Pantheon Report

Generated at 2018-01-02 22:21:59 (UTC).

Data path: AWS Brazil 2 Ethernet (*local*) →Colombia ppp0 (*remote*).

Repeated the test of 14 congestion control schemes 3 times.

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

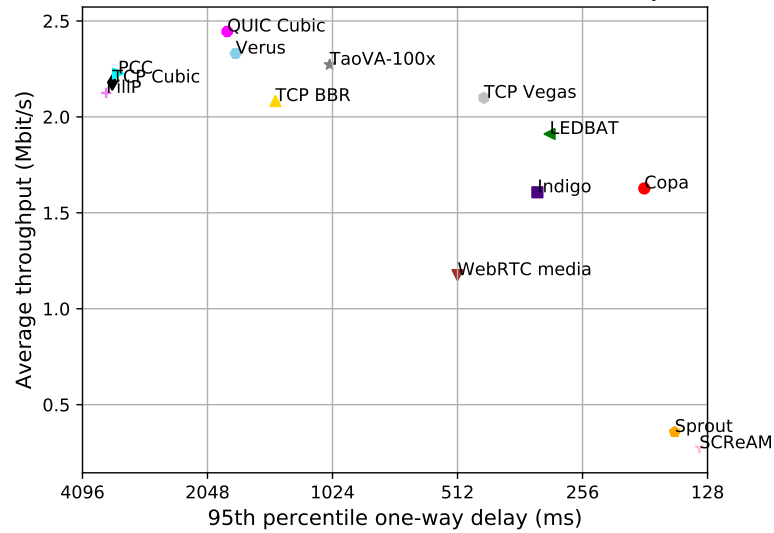Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: master @ 904a5750834816b1e46a2c86405d707788d27c16
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/fillp @ dcaef6b00654e660f73f7ed679d2eab61ce08639
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
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/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 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/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```
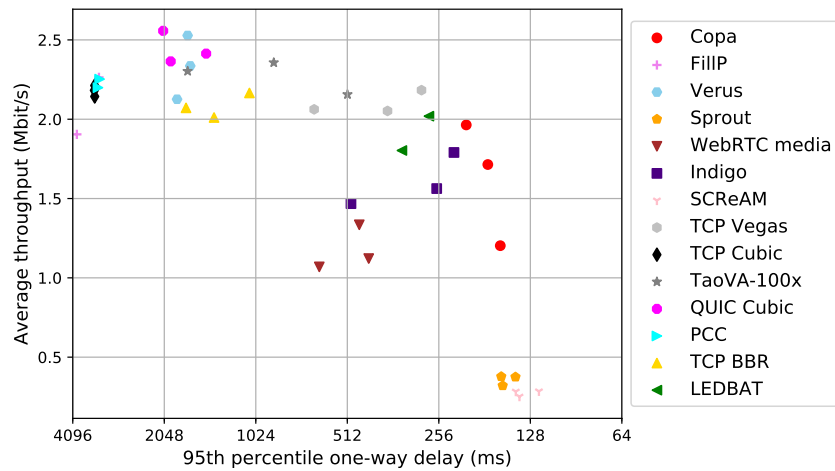
test from AWS Brazil 2 Ethernet to Colombia ppp0, 3 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from AWS Brazil 2 Ethernet to Colombia ppp0, 3 runs of 30s each per scheme
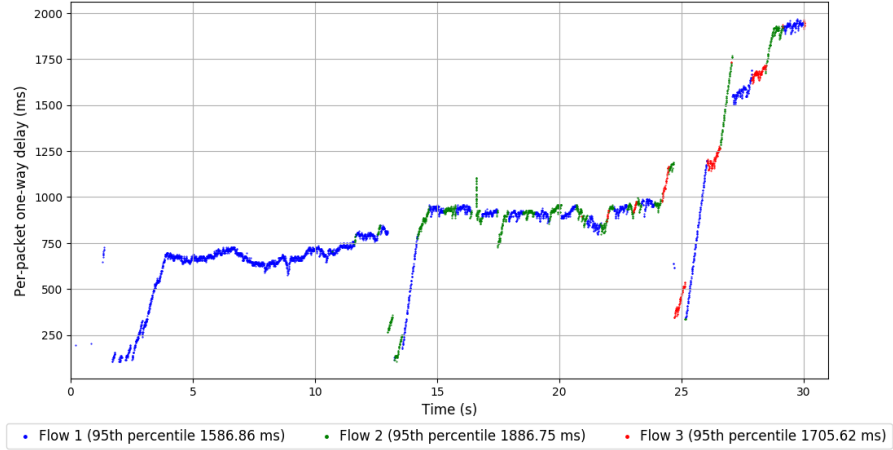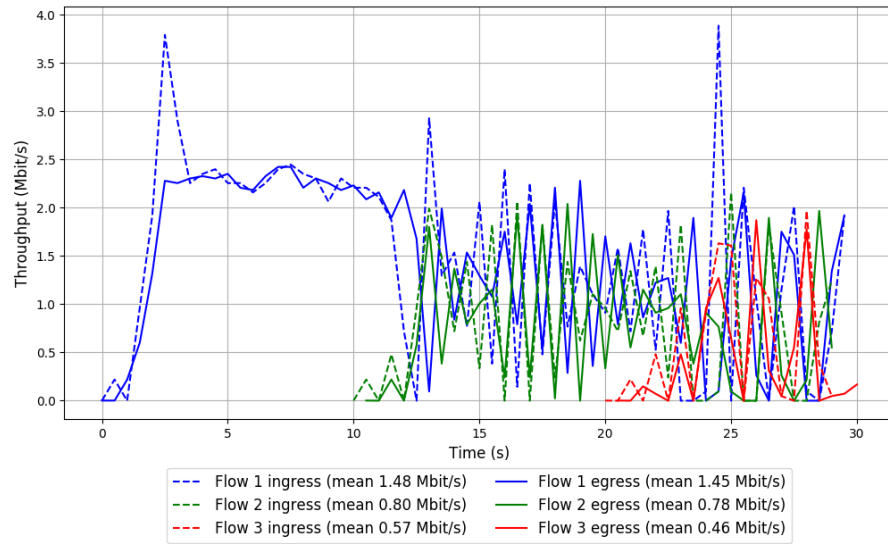3 flows with 10s interval between flows

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	1.43	0.82	0.51	1316.62	1466.28	1391.23	2.11	3.86	16.64
TCP Cubic	3	2.10	0.12	0.02	3469.25	3388.94	3341.28	15.81	26.72	66.27
LEDBAT	2	1.54	0.37	0.39	303.03	313.00	326.00	0.36	1.04	3.40
PCC	2	1.56	0.67	0.73	3342.11	3347.01	3416.17	46.87	36.00	37.74
QUIC Cubic	3	1.99	0.59	0.19	1814.21	1882.39	1897.03	4.98	11.13	30.11
SCReAM	3	0.08	0.19	0.20	126.90	134.13	136.70	0.13	0.19	0.33
WebRTC media	3	0.73	0.35	0.11	481.62	540.10	515.83	0.06	0.11	1.33
Sprout	3	0.19	0.17	0.17	153.78	144.83	160.39	0.01	1.03	0.07
TaoVA-100x	3	1.28	1.02	0.93	974.13	974.90	1020.51	1.15	1.91	6.76
TCP Vegas	3	1.22	0.96	0.71	437.61	456.01	427.36	0.37	0.78	2.08
Verus	3	2.32	0.01	0.01	1752.46	1804.22	1673.65	4.92	4.64	6.36
Copa	3	1.11	0.91	0.54	1041.42	172.57	216.11	0.06	0.30	0.79
FillP	3	1.84	0.51	0.01	3559.40	3687.71	3624.20	94.63	99.56	100.00
Indigo	3	0.76	0.98	0.65	302.50	342.19	228.73	0.06	0.17	0.65

```
Run 1: Statistics of TCP BBR

Start at: 2018-01-02 21:42:00
End at: 2018-01-02 21:42:30
Local clock offset: -0.164 ms
Remote clock offset: -19.27 ms


# Below is generated by plot.py at 2018-01-02 22:21:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 1737.058 ms
Loss rate: 5.26%
-- Flow 1:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 1586.860 ms
Loss rate: 2.97%
-- Flow 2:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 1886.750 ms
Loss rate: 6.67%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 1705.617 ms
Loss rate: 20.39%
```
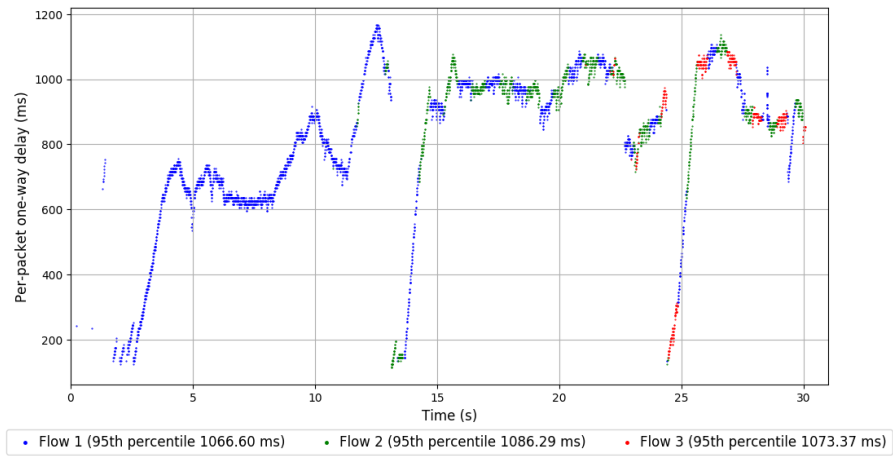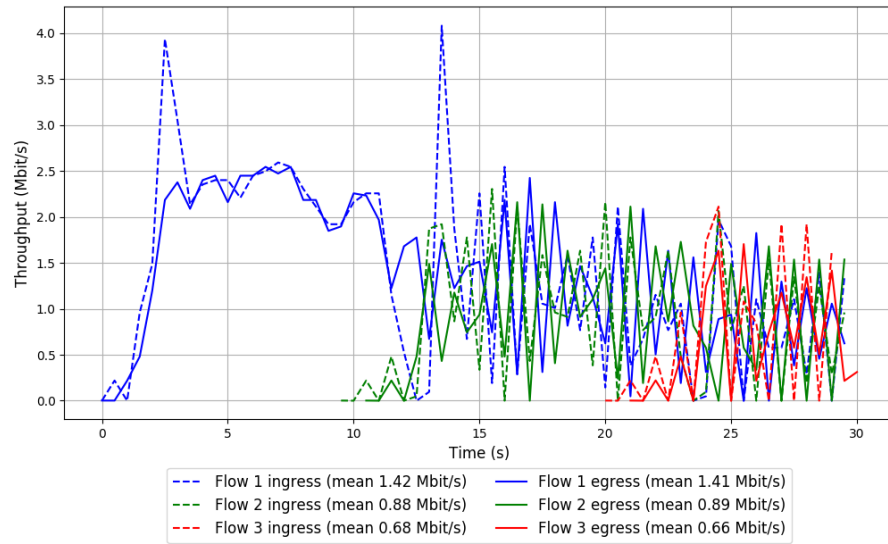
Run 1: Report of TCP BBR — Data Link

Figure: Throughput (Mbit/s) vs Time (s)

- Flow 1 ingress (mean 1.48 Mbit/s)
- Flow 1 egress (mean 1.45 Mbit/s)
- Flow 2 ingress (mean 0.80 Mbit/s)
- Flow 2 egress (mean 0.78 Mbit/s)
- Flow 3 ingress (mean 0.57 Mbit/s)
- Flow 3 egress (mean 0.46 Mbit/s)

Figure: Per-packet one-way delay (ms) vs Time (s)

- Flow 1 (95th percentile 1586.86 ms)
- Flow 2 (95th percentile 1886.75 ms)
- Flow 3 (95th percentile 1705.62 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2018-01-02 22:00:51
End at: 2018-01-02 22:01:21
Local clock offset: -0.115 ms
Remote clock offset: 0.084 ms


# Below is generated by plot.py at 2018-01-02 22:21:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 1074.513 ms
Loss rate: 2.57%
-- Flow 1:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 1066.597 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 1086.287 ms
Loss rate: 2.72%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 1073.373 ms
Loss rate: 8.56%
```
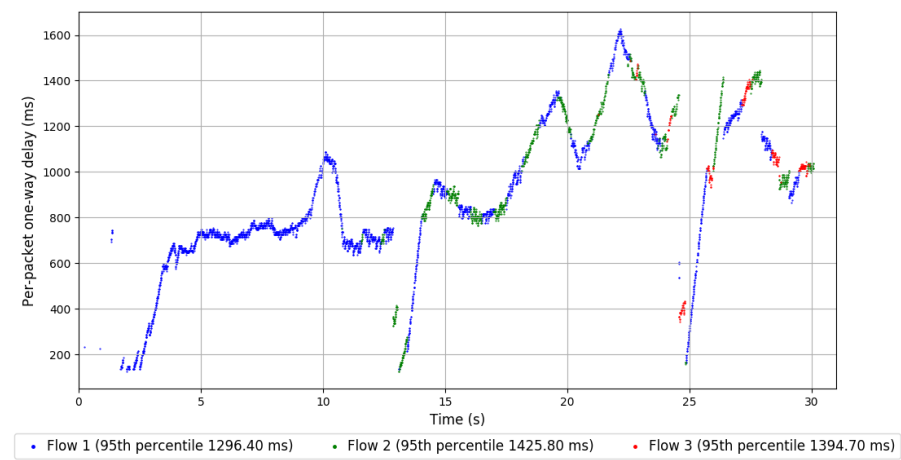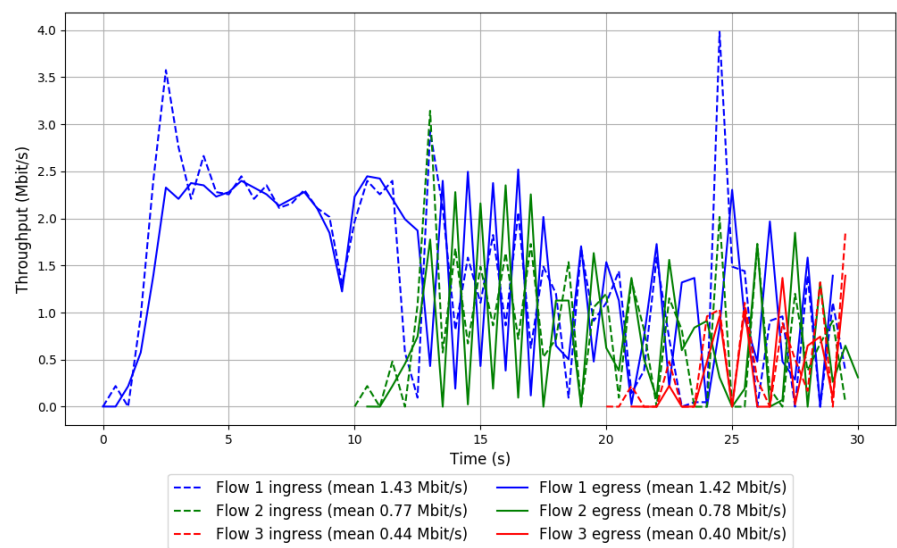
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2018-01-02 22:19:42
End at: 2018-01-02 22:20:12
Local clock offset: -0.08 ms
Remote clock offset: 8.367 ms


# Below is generated by plot.py at 2018-01-02 22:21:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 1404.895 ms
Loss rate: 3.23%
-- Flow 1:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 1296.397 ms
Loss rate: 1.76%
-- Flow 2:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 1425.799 ms
Loss rate: 2.19%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 1394.702 ms
Loss rate: 20.96%
```
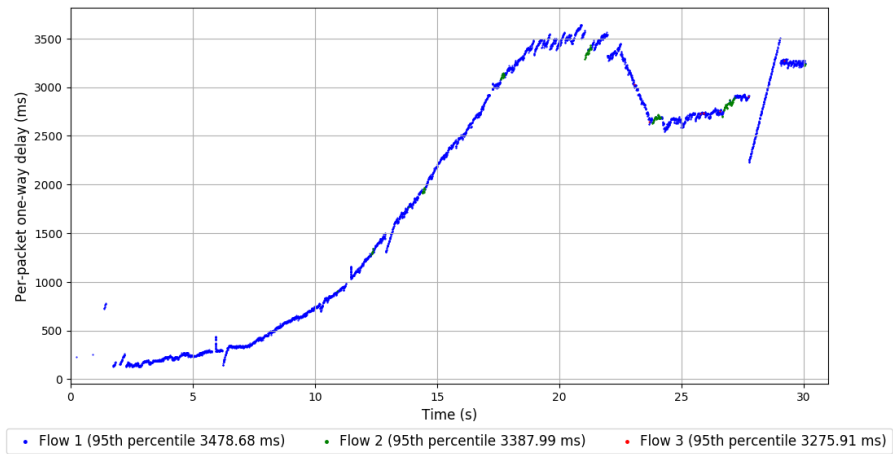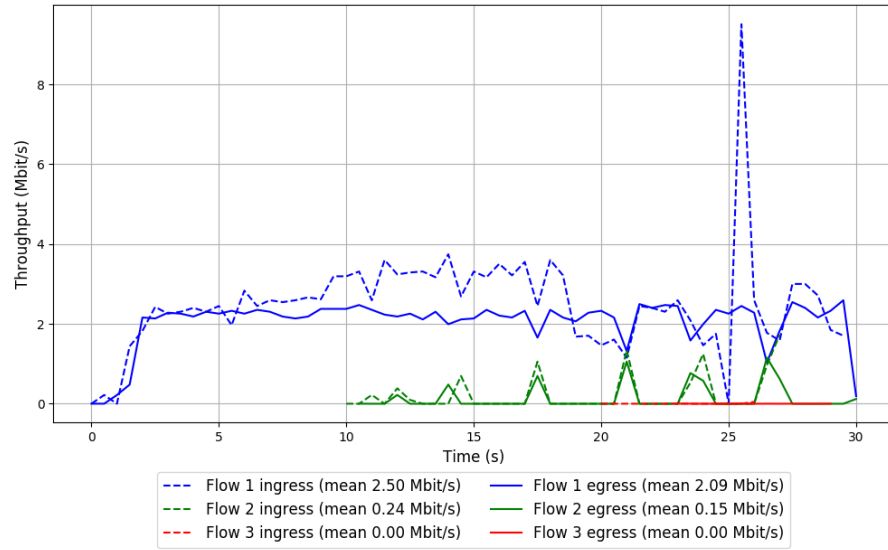
Run 3: Report of TCP BBR — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2018-01-02 21:33:12
End at: 2018-01-02 21:33:42
Local clock offset: -0.255 ms
Remote clock offset: 9.318 ms


# Below is generated by plot.py at 2018-01-02 22:21:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 3478.512 ms
Loss rate: 17.57%
-- Flow 1:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 3478.684 ms
Loss rate: 16.80%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 3387.986 ms
Loss rate: 31.08%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 3275.910 ms
Loss rate: 79.70%
```
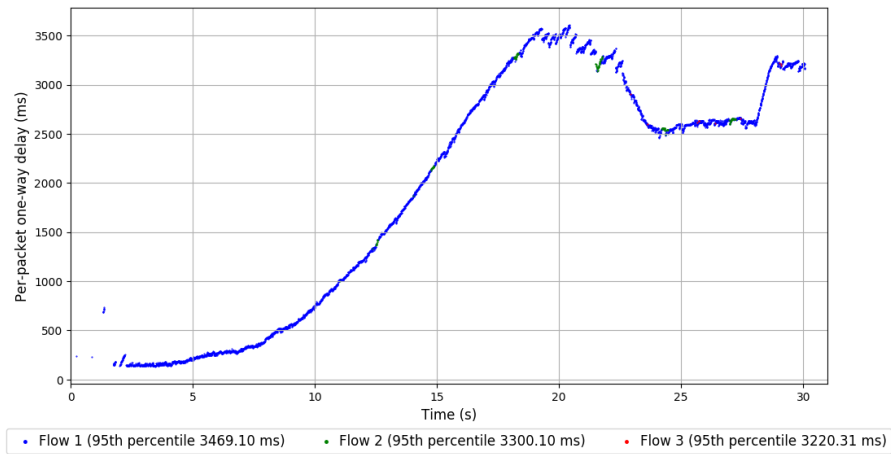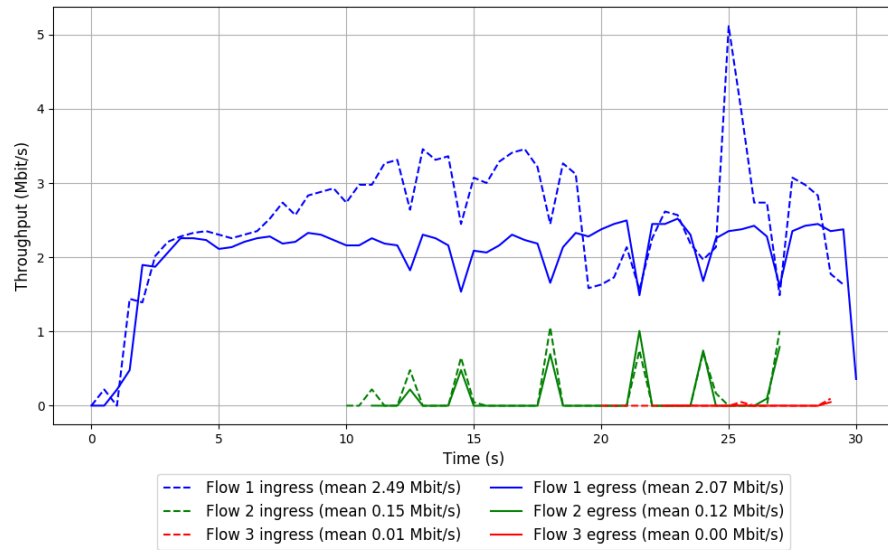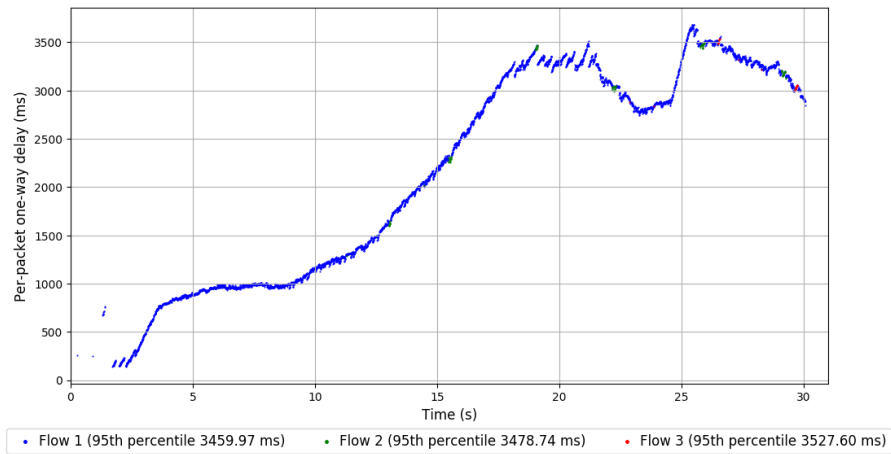
Run 1: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 2.50 Mbit/s) —— Flow 1 egress (mean 2.09 Mbit/s)
- - - Flow 2 ingress (mean 0.24 Mbit/s) —— Flow 2 egress (mean 0.15 Mbit/s)
- - - Flow 3 ingress (mean 0.00 Mbit/s) —— Flow 3 egress (mean 0.00 Mbit/s)

• Flow 1 (95th percentile 3478.68 ms)　　• Flow 2 (95th percentile 3387.99 ms)　　• Flow 3 (95th percentile 3275.91 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2018-01-02 21:52:06
End at: 2018-01-02 21:52:36
Local clock offset: -0.148 ms
Remote clock offset: 9.102 ms


# Below is generated by plot.py at 2018-01-02 22:21:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 3468.813 ms
Loss rate: 17.29%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 3469.099 ms
Loss rate: 17.13%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 3300.104 ms
Loss rate: 20.72%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 3220.313 ms
Loss rate: 61.45%
```

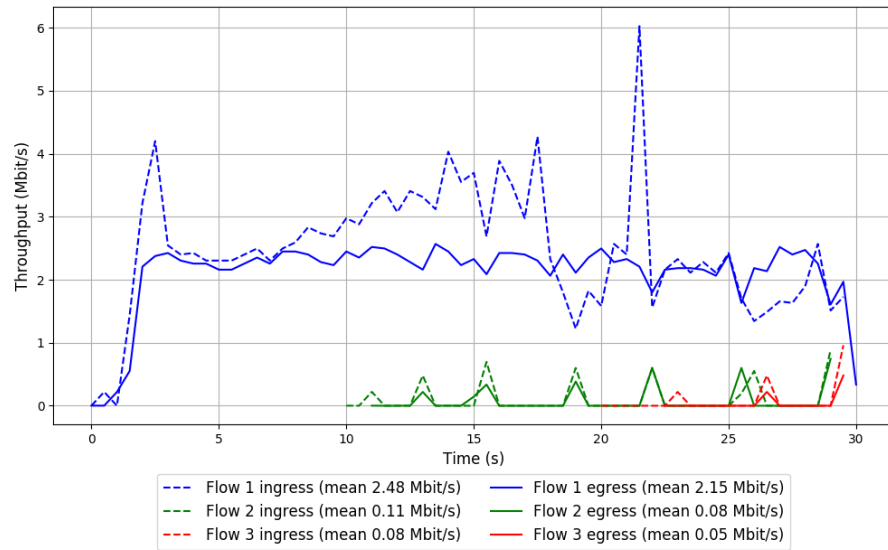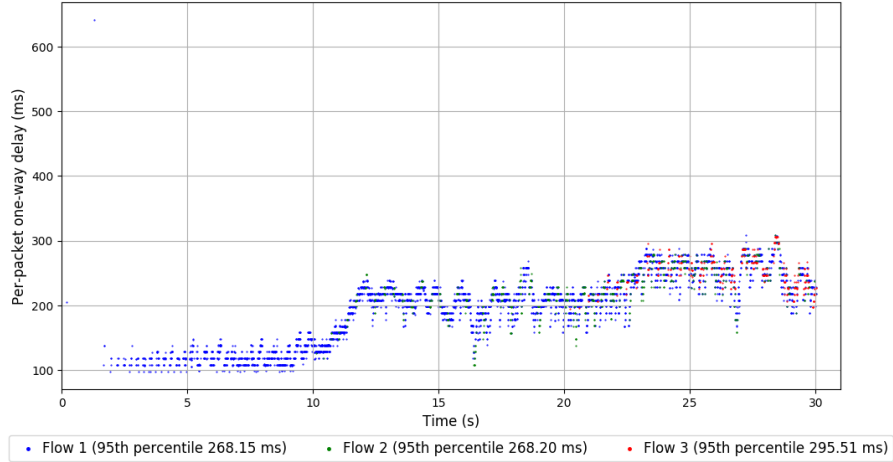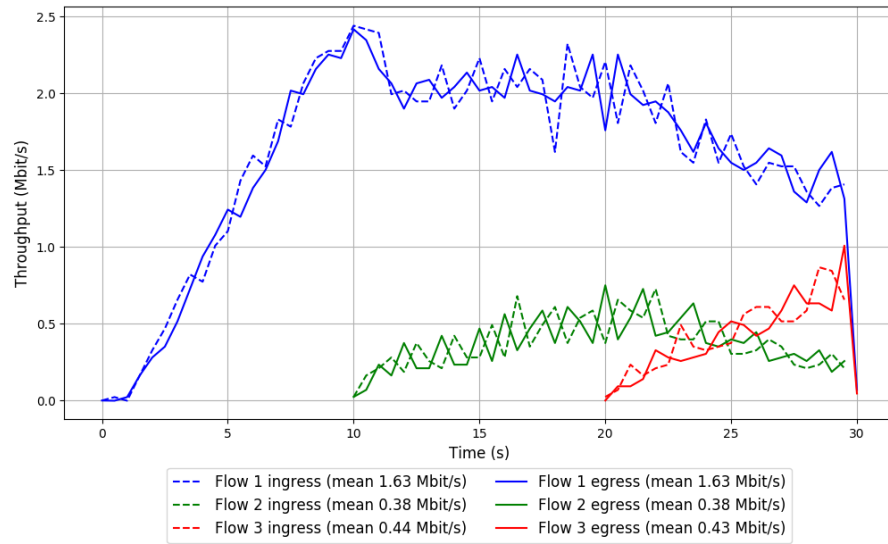Run 2: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 2.49 Mbit/s)   ——— Flow 1 egress (mean 2.07 Mbit/s)
- - - - Flow 2 ingress (mean 0.15 Mbit/s)   ——— Flow 2 egress (mean 0.12 Mbit/s)
- - - - Flow 3 ingress (mean 0.01 Mbit/s)   ——— Flow 3 egress (mean 0.00 Mbit/s)

• Flow 1 (95th percentile 3469.10 ms)   • Flow 2 (95th percentile 3300.10 ms)   • Flow 3 (95th percentile 3220.31 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2018-01-02 22:10:57
End at: 2018-01-02 22:11:27
Local clock offset: -0.1 ms
Remote clock offset: 14.753 ms


# Below is generated by plot.py at 2018-01-02 22:21:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 3469.283 ms
Loss rate: 14.38%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 3459.975 ms
Loss rate: 13.49%
-- Flow 2:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 3478.736 ms
Loss rate: 28.36%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3527.604 ms
Loss rate: 57.65%
```

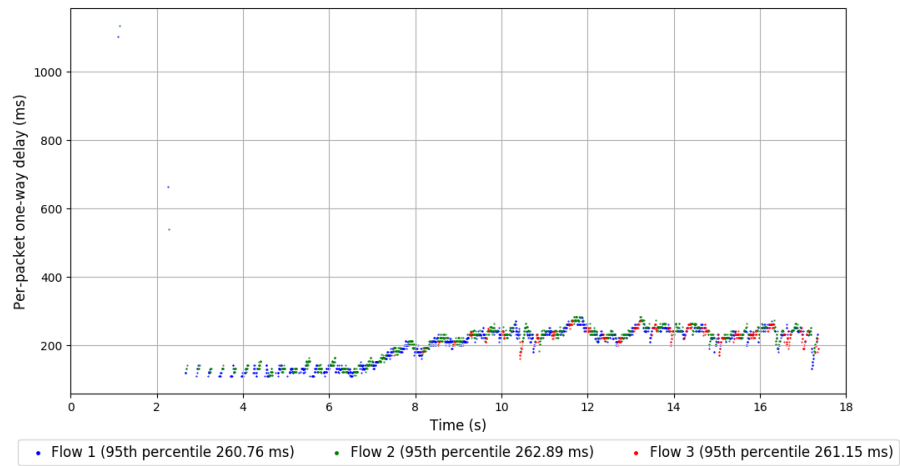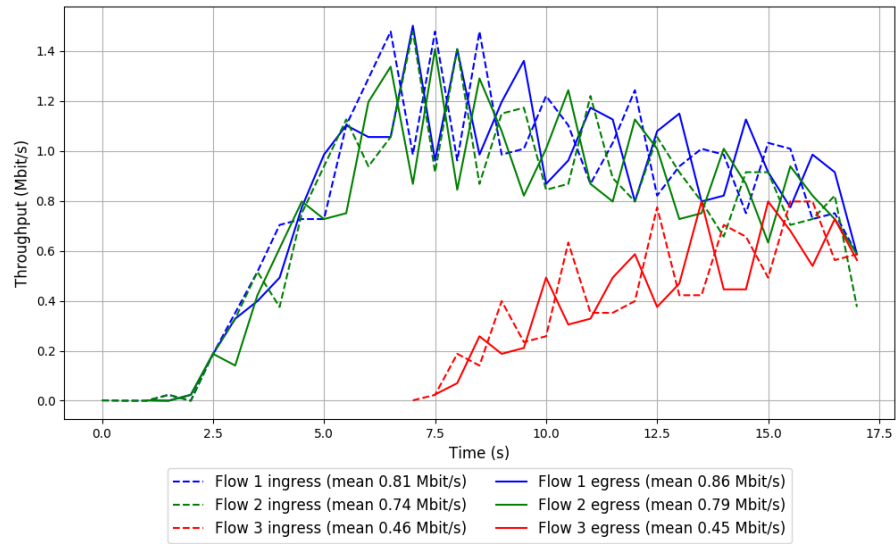Run 3: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 2.48 Mbit/s) —— Flow 1 egress (mean 2.15 Mbit/s)
- - - Flow 2 ingress (mean 0.11 Mbit/s) —— Flow 2 egress (mean 0.08 Mbit/s)
- - - Flow 3 ingress (mean 0.08 Mbit/s) —— Flow 3 egress (mean 0.05 Mbit/s)

- Flow 1 (95th percentile 3459.97 ms)   • Flow 2 (95th percentile 3478.74 ms)   • Flow 3 (95th percentile 3527.60 ms)

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```
Run 1: Statistics of LEDBAT

Start at: 2018-01-02 21:26:52
End at: 2018-01-02 21:27:22
Local clock offset: -0.159 ms
Remote clock offset: -19.074 ms


# Below is generated by plot.py at 2018-01-02 22:21:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 275.949 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 268.150 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 268.205 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 295.507 ms
Loss rate: 2.72%
```
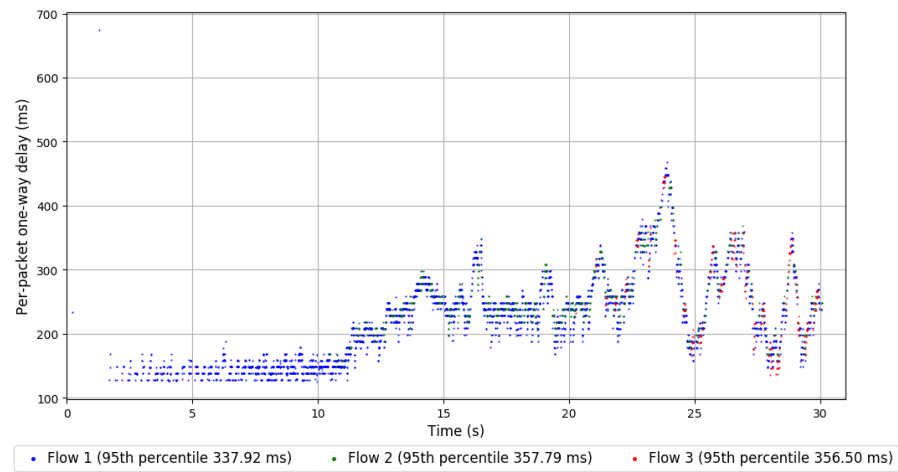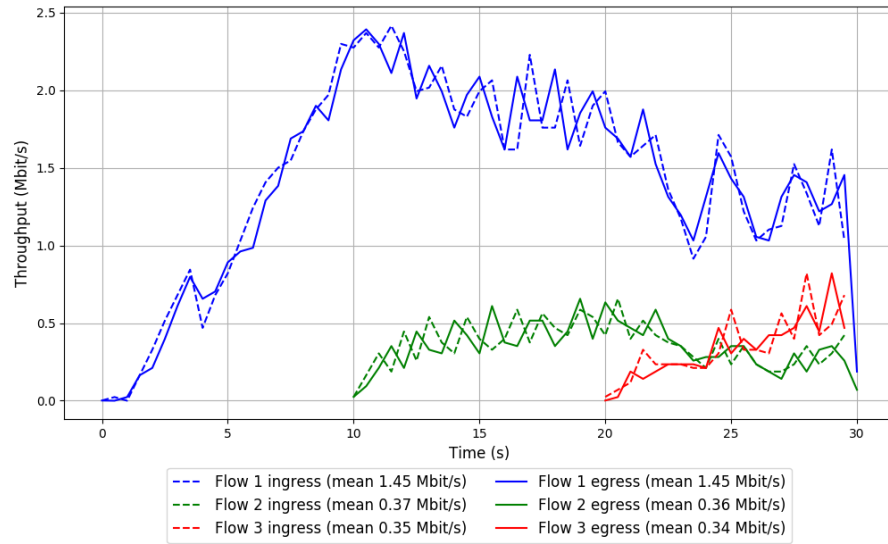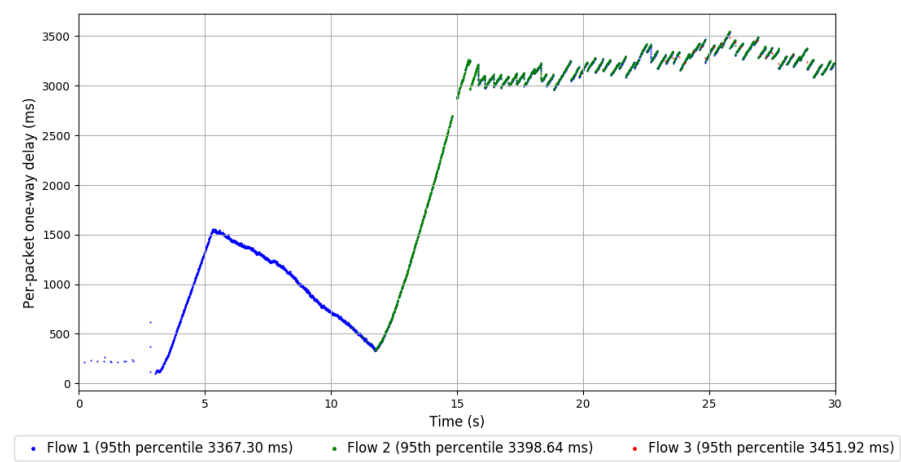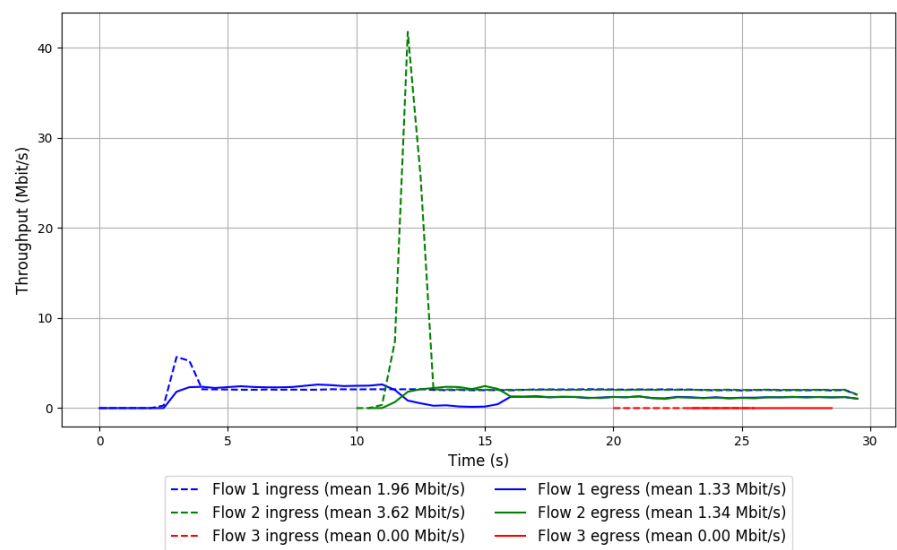
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-01-02 21:45:47
End at: 2018-01-02 21:46:17
Local clock offset: -0.146 ms
Remote clock offset: -14.568 ms
```

Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 0.81 Mbit/s)   Flow 1 egress (mean 0.86 Mbit/s)
Flow 2 ingress (mean 0.74 Mbit/s)   Flow 2 egress (mean 0.79 Mbit/s)
Flow 3 ingress (mean 0.46 Mbit/s)   Flow 3 egress (mean 0.45 Mbit/s)

Flow 1 (95th percentile 260.76 ms)   Flow 2 (95th percentile 262.89 ms)   Flow 3 (95th percentile 261.15 ms)

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```
Run 3: Statistics of LEDBAT

Start at: 2018-01-02 22:04:37
End at: 2018-01-02 22:05:07
Local clock offset: -0.112 ms
Remote clock offset: 9.125 ms

# Below is generated by plot.py at 2018-01-02 22:21:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 338.614 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 337.916 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 357.785 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 356.497 ms
Loss rate: 4.08%
```

Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 1.45 Mbit/s)   Flow 1 egress (mean 1.45 Mbit/s)
Flow 2 ingress (mean 0.37 Mbit/s)   Flow 2 egress (mean 0.36 Mbit/s)
Flow 3 ingress (mean 0.35 Mbit/s)   Flow 3 egress (mean 0.34 Mbit/s)

Flow 1 (95th percentile 337.92 ms)   Flow 2 (95th percentile 357.79 ms)   Flow 3 (95th percentile 356.50 ms)

```
Run 1: Statistics of PCC

Start at: 2018-01-02 21:35:44
End at: 2018-01-02 21:36:14
Local clock offset: -0.231 ms
Remote clock offset: -18.332 ms


# Below is generated by plot.py at 2018-01-02 22:21:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 3384.130 ms
Loss rate: 49.90%
-- Flow 1:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 3367.297 ms
Loss rate: 32.42%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 3398.641 ms
Loss rate: 64.12%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 3451.921 ms
Loss rate: 5.60%
```
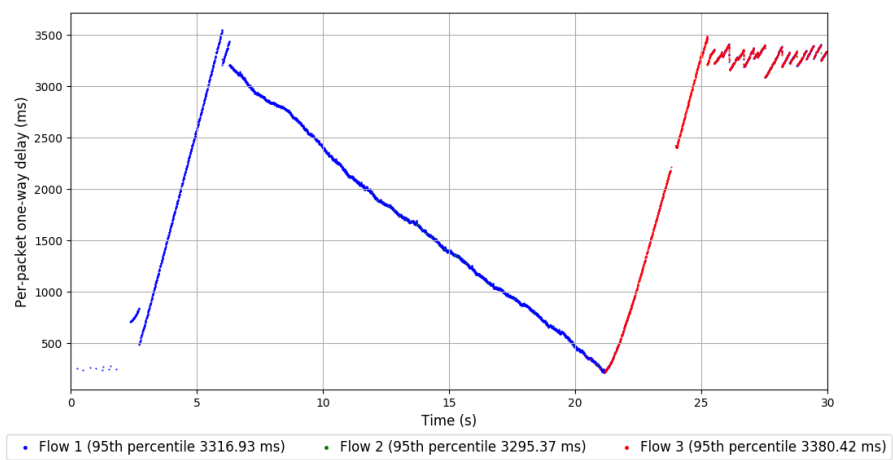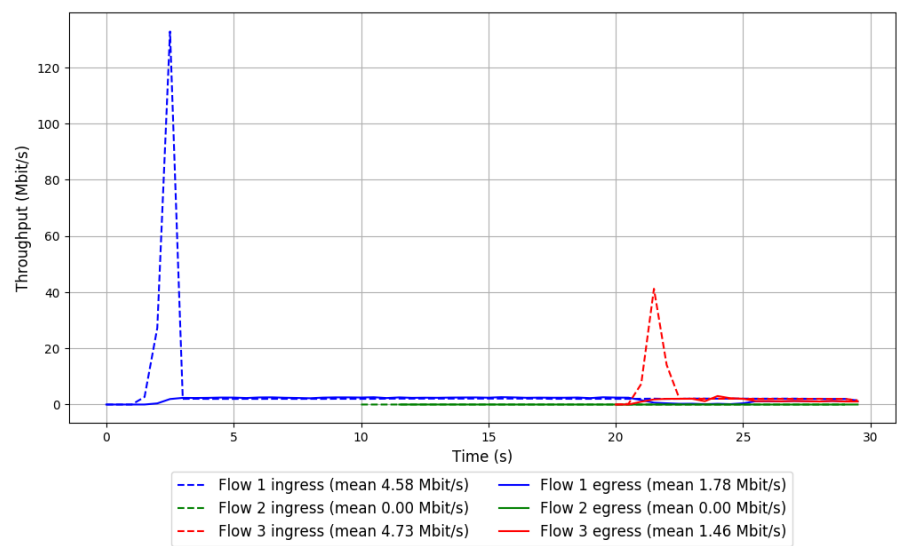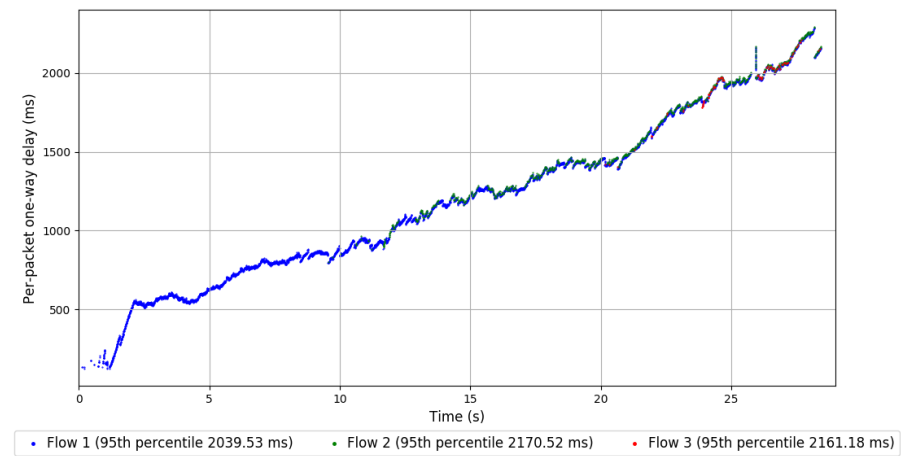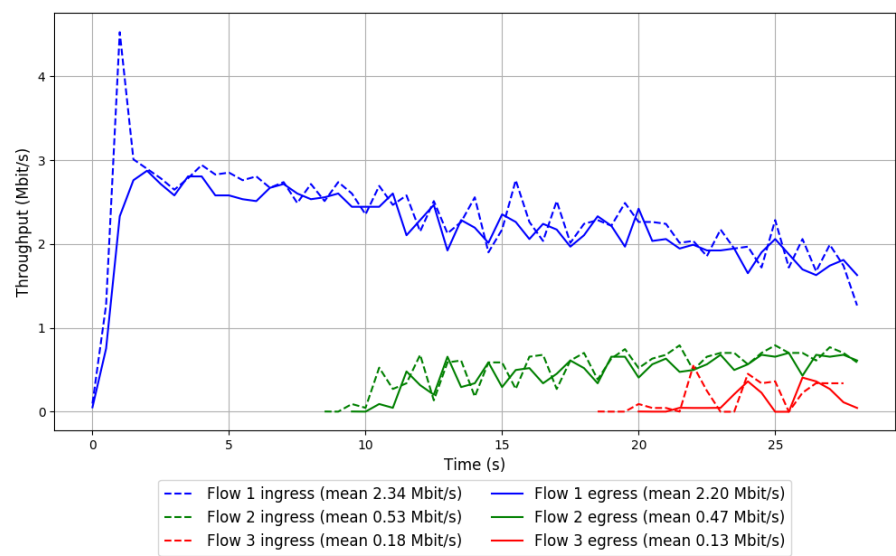
Run 1: Report of PCC — Data Link

- Flow 1 ingress (mean 1.96 Mbit/s)
- Flow 1 egress (mean 1.33 Mbit/s)
- Flow 2 ingress (mean 3.62 Mbit/s)
- Flow 2 egress (mean 1.34 Mbit/s)
- Flow 3 ingress (mean 0.00 Mbit/s)
- Flow 3 egress (mean 0.00 Mbit/s)

- Flow 1 (95th percentile 3367.30 ms)
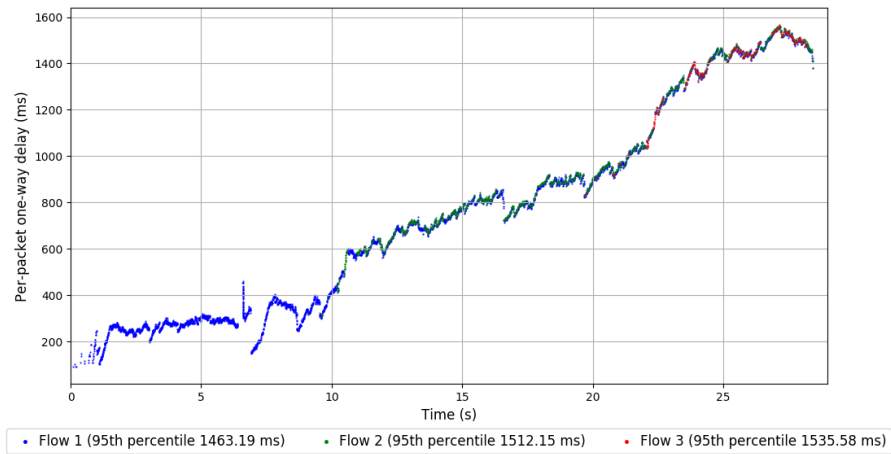- Flow 2 (95th percentile 3398.64 ms)
- Flow 3 (95th percentile 3451.92 ms)

```
Run 2: Statistics of PCC

Start at: 2018-01-02 21:54:36
End at: 2018-01-02 21:55:06
Local clock offset: -0.215 ms
Remote clock offset: 13.974 ms
```

Run 2: Report of PCC — Data Link

- Flow 1 ingress (mean 3.39 Mbit/s)
- Flow 2 ingress (mean 5.30 Mbit/s)
- Flow 3 ingress (mean 0.00 Mbit/s)
- Flow 1 egress (mean 1.07 Mbit/s)
- Flow 2 egress (mean 1.02 Mbit/s)
- Flow 3 egress (mean 0.00 Mbit/s)

- Flow 1 (95th percentile 4262.83 ms)
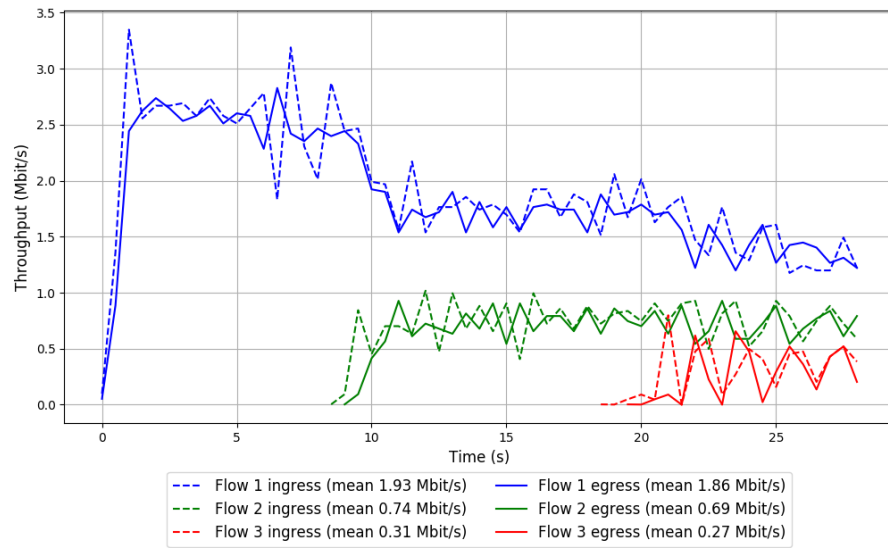- Flow 2 (95th percentile 4270.09 ms)
- Flow 3 (95th percentile 4346.08 ms)

```
Run 3: Statistics of PCC

Start at: 2018-01-02 22:13:27
End at: 2018-01-02 22:13:57
Local clock offset: -0.101 ms
Remote clock offset: 9.184 ms


# Below is generated by plot.py at 2018-01-02 22:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 3341.801 ms
Loss rate: 63.48%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 3316.933 ms
Loss rate: 61.31%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 3295.373 ms
Loss rate: 7.87%
-- Flow 3:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 3380.422 ms
Loss rate: 69.89%
```

Run 3: Report of PCC — Data Link

Flow 1 ingress (mean 4.58 Mbit/s)   Flow 1 egress (mean 1.78 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s)   Flow 2 egress (mean 0.00 Mbit/s)
Flow 3 ingress (mean 4.73 Mbit/s)   Flow 3 egress (mean 1.46 Mbit/s)

Flow 1 (95th percentile 3316.93 ms)   Flow 2 (95th percentile 3295.37 ms)   Flow 3 (95th percentile 3380.42 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-01-02 21:24:21
End at: 2018-01-02 21:24:51
Local clock offset: -0.168 ms
Remote clock offset: 15.163 ms


# Below is generated by plot.py at 2018-01-02 22:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 2065.281 ms
Loss rate: 7.66%
-- Flow 1:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 2039.530 ms
Loss rate: 5.88%
-- Flow 2:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 2170.518 ms
Loss rate: 14.49%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 2161.178 ms
Loss rate: 35.45%
```
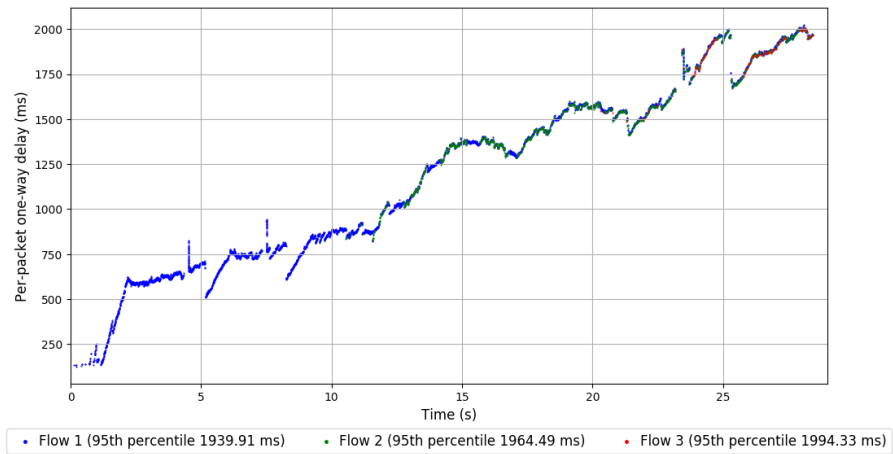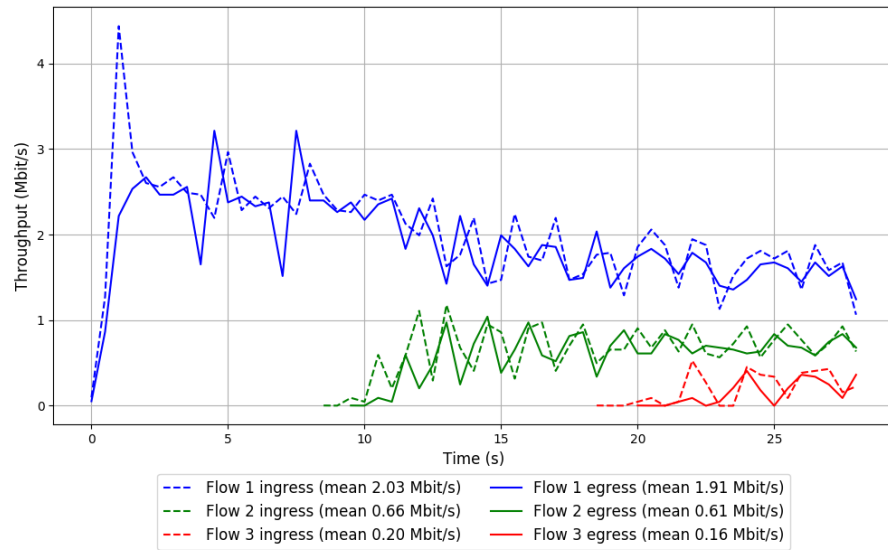
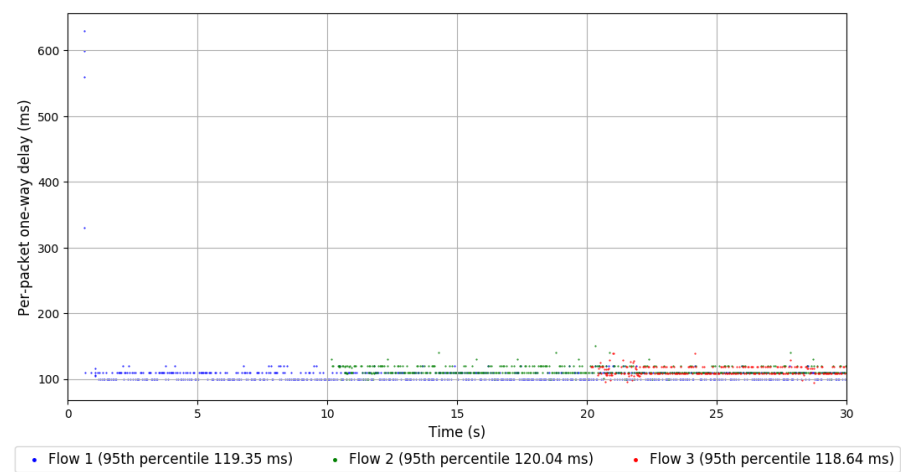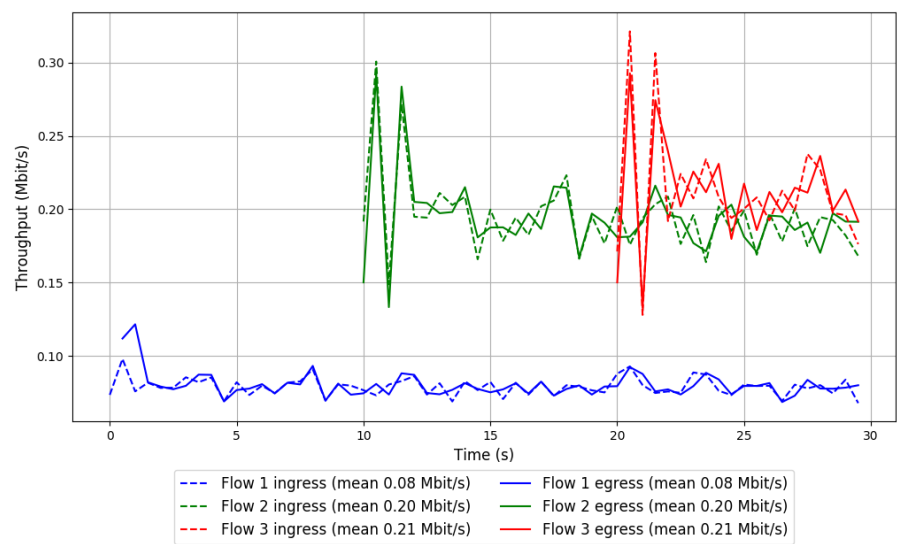Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-01-02 21:43:16
End at: 2018-01-02 21:43:46
Local clock offset: -0.215 ms
Remote clock offset: -18.529 ms


# Below is generated by plot.py at 2018-01-02 22:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 1491.443 ms
Loss rate: 5.12%
-- Flow 1:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 1463.194 ms
Loss rate: 3.56%
-- Flow 2:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 1512.153 ms
Loss rate: 7.45%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 1535.578 ms
Loss rate: 22.46%
```
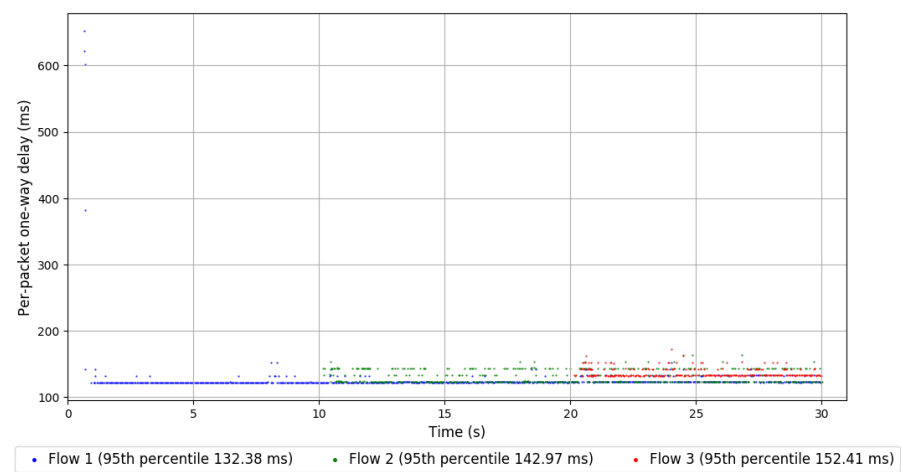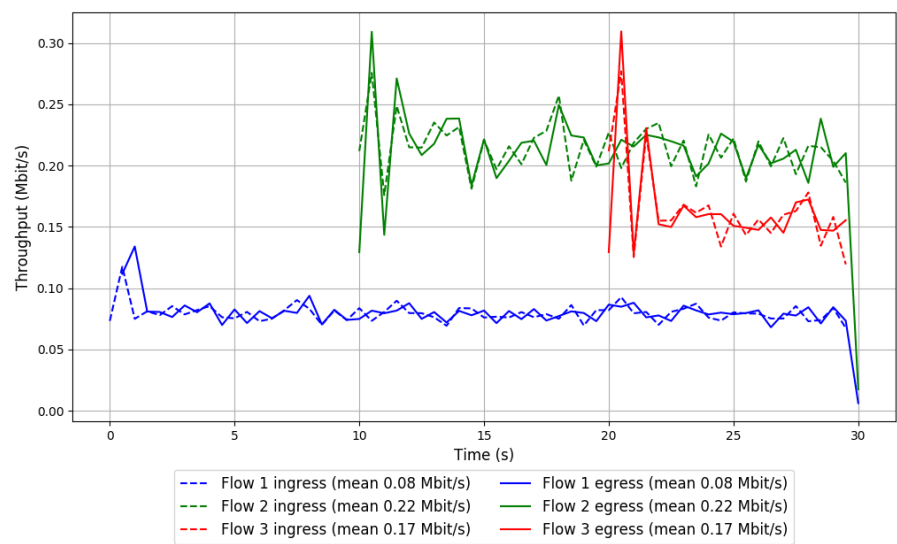
Run 2: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 1.93 Mbit/s) ——— Flow 1 egress (mean 1.86 Mbit/s)
- - - Flow 2 ingress (mean 0.74 Mbit/s) ——— Flow 2 egress (mean 0.69 Mbit/s)
- - - Flow 3 ingress (mean 0.31 Mbit/s) ——— Flow 3 egress (mean 0.27 Mbit/s)

• Flow 1 (95th percentile 1463.19 ms)   • Flow 2 (95th percentile 1512.15 ms)   • Flow 3 (95th percentile 1535.58 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-01-02 22:02:07
End at: 2018-01-02 22:02:37
Local clock offset: -0.155 ms
Remote clock offset: 8.233 ms


# Below is generated by plot.py at 2018-01-02 22:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 1950.980 ms
Loss rate: 7.29%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 1939.906 ms
Loss rate: 5.51%
-- Flow 2:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 1964.488 ms
Loss rate: 11.46%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 1994.325 ms
Loss rate: 32.42%
```

Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 2.03 Mbit/s) --- Flow 1 egress (mean 1.91 Mbit/s)
Flow 2 ingress (mean 0.66 Mbit/s) --- Flow 2 egress (mean 0.61 Mbit/s)
Flow 3 ingress (mean 0.20 Mbit/s) --- Flow 3 egress (mean 0.16 Mbit/s)

Flow 1 (95th percentile 1939.91 ms)   Flow 2 (95th percentile 1964.49 ms)   Flow 3 (95th percentile 1994.33 ms)

33

```
Run 1: Statistics of SCReAM

Start at: 2018-01-02 21:40:45
End at: 2018-01-02 21:41:15
Local clock offset: -0.164 ms
Remote clock offset: -14.449 ms

# Below is generated by plot.py at 2018-01-02 22:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 119.929 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 119.351 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 120.039 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 118.644 ms
Loss rate: 0.35%
```
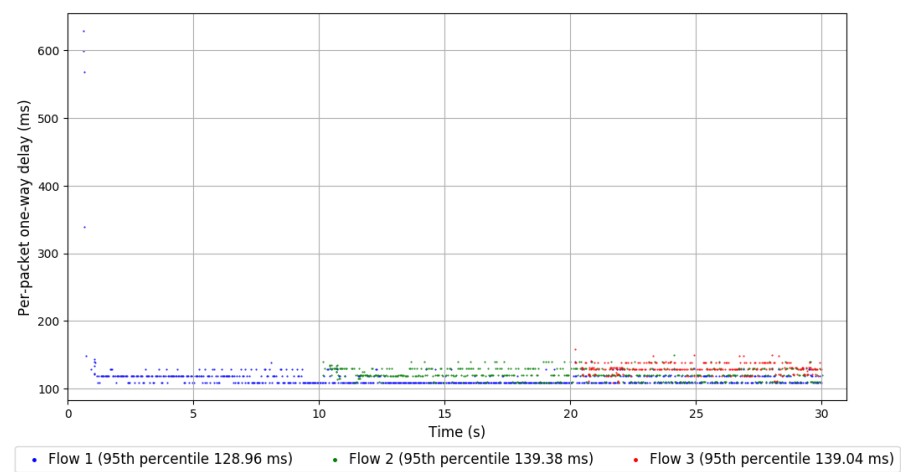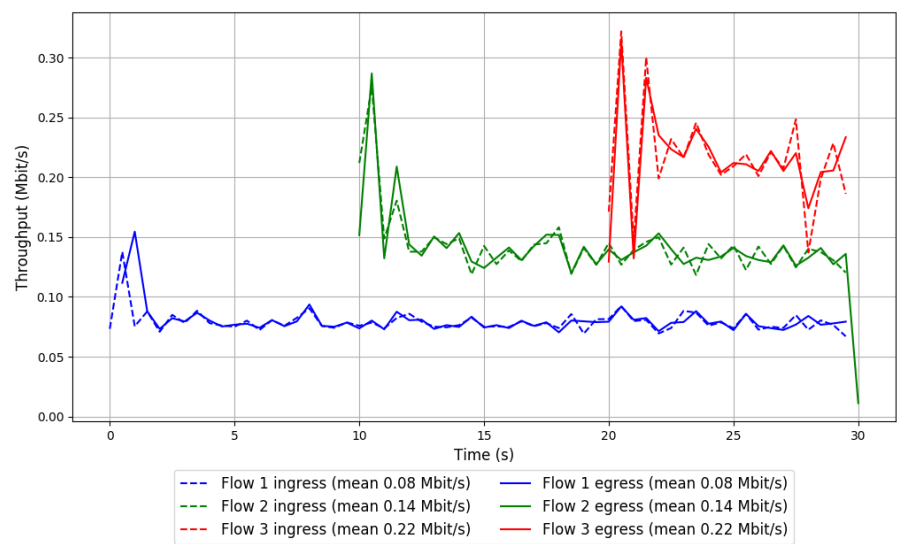
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-01-02 21:59:36
End at: 2018-01-02 22:00:06
Local clock offset: -0.119 ms
Remote clock offset: 8.207 ms

# Below is generated by plot.py at 2018-01-02 22:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 142.898 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 132.384 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 142.965 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 152.412 ms
Loss rate: 0.34%
```
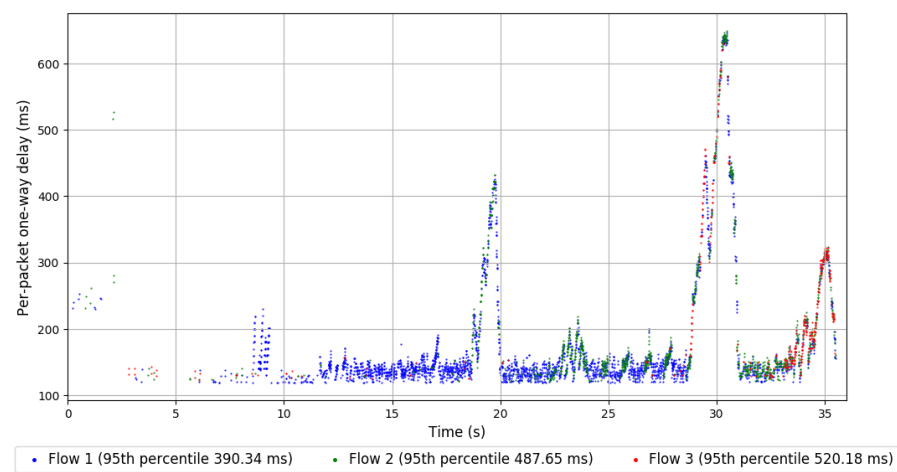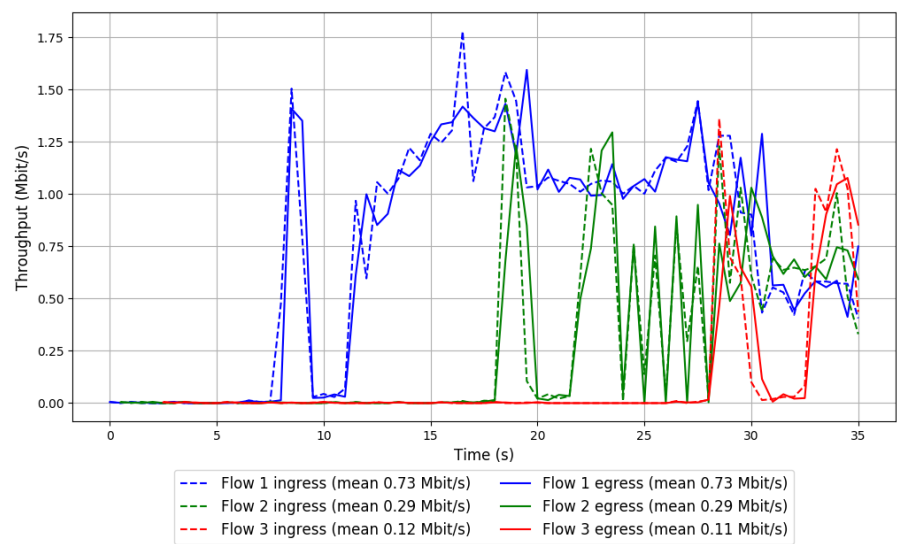
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-01-02 22:18:27
End at: 2018-01-02 22:18:57
Local clock offset: -0.091 ms
Remote clock offset: -4.67 ms


# Below is generated by plot.py at 2018-01-02 22:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 138.978 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 128.964 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 139.378 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.041 ms
Loss rate: 0.31%
```
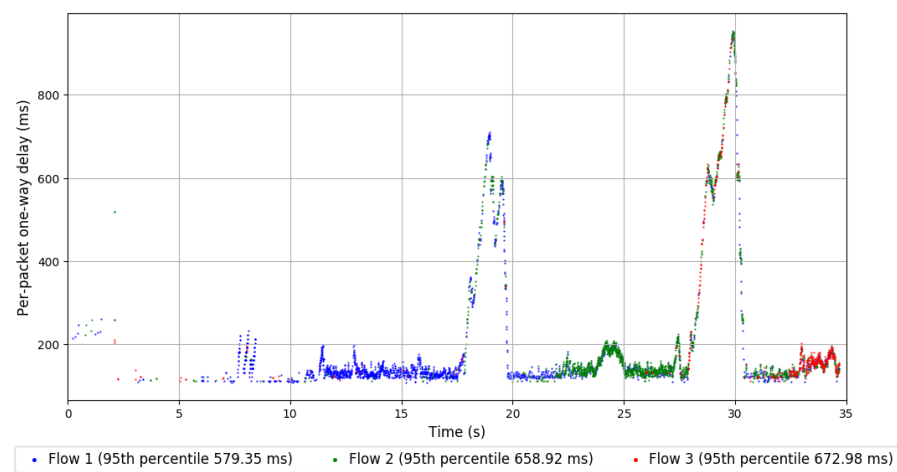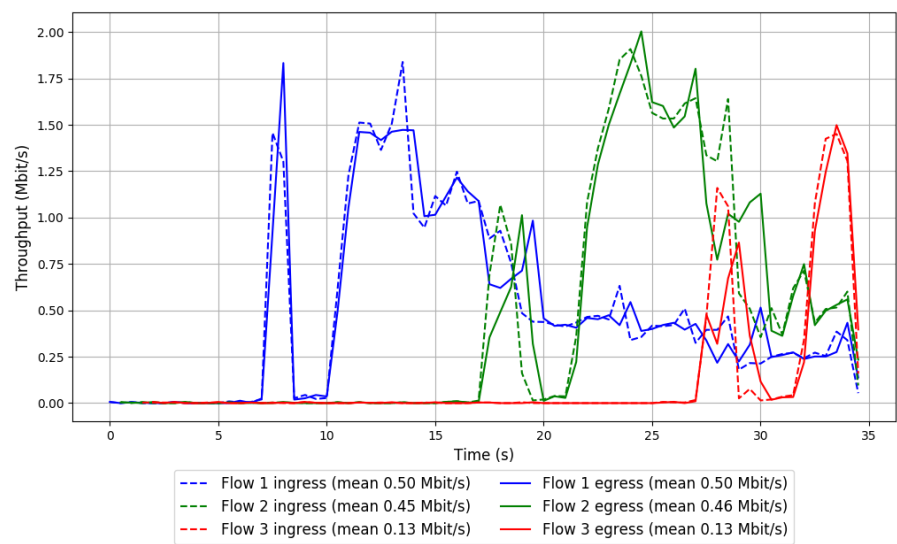
Run 3: Report of SCReAM — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-01-02 21:28:08
End at: 2018-01-02 21:28:38
Local clock offset: -0.168 ms
Remote clock offset: 8.589 ms


# Below is generated by plot.py at 2018-01-02 22:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 435.366 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 390.338 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 487.655 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 520.180 ms
Loss rate: 2.43%
```
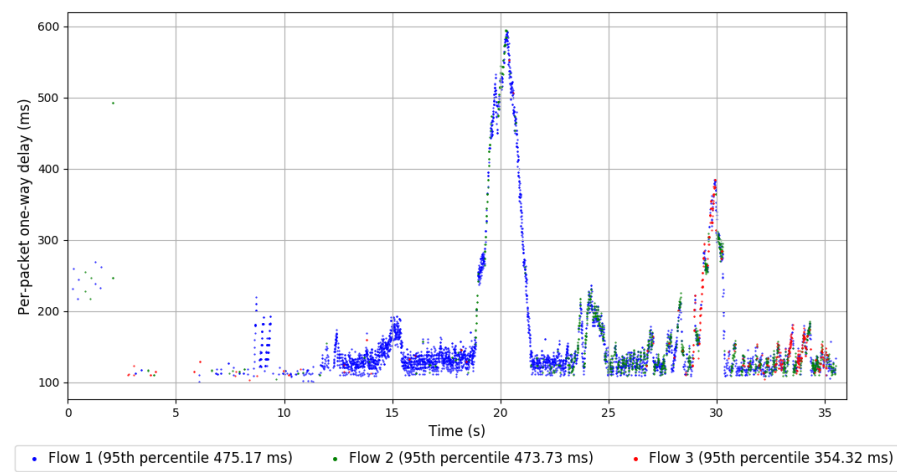
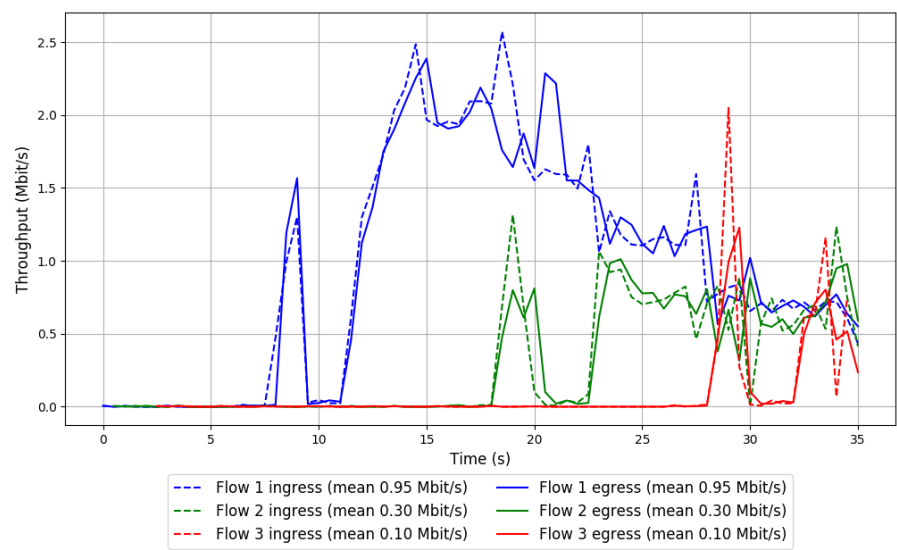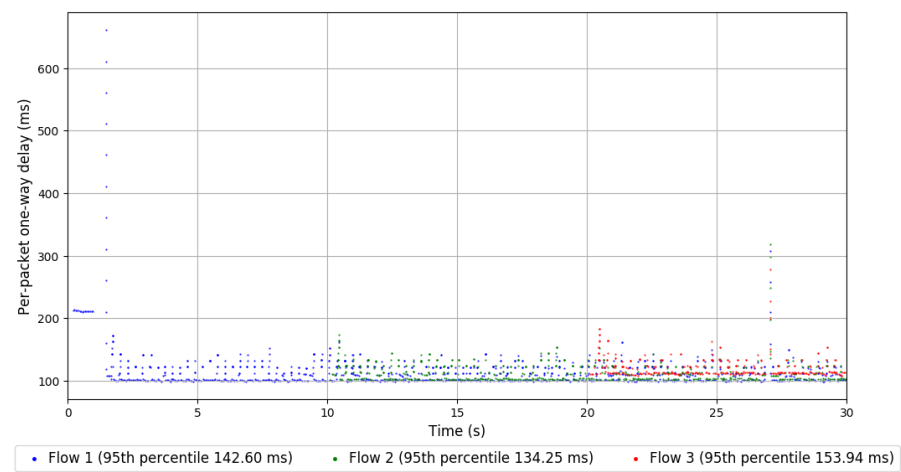Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-01-02 21:47:03
End at: 2018-01-02 21:47:33
Local clock offset: -0.133 ms
Remote clock offset: 0.979 ms


# Below is generated by plot.py at 2018-01-02 22:21:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 633.009 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 579.352 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 658.924 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 672.977 ms
Loss rate: 1.57%
```

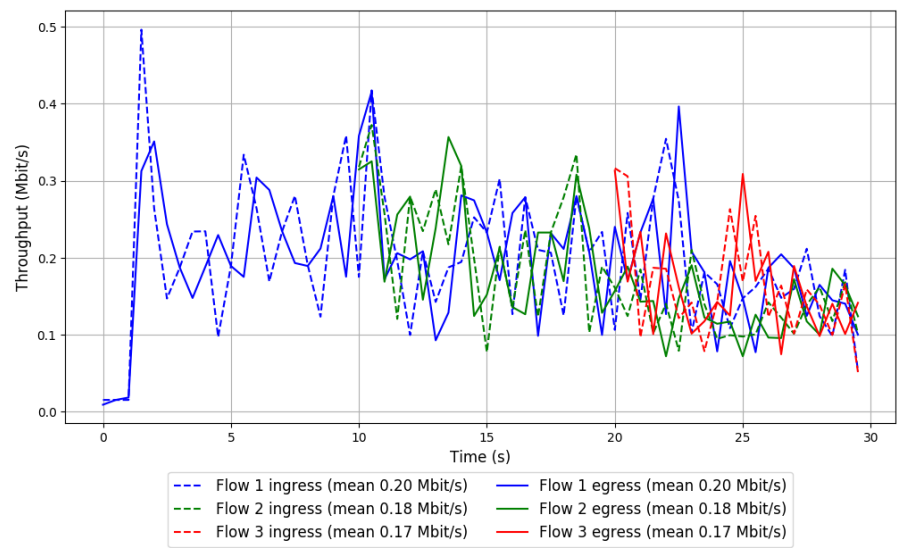Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-01-02 22:05:54
End at: 2018-01-02 22:06:24
Local clock offset: -0.104 ms
Remote clock offset: -5.605 ms


# Below is generated by plot.py at 2018-01-02 22:21:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 467.590 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 475.171 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 473.733 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 354.322 ms
Loss rate: 0.00%
```

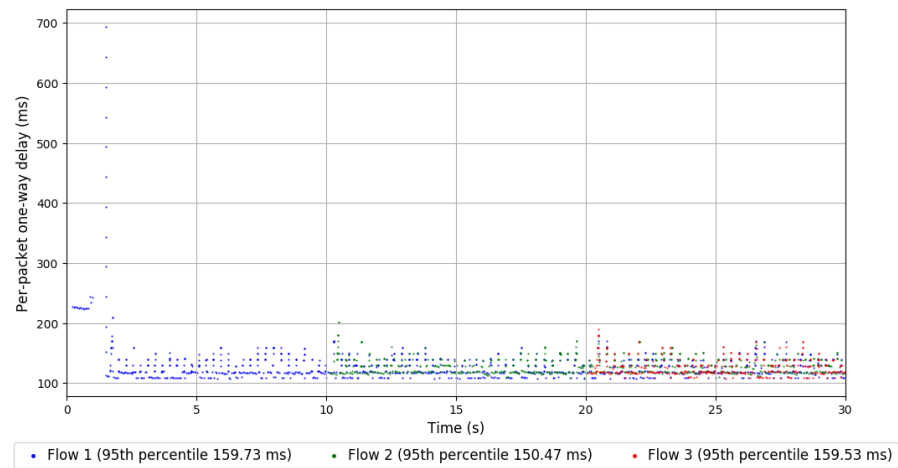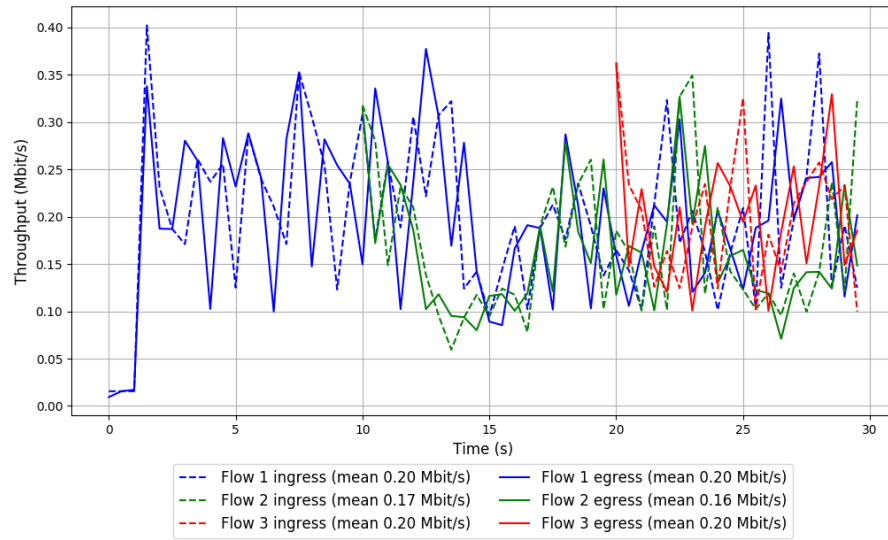Run 3: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-01-02 21:31:57
End at: 2018-01-02 21:32:27
Local clock offset: -0.176 ms
Remote clock offset: -12.581 ms


# Below is generated by plot.py at 2018-01-02 22:21:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 143.252 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 142.605 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 134.247 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 153.941 ms
Loss rate: 0.05%
```
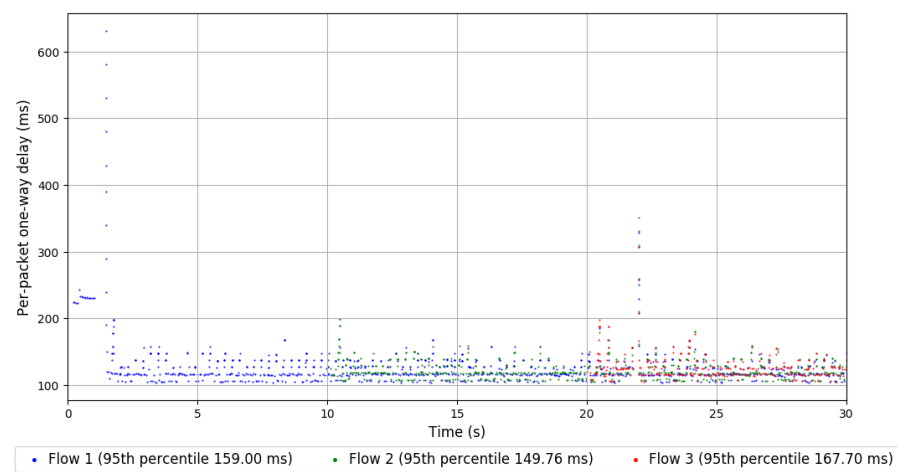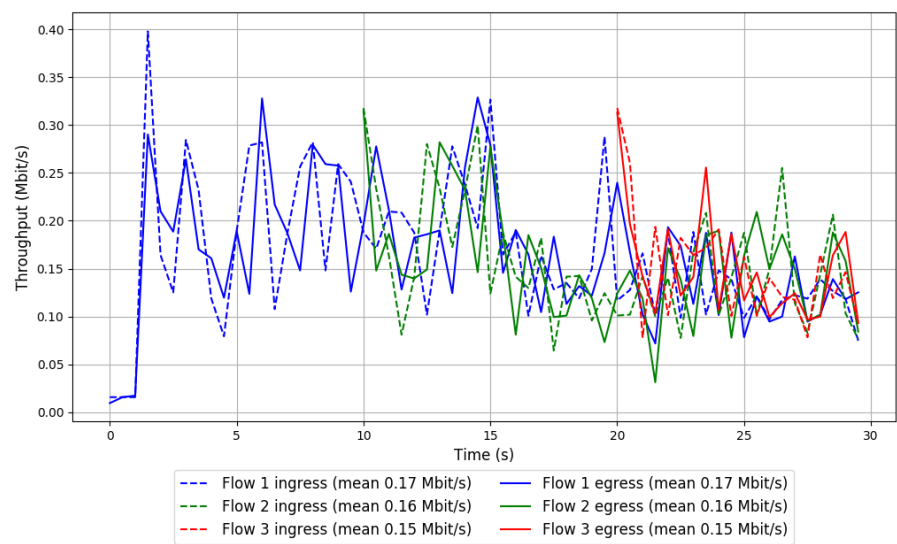
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-01-02 21:50:51
End at: 2018-01-02 21:51:21
Local clock offset: -0.151 ms
Remote clock offset: 0.957 ms


# Below is generated by plot.py at 2018-01-02 22:21:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 159.533 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 159.727 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 150.470 ms
Loss rate: 2.67%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 159.533 ms
Loss rate: 0.04%
```
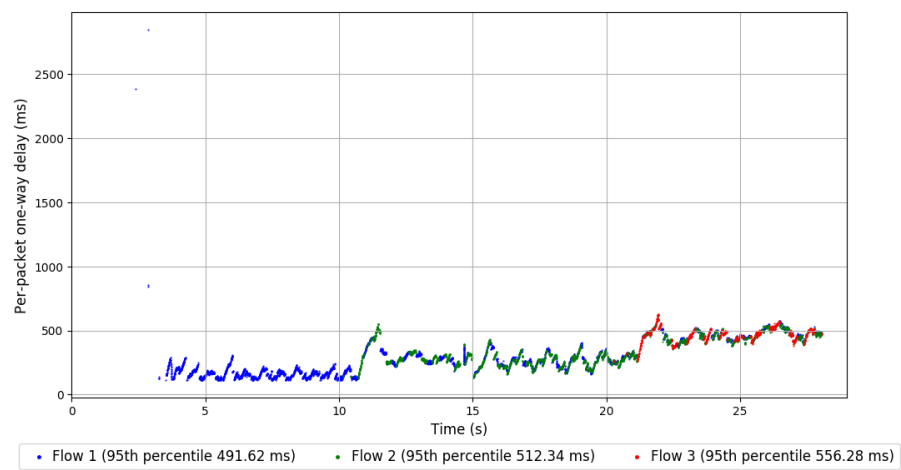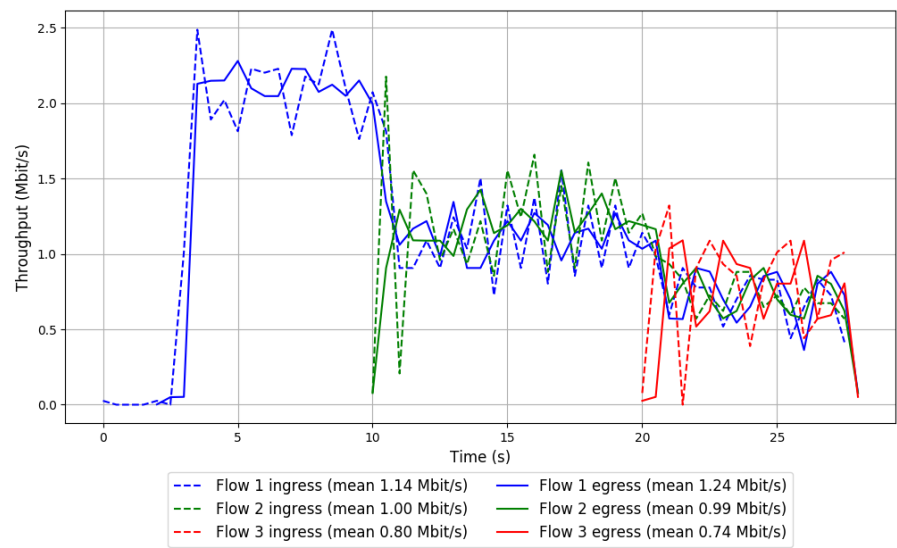
Run 2: Report of Sprout — Data Link

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```
Run 3: Statistics of Sprout

Start at: 2018-01-02 22:09:42
End at: 2018-01-02 22:10:12
Local clock offset: -0.19 ms
Remote clock offset: -0.733 ms


# Below is generated by plot.py at 2018-01-02 22:21:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 157.812 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 158.999 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 149.765 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 167.701 ms
Loss rate: 0.11%
```

Run 3: Report of Sprout — Data Link

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

Start at: 2018-01-02 21:34:28
End at: 2018-01-02 21:34:58
Local clock offset: -0.161 ms
Remote clock offset: -5.337 ms

# Below is generated by plot.py at 2018-01-02 22:21:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 511.370 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 491.623 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 512.339 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 556.281 ms
Loss rate: 7.66%
```
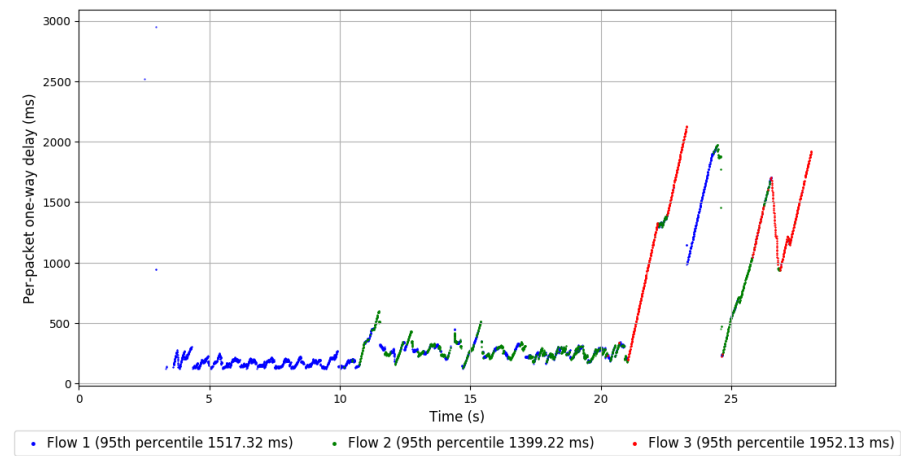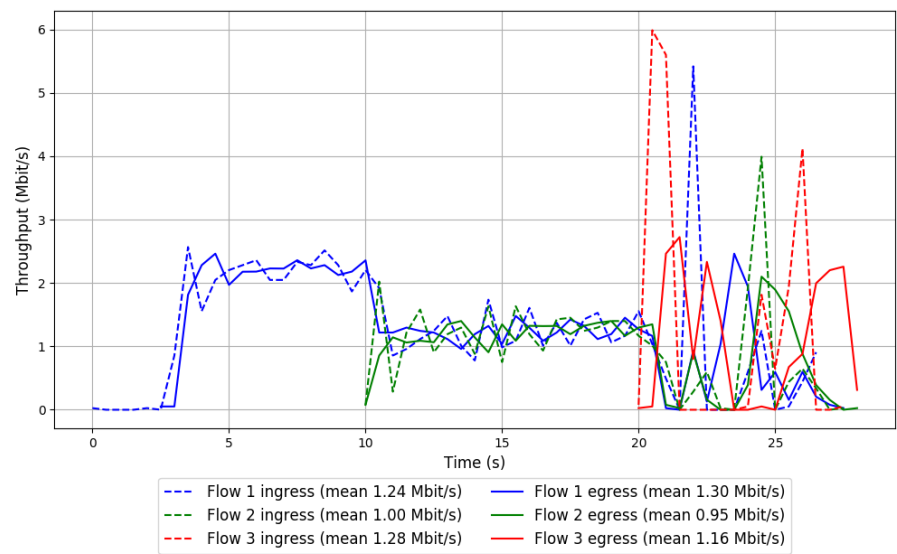
Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 1.14 Mbit/s)   Flow 1 egress (mean 1.24 Mbit/s)
Flow 2 ingress (mean 1.00 Mbit/s)   Flow 2 egress (mean 0.99 Mbit/s)
Flow 3 ingress (mean 0.80 Mbit/s)   Flow 3 egress (mean 0.74 Mbit/s)

Flow 1 (95th percentile 491.62 ms)   Flow 2 (95th percentile 512.34 ms)   Flow 3 (95th percentile 556.28 ms)

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```
Run 2: Statistics of TaoVA-100x

Start at: 2018-01-02 21:53:21
End at: 2018-01-02 21:53:51
Local clock offset: -0.159 ms
Remote clock offset: 9.105 ms


# Below is generated by plot.py at 2018-01-02 22:21:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 1716.003 ms
Loss rate: 3.50%
-- Flow 1:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 1517.316 ms
Loss rate: 1.91%
-- Flow 2:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 1399.223 ms
Loss rate: 2.52%
-- Flow 3:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 1952.127 ms
Loss rate: 10.43%
```
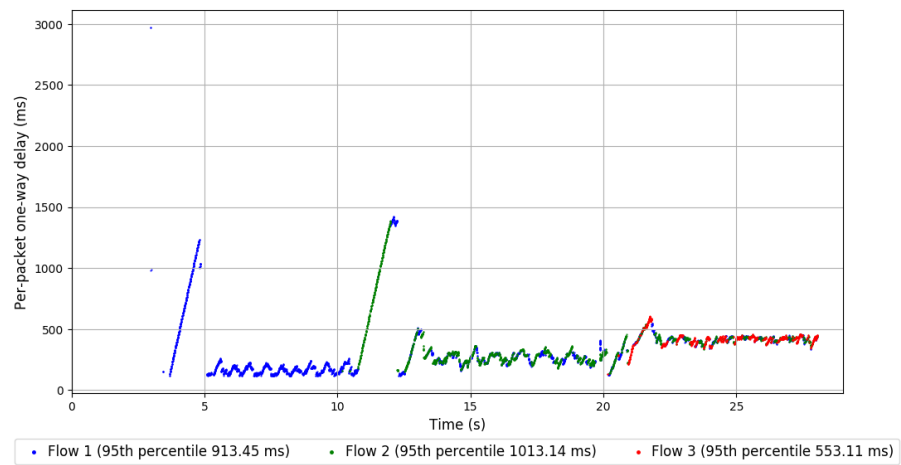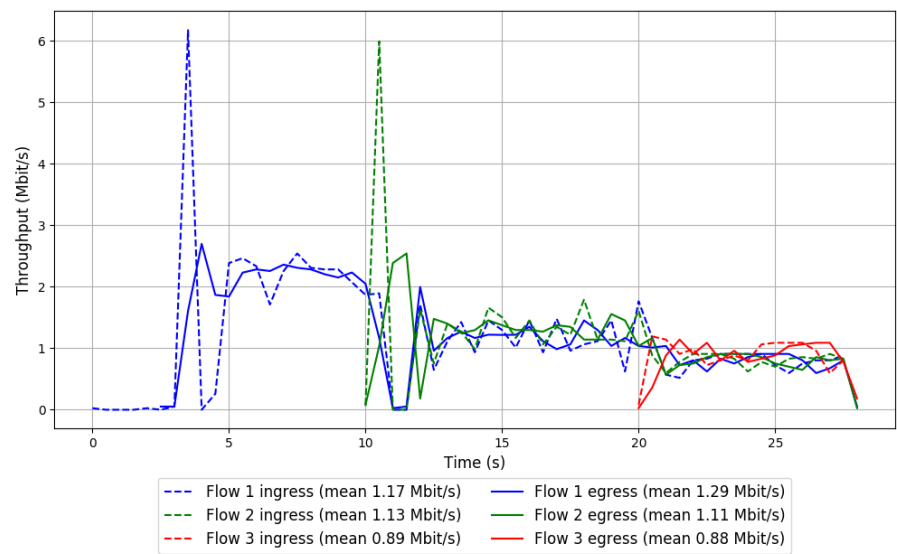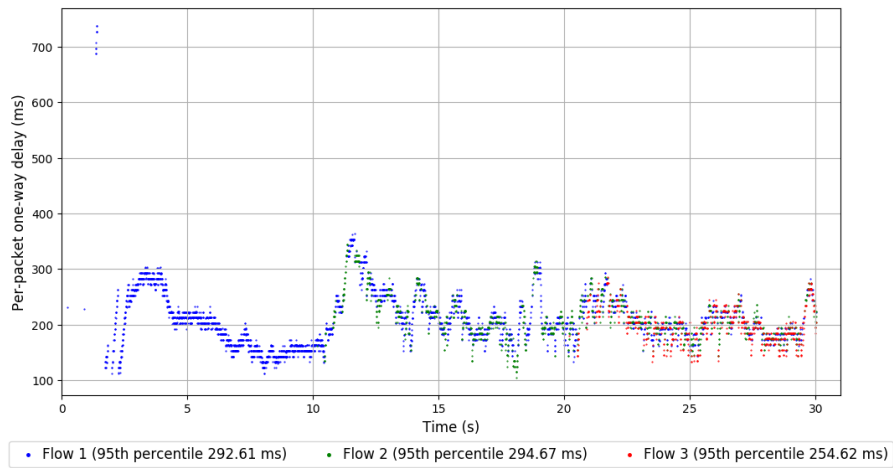
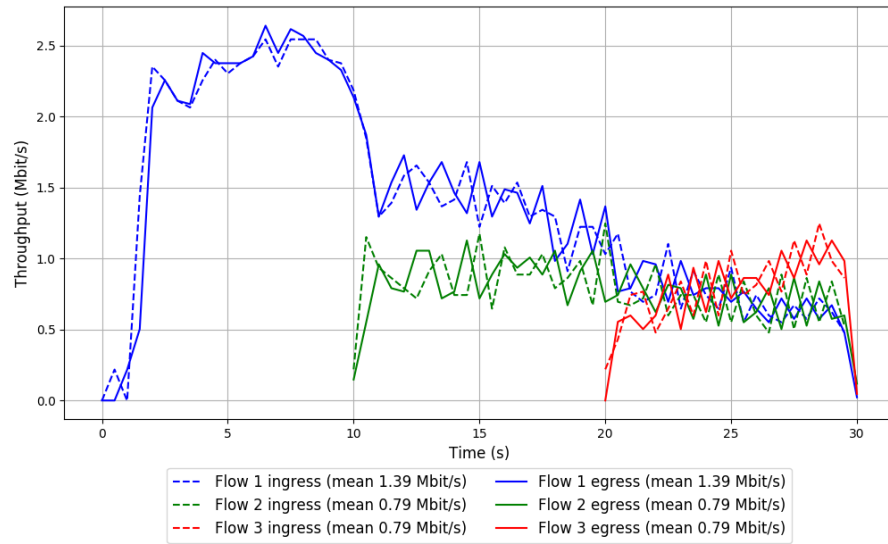# Run 2: Report of TaoVA-100x — Data Link

- Flow 1 ingress (mean 1.24 Mbit/s)
- Flow 1 egress (mean 1.30 Mbit/s)
- Flow 2 ingress (mean 1.00 Mbit/s)
- Flow 2 egress (mean 0.95 Mbit/s)
- Flow 3 ingress (mean 1.28 Mbit/s)
- Flow 3 egress (mean 1.16 Mbit/s)

- Flow 1 (95th percentile 1517.32 ms)
- Flow 2 (95th percentile 1399.22 ms)
- Flow 3 (95th percentile 1952.13 ms)

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```
Run 3: Statistics of TaoVA-100x

Start at: 2018-01-02 22:12:12
End at: 2018-01-02 22:12:42
Local clock offset: -0.074 ms
Remote clock offset: 0.095 ms


# Below is generated by plot.py at 2018-01-02 22:21:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 893.828 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 913.446 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 1013.140 ms
Loss rate: 2.05%
-- Flow 3:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 553.114 ms
Loss rate: 2.18%
```

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

```
Run 1: Statistics of TCP Vegas

Start at: 2018-01-02 21:39:30
End at: 2018-01-02 21:40:00
Local clock offset: -0.17 ms
Remote clock offset: -12.748 ms


# Below is generated by plot.py at 2018-01-02 22:21:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 291.895 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 292.611 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 294.670 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 254.624 ms
Loss rate: 1.52%
```
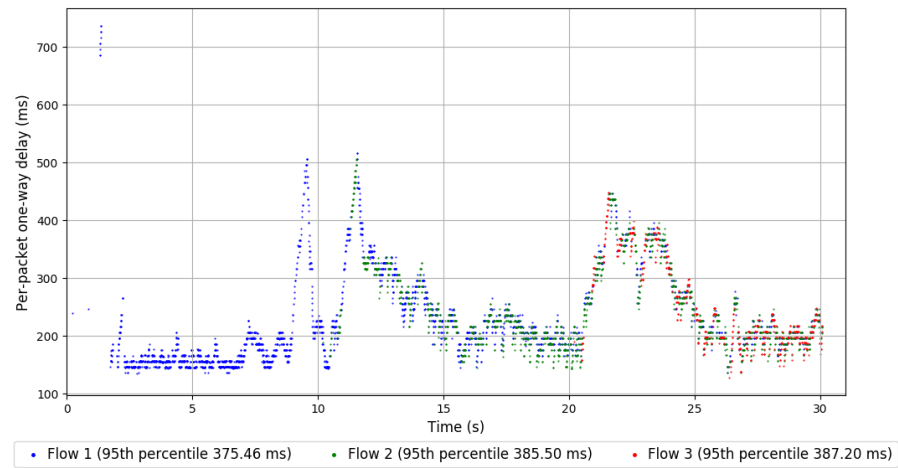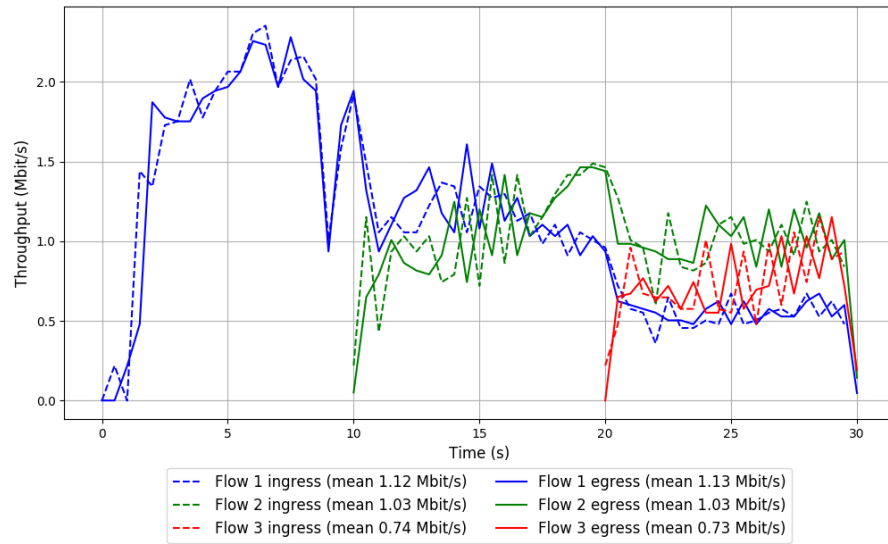
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-01-02 21:58:22
End at: 2018-01-02 21:58:52
Local clock offset: -0.12 ms
Remote clock offset: 13.92 ms


# Below is generated by plot.py at 2018-01-02 22:21:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 377.579 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 375.463 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 385.498 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 387.203 ms
Loss rate: 1.96%
```
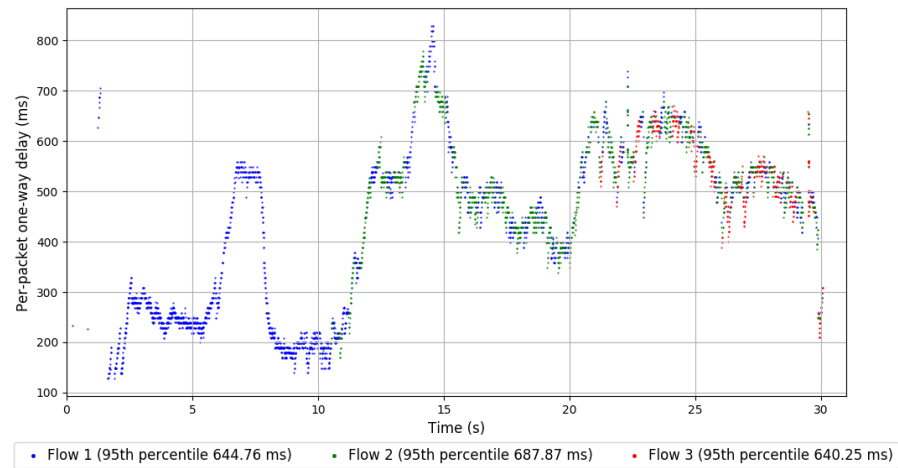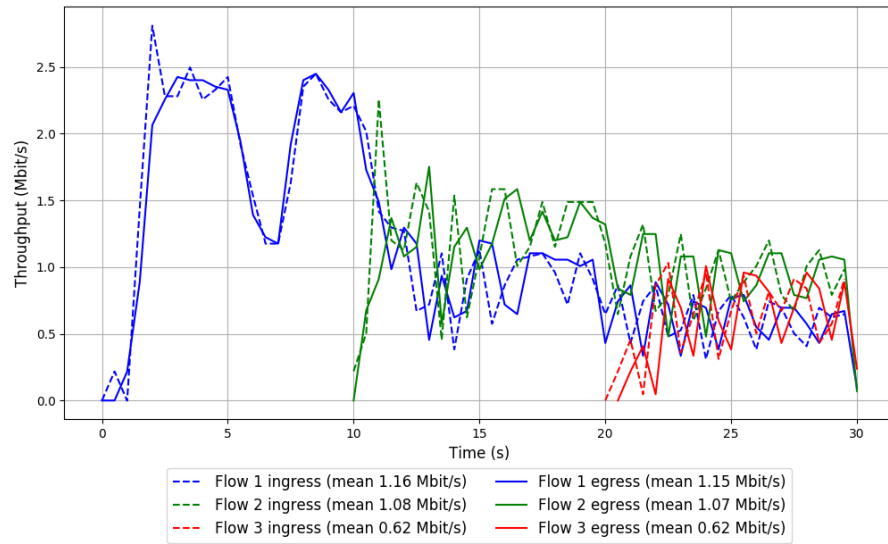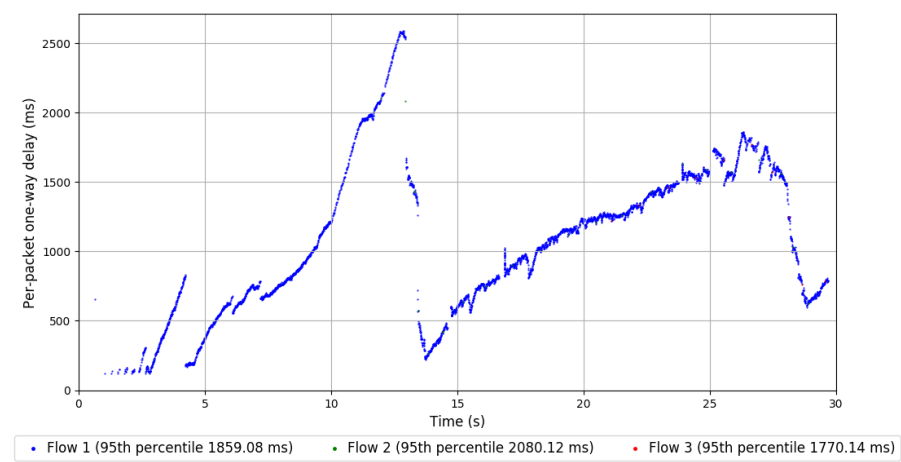
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-01-02 22:17:12
End at: 2018-01-02 22:17:42
Local clock offset: -0.08 ms
Remote clock offset: 9.159 ms


# Below is generated by plot.py at 2018-01-02 22:21:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 658.166 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 644.761 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 687.871 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 640.245 ms
Loss rate: 2.76%
```

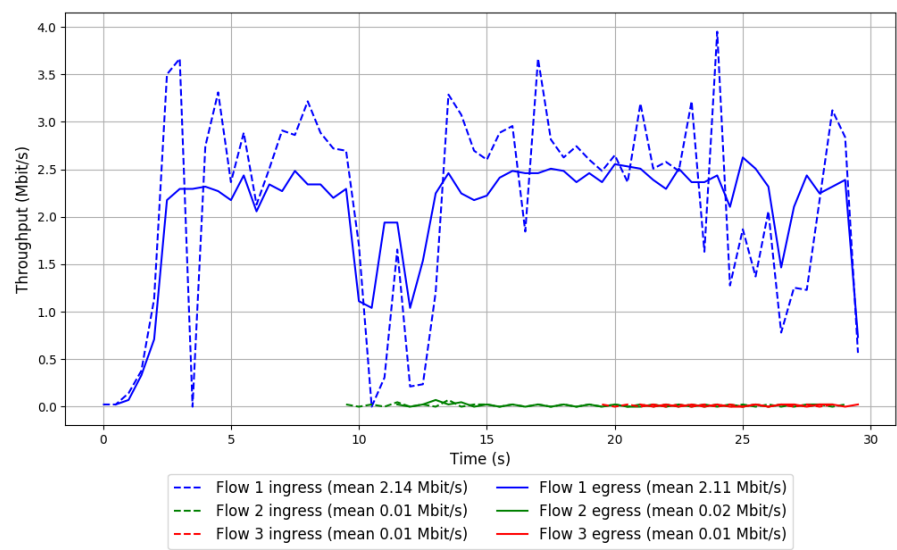Run 3: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-01-02 21:38:15
End at: 2018-01-02 21:38:45
Local clock offset: -0.239 ms
Remote clock offset: -4.607 ms


# Below is generated by plot.py at 2018-01-02 22:21:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 1859.080 ms
Loss rate: 3.34%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 1859.080 ms
Loss rate: 3.34%
-- Flow 2:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 2080.116 ms
Loss rate: 4.17%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1770.136 ms
Loss rate: 0.00%
```

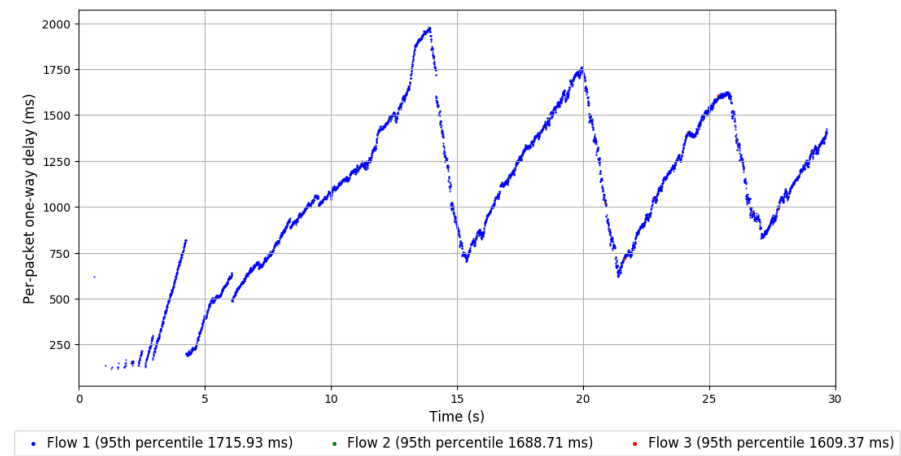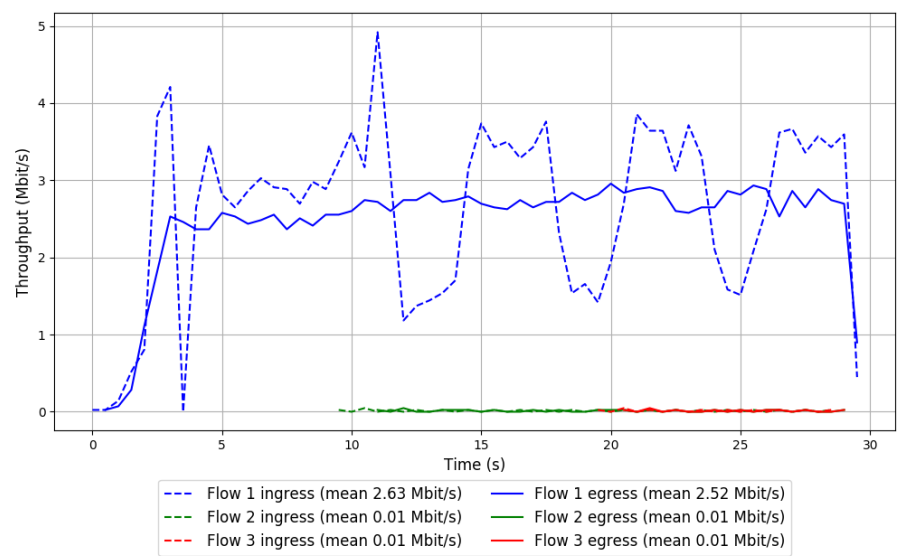Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-01-02 21:57:06
End at: 2018-01-02 21:57:36
Local clock offset: -0.124 ms
Remote clock offset: -0.761 ms


# Below is generated by plot.py at 2018-01-02 22:21:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.53 Mbit/s
95th percentile per-packet one-way delay: 1715.935 ms
Loss rate: 5.94%
-- Flow 1:
Average throughput: 2.52 Mbit/s
95th percentile per-packet one-way delay: 1715.935 ms
Loss rate: 5.94%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1688.707 ms
Loss rate: 4.76%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1609.373 ms
Loss rate: 9.09%
```
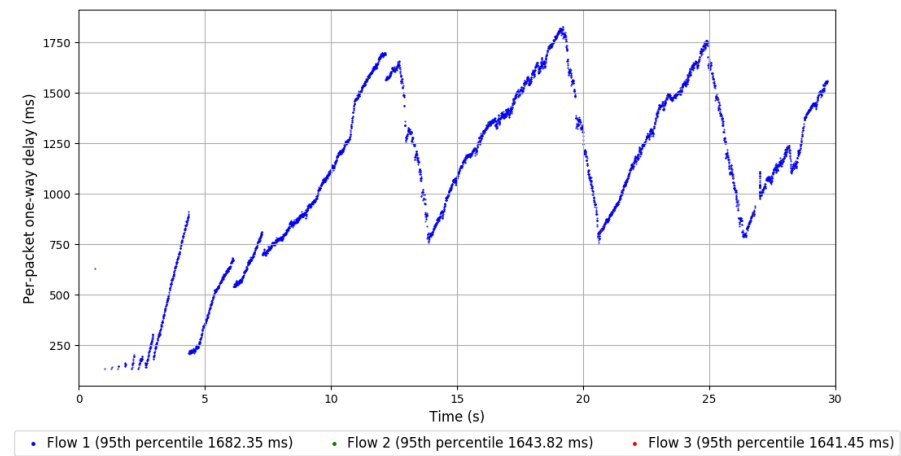
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-01-02 22:15:57
End at: 2018-01-02 22:16:27
Local clock offset: -0.09 ms
Remote clock offset: 8.291 ms


# Below is generated by plot.py at 2018-01-02 22:21:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 1682.352 ms
Loss rate: 5.50%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 1682.352 ms
Loss rate: 5.49%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1643.822 ms
Loss rate: 5.00%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1641.450 ms
Loss rate: 10.00%
```
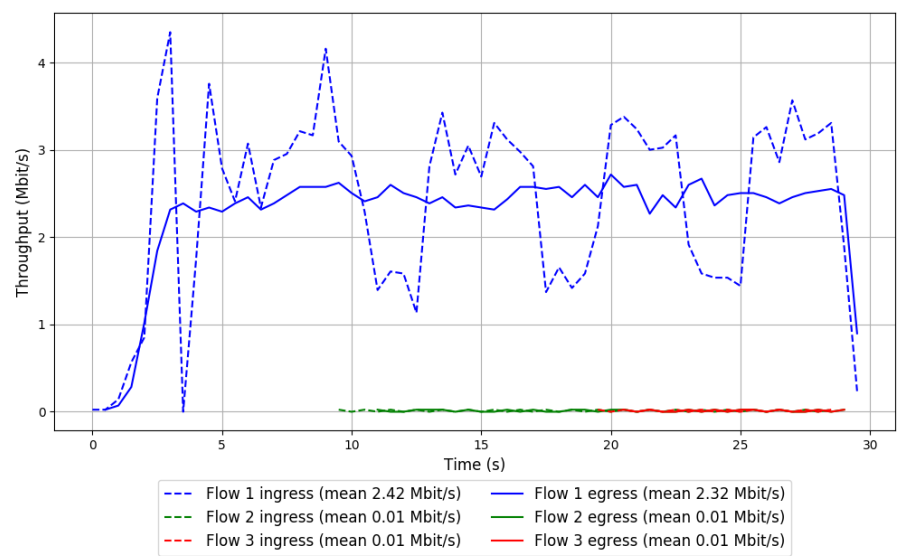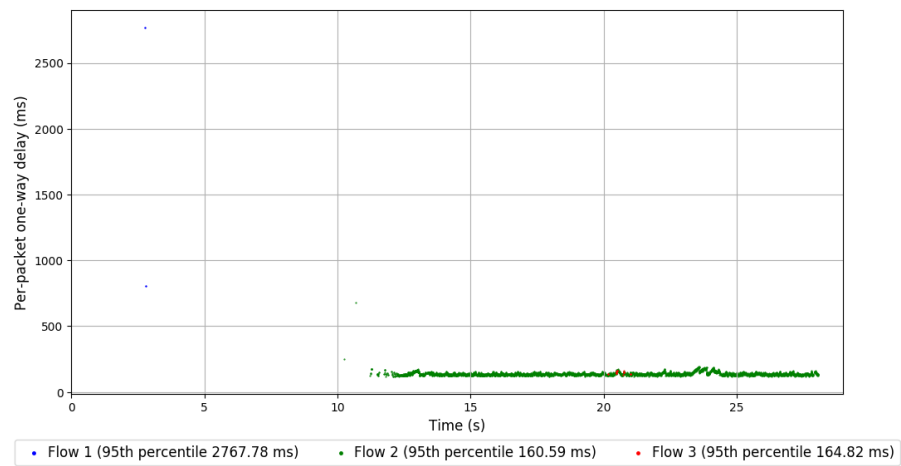
Run 3: Report of Verus — Data Link

- Flow 1 ingress (mean 2.42 Mbit/s)
- Flow 1 egress (mean 2.32 Mbit/s)
- Flow 2 ingress (mean 0.01 Mbit/s)
- Flow 2 egress (mean 0.01 Mbit/s)
- Flow 3 ingress (mean 0.01 Mbit/s)
- Flow 3 egress (mean 0.01 Mbit/s)

- Flow 1 (95th percentile 1682.35 ms)
- Flow 2 (95th percentile 1643.82 ms)
- Flow 3 (95th percentile 1641.45 ms)

```
Run 1: Statistics of Copa

Start at: 2018-01-02 21:25:36
End at: 2018-01-02 21:26:06
Local clock offset: -0.155 ms
Remote clock offset: 8.611 ms


# Below is generated by plot.py at 2018-01-02 22:21:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 160.716 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 2767.783 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 160.588 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 164.820 ms
Loss rate: 0.00%
```
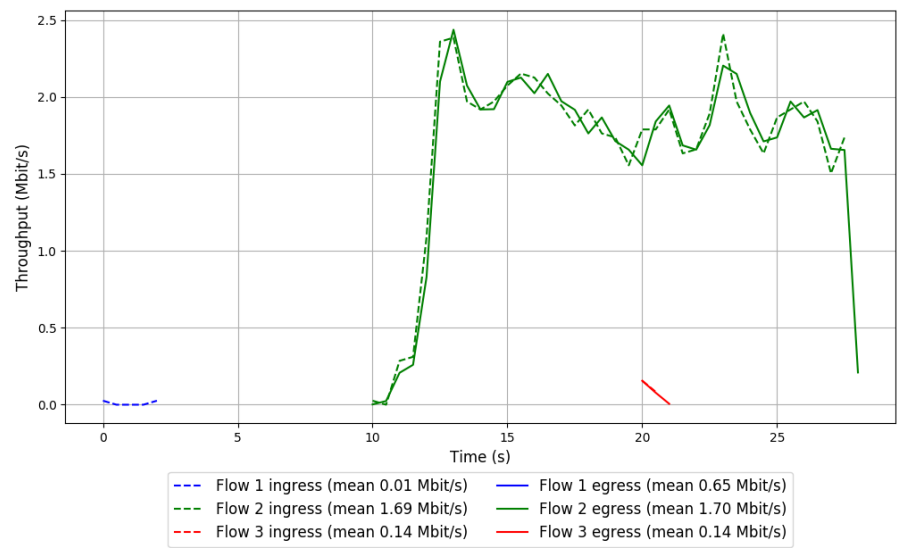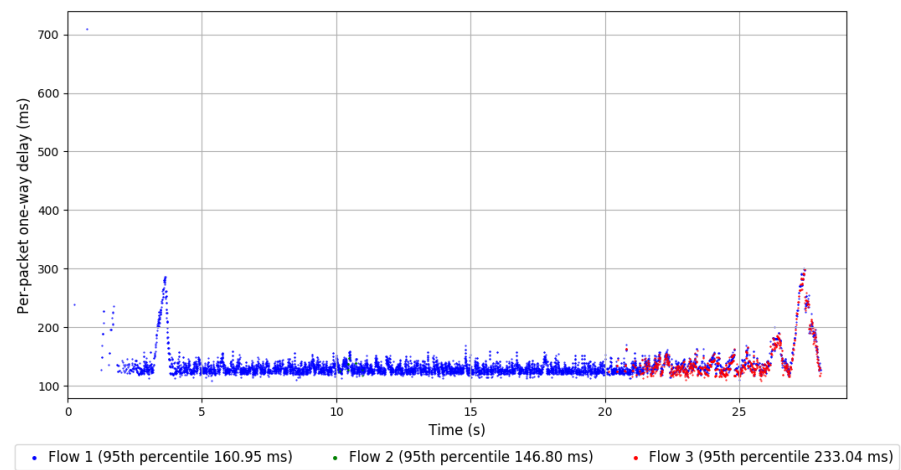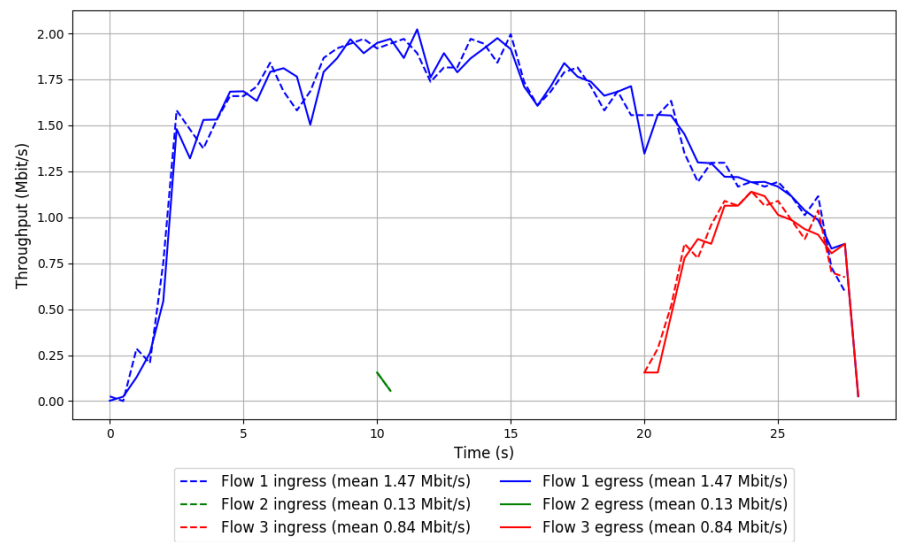
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2018-01-02 21:44:31
End at: 2018-01-02 21:45:01
Local clock offset: -0.169 ms
Remote clock offset: -0.638 ms

# Below is generated by plot.py at 2018-01-02 22:21:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 176.643 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 160.951 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 146.797 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 233.037 ms
Loss rate: 0.57%
```
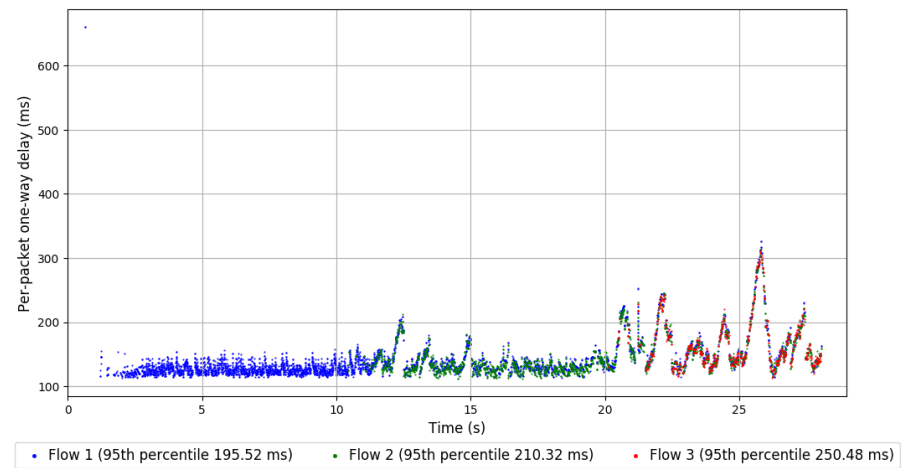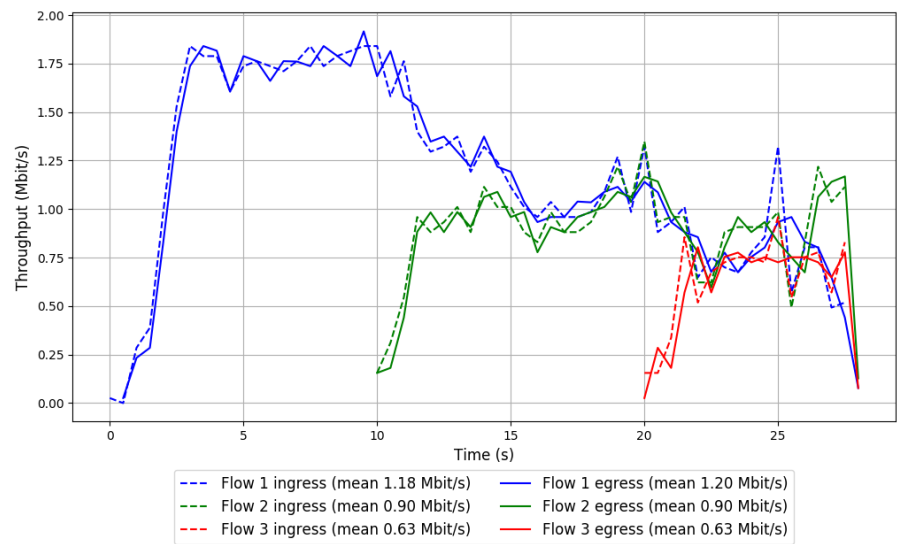
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2018-01-02 22:03:22
End at: 2018-01-02 22:03:52
Local clock offset: -0.213 ms
Remote clock offset: -0.049 ms


# Below is generated by plot.py at 2018-01-02 22:21:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 207.982 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 195.521 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 210.322 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 250.476 ms
Loss rate: 1.80%
```

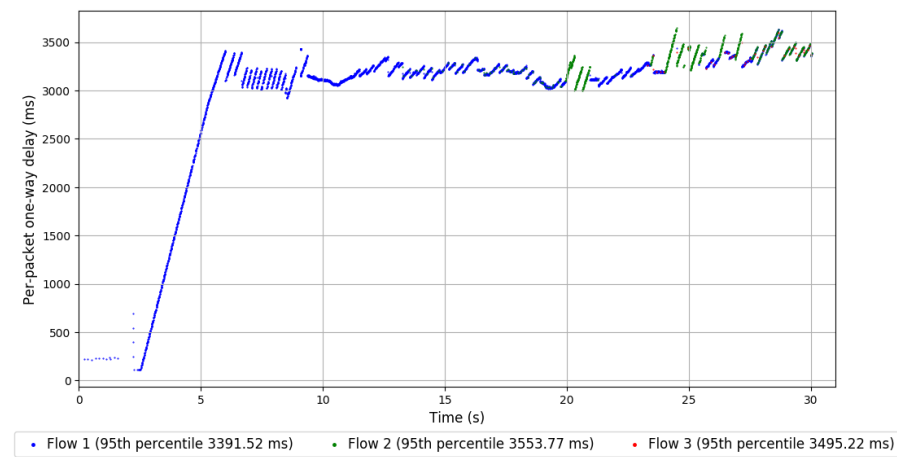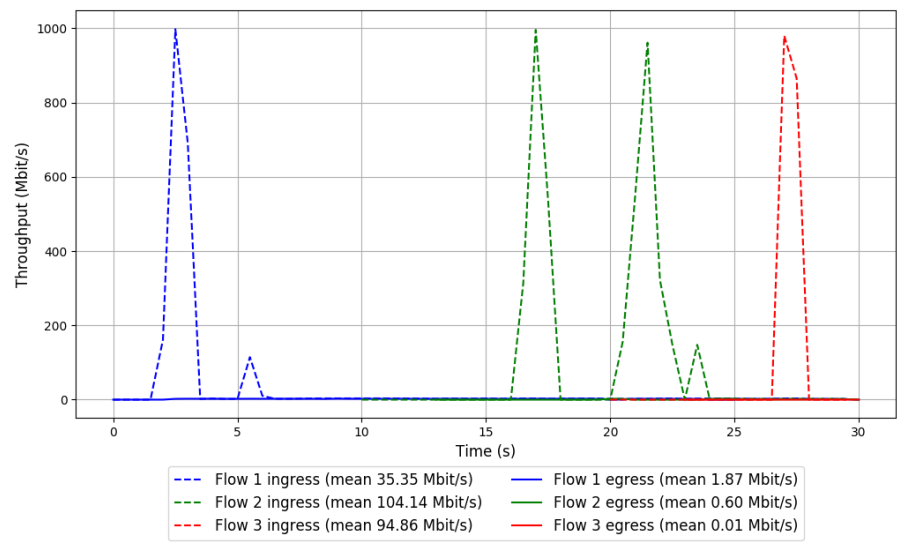## Run 3: Report of Copa — Data Link

```
Run 1: Statistics of FillP

Start at: 2018-01-02 21:29:24
End at: 2018-01-02 21:29:54
Local clock offset: -0.189 ms
Remote clock offset: -4.384 ms


# Below is generated by plot.py at 2018-01-02 22:21:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 3445.240 ms
Loss rate: 98.38%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 3391.522 ms
Loss rate: 94.73%
-- Flow 2:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 3553.766 ms
Loss rate: 99.52%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 3495.221 ms
Loss rate: 100.00%
```

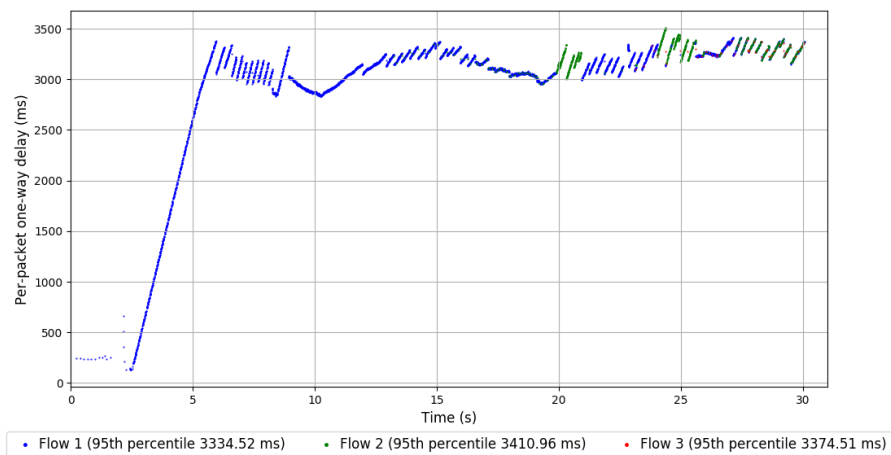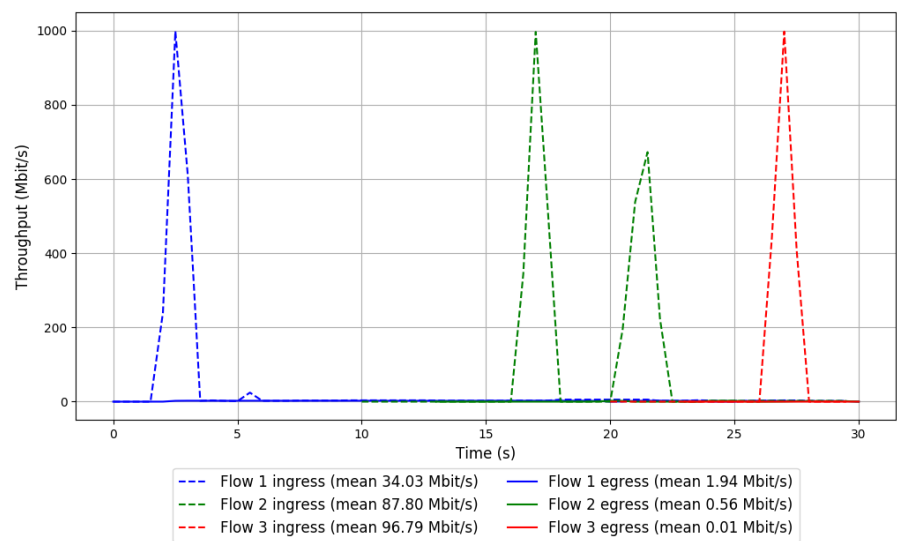# Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-01-02 21:48:18
End at: 2018-01-02 21:48:48
Local clock offset: -0.232 ms
Remote clock offset: 13.115 ms


# Below is generated by plot.py at 2018-01-02 22:21:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 3358.960 ms
Loss rate: 98.17%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 3334.517 ms
Loss rate: 94.31%
-- Flow 2:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 3410.963 ms
Loss rate: 99.46%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 3374.515 ms
Loss rate: 100.00%
```

Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2018-01-02 22:07:09
End at: 2018-01-02 22:07:39
Local clock offset: -0.113 ms
Remote clock offset: 9.13 ms


# Below is generated by plot.py at 2018-01-02 22:21:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 3971.146 ms
Loss rate: 98.49%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 3952.168 ms
Loss rate: 94.85%
-- Flow 2:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 4098.401 ms
Loss rate: 99.69%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 4002.854 ms
Loss rate: 100.00%
```
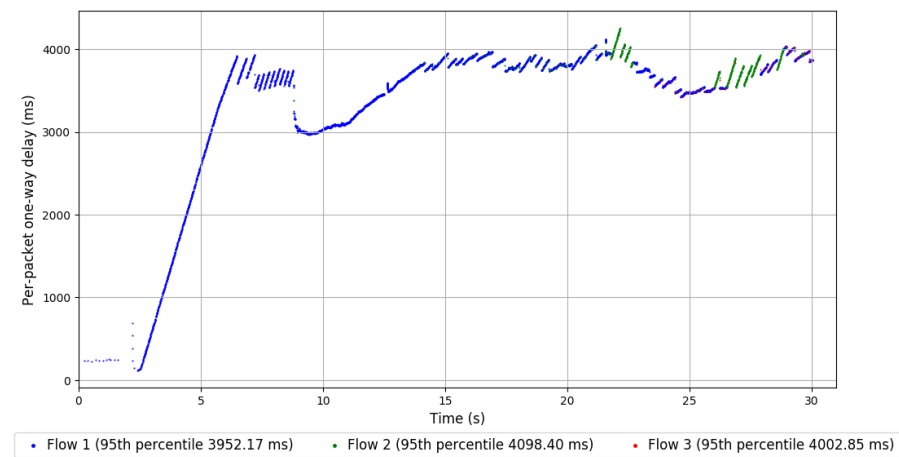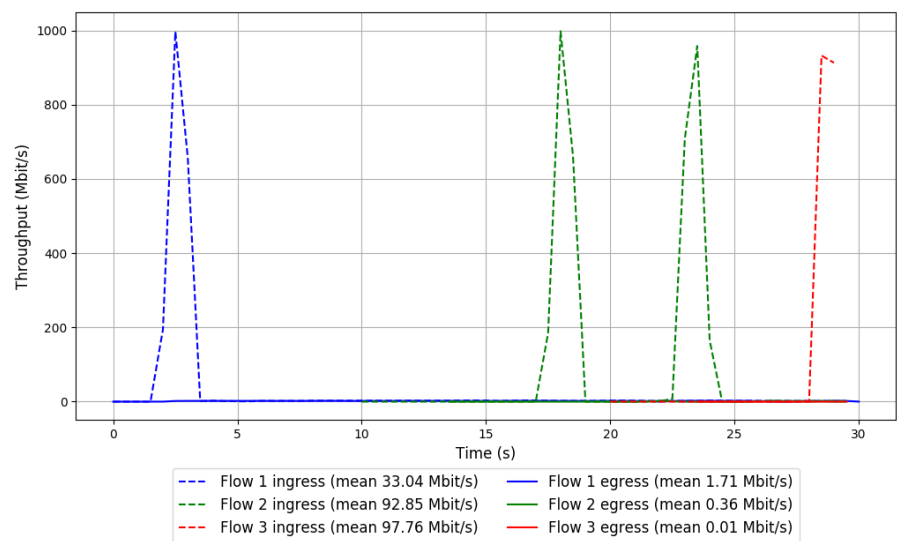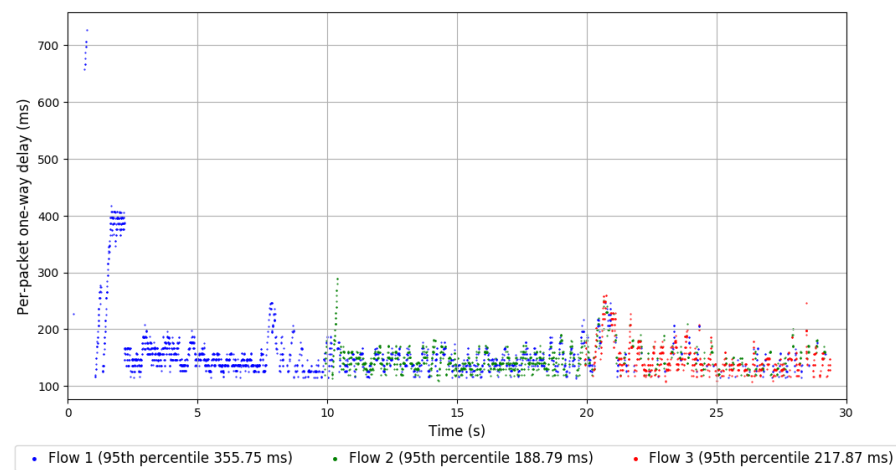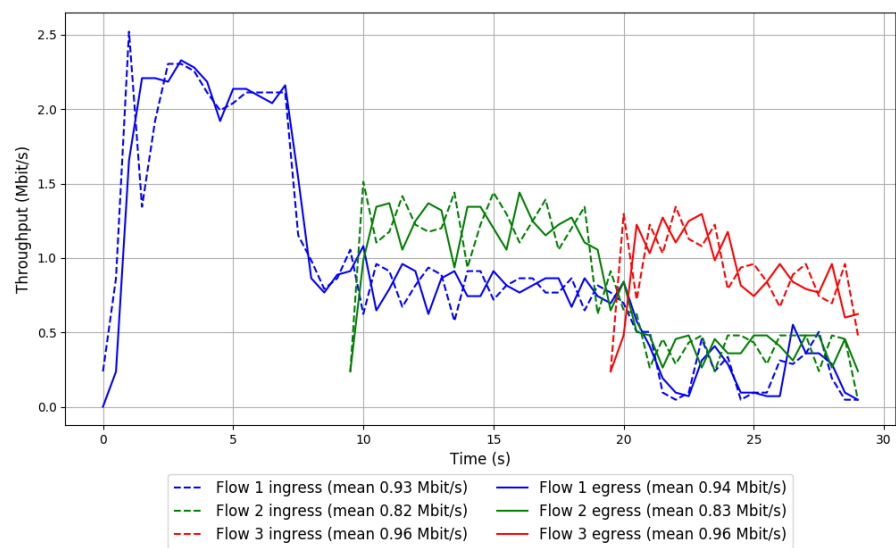
Run 3: Report of FillP — Data Link

```
Run 1: Statistics of Indigo

Start at: 2018-01-02 21:36:59
End at: 2018-01-02 21:37:29
Local clock offset: -0.148 ms
Remote clock offset: -5.437 ms

# Below is generated by plot.py at 2018-01-02 22:21:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 228.254 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 355.749 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 188.787 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 217.872 ms
Loss rate: 1.19%
```
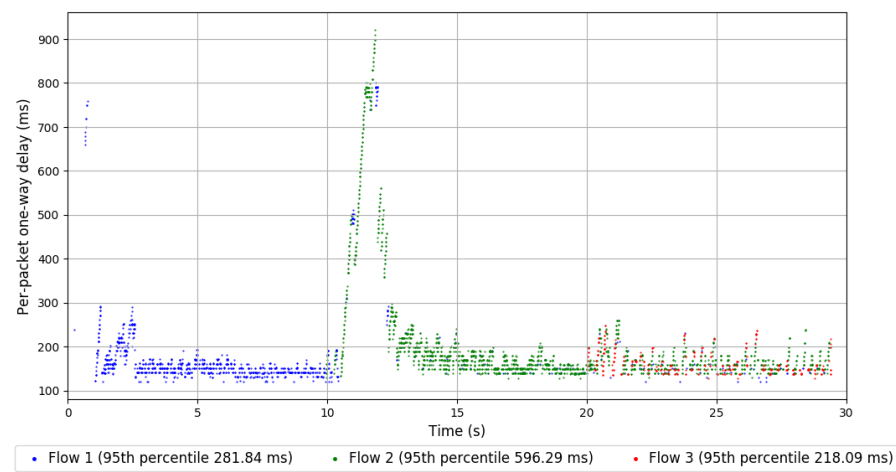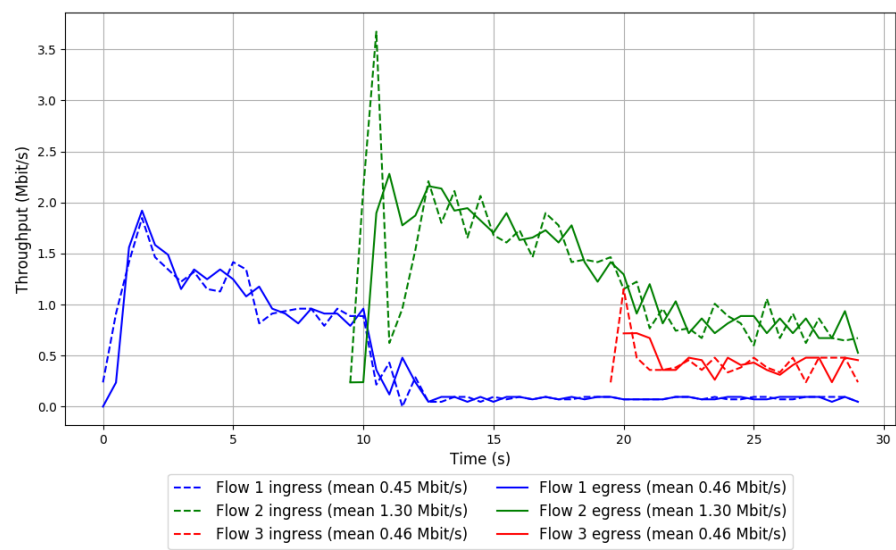
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2018-01-02 21:55:51
End at: 2018-01-02 21:56:21
Local clock offset: -0.132 ms
Remote clock offset: 9.132 ms


# Below is generated by plot.py at 2018-01-02 22:21:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 498.021 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 281.839 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 596.292 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 218.085 ms
Loss rate: 0.28%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2018-01-02 22:14:42
End at: 2018-01-02 22:15:12
Local clock offset: -0.09 ms
Remote clock offset: 9.129 ms


# Below is generated by plot.py at 2018-01-02 22:21:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 260.153 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 269.908 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 241.506 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 250.243 ms
Loss rate: 0.49%
```

Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 0.86 Mbit/s) --- Flow 1 egress (mean 0.87 Mbit/s)
Flow 2 ingress (mean 0.79 Mbit/s) --- Flow 2 egress (mean 0.80 Mbit/s)
Flow 3 ingress (mean 0.52 Mbit/s) --- Flow 3 egress (mean 0.52 Mbit/s)

Flow 1 (95th percentile 269.91 ms)　　Flow 2 (95th percentile 241.51 ms)　　Flow 3 (95th percentile 250.24 ms)