

## Pantheon Report

Generated at 2018-12-20 10:02:10 (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:

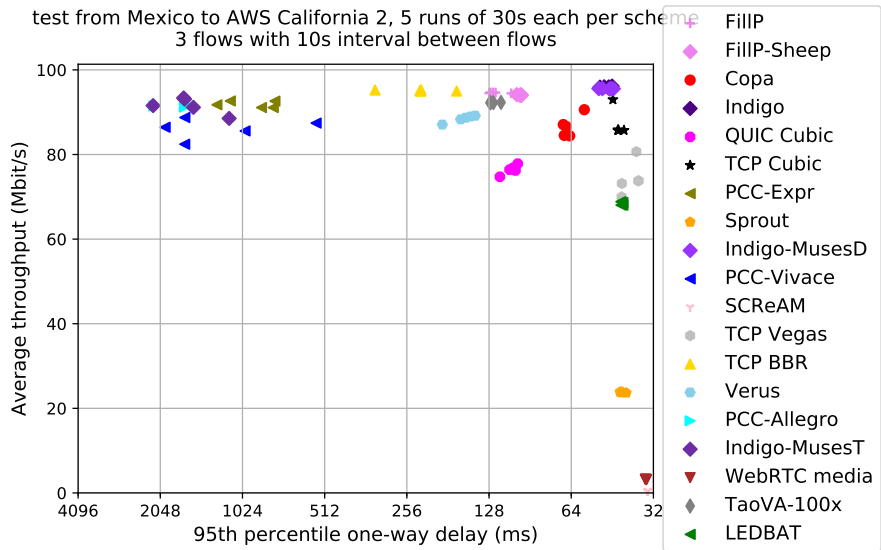
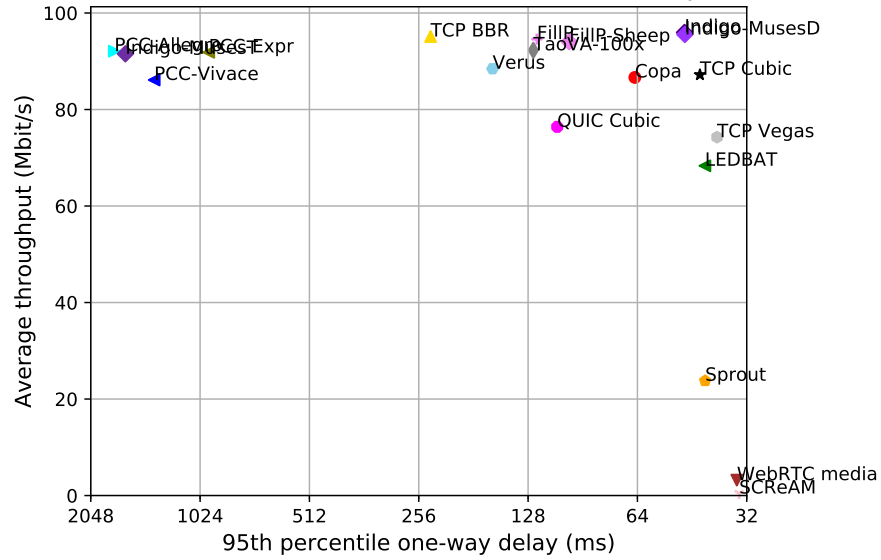
```
Linux 4.15.0-1029-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

```
branch: muses @ c654af0b7d59d4ef4b914cfac404e1fc2e96dc68
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfc58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/muses-refactored @ 31f8f0ba8ef8b1da76c2bc0cd0a7850c33ff64fb
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	57.49	38.97	35.38	192.87	173.59	447.95	0.74	1.16	3.85
Copa	5	49.19	41.40	29.86	98.27	43.66	37.88	0.20	0.26	0.72
TCP Cubic	5	48.99	39.97	35.08	46.52	41.23	44.31	0.22	0.31	0.71
FillP	5	57.55	41.21	29.03	93.40	129.88	115.01	0.39	3.17	3.12
FillP-Sheep	5	58.21	38.31	31.28	84.20	111.66	116.28	0.25	0.49	1.68
Indigo	5	57.55	42.41	31.27	49.42	46.92	47.37	0.20	0.34	0.90
Indigo-MusesD	5	59.07	41.81	26.33	49.49	43.33	52.02	0.14	0.33	0.74
Indigo-MusesT	5	53.45	42.99	31.34	1583.96	1665.90	1896.03	16.66	25.61	42.64
LEDBAT	5	40.25	31.55	21.43	41.72	42.39	41.00	0.16	0.34	1.10
PCC-Allegro	5	58.42	35.31	31.05	1763.89	2179.31	277.41	16.89	17.44	2.43
PCC-Expr	5	57.08	38.56	27.80	936.79	815.98	156.33	31.43	13.06	1.70
QUIC Cubic	5	43.97	33.77	30.34	93.98	120.68	121.96	0.21	0.39	1.00
SCReAM	5	0.21	0.21	0.22	33.55	33.56	33.55	0.23	0.40	0.71
Sprout	5	12.00	11.95	11.71	41.09	41.86	42.78	0.13	0.32	0.66
TaoVA-100x	5	56.22	37.72	33.01	116.14	129.37	138.76	0.66	1.72	2.77
TCP Vegas	5	40.88	34.72	31.05	44.25	36.49	39.80	0.20	0.28	0.70
Verus	5	52.19	38.74	31.76	155.09	148.90	228.38	0.34	0.59	1.29
PCC-Vivace	5	54.27	35.34	25.42	1118.68	911.44	137.20	3.32	6.38	1.44
WebRTC media	5	1.77	1.01	0.43	34.04	34.07	34.24	0.15	0.28	0.76

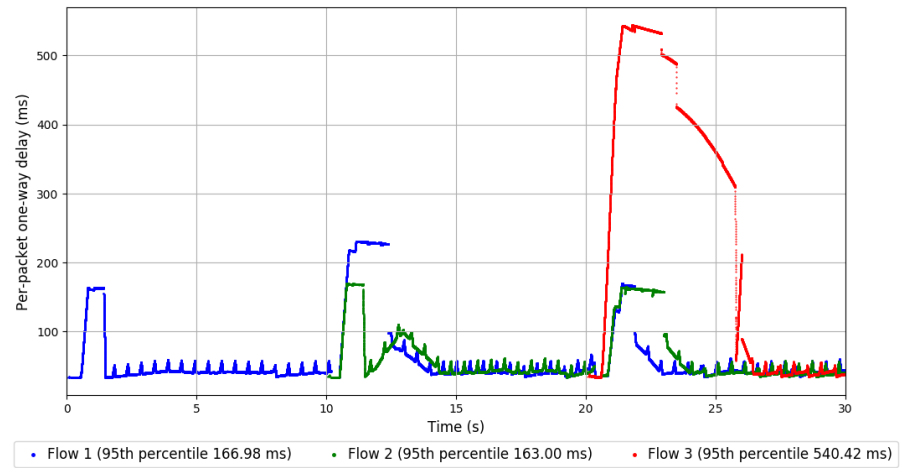
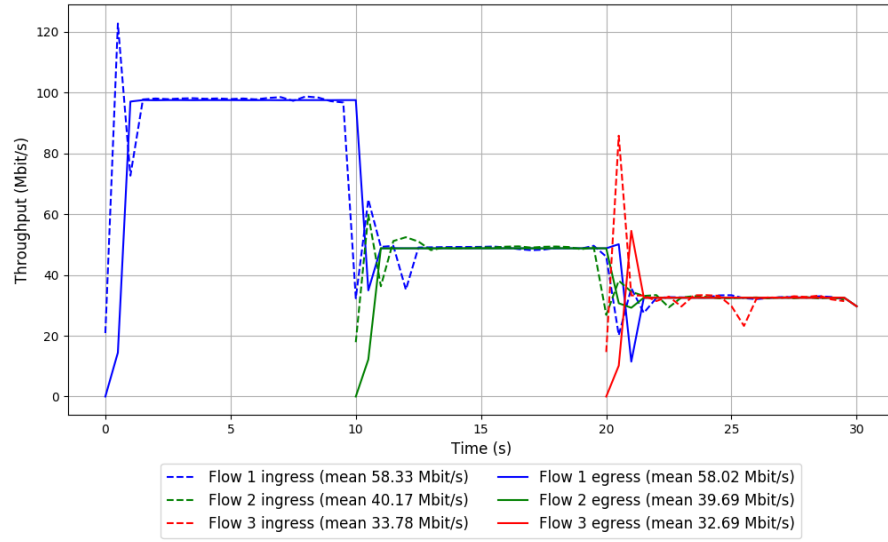


Run 1: Statistics of TCP BBR

Start at: 2018-12-20 08:08:52  
End at: 2018-12-20 08:09:22  
Local clock offset: 0.482 ms  
Remote clock offset: -3.776 ms

# Below is generated by plot.py at 2018-12-20 09:50:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.25 Mbit/s  
95th percentile per-packet one-way delay: 334.675 ms  
Loss rate: 1.32%  
-- Flow 1:  
Average throughput: 58.02 Mbit/s  
95th percentile per-packet one-way delay: 166.982 ms  
Loss rate: 0.73%  
-- Flow 2:  
Average throughput: 39.69 Mbit/s  
95th percentile per-packet one-way delay: 162.998 ms  
Loss rate: 1.51%  
-- Flow 3:  
Average throughput: 32.69 Mbit/s  
95th percentile per-packet one-way delay: 540.417 ms  
Loss rate: 3.88%

# Run 1: Report of TCP BBR — Data Link

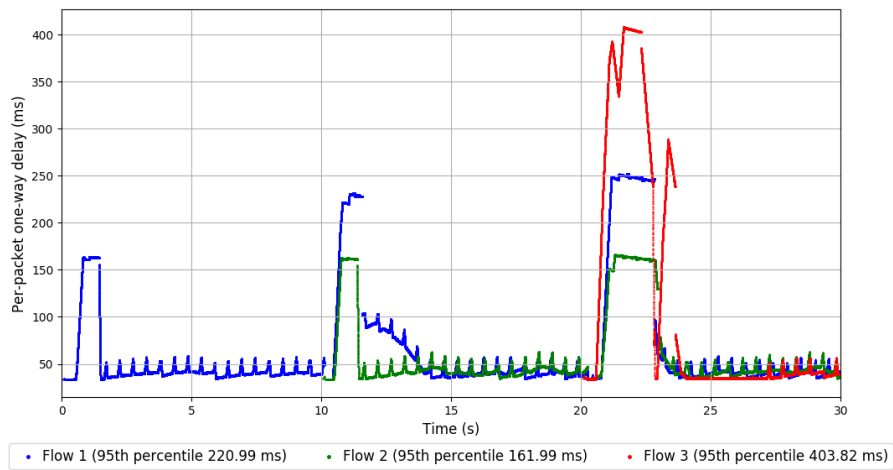
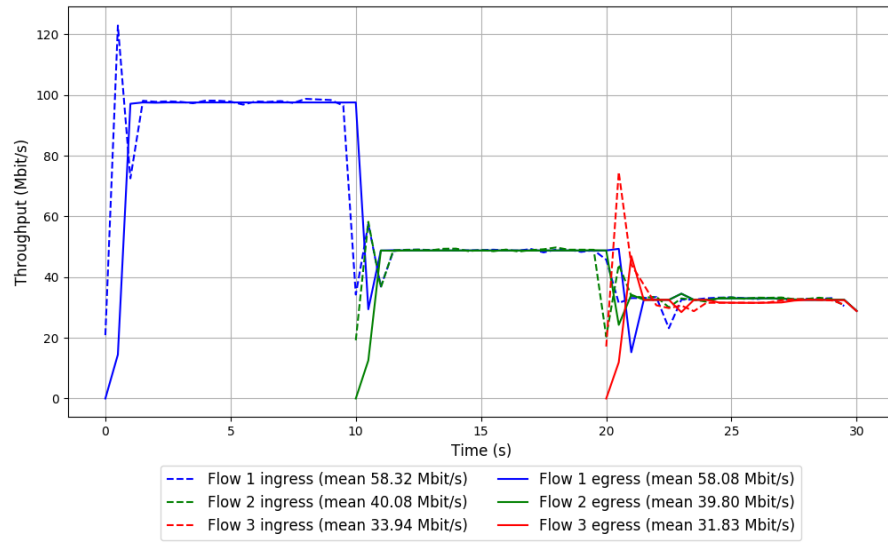


Run 2: Statistics of TCP BBR

Start at: 2018-12-20 08:32:00  
End at: 2018-12-20 08:32:30  
Local clock offset: 0.342 ms  
Remote clock offset: -3.008 ms

# Below is generated by plot.py at 2018-12-20 09:50:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.09 Mbit/s  
95th percentile per-packet one-way delay: 229.402 ms  
Loss rate: 1.46%  
-- Flow 1:  
Average throughput: 58.08 Mbit/s  
95th percentile per-packet one-way delay: 220.986 ms  
Loss rate: 0.62%  
-- Flow 2:  
Average throughput: 39.80 Mbit/s  
95th percentile per-packet one-way delay: 161.992 ms  
Loss rate: 1.03%  
-- Flow 3:  
Average throughput: 31.83 Mbit/s  
95th percentile per-packet one-way delay: 403.824 ms  
Loss rate: 6.81%

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

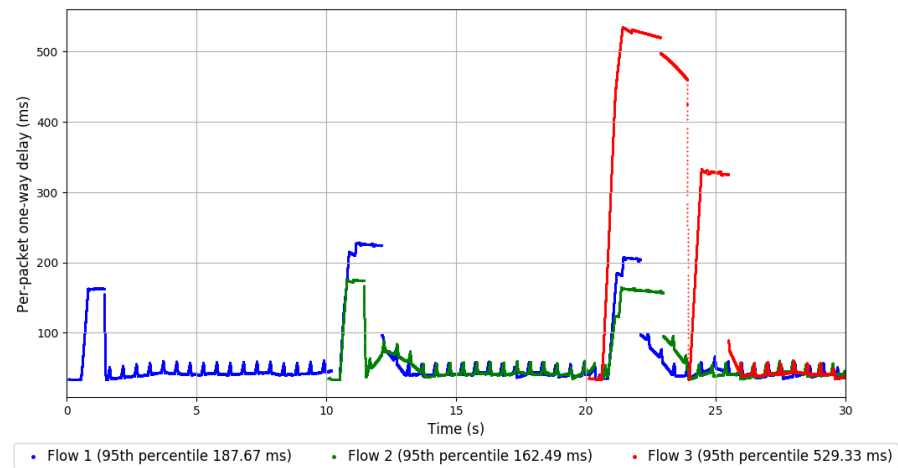
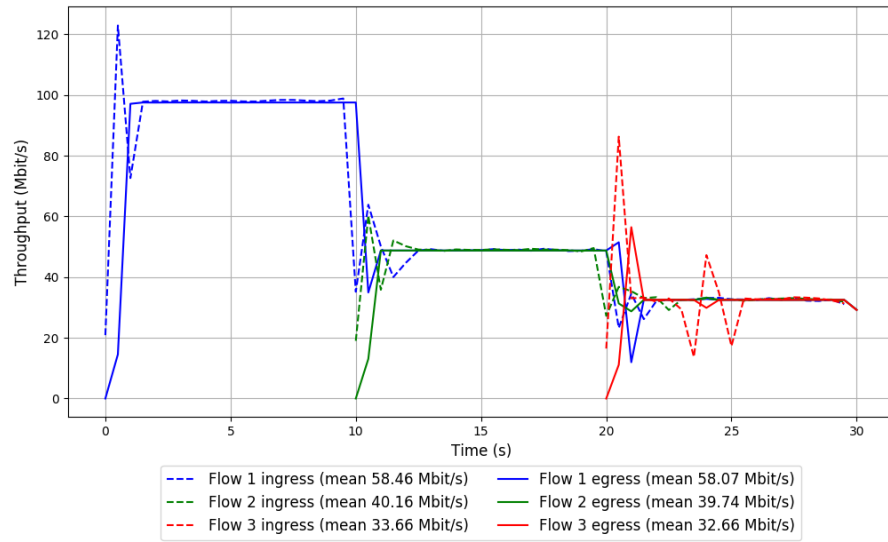


Run 3: Statistics of TCP BBR

Start at: 2018-12-20 08:55:32  
End at: 2018-12-20 08:56:02  
Local clock offset: 0.237 ms  
Remote clock offset: -2.201 ms

# Below is generated by plot.py at 2018-12-20 09:50:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.32 Mbit/s  
95th percentile per-packet one-way delay: 227.271 ms  
Loss rate: 1.34%  
-- Flow 1:  
Average throughput: 58.07 Mbit/s  
95th percentile per-packet one-way delay: 187.672 ms  
Loss rate: 0.89%  
-- Flow 2:  
Average throughput: 39.74 Mbit/s  
95th percentile per-packet one-way delay: 162.487 ms  
Loss rate: 1.38%  
-- Flow 3:  
Average throughput: 32.66 Mbit/s  
95th percentile per-packet one-way delay: 529.327 ms  
Loss rate: 3.61%

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



Run 4: Statistics of TCP BBR

Start at: 2018-12-20 09:19:05

End at: 2018-12-20 09:19:35

Local clock offset: -2.713 ms

Remote clock offset: -1.6 ms

# Below is generated by plot.py at 2018-12-20 09:50:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.98 Mbit/s

95th percentile per-packet one-way delay: 228.029 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 55.39 Mbit/s

95th percentile per-packet one-way delay: 227.189 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 35.89 Mbit/s

95th percentile per-packet one-way delay: 219.575 ms

Loss rate: 1.05%

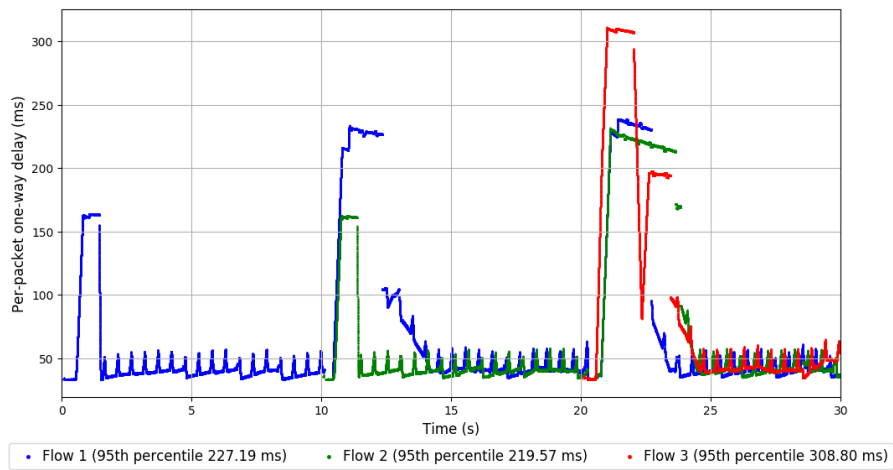
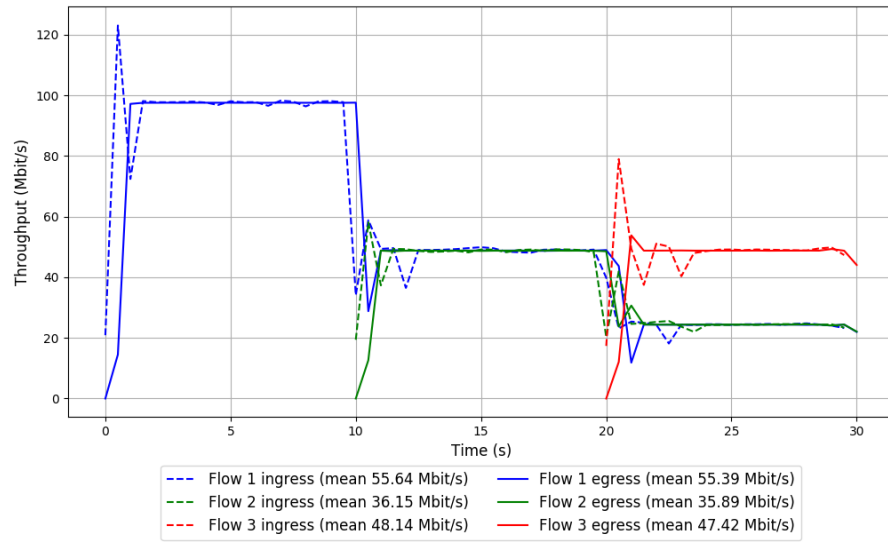
-- Flow 3:

Average throughput: 47.42 Mbit/s

95th percentile per-packet one-way delay: 308.802 ms

Loss rate: 2.13%

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



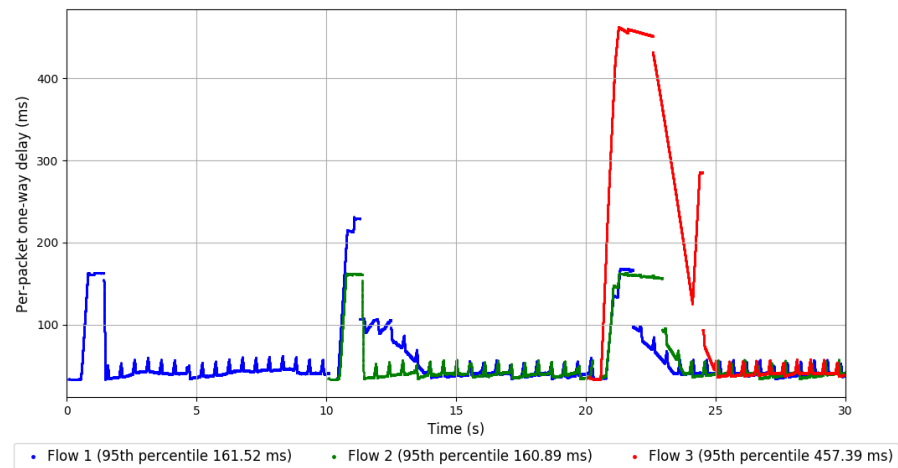
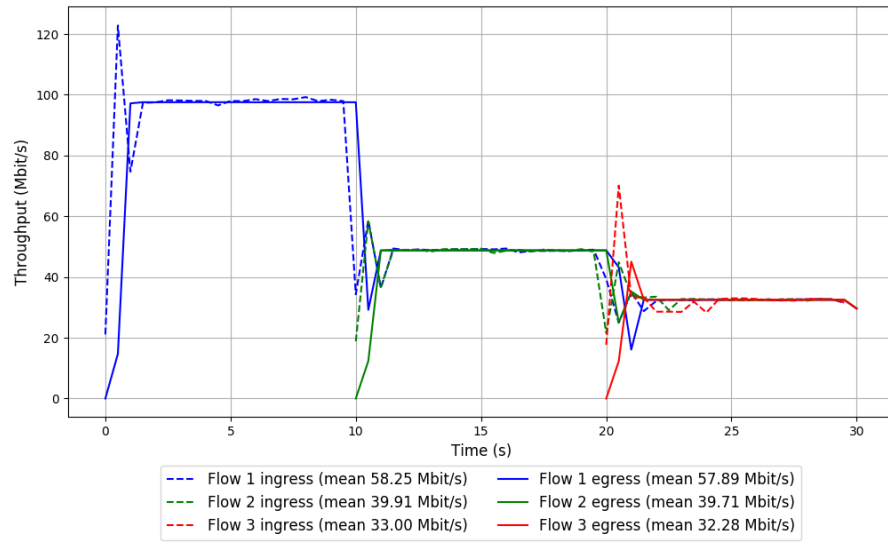


Run 5: Statistics of TCP BBR

Start at: 2018-12-20 09:42:12  
End at: 2018-12-20 09:42:42  
Local clock offset: -1.648 ms  
Remote clock offset: -1.322 ms

# Below is generated by plot.py at 2018-12-20 09:50:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.01 Mbit/s  
95th percentile per-packet one-way delay: 168.195 ms  
Loss rate: 1.05%  
-- Flow 1:  
Average throughput: 57.89 Mbit/s  
95th percentile per-packet one-way delay: 161.517 ms  
Loss rate: 0.82%  
-- Flow 2:  
Average throughput: 39.71 Mbit/s  
95th percentile per-packet one-way delay: 160.892 ms  
Loss rate: 0.83%  
-- Flow 3:  
Average throughput: 32.28 Mbit/s  
95th percentile per-packet one-way delay: 457.390 ms  
Loss rate: 2.82%

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

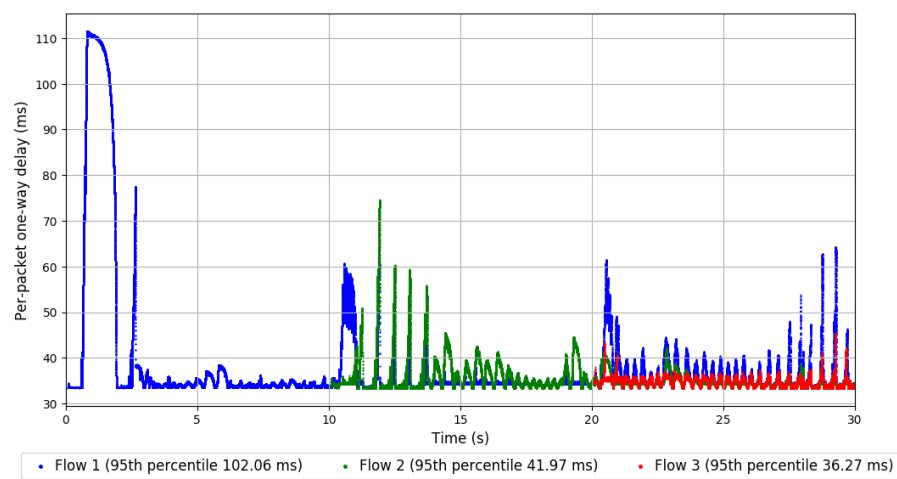
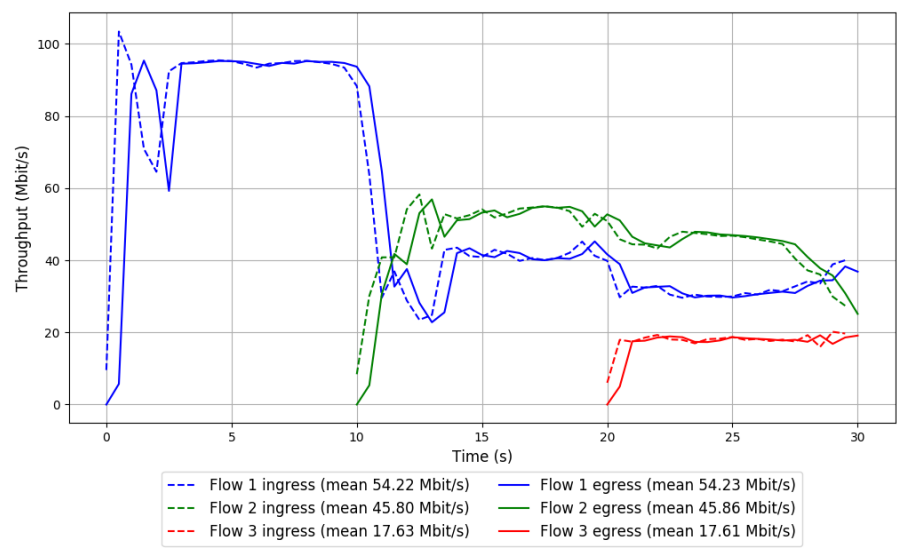


Run 1: Statistics of Copa

Start at: 2018-12-20 08:06:24  
End at: 2018-12-20 08:06:54  
Local clock offset: 0.555 ms  
Remote clock offset: -3.621 ms

# Below is generated by plot.py at 2018-12-20 09:51:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.59 Mbit/s  
95th percentile per-packet one-way delay: 57.313 ms  
Loss rate: 0.23%  
-- Flow 1:  
Average throughput: 54.23 Mbit/s  
95th percentile per-packet one-way delay: 102.058 ms  
Loss rate: 0.19%  
-- Flow 2:  
Average throughput: 45.86 Mbit/s  
95th percentile per-packet one-way delay: 41.973 ms  
Loss rate: 0.21%  
-- Flow 3:  
Average throughput: 17.61 Mbit/s  
95th percentile per-packet one-way delay: 36.275 ms  
Loss rate: 0.76%

Run 1: Report of Copa — Data Link

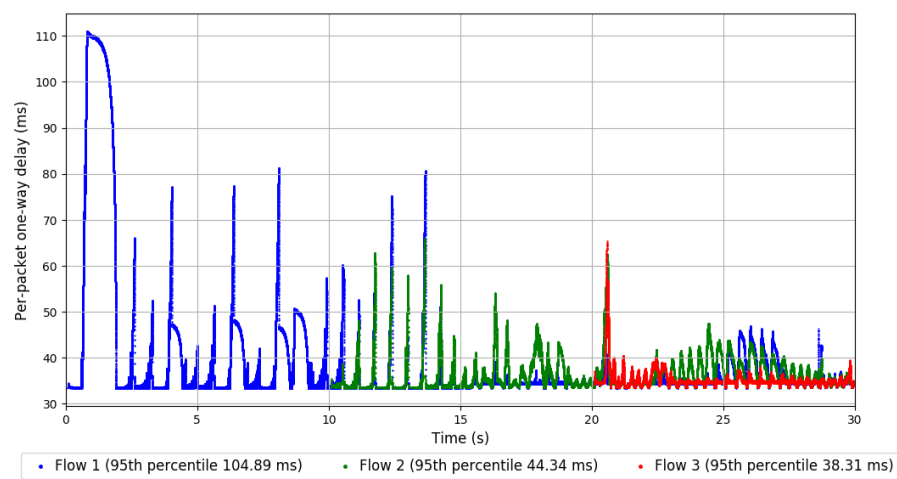
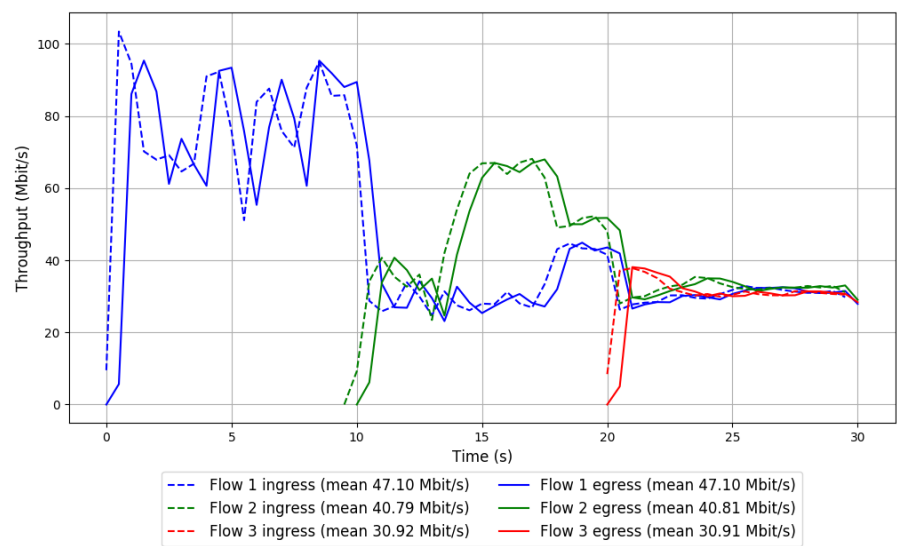


Run 2: Statistics of Copa

Start at: 2018-12-20 08:29:32  
End at: 2018-12-20 08:30:02  
Local clock offset: 0.356 ms  
Remote clock offset: -2.936 ms

# Below is generated by plot.py at 2018-12-20 09:51:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.52 Mbit/s  
95th percentile per-packet one-way delay: 67.889 ms  
Loss rate: 0.29%  
-- Flow 1:  
Average throughput: 47.10 Mbit/s  
95th percentile per-packet one-way delay: 104.886 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 40.81 Mbit/s  
95th percentile per-packet one-way delay: 44.341 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 30.91 Mbit/s  
95th percentile per-packet one-way delay: 38.312 ms  
Loss rate: 0.68%

Run 2: Report of Copa — Data Link

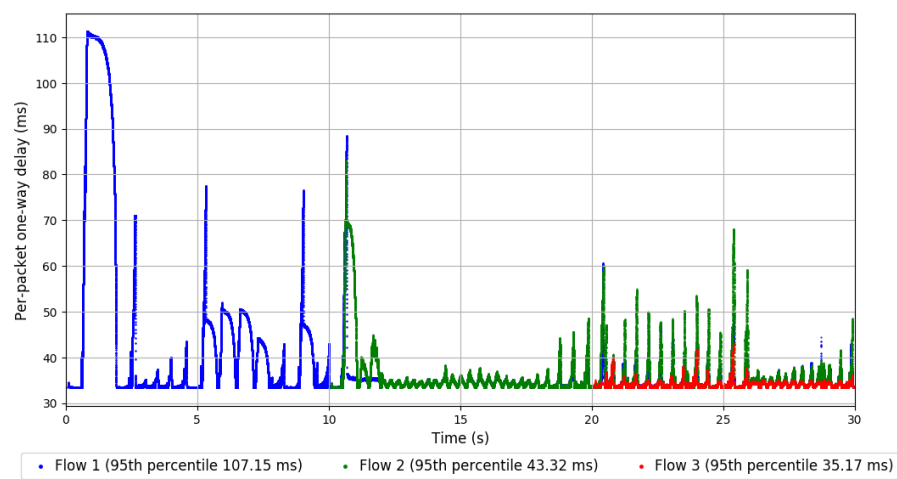
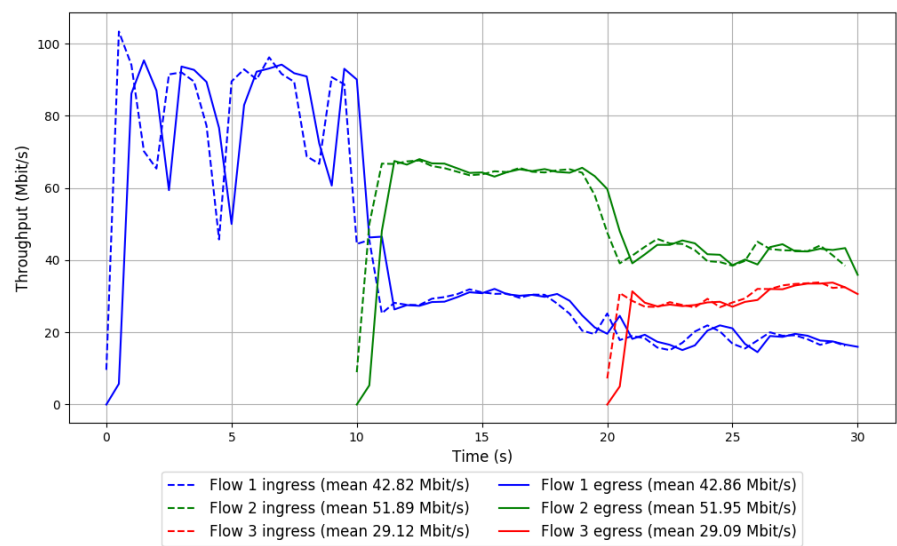


Run 3: Statistics of Copa

Start at: 2018-12-20 08:52:55  
End at: 2018-12-20 08:53:25  
Local clock offset: 0.229 ms  
Remote clock offset: -2.286 ms

# Below is generated by plot.py at 2018-12-20 09:51:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.08 Mbit/s  
95th percentile per-packet one-way delay: 68.440 ms  
Loss rate: 0.21%  
-- Flow 1:  
Average throughput: 42.86 Mbit/s  
95th percentile per-packet one-way delay: 107.151 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 51.95 Mbit/s  
95th percentile per-packet one-way delay: 43.318 ms  
Loss rate: 0.21%  
-- Flow 3:  
Average throughput: 29.09 Mbit/s  
95th percentile per-packet one-way delay: 35.168 ms  
Loss rate: 0.71%

Run 3: Report of Copa — Data Link



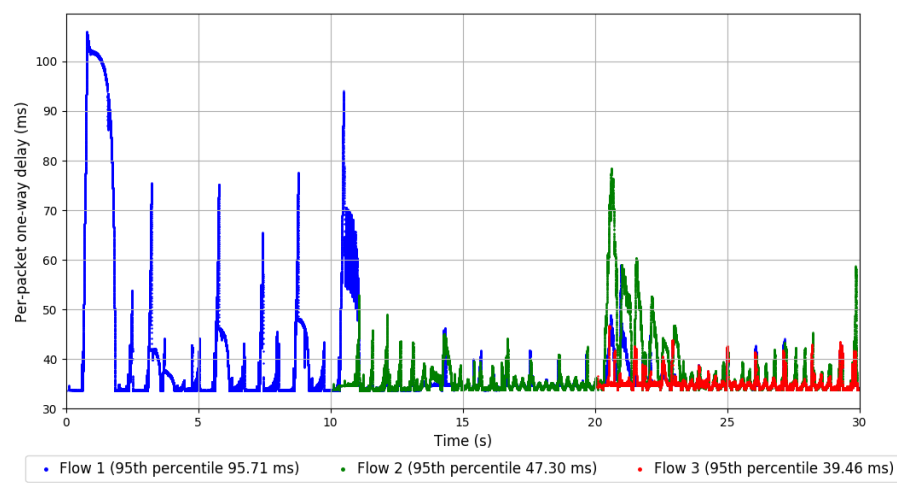
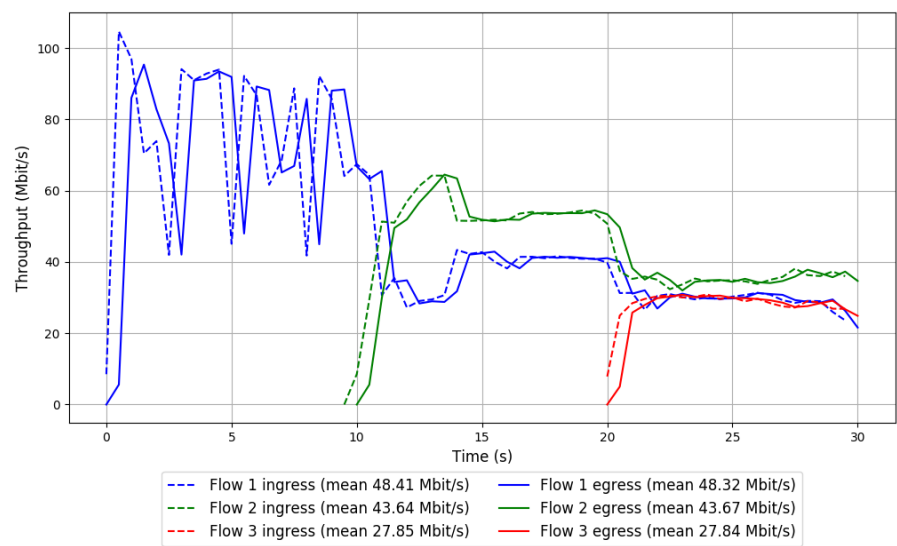


Run 4: Statistics of Copa

Start at: 2018-12-20 09:16:35  
End at: 2018-12-20 09:17:05  
Local clock offset: -2.415 ms  
Remote clock offset: -1.906 ms

```
# Below is generated by plot.py at 2018-12-20 09:52:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.62 Mbit/s
95th percentile per-packet one-way delay: 66.747 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 48.32 Mbit/s
95th percentile per-packet one-way delay: 95.709 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 43.67 Mbit/s
95th percentile per-packet one-way delay: 47.305 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 27.84 Mbit/s
95th percentile per-packet one-way delay: 39.456 ms
Loss rate: 0.70%
```

Run 4: Report of Copa — Data Link

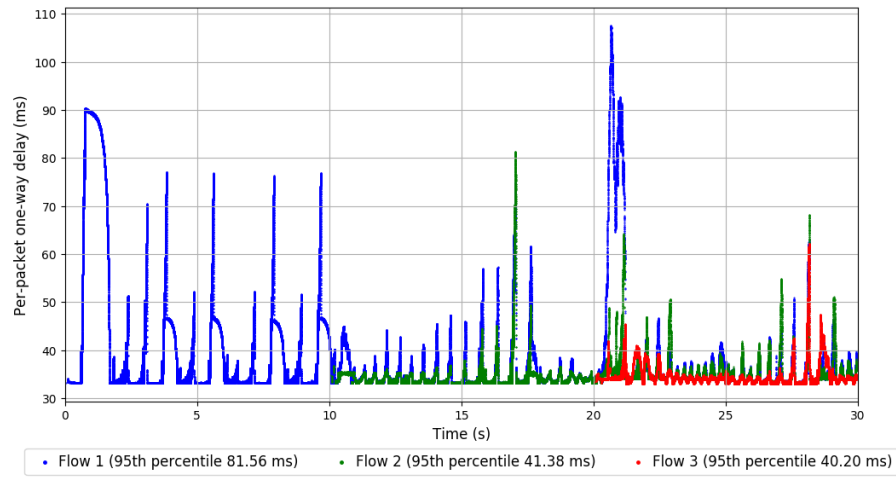
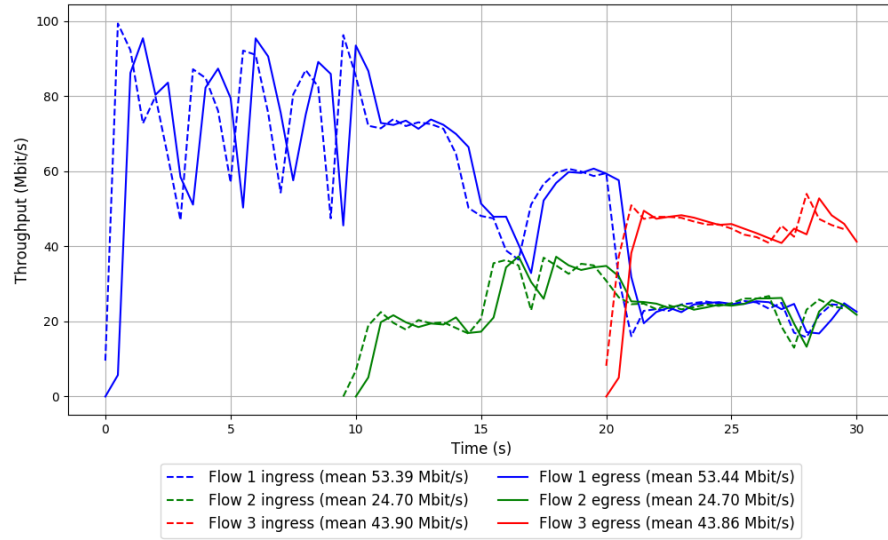


Run 5: Statistics of Copa

Start at: 2018-12-20 09:39:43  
End at: 2018-12-20 09:40:13  
Local clock offset: -2.383 ms  
Remote clock offset: -1.346 ms

# Below is generated by plot.py at 2018-12-20 09:52:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.41 Mbit/s  
95th percentile per-packet one-way delay: 64.849 ms  
Loss rate: 0.27%  
-- Flow 1:  
Average throughput: 53.44 Mbit/s  
95th percentile per-packet one-way delay: 81.556 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 24.70 Mbit/s  
95th percentile per-packet one-way delay: 41.375 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 43.86 Mbit/s  
95th percentile per-packet one-way delay: 40.200 ms  
Loss rate: 0.73%

# Run 5: Report of Copa — Data Link

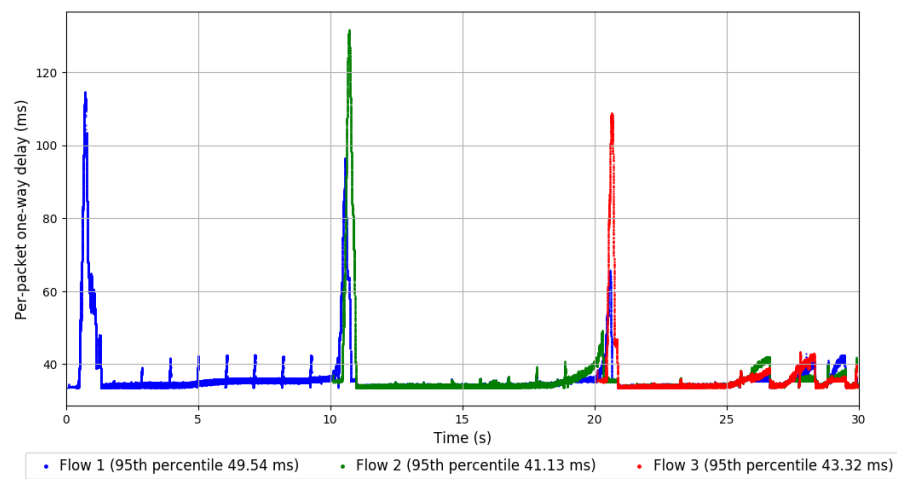
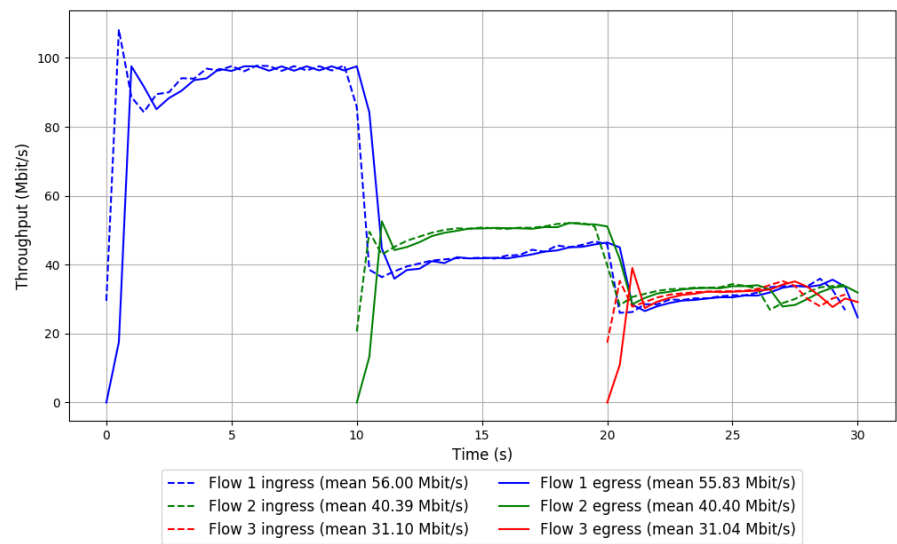


Run 1: Statistics of TCP Cubic

Start at: 2018-12-20 08:13:39  
End at: 2018-12-20 08:14:09  
Local clock offset: 0.406 ms  
Remote clock offset: -3.615 ms

# Below is generated by plot.py at 2018-12-20 09:52:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.98 Mbit/s  
95th percentile per-packet one-way delay: 45.036 ms  
Loss rate: 0.49%  
-- Flow 1:  
Average throughput: 55.83 Mbit/s  
95th percentile per-packet one-way delay: 49.541 ms  
Loss rate: 0.52%  
-- Flow 2:  
Average throughput: 40.40 Mbit/s  
95th percentile per-packet one-way delay: 41.133 ms  
Loss rate: 0.30%  
-- Flow 3:  
Average throughput: 31.04 Mbit/s  
95th percentile per-packet one-way delay: 43.319 ms  
Loss rate: 0.85%

Run 1: Report of TCP Cubic — Data Link

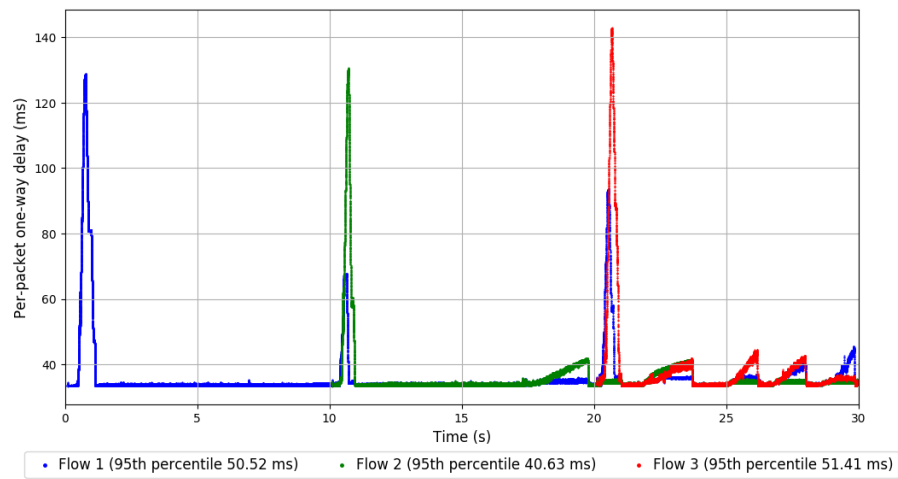
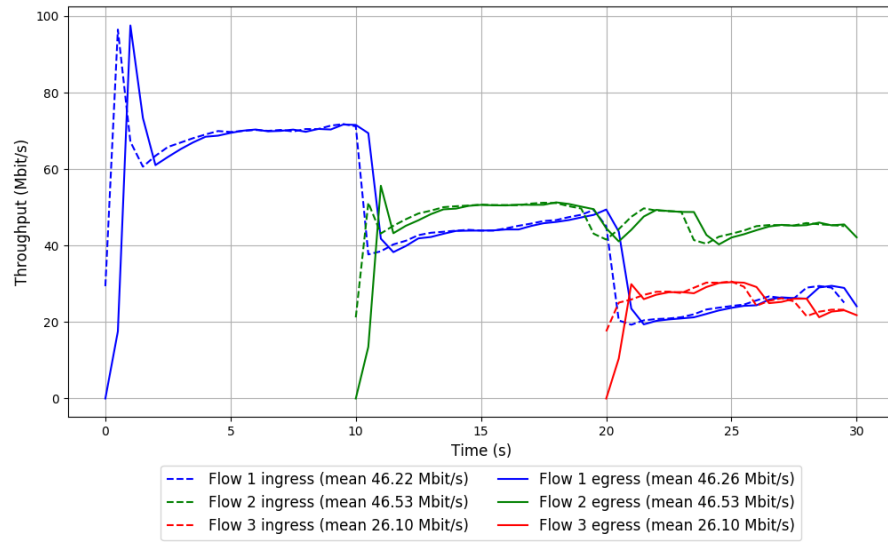


Run 2: Statistics of TCP Cubic

Start at: 2018-12-20 08:36:46  
End at: 2018-12-20 08:37:16  
Local clock offset: 0.349 ms  
Remote clock offset: -2.691 ms

# Below is generated by plot.py at 2018-12-20 09:52:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.86 Mbit/s  
95th percentile per-packet one-way delay: 43.103 ms  
Loss rate: 0.26%  
-- Flow 1:  
Average throughput: 46.26 Mbit/s  
95th percentile per-packet one-way delay: 50.525 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 46.53 Mbit/s  
95th percentile per-packet one-way delay: 40.631 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 26.10 Mbit/s  
95th percentile per-packet one-way delay: 51.413 ms  
Loss rate: 0.66%

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



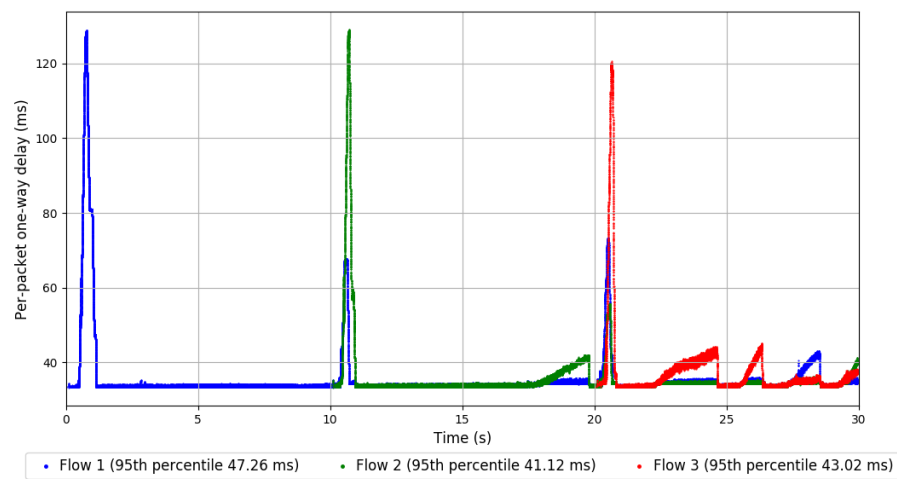
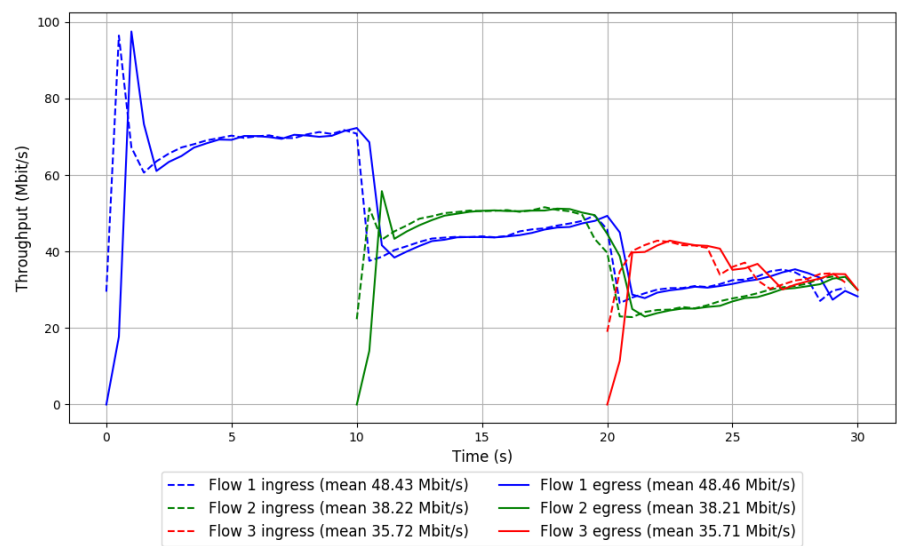


Run 3: Statistics of TCP Cubic

Start at: 2018-12-20 09:00:22  
End at: 2018-12-20 09:00:52  
Local clock offset: 0.218 ms  
Remote clock offset: -2.082 ms

# Below is generated by plot.py at 2018-12-20 09:52:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.71 Mbit/s  
95th percentile per-packet one-way delay: 43.209 ms  
Loss rate: 0.29%  
-- Flow 1:  
Average throughput: 48.46 Mbit/s  
95th percentile per-packet one-way delay: 47.255 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 38.21 Mbit/s  
95th percentile per-packet one-way delay: 41.124 ms  
Loss rate: 0.35%  
-- Flow 3:  
Average throughput: 35.71 Mbit/s  
95th percentile per-packet one-way delay: 43.019 ms  
Loss rate: 0.64%

Run 3: Report of TCP Cubic — Data Link

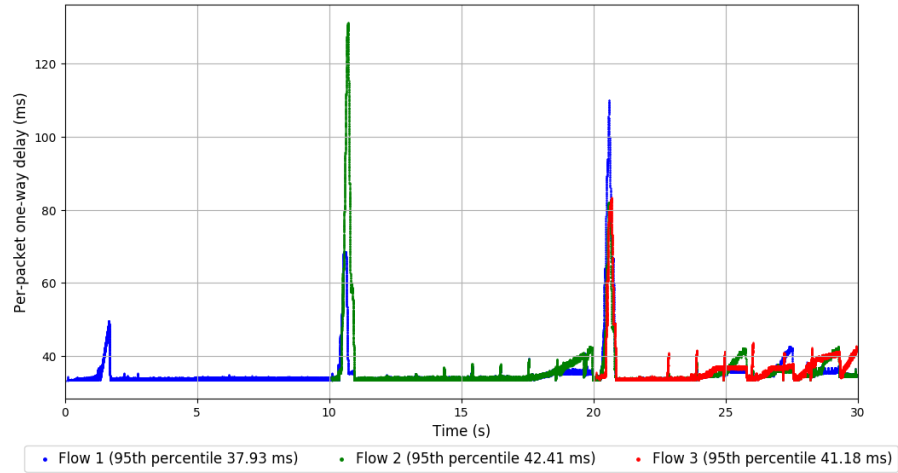
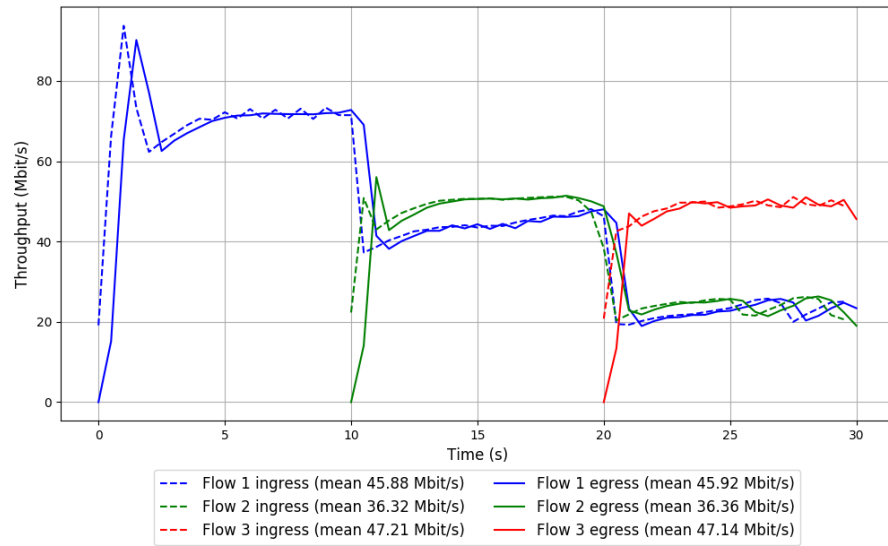


Run 4: Statistics of TCP Cubic

Start at: 2018-12-20 09:23:54  
End at: 2018-12-20 09:24:24  
Local clock offset: -3.2 ms  
Remote clock offset: -1.515 ms

# Below is generated by plot.py at 2018-12-20 09:52:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.72 Mbit/s  
95th percentile per-packet one-way delay: 41.002 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 45.92 Mbit/s  
95th percentile per-packet one-way delay: 37.932 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 36.36 Mbit/s  
95th percentile per-packet one-way delay: 42.407 ms  
Loss rate: 0.22%  
-- Flow 3:  
Average throughput: 47.14 Mbit/s  
95th percentile per-packet one-way delay: 41.176 ms  
Loss rate: 0.77%

# Run 4: Report of TCP Cubic — Data Link

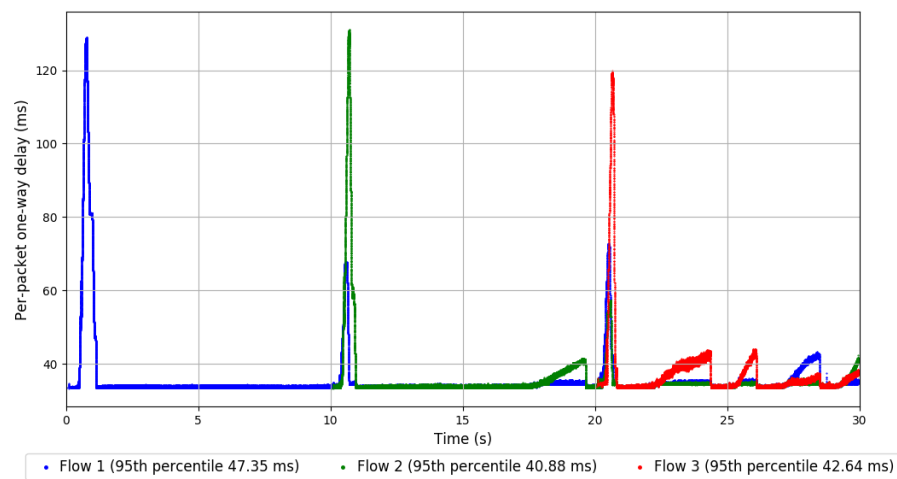
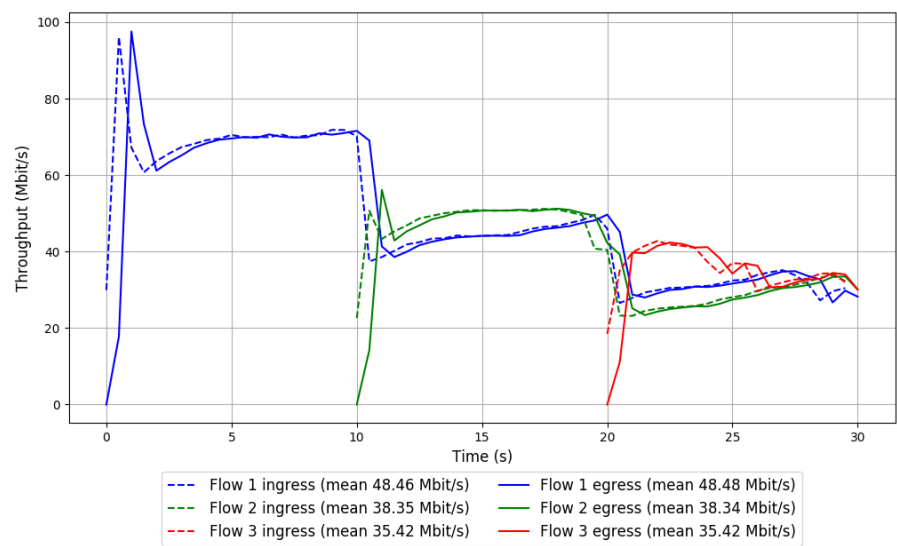


Run 5: Statistics of TCP Cubic

Start at: 2018-12-20 09:46:57  
End at: 2018-12-20 09:47:27  
Local clock offset: -0.808 ms  
Remote clock offset: -1.489 ms

# Below is generated by plot.py at 2018-12-20 09:52:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.72 Mbit/s  
95th percentile per-packet one-way delay: 42.984 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 48.48 Mbit/s  
95th percentile per-packet one-way delay: 47.347 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 38.34 Mbit/s  
95th percentile per-packet one-way delay: 40.880 ms  
Loss rate: 0.33%  
-- Flow 3:  
Average throughput: 35.42 Mbit/s  
95th percentile per-packet one-way delay: 42.641 ms  
Loss rate: 0.64%

Run 5: Report of TCP Cubic — Data Link

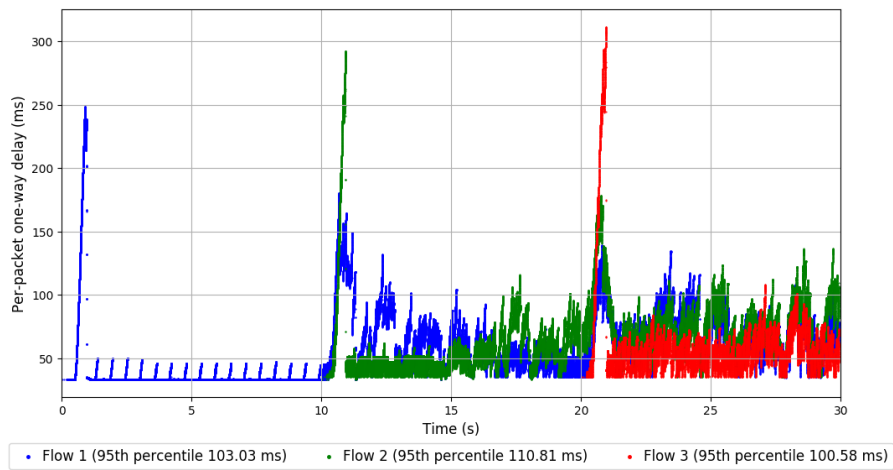
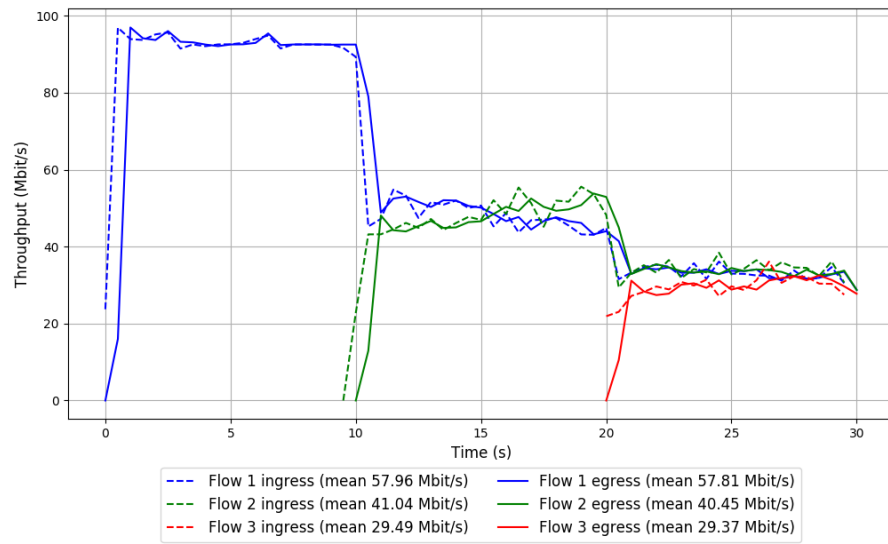


Run 1: Statistics of FillP

Start at: 2018-12-20 07:56:38  
End at: 2018-12-20 07:57:08  
Local clock offset: 0.519 ms  
Remote clock offset: -3.877 ms

# Below is generated by plot.py at 2018-12-20 09:52:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.46 Mbit/s  
95th percentile per-packet one-way delay: 106.103 ms  
Loss rate: 0.85%  
-- Flow 1:  
Average throughput: 57.81 Mbit/s  
95th percentile per-packet one-way delay: 103.031 ms  
Loss rate: 0.46%  
-- Flow 2:  
Average throughput: 40.45 Mbit/s  
95th percentile per-packet one-way delay: 110.811 ms  
Loss rate: 1.63%  
-- Flow 3:  
Average throughput: 29.37 Mbit/s  
95th percentile per-packet one-way delay: 100.582 ms  
Loss rate: 0.96%

## Run 1: Report of FillP — Data Link



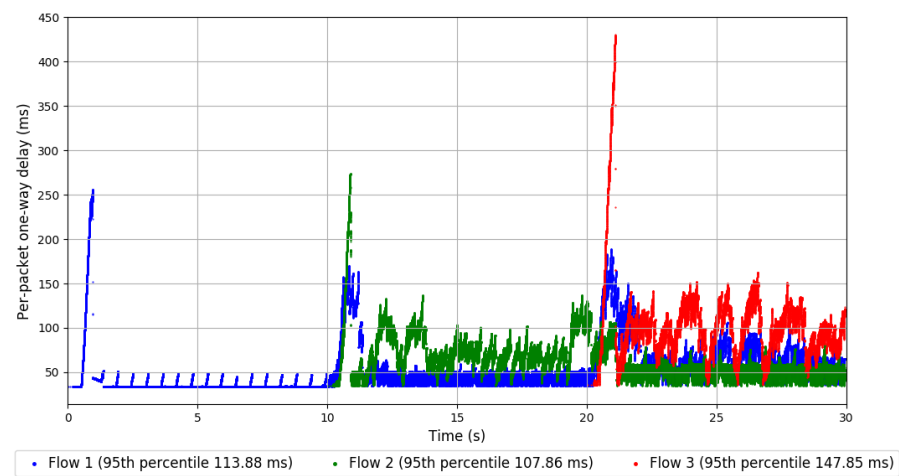
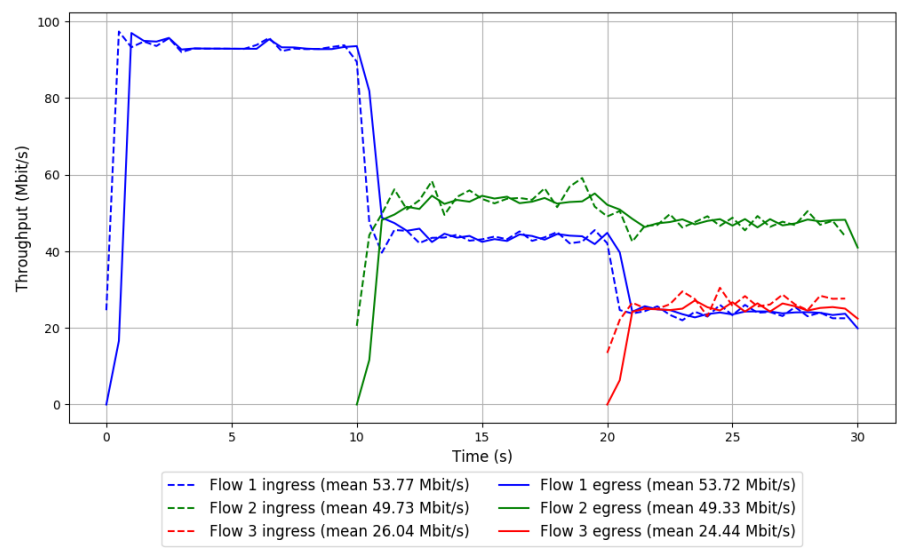


Run 2: Statistics of FillP

Start at: 2018-12-20 08:19:44  
End at: 2018-12-20 08:20:14  
Local clock offset: 0.371 ms  
Remote clock offset: -3.388 ms

# Below is generated by plot.py at 2018-12-20 09:52:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.63 Mbit/s  
95th percentile per-packet one-way delay: 121.151 ms  
Loss rate: 1.16%  
-- Flow 1:  
Average throughput: 53.72 Mbit/s  
95th percentile per-packet one-way delay: 113.881 ms  
Loss rate: 0.30%  
-- Flow 2:  
Average throughput: 49.33 Mbit/s  
95th percentile per-packet one-way delay: 107.863 ms  
Loss rate: 1.11%  
-- Flow 3:  
Average throughput: 24.44 Mbit/s  
95th percentile per-packet one-way delay: 147.855 ms  
Loss rate: 6.64%

Run 2: Report of FillP — Data Link

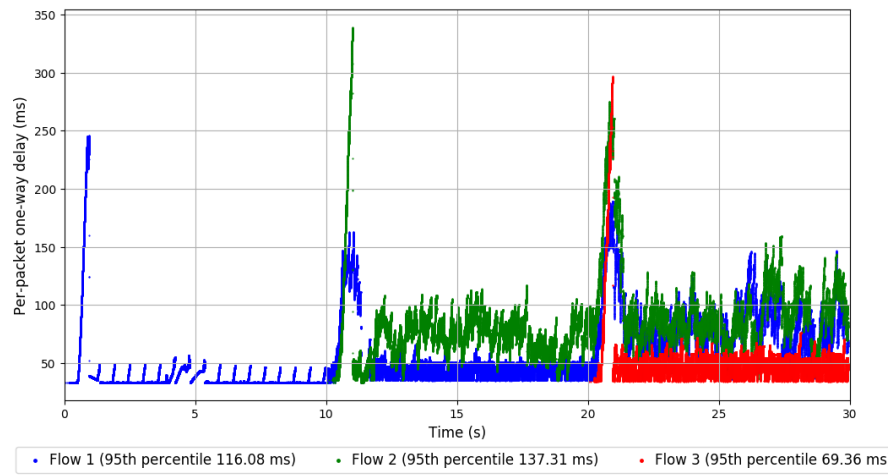
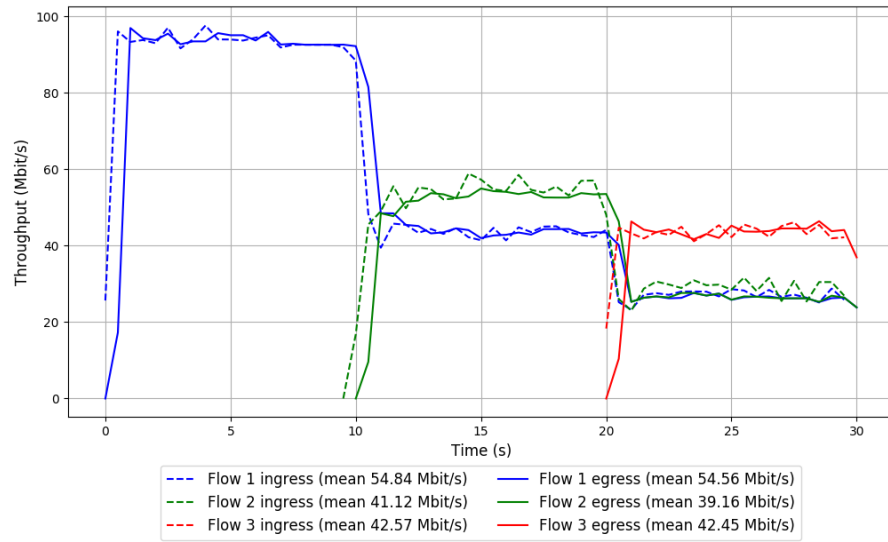


Run 3: Statistics of FillP

Start at: 2018-12-20 08:42:57  
End at: 2018-12-20 08:43:27  
Local clock offset: 0.272 ms  
Remote clock offset: -2.537 ms

# Below is generated by plot.py at 2018-12-20 09:52:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.66 Mbit/s  
95th percentile per-packet one-way delay: 123.786 ms  
Loss rate: 1.95%  
-- Flow 1:  
Average throughput: 54.56 Mbit/s  
95th percentile per-packet one-way delay: 116.082 ms  
Loss rate: 0.68%  
-- Flow 2:  
Average throughput: 39.16 Mbit/s  
95th percentile per-packet one-way delay: 137.311 ms  
Loss rate: 5.04%  
-- Flow 3:  
Average throughput: 42.45 Mbit/s  
95th percentile per-packet one-way delay: 69.356 ms  
Loss rate: 0.93%

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

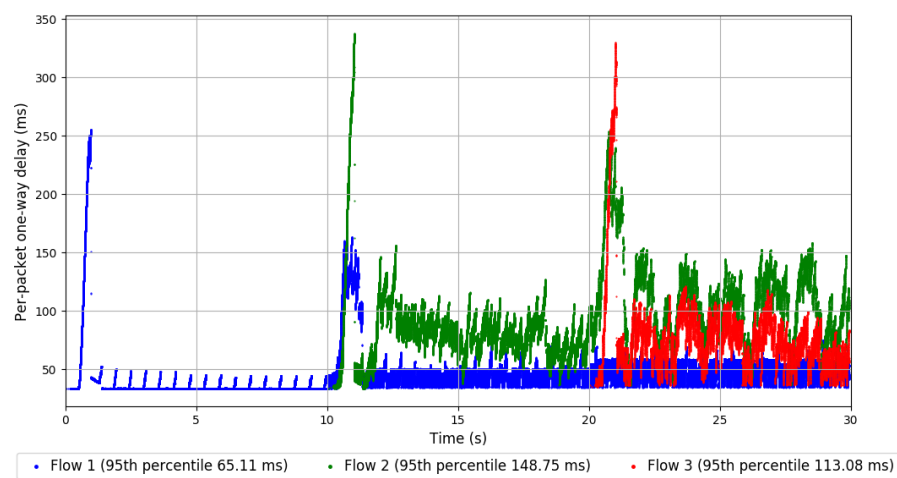
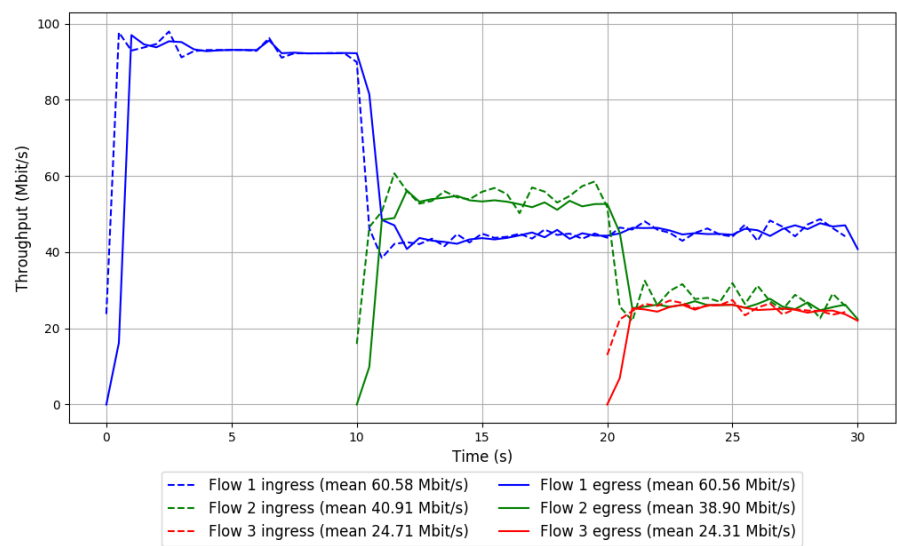


Run 4: Statistics of FillP

Start at: 2018-12-20 09:06:39  
End at: 2018-12-20 09:07:09  
Local clock offset: -0.145 ms  
Remote clock offset: -1.973 ms

# Below is generated by plot.py at 2018-12-20 09:52:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.50 Mbit/s  
95th percentile per-packet one-way delay: 127.722 ms  
Loss rate: 1.78%  
-- Flow 1:  
Average throughput: 60.56 Mbit/s  
95th percentile per-packet one-way delay: 65.111 ms  
Loss rate: 0.23%  
-- Flow 2:  
Average throughput: 38.90 Mbit/s  
95th percentile per-packet one-way delay: 148.749 ms  
Loss rate: 5.09%  
-- Flow 3:  
Average throughput: 24.31 Mbit/s  
95th percentile per-packet one-way delay: 113.085 ms  
Loss rate: 2.24%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-12-20 09:29:59

End at: 2018-12-20 09:30:29

Local clock offset: -3.642 ms

Remote clock offset: -1.69 ms

# Below is generated by plot.py at 2018-12-20 09:53:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.68 Mbit/s

95th percentile per-packet one-way delay: 126.492 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 61.12 Mbit/s

95th percentile per-packet one-way delay: 68.910 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 38.23 Mbit/s

95th percentile per-packet one-way delay: 144.644 ms

Loss rate: 2.96%

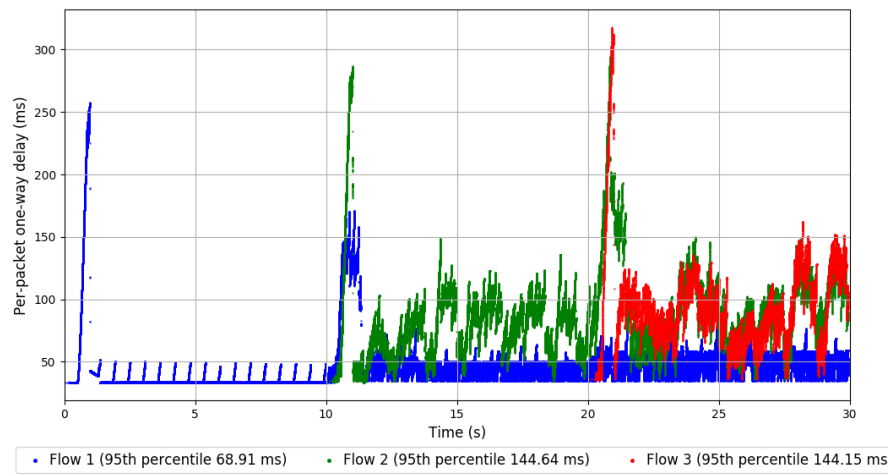
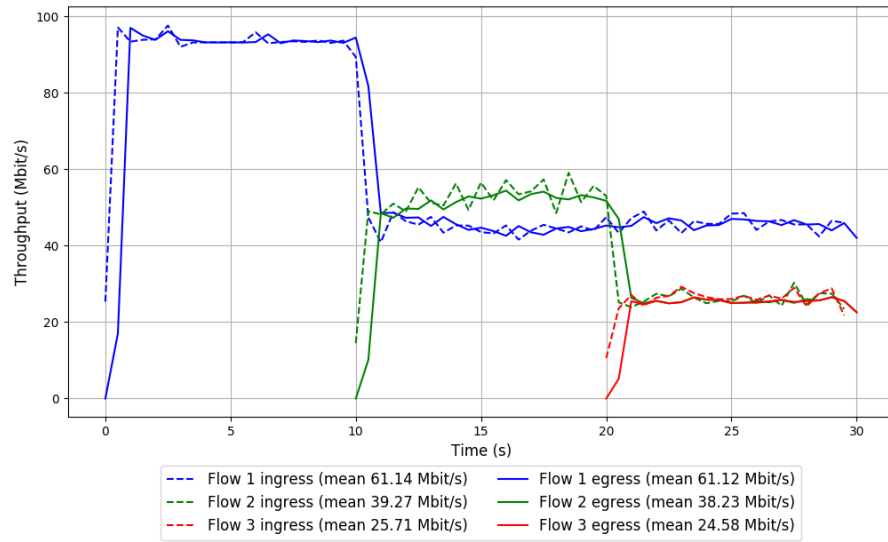
-- Flow 3:

Average throughput: 24.58 Mbit/s

95th percentile per-packet one-way delay: 144.150 ms

Loss rate: 4.83%

## Run 5: Report of FillP — Data Link



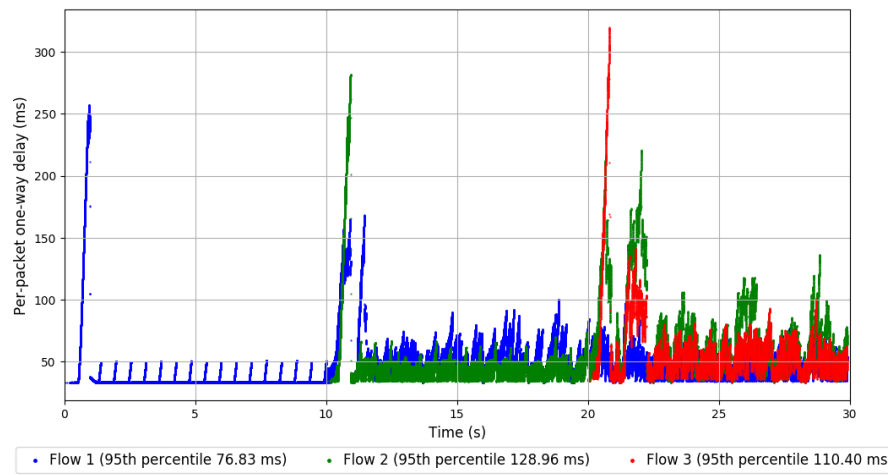
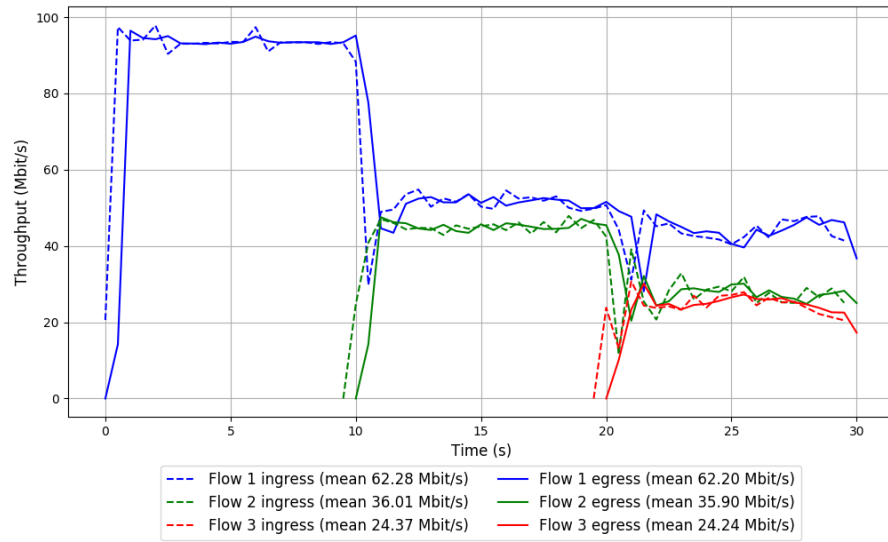


Run 1: Statistics of FillP-Sheep

Start at: 2018-12-20 08:01:32  
End at: 2018-12-20 08:02:02  
Local clock offset: 0.547 ms  
Remote clock offset: -3.748 ms

# Below is generated by plot.py at 2018-12-20 09:53:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.13 Mbit/s  
95th percentile per-packet one-way delay: 97.715 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 62.20 Mbit/s  
95th percentile per-packet one-way delay: 76.833 ms  
Loss rate: 0.31%  
-- Flow 2:  
Average throughput: 35.90 Mbit/s  
95th percentile per-packet one-way delay: 128.956 ms  
Loss rate: 0.48%  
-- Flow 3:  
Average throughput: 24.24 Mbit/s  
95th percentile per-packet one-way delay: 110.399 ms  
Loss rate: 1.20%

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

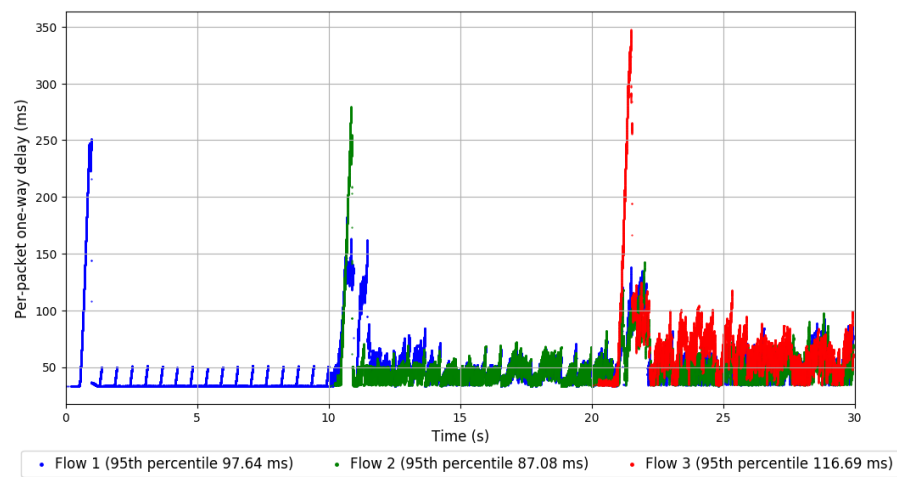
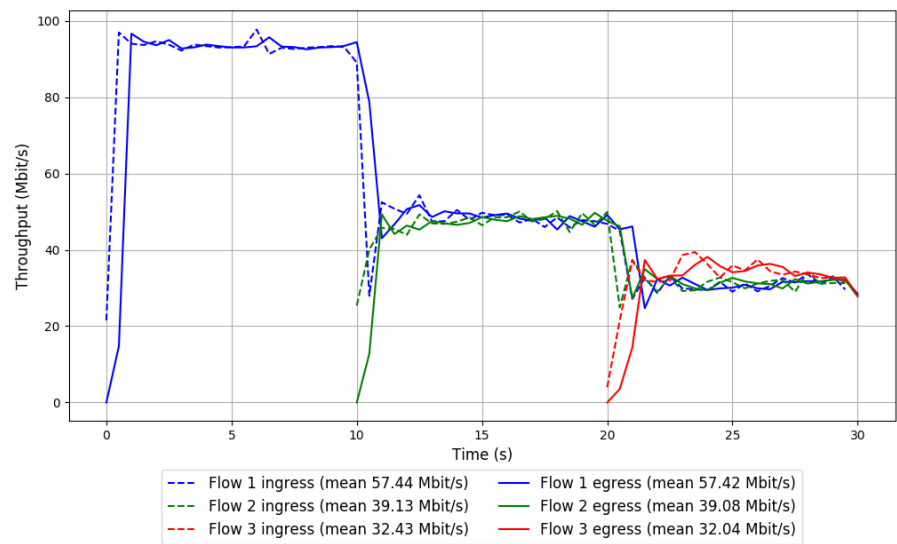


Run 2: Statistics of FillP-Sheep

Start at: 2018-12-20 08:24:39  
End at: 2018-12-20 08:25:09  
Local clock offset: 0.363 ms  
Remote clock offset: -3.089 ms

# Below is generated by plot.py at 2018-12-20 09:53:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.02 Mbit/s  
95th percentile per-packet one-way delay: 98.823 ms  
Loss rate: 0.45%  
-- Flow 1:  
Average throughput: 57.42 Mbit/s  
95th percentile per-packet one-way delay: 97.637 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 39.08 Mbit/s  
95th percentile per-packet one-way delay: 87.080 ms  
Loss rate: 0.46%  
-- Flow 3:  
Average throughput: 32.04 Mbit/s  
95th percentile per-packet one-way delay: 116.693 ms  
Loss rate: 1.77%

Run 2: Report of FillP-Sheep — Data Link

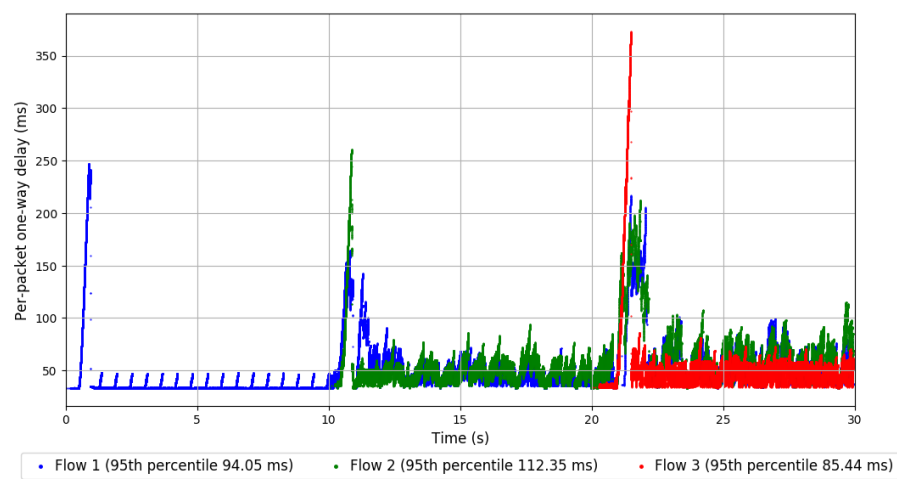
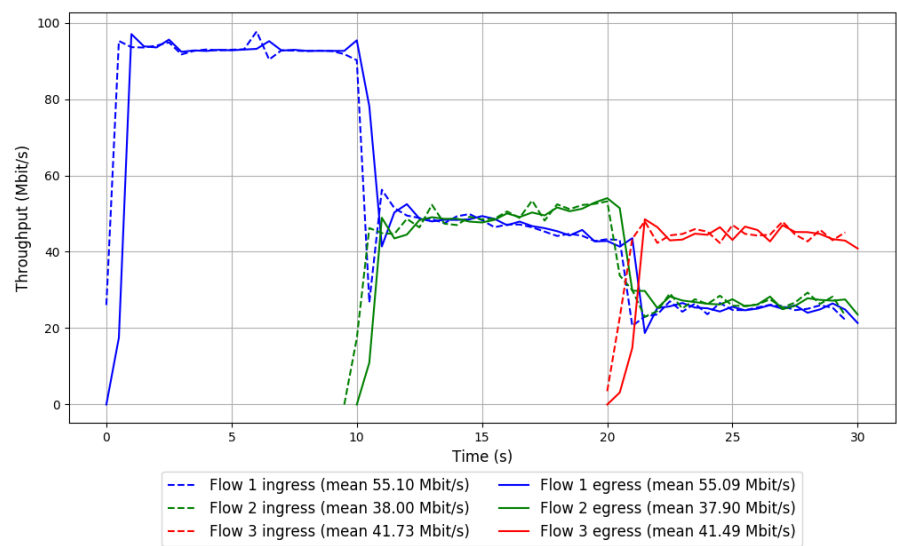


Run 3: Statistics of FillP-Sheep

Start at: 2018-12-20 08:47:52  
End at: 2018-12-20 08:48:22  
Local clock offset: 0.265 ms  
Remote clock offset: -2.397 ms

# Below is generated by plot.py at 2018-12-20 09:53:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.05 Mbit/s  
95th percentile per-packet one-way delay: 97.680 ms  
Loss rate: 0.45%  
-- Flow 1:  
Average throughput: 55.09 Mbit/s  
95th percentile per-packet one-way delay: 94.050 ms  
Loss rate: 0.25%  
-- Flow 2:  
Average throughput: 37.90 Mbit/s  
95th percentile per-packet one-way delay: 112.354 ms  
Loss rate: 0.48%  
-- Flow 3:  
Average throughput: 41.49 Mbit/s  
95th percentile per-packet one-way delay: 85.441 ms  
Loss rate: 1.22%

Run 3: Report of FillP-Sheep — Data Link

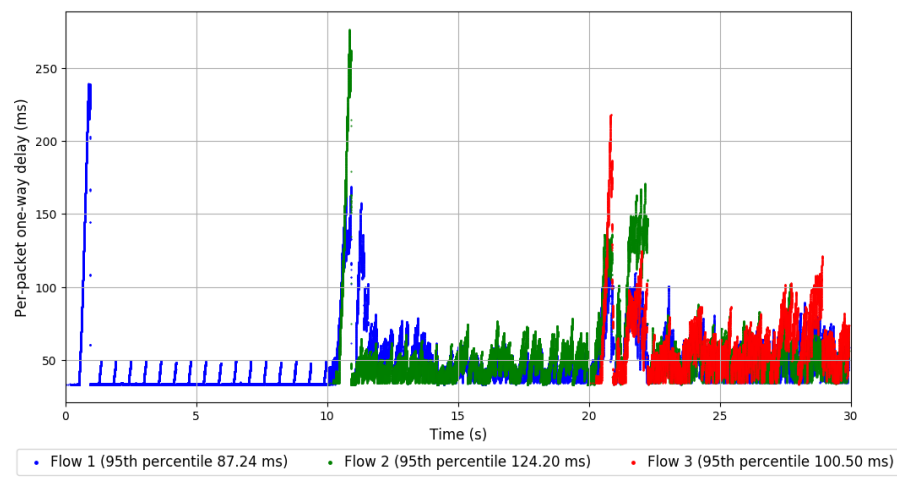
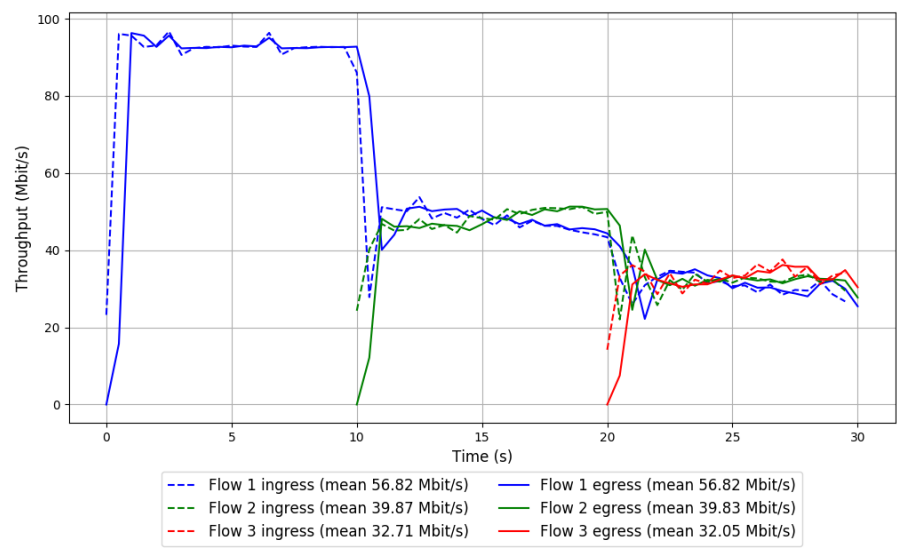


Run 4: Statistics of FillP-Sheep

Start at: 2018-12-20 09:11:41  
End at: 2018-12-20 09:12:11  
Local clock offset: -1.535 ms  
Remote clock offset: -1.857 ms

# Below is generated by plot.py at 2018-12-20 09:54:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.92 Mbit/s  
95th percentile per-packet one-way delay: 97.668 ms  
Loss rate: 0.53%  
-- Flow 1:  
Average throughput: 56.82 Mbit/s  
95th percentile per-packet one-way delay: 87.240 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 39.83 Mbit/s  
95th percentile per-packet one-way delay: 124.202 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 32.05 Mbit/s  
95th percentile per-packet one-way delay: 100.503 ms  
Loss rate: 2.52%

Run 4: Report of FillP-Sheep — Data Link



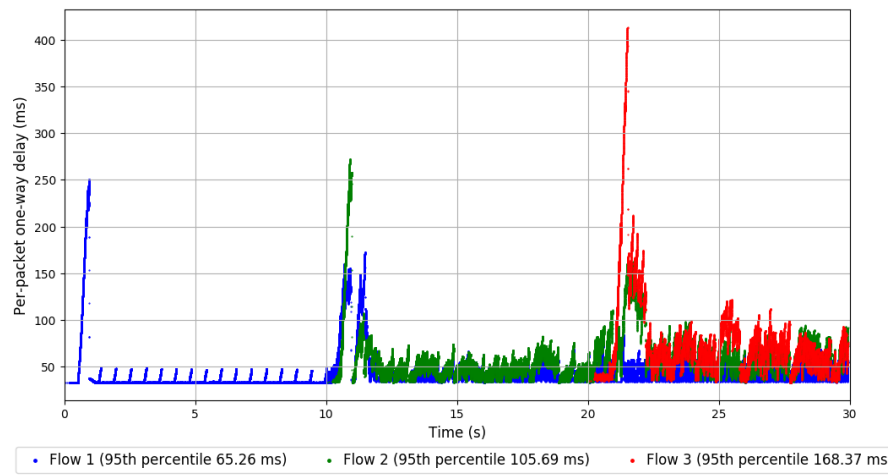
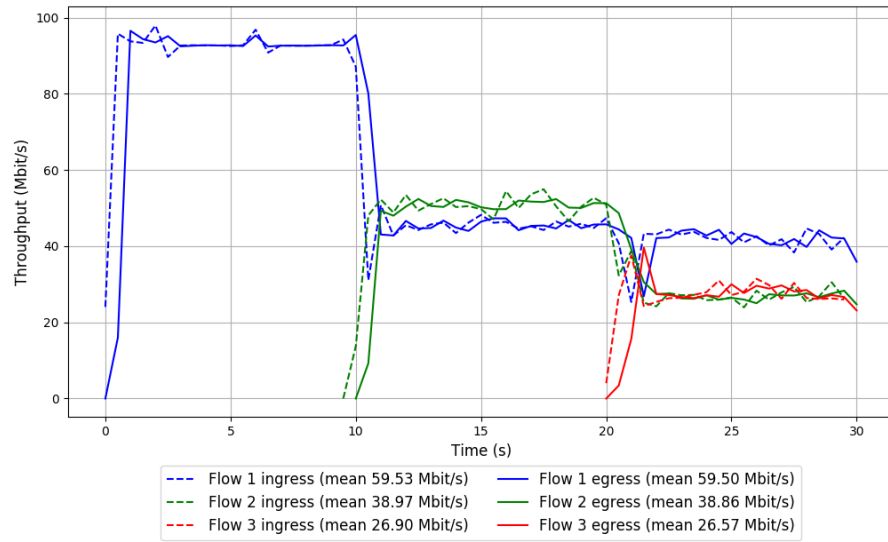


Run 5: Statistics of FillP-Sheep

Start at: 2018-12-20 09:34:52  
End at: 2018-12-20 09:35:22  
Local clock offset: -3.945 ms  
Remote clock offset: -1.382 ms

# Below is generated by plot.py at 2018-12-20 09:54:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.15 Mbit/s  
95th percentile per-packet one-way delay: 101.350 ms  
Loss rate: 0.49%  
-- Flow 1:  
Average throughput: 59.50 Mbit/s  
95th percentile per-packet one-way delay: 65.263 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 38.86 Mbit/s  
95th percentile per-packet one-way delay: 105.688 ms  
Loss rate: 0.60%  
-- Flow 3:  
Average throughput: 26.57 Mbit/s  
95th percentile per-packet one-way delay: 168.372 ms  
Loss rate: 1.70%

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

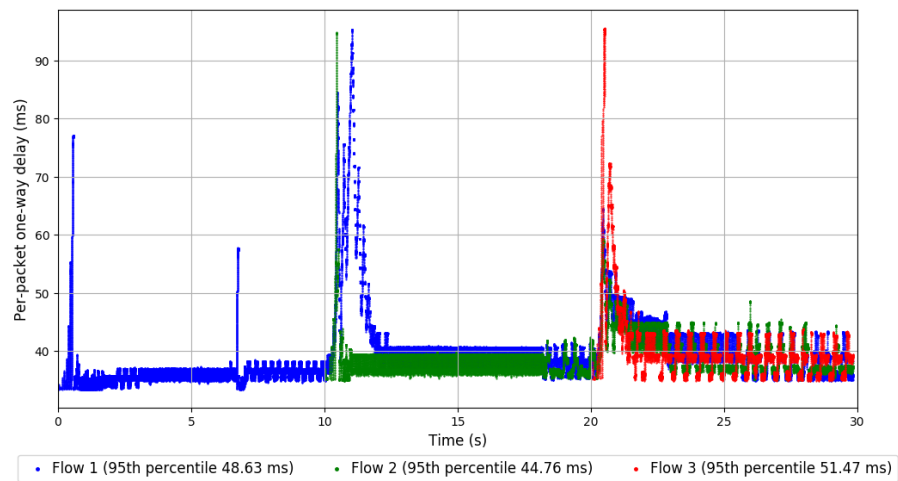
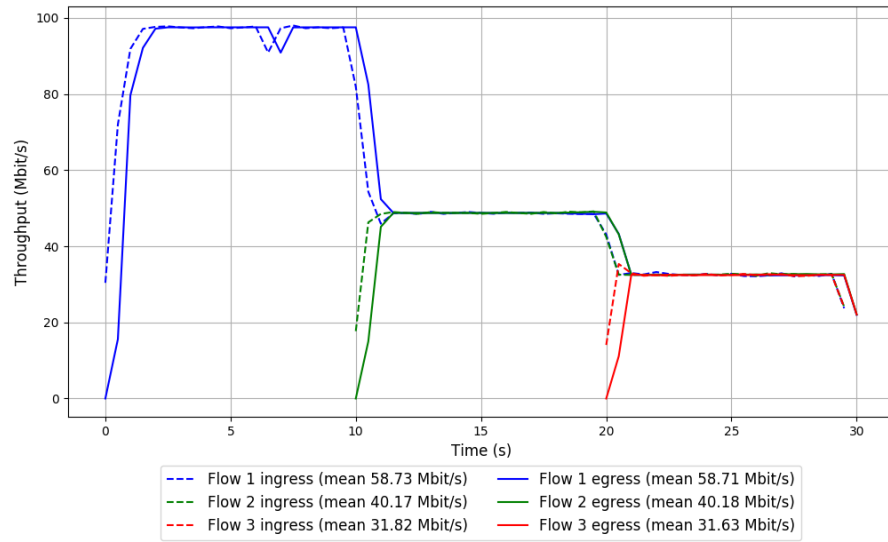


Run 1: Statistics of Indigo

Start at: 2018-12-20 08:03:57  
End at: 2018-12-20 08:04:27  
Local clock offset: 0.542 ms  
Remote clock offset: -3.698 ms

# Below is generated by plot.py at 2018-12-20 09:54:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.75 Mbit/s  
95th percentile per-packet one-way delay: 46.810 ms  
Loss rate: 0.36%  
-- Flow 1:  
Average throughput: 58.71 Mbit/s  
95th percentile per-packet one-way delay: 48.629 ms  
Loss rate: 0.23%  
-- Flow 2:  
Average throughput: 40.18 Mbit/s  
95th percentile per-packet one-way delay: 44.756 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 31.63 Mbit/s  
95th percentile per-packet one-way delay: 51.469 ms  
Loss rate: 1.24%

## Run 1: Report of Indigo — Data Link

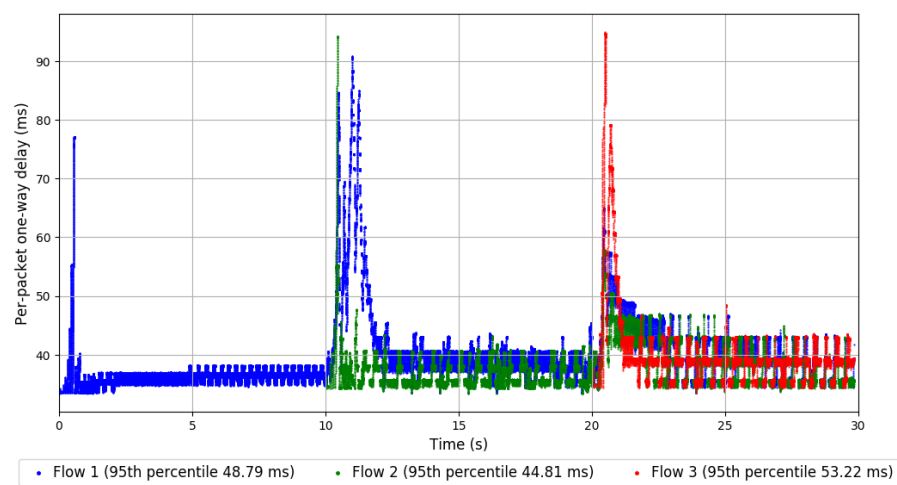
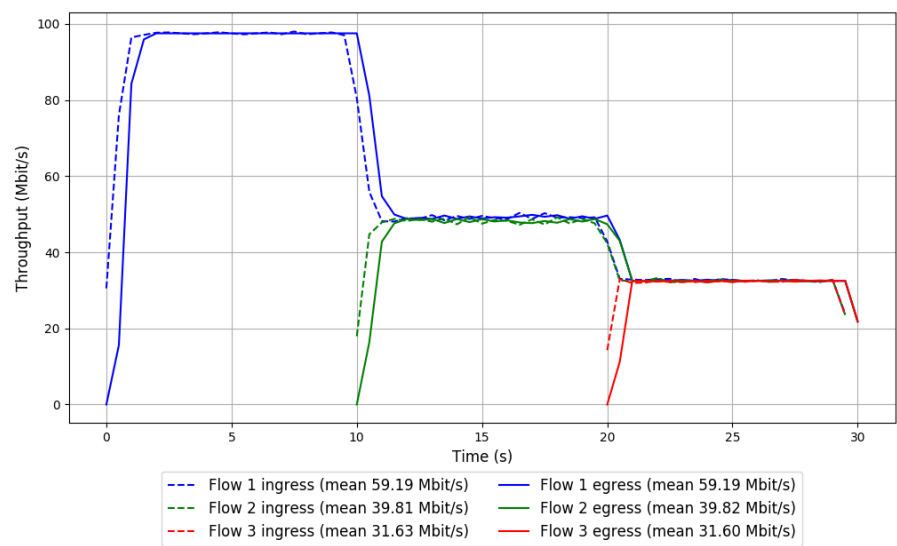


Run 2: Statistics of Indigo

Start at: 2018-12-20 08:27:05  
End at: 2018-12-20 08:27:35  
Local clock offset: 0.359 ms  
Remote clock offset: -2.961 ms

# Below is generated by plot.py at 2018-12-20 09:54:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.98 Mbit/s  
95th percentile per-packet one-way delay: 46.586 ms  
Loss rate: 0.29%  
-- Flow 1:  
Average throughput: 59.19 Mbit/s  
95th percentile per-packet one-way delay: 48.791 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 39.82 Mbit/s  
95th percentile per-packet one-way delay: 44.807 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 31.60 Mbit/s  
95th percentile per-packet one-way delay: 53.224 ms  
Loss rate: 0.75%

Run 2: Report of Indigo — Data Link

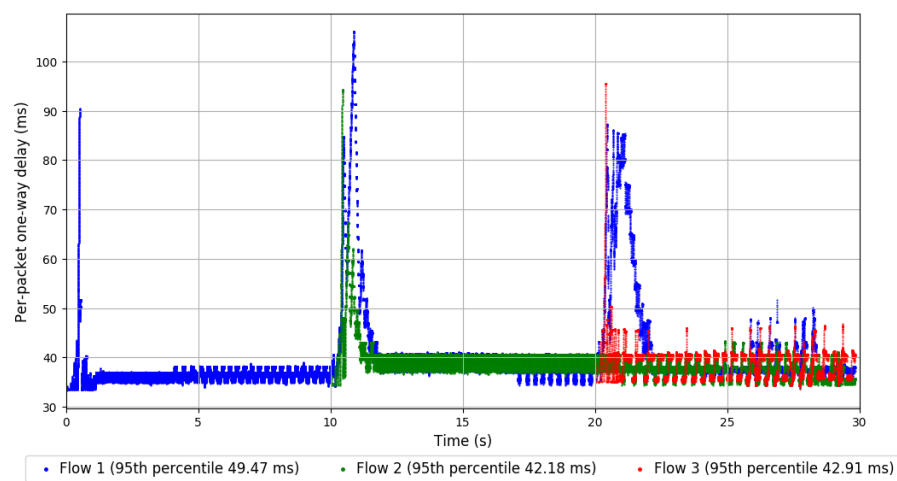
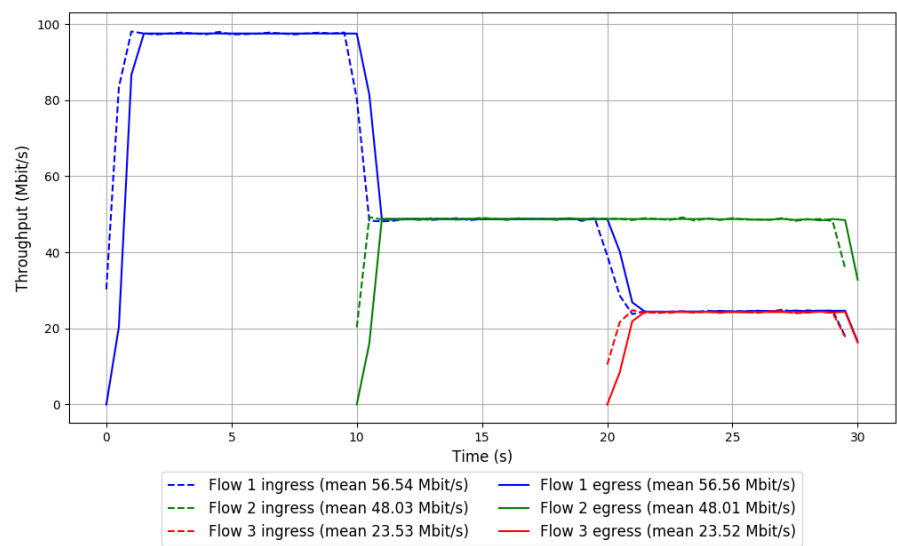


Run 3: Statistics of Indigo

Start at: 2018-12-20 08:50:23  
End at: 2018-12-20 08:50:53  
Local clock offset: 0.235 ms  
Remote clock offset: -2.307 ms

# Below is generated by plot.py at 2018-12-20 09:54:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.16 Mbit/s  
95th percentile per-packet one-way delay: 45.334 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 56.56 Mbit/s  
95th percentile per-packet one-way delay: 49.472 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 48.01 Mbit/s  
95th percentile per-packet one-way delay: 42.177 ms  
Loss rate: 0.36%  
-- Flow 3:  
Average throughput: 23.52 Mbit/s  
95th percentile per-packet one-way delay: 42.912 ms  
Loss rate: 0.69%

Run 3: Report of Indigo — Data Link



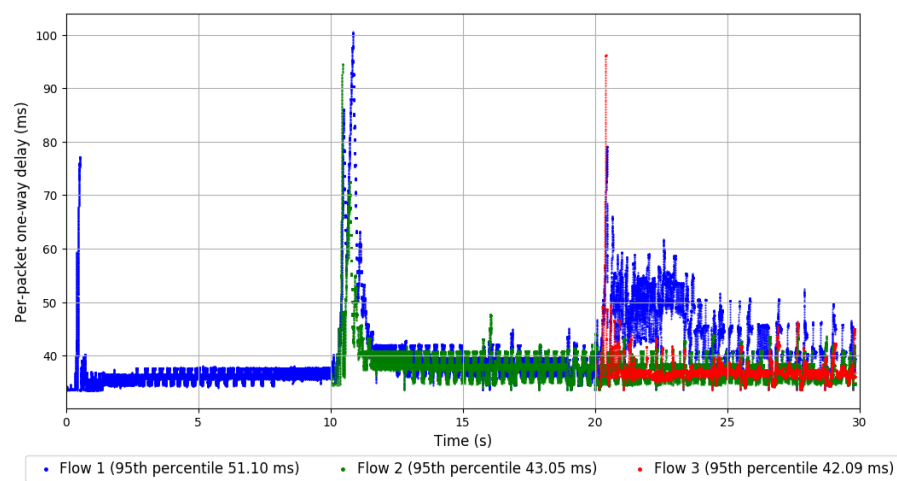
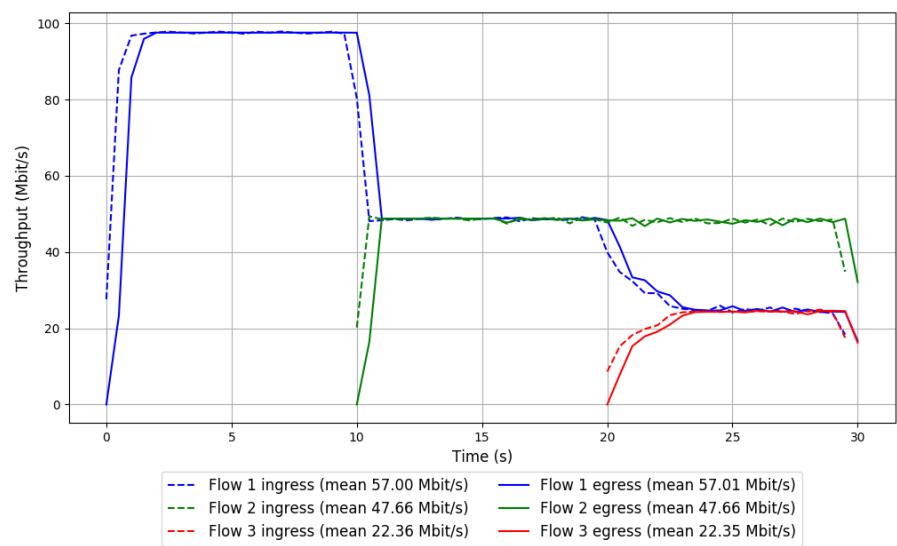


Run 4: Statistics of Indigo

Start at: 2018-12-20 09:14:07  
End at: 2018-12-20 09:14:37  
Local clock offset: -1.996 ms  
Remote clock offset: -1.772 ms

# Below is generated by plot.py at 2018-12-20 09:54:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.01 Mbit/s  
95th percentile per-packet one-way delay: 48.483 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 57.01 Mbit/s  
95th percentile per-packet one-way delay: 51.096 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 47.66 Mbit/s  
95th percentile per-packet one-way delay: 43.049 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 22.35 Mbit/s  
95th percentile per-packet one-way delay: 42.085 ms  
Loss rate: 0.69%

Run 4: Report of Indigo — Data Link

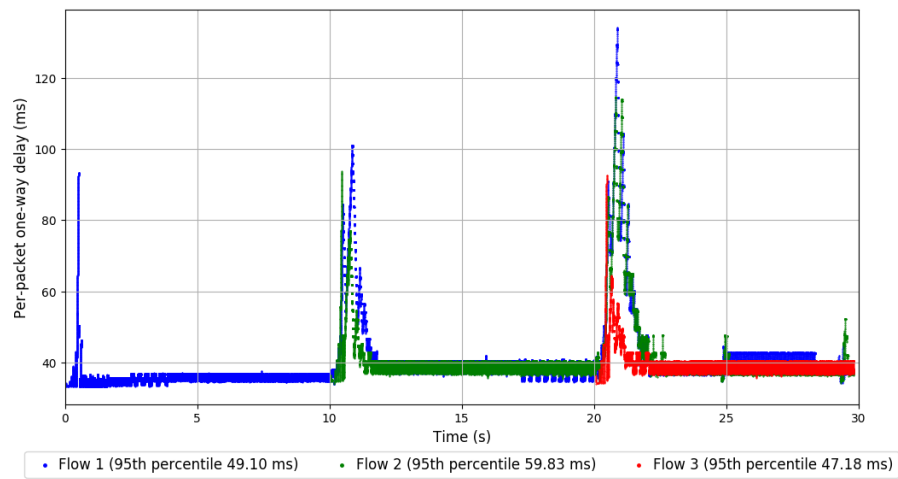
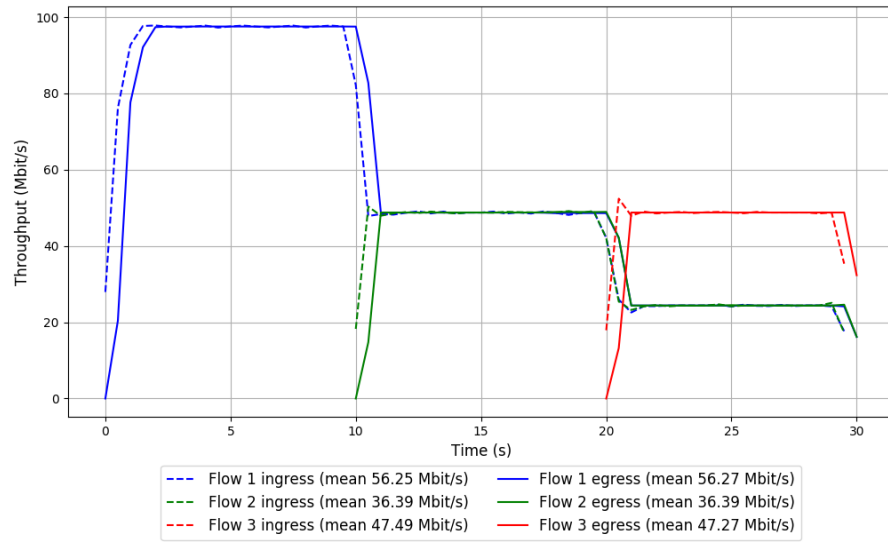


Run 5: Statistics of Indigo

Start at: 2018-12-20 09:37:17  
End at: 2018-12-20 09:37:47  
Local clock offset: -3.225 ms  
Remote clock offset: -1.393 ms

# Below is generated by plot.py at 2018-12-20 09:54:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.92 Mbit/s  
95th percentile per-packet one-way delay: 50.226 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 56.27 Mbit/s  
95th percentile per-packet one-way delay: 49.100 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 36.39 Mbit/s  
95th percentile per-packet one-way delay: 59.825 ms  
Loss rate: 0.36%  
-- Flow 3:  
Average throughput: 47.27 Mbit/s  
95th percentile per-packet one-way delay: 47.179 ms  
Loss rate: 1.12%

## Run 5: Report of Indigo — Data Link

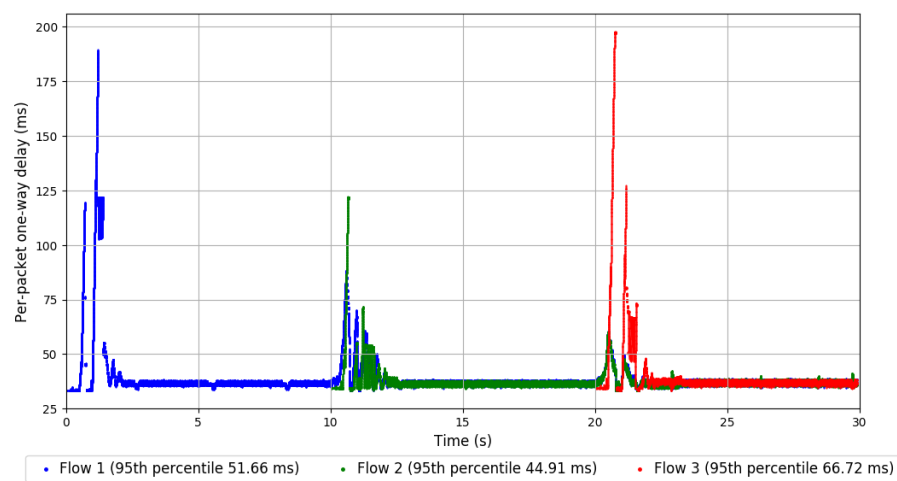
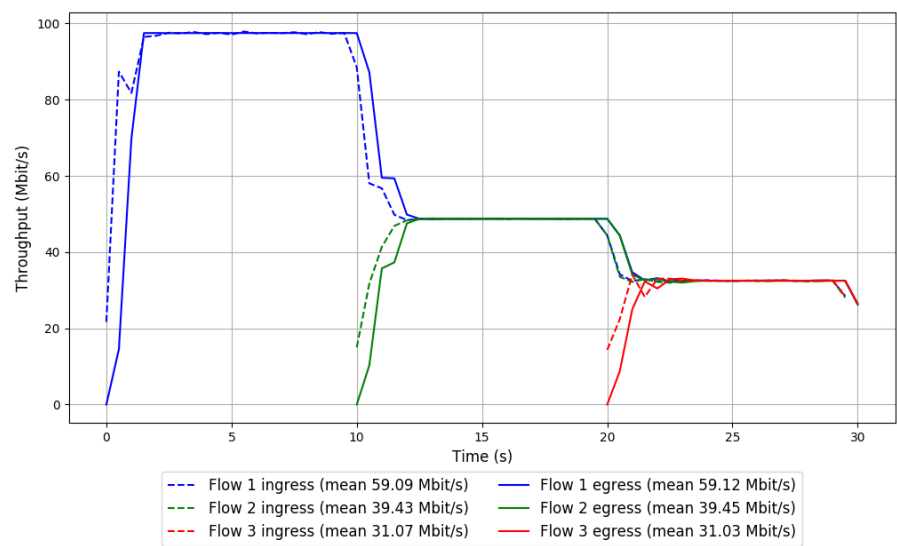


Run 1: Statistics of Indigo-MusesD

Start at: 2018-12-20 07:51:47  
End at: 2018-12-20 07:52:17  
Local clock offset: 0.47 ms  
Remote clock offset: -3.787 ms

# Below is generated by plot.py at 2018-12-20 09:54:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.58 Mbit/s  
95th percentile per-packet one-way delay: 50.709 ms  
Loss rate: 0.25%  
-- Flow 1:  
Average throughput: 59.12 Mbit/s  
95th percentile per-packet one-way delay: 51.660 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 39.45 Mbit/s  
95th percentile per-packet one-way delay: 44.907 ms  
Loss rate: 0.29%  
-- Flow 3:  
Average throughput: 31.03 Mbit/s  
95th percentile per-packet one-way delay: 66.722 ms  
Loss rate: 0.76%

Run 1: Report of Indigo-MusesD — Data Link

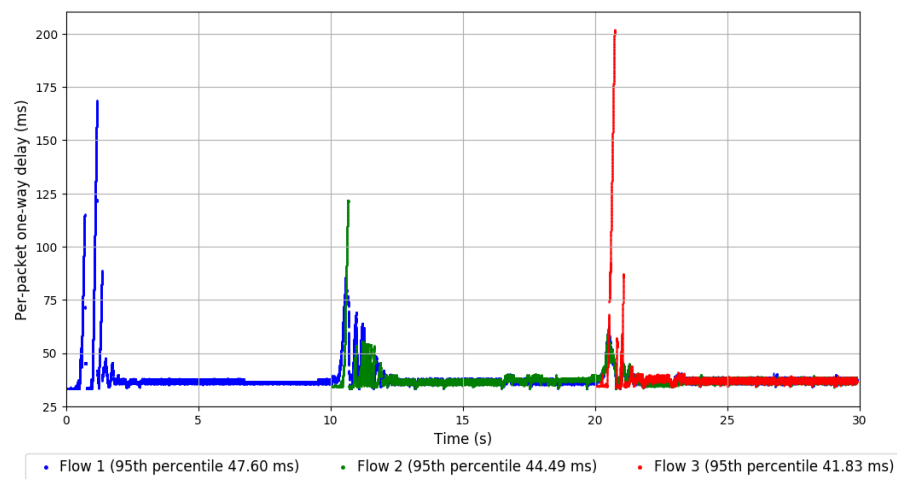
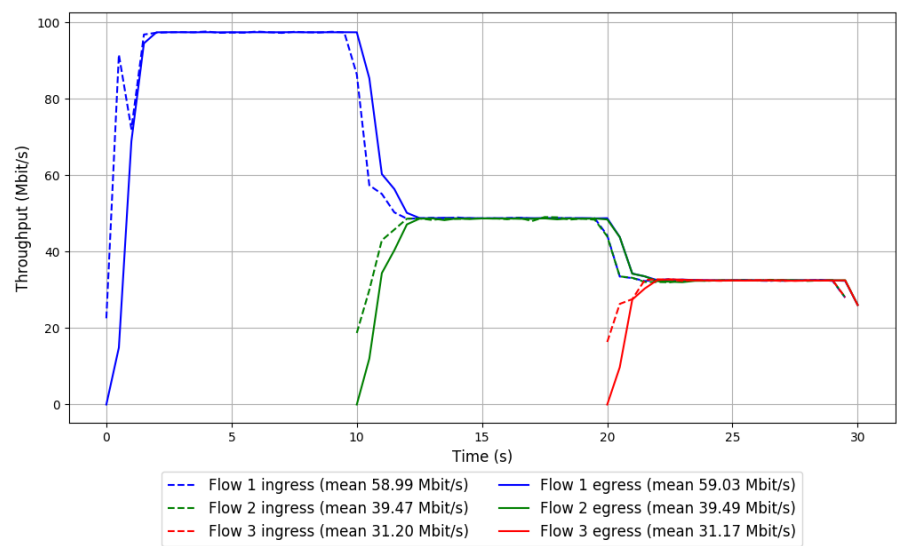


Run 2: Statistics of Indigo-MusesD

Start at: 2018-12-20 08:14:52  
End at: 2018-12-20 08:15:22  
Local clock offset: 0.404 ms  
Remote clock offset: -3.382 ms

# Below is generated by plot.py at 2018-12-20 09:55:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.56 Mbit/s  
95th percentile per-packet one-way delay: 45.800 ms  
Loss rate: 0.25%  
-- Flow 1:  
Average throughput: 59.03 Mbit/s  
95th percentile per-packet one-way delay: 47.599 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 39.49 Mbit/s  
95th percentile per-packet one-way delay: 44.494 ms  
Loss rate: 0.29%  
-- Flow 3:  
Average throughput: 31.17 Mbit/s  
95th percentile per-packet one-way delay: 41.830 ms  
Loss rate: 0.75%

Run 2: Report of Indigo-MusesD — Data Link



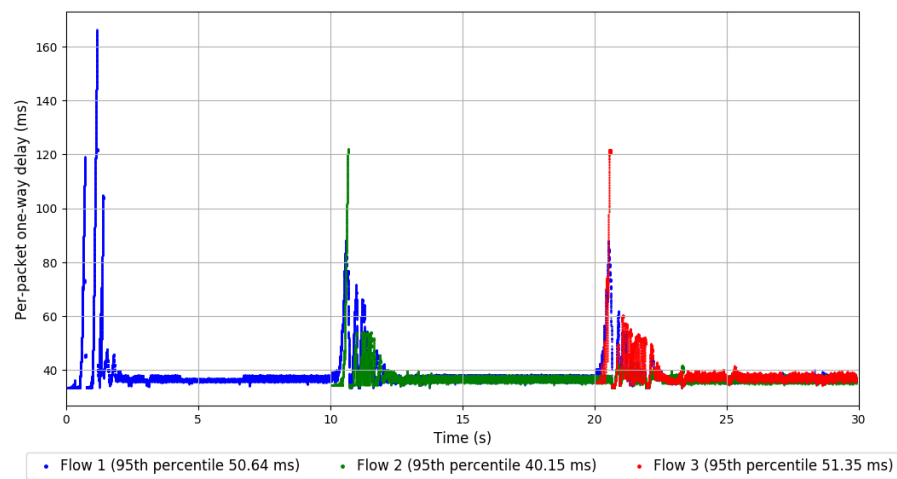
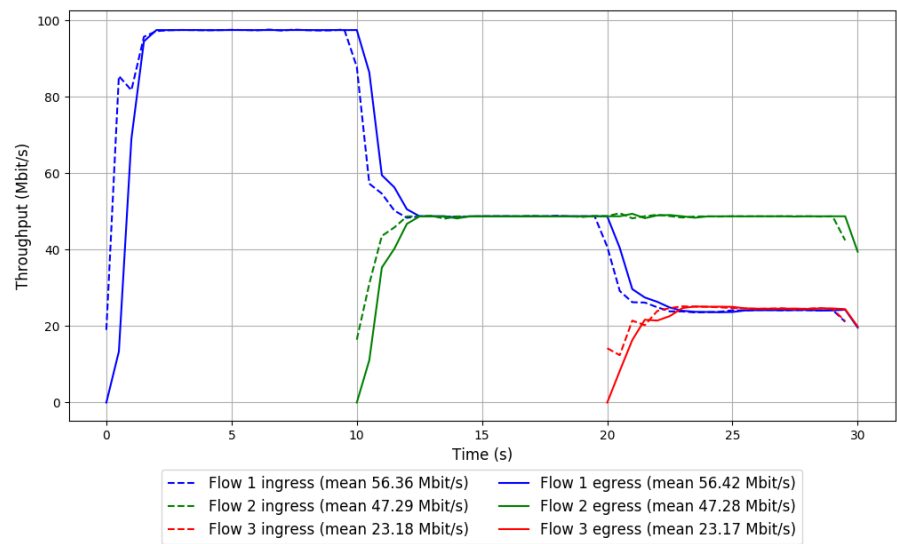


Run 3: Statistics of Indigo-MusesD

Start at: 2018-12-20 08:37:59  
End at: 2018-12-20 08:38:29  
Local clock offset: 0.317 ms  
Remote clock offset: -2.654 ms

# Below is generated by plot.py at 2018-12-20 09:55:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.49 Mbit/s  
95th percentile per-packet one-way delay: 46.279 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 56.42 Mbit/s  
95th percentile per-packet one-way delay: 50.643 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 47.28 Mbit/s  
95th percentile per-packet one-way delay: 40.148 ms  
Loss rate: 0.35%  
-- Flow 3:  
Average throughput: 23.17 Mbit/s  
95th percentile per-packet one-way delay: 51.354 ms  
Loss rate: 0.72%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2018-12-20 09:01:34

End at: 2018-12-20 09:02:04

Local clock offset: 0.222 ms

Remote clock offset: -2.26 ms

# Below is generated by plot.py at 2018-12-20 09:55:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.57 Mbit/s

95th percentile per-packet one-way delay: 49.231 ms

Loss rate: 0.29%

-- Flow 1:

Average throughput: 56.64 Mbit/s

95th percentile per-packet one-way delay: 54.305 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 47.11 Mbit/s

95th percentile per-packet one-way delay: 39.879 ms

Loss rate: 0.47%

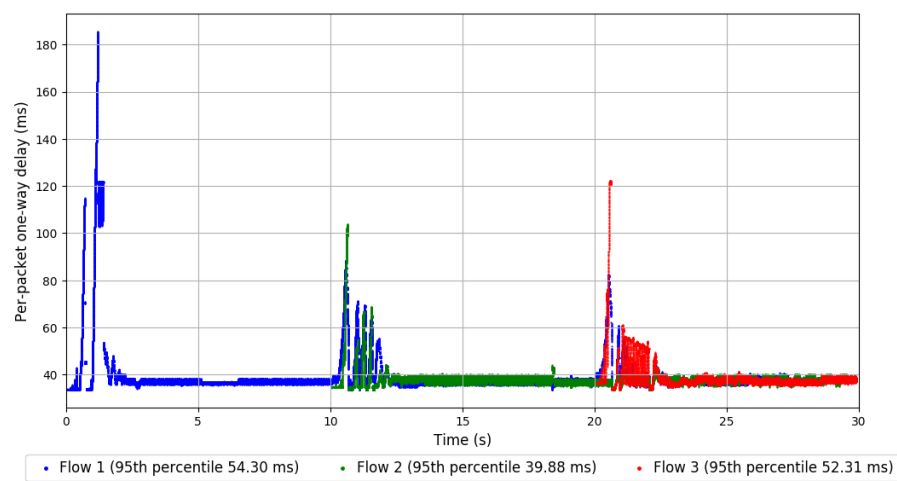
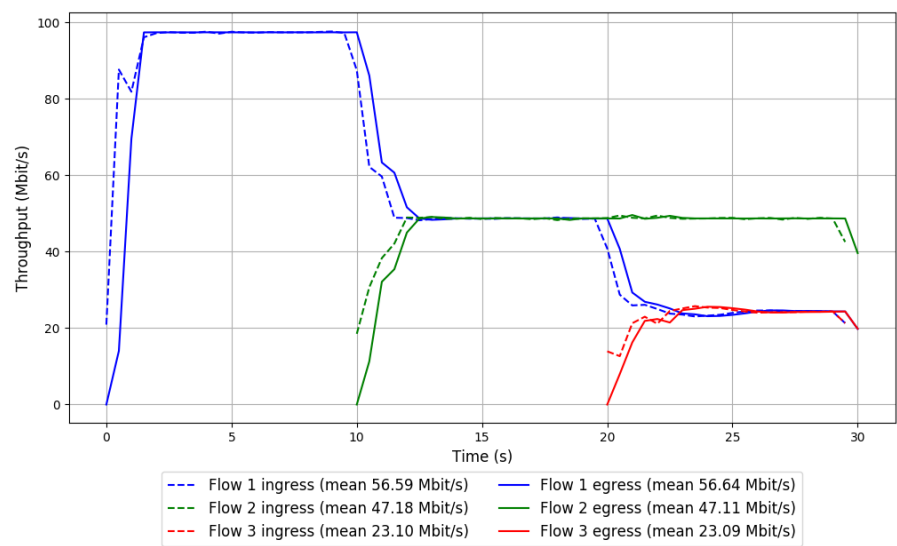
-- Flow 3:

Average throughput: 23.09 Mbit/s

95th percentile per-packet one-way delay: 52.306 ms

Loss rate: 0.73%

Run 4: Report of Indigo-MusesD — Data Link

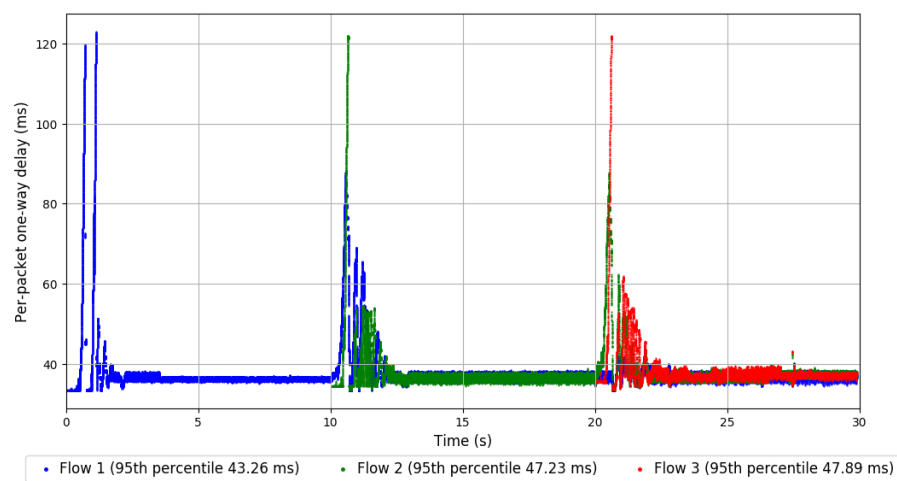
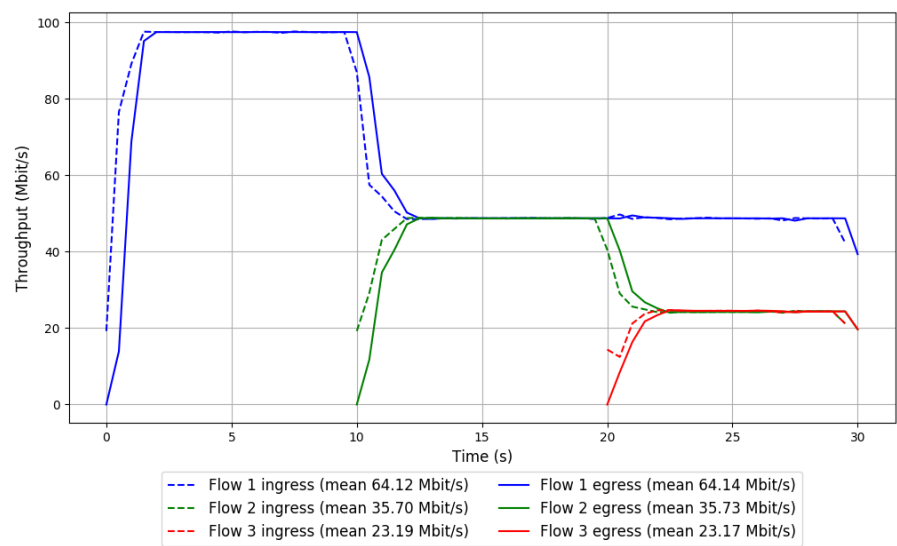


Run 5: Statistics of Indigo-MusesD

Start at: 2018-12-20 09:25:07  
End at: 2018-12-20 09:25:37  
Local clock offset: -3.294 ms  
Remote clock offset: -1.498 ms

# Below is generated by plot.py at 2018-12-20 09:55:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.54 Mbit/s  
95th percentile per-packet one-way delay: 44.860 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 64.14 Mbit/s  
95th percentile per-packet one-way delay: 43.264 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 35.73 Mbit/s  
95th percentile per-packet one-way delay: 47.225 ms  
Loss rate: 0.25%  
-- Flow 3:  
Average throughput: 23.17 Mbit/s  
95th percentile per-packet one-way delay: 47.893 ms  
Loss rate: 0.72%

Run 5: Report of Indigo-MusesD — Data Link

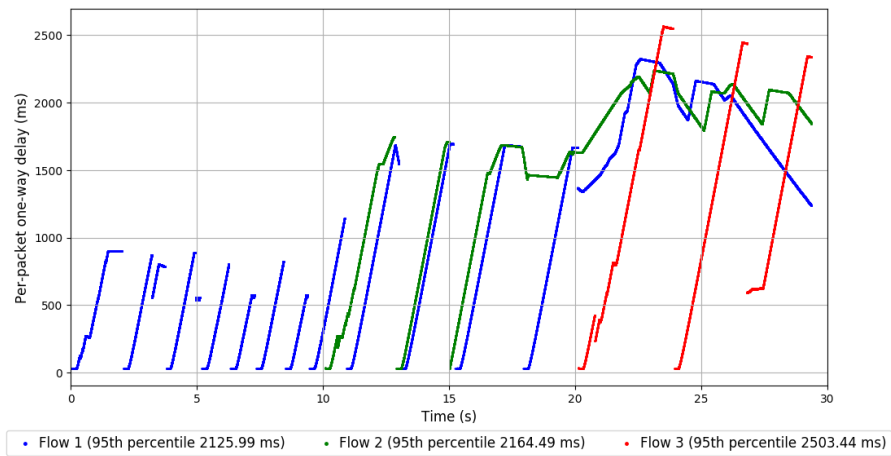
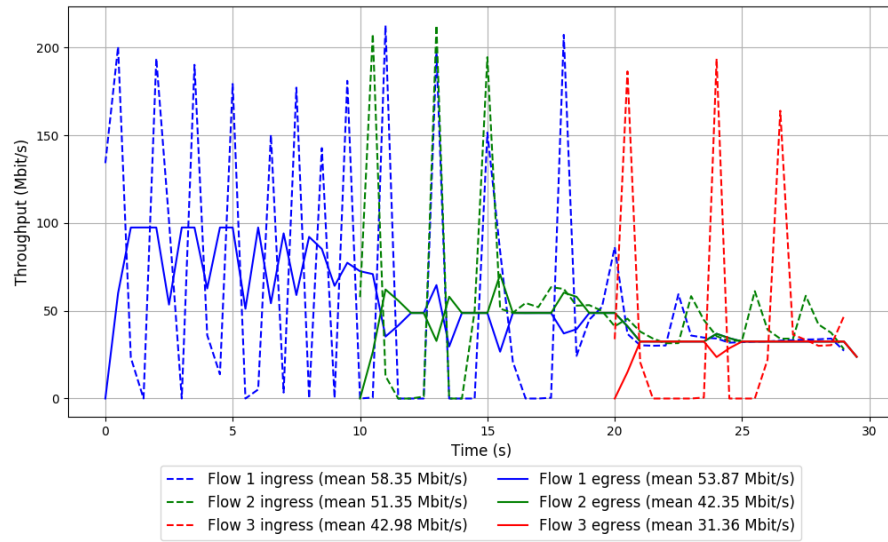


Run 1: Statistics of Indigo-MusesT

Start at: 2018-12-20 08:02:44  
End at: 2018-12-20 08:03:14  
Local clock offset: 0.548 ms  
Remote clock offset: -3.702 ms

# Below is generated by plot.py at 2018-12-20 09:55:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.56 Mbit/s  
95th percentile per-packet one-way delay: 2175.919 ms  
Loss rate: 13.59%  
-- Flow 1:  
Average throughput: 53.87 Mbit/s  
95th percentile per-packet one-way delay: 2125.993 ms  
Loss rate: 7.89%  
-- Flow 2:  
Average throughput: 42.35 Mbit/s  
95th percentile per-packet one-way delay: 2164.491 ms  
Loss rate: 17.82%  
-- Flow 3:  
Average throughput: 31.36 Mbit/s  
95th percentile per-packet one-way delay: 2503.439 ms  
Loss rate: 27.53%

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



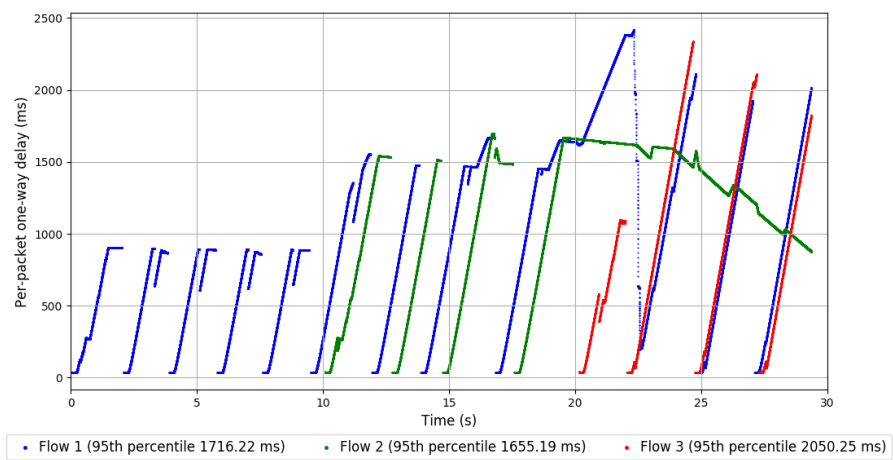
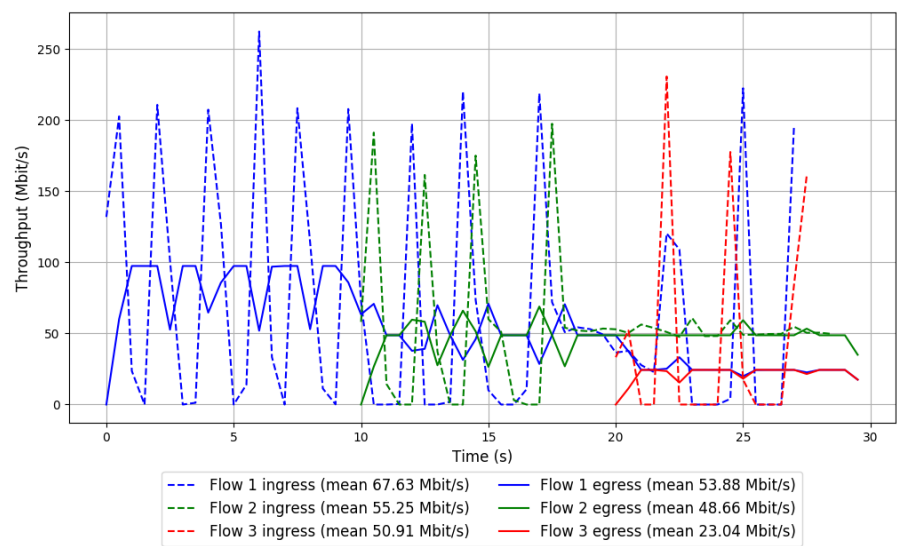


Run 2: Statistics of Indigo-MusesT

Start at: 2018-12-20 08:25:51  
End at: 2018-12-20 08:26:21  
Local clock offset: 0.357 ms  
Remote clock offset: -3.063 ms

# Below is generated by plot.py at 2018-12-20 09:55:50  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.10 Mbit/s  
95th percentile per-packet one-way delay: 1668.790 ms  
Loss rate: 16.87%  
-- Flow 1:  
Average throughput: 53.88 Mbit/s  
95th percentile per-packet one-way delay: 1716.224 ms  
Loss rate: 15.04%  
-- Flow 2:  
Average throughput: 48.66 Mbit/s  
95th percentile per-packet one-way delay: 1655.188 ms  
Loss rate: 10.35%  
-- Flow 3:  
Average throughput: 23.04 Mbit/s  
95th percentile per-packet one-way delay: 2050.250 ms  
Loss rate: 43.90%

Run 2: Report of Indigo-MusesT — Data Link

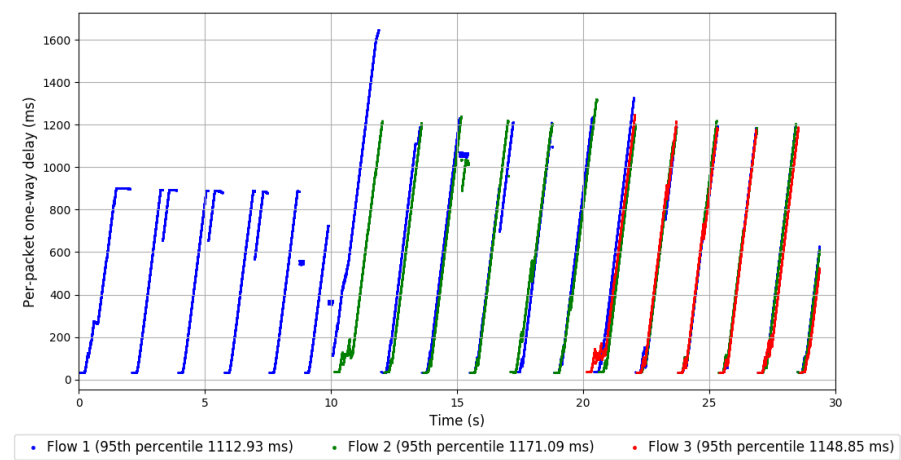
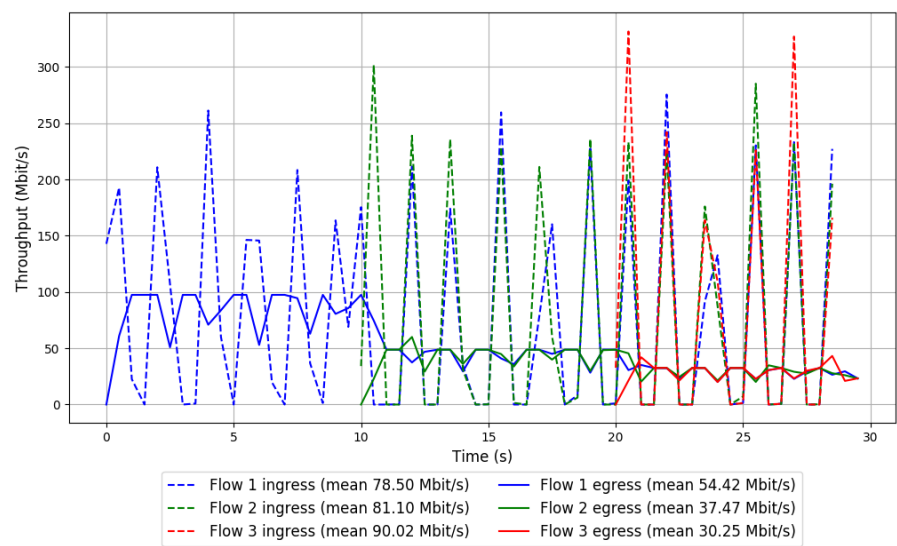


Run 3: Statistics of Indigo-MusesT

Start at: 2018-12-20 08:49:06  
End at: 2018-12-20 08:49:36  
Local clock offset: 0.251 ms  
Remote clock offset: -2.574 ms

# Below is generated by plot.py at 2018-12-20 09:56:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.53 Mbit/s  
95th percentile per-packet one-way delay: 1145.796 ms  
Loss rate: 43.20%  
-- Flow 1:  
Average throughput: 54.42 Mbit/s  
95th percentile per-packet one-way delay: 1112.935 ms  
Loss rate: 29.26%  
-- Flow 2:  
Average throughput: 37.47 Mbit/s  
95th percentile per-packet one-way delay: 1171.091 ms  
Loss rate: 52.41%  
-- Flow 3:  
Average throughput: 30.25 Mbit/s  
95th percentile per-packet one-way delay: 1148.848 ms  
Loss rate: 65.09%

Run 3: Report of Indigo-MusesT — Data Link

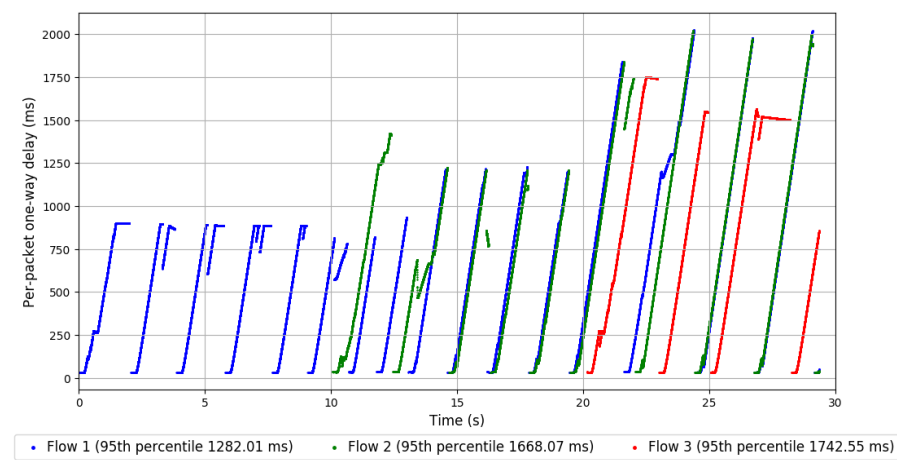
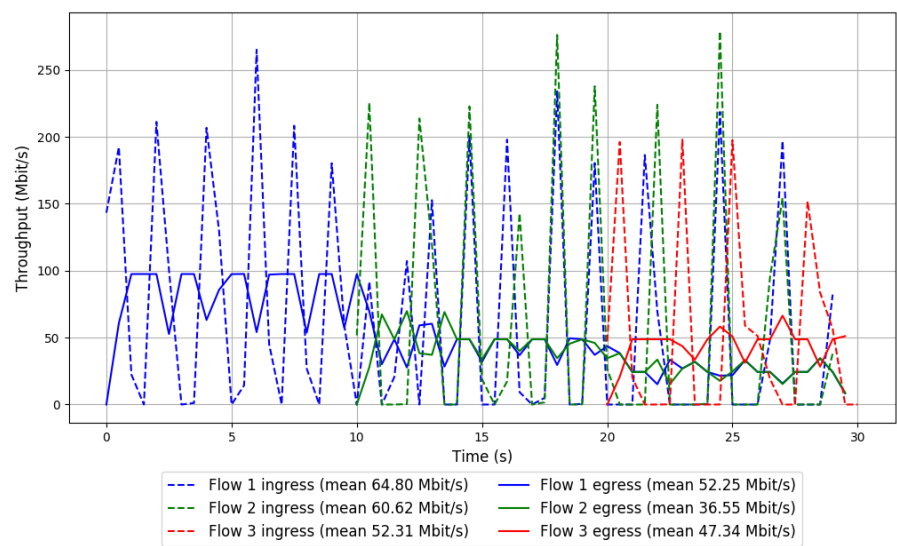


Run 4: Statistics of Indigo-MusesT

Start at: 2018-12-20 09:12:53  
End at: 2018-12-20 09:13:23  
Local clock offset: -1.773 ms  
Remote clock offset: -1.826 ms

# Below is generated by plot.py at 2018-12-20 09:56:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.14 Mbit/s  
95th percentile per-packet one-way delay: 1549.180 ms  
Loss rate: 26.12%  
-- Flow 1:  
Average throughput: 52.25 Mbit/s  
95th percentile per-packet one-way delay: 1282.011 ms  
Loss rate: 19.54%  
-- Flow 2:  
Average throughput: 36.55 Mbit/s  
95th percentile per-packet one-way delay: 1668.066 ms  
Loss rate: 39.92%  
-- Flow 3:  
Average throughput: 47.34 Mbit/s  
95th percentile per-packet one-way delay: 1742.552 ms  
Loss rate: 19.35%

Run 4: Report of Indigo-MusesT — Data Link

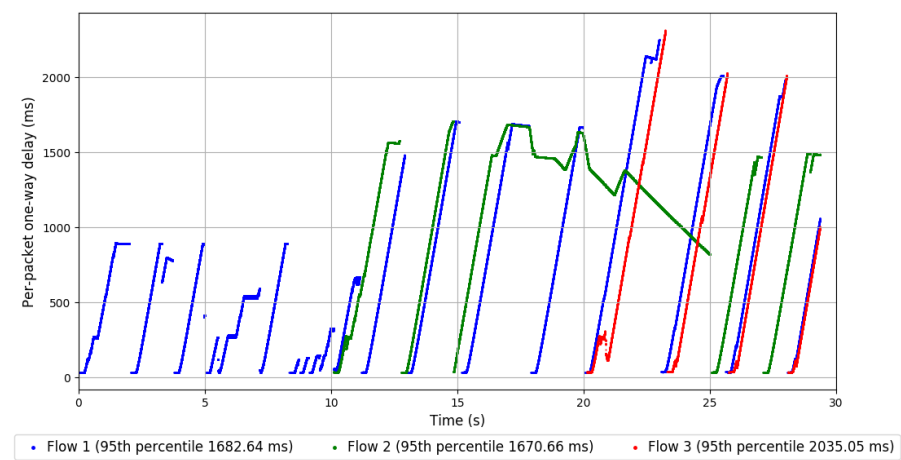
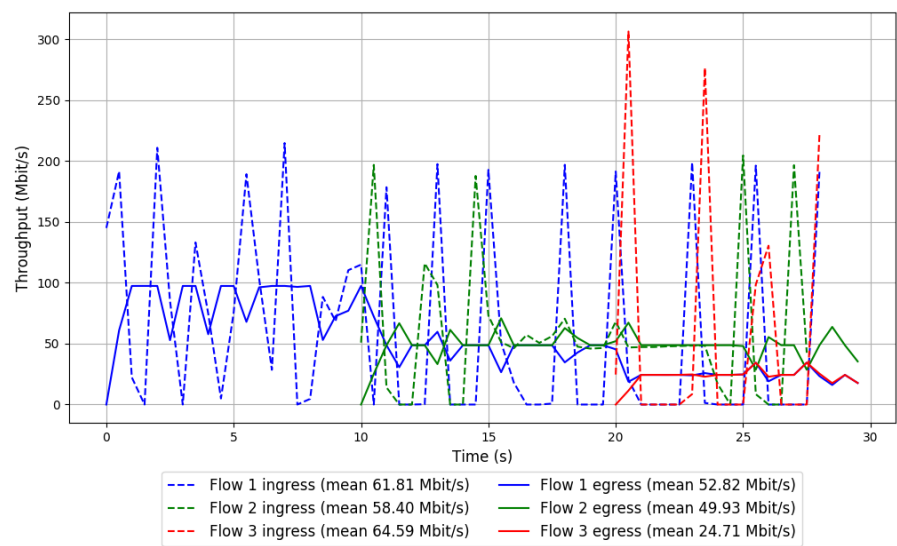


Run 5: Statistics of Indigo-MusesT

Start at: 2018-12-20 09:36:04  
End at: 2018-12-20 09:36:34  
Local clock offset: -3.856 ms  
Remote clock offset: -1.569 ms

# Below is generated by plot.py at 2018-12-20 09:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.37 Mbit/s  
95th percentile per-packet one-way delay: 1681.992 ms  
Loss rate: 17.64%  
-- Flow 1:  
Average throughput: 52.82 Mbit/s  
95th percentile per-packet one-way delay: 1682.638 ms  
Loss rate: 11.55%  
-- Flow 2:  
Average throughput: 49.93 Mbit/s  
95th percentile per-packet one-way delay: 1670.658 ms  
Loss rate: 7.54%  
-- Flow 3:  
Average throughput: 24.71 Mbit/s  
95th percentile per-packet one-way delay: 2035.049 ms  
Loss rate: 57.34%

Run 5: Report of Indigo-MusesT — Data Link



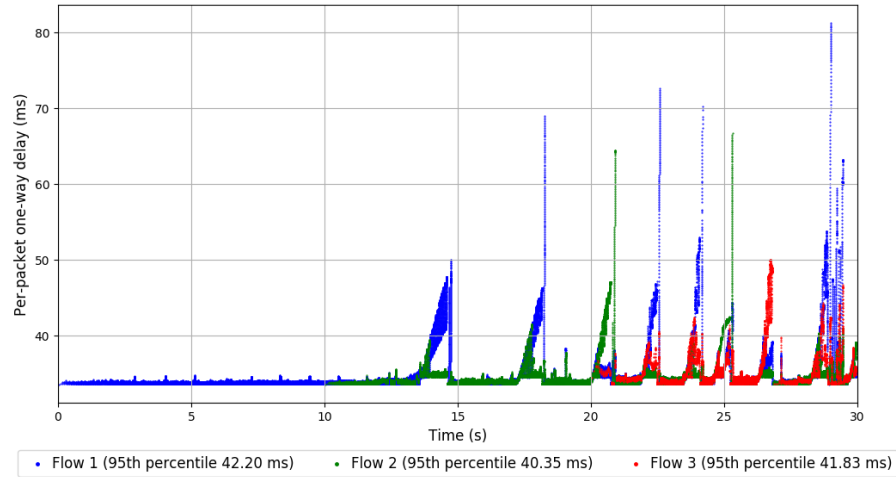
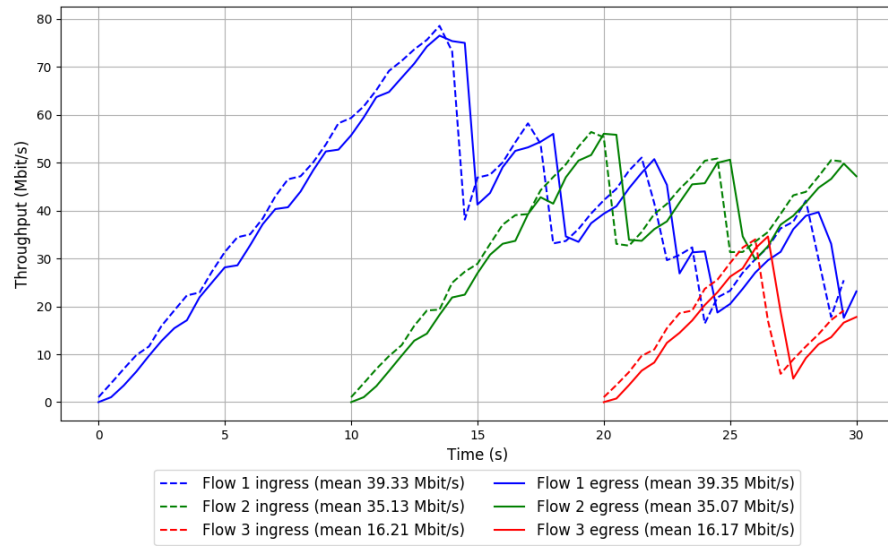


```
Run 1: Statistics of LEDBAT

Start at: 2018-12-20 08:05:11
End at: 2018-12-20 08:05:41
Local clock offset: 0.556 ms
Remote clock offset: -3.881 ms

# Below is generated by plot.py at 2018-12-20 09:56:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.04 Mbit/s
95th percentile per-packet one-way delay: 41.418 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 39.35 Mbit/s
95th percentile per-packet one-way delay: 42.202 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 35.07 Mbit/s
95th percentile per-packet one-way delay: 40.354 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 16.17 Mbit/s
95th percentile per-packet one-way delay: 41.827 ms
Loss rate: 0.90%
```

## Run 1: Report of LEDBAT — Data Link

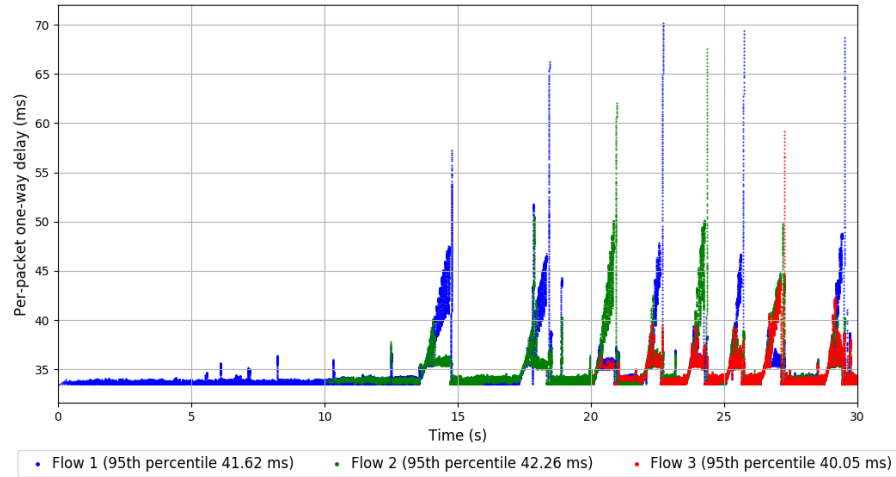
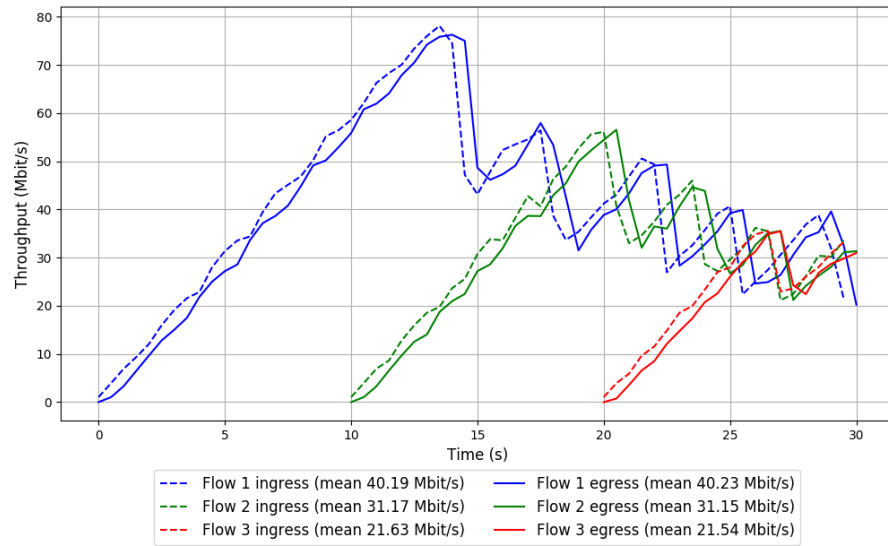


Run 2: Statistics of LEDBAT

Start at: 2018-12-20 08:28:19  
End at: 2018-12-20 08:28:49  
Local clock offset: 0.358 ms  
Remote clock offset: -2.979 ms

# Below is generated by plot.py at 2018-12-20 09:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 68.09 Mbit/s  
95th percentile per-packet one-way delay: 41.598 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 40.23 Mbit/s  
95th percentile per-packet one-way delay: 41.623 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 31.15 Mbit/s  
95th percentile per-packet one-way delay: 42.258 ms  
Loss rate: 0.38%  
-- Flow 3:  
Average throughput: 21.54 Mbit/s  
95th percentile per-packet one-way delay: 40.054 ms  
Loss rate: 1.08%

## Run 2: Report of LEDBAT — Data Link

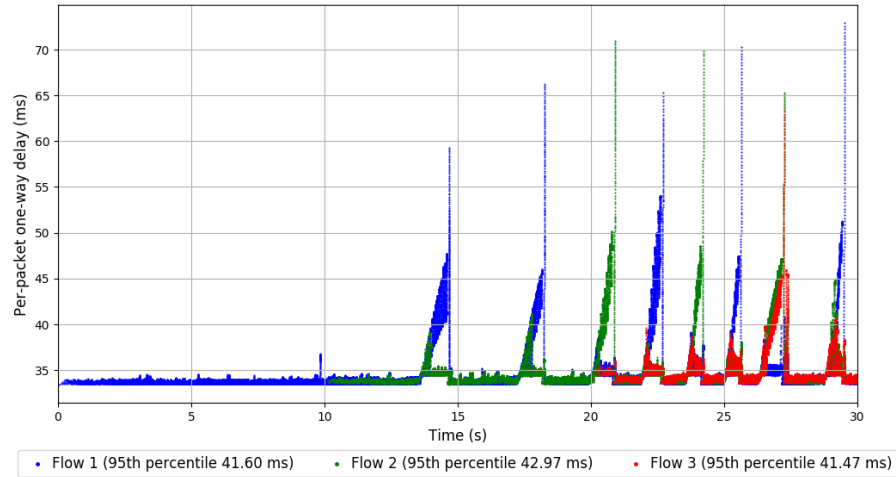
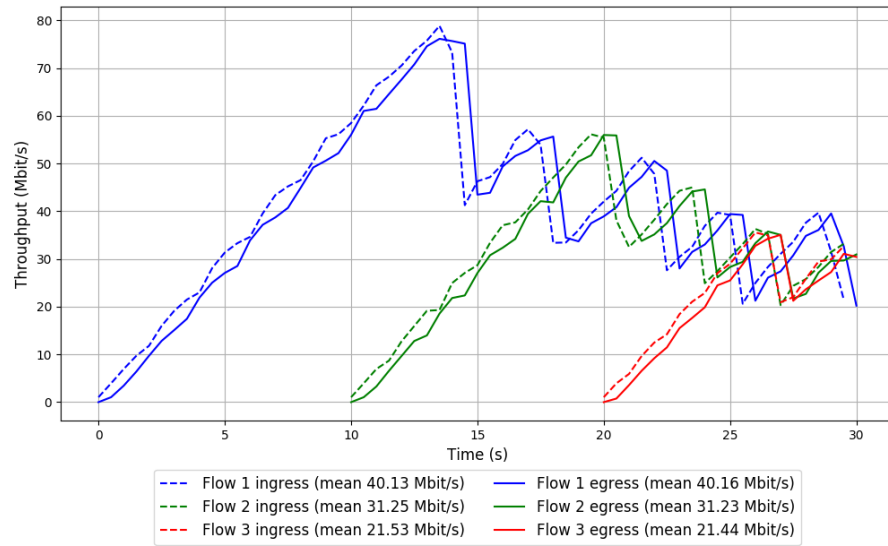


Run 3: Statistics of LEDBAT

Start at: 2018-12-20 08:51:40  
End at: 2018-12-20 08:52:10  
Local clock offset: 0.243 ms  
Remote clock offset: -2.346 ms

# Below is generated by plot.py at 2018-12-20 09:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 68.05 Mbit/s  
95th percentile per-packet one-way delay: 42.099 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 40.16 Mbit/s  
95th percentile per-packet one-way delay: 41.605 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 31.23 Mbit/s  
95th percentile per-packet one-way delay: 42.969 ms  
Loss rate: 0.38%  
-- Flow 3:  
Average throughput: 21.44 Mbit/s  
95th percentile per-packet one-way delay: 41.468 ms  
Loss rate: 1.07%

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



Run 4: Statistics of LEDBAT

Start at: 2018-12-20 09:15:22

End at: 2018-12-20 09:15:52

Local clock offset: -2.256 ms

Remote clock offset: -1.72 ms

# Below is generated by plot.py at 2018-12-20 09:56:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 68.85 Mbit/s

95th percentile per-packet one-way delay: 42.135 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 39.52 Mbit/s

95th percentile per-packet one-way delay: 42.471 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 30.38 Mbit/s

95th percentile per-packet one-way delay: 43.171 ms

Loss rate: 0.21%

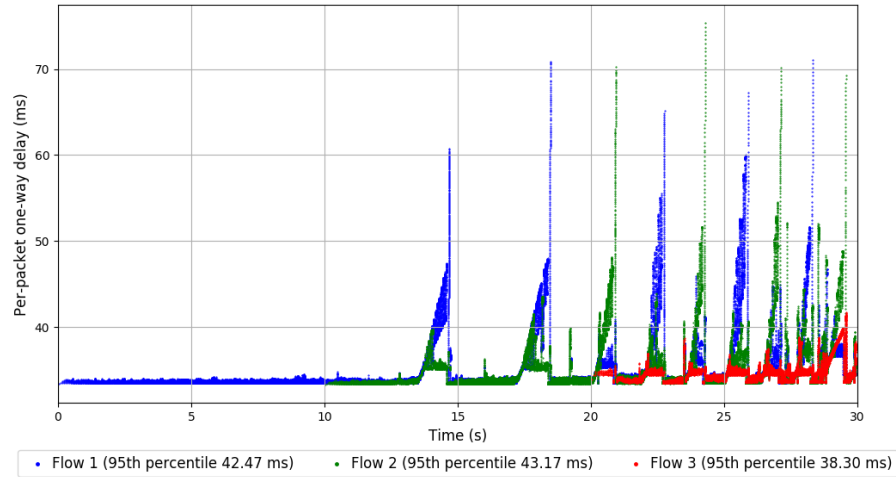
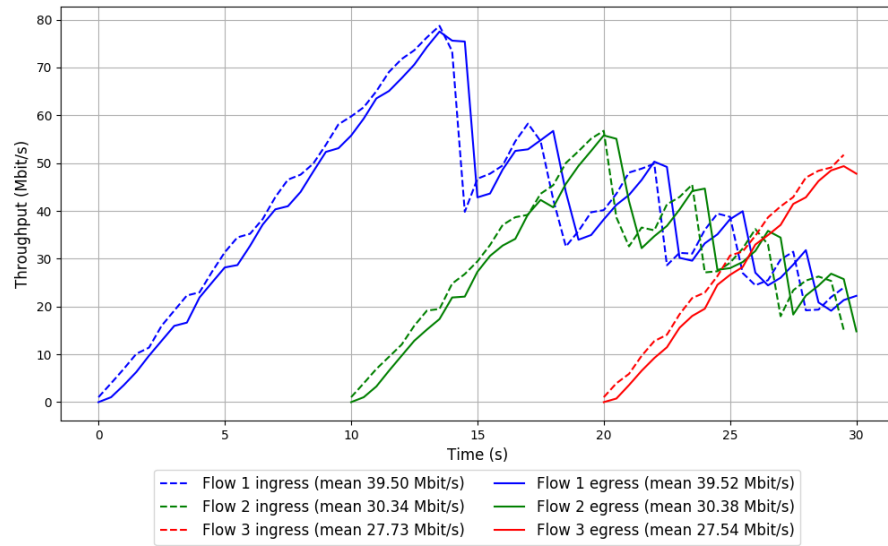
-- Flow 3:

Average throughput: 27.54 Mbit/s

95th percentile per-packet one-way delay: 38.296 ms

Loss rate: 1.31%

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



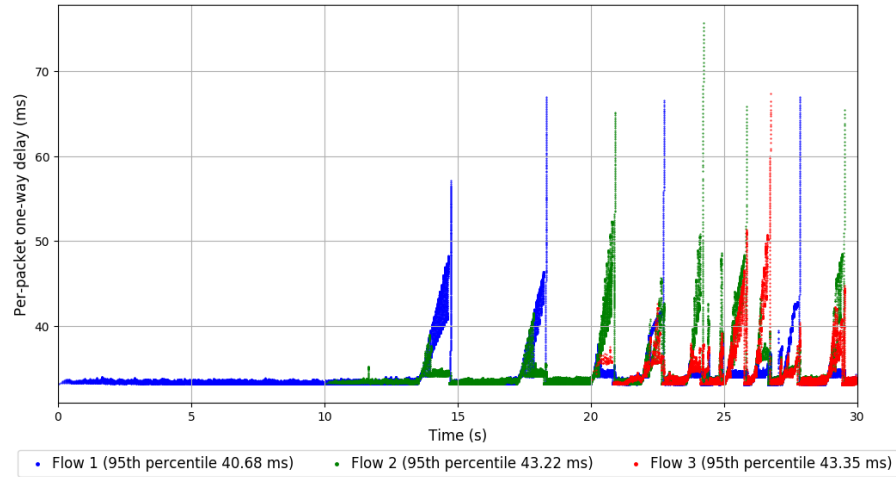
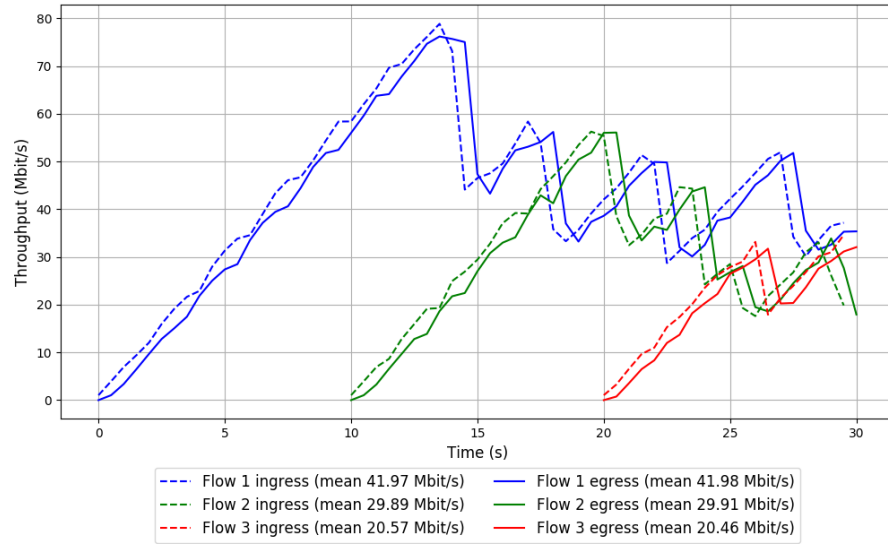


Run 5: Statistics of LEDBAT

Start at: 2018-12-20 09:38:31  
End at: 2018-12-20 09:39:01  
Local clock offset: -2.76 ms  
Remote clock offset: -1.337 ms

# Below is generated by plot.py at 2018-12-20 09:56:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 68.66 Mbit/s  
95th percentile per-packet one-way delay: 41.415 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 41.98 Mbit/s  
95th percentile per-packet one-way delay: 40.683 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 29.91 Mbit/s  
95th percentile per-packet one-way delay: 43.219 ms  
Loss rate: 0.24%  
-- Flow 3:  
Average throughput: 20.46 Mbit/s  
95th percentile per-packet one-way delay: 43.347 ms  
Loss rate: 1.16%

## Run 5: Report of LEDBAT — Data Link

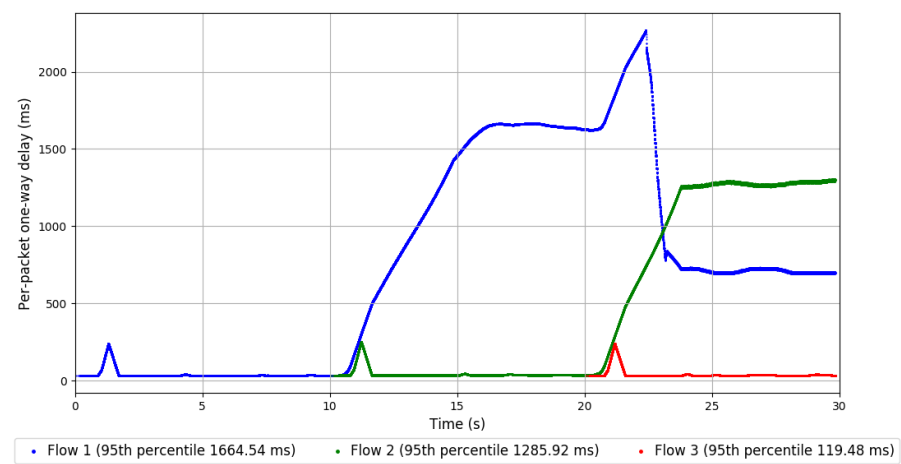
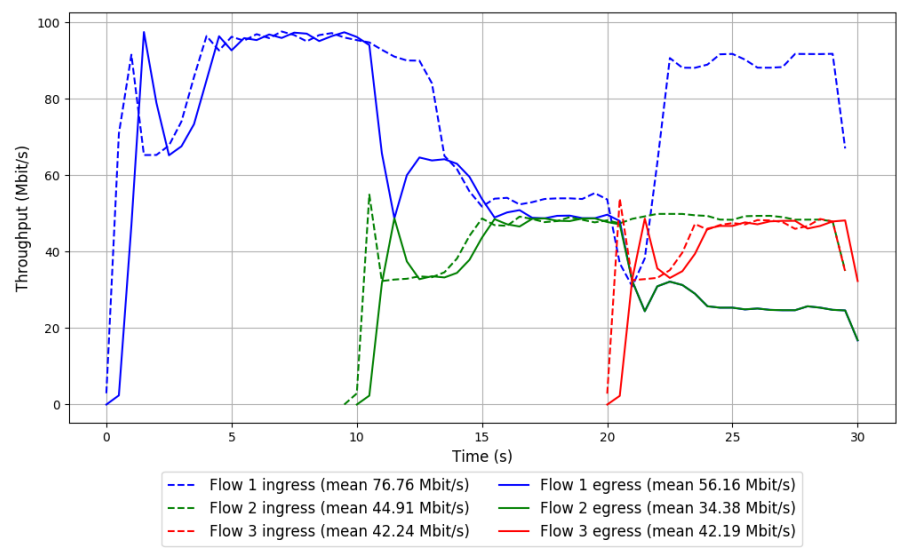


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-12-20 08:07:40
End at: 2018-12-20 08:08:10
Local clock offset: 0.496 ms
Remote clock offset: -3.596 ms

# Below is generated by plot.py at 2018-12-20 09:57:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.88 Mbit/s
95th percentile per-packet one-way delay: 1659.276 ms
Loss rate: 23.14%
-- Flow 1:
Average throughput: 56.16 Mbit/s
95th percentile per-packet one-way delay: 1664.538 ms
Loss rate: 26.99%
-- Flow 2:
Average throughput: 34.38 Mbit/s
95th percentile per-packet one-way delay: 1285.917 ms
Loss rate: 23.68%
-- Flow 3:
Average throughput: 42.19 Mbit/s
95th percentile per-packet one-way delay: 119.479 ms
Loss rate: 0.78%
```

Run 1: Report of PCC-Allegro — Data Link

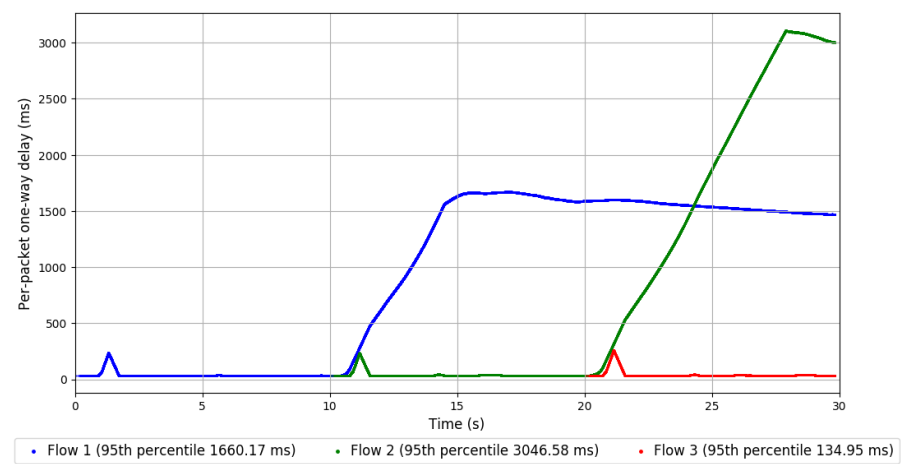
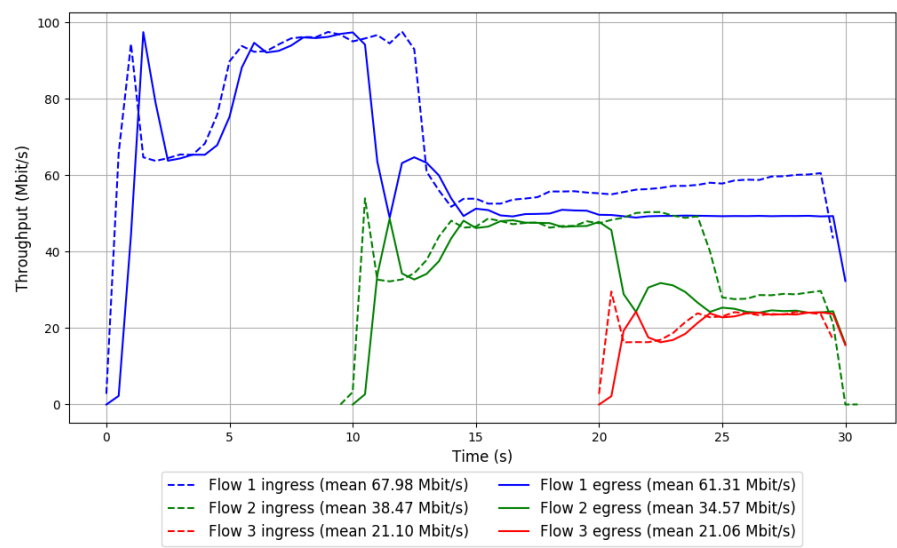


Run 2: Statistics of PCC-Allegro

Start at: 2018-12-20 08:30:47  
End at: 2018-12-20 08:31:17  
Local clock offset: 0.349 ms  
Remote clock offset: -2.906 ms

# Below is generated by plot.py at 2018-12-20 09:57:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.20 Mbit/s  
95th percentile per-packet one-way delay: 1670.477 ms  
Loss rate: 10.56%  
-- Flow 1:  
Average throughput: 61.31 Mbit/s  
95th percentile per-packet one-way delay: 1660.174 ms  
Loss rate: 9.99%  
-- Flow 2:  
Average throughput: 34.57 Mbit/s  
95th percentile per-packet one-way delay: 3046.580 ms  
Loss rate: 14.51%  
-- Flow 3:  
Average throughput: 21.06 Mbit/s  
95th percentile per-packet one-way delay: 134.952 ms  
Loss rate: 0.89%

Run 2: Report of PCC-Allegro — Data Link

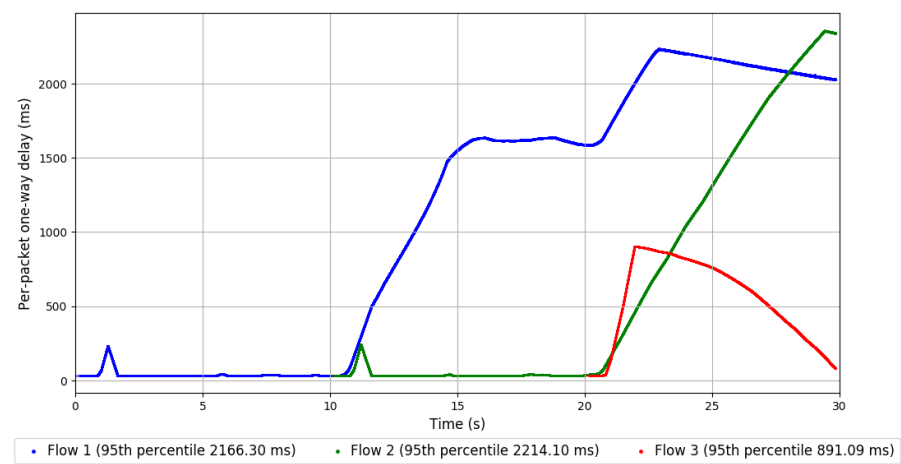
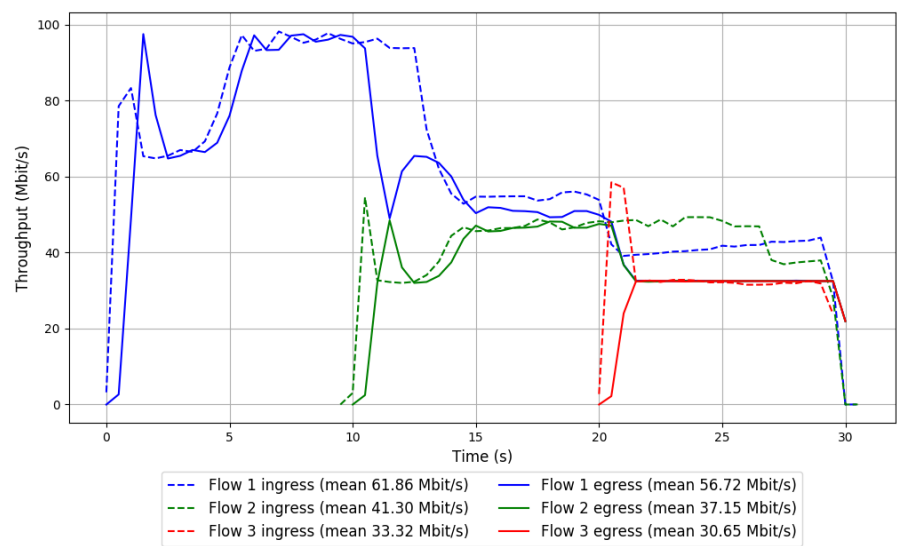


Run 3: Statistics of PCC-Allegro

Start at: 2018-12-20 08:54:17  
End at: 2018-12-20 08:54:47  
Local clock offset: 0.209 ms  
Remote clock offset: -2.244 ms

# Below is generated by plot.py at 2018-12-20 09:57:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.47 Mbit/s  
95th percentile per-packet one-way delay: 2161.224 ms  
Loss rate: 11.32%  
-- Flow 1:  
Average throughput: 56.72 Mbit/s  
95th percentile per-packet one-way delay: 2166.298 ms  
Loss rate: 10.67%  
-- Flow 2:  
Average throughput: 37.15 Mbit/s  
95th percentile per-packet one-way delay: 2214.099 ms  
Loss rate: 13.81%  
-- Flow 3:  
Average throughput: 30.65 Mbit/s  
95th percentile per-packet one-way delay: 891.093 ms  
Loss rate: 8.62%

Run 3: Report of PCC-Allegro — Data Link



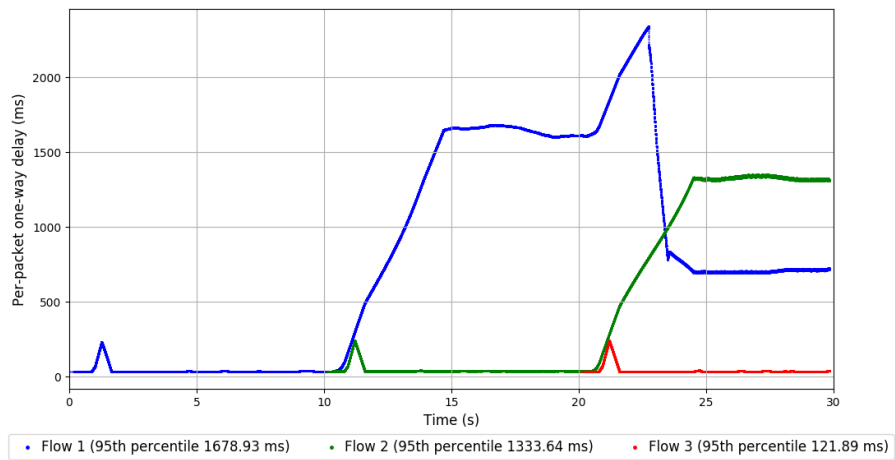
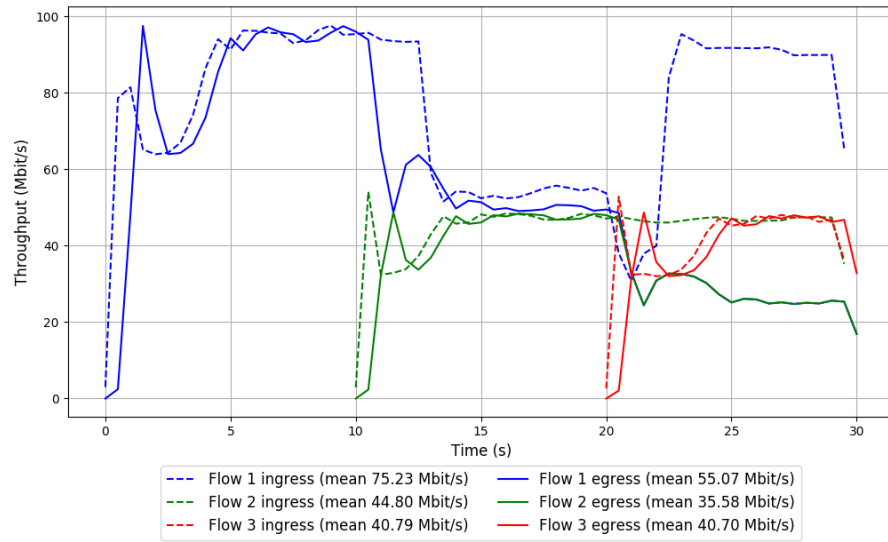


Run 4: Statistics of PCC-Allegro

Start at: 2018-12-20 09:17:52  
End at: 2018-12-20 09:18:22  
Local clock offset: -2.591 ms  
Remote clock offset: -1.842 ms

# Below is generated by plot.py at 2018-12-20 09:57:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.08 Mbit/s  
95th percentile per-packet one-way delay: 1665.203 ms  
Loss rate: 22.45%  
-- Flow 1:  
Average throughput: 55.07 Mbit/s  
95th percentile per-packet one-way delay: 1678.933 ms  
Loss rate: 26.95%  
-- Flow 2:  
Average throughput: 35.58 Mbit/s  
95th percentile per-packet one-way delay: 1333.636 ms  
Loss rate: 20.83%  
-- Flow 3:  
Average throughput: 40.70 Mbit/s  
95th percentile per-packet one-way delay: 121.890 ms  
Loss rate: 0.89%

# Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-12-20 09:40:59

End at: 2018-12-20 09:41:29

Local clock offset: -2.007 ms

Remote clock offset: -1.37 ms

# Below is generated by plot.py at 2018-12-20 09:57:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.82 Mbit/s

95th percentile per-packet one-way delay: 1661.314 ms

Loss rate: 10.45%

-- Flow 1:

Average throughput: 62.85 Mbit/s

95th percentile per-packet one-way delay: 1649.502 ms

Loss rate: 9.86%

-- Flow 2:

Average throughput: 34.88 Mbit/s

95th percentile per-packet one-way delay: 3016.331 ms

Loss rate: 14.37%

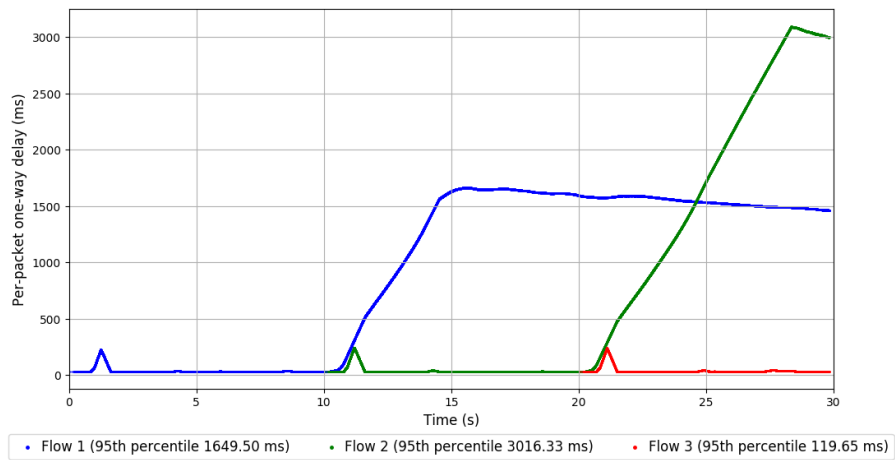
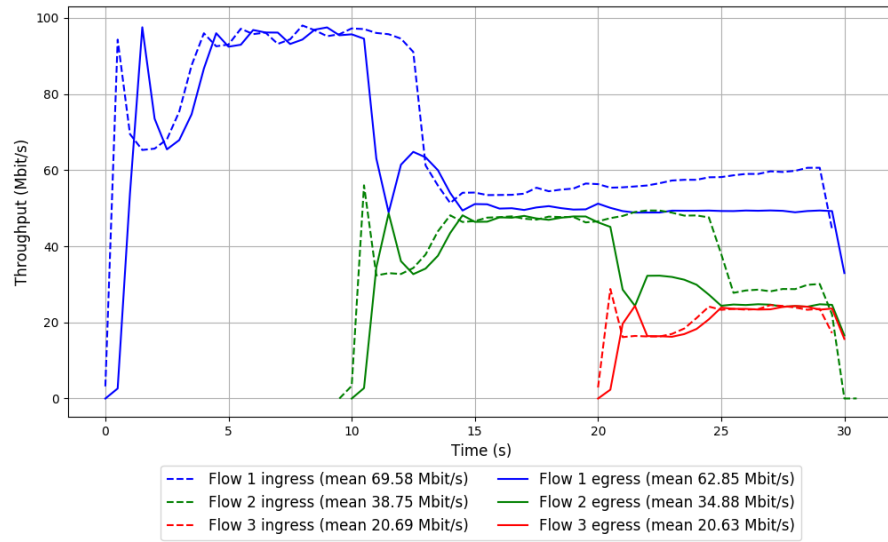
-- Flow 3:

Average throughput: 20.63 Mbit/s

95th percentile per-packet one-way delay: 119.647 ms

Loss rate: 0.95%

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

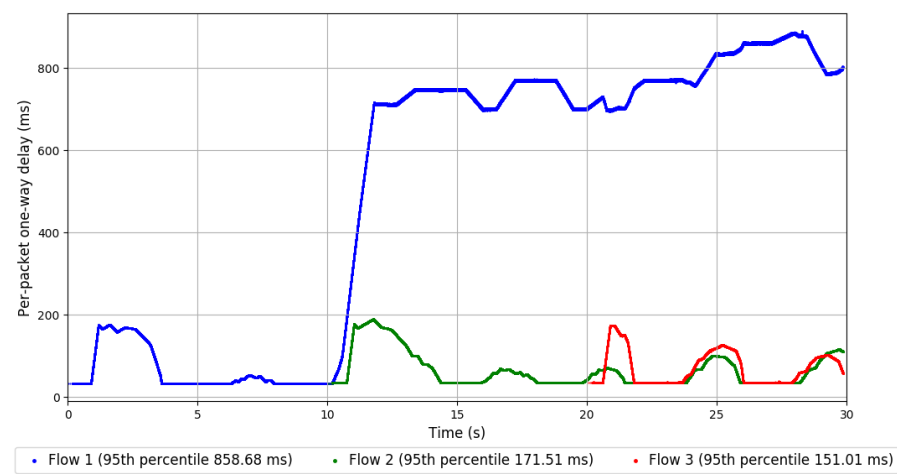
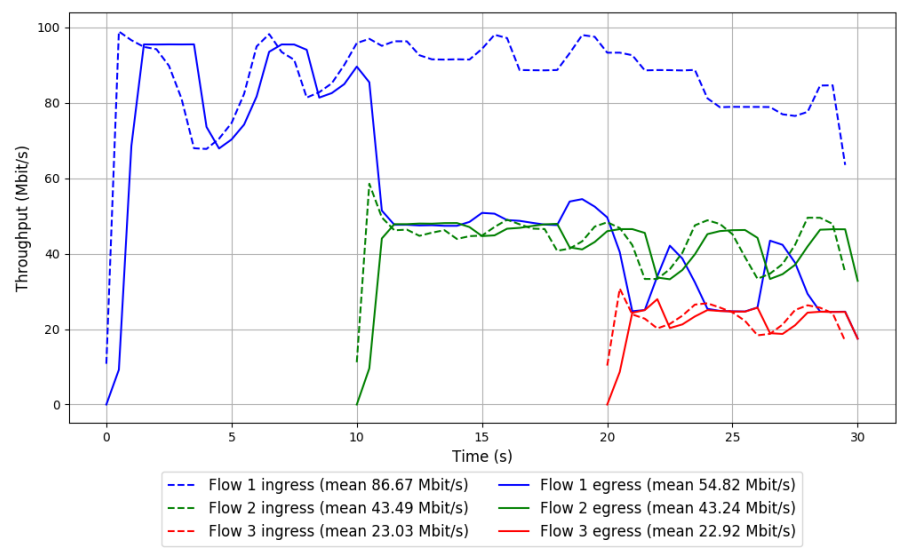


```
Run 1: Statistics of PCC-Expr

Start at: 2018-12-20 08:00:15
End at: 2018-12-20 08:00:45
Local clock offset: 0.531 ms
Remote clock offset: -3.958 ms

# Below is generated by plot.py at 2018-12-20 09:58:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.10 Mbit/s
95th percentile per-packet one-way delay: 790.163 ms
Loss rate: 26.22%
-- Flow 1:
Average throughput: 54.82 Mbit/s
95th percentile per-packet one-way delay: 858.680 ms
Loss rate: 36.88%
-- Flow 2:
Average throughput: 43.24 Mbit/s
95th percentile per-packet one-way delay: 171.508 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 22.92 Mbit/s
95th percentile per-packet one-way delay: 151.012 ms
Loss rate: 1.11%
```

Run 1: Report of PCC-Expr — Data Link

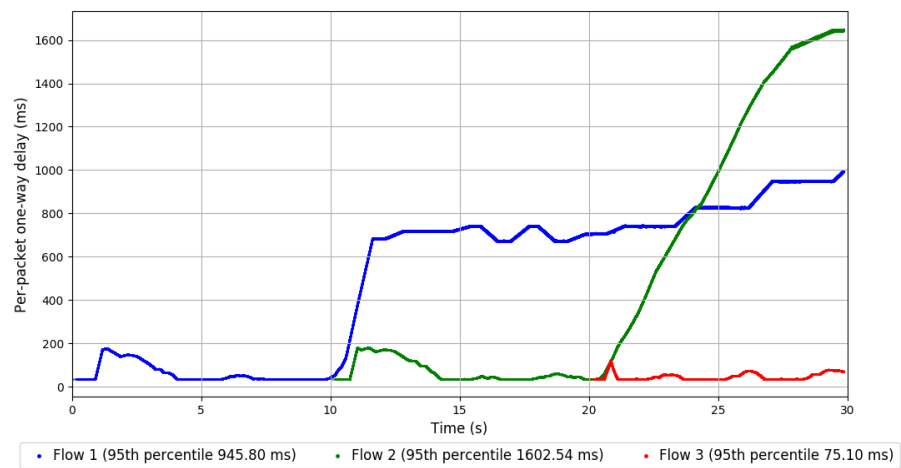
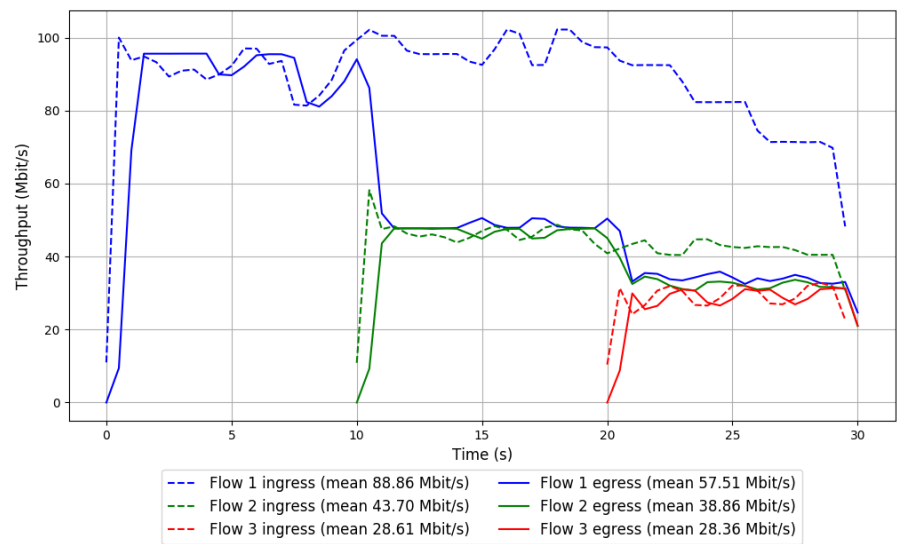


Run 2: Statistics of PCC-Expr

Start at: 2018-12-20 08:23:21  
End at: 2018-12-20 08:23:51  
Local clock offset: 0.372 ms  
Remote clock offset: -3.091 ms

# Below is generated by plot.py at 2018-12-20 09:58:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.65 Mbit/s  
95th percentile per-packet one-way delay: 1134.940 ms  
Loss rate: 27.41%  
-- Flow 1:  
Average throughput: 57.51 Mbit/s  
95th percentile per-packet one-way delay: 945.805 ms  
Loss rate: 35.42%  
-- Flow 2:  
Average throughput: 38.86 Mbit/s  
95th percentile per-packet one-way delay: 1602.544 ms  
Loss rate: 11.34%  
-- Flow 3:  
Average throughput: 28.36 Mbit/s  
95th percentile per-packet one-way delay: 75.096 ms  
Loss rate: 1.50%

Run 2: Report of PCC-Expr — Data Link



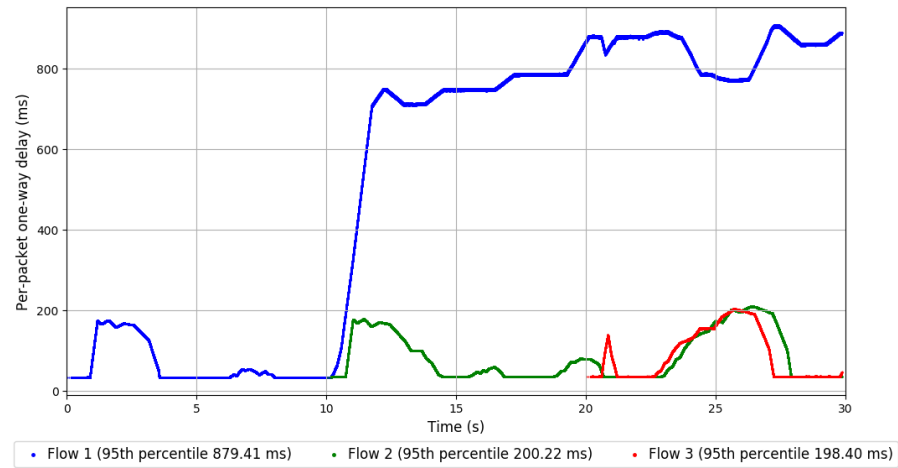
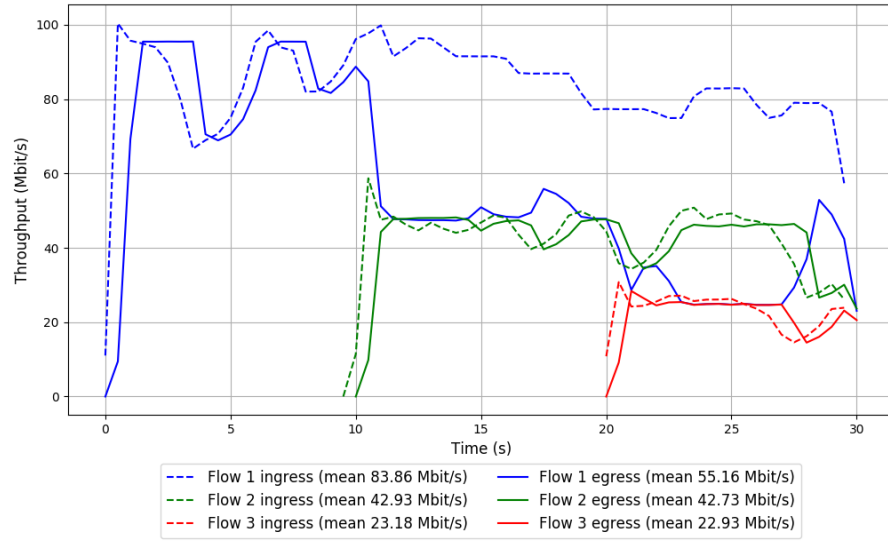


Run 3: Statistics of PCC-Expr

Start at: 2018-12-20 08:46:34  
End at: 2018-12-20 08:47:04  
Local clock offset: 0.254 ms  
Remote clock offset: -2.443 ms

# Below is generated by plot.py at 2018-12-20 09:58:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.10 Mbit/s  
95th percentile per-packet one-way delay: 872.448 ms  
Loss rate: 24.30%  
-- Flow 1:  
Average throughput: 55.16 Mbit/s  
95th percentile per-packet one-way delay: 879.408 ms  
Loss rate: 34.37%  
-- Flow 2:  
Average throughput: 42.73 Mbit/s  
95th percentile per-packet one-way delay: 200.222 ms  
Loss rate: 0.78%  
-- Flow 3:  
Average throughput: 22.93 Mbit/s  
95th percentile per-packet one-way delay: 198.398 ms  
Loss rate: 1.76%

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

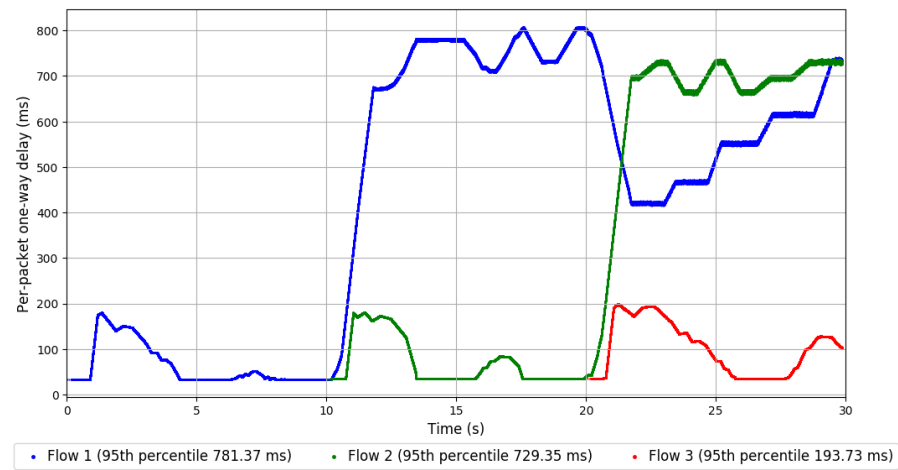
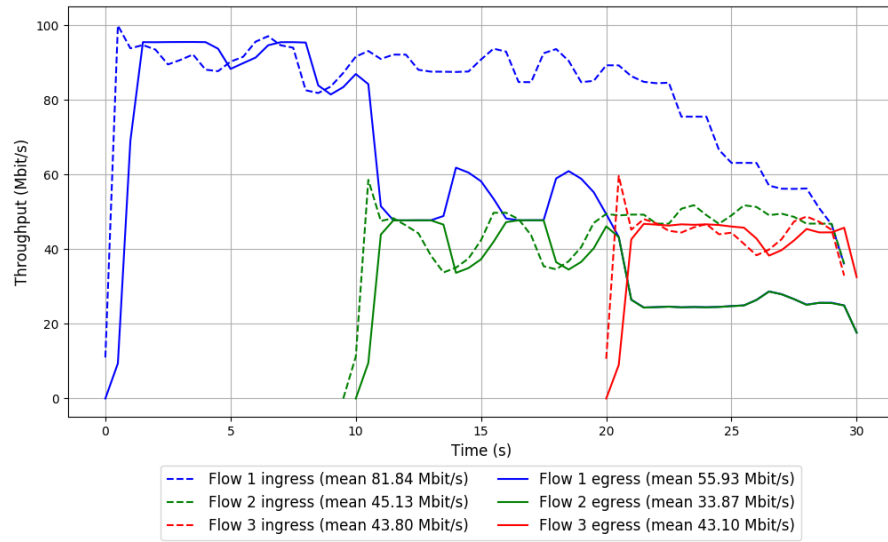


Run 4: Statistics of PCC-Expr

Start at: 2018-12-20 09:10:22  
End at: 2018-12-20 09:10:52  
Local clock offset: -1.249 ms  
Remote clock offset: -2.085 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.62 Mbit/s  
95th percentile per-packet one-way delay: 779.183 ms  
Loss rate: 26.85%  
-- Flow 1:  
Average throughput: 55.93 Mbit/s  
95th percentile per-packet one-way delay: 781.365 ms  
Loss rate: 31.81%  
-- Flow 2:  
Average throughput: 33.87 Mbit/s  
95th percentile per-packet one-way delay: 729.350 ms  
Loss rate: 25.19%  
-- Flow 3:  
Average throughput: 43.10 Mbit/s  
95th percentile per-packet one-way delay: 193.730 ms  
Loss rate: 2.24%

# Run 4: Report of PCC-Expr — Data Link

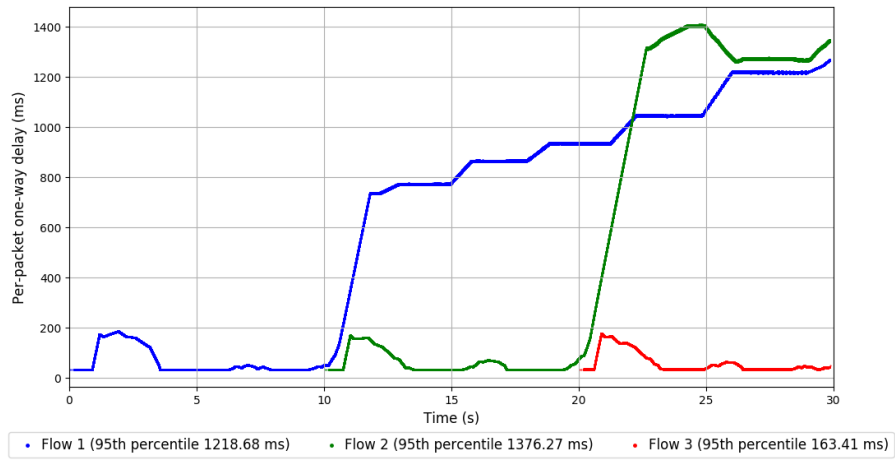
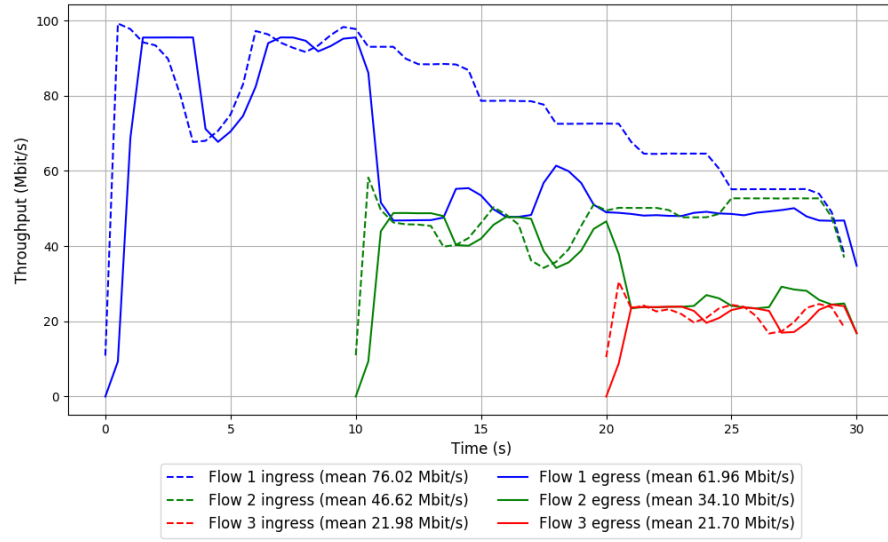


Run 5: Statistics of PCC-Expr

Start at: 2018-12-20 09:33:35  
End at: 2018-12-20 09:34:05  
Local clock offset: -3.846 ms  
Remote clock offset: -1.458 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.75 Mbit/s  
95th percentile per-packet one-way delay: 1270.784 ms  
Loss rate: 19.89%  
-- Flow 1:  
Average throughput: 61.96 Mbit/s  
95th percentile per-packet one-way delay: 1218.678 ms  
Loss rate: 18.67%  
-- Flow 2:  
Average throughput: 34.10 Mbit/s  
95th percentile per-packet one-way delay: 1376.272 ms  
Loss rate: 27.08%  
-- Flow 3:  
Average throughput: 21.70 Mbit/s  
95th percentile per-packet one-way delay: 163.411 ms  
Loss rate: 1.88%

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

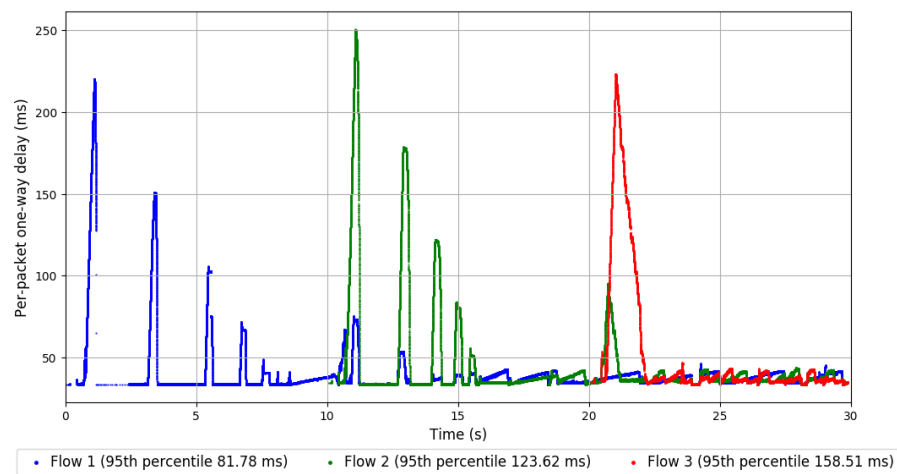
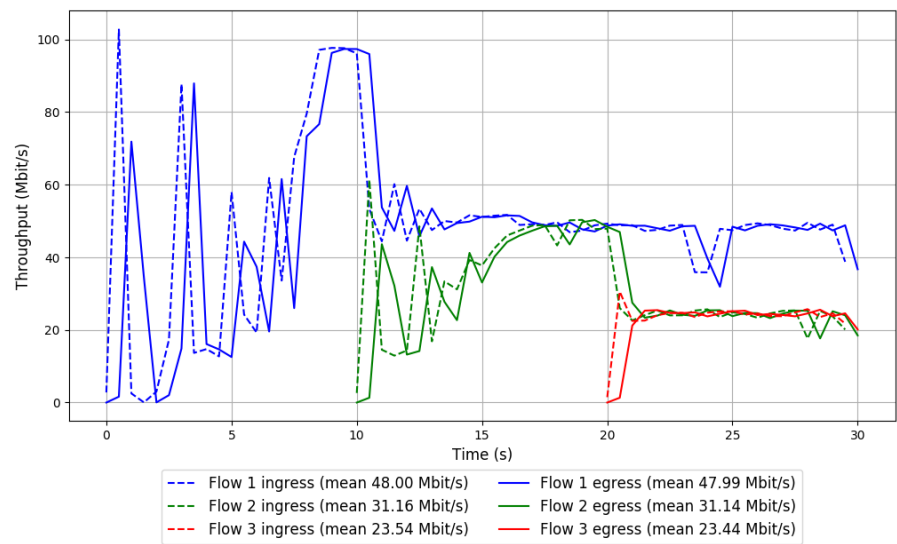


Run 1: Statistics of QUIC Cubic

Start at: 2018-12-20 07:59:02  
End at: 2018-12-20 07:59:32  
Local clock offset: 0.525 ms  
Remote clock offset: -4.038 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.42 Mbit/s  
95th percentile per-packet one-way delay: 107.693 ms  
Loss rate: 0.36%  
-- Flow 1:  
Average throughput: 47.99 Mbit/s  
95th percentile per-packet one-way delay: 81.776 ms  
Loss rate: 0.24%  
-- Flow 2:  
Average throughput: 31.14 Mbit/s  
95th percentile per-packet one-way delay: 123.616 ms  
Loss rate: 0.38%  
-- Flow 3:  
Average throughput: 23.44 Mbit/s  
95th percentile per-packet one-way delay: 158.509 ms  
Loss rate: 1.04%

Run 1: Report of QUIC Cubic — Data Link



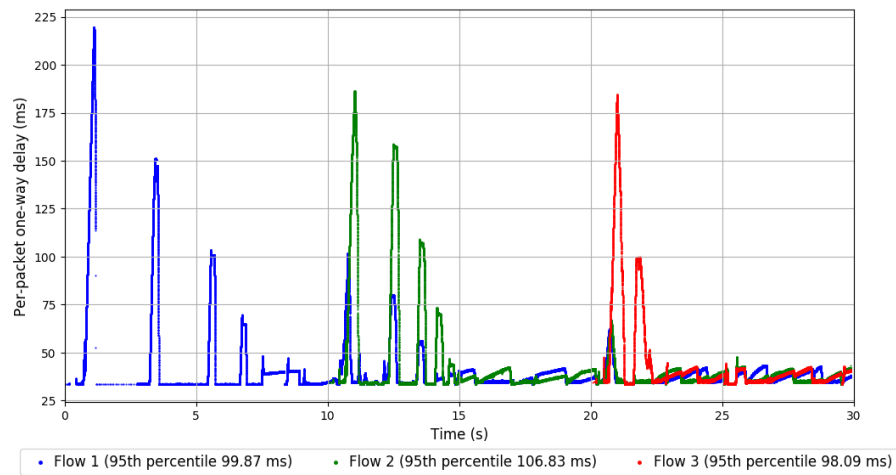
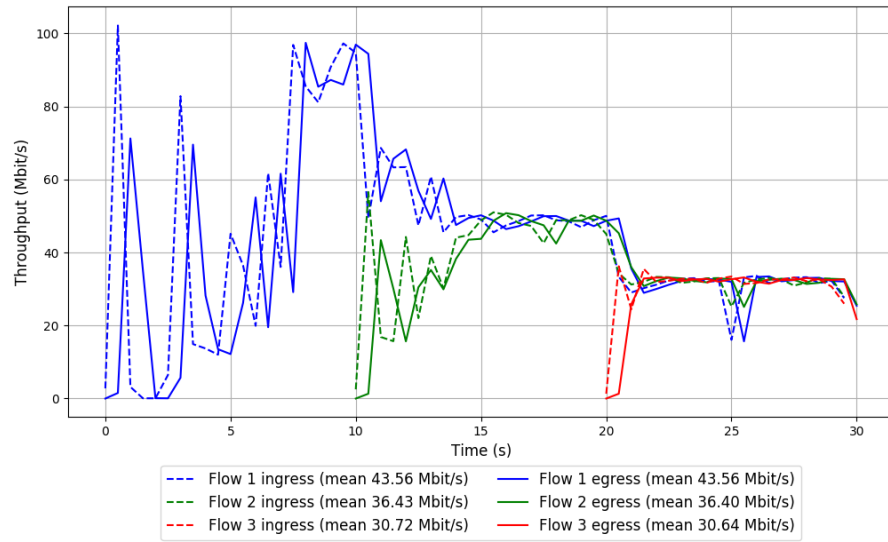


Run 2: Statistics of QUIC Cubic

Start at: 2018-12-20 08:22:08  
End at: 2018-12-20 08:22:38  
Local clock offset: 0.372 ms  
Remote clock offset: -3.335 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 77.84 Mbit/s  
95th percentile per-packet one-way delay: 100.513 ms  
Loss rate: 0.36%  
-- Flow 1:  
Average throughput: 43.56 Mbit/s  
95th percentile per-packet one-way delay: 99.866 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 36.40 Mbit/s  
95th percentile per-packet one-way delay: 106.827 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 30.64 Mbit/s  
95th percentile per-packet one-way delay: 98.093 ms  
Loss rate: 0.90%

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

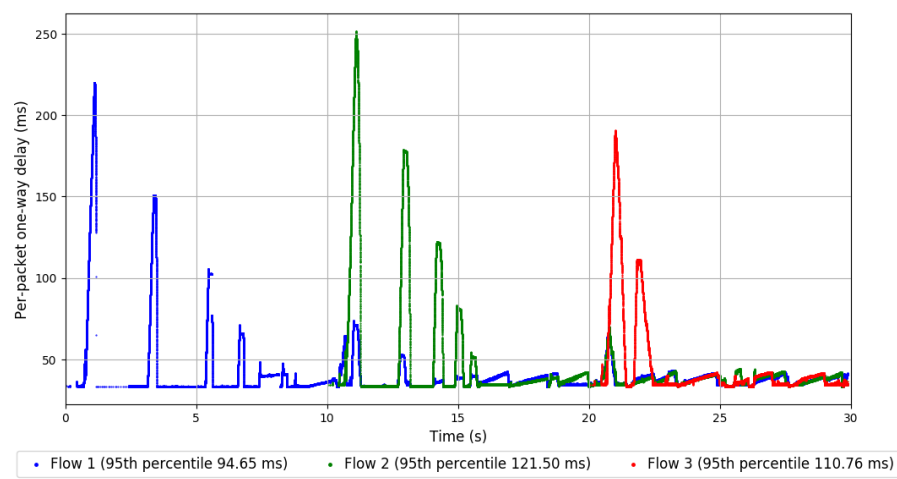
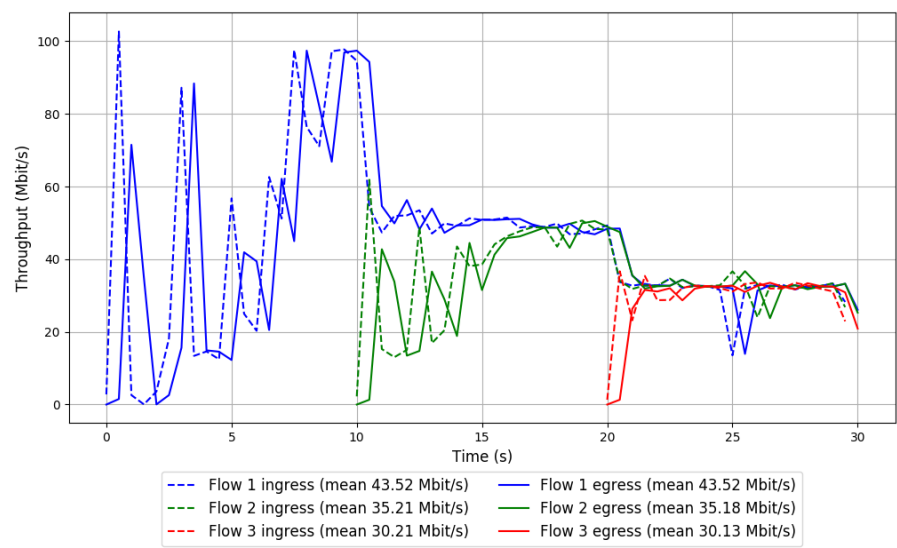


Run 3: Statistics of QUIC Cubic

Start at: 2018-12-20 08:45:21  
End at: 2018-12-20 08:45:51  
Local clock offset: 0.263 ms  
Remote clock offset: -2.462 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.82 Mbit/s  
95th percentile per-packet one-way delay: 104.691 ms  
Loss rate: 0.36%  
-- Flow 1:  
Average throughput: 43.52 Mbit/s  
95th percentile per-packet one-way delay: 94.650 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 35.18 Mbit/s  
95th percentile per-packet one-way delay: 121.503 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 30.13 Mbit/s  
95th percentile per-packet one-way delay: 110.763 ms  
Loss rate: 0.90%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-12-20 09:09:09

End at: 2018-12-20 09:09:39

Local clock offset: -0.904 ms

Remote clock offset: -1.89 ms

# Below is generated by plot.py at 2018-12-20 09:59:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 74.74 Mbit/s

95th percentile per-packet one-way delay: 116.803 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 41.71 Mbit/s

95th percentile per-packet one-way delay: 99.472 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 31.51 Mbit/s

95th percentile per-packet one-way delay: 126.078 ms

Loss rate: 0.39%

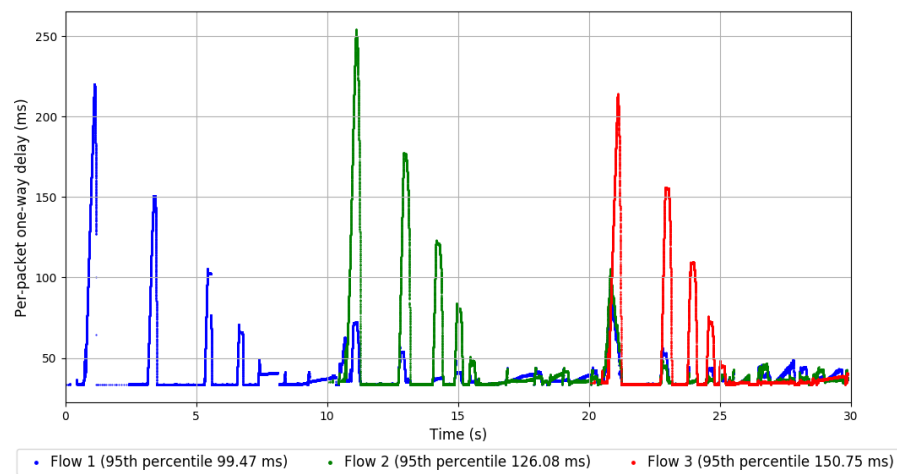
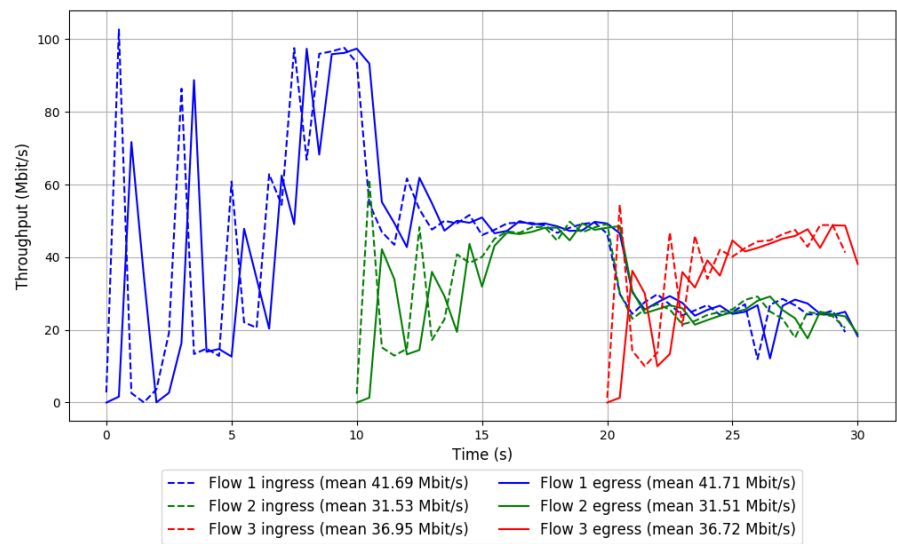
-- Flow 3:

Average throughput: 36.72 Mbit/s

95th percentile per-packet one-way delay: 150.754 ms

Loss rate: 1.26%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-12-20 09:32:23

End at: 2018-12-20 09:32:53

Local clock offset: -3.788 ms

Remote clock offset: -1.39 ms

# Below is generated by plot.py at 2018-12-20 09:59:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 76.22 Mbit/s

95th percentile per-packet one-way delay: 102.407 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 43.07 Mbit/s

95th percentile per-packet one-way delay: 94.145 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 34.62 Mbit/s

95th percentile per-packet one-way delay: 125.364 ms

Loss rate: 0.40%

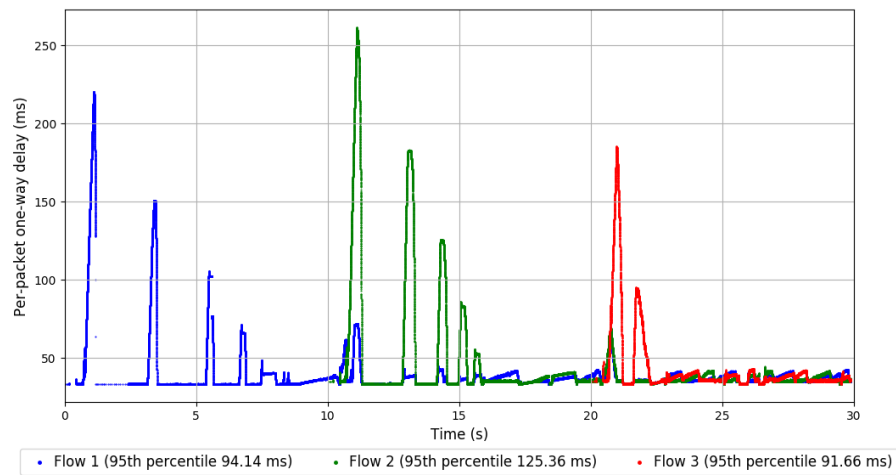
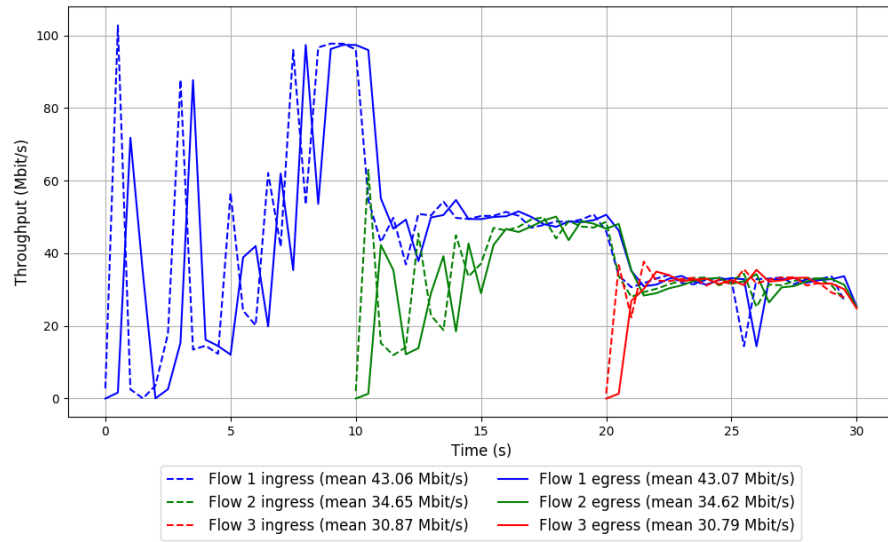
-- Flow 3:

Average throughput: 30.79 Mbit/s

95th percentile per-packet one-way delay: 91.663 ms

Loss rate: 0.91%

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



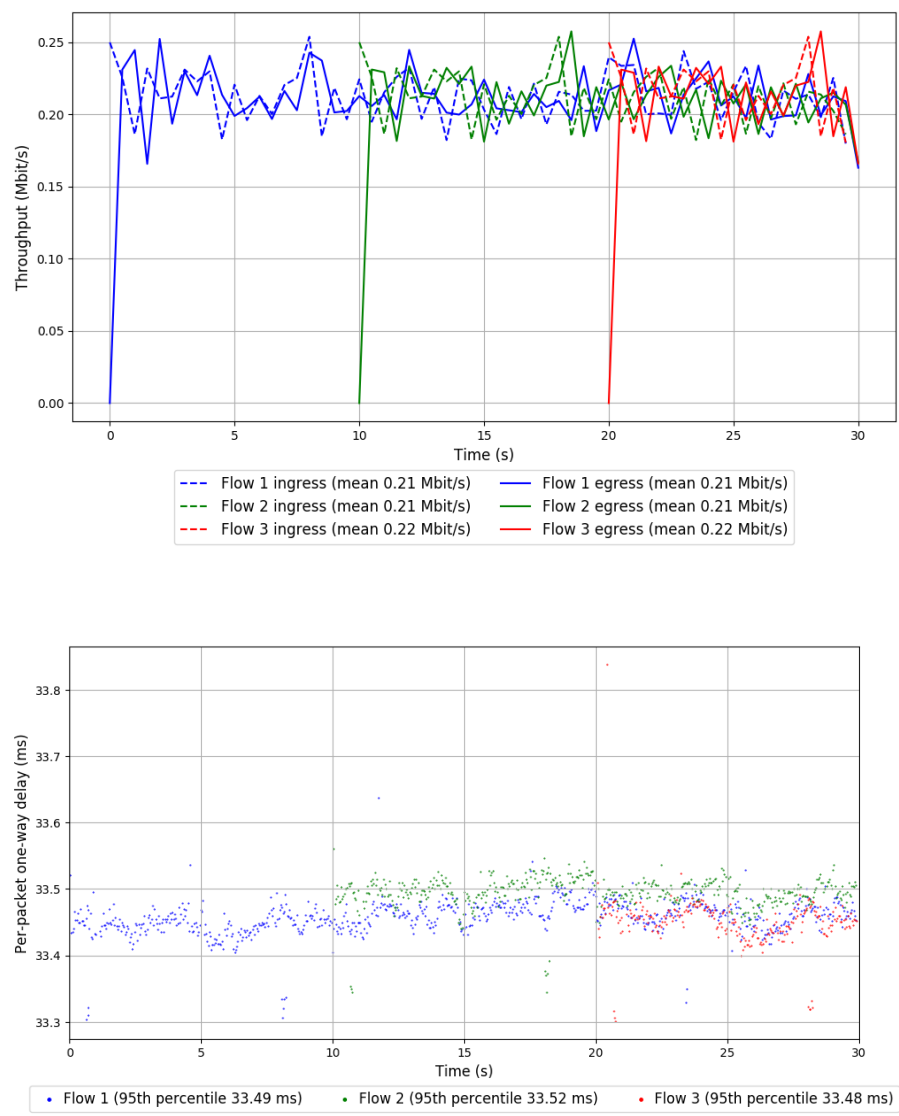


Run 1: Statistics of SCReAM

Start at: 2018-12-20 07:54:16  
End at: 2018-12-20 07:54:46  
Local clock offset: 0.483 ms  
Remote clock offset: -3.885 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.515 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.492 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.525 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.481 ms  
Loss rate: 0.71%

Run 1: Report of SReAM — Data Link

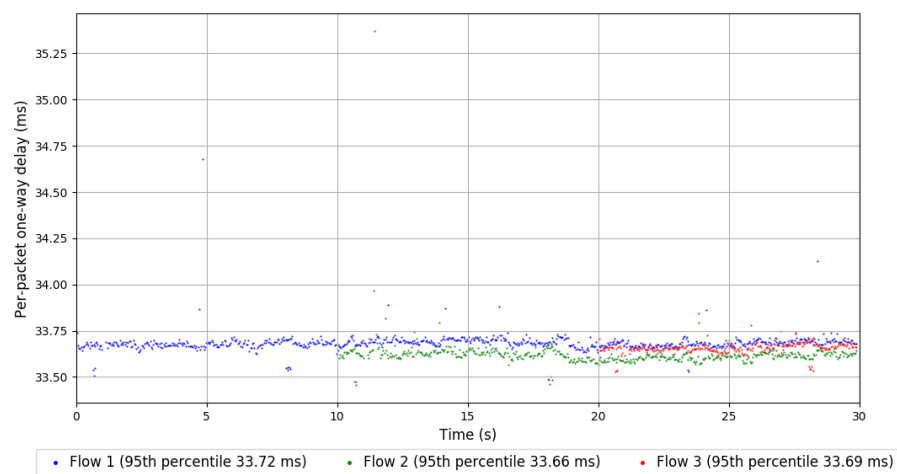
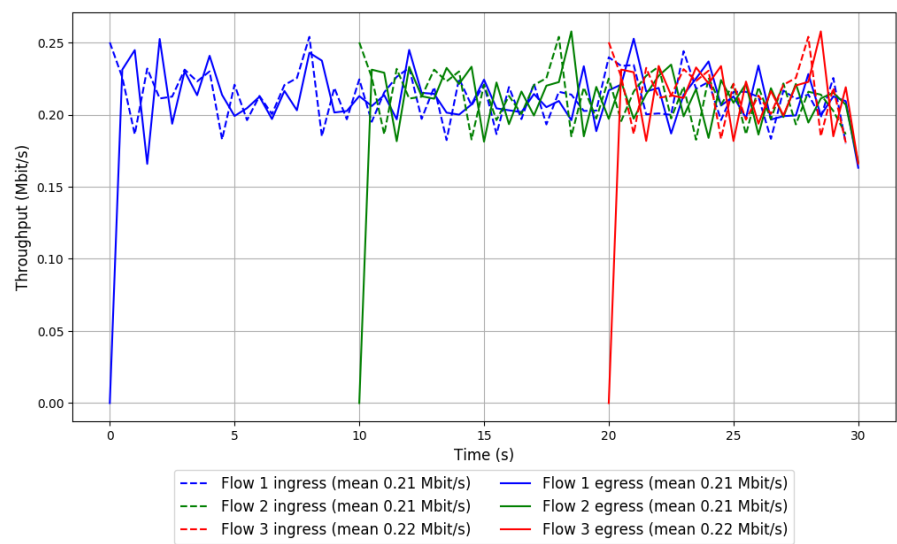


Run 2: Statistics of SReAM

Start at: 2018-12-20 08:17:22  
End at: 2018-12-20 08:17:52  
Local clock offset: 0.392 ms  
Remote clock offset: -3.455 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.711 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.716 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.664 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.694 ms  
Loss rate: 0.71%

Run 2: Report of SReAM — Data Link

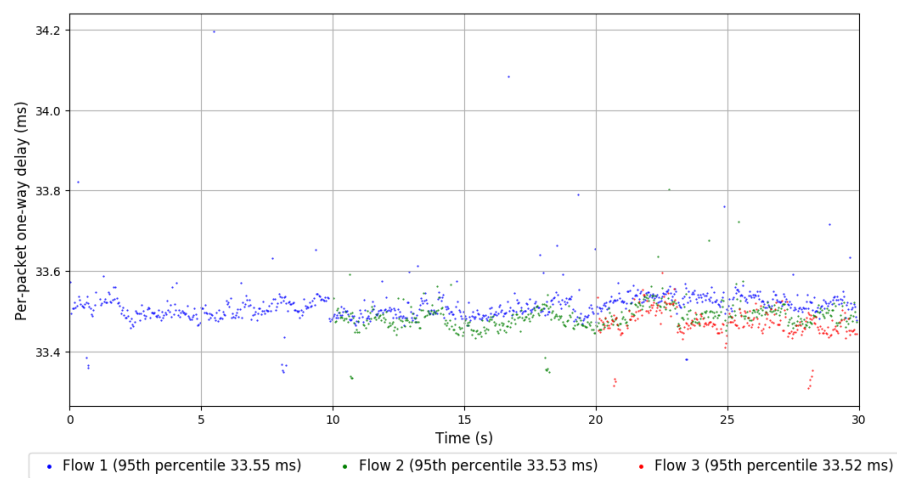
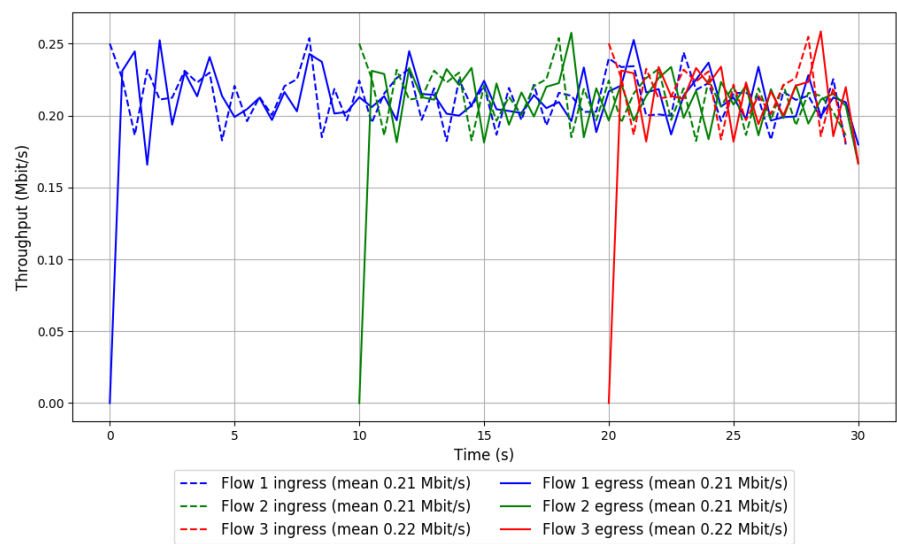


Run 3: Statistics of SCReAM

Start at: 2018-12-20 08:40:34  
End at: 2018-12-20 08:41:04  
Local clock offset: 0.286 ms  
Remote clock offset: -2.628 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.547 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.553 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.532 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.524 ms  
Loss rate: 0.71%

Run 3: Report of SCReAM — Data Link

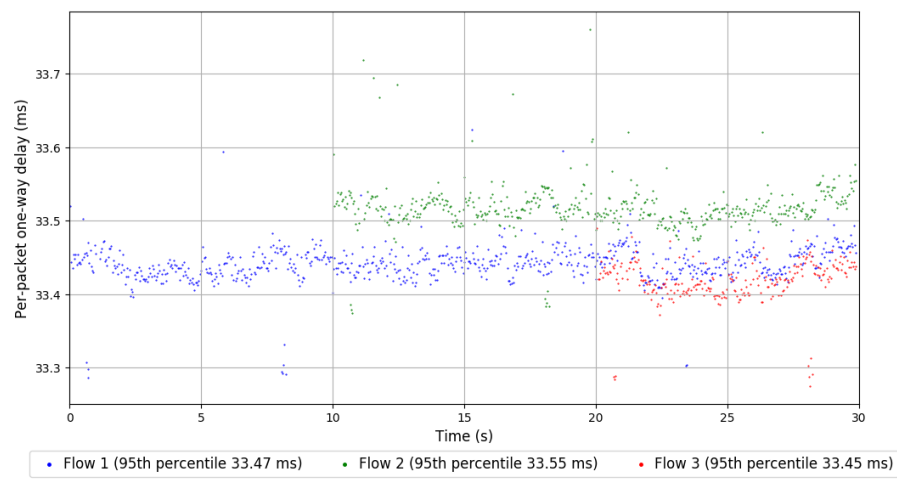
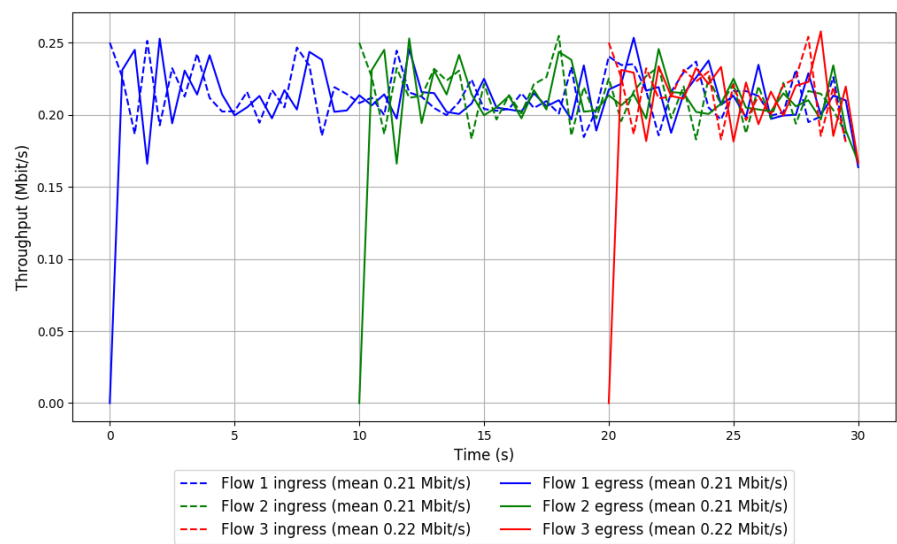


Run 4: Statistics of SReAM

Start at: 2018-12-20 09:04:11  
End at: 2018-12-20 09:04:41  
Local clock offset: 0.215 ms  
Remote clock offset: -2.049 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.537 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.472 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.553 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.452 ms  
Loss rate: 0.71%

Run 4: Report of SReAM — Data Link



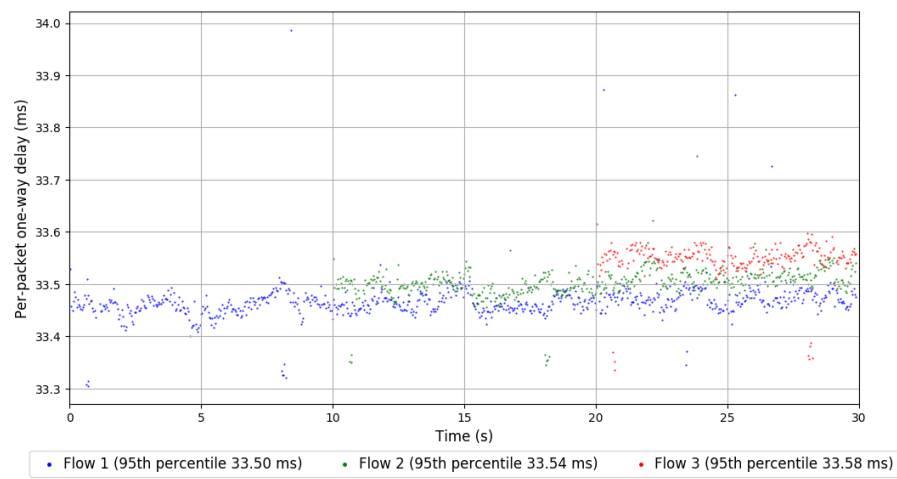
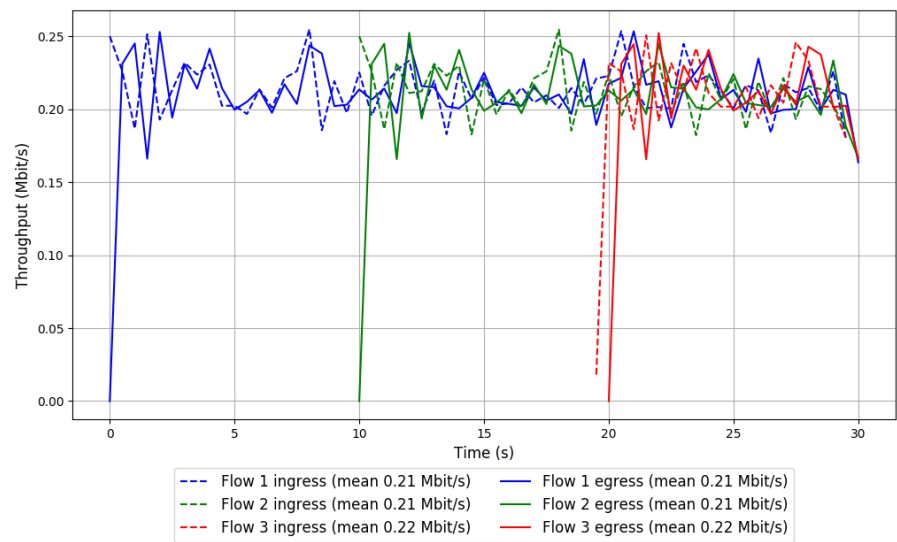


Run 5: Statistics of SReAM

Start at: 2018-12-20 09:27:37  
End at: 2018-12-20 09:28:07  
Local clock offset: -3.478 ms  
Remote clock offset: -1.538 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.563 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.499 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.541 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.579 ms  
Loss rate: 0.71%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-12-20 08:10:06

End at: 2018-12-20 08:10:36

Local clock offset: 0.471 ms

Remote clock offset: -3.53 ms

# Below is generated by plot.py at 2018-12-20 09:59:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 23.67 Mbit/s

95th percentile per-packet one-way delay: 40.224 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 11.97 Mbit/s

95th percentile per-packet one-way delay: 39.251 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 11.82 Mbit/s

95th percentile per-packet one-way delay: 40.513 ms

Loss rate: 0.42%

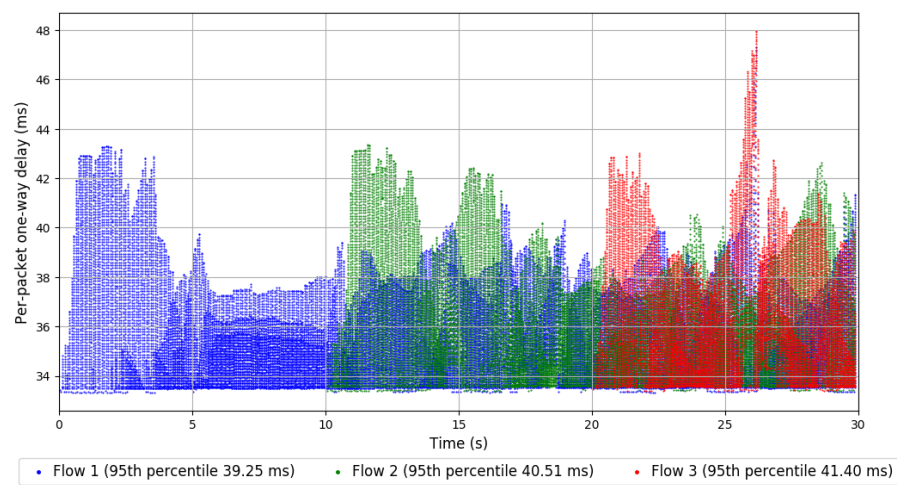
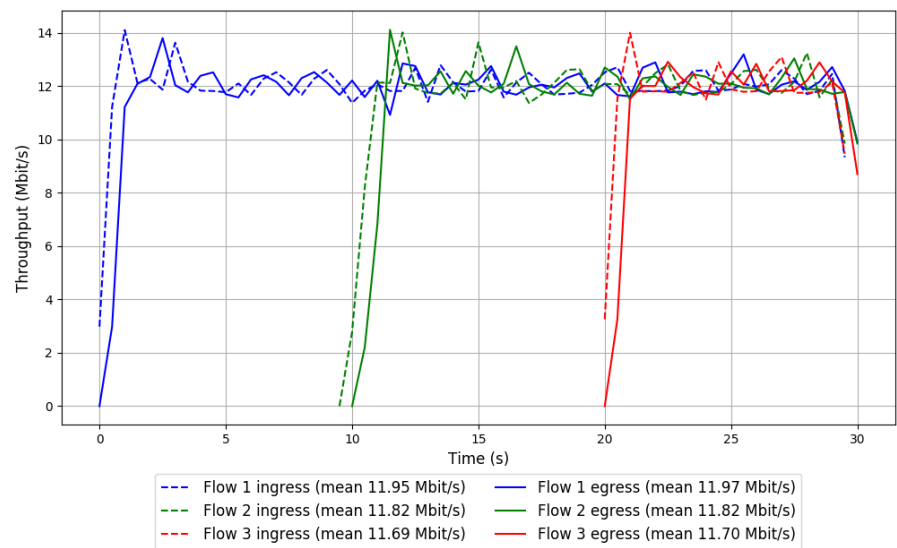
-- Flow 3:

Average throughput: 11.70 Mbit/s

95th percentile per-packet one-way delay: 41.397 ms

Loss rate: 0.49%

Run 1: Report of Sprout — Data Link

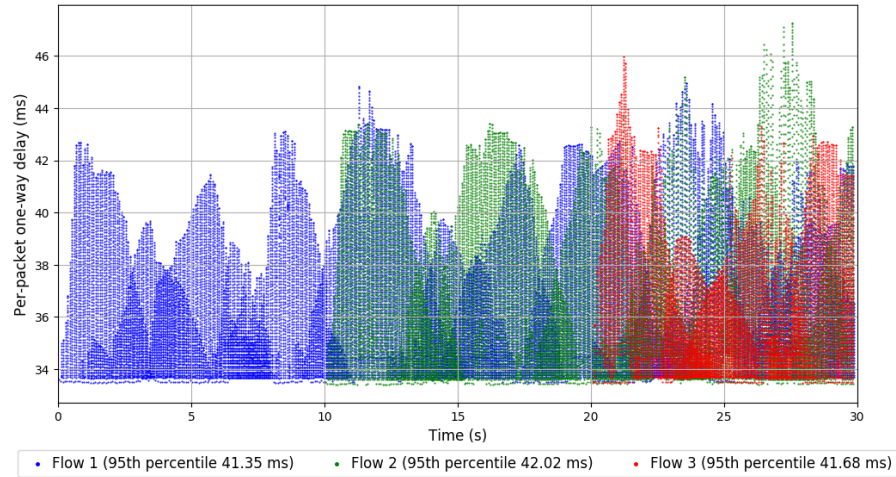
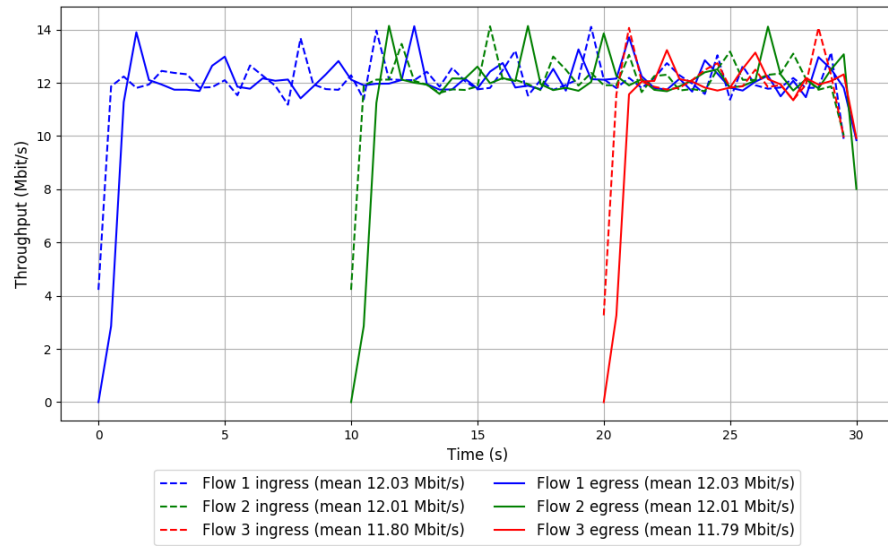


Run 2: Statistics of Sprout

Start at: 2018-12-20 08:33:14  
End at: 2018-12-20 08:33:44  
Local clock offset: 0.357 ms  
Remote clock offset: -2.974 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 23.88 Mbit/s  
95th percentile per-packet one-way delay: 41.653 ms  
Loss rate: 0.37%  
-- Flow 1:  
Average throughput: 12.03 Mbit/s  
95th percentile per-packet one-way delay: 41.349 ms  
Loss rate: 0.19%  
-- Flow 2:  
Average throughput: 12.01 Mbit/s  
95th percentile per-packet one-way delay: 42.024 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 11.79 Mbit/s  
95th percentile per-packet one-way delay: 41.683 ms  
Loss rate: 0.85%

## Run 2: Report of Sprout — Data Link

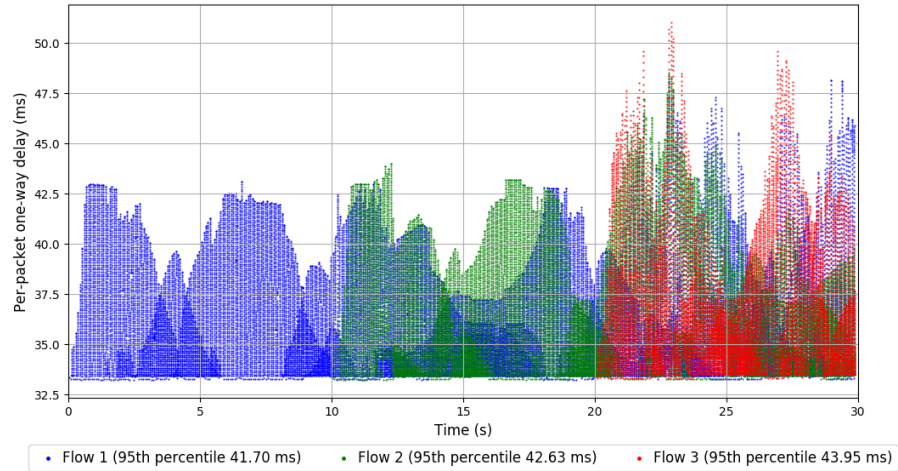
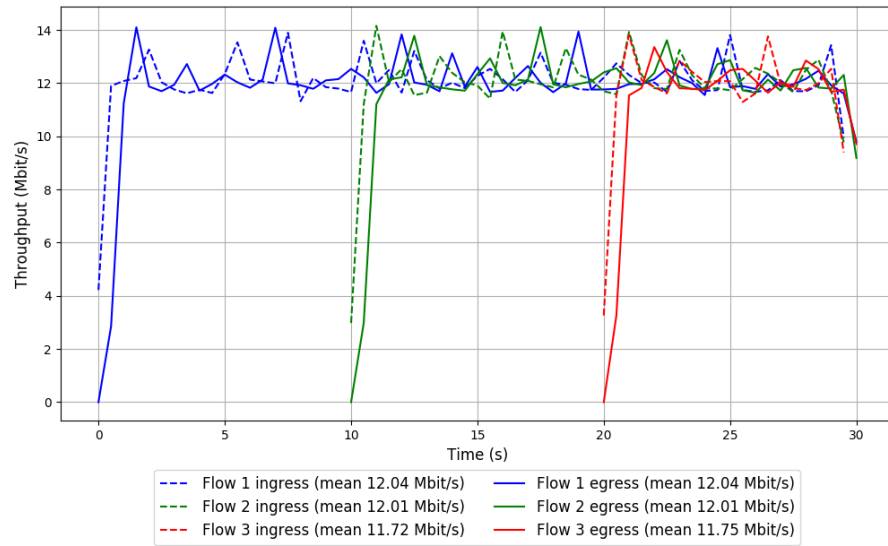


### Run 3: Statistics of Sprout

Start at: 2018-12-20 08:56:48  
End at: 2018-12-20 08:57:18  
Local clock offset: 0.239 ms  
Remote clock offset: -2.158 ms

```
# Below is generated by plot.py at 2018-12-20 09:59:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.89 Mbit/s
95th percentile per-packet one-way delay: 42.379 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 12.04 Mbit/s
95th percentile per-packet one-way delay: 41.697 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 12.01 Mbit/s
95th percentile per-packet one-way delay: 42.629 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 43.947 ms
Loss rate: 0.34%
```

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



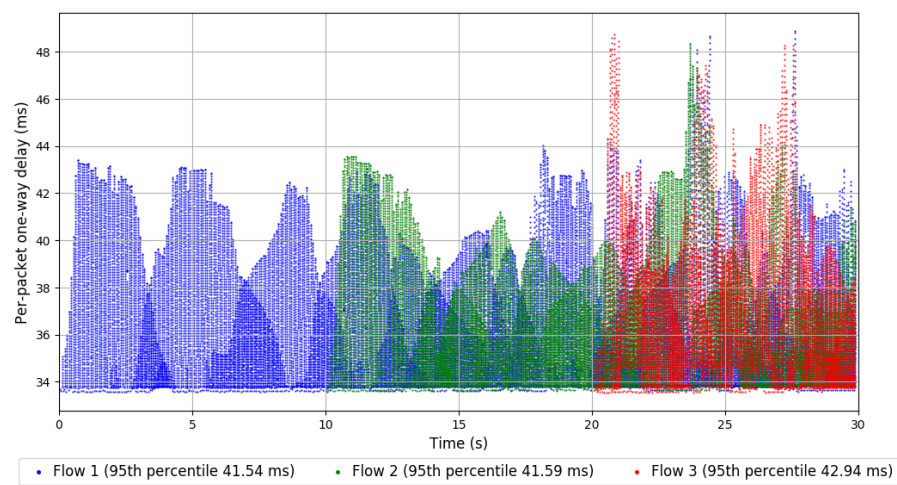
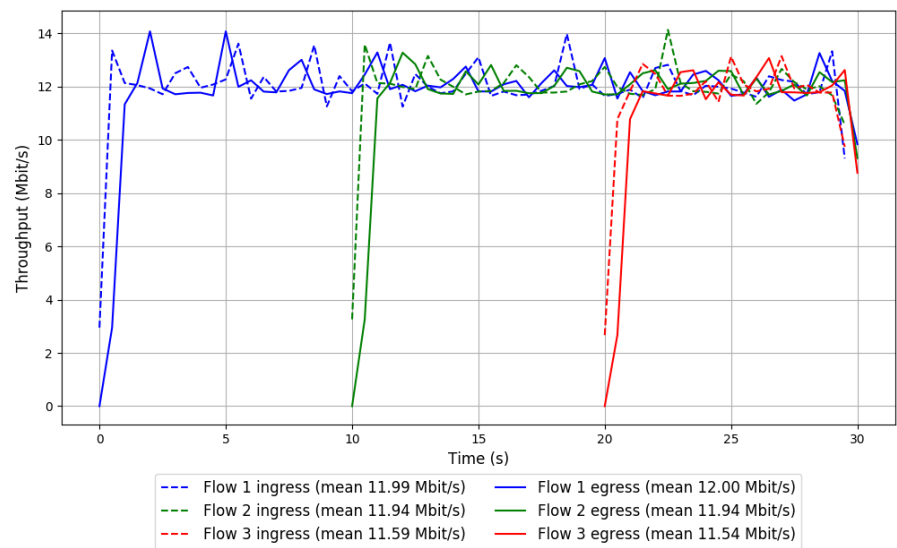


#### Run 4: Statistics of Sprout

Start at: 2018-12-20 09:20:20  
End at: 2018-12-20 09:20:50  
Local clock offset: -2.863 ms  
Remote clock offset: -1.835 ms

```
# Below is generated by plot.py at 2018-12-20 09:59:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.73 Mbit/s
95th percentile per-packet one-way delay: 41.726 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 12.00 Mbit/s
95th percentile per-packet one-way delay: 41.536 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 11.94 Mbit/s
95th percentile per-packet one-way delay: 41.585 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 11.54 Mbit/s
95th percentile per-packet one-way delay: 42.940 ms
Loss rate: 0.79%
```

Run 4: Report of Sprout — Data Link

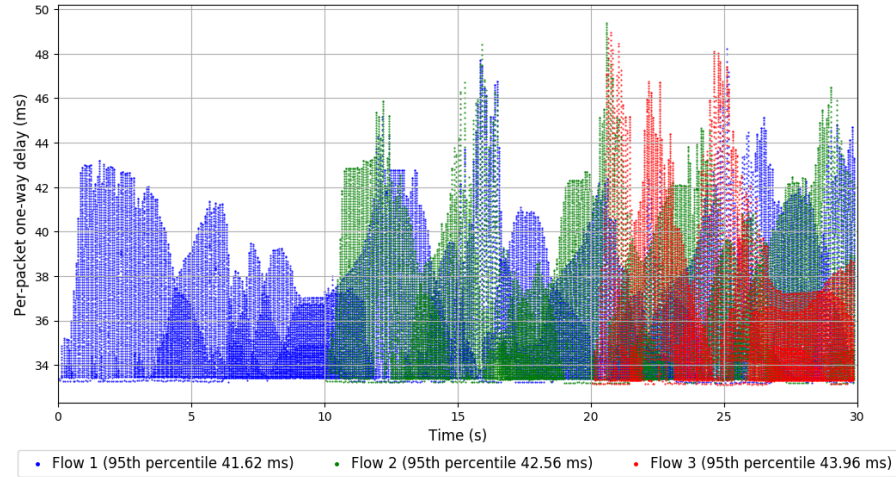
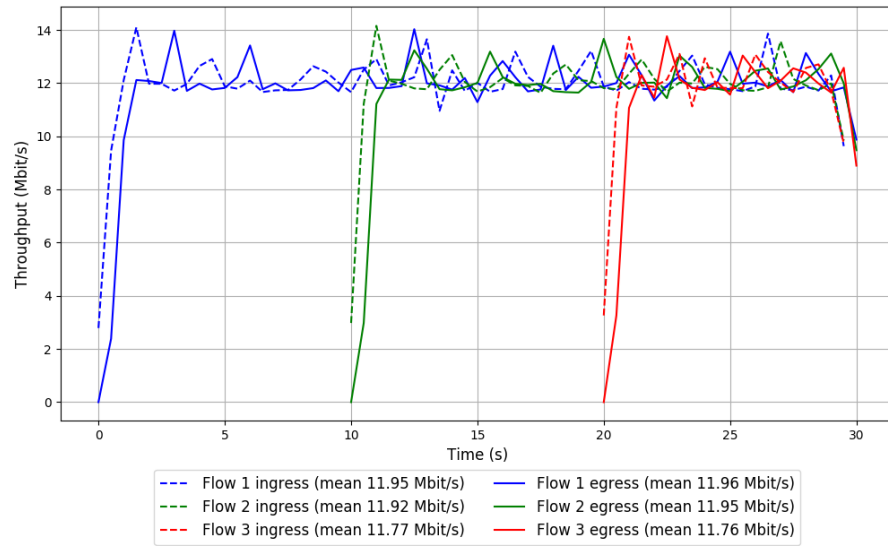


Run 5: Statistics of Sprout

Start at: 2018-12-20 09:43:25  
End at: 2018-12-20 09:43:55  
Local clock offset: -1.428 ms  
Remote clock offset: -1.373 ms

# Below is generated by plot.py at 2018-12-20 09:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 23.77 Mbit/s  
95th percentile per-packet one-way delay: 42.297 ms  
Loss rate: 0.18%  
-- Flow 1:  
Average throughput: 11.96 Mbit/s  
95th percentile per-packet one-way delay: 41.618 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 11.95 Mbit/s  
95th percentile per-packet one-way delay: 42.559 ms  
Loss rate: 0.08%  
-- Flow 3:  
Average throughput: 11.76 Mbit/s  
95th percentile per-packet one-way delay: 43.958 ms  
Loss rate: 0.84%

## Run 5: Report of Sprout — Data Link

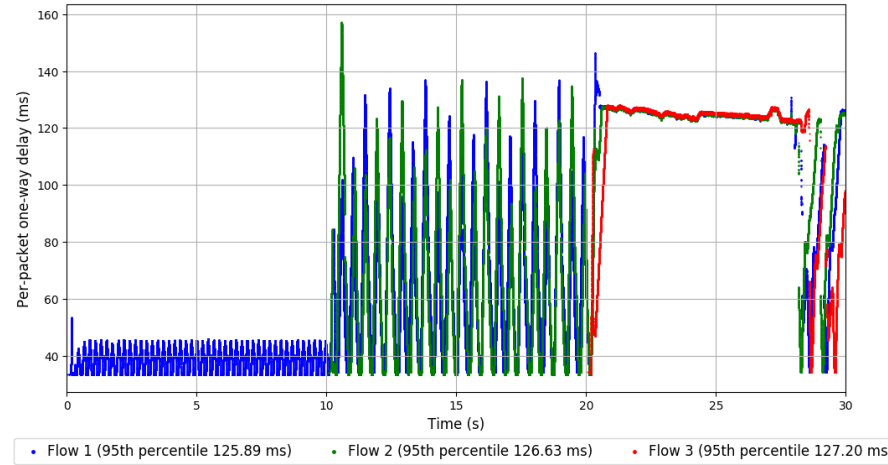
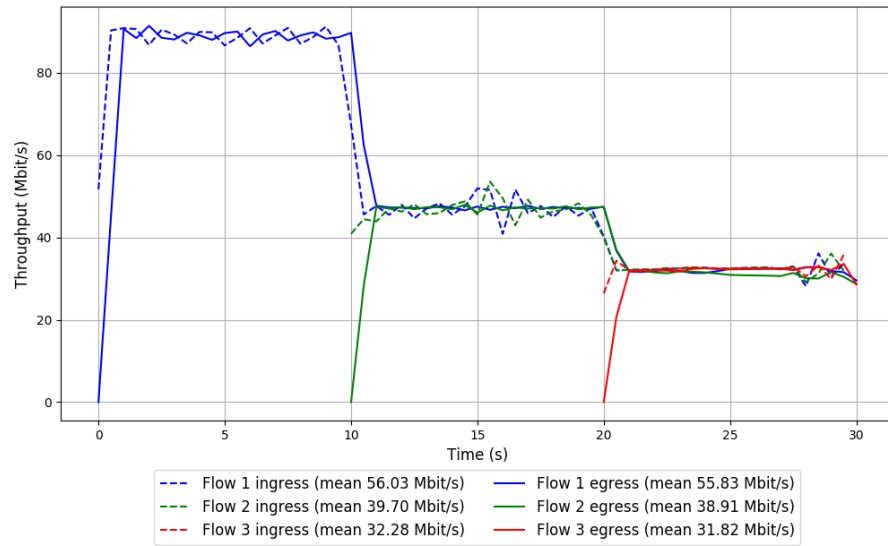


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-12-20 07:53:00
End at: 2018-12-20 07:53:30
Local clock offset: 0.5 ms
Remote clock offset: -3.908 ms

# Below is generated by plot.py at 2018-12-20 10:00:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.26 Mbit/s
95th percentile per-packet one-way delay: 126.602 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 55.83 Mbit/s
95th percentile per-packet one-way delay: 125.893 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 38.91 Mbit/s
95th percentile per-packet one-way delay: 126.630 ms
Loss rate: 2.31%
-- Flow 3:
Average throughput: 31.82 Mbit/s
95th percentile per-packet one-way delay: 127.205 ms
Loss rate: 2.05%
```

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

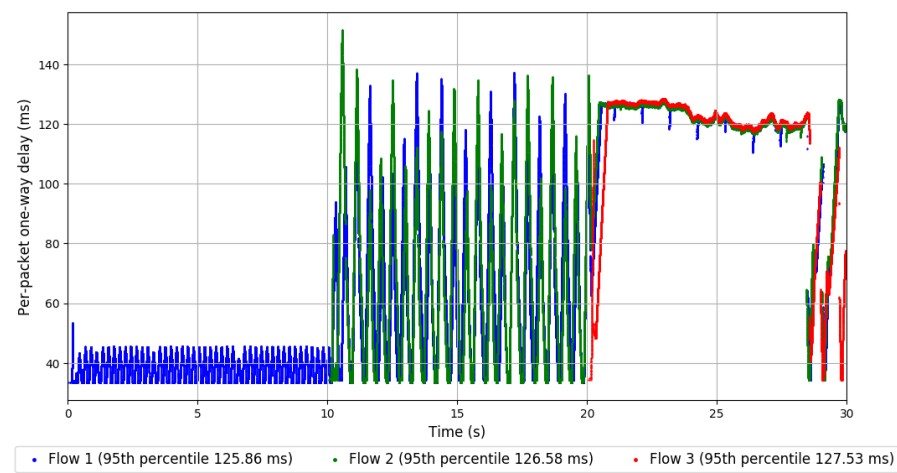
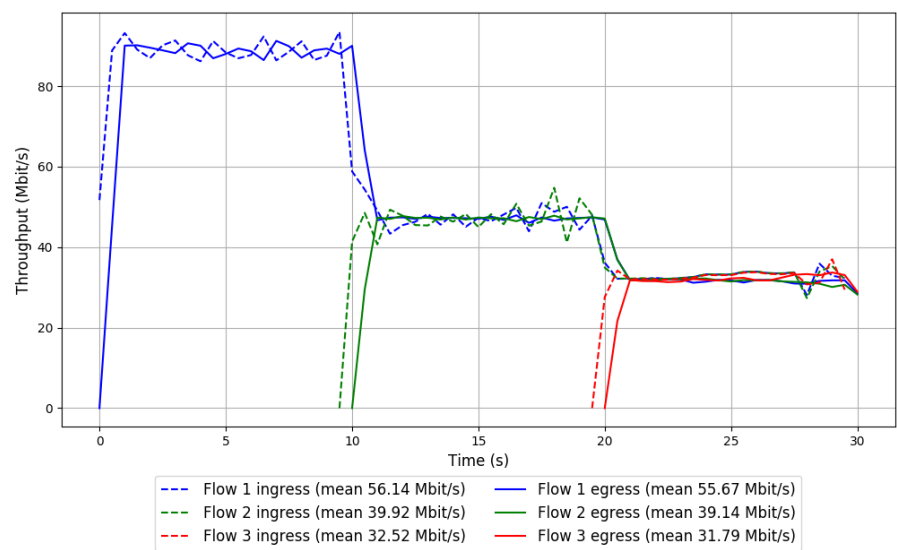


Run 2: Statistics of TaoVA-100x

Start at: 2018-12-20 08:16:05  
End at: 2018-12-20 08:16:35  
Local clock offset: 0.403 ms  
Remote clock offset: -3.358 ms

# Below is generated by plot.py at 2018-12-20 10:00:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.27 Mbit/s  
95th percentile per-packet one-way delay: 126.615 ms  
Loss rate: 1.60%  
-- Flow 1:  
Average throughput: 55.67 Mbit/s  
95th percentile per-packet one-way delay: 125.856 ms  
Loss rate: 1.03%  
-- Flow 2:  
Average throughput: 39.14 Mbit/s  
95th percentile per-packet one-way delay: 126.575 ms  
Loss rate: 2.28%  
-- Flow 3:  
Average throughput: 31.79 Mbit/s  
95th percentile per-packet one-way delay: 127.531 ms  
Loss rate: 2.89%

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



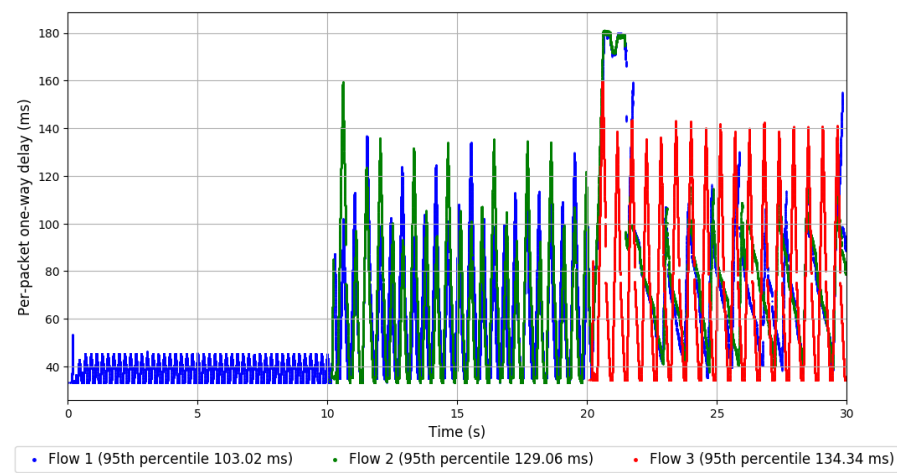
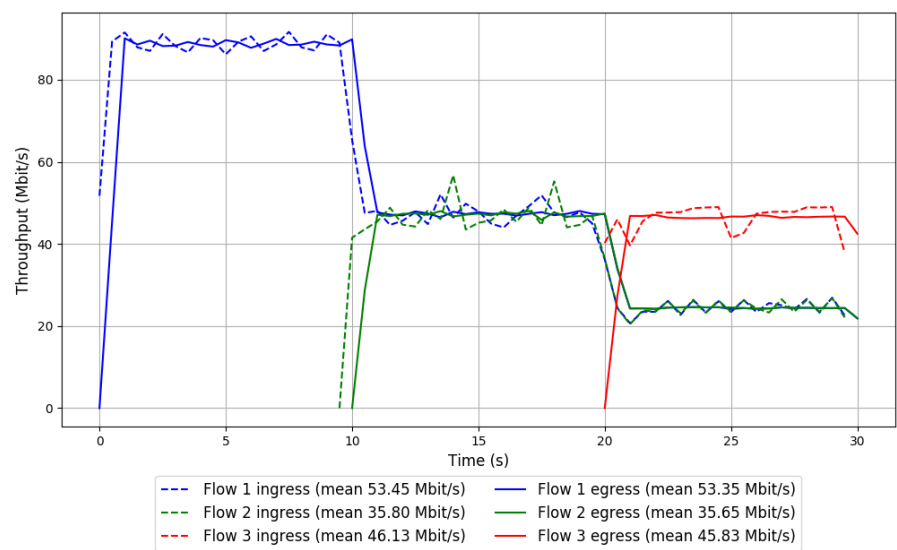


Run 3: Statistics of TaoVA-100x

Start at: 2018-12-20 08:39:12  
End at: 2018-12-20 08:39:42  
Local clock offset: 0.304 ms  
Remote clock offset: -2.545 ms

# Below is generated by plot.py at 2018-12-20 10:00:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.27 Mbit/s  
95th percentile per-packet one-way delay: 123.364 ms  
Loss rate: 0.63%  
-- Flow 1:  
Average throughput: 53.35 Mbit/s  
95th percentile per-packet one-way delay: 103.023 ms  
Loss rate: 0.39%  
-- Flow 2:  
Average throughput: 35.65 Mbit/s  
95th percentile per-packet one-way delay: 129.061 ms  
Loss rate: 0.75%  
-- Flow 3:  
Average throughput: 45.83 Mbit/s  
95th percentile per-packet one-way delay: 134.345 ms  
Loss rate: 1.29%

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

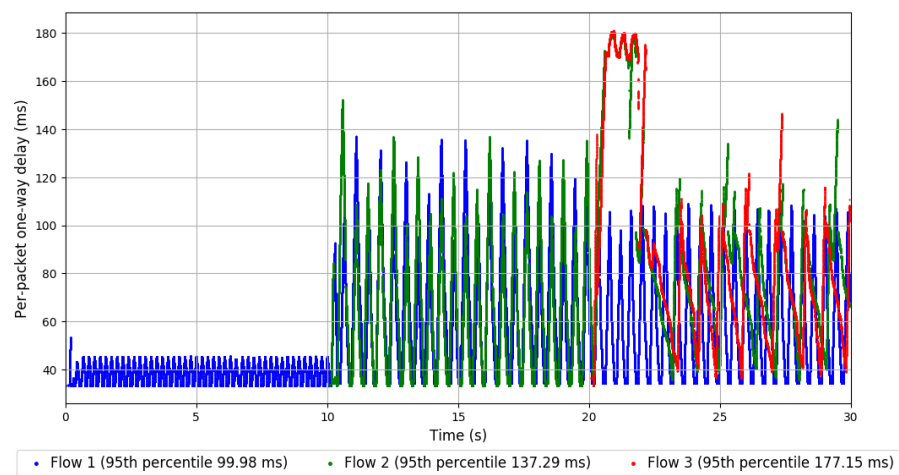
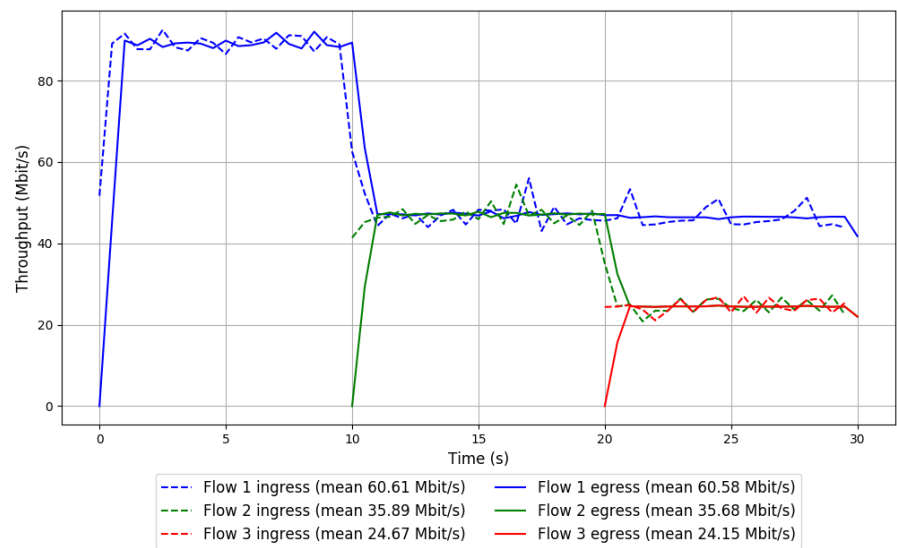


Run 4: Statistics of TaoVA-100x

Start at: 2018-12-20 09:02:47  
End at: 2018-12-20 09:03:17  
Local clock offset: 0.228 ms  
Remote clock offset: -2.047 ms

# Below is generated by plot.py at 2018-12-20 10:00:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.31 Mbit/s  
95th percentile per-packet one-way delay: 115.690 ms  
Loss rate: 0.66%  
-- Flow 1:  
Average throughput: 60.58 Mbit/s  
95th percentile per-packet one-way delay: 99.980 ms  
Loss rate: 0.28%  
-- Flow 2:  
Average throughput: 35.68 Mbit/s  
95th percentile per-packet one-way delay: 137.294 ms  
Loss rate: 0.90%  
-- Flow 3:  
Average throughput: 24.15 Mbit/s  
95th percentile per-packet one-way delay: 177.149 ms  
Loss rate: 2.74%

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

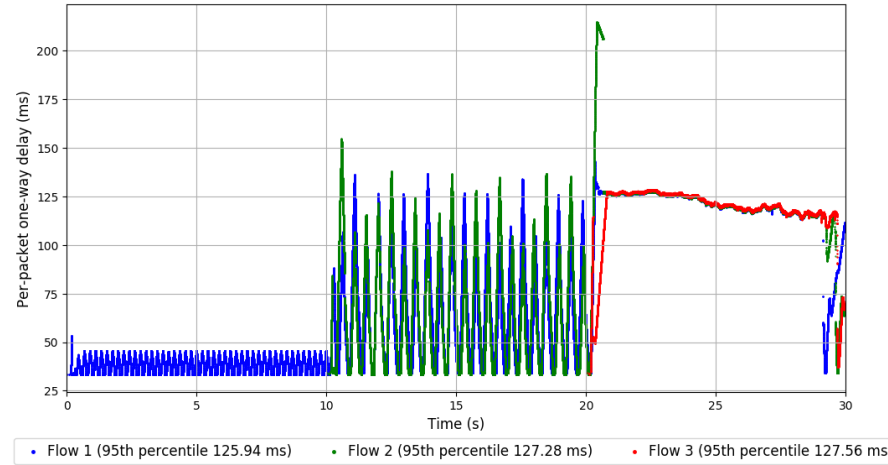
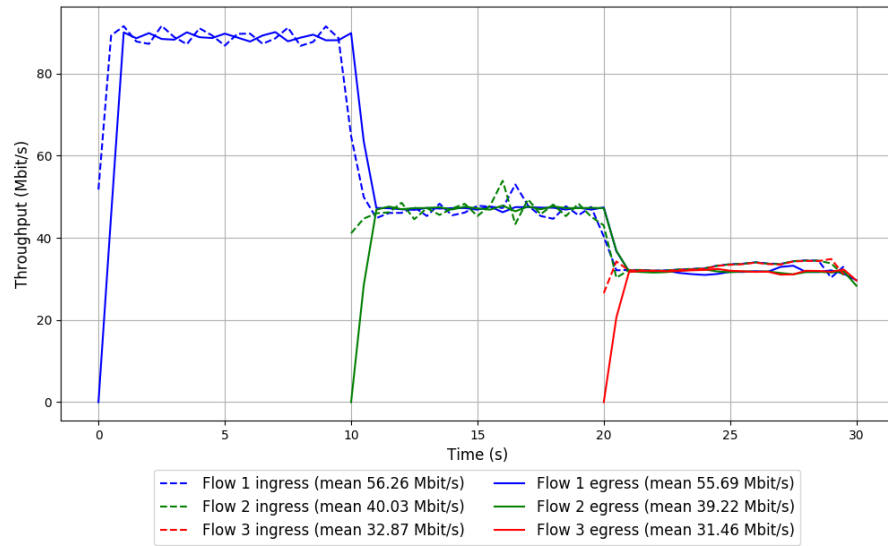


Run 5: Statistics of TaoVA-100x

Start at: 2018-12-20 09:26:20  
End at: 2018-12-20 09:26:50  
Local clock offset: -3.383 ms  
Remote clock offset: -1.533 ms

# Below is generated by plot.py at 2018-12-20 10:01:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.22 Mbit/s  
95th percentile per-packet one-way delay: 126.883 ms  
Loss rate: 1.86%  
-- Flow 1:  
Average throughput: 55.69 Mbit/s  
95th percentile per-packet one-way delay: 125.937 ms  
Loss rate: 1.04%  
-- Flow 2:  
Average throughput: 39.22 Mbit/s  
95th percentile per-packet one-way delay: 127.283 ms  
Loss rate: 2.36%  
-- Flow 3:  
Average throughput: 31.46 Mbit/s  
95th percentile per-packet one-way delay: 127.555 ms  
Loss rate: 4.90%

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

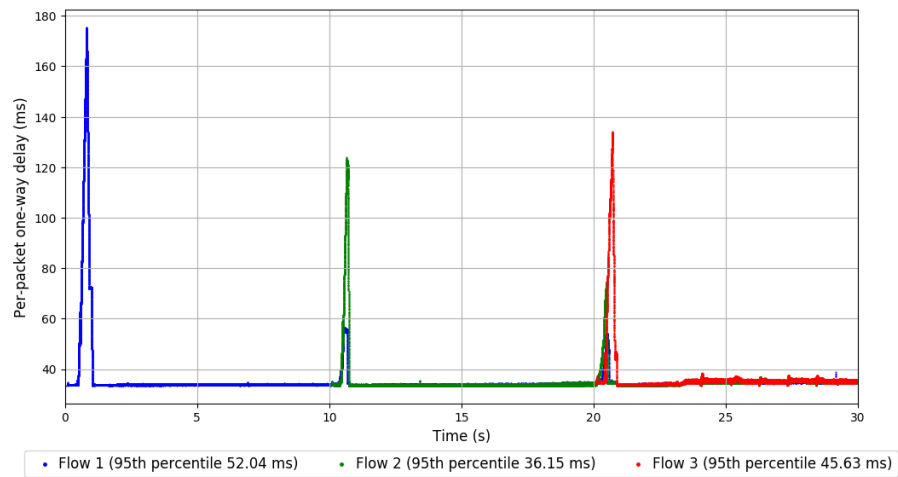
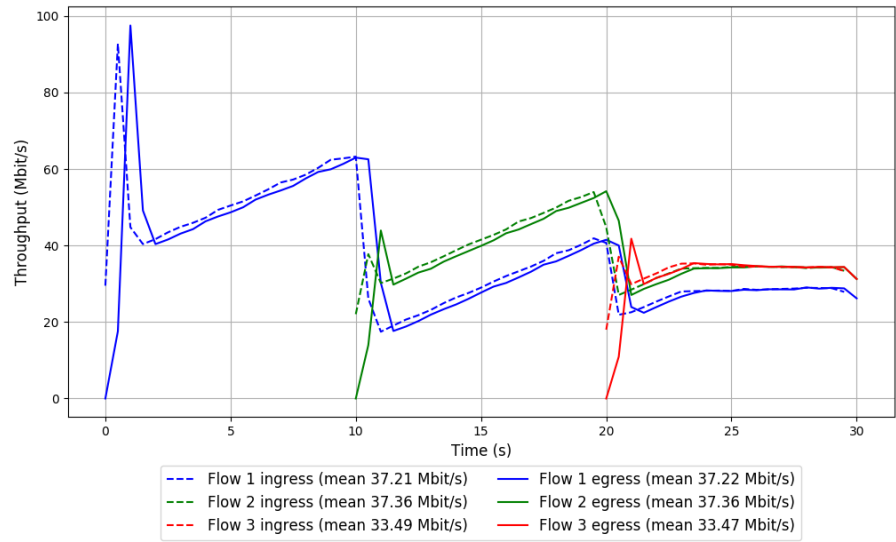


Run 1: Statistics of TCP Vegas

Start at: 2018-12-20 07:57:50  
End at: 2018-12-20 07:58:20  
Local clock offset: 0.505 ms  
Remote clock offset: -3.987 ms

# Below is generated by plot.py at 2018-12-20 10:01:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 73.16 Mbit/s  
95th percentile per-packet one-way delay: 41.773 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 37.22 Mbit/s  
95th percentile per-packet one-way delay: 52.042 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 37.36 Mbit/s  
95th percentile per-packet one-way delay: 36.145 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 33.47 Mbit/s  
95th percentile per-packet one-way delay: 45.627 ms  
Loss rate: 0.69%

# Run 1: Report of TCP Vegas — Data Link



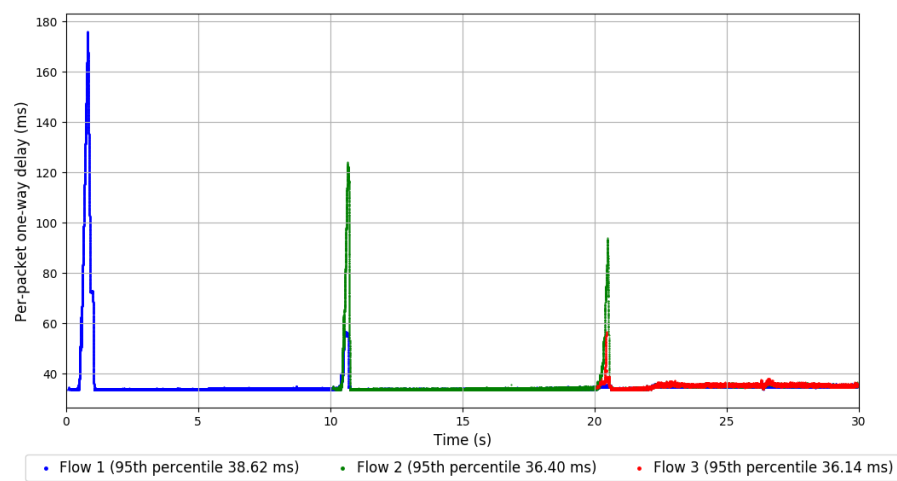
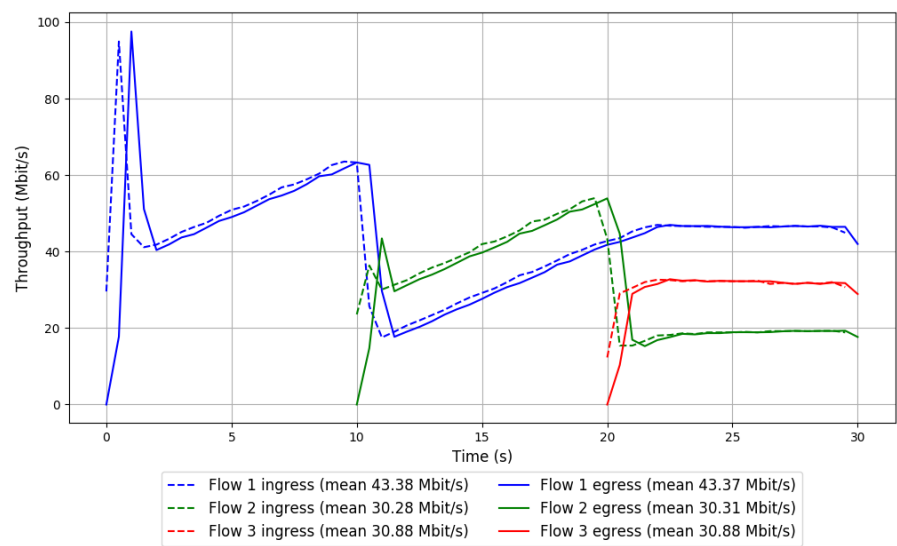


Run 2: Statistics of TCP Vegas

Start at: 2018-12-20 08:20:56  
End at: 2018-12-20 08:21:26  
Local clock offset: 0.375 ms  
Remote clock offset: -3.339 ms

# Below is generated by plot.py at 2018-12-20 10:01:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 73.77 Mbit/s  
95th percentile per-packet one-way delay: 36.348 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 43.37 Mbit/s  
95th percentile per-packet one-way delay: 38.617 ms  
Loss rate: 0.25%  
-- Flow 2:  
Average throughput: 30.31 Mbit/s  
95th percentile per-packet one-way delay: 36.399 ms  
Loss rate: 0.22%  
-- Flow 3:  
Average throughput: 30.88 Mbit/s  
95th percentile per-packet one-way delay: 36.143 ms  
Loss rate: 0.68%

Run 2: Report of TCP Vegas — Data Link

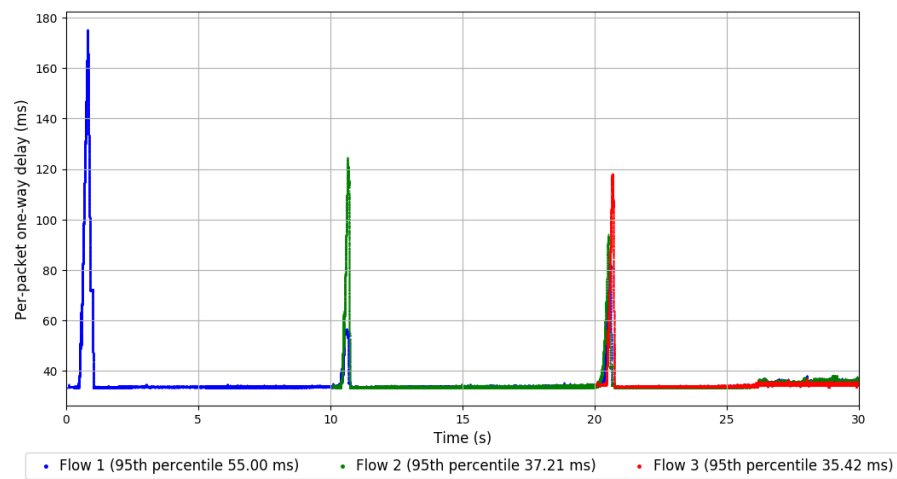
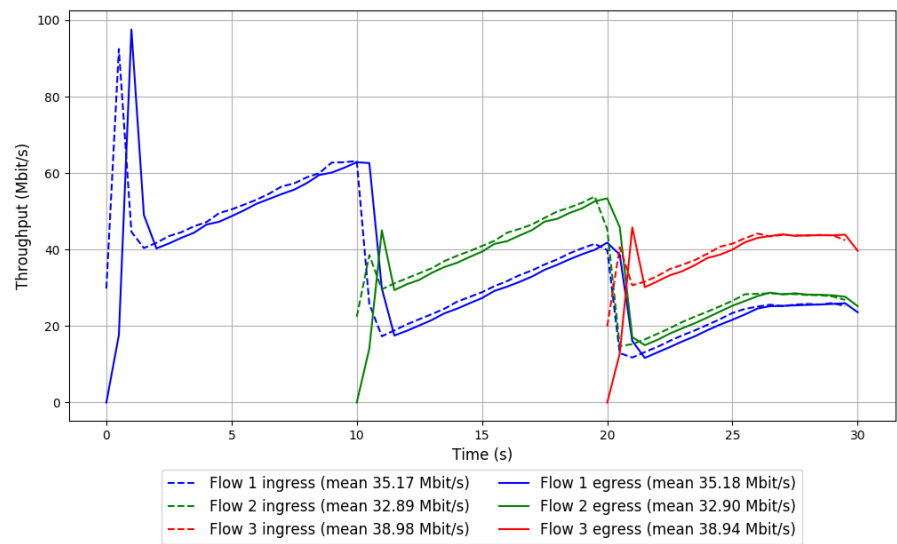


Run 3: Statistics of TCP Vegas

Start at: 2018-12-20 08:44:09  
End at: 2018-12-20 08:44:39  
Local clock offset: 0.274 ms  
Remote clock offset: -2.489 ms

# Below is generated by plot.py at 2018-12-20 10:01:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 69.97 Mbit/s  
95th percentile per-packet one-way delay: 41.844 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 35.18 Mbit/s  
95th percentile per-packet one-way delay: 54.996 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 32.90 Mbit/s  
95th percentile per-packet one-way delay: 37.207 ms  
Loss rate: 0.30%  
-- Flow 3:  
Average throughput: 38.94 Mbit/s  
95th percentile per-packet one-way delay: 35.420 ms  
Loss rate: 0.74%

Run 3: Report of TCP Vegas — Data Link

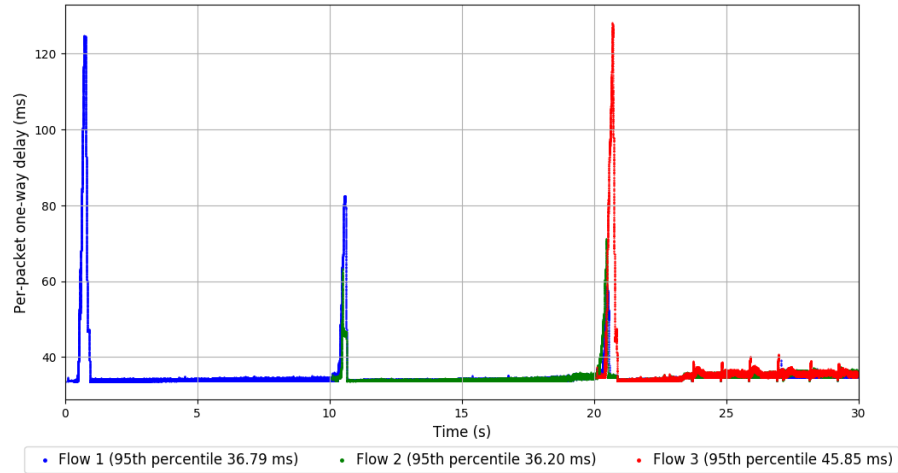
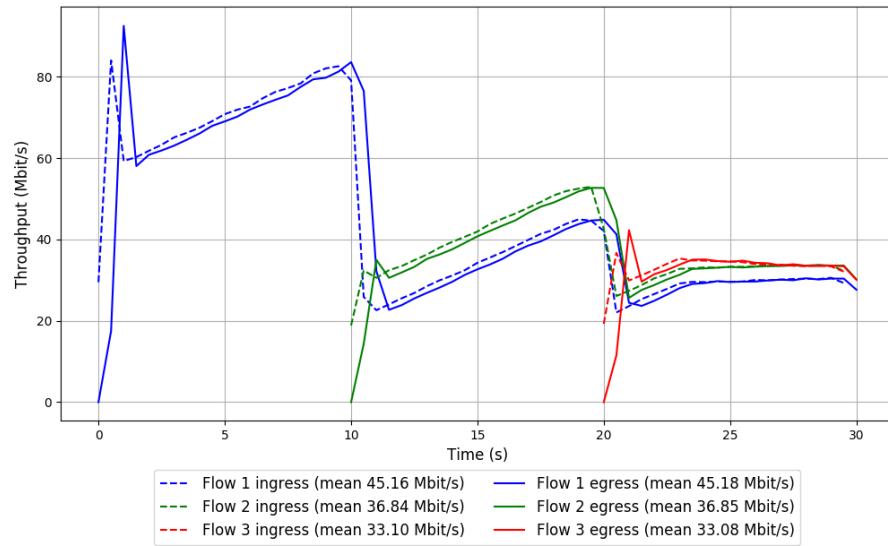


Run 4: Statistics of TCP Vegas

Start at: 2018-12-20 09:07:54  
End at: 2018-12-20 09:08:24  
Local clock offset: -0.555 ms  
Remote clock offset: -1.924 ms

# Below is generated by plot.py at 2018-12-20 10:01:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 80.66 Mbit/s  
95th percentile per-packet one-way delay: 36.945 ms  
Loss rate: 0.27%  
-- Flow 1:  
Average throughput: 45.18 Mbit/s  
95th percentile per-packet one-way delay: 36.789 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 36.85 Mbit/s  
95th percentile per-packet one-way delay: 36.198 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 33.08 Mbit/s  
95th percentile per-packet one-way delay: 45.855 ms  
Loss rate: 0.69%

# Run 4: Report of TCP Vegas — Data Link

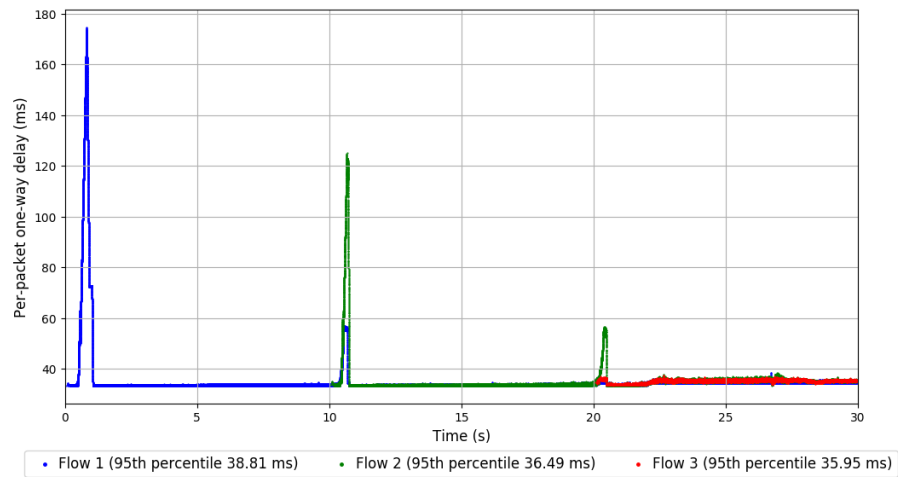
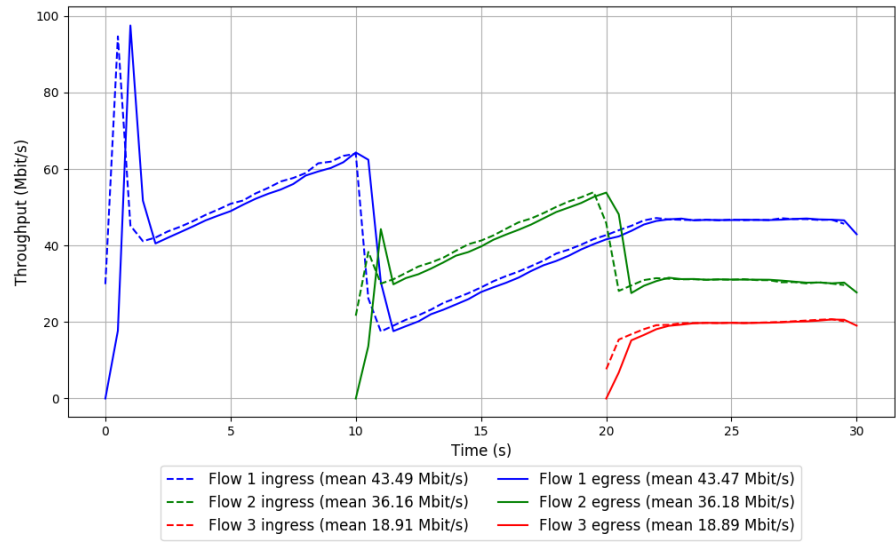


Run 5: Statistics of TCP Vegas

Start at: 2018-12-20 09:31:11  
End at: 2018-12-20 09:31:41  
Local clock offset: -3.698 ms  
Remote clock offset: -1.435 ms

# Below is generated by plot.py at 2018-12-20 10:01:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 73.79 Mbit/s  
95th percentile per-packet one-way delay: 36.264 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 43.47 Mbit/s  
95th percentile per-packet one-way delay: 38.813 ms  
Loss rate: 0.25%  
-- Flow 2:  
Average throughput: 36.18 Mbit/s  
95th percentile per-packet one-way delay: 36.486 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 18.89 Mbit/s  
95th percentile per-packet one-way delay: 35.951 ms  
Loss rate: 0.71%

# Run 5: Report of TCP Vegas — Data Link



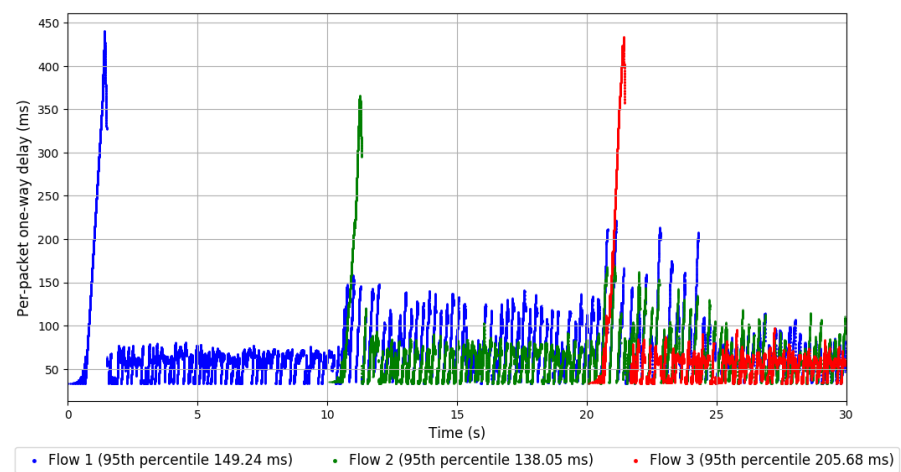
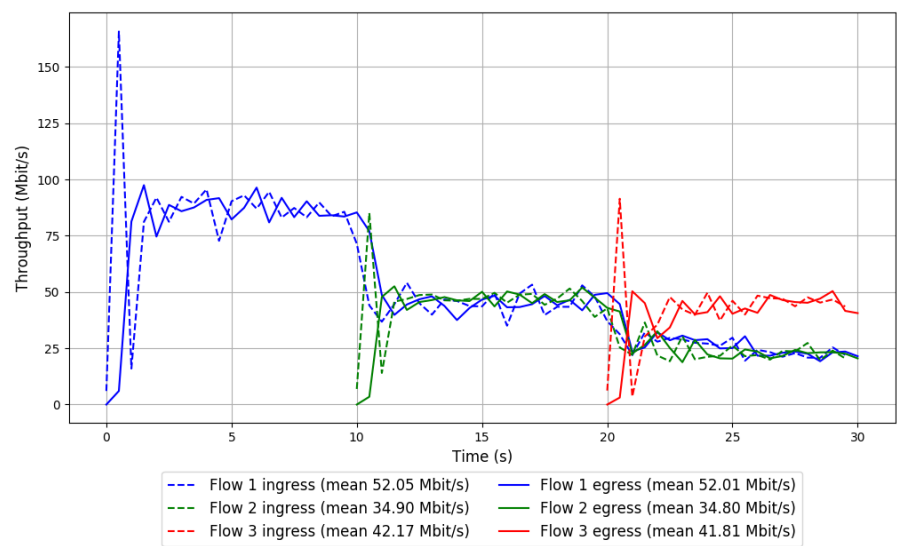


Run 1: Statistics of Verus

Start at: 2018-12-20 07:55:24  
End at: 2018-12-20 07:55:54  
Local clock offset: 0.509 ms  
Remote clock offset: -3.842 ms

# Below is generated by plot.py at 2018-12-20 10:01:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.99 Mbit/s  
95th percentile per-packet one-way delay: 149.571 ms  
Loss rate: 0.56%  
-- Flow 1:  
Average throughput: 52.01 Mbit/s  
95th percentile per-packet one-way delay: 149.237 ms  
Loss rate: 0.29%  
-- Flow 2:  
Average throughput: 34.80 Mbit/s  
95th percentile per-packet one-way delay: 138.051 ms  
Loss rate: 0.59%  
-- Flow 3:  
Average throughput: 41.81 Mbit/s  
95th percentile per-packet one-way delay: 205.680 ms  
Loss rate: 1.49%

Run 1: Report of Verus — Data Link

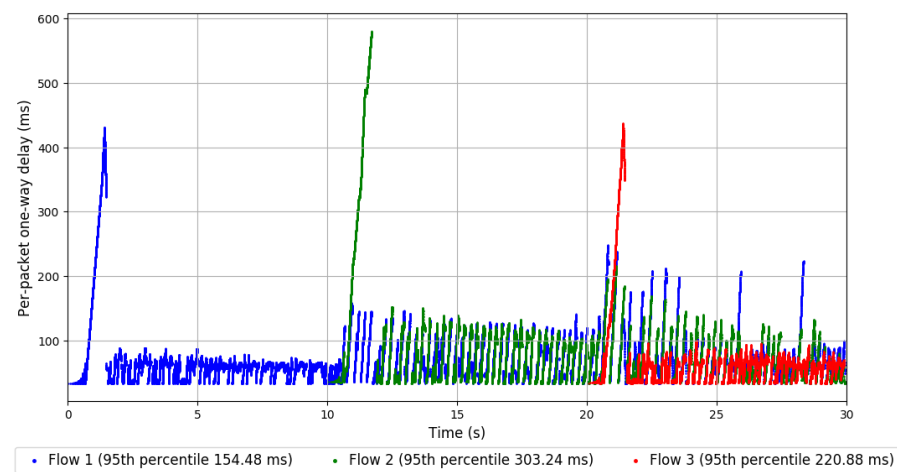
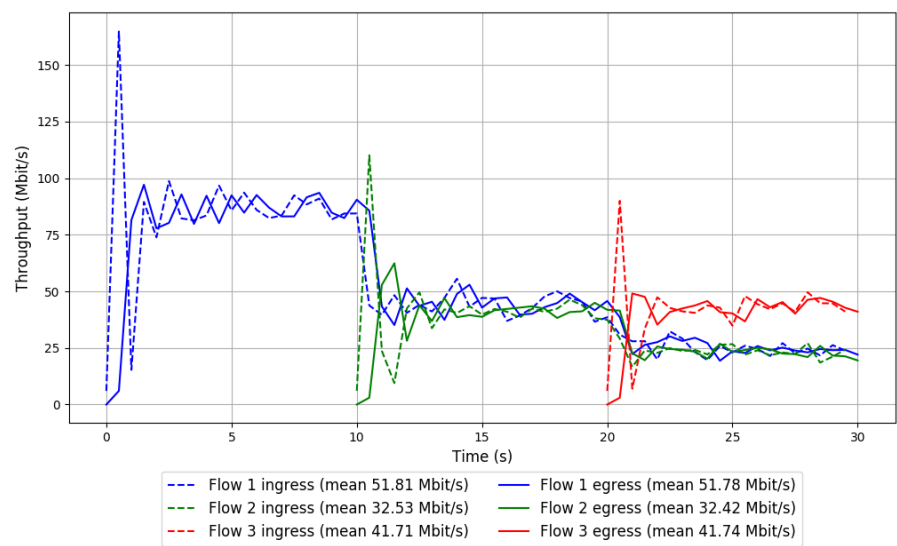


Run 2: Statistics of Verus

Start at: 2018-12-20 08:18:30  
End at: 2018-12-20 08:19:00  
Local clock offset: 0.377 ms  
Remote clock offset: -3.22 ms

# Below is generated by plot.py at 2018-12-20 10:01:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.07 Mbit/s  
95th percentile per-packet one-way delay: 189.757 ms  
Loss rate: 0.49%  
-- Flow 1:  
Average throughput: 51.78 Mbit/s  
95th percentile per-packet one-way delay: 154.481 ms  
Loss rate: 0.34%  
-- Flow 2:  
Average throughput: 32.42 Mbit/s  
95th percentile per-packet one-way delay: 303.238 ms  
Loss rate: 0.66%  
-- Flow 3:  
Average throughput: 41.74 Mbit/s  
95th percentile per-packet one-way delay: 220.875 ms  
Loss rate: 0.81%

Run 2: Report of Verus — Data Link

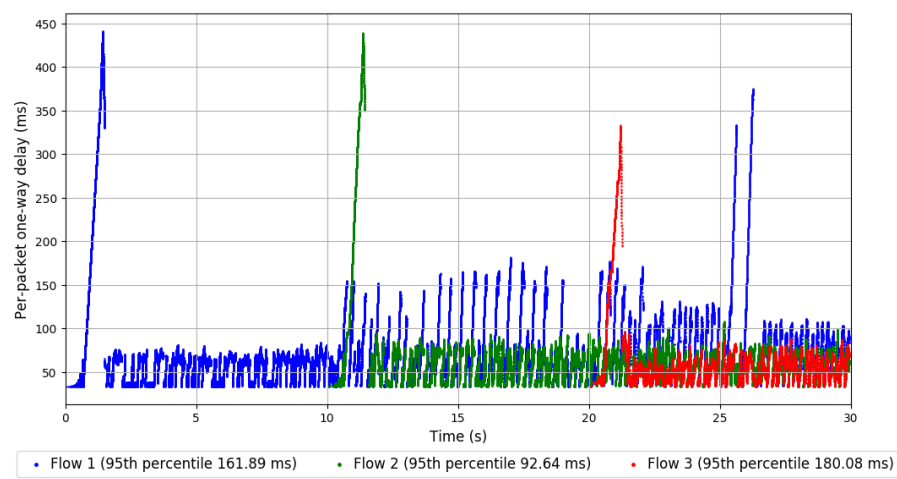
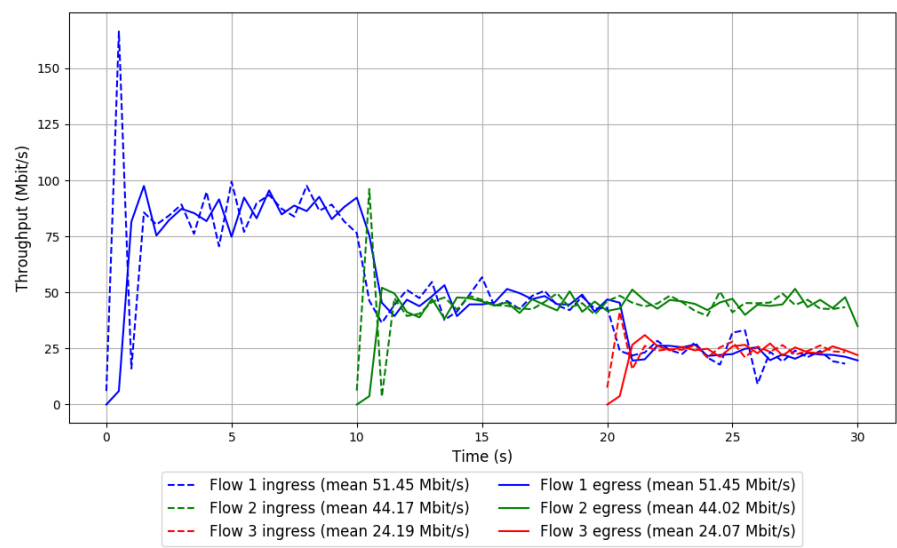


Run 3: Statistics of Verus

Start at: 2018-12-20 08:41:42  
End at: 2018-12-20 08:42:12  
Local clock offset: 0.239 ms  
Remote clock offset: -2.598 ms

# Below is generated by plot.py at 2018-12-20 10:01:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.70 Mbit/s  
95th percentile per-packet one-way delay: 155.897 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 51.45 Mbit/s  
95th percentile per-packet one-way delay: 161.894 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 44.02 Mbit/s  
95th percentile per-packet one-way delay: 92.644 ms  
Loss rate: 0.66%  
-- Flow 3:  
Average throughput: 24.07 Mbit/s  
95th percentile per-packet one-way delay: 180.080 ms  
Loss rate: 1.10%

Run 3: Report of Verus — Data Link

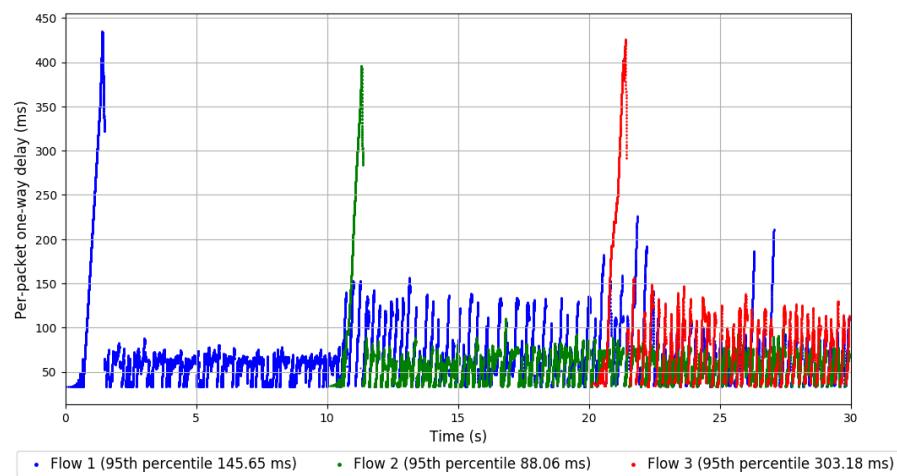
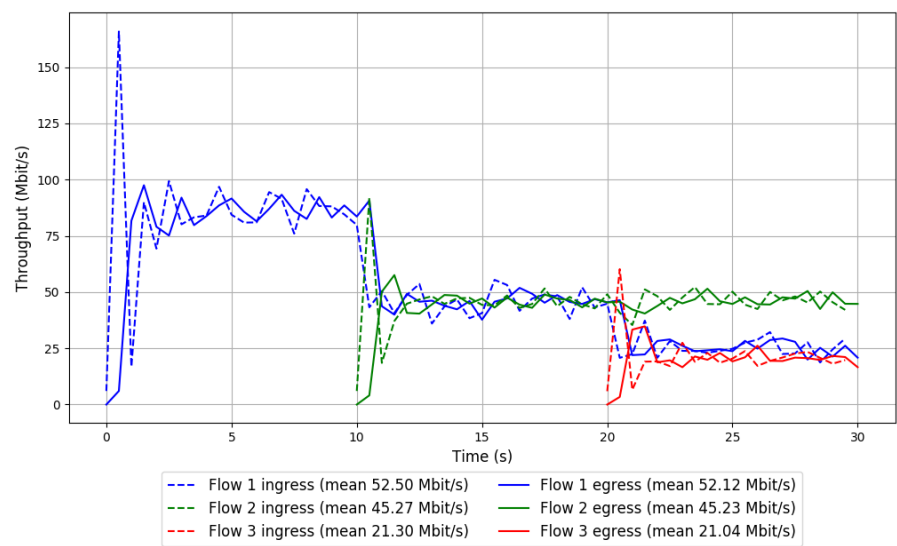


Run 4: Statistics of Verus

Start at: 2018-12-20 09:05:19  
End at: 2018-12-20 09:05:49  
Local clock offset: 0.22 ms  
Remote clock offset: -2.048 ms

# Below is generated by plot.py at 2018-12-20 10:01:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.18 Mbit/s  
95th percentile per-packet one-way delay: 143.733 ms  
Loss rate: 0.55%  
-- Flow 1:  
Average throughput: 52.12 Mbit/s  
95th percentile per-packet one-way delay: 145.652 ms  
Loss rate: 0.51%  
-- Flow 2:  
Average throughput: 45.23 Mbit/s  
95th percentile per-packet one-way delay: 88.056 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 21.04 Mbit/s  
95th percentile per-packet one-way delay: 303.184 ms  
Loss rate: 1.43%

Run 4: Report of Verus — Data Link



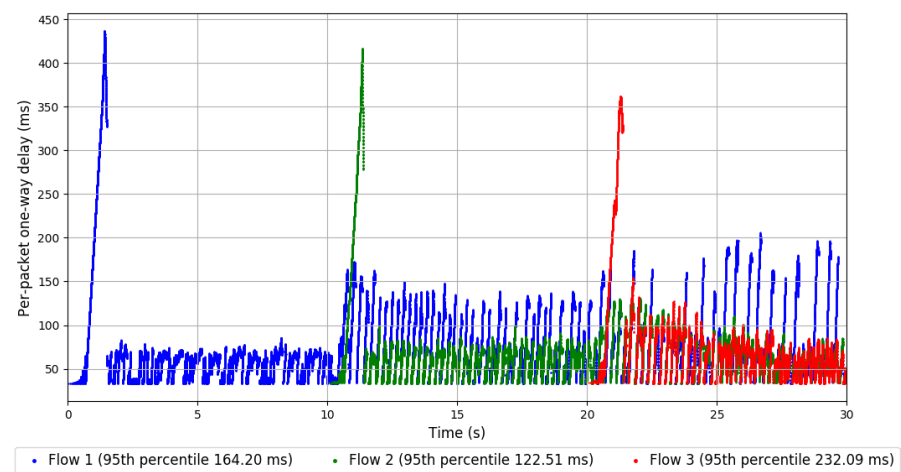
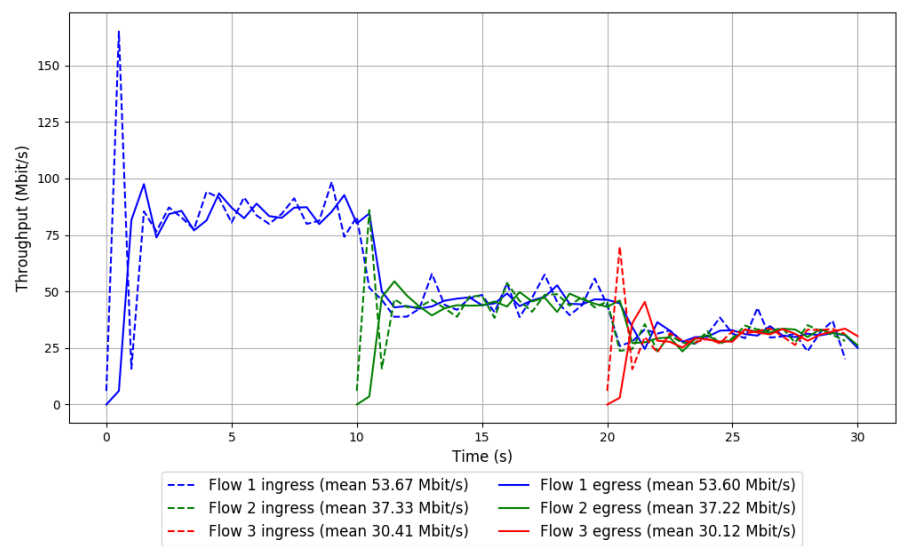


Run 5: Statistics of Verus

Start at: 2018-12-20 09:28:45  
End at: 2018-12-20 09:29:15  
Local clock offset: -3.553 ms  
Remote clock offset: -1.501 ms

# Below is generated by plot.py at 2018-12-20 10:01:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.32 Mbit/s  
95th percentile per-packet one-way delay: 162.746 ms  
Loss rate: 0.56%  
-- Flow 1:  
Average throughput: 53.60 Mbit/s  
95th percentile per-packet one-way delay: 164.196 ms  
Loss rate: 0.34%  
-- Flow 2:  
Average throughput: 37.22 Mbit/s  
95th percentile per-packet one-way delay: 122.512 ms  
Loss rate: 0.63%  
-- Flow 3:  
Average throughput: 30.12 Mbit/s  
95th percentile per-packet one-way delay: 232.093 ms  
Loss rate: 1.60%

Run 5: Report of Verus — Data Link

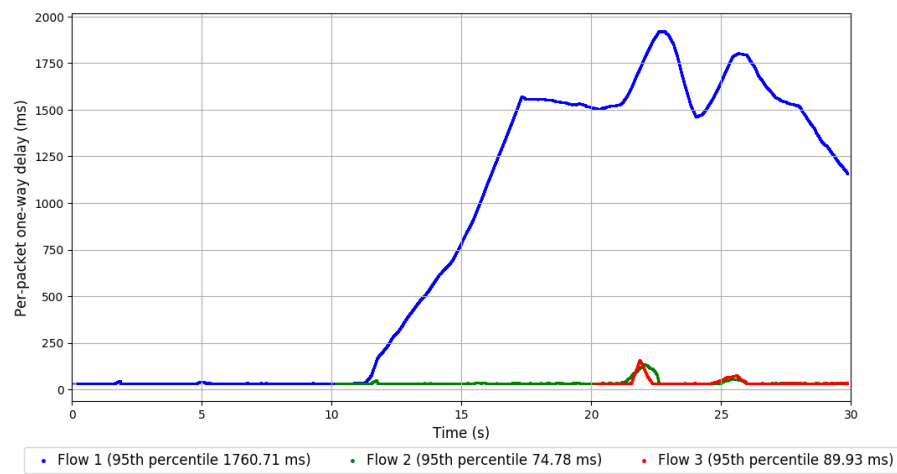
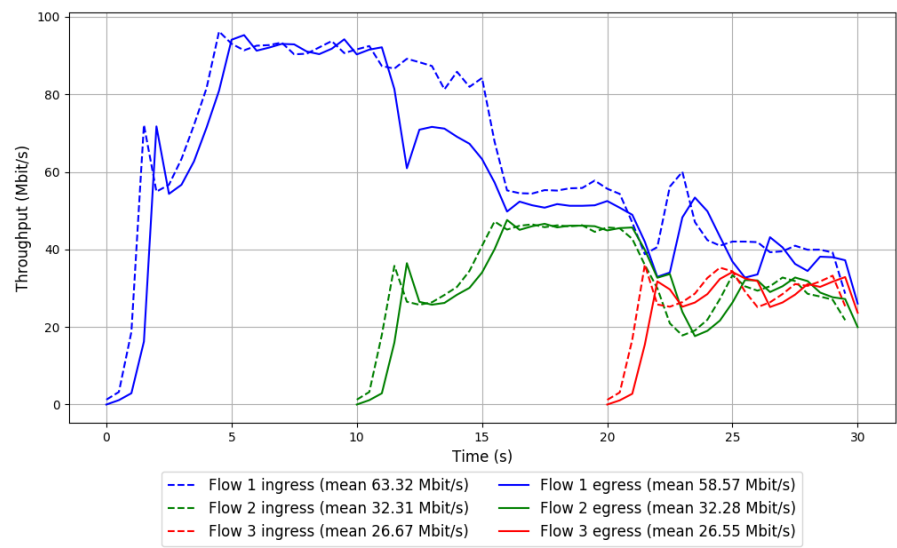


Run 1: Statistics of PCC-Vivace

Start at: 2018-12-20 08:11:15  
End at: 2018-12-20 08:11:45  
Local clock offset: 0.248 ms  
Remote clock offset: -3.405 ms

# Below is generated by plot.py at 2018-12-20 10:02:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.74 Mbit/s  
95th percentile per-packet one-way delay: 1665.213 ms  
Loss rate: 5.39%  
-- Flow 1:  
Average throughput: 58.57 Mbit/s  
95th percentile per-packet one-way delay: 1760.711 ms  
Loss rate: 7.69%  
-- Flow 2:  
Average throughput: 32.28 Mbit/s  
95th percentile per-packet one-way delay: 74.781 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 26.55 Mbit/s  
95th percentile per-packet one-way delay: 89.931 ms  
Loss rate: 1.05%

Run 1: Report of PCC-Vivace — Data Link

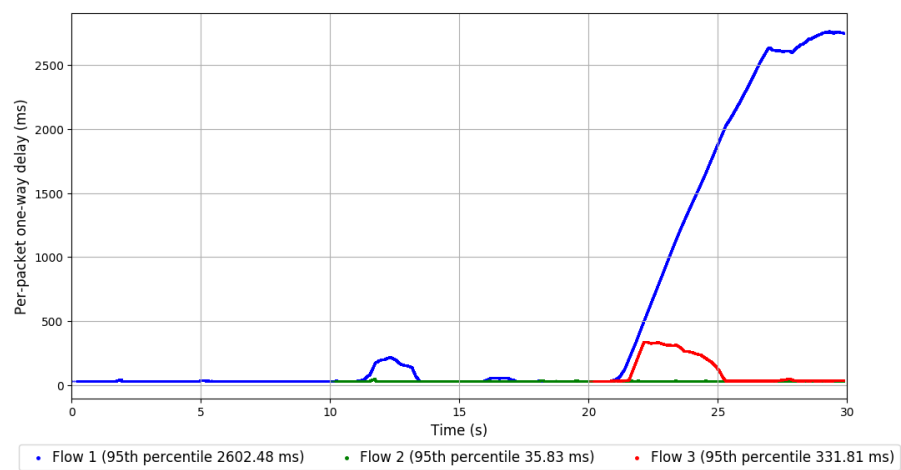
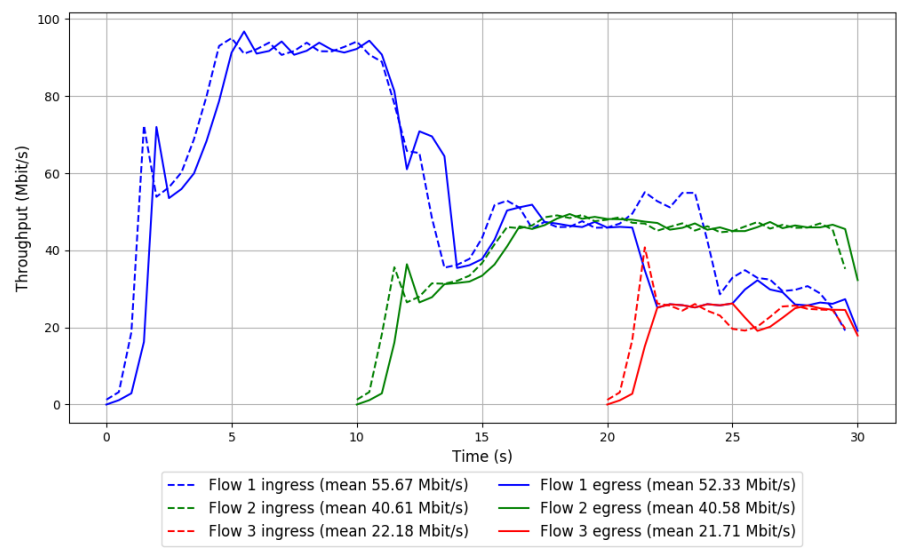


Run 2: Statistics of PCC-Vivace

Start at: 2018-12-20 08:34:23  
End at: 2018-12-20 08:34:53  
Local clock offset: 0.367 ms  
Remote clock offset: -2.773 ms

# Below is generated by plot.py at 2018-12-20 10:02:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.44 Mbit/s  
95th percentile per-packet one-way delay: 1966.587 ms  
Loss rate: 4.17%  
-- Flow 1:  
Average throughput: 52.33 Mbit/s  
95th percentile per-packet one-way delay: 2602.477 ms  
Loss rate: 6.20%  
-- Flow 2:  
Average throughput: 40.58 Mbit/s  
95th percentile per-packet one-way delay: 35.825 ms  
Loss rate: 0.38%  
-- Flow 3:  
Average throughput: 21.71 Mbit/s  
95th percentile per-packet one-way delay: 331.813 ms  
Loss rate: 2.74%

Run 2: Report of PCC-Vivace — Data Link

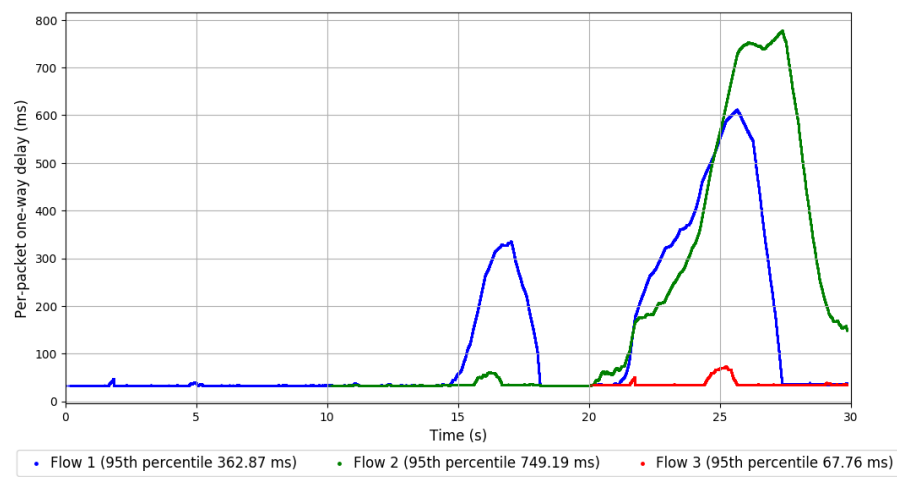
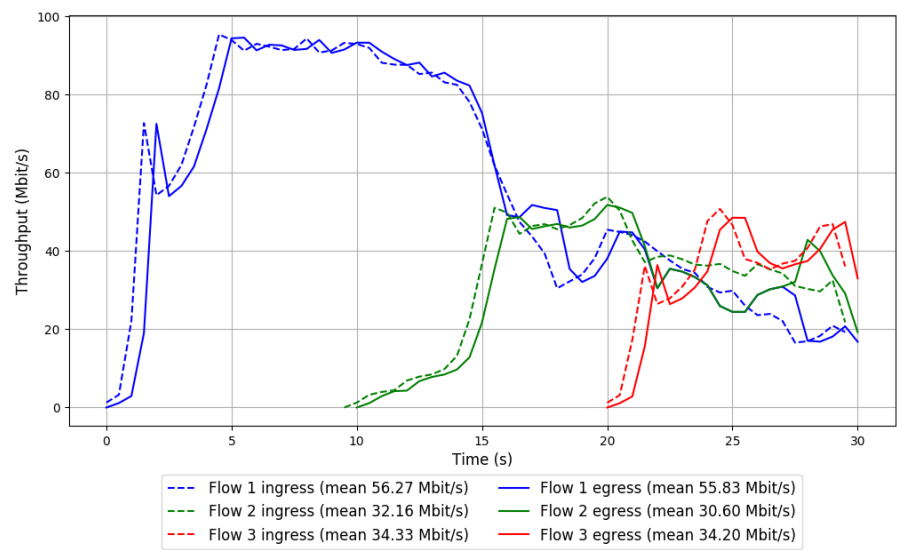


Run 3: Statistics of PCC-Vivace

Start at: 2018-12-20 08:57:58  
End at: 2018-12-20 08:58:28  
Local clock offset: 0.244 ms  
Remote clock offset: -2.111 ms

# Below is generated by plot.py at 2018-12-20 10:02:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.42 Mbit/s  
95th percentile per-packet one-way delay: 550.449 ms  
Loss rate: 2.00%  
-- Flow 1:  
Average throughput: 55.83 Mbit/s  
95th percentile per-packet one-way delay: 362.869 ms  
Loss rate: 0.98%  
-- Flow 2:  
Average throughput: 30.60 Mbit/s  
95th percentile per-packet one-way delay: 749.193 ms  
Loss rate: 5.17%  
-- Flow 3:  
Average throughput: 34.20 Mbit/s  
95th percentile per-packet one-way delay: 67.756 ms  
Loss rate: 1.03%

Run 3: Report of PCC-Vivace — Data Link



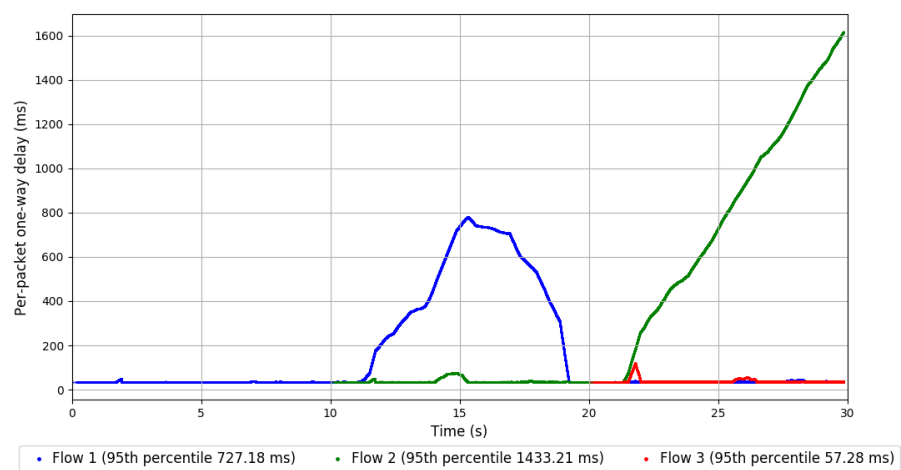
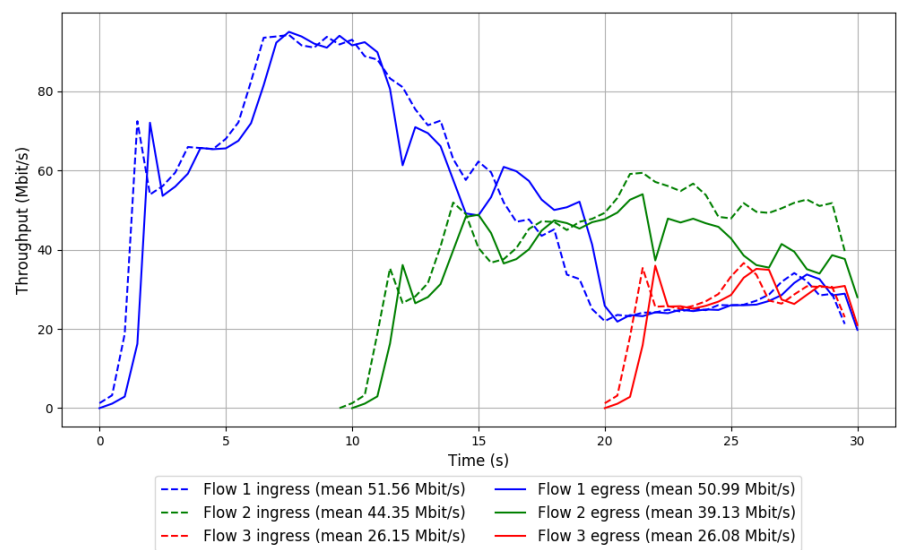


Run 4: Statistics of PCC-Vivace

Start at: 2018-12-20 09:21:29  
End at: 2018-12-20 09:21:59  
Local clock offset: -2.979 ms  
Remote clock offset: -1.578 ms

# Below is generated by plot.py at 2018-12-20 10:02:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.57 Mbit/s  
95th percentile per-packet one-way delay: 1001.859 ms  
Loss rate: 4.81%  
-- Flow 1:  
Average throughput: 50.99 Mbit/s  
95th percentile per-packet one-way delay: 727.177 ms  
Loss rate: 1.32%  
-- Flow 2:  
Average throughput: 39.13 Mbit/s  
95th percentile per-packet one-way delay: 1433.213 ms  
Loss rate: 12.04%  
-- Flow 3:  
Average throughput: 26.08 Mbit/s  
95th percentile per-packet one-way delay: 57.285 ms  
Loss rate: 0.91%

Run 4: Report of PCC-Vivace — Data Link

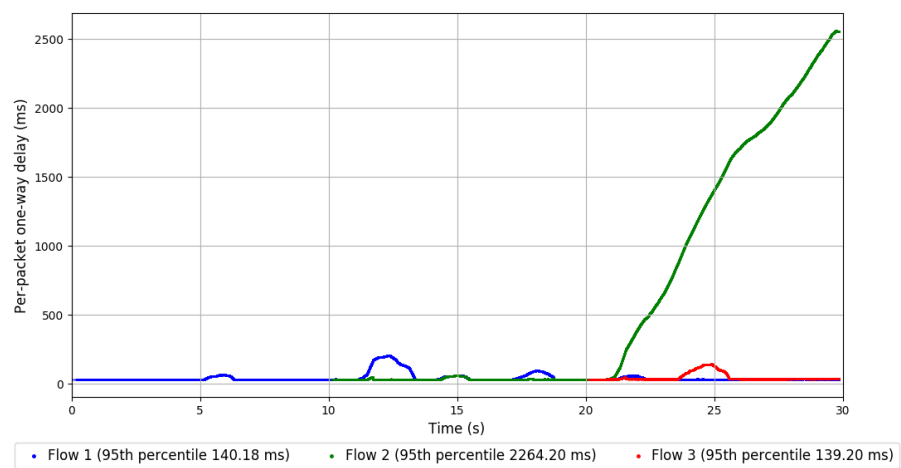
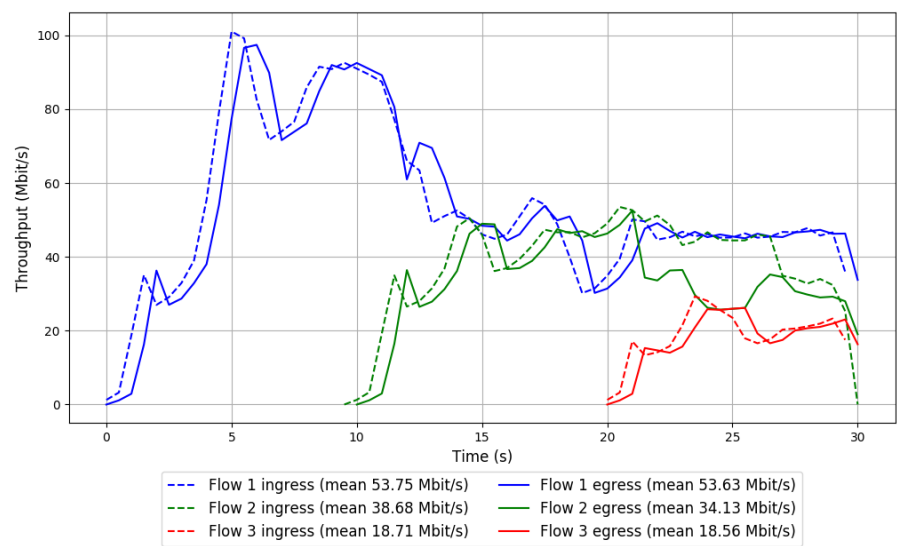


Run 5: Statistics of PCC-Vivace

Start at: 2018-12-20 09:44:34  
End at: 2018-12-20 09:45:04  
Local clock offset: -1.169 ms  
Remote clock offset: -1.506 ms

# Below is generated by plot.py at 2018-12-20 10:02:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 82.43 Mbit/s  
95th percentile per-packet one-way delay: 1667.040 ms  
Loss rate: 4.60%  
-- Flow 1:  
Average throughput: 53.63 Mbit/s  
95th percentile per-packet one-way delay: 140.183 ms  
Loss rate: 0.43%  
-- Flow 2:  
Average throughput: 34.13 Mbit/s  
95th percentile per-packet one-way delay: 2264.202 ms  
Loss rate: 13.87%  
-- Flow 3:  
Average throughput: 18.56 Mbit/s  
95th percentile per-packet one-way delay: 139.203 ms  
Loss rate: 1.45%

Run 5: Report of PCC-Vivace — Data Link

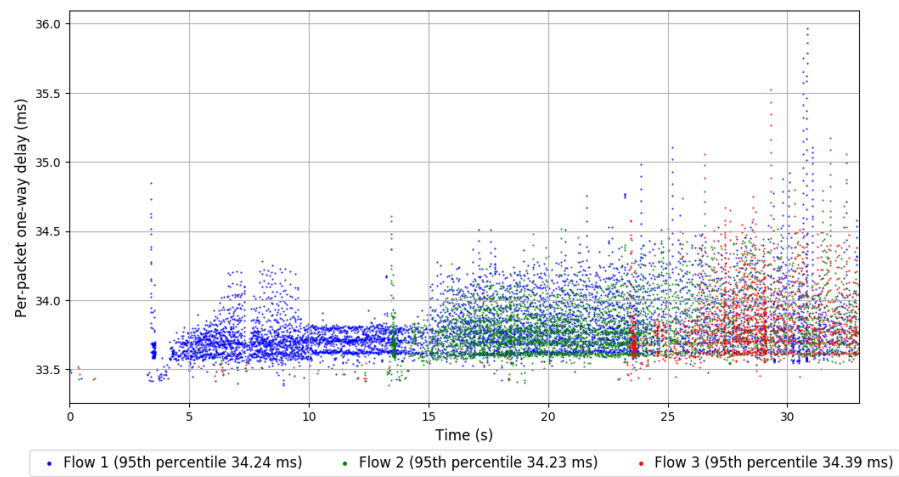
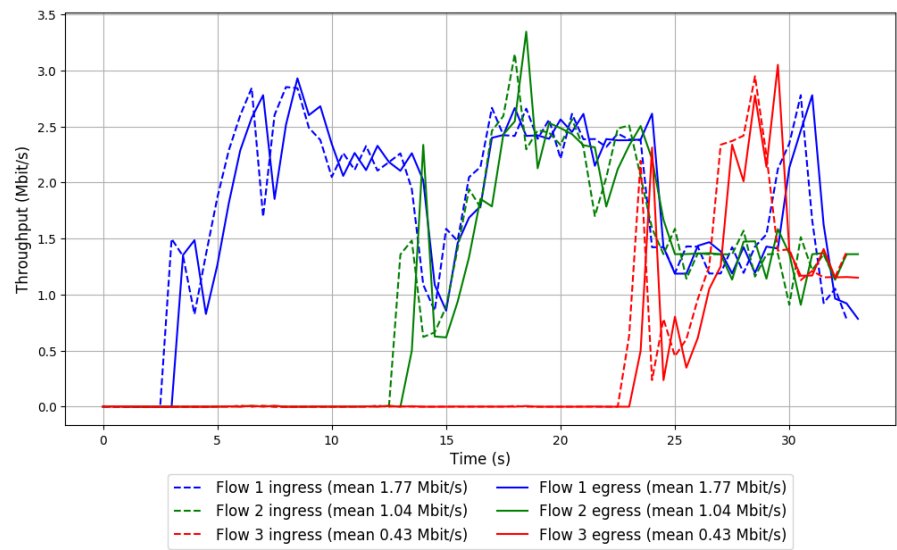


Run 1: Statistics of WebRTC media

Start at: 2018-12-20 08:12:30  
End at: 2018-12-20 08:13:00  
Local clock offset: 0.402 ms  
Remote clock offset: -3.621 ms

# Below is generated by plot.py at 2018-12-20 10:02:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.23 Mbit/s  
95th percentile per-packet one-way delay: 34.260 ms  
Loss rate: 0.17%  
-- Flow 1:  
Average throughput: 1.77 Mbit/s  
95th percentile per-packet one-way delay: 34.237 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 1.04 Mbit/s  
95th percentile per-packet one-way delay: 34.230 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 34.393 ms  
Loss rate: 0.81%

Run 1: Report of WebRTC media — Data Link

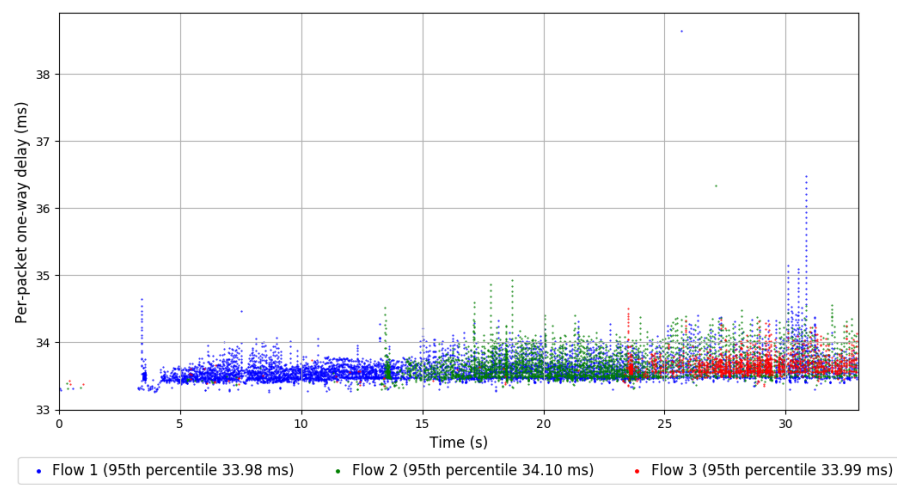
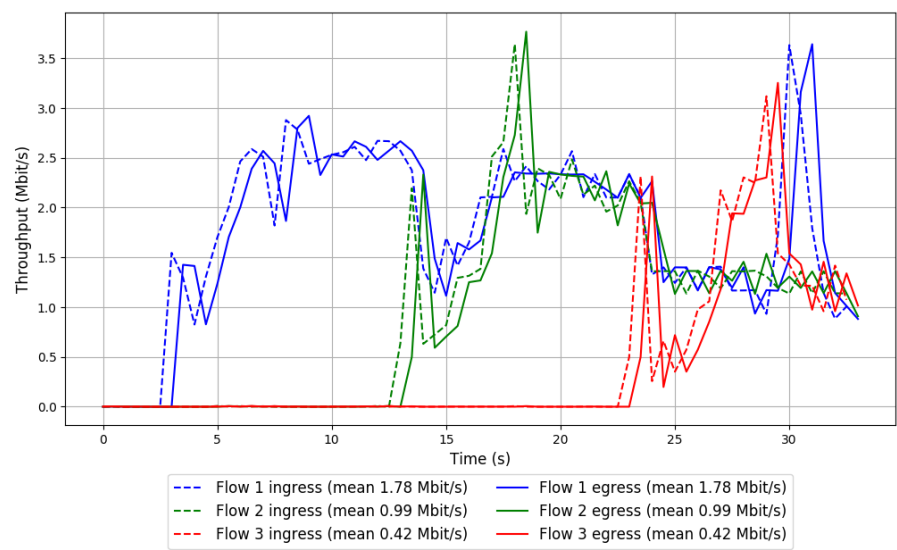


Run 2: Statistics of WebRTC media

Start at: 2018-12-20 08:35:38  
End at: 2018-12-20 08:36:08  
Local clock offset: 0.349 ms  
Remote clock offset: -2.741 ms

# Below is generated by plot.py at 2018-12-20 10:02:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.17 Mbit/s  
95th percentile per-packet one-way delay: 34.030 ms  
Loss rate: 0.23%  
-- Flow 1:  
Average throughput: 1.78 Mbit/s  
95th percentile per-packet one-way delay: 33.978 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 0.99 Mbit/s  
95th percentile per-packet one-way delay: 34.105 ms  
Loss rate: 0.35%  
-- Flow 3:  
Average throughput: 0.42 Mbit/s  
95th percentile per-packet one-way delay: 33.987 ms  
Loss rate: 0.50%

Run 2: Report of WebRTC media — Data Link



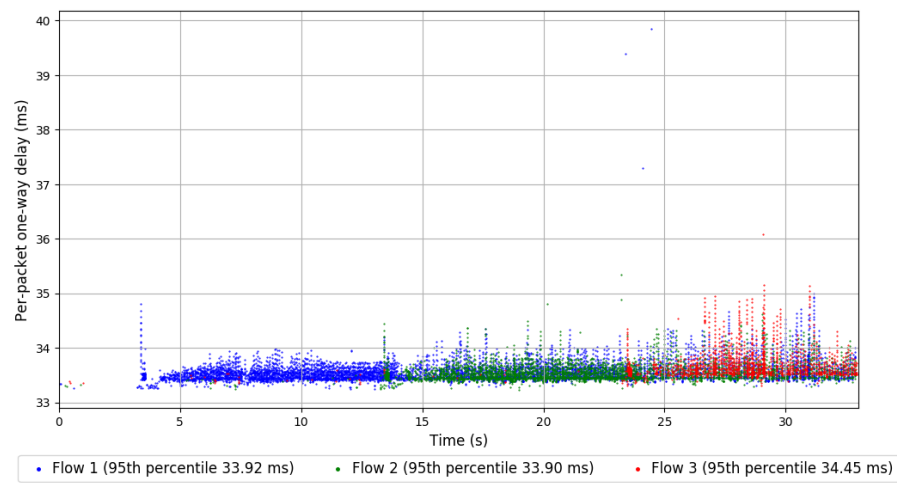
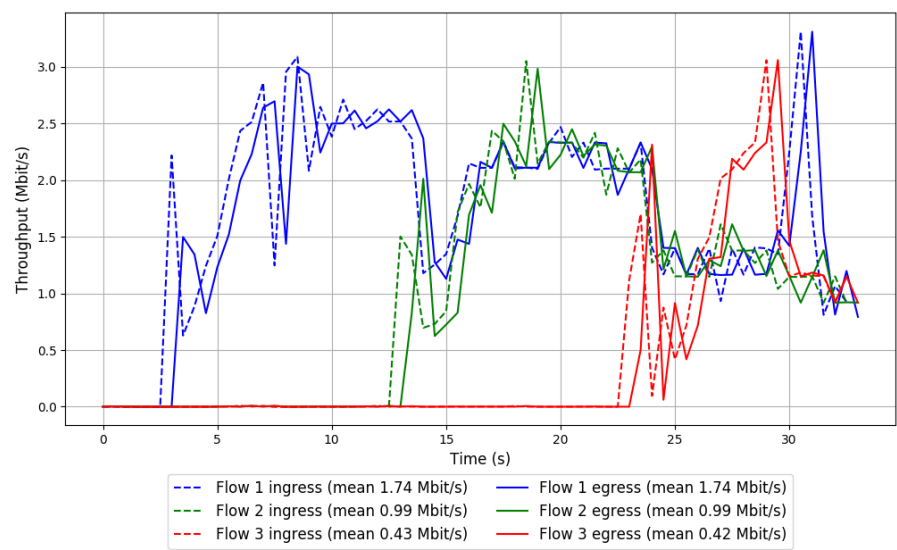


Run 3: Statistics of WebRTC media

Start at: 2018-12-20 08:59:13  
End at: 2018-12-20 08:59:43  
Local clock offset: 0.225 ms  
Remote clock offset: -2.097 ms

# Below is generated by plot.py at 2018-12-20 10:02:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.13 Mbit/s  
95th percentile per-packet one-way delay: 33.988 ms  
Loss rate: 0.29%  
-- Flow 1:  
Average throughput: 1.74 Mbit/s  
95th percentile per-packet one-way delay: 33.918 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 0.99 Mbit/s  
95th percentile per-packet one-way delay: 33.901 ms  
Loss rate: 0.36%  
-- Flow 3:  
Average throughput: 0.42 Mbit/s  
95th percentile per-packet one-way delay: 34.449 ms  
Loss rate: 0.83%

Run 3: Report of WebRTC media — Data Link

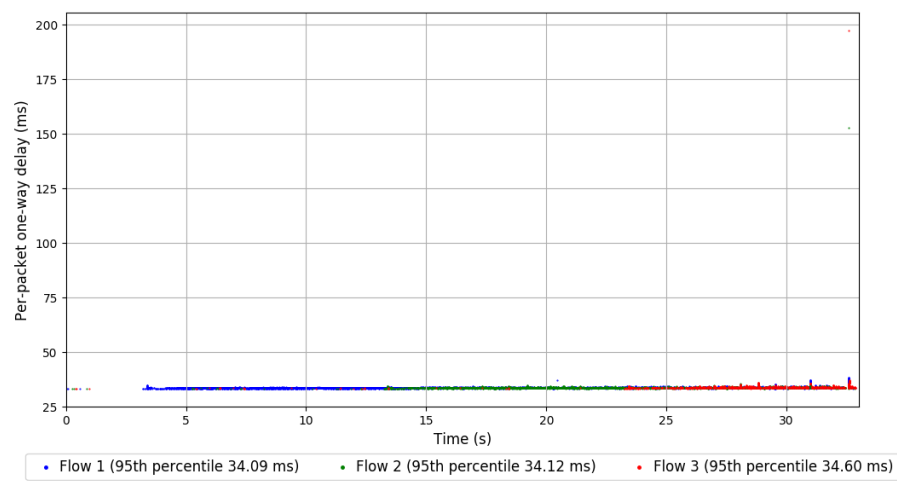
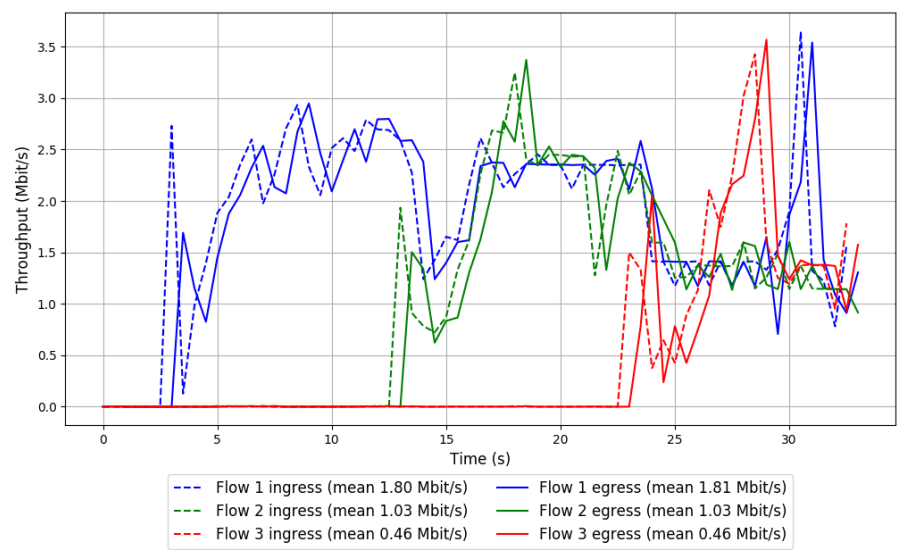


Run 4: Statistics of WebRTC media

Start at: 2018-12-20 09:22:45  
End at: 2018-12-20 09:23:15  
Local clock offset: -3.103 ms  
Remote clock offset: -1.596 ms

# Below is generated by plot.py at 2018-12-20 10:02:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.28 Mbit/s  
95th percentile per-packet one-way delay: 34.183 ms  
Loss rate: 0.33%  
-- Flow 1:  
Average throughput: 1.81 Mbit/s  
95th percentile per-packet one-way delay: 34.095 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 1.03 Mbit/s  
95th percentile per-packet one-way delay: 34.121 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 0.46 Mbit/s  
95th percentile per-packet one-way delay: 34.601 ms  
Loss rate: 0.76%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-12-20 09:45:48  
End at: 2018-12-20 09:46:18  
Local clock offset: -0.98 ms  
Remote clock offset: -1.303 ms

# Below is generated by plot.py at 2018-12-20 10:02:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.16 Mbit/s  
95th percentile per-packet one-way delay: 33.950 ms  
Loss rate: 0.34%  
-- Flow 1:  
Average throughput: 1.77 Mbit/s  
95th percentile per-packet one-way delay: 33.947 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 1.01 Mbit/s  
95th percentile per-packet one-way delay: 33.996 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 0.40 Mbit/s  
95th percentile per-packet one-way delay: 33.756 ms  
Loss rate: 0.88%

Run 5: Report of WebRTC media — Data Link

