

## Pantheon Report

Generated at 2019-03-09 05:49:43 (UTC).

Data path: AWS California 1 on `ens5` (*local*) → Stanford on `eno1` (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

### System info:

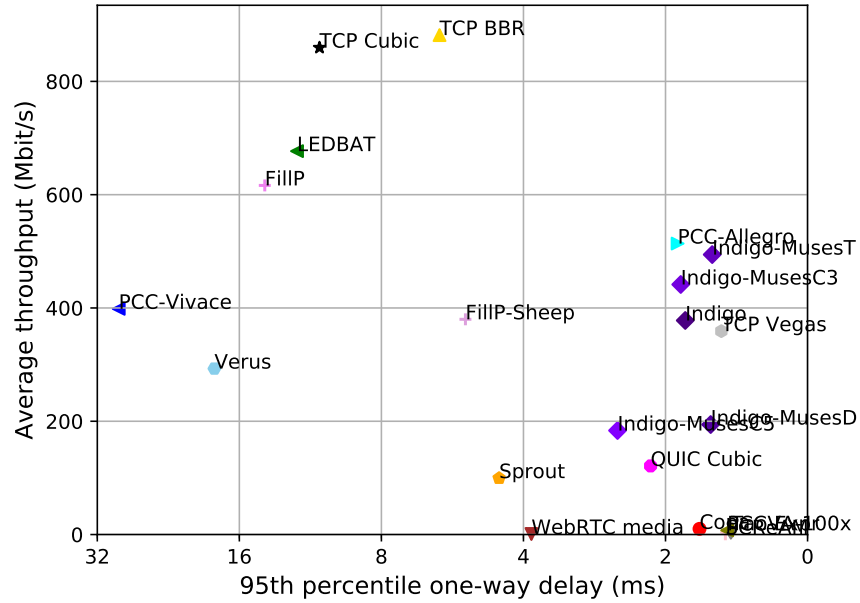
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

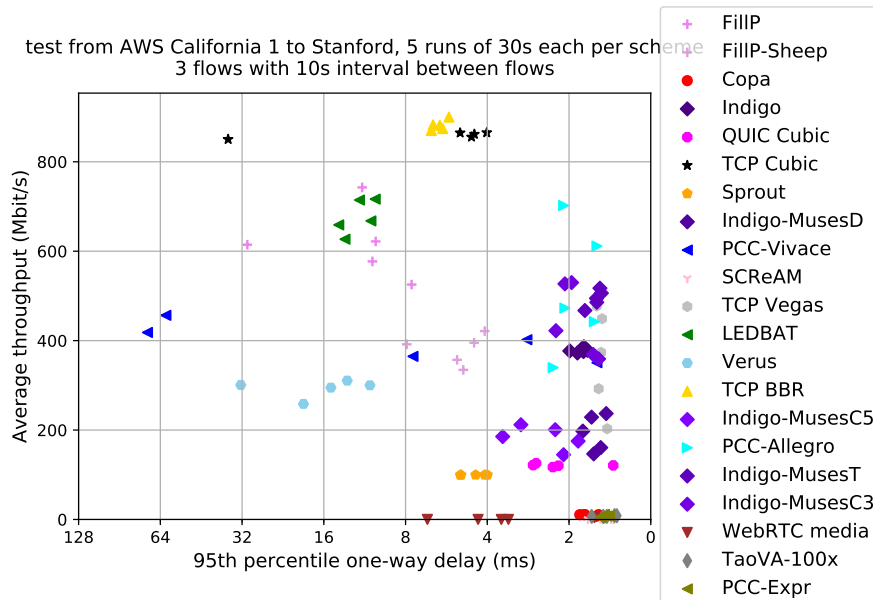
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d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

test from AWS California 1 to Stanford, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS California 1 to Stanford, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	482.65	434.59	329.75	5.83	6.38	3.98	5.15	9.06	12.25
Copa	5	4.81	6.77	4.18	1.47	1.51	1.63	61.37	53.18	47.07
TCP Cubic	5	491.00	401.74	303.44	12.04	2.25	2.30	0.05	0.04	0.07
FillP	5	414.44	225.85	155.84	15.66	4.43	4.08	10.34	15.73	9.35
FillP-Sheep	5	312.68	89.32	24.25	5.77	2.09	2.35	2.96	1.75	4.21
Indigo	5	194.89	186.80	182.82	1.53	1.76	2.07	0.00	0.01	0.01
Indigo-MusesC3	5	245.64	213.70	193.92	1.78	1.86	1.78	0.05	0.18	0.07
Indigo-MusesC5	5	79.11	103.57	122.18	1.87	3.06	2.16	0.03	0.06	0.01
Indigo-MusesD	5	109.82	85.38	95.60	1.40	1.20	1.46	0.00	0.01	0.01
Indigo-MusesT	5	274.18	241.19	202.44	1.27	1.36	1.57	0.01	0.00	0.01
LEDBAT	5	386.03	312.01	265.02	12.90	9.03	6.83	0.12	0.23	0.36
PCC-Allegro	5	231.78	324.53	200.69	1.76	1.75	1.89	0.09	0.11	0.14
PCC-Expr	5	1.67	6.41	6.69	1.12	1.13	1.09	88.07	26.56	22.88
QUIC Cubic	5	64.70	59.96	50.58	1.09	1.74	4.49	0.00	0.00	0.01
SCReAM	5	0.22	0.22	0.22	1.16	1.16	1.12	0.00	0.00	0.00
Sprout	5	50.03	49.89	49.59	4.43	4.43	4.77	0.03	0.04	0.07
TaoVA-100x	5	0.00	7.93	8.24	1.00	1.10	1.04	95.92	37.57	33.77
TCP Vegas	5	151.19	188.90	246.81	1.21	1.18	1.23	0.01	0.01	0.01
Verus	5	161.43	132.53	131.81	19.29	24.15	22.54	2.27	3.69	4.29
PCC-Vivace	5	217.06	193.11	160.39	17.09	28.14	46.80	0.02	0.03	0.90
WebRTC media	5	0.47	0.32	0.16	2.79	3.29	6.14	0.00	0.00	0.00

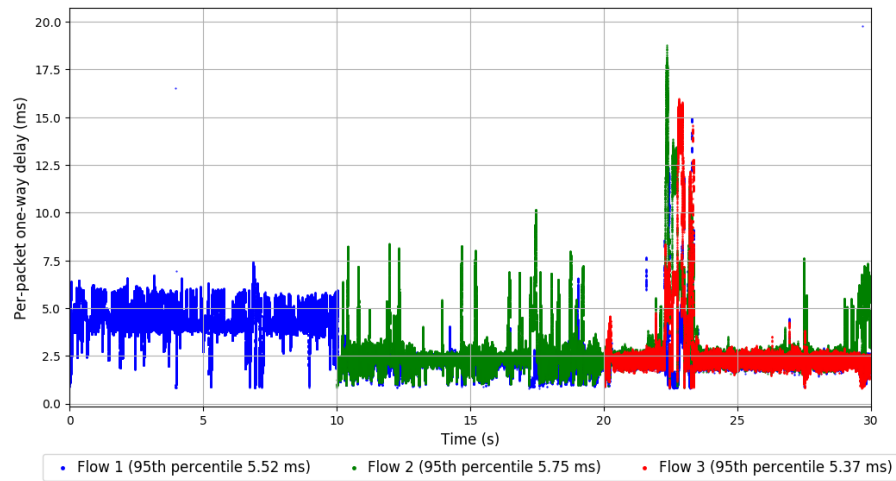
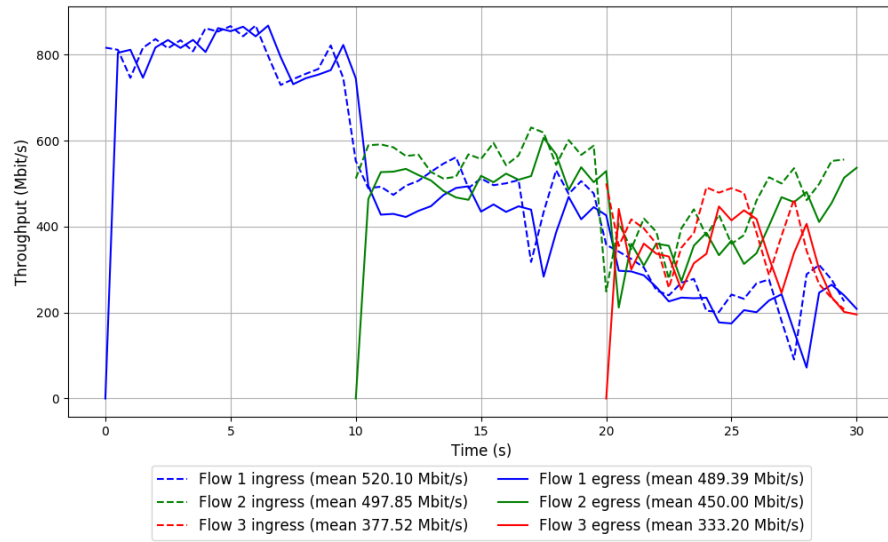


Run 1: Statistics of TCP BBR

Start at: 2019-03-09 02:27:49  
End at: 2019-03-09 02:28:19  
Local clock offset: 3.786 ms  
Remote clock offset: -0.679 ms

# Below is generated by plot.py at 2019-03-09 05:07:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 899.96 Mbit/s  
95th percentile per-packet one-way delay: 5.538 ms  
Loss rate: 7.91%  
-- Flow 1:  
Average throughput: 489.39 Mbit/s  
95th percentile per-packet one-way delay: 5.517 ms  
Loss rate: 5.90%  
-- Flow 2:  
Average throughput: 450.00 Mbit/s  
95th percentile per-packet one-way delay: 5.751 ms  
Loss rate: 9.61%  
-- Flow 3:  
Average throughput: 333.20 Mbit/s  
95th percentile per-packet one-way delay: 5.374 ms  
Loss rate: 11.73%

# Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-03-09 02:57:53

End at: 2019-03-09 02:58:23

Local clock offset: 0.662 ms

Remote clock offset: -0.43 ms

# Below is generated by plot.py at 2019-03-09 05:07:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 881.66 Mbit/s

95th percentile per-packet one-way delay: 5.981 ms

Loss rate: 6.42%

-- Flow 1:

Average throughput: 451.29 Mbit/s

95th percentile per-packet one-way delay: 5.292 ms

Loss rate: 4.91%

-- Flow 2:

Average throughput: 498.37 Mbit/s

95th percentile per-packet one-way delay: 6.473 ms

Loss rate: 6.29%

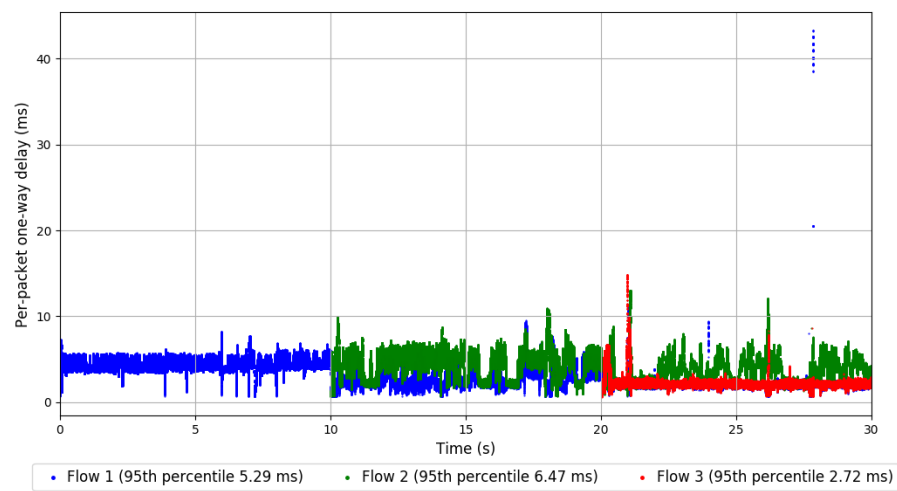
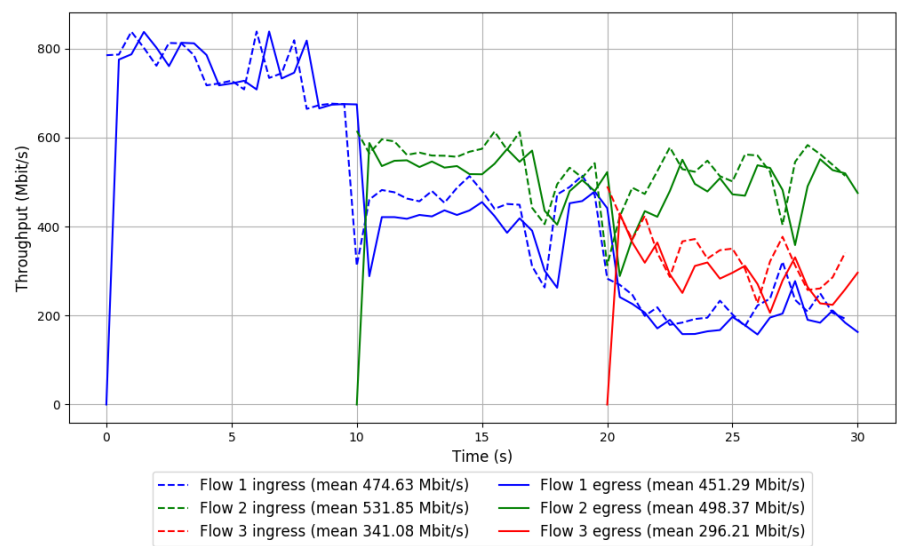
-- Flow 3:

Average throughput: 296.21 Mbit/s

95th percentile per-packet one-way delay: 2.720 ms

Loss rate: 13.14%

Run 2: Report of TCP BBR — Data Link

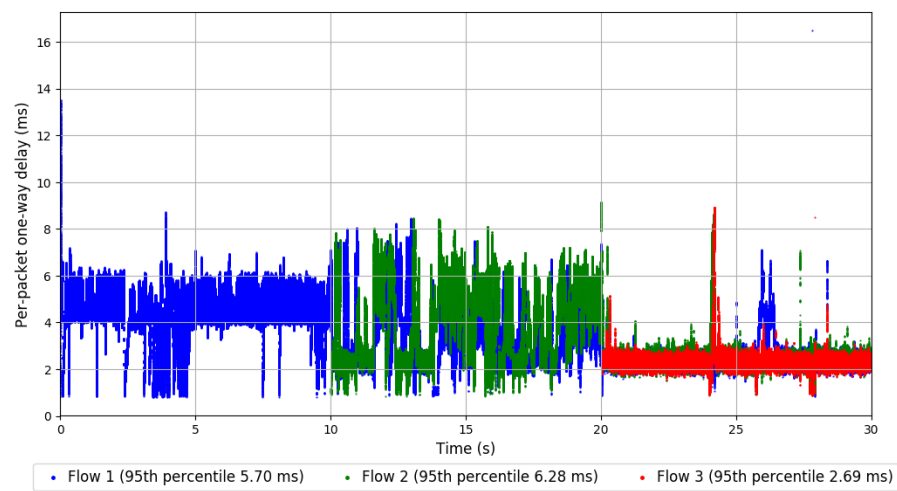
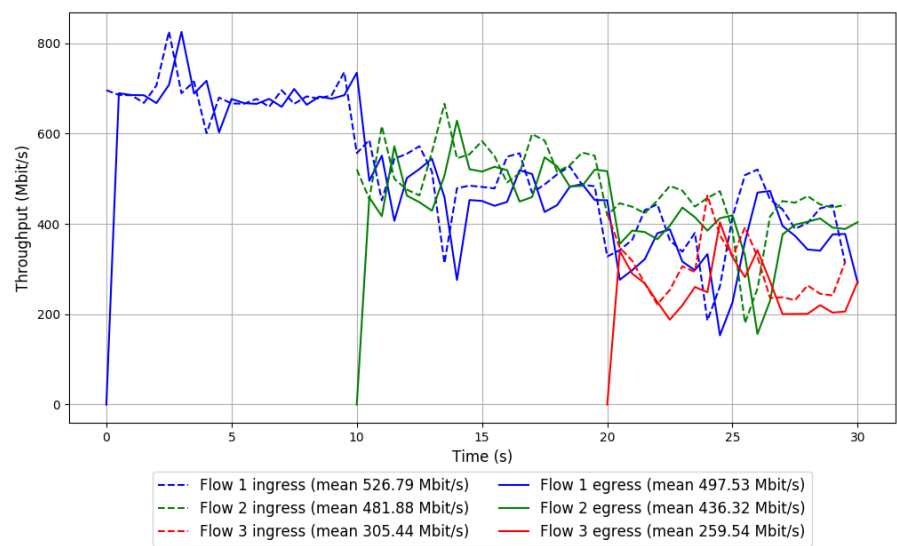


Run 3: Statistics of TCP BBR

Start at: 2019-03-09 03:28:07  
End at: 2019-03-09 03:28:37  
Local clock offset: 2.798 ms  
Remote clock offset: -0.585 ms

# Below is generated by plot.py at 2019-03-09 05:07:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 874.43 Mbit/s  
95th percentile per-packet one-way delay: 5.840 ms  
Loss rate: 7.88%  
-- Flow 1:  
Average throughput: 497.53 Mbit/s  
95th percentile per-packet one-way delay: 5.701 ms  
Loss rate: 5.55%  
-- Flow 2:  
Average throughput: 436.32 Mbit/s  
95th percentile per-packet one-way delay: 6.277 ms  
Loss rate: 9.45%  
-- Flow 3:  
Average throughput: 259.54 Mbit/s  
95th percentile per-packet one-way delay: 2.695 ms  
Loss rate: 15.02%

Run 3: Report of TCP BBR — Data Link

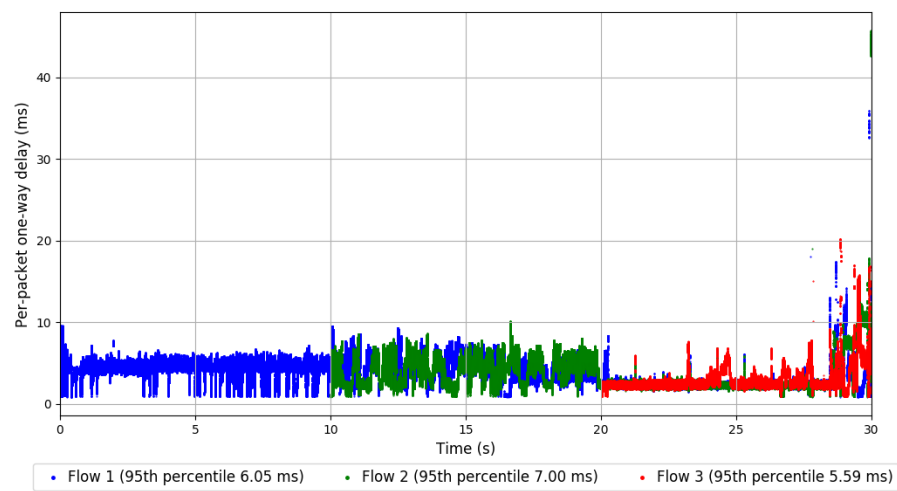
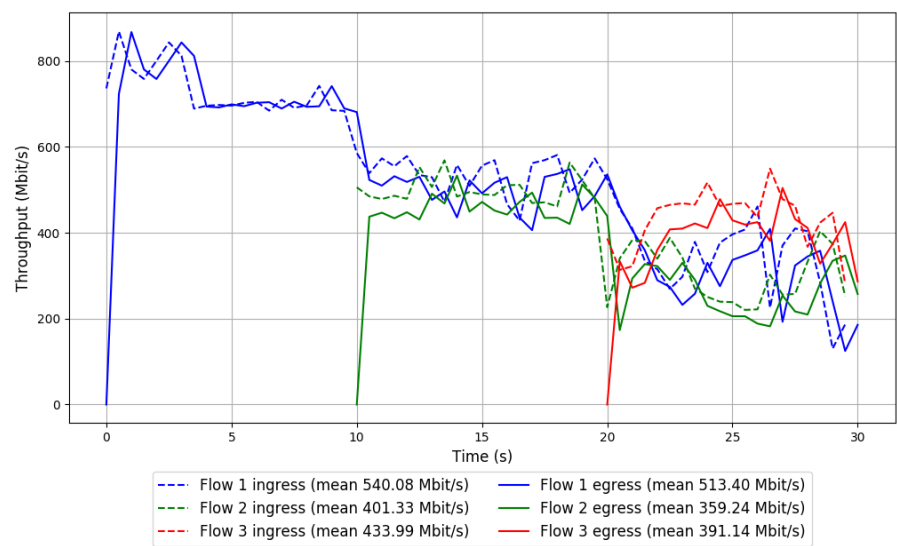


Run 4: Statistics of TCP BBR

Start at: 2019-03-09 03:58:12  
End at: 2019-03-09 03:58:42  
Local clock offset: 3.433 ms  
Remote clock offset: -0.666 ms

# Below is generated by plot.py at 2019-03-09 05:07:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 882.64 Mbit/s  
95th percentile per-packet one-way delay: 6.333 ms  
Loss rate: 7.24%  
-- Flow 1:  
Average throughput: 513.40 Mbit/s  
95th percentile per-packet one-way delay: 6.047 ms  
Loss rate: 4.94%  
-- Flow 2:  
Average throughput: 359.24 Mbit/s  
95th percentile per-packet one-way delay: 7.001 ms  
Loss rate: 10.48%  
-- Flow 3:  
Average throughput: 391.14 Mbit/s  
95th percentile per-packet one-way delay: 5.594 ms  
Loss rate: 9.88%

Run 4: Report of TCP BBR — Data Link



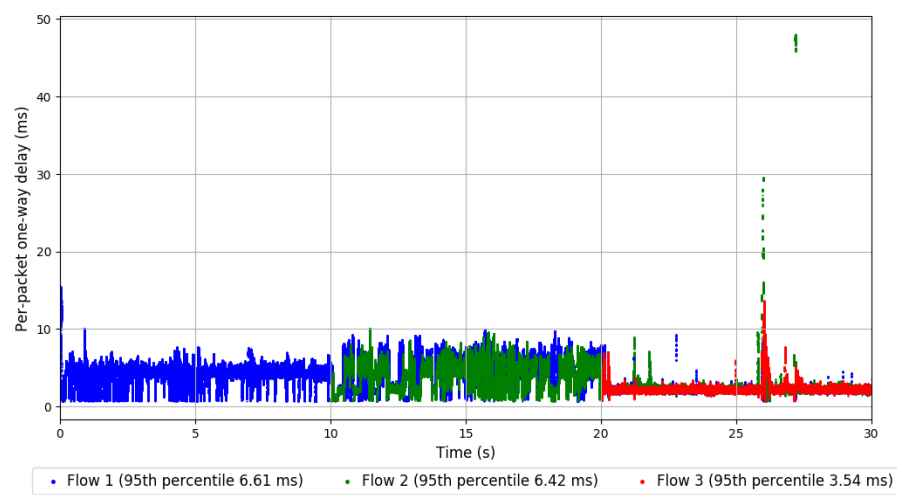
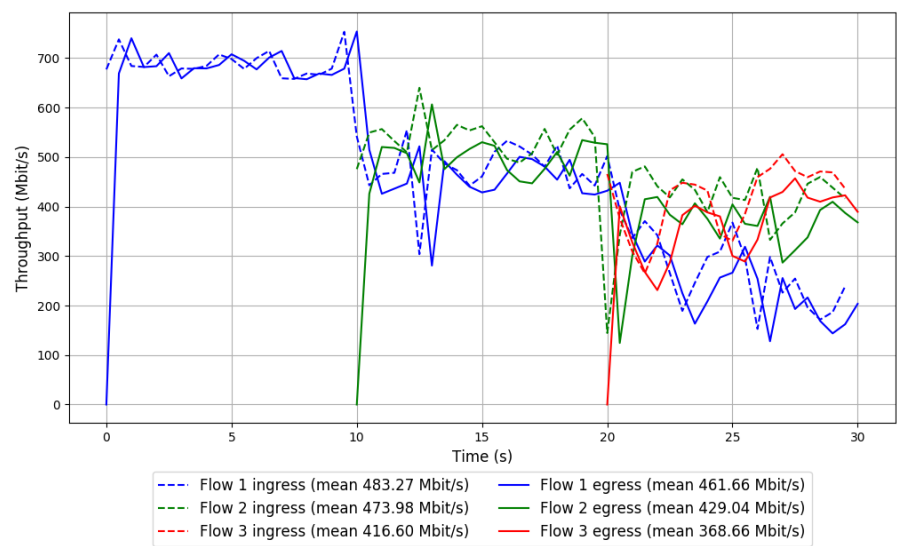


Run 5: Statistics of TCP BBR

Start at: 2019-03-09 04:28:06  
End at: 2019-03-09 04:28:36  
Local clock offset: 0.437 ms  
Remote clock offset: -4.366 ms

# Below is generated by plot.py at 2019-03-09 05:07:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 870.06 Mbit/s  
95th percentile per-packet one-way delay: 6.427 ms  
Loss rate: 7.19%  
-- Flow 1:  
Average throughput: 461.66 Mbit/s  
95th percentile per-packet one-way delay: 6.614 ms  
Loss rate: 4.47%  
-- Flow 2:  
Average throughput: 429.04 Mbit/s  
95th percentile per-packet one-way delay: 6.421 ms  
Loss rate: 9.47%  
-- Flow 3:  
Average throughput: 368.66 Mbit/s  
95th percentile per-packet one-way delay: 3.535 ms  
Loss rate: 11.50%

Run 5: Report of TCP BBR — Data Link

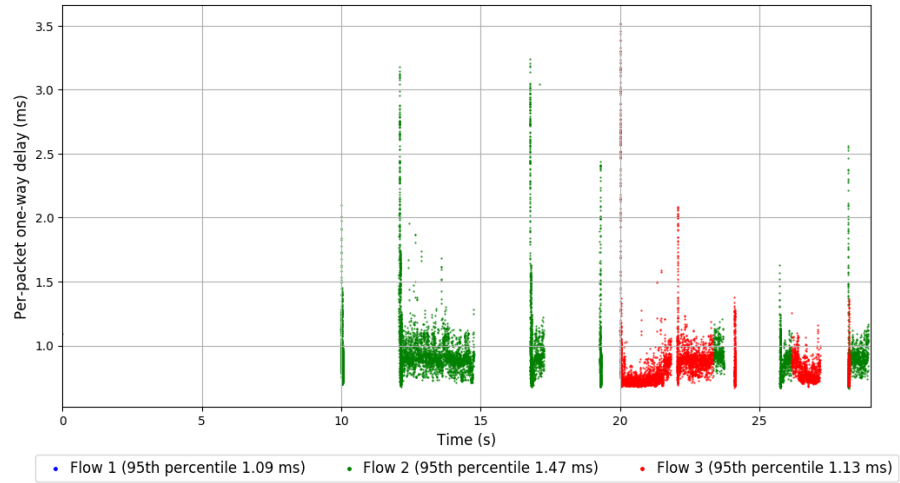
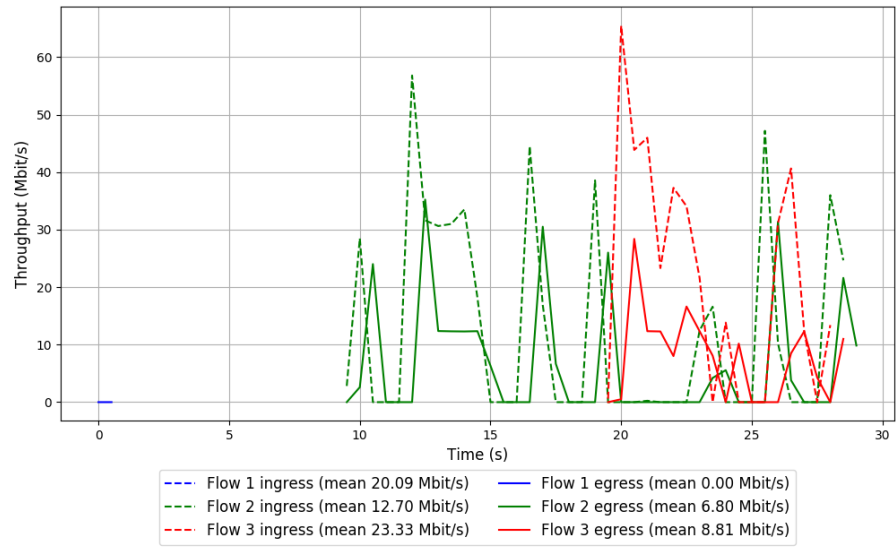


Run 1: Statistics of Copa

Start at: 2019-03-09 02:25:20  
End at: 2019-03-09 02:25:50  
Local clock offset: 3.791 ms  
Remote clock offset: -0.922 ms

# Below is generated by plot.py at 2019-03-09 05:07:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 6.96 Mbit/s  
95th percentile per-packet one-way delay: 1.341 ms  
Loss rate: 53.49%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 1.093 ms  
Loss rate: 98.33%  
-- Flow 2:  
Average throughput: 6.80 Mbit/s  
95th percentile per-packet one-way delay: 1.467 ms  
Loss rate: 46.48%  
-- Flow 3:  
Average throughput: 8.81 Mbit/s  
95th percentile per-packet one-way delay: 1.126 ms  
Loss rate: 62.24%

# Run 1: Report of Copa — Data Link

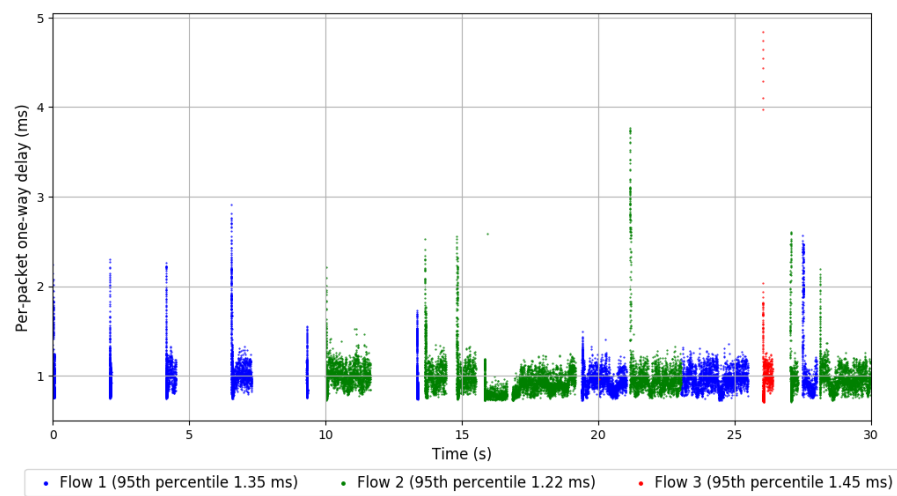
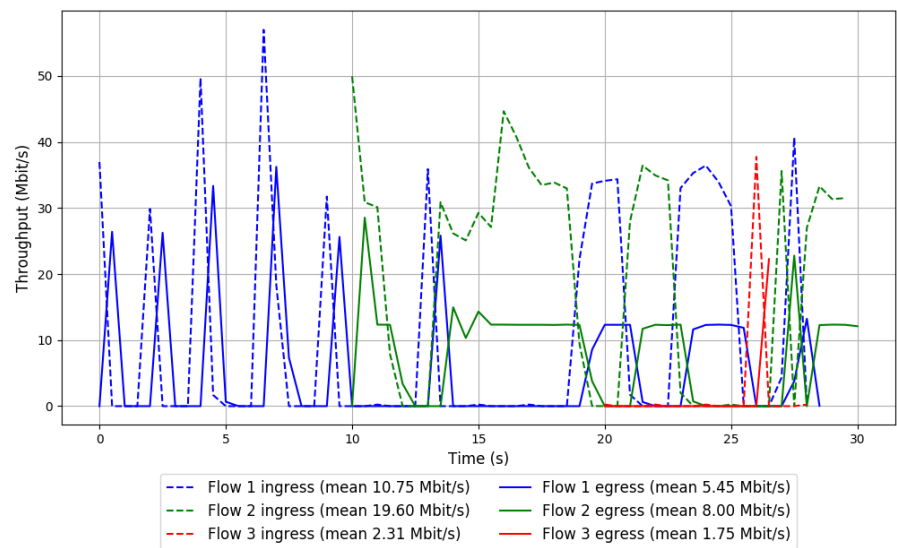


Run 2: Statistics of Copa

Start at: 2019-03-09 02:55:24  
End at: 2019-03-09 02:55:54  
Local clock offset: 0.988 ms  
Remote clock offset: -0.264 ms

# Below is generated by plot.py at 2019-03-09 05:07:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 10.79 Mbit/s  
95th percentile per-packet one-way delay: 1.276 ms  
Loss rate: 54.54%  
-- Flow 1:  
Average throughput: 5.45 Mbit/s  
95th percentile per-packet one-way delay: 1.350 ms  
Loss rate: 49.28%  
-- Flow 2:  
Average throughput: 8.00 Mbit/s  
95th percentile per-packet one-way delay: 1.219 ms  
Loss rate: 59.18%  
-- Flow 3:  
Average throughput: 1.75 Mbit/s  
95th percentile per-packet one-way delay: 1.447 ms  
Loss rate: 42.51%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-03-09 03:25:38

End at: 2019-03-09 03:26:08

Local clock offset: 2.488 ms

Remote clock offset: -0.46 ms

# Below is generated by plot.py at 2019-03-09 05:07:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.79 Mbit/s

95th percentile per-packet one-way delay: 1.641 ms

Loss rate: 50.85%

-- Flow 1:

Average throughput: 5.44 Mbit/s

95th percentile per-packet one-way delay: 1.452 ms

Loss rate: 53.20%

-- Flow 2:

Average throughput: 6.78 Mbit/s

95th percentile per-packet one-way delay: 1.761 ms

Loss rate: 50.57%

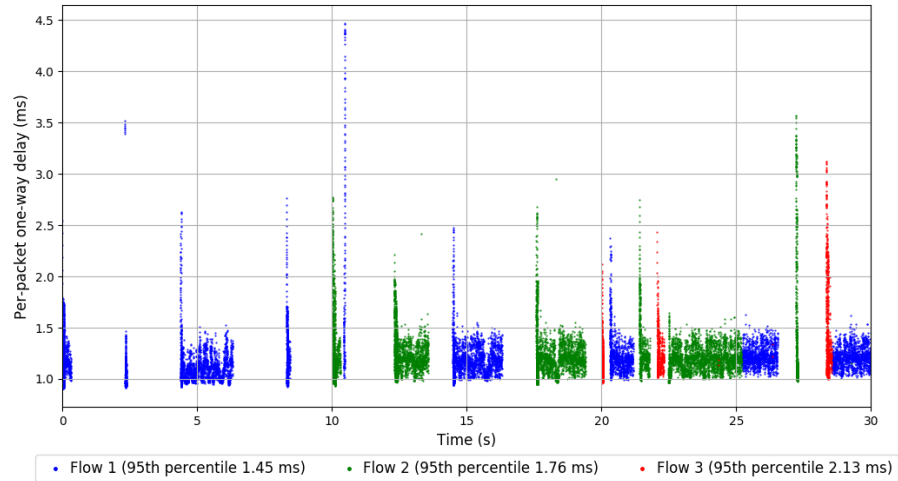
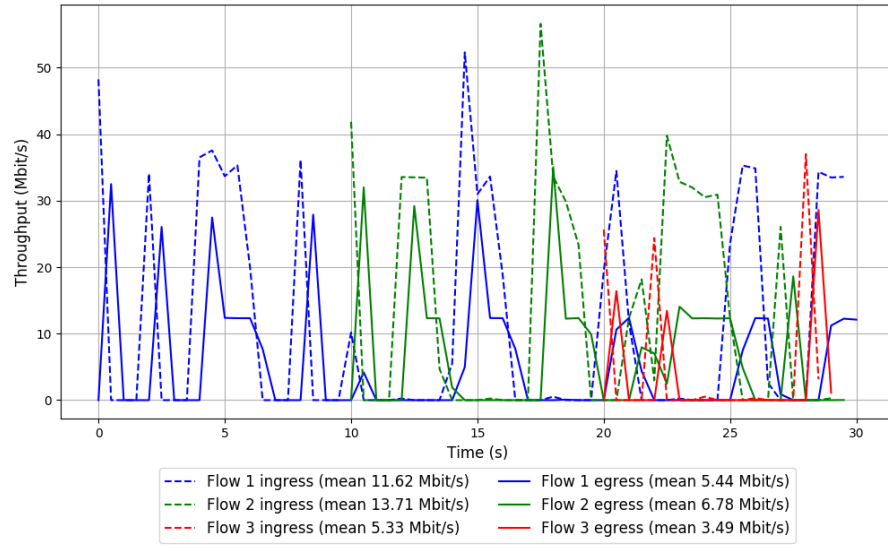
-- Flow 3:

Average throughput: 3.49 Mbit/s

95th percentile per-packet one-way delay: 2.130 ms

Loss rate: 34.49%

### Run 3: Report of Copa — Data Link



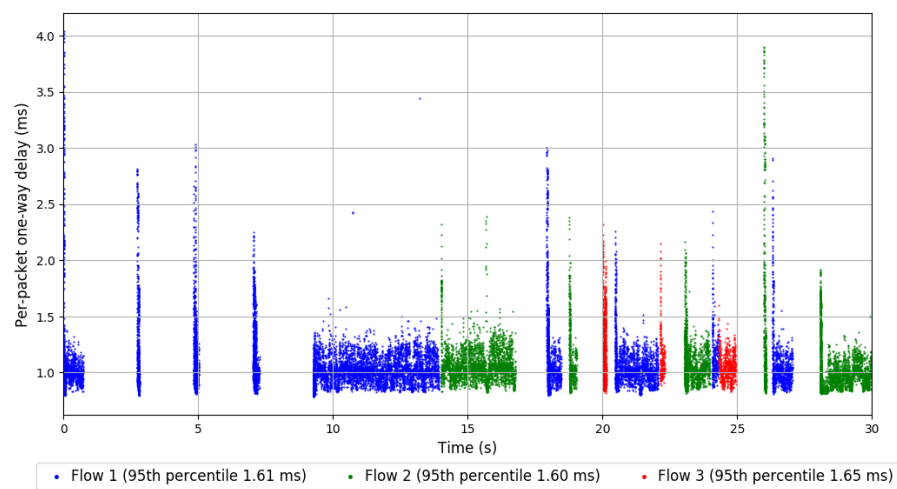
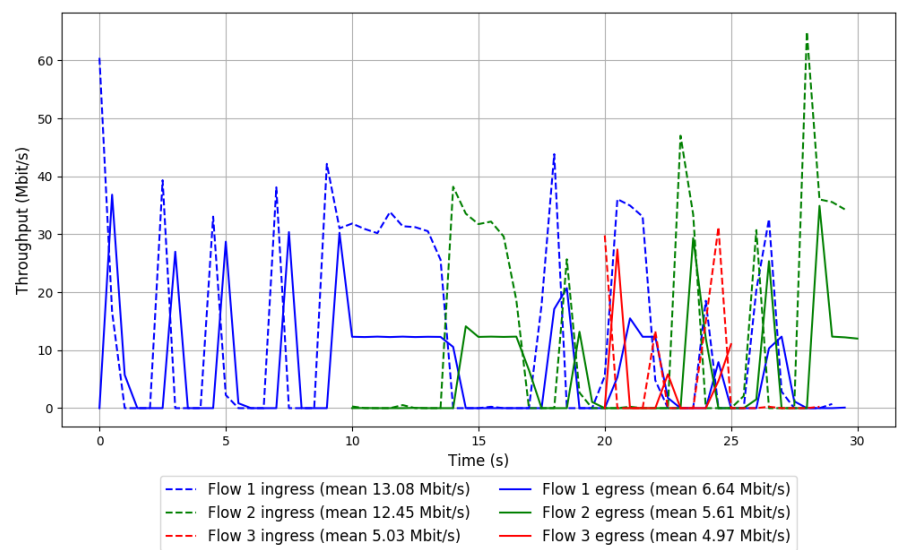


Run 4: Statistics of Copa

Start at: 2019-03-09 03:55:43  
End at: 2019-03-09 03:56:13  
Local clock offset: 3.432 ms  
Remote clock offset: -0.717 ms

# Below is generated by plot.py at 2019-03-09 05:07:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 10.98 Mbit/s  
95th percentile per-packet one-way delay: 1.610 ms  
Loss rate: 51.11%  
-- Flow 1:  
Average throughput: 6.64 Mbit/s  
95th percentile per-packet one-way delay: 1.606 ms  
Loss rate: 49.25%  
-- Flow 2:  
Average throughput: 5.61 Mbit/s  
95th percentile per-packet one-way delay: 1.600 ms  
Loss rate: 54.97%  
-- Flow 3:  
Average throughput: 4.97 Mbit/s  
95th percentile per-packet one-way delay: 1.649 ms  
Loss rate: 45.47%

Run 4: Report of Copa — Data Link

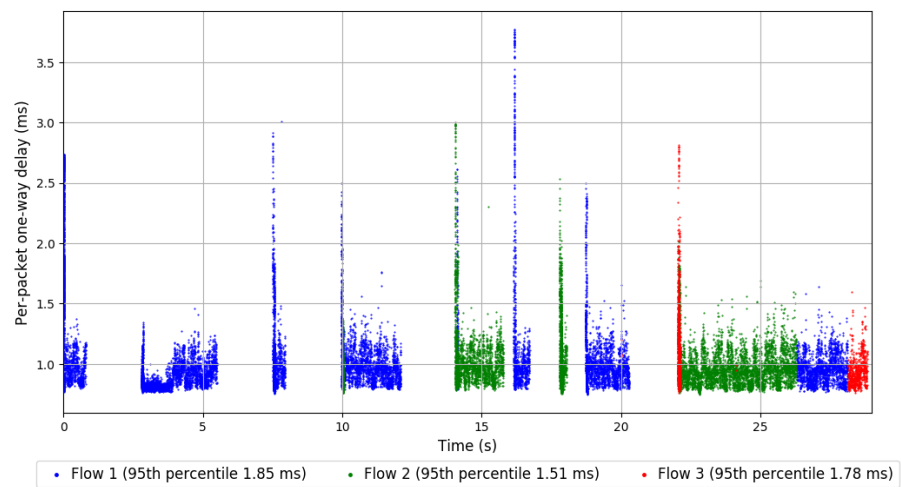
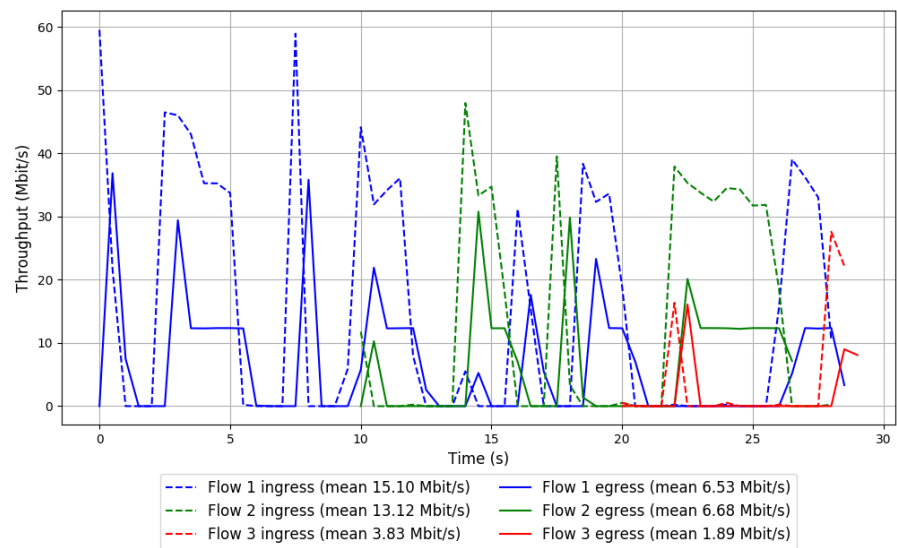


Run 5: Statistics of Copa

Start at: 2019-03-09 04:25:37  
End at: 2019-03-09 04:26:07  
Local clock offset: 0.742 ms  
Remote clock offset: -4.121 ms

# Below is generated by plot.py at 2019-03-09 05:07:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 10.72 Mbit/s  
95th percentile per-packet one-way delay: 1.738 ms  
Loss rate: 55.77%  
-- Flow 1:  
Average throughput: 6.53 Mbit/s  
95th percentile per-packet one-way delay: 1.849 ms  
Loss rate: 56.79%  
-- Flow 2:  
Average throughput: 6.68 Mbit/s  
95th percentile per-packet one-way delay: 1.514 ms  
Loss rate: 54.68%  
-- Flow 3:  
Average throughput: 1.89 Mbit/s  
95th percentile per-packet one-way delay: 1.785 ms  
Loss rate: 50.64%

Run 5: Report of Copa — Data Link

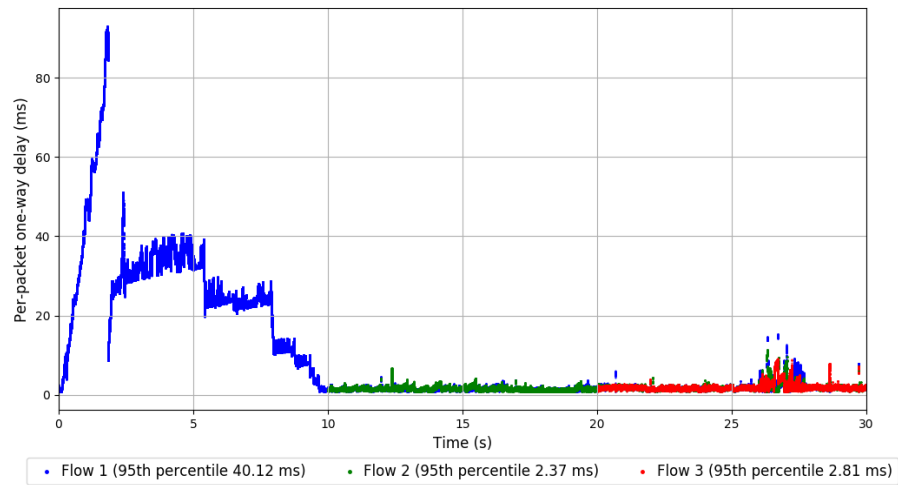
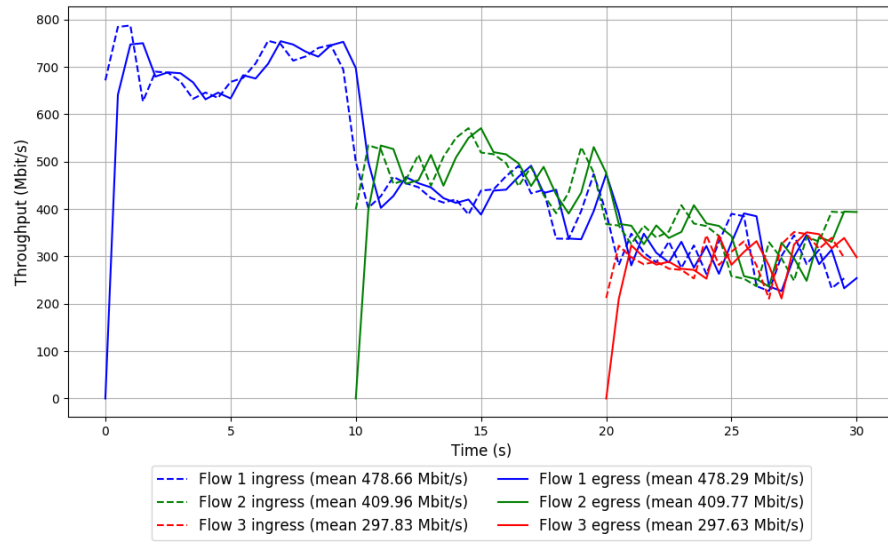


Run 1: Statistics of TCP Cubic

Start at: 2019-03-09 02:38:14  
End at: 2019-03-09 02:38:44  
Local clock offset: 3.835 ms  
Remote clock offset: -0.412 ms

# Below is generated by plot.py at 2019-03-09 05:07:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 850.29 Mbit/s  
95th percentile per-packet one-way delay: 36.016 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 478.29 Mbit/s  
95th percentile per-packet one-way delay: 40.120 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 409.77 Mbit/s  
95th percentile per-packet one-way delay: 2.373 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 297.63 Mbit/s  
95th percentile per-packet one-way delay: 2.807 ms  
Loss rate: 0.07%

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

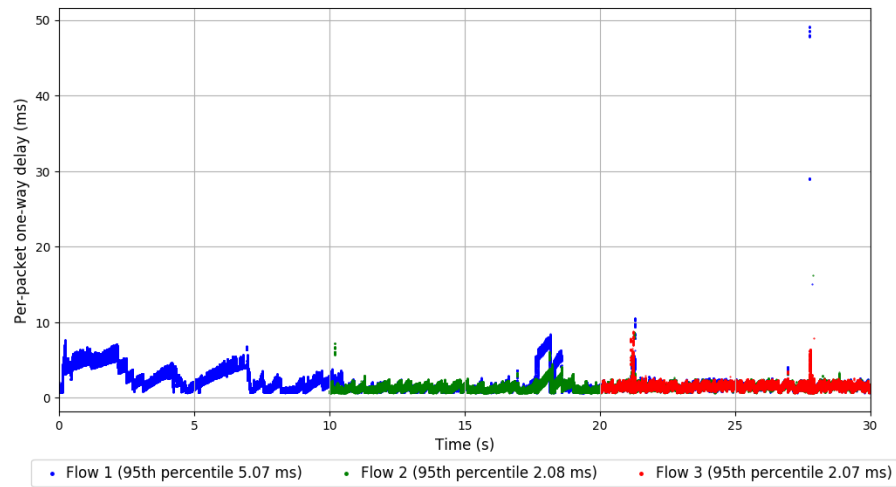
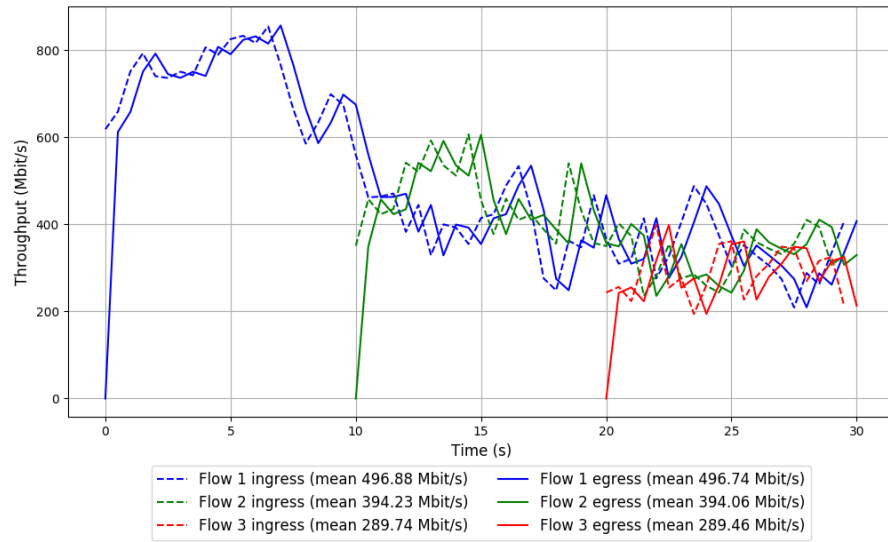


Run 2: Statistics of TCP Cubic

Start at: 2019-03-09 03:08:23  
End at: 2019-03-09 03:08:53  
Local clock offset: -0.218 ms  
Remote clock offset: -0.547 ms

# Below is generated by plot.py at 2019-03-09 05:07:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 855.54 Mbit/s  
95th percentile per-packet one-way delay: 4.573 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 496.74 Mbit/s  
95th percentile per-packet one-way delay: 5.066 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 394.06 Mbit/s  
95th percentile per-packet one-way delay: 2.084 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 289.46 Mbit/s  
95th percentile per-packet one-way delay: 2.072 ms  
Loss rate: 0.09%

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



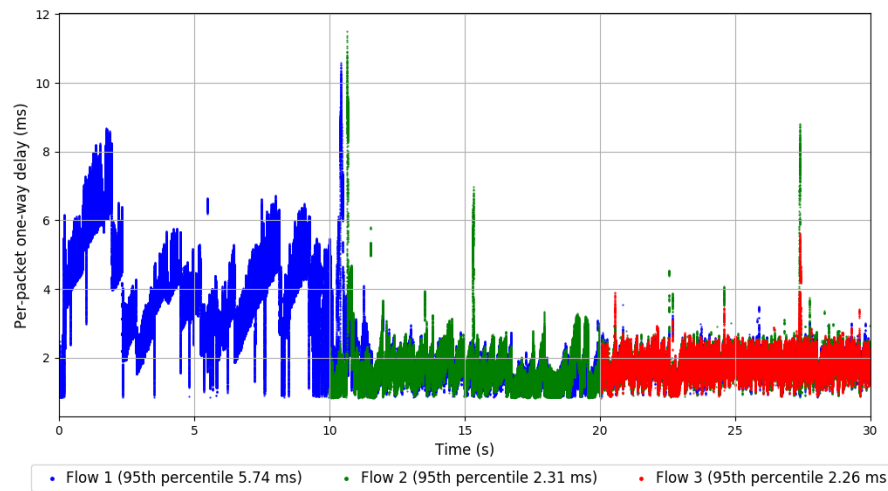
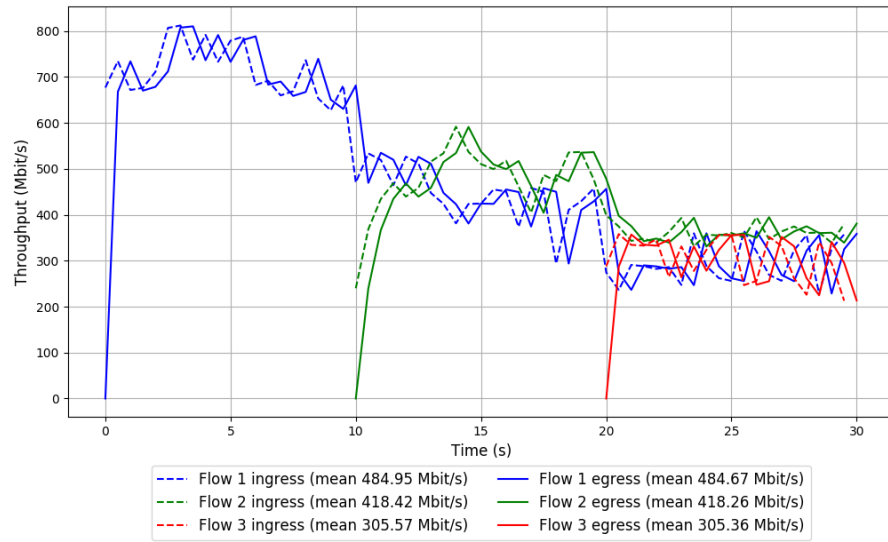


Run 3: Statistics of TCP Cubic

Start at: 2019-03-09 03:38:31  
End at: 2019-03-09 03:39:01  
Local clock offset: 3.569 ms  
Remote clock offset: -0.689 ms

# Below is generated by plot.py at 2019-03-09 05:07:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 864.80 Mbit/s  
95th percentile per-packet one-way delay: 5.036 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 484.67 Mbit/s  
95th percentile per-packet one-way delay: 5.741 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 418.26 Mbit/s  
95th percentile per-packet one-way delay: 2.315 ms  
Loss rate: 0.03%  
-- Flow 3:  
Average throughput: 305.36 Mbit/s  
95th percentile per-packet one-way delay: 2.260 ms  
Loss rate: 0.06%

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

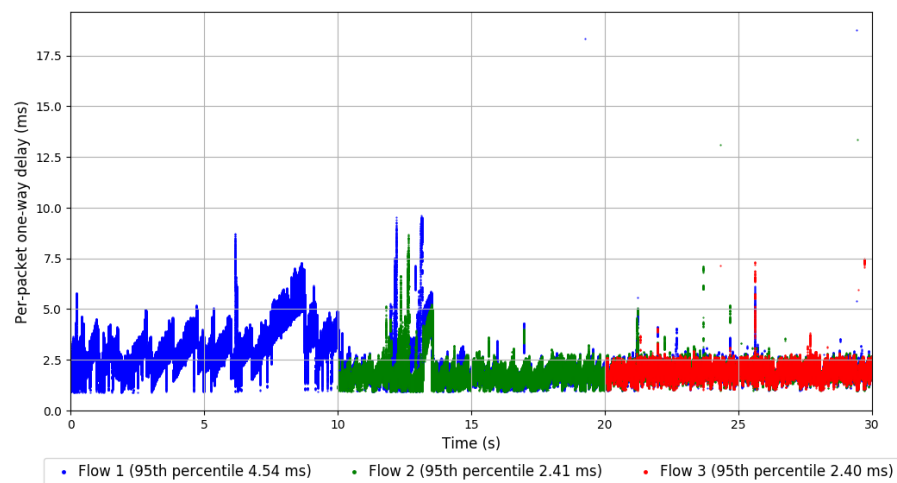
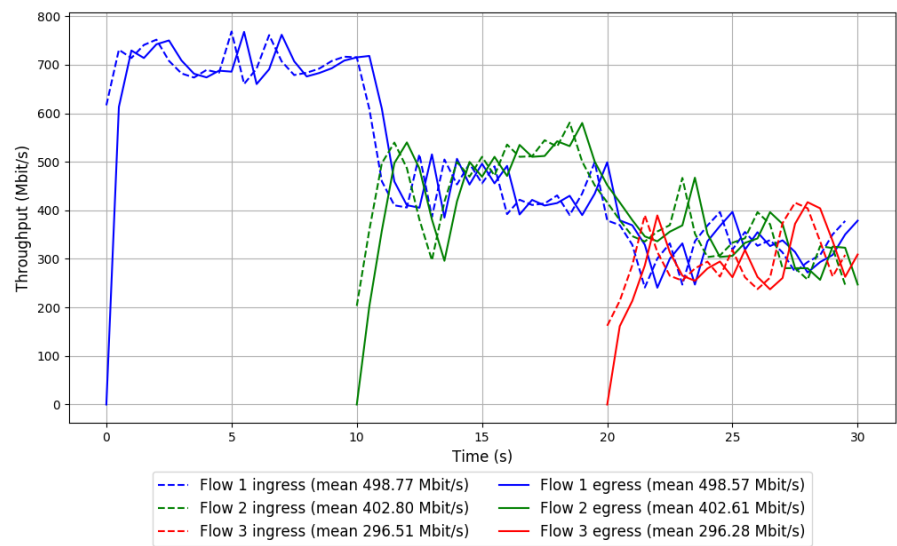


Run 4: Statistics of TCP Cubic

Start at: 2019-03-09 04:08:28  
End at: 2019-03-09 04:08:58  
Local clock offset: 3.489 ms  
Remote clock offset: -2.195 ms

# Below is generated by plot.py at 2019-03-09 05:16:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 865.21 Mbit/s  
95th percentile per-packet one-way delay: 4.018 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 498.57 Mbit/s  
95th percentile per-packet one-way delay: 4.537 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 402.61 Mbit/s  
95th percentile per-packet one-way delay: 2.414 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 296.28 Mbit/s  
95th percentile per-packet one-way delay: 2.399 ms  
Loss rate: 0.07%

Run 4: Report of TCP Cubic — Data Link

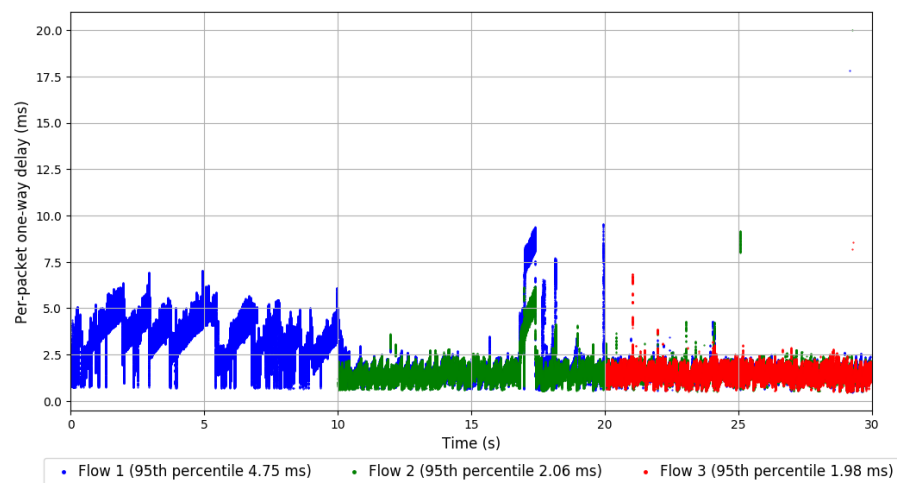
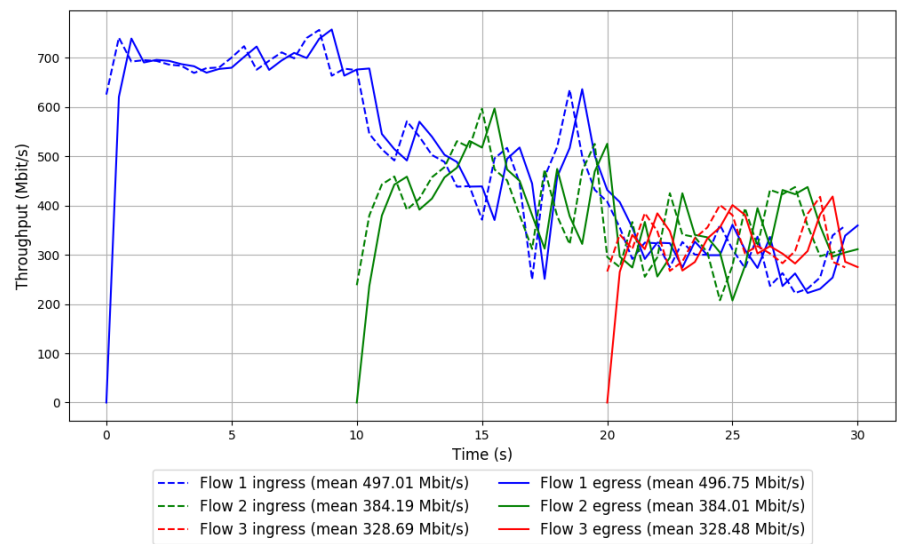


Run 5: Statistics of TCP Cubic

Start at: 2019-03-09 04:38:23  
End at: 2019-03-09 04:38:53  
Local clock offset: -0.419 ms  
Remote clock offset: -4.157 ms

# Below is generated by plot.py at 2019-03-09 05:16:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 861.71 Mbit/s  
95th percentile per-packet one-way delay: 4.463 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 496.75 Mbit/s  
95th percentile per-packet one-way delay: 4.754 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 384.01 Mbit/s  
95th percentile per-packet one-way delay: 2.055 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 328.48 Mbit/s  
95th percentile per-packet one-way delay: 1.975 ms  
Loss rate: 0.06%

Run 5: Report of TCP Cubic — Data Link

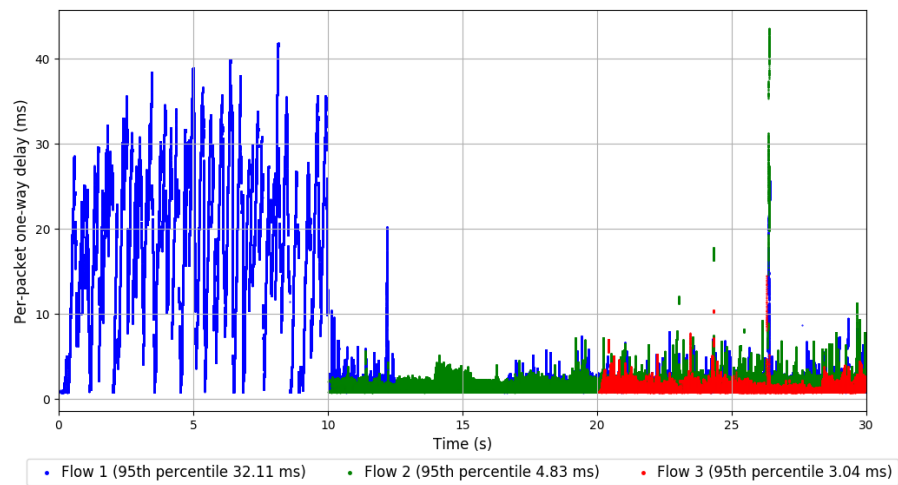
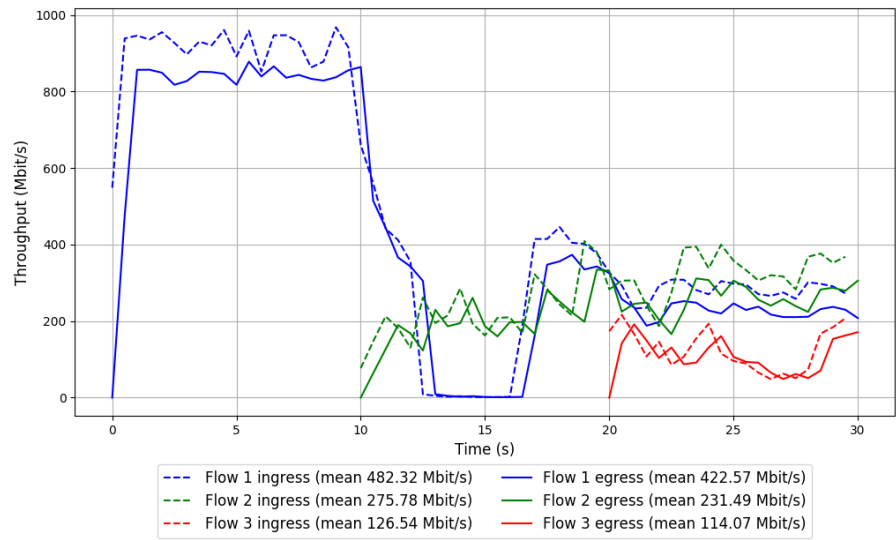


Run 1: Statistics of FillP

Start at: 2019-03-09 02:39:56  
End at: 2019-03-09 02:40:26  
Local clock offset: 3.868 ms  
Remote clock offset: -0.414 ms

# Below is generated by plot.py at 2019-03-09 05:16:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 614.53 Mbit/s  
95th percentile per-packet one-way delay: 30.609 ms  
Loss rate: 13.19%  
-- Flow 1:  
Average throughput: 422.57 Mbit/s  
95th percentile per-packet one-way delay: 32.107 ms  
Loss rate: 12.39%  
-- Flow 2:  
Average throughput: 231.49 Mbit/s  
95th percentile per-packet one-way delay: 4.828 ms  
Loss rate: 16.06%  
-- Flow 3:  
Average throughput: 114.07 Mbit/s  
95th percentile per-packet one-way delay: 3.038 ms  
Loss rate: 9.85%

## Run 1: Report of FillP — Data Link



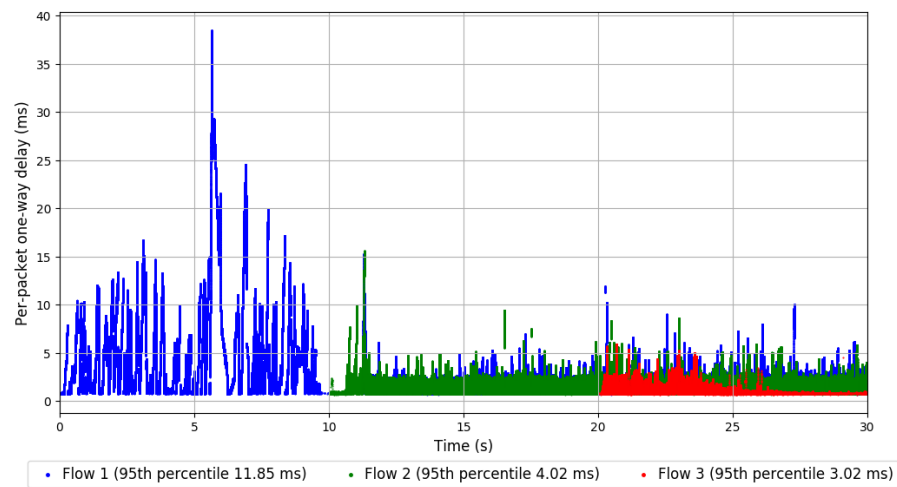
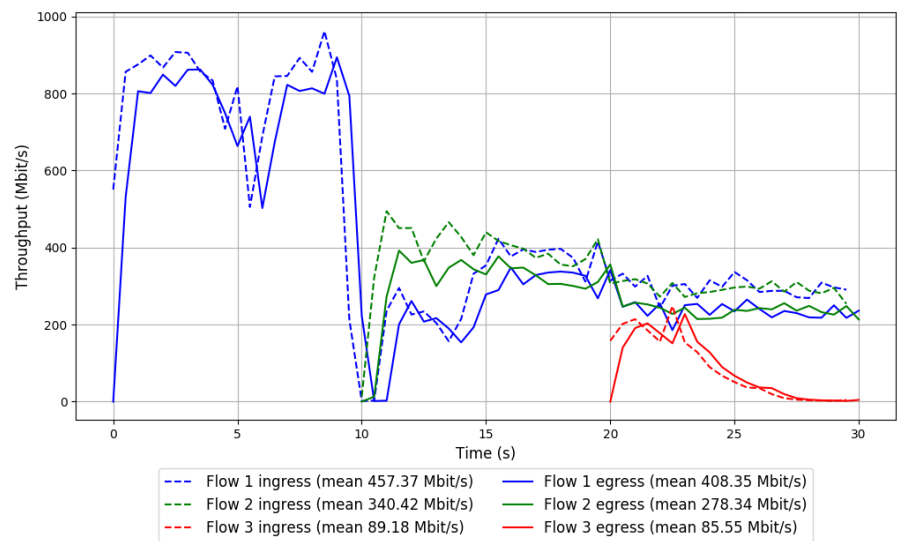


Run 2: Statistics of FillP

Start at: 2019-03-09 03:10:05  
End at: 2019-03-09 03:10:35  
Local clock offset: -0.329 ms  
Remote clock offset: -0.495 ms

# Below is generated by plot.py at 2019-03-09 05:16:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 621.90 Mbit/s  
95th percentile per-packet one-way delay: 10.305 ms  
Loss rate: 12.83%  
-- Flow 1:  
Average throughput: 408.35 Mbit/s  
95th percentile per-packet one-way delay: 11.854 ms  
Loss rate: 10.72%  
-- Flow 2:  
Average throughput: 278.34 Mbit/s  
95th percentile per-packet one-way delay: 4.021 ms  
Loss rate: 18.24%  
-- Flow 3:  
Average throughput: 85.55 Mbit/s  
95th percentile per-packet one-way delay: 3.015 ms  
Loss rate: 4.08%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-03-09 03:40:13

End at: 2019-03-09 03:40:44

Local clock offset: 3.661 ms

Remote clock offset: -0.66 ms

# Below is generated by plot.py at 2019-03-09 05:16:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 577.17 Mbit/s

95th percentile per-packet one-way delay: 10.596 ms

Loss rate: 10.50%

-- Flow 1:

Average throughput: 415.18 Mbit/s

95th percentile per-packet one-way delay: 11.498 ms

Loss rate: 8.67%

-- Flow 2:

Average throughput: 130.95 Mbit/s

95th percentile per-packet one-way delay: 4.528 ms

Loss rate: 11.40%

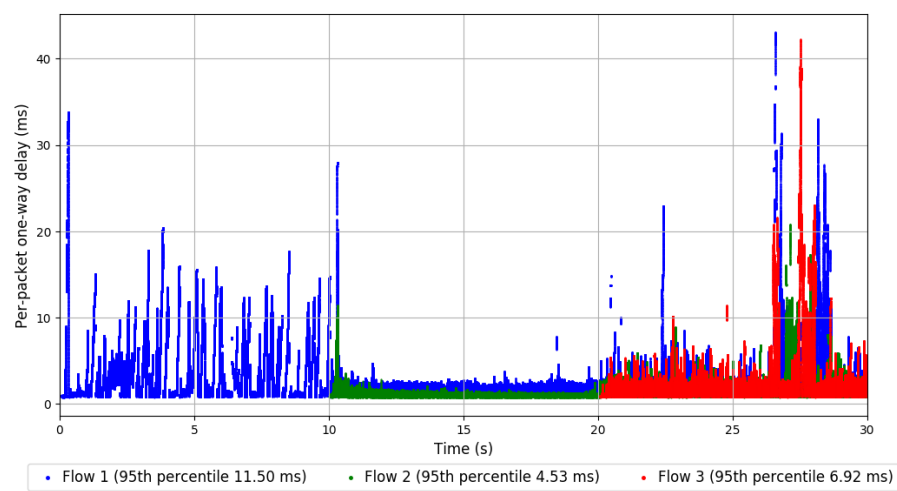
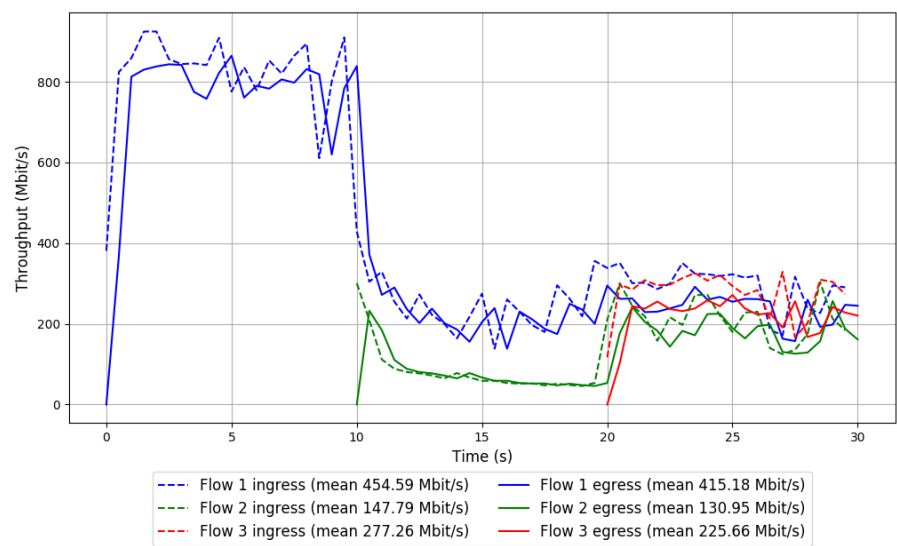
-- Flow 3:

Average throughput: 225.66 Mbit/s

95th percentile per-packet one-way delay: 6.920 ms

Loss rate: 18.62%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2019-03-09 04:10:11

End at: 2019-03-09 04:10:41

Local clock offset: 3.518 ms

Remote clock offset: -2.52 ms

# Below is generated by plot.py at 2019-03-09 05:17:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 742.71 Mbit/s

95th percentile per-packet one-way delay: 11.556 ms

Loss rate: 10.79%

-- Flow 1:

Average throughput: 522.76 Mbit/s

95th percentile per-packet one-way delay: 13.569 ms

Loss rate: 7.68%

-- Flow 2:

Average throughput: 279.39 Mbit/s

95th percentile per-packet one-way delay: 5.080 ms

Loss rate: 19.63%

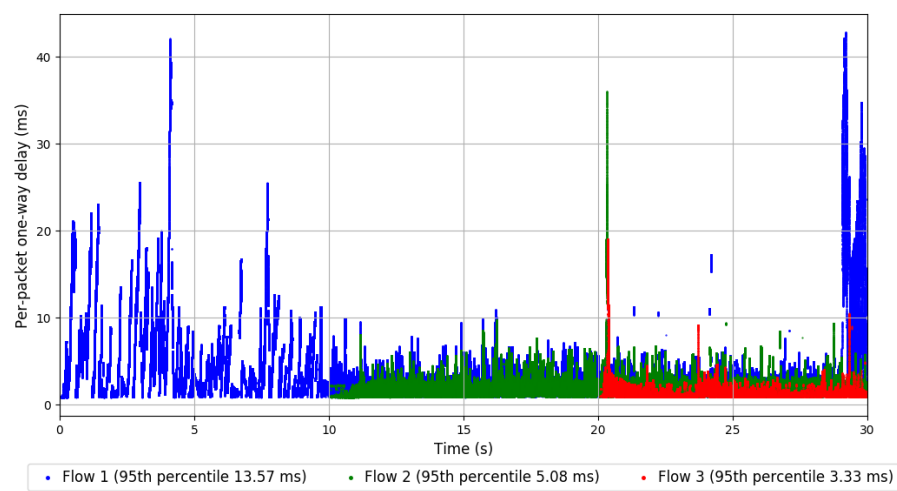
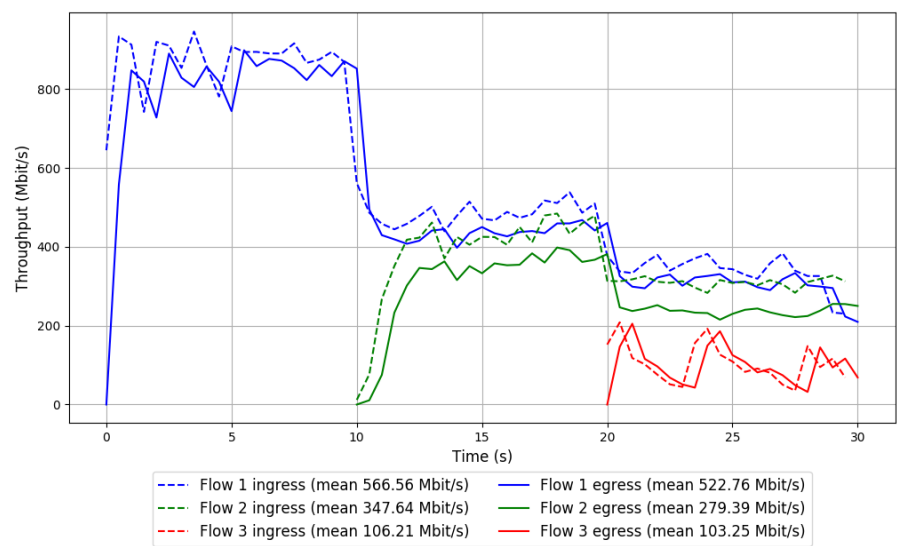
-- Flow 3:

Average throughput: 103.25 Mbit/s

95th percentile per-packet one-way delay: 3.330 ms

Loss rate: 2.79%

Run 4: Report of FillP — Data Link

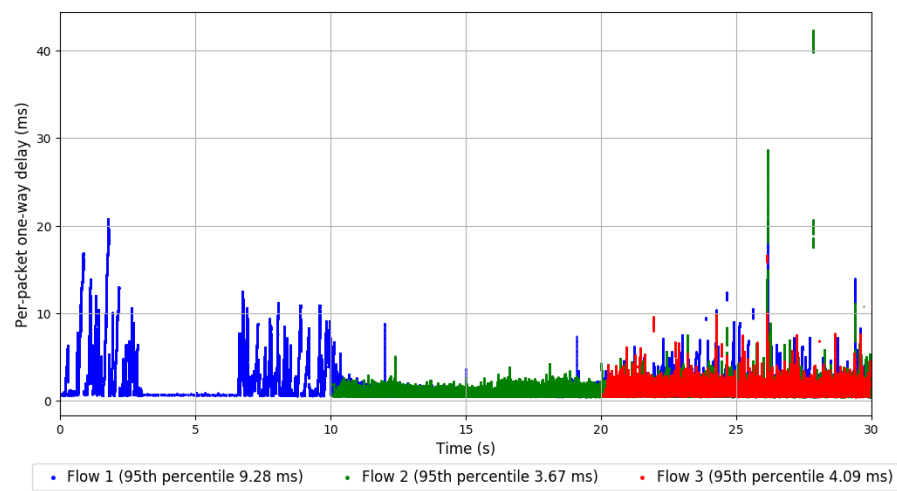
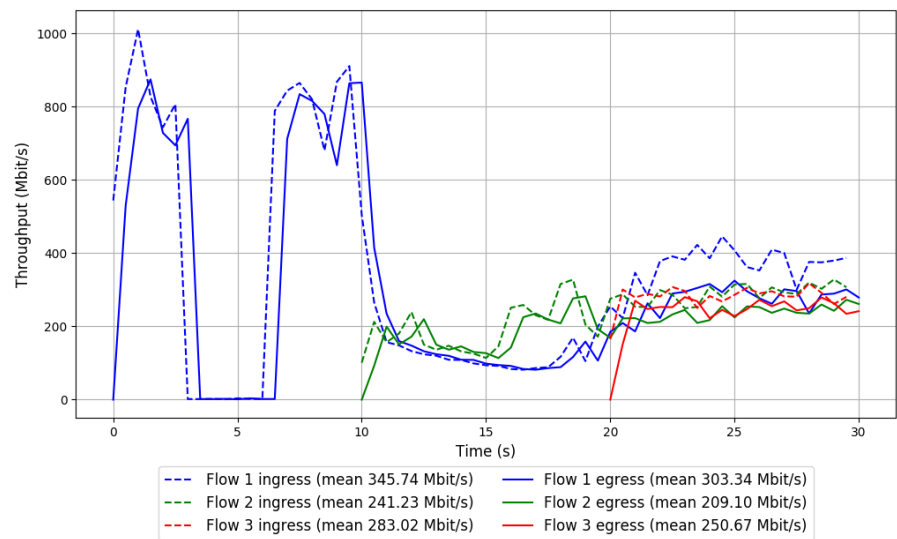


Run 5: Statistics of FillP

Start at: 2019-03-09 04:40:06  
End at: 2019-03-09 04:40:36  
Local clock offset: -0.505 ms  
Remote clock offset: -3.482 ms

# Below is generated by plot.py at 2019-03-09 05:17:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 525.40 Mbit/s  
95th percentile per-packet one-way delay: 7.598 ms  
Loss rate: 12.41%  
-- Flow 1:  
Average throughput: 303.34 Mbit/s  
95th percentile per-packet one-way delay: 9.276 ms  
Loss rate: 12.25%  
-- Flow 2:  
Average throughput: 209.10 Mbit/s  
95th percentile per-packet one-way delay: 3.670 ms  
Loss rate: 13.33%  
-- Flow 3:  
Average throughput: 250.67 Mbit/s  
95th percentile per-packet one-way delay: 4.095 ms  
Loss rate: 11.40%

Run 5: Report of FillP — Data Link



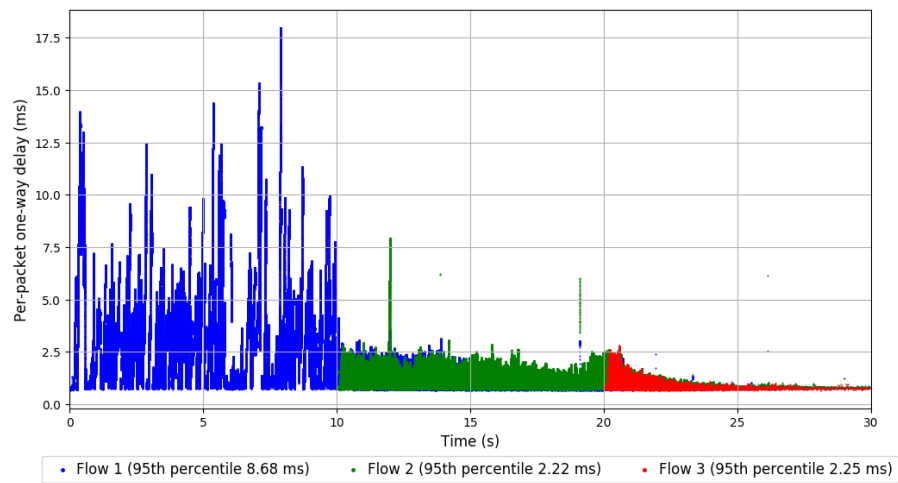
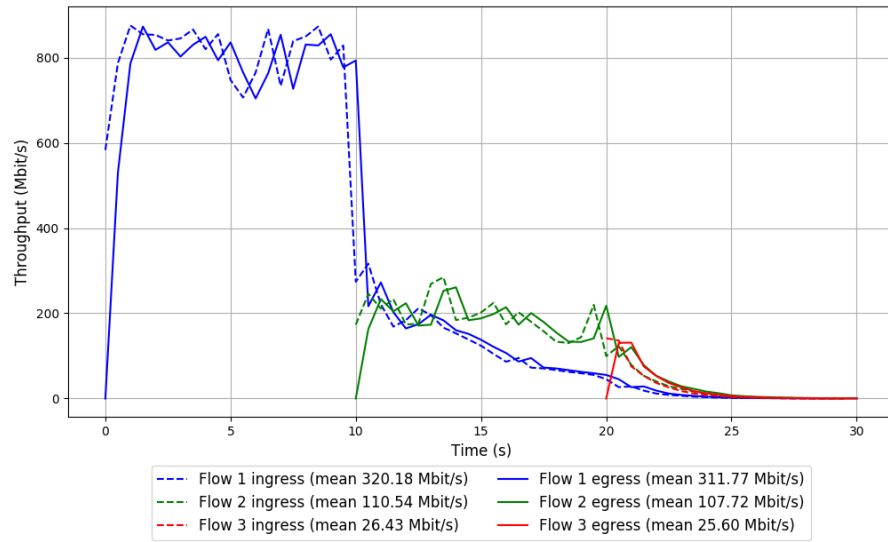


Run 1: Statistics of FillP-Sheep

Start at: 2019-03-09 02:19:35  
End at: 2019-03-09 02:20:05  
Local clock offset: 3.944 ms  
Remote clock offset: -1.113 ms

# Below is generated by plot.py at 2019-03-09 05:17:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 391.74 Mbit/s  
95th percentile per-packet one-way delay: 7.918 ms  
Loss rate: 2.62%  
-- Flow 1:  
Average throughput: 311.77 Mbit/s  
95th percentile per-packet one-way delay: 8.678 ms  
Loss rate: 2.63%  
-- Flow 2:  
Average throughput: 107.72 Mbit/s  
95th percentile per-packet one-way delay: 2.216 ms  
Loss rate: 2.55%  
-- Flow 3:  
Average throughput: 25.60 Mbit/s  
95th percentile per-packet one-way delay: 2.246 ms  
Loss rate: 3.13%

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

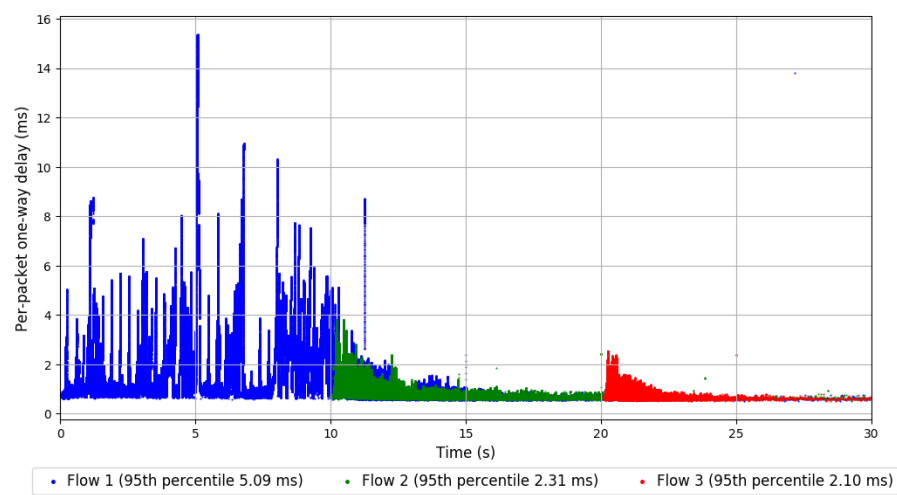
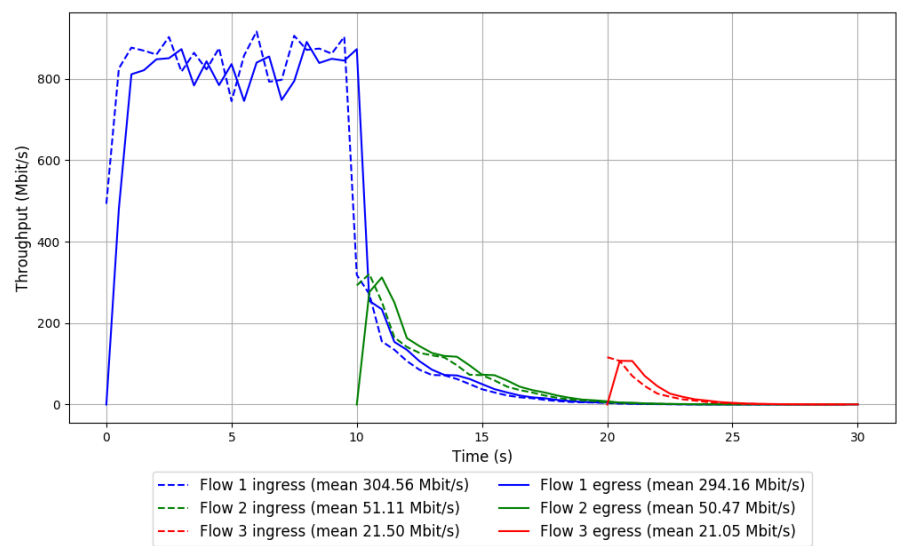


Run 2: Statistics of FillP-Sheep

Start at: 2019-03-09 02:49:45  
End at: 2019-03-09 02:50:15  
Local clock offset: 2.104 ms  
Remote clock offset: -0.302 ms

# Below is generated by plot.py at 2019-03-09 05:17:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 334.59 Mbit/s  
95th percentile per-packet one-way delay: 4.902 ms  
Loss rate: 3.18%  
-- Flow 1:  
Average throughput: 294.16 Mbit/s  
95th percentile per-packet one-way delay: 5.089 ms  
Loss rate: 3.41%  
-- Flow 2:  
Average throughput: 50.47 Mbit/s  
95th percentile per-packet one-way delay: 2.306 ms  
Loss rate: 1.26%  
-- Flow 3:  
Average throughput: 21.05 Mbit/s  
95th percentile per-packet one-way delay: 2.096 ms  
Loss rate: 2.11%

Run 2: Report of FillP-Sheep — Data Link

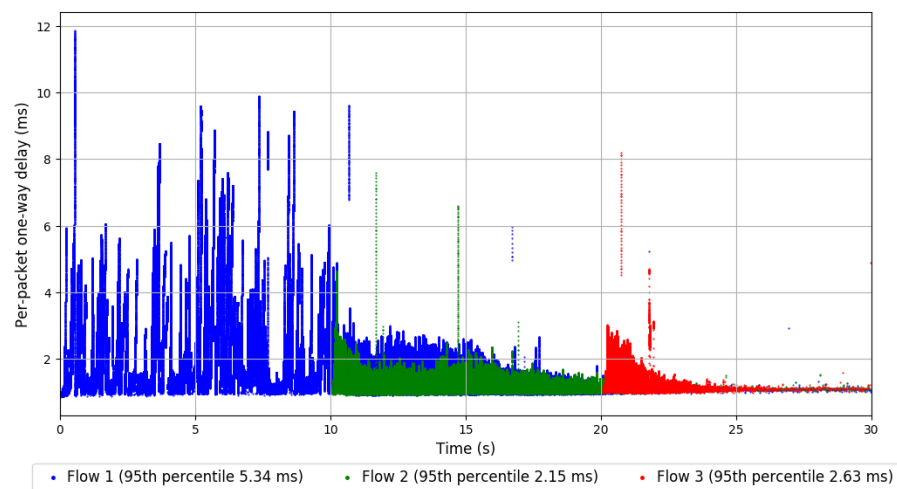
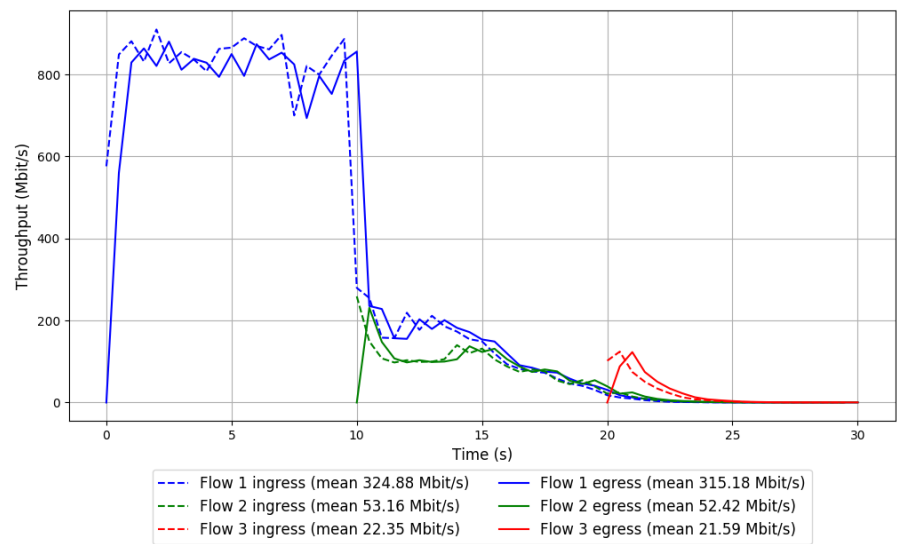


Run 3: Statistics of FillP-Sheep

Start at: 2019-03-09 03:19:55  
End at: 2019-03-09 03:20:25  
Local clock offset: 1.373 ms  
Remote clock offset: -0.492 ms

# Below is generated by plot.py at 2019-03-09 05:19:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 357.04 Mbit/s  
95th percentile per-packet one-way delay: 5.165 ms  
Loss rate: 2.84%  
-- Flow 1:  
Average throughput: 315.18 Mbit/s  
95th percentile per-packet one-way delay: 5.340 ms  
Loss rate: 2.99%  
-- Flow 2:  
Average throughput: 52.42 Mbit/s  
95th percentile per-packet one-way delay: 2.145 ms  
Loss rate: 1.40%  
-- Flow 3:  
Average throughput: 21.59 Mbit/s  
95th percentile per-packet one-way delay: 2.632 ms  
Loss rate: 3.39%

Run 3: Report of FillP-Sheep — Data Link

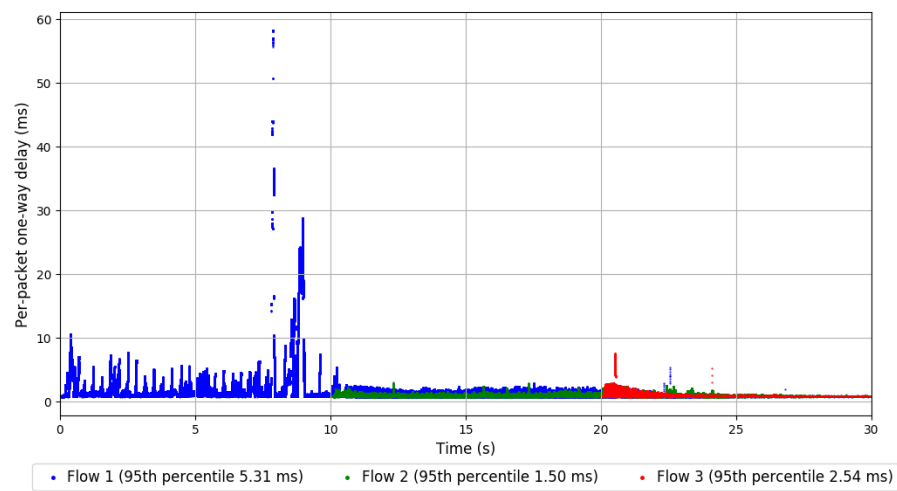
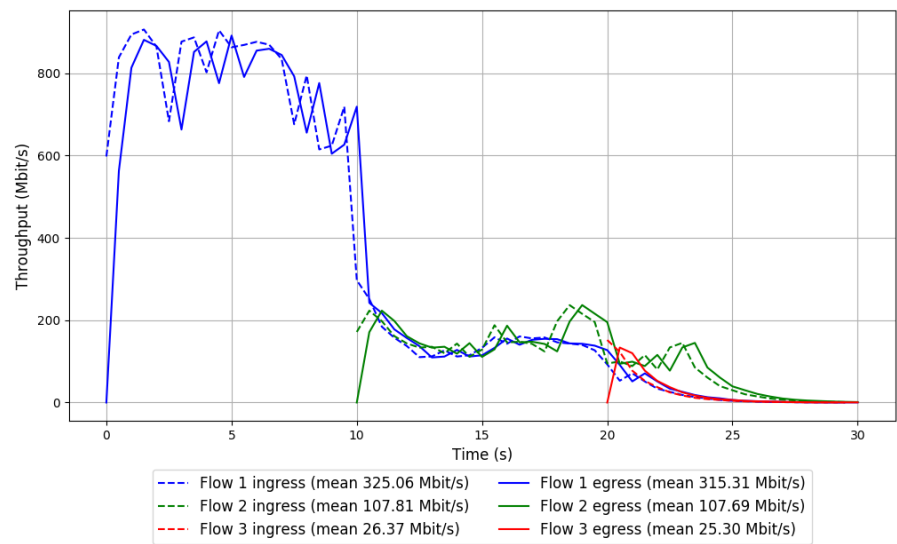


Run 4: Statistics of FillP-Sheep

Start at: 2019-03-09 03:50:02  
End at: 2019-03-09 03:50:32  
Local clock offset: 3.555 ms  
Remote clock offset: -0.689 ms

# Below is generated by plot.py at 2019-03-09 05:20:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 395.19 Mbit/s  
95th percentile per-packet one-way delay: 4.472 ms  
Loss rate: 2.51%  
-- Flow 1:  
Average throughput: 315.31 Mbit/s  
95th percentile per-packet one-way delay: 5.307 ms  
Loss rate: 3.00%  
-- Flow 2:  
Average throughput: 107.69 Mbit/s  
95th percentile per-packet one-way delay: 1.496 ms  
Loss rate: 0.11%  
-- Flow 3:  
Average throughput: 25.30 Mbit/s  
95th percentile per-packet one-way delay: 2.541 ms  
Loss rate: 4.07%

Run 4: Report of FillP-Sheep — Data Link



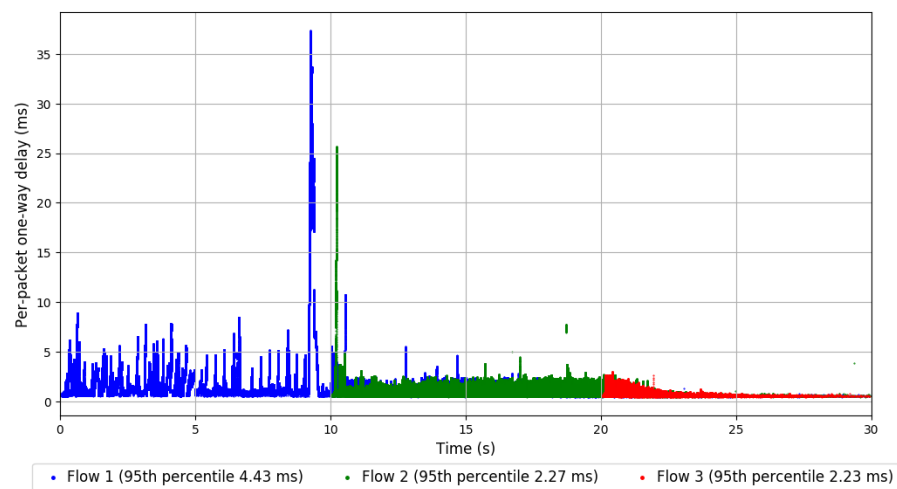
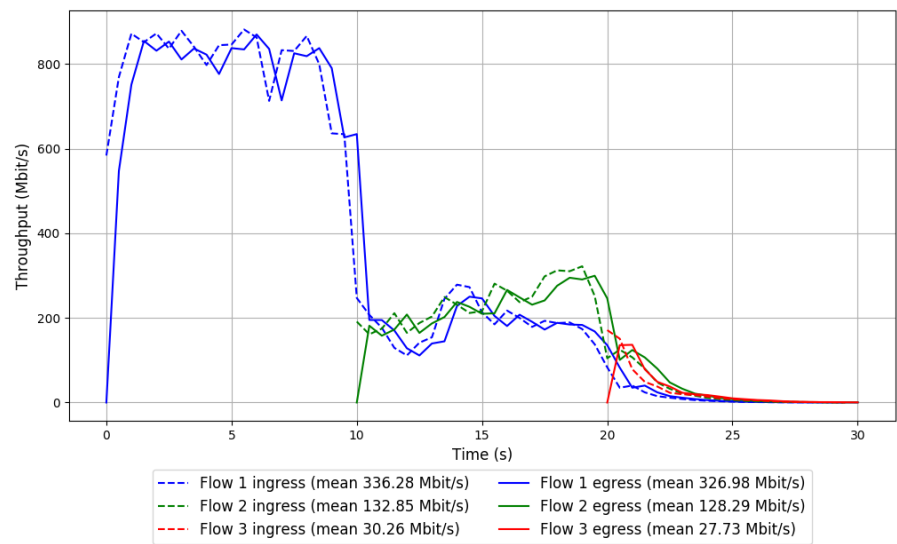


Run 5: Statistics of FillP-Sheep

Start at: 2019-03-09 04:20:01  
End at: 2019-03-09 04:20:31  
Local clock offset: 1.791 ms  
Remote clock offset: -3.861 ms

# Below is generated by plot.py at 2019-03-09 05:21:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 421.35 Mbit/s  
95th percentile per-packet one-way delay: 4.088 ms  
Loss rate: 3.03%  
-- Flow 1:  
Average throughput: 326.98 Mbit/s  
95th percentile per-packet one-way delay: 4.432 ms  
Loss rate: 2.77%  
-- Flow 2:  
Average throughput: 128.29 Mbit/s  
95th percentile per-packet one-way delay: 2.265 ms  
Loss rate: 3.43%  
-- Flow 3:  
Average throughput: 27.73 Mbit/s  
95th percentile per-packet one-way delay: 2.230 ms  
Loss rate: 8.36%

Run 5: Report of FillP-Sheep — Data Link

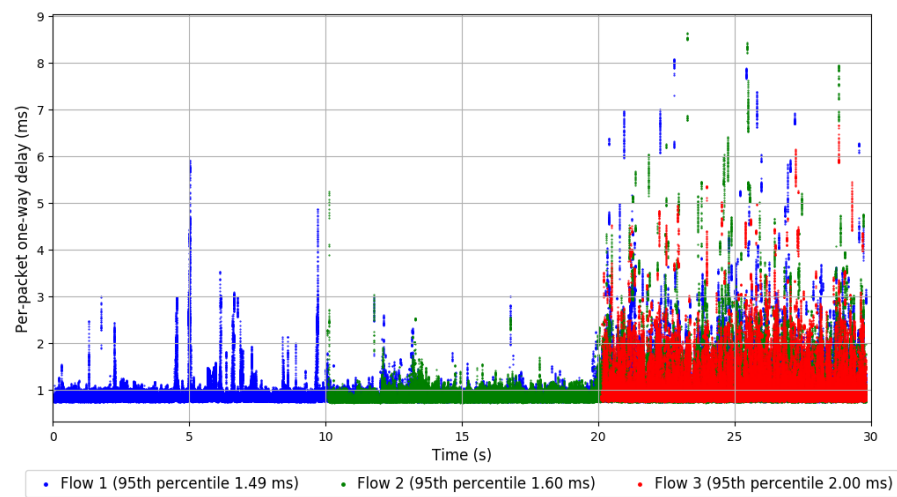
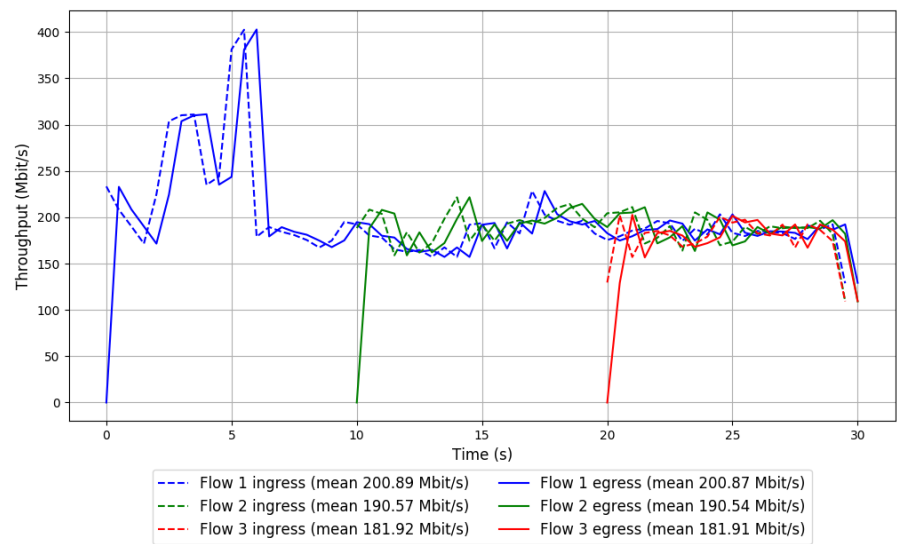


Run 1: Statistics of Indigo

Start at: 2019-03-09 02:42:58  
End at: 2019-03-09 02:43:28  
Local clock offset: 3.921 ms  
Remote clock offset: -0.417 ms

# Below is generated by plot.py at 2019-03-09 05:21:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 386.31 Mbit/s  
95th percentile per-packet one-way delay: 1.638 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 200.87 Mbit/s  
95th percentile per-packet one-way delay: 1.489 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 190.54 Mbit/s  
95th percentile per-packet one-way delay: 1.598 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 181.91 Mbit/s  
95th percentile per-packet one-way delay: 2.003 ms  
Loss rate: 0.01%

Run 1: Report of Indigo — Data Link

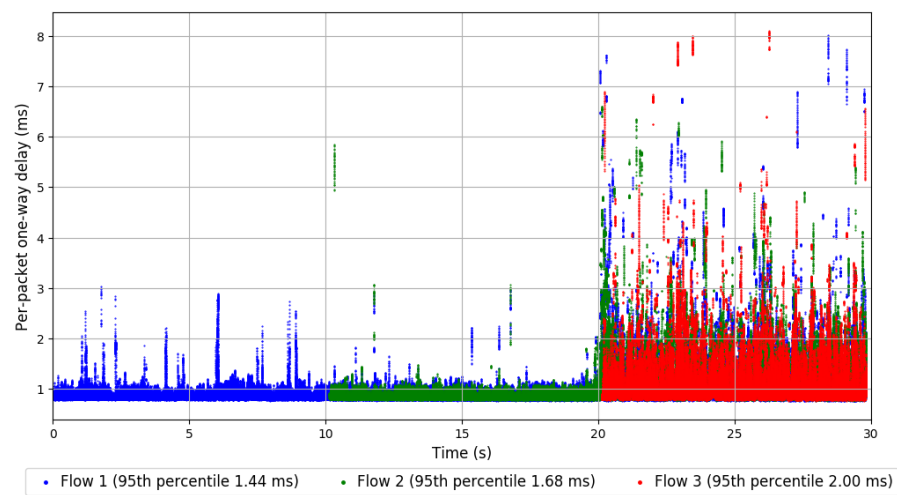
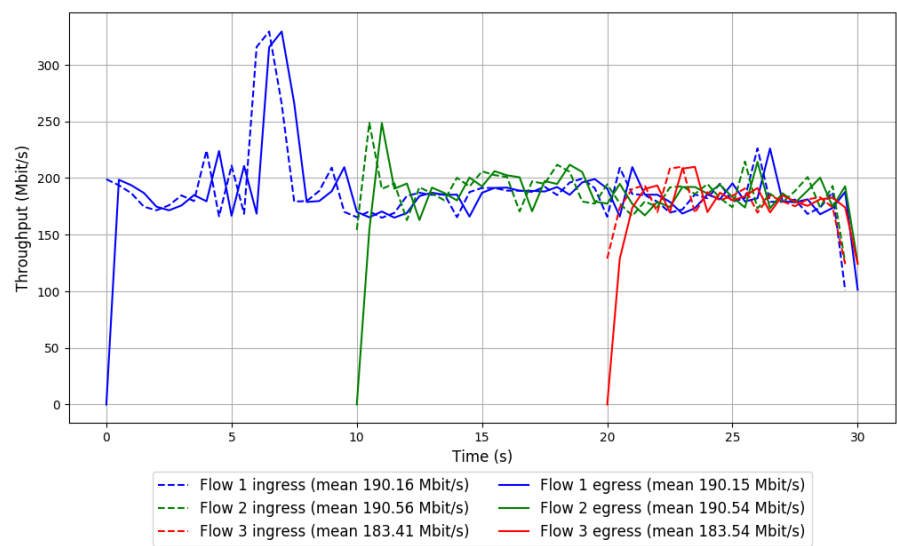


Run 2: Statistics of Indigo

Start at: 2019-03-09 03:13:07  
End at: 2019-03-09 03:13:37  
Local clock offset: -0.483 ms  
Remote clock offset: -0.463 ms

# Below is generated by plot.py at 2019-03-09 05:21:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 375.58 Mbit/s  
95th percentile per-packet one-way delay: 1.646 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 190.15 Mbit/s  
95th percentile per-packet one-way delay: 1.441 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 190.54 Mbit/s  
95th percentile per-packet one-way delay: 1.675 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 183.54 Mbit/s  
95th percentile per-packet one-way delay: 1.997 ms  
Loss rate: 0.01%

Run 2: Report of Indigo — Data Link

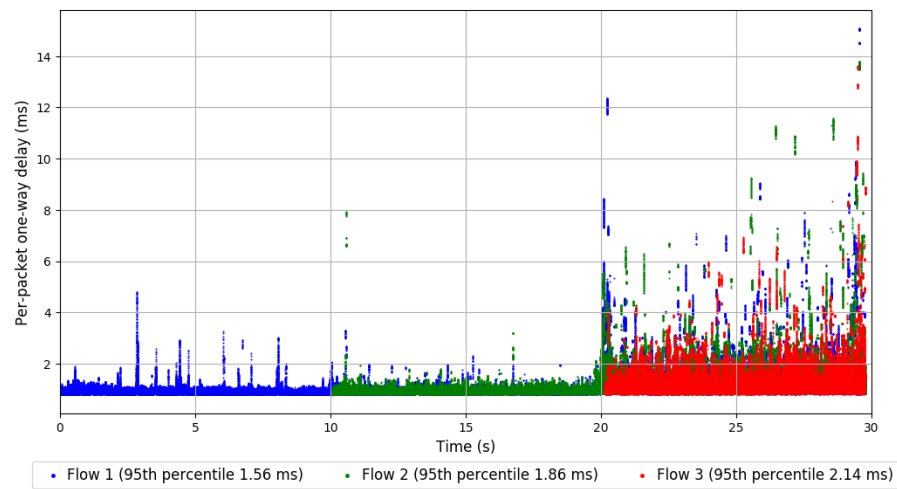
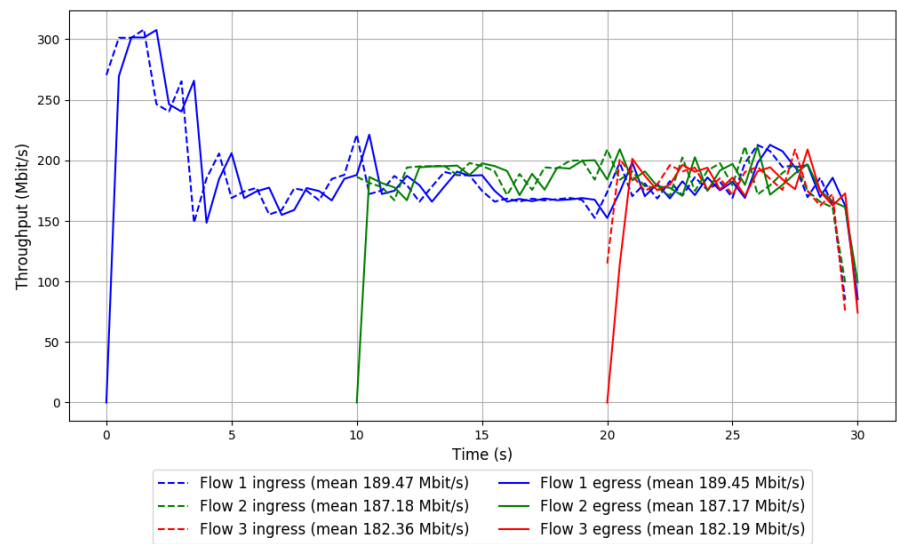


Run 3: Statistics of Indigo

Start at: 2019-03-09 03:43:12  
End at: 2019-03-09 03:43:42  
Local clock offset: 3.763 ms  
Remote clock offset: -0.704 ms

# Below is generated by plot.py at 2019-03-09 05:21:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 372.31 Mbit/s  
95th percentile per-packet one-way delay: 1.794 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 189.45 Mbit/s  
95th percentile per-packet one-way delay: 1.559 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 187.17 Mbit/s  
95th percentile per-packet one-way delay: 1.865 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 182.19 Mbit/s  
95th percentile per-packet one-way delay: 2.141 ms  
Loss rate: 0.02%

Run 3: Report of Indigo — Data Link



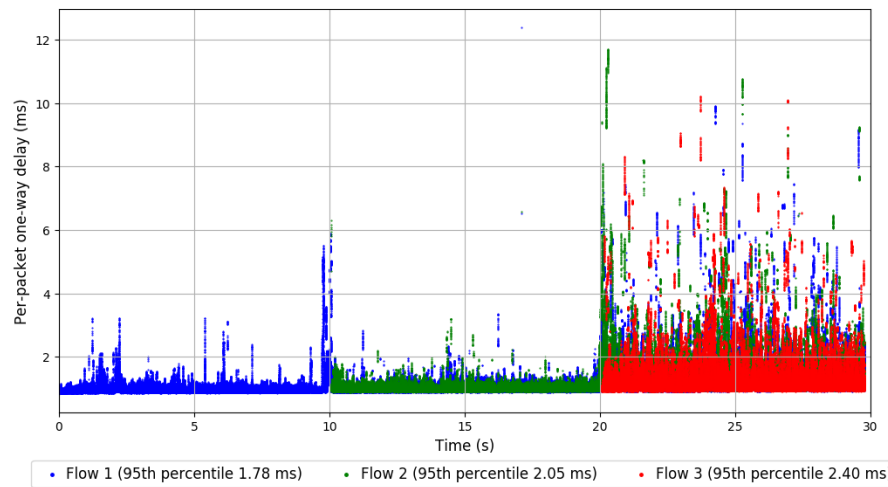
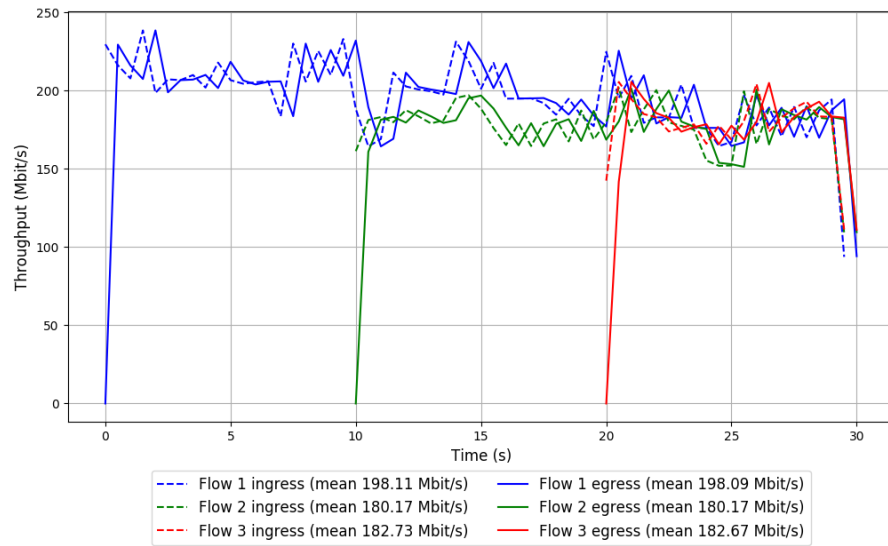


Run 4: Statistics of Indigo

Start at: 2019-03-09 04:13:16  
End at: 2019-03-09 04:13:46  
Local clock offset: 3.546 ms  
Remote clock offset: -2.981 ms

# Below is generated by plot.py at 2019-03-09 05:22:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 377.02 Mbit/s  
95th percentile per-packet one-way delay: 1.982 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 198.09 Mbit/s  
95th percentile per-packet one-way delay: 1.782 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 180.17 Mbit/s  
95th percentile per-packet one-way delay: 2.053 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 182.67 Mbit/s  
95th percentile per-packet one-way delay: 2.403 ms  
Loss rate: 0.02%

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



Run 5: Statistics of Indigo

Start at: 2019-03-09 04:43:05

End at: 2019-03-09 04:43:35

Local clock offset: -0.666 ms

Remote clock offset: -2.43 ms

# Below is generated by plot.py at 2019-03-09 05:22:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 378.40 Mbit/s

95th percentile per-packet one-way delay: 1.551 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 195.89 Mbit/s

95th percentile per-packet one-way delay: 1.386 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 185.59 Mbit/s

95th percentile per-packet one-way delay: 1.598 ms

Loss rate: 0.02%

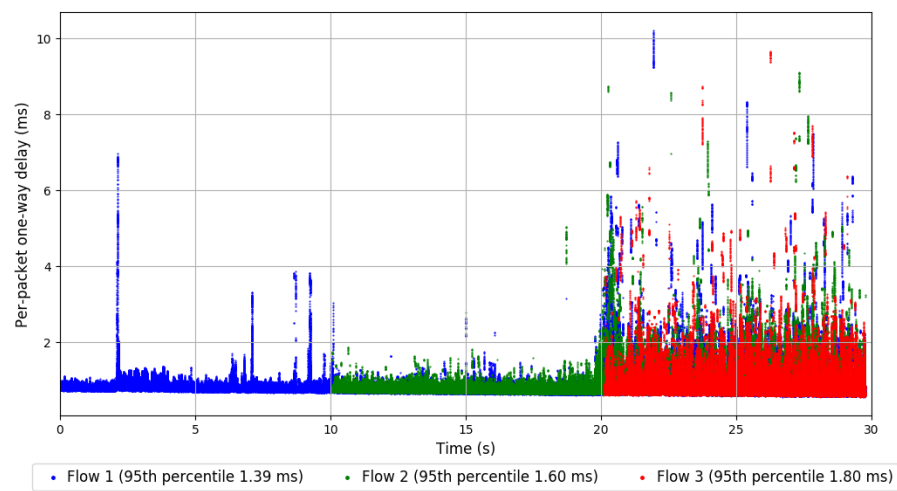
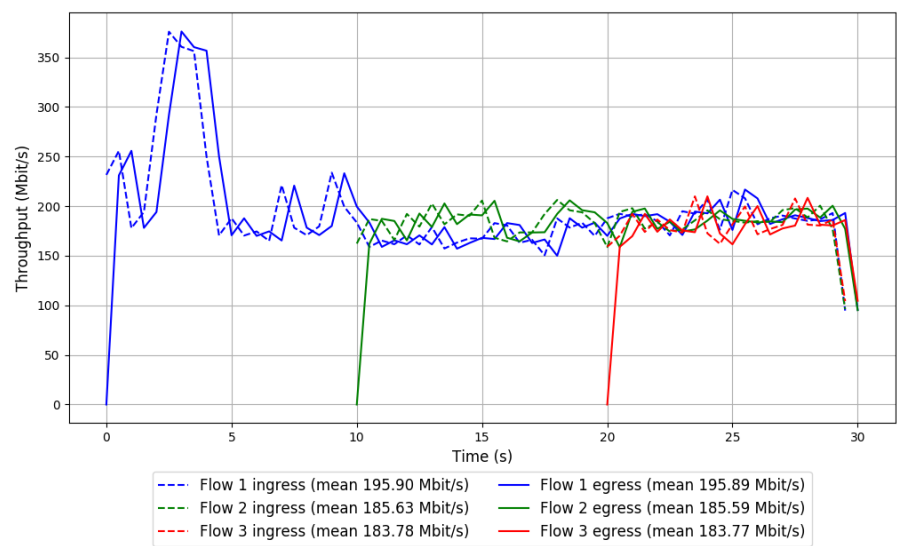
-- Flow 3:

Average throughput: 183.77 Mbit/s

95th percentile per-packet one-way delay: 1.798 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

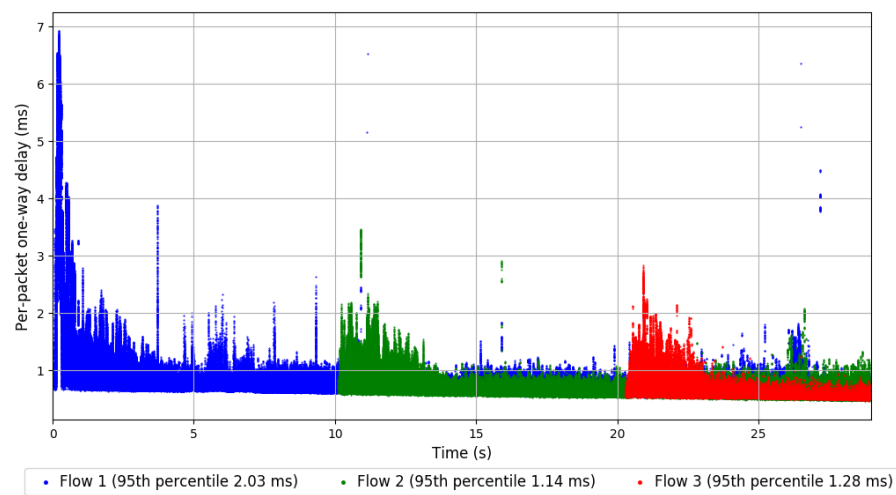
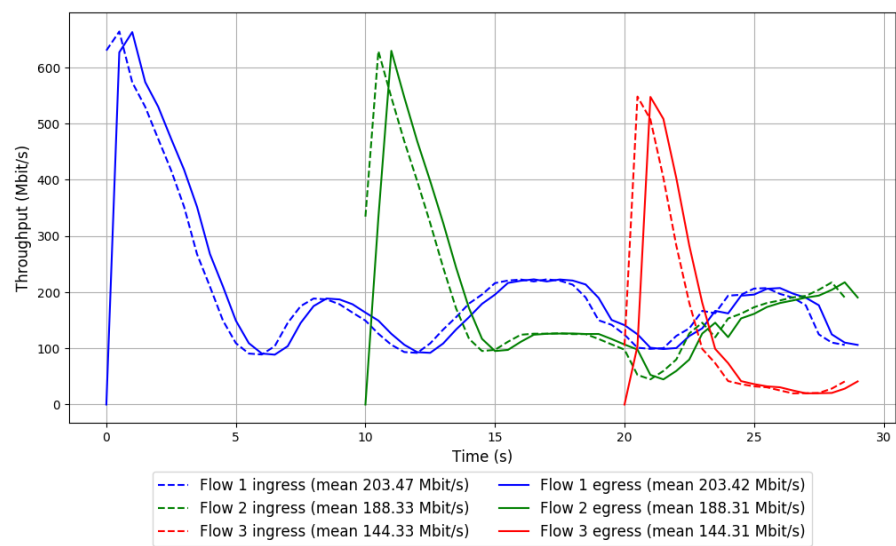


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-09 02:45:43  
End at: 2019-03-09 02:46:13  
Local clock offset: 3.401 ms  
Remote clock offset: -0.281 ms

# Below is generated by plot.py at 2019-03-09 05:23:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 369.07 Mbit/s  
95th percentile per-packet one-way delay: 1.409 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 203.42 Mbit/s  
95th percentile per-packet one-way delay: 2.028 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 188.31 Mbit/s  
95th percentile per-packet one-way delay: 1.135 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 144.31 Mbit/s  
95th percentile per-packet one-way delay: 1.283 ms  
Loss rate: 0.01%

Run 1: Report of Indigo-MusesC3 — Data Link

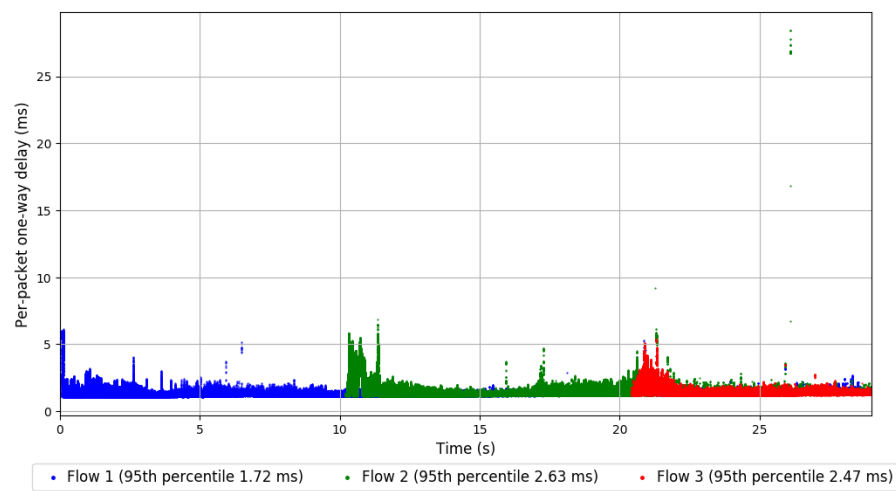
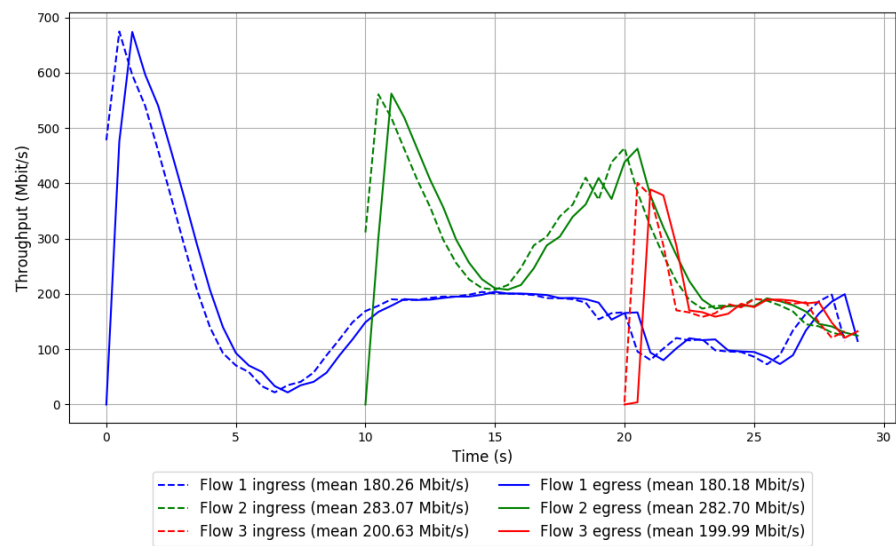


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-09 03:15:52  
End at: 2019-03-09 03:16:22  
Local clock offset: 0.024 ms  
Remote clock offset: -0.478 ms

# Below is generated by plot.py at 2019-03-09 05:25:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 422.22 Mbit/s  
95th percentile per-packet one-way delay: 2.235 ms  
Loss rate: 0.12%  
-- Flow 1:  
Average throughput: 180.18 Mbit/s  
95th percentile per-packet one-way delay: 1.718 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 282.70 Mbit/s  
95th percentile per-packet one-way delay: 2.626 ms  
Loss rate: 0.13%  
-- Flow 3:  
Average throughput: 199.99 Mbit/s  
95th percentile per-packet one-way delay: 2.470 ms  
Loss rate: 0.32%

Run 2: Report of Indigo-MusesC3 — Data Link



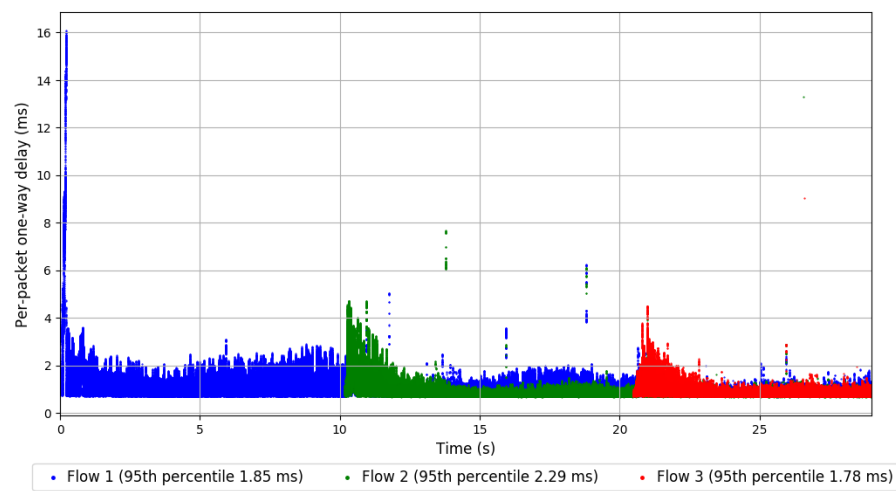
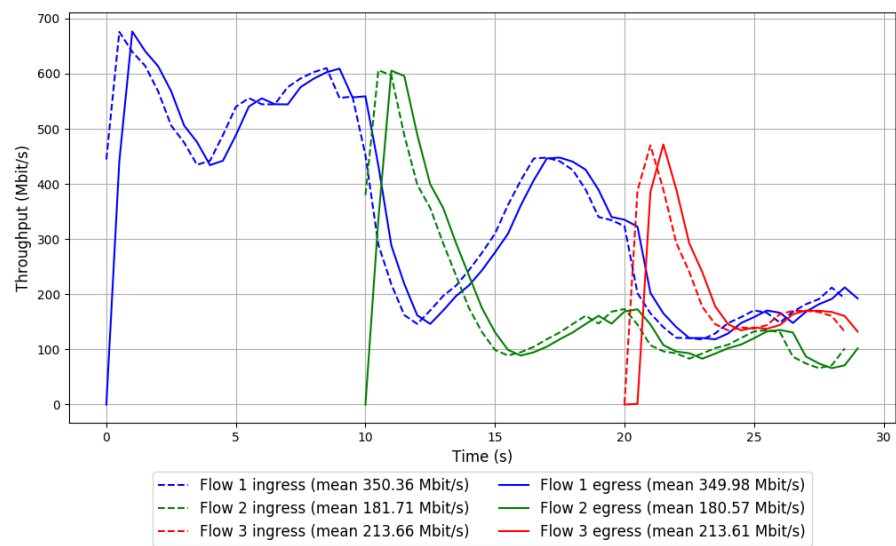


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-09 03:45:56  
End at: 2019-03-09 03:46:26  
Local clock offset: 3.73 ms  
Remote clock offset: -0.741 ms

# Below is generated by plot.py at 2019-03-09 05:26:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 529.85 Mbit/s  
95th percentile per-packet one-way delay: 1.937 ms  
Loss rate: 0.21%  
-- Flow 1:  
Average throughput: 349.98 Mbit/s  
95th percentile per-packet one-way delay: 1.853 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 180.57 Mbit/s  
95th percentile per-packet one-way delay: 2.285 ms  
Loss rate: 0.63%  
-- Flow 3:  
Average throughput: 213.61 Mbit/s  
95th percentile per-packet one-way delay: 1.783 ms  
Loss rate: 0.02%

Run 3: Report of Indigo-MusesC3 — Data Link

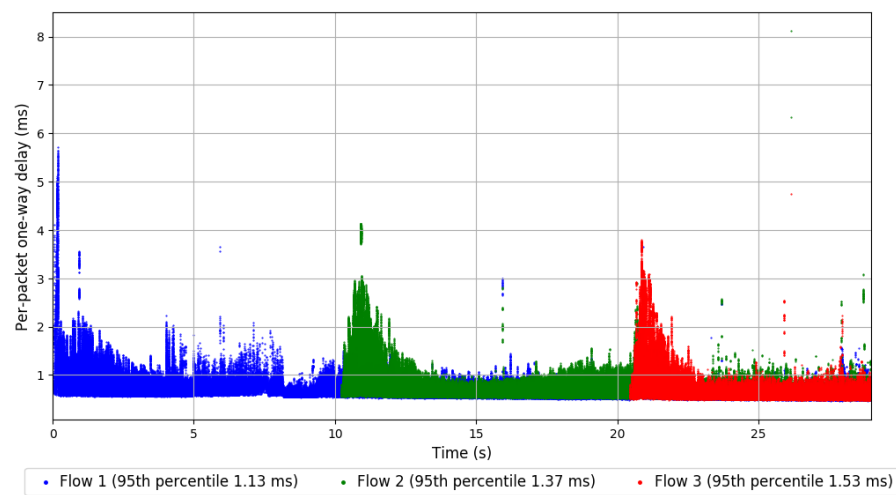
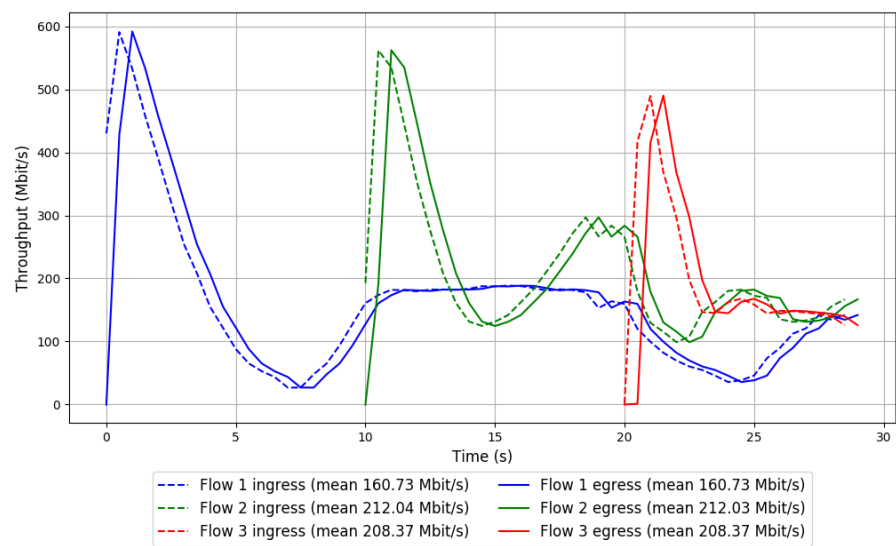


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-09 04:16:01  
End at: 2019-03-09 04:16:31  
Local clock offset: 2.929 ms  
Remote clock offset: -3.405 ms

# Below is generated by plot.py at 2019-03-09 05:26:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 359.14 Mbit/s  
95th percentile per-packet one-way delay: 1.276 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 160.73 Mbit/s  
95th percentile per-packet one-way delay: 1.129 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 212.03 Mbit/s  
95th percentile per-packet one-way delay: 1.368 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 208.37 Mbit/s  
95th percentile per-packet one-way delay: 1.533 ms  
Loss rate: 0.00%

Run 4: Report of Indigo-MusesC3 — Data Link

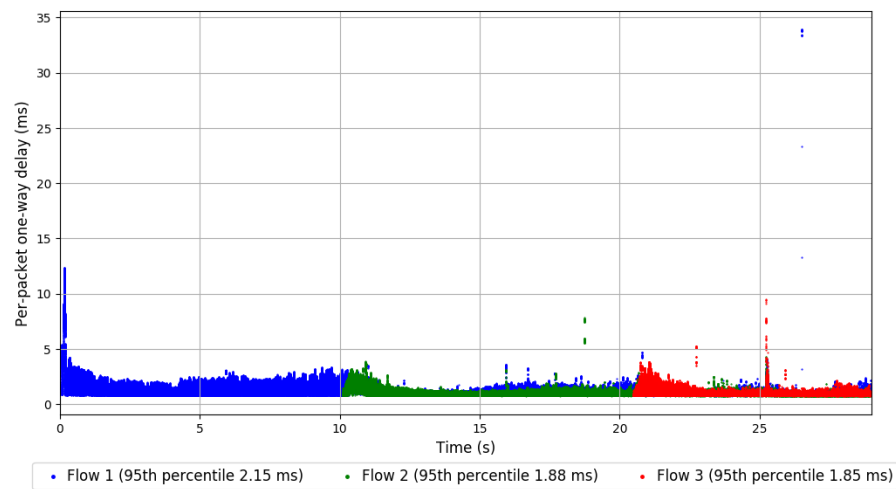
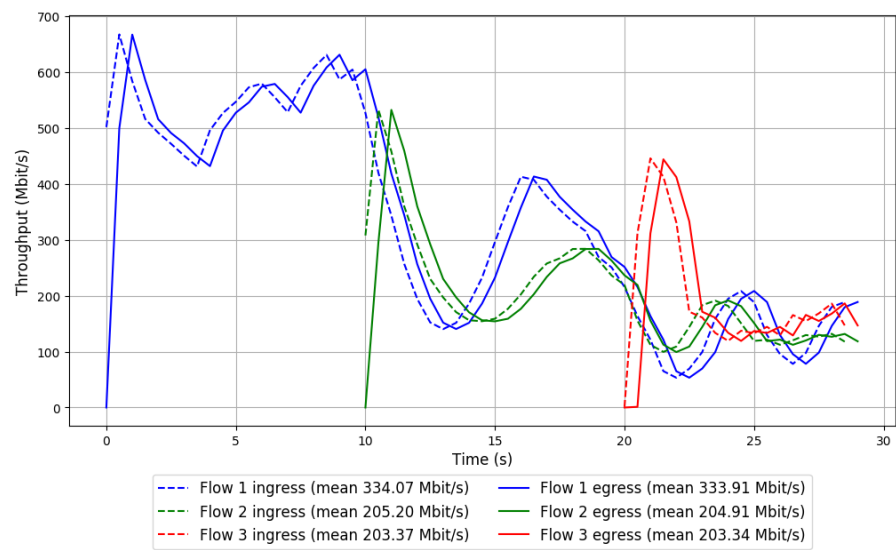


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-09 04:45:49  
End at: 2019-03-09 04:46:19  
Local clock offset: -0.644 ms  
Remote clock offset: -1.763 ms

# Below is generated by plot.py at 2019-03-09 05:27:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 526.99 Mbit/s  
95th percentile per-packet one-way delay: 2.071 ms  
Loss rate: 0.07%  
-- Flow 1:  
Average throughput: 333.91 Mbit/s  
95th percentile per-packet one-way delay: 2.150 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 204.91 Mbit/s  
95th percentile per-packet one-way delay: 1.881 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 203.34 Mbit/s  
95th percentile per-packet one-way delay: 1.846 ms  
Loss rate: 0.02%

Run 5: Report of Indigo-MusesC3 — Data Link

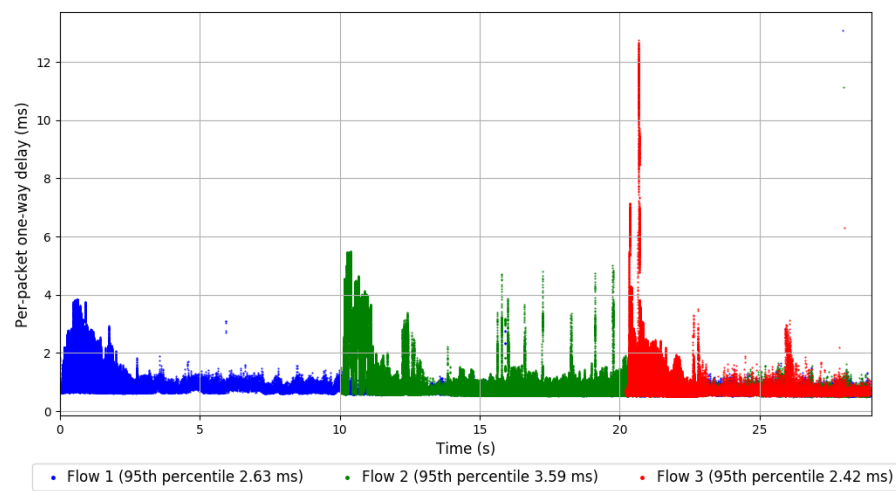
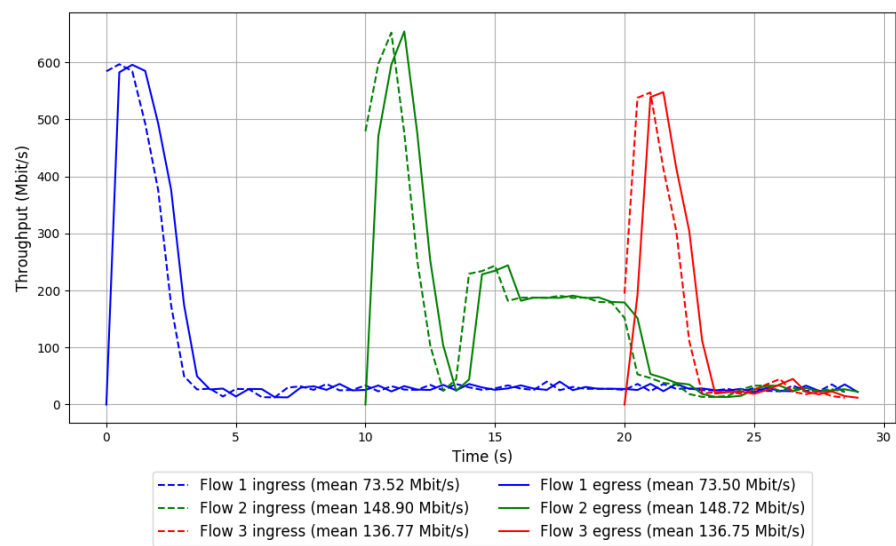


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-09 02:47:09  
End at: 2019-03-09 02:47:39  
Local clock offset: 2.864 ms  
Remote clock offset: -0.334 ms

# Below is generated by plot.py at 2019-03-09 05:27:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 211.87 Mbit/s  
95th percentile per-packet one-way delay: 3.008 ms  
Loss rate: 0.07%  
-- Flow 1:  
Average throughput: 73.50 Mbit/s  
95th percentile per-packet one-way delay: 2.633 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 148.72 Mbit/s  
95th percentile per-packet one-way delay: 3.586 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 136.75 Mbit/s  
95th percentile per-packet one-way delay: 2.422 ms  
Loss rate: 0.01%

Run 1: Report of Indigo-MusesC5 — Data Link



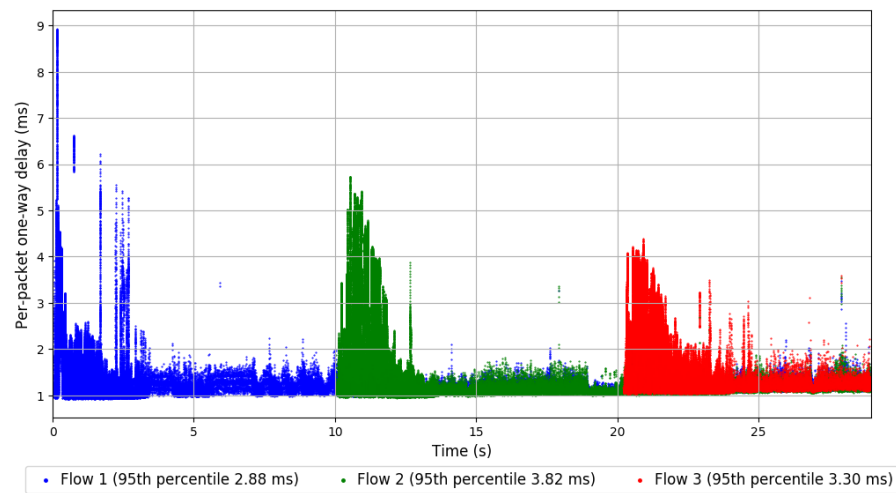
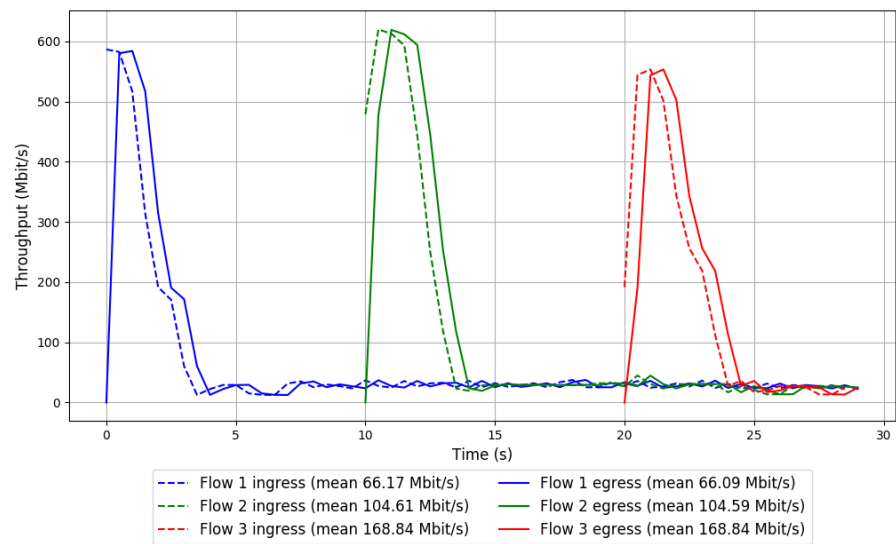


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-09 03:17:20  
End at: 2019-03-09 03:17:50  
Local clock offset: 0.621 ms  
Remote clock offset: -0.527 ms

# Below is generated by plot.py at 2019-03-09 05:27:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 185.42 Mbit/s  
95th percentile per-packet one-way delay: 3.510 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 66.09 Mbit/s  
95th percentile per-packet one-way delay: 2.882 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 104.59 Mbit/s  
95th percentile per-packet one-way delay: 3.818 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 168.84 Mbit/s  
95th percentile per-packet one-way delay: 3.302 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-09 03:47:27

End at: 2019-03-09 03:47:57

Local clock offset: 3.664 ms

Remote clock offset: -0.78 ms

# Below is generated by plot.py at 2019-03-09 05:27:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 200.82 Mbit/s

95th percentile per-packet one-way delay: 2.248 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 94.20 Mbit/s

95th percentile per-packet one-way delay: 1.222 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 99.16 Mbit/s

95th percentile per-packet one-way delay: 3.376 ms

Loss rate: 0.17%

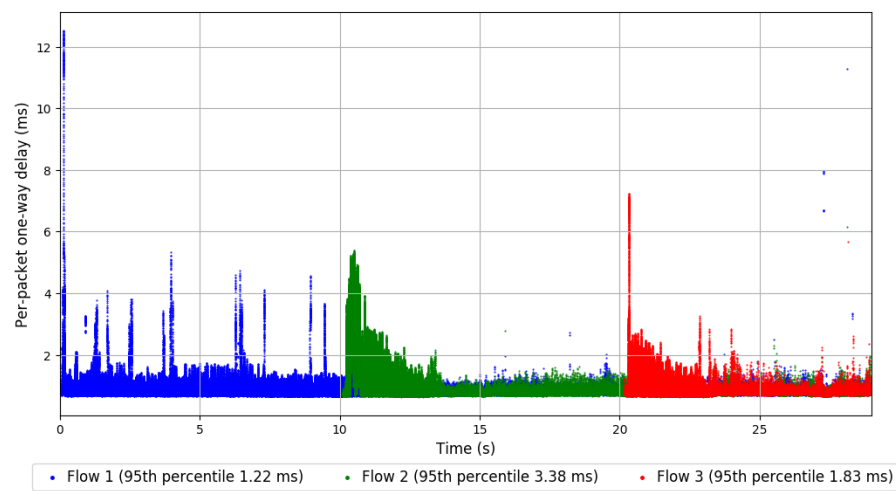
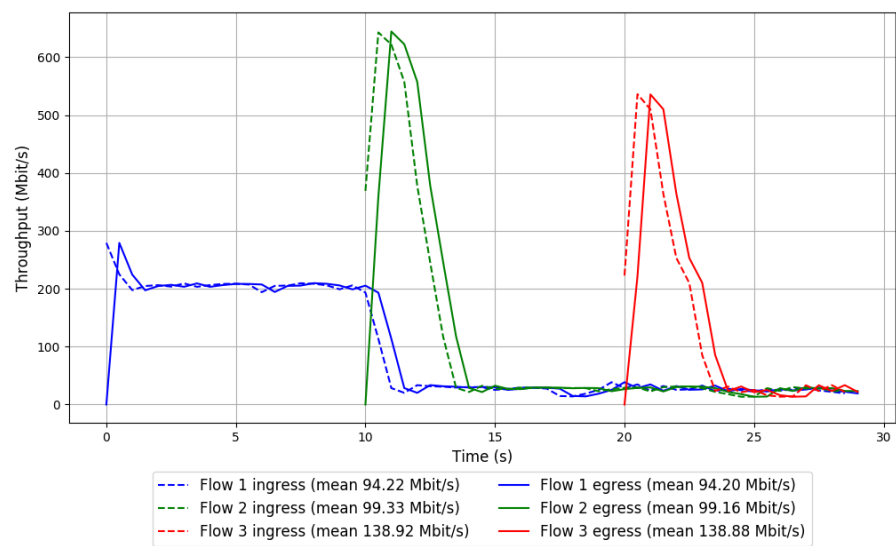
-- Flow 3:

Average throughput: 138.88 Mbit/s

95th percentile per-packet one-way delay: 1.834 ms

Loss rate: 0.03%

Run 3: Report of Indigo-MusesC5 — Data Link

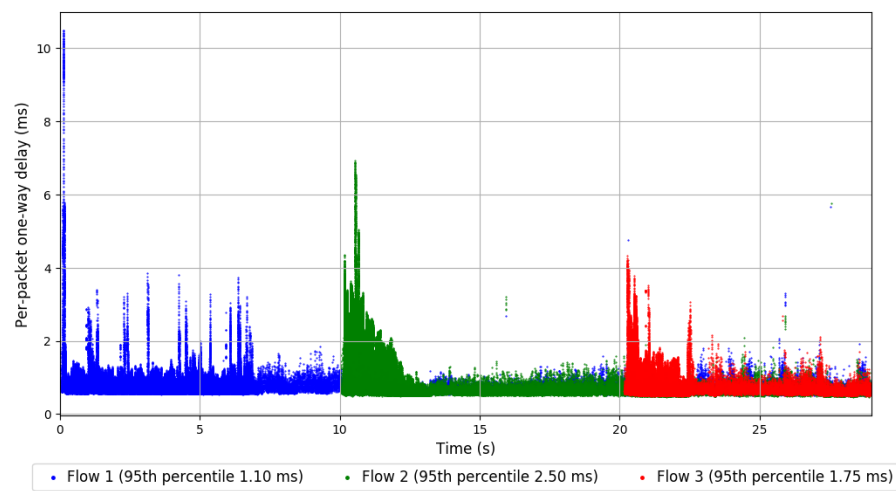
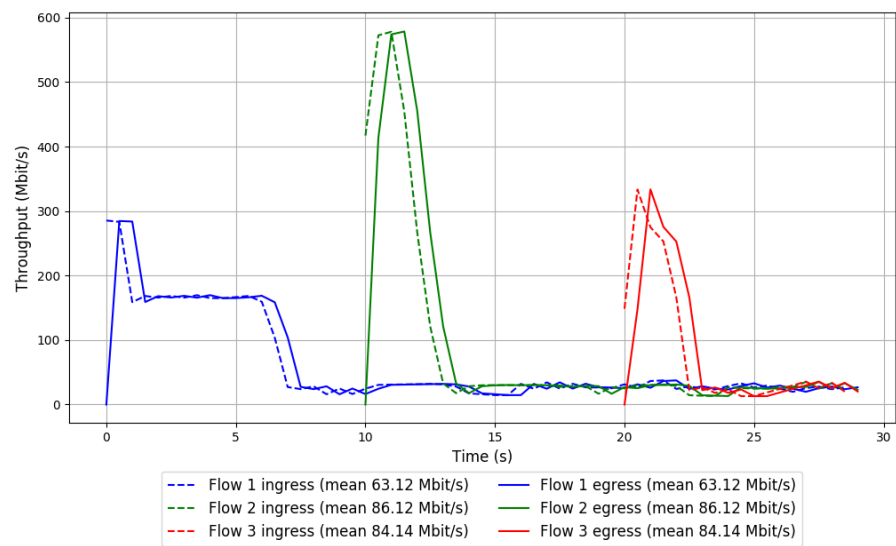


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-09 04:17:27  
End at: 2019-03-09 04:17:57  
Local clock offset: 2.541 ms  
Remote clock offset: -3.524 ms

# Below is generated by plot.py at 2019-03-09 05:27:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 144.88 Mbit/s  
95th percentile per-packet one-way delay: 2.095 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 63.12 Mbit/s  
95th percentile per-packet one-way delay: 1.102 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 86.12 Mbit/s  
95th percentile per-packet one-way delay: 2.499 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 84.14 Mbit/s  
95th percentile per-packet one-way delay: 1.750 ms  
Loss rate: 0.00%

Run 4: Report of Indigo-MusesC5 — Data Link

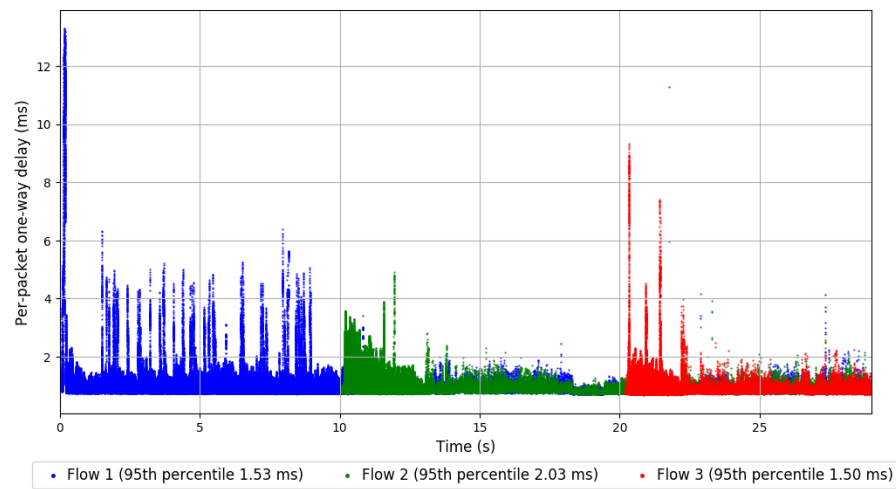
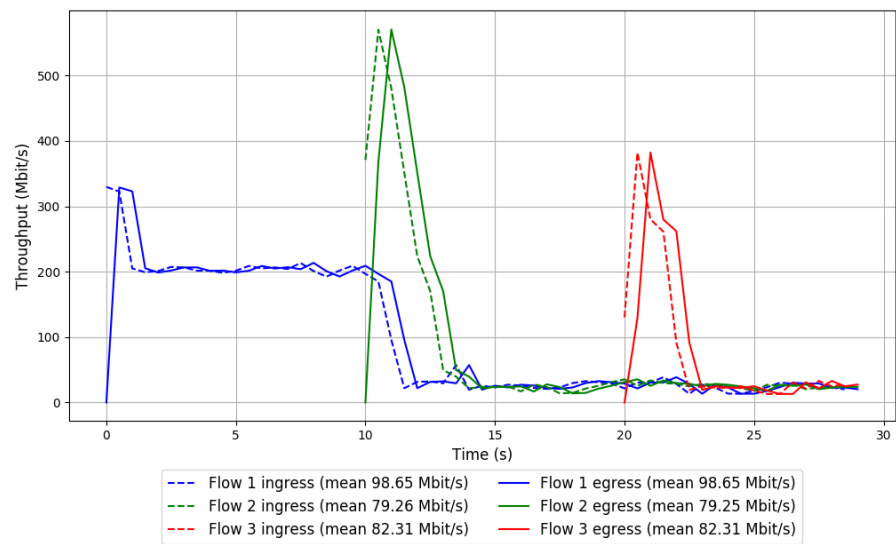


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-09 04:47:21  
End at: 2019-03-09 04:47:51  
Local clock offset: -0.517 ms  
Remote clock offset: -1.497 ms

# Below is generated by plot.py at 2019-03-09 05:27:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 175.26 Mbit/s  
95th percentile per-packet one-way delay: 1.777 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 98.65 Mbit/s  
95th percentile per-packet one-way delay: 1.534 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 79.25 Mbit/s  
95th percentile per-packet one-way delay: 2.031 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 82.31 Mbit/s  
95th percentile per-packet one-way delay: 1.505 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesC5 — Data Link



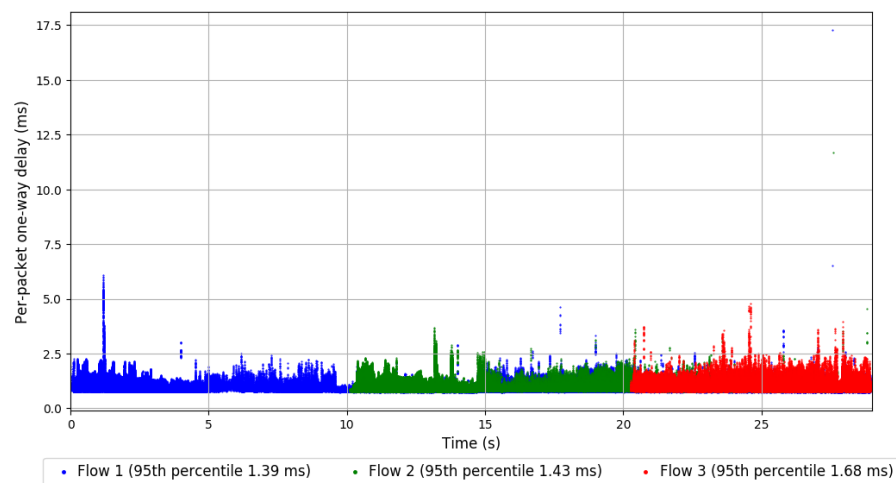
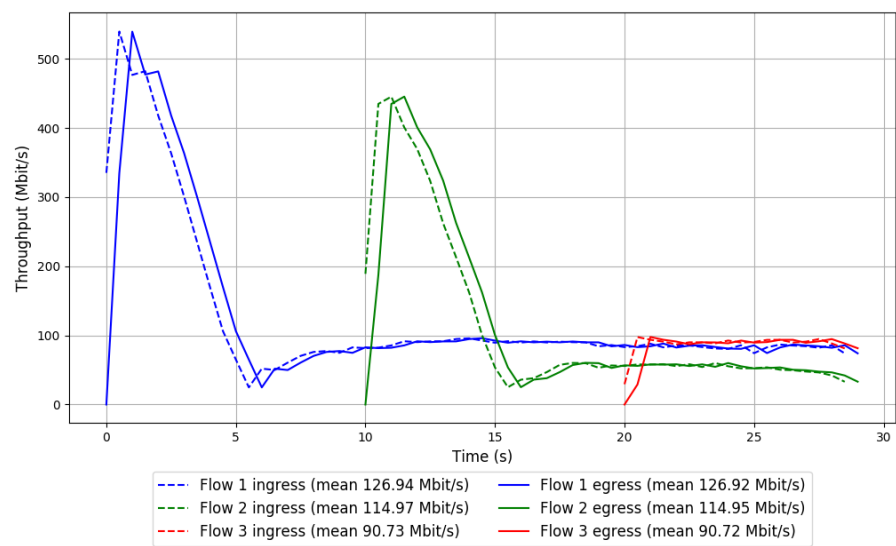


Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-09 02:22:29  
End at: 2019-03-09 02:22:59  
Local clock offset: 3.844 ms  
Remote clock offset: -0.974 ms

# Below is generated by plot.py at 2019-03-09 05:27:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 228.86 Mbit/s  
95th percentile per-packet one-way delay: 1.449 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 126.92 Mbit/s  
95th percentile per-packet one-way delay: 1.391 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 114.95 Mbit/s  
95th percentile per-packet one-way delay: 1.434 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 90.72 Mbit/s  
95th percentile per-packet one-way delay: 1.682 ms  
Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link

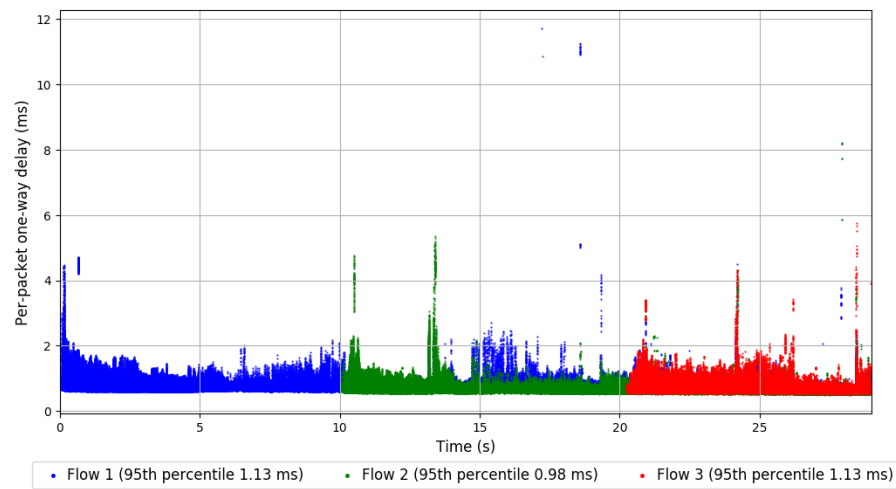
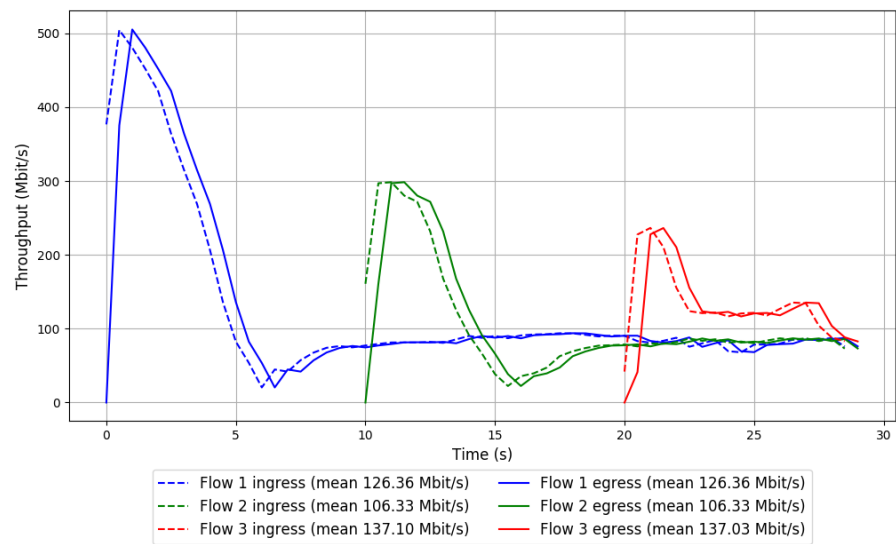


Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-09 02:52:39  
End at: 2019-03-09 02:53:09  
Local clock offset: 1.475 ms  
Remote clock offset: -0.364 ms

# Below is generated by plot.py at 2019-03-09 05:27:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 236.91 Mbit/s  
95th percentile per-packet one-way delay: 1.091 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 126.36 Mbit/s  
95th percentile per-packet one-way delay: 1.127 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 106.33 Mbit/s  
95th percentile per-packet one-way delay: 0.985 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 137.03 Mbit/s  
95th percentile per-packet one-way delay: 1.133 ms  
Loss rate: 0.02%

Run 2: Report of Indigo-MusesD — Data Link

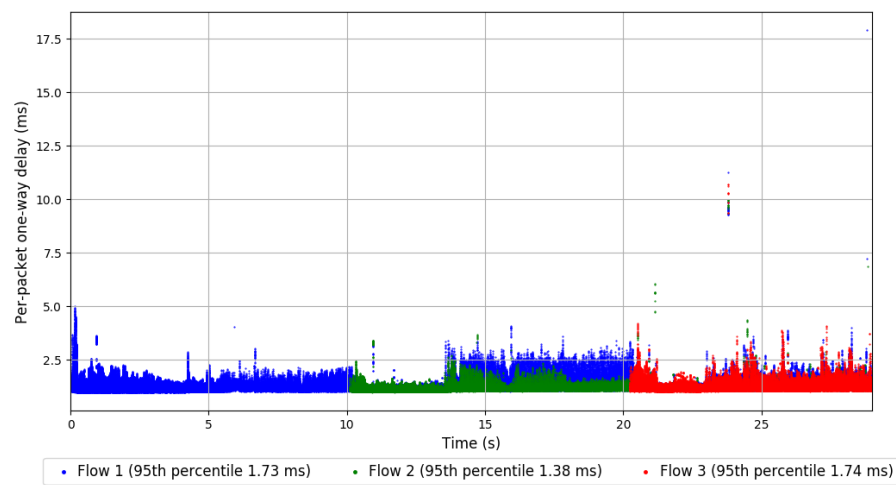
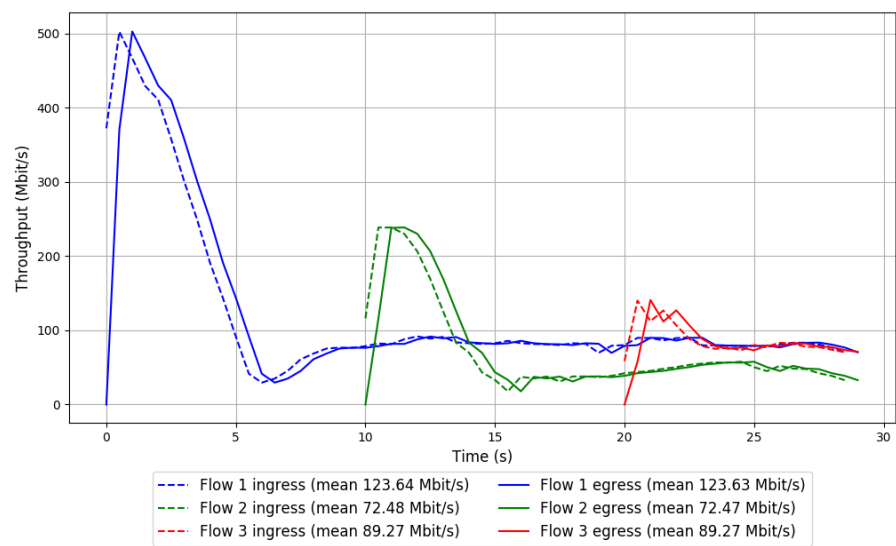


Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-09 03:22:48  
End at: 2019-03-09 03:23:18  
Local clock offset: 2.002 ms  
Remote clock offset: -0.436 ms

# Below is generated by plot.py at 2019-03-09 05:27:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 197.75 Mbit/s  
95th percentile per-packet one-way delay: 1.662 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 123.63 Mbit/s  
95th percentile per-packet one-way delay: 1.725 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 72.47 Mbit/s  
95th percentile per-packet one-way delay: 1.376 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 89.27 Mbit/s  
95th percentile per-packet one-way delay: 1.737 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link

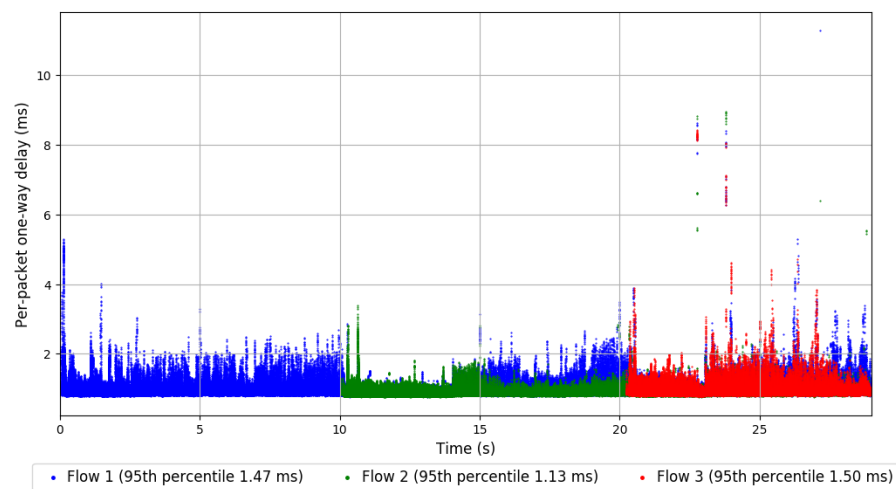
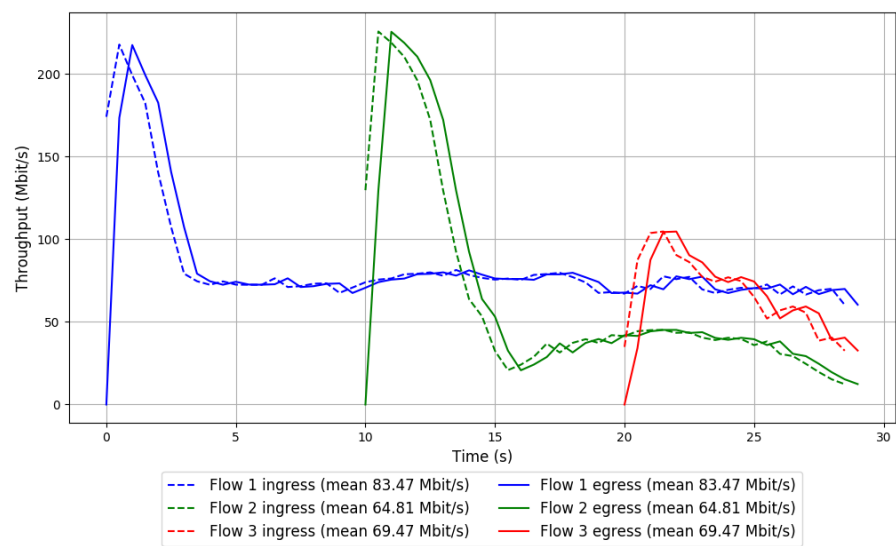


Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-09 03:52:57  
End at: 2019-03-09 03:53:27  
Local clock offset: 3.49 ms  
Remote clock offset: -0.695 ms

# Below is generated by plot.py at 2019-03-09 05:27:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 146.69 Mbit/s  
95th percentile per-packet one-way delay: 1.396 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 83.47 Mbit/s  
95th percentile per-packet one-way delay: 1.467 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 64.81 Mbit/s  
95th percentile per-packet one-way delay: 1.127 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 69.47 Mbit/s  
95th percentile per-packet one-way delay: 1.496 ms  
Loss rate: 0.01%

Run 4: Report of Indigo-MusesD — Data Link





Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-09 04:22:57

End at: 2019-03-09 04:23:27

Local clock offset: 1.207 ms

Remote clock offset: -3.97 ms

# Below is generated by plot.py at 2019-03-09 05:27:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 160.75 Mbit/s

95th percentile per-packet one-way delay: 1.224 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 88.71 Mbit/s

95th percentile per-packet one-way delay: 1.271 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 68.34 Mbit/s

95th percentile per-packet one-way delay: 1.097 ms

Loss rate: 0.01%

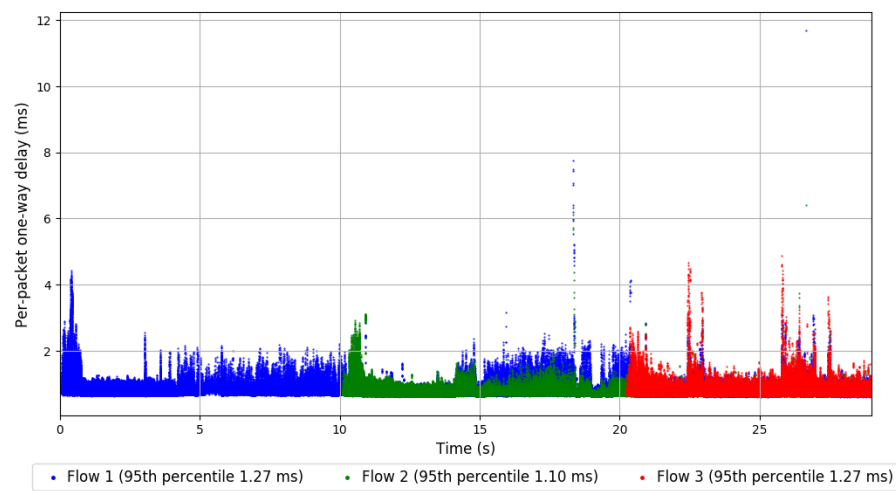
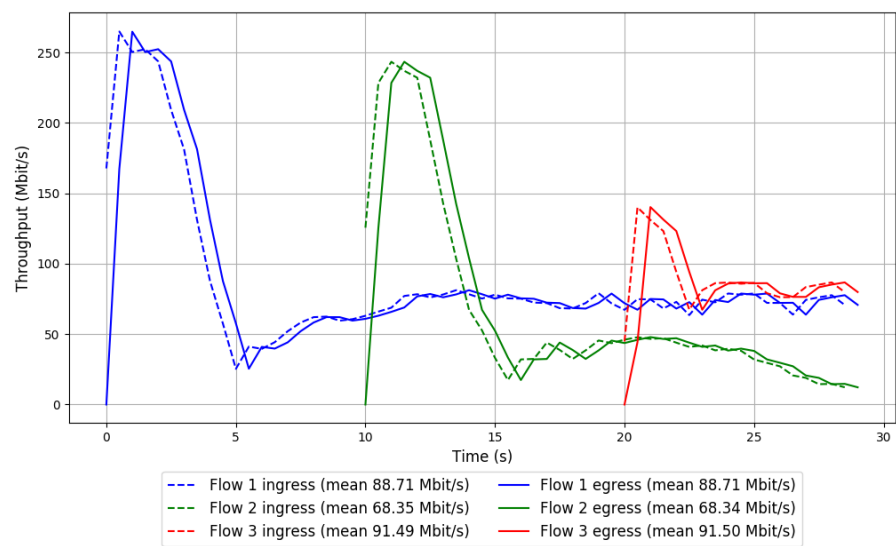
-- Flow 3:

Average throughput: 91.50 Mbit/s

95th percentile per-packet one-way delay: 1.267 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesD — Data Link

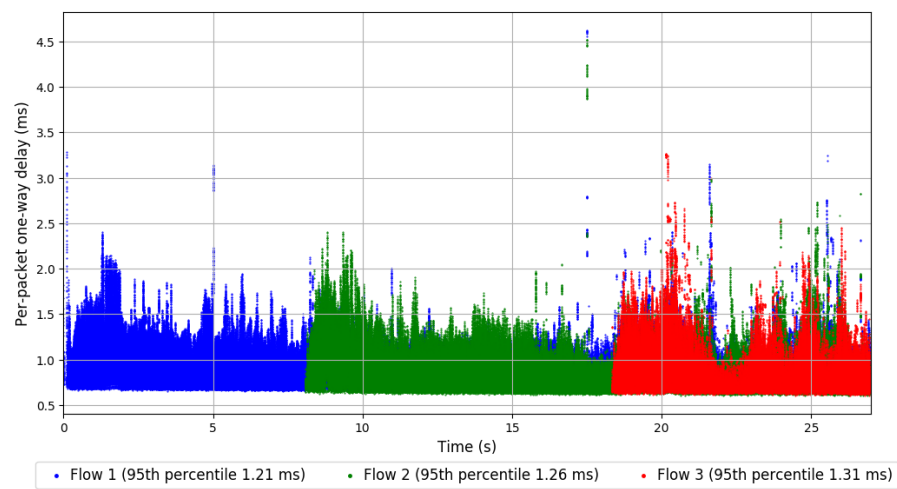
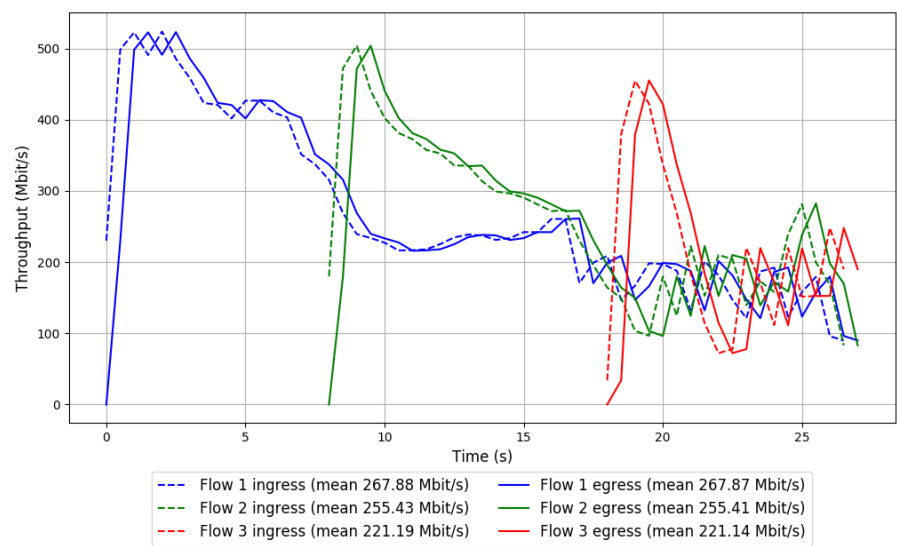


Run 1: Statistics of Indigo-MusesT

Start at: 2019-03-09 02:21:00  
End at: 2019-03-09 02:21:30  
Local clock offset: 3.903 ms  
Remote clock offset: -1.166 ms

# Below is generated by plot.py at 2019-03-09 05:31:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 517.27 Mbit/s  
95th percentile per-packet one-way delay: 1.244 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 267.87 Mbit/s  
95th percentile per-packet one-way delay: 1.214 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 255.41 Mbit/s  
95th percentile per-packet one-way delay: 1.256 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 221.14 Mbit/s  
95th percentile per-packet one-way delay: 1.314 ms  
Loss rate: 0.02%

Run 1: Report of Indigo-MusesT — Data Link

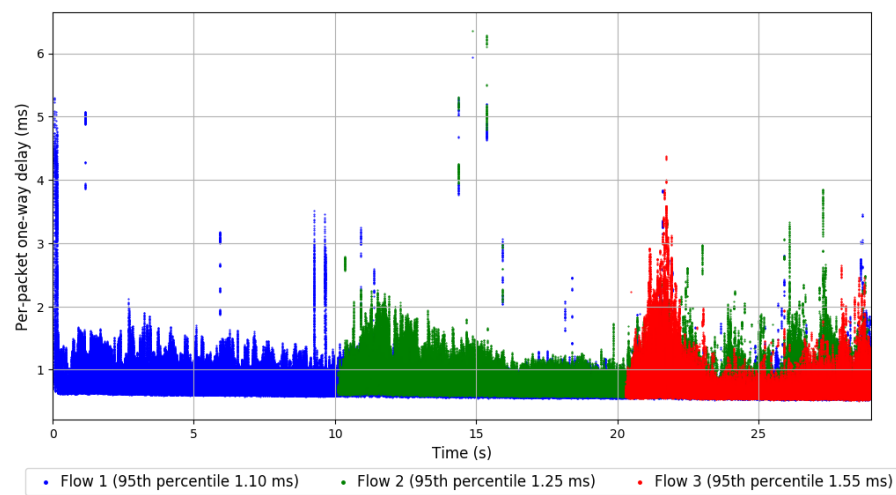
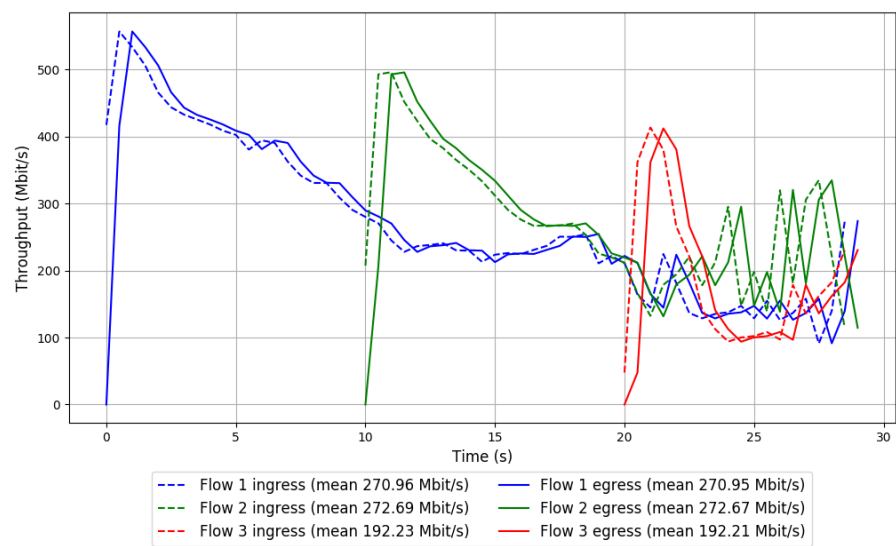


Run 2: Statistics of Indigo-MusesT

Start at: 2019-03-09 02:51:08  
End at: 2019-03-09 02:51:38  
Local clock offset: 1.804 ms  
Remote clock offset: -0.315 ms

# Below is generated by plot.py at 2019-03-09 05:32:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 506.17 Mbit/s  
95th percentile per-packet one-way delay: 1.208 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 270.95 Mbit/s  
95th percentile per-packet one-way delay: 1.096 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 272.67 Mbit/s  
95th percentile per-packet one-way delay: 1.254 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 192.21 Mbit/s  
95th percentile per-packet one-way delay: 1.551 ms  
Loss rate: 0.01%

Run 2: Report of Indigo-MusesT — Data Link

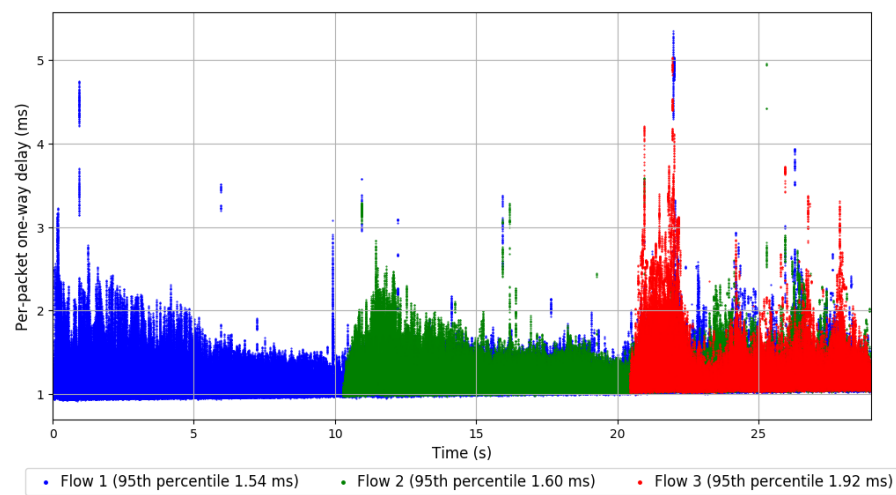
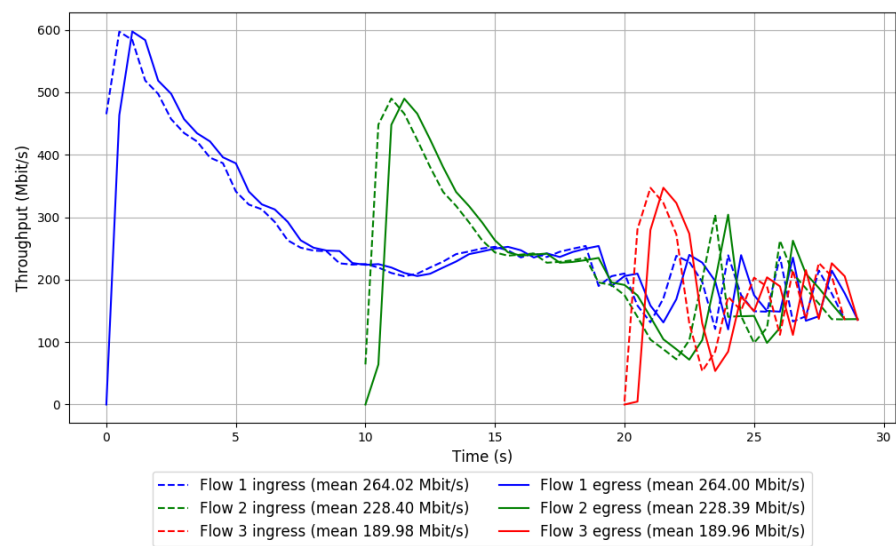


Run 3: Statistics of Indigo-MusesT

Start at: 2019-03-09 03:21:19  
End at: 2019-03-09 03:21:49  
Local clock offset: 1.693 ms  
Remote clock offset: -0.496 ms

# Below is generated by plot.py at 2019-03-09 05:32:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 467.37 Mbit/s  
95th percentile per-packet one-way delay: 1.612 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 264.00 Mbit/s  
95th percentile per-packet one-way delay: 1.543 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 228.39 Mbit/s  
95th percentile per-packet one-way delay: 1.597 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 189.96 Mbit/s  
95th percentile per-packet one-way delay: 1.921 ms  
Loss rate: 0.01%

Run 3: Report of Indigo-MusesT — Data Link



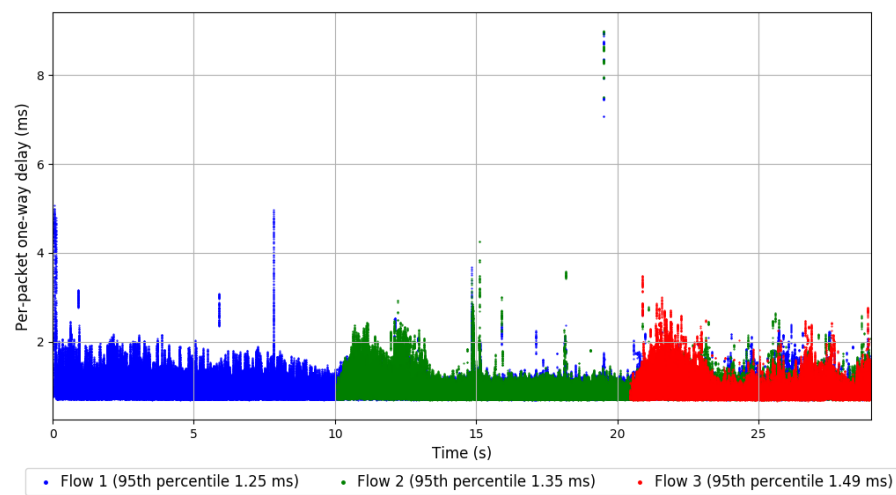
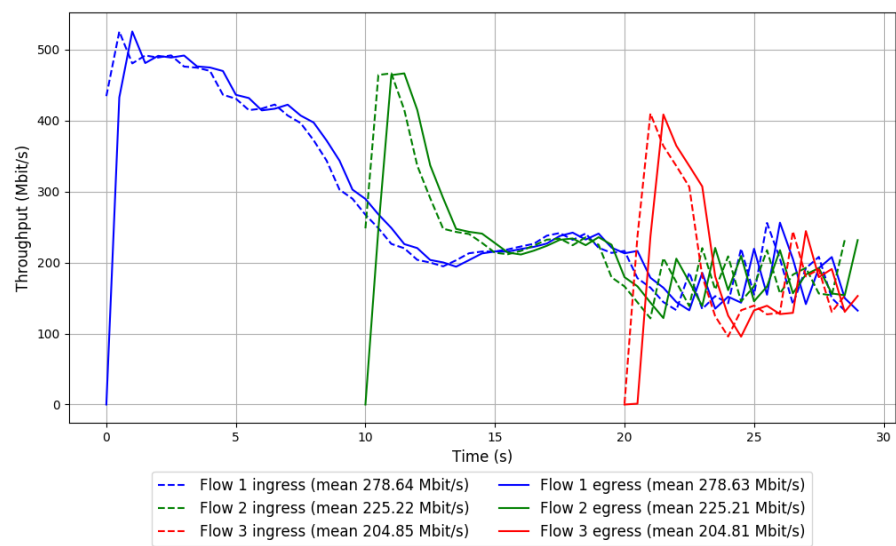


Run 4: Statistics of Indigo-MusesT

Start at: 2019-03-09 03:51:27  
End at: 2019-03-09 03:51:57  
Local clock offset: 3.508 ms  
Remote clock offset: -0.791 ms

# Below is generated by plot.py at 2019-03-09 05:32:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 485.80 Mbit/s  
95th percentile per-packet one-way delay: 1.321 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 278.63 Mbit/s  
95th percentile per-packet one-way delay: 1.251 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 225.21 Mbit/s  
95th percentile per-packet one-way delay: 1.354 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 204.81 Mbit/s  
95th percentile per-packet one-way delay: 1.490 ms  
Loss rate: 0.03%

Run 4: Report of Indigo-MusesT — Data Link

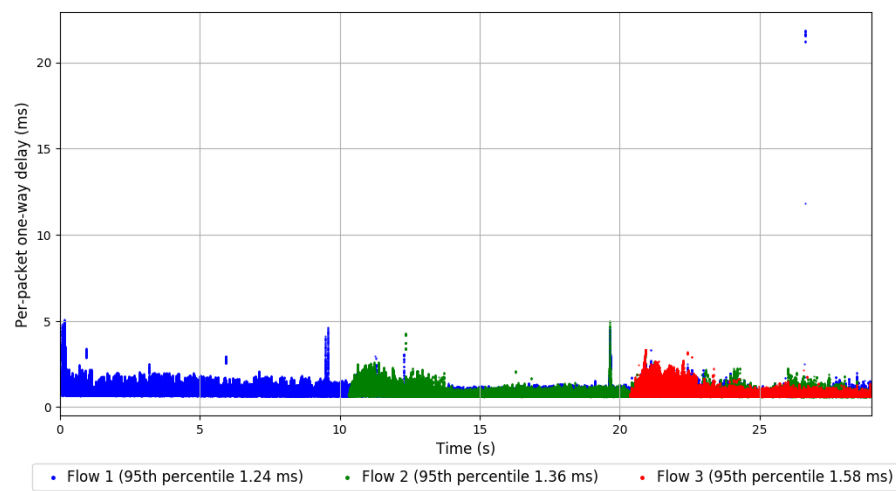
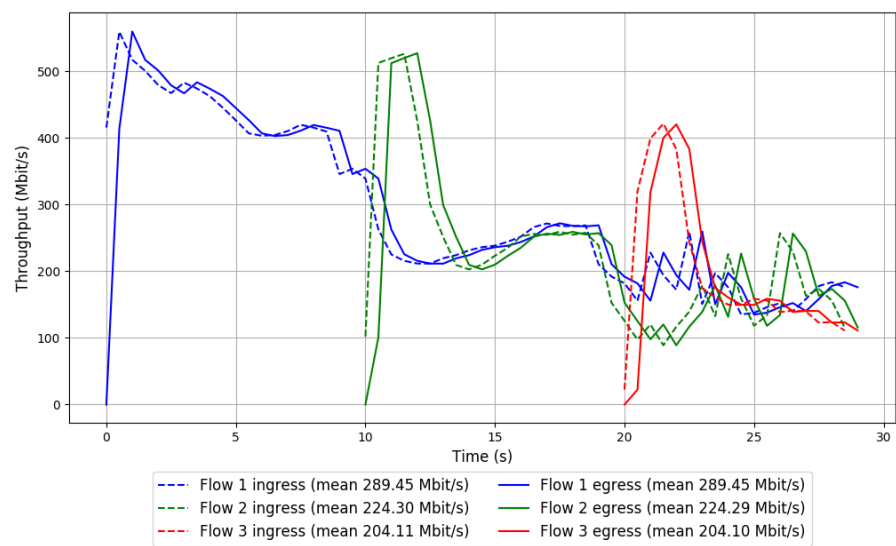


Run 5: Statistics of Indigo-MusesT

Start at: 2019-03-09 04:21:27  
End at: 2019-03-09 04:21:57  
Local clock offset: 1.505 ms  
Remote clock offset: -3.842 ms

# Below is generated by plot.py at 2019-03-09 05:32:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 494.58 Mbit/s  
95th percentile per-packet one-way delay: 1.328 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 289.45 Mbit/s  
95th percentile per-packet one-way delay: 1.242 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 224.29 Mbit/s  
95th percentile per-packet one-way delay: 1.358 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 204.10 Mbit/s  
95th percentile per-packet one-way delay: 1.579 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesT — Data Link

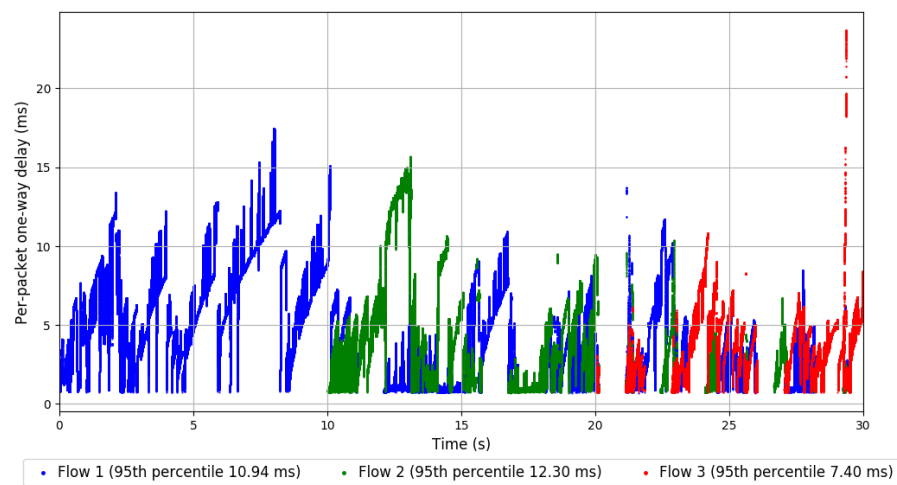
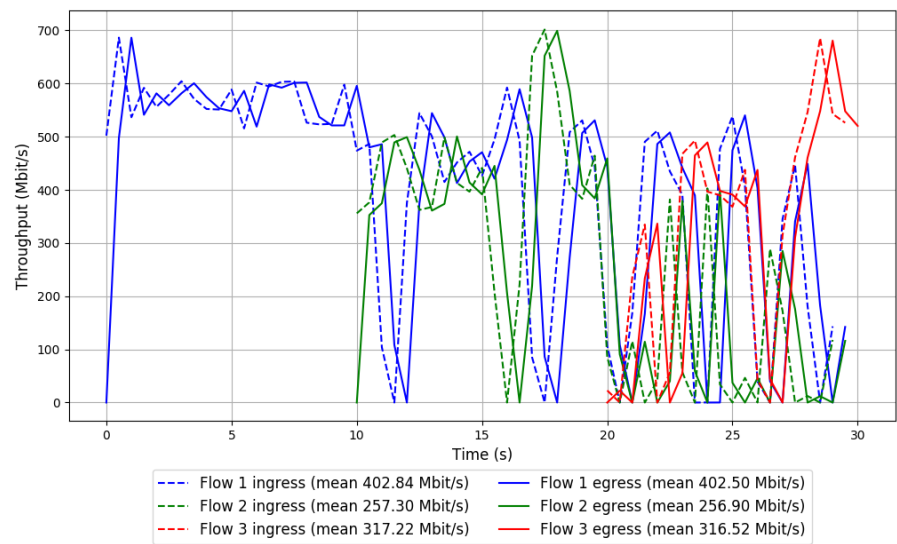


Run 1: Statistics of LEDBAT

Start at: 2019-03-09 02:35:09  
End at: 2019-03-09 02:35:39  
Local clock offset: 3.808 ms  
Remote clock offset: -0.584 ms

# Below is generated by plot.py at 2019-03-09 05:34:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 667.73 Mbit/s  
95th percentile per-packet one-way delay: 10.735 ms  
Loss rate: 0.12%  
-- Flow 1:  
Average throughput: 402.50 Mbit/s  
95th percentile per-packet one-way delay: 10.943 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 256.90 Mbit/s  
95th percentile per-packet one-way delay: 12.298 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 316.52 Mbit/s  
95th percentile per-packet one-way delay: 7.400 ms  
Loss rate: 0.22%

Run 1: Report of LEDBAT — Data Link

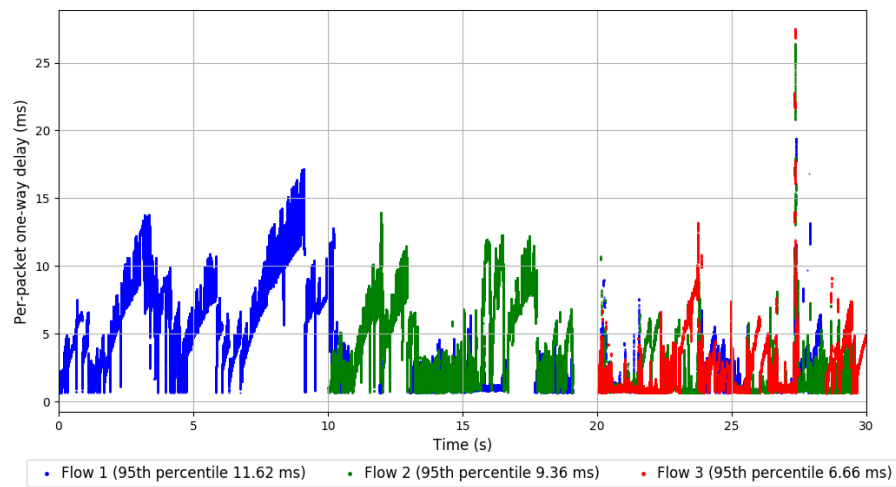
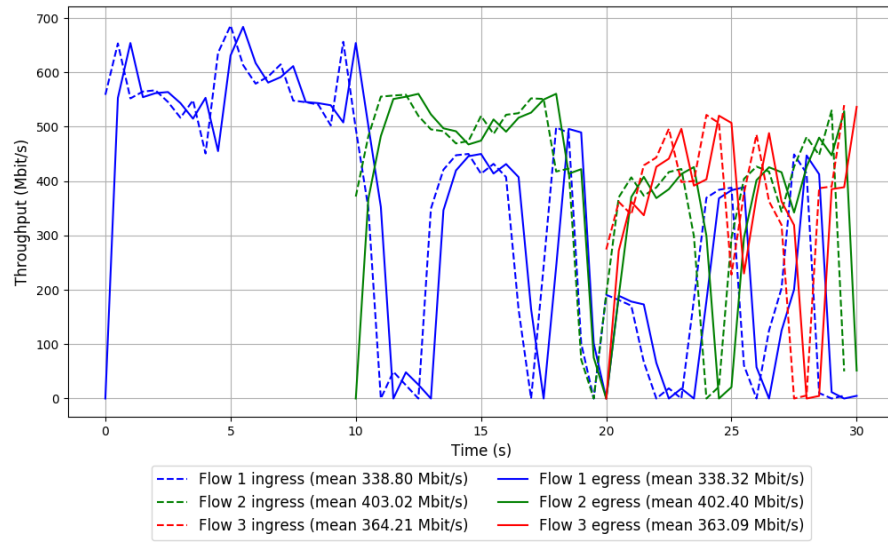


Run 2: Statistics of LEDBAT

Start at: 2019-03-09 03:05:07  
End at: 2019-03-09 03:05:37  
Local clock offset: -0.008 ms  
Remote clock offset: -0.598 ms

# Below is generated by plot.py at 2019-03-09 05:35:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 716.54 Mbit/s  
95th percentile per-packet one-way delay: 10.350 ms  
Loss rate: 0.17%  
-- Flow 1:  
Average throughput: 338.32 Mbit/s  
95th percentile per-packet one-way delay: 11.620 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 402.40 Mbit/s  
95th percentile per-packet one-way delay: 9.357 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 363.09 Mbit/s  
95th percentile per-packet one-way delay: 6.662 ms  
Loss rate: 0.31%

## Run 2: Report of LEDBAT — Data Link



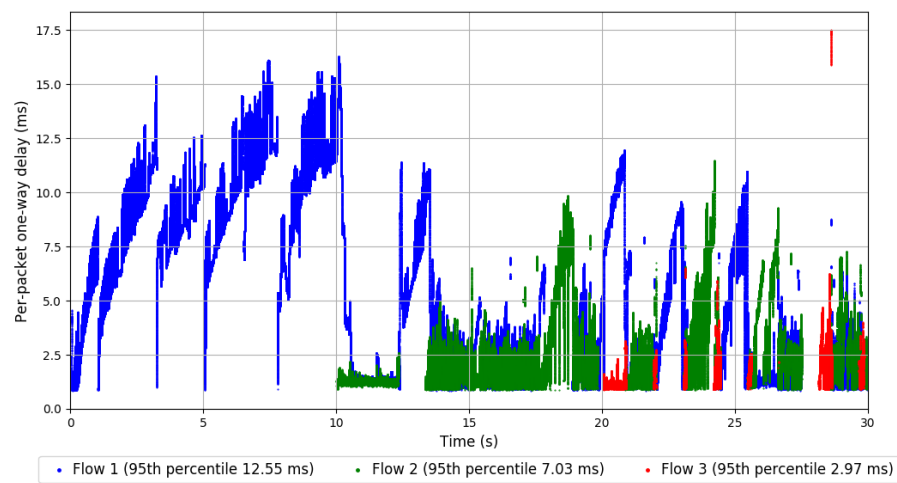
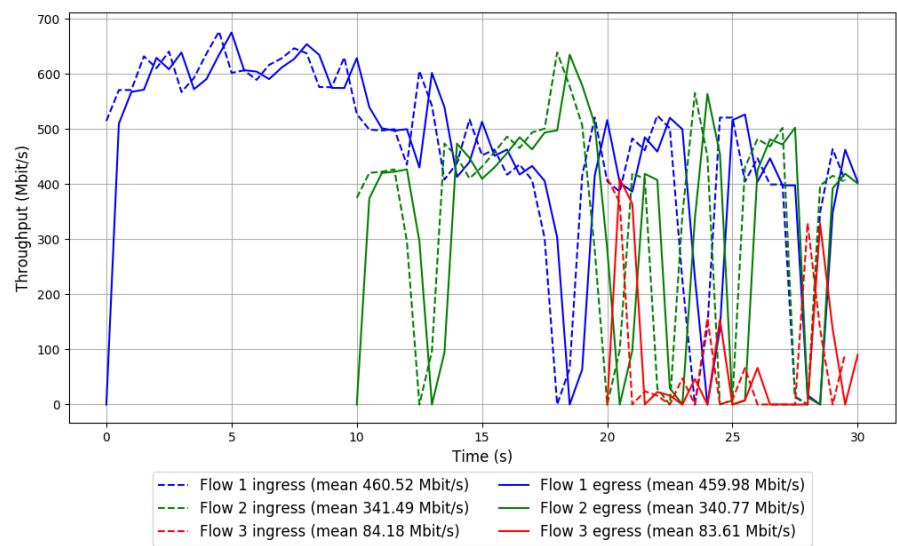


Run 3: Statistics of LEDBAT

Start at: 2019-03-09 03:35:17  
End at: 2019-03-09 03:35:47  
Local clock offset: 3.403 ms  
Remote clock offset: -0.632 ms

# Below is generated by plot.py at 2019-03-09 05:35:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 714.44 Mbit/s  
95th percentile per-packet one-way delay: 11.827 ms  
Loss rate: 0.17%  
-- Flow 1:  
Average throughput: 459.98 Mbit/s  
95th percentile per-packet one-way delay: 12.552 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 340.77 Mbit/s  
95th percentile per-packet one-way delay: 7.034 ms  
Loss rate: 0.21%  
-- Flow 3:  
Average throughput: 83.61 Mbit/s  
95th percentile per-packet one-way delay: 2.967 ms  
Loss rate: 0.67%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-03-09 04:05:21

End at: 2019-03-09 04:05:51

Local clock offset: 3.462 ms

Remote clock offset: -1.38 ms

# Below is generated by plot.py at 2019-03-09 05:39:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 658.84 Mbit/s

95th percentile per-packet one-way delay: 14.102 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 368.24 Mbit/s

95th percentile per-packet one-way delay: 14.713 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 311.52 Mbit/s

95th percentile per-packet one-way delay: 7.437 ms

Loss rate: 0.28%

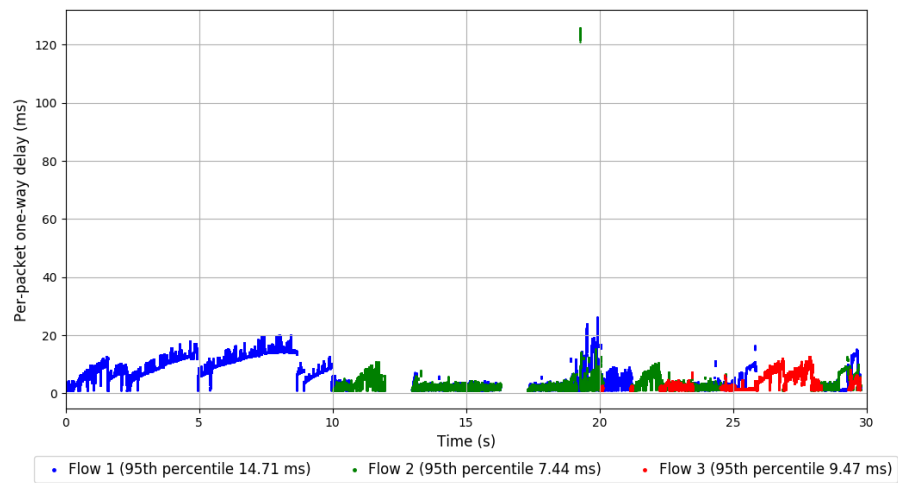
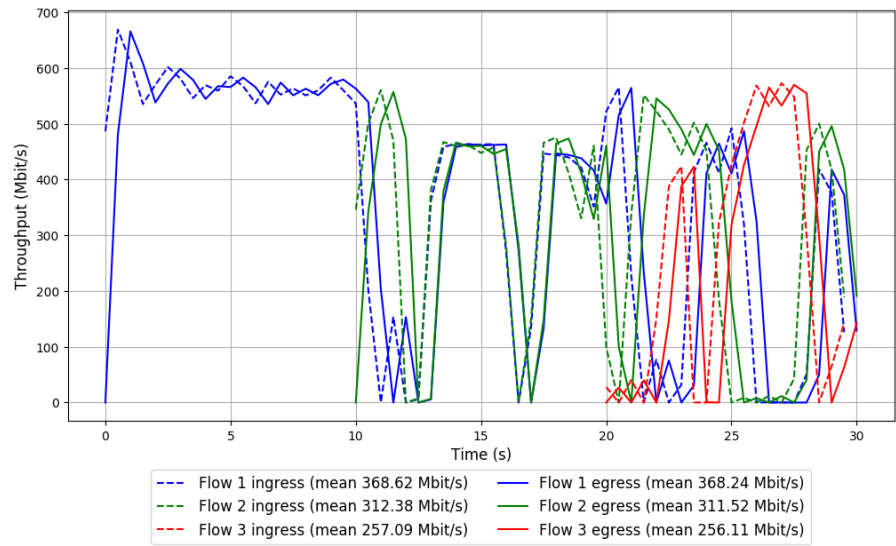
-- Flow 3:

Average throughput: 256.11 Mbit/s

95th percentile per-packet one-way delay: 9.470 ms

Loss rate: 0.36%

# Run 4: Report of LEDBAT — Data Link

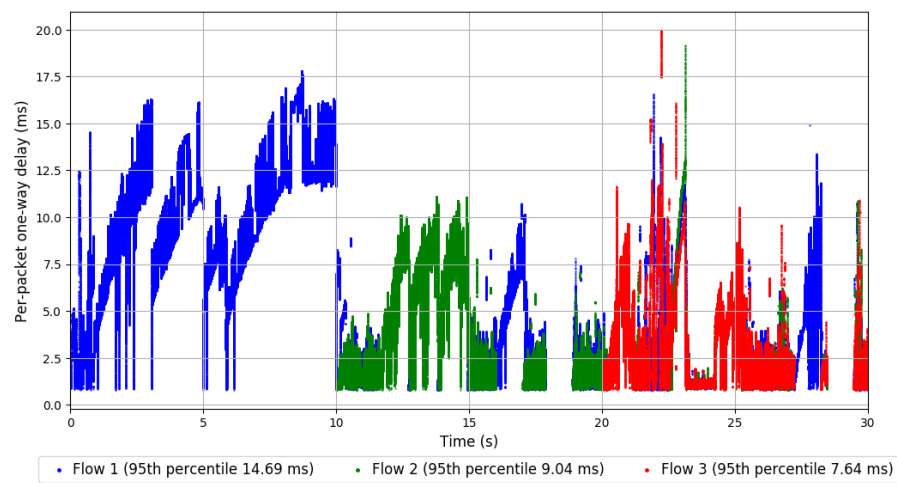
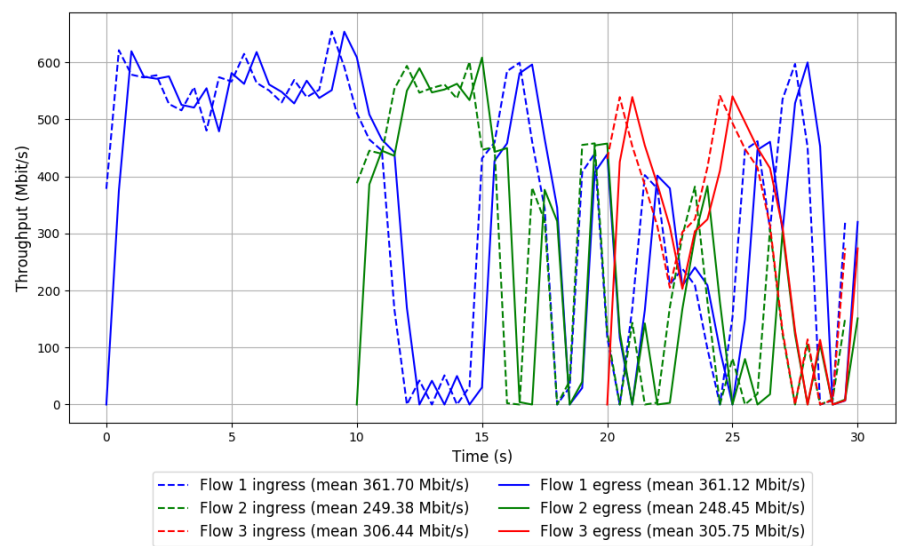


Run 5: Statistics of LEDBAT

Start at: 2019-03-09 04:35:18  
End at: 2019-03-09 04:35:48  
Local clock offset: -0.208 ms  
Remote clock offset: -4.633 ms

# Below is generated by plot.py at 2019-03-09 05:39:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 626.85 Mbit/s  
95th percentile per-packet one-way delay: 13.374 ms  
Loss rate: 0.22%  
-- Flow 1:  
Average throughput: 361.12 Mbit/s  
95th percentile per-packet one-way delay: 14.689 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 248.45 Mbit/s  
95th percentile per-packet one-way delay: 9.040 ms  
Loss rate: 0.37%  
-- Flow 3:  
Average throughput: 305.75 Mbit/s  
95th percentile per-packet one-way delay: 7.636 ms  
Loss rate: 0.22%

Run 5: Report of LEDBAT — Data Link

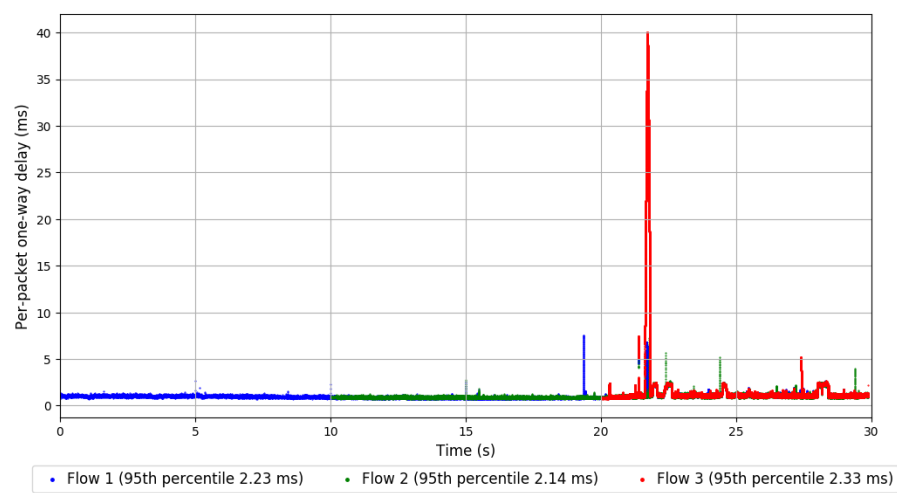
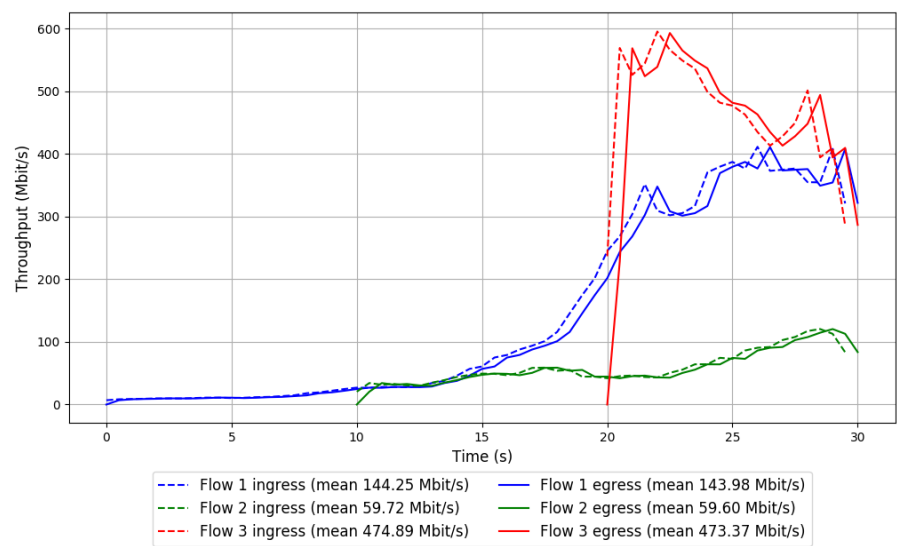


Run 1: Statistics of PCC-Allegro

Start at: 2019-03-09 02:36:52  
End at: 2019-03-09 02:37:22  
Local clock offset: 3.832 ms  
Remote clock offset: -0.487 ms

# Below is generated by plot.py at 2019-03-09 05:39:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 339.75 Mbit/s  
95th percentile per-packet one-way delay: 2.287 ms  
Loss rate: 0.25%  
-- Flow 1:  
Average throughput: 143.98 Mbit/s  
95th percentile per-packet one-way delay: 2.231 ms  
Loss rate: 0.19%  
-- Flow 2:  
Average throughput: 59.60 Mbit/s  
95th percentile per-packet one-way delay: 2.142 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 473.37 Mbit/s  
95th percentile per-packet one-way delay: 2.325 ms  
Loss rate: 0.31%

Run 1: Report of PCC-Allegro — Data Link



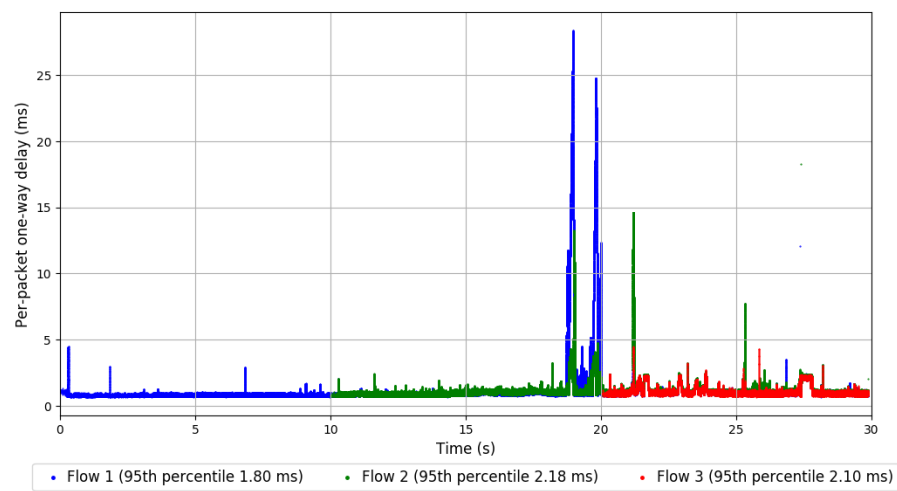
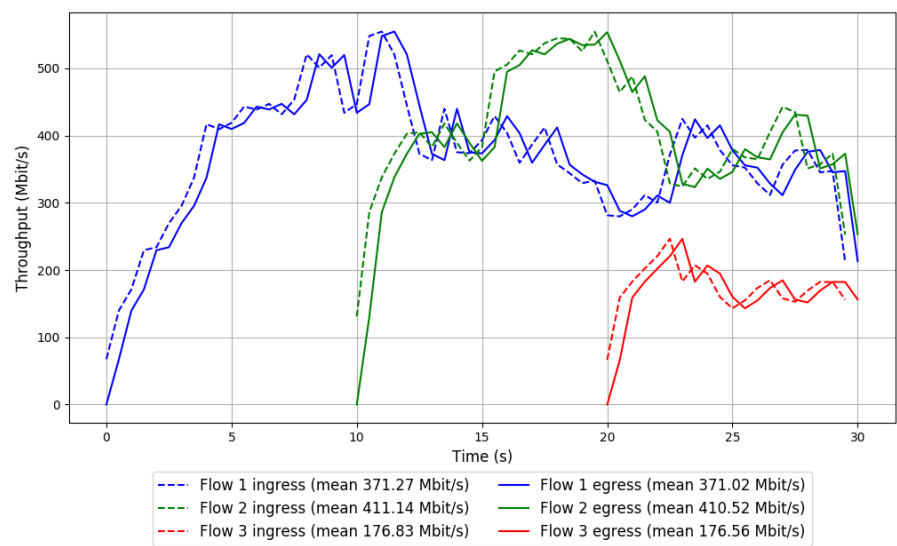


Run 2: Statistics of PCC-Allegro

Start at: 2019-03-09 03:06:51  
End at: 2019-03-09 03:07:21  
Local clock offset: -0.158 ms  
Remote clock offset: -0.564 ms

# Below is generated by plot.py at 2019-03-09 05:41:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 702.13 Mbit/s  
95th percentile per-packet one-way delay: 2.092 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 371.02 Mbit/s  
95th percentile per-packet one-way delay: 1.805 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 410.52 Mbit/s  
95th percentile per-packet one-way delay: 2.180 ms  
Loss rate: 0.14%  
-- Flow 3:  
Average throughput: 176.56 Mbit/s  
95th percentile per-packet one-way delay: 2.096 ms  
Loss rate: 0.15%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-03-09 03:37:02

End at: 2019-03-09 03:37:32

Local clock offset: 3.506 ms

Remote clock offset: -0.67 ms

# Below is generated by plot.py at 2019-03-09 05:41:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 611.49 Mbit/s

95th percentile per-packet one-way delay: 1.316 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 518.13 Mbit/s

95th percentile per-packet one-way delay: 1.322 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 124.36 Mbit/s

95th percentile per-packet one-way delay: 1.283 ms

Loss rate: 0.05%

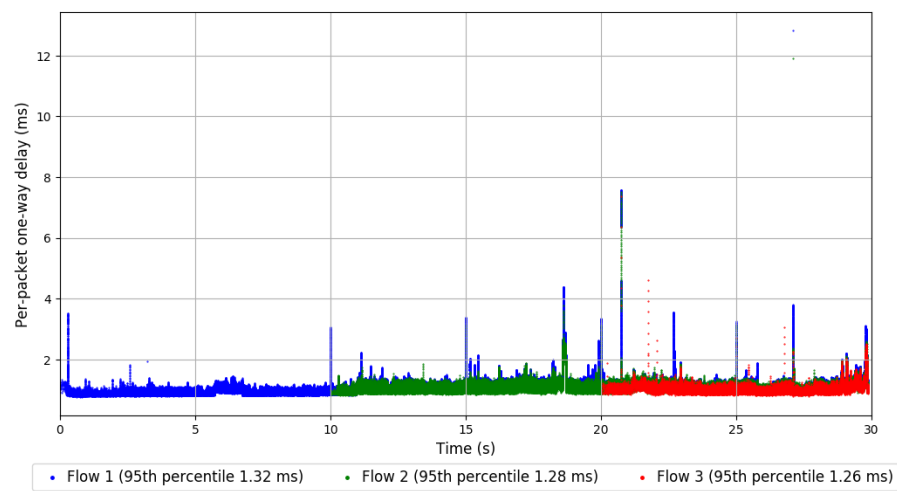
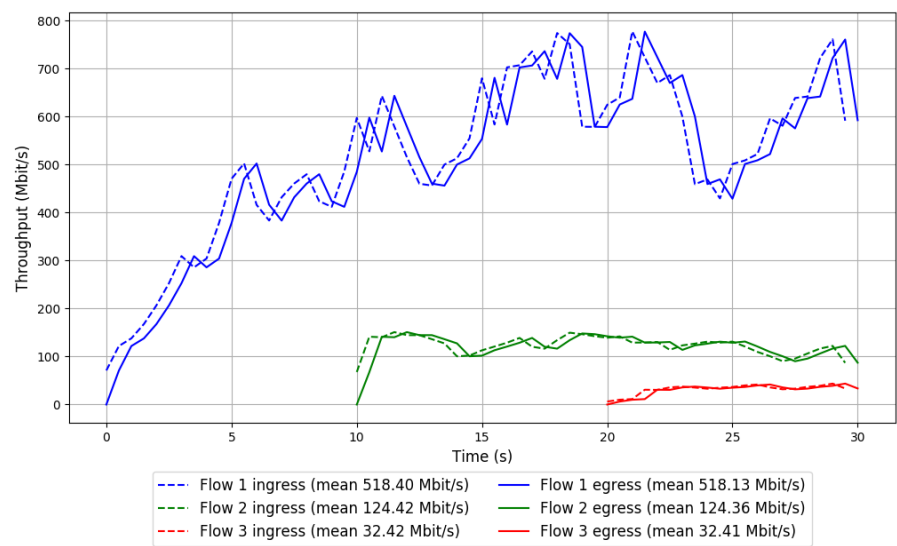
-- Flow 3:

Average throughput: 32.41 Mbit/s

95th percentile per-packet one-way delay: 1.264 ms

Loss rate: 0.04%

Run 3: Report of PCC-Allegro — Data Link

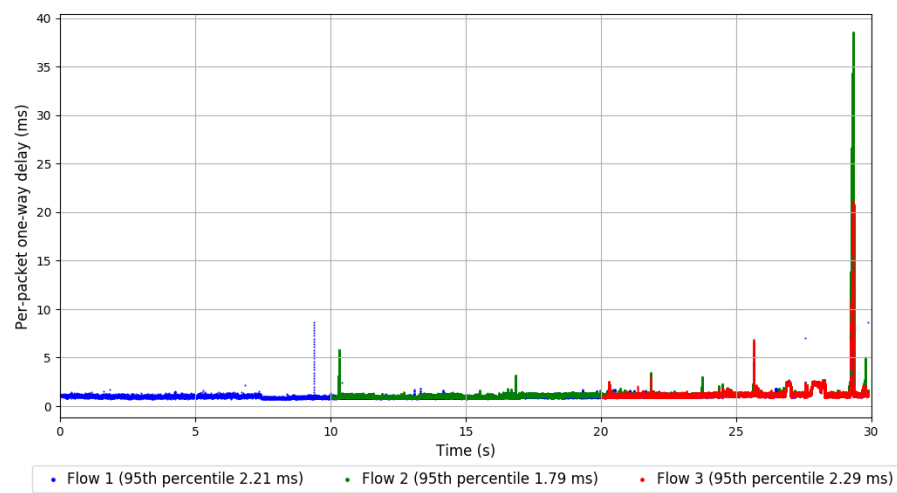
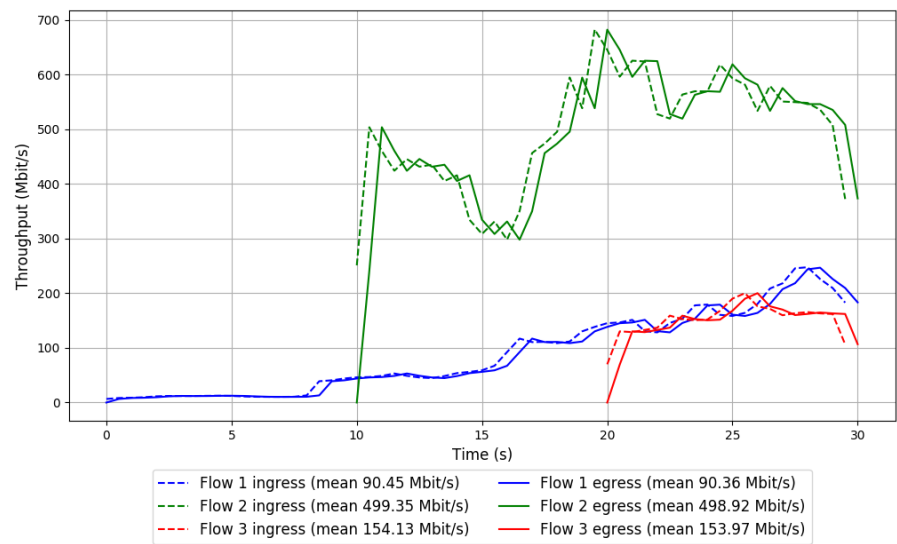


Run 4: Statistics of PCC-Allegro

Start at: 2019-03-09 04:07:02  
End at: 2019-03-09 04:07:32  
Local clock offset: 3.483 ms  
Remote clock offset: -2.023 ms

# Below is generated by plot.py at 2019-03-09 05:41:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 472.79 Mbit/s  
95th percentile per-packet one-way delay: 2.071 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 90.36 Mbit/s  
95th percentile per-packet one-way delay: 2.205 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 498.92 Mbit/s  
95th percentile per-packet one-way delay: 1.791 ms  
Loss rate: 0.10%  
-- Flow 3:  
Average throughput: 153.97 Mbit/s  
95th percentile per-packet one-way delay: 2.289 ms  
Loss rate: 0.10%

Run 4: Report of PCC-Allegro — Data Link

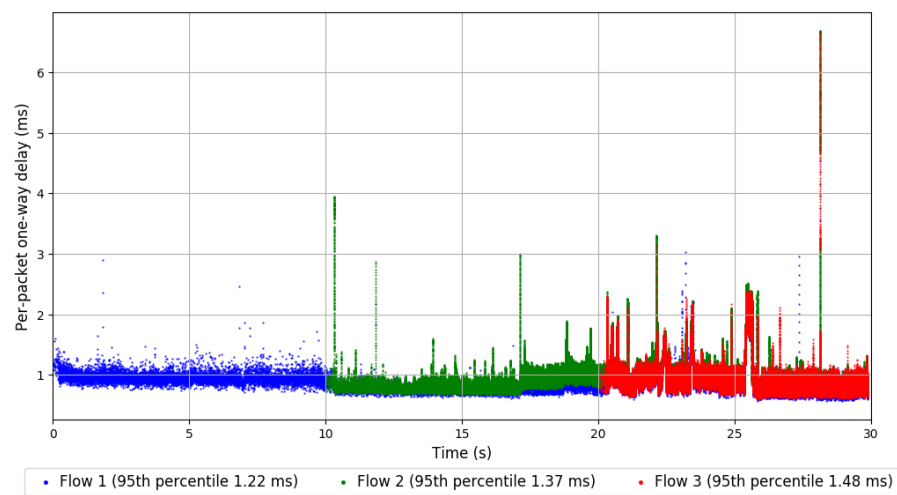
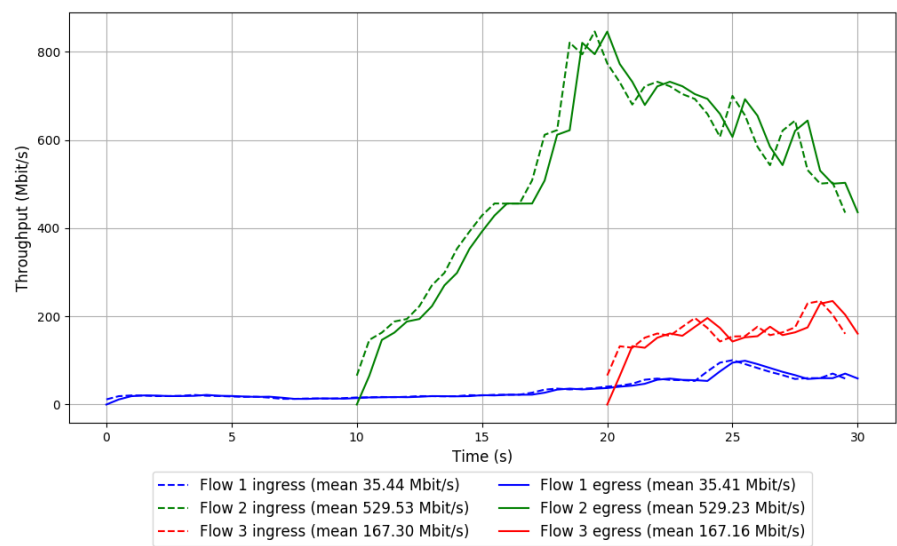


Run 5: Statistics of PCC-Allegro

Start at: 2019-03-09 04:36:58  
End at: 2019-03-09 04:37:28  
Local clock offset: -0.324 ms  
Remote clock offset: -4.704 ms

# Below is generated by plot.py at 2019-03-09 05:41:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 442.40 Mbit/s  
95th percentile per-packet one-way delay: 1.380 ms  
Loss rate: 0.07%  
-- Flow 1:  
Average throughput: 35.41 Mbit/s  
95th percentile per-packet one-way delay: 1.219 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 529.23 Mbit/s  
95th percentile per-packet one-way delay: 1.374 ms  
Loss rate: 0.06%  
-- Flow 3:  
Average throughput: 167.16 Mbit/s  
95th percentile per-packet one-way delay: 1.482 ms  
Loss rate: 0.10%

Run 5: Report of PCC-Allegro — Data Link



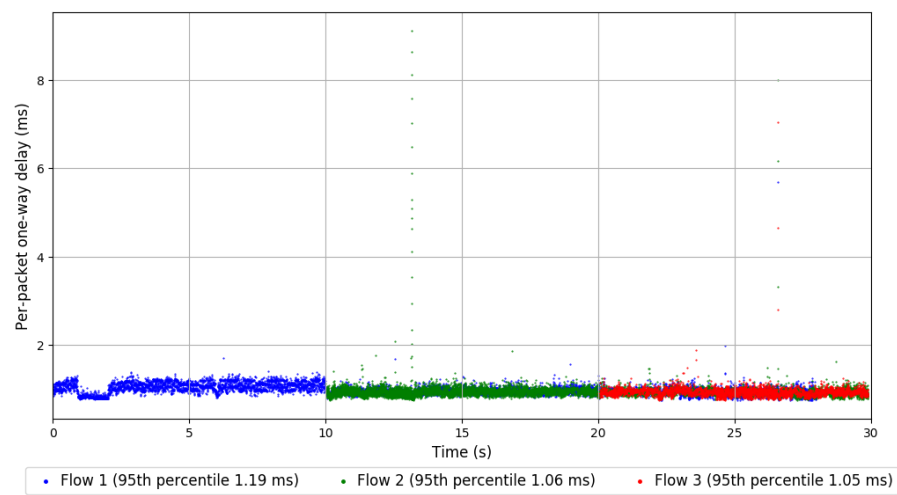
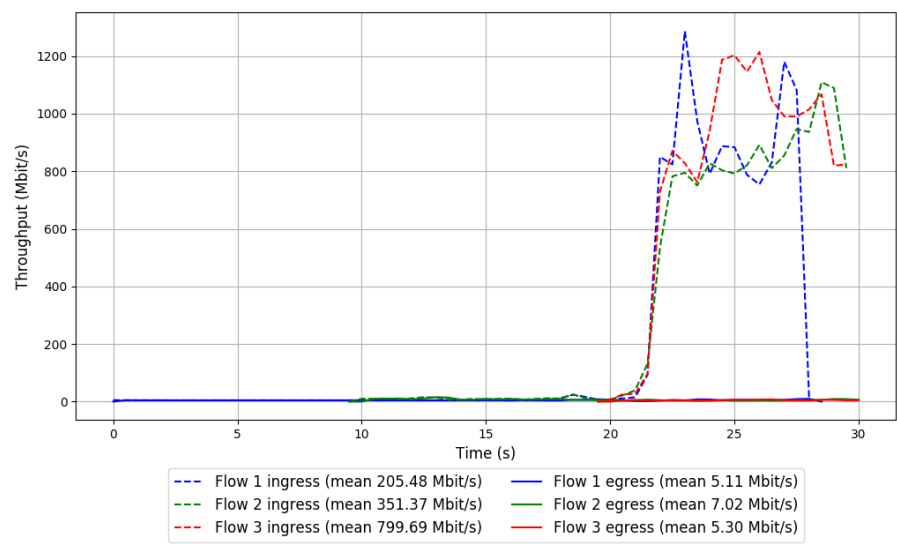


Run 1: Statistics of PCC-Expr

Start at: 2019-03-09 02:29:39  
End at: 2019-03-09 02:30:09  
Local clock offset: 3.783 ms  
Remote clock offset: -0.671 ms

# Below is generated by plot.py at 2019-03-09 05:41:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.22 Mbit/s  
95th percentile per-packet one-way delay: 1.130 ms  
Loss rate: 98.38%  
-- Flow 1:  
Average throughput: 5.11 Mbit/s  
95th percentile per-packet one-way delay: 1.191 ms  
Loss rate: 97.51%  
-- Flow 2:  
Average throughput: 7.02 Mbit/s  
95th percentile per-packet one-way delay: 1.056 ms  
Loss rate: 98.00%  
-- Flow 3:  
Average throughput: 5.30 Mbit/s  
95th percentile per-packet one-way delay: 1.052 ms  
Loss rate: 99.34%

Run 1: Report of PCC-Expr — Data Link

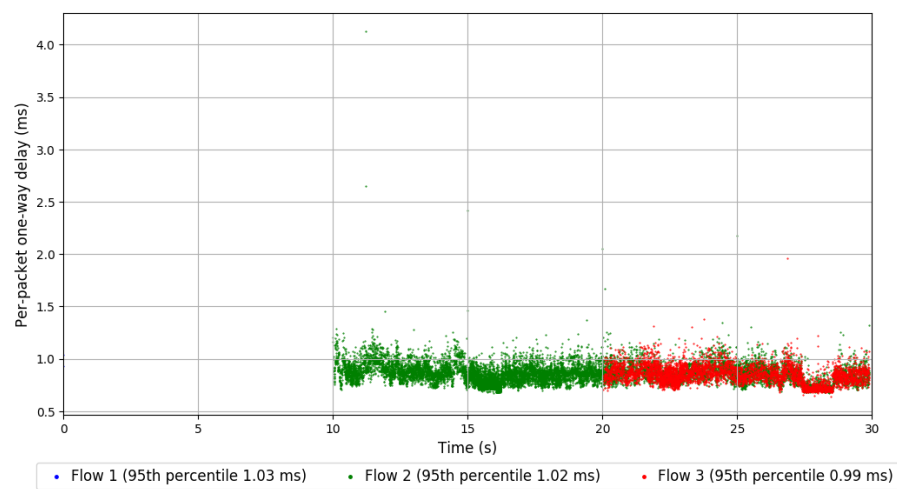
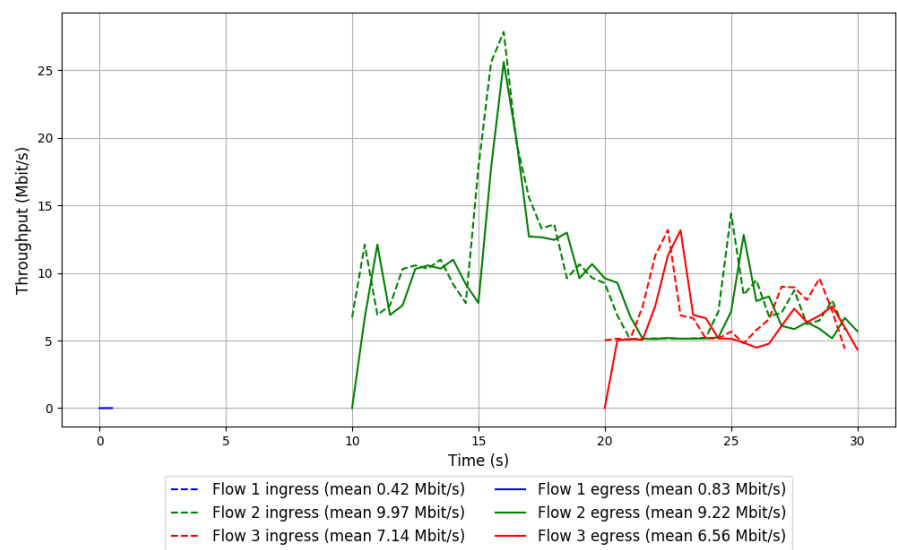


Run 2: Statistics of PCC-Expr

Start at: 2019-03-09 02:59:43  
End at: 2019-03-09 03:00:13  
Local clock offset: 0.465 ms  
Remote clock offset: -0.445 ms

# Below is generated by plot.py at 2019-03-09 05:41:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.30 Mbit/s  
95th percentile per-packet one-way delay: 1.012 ms  
Loss rate: 7.68%  
-- Flow 1:  
Average throughput: 0.83 Mbit/s  
95th percentile per-packet one-way delay: 1.034 ms  
Loss rate: 85.71%  
-- Flow 2:  
Average throughput: 9.22 Mbit/s  
95th percentile per-packet one-way delay: 1.017 ms  
Loss rate: 7.55%  
-- Flow 3:  
Average throughput: 6.56 Mbit/s  
95th percentile per-packet one-way delay: 0.995 ms  
Loss rate: 8.05%

Run 2: Report of PCC-Expr — Data Link

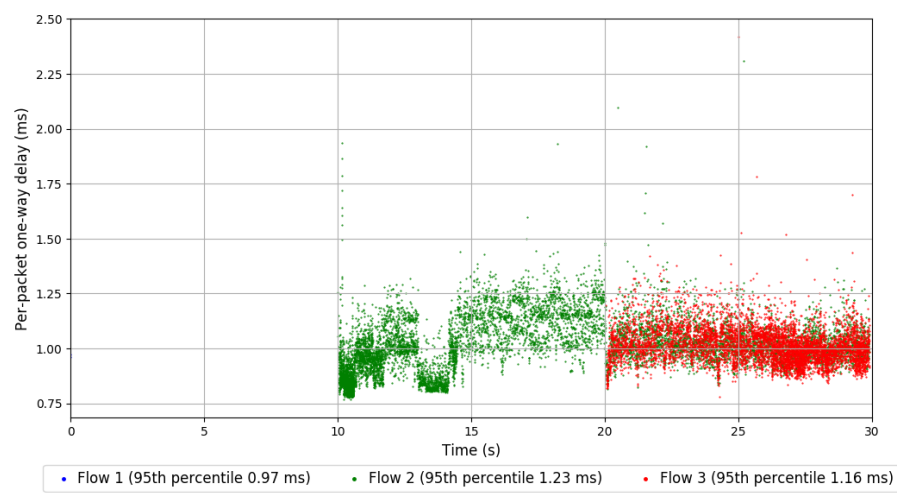
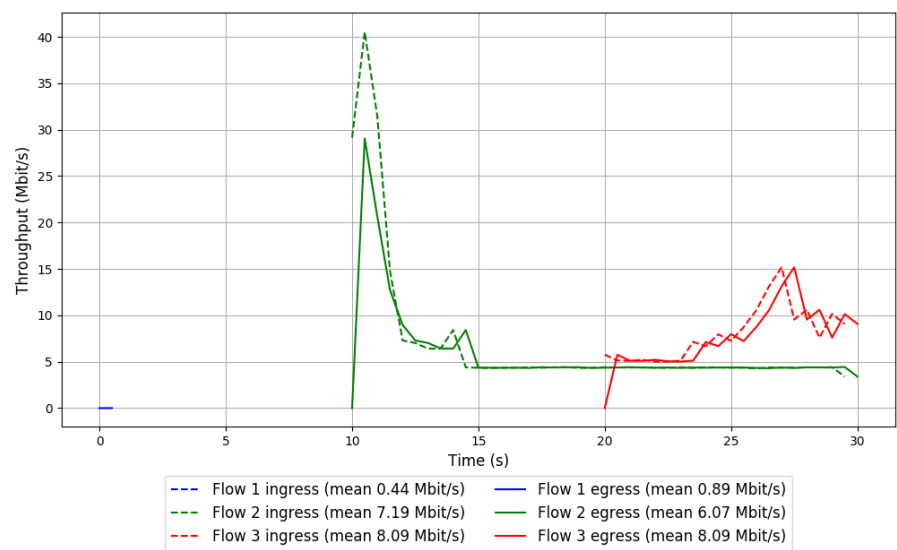


Run 3: Statistics of PCC-Expr

Start at: 2019-03-09 03:29:57  
End at: 2019-03-09 03:30:27  
Local clock offset: 3.01 ms  
Remote clock offset: -0.631 ms

# Below is generated by plot.py at 2019-03-09 05:41:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 6.71 Mbit/s  
95th percentile per-packet one-way delay: 1.204 ms  
Loss rate: 9.98%  
-- Flow 1:  
Average throughput: 0.89 Mbit/s  
95th percentile per-packet one-way delay: 0.971 ms  
Loss rate: 85.71%  
-- Flow 2:  
Average throughput: 6.07 Mbit/s  
95th percentile per-packet one-way delay: 1.226 ms  
Loss rate: 15.55%  
-- Flow 3:  
Average throughput: 8.09 Mbit/s  
95th percentile per-packet one-way delay: 1.156 ms  
Loss rate: 0.00%

Run 3: Report of PCC-Expr — Data Link

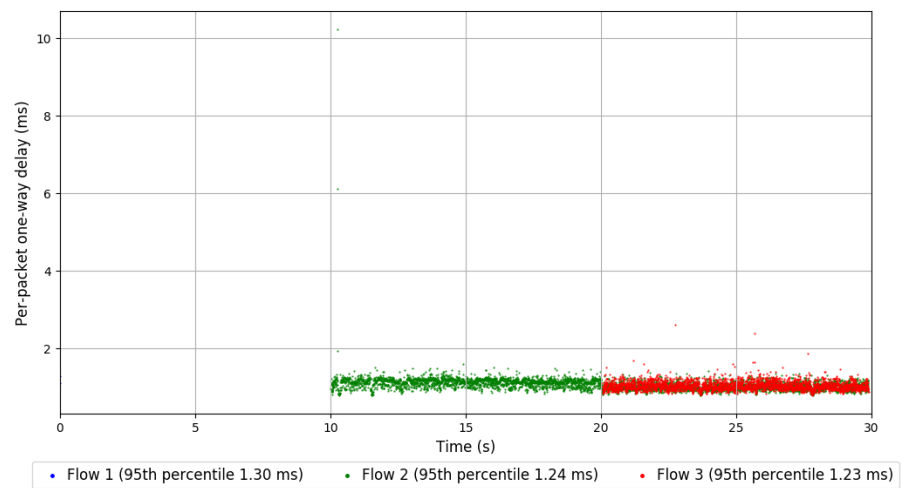
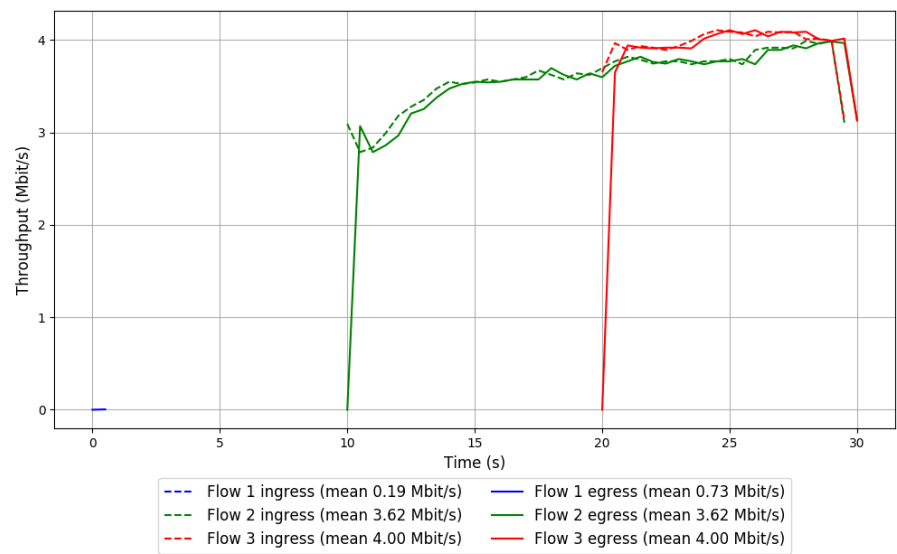


Run 4: Statistics of PCC-Expr

Start at: 2019-03-09 04:00:01  
End at: 2019-03-09 04:00:31  
Local clock offset: 3.44 ms  
Remote clock offset: -0.744 ms

# Below is generated by plot.py at 2019-03-09 05:41:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.73 Mbit/s  
95th percentile per-packet one-way delay: 1.238 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 0.73 Mbit/s  
95th percentile per-packet one-way delay: 1.300 ms  
Loss rate: 85.71%  
-- Flow 2:  
Average throughput: 3.62 Mbit/s  
95th percentile per-packet one-way delay: 1.240 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 4.00 Mbit/s  
95th percentile per-packet one-way delay: 1.232 ms  
Loss rate: 0.00%

Run 4: Report of PCC-Expr — Data Link



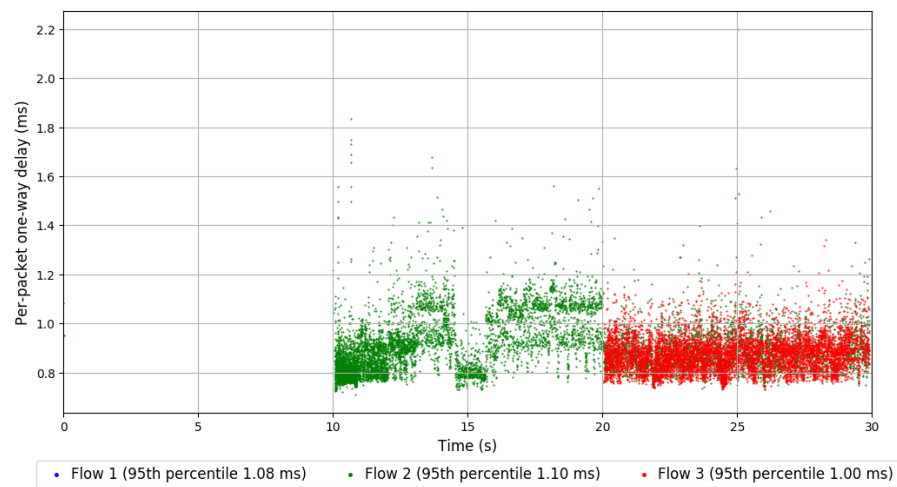
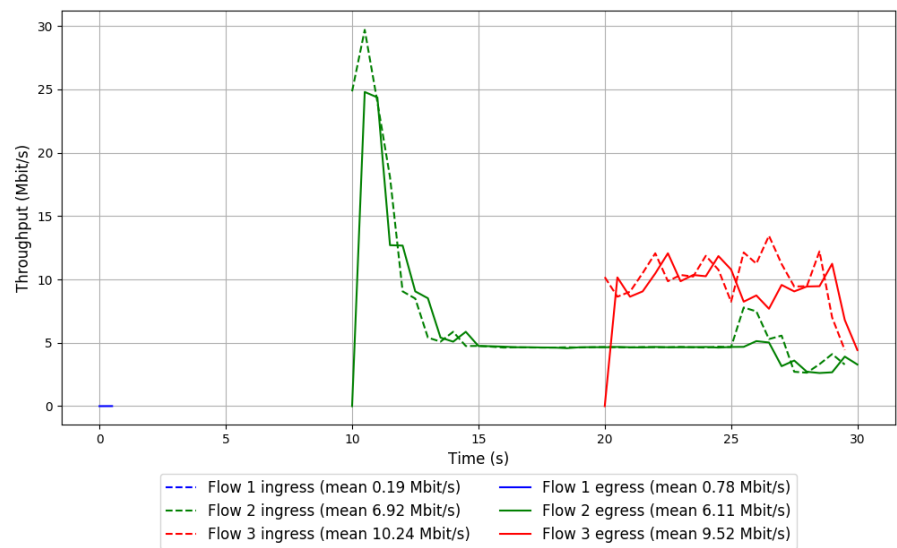


Run 5: Statistics of PCC-Expr

Start at: 2019-03-09 04:29:55  
End at: 2019-03-09 04:30:25  
Local clock offset: 0.261 ms  
Remote clock offset: -4.415 ms

# Below is generated by plot.py at 2019-03-09 05:41:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 7.21 Mbit/s  
95th percentile per-packet one-way delay: 1.076 ms  
Loss rate: 9.71%  
-- Flow 1:  
Average throughput: 0.78 Mbit/s  
95th percentile per-packet one-way delay: 1.081 ms  
Loss rate: 85.71%  
-- Flow 2:  
Average throughput: 6.11 Mbit/s  
95th percentile per-packet one-way delay: 1.099 ms  
Loss rate: 11.69%  
-- Flow 3:  
Average throughput: 9.52 Mbit/s  
95th percentile per-packet one-way delay: 1.002 ms  
Loss rate: 7.01%

Run 5: Report of PCC-Expr — Data Link

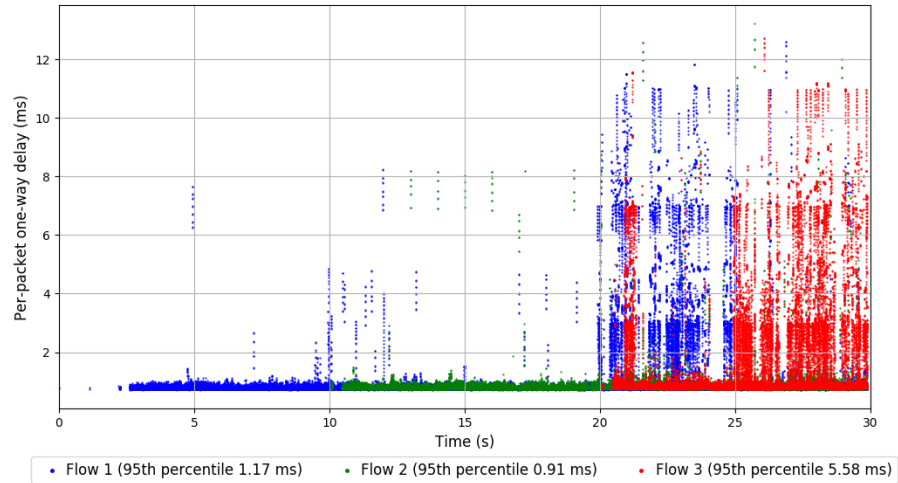
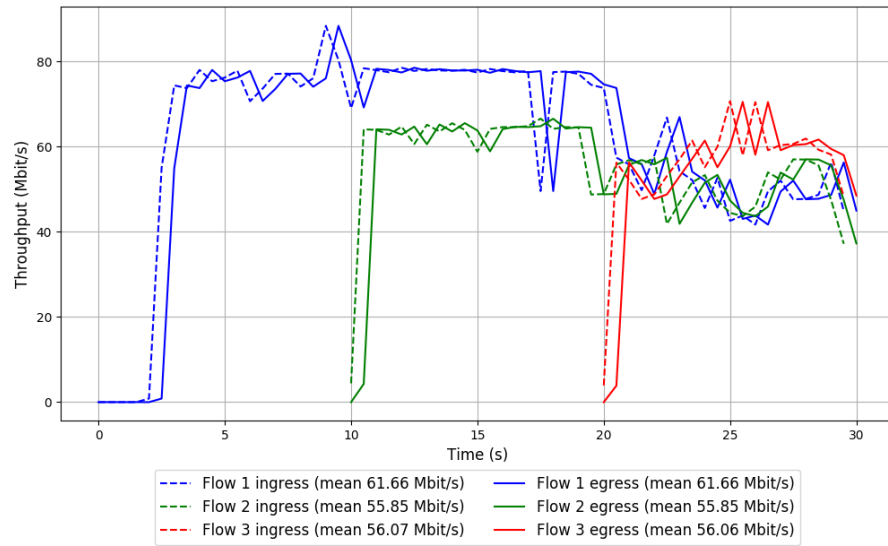


Run 1: Statistics of QUIC Cubic

Start at: 2019-03-09 02:31:01  
End at: 2019-03-09 02:31:31  
Local clock offset: 3.78 ms  
Remote clock offset: -0.649 ms

# Below is generated by plot.py at 2019-03-09 05:41:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 117.14 Mbit/s  
95th percentile per-packet one-way delay: 2.294 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 61.66 Mbit/s  
95th percentile per-packet one-way delay: 1.172 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 55.85 Mbit/s  
95th percentile per-packet one-way delay: 0.910 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 56.06 Mbit/s  
95th percentile per-packet one-way delay: 5.579 ms  
Loss rate: 0.01%

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

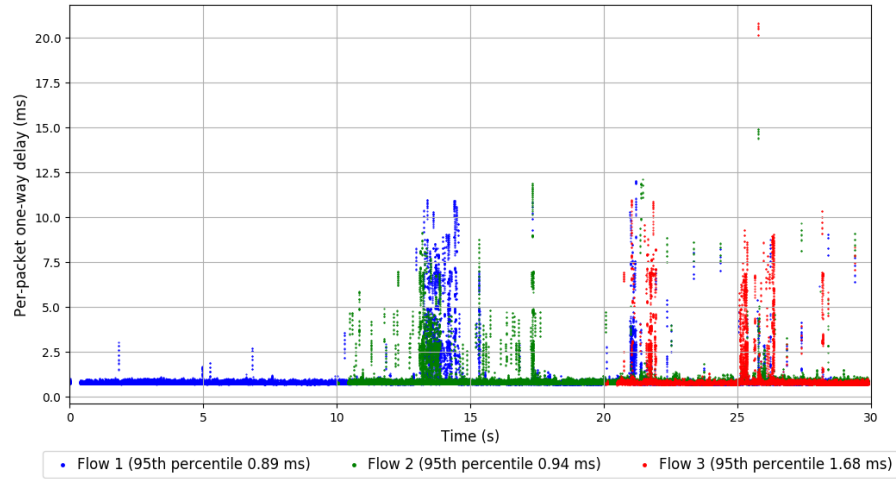
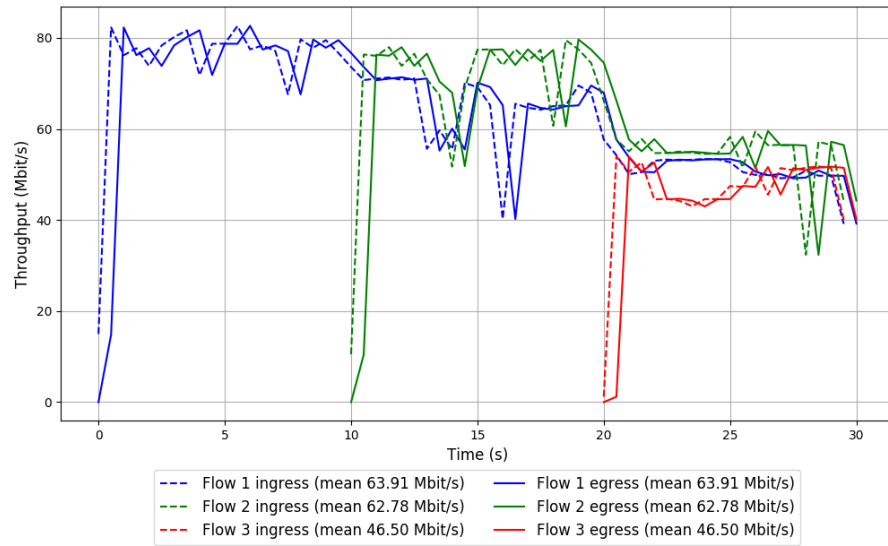


Run 2: Statistics of QUIC Cubic

Start at: 2019-03-09 03:00:57  
End at: 2019-03-09 03:01:27  
Local clock offset: 0.33 ms  
Remote clock offset: -0.468 ms

# Below is generated by plot.py at 2019-03-09 05:41:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 120.92 Mbit/s  
95th percentile per-packet one-way delay: 0.918 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 63.91 Mbit/s  
95th percentile per-packet one-way delay: 0.888 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 62.78 Mbit/s  
95th percentile per-packet one-way delay: 0.942 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 46.50 Mbit/s  
95th percentile per-packet one-way delay: 1.677 ms  
Loss rate: 0.00%

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

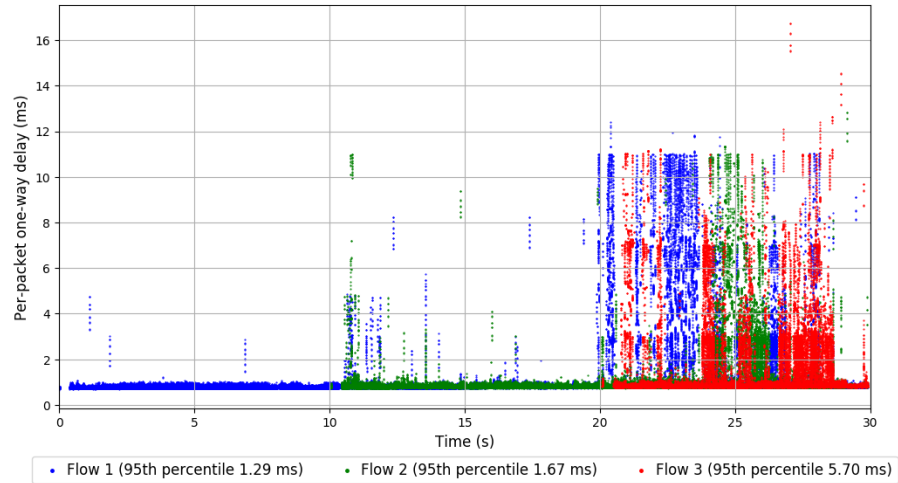
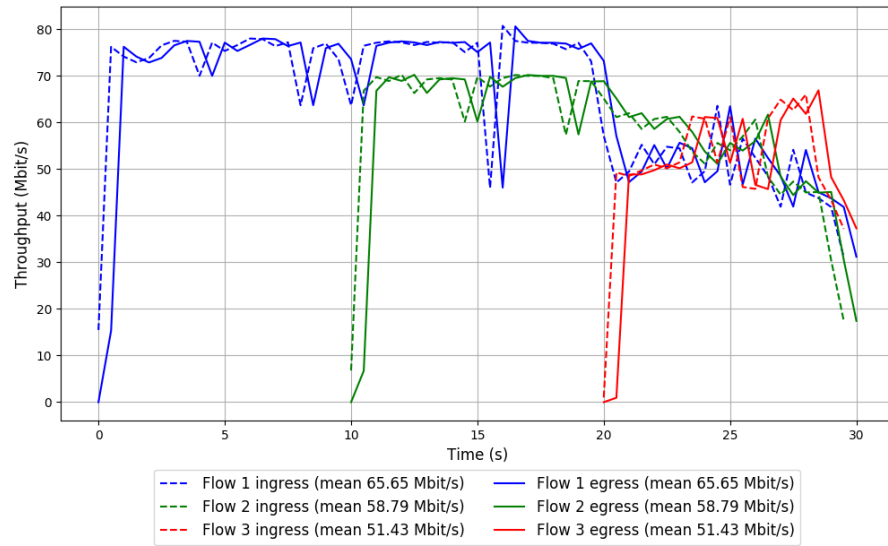


Run 3: Statistics of QUIC Cubic

Start at: 2019-03-09 03:31:11  
End at: 2019-03-09 03:31:41  
Local clock offset: 3.134 ms  
Remote clock offset: -0.672 ms

# Below is generated by plot.py at 2019-03-09 05:41:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 121.60 Mbit/s  
95th percentile per-packet one-way delay: 2.714 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 65.65 Mbit/s  
95th percentile per-packet one-way delay: 1.290 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 58.79 Mbit/s  
95th percentile per-packet one-way delay: 1.668 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 51.43 Mbit/s  
95th percentile per-packet one-way delay: 5.702 ms  
Loss rate: 0.01%

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



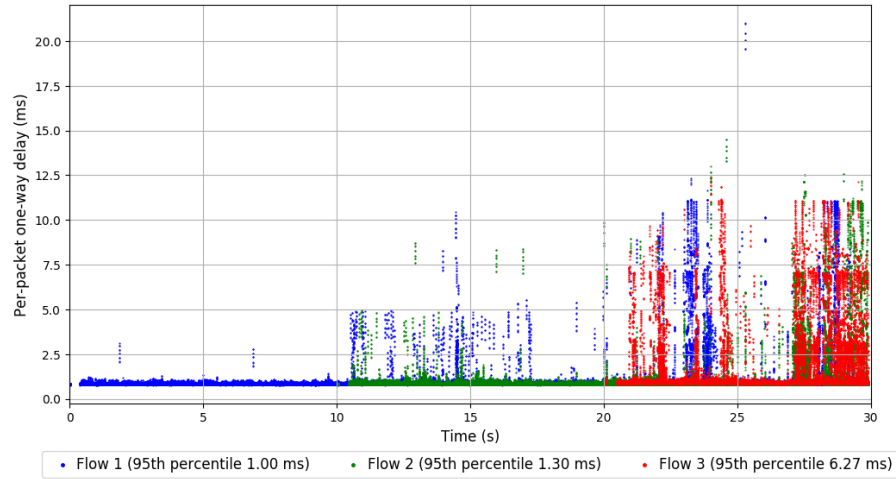
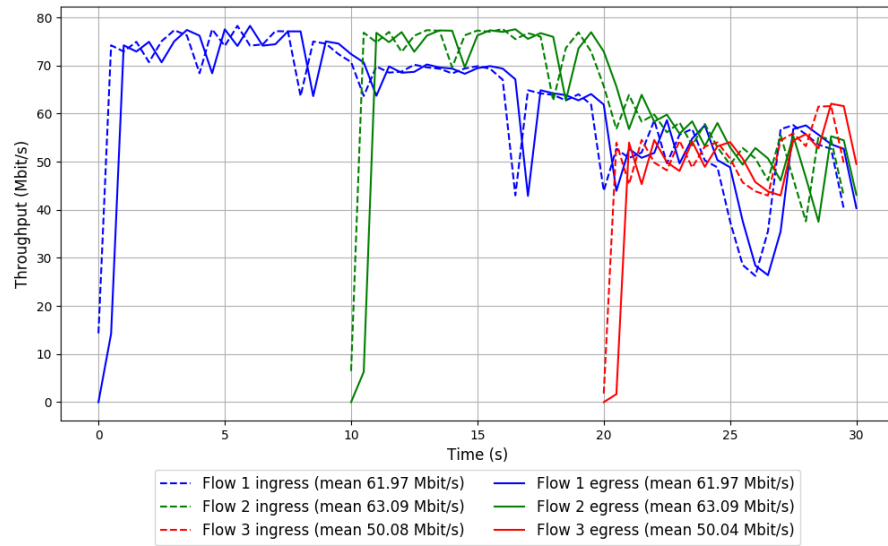


Run 4: Statistics of QUIC Cubic

Start at: 2019-03-09 04:01:15  
End at: 2019-03-09 04:01:45  
Local clock offset: 3.427 ms  
Remote clock offset: -0.736 ms

# Below is generated by plot.py at 2019-03-09 05:41:32  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 120.32 Mbit/s  
95th percentile per-packet one-way delay: 2.188 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 61.97 Mbit/s  
95th percentile per-packet one-way delay: 1.004 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 63.09 Mbit/s  
95th percentile per-packet one-way delay: 1.303 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 50.04 Mbit/s  
95th percentile per-packet one-way delay: 6.267 ms  
Loss rate: 0.03%

#### Run 4: Report of QUIC Cubic — Data Link

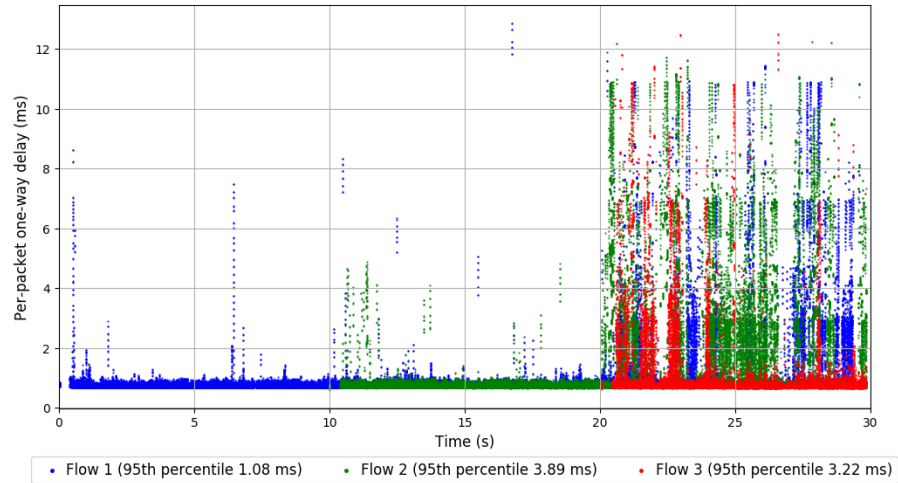
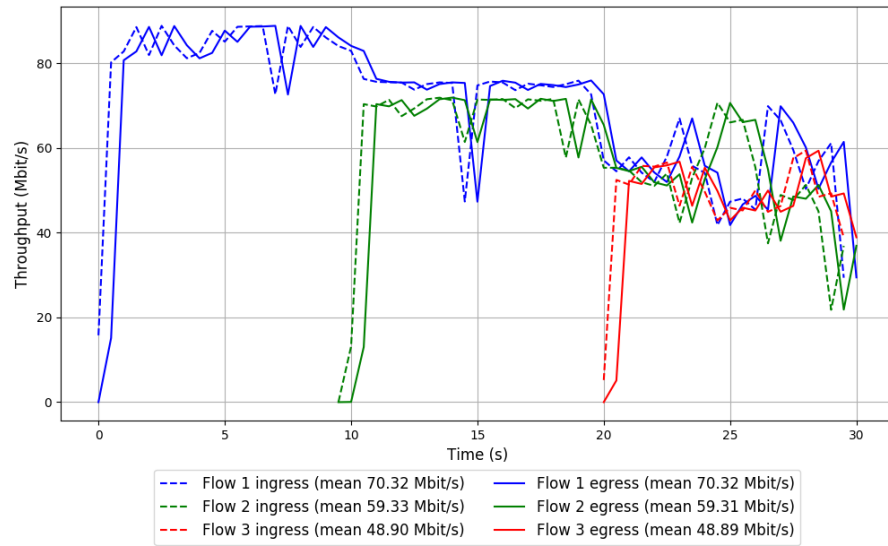


Run 5: Statistics of QUIC Cubic

Start at: 2019-03-09 04:31:10  
End at: 2019-03-09 04:31:40  
Local clock offset: 0.125 ms  
Remote clock offset: -4.551 ms

# Below is generated by plot.py at 2019-03-09 05:41:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 125.82 Mbit/s  
95th percentile per-packet one-way delay: 2.643 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 70.32 Mbit/s  
95th percentile per-packet one-way delay: 1.081 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 59.31 Mbit/s  
95th percentile per-packet one-way delay: 3.887 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 48.89 Mbit/s  
95th percentile per-packet one-way delay: 3.223 ms  
Loss rate: 0.00%

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

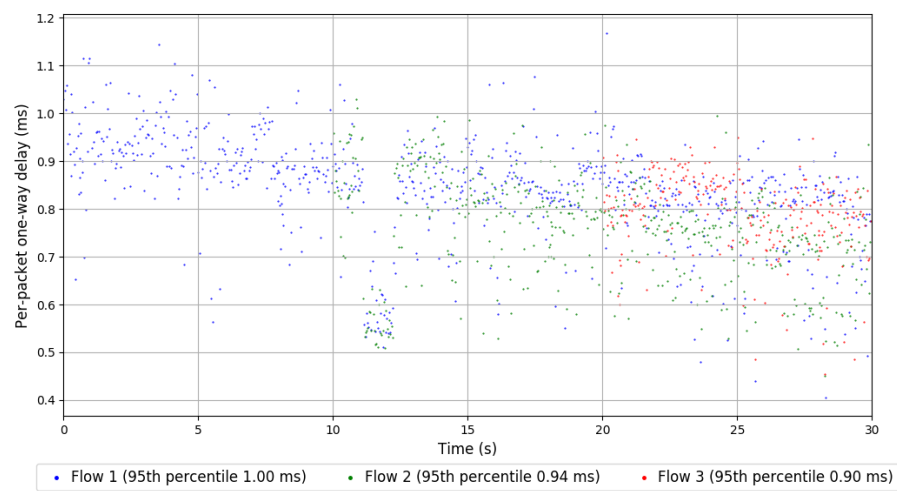
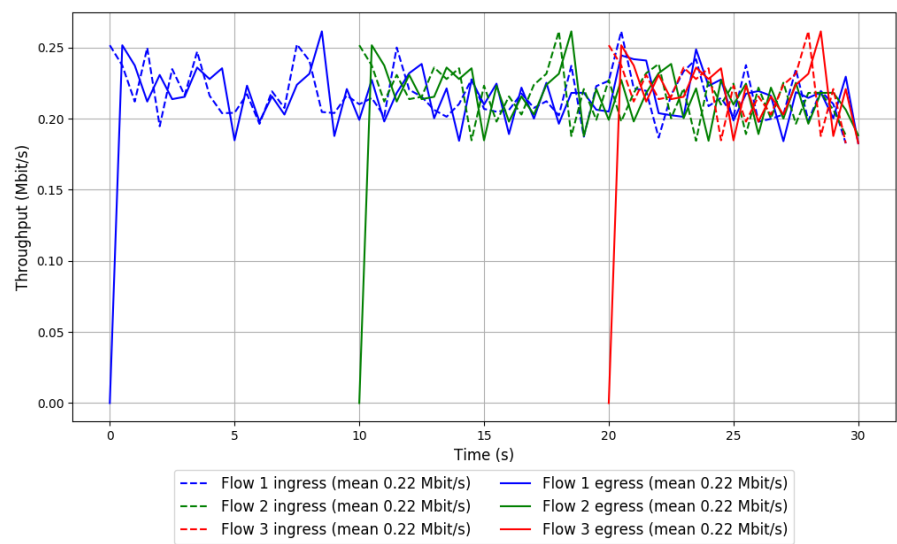


Run 1: Statistics of SReAM

Start at: 2019-03-09 02:44:29  
End at: 2019-03-09 02:44:59  
Local clock offset: 3.957 ms  
Remote clock offset: -0.327 ms

# Below is generated by plot.py at 2019-03-09 05:41:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 0.967 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.005 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 0.936 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 0.899 ms  
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

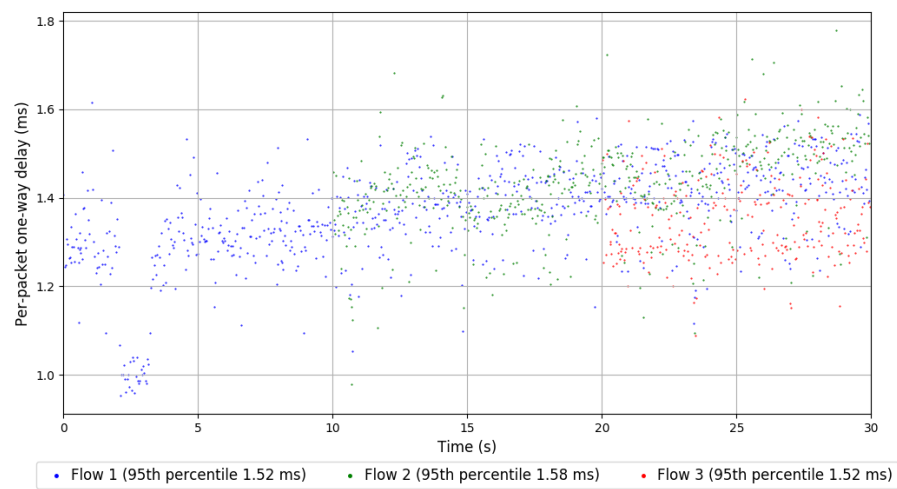
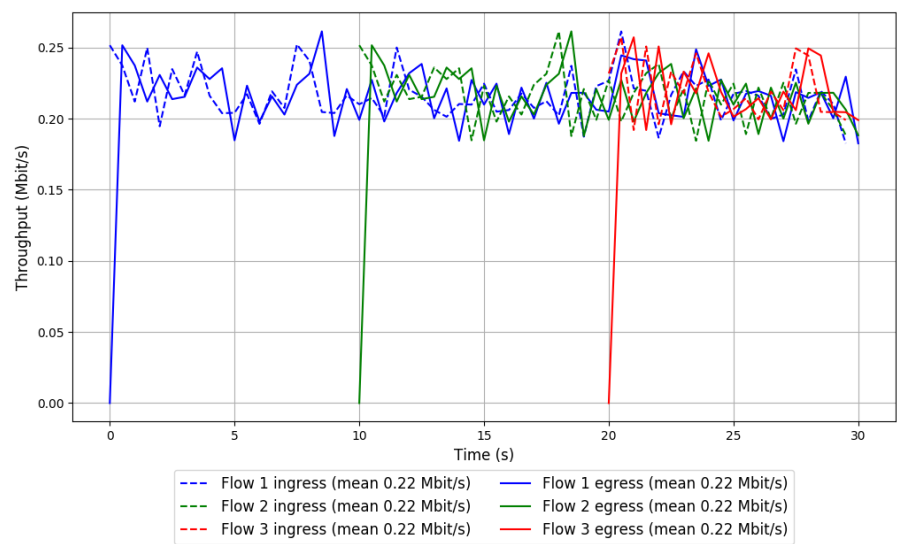


Run 2: Statistics of SReAM

Start at: 2019-03-09 03:14:38  
End at: 2019-03-09 03:15:08  
Local clock offset: -0.426 ms  
Remote clock offset: -0.574 ms

# Below is generated by plot.py at 2019-03-09 05:41:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 1.538 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.517 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.582 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.517 ms  
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



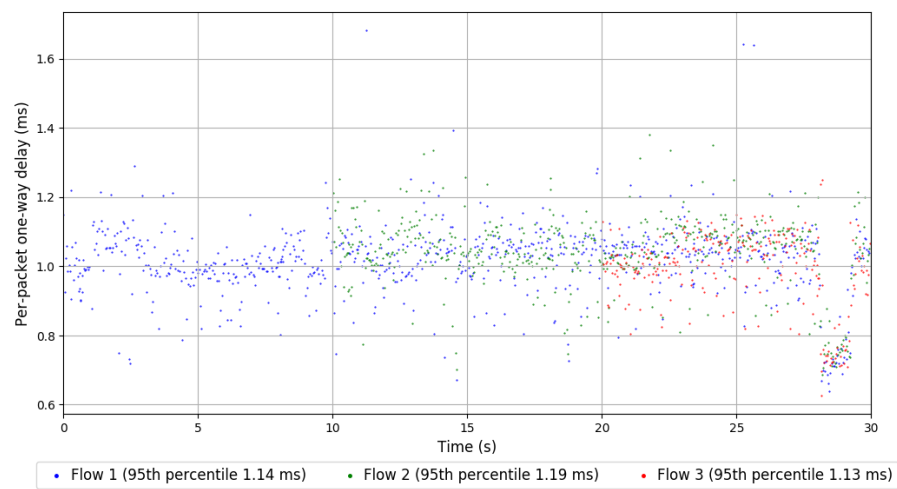
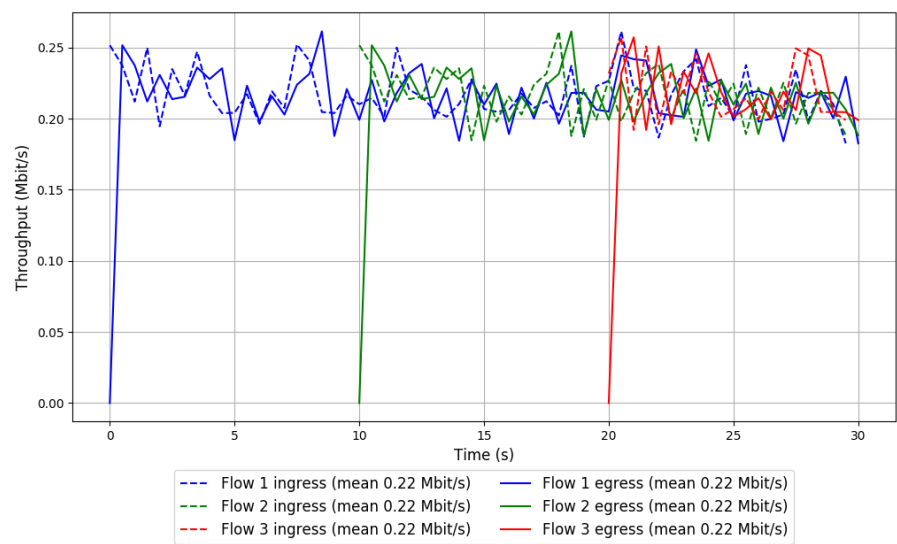


Run 3: Statistics of SReAM

Start at: 2019-03-09 03:44:42  
End at: 2019-03-09 03:45:12  
Local clock offset: 3.794 ms  
Remote clock offset: -0.768 ms

# Below is generated by plot.py at 2019-03-09 05:41:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 1.150 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.139 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.190 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.126 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

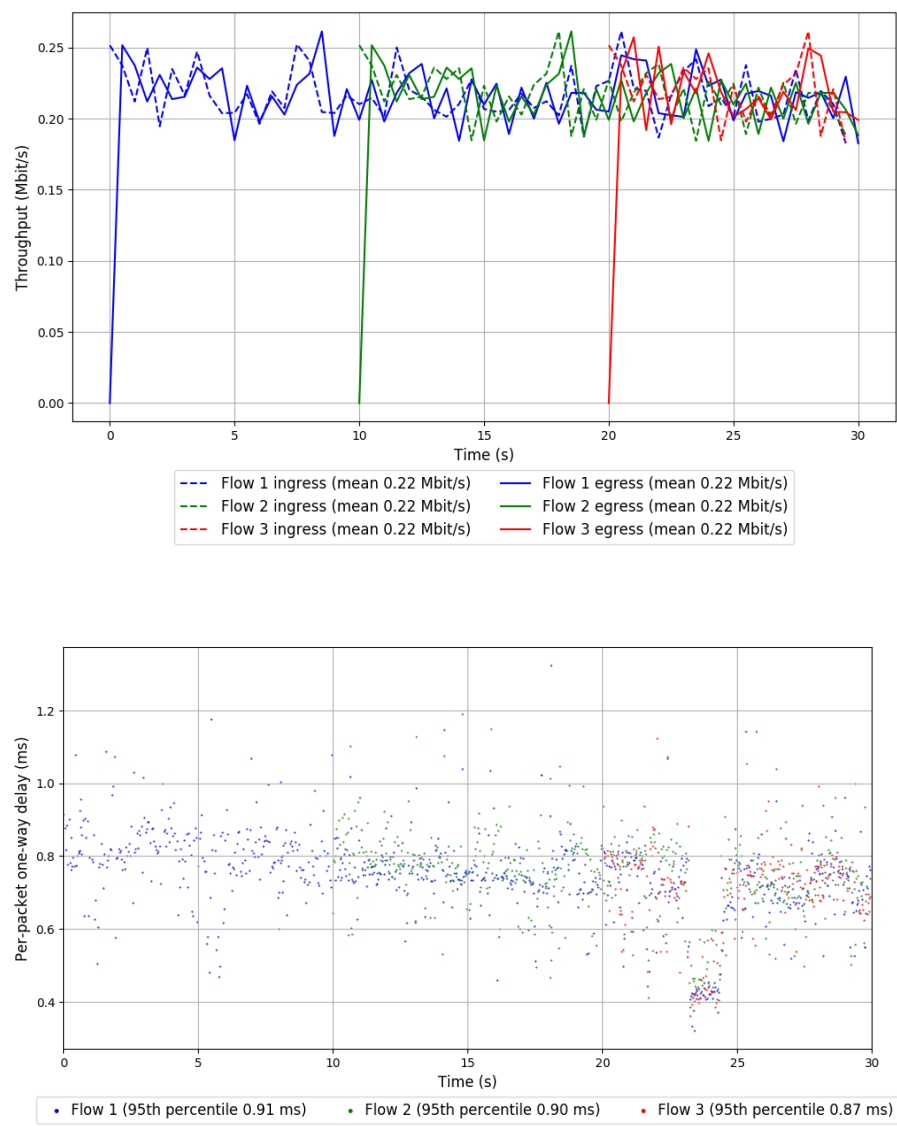


Run 4: Statistics of SReAM

Start at: 2019-03-09 04:14:47  
End at: 2019-03-09 04:15:17  
Local clock offset: 3.52 ms  
Remote clock offset: -3.243 ms

# Below is generated by plot.py at 2019-03-09 05:41:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 0.904 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 0.911 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 0.898 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 0.874 ms  
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

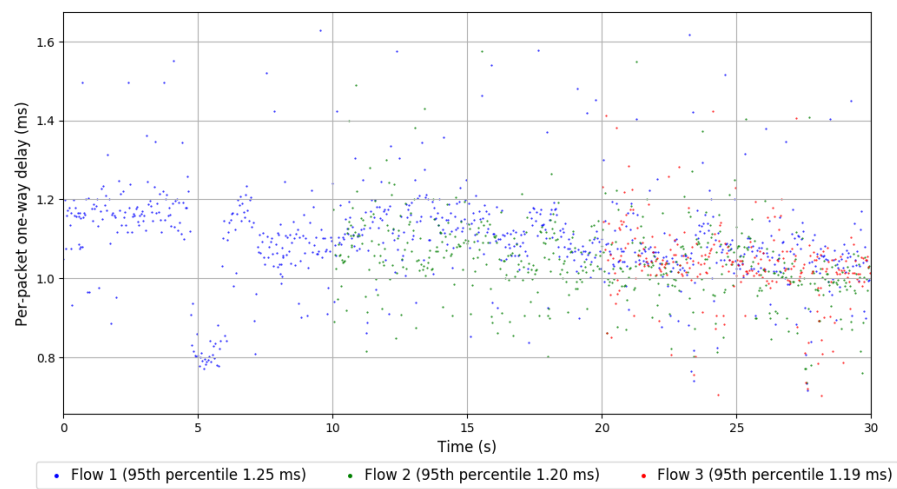
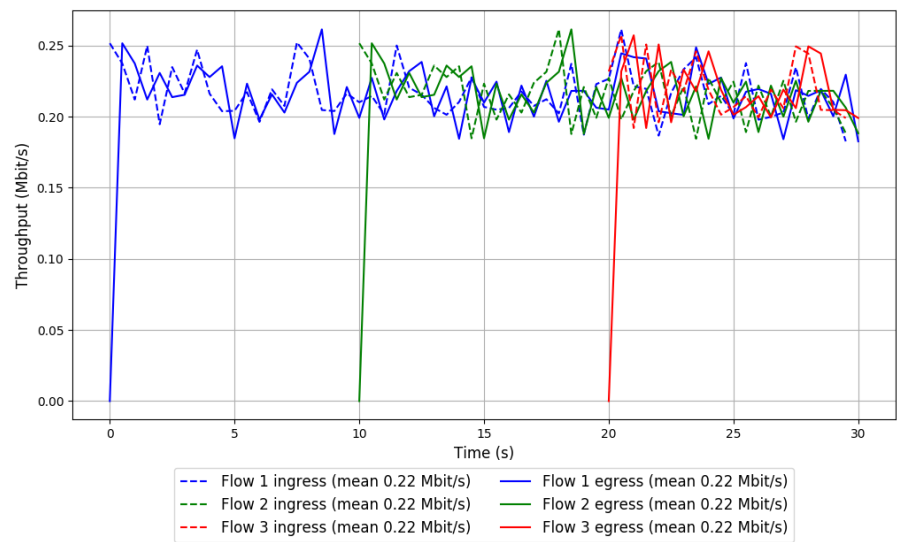


Run 5: Statistics of SReAM

Start at: 2019-03-09 04:44:35  
End at: 2019-03-09 04:45:05  
Local clock offset: -0.718 ms  
Remote clock offset: -2.098 ms

# Below is generated by plot.py at 2019-03-09 05:41:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 1.227 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.251 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.201 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.188 ms  
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

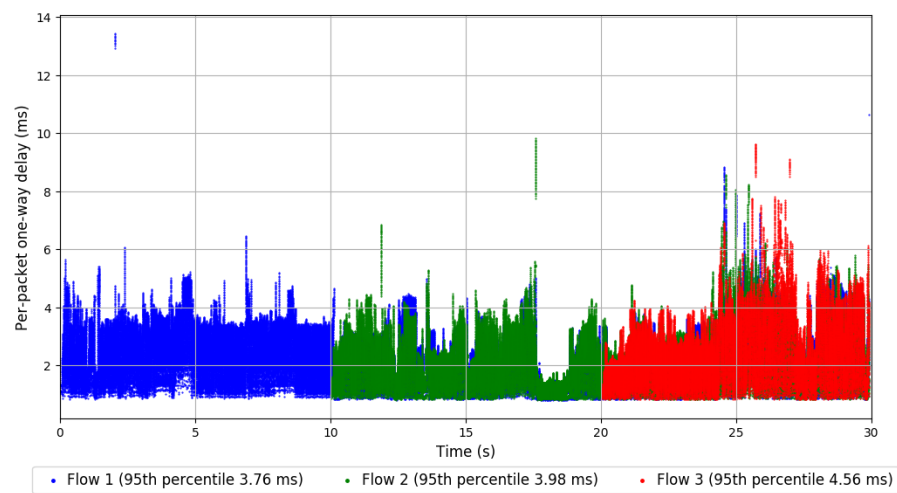
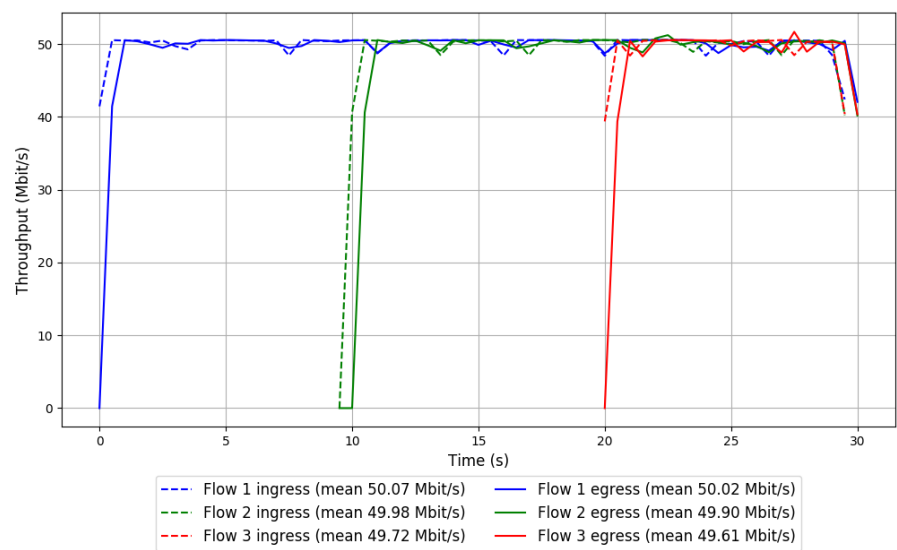


Run 1: Statistics of Sprout

Start at: 2019-03-09 02:33:52  
End at: 2019-03-09 02:34:22  
Local clock offset: 3.803 ms  
Remote clock offset: -0.537 ms

# Below is generated by plot.py at 2019-03-09 05:41:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 99.63 Mbit/s  
95th percentile per-packet one-way delay: 3.995 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 50.02 Mbit/s  
95th percentile per-packet one-way delay: 3.756 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 49.90 Mbit/s  
95th percentile per-packet one-way delay: 3.981 ms  
Loss rate: 0.14%  
-- Flow 3:  
Average throughput: 49.61 Mbit/s  
95th percentile per-packet one-way delay: 4.556 ms  
Loss rate: 0.18%

Run 1: Report of Sprout — Data Link



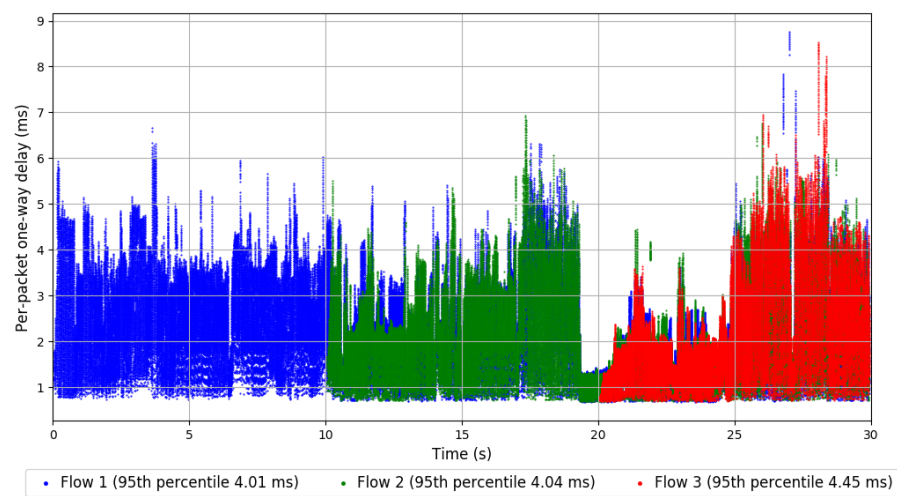
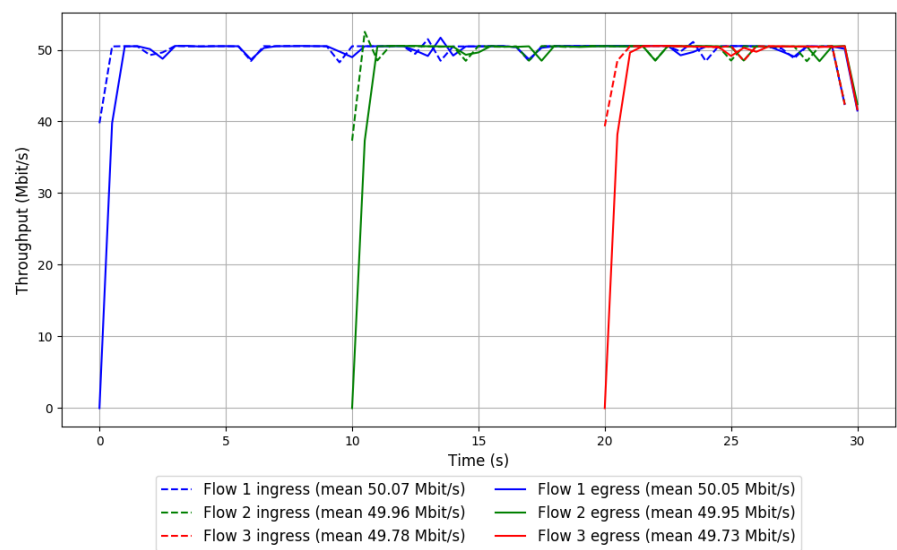


Run 2: Statistics of Sprout

Start at: 2019-03-09 03:03:51  
End at: 2019-03-09 03:04:21  
Local clock offset: 0.094 ms  
Remote clock offset: -0.528 ms

# Below is generated by plot.py at 2019-03-09 05:41:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 99.74 Mbit/s  
95th percentile per-packet one-way delay: 4.089 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 50.05 Mbit/s  
95th percentile per-packet one-way delay: 4.009 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 49.95 Mbit/s  
95th percentile per-packet one-way delay: 4.037 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 49.73 Mbit/s  
95th percentile per-packet one-way delay: 4.447 ms  
Loss rate: 0.09%

Run 2: Report of Sprout — Data Link

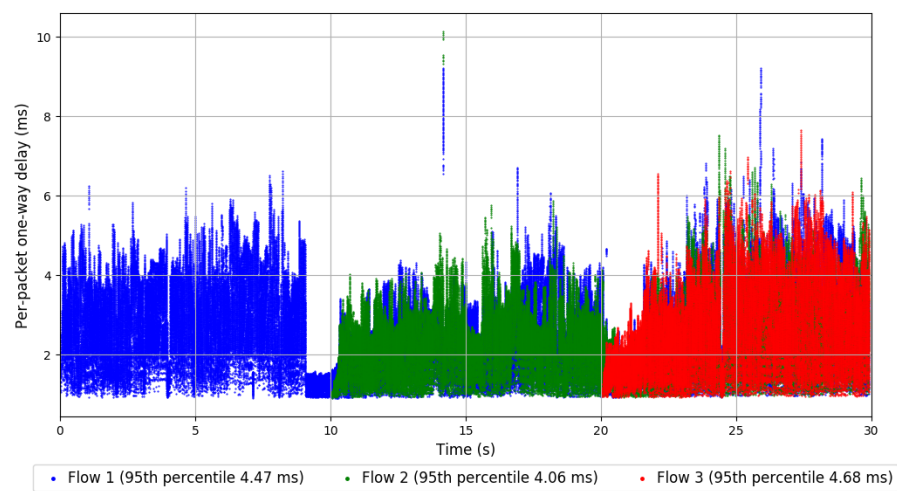
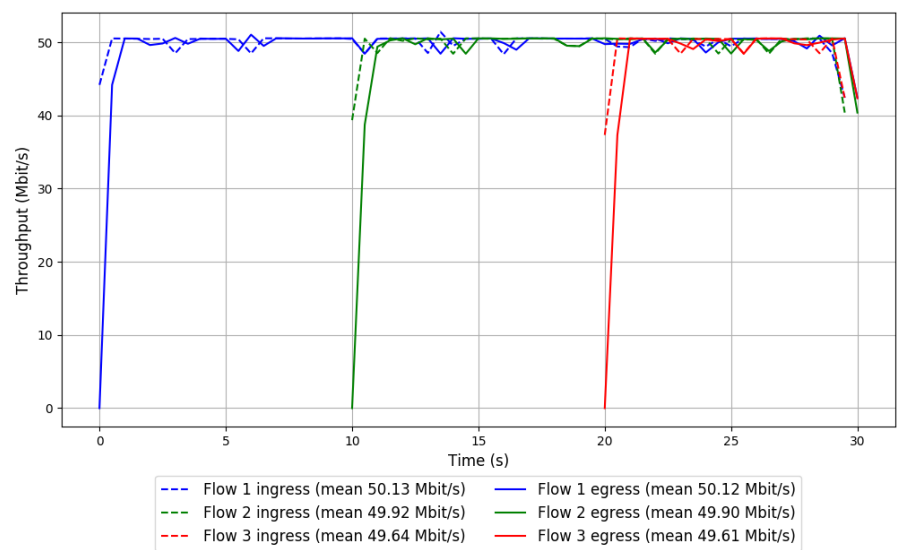


### Run 3: Statistics of Sprout

Start at: 2019-03-09 03:34:01  
End at: 2019-03-09 03:34:31  
Local clock offset: 3.316 ms  
Remote clock offset: -0.591 ms

```
# Below is generated by plot.py at 2019-03-09 05:41:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.70 Mbit/s
95th percentile per-packet one-way delay: 4.415 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 50.12 Mbit/s
95th percentile per-packet one-way delay: 4.474 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 49.90 Mbit/s
95th percentile per-packet one-way delay: 4.060 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 49.61 Mbit/s
95th percentile per-packet one-way delay: 4.682 ms
Loss rate: 0.03%
```

Run 3: Report of Sprout — Data Link

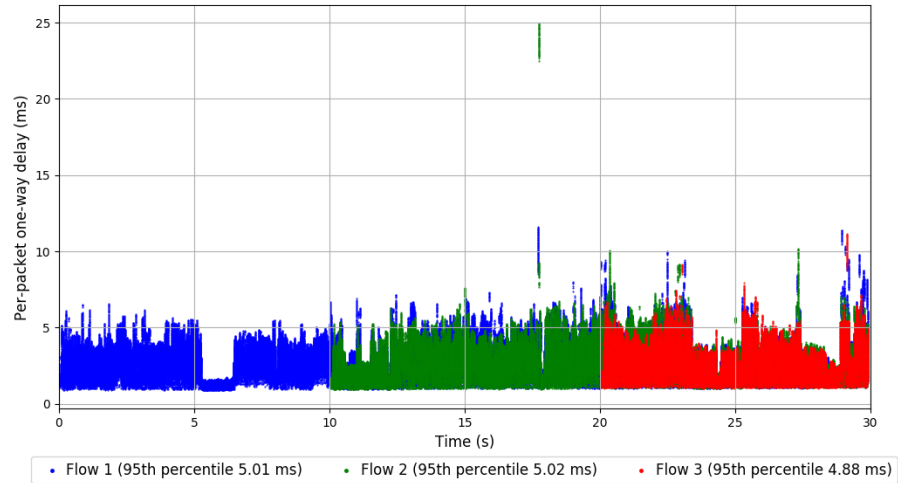
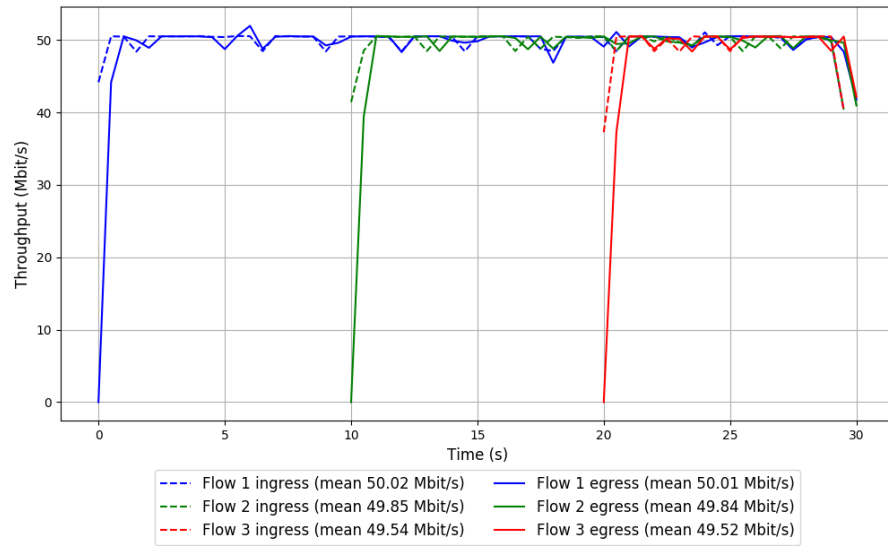


#### Run 4: Statistics of Sprout

Start at: 2019-03-09 04:04:05  
End at: 2019-03-09 04:04:35  
Local clock offset: 3.465 ms  
Remote clock offset: -1.08 ms

```
# Below is generated by plot.py at 2019-03-09 05:42:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.53 Mbit/s
95th percentile per-packet one-way delay: 4.996 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 50.01 Mbit/s
95th percentile per-packet one-way delay: 5.014 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.84 Mbit/s
95th percentile per-packet one-way delay: 5.024 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.52 Mbit/s
95th percentile per-packet one-way delay: 4.880 ms
Loss rate: 0.01%
```

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

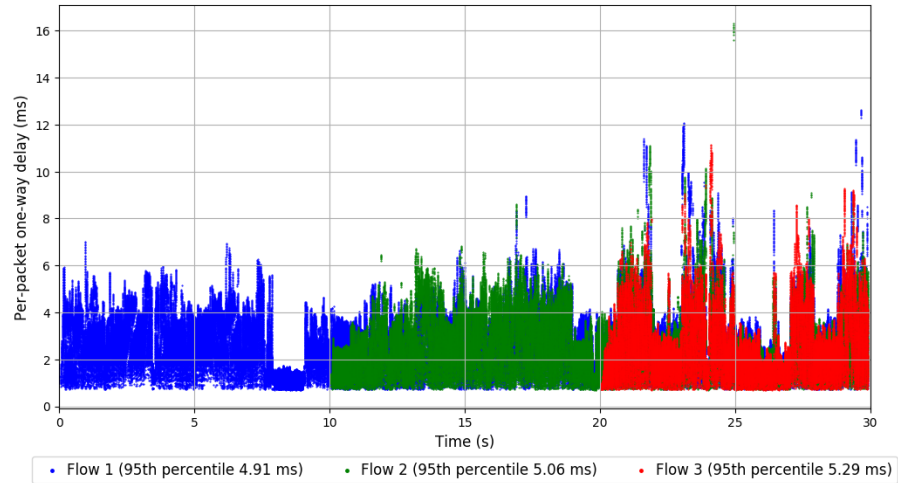
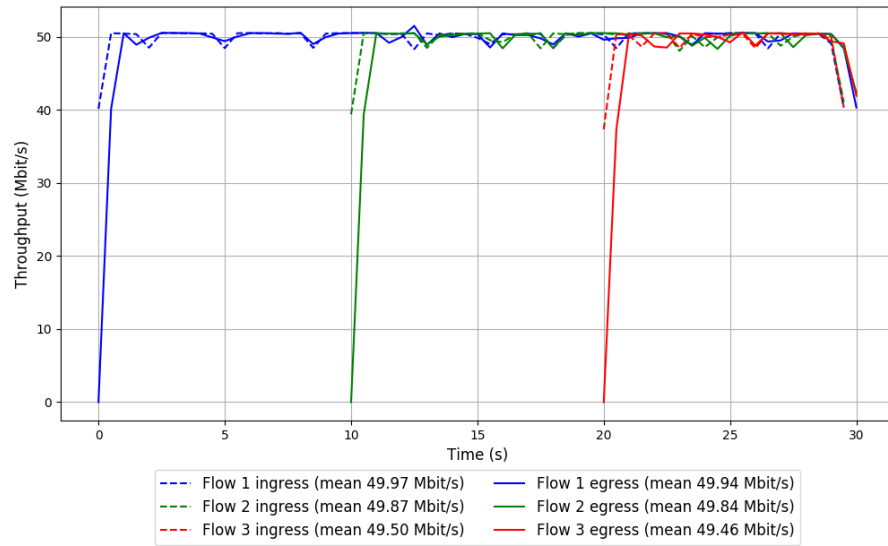


Run 5: Statistics of Sprout

Start at: 2019-03-09 04:34:02  
End at: 2019-03-09 04:34:32  
Local clock offset: -0.104 ms  
Remote clock offset: -4.677 ms

# Below is generated by plot.py at 2019-03-09 05:42:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 99.44 Mbit/s  
95th percentile per-packet one-way delay: 5.029 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 49.94 Mbit/s  
95th percentile per-packet one-way delay: 4.909 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 49.84 Mbit/s  
95th percentile per-packet one-way delay: 5.060 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 49.46 Mbit/s  
95th percentile per-packet one-way delay: 5.292 ms  
Loss rate: 0.05%

## Run 5: Report of Sprout — Data Link



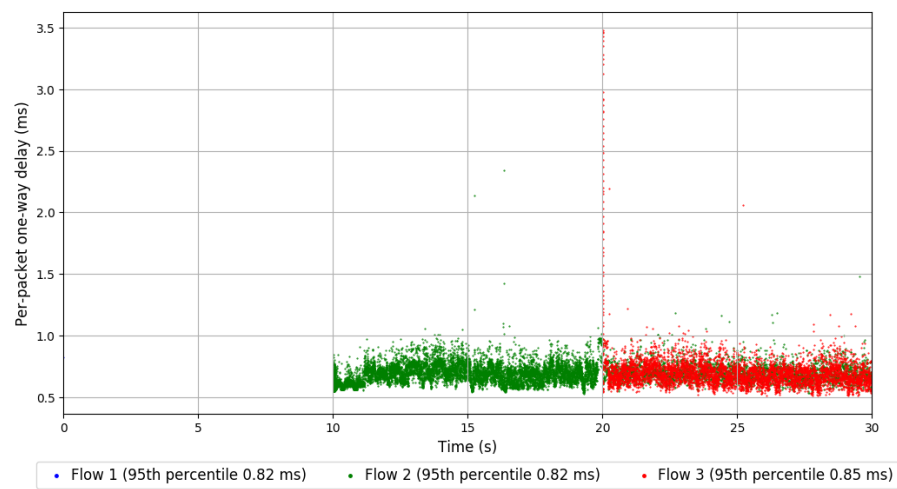
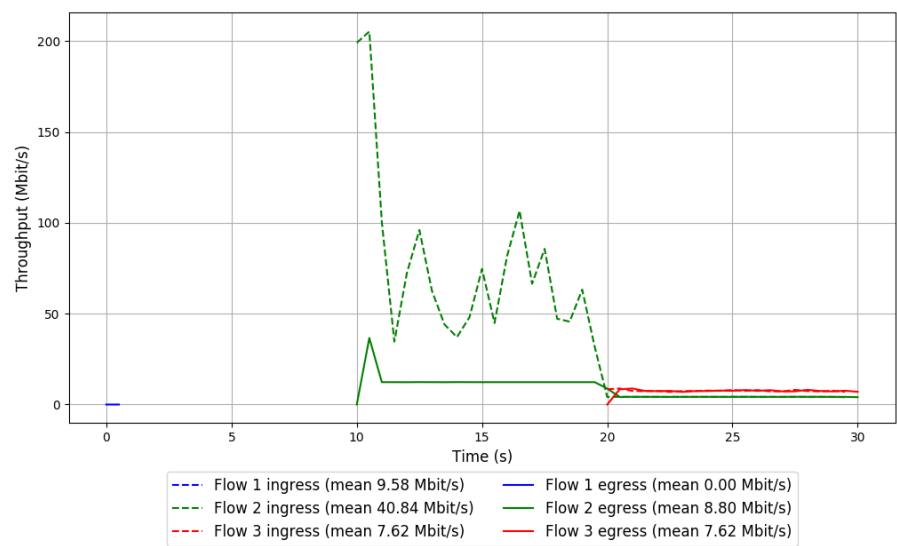


Run 1: Statistics of TaoVA-100x

Start at: 2019-03-09 02:48:30  
End at: 2019-03-09 02:49:00  
Local clock offset: 2.539 ms  
Remote clock offset: -0.287 ms

# Below is generated by plot.py at 2019-03-09 05:42:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.39 Mbit/s  
95th percentile per-packet one-way delay: 0.830 ms  
Loss rate: 71.78%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 0.822 ms  
Loss rate: 95.92%  
-- Flow 2:  
Average throughput: 8.80 Mbit/s  
95th percentile per-packet one-way delay: 0.821 ms  
Loss rate: 78.46%  
-- Flow 3:  
Average throughput: 7.62 Mbit/s  
95th percentile per-packet one-way delay: 0.850 ms  
Loss rate: 0.02%

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

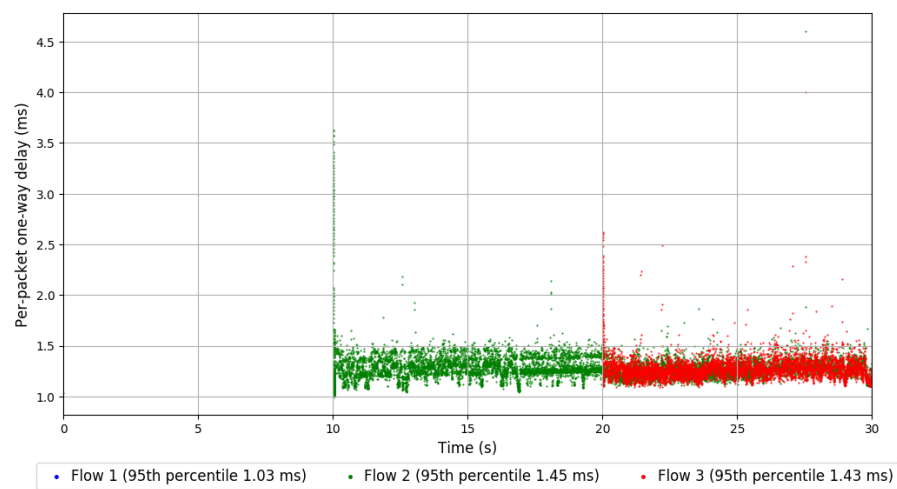
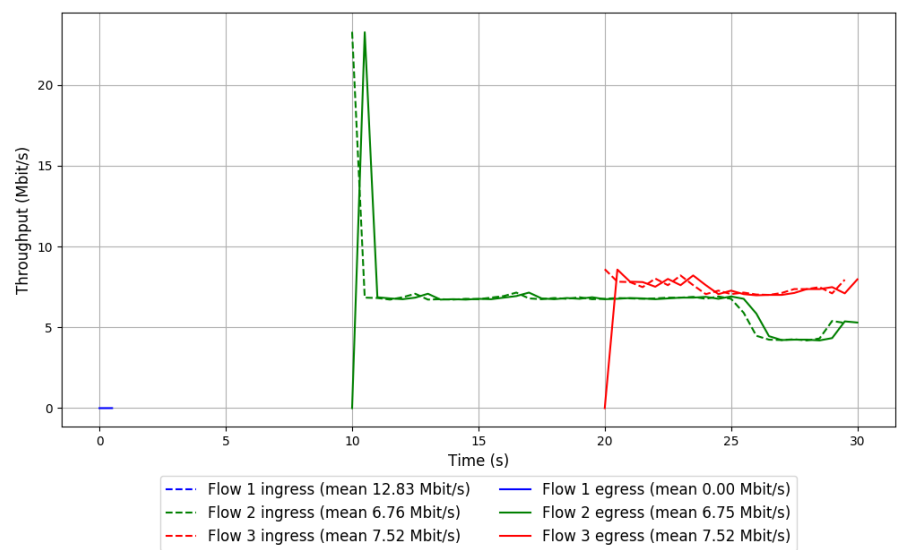


Run 2: Statistics of TaoVA-100x

Start at: 2019-03-09 03:18:40  
End at: 2019-03-09 03:19:10  
Local clock offset: 1.025 ms  
Remote clock offset: -0.491 ms

# Below is generated by plot.py at 2019-03-09 05:42:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 7.00 Mbit/s  
95th percentile per-packet one-way delay: 1.446 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 1.034 ms  
Loss rate: 95.92%  
-- Flow 2:  
Average throughput: 6.75 Mbit/s  
95th percentile per-packet one-way delay: 1.450 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 7.52 Mbit/s  
95th percentile per-packet one-way delay: 1.425 ms  
Loss rate: 0.13%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-03-09 03:48:48

End at: 2019-03-09 03:49:18

Local clock offset: 3.601 ms

Remote clock offset: -0.78 ms

# Below is generated by plot.py at 2019-03-09 05:42:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 6.83 Mbit/s

95th percentile per-packet one-way delay: 1.074 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.217 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 7.22 Mbit/s

95th percentile per-packet one-way delay: 1.088 ms

Loss rate: 0.38%

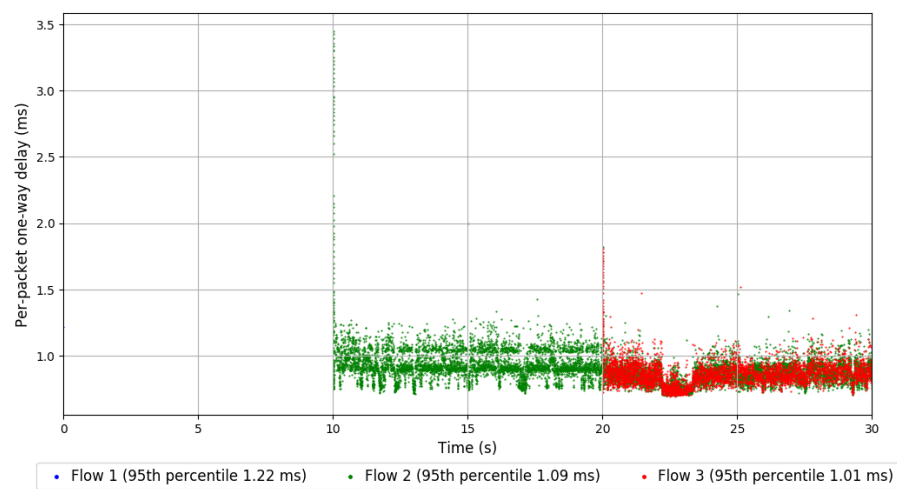
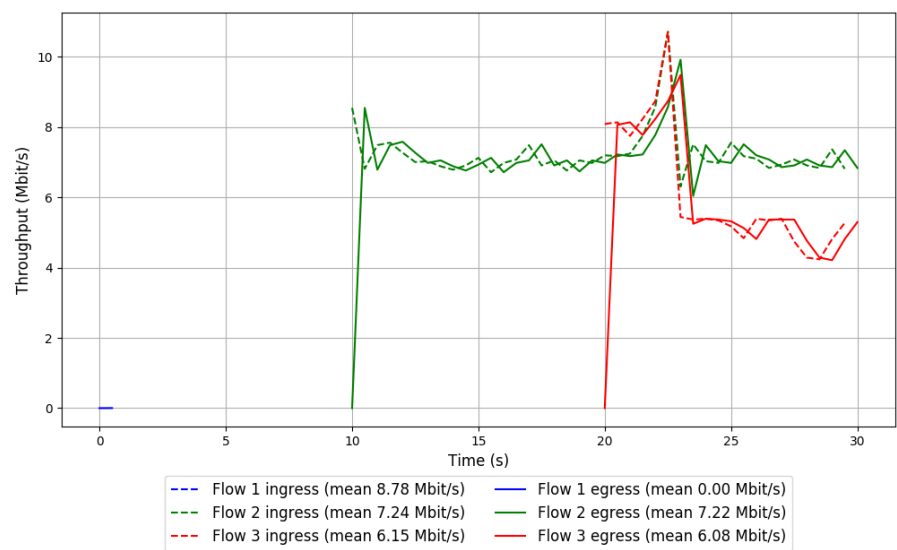
-- Flow 3:

Average throughput: 6.08 Mbit/s

95th percentile per-packet one-way delay: 1.006 ms

Loss rate: 1.24%

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

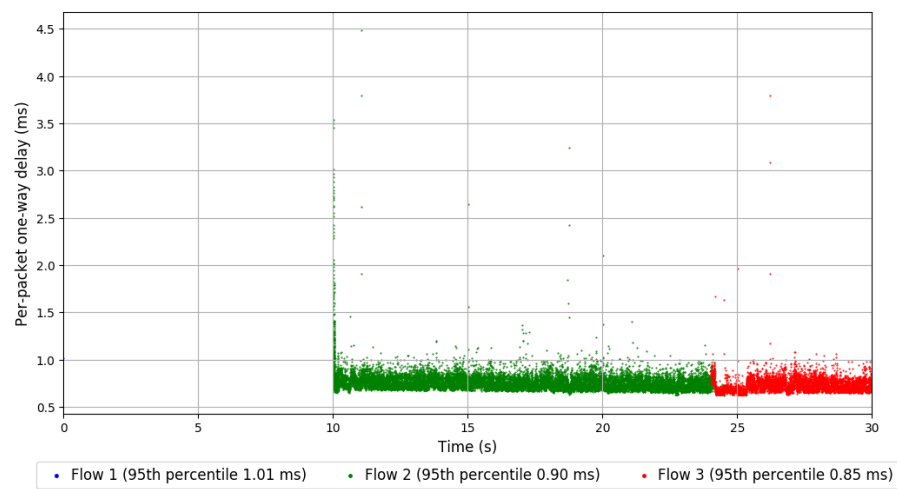
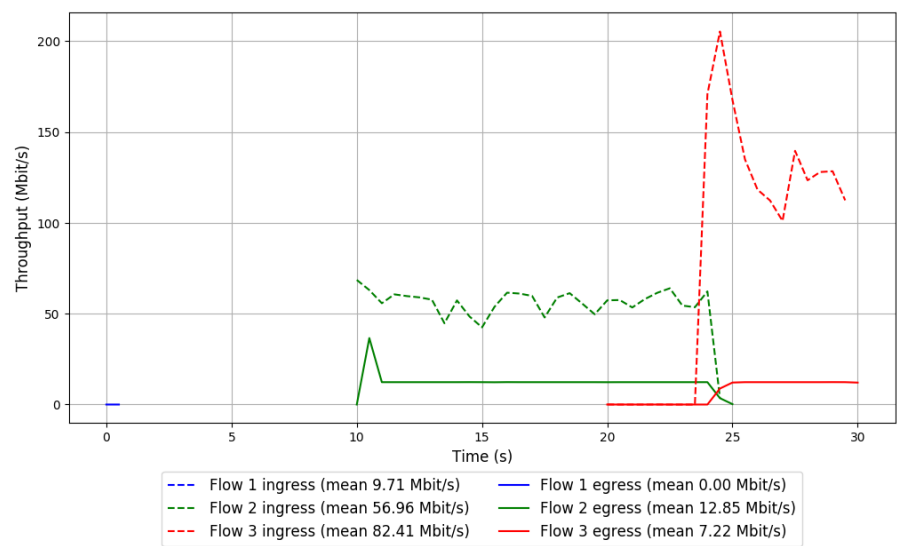


Run 4: Statistics of TaoVA-100x

Start at: 2019-03-09 04:18:46  
End at: 2019-03-09 04:19:16  
Local clock offset: 2.116 ms  
Remote clock offset: -3.597 ms

# Below is generated by plot.py at 2019-03-09 05:42:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.62 Mbit/s  
95th percentile per-packet one-way delay: 0.886 ms  
Loss rate: 84.32%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 1.013 ms  
Loss rate: 95.92%  
-- Flow 2:  
Average throughput: 12.85 Mbit/s  
95th percentile per-packet one-way delay: 0.895 ms  
Loss rate: 77.44%  
-- Flow 3:  
Average throughput: 7.22 Mbit/s  
95th percentile per-packet one-way delay: 0.849 ms  
Loss rate: 91.24%

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



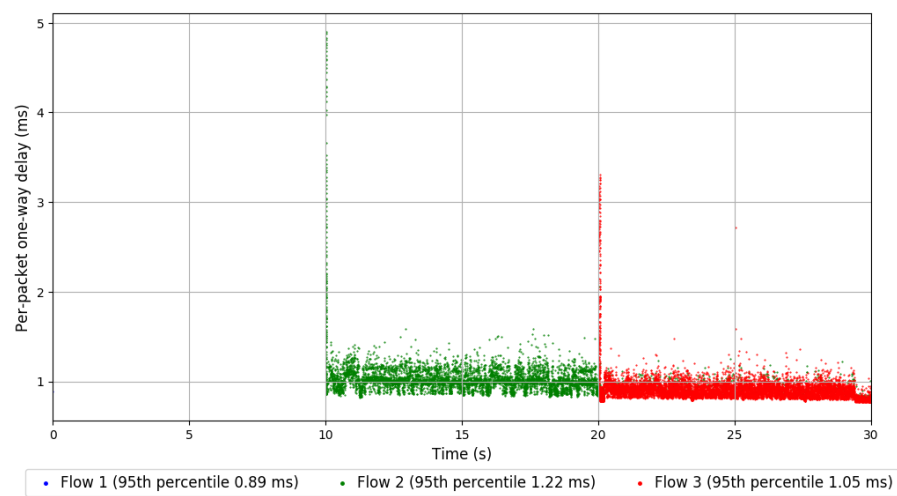
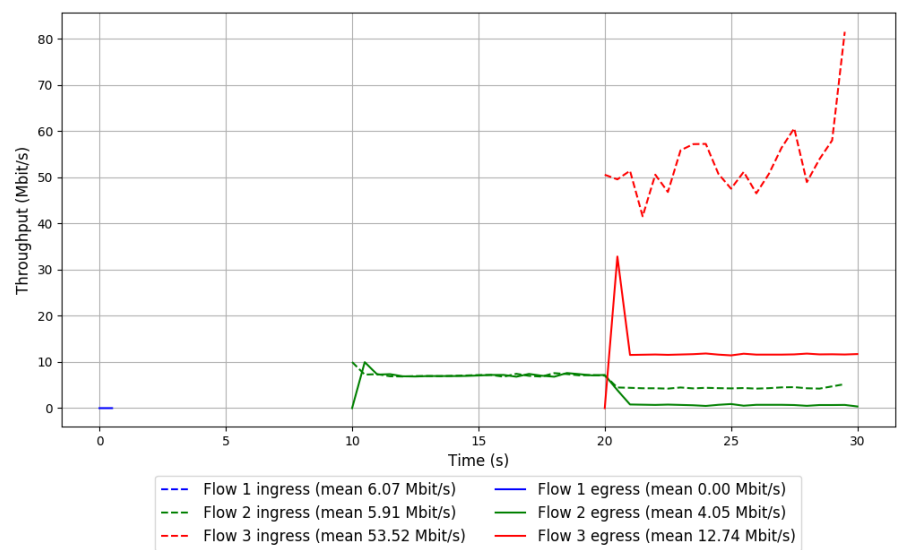


Run 5: Statistics of TaoVA-100x

Start at: 2019-03-09 04:48:41  
End at: 2019-03-09 04:49:11  
Local clock offset: -0.447 ms  
Remote clock offset: -1.189 ms

# Below is generated by plot.py at 2019-03-09 05:42:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 6.93 Mbit/s  
95th percentile per-packet one-way delay: 1.161 ms  
Loss rate: 68.11%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 0.891 ms  
Loss rate: 95.92%  
-- Flow 2:  
Average throughput: 4.05 Mbit/s  
95th percentile per-packet one-way delay: 1.222 ms  
Loss rate: 31.52%  
-- Flow 3:  
Average throughput: 12.74 Mbit/s  
95th percentile per-packet one-way delay: 1.046 ms  
Loss rate: 76.20%

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

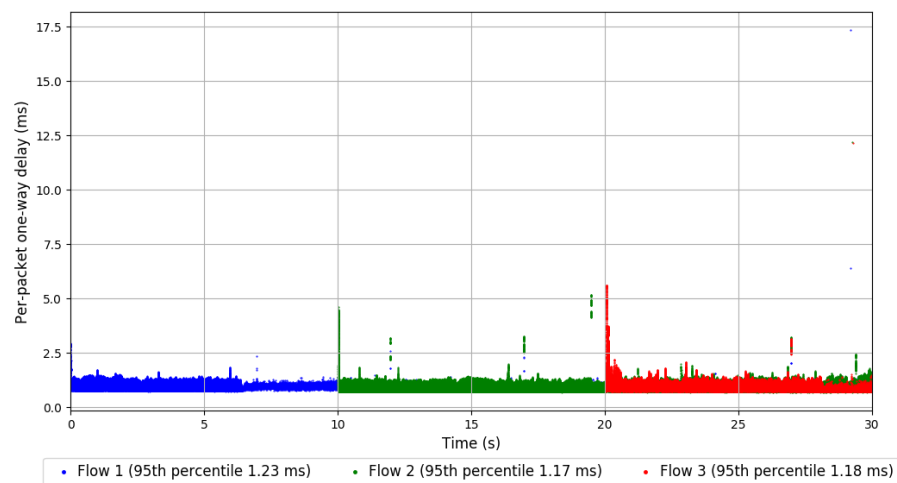
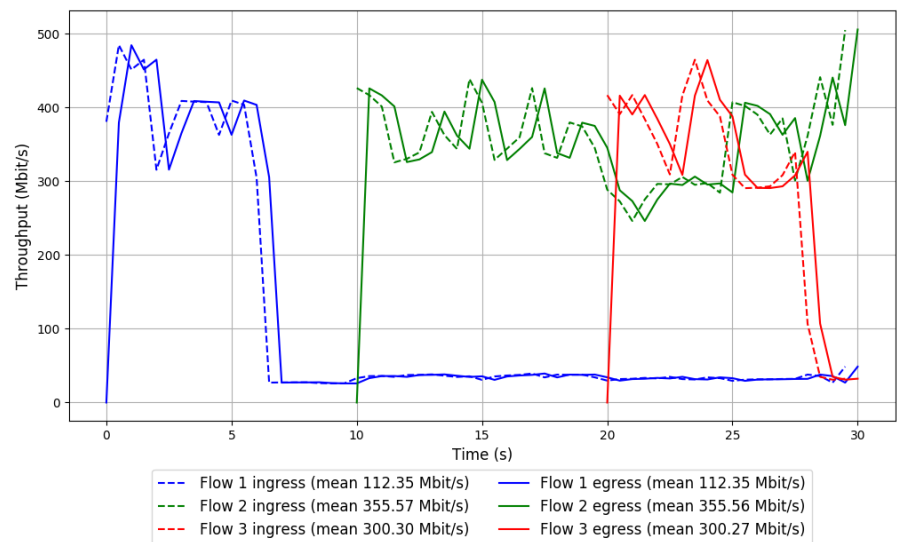


Run 1: Statistics of TCP Vegas

Start at: 2019-03-09 02:23:51  
End at: 2019-03-09 02:24:21  
Local clock offset: 3.813 ms  
Remote clock offset: -0.946 ms

# Below is generated by plot.py at 2019-03-09 05:46:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 449.01 Mbit/s  
95th percentile per-packet one-way delay: 1.192 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 112.35 Mbit/s  
95th percentile per-packet one-way delay: 1.232 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 355.56 Mbit/s  
95th percentile per-packet one-way delay: 1.171 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 300.27 Mbit/s  
95th percentile per-packet one-way delay: 1.176 ms  
Loss rate: 0.01%

Run 1: Report of TCP Vegas — Data Link

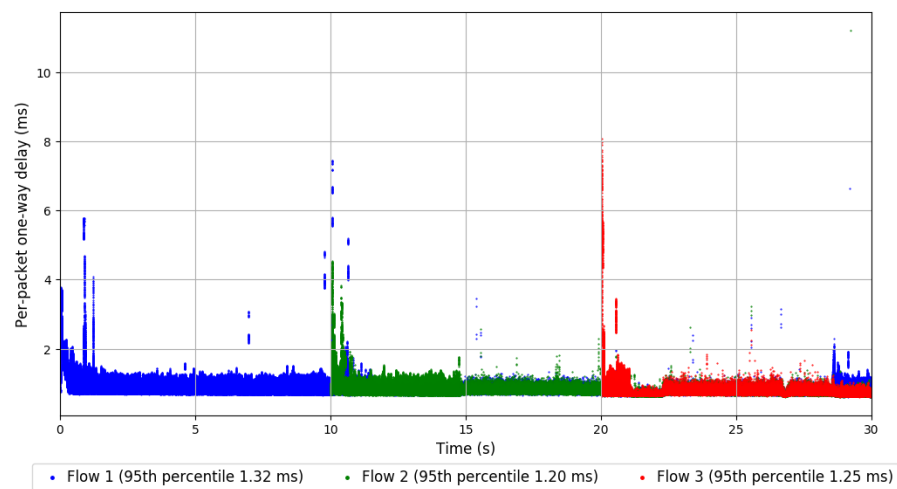
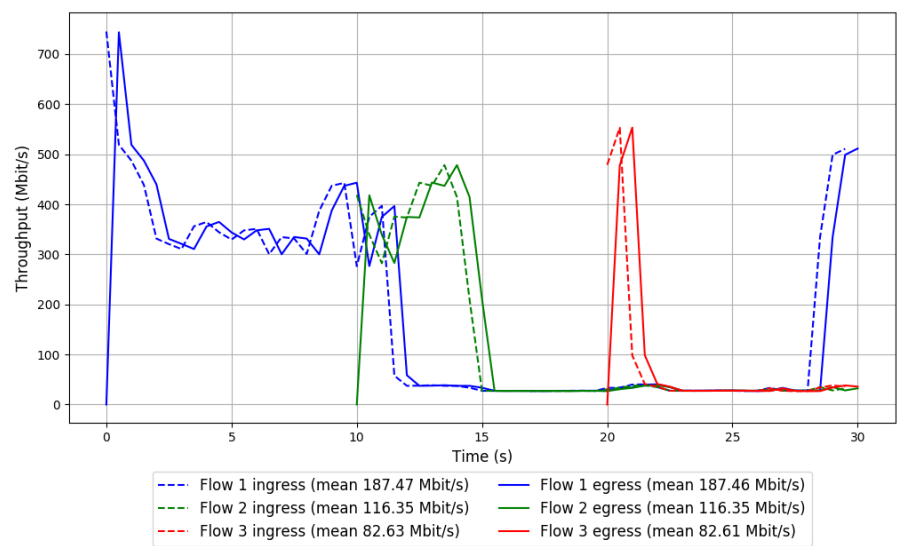


Run 2: Statistics of TCP Vegas

Start at: 2019-03-09 02:54:00  
End at: 2019-03-09 02:54:30  
Local clock offset: 1.204 ms  
Remote clock offset: -0.289 ms

# Below is generated by plot.py at 2019-03-09 05:46:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 292.45 Mbit/s  
95th percentile per-packet one-way delay: 1.274 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 187.46 Mbit/s  
95th percentile per-packet one-way delay: 1.316 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 116.35 Mbit/s  
95th percentile per-packet one-way delay: 1.195 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 82.61 Mbit/s  
95th percentile per-packet one-way delay: 1.253 ms  
Loss rate: 0.02%

Run 2: Report of TCP Vegas — Data Link

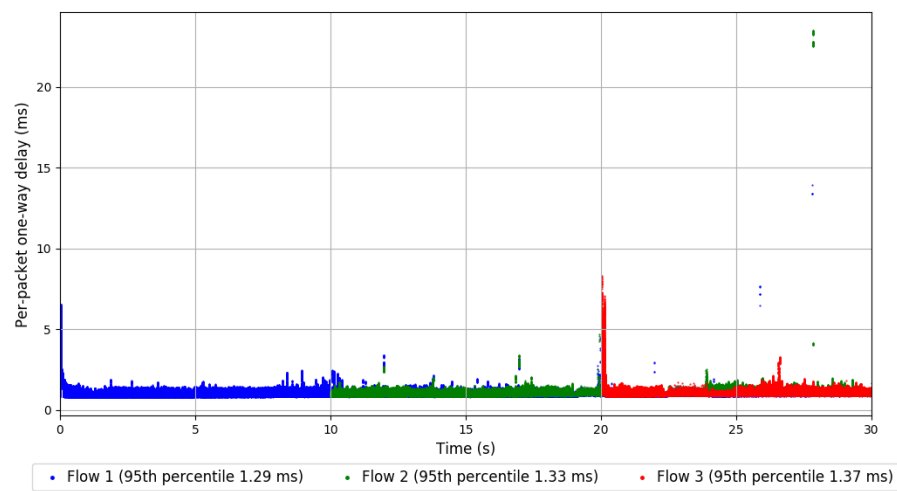
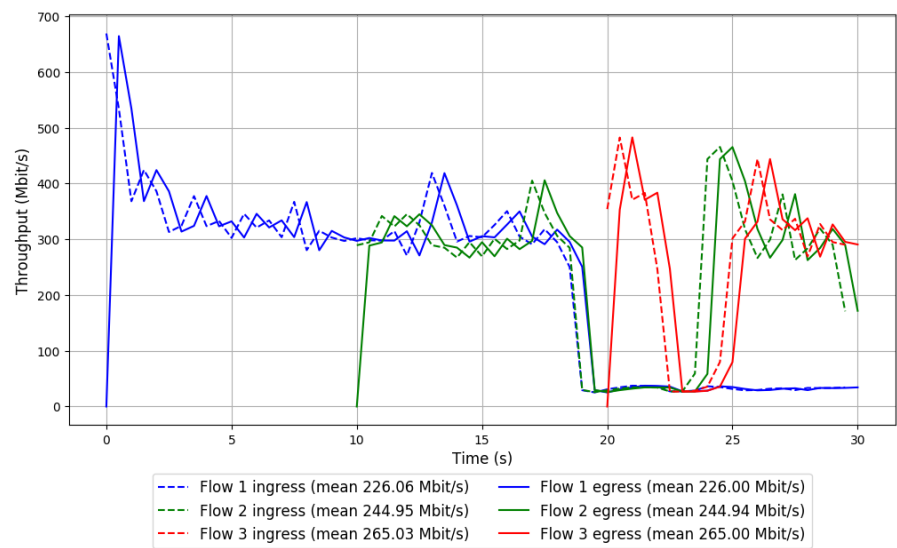


Run 3: Statistics of TCP Vegas

Start at: 2019-03-09 03:24:08  
End at: 2019-03-09 03:24:38  
Local clock offset: 2.259 ms  
Remote clock offset: -0.576 ms

# Below is generated by plot.py at 2019-03-09 05:46:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 477.22 Mbit/s  
95th percentile per-packet one-way delay: 1.321 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 226.00 Mbit/s  
95th percentile per-packet one-way delay: 1.291 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 244.94 Mbit/s  
95th percentile per-packet one-way delay: 1.326 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 265.00 Mbit/s  
95th percentile per-packet one-way delay: 1.366 ms  
Loss rate: 0.01%

Run 3: Report of TCP Vegas — Data Link



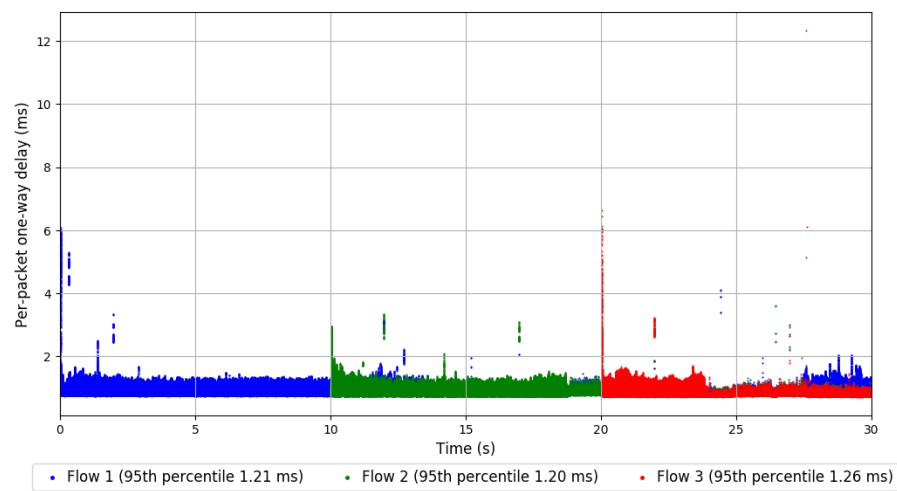
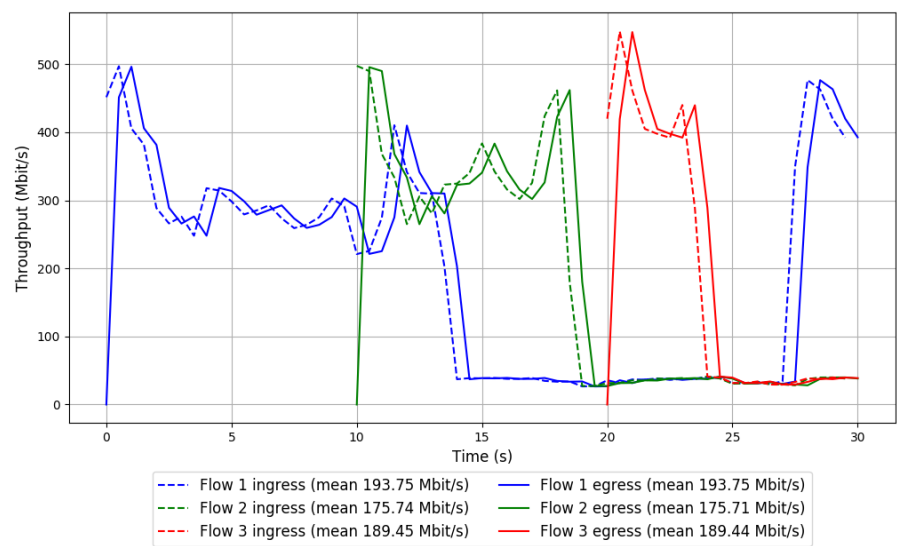


Run 4: Statistics of TCP Vegas

Start at: 2019-03-09 03:54:16  
End at: 2019-03-09 03:54:46  
Local clock offset: 3.469 ms  
Remote clock offset: -0.745 ms

# Below is generated by plot.py at 2019-03-09 05:46:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 373.74 Mbit/s  
95th percentile per-packet one-way delay: 1.216 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 193.75 Mbit/s  
95th percentile per-packet one-way delay: 1.209 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 175.71 Mbit/s  
95th percentile per-packet one-way delay: 1.203 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 189.44 Mbit/s  
95th percentile per-packet one-way delay: 1.256 ms  
Loss rate: 0.01%

Run 4: Report of TCP Vegas — Data Link

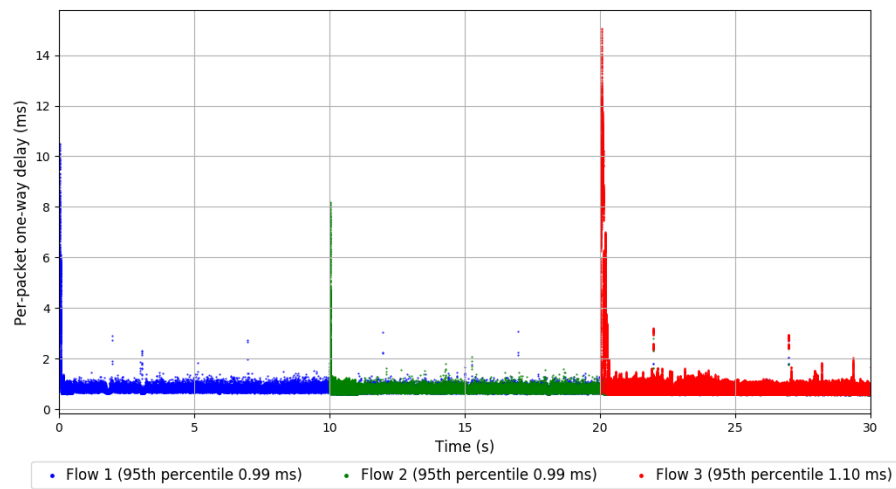
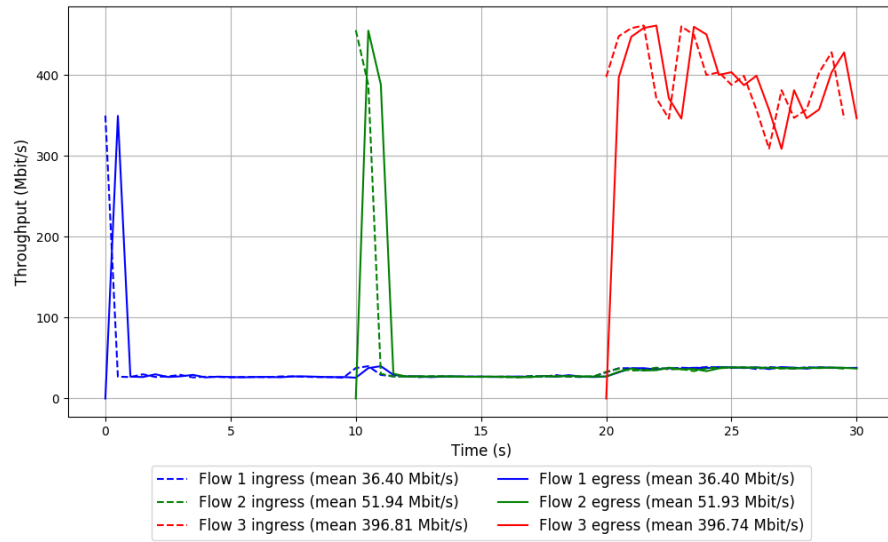


Run 5: Statistics of TCP Vegas

Start at: 2019-03-09 04:24:16  
End at: 2019-03-09 04:24:46  
Local clock offset: 0.989 ms  
Remote clock offset: -4.114 ms

# Below is generated by plot.py at 2019-03-09 05:46:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 202.93 Mbit/s  
95th percentile per-packet one-way delay: 1.066 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 36.40 Mbit/s  
95th percentile per-packet one-way delay: 0.990 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 51.93 Mbit/s  
95th percentile per-packet one-way delay: 0.988 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 396.74 Mbit/s  
95th percentile per-packet one-way delay: 1.101 ms  
Loss rate: 0.01%

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

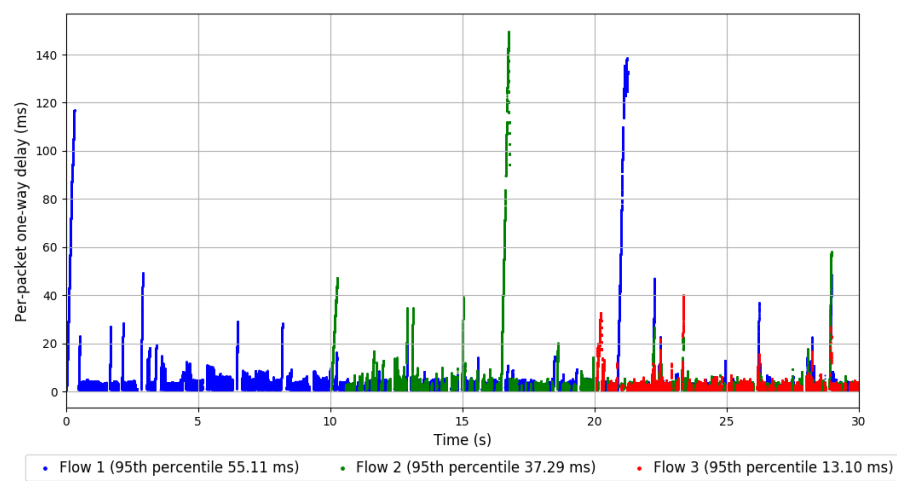
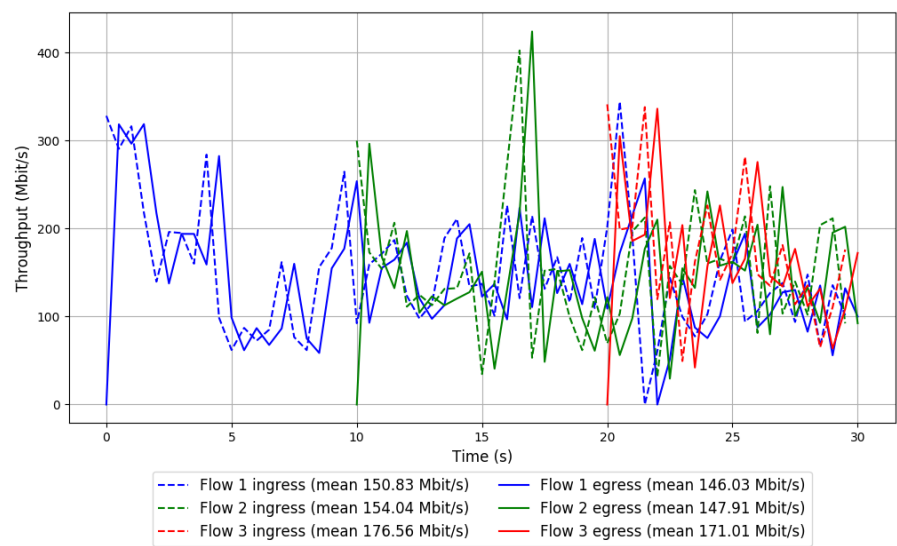


Run 1: Statistics of Verus

Start at: 2019-03-09 02:41:30  
End at: 2019-03-09 02:42:00  
Local clock offset: 3.893 ms  
Remote clock offset: -0.401 ms

# Below is generated by plot.py at 2019-03-09 05:46:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 300.82 Mbit/s  
95th percentile per-packet one-way delay: 32.346 ms  
Loss rate: 3.43%  
-- Flow 1:  
Average throughput: 146.03 Mbit/s  
95th percentile per-packet one-way delay: 55.109 ms  
Loss rate: 3.18%  
-- Flow 2:  
Average throughput: 147.91 Mbit/s  
95th percentile per-packet one-way delay: 37.290 ms  
Loss rate: 3.97%  
-- Flow 3:  
Average throughput: 171.01 Mbit/s  
95th percentile per-packet one-way delay: 13.095 ms  
Loss rate: 3.14%

Run 1: Report of Verus — Data Link

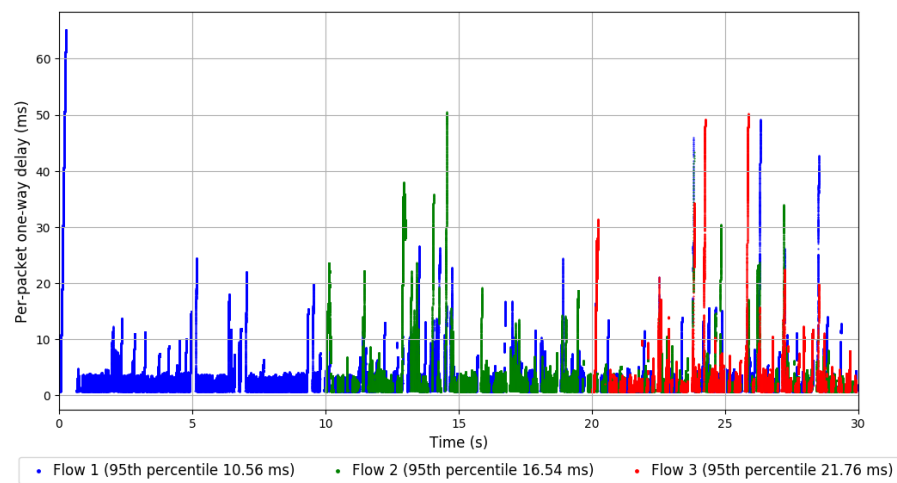
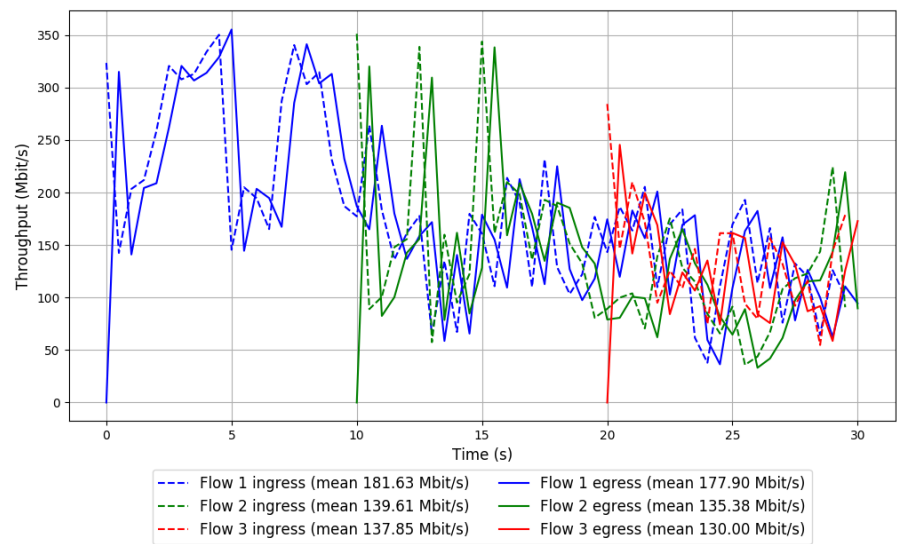


Run 2: Statistics of Verus

Start at: 2019-03-09 03:11:39  
End at: 2019-03-09 03:12:09  
Local clock offset: -0.402 ms  
Remote clock offset: -0.535 ms

# Below is generated by plot.py at 2019-03-09 05:46:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 310.59 Mbit/s  
95th percentile per-packet one-way delay: 13.119 ms  
Loss rate: 2.85%  
-- Flow 1:  
Average throughput: 177.90 Mbit/s  
95th percentile per-packet one-way delay: 10.560 ms  
Loss rate: 2.05%  
-- Flow 2:  
Average throughput: 135.38 Mbit/s  
95th percentile per-packet one-way delay: 16.541 ms  
Loss rate: 3.03%  
-- Flow 3:  
Average throughput: 130.00 Mbit/s  
95th percentile per-packet one-way delay: 21.756 ms  
Loss rate: 5.69%

Run 2: Report of Verus — Data Link



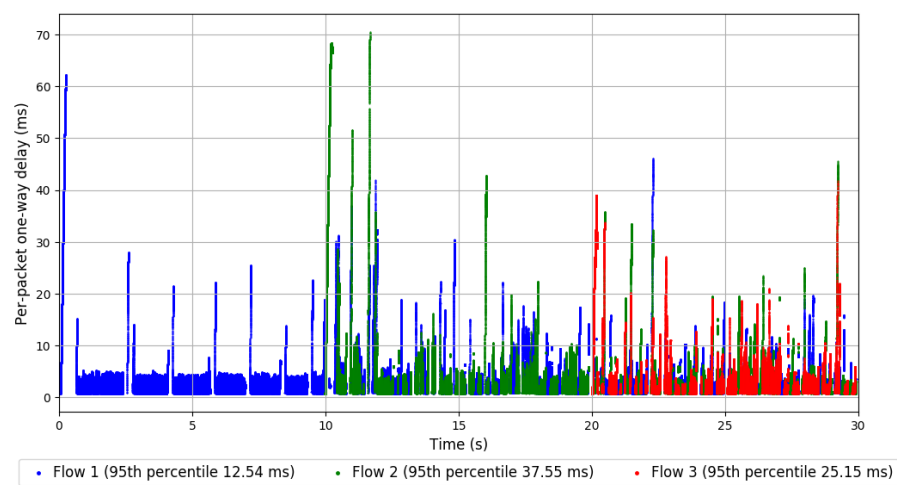
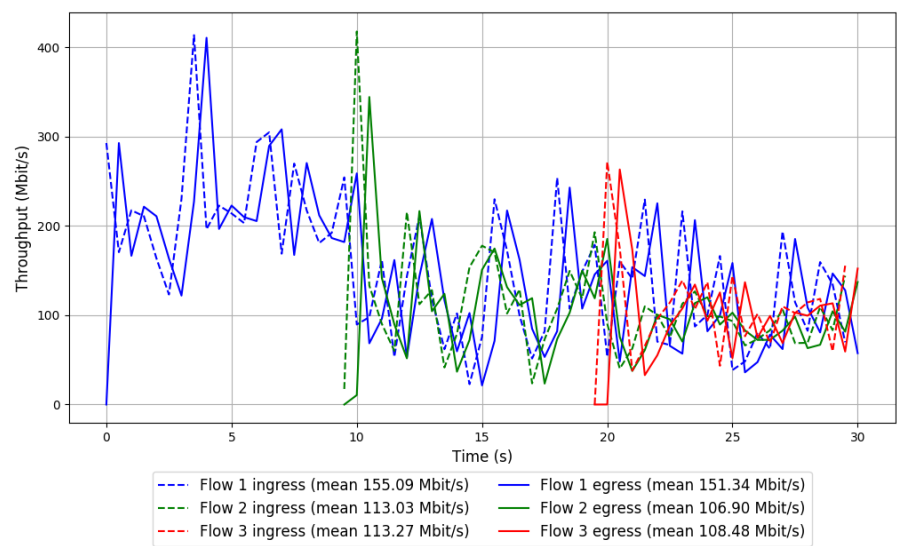


Run 3: Statistics of Verus

Start at: 2019-03-09 03:41:46  
End at: 2019-03-09 03:42:16  
Local clock offset: 3.732 ms  
Remote clock offset: -0.737 ms

# Below is generated by plot.py at 2019-03-09 05:46:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 258.42 Mbit/s  
95th percentile per-packet one-way delay: 19.007 ms  
Loss rate: 3.50%  
-- Flow 1:  
Average throughput: 151.34 Mbit/s  
95th percentile per-packet one-way delay: 12.545 ms  
Loss rate: 2.41%  
-- Flow 2:  
Average throughput: 106.90 Mbit/s  
95th percentile per-packet one-way delay: 37.548 ms  
Loss rate: 5.41%  
-- Flow 3:  
Average throughput: 108.48 Mbit/s  
95th percentile per-packet one-way delay: 25.153 ms  
Loss rate: 4.19%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-03-09 04:11:49

End at: 2019-03-09 04:12:19

Local clock offset: 3.522 ms

Remote clock offset: -2.74 ms

# Below is generated by plot.py at 2019-03-09 05:47:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 300.09 Mbit/s

95th percentile per-packet one-way delay: 10.820 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 164.94 Mbit/s

95th percentile per-packet one-way delay: 8.513 ms

Loss rate: 1.48%

-- Flow 2:

Average throughput: 146.31 Mbit/s

95th percentile per-packet one-way delay: 8.078 ms

Loss rate: 1.88%

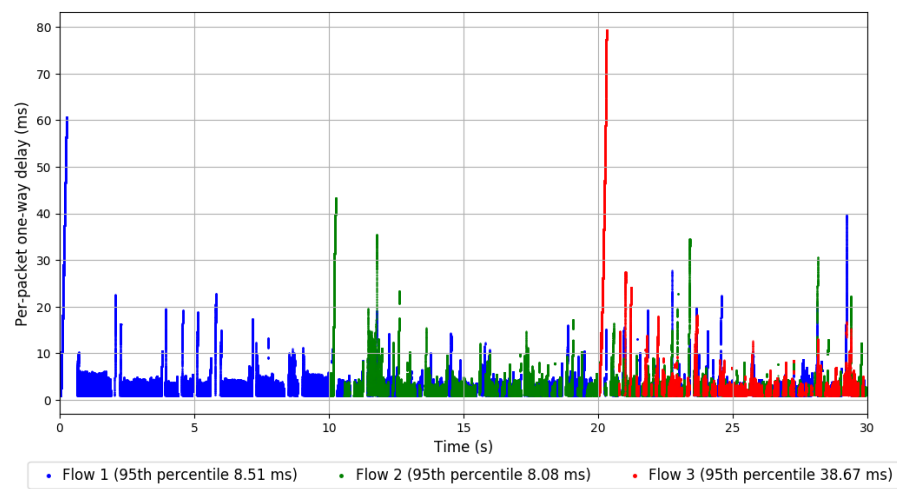
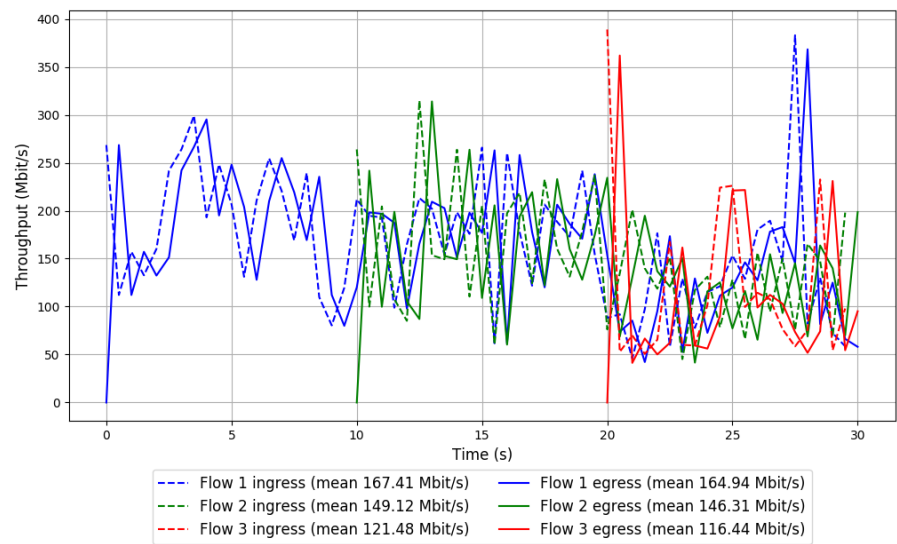
-- Flow 3:

Average throughput: 116.44 Mbit/s

95th percentile per-packet one-way delay: 38.668 ms

Loss rate: 4.11%

Run 4: Report of Verus — Data Link

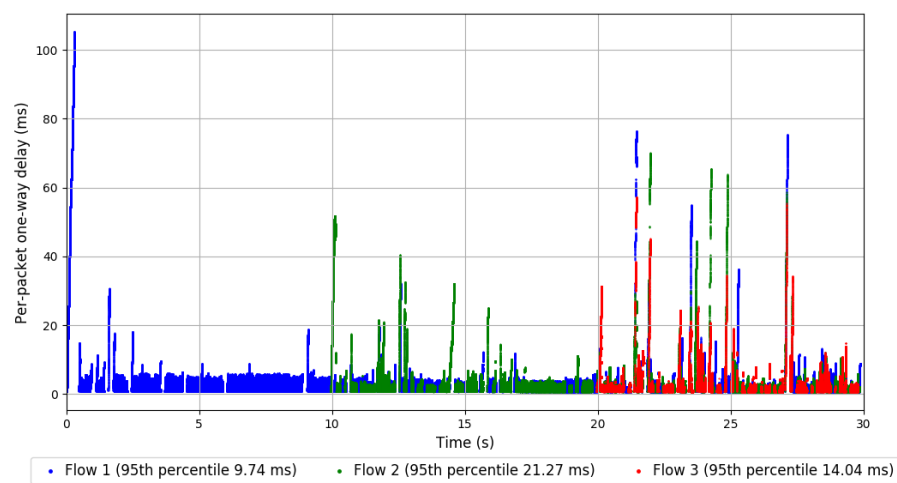
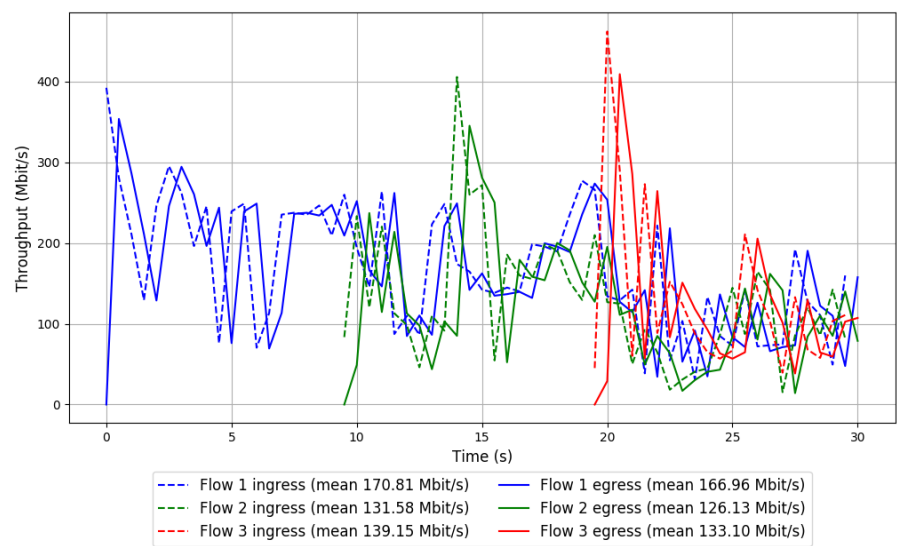


Run 5: Statistics of Verus

Start at: 2019-03-09 04:41:37  
End at: 2019-03-09 04:42:07  
Local clock offset: -0.576 ms  
Remote clock offset: -2.927 ms

# Below is generated by plot.py at 2019-03-09 05:47:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 294.89 Mbit/s  
95th percentile per-packet one-way delay: 15.067 ms  
Loss rate: 3.09%  
-- Flow 1:  
Average throughput: 166.96 Mbit/s  
95th percentile per-packet one-way delay: 9.738 ms  
Loss rate: 2.23%  
-- Flow 2:  
Average throughput: 126.13 Mbit/s  
95th percentile per-packet one-way delay: 21.268 ms  
Loss rate: 4.14%  
-- Flow 3:  
Average throughput: 133.10 Mbit/s  
95th percentile per-packet one-way delay: 14.044 ms  
Loss rate: 4.33%

Run 5: Report of Verus — Data Link

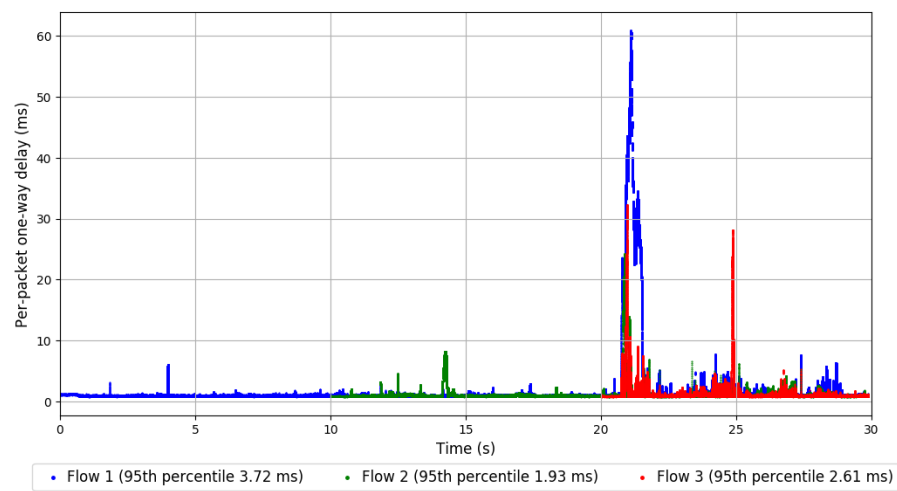
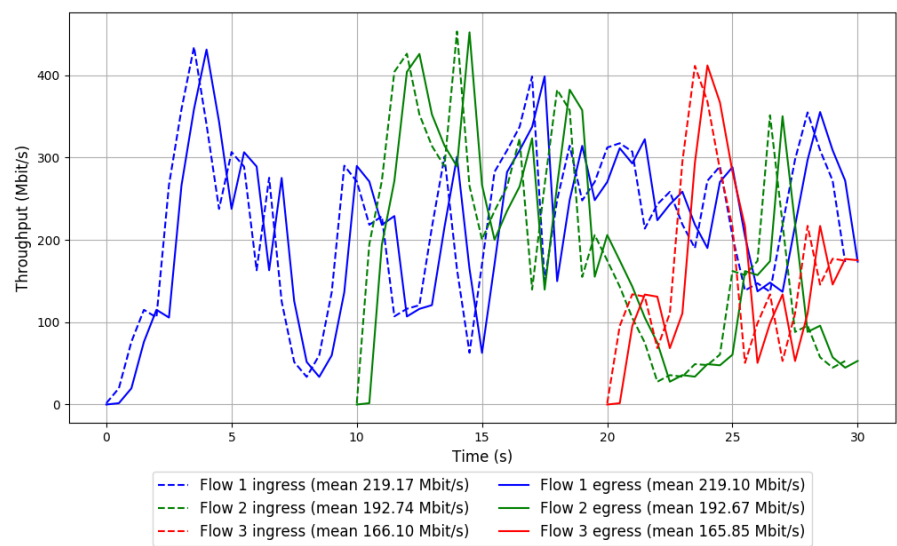


Run 1: Statistics of PCC-Vivace

Start at: 2019-03-09 02:32:19  
End at: 2019-03-09 02:32:49  
Local clock offset: 3.79 ms  
Remote clock offset: -0.554 ms

# Below is generated by plot.py at 2019-03-09 05:49:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 402.06 Mbit/s  
95th percentile per-packet one-way delay: 2.859 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 219.10 Mbit/s  
95th percentile per-packet one-way delay: 3.718 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 192.67 Mbit/s  
95th percentile per-packet one-way delay: 1.933 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 165.85 Mbit/s  
95th percentile per-packet one-way delay: 2.612 ms  
Loss rate: 0.15%

Run 1: Report of PCC-Vivace — Data Link



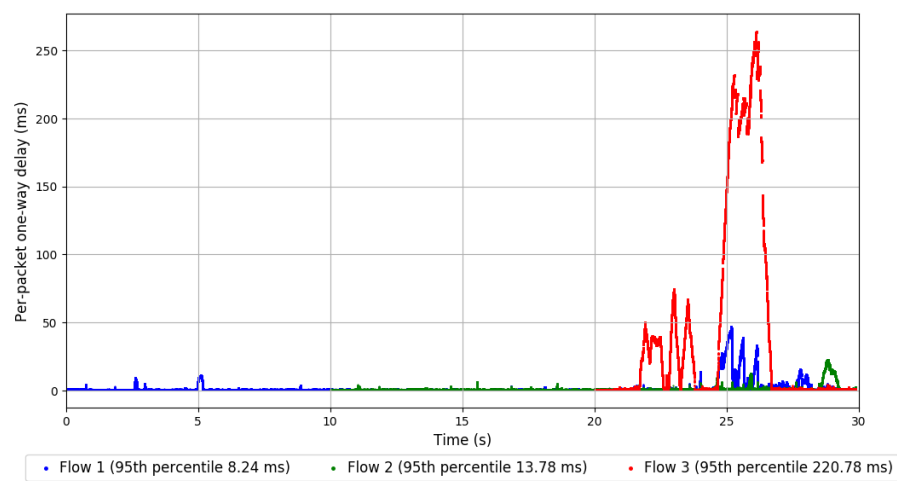
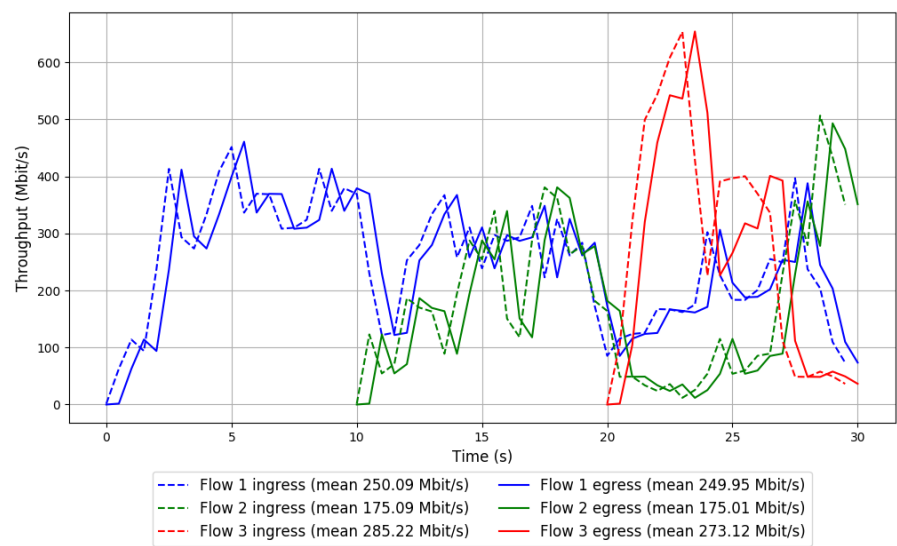


Run 2: Statistics of PCC-Vivace

Start at: 2019-03-09 03:02:15  
End at: 2019-03-09 03:02:45  
Local clock offset: 0.223 ms  
Remote clock offset: -0.402 ms

# Below is generated by plot.py at 2019-03-09 05:49:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 456.55 Mbit/s  
95th percentile per-packet one-way delay: 61.067 ms  
Loss rate: 0.91%  
-- Flow 1:  
Average throughput: 249.95 Mbit/s  
95th percentile per-packet one-way delay: 8.241 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 175.01 Mbit/s  
95th percentile per-packet one-way delay: 13.776 ms  
Loss rate: 0.05%  
-- Flow 3:  
Average throughput: 273.12 Mbit/s  
95th percentile per-packet one-way delay: 220.775 ms  
Loss rate: 4.24%

Run 2: Report of PCC-Vivace — Data Link

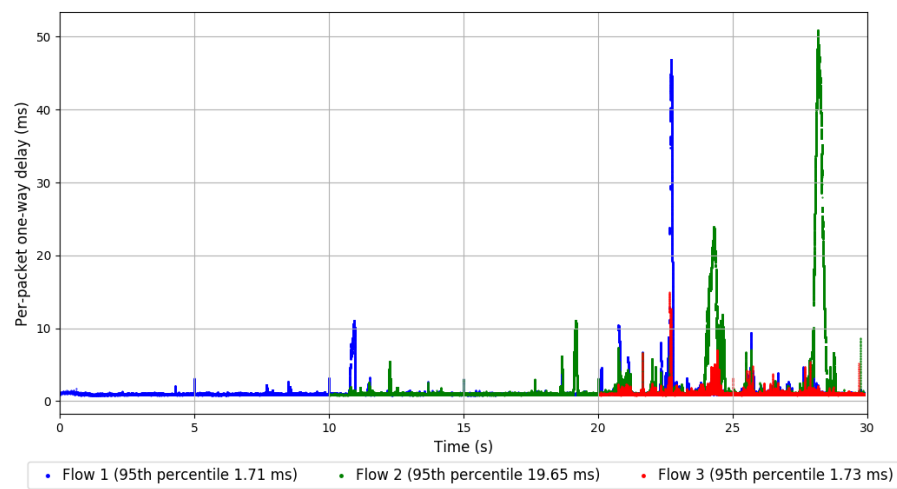
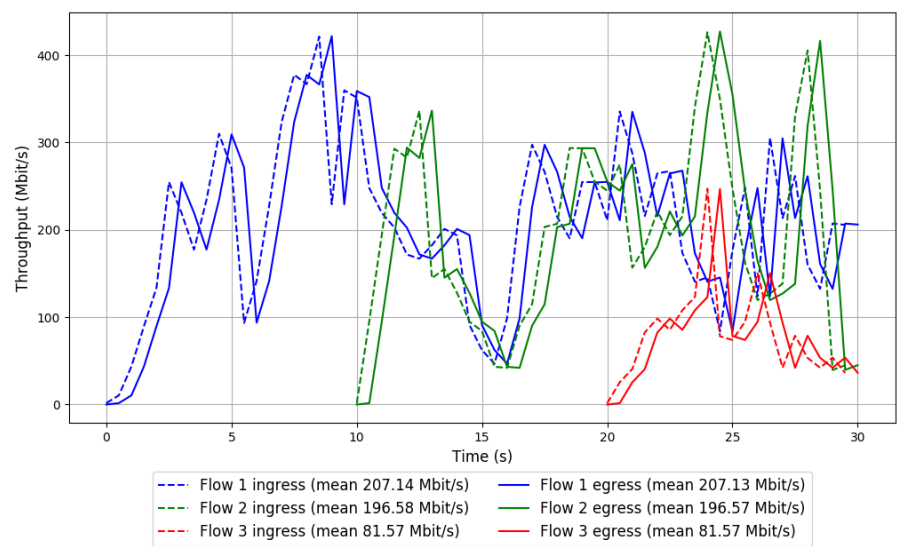


Run 3: Statistics of PCC-Vivace

Start at: 2019-03-09 03:32:30  
End at: 2019-03-09 03:33:00  
Local clock offset: 3.201 ms  
Remote clock offset: -0.603 ms

# Below is generated by plot.py at 2019-03-09 05:49:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 364.77 Mbit/s  
95th percentile per-packet one-way delay: 7.513 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 207.13 Mbit/s  
95th percentile per-packet one-way delay: 1.709 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 196.57 Mbit/s  
95th percentile per-packet one-way delay: 19.649 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 81.57 Mbit/s  
95th percentile per-packet one-way delay: 1.732 ms  
Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link

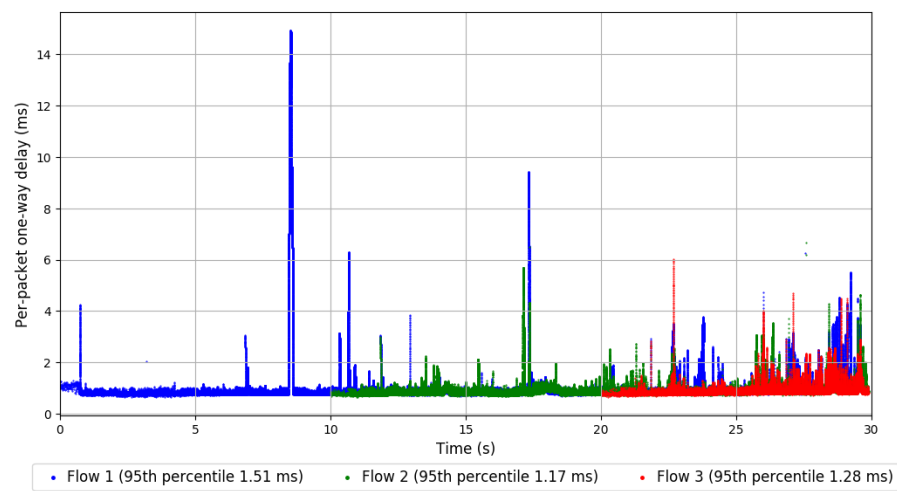
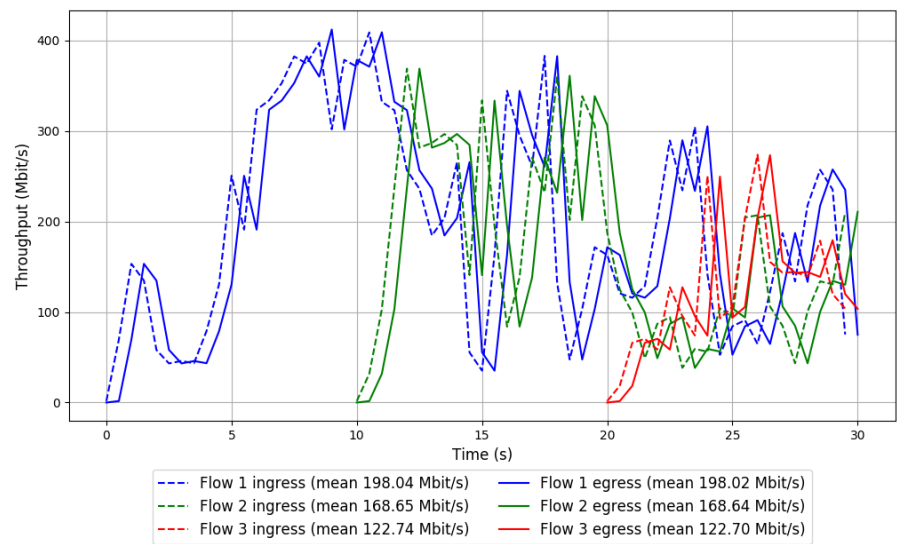


Run 4: Statistics of PCC-Vivace

Start at: 2019-03-09 04:02:34  
End at: 2019-03-09 04:03:04  
Local clock offset: 3.464 ms  
Remote clock offset: -0.755 ms

# Below is generated by plot.py at 2019-03-09 05:49:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 350.69 Mbit/s  
95th percentile per-packet one-way delay: 1.318 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 198.02 Mbit/s  
95th percentile per-packet one-way delay: 1.512 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 168.64 Mbit/s  
95th percentile per-packet one-way delay: 1.168 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 122.70 Mbit/s  
95th percentile per-packet one-way delay: 1.284 ms  
Loss rate: 0.03%

Run 4: Report of PCC-Vivace — Data Link

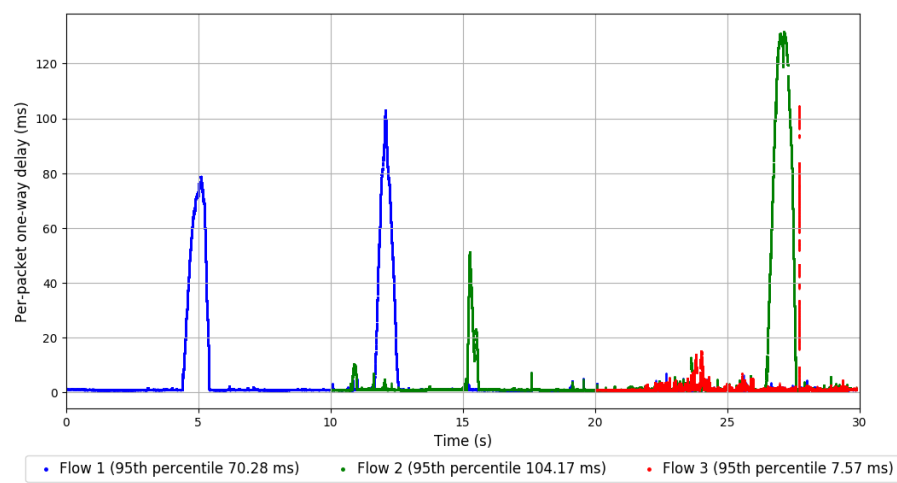
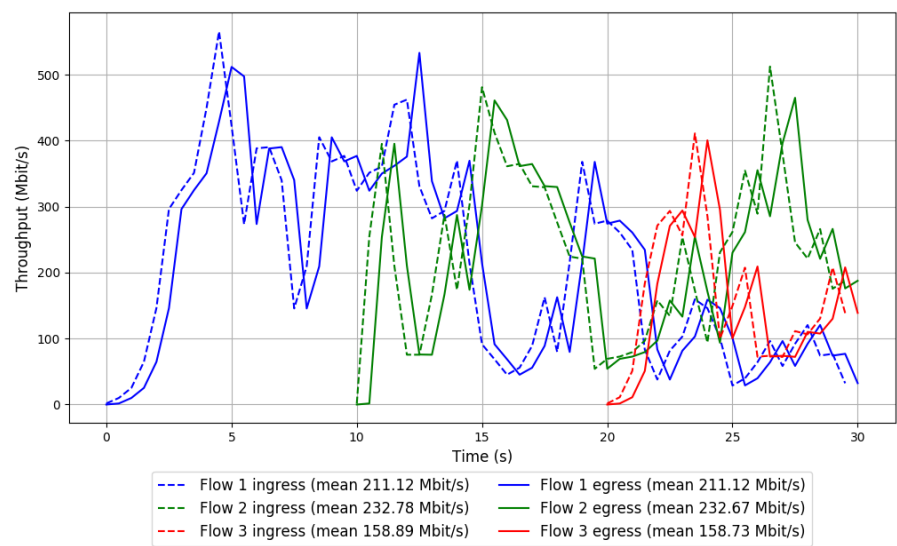


Run 5: Statistics of PCC-Vivace

Start at: 2019-03-09 04:32:28  
End at: 2019-03-09 04:32:58  
Local clock offset: 0.011 ms  
Remote clock offset: -4.471 ms

# Below is generated by plot.py at 2019-03-09 05:49:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 418.27 Mbit/s  
95th percentile per-packet one-way delay: 71.392 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 211.12 Mbit/s  
95th percentile per-packet one-way delay: 70.278 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 232.67 Mbit/s  
95th percentile per-packet one-way delay: 104.169 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 158.73 Mbit/s  
95th percentile per-packet one-way delay: 7.573 ms  
Loss rate: 0.09%

Run 5: Report of PCC-Vivace — Data Link



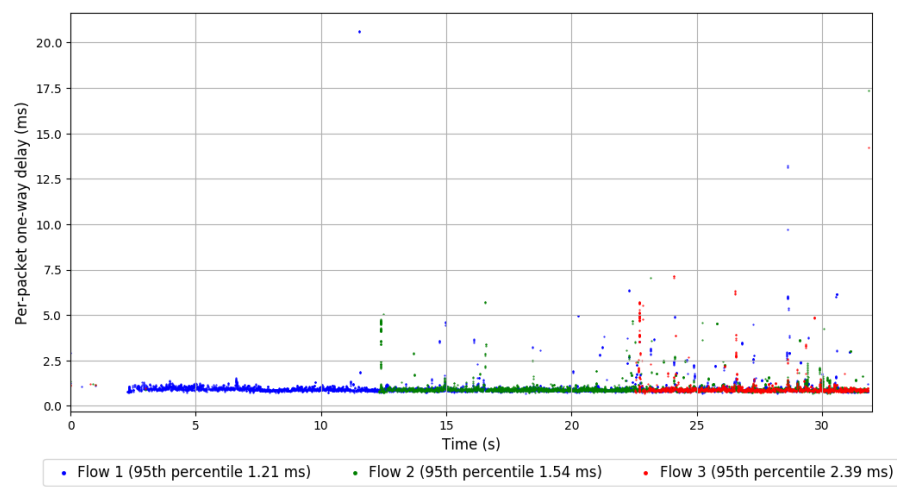
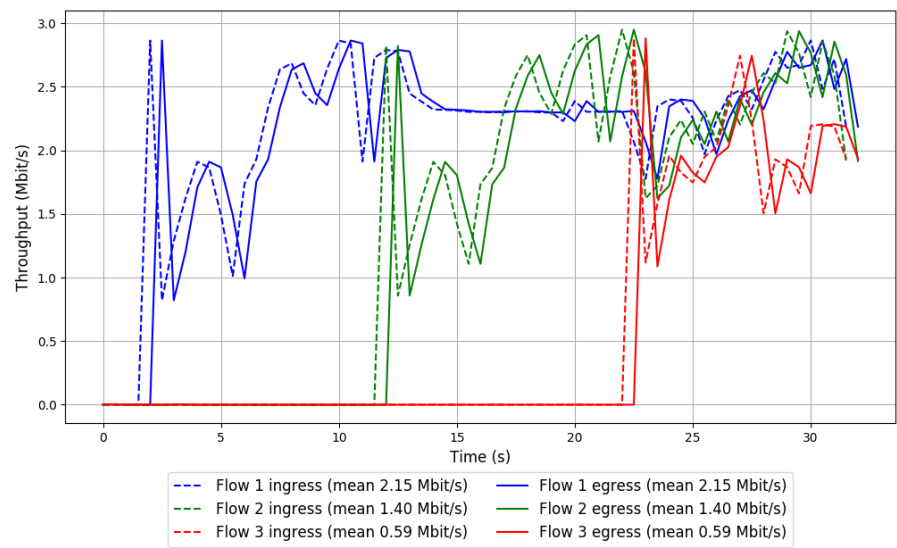


Run 1: Statistics of WebRTC media

Start at: 2019-03-09 02:26:34  
End at: 2019-03-09 02:27:04  
Local clock offset: 3.785 ms  
Remote clock offset: -0.779 ms

# Below is generated by plot.py at 2019-03-09 05:49:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 4.14 Mbit/s  
95th percentile per-packet one-way delay: 1.378 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 2.15 Mbit/s  
95th percentile per-packet one-way delay: 1.208 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 1.40 Mbit/s  
95th percentile per-packet one-way delay: 1.539 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.59 Mbit/s  
95th percentile per-packet one-way delay: 2.386 ms  
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-03-09 02:56:39

End at: 2019-03-09 02:57:09

Local clock offset: 0.845 ms

Remote clock offset: -0.4 ms

# Below is generated by plot.py at 2019-03-09 05:49:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 6.646 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.522 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.194 ms

Loss rate: 0.00%

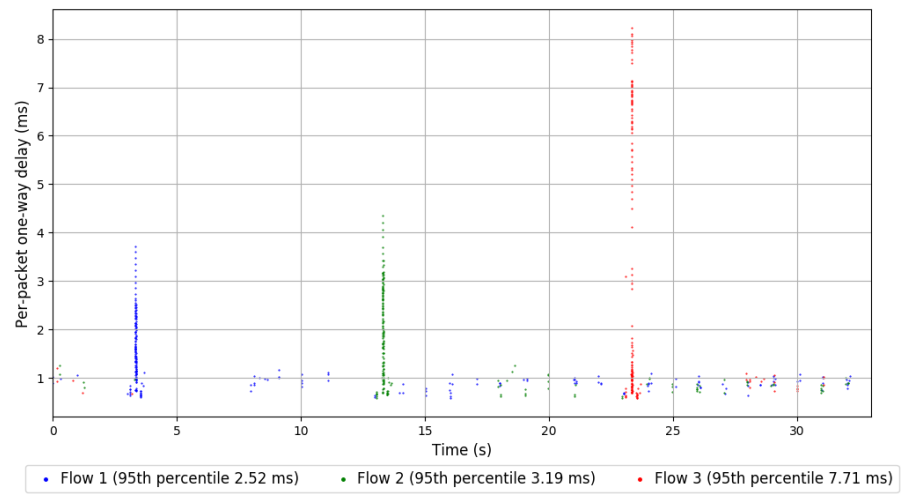
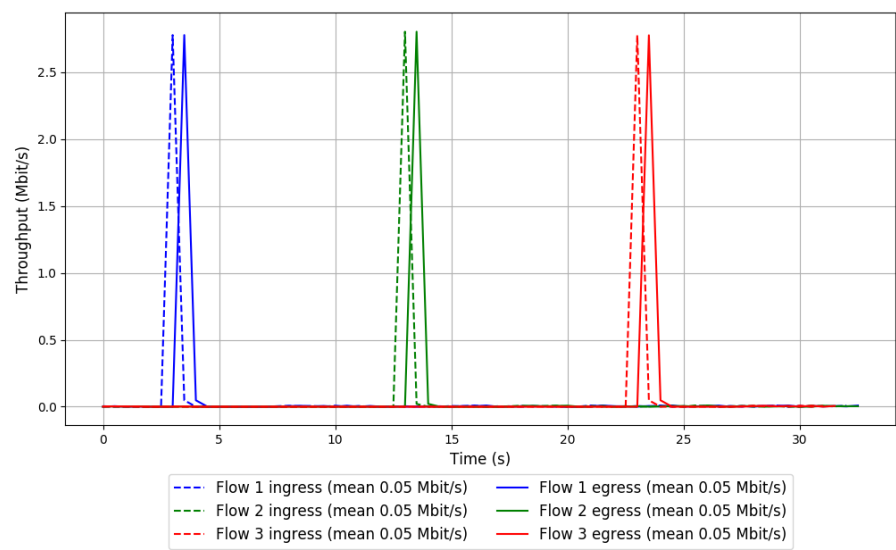
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 7.712 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-03-09 03:26:53

End at: 2019-03-09 03:27:23

Local clock offset: 2.659 ms

Remote clock offset: -0.52 ms

# Below is generated by plot.py at 2019-03-09 05:49:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 3.550 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.099 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.248 ms

Loss rate: 0.00%

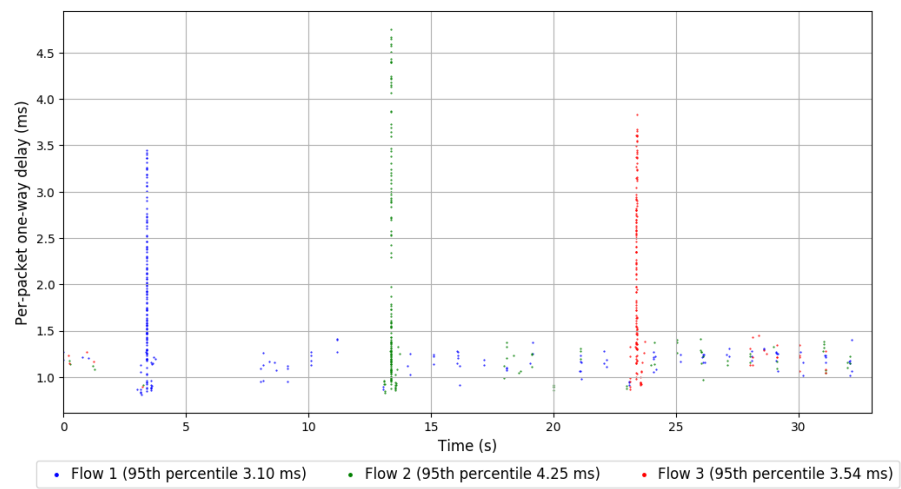
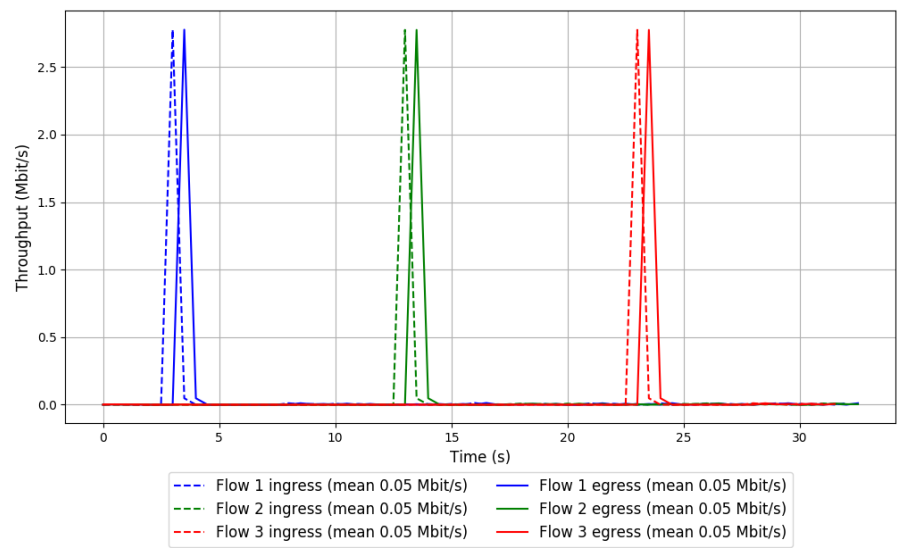
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.539 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

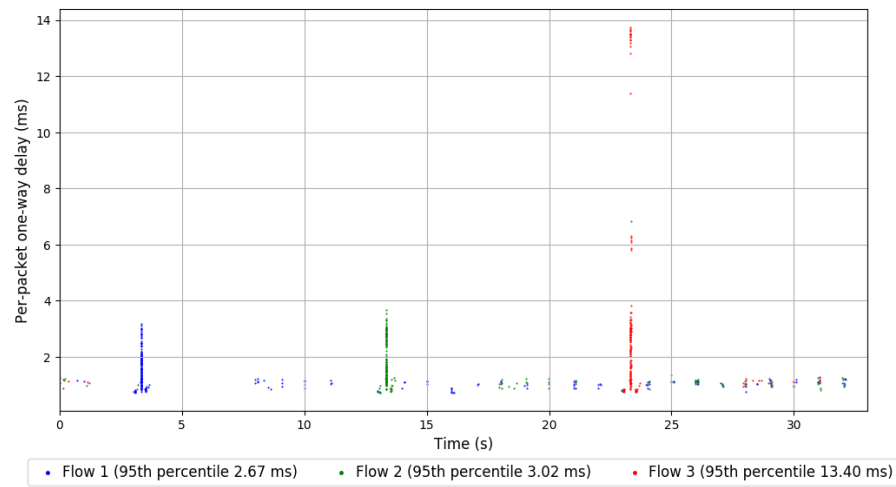
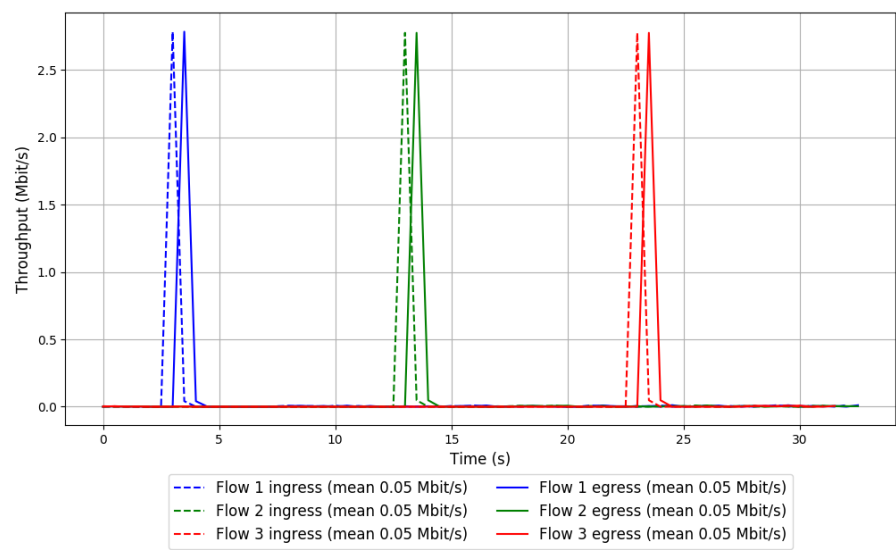


Run 4: Statistics of WebRTC media

Start at: 2019-03-09 03:56:57  
End at: 2019-03-09 03:57:27  
Local clock offset: 3.454 ms  
Remote clock offset: -0.709 ms

# Below is generated by plot.py at 2019-03-09 05:49:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 3.343 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 2.670 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 3.015 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 13.401 ms  
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-03-09 04:26:52  
End at: 2019-03-09 04:27:22  
Local clock offset: 0.59 ms  
Remote clock offset: -4.207 ms

# Below is generated by plot.py at 2019-03-09 05:49:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 4.324 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 4.434 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 4.464 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 3.671 ms  
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

