

## Pantheon Report

Generated at 2019-02-20 12:08:36 (UTC).

Data path: Brazil on **p4p1** (*remote*) → AWS Brazil 1 on **ens5** (*local*).

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 **gps.ntp.br** and have been applied to correct the timestamps in logs.

### System info:

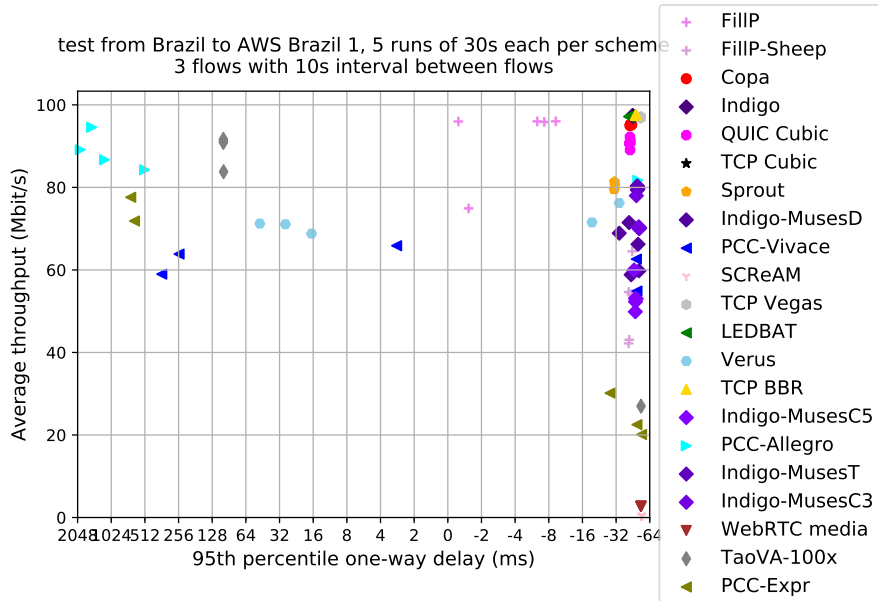
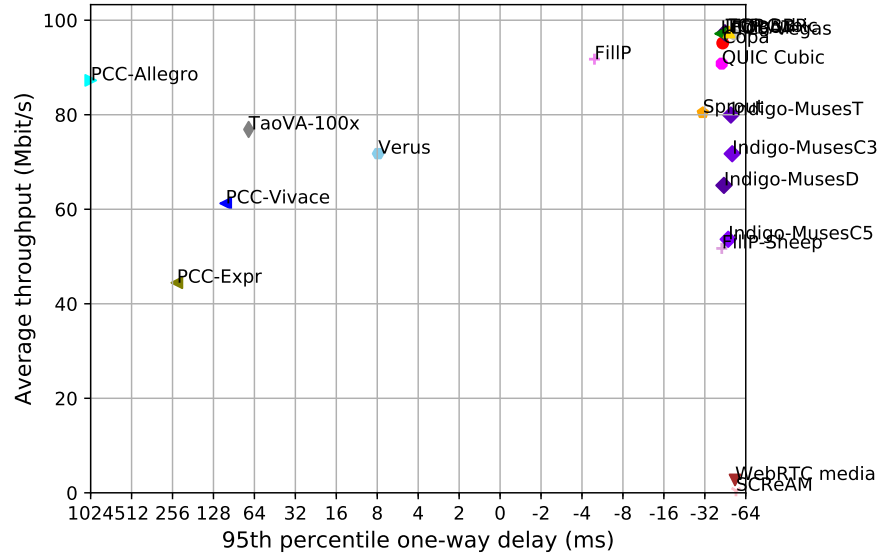
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
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

100



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	59.37	40.89	32.83	-48.43	-48.40	-48.13	0.02	0.03	0.07
Copa	5	57.88	40.06	31.95	-43.70	-43.07	-42.34	0.06	0.09	0.15
TCP Cubic	5	59.64	40.65	32.49	-45.36	-45.83	-45.48	0.10	0.18	0.29
FillP	5	52.46	44.33	29.49	-30.52	-4.00	-4.05	0.06	2.04	2.35
FillP-Sheep	5	39.58	11.08	14.42	-46.96	-34.43	20.94	0.00	0.01	0.02
Indigo	5	59.67	40.65	32.35	-45.01	-44.89	-47.01	0.61	1.56	0.12
Indigo-MusesC3	5	50.81	25.87	17.42	-50.88	-50.88	-52.04	0.00	0.01	0.03
Indigo-MusesC5	5	28.17	26.77	31.82	-48.68	-47.71	-45.67	0.01	0.02	0.03
Indigo-MusesD	5	40.26	22.18	39.94	-51.33	-48.62	-33.49	0.02	0.04	0.42
Indigo-MusesT	5	52.41	34.09	22.83	-50.26	-48.95	-49.37	0.00	0.03	0.06
LEDBAT	5	59.34	40.60	32.47	-42.14	-41.73	-41.43	0.16	0.27	0.41
PCC-Allegro	5	62.37	26.26	22.62	1140.69	374.53	-42.47	7.77	4.65	0.12
PCC-Expr	5	34.98	5.48	17.66	239.27	-53.74	12.30	7.94	0.01	1.09
QUIC Cubic	5	53.78	40.16	31.19	-42.83	-42.59	-42.16	0.20	0.41	0.57
SCReAM	5	0.22	0.22	0.22	-54.30	-54.23	-54.28	0.00	0.00	0.00
Sprout	5	43.32	39.83	32.15	-32.38	-30.92	-29.50	0.63	1.13	2.81
TaoVA-100x	5	43.81	32.64	34.11	69.53	70.96	71.19	0.36	0.76	1.82
TCP Vegas	5	54.63	42.55	42.08	-53.28	-52.82	-52.72	0.00	0.01	0.02
Verus	5	39.79	31.81	32.51	-30.90	-21.36	148.84	0.04	0.08	0.17
PCC-Vivace	5	32.84	31.31	22.93	135.20	-35.93	17.58	1.43	0.05	1.10
WebRTC media	5	1.52	0.83	0.39	-53.47	-53.44	-53.14	0.00	0.00	0.00

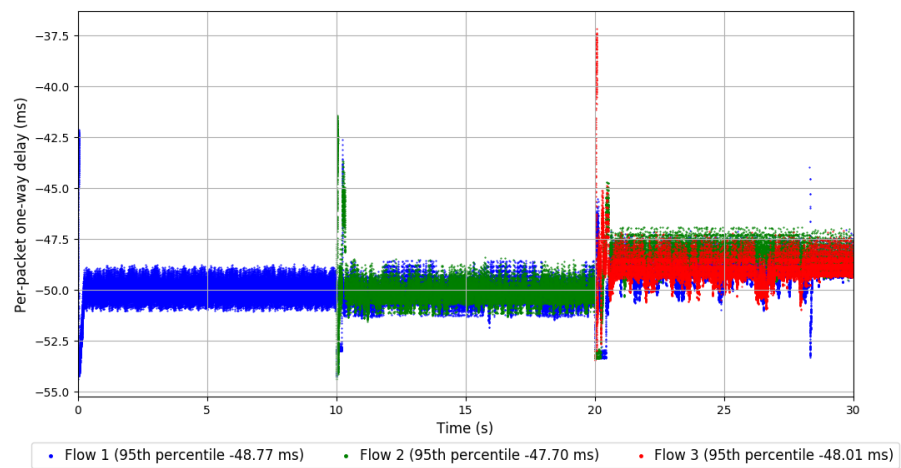
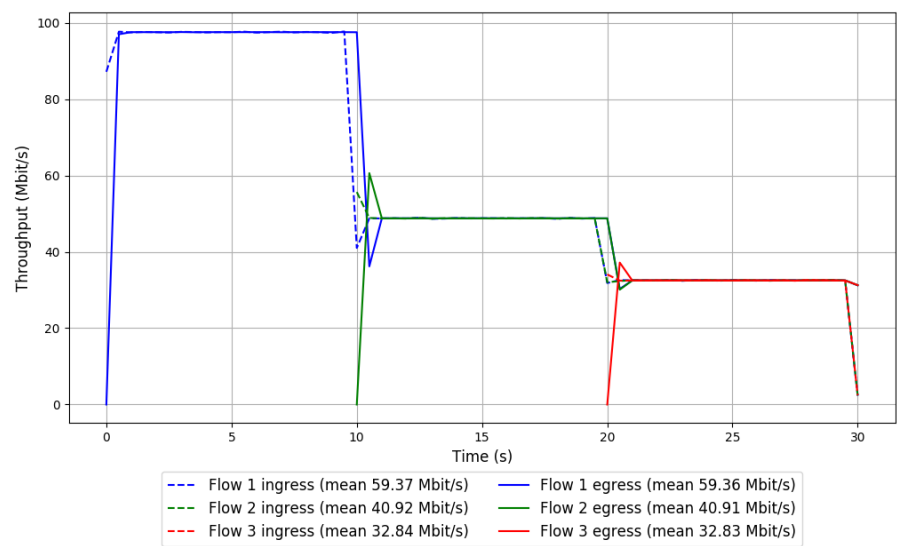


Run 1: Statistics of TCP BBR

Start at: 2019-02-20 10:08:30  
End at: 2019-02-20 10:09:00  
Local clock offset: -61.822 ms  
Remote clock offset: -0.215 ms

# Below is generated by plot.py at 2019-02-20 11:56:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.51 Mbit/s  
95th percentile per-packet one-way delay: -48.071 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 59.36 Mbit/s  
95th percentile per-packet one-way delay: -48.766 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 40.91 Mbit/s  
95th percentile per-packet one-way delay: -47.701 ms  
Loss rate: 0.03%  
-- Flow 3:  
Average throughput: 32.83 Mbit/s  
95th percentile per-packet one-way delay: -48.009 ms  
Loss rate: 0.07%

Run 1: Report of TCP BBR — Data Link

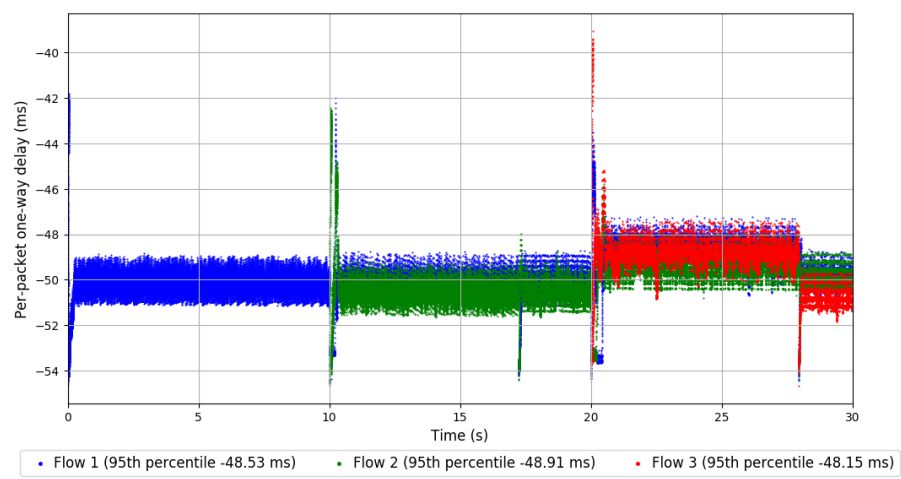
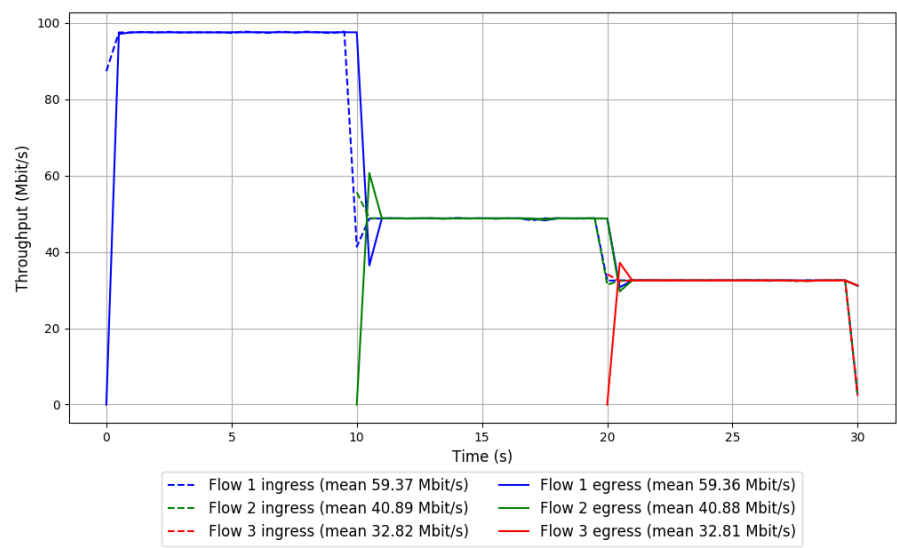


Run 2: Statistics of TCP BBR

Start at: 2019-02-20 10:32:37  
End at: 2019-02-20 10:33:07  
Local clock offset: -60.564 ms  
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2019-02-20 11:56:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.49 Mbit/s  
95th percentile per-packet one-way delay: -48.490 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 59.36 Mbit/s  
95th percentile per-packet one-way delay: -48.526 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 40.88 Mbit/s  
95th percentile per-packet one-way delay: -48.908 ms  
Loss rate: 0.03%  
-- Flow 3:  
Average throughput: 32.81 Mbit/s  
95th percentile per-packet one-way delay: -48.147 ms  
Loss rate: 0.06%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-02-20 10:56:41

End at: 2019-02-20 10:57:11

Local clock offset: -55.77 ms

Remote clock offset: 0.344 ms

# Below is generated by plot.py at 2019-02-20 11:56:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.50 Mbit/s

95th percentile per-packet one-way delay: -48.373 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 59.36 Mbit/s

95th percentile per-packet one-way delay: -48.626 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 40.90 Mbit/s

95th percentile per-packet one-way delay: -48.204 ms

Loss rate: 0.03%

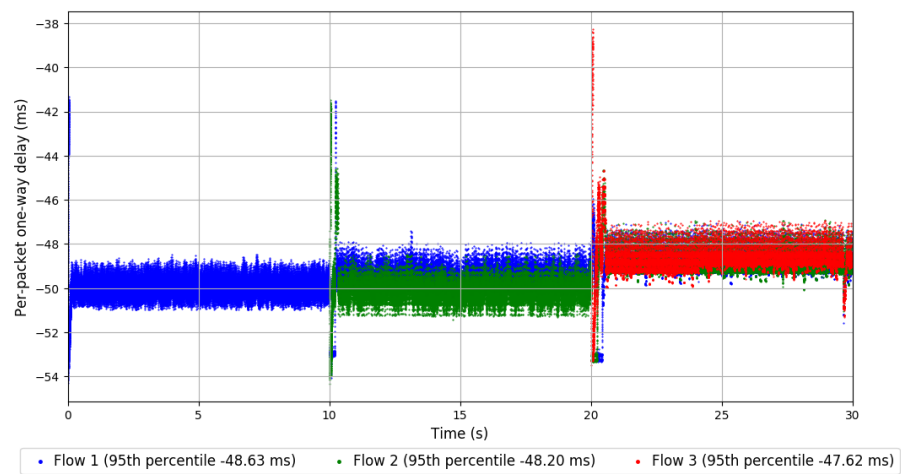
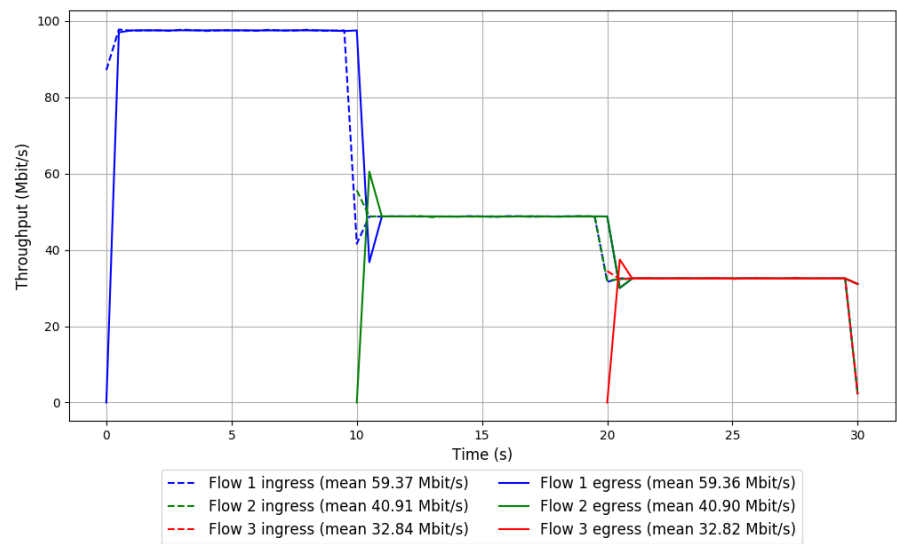
-- Flow 3:

Average throughput: 32.82 Mbit/s

95th percentile per-packet one-way delay: -47.619 ms

Loss rate: 0.07%

Run 3: Report of TCP BBR — Data Link

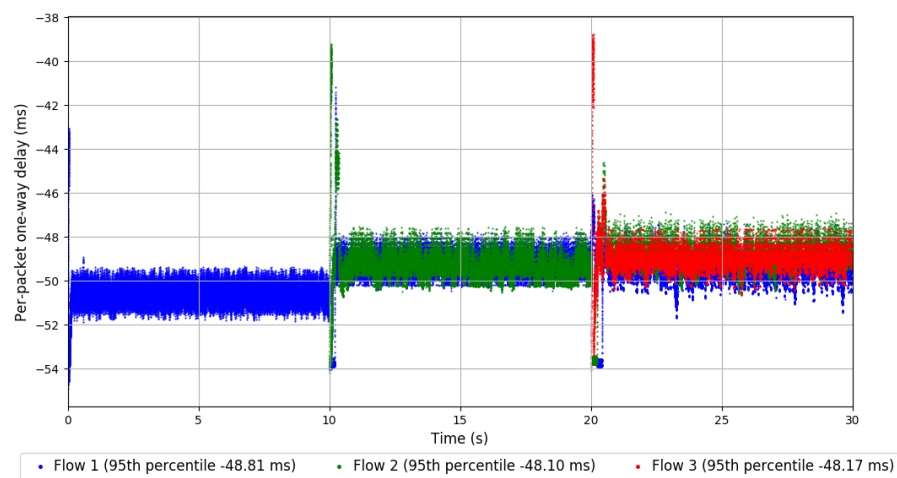
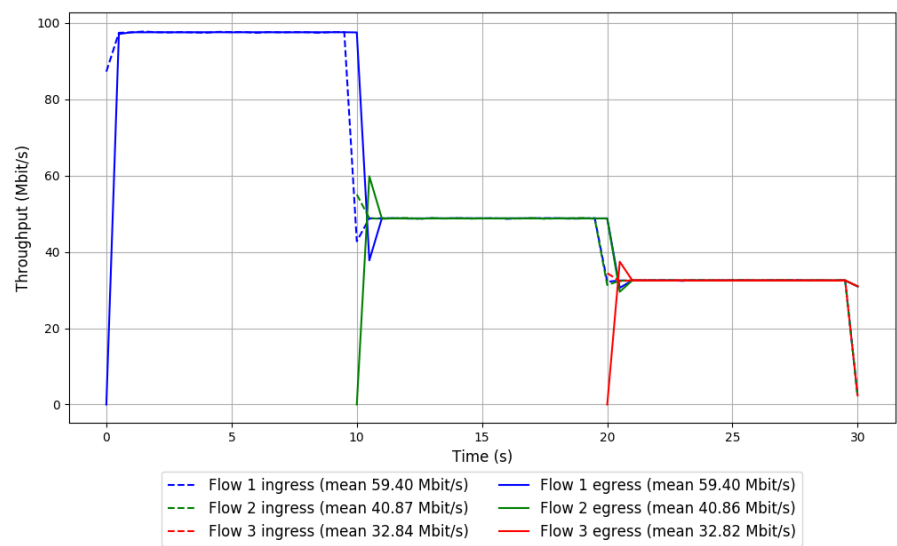


Run 4: Statistics of TCP BBR

Start at: 2019-02-20 11:20:39  
End at: 2019-02-20 11:21:09  
Local clock offset: -56.522 ms  
Remote clock offset: 0.811 ms

# Below is generated by plot.py at 2019-02-20 11:56:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.52 Mbit/s  
95th percentile per-packet one-way delay: -48.426 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 59.40 Mbit/s  
95th percentile per-packet one-way delay: -48.807 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 40.86 Mbit/s  
95th percentile per-packet one-way delay: -48.098 ms  
Loss rate: 0.03%  
-- Flow 3:  
Average throughput: 32.82 Mbit/s  
95th percentile per-packet one-way delay: -48.167 ms  
Loss rate: 0.08%

Run 4: Report of TCP BBR — Data Link



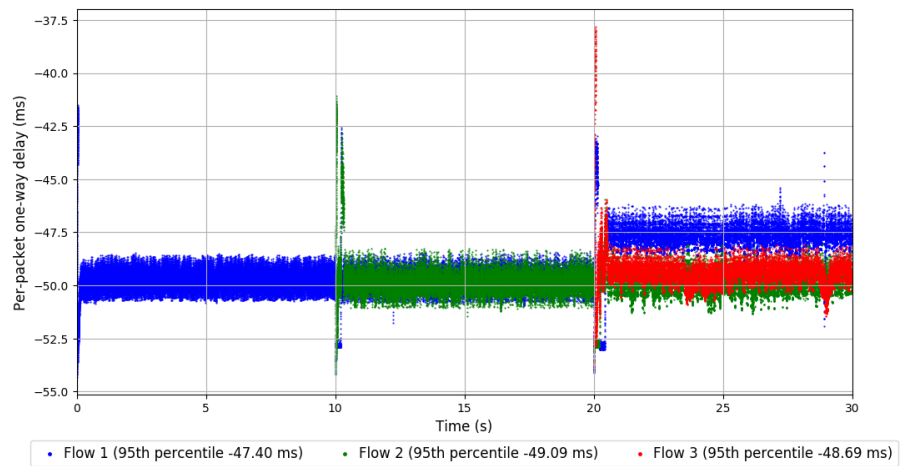
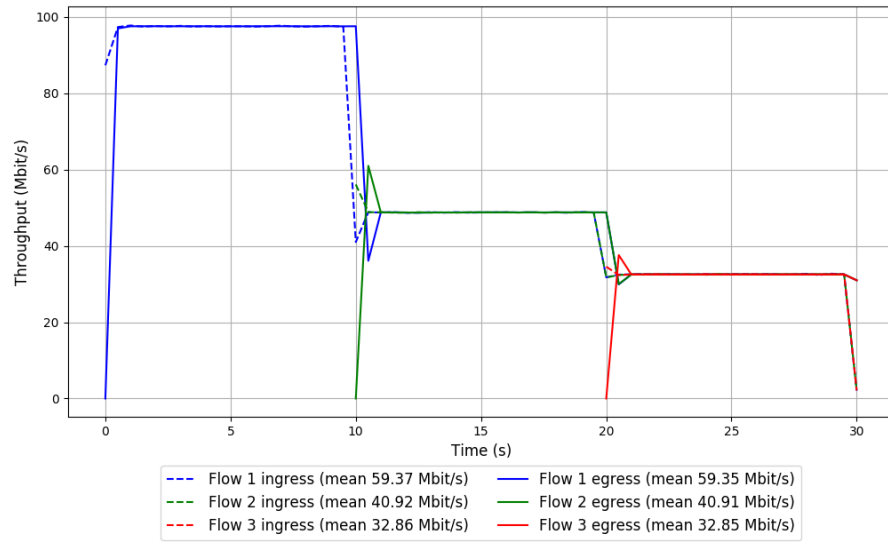


Run 5: Statistics of TCP BBR

Start at: 2019-02-20 11:44:46  
End at: 2019-02-20 11:45:16  
Local clock offset: -60.913 ms  
Remote clock offset: 0.992 ms

# Below is generated by plot.py at 2019-02-20 11:56:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.50 Mbit/s  
95th percentile per-packet one-way delay: -47.556 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 59.35 Mbit/s  
95th percentile per-packet one-way delay: -47.403 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 40.91 Mbit/s  
95th percentile per-packet one-way delay: -49.091 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 32.85 Mbit/s  
95th percentile per-packet one-way delay: -48.692 ms  
Loss rate: 0.06%

# Run 5: Report of TCP BBR — Data Link

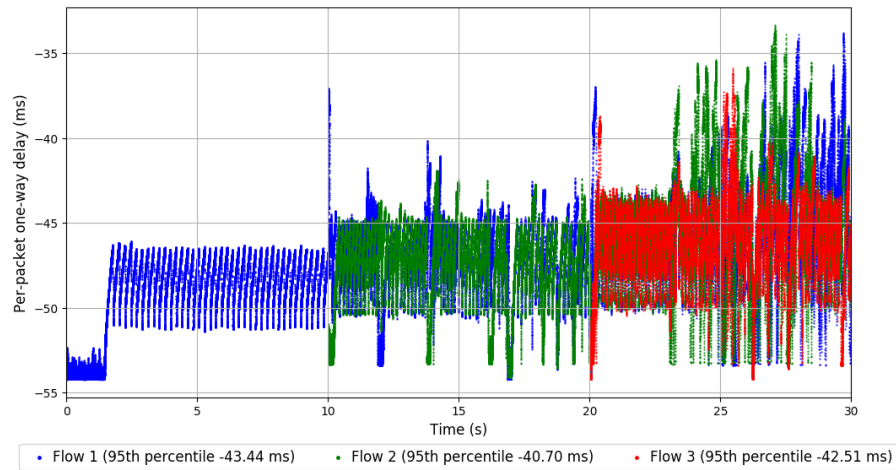
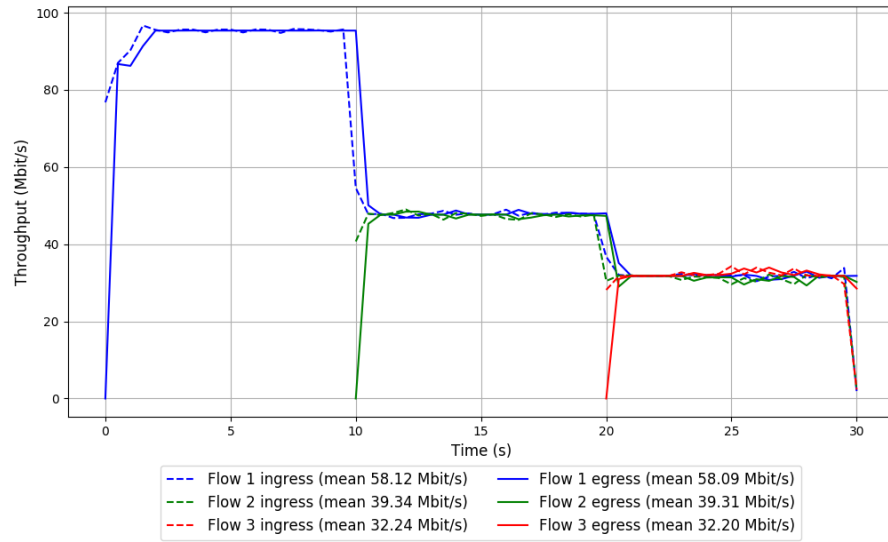


Run 1: Statistics of Copa

Start at: 2019-02-20 10:09:39  
End at: 2019-02-20 10:10:09  
Local clock offset: -61.846 ms  
Remote clock offset: -0.353 ms

# Below is generated by plot.py at 2019-02-20 11:57:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.97 Mbit/s  
95th percentile per-packet one-way delay: -42.516 ms  
Loss rate: 0.08%  
-- Flow 1:  
Average throughput: 58.09 Mbit/s  
95th percentile per-packet one-way delay: -43.442 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 39.31 Mbit/s  
95th percentile per-packet one-way delay: -40.696 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 32.20 Mbit/s  
95th percentile per-packet one-way delay: -42.509 ms  
Loss rate: 0.15%

## Run 1: Report of Copa — Data Link

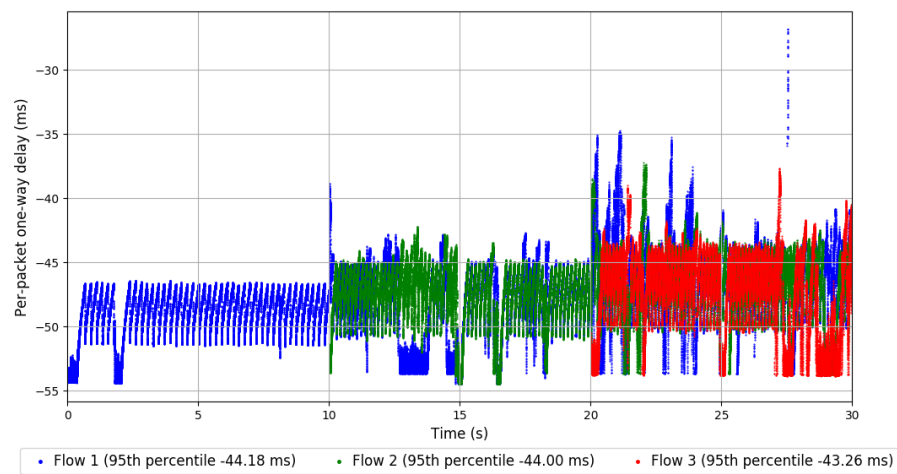
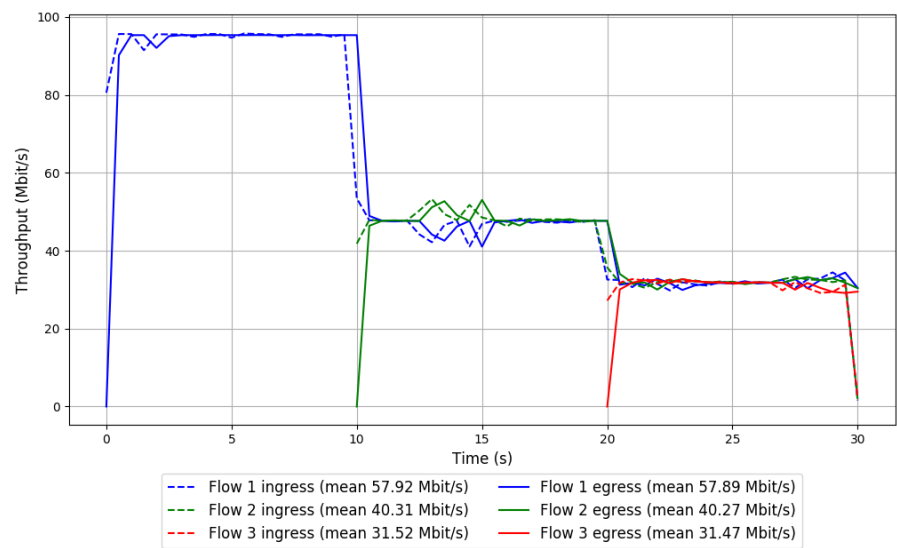


Run 2: Statistics of Copa

Start at: 2019-02-20 10:33:47  
End at: 2019-02-20 10:34:17  
Local clock offset: -59.935 ms  
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2019-02-20 11:57:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.16 Mbit/s  
95th percentile per-packet one-way delay: -43.982 ms  
Loss rate: 0.08%  
-- Flow 1:  
Average throughput: 57.89 Mbit/s  
95th percentile per-packet one-way delay: -44.184 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 40.27 Mbit/s  
95th percentile per-packet one-way delay: -44.003 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 31.47 Mbit/s  
95th percentile per-packet one-way delay: -43.256 ms  
Loss rate: 0.18%

Run 2: Report of Copa — Data Link

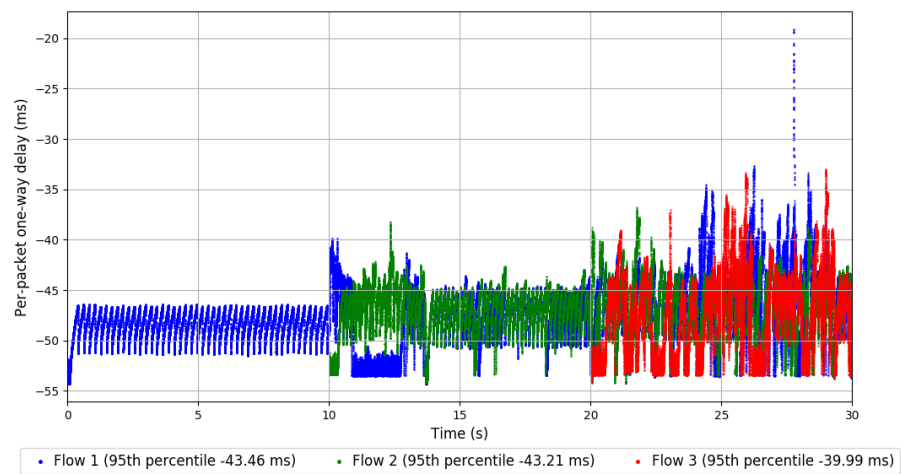
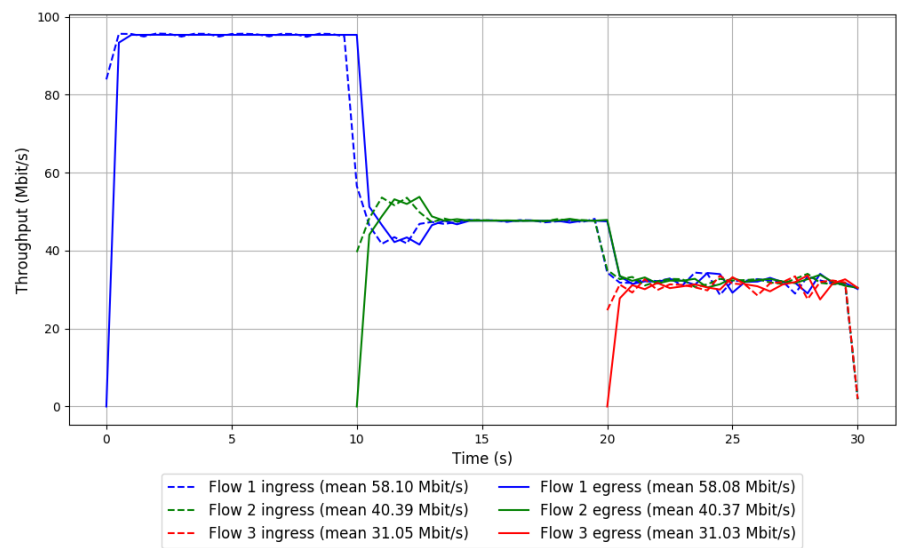


Run 3: Statistics of Copa

Start at: 2019-02-20 10:57:50  
End at: 2019-02-20 10:58:20  
Local clock offset: -55.753 ms  
Remote clock offset: 0.338 ms

# Below is generated by plot.py at 2019-02-20 11:57:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.28 Mbit/s  
95th percentile per-packet one-way delay: -42.926 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 58.08 Mbit/s  
95th percentile per-packet one-way delay: -43.460 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 40.37 Mbit/s  
95th percentile per-packet one-way delay: -43.207 ms  
Loss rate: 0.06%  
-- Flow 3:  
Average throughput: 31.03 Mbit/s  
95th percentile per-packet one-way delay: -39.986 ms  
Loss rate: 0.08%

Run 3: Report of Copa — Data Link



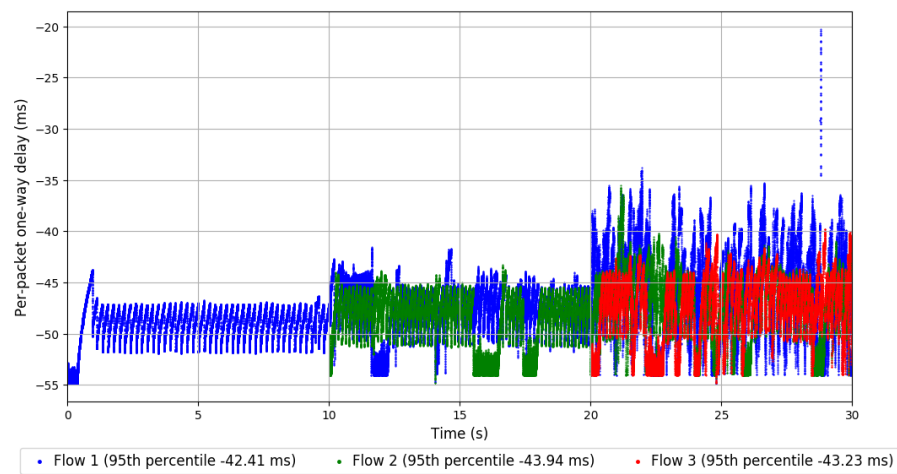
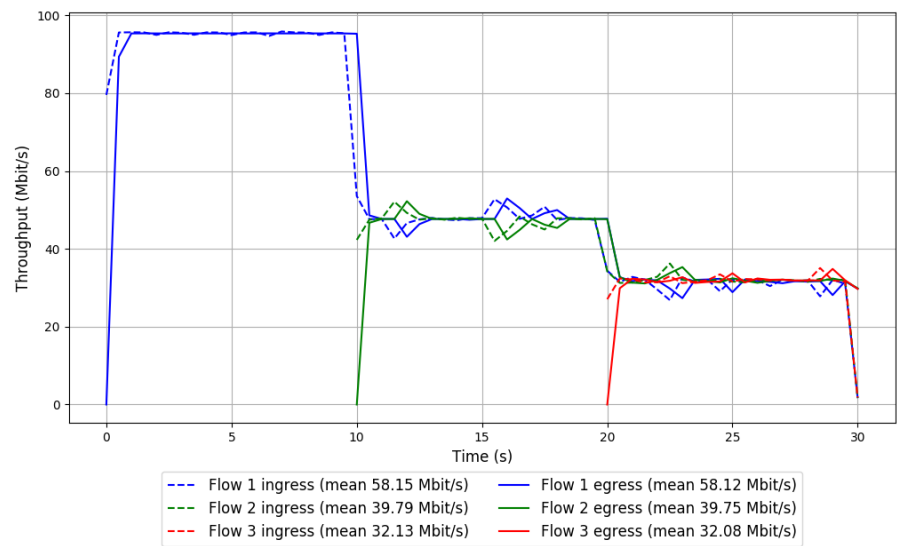


Run 4: Statistics of Copa

Start at: 2019-02-20 11:21:49  
End at: 2019-02-20 11:22:19  
Local clock offset: -56.559 ms  
Remote clock offset: 0.855 ms

# Below is generated by plot.py at 2019-02-20 11:58:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.25 Mbit/s  
95th percentile per-packet one-way delay: -43.086 ms  
Loss rate: 0.08%  
-- Flow 1:  
Average throughput: 58.12 Mbit/s  
95th percentile per-packet one-way delay: -42.415 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 39.75 Mbit/s  
95th percentile per-packet one-way delay: -43.943 ms  
Loss rate: 0.10%  
-- Flow 3:  
Average throughput: 32.08 Mbit/s  
95th percentile per-packet one-way delay: -43.227 ms  
Loss rate: 0.17%

Run 4: Report of Copa — Data Link

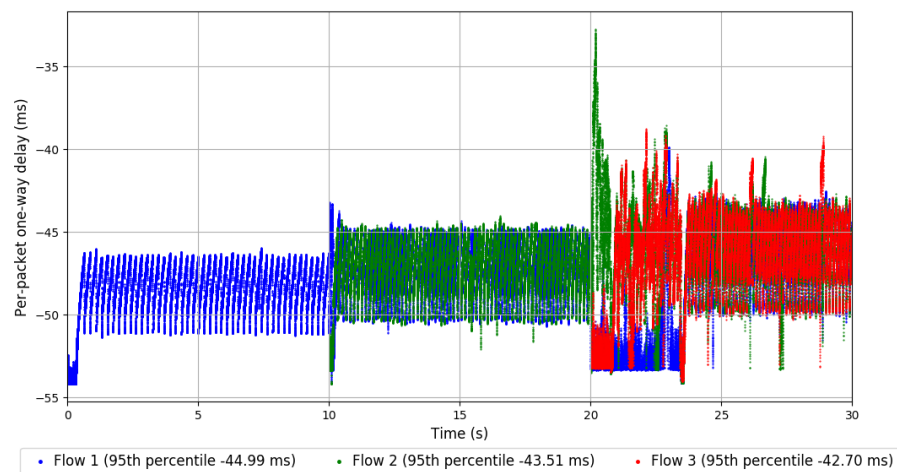
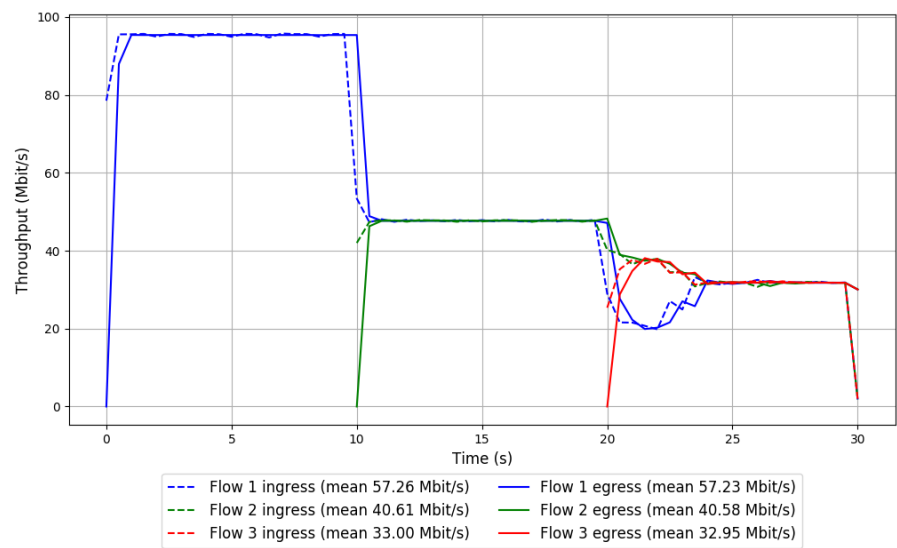


Run 5: Statistics of Copa

Start at: 2019-02-20 11:45:55  
End at: 2019-02-20 11:46:25  
Local clock offset: -61.031 ms  
Remote clock offset: 1.037 ms

# Below is generated by plot.py at 2019-02-20 11:58:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.20 Mbit/s  
95th percentile per-packet one-way delay: -44.072 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 57.23 Mbit/s  
95th percentile per-packet one-way delay: -44.986 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 40.58 Mbit/s  
95th percentile per-packet one-way delay: -43.508 ms  
Loss rate: 0.10%  
-- Flow 3:  
Average throughput: 32.95 Mbit/s  
95th percentile per-packet one-way delay: -42.703 ms  
Loss rate: 0.15%

Run 5: Report of Copa — Data Link

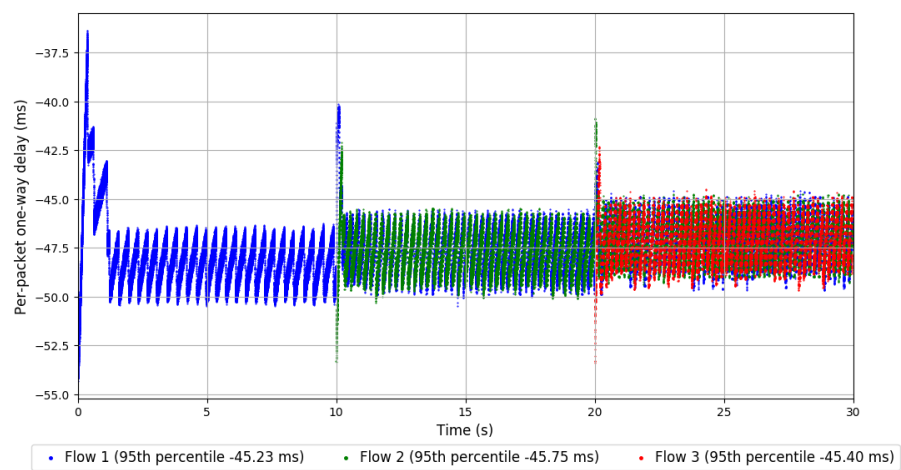
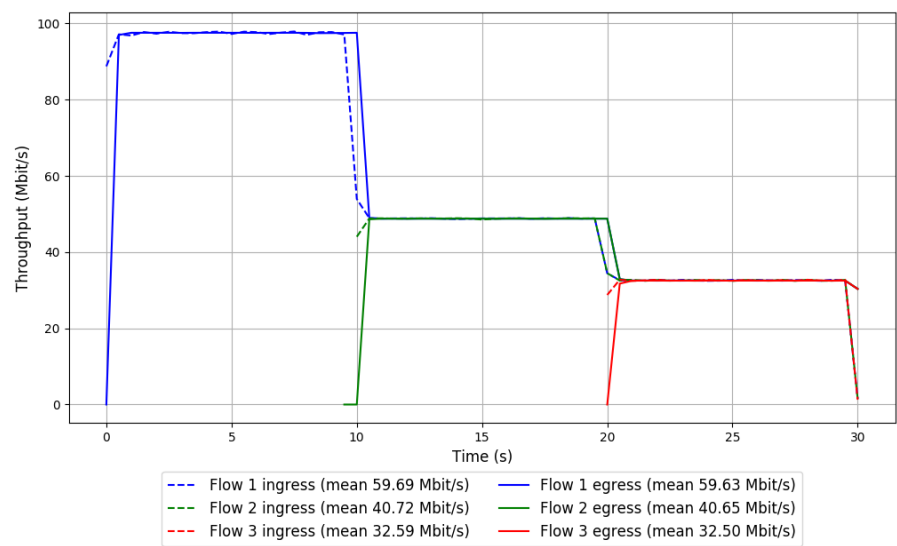


Run 1: Statistics of TCP Cubic

Start at: 2019-02-20 10:16:38  
End at: 2019-02-20 10:17:08  
Local clock offset: -61.852 ms  
Remote clock offset: -0.256 ms

# Below is generated by plot.py at 2019-02-20 11:58:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.52 Mbit/s  
95th percentile per-packet one-way delay: -45.496 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 59.63 Mbit/s  
95th percentile per-packet one-way delay: -45.230 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 40.65 Mbit/s  
95th percentile per-packet one-way delay: -45.747 ms  
Loss rate: 0.18%  
-- Flow 3:  
Average throughput: 32.50 Mbit/s  
95th percentile per-packet one-way delay: -45.397 ms  
Loss rate: 0.30%

Run 1: Report of TCP Cubic — Data Link

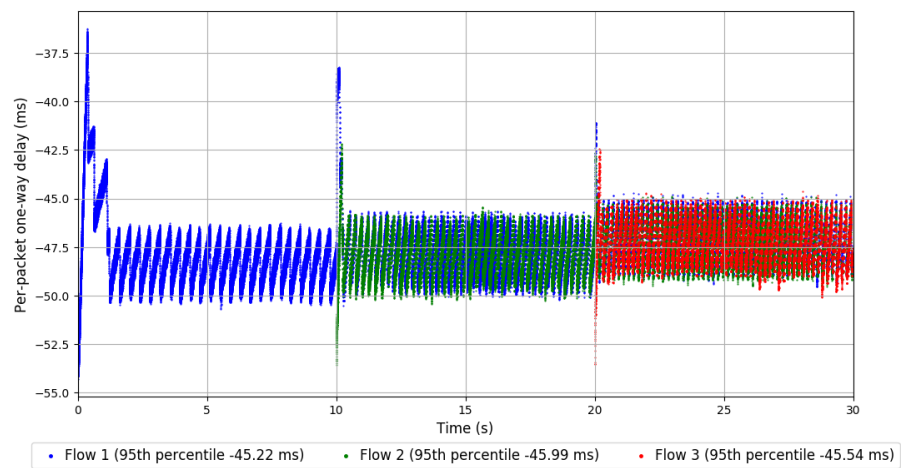
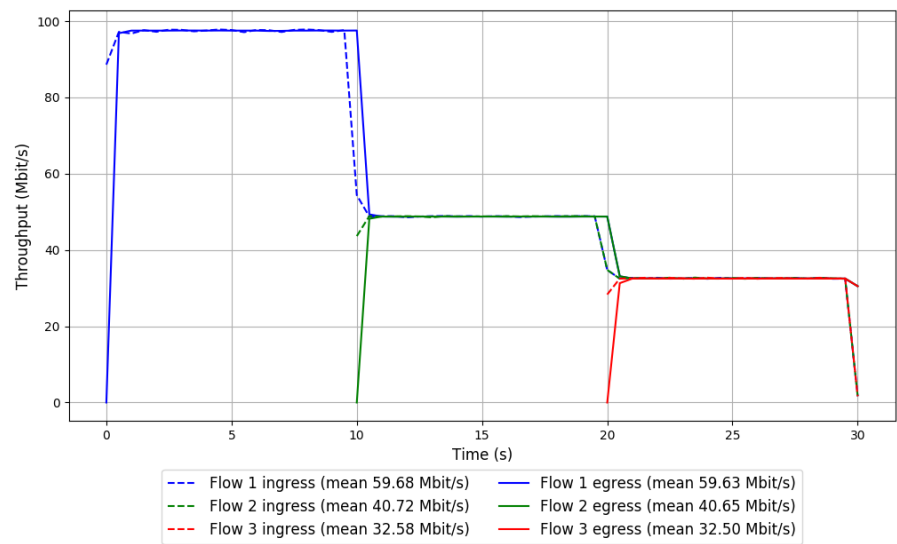


Run 2: Statistics of TCP Cubic

Start at: 2019-02-20 10:40:46  
End at: 2019-02-20 10:41:16  
Local clock offset: -57.853 ms  
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2019-02-20 11:58:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.51 Mbit/s  
95th percentile per-packet one-way delay: -45.594 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 59.63 Mbit/s  
95th percentile per-packet one-way delay: -45.223 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 40.65 Mbit/s  
95th percentile per-packet one-way delay: -45.991 ms  
Loss rate: 0.17%  
-- Flow 3:  
Average throughput: 32.50 Mbit/s  
95th percentile per-packet one-way delay: -45.537 ms  
Loss rate: 0.27%

Run 2: Report of TCP Cubic — Data Link



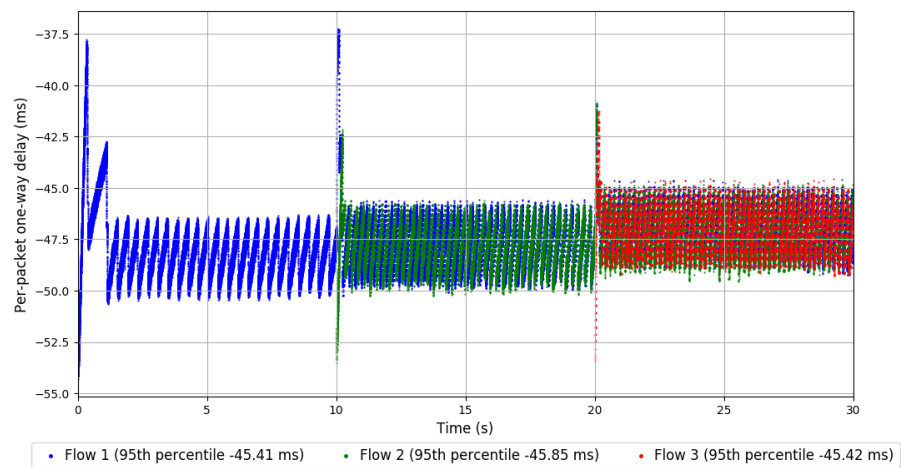
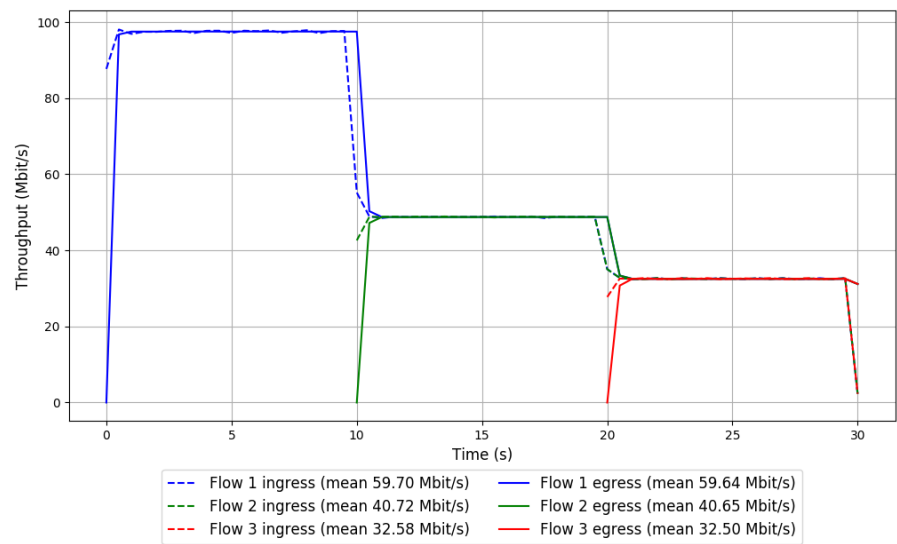


Run 3: Statistics of TCP Cubic

Start at: 2019-02-20 11:04:45  
End at: 2019-02-20 11:05:15  
Local clock offset: -56.018 ms  
Remote clock offset: 0.497 ms

# Below is generated by plot.py at 2019-02-20 11:58:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.51 Mbit/s  
95th percentile per-packet one-way delay: -45.545 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 59.64 Mbit/s  
95th percentile per-packet one-way delay: -45.414 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 40.65 Mbit/s  
95th percentile per-packet one-way delay: -45.852 ms  
Loss rate: 0.18%  
-- Flow 3:  
Average throughput: 32.50 Mbit/s  
95th percentile per-packet one-way delay: -45.420 ms  
Loss rate: 0.28%

Run 3: Report of TCP Cubic — Data Link

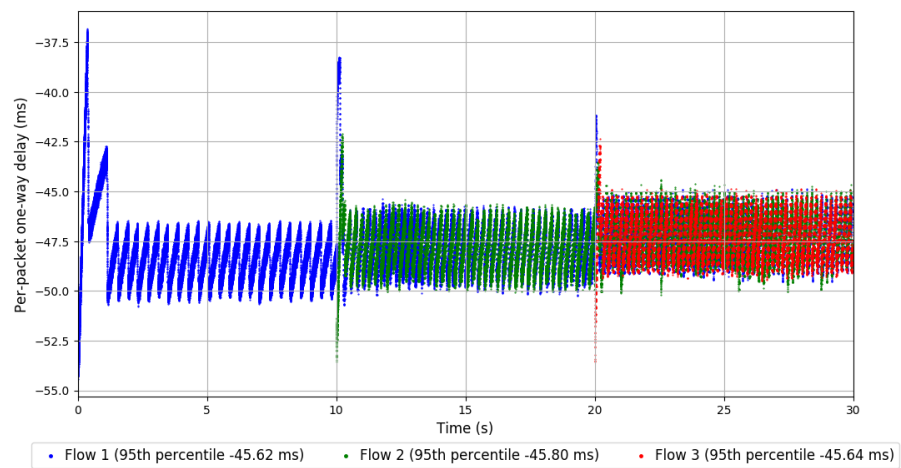
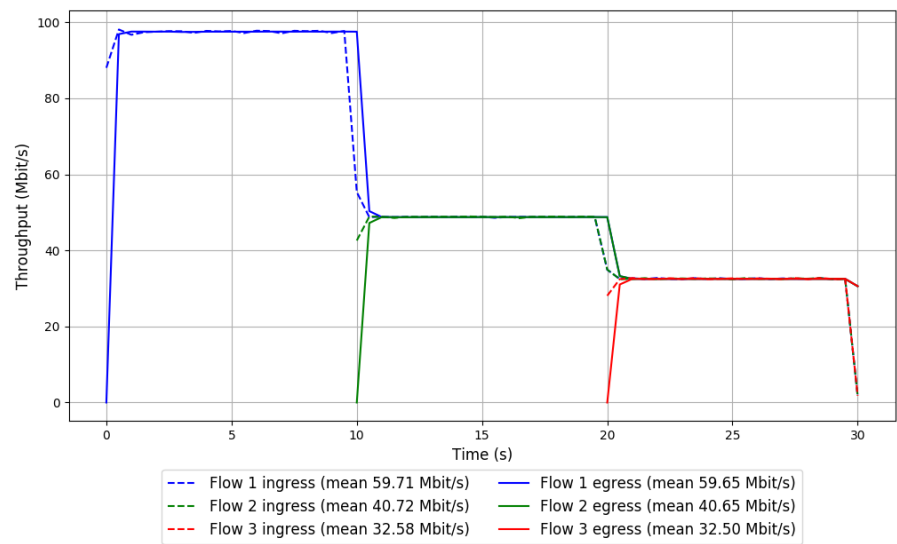


Run 4: Statistics of TCP Cubic

Start at: 2019-02-20 11:28:47  
End at: 2019-02-20 11:29:17  
Local clock offset: -55.888 ms  
Remote clock offset: 0.83 ms

# Below is generated by plot.py at 2019-02-20 11:58:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.51 Mbit/s  
95th percentile per-packet one-way delay: -45.675 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 59.65 Mbit/s  
95th percentile per-packet one-way delay: -45.621 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 40.65 Mbit/s  
95th percentile per-packet one-way delay: -45.801 ms  
Loss rate: 0.17%  
-- Flow 3:  
Average throughput: 32.50 Mbit/s  
95th percentile per-packet one-way delay: -45.636 ms  
Loss rate: 0.27%

Run 4: Report of TCP Cubic — Data Link

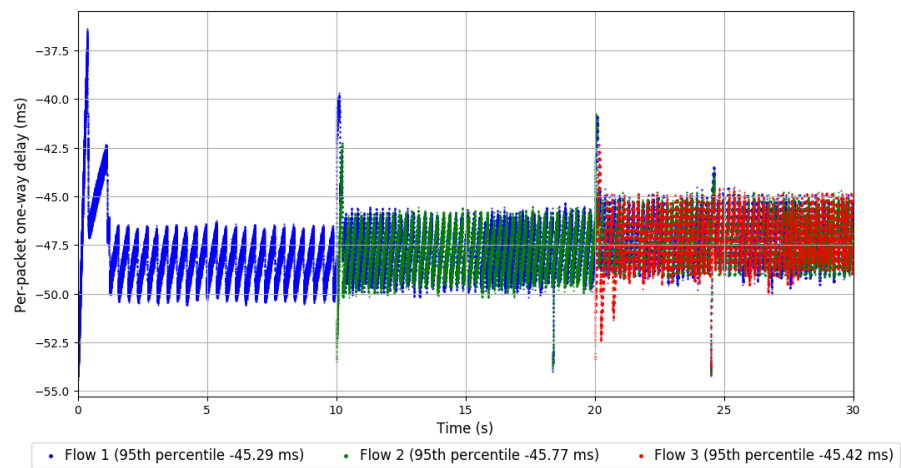
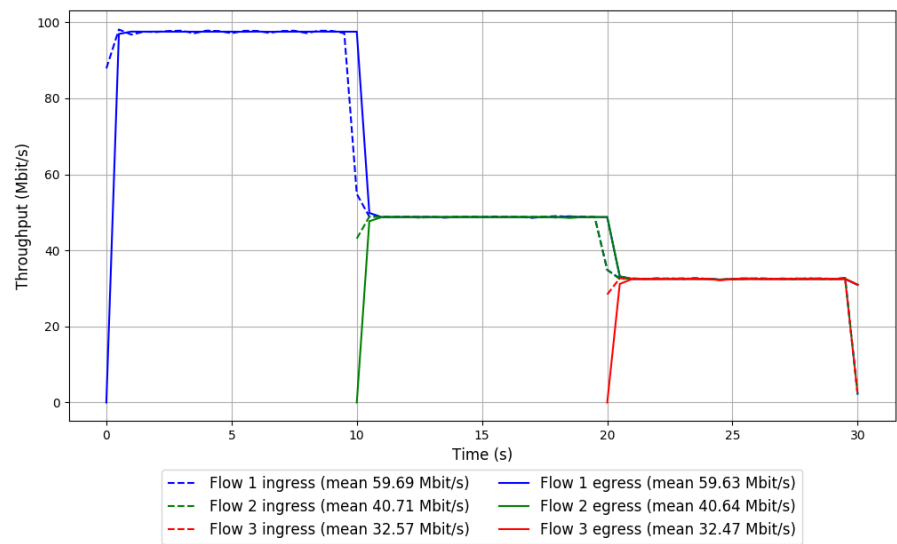


Run 5: Statistics of TCP Cubic

Start at: 2019-02-20 11:52:54  
End at: 2019-02-20 11:53:24  
Local clock offset: -61.781 ms  
Remote clock offset: 1.208 ms

# Below is generated by plot.py at 2019-02-20 11:58:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.49 Mbit/s  
95th percentile per-packet one-way delay: -45.522 ms  
Loss rate: 0.15%  
-- Flow 1:  
Average throughput: 59.63 Mbit/s  
95th percentile per-packet one-way delay: -45.294 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 40.64 Mbit/s  
95th percentile per-packet one-way delay: -45.767 ms  
Loss rate: 0.18%  
-- Flow 3:  
Average throughput: 32.47 Mbit/s  
95th percentile per-packet one-way delay: -45.421 ms  
Loss rate: 0.32%

Run 5: Report of TCP Cubic — Data Link

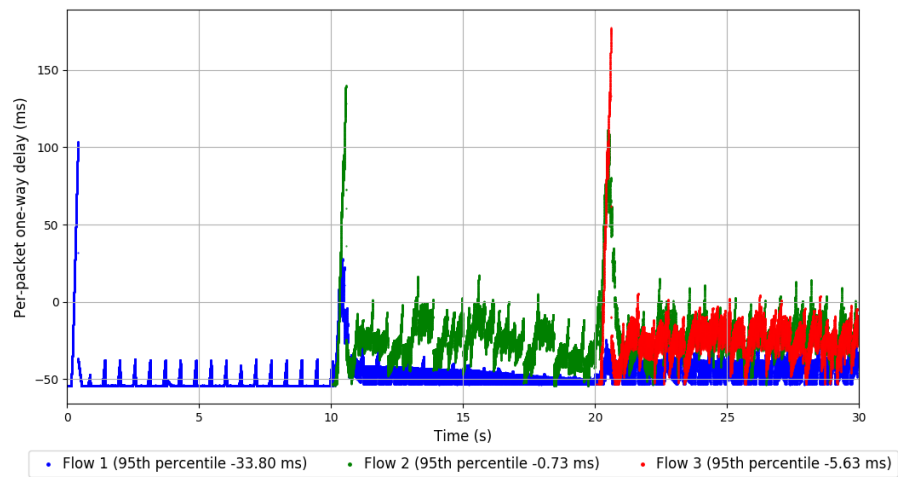
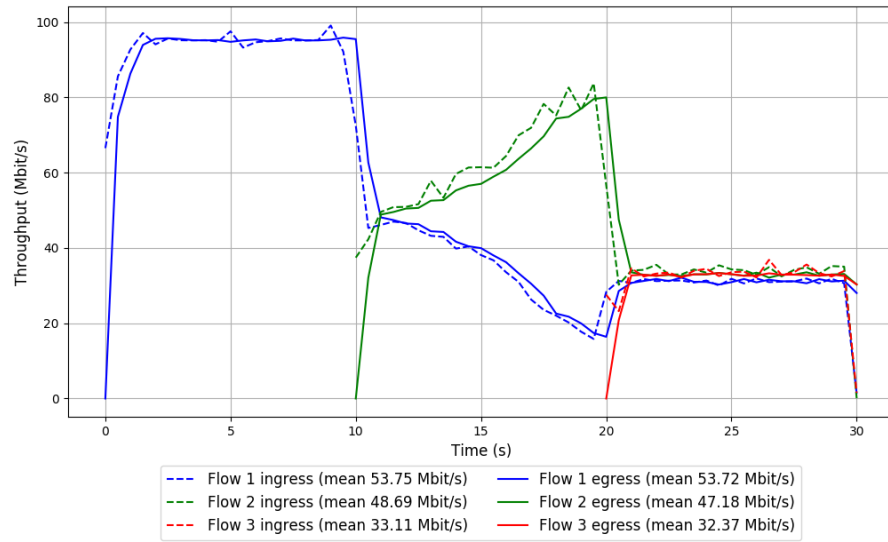


Run 1: Statistics of FillP

Start at: 2019-02-20 09:59:27  
End at: 2019-02-20 09:59:57  
Local clock offset: -61.895 ms  
Remote clock offset: -0.446 ms

# Below is generated by plot.py at 2019-02-20 11:58:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.86 Mbit/s  
95th percentile per-packet one-way delay: -7.294 ms  
Loss rate: 1.30%  
-- Flow 1:  
Average throughput: 53.72 Mbit/s  
95th percentile per-packet one-way delay: -33.797 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 47.18 Mbit/s  
95th percentile per-packet one-way delay: -0.726 ms  
Loss rate: 3.06%  
-- Flow 3:  
Average throughput: 32.37 Mbit/s  
95th percentile per-packet one-way delay: -5.626 ms  
Loss rate: 2.24%

## Run 1: Report of FillP — Data Link



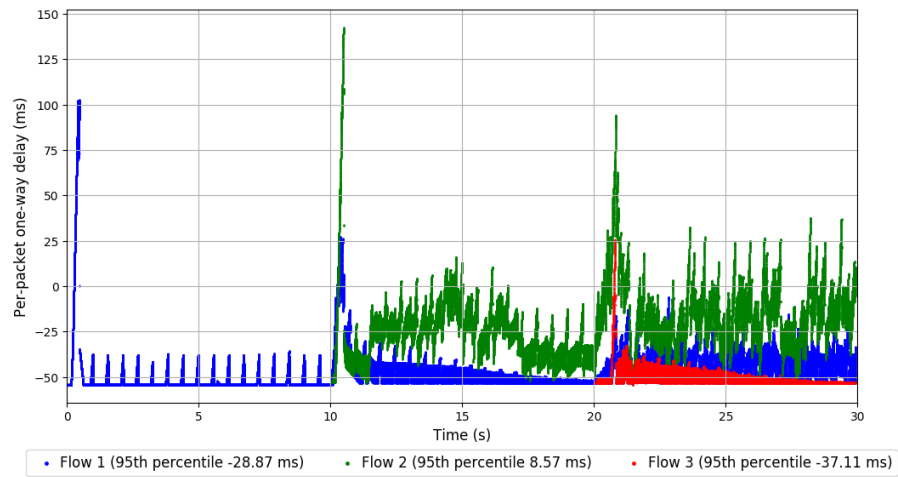
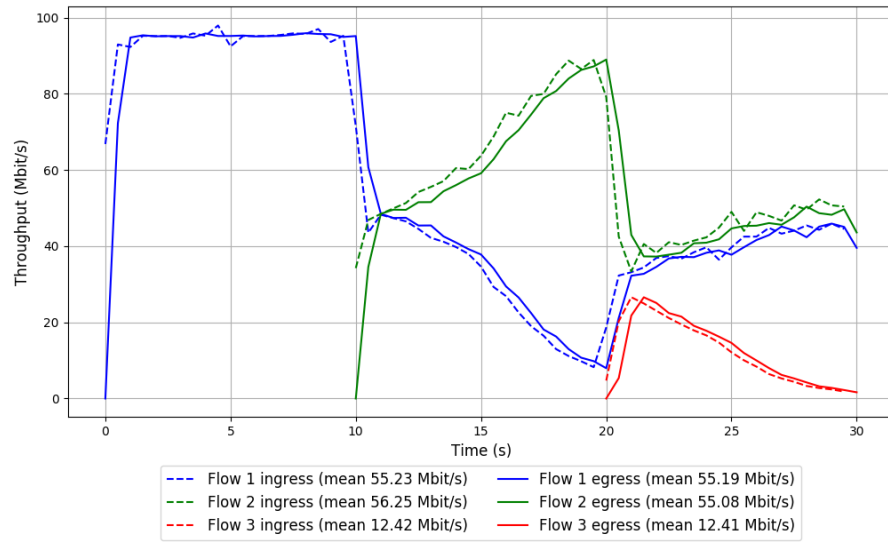


Run 2: Statistics of FillP

Start at: 2019-02-20 10:23:34  
End at: 2019-02-20 10:24:04  
Local clock offset: -61.878 ms  
Remote clock offset: -0.136 ms

# Below is generated by plot.py at 2019-02-20 11:59:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.97 Mbit/s  
95th percentile per-packet one-way delay: -0.627 ms  
Loss rate: 0.85%  
-- Flow 1:  
Average throughput: 55.19 Mbit/s  
95th percentile per-packet one-way delay: -28.868 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 55.08 Mbit/s  
95th percentile per-packet one-way delay: 8.568 ms  
Loss rate: 2.07%  
-- Flow 3:  
Average throughput: 12.41 Mbit/s  
95th percentile per-packet one-way delay: -37.113 ms  
Loss rate: 0.09%

## Run 2: Report of FillP — Data Link

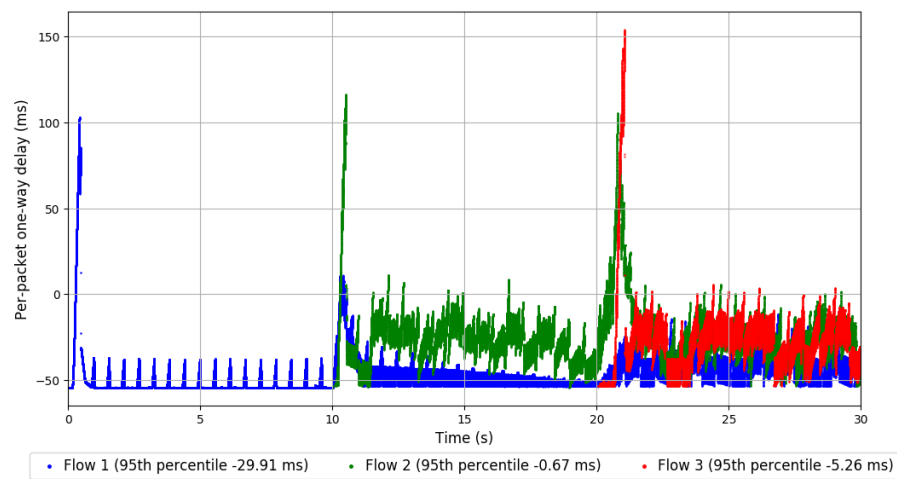
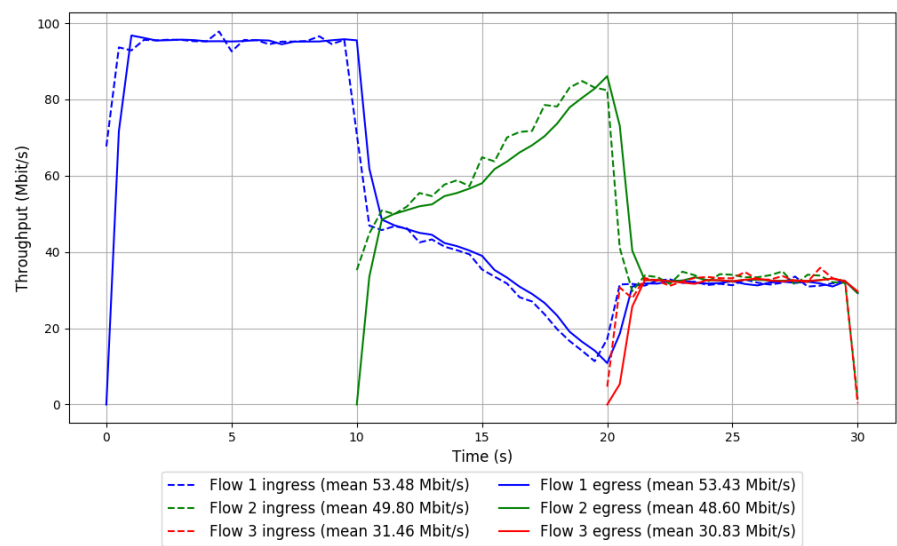


Run 3: Statistics of FillP

Start at: 2019-02-20 10:47:38  
End at: 2019-02-20 10:48:08  
Local clock offset: -56.694 ms  
Remote clock offset: 0.142 ms

# Below is generated by plot.py at 2019-02-20 11:59:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.03 Mbit/s  
95th percentile per-packet one-way delay: -9.244 ms  
Loss rate: 1.06%  
-- Flow 1:  
Average throughput: 53.43 Mbit/s  
95th percentile per-packet one-way delay: -29.913 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 48.60 Mbit/s  
95th percentile per-packet one-way delay: -0.670 ms  
Loss rate: 2.39%  
-- Flow 3:  
Average throughput: 30.83 Mbit/s  
95th percentile per-packet one-way delay: -5.265 ms  
Loss rate: 1.96%

Run 3: Report of FillP — Data Link

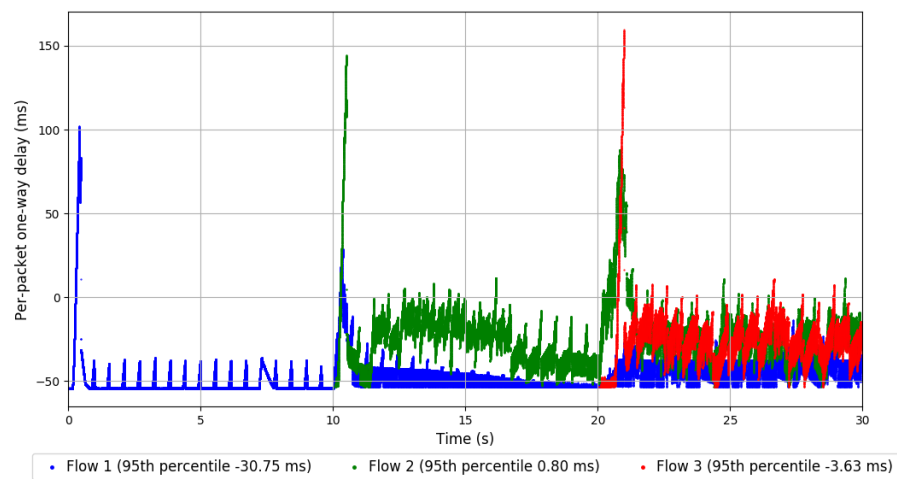
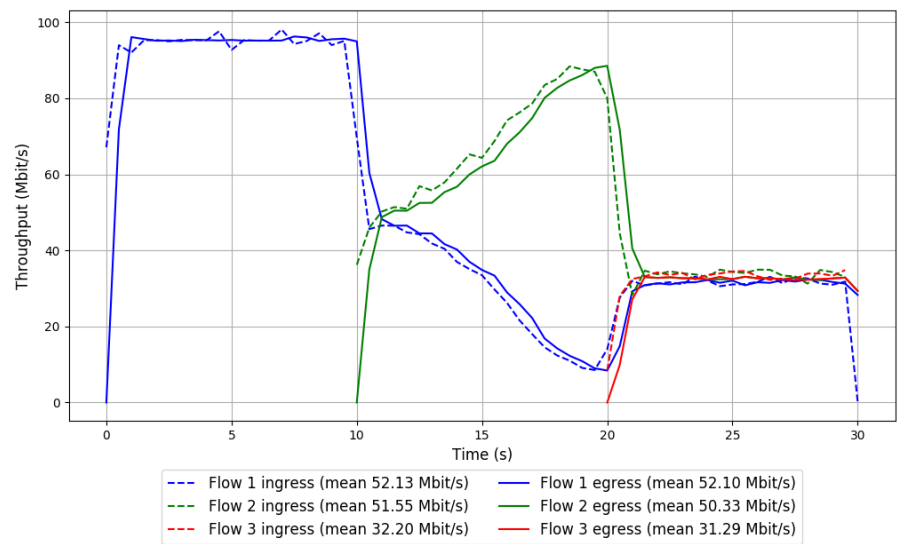


Run 4: Statistics of FillP

Start at: 2019-02-20 11:11:36  
End at: 2019-02-20 11:12:06  
Local clock offset: -56.149 ms  
Remote clock offset: 0.611 ms

# Below is generated by plot.py at 2019-02-20 11:59:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.00 Mbit/s  
95th percentile per-packet one-way delay: -6.308 ms  
Loss rate: 1.16%  
-- Flow 1:  
Average throughput: 52.10 Mbit/s  
95th percentile per-packet one-way delay: -30.745 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 50.33 Mbit/s  
95th percentile per-packet one-way delay: 0.796 ms  
Loss rate: 2.30%  
-- Flow 3:  
Average throughput: 31.29 Mbit/s  
95th percentile per-packet one-way delay: -3.631 ms  
Loss rate: 2.79%

Run 4: Report of FillP — Data Link

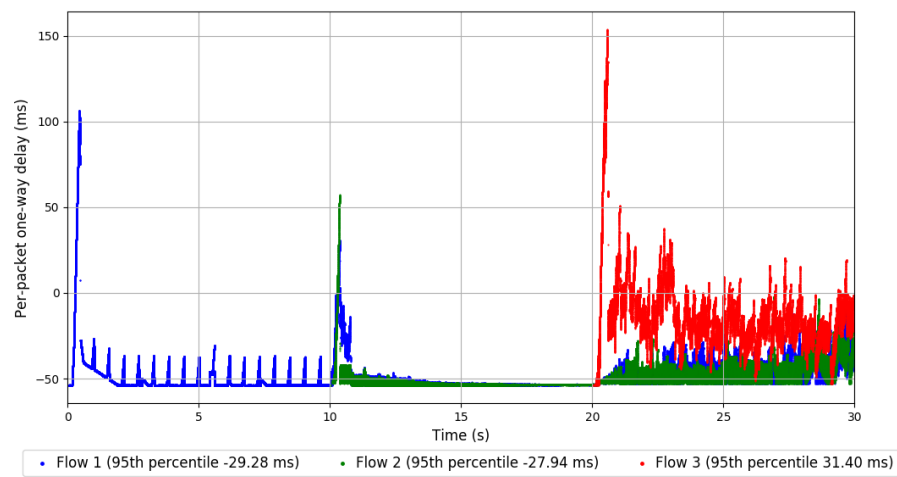
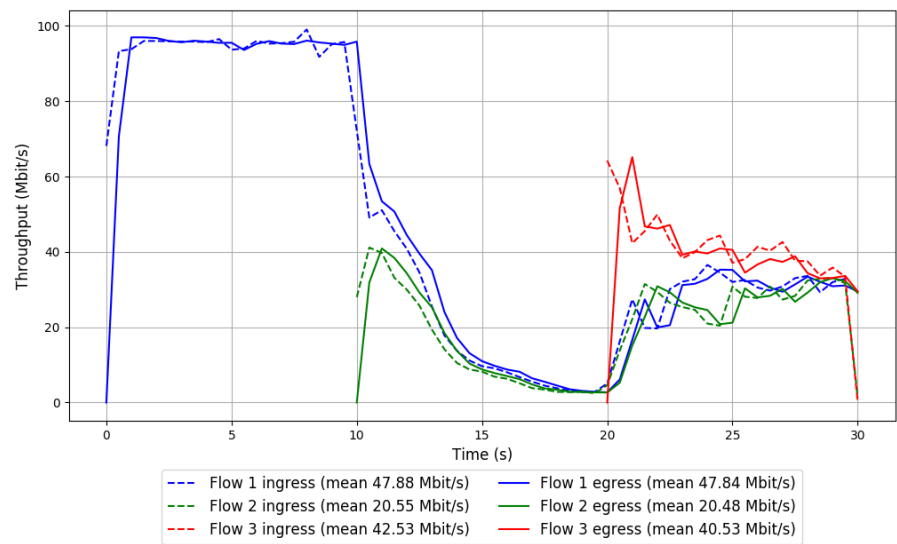


Run 5: Statistics of FillP

Start at: 2019-02-20 11:35:43  
End at: 2019-02-20 11:36:13  
Local clock offset: -58.709 ms  
Remote clock offset: 0.92 ms

# Below is generated by plot.py at 2019-02-20 11:59:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 74.92 Mbit/s  
95th percentile per-packet one-way delay: -1.234 ms  
Loss rate: 0.96%  
-- Flow 1:  
Average throughput: 47.84 Mbit/s  
95th percentile per-packet one-way delay: -29.276 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 20.48 Mbit/s  
95th percentile per-packet one-way delay: -27.943 ms  
Loss rate: 0.36%  
-- Flow 3:  
Average throughput: 40.53 Mbit/s  
95th percentile per-packet one-way delay: 31.402 ms  
Loss rate: 4.65%

Run 5: Report of FillP — Data Link



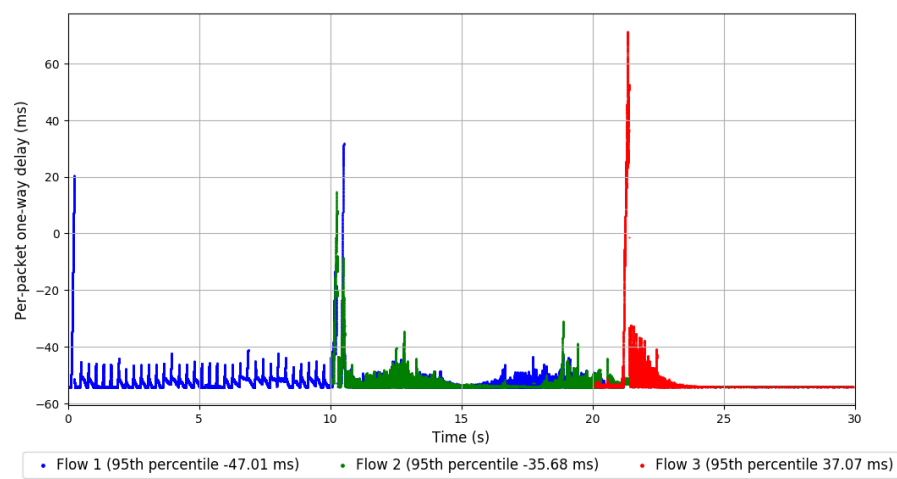
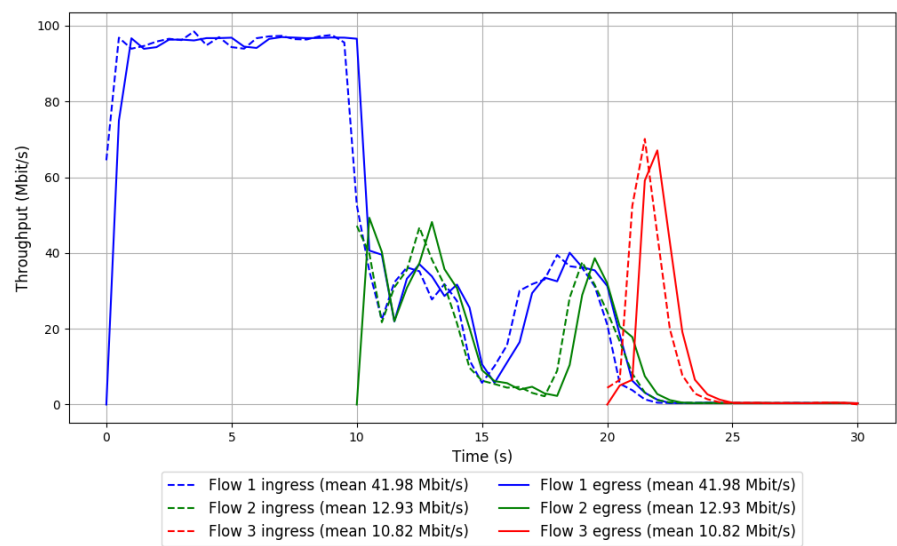


Run 1: Statistics of FillP-Sheep

Start at: 2019-02-20 10:05:04  
End at: 2019-02-20 10:05:34  
Local clock offset: -61.756 ms  
Remote clock offset: -0.336 ms

# Below is generated by plot.py at 2019-02-20 11:59:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 54.12 Mbit/s  
95th percentile per-packet one-way delay: -43.817 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 41.98 Mbit/s  
95th percentile per-packet one-way delay: -47.013 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 12.93 Mbit/s  
95th percentile per-packet one-way delay: -35.676 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 10.82 Mbit/s  
95th percentile per-packet one-way delay: 37.067 ms  
Loss rate: 0.02%

Run 1: Report of FillP-Sheep — Data Link

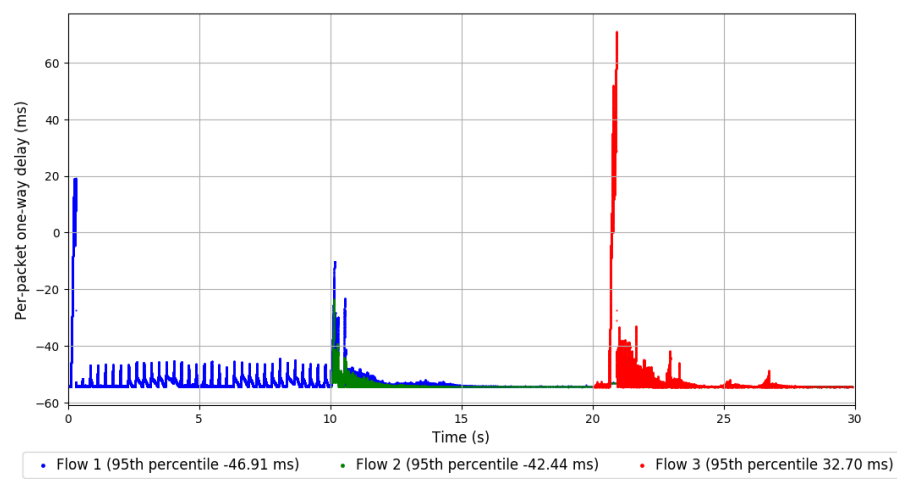
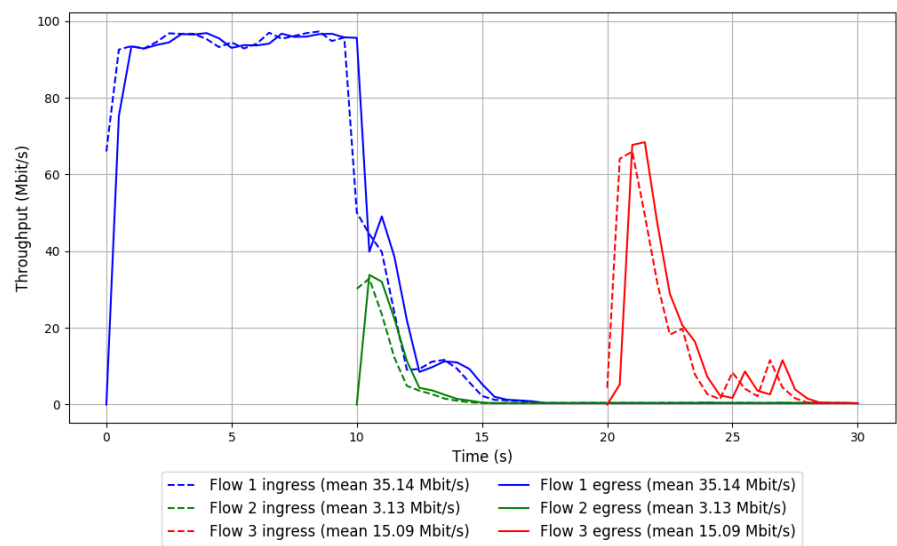


Run 2: Statistics of FillP-Sheep

Start at: 2019-02-20 10:29:12  
End at: 2019-02-20 10:29:42  
Local clock offset: -61.987 ms  
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-02-20 11:59:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 42.20 Mbit/s  
95th percentile per-packet one-way delay: -41.376 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 35.14 Mbit/s  
95th percentile per-packet one-way delay: -46.913 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 3.13 Mbit/s  
95th percentile per-packet one-way delay: -42.444 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 15.09 Mbit/s  
95th percentile per-packet one-way delay: 32.704 ms  
Loss rate: 0.02%

Run 2: Report of FillP-Sheep — Data Link

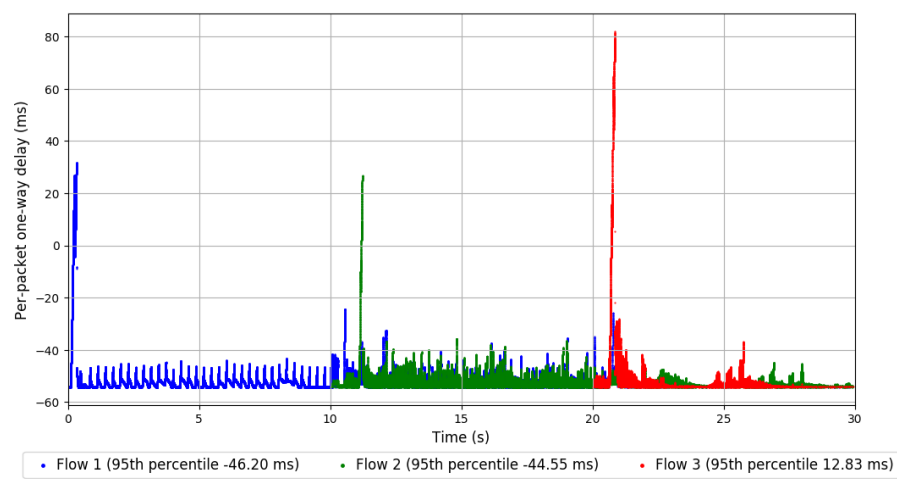
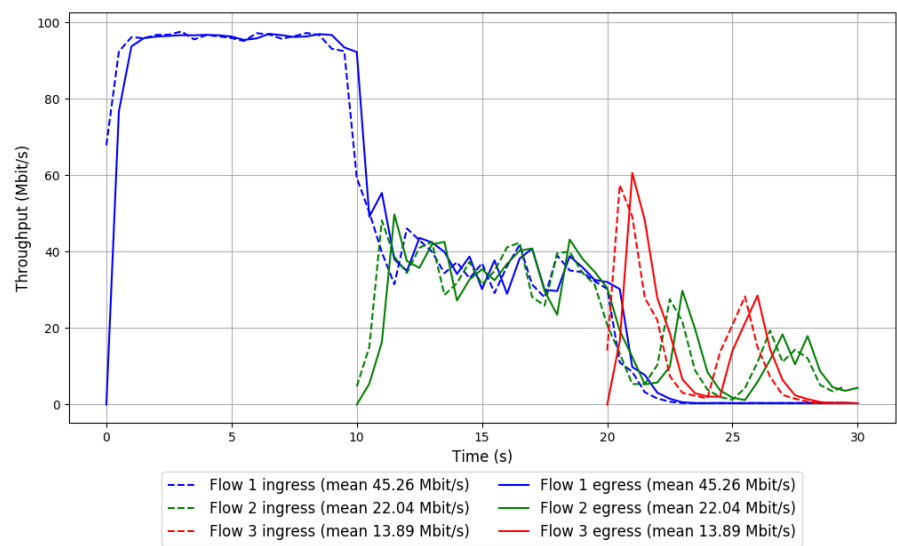


Run 3: Statistics of FillP-Sheep

Start at: 2019-02-20 10:53:14  
End at: 2019-02-20 10:53:44  
Local clock offset: -56.138 ms  
Remote clock offset: 0.221 ms

# Below is generated by plot.py at 2019-02-20 11:59:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 64.50 Mbit/s  
95th percentile per-packet one-way delay: -44.616 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 45.26 Mbit/s  
95th percentile per-packet one-way delay: -46.202 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 22.04 Mbit/s  
95th percentile per-packet one-way delay: -44.553 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 13.89 Mbit/s  
95th percentile per-packet one-way delay: 12.832 ms  
Loss rate: 0.01%

Run 3: Report of FillP-Sheep — Data Link

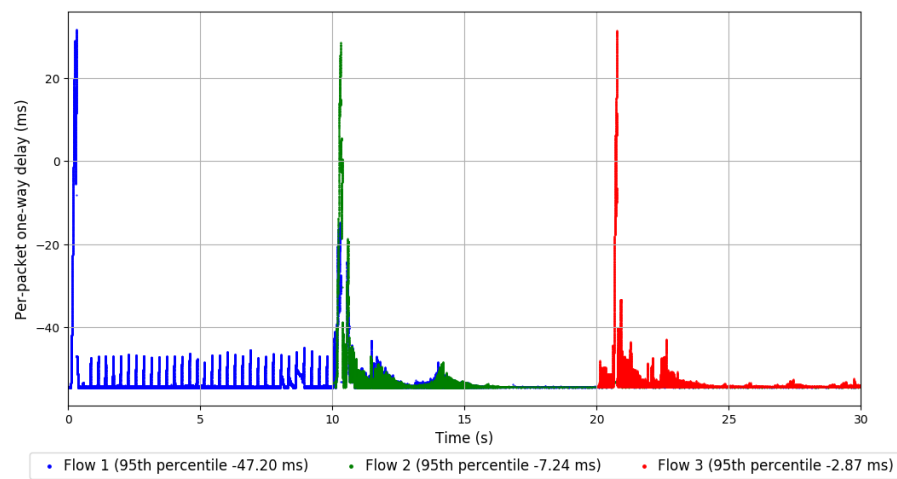
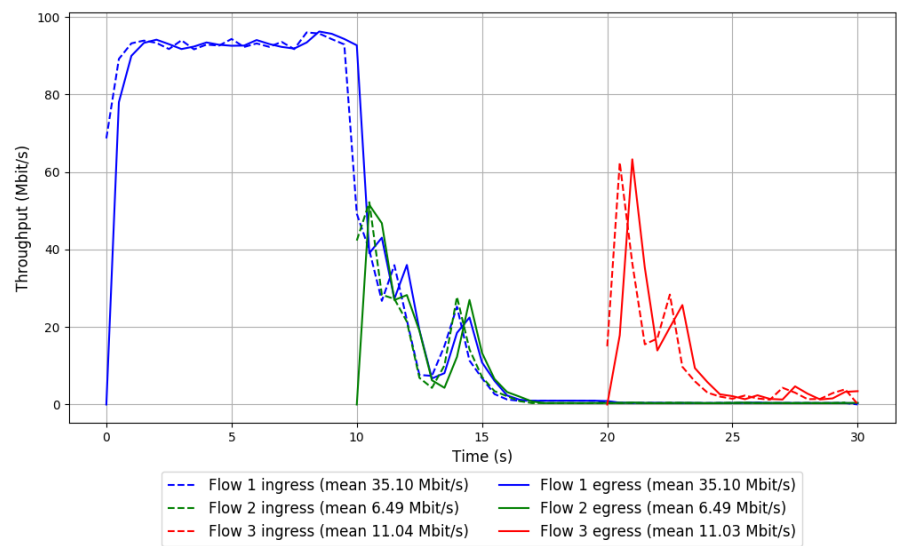


Run 4: Statistics of FillP-Sheep

Start at: 2019-02-20 11:17:13  
End at: 2019-02-20 11:17:43  
Local clock offset: -56.251 ms  
Remote clock offset: 0.68 ms

# Below is generated by plot.py at 2019-02-20 11:59:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 43.08 Mbit/s  
95th percentile per-packet one-way delay: -41.940 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 35.10 Mbit/s  
95th percentile per-packet one-way delay: -47.202 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 6.49 Mbit/s  
95th percentile per-packet one-way delay: -7.244 ms  
Loss rate: 0.03%  
-- Flow 3:  
Average throughput: 11.03 Mbit/s  
95th percentile per-packet one-way delay: -2.873 ms  
Loss rate: 0.01%

Run 4: Report of FillP-Sheep — Data Link



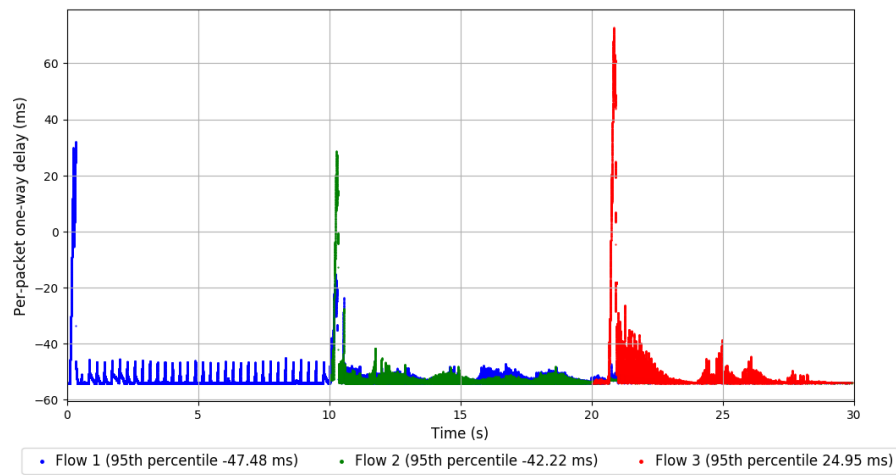
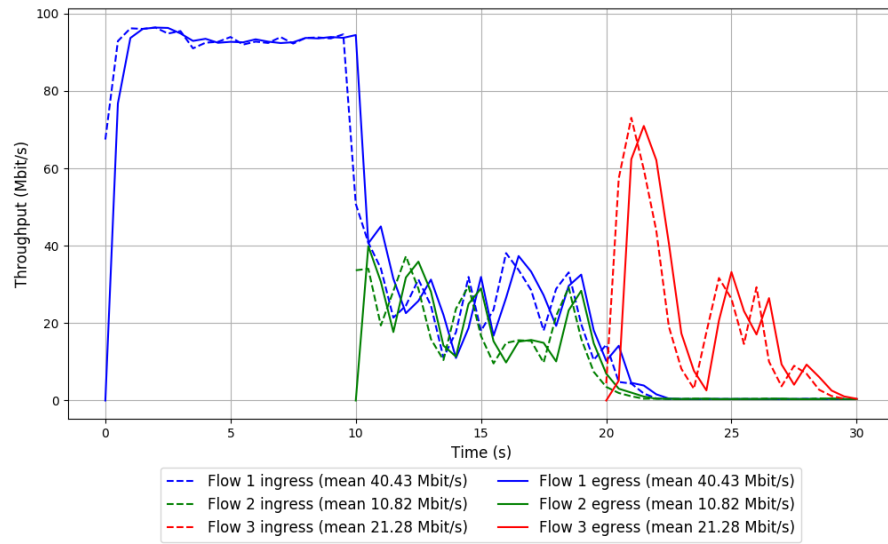


Run 5: Statistics of FillP-Sheep

Start at: 2019-02-20 11:41:19  
End at: 2019-02-20 11:41:49  
Local clock offset: -60.222 ms  
Remote clock offset: 0.95 ms

# Below is generated by plot.py at 2019-02-20 11:59:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 54.67 Mbit/s  
95th percentile per-packet one-way delay: -41.462 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 40.43 Mbit/s  
95th percentile per-packet one-way delay: -47.477 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 10.82 Mbit/s  
95th percentile per-packet one-way delay: -42.216 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 21.28 Mbit/s  
95th percentile per-packet one-way delay: 24.955 ms  
Loss rate: 0.02%

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

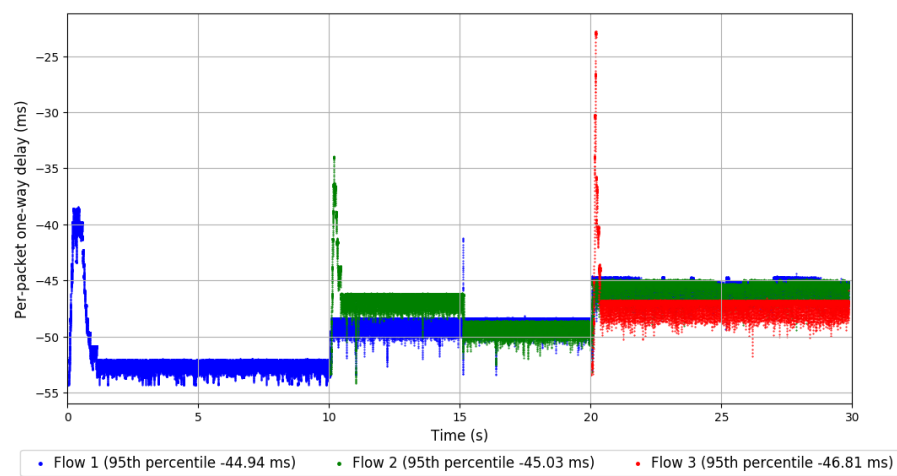
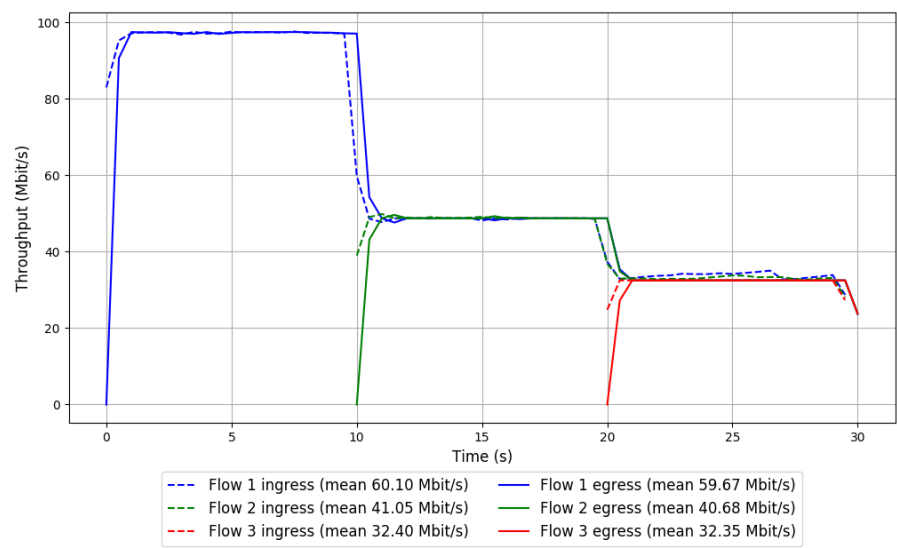


Run 1: Statistics of Indigo

Start at: 2019-02-20 09:53:46  
End at: 2019-02-20 09:54:16  
Local clock offset: -61.812 ms  
Remote clock offset: -0.425 ms

# Below is generated by plot.py at 2019-02-20 12:00:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.36 Mbit/s  
95th percentile per-packet one-way delay: -45.033 ms  
Loss rate: 0.71%  
-- Flow 1:  
Average throughput: 59.67 Mbit/s  
95th percentile per-packet one-way delay: -44.940 ms  
Loss rate: 0.72%  
-- Flow 2:  
Average throughput: 40.68 Mbit/s  
95th percentile per-packet one-way delay: -45.033 ms  
Loss rate: 0.91%  
-- Flow 3:  
Average throughput: 32.35 Mbit/s  
95th percentile per-packet one-way delay: -46.807 ms  
Loss rate: 0.17%

Run 1: Report of Indigo — Data Link

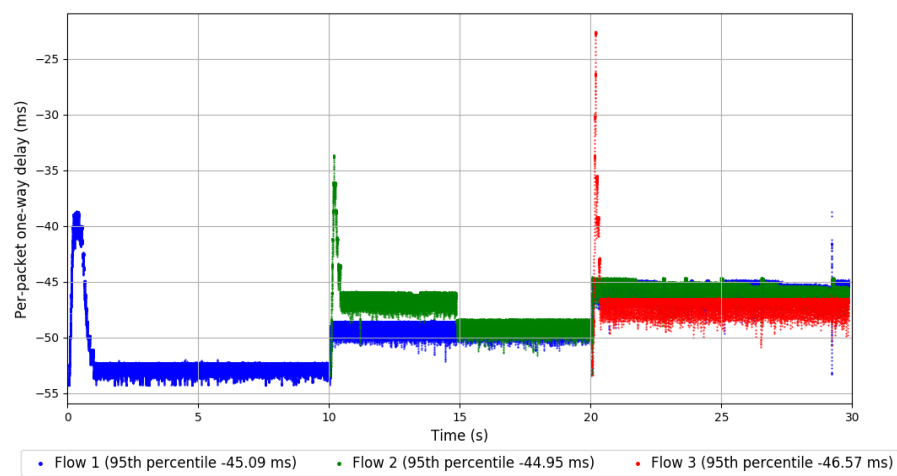
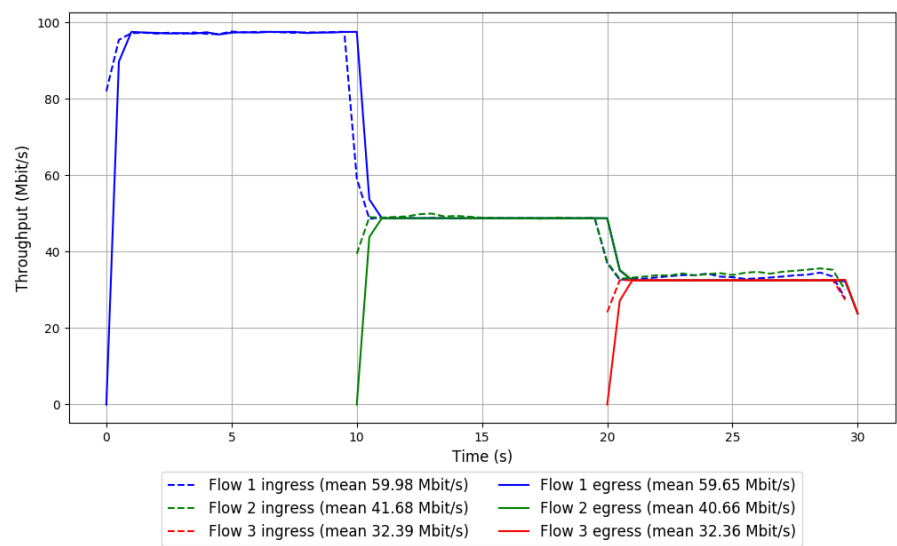


Run 2: Statistics of Indigo

Start at: 2019-02-20 10:17:47  
End at: 2019-02-20 10:18:17  
Local clock offset: -61.959 ms  
Remote clock offset: -0.245 ms

# Below is generated by plot.py at 2019-02-20 12:00:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.34 Mbit/s  
95th percentile per-packet one-way delay: -45.081 ms  
Loss rate: 1.03%  
-- Flow 1:  
Average throughput: 59.65 Mbit/s  
95th percentile per-packet one-way delay: -45.087 ms  
Loss rate: 0.54%  
-- Flow 2:  
Average throughput: 40.66 Mbit/s  
95th percentile per-packet one-way delay: -44.950 ms  
Loss rate: 2.46%  
-- Flow 3:  
Average throughput: 32.36 Mbit/s  
95th percentile per-packet one-way delay: -46.570 ms  
Loss rate: 0.13%

Run 2: Report of Indigo — Data Link

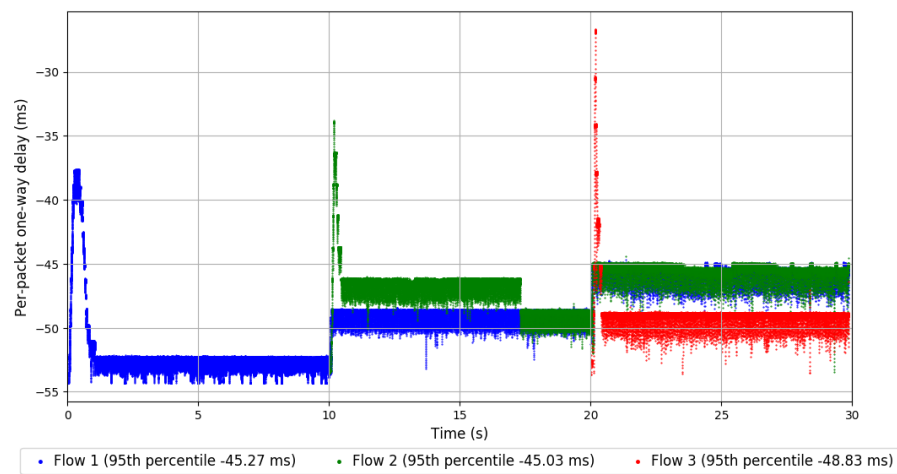
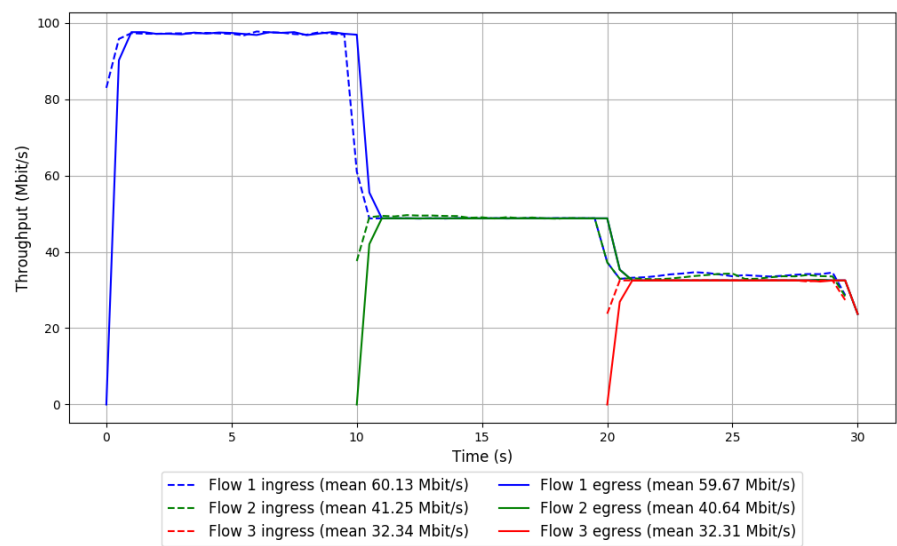


Run 3: Statistics of Indigo

Start at: 2019-02-20 10:41:55  
End at: 2019-02-20 10:42:25  
Local clock offset: -57.663 ms  
Remote clock offset: 0.119 ms

# Below is generated by plot.py at 2019-02-20 12:00:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.30 Mbit/s  
95th percentile per-packet one-way delay: -45.120 ms  
Loss rate: 0.90%  
-- Flow 1:  
Average throughput: 59.67 Mbit/s  
95th percentile per-packet one-way delay: -45.268 ms  
Loss rate: 0.78%  
-- Flow 2:  
Average throughput: 40.64 Mbit/s  
95th percentile per-packet one-way delay: -45.027 ms  
Loss rate: 1.49%  
-- Flow 3:  
Average throughput: 32.31 Mbit/s  
95th percentile per-packet one-way delay: -48.830 ms  
Loss rate: 0.08%

Run 3: Report of Indigo — Data Link



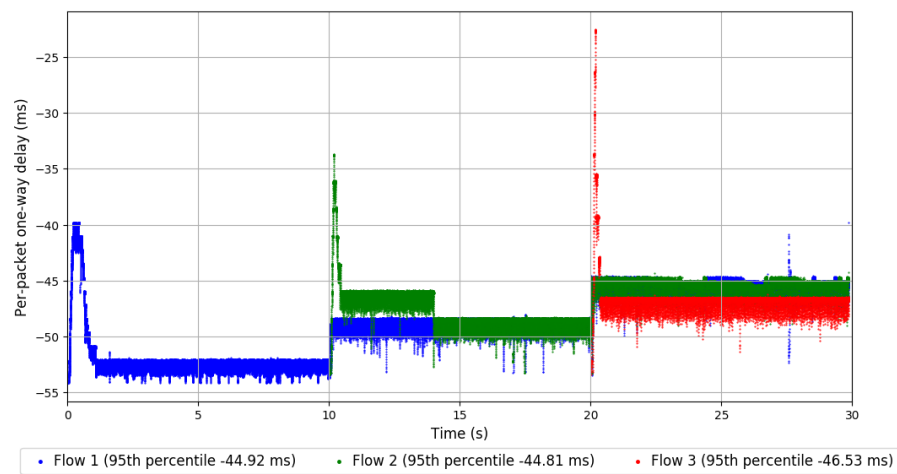
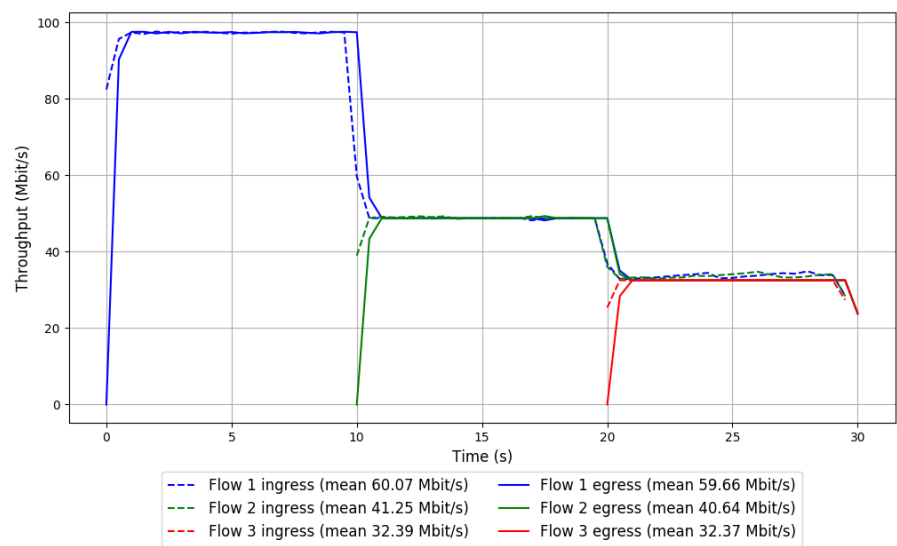


Run 4: Statistics of Indigo

Start at: 2019-02-20 11:05:54  
End at: 2019-02-20 11:06:24  
Local clock offset: -56.073 ms  
Remote clock offset: 0.49 ms

# Below is generated by plot.py at 2019-02-20 12:00:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.34 Mbit/s  
95th percentile per-packet one-way delay: -44.877 ms  
Loss rate: 0.83%  
-- Flow 1:  
Average throughput: 59.66 Mbit/s  
95th percentile per-packet one-way delay: -44.920 ms  
Loss rate: 0.66%  
-- Flow 2:  
Average throughput: 40.64 Mbit/s  
95th percentile per-packet one-way delay: -44.813 ms  
Loss rate: 1.48%  
-- Flow 3:  
Average throughput: 32.37 Mbit/s  
95th percentile per-packet one-way delay: -46.534 ms  
Loss rate: 0.10%

Run 4: Report of Indigo — Data Link

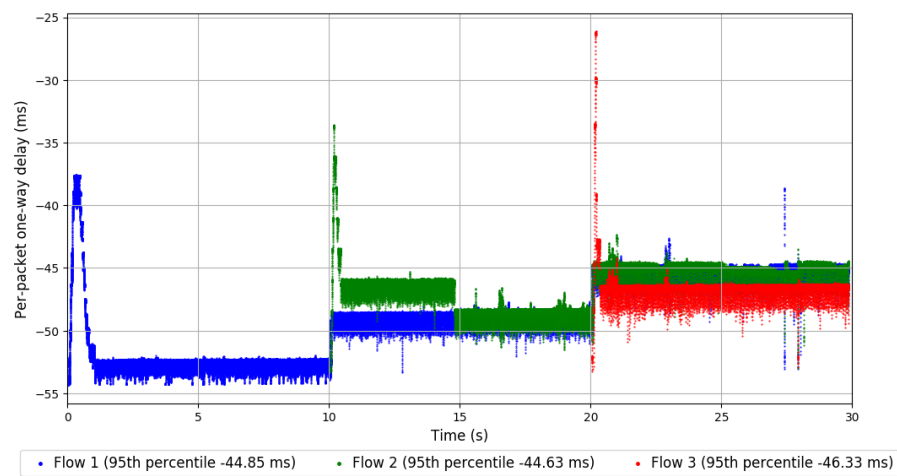
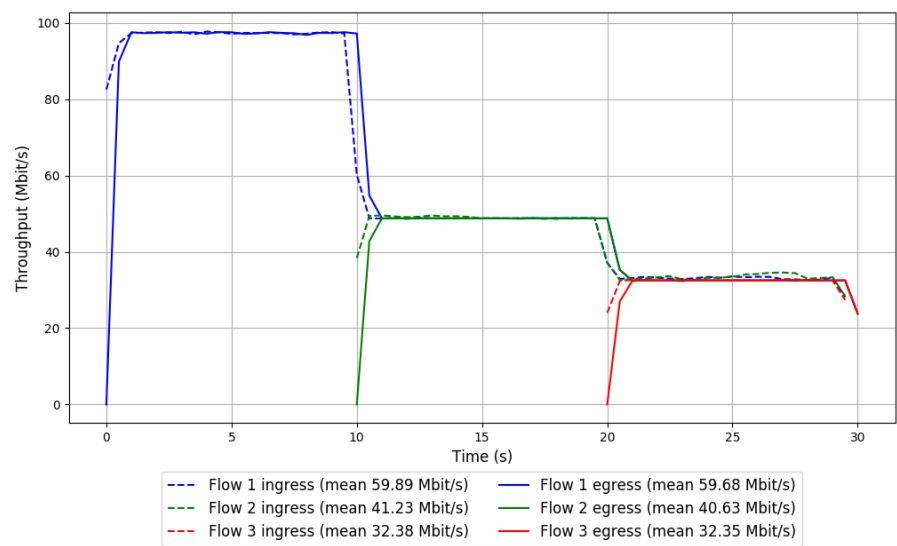


Run 5: Statistics of Indigo

Start at: 2019-02-20 11:29:56  
End at: 2019-02-20 11:30:26  
Local clock offset: -56.235 ms  
Remote clock offset: 0.858 ms

# Below is generated by plot.py at 2019-02-20 12:00:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.33 Mbit/s  
95th percentile per-packet one-way delay: -44.755 ms  
Loss rate: 0.64%  
-- Flow 1:  
Average throughput: 59.68 Mbit/s  
95th percentile per-packet one-way delay: -44.854 ms  
Loss rate: 0.36%  
-- Flow 2:  
Average throughput: 40.63 Mbit/s  
95th percentile per-packet one-way delay: -44.629 ms  
Loss rate: 1.46%  
-- Flow 3:  
Average throughput: 32.35 Mbit/s  
95th percentile per-packet one-way delay: -46.333 ms  
Loss rate: 0.10%

Run 5: Report of Indigo — Data Link

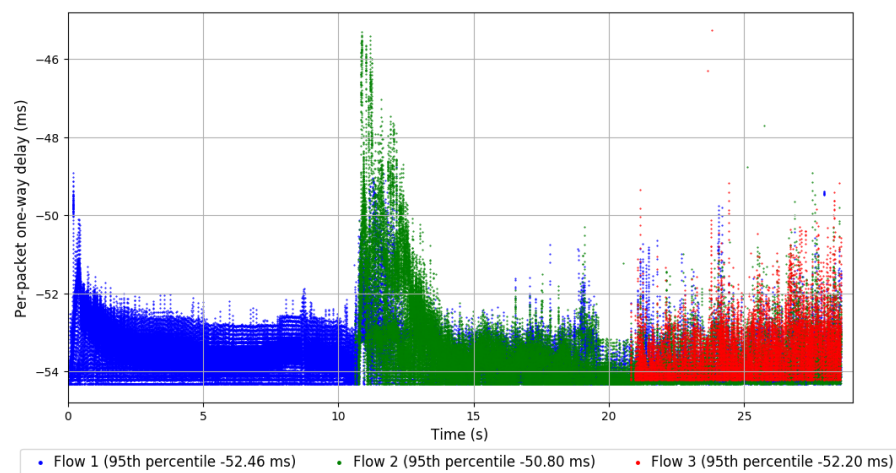
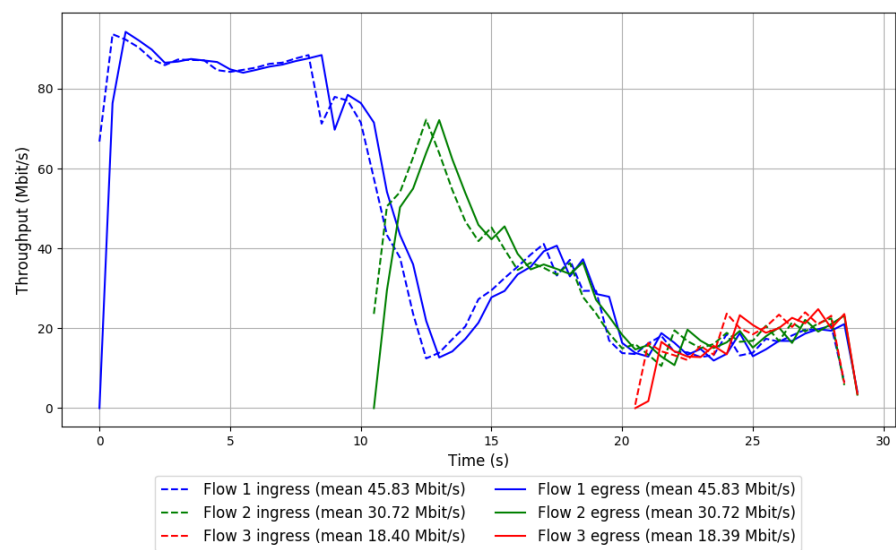


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-20 10:14:22  
End at: 2019-02-20 10:14:52  
Local clock offset: -61.835 ms  
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2019-02-20 12:00:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 70.13 Mbit/s  
95th percentile per-packet one-way delay: -52.036 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 45.83 Mbit/s  
95th percentile per-packet one-way delay: -52.462 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 30.72 Mbit/s  
95th percentile per-packet one-way delay: -50.804 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 18.39 Mbit/s  
95th percentile per-packet one-way delay: -52.197 ms  
Loss rate: 0.02%

Run 1: Report of Indigo-MusesC3 — Data Link

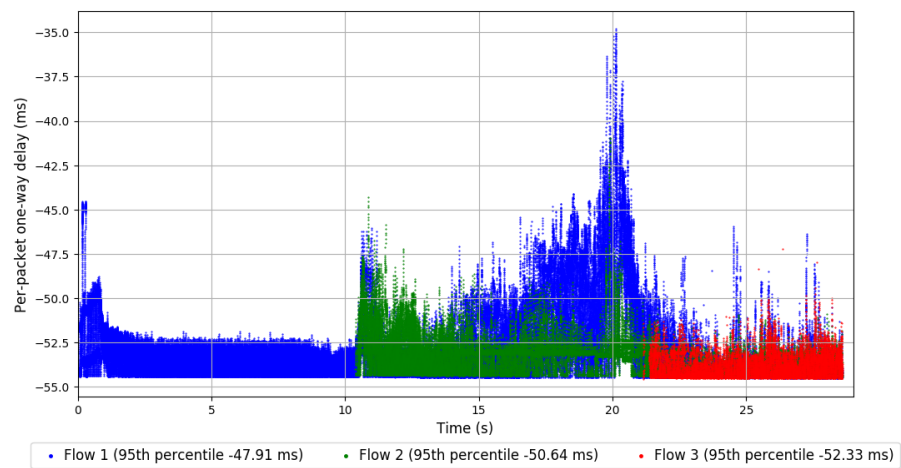
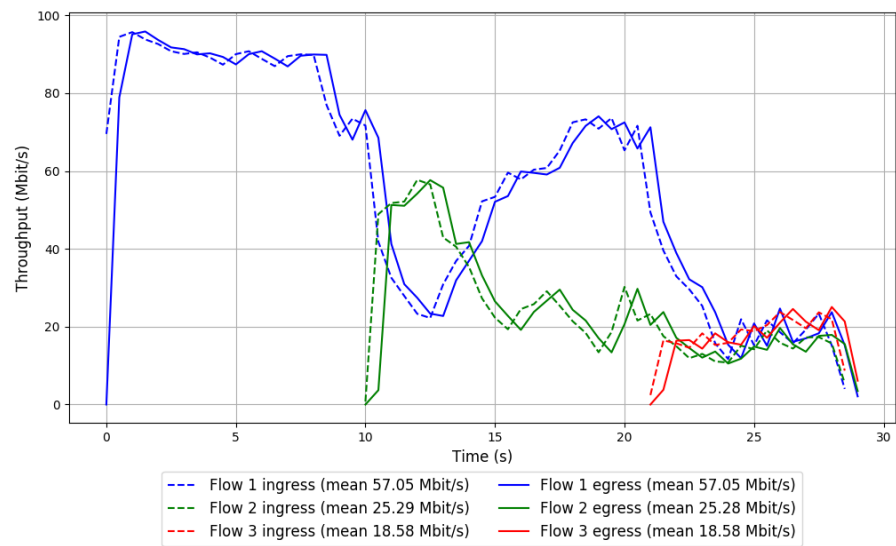


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-20 10:38:30  
End at: 2019-02-20 10:39:00  
Local clock offset: -58.392 ms  
Remote clock offset: 0.103 ms

# Below is generated by plot.py at 2019-02-20 12:00:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 77.99 Mbit/s  
95th percentile per-packet one-way delay: -48.562 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 57.05 Mbit/s  
95th percentile per-packet one-way delay: -47.909 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 25.28 Mbit/s  
95th percentile per-packet one-way delay: -50.643 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 18.58 Mbit/s  
95th percentile per-packet one-way delay: -52.334 ms  
Loss rate: 0.01%

Run 2: Report of Indigo-MusesC3 — Data Link





Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-20 11:02:29

End at: 2019-02-20 11:02:59

Local clock offset: -55.81 ms

Remote clock offset: 0.464 ms

# Below is generated by plot.py at 2019-02-20 12:00:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 70.46 Mbit/s

95th percentile per-packet one-way delay: -50.980 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 50.48 Mbit/s

95th percentile per-packet one-way delay: -51.327 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.78 Mbit/s

95th percentile per-packet one-way delay: -50.095 ms

Loss rate: 0.00%

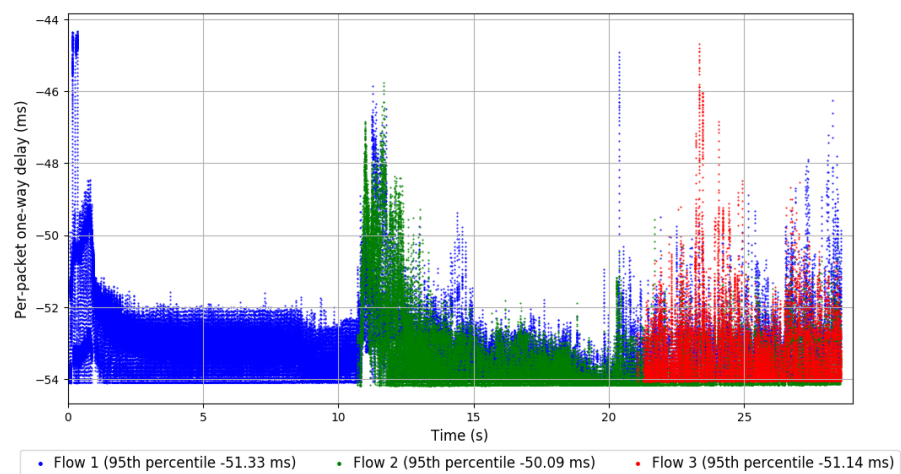
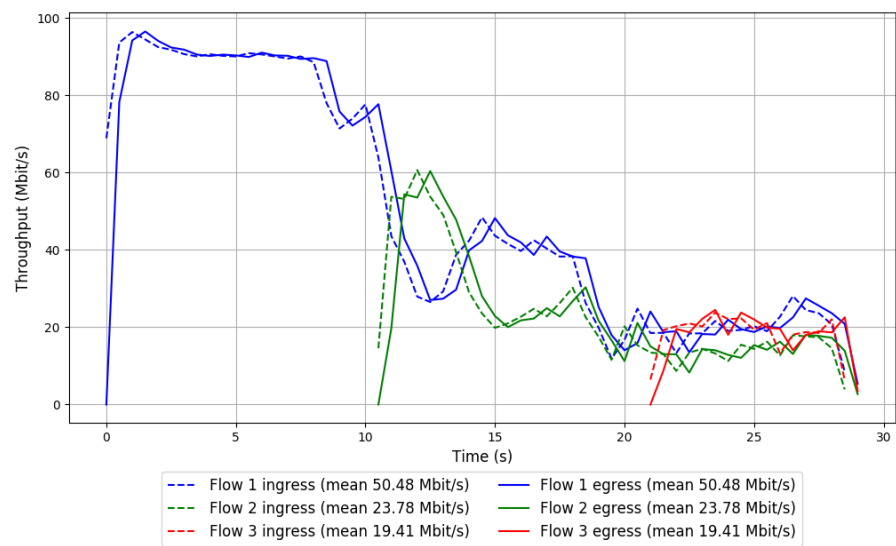
-- Flow 3:

Average throughput: 19.41 Mbit/s

95th percentile per-packet one-way delay: -51.139 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-20 11:26:31

End at: 2019-02-20 11:27:01

Local clock offset: -55.87 ms

Remote clock offset: 0.824 ms

# Below is generated by plot.py at 2019-02-20 12:01:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 70.06 Mbit/s

95th percentile per-packet one-way delay: -51.252 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 49.82 Mbit/s

95th percentile per-packet one-way delay: -51.154 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 25.28 Mbit/s

95th percentile per-packet one-way delay: -51.403 ms

Loss rate: 0.01%

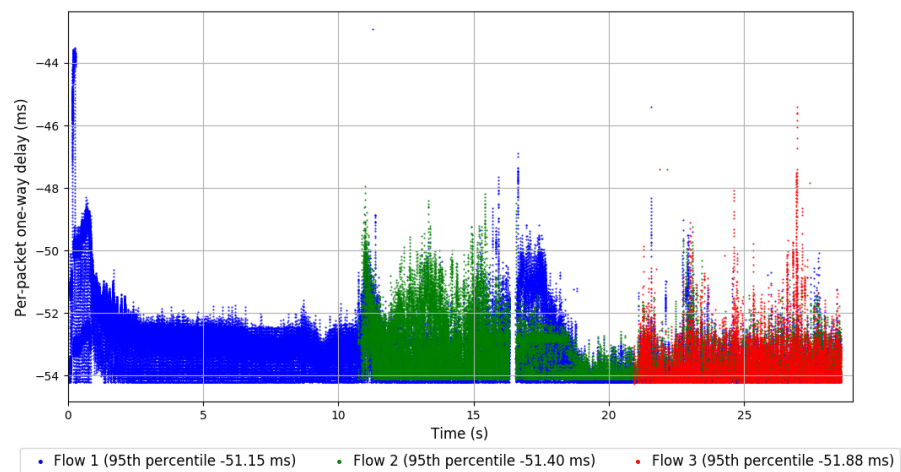
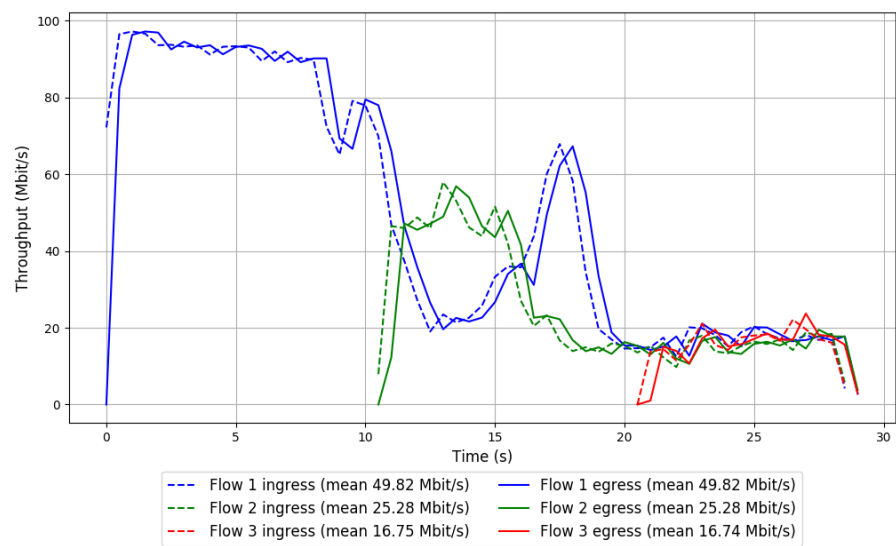
-- Flow 3:

Average throughput: 16.74 Mbit/s

95th percentile per-packet one-way delay: -51.880 ms

Loss rate: 0.13%

Run 4: Report of Indigo-MusesC3 — Data Link

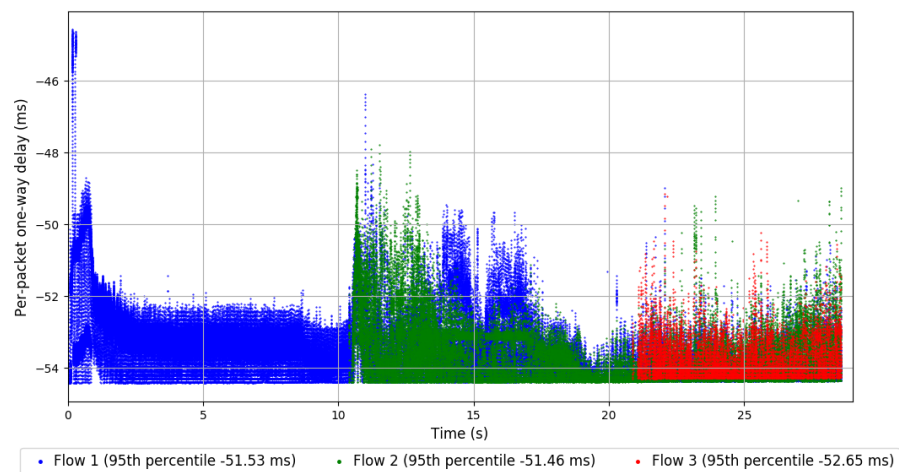
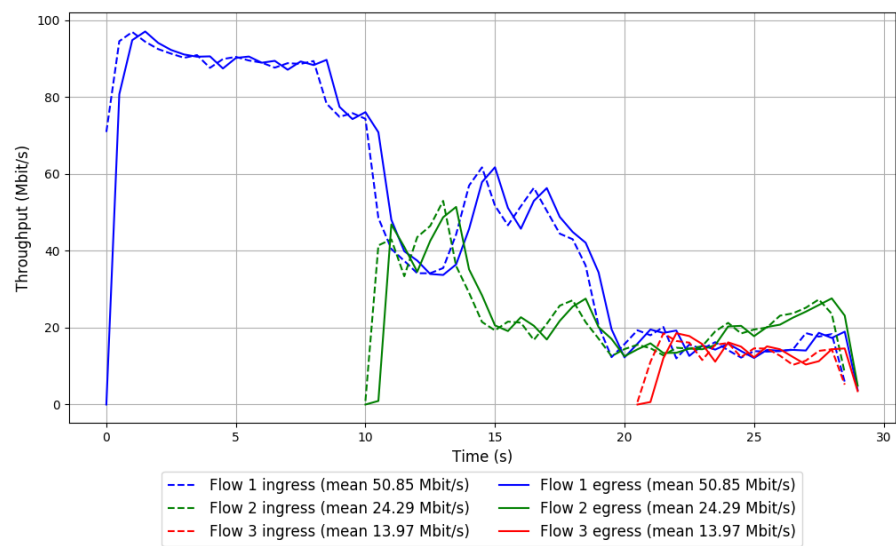


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-20 11:50:39  
End at: 2019-02-20 11:51:09  
Local clock offset: -61.769 ms  
Remote clock offset: 1.177 ms

# Below is generated by plot.py at 2019-02-20 12:01:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 70.08 Mbit/s  
95th percentile per-packet one-way delay: -51.562 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 50.85 Mbit/s  
95th percentile per-packet one-way delay: -51.527 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 24.29 Mbit/s  
95th percentile per-packet one-way delay: -51.459 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 13.97 Mbit/s  
95th percentile per-packet one-way delay: -52.645 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesC3 — Data Link

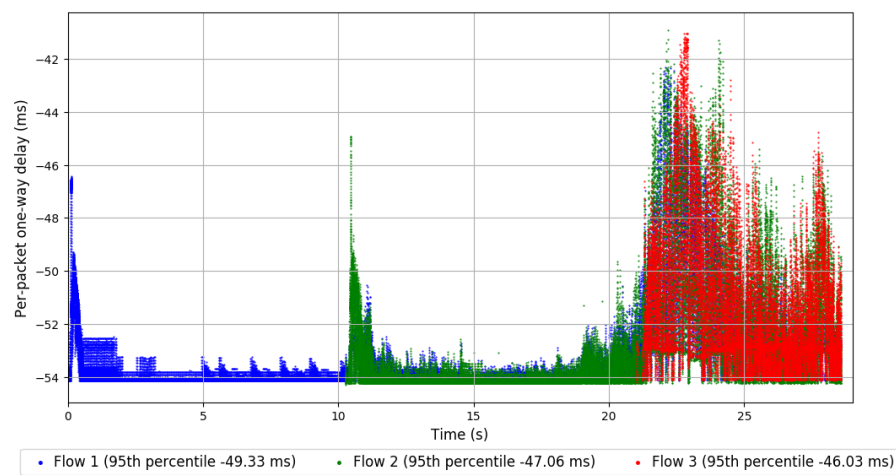
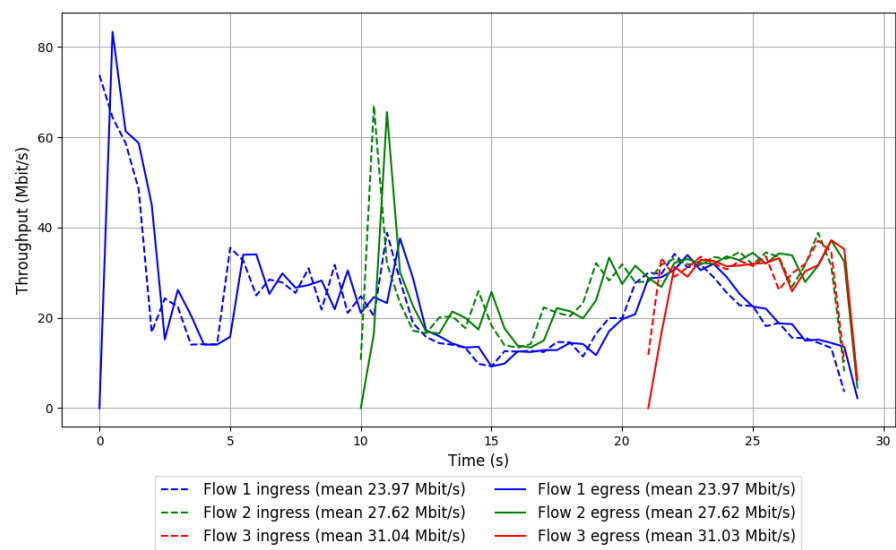


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-20 09:54:56  
End at: 2019-02-20 09:55:26  
Local clock offset: -61.818 ms  
Remote clock offset: -0.478 ms

# Below is generated by plot.py at 2019-02-20 12:01:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 49.87 Mbit/s  
95th percentile per-packet one-way delay: -47.542 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 23.97 Mbit/s  
95th percentile per-packet one-way delay: -49.329 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 27.62 Mbit/s  
95th percentile per-packet one-way delay: -47.060 ms  
Loss rate: 0.03%  
-- Flow 3:  
Average throughput: 31.03 Mbit/s  
95th percentile per-packet one-way delay: -46.035 ms  
Loss rate: 0.02%

Run 1: Report of Indigo-MusesC5 — Data Link



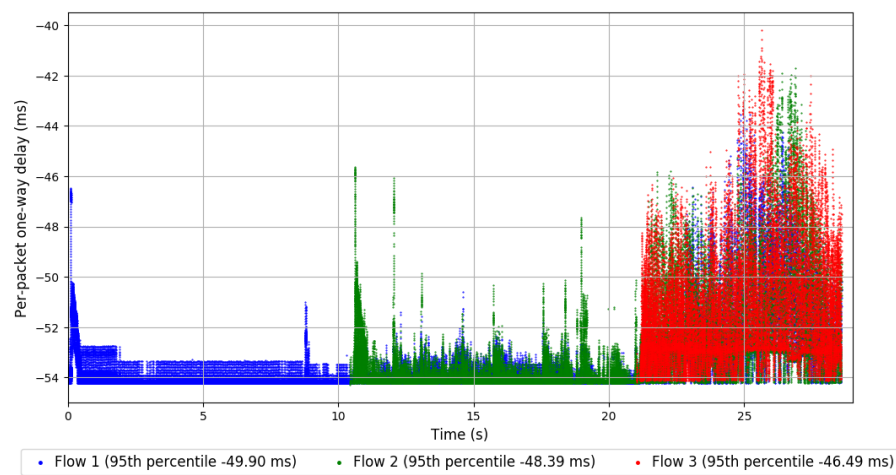
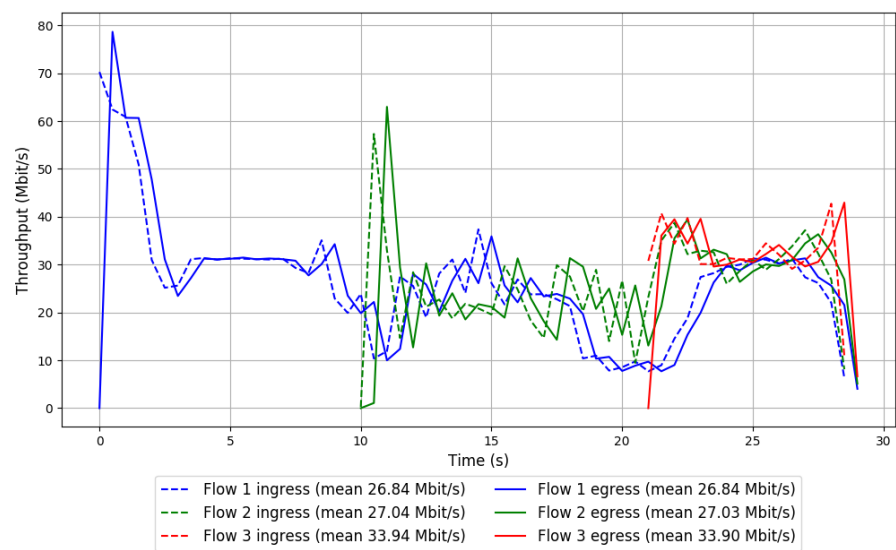


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-20 10:18:58  
End at: 2019-02-20 10:19:28  
Local clock offset: -61.831 ms  
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2019-02-20 12:01:07  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 52.97 Mbit/s  
95th percentile per-packet one-way delay: -48.454 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 26.84 Mbit/s  
95th percentile per-packet one-way delay: -49.903 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 27.03 Mbit/s  
95th percentile per-packet one-way delay: -48.391 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 33.90 Mbit/s  
95th percentile per-packet one-way delay: -46.488 ms  
Loss rate: 0.03%

Run 2: Report of Indigo-MusesC5 — Data Link

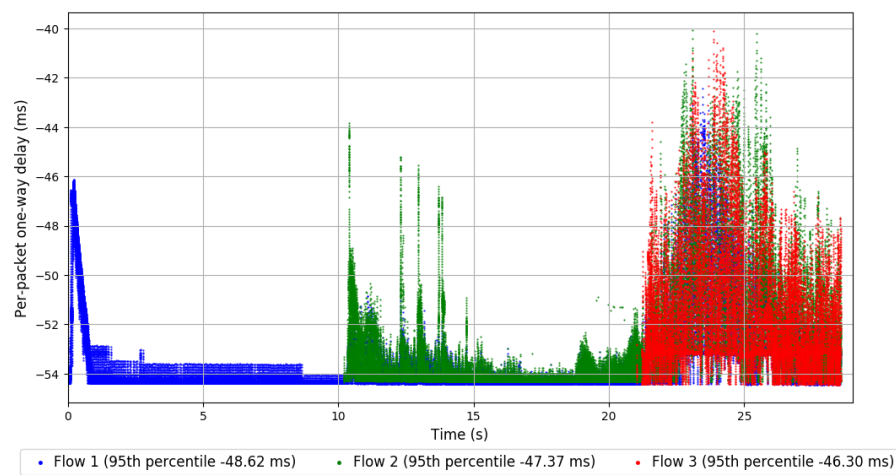
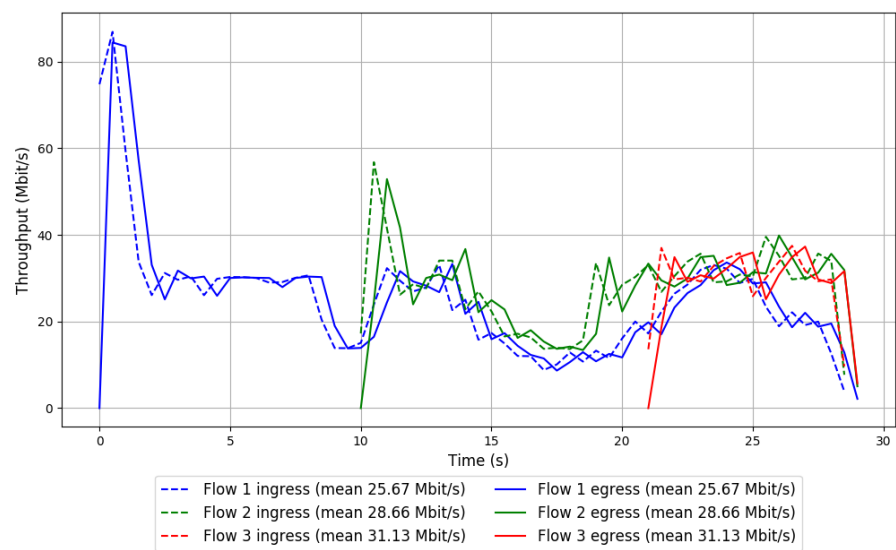


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-20 10:43:06  
End at: 2019-02-20 10:43:36  
Local clock offset: -57.372 ms  
Remote clock offset: 0.18 ms

# Below is generated by plot.py at 2019-02-20 12:01:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 52.31 Mbit/s  
95th percentile per-packet one-way delay: -47.667 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 25.67 Mbit/s  
95th percentile per-packet one-way delay: -48.622 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 28.66 Mbit/s  
95th percentile per-packet one-way delay: -47.366 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 31.13 Mbit/s  
95th percentile per-packet one-way delay: -46.298 ms  
Loss rate: 0.02%

Run 3: Report of Indigo-MusesC5 — Data Link

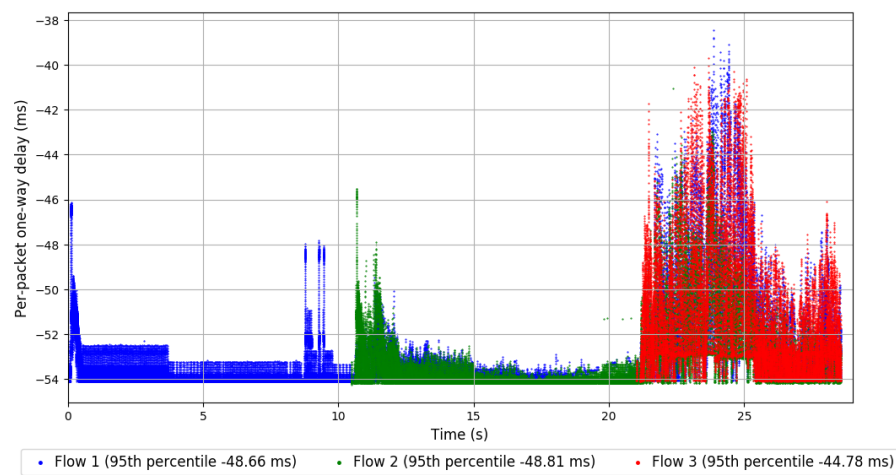
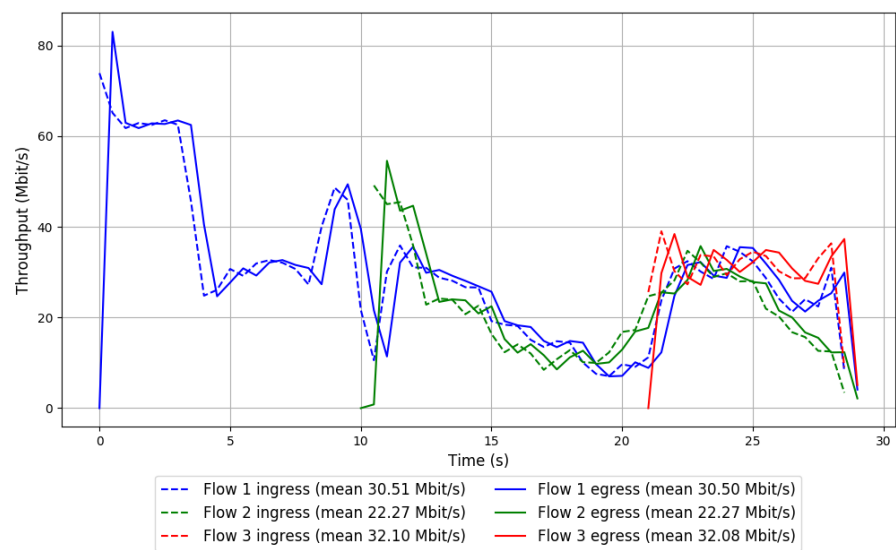


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-20 11:07:05  
End at: 2019-02-20 11:07:35  
Local clock offset: -56.068 ms  
Remote clock offset: 0.515 ms

# Below is generated by plot.py at 2019-02-20 12:01:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 53.09 Mbit/s  
95th percentile per-packet one-way delay: -47.705 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 30.50 Mbit/s  
95th percentile per-packet one-way delay: -48.659 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 22.27 Mbit/s  
95th percentile per-packet one-way delay: -48.811 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 32.08 Mbit/s  
95th percentile per-packet one-way delay: -44.779 ms  
Loss rate: 0.00%

Run 4: Report of Indigo-MusesC5 — Data Link

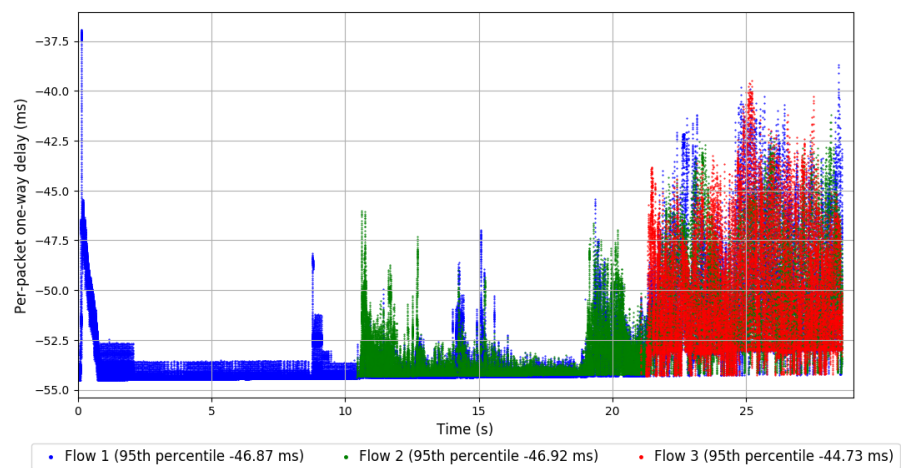
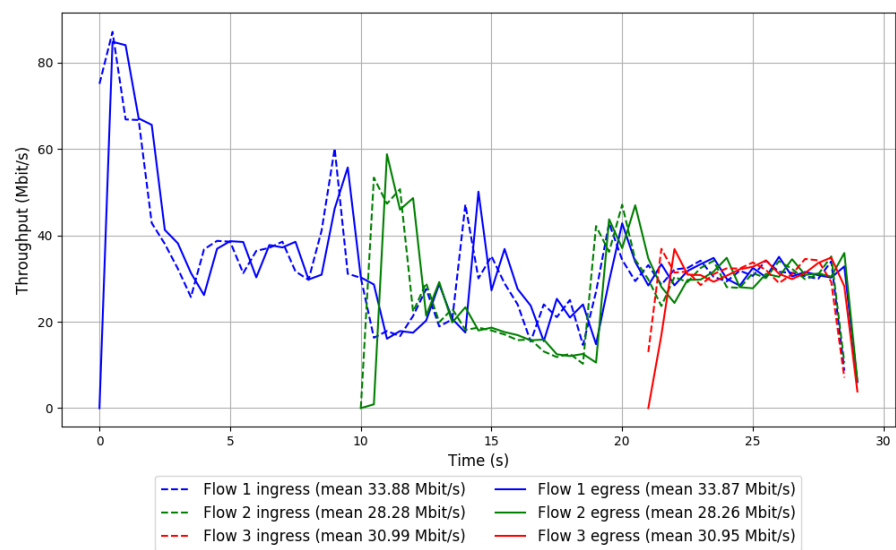


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-20 11:31:07  
End at: 2019-02-20 11:31:37  
Local clock offset: -57.043 ms  
Remote clock offset: 0.949 ms

# Below is generated by plot.py at 2019-02-20 12:01:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 59.98 Mbit/s  
95th percentile per-packet one-way delay: -46.373 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 33.87 Mbit/s  
95th percentile per-packet one-way delay: -46.865 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 28.26 Mbit/s  
95th percentile per-packet one-way delay: -46.920 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 30.95 Mbit/s  
95th percentile per-packet one-way delay: -44.733 ms  
Loss rate: 0.10%

Run 5: Report of Indigo-MusesC5 — Data Link



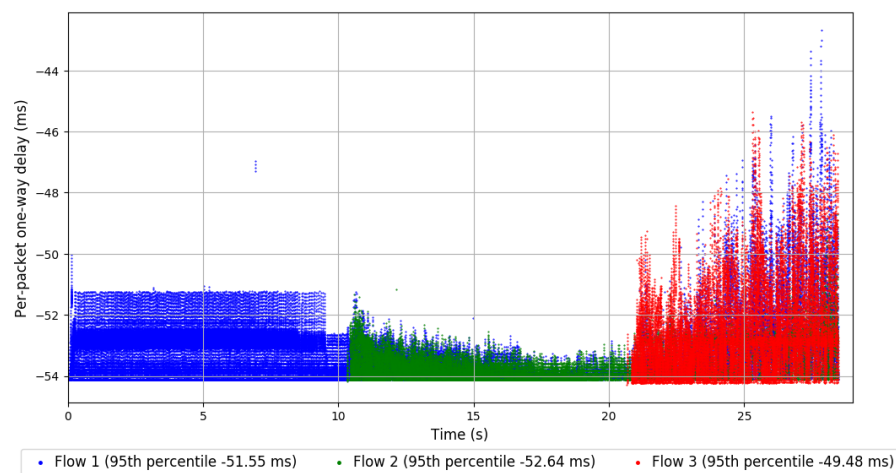
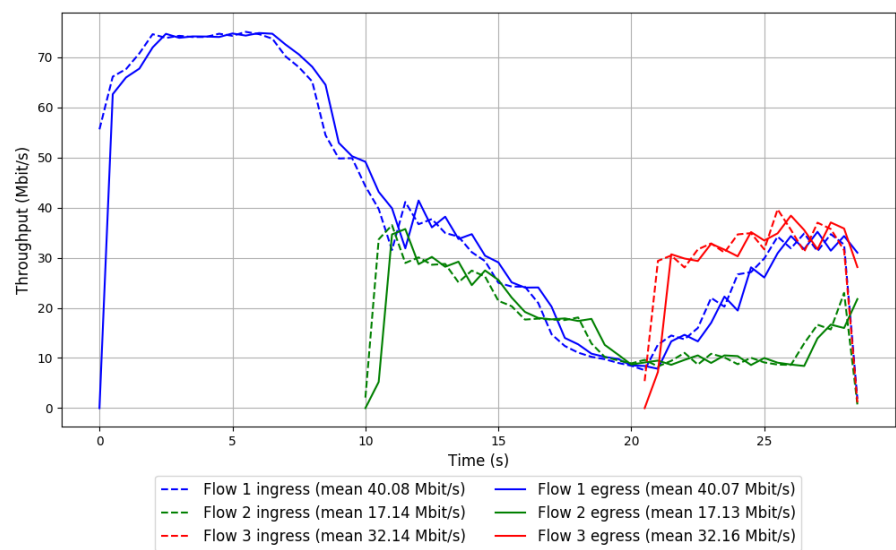


Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-20 09:57:13  
End at: 2019-02-20 09:57:43  
Local clock offset: -61.788 ms  
Remote clock offset: -0.415 ms

# Below is generated by plot.py at 2019-02-20 12:01:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 59.80 Mbit/s  
95th percentile per-packet one-way delay: -51.180 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 40.07 Mbit/s  
95th percentile per-packet one-way delay: -51.548 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 17.13 Mbit/s  
95th percentile per-packet one-way delay: -52.636 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 32.16 Mbit/s  
95th percentile per-packet one-way delay: -49.483 ms  
Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link

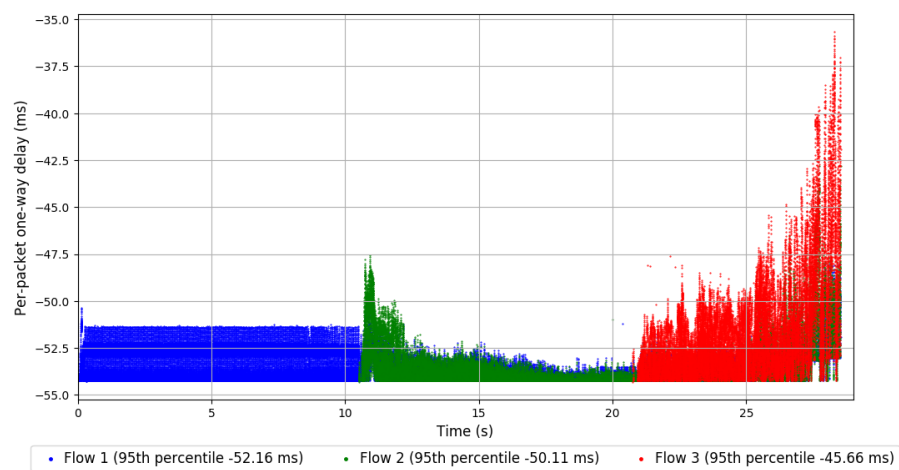
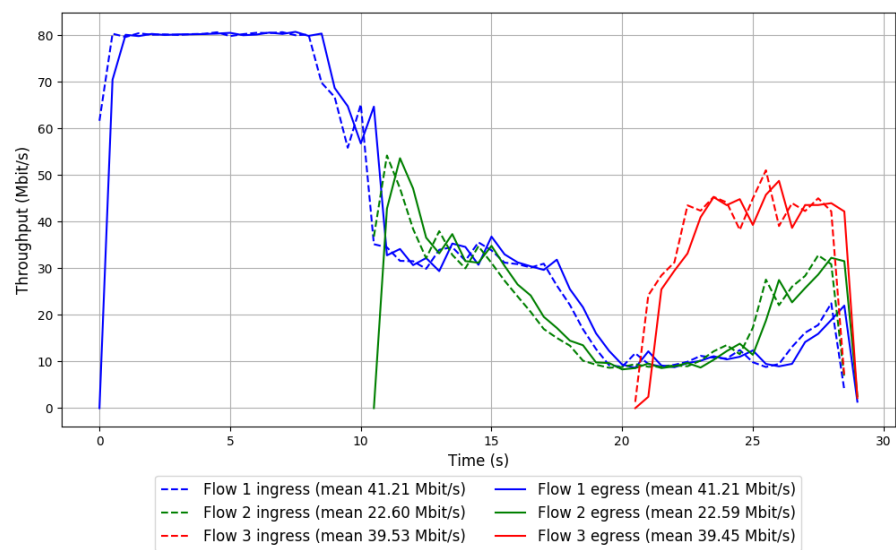


Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-20 10:21:14  
End at: 2019-02-20 10:21:44  
Local clock offset: -61.87 ms  
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2019-02-20 12:01:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 66.22 Mbit/s  
95th percentile per-packet one-way delay: -50.263 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 41.21 Mbit/s  
95th percentile per-packet one-way delay: -52.164 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 22.59 Mbit/s  
95th percentile per-packet one-way delay: -50.106 ms  
Loss rate: 0.05%  
-- Flow 3:  
Average throughput: 39.45 Mbit/s  
95th percentile per-packet one-way delay: -45.665 ms  
Loss rate: 0.17%

Run 2: Report of Indigo-MusesD — Data Link

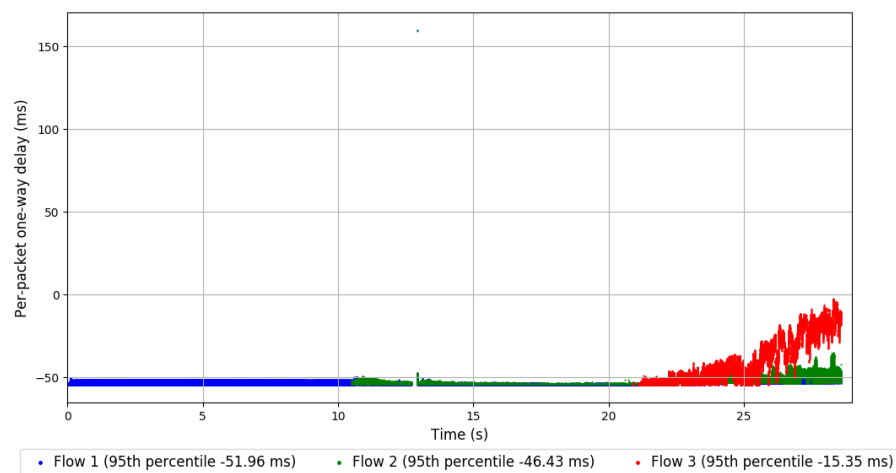
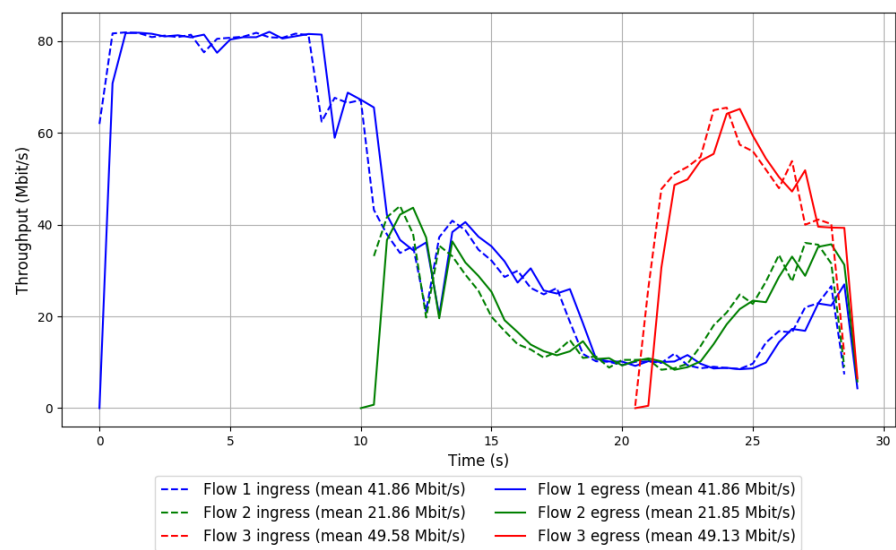


Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-20 10:45:22  
End at: 2019-02-20 10:45:52  
Local clock offset: -56.982 ms  
Remote clock offset: 0.134 ms

# Below is generated by plot.py at 2019-02-20 12:01:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 68.90 Mbit/s  
95th percentile per-packet one-way delay: -34.151 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 41.86 Mbit/s  
95th percentile per-packet one-way delay: -51.957 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 21.85 Mbit/s  
95th percentile per-packet one-way delay: -46.430 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 49.13 Mbit/s  
95th percentile per-packet one-way delay: -15.347 ms  
Loss rate: 0.92%

Run 3: Report of Indigo-MusesD — Data Link

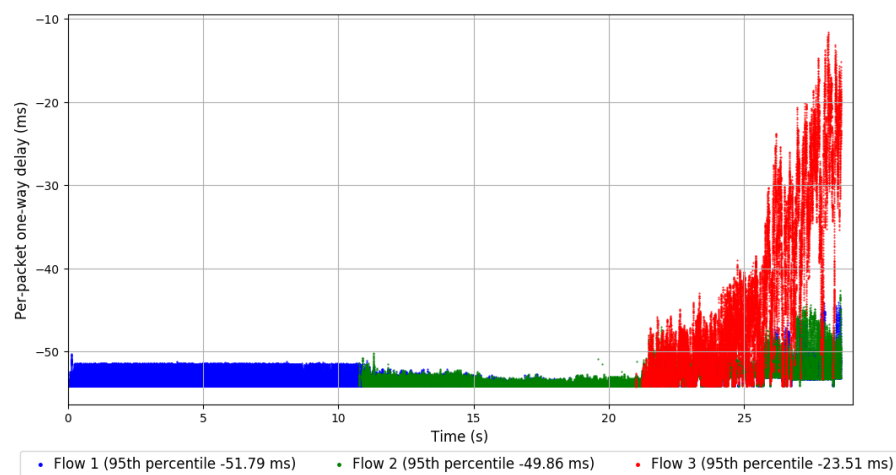
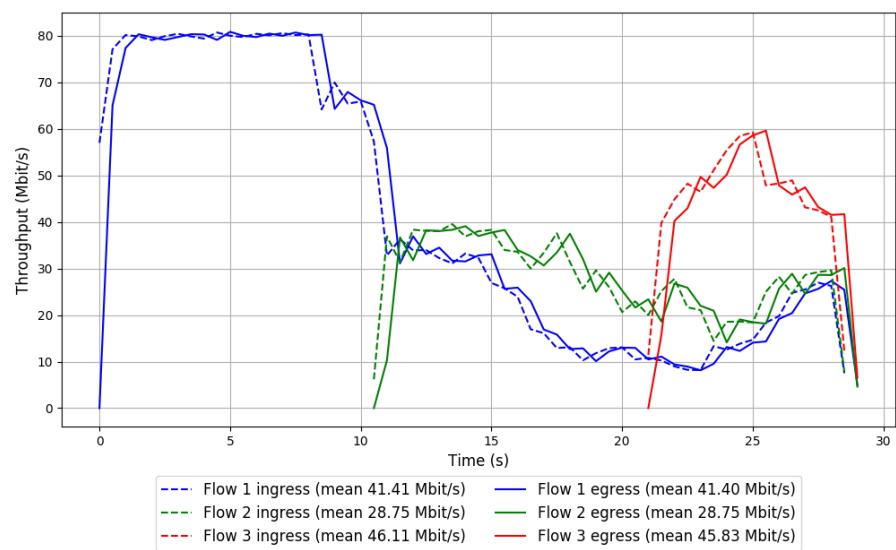


Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-20 11:09:21  
End at: 2019-02-20 11:09:51  
Local clock offset: -56.109 ms  
Remote clock offset: 0.554 ms

# Below is generated by plot.py at 2019-02-20 12:01:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 71.48 Mbit/s  
95th percentile per-packet one-way delay: -41.818 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 41.40 Mbit/s  
95th percentile per-packet one-way delay: -51.788 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 28.75 Mbit/s  
95th percentile per-packet one-way delay: -49.861 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 45.83 Mbit/s  
95th percentile per-packet one-way delay: -23.508 ms  
Loss rate: 0.59%

Run 4: Report of Indigo-MusesD — Data Link



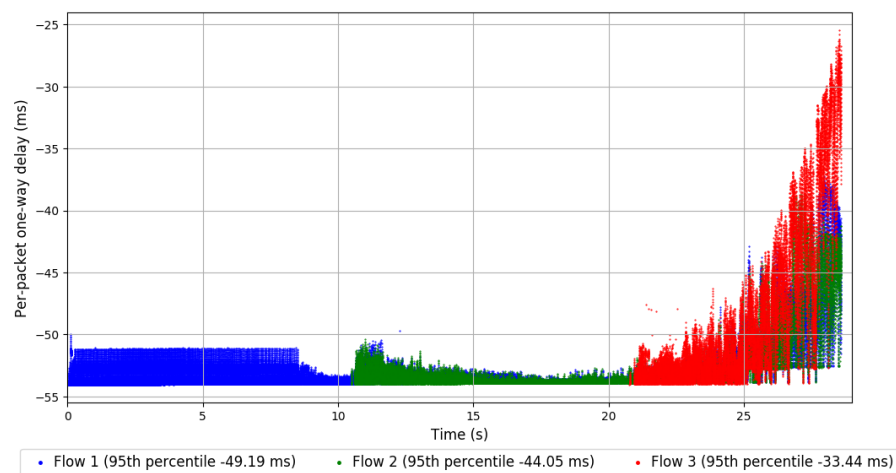
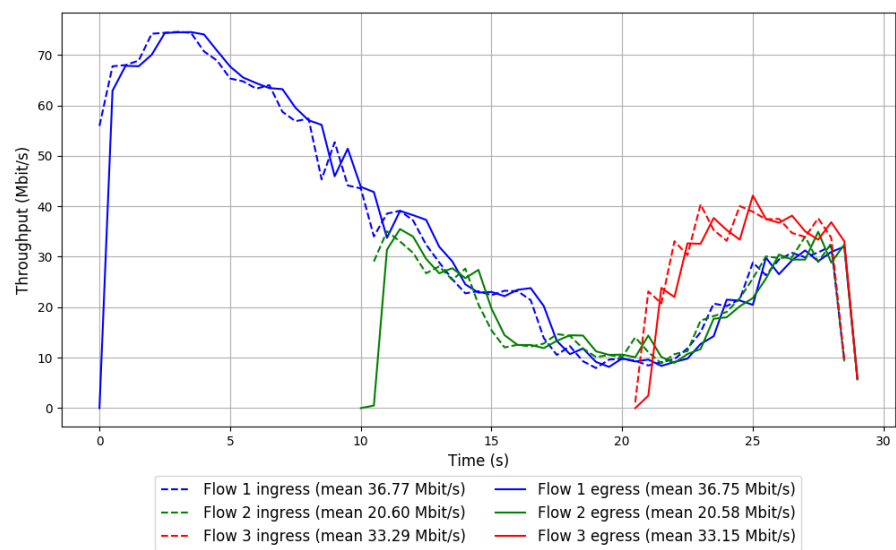


Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-20 11:33:24  
End at: 2019-02-20 11:33:54  
Local clock offset: -57.834 ms  
Remote clock offset: 0.963 ms

# Below is generated by plot.py at 2019-02-20 12:01:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 58.84 Mbit/s  
95th percentile per-packet one-way delay: -43.641 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 36.75 Mbit/s  
95th percentile per-packet one-way delay: -49.194 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 20.58 Mbit/s  
95th percentile per-packet one-way delay: -44.045 ms  
Loss rate: 0.10%  
-- Flow 3:  
Average throughput: 33.15 Mbit/s  
95th percentile per-packet one-way delay: -33.436 ms  
Loss rate: 0.42%

Run 5: Report of Indigo-MusesD — Data Link

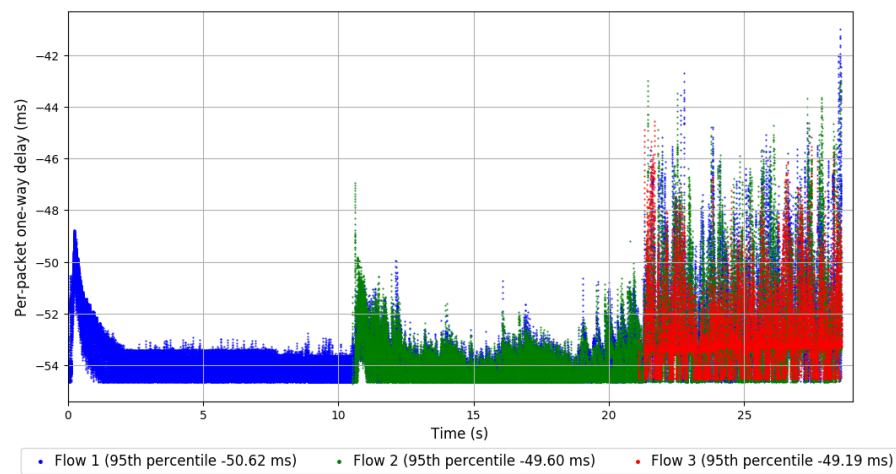
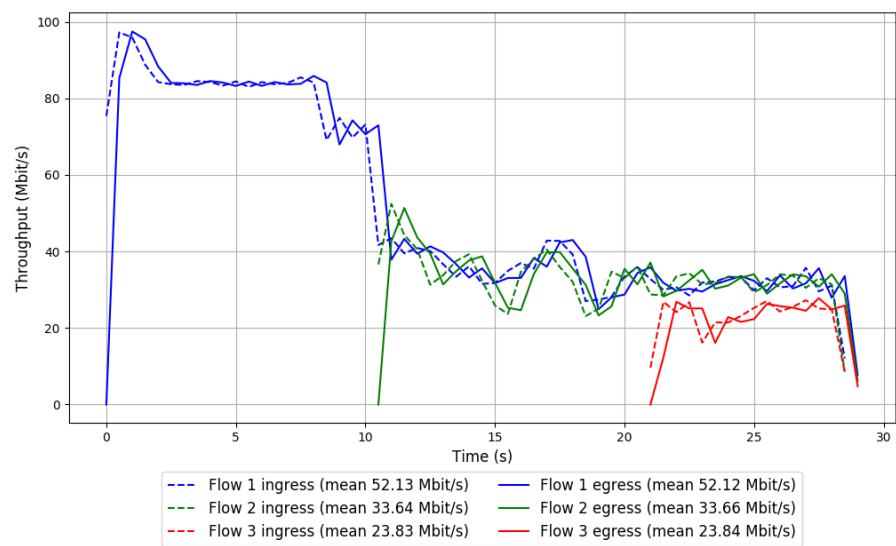


Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-20 10:01:44  
End at: 2019-02-20 10:02:14  
Local clock offset: -62.163 ms  
Remote clock offset: -0.335 ms

# Below is generated by plot.py at 2019-02-20 12:02:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 79.65 Mbit/s  
95th percentile per-packet one-way delay: -50.145 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 52.12 Mbit/s  
95th percentile per-packet one-way delay: -50.623 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 33.66 Mbit/s  
95th percentile per-packet one-way delay: -49.600 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 23.84 Mbit/s  
95th percentile per-packet one-way delay: -49.191 ms  
Loss rate: 0.06%

Run 1: Report of Indigo-MusesT — Data Link

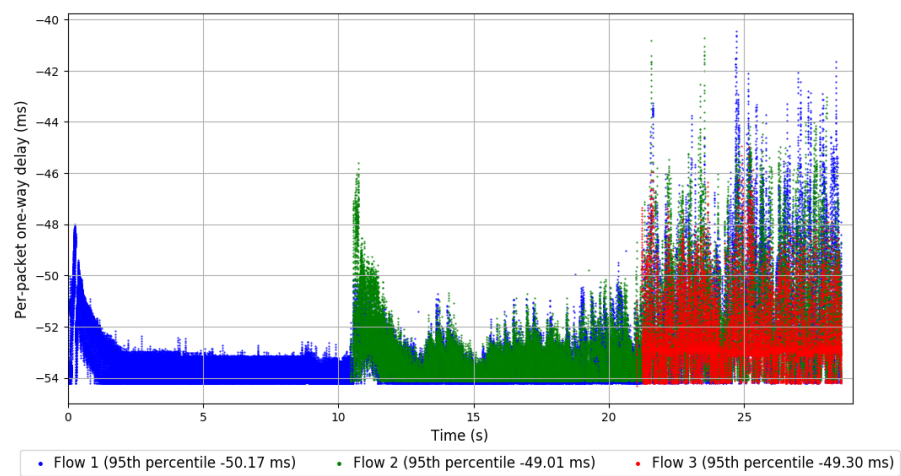
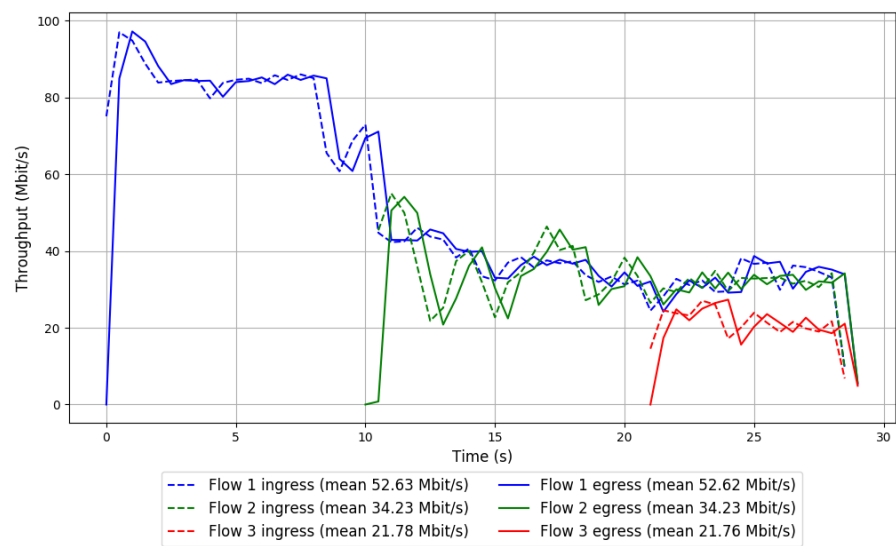


Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-20 10:25:52  
End at: 2019-02-20 10:26:22  
Local clock offset: -61.905 ms  
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2019-02-20 12:02:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 80.09 Mbit/s  
95th percentile per-packet one-way delay: -49.661 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 52.62 Mbit/s  
95th percentile per-packet one-way delay: -50.174 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 34.23 Mbit/s  
95th percentile per-packet one-way delay: -49.008 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 21.76 Mbit/s  
95th percentile per-packet one-way delay: -49.297 ms  
Loss rate: 0.08%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-20 10:49:54

End at: 2019-02-20 10:50:24

Local clock offset: -56.48 ms

Remote clock offset: 0.214 ms

# Below is generated by plot.py at 2019-02-20 12:02:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 80.35 Mbit/s

95th percentile per-packet one-way delay: -49.430 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 53.32 Mbit/s

95th percentile per-packet one-way delay: -49.889 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 33.70 Mbit/s

95th percentile per-packet one-way delay: -48.501 ms

Loss rate: 0.00%

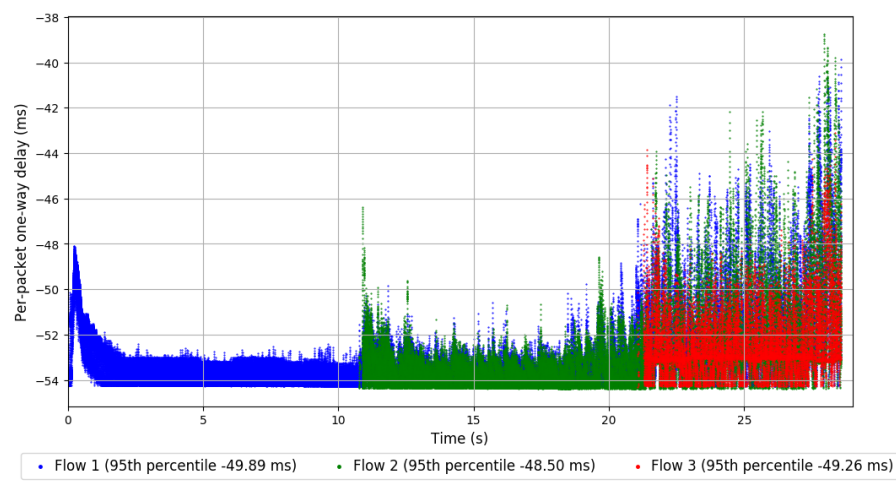
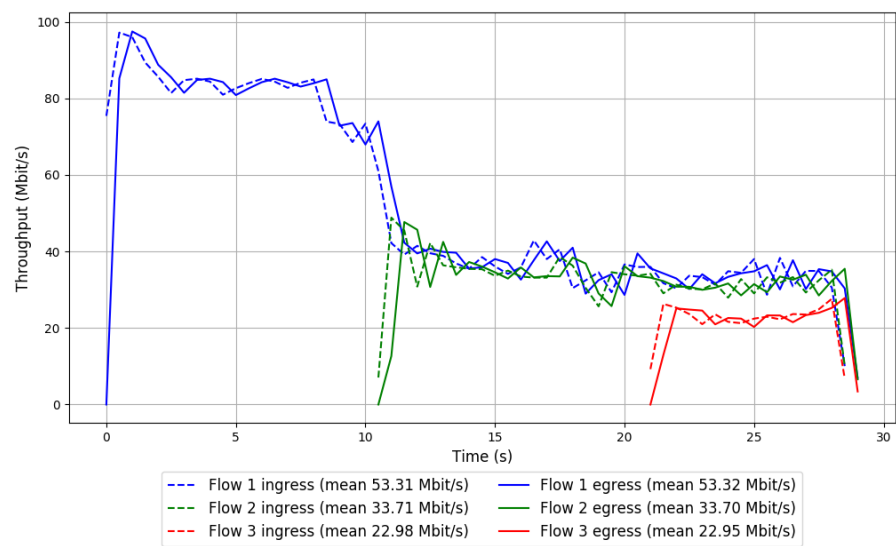
-- Flow 3:

Average throughput: 22.95 Mbit/s

95th percentile per-packet one-way delay: -49.263 ms

Loss rate: 0.11%

Run 3: Report of Indigo-MusesT — Data Link





Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-20 11:13:53

End at: 2019-02-20 11:14:23

Local clock offset: -56.64 ms

Remote clock offset: 0.626 ms

# Below is generated by plot.py at 2019-02-20 12:02:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 79.38 Mbit/s

95th percentile per-packet one-way delay: -49.582 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 51.60 Mbit/s

95th percentile per-packet one-way delay: -50.360 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 34.10 Mbit/s

95th percentile per-packet one-way delay: -48.403 ms

Loss rate: 0.05%

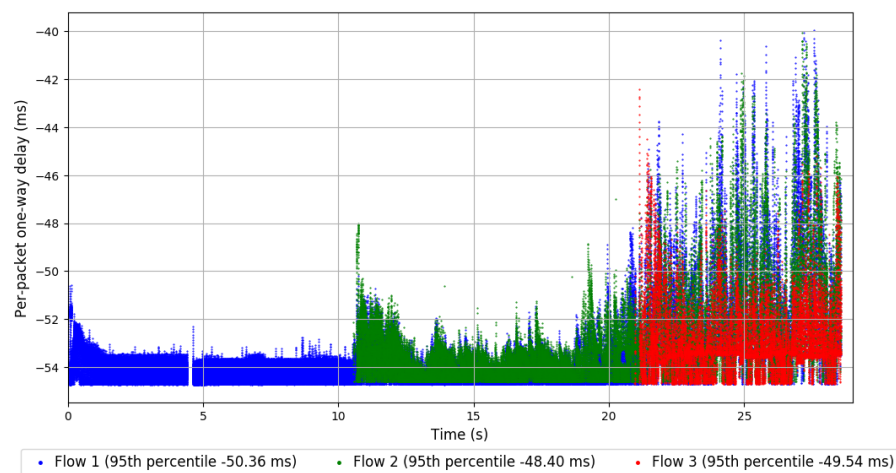
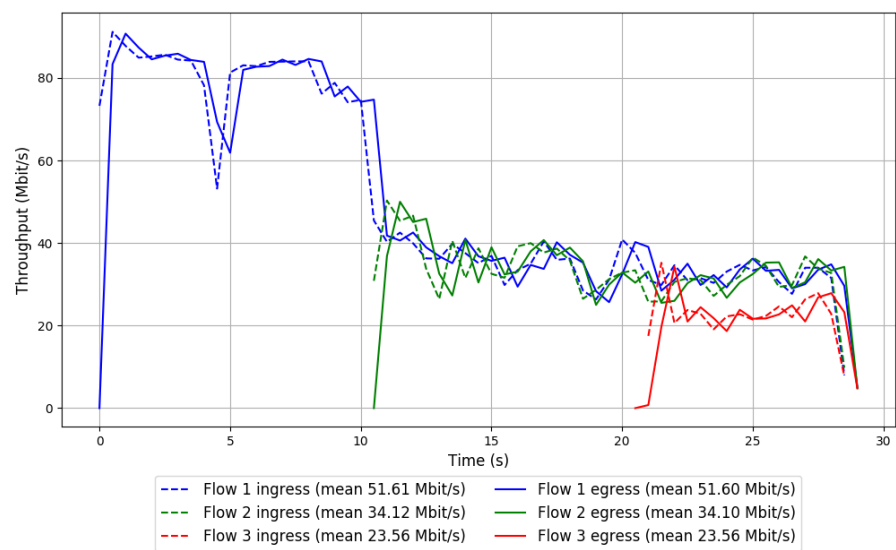
-- Flow 3:

Average throughput: 23.56 Mbit/s

95th percentile per-packet one-way delay: -49.542 ms

Loss rate: 0.03%

Run 4: Report of Indigo-MusesT — Data Link

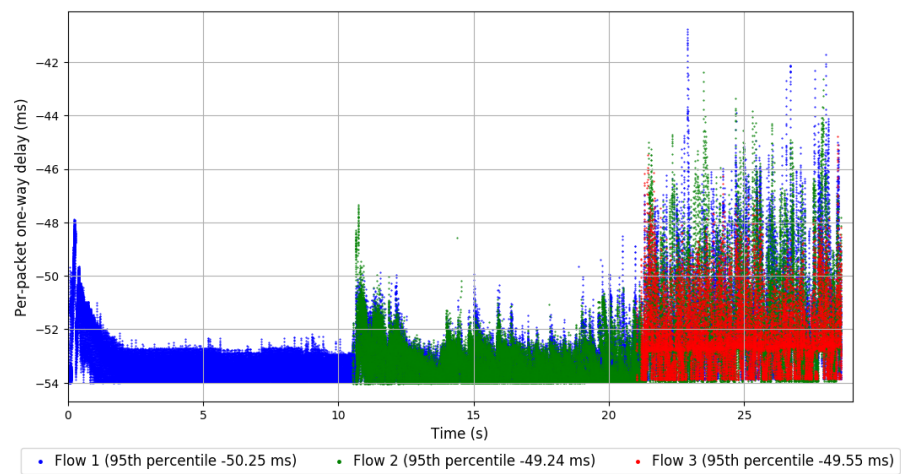
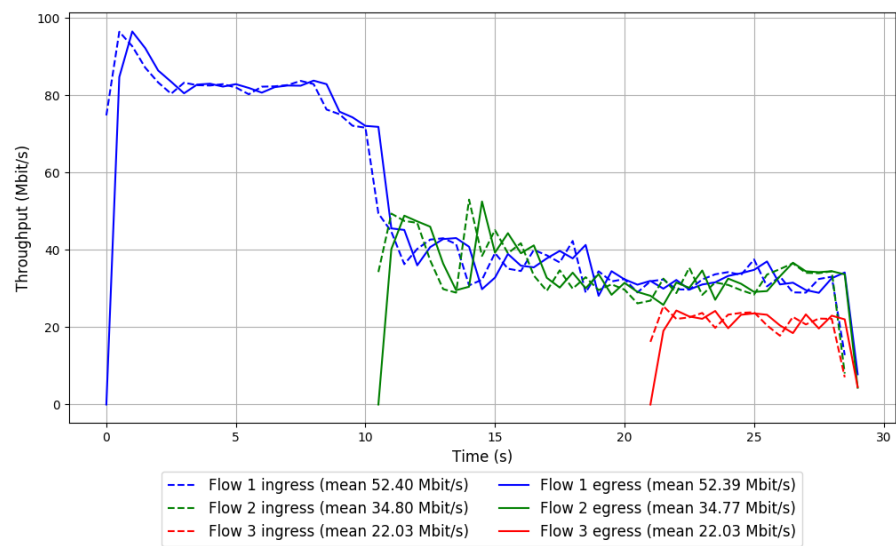


Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-20 11:38:00  
End at: 2019-02-20 11:38:30  
Local clock offset: -59.447 ms  
Remote clock offset: 0.932 ms

# Below is generated by plot.py at 2019-02-20 12:02:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 80.18 Mbit/s  
95th percentile per-packet one-way delay: -49.847 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 52.39 Mbit/s  
95th percentile per-packet one-way delay: -50.250 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 34.77 Mbit/s  
95th percentile per-packet one-way delay: -49.239 ms  
Loss rate: 0.07%  
-- Flow 3:  
Average throughput: 22.03 Mbit/s  
95th percentile per-packet one-way delay: -49.553 ms  
Loss rate: 0.01%

Run 5: Report of Indigo-MusesT — Data Link

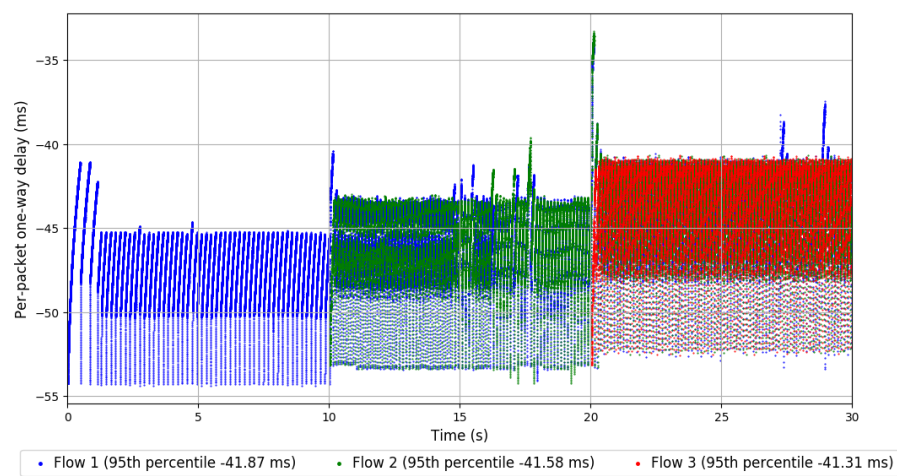
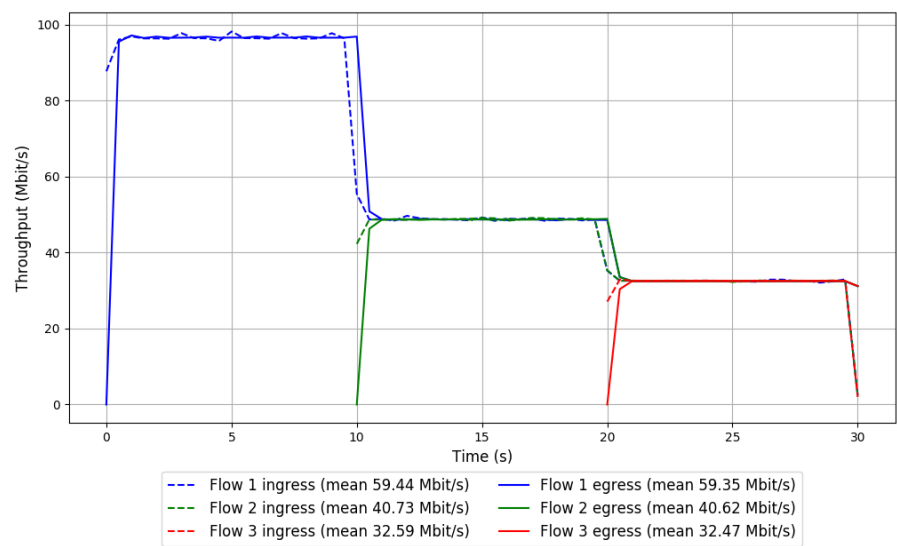


Run 1: Statistics of LEDBAT

Start at: 2019-02-20 10:07:20  
End at: 2019-02-20 10:07:50  
Local clock offset: -61.812 ms  
Remote clock offset: -0.318 ms

# Below is generated by plot.py at 2019-02-20 12:02:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.18 Mbit/s  
95th percentile per-packet one-way delay: -41.628 ms  
Loss rate: 0.22%  
-- Flow 1:  
Average throughput: 59.35 Mbit/s  
95th percentile per-packet one-way delay: -41.873 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 40.62 Mbit/s  
95th percentile per-packet one-way delay: -41.579 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 32.47 Mbit/s  
95th percentile per-packet one-way delay: -41.310 ms  
Loss rate: 0.39%

Run 1: Report of LEDBAT — Data Link

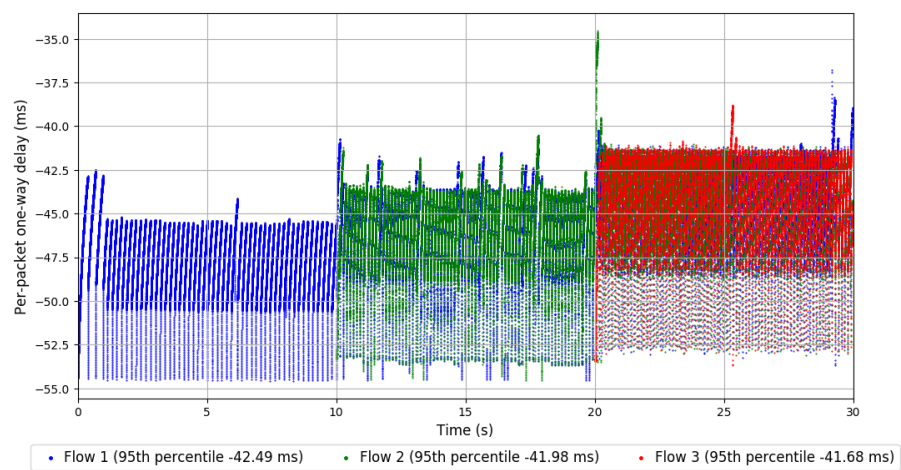
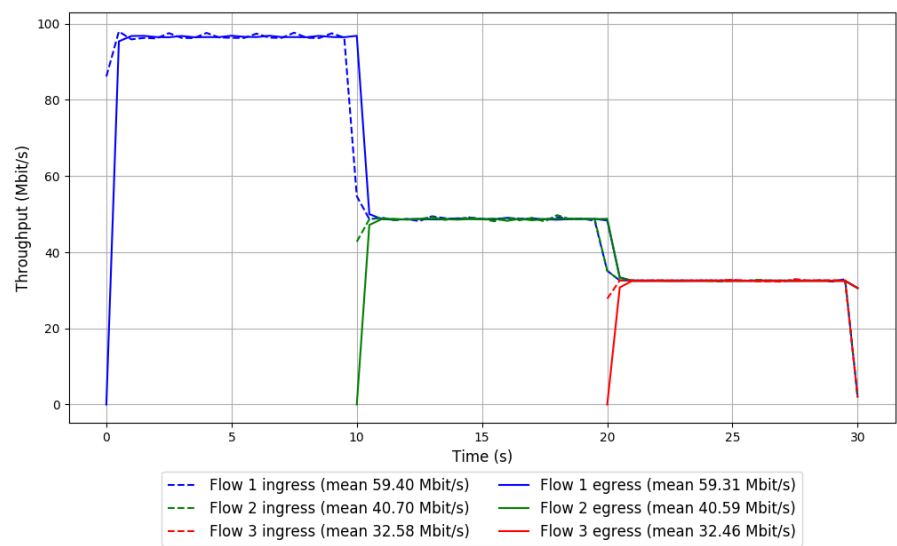


Run 2: Statistics of LEDBAT

Start at: 2019-02-20 10:31:27  
End at: 2019-02-20 10:31:57  
Local clock offset: -61.074 ms  
Remote clock offset: 0.017 ms

# Below is generated by plot.py at 2019-02-20 12:03:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.12 Mbit/s  
95th percentile per-packet one-way delay: -42.083 ms  
Loss rate: 0.22%  
-- Flow 1:  
Average throughput: 59.31 Mbit/s  
95th percentile per-packet one-way delay: -42.494 ms  
Loss rate: 0.17%  
-- Flow 2:  
Average throughput: 40.59 Mbit/s  
95th percentile per-packet one-way delay: -41.976 ms  
Loss rate: 0.27%  
-- Flow 3:  
Average throughput: 32.46 Mbit/s  
95th percentile per-packet one-way delay: -41.679 ms  
Loss rate: 0.41%

Run 2: Report of LEDBAT — Data Link



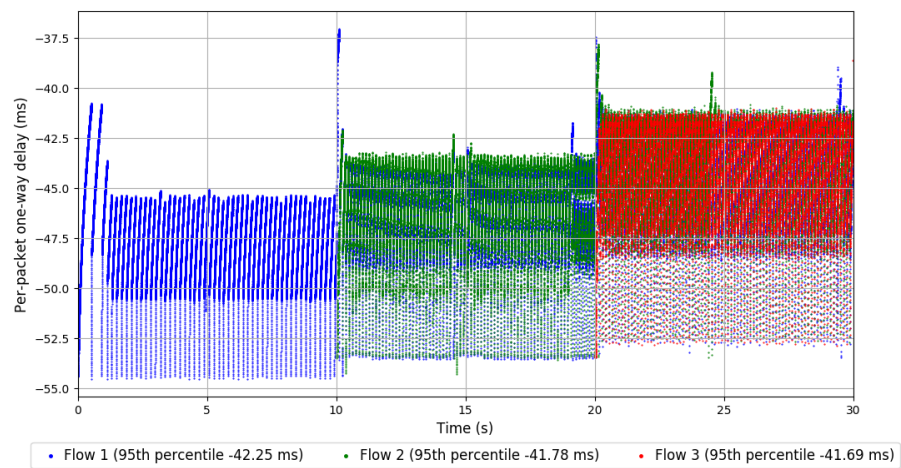
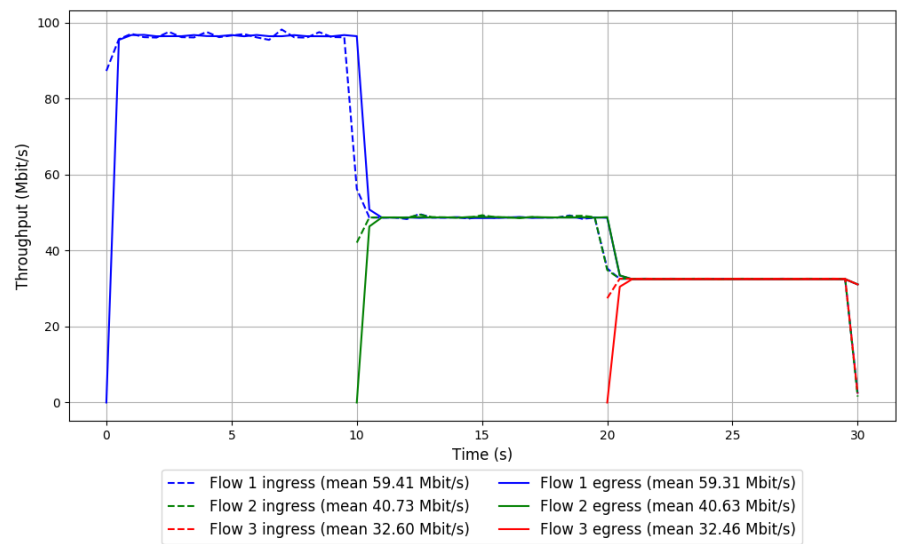


Run 3: Statistics of LEDBAT

Start at: 2019-02-20 10:55:30  
End at: 2019-02-20 10:56:00  
Local clock offset: -56.005 ms  
Remote clock offset: 0.327 ms

# Below is generated by plot.py at 2019-02-20 12:03:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.14 Mbit/s  
95th percentile per-packet one-way delay: -41.924 ms  
Loss rate: 0.21%  
-- Flow 1:  
Average throughput: 59.31 Mbit/s  
95th percentile per-packet one-way delay: -42.251 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 40.63 Mbit/s  
95th percentile per-packet one-way delay: -41.778 ms  
Loss rate: 0.24%  
-- Flow 3:  
Average throughput: 32.46 Mbit/s  
95th percentile per-packet one-way delay: -41.692 ms  
Loss rate: 0.43%

Run 3: Report of LEDBAT — Data Link

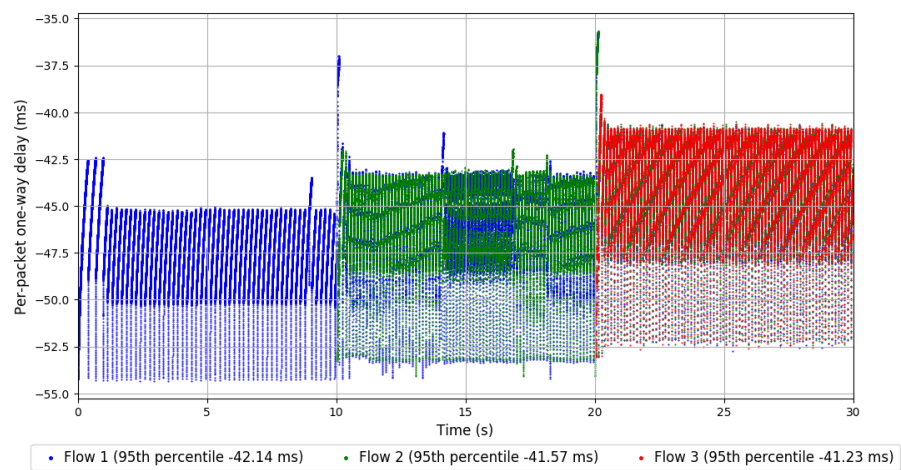
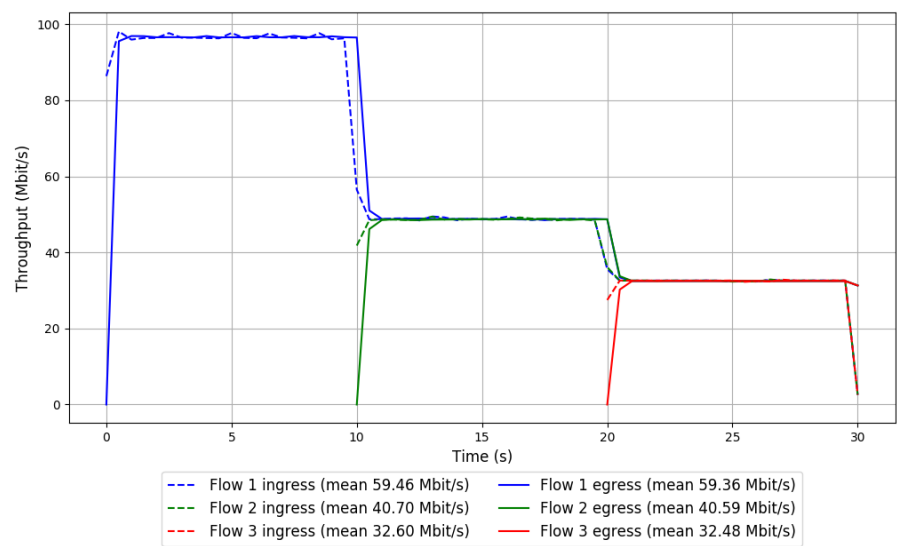


Run 4: Statistics of LEDBAT

Start at: 2019-02-20 11:19:29  
End at: 2019-02-20 11:19:59  
Local clock offset: -56.123 ms  
Remote clock offset: 0.669 ms

# Below is generated by plot.py at 2019-02-20 12:03:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.17 Mbit/s  
95th percentile per-packet one-way delay: -41.652 ms  
Loss rate: 0.22%  
-- Flow 1:  
Average throughput: 59.36 Mbit/s  
95th percentile per-packet one-way delay: -42.139 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 40.59 Mbit/s  
95th percentile per-packet one-way delay: -41.566 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 32.48 Mbit/s  
95th percentile per-packet one-way delay: -41.235 ms  
Loss rate: 0.41%

Run 4: Report of LEDBAT — Data Link

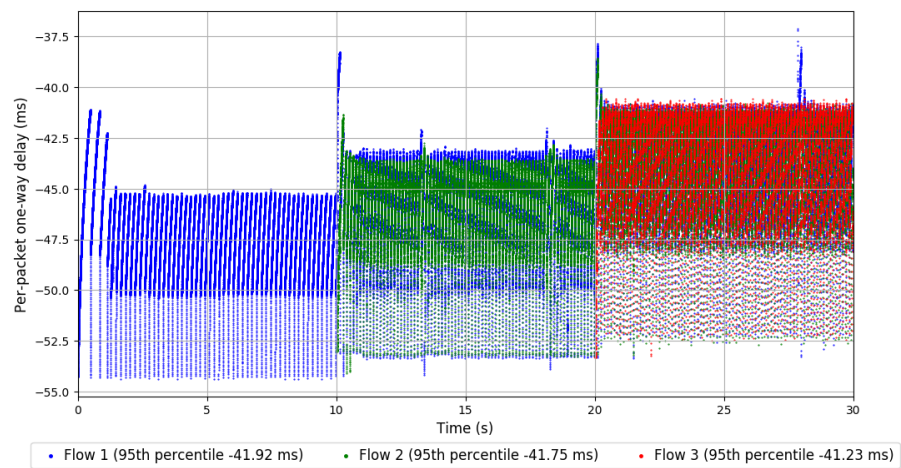
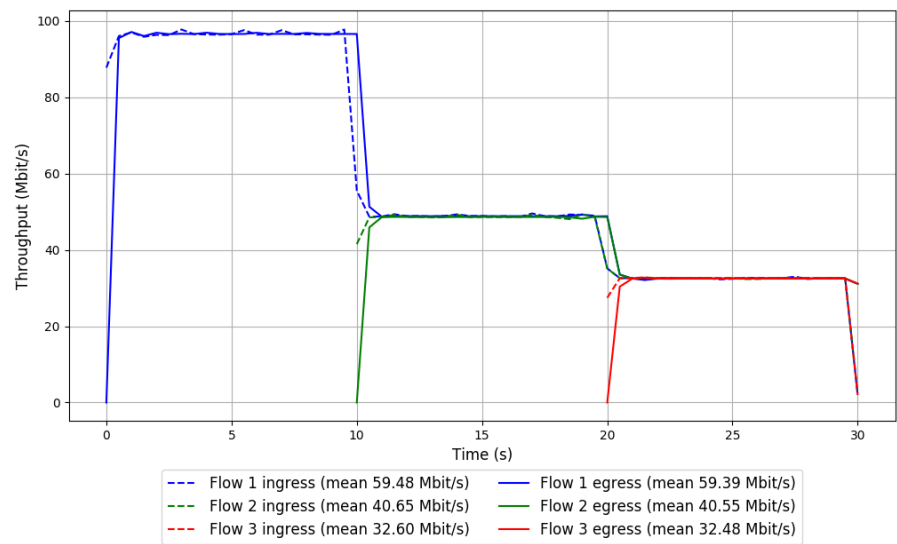


Run 5: Statistics of LEDBAT

Start at: 2019-02-20 11:43:35  
End at: 2019-02-20 11:44:05  
Local clock offset: -60.707 ms  
Remote clock offset: 1.072 ms

# Below is generated by plot.py at 2019-02-20 12:03:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.17 Mbit/s  
95th percentile per-packet one-way delay: -41.645 ms  
Loss rate: 0.21%  
-- Flow 1:  
Average throughput: 59.39 Mbit/s  
95th percentile per-packet one-way delay: -41.925 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 40.55 Mbit/s  
95th percentile per-packet one-way delay: -41.747 ms  
Loss rate: 0.27%  
-- Flow 3:  
Average throughput: 32.48 Mbit/s  
95th percentile per-packet one-way delay: -41.226 ms  
Loss rate: 0.39%

Run 5: Report of LEDBAT — Data Link

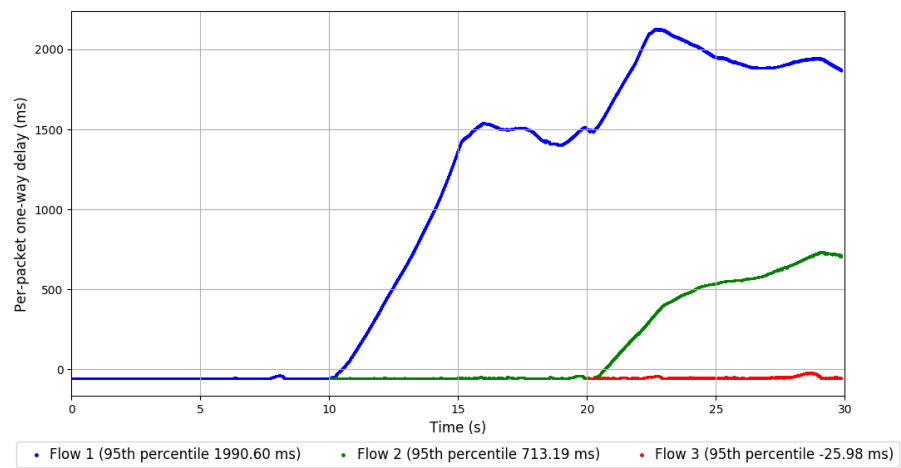
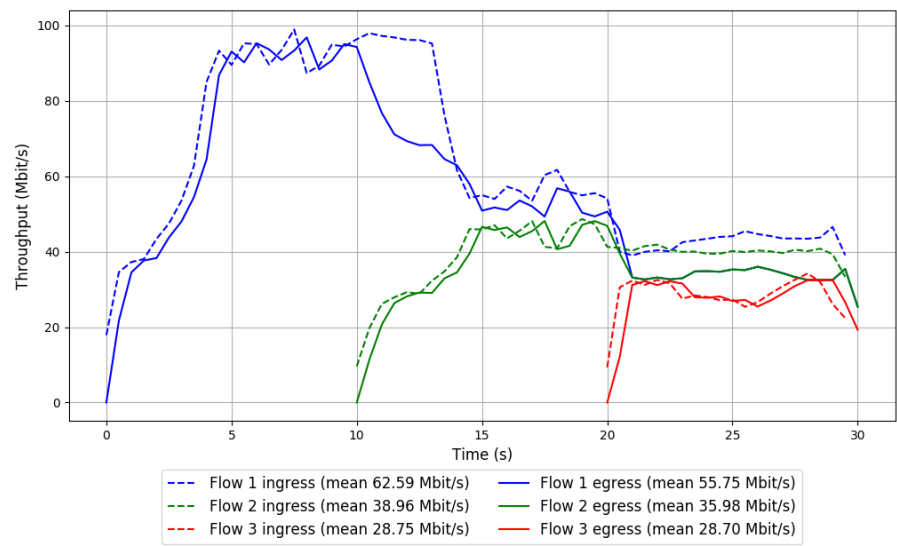


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-02-20 10:00:36
End at: 2019-02-20 10:01:06
Local clock offset: -61.868 ms
Remote clock offset: -0.363 ms

# Below is generated by plot.py at 2019-02-20 12:03:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.11 Mbit/s
95th percentile per-packet one-way delay: 1937.881 ms
Loss rate: 9.04%
-- Flow 1:
Average throughput: 55.75 Mbit/s
95th percentile per-packet one-way delay: 1990.599 ms
Loss rate: 10.93%
-- Flow 2:
Average throughput: 35.98 Mbit/s
95th percentile per-packet one-way delay: 713.190 ms
Loss rate: 7.72%
-- Flow 3:
Average throughput: 28.70 Mbit/s
95th percentile per-packet one-way delay: -25.979 ms
Loss rate: 0.19%
```

Run 1: Report of PCC-Allegro — Data Link



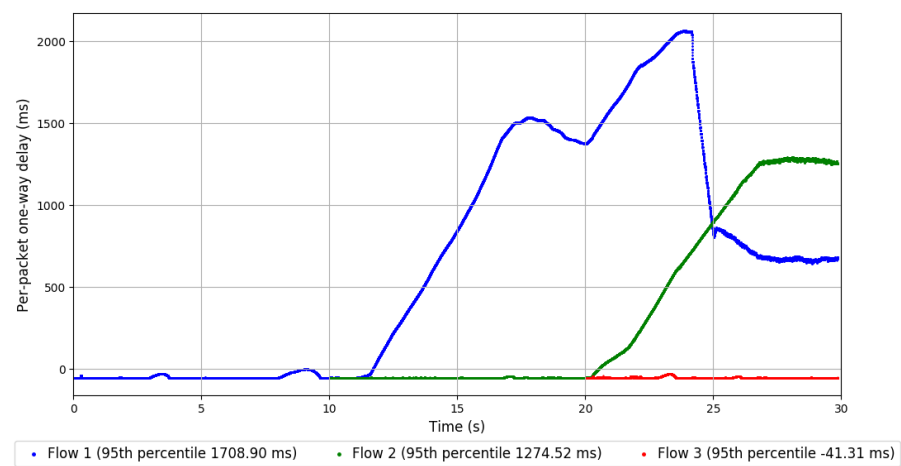
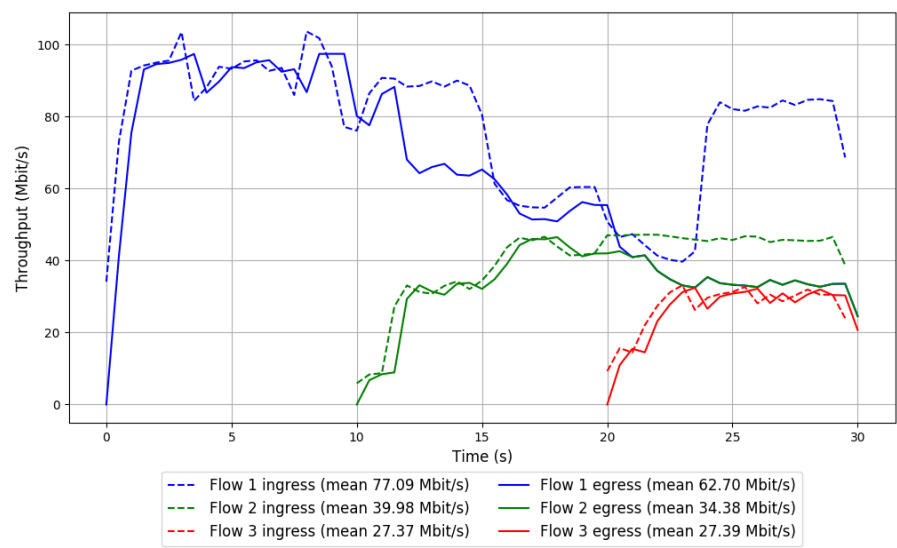


Run 2: Statistics of PCC-Allegro

Start at: 2019-02-20 10:24:43  
End at: 2019-02-20 10:25:13  
Local clock offset: -61.91 ms  
Remote clock offset: -0.168 ms

# Below is generated by plot.py at 2019-02-20 12:03:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.57 Mbit/s  
95th percentile per-packet one-way delay: 1530.720 ms  
Loss rate: 16.07%  
-- Flow 1:  
Average throughput: 62.70 Mbit/s  
95th percentile per-packet one-way delay: 1708.902 ms  
Loss rate: 18.65%  
-- Flow 2:  
Average throughput: 34.38 Mbit/s  
95th percentile per-packet one-way delay: 1274.522 ms  
Loss rate: 14.02%  
-- Flow 3:  
Average throughput: 27.39 Mbit/s  
95th percentile per-packet one-way delay: -41.308 ms  
Loss rate: 0.08%

Run 2: Report of PCC-Allegro — Data Link

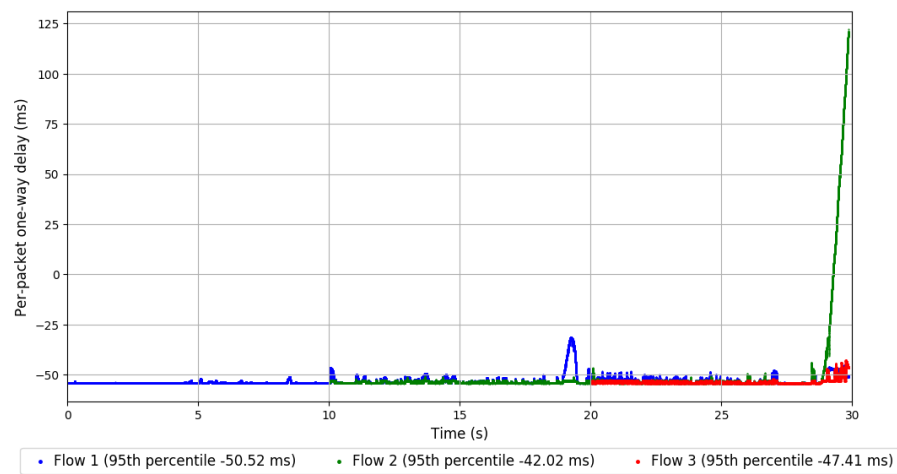
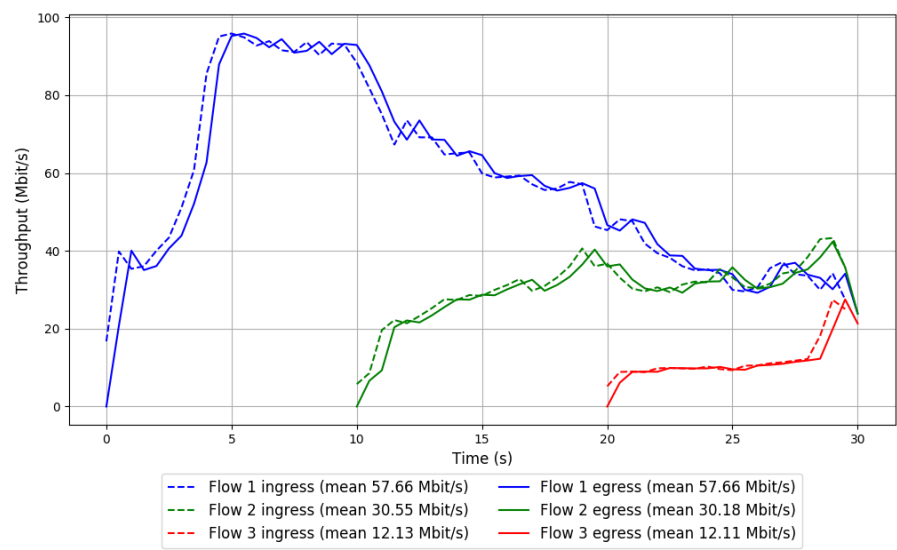


Run 3: Statistics of PCC-Allegro

Start at: 2019-02-20 10:48:46  
End at: 2019-02-20 10:49:16  
Local clock offset: -56.536 ms  
Remote clock offset: 0.186 ms

# Below is generated by plot.py at 2019-02-20 12:03:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.71 Mbit/s  
95th percentile per-packet one-way delay: -50.076 ms  
Loss rate: 0.35%  
-- Flow 1:  
Average throughput: 57.66 Mbit/s  
95th percentile per-packet one-way delay: -50.523 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 30.18 Mbit/s  
95th percentile per-packet one-way delay: -42.019 ms  
Loss rate: 1.31%  
-- Flow 3:  
Average throughput: 12.11 Mbit/s  
95th percentile per-packet one-way delay: -47.414 ms  
Loss rate: 0.24%

Run 3: Report of PCC-Allegro — Data Link

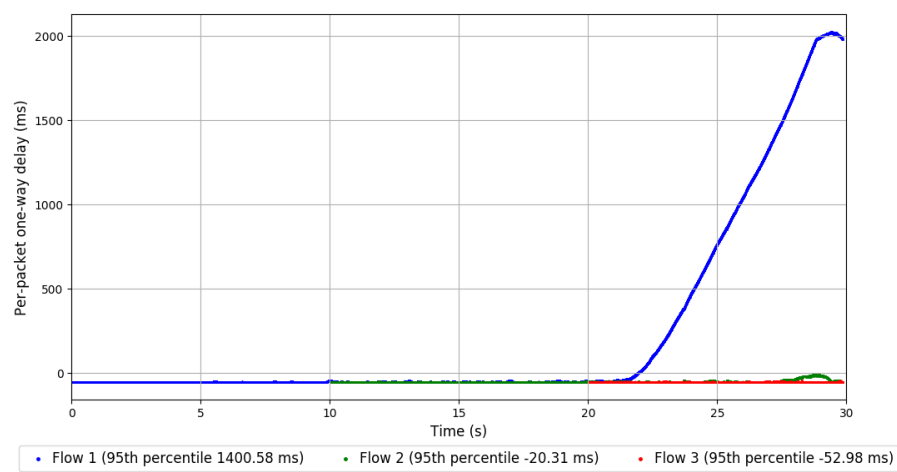
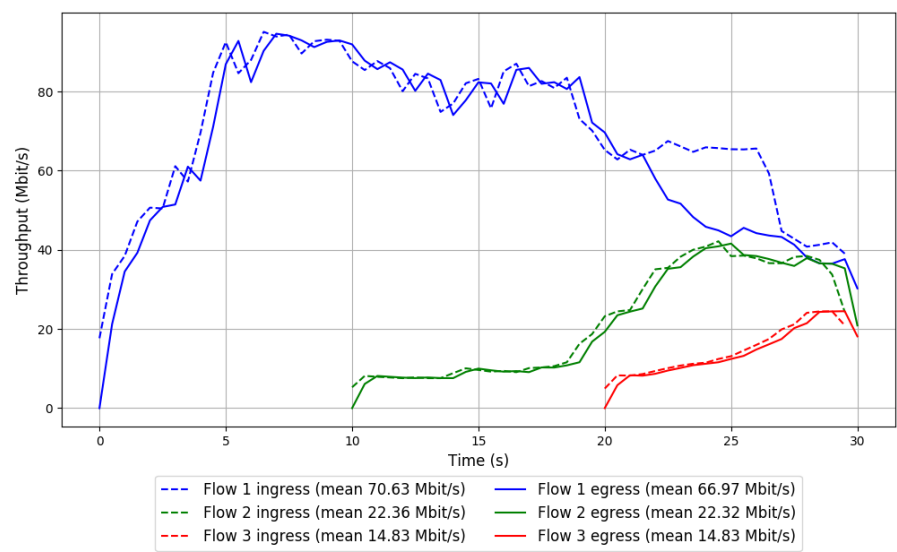


Run 4: Statistics of PCC-Allegro

Start at: 2019-02-20 11:12:45  
End at: 2019-02-20 11:13:15  
Local clock offset: -56.333 ms  
Remote clock offset: 0.626 ms

# Below is generated by plot.py at 2019-02-20 12:04:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.69 Mbit/s  
95th percentile per-packet one-way delay: 1176.296 ms  
Loss rate: 4.09%  
-- Flow 1:  
Average throughput: 66.97 Mbit/s  
95th percentile per-packet one-way delay: 1400.582 ms  
Loss rate: 5.19%  
-- Flow 2:  
Average throughput: 22.32 Mbit/s  
95th percentile per-packet one-way delay: -20.310 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 14.83 Mbit/s  
95th percentile per-packet one-way delay: -52.978 ms  
Loss rate: 0.03%

Run 4: Report of PCC-Allegro — Data Link

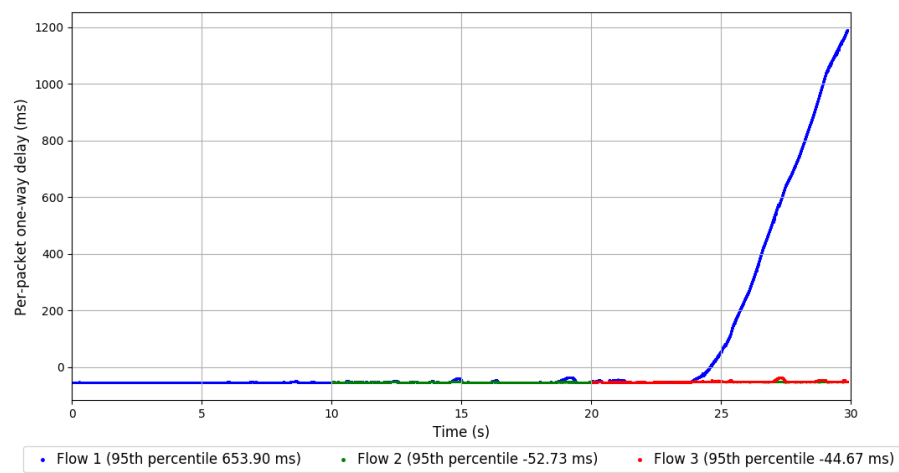
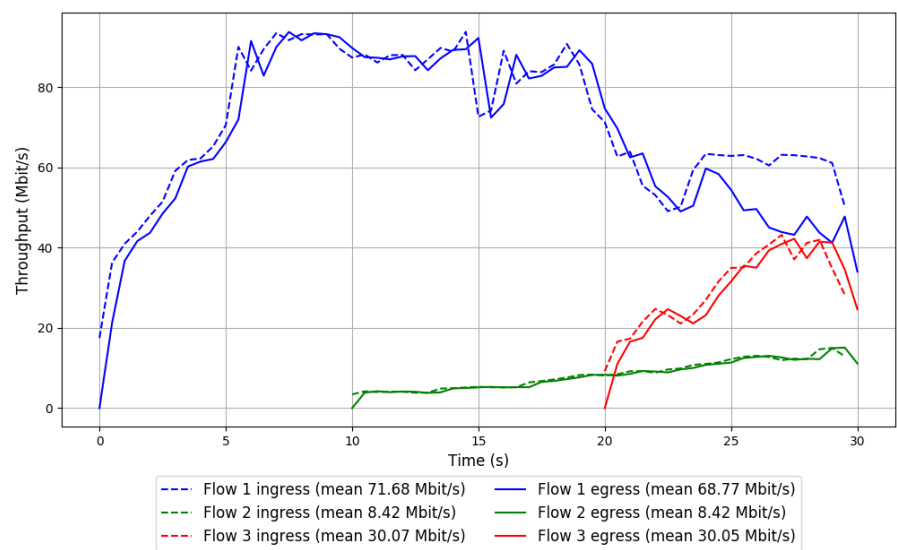


Run 5: Statistics of PCC-Allegro

Start at: 2019-02-20 11:36:51  
End at: 2019-02-20 11:37:21  
Local clock offset: -59.051 ms  
Remote clock offset: 0.983 ms

# Below is generated by plot.py at 2019-02-20 12:04:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.27 Mbit/s  
95th percentile per-packet one-way delay: 515.364 ms  
Loss rate: 3.35%  
-- Flow 1:  
Average throughput: 68.77 Mbit/s  
95th percentile per-packet one-way delay: 653.905 ms  
Loss rate: 4.06%  
-- Flow 2:  
Average throughput: 8.42 Mbit/s  
95th percentile per-packet one-way delay: -52.732 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 30.05 Mbit/s  
95th percentile per-packet one-way delay: -44.667 ms  
Loss rate: 0.07%

Run 5: Report of PCC-Allegro — Data Link



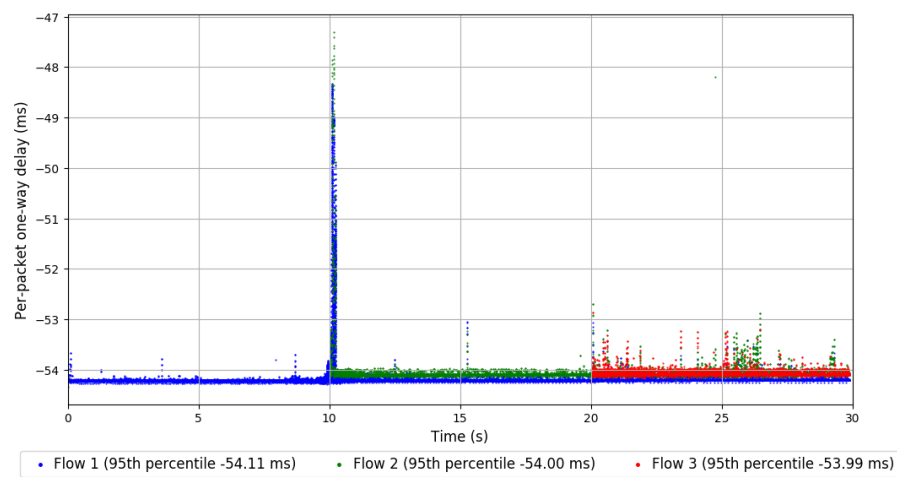
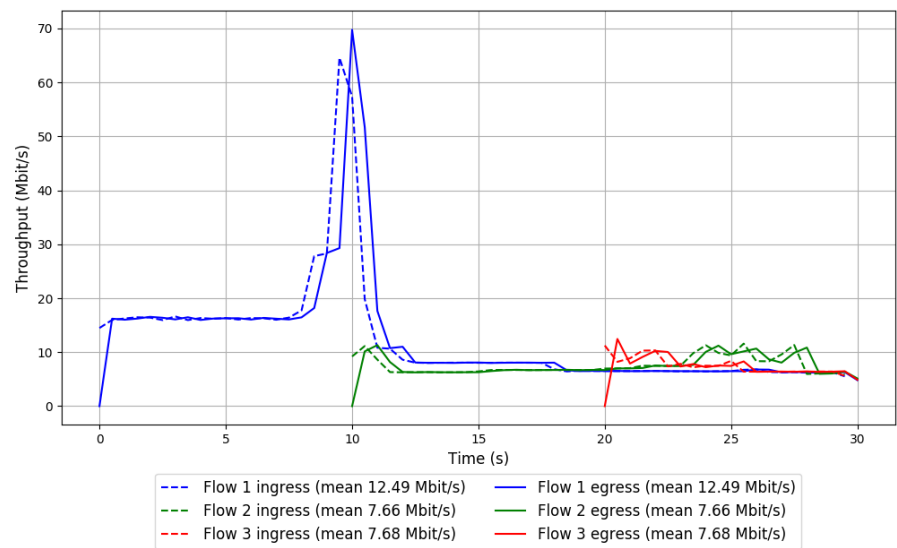


```
Run 1: Statistics of PCC-Expr

Start at: 2019-02-20 09:58:20
End at: 2019-02-20 09:58:50
Local clock offset: -61.79 ms
Remote clock offset: -0.402 ms

# Below is generated by plot.py at 2019-02-20 12:04:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.12 Mbit/s
95th percentile per-packet one-way delay: -54.011 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: -54.106 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.66 Mbit/s
95th percentile per-packet one-way delay: -53.997 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 7.68 Mbit/s
95th percentile per-packet one-way delay: -53.989 ms
Loss rate: 0.02%
```

Run 1: Report of PCC-Expr — Data Link

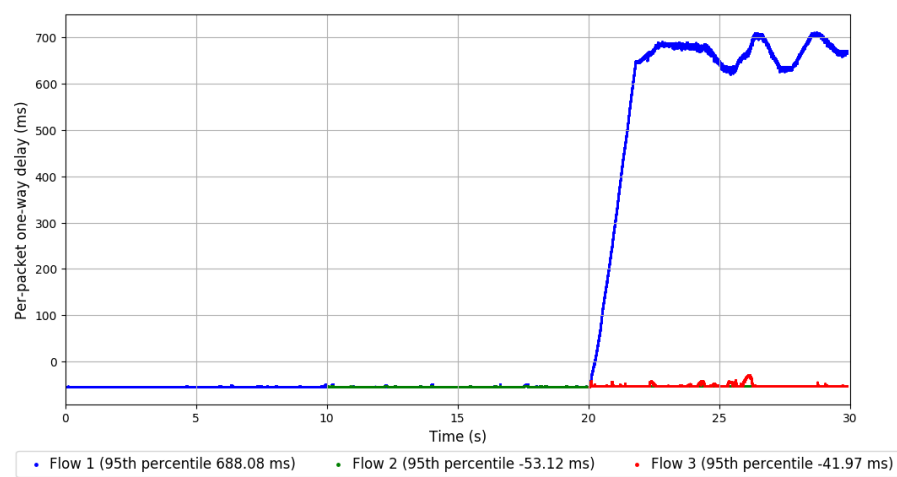
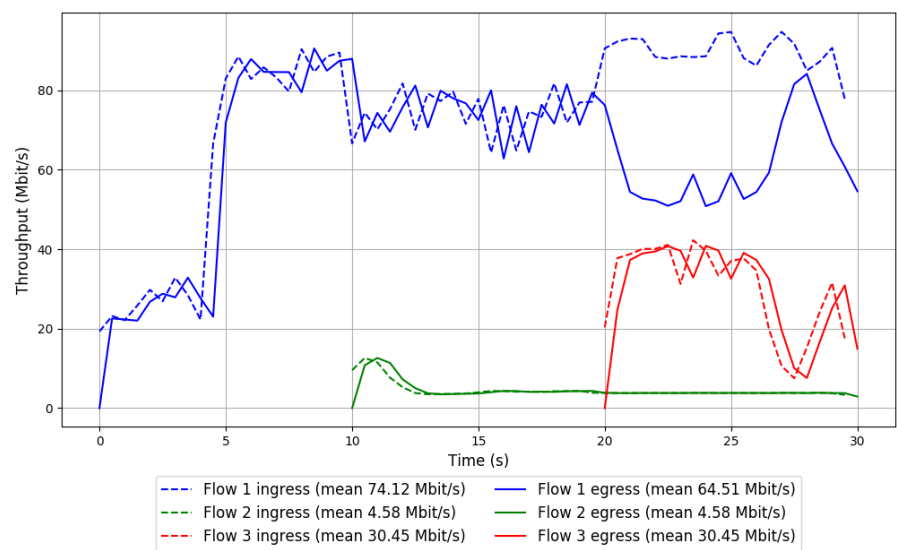


```
Run 2: Statistics of PCC-Expr

Start at: 2019-02-20 10:22:22
End at: 2019-02-20 10:22:52
Local clock offset: -61.878 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-02-20 12:05:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.61 Mbit/s
95th percentile per-packet one-way delay: 686.234 ms
Loss rate: 11.02%
-- Flow 1:
Average throughput: 64.51 Mbit/s
95th percentile per-packet one-way delay: 688.080 ms
Loss rate: 12.97%
-- Flow 2:
Average throughput: 4.58 Mbit/s
95th percentile per-packet one-way delay: -53.116 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 30.45 Mbit/s
95th percentile per-packet one-way delay: -41.973 ms
Loss rate: 0.01%
```

Run 2: Report of PCC-Expr — Data Link

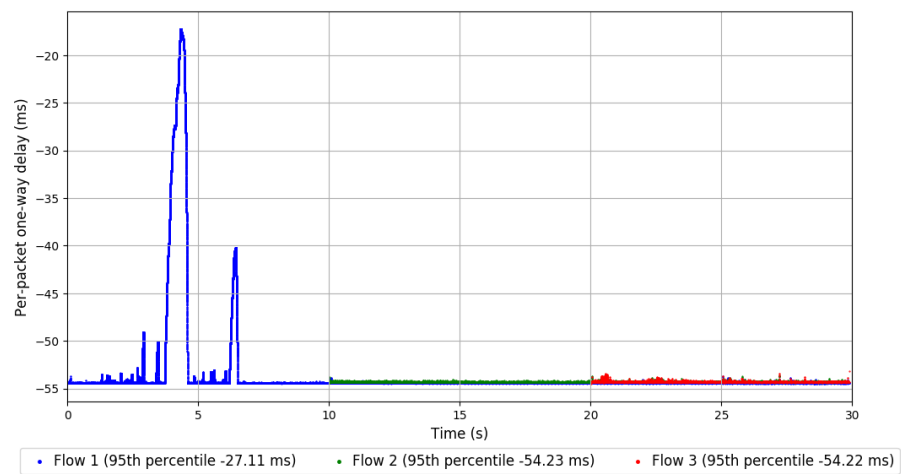
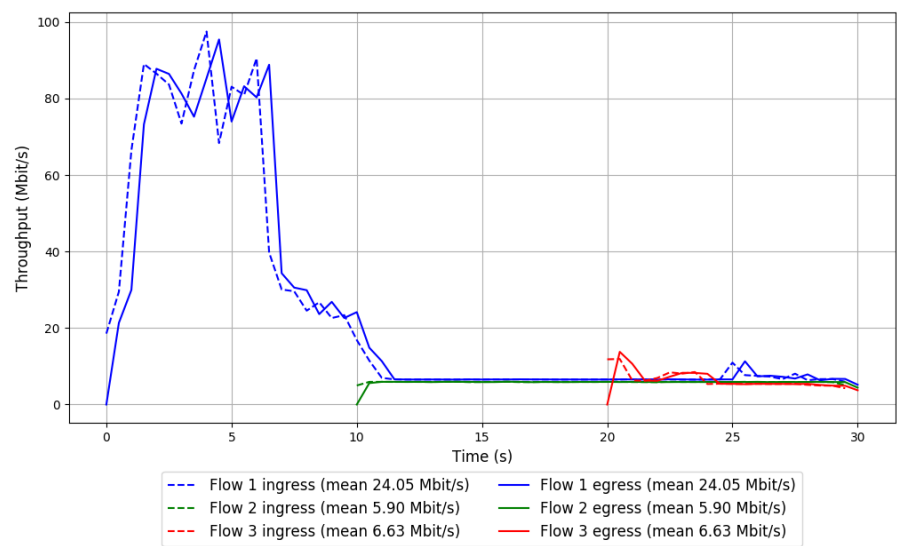


Run 3: Statistics of PCC-Expr

Start at: 2019-02-20 10:46:30  
End at: 2019-02-20 10:47:00  
Local clock offset: -56.876 ms  
Remote clock offset: 0.215 ms

# Below is generated by plot.py at 2019-02-20 12:05:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 30.15 Mbit/s  
95th percentile per-packet one-way delay: -28.235 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 24.05 Mbit/s  
95th percentile per-packet one-way delay: -27.110 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 5.90 Mbit/s  
95th percentile per-packet one-way delay: -54.232 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 6.63 Mbit/s  
95th percentile per-packet one-way delay: -54.217 ms  
Loss rate: 0.00%

Run 3: Report of PCC-Expr — Data Link

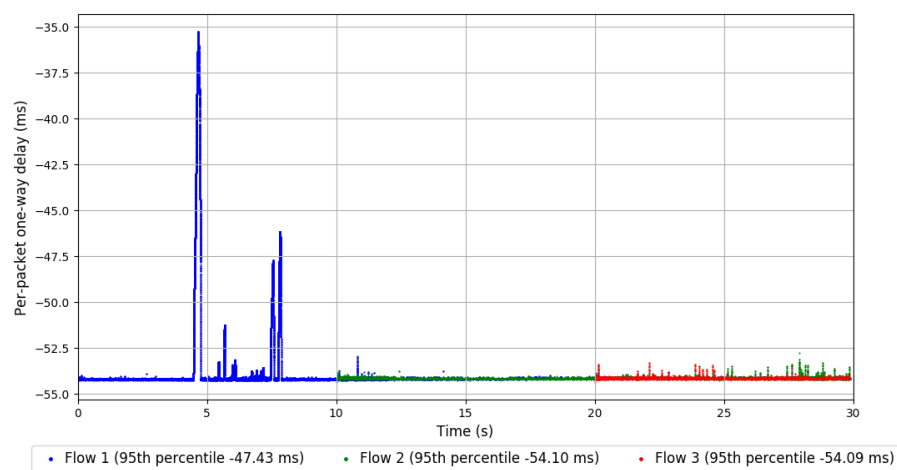
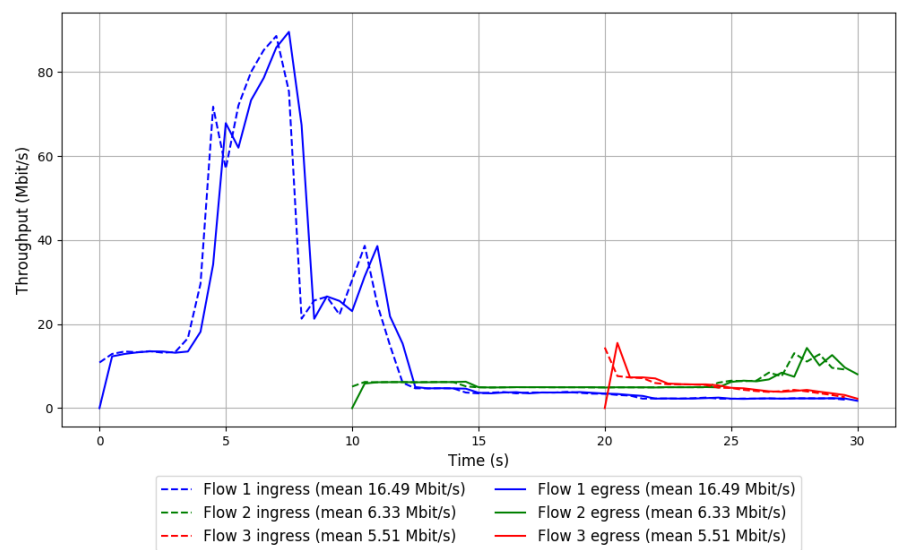


Run 4: Statistics of PCC-Expr

Start at: 2019-02-20 11:10:29  
End at: 2019-02-20 11:10:59  
Local clock offset: -56.211 ms  
Remote clock offset: 0.583 ms

# Below is generated by plot.py at 2019-02-20 12:05:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 22.51 Mbit/s  
95th percentile per-packet one-way delay: -49.133 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 16.49 Mbit/s  
95th percentile per-packet one-way delay: -47.428 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 6.33 Mbit/s  
95th percentile per-packet one-way delay: -54.100 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 5.51 Mbit/s  
95th percentile per-packet one-way delay: -54.090 ms  
Loss rate: 0.00%

Run 4: Report of PCC-Expr — Data Link



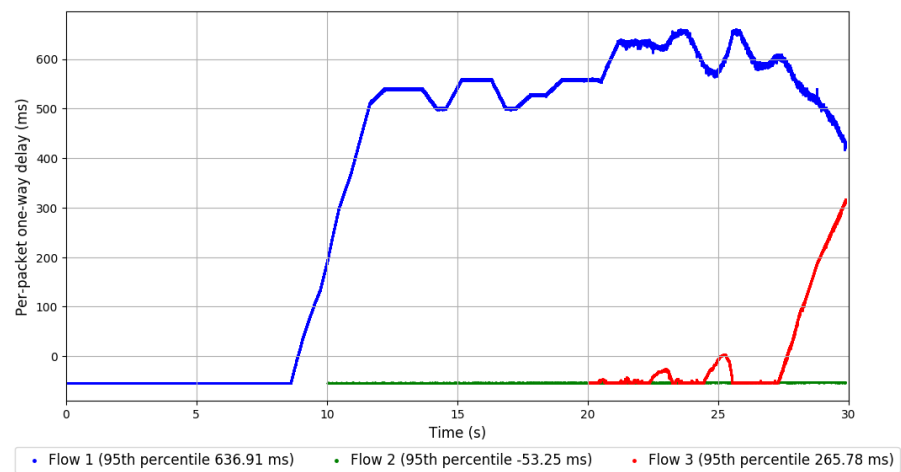
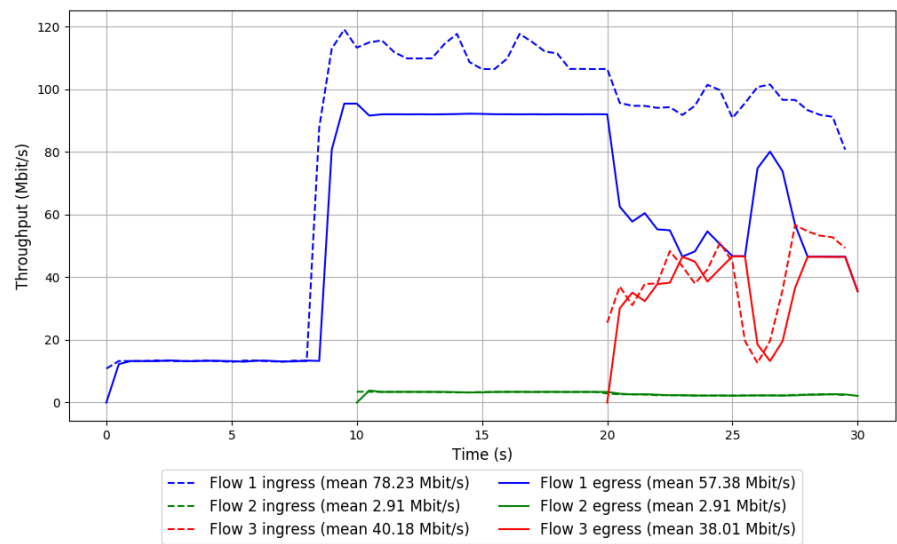


Run 5: Statistics of PCC-Expr

Start at: 2019-02-20 11:34:31  
End at: 2019-02-20 11:35:01  
Local clock offset: -58.642 ms  
Remote clock offset: 0.895 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 71.86 Mbit/s  
95th percentile per-packet one-way delay: 634.793 ms  
Loss rate: 23.09%  
-- Flow 1:  
Average throughput: 57.38 Mbit/s  
95th percentile per-packet one-way delay: 636.907 ms  
Loss rate: 26.66%  
-- Flow 2:  
Average throughput: 2.91 Mbit/s  
95th percentile per-packet one-way delay: -53.254 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 38.01 Mbit/s  
95th percentile per-packet one-way delay: 265.776 ms  
Loss rate: 5.41%

Run 5: Report of PCC-Expr — Data Link

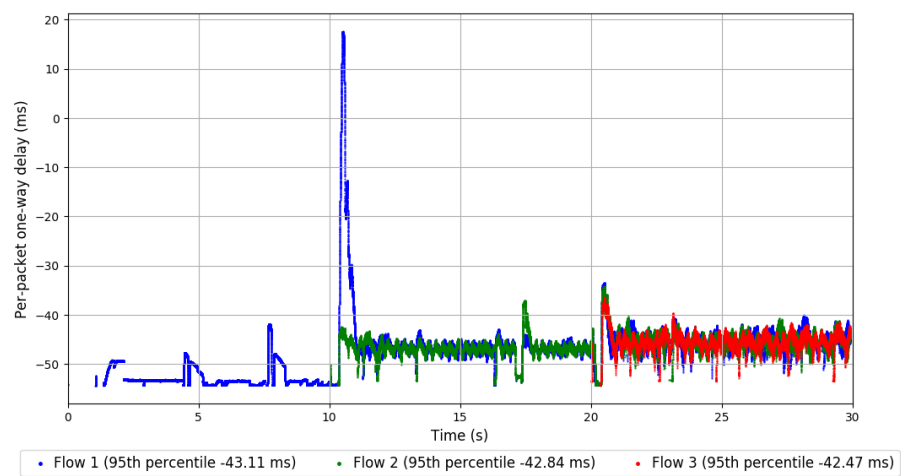
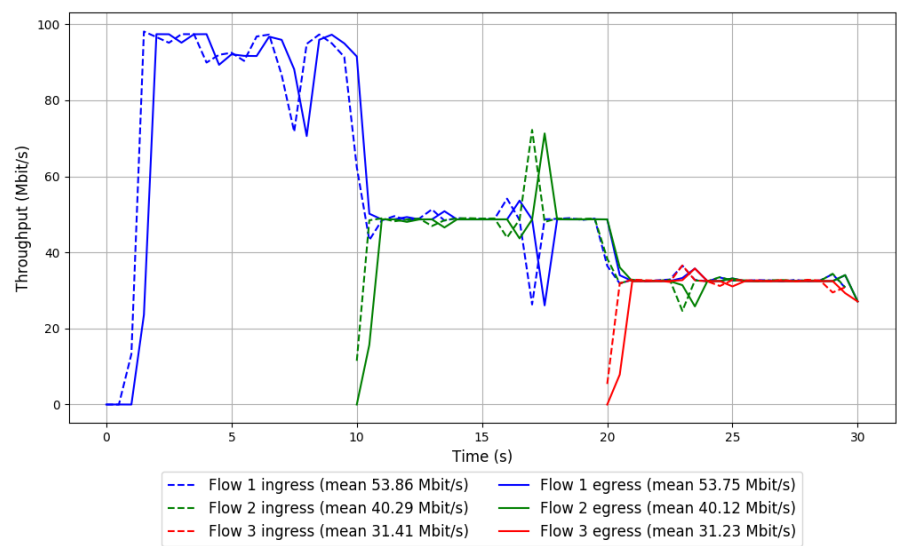


Run 1: Statistics of QUIC Cubic

Start at: 2019-02-20 09:56:03  
End at: 2019-02-20 09:56:33  
Local clock offset: -61.832 ms  
Remote clock offset: -0.428 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.79 Mbit/s  
95th percentile per-packet one-way delay: -42.916 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 53.75 Mbit/s  
95th percentile per-packet one-way delay: -43.114 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 40.12 Mbit/s  
95th percentile per-packet one-way delay: -42.844 ms  
Loss rate: 0.41%  
-- Flow 3:  
Average throughput: 31.23 Mbit/s  
95th percentile per-packet one-way delay: -42.466 ms  
Loss rate: 0.59%

Run 1: Report of QUIC Cubic — Data Link

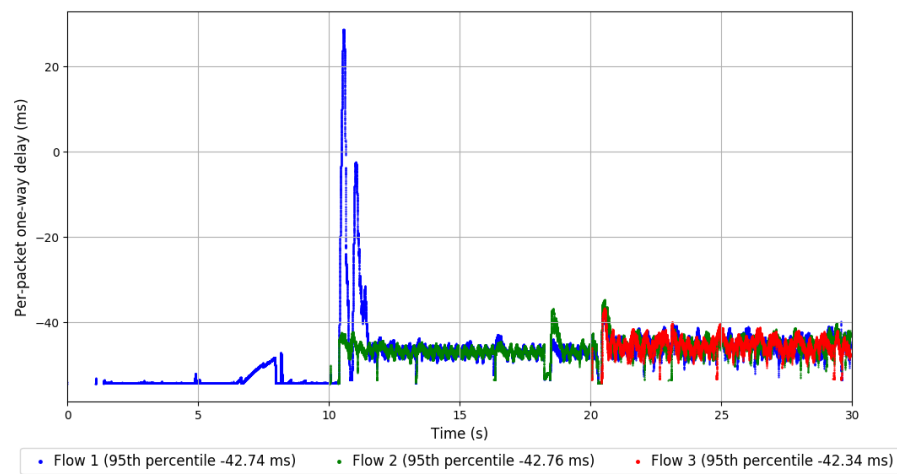
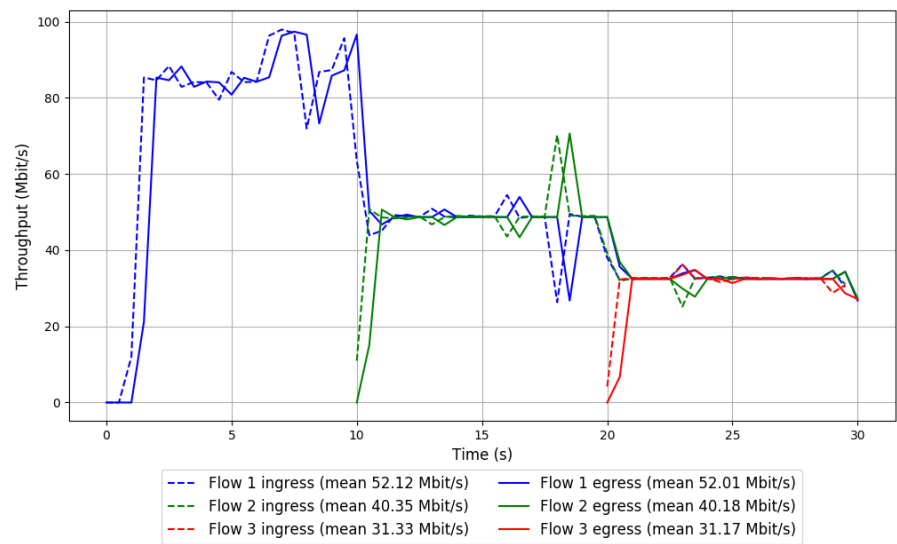


Run 2: Statistics of QUIC Cubic

Start at: 2019-02-20 10:20:05  
End at: 2019-02-20 10:20:35  
Local clock offset: -61.905 ms  
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.05 Mbit/s  
95th percentile per-packet one-way delay: -42.639 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 52.01 Mbit/s  
95th percentile per-packet one-way delay: -42.745 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 40.18 Mbit/s  
95th percentile per-packet one-way delay: -42.755 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 31.17 Mbit/s  
95th percentile per-packet one-way delay: -42.343 ms  
Loss rate: 0.59%

Run 2: Report of QUIC Cubic — Data Link

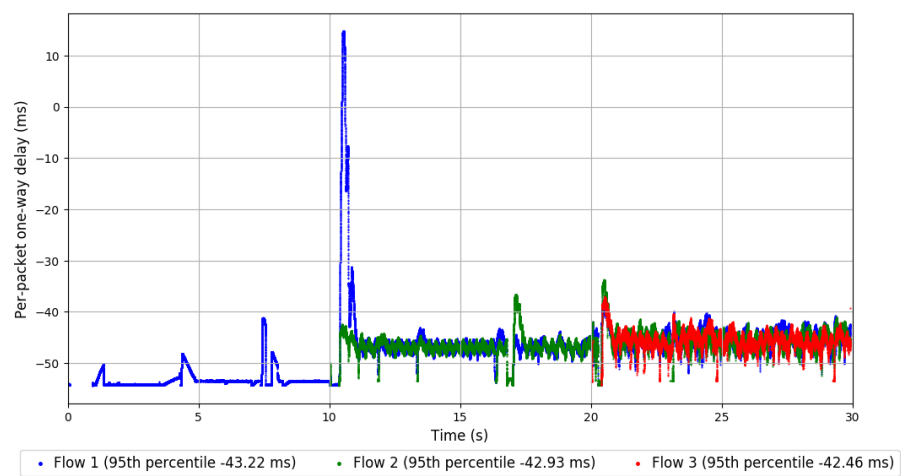
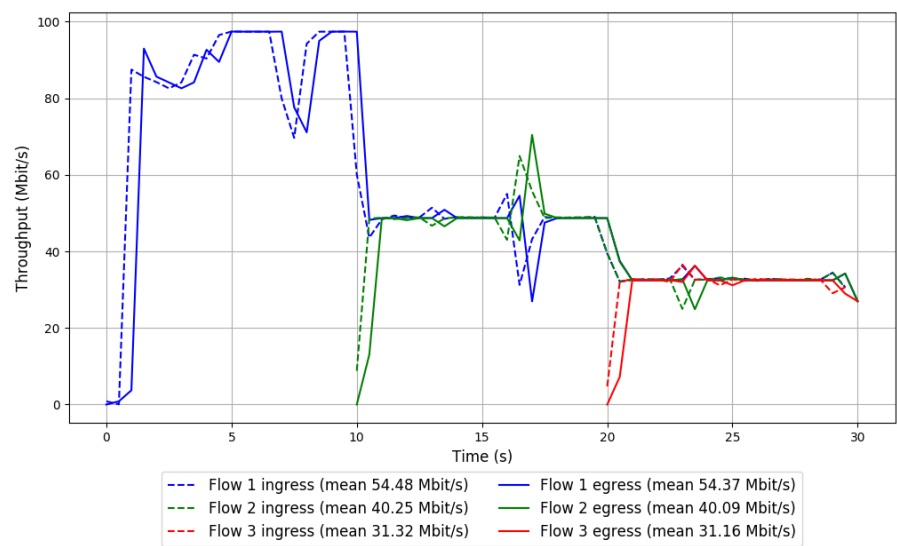


Run 3: Statistics of QUIC Cubic

Start at: 2019-02-20 10:44:13  
End at: 2019-02-20 10:44:43  
Local clock offset: -57.208 ms  
Remote clock offset: 0.107 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.33 Mbit/s  
95th percentile per-packet one-way delay: -42.952 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 54.37 Mbit/s  
95th percentile per-packet one-way delay: -43.224 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 40.09 Mbit/s  
95th percentile per-packet one-way delay: -42.927 ms  
Loss rate: 0.41%  
-- Flow 3:  
Average throughput: 31.16 Mbit/s  
95th percentile per-packet one-way delay: -42.461 ms  
Loss rate: 0.56%

Run 3: Report of QUIC Cubic — Data Link



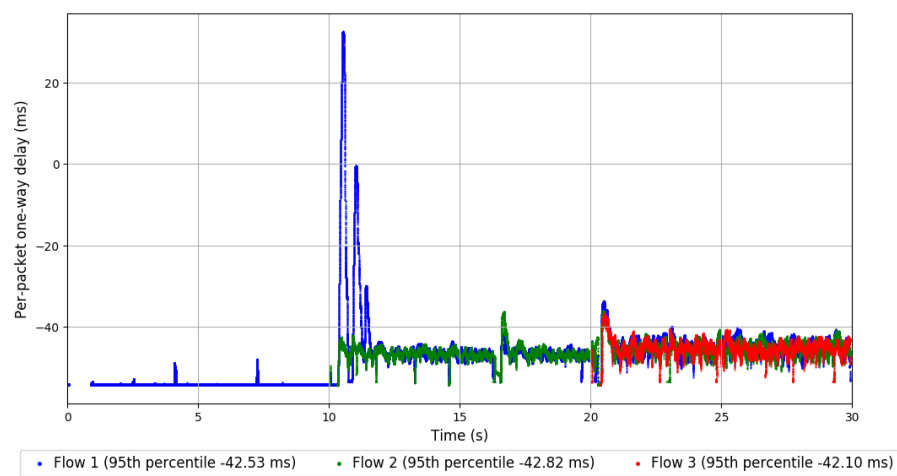
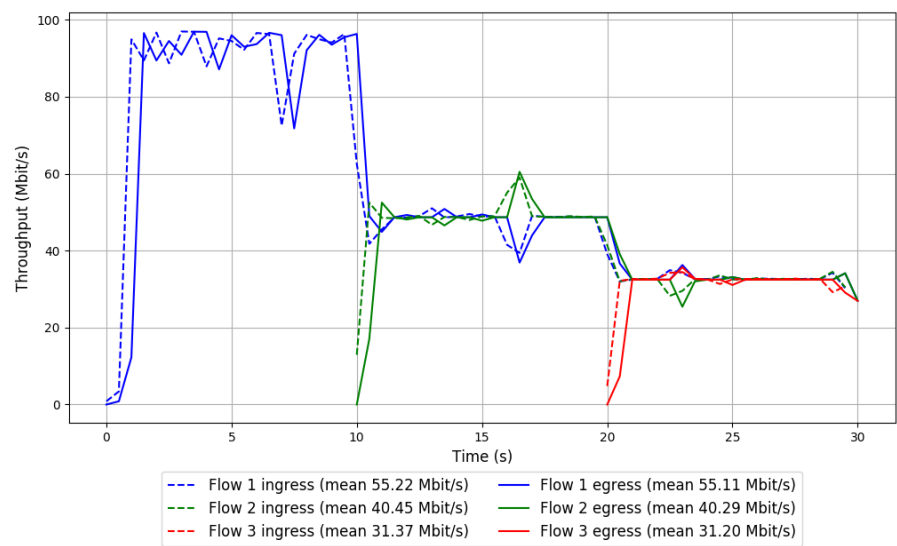


Run 4: Statistics of QUIC Cubic

Start at: 2019-02-20 11:08:12  
End at: 2019-02-20 11:08:42  
Local clock offset: -56.146 ms  
Remote clock offset: 0.549 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.23 Mbit/s  
95th percentile per-packet one-way delay: -42.569 ms  
Loss rate: 0.29%  
-- Flow 1:  
Average throughput: 55.11 Mbit/s  
95th percentile per-packet one-way delay: -42.530 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 40.29 Mbit/s  
95th percentile per-packet one-way delay: -42.819 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 31.20 Mbit/s  
95th percentile per-packet one-way delay: -42.097 ms  
Loss rate: 0.57%

Run 4: Report of QUIC Cubic — Data Link

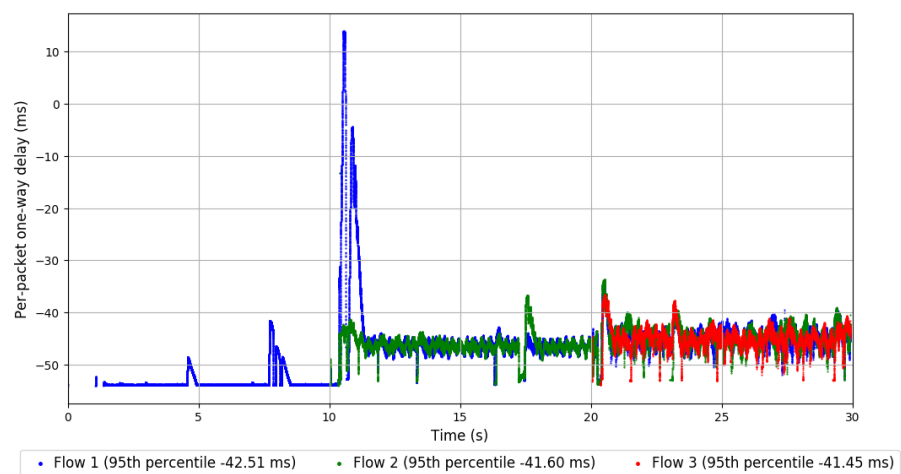
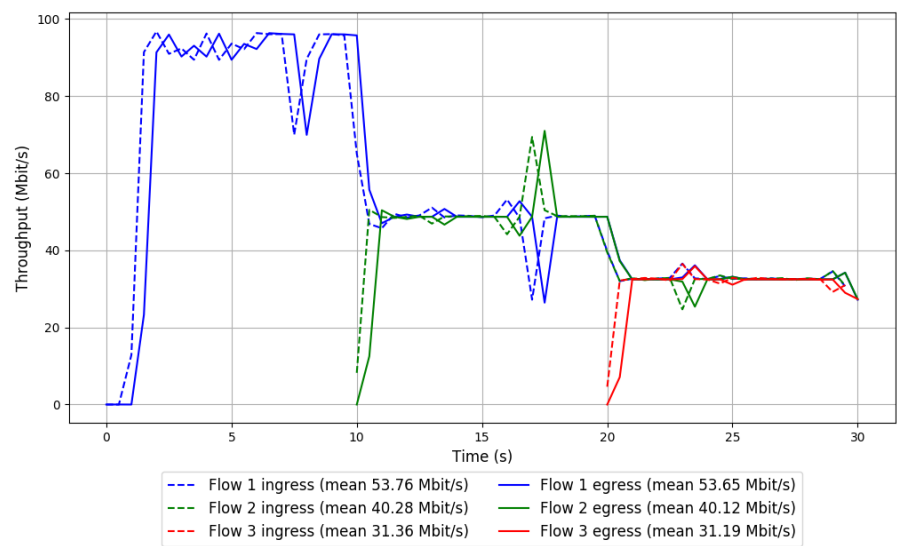


Run 5: Statistics of QUIC Cubic

Start at: 2019-02-20 11:32:15  
End at: 2019-02-20 11:32:45  
Local clock offset: -57.242 ms  
Remote clock offset: 0.861 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.65 Mbit/s  
95th percentile per-packet one-way delay: -41.970 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 53.65 Mbit/s  
95th percentile per-packet one-way delay: -42.513 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 40.12 Mbit/s  
95th percentile per-packet one-way delay: -41.599 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 31.19 Mbit/s  
95th percentile per-packet one-way delay: -41.447 ms  
Loss rate: 0.56%

Run 5: Report of QUIC Cubic — Data Link

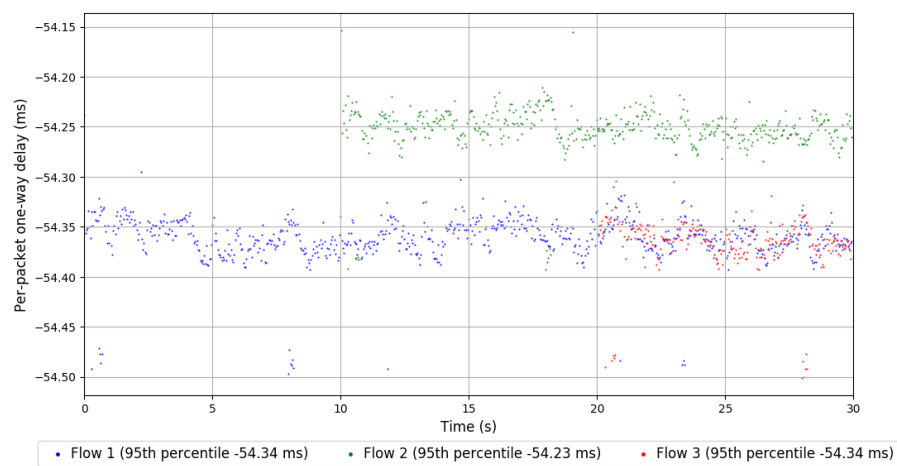
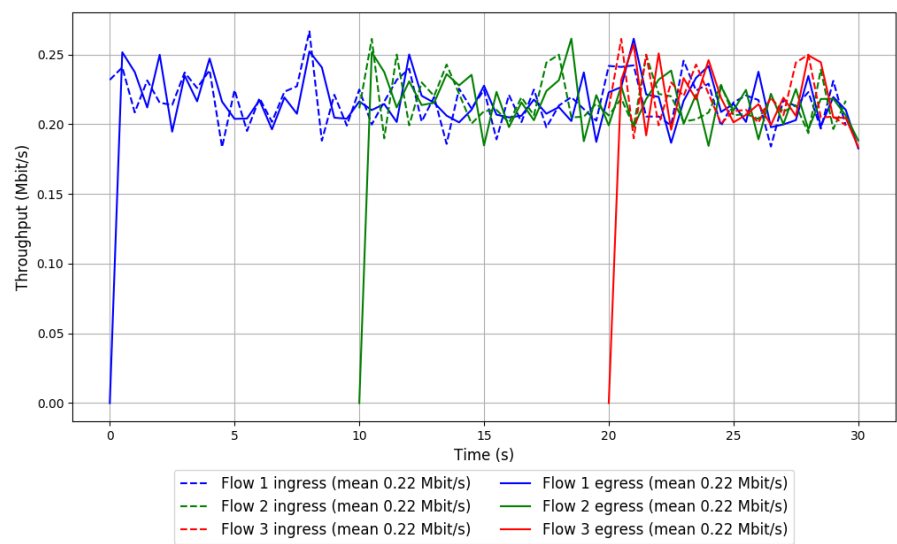


Run 1: Statistics of SReAM

Start at: 2019-02-20 10:03:58  
End at: 2019-02-20 10:04:28  
Local clock offset: -61.825 ms  
Remote clock offset: -0.273 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: -54.236 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.335 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.226 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.338 ms  
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

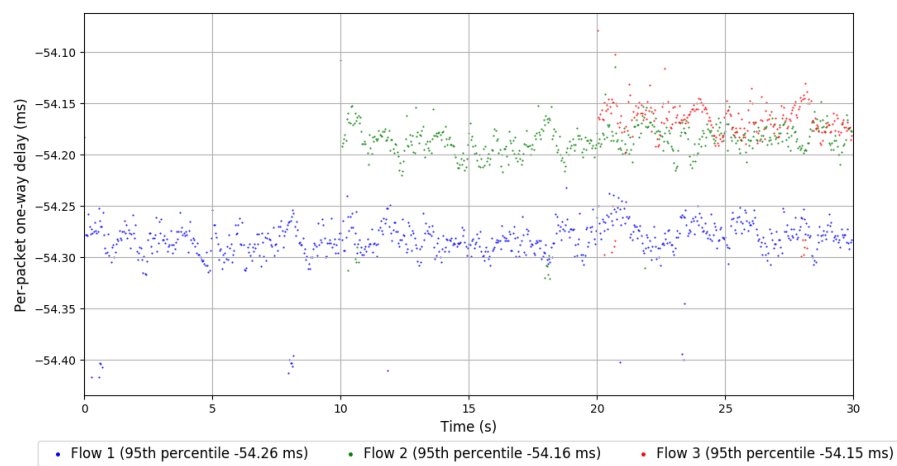
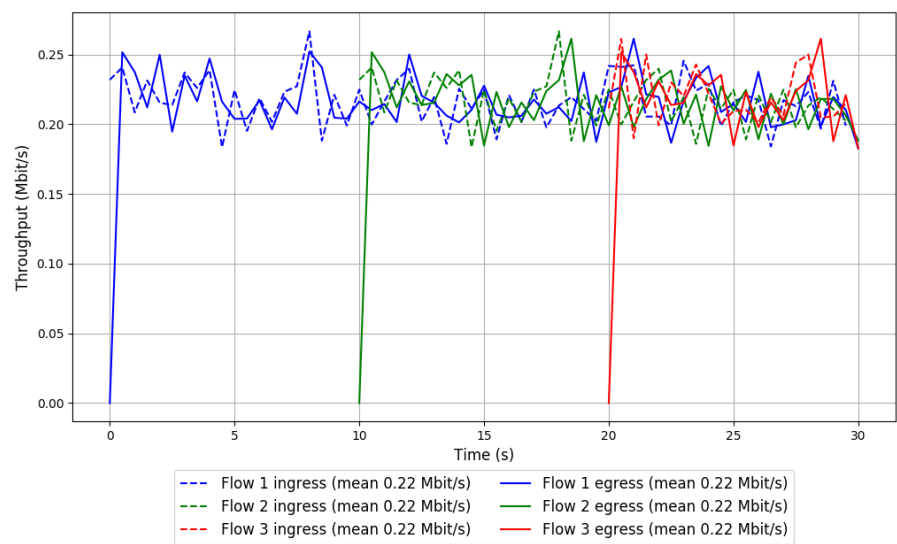


Run 2: Statistics of SReAM

Start at: 2019-02-20 10:28:06  
End at: 2019-02-20 10:28:36  
Local clock offset: -61.955 ms  
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: -54.155 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.257 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.163 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.145 ms  
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



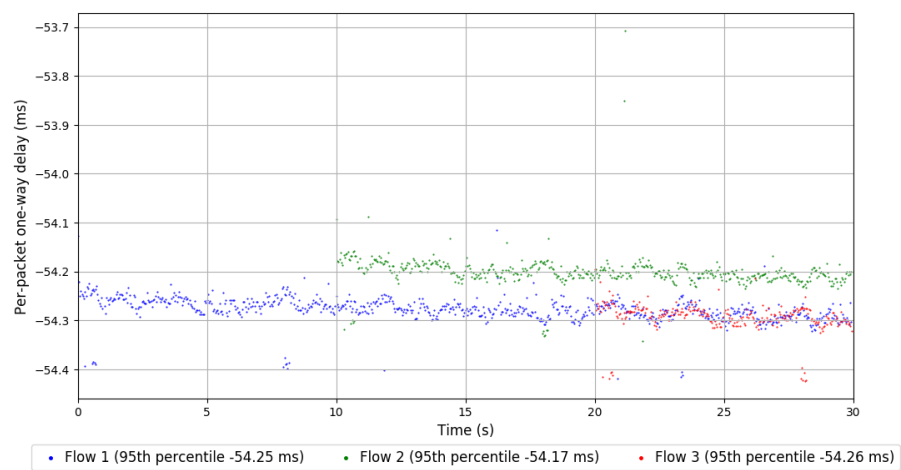
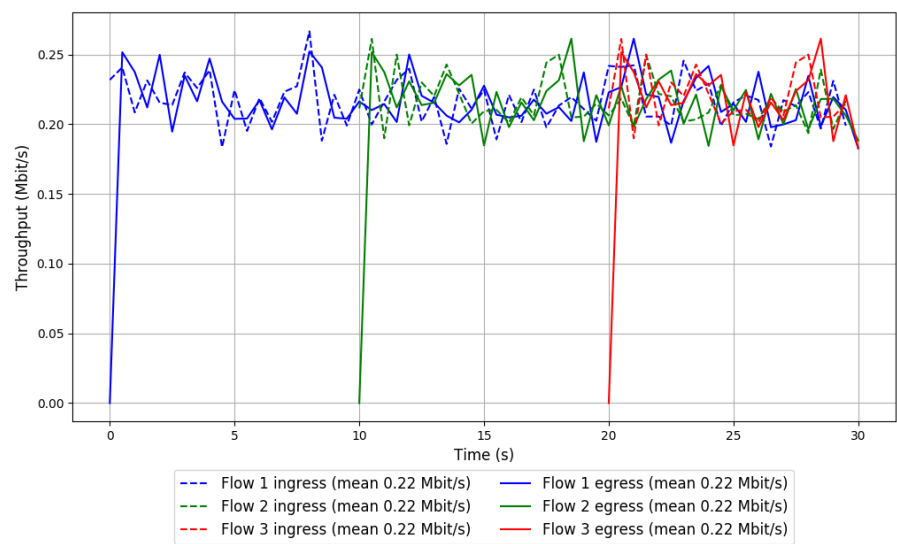


Run 3: Statistics of SCReAM

Start at: 2019-02-20 10:52:08  
End at: 2019-02-20 10:52:38  
Local clock offset: -56.167 ms  
Remote clock offset: 0.26 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: -54.183 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.246 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.172 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.263 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

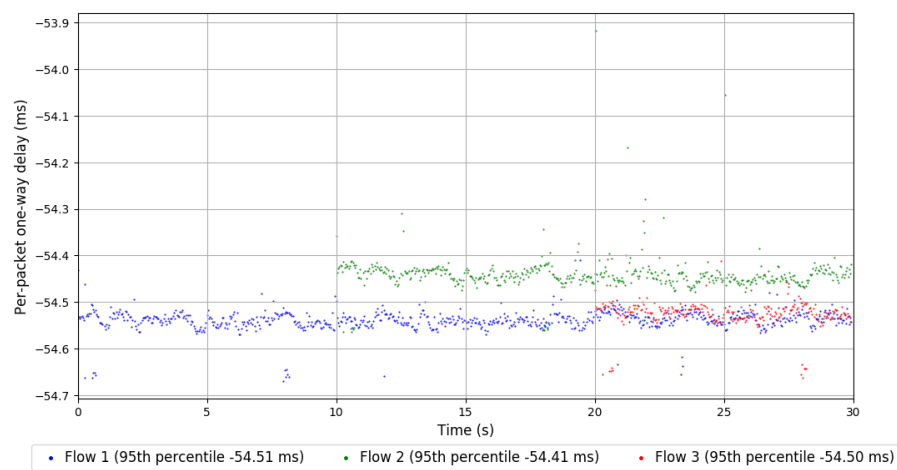
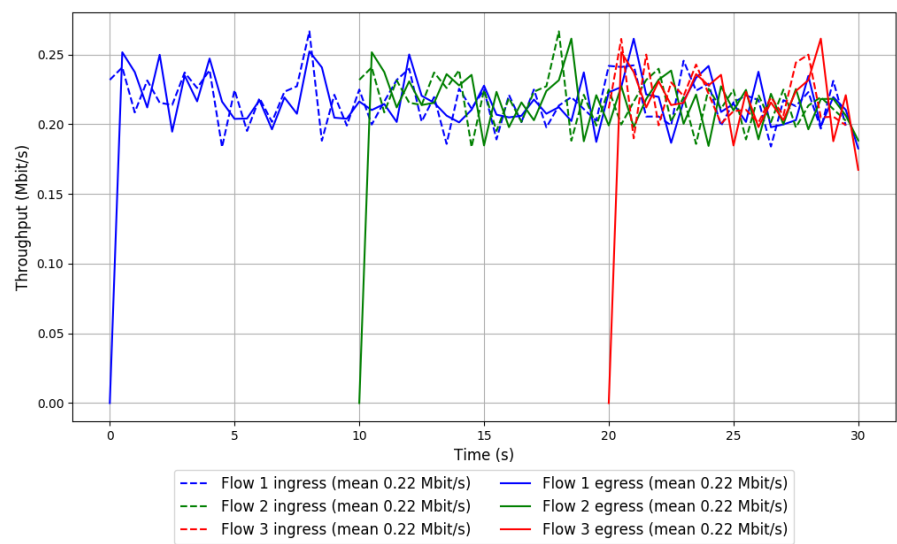


Run 4: Statistics of SReAM

Start at: 2019-02-20 11:16:07  
End at: 2019-02-20 11:16:37  
Local clock offset: -56.491 ms  
Remote clock offset: 0.619 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: -54.425 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.514 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.410 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.499 ms  
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

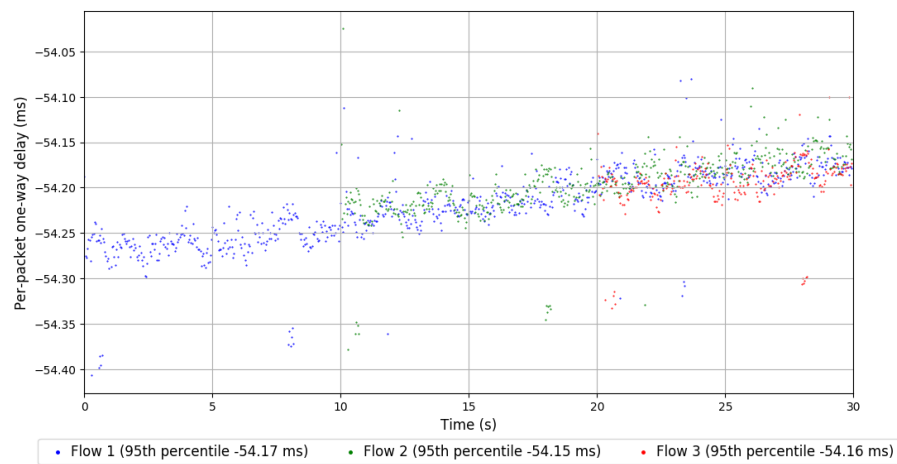
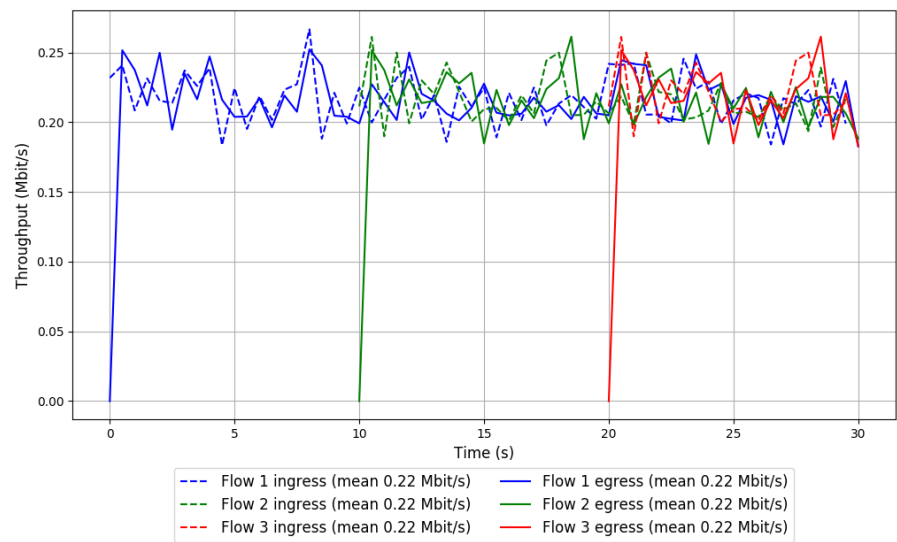


Run 5: Statistics of SReAM

Start at: 2019-02-20 11:40:14  
End at: 2019-02-20 11:40:44  
Local clock offset: -60.082 ms  
Remote clock offset: 1.044 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: -54.161 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.167 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.154 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: -54.163 ms  
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

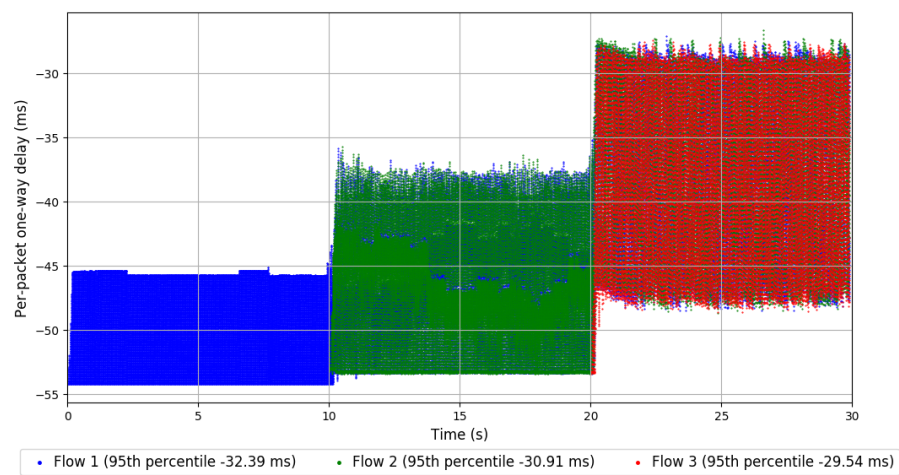
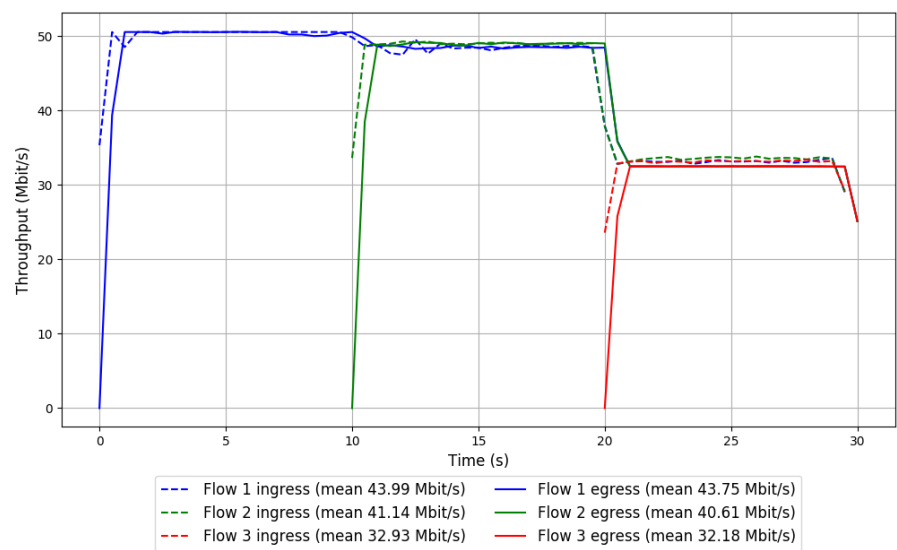


Run 1: Statistics of Sprout

Start at: 2019-02-20 10:15:31  
End at: 2019-02-20 10:16:01  
Local clock offset: -61.859 ms  
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2019-02-20 12:05:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.39 Mbit/s  
95th percentile per-packet one-way delay: -30.945 ms  
Loss rate: 0.99%  
-- Flow 1:  
Average throughput: 43.75 Mbit/s  
95th percentile per-packet one-way delay: -32.390 ms  
Loss rate: 0.51%  
-- Flow 2:  
Average throughput: 40.61 Mbit/s  
95th percentile per-packet one-way delay: -30.907 ms  
Loss rate: 1.29%  
-- Flow 3:  
Average throughput: 32.18 Mbit/s  
95th percentile per-packet one-way delay: -29.540 ms  
Loss rate: 2.16%

Run 1: Report of Sprout — Data Link



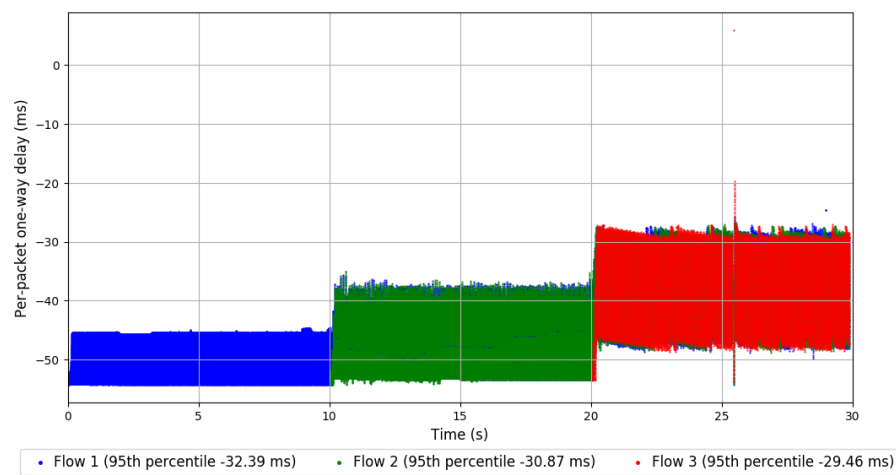
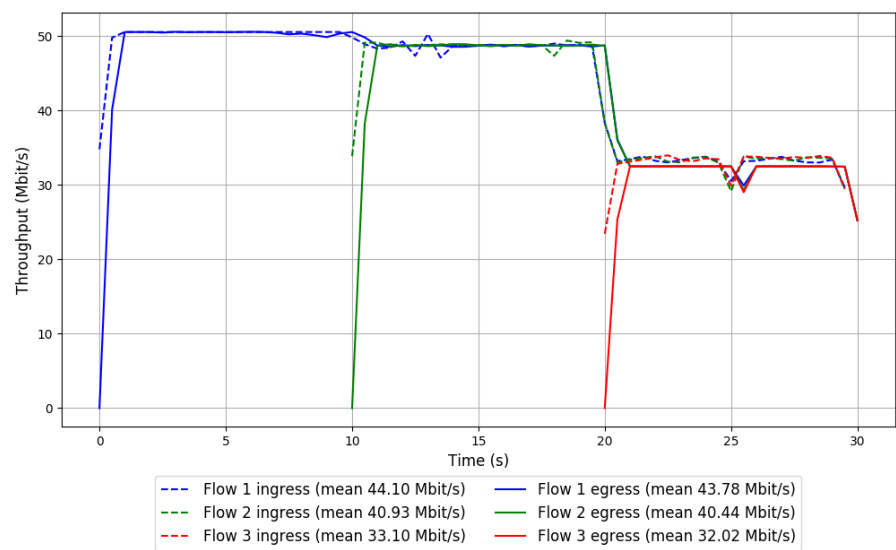


Run 2: Statistics of Sprout

Start at: 2019-02-20 10:39:38  
End at: 2019-02-20 10:40:08  
Local clock offset: -58.098 ms  
Remote clock offset: 0.071 ms

# Below is generated by plot.py at 2019-02-20 12:05:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.25 Mbit/s  
95th percentile per-packet one-way delay: -30.902 ms  
Loss rate: 1.18%  
-- Flow 1:  
Average throughput: 43.78 Mbit/s  
95th percentile per-packet one-way delay: -32.389 ms  
Loss rate: 0.67%  
-- Flow 2:  
Average throughput: 40.44 Mbit/s  
95th percentile per-packet one-way delay: -30.872 ms  
Loss rate: 1.19%  
-- Flow 3:  
Average throughput: 32.02 Mbit/s  
95th percentile per-packet one-way delay: -29.456 ms  
Loss rate: 3.24%

Run 2: Report of Sprout — Data Link

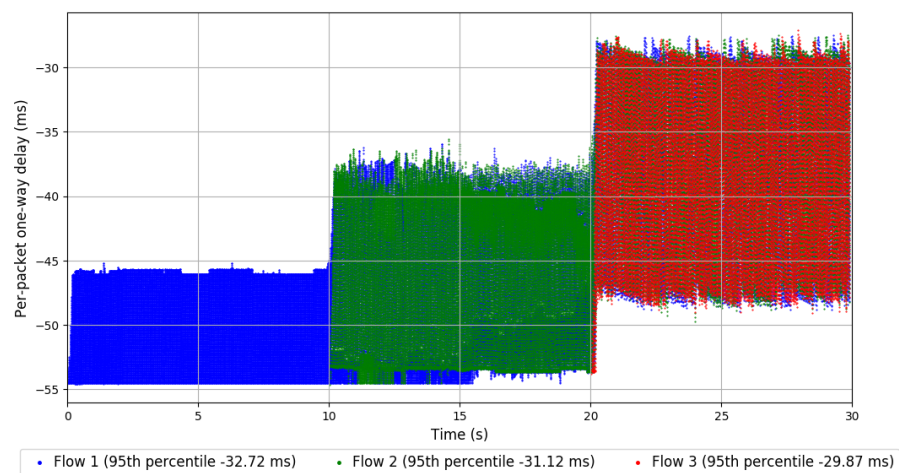
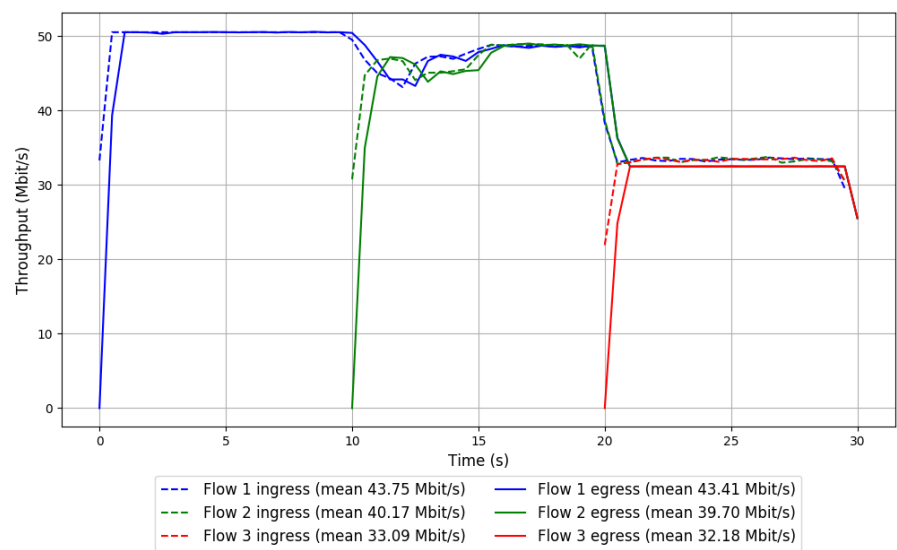


### Run 3: Statistics of Sprout

Start at: 2019-02-20 11:03:37  
End at: 2019-02-20 11:04:07  
Local clock offset: -56.253 ms  
Remote clock offset: 0.487 ms

```
# Below is generated by plot.py at 2019-02-20 12:05:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.45 Mbit/s
95th percentile per-packet one-way delay: -31.226 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 43.41 Mbit/s
95th percentile per-packet one-way delay: -32.715 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 39.70 Mbit/s
95th percentile per-packet one-way delay: -31.119 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 32.18 Mbit/s
95th percentile per-packet one-way delay: -29.869 ms
Loss rate: 2.72%
```

Run 3: Report of Sprout — Data Link

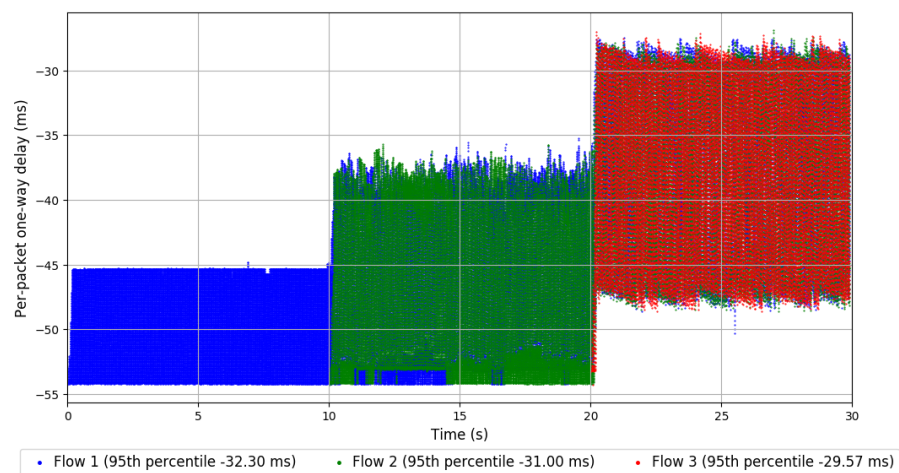
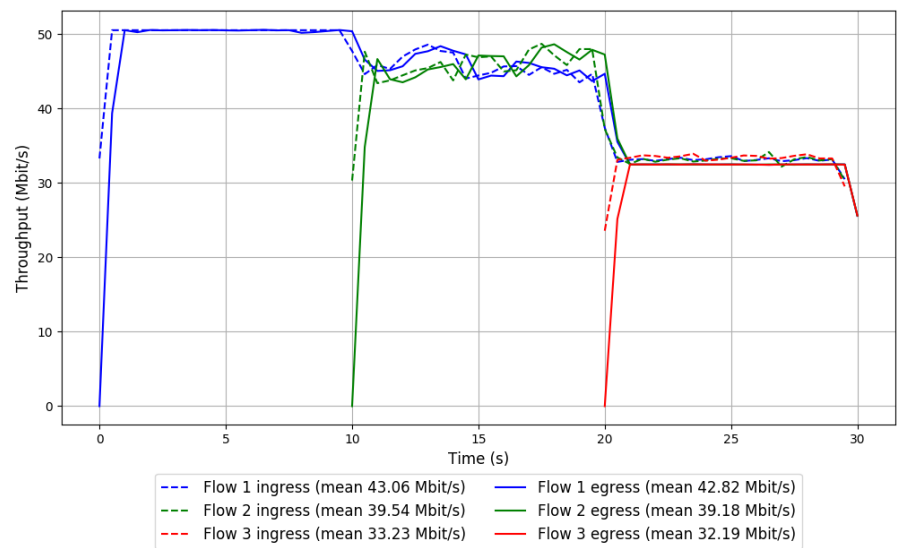


#### Run 4: Statistics of Sprout

Start at: 2019-02-20 11:27:39  
End at: 2019-02-20 11:28:09  
Local clock offset: -55.895 ms  
Remote clock offset: 0.864 ms

```
# Below is generated by plot.py at 2019-02-20 12:06:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.51 Mbit/s
95th percentile per-packet one-way delay: -30.959 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 42.82 Mbit/s
95th percentile per-packet one-way delay: -32.305 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 39.18 Mbit/s
95th percentile per-packet one-way delay: -31.004 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 32.19 Mbit/s
95th percentile per-packet one-way delay: -29.574 ms
Loss rate: 3.05%
```

Run 4: Report of Sprout — Data Link

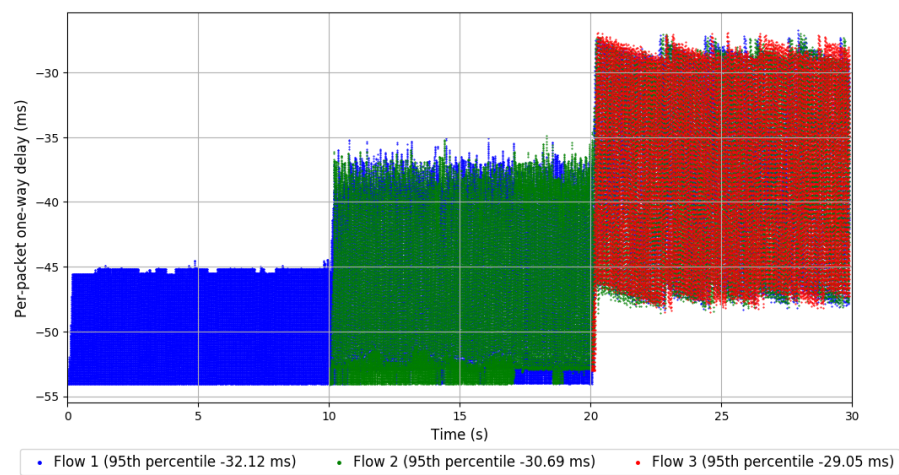
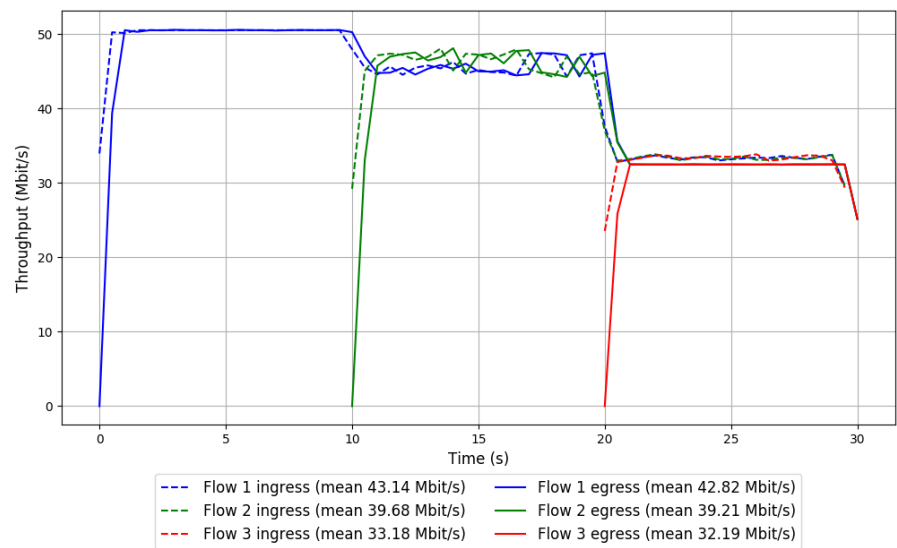


Run 5: Statistics of Sprout

Start at: 2019-02-20 11:51:47  
End at: 2019-02-20 11:52:17  
Local clock offset: -61.654 ms  
Remote clock offset: 1.153 ms

# Below is generated by plot.py at 2019-02-20 12:06:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 79.54 Mbit/s  
95th percentile per-packet one-way delay: -30.625 ms  
Loss rate: 1.16%  
-- Flow 1:  
Average throughput: 42.82 Mbit/s  
95th percentile per-packet one-way delay: -32.123 ms  
Loss rate: 0.71%  
-- Flow 2:  
Average throughput: 39.21 Mbit/s  
95th percentile per-packet one-way delay: -30.694 ms  
Loss rate: 1.18%  
-- Flow 3:  
Average throughput: 32.19 Mbit/s  
95th percentile per-packet one-way delay: -29.053 ms  
Loss rate: 2.88%

Run 5: Report of Sprout — Data Link



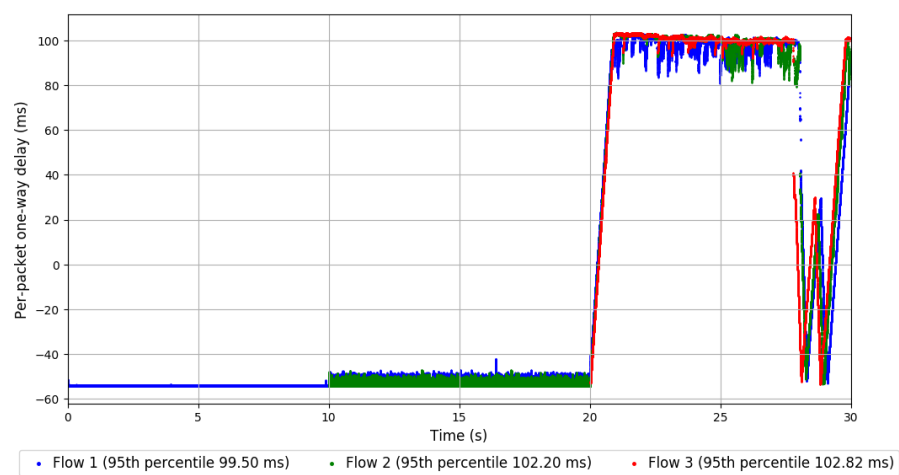
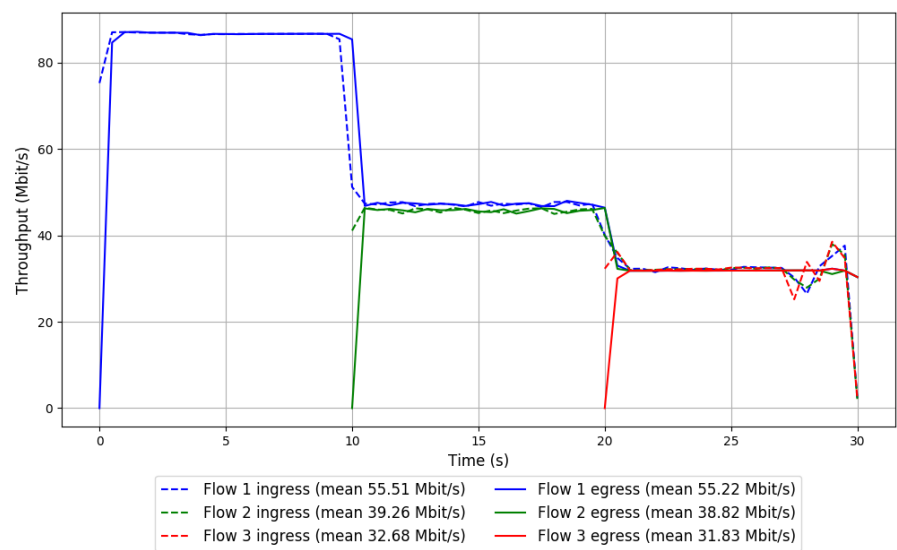


```
Run 1: Statistics of TaoVA-100x

Start at: 2019-02-20 10:13:10
End at: 2019-02-20 10:13:40
Local clock offset: -61.768 ms
Remote clock offset: -0.215 ms

# Below is generated by plot.py at 2019-02-20 12:07:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.65 Mbit/s
95th percentile per-packet one-way delay: 101.763 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 55.22 Mbit/s
95th percentile per-packet one-way delay: 99.498 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 38.82 Mbit/s
95th percentile per-packet one-way delay: 102.200 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 31.83 Mbit/s
95th percentile per-packet one-way delay: 102.824 ms
Loss rate: 2.64%
```

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

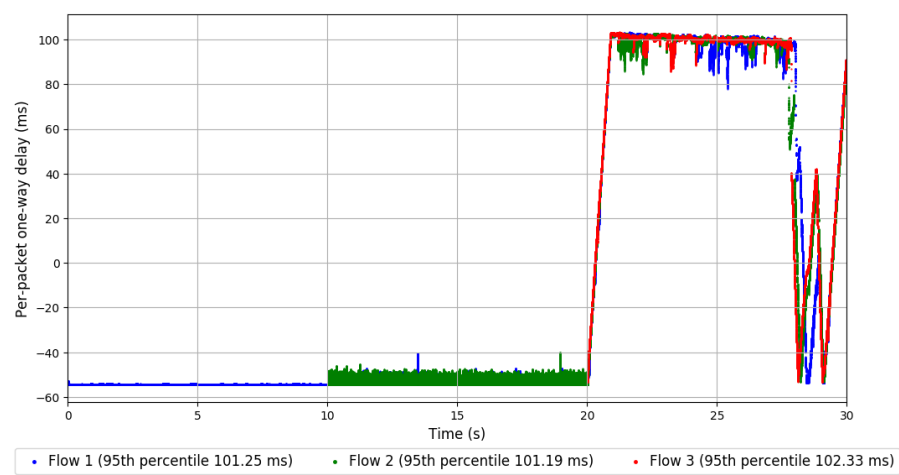
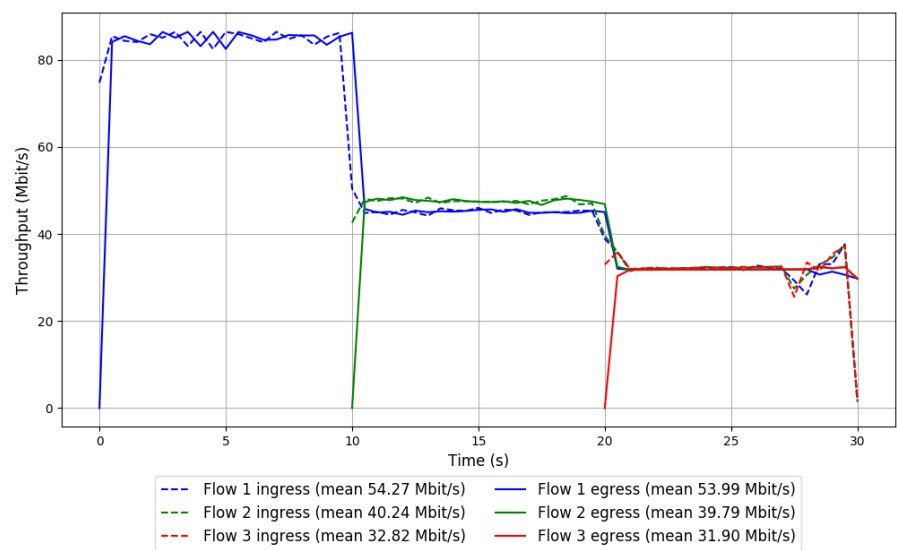


Run 2: Statistics of TaoVA-100x

Start at: 2019-02-20 10:37:18  
End at: 2019-02-20 10:37:48  
Local clock offset: -58.663 ms  
Remote clock offset: 0.071 ms

# Below is generated by plot.py at 2019-02-20 12:07:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.07 Mbit/s  
95th percentile per-packet one-way delay: 101.557 ms  
Loss rate: 0.98%  
-- Flow 1:  
Average throughput: 53.99 Mbit/s  
95th percentile per-packet one-way delay: 101.248 ms  
Loss rate: 0.53%  
-- Flow 2:  
Average throughput: 39.79 Mbit/s  
95th percentile per-packet one-way delay: 101.194 ms  
Loss rate: 1.14%  
-- Flow 3:  
Average throughput: 31.90 Mbit/s  
95th percentile per-packet one-way delay: 102.326 ms  
Loss rate: 2.84%

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

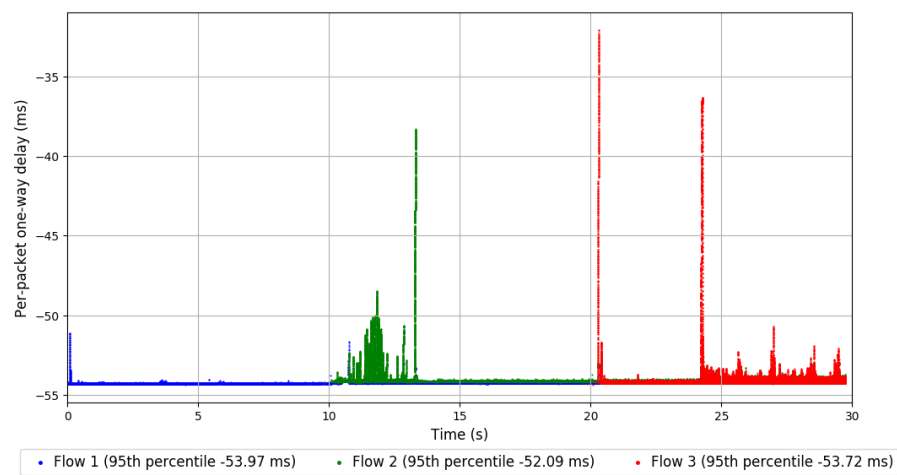
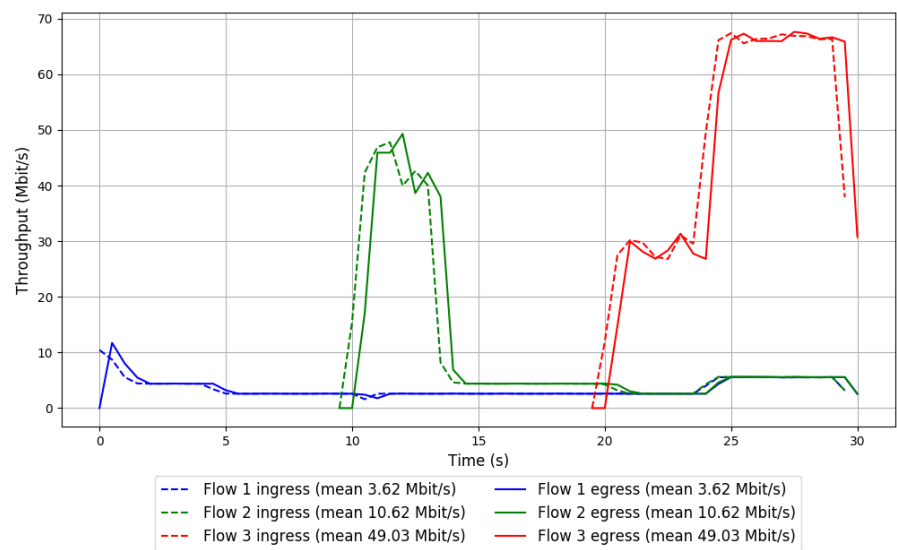


Run 3: Statistics of TaoVA-100x

Start at: 2019-02-20 11:01:22  
End at: 2019-02-20 11:01:52  
Local clock offset: -55.761 ms  
Remote clock offset: 0.475 ms

# Below is generated by plot.py at 2019-02-20 12:07:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 26.98 Mbit/s  
95th percentile per-packet one-way delay: -53.502 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 3.62 Mbit/s  
95th percentile per-packet one-way delay: -53.969 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 10.62 Mbit/s  
95th percentile per-packet one-way delay: -52.085 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 49.03 Mbit/s  
95th percentile per-packet one-way delay: -53.724 ms  
Loss rate: 0.02%

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

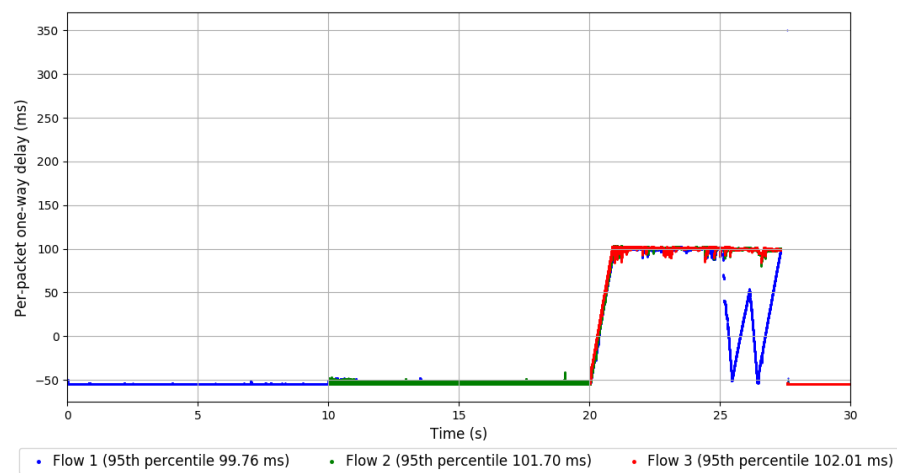
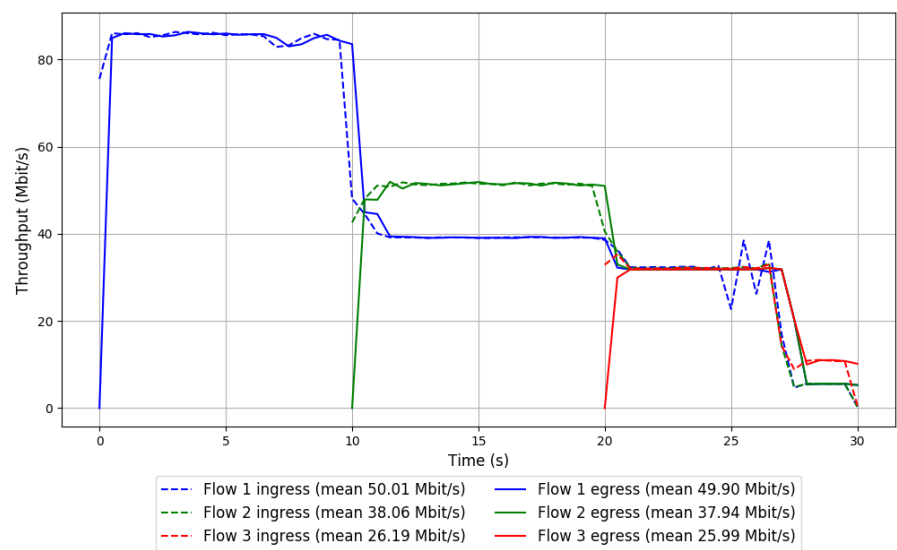


Run 4: Statistics of TaoVA-100x

Start at: 2019-02-20 11:25:20  
End at: 2019-02-20 11:25:50  
Local clock offset: -55.973 ms  
Remote clock offset: 0.888 ms

# Below is generated by plot.py at 2019-02-20 12:07:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 83.80 Mbit/s  
95th percentile per-packet one-way delay: 101.366 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 49.90 Mbit/s  
95th percentile per-packet one-way delay: 99.758 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 37.94 Mbit/s  
95th percentile per-packet one-way delay: 101.705 ms  
Loss rate: 0.33%  
-- Flow 3:  
Average throughput: 25.99 Mbit/s  
95th percentile per-packet one-way delay: 102.010 ms  
Loss rate: 0.82%

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



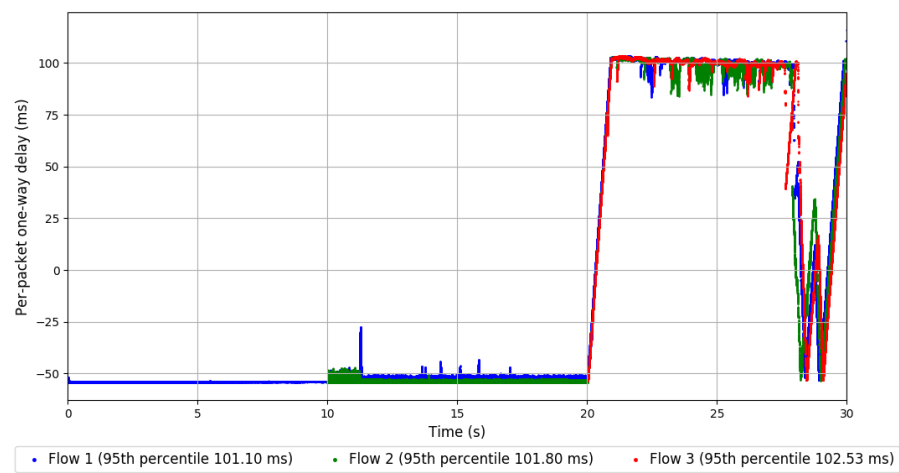
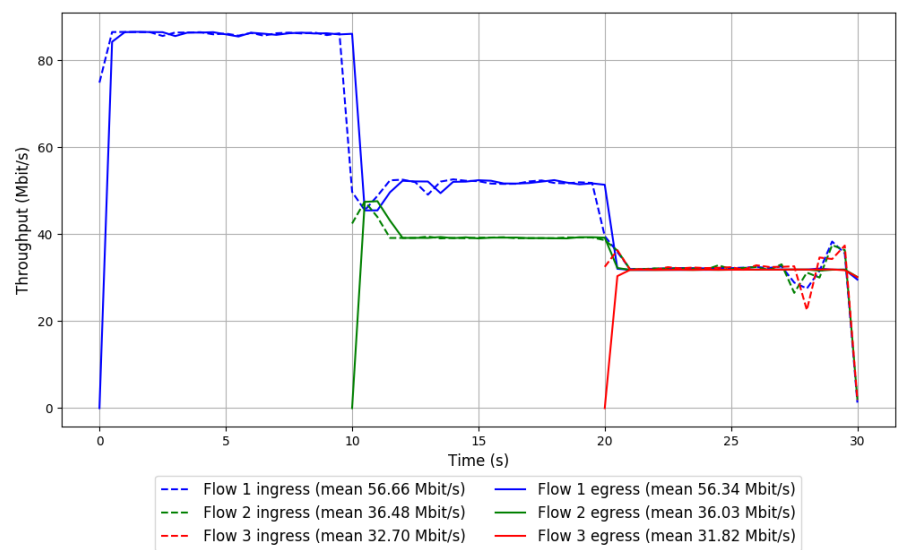


Run 5: Statistics of TaoVA-100x

Start at: 2019-02-20 11:49:26  
End at: 2019-02-20 11:49:56  
Local clock offset: -61.467 ms  
Remote clock offset: 1.159 ms

# Below is generated by plot.py at 2019-02-20 12:07:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.91 Mbit/s  
95th percentile per-packet one-way delay: 101.715 ms  
Loss rate: 0.97%  
-- Flow 1:  
Average throughput: 56.34 Mbit/s  
95th percentile per-packet one-way delay: 101.102 ms  
Loss rate: 0.52%  
-- Flow 2:  
Average throughput: 36.03 Mbit/s  
95th percentile per-packet one-way delay: 101.804 ms  
Loss rate: 1.22%  
-- Flow 3:  
Average throughput: 31.82 Mbit/s  
95th percentile per-packet one-way delay: 102.531 ms  
Loss rate: 2.77%

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

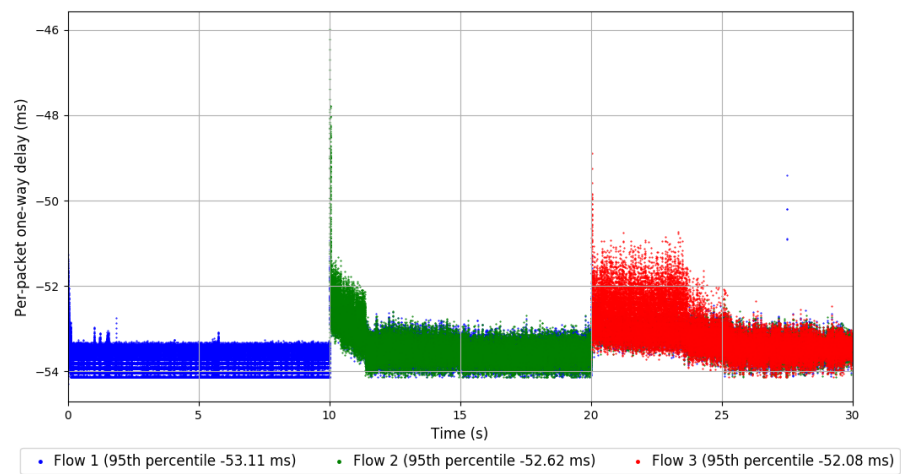
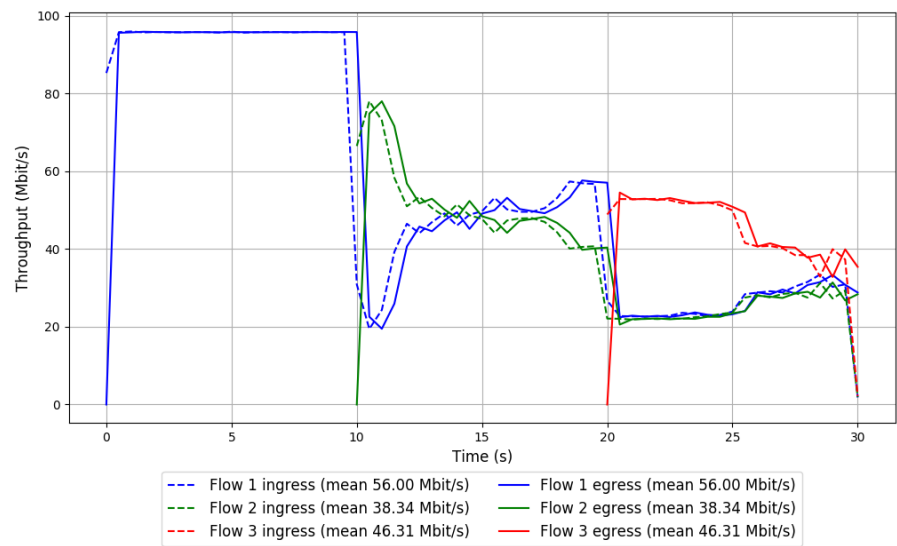


Run 1: Statistics of TCP Vegas

Start at: 2019-02-20 10:12:01  
End at: 2019-02-20 10:12:31  
Local clock offset: -61.851 ms  
Remote clock offset: -0.27 ms

# Below is generated by plot.py at 2019-02-20 12:07:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.91 Mbit/s  
95th percentile per-packet one-way delay: -52.712 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 56.00 Mbit/s  
95th percentile per-packet one-way delay: -53.108 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 38.34 Mbit/s  
95th percentile per-packet one-way delay: -52.615 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 46.31 Mbit/s  
95th percentile per-packet one-way delay: -52.080 ms  
Loss rate: 0.02%

Run 1: Report of TCP Vegas — Data Link

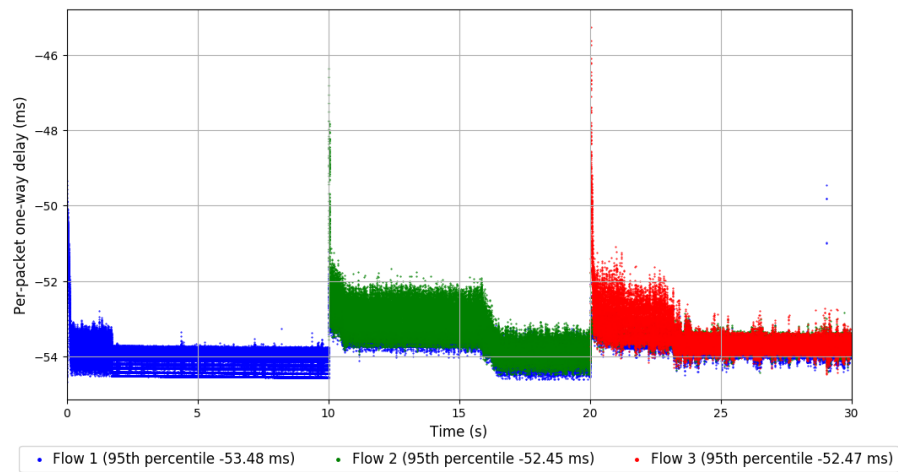
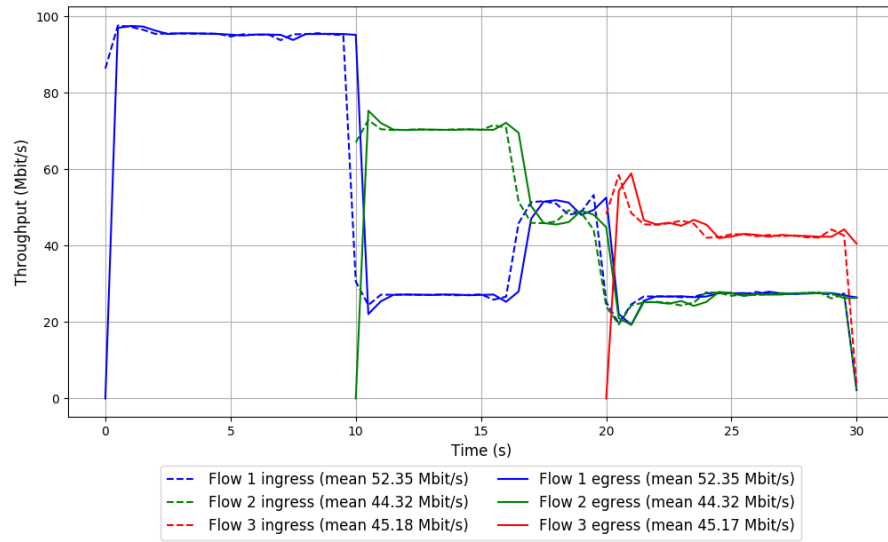


Run 2: Statistics of TCP Vegas

Start at: 2019-02-20 10:36:08  
End at: 2019-02-20 10:36:38  
Local clock offset: -59.137 ms  
Remote clock offset: 0.113 ms

# Below is generated by plot.py at 2019-02-20 12:07:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.87 Mbit/s  
95th percentile per-packet one-way delay: -52.667 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 52.35 Mbit/s  
95th percentile per-packet one-way delay: -53.485 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 44.32 Mbit/s  
95th percentile per-packet one-way delay: -52.454 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 45.17 Mbit/s  
95th percentile per-packet one-way delay: -52.468 ms  
Loss rate: 0.02%

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

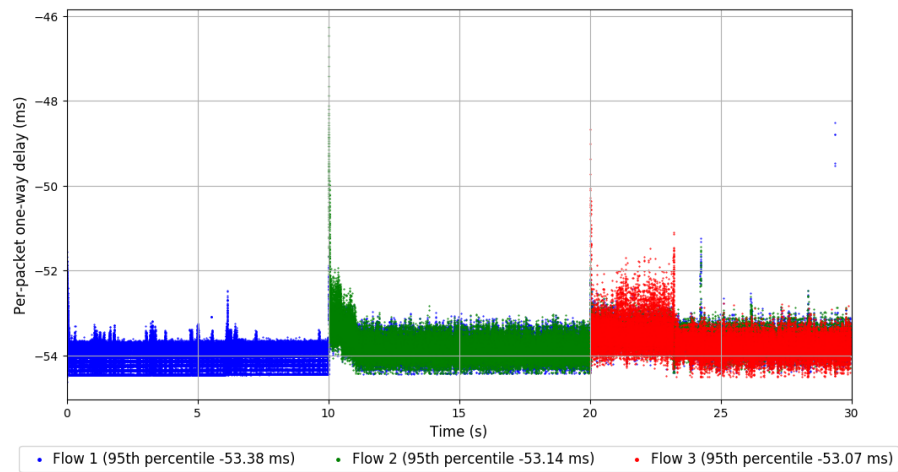
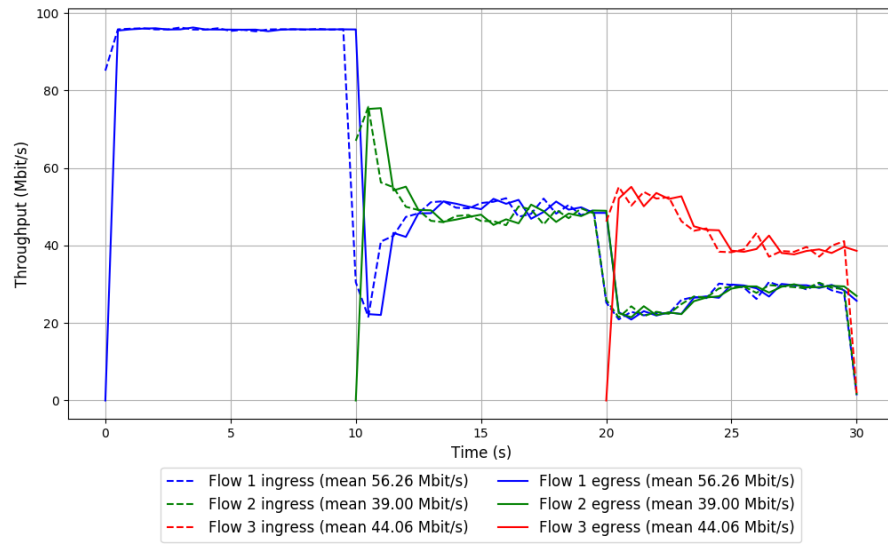


Run 3: Statistics of TCP Vegas

Start at: 2019-02-20 11:00:12  
End at: 2019-02-20 11:00:42  
Local clock offset: -55.981 ms  
Remote clock offset: 0.393 ms

# Below is generated by plot.py at 2019-02-20 12:07:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.87 Mbit/s  
95th percentile per-packet one-way delay: -53.250 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 56.26 Mbit/s  
95th percentile per-packet one-way delay: -53.379 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 39.00 Mbit/s  
95th percentile per-packet one-way delay: -53.140 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 44.06 Mbit/s  
95th percentile per-packet one-way delay: -53.067 ms  
Loss rate: 0.02%

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



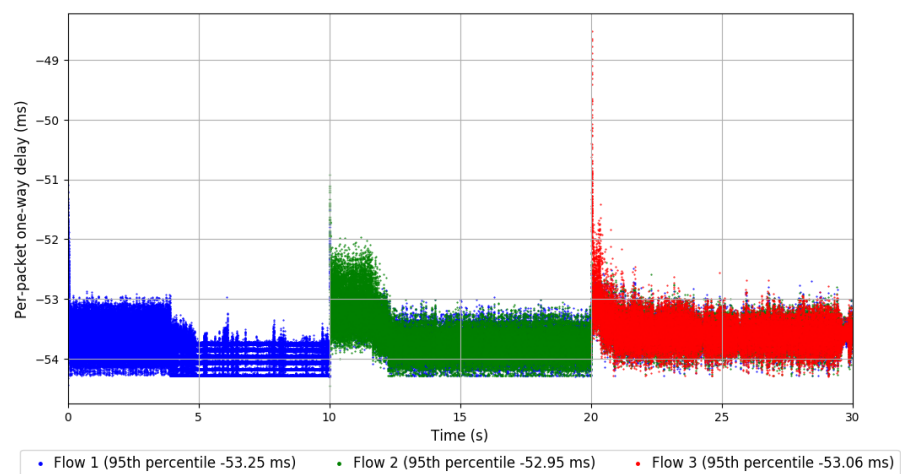
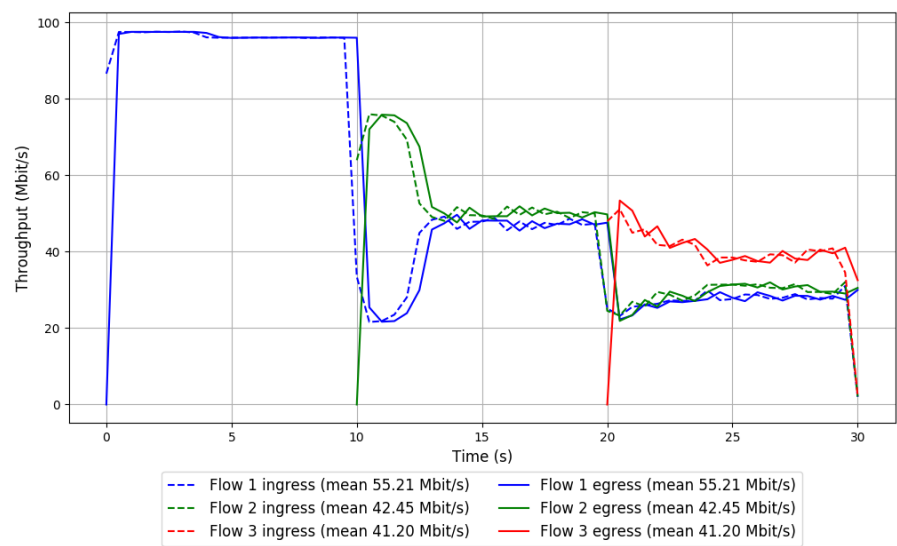


Run 4: Statistics of TCP Vegas

Start at: 2019-02-20 11:24:10  
End at: 2019-02-20 11:24:41  
Local clock offset: -55.938 ms  
Remote clock offset: 0.882 ms

# Below is generated by plot.py at 2019-02-20 12:07:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.16 Mbit/s  
95th percentile per-packet one-way delay: -53.140 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 55.21 Mbit/s  
95th percentile per-packet one-way delay: -53.247 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 42.45 Mbit/s  
95th percentile per-packet one-way delay: -52.948 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 41.20 Mbit/s  
95th percentile per-packet one-way delay: -53.059 ms  
Loss rate: 0.02%

Run 4: Report of TCP Vegas — Data Link

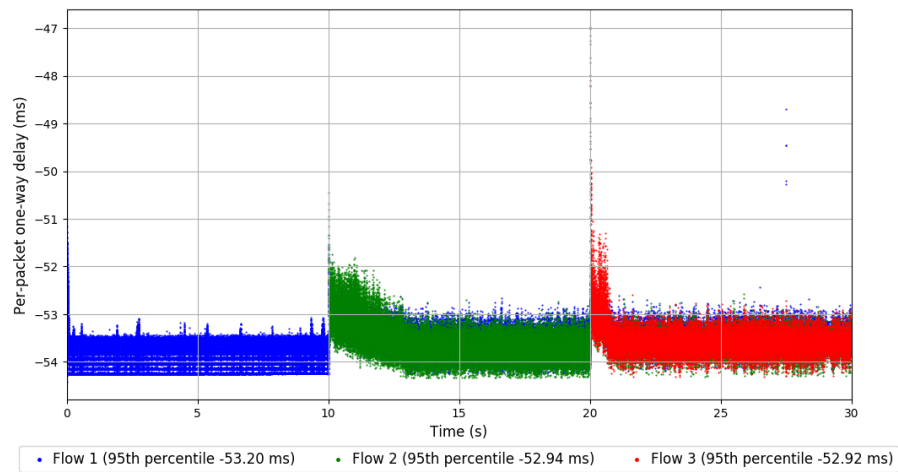
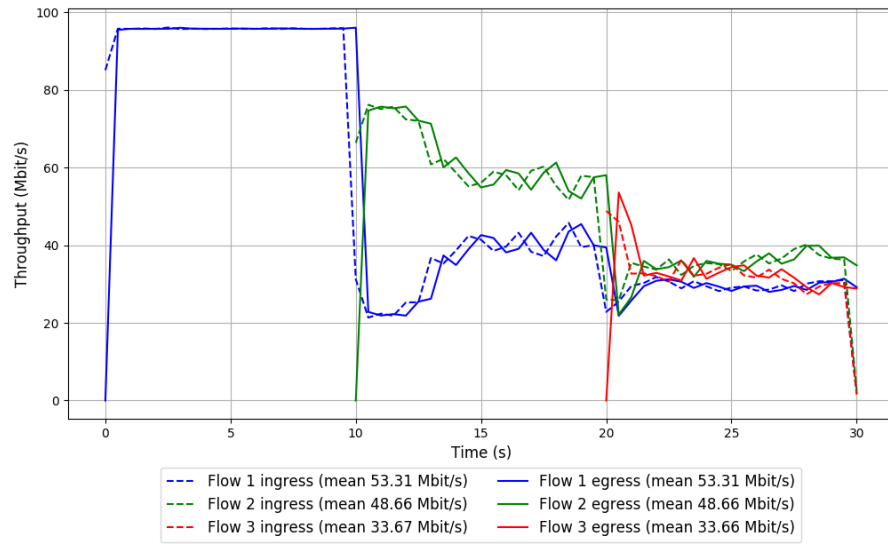


Run 5: Statistics of TCP Vegas

Start at: 2019-02-20 11:48:17  
End at: 2019-02-20 11:48:47  
Local clock offset: -61.453 ms  
Remote clock offset: 1.142 ms

# Below is generated by plot.py at 2019-02-20 12:08:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.91 Mbit/s  
95th percentile per-packet one-way delay: -53.090 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 53.31 Mbit/s  
95th percentile per-packet one-way delay: -53.202 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 48.66 Mbit/s  
95th percentile per-packet one-way delay: -52.939 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 33.66 Mbit/s  
95th percentile per-packet one-way delay: -52.923 ms  
Loss rate: 0.02%

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

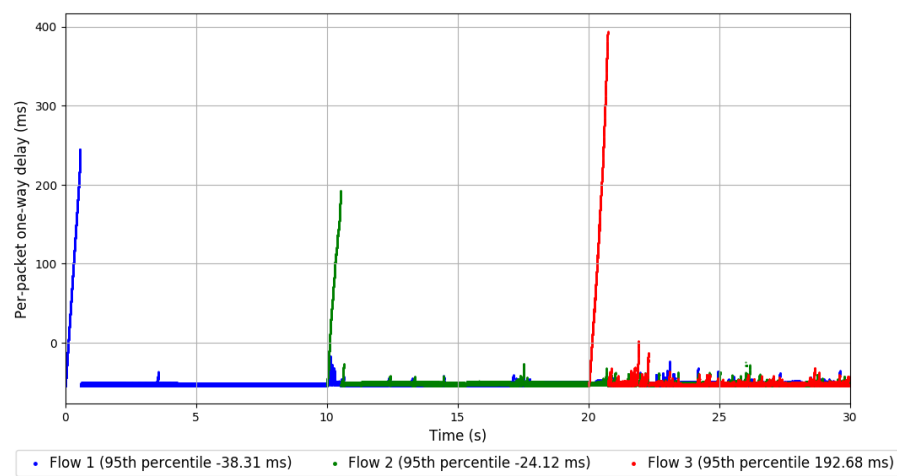
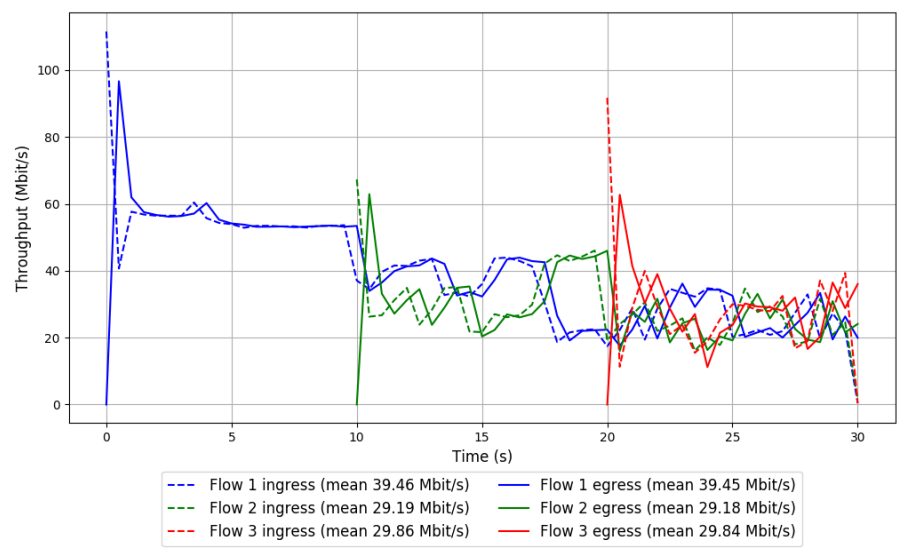


Run 1: Statistics of Verus

Start at: 2019-02-20 10:10:52  
End at: 2019-02-20 10:11:22  
Local clock offset: -61.805 ms  
Remote clock offset: -0.238 ms

# Below is generated by plot.py at 2019-02-20 12:08:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 68.80 Mbit/s  
95th percentile per-packet one-way delay: 16.576 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 39.45 Mbit/s  
95th percentile per-packet one-way delay: -38.313 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 29.18 Mbit/s  
95th percentile per-packet one-way delay: -24.120 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 29.84 Mbit/s  
95th percentile per-packet one-way delay: 192.684 ms  
Loss rate: 0.06%

Run 1: Report of Verus — Data Link

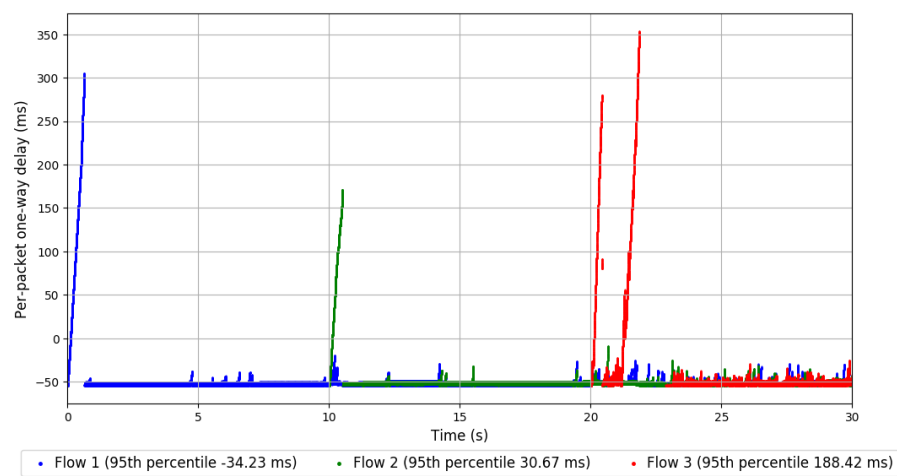
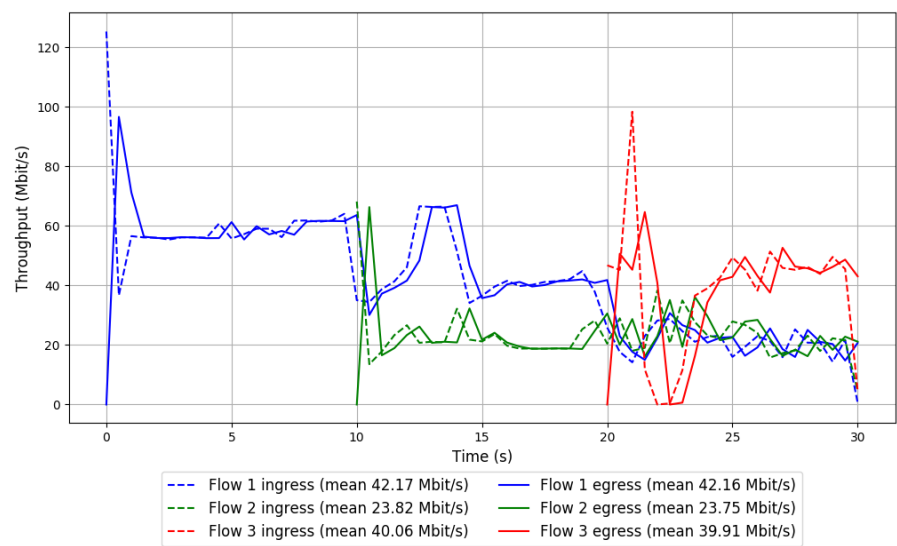


Run 2: Statistics of Verus

Start at: 2019-02-20 10:34:59  
End at: 2019-02-20 10:35:29  
Local clock offset: -59.495 ms  
Remote clock offset: 0.116 ms

# Below is generated by plot.py at 2019-02-20 12:08:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 71.23 Mbit/s  
95th percentile per-packet one-way delay: 48.048 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 42.16 Mbit/s  
95th percentile per-packet one-way delay: -34.228 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 23.75 Mbit/s  
95th percentile per-packet one-way delay: 30.670 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 39.91 Mbit/s  
95th percentile per-packet one-way delay: 188.418 ms  
Loss rate: 0.34%

Run 2: Report of Verus — Data Link



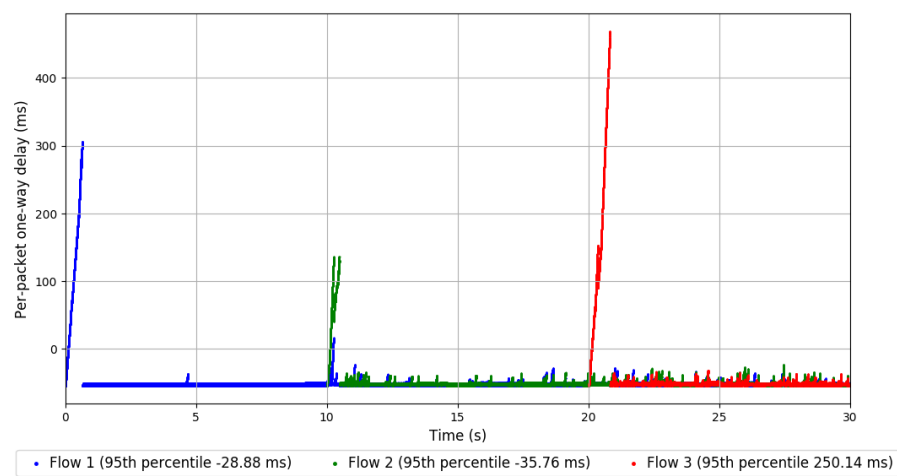
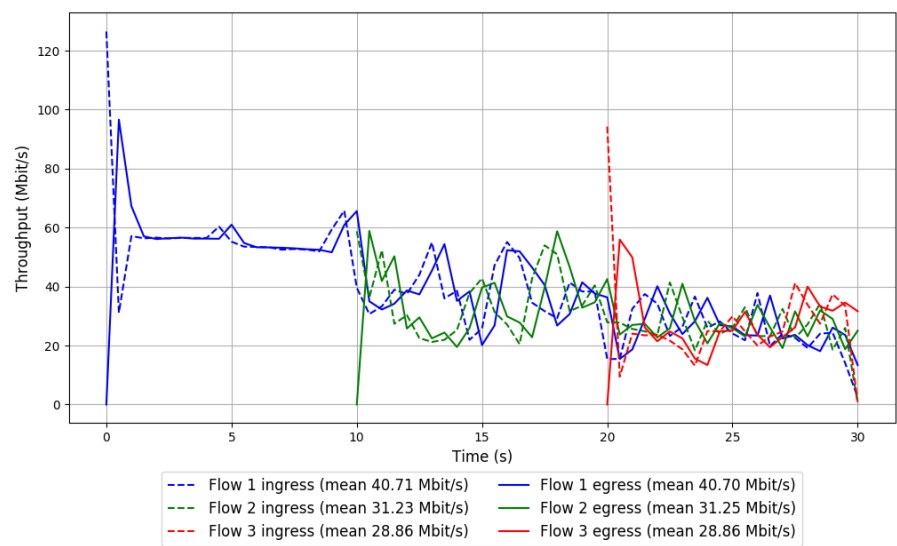


Run 3: Statistics of Verus

Start at: 2019-02-20 10:59:03  
End at: 2019-02-20 10:59:33  
Local clock offset: -55.587 ms  
Remote clock offset: 0.326 ms

# Below is generated by plot.py at 2019-02-20 12:08:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 71.08 Mbit/s  
95th percentile per-packet one-way delay: 28.352 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 40.70 Mbit/s  
95th percentile per-packet one-way delay: -28.875 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 31.25 Mbit/s  
95th percentile per-packet one-way delay: -35.756 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 28.86 Mbit/s  
95th percentile per-packet one-way delay: 250.136 ms  
Loss rate: 0.08%

Run 3: Report of Verus — Data Link

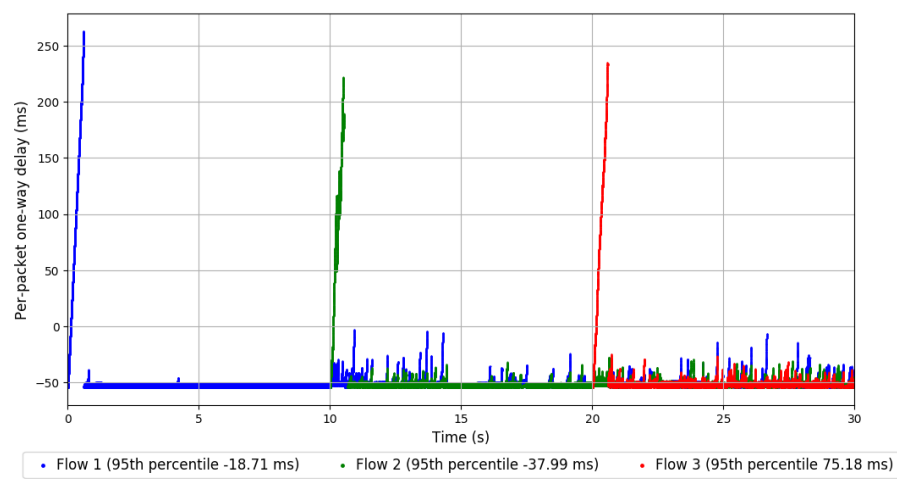
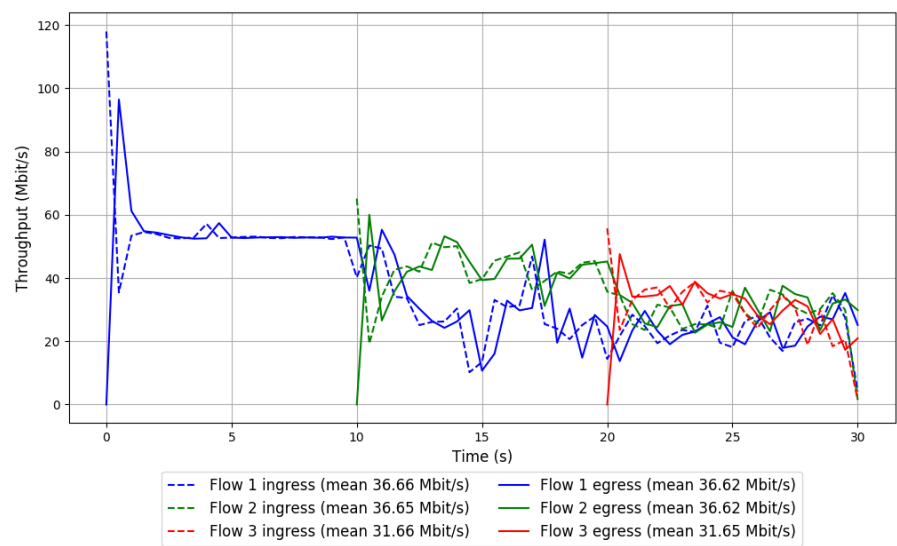


Run 4: Statistics of Verus

Start at: 2019-02-20 11:23:01  
End at: 2019-02-20 11:23:31  
Local clock offset: -56.024 ms  
Remote clock offset: 0.818 ms

# Below is generated by plot.py at 2019-02-20 12:08:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 71.52 Mbit/s  
95th percentile per-packet one-way delay: -19.474 ms  
Loss rate: 0.08%  
-- Flow 1:  
Average throughput: 36.62 Mbit/s  
95th percentile per-packet one-way delay: -18.707 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 36.62 Mbit/s  
95th percentile per-packet one-way delay: -37.988 ms  
Loss rate: 0.07%  
-- Flow 3:  
Average throughput: 31.65 Mbit/s  
95th percentile per-packet one-way delay: 75.177 ms  
Loss rate: 0.05%

Run 4: Report of Verus — Data Link

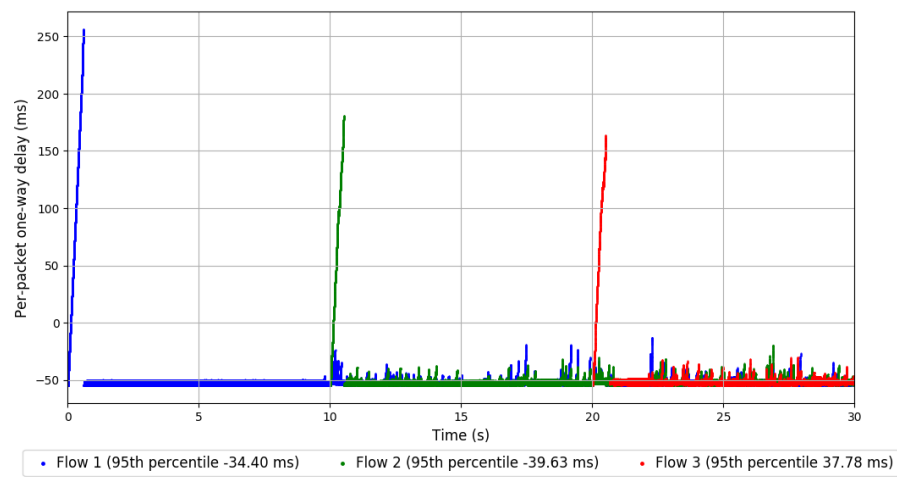
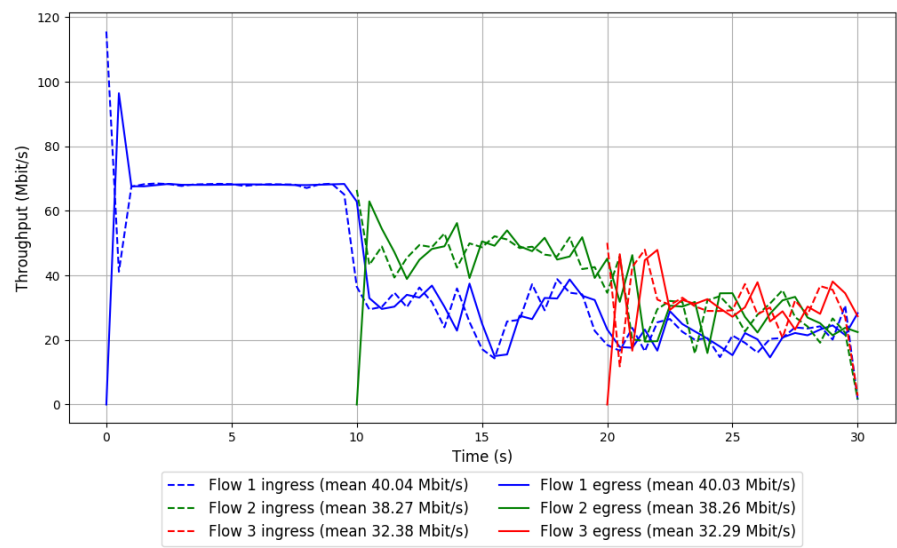


Run 5: Statistics of Verus

Start at: 2019-02-20 11:47:08  
End at: 2019-02-20 11:47:38  
Local clock offset: -61.723 ms  
Remote clock offset: 1.062 ms

# Below is generated by plot.py at 2019-02-20 12:08:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.23 Mbit/s  
95th percentile per-packet one-way delay: -34.102 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 40.03 Mbit/s  
95th percentile per-packet one-way delay: -34.399 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 38.26 Mbit/s  
95th percentile per-packet one-way delay: -39.627 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 32.29 Mbit/s  
95th percentile per-packet one-way delay: 37.785 ms  
Loss rate: 0.31%

Run 5: Report of Verus — Data Link

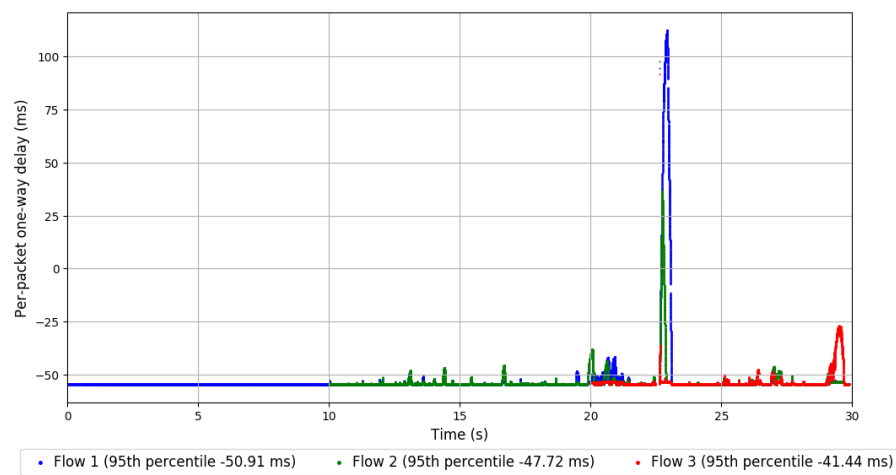
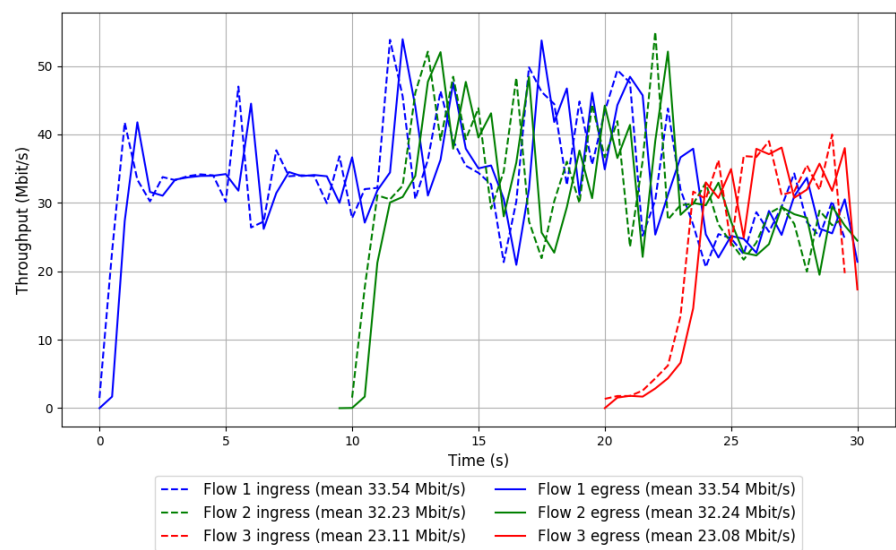


Run 1: Statistics of PCC-Vivace

Start at: 2019-02-20 10:06:11  
End at: 2019-02-20 10:06:41  
Local clock offset: -61.967 ms  
Remote clock offset: -0.249 ms

# Below is generated by plot.py at 2019-02-20 12:08:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 62.62 Mbit/s  
95th percentile per-packet one-way delay: -48.536 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 33.54 Mbit/s  
95th percentile per-packet one-way delay: -50.906 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 32.24 Mbit/s  
95th percentile per-packet one-way delay: -47.723 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 23.08 Mbit/s  
95th percentile per-packet one-way delay: -41.442 ms  
Loss rate: 0.14%

Run 1: Report of PCC-Vivace — Data Link



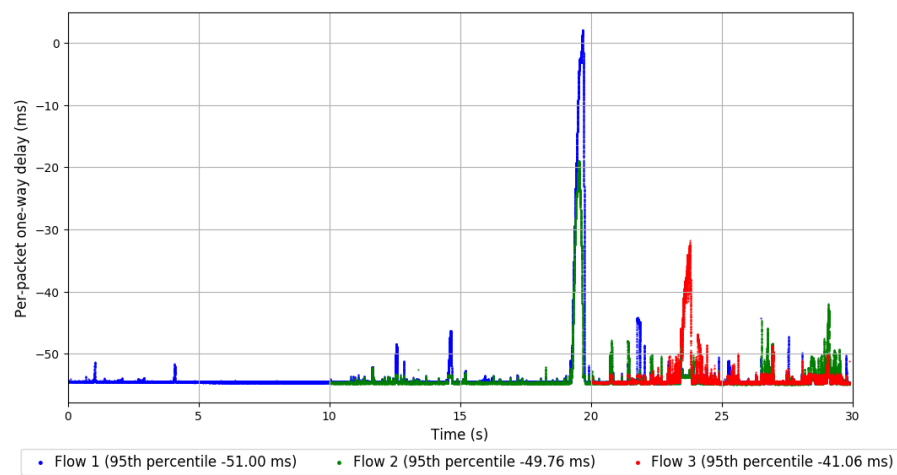
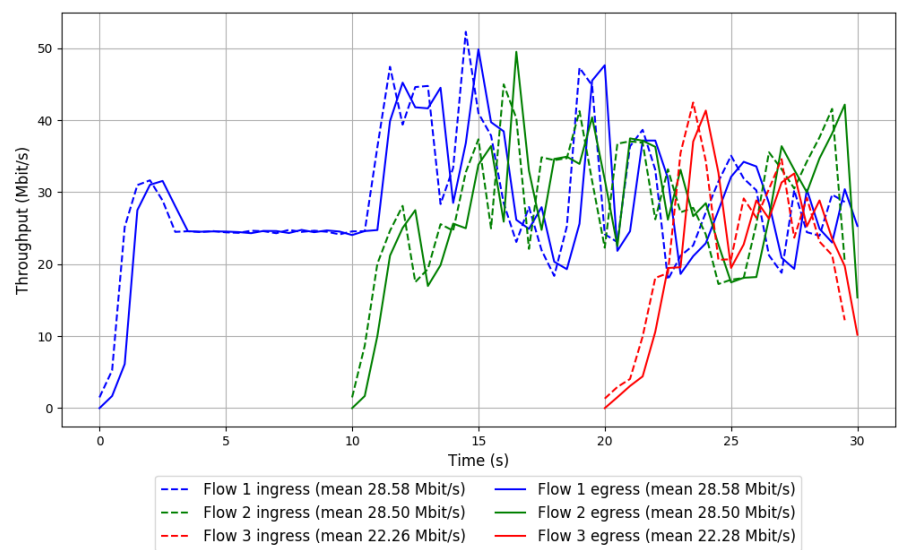


Run 2: Statistics of PCC-Vivace

Start at: 2019-02-20 10:30:18  
End at: 2019-02-20 10:30:48  
Local clock offset: -61.667 ms  
Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2019-02-20 12:08:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 54.87 Mbit/s  
95th percentile per-packet one-way delay: -49.134 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 28.58 Mbit/s  
95th percentile per-packet one-way delay: -50.997 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 28.50 Mbit/s  
95th percentile per-packet one-way delay: -49.761 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 22.28 Mbit/s  
95th percentile per-packet one-way delay: -41.064 ms  
Loss rate: 0.03%

Run 2: Report of PCC-Vivace — Data Link

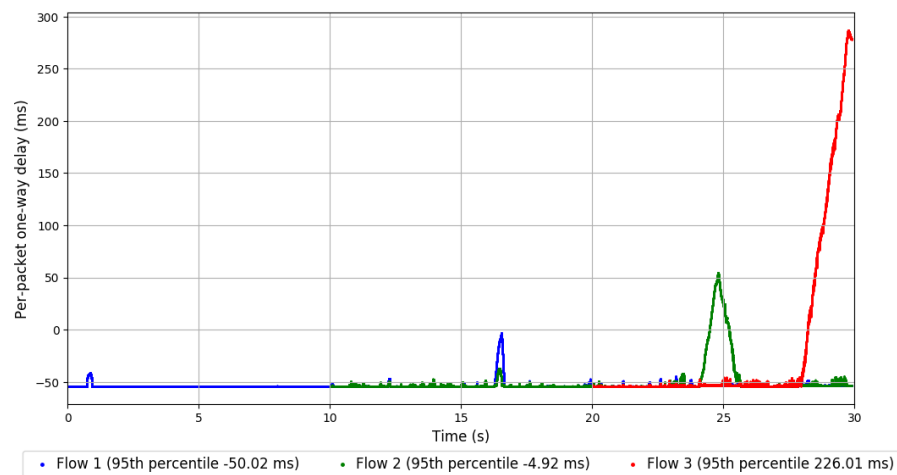
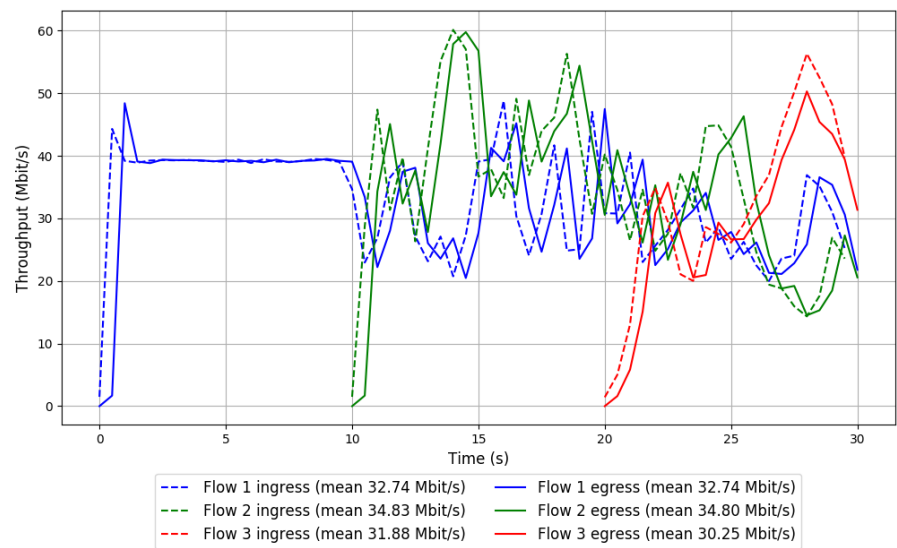


Run 3: Statistics of PCC-Vivace

Start at: 2019-02-20 10:54:21  
End at: 2019-02-20 10:54:51  
Local clock offset: -55.977 ms  
Remote clock offset: 0.277 ms

# Below is generated by plot.py at 2019-02-20 12:08:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 65.87 Mbit/s  
95th percentile per-packet one-way delay: 2.872 ms  
Loss rate: 0.85%  
-- Flow 1:  
Average throughput: 32.74 Mbit/s  
95th percentile per-packet one-way delay: -50.015 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 34.80 Mbit/s  
95th percentile per-packet one-way delay: -4.917 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 30.25 Mbit/s  
95th percentile per-packet one-way delay: 226.012 ms  
Loss rate: 5.13%

Run 3: Report of PCC-Vivace — Data Link

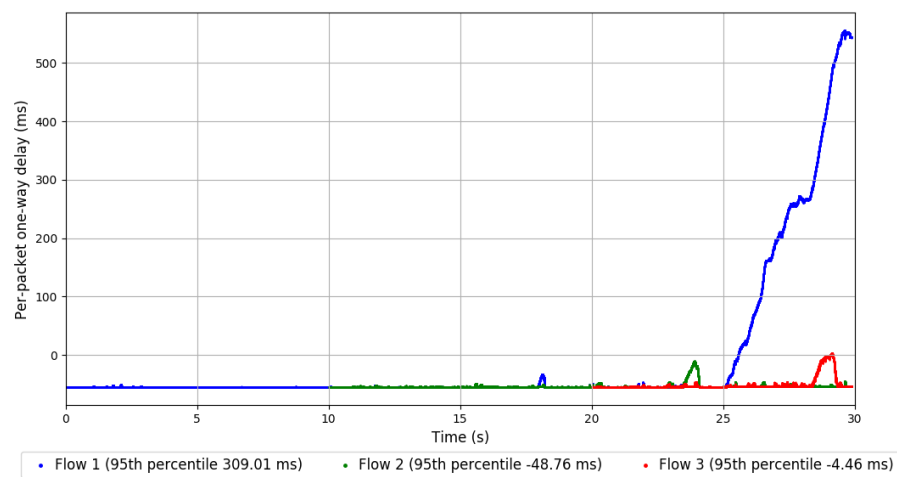
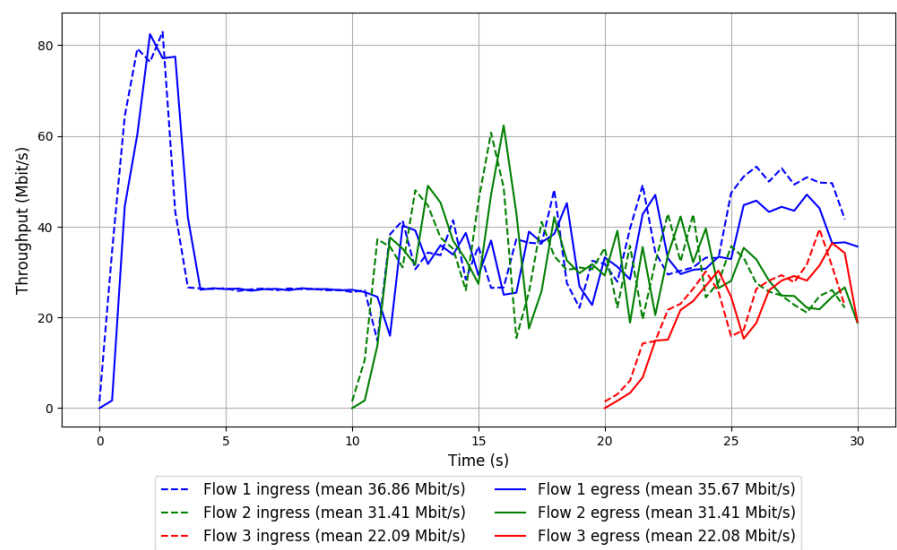


Run 4: Statistics of PCC-Vivace

Start at: 2019-02-20 11:18:19  
End at: 2019-02-20 11:18:49  
Local clock offset: -56.087 ms  
Remote clock offset: 0.779 ms

# Below is generated by plot.py at 2019-02-20 12:08:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 63.85 Mbit/s  
95th percentile per-packet one-way delay: 253.533 ms  
Loss rate: 1.86%  
-- Flow 1:  
Average throughput: 35.67 Mbit/s  
95th percentile per-packet one-way delay: 309.011 ms  
Loss rate: 3.24%  
-- Flow 2:  
Average throughput: 31.41 Mbit/s  
95th percentile per-packet one-way delay: -48.761 ms  
Loss rate: 0.03%  
-- Flow 3:  
Average throughput: 22.08 Mbit/s  
95th percentile per-packet one-way delay: -4.455 ms  
Loss rate: 0.15%

Run 4: Report of PCC-Vivace — Data Link

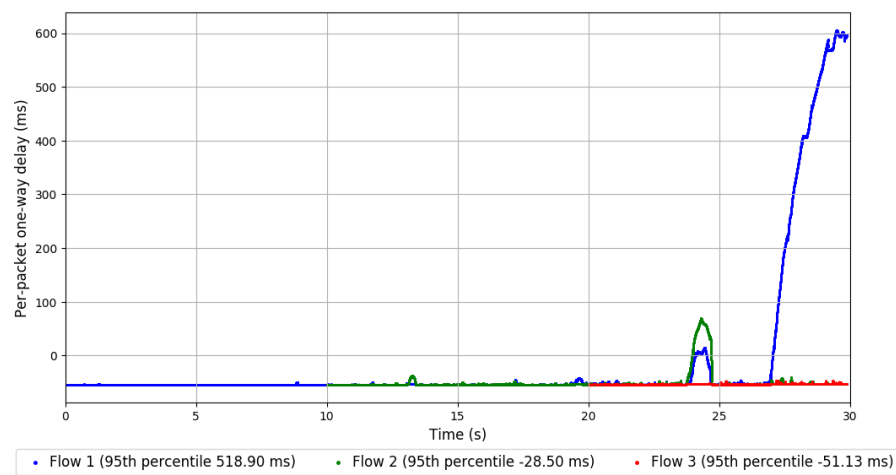
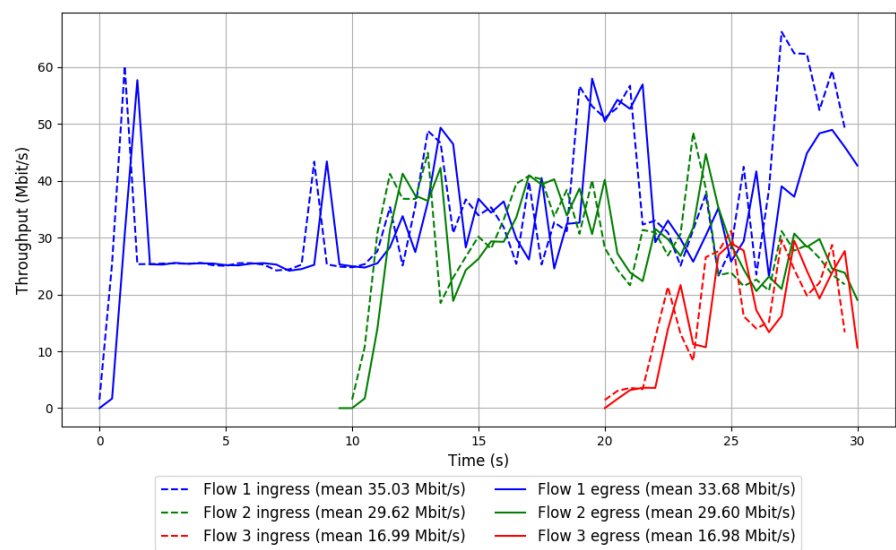


Run 5: Statistics of PCC-Vivace

Start at: 2019-02-20 11:42:26  
End at: 2019-02-20 11:42:56  
Local clock offset: -60.503 ms  
Remote clock offset: 1.0 ms

# Below is generated by plot.py at 2019-02-20 12:08:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 58.98 Mbit/s  
95th percentile per-packet one-way delay: 361.855 ms  
Loss rate: 2.29%  
-- Flow 1:  
Average throughput: 33.68 Mbit/s  
95th percentile per-packet one-way delay: 518.904 ms  
Loss rate: 3.89%  
-- Flow 2:  
Average throughput: 29.60 Mbit/s  
95th percentile per-packet one-way delay: -28.500 ms  
Loss rate: 0.08%  
-- Flow 3:  
Average throughput: 16.98 Mbit/s  
95th percentile per-packet one-way delay: -51.128 ms  
Loss rate: 0.03%

Run 5: Report of PCC-Vivace — Data Link



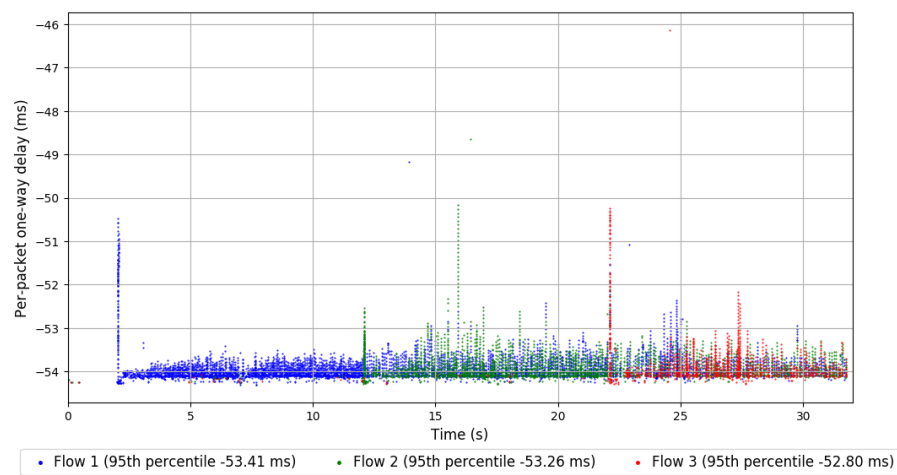
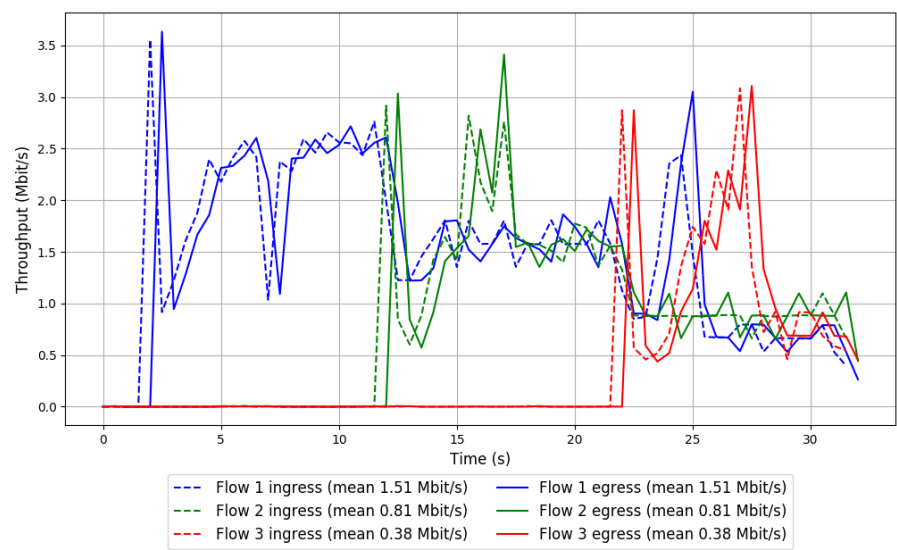


Run 1: Statistics of WebRTC media

Start at: 2019-02-20 10:02:53  
End at: 2019-02-20 10:03:23  
Local clock offset: -61.765 ms  
Remote clock offset: -0.337 ms

# Below is generated by plot.py at 2019-02-20 12:08:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.70 Mbit/s  
95th percentile per-packet one-way delay: -53.284 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.51 Mbit/s  
95th percentile per-packet one-way delay: -53.411 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.81 Mbit/s  
95th percentile per-packet one-way delay: -53.263 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.38 Mbit/s  
95th percentile per-packet one-way delay: -52.804 ms  
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

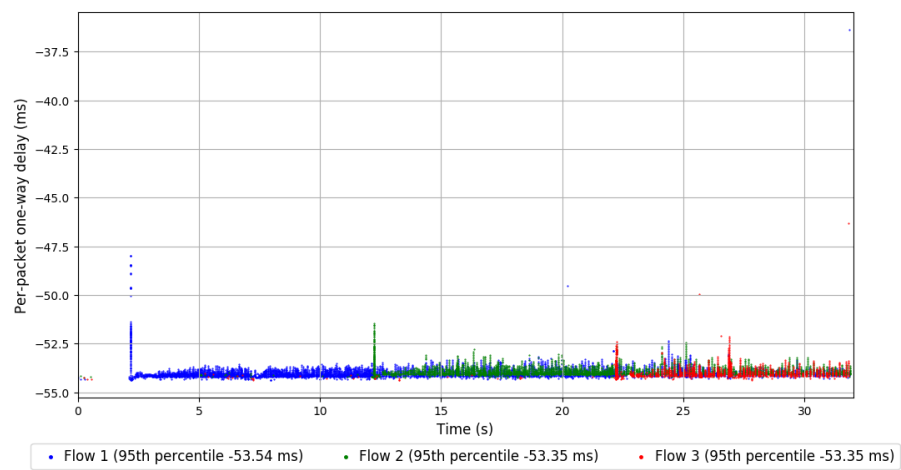
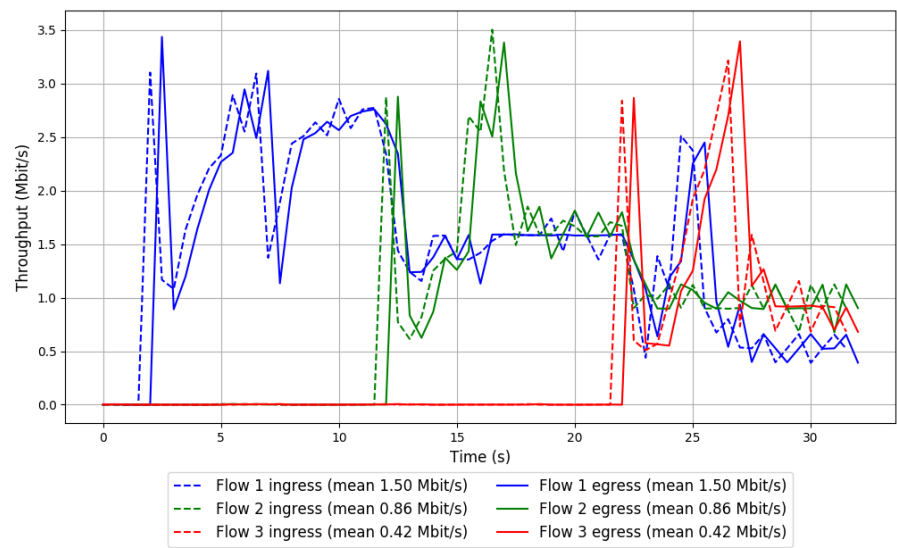


Run 2: Statistics of WebRTC media

Start at: 2019-02-20 10:27:01  
End at: 2019-02-20 10:27:31  
Local clock offset: -61.972 ms  
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2019-02-20 12:08:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.77 Mbit/s  
95th percentile per-packet one-way delay: -53.443 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.50 Mbit/s  
95th percentile per-packet one-way delay: -53.542 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.86 Mbit/s  
95th percentile per-packet one-way delay: -53.351 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.42 Mbit/s  
95th percentile per-packet one-way delay: -53.355 ms  
Loss rate: 0.01%

Run 2: Report of WebRTC media — Data Link

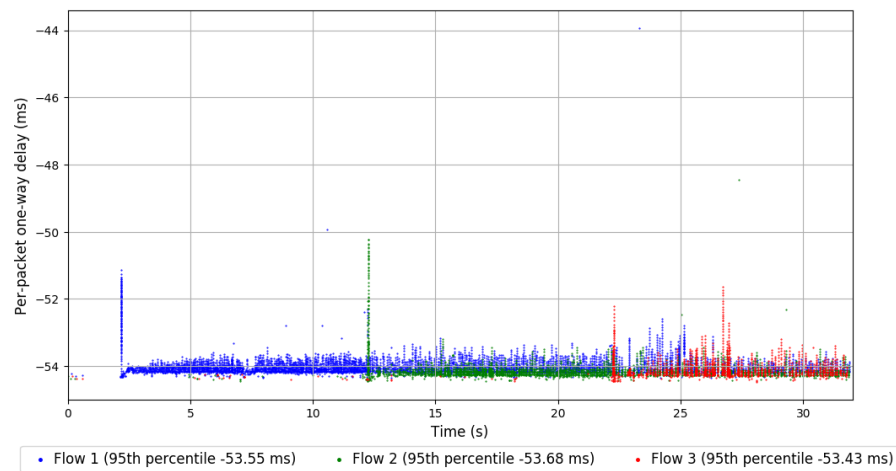
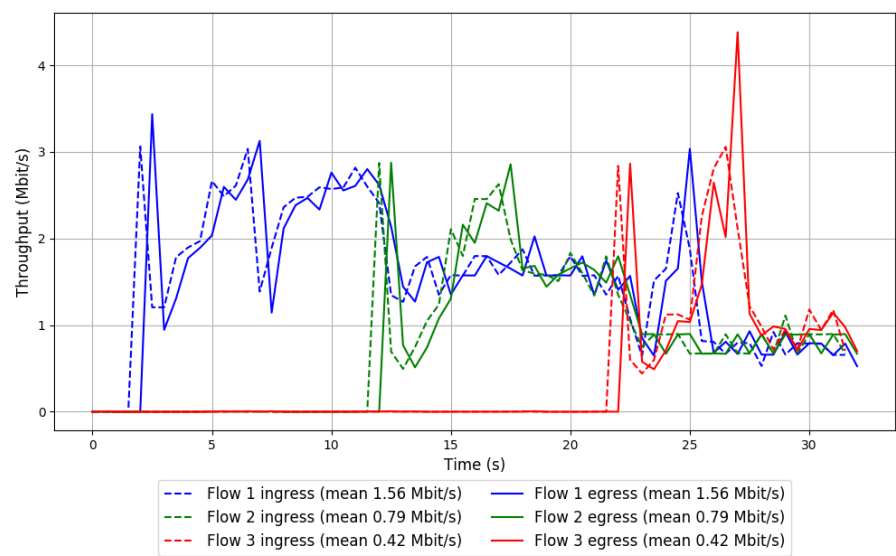


Run 3: Statistics of WebRTC media

Start at: 2019-02-20 10:51:03  
End at: 2019-02-20 10:51:33  
Local clock offset: -56.284 ms  
Remote clock offset: 0.25 ms

# Below is generated by plot.py at 2019-02-20 12:08:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.76 Mbit/s  
95th percentile per-packet one-way delay: -53.550 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.56 Mbit/s  
95th percentile per-packet one-way delay: -53.546 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.79 Mbit/s  
95th percentile per-packet one-way delay: -53.683 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.42 Mbit/s  
95th percentile per-packet one-way delay: -53.427 ms  
Loss rate: 0.01%

Run 3: Report of WebRTC media — Data Link

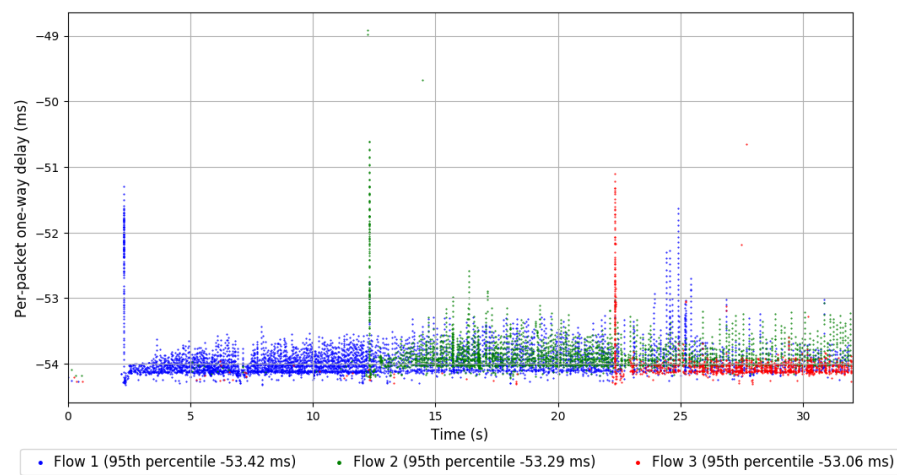
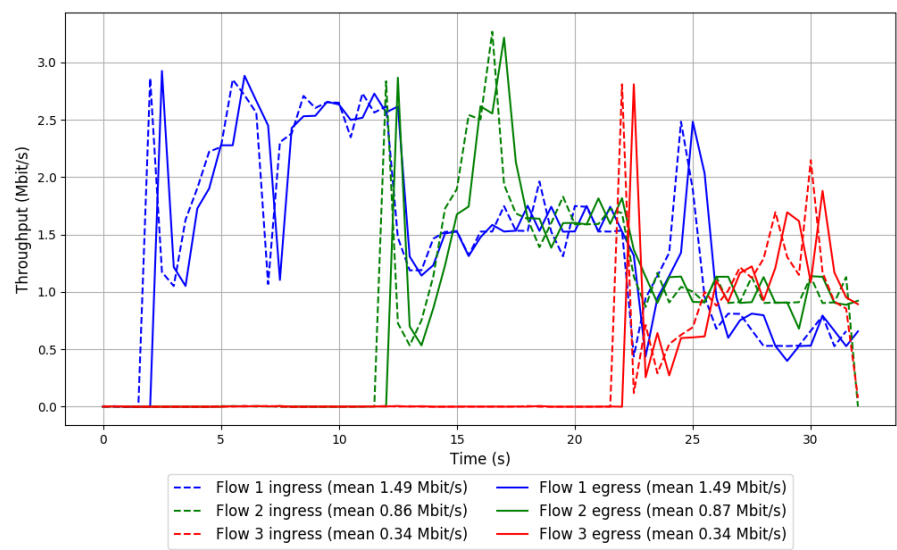


Run 4: Statistics of WebRTC media

Start at: 2019-02-20 11:15:02  
End at: 2019-02-20 11:15:32  
Local clock offset: -56.133 ms  
Remote clock offset: 0.59 ms

# Below is generated by plot.py at 2019-02-20 12:08:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.69 Mbit/s  
95th percentile per-packet one-way delay: -53.328 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.49 Mbit/s  
95th percentile per-packet one-way delay: -53.416 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.87 Mbit/s  
95th percentile per-packet one-way delay: -53.291 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.34 Mbit/s  
95th percentile per-packet one-way delay: -53.058 ms  
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-02-20 11:39:08

End at: 2019-02-20 11:39:38

Local clock offset: -59.75 ms

Remote clock offset: 1.02 ms

# Below is generated by plot.py at 2019-02-20 12:08:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.69 Mbit/s

95th percentile per-packet one-way delay: -53.368 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: -53.452 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: -53.600 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: -53.053 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

