

## Pantheon Report

Generated at 2019-01-21 13:18:36 (UTC).

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

Repeated the test of 21 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:

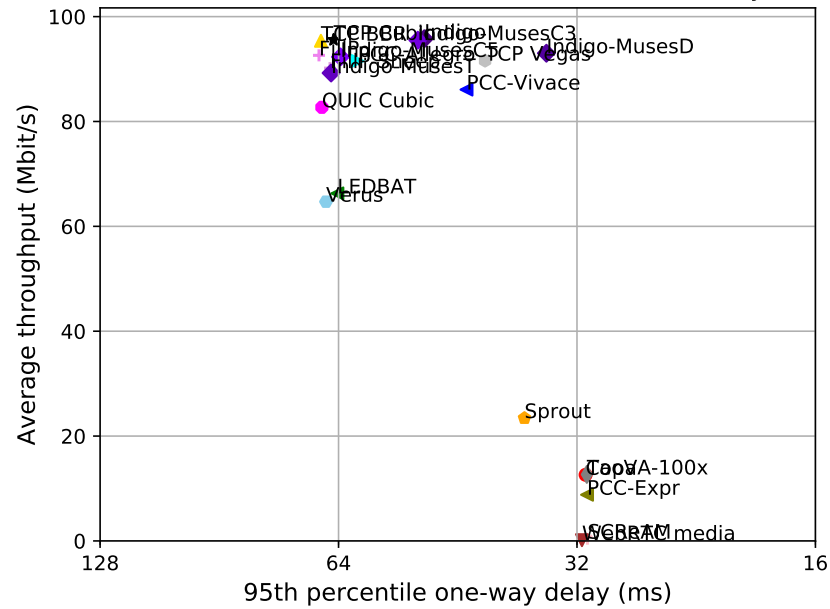
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

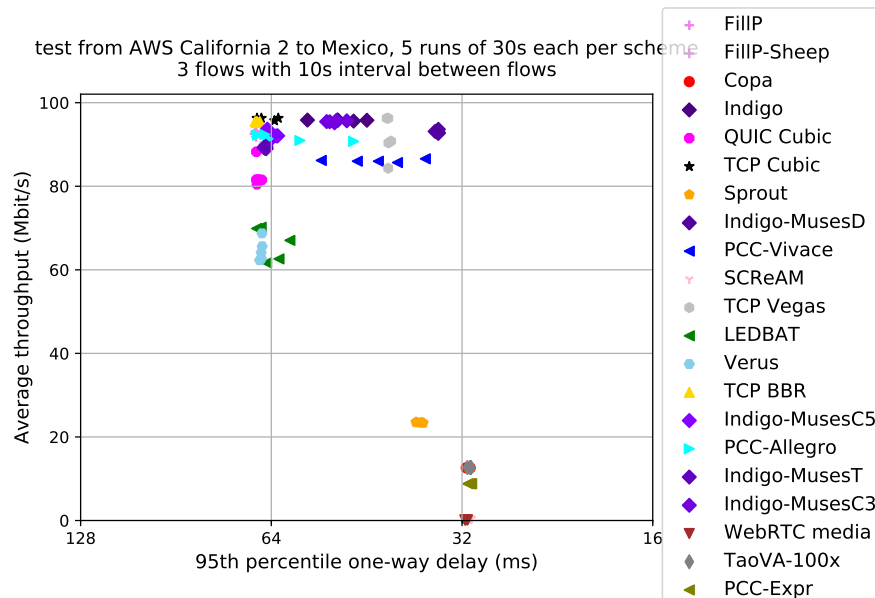
```
branch: muses @ 89d24e57783e7fbfec537a619071de937b639e38
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 1ddcff131048c6962f123bcd22b4d166a422adde
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 AWS California 2 to Mexico, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows (mean of all runs by scheme)



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



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	61.81	35.20	32.60	66.10	68.37	68.96	6.62	10.89	12.67
Copa	5	8.73	5.84	0.01	31.36	30.96	31.17	72.16	75.00	93.24
TCP Cubic	5	70.89	23.06	28.04	64.71	65.37	63.40	0.88	0.54	0.75
FillP	5	58.32	40.82	22.14	66.25	69.02	68.62	29.76	46.94	53.13
FillP-Sheep	5	57.76	40.00	17.65	64.10	67.04	66.32	9.07	16.12	15.99
Indigo	5	64.78	31.56	30.86	46.63	52.26	54.75	0.13	0.21	0.54
Indigo-MusesC3	5	54.47	46.65	35.62	45.82	50.81	58.52	0.61	1.39	4.02
Indigo-MusesC5	5	57.23	49.53	9.44	61.43	65.49	65.40	10.02	18.26	28.84
Indigo-MusesD	5	49.64	54.18	27.02	34.71	34.96	35.81	0.00	0.01	0.01
Indigo-MusesT	5	60.91	42.07	3.39	63.97	67.12	65.56	22.32	38.15	30.39
LEDBAT	5	42.87	25.42	20.40	63.28	65.00	61.37	0.12	0.19	0.11
PCC-Allegro	5	79.14	13.58	10.17	60.26	61.43	55.43	2.94	3.67	4.44
PCC-Expr	5	0.03	11.09	4.32	30.97	31.07	31.13	85.71	52.59	47.44
QUIC Cubic	5	60.90	23.23	19.41	67.02	67.41	67.66	2.65	1.11	0.99
SCReAM	5	0.21	0.21	0.22	31.01	31.03	31.03	0.00	0.00	0.00
Sprout	5	11.80	11.75	11.55	37.05	37.32	37.60	0.01	0.00	0.00
TaoVA-100x	5	7.83	4.72	7.87	31.63	31.48	30.97	84.26	57.69	85.30
TCP Vegas	5	68.46	25.75	18.02	42.31	38.71	37.91	0.40	0.01	0.00
Verus	5	41.08	24.49	24.67	66.48	66.09	65.05	28.93	32.64	30.64
PCC-Vivace	5	64.08	25.60	15.09	41.69	47.63	45.91	0.03	0.13	0.25
WebRTC media	5	0.05	0.05	0.05	31.54	31.52	31.53	0.01	0.00	0.00



Run 1: Statistics of TCP BBR

Start at: 2019-01-21 11:17:18

End at: 2019-01-21 11:17:48

Local clock offset: -0.388 ms

Remote clock offset: -0.99 ms

# Below is generated by plot.py at 2019-01-21 13:08:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.24 Mbit/s

95th percentile per-packet one-way delay: 67.168 ms

Loss rate: 6.91%

-- Flow 1:

Average throughput: 65.39 Mbit/s

95th percentile per-packet one-way delay: 65.978 ms

Loss rate: 5.67%

-- Flow 2:

Average throughput: 32.64 Mbit/s

95th percentile per-packet one-way delay: 68.635 ms

Loss rate: 9.54%

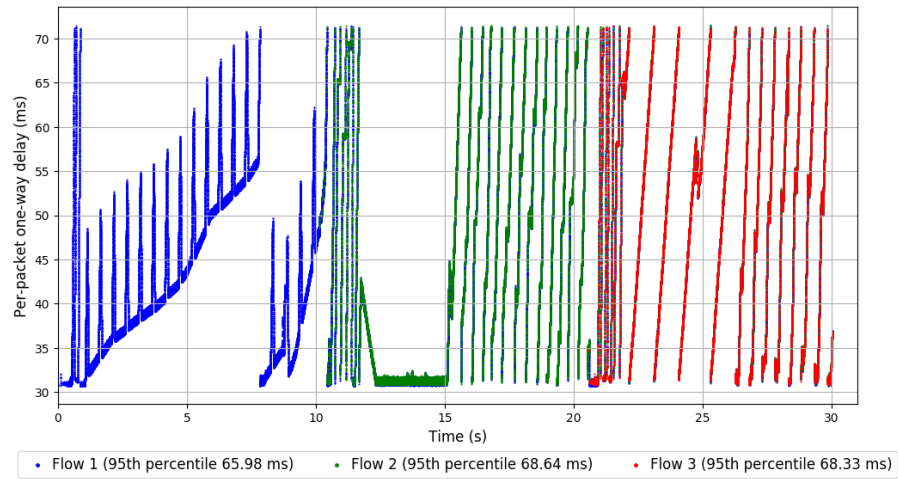
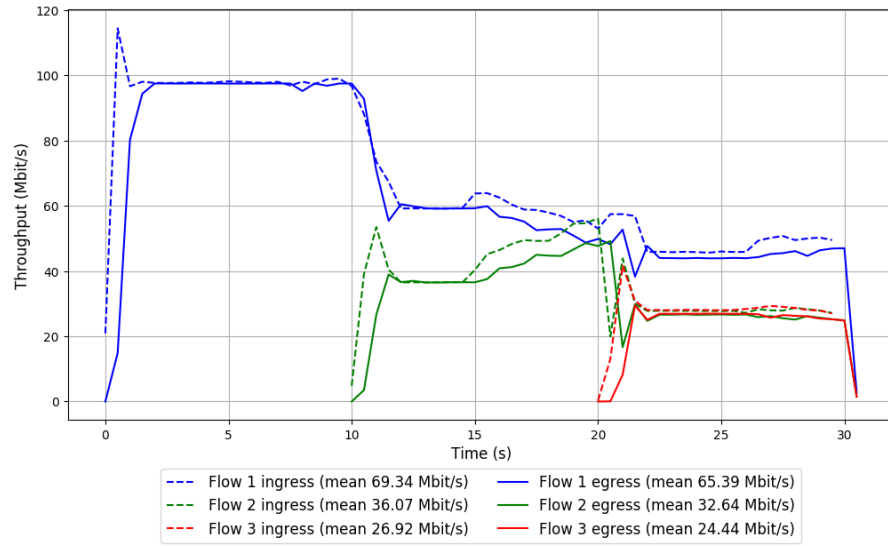
-- Flow 3:

Average throughput: 24.44 Mbit/s

95th percentile per-packet one-way delay: 68.325 ms

Loss rate: 9.49%

# Run 1: Report of TCP BBR — Data Link

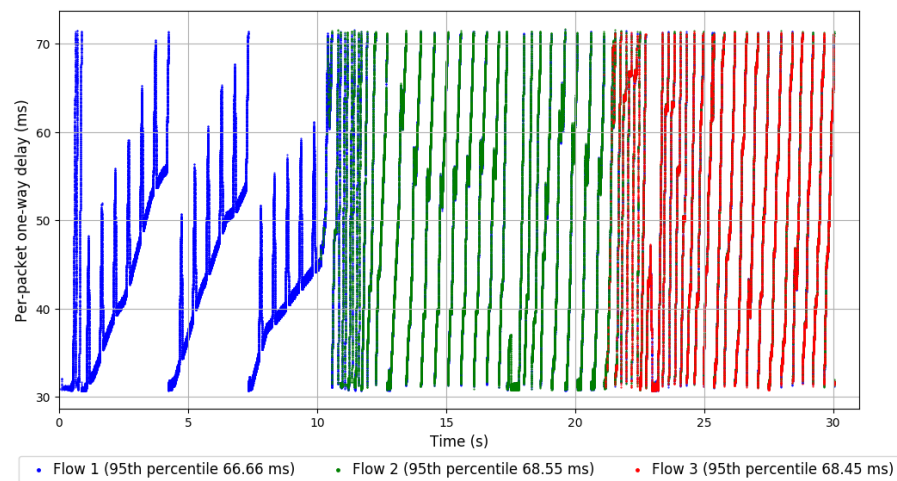
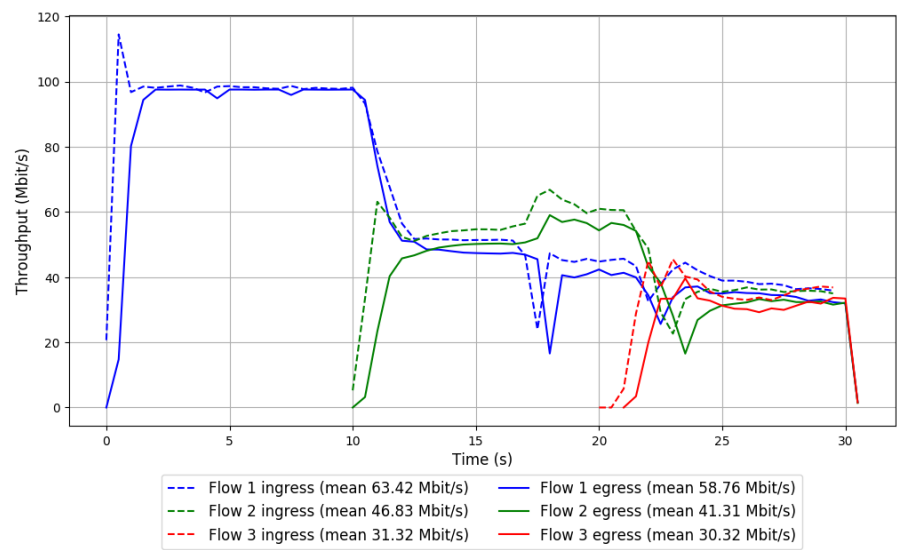


Run 2: Statistics of TCP BBR

Start at: 2019-01-21 11:43:25  
End at: 2019-01-21 11:43:55  
Local clock offset: -0.179 ms  
Remote clock offset: -0.933 ms

# Below is generated by plot.py at 2019-01-21 13:08:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.29 Mbit/s  
95th percentile per-packet one-way delay: 67.592 ms  
Loss rate: 9.27%  
-- Flow 1:  
Average throughput: 58.76 Mbit/s  
95th percentile per-packet one-way delay: 66.658 ms  
Loss rate: 7.34%  
-- Flow 2:  
Average throughput: 41.31 Mbit/s  
95th percentile per-packet one-way delay: 68.546 ms  
Loss rate: 11.84%  
-- Flow 3:  
Average throughput: 30.32 Mbit/s  
95th percentile per-packet one-way delay: 68.450 ms  
Loss rate: 13.31%

Run 2: Report of TCP BBR — Data Link

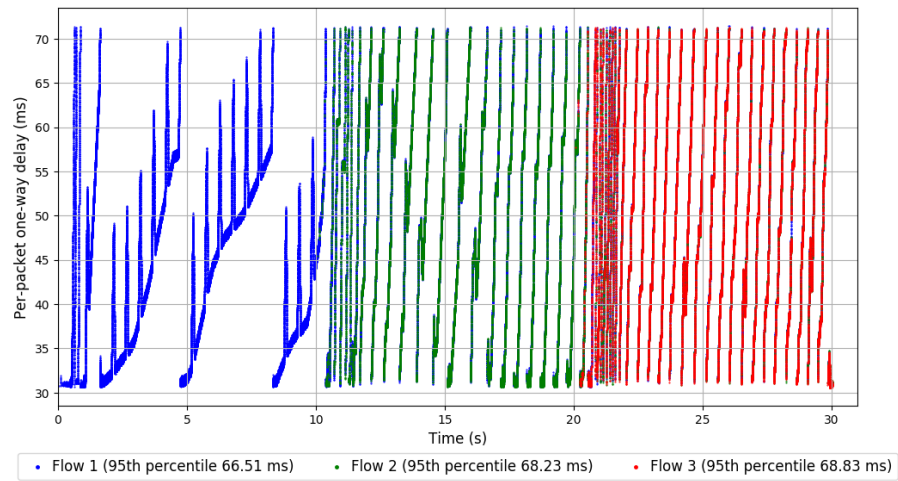
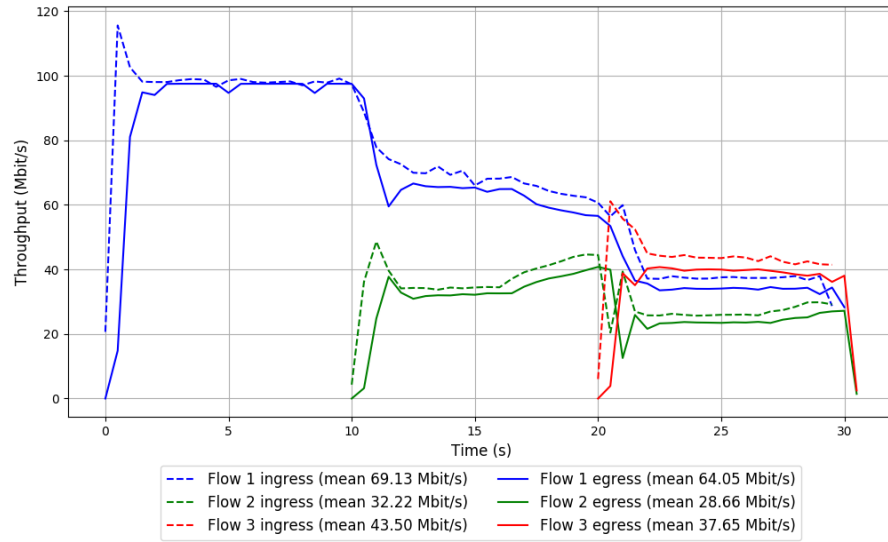


Run 3: Statistics of TCP BBR

Start at: 2019-01-21 12:09:15  
End at: 2019-01-21 12:09:45  
Local clock offset: 0.136 ms  
Remote clock offset: -0.731 ms

# Below is generated by plot.py at 2019-01-21 13:08:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.51 Mbit/s  
95th percentile per-packet one-way delay: 67.464 ms  
Loss rate: 8.99%  
-- Flow 1:  
Average throughput: 64.05 Mbit/s  
95th percentile per-packet one-way delay: 66.508 ms  
Loss rate: 7.35%  
-- Flow 2:  
Average throughput: 28.66 Mbit/s  
95th percentile per-packet one-way delay: 68.228 ms  
Loss rate: 11.12%  
-- Flow 3:  
Average throughput: 37.65 Mbit/s  
95th percentile per-packet one-way delay: 68.832 ms  
Loss rate: 13.70%

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

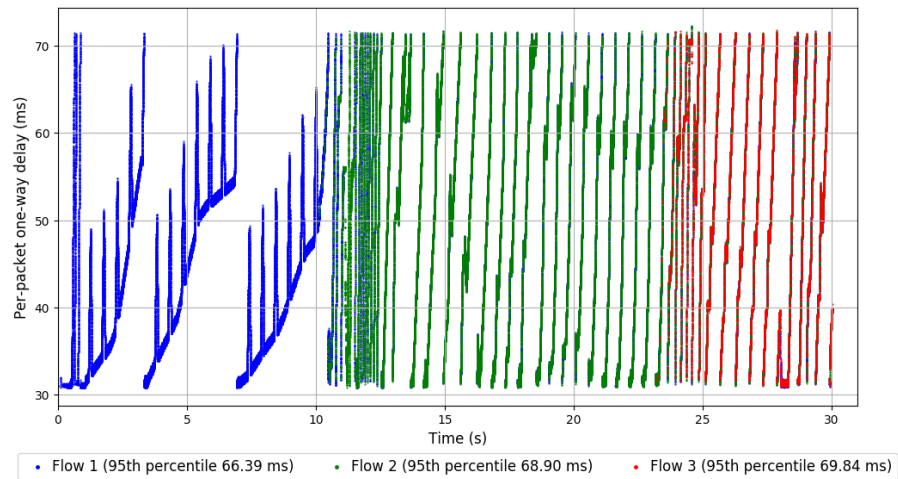
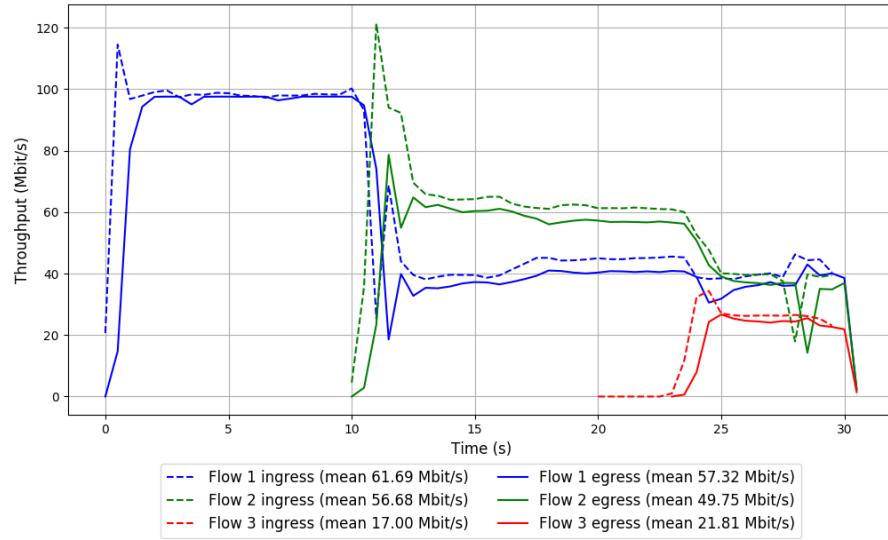


Run 4: Statistics of TCP BBR

Start at: 2019-01-21 12:35:04  
End at: 2019-01-21 12:35:34  
Local clock offset: 3.854 ms  
Remote clock offset: -0.266 ms

# Below is generated by plot.py at 2019-01-21 13:08:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.46 Mbit/s  
95th percentile per-packet one-way delay: 67.885 ms  
Loss rate: 9.15%  
-- Flow 1:  
Average throughput: 57.32 Mbit/s  
95th percentile per-packet one-way delay: 66.388 ms  
Loss rate: 7.06%  
-- Flow 2:  
Average throughput: 49.75 Mbit/s  
95th percentile per-packet one-way delay: 68.901 ms  
Loss rate: 12.29%  
-- Flow 3:  
Average throughput: 21.81 Mbit/s  
95th percentile per-packet one-way delay: 69.841 ms  
Loss rate: 11.10%

# Run 4: Report of TCP BBR — Data Link



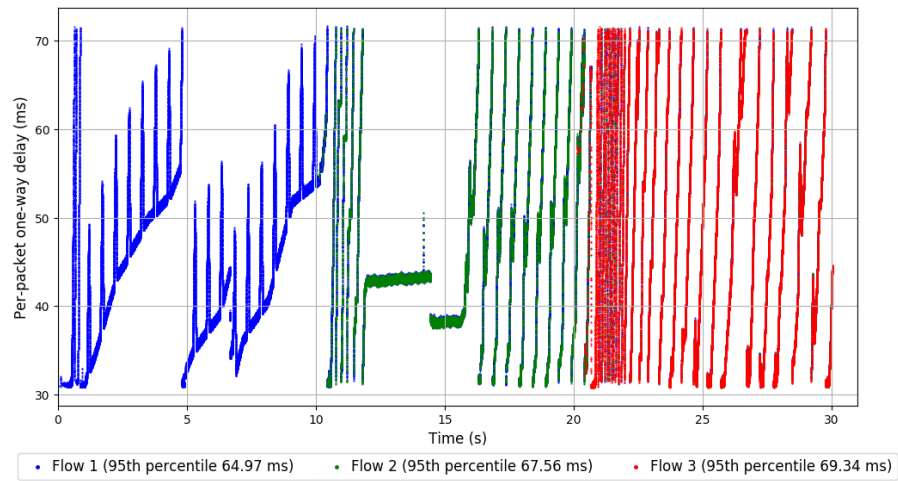
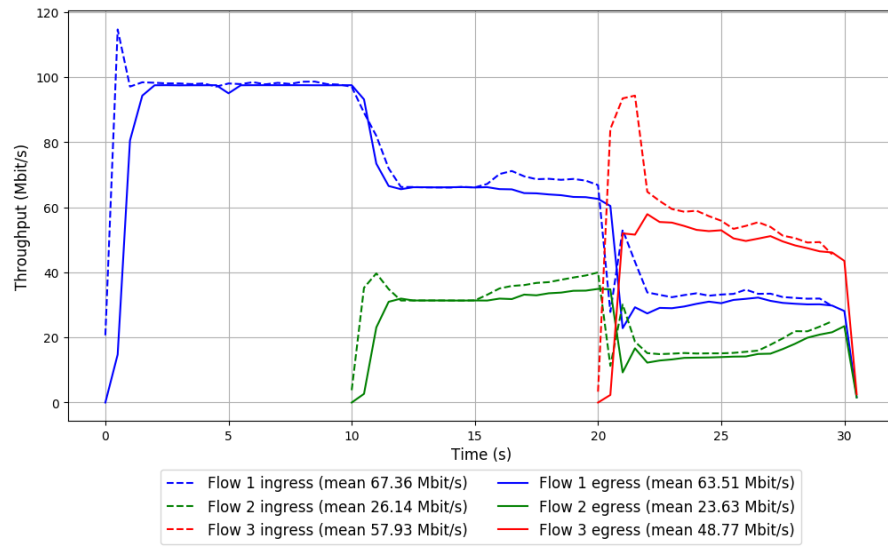


Run 5: Statistics of TCP BBR

Start at: 2019-01-21 13:01:09  
End at: 2019-01-21 13:01:39  
Local clock offset: 4.319 ms  
Remote clock offset: -0.817 ms

# Below is generated by plot.py at 2019-01-21 13:08:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.46 Mbit/s  
95th percentile per-packet one-way delay: 66.711 ms  
Loss rate: 8.20%  
-- Flow 1:  
Average throughput: 63.51 Mbit/s  
95th percentile per-packet one-way delay: 64.970 ms  
Loss rate: 5.67%  
-- Flow 2:  
Average throughput: 23.63 Mbit/s  
95th percentile per-packet one-way delay: 67.563 ms  
Loss rate: 9.64%  
-- Flow 3:  
Average throughput: 48.77 Mbit/s  
95th percentile per-packet one-way delay: 69.341 ms  
Loss rate: 15.76%

# Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-01-21 11:04:44

End at: 2019-01-21 11:05:14

Local clock offset: 0.106 ms

Remote clock offset: -1.12 ms

# Below is generated by plot.py at 2019-01-21 13:08:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.61 Mbit/s

95th percentile per-packet one-way delay: 31.521 ms

Loss rate: 74.31%

-- Flow 1:

Average throughput: 8.71 Mbit/s

95th percentile per-packet one-way delay: 31.754 ms

Loss rate: 73.91%

-- Flow 2:

Average throughput: 5.87 Mbit/s

95th percentile per-packet one-way delay: 30.866 ms

Loss rate: 75.11%

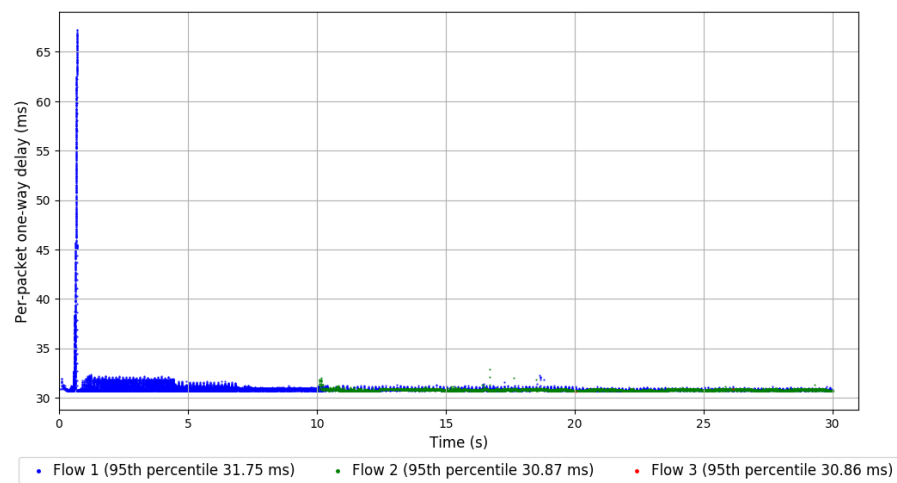
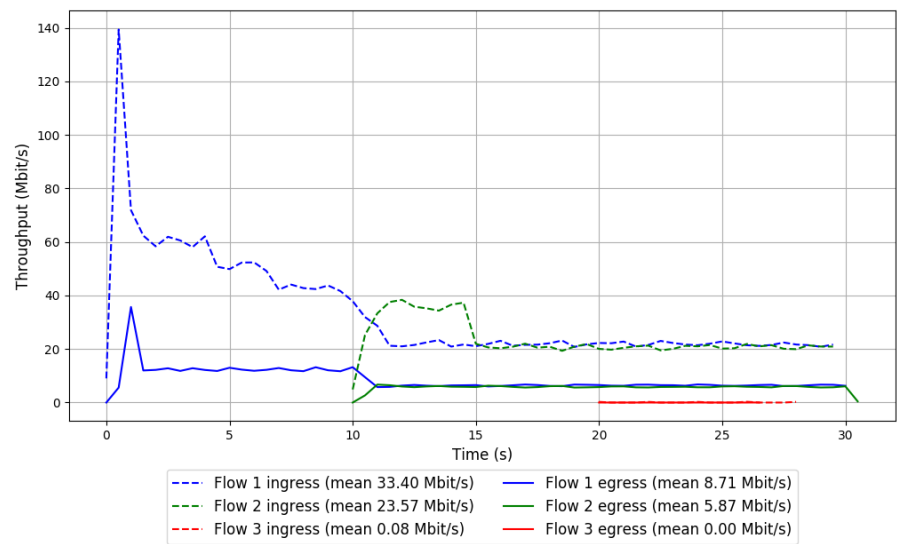
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 30.860 ms

Loss rate: 97.92%

Run 1: Report of Copa — Data Link

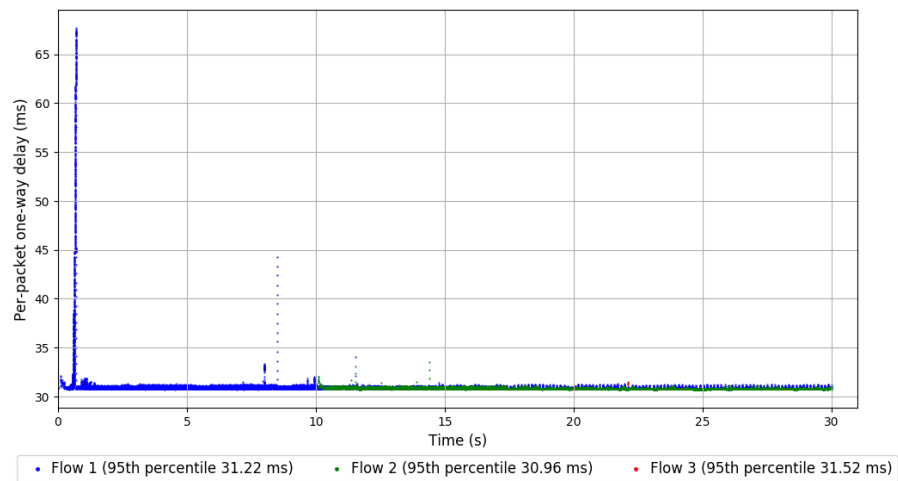
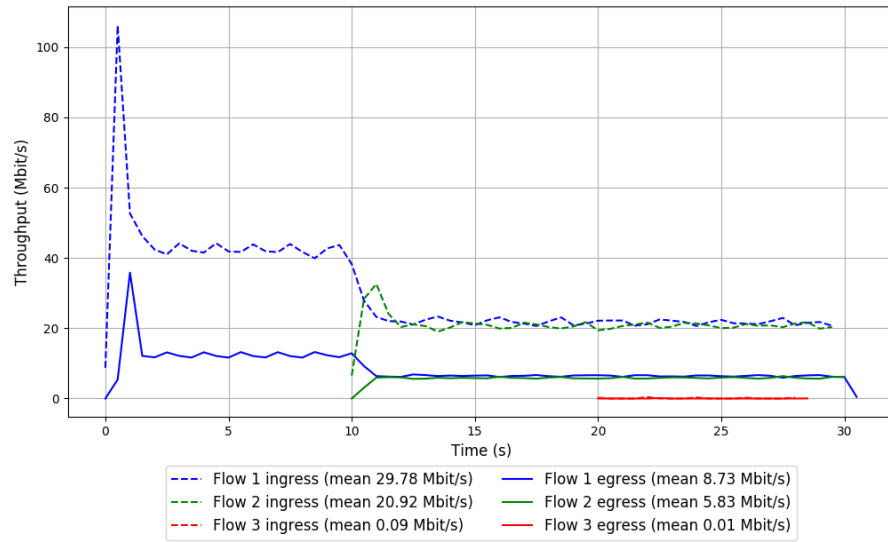


Run 2: Statistics of Copa

Start at: 2019-01-21 11:30:56  
End at: 2019-01-21 11:31:26  
Local clock offset: -0.119 ms  
Remote clock offset: -0.953 ms

# Below is generated by plot.py at 2019-01-21 13:08:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.61 Mbit/s  
95th percentile per-packet one-way delay: 31.127 ms  
Loss rate: 71.16%  
-- Flow 1:  
Average throughput: 8.73 Mbit/s  
95th percentile per-packet one-way delay: 31.221 ms  
Loss rate: 70.69%  
-- Flow 2:  
Average throughput: 5.83 Mbit/s  
95th percentile per-packet one-way delay: 30.961 ms  
Loss rate: 72.15%  
-- Flow 3:  
Average throughput: 0.01 Mbit/s  
95th percentile per-packet one-way delay: 31.519 ms  
Loss rate: 86.76%

## Run 2: Report of Copa — Data Link

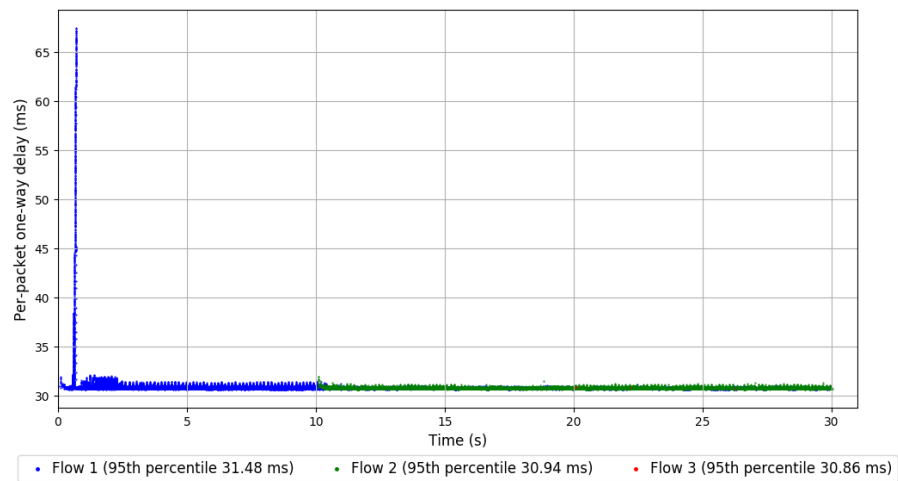
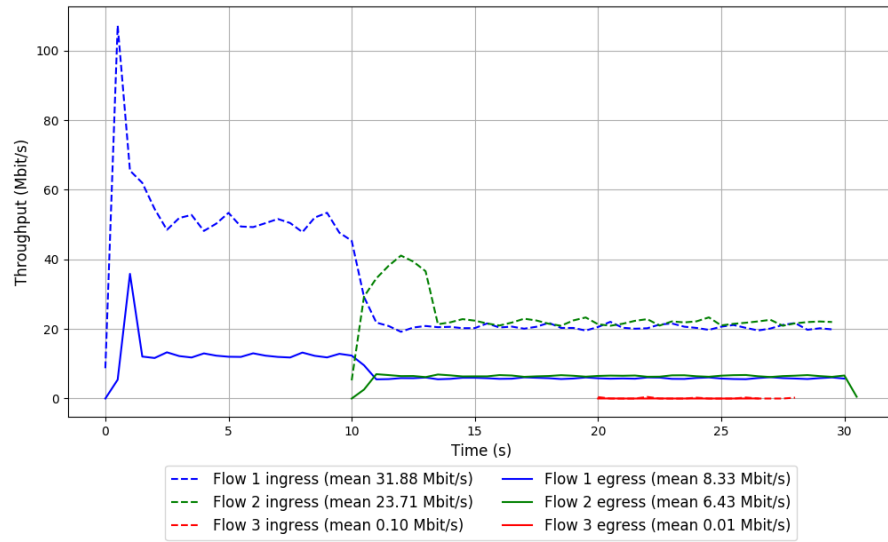


Run 3: Statistics of Copa

Start at: 2019-01-21 11:56:55  
End at: 2019-01-21 11:57:25  
Local clock offset: 0.114 ms  
Remote clock offset: -0.861 ms

# Below is generated by plot.py at 2019-01-21 13:08:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.61 Mbit/s  
95th percentile per-packet one-way delay: 31.210 ms  
Loss rate: 73.54%  
-- Flow 1:  
Average throughput: 8.33 Mbit/s  
95th percentile per-packet one-way delay: 31.483 ms  
Loss rate: 73.86%  
-- Flow 2:  
Average throughput: 6.43 Mbit/s  
95th percentile per-packet one-way delay: 30.936 ms  
Loss rate: 72.87%  
-- Flow 3:  
Average throughput: 0.01 Mbit/s  
95th percentile per-packet one-way delay: 30.864 ms  
Loss rate: 95.47%

### Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-01-21 12:22:37

End at: 2019-01-21 12:23:07

Local clock offset: 2.163 ms

Remote clock offset: -0.53 ms

# Below is generated by plot.py at 2019-01-21 13:08:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.61 Mbit/s

95th percentile per-packet one-way delay: 31.116 ms

Loss rate: 72.34%

-- Flow 1:

Average throughput: 9.21 Mbit/s

95th percentile per-packet one-way delay: 31.139 ms

Loss rate: 71.33%

-- Flow 2:

Average throughput: 5.12 Mbit/s

95th percentile per-packet one-way delay: 31.082 ms

Loss rate: 74.72%

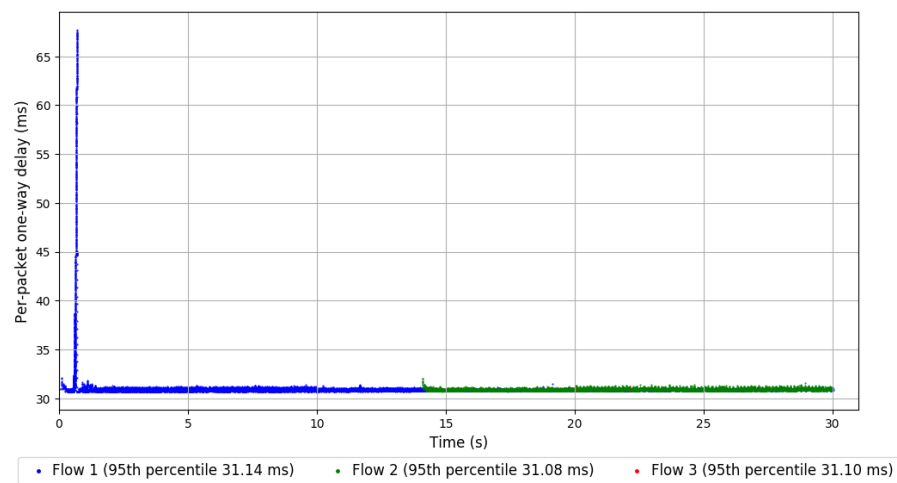
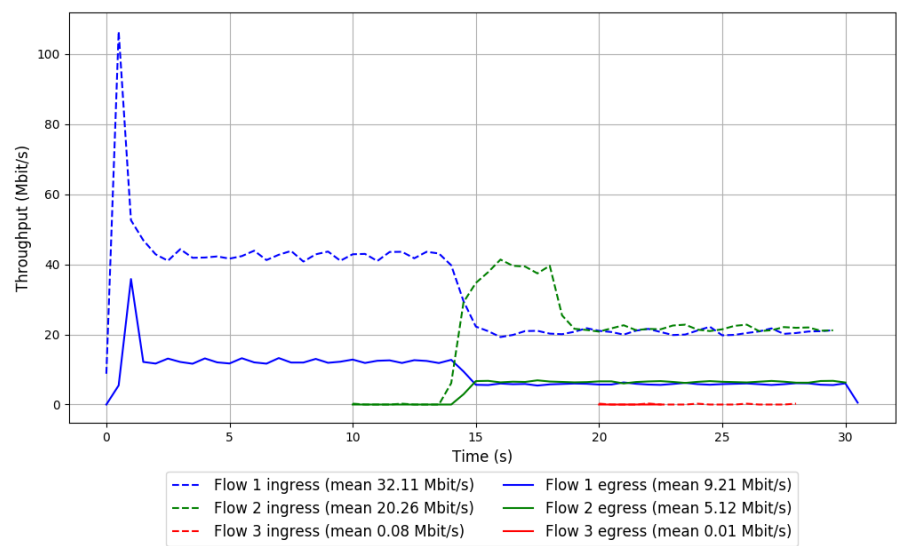
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 31.097 ms

Loss rate: 97.92%

Run 4: Report of Copa — Data Link

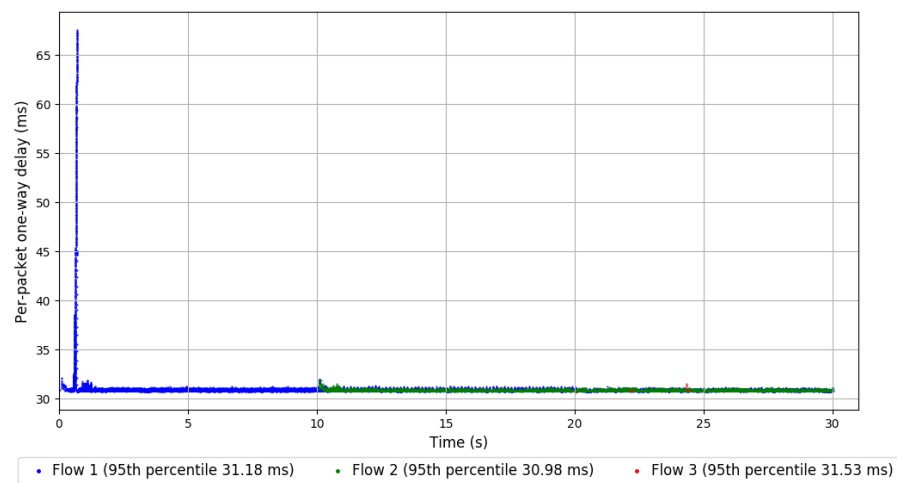
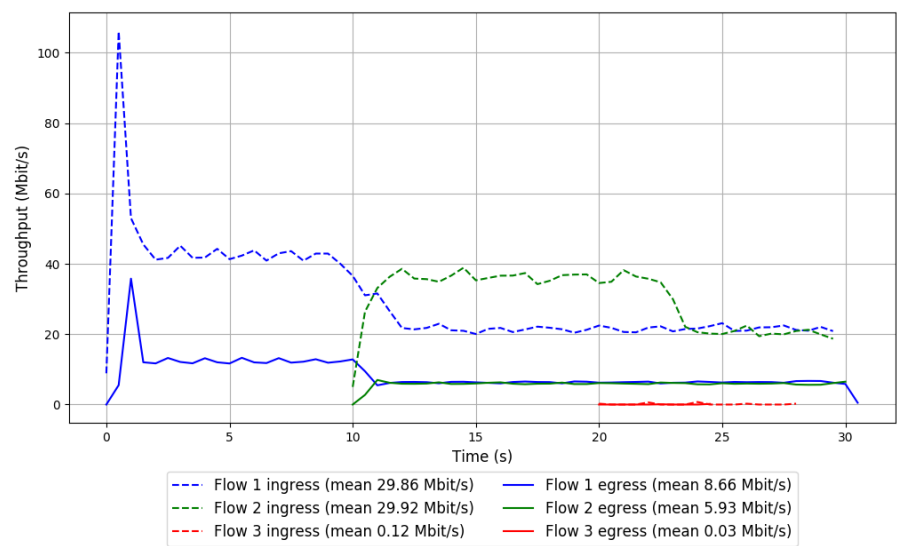


Run 5: Statistics of Copa

Start at: 2019-01-21 12:48:48  
End at: 2019-01-21 12:49:18  
Local clock offset: 4.436 ms  
Remote clock offset: -0.574 ms

# Below is generated by plot.py at 2019-01-21 13:08:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.61 Mbit/s  
95th percentile per-packet one-way delay: 31.062 ms  
Loss rate: 74.68%  
-- Flow 1:  
Average throughput: 8.66 Mbit/s  
95th percentile per-packet one-way delay: 31.178 ms  
Loss rate: 71.00%  
-- Flow 2:  
Average throughput: 5.93 Mbit/s  
95th percentile per-packet one-way delay: 30.980 ms  
Loss rate: 80.17%  
-- Flow 3:  
Average throughput: 0.03 Mbit/s  
95th percentile per-packet one-way delay: 31.529 ms  
Loss rate: 88.15%

Run 5: Report of Copa — Data Link

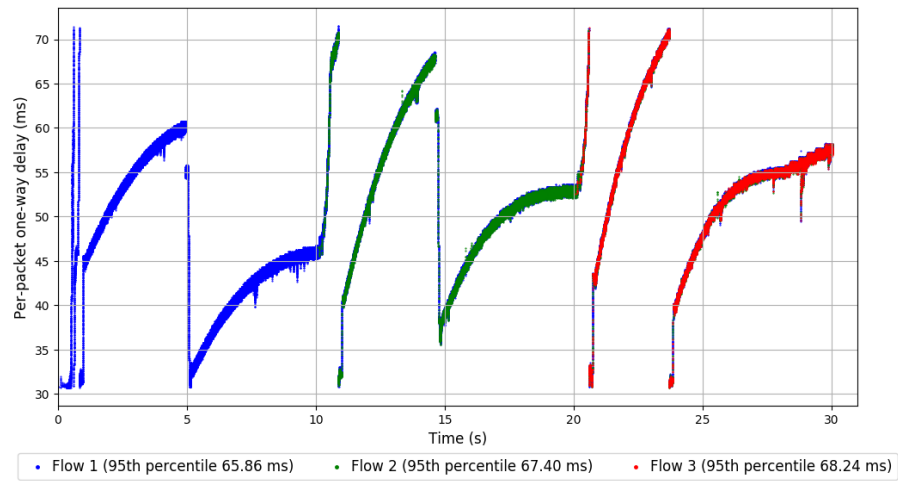
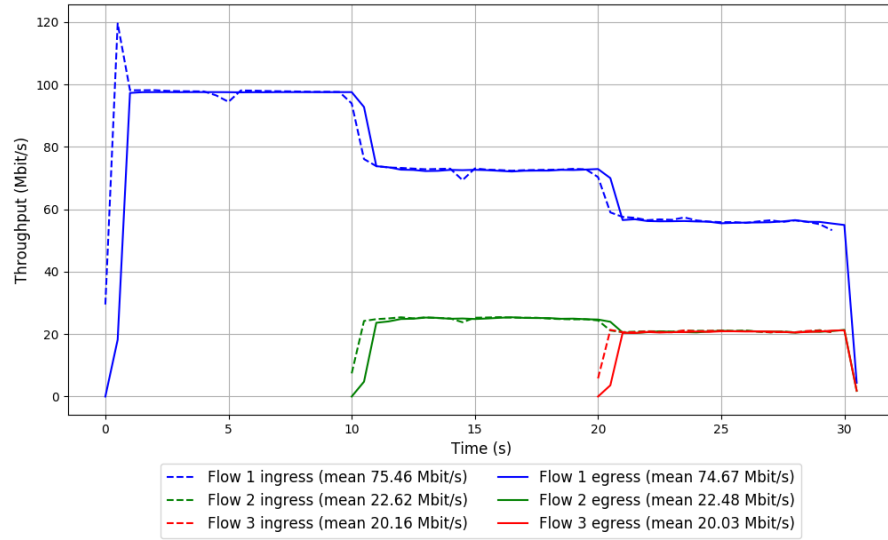


Run 1: Statistics of TCP Cubic

Start at: 2019-01-21 11:00:00  
End at: 2019-01-21 11:00:30  
Local clock offset: 0.537 ms  
Remote clock offset: -1.228 ms

# Below is generated by plot.py at 2019-01-21 13:08:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.30 Mbit/s  
95th percentile per-packet one-way delay: 66.352 ms  
Loss rate: 0.88%  
-- Flow 1:  
Average throughput: 74.67 Mbit/s  
95th percentile per-packet one-way delay: 65.857 ms  
Loss rate: 0.96%  
-- Flow 2:  
Average throughput: 22.48 Mbit/s  
95th percentile per-packet one-way delay: 67.403 ms  
Loss rate: 0.57%  
-- Flow 3:  
Average throughput: 20.03 Mbit/s  
95th percentile per-packet one-way delay: 68.242 ms  
Loss rate: 0.61%

# Run 1: Report of TCP Cubic — Data Link

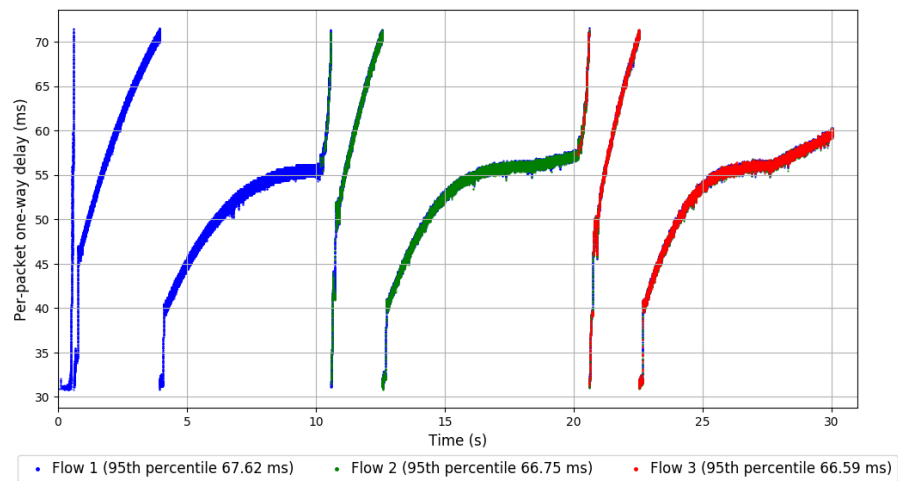
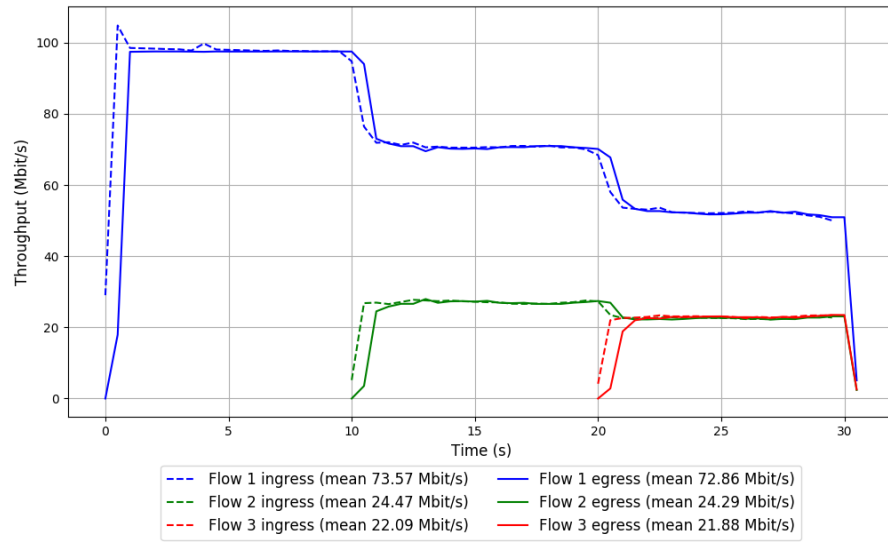


Run 2: Statistics of TCP Cubic

Start at: 2019-01-21 11:25:55  
End at: 2019-01-21 11:26:25  
Local clock offset: -0.156 ms  
Remote clock offset: -0.978 ms

# Below is generated by plot.py at 2019-01-21 13:08:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.30 Mbit/s  
95th percentile per-packet one-way delay: 67.411 ms  
Loss rate: 0.86%  
-- Flow 1:  
Average throughput: 72.86 Mbit/s  
95th percentile per-packet one-way delay: 67.624 ms  
Loss rate: 0.88%  
-- Flow 2:  
Average throughput: 24.29 Mbit/s  
95th percentile per-packet one-way delay: 66.755 ms  
Loss rate: 0.72%  
-- Flow 3:  
Average throughput: 21.88 Mbit/s  
95th percentile per-packet one-way delay: 66.586 ms  
Loss rate: 0.93%

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



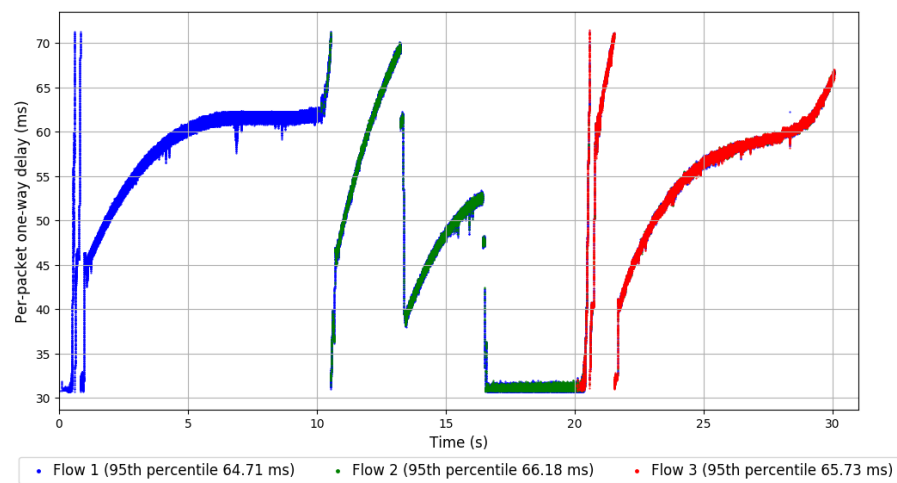
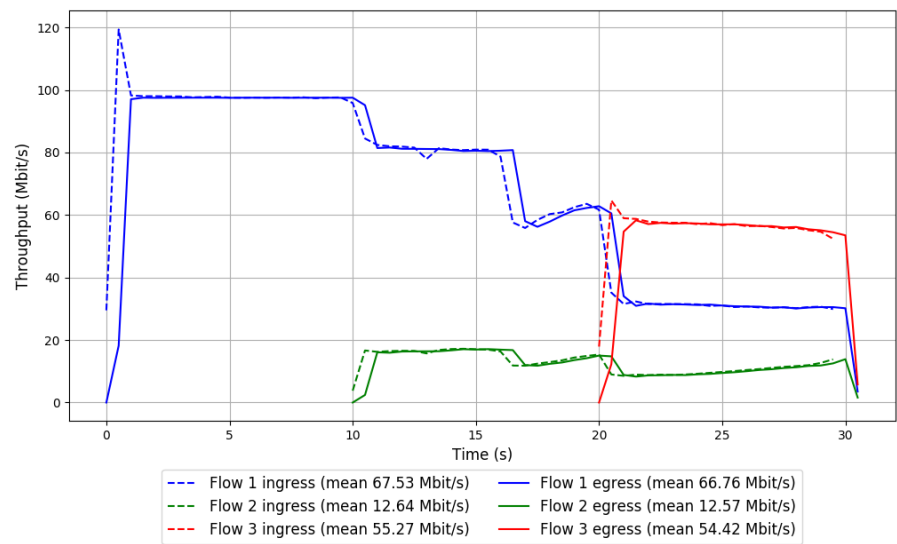


Run 3: Statistics of TCP Cubic

Start at: 2019-01-21 11:51:59  
End at: 2019-01-21 11:52:29  
Local clock offset: 0.036 ms  
Remote clock offset: -0.816 ms

# Below is generated by plot.py at 2019-01-21 13:08:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.26 Mbit/s  
95th percentile per-packet one-way delay: 65.186 ms  
Loss rate: 1.01%  
-- Flow 1:  
Average throughput: 66.76 Mbit/s  
95th percentile per-packet one-way delay: 64.707 ms  
Loss rate: 1.03%  
-- Flow 2:  
Average throughput: 12.57 Mbit/s  
95th percentile per-packet one-way delay: 66.177 ms  
Loss rate: 0.48%  
-- Flow 3:  
Average throughput: 54.42 Mbit/s  
95th percentile per-packet one-way delay: 65.728 ms  
Loss rate: 1.18%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-01-21 12:17:48

End at: 2019-01-21 12:18:18

Local clock offset: 0.8 ms

Remote clock offset: -0.33 ms

# Below is generated by plot.py at 2019-01-21 13:09:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.29 Mbit/s

95th percentile per-packet one-way delay: 62.402 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 72.49 Mbit/s

95th percentile per-packet one-way delay: 62.274 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 20.92 Mbit/s

95th percentile per-packet one-way delay: 62.787 ms

Loss rate: 0.52%

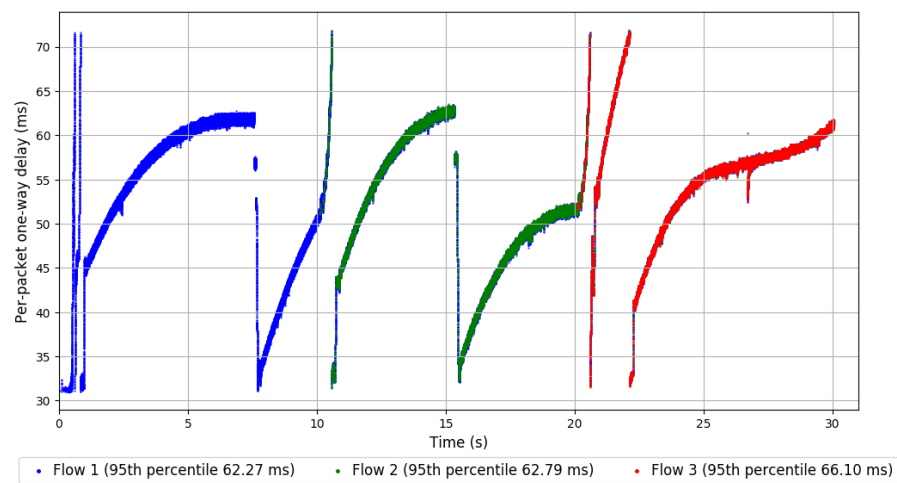
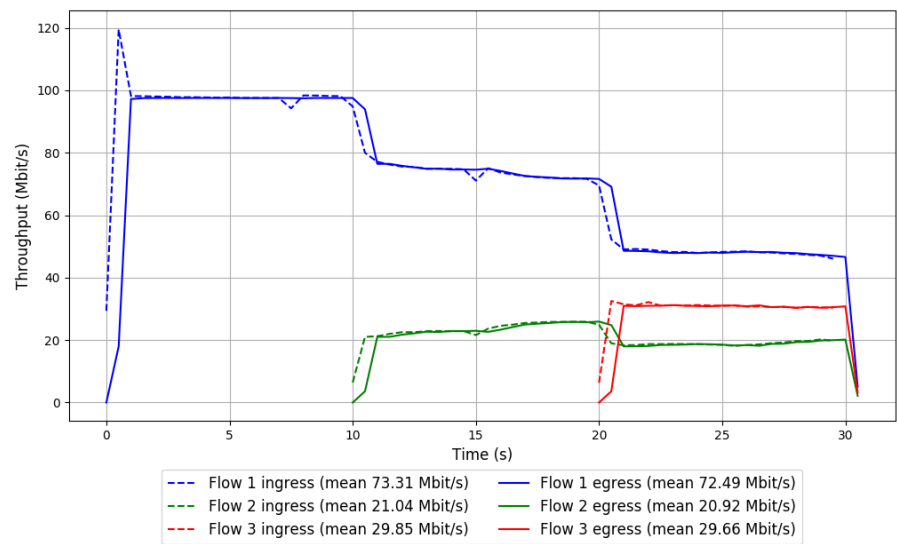
-- Flow 3:

Average throughput: 29.66 Mbit/s

95th percentile per-packet one-way delay: 66.100 ms

Loss rate: 0.54%

Run 4: Report of TCP Cubic — Data Link

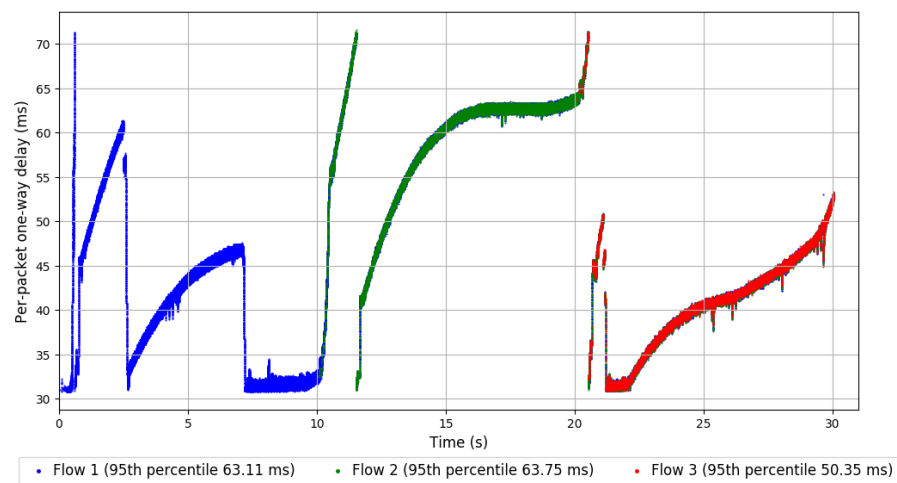
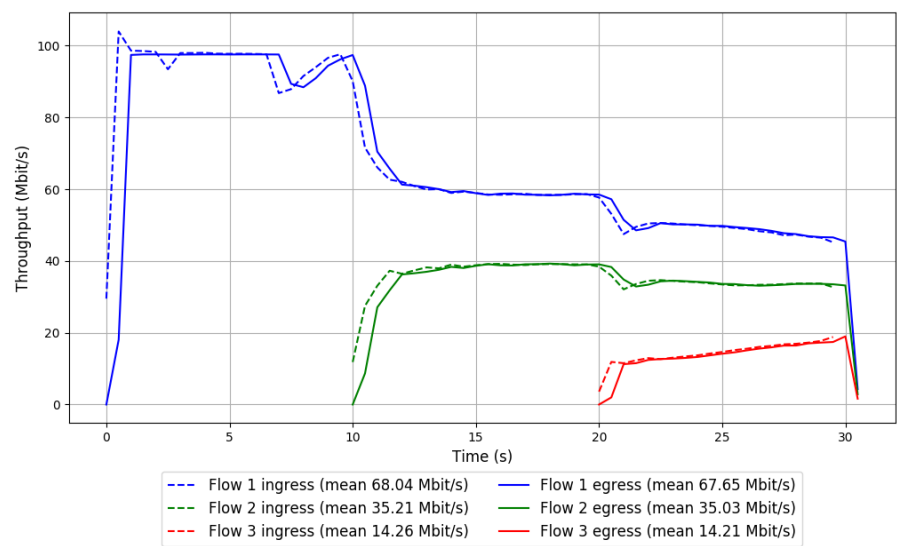


Run 5: Statistics of TCP Cubic

Start at: 2019-01-21 12:43:55  
End at: 2019-01-21 12:44:25  
Local clock offset: 4.473 ms  
Remote clock offset: -0.438 ms

# Below is generated by plot.py at 2019-01-21 13:09:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.70 Mbit/s  
95th percentile per-packet one-way delay: 63.277 ms  
Loss rate: 0.49%  
-- Flow 1:  
Average throughput: 67.65 Mbit/s  
95th percentile per-packet one-way delay: 63.110 ms  
Loss rate: 0.51%  
-- Flow 2:  
Average throughput: 35.03 Mbit/s  
95th percentile per-packet one-way delay: 63.750 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 14.21 Mbit/s  
95th percentile per-packet one-way delay: 50.349 ms  
Loss rate: 0.49%

Run 5: Report of TCP Cubic — Data Link

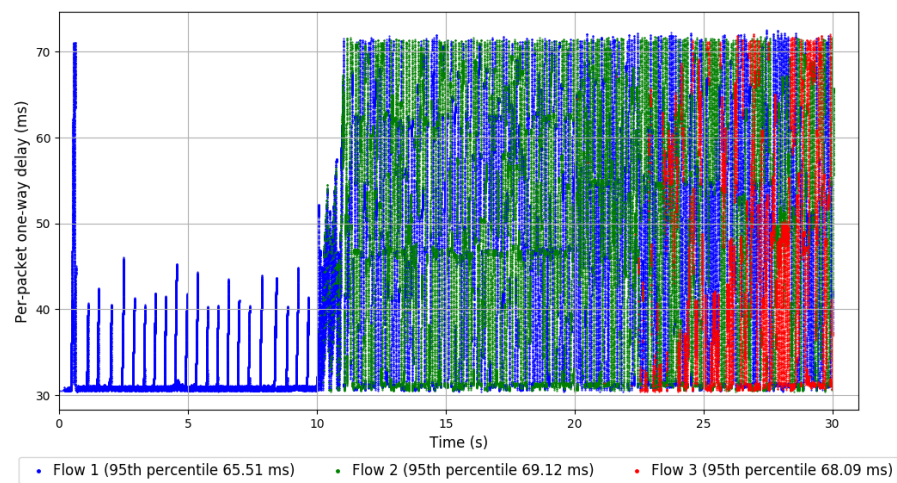
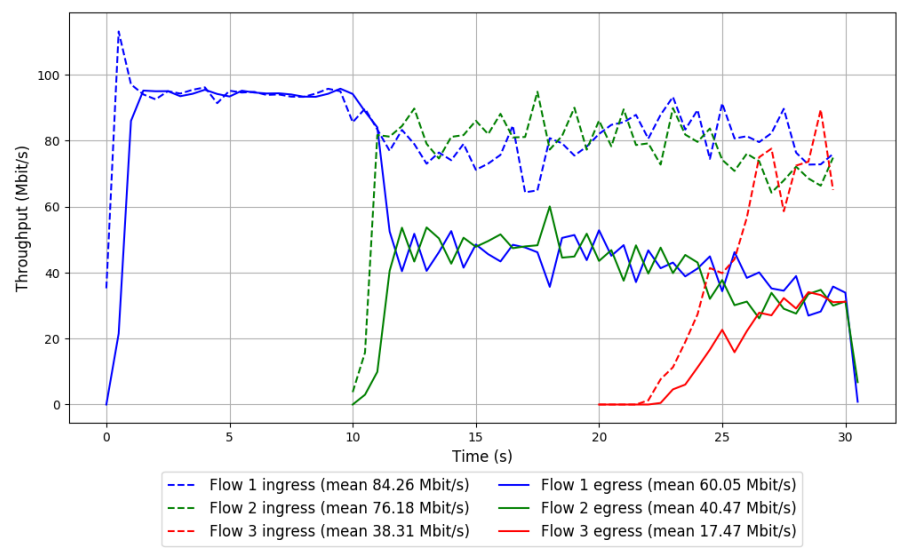


Run 1: Statistics of FillP

Start at: 2019-01-21 11:02:22  
End at: 2019-01-21 11:02:52  
Local clock offset: 0.299 ms  
Remote clock offset: -1.182 ms

# Below is generated by plot.py at 2019-01-21 13:09:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.70 Mbit/s  
95th percentile per-packet one-way delay: 67.552 ms  
Loss rate: 37.14%  
-- Flow 1:  
Average throughput: 60.05 Mbit/s  
95th percentile per-packet one-way delay: 65.512 ms  
Loss rate: 28.70%  
-- Flow 2:  
Average throughput: 40.47 Mbit/s  
95th percentile per-packet one-way delay: 69.123 ms  
Loss rate: 46.81%  
-- Flow 3:  
Average throughput: 17.47 Mbit/s  
95th percentile per-packet one-way delay: 68.093 ms  
Loss rate: 54.54%

Run 1: Report of FillP — Data Link



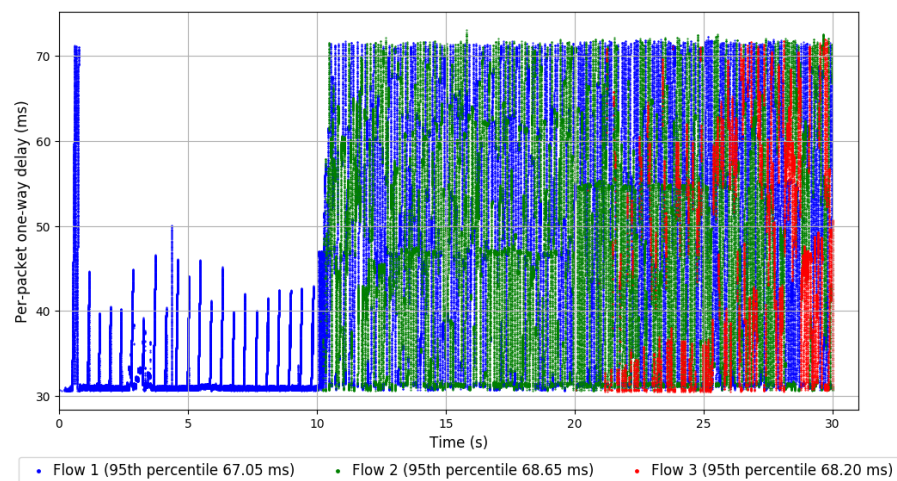
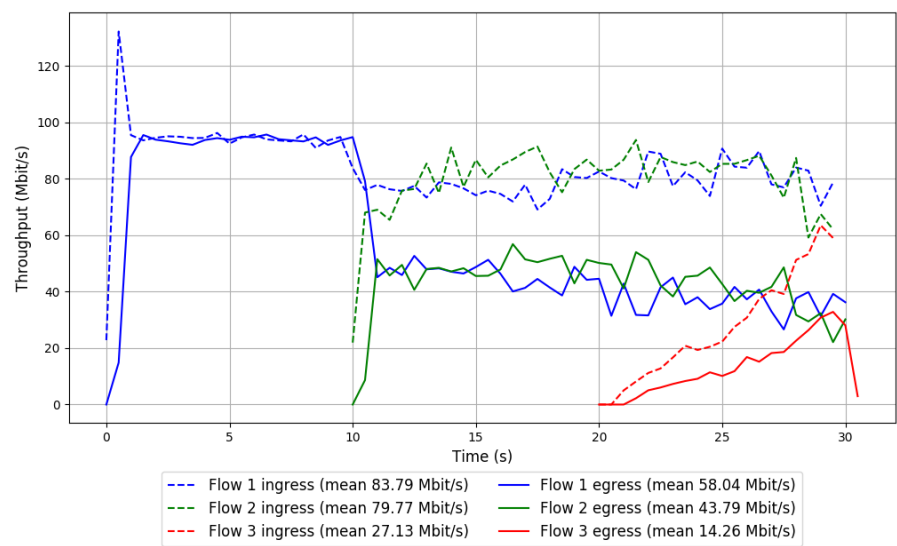


Run 2: Statistics of FillP

Start at: 2019-01-21 11:28:26  
End at: 2019-01-21 11:28:56  
Local clock offset: -0.133 ms  
Remote clock offset: -1.002 ms

# Below is generated by plot.py at 2019-01-21 13:09:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.84 Mbit/s  
95th percentile per-packet one-way delay: 67.653 ms  
Loss rate: 36.99%  
-- Flow 1:  
Average throughput: 58.04 Mbit/s  
95th percentile per-packet one-way delay: 67.054 ms  
Loss rate: 30.73%  
-- Flow 2:  
Average throughput: 43.79 Mbit/s  
95th percentile per-packet one-way delay: 68.652 ms  
Loss rate: 45.11%  
-- Flow 3:  
Average throughput: 14.26 Mbit/s  
95th percentile per-packet one-way delay: 68.201 ms  
Loss rate: 47.34%

Run 2: Report of FillP — Data Link

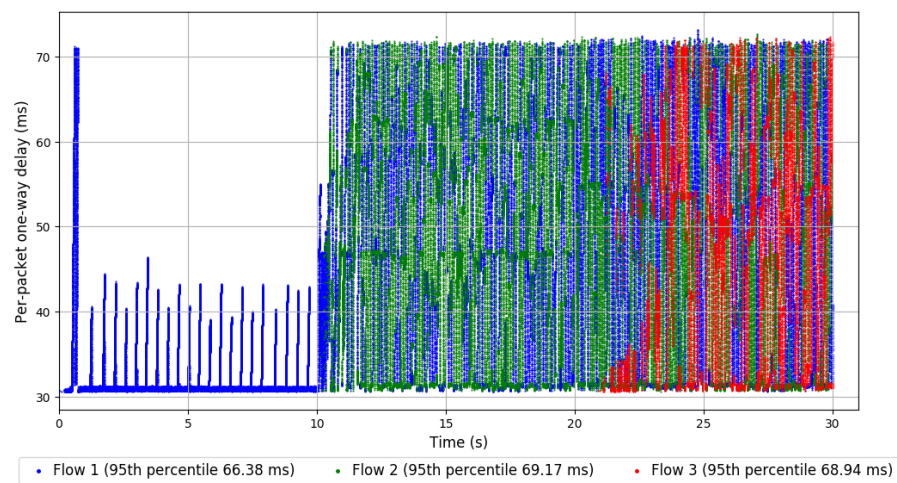
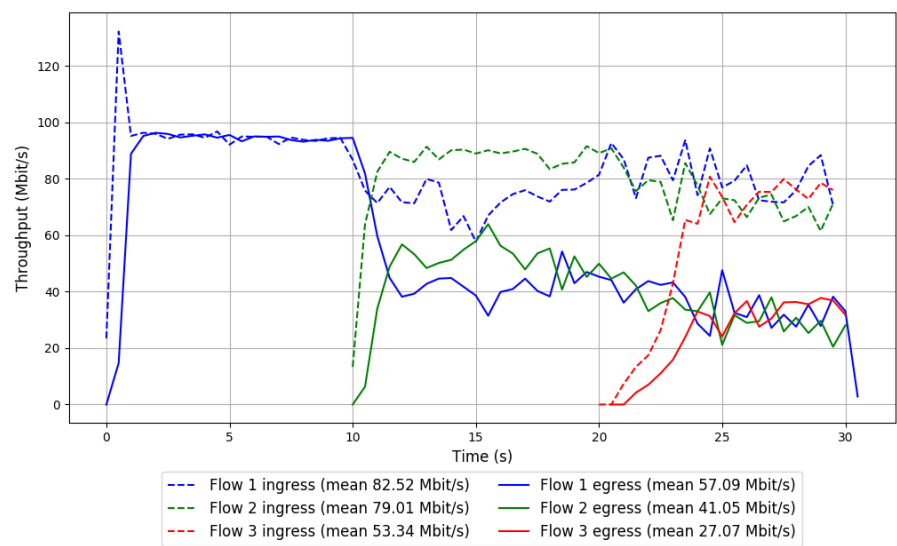


Run 3: Statistics of FillP

Start at: 2019-01-21 11:54:24  
End at: 2019-01-21 11:54:54  
Local clock offset: 0.071 ms  
Remote clock offset: -0.821 ms

# Below is generated by plot.py at 2019-01-21 13:09:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.58 Mbit/s  
95th percentile per-packet one-way delay: 68.038 ms  
Loss rate: 39.38%  
-- Flow 1:  
Average throughput: 57.09 Mbit/s  
95th percentile per-packet one-way delay: 66.382 ms  
Loss rate: 30.80%  
-- Flow 2:  
Average throughput: 41.05 Mbit/s  
95th percentile per-packet one-way delay: 69.174 ms  
Loss rate: 48.07%  
-- Flow 3:  
Average throughput: 27.07 Mbit/s  
95th percentile per-packet one-way delay: 68.938 ms  
Loss rate: 53.60%

Run 3: Report of FillP — Data Link

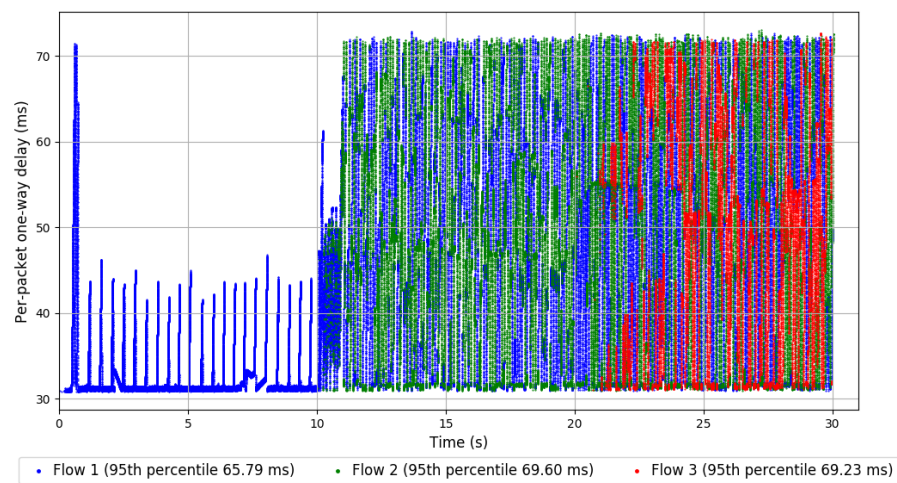
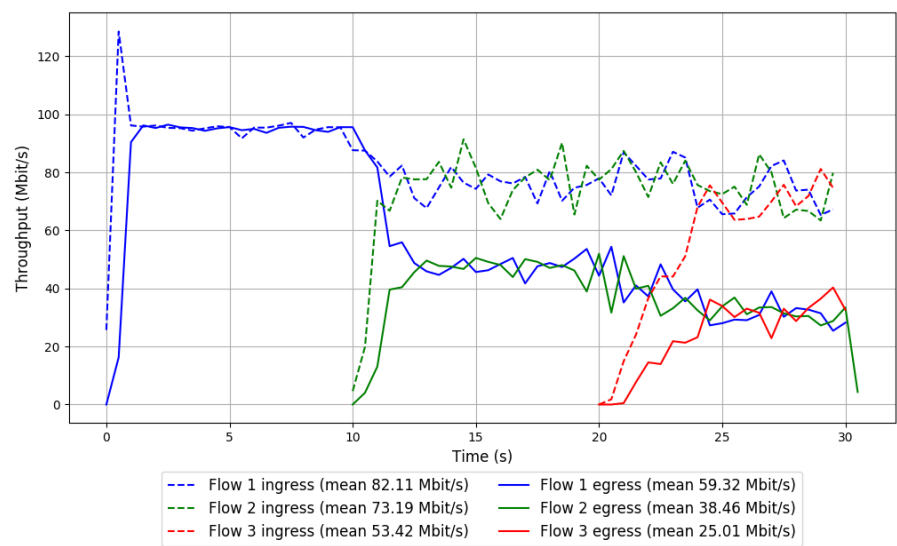


Run 4: Statistics of FillP

Start at: 2019-01-21 12:20:12  
End at: 2019-01-21 12:20:42  
Local clock offset: 1.564 ms  
Remote clock offset: -0.28 ms

# Below is generated by plot.py at 2019-01-21 13:10:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.16 Mbit/s  
95th percentile per-packet one-way delay: 67.810 ms  
Loss rate: 37.27%  
-- Flow 1:  
Average throughput: 59.32 Mbit/s  
95th percentile per-packet one-way delay: 65.788 ms  
Loss rate: 27.77%  
-- Flow 2:  
Average throughput: 38.46 Mbit/s  
95th percentile per-packet one-way delay: 69.597 ms  
Loss rate: 47.36%  
-- Flow 3:  
Average throughput: 25.01 Mbit/s  
95th percentile per-packet one-way delay: 69.231 ms  
Loss rate: 53.46%

Run 4: Report of FillP — Data Link

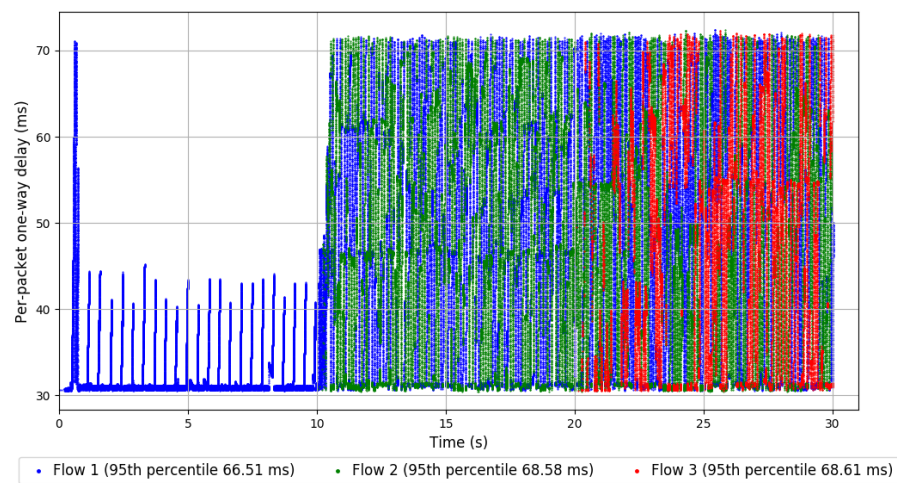
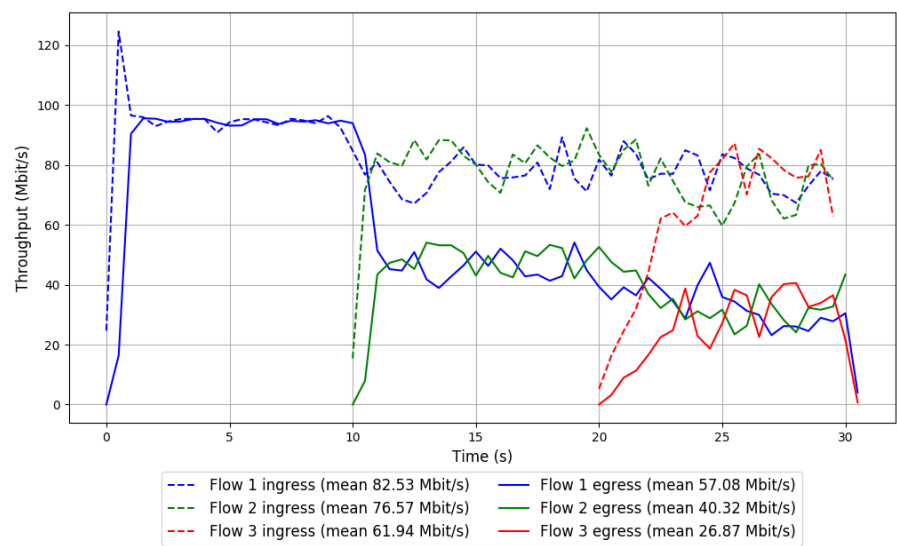


Run 5: Statistics of FillP

Start at: 2019-01-21 12:46:22  
End at: 2019-01-21 12:46:52  
Local clock offset: 4.563 ms  
Remote clock offset: -0.693 ms

# Below is generated by plot.py at 2019-01-21 13:10:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.78 Mbit/s  
95th percentile per-packet one-way delay: 67.650 ms  
Loss rate: 39.73%  
-- Flow 1:  
Average throughput: 57.08 Mbit/s  
95th percentile per-packet one-way delay: 66.514 ms  
Loss rate: 30.79%  
-- Flow 2:  
Average throughput: 40.32 Mbit/s  
95th percentile per-packet one-way delay: 68.578 ms  
Loss rate: 47.36%  
-- Flow 3:  
Average throughput: 26.87 Mbit/s  
95th percentile per-packet one-way delay: 68.613 ms  
Loss rate: 56.70%

Run 5: Report of FillP — Data Link





Run 1: Statistics of FillP-Sheep

Start at: 2019-01-21 11:13:40

End at: 2019-01-21 11:14:10

Local clock offset: -0.389 ms

Remote clock offset: -1.0 ms

# Below is generated by plot.py at 2019-01-21 13:10:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.16 Mbit/s

95th percentile per-packet one-way delay: 65.565 ms

Loss rate: 11.37%

-- Flow 1:

Average throughput: 58.09 Mbit/s

95th percentile per-packet one-way delay: 64.070 ms

Loss rate: 8.48%

-- Flow 2:

Average throughput: 43.65 Mbit/s

95th percentile per-packet one-way delay: 66.948 ms

Loss rate: 16.24%

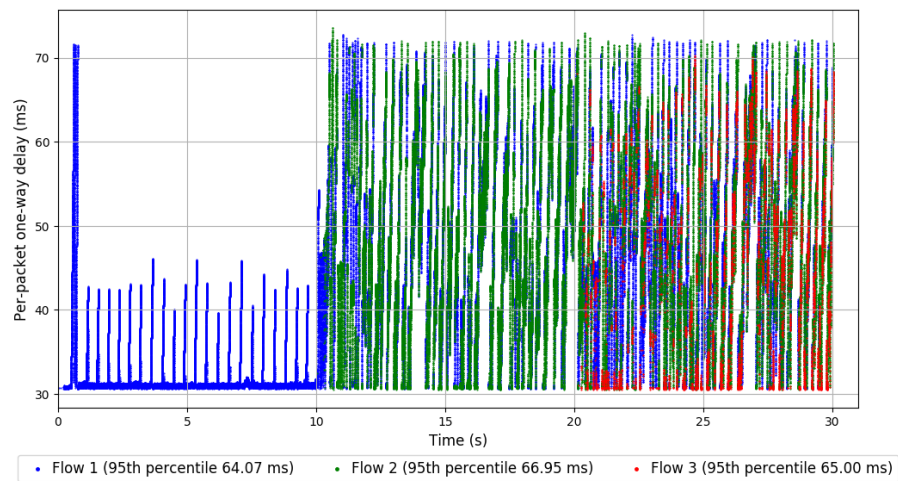
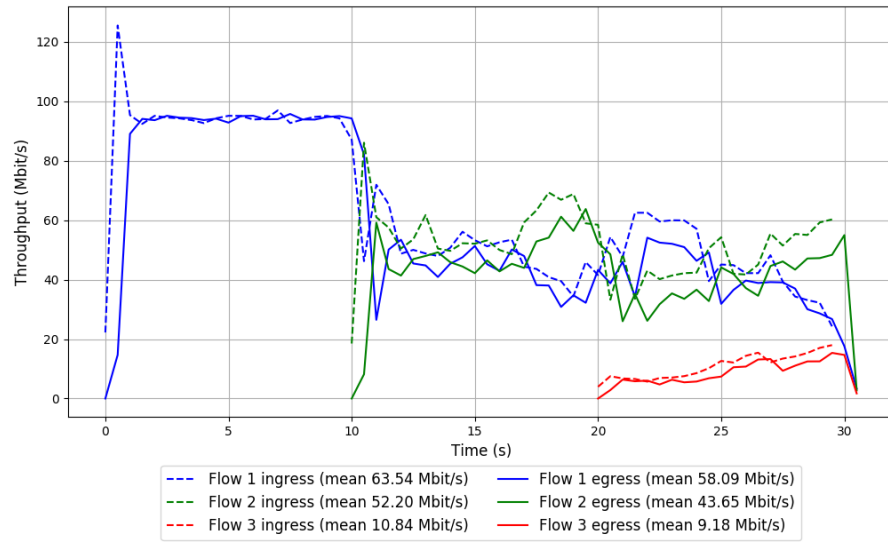
-- Flow 3:

Average throughput: 9.18 Mbit/s

95th percentile per-packet one-way delay: 64.995 ms

Loss rate: 15.37%

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

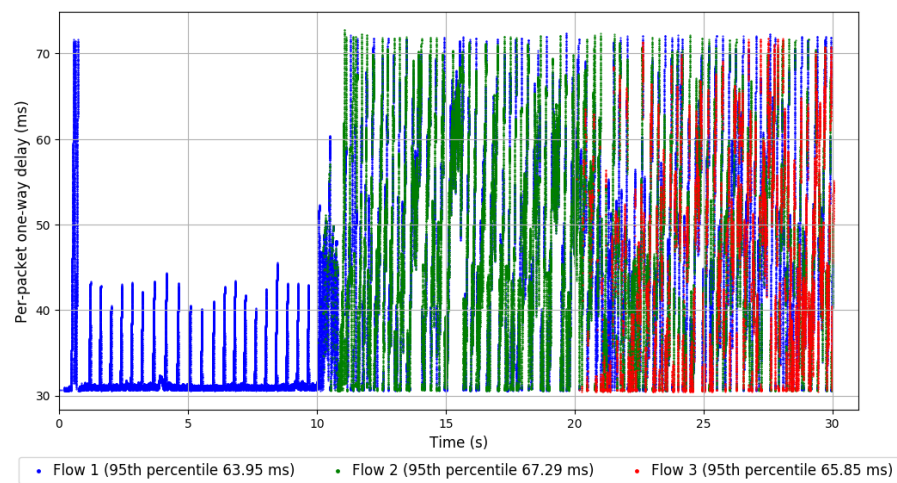
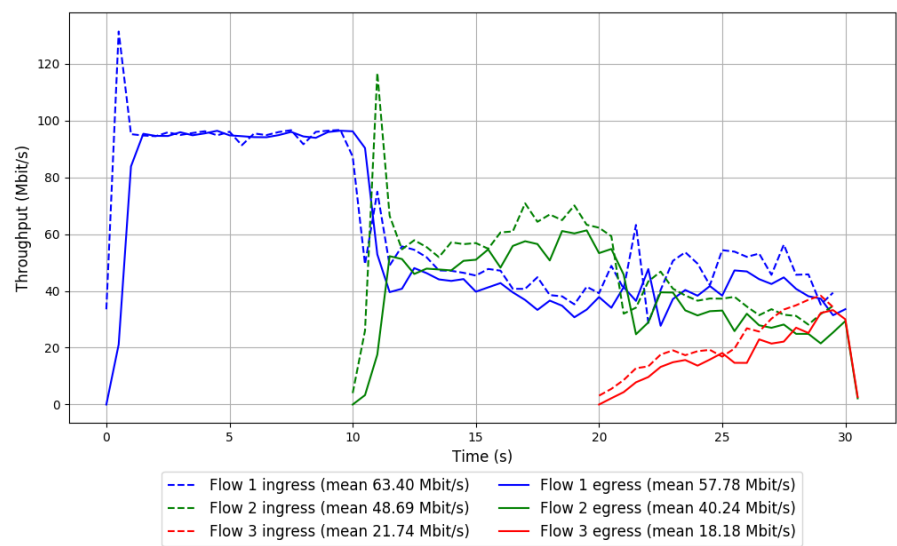


Run 2: Statistics of FillP-Sheep

Start at: 2019-01-21 11:39:48  
End at: 2019-01-21 11:40:18  
Local clock offset: -0.14 ms  
Remote clock offset: -1.006 ms

# Below is generated by plot.py at 2019-01-21 13:10:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.53 Mbit/s  
95th percentile per-packet one-way delay: 65.643 ms  
Loss rate: 12.04%  
-- Flow 1:  
Average throughput: 57.78 Mbit/s  
95th percentile per-packet one-way delay: 63.949 ms  
Loss rate: 8.84%  
-- Flow 2:  
Average throughput: 40.24 Mbit/s  
95th percentile per-packet one-way delay: 67.288 ms  
Loss rate: 17.33%  
-- Flow 3:  
Average throughput: 18.18 Mbit/s  
95th percentile per-packet one-way delay: 65.850 ms  
Loss rate: 16.39%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-01-21 12:05:34

End at: 2019-01-21 12:06:04

Local clock offset: 0.152 ms

Remote clock offset: -0.58 ms

# Below is generated by plot.py at 2019-01-21 13:10:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.10 Mbit/s

95th percentile per-packet one-way delay: 65.640 ms

Loss rate: 12.15%

-- Flow 1:

Average throughput: 56.68 Mbit/s

95th percentile per-packet one-way delay: 64.308 ms

Loss rate: 9.67%

-- Flow 2:

Average throughput: 38.22 Mbit/s

95th percentile per-packet one-way delay: 67.083 ms

Loss rate: 15.91%

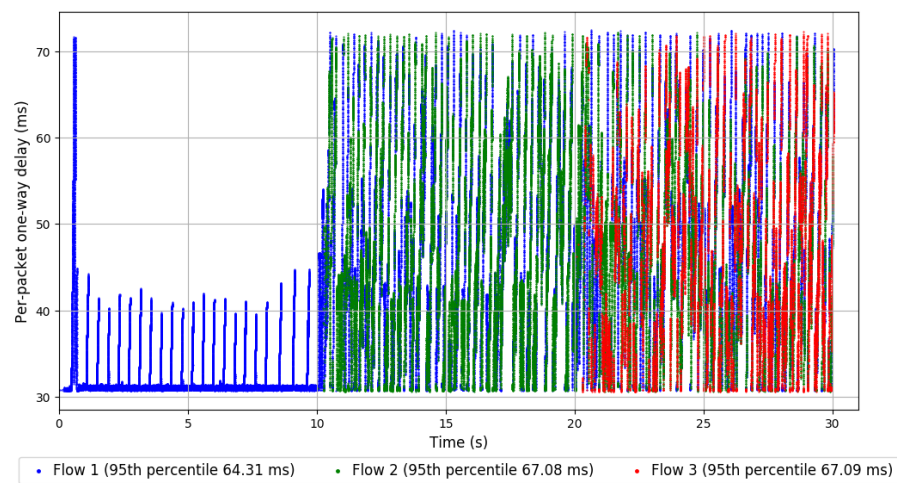
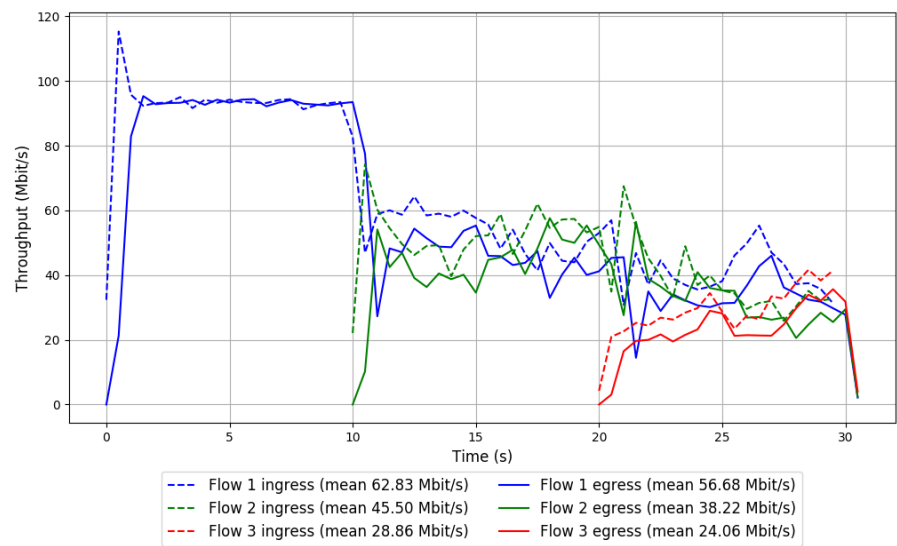
-- Flow 3:

Average throughput: 24.06 Mbit/s

95th percentile per-packet one-way delay: 67.089 ms

Loss rate: 16.51%

Run 3: Report of FillP-Sheep — Data Link

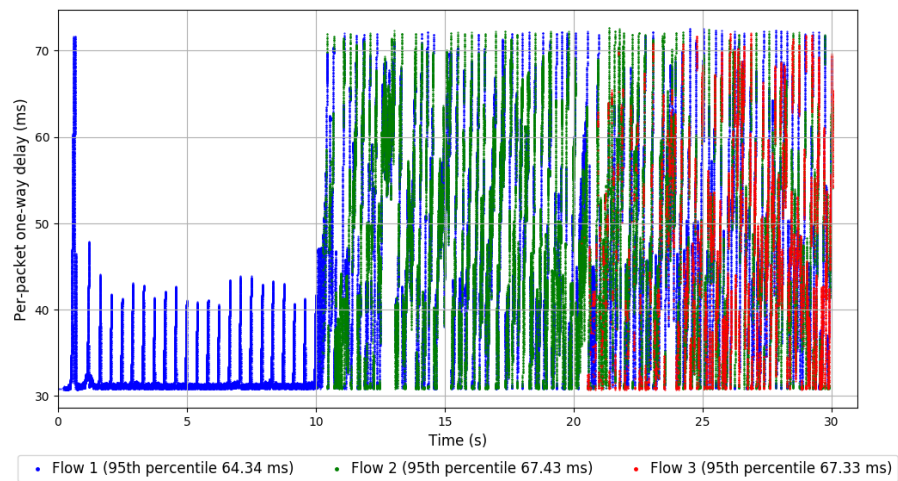
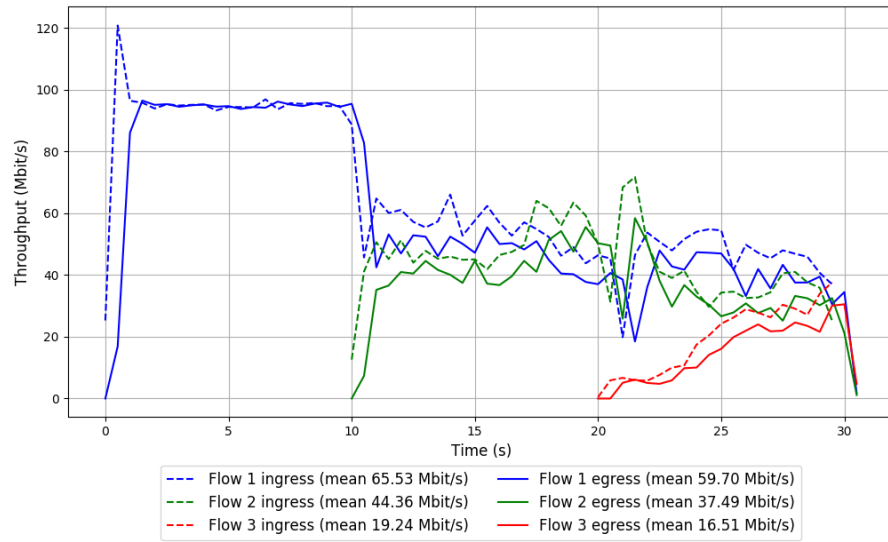


Run 4: Statistics of FillP-Sheep

Start at: 2019-01-21 12:31:23  
End at: 2019-01-21 12:31:53  
Local clock offset: 3.523 ms  
Remote clock offset: -0.172 ms

# Below is generated by plot.py at 2019-01-21 13:11:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.98 Mbit/s  
95th percentile per-packet one-way delay: 65.925 ms  
Loss rate: 11.17%  
-- Flow 1:  
Average throughput: 59.70 Mbit/s  
95th percentile per-packet one-way delay: 64.336 ms  
Loss rate: 8.80%  
-- Flow 2:  
Average throughput: 37.49 Mbit/s  
95th percentile per-packet one-way delay: 67.433 ms  
Loss rate: 15.38%  
-- Flow 3:  
Average throughput: 16.51 Mbit/s  
95th percentile per-packet one-way delay: 67.332 ms  
Loss rate: 15.91%

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



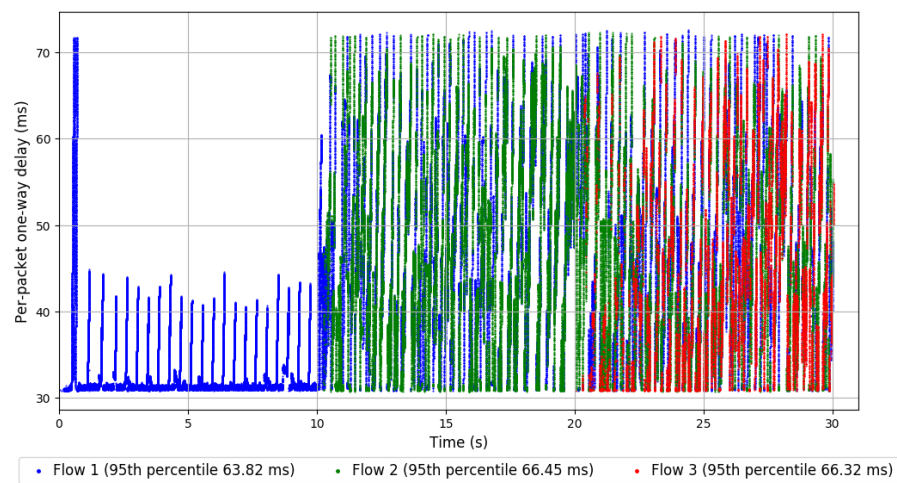
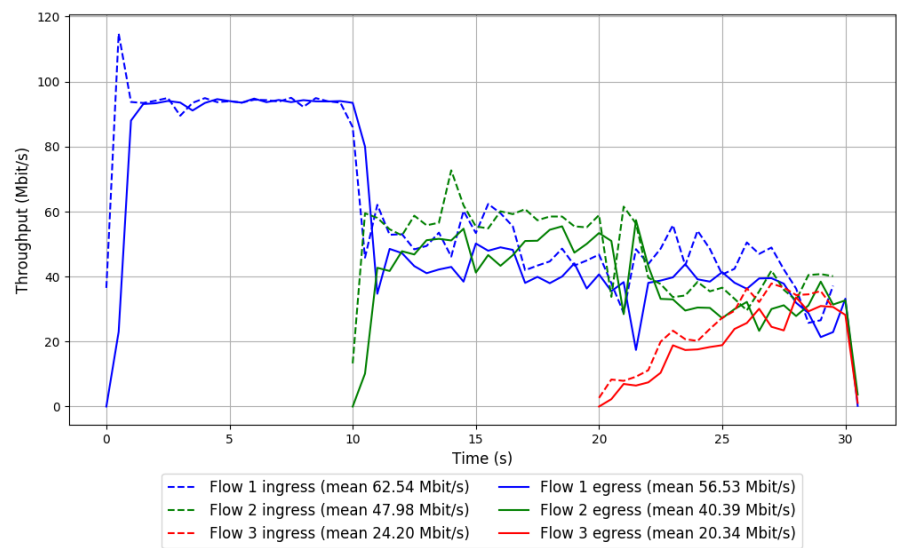


Run 5: Statistics of FillP-Sheep

Start at: 2019-01-21 12:57:29  
End at: 2019-01-21 12:57:59  
Local clock offset: 4.278 ms  
Remote clock offset: -0.682 ms

```
# Below is generated by plot.py at 2019-01-21 13:11:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.14 Mbit/s
95th percentile per-packet one-way delay: 65.261 ms
Loss rate: 11.98%
-- Flow 1:
Average throughput: 56.53 Mbit/s
95th percentile per-packet one-way delay: 63.819 ms
Loss rate: 9.58%
-- Flow 2:
Average throughput: 40.39 Mbit/s
95th percentile per-packet one-way delay: 66.451 ms
Loss rate: 15.74%
-- Flow 3:
Average throughput: 20.34 Mbit/s
95th percentile per-packet one-way delay: 66.318 ms
Loss rate: 15.76%
```

Run 5: Report of FillP-Sheep — Data Link

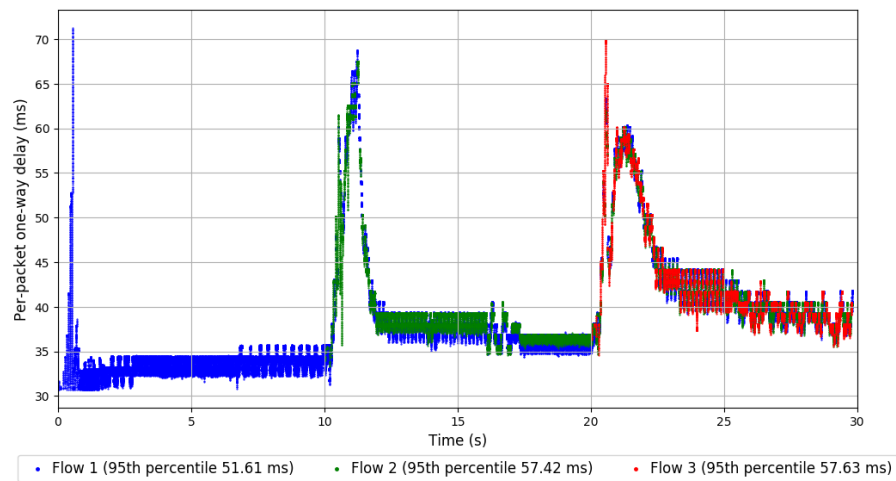
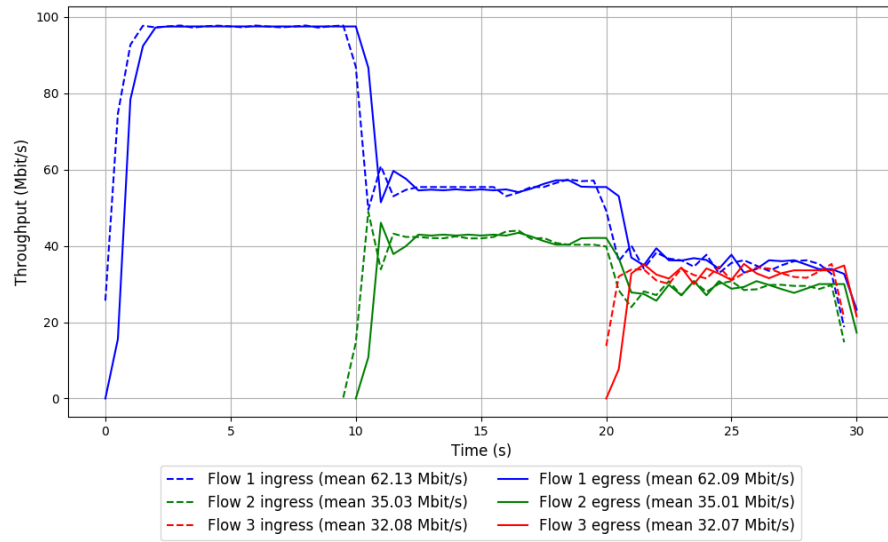


Run 1: Statistics of Indigo

Start at: 2019-01-21 11:05:57  
End at: 2019-01-21 11:06:27  
Local clock offset: 0.023 ms  
Remote clock offset: -1.143 ms

# Below is generated by plot.py at 2019-01-21 13:11:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.84 Mbit/s  
95th percentile per-packet one-way delay: 56.125 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 62.09 Mbit/s  
95th percentile per-packet one-way delay: 51.610 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 35.01 Mbit/s  
95th percentile per-packet one-way delay: 57.422 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 32.07 Mbit/s  
95th percentile per-packet one-way delay: 57.627 ms  
Loss rate: 0.00%

## Run 1: Report of Indigo — Data Link

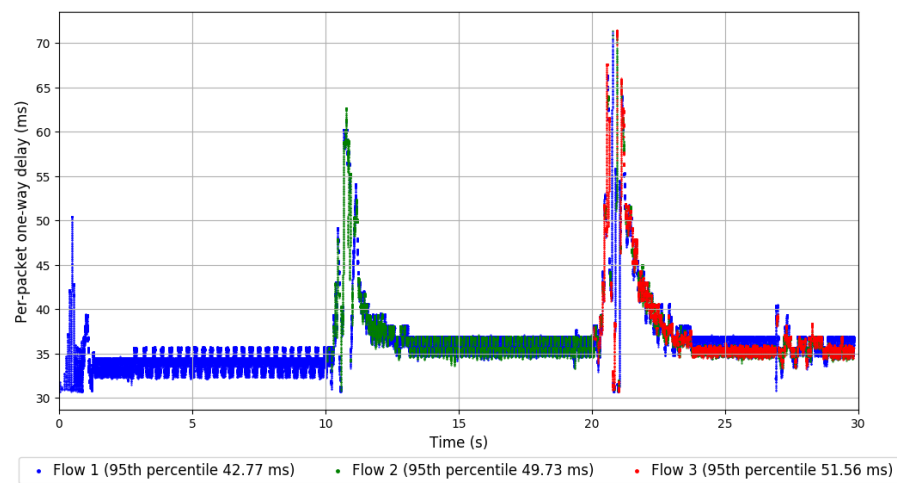
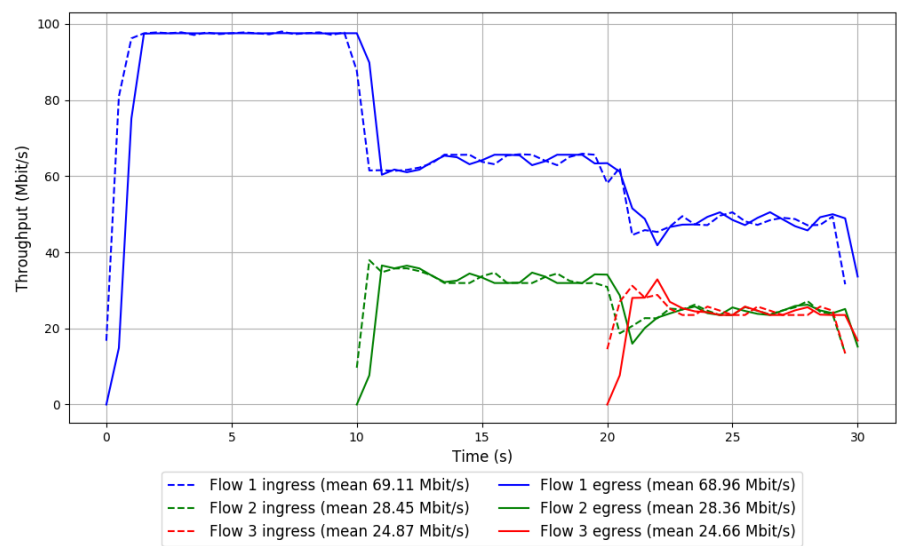


Run 2: Statistics of Indigo

Start at: 2019-01-21 11:32:07  
End at: 2019-01-21 11:32:37  
Local clock offset: -0.119 ms  
Remote clock offset: -0.988 ms

# Below is generated by plot.py at 2019-01-21 13:11:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.80 Mbit/s  
95th percentile per-packet one-way delay: 45.220 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 68.96 Mbit/s  
95th percentile per-packet one-way delay: 42.767 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 28.36 Mbit/s  
95th percentile per-packet one-way delay: 49.733 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 24.66 Mbit/s  
95th percentile per-packet one-way delay: 51.563 ms  
Loss rate: 0.86%

Run 2: Report of Indigo — Data Link

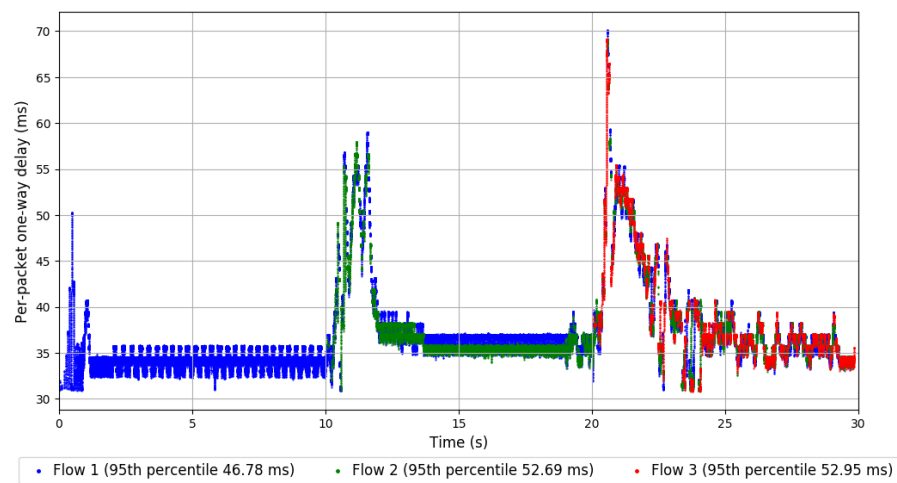
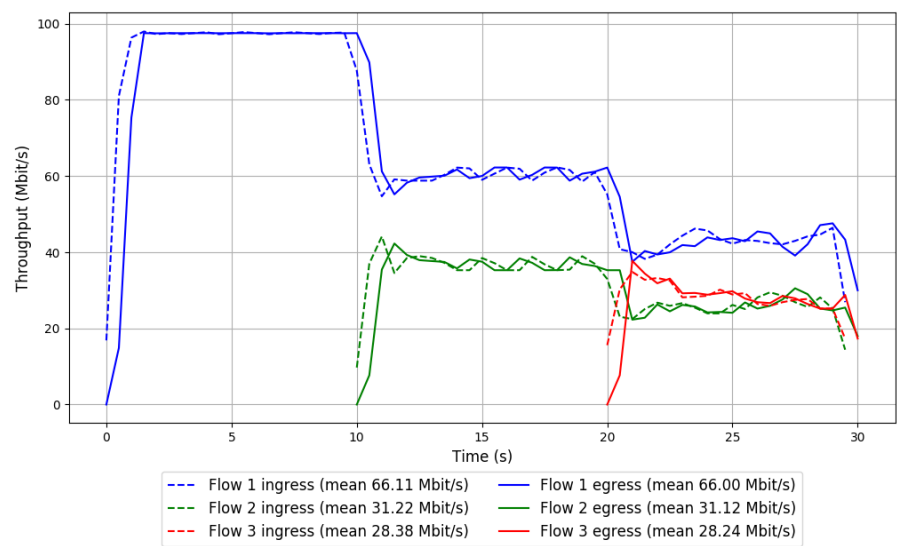


Run 3: Statistics of Indigo

Start at: 2019-01-21 11:58:07  
End at: 2019-01-21 11:58:37  
Local clock offset: 0.101 ms  
Remote clock offset: -0.669 ms

# Below is generated by plot.py at 2019-01-21 13:11:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.81 Mbit/s  
95th percentile per-packet one-way delay: 50.232 ms  
Loss rate: 0.23%  
-- Flow 1:  
Average throughput: 66.00 Mbit/s  
95th percentile per-packet one-way delay: 46.784 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 31.12 Mbit/s  
95th percentile per-packet one-way delay: 52.690 ms  
Loss rate: 0.34%  
-- Flow 3:  
Average throughput: 28.24 Mbit/s  
95th percentile per-packet one-way delay: 52.949 ms  
Loss rate: 0.53%

Run 3: Report of Indigo — Data Link



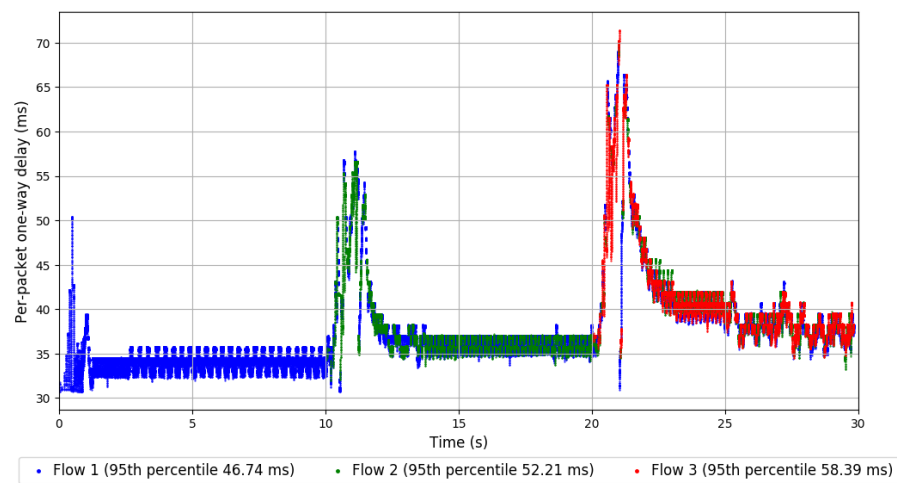
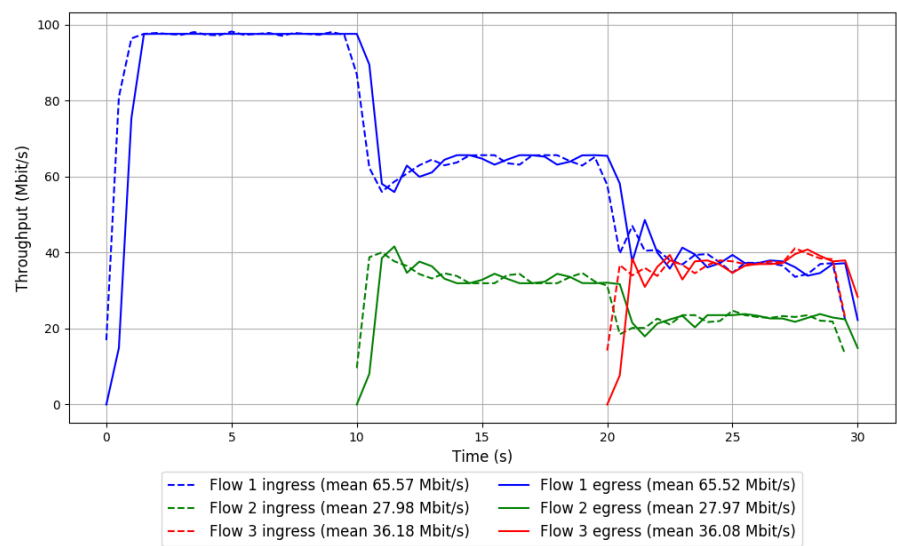


Run 4: Statistics of Indigo

Start at: 2019-01-21 12:23:47  
End at: 2019-01-21 12:24:17  
Local clock offset: 2.446 ms  
Remote clock offset: -0.413 ms

# Below is generated by plot.py at 2019-01-21 13:11:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.85 Mbit/s  
95th percentile per-packet one-way delay: 50.362 ms  
Loss rate: 0.07%  
-- Flow 1:  
Average throughput: 65.52 Mbit/s  
95th percentile per-packet one-way delay: 46.742 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 27.97 Mbit/s  
95th percentile per-packet one-way delay: 52.214 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 36.08 Mbit/s  
95th percentile per-packet one-way delay: 58.394 ms  
Loss rate: 0.26%

Run 4: Report of Indigo — Data Link

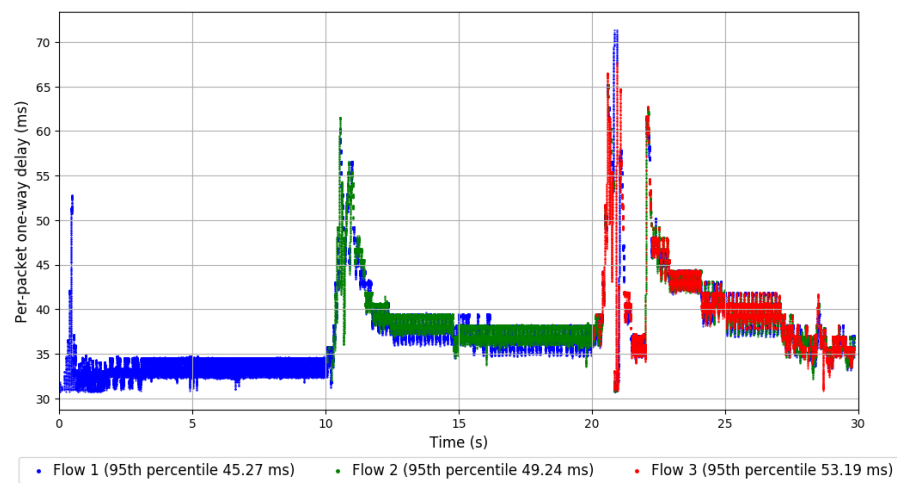
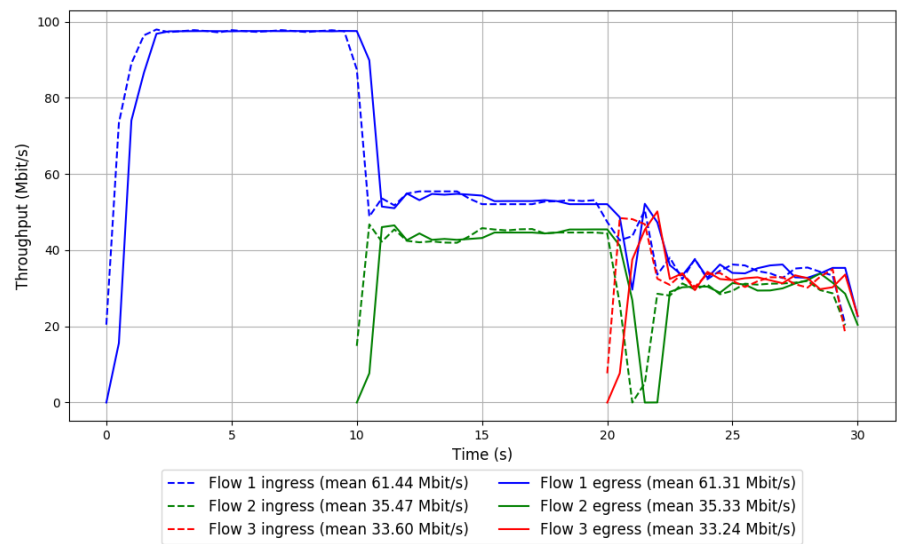


Run 5: Statistics of Indigo

Start at: 2019-01-21 12:49:58  
End at: 2019-01-21 12:50:28  
Local clock offset: 4.387 ms  
Remote clock offset: -0.594 ms

# Below is generated by plot.py at 2019-01-21 13:11:50  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.59 Mbit/s  
95th percentile per-packet one-way delay: 47.457 ms  
Loss rate: 0.34%  
-- Flow 1:  
Average throughput: 61.31 Mbit/s  
95th percentile per-packet one-way delay: 45.267 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 35.33 Mbit/s  
95th percentile per-packet one-way delay: 49.237 ms  
Loss rate: 0.38%  
-- Flow 3:  
Average throughput: 33.24 Mbit/s  
95th percentile per-packet one-way delay: 53.192 ms  
Loss rate: 1.06%

Run 5: Report of Indigo — Data Link

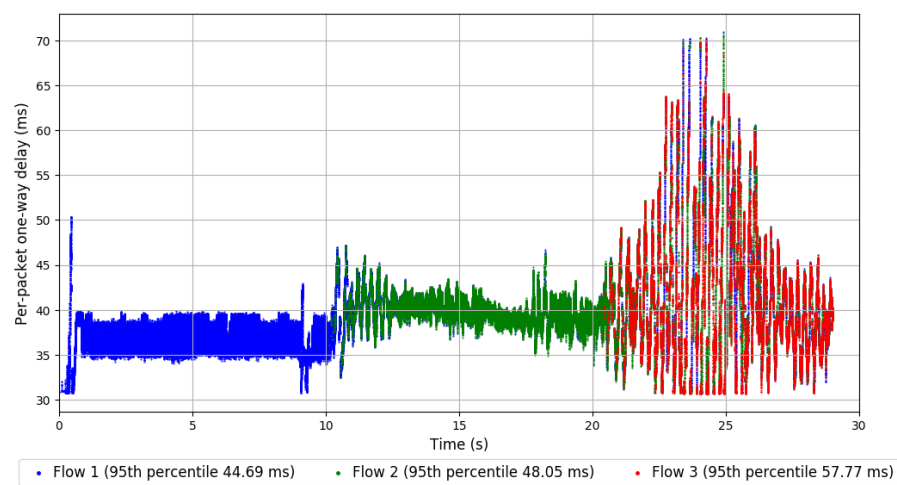
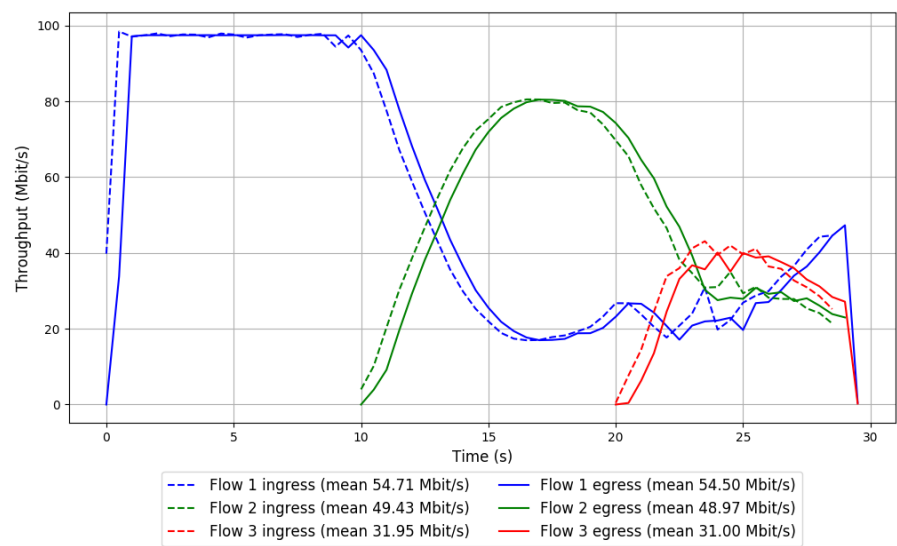


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-21 11:12:19  
End at: 2019-01-21 11:12:49  
Local clock offset: -0.308 ms  
Remote clock offset: -1.024 ms

# Below is generated by plot.py at 2019-01-21 13:11:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.66 Mbit/s  
95th percentile per-packet one-way delay: 48.644 ms  
Loss rate: 0.79%  
-- Flow 1:  
Average throughput: 54.50 Mbit/s  
95th percentile per-packet one-way delay: 44.685 ms  
Loss rate: 0.35%  
-- Flow 2:  
Average throughput: 48.97 Mbit/s  
95th percentile per-packet one-way delay: 48.050 ms  
Loss rate: 0.91%  
-- Flow 3:  
Average throughput: 31.00 Mbit/s  
95th percentile per-packet one-way delay: 57.774 ms  
Loss rate: 2.95%

Run 1: Report of Indigo-MusesC3 — Data Link

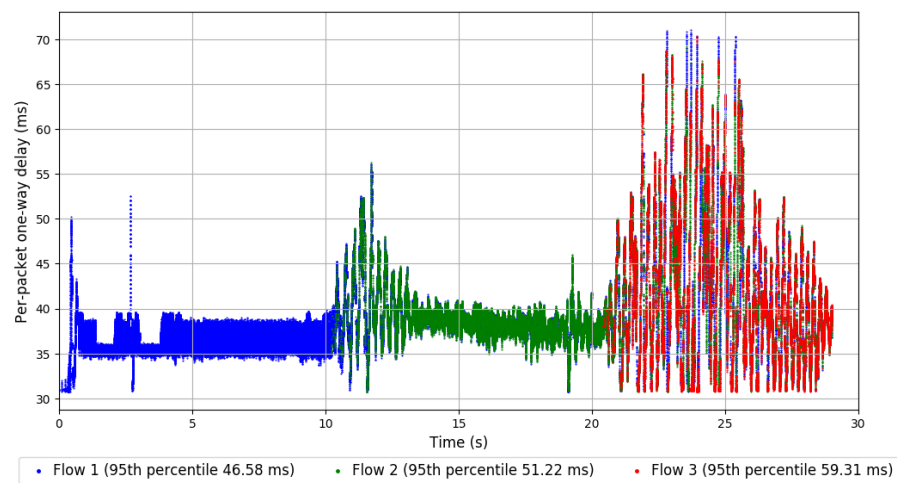
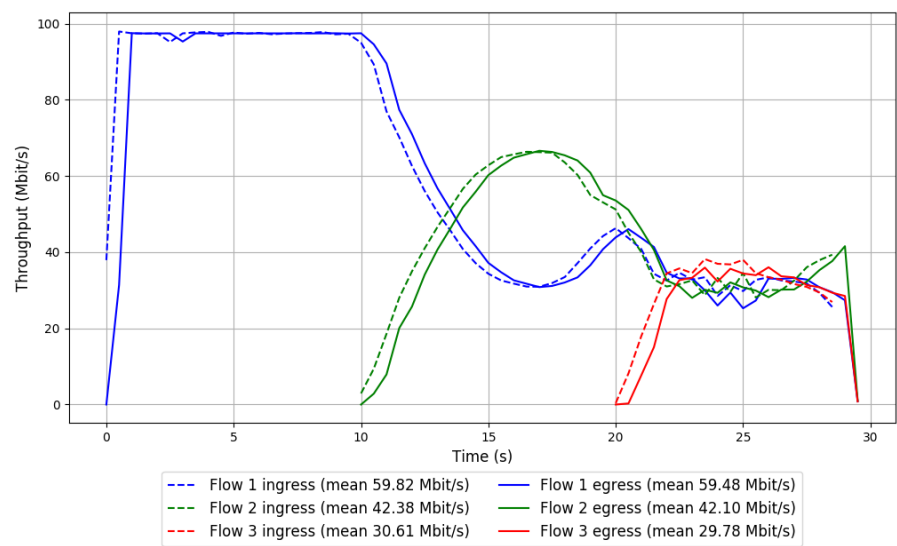


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-21 11:38:27  
End at: 2019-01-21 11:38:57  
Local clock offset: -0.138 ms  
Remote clock offset: -0.923 ms

# Below is generated by plot.py at 2019-01-21 13:12:07  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.73 Mbit/s  
95th percentile per-packet one-way delay: 50.522 ms  
Loss rate: 0.77%  
-- Flow 1:  
Average throughput: 59.48 Mbit/s  
95th percentile per-packet one-way delay: 46.583 ms  
Loss rate: 0.54%  
-- Flow 2:  
Average throughput: 42.10 Mbit/s  
95th percentile per-packet one-way delay: 51.222 ms  
Loss rate: 0.65%  
-- Flow 3:  
Average throughput: 29.78 Mbit/s  
95th percentile per-packet one-way delay: 59.315 ms  
Loss rate: 2.69%

Run 2: Report of Indigo-MusesC3 — Data Link



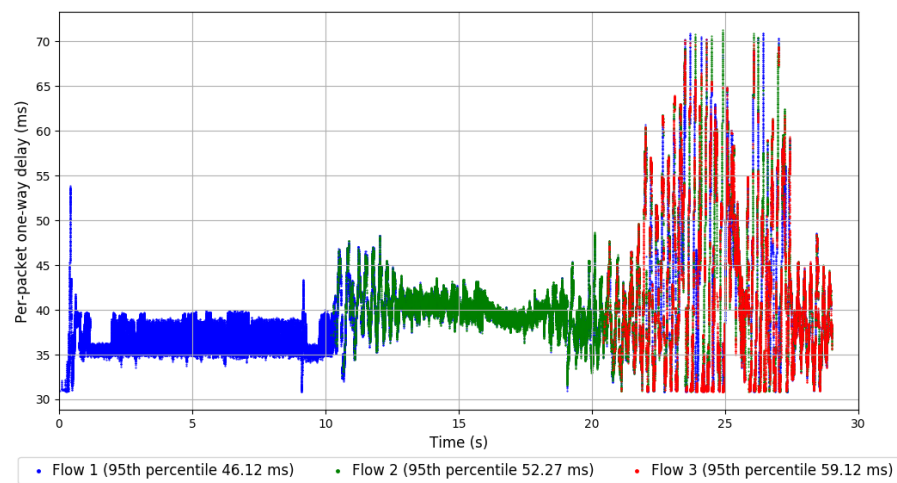
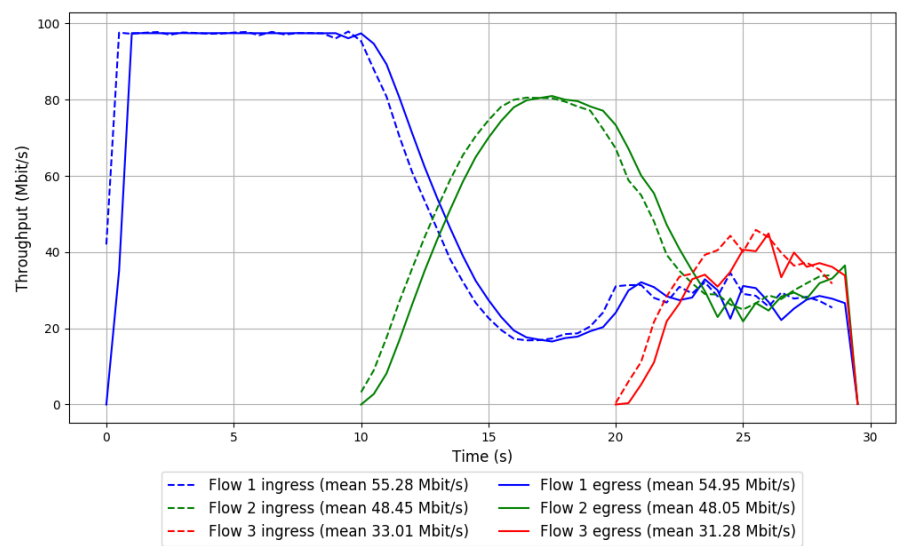


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-21 12:04:19  
End at: 2019-01-21 12:04:49  
Local clock offset: 0.129 ms  
Remote clock offset: -0.518 ms

# Below is generated by plot.py at 2019-01-21 13:12:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.44 Mbit/s  
95th percentile per-packet one-way delay: 51.758 ms  
Loss rate: 1.13%  
-- Flow 1:  
Average throughput: 54.95 Mbit/s  
95th percentile per-packet one-way delay: 46.116 ms  
Loss rate: 0.56%  
-- Flow 2:  
Average throughput: 48.05 Mbit/s  
95th percentile per-packet one-way delay: 52.273 ms  
Loss rate: 0.83%  
-- Flow 3:  
Average throughput: 31.28 Mbit/s  
95th percentile per-packet one-way delay: 59.119 ms  
Loss rate: 5.26%

Run 3: Report of Indigo-MusesC3 — Data Link

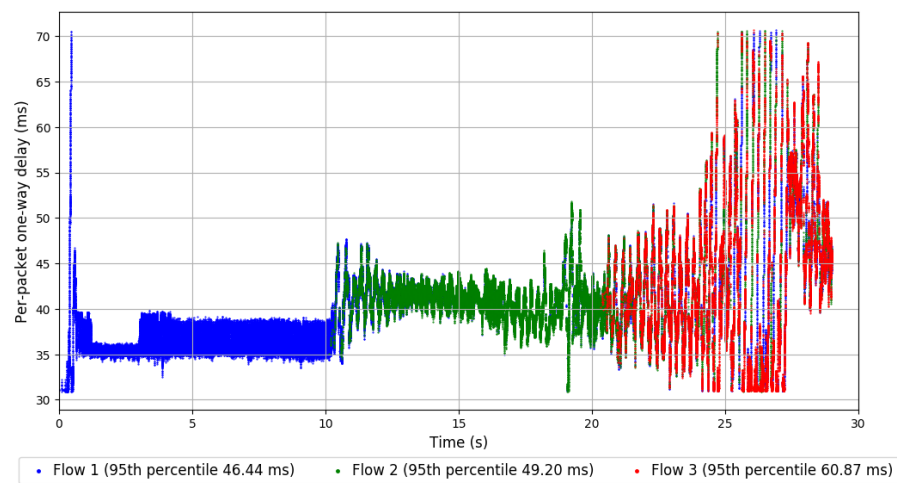
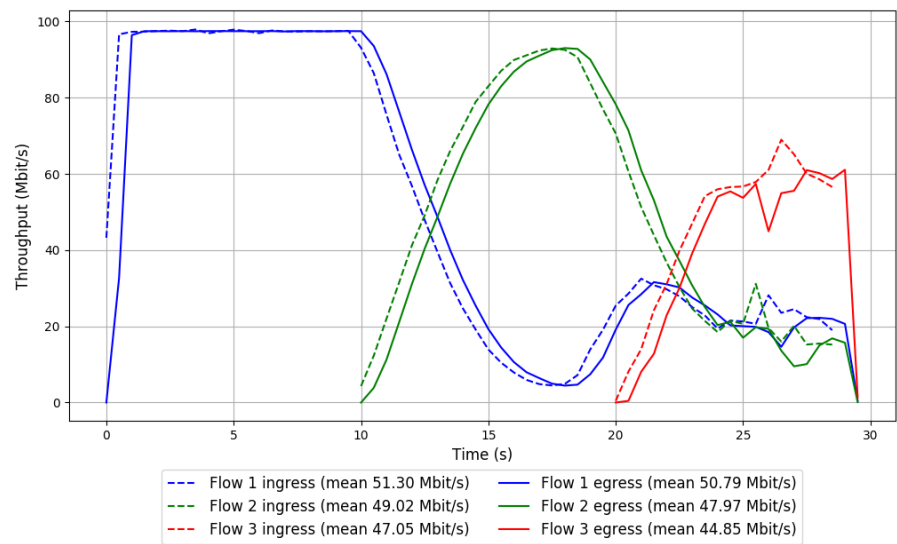


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-21 12:30:03  
End at: 2019-01-21 12:30:33  
Local clock offset: 3.367 ms  
Remote clock offset: -0.152 ms

# Below is generated by plot.py at 2019-01-21 13:12:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.48 Mbit/s  
95th percentile per-packet one-way delay: 52.345 ms  
Loss rate: 1.84%  
-- Flow 1:  
Average throughput: 50.79 Mbit/s  
95th percentile per-packet one-way delay: 46.439 ms  
Loss rate: 0.93%  
-- Flow 2:  
Average throughput: 47.97 Mbit/s  
95th percentile per-packet one-way delay: 49.203 ms  
Loss rate: 2.09%  
-- Flow 3:  
Average throughput: 44.85 Mbit/s  
95th percentile per-packet one-way delay: 60.874 ms  
Loss rate: 4.61%

Run 4: Report of Indigo-MusesC3 — Data Link

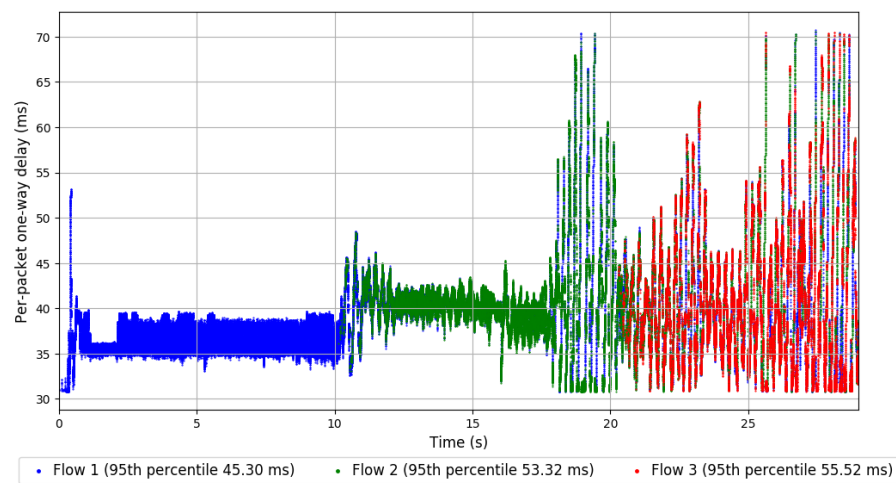
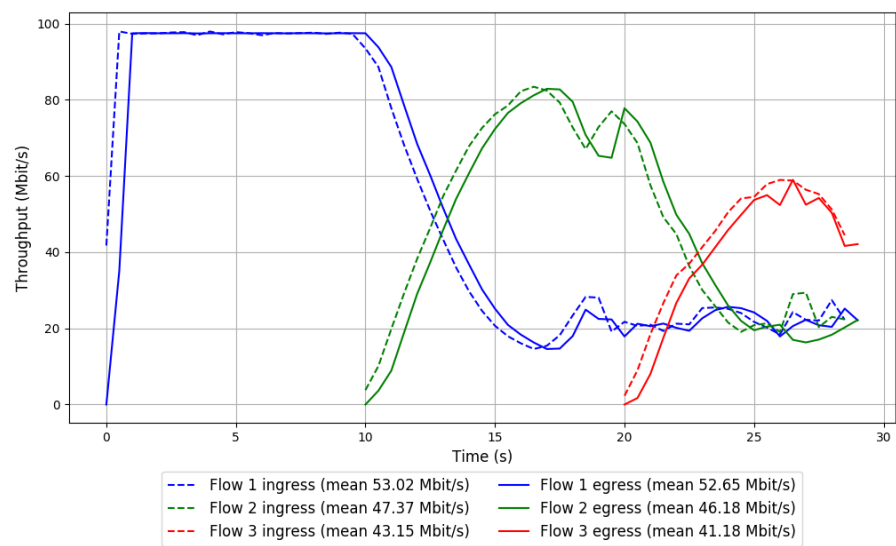


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-21 12:56:13  
End at: 2019-01-21 12:56:43  
Local clock offset: 4.288 ms  
Remote clock offset: -0.771 ms

# Below is generated by plot.py at 2019-01-21 13:12:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.19 Mbit/s  
95th percentile per-packet one-way delay: 50.858 ms  
Loss rate: 1.78%  
-- Flow 1:  
Average throughput: 52.65 Mbit/s  
95th percentile per-packet one-way delay: 45.298 ms  
Loss rate: 0.66%  
-- Flow 2:  
Average throughput: 46.18 Mbit/s  
95th percentile per-packet one-way delay: 53.316 ms  
Loss rate: 2.49%  
-- Flow 3:  
Average throughput: 41.18 Mbit/s  
95th percentile per-packet one-way delay: 55.523 ms  
Loss rate: 4.60%

Run 5: Report of Indigo-MusesC3 — Data Link

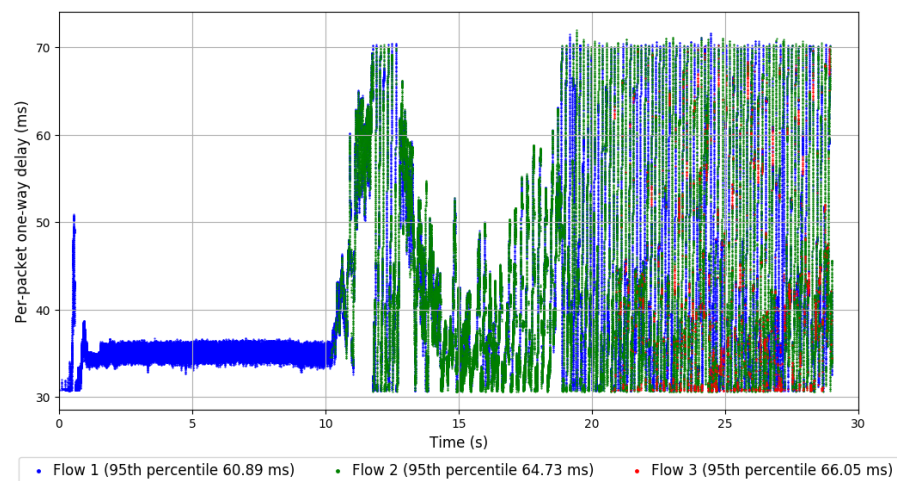
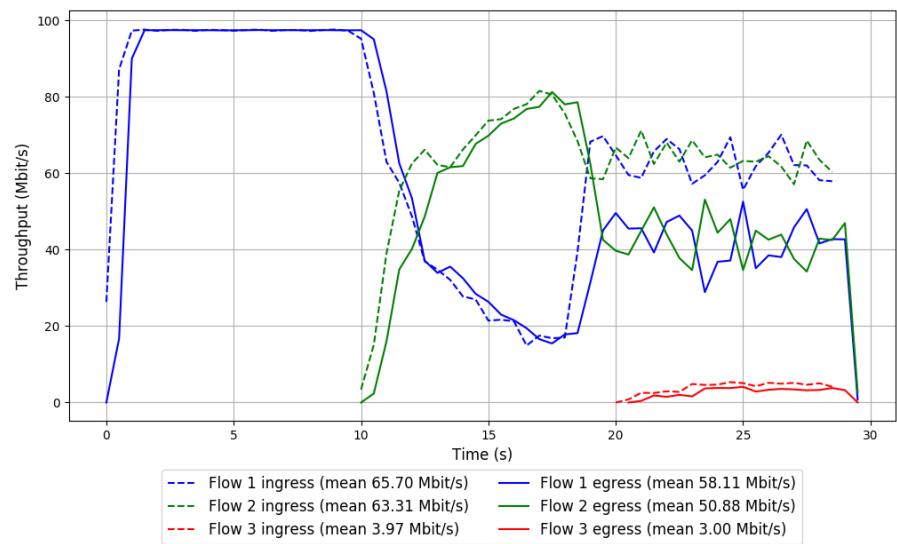


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-21 11:07:19  
End at: 2019-01-21 11:07:49  
Local clock offset: -0.066 ms  
Remote clock offset: -1.088 ms

# Below is generated by plot.py at 2019-01-21 13:12:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.05 Mbit/s  
95th percentile per-packet one-way delay: 62.832 ms  
Loss rate: 14.77%  
-- Flow 1:  
Average throughput: 58.11 Mbit/s  
95th percentile per-packet one-way delay: 60.887 ms  
Loss rate: 11.50%  
-- Flow 2:  
Average throughput: 50.88 Mbit/s  
95th percentile per-packet one-way delay: 64.733 ms  
Loss rate: 19.58%  
-- Flow 3:  
Average throughput: 3.00 Mbit/s  
95th percentile per-packet one-way delay: 66.045 ms  
Loss rate: 28.69%

Run 1: Report of Indigo-MusesC5 — Data Link



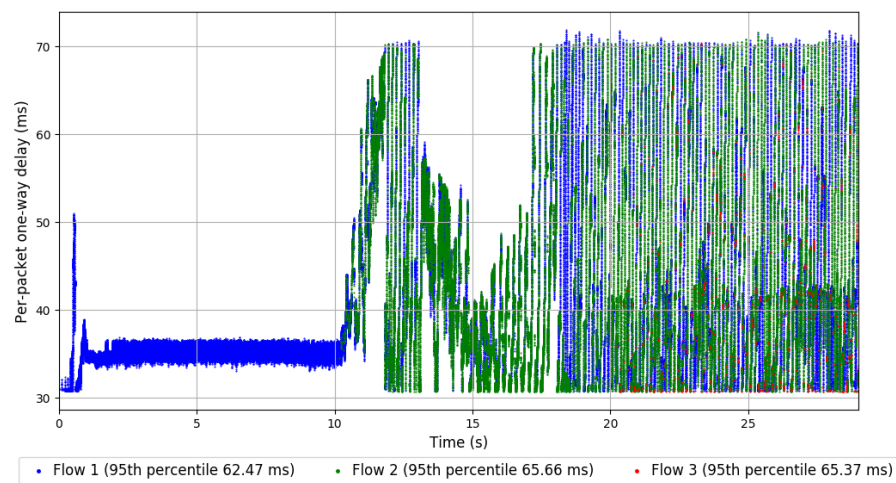
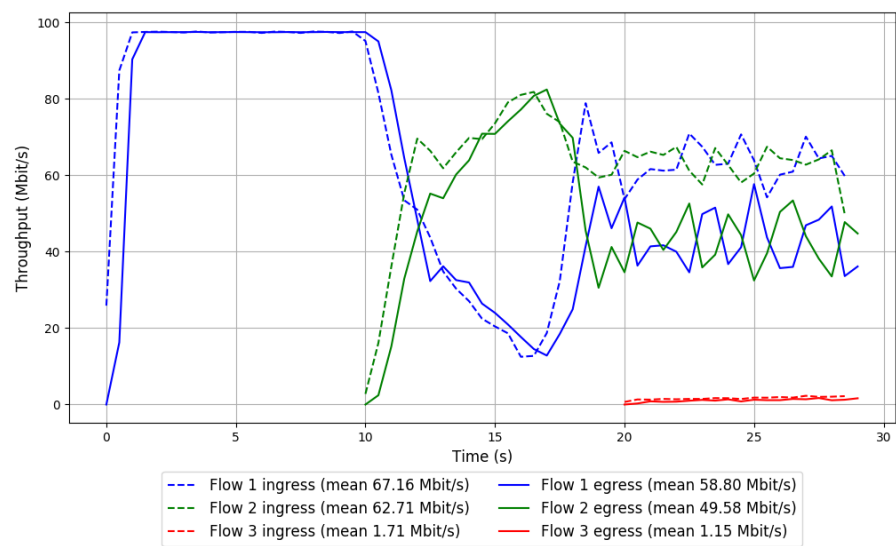


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-21 11:33:29  
End at: 2019-01-21 11:33:59  
Local clock offset: -0.123 ms  
Remote clock offset: -0.922 ms

# Below is generated by plot.py at 2019-01-21 13:12:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.36 Mbit/s  
95th percentile per-packet one-way delay: 64.014 ms  
Loss rate: 15.73%  
-- Flow 1:  
Average throughput: 58.80 Mbit/s  
95th percentile per-packet one-way delay: 62.468 ms  
Loss rate: 12.44%  
-- Flow 2:  
Average throughput: 49.58 Mbit/s  
95th percentile per-packet one-way delay: 65.660 ms  
Loss rate: 20.95%  
-- Flow 3:  
Average throughput: 1.15 Mbit/s  
95th percentile per-packet one-way delay: 65.371 ms  
Loss rate: 32.58%

Run 2: Report of Indigo-MusesC5 — Data Link

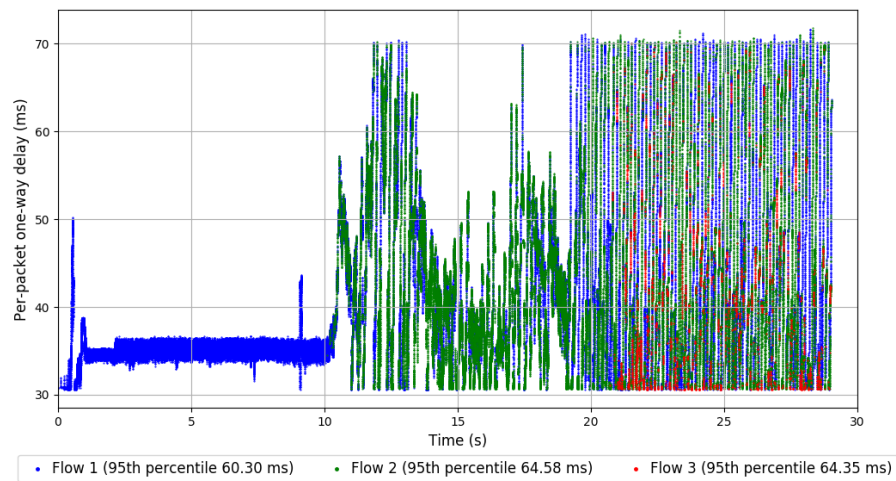
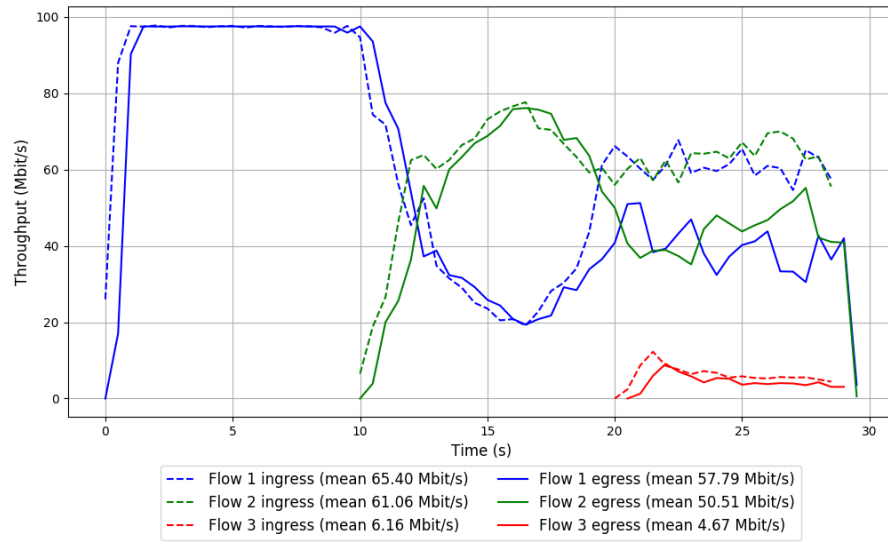


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-21 11:59:29  
End at: 2019-01-21 11:59:59  
Local clock offset: 0.12 ms  
Remote clock offset: -0.862 ms

# Below is generated by plot.py at 2019-01-21 13:12:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.07 Mbit/s  
95th percentile per-packet one-way delay: 62.542 ms  
Loss rate: 13.92%  
-- Flow 1:  
Average throughput: 57.79 Mbit/s  
95th percentile per-packet one-way delay: 60.305 ms  
Loss rate: 11.54%  
-- Flow 2:  
Average throughput: 50.51 Mbit/s  
95th percentile per-packet one-way delay: 64.582 ms  
Loss rate: 17.15%  
-- Flow 3:  
Average throughput: 4.67 Mbit/s  
95th percentile per-packet one-way delay: 64.353 ms  
Loss rate: 28.38%

### Run 3: Report of Indigo-MusesC5 — Data Link

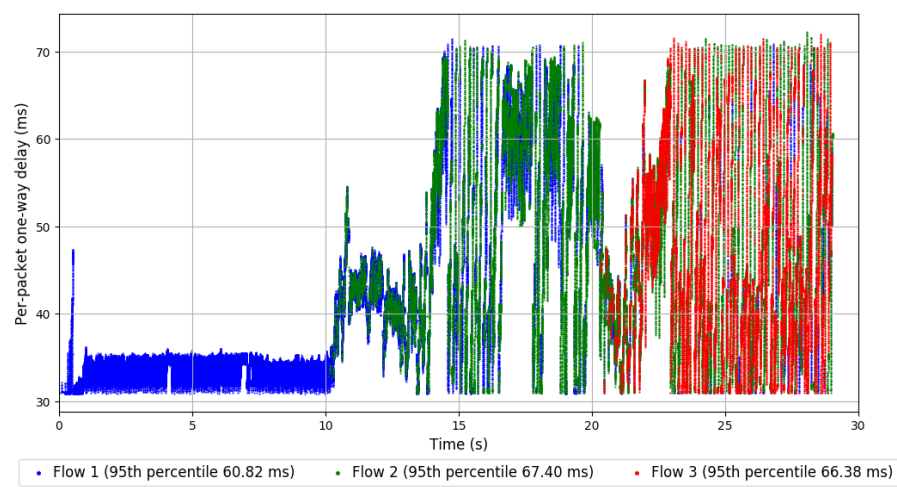
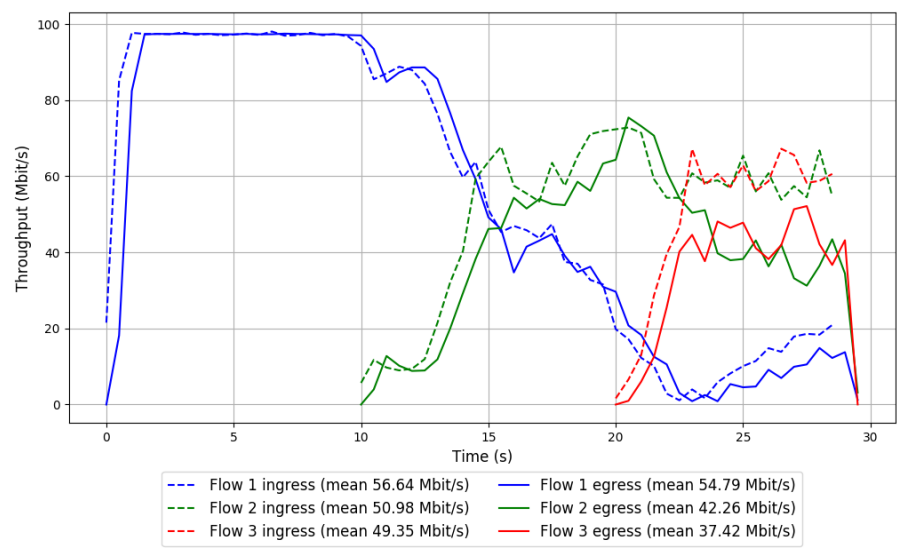


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-21 12:25:05  
End at: 2019-01-21 12:25:35  
Local clock offset: 2.684 ms  
Remote clock offset: -0.274 ms

# Below is generated by plot.py at 2019-01-21 13:12:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.66 Mbit/s  
95th percentile per-packet one-way delay: 64.937 ms  
Loss rate: 10.58%  
-- Flow 1:  
Average throughput: 54.79 Mbit/s  
95th percentile per-packet one-way delay: 60.820 ms  
Loss rate: 3.19%  
-- Flow 2:  
Average throughput: 42.26 Mbit/s  
95th percentile per-packet one-way delay: 67.404 ms  
Loss rate: 16.99%  
-- Flow 3:  
Average throughput: 37.42 Mbit/s  
95th percentile per-packet one-way delay: 66.384 ms  
Loss rate: 24.26%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-21 12:51:17

End at: 2019-01-21 12:51:47

Local clock offset: 4.346 ms

Remote clock offset: -0.56 ms

# Below is generated by plot.py at 2019-01-21 13:13:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.45 Mbit/s

95th percentile per-packet one-way delay: 63.895 ms

Loss rate: 13.56%

-- Flow 1:

Average throughput: 56.68 Mbit/s

95th percentile per-packet one-way delay: 62.660 ms

Loss rate: 11.41%

-- Flow 2:

Average throughput: 54.41 Mbit/s

95th percentile per-packet one-way delay: 65.079 ms

Loss rate: 16.63%

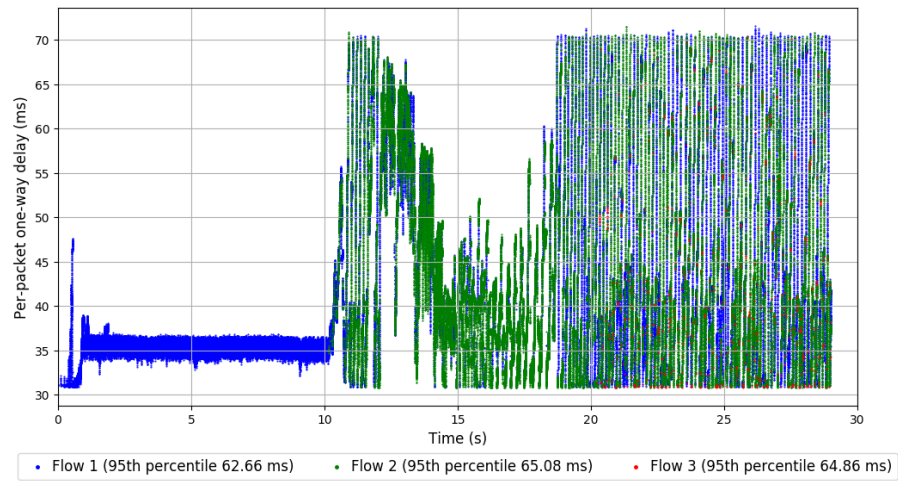
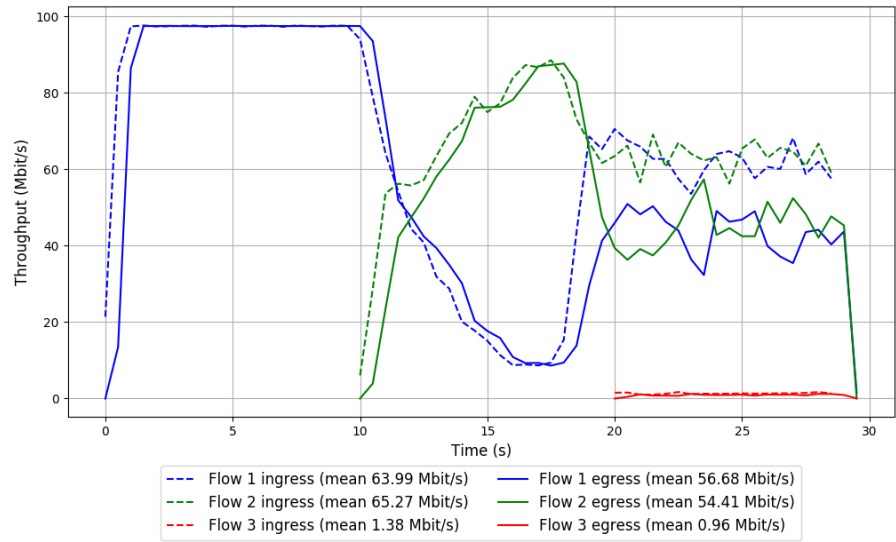
-- Flow 3:

Average throughput: 0.96 Mbit/s

95th percentile per-packet one-way delay: 64.858 ms

Loss rate: 30.27%

# Run 5: Report of Indigo-MusesC5 — Data Link



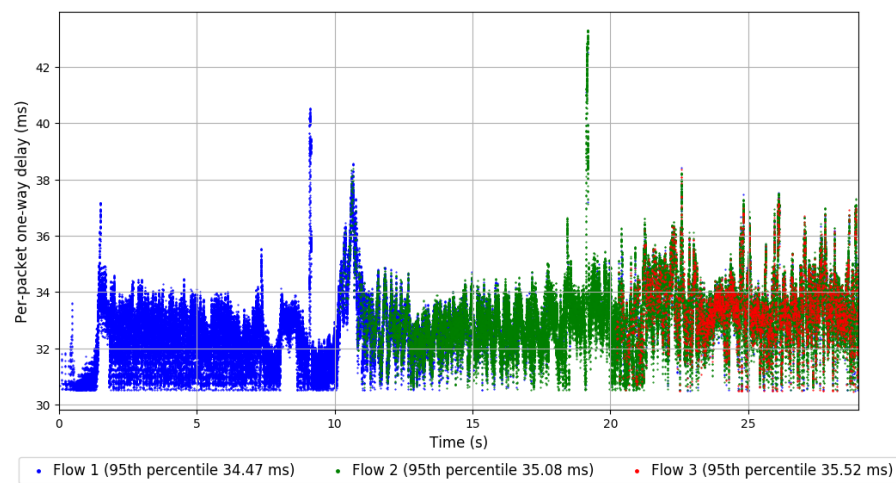
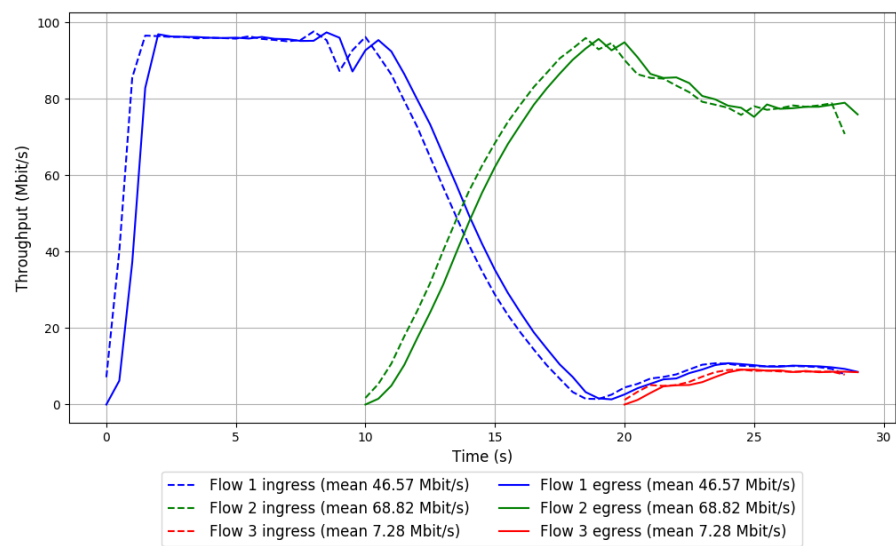


Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-21 11:08:35  
End at: 2019-01-21 11:09:05  
Local clock offset: -0.116 ms  
Remote clock offset: -1.264 ms

# Below is generated by plot.py at 2019-01-21 13:13:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.62 Mbit/s  
95th percentile per-packet one-way delay: 34.876 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 46.57 Mbit/s  
95th percentile per-packet one-way delay: 34.465 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 68.82 Mbit/s  
95th percentile per-packet one-way delay: 35.079 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 7.28 Mbit/s  
95th percentile per-packet one-way delay: 35.518 ms  
Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link

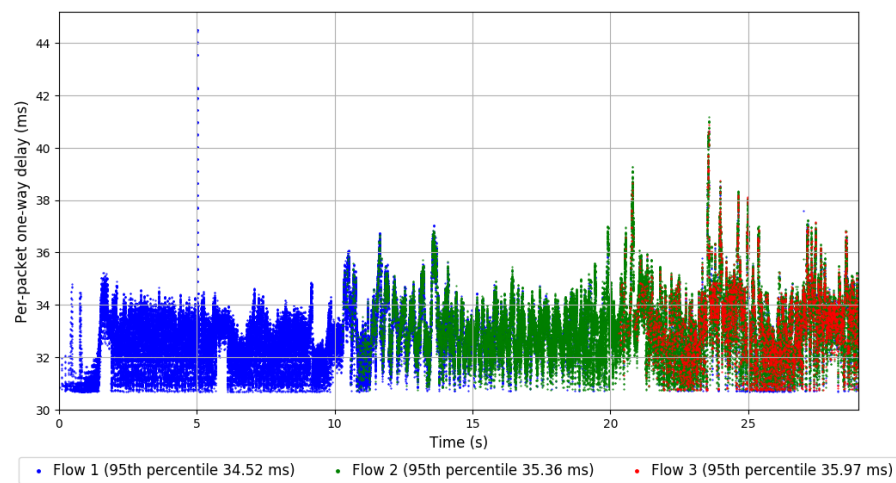
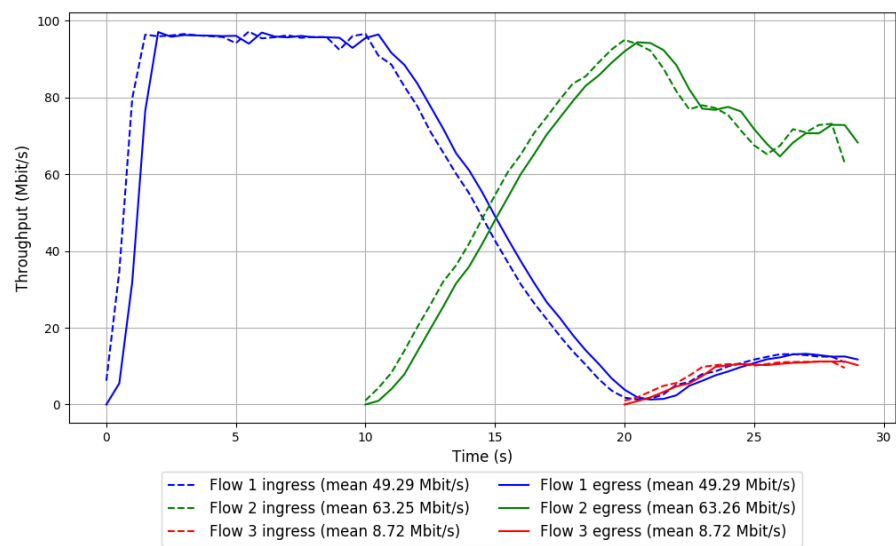


Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-21 11:34:45  
End at: 2019-01-21 11:35:15  
Local clock offset: -0.117 ms  
Remote clock offset: -0.926 ms

# Below is generated by plot.py at 2019-01-21 13:13:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.85 Mbit/s  
95th percentile per-packet one-way delay: 34.927 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 49.29 Mbit/s  
95th percentile per-packet one-way delay: 34.520 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 63.26 Mbit/s  
95th percentile per-packet one-way delay: 35.359 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 8.72 Mbit/s  
95th percentile per-packet one-way delay: 35.971 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link

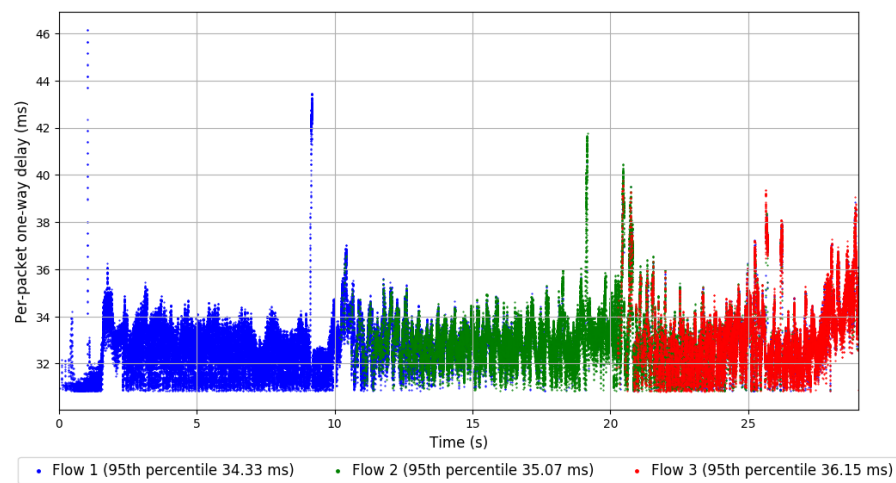
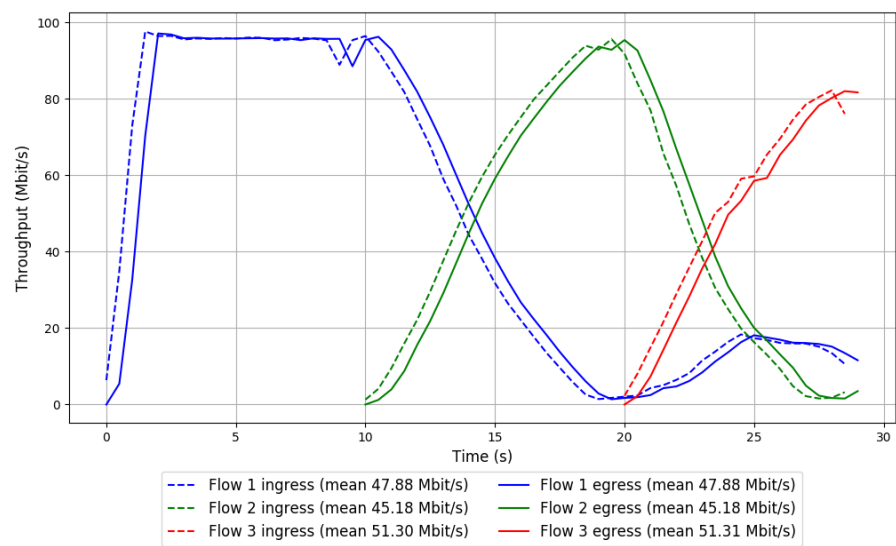


Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-21 12:00:42  
End at: 2019-01-21 12:01:12  
Local clock offset: 0.125 ms  
Remote clock offset: -0.596 ms

# Below is generated by plot.py at 2019-01-21 13:13:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.84 Mbit/s  
95th percentile per-packet one-way delay: 34.891 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 47.88 Mbit/s  
95th percentile per-packet one-way delay: 34.333 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 45.18 Mbit/s  
95th percentile per-packet one-way delay: 35.071 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 51.31 Mbit/s  
95th percentile per-packet one-way delay: 36.153 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link

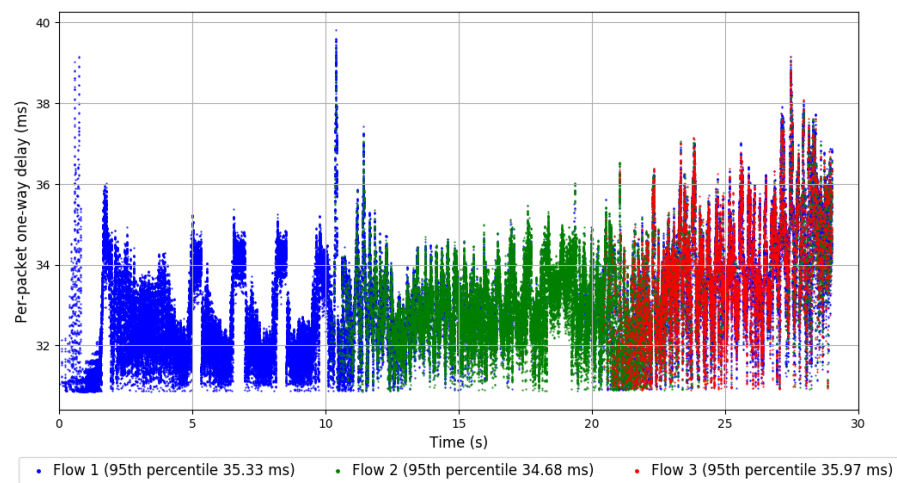
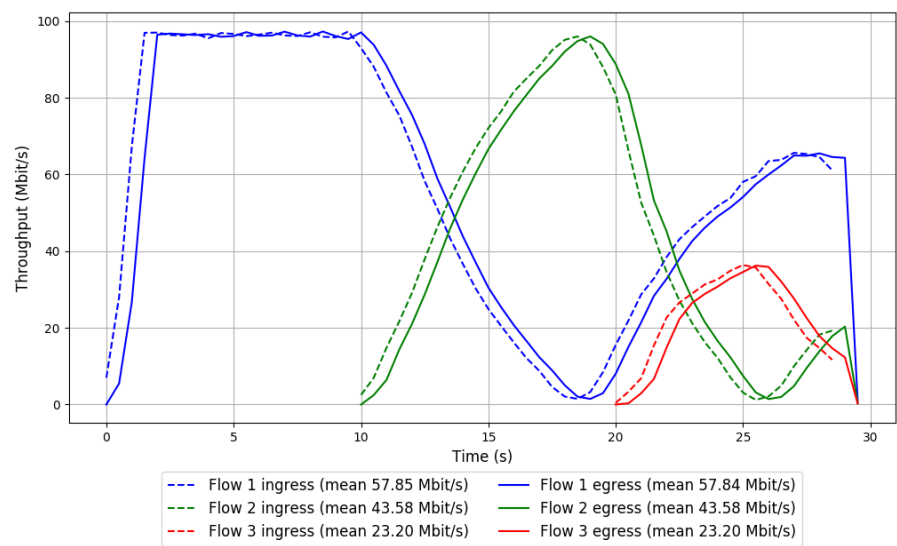


Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-21 12:26:21  
End at: 2019-01-21 12:26:51  
Local clock offset: 2.882 ms  
Remote clock offset: -0.216 ms

# Below is generated by plot.py at 2019-01-21 13:13:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.13 Mbit/s  
95th percentile per-packet one-way delay: 35.288 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 57.84 Mbit/s  
95th percentile per-packet one-way delay: 35.326 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 43.58 Mbit/s  
95th percentile per-packet one-way delay: 34.676 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 23.20 Mbit/s  
95th percentile per-packet one-way delay: 35.969 ms  
Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link



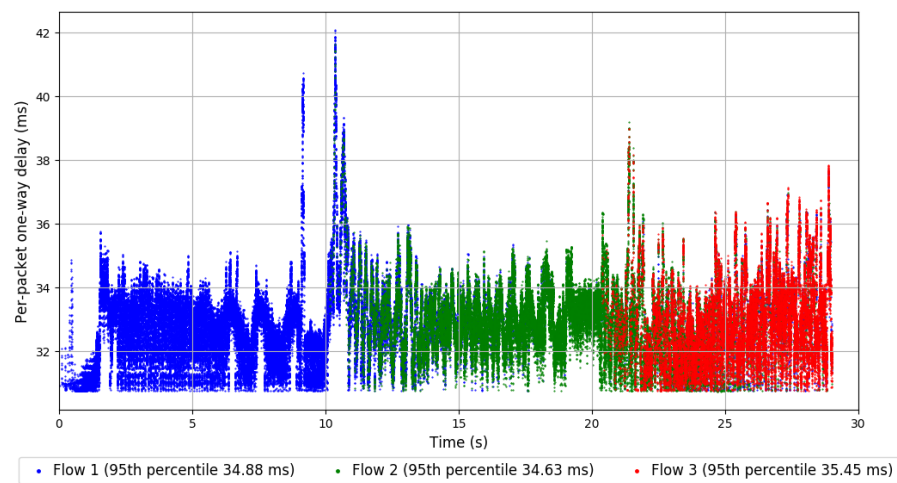
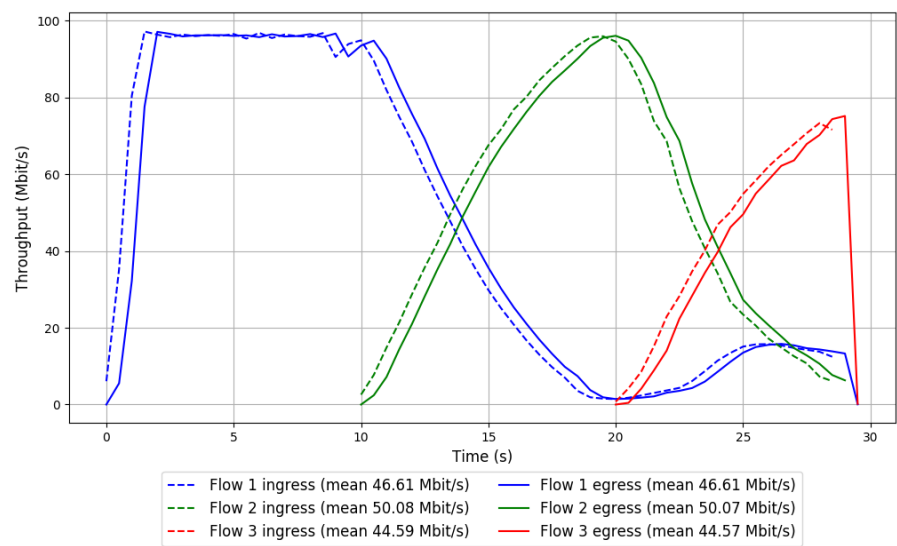


Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-21 12:52:32  
End at: 2019-01-21 12:53:02  
Local clock offset: 4.308 ms  
Remote clock offset: -0.653 ms

# Below is generated by plot.py at 2019-01-21 13:13:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.65 Mbit/s  
95th percentile per-packet one-way delay: 34.893 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 46.61 Mbit/s  
95th percentile per-packet one-way delay: 34.885 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 50.07 Mbit/s  
95th percentile per-packet one-way delay: 34.632 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 44.57 Mbit/s  
95th percentile per-packet one-way delay: 35.453 ms  
Loss rate: 0.05%

Run 5: Report of Indigo-MusesD — Data Link

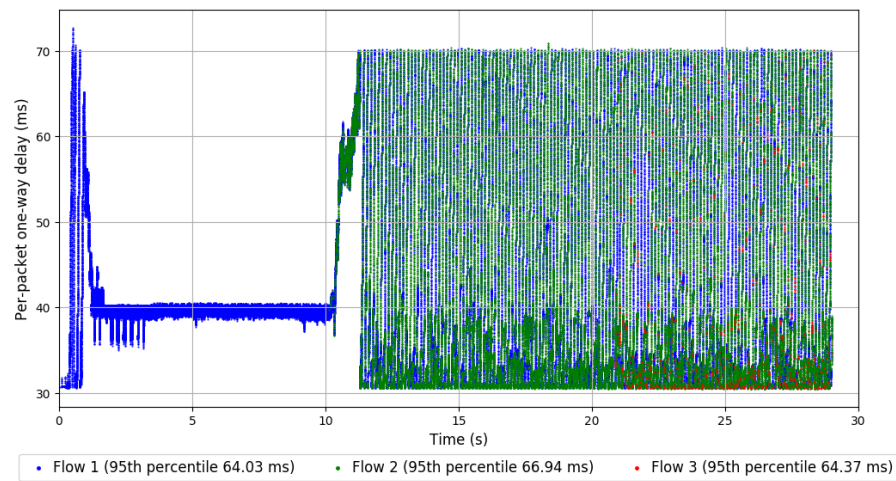
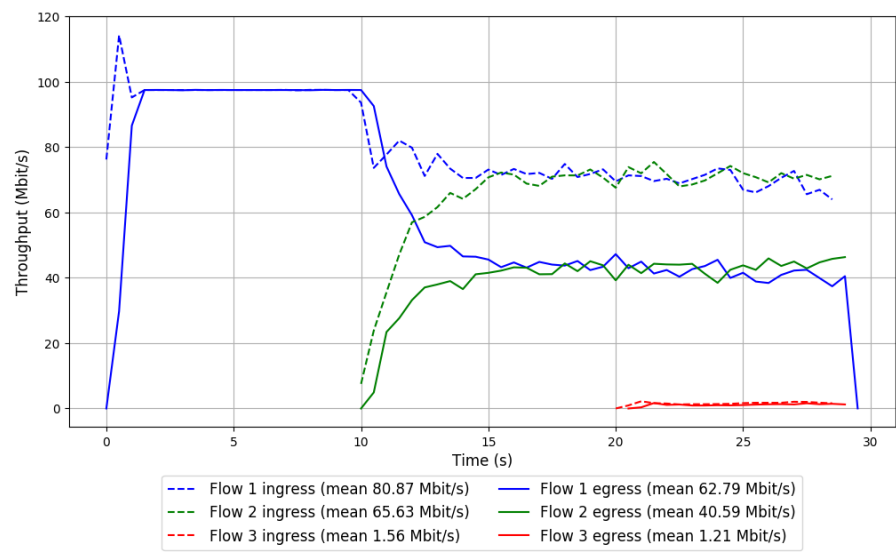


Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-21 10:56:27  
End at: 2019-01-21 10:56:57  
Local clock offset: 0.962 ms  
Remote clock offset: -1.327 ms

# Below is generated by plot.py at 2019-01-21 13:14:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.57 Mbit/s  
95th percentile per-packet one-way delay: 65.297 ms  
Loss rate: 27.82%  
-- Flow 1:  
Average throughput: 62.79 Mbit/s  
95th percentile per-packet one-way delay: 64.035 ms  
Loss rate: 22.35%  
-- Flow 2:  
Average throughput: 40.59 Mbit/s  
95th percentile per-packet one-way delay: 66.936 ms  
Loss rate: 38.16%  
-- Flow 3:  
Average throughput: 1.21 Mbit/s  
95th percentile per-packet one-way delay: 64.371 ms  
Loss rate: 27.45%

Run 1: Report of Indigo-MusesT — Data Link

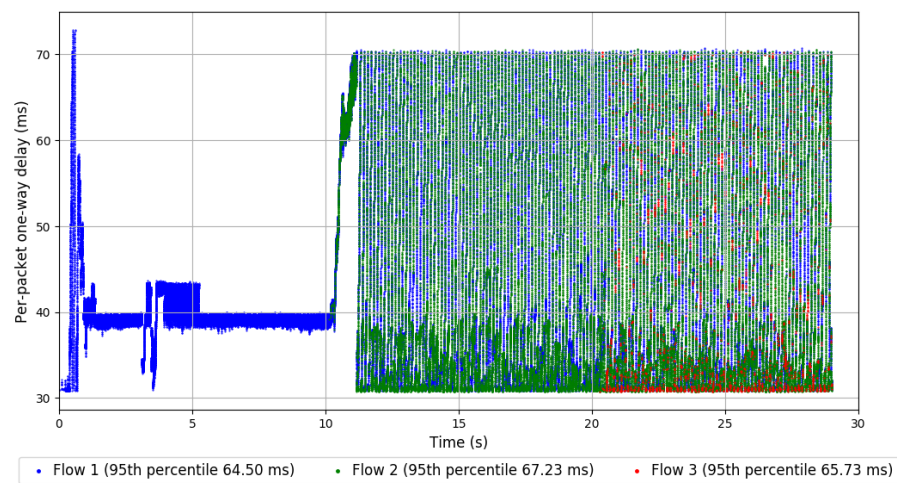
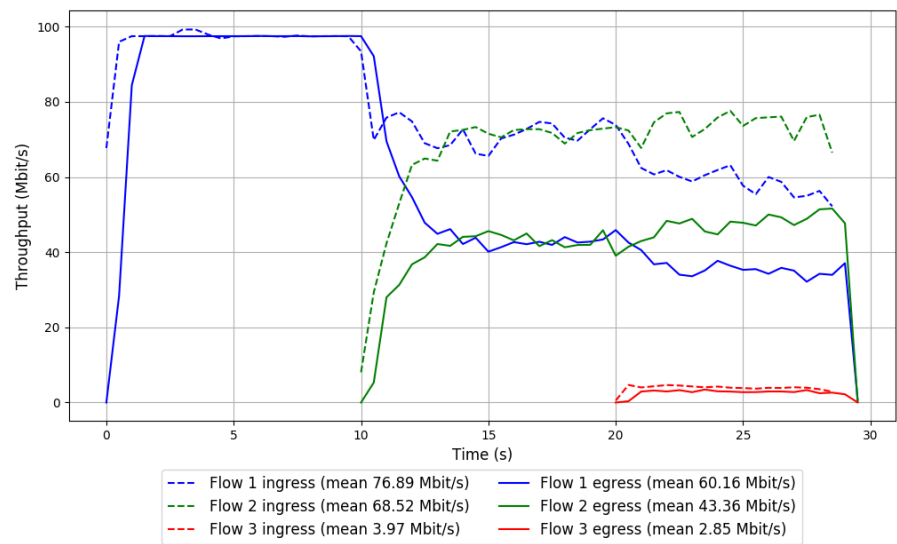


Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-21 11:22:15  
End at: 2019-01-21 11:22:45  
Local clock offset: -0.204 ms  
Remote clock offset: -0.919 ms

# Below is generated by plot.py at 2019-01-21 13:14:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.28 Mbit/s  
95th percentile per-packet one-way delay: 65.742 ms  
Loss rate: 27.27%  
-- Flow 1:  
Average throughput: 60.16 Mbit/s  
95th percentile per-packet one-way delay: 64.505 ms  
Loss rate: 21.76%  
-- Flow 2:  
Average throughput: 43.36 Mbit/s  
95th percentile per-packet one-way delay: 67.229 ms  
Loss rate: 36.74%  
-- Flow 3:  
Average throughput: 2.85 Mbit/s  
95th percentile per-packet one-way delay: 65.730 ms  
Loss rate: 28.04%

Run 2: Report of Indigo-MusesT — Data Link

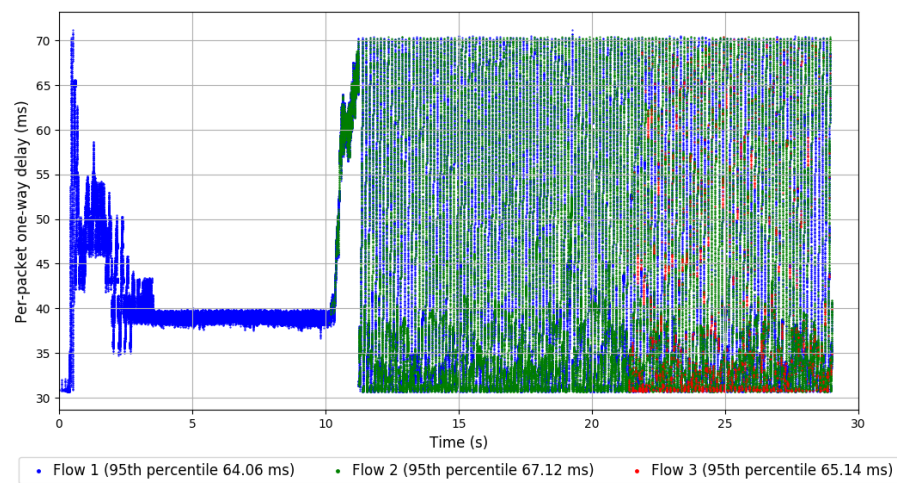
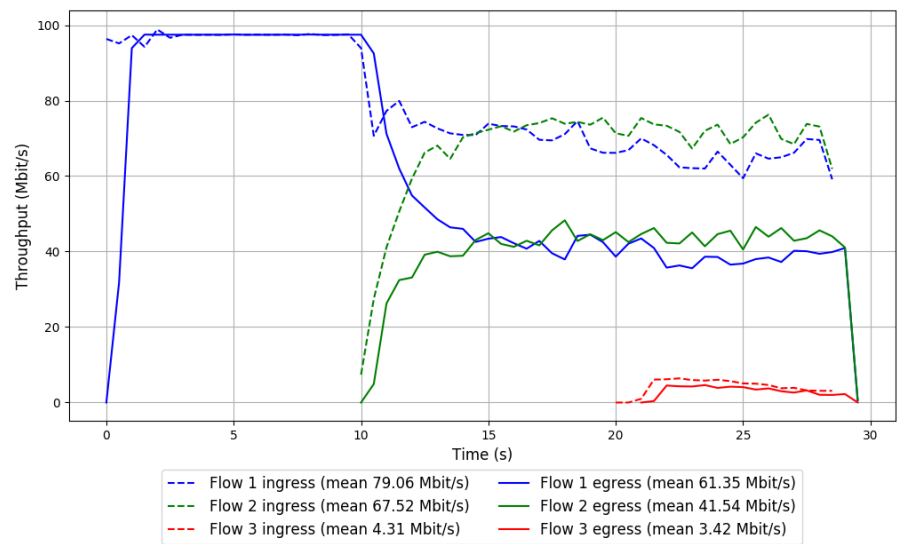


Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-21 11:48:22  
End at: 2019-01-21 11:48:52  
Local clock offset: -0.093 ms  
Remote clock offset: -0.855 ms

# Below is generated by plot.py at 2019-01-21 13:14:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.32 Mbit/s  
95th percentile per-packet one-way delay: 65.304 ms  
Loss rate: 28.16%  
-- Flow 1:  
Average throughput: 61.35 Mbit/s  
95th percentile per-packet one-way delay: 64.057 ms  
Loss rate: 22.39%  
-- Flow 2:  
Average throughput: 41.54 Mbit/s  
95th percentile per-packet one-way delay: 67.121 ms  
Loss rate: 38.48%  
-- Flow 3:  
Average throughput: 3.42 Mbit/s  
95th percentile per-packet one-way delay: 65.139 ms  
Loss rate: 29.78%

Run 3: Report of Indigo-MusesT — Data Link



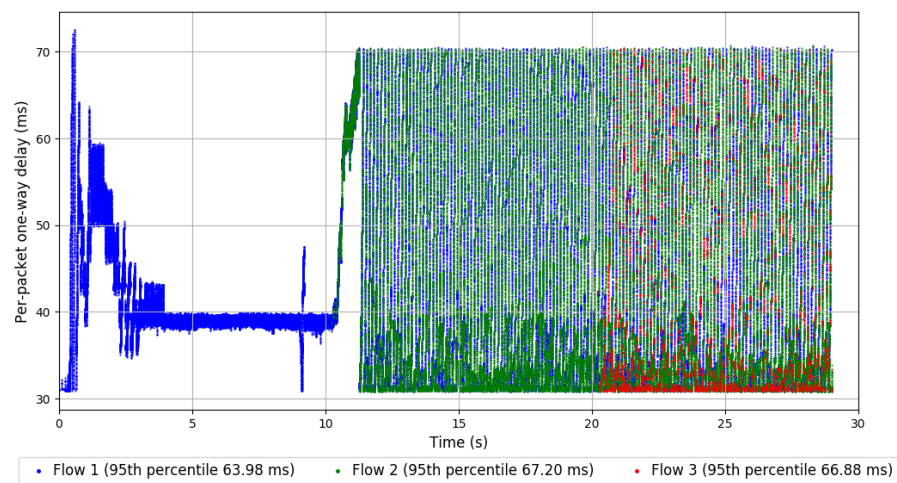
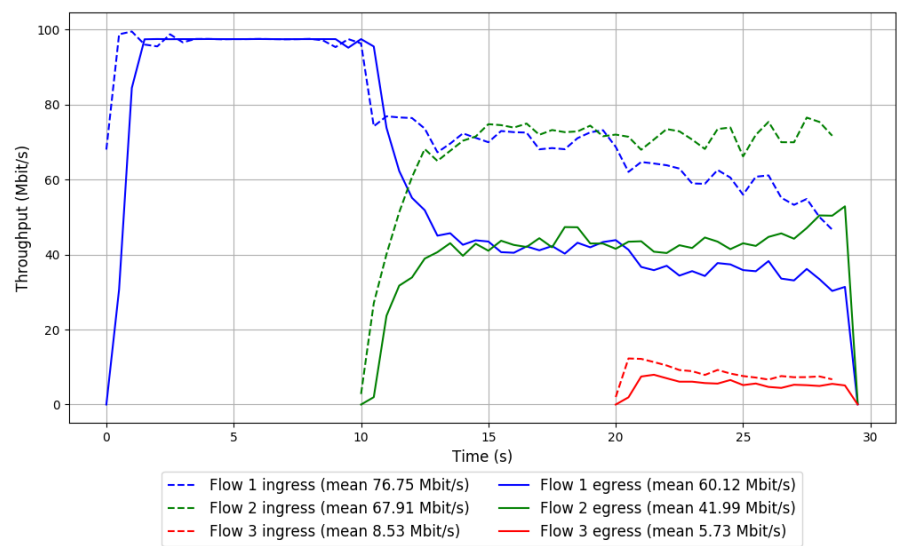


Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-21 12:14:11  
End at: 2019-01-21 12:14:41  
Local clock offset: 0.12 ms  
Remote clock offset: -0.446 ms

# Below is generated by plot.py at 2019-01-21 13:14:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.06 Mbit/s  
95th percentile per-packet one-way delay: 65.470 ms  
Loss rate: 27.80%  
-- Flow 1:  
Average throughput: 60.12 Mbit/s  
95th percentile per-packet one-way delay: 63.983 ms  
Loss rate: 21.67%  
-- Flow 2:  
Average throughput: 41.99 Mbit/s  
95th percentile per-packet one-way delay: 67.199 ms  
Loss rate: 38.18%  
-- Flow 3:  
Average throughput: 5.73 Mbit/s  
95th percentile per-packet one-way delay: 66.882 ms  
Loss rate: 32.92%

Run 4: Report of Indigo-MusesT — Data Link

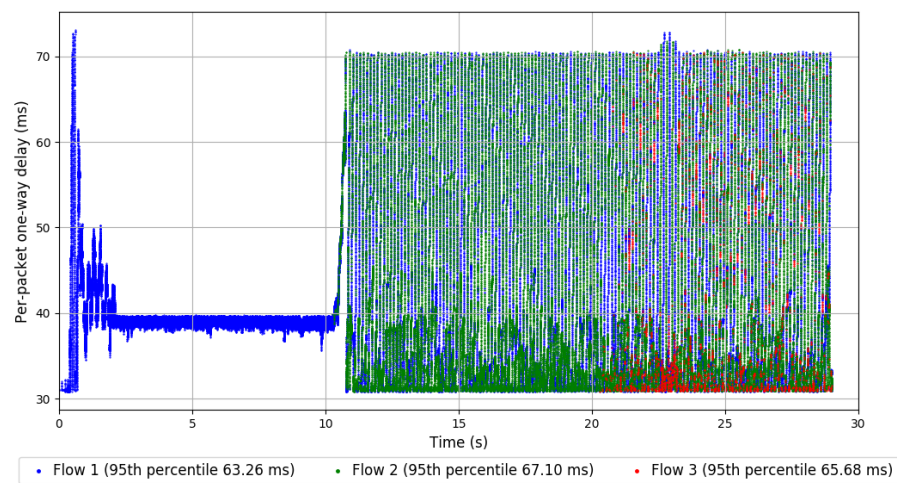
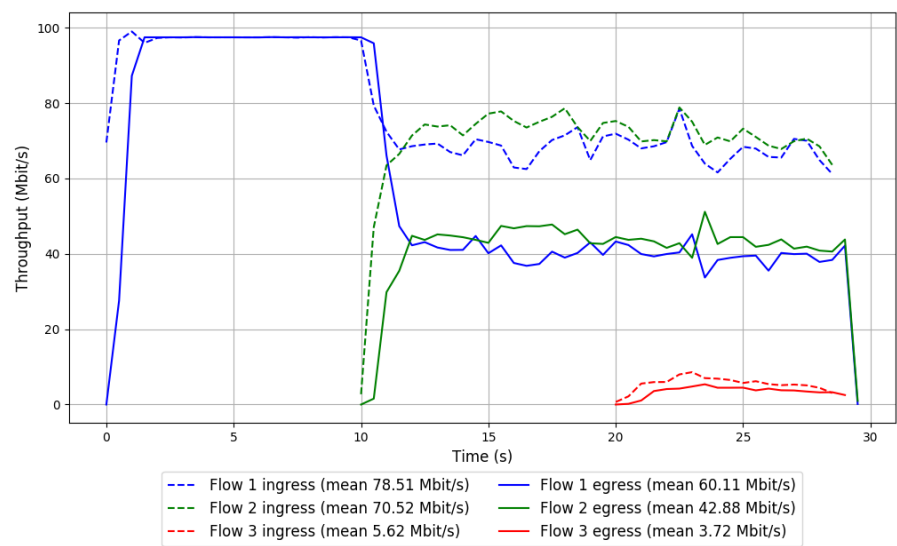


Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-21 12:40:15  
End at: 2019-01-21 12:40:45  
Local clock offset: 4.233 ms  
Remote clock offset: -0.431 ms

# Below is generated by plot.py at 2019-01-21 13:14:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.99 Mbit/s  
95th percentile per-packet one-way delay: 65.196 ms  
Loss rate: 29.30%  
-- Flow 1:  
Average throughput: 60.11 Mbit/s  
95th percentile per-packet one-way delay: 63.256 ms  
Loss rate: 23.43%  
-- Flow 2:  
Average throughput: 42.88 Mbit/s  
95th percentile per-packet one-way delay: 67.099 ms  
Loss rate: 39.21%  
-- Flow 3:  
Average throughput: 3.72 Mbit/s  
95th percentile per-packet one-way delay: 65.684 ms  
Loss rate: 33.74%

Run 5: Report of Indigo-MusesT — Data Link

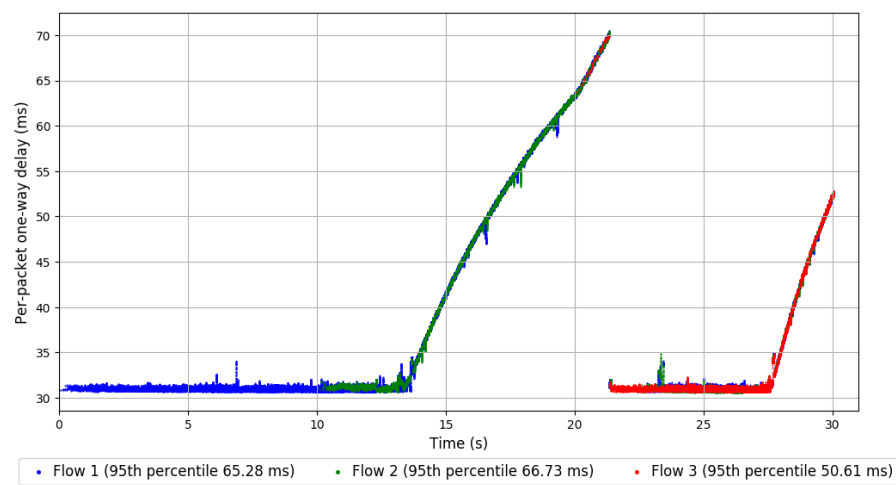
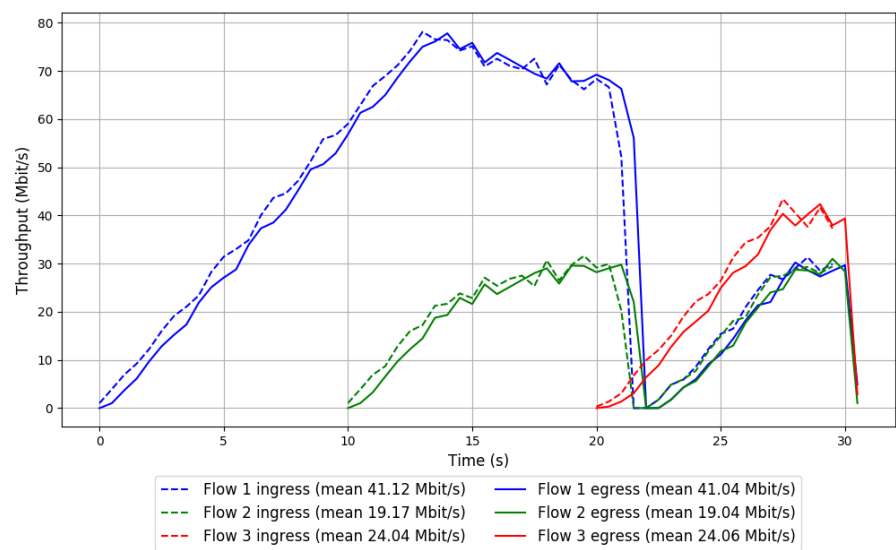


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-21 10:57:40
End at: 2019-01-21 10:58:10
Local clock offset: 0.801 ms
Remote clock offset: -1.257 ms

# Below is generated by plot.py at 2019-01-21 13:14:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.67 Mbit/s
95th percentile per-packet one-way delay: 65.105 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 41.04 Mbit/s
95th percentile per-packet one-way delay: 65.284 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 19.04 Mbit/s
95th percentile per-packet one-way delay: 66.735 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 24.06 Mbit/s
95th percentile per-packet one-way delay: 50.609 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

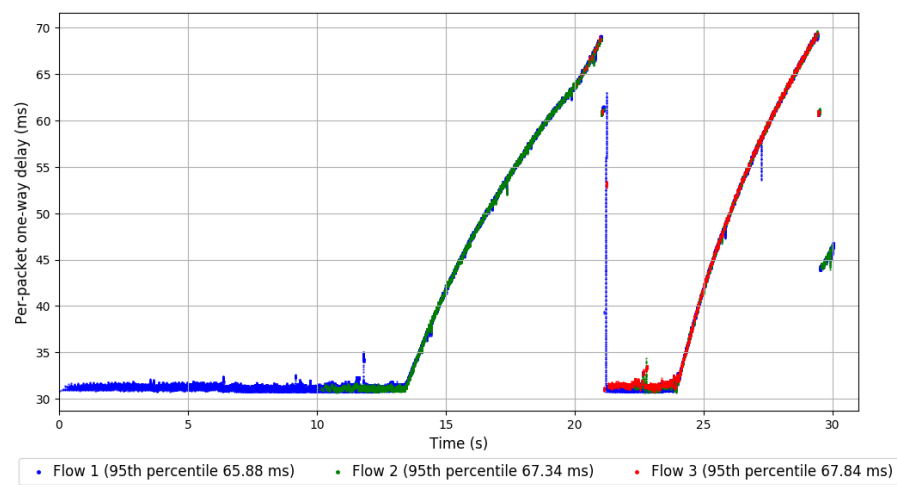
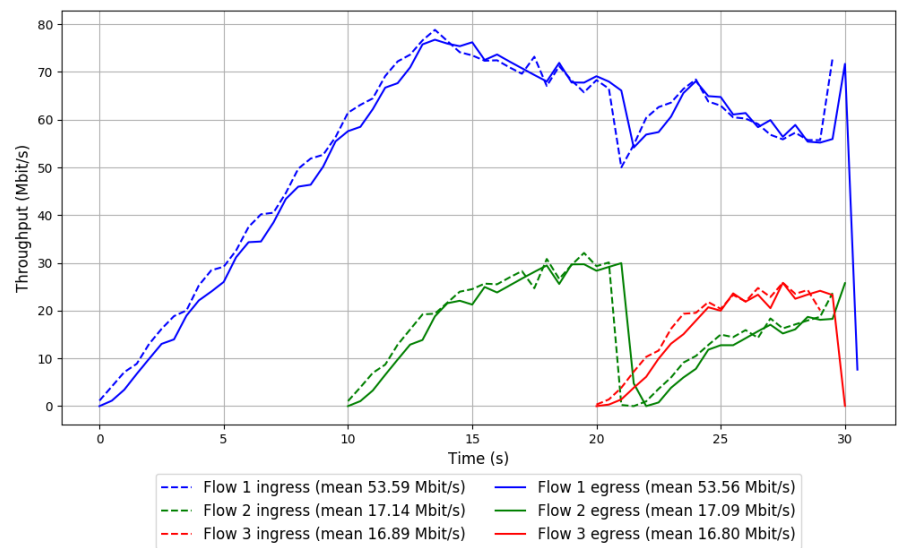


Run 2: Statistics of LEDBAT

Start at: 2019-01-21 11:23:30  
End at: 2019-01-21 11:24:00  
Local clock offset: -0.172 ms  
Remote clock offset: -1.005 ms

# Below is generated by plot.py at 2019-01-21 13:14:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 70.19 Mbit/s  
95th percentile per-packet one-way delay: 66.416 ms  
Loss rate: 0.08%  
-- Flow 1:  
Average throughput: 53.56 Mbit/s  
95th percentile per-packet one-way delay: 65.883 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 17.09 Mbit/s  
95th percentile per-packet one-way delay: 67.344 ms  
Loss rate: 0.23%  
-- Flow 3:  
Average throughput: 16.80 Mbit/s  
95th percentile per-packet one-way delay: 67.838 ms  
Loss rate: 0.53%

Run 2: Report of LEDBAT — Data Link



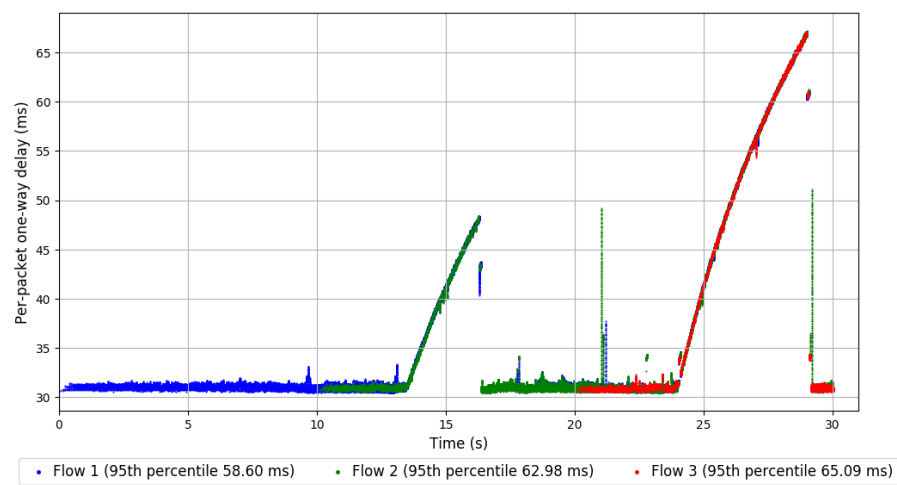
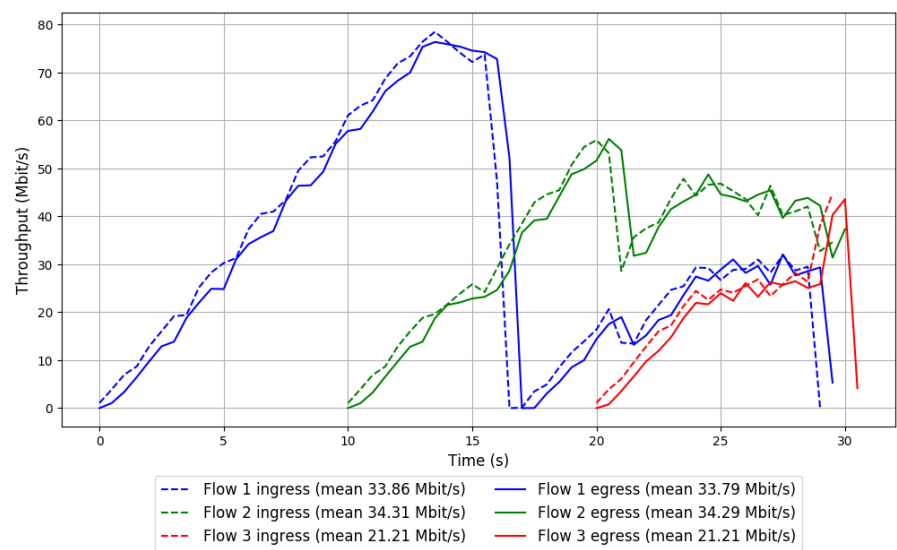


Run 3: Statistics of LEDBAT

Start at: 2019-01-21 11:49:38  
End at: 2019-01-21 11:50:08  
Local clock offset: -0.038 ms  
Remote clock offset: -1.055 ms

# Below is generated by plot.py at 2019-01-21 13:14:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 62.61 Mbit/s  
95th percentile per-packet one-way delay: 62.243 ms  
Loss rate: 0.07%  
-- Flow 1:  
Average throughput: 33.79 Mbit/s  
95th percentile per-packet one-way delay: 58.604 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 34.29 Mbit/s  
95th percentile per-packet one-way delay: 62.975 ms  
Loss rate: 0.05%  
-- Flow 3:  
Average throughput: 21.21 Mbit/s  
95th percentile per-packet one-way delay: 65.094 ms  
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

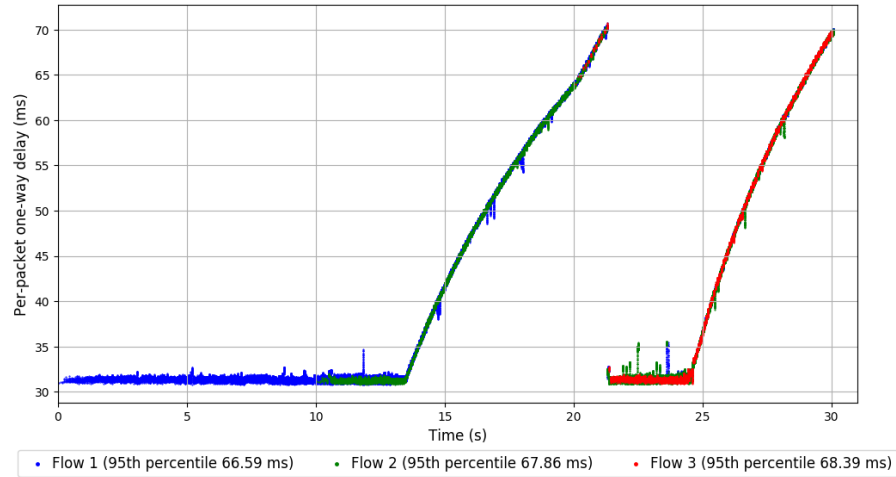
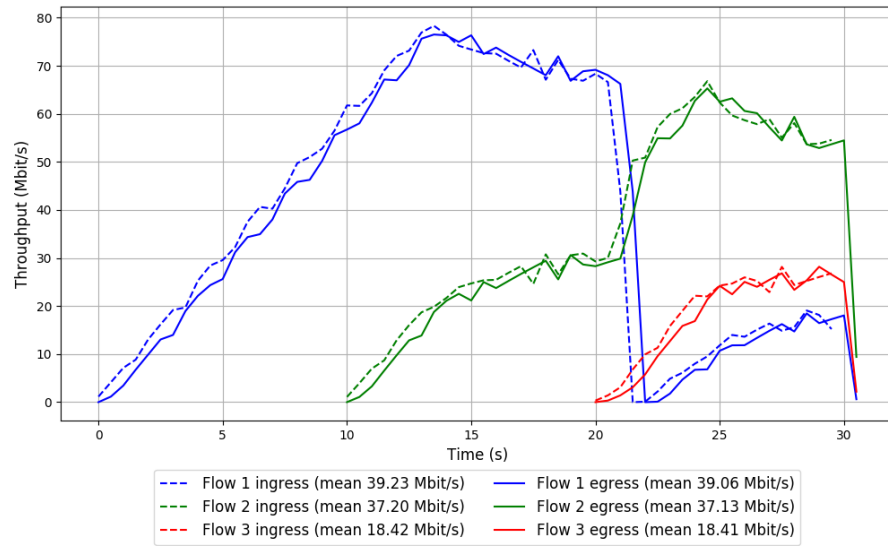


Run 4: Statistics of LEDBAT

Start at: 2019-01-21 12:15:26  
End at: 2019-01-21 12:15:56  
Local clock offset: 0.134 ms  
Remote clock offset: -0.391 ms

# Below is generated by plot.py at 2019-01-21 13:14:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 69.89 Mbit/s  
95th percentile per-packet one-way delay: 67.514 ms  
Loss rate: 0.18%  
-- Flow 1:  
Average throughput: 39.06 Mbit/s  
95th percentile per-packet one-way delay: 66.594 ms  
Loss rate: 0.32%  
-- Flow 2:  
Average throughput: 37.13 Mbit/s  
95th percentile per-packet one-way delay: 67.865 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 18.41 Mbit/s  
95th percentile per-packet one-way delay: 68.391 ms  
Loss rate: 0.00%

# Run 4: Report of LEDBAT — Data Link

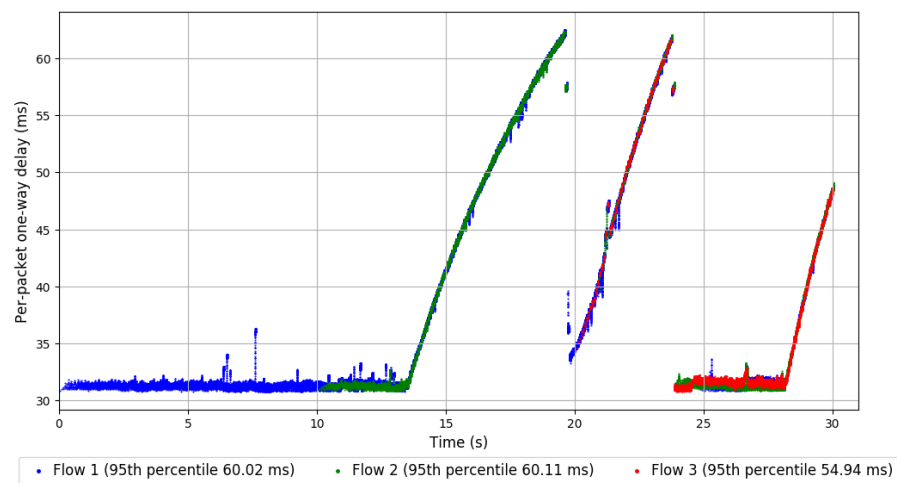
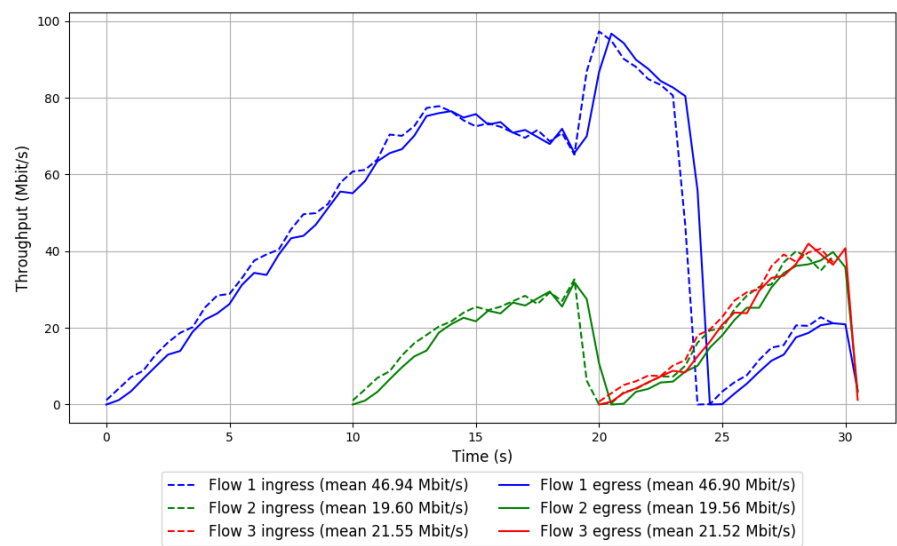


Run 5: Statistics of LEDBAT

Start at: 2019-01-21 12:41:33  
End at: 2019-01-21 12:42:03  
Local clock offset: 4.338 ms  
Remote clock offset: -0.457 ms

# Below is generated by plot.py at 2019-01-21 13:14:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 67.04 Mbit/s  
95th percentile per-packet one-way delay: 59.831 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 46.90 Mbit/s  
95th percentile per-packet one-way delay: 60.021 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 19.56 Mbit/s  
95th percentile per-packet one-way delay: 60.106 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 21.52 Mbit/s  
95th percentile per-packet one-way delay: 54.935 ms  
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

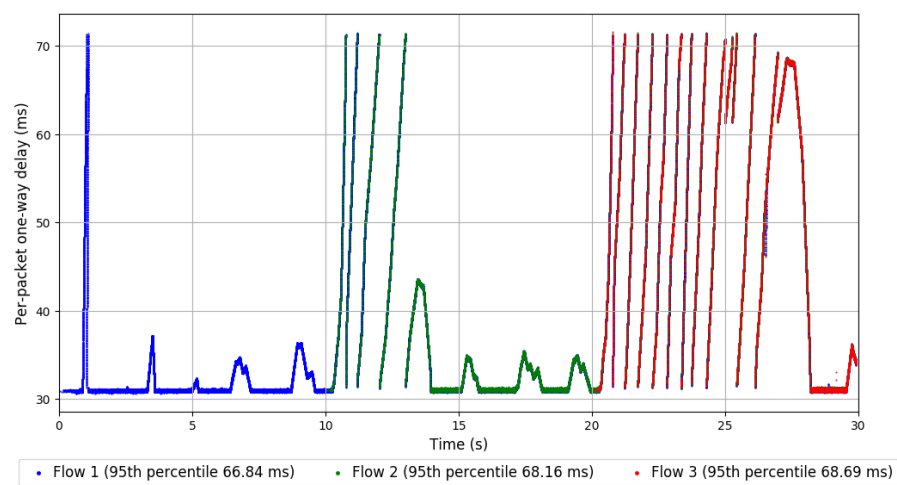
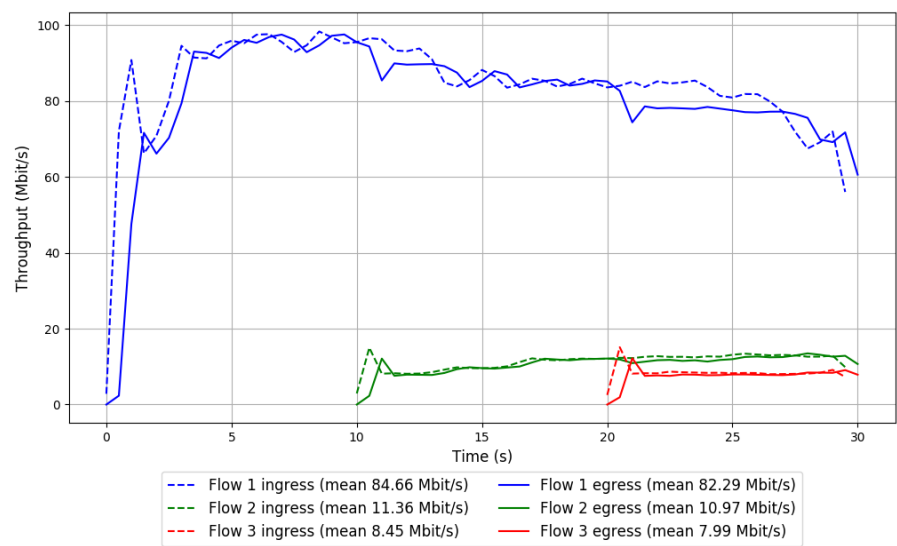


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-01-21 11:21:02
End at: 2019-01-21 11:21:32
Local clock offset: -0.235 ms
Remote clock offset: -0.94 ms

# Below is generated by plot.py at 2019-01-21 13:15:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.22 Mbit/s
95th percentile per-packet one-way delay: 67.275 ms
Loss rate: 2.92%
-- Flow 1:
Average throughput: 82.29 Mbit/s
95th percentile per-packet one-way delay: 66.839 ms
Loss rate: 2.79%
-- Flow 2:
Average throughput: 10.97 Mbit/s
95th percentile per-packet one-way delay: 68.163 ms
Loss rate: 3.38%
-- Flow 3:
Average throughput: 7.99 Mbit/s
95th percentile per-packet one-way delay: 68.692 ms
Loss rate: 5.44%
```

Run 1: Report of PCC-Allegro — Data Link



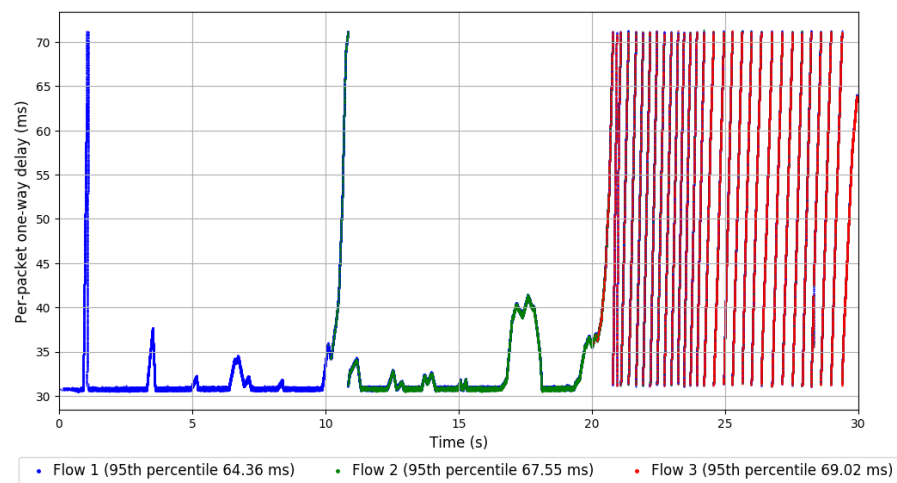
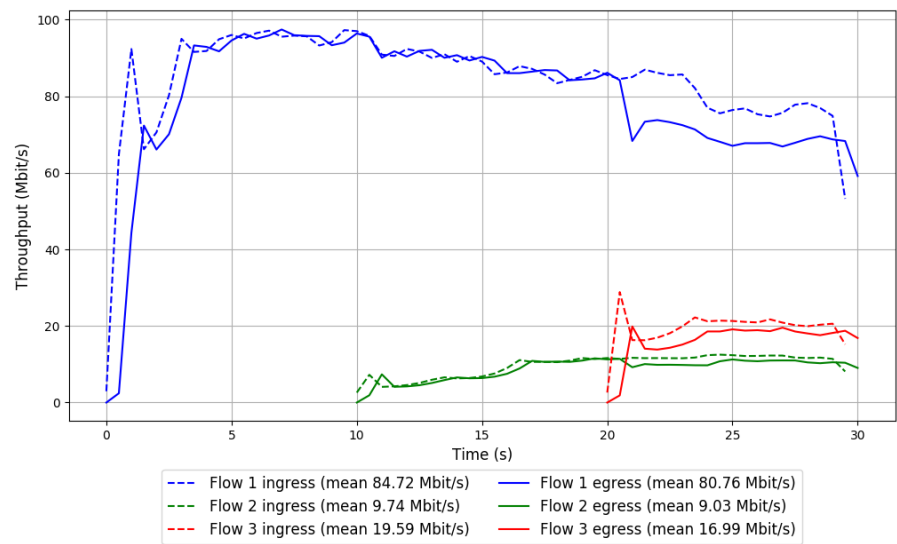


Run 2: Statistics of PCC-Allegro

Start at: 2019-01-21 11:47:07  
End at: 2019-01-21 11:47:37  
Local clock offset: -0.138 ms  
Remote clock offset: -1.064 ms

# Below is generated by plot.py at 2019-01-21 13:15:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.38 Mbit/s  
95th percentile per-packet one-way delay: 65.519 ms  
Loss rate: 5.30%  
-- Flow 1:  
Average throughput: 80.76 Mbit/s  
95th percentile per-packet one-way delay: 64.355 ms  
Loss rate: 4.57%  
-- Flow 2:  
Average throughput: 9.03 Mbit/s  
95th percentile per-packet one-way delay: 67.547 ms  
Loss rate: 7.14%  
-- Flow 3:  
Average throughput: 16.99 Mbit/s  
95th percentile per-packet one-way delay: 69.015 ms  
Loss rate: 13.07%

Run 2: Report of PCC-Allegro — Data Link

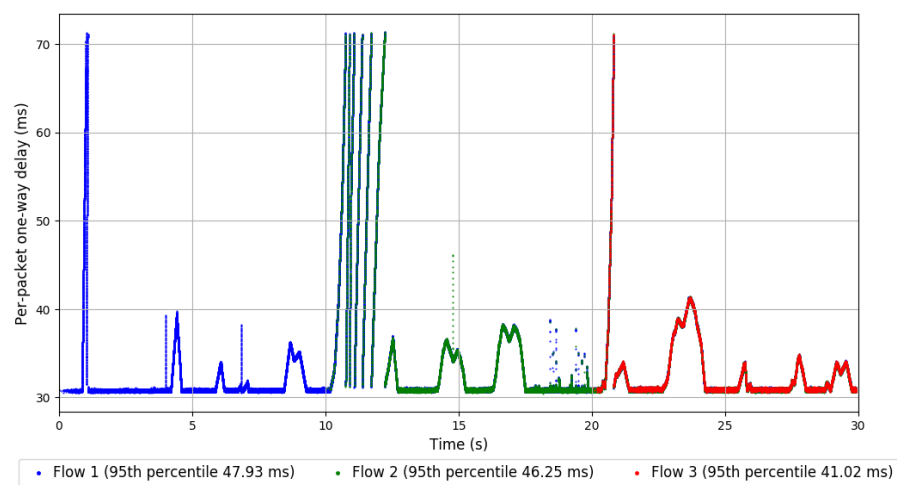
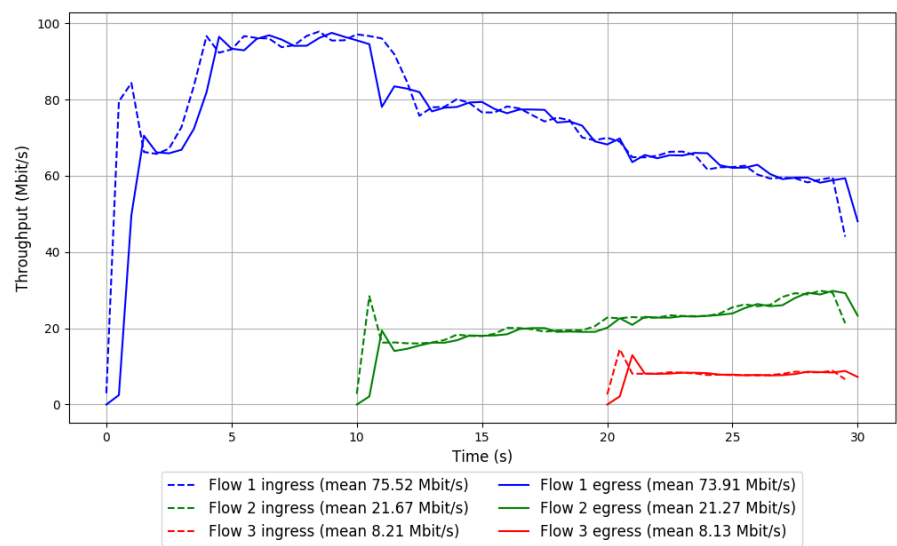


Run 3: Statistics of PCC-Allegro

Start at: 2019-01-21 12:12:58  
End at: 2019-01-21 12:13:28  
Local clock offset: 0.134 ms  
Remote clock offset: -0.628 ms

# Below is generated by plot.py at 2019-01-21 13:15:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.74 Mbit/s  
95th percentile per-packet one-way delay: 47.449 ms  
Loss rate: 2.05%  
-- Flow 1:  
Average throughput: 73.91 Mbit/s  
95th percentile per-packet one-way delay: 47.932 ms  
Loss rate: 2.13%  
-- Flow 2:  
Average throughput: 21.27 Mbit/s  
95th percentile per-packet one-way delay: 46.249 ms  
Loss rate: 1.87%  
-- Flow 3:  
Average throughput: 8.13 Mbit/s  
95th percentile per-packet one-way delay: 41.024 ms  
Loss rate: 0.97%

Run 3: Report of PCC-Allegro — Data Link

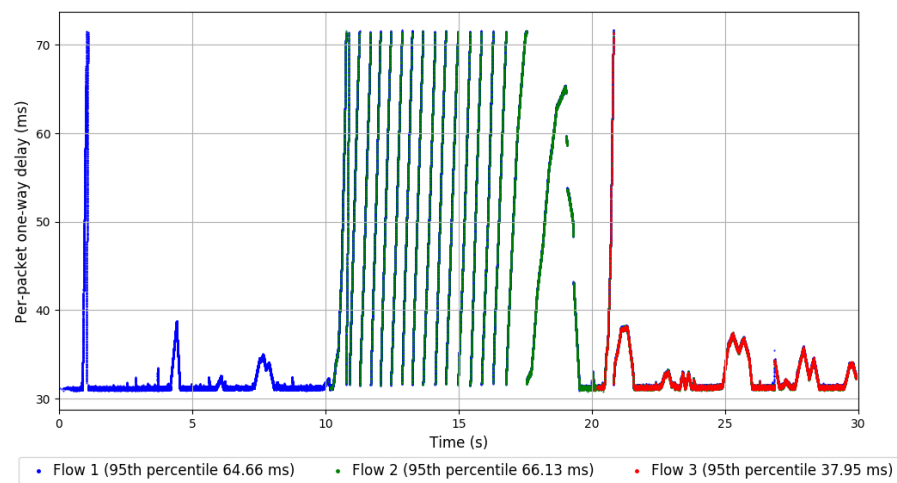
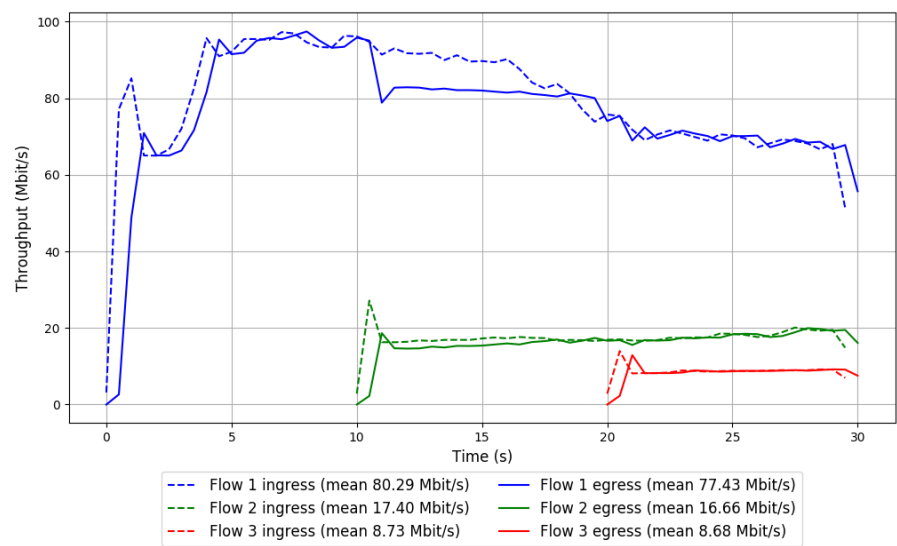


Run 4: Statistics of PCC-Allegro

Start at: 2019-01-21 12:39:01  
End at: 2019-01-21 12:39:31  
Local clock offset: 4.155 ms  
Remote clock offset: -0.304 ms

# Below is generated by plot.py at 2019-01-21 13:15:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.36 Mbit/s  
95th percentile per-packet one-way delay: 64.725 ms  
Loss rate: 3.56%  
-- Flow 1:  
Average throughput: 77.43 Mbit/s  
95th percentile per-packet one-way delay: 64.660 ms  
Loss rate: 3.56%  
-- Flow 2:  
Average throughput: 16.66 Mbit/s  
95th percentile per-packet one-way delay: 66.130 ms  
Loss rate: 4.30%  
-- Flow 3:  
Average throughput: 8.68 Mbit/s  
95th percentile per-packet one-way delay: 37.945 ms  
Loss rate: 0.60%

Run 4: Report of PCC-Allegro — Data Link

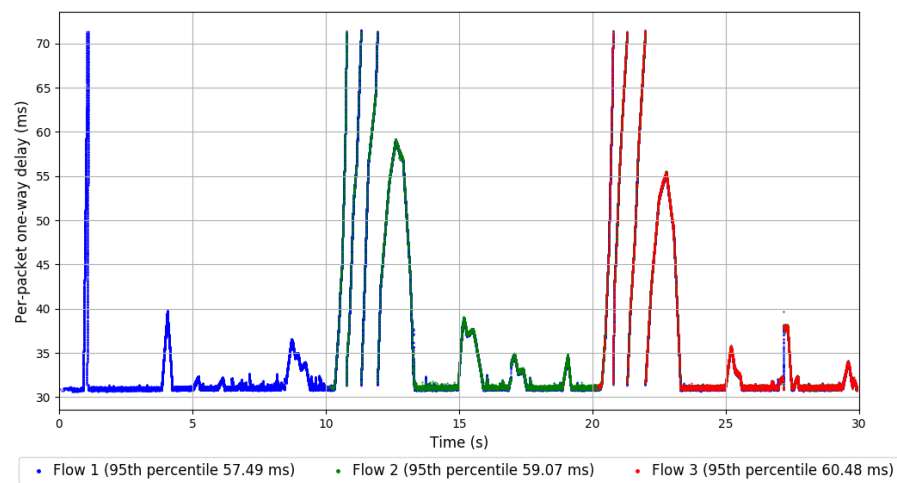
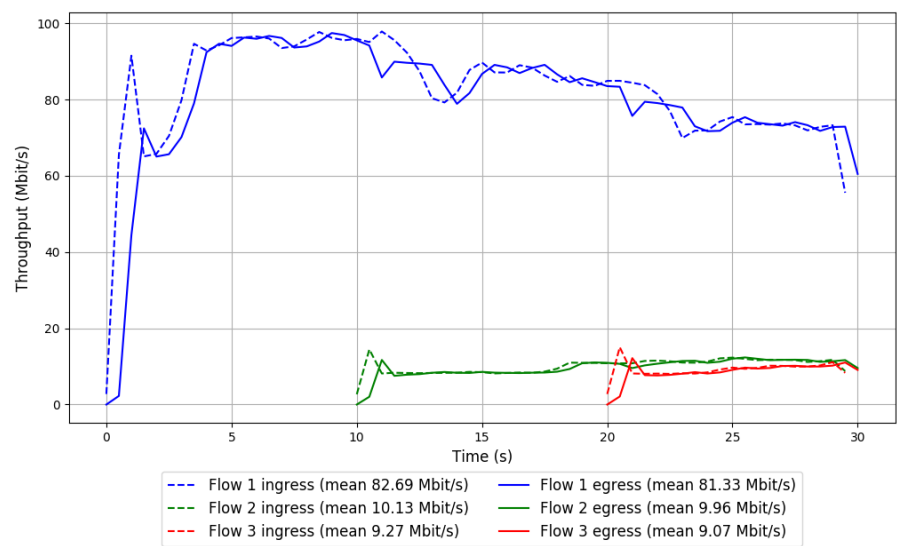


Run 5: Statistics of PCC-Allegro

Start at: 2019-01-21 13:04:53  
End at: 2019-01-21 13:05:23  
Local clock offset: 4.361 ms  
Remote clock offset: -0.865 ms

# Below is generated by plot.py at 2019-01-21 13:15:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.95 Mbit/s  
95th percentile per-packet one-way delay: 57.679 ms  
Loss rate: 1.65%  
-- Flow 1:  
Average throughput: 81.33 Mbit/s  
95th percentile per-packet one-way delay: 57.490 ms  
Loss rate: 1.64%  
-- Flow 2:  
Average throughput: 9.96 Mbit/s  
95th percentile per-packet one-way delay: 59.066 ms  
Loss rate: 1.64%  
-- Flow 3:  
Average throughput: 9.07 Mbit/s  
95th percentile per-packet one-way delay: 60.476 ms  
Loss rate: 2.13%

Run 5: Report of PCC-Allegro — Data Link



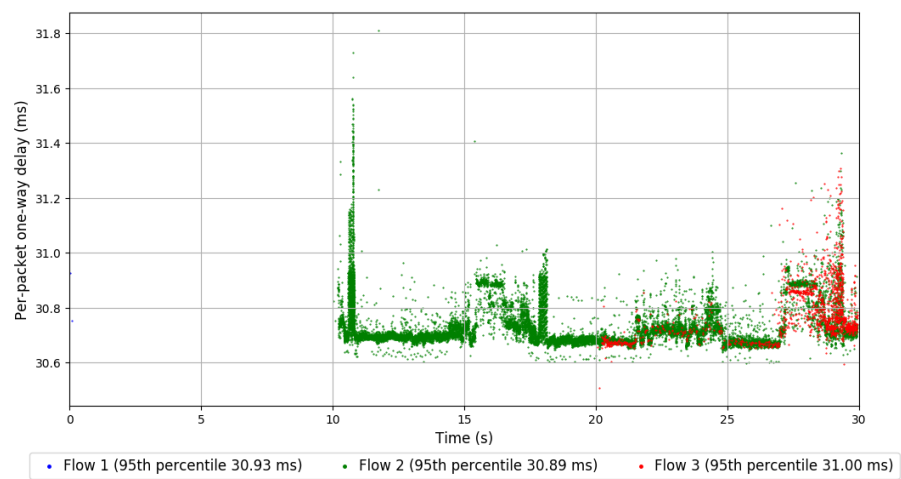
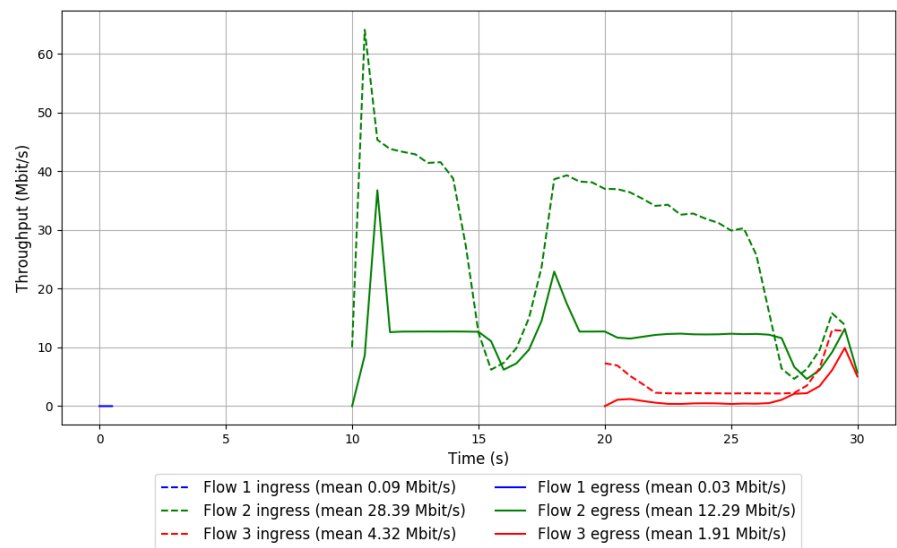


Run 1: Statistics of PCC-Expr

Start at: 2019-01-21 11:01:13  
End at: 2019-01-21 11:01:43  
Local clock offset: 0.392 ms  
Remote clock offset: -1.176 ms

# Below is generated by plot.py at 2019-01-21 13:15:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.81 Mbit/s  
95th percentile per-packet one-way delay: 30.901 ms  
Loss rate: 56.64%  
-- Flow 1:  
Average throughput: 0.03 Mbit/s  
95th percentile per-packet one-way delay: 30.928 ms  
Loss rate: 85.71%  
-- Flow 2:  
Average throughput: 12.29 Mbit/s  
95th percentile per-packet one-way delay: 30.895 ms  
Loss rate: 56.70%  
-- Flow 3:  
Average throughput: 1.91 Mbit/s  
95th percentile per-packet one-way delay: 30.995 ms  
Loss rate: 55.82%

Run 1: Report of PCC-Expr — Data Link

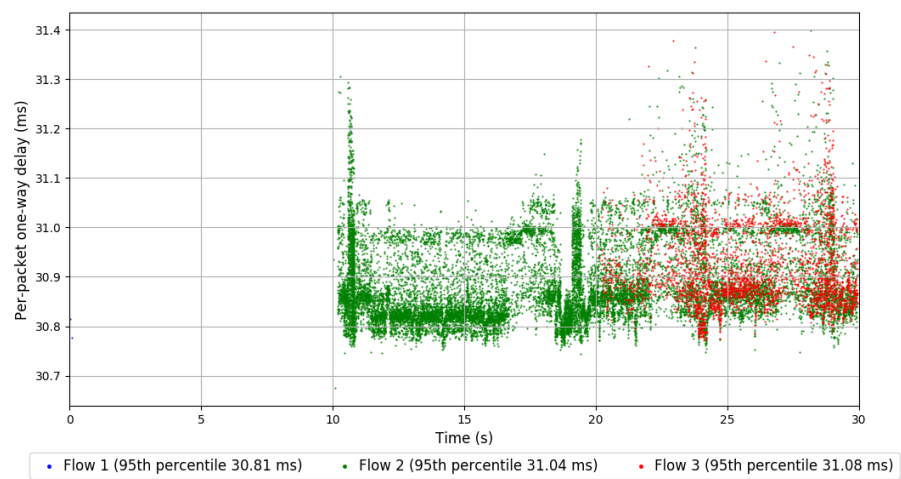
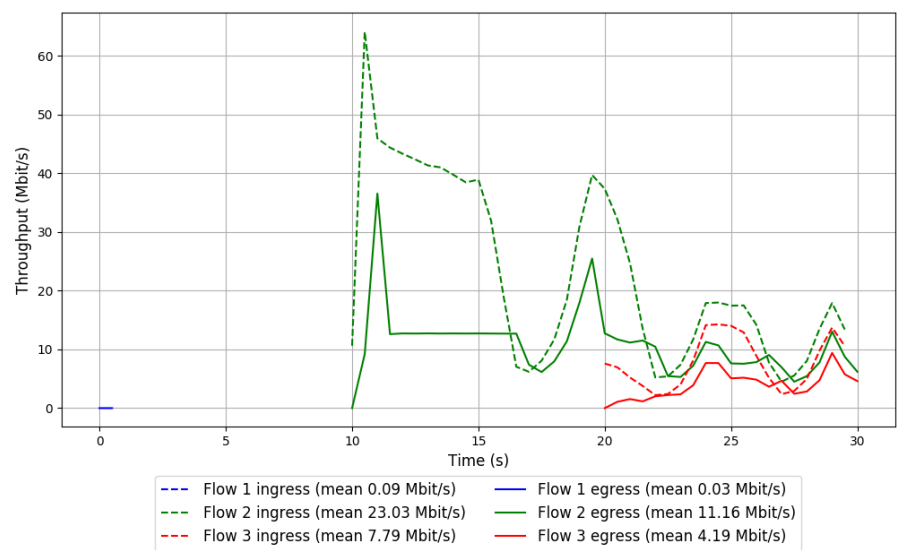


Run 2: Statistics of PCC-Expr

Start at: 2019-01-21 11:27:16  
End at: 2019-01-21 11:27:47  
Local clock offset: -0.134 ms  
Remote clock offset: -0.951 ms

# Below is generated by plot.py at 2019-01-21 13:15:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.81 Mbit/s  
95th percentile per-packet one-way delay: 31.045 ms  
Loss rate: 50.77%  
-- Flow 1:  
Average throughput: 0.03 Mbit/s  
95th percentile per-packet one-way delay: 30.814 ms  
Loss rate: 85.71%  
-- Flow 2:  
Average throughput: 11.16 Mbit/s  
95th percentile per-packet one-way delay: 31.037 ms  
Loss rate: 51.53%  
-- Flow 3:  
Average throughput: 4.19 Mbit/s  
95th percentile per-packet one-way delay: 31.081 ms  
Loss rate: 46.22%

Run 2: Report of PCC-Expr — Data Link

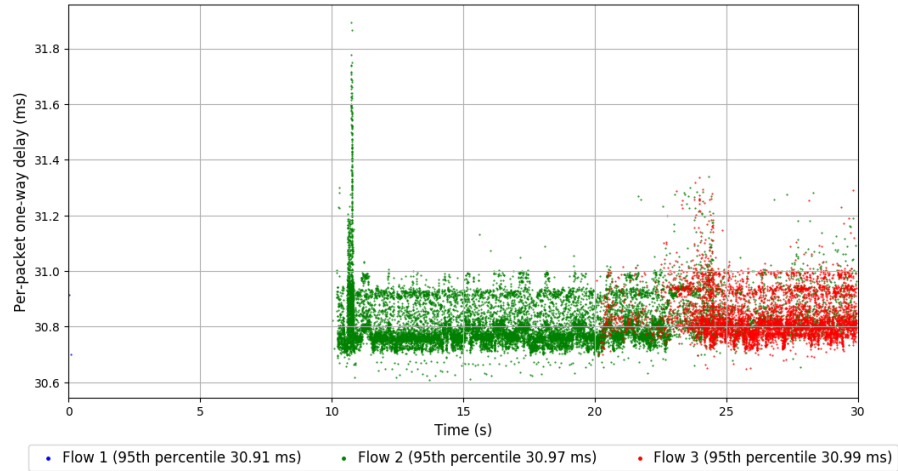
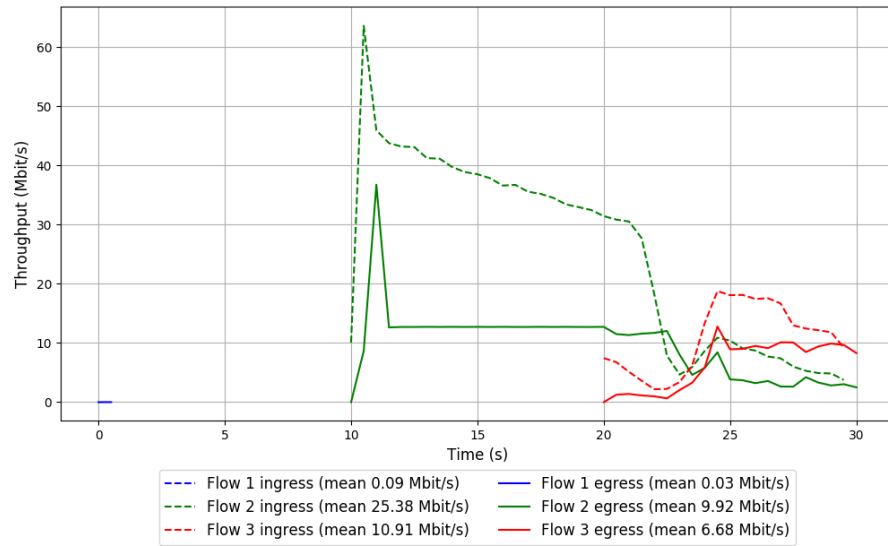


Run 3: Statistics of PCC-Expr

Start at: 2019-01-21 11:53:13  
End at: 2019-01-21 11:53:43  
Local clock offset: 0.037 ms  
Remote clock offset: -0.864 ms

# Below is generated by plot.py at 2019-01-21 13:15:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.80 Mbit/s  
95th percentile per-packet one-way delay: 30.979 ms  
Loss rate: 57.02%  
-- Flow 1:  
Average throughput: 0.03 Mbit/s  
95th percentile per-packet one-way delay: 30.915 ms  
Loss rate: 85.71%  
-- Flow 2:  
Average throughput: 9.92 Mbit/s  
95th percentile per-packet one-way delay: 30.973 ms  
Loss rate: 60.91%  
-- Flow 3:  
Average throughput: 6.68 Mbit/s  
95th percentile per-packet one-way delay: 30.988 ms  
Loss rate: 38.81%

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

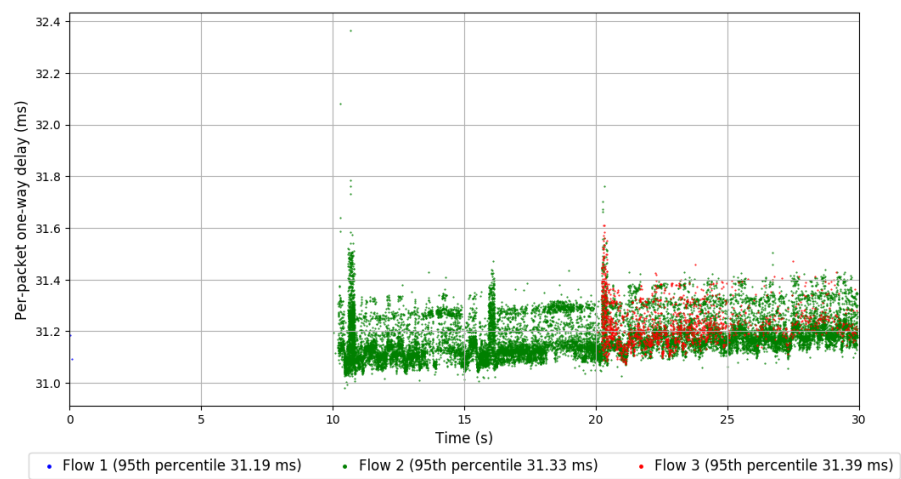
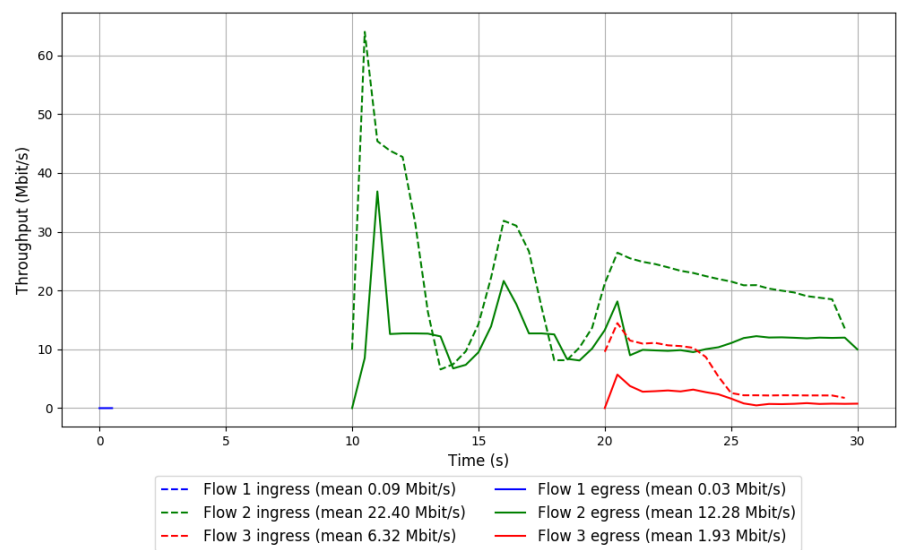


Run 4: Statistics of PCC-Expr

Start at: 2019-01-21 12:19:03  
End at: 2019-01-21 12:19:33  
Local clock offset: 1.211 ms  
Remote clock offset: -0.308 ms

# Below is generated by plot.py at 2019-01-21 13:15:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.80 Mbit/s  
95th percentile per-packet one-way delay: 31.333 ms  
Loss rate: 48.18%  
-- Flow 1:  
Average throughput: 0.03 Mbit/s  
95th percentile per-packet one-way delay: 31.186 ms  
Loss rate: 85.71%  
-- Flow 2:  
Average throughput: 12.28 Mbit/s  
95th percentile per-packet one-way delay: 31.327 ms  
Loss rate: 45.19%  
-- Flow 3:  
Average throughput: 1.93 Mbit/s  
95th percentile per-packet one-way delay: 31.386 ms  
Loss rate: 69.51%

Run 4: Report of PCC-Expr — Data Link



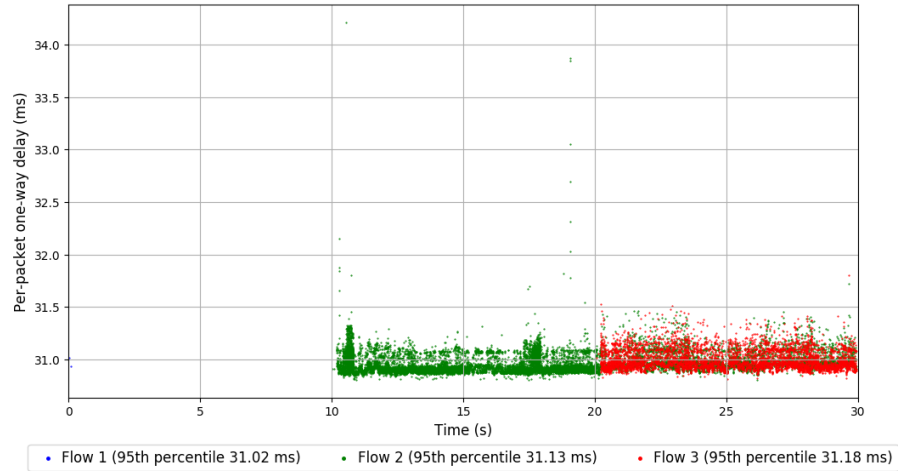
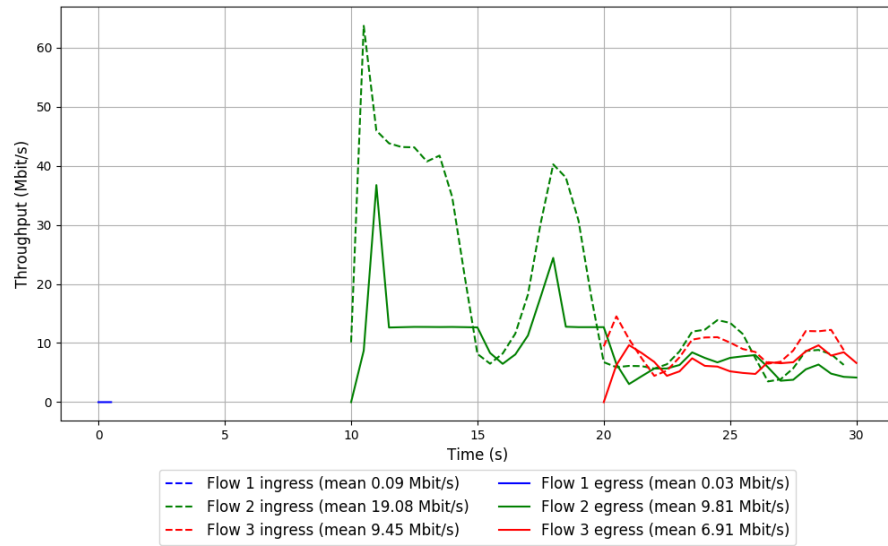


Run 5: Statistics of PCC-Expr

Start at: 2019-01-21 12:45:12  
End at: 2019-01-21 12:45:42  
Local clock offset: 4.552 ms  
Remote clock offset: -0.447 ms

# Below is generated by plot.py at 2019-01-21 13:15:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.81 Mbit/s  
95th percentile per-packet one-way delay: 31.150 ms  
Loss rate: 44.32%  
-- Flow 1:  
Average throughput: 0.03 Mbit/s  
95th percentile per-packet one-way delay: 31.021 ms  
Loss rate: 85.71%  
-- Flow 2:  
Average throughput: 9.81 Mbit/s  
95th percentile per-packet one-way delay: 31.127 ms  
Loss rate: 48.61%  
-- Flow 3:  
Average throughput: 6.91 Mbit/s  
95th percentile per-packet one-way delay: 31.177 ms  
Loss rate: 26.86%

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

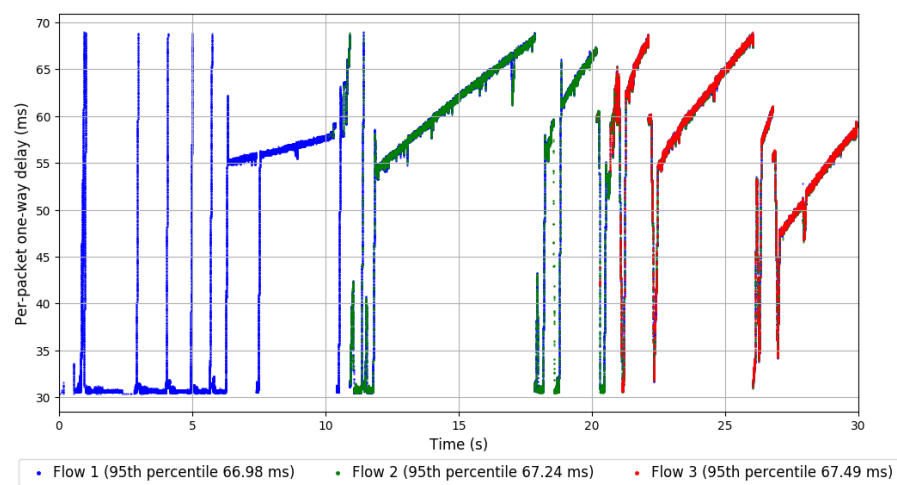
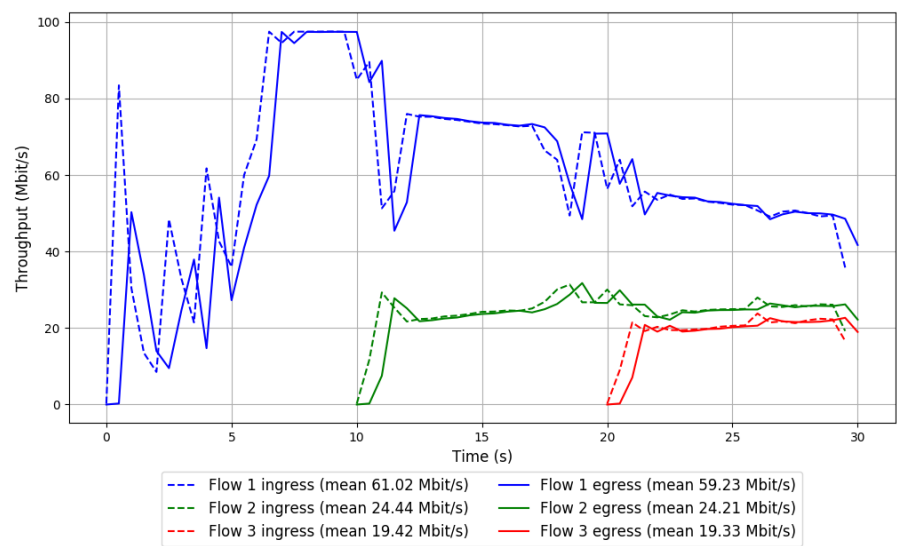


Run 1: Statistics of QUIC Cubic

Start at: 2019-01-21 11:18:32  
End at: 2019-01-21 11:19:02  
Local clock offset: -0.34 ms  
Remote clock offset: -1.142 ms

# Below is generated by plot.py at 2019-01-21 13:16:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.65 Mbit/s  
95th percentile per-packet one-way delay: 67.064 ms  
Loss rate: 2.29%  
-- Flow 1:  
Average throughput: 59.23 Mbit/s  
95th percentile per-packet one-way delay: 66.977 ms  
Loss rate: 2.83%  
-- Flow 2:  
Average throughput: 24.21 Mbit/s  
95th percentile per-packet one-way delay: 67.238 ms  
Loss rate: 0.94%  
-- Flow 3:  
Average throughput: 19.33 Mbit/s  
95th percentile per-packet one-way delay: 67.491 ms  
Loss rate: 0.54%

Run 1: Report of QUIC Cubic — Data Link

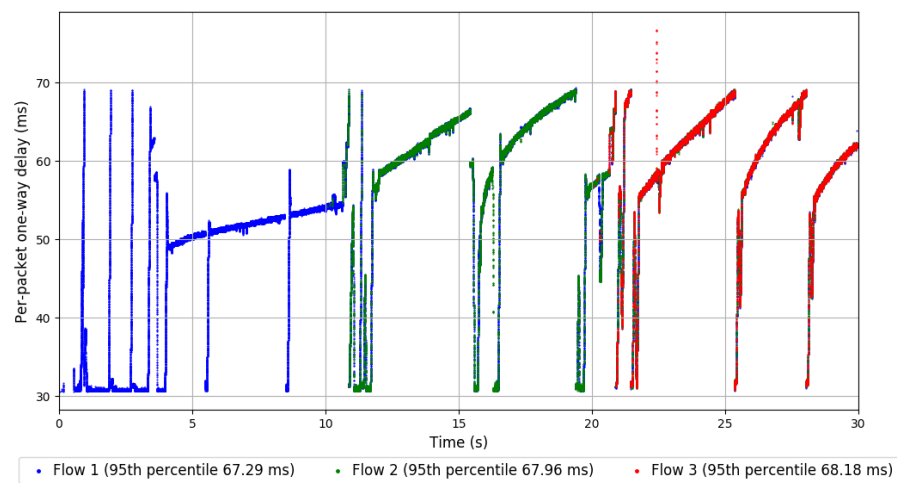
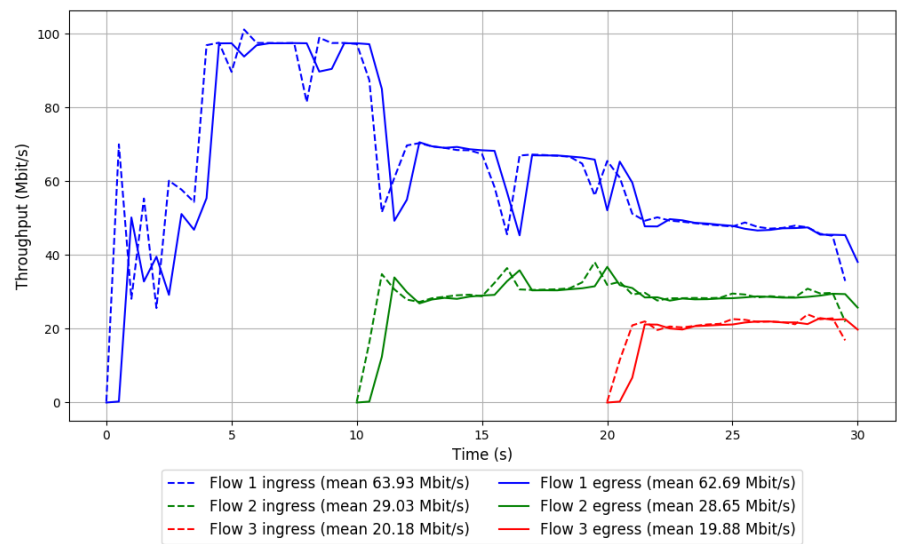


Run 2: Statistics of QUIC Cubic

Start at: 2019-01-21 11:44:39  
End at: 2019-01-21 11:45:09  
Local clock offset: -0.192 ms  
Remote clock offset: -0.903 ms

# Below is generated by plot.py at 2019-01-21 13:16:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.25 Mbit/s  
95th percentile per-packet one-way delay: 67.580 ms  
Loss rate: 1.69%  
-- Flow 1:  
Average throughput: 62.69 Mbit/s  
95th percentile per-packet one-way delay: 67.287 ms  
Loss rate: 1.84%  
-- Flow 2:  
Average throughput: 28.65 Mbit/s  
95th percentile per-packet one-way delay: 67.961 ms  
Loss rate: 1.27%  
-- Flow 3:  
Average throughput: 19.88 Mbit/s  
95th percentile per-packet one-way delay: 68.178 ms  
Loss rate: 1.44%

Run 2: Report of QUIC Cubic — Data Link

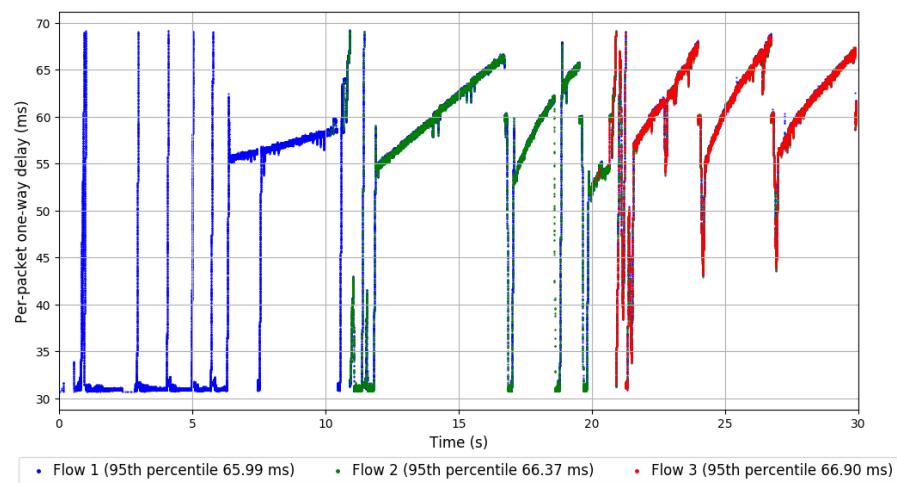
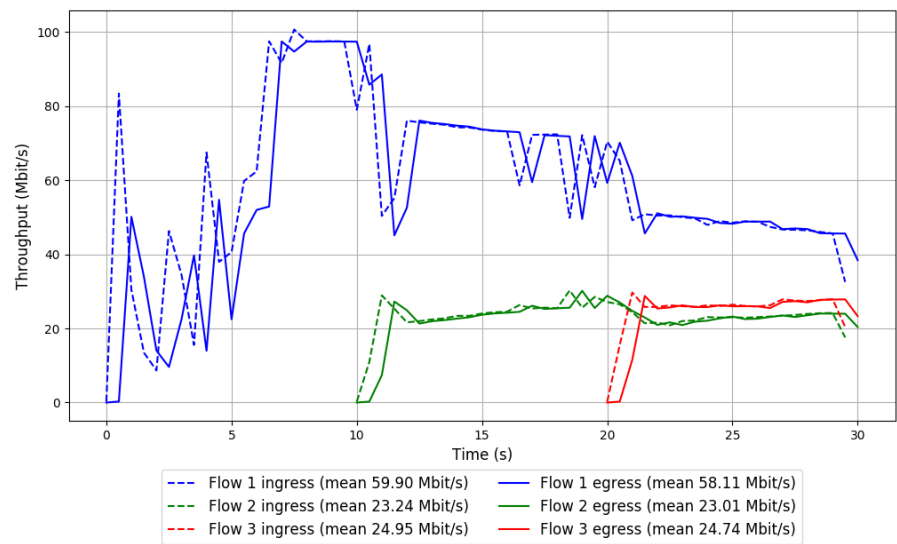


Run 3: Statistics of QUIC Cubic

Start at: 2019-01-21 12:10:30  
End at: 2019-01-21 12:11:00  
Local clock offset: 0.13 ms  
Remote clock offset: -0.533 ms

# Below is generated by plot.py at 2019-01-21 13:16:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.52 Mbit/s  
95th percentile per-packet one-way delay: 66.239 ms  
Loss rate: 2.33%  
-- Flow 1:  
Average throughput: 58.11 Mbit/s  
95th percentile per-packet one-way delay: 65.986 ms  
Loss rate: 2.90%  
-- Flow 2:  
Average throughput: 23.01 Mbit/s  
95th percentile per-packet one-way delay: 66.374 ms  
Loss rate: 0.98%  
-- Flow 3:  
Average throughput: 24.74 Mbit/s  
95th percentile per-packet one-way delay: 66.898 ms  
Loss rate: 0.73%

Run 3: Report of QUIC Cubic — Data Link



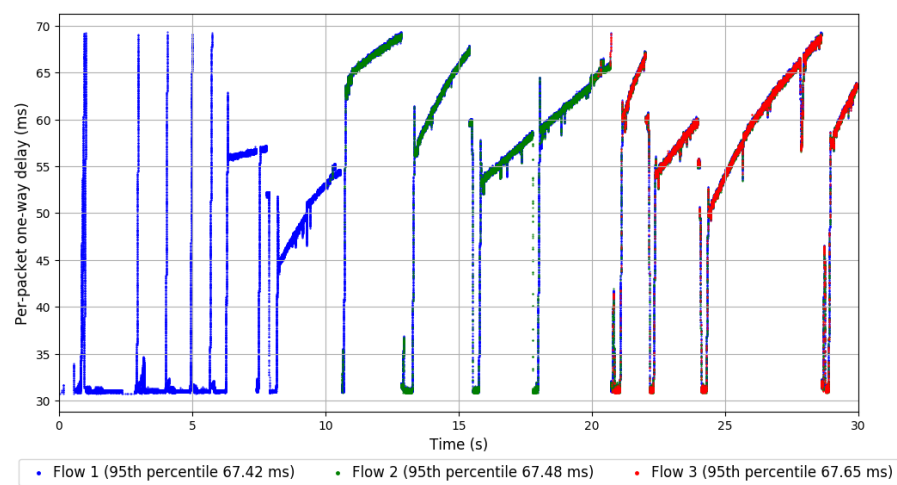
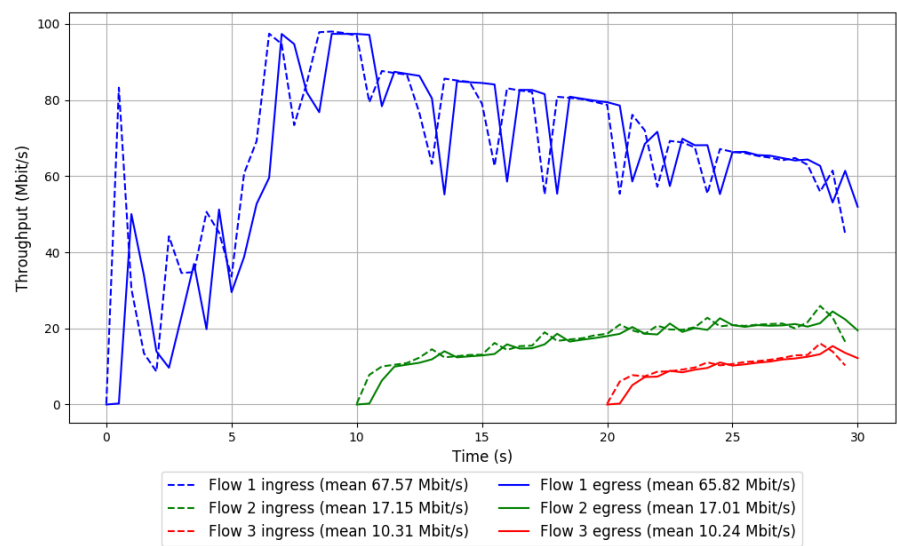


Run 4: Statistics of QUIC Cubic

Start at: 2019-01-21 12:36:30  
End at: 2019-01-21 12:37:00  
Local clock offset: 3.974 ms  
Remote clock offset: -0.296 ms

# Below is generated by plot.py at 2019-01-21 13:16:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 80.48 Mbit/s  
95th percentile per-packet one-way delay: 67.440 ms  
Loss rate: 2.16%  
-- Flow 1:  
Average throughput: 65.82 Mbit/s  
95th percentile per-packet one-way delay: 67.420 ms  
Loss rate: 2.47%  
-- Flow 2:  
Average throughput: 17.01 Mbit/s  
95th percentile per-packet one-way delay: 67.482 ms  
Loss rate: 0.75%  
-- Flow 3:  
Average throughput: 10.24 Mbit/s  
95th percentile per-packet one-way delay: 67.652 ms  
Loss rate: 0.76%

Run 4: Report of QUIC Cubic — Data Link

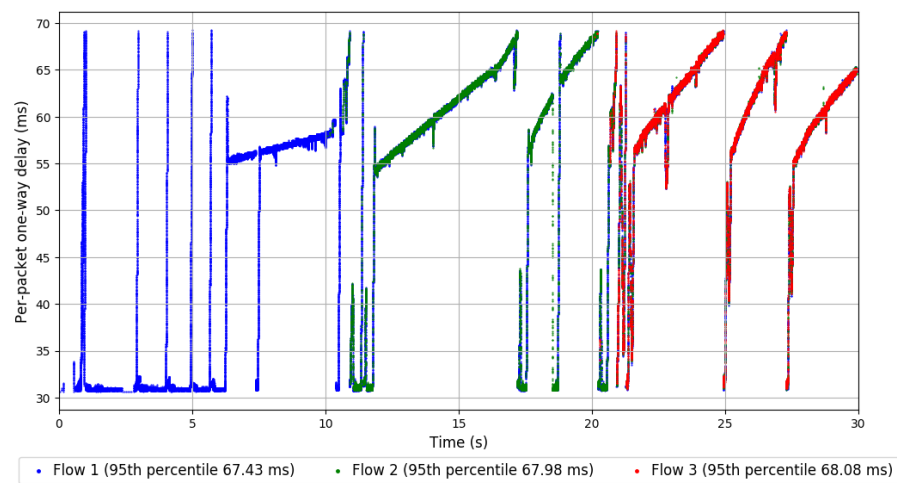
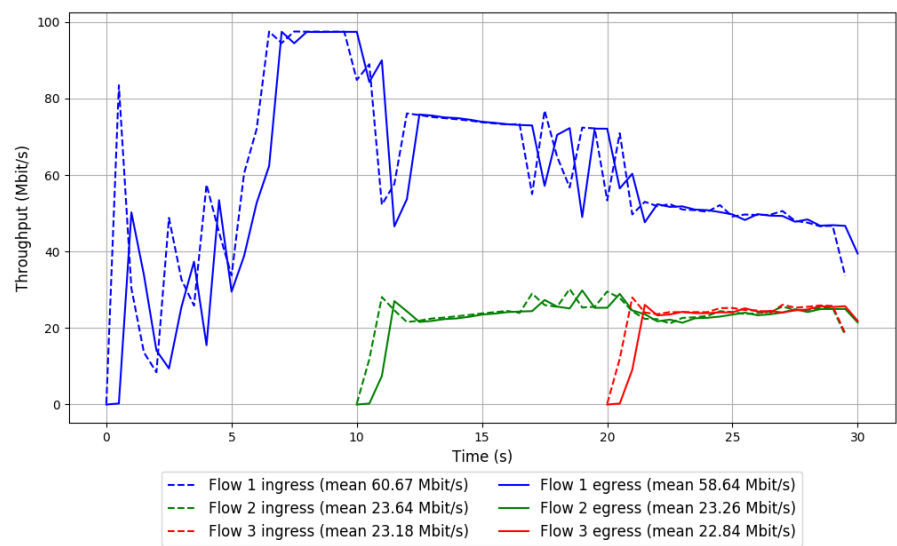


Run 5: Statistics of QUIC Cubic

Start at: 2019-01-21 13:02:25  
End at: 2019-01-21 13:02:55  
Local clock offset: 4.319 ms  
Remote clock offset: -0.814 ms

# Below is generated by plot.py at 2019-01-21 13:16:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.59 Mbit/s  
95th percentile per-packet one-way delay: 67.574 ms  
Loss rate: 2.76%  
-- Flow 1:  
Average throughput: 58.64 Mbit/s  
95th percentile per-packet one-way delay: 67.428 ms  
Loss rate: 3.23%  
-- Flow 2:  
Average throughput: 23.26 Mbit/s  
95th percentile per-packet one-way delay: 67.982 ms  
Loss rate: 1.59%  
-- Flow 3:  
Average throughput: 22.84 Mbit/s  
95th percentile per-packet one-way delay: 68.075 ms  
Loss rate: 1.48%

Run 5: Report of QUIC Cubic — Data Link

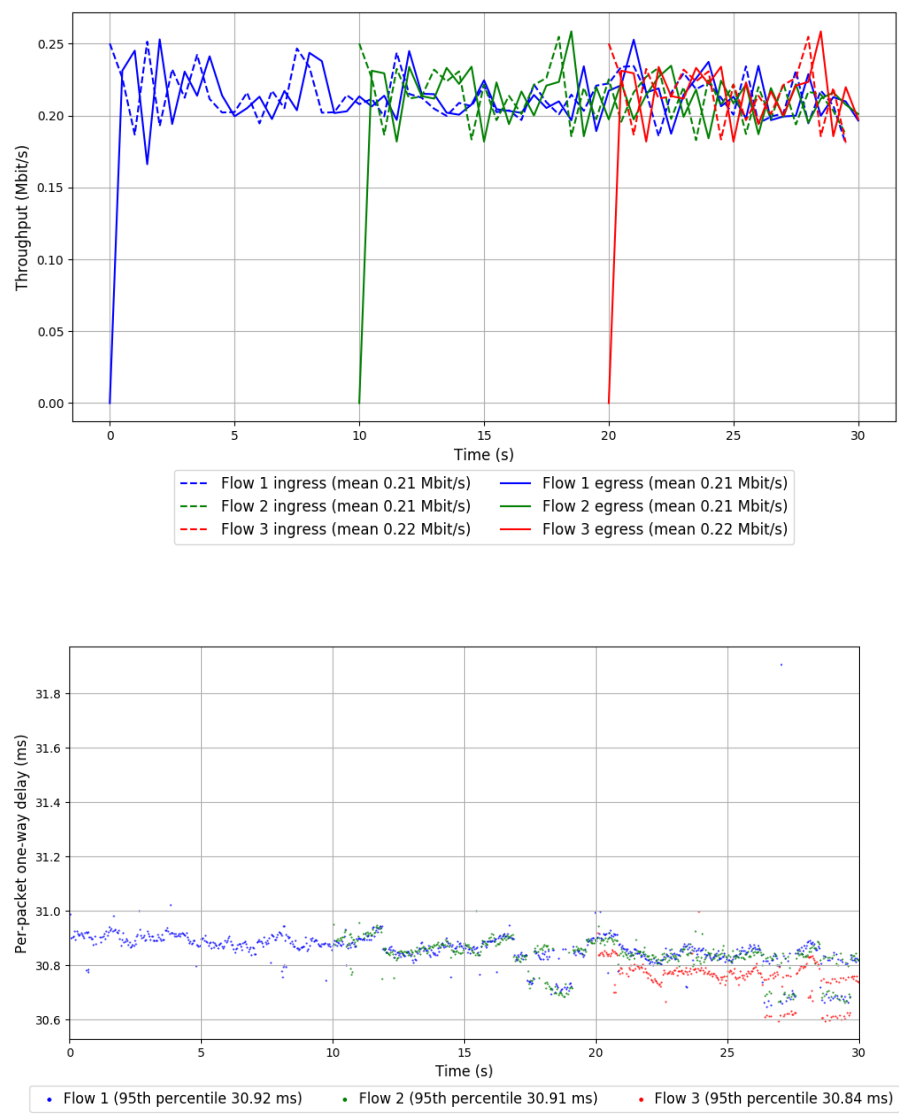


```
Run 1: Statistics of SReAM

Start at: 2019-01-21 10:58:52
End at: 2019-01-21 10:59:22
Local clock offset: 0.631 ms
Remote clock offset: -1.219 ms

# Below is generated by plot.py at 2019-01-21 13:16:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.916 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.923 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.913 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.840 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

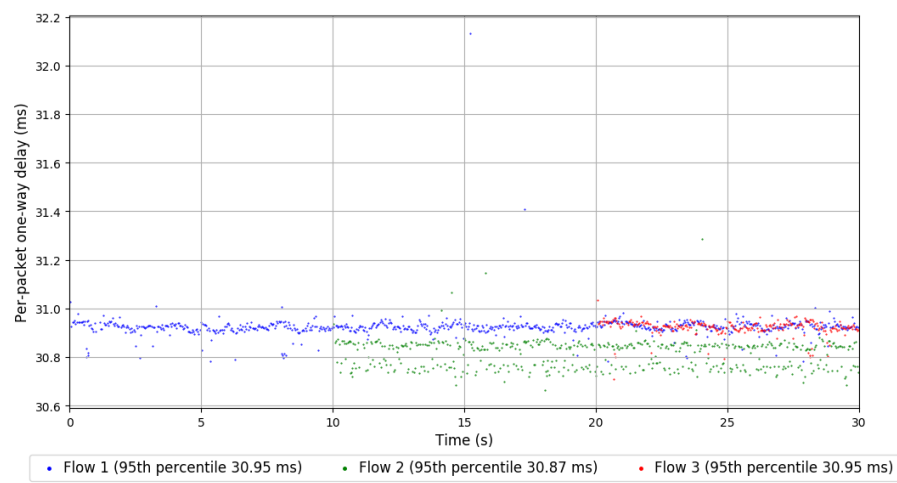
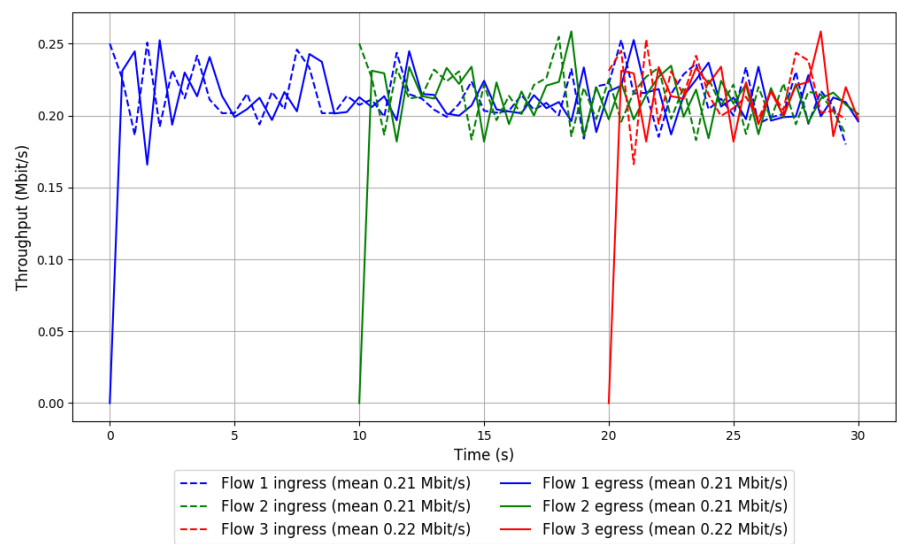


Run 2: Statistics of SReAM

Start at: 2019-01-21 11:24:47  
End at: 2019-01-21 11:25:17  
Local clock offset: -0.159 ms  
Remote clock offset: -1.007 ms

# Below is generated by plot.py at 2019-01-21 13:16:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 30.948 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 30.954 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 30.868 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 30.954 ms  
Loss rate: 0.00%

Run 2: Report of SCReAM — Data Link



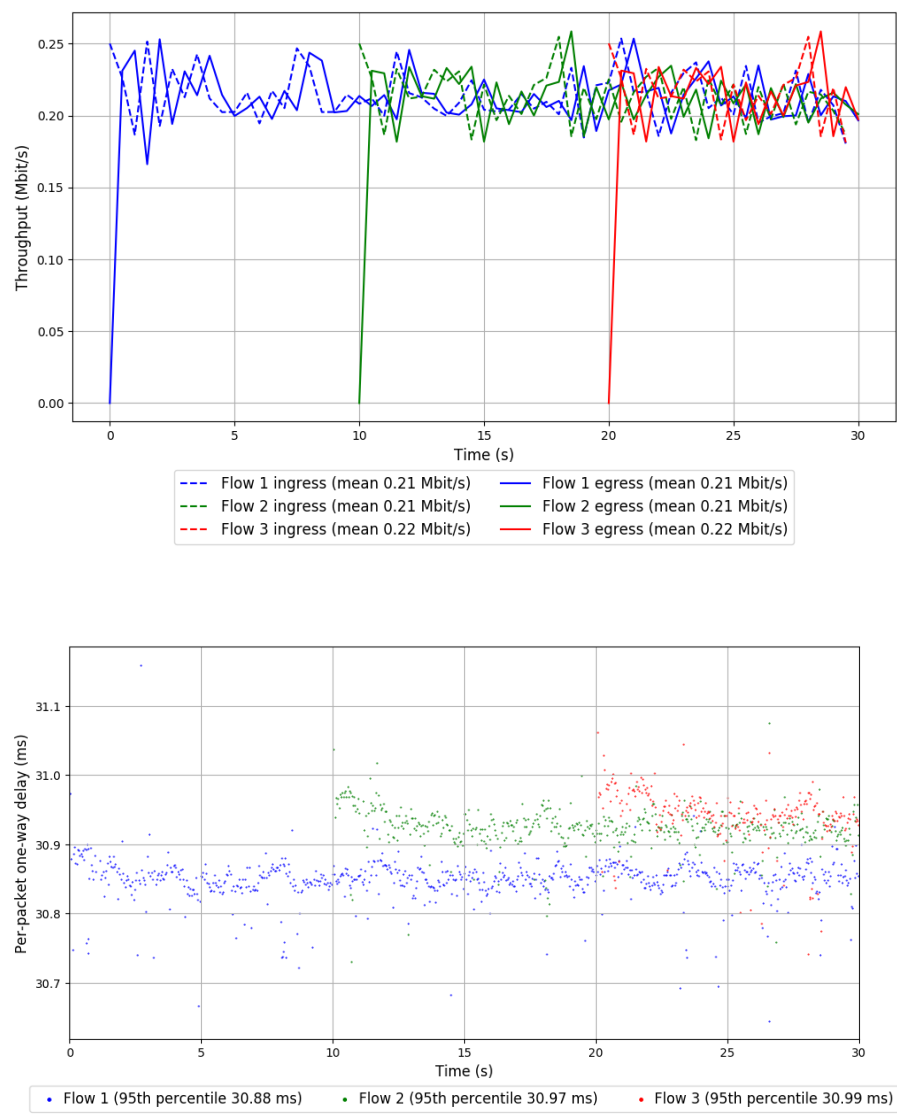


Run 3: Statistics of SReAM

Start at: 2019-01-21 11:50:51  
End at: 2019-01-21 11:51:21  
Local clock offset: -0.003 ms  
Remote clock offset: -0.833 ms

# Below is generated by plot.py at 2019-01-21 13:16:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 30.968 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 30.884 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 30.966 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 30.990 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

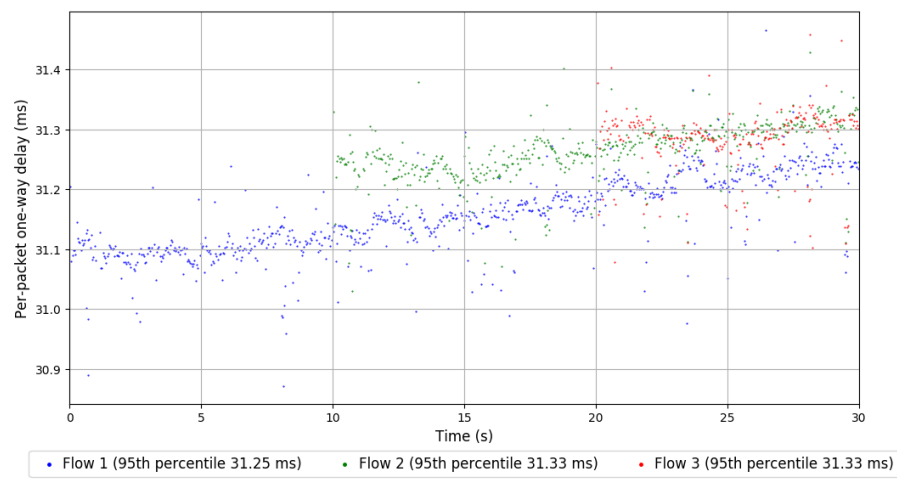
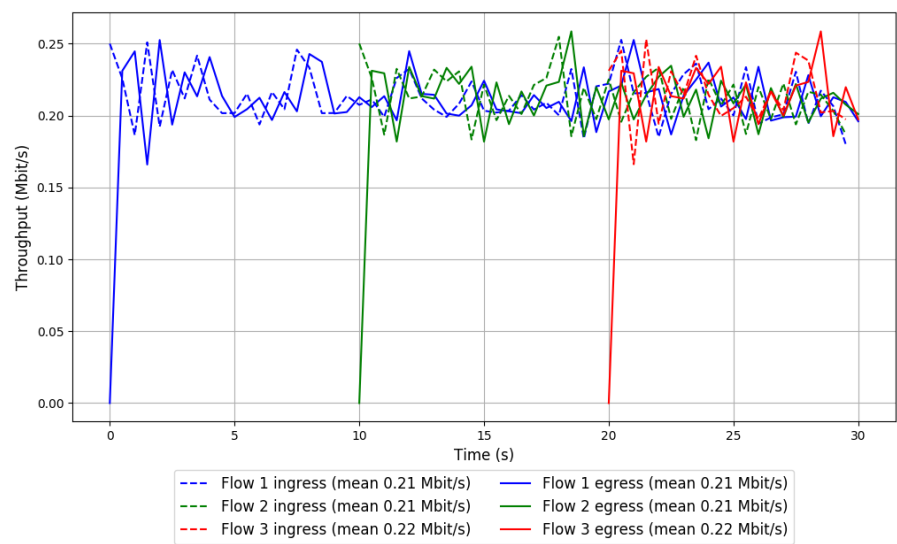


Run 4: Statistics of SReAM

Start at: 2019-01-21 12:16:40  
End at: 2019-01-21 12:17:10  
Local clock offset: 0.414 ms  
Remote clock offset: -0.386 ms

# Below is generated by plot.py at 2019-01-21 13:16:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 31.318 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 31.253 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 31.329 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 31.333 ms  
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2019-01-21 12:42:47

End at: 2019-01-21 12:43:17

Local clock offset: 4.409 ms

Remote clock offset: -0.45 ms

# Below is generated by plot.py at 2019-01-21 13:16:40

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 31.054 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 31.056 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 31.055 ms

Loss rate: 0.00%

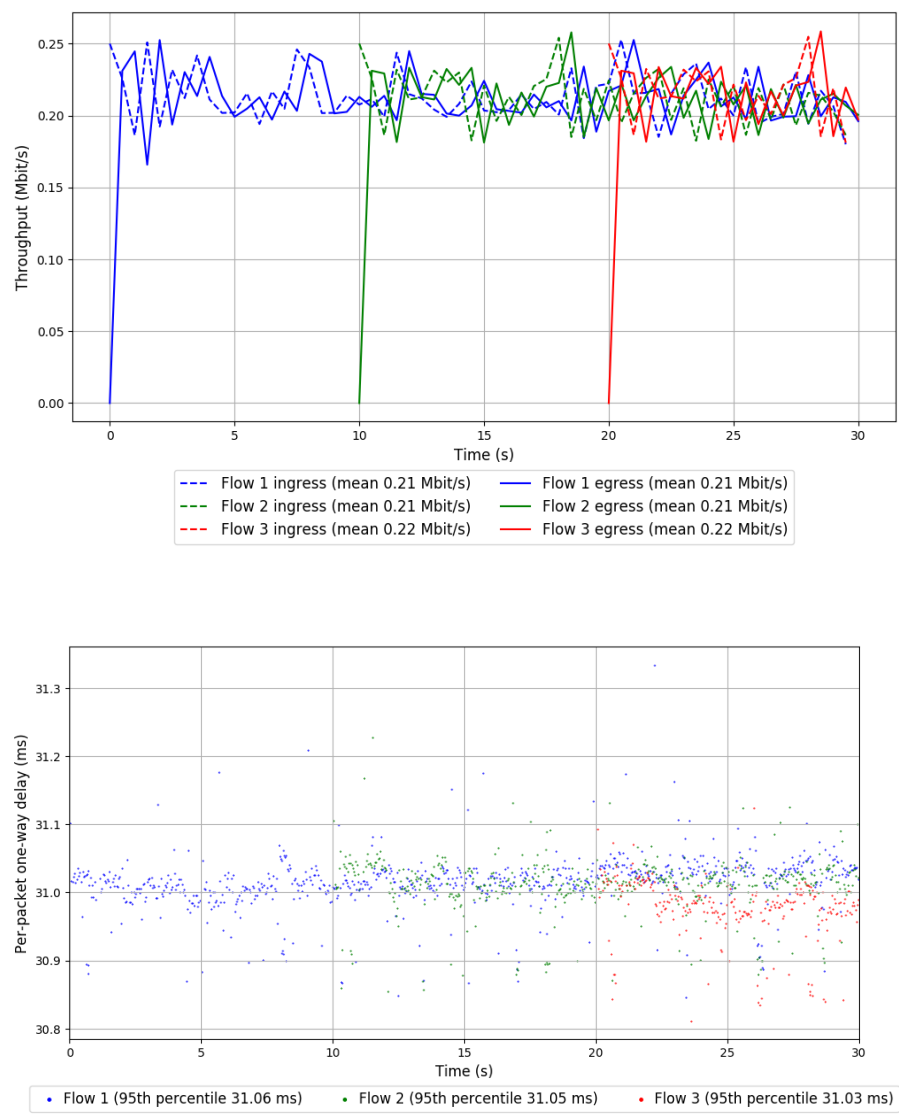
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 31.026 ms

Loss rate: 0.00%

Run 5: Report of SCRaM — Data Link

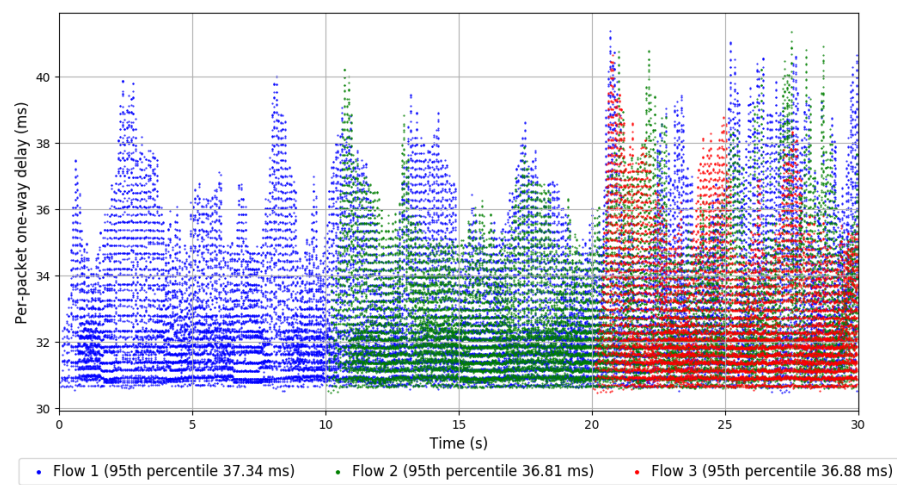
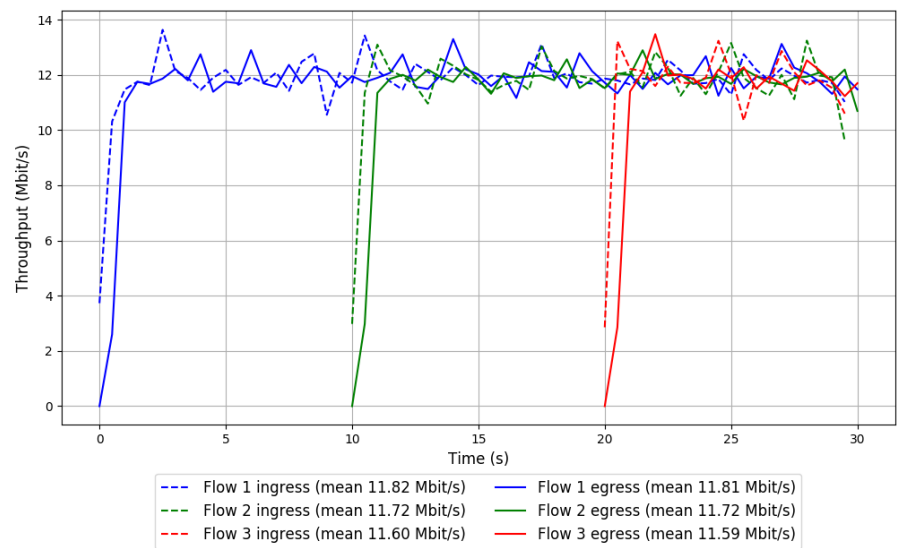


Run 1: Statistics of Sprout

Start at: 2019-01-21 11:03:35  
End at: 2019-01-21 11:04:05  
Local clock offset: 0.208 ms  
Remote clock offset: -1.168 ms

# Below is generated by plot.py at 2019-01-21 13:16:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 23.44 Mbit/s  
95th percentile per-packet one-way delay: 37.128 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 11.81 Mbit/s  
95th percentile per-packet one-way delay: 37.338 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 11.72 Mbit/s  
95th percentile per-packet one-way delay: 36.810 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 11.59 Mbit/s  
95th percentile per-packet one-way delay: 36.882 ms  
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



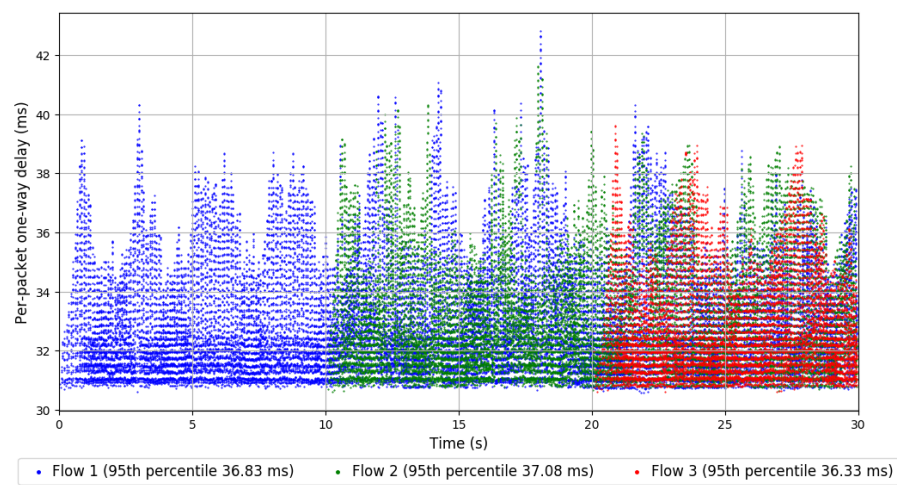
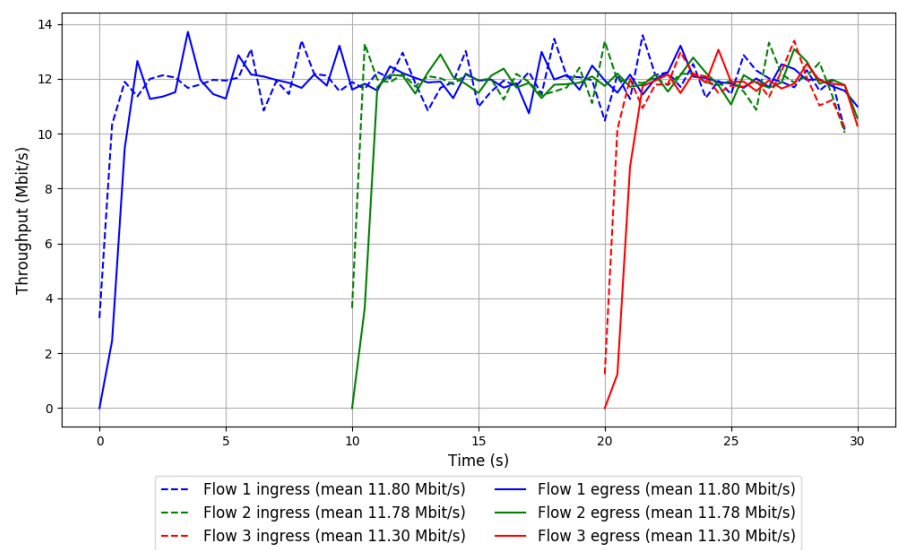


Run 2: Statistics of Sprout

Start at: 2019-01-21 11:29:46  
End at: 2019-01-21 11:30:16  
Local clock offset: -0.121 ms  
Remote clock offset: -0.946 ms

# Below is generated by plot.py at 2019-01-21 13:16:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 23.37 Mbit/s  
95th percentile per-packet one-way delay: 36.844 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 11.80 Mbit/s  
95th percentile per-packet one-way delay: 36.834 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 11.78 Mbit/s  
95th percentile per-packet one-way delay: 37.079 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 11.30 Mbit/s  
95th percentile per-packet one-way delay: 36.334 ms  
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

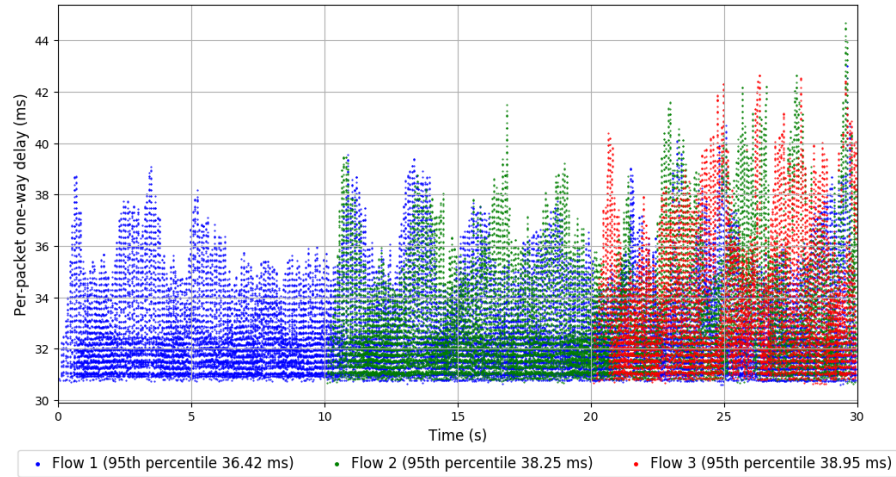
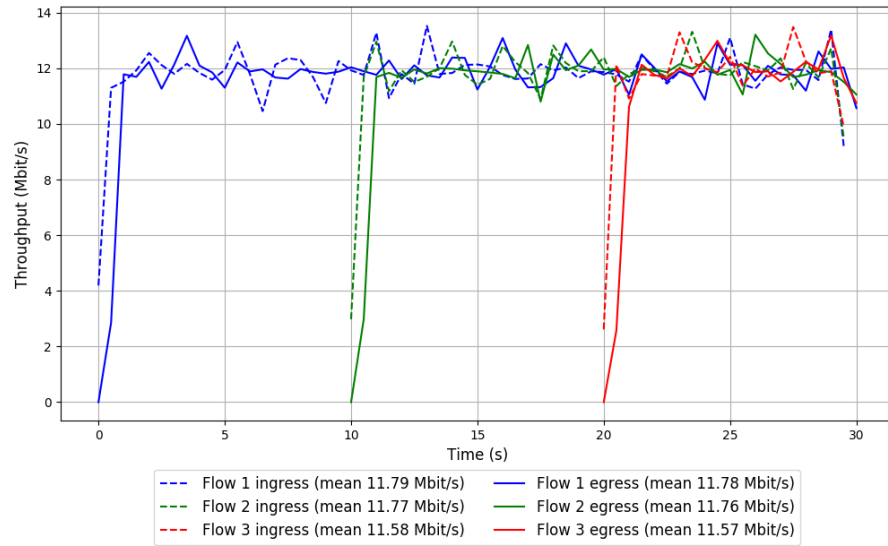


Run 3: Statistics of Sprout

Start at: 2019-01-21 11:55:43  
End at: 2019-01-21 11:56:13  
Local clock offset: 0.092 ms  
Remote clock offset: -0.791 ms

# Below is generated by plot.py at 2019-01-21 13:16:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 23.42 Mbit/s  
95th percentile per-packet one-way delay: 37.591 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 11.78 Mbit/s  
95th percentile per-packet one-way delay: 36.425 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 11.76 Mbit/s  
95th percentile per-packet one-way delay: 38.247 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 11.57 Mbit/s  
95th percentile per-packet one-way delay: 38.948 ms  
Loss rate: 0.00%

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

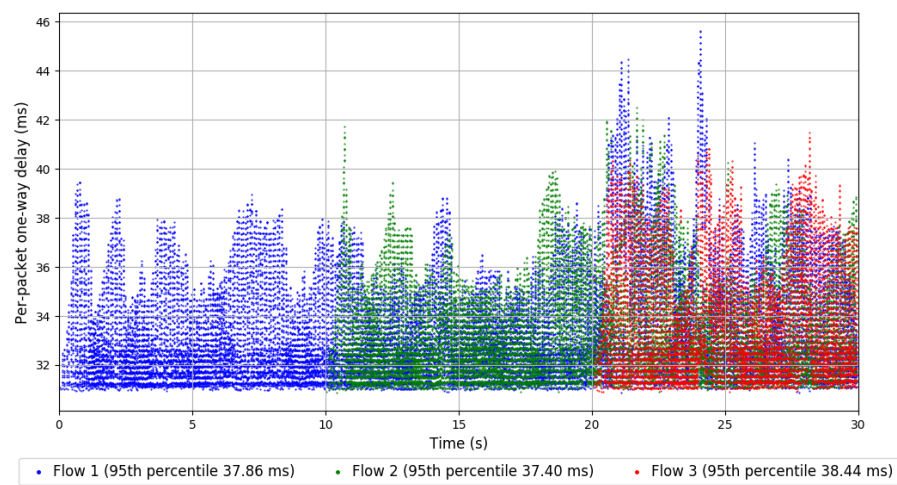
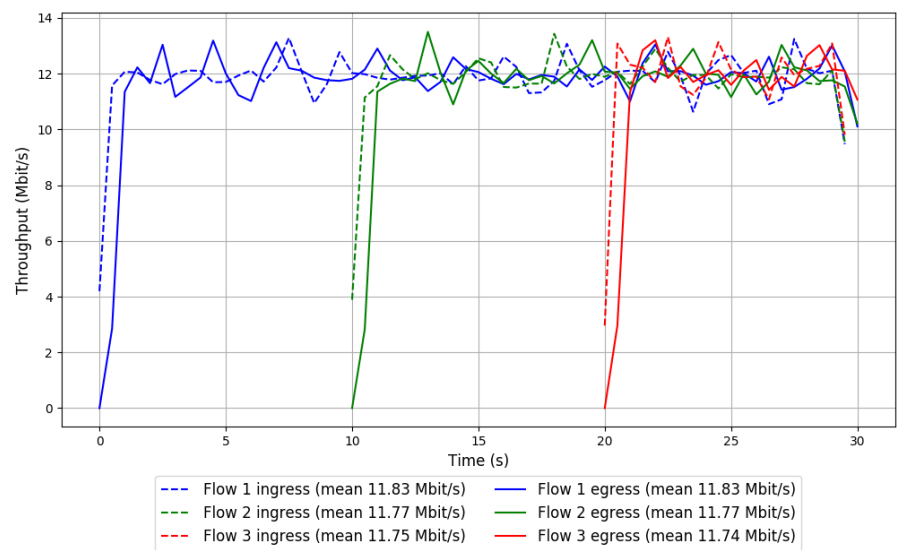


Run 4: Statistics of Sprout

Start at: 2019-01-21 12:21:28  
End at: 2019-01-21 12:21:58  
Local clock offset: 1.889 ms  
Remote clock offset: -0.336 ms

# Below is generated by plot.py at 2019-01-21 13:16:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 23.54 Mbit/s  
95th percentile per-packet one-way delay: 37.852 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 11.83 Mbit/s  
95th percentile per-packet one-way delay: 37.856 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 11.77 Mbit/s  
95th percentile per-packet one-way delay: 37.395 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 11.74 Mbit/s  
95th percentile per-packet one-way delay: 38.444 ms  
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

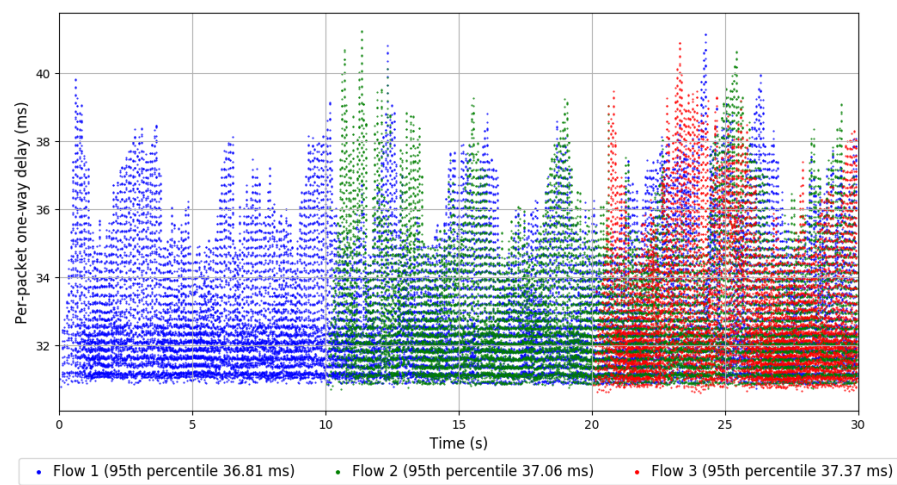
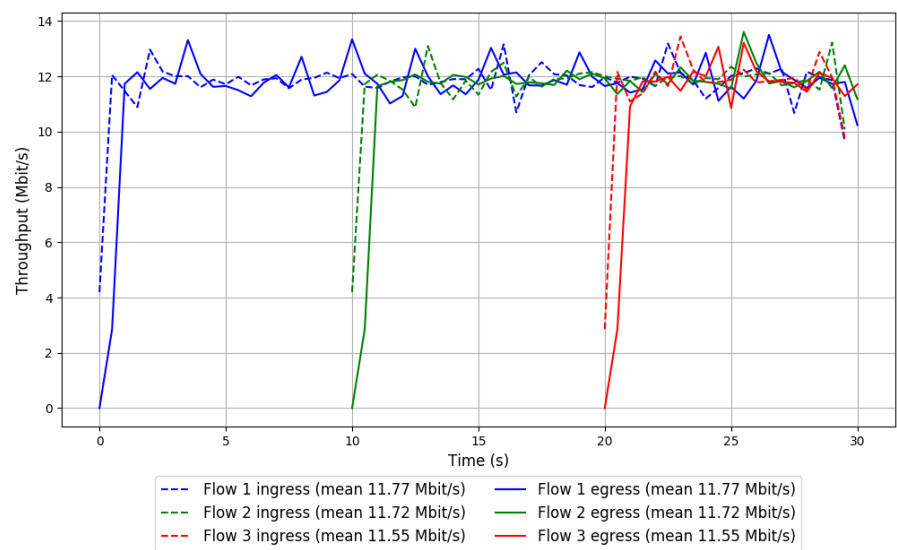


Run 5: Statistics of Sprout

Start at: 2019-01-21 12:47:38  
End at: 2019-01-21 12:48:08  
Local clock offset: 4.497 ms  
Remote clock offset: -0.534 ms

```
# Below is generated by plot.py at 2019-01-21 13:16:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.38 Mbit/s
95th percentile per-packet one-way delay: 36.974 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 36.807 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 37.061 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.55 Mbit/s
95th percentile per-packet one-way delay: 37.372 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link



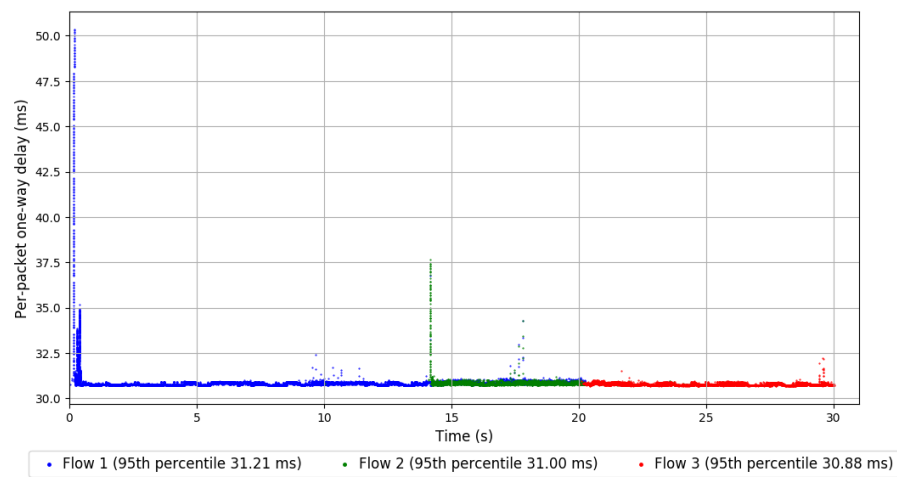
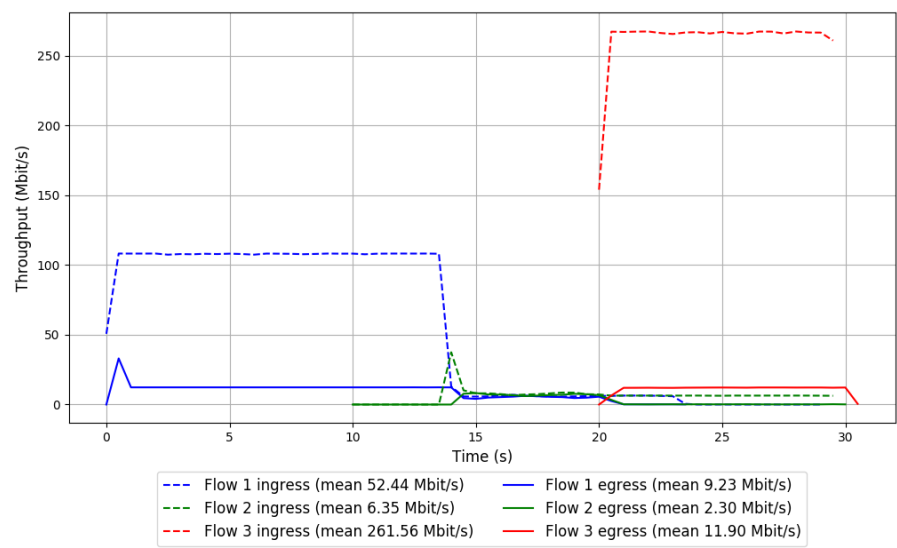


Run 1: Statistics of TaoVA-100x

Start at: 2019-01-21 11:09:51  
End at: 2019-01-21 11:10:21  
Local clock offset: -0.196 ms  
Remote clock offset: -1.038 ms

# Below is generated by plot.py at 2019-01-21 13:16:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.68 Mbit/s  
95th percentile per-packet one-way delay: 30.985 ms  
Loss rate: 91.12%  
-- Flow 1:  
Average throughput: 9.23 Mbit/s  
95th percentile per-packet one-way delay: 31.206 ms  
Loss rate: 86.02%  
-- Flow 2:  
Average throughput: 2.30 Mbit/s  
95th percentile per-packet one-way delay: 30.996 ms  
Loss rate: 64.12%  
-- Flow 3:  
Average throughput: 11.90 Mbit/s  
95th percentile per-packet one-way delay: 30.877 ms  
Loss rate: 95.45%

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

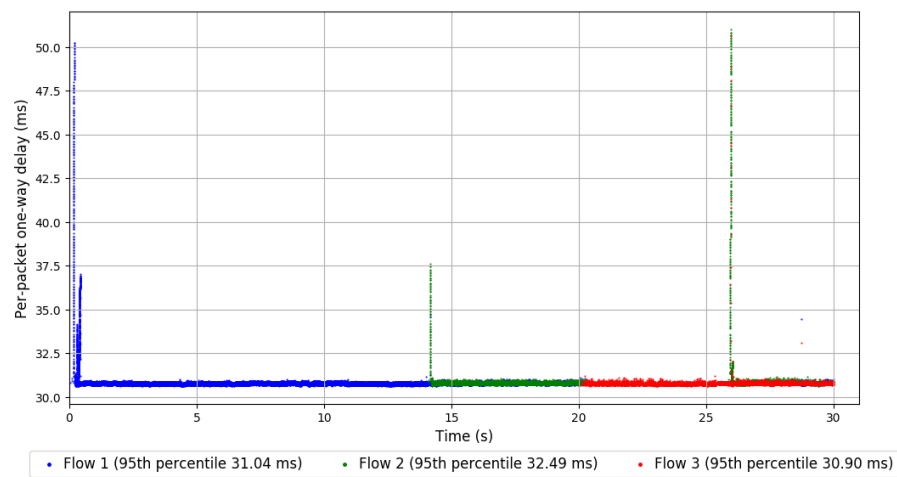
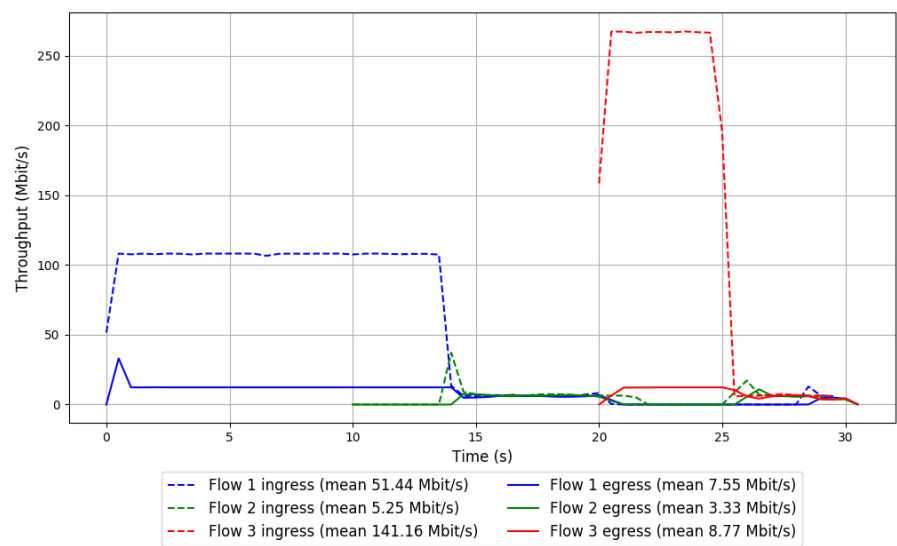


Run 2: Statistics of TaoVA-100x

Start at: 2019-01-21 11:36:01  
End at: 2019-01-21 11:36:31  
Local clock offset: -0.125 ms  
Remote clock offset: -0.984 ms

# Below is generated by plot.py at 2019-01-21 13:16:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.68 Mbit/s  
95th percentile per-packet one-way delay: 30.984 ms  
Loss rate: 87.55%  
-- Flow 1:  
Average throughput: 7.55 Mbit/s  
95th percentile per-packet one-way delay: 31.041 ms  
Loss rate: 85.34%  
-- Flow 2:  
Average throughput: 3.33 Mbit/s  
95th percentile per-packet one-way delay: 32.493 ms  
Loss rate: 36.54%  
-- Flow 3:  
Average throughput: 8.77 Mbit/s  
95th percentile per-packet one-way delay: 30.901 ms  
Loss rate: 93.79%

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

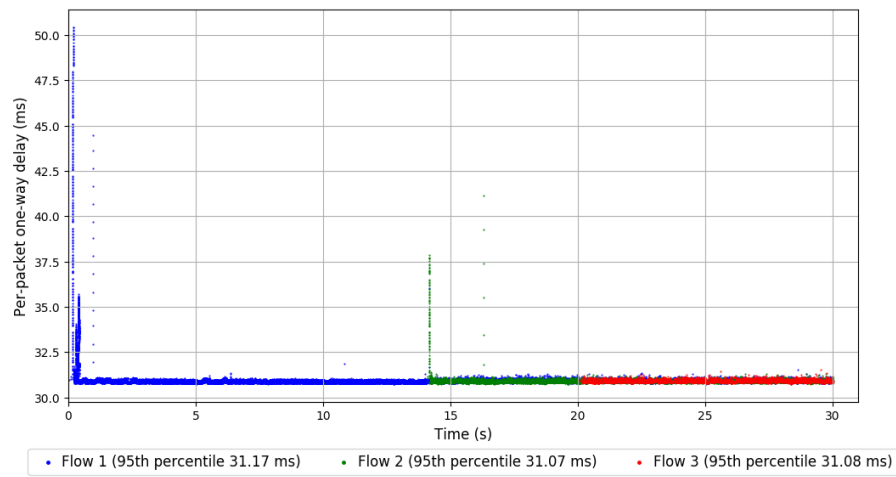
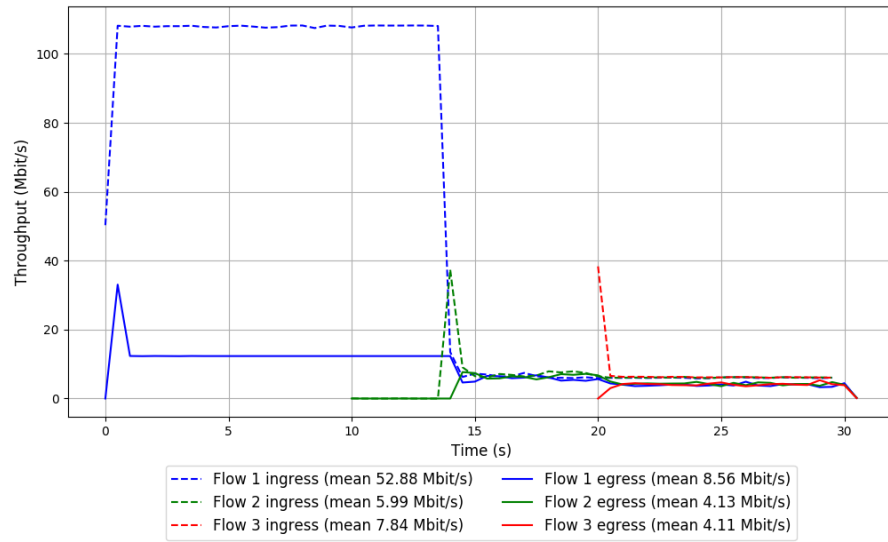


Run 3: Statistics of TaoVA-100x

Start at: 2019-01-21 12:01:55  
End at: 2019-01-21 12:02:25  
Local clock offset: 0.143 ms  
Remote clock offset: -0.618 ms

# Below is generated by plot.py at 2019-01-21 13:16:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.68 Mbit/s  
95th percentile per-packet one-way delay: 31.106 ms  
Loss rate: 78.68%  
-- Flow 1:  
Average throughput: 8.56 Mbit/s  
95th percentile per-packet one-way delay: 31.171 ms  
Loss rate: 83.81%  
-- Flow 2:  
Average throughput: 4.13 Mbit/s  
95th percentile per-packet one-way delay: 31.070 ms  
Loss rate: 31.08%  
-- Flow 3:  
Average throughput: 4.11 Mbit/s  
95th percentile per-packet one-way delay: 31.083 ms  
Loss rate: 47.58%

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

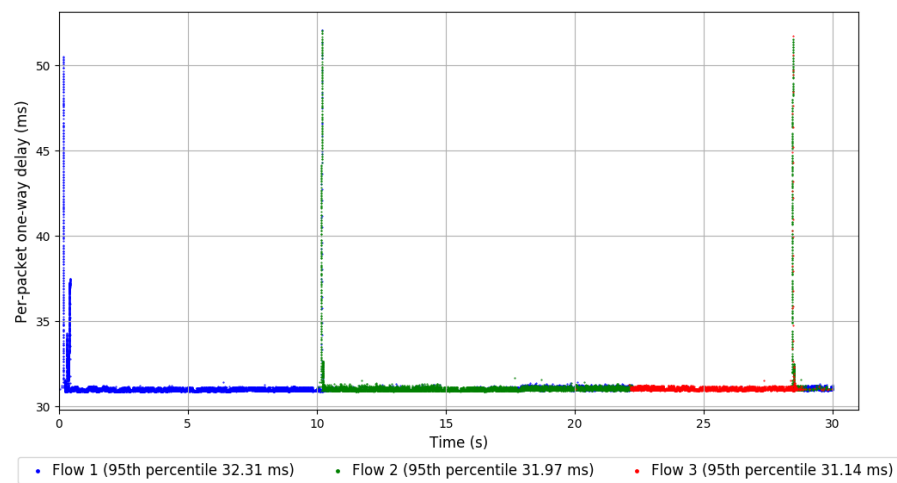
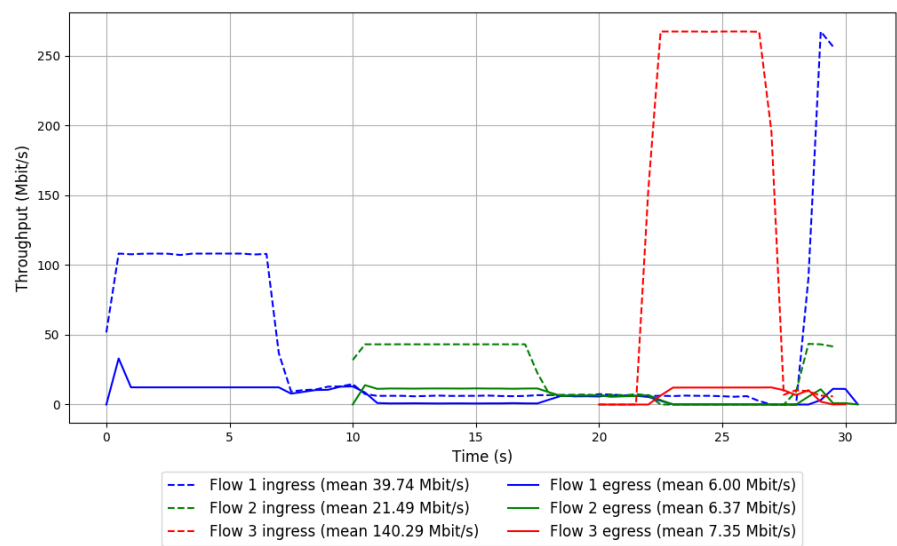


Run 4: Statistics of TaoVA-100x

Start at: 2019-01-21 12:27:35  
End at: 2019-01-21 12:28:05  
Local clock offset: 3.06 ms  
Remote clock offset: -0.197 ms

# Below is generated by plot.py at 2019-01-21 13:16:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.68 Mbit/s  
95th percentile per-packet one-way delay: 31.401 ms  
Loss rate: 87.40%  
-- Flow 1:  
Average throughput: 6.00 Mbit/s  
95th percentile per-packet one-way delay: 32.310 ms  
Loss rate: 84.90%  
-- Flow 2:  
Average throughput: 6.37 Mbit/s  
95th percentile per-packet one-way delay: 31.966 ms  
Loss rate: 70.34%  
-- Flow 3:  
Average throughput: 7.35 Mbit/s  
95th percentile per-packet one-way delay: 31.136 ms  
Loss rate: 94.78%

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



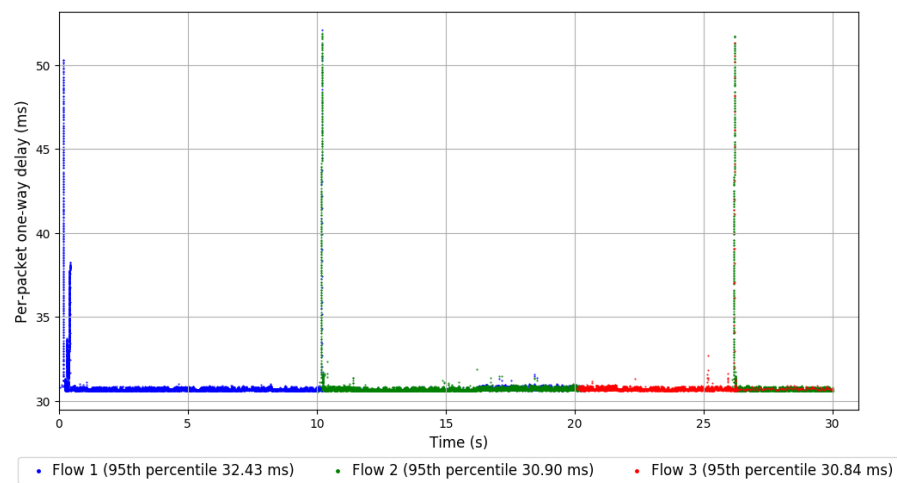
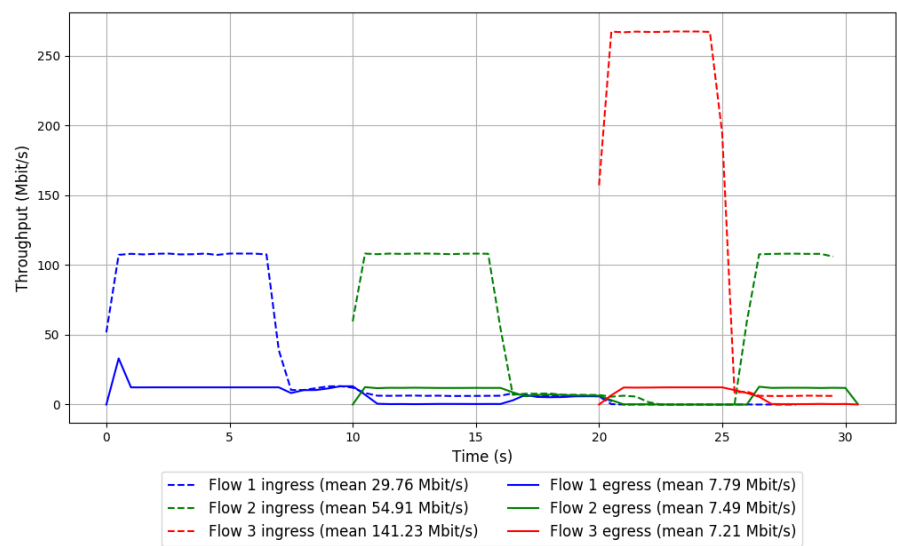


Run 5: Statistics of TaoVA-100x

Start at: 2019-01-21 12:53:46  
End at: 2019-01-21 12:54:16  
Local clock offset: 4.299 ms  
Remote clock offset: -0.857 ms

# Below is generated by plot.py at 2019-01-21 13:16:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.68 Mbit/s  
95th percentile per-packet one-way delay: 31.008 ms  
Loss rate: 88.66%  
-- Flow 1:  
Average throughput: 7.79 Mbit/s  
95th percentile per-packet one-way delay: 32.432 ms  
Loss rate: 81.25%  
-- Flow 2:  
Average throughput: 7.49 Mbit/s  
95th percentile per-packet one-way delay: 30.899 ms  
Loss rate: 86.36%  
-- Flow 3:  
Average throughput: 7.21 Mbit/s  
95th percentile per-packet one-way delay: 30.835 ms  
Loss rate: 94.90%

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

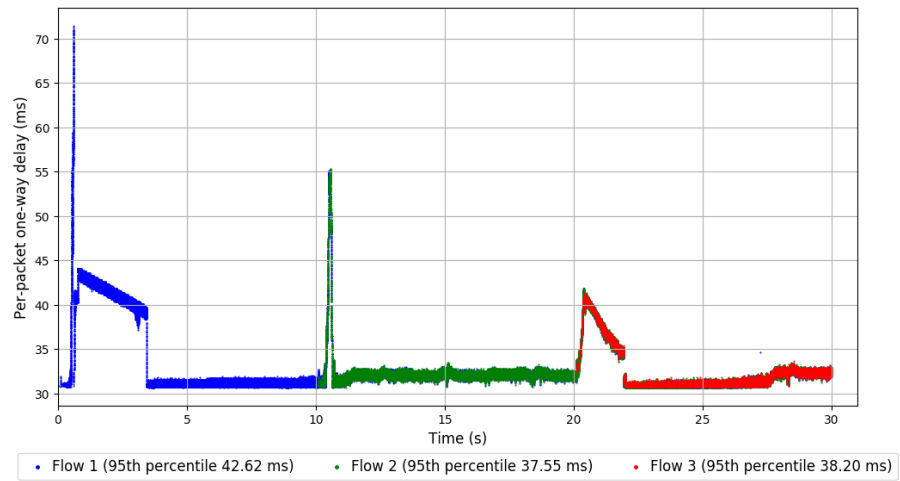
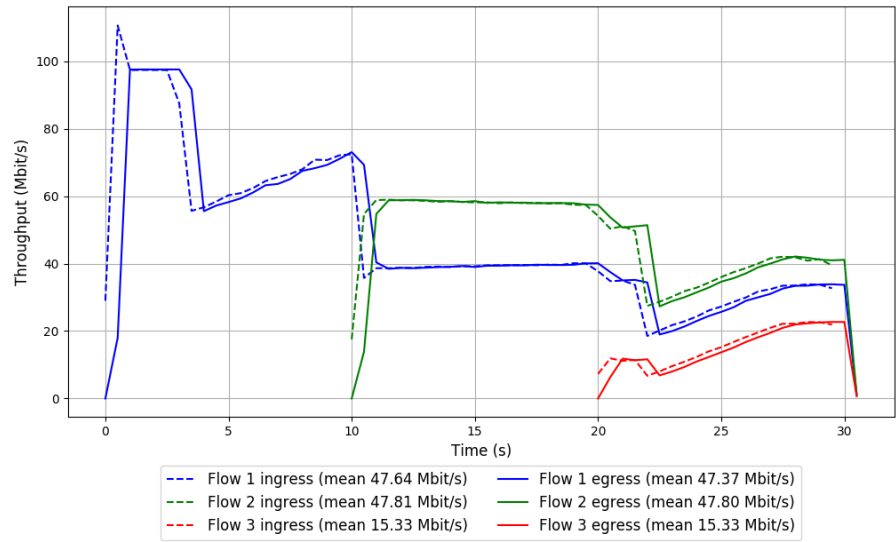


Run 1: Statistics of TCP Vegas

Start at: 2019-01-21 11:11:02  
End at: 2019-01-21 11:11:32  
Local clock offset: -0.264 ms  
Remote clock offset: -1.032 ms

# Below is generated by plot.py at 2019-01-21 13:17:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.31 Mbit/s  
95th percentile per-packet one-way delay: 41.852 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 47.37 Mbit/s  
95th percentile per-packet one-way delay: 42.621 ms  
Loss rate: 0.56%  
-- Flow 2:  
Average throughput: 47.80 Mbit/s  
95th percentile per-packet one-way delay: 37.547 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 15.33 Mbit/s  
95th percentile per-packet one-way delay: 38.200 ms  
Loss rate: 0.02%

# Run 1: Report of TCP Vegas — Data Link

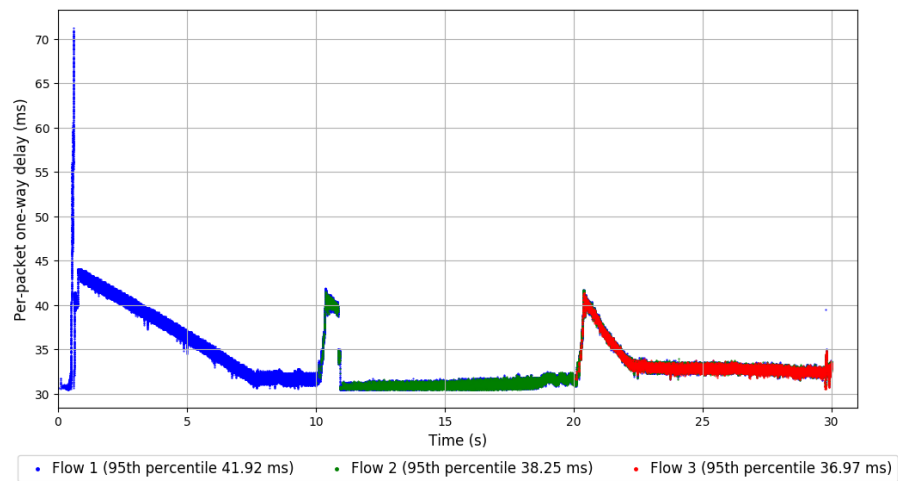
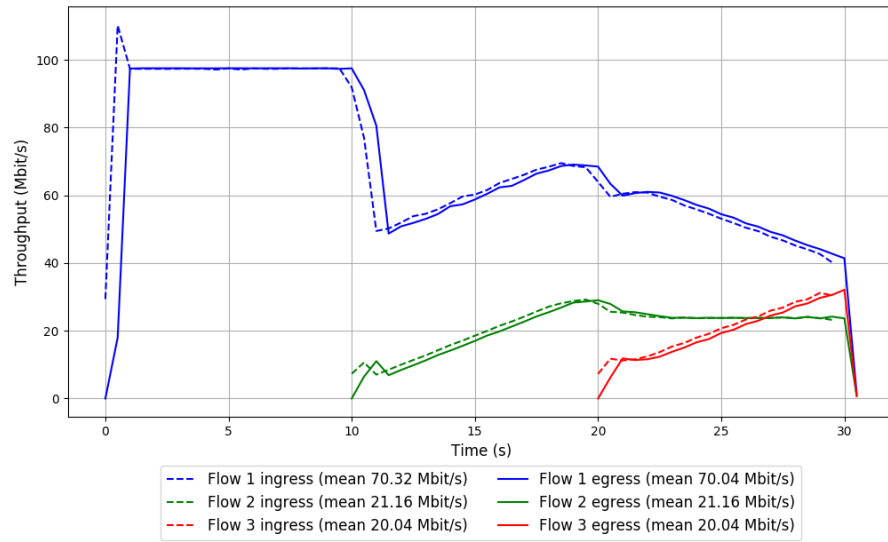


Run 2: Statistics of TCP Vegas

Start at: 2019-01-21 11:37:12  
End at: 2019-01-21 11:37:42  
Local clock offset: -0.103 ms  
Remote clock offset: -1.147 ms

# Below is generated by plot.py at 2019-01-21 13:17:32  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.79 Mbit/s  
95th percentile per-packet one-way delay: 41.420 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 70.04 Mbit/s  
95th percentile per-packet one-way delay: 41.917 ms  
Loss rate: 0.39%  
-- Flow 2:  
Average throughput: 21.16 Mbit/s  
95th percentile per-packet one-way delay: 38.250 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 20.04 Mbit/s  
95th percentile per-packet one-way delay: 36.972 ms  
Loss rate: 0.00%

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

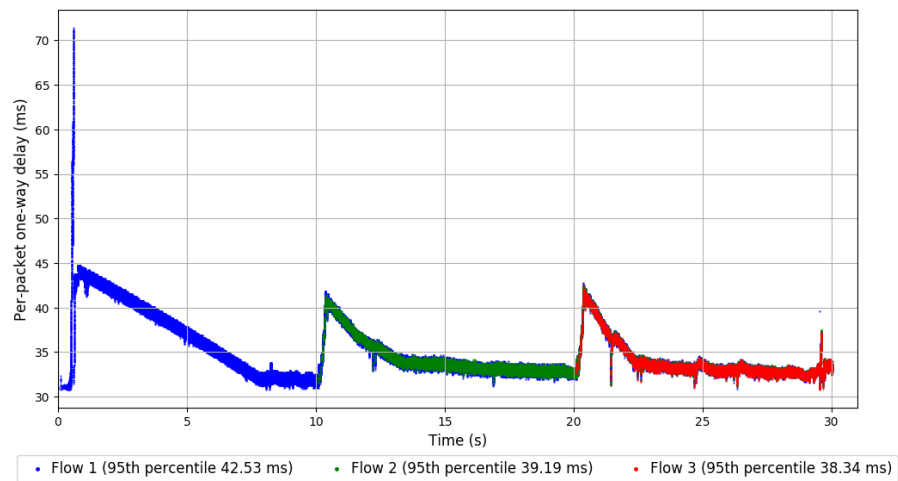
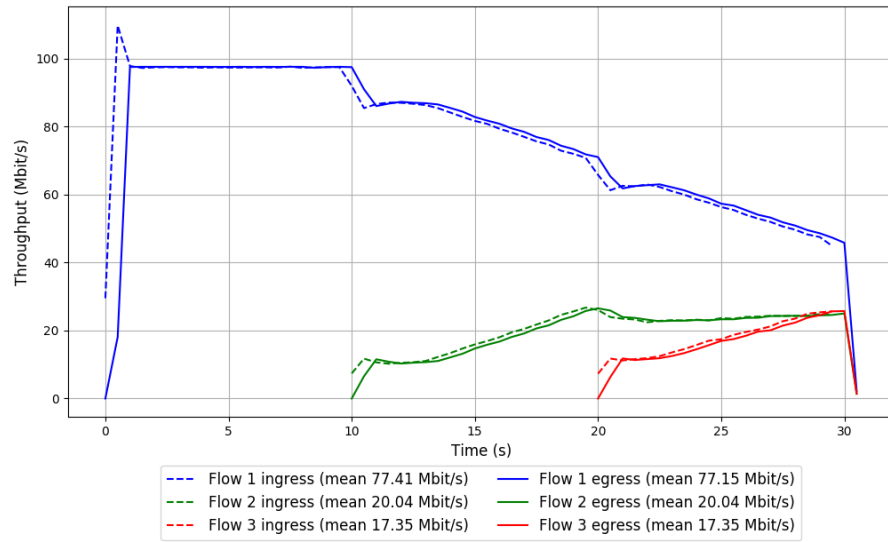


Run 3: Statistics of TCP Vegas

Start at: 2019-01-21 12:03:05  
End at: 2019-01-21 12:03:35  
Local clock offset: 0.151 ms  
Remote clock offset: -0.576 ms

# Below is generated by plot.py at 2019-01-21 13:17:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.28 Mbit/s  
95th percentile per-packet one-way delay: 42.070 ms  
Loss rate: 0.26%  
-- Flow 1:  
Average throughput: 77.15 Mbit/s  
95th percentile per-packet one-way delay: 42.531 ms  
Loss rate: 0.33%  
-- Flow 2:  
Average throughput: 20.04 Mbit/s  
95th percentile per-packet one-way delay: 39.187 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 17.35 Mbit/s  
95th percentile per-packet one-way delay: 38.335 ms  
Loss rate: 0.00%

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



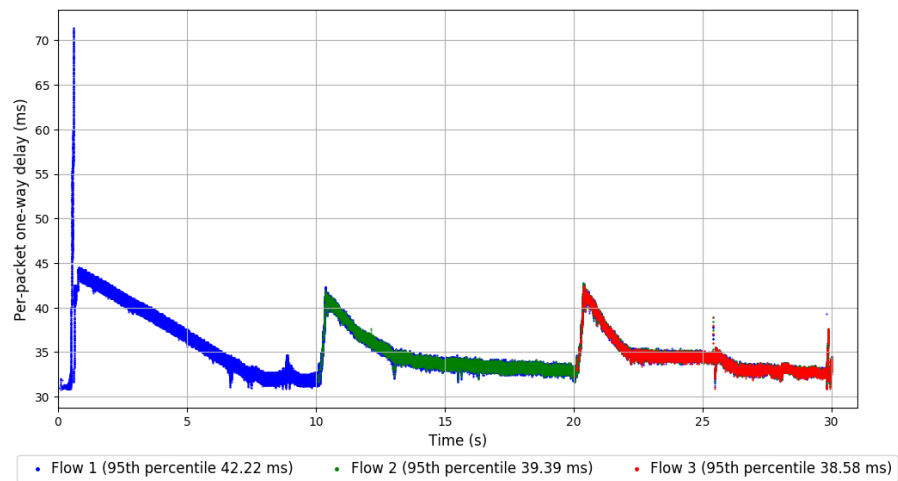
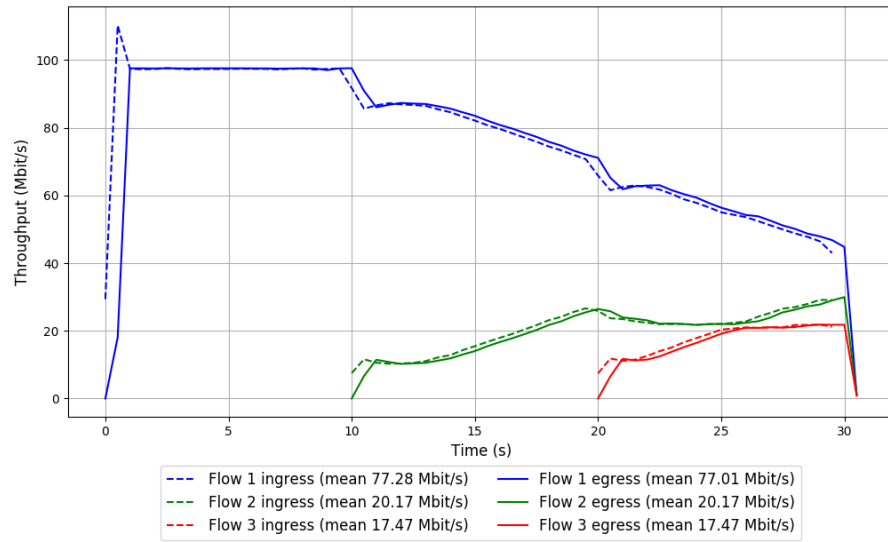


Run 4: Statistics of TCP Vegas

Start at: 2019-01-21 12:28:46  
End at: 2019-01-21 12:29:16  
Local clock offset: 3.235 ms  
Remote clock offset: -0.185 ms

# Below is generated by plot.py at 2019-01-21 13:17:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.27 Mbit/s  
95th percentile per-packet one-way delay: 41.844 ms  
Loss rate: 0.27%  
-- Flow 1:  
Average throughput: 77.01 Mbit/s  
95th percentile per-packet one-way delay: 42.220 ms  
Loss rate: 0.33%  
-- Flow 2:  
Average throughput: 20.17 Mbit/s  
95th percentile per-packet one-way delay: 39.392 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 17.47 Mbit/s  
95th percentile per-packet one-way delay: 38.580 ms  
Loss rate: 0.00%

# Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-01-21 12:54:58

End at: 2019-01-21 12:55:28

Local clock offset: 4.293 ms

Remote clock offset: -0.64 ms

# Below is generated by plot.py at 2019-01-21 13:17:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.37 Mbit/s

95th percentile per-packet one-way delay: 41.813 ms

Loss rate: 0.29%

-- Flow 1:

Average throughput: 70.72 Mbit/s

95th percentile per-packet one-way delay: 42.279 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 19.57 Mbit/s

95th percentile per-packet one-way delay: 39.163 ms

Loss rate: 0.00%

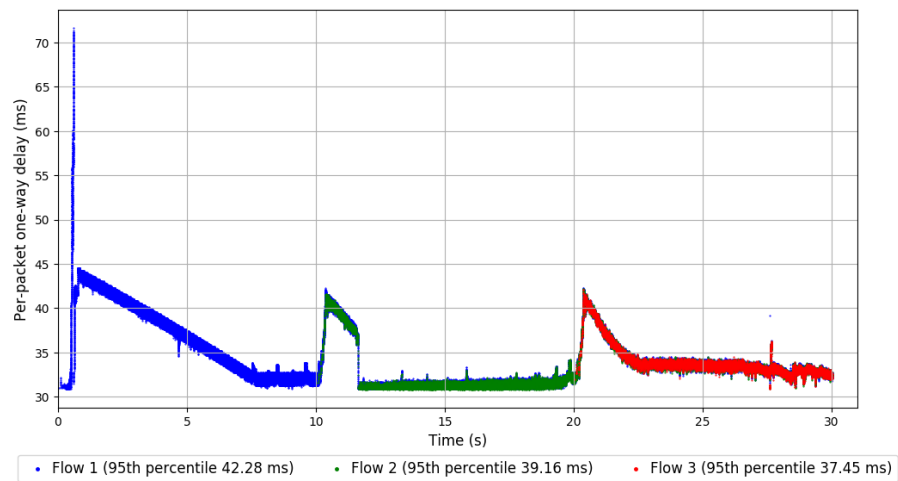
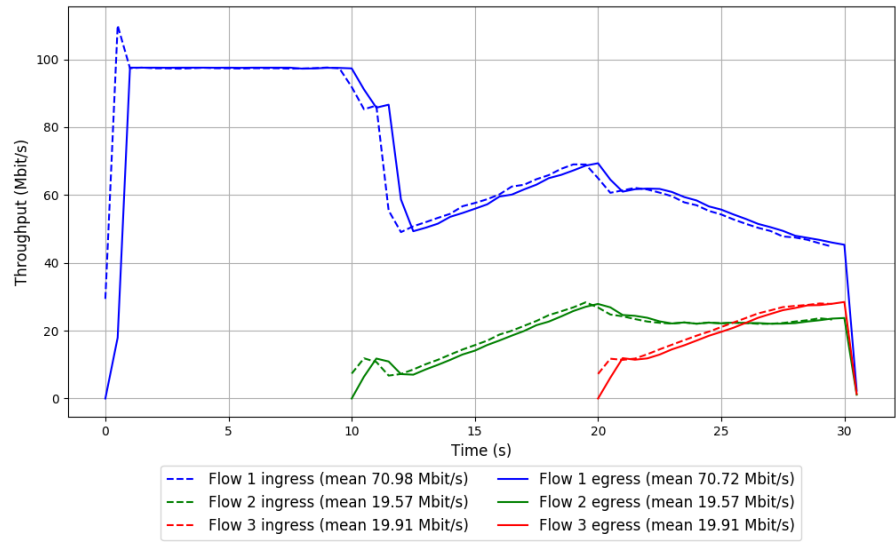
-- Flow 3:

Average throughput: 19.91 Mbit/s

95th percentile per-packet one-way delay: 37.448 ms

Loss rate: 0.00%

# Run 5: Report of TCP Vegas — Data Link

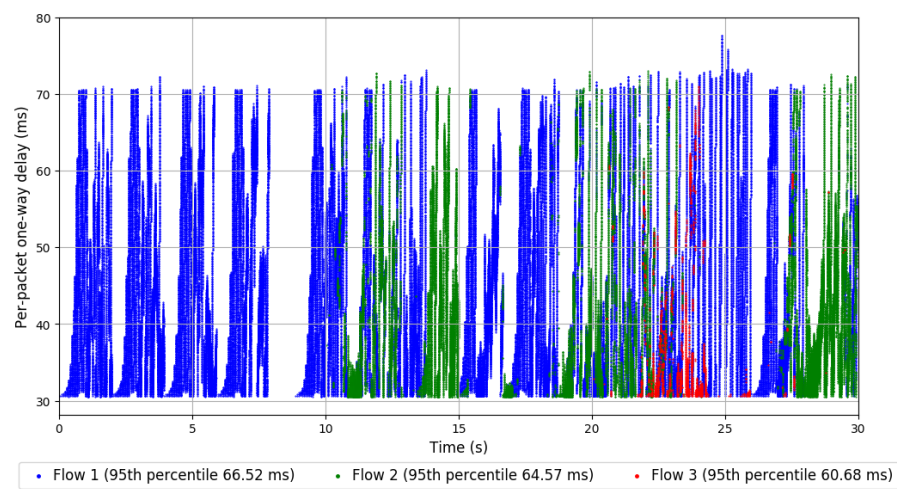
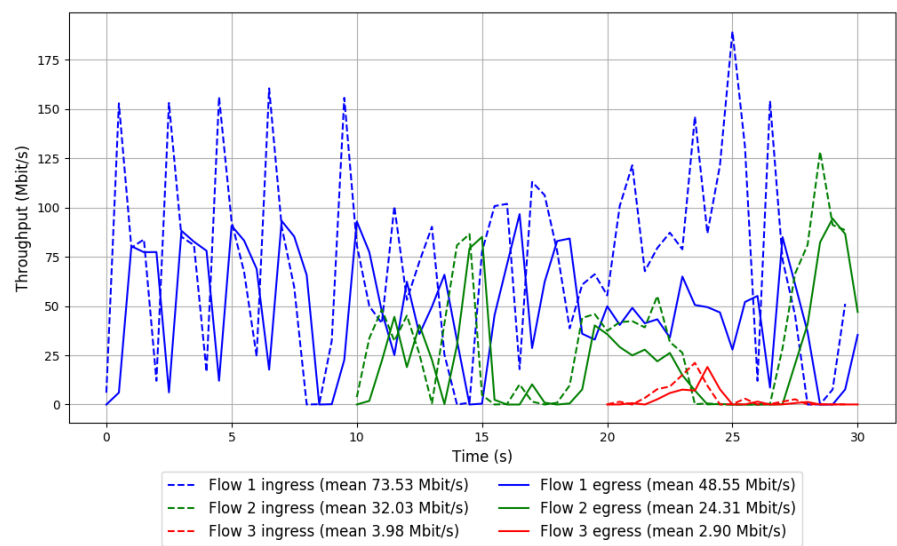


Run 1: Statistics of Verus

Start at: 2019-01-21 11:19:47  
End at: 2019-01-21 11:20:17  
Local clock offset: -0.267 ms  
Remote clock offset: -1.139 ms

# Below is generated by plot.py at 2019-01-21 13:17:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 65.63 Mbit/s  
95th percentile per-packet one-way delay: 66.155 ms  
Loss rate: 31.65%  
-- Flow 1:  
Average throughput: 48.55 Mbit/s  
95th percentile per-packet one-way delay: 66.521 ms  
Loss rate: 33.91%  
-- Flow 2:  
Average throughput: 24.31 Mbit/s  
95th percentile per-packet one-way delay: 64.566 ms  
Loss rate: 24.09%  
-- Flow 3:  
Average throughput: 2.90 Mbit/s  
95th percentile per-packet one-way delay: 60.678 ms  
Loss rate: 27.80%

Run 1: Report of Verus — Data Link

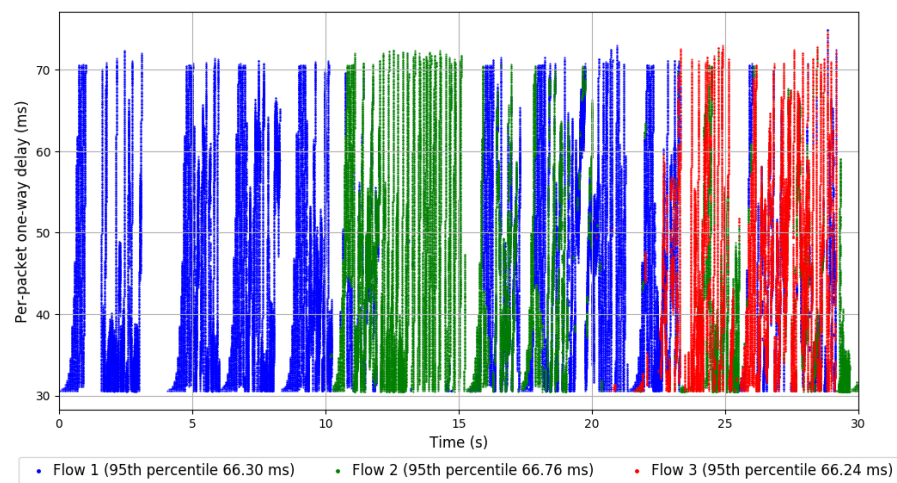
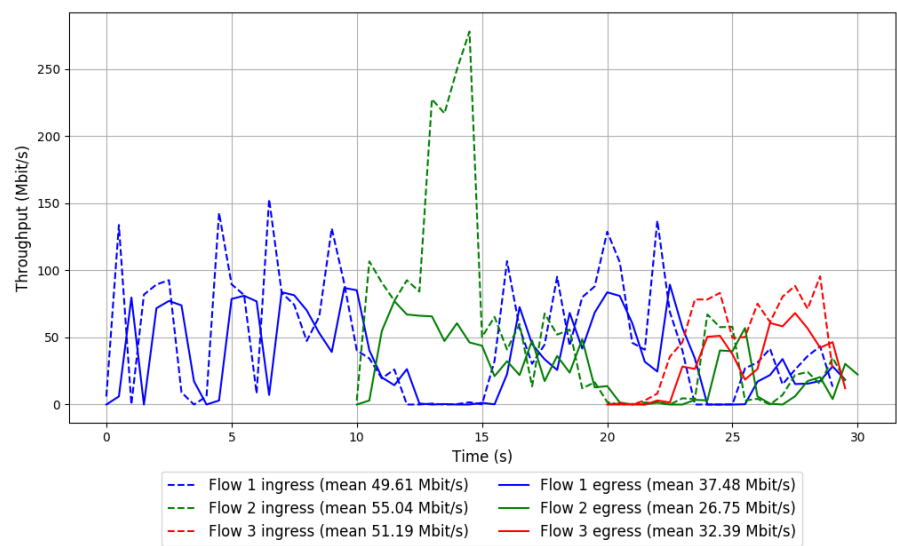


Run 2: Statistics of Verus

Start at: 2019-01-21 11:45:53  
End at: 2019-01-21 11:46:23  
Local clock offset: -0.197 ms  
Remote clock offset: -1.108 ms

# Below is generated by plot.py at 2019-01-21 13:17:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 64.14 Mbit/s  
95th percentile per-packet one-way delay: 66.401 ms  
Loss rate: 36.14%  
-- Flow 1:  
Average throughput: 37.48 Mbit/s  
95th percentile per-packet one-way delay: 66.296 ms  
Loss rate: 24.36%  
-- Flow 2:  
Average throughput: 26.75 Mbit/s  
95th percentile per-packet one-way delay: 66.761 ms  
Loss rate: 51.44%  
-- Flow 3:  
Average throughput: 32.39 Mbit/s  
95th percentile per-packet one-way delay: 66.244 ms  
Loss rate: 36.77%

Run 2: Report of Verus — Data Link



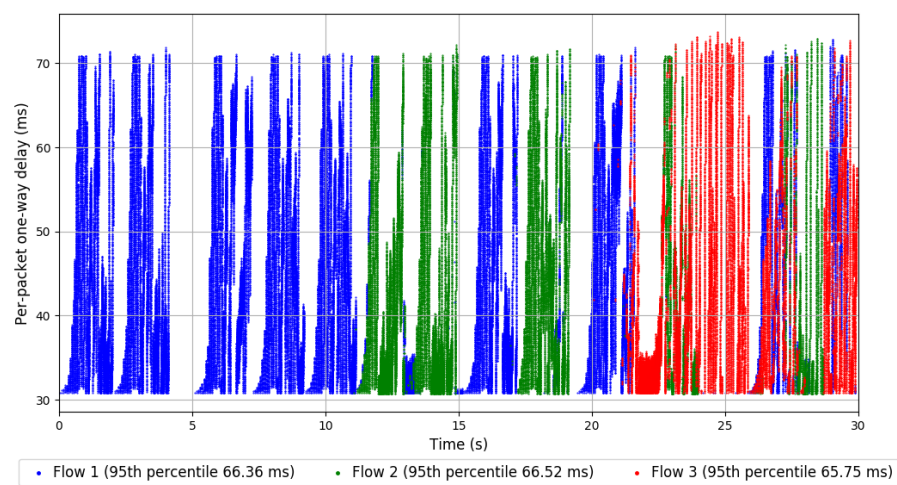
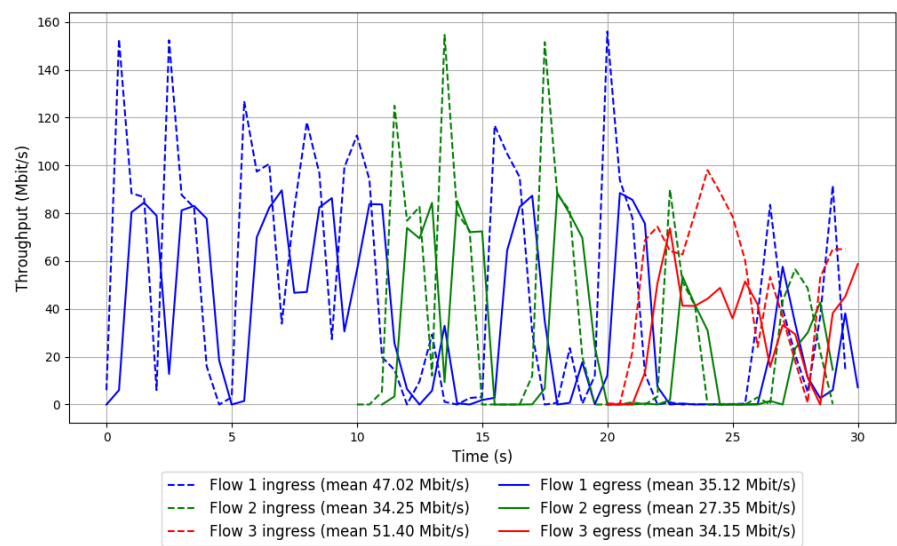


Run 3: Statistics of Verus

Start at: 2019-01-21 12:11:44  
End at: 2019-01-21 12:12:14  
Local clock offset: 0.141 ms  
Remote clock offset: -0.507 ms

# Below is generated by plot.py at 2019-01-21 13:17:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 62.71 Mbit/s  
95th percentile per-packet one-way delay: 66.325 ms  
Loss rate: 27.07%  
-- Flow 1:  
Average throughput: 35.12 Mbit/s  
95th percentile per-packet one-way delay: 66.357 ms  
Loss rate: 25.31%  
-- Flow 2:  
Average throughput: 27.35 Mbit/s  
95th percentile per-packet one-way delay: 66.521 ms  
Loss rate: 25.91%  
-- Flow 3:  
Average throughput: 34.15 Mbit/s  
95th percentile per-packet one-way delay: 65.745 ms  
Loss rate: 33.46%

Run 3: Report of Verus — Data Link

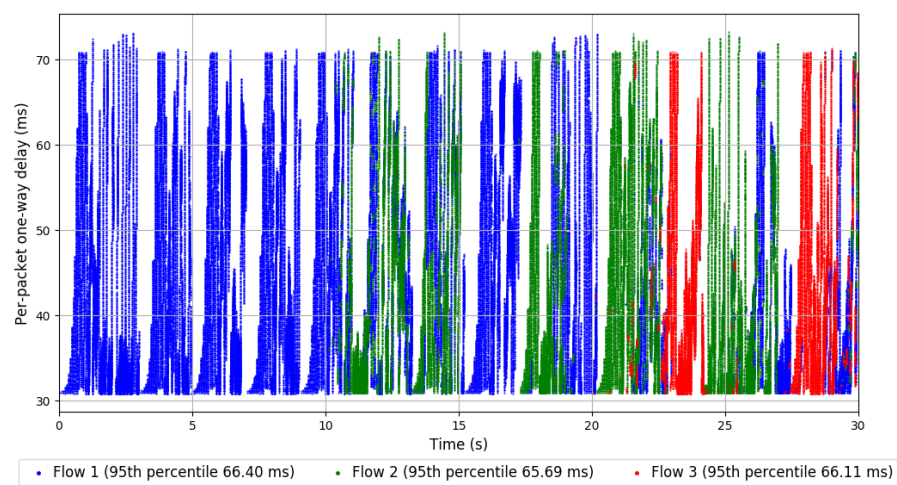
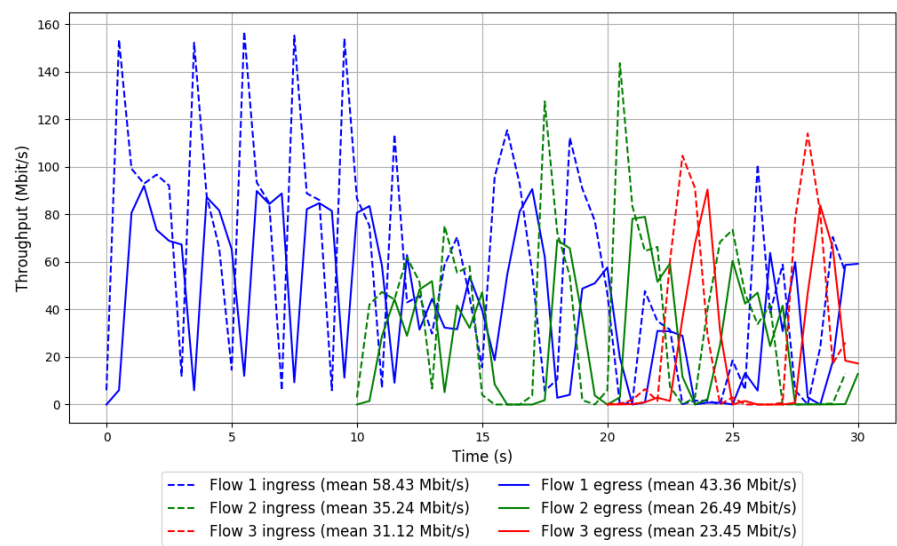


Run 4: Statistics of Verus

Start at: 2019-01-21 12:37:46  
End at: 2019-01-21 12:38:16  
Local clock offset: 4.096 ms  
Remote clock offset: -0.334 ms

# Below is generated by plot.py at 2019-01-21 13:18:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 68.73 Mbit/s  
95th percentile per-packet one-way delay: 66.218 ms  
Loss rate: 25.31%  
-- Flow 1:  
Average throughput: 43.36 Mbit/s  
95th percentile per-packet one-way delay: 66.400 ms  
Loss rate: 25.70%  
-- Flow 2:  
Average throughput: 26.49 Mbit/s  
95th percentile per-packet one-way delay: 65.686 ms  
Loss rate: 24.74%  
-- Flow 3:  
Average throughput: 23.45 Mbit/s  
95th percentile per-packet one-way delay: 66.109 ms  
Loss rate: 24.37%

Run 4: Report of Verus — Data Link

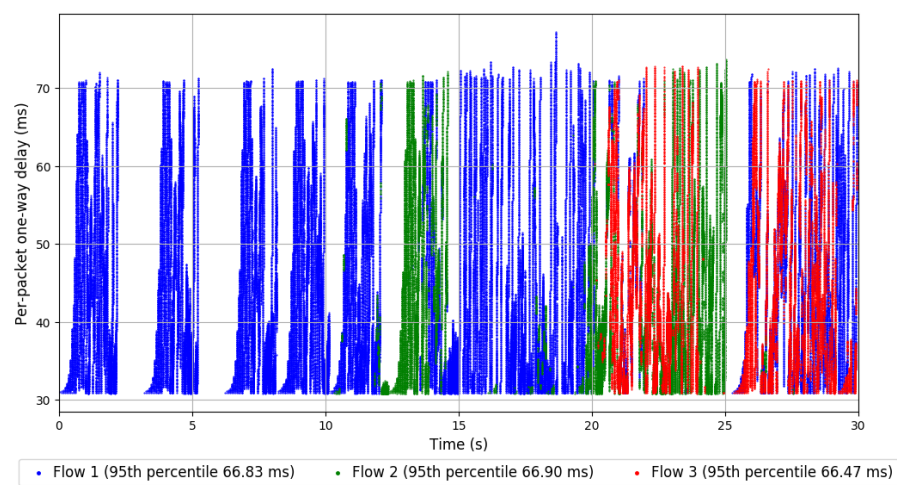
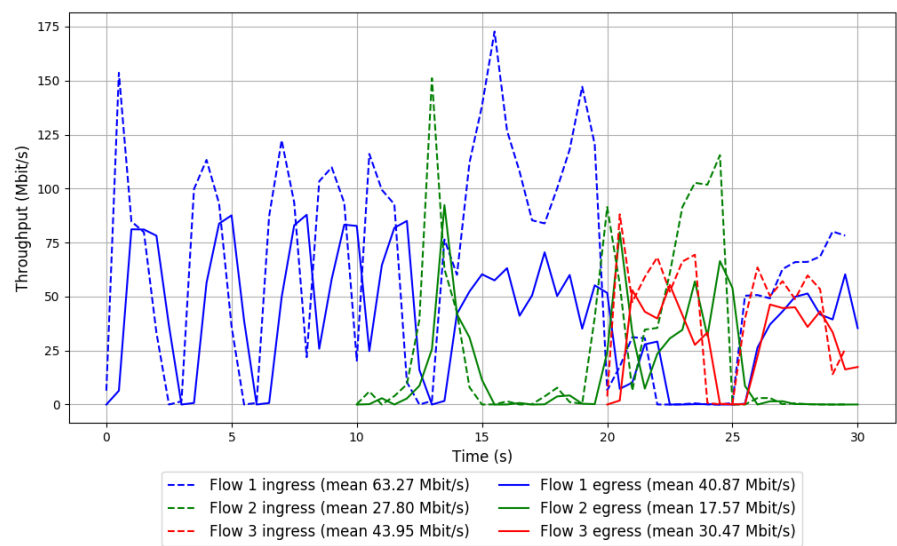


Run 5: Statistics of Verus

Start at: 2019-01-21 13:03:38  
End at: 2019-01-21 13:04:08  
Local clock offset: 4.361 ms  
Remote clock offset: -0.788 ms

# Below is generated by plot.py at 2019-01-21 13:18:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 62.29 Mbit/s  
95th percentile per-packet one-way delay: 66.779 ms  
Loss rate: 34.98%  
-- Flow 1:  
Average throughput: 40.87 Mbit/s  
95th percentile per-packet one-way delay: 66.834 ms  
Loss rate: 35.37%  
-- Flow 2:  
Average throughput: 17.57 Mbit/s  
95th percentile per-packet one-way delay: 66.902 ms  
Loss rate: 37.01%  
-- Flow 3:  
Average throughput: 30.47 Mbit/s  
95th percentile per-packet one-way delay: 66.468 ms  
Loss rate: 30.79%

Run 5: Report of Verus — Data Link

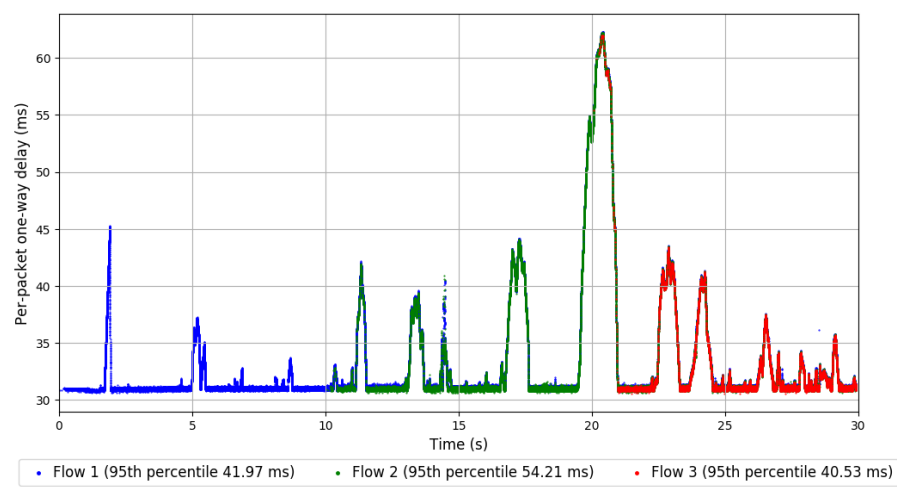
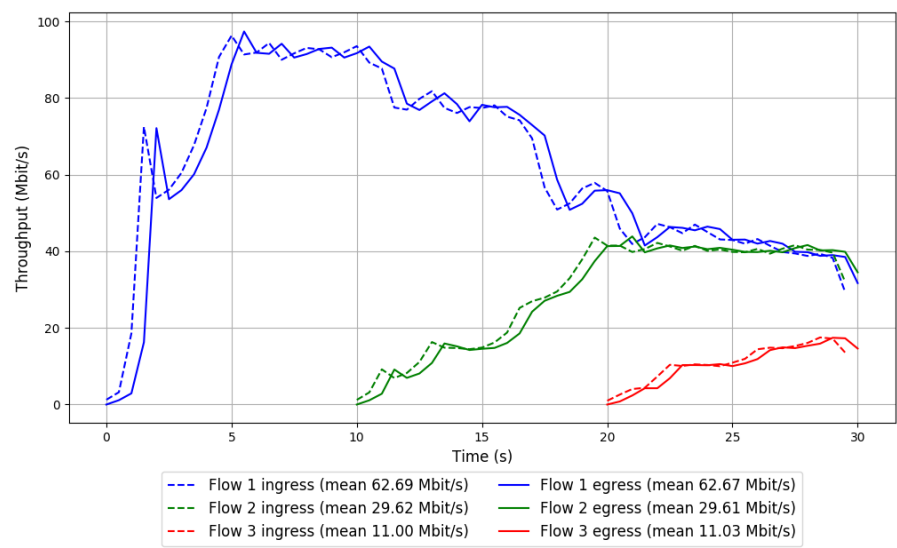


Run 1: Statistics of PCC-Vivace

Start at: 2019-01-21 11:16:03  
End at: 2019-01-21 11:16:33  
Local clock offset: -0.477 ms  
Remote clock offset: -0.992 ms

# Below is generated by plot.py at 2019-01-21 13:18:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.99 Mbit/s  
95th percentile per-packet one-way delay: 43.378 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 62.67 Mbit/s  
95th percentile per-packet one-way delay: 41.969 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 29.61 Mbit/s  
95th percentile per-packet one-way delay: 54.209 ms  
Loss rate: 0.03%  
-- Flow 3:  
Average throughput: 11.03 Mbit/s  
95th percentile per-packet one-way delay: 40.526 ms  
Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



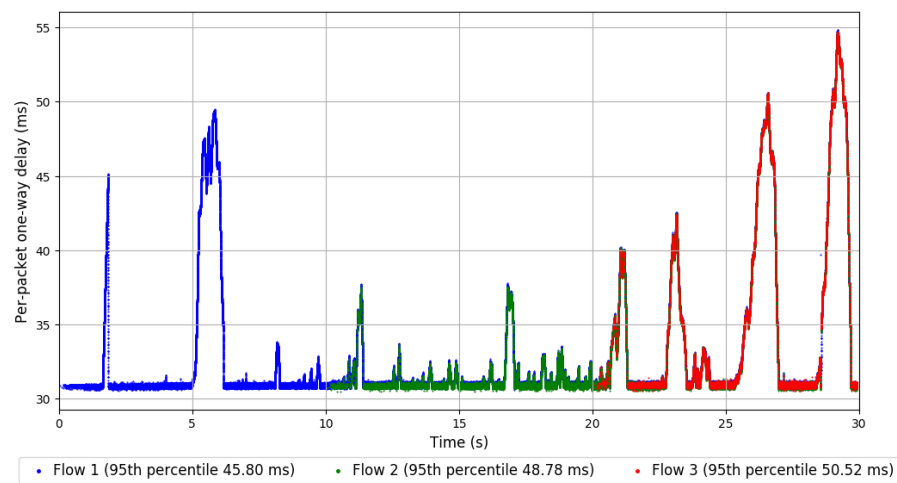
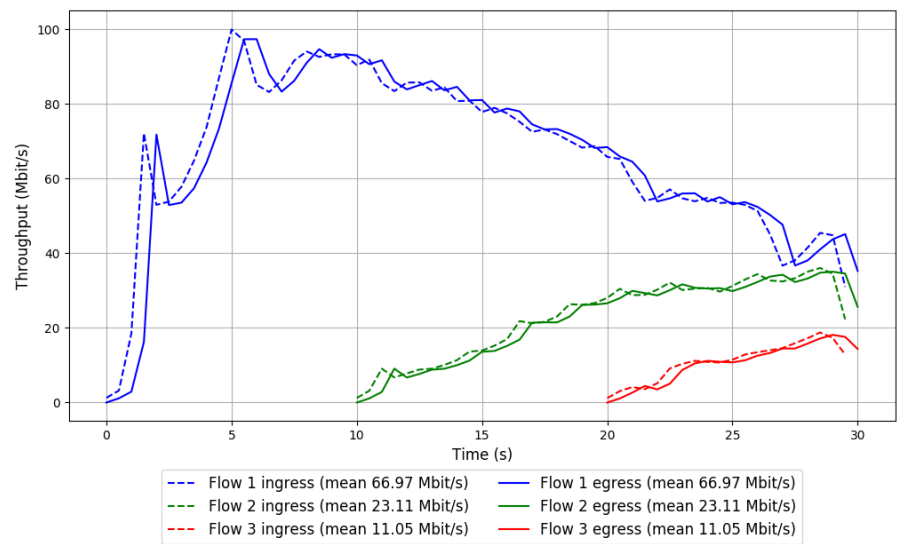


Run 2: Statistics of PCC-Vivace

Start at: 2019-01-21 11:42:10  
End at: 2019-01-21 11:42:40  
Local clock offset: -0.154 ms  
Remote clock offset: -0.988 ms

# Below is generated by plot.py at 2019-01-21 13:18:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.99 Mbit/s  
95th percentile per-packet one-way delay: 46.825 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 66.97 Mbit/s  
95th percentile per-packet one-way delay: 45.796 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 23.11 Mbit/s  
95th percentile per-packet one-way delay: 48.781 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 11.05 Mbit/s  
95th percentile per-packet one-way delay: 50.519 ms  
Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-01-21 12:07:57

End at: 2019-01-21 12:08:27

Local clock offset: 0.134 ms

Remote clock offset: -0.54 ms

# Below is generated by plot.py at 2019-01-21 13:18:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 85.67 Mbit/s

95th percentile per-packet one-way delay: 40.467 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 62.34 Mbit/s

95th percentile per-packet one-way delay: 39.442 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.70 Mbit/s

95th percentile per-packet one-way delay: 42.319 ms

Loss rate: 0.00%

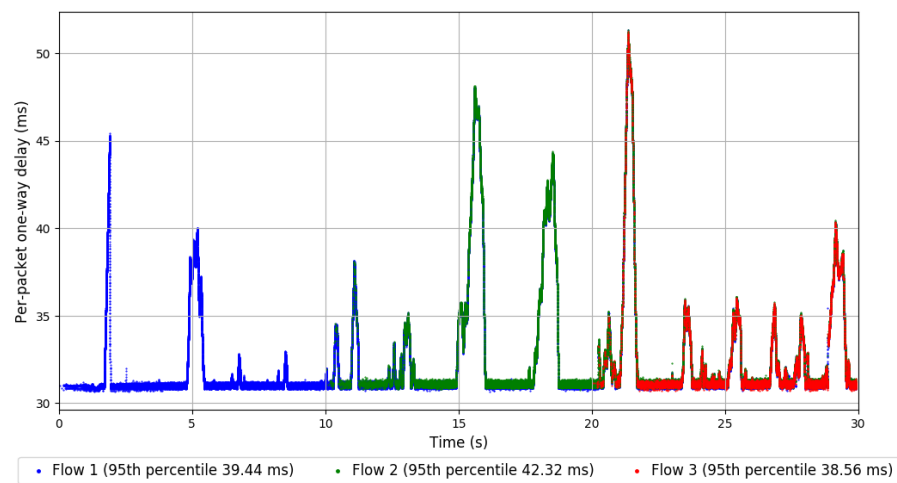
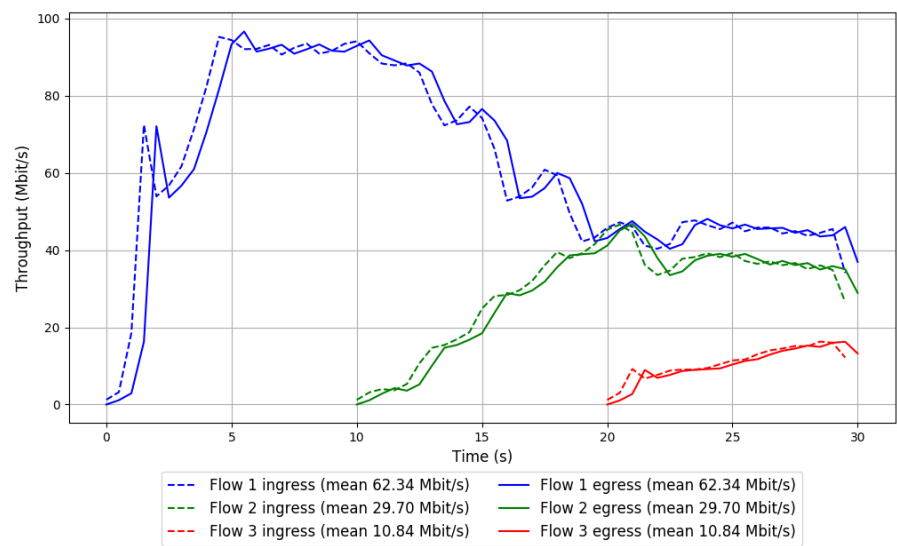
-- Flow 3:

Average throughput: 10.84 Mbit/s

95th percentile per-packet one-way delay: 38.558 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-01-21 12:33:46

End at: 2019-01-21 12:34:16

Local clock offset: 3.749 ms

Remote clock offset: -0.25 ms

# Below is generated by plot.py at 2019-01-21 13:18:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 86.18 Mbit/s

95th percentile per-packet one-way delay: 53.378 ms

Loss rate: 0.33%

-- Flow 1:

Average throughput: 59.91 Mbit/s

95th percentile per-packet one-way delay: 45.127 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 24.98 Mbit/s

95th percentile per-packet one-way delay: 56.282 ms

Loss rate: 0.60%

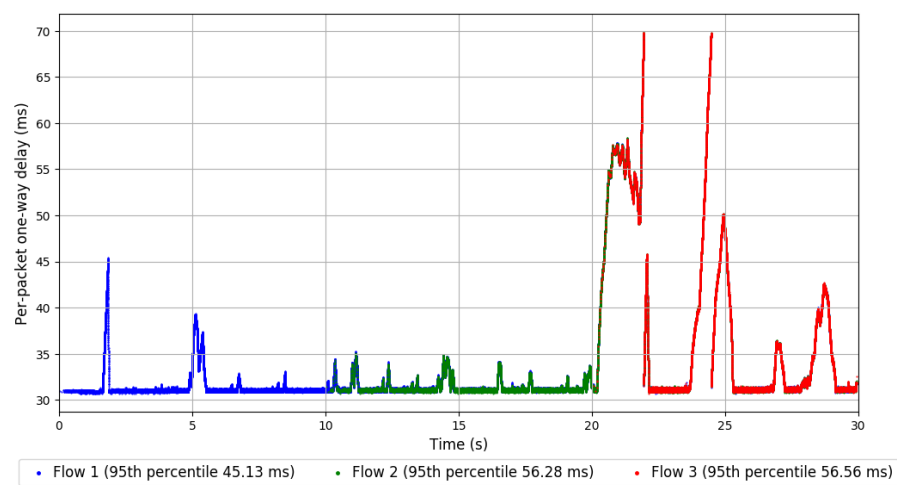
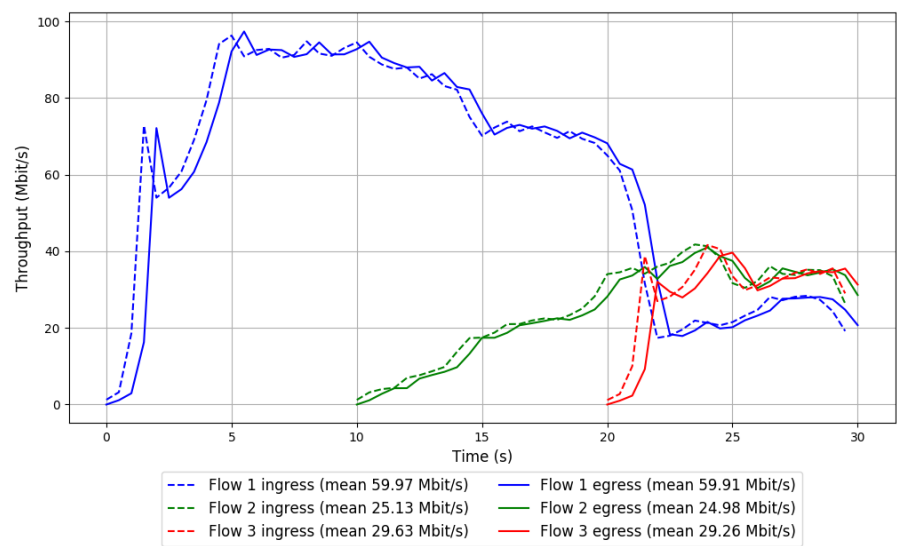
-- Flow 3:

Average throughput: 29.26 Mbit/s

95th percentile per-packet one-way delay: 56.557 ms

Loss rate: 1.24%

Run 4: Report of PCC-Vivace — Data Link

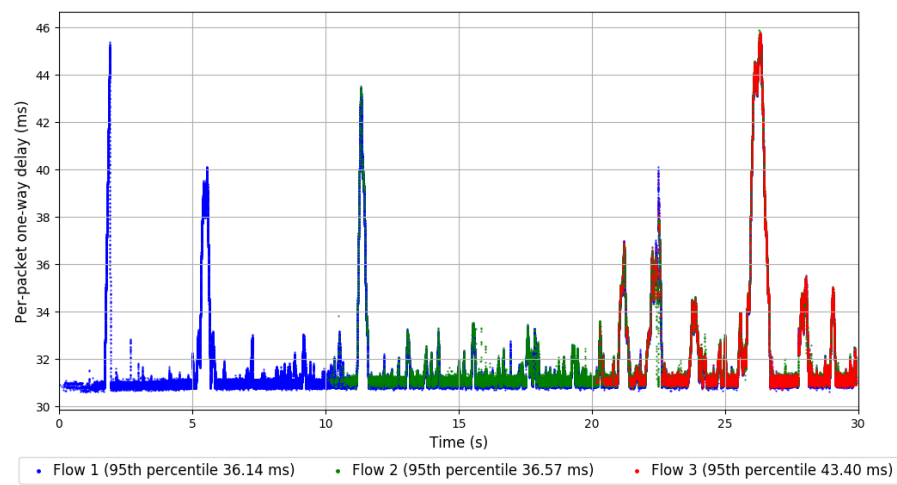
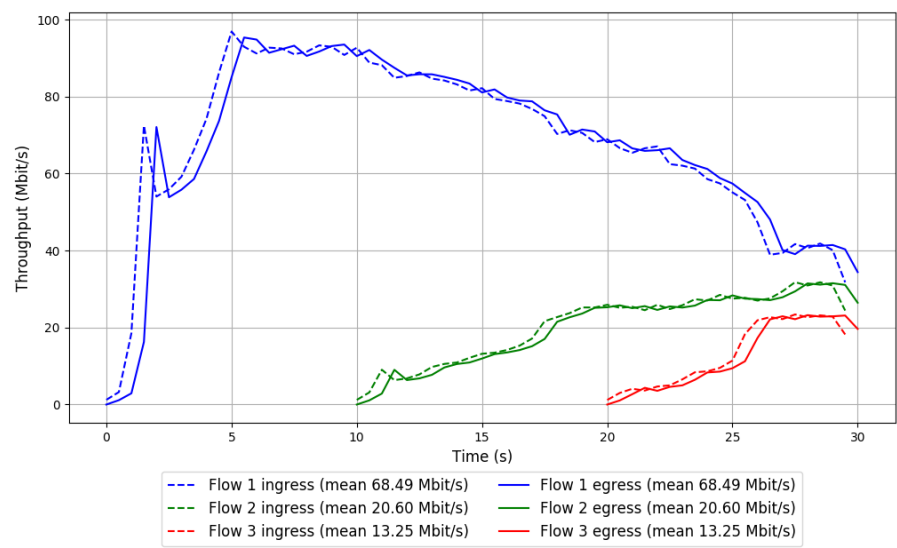


Run 5: Statistics of PCC-Vivace

Start at: 2019-01-21 12:59:52  
End at: 2019-01-21 13:00:22  
Local clock offset: 4.325 ms  
Remote clock offset: -0.811 ms

# Below is generated by plot.py at 2019-01-21 13:18:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.57 Mbit/s  
95th percentile per-packet one-way delay: 36.567 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 68.49 Mbit/s  
95th percentile per-packet one-way delay: 36.139 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 20.60 Mbit/s  
95th percentile per-packet one-way delay: 36.568 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 13.25 Mbit/s  
95th percentile per-packet one-way delay: 43.401 ms  
Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



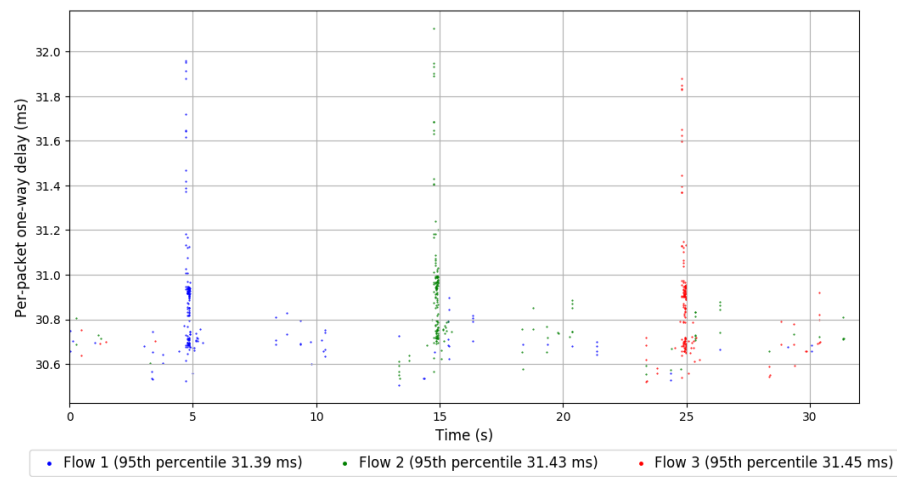
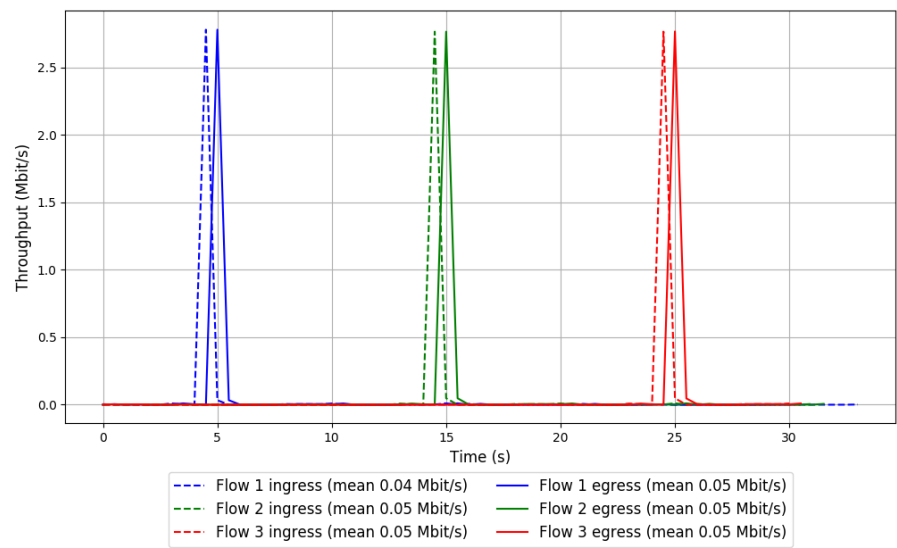


Run 1: Statistics of WebRTC media

Start at: 2019-01-21 11:14:55  
End at: 2019-01-21 11:15:25  
Local clock offset: -0.437 ms  
Remote clock offset: -0.998 ms

# Below is generated by plot.py at 2019-01-21 13:18:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 31.430 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.388 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.430 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.445 ms  
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

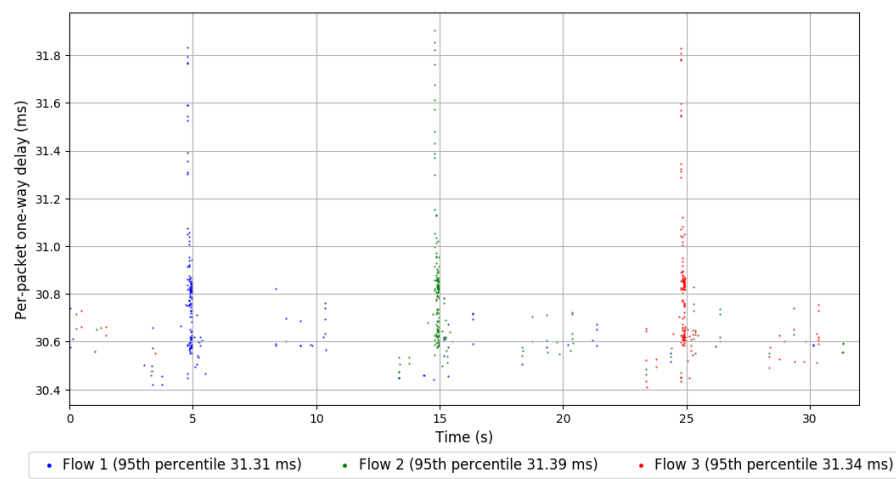
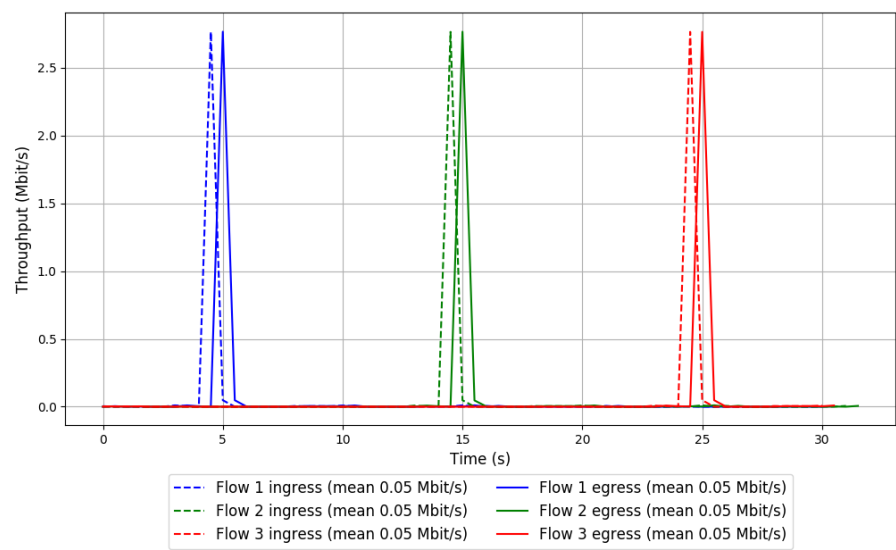


Run 2: Statistics of WebRTC media

Start at: 2019-01-21 11:41:02  
End at: 2019-01-21 11:41:32  
Local clock offset: -0.151 ms  
Remote clock offset: -1.161 ms

# Below is generated by plot.py at 2019-01-21 13:18:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 31.369 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.309 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.389 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.344 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

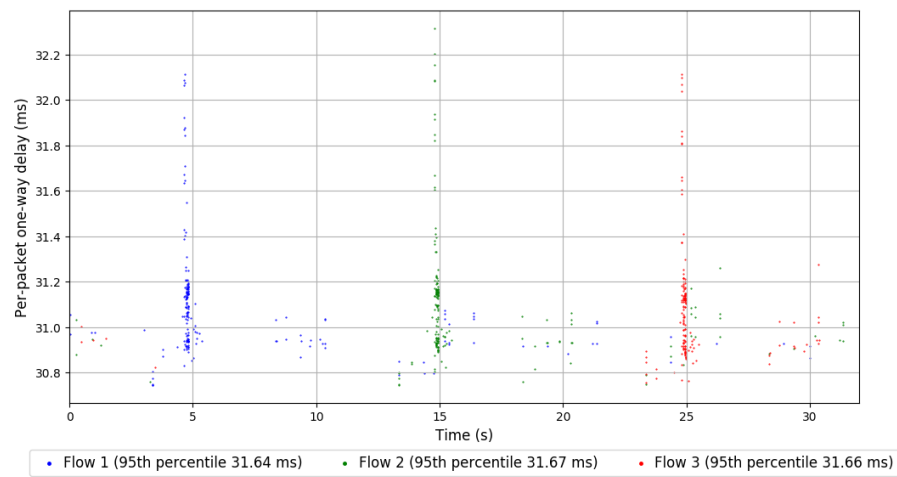
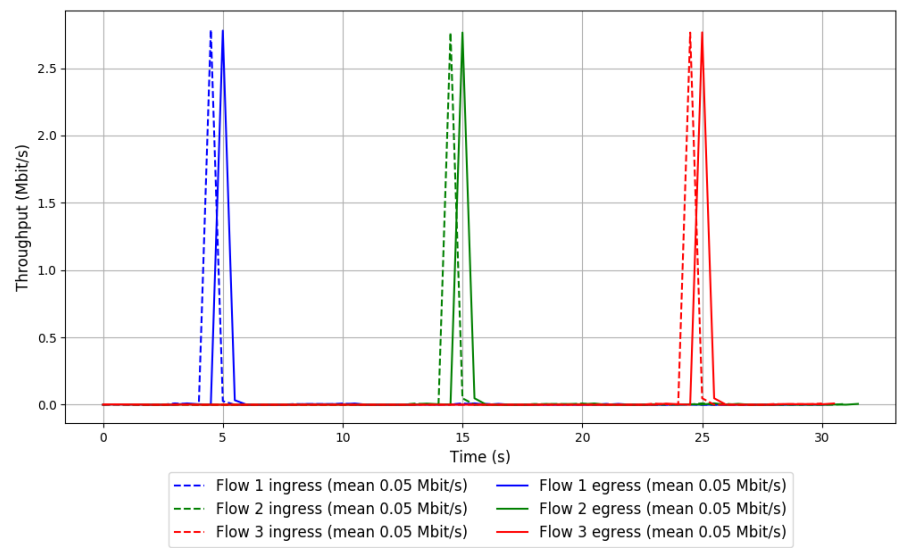


Run 3: Statistics of WebRTC media

Start at: 2019-01-21 12:06:49  
End at: 2019-01-21 12:07:19  
Local clock offset: 0.14 ms  
Remote clock offset: -0.537 ms

# Below is generated by plot.py at 2019-01-21 13:18:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 31.667 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.645 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.667 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.662 ms  
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

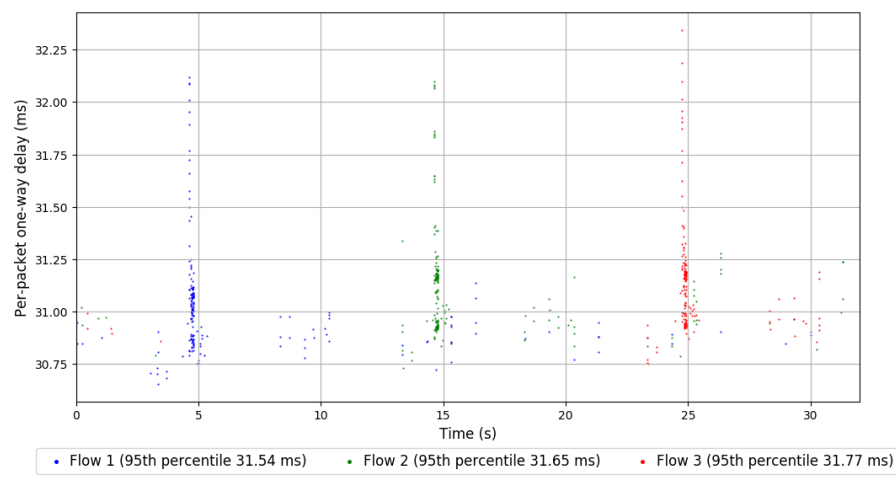
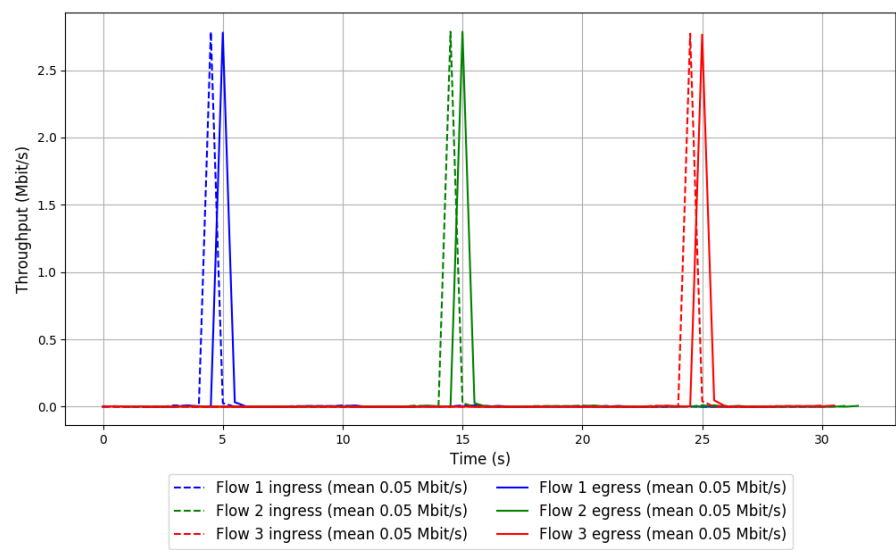


Run 4: Statistics of WebRTC media

Start at: 2019-01-21 12:32:38  
End at: 2019-01-21 12:33:08  
Local clock offset: 3.65 ms  
Remote clock offset: -0.239 ms

# Below is generated by plot.py at 2019-01-21 13:18:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 31.647 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.538 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.647 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.767 ms  
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-01-21 12:58:44  
End at: 2019-01-21 12:59:14  
Local clock offset: 4.296 ms  
Remote clock offset: -1.005 ms

# Below is generated by plot.py at 2019-01-21 13:18:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 31.598 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.797 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.444 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 31.436 ms  
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

