

## Pantheon Report

Generated at 2019-02-12 06:55:14 (UTC).

Data path: India on `em1` (*remote*) → AWS India 1 on `ens5` (*local*).

Repeated the test of 21 congestion control schemes 5 times.

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

NTP offsets were measured against `nets.org.sg` 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 @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
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

Scatter plot showing Average throughput (Mbps) on the Y-axis (0 to 100) versus 95th percentile one-way delay (ms) on the X-axis (2048 to 16). The plot displays the performance of various protocols, with a general trend of higher throughput at lower delay.

Protocol	95th percentile one-way delay (ms)	Average throughput (Mbps)
TCP BBR	~64	~95
Indigo-Bus MusesC5	~32	~95
Indigo-Bus MusesC3	~24	~95
Indigo-Bus MusesC1	~24	~95
Indigo-Bus MusesC2	~24	~95
Indigo-Bus MusesC4	~24	~95
Indigo-Bus MusesC6	~24	~95
Indigo-Bus MusesC7	~24	~95
Indigo-Bus MusesC8	~24	~95
Indigo-Bus MusesC9	~24	~95
Indigo-Bus MusesC10	~24	~95
Indigo-Bus MusesC11	~24	~95
Indigo-Bus MusesC12	~24	~95
Indigo-Bus MusesC13	~24	~95
Indigo-Bus MusesC14	~24	~95
Indigo-Bus MusesC15	~24	~95
Indigo-Bus MusesC16	~24	~95
Indigo-Bus MusesC17	~24	~95
Indigo-Bus MusesC18	~24	~95
Indigo-Bus MusesC19	~24	~95
Indigo-Bus MusesC20	~24	~95
Indigo-Bus MusesC21	~24	~95
Indigo-Bus MusesC22	~24	~95
Indigo-Bus MusesC23	~24	~95
Indigo-Bus MusesC24	~24	~95
Indigo-Bus MusesC25	~24	~95
Indigo-Bus MusesC26	~24	~95
Indigo-Bus MusesC27	~24	~95
Indigo-Bus MusesC28	~24	~95
Indigo-Bus MusesC29	~24	~95
Indigo-Bus MusesC30	~24	~95
Indigo-Bus MusesC31	~24	~95
Indigo-Bus MusesC32	~24	~95
Indigo-Bus MusesC33	~24	~95
Indigo-Bus MusesC34	~24	~95
Indigo-Bus MusesC35	~24	~95
Indigo-Bus MusesC36	~24	~95
Indigo-Bus MusesC37	~24	~95
Indigo-Bus MusesC38	~24	~95
Indigo-Bus MusesC39	~24	~95
Indigo-Bus MusesC40	~24	~95
Indigo-Bus MusesC41	~24	~95
Indigo-Bus MusesC42	~24	~95
Indigo-Bus MusesC43	~24	~95
Indigo-Bus MusesC44	~24	~95
Indigo-Bus MusesC45	~24	~95
Indigo-Bus MusesC46	~24	~95
Indigo-Bus MusesC47	~24	~95
Indigo-Bus MusesC48	~24	~95
Indigo-Bus MusesC49	~24	~95
Indigo-Bus MusesC50	~24	~95
Indigo-Bus MusesC51	~24	~95
Indigo-Bus MusesC52	~24	~95
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Indigo-Bus MusesC59	~24	~95
Indigo-Bus MusesC60	~24	~95
Indigo-Bus MusesC61	~24	~95
Indigo-Bus MusesC62	~24	~95
Indigo-Bus MusesC63	~24	~95
Indigo-Bus MusesC64	~24	~95
Indigo-Bus MusesC65	~24	~95
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Indigo-Bus MusesC68	~24	~95
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Indigo-Bus MusesC75	~24	~95
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Indigo-Bus MusesC89	~24	~95
Indigo-Bus MusesC90	~24	~95
Indigo-Bus MusesC91	~24	~95
Indigo-Bus MusesC92	~24	~95
Indigo-Bus MusesC93	~24	~95
Indigo-Bus MusesC94	~24	~95
Indigo-Bus MusesC95	~24	~95
Indigo-Bus MusesC96	~24	~95
Indigo-Bus MusesC97		



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	60.45	40.71	28.51	45.75	99.92	138.75	3.01	3.18	3.96
Copa	5	46.56	33.08	30.95	19.63	20.20	21.15	0.06	0.09	0.27
TCP Cubic	5	56.53	38.45	33.64	26.30	27.00	27.48	0.11	0.21	0.31
FillP	5	57.07	42.66	26.51	58.68	85.22	71.03	0.96	4.28	4.91
FillP-Sheep	5	46.47	31.41	27.56	63.06	50.79	58.96	4.08	13.63	12.33
Indigo	5	56.27	38.40	41.19	26.16	27.89	26.04	0.06	0.13	0.31
Indigo-MusesC3	5	50.22	32.21	16.31	21.77	21.66	21.71	0.03	0.07	0.39
Indigo-MusesC5	5	50.84	43.58	33.12	68.71	51.59	70.06	1.15	0.92	4.14
Indigo-MusesD	5	48.24	30.39	26.21	61.53	50.82	50.50	1.12	0.57	0.72
Indigo-MusesT	5	60.21	40.17	27.49	68.07	68.97	107.09	0.56	1.18	4.09
LEDBAT	5	51.23	37.42	27.36	28.45	30.28	31.43	0.11	0.13	0.38
PCC-Allegro	5	51.42	32.26	23.29	1060.80	298.07	48.50	5.51	3.30	0.33
PCC-Expr	4	51.84	34.61	23.50	994.39	948.62	64.11	8.31	7.97	0.46
QUIC Cubic	5	55.42	40.56	32.70	31.45	30.27	36.15	0.33	0.20	0.51
SCReAM	5	0.21	0.21	0.22	16.37	16.40	16.46	0.13	0.19	0.35
Sprout	5	22.99	21.91	21.45	25.14	25.87	25.87	3.47	6.36	7.41
TaoVA-100x	5	54.19	35.52	42.81	102.82	155.94	71.47	0.46	0.75	1.27
TCP Vegas	5	54.33	36.14	34.50	18.87	18.84	19.43	0.06	0.10	0.28
Verus	5	58.36	40.90	25.55	68.38	86.33	116.06	0.24	0.43	0.79
PCC-Vivace	5	46.04	22.98	10.98	97.96	21.33	20.30	0.52	0.45	0.46
WebRTC media	5	1.51	0.95	0.45	18.49	19.54	19.82	3.52	4.92	6.05

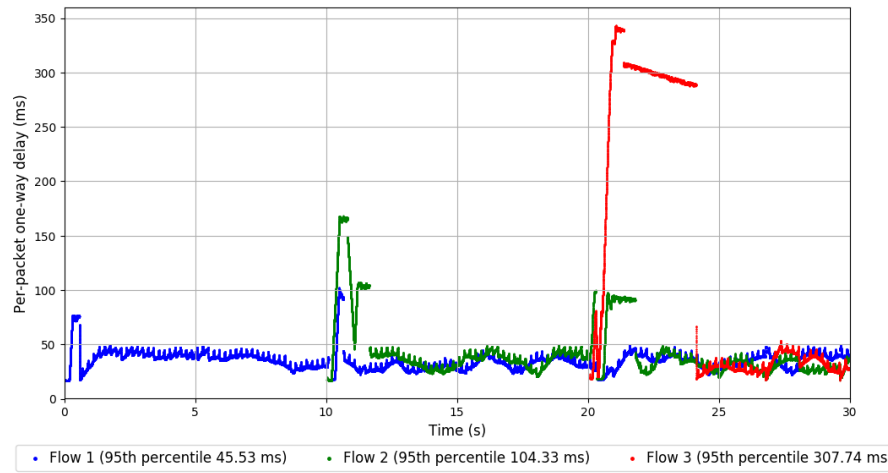
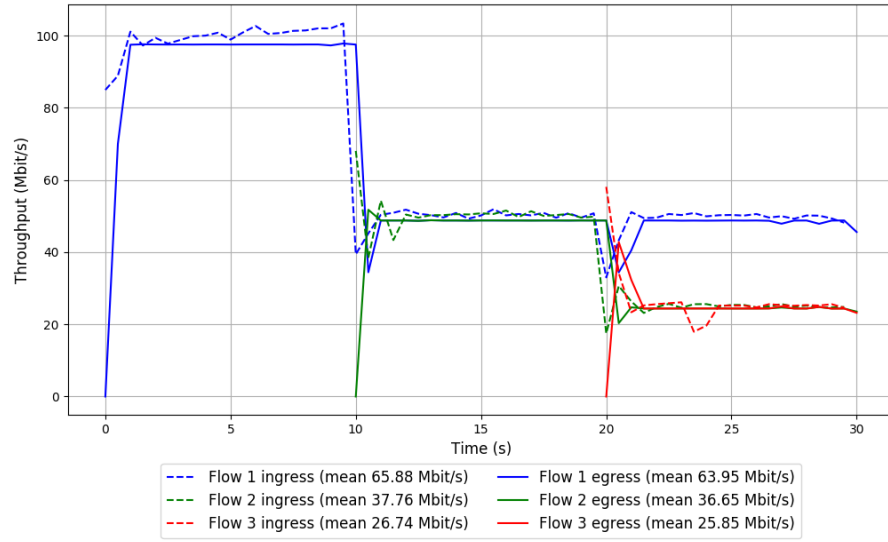


Run 1: Statistics of TCP BBR

Start at: 2019-02-12 04:30:43  
End at: 2019-02-12 04:31:13  
Local clock offset: 3.584 ms  
Remote clock offset: -2.662 ms

# Below is generated by plot.py at 2019-02-12 06:42:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.93 Mbit/s  
95th percentile per-packet one-way delay: 95.095 ms  
Loss rate: 3.09%  
-- Flow 1:  
Average throughput: 63.95 Mbit/s  
95th percentile per-packet one-way delay: 45.530 ms  
Loss rate: 3.02%  
-- Flow 2:  
Average throughput: 36.65 Mbit/s  
95th percentile per-packet one-way delay: 104.333 ms  
Loss rate: 3.10%  
-- Flow 3:  
Average throughput: 25.85 Mbit/s  
95th percentile per-packet one-way delay: 307.743 ms  
Loss rate: 3.60%

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

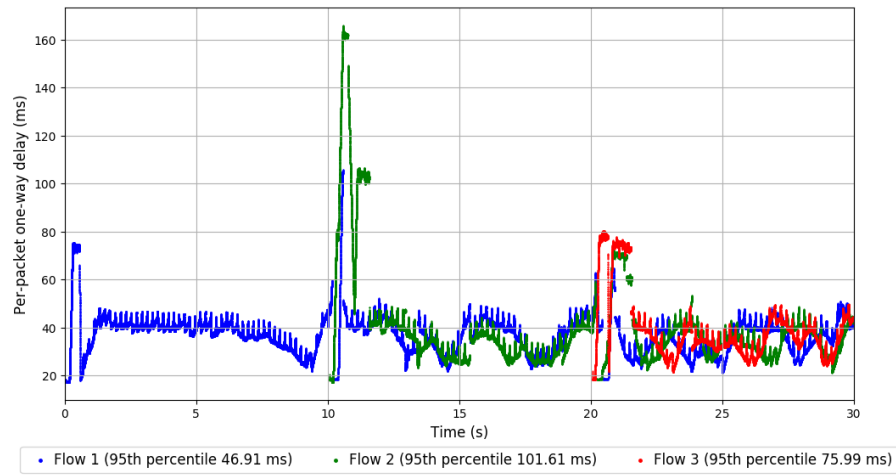
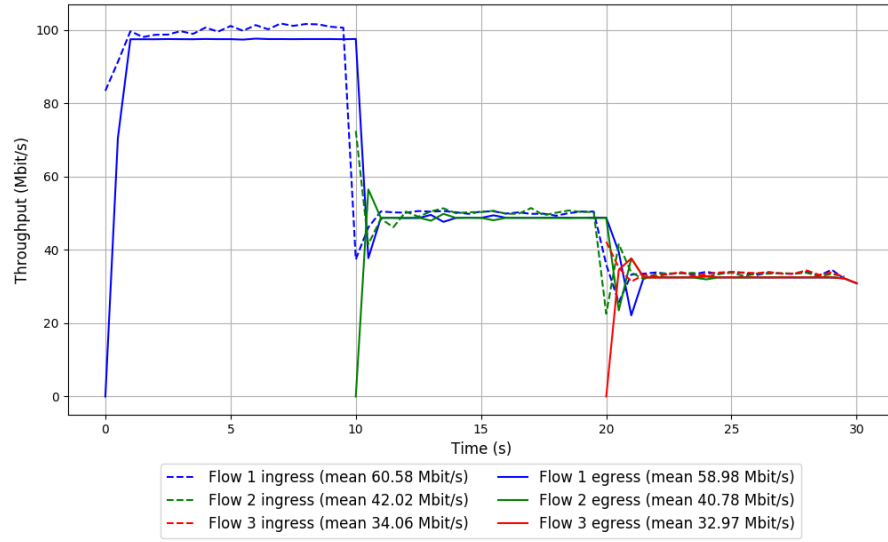


Run 2: Statistics of TCP BBR

Start at: 2019-02-12 04:56:54  
End at: 2019-02-12 04:57:24  
Local clock offset: -0.662 ms  
Remote clock offset: -2.779 ms

# Below is generated by plot.py at 2019-02-12 06:42:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.07 Mbit/s  
95th percentile per-packet one-way delay: 69.697 ms  
Loss rate: 2.91%  
-- Flow 1:  
Average throughput: 58.98 Mbit/s  
95th percentile per-packet one-way delay: 46.906 ms  
Loss rate: 2.72%  
-- Flow 2:  
Average throughput: 40.78 Mbit/s  
95th percentile per-packet one-way delay: 101.609 ms  
Loss rate: 3.08%  
-- Flow 3:  
Average throughput: 32.97 Mbit/s  
95th percentile per-packet one-way delay: 75.991 ms  
Loss rate: 3.45%

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

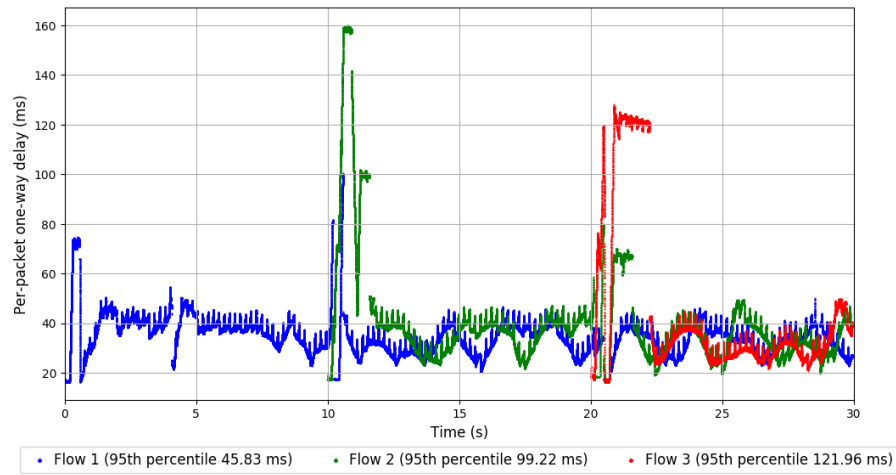
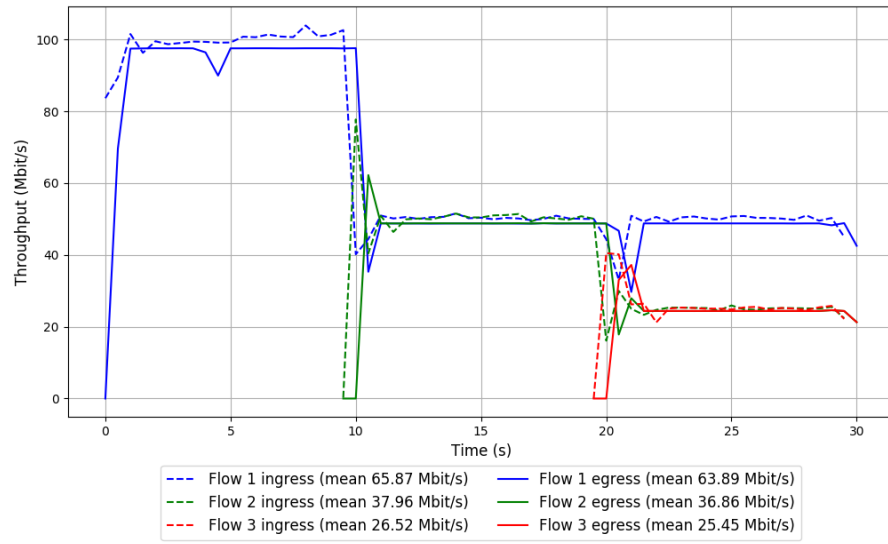


Run 3: Statistics of TCP BBR

Start at: 2019-02-12 05:23:40  
End at: 2019-02-12 05:24:10  
Local clock offset: -6.189 ms  
Remote clock offset: -2.303 ms

# Below is generated by plot.py at 2019-02-12 06:42:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.92 Mbit/s  
95th percentile per-packet one-way delay: 67.386 ms  
Loss rate: 3.17%  
-- Flow 1:  
Average throughput: 63.89 Mbit/s  
95th percentile per-packet one-way delay: 45.831 ms  
Loss rate: 3.08%  
-- Flow 2:  
Average throughput: 36.86 Mbit/s  
95th percentile per-packet one-way delay: 99.223 ms  
Loss rate: 3.01%  
-- Flow 3:  
Average throughput: 25.45 Mbit/s  
95th percentile per-packet one-way delay: 121.959 ms  
Loss rate: 4.29%

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

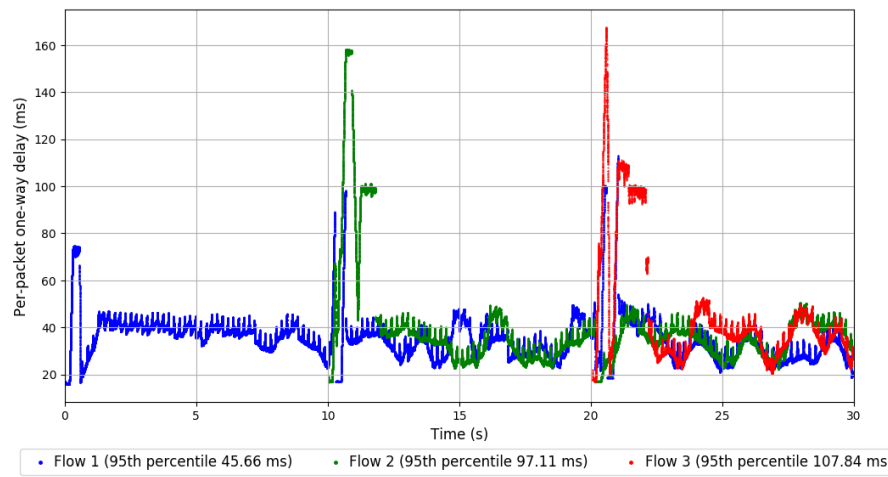
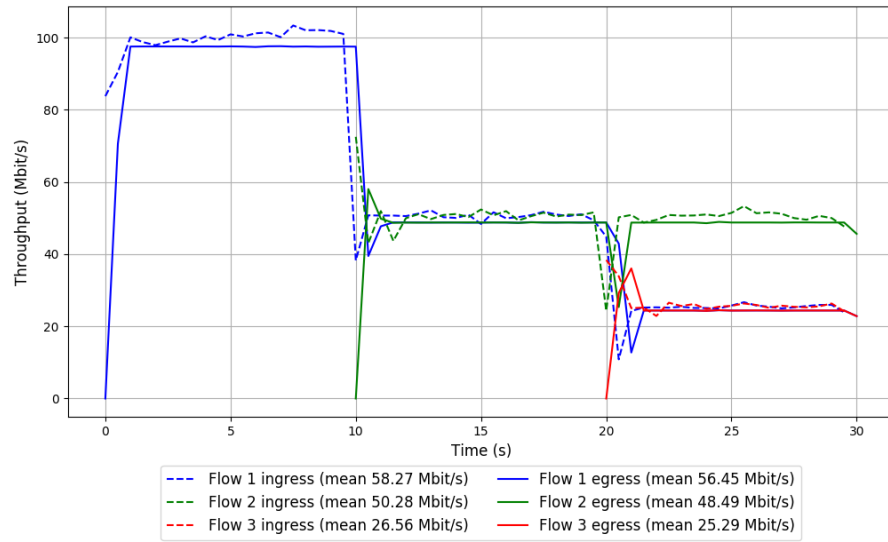


Run 4: Statistics of TCP BBR

Start at: 2019-02-12 05:58:46  
End at: 2019-02-12 05:59:16  
Local clock offset: -1.82 ms  
Remote clock offset: -2.148 ms

# Below is generated by plot.py at 2019-02-12 06:42:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.13 Mbit/s  
95th percentile per-packet one-way delay: 67.861 ms  
Loss rate: 3.53%  
-- Flow 1:  
Average throughput: 56.45 Mbit/s  
95th percentile per-packet one-way delay: 45.657 ms  
Loss rate: 3.21%  
-- Flow 2:  
Average throughput: 48.49 Mbit/s  
95th percentile per-packet one-way delay: 97.108 ms  
Loss rate: 3.70%  
-- Flow 3:  
Average throughput: 25.29 Mbit/s  
95th percentile per-packet one-way delay: 107.840 ms  
Loss rate: 5.06%

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



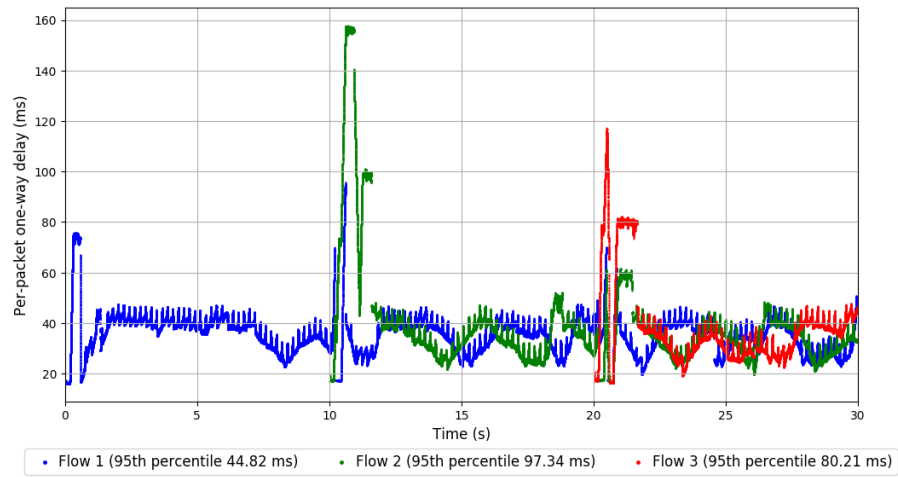
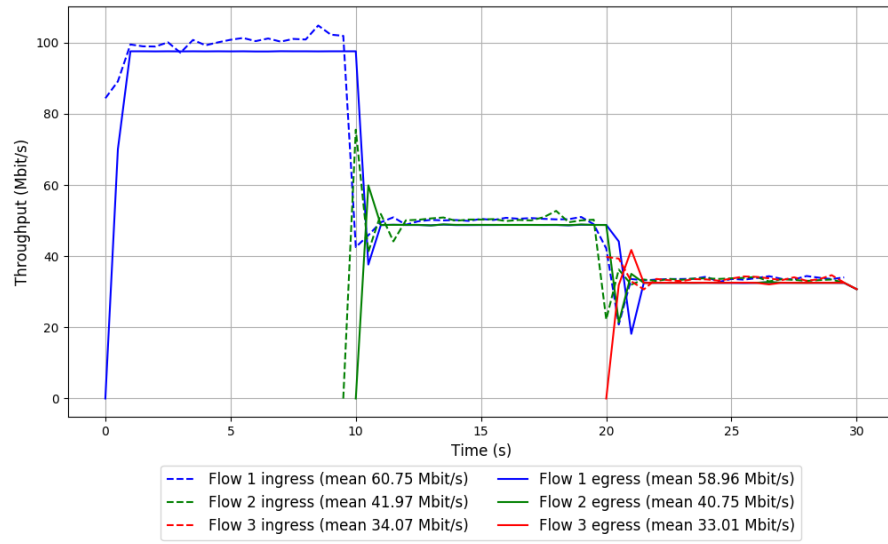


Run 5: Statistics of TCP BBR

Start at: 2019-02-12 06:37:18  
End at: 2019-02-12 06:37:48  
Local clock offset: 1.623 ms  
Remote clock offset: -1.427 ms

# Below is generated by plot.py at 2019-02-12 06:42:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.07 Mbit/s  
95th percentile per-packet one-way delay: 59.497 ms  
Loss rate: 3.07%  
-- Flow 1:  
Average throughput: 58.96 Mbit/s  
95th percentile per-packet one-way delay: 44.822 ms  
Loss rate: 3.03%  
-- Flow 2:  
Average throughput: 40.75 Mbit/s  
95th percentile per-packet one-way delay: 97.342 ms  
Loss rate: 3.03%  
-- Flow 3:  
Average throughput: 33.01 Mbit/s  
95th percentile per-packet one-way delay: 80.207 ms  
Loss rate: 3.39%

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

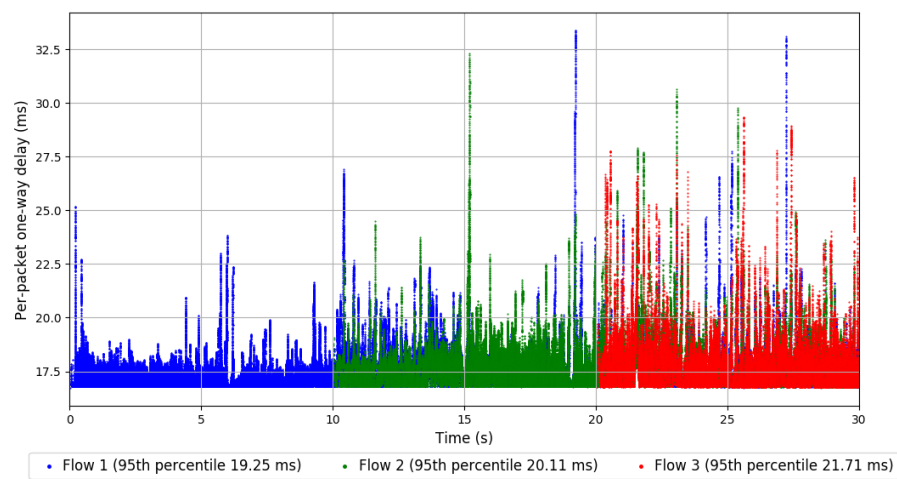
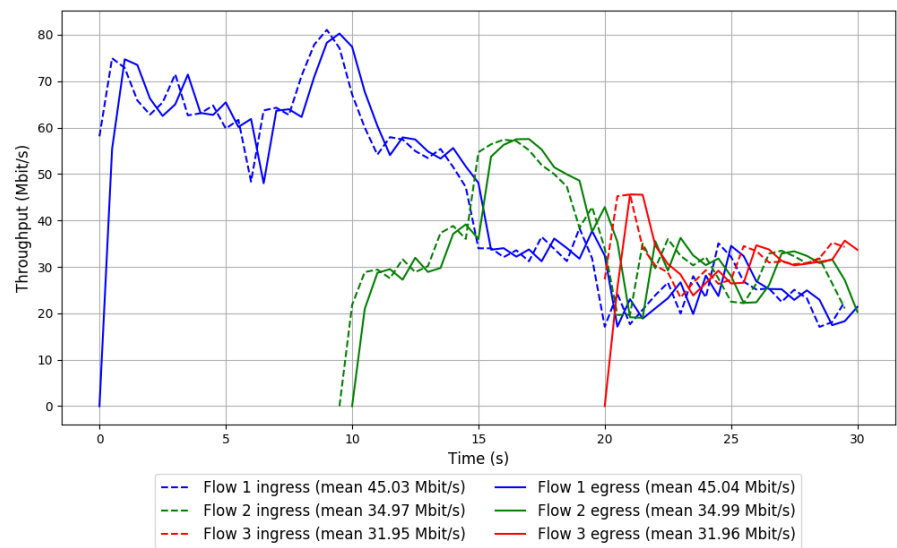


Run 1: Statistics of Copa

Start at: 2019-02-12 04:07:28  
End at: 2019-02-12 04:07:58  
Local clock offset: 3.435 ms  
Remote clock offset: -2.197 ms

# Below is generated by plot.py at 2019-02-12 06:43:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 78.95 Mbit/s  
95th percentile per-packet one-way delay: 19.848 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 45.04 Mbit/s  
95th percentile per-packet one-way delay: 19.248 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 34.99 Mbit/s  
95th percentile per-packet one-way delay: 20.107 ms  
Loss rate: 0.10%  
-- Flow 3:  
Average throughput: 31.96 Mbit/s  
95th percentile per-packet one-way delay: 21.707 ms  
Loss rate: 0.24%

Run 1: Report of Copa — Data Link

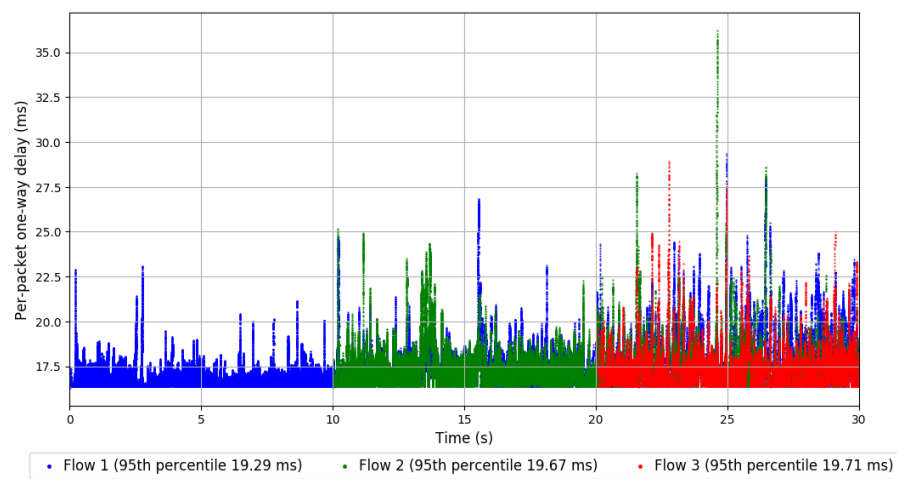
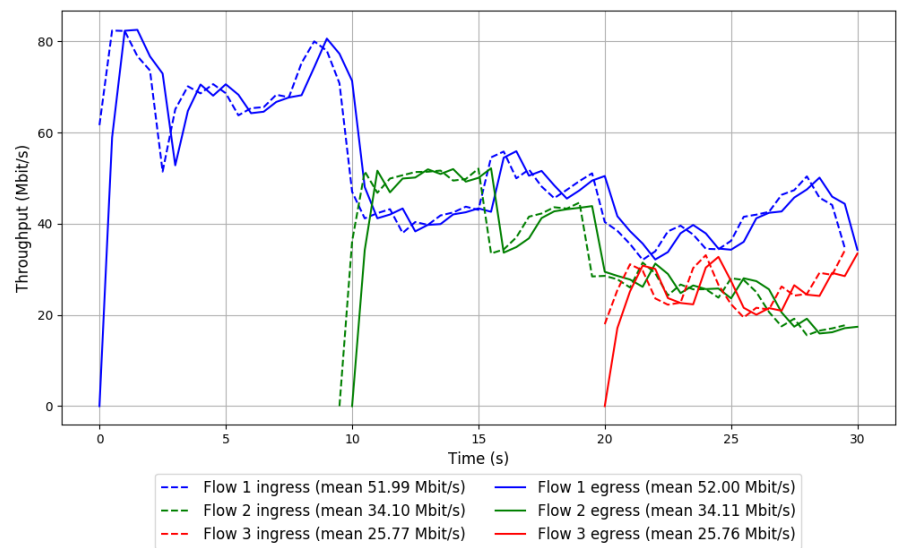


Run 2: Statistics of Copa

Start at: 2019-02-12 04:33:13  
End at: 2019-02-12 04:33:43  
Local clock offset: 3.282 ms  
Remote clock offset: -2.648 ms

# Below is generated by plot.py at 2019-02-12 06:43:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 83.29 Mbit/s  
95th percentile per-packet one-way delay: 19.446 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 52.00 Mbit/s  
95th percentile per-packet one-way delay: 19.293 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 34.11 Mbit/s  
95th percentile per-packet one-way delay: 19.673 ms  
Loss rate: 0.07%  
-- Flow 3:  
Average throughput: 25.76 Mbit/s  
95th percentile per-packet one-way delay: 19.713 ms  
Loss rate: 0.36%

Run 2: Report of Copa — Data Link

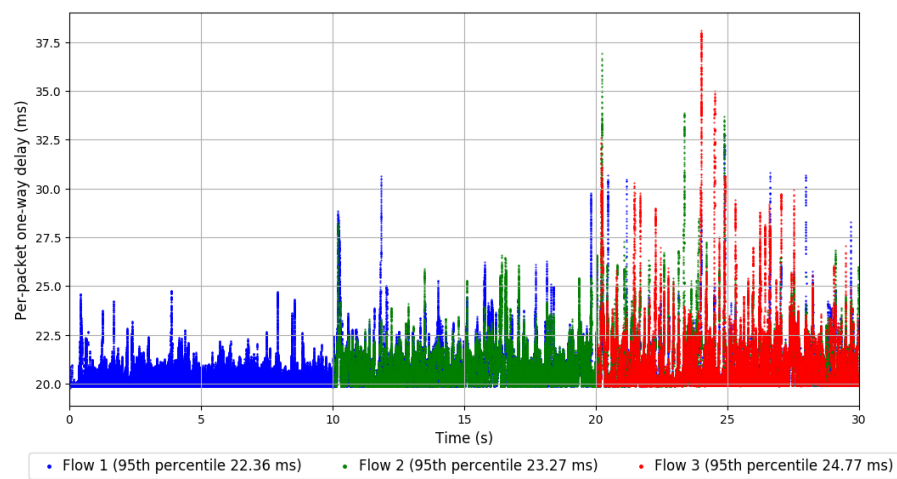
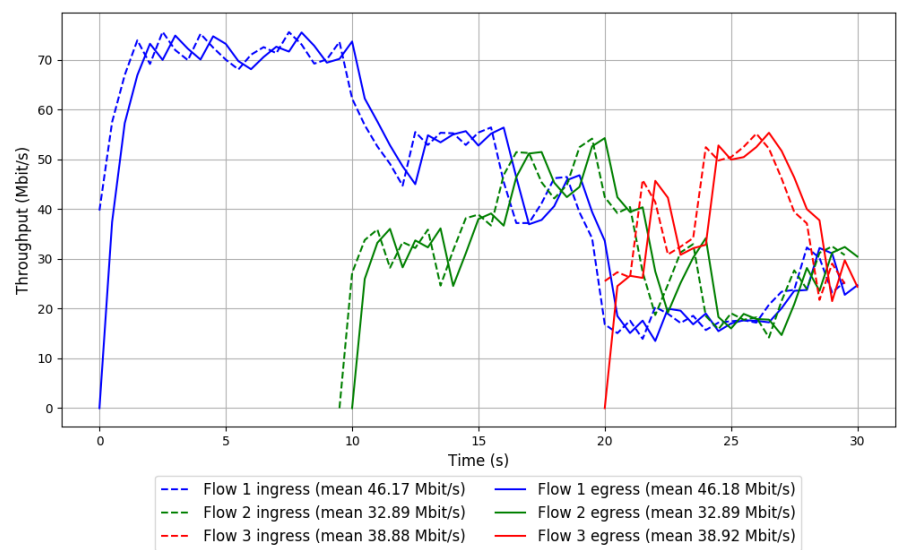


Run 3: Statistics of Copa

Start at: 2019-02-12 04:59:42  
End at: 2019-02-12 05:00:12  
Local clock offset: -0.611 ms  
Remote clock offset: -4.925 ms

# Below is generated by plot.py at 2019-02-12 06:43:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.02 Mbit/s  
95th percentile per-packet one-way delay: 22.976 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 46.18 Mbit/s  
95th percentile per-packet one-way delay: 22.361 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 32.89 Mbit/s  
95th percentile per-packet one-way delay: 23.265 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 38.92 Mbit/s  
95th percentile per-packet one-way delay: 24.774 ms  
Loss rate: 0.17%

Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-02-12 05:26:15

End at: 2019-02-12 05:26:45

Local clock offset: -7.149 ms

Remote clock offset: -1.54 ms

# Below is generated by plot.py at 2019-02-12 06:44:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 75.33 Mbit/s

95th percentile per-packet one-way delay: 19.175 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 43.67 Mbit/s

95th percentile per-packet one-way delay: 19.448 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 34.15 Mbit/s

95th percentile per-packet one-way delay: 18.869 ms

Loss rate: 0.10%

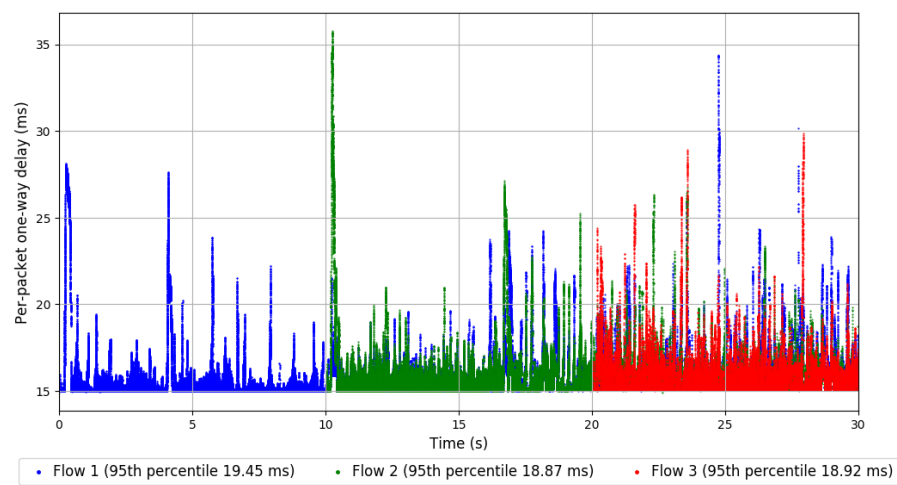
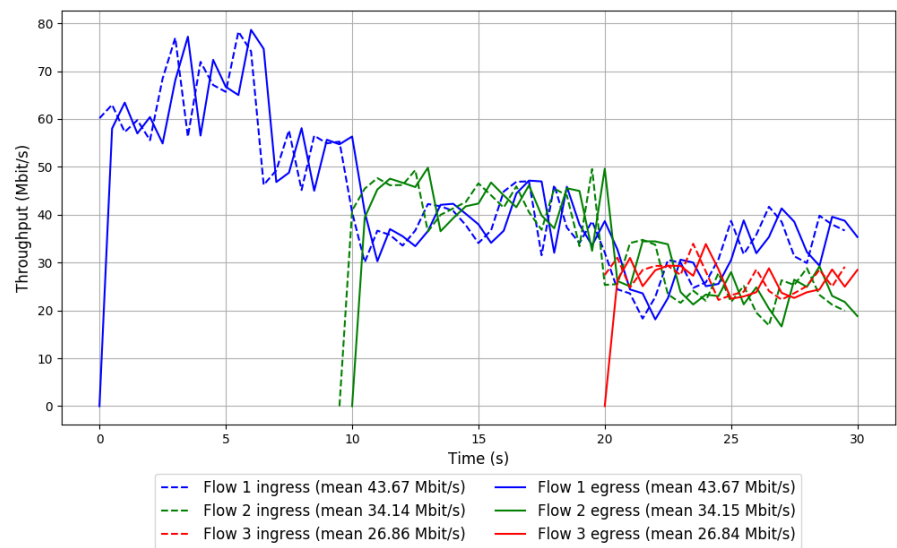
-- Flow 3:

Average throughput: 26.84 Mbit/s

95th percentile per-packet one-way delay: 18.924 ms

Loss rate: 0.32%

Run 4: Report of Copa — Data Link

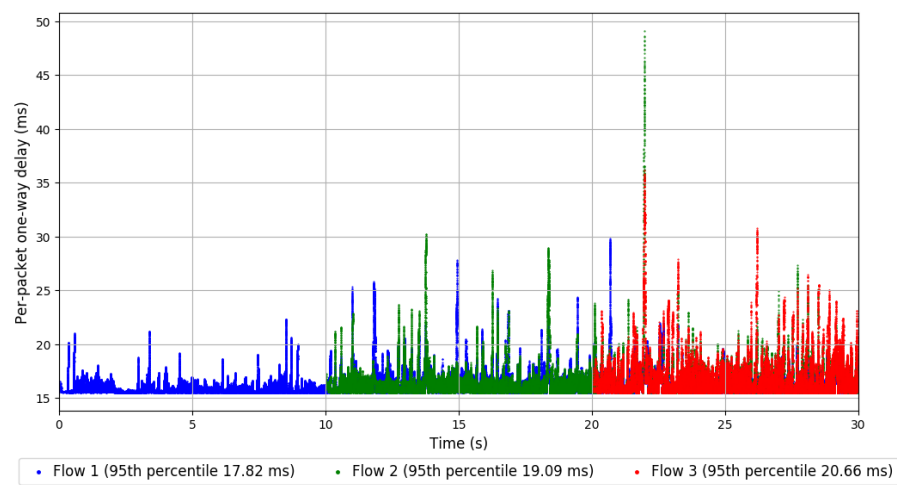
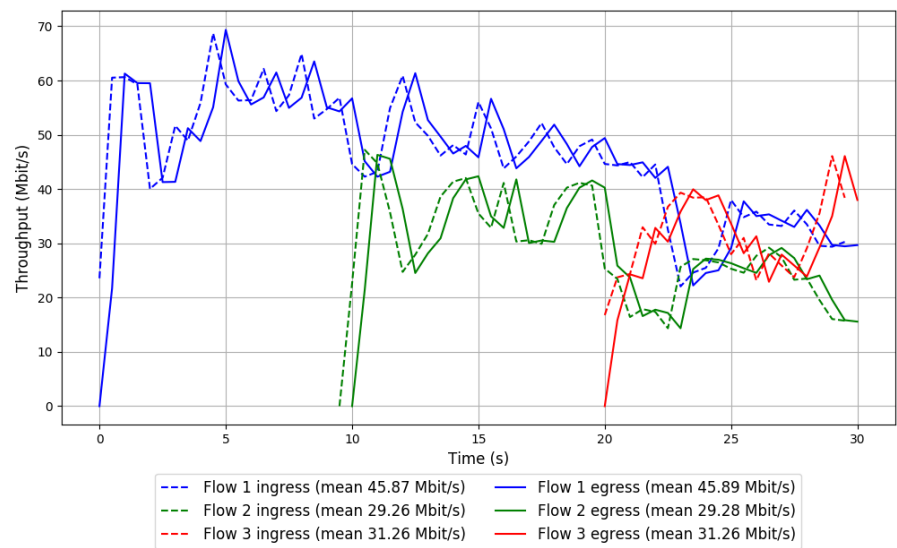


Run 5: Statistics of Copa

Start at: 2019-02-12 06:01:33  
End at: 2019-02-12 06:02:03  
Local clock offset: -1.092 ms  
Remote clock offset: -1.089 ms

# Below is generated by plot.py at 2019-02-12 06:44:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 75.77 Mbit/s  
95th percentile per-packet one-way delay: 18.730 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 45.89 Mbit/s  
95th percentile per-packet one-way delay: 17.817 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 29.28 Mbit/s  
95th percentile per-packet one-way delay: 19.094 ms  
Loss rate: 0.06%  
-- Flow 3:  
Average throughput: 31.26 Mbit/s  
95th percentile per-packet one-way delay: 20.656 ms  
Loss rate: 0.28%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-02-12 04:24:41

End at: 2019-02-12 04:25:11

Local clock offset: 1.608 ms

Remote clock offset: -1.62 ms

# Below is generated by plot.py at 2019-02-12 06:44:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.01 Mbit/s

95th percentile per-packet one-way delay: 23.159 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 58.62 Mbit/s

95th percentile per-packet one-way delay: 22.494 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 40.23 Mbit/s

95th percentile per-packet one-way delay: 23.611 ms

Loss rate: 0.14%

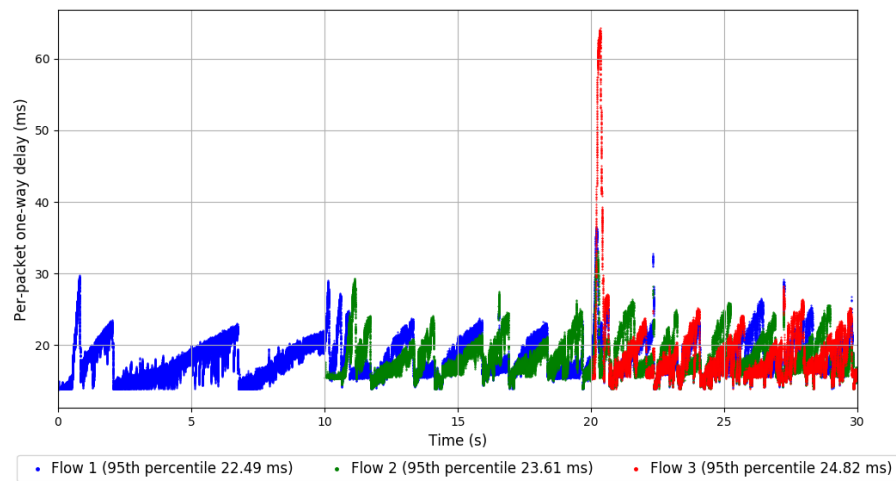
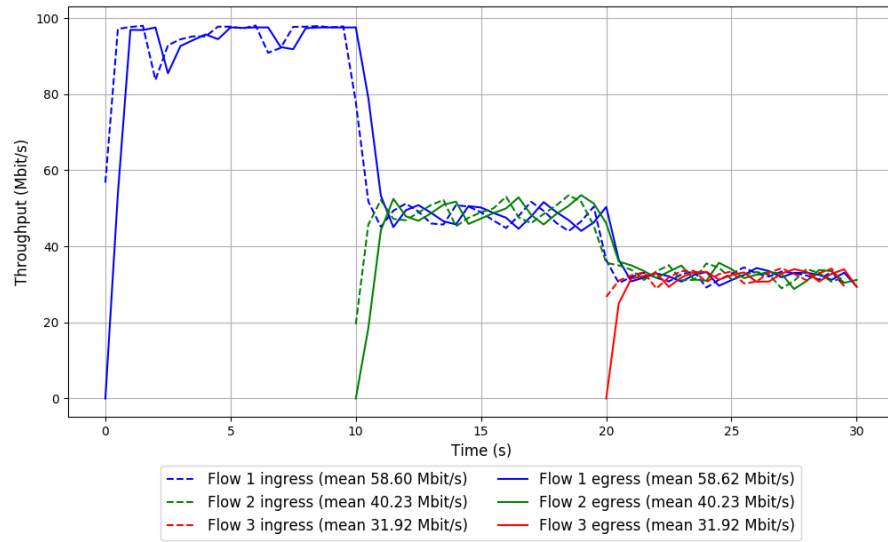
-- Flow 3:

Average throughput: 31.92 Mbit/s

95th percentile per-packet one-way delay: 24.825 ms

Loss rate: 0.29%

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



Run 2: Statistics of TCP Cubic

Start at: 2019-02-12 04:50:38

End at: 2019-02-12 04:51:08

Local clock offset: 0.911 ms

Remote clock offset: -3.07 ms

# Below is generated by plot.py at 2019-02-12 06:44:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.52 Mbit/s

95th percentile per-packet one-way delay: 27.422 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 56.86 Mbit/s

95th percentile per-packet one-way delay: 27.402 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 35.82 Mbit/s

95th percentile per-packet one-way delay: 27.556 ms

Loss rate: 0.12%

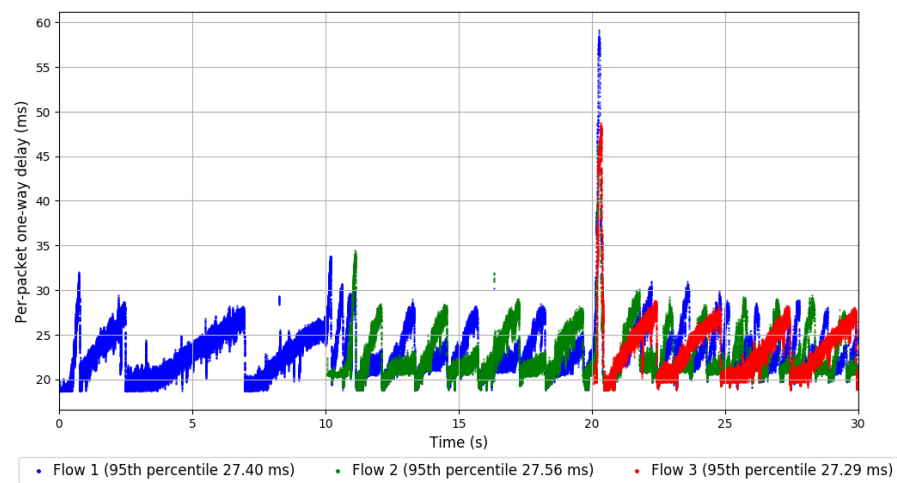
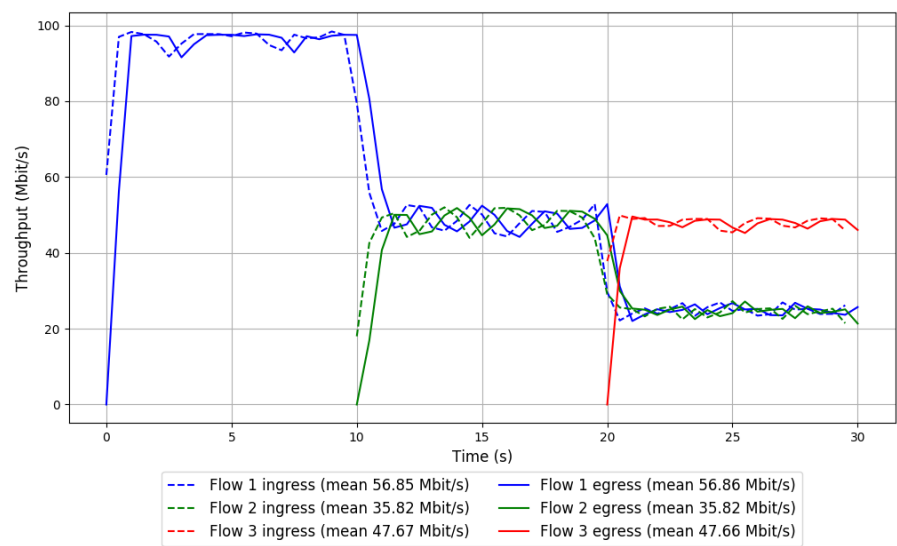
-- Flow 3:

Average throughput: 47.66 Mbit/s

95th percentile per-packet one-way delay: 27.294 ms

Loss rate: 0.27%

Run 2: Report of TCP Cubic — Data Link



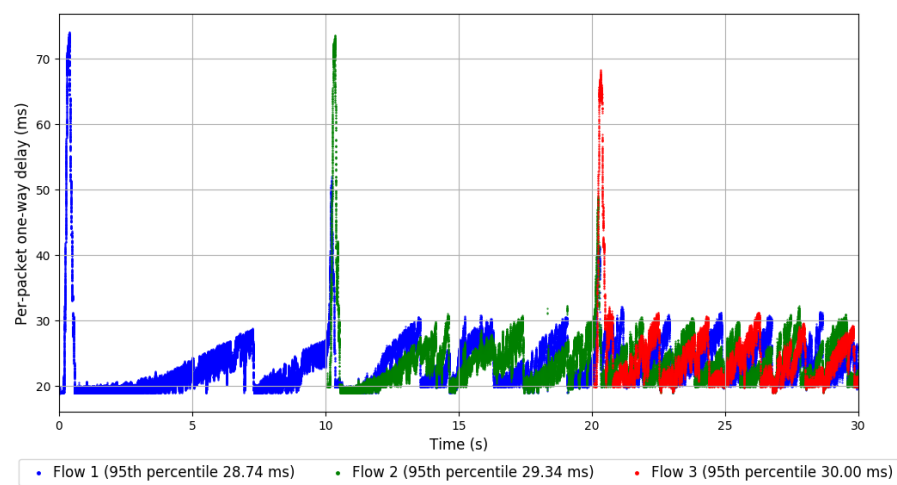
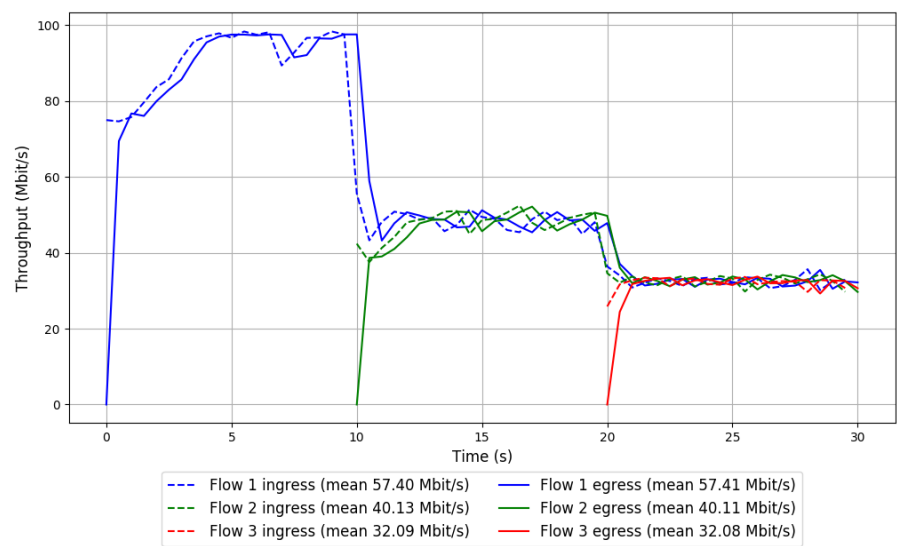


Run 3: Statistics of TCP Cubic

Start at: 2019-02-12 05:17:14  
End at: 2019-02-12 05:17:44  
Local clock offset: -2.815 ms  
Remote clock offset: -2.582 ms

# Below is generated by plot.py at 2019-02-12 06:44:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.75 Mbit/s  
95th percentile per-packet one-way delay: 29.155 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 57.41 Mbit/s  
95th percentile per-packet one-way delay: 28.741 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 40.11 Mbit/s  
95th percentile per-packet one-way delay: 29.344 ms  
Loss rate: 0.18%  
-- Flow 3:  
Average throughput: 32.08 Mbit/s  
95th percentile per-packet one-way delay: 29.995 ms  
Loss rate: 0.30%

Run 3: Report of TCP Cubic — Data Link

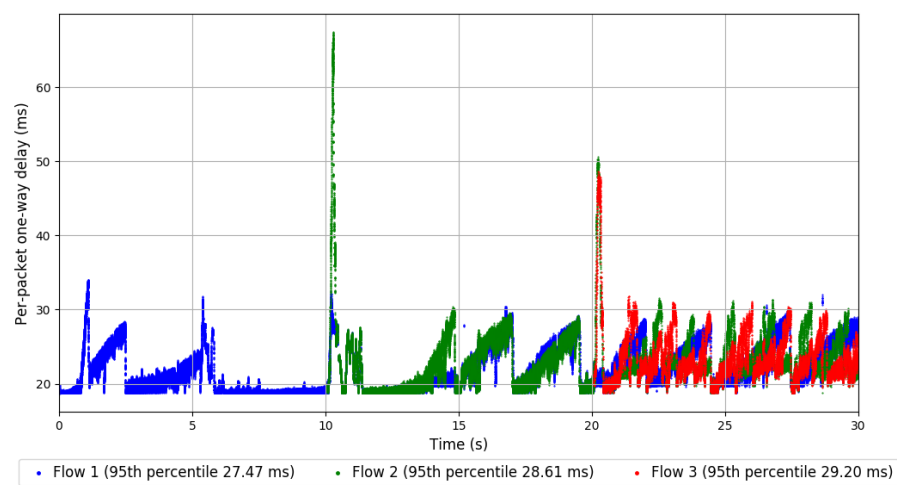
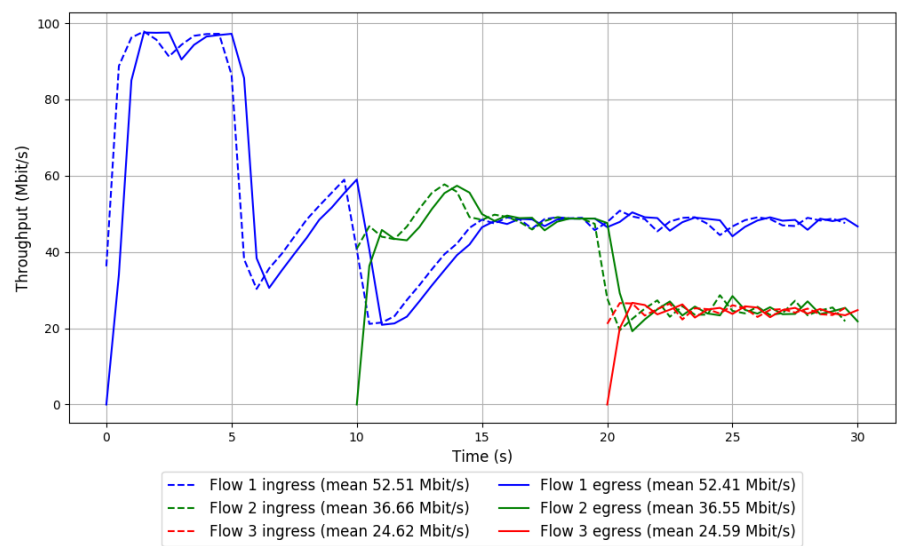


Run 4: Statistics of TCP Cubic

Start at: 2019-02-12 05:52:30  
End at: 2019-02-12 05:53:00  
Local clock offset: 0.489 ms  
Remote clock offset: -2.242 ms

# Below is generated by plot.py at 2019-02-12 06:44:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.93 Mbit/s  
95th percentile per-packet one-way delay: 27.983 ms  
Loss rate: 0.34%  
-- Flow 1:  
Average throughput: 52.41 Mbit/s  
95th percentile per-packet one-way delay: 27.468 ms  
Loss rate: 0.30%  
-- Flow 2:  
Average throughput: 36.55 Mbit/s  
95th percentile per-packet one-way delay: 28.612 ms  
Loss rate: 0.42%  
-- Flow 3:  
Average throughput: 24.59 Mbit/s  
95th percentile per-packet one-way delay: 29.199 ms  
Loss rate: 0.37%

Run 4: Report of TCP Cubic — Data Link

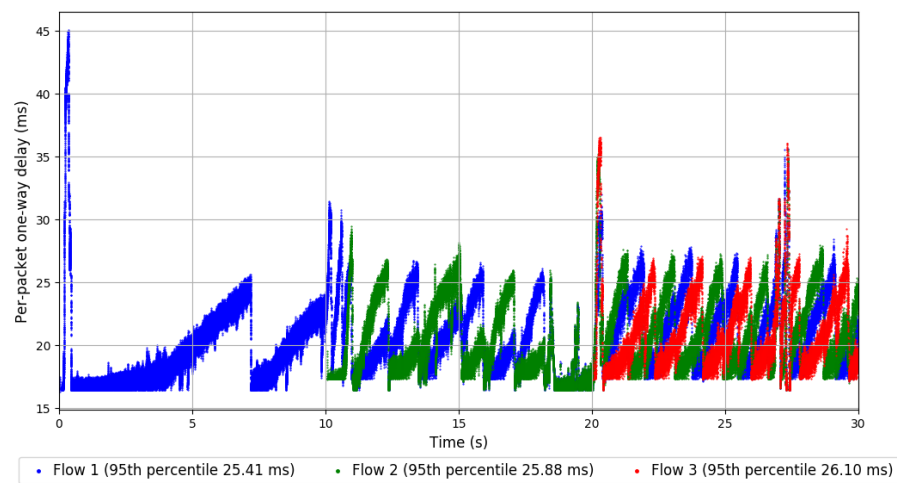
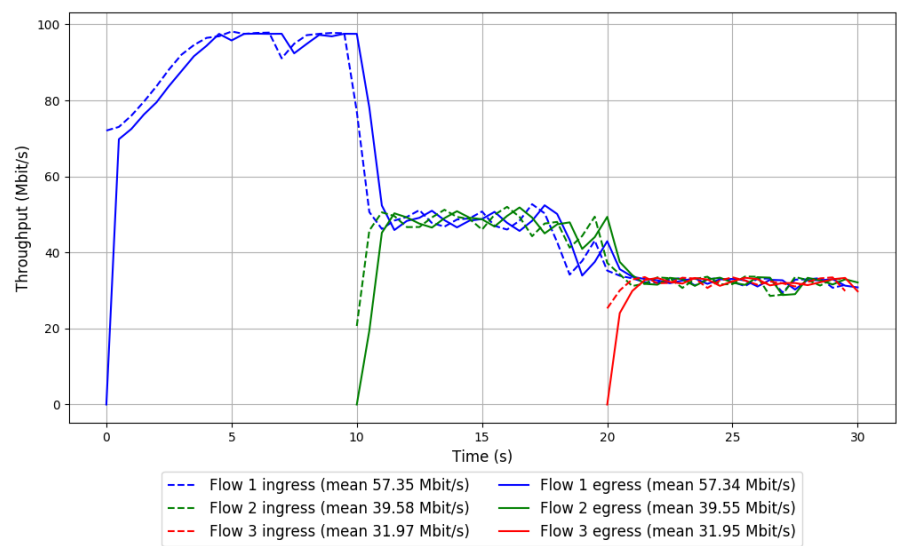


Run 5: Statistics of TCP Cubic

Start at: 2019-02-12 06:30:49  
End at: 2019-02-12 06:31:19  
Local clock offset: 3.837 ms  
Remote clock offset: -1.647 ms

# Below is generated by plot.py at 2019-02-12 06:44:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.27 Mbit/s  
95th percentile per-packet one-way delay: 25.717 ms  
Loss rate: 0.15%  
-- Flow 1:  
Average throughput: 57.34 Mbit/s  
95th percentile per-packet one-way delay: 25.412 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 39.55 Mbit/s  
95th percentile per-packet one-way delay: 25.877 ms  
Loss rate: 0.21%  
-- Flow 3:  
Average throughput: 31.95 Mbit/s  
95th percentile per-packet one-way delay: 26.098 ms  
Loss rate: 0.33%

Run 5: Report of TCP Cubic — Data Link

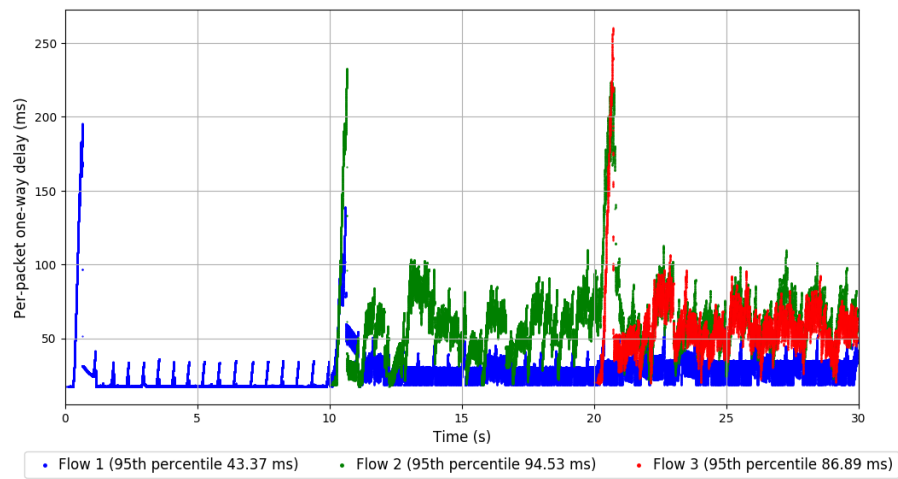
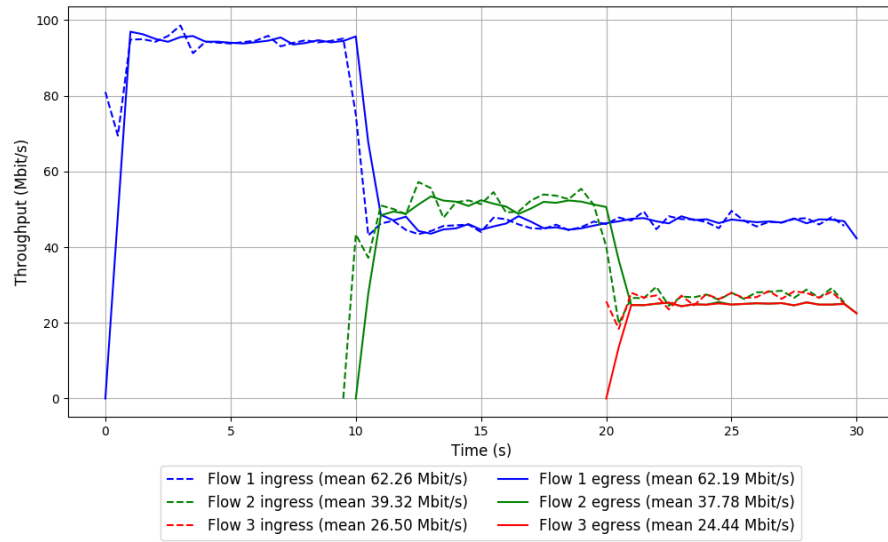


Run 1: Statistics of FillP

Start at: 2019-02-12 04:16:04  
End at: 2019-02-12 04:16:34  
Local clock offset: 3.823 ms  
Remote clock offset: -2.828 ms

# Below is generated by plot.py at 2019-02-12 06:44:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.44 Mbit/s  
95th percentile per-packet one-way delay: 81.878 ms  
Loss rate: 1.92%  
-- Flow 1:  
Average throughput: 62.19 Mbit/s  
95th percentile per-packet one-way delay: 43.369 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 37.78 Mbit/s  
95th percentile per-packet one-way delay: 94.526 ms  
Loss rate: 3.98%  
-- Flow 3:  
Average throughput: 24.44 Mbit/s  
95th percentile per-packet one-way delay: 86.886 ms  
Loss rate: 8.02%

## Run 1: Report of FillP — Data Link



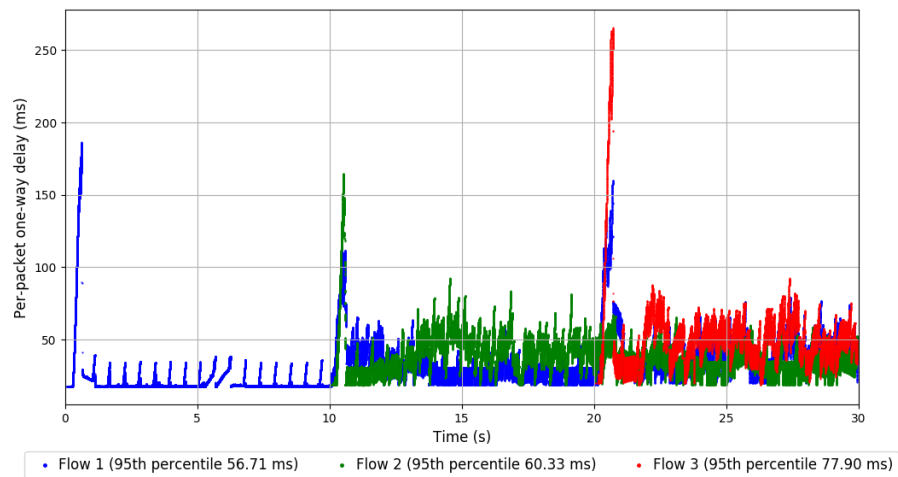
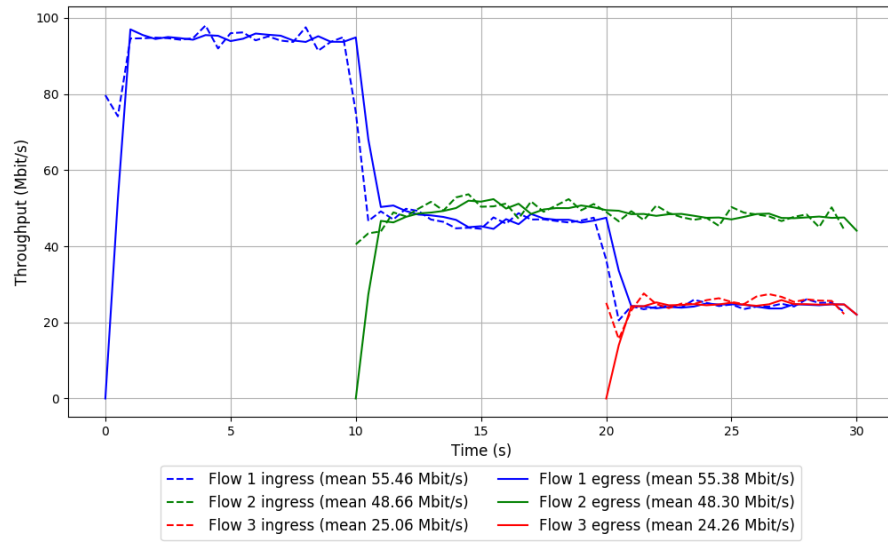


Run 2: Statistics of FillP

Start at: 2019-02-12 04:41:58  
End at: 2019-02-12 04:42:28  
Local clock offset: 2.115 ms  
Remote clock offset: -2.413 ms

# Below is generated by plot.py at 2019-02-12 06:45:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.58 Mbit/s  
95th percentile per-packet one-way delay: 63.163 ms  
Loss rate: 0.71%  
-- Flow 1:  
Average throughput: 55.38 Mbit/s  
95th percentile per-packet one-way delay: 56.713 ms  
Loss rate: 0.24%  
-- Flow 2:  
Average throughput: 48.30 Mbit/s  
95th percentile per-packet one-way delay: 60.326 ms  
Loss rate: 0.83%  
-- Flow 3:  
Average throughput: 24.26 Mbit/s  
95th percentile per-packet one-way delay: 77.899 ms  
Loss rate: 3.35%

## Run 2: Report of FillP — Data Link

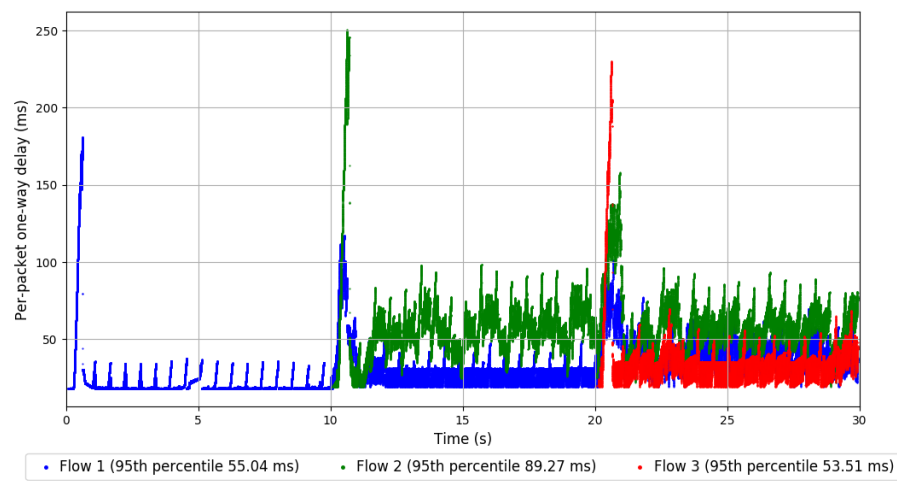
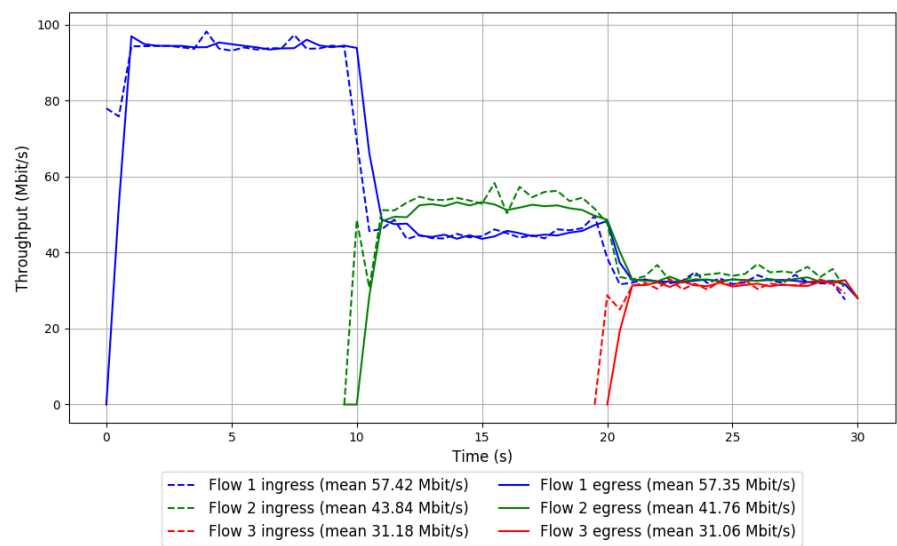


Run 3: Statistics of FillP

Start at: 2019-02-12 05:08:28  
End at: 2019-02-12 05:08:58  
Local clock offset: -0.721 ms  
Remote clock offset: -1.264 ms

# Below is generated by plot.py at 2019-02-12 06:45:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.48 Mbit/s  
95th percentile per-packet one-way delay: 75.697 ms  
Loss rate: 1.61%  
-- Flow 1:  
Average throughput: 57.35 Mbit/s  
95th percentile per-packet one-way delay: 55.040 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 41.76 Mbit/s  
95th percentile per-packet one-way delay: 89.272 ms  
Loss rate: 4.82%  
-- Flow 3:  
Average throughput: 31.06 Mbit/s  
95th percentile per-packet one-way delay: 53.505 ms  
Loss rate: 0.60%

Run 3: Report of FillP — Data Link

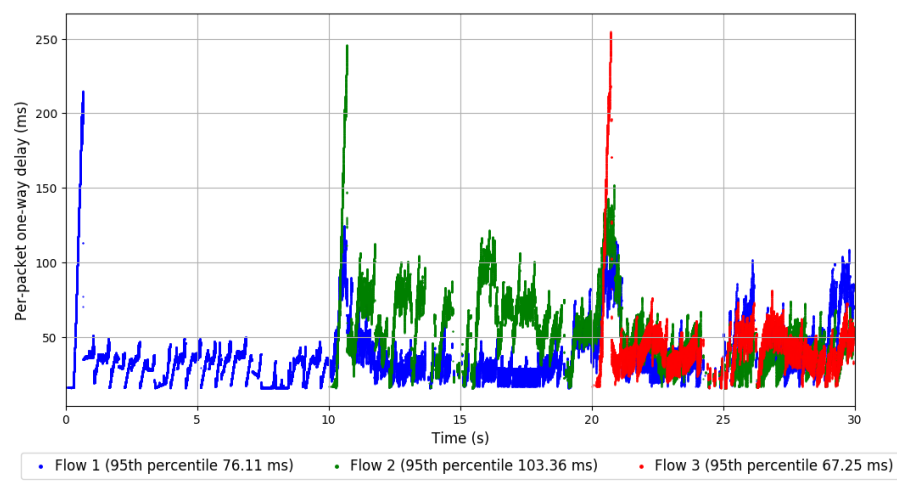
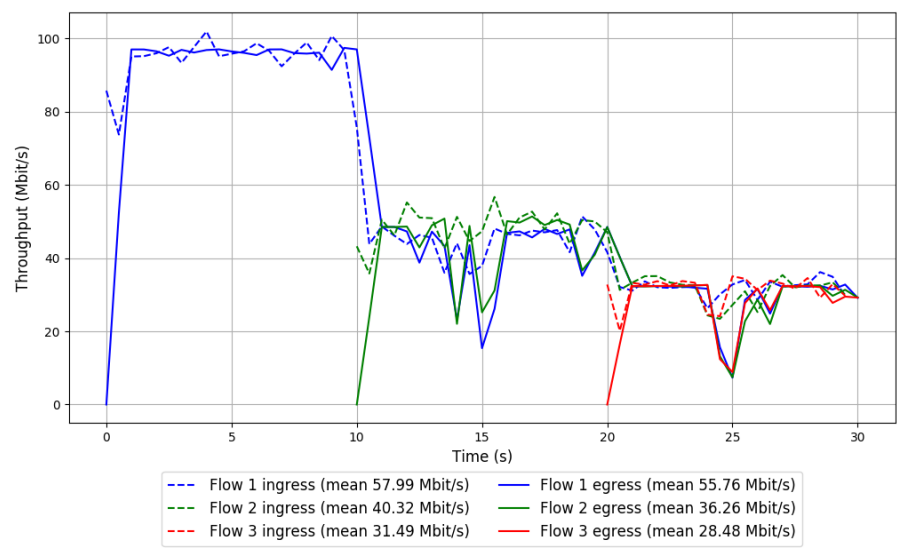


Run 4: Statistics of FillP

Start at: 2019-02-12 05:35:15  
End at: 2019-02-12 05:35:45  
Local clock offset: -5.063 ms  
Remote clock offset: -0.525 ms

# Below is generated by plot.py at 2019-02-12 06:45:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.35 Mbit/s  
95th percentile per-packet one-way delay: 88.898 ms  
Loss rate: 6.32%  
-- Flow 1:  
Average throughput: 55.76 Mbit/s  
95th percentile per-packet one-way delay: 76.105 ms  
Loss rate: 3.92%  
-- Flow 2:  
Average throughput: 36.26 Mbit/s  
95th percentile per-packet one-way delay: 103.356 ms  
Loss rate: 10.18%  
-- Flow 3:  
Average throughput: 28.48 Mbit/s  
95th percentile per-packet one-way delay: 67.247 ms  
Loss rate: 9.70%

Run 4: Report of FillP — Data Link

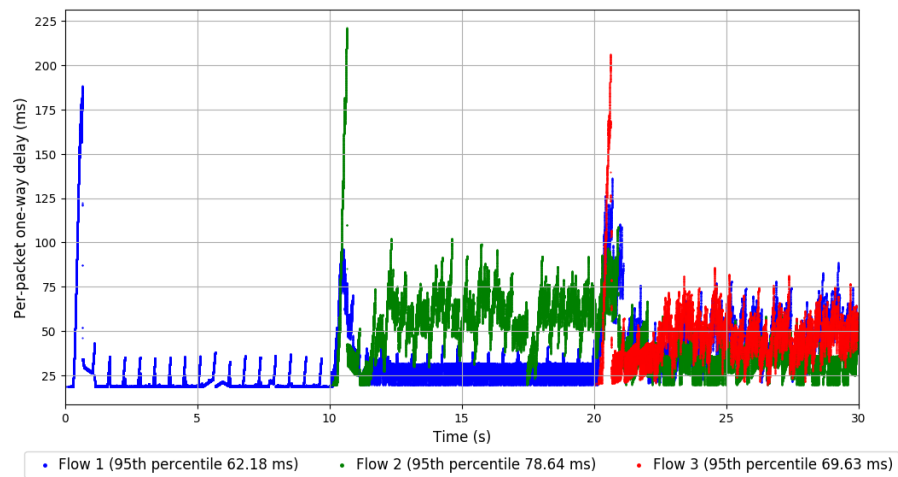
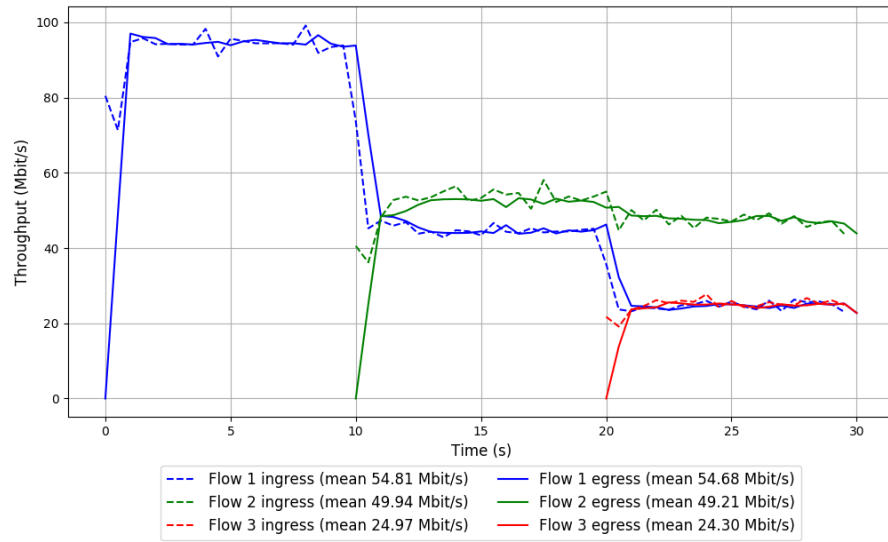


Run 5: Statistics of FillP

Start at: 2019-02-12 06:21:22  
End at: 2019-02-12 06:21:52  
Local clock offset: 5.914 ms  
Remote clock offset: -1.025 ms

# Below is generated by plot.py at 2019-02-12 06:45:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.50 Mbit/s  
95th percentile per-packet one-way delay: 73.738 ms  
Loss rate: 0.95%  
-- Flow 1:  
Average throughput: 54.68 Mbit/s  
95th percentile per-packet one-way delay: 62.180 ms  
Loss rate: 0.27%  
-- Flow 2:  
Average throughput: 49.21 Mbit/s  
95th percentile per-packet one-way delay: 78.642 ms  
Loss rate: 1.60%  
-- Flow 3:  
Average throughput: 24.30 Mbit/s  
95th percentile per-packet one-way delay: 69.633 ms  
Loss rate: 2.88%

## Run 5: Report of FillP — Data Link



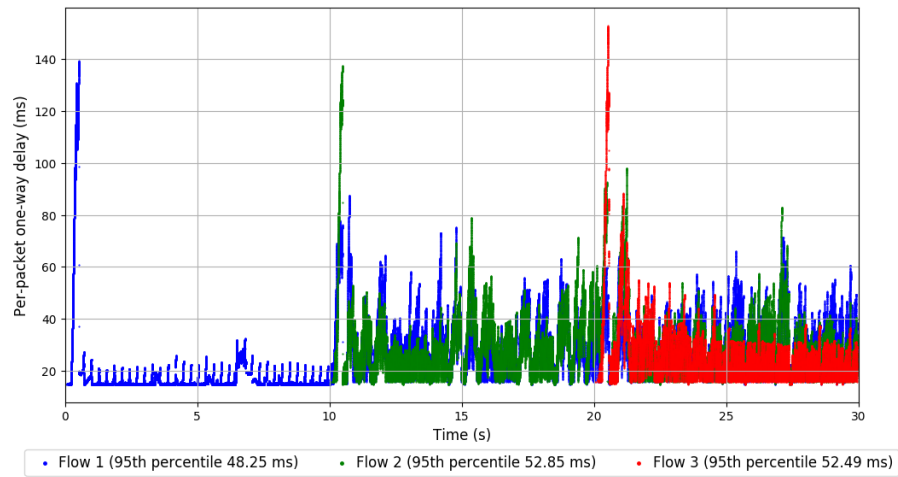
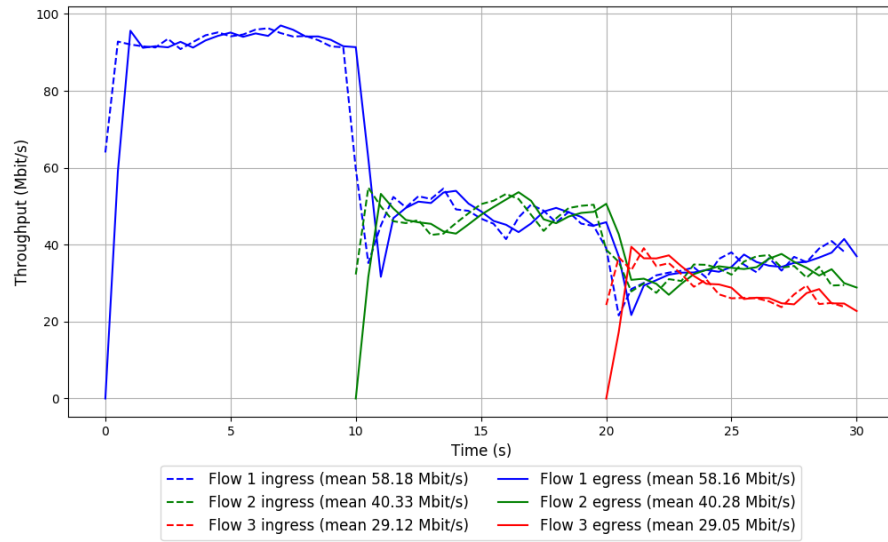


Run 1: Statistics of FillP-Sheep

Start at: 2019-02-12 04:11:12  
End at: 2019-02-12 04:11:42  
Local clock offset: 1.097 ms  
Remote clock offset: -2.885 ms

# Below is generated by plot.py at 2019-02-12 06:45:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.60 Mbit/s  
95th percentile per-packet one-way delay: 50.046 ms  
Loss rate: 0.18%  
-- Flow 1:  
Average throughput: 58.16 Mbit/s  
95th percentile per-packet one-way delay: 48.251 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 40.28 Mbit/s  
95th percentile per-packet one-way delay: 52.847 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 29.05 Mbit/s  
95th percentile per-packet one-way delay: 52.491 ms  
Loss rate: 0.45%

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

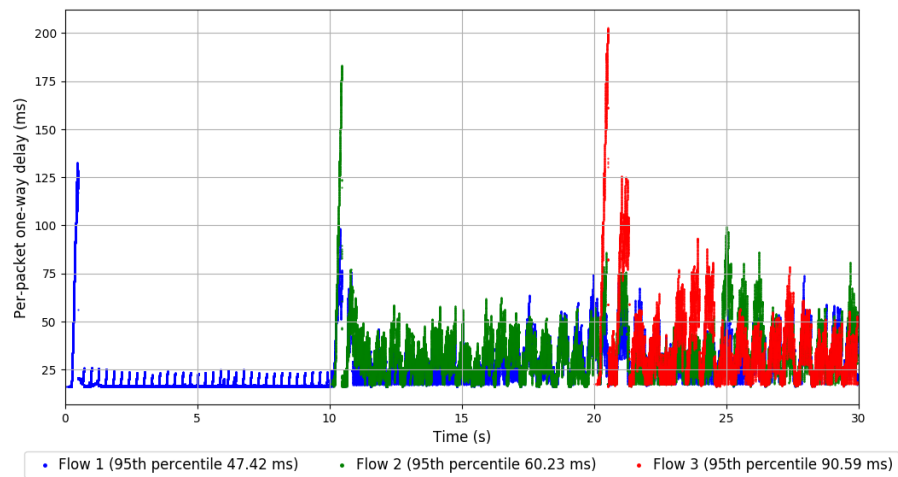
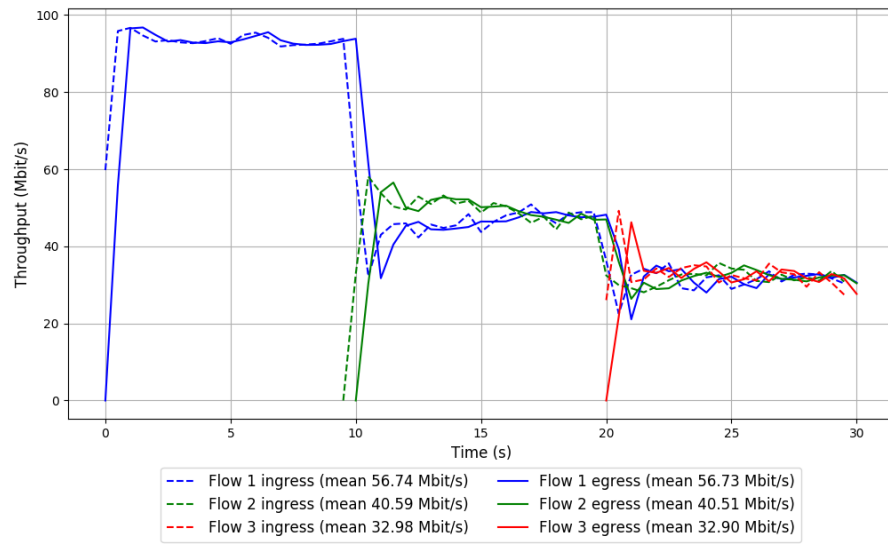


Run 2: Statistics of FillP-Sheep

Start at: 2019-02-12 04:37:04  
End at: 2019-02-12 04:37:34  
Local clock offset: 0.793 ms  
Remote clock offset: -3.573 ms

# Below is generated by plot.py at 2019-02-12 06:45:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.61 Mbit/s  
95th percentile per-packet one-way delay: 55.863 ms  
Loss rate: 0.20%  
-- Flow 1:  
Average throughput: 56.73 Mbit/s  
95th percentile per-packet one-way delay: 47.421 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 40.51 Mbit/s  
95th percentile per-packet one-way delay: 60.233 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 32.90 Mbit/s  
95th percentile per-packet one-way delay: 90.586 ms  
Loss rate: 0.49%

## Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-02-12 05:03:28

End at: 2019-02-12 05:03:58

Local clock offset: -2.37 ms

Remote clock offset: -2.46 ms

# Below is generated by plot.py at 2019-02-12 06:45:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.45 Mbit/s

95th percentile per-packet one-way delay: 55.644 ms

Loss rate: 0.24%

-- Flow 1:

Average throughput: 57.23 Mbit/s

95th percentile per-packet one-way delay: 49.055 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 39.51 Mbit/s

95th percentile per-packet one-way delay: 57.321 ms

Loss rate: 0.28%

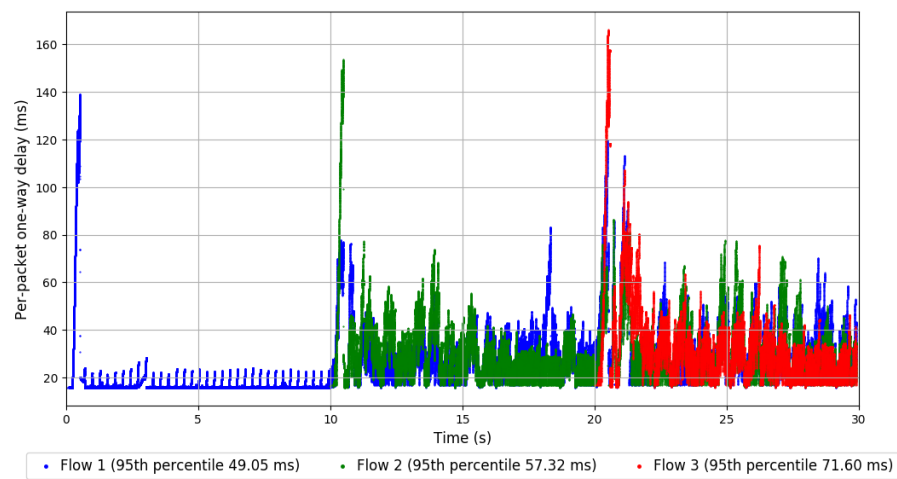
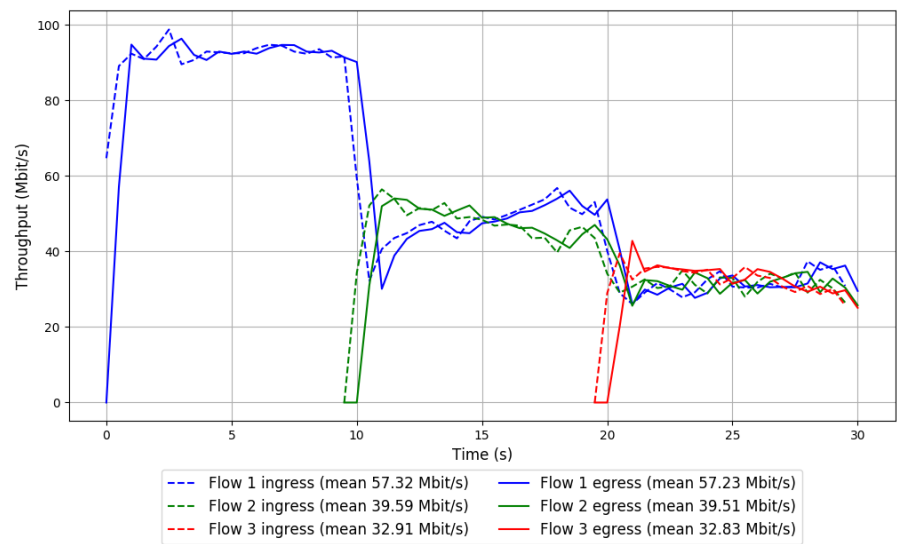
-- Flow 3:

Average throughput: 32.83 Mbit/s

95th percentile per-packet one-way delay: 71.596 ms

Loss rate: 0.48%

Run 3: Report of FillP-Sheep — Data Link

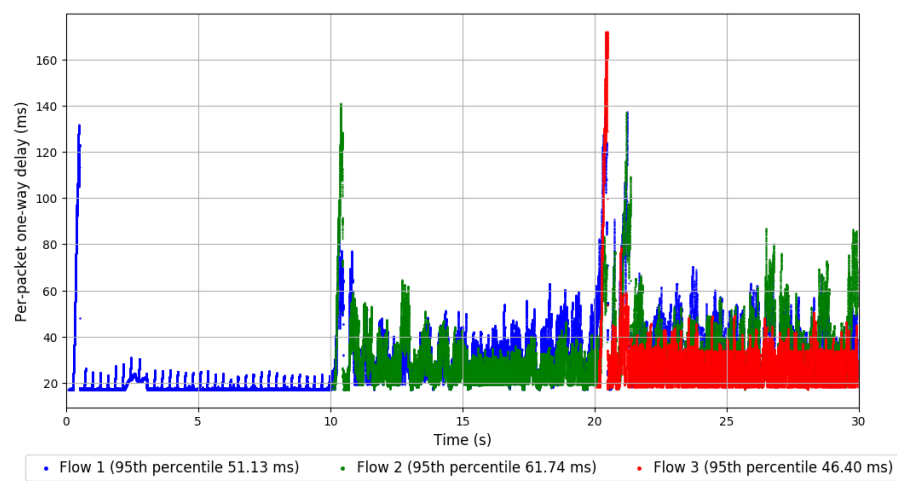
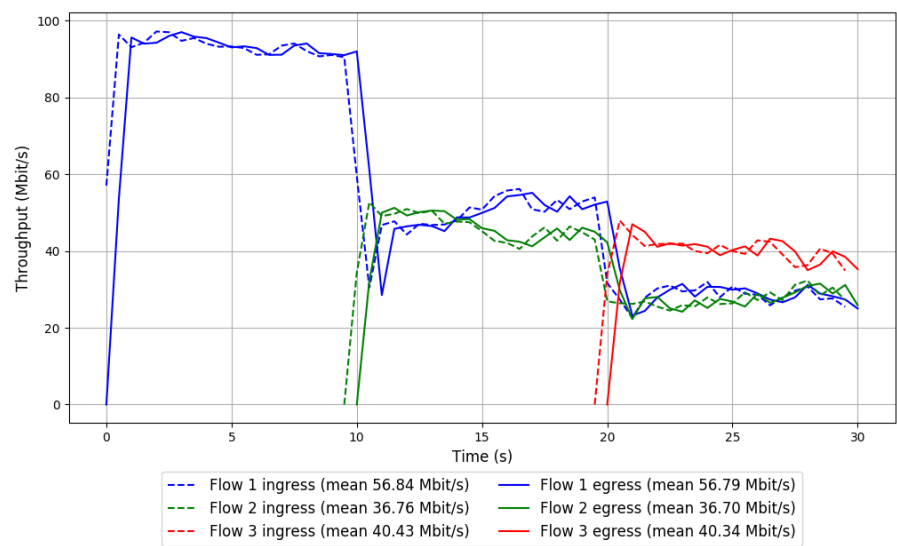


Run 4: Statistics of FillP-Sheep

Start at: 2019-02-12 05:30:16  
End at: 2019-02-12 05:30:46  
Local clock offset: -5.297 ms  
Remote clock offset: -1.375 ms

# Below is generated by plot.py at 2019-02-12 06:46:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.61 Mbit/s  
95th percentile per-packet one-way delay: 53.999 ms  
Loss rate: 0.20%  
-- Flow 1:  
Average throughput: 56.79 Mbit/s  
95th percentile per-packet one-way delay: 51.129 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 36.70 Mbit/s  
95th percentile per-packet one-way delay: 61.742 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 40.34 Mbit/s  
95th percentile per-packet one-way delay: 46.403 ms  
Loss rate: 0.42%

Run 4: Report of FillP-Sheep — Data Link



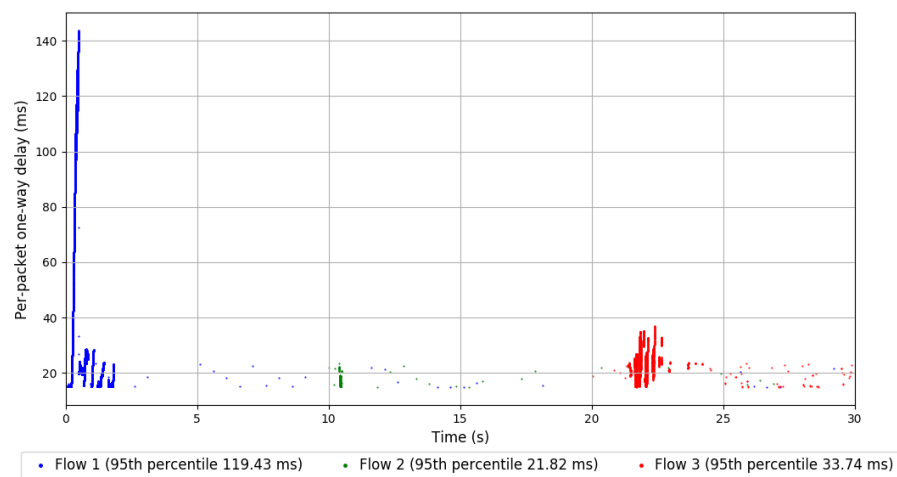
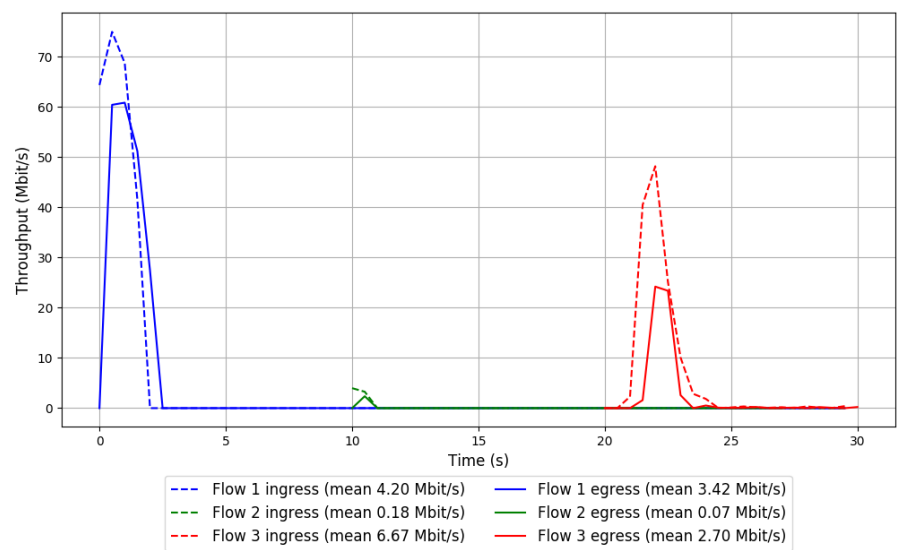


Run 5: Statistics of FillP-Sheep

Start at: 2019-02-12 06:05:30  
End at: 2019-02-12 06:06:00  
Local clock offset: -0.685 ms  
Remote clock offset: -0.846 ms

```
# Below is generated by plot.py at 2019-02-12 06:46:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.28 Mbit/s
95th percentile per-packet one-way delay: 114.903 ms
Loss rate: 34.39%
-- Flow 1:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 119.432 ms
Loss rate: 19.90%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 21.823 ms
Loss rate: 67.10%
-- Flow 3:
Average throughput: 2.70 Mbit/s
95th percentile per-packet one-way delay: 33.739 ms
Loss rate: 59.81%
```

Run 5: Report of FillP-Sheep — Data Link

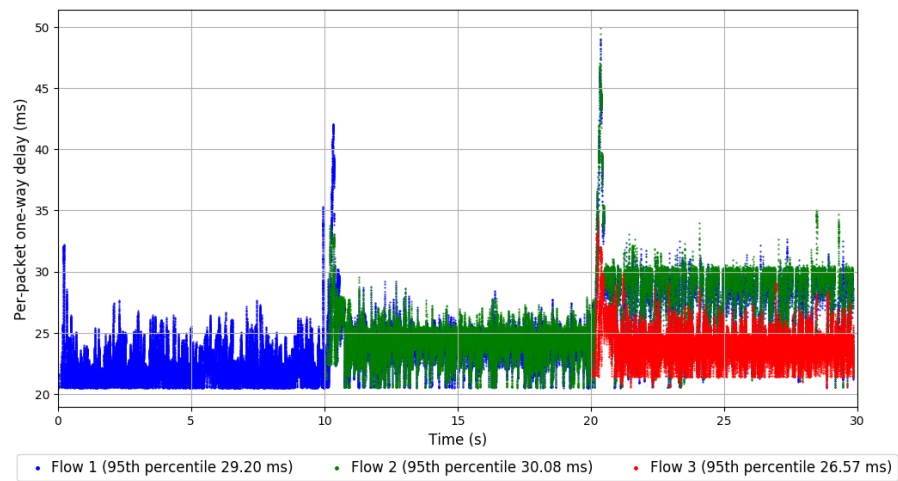
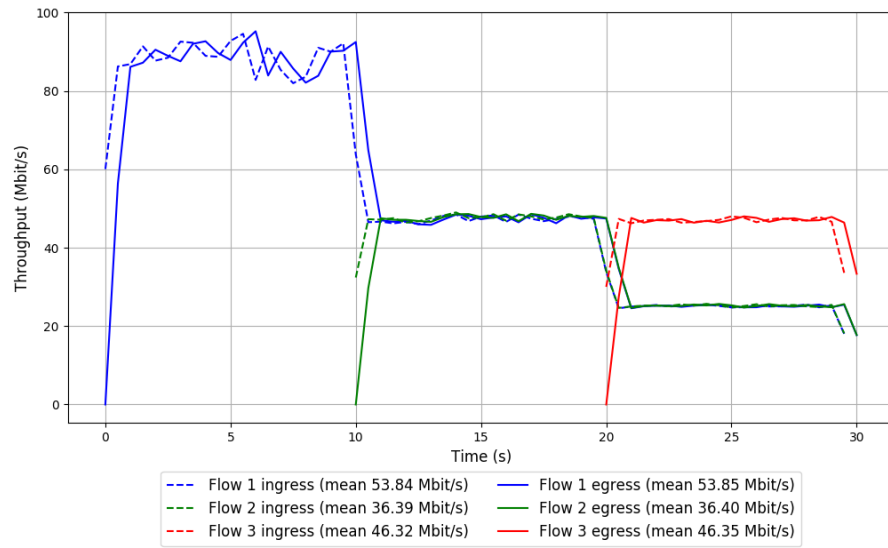


Run 1: Statistics of Indigo

Start at: 2019-02-12 04:08:42  
End at: 2019-02-12 04:09:12  
Local clock offset: 5.075 ms  
Remote clock offset: -4.337 ms

# Below is generated by plot.py at 2019-02-12 06:46:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.25 Mbit/s  
95th percentile per-packet one-way delay: 29.508 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 53.85 Mbit/s  
95th percentile per-packet one-way delay: 29.204 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 36.40 Mbit/s  
95th percentile per-packet one-way delay: 30.082 ms  
Loss rate: 0.13%  
-- Flow 3:  
Average throughput: 46.35 Mbit/s  
95th percentile per-packet one-way delay: 26.569 ms  
Loss rate: 0.31%

## Run 1: Report of Indigo — Data Link

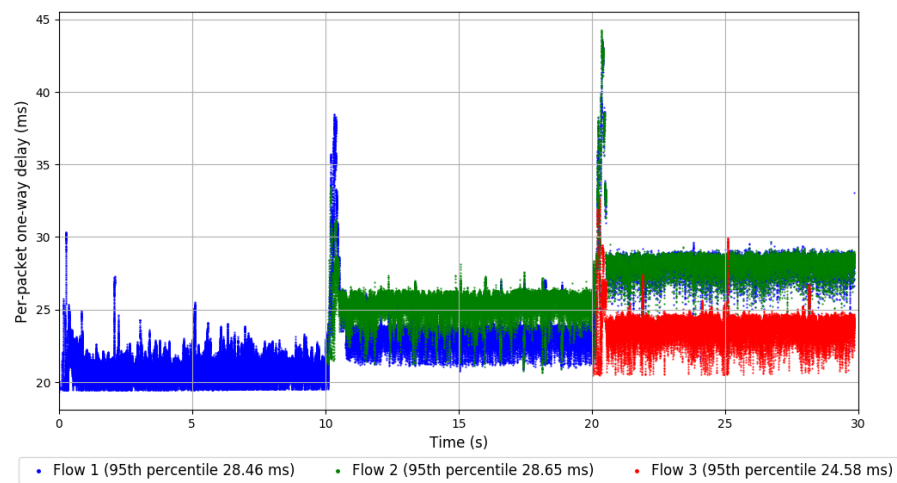
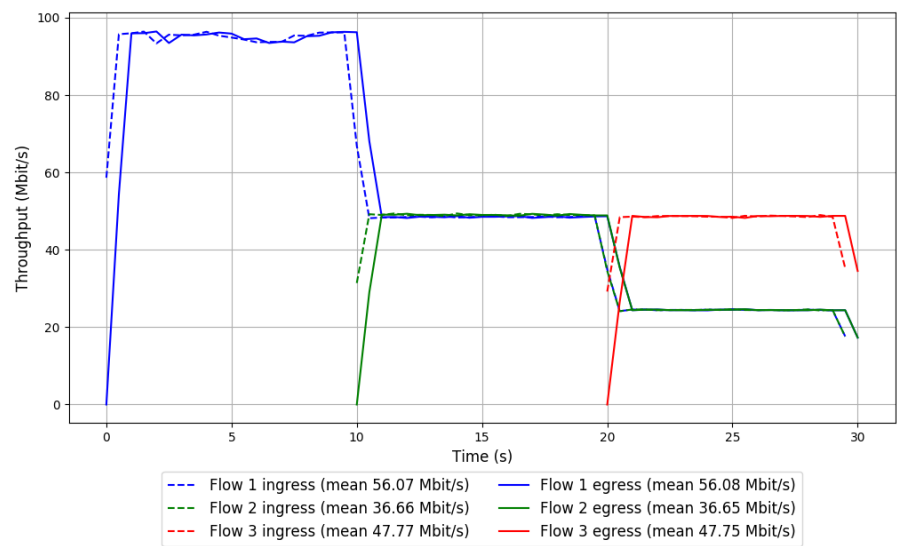


Run 2: Statistics of Indigo

Start at: 2019-02-12 04:34:34  
End at: 2019-02-12 04:35:04  
Local clock offset: 5.433 ms  
Remote clock offset: -3.156 ms

# Below is generated by plot.py at 2019-02-12 06:46:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.13 Mbit/s  
95th percentile per-packet one-way delay: 28.492 ms  
Loss rate: 0.12%  
-- Flow 1:  
Average throughput: 56.08 Mbit/s  
95th percentile per-packet one-way delay: 28.462 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 36.65 Mbit/s  
95th percentile per-packet one-way delay: 28.648 ms  
Loss rate: 0.14%  
-- Flow 3:  
Average throughput: 47.75 Mbit/s  
95th percentile per-packet one-way delay: 24.578 ms  
Loss rate: 0.30%

Run 2: Report of Indigo — Data Link

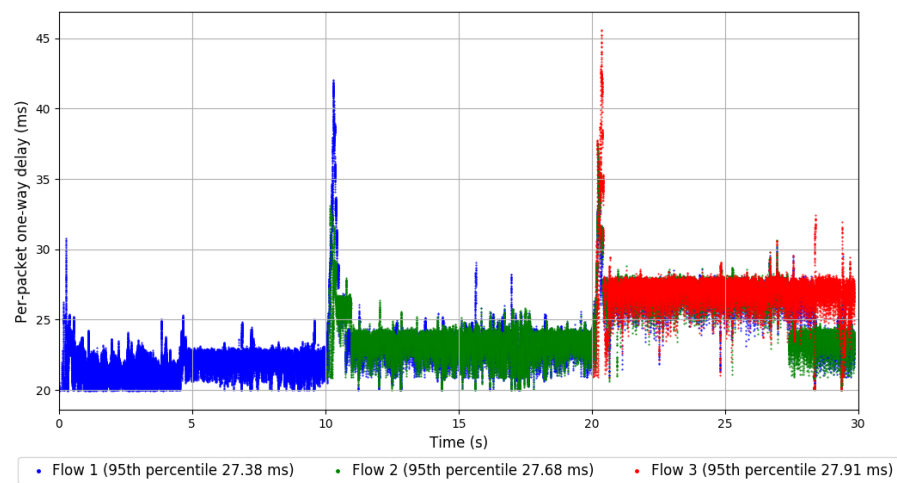
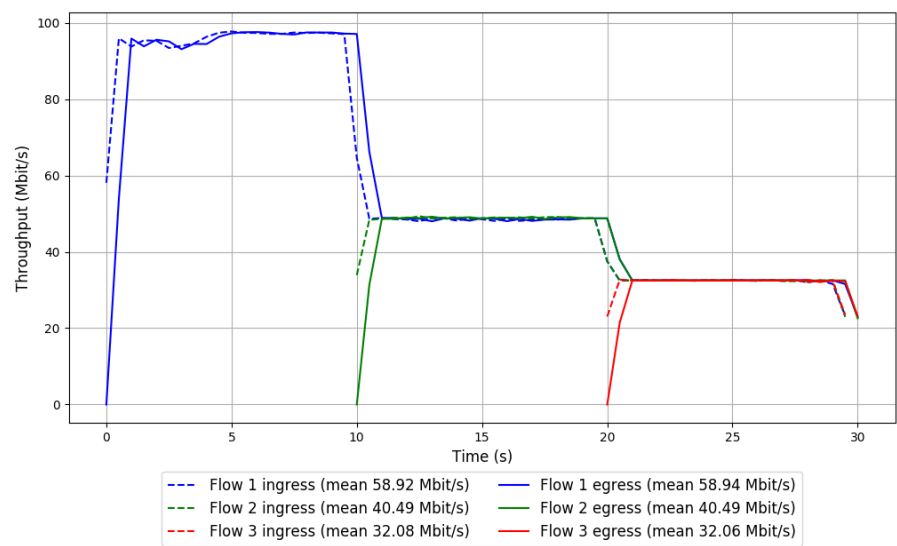


Run 3: Statistics of Indigo

Start at: 2019-02-12 05:01:03  
End at: 2019-02-12 05:01:33  
Local clock offset: -0.904 ms  
Remote clock offset: -5.194 ms

# Below is generated by plot.py at 2019-02-12 06:46:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.39 Mbit/s  
95th percentile per-packet one-way delay: 27.636 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 58.94 Mbit/s  
95th percentile per-packet one-way delay: 27.382 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 40.49 Mbit/s  
95th percentile per-packet one-way delay: 27.685 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 32.06 Mbit/s  
95th percentile per-packet one-way delay: 27.912 ms  
Loss rate: 0.35%

Run 3: Report of Indigo — Data Link



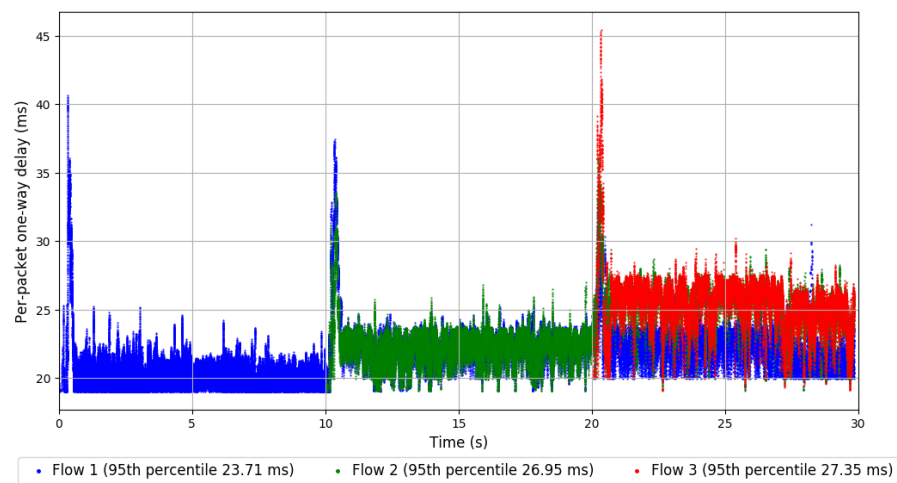
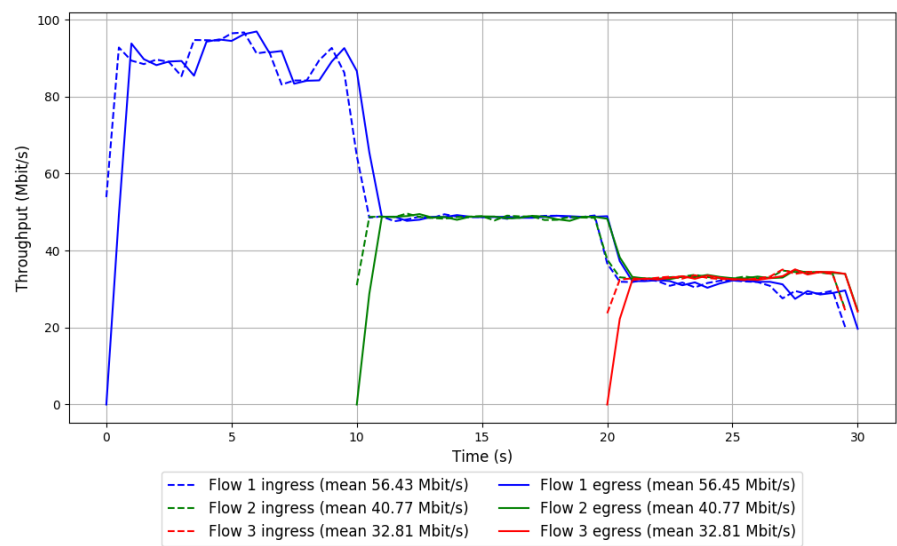


Run 4: Statistics of Indigo

Start at: 2019-02-12 05:27:36  
End at: 2019-02-12 05:28:06  
Local clock offset: -3.262 ms  
Remote clock offset: -1.494 ms

# Below is generated by plot.py at 2019-02-12 06:46:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.34 Mbit/s  
95th percentile per-packet one-way delay: 26.807 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 56.45 Mbit/s  
95th percentile per-packet one-way delay: 23.715 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 40.77 Mbit/s  
95th percentile per-packet one-way delay: 26.947 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 32.81 Mbit/s  
95th percentile per-packet one-way delay: 27.353 ms  
Loss rate: 0.32%

Run 4: Report of Indigo — Data Link

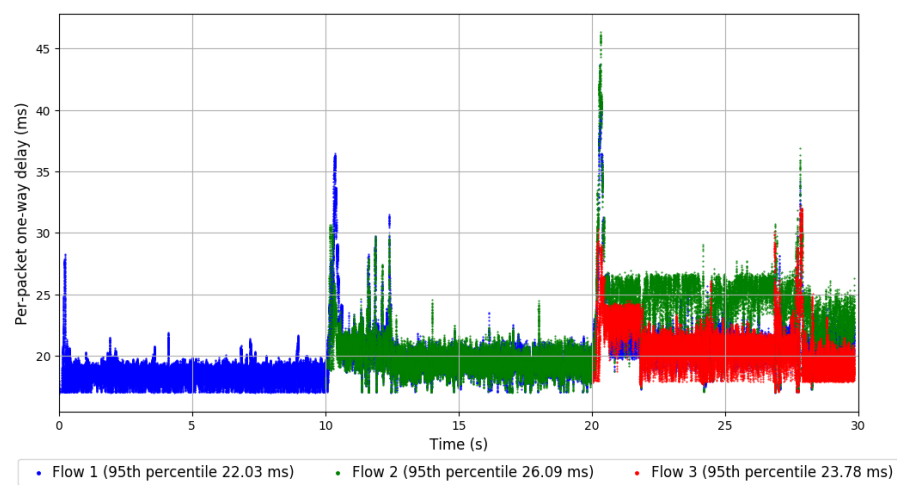
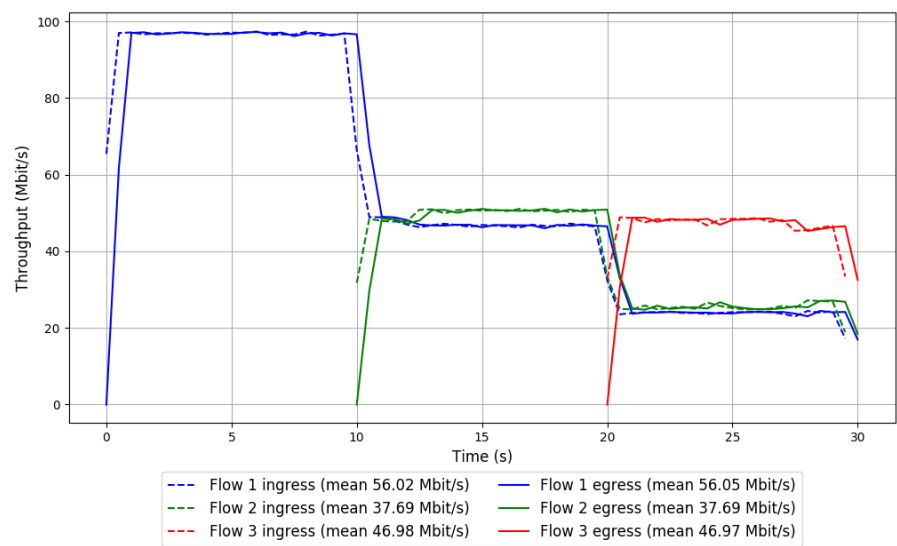


Run 5: Statistics of Indigo

Start at: 2019-02-12 06:02:54  
End at: 2019-02-12 06:03:24  
Local clock offset: 0.916 ms  
Remote clock offset: -0.604 ms

# Below is generated by plot.py at 2019-02-12 06:46:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.55 Mbit/s  
95th percentile per-packet one-way delay: 24.974 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 56.05 Mbit/s  
95th percentile per-packet one-way delay: 22.034 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 37.69 Mbit/s  
95th percentile per-packet one-way delay: 26.092 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 46.97 Mbit/s  
95th percentile per-packet one-way delay: 23.783 ms  
Loss rate: 0.29%

Run 5: Report of Indigo — Data Link

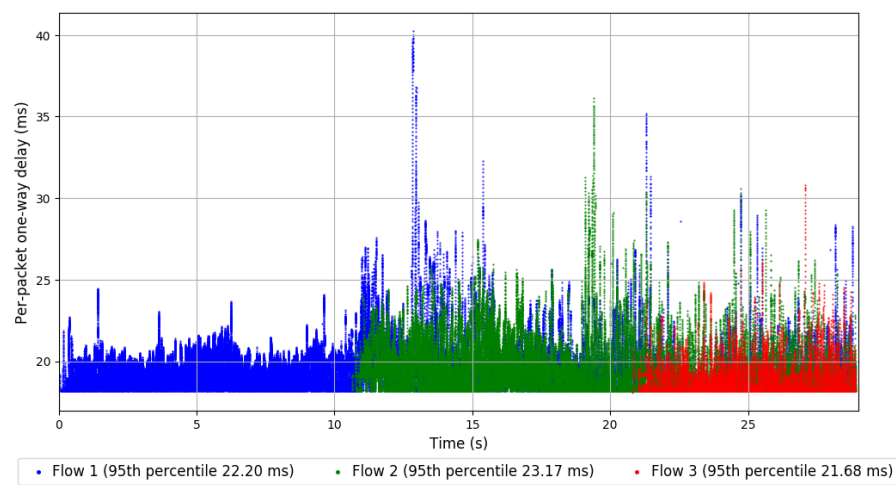
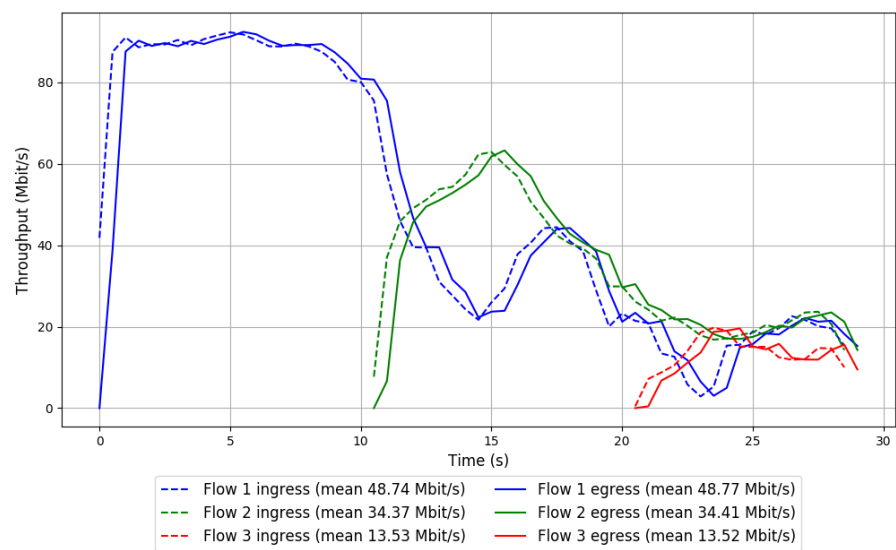


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-12 04:12:26  
End at: 2019-02-12 04:12:56  
Local clock offset: 4.029 ms  
Remote clock offset: -3.148 ms

# Below is generated by plot.py at 2019-02-12 06:46:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 74.32 Mbit/s  
95th percentile per-packet one-way delay: 22.581 ms  
Loss rate: 0.07%  
-- Flow 1:  
Average throughput: 48.77 Mbit/s  
95th percentile per-packet one-way delay: 22.201 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 34.41 Mbit/s  
95th percentile per-packet one-way delay: 23.172 ms  
Loss rate: 0.07%  
-- Flow 3:  
Average throughput: 13.52 Mbit/s  
95th percentile per-packet one-way delay: 21.678 ms  
Loss rate: 0.31%

Run 1: Report of Indigo-MusesC3 — Data Link

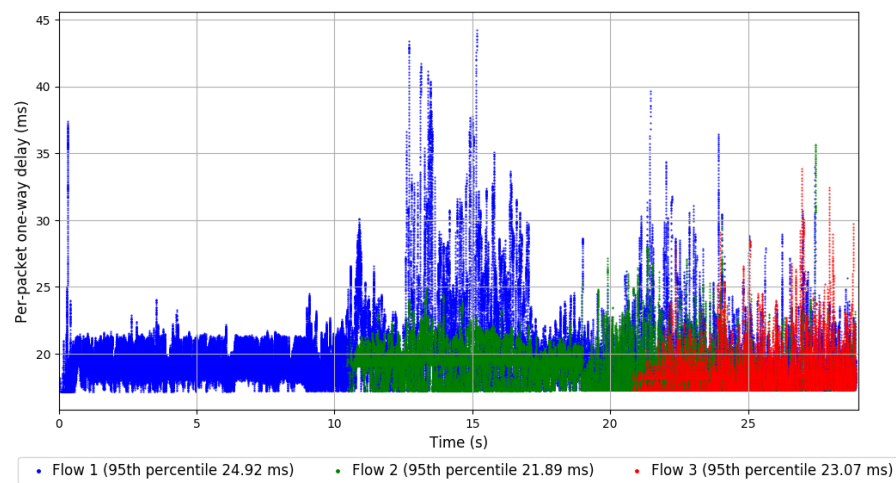
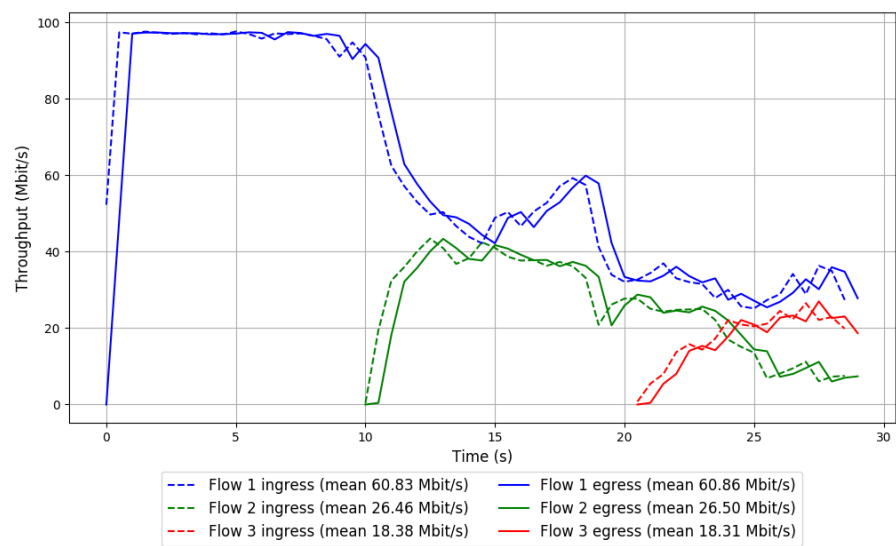


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-12 04:38:16  
End at: 2019-02-12 04:38:46  
Local clock offset: 2.359 ms  
Remote clock offset: -2.481 ms

# Below is generated by plot.py at 2019-02-12 06:46:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 82.94 Mbit/s  
95th percentile per-packet one-way delay: 24.026 ms  
Loss rate: 0.07%  
-- Flow 1:  
Average throughput: 60.86 Mbit/s  
95th percentile per-packet one-way delay: 24.917 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 26.50 Mbit/s  
95th percentile per-packet one-way delay: 21.890 ms  
Loss rate: 0.06%  
-- Flow 3:  
Average throughput: 18.31 Mbit/s  
95th percentile per-packet one-way delay: 23.072 ms  
Loss rate: 0.61%

Run 2: Report of Indigo-MusesC3 — Data Link





Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-12 05:04:45

End at: 2019-02-12 05:05:15

Local clock offset: -4.103 ms

Remote clock offset: -2.49 ms

# Below is generated by plot.py at 2019-02-12 06:47:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 78.12 Mbit/s

95th percentile per-packet one-way delay: 19.556 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 47.47 Mbit/s

95th percentile per-packet one-way delay: 18.880 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 39.94 Mbit/s

95th percentile per-packet one-way delay: 20.111 ms

Loss rate: 0.02%

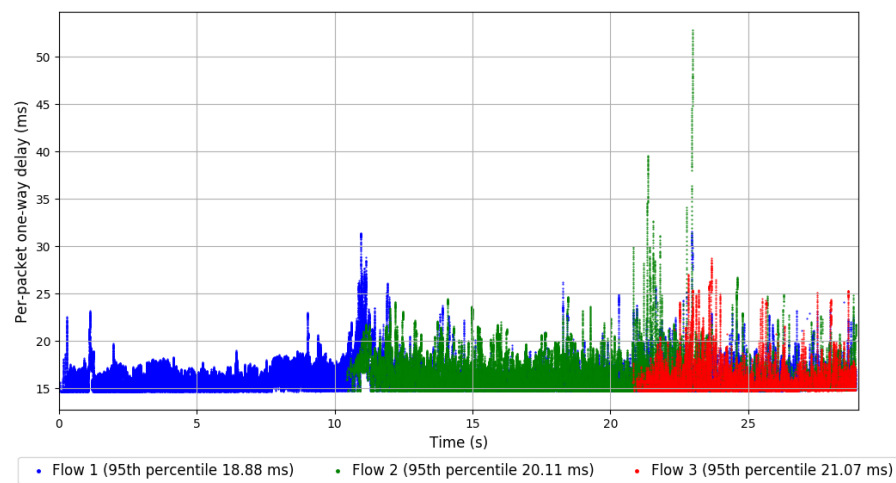
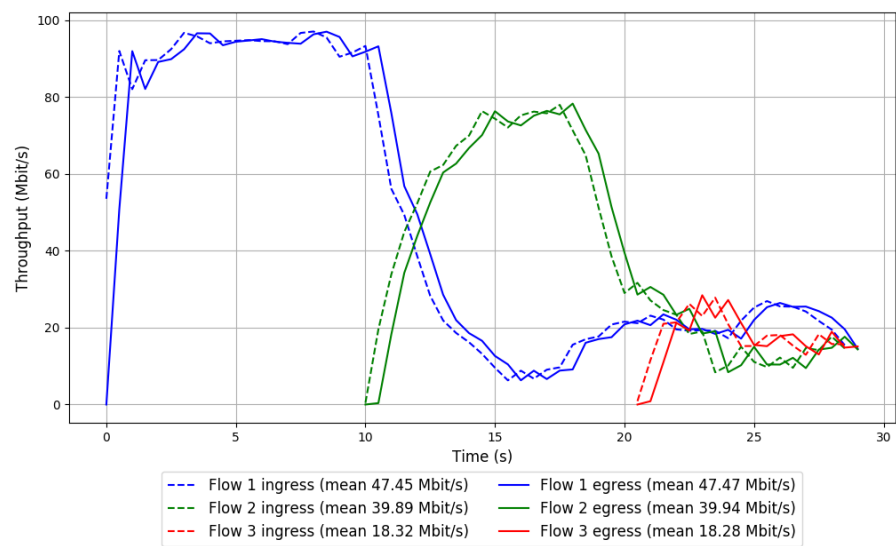
-- Flow 3:

Average throughput: 18.28 Mbit/s

95th percentile per-packet one-way delay: 21.073 ms

Loss rate: 0.52%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-12 05:31:33

End at: 2019-02-12 05:32:03

Local clock offset: -4.385 ms

Remote clock offset: -1.96 ms

# Below is generated by plot.py at 2019-02-12 06:47:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 72.12 Mbit/s

95th percentile per-packet one-way delay: 23.319 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 49.30 Mbit/s

95th percentile per-packet one-way delay: 23.542 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.11 Mbit/s

95th percentile per-packet one-way delay: 23.060 ms

Loss rate: 0.10%

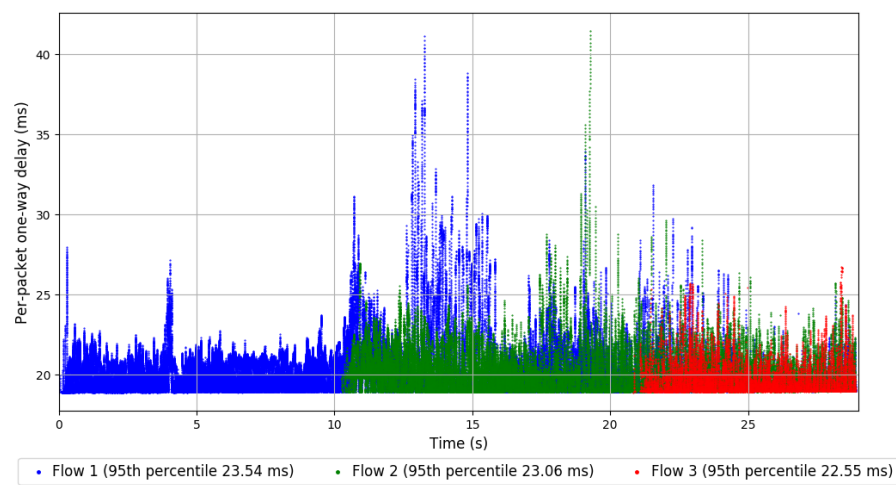
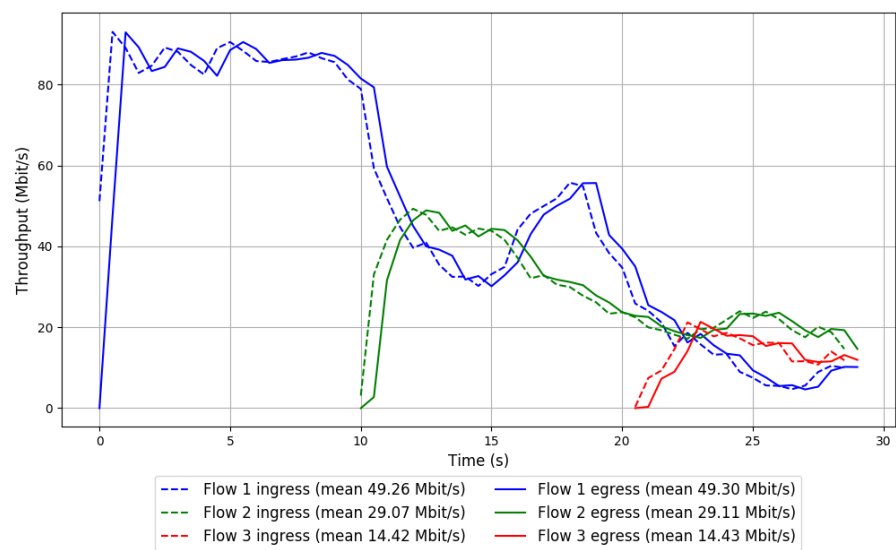
-- Flow 3:

Average throughput: 14.43 Mbit/s

95th percentile per-packet one-way delay: 22.549 ms

Loss rate: 0.33%

Run 4: Report of Indigo-MusesC3 — Data Link

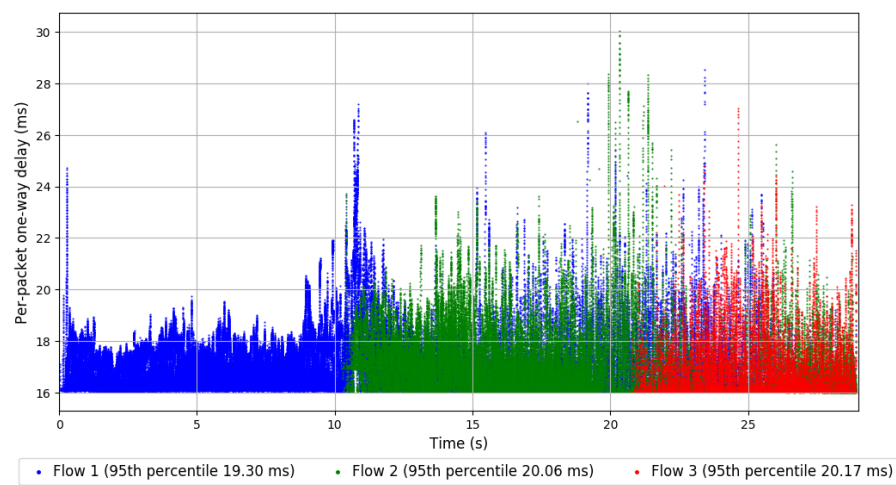
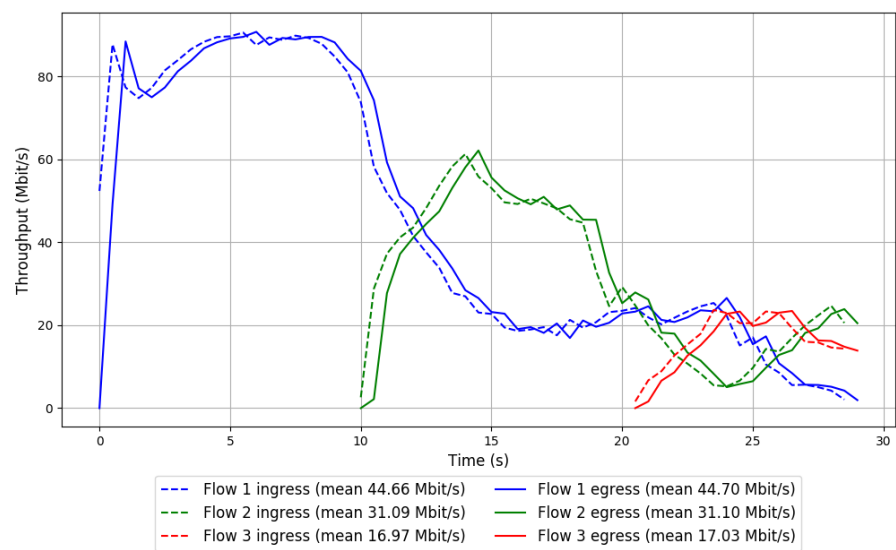


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-12 06:17:28  
End at: 2019-02-12 06:17:58  
Local clock offset: 2.874 ms  
Remote clock offset: -0.866 ms

# Below is generated by plot.py at 2019-02-12 06:47:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 69.53 Mbit/s  
95th percentile per-packet one-way delay: 19.674 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 44.70 Mbit/s  
95th percentile per-packet one-way delay: 19.305 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 31.10 Mbit/s  
95th percentile per-packet one-way delay: 20.060 ms  
Loss rate: 0.11%  
-- Flow 3:  
Average throughput: 17.03 Mbit/s  
95th percentile per-packet one-way delay: 20.171 ms  
Loss rate: 0.18%

Run 5: Report of Indigo-MusesC3 — Data Link

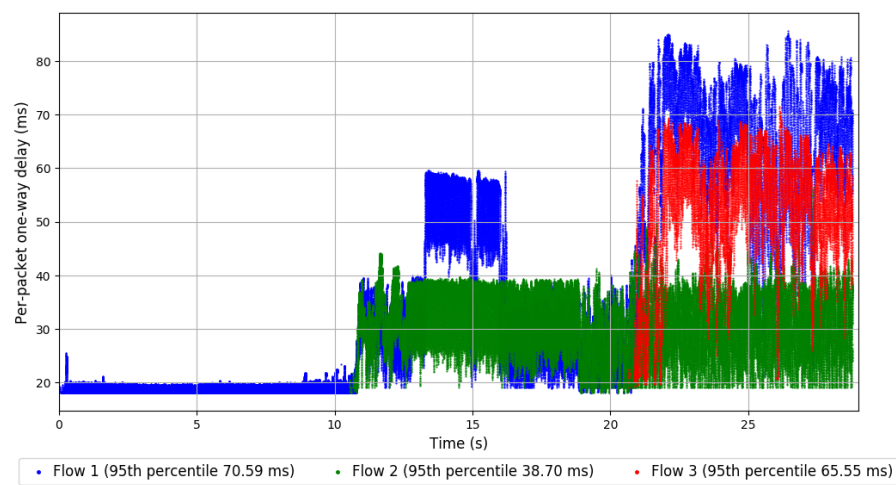
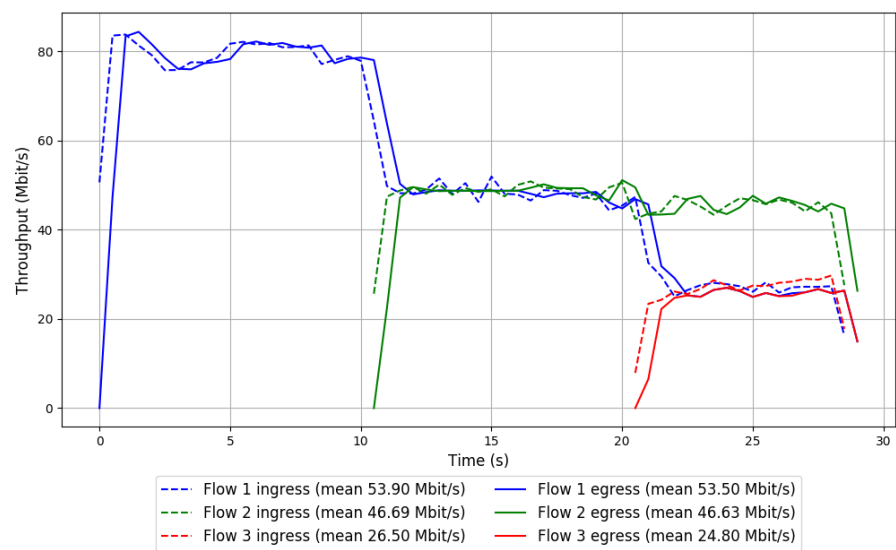


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-12 04:32:00  
End at: 2019-02-12 04:32:30  
Local clock offset: 3.918 ms  
Remote clock offset: -3.716 ms

# Below is generated by plot.py at 2019-02-12 06:47:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.12 Mbit/s  
95th percentile per-packet one-way delay: 65.178 ms  
Loss rate: 1.09%  
-- Flow 1:  
Average throughput: 53.50 Mbit/s  
95th percentile per-packet one-way delay: 70.590 ms  
Loss rate: 0.79%  
-- Flow 2:  
Average throughput: 46.63 Mbit/s  
95th percentile per-packet one-way delay: 38.695 ms  
Loss rate: 0.21%  
-- Flow 3:  
Average throughput: 24.80 Mbit/s  
95th percentile per-packet one-way delay: 65.551 ms  
Loss rate: 6.69%

Run 1: Report of Indigo-MusesC5 — Data Link



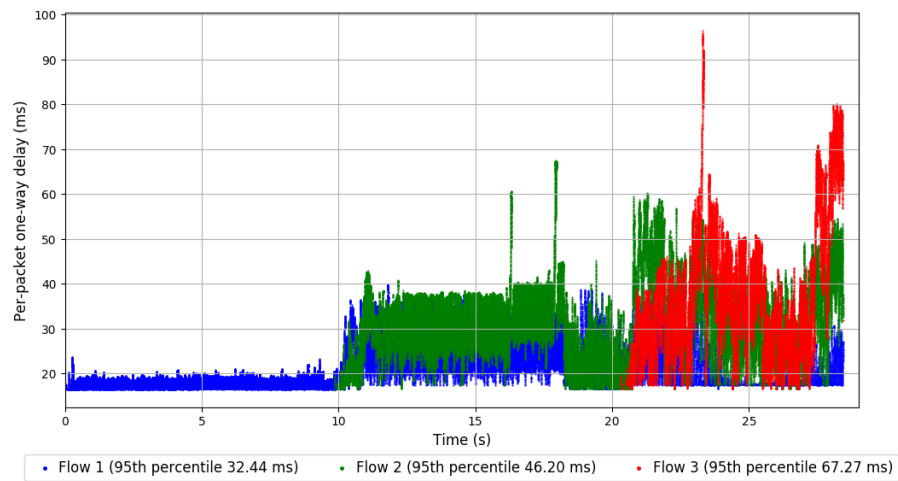
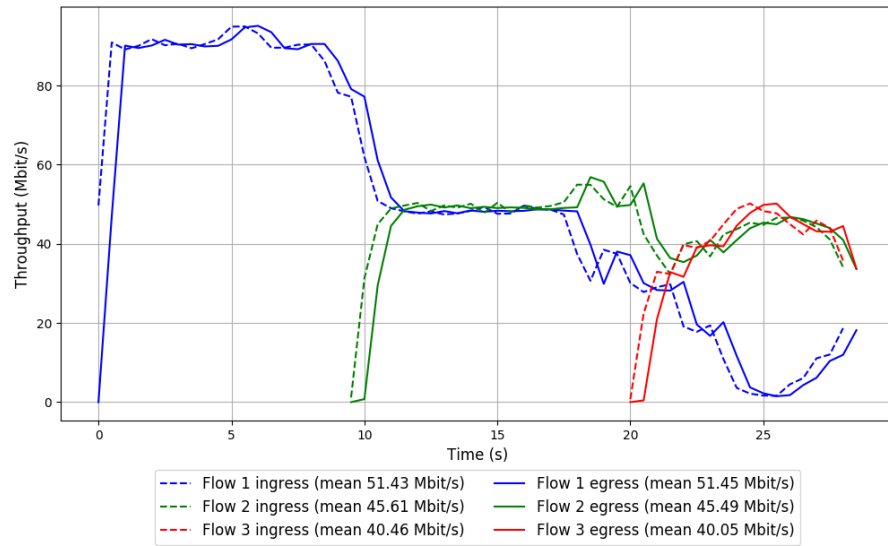


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-12 04:58:23  
End at: 2019-02-12 04:58:53  
Local clock offset: -3.209 ms  
Remote clock offset: -4.248 ms

# Below is generated by plot.py at 2019-02-12 06:47:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.70 Mbit/s  
95th percentile per-packet one-way delay: 45.225 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 51.45 Mbit/s  
95th percentile per-packet one-way delay: 32.443 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 45.49 Mbit/s  
95th percentile per-packet one-way delay: 46.202 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 40.05 Mbit/s  
95th percentile per-packet one-way delay: 67.273 ms  
Loss rate: 1.22%

## Run 2: Report of Indigo-MusesC5 — Data Link

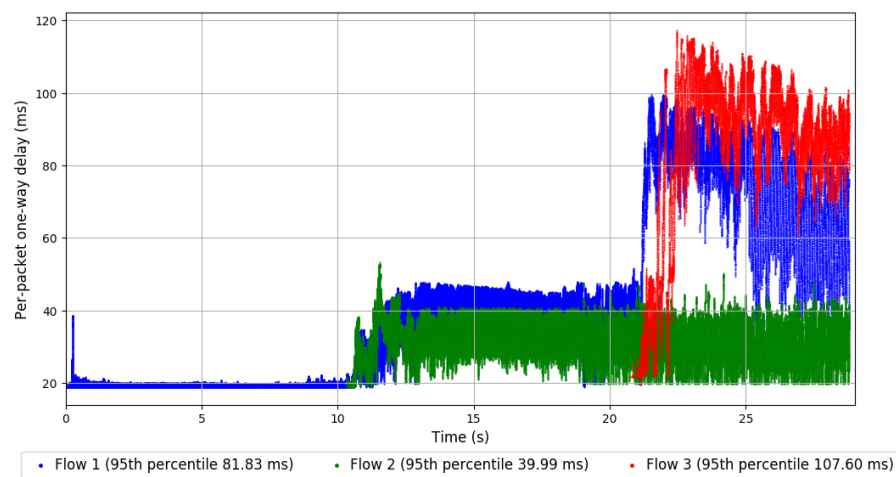
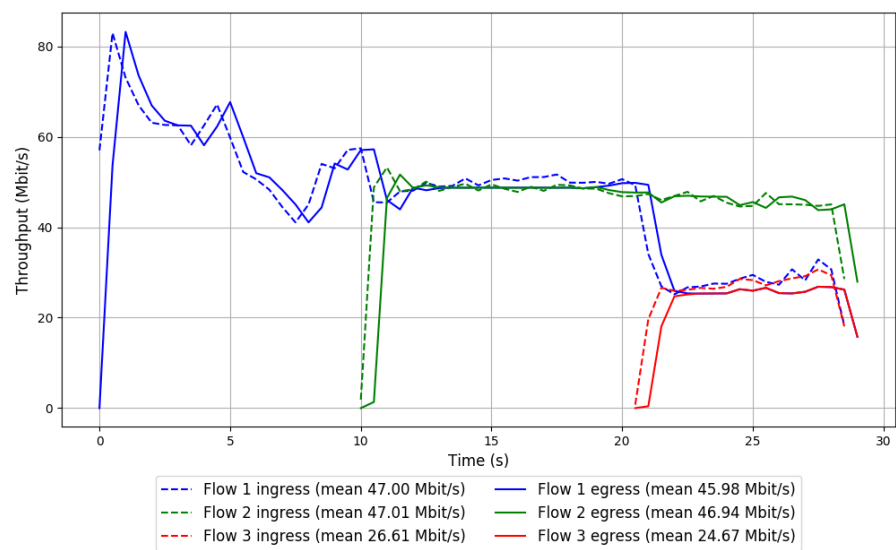


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-12 05:24:59  
End at: 2019-02-12 05:25:29  
Local clock offset: -3.812 ms  
Remote clock offset: -2.272 ms

# Below is generated by plot.py at 2019-02-12 06:47:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 83.00 Mbit/s  
95th percentile per-packet one-way delay: 90.445 ms  
Loss rate: 1.97%  
-- Flow 1:  
Average throughput: 45.98 Mbit/s  
95th percentile per-packet one-way delay: 81.829 ms  
Loss rate: 2.22%  
-- Flow 2:  
Average throughput: 46.94 Mbit/s  
95th percentile per-packet one-way delay: 39.994 ms  
Loss rate: 0.25%  
-- Flow 3:  
Average throughput: 24.67 Mbit/s  
95th percentile per-packet one-way delay: 107.596 ms  
Loss rate: 7.41%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-12 06:00:14

End at: 2019-02-12 06:00:44

Local clock offset: 0.466 ms

Remote clock offset: -2.74 ms

# Below is generated by plot.py at 2019-02-12 06:47:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 85.67 Mbit/s

95th percentile per-packet one-way delay: 64.830 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 50.63 Mbit/s

95th percentile per-packet one-way delay: 69.293 ms

Loss rate: 1.22%

-- Flow 2:

Average throughput: 40.93 Mbit/s

95th percentile per-packet one-way delay: 56.011 ms

Loss rate: 1.17%

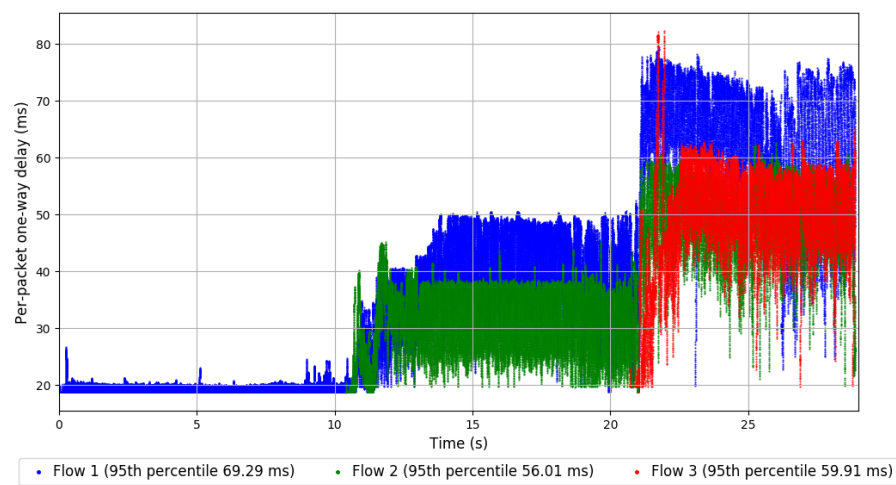
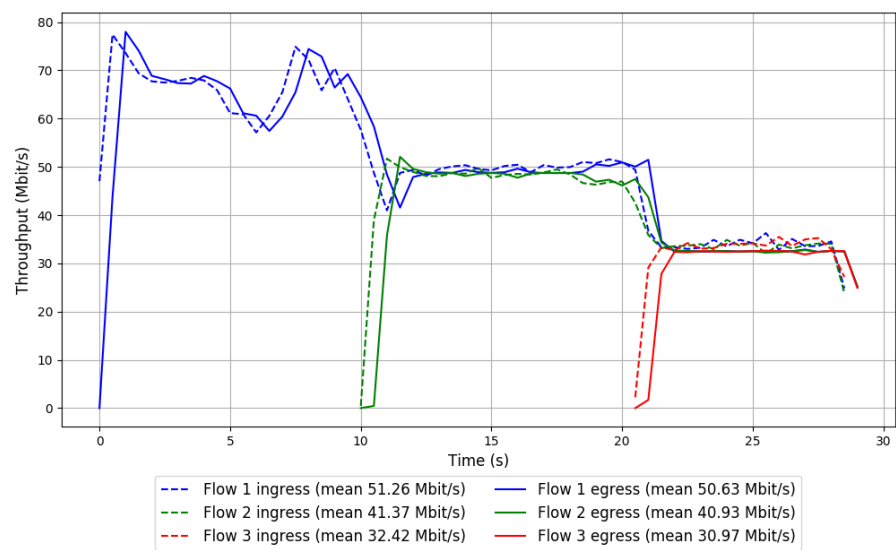
-- Flow 3:

Average throughput: 30.97 Mbit/s

95th percentile per-packet one-way delay: 59.906 ms

Loss rate: 4.64%

Run 4: Report of Indigo-MusesC5 — Data Link

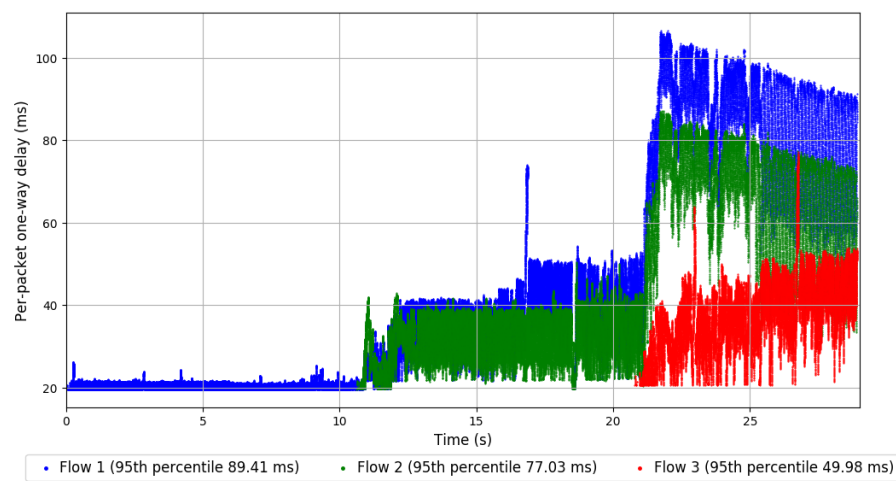
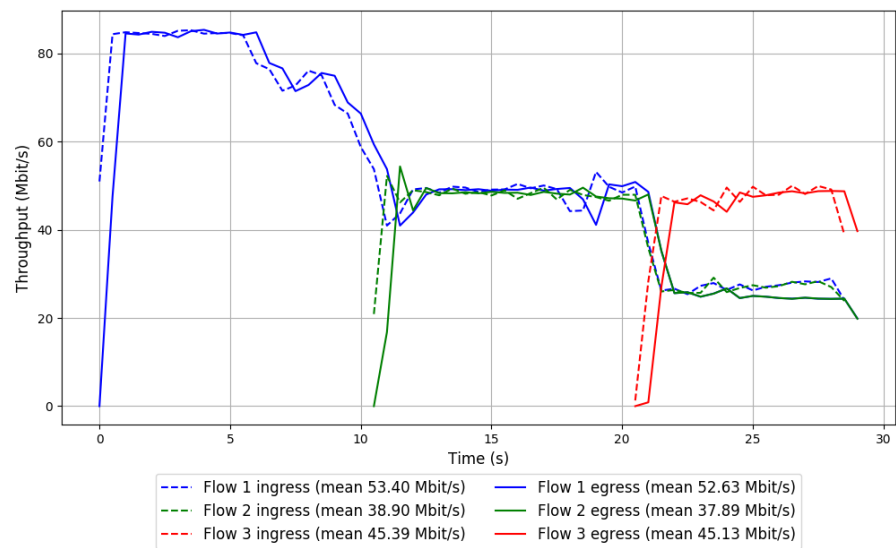


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-12 06:38:48  
End at: 2019-02-12 06:39:18  
Local clock offset: 2.942 ms  
Remote clock offset: -2.905 ms

# Below is generated by plot.py at 2019-02-12 06:47:50  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.33 Mbit/s  
95th percentile per-packet one-way delay: 81.661 ms  
Loss rate: 1.69%  
-- Flow 1:  
Average throughput: 52.63 Mbit/s  
95th percentile per-packet one-way delay: 89.410 ms  
Loss rate: 1.49%  
-- Flow 2:  
Average throughput: 37.89 Mbit/s  
95th percentile per-packet one-way delay: 77.035 ms  
Loss rate: 2.60%  
-- Flow 3:  
Average throughput: 45.13 Mbit/s  
95th percentile per-packet one-way delay: 49.975 ms  
Loss rate: 0.75%

Run 5: Report of Indigo-MusesC5 — Data Link



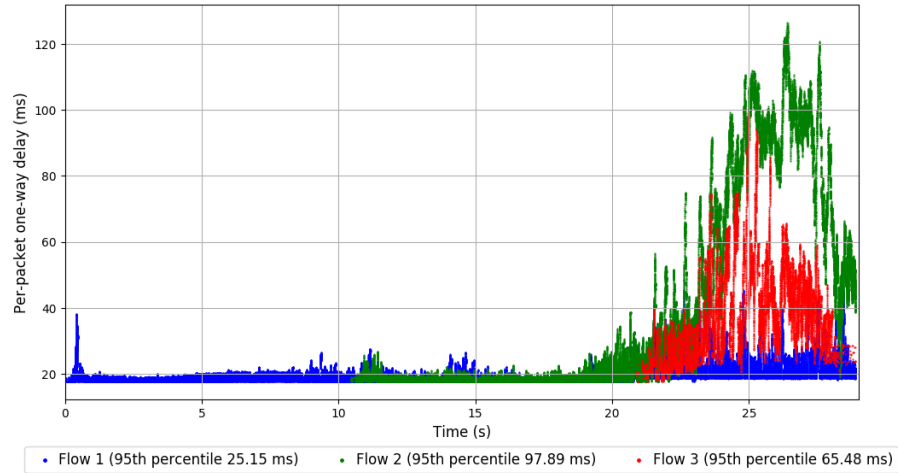
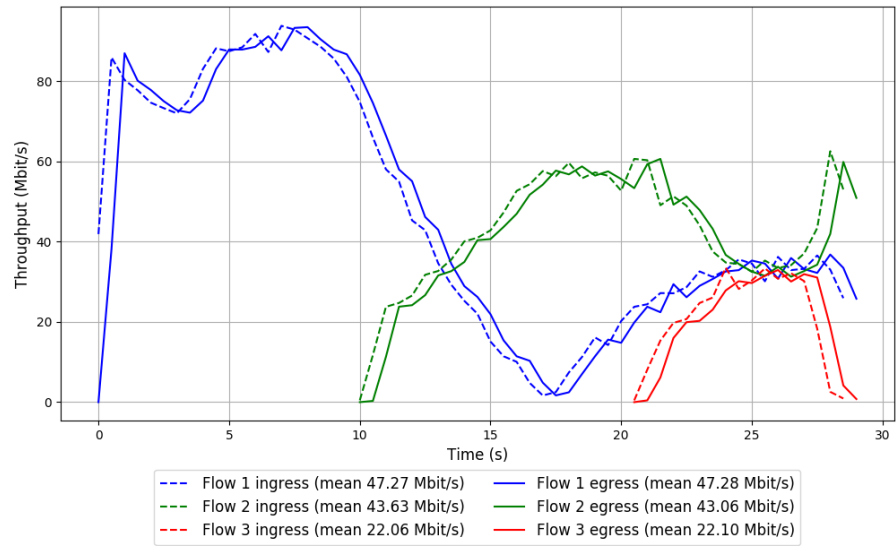


Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-12 04:09:57  
End at: 2019-02-12 04:10:27  
Local clock offset: 3.38 ms  
Remote clock offset: -3.258 ms

# Below is generated by plot.py at 2019-02-12 06:48:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 80.93 Mbit/s  
95th percentile per-packet one-way delay: 76.628 ms  
Loss rate: 0.54%  
-- Flow 1:  
Average throughput: 47.28 Mbit/s  
95th percentile per-packet one-way delay: 25.152 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 43.06 Mbit/s  
95th percentile per-packet one-way delay: 97.893 ms  
Loss rate: 1.43%  
-- Flow 3:  
Average throughput: 22.10 Mbit/s  
95th percentile per-packet one-way delay: 65.481 ms  
Loss rate: 0.19%

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

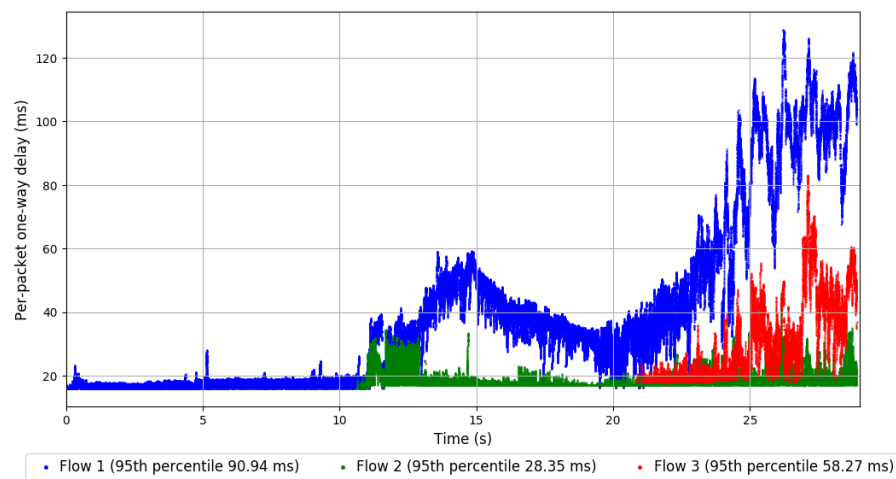
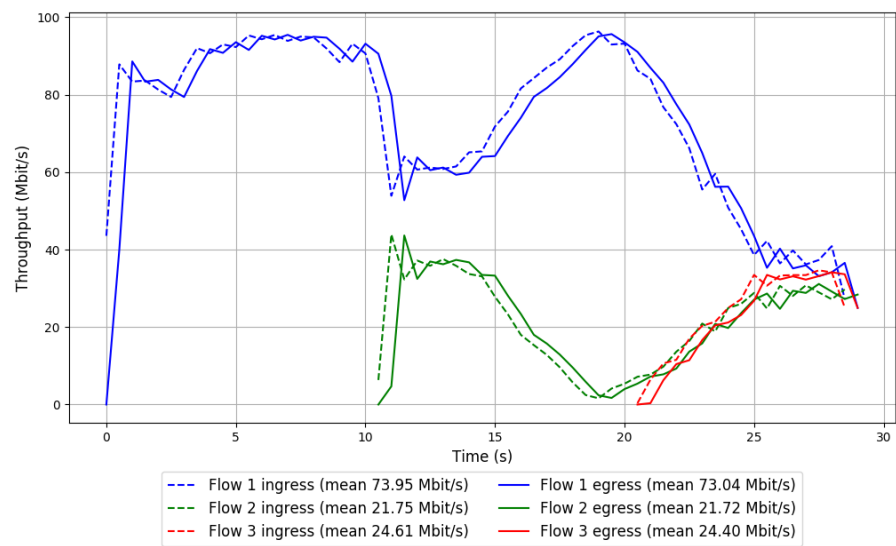


Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-12 04:35:49  
End at: 2019-02-12 04:36:19  
Local clock offset: 1.335 ms  
Remote clock offset: -3.204 ms

# Below is generated by plot.py at 2019-02-12 06:48:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.61 Mbit/s  
95th percentile per-packet one-way delay: 80.350 ms  
Loss rate: 1.11%  
-- Flow 1:  
Average throughput: 73.04 Mbit/s  
95th percentile per-packet one-way delay: 90.944 ms  
Loss rate: 1.27%  
-- Flow 2:  
Average throughput: 21.72 Mbit/s  
95th percentile per-packet one-way delay: 28.352 ms  
Loss rate: 0.25%  
-- Flow 3:  
Average throughput: 24.40 Mbit/s  
95th percentile per-packet one-way delay: 58.269 ms  
Loss rate: 1.06%

Run 2: Report of Indigo-MusesD — Data Link

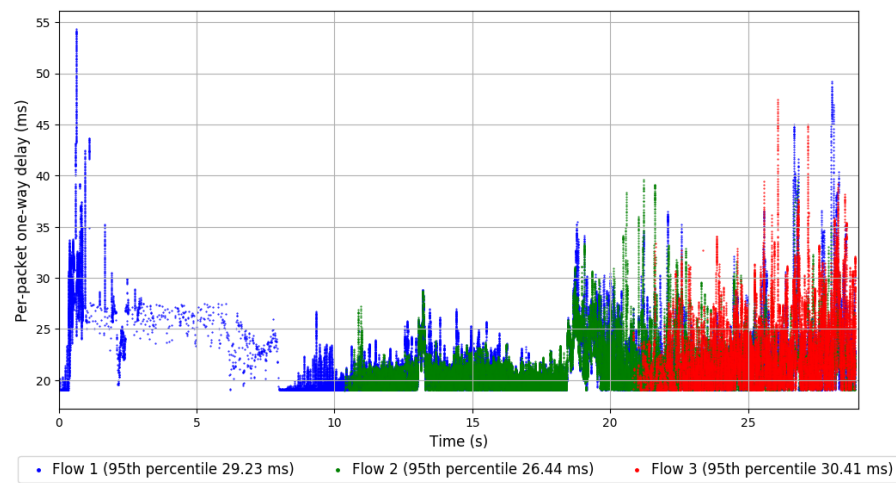
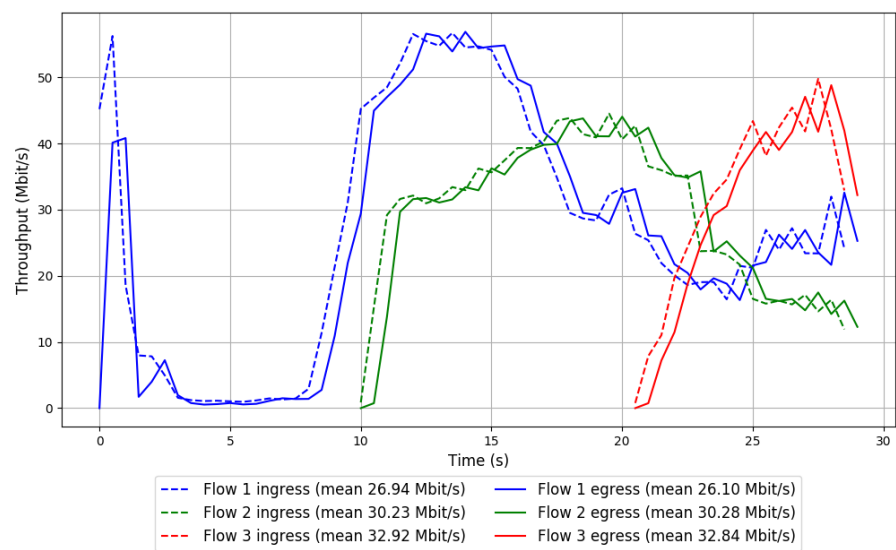


Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-12 05:02:18  
End at: 2019-02-12 05:02:48  
Local clock offset: 0.352 ms  
Remote clock offset: -2.893 ms

# Below is generated by plot.py at 2019-02-12 06:48:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 54.74 Mbit/s  
95th percentile per-packet one-way delay: 28.596 ms  
Loss rate: 1.64%  
-- Flow 1:  
Average throughput: 26.10 Mbit/s  
95th percentile per-packet one-way delay: 29.225 ms  
Loss rate: 3.14%  
-- Flow 2:  
Average throughput: 30.28 Mbit/s  
95th percentile per-packet one-way delay: 26.440 ms  
Loss rate: 0.06%  
-- Flow 3:  
Average throughput: 32.84 Mbit/s  
95th percentile per-packet one-way delay: 30.408 ms  
Loss rate: 0.58%

Run 3: Report of Indigo-MusesD — Data Link

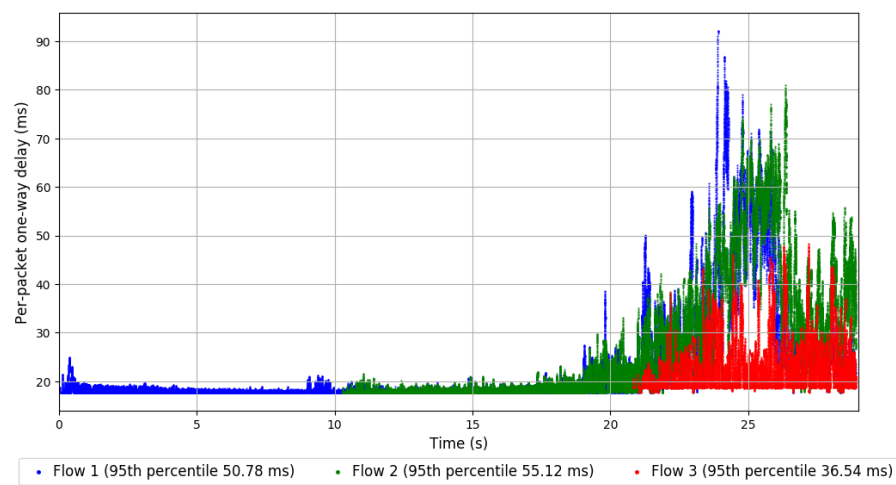
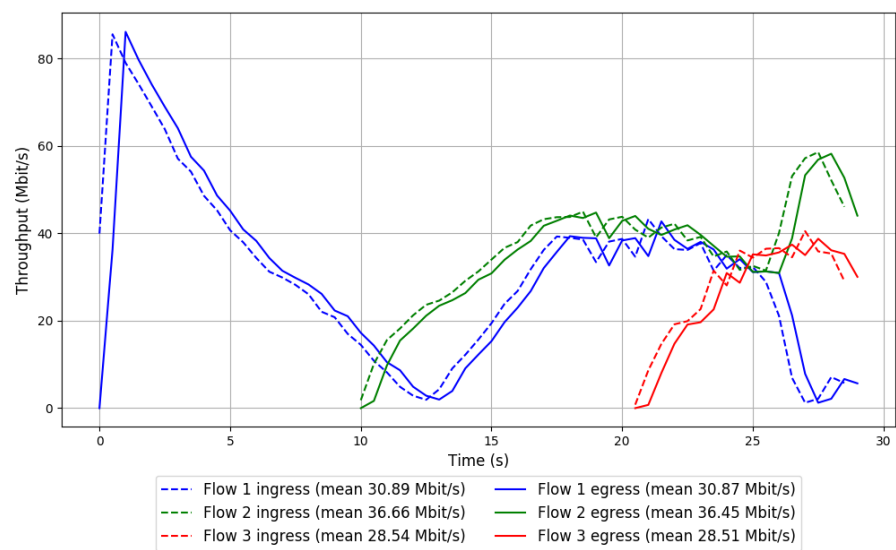


Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-12 05:29:03  
End at: 2019-02-12 05:29:33  
Local clock offset: -5.258 ms  
Remote clock offset: -1.923 ms

# Below is generated by plot.py at 2019-02-12 06:48:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 62.39 Mbit/s  
95th percentile per-packet one-way delay: 51.751 ms  
Loss rate: 0.36%  
-- Flow 1:  
Average throughput: 30.87 Mbit/s  
95th percentile per-packet one-way delay: 50.784 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 36.45 Mbit/s  
95th percentile per-packet one-way delay: 55.120 ms  
Loss rate: 0.70%  
-- Flow 3:  
Average throughput: 28.51 Mbit/s  
95th percentile per-packet one-way delay: 36.541 ms  
Loss rate: 0.30%

Run 4: Report of Indigo-MusesD — Data Link



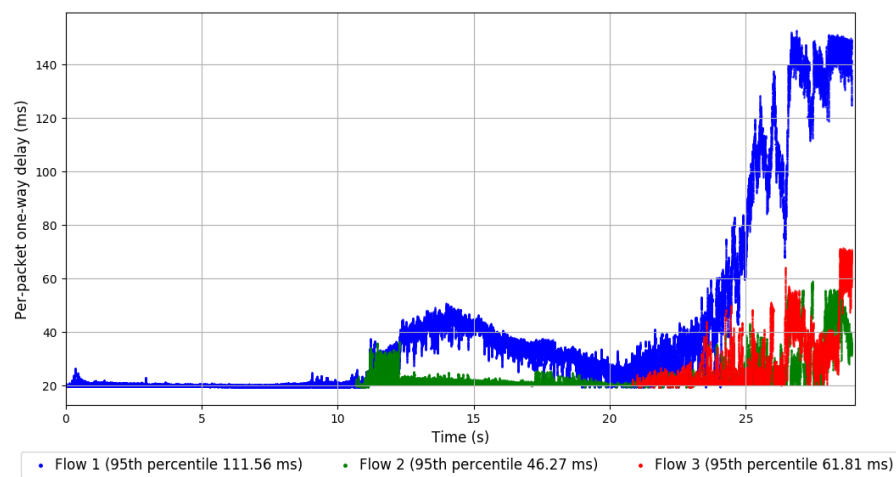
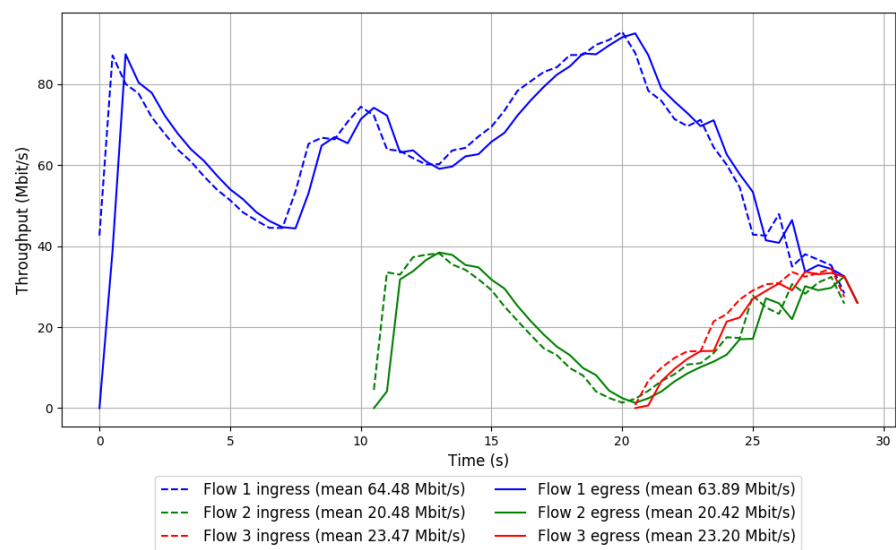


Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-12 06:04:15  
End at: 2019-02-12 06:04:45  
Local clock offset: 2.13 ms  
Remote clock offset: -2.187 ms

# Below is generated by plot.py at 2019-02-12 06:48:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 83.31 Mbit/s  
95th percentile per-packet one-way delay: 98.492 ms  
Loss rate: 0.93%  
-- Flow 1:  
Average throughput: 63.89 Mbit/s  
95th percentile per-packet one-way delay: 111.565 ms  
Loss rate: 0.99%  
-- Flow 2:  
Average throughput: 20.42 Mbit/s  
95th percentile per-packet one-way delay: 46.274 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 23.20 Mbit/s  
95th percentile per-packet one-way delay: 61.810 ms  
Loss rate: 1.48%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-12 04:14:50

End at: 2019-02-12 04:15:20

Local clock offset: 4.217 ms

Remote clock offset: -3.17 ms

# Below is generated by plot.py at 2019-02-12 06:48:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.53 Mbit/s

95th percentile per-packet one-way delay: 81.095 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 59.75 Mbit/s

95th percentile per-packet one-way delay: 81.760 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 42.15 Mbit/s

95th percentile per-packet one-way delay: 31.539 ms

Loss rate: 0.15%

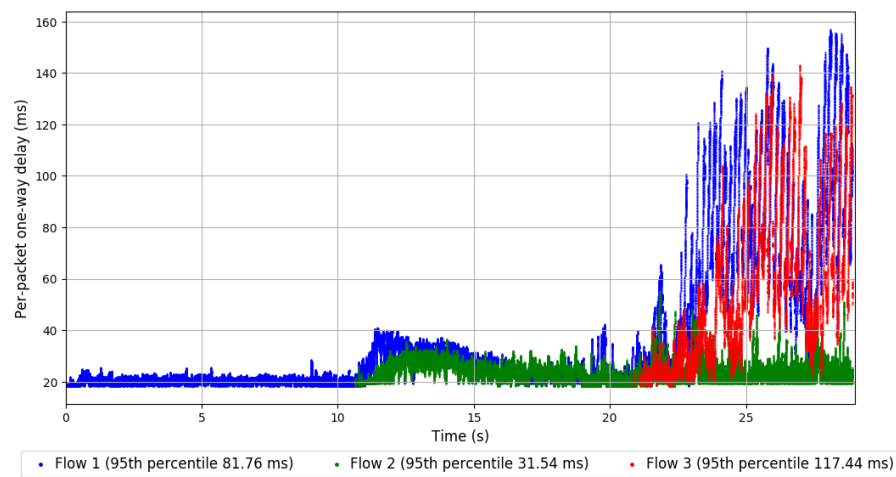
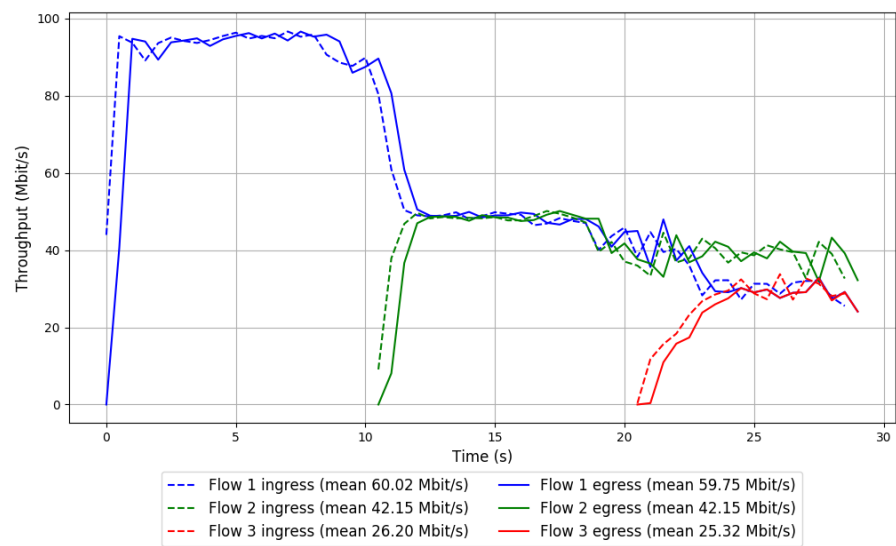
-- Flow 3:

Average throughput: 25.32 Mbit/s

95th percentile per-packet one-way delay: 117.445 ms

Loss rate: 3.56%

Run 1: Report of Indigo-MusesT — Data Link

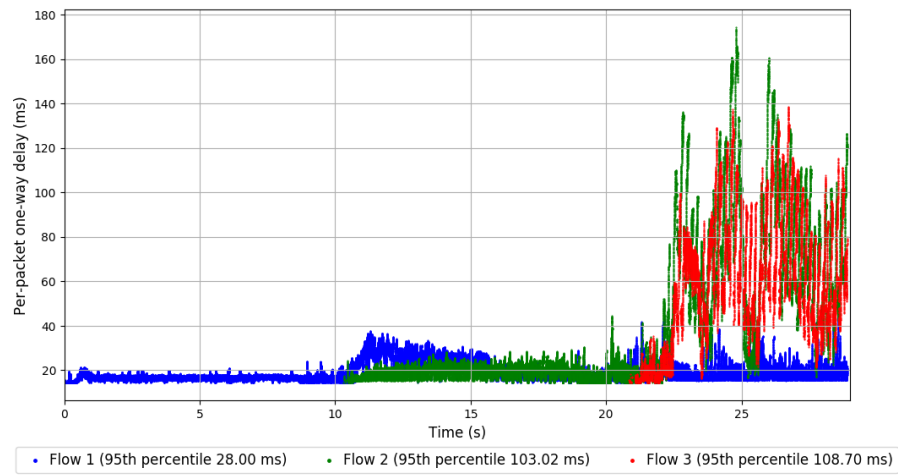
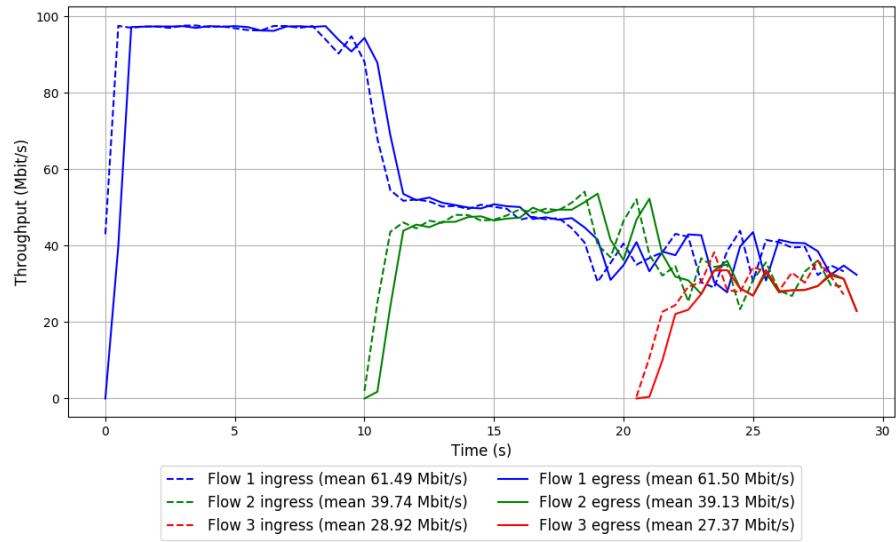


Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-12 04:40:44  
End at: 2019-02-12 04:41:14  
Local clock offset: -6.054 ms  
Remote clock offset: -7.343 ms

# Below is generated by plot.py at 2019-02-12 06:48:50  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.31 Mbit/s  
95th percentile per-packet one-way delay: 78.567 ms  
Loss rate: 0.97%  
-- Flow 1:  
Average throughput: 61.50 Mbit/s  
95th percentile per-packet one-way delay: 28.003 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 39.13 Mbit/s  
95th percentile per-packet one-way delay: 103.015 ms  
Loss rate: 1.66%  
-- Flow 3:  
Average throughput: 27.37 Mbit/s  
95th percentile per-packet one-way delay: 108.697 ms  
Loss rate: 5.60%

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

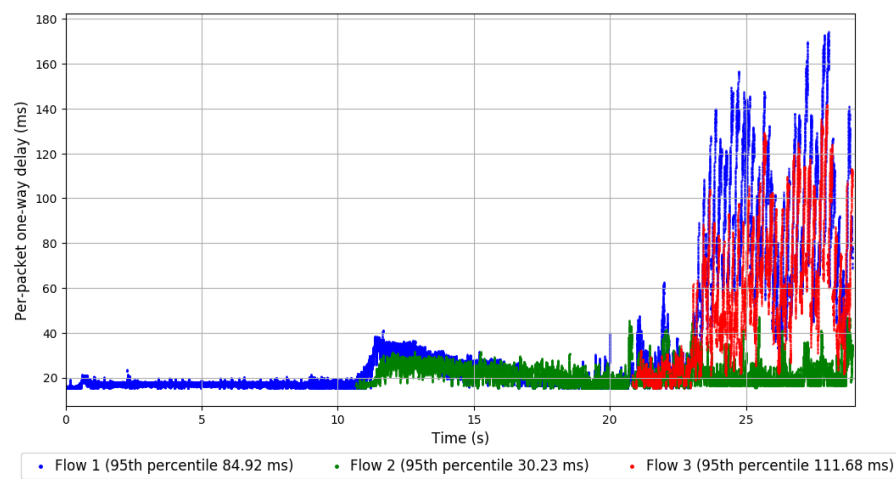
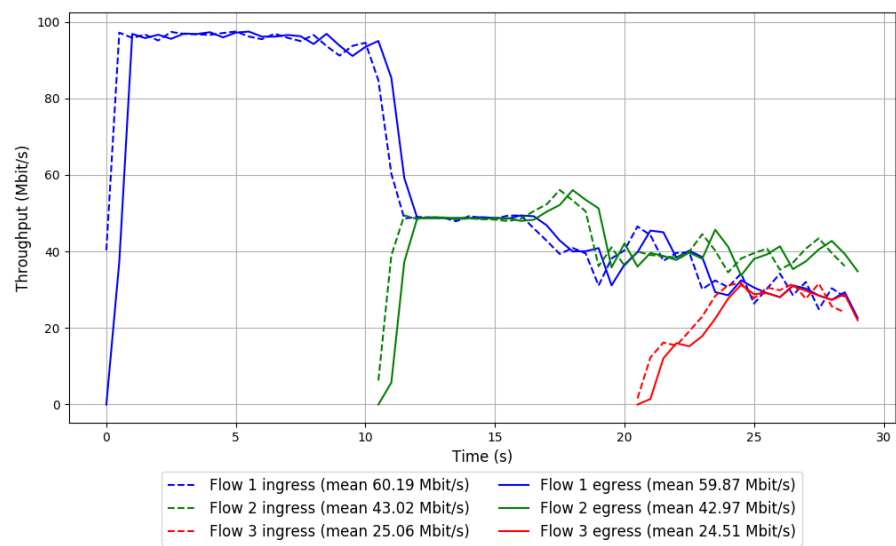


Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-12 05:07:13  
End at: 2019-02-12 05:07:43  
Local clock offset: -4.923 ms  
Remote clock offset: -3.239 ms

# Below is generated by plot.py at 2019-02-12 06:48:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.91 Mbit/s  
95th percentile per-packet one-way delay: 80.964 ms  
Loss rate: 0.60%  
-- Flow 1:  
Average throughput: 59.87 Mbit/s  
95th percentile per-packet one-way delay: 84.925 ms  
Loss rate: 0.54%  
-- Flow 2:  
Average throughput: 42.97 Mbit/s  
95th percentile per-packet one-way delay: 30.235 ms  
Loss rate: 0.26%  
-- Flow 3:  
Average throughput: 24.51 Mbit/s  
95th percentile per-packet one-way delay: 111.680 ms  
Loss rate: 2.54%

Run 3: Report of Indigo-MusesT — Data Link





Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-12 05:33:57

End at: 2019-02-12 05:34:27

Local clock offset: -6.951 ms

Remote clock offset: -1.16 ms

# Below is generated by plot.py at 2019-02-12 06:48:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.70 Mbit/s

95th percentile per-packet one-way delay: 88.498 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 60.45 Mbit/s

95th percentile per-packet one-way delay: 77.935 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 38.34 Mbit/s

95th percentile per-packet one-way delay: 87.416 ms

Loss rate: 1.76%

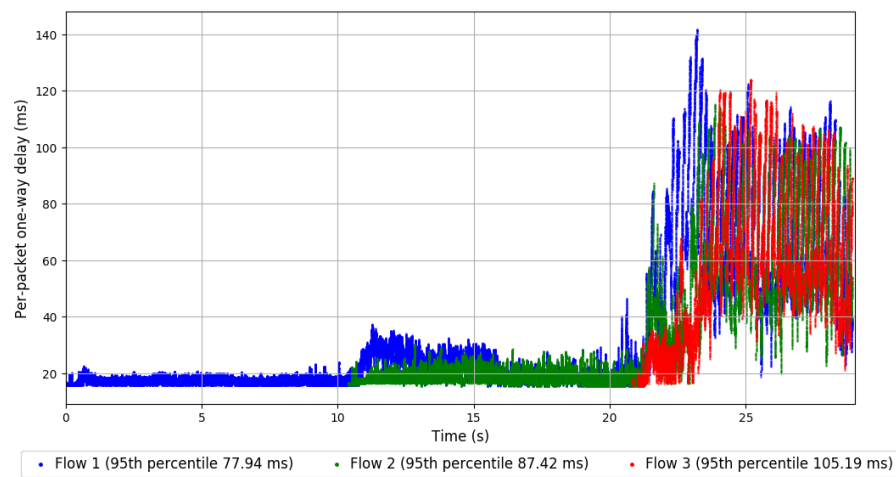
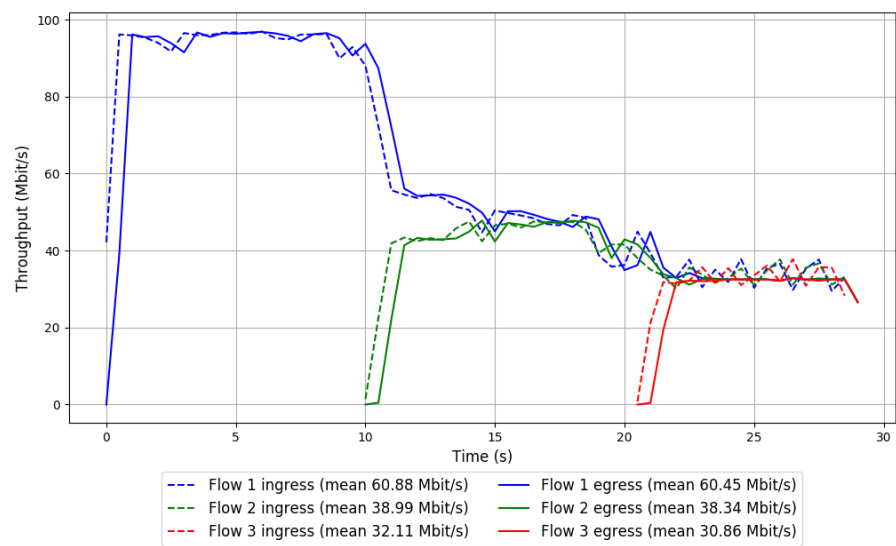
-- Flow 3:

Average throughput: 30.86 Mbit/s

95th percentile per-packet one-way delay: 105.195 ms

Loss rate: 4.19%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-12 06:20:00

End at: 2019-02-12 06:20:30

Local clock offset: 4.308 ms

Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2019-02-12 06:49:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.36 Mbit/s

95th percentile per-packet one-way delay: 83.417 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 59.50 Mbit/s

95th percentile per-packet one-way delay: 67.741 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 38.25 Mbit/s

95th percentile per-packet one-way delay: 92.653 ms

Loss rate: 2.09%

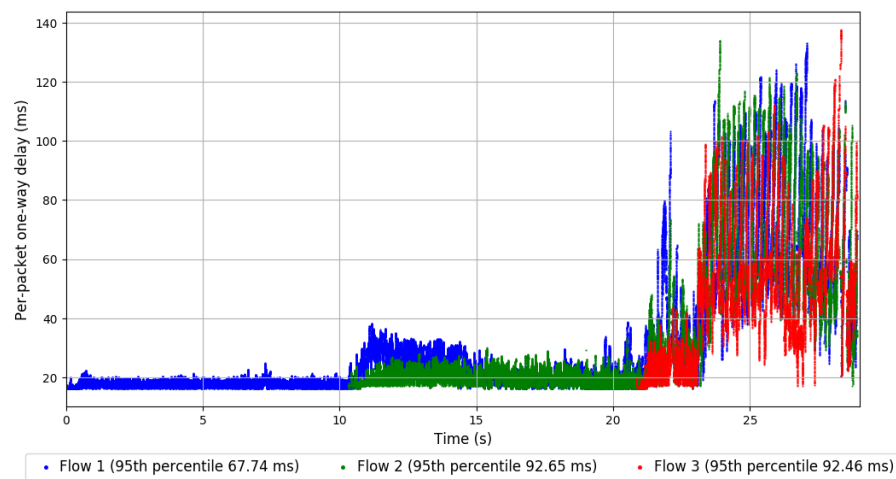
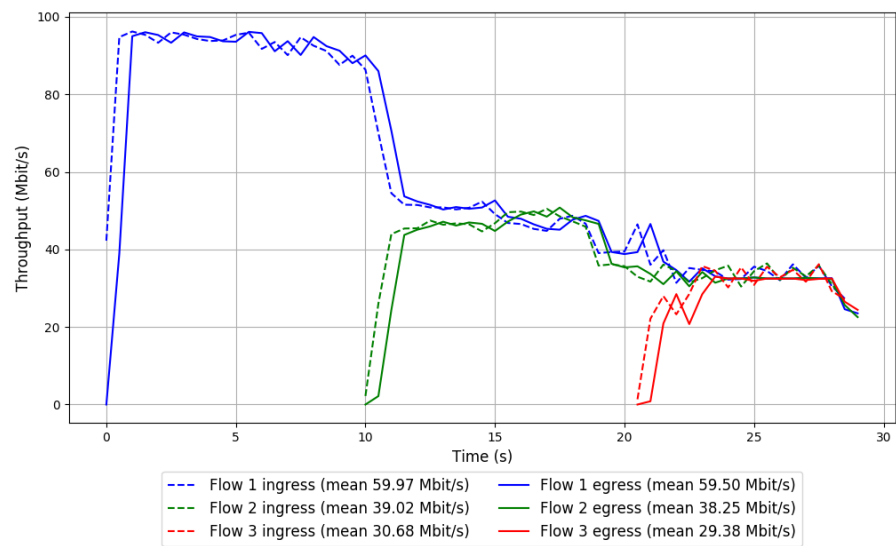
-- Flow 3:

Average throughput: 29.38 Mbit/s

95th percentile per-packet one-way delay: 92.456 ms

Loss rate: 4.54%

Run 5: Report of Indigo-MusesT — Data Link

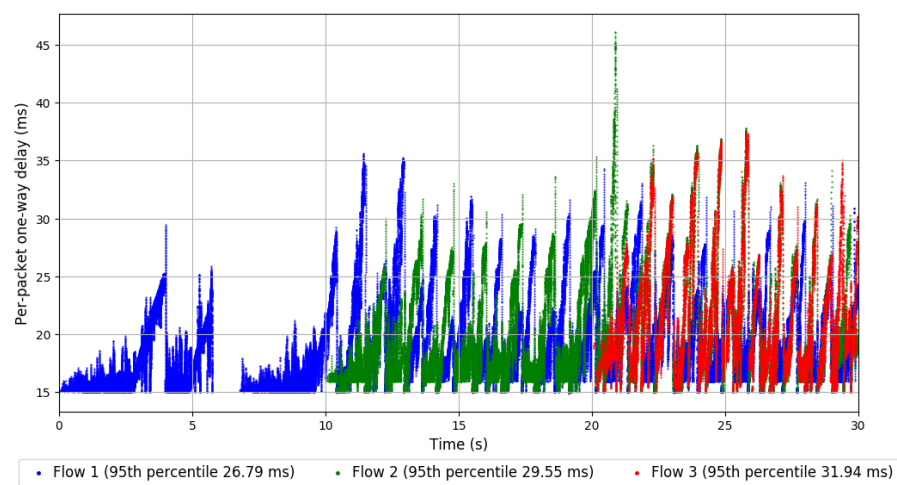
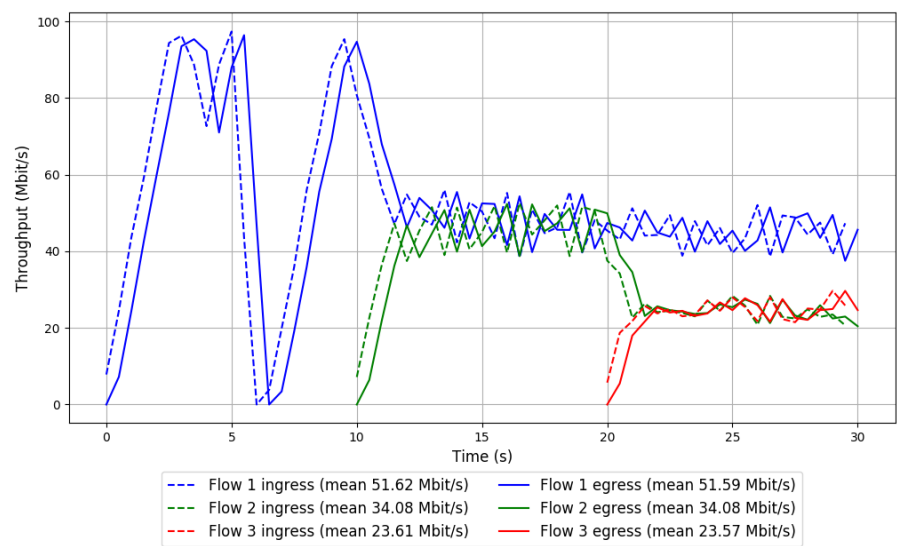


Run 1: Statistics of LEDBAT

Start at: 2019-02-12 04:25:53  
End at: 2019-02-12 04:26:23  
Local clock offset: 1.791 ms  
Remote clock offset: -2.633 ms

# Below is generated by plot.py at 2019-02-12 06:49:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 82.11 Mbit/s  
95th percentile per-packet one-way delay: 28.153 ms  
Loss rate: 0.18%  
-- Flow 1:  
Average throughput: 51.59 Mbit/s  
95th percentile per-packet one-way delay: 26.785 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 34.08 Mbit/s  
95th percentile per-packet one-way delay: 29.551 ms  
Loss rate: 0.14%  
-- Flow 3:  
Average throughput: 23.57 Mbit/s  
95th percentile per-packet one-way delay: 31.940 ms  
Loss rate: 0.52%

Run 1: Report of LEDBAT — Data Link

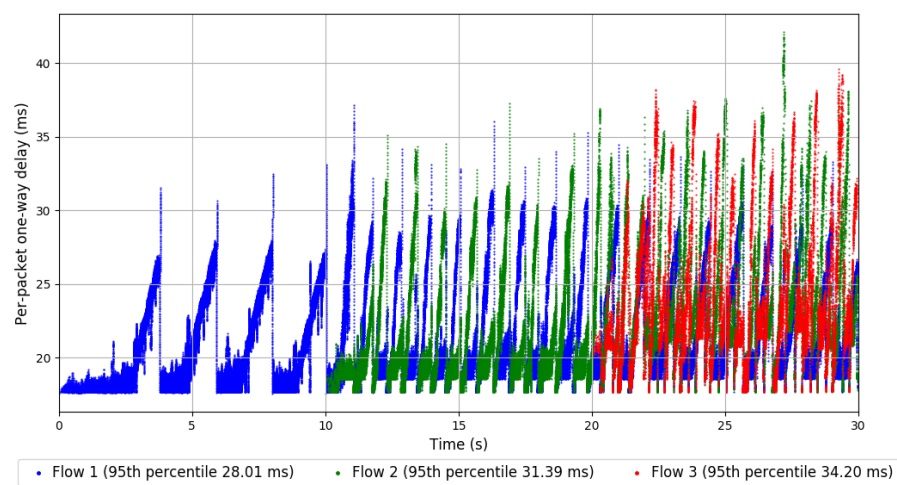
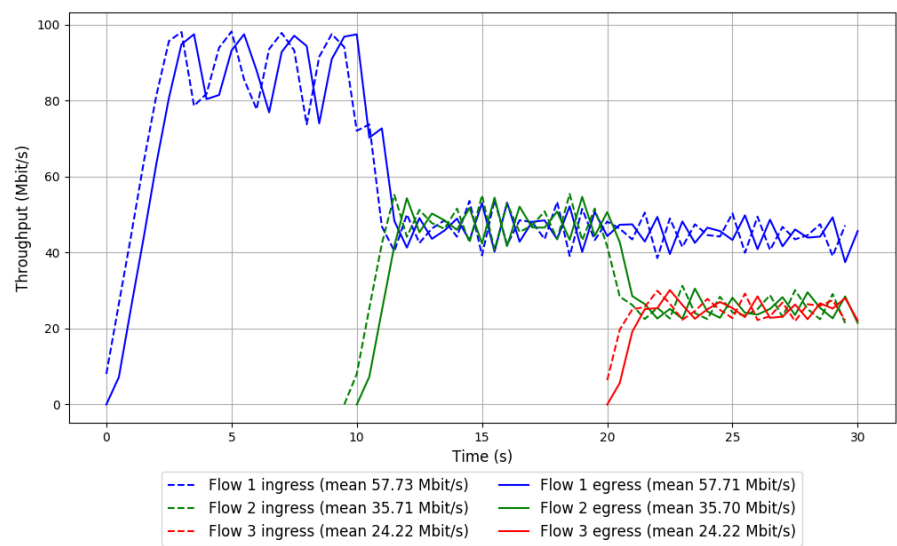


Run 2: Statistics of LEDBAT

Start at: 2019-02-12 04:51:54  
End at: 2019-02-12 04:52:24  
Local clock offset: -0.446 ms  
Remote clock offset: -3.205 ms

# Below is generated by plot.py at 2019-02-12 06:49:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.51 Mbit/s  
95th percentile per-packet one-way delay: 29.445 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 57.71 Mbit/s  
95th percentile per-packet one-way delay: 28.008 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 35.70 Mbit/s  
95th percentile per-packet one-way delay: 31.395 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 24.22 Mbit/s  
95th percentile per-packet one-way delay: 34.199 ms  
Loss rate: 0.28%

Run 2: Report of LEDBAT — Data Link



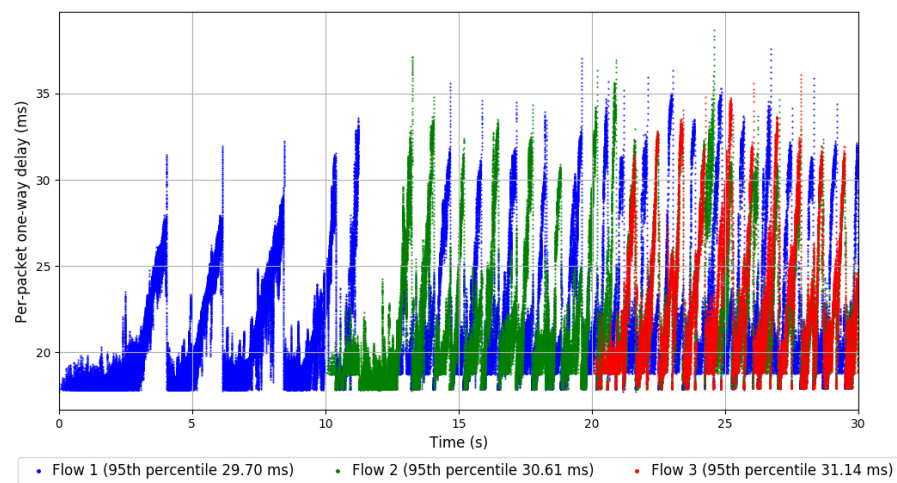
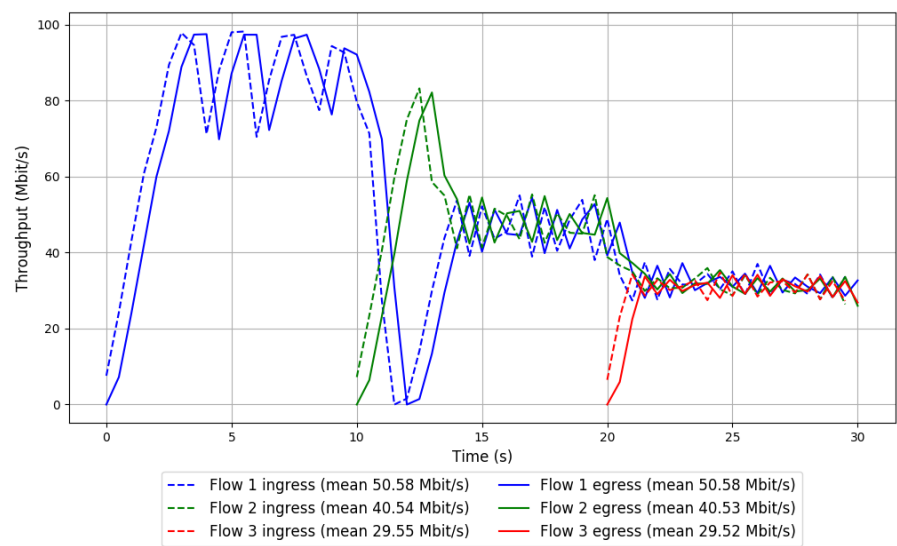


Run 3: Statistics of LEDBAT

Start at: 2019-02-12 05:18:35  
End at: 2019-02-12 05:19:05  
Local clock offset: -4.116 ms  
Remote clock offset: -2.536 ms

# Below is generated by plot.py at 2019-02-12 06:49:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.35 Mbit/s  
95th percentile per-packet one-way delay: 30.274 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 50.58 Mbit/s  
95th percentile per-packet one-way delay: 29.700 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 40.53 Mbit/s  
95th percentile per-packet one-way delay: 30.610 ms  
Loss rate: 0.13%  
-- Flow 3:  
Average throughput: 29.52 Mbit/s  
95th percentile per-packet one-way delay: 31.144 ms  
Loss rate: 0.33%

Run 3: Report of LEDBAT — Data Link

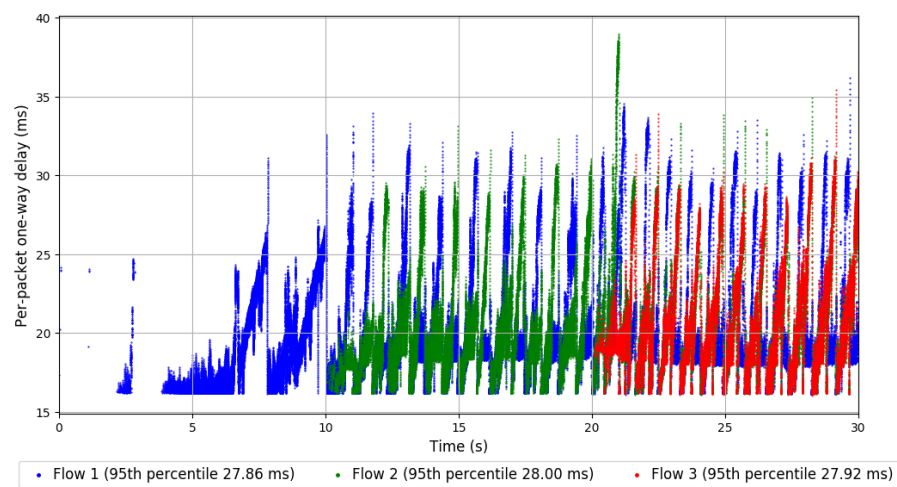
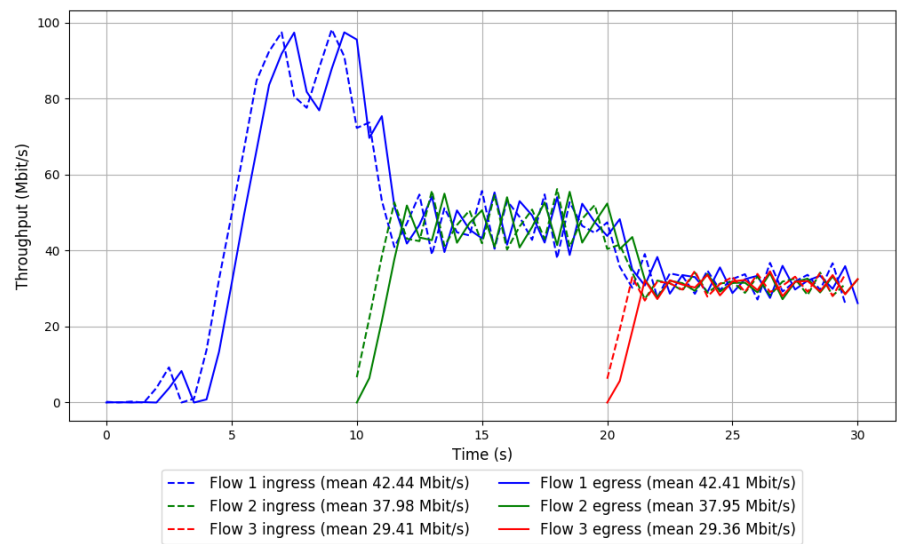


Run 4: Statistics of LEDBAT

Start at: 2019-02-12 05:53:43  
End at: 2019-02-12 05:54:13  
Local clock offset: -1.837 ms  
Remote clock offset: -2.057 ms

# Below is generated by plot.py at 2019-02-12 06:49:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 77.42 Mbit/s  
95th percentile per-packet one-way delay: 27.922 ms  
Loss rate: 0.15%  
-- Flow 1:  
Average throughput: 42.41 Mbit/s  
95th percentile per-packet one-way delay: 27.856 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 37.95 Mbit/s  
95th percentile per-packet one-way delay: 28.004 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 29.36 Mbit/s  
95th percentile per-packet one-way delay: 27.916 ms  
Loss rate: 0.48%

Run 4: Report of LEDBAT — Data Link

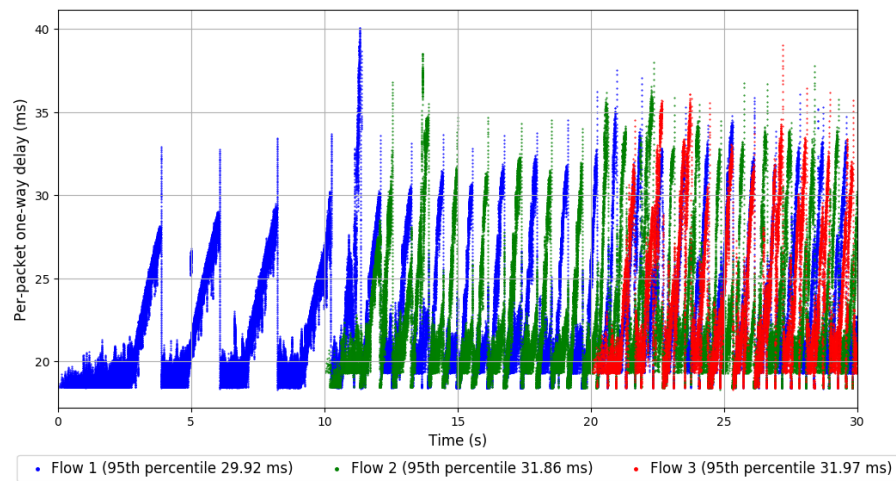
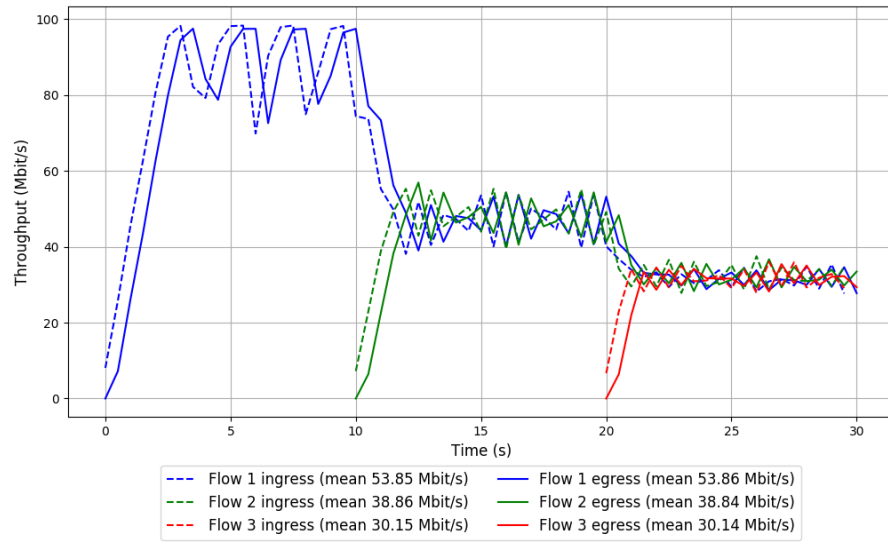


Run 5: Statistics of LEDBAT

Start at: 2019-02-12 06:32:04  
End at: 2019-02-12 06:32:34  
Local clock offset: 6.206 ms  
Remote clock offset: -1.384 ms

# Below is generated by plot.py at 2019-02-12 06:49:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.72 Mbit/s  
95th percentile per-packet one-way delay: 30.917 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 53.86 Mbit/s  
95th percentile per-packet one-way delay: 29.917 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 38.84 Mbit/s  
95th percentile per-packet one-way delay: 31.864 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 30.14 Mbit/s  
95th percentile per-packet one-way delay: 31.974 ms  
Loss rate: 0.30%

# Run 5: Report of LEDBAT — Data Link

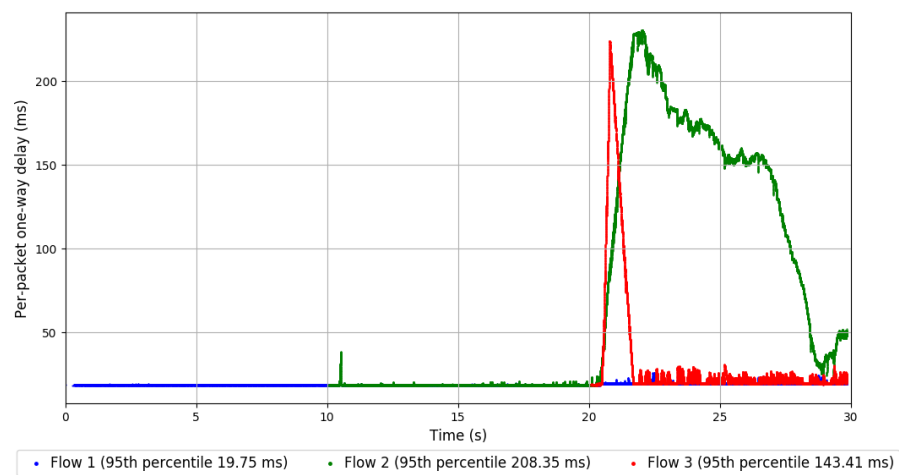
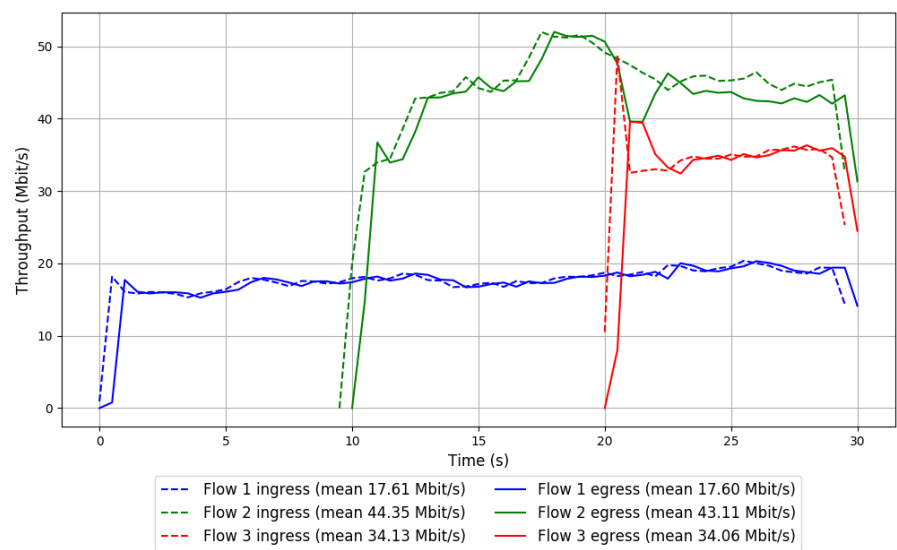


Run 1: Statistics of PCC-Allegro

Start at: 2019-02-12 04:28:18  
End at: 2019-02-12 04:28:48  
Local clock offset: 3.604 ms  
Remote clock offset: -4.469 ms

# Below is generated by plot.py at 2019-02-12 06:49:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 57.49 Mbit/s  
95th percentile per-packet one-way delay: 182.715 ms  
Loss rate: 1.61%  
-- Flow 1:  
Average throughput: 17.60 Mbit/s  
95th percentile per-packet one-way delay: 19.749 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 43.11 Mbit/s  
95th percentile per-packet one-way delay: 208.348 ms  
Loss rate: 2.95%  
-- Flow 3:  
Average throughput: 34.06 Mbit/s  
95th percentile per-packet one-way delay: 143.407 ms  
Loss rate: 0.46%

Run 1: Report of PCC-Allegro — Data Link



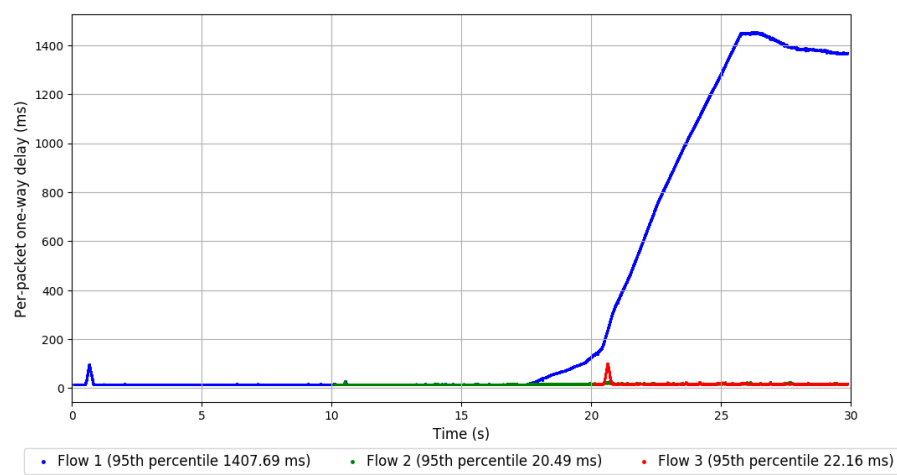
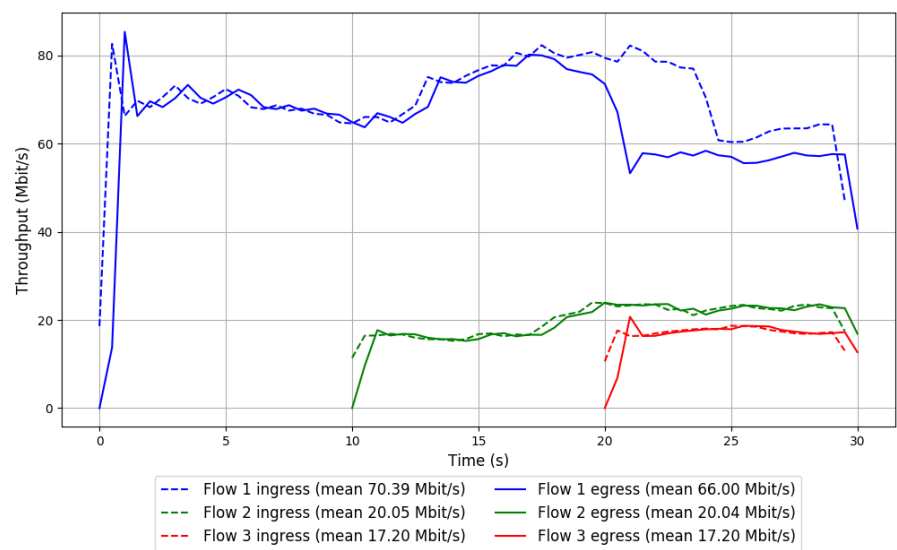


Run 2: Statistics of PCC-Allegro

Start at: 2019-02-12 04:54:29  
End at: 2019-02-12 04:54:59  
Local clock offset: -1.43 ms  
Remote clock offset: -2.427 ms

# Below is generated by plot.py at 2019-02-12 06:49:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.97 Mbit/s  
95th percentile per-packet one-way delay: 1391.723 ms  
Loss rate: 5.02%  
-- Flow 1:  
Average throughput: 66.00 Mbit/s  
95th percentile per-packet one-way delay: 1407.690 ms  
Loss rate: 6.32%  
-- Flow 2:  
Average throughput: 20.04 Mbit/s  
95th percentile per-packet one-way delay: 20.488 ms  
Loss rate: 0.17%  
-- Flow 3:  
Average throughput: 17.20 Mbit/s  
95th percentile per-packet one-way delay: 22.158 ms  
Loss rate: 0.30%

Run 2: Report of PCC-Allegro — Data Link

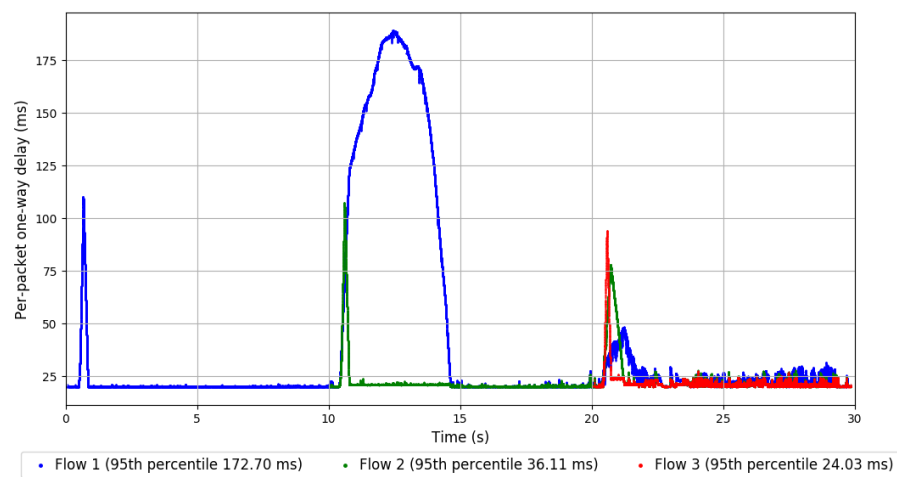
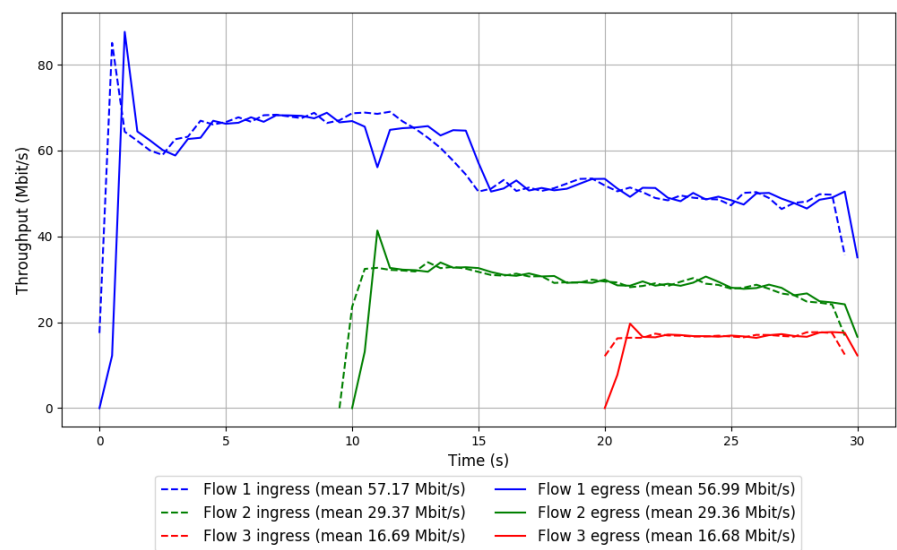


Run 3: Statistics of PCC-Allegro

Start at: 2019-02-12 05:21:11  
End at: 2019-02-12 05:21:41  
Local clock offset: -4.343 ms  
Remote clock offset: -4.413 ms

# Below is generated by plot.py at 2019-02-12 06:50:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 82.01 Mbit/s  
95th percentile per-packet one-way delay: 162.300 ms  
Loss rate: 0.33%  
-- Flow 1:  
Average throughput: 56.99 Mbit/s  
95th percentile per-packet one-way delay: 172.698 ms  
Loss rate: 0.40%  
-- Flow 2:  
Average throughput: 29.36 Mbit/s  
95th percentile per-packet one-way delay: 36.112 ms  
Loss rate: 0.14%  
-- Flow 3:  
Average throughput: 16.68 Mbit/s  
95th percentile per-packet one-way delay: 24.031 ms  
Loss rate: 0.29%

Run 3: Report of PCC-Allegro — Data Link

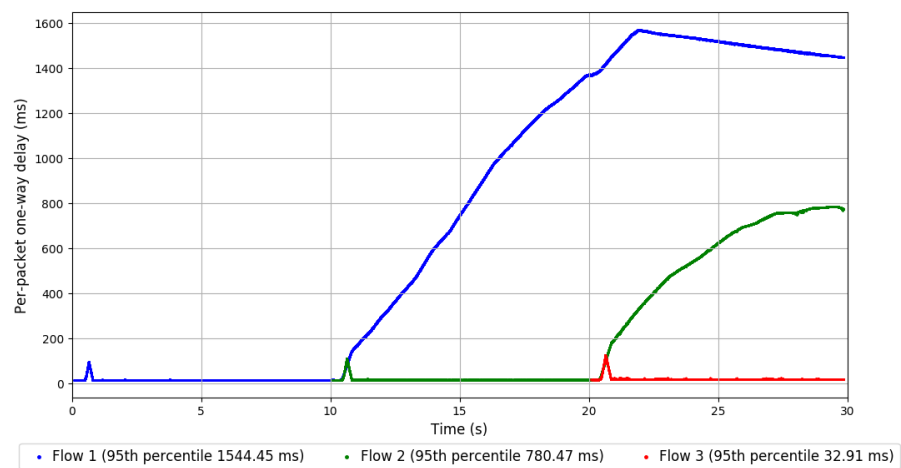
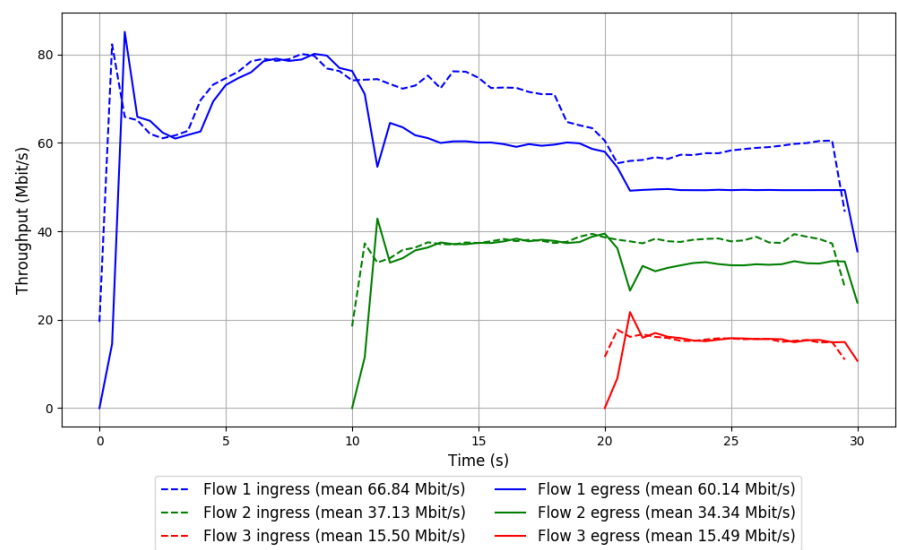


Run 4: Statistics of PCC-Allegro

Start at: 2019-02-12 05:56:17  
End at: 2019-02-12 05:56:47  
Local clock offset: -2.364 ms  
Remote clock offset: -2.685 ms

# Below is generated by plot.py at 2019-02-12 06:50:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.06 Mbit/s  
95th percentile per-packet one-way delay: 1533.369 ms  
Loss rate: 8.94%  
-- Flow 1:  
Average throughput: 60.14 Mbit/s  
95th percentile per-packet one-way delay: 1544.452 ms  
Loss rate: 10.08%  
-- Flow 2:  
Average throughput: 34.34 Mbit/s  
95th percentile per-packet one-way delay: 780.469 ms  
Loss rate: 7.63%  
-- Flow 3:  
Average throughput: 15.49 Mbit/s  
95th percentile per-packet one-way delay: 32.907 ms  
Loss rate: 0.31%

Run 4: Report of PCC-Allegro — Data Link

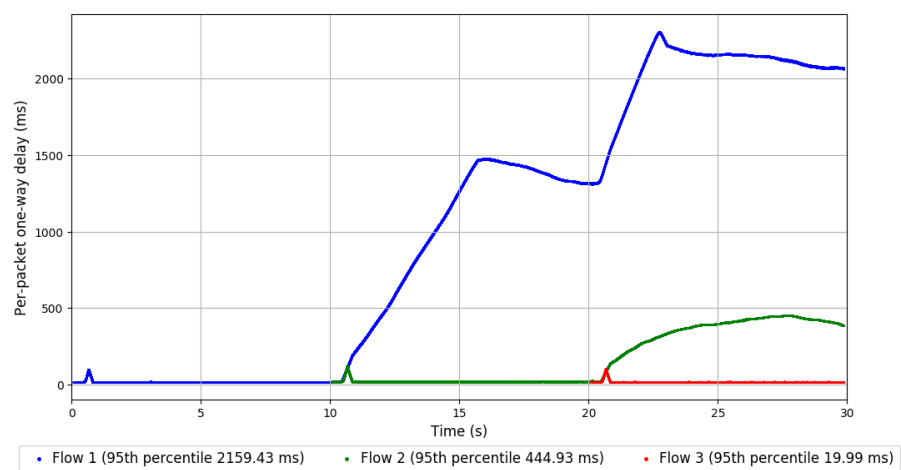
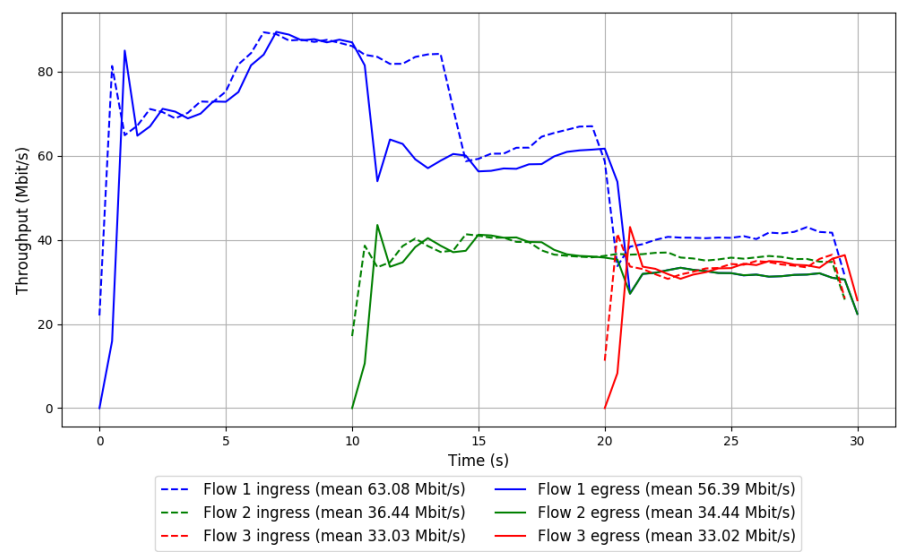


Run 5: Statistics of PCC-Allegro

Start at: 2019-02-12 06:34:50  
End at: 2019-02-12 06:35:20  
Local clock offset: 5.421 ms  
Remote clock offset: -1.102 ms

# Below is generated by plot.py at 2019-02-12 06:50:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.14 Mbit/s  
95th percentile per-packet one-way delay: 2150.004 ms  
Loss rate: 8.26%  
-- Flow 1:  
Average throughput: 56.39 Mbit/s  
95th percentile per-packet one-way delay: 2159.426 ms  
Loss rate: 10.66%  
-- Flow 2:  
Average throughput: 34.44 Mbit/s  
95th percentile per-packet one-way delay: 444.928 ms  
Loss rate: 5.59%  
-- Flow 3:  
Average throughput: 33.02 Mbit/s  
95th percentile per-packet one-way delay: 19.992 ms  
Loss rate: 0.30%

Run 5: Report of PCC-Allegro — Data Link



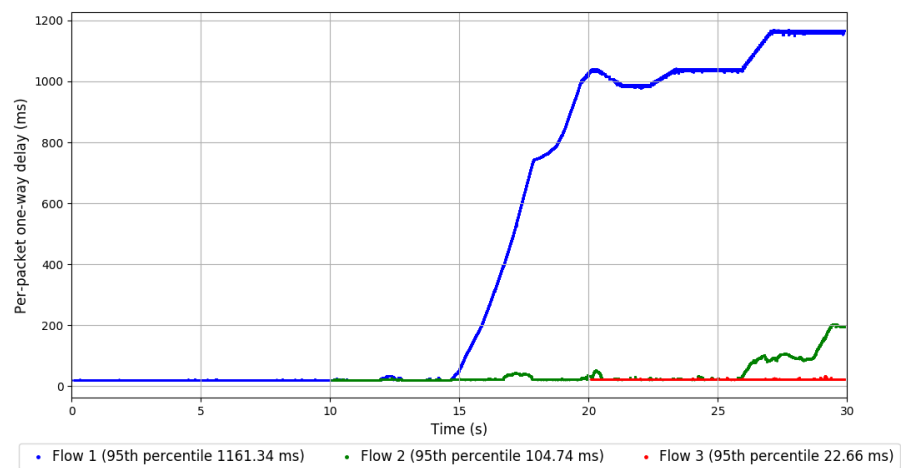
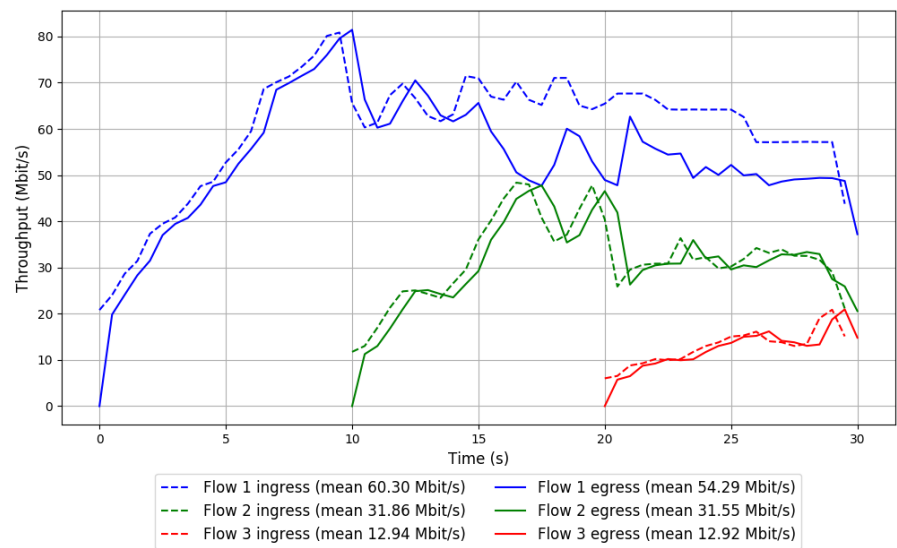


```
Run 1: Statistics of PCC-Expr

Start at: 2019-02-12 04:17:21
End at: 2019-02-12 04:17:51
Local clock offset: 5.52 ms
Remote clock offset: -3.015 ms

# Below is generated by plot.py at 2019-02-12 06:51:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.53 Mbit/s
95th percentile per-packet one-way delay: 1159.031 ms
Loss rate: 7.35%
-- Flow 1:
Average throughput: 54.29 Mbit/s
95th percentile per-packet one-way delay: 1161.336 ms
Loss rate: 10.04%
-- Flow 2:
Average throughput: 31.55 Mbit/s
95th percentile per-packet one-way delay: 104.744 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 12.92 Mbit/s
95th percentile per-packet one-way delay: 22.663 ms
Loss rate: 0.45%
```

Run 1: Report of PCC-Expr — Data Link

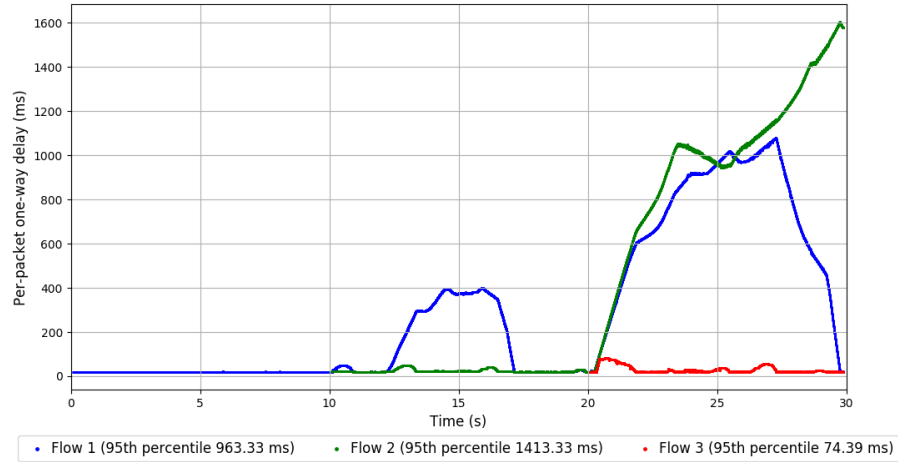
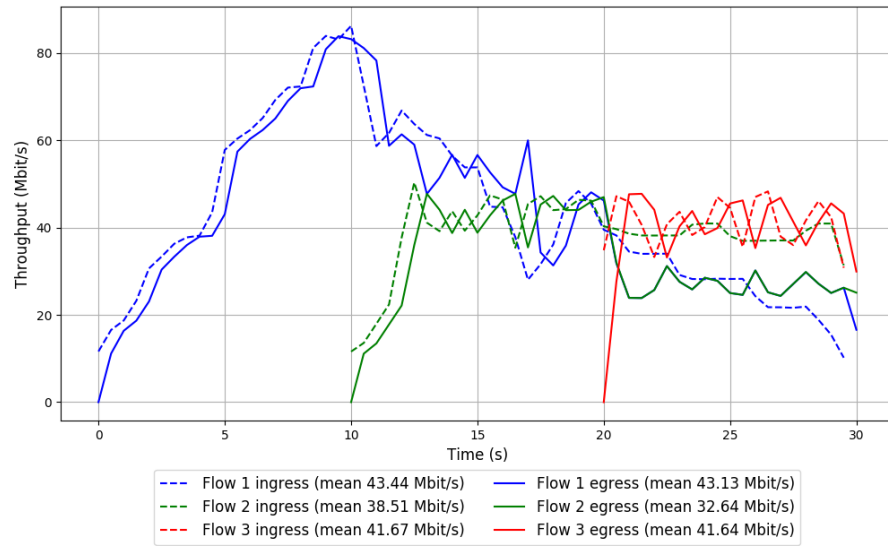


Run 2: Statistics of PCC-Expr

Start at: 2019-02-12 04:43:13  
End at: 2019-02-12 04:43:43  
Local clock offset: -0.577 ms  
Remote clock offset: -4.796 ms

# Below is generated by plot.py at 2019-02-12 06:51:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 78.54 Mbit/s  
95th percentile per-packet one-way delay: 1042.673 ms  
Loss rate: 5.25%  
-- Flow 1:  
Average throughput: 43.13 Mbit/s  
95th percentile per-packet one-way delay: 963.329 ms  
Loss rate: 0.80%  
-- Flow 2:  
Average throughput: 32.64 Mbit/s  
95th percentile per-packet one-way delay: 1413.334 ms  
Loss rate: 15.41%  
-- Flow 3:  
Average throughput: 41.64 Mbit/s  
95th percentile per-packet one-way delay: 74.394 ms  
Loss rate: 0.34%

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

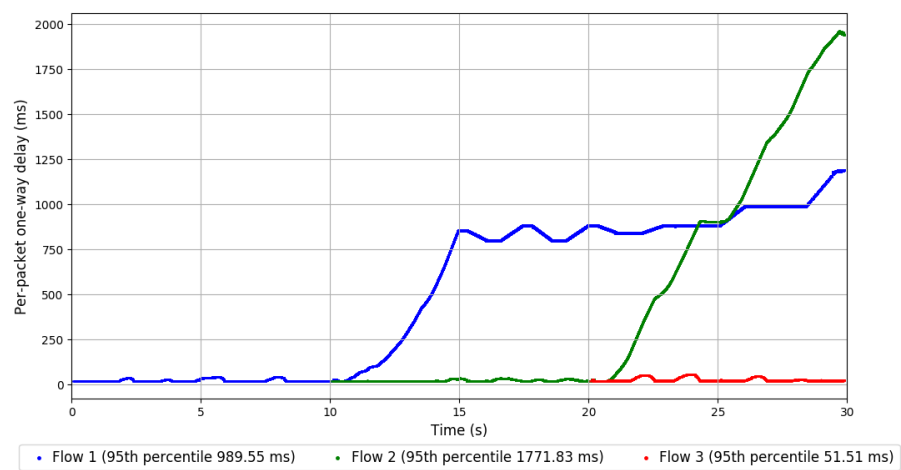
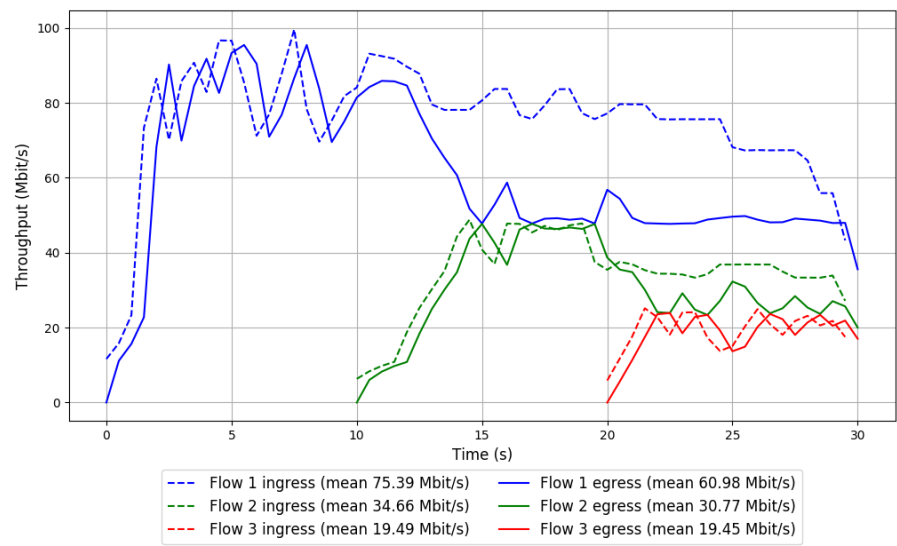


Run 3: Statistics of PCC-Expr

Start at: 2019-02-12 05:09:40  
End at: 2019-02-12 05:10:10  
Local clock offset: -2.113 ms  
Remote clock offset: -2.521 ms

# Below is generated by plot.py at 2019-02-12 06:51:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.85 Mbit/s  
95th percentile per-packet one-way delay: 1105.017 ms  
Loss rate: 16.32%  
-- Flow 1:  
Average throughput: 60.98 Mbit/s  
95th percentile per-packet one-way delay: 989.550 ms  
Loss rate: 19.19%  
-- Flow 2:  
Average throughput: 30.77 Mbit/s  
95th percentile per-packet one-way delay: 1771.834 ms  
Loss rate: 11.35%  
-- Flow 3:  
Average throughput: 19.45 Mbit/s  
95th percentile per-packet one-way delay: 51.513 ms  
Loss rate: 0.50%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

/home/ubuntu/pantheon/data/2019-02-12T04-06-India-to-AWS-India-1-5-runs-3-flows/pcc\_experime

Run 4: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

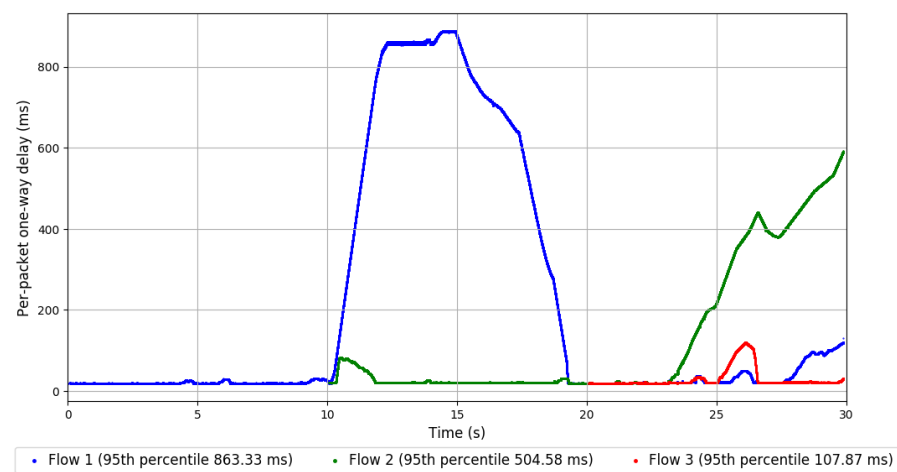
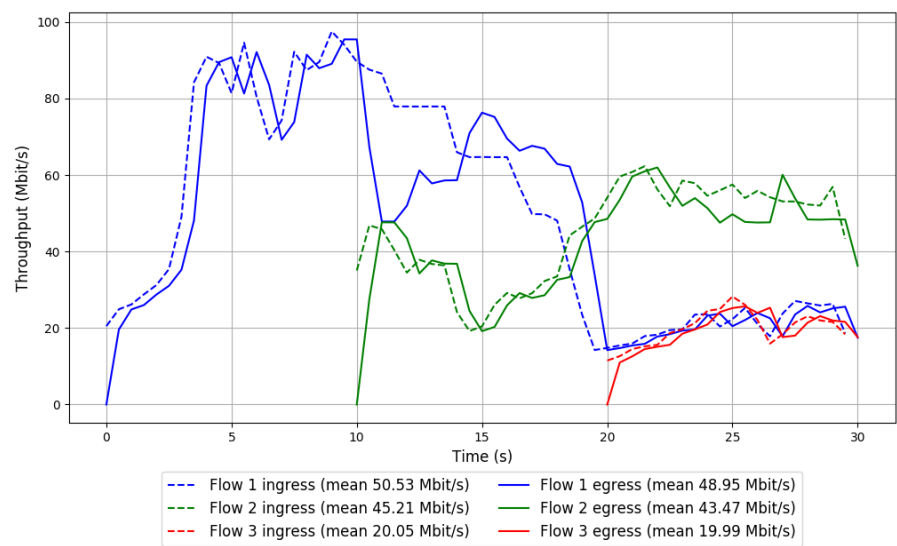


Run 5: Statistics of PCC-Expr

Start at: 2019-02-12 06:22:39  
End at: 2019-02-12 06:23:09  
Local clock offset: 5.299 ms  
Remote clock offset: -2.397 ms

# Below is generated by plot.py at 2019-02-12 06:51:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.44 Mbit/s  
95th percentile per-packet one-way delay: 858.167 ms  
Loss rate: 3.29%  
-- Flow 1:  
Average throughput: 48.95 Mbit/s  
95th percentile per-packet one-way delay: 863.329 ms  
Loss rate: 3.21%  
-- Flow 2:  
Average throughput: 43.47 Mbit/s  
95th percentile per-packet one-way delay: 504.579 ms  
Loss rate: 4.03%  
-- Flow 3:  
Average throughput: 19.99 Mbit/s  
95th percentile per-packet one-way delay: 107.870 ms  
Loss rate: 0.53%

Run 5: Report of PCC-Expr — Data Link

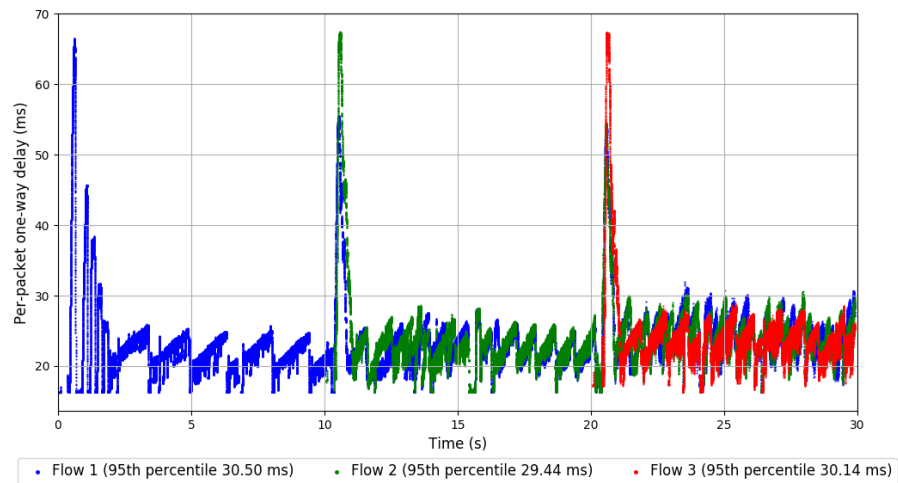
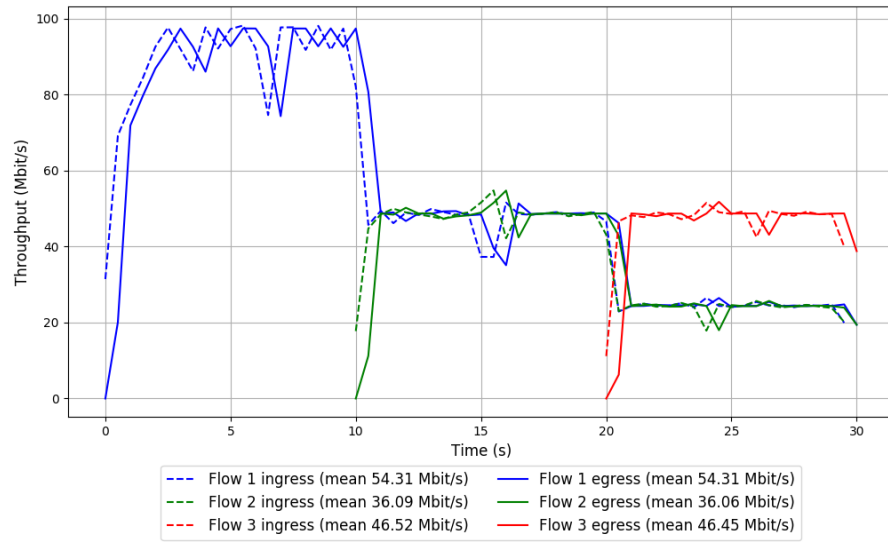


Run 1: Statistics of QUIC Cubic

Start at: 2019-02-12 04:29:27  
End at: 2019-02-12 04:29:57  
Local clock offset: 3.609 ms  
Remote clock offset: -2.167 ms

# Below is generated by plot.py at 2019-02-12 06:51:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.62 Mbit/s  
95th percentile per-packet one-way delay: 30.180 ms  
Loss rate: 0.17%  
-- Flow 1:  
Average throughput: 54.31 Mbit/s  
95th percentile per-packet one-way delay: 30.499 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 36.06 Mbit/s  
95th percentile per-packet one-way delay: 29.438 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 46.45 Mbit/s  
95th percentile per-packet one-way delay: 30.143 ms  
Loss rate: 0.41%

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

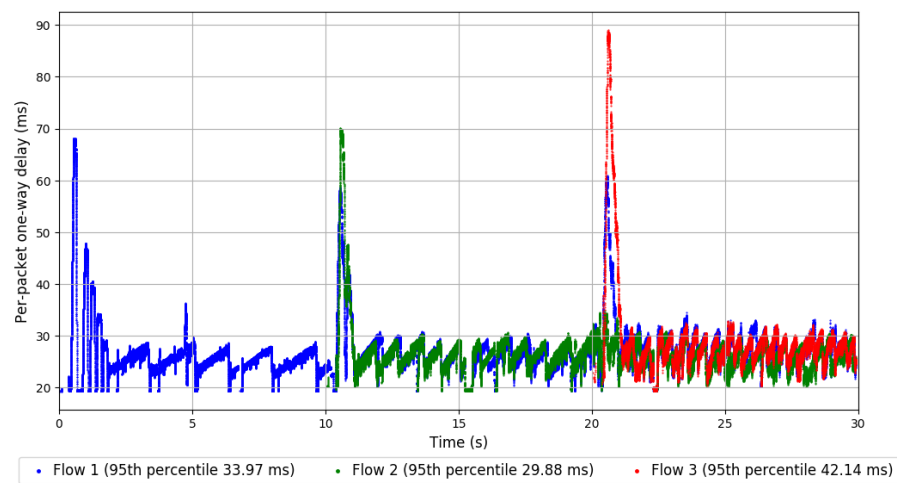
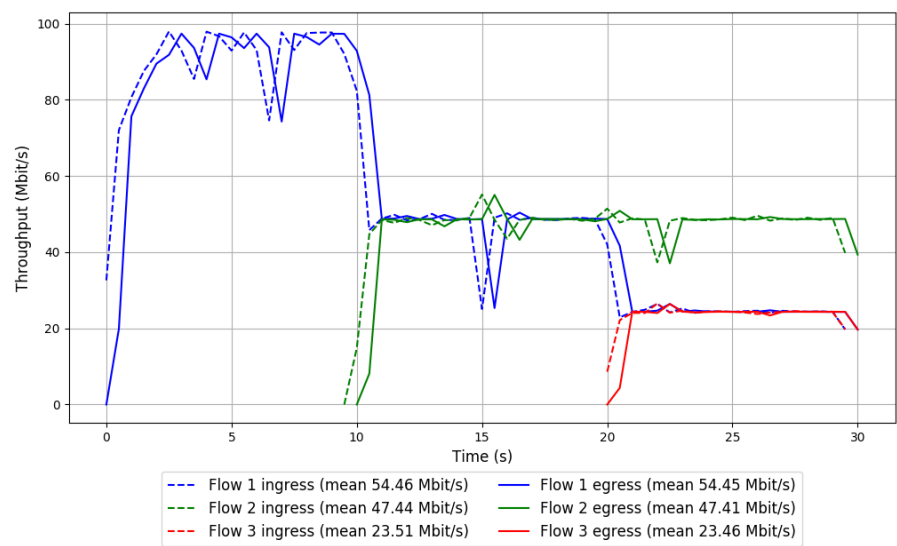


Run 2: Statistics of QUIC Cubic

Start at: 2019-02-12 04:55:41  
End at: 2019-02-12 04:56:11  
Local clock offset: -1.289 ms  
Remote clock offset: -5.385 ms

# Below is generated by plot.py at 2019-02-12 06:51:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.74 Mbit/s  
95th percentile per-packet one-way delay: 32.742 ms  
Loss rate: 0.16%  
-- Flow 1:  
Average throughput: 54.45 Mbit/s  
95th percentile per-packet one-way delay: 33.969 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 47.41 Mbit/s  
95th percentile per-packet one-way delay: 29.878 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 23.46 Mbit/s  
95th percentile per-packet one-way delay: 42.138 ms  
Loss rate: 0.49%

Run 2: Report of QUIC Cubic — Data Link

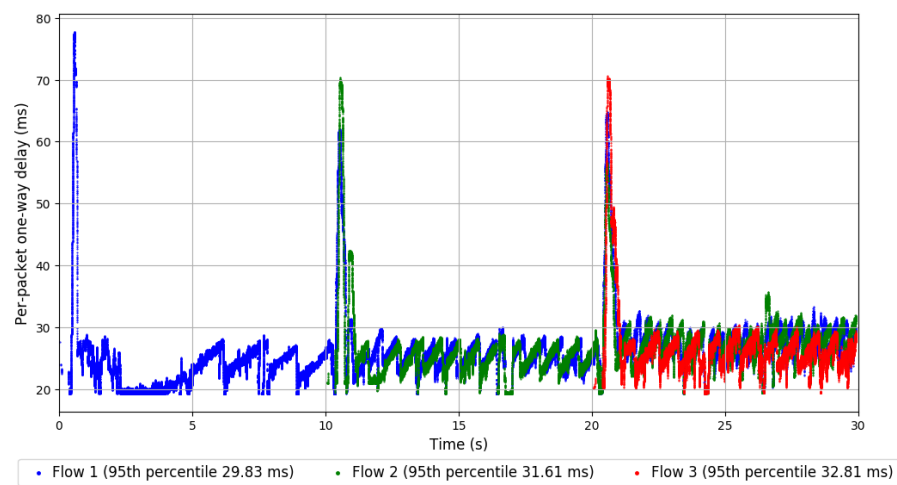
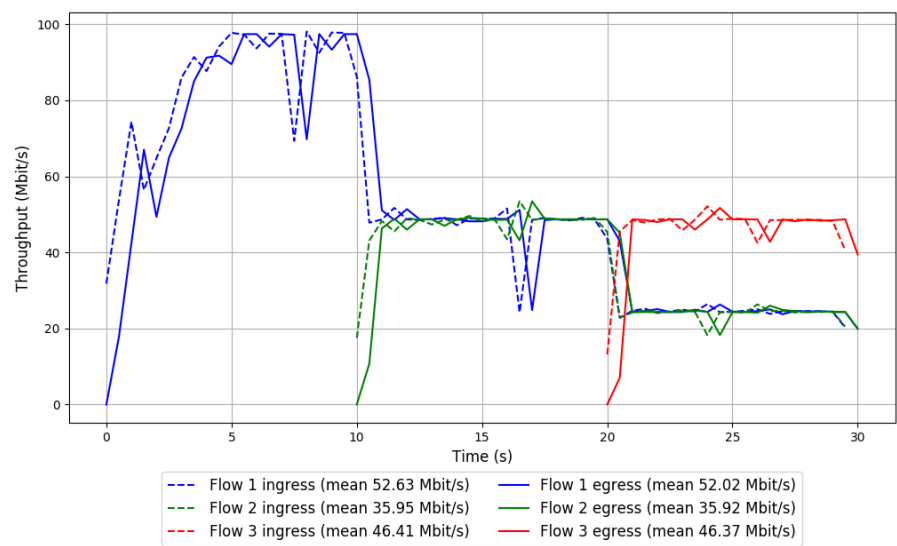


Run 3: Statistics of QUIC Cubic

Start at: 2019-02-12 05:22:25  
End at: 2019-02-12 05:22:55  
Local clock offset: -3.694 ms  
Remote clock offset: -2.945 ms

# Below is generated by plot.py at 2019-02-12 06:51:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.24 Mbit/s  
95th percentile per-packet one-way delay: 30.486 ms  
Loss rate: 0.85%  
-- Flow 1:  
Average throughput: 52.02 Mbit/s  
95th percentile per-packet one-way delay: 29.833 ms  
Loss rate: 1.26%  
-- Flow 2:  
Average throughput: 35.92 Mbit/s  
95th percentile per-packet one-way delay: 31.606 ms  
Loss rate: 0.21%  
-- Flow 3:  
Average throughput: 46.37 Mbit/s  
95th percentile per-packet one-way delay: 32.815 ms  
Loss rate: 0.42%

Run 3: Report of QUIC Cubic — Data Link



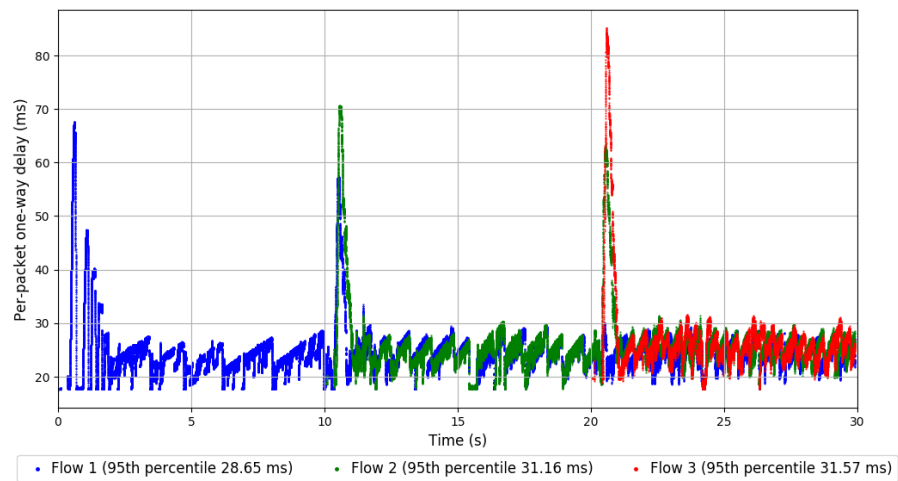
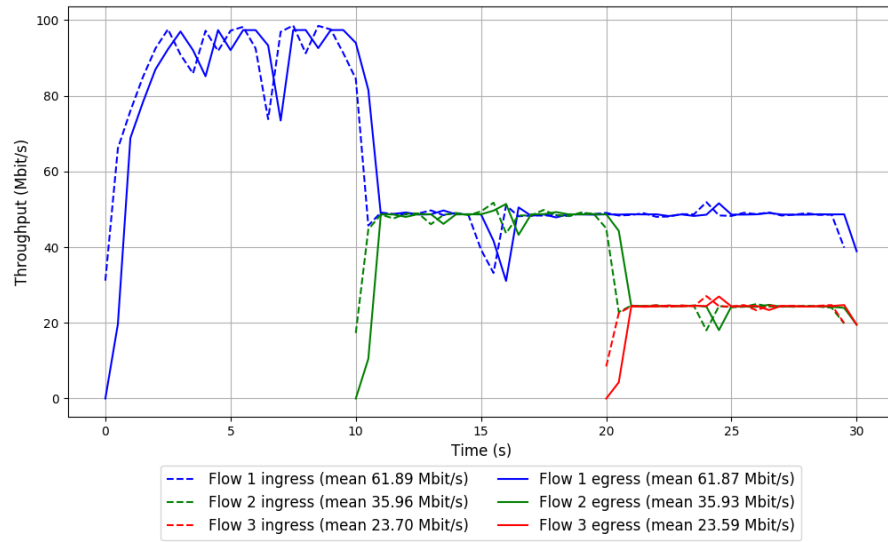


Run 4: Statistics of QUIC Cubic

Start at: 2019-02-12 05:57:31  
End at: 2019-02-12 05:58:01  
Local clock offset: 1.612 ms  
Remote clock offset: -0.376 ms

# Below is generated by plot.py at 2019-02-12 06:51:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.53 Mbit/s  
95th percentile per-packet one-way delay: 29.810 ms  
Loss rate: 0.18%  
-- Flow 1:  
Average throughput: 61.87 Mbit/s  
95th percentile per-packet one-way delay: 28.654 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 35.93 Mbit/s  
95th percentile per-packet one-way delay: 31.155 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 23.59 Mbit/s  
95th percentile per-packet one-way delay: 31.573 ms  
Loss rate: 0.71%

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

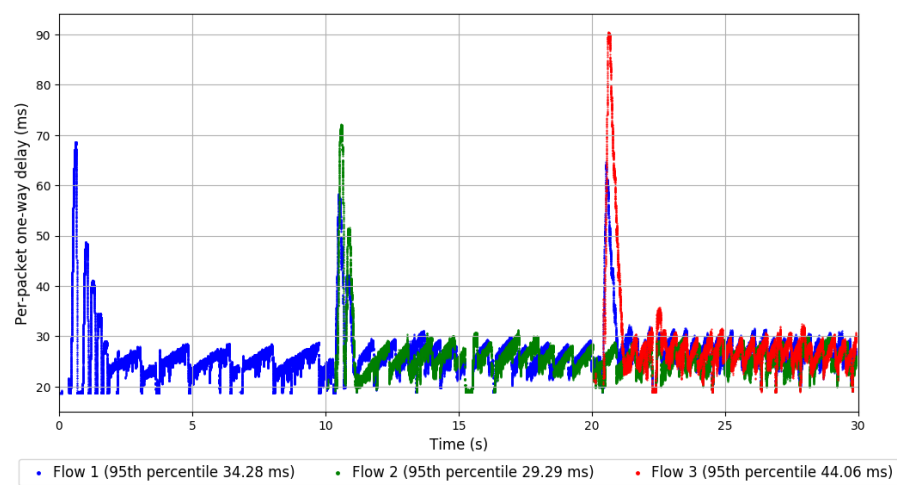
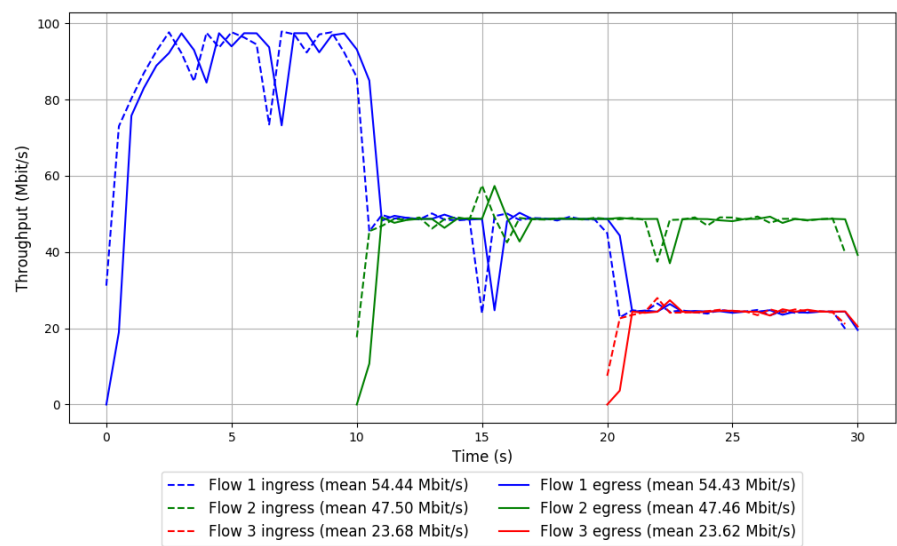


Run 5: Statistics of QUIC Cubic

Start at: 2019-02-12 06:36:04  
End at: 2019-02-12 06:36:34  
Local clock offset: 3.083 ms  
Remote clock offset: -3.324 ms

# Below is generated by plot.py at 2019-02-12 06:52:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.79 Mbit/s  
95th percentile per-packet one-way delay: 32.210 ms  
Loss rate: 0.16%  
-- Flow 1:  
Average throughput: 54.43 Mbit/s  
95th percentile per-packet one-way delay: 34.282 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 47.46 Mbit/s  
95th percentile per-packet one-way delay: 29.290 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 23.62 Mbit/s  
95th percentile per-packet one-way delay: 44.058 ms  
Loss rate: 0.54%

Run 5: Report of QUIC Cubic — Data Link

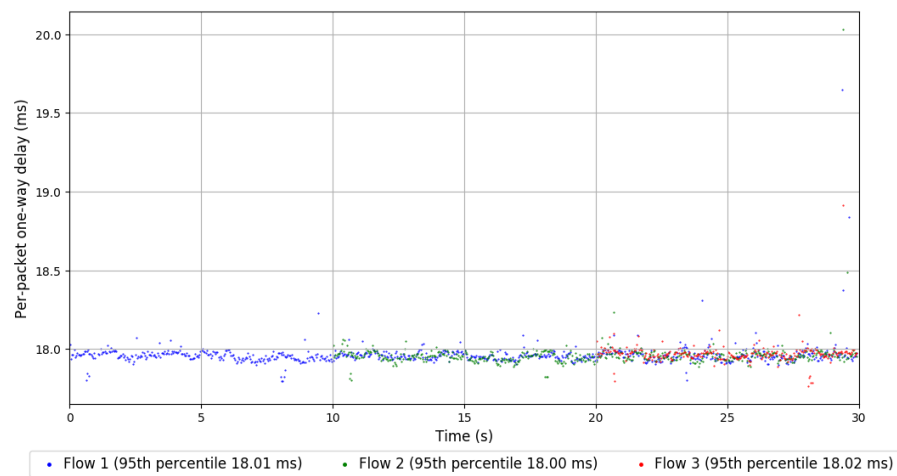
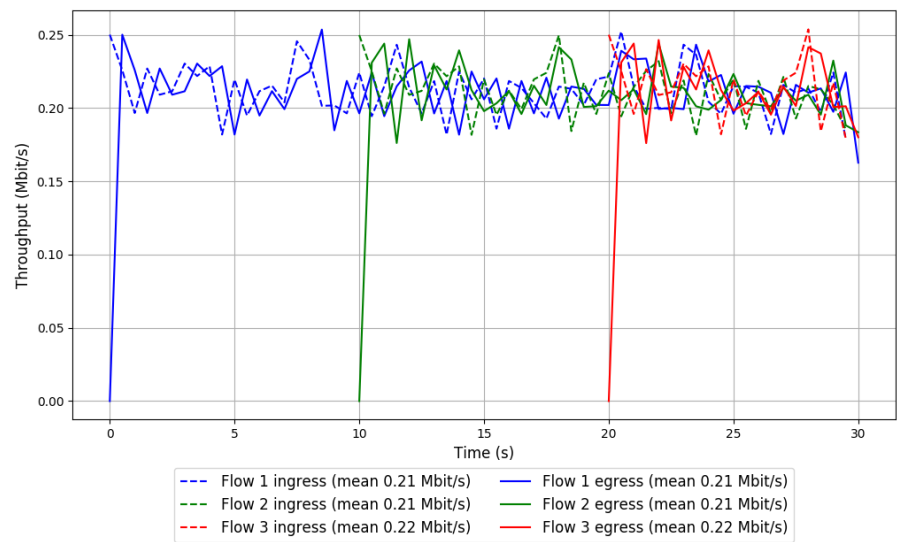


```
Run 1: Statistics of SCReAM

Start at: 2019-02-12 04:22:20
End at: 2019-02-12 04:22:50
Local clock offset: 4.153 ms
Remote clock offset: -3.058 ms

# Below is generated by plot.py at 2019-02-12 06:52:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 18.009 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 18.009 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 18.000 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 18.018 ms
Loss rate: 0.35%
```

Run 1: Report of SReAM — Data Link

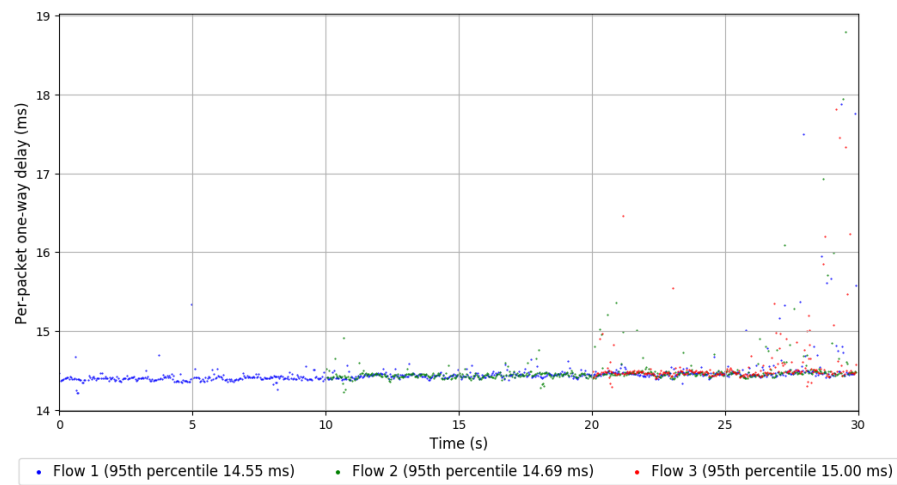
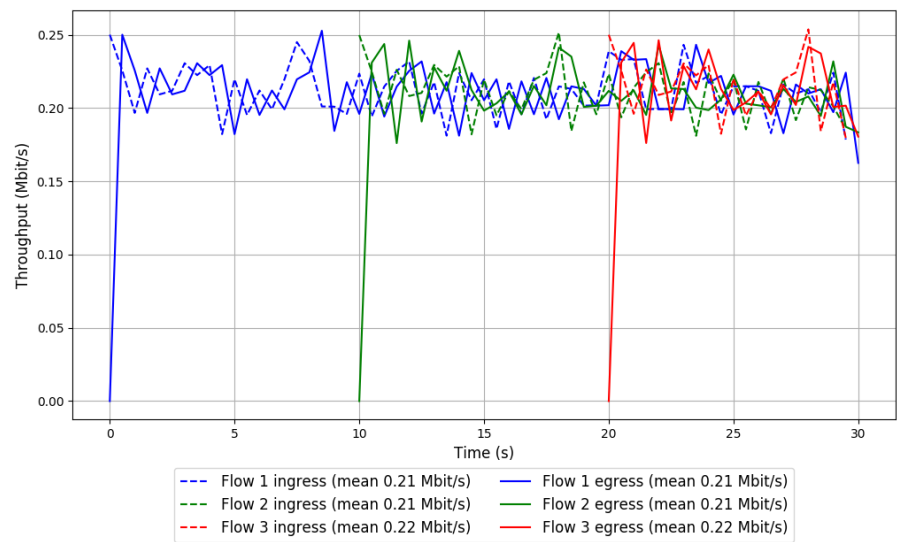


Run 2: Statistics of SCReAM

Start at: 2019-02-12 04:48:14  
End at: 2019-02-12 04:48:44  
Local clock offset: -2.193 ms  
Remote clock offset: -2.123 ms

# Below is generated by plot.py at 2019-02-12 06:52:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 14.655 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 14.549 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 14.687 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 14.997 ms  
Loss rate: 0.35%

Run 2: Report of SReAM — Data Link



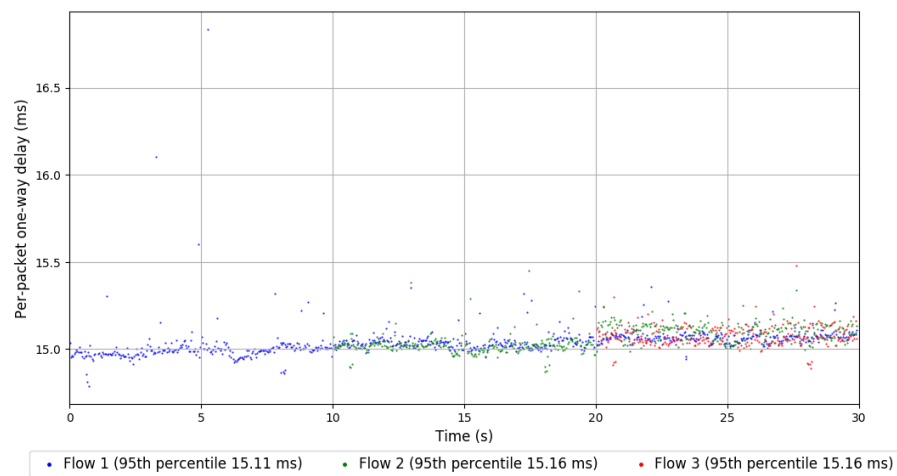
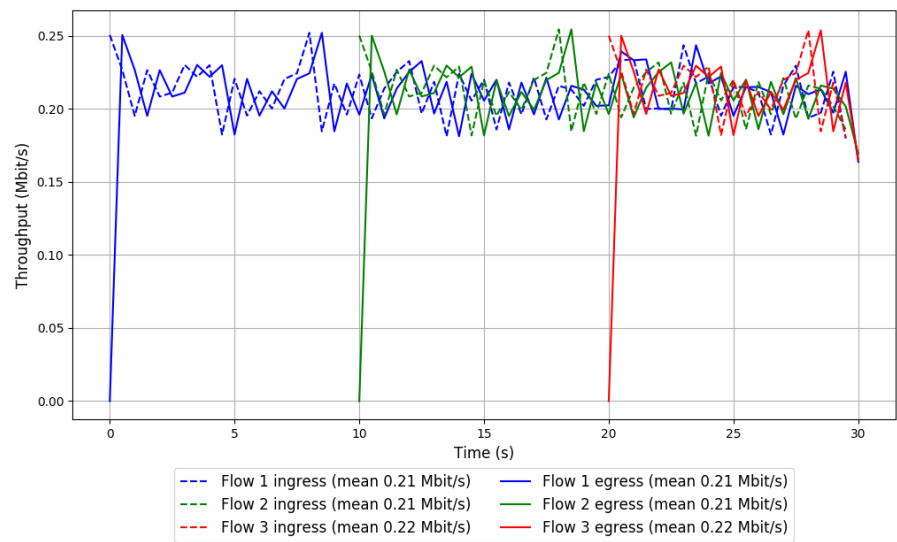


Run 3: Statistics of SReAM

Start at: 2019-02-12 05:14:49  
End at: 2019-02-12 05:15:19  
Local clock offset: -5.693 ms  
Remote clock offset: -1.914 ms

# Below is generated by plot.py at 2019-02-12 06:52:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 15.153 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 15.107 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 15.163 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 15.160 ms  
Loss rate: 0.36%

Run 3: Report of SReAM — Data Link

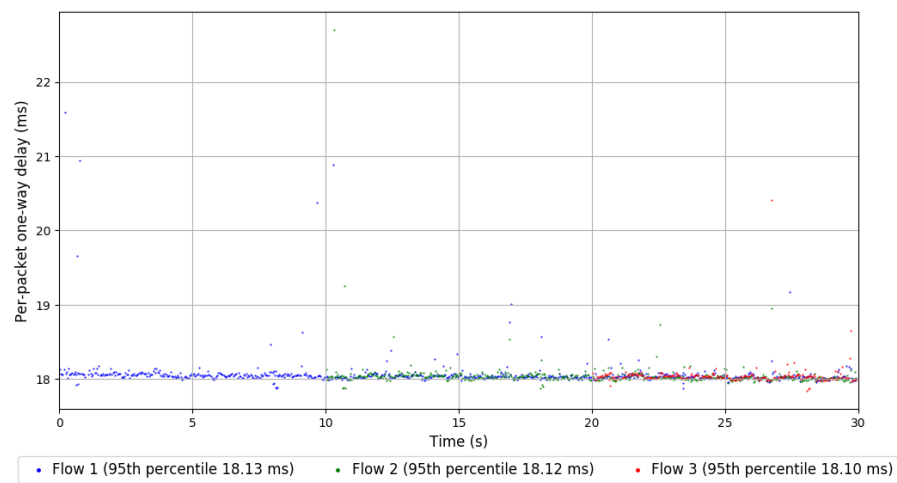
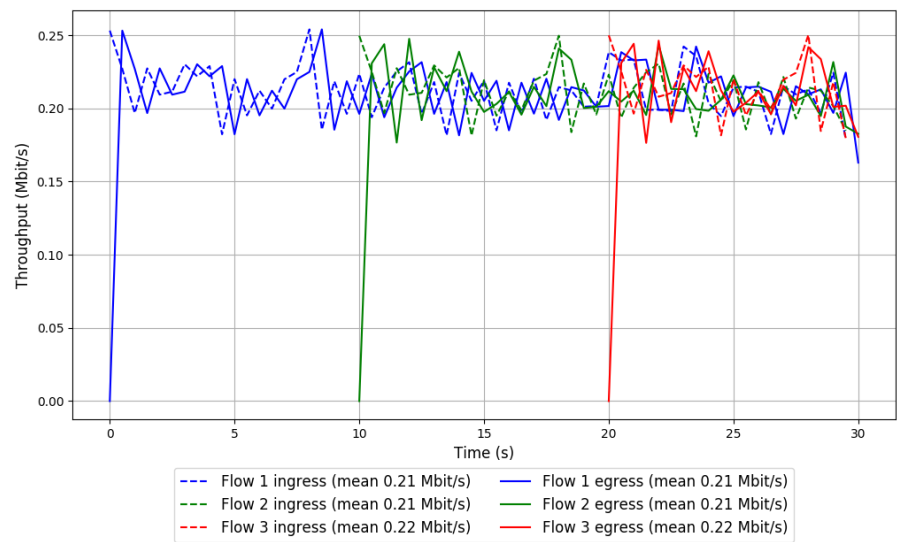


Run 4: Statistics of SReAM

Start at: 2019-02-12 05:50:08  
End at: 2019-02-12 05:50:38  
Local clock offset: 0.468 ms  
Remote clock offset: -1.232 ms

# Below is generated by plot.py at 2019-02-12 06:52:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.42 Mbit/s  
95th percentile per-packet one-way delay: 18.121 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 18.133 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 18.119 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 18.099 ms  
Loss rate: 0.36%

Run 4: Report of SCRaM — Data Link

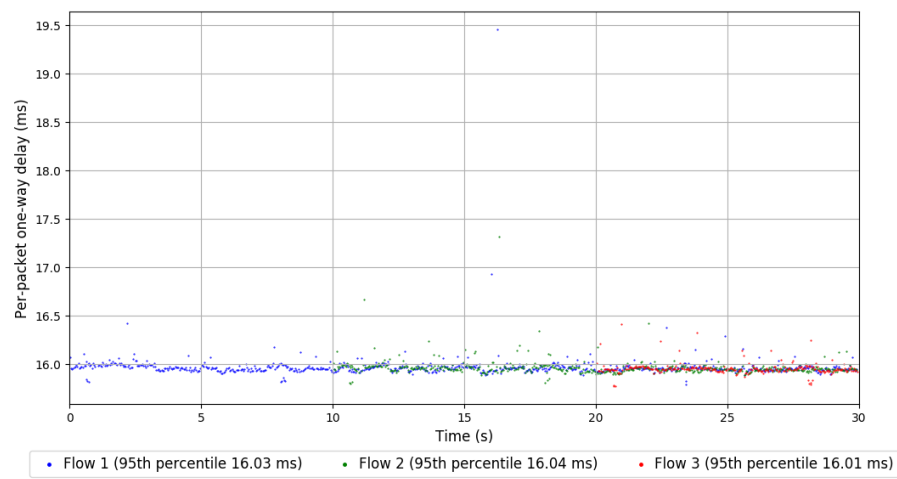
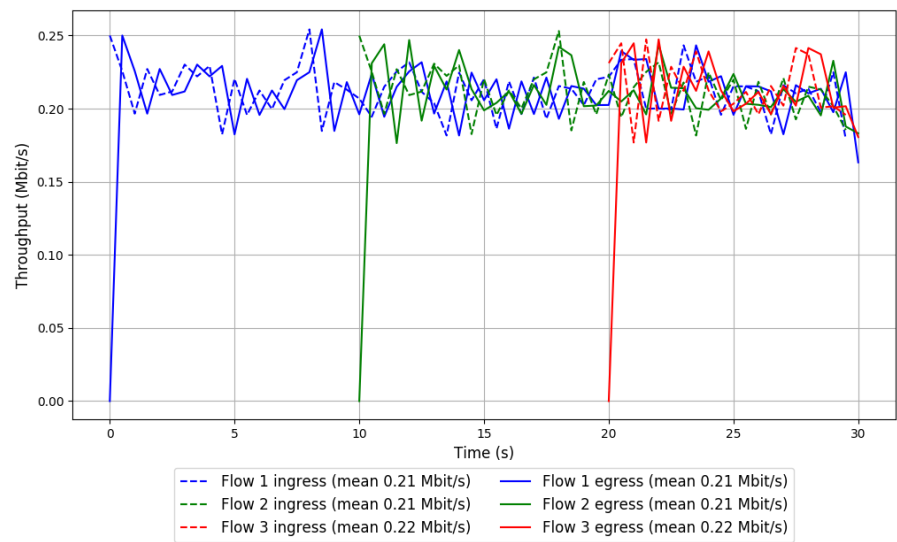


Run 5: Statistics of SReAM

Start at: 2019-02-12 06:28:16  
End at: 2019-02-12 06:28:47  
Local clock offset: 3.573 ms  
Remote clock offset: -1.197 ms

# Below is generated by plot.py at 2019-02-12 06:52:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 16.031 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 16.031 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 16.035 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 16.014 ms  
Loss rate: 0.35%

Run 5: Report of SReAM — Data Link

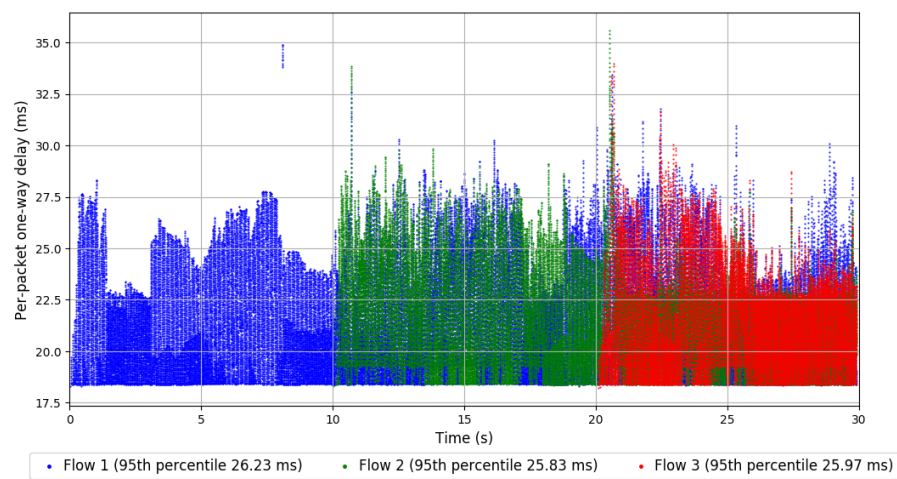
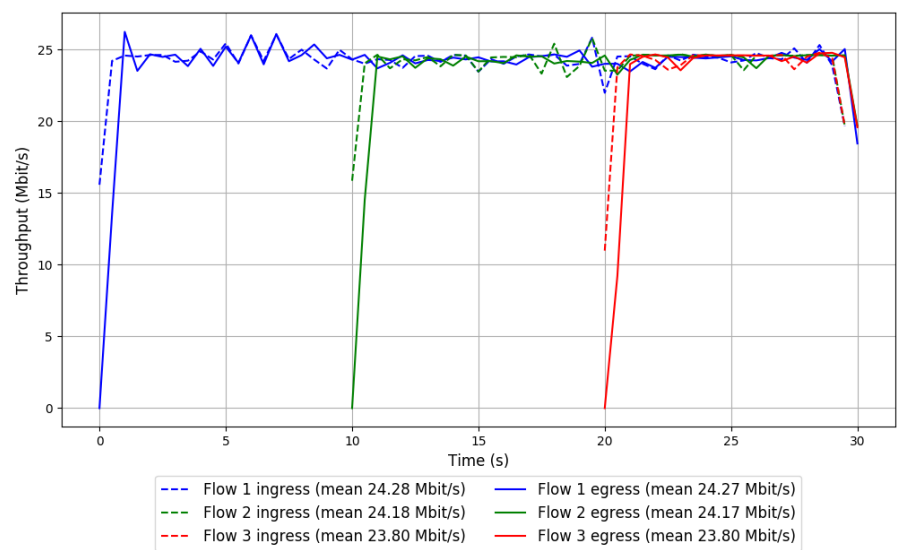


Run 1: Statistics of Sprout

Start at: 2019-02-12 04:20:03  
End at: 2019-02-12 04:20:33  
Local clock offset: 4.626 ms  
Remote clock offset: -2.939 ms

# Below is generated by plot.py at 2019-02-12 06:52:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 48.18 Mbit/s  
95th percentile per-packet one-way delay: 26.069 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 24.27 Mbit/s  
95th percentile per-packet one-way delay: 26.225 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 24.17 Mbit/s  
95th percentile per-packet one-way delay: 25.832 ms  
Loss rate: 0.10%  
-- Flow 3:  
Average throughput: 23.80 Mbit/s  
95th percentile per-packet one-way delay: 25.968 ms  
Loss rate: 0.18%

Run 1: Report of Sprout — Data Link



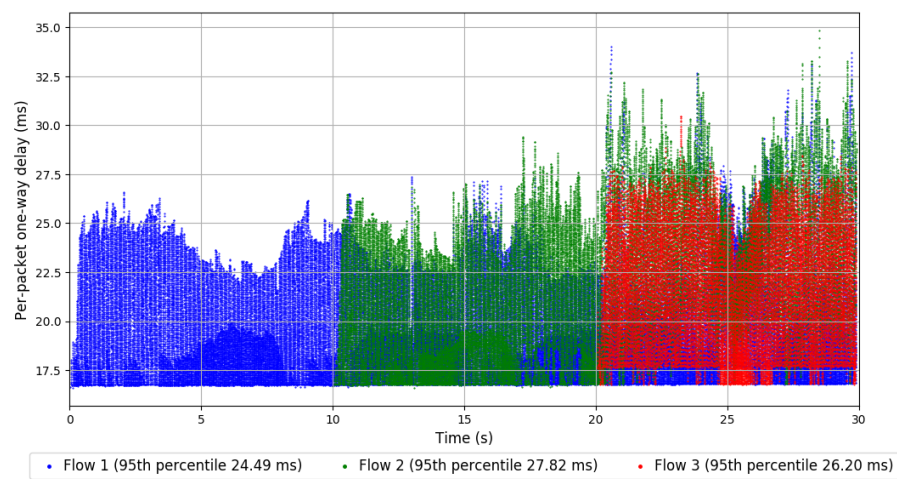
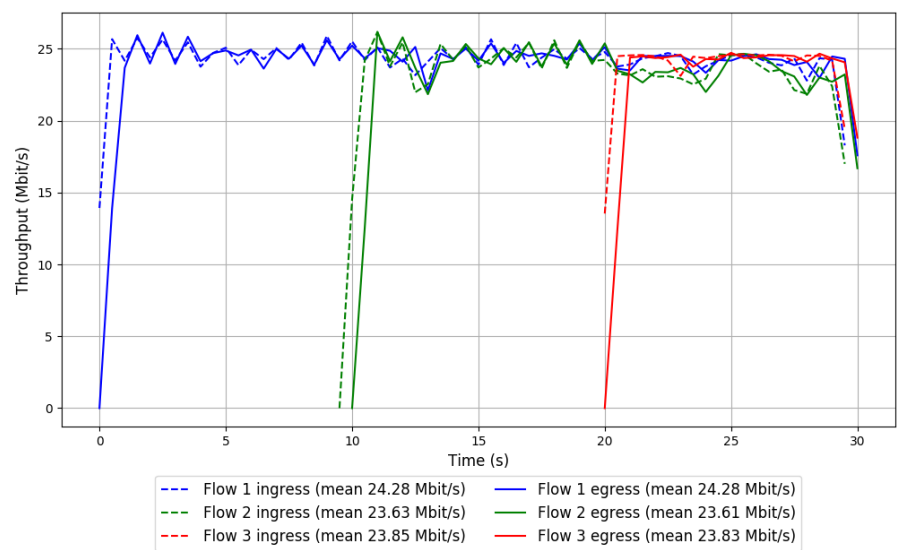


Run 2: Statistics of Sprout

Start at: 2019-02-12 04:45:53  
End at: 2019-02-12 04:46:23  
Local clock offset: 1.088 ms  
Remote clock offset: -1.505 ms

# Below is generated by plot.py at 2019-02-12 06:52:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 47.86 Mbit/s  
95th percentile per-packet one-way delay: 26.465 ms  
Loss rate: 0.15%  
-- Flow 1:  
Average throughput: 24.28 Mbit/s  
95th percentile per-packet one-way delay: 24.490 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 23.61 Mbit/s  
95th percentile per-packet one-way delay: 27.823 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 23.83 Mbit/s  
95th percentile per-packet one-way delay: 26.198 ms  
Loss rate: 0.39%

Run 2: Report of Sprout — Data Link



### Run 3: Statistics of Sprout

Start at: 2019-02-12 05:12:28

End at: 2019-02-12 05:12:58

Local clock offset: -3.148 ms

Remote clock offset: -1.83 ms

# Below is generated by plot.py at 2019-02-12 06:52:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 48.43 Mbit/s

95th percentile per-packet one-way delay: 25.286 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 24.25 Mbit/s

95th percentile per-packet one-way delay: 24.721 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 24.36 Mbit/s

95th percentile per-packet one-way delay: 25.600 ms

Loss rate: 0.21%

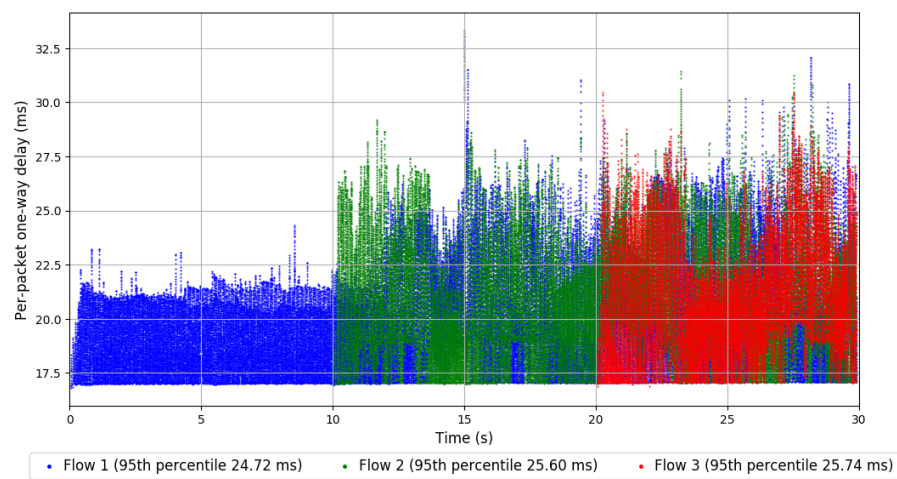
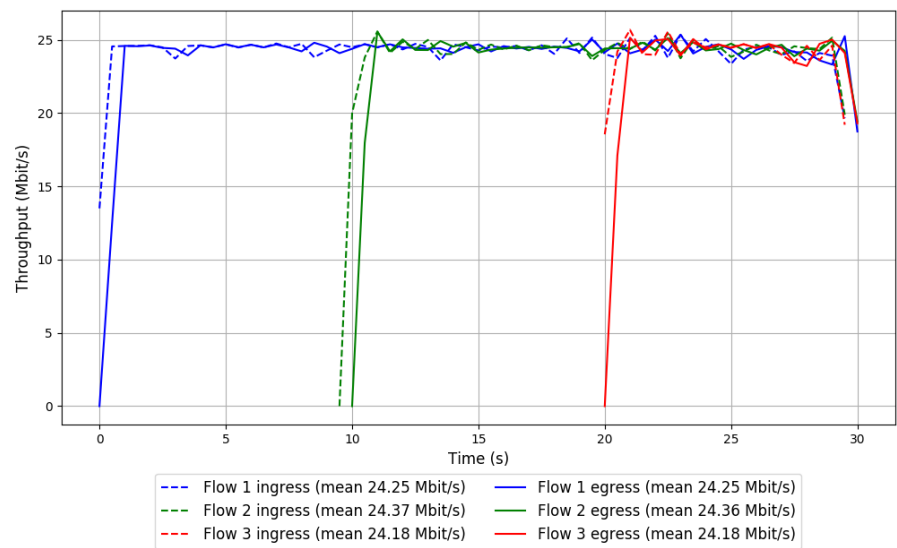
-- Flow 3:

Average throughput: 24.18 Mbit/s

95th percentile per-packet one-way delay: 25.741 ms

Loss rate: 0.13%

Run 3: Report of Sprout — Data Link

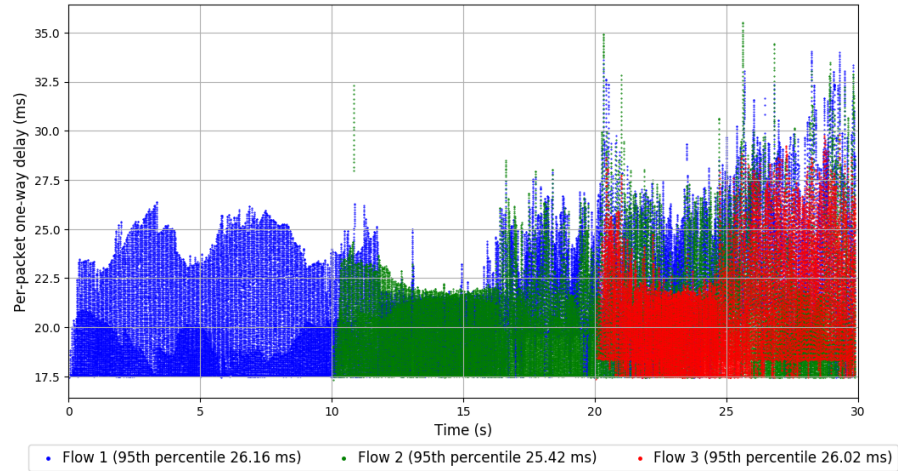
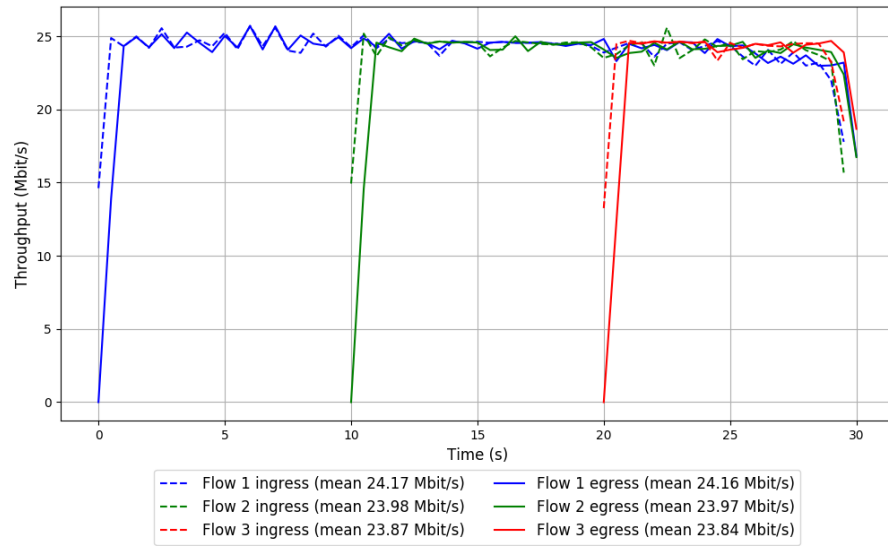


#### Run 4: Statistics of Sprout

Start at: 2019-02-12 05:47:52  
End at: 2019-02-12 05:48:22  
Local clock offset: -0.504 ms  
Remote clock offset: -1.348 ms

```
# Below is generated by plot.py at 2019-02-12 06:52:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.96 Mbit/s
95th percentile per-packet one-way delay: 25.934 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 24.16 Mbit/s
95th percentile per-packet one-way delay: 26.163 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 23.97 Mbit/s
95th percentile per-packet one-way delay: 25.419 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 23.84 Mbit/s
95th percentile per-packet one-way delay: 26.017 ms
Loss rate: 0.23%
```

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

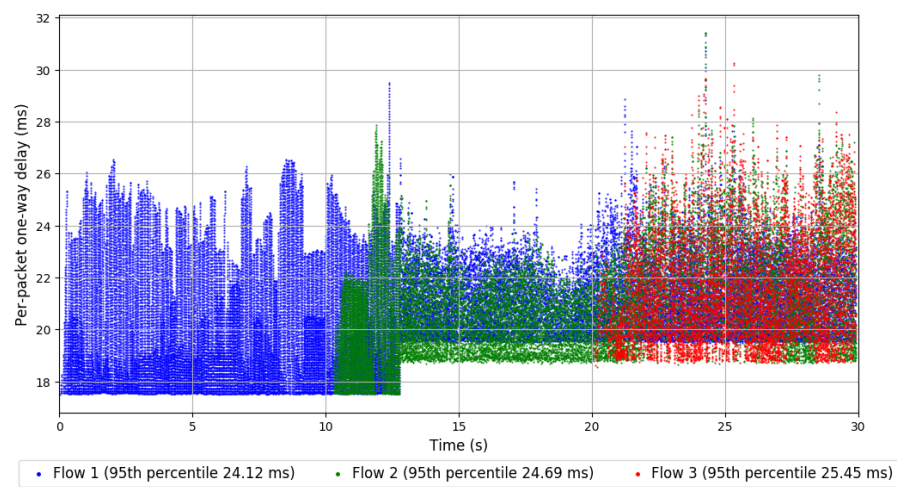
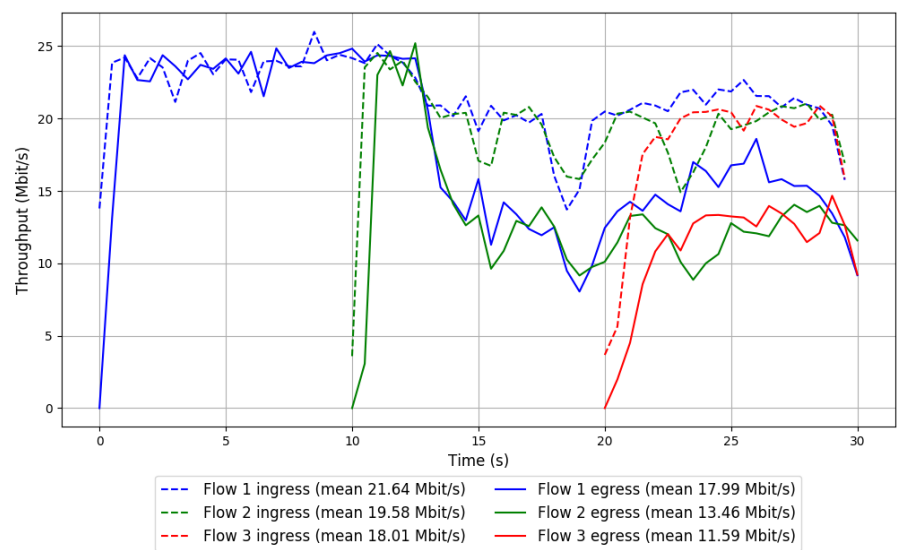


Run 5: Statistics of Sprout

Start at: 2019-02-12 06:25:14  
End at: 2019-02-12 06:25:44  
Local clock offset: 3.285 ms  
Remote clock offset: -2.773 ms

# Below is generated by plot.py at 2019-02-12 06:52:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 30.63 Mbit/s  
95th percentile per-packet one-way delay: 24.487 ms  
Loss rate: 24.34%  
-- Flow 1:  
Average throughput: 17.99 Mbit/s  
95th percentile per-packet one-way delay: 24.122 ms  
Loss rate: 16.95%  
-- Flow 2:  
Average throughput: 13.46 Mbit/s  
95th percentile per-packet one-way delay: 24.690 ms  
Loss rate: 31.33%  
-- Flow 3:  
Average throughput: 11.59 Mbit/s  
95th percentile per-packet one-way delay: 25.450 ms  
Loss rate: 36.10%

Run 5: Report of Sprout — Data Link



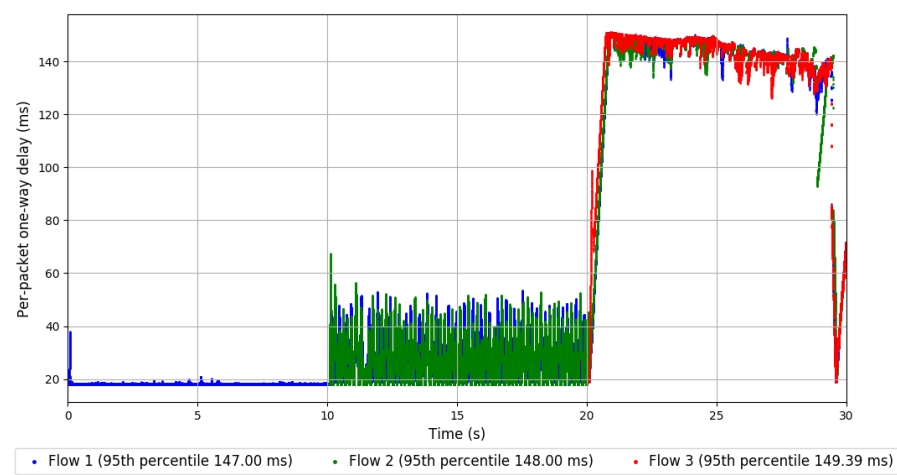
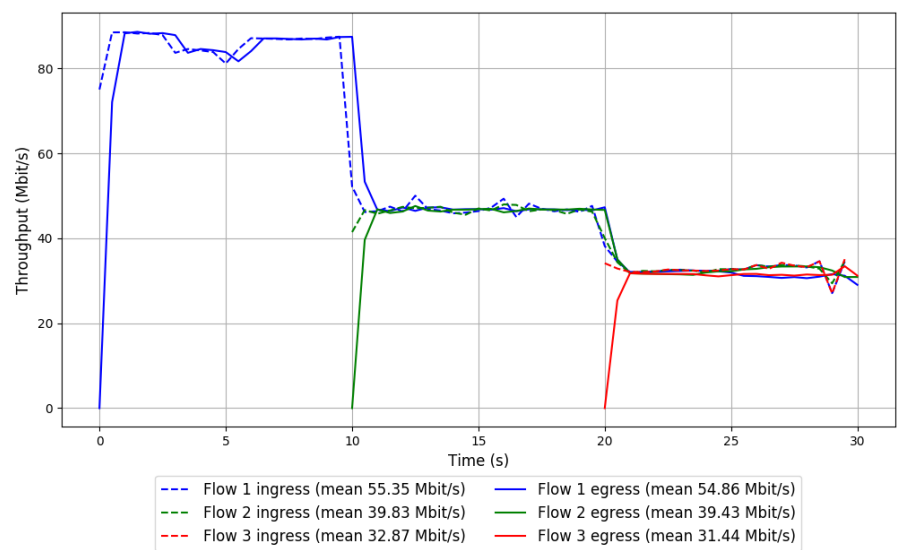


Run 1: Statistics of TaoVA-100x

Start at: 2019-02-12 04:18:40  
End at: 2019-02-12 04:19:10  
Local clock offset: 2.288 ms  
Remote clock offset: -4.925 ms

# Below is generated by plot.py at 2019-02-12 06:53:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.55 Mbit/s  
95th percentile per-packet one-way delay: 148.158 ms  
Loss rate: 1.44%  
-- Flow 1:  
Average throughput: 54.86 Mbit/s  
95th percentile per-packet one-way delay: 146.997 ms  
Loss rate: 0.96%  
-- Flow 2:  
Average throughput: 39.43 Mbit/s  
95th percentile per-packet one-way delay: 147.997 ms  
Loss rate: 1.14%  
-- Flow 3:  
Average throughput: 31.44 Mbit/s  
95th percentile per-packet one-way delay: 149.393 ms  
Loss rate: 4.61%

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

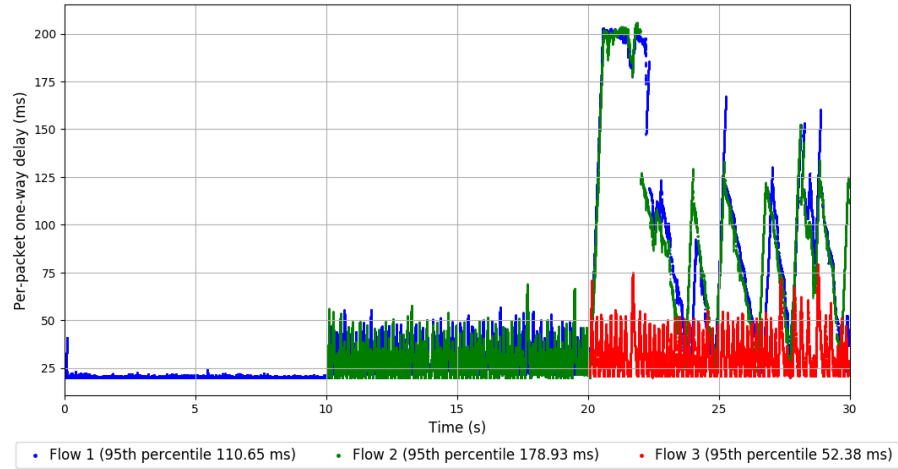
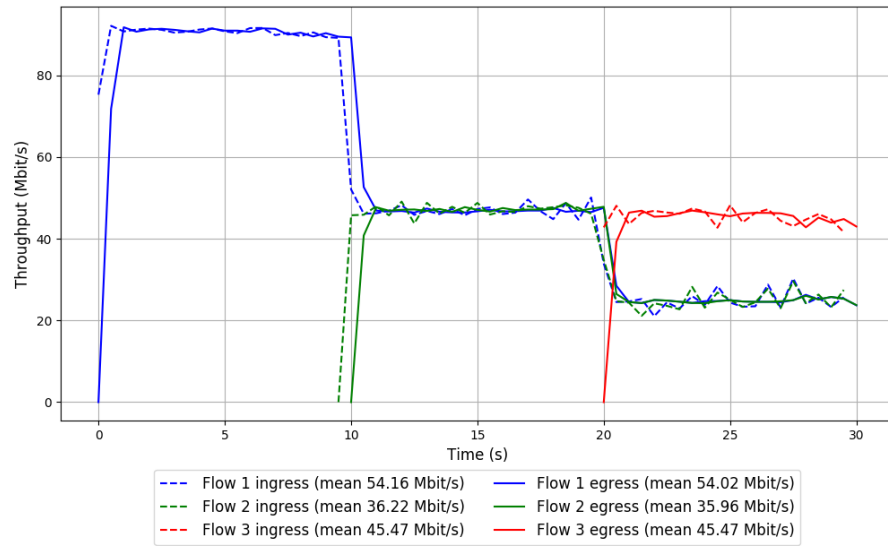


Run 2: Statistics of TaoVA-100x

Start at: 2019-02-12 04:44:33  
End at: 2019-02-12 04:45:03  
Local clock offset: 1.449 ms  
Remote clock offset: -4.697 ms

# Below is generated by plot.py at 2019-02-12 06:53:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.07 Mbit/s  
95th percentile per-packet one-way delay: 113.712 ms  
Loss rate: 0.47%  
-- Flow 1:  
Average throughput: 54.02 Mbit/s  
95th percentile per-packet one-way delay: 110.646 ms  
Loss rate: 0.36%  
-- Flow 2:  
Average throughput: 35.96 Mbit/s  
95th percentile per-packet one-way delay: 178.933 ms  
Loss rate: 0.86%  
-- Flow 3:  
Average throughput: 45.47 Mbit/s  
95th percentile per-packet one-way delay: 52.379 ms  
Loss rate: 0.26%

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

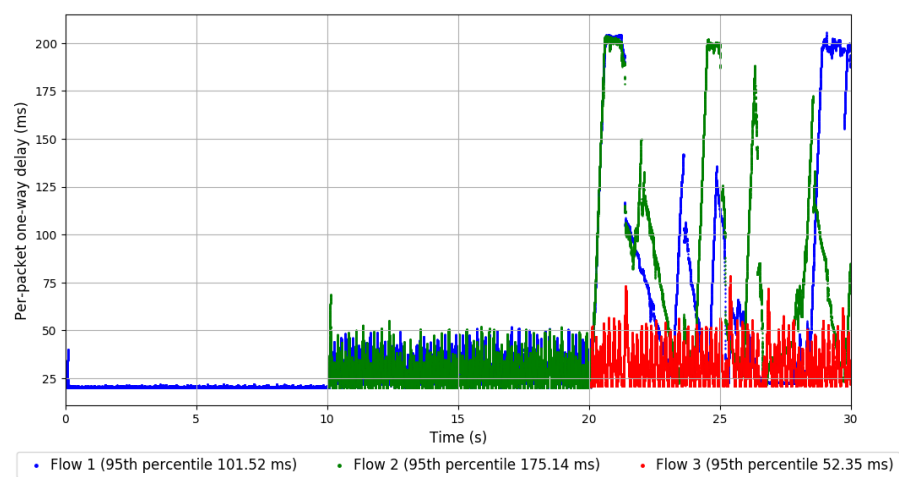
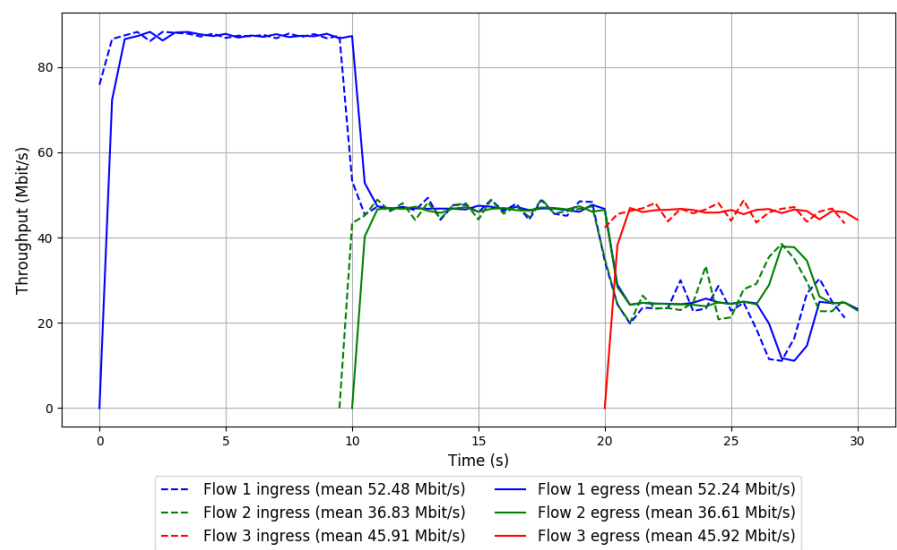


Run 3: Statistics of TaoVA-100x

Start at: 2019-02-12 05:11:07  
End at: 2019-02-12 05:11:37  
Local clock offset: -2.362 ms  
Remote clock offset: -4.668 ms

# Below is generated by plot.py at 2019-02-12 06:53:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.86 Mbit/s  
95th percentile per-packet one-way delay: 112.219 ms  
Loss rate: 0.45%  
-- Flow 1:  
Average throughput: 52.24 Mbit/s  
95th percentile per-packet one-way delay: 101.524 ms  
Loss rate: 0.37%  
-- Flow 2:  
Average throughput: 36.61 Mbit/s  
95th percentile per-packet one-way delay: 175.142 ms  
Loss rate: 0.74%  
-- Flow 3:  
Average throughput: 45.92 Mbit/s  
95th percentile per-packet one-way delay: 52.352 ms  
Loss rate: 0.29%

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

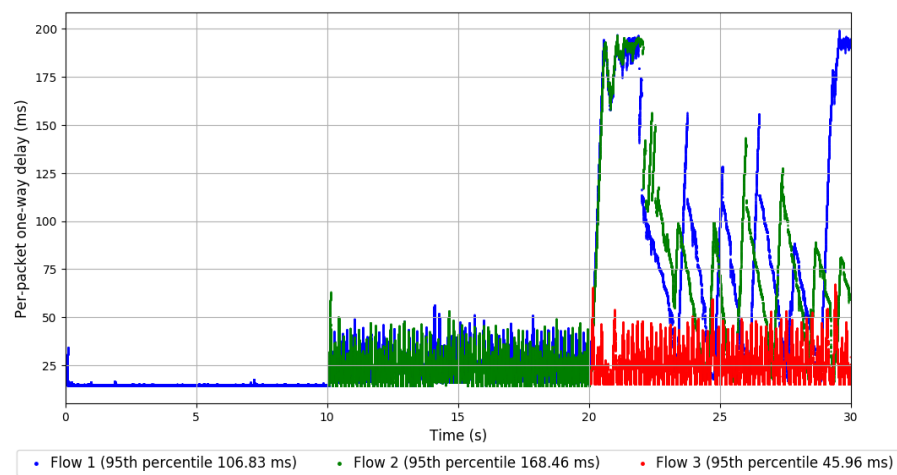
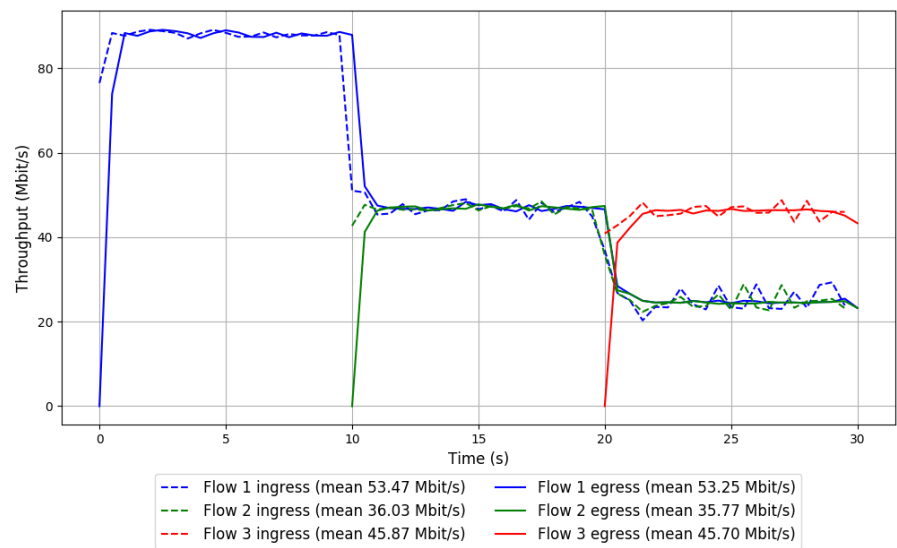


Run 4: Statistics of TaoVA-100x

Start at: 2019-02-12 05:46:30  
End at: 2019-02-12 05:47:00  
Local clock offset: -2.811 ms  
Remote clock offset: -0.561 ms

# Below is generated by plot.py at 2019-02-12 06:53:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.24 Mbit/s  
95th percentile per-packet one-way delay: 108.226 ms  
Loss rate: 0.61%  
-- Flow 1:  
Average throughput: 53.25 Mbit/s  
95th percentile per-packet one-way delay: 106.826 ms  
Loss rate: 0.50%  
-- Flow 2:  
Average throughput: 35.77 Mbit/s  
95th percentile per-packet one-way delay: 168.462 ms  
Loss rate: 0.85%  
-- Flow 3:  
Average throughput: 45.70 Mbit/s  
95th percentile per-packet one-way delay: 45.963 ms  
Loss rate: 0.59%

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



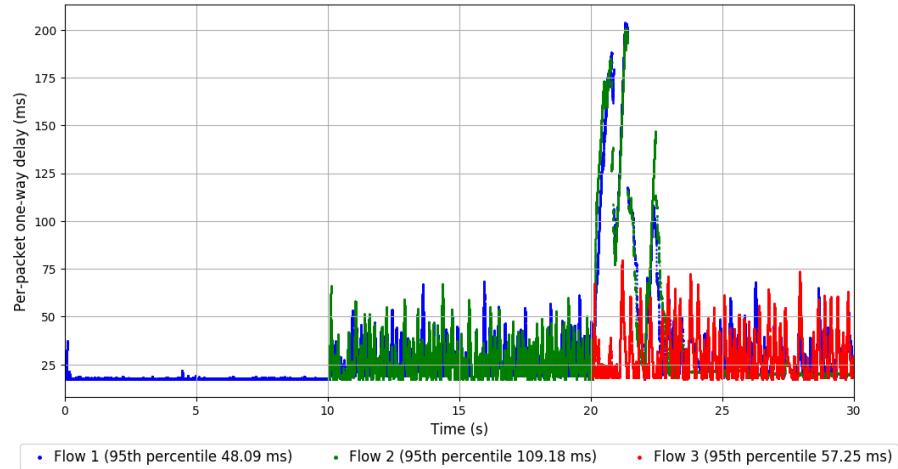
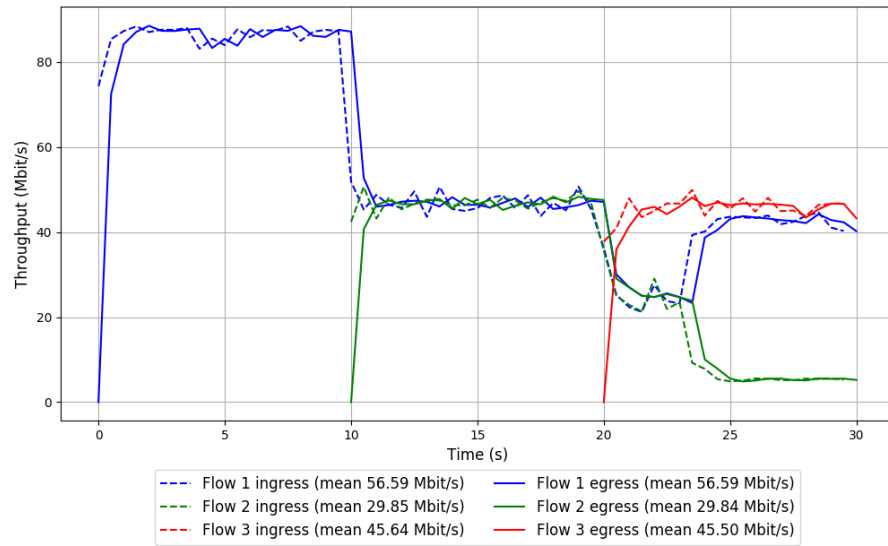


Run 5: Statistics of TaoVA-100x

Start at: 2019-02-12 06:23:58  
End at: 2019-02-12 06:24:28  
Local clock offset: 2.87 ms  
Remote clock offset: -3.024 ms

# Below is generated by plot.py at 2019-02-12 06:53:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.55 Mbit/s  
95th percentile per-packet one-way delay: 57.925 ms  
Loss rate: 0.20%  
-- Flow 1:  
Average throughput: 56.59 Mbit/s  
95th percentile per-packet one-way delay: 48.091 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 29.84 Mbit/s  
95th percentile per-packet one-way delay: 109.180 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 45.50 Mbit/s  
95th percentile per-packet one-way delay: 57.254 ms  
Loss rate: 0.60%

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

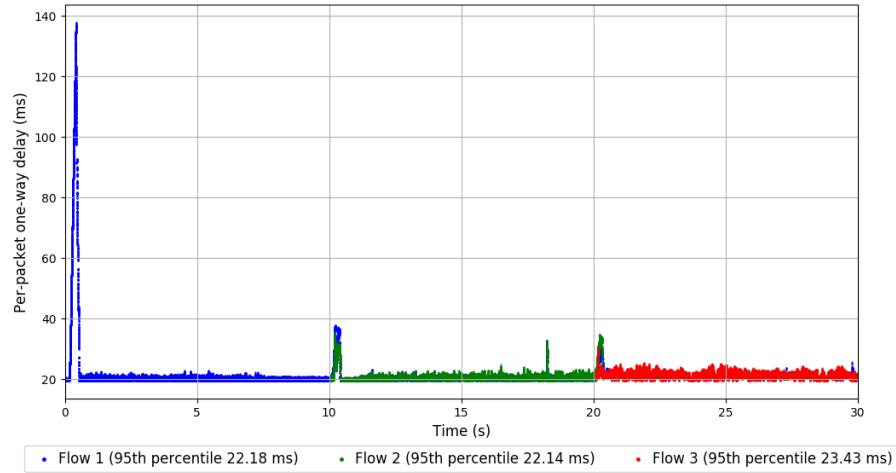
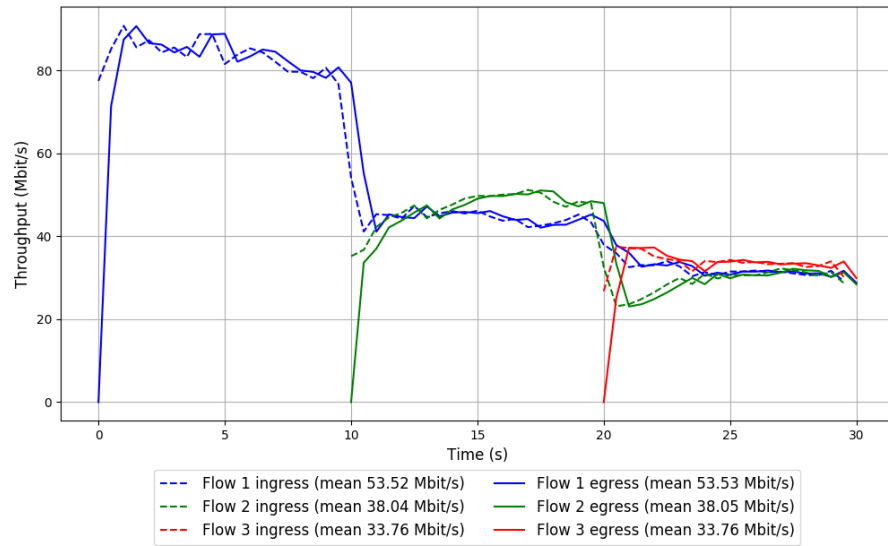


Run 1: Statistics of TCP Vegas

Start at: 2019-02-12 04:23:27  
End at: 2019-02-12 04:23:57  
Local clock offset: 6.186 ms  
Remote clock offset: -2.668 ms

# Below is generated by plot.py at 2019-02-12 06:53:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.06 Mbit/s  
95th percentile per-packet one-way delay: 22.685 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 53.53 Mbit/s  
95th percentile per-packet one-way delay: 22.183 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 38.05 Mbit/s  
95th percentile per-packet one-way delay: 22.141 ms  
Loss rate: 0.11%  
-- Flow 3:  
Average throughput: 33.76 Mbit/s  
95th percentile per-packet one-way delay: 23.435 ms  
Loss rate: 0.27%

# Run 1: Report of TCP Vegas — Data Link

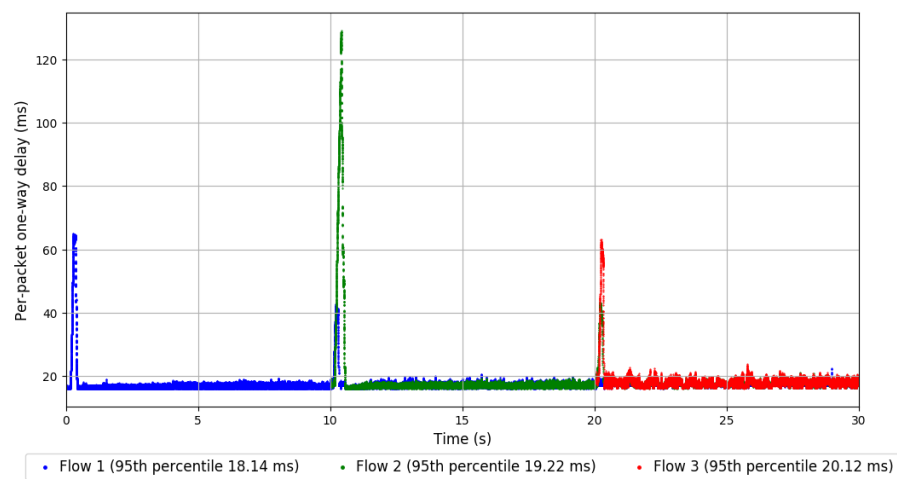
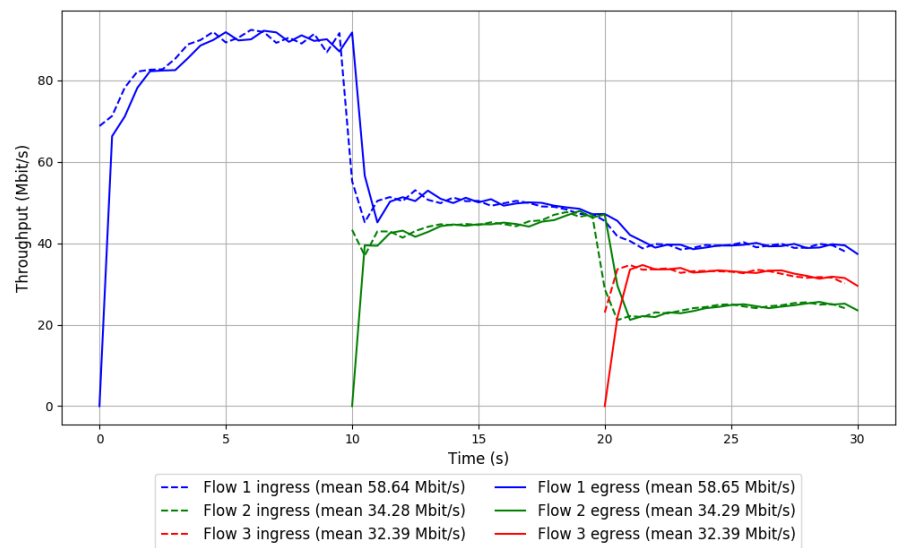


Run 2: Statistics of TCP Vegas

Start at: 2019-02-12 04:49:22  
End at: 2019-02-12 04:49:52  
Local clock offset: -1.64 ms  
Remote clock offset: -3.196 ms

# Below is generated by plot.py at 2019-02-12 06:53:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.23 Mbit/s  
95th percentile per-packet one-way delay: 18.986 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 58.65 Mbit/s  
95th percentile per-packet one-way delay: 18.145 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 34.29 Mbit/s  
95th percentile per-packet one-way delay: 19.222 ms  
Loss rate: 0.11%  
-- Flow 3:  
Average throughput: 32.39 Mbit/s  
95th percentile per-packet one-way delay: 20.119 ms  
Loss rate: 0.28%

Run 2: Report of TCP Vegas — Data Link

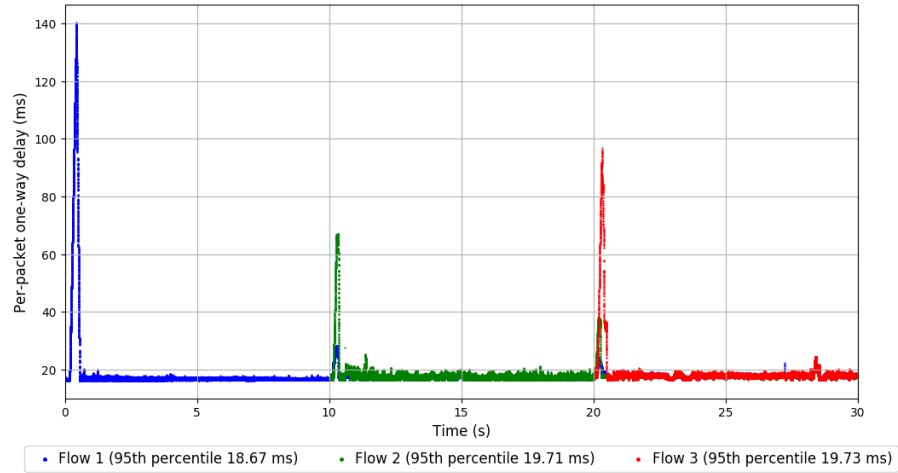
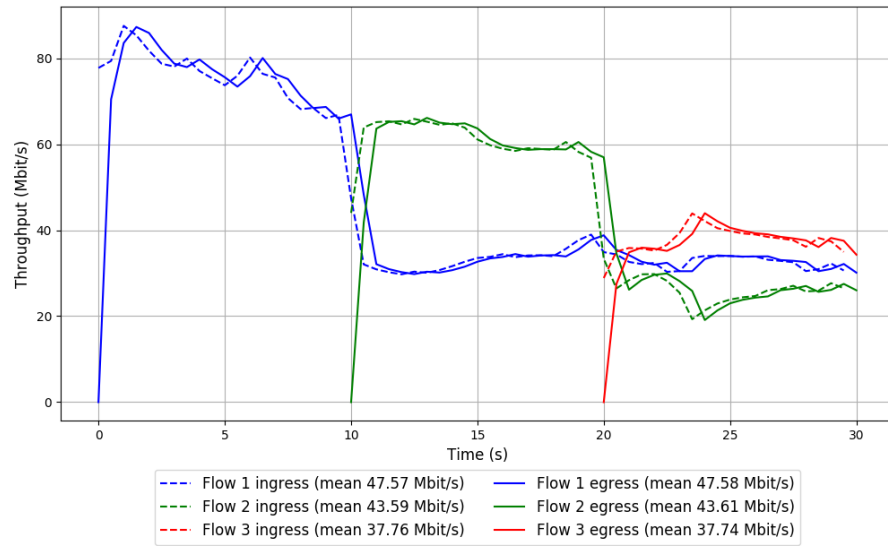


Run 3: Statistics of TCP Vegas

Start at: 2019-02-12 05:15:56  
End at: 2019-02-12 05:16:26  
Local clock offset: -4.616 ms  
Remote clock offset: -2.015 ms

# Below is generated by plot.py at 2019-02-12 06:53:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.13 Mbit/s  
95th percentile per-packet one-way delay: 19.415 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 47.58 Mbit/s  
95th percentile per-packet one-way delay: 18.670 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 43.61 Mbit/s  
95th percentile per-packet one-way delay: 19.706 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 37.74 Mbit/s  
95th percentile per-packet one-way delay: 19.734 ms  
Loss rate: 0.30%

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



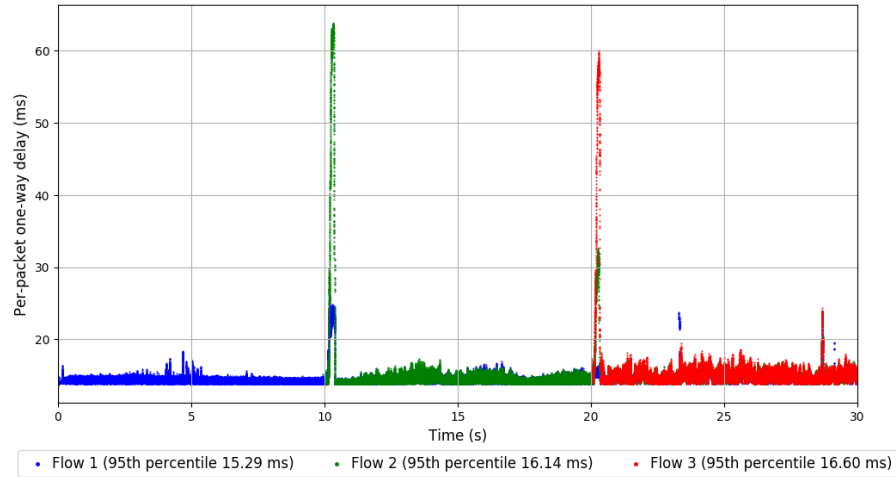
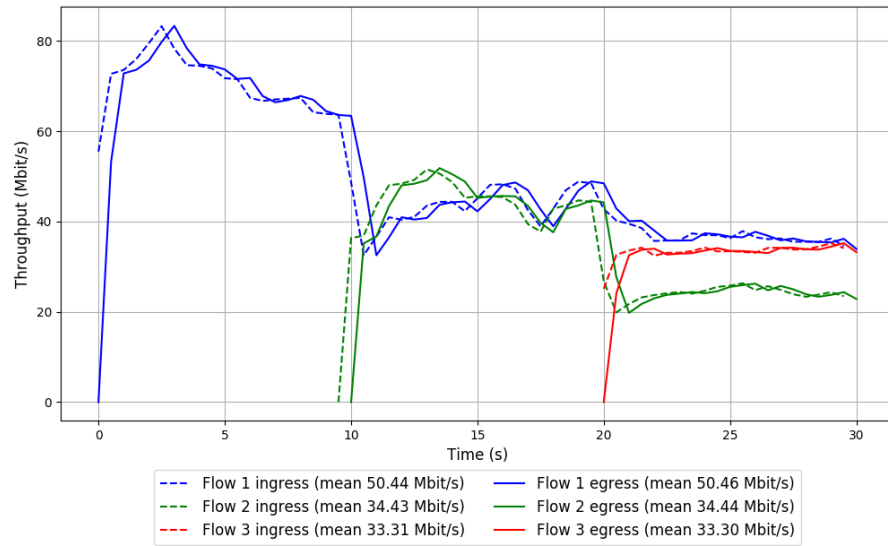


Run 4: Statistics of TCP Vegas

Start at: 2019-02-12 05:51:15  
End at: 2019-02-12 05:51:45  
Local clock offset: -3.316 ms  
Remote clock offset: -0.999 ms

# Below is generated by plot.py at 2019-02-12 06:54:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.46 Mbit/s  
95th percentile per-packet one-way delay: 15.857 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 50.46 Mbit/s  
95th percentile per-packet one-way delay: 15.289 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 34.44 Mbit/s  
95th percentile per-packet one-way delay: 16.144 ms  
Loss rate: 0.10%  
-- Flow 3:  
Average throughput: 33.30 Mbit/s  
95th percentile per-packet one-way delay: 16.603 ms  
Loss rate: 0.30%

# Run 4: Report of TCP Vegas — Data Link

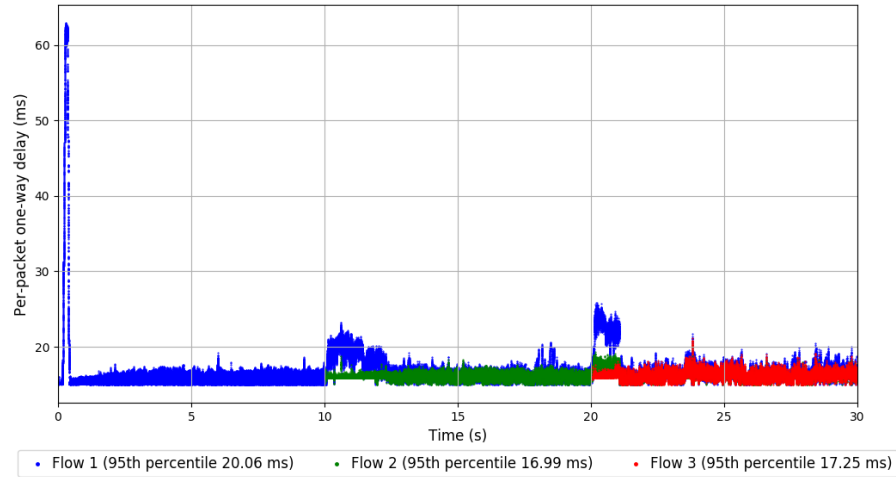
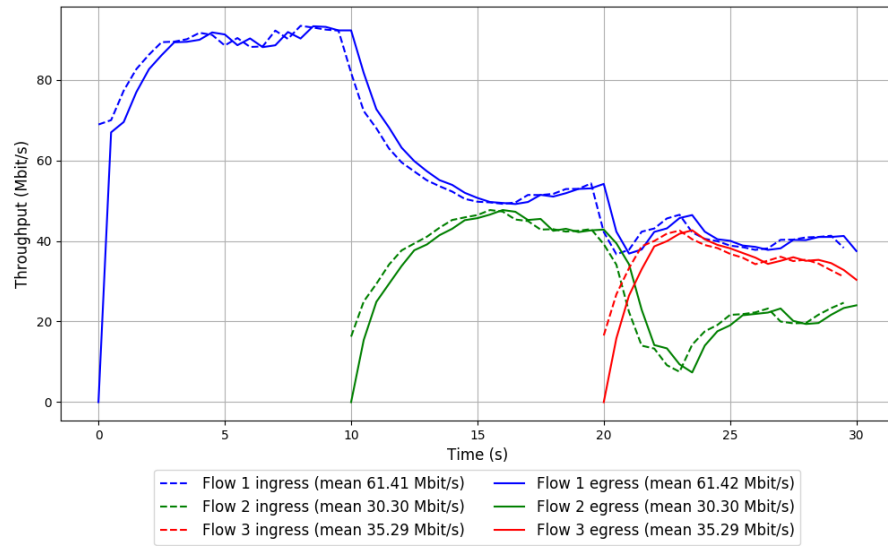


Run 5: Statistics of TCP Vegas

Start at: 2019-02-12 06:29:23  
End at: 2019-02-12 06:29:53  
Local clock offset: 3.398 ms  
Remote clock offset: -0.512 ms

# Below is generated by plot.py at 2019-02-12 06:54:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.32 Mbit/s  
95th percentile per-packet one-way delay: 19.019 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 61.42 Mbit/s  
95th percentile per-packet one-way delay: 20.057 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 30.30 Mbit/s  
95th percentile per-packet one-way delay: 16.989 ms  
Loss rate: 0.11%  
-- Flow 3:  
Average throughput: 35.29 Mbit/s  
95th percentile per-packet one-way delay: 17.247 ms  
Loss rate: 0.25%

# Run 5: Report of TCP Vegas — Data Link

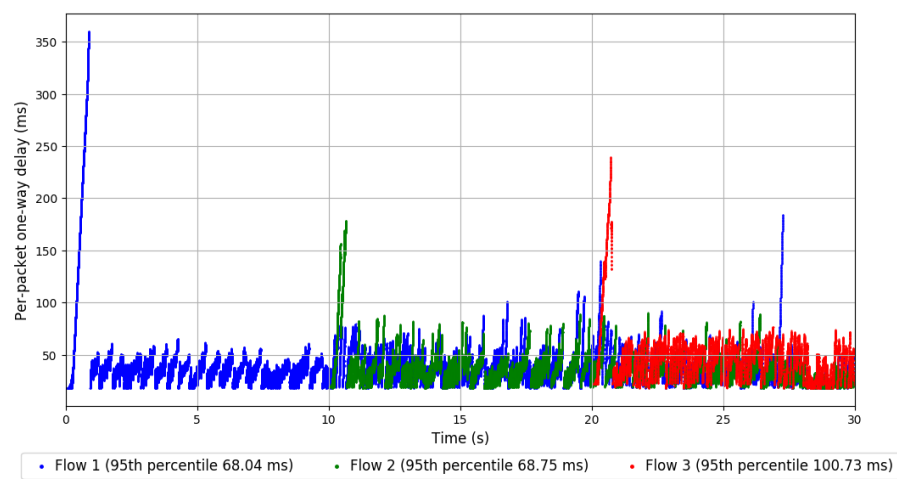
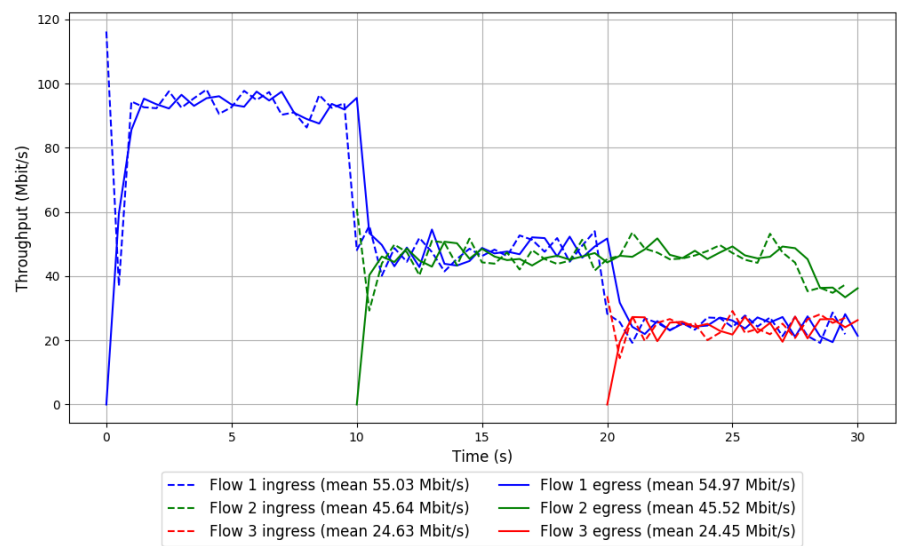


Run 1: Statistics of Verus

Start at: 2019-02-12 04:27:06  
End at: 2019-02-12 04:27:36  
Local clock offset: 4.179 ms  
Remote clock offset: -3.407 ms

# Below is generated by plot.py at 2019-02-12 06:54:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.37 Mbit/s  
95th percentile per-packet one-way delay: 69.667 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 54.97 Mbit/s  
95th percentile per-packet one-way delay: 68.042 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 45.52 Mbit/s  
95th percentile per-packet one-way delay: 68.752 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 24.45 Mbit/s  
95th percentile per-packet one-way delay: 100.727 ms  
Loss rate: 0.97%

Run 1: Report of Verus — Data Link

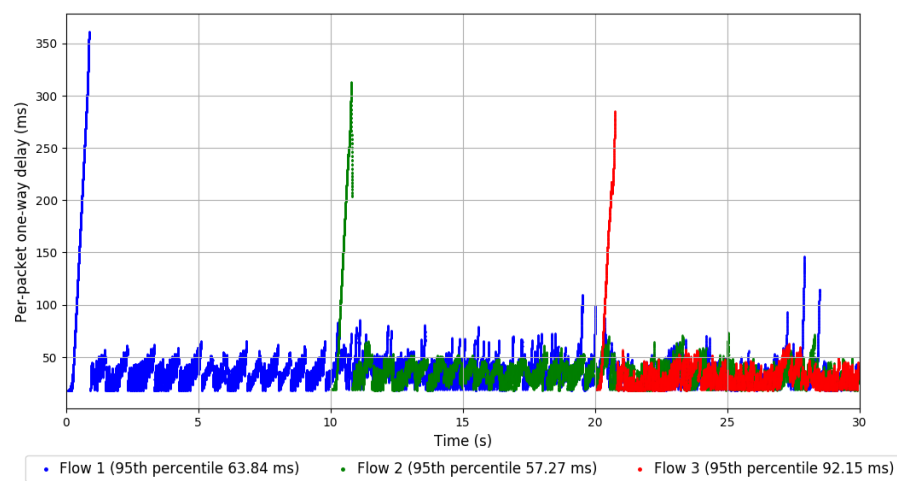
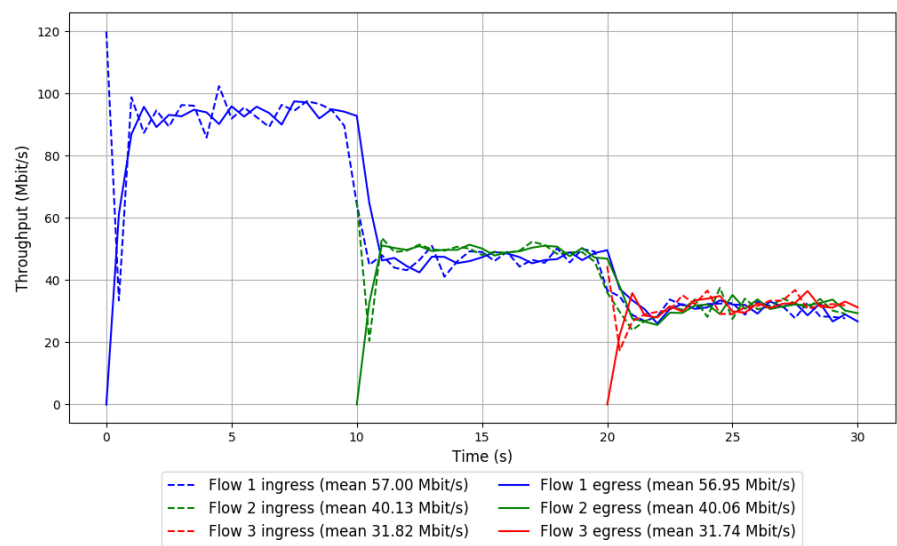


Run 2: Statistics of Verus

Start at: 2019-02-12 04:53:10  
End at: 2019-02-12 04:53:40  
Local clock offset: -1.256 ms  
Remote clock offset: -4.336 ms

# Below is generated by plot.py at 2019-02-12 06:54:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.16 Mbit/s  
95th percentile per-packet one-way delay: 62.310 ms  
Loss rate: 0.23%  
-- Flow 1:  
Average throughput: 56.95 Mbit/s  
95th percentile per-packet one-way delay: 63.836 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 40.06 Mbit/s  
95th percentile per-packet one-way delay: 57.272 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 31.74 Mbit/s  
95th percentile per-packet one-way delay: 92.150 ms  
Loss rate: 0.49%

Run 2: Report of Verus — Data Link



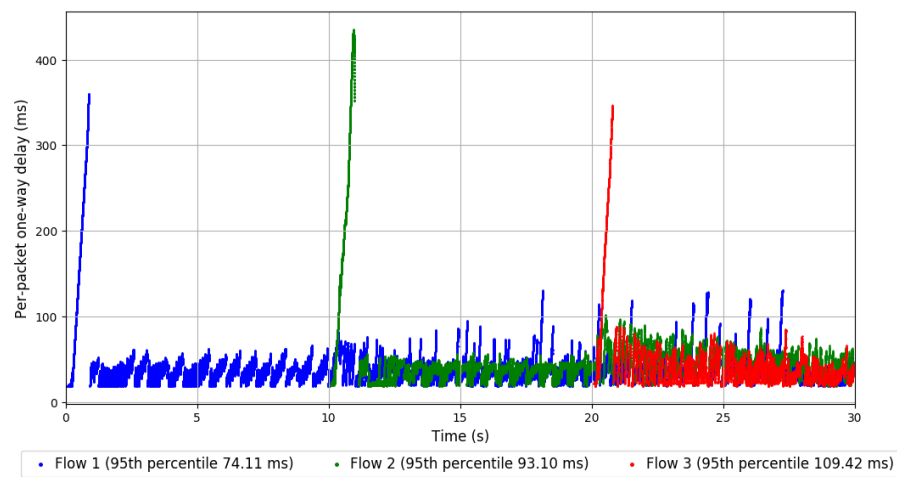
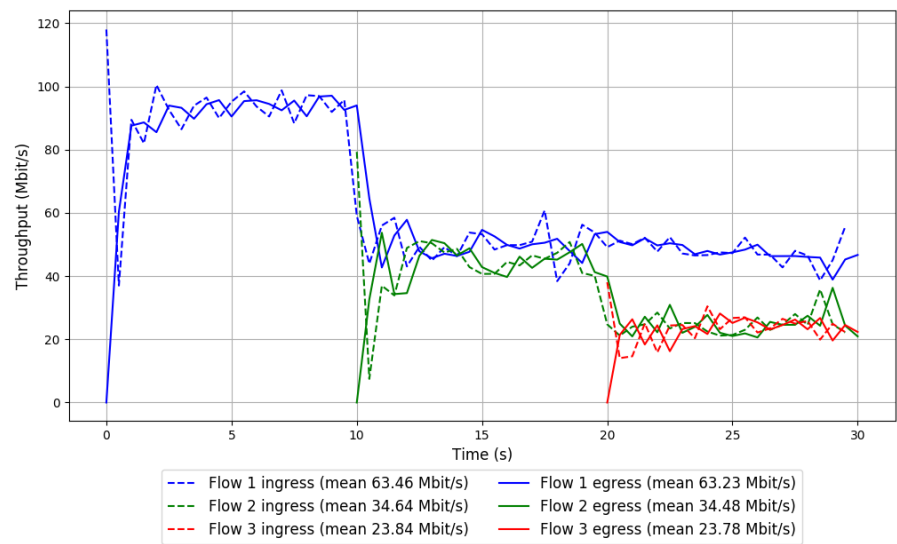


Run 3: Statistics of Verus

Start at: 2019-02-12 05:19:54  
End at: 2019-02-12 05:20:24  
Local clock offset: -3.159 ms  
Remote clock offset: -2.187 ms

# Below is generated by plot.py at 2019-02-12 06:54:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.05 Mbit/s  
95th percentile per-packet one-way delay: 80.399 ms  
Loss rate: 0.48%  
-- Flow 1:  
Average throughput: 63.23 Mbit/s  
95th percentile per-packet one-way delay: 74.113 ms  
Loss rate: 0.44%  
-- Flow 2:  
Average throughput: 34.48 Mbit/s  
95th percentile per-packet one-way delay: 93.102 ms  
Loss rate: 0.57%  
-- Flow 3:  
Average throughput: 23.78 Mbit/s  
95th percentile per-packet one-way delay: 109.419 ms  
Loss rate: 0.53%

Run 3: Report of Verus — Data Link

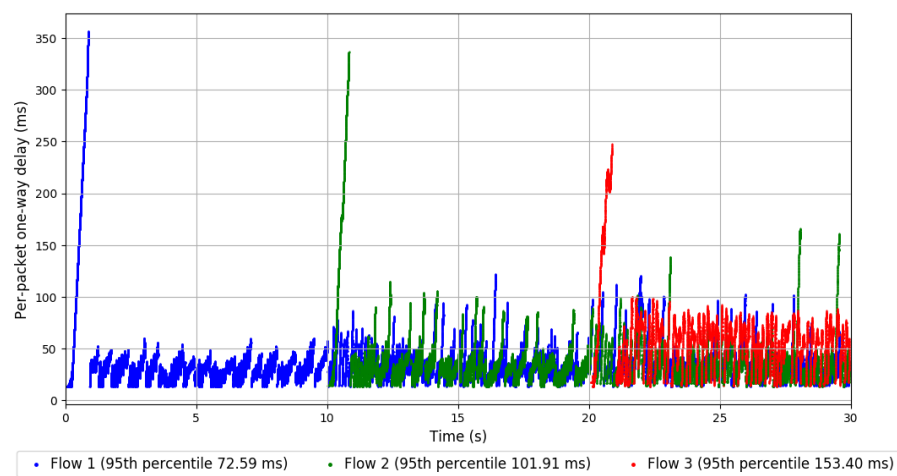
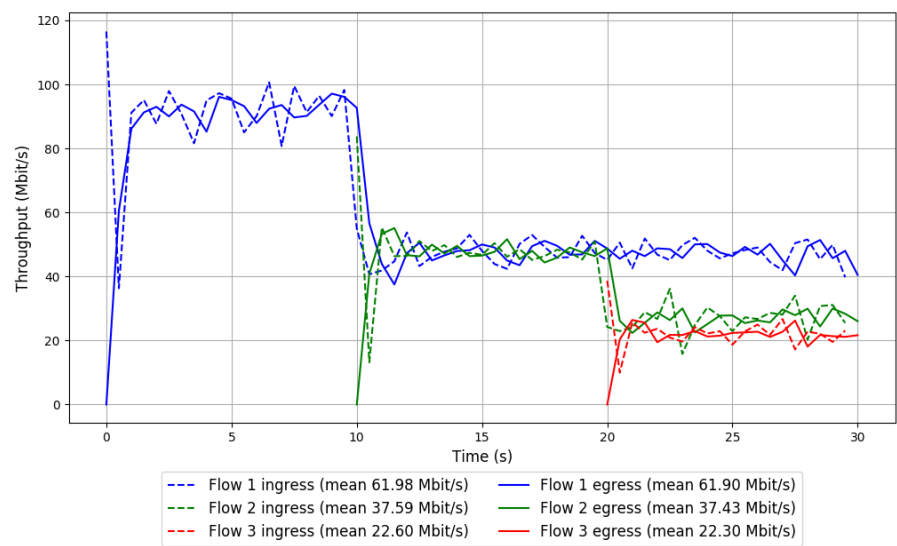


Run 4: Statistics of Verus

Start at: 2019-02-12 05:55:02  
End at: 2019-02-12 05:55:32  
Local clock offset: -3.783 ms  
Remote clock offset: -1.198 ms

# Below is generated by plot.py at 2019-02-12 06:55:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.21 Mbit/s  
95th percentile per-packet one-way delay: 86.225 ms  
Loss rate: 0.40%  
-- Flow 1:  
Average throughput: 61.90 Mbit/s  
95th percentile per-packet one-way delay: 72.592 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 37.43 Mbit/s  
95th percentile per-packet one-way delay: 101.905 ms  
Loss rate: 0.47%  
-- Flow 3:  
Average throughput: 22.30 Mbit/s  
95th percentile per-packet one-way delay: 153.397 ms  
Loss rate: 1.61%

Run 4: Report of Verus — Data Link

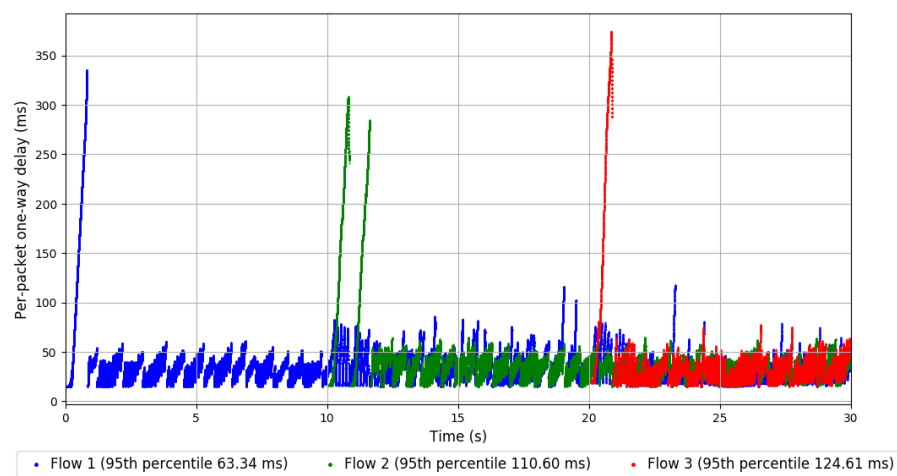
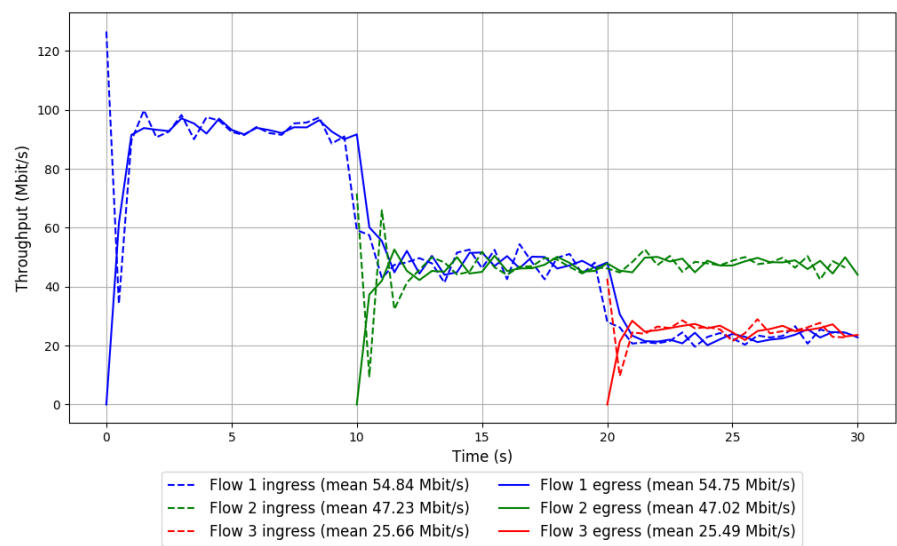


Run 5: Statistics of Verus

Start at: 2019-02-12 06:33:29  
End at: 2019-02-12 06:33:59  
Local clock offset: 3.0 ms  
Remote clock offset: -1.243 ms

# Below is generated by plot.py at 2019-02-12 06:55:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.50 Mbit/s  
95th percentile per-packet one-way delay: 68.715 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 54.75 Mbit/s  
95th percentile per-packet one-way delay: 63.336 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 47.02 Mbit/s  
95th percentile per-packet one-way delay: 110.601 ms  
Loss rate: 0.46%  
-- Flow 3:  
Average throughput: 25.49 Mbit/s  
95th percentile per-packet one-way delay: 124.609 ms  
Loss rate: 0.37%

Run 5: Report of Verus — Data Link

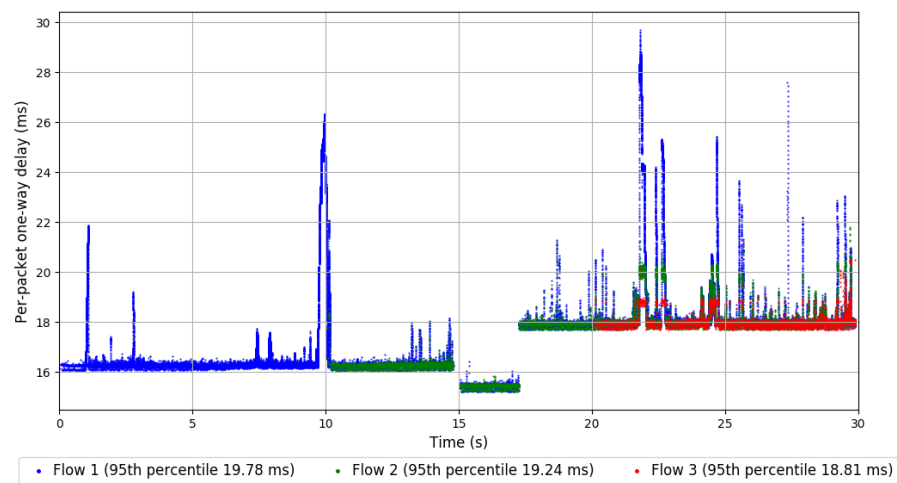
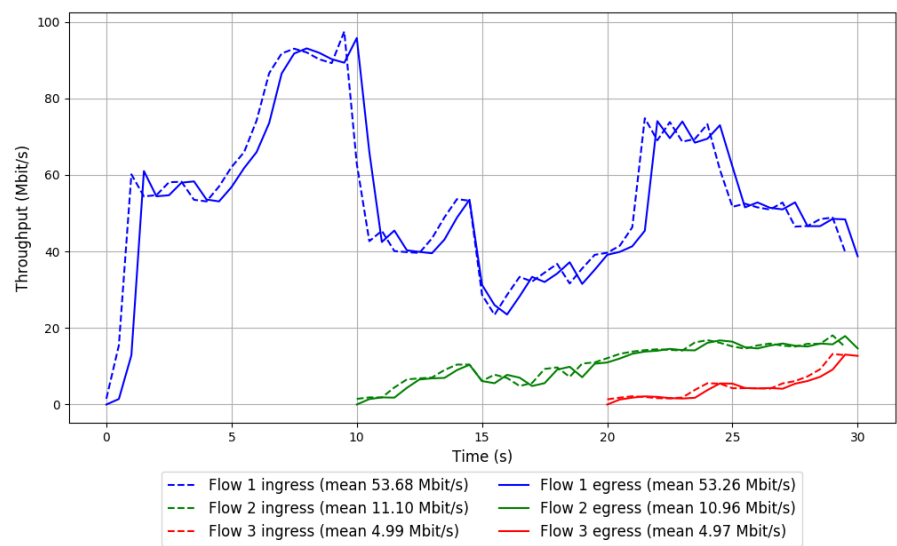


Run 1: Statistics of PCC-Vivace

Start at: 2019-02-12 04:13:38  
End at: 2019-02-12 04:14:08  
Local clock offset: 2.85 ms  
Remote clock offset: -2.439 ms

# Below is generated by plot.py at 2019-02-12 06:55:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 62.17 Mbit/s  
95th percentile per-packet one-way delay: 19.565 ms  
Loss rate: 0.96%  
-- Flow 1:  
Average throughput: 53.26 Mbit/s  
95th percentile per-packet one-way delay: 19.776 ms  
Loss rate: 0.90%  
-- Flow 2:  
Average throughput: 10.96 Mbit/s  
95th percentile per-packet one-way delay: 19.238 ms  
Loss rate: 1.40%  
-- Flow 3:  
Average throughput: 4.97 Mbit/s  
95th percentile per-packet one-way delay: 18.810 ms  
Loss rate: 0.77%

Run 1: Report of PCC-Vivace — Data Link



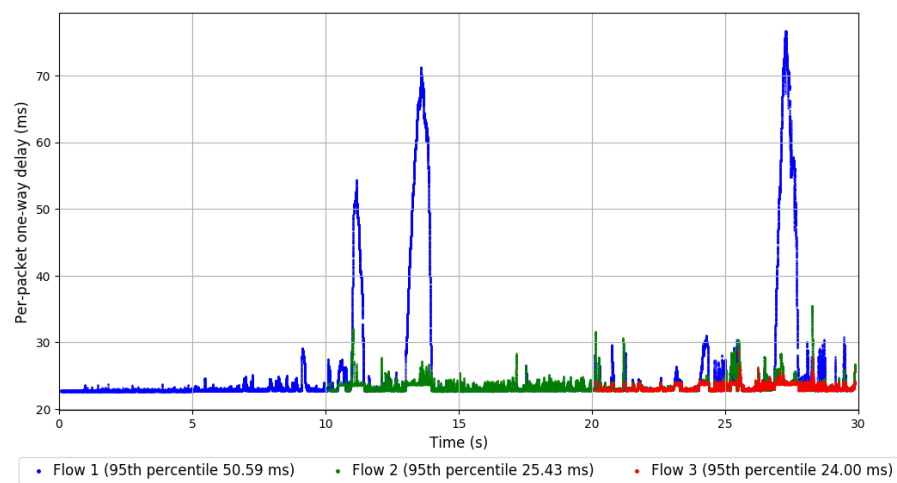
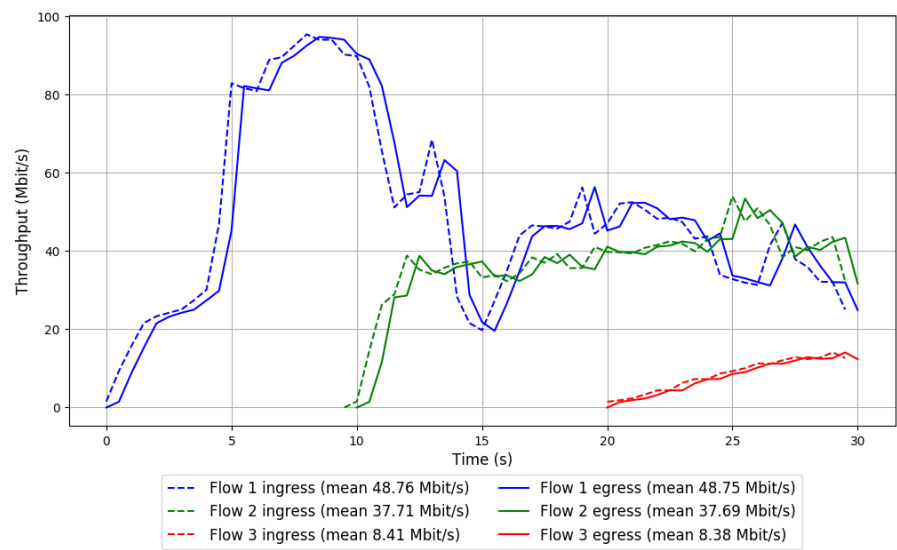


Run 2: Statistics of PCC-Vivace

Start at: 2019-02-12 04:39:29  
End at: 2019-02-12 04:39:59  
Local clock offset: 3.814 ms  
Remote clock offset: -6.272 ms

# Below is generated by plot.py at 2019-02-12 06:55:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.57 Mbit/s  
95th percentile per-packet one-way delay: 34.445 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 48.75 Mbit/s  
95th percentile per-packet one-way delay: 50.585 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 37.69 Mbit/s  
95th percentile per-packet one-way delay: 25.433 ms  
Loss rate: 0.18%  
-- Flow 3:  
Average throughput: 8.38 Mbit/s  
95th percentile per-packet one-way delay: 23.998 ms  
Loss rate: 0.58%

Run 2: Report of PCC-Vivace — Data Link

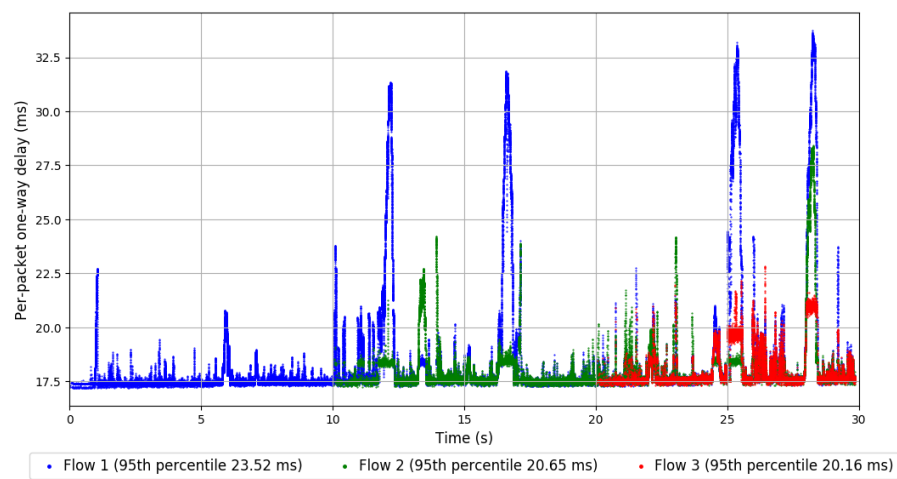
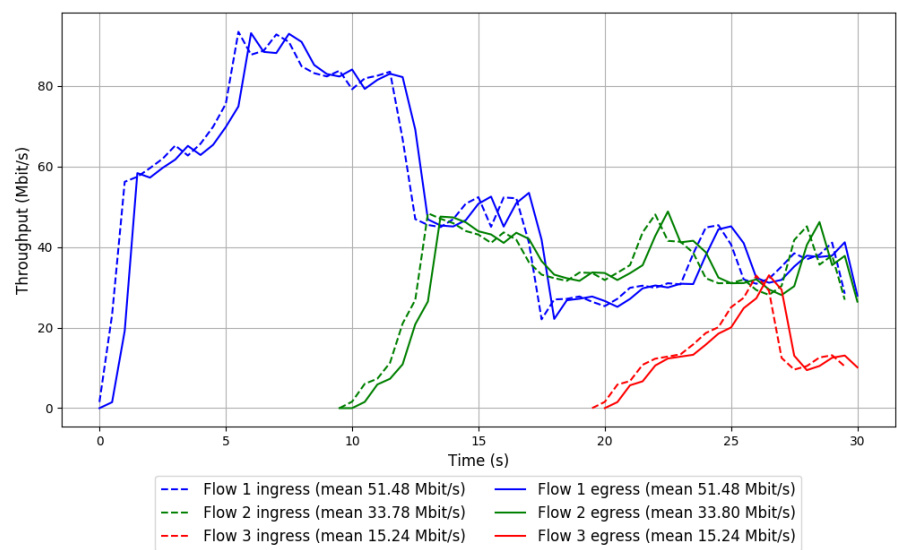


Run 3: Statistics of PCC-Vivace

Start at: 2019-02-12 05:05:58  
End at: 2019-02-12 05:06:28  
Local clock offset: -3.768 ms  
Remote clock offset: -4.528 ms

# Below is generated by plot.py at 2019-02-12 06:55:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 79.01 Mbit/s  
95th percentile per-packet one-way delay: 21.612 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 51.48 Mbit/s  
95th percentile per-packet one-way delay: 23.524 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 33.80 Mbit/s  
95th percentile per-packet one-way delay: 20.654 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 15.24 Mbit/s  
95th percentile per-packet one-way delay: 20.156 ms  
Loss rate: 0.26%

Run 3: Report of PCC-Vivace — Data Link

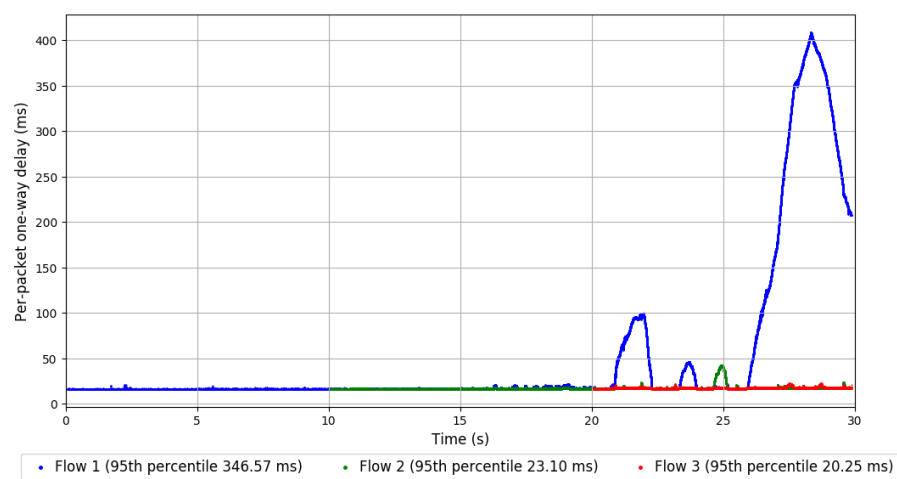
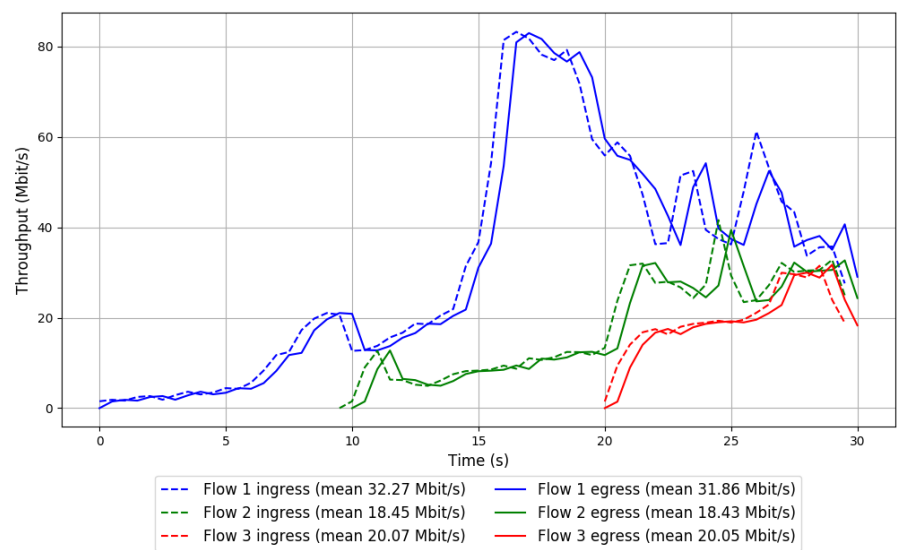


Run 4: Statistics of PCC-Vivace

Start at: 2019-02-12 05:32:44  
End at: 2019-02-12 05:33:14  
Local clock offset: -5.524 ms  
Remote clock offset: -0.568 ms

# Below is generated by plot.py at 2019-02-12 06:55:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 50.71 Mbit/s  
95th percentile per-packet one-way delay: 263.419 ms  
Loss rate: 0.98%  
-- Flow 1:  
Average throughput: 31.86 Mbit/s  
95th percentile per-packet one-way delay: 346.566 ms  
Loss rate: 1.37%  
-- Flow 2:  
Average throughput: 18.43 Mbit/s  
95th percentile per-packet one-way delay: 23.097 ms  
Loss rate: 0.27%  
-- Flow 3:  
Average throughput: 20.05 Mbit/s  
95th percentile per-packet one-way delay: 20.247 ms  
Loss rate: 0.35%

Run 4: Report of PCC-Vivace — Data Link

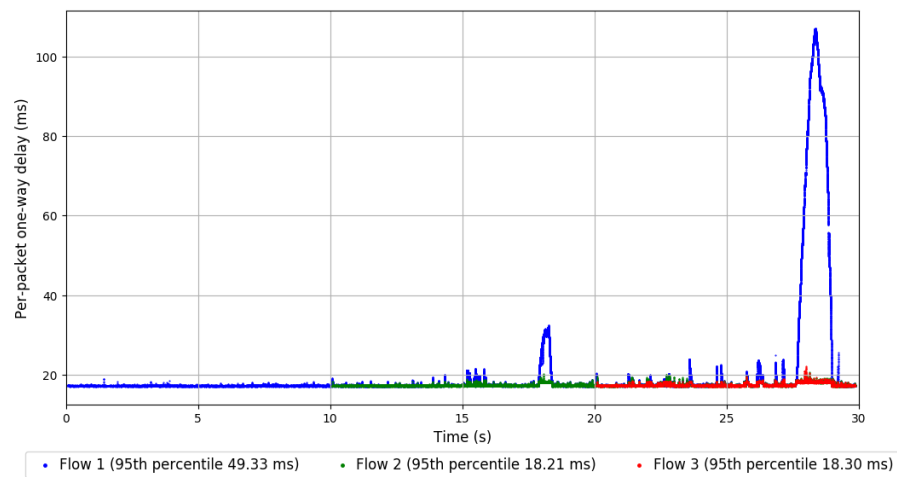
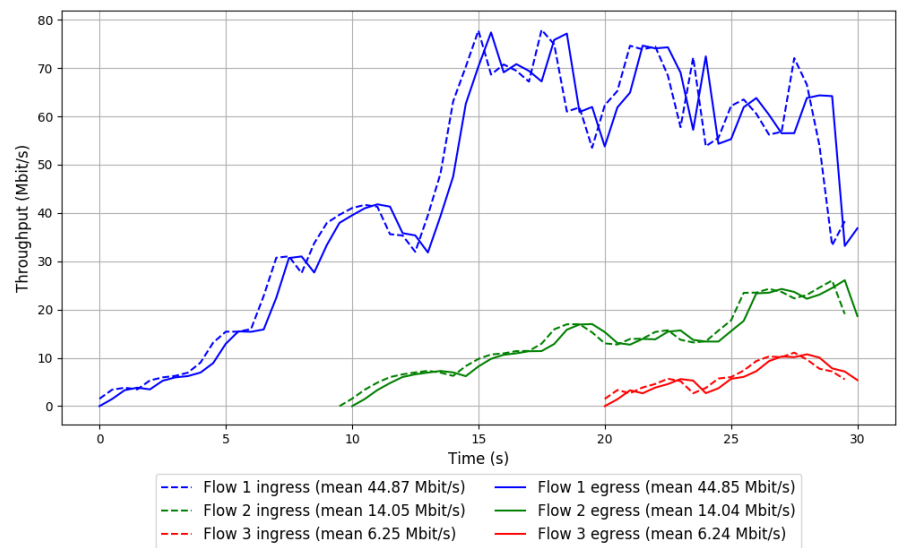


Run 5: Statistics of PCC-Vivace

Start at: 2019-02-12 06:18:44  
End at: 2019-02-12 06:19:14  
Local clock offset: 3.707 ms  
Remote clock offset: -1.385 ms

# Below is generated by plot.py at 2019-02-12 06:55:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 56.24 Mbit/s  
95th percentile per-packet one-way delay: 31.051 ms  
Loss rate: 0.17%  
-- Flow 1:  
Average throughput: 44.85 Mbit/s  
95th percentile per-packet one-way delay: 49.333 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 14.04 Mbit/s  
95th percentile per-packet one-way delay: 18.207 ms  
Loss rate: 0.23%  
-- Flow 3:  
Average throughput: 6.24 Mbit/s  
95th percentile per-packet one-way delay: 18.298 ms  
Loss rate: 0.33%

Run 5: Report of PCC-Vivace — Data Link



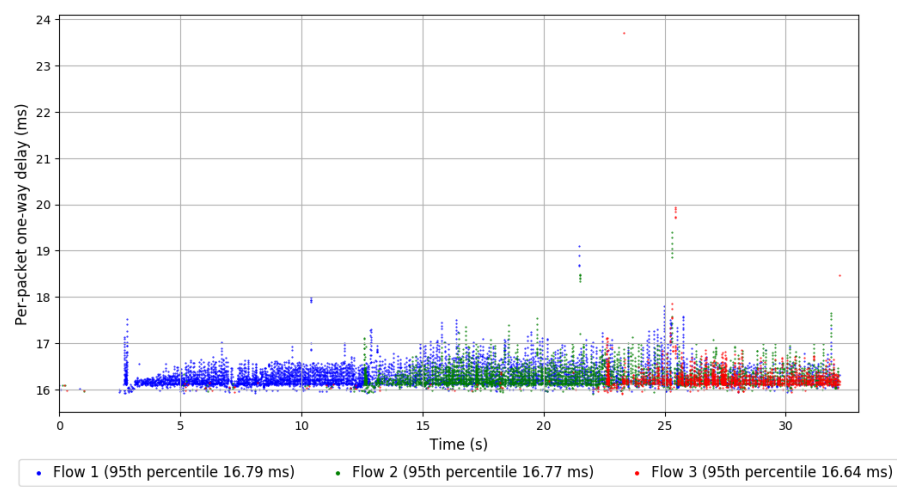
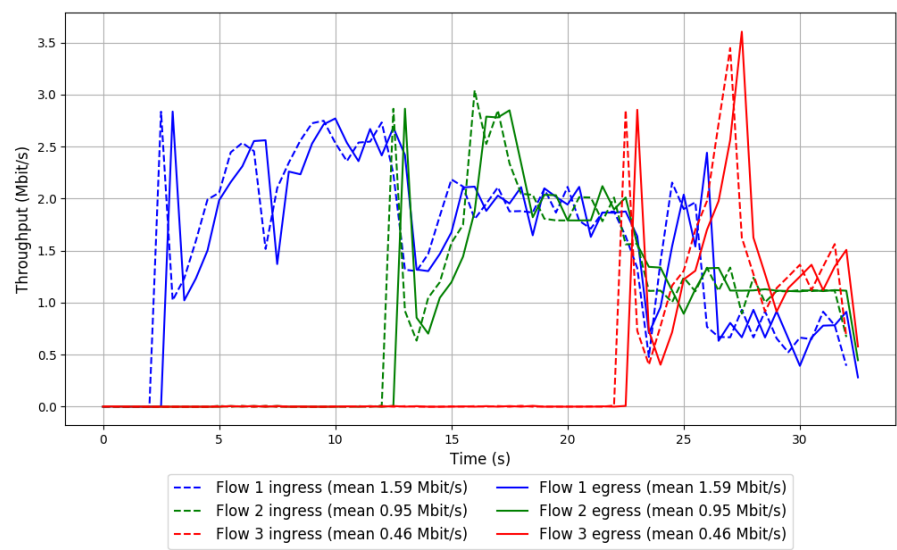


Run 1: Statistics of WebRTC media

Start at: 2019-02-12 04:21:13  
End at: 2019-02-12 04:21:43  
Local clock offset: 2.341 ms  
Remote clock offset: -2.997 ms

# Below is generated by plot.py at 2019-02-12 06:55:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.99 Mbit/s  
95th percentile per-packet one-way delay: 16.764 ms  
Loss rate: 0.25%  
-- Flow 1:  
Average throughput: 1.59 Mbit/s  
95th percentile per-packet one-way delay: 16.792 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 0.95 Mbit/s  
95th percentile per-packet one-way delay: 16.770 ms  
Loss rate: 0.37%  
-- Flow 3:  
Average throughput: 0.46 Mbit/s  
95th percentile per-packet one-way delay: 16.641 ms  
Loss rate: 0.51%

Run 1: Report of WebRTC media — Data Link

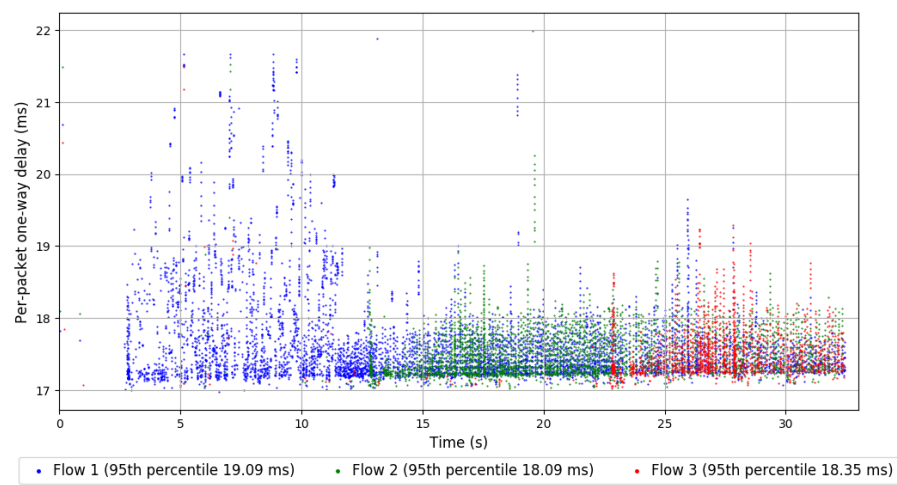
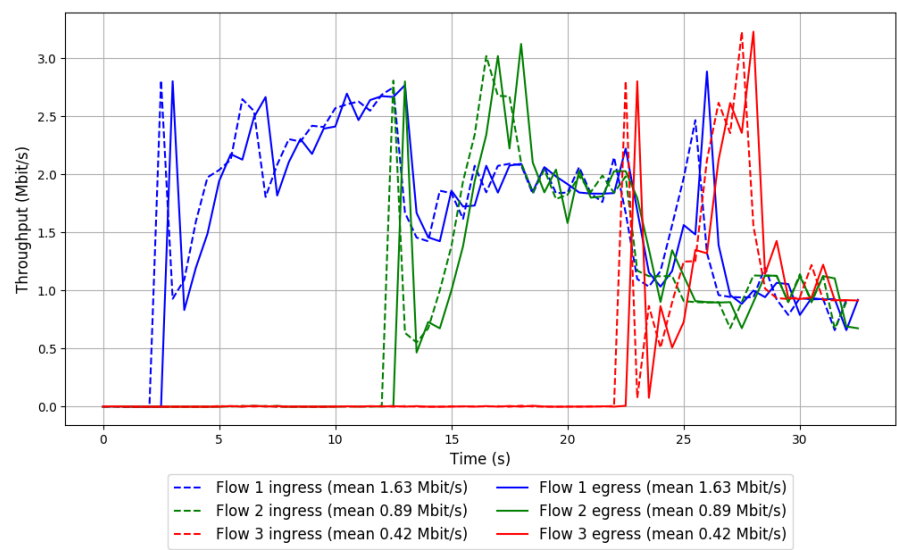


Run 2: Statistics of WebRTC media

Start at: 2019-02-12 04:47:07  
End at: 2019-02-12 04:47:37  
Local clock offset: -0.164 ms  
Remote clock offset: -3.039 ms

# Below is generated by plot.py at 2019-02-12 06:55:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.94 Mbit/s  
95th percentile per-packet one-way delay: 18.718 ms  
Loss rate: 0.12%  
-- Flow 1:  
Average throughput: 1.63 Mbit/s  
95th percentile per-packet one-way delay: 19.091 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.89 Mbit/s  
95th percentile per-packet one-way delay: 18.093 ms  
Loss rate: 0.39%  
-- Flow 3:  
Average throughput: 0.42 Mbit/s  
95th percentile per-packet one-way delay: 18.354 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

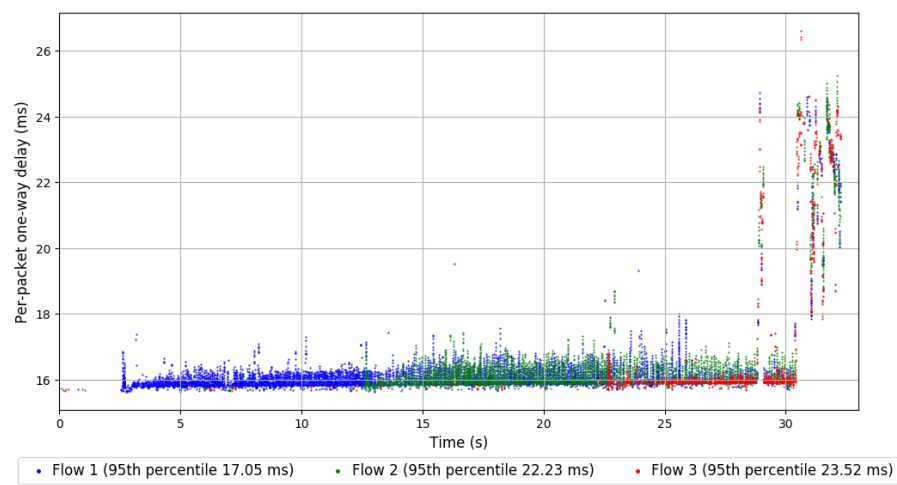
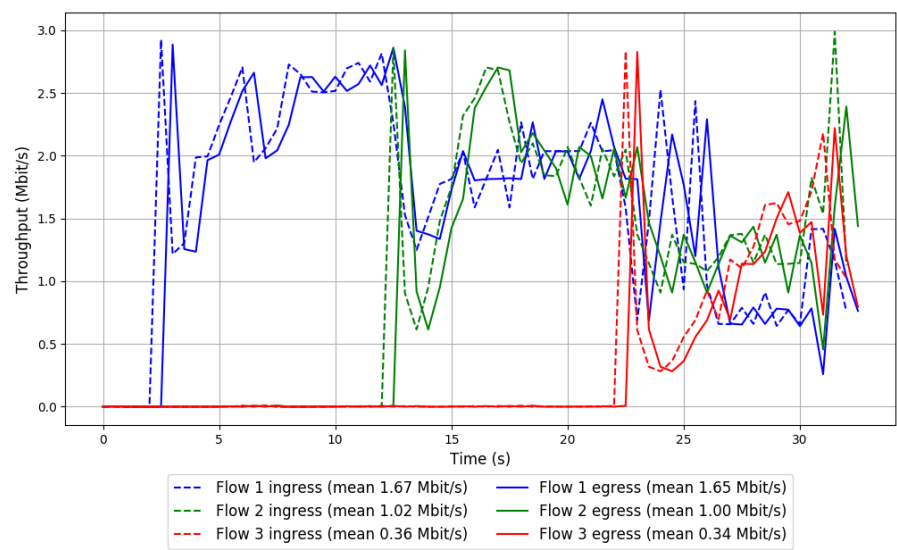


Run 3: Statistics of WebRTC media

Start at: 2019-02-12 05:13:41  
End at: 2019-02-12 05:14:11  
Local clock offset: -4.692 ms  
Remote clock offset: -1.988 ms

# Below is generated by plot.py at 2019-02-12 06:55:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.98 Mbit/s  
95th percentile per-packet one-way delay: 21.873 ms  
Loss rate: 2.12%  
-- Flow 1:  
Average throughput: 1.65 Mbit/s  
95th percentile per-packet one-way delay: 17.050 ms  
Loss rate: 1.20%  
-- Flow 2:  
Average throughput: 1.00 Mbit/s  
95th percentile per-packet one-way delay: 22.233 ms  
Loss rate: 2.43%  
-- Flow 3:  
Average throughput: 0.34 Mbit/s  
95th percentile per-packet one-way delay: 23.520 ms  
Loss rate: 5.53%

Run 3: Report of WebRTC media — Data Link

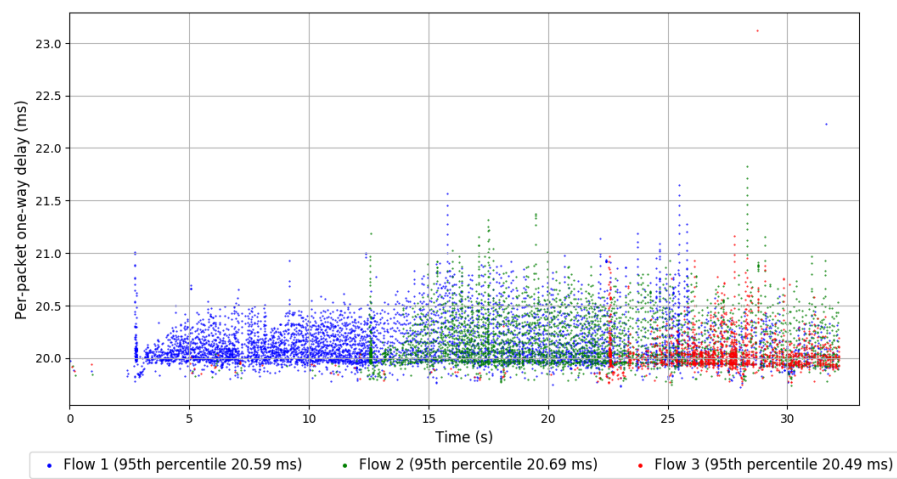
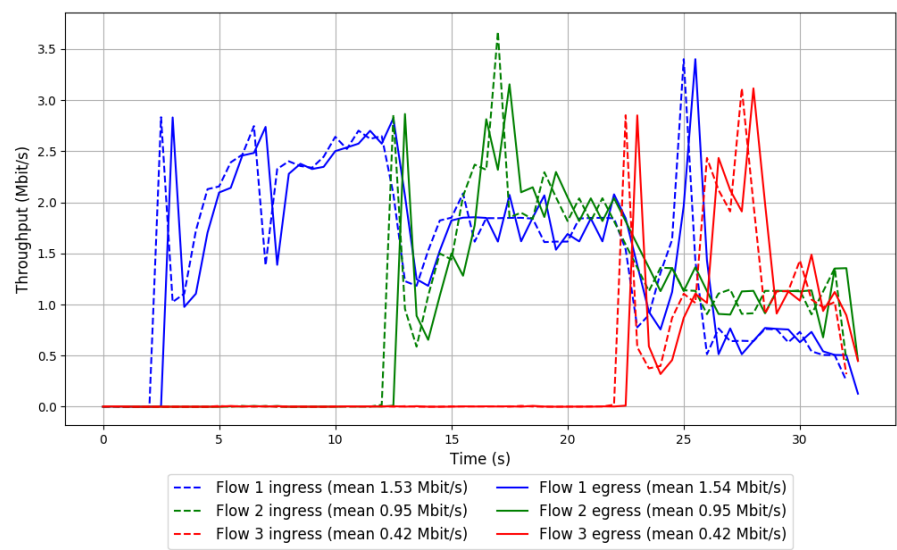


Run 4: Statistics of WebRTC media

Start at: 2019-02-12 05:49:01  
End at: 2019-02-12 05:49:31  
Local clock offset: 0.745 ms  
Remote clock offset: -2.739 ms

# Below is generated by plot.py at 2019-02-12 06:55:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.90 Mbit/s  
95th percentile per-packet one-way delay: 20.621 ms  
Loss rate: 0.07%  
-- Flow 1:  
Average throughput: 1.54 Mbit/s  
95th percentile per-packet one-way delay: 20.594 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.95 Mbit/s  
95th percentile per-packet one-way delay: 20.690 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.42 Mbit/s  
95th percentile per-packet one-way delay: 20.494 ms  
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-02-12 06:27:04  
End at: 2019-02-12 06:27:34  
Local clock offset: 3.929 ms  
Remote clock offset: -2.138 ms

# Below is generated by plot.py at 2019-02-12 06:55:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.70 Mbit/s  
95th percentile per-packet one-way delay: 19.821 ms  
Loss rate: 19.89%  
-- Flow 1:  
Average throughput: 1.16 Mbit/s  
95th percentile per-packet one-way delay: 18.937 ms  
Loss rate: 16.14%  
-- Flow 2:  
Average throughput: 0.96 Mbit/s  
95th percentile per-packet one-way delay: 19.914 ms  
Loss rate: 21.40%  
-- Flow 3:  
Average throughput: 0.59 Mbit/s  
95th percentile per-packet one-way delay: 20.084 ms  
Loss rate: 24.21%

Run 5: Report of WebRTC media — Data Link

