

## Pantheon Report

Generated at 2018-12-02 16:51:33 (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:

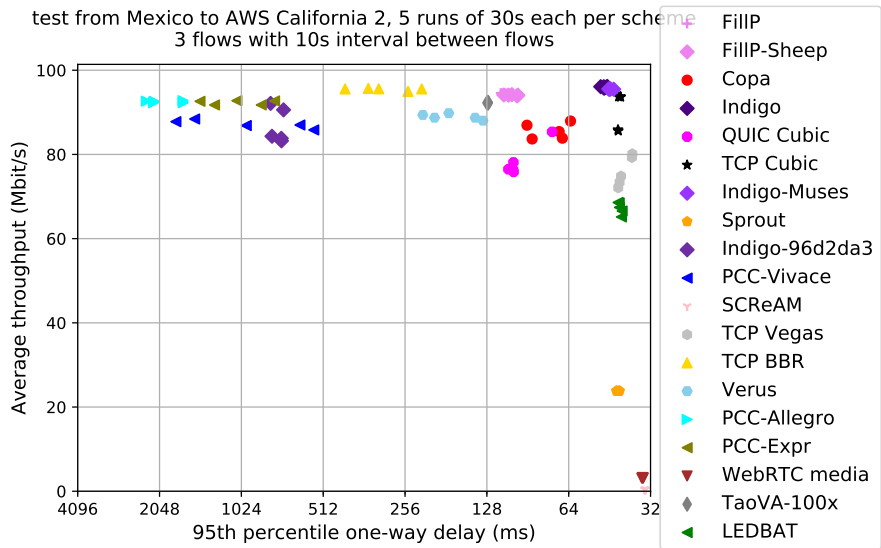
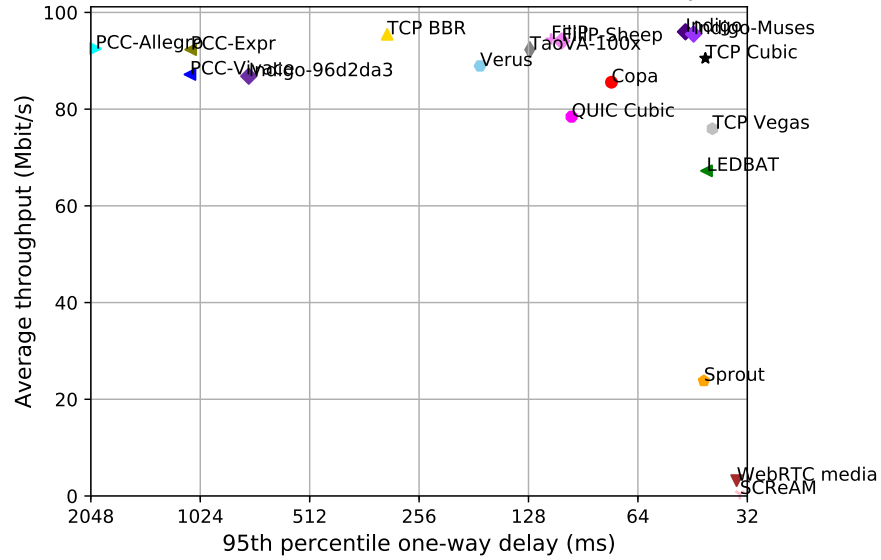
```
Linux 4.15.0-1027-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

```
branch: muses @ 7b6dad87cde3ab65f7c4052140eb54098aa58e9d
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
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	60.04	38.28	30.10	183.61	279.27	636.06	0.80	2.31	5.25
Copa	5	52.73	34.11	30.59	95.86	53.92	49.23	0.14	0.28	0.59
TCP Cubic	5	52.64	39.11	35.78	42.11	41.60	46.33	0.17	0.27	0.83
FillP	5	55.56	43.48	30.29	99.18	122.48	113.05	0.30	2.96	3.66
FillP-Sheep	5	57.30	38.81	33.11	95.30	103.29	118.02	0.27	0.60	1.10
Indigo	5	59.97	39.40	30.10	46.13	49.25	48.75	0.23	0.41	0.76
Indigo-96d2da3	5	53.38	36.36	28.10	605.21	752.62	1022.70	2.72	4.81	7.68
LEDBAT	5	38.95	31.84	21.43	41.50	41.11	42.86	0.16	0.45	0.85
Indigo-Muses	5	61.93	37.48	26.29	43.40	46.40	52.06	0.17	0.27	0.73
PCC-Allegro	5	56.35	39.45	30.29	2033.78	956.81	271.16	17.60	11.53	2.65
PCC-Expr	5	58.51	37.91	26.15	953.47	1084.34	122.17	29.64	11.70	0.94
QUIC Cubic	5	45.24	34.90	30.37	85.25	121.48	103.32	0.19	0.46	0.97
SCReAM	5	0.21	0.21	0.22	33.52	33.55	33.55	0.26	0.36	0.64
Sprout	5	12.02	11.97	11.68	41.98	42.28	42.35	0.27	0.31	0.80
TaoVA-100x	5	55.79	39.26	31.27	126.14	127.13	127.77	0.65	1.53	3.84
TCP Vegas	5	42.07	35.62	30.73	46.83	36.10	44.51	0.19	0.30	0.77
Verus	5	52.51	39.96	29.77	146.34	160.53	325.80	0.48	0.60	1.46
PCC-Vivace	5	55.79	33.76	27.20	1096.12	573.20	91.97	3.83	3.20	0.98
WebRTC media	5	1.75	1.00	0.44	34.18	34.17	34.53	0.10	0.25	0.62

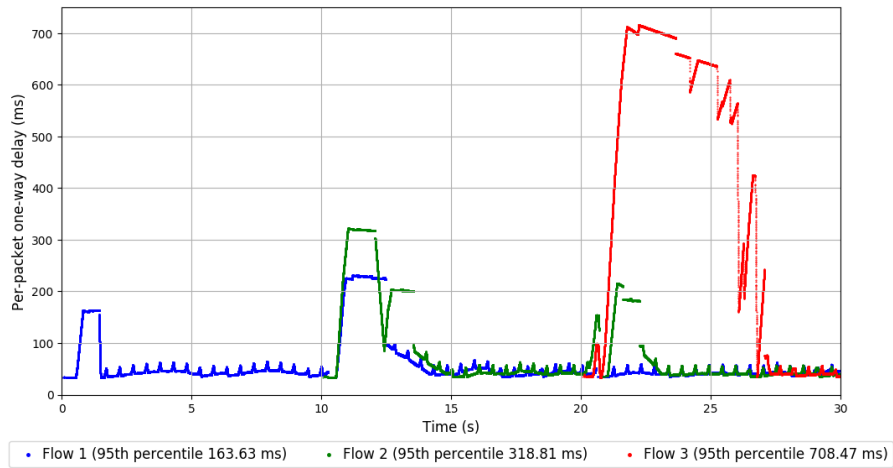
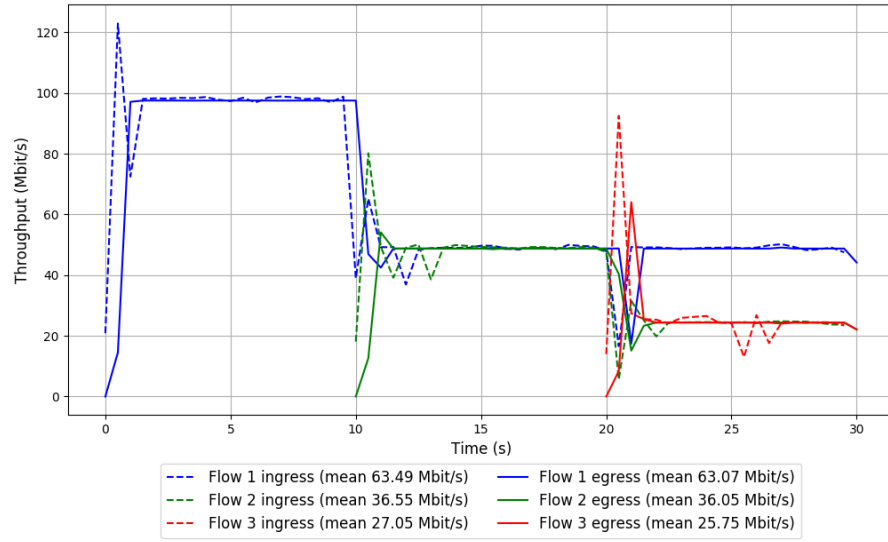


Run 1: Statistics of TCP BBR

Start at: 2018-12-02 14:40:10  
End at: 2018-12-02 14:40:40  
Local clock offset: -4.803 ms  
Remote clock offset: -4.126 ms

# Below is generated by plot.py at 2018-12-02 16:39:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.58 Mbit/s  
95th percentile per-packet one-way delay: 319.897 ms  
Loss rate: 1.50%  
-- Flow 1:  
Average throughput: 63.07 Mbit/s  
95th percentile per-packet one-way delay: 163.633 ms  
Loss rate: 0.88%  
-- Flow 2:  
Average throughput: 36.05 Mbit/s  
95th percentile per-packet one-way delay: 318.808 ms  
Loss rate: 1.68%  
-- Flow 3:  
Average throughput: 25.75 Mbit/s  
95th percentile per-packet one-way delay: 708.471 ms  
Loss rate: 5.43%

# Run 1: Report of TCP BBR — Data Link

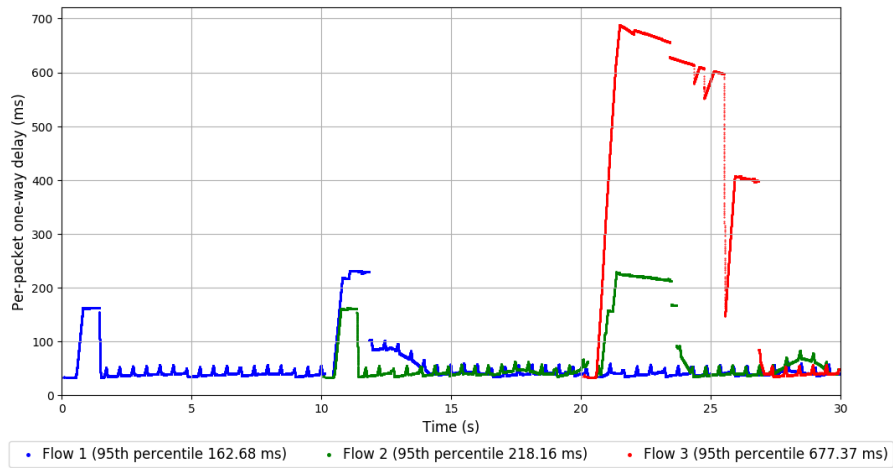
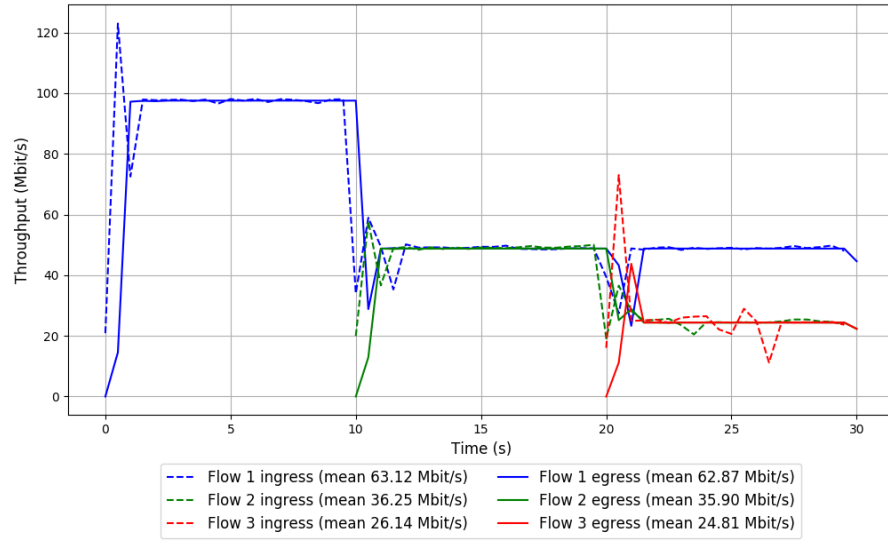


Run 2: Statistics of TCP BBR

Start at: 2018-12-02 15:03:36  
End at: 2018-12-02 15:04:07  
Local clock offset: 0.152 ms  
Remote clock offset: -3.679 ms

# Below is generated by plot.py at 2018-12-02 16:39:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.98 Mbit/s  
95th percentile per-packet one-way delay: 249.690 ms  
Loss rate: 1.23%  
-- Flow 1:  
Average throughput: 62.87 Mbit/s  
95th percentile per-packet one-way delay: 162.684 ms  
Loss rate: 0.60%  
-- Flow 2:  
Average throughput: 35.90 Mbit/s  
95th percentile per-packet one-way delay: 218.156 ms  
Loss rate: 1.30%  
-- Flow 3:  
Average throughput: 24.81 Mbit/s  
95th percentile per-packet one-way delay: 677.366 ms  
Loss rate: 5.68%

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



Run 3: Statistics of TCP BBR

Start at: 2018-12-02 15:26:44

End at: 2018-12-02 15:27:14

Local clock offset: 1.055 ms

Remote clock offset: -2.86 ms

# Below is generated by plot.py at 2018-12-02 16:39:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.56 Mbit/s

95th percentile per-packet one-way delay: 425.410 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 63.05 Mbit/s

95th percentile per-packet one-way delay: 163.204 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 36.05 Mbit/s

95th percentile per-packet one-way delay: 305.061 ms

Loss rate: 2.04%

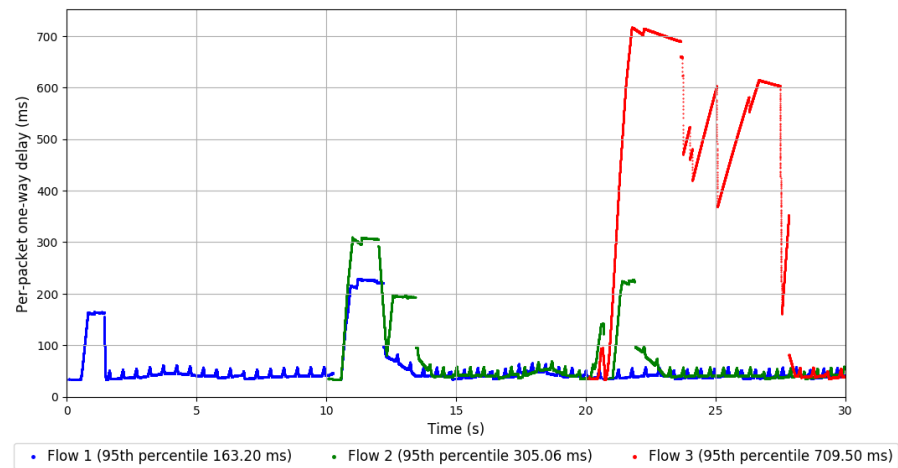
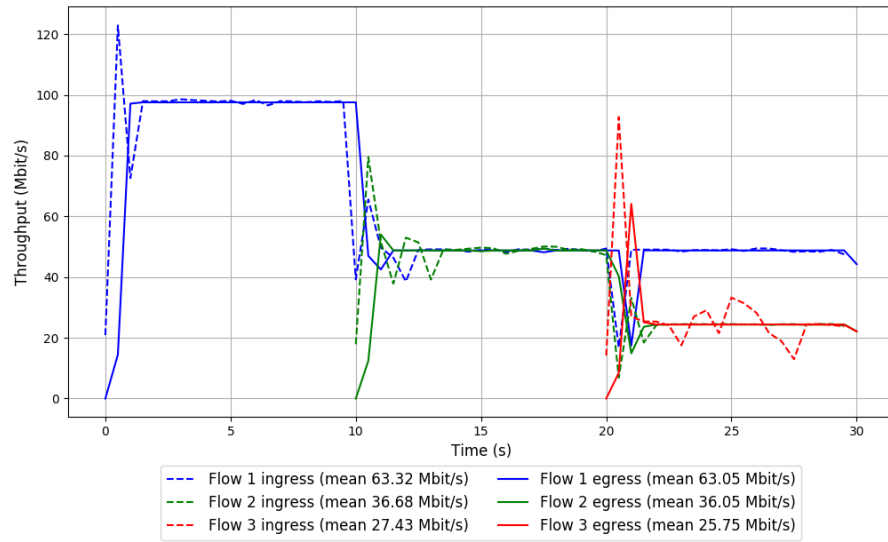
-- Flow 3:

Average throughput: 25.75 Mbit/s

95th percentile per-packet one-way delay: 709.501 ms

Loss rate: 6.75%

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

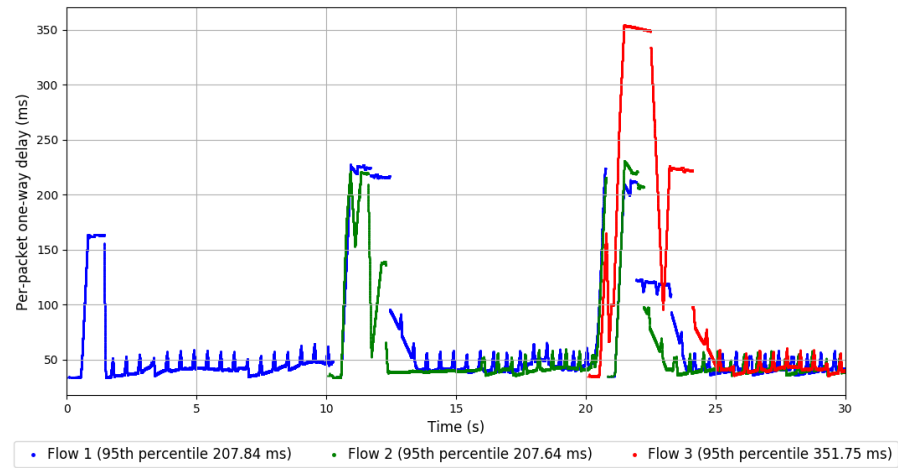
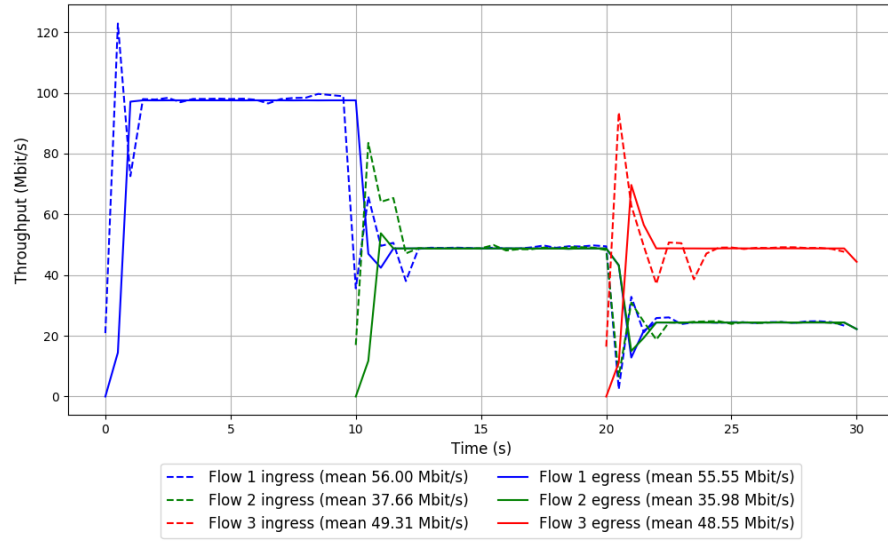


Run 4: Statistics of TCP BBR

Start at: 2018-12-02 15:50:00  
End at: 2018-12-02 15:50:30  
Local clock offset: 1.123 ms  
Remote clock offset: -2.362 ms

# Below is generated by plot.py at 2018-12-02 16:39:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.57 Mbit/s  
95th percentile per-packet one-way delay: 222.314 ms  
Loss rate: 2.18%  
-- Flow 1:  
Average throughput: 55.55 Mbit/s  
95th percentile per-packet one-way delay: 207.836 ms  
Loss rate: 1.02%  
-- Flow 2:  
Average throughput: 35.98 Mbit/s  
95th percentile per-packet one-way delay: 207.637 ms  
Loss rate: 4.76%  
-- Flow 3:  
Average throughput: 48.55 Mbit/s  
95th percentile per-packet one-way delay: 351.746 ms  
Loss rate: 2.18%

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



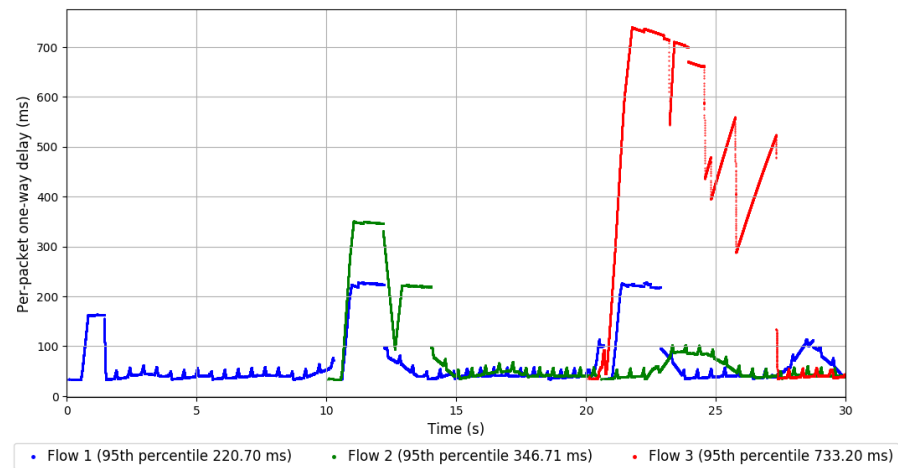
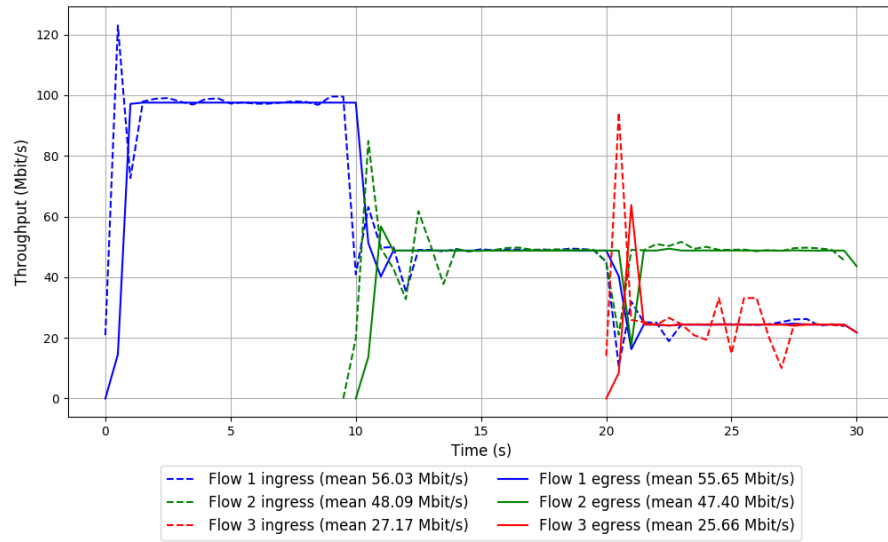


Run 5: Statistics of TCP BBR

Start at: 2018-12-02 16:13:37  
End at: 2018-12-02 16:14:07  
Local clock offset: 0.82 ms  
Remote clock offset: -1.726 ms

# Below is generated by plot.py at 2018-12-02 16:39:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.69 Mbit/s  
95th percentile per-packet one-way delay: 349.468 ms  
Loss rate: 1.67%  
-- Flow 1:  
Average throughput: 55.65 Mbit/s  
95th percentile per-packet one-way delay: 220.699 ms  
Loss rate: 0.89%  
-- Flow 2:  
Average throughput: 47.40 Mbit/s  
95th percentile per-packet one-way delay: 346.712 ms  
Loss rate: 1.75%  
-- Flow 3:  
Average throughput: 25.66 Mbit/s  
95th percentile per-packet one-way delay: 733.200 ms  
Loss rate: 6.19%

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

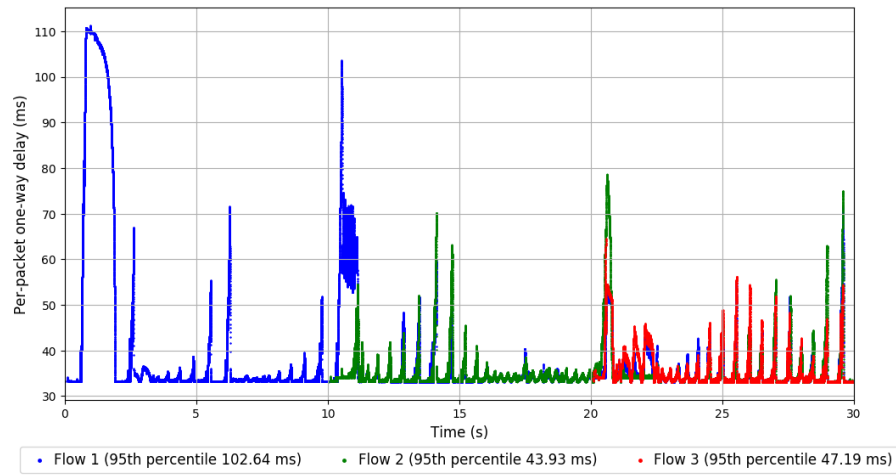
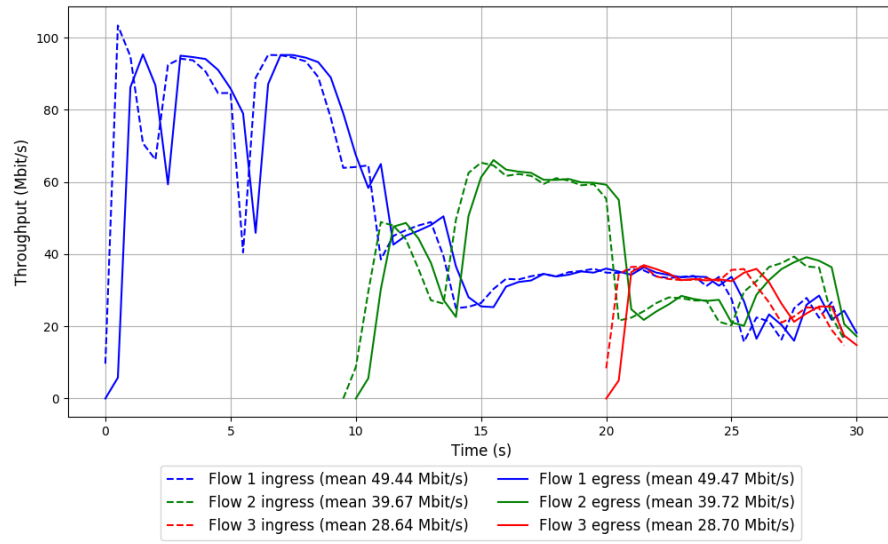


Run 1: Statistics of Copa

Start at: 2018-12-02 14:55:04  
End at: 2018-12-02 14:55:34  
Local clock offset: -1.773 ms  
Remote clock offset: -3.888 ms

# Below is generated by plot.py at 2018-12-02 16:40:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.42 Mbit/s  
95th percentile per-packet one-way delay: 69.405 ms  
Loss rate: 0.20%  
-- Flow 1:  
Average throughput: 49.47 Mbit/s  
95th percentile per-packet one-way delay: 102.636 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 39.72 Mbit/s  
95th percentile per-packet one-way delay: 43.933 ms  
Loss rate: 0.18%  
-- Flow 3:  
Average throughput: 28.70 Mbit/s  
95th percentile per-packet one-way delay: 47.193 ms  
Loss rate: 0.45%

# Run 1: Report of Copa — Data Link

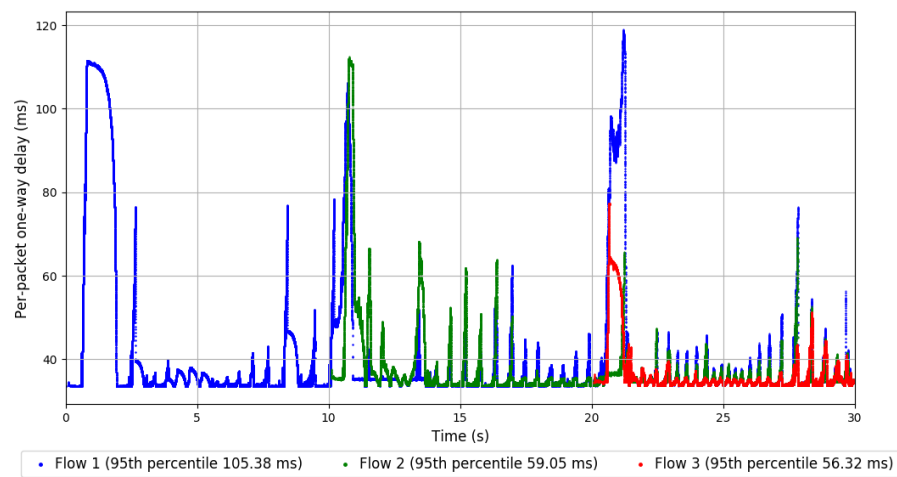
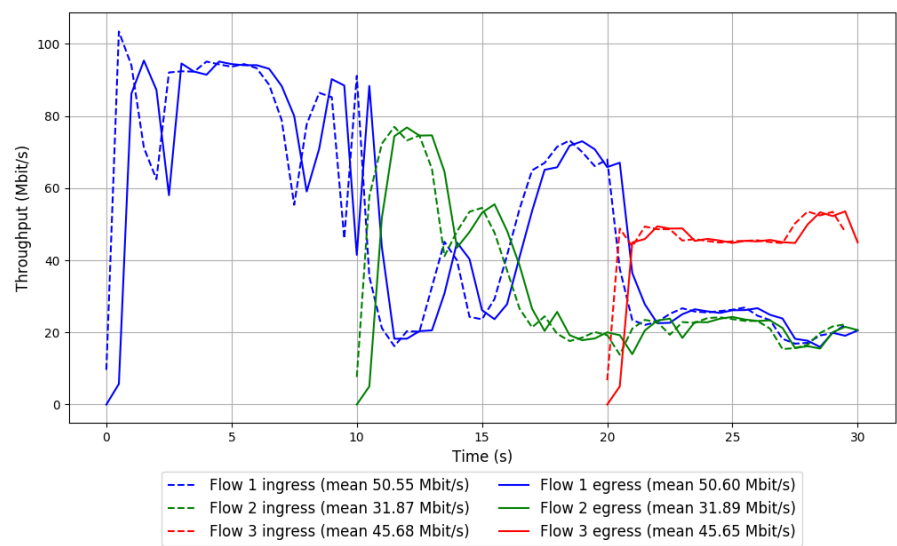


Run 2: Statistics of Copa

Start at: 2018-12-02 15:18:23  
End at: 2018-12-02 15:18:54  
Local clock offset: 1.588 ms  
Remote clock offset: -3.194 ms

# Below is generated by plot.py at 2018-12-02 16:40:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.94 Mbit/s  
95th percentile per-packet one-way delay: 91.152 ms  
Loss rate: 0.25%  
-- Flow 1:  
Average throughput: 50.60 Mbit/s  
95th percentile per-packet one-way delay: 105.376 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 31.89 Mbit/s  
95th percentile per-packet one-way delay: 59.053 ms  
Loss rate: 0.26%  
-- Flow 3:  
Average throughput: 45.65 Mbit/s  
95th percentile per-packet one-way delay: 56.321 ms  
Loss rate: 0.72%

Run 2: Report of Copa — Data Link

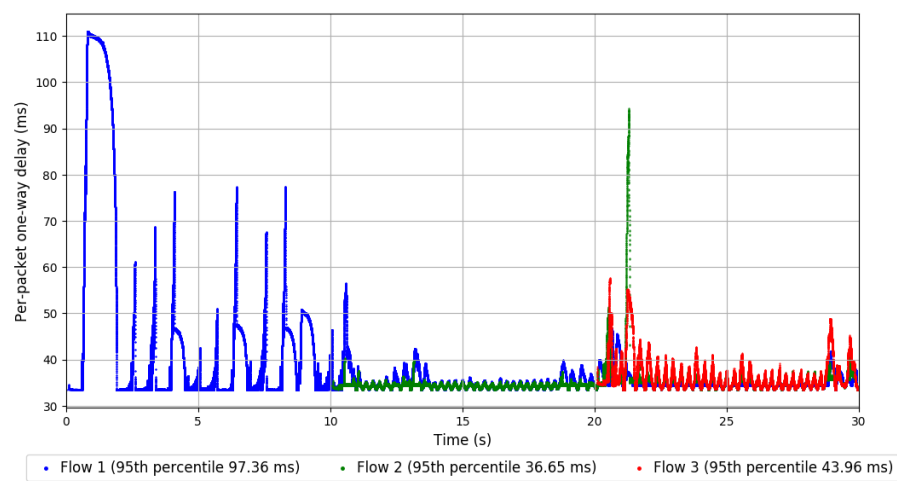
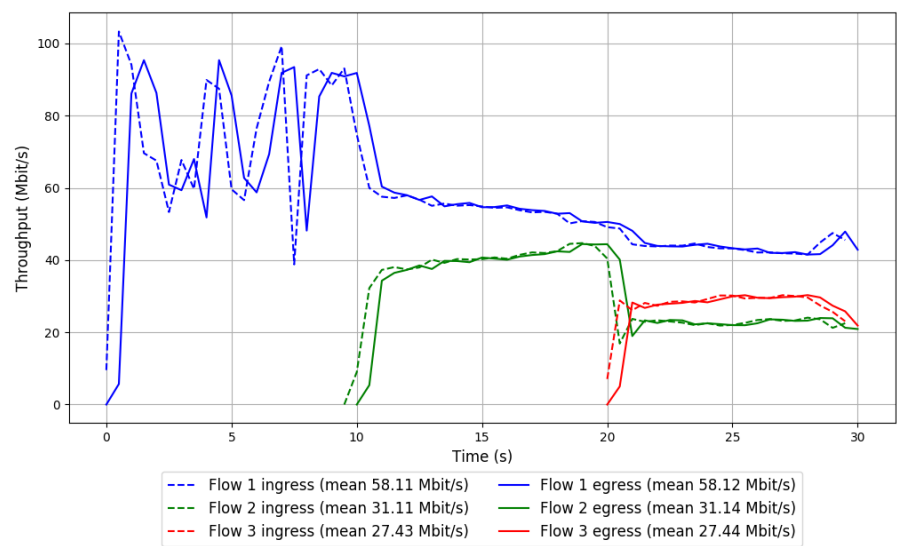


Run 3: Statistics of Copa

Start at: 2018-12-02 15:41:39  
End at: 2018-12-02 15:42:09  
Local clock offset: 1.182 ms  
Remote clock offset: -2.468 ms

# Below is generated by plot.py at 2018-12-02 16:40:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.94 Mbit/s  
95th percentile per-packet one-way delay: 63.033 ms  
Loss rate: 0.25%  
-- Flow 1:  
Average throughput: 58.12 Mbit/s  
95th percentile per-packet one-way delay: 97.356 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 31.14 Mbit/s  
95th percentile per-packet one-way delay: 36.646 ms  
Loss rate: 0.25%  
-- Flow 3:  
Average throughput: 27.44 Mbit/s  
95th percentile per-packet one-way delay: 43.962 ms  
Loss rate: 0.59%

Run 3: Report of Copa — Data Link



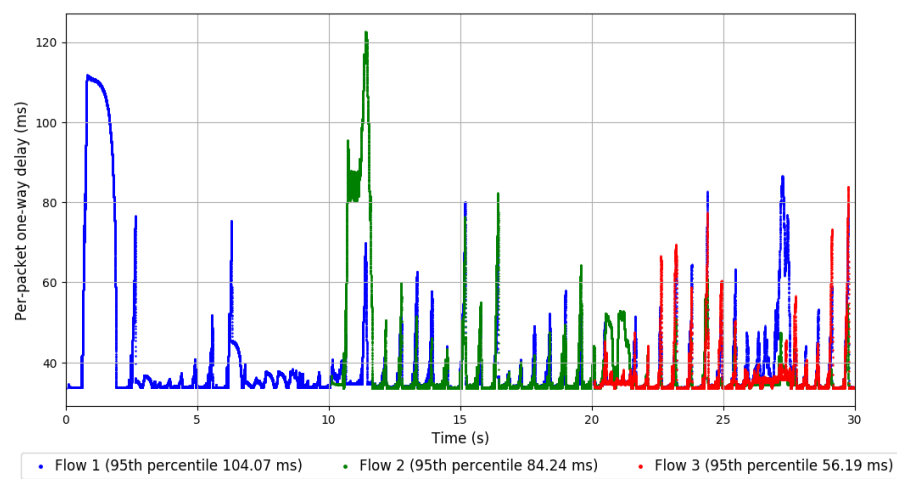
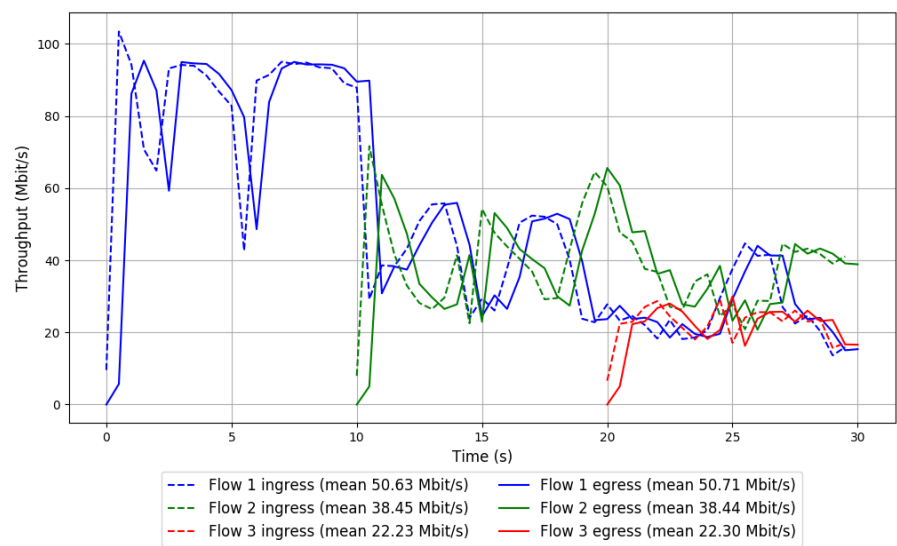


Run 4: Statistics of Copa

Start at: 2018-12-02 16:05:15  
End at: 2018-12-02 16:05:45  
Local clock offset: 0.735 ms  
Remote clock offset: -2.098 ms

# Below is generated by plot.py at 2018-12-02 16:41:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 83.67 Mbit/s  
95th percentile per-packet one-way delay: 87.239 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 50.71 Mbit/s  
95th percentile per-packet one-way delay: 104.074 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 38.44 Mbit/s  
95th percentile per-packet one-way delay: 84.240 ms  
Loss rate: 0.37%  
-- Flow 3:  
Average throughput: 22.30 Mbit/s  
95th percentile per-packet one-way delay: 56.185 ms  
Loss rate: 0.34%

Run 4: Report of Copa — Data Link

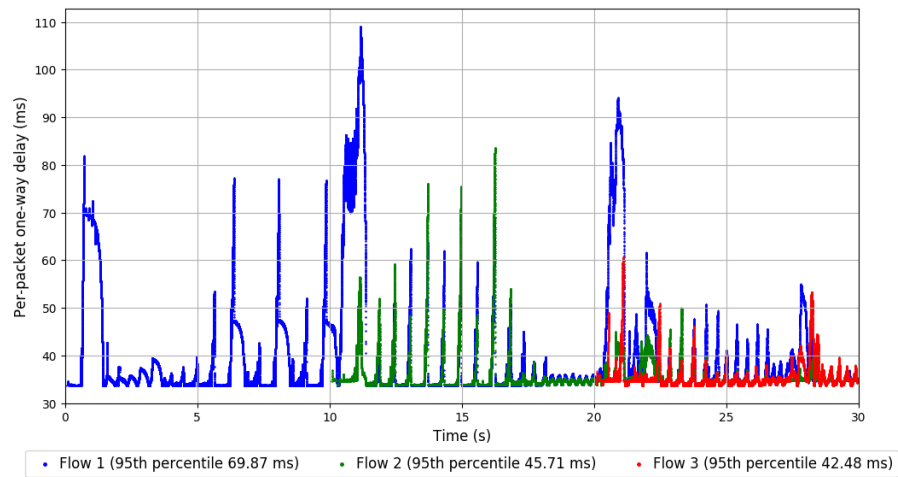
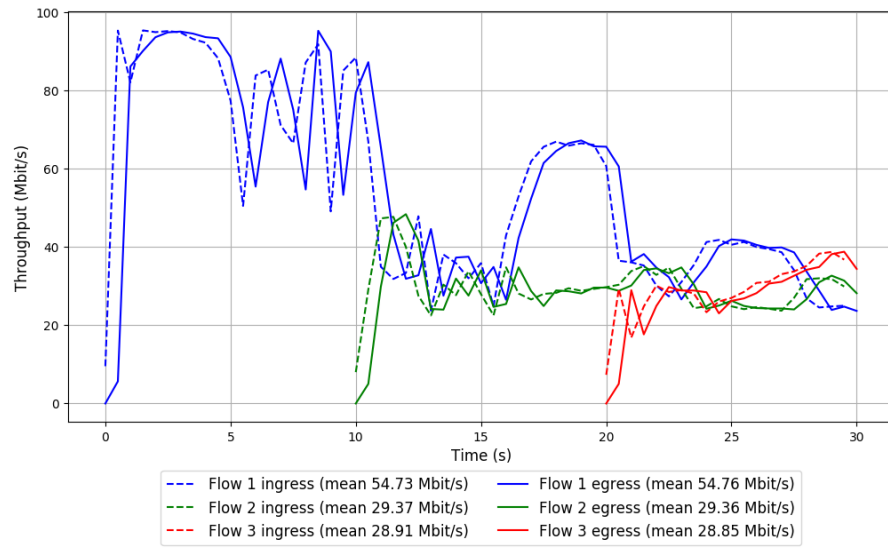


Run 5: Statistics of Copa

Start at: 2018-12-02 16:28:29  
End at: 2018-12-02 16:28:59  
Local clock offset: -1.93 ms  
Remote clock offset: -1.773 ms

# Below is generated by plot.py at 2018-12-02 16:41:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 83.86 Mbit/s  
95th percentile per-packet one-way delay: 67.535 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 54.76 Mbit/s  
95th percentile per-packet one-way delay: 69.868 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 29.36 Mbit/s  
95th percentile per-packet one-way delay: 45.710 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 28.85 Mbit/s  
95th percentile per-packet one-way delay: 42.480 ms  
Loss rate: 0.86%

## Run 5: Report of Copa — Data Link

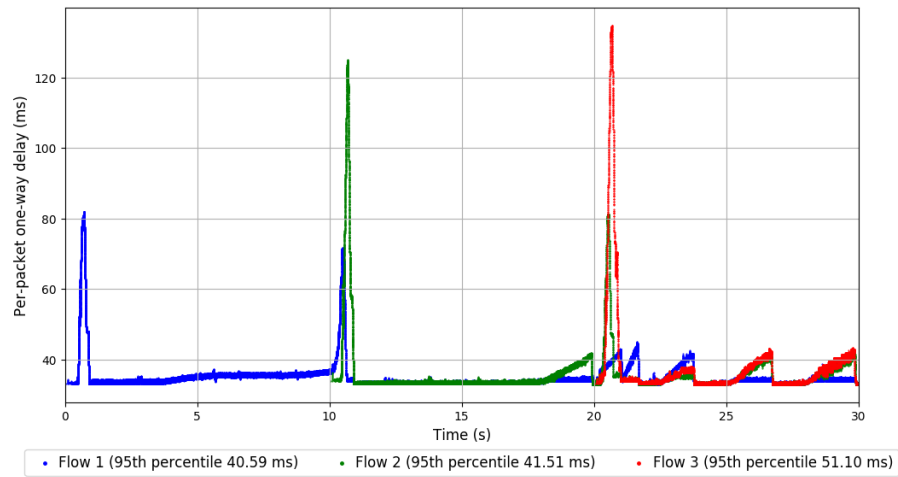
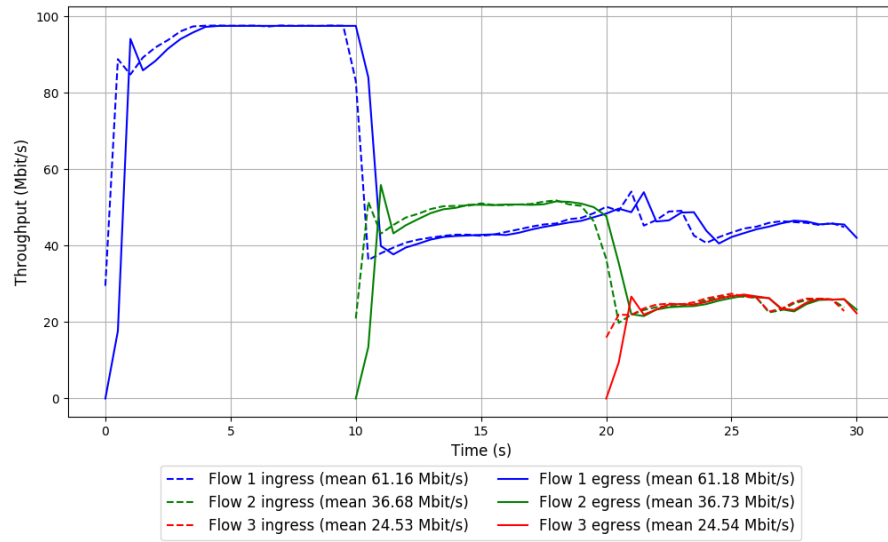


Run 1: Statistics of TCP Cubic

Start at: 2018-12-02 14:47:41  
End at: 2018-12-02 14:48:11  
Local clock offset: -5.129 ms  
Remote clock offset: -4.063 ms

# Below is generated by plot.py at 2018-12-02 16:41:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.74 Mbit/s  
95th percentile per-packet one-way delay: 41.297 ms  
Loss rate: 0.22%  
-- Flow 1:  
Average throughput: 61.18 Mbit/s  
95th percentile per-packet one-way delay: 40.589 ms  
Loss rate: 0.17%  
-- Flow 2:  
Average throughput: 36.73 Mbit/s  
95th percentile per-packet one-way delay: 41.510 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 24.54 Mbit/s  
95th percentile per-packet one-way delay: 51.100 ms  
Loss rate: 0.60%

# Run 1: Report of TCP Cubic — Data Link

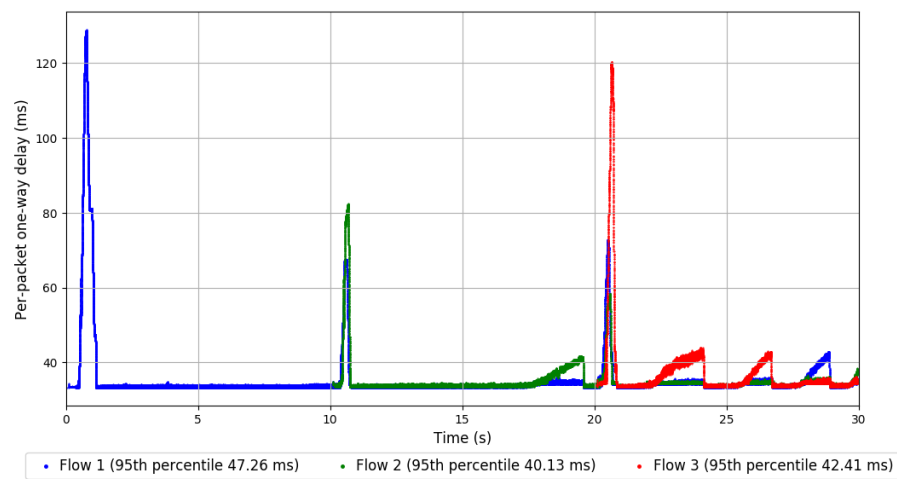
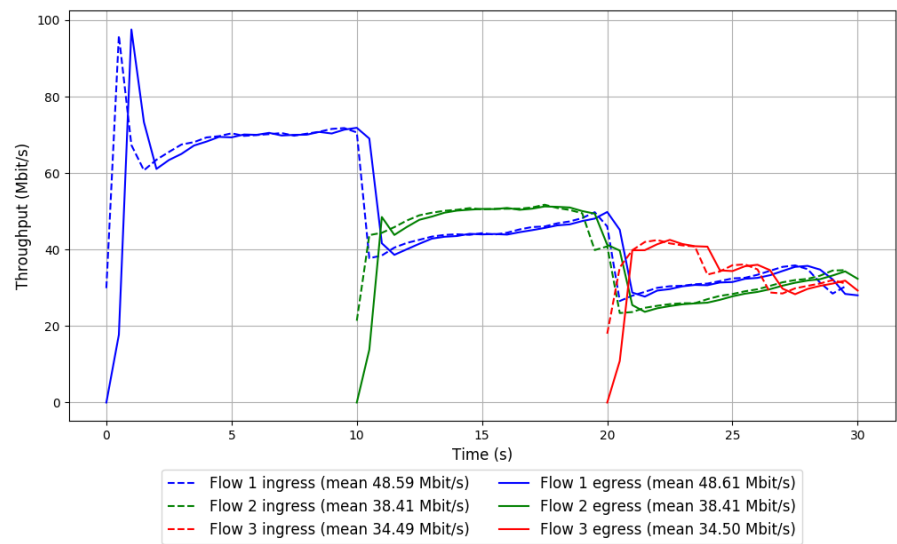


Run 2: Statistics of TCP Cubic

Start at: 2018-12-02 15:11:01  
End at: 2018-12-02 15:11:31  
Local clock offset: 1.047 ms  
Remote clock offset: -3.441 ms

# Below is generated by plot.py at 2018-12-02 16:41:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.59 Mbit/s  
95th percentile per-packet one-way delay: 42.071 ms  
Loss rate: 0.27%  
-- Flow 1:  
Average throughput: 48.61 Mbit/s  
95th percentile per-packet one-way delay: 47.259 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 38.41 Mbit/s  
95th percentile per-packet one-way delay: 40.133 ms  
Loss rate: 0.32%  
-- Flow 3:  
Average throughput: 34.50 Mbit/s  
95th percentile per-packet one-way delay: 42.411 ms  
Loss rate: 0.62%

Run 2: Report of TCP Cubic — Data Link



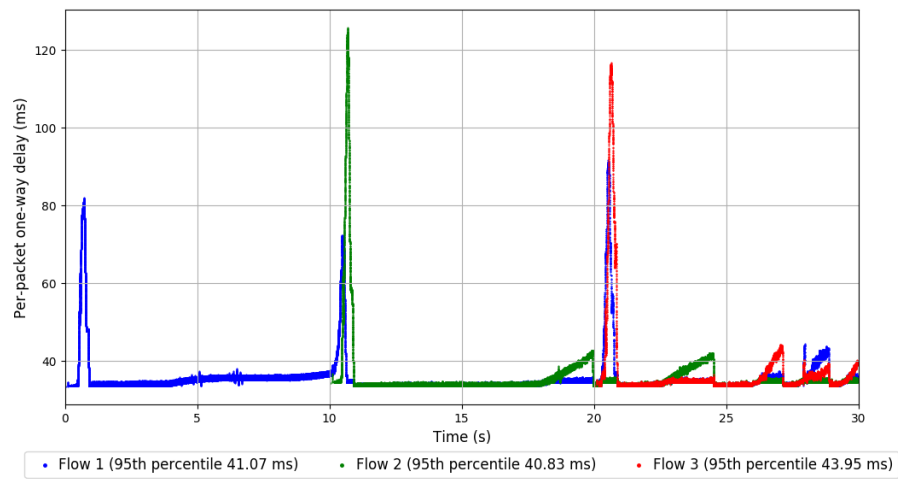
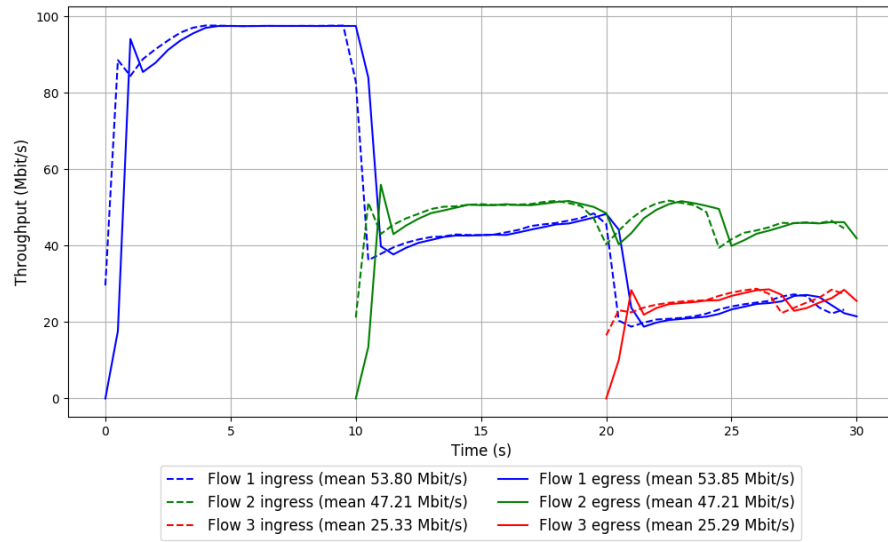


Run 3: Statistics of TCP Cubic

Start at: 2018-12-02 15:34:15  
End at: 2018-12-02 15:34:45  
Local clock offset: 1.041 ms  
Remote clock offset: -2.848 ms

# Below is generated by plot.py at 2018-12-02 16:41:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.64 Mbit/s  
95th percentile per-packet one-way delay: 41.221 ms  
Loss rate: 0.25%  
-- Flow 1:  
Average throughput: 53.85 Mbit/s  
95th percentile per-packet one-way delay: 41.066 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 47.21 Mbit/s  
95th percentile per-packet one-way delay: 40.828 ms  
Loss rate: 0.33%  
-- Flow 3:  
Average throughput: 25.29 Mbit/s  
95th percentile per-packet one-way delay: 43.954 ms  
Loss rate: 0.79%

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

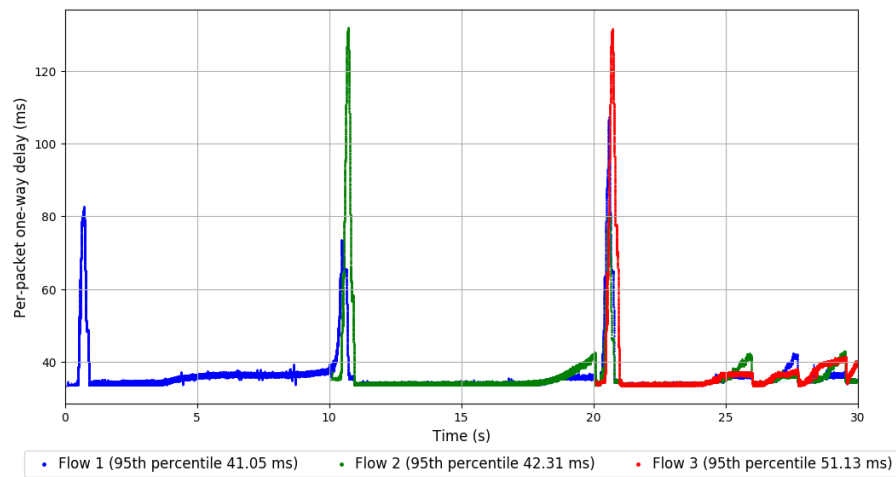
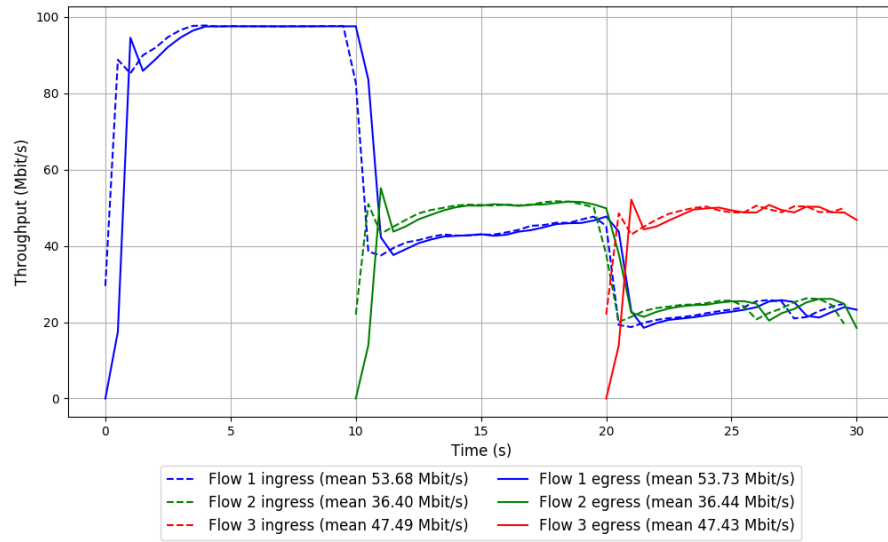


Run 4: Statistics of TCP Cubic

Start at: 2018-12-02 15:57:39  
End at: 2018-12-02 15:58:09  
Local clock offset: 0.781 ms  
Remote clock offset: -2.097 ms

# Below is generated by plot.py at 2018-12-02 16:41:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.70 Mbit/s  
95th percentile per-packet one-way delay: 41.935 ms  
Loss rate: 0.25%  
-- Flow 1:  
Average throughput: 53.73 Mbit/s  
95th percentile per-packet one-way delay: 41.046 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 36.44 Mbit/s  
95th percentile per-packet one-way delay: 42.315 ms  
Loss rate: 0.21%  
-- Flow 3:  
Average throughput: 47.43 Mbit/s  
95th percentile per-packet one-way delay: 51.135 ms  
Loss rate: 0.77%

# Run 4: Report of TCP Cubic — Data Link

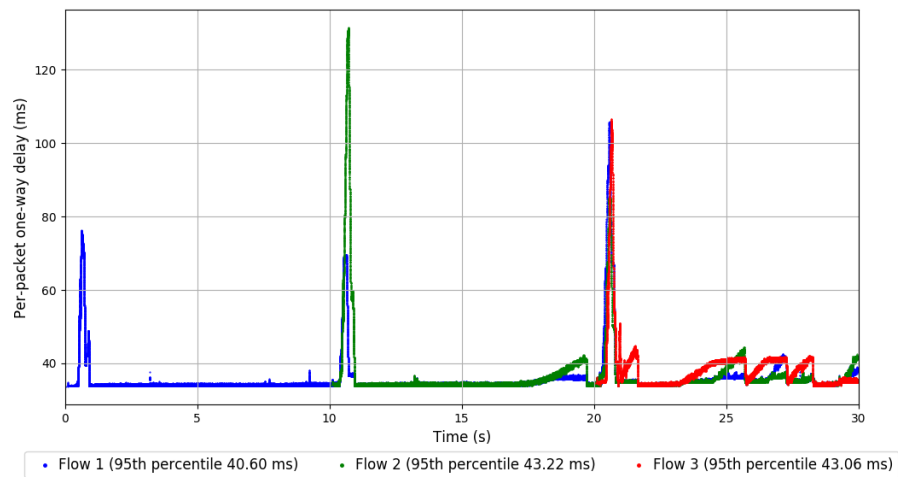
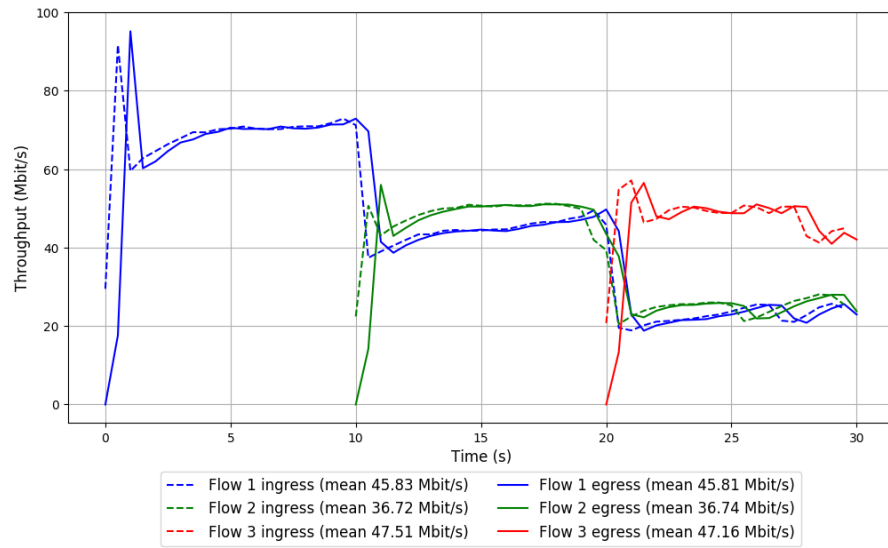


Run 5: Statistics of TCP Cubic

Start at: 2018-12-02 16:21:01  
End at: 2018-12-02 16:21:31  
Local clock offset: -0.272 ms  
Remote clock offset: -1.735 ms

# Below is generated by plot.py at 2018-12-02 16:41:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.88 Mbit/s  
95th percentile per-packet one-way delay: 42.169 ms  
Loss rate: 0.47%  
-- Flow 1:  
Average throughput: 45.81 Mbit/s  
95th percentile per-packet one-way delay: 40.603 ms  
Loss rate: 0.27%  
-- Flow 2:  
Average throughput: 36.74 Mbit/s  
95th percentile per-packet one-way delay: 43.217 ms  
Loss rate: 0.27%  
-- Flow 3:  
Average throughput: 47.16 Mbit/s  
95th percentile per-packet one-way delay: 43.064 ms  
Loss rate: 1.37%

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

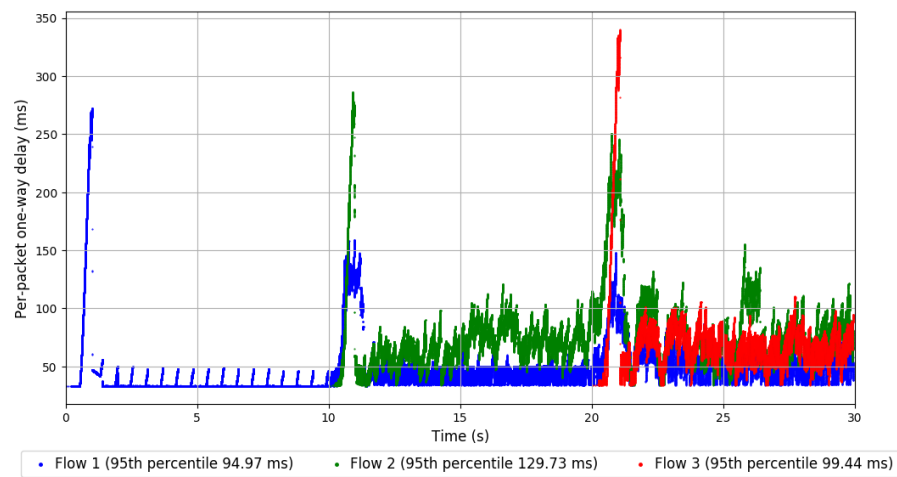
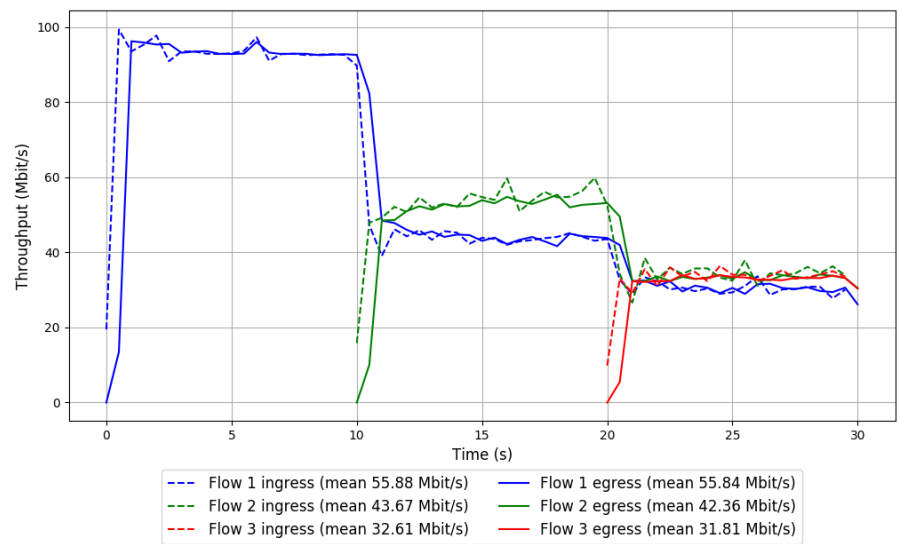


Run 1: Statistics of FillP

Start at: 2018-12-02 14:58:55  
End at: 2018-12-02 14:59:25  
Local clock offset: -0.748 ms  
Remote clock offset: -3.796 ms

# Below is generated by plot.py at 2018-12-02 16:41:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.55 Mbit/s  
95th percentile per-packet one-way delay: 112.505 ms  
Loss rate: 1.46%  
-- Flow 1:  
Average throughput: 55.84 Mbit/s  
95th percentile per-packet one-way delay: 94.970 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 42.36 Mbit/s  
95th percentile per-packet one-way delay: 129.727 ms  
Loss rate: 3.23%  
-- Flow 3:  
Average throughput: 31.81 Mbit/s  
95th percentile per-packet one-way delay: 99.444 ms  
Loss rate: 3.05%

Run 1: Report of FillP — Data Link



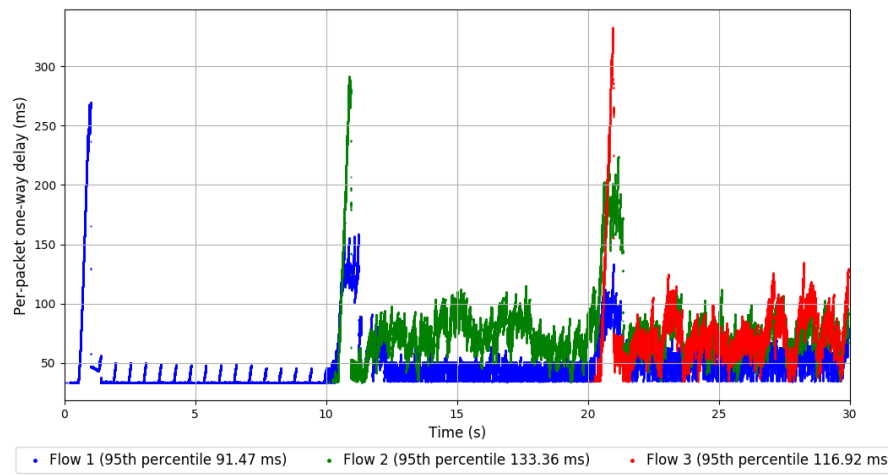
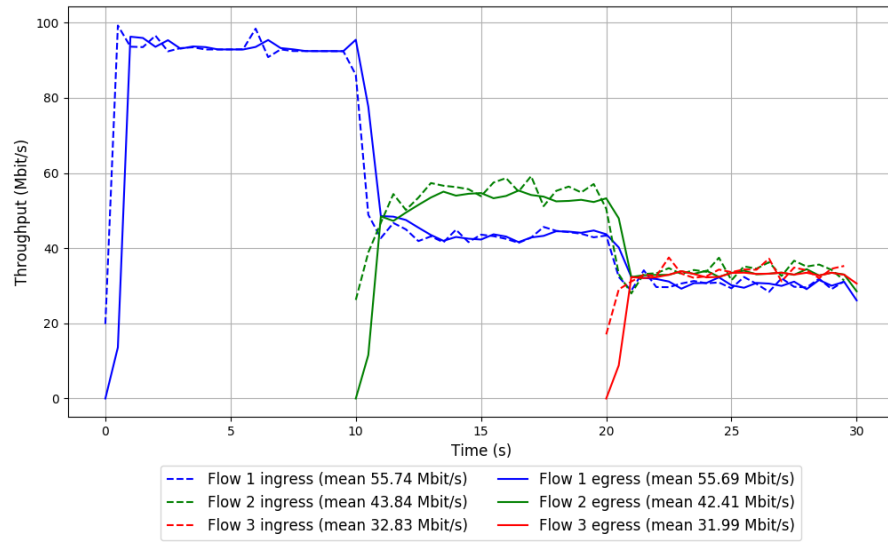


Run 2: Statistics of FillP

Start at: 2018-12-02 15:22:03  
End at: 2018-12-02 15:22:33  
Local clock offset: 1.257 ms  
Remote clock offset: -3.017 ms

# Below is generated by plot.py at 2018-12-02 16:41:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.49 Mbit/s  
95th percentile per-packet one-way delay: 107.835 ms  
Loss rate: 1.58%  
-- Flow 1:  
Average throughput: 55.69 Mbit/s  
95th percentile per-packet one-way delay: 91.470 ms  
Loss rate: 0.28%  
-- Flow 2:  
Average throughput: 42.41 Mbit/s  
95th percentile per-packet one-way delay: 133.358 ms  
Loss rate: 3.47%  
-- Flow 3:  
Average throughput: 31.99 Mbit/s  
95th percentile per-packet one-way delay: 116.919 ms  
Loss rate: 3.20%

## Run 2: Report of FillP — Data Link

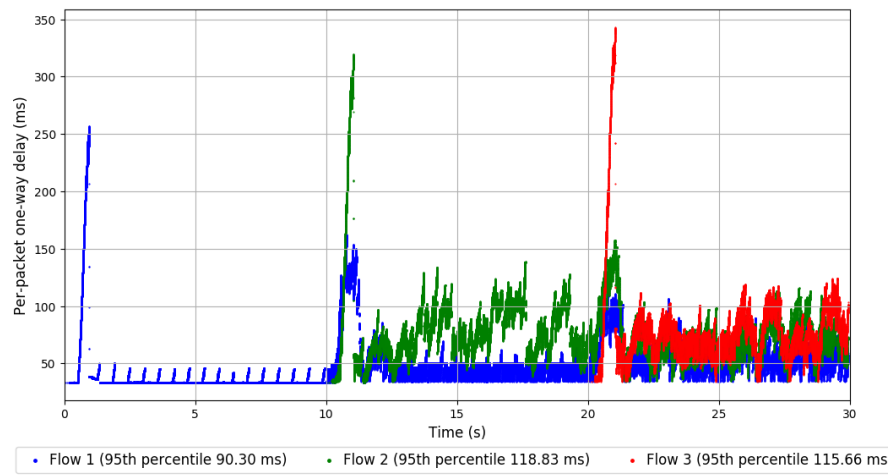
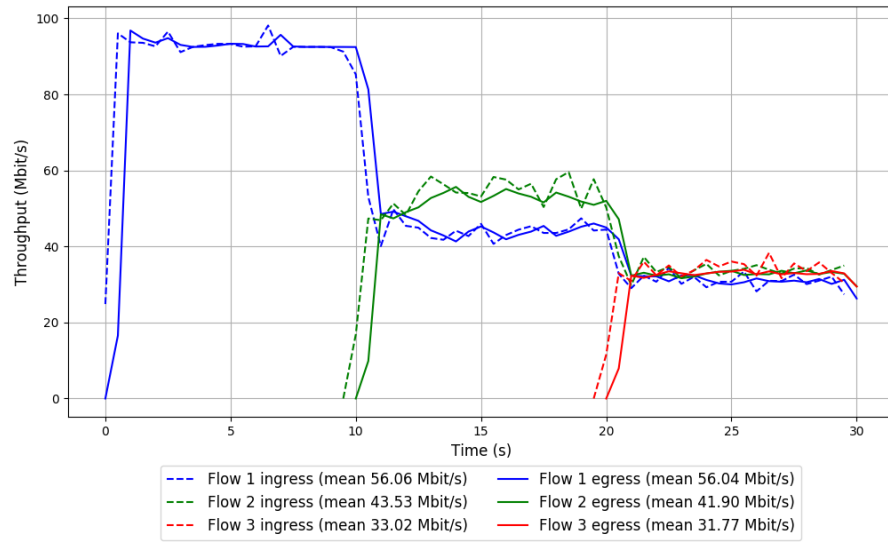


Run 3: Statistics of FillP

Start at: 2018-12-02 15:45:18  
End at: 2018-12-02 15:45:48  
Local clock offset: 1.264 ms  
Remote clock offset: -2.488 ms

# Below is generated by plot.py at 2018-12-02 16:41:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.47 Mbit/s  
95th percentile per-packet one-way delay: 110.576 ms  
Loss rate: 1.84%  
-- Flow 1:  
Average throughput: 56.04 Mbit/s  
95th percentile per-packet one-way delay: 90.297 ms  
Loss rate: 0.24%  
-- Flow 2:  
Average throughput: 41.90 Mbit/s  
95th percentile per-packet one-way delay: 118.828 ms  
Loss rate: 4.03%  
-- Flow 3:  
Average throughput: 31.77 Mbit/s  
95th percentile per-packet one-way delay: 115.659 ms  
Loss rate: 4.22%

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

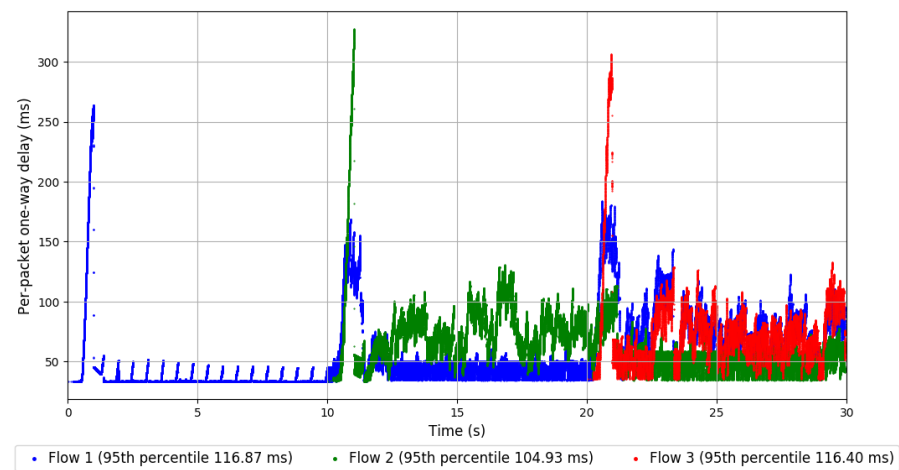
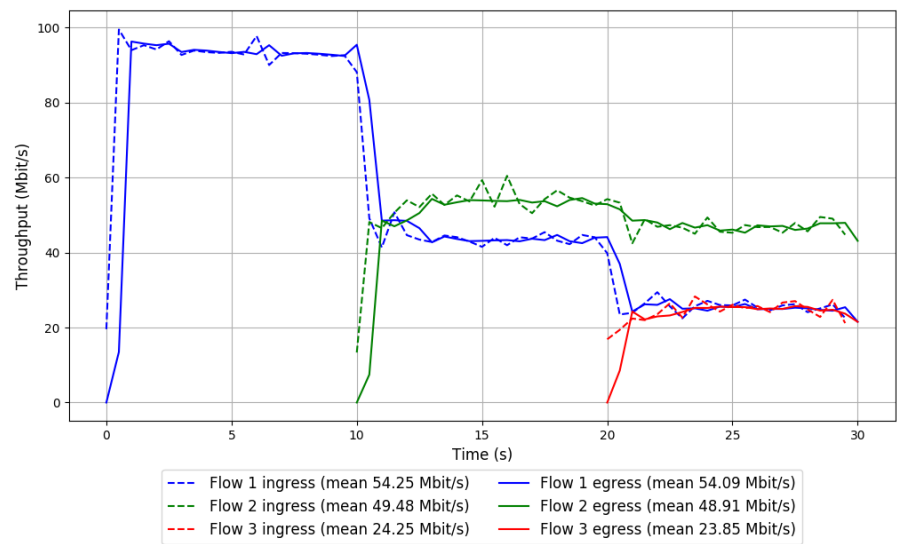


Run 4: Statistics of FillP

Start at: 2018-12-02 16:08:55  
End at: 2018-12-02 16:09:25  
Local clock offset: 0.764 ms  
Remote clock offset: -1.843 ms

# Below is generated by plot.py at 2018-12-02 16:41:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.53 Mbit/s  
95th percentile per-packet one-way delay: 109.692 ms  
Loss rate: 0.96%  
-- Flow 1:  
Average throughput: 54.09 Mbit/s  
95th percentile per-packet one-way delay: 116.871 ms  
Loss rate: 0.49%  
-- Flow 2:  
Average throughput: 48.91 Mbit/s  
95th percentile per-packet one-way delay: 104.927 ms  
Loss rate: 1.45%  
-- Flow 3:  
Average throughput: 23.85 Mbit/s  
95th percentile per-packet one-way delay: 116.402 ms  
Loss rate: 2.10%

Run 4: Report of FillP — Data Link

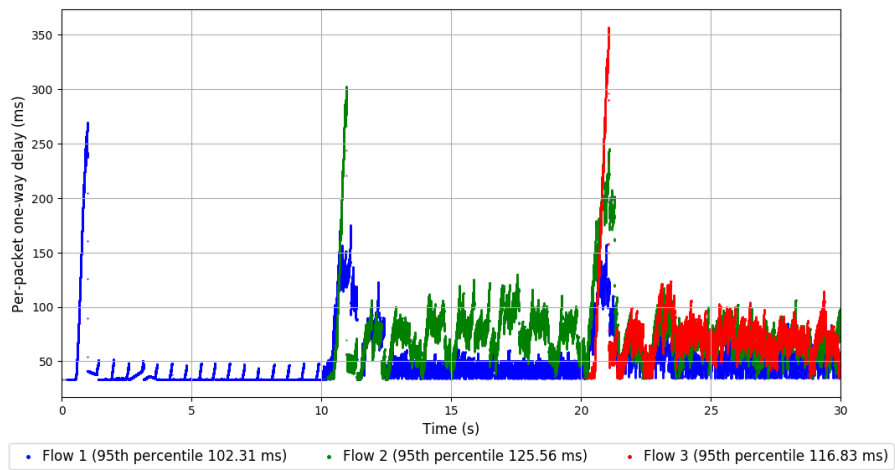
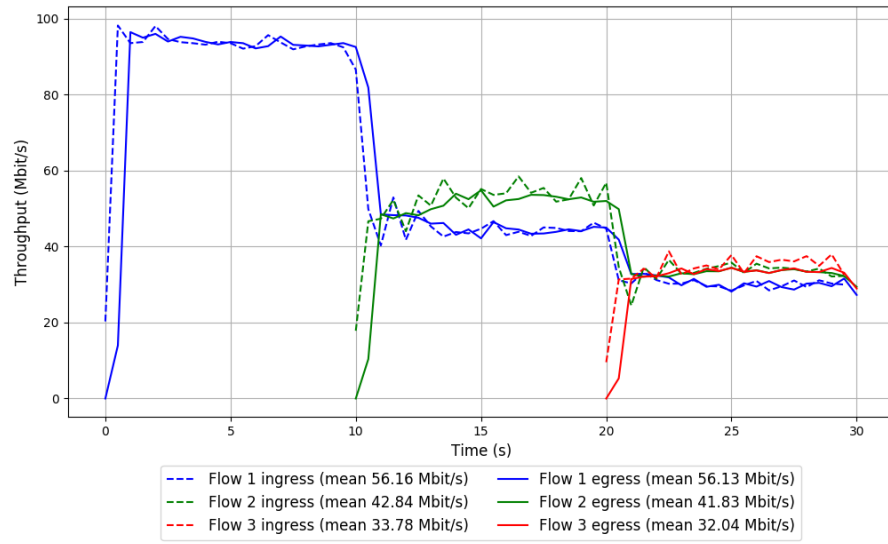


Run 5: Statistics of FillP

Start at: 2018-12-02 16:32:13  
End at: 2018-12-02 16:32:43  
Local clock offset: -2.415 ms  
Remote clock offset: -1.581 ms

# Below is generated by plot.py at 2018-12-02 16:42:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.56 Mbit/s  
95th percentile per-packet one-way delay: 113.841 ms  
Loss rate: 1.59%  
-- Flow 1:  
Average throughput: 56.13 Mbit/s  
95th percentile per-packet one-way delay: 102.313 ms  
Loss rate: 0.25%  
-- Flow 2:  
Average throughput: 41.83 Mbit/s  
95th percentile per-packet one-way delay: 125.559 ms  
Loss rate: 2.60%  
-- Flow 3:  
Average throughput: 32.04 Mbit/s  
95th percentile per-packet one-way delay: 116.832 ms  
Loss rate: 5.73%

## Run 5: Report of FillP — Data Link



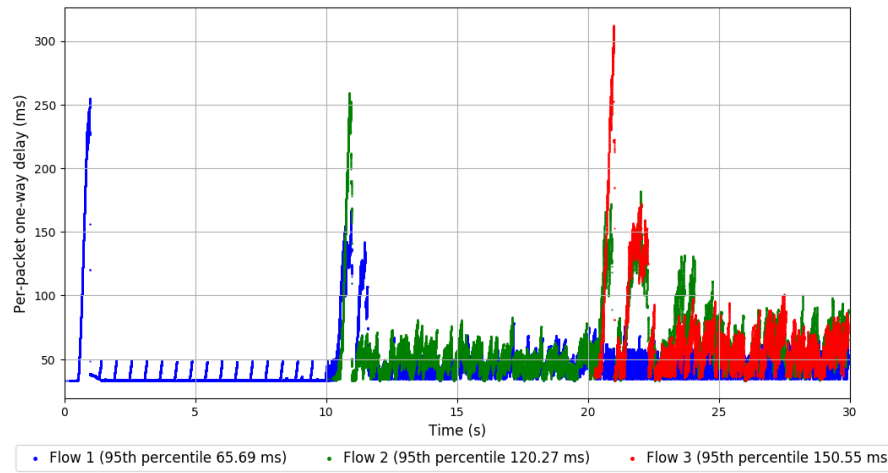
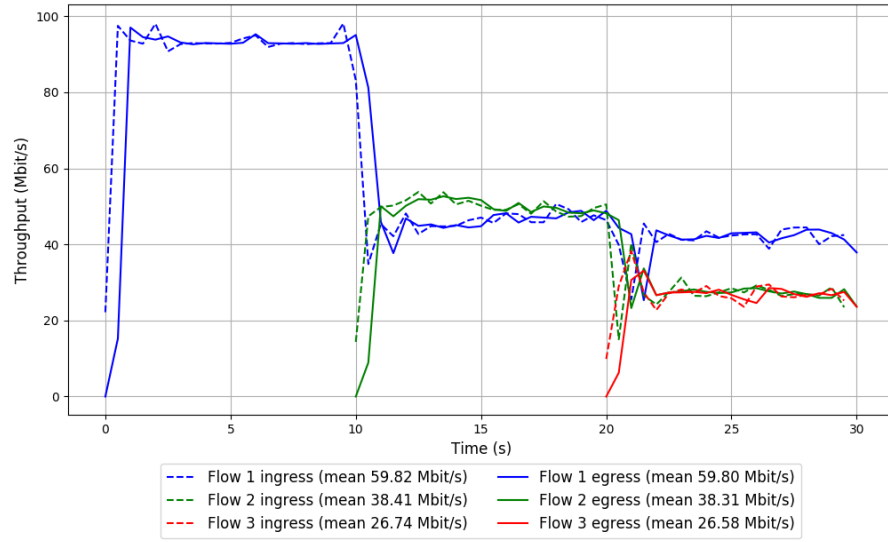


Run 1: Statistics of FillP-Sheep

Start at: 2018-12-02 14:46:28  
End at: 2018-12-02 14:46:58  
Local clock offset: -5.092 ms  
Remote clock offset: -4.038 ms

# Below is generated by plot.py at 2018-12-02 16:42:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.08 Mbit/s  
95th percentile per-packet one-way delay: 106.591 ms  
Loss rate: 0.41%  
-- Flow 1:  
Average throughput: 59.80 Mbit/s  
95th percentile per-packet one-way delay: 65.689 ms  
Loss rate: 0.23%  
-- Flow 2:  
Average throughput: 38.31 Mbit/s  
95th percentile per-packet one-way delay: 120.269 ms  
Loss rate: 0.53%  
-- Flow 3:  
Average throughput: 26.58 Mbit/s  
95th percentile per-packet one-way delay: 150.548 ms  
Loss rate: 1.26%

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

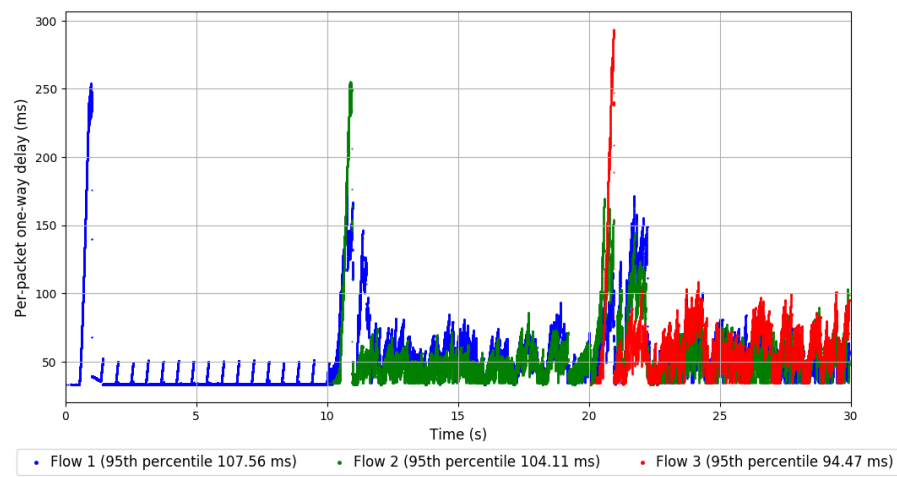
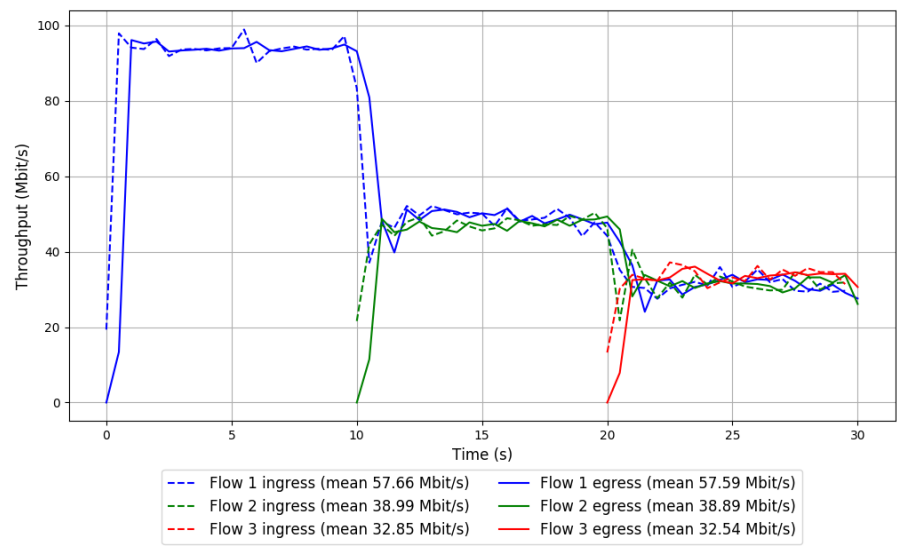


Run 2: Statistics of FillP-Sheep

Start at: 2018-12-02 15:09:49  
End at: 2018-12-02 15:10:19  
Local clock offset: 0.942 ms  
Remote clock offset: -3.466 ms

# Below is generated by plot.py at 2018-12-02 16:42:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.22 Mbit/s  
95th percentile per-packet one-way delay: 103.544 ms  
Loss rate: 0.51%  
-- Flow 1:  
Average throughput: 57.59 Mbit/s  
95th percentile per-packet one-way delay: 107.557 ms  
Loss rate: 0.33%  
-- Flow 2:  
Average throughput: 38.89 Mbit/s  
95th percentile per-packet one-way delay: 104.111 ms  
Loss rate: 0.55%  
-- Flow 3:  
Average throughput: 32.54 Mbit/s  
95th percentile per-packet one-way delay: 94.467 ms  
Loss rate: 1.34%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-12-02 15:33:01

End at: 2018-12-02 15:33:31

Local clock offset: 1.039 ms

Remote clock offset: -2.68 ms

# Below is generated by plot.py at 2018-12-02 16:42:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.09 Mbit/s

95th percentile per-packet one-way delay: 98.477 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 58.14 Mbit/s

95th percentile per-packet one-way delay: 93.847 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 38.19 Mbit/s

95th percentile per-packet one-way delay: 79.475 ms

Loss rate: 0.38%

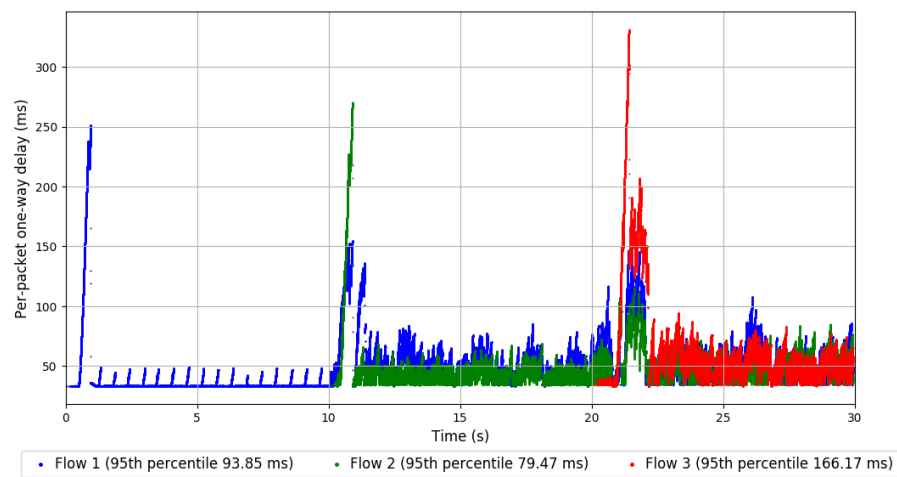
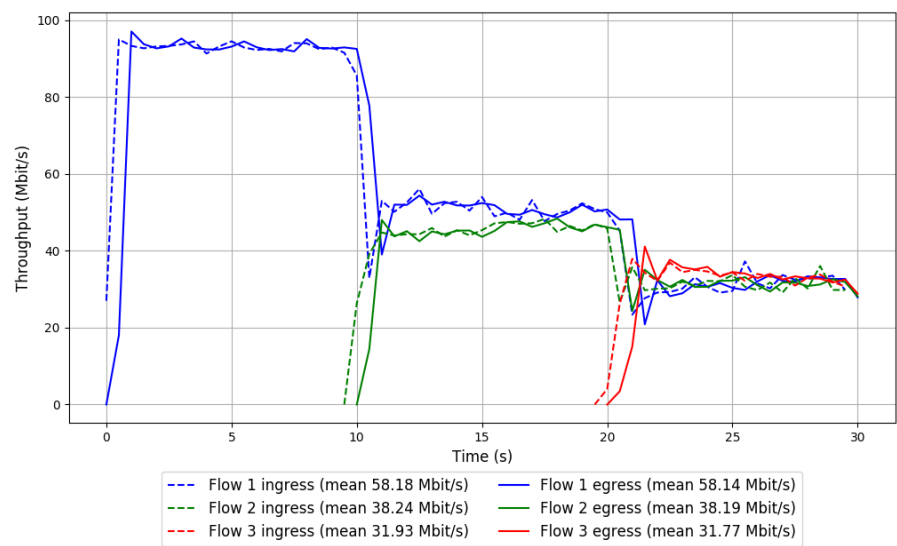
-- Flow 3:

Average throughput: 31.77 Mbit/s

95th percentile per-packet one-way delay: 166.167 ms

Loss rate: 1.11%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2018-12-02 15:56:20

End at: 2018-12-02 15:56:50

Local clock offset: 0.815 ms

Remote clock offset: -2.04 ms

# Below is generated by plot.py at 2018-12-02 16:43:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.91 Mbit/s

95th percentile per-packet one-way delay: 99.093 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 57.08 Mbit/s

95th percentile per-packet one-way delay: 107.430 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 39.61 Mbit/s

95th percentile per-packet one-way delay: 88.585 ms

Loss rate: 0.50%

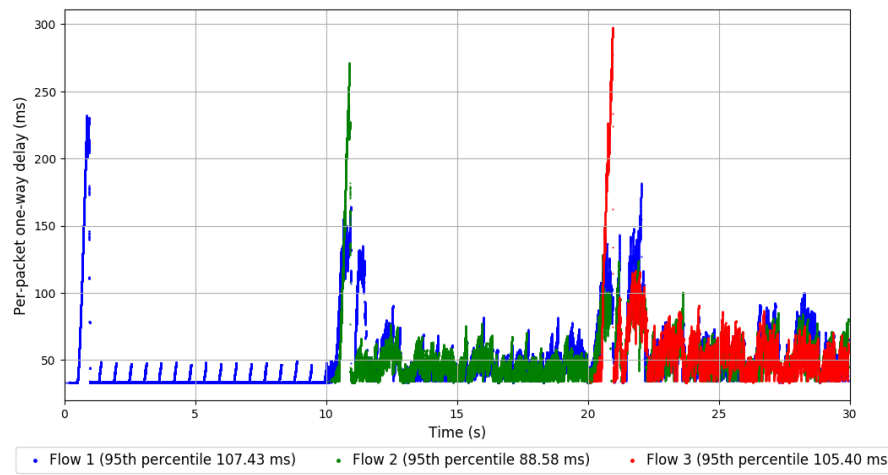
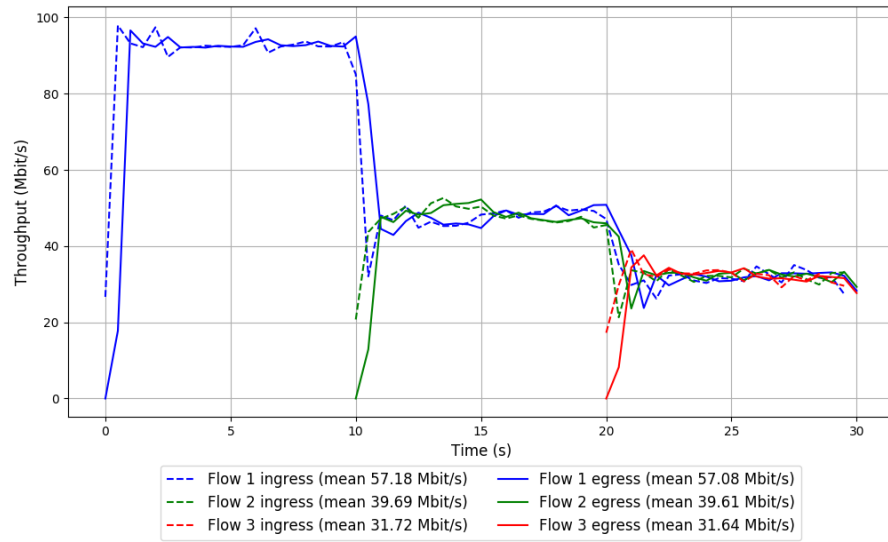
-- Flow 3:

Average throughput: 31.64 Mbit/s

95th percentile per-packet one-way delay: 105.404 ms

Loss rate: 0.85%

# Run 4: Report of FillP-Sheep — Data Link



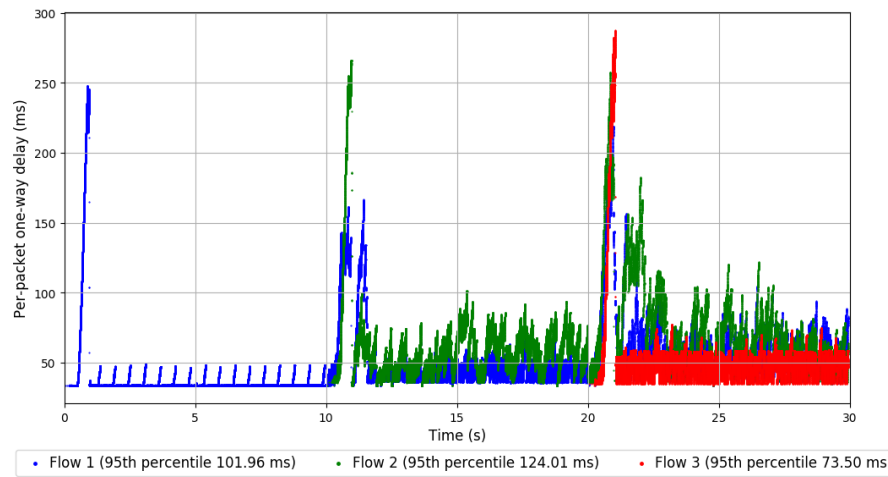
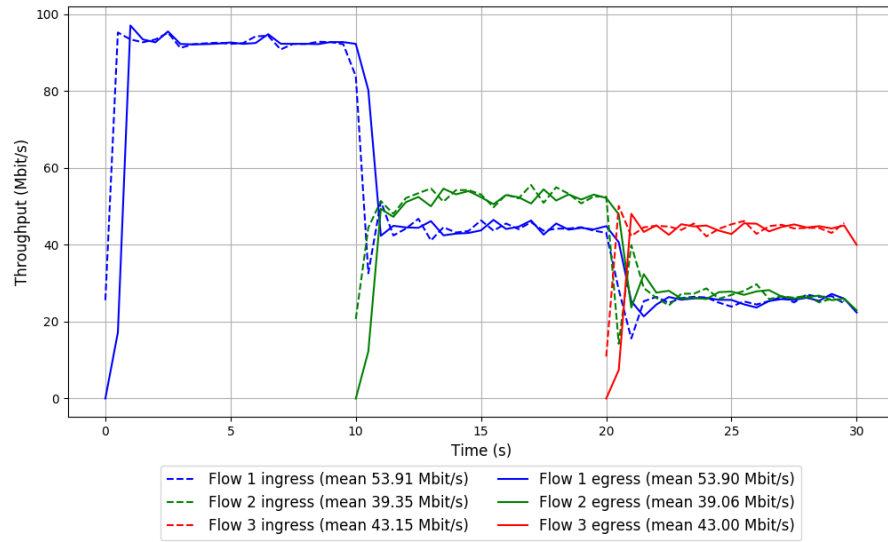


Run 5: Statistics of FillP-Sheep

Start at: 2018-12-02 16:19:49  
End at: 2018-12-02 16:20:19  
Local clock offset: 0.088 ms  
Remote clock offset: -1.771 ms

# Below is generated by plot.py at 2018-12-02 16:43:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.12 Mbit/s  
95th percentile per-packet one-way delay: 110.851 ms  
Loss rate: 0.56%  
-- Flow 1:  
Average throughput: 53.90 Mbit/s  
95th percentile per-packet one-way delay: 101.960 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 39.06 Mbit/s  
95th percentile per-packet one-way delay: 124.012 ms  
Loss rate: 1.04%  
-- Flow 3:  
Average throughput: 43.00 Mbit/s  
95th percentile per-packet one-way delay: 73.503 ms  
Loss rate: 0.96%

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

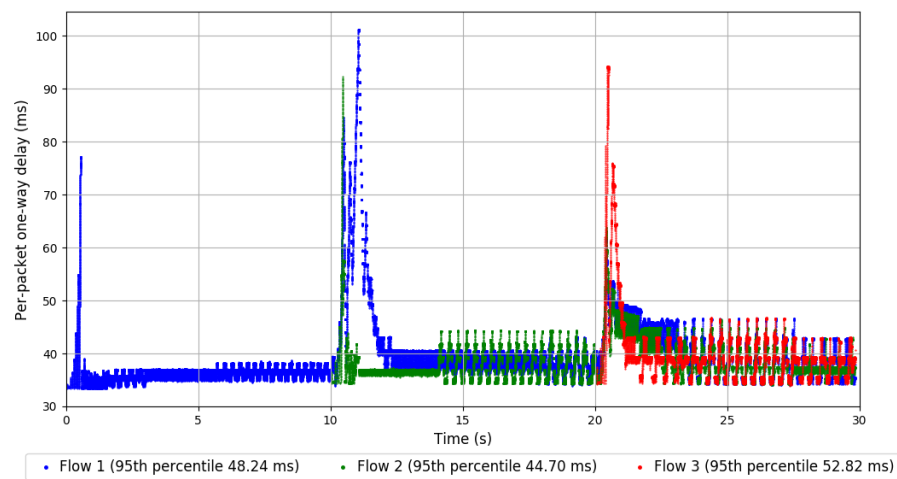
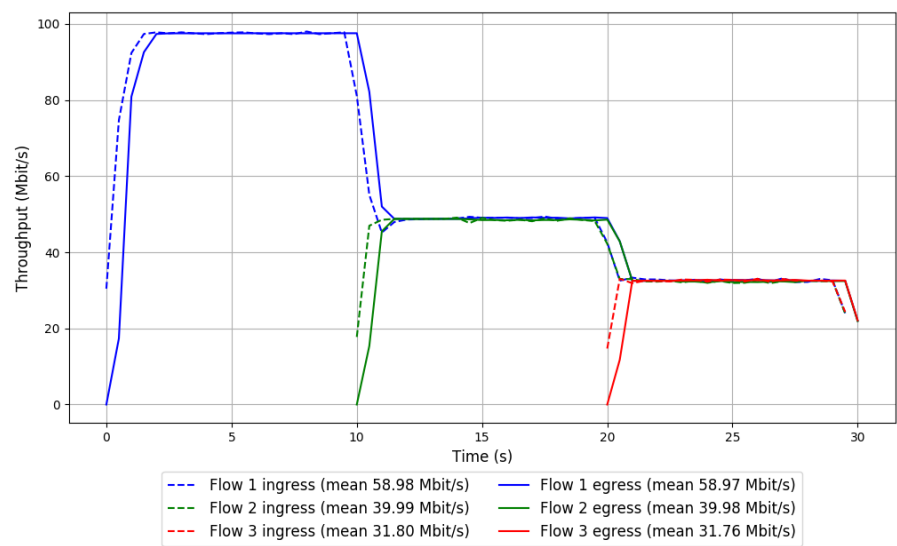


Run 1: Statistics of Indigo

Start at: 2018-12-02 14:51:24  
End at: 2018-12-02 14:51:54  
Local clock offset: -3.128 ms  
Remote clock offset: -4.156 ms

# Below is generated by plot.py at 2018-12-02 16:43:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.92 Mbit/s  
95th percentile per-packet one-way delay: 46.805 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 58.97 Mbit/s  
95th percentile per-packet one-way delay: 48.237 ms  
Loss rate: 0.23%  
-- Flow 2:  
Average throughput: 39.98 Mbit/s  
95th percentile per-packet one-way delay: 44.700 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 31.76 Mbit/s  
95th percentile per-packet one-way delay: 52.820 ms  
Loss rate: 0.79%

Run 1: Report of Indigo — Data Link

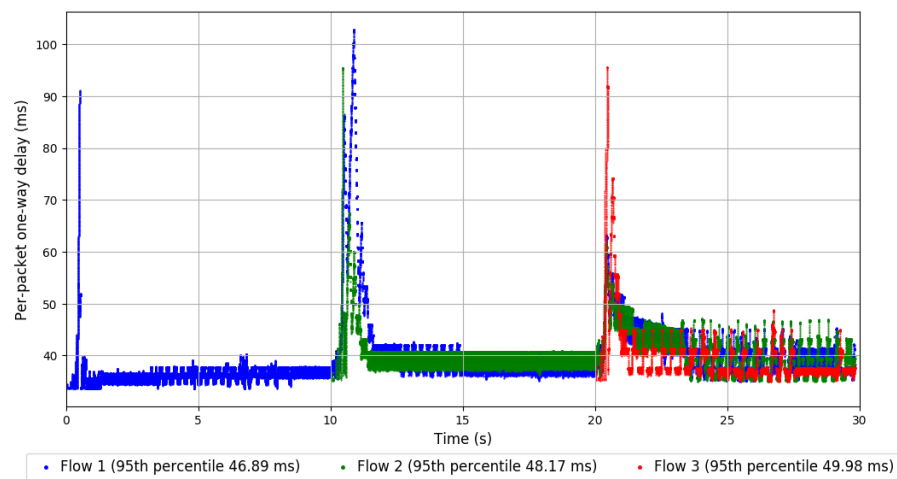
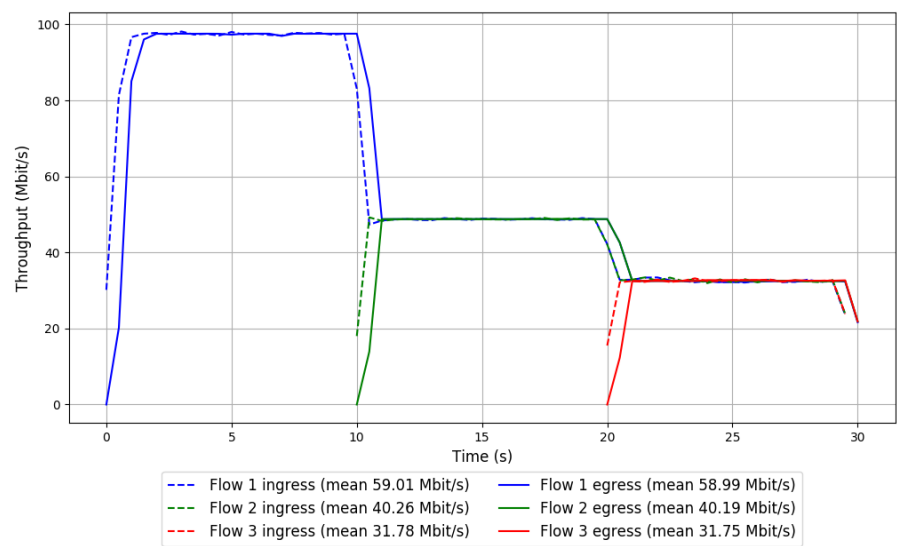


Run 2: Statistics of Indigo

Start at: 2018-12-02 15:14:44  
End at: 2018-12-02 15:15:14  
Local clock offset: 1.378 ms  
Remote clock offset: -3.432 ms

# Below is generated by plot.py at 2018-12-02 16:43:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.09 Mbit/s  
95th percentile per-packet one-way delay: 47.542 ms  
Loss rate: 0.37%  
-- Flow 1:  
Average throughput: 58.99 Mbit/s  
95th percentile per-packet one-way delay: 46.891 ms  
Loss rate: 0.25%  
-- Flow 2:  
Average throughput: 40.19 Mbit/s  
95th percentile per-packet one-way delay: 48.172 ms  
Loss rate: 0.50%  
-- Flow 3:  
Average throughput: 31.75 Mbit/s  
95th percentile per-packet one-way delay: 49.975 ms  
Loss rate: 0.75%

Run 2: Report of Indigo — Data Link

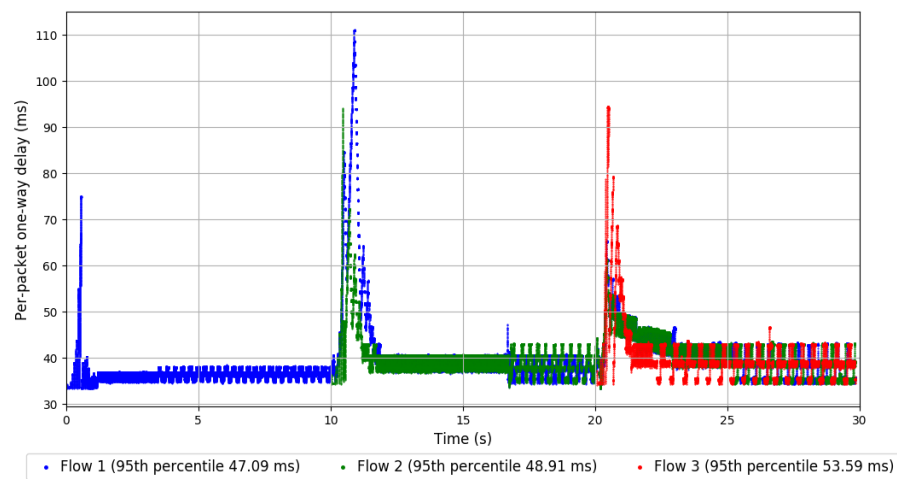
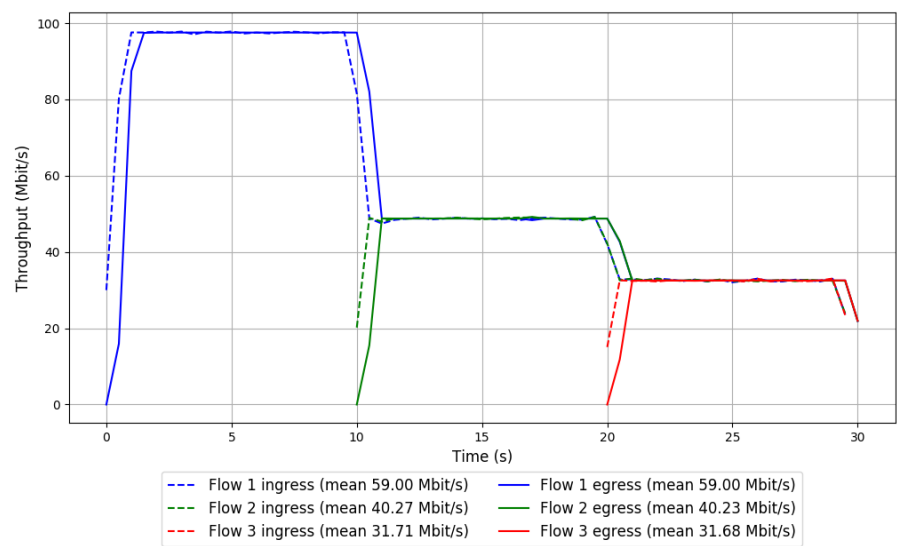


Run 3: Statistics of Indigo

Start at: 2018-12-02 15:38:00  
End at: 2018-12-02 15:38:30  
Local clock offset: 1.11 ms  
Remote clock offset: -2.528 ms

# Below is generated by plot.py at 2018-12-02 16:43:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.09 Mbit/s  
95th percentile per-packet one-way delay: 48.813 ms  
Loss rate: 0.33%  
-- Flow 1:  
Average throughput: 59.00 Mbit/s  
95th percentile per-packet one-way delay: 47.094 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 40.23 Mbit/s  
95th percentile per-packet one-way delay: 48.907 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 31.68 Mbit/s  
95th percentile per-packet one-way delay: 53.590 ms  
Loss rate: 0.76%

Run 3: Report of Indigo — Data Link



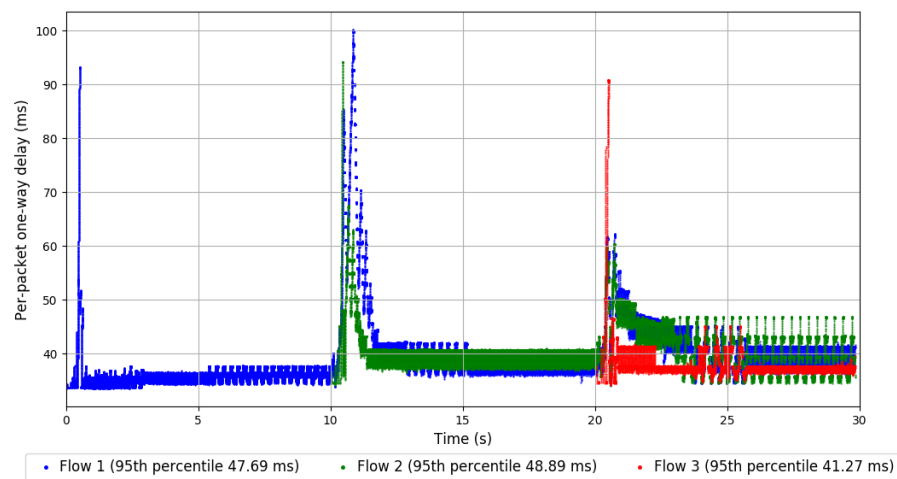
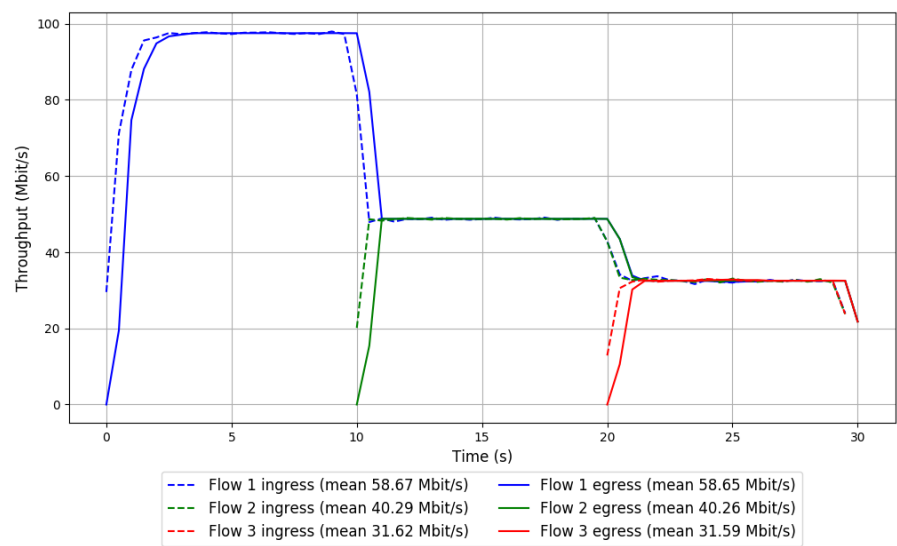


Run 4: Statistics of Indigo

Start at: 2018-12-02 16:01:29  
End at: 2018-12-02 16:01:59  
Local clock offset: 0.741 ms  
Remote clock offset: -2.038 ms

# Below is generated by plot.py at 2018-12-02 16:43:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.72 Mbit/s  
95th percentile per-packet one-way delay: 47.459 ms  
Loss rate: 0.33%  
-- Flow 1:  
Average throughput: 58.65 Mbit/s  
95th percentile per-packet one-way delay: 47.693 ms  
Loss rate: 0.24%  
-- Flow 2:  
Average throughput: 40.26 Mbit/s  
95th percentile per-packet one-way delay: 48.889 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 31.59 Mbit/s  
95th percentile per-packet one-way delay: 41.272 ms  
Loss rate: 0.71%

Run 4: Report of Indigo — Data Link

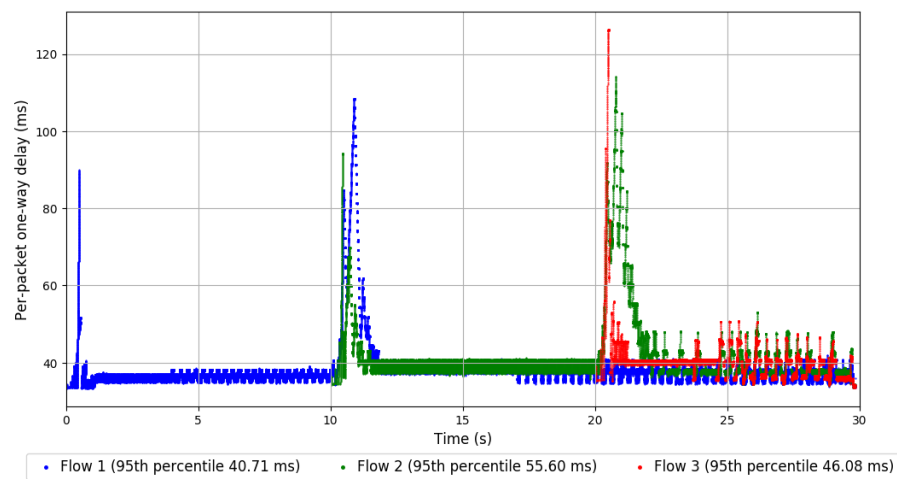
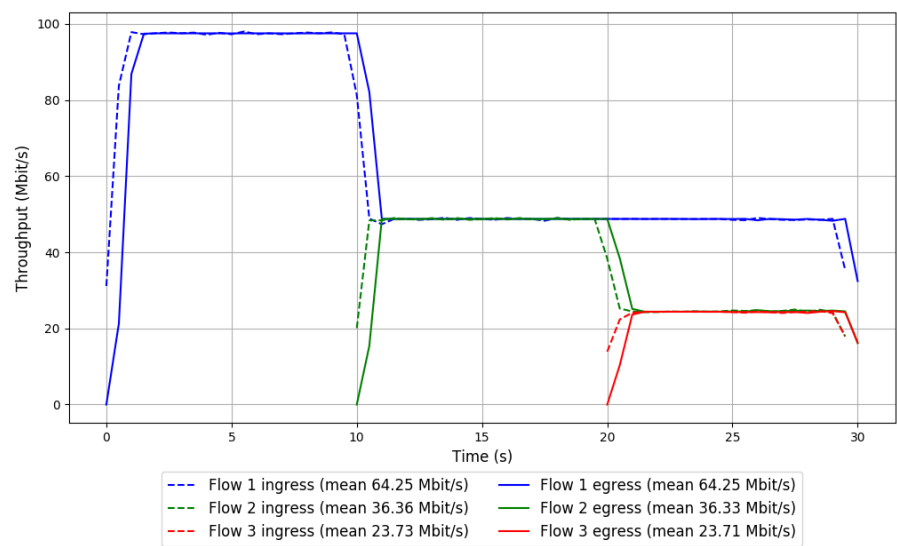


Run 5: Statistics of Indigo

Start at: 2018-12-02 16:24:46  
End at: 2018-12-02 16:25:16  
Local clock offset: -1.252 ms  
Remote clock offset: -1.431 ms

# Below is generated by plot.py at 2018-12-02 16:43:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.16 Mbit/s  
95th percentile per-packet one-way delay: 46.186 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 64.25 Mbit/s  
95th percentile per-packet one-way delay: 40.711 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 36.33 Mbit/s  
95th percentile per-packet one-way delay: 55.603 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 23.71 Mbit/s  
95th percentile per-packet one-way delay: 46.077 ms  
Loss rate: 0.77%

Run 5: Report of Indigo — Data Link

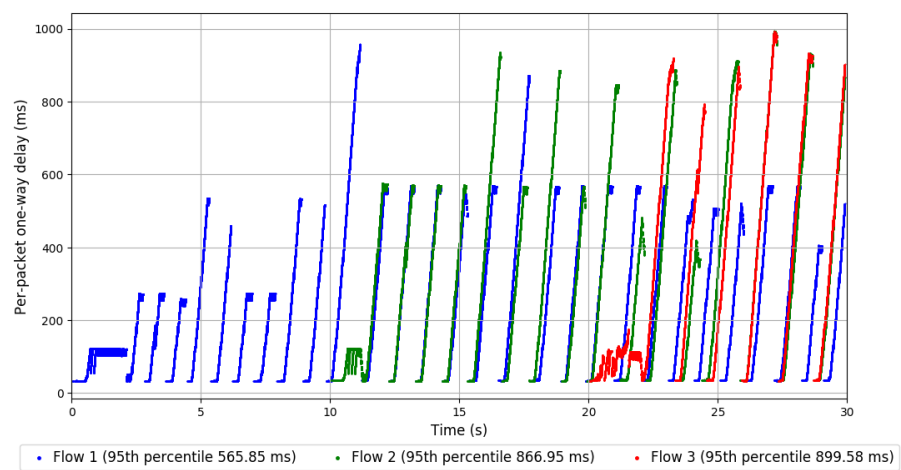
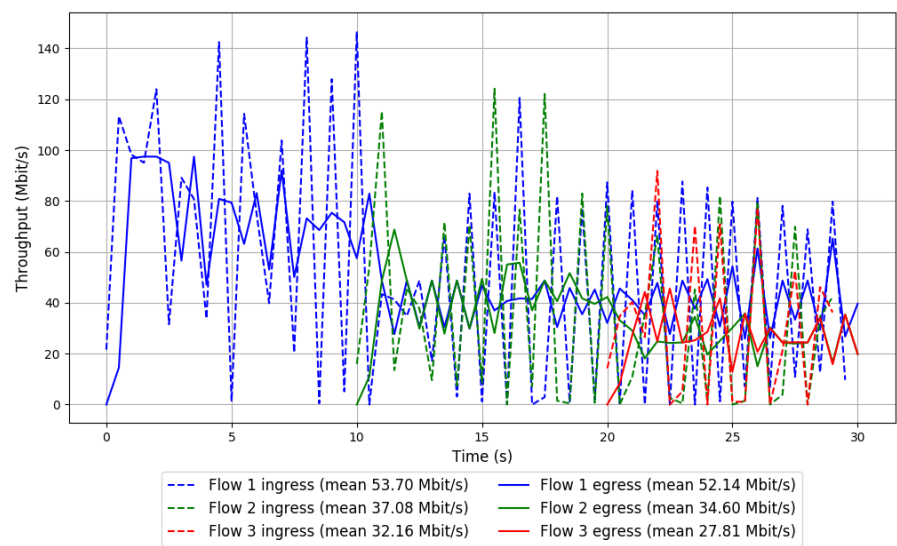


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-12-02 14:42:36  
End at: 2018-12-02 14:43:06  
Local clock offset: -4.919 ms  
Remote clock offset: -4.131 ms

# Below is generated by plot.py at 2018-12-02 16:43:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.31 Mbit/s  
95th percentile per-packet one-way delay: 790.082 ms  
Loss rate: 2.89%  
-- Flow 1:  
Average throughput: 52.14 Mbit/s  
95th percentile per-packet one-way delay: 565.852 ms  
Loss rate: 1.98%  
-- Flow 2:  
Average throughput: 34.60 Mbit/s  
95th percentile per-packet one-way delay: 866.952 ms  
Loss rate: 3.20%  
-- Flow 3:  
Average throughput: 27.81 Mbit/s  
95th percentile per-packet one-way delay: 899.579 ms  
Loss rate: 7.05%

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



Run 2: Statistics of Indigo-96d2da3

Start at: 2018-12-02 15:06:03

End at: 2018-12-02 15:06:33

Local clock offset: 0.504 ms

Remote clock offset: -3.59 ms

# Below is generated by plot.py at 2018-12-02 16:44:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.12 Mbit/s

95th percentile per-packet one-way delay: 799.418 ms

Loss rate: 4.04%

-- Flow 1:

Average throughput: 55.05 Mbit/s

95th percentile per-packet one-way delay: 692.509 ms

Loss rate: 3.02%

-- Flow 2:

Average throughput: 41.76 Mbit/s

95th percentile per-packet one-way delay: 569.951 ms

Loss rate: 4.89%

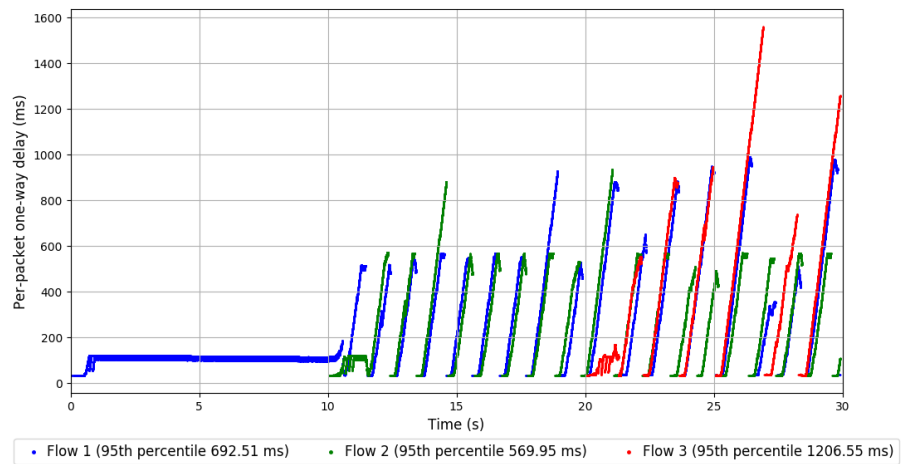
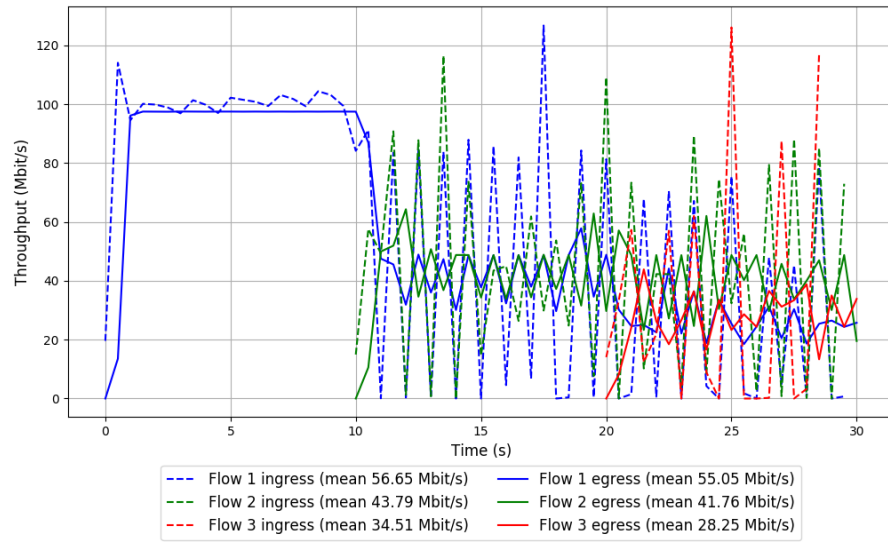
-- Flow 3:

Average throughput: 28.25 Mbit/s

95th percentile per-packet one-way delay: 1206.550 ms

Loss rate: 7.36%

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



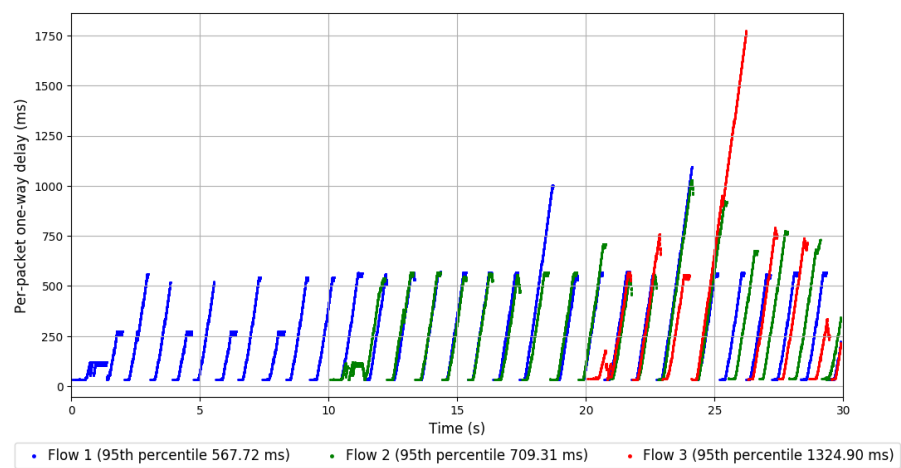
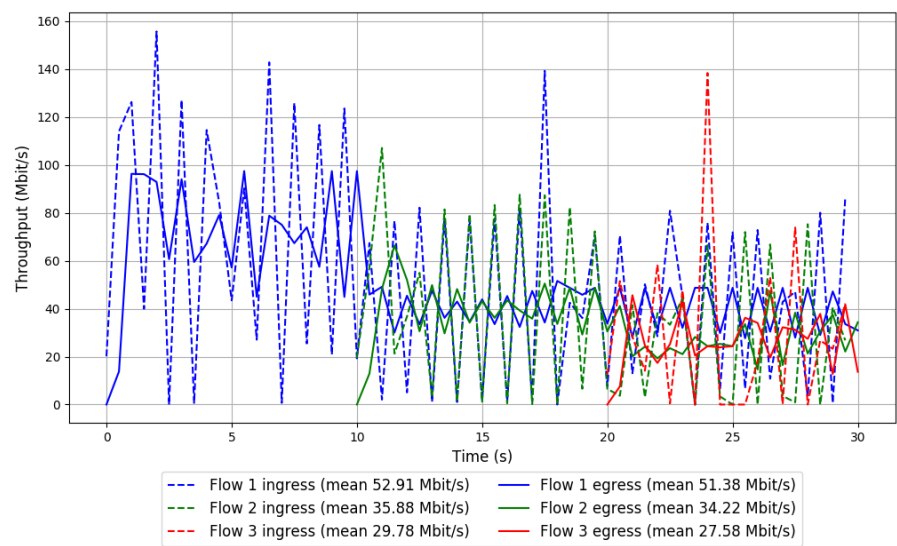


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-12-02 15:29:10  
End at: 2018-12-02 15:29:40  
Local clock offset: 1.024 ms  
Remote clock offset: -2.904 ms

# Below is generated by plot.py at 2018-12-02 16:44:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 83.22 Mbit/s  
95th percentile per-packet one-way delay: 729.189 ms  
Loss rate: 3.69%  
-- Flow 1:  
Average throughput: 51.38 Mbit/s  
95th percentile per-packet one-way delay: 567.716 ms  
Loss rate: 2.96%  
-- Flow 2:  
Average throughput: 34.22 Mbit/s  
95th percentile per-packet one-way delay: 709.311 ms  
Loss rate: 3.59%  
-- Flow 3:  
Average throughput: 27.58 Mbit/s  
95th percentile per-packet one-way delay: 1324.899 ms  
Loss rate: 7.78%

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

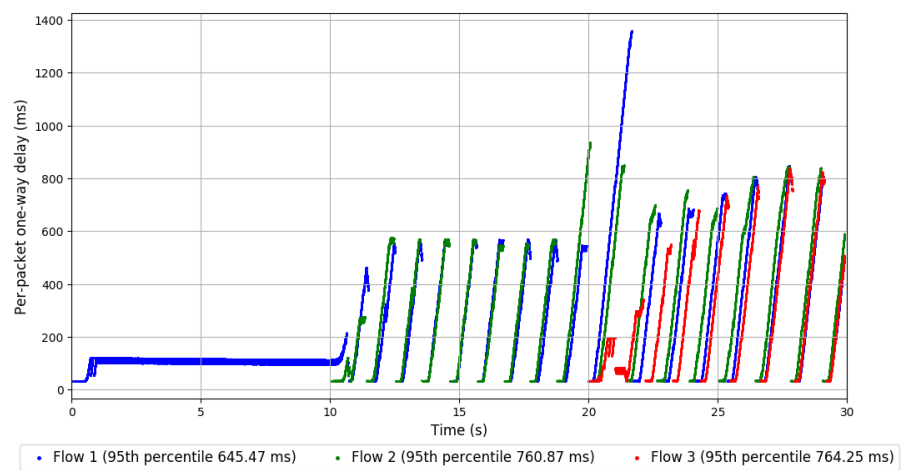
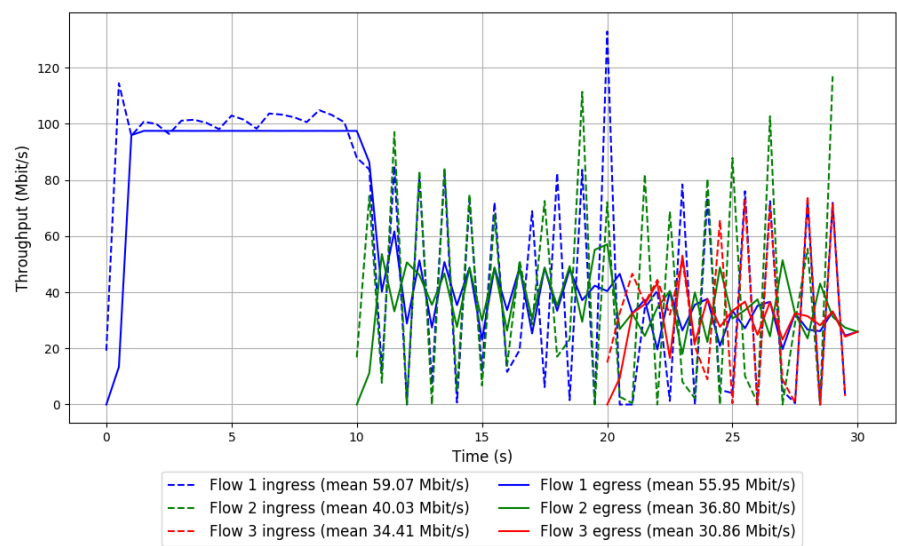


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-12-02 15:52:31  
End at: 2018-12-02 15:53:01  
Local clock offset: 0.961 ms  
Remote clock offset: -2.116 ms

# Below is generated by plot.py at 2018-12-02 16:44:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.58 Mbit/s  
95th percentile per-packet one-way delay: 716.425 ms  
Loss rate: 5.07%  
-- Flow 1:  
Average throughput: 55.95 Mbit/s  
95th percentile per-packet one-way delay: 645.472 ms  
Loss rate: 4.23%  
-- Flow 2:  
Average throughput: 36.80 Mbit/s  
95th percentile per-packet one-way delay: 760.873 ms  
Loss rate: 6.01%  
-- Flow 3:  
Average throughput: 30.86 Mbit/s  
95th percentile per-packet one-way delay: 764.254 ms  
Loss rate: 7.30%

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



Run 5: Statistics of Indigo-96d2da3

Start at: 2018-12-02 16:16:05

End at: 2018-12-02 16:16:35

Local clock offset: 0.859 ms

Remote clock offset: -1.69 ms

# Below is generated by plot.py at 2018-12-02 16:44:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 83.83 Mbit/s

95th percentile per-packet one-way delay: 730.201 ms

Loss rate: 3.61%

-- Flow 1:

Average throughput: 52.37 Mbit/s

95th percentile per-packet one-way delay: 554.511 ms

Loss rate: 1.41%

-- Flow 2:

Average throughput: 34.41 Mbit/s

95th percentile per-packet one-way delay: 856.008 ms

Loss rate: 6.35%

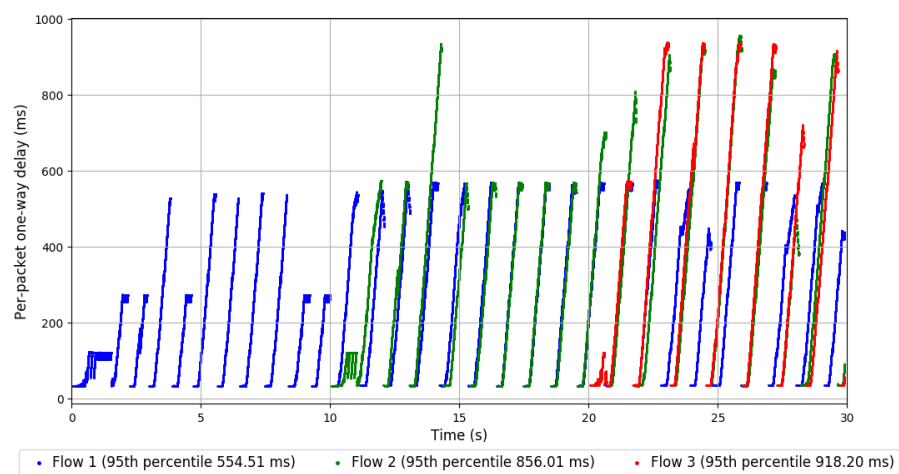
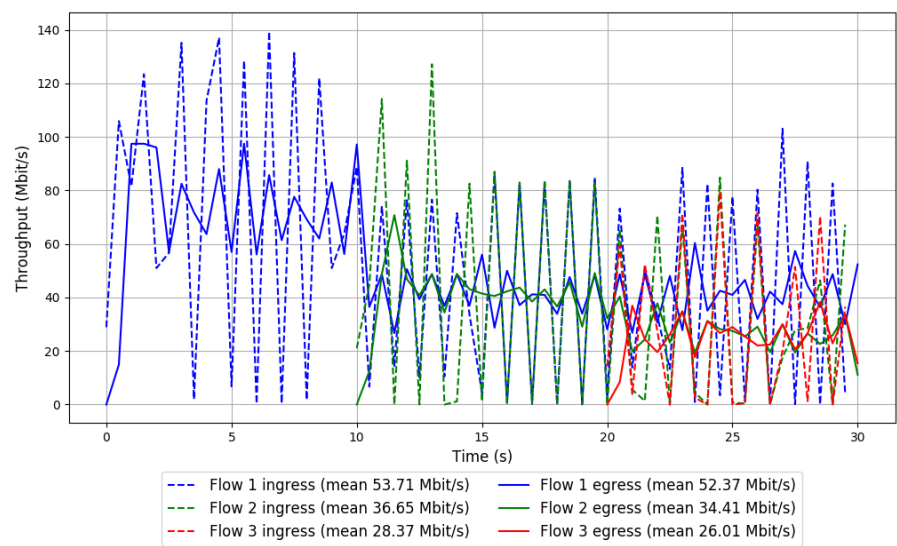
-- Flow 3:

Average throughput: 26.01 Mbit/s

95th percentile per-packet one-way delay: 918.200 ms

Loss rate: 8.92%

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

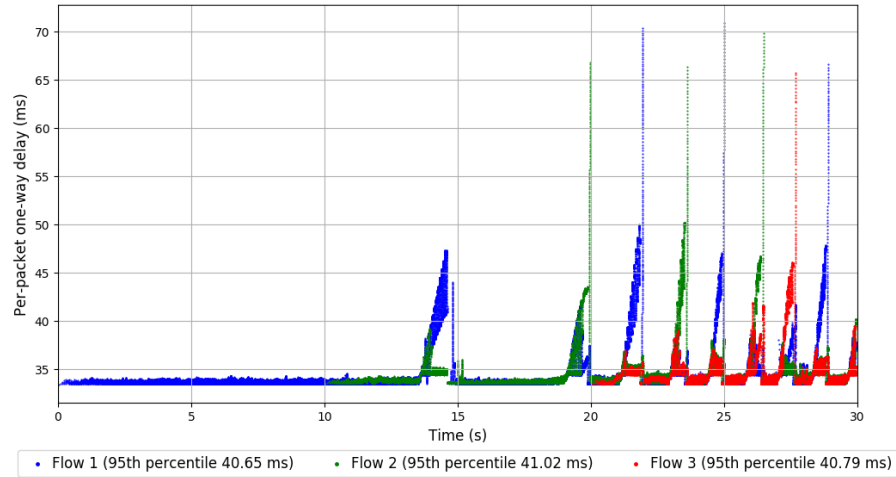
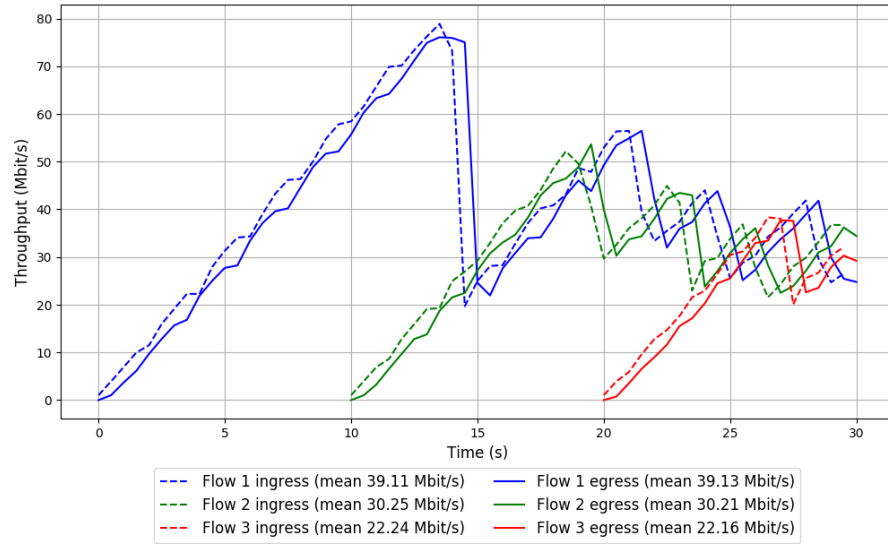


```
Run 1: Statistics of LEDBAT

Start at: 2018-12-02 14:41:24
End at: 2018-12-02 14:41:54
Local clock offset: -4.865 ms
Remote clock offset: -4.212 ms

# Below is generated by plot.py at 2018-12-02 16:44:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.57 Mbit/s
95th percentile per-packet one-way delay: 40.724 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 39.13 Mbit/s
95th percentile per-packet one-way delay: 40.647 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 30.21 Mbit/s
95th percentile per-packet one-way delay: 41.018 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 22.16 Mbit/s
95th percentile per-packet one-way delay: 40.790 ms
Loss rate: 1.01%
```

## Run 1: Report of LEDBAT — Data Link





Run 2: Statistics of LEDBAT

Start at: 2018-12-02 15:04:50

End at: 2018-12-02 15:05:20

Local clock offset: 0.352 ms

Remote clock offset: -3.57 ms

# Below is generated by plot.py at 2018-12-02 16:44:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 68.47 Mbit/s

95th percentile per-packet one-way delay: 41.749 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 38.92 Mbit/s

95th percentile per-packet one-way delay: 41.999 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 34.61 Mbit/s

95th percentile per-packet one-way delay: 41.087 ms

Loss rate: 0.50%

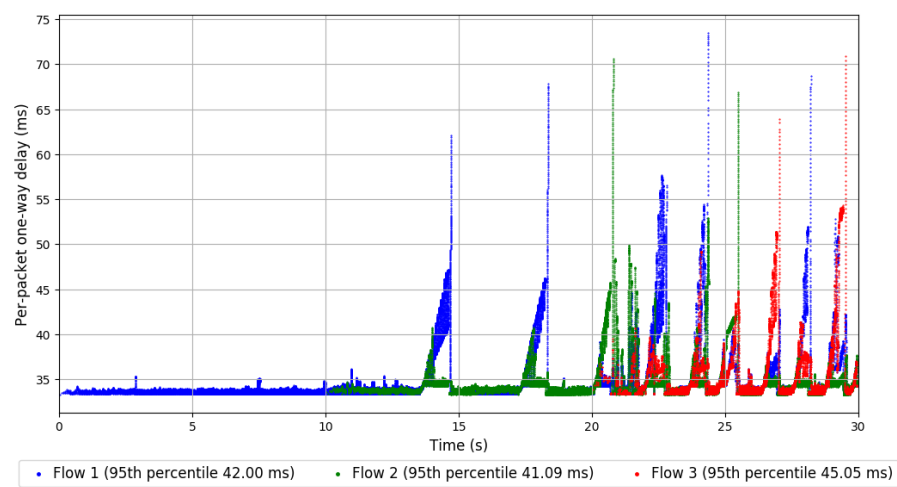
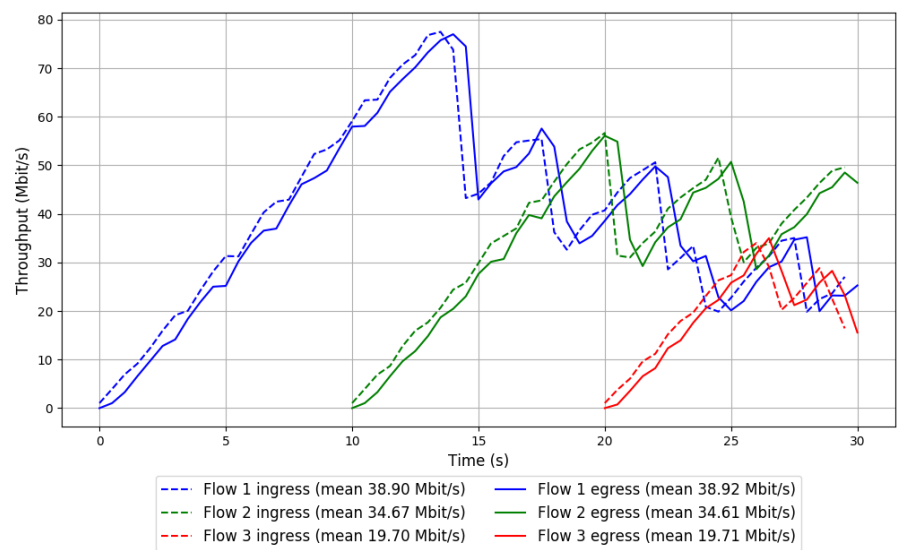
-- Flow 3:

Average throughput: 19.71 Mbit/s

95th percentile per-packet one-way delay: 45.051 ms

Loss rate: 0.63%

Run 2: Report of LEDBAT — Data Link

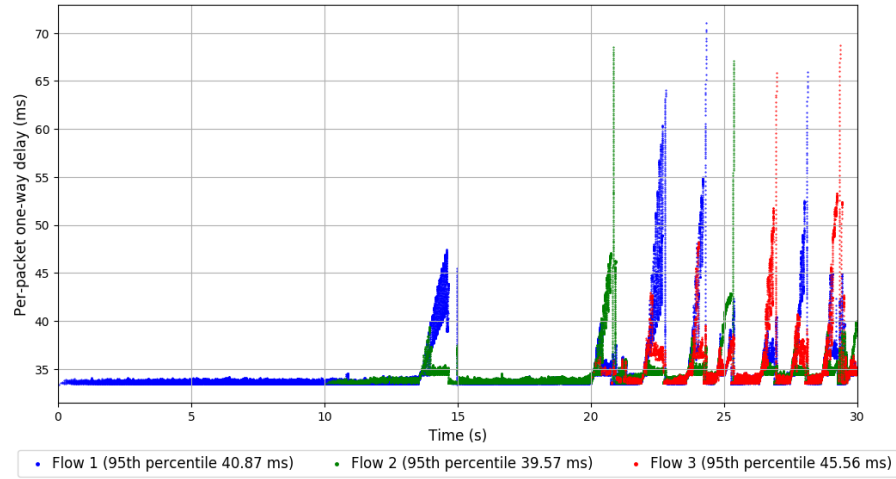
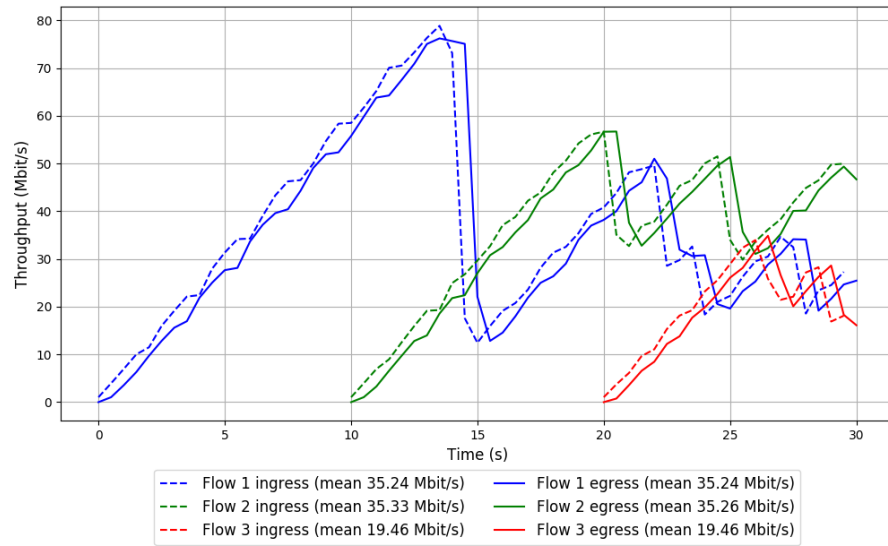


Run 3: Statistics of LEDBAT

Start at: 2018-12-02 15:27:57  
End at: 2018-12-02 15:28:27  
Local clock offset: 1.035 ms  
Remote clock offset: -2.821 ms

# Below is generated by plot.py at 2018-12-02 16:44:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 65.16 Mbit/s  
95th percentile per-packet one-way delay: 40.971 ms  
Loss rate: 0.36%  
-- Flow 1:  
Average throughput: 35.24 Mbit/s  
95th percentile per-packet one-way delay: 40.868 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 35.26 Mbit/s  
95th percentile per-packet one-way delay: 39.569 ms  
Loss rate: 0.50%  
-- Flow 3:  
Average throughput: 19.46 Mbit/s  
95th percentile per-packet one-way delay: 45.563 ms  
Loss rate: 0.65%

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

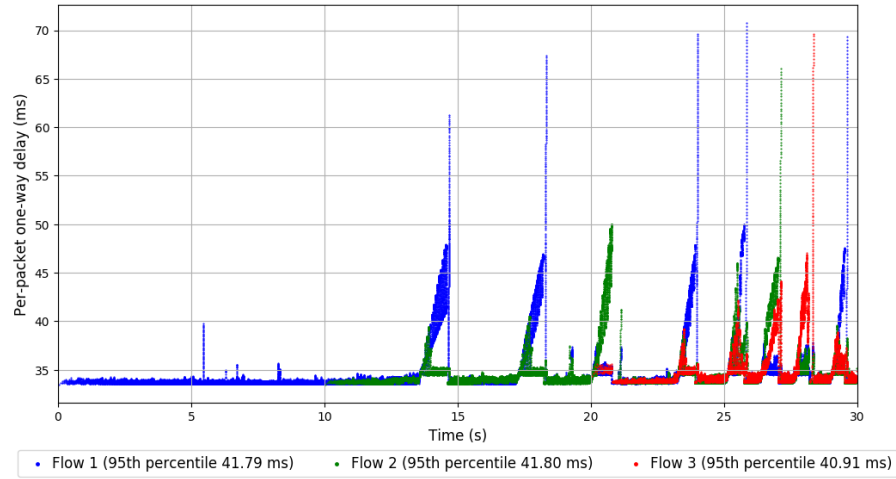
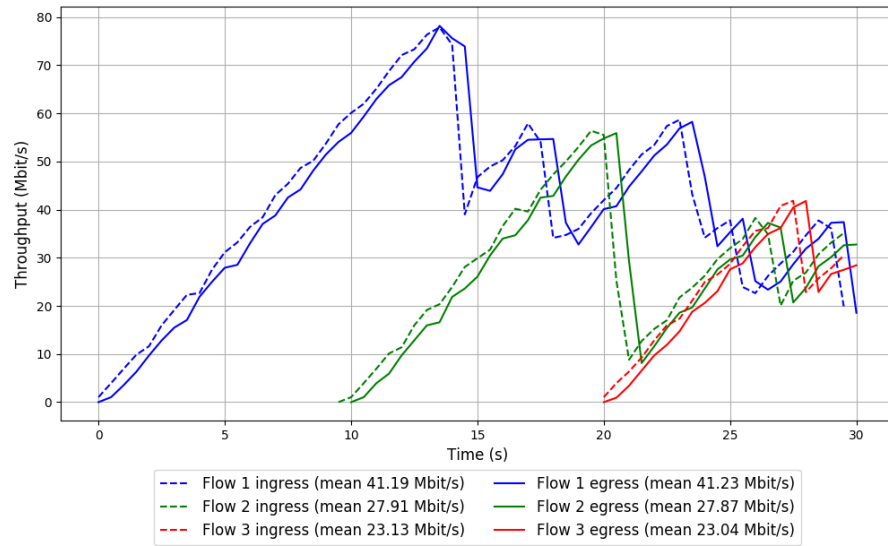


Run 4: Statistics of LEDBAT

Start at: 2018-12-02 15:51:14  
End at: 2018-12-02 15:51:44  
Local clock offset: 1.039 ms  
Remote clock offset: -2.322 ms

# Below is generated by plot.py at 2018-12-02 16:44:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 67.42 Mbit/s  
95th percentile per-packet one-way delay: 41.662 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 41.23 Mbit/s  
95th percentile per-packet one-way delay: 41.787 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 27.87 Mbit/s  
95th percentile per-packet one-way delay: 41.797 ms  
Loss rate: 0.44%  
-- Flow 3:  
Average throughput: 23.04 Mbit/s  
95th percentile per-packet one-way delay: 40.908 ms  
Loss rate: 1.00%

# Run 4: Report of LEDBAT — Data Link

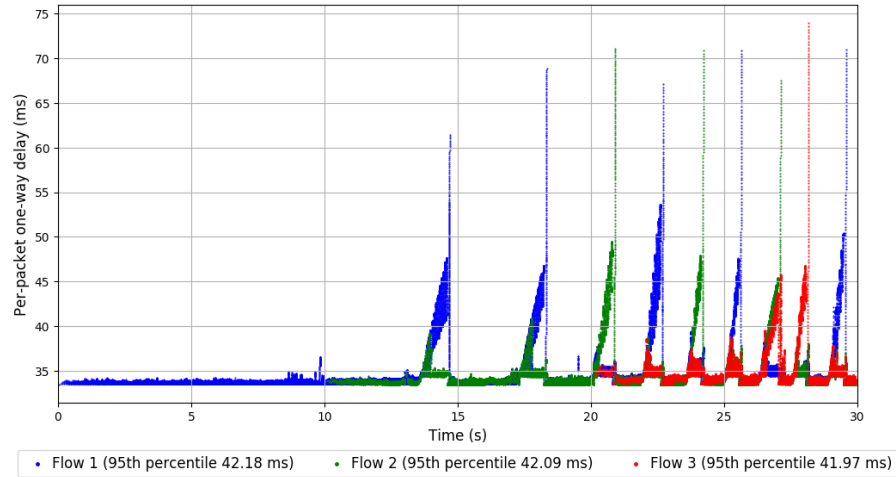
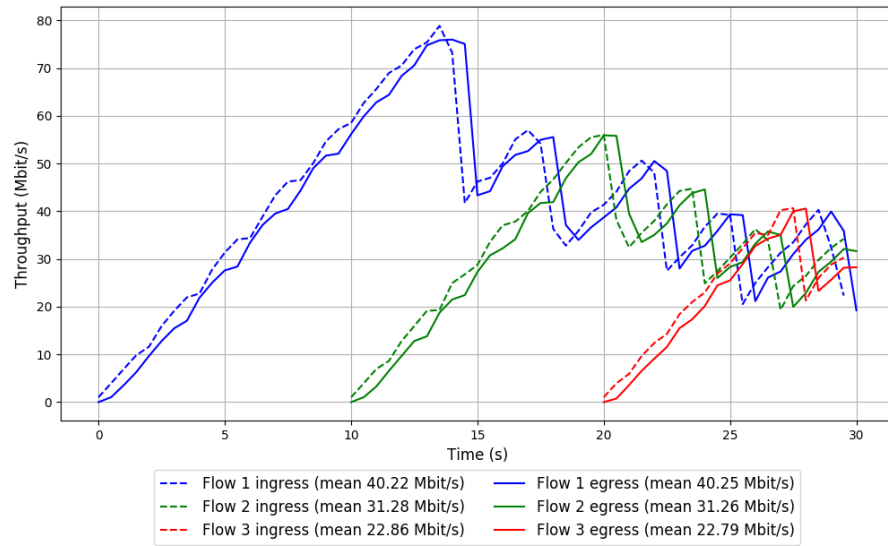


Run 5: Statistics of LEDBAT

Start at: 2018-12-02 16:14:51  
End at: 2018-12-02 16:15:21  
Local clock offset: 0.845 ms  
Remote clock offset: -1.709 ms

# Below is generated by plot.py at 2018-12-02 16:44:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 68.60 Mbit/s  
95th percentile per-packet one-way delay: 42.130 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 40.25 Mbit/s  
95th percentile per-packet one-way delay: 42.177 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 31.26 Mbit/s  
95th percentile per-packet one-way delay: 42.095 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 22.79 Mbit/s  
95th percentile per-packet one-way delay: 41.973 ms  
Loss rate: 0.94%

## Run 5: Report of LEDBAT — Data Link



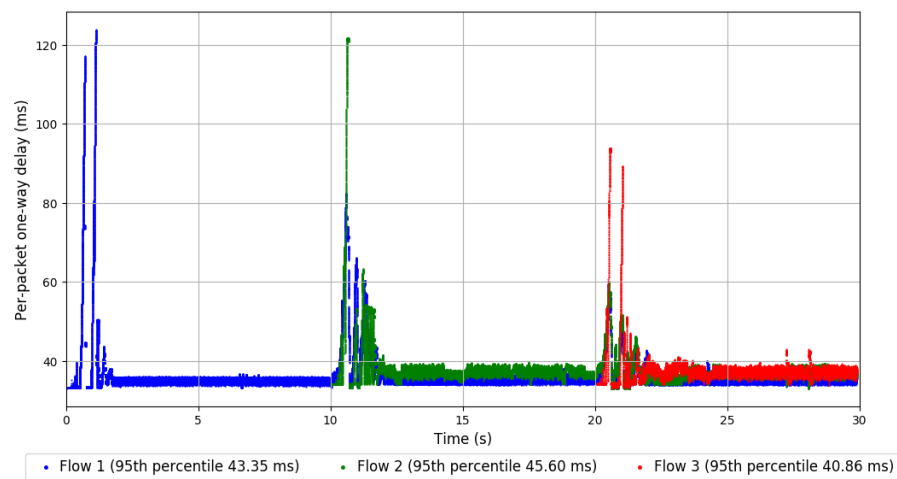
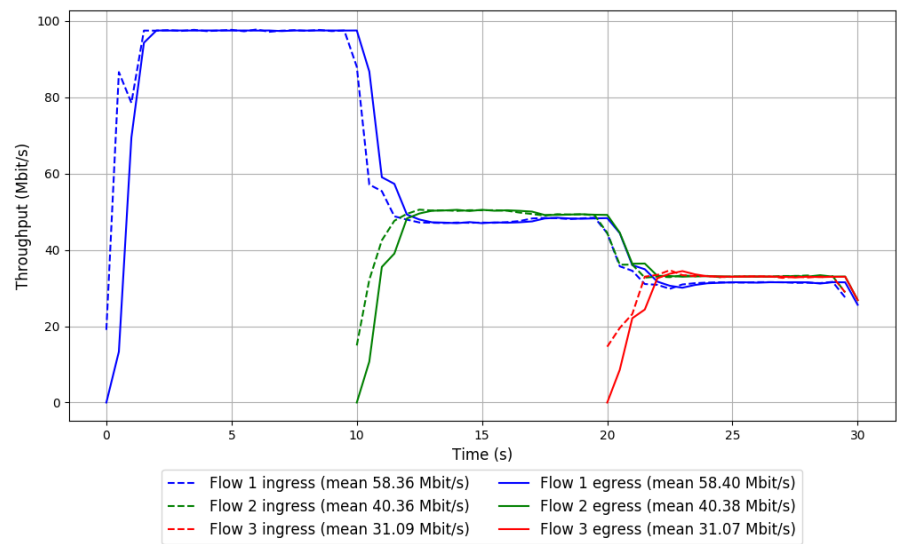


Run 1: Statistics of Indigo-Muses

Start at: 2018-12-02 14:52:38  
End at: 2018-12-02 14:53:08  
Local clock offset: -2.621 ms  
Remote clock offset: -3.944 ms

# Below is generated by plot.py at 2018-12-02 16:45:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.49 Mbit/s  
95th percentile per-packet one-way delay: 43.724 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 58.40 Mbit/s  
95th percentile per-packet one-way delay: 43.350 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 40.38 Mbit/s  
95th percentile per-packet one-way delay: 45.602 ms  
Loss rate: 0.29%  
-- Flow 3:  
Average throughput: 31.07 Mbit/s  
95th percentile per-packet one-way delay: 40.864 ms  
Loss rate: 0.73%

Run 1: Report of Indigo-Muses — Data Link

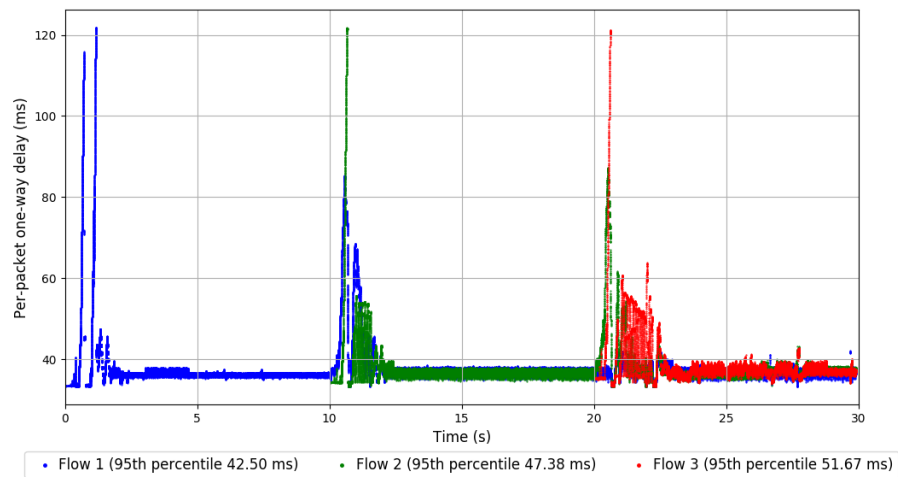
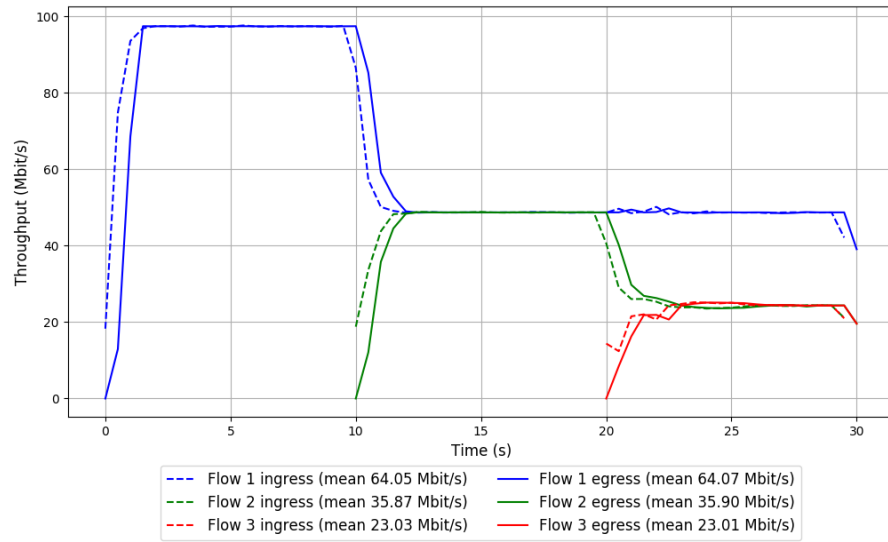


Run 2: Statistics of Indigo-Muses

Start at: 2018-12-02 15:15:58  
End at: 2018-12-02 15:16:28  
Local clock offset: 1.464 ms  
Remote clock offset: -3.097 ms

# Below is generated by plot.py at 2018-12-02 16:45:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.53 Mbit/s  
95th percentile per-packet one-way delay: 44.916 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 64.07 Mbit/s  
95th percentile per-packet one-way delay: 42.498 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 35.90 Mbit/s  
95th percentile per-packet one-way delay: 47.379 ms  
Loss rate: 0.25%  
-- Flow 3:  
Average throughput: 23.01 Mbit/s  
95th percentile per-packet one-way delay: 51.675 ms  
Loss rate: 0.72%

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

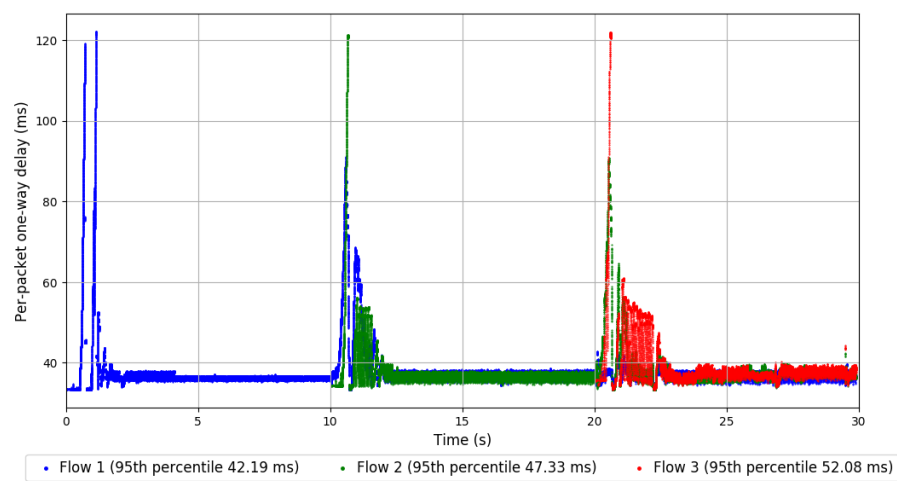
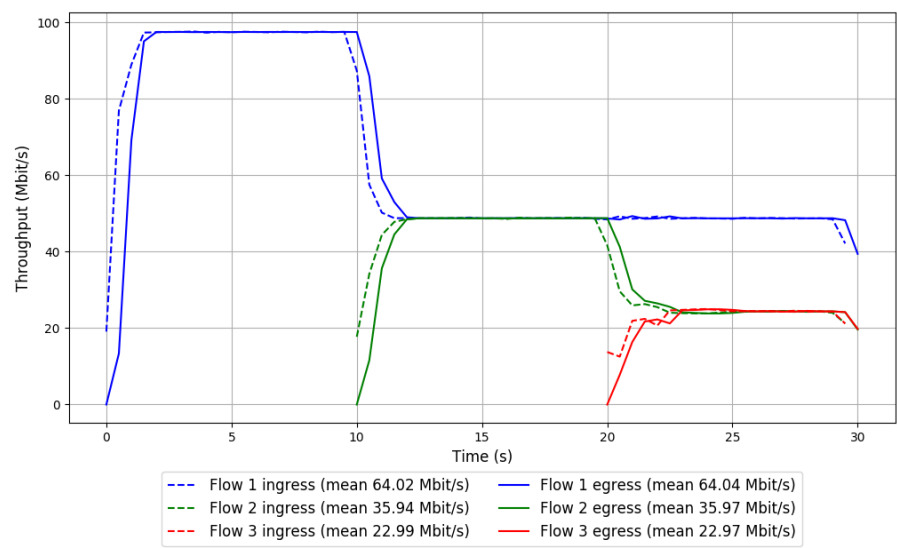


Run 3: Statistics of Indigo-Muses

Start at: 2018-12-02 15:39:14  
End at: 2018-12-02 15:39:44  
Local clock offset: 1.125 ms  
Remote clock offset: -2.461 ms

# Below is generated by plot.py at 2018-12-02 16:45:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.53 Mbit/s  
95th percentile per-packet one-way delay: 45.584 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 64.04 Mbit/s  
95th percentile per-packet one-way delay: 42.186 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 35.97 Mbit/s  
95th percentile per-packet one-way delay: 47.328 ms  
Loss rate: 0.25%  
-- Flow 3:  
Average throughput: 22.97 Mbit/s  
95th percentile per-packet one-way delay: 52.078 ms  
Loss rate: 0.75%

Run 3: Report of Indigo-Muses — Data Link

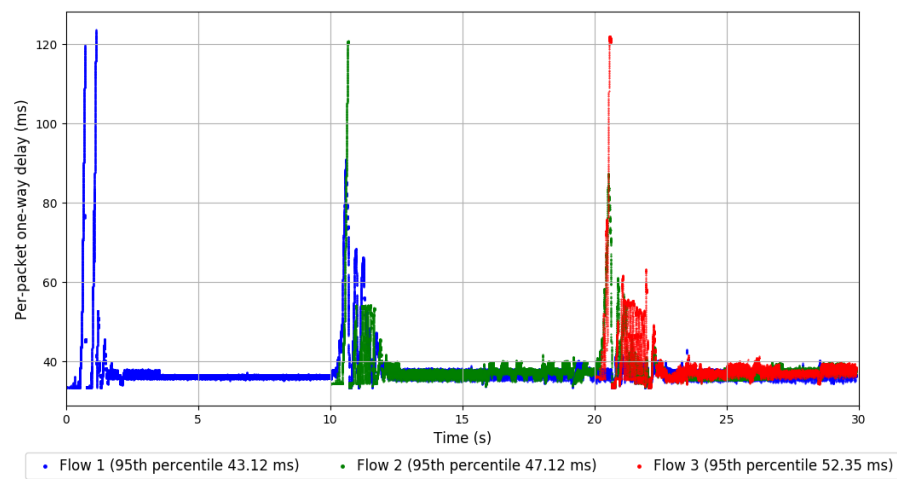
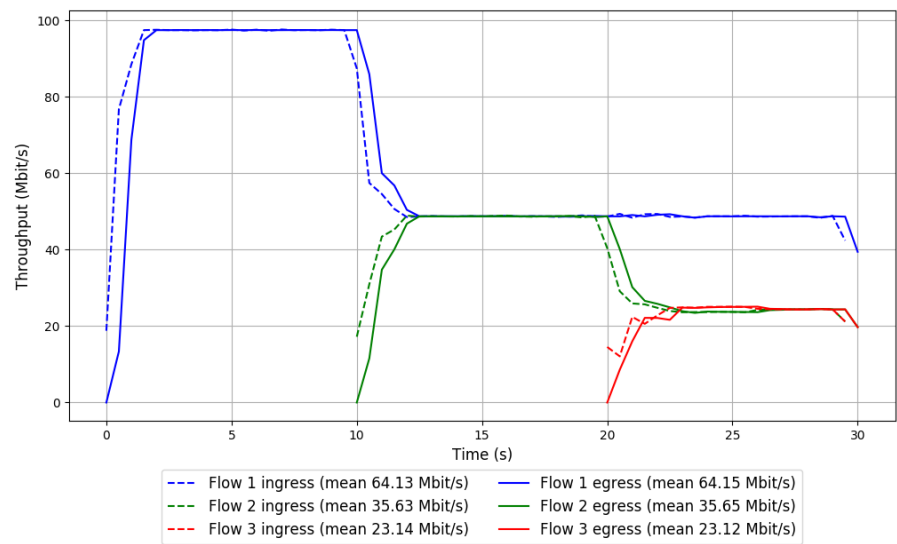


Run 4: Statistics of Indigo-Muses

Start at: 2018-12-02 16:02:43  
End at: 2018-12-02 16:03:13  
Local clock offset: 0.735 ms  
Remote clock offset: -1.891 ms

# Below is generated by plot.py at 2018-12-02 16:45:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.49 Mbit/s  
95th percentile per-packet one-way delay: 45.207 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 64.15 Mbit/s  
95th percentile per-packet one-way delay: 43.118 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 35.65 Mbit/s  
95th percentile per-packet one-way delay: 47.117 ms  
Loss rate: 0.26%  
-- Flow 3:  
Average throughput: 23.12 Mbit/s  
95th percentile per-packet one-way delay: 52.352 ms  
Loss rate: 0.73%

Run 4: Report of Indigo-Muses — Data Link



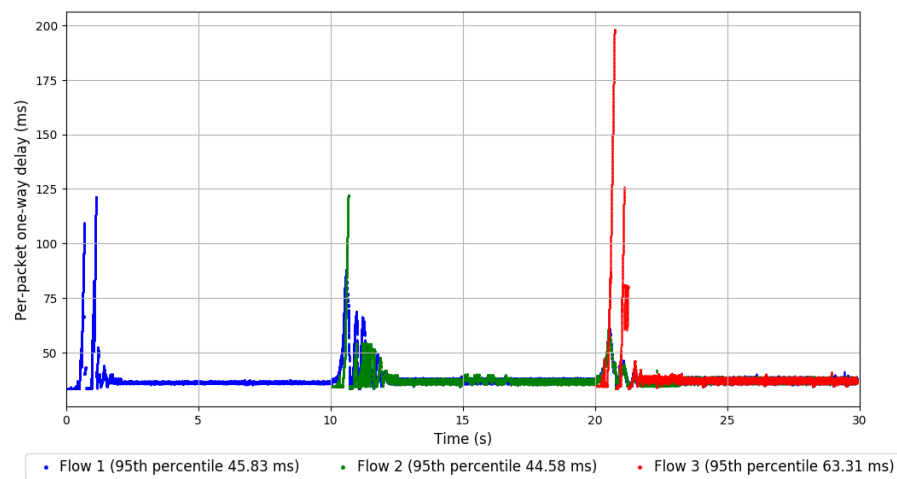
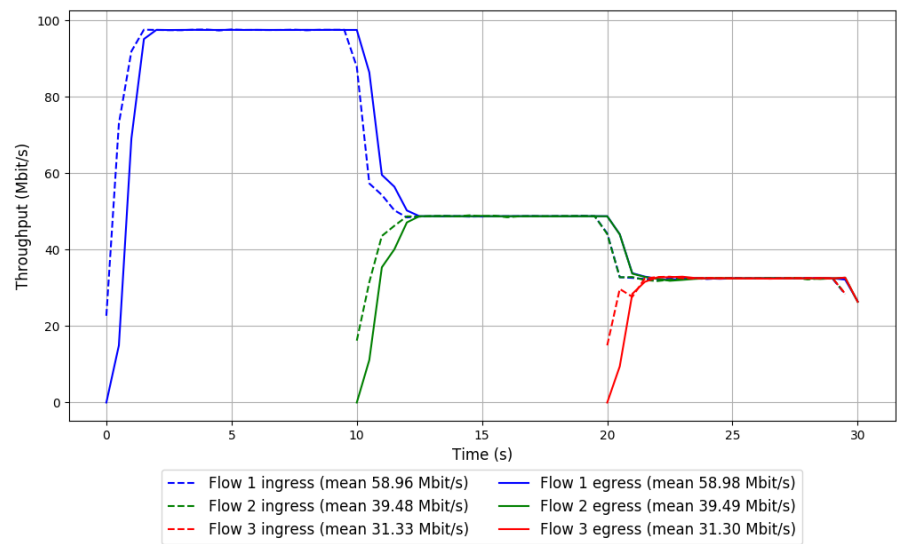


Run 5: Statistics of Indigo-Muses

Start at: 2018-12-02 16:26:02  
End at: 2018-12-02 16:26:32  
Local clock offset: -1.492 ms  
Remote clock offset: -1.532 ms

# Below is generated by plot.py at 2018-12-02 16:45:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.57 Mbit/s  
95th percentile per-packet one-way delay: 45.444 ms  
Loss rate: 0.27%  
-- Flow 1:  
Average throughput: 58.98 Mbit/s  
95th percentile per-packet one-way delay: 45.828 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 39.49 Mbit/s  
95th percentile per-packet one-way delay: 44.577 ms  
Loss rate: 0.29%  
-- Flow 3:  
Average throughput: 31.30 Mbit/s  
95th percentile per-packet one-way delay: 63.312 ms  
Loss rate: 0.72%

Run 5: Report of Indigo-Muses — Data Link

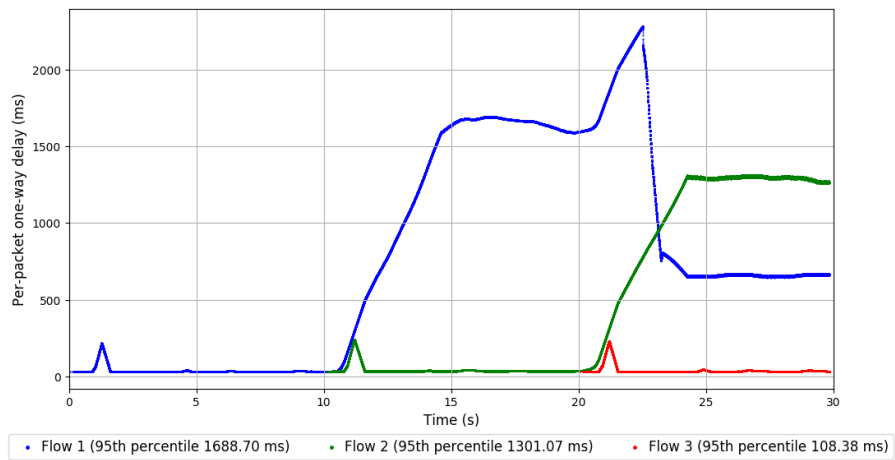
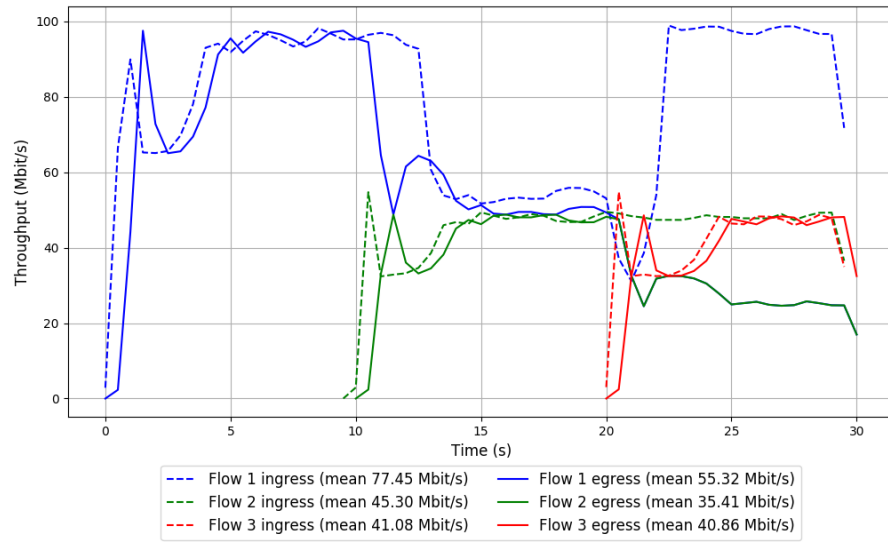


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-12-02 14:53:51
End at: 2018-12-02 14:54:21
Local clock offset: -2.16 ms
Remote clock offset: -3.9 ms

# Below is generated by plot.py at 2018-12-02 16:45:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.28 Mbit/s
95th percentile per-packet one-way delay: 1676.318 ms
Loss rate: 24.00%
-- Flow 1:
Average throughput: 55.32 Mbit/s
95th percentile per-packet one-way delay: 1688.701 ms
Loss rate: 28.74%
-- Flow 2:
Average throughput: 35.41 Mbit/s
95th percentile per-packet one-way delay: 1301.067 ms
Loss rate: 22.08%
-- Flow 3:
Average throughput: 40.86 Mbit/s
95th percentile per-packet one-way delay: 108.383 ms
Loss rate: 1.20%
```

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

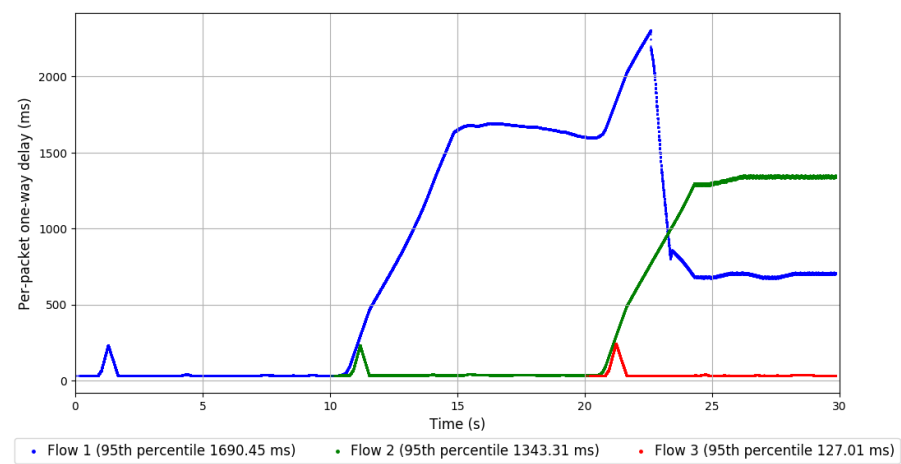
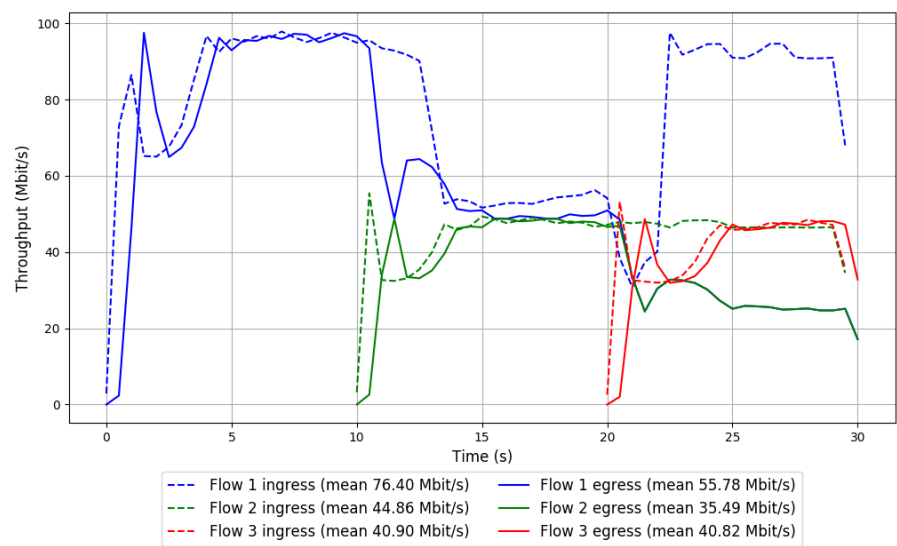


Run 2: Statistics of PCC-Allegro

Start at: 2018-12-02 15:17:11  
End at: 2018-12-02 15:17:41  
Local clock offset: 1.572 ms  
Remote clock offset: -3.355 ms

# Below is generated by plot.py at 2018-12-02 16:45:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.77 Mbit/s  
95th percentile per-packet one-way delay: 1678.513 ms  
Loss rate: 22.68%  
-- Flow 1:  
Average throughput: 55.78 Mbit/s  
95th percentile per-packet one-way delay: 1690.451 ms  
Loss rate: 27.15%  
-- Flow 2:  
Average throughput: 35.49 Mbit/s  
95th percentile per-packet one-way delay: 1343.308 ms  
Loss rate: 21.14%  
-- Flow 3:  
Average throughput: 40.82 Mbit/s  
95th percentile per-packet one-way delay: 127.007 ms  
Loss rate: 0.83%

Run 2: Report of PCC-Allegro — Data Link

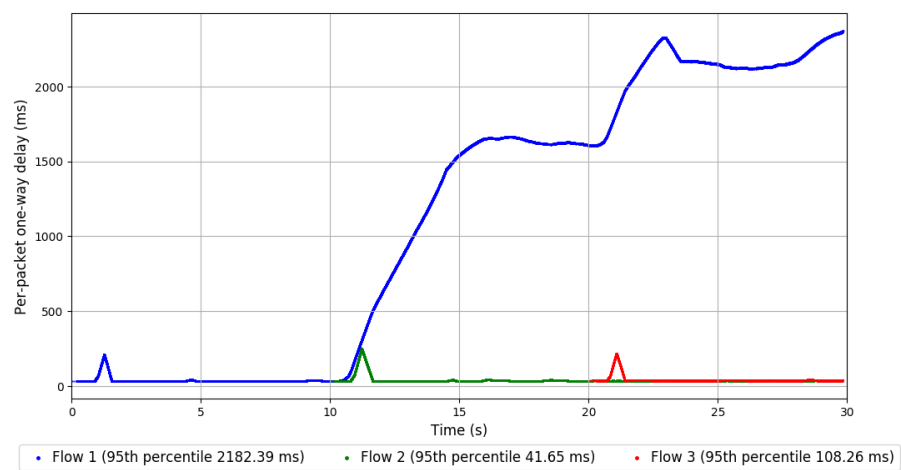
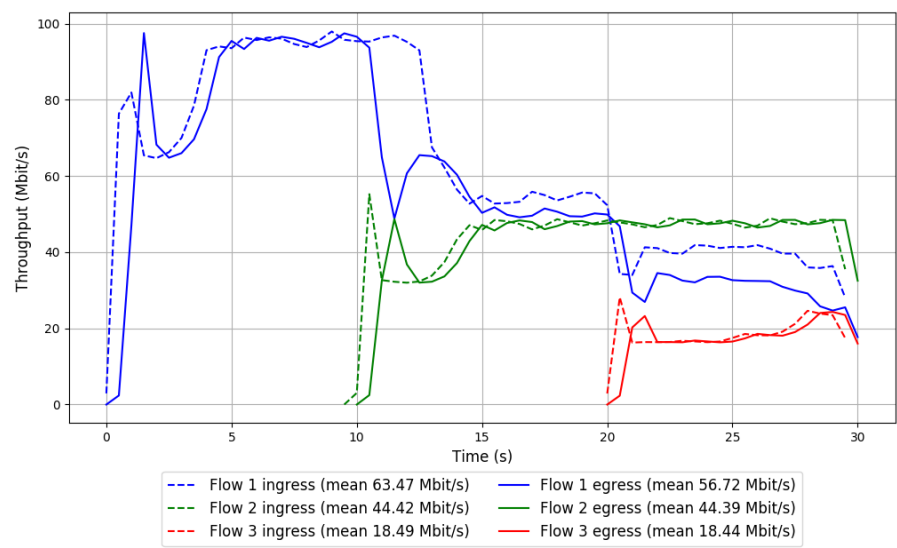


Run 3: Statistics of PCC-Allegro

Start at: 2018-12-02 15:40:27  
End at: 2018-12-02 15:40:57  
Local clock offset: 1.158 ms  
Remote clock offset: -2.482 ms

# Below is generated by plot.py at 2018-12-02 16:46:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.28 Mbit/s  
95th percentile per-packet one-way delay: 2155.592 ms  
Loss rate: 7.10%  
-- Flow 1:  
Average throughput: 56.72 Mbit/s  
95th percentile per-packet one-way delay: 2182.391 ms  
Loss rate: 10.82%  
-- Flow 2:  
Average throughput: 44.39 Mbit/s  
95th percentile per-packet one-way delay: 41.651 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 18.44 Mbit/s  
95th percentile per-packet one-way delay: 108.259 ms  
Loss rate: 0.96%

Run 3: Report of PCC-Allegro — Data Link



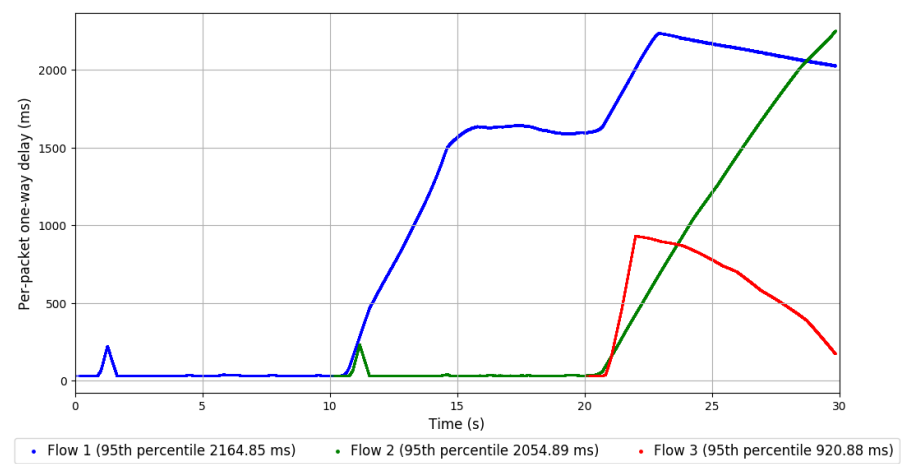
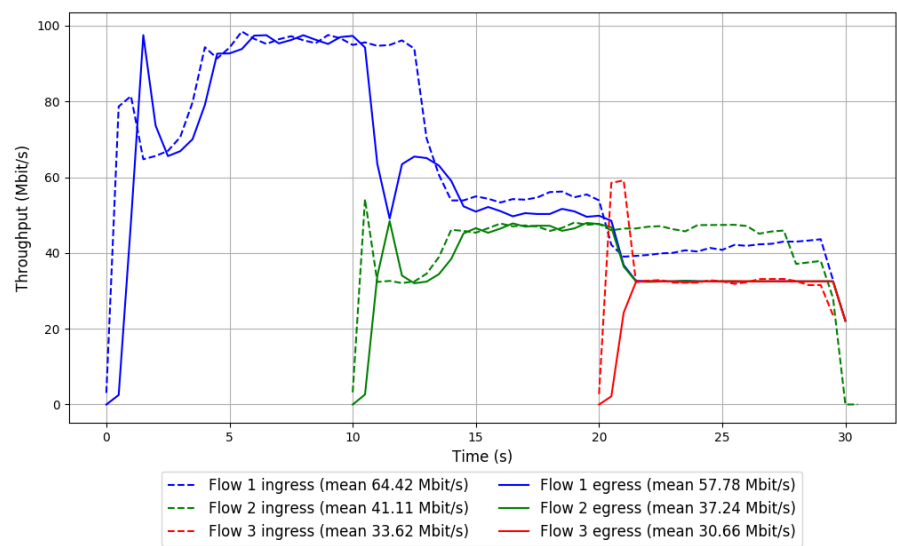


Run 4: Statistics of PCC-Allegro

Start at: 2018-12-02 16:04:01  
End at: 2018-12-02 16:04:31  
Local clock offset: 0.737 ms  
Remote clock offset: -2.038 ms

# Below is generated by plot.py at 2018-12-02 16:46:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.60 Mbit/s  
95th percentile per-packet one-way delay: 2140.530 ms  
Loss rate: 11.24%  
-- Flow 1:  
Average throughput: 57.78 Mbit/s  
95th percentile per-packet one-way delay: 2164.846 ms  
Loss rate: 10.50%  
-- Flow 2:  
Average throughput: 37.24 Mbit/s  
95th percentile per-packet one-way delay: 2054.886 ms  
Loss rate: 13.63%  
-- Flow 3:  
Average throughput: 30.66 Mbit/s  
95th percentile per-packet one-way delay: 920.883 ms  
Loss rate: 9.39%

Run 4: Report of PCC-Allegro — Data Link

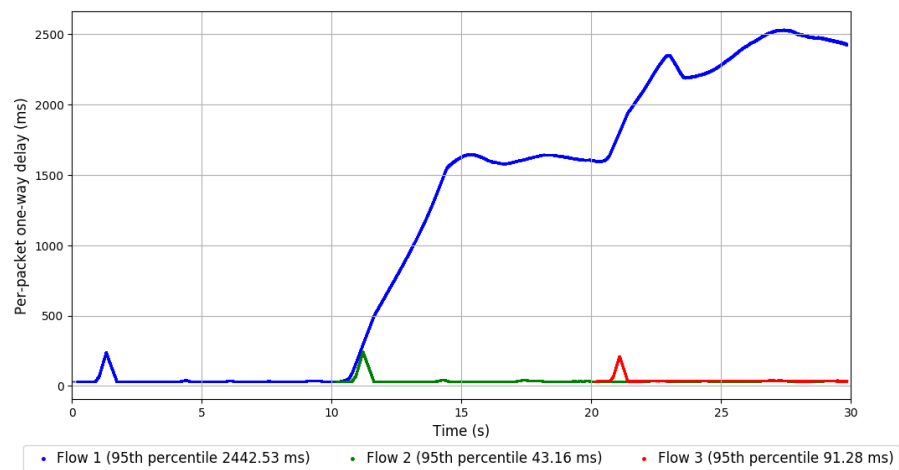
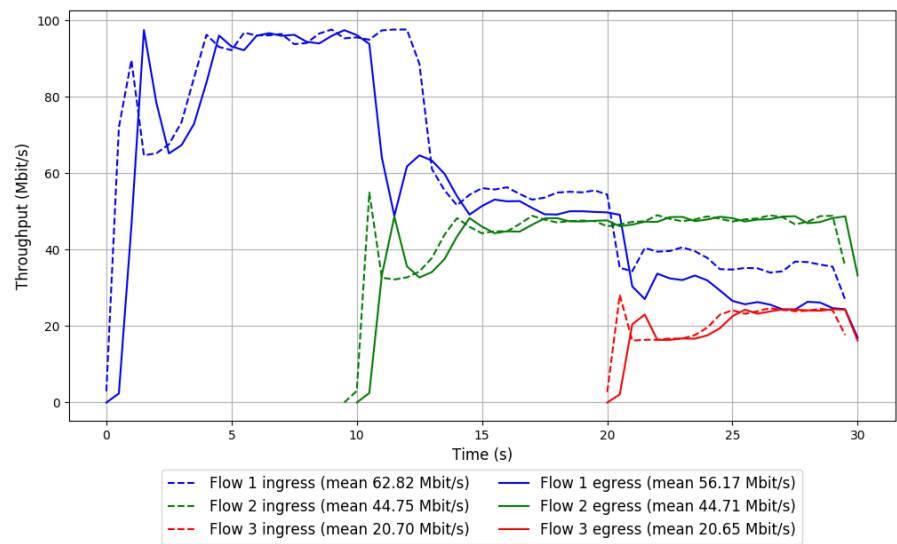


Run 5: Statistics of PCC-Allegro

Start at: 2018-12-02 16:27:16  
End at: 2018-12-02 16:27:46  
Local clock offset: -1.753 ms  
Remote clock offset: -1.572 ms

# Below is generated by plot.py at 2018-12-02 16:46:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.66 Mbit/s  
95th percentile per-packet one-way delay: 2289.228 ms  
Loss rate: 6.98%  
-- Flow 1:  
Average throughput: 56.17 Mbit/s  
95th percentile per-packet one-way delay: 2442.530 ms  
Loss rate: 10.77%  
-- Flow 2:  
Average throughput: 44.71 Mbit/s  
95th percentile per-packet one-way delay: 43.159 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 20.65 Mbit/s  
95th percentile per-packet one-way delay: 91.281 ms  
Loss rate: 0.86%

Run 5: Report of PCC-Allegro — Data Link

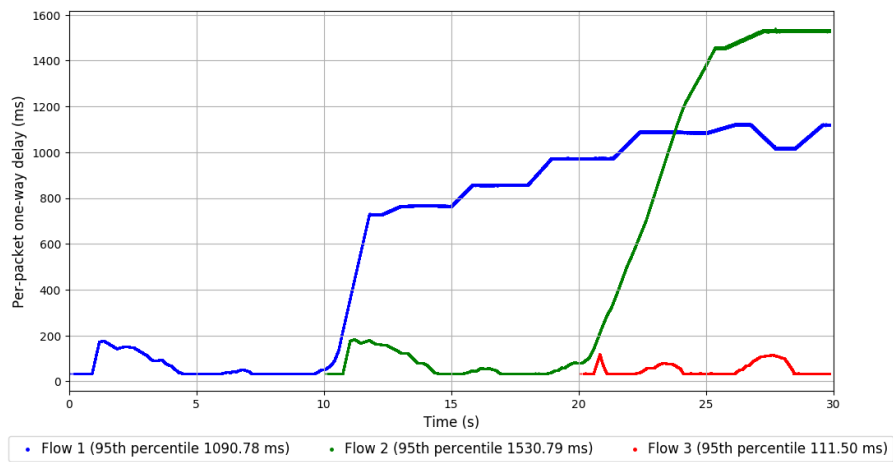
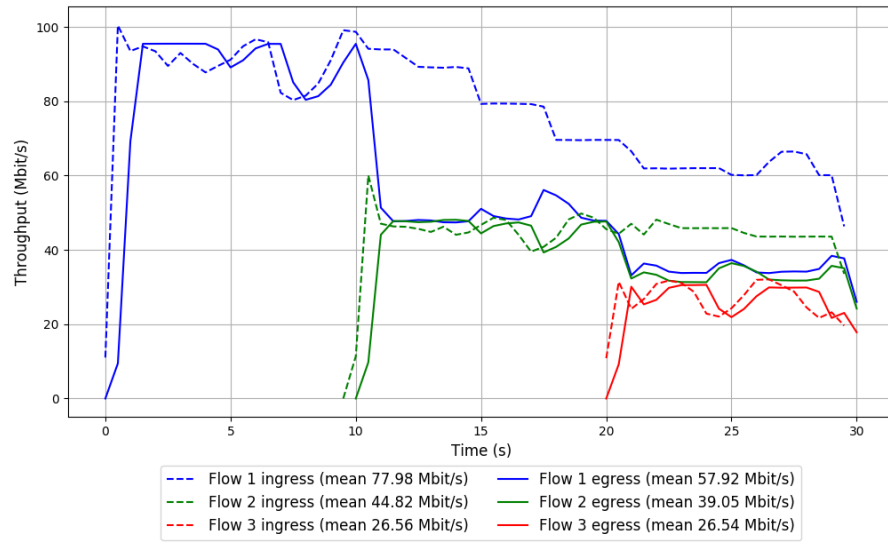


```
Run 1: Statistics of PCC-Expr

Start at: 2018-12-02 14:43:51
End at: 2018-12-02 14:44:21
Local clock offset: -4.966 ms
Remote clock offset: -4.302 ms

# Below is generated by plot.py at 2018-12-02 16:47:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.62 Mbit/s
95th percentile per-packet one-way delay: 1454.494 ms
Loss rate: 20.73%
-- Flow 1:
Average throughput: 57.92 Mbit/s
95th percentile per-packet one-way delay: 1090.779 ms
Loss rate: 25.88%
-- Flow 2:
Average throughput: 39.05 Mbit/s
95th percentile per-packet one-way delay: 1530.785 ms
Loss rate: 13.14%
-- Flow 3:
Average throughput: 26.54 Mbit/s
95th percentile per-packet one-way delay: 111.505 ms
Loss rate: 0.73%
```

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

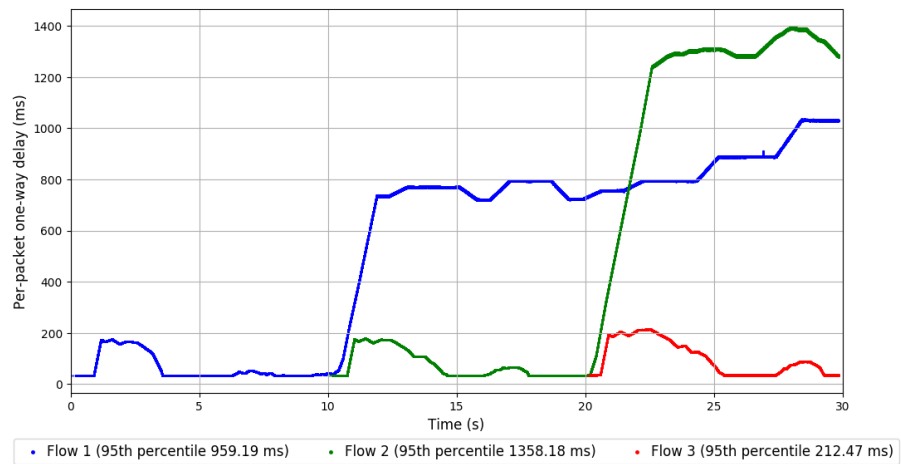
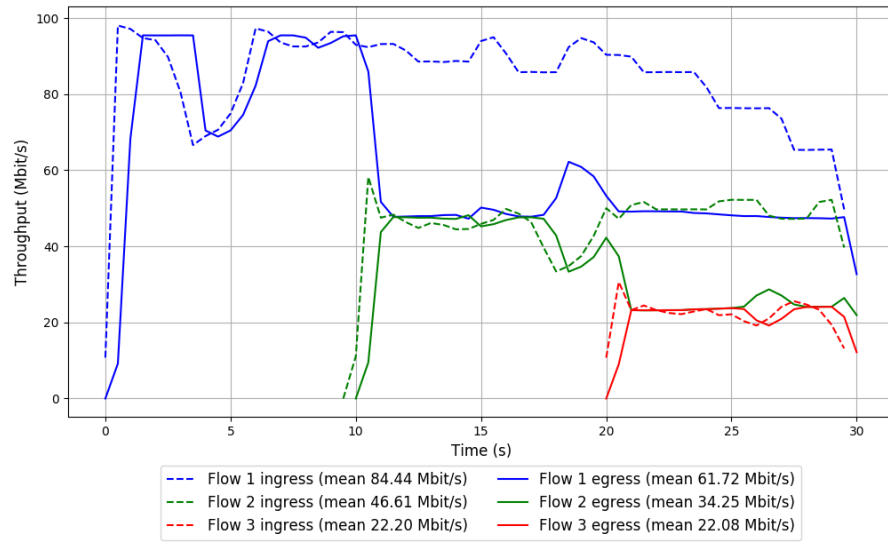


Run 2: Statistics of PCC-Expr

Start at: 2018-12-02 15:07:15  
End at: 2018-12-02 15:07:45  
Local clock offset: 0.634 ms  
Remote clock offset: -3.429 ms

# Below is generated by plot.py at 2018-12-02 16:47:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.75 Mbit/s  
95th percentile per-packet one-way delay: 1285.666 ms  
Loss rate: 25.44%  
-- Flow 1:  
Average throughput: 61.72 Mbit/s  
95th percentile per-packet one-way delay: 959.192 ms  
Loss rate: 27.06%  
-- Flow 2:  
Average throughput: 34.25 Mbit/s  
95th percentile per-packet one-way delay: 1358.185 ms  
Loss rate: 26.76%  
-- Flow 3:  
Average throughput: 22.08 Mbit/s  
95th percentile per-packet one-way delay: 212.465 ms  
Loss rate: 1.20%

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



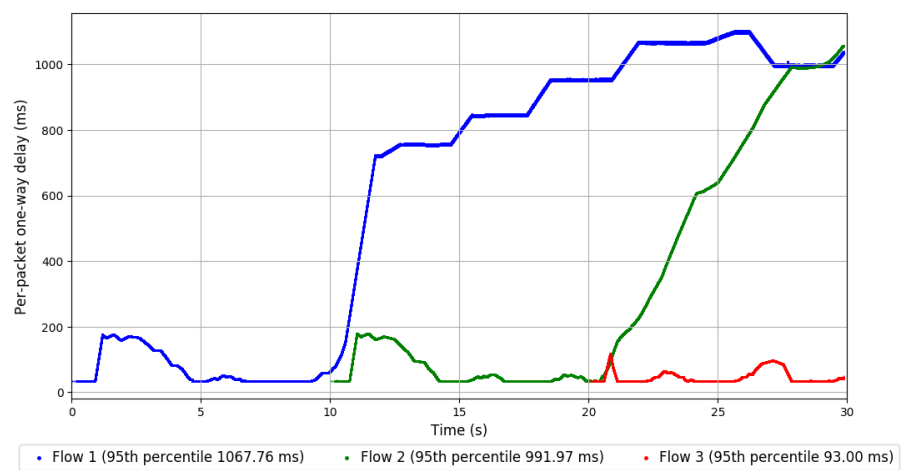
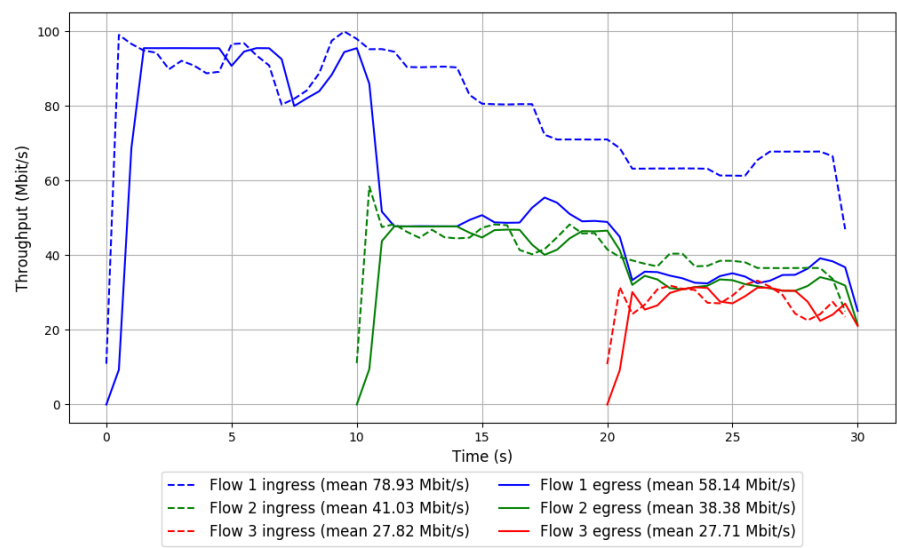


Run 3: Statistics of PCC-Expr

Start at: 2018-12-02 15:30:22  
End at: 2018-12-02 15:30:52  
Local clock offset: 1.027 ms  
Remote clock offset: -2.743 ms

# Below is generated by plot.py at 2018-12-02 16:47:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.76 Mbit/s  
95th percentile per-packet one-way delay: 1064.032 ms  
Loss rate: 19.79%  
-- Flow 1:  
Average throughput: 58.14 Mbit/s  
95th percentile per-packet one-way delay: 1067.756 ms  
Loss rate: 26.48%  
-- Flow 2:  
Average throughput: 38.38 Mbit/s  
95th percentile per-packet one-way delay: 991.968 ms  
Loss rate: 6.77%  
-- Flow 3:  
Average throughput: 27.71 Mbit/s  
95th percentile per-packet one-way delay: 93.004 ms  
Loss rate: 0.99%

Run 3: Report of PCC-Expr — Data Link

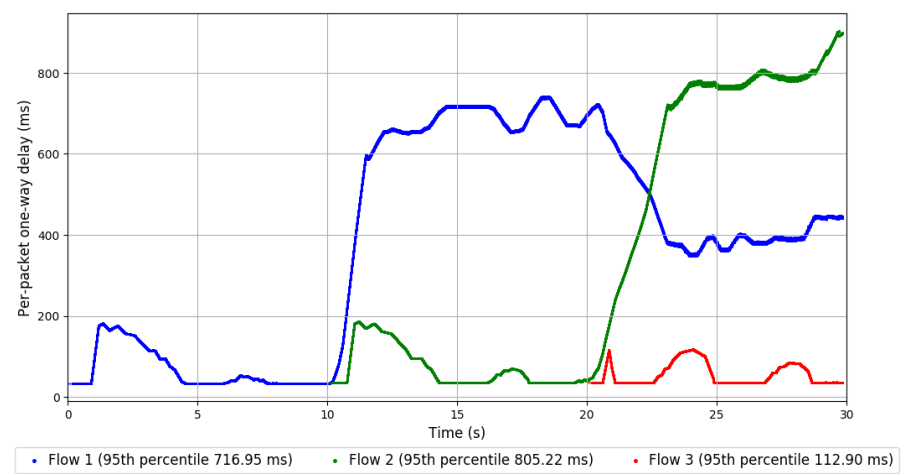
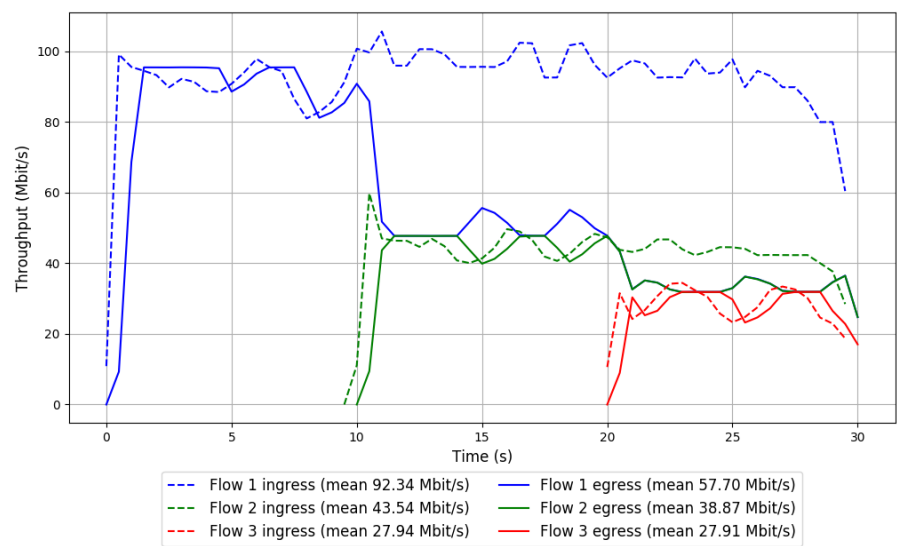


Run 4: Statistics of PCC-Expr

Start at: 2018-12-02 15:53:48  
End at: 2018-12-02 15:54:18  
Local clock offset: 0.897 ms  
Remote clock offset: -2.134 ms

# Below is generated by plot.py at 2018-12-02 16:48:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.71 Mbit/s  
95th percentile per-packet one-way delay: 773.201 ms  
Loss rate: 29.13%  
-- Flow 1:  
Average throughput: 57.70 Mbit/s  
95th percentile per-packet one-way delay: 716.950 ms  
Loss rate: 37.65%  
-- Flow 2:  
Average throughput: 38.87 Mbit/s  
95th percentile per-packet one-way delay: 805.222 ms  
Loss rate: 11.00%  
-- Flow 3:  
Average throughput: 27.91 Mbit/s  
95th percentile per-packet one-way delay: 112.904 ms  
Loss rate: 0.78%

Run 4: Report of PCC-Expr — Data Link

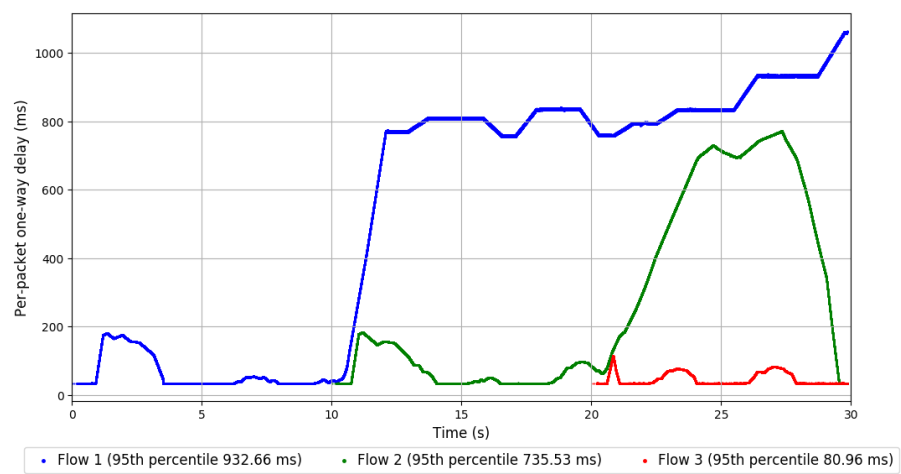
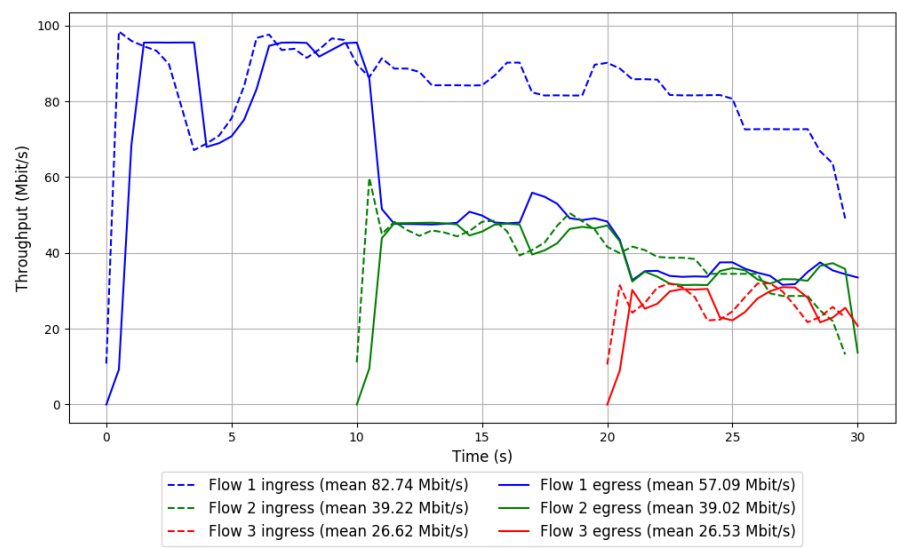


Run 5: Statistics of PCC-Expr

Start at: 2018-12-02 16:17:18  
End at: 2018-12-02 16:17:48  
Local clock offset: 0.873 ms  
Remote clock offset: -1.651 ms

# Below is generated by plot.py at 2018-12-02 16:48:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.75 Mbit/s  
95th percentile per-packet one-way delay: 865.437 ms  
Loss rate: 22.16%  
-- Flow 1:  
Average throughput: 57.09 Mbit/s  
95th percentile per-packet one-way delay: 932.663 ms  
Loss rate: 31.14%  
-- Flow 2:  
Average throughput: 39.02 Mbit/s  
95th percentile per-packet one-way delay: 735.530 ms  
Loss rate: 0.82%  
-- Flow 3:  
Average throughput: 26.53 Mbit/s  
95th percentile per-packet one-way delay: 80.963 ms  
Loss rate: 1.01%

Run 5: Report of PCC-Expr — Data Link

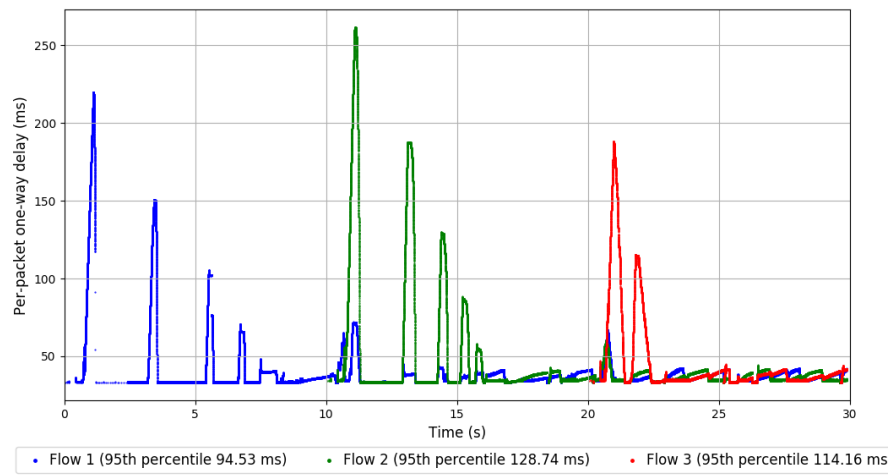
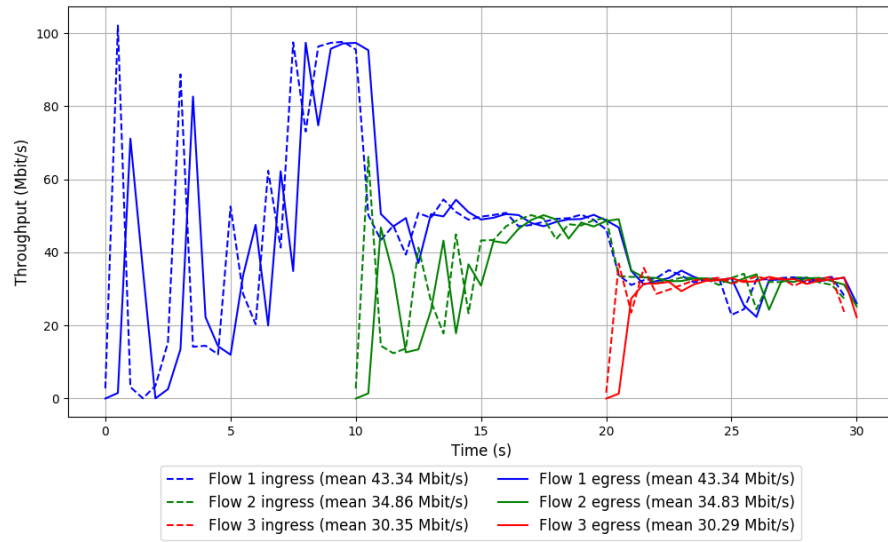


Run 1: Statistics of QUIC Cubic

Start at: 2018-12-02 14:50:11  
End at: 2018-12-02 14:50:41  
Local clock offset: -3.775 ms  
Remote clock offset: -4.015 ms

# Below is generated by plot.py at 2018-12-02 16:48:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.48 Mbit/s  
95th percentile per-packet one-way delay: 106.688 ms  
Loss rate: 0.35%  
-- Flow 1:  
Average throughput: 43.34 Mbit/s  
95th percentile per-packet one-way delay: 94.526 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 34.83 Mbit/s  
95th percentile per-packet one-way delay: 128.735 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 30.29 Mbit/s  
95th percentile per-packet one-way delay: 114.160 ms  
Loss rate: 0.87%

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



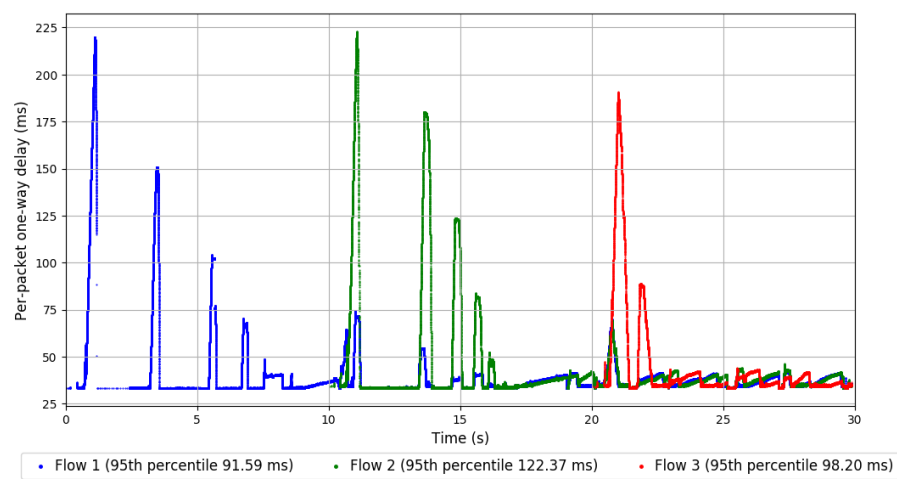
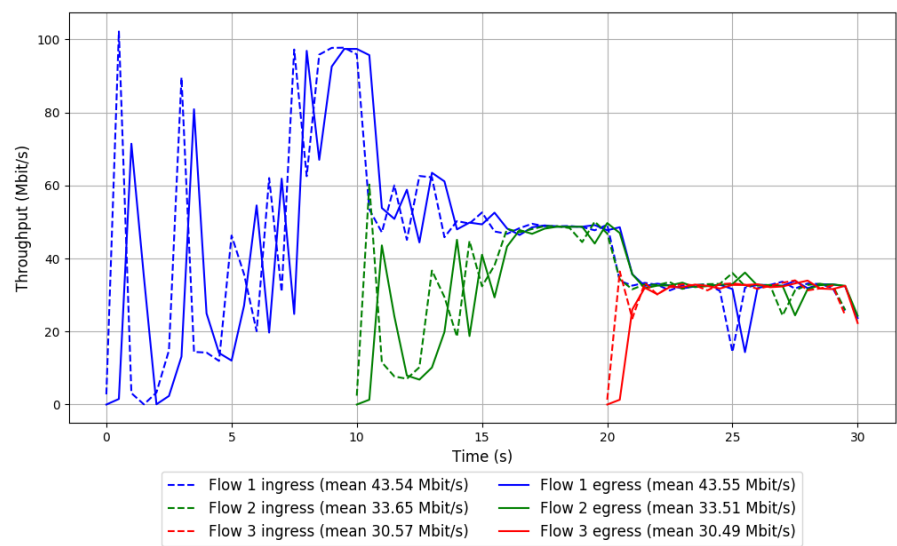


Run 2: Statistics of QUIC Cubic

Start at: 2018-12-02 15:13:32  
End at: 2018-12-02 15:14:02  
Local clock offset: 1.285 ms  
Remote clock offset: -3.305 ms

# Below is generated by plot.py at 2018-12-02 16:48:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 75.86 Mbit/s  
95th percentile per-packet one-way delay: 102.072 ms  
Loss rate: 0.44%  
-- Flow 1:  
Average throughput: 43.55 Mbit/s  
95th percentile per-packet one-way delay: 91.592 ms  
Loss rate: 0.19%  
-- Flow 2:  
Average throughput: 33.51 Mbit/s  
95th percentile per-packet one-way delay: 122.373 ms  
Loss rate: 0.72%  
-- Flow 3:  
Average throughput: 30.49 Mbit/s  
95th percentile per-packet one-way delay: 98.203 ms  
Loss rate: 0.89%

Run 2: Report of QUIC Cubic — Data Link

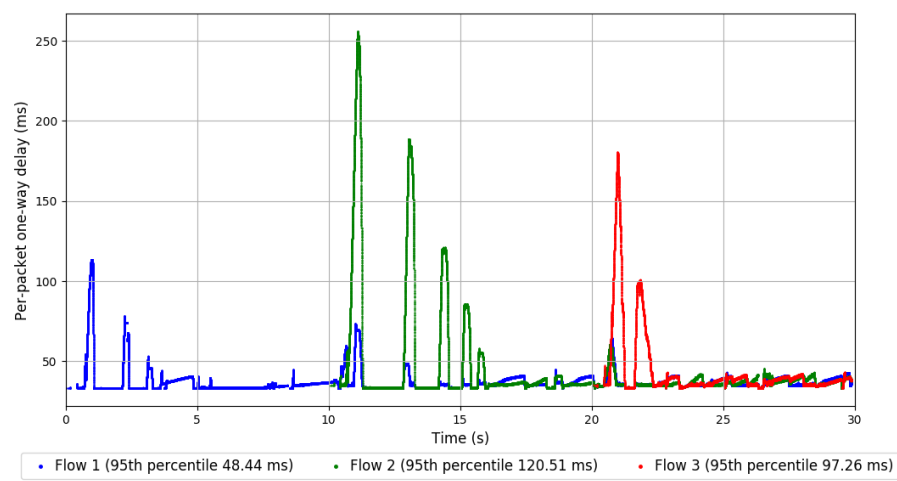
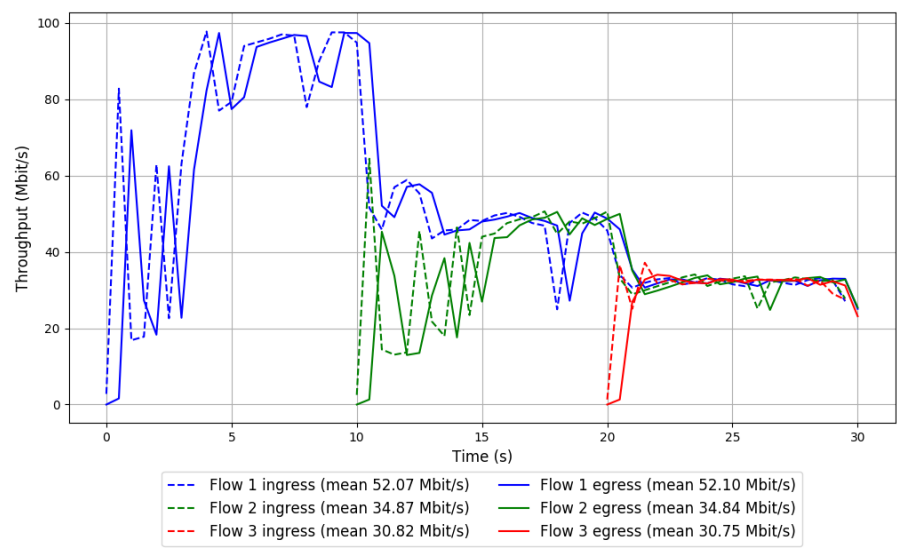


Run 3: Statistics of QUIC Cubic

Start at: 2018-12-02 15:36:47  
End at: 2018-12-02 15:37:17  
Local clock offset: 1.082 ms  
Remote clock offset: -2.514 ms

# Below is generated by plot.py at 2018-12-02 16:48:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.38 Mbit/s  
95th percentile per-packet one-way delay: 73.652 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 52.10 Mbit/s  
95th percentile per-packet one-way delay: 48.439 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 34.84 Mbit/s  
95th percentile per-packet one-way delay: 120.514 ms  
Loss rate: 0.41%  
-- Flow 3:  
Average throughput: 30.75 Mbit/s  
95th percentile per-packet one-way delay: 97.262 ms  
Loss rate: 0.90%

Run 3: Report of QUIC Cubic — Data Link

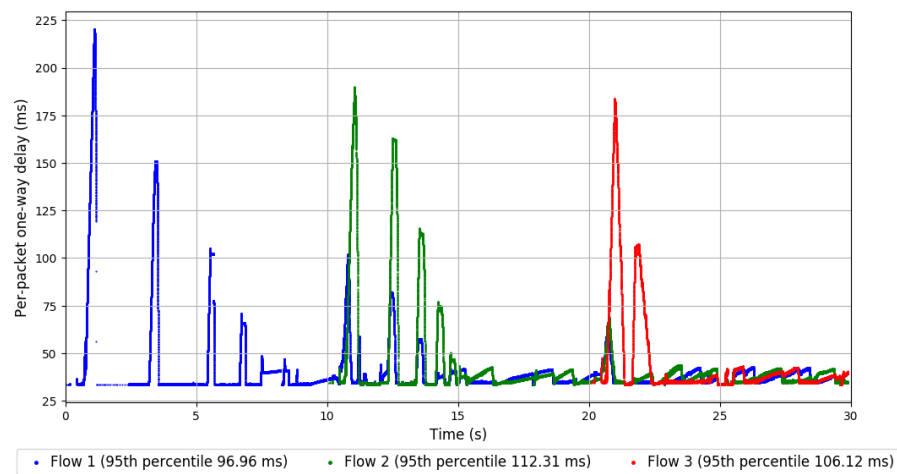
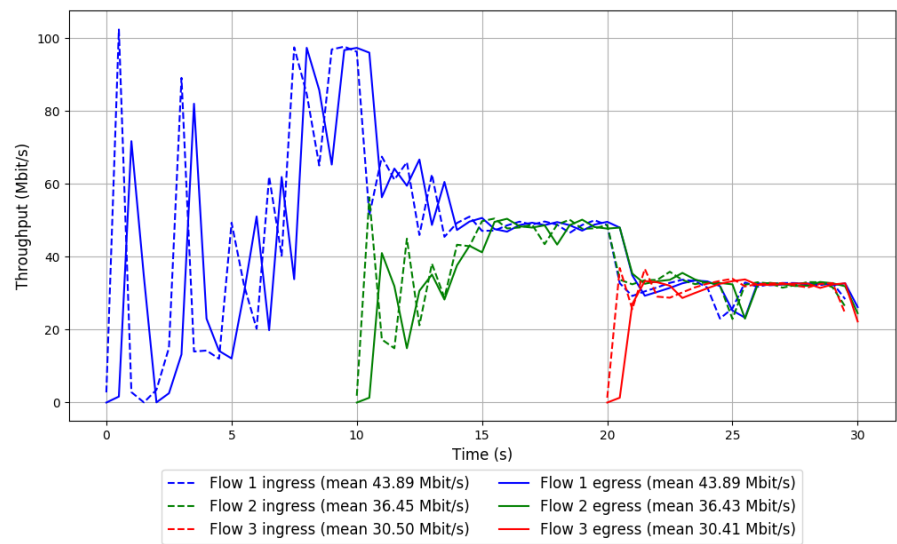


Run 4: Statistics of QUIC Cubic

Start at: 2018-12-02 16:00:17  
End at: 2018-12-02 16:00:47  
Local clock offset: 0.745 ms  
Remote clock offset: -2.198 ms

# Below is generated by plot.py at 2018-12-02 16:48:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 78.12 Mbit/s  
95th percentile per-packet one-way delay: 102.224 ms  
Loss rate: 0.35%  
-- Flow 1:  
Average throughput: 43.89 Mbit/s  
95th percentile per-packet one-way delay: 96.957 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 36.43 Mbit/s  
95th percentile per-packet one-way delay: 112.309 ms  
Loss rate: 0.36%  
-- Flow 3:  
Average throughput: 30.41 Mbit/s  
95th percentile per-packet one-way delay: 106.121 ms  
Loss rate: 0.94%

Run 4: Report of QUIC Cubic — Data Link

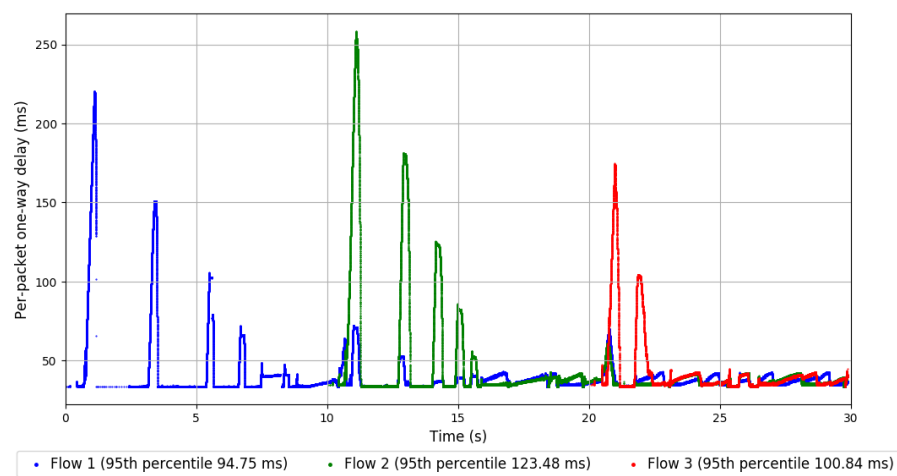
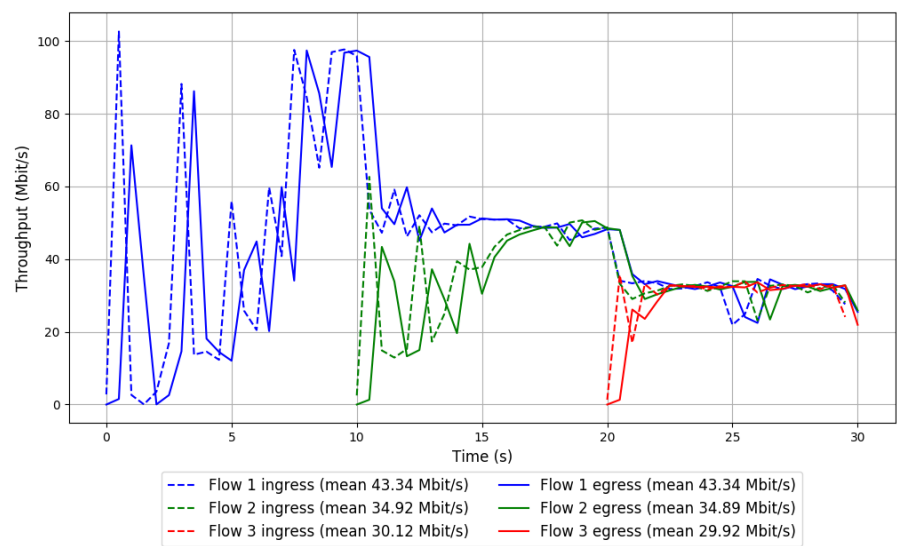


Run 5: Statistics of QUIC Cubic

Start at: 2018-12-02 16:23:32  
End at: 2018-12-02 16:24:02  
Local clock offset: -1.02 ms  
Remote clock offset: -1.535 ms

# Below is generated by plot.py at 2018-12-02 16:48:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.37 Mbit/s  
95th percentile per-packet one-way delay: 102.528 ms  
Loss rate: 0.41%  
-- Flow 1:  
Average throughput: 43.34 Mbit/s  
95th percentile per-packet one-way delay: 94.750 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 34.89 Mbit/s  
95th percentile per-packet one-way delay: 123.482 ms  
Loss rate: 0.43%  
-- Flow 3:  
Average throughput: 29.92 Mbit/s  
95th percentile per-packet one-way delay: 100.841 ms  
Loss rate: 1.26%

Run 5: Report of QUIC Cubic — Data Link



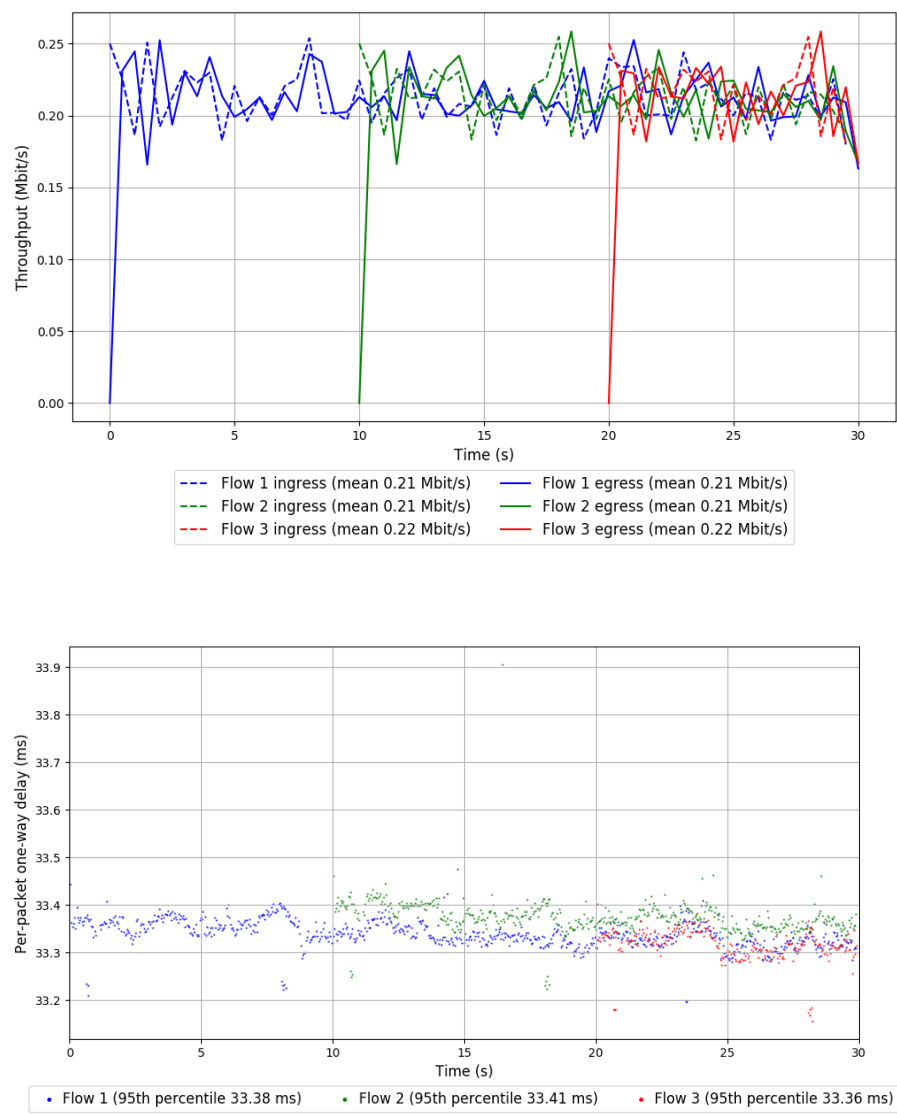


```
Run 1: Statistics of SCReAM

Start at: 2018-12-02 15:02:28
End at: 2018-12-02 15:02:58
Local clock offset: -0.039 ms
Remote clock offset: -3.716 ms

# Below is generated by plot.py at 2018-12-02 16:48:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.402 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.382 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.414 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.356 ms
Loss rate: 0.71%
```

Run 1: Report of SReAM — Data Link

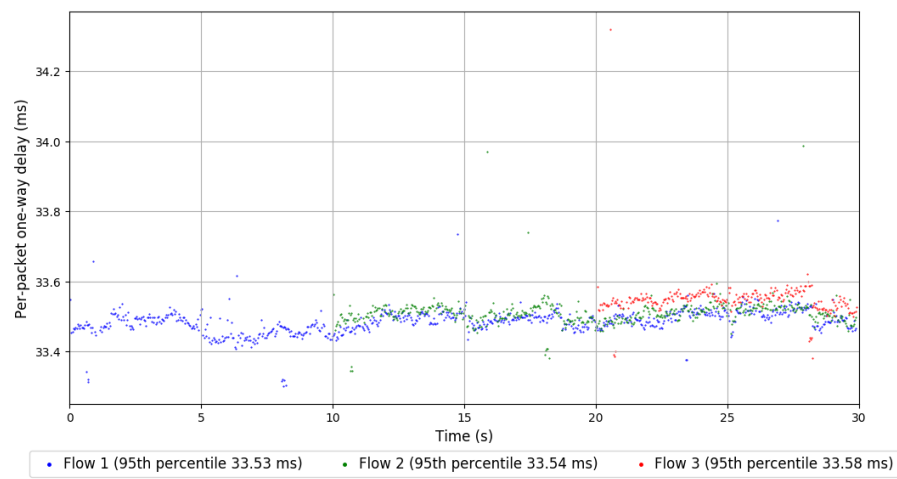
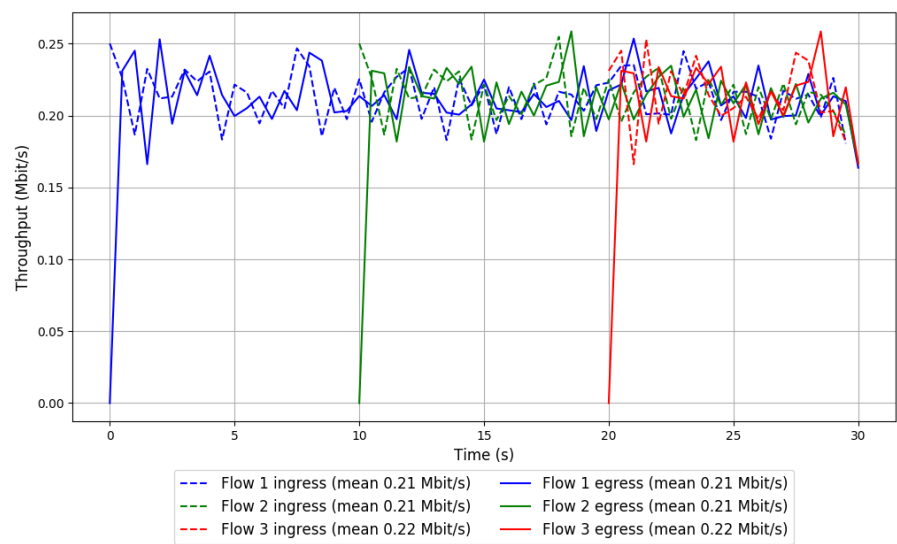


Run 2: Statistics of SReAM

Start at: 2018-12-02 15:25:36  
End at: 2018-12-02 15:26:06  
Local clock offset: 1.106 ms  
Remote clock offset: -2.879 ms

# Below is generated by plot.py at 2018-12-02 16:48:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.563 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.528 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.543 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.583 ms  
Loss rate: 0.35%

Run 2: Report of SReAM — Data Link

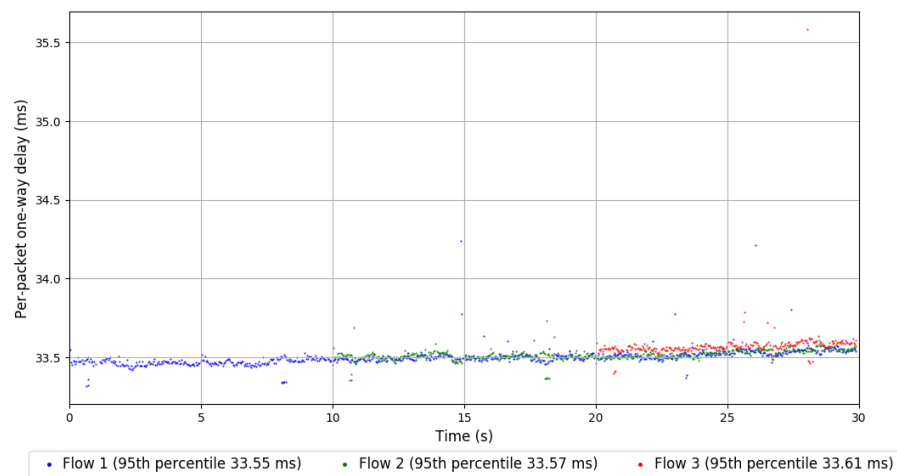
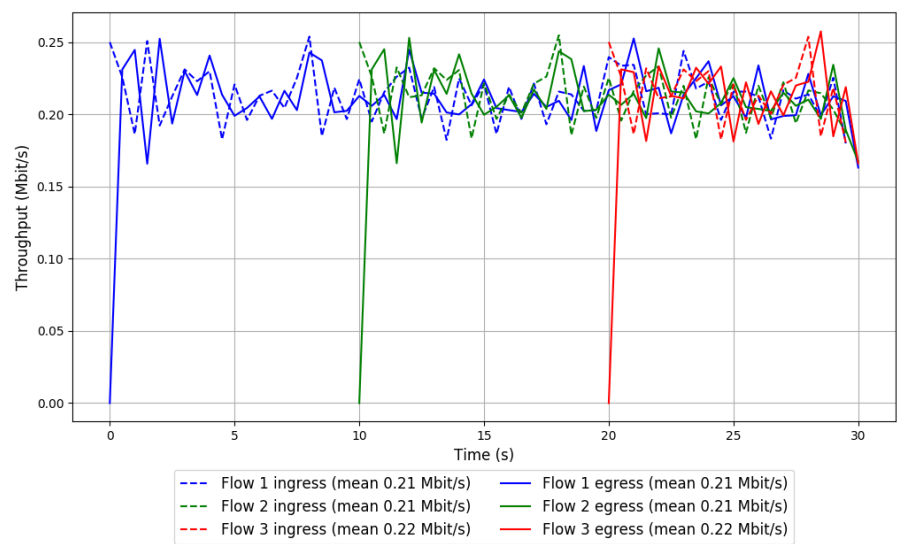


Run 3: Statistics of SReAM

Start at: 2018-12-02 15:48:52  
End at: 2018-12-02 15:49:22  
Local clock offset: 1.227 ms  
Remote clock offset: -2.209 ms

# Below is generated by plot.py at 2018-12-02 16:48:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.589 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.551 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.566 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.608 ms  
Loss rate: 0.71%

Run 3: Report of SReAM — Data Link

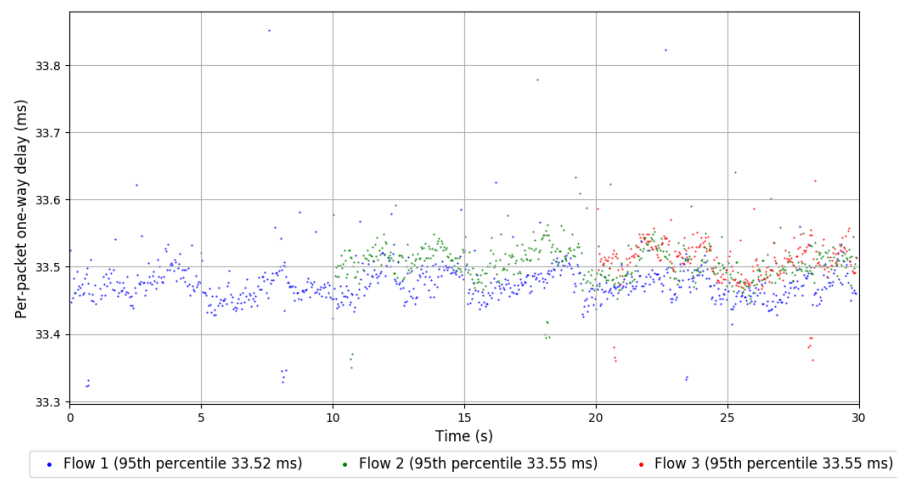
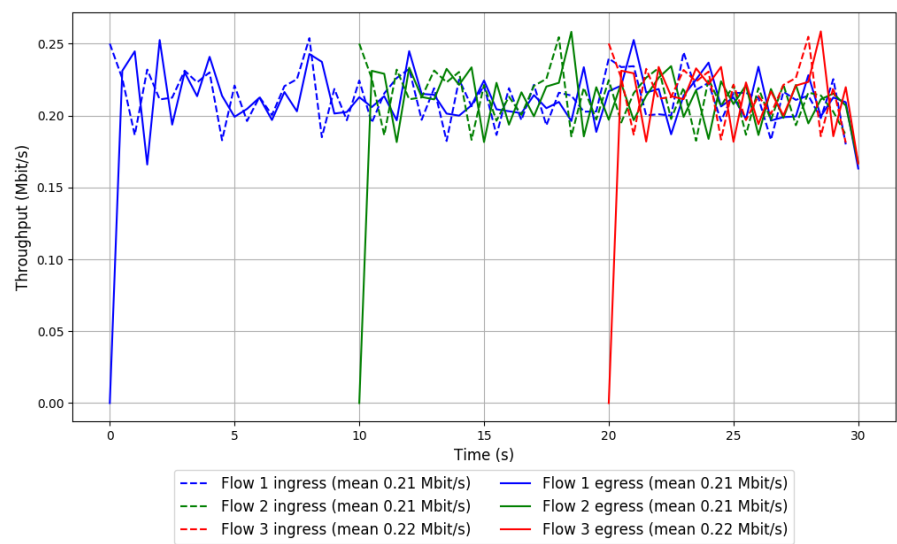


Run 4: Statistics of SReAM

Start at: 2018-12-02 16:12:28  
End at: 2018-12-02 16:12:58  
Local clock offset: 0.789 ms  
Remote clock offset: -1.757 ms

# Below is generated by plot.py at 2018-12-02 16:48:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.543 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.517 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.547 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.548 ms  
Loss rate: 0.71%

Run 4: Report of SReAM — Data Link



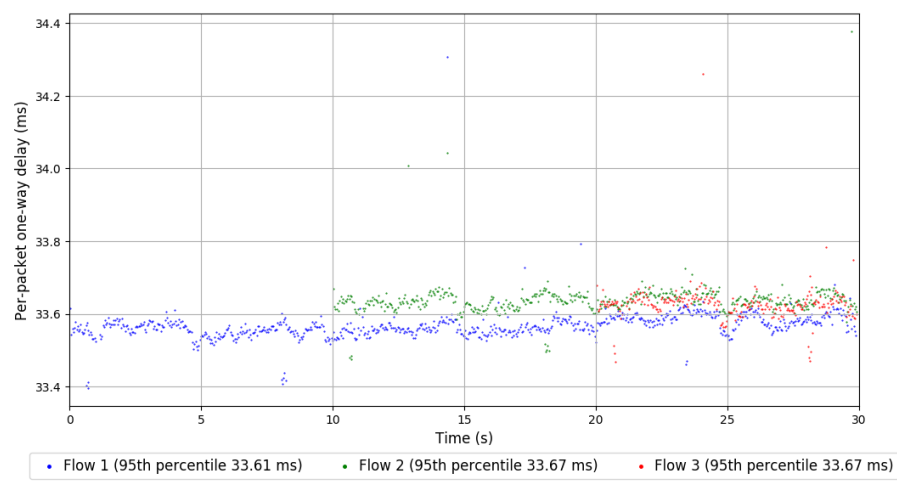
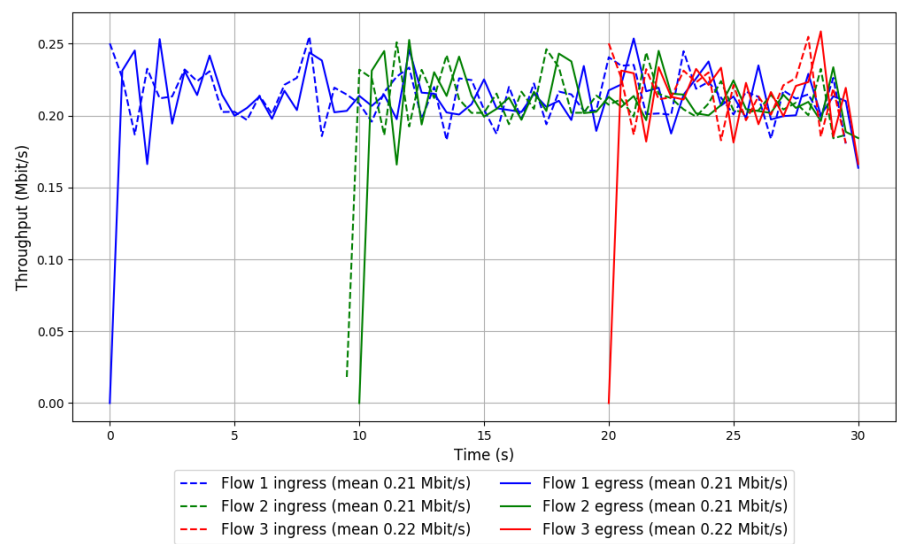


Run 5: Statistics of SReAM

Start at: 2018-12-02 16:35:46  
End at: 2018-12-02 16:36:16  
Local clock offset: -2.718 ms  
Remote clock offset: -1.599 ms

# Below is generated by plot.py at 2018-12-02 16:48:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.662 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.609 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.669 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.669 ms  
Loss rate: 0.71%

Run 5: Report of SReAM — Data Link

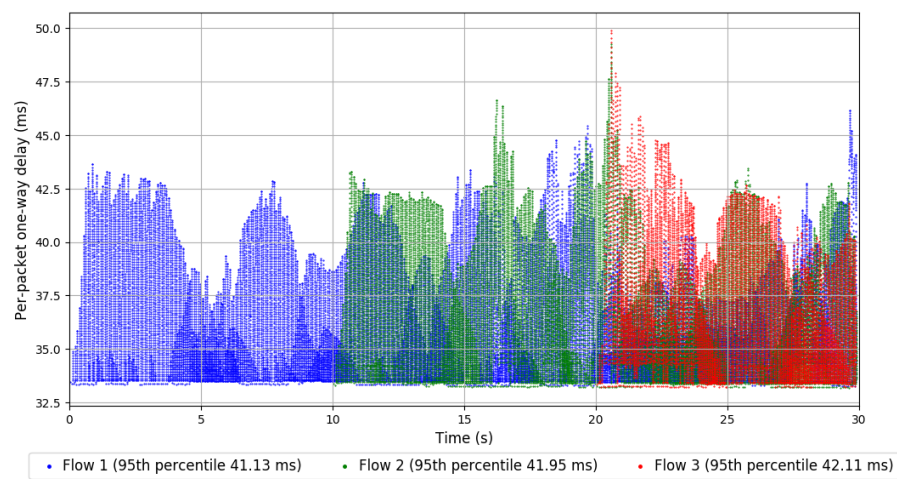
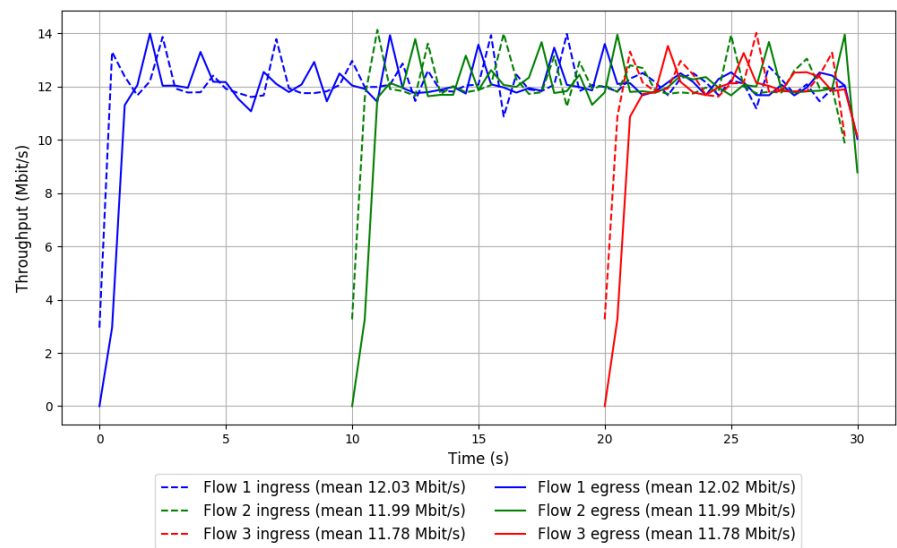


Run 1: Statistics of Sprout

Start at: 2018-12-02 14:56:21  
End at: 2018-12-02 14:56:51  
Local clock offset: -1.369 ms  
Remote clock offset: -4.052 ms

# Below is generated by plot.py at 2018-12-02 16:48:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 23.86 Mbit/s  
95th percentile per-packet one-way delay: 41.633 ms  
Loss rate: 0.35%  
-- Flow 1:  
Average throughput: 12.02 Mbit/s  
95th percentile per-packet one-way delay: 41.126 ms  
Loss rate: 0.28%  
-- Flow 2:  
Average throughput: 11.99 Mbit/s  
95th percentile per-packet one-way delay: 41.951 ms  
Loss rate: 0.23%  
-- Flow 3:  
Average throughput: 11.78 Mbit/s  
95th percentile per-packet one-way delay: 42.106 ms  
Loss rate: 0.84%

Run 1: Report of Sprout — Data Link

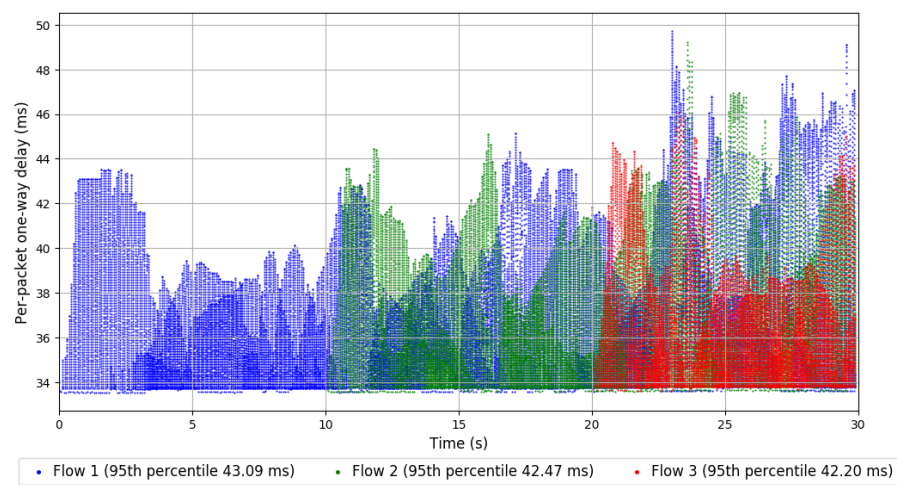
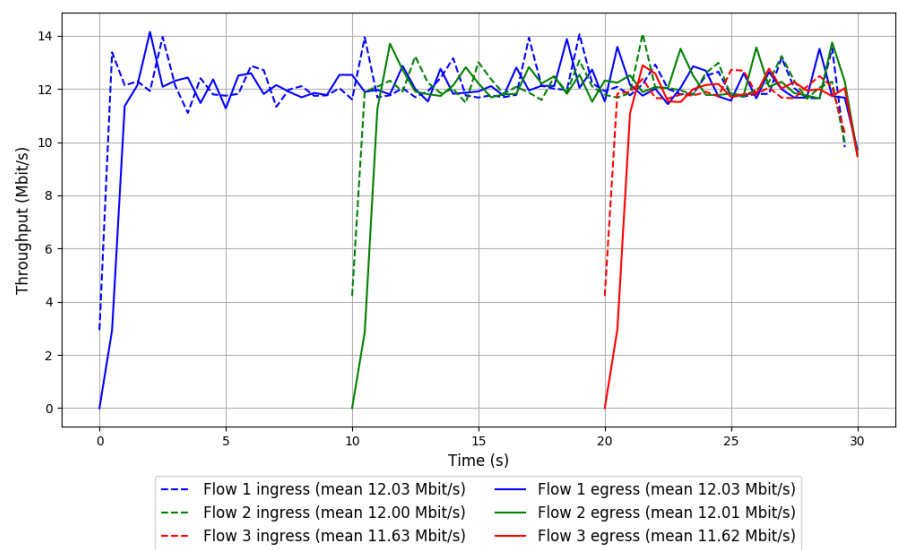


Run 2: Statistics of Sprout

Start at: 2018-12-02 15:19:39  
End at: 2018-12-02 15:20:09  
Local clock offset: 1.429 ms  
Remote clock offset: -3.308 ms

# Below is generated by plot.py at 2018-12-02 16:48:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 23.84 Mbit/s  
95th percentile per-packet one-way delay: 42.722 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 12.03 Mbit/s  
95th percentile per-packet one-way delay: 43.095 ms  
Loss rate: 0.27%  
-- Flow 2:  
Average throughput: 12.01 Mbit/s  
95th percentile per-packet one-way delay: 42.466 ms  
Loss rate: 0.13%  
-- Flow 3:  
Average throughput: 11.62 Mbit/s  
95th percentile per-packet one-way delay: 42.203 ms  
Loss rate: 0.85%

Run 2: Report of Sprout — Data Link

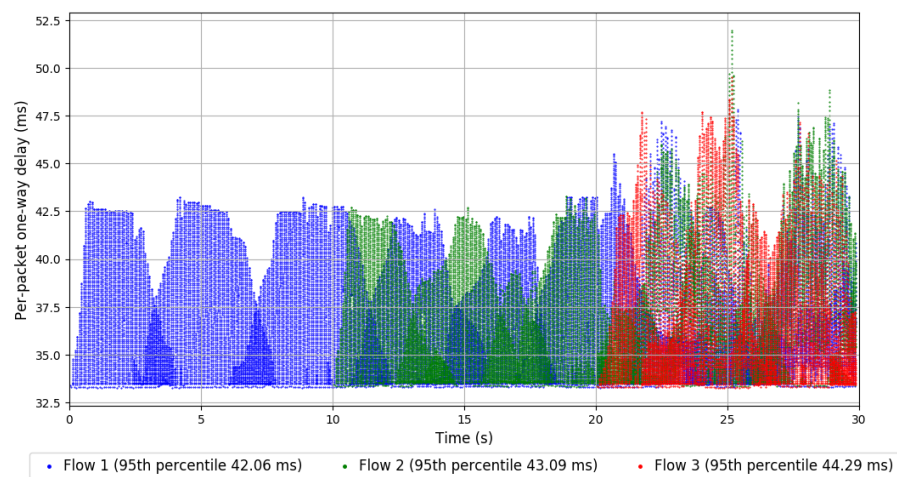
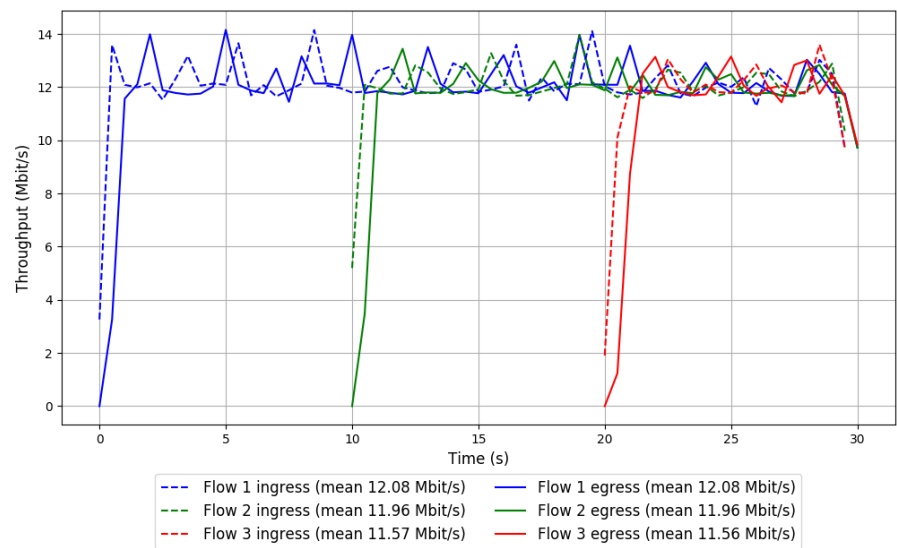


### Run 3: Statistics of Sprout

Start at: 2018-12-02 15:42:55  
End at: 2018-12-02 15:43:25  
Local clock offset: 1.219 ms  
Remote clock offset: -2.383 ms

```
# Below is generated by plot.py at 2018-12-02 16:48:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.83 Mbit/s
95th percentile per-packet one-way delay: 42.628 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 12.08 Mbit/s
95th percentile per-packet one-way delay: 42.061 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 11.96 Mbit/s
95th percentile per-packet one-way delay: 43.095 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 11.56 Mbit/s
95th percentile per-packet one-way delay: 44.288 ms
Loss rate: 0.72%
```

Run 3: Report of Sprout — Data Link



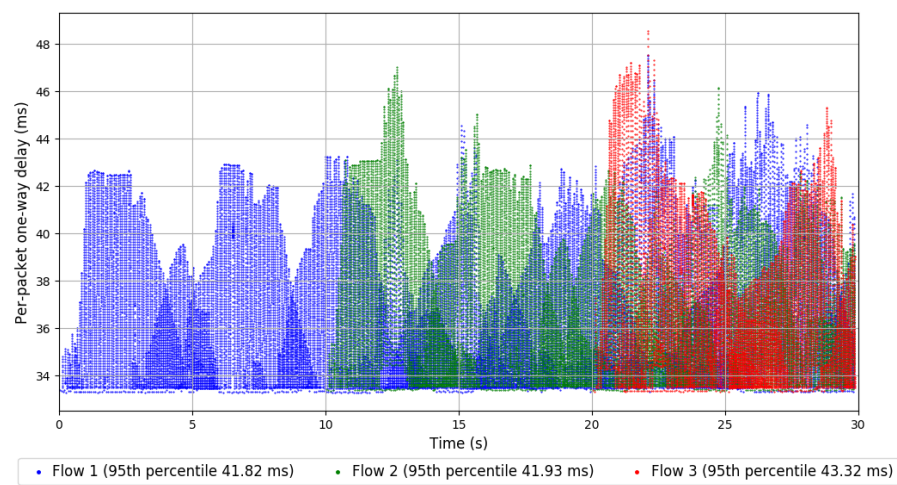
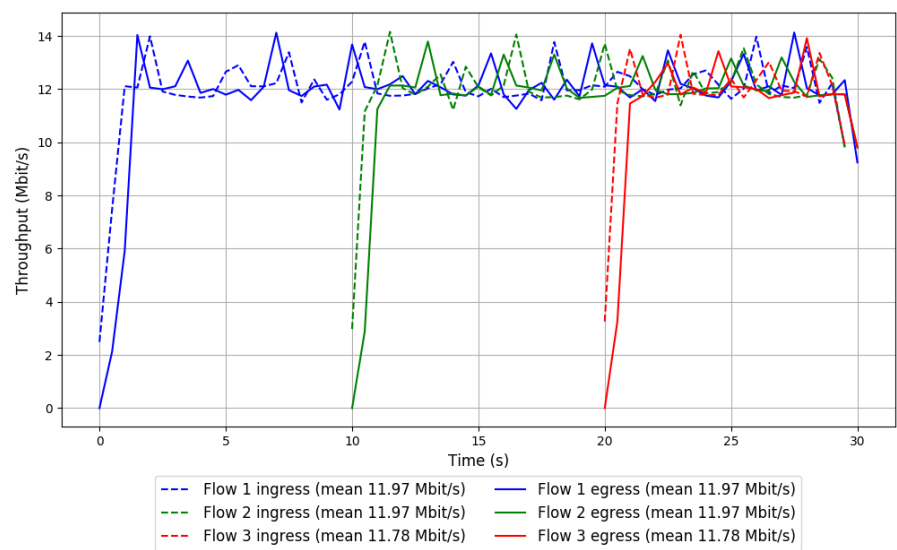


#### Run 4: Statistics of Sprout

Start at: 2018-12-02 16:06:31  
End at: 2018-12-02 16:07:01  
Local clock offset: 0.747 ms  
Remote clock offset: -1.886 ms

```
# Below is generated by plot.py at 2018-12-02 16:48:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.78 Mbit/s
95th percentile per-packet one-way delay: 42.034 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 41.816 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 41.932 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 43.320 ms
Loss rate: 0.84%
```

Run 4: Report of Sprout — Data Link

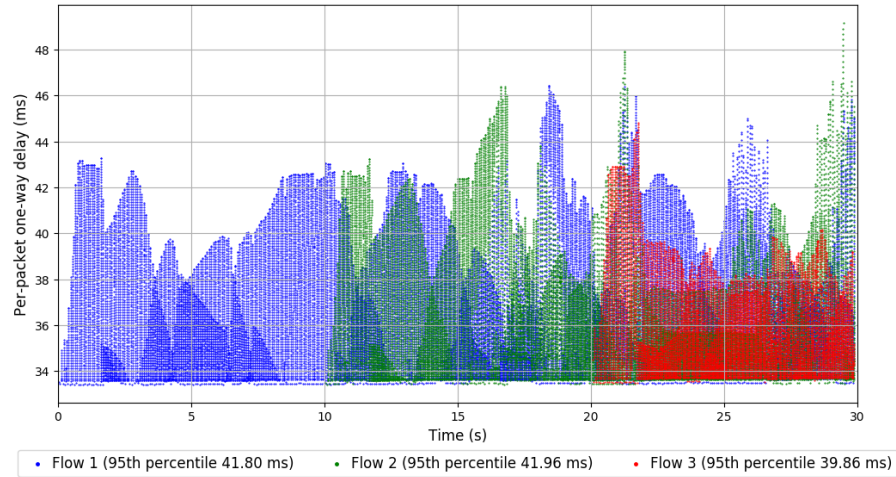
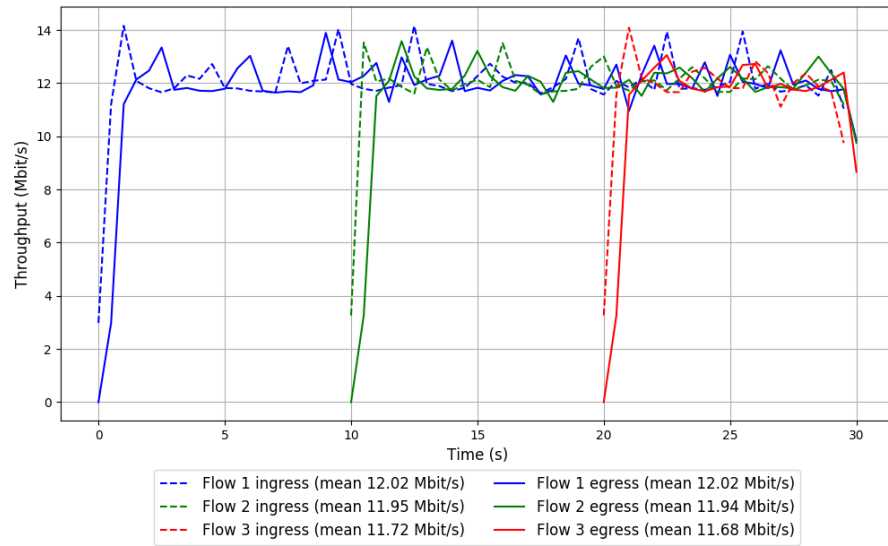


Run 5: Statistics of Sprout

Start at: 2018-12-02 16:29:49  
End at: 2018-12-02 16:30:19  
Local clock offset: -2.104 ms  
Remote clock offset: -1.617 ms

# Below is generated by plot.py at 2018-12-02 16:48:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 23.80 Mbit/s  
95th percentile per-packet one-way delay: 41.703 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 12.02 Mbit/s  
95th percentile per-packet one-way delay: 41.805 ms  
Loss rate: 0.27%  
-- Flow 2:  
Average throughput: 11.94 Mbit/s  
95th percentile per-packet one-way delay: 41.963 ms  
Loss rate: 0.37%  
-- Flow 3:  
Average throughput: 11.68 Mbit/s  
95th percentile per-packet one-way delay: 39.858 ms  
Loss rate: 0.74%

## Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-12-02 14:48:54

End at: 2018-12-02 14:49:24

Local clock offset: -4.55 ms

Remote clock offset: -4.0 ms

# Below is generated by plot.py at 2018-12-02 16:50:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.33 Mbit/s

95th percentile per-packet one-way delay: 126.854 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 55.76 Mbit/s

95th percentile per-packet one-way delay: 126.470 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 39.34 Mbit/s

95th percentile per-packet one-way delay: 126.780 ms

Loss rate: 0.98%

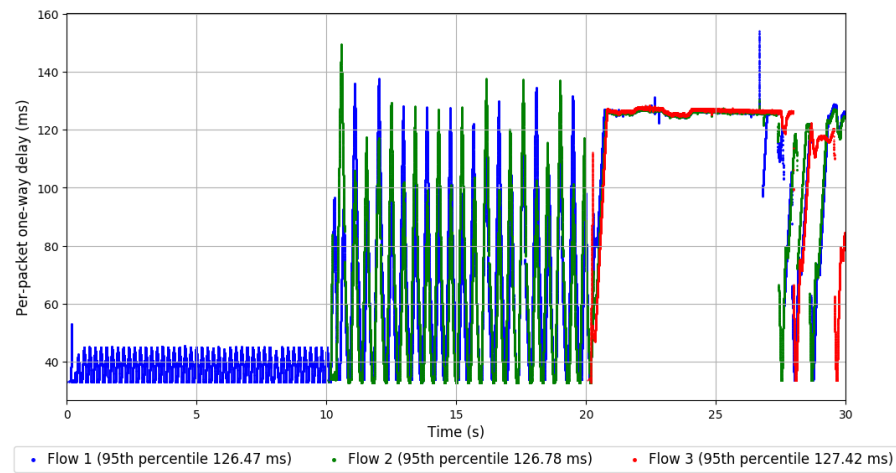
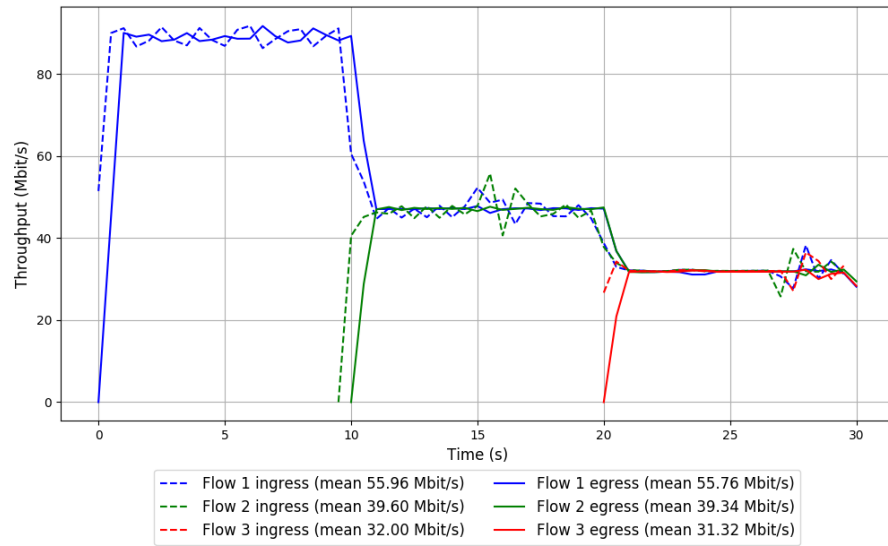
-- Flow 3:

Average throughput: 31.32 Mbit/s

95th percentile per-packet one-way delay: 127.424 ms

Loss rate: 2.76%

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

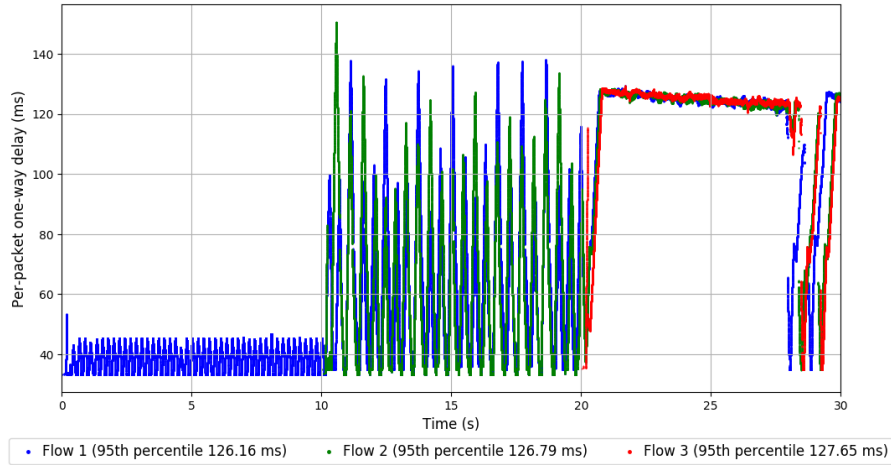
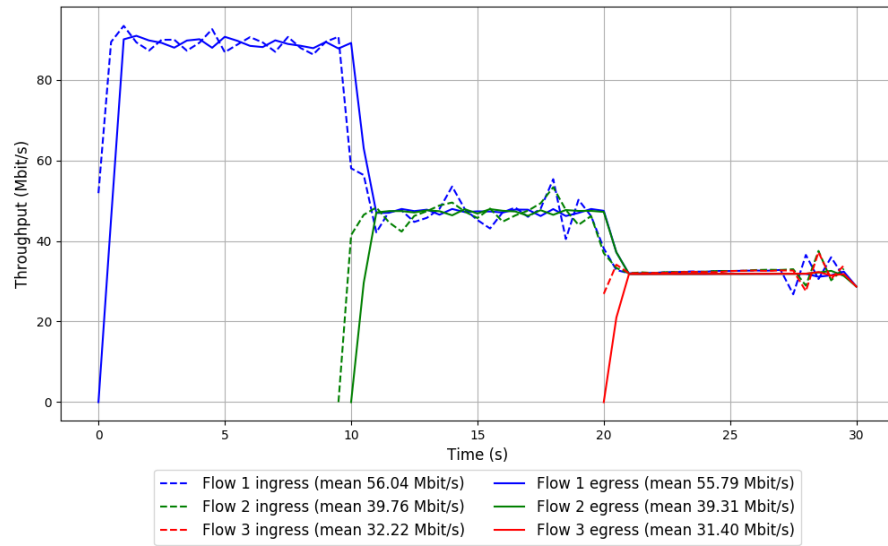


Run 2: Statistics of TaoVA-100x

Start at: 2018-12-02 15:12:14  
End at: 2018-12-02 15:12:44  
Local clock offset: 1.164 ms  
Remote clock offset: -3.392 ms

# Below is generated by plot.py at 2018-12-02 16:50:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.37 Mbit/s  
95th percentile per-packet one-way delay: 126.767 ms  
Loss rate: 1.18%  
-- Flow 1:  
Average throughput: 55.79 Mbit/s  
95th percentile per-packet one-way delay: 126.155 ms  
Loss rate: 0.66%  
-- Flow 2:  
Average throughput: 39.31 Mbit/s  
95th percentile per-packet one-way delay: 126.789 ms  
Loss rate: 1.45%  
-- Flow 3:  
Average throughput: 31.40 Mbit/s  
95th percentile per-packet one-way delay: 127.650 ms  
Loss rate: 3.19%

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



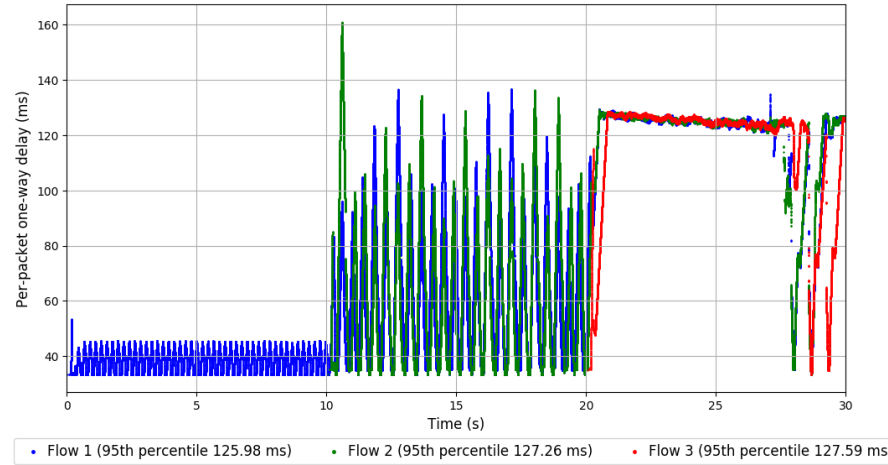
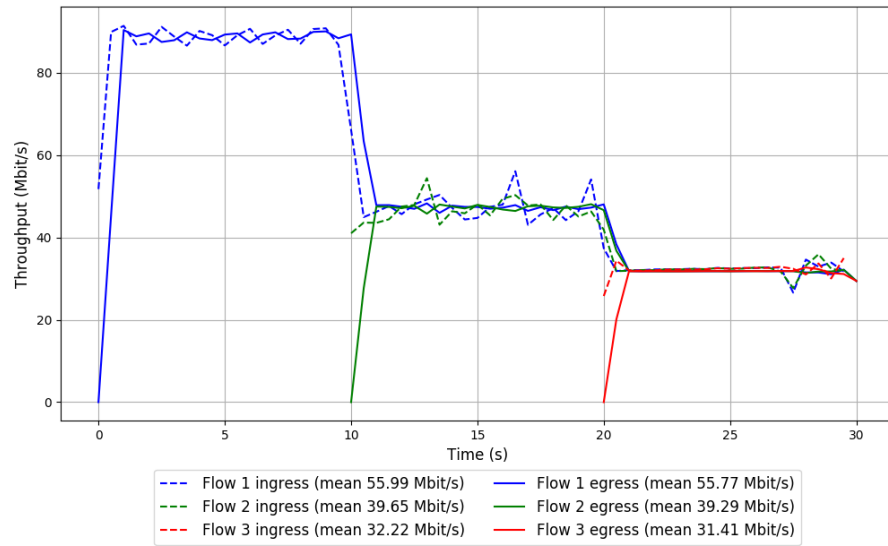


Run 3: Statistics of TaoVA-100x

Start at: 2018-12-02 15:35:30  
End at: 2018-12-02 15:36:00  
Local clock offset: 1.062 ms  
Remote clock offset: -2.562 ms

# Below is generated by plot.py at 2018-12-02 16:50:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.32 Mbit/s  
95th percentile per-packet one-way delay: 126.904 ms  
Loss rate: 1.08%  
-- Flow 1:  
Average throughput: 55.77 Mbit/s  
95th percentile per-packet one-way delay: 125.980 ms  
Loss rate: 0.62%  
-- Flow 2:  
Average throughput: 39.29 Mbit/s  
95th percentile per-packet one-way delay: 127.263 ms  
Loss rate: 1.23%  
-- Flow 3:  
Average throughput: 31.41 Mbit/s  
95th percentile per-packet one-way delay: 127.592 ms  
Loss rate: 3.15%

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

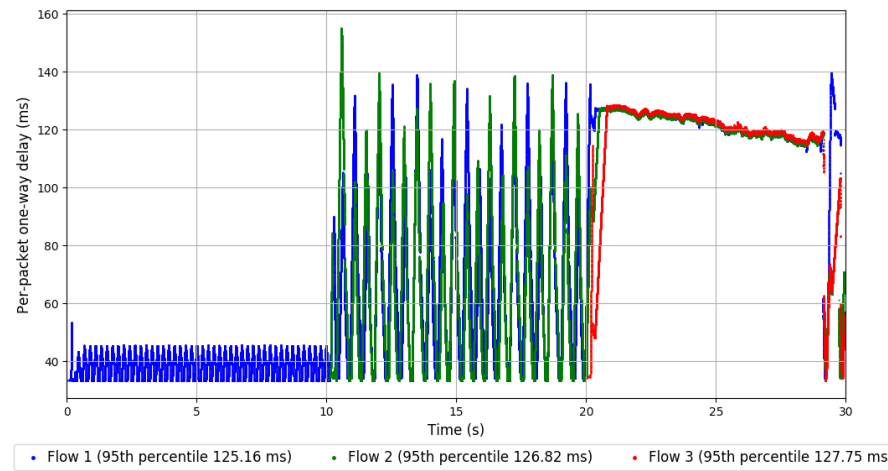
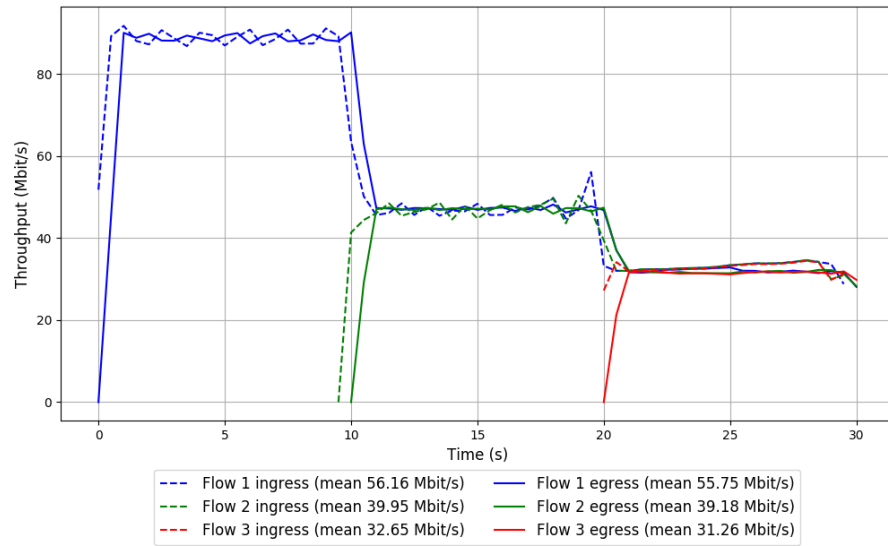


Run 4: Statistics of TaoVA-100x

Start at: 2018-12-02 15:58:59  
End at: 2018-12-02 15:59:29  
Local clock offset: 0.762 ms  
Remote clock offset: -2.059 ms

# Below is generated by plot.py at 2018-12-02 16:50:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.19 Mbit/s  
95th percentile per-packet one-way delay: 126.577 ms  
Loss rate: 1.77%  
-- Flow 1:  
Average throughput: 55.75 Mbit/s  
95th percentile per-packet one-way delay: 125.163 ms  
Loss rate: 0.93%  
-- Flow 2:  
Average throughput: 39.18 Mbit/s  
95th percentile per-packet one-way delay: 126.821 ms  
Loss rate: 2.26%  
-- Flow 3:  
Average throughput: 31.26 Mbit/s  
95th percentile per-packet one-way delay: 127.745 ms  
Loss rate: 4.89%

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

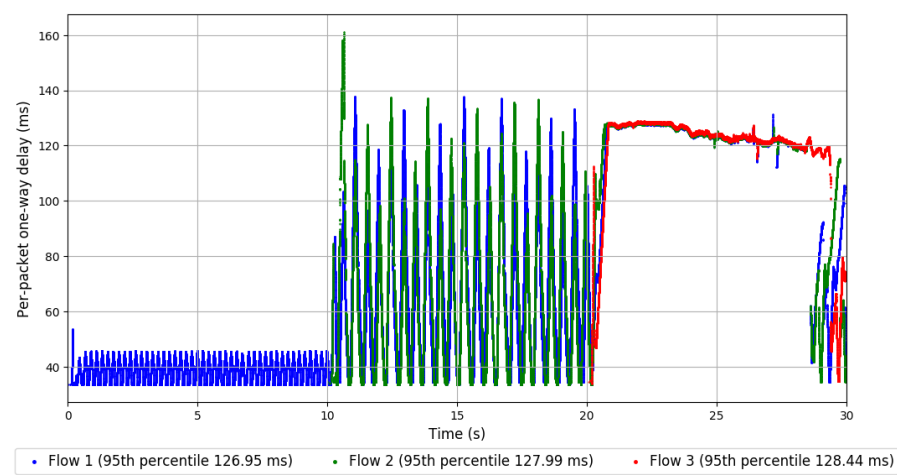
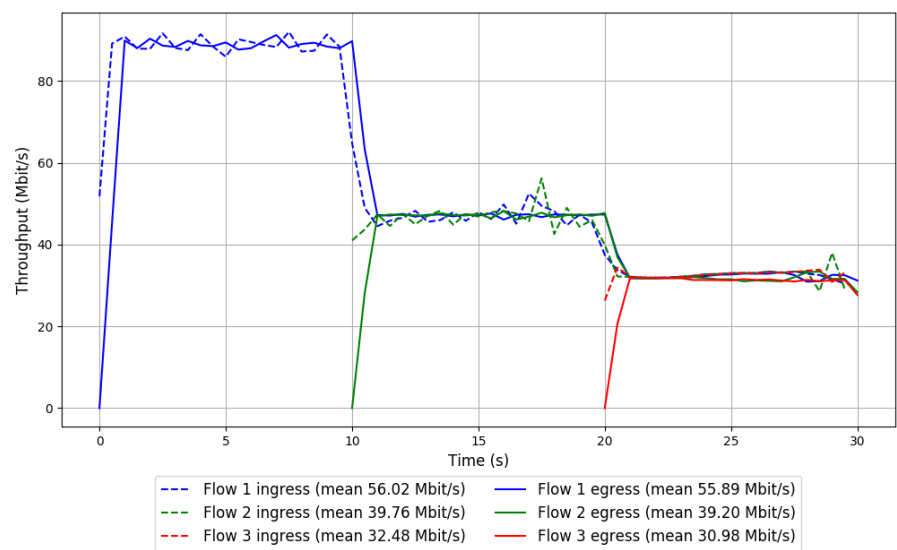


Run 5: Statistics of TaoVA-100x

Start at: 2018-12-02 16:22:14  
End at: 2018-12-02 16:22:44  
Local clock offset: -0.691 ms  
Remote clock offset: -1.749 ms

# Below is generated by plot.py at 2018-12-02 16:50:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.24 Mbit/s  
95th percentile per-packet one-way delay: 127.891 ms  
Loss rate: 1.36%  
-- Flow 1:  
Average throughput: 55.89 Mbit/s  
95th percentile per-packet one-way delay: 126.948 ms  
Loss rate: 0.45%  
-- Flow 2:  
Average throughput: 39.20 Mbit/s  
95th percentile per-packet one-way delay: 127.986 ms  
Loss rate: 1.72%  
-- Flow 3:  
Average throughput: 30.98 Mbit/s  
95th percentile per-packet one-way delay: 128.435 ms  
Loss rate: 5.22%

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

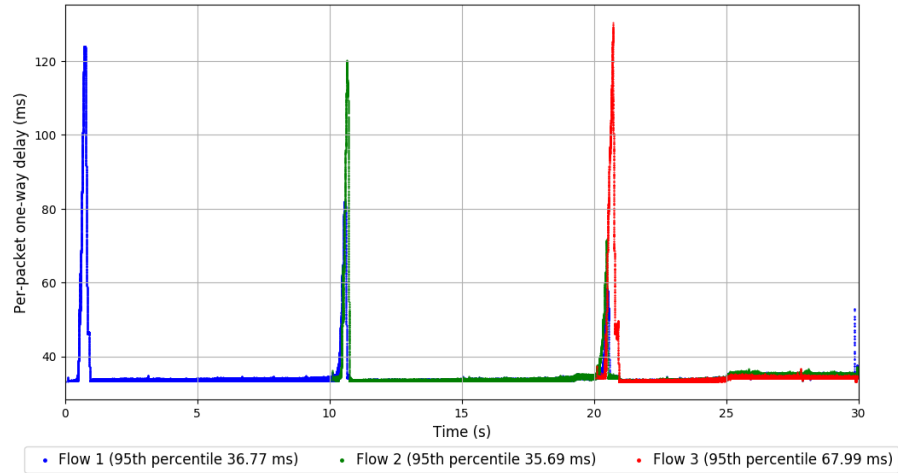
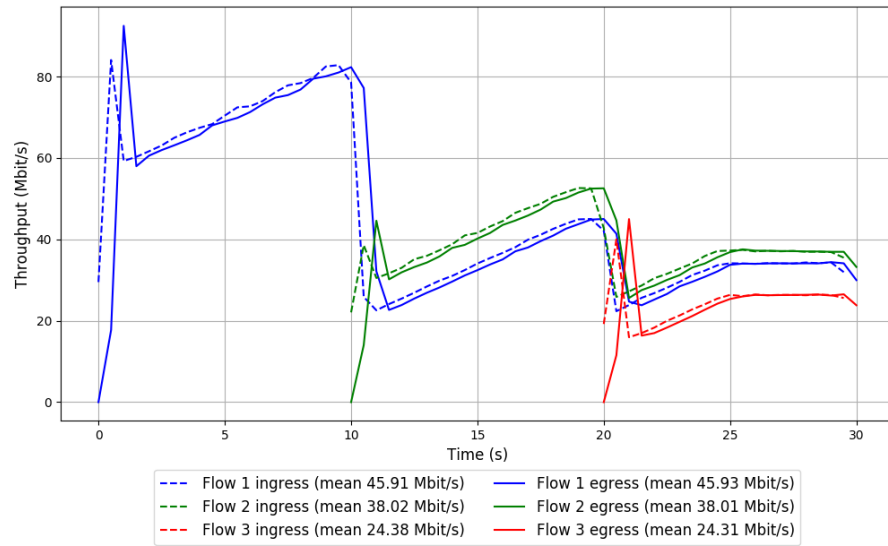


Run 1: Statistics of TCP Vegas

Start at: 2018-12-02 15:00:08  
End at: 2018-12-02 15:00:38  
Local clock offset: -0.453 ms  
Remote clock offset: -3.742 ms

# Below is generated by plot.py at 2018-12-02 16:50:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 79.28 Mbit/s  
95th percentile per-packet one-way delay: 37.490 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 45.93 Mbit/s  
95th percentile per-packet one-way delay: 36.770 ms  
Loss rate: 0.17%  
-- Flow 2:  
Average throughput: 38.01 Mbit/s  
95th percentile per-packet one-way delay: 35.693 ms  
Loss rate: 0.33%  
-- Flow 3:  
Average throughput: 24.31 Mbit/s  
95th percentile per-packet one-way delay: 67.993 ms  
Loss rate: 0.94%

# Run 1: Report of TCP Vegas — Data Link



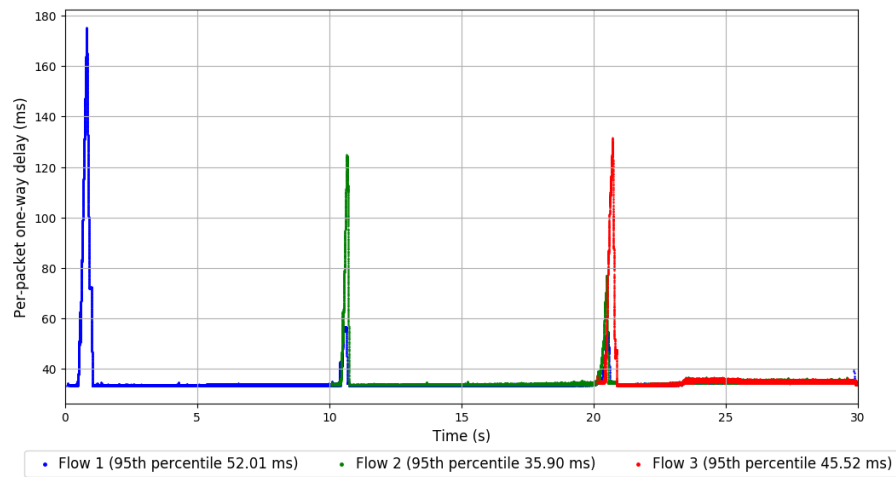
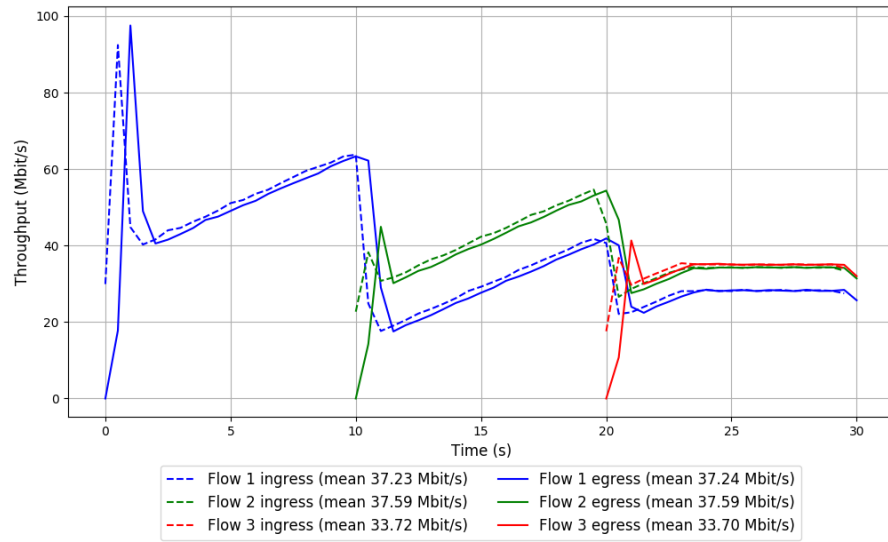


Run 2: Statistics of TCP Vegas

Start at: 2018-12-02 15:23:15  
End at: 2018-12-02 15:23:45  
Local clock offset: 1.188 ms  
Remote clock offset: -3.034 ms

# Below is generated by plot.py at 2018-12-02 16:50:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 73.41 Mbit/s  
95th percentile per-packet one-way delay: 41.594 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 37.24 Mbit/s  
95th percentile per-packet one-way delay: 52.007 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 37.59 Mbit/s  
95th percentile per-packet one-way delay: 35.901 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 33.70 Mbit/s  
95th percentile per-packet one-way delay: 45.521 ms  
Loss rate: 0.71%

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

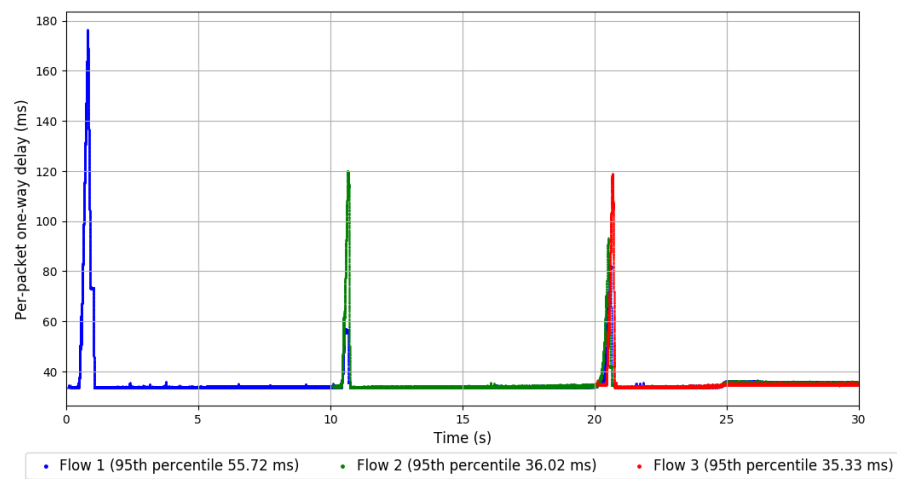
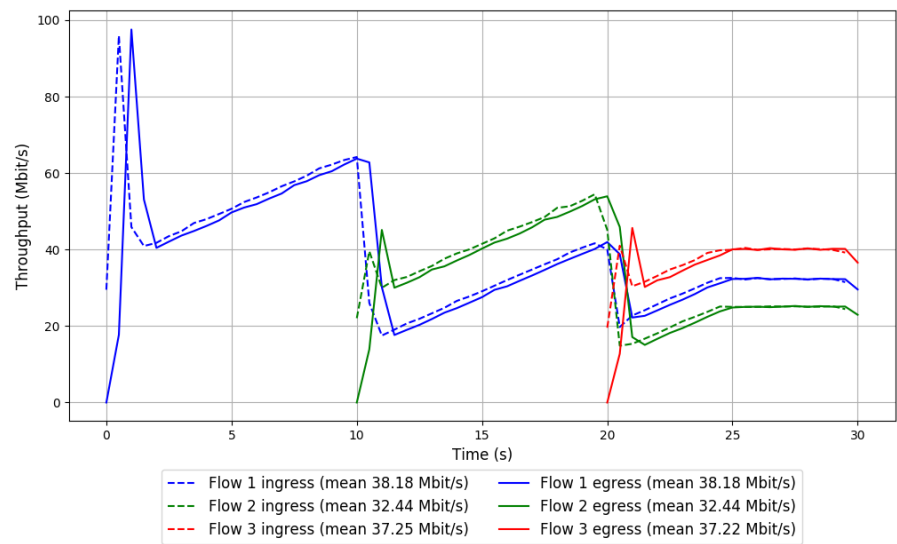


Run 3: Statistics of TCP Vegas

Start at: 2018-12-02 15:46:31  
End at: 2018-12-02 15:47:01  
Local clock offset: 1.293 ms  
Remote clock offset: -2.418 ms

# Below is generated by plot.py at 2018-12-02 16:50:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 72.09 Mbit/s  
95th percentile per-packet one-way delay: 42.073 ms  
Loss rate: 0.33%  
-- Flow 1:  
Average throughput: 38.18 Mbit/s  
95th percentile per-packet one-way delay: 55.721 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 32.44 Mbit/s  
95th percentile per-packet one-way delay: 36.024 ms  
Loss rate: 0.32%  
-- Flow 3:  
Average throughput: 37.22 Mbit/s  
95th percentile per-packet one-way delay: 35.332 ms  
Loss rate: 0.71%

Run 3: Report of TCP Vegas — Data Link

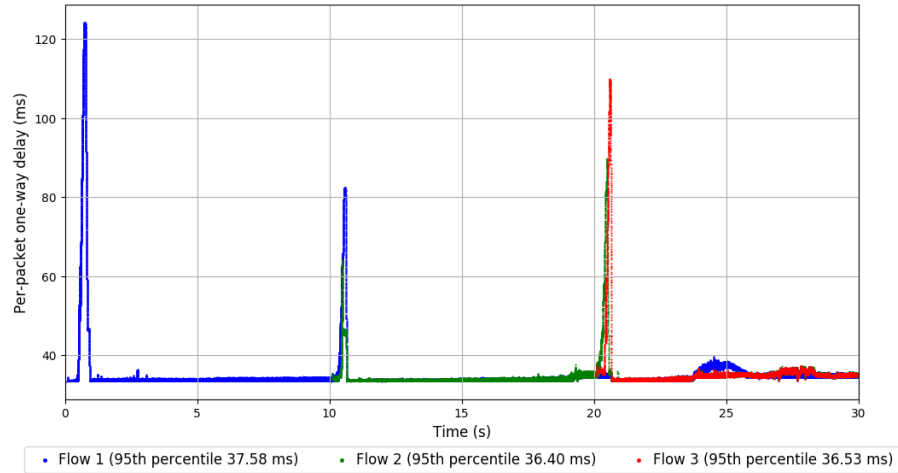
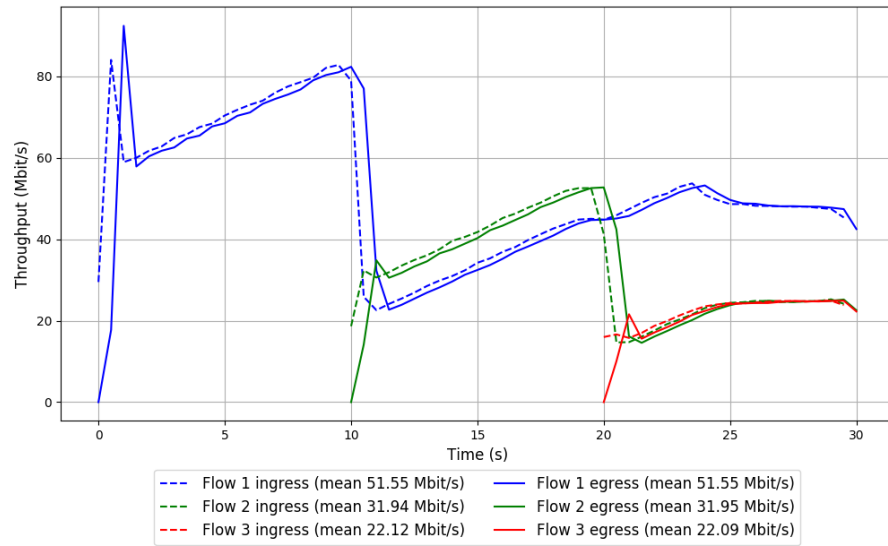


Run 4: Statistics of TCP Vegas

Start at: 2018-12-02 16:10:07  
End at: 2018-12-02 16:10:37  
Local clock offset: 0.774 ms  
Remote clock offset: -1.824 ms

# Below is generated by plot.py at 2018-12-02 16:50:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 80.13 Mbit/s  
95th percentile per-packet one-way delay: 37.345 ms  
Loss rate: 0.27%  
-- Flow 1:  
Average throughput: 51.55 Mbit/s  
95th percentile per-packet one-way delay: 37.581 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 31.95 Mbit/s  
95th percentile per-packet one-way delay: 36.400 ms  
Loss rate: 0.27%  
-- Flow 3:  
Average throughput: 22.09 Mbit/s  
95th percentile per-packet one-way delay: 36.531 ms  
Loss rate: 0.76%

# Run 4: Report of TCP Vegas — Data Link

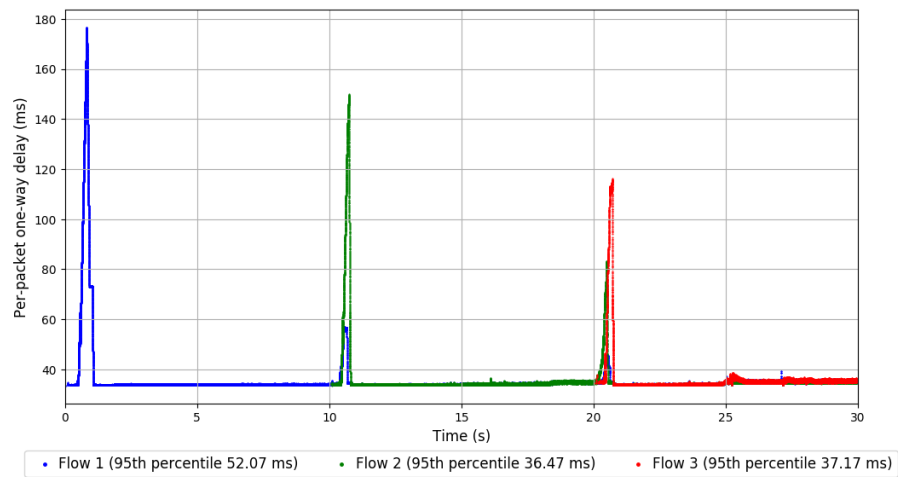
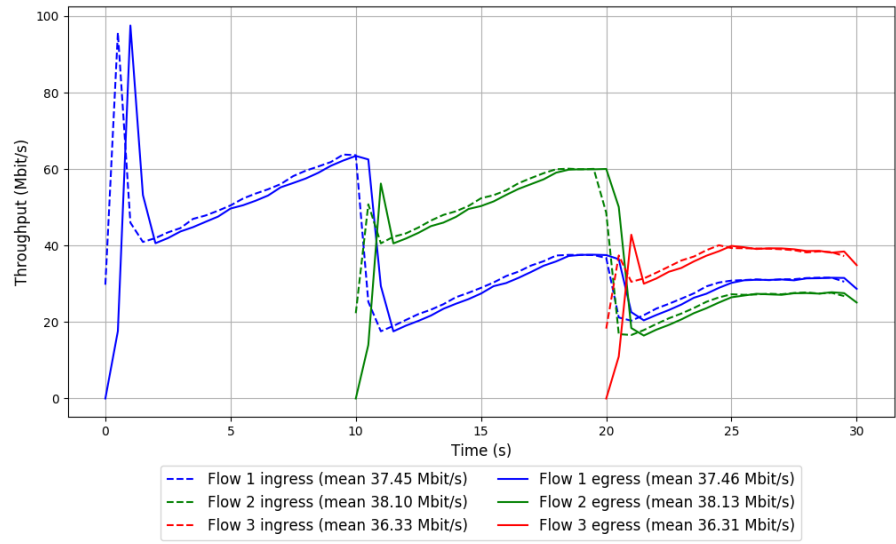


Run 5: Statistics of TCP Vegas

Start at: 2018-12-02 16:33:26  
End at: 2018-12-02 16:33:56  
Local clock offset: -2.5 ms  
Remote clock offset: -1.677 ms

# Below is generated by plot.py at 2018-12-02 16:50:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 74.84 Mbit/s  
95th percentile per-packet one-way delay: 41.091 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 37.46 Mbit/s  
95th percentile per-packet one-way delay: 52.073 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 38.13 Mbit/s  
95th percentile per-packet one-way delay: 36.469 ms  
Loss rate: 0.25%  
-- Flow 3:  
Average throughput: 36.31 Mbit/s  
95th percentile per-packet one-way delay: 37.174 ms  
Loss rate: 0.71%

# Run 5: Report of TCP Vegas — Data Link



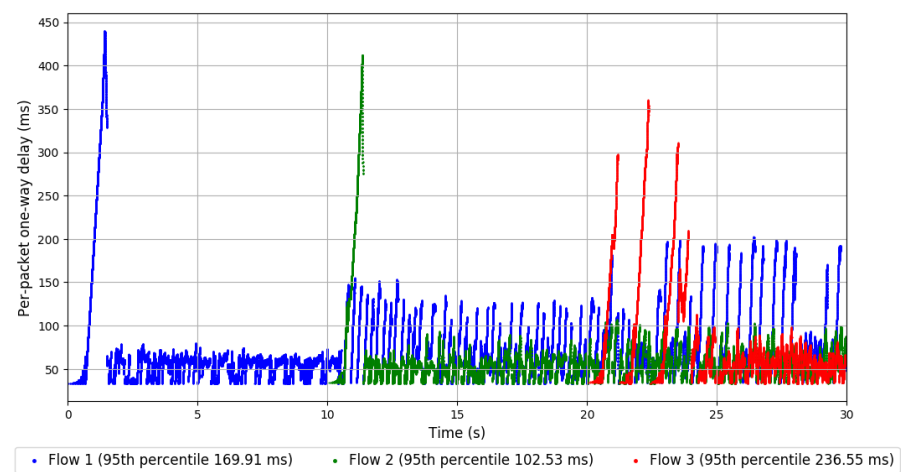
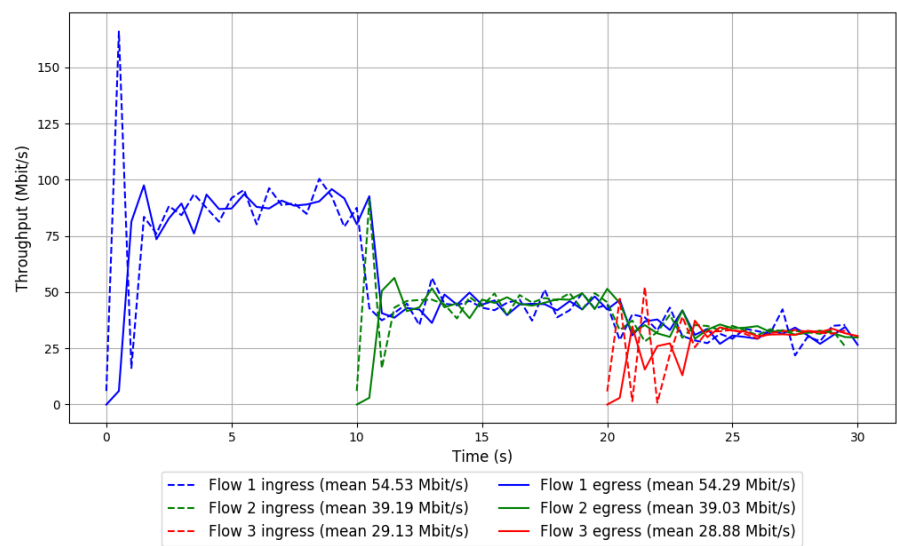


Run 1: Statistics of Verus

Start at: 2018-12-02 14:45:12  
End at: 2018-12-02 14:45:42  
Local clock offset: -5.034 ms  
Remote clock offset: -4.233 ms

# Below is generated by plot.py at 2018-12-02 16:50:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.80 Mbit/s  
95th percentile per-packet one-way delay: 176.745 ms  
Loss rate: 0.56%  
-- Flow 1:  
Average throughput: 54.29 Mbit/s  
95th percentile per-packet one-way delay: 169.910 ms  
Loss rate: 0.55%  
-- Flow 2:  
Average throughput: 39.03 Mbit/s  
95th percentile per-packet one-way delay: 102.528 ms  
Loss rate: 0.26%  
-- Flow 3:  
Average throughput: 28.88 Mbit/s  
95th percentile per-packet one-way delay: 236.553 ms  
Loss rate: 1.47%

Run 1: Report of Verus — Data Link

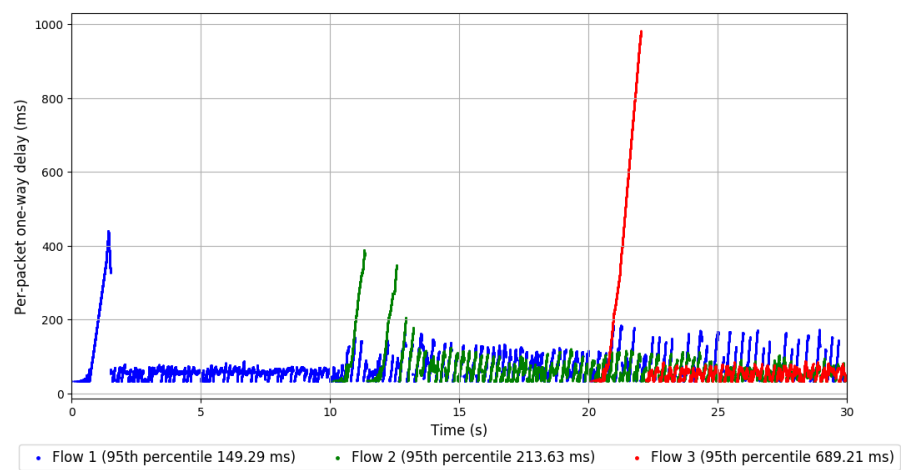
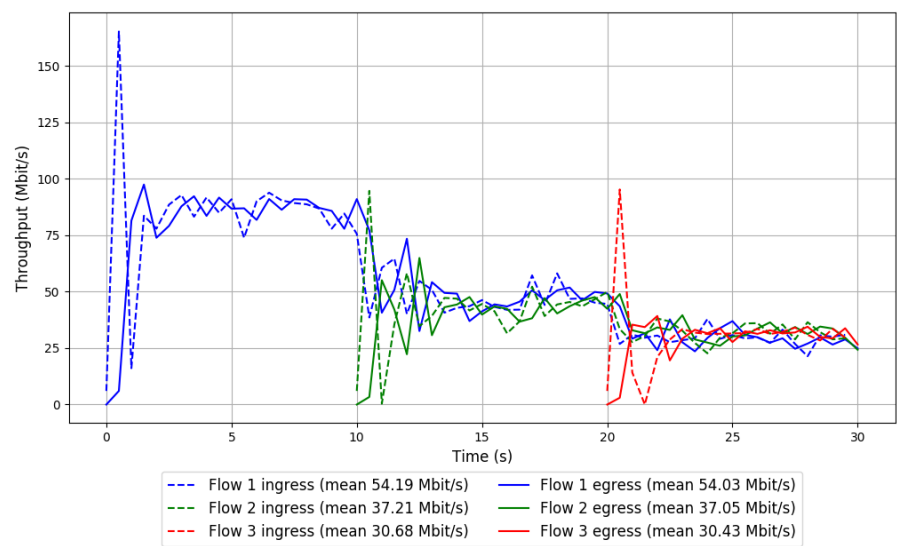


Run 2: Statistics of Verus

Start at: 2018-12-02 15:08:34  
End at: 2018-12-02 15:09:04  
Local clock offset: 0.797 ms  
Remote clock offset: -3.47 ms

# Below is generated by plot.py at 2018-12-02 16:51:07  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.73 Mbit/s  
95th percentile per-packet one-way delay: 199.391 ms  
Loss rate: 0.66%  
-- Flow 1:  
Average throughput: 54.03 Mbit/s  
95th percentile per-packet one-way delay: 149.292 ms  
Loss rate: 0.49%  
-- Flow 2:  
Average throughput: 37.05 Mbit/s  
95th percentile per-packet one-way delay: 213.626 ms  
Loss rate: 0.73%  
-- Flow 3:  
Average throughput: 30.43 Mbit/s  
95th percentile per-packet one-way delay: 689.208 ms  
Loss rate: 1.43%

Run 2: Report of Verus — Data Link

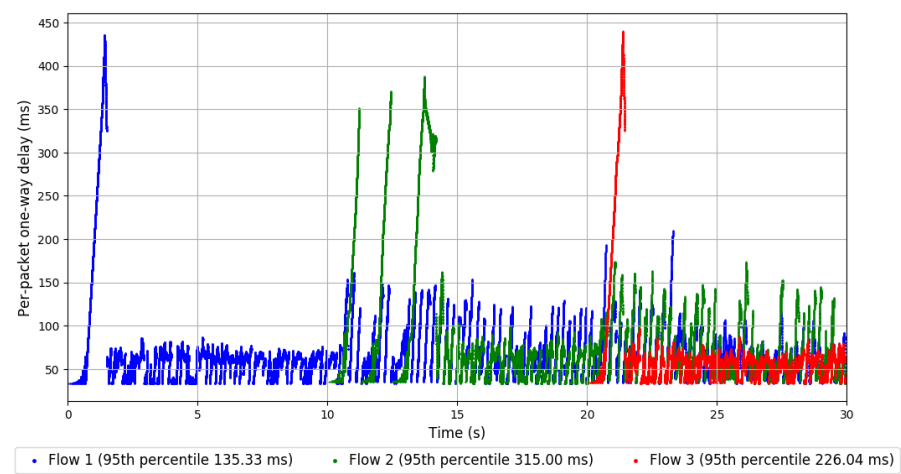
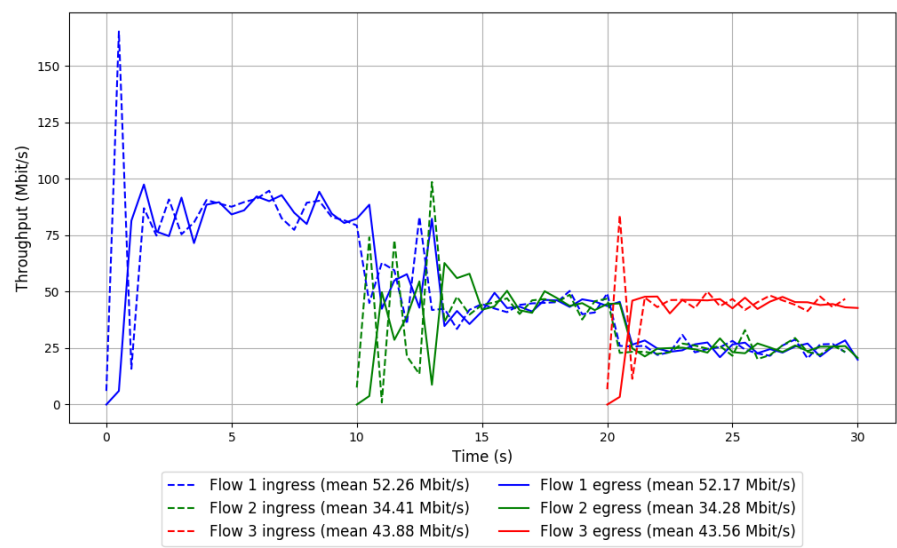


Run 3: Statistics of Verus

Start at: 2018-12-02 15:31:41  
End at: 2018-12-02 15:32:11  
Local clock offset: 1.024 ms  
Remote clock offset: -2.736 ms

# Below is generated by plot.py at 2018-12-02 16:51:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.38 Mbit/s  
95th percentile per-packet one-way delay: 220.195 ms  
Loss rate: 0.61%  
-- Flow 1:  
Average throughput: 52.17 Mbit/s  
95th percentile per-packet one-way delay: 135.331 ms  
Loss rate: 0.37%  
-- Flow 2:  
Average throughput: 34.28 Mbit/s  
95th percentile per-packet one-way delay: 314.998 ms  
Loss rate: 0.68%  
-- Flow 3:  
Average throughput: 43.56 Mbit/s  
95th percentile per-packet one-way delay: 226.036 ms  
Loss rate: 1.34%

Run 3: Report of Verus — Data Link

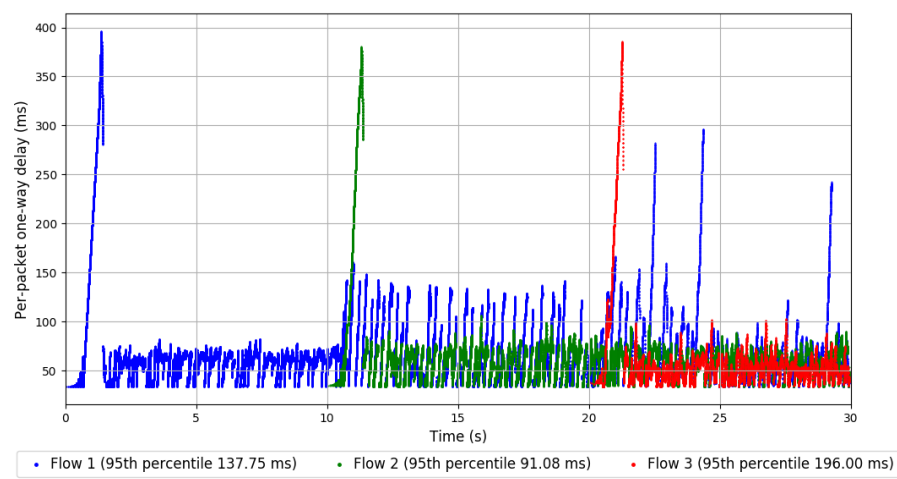
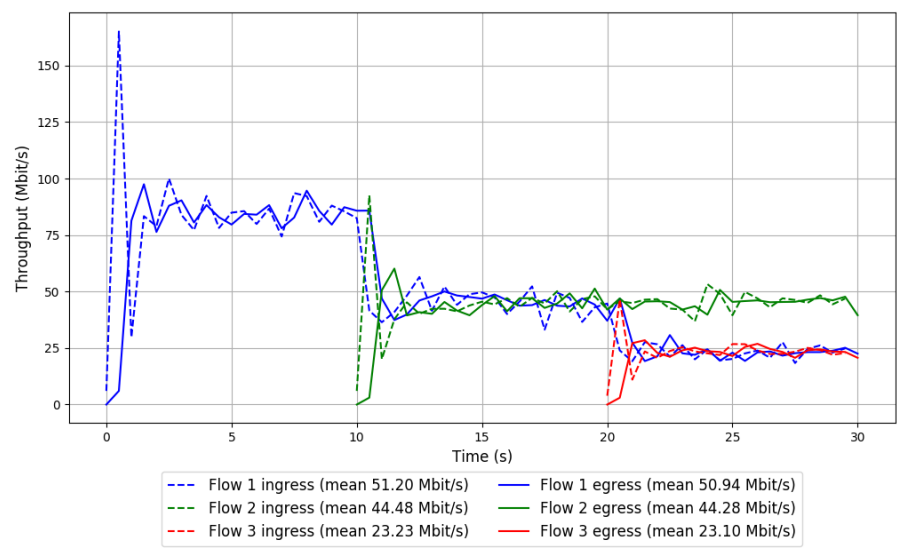


Run 4: Statistics of Verus

Start at: 2018-12-02 15:55:07  
End at: 2018-12-02 15:55:37  
Local clock offset: 0.854 ms  
Remote clock offset: -2.303 ms

# Below is generated by plot.py at 2018-12-02 16:51:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.03 Mbit/s  
95th percentile per-packet one-way delay: 132.369 ms  
Loss rate: 0.76%  
-- Flow 1:  
Average throughput: 50.94 Mbit/s  
95th percentile per-packet one-way delay: 137.745 ms  
Loss rate: 0.71%  
-- Flow 2:  
Average throughput: 44.28 Mbit/s  
95th percentile per-packet one-way delay: 91.083 ms  
Loss rate: 0.75%  
-- Flow 3:  
Average throughput: 23.10 Mbit/s  
95th percentile per-packet one-way delay: 195.999 ms  
Loss rate: 1.18%

Run 4: Report of Verus — Data Link



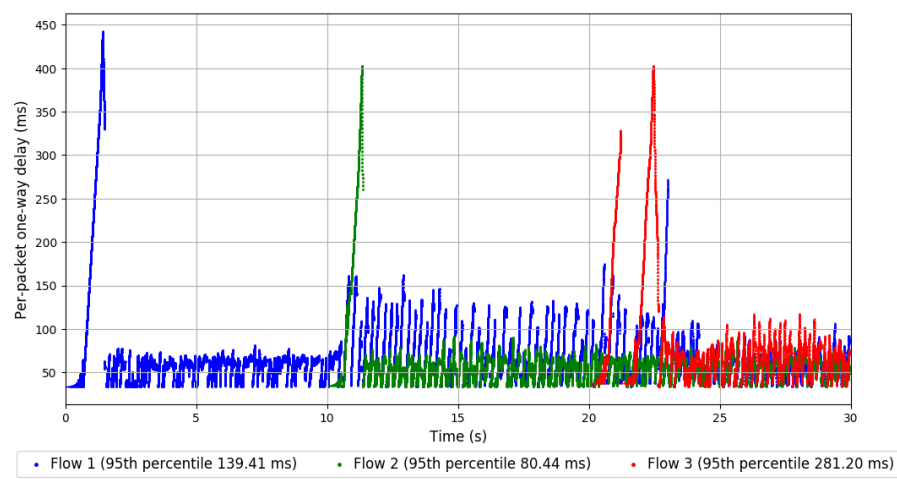
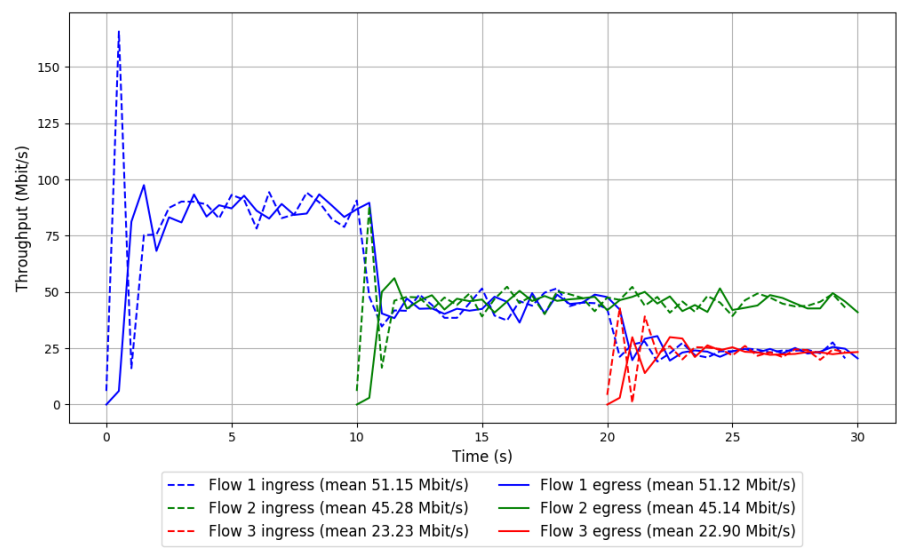


Run 5: Statistics of Verus

Start at: 2018-12-02 16:18:35  
End at: 2018-12-02 16:19:05  
Local clock offset: 0.598 ms  
Remote clock offset: -1.834 ms

# Below is generated by plot.py at 2018-12-02 16:51:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.72 Mbit/s  
95th percentile per-packet one-way delay: 141.417 ms  
Loss rate: 0.51%  
-- Flow 1:  
Average throughput: 51.12 Mbit/s  
95th percentile per-packet one-way delay: 139.415 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 45.14 Mbit/s  
95th percentile per-packet one-way delay: 80.436 ms  
Loss rate: 0.60%  
-- Flow 3:  
Average throughput: 22.90 Mbit/s  
95th percentile per-packet one-way delay: 281.197 ms  
Loss rate: 1.86%

Run 5: Report of Verus — Data Link

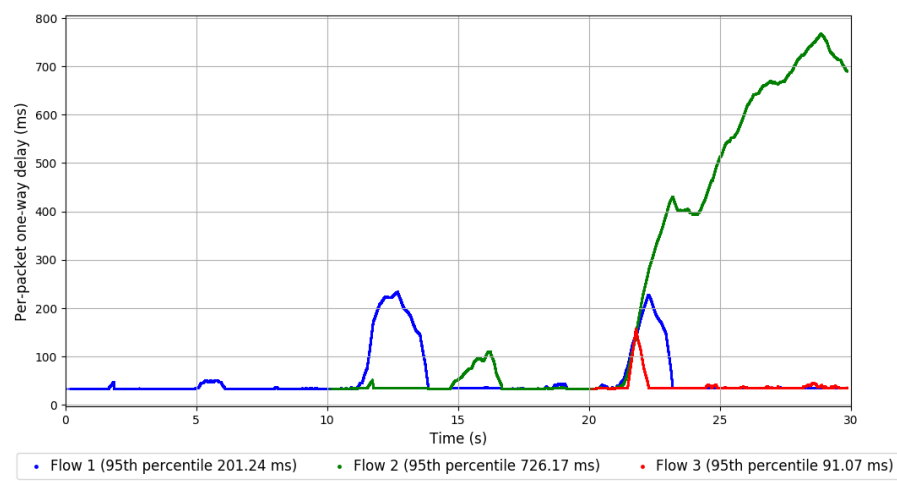
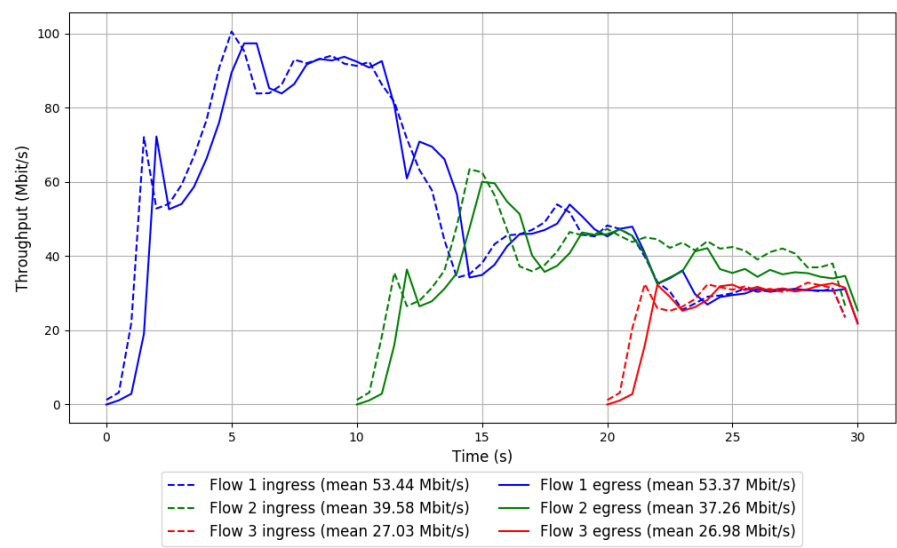


Run 1: Statistics of PCC-Vivace

Start at: 2018-12-02 14:57:33  
End at: 2018-12-02 14:58:03  
Local clock offset: -1.063 ms  
Remote clock offset: -4.015 ms

# Below is generated by plot.py at 2018-12-02 16:51:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.00 Mbit/s  
95th percentile per-packet one-way delay: 623.712 ms  
Loss rate: 2.13%  
-- Flow 1:  
Average throughput: 53.37 Mbit/s  
95th percentile per-packet one-way delay: 201.236 ms  
Loss rate: 0.35%  
-- Flow 2:  
Average throughput: 37.26 Mbit/s  
95th percentile per-packet one-way delay: 726.169 ms  
Loss rate: 6.18%  
-- Flow 3:  
Average throughput: 26.98 Mbit/s  
95th percentile per-packet one-way delay: 91.069 ms  
Loss rate: 0.82%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-12-02 15:20:49

End at: 2018-12-02 15:21:19

Local clock offset: 1.33 ms

Remote clock offset: -3.3 ms

# Below is generated by plot.py at 2018-12-02 16:51:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 86.86 Mbit/s

95th percentile per-packet one-way delay: 982.784 ms

Loss rate: 2.77%

-- Flow 1:

Average throughput: 54.81 Mbit/s

95th percentile per-packet one-way delay: 1187.203 ms

Loss rate: 2.61%

-- Flow 2:

Average throughput: 30.48 Mbit/s

95th percentile per-packet one-way delay: 888.115 ms

Loss rate: 4.21%

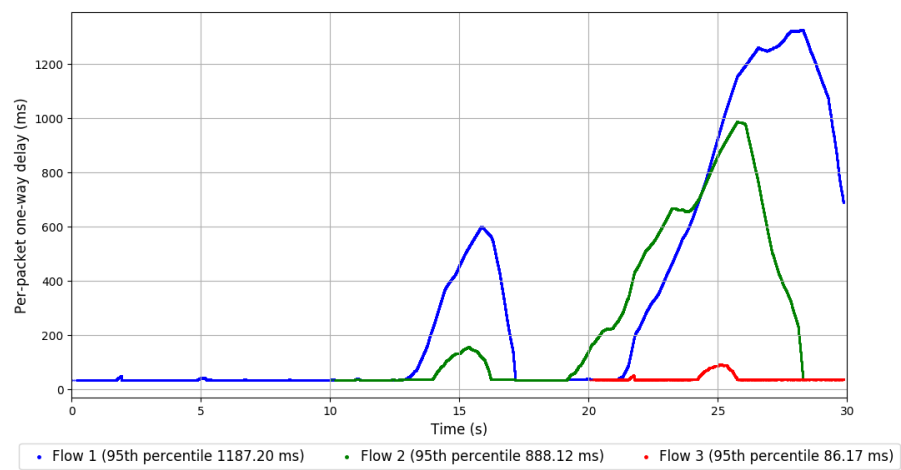
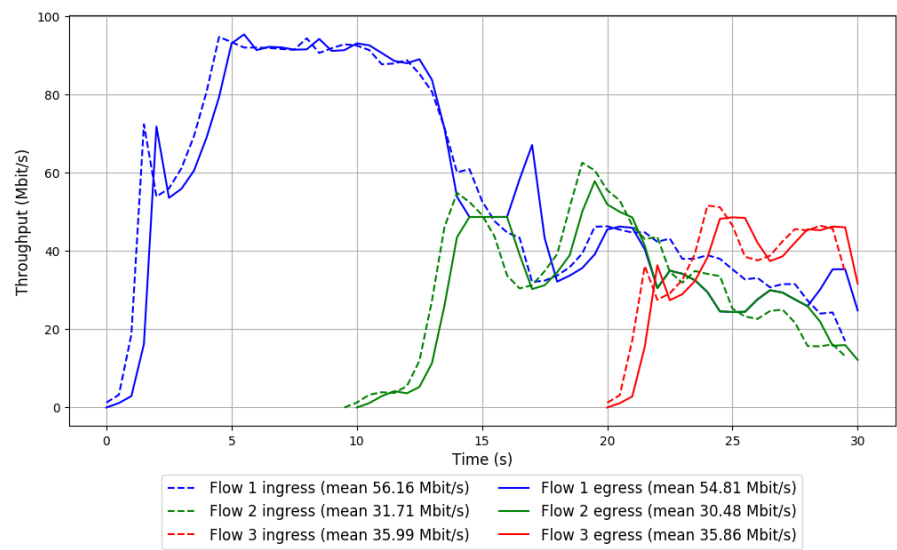
-- Flow 3:

Average throughput: 35.86 Mbit/s

95th percentile per-packet one-way delay: 86.167 ms

Loss rate: 1.01%

Run 2: Report of PCC-Vivace — Data Link

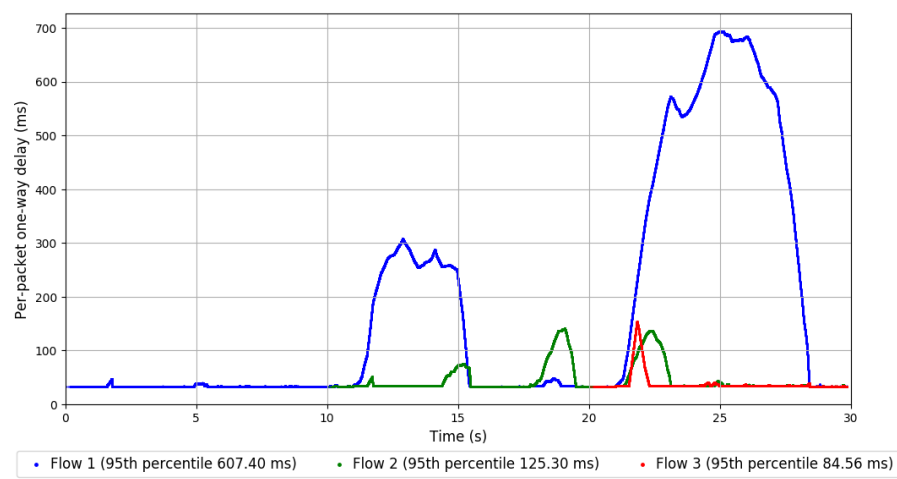
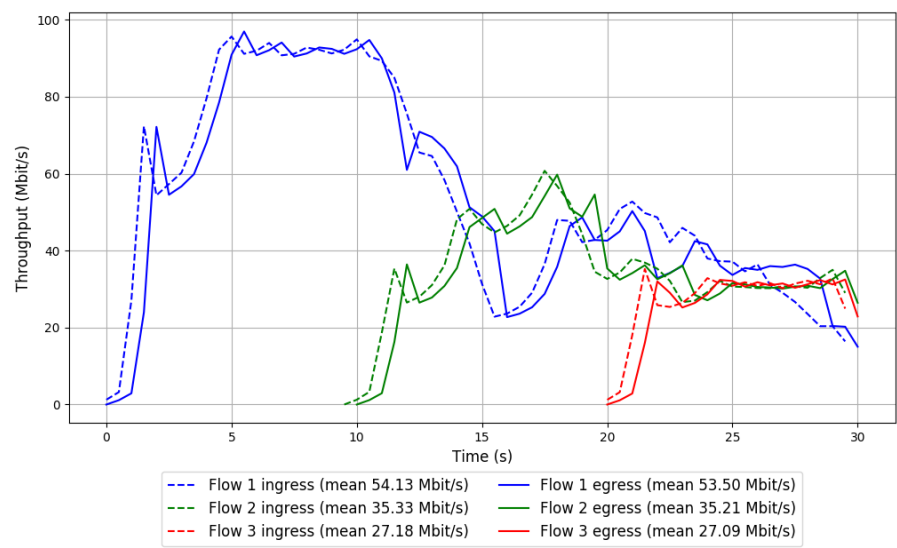


Run 3: Statistics of PCC-Vivace

Start at: 2018-12-02 15:44:04  
End at: 2018-12-02 15:44:34  
Local clock offset: 1.224 ms  
Remote clock offset: -2.371 ms

# Below is generated by plot.py at 2018-12-02 16:51:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.82 Mbit/s  
95th percentile per-packet one-way delay: 554.731 ms  
Loss rate: 1.13%  
-- Flow 1:  
Average throughput: 53.50 Mbit/s  
95th percentile per-packet one-way delay: 607.401 ms  
Loss rate: 1.38%  
-- Flow 2:  
Average throughput: 35.21 Mbit/s  
95th percentile per-packet one-way delay: 125.295 ms  
Loss rate: 0.64%  
-- Flow 3:  
Average throughput: 27.09 Mbit/s  
95th percentile per-packet one-way delay: 84.564 ms  
Loss rate: 0.97%

Run 3: Report of PCC-Vivace — Data Link



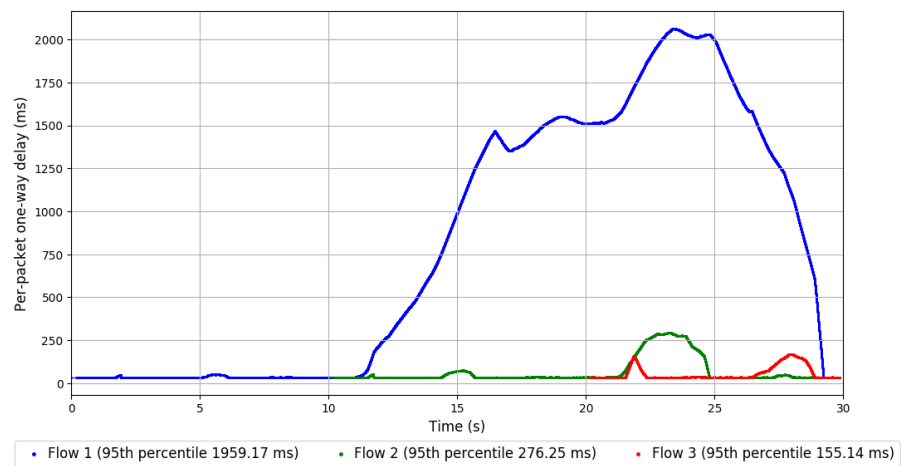
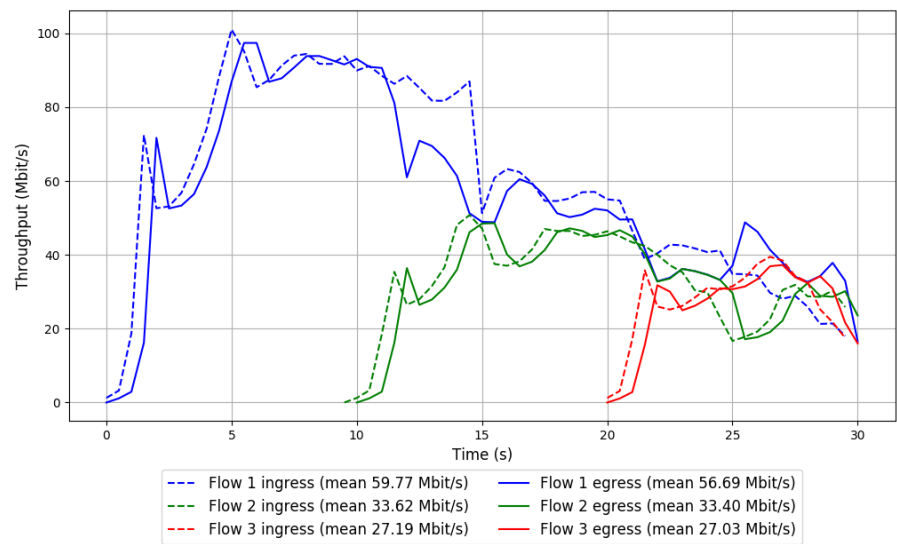


Run 4: Statistics of PCC-Vivace

Start at: 2018-12-02 16:07:41  
End at: 2018-12-02 16:08:11  
Local clock offset: 0.754 ms  
Remote clock offset: -1.853 ms

# Below is generated by plot.py at 2018-12-02 16:51:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.79 Mbit/s  
95th percentile per-packet one-way delay: 1783.469 ms  
Loss rate: 3.87%  
-- Flow 1:  
Average throughput: 56.69 Mbit/s  
95th percentile per-packet one-way delay: 1959.169 ms  
Loss rate: 5.36%  
-- Flow 2:  
Average throughput: 33.40 Mbit/s  
95th percentile per-packet one-way delay: 276.254 ms  
Loss rate: 0.97%  
-- Flow 3:  
Average throughput: 27.03 Mbit/s  
95th percentile per-packet one-way delay: 155.137 ms  
Loss rate: 1.25%

Run 4: Report of PCC-Vivace — Data Link

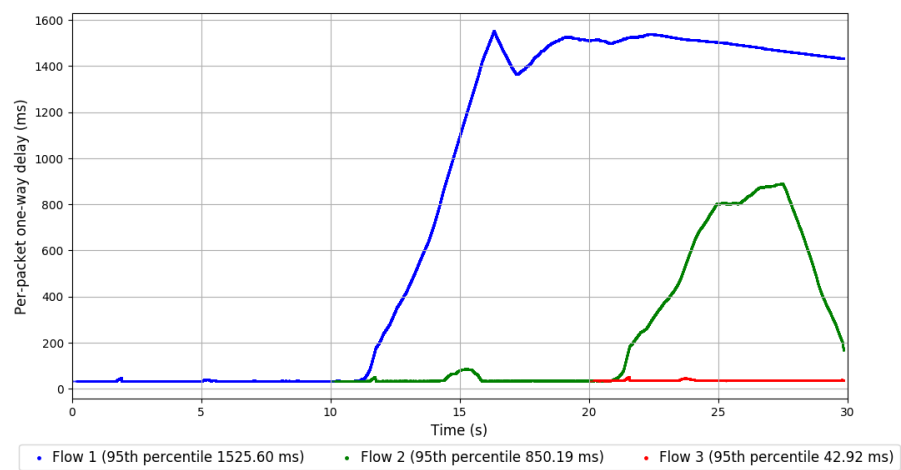
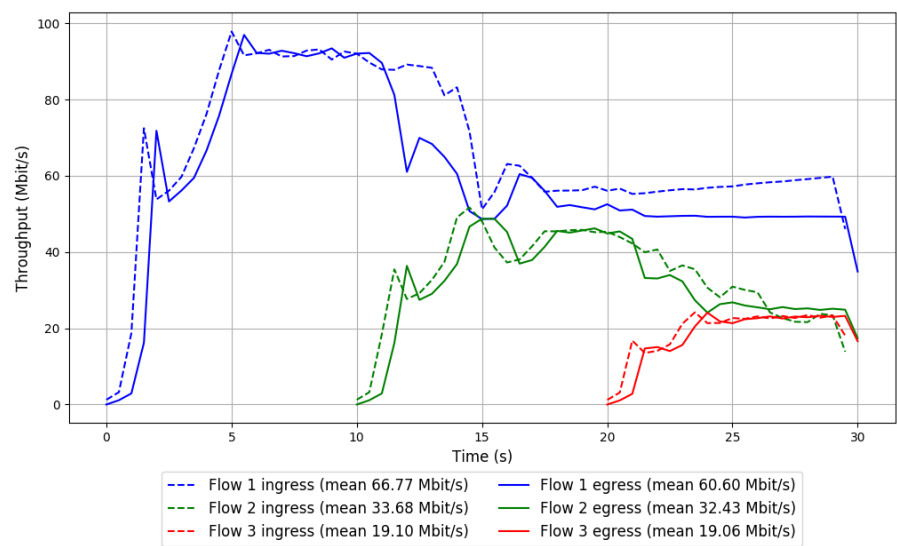


Run 5: Statistics of PCC-Vivace

Start at: 2018-12-02 16:30:58  
End at: 2018-12-02 16:31:28  
Local clock offset: -2.261 ms  
Remote clock offset: -1.558 ms

# Below is generated by plot.py at 2018-12-02 16:51:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.42 Mbit/s  
95th percentile per-packet one-way delay: 1521.512 ms  
Loss rate: 7.59%  
-- Flow 1:  
Average throughput: 60.60 Mbit/s  
95th percentile per-packet one-way delay: 1525.600 ms  
Loss rate: 9.43%  
-- Flow 2:  
Average throughput: 32.43 Mbit/s  
95th percentile per-packet one-way delay: 850.188 ms  
Loss rate: 4.00%  
-- Flow 3:  
Average throughput: 19.06 Mbit/s  
95th percentile per-packet one-way delay: 42.920 ms  
Loss rate: 0.87%

Run 5: Report of PCC-Vivace — Data Link

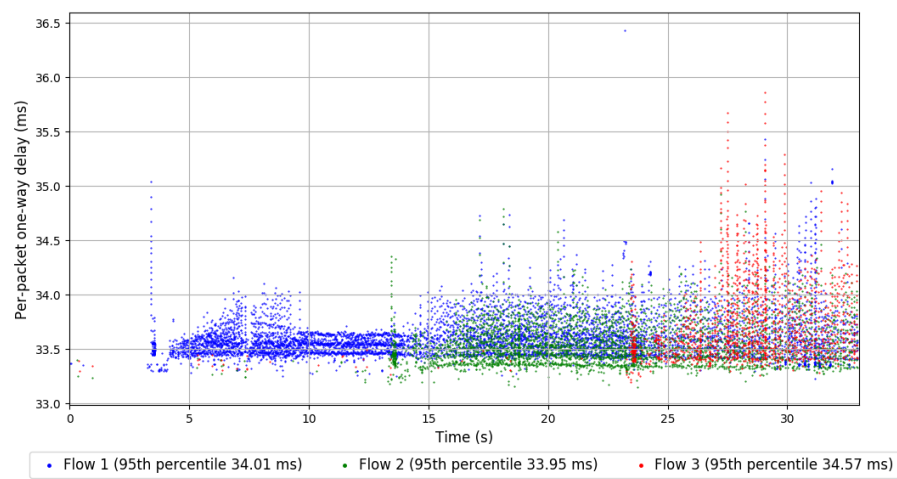
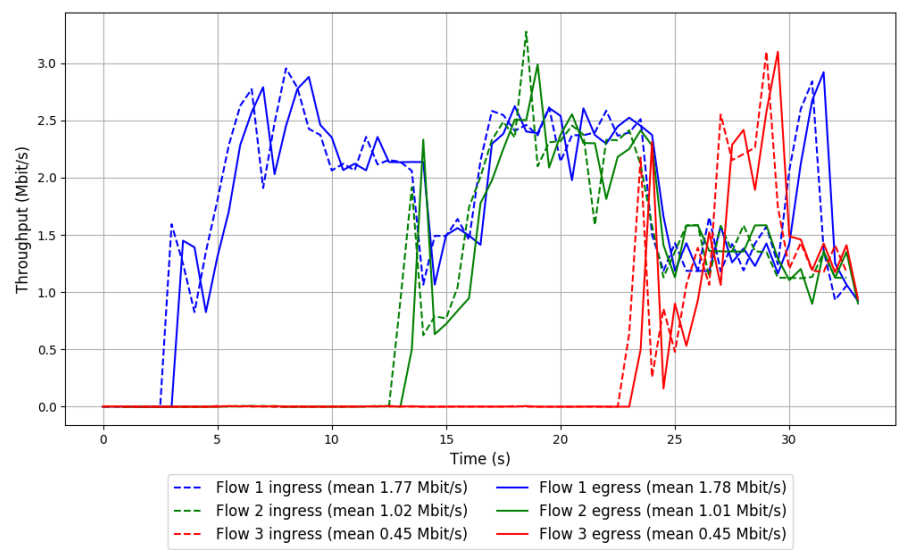


Run 1: Statistics of WebRTC media

Start at: 2018-12-02 15:01:20  
End at: 2018-12-02 15:01:50  
Local clock offset: -0.25 ms  
Remote clock offset: -3.779 ms

# Below is generated by plot.py at 2018-12-02 16:51:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.23 Mbit/s  
95th percentile per-packet one-way delay: 34.116 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 1.78 Mbit/s  
95th percentile per-packet one-way delay: 34.012 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 1.01 Mbit/s  
95th percentile per-packet one-way delay: 33.945 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 0.45 Mbit/s  
95th percentile per-packet one-way delay: 34.570 ms  
Loss rate: 0.79%

Run 1: Report of WebRTC media — Data Link

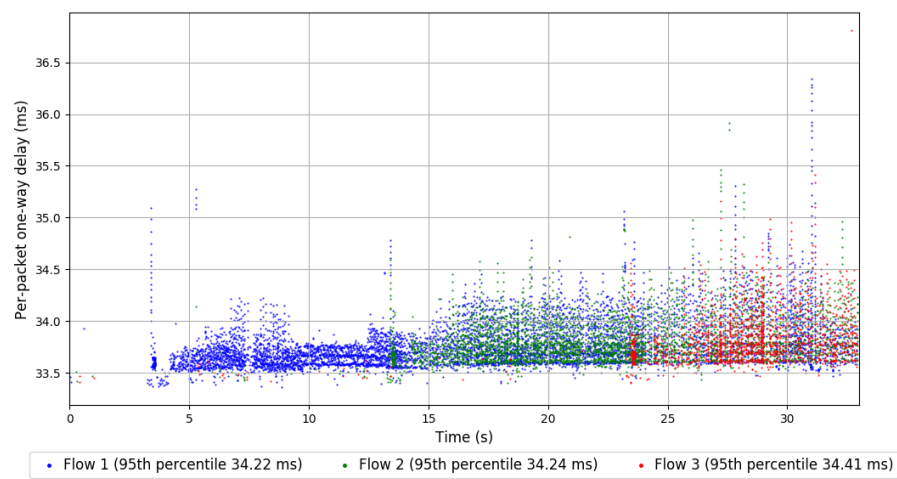
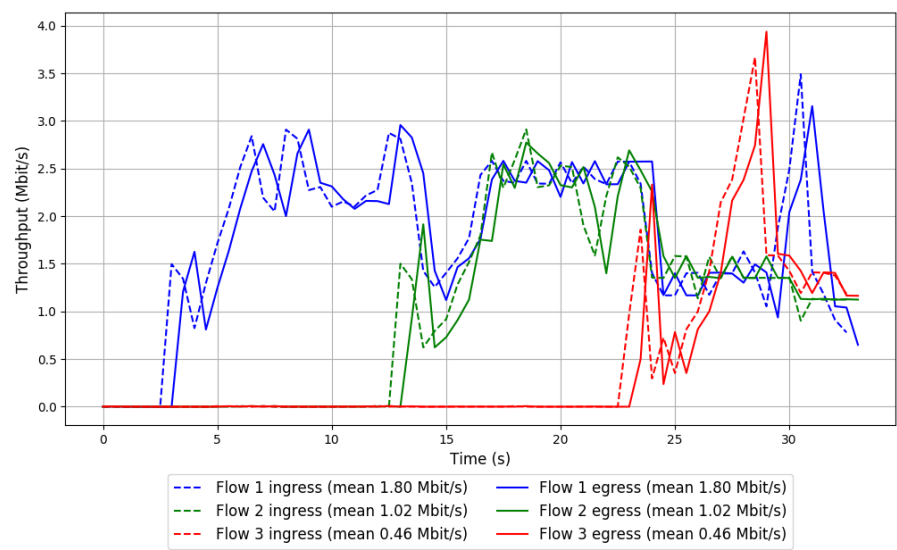


Run 2: Statistics of WebRTC media

Start at: 2018-12-02 15:24:27  
End at: 2018-12-02 15:24:57  
Local clock offset: 1.125 ms  
Remote clock offset: -2.974 ms

# Below is generated by plot.py at 2018-12-02 16:51:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.26 Mbit/s  
95th percentile per-packet one-way delay: 34.268 ms  
Loss rate: 0.17%  
-- Flow 1:  
Average throughput: 1.80 Mbit/s  
95th percentile per-packet one-way delay: 34.223 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 1.02 Mbit/s  
95th percentile per-packet one-way delay: 34.245 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.46 Mbit/s  
95th percentile per-packet one-way delay: 34.407 ms  
Loss rate: 0.77%

Run 2: Report of WebRTC media — Data Link



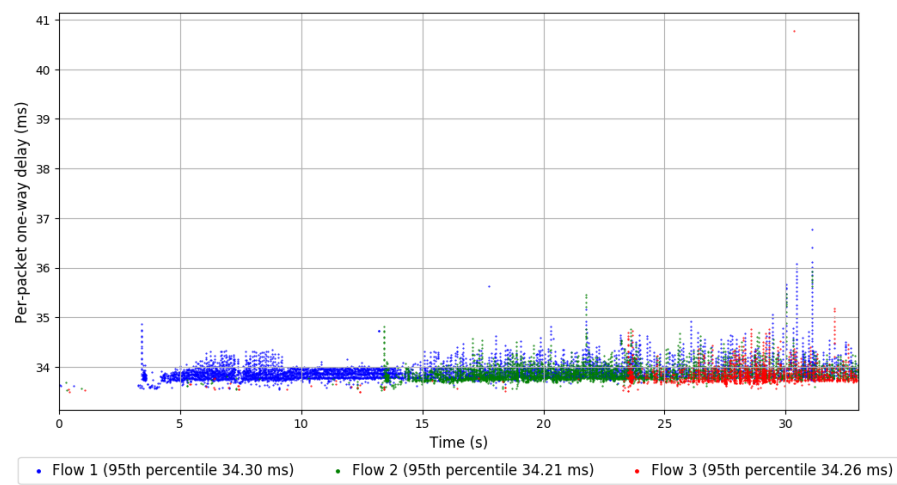
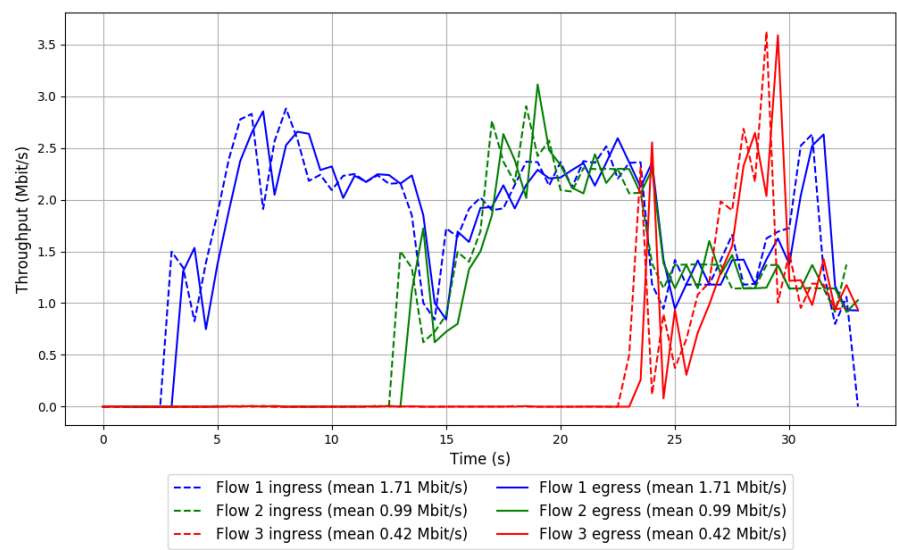


Run 3: Statistics of WebRTC media

Start at: 2018-12-02 15:47:43  
End at: 2018-12-02 15:48:13  
Local clock offset: 1.336 ms  
Remote clock offset: -2.423 ms

# Below is generated by plot.py at 2018-12-02 16:51:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.11 Mbit/s  
95th percentile per-packet one-way delay: 34.268 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 1.71 Mbit/s  
95th percentile per-packet one-way delay: 34.295 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 0.99 Mbit/s  
95th percentile per-packet one-way delay: 34.210 ms  
Loss rate: 0.53%  
-- Flow 3:  
Average throughput: 0.42 Mbit/s  
95th percentile per-packet one-way delay: 34.261 ms  
Loss rate: 0.07%

Run 3: Report of WebRTC media — Data Link

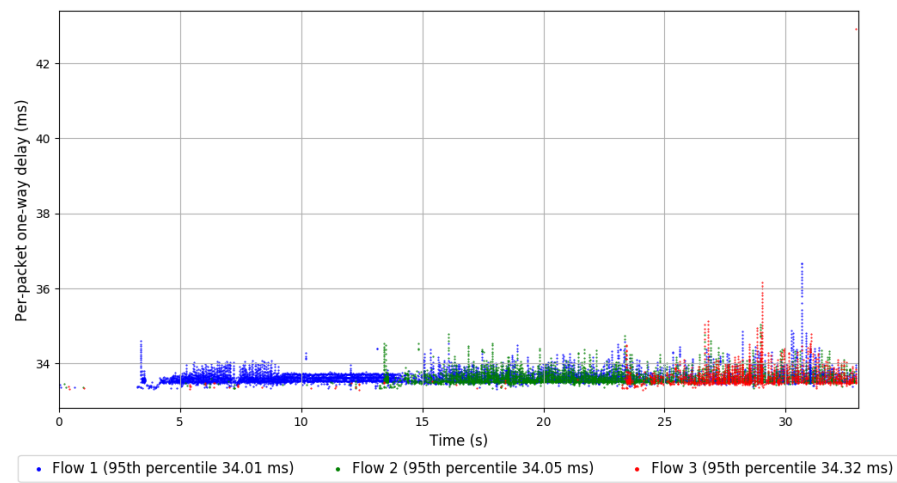
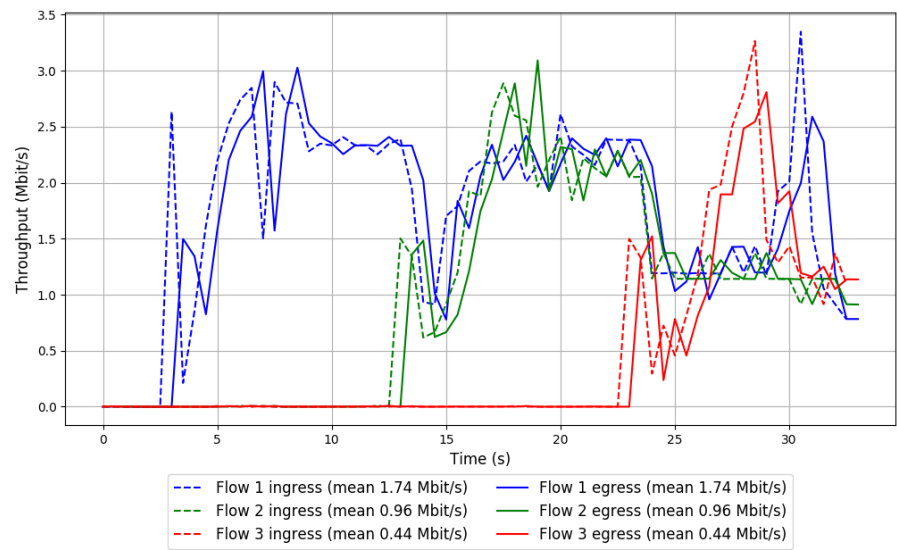


Run 4: Statistics of WebRTC media

Start at: 2018-12-02 16:11:20  
End at: 2018-12-02 16:11:50  
Local clock offset: 0.782 ms  
Remote clock offset: -1.796 ms

```
# Below is generated by plot.py at 2018-12-02 16:51:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 34.059 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 34.014 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 34.045 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 34.318 ms
Loss rate: 0.66%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-12-02 16:34:37  
End at: 2018-12-02 16:35:07  
Local clock offset: -2.625 ms  
Remote clock offset: -1.758 ms

# Below is generated by plot.py at 2018-12-02 16:51:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.12 Mbit/s  
95th percentile per-packet one-way delay: 34.459 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 1.70 Mbit/s  
95th percentile per-packet one-way delay: 34.340 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 1.00 Mbit/s  
95th percentile per-packet one-way delay: 34.381 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 35.084 ms  
Loss rate: 0.82%

Run 5: Report of WebRTC media — Data Link

