# Pantheon Report

Generated at 2018-05-25 10:40:32 (UTC).

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

Repeated the test of 16 congestion control schemes 10 times.

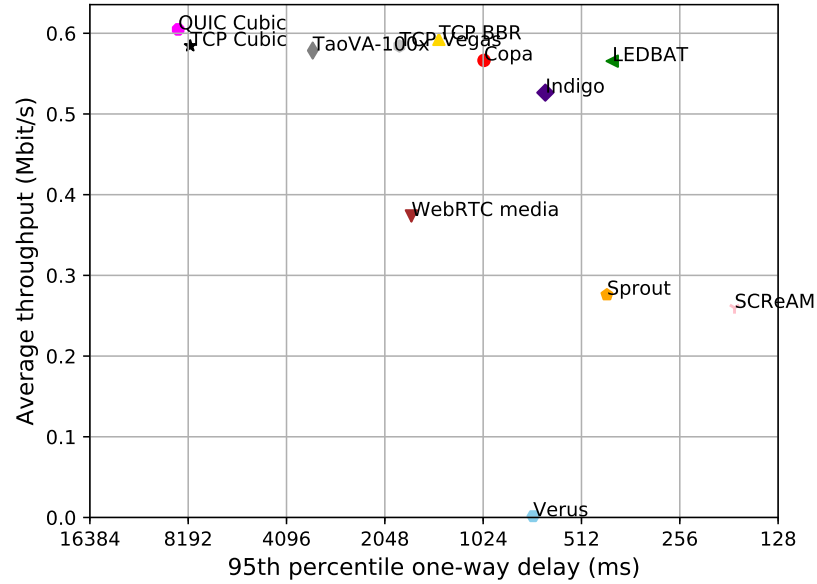Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

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

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.
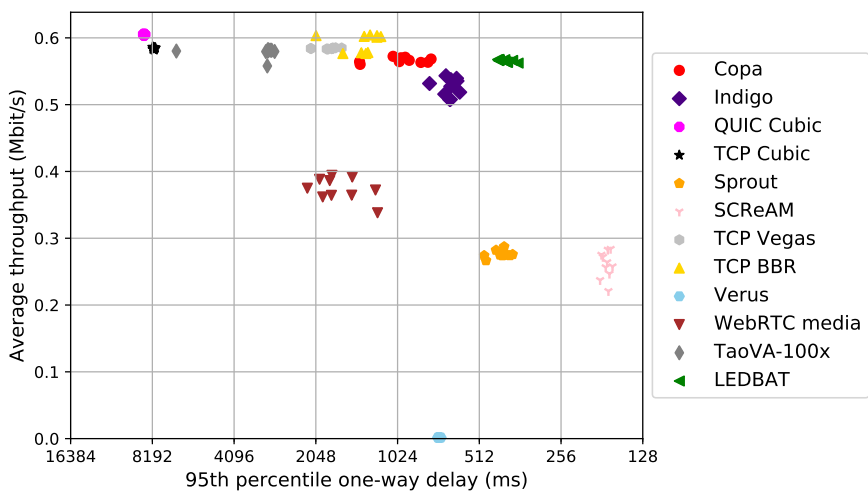
```
Git summary:
branch: master @ 0088822873ea99180f63545a341ef069f40efe59
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/genericCC @ c7966e494a929986eaa5a9c169a7f381fe1bbbe5
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
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-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
third_party/sprout @ c838669682f0c19f6baf92afc9a596a406d48c1f
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from Colombia ppp0 to AWS Brazil 2, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from Colombia ppp0 to AWS Brazil 2, 10 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 | 10 | 0.38 | 0.24 | 0.19 | 1360.93 | 1417.86 | 1422.99 | 2.46 | 4.45 | 10.60 |
| Copa | 10 | 0.33 | 0.27 | 0.19 | 950.26 | 1016.23 | 1095.32 | 1.40 | 3.12 | 7.42 |
| TCP Cubic | 10 | 0.57 | 0.03 | 0.00 | 8080.44 | 6395.56 | 8384.98 | 30.86 | 52.85 | 90.91 |
| FillP | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Indigo | 10 | 0.28 | 0.25 | 0.24 | 551.51 | 656.81 | 780.19 | 0.51 | 0.91 | 2.41 |
| LEDBAT | 10 | 0.24 | 0.37 | 0.26 | 339.87 | 418.49 | 434.91 | 0.03 | 0.68 | 7.93 |
| PCC-Allegro | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| PCC-Expr | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| QUIC Cubic | 10 | 0.60 | 0.00 | 0.00 | 8779.04 | 5986.26 | 9192.55 | 32.29 | 0.00 | 50.00 |
| SCReAM | 10 | 0.08 | 0.17 | 0.19 | 157.26 | 174.08 | 192.81 | 0.68 | 1.02 | 2.02 |
| Sprout | 10 | 0.14 | 0.14 | 0.14 | 514.73 | 328.85 | 388.31 | 0.78 | 1.22 | 1.88 |
| TaoVA-100x | 10 | 0.35 | 0.29 | 0.19 | 2898.73 | 3558.26 | 3446.05 | 6.23 | 10.03 | 31.62 |
| TCP Vegas | 10 | 0.39 | 0.23 | 0.19 | 1702.94 | 1865.29 | 1978.06 | 3.08 | 6.48 | 22.18 |
| Verus | 10 | 0.00 | 0.00 | 0.00 | 480.55 | 574.10 | 766.44 | 0.00 | 0.00 | 2.00 |
| PCC-Vivace | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| WebRTC media | 10 | 0.17 | 0.15 | 0.06 | 1549.12 | 1737.77 | 1693.08 | 1.34 | 1.62 | 11.65 |

```
Run 1: Statistics of TCP BBR

Start at: 2018-05-25 07:37:08
End at: 2018-05-25 07:37:38
Local clock offset: -1.469 ms
Remote clock offset: 3.506 ms


# Below is generated by plot.py at 2018-05-25 10:38:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 1292.848 ms
Loss rate: 3.16%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 1240.502 ms
Loss rate: 1.75%
-- Flow 2:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 1322.517 ms
Loss rate: 4.27%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 1202.335 ms
Loss rate: 9.14%
```
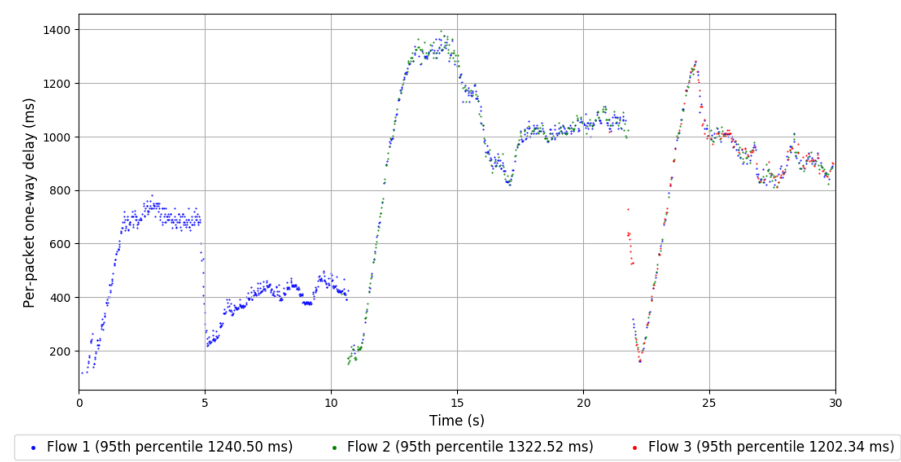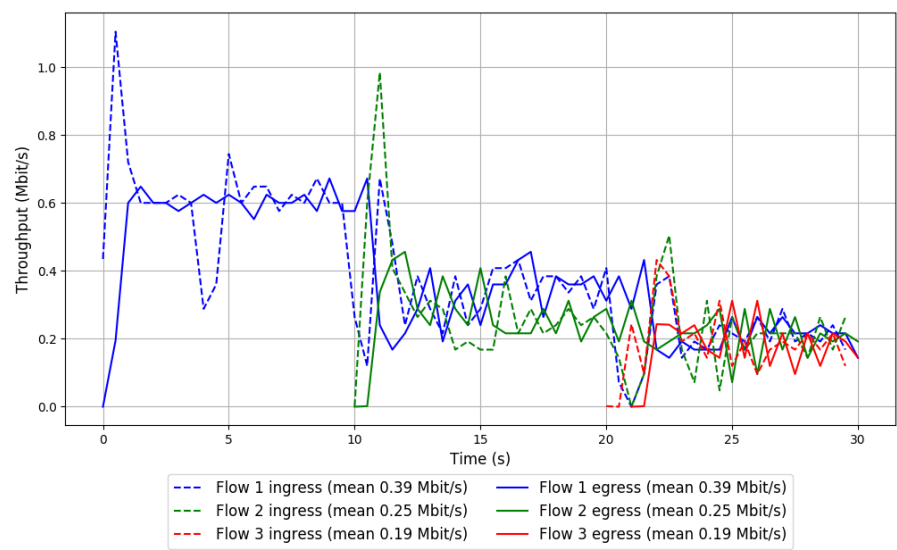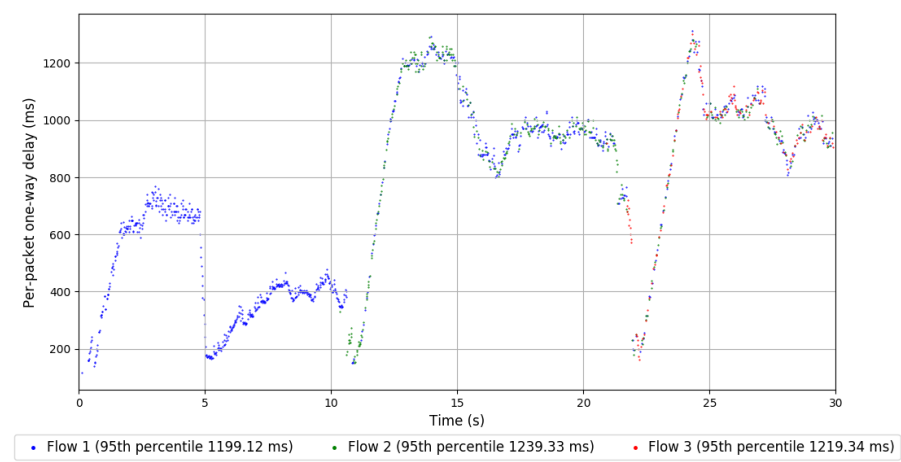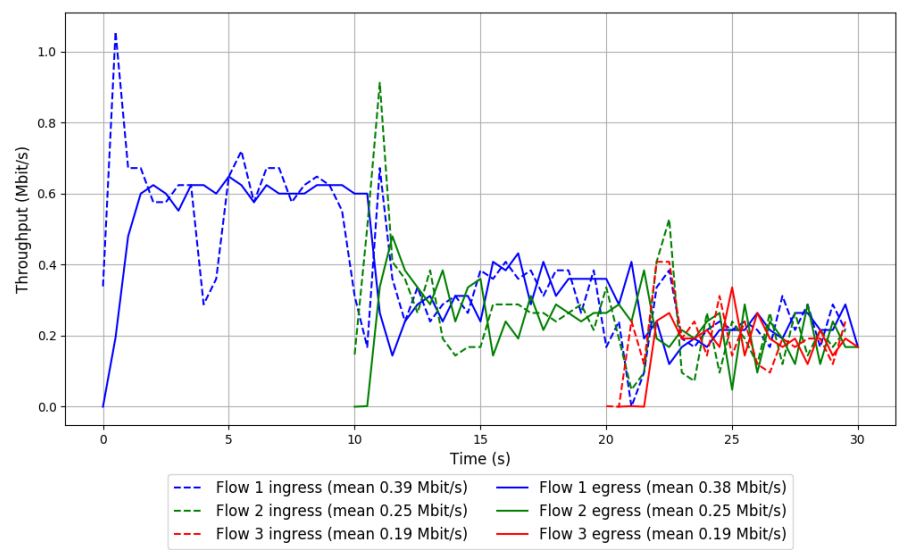
Run 1: Report of TCP BBR — Data Link



Flow 1 ingress (mean 0.39 Mbit/s)    Flow 1 egress (mean 0.39 Mbit/s)
Flow 2 ingress (mean 0.25 Mbit/s)    Flow 2 egress (mean 0.25 Mbit/s)
Flow 3 ingress (mean 0.19 Mbit/s)    Flow 3 egress (mean 0.19 Mbit/s)



Flow 1 (95th percentile 1240.50 ms)    Flow 2 (95th percentile 1322.52 ms)    Flow 3 (95th percentile 1202.34 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2018-05-25 07:56:10
End at: 2018-05-25 07:56:40
Local clock offset: -1.767 ms
Remote clock offset: 9.037 ms


# Below is generated by plot.py at 2018-05-25 10:38:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 1219.351 ms
Loss rate: 3.42%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 1199.123 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 1239.333 ms
Loss rate: 4.03%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 1219.336 ms
Loss rate: 9.55%
```
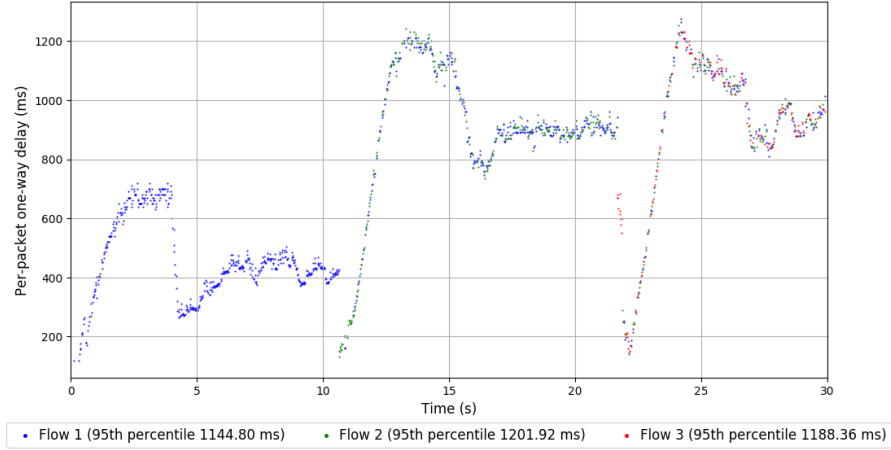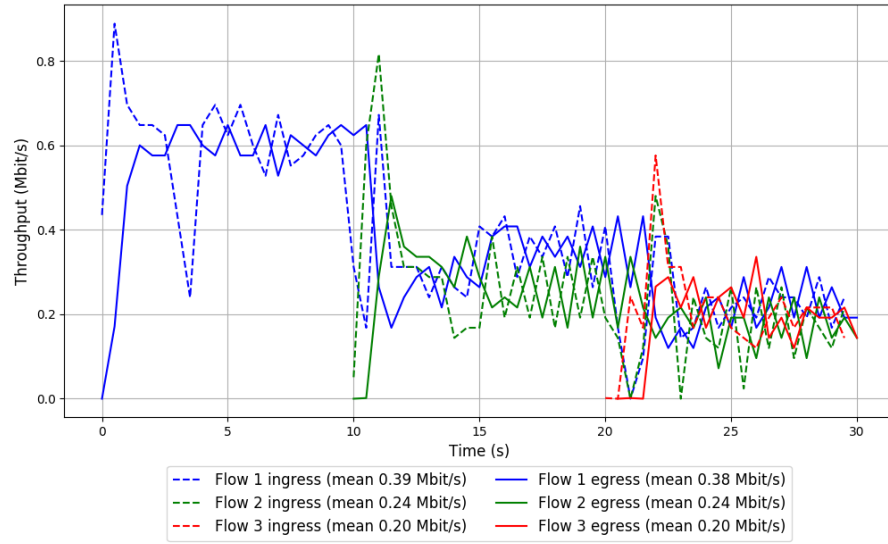
# Run 2: Report of TCP BBR — Data Link



- Flow 1 ingress (mean 0.39 Mbit/s)
- Flow 1 egress (mean 0.38 Mbit/s)
- Flow 2 ingress (mean 0.25 Mbit/s)
- Flow 2 egress (mean 0.25 Mbit/s)
- Flow 3 ingress (mean 0.19 Mbit/s)
- Flow 3 egress (mean 0.19 Mbit/s)



- Flow 1 (95th percentile 1199.12 ms)
- Flow 2 (95th percentile 1239.33 ms)
- Flow 3 (95th percentile 1219.34 ms)

7

```
Run 3: Statistics of TCP BBR

Start at: 2018-05-25 08:15:11
End at: 2018-05-25 08:15:41
Local clock offset: -2.794 ms
Remote clock offset: 3.132 ms


# Below is generated by plot.py at 2018-05-25 10:38:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 1180.112 ms
Loss rate: 3.24%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 1144.798 ms
Loss rate: 1.95%
-- Flow 2:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 1201.919 ms
Loss rate: 3.50%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 1188.359 ms
Loss rate: 9.99%
```
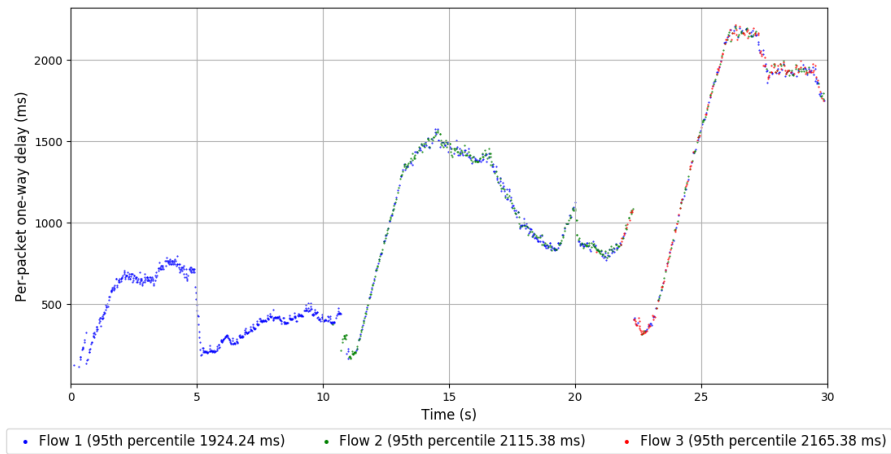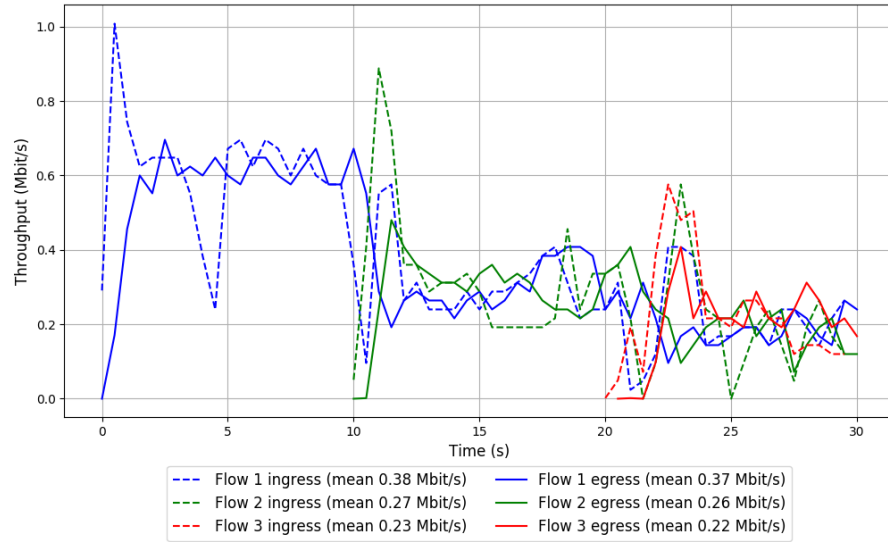
Run 3: Report of TCP BBR — Data Link



Flow 1 ingress (mean 0.39 Mbit/s) — Flow 1 egress (mean 0.38 Mbit/s)
Flow 2 ingress (mean 0.24 Mbit/s) — Flow 2 egress (mean 0.24 Mbit/s)
Flow 3 ingress (mean 0.20 Mbit/s) — Flow 3 egress (mean 0.20 Mbit/s)



Flow 1 (95th percentile 1144.80 ms)  Flow 2 (95th percentile 1201.92 ms)  Flow 3 (95th percentile 1188.36 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2018-05-25 08:34:12
End at: 2018-05-25 08:34:42
Local clock offset: -2.405 ms
Remote clock offset: 7.355 ms


# Below is generated by plot.py at 2018-05-25 10:38:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 2044.526 ms
Loss rate: 5.14%
-- Flow 1:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 1924.240 ms
Loss rate: 3.50%
-- Flow 2:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 2115.379 ms
Loss rate: 6.26%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2165.382 ms
Loss rate: 10.69%
```
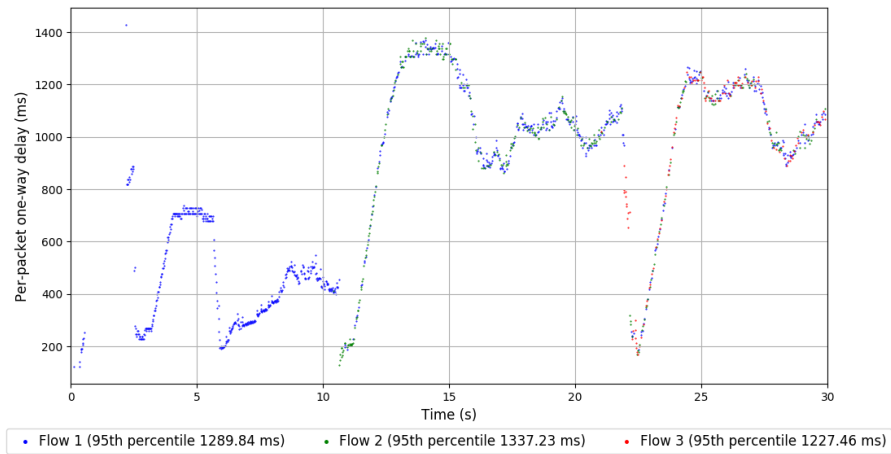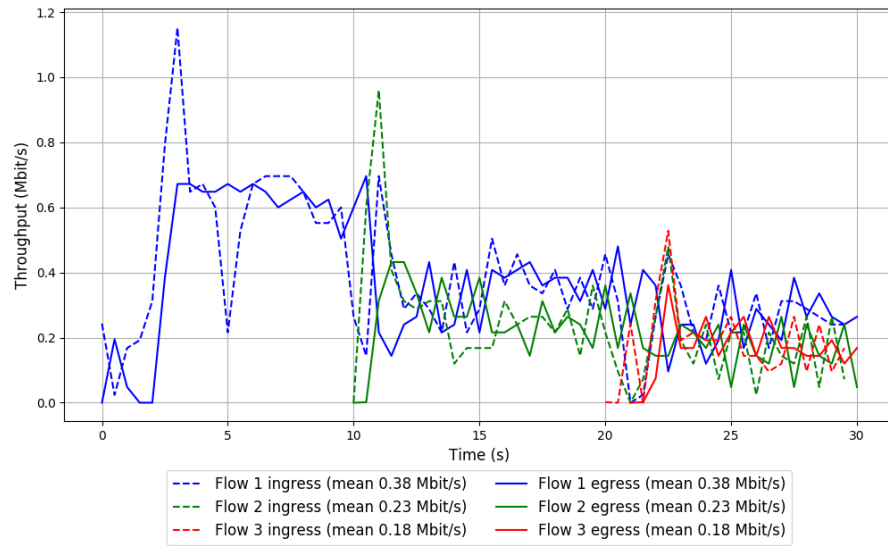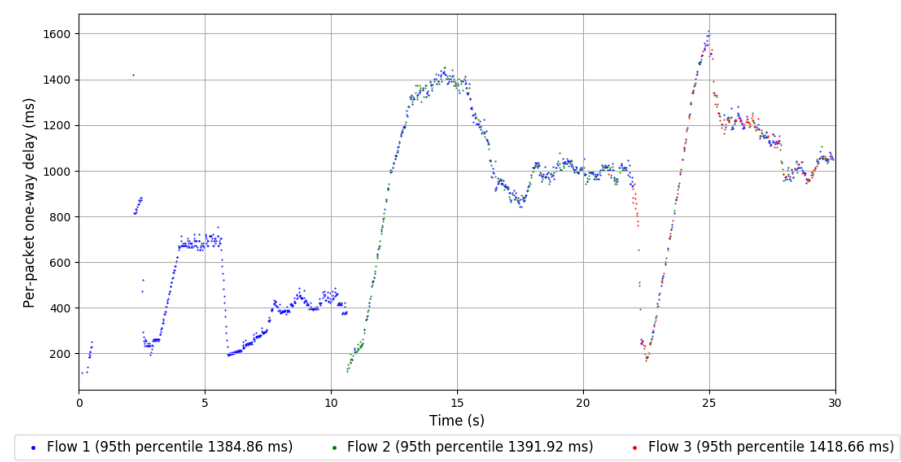
# Run 4: Report of TCP BBR — Data Link



- Flow 1 ingress (mean 0.38 Mbit/s)
- Flow 1 egress (mean 0.37 Mbit/s)
- Flow 2 ingress (mean 0.27 Mbit/s)
- Flow 2 egress (mean 0.26 Mbit/s)
- Flow 3 ingress (mean 0.23 Mbit/s)
- Flow 3 egress (mean 0.22 Mbit/s)



- Flow 1 (95th percentile 1924.24 ms)
- Flow 2 (95th percentile 2115.38 ms)
- Flow 3 (95th percentile 2165.38 ms)

11

```
Run 5: Statistics of TCP BBR

Start at: 2018-05-25 08:53:17
End at: 2018-05-25 08:53:47
Local clock offset: -2.063 ms
Remote clock offset: 4.757 ms


# Below is generated by plot.py at 2018-05-25 10:38:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1317.226 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 1289.840 ms
Loss rate: 2.31%
-- Flow 2:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 1337.231 ms
Loss rate: 3.89%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 1227.462 ms
Loss rate: 9.57%
```
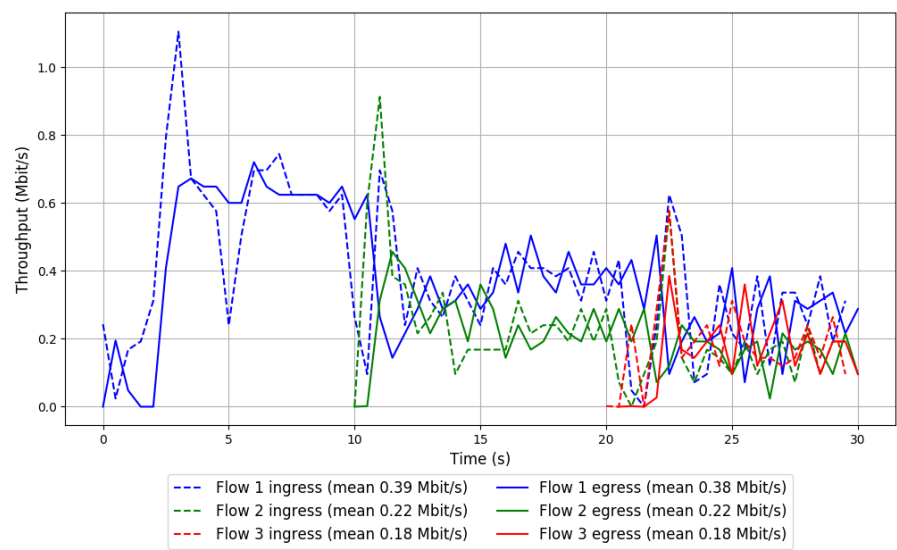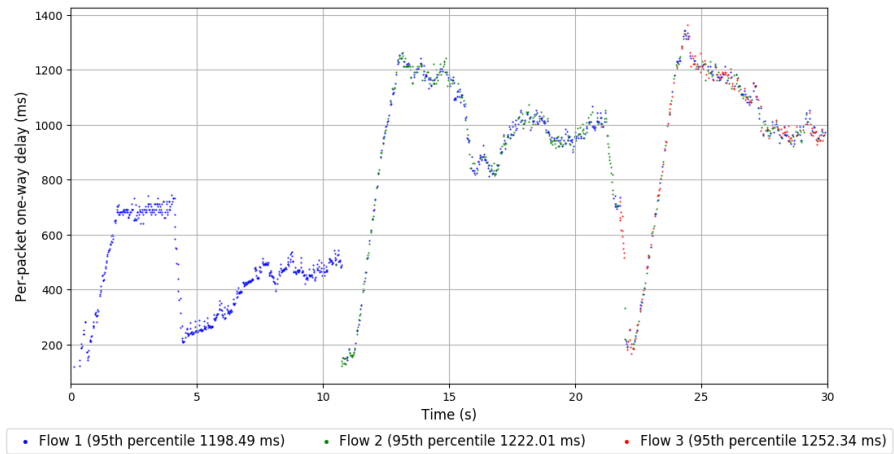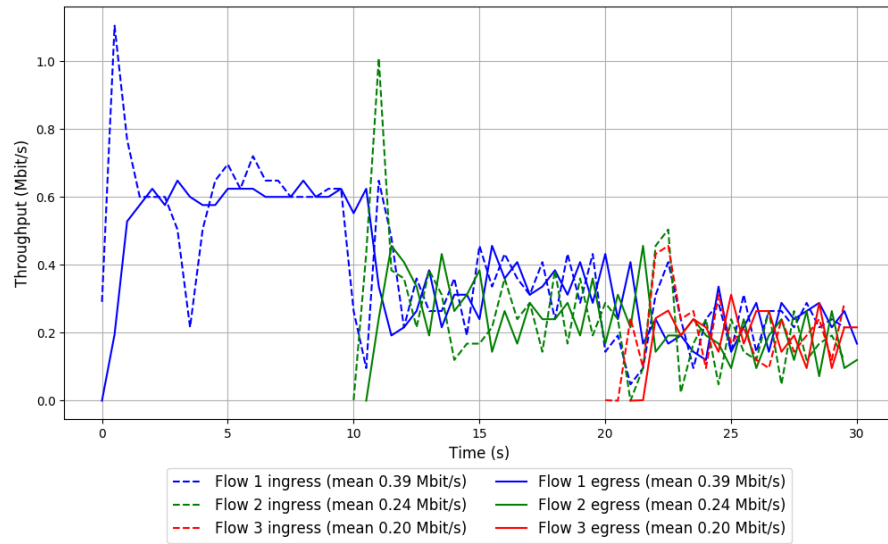
Run 5: Report of TCP BBR — Data Link

```
Run 6: Statistics of TCP BBR

Start at: 2018-05-25 09:12:18
End at: 2018-05-25 09:12:48
Local clock offset: -3.607 ms
Remote clock offset: 8.767 ms


# Below is generated by plot.py at 2018-05-25 10:38:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1392.034 ms
Loss rate: 4.02%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 1384.864 ms
Loss rate: 2.66%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1391.917 ms
Loss rate: 4.36%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 1418.659 ms
Loss rate: 11.98%
```
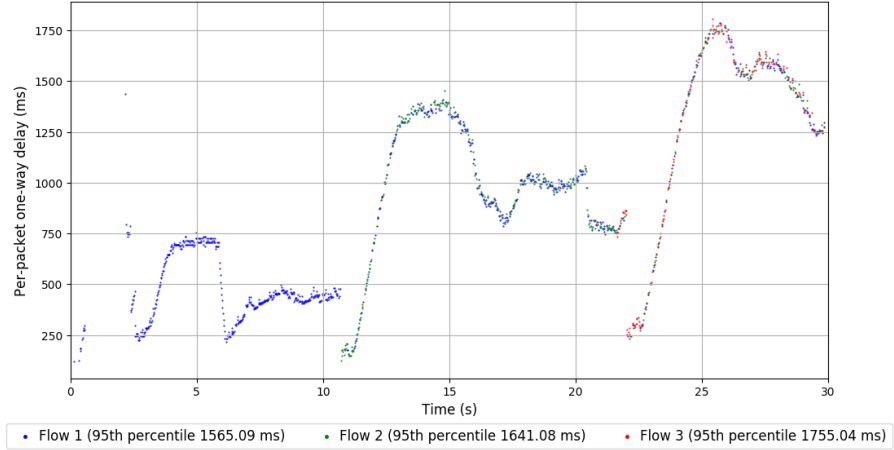
Run 6: Report of TCP BBR — Data Link





15

```
Run 7: Statistics of TCP BBR

Start at: 2018-05-25 09:31:21
End at: 2018-05-25 09:31:51
Local clock offset: -4.168 ms
Remote clock offset: 7.416 ms


# Below is generated by plot.py at 2018-05-25 10:38:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 1219.889 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 1198.486 ms
Loss rate: 2.15%
-- Flow 2:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 1222.012 ms
Loss rate: 3.73%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 1252.336 ms
Loss rate: 10.29%
```
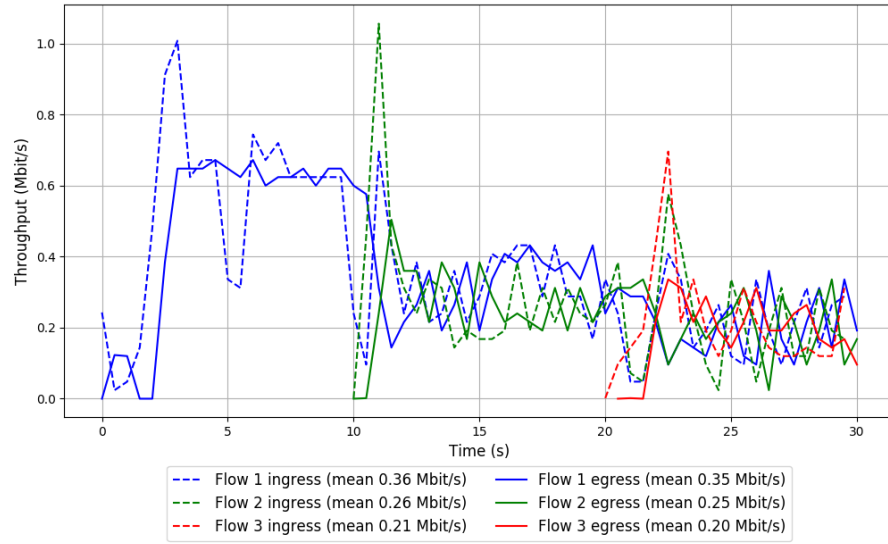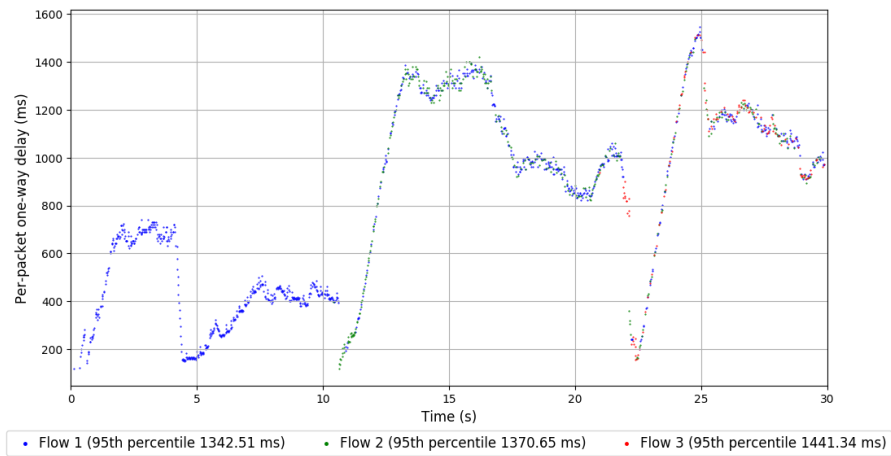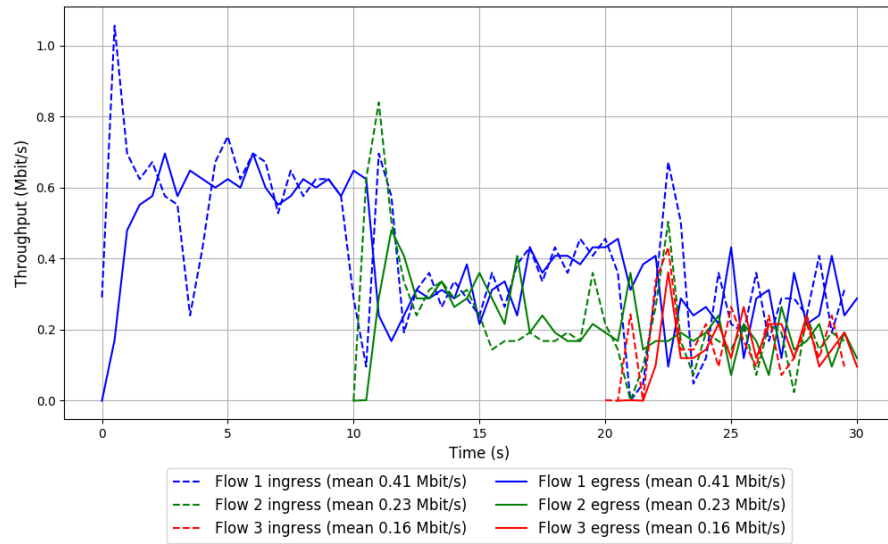
# Run 7: Report of TCP BBR — Data Link



- Flow 1 ingress (mean 0.39 Mbit/s)
- Flow 2 ingress (mean 0.24 Mbit/s)
- Flow 3 ingress (mean 0.20 Mbit/s)
- Flow 1 egress (mean 0.39 Mbit/s)
- Flow 2 egress (mean 0.24 Mbit/s)
- Flow 3 egress (mean 0.20 Mbit/s)



- Flow 1 (95th percentile 1198.49 ms)
- Flow 2 (95th percentile 1222.01 ms)
- Flow 3 (95th percentile 1252.34 ms)

17

```
Run 8: Statistics of TCP BBR

Start at: 2018-05-25 09:50:23
End at: 2018-05-25 09:50:53
Local clock offset: -7.448 ms
Remote clock offset: 6.922 ms

# Below is generated by plot.py at 2018-05-25 10:38:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1628.173 ms
Loss rate: 4.99%
-- Flow 1:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 1565.087 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 1641.079 ms
Loss rate: 6.07%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 1755.038 ms
Loss rate: 12.49%
```
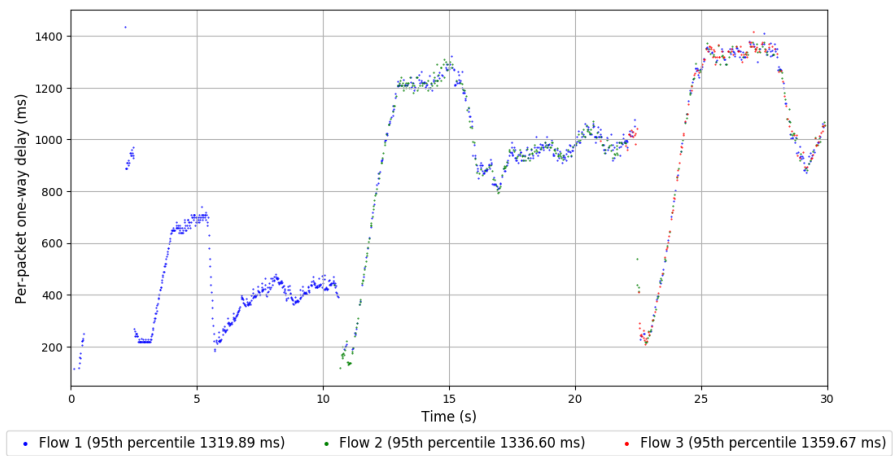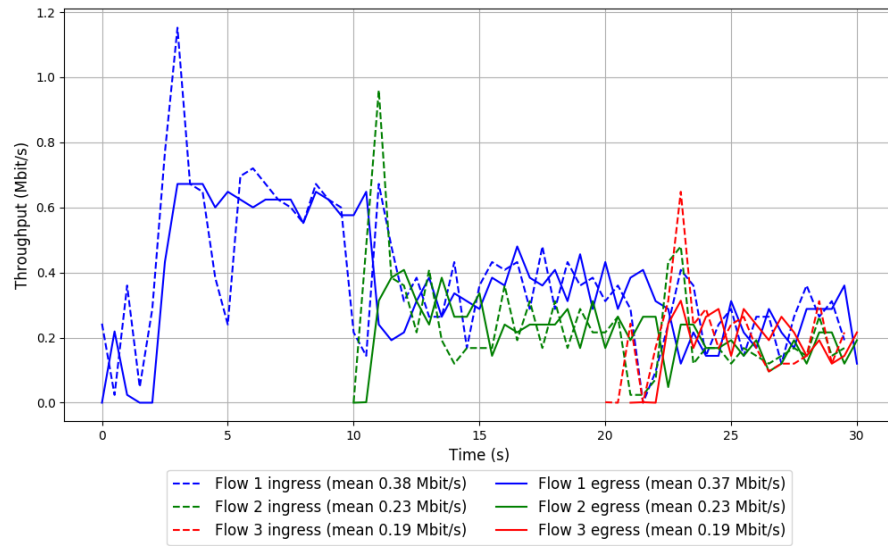
Run 8: Report of TCP BBR — Data Link



Flow 1 ingress (mean 0.36 Mbit/s)     Flow 1 egress (mean 0.35 Mbit/s)
Flow 2 ingress (mean 0.26 Mbit/s)     Flow 2 egress (mean 0.25 Mbit/s)
Flow 3 ingress (mean 0.21 Mbit/s)     Flow 3 egress (mean 0.20 Mbit/s)



• Flow 1 (95th percentile 1565.09 ms)    • Flow 2 (95th percentile 1641.08 ms)    • Flow 3 (95th percentile 1755.04 ms)

19

```
Run 9: Statistics of TCP BBR

Start at: 2018-05-25 10:09:29
End at: 2018-05-25 10:09:59
Local clock offset: -3.593 ms
Remote clock offset: 17.095 ms


# Below is generated by plot.py at 2018-05-25 10:38:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 1358.788 ms
Loss rate: 3.61%
-- Flow 1:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 1342.514 ms
Loss rate: 2.42%
-- Flow 2:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 1370.651 ms
Loss rate: 4.18%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 1441.337 ms
Loss rate: 11.09%
```
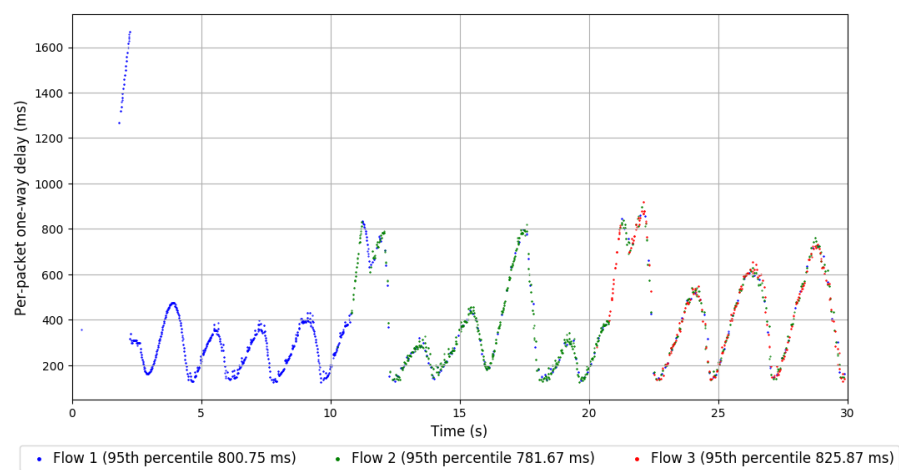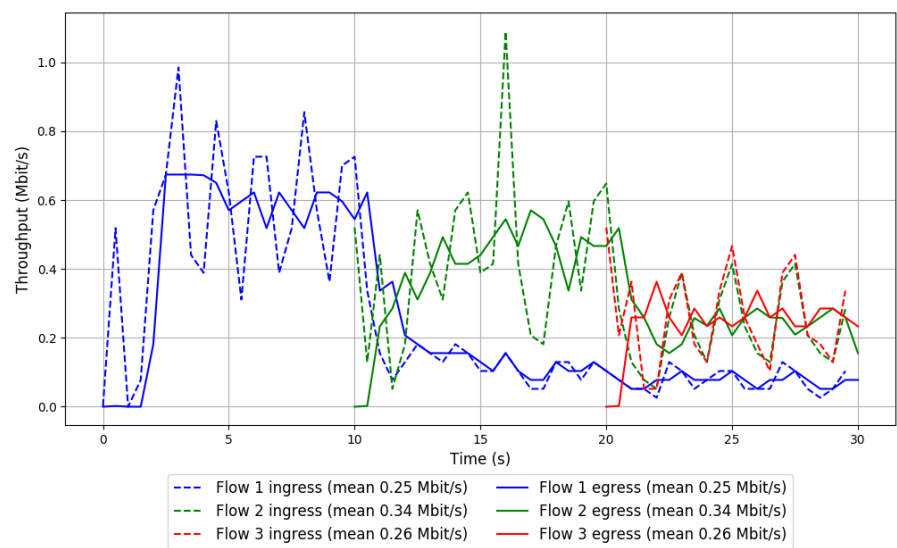
Run 9: Report of TCP BBR — Data Link



Flow 1 ingress (mean 0.41 Mbit/s) --- Flow 1 egress (mean 0.41 Mbit/s)
Flow 2 ingress (mean 0.23 Mbit/s) --- Flow 2 egress (mean 0.23 Mbit/s)
Flow 3 ingress (mean 0.16 Mbit/s) --- Flow 3 egress (mean 0.16 Mbit/s)



Flow 1 (95th percentile 1342.51 ms) • Flow 2 (95th percentile 1370.65 ms) • Flow 3 (95th percentile 1441.34 ms)

21

```
Run 10: Statistics of TCP BBR

Start at: 2018-05-25 10:28:31
End at: 2018-05-25 10:29:01
Local clock offset: -3.363 ms
Remote clock offset: 18.13 ms


# Below is generated by plot.py at 2018-05-25 10:38:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1339.844 ms
Loss rate: 4.03%
-- Flow 1:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 1319.889 ms
Loss rate: 2.75%
-- Flow 2:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 1336.598 ms
Loss rate: 4.18%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 1359.667 ms
Loss rate: 11.16%
```
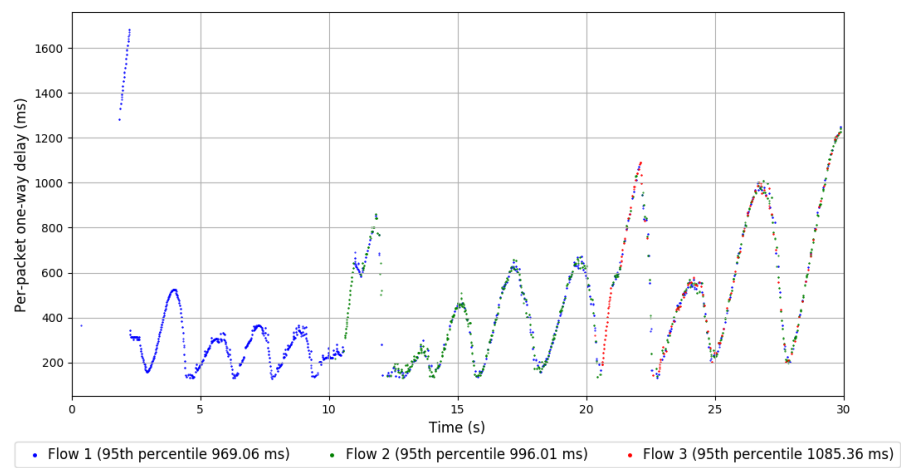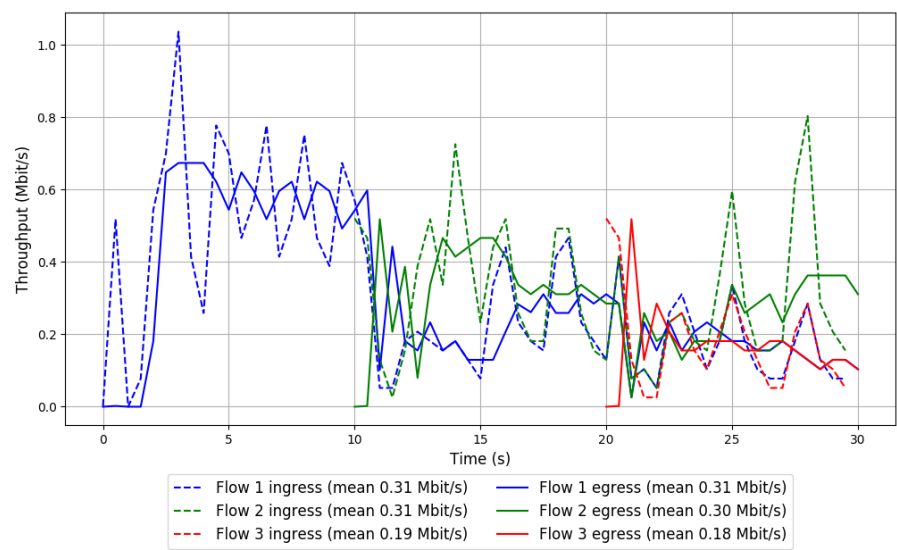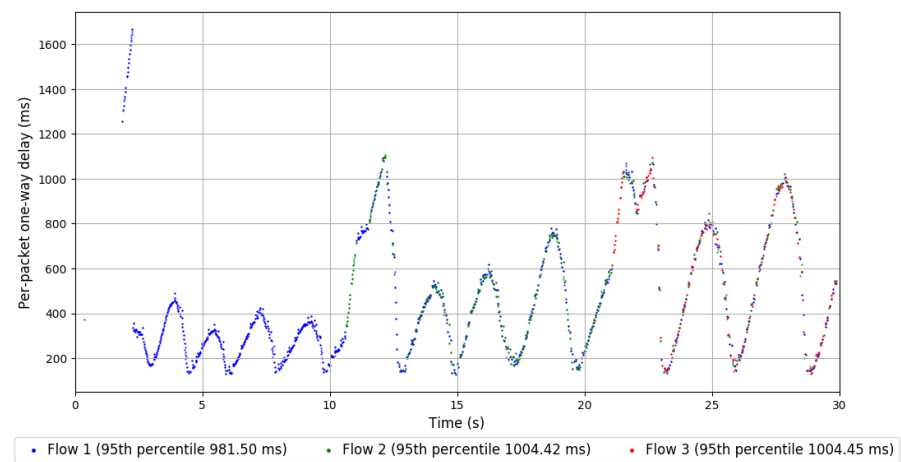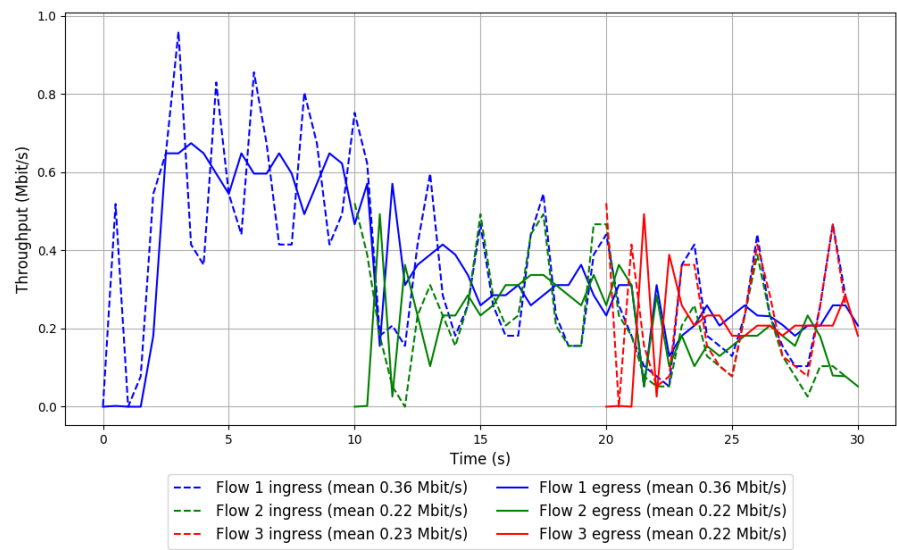
Run 10: Report of TCP BBR — Data Link



Flow 1 ingress (mean 0.38 Mbit/s) — — — Flow 1 egress (mean 0.37 Mbit/s)
Flow 2 ingress (mean 0.23 Mbit/s) — — — Flow 2 egress (mean 0.23 Mbit/s)
Flow 3 ingress (mean 0.19 Mbit/s) — — — Flow 3 egress (mean 0.19 Mbit/s)



Flow 1 (95th percentile 1319.89 ms)   Flow 2 (95th percentile 1336.60 ms)   Flow 3 (95th percentile 1359.67 ms)

23

```
Run 1: Statistics of Copa

Start at: 2018-05-25 07:44:18
End at: 2018-05-25 07:44:48
Local clock offset: -1.661 ms
Remote clock offset: 7.751 ms


# Below is generated by plot.py at 2018-05-25 10:38:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 791.782 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 800.755 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 781.670 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 825.872 ms
Loss rate: 3.96%
```
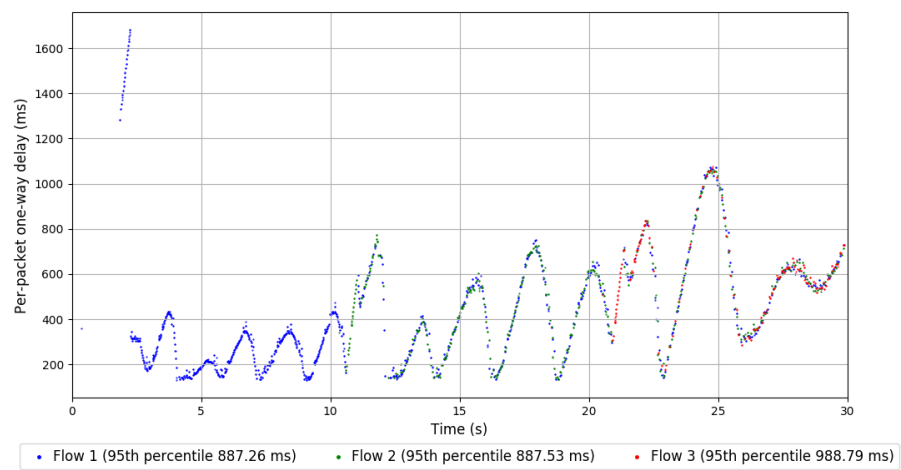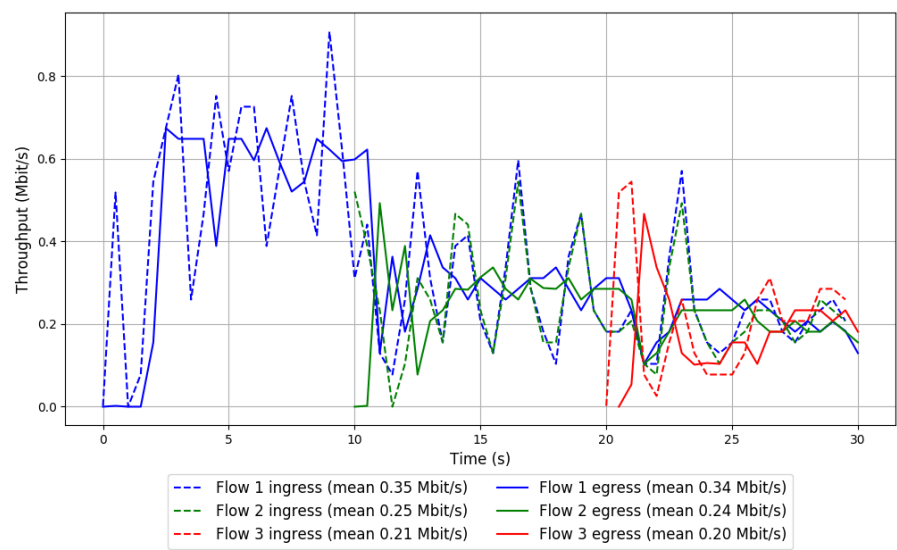
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2018-05-25 08:03:19
End at: 2018-05-25 08:03:49
Local clock offset: -2.419 ms
Remote clock offset: 4.281 ms


# Below is generated by plot.py at 2018-05-25 10:38:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 1009.713 ms
Loss rate: 2.80%
-- Flow 1:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 969.063 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 996.014 ms
Loss rate: 3.98%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 1085.364 ms
Loss rate: 6.38%
```
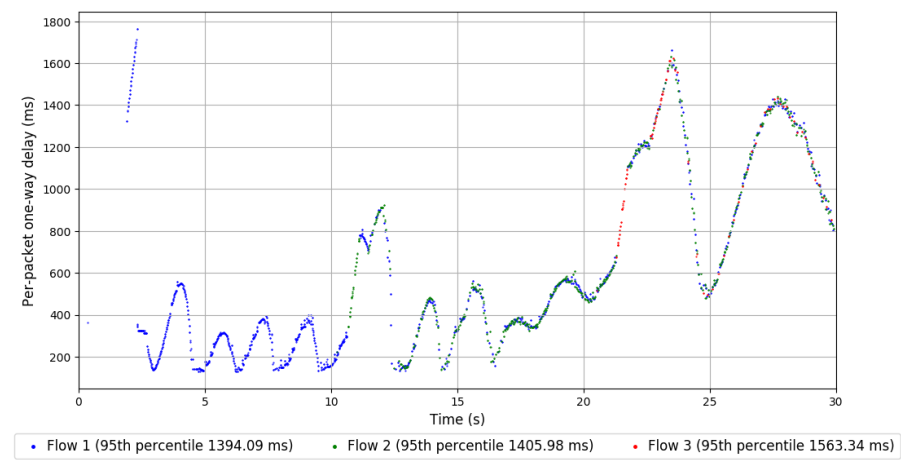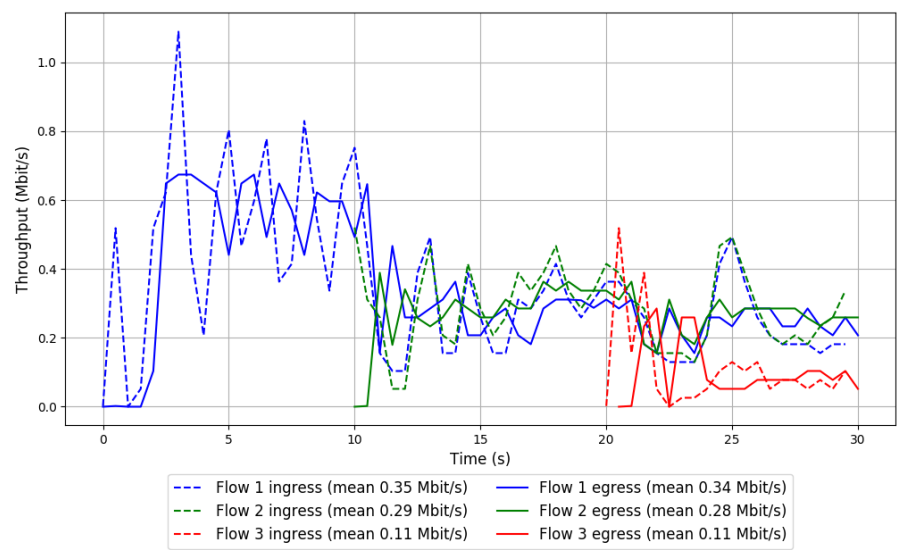
Run 2: Report of Copa — Data Link



Flow 1 ingress (mean 0.31 Mbit/s) --- Flow 1 egress (mean 0.31 Mbit/s)
Flow 2 ingress (mean 0.31 Mbit/s) --- Flow 2 egress (mean 0.30 Mbit/s)
Flow 3 ingress (mean 0.19 Mbit/s) --- Flow 3 egress (mean 0.18 Mbit/s)



Flow 1 (95th percentile 969.06 ms)   Flow 2 (95th percentile 996.01 ms)   Flow 3 (95th percentile 1085.36 ms)

27

```
Run 3: Statistics of Copa

Start at: 2018-05-25 08:22:20
End at: 2018-05-25 08:22:50
Local clock offset: -2.897 ms
Remote clock offset: 3.864 ms


# Below is generated by plot.py at 2018-05-25 10:39:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 995.277 ms
Loss rate: 2.70%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 981.502 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1004.424 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1004.454 ms
Loss rate: 9.19%
```
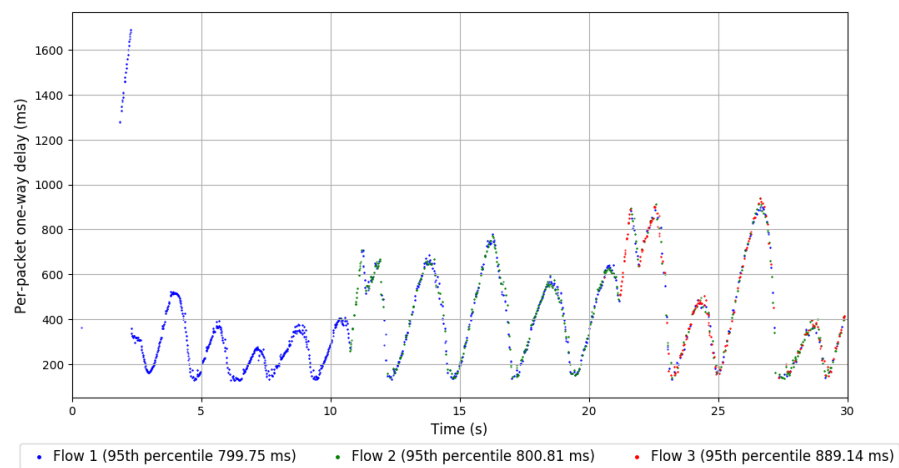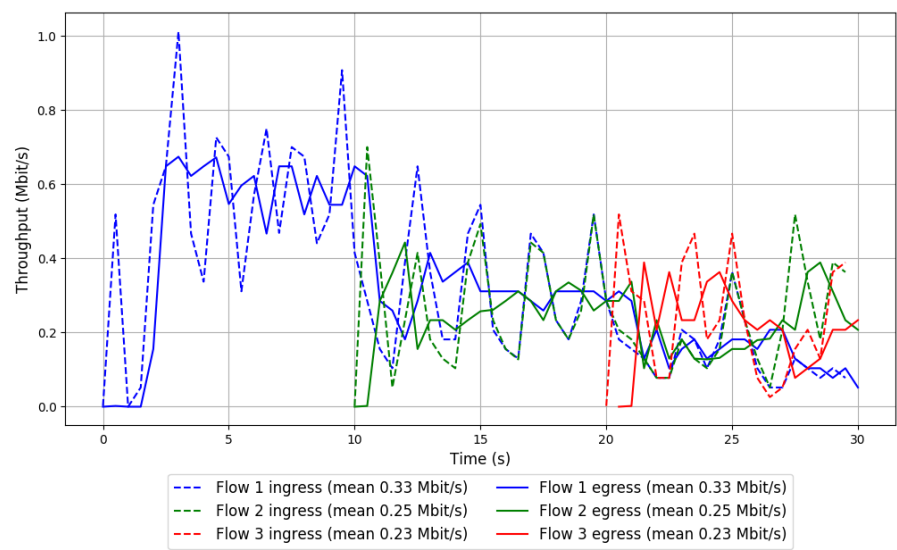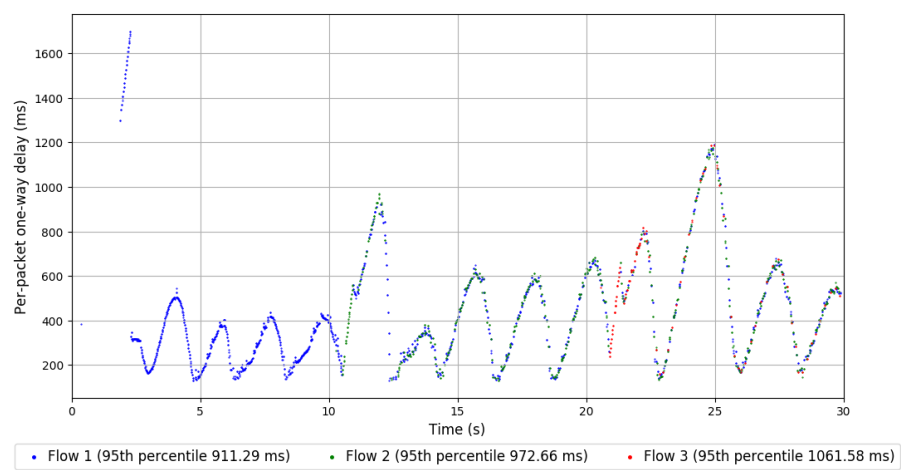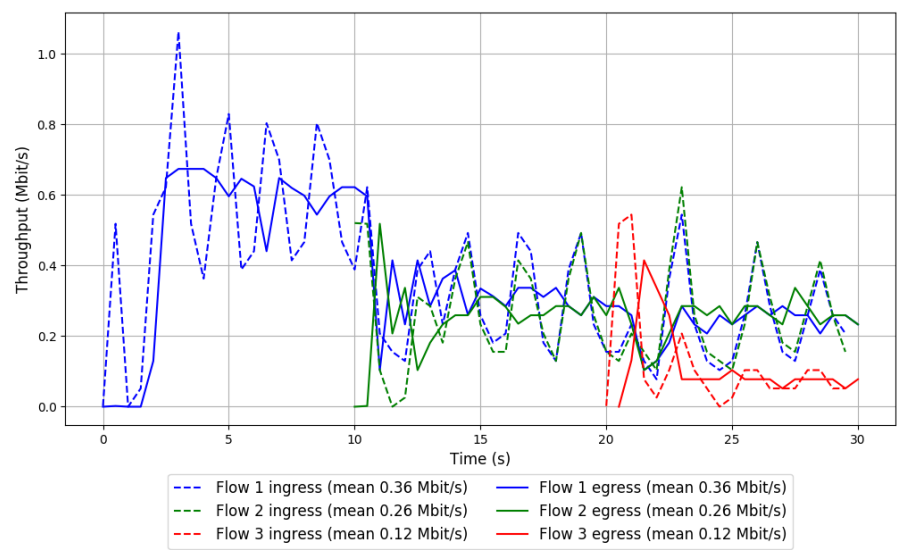
Run 3: Report of Copa — Data Link



Flow 1 ingress (mean 0.36 Mbit/s)     Flow 1 egress (mean 0.36 Mbit/s)
Flow 2 ingress (mean 0.22 Mbit/s)     Flow 2 egress (mean 0.22 Mbit/s)
Flow 3 ingress (mean 0.23 Mbit/s)     Flow 3 egress (mean 0.22 Mbit/s)



Flow 1 (95th percentile 981.50 ms)    Flow 2 (95th percentile 1004.42 ms)    Flow 3 (95th percentile 1004.45 ms)

29

```
Run 4: Statistics of Copa

Start at: 2018-05-25 08:41:25
End at: 2018-05-25 08:41:55
Local clock offset: -2.214 ms
Remote clock offset: 3.354 ms


# Below is generated by plot.py at 2018-05-25 10:39:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 927.641 ms
Loss rate: 3.44%
-- Flow 1:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 887.264 ms
Loss rate: 1.88%
-- Flow 2:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 887.526 ms
Loss rate: 3.68%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 988.786 ms
Loss rate: 10.75%
```
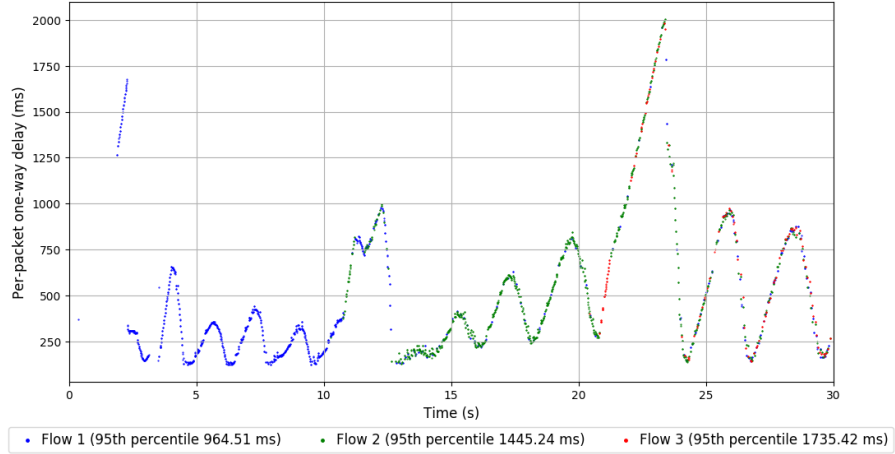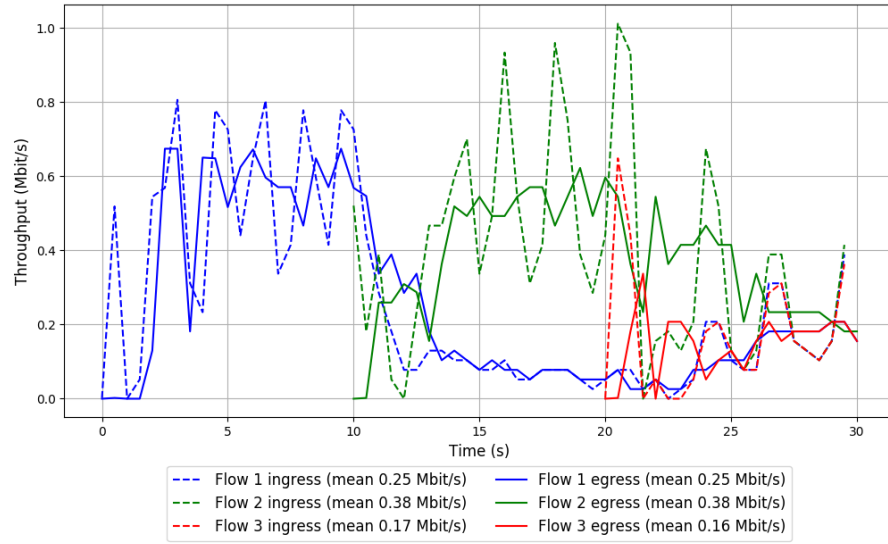
## Run 4: Report of Copa — Data Link



Flow 1 ingress (mean 0.35 Mbit/s) ---
Flow 1 egress (mean 0.34 Mbit/s) —
Flow 2 ingress (mean 0.25 Mbit/s) ---
Flow 2 egress (mean 0.24 Mbit/s) —
Flow 3 ingress (mean 0.21 Mbit/s) ---
Flow 3 egress (mean 0.20 Mbit/s) —



Flow 1 (95th percentile 887.26 ms) · Flow 2 (95th percentile 887.53 ms) · Flow 3 (95th percentile 988.79 ms)

```
Run 5: Statistics of Copa

Start at: 2018-05-25 09:00:26
End at: 2018-05-25 09:00:56
Local clock offset: -2.451 ms
Remote clock offset: 5.025 ms


# Below is generated by plot.py at 2018-05-25 10:39:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 1413.340 ms
Loss rate: 2.94%
-- Flow 1:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 1394.087 ms
Loss rate: 1.51%
-- Flow 2:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 1405.981 ms
Loss rate: 4.73%
-- Flow 3:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 1563.340 ms
Loss rate: 7.14%
```
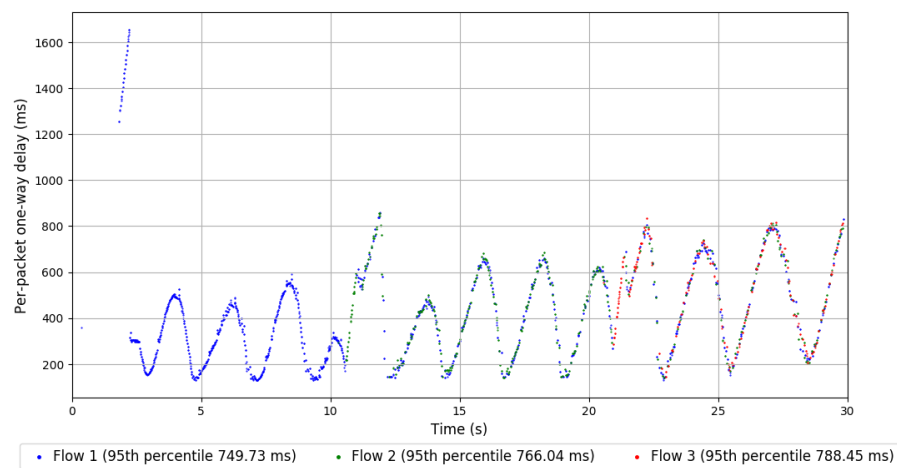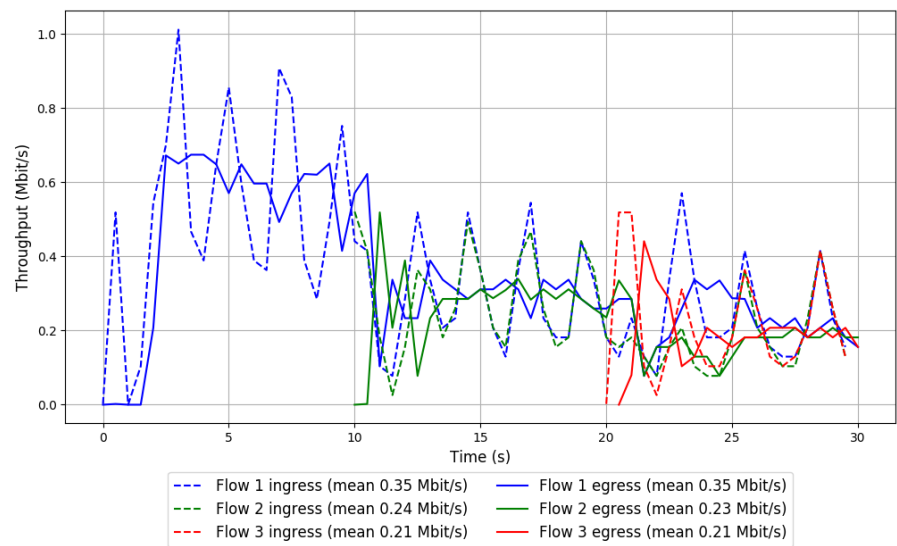
Run 5: Report of Copa — Data Link



Flow 1 ingress (mean 0.35 Mbit/s) --- Flow 1 egress (mean 0.34 Mbit/s)
Flow 2 ingress (mean 0.29 Mbit/s) --- Flow 2 egress (mean 0.28 Mbit/s)
Flow 3 ingress (mean 0.11 Mbit/s) --- Flow 3 egress (mean 0.11 Mbit/s)



Flow 1 (95th percentile 1394.09 ms)　　Flow 2 (95th percentile 1405.98 ms)　　Flow 3 (95th percentile 1563.34 ms)

33

```
Run 6: Statistics of Copa

Start at: 2018-05-25 09:19:27
End at: 2018-05-25 09:19:57
Local clock offset: -3.676 ms
Remote clock offset: 3.312 ms


# Below is generated by plot.py at 2018-05-25 10:39:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 840.370 ms
Loss rate: 2.51%
-- Flow 1:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 799.750 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 800.807 ms
Loss rate: 3.91%
-- Flow 3:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 889.142 ms
Loss rate: 8.38%
```
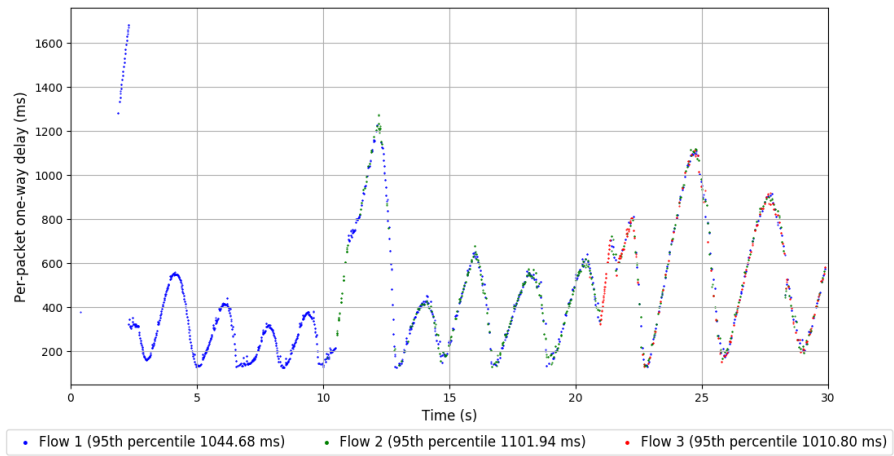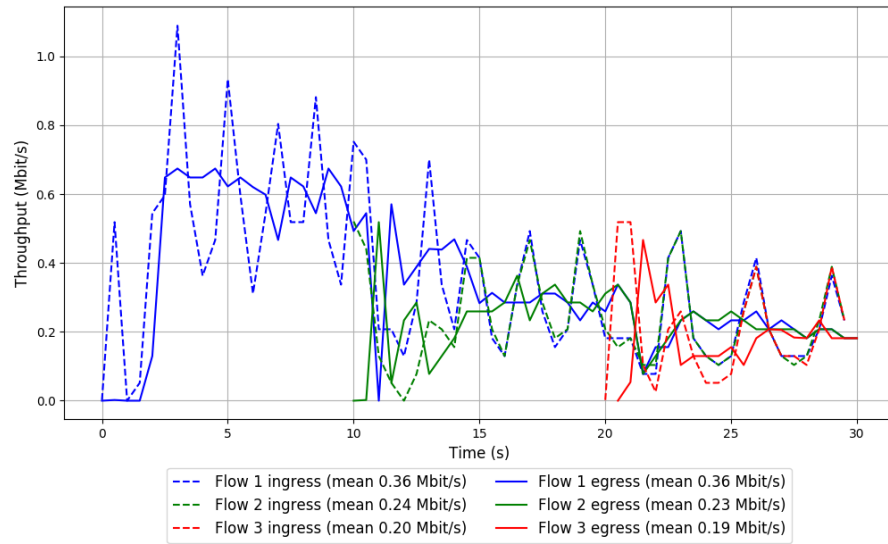
# Run 6: Report of Copa — Data Link

```
Run 7: Statistics of Copa

Start at: 2018-05-25 09:38:30
End at: 2018-05-25 09:39:00
Local clock offset: -5.495 ms
Remote clock offset: 3.537 ms


# Below is generated by plot.py at 2018-05-25 10:39:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 959.787 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 911.288 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 972.659 ms
Loss rate: 2.24%
-- Flow 3:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 1061.581 ms
Loss rate: 2.22%
```
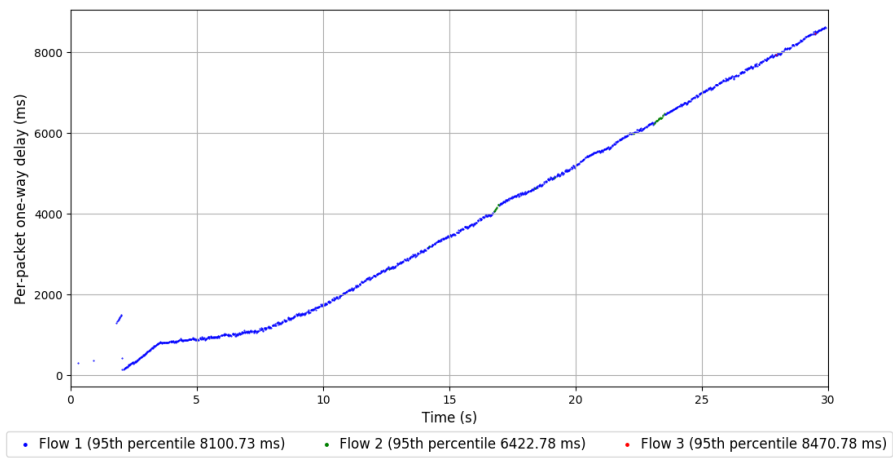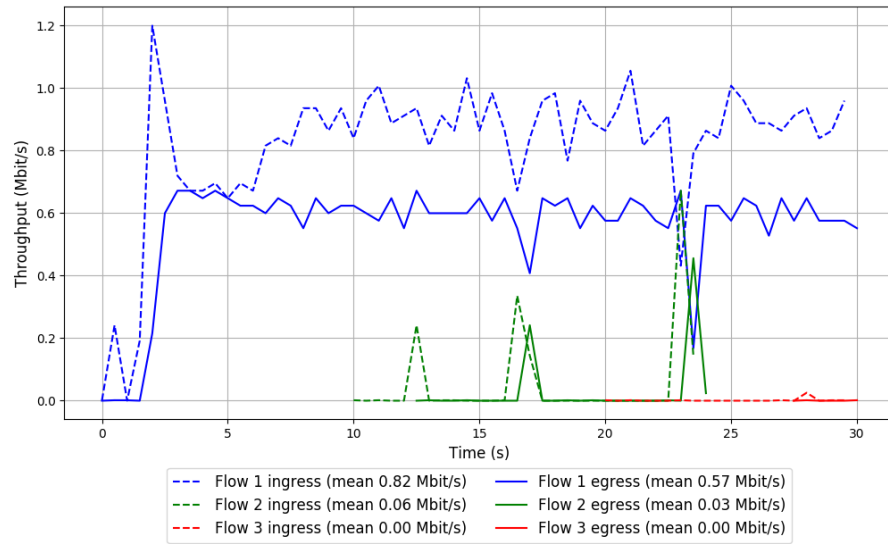
## Run 7: Report of Copa — Data Link



- - - Flow 1 ingress (mean 0.36 Mbit/s)     —— Flow 1 egress (mean 0.36 Mbit/s)
- - - Flow 2 ingress (mean 0.26 Mbit/s)     —— Flow 2 egress (mean 0.26 Mbit/s)
- - - Flow 3 ingress (mean 0.12 Mbit/s)     —— Flow 3 egress (mean 0.12 Mbit/s)



• Flow 1 (95th percentile 911.29 ms)     • Flow 2 (95th percentile 972.66 ms)     • Flow 3 (95th percentile 1061.58 ms)

```
Run 8: Statistics of Copa

Start at: 2018-05-25 09:57:35
End at: 2018-05-25 09:58:05
Local clock offset: -6.9 ms
Remote clock offset: 14.532 ms


# Below is generated by plot.py at 2018-05-25 10:39:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 1406.732 ms
Loss rate: 2.67%
-- Flow 1:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 964.506 ms
Loss rate: 2.04%
-- Flow 2:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 1445.244 ms
Loss rate: 2.03%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 1735.418 ms
Loss rate: 8.46%
```
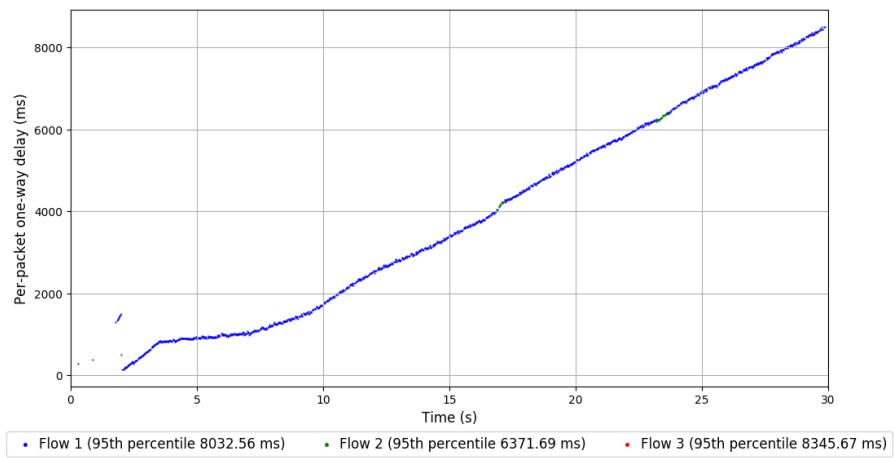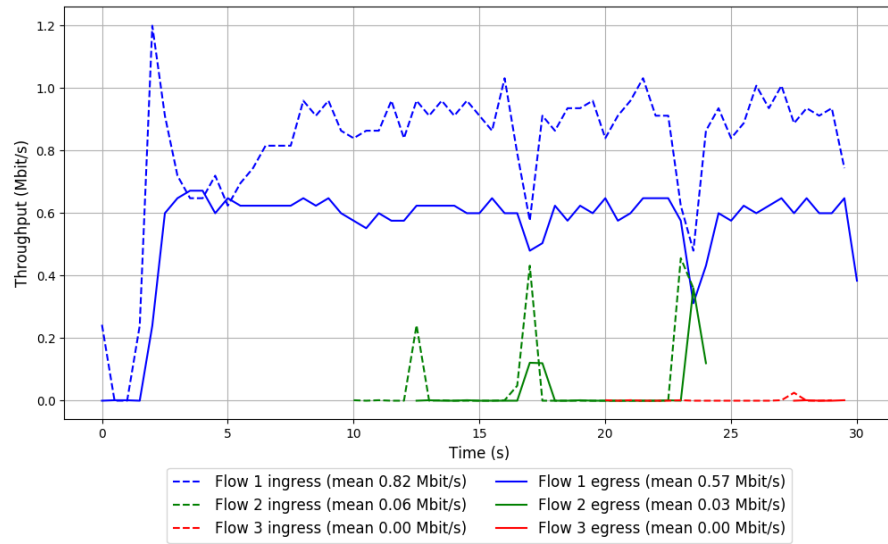
Run 8: Report of Copa — Data Link



- Flow 1 ingress (mean 0.25 Mbit/s)
- Flow 1 egress (mean 0.25 Mbit/s)
- Flow 2 ingress (mean 0.38 Mbit/s)
- Flow 2 egress (mean 0.38 Mbit/s)
- Flow 3 ingress (mean 0.17 Mbit/s)
- Flow 3 egress (mean 0.16 Mbit/s)



- Flow 1 (95th percentile 964.51 ms)
- Flow 2 (95th percentile 1445.24 ms)
- Flow 3 (95th percentile 1735.42 ms)

```
Run 9: Statistics of Copa

Start at: 2018-05-25 10:16:38
End at: 2018-05-25 10:17:08
Local clock offset: -2.937 ms
Remote clock offset: 13.653 ms


# Below is generated by plot.py at 2018-05-25 10:39:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 770.739 ms
Loss rate: 3.15%
-- Flow 1:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 749.732 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 766.039 ms
Loss rate: 3.87%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 788.447 ms
Loss rate: 8.64%
```
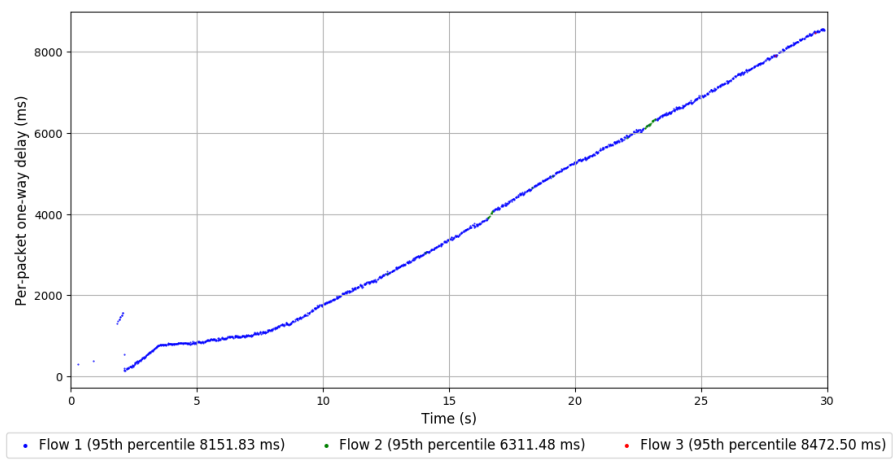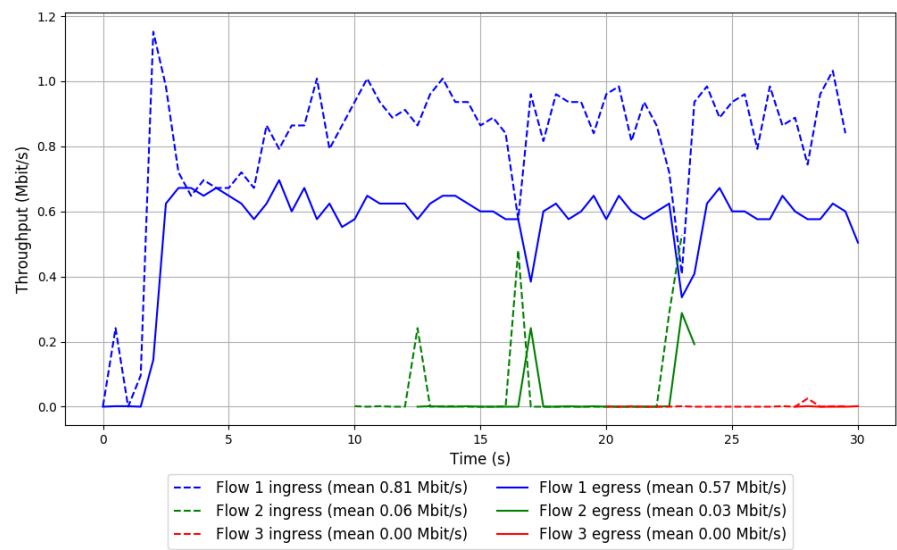
## Run 9: Report of Copa — Data Link

```
Run 10: Statistics of Copa

Start at: 2018-05-25 10:35:40
End at: 2018-05-25 10:36:10
Local clock offset: -3.358 ms
Remote clock offset: 19.963 ms


# Below is generated by plot.py at 2018-05-25 10:39:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 1063.736 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 1044.678 ms
Loss rate: 1.70%
-- Flow 2:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 1101.941 ms
Loss rate: 4.06%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 1010.798 ms
Loss rate: 9.09%
```
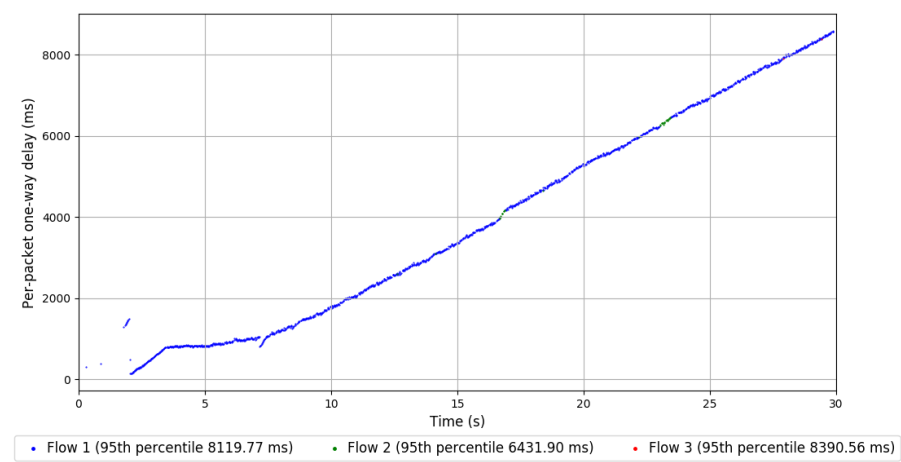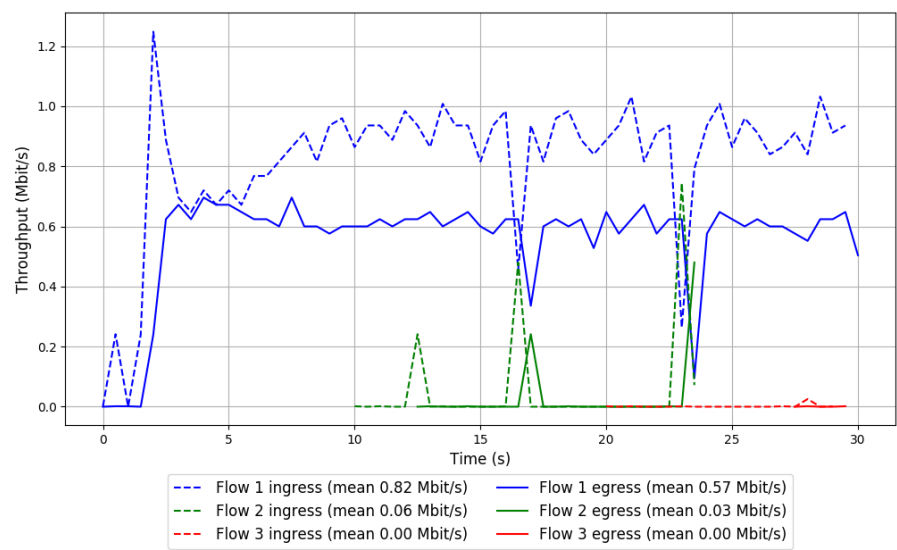
## Run 10: Report of Copa — Data Link



Flow 1 ingress (mean 0.36 Mbit/s)   Flow 1 egress (mean 0.36 Mbit/s)
Flow 2 ingress (mean 0.24 Mbit/s)   Flow 2 egress (mean 0.23 Mbit/s)
Flow 3 ingress (mean 0.20 Mbit/s)   Flow 3 egress (mean 0.19 Mbit/s)



Flow 1 (95th percentile 1044.68 ms)   Flow 2 (95th percentile 1101.94 ms)   Flow 3 (95th percentile 1010.80 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2018-05-25 07:43:06
End at: 2018-05-25 07:43:36
Local clock offset: -1.765 ms
Remote clock offset: 7.677 ms


# Below is generated by plot.py at 2018-05-25 10:39:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 8100.729 ms
Loss rate: 31.59%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 8100.729 ms
Loss rate: 30.88%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 6422.779 ms
Loss rate: 52.83%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8470.776 ms
Loss rate: 91.06%
```
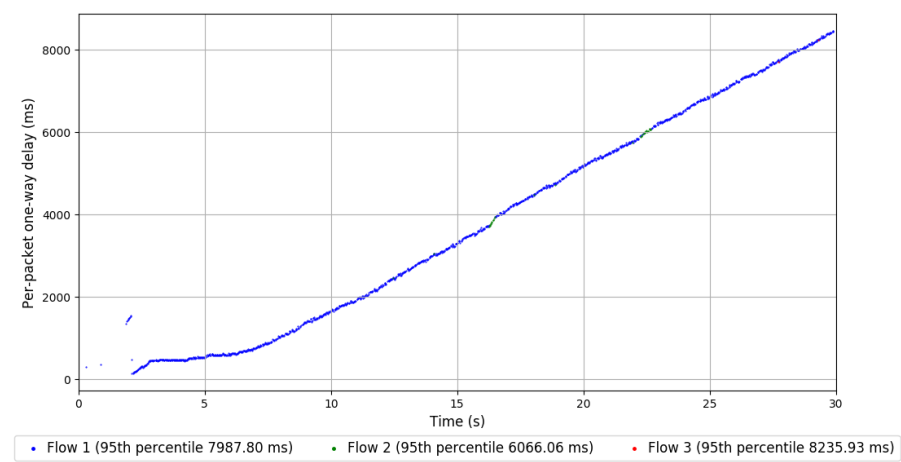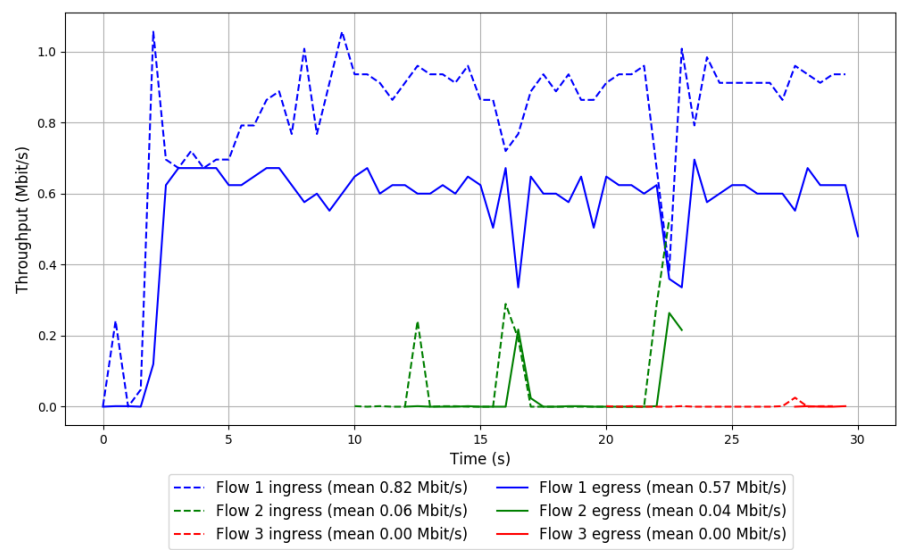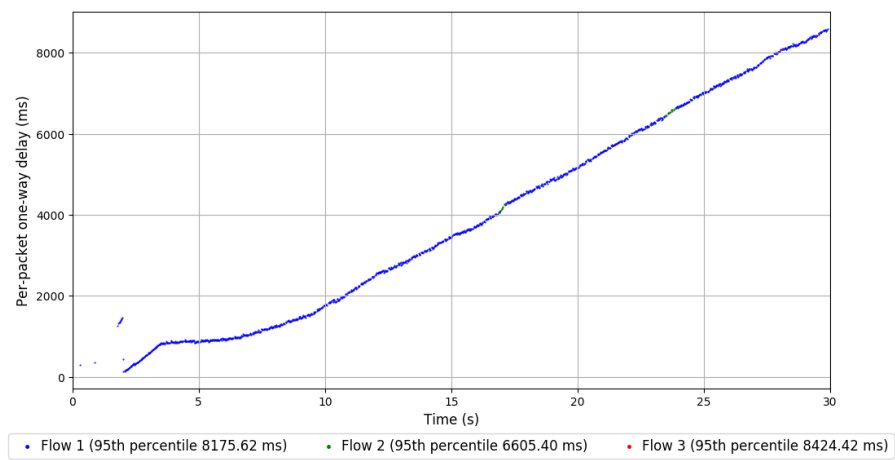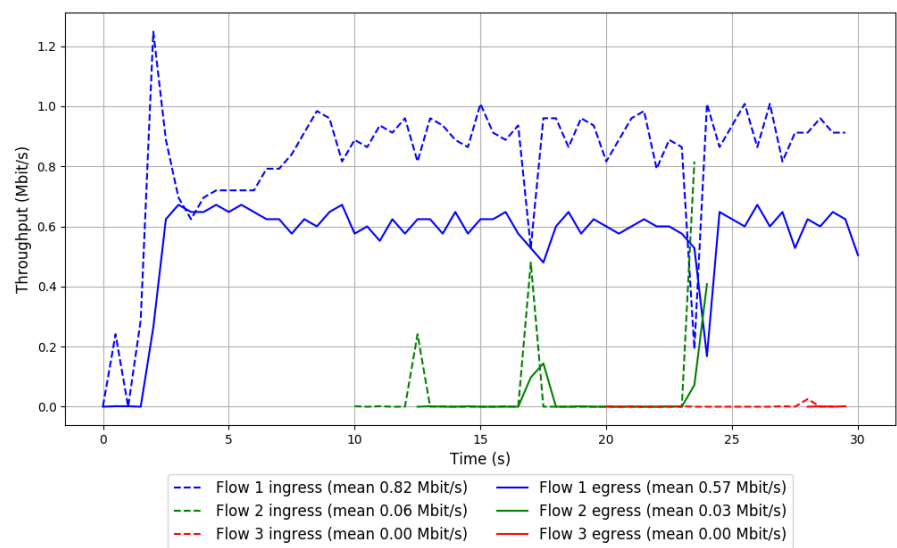
Run 1: Report of TCP Cubic — Data Link



Flow 1 ingress (mean 0.82 Mbit/s)          Flow 1 egress (mean 0.57 Mbit/s)
Flow 2 ingress (mean 0.06 Mbit/s)          Flow 2 egress (mean 0.03 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s)          Flow 3 egress (mean 0.00 Mbit/s)



• Flow 1 (95th percentile 8100.73 ms)     • Flow 2 (95th percentile 6422.78 ms)     • Flow 3 (95th percentile 8470.78 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2018-05-25 08:02:07
End at: 2018-05-25 08:02:37
Local clock offset: -2.278 ms
Remote clock offset: 9.965 ms


# Below is generated by plot.py at 2018-05-25 10:39:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 8032.543 ms
Loss rate: 31.69%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 8032.557 ms
Loss rate: 30.98%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 6371.690 ms
Loss rate: 52.87%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8345.669 ms
Loss rate: 90.68%
```
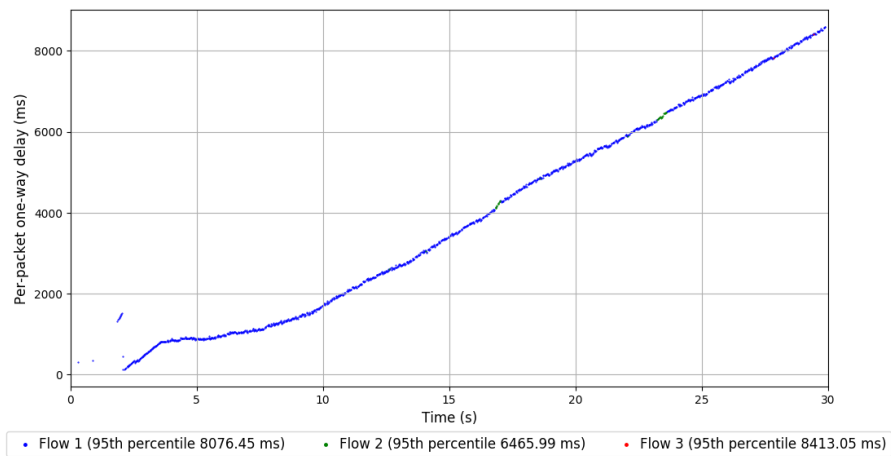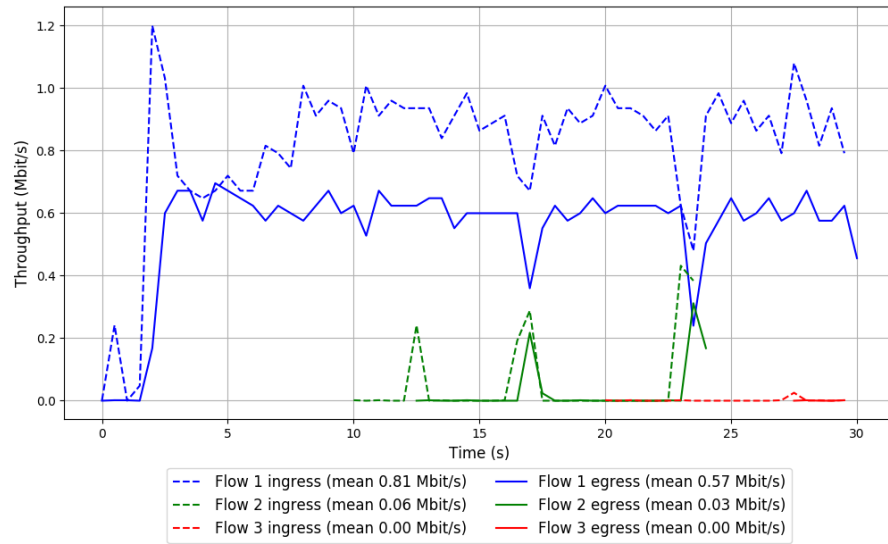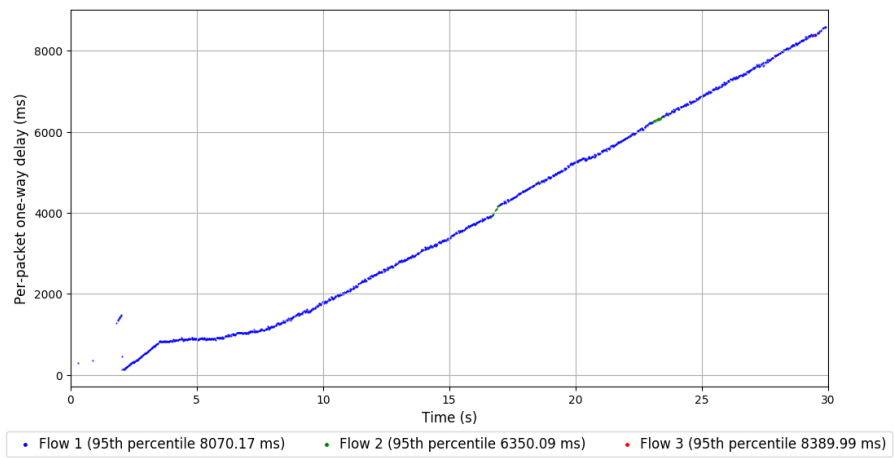
Run 2: Report of TCP Cubic — Data Link



Flow 1 ingress (mean 0.82 Mbit/s) --- Flow 1 egress (mean 0.57 Mbit/s)
Flow 2 ingress (mean 0.06 Mbit/s) --- Flow 2 egress (mean 0.03 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s) --- Flow 3 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 8032.56 ms)    Flow 2 (95th percentile 6371.69 ms)    Flow 3 (95th percentile 8345.67 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2018-05-25 08:21:08
End at: 2018-05-25 08:21:38
Local clock offset: -2.883 ms
Remote clock offset: 7.686 ms


# Below is generated by plot.py at 2018-05-25 10:39:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 8151.516 ms
Loss rate: 31.54%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 8151.831 ms
Loss rate: 30.82%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 6311.481 ms
Loss rate: 52.83%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8472.505 ms
Loss rate: 91.06%
```

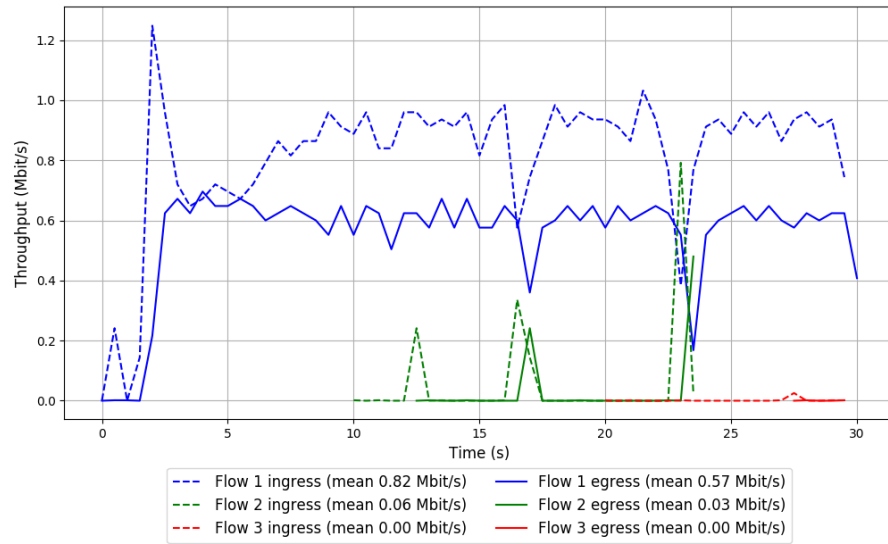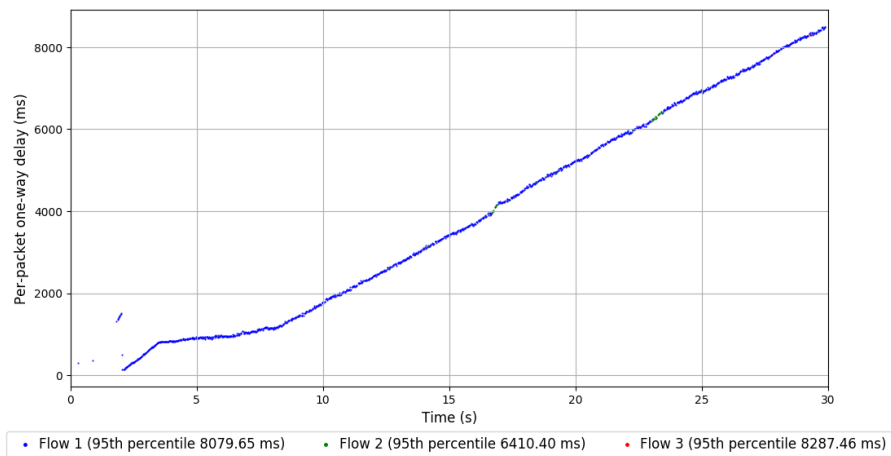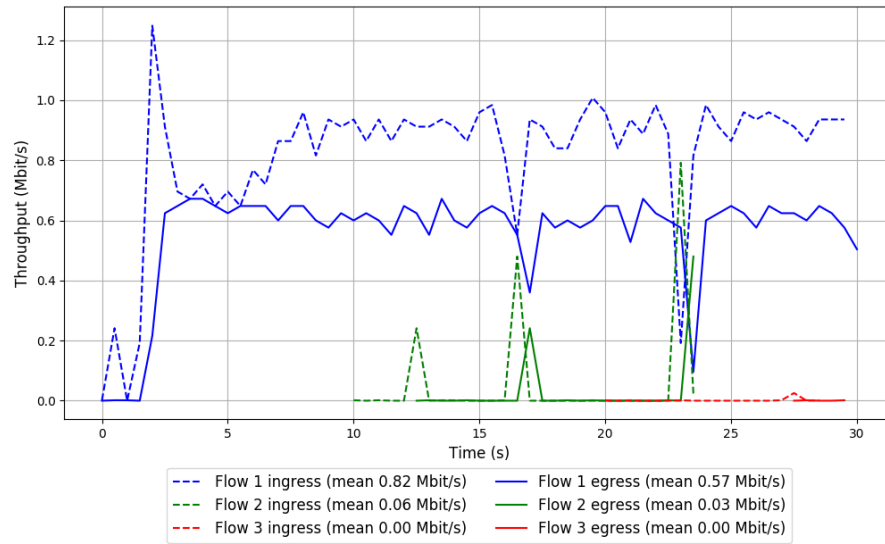Run 3: Report of TCP Cubic — Data Link





49

```
Run 4: Statistics of TCP Cubic

Start at: 2018-05-25 08:40:09
End at: 2018-05-25 08:40:39
Local clock offset: -2.312 ms
Remote clock offset: 7.882 ms


# Below is generated by plot.py at 2018-05-25 10:39:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 8109.947 ms
Loss rate: 31.56%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 8119.772 ms
Loss rate: 30.85%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 6431.902 ms
Loss rate: 52.87%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8390.564 ms
Loss rate: 90.68%
```
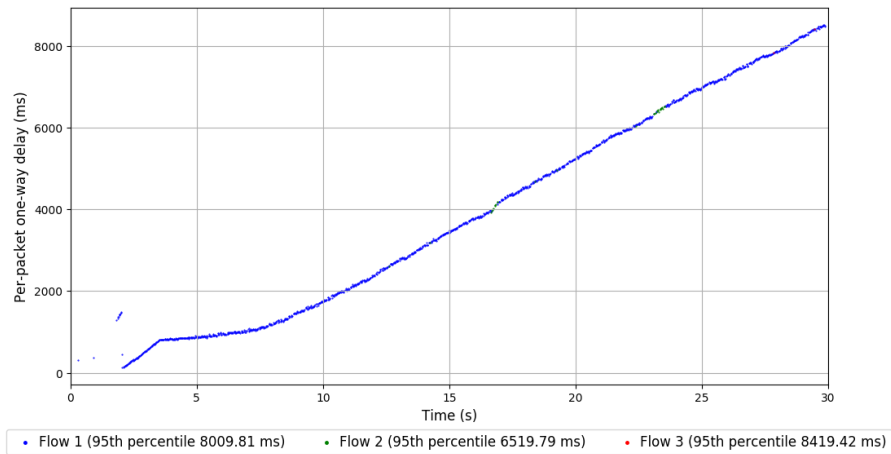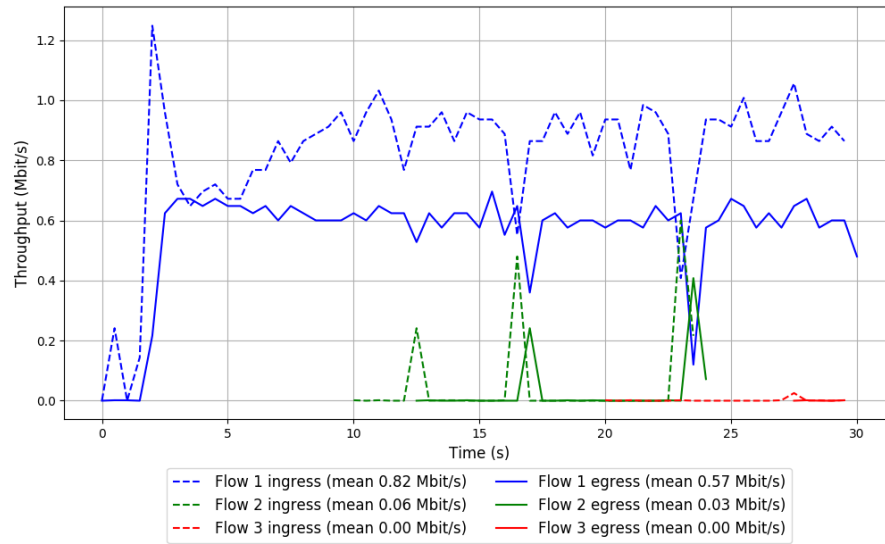
Run 4: Report of TCP Cubic — Data Link



Flow 1 ingress (mean 0.82 Mbit/s)     Flow 1 egress (mean 0.57 Mbit/s)
Flow 2 ingress (mean 0.06 Mbit/s)     Flow 2 egress (mean 0.03 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s)     Flow 3 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 8119.77 ms)     Flow 2 (95th percentile 6431.90 ms)     Flow 3 (95th percentile 8390.56 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2018-05-25 08:59:14
End at: 2018-05-25 08:59:44
Local clock offset: -2.39 ms
Remote clock offset: 4.917 ms


# Below is generated by plot.py at 2018-05-25 10:39:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 7987.782 ms
Loss rate: 31.40%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 7987.795 ms
Loss rate: 30.68%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 6066.064 ms
Loss rate: 52.83%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8235.931 ms
Loss rate: 91.06%
```

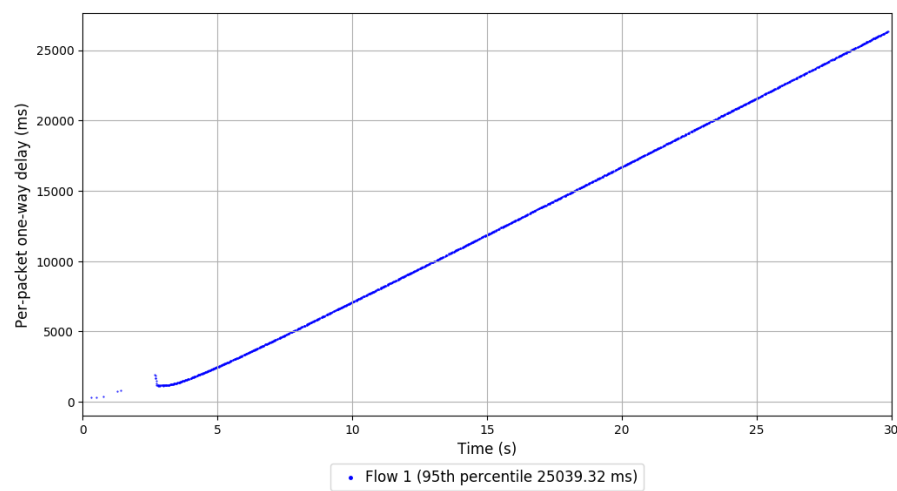Run 5: Report of TCP Cubic — Data Link
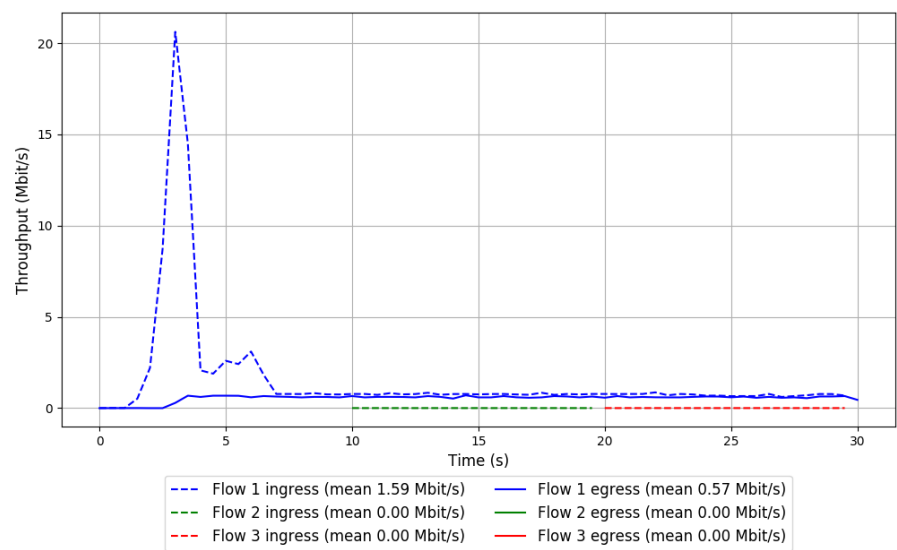
```
Run 6: Statistics of TCP Cubic

Start at: 2018-05-25 09:18:16
End at: 2018-05-25 09:18:46
Local clock offset: -2.124 ms
Remote clock offset: 4.315 ms


# Below is generated by plot.py at 2018-05-25 10:39:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 8175.552 ms
Loss rate: 31.58%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 8175.616 ms
Loss rate: 30.87%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 6605.401 ms
Loss rate: 52.87%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8424.415 ms
Loss rate: 90.68%
```

# Run 6: Report of TCP Cubic — Data Link



- Flow 1 ingress (mean 0.82 Mbit/s)
- Flow 1 egress (mean 0.57 Mbit/s)
- Flow 2 ingress (mean 0.06 Mbit/s)
- Flow 2 egress (mean 0.03 Mbit/s)
- Flow 3 ingress (mean 0.00 Mbit/s)
- Flow 3 egress (mean 0.00 Mbit/s)



- Flow 1 (95th percentile 8175.62 ms)
- Flow 2 (95th percentile 6605.40 ms)
- Flow 3 (95th percentile 8424.42 ms)

```
Run 7: Statistics of TCP Cubic

Start at: 2018-05-25 09:37:18
End at: 2018-05-25 09:37:48
Local clock offset: -5.276 ms
Remote clock offset: 7.374 ms


# Below is generated by plot.py at 2018-05-25 10:39:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 8066.421 ms
Loss rate: 31.62%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 8076.449 ms
Loss rate: 30.90%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 6465.994 ms
Loss rate: 52.87%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8413.045 ms
Loss rate: 91.06%
```

Run 7: Report of TCP Cubic — Data Link





57

```
Run 8: Statistics of TCP Cubic

Start at: 2018-05-25 09:56:23
End at: 2018-05-25 09:56:53
Local clock offset: -8.234 ms
Remote clock offset: 13.194 ms


# Below is generated by plot.py at 2018-05-25 10:39:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 8060.106 ms
Loss rate: 31.58%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 8070.172 ms
Loss rate: 30.86%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 6350.093 ms
Loss rate: 52.87%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8389.993 ms
Loss rate: 91.06%
```

Run 8: Report of TCP Cubic — Data Link



Flow 1 ingress (mean 0.82 Mbit/s)  Flow 1 egress (mean 0.57 Mbit/s)
Flow 2 ingress (mean 0.06 Mbit/s)  Flow 2 egress (mean 0.03 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s)  Flow 3 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 8070.17 ms)   Flow 2 (95th percentile 6350.09 ms)   Flow 3 (95th percentile 8389.99 ms)

59

```
Run 9: Statistics of TCP Cubic

Start at: 2018-05-25 10:15:27
End at: 2018-05-25 10:15:57
Local clock offset: -3.007 ms
Remote clock offset: 12.648 ms


# Below is generated by plot.py at 2018-05-25 10:39:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 8059.628 ms
Loss rate: 31.56%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 8079.649 ms
Loss rate: 30.85%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 6410.405 ms
Loss rate: 52.83%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8287.458 ms
Loss rate: 90.68%
```

Run 9: Report of TCP Cubic — Data Link

```
Run 10: Statistics of TCP Cubic

Start at: 2018-05-25 10:34:28
End at: 2018-05-25 10:34:58
Local clock offset: -2.524 ms
Remote clock offset: 19.835 ms


# Below is generated by plot.py at 2018-05-25 10:39:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 8009.810 ms
Loss rate: 31.58%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 8009.810 ms
Loss rate: 30.87%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 6519.790 ms
Loss rate: 52.83%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8419.416 ms
Loss rate: 91.06%
```
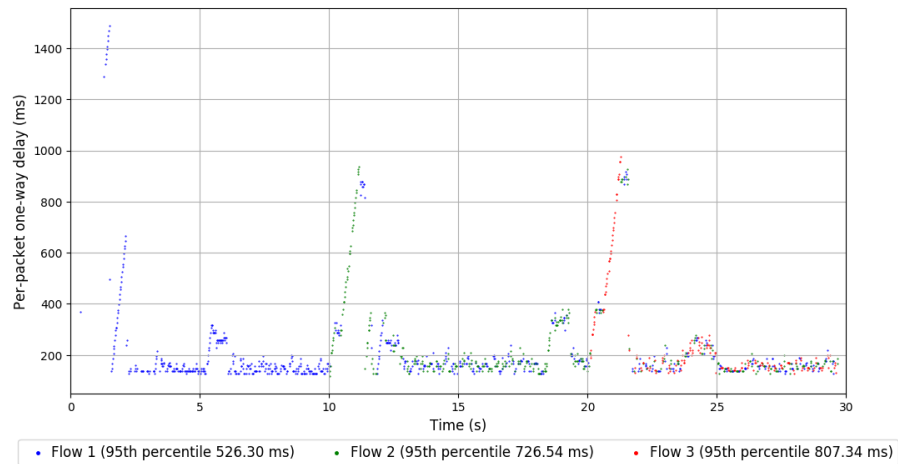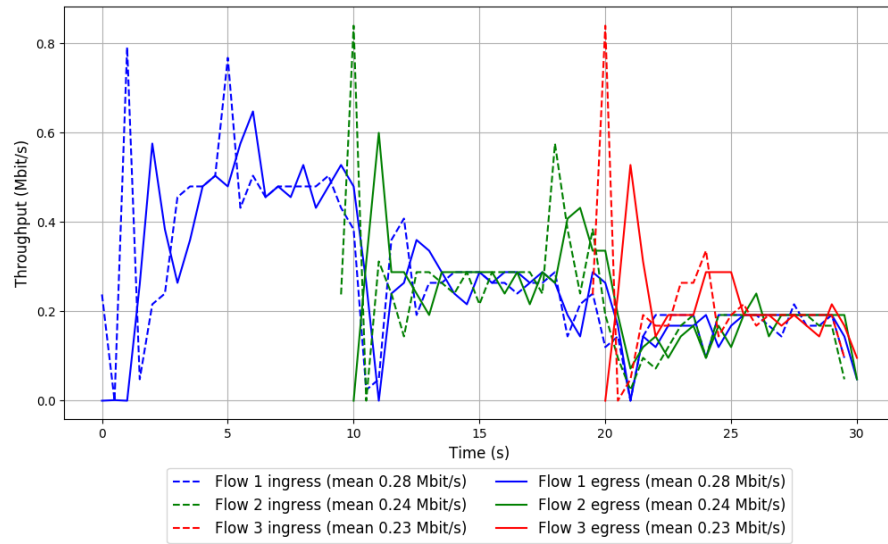
Run 10: Report of TCP Cubic — Data Link



Flow 1 ingress (mean 0.82 Mbit/s)    Flow 1 egress (mean 0.57 Mbit/s)
Flow 2 ingress (mean 0.06 Mbit/s)    Flow 2 egress (mean 0.03 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s)    Flow 3 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 8009.81 ms)    Flow 2 (95th percentile 6519.79 ms)    Flow 3 (95th percentile 8419.42 ms)

```
Run 1: Statistics of FillP

Start at: 2018-05-25 07:34:47
End at: 2018-05-25 07:35:17
Local clock offset: -1.456 ms
Remote clock offset: 3.281 ms
```

Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-05-25 07:53:48
End at: 2018-05-25 07:54:18
Local clock offset: -1.637 ms
Remote clock offset: 5.121 ms
```

Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2018-05-25 08:12:50
End at: 2018-05-25 08:13:20
Local clock offset: -2.878 ms
Remote clock offset: 4.2 ms
```

## Run 3: Report of FillP — Data Link





69

```
Run 4: Statistics of FillP

Start at: 2018-05-25 08:31:50
End at: 2018-05-25 08:32:20
Local clock offset: -2.624 ms
Remote clock offset: 7.431 ms
```

Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2018-05-25 08:50:56
End at: 2018-05-25 08:51:26
Local clock offset: -2.115 ms
Remote clock offset: 3.906 ms
```

Run 5: Report of FillP — Data Link





73

```
Run 6: Statistics of FillP

Start at: 2018-05-25 09:09:56
End at: 2018-05-25 09:10:26
Local clock offset: -2.742 ms
Remote clock offset: 8.863 ms
```

Run 6: Report of FillP — Data Link

```
Run 7: Statistics of FillP

Start at: 2018-05-25 09:28:59
End at: 2018-05-25 09:29:29
Local clock offset: -4.961 ms
Remote clock offset: 3.623 ms
```

Run 7: Report of FillP — Data Link



Flow 1 ingress (mean 1.52 Mbit/s)    Flow 1 egress (mean 0.57 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s)    Flow 2 egress (mean 0.00 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s)    Flow 3 egress (mean 0.00 Mbit/s)



• Flow 1 (95th percentile 24428.94 ms)

```
Run 8: Statistics of FillP

Start at: 2018-05-25 09:48:01
End at: 2018-05-25 09:48:31
Local clock offset: -7.254 ms
Remote clock offset: 4.999 ms
```

Run 8: Report of FillP — Data Link



Flow 1 ingress (mean 1.51 Mbit/s)    Flow 1 egress (mean 0.56 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s)    Flow 2 egress (mean 0.00 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s)    Flow 3 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 24920.16 ms)

```
Run 9: Statistics of FillP

Start at: 2018-05-25 10:07:07
End at: 2018-05-25 10:07:37
Local clock offset: -4.025 ms
Remote clock offset: 12.108 ms
```

Run 9: Report of FillP — Data Link





81

```
Run 10: Statistics of FillP

Start at: 2018-05-25 10:26:09
End at: 2018-05-25 10:26:39
Local clock offset: -2.503 ms
Remote clock offset: 17.94 ms
```

Run 10: Report of FillP — Data Link



Flow 1 ingress (mean 1.56 Mbit/s) — Flow 1 egress (mean 0.57 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s) — Flow 2 egress (mean 0.00 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s) — Flow 3 egress (mean 0.00 Mbit/s)



• Flow 1 (95th percentile 24991.26 ms)

```
Run 1: Statistics of Indigo

Start at: 2018-05-25 07:40:43
End at: 2018-05-25 07:41:13
Local clock offset: -1.642 ms
Remote clock offset: 8.375 ms


# Below is generated by plot.py at 2018-05-25 10:39:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 686.683 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 526.297 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 726.545 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 807.336 ms
Loss rate: 2.14%
```
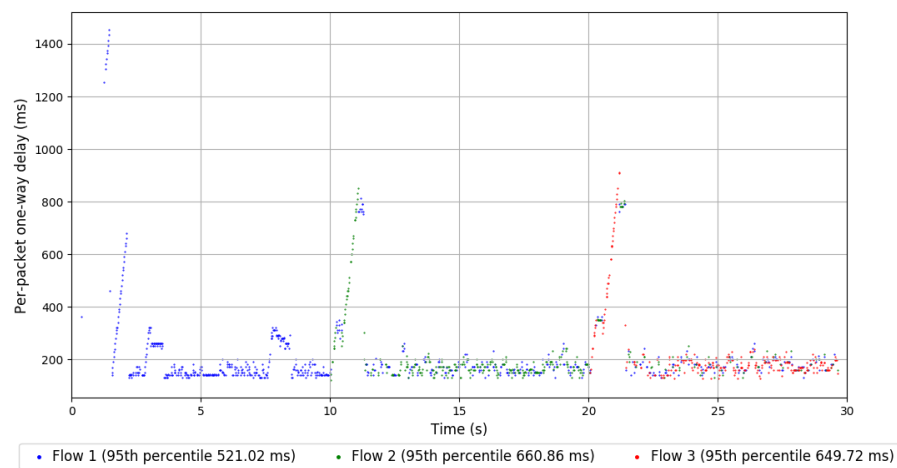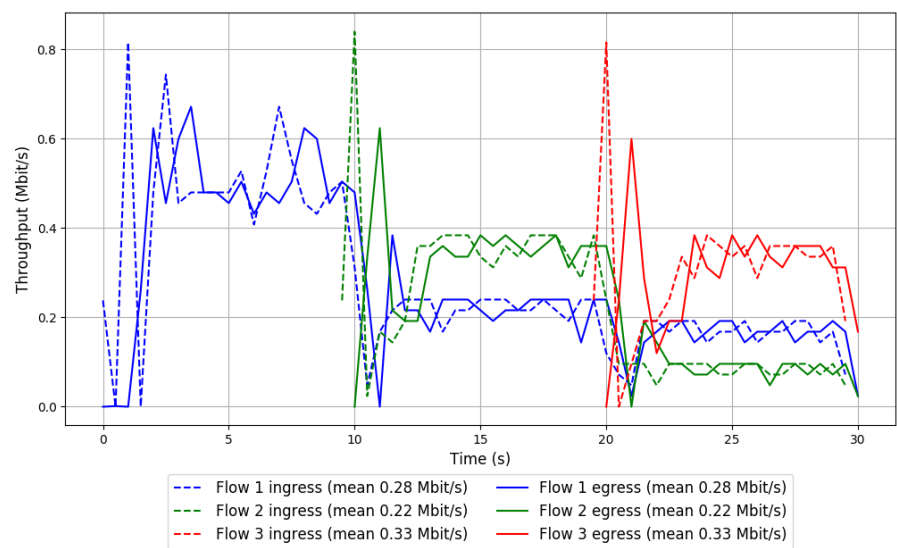
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2018-05-25 07:59:44
End at: 2018-05-25 08:00:14
Local clock offset: -2.1 ms
Remote clock offset: 4.428 ms

# Below is generated by plot.py at 2018-05-25 10:39:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 780.759 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 769.200 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 780.759 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 828.251 ms
Loss rate: 2.57%
```
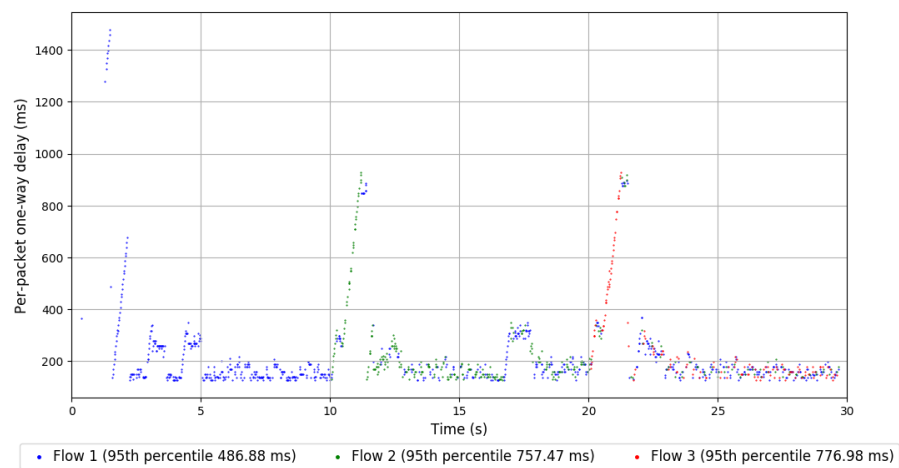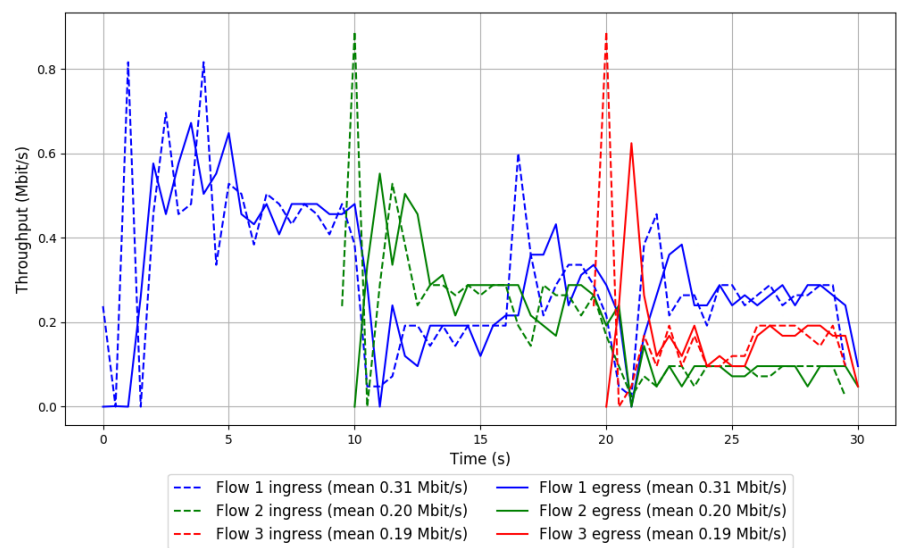
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2018-05-25 08:18:46
End at: 2018-05-25 08:19:16
Local clock offset: -2.905 ms
Remote clock offset: 3.904 ms


# Below is generated by plot.py at 2018-05-25 10:39:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 679.434 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 499.151 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 679.238 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 876.778 ms
Loss rate: 2.00%
```
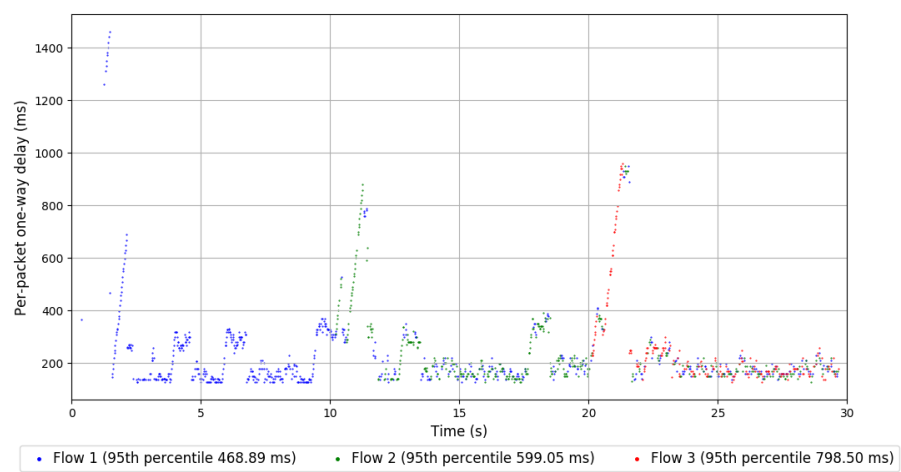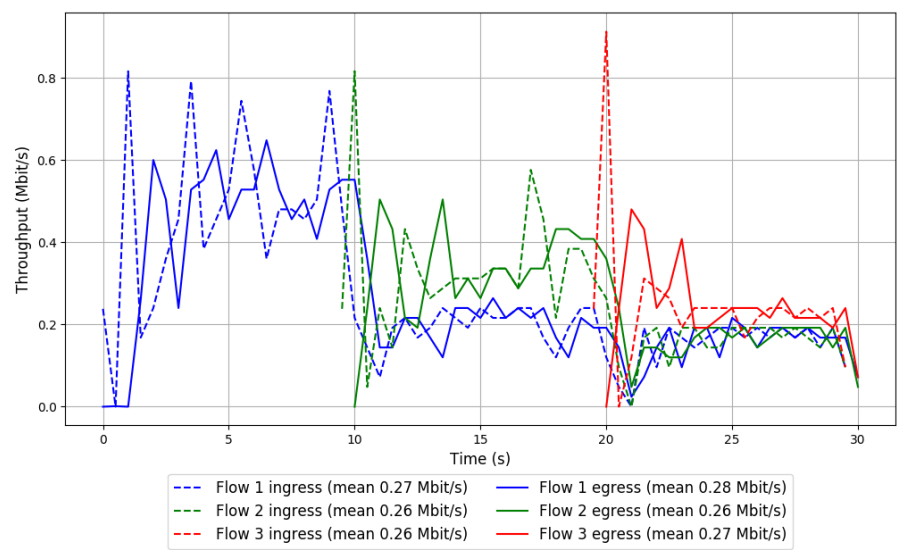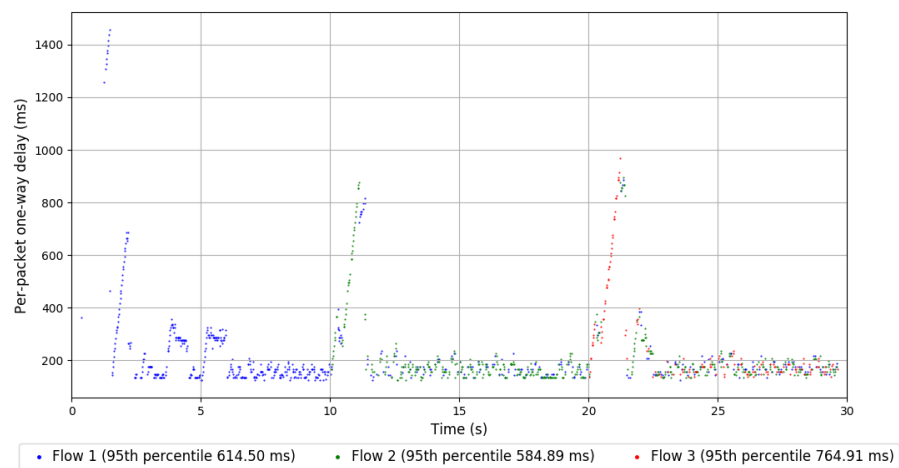
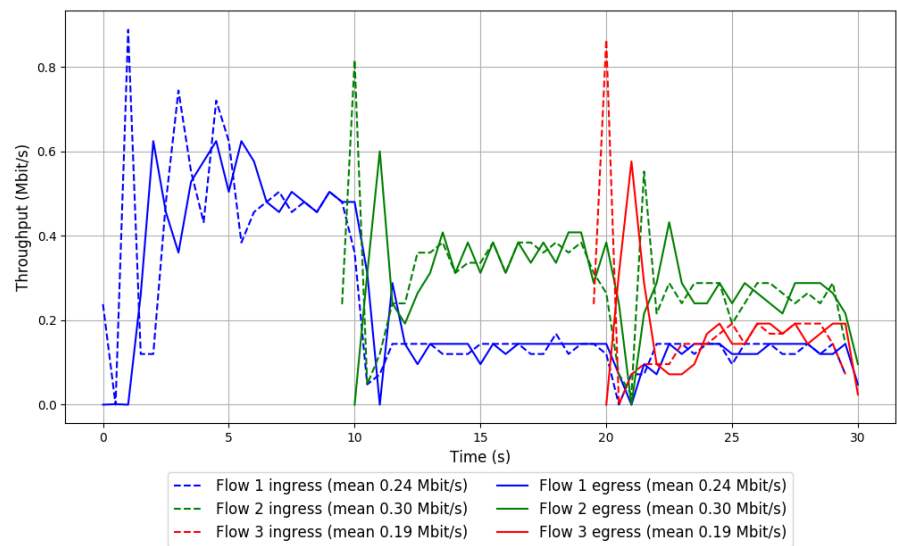## Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2018-05-25 08:37:46
End at: 2018-05-25 08:38:16
Local clock offset: -2.412 ms
Remote clock offset: 2.894 ms


# Below is generated by plot.py at 2018-05-25 10:39:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 652.328 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 562.485 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 652.565 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 703.016 ms
Loss rate: 3.09%
```
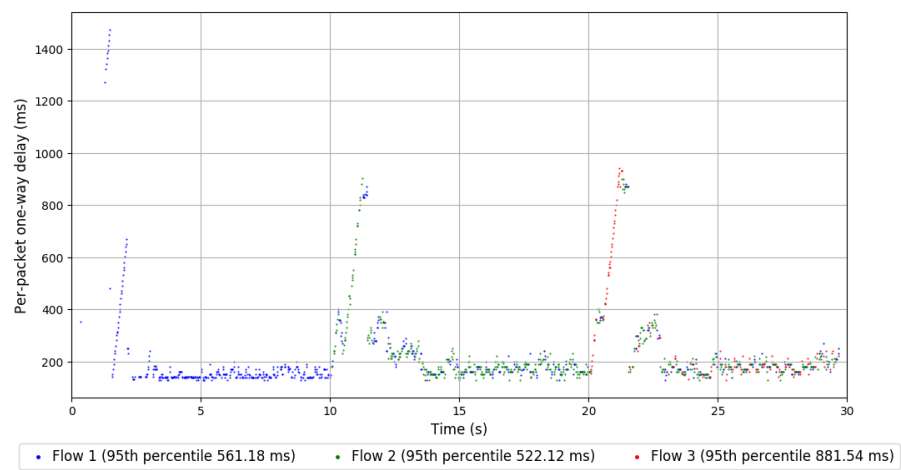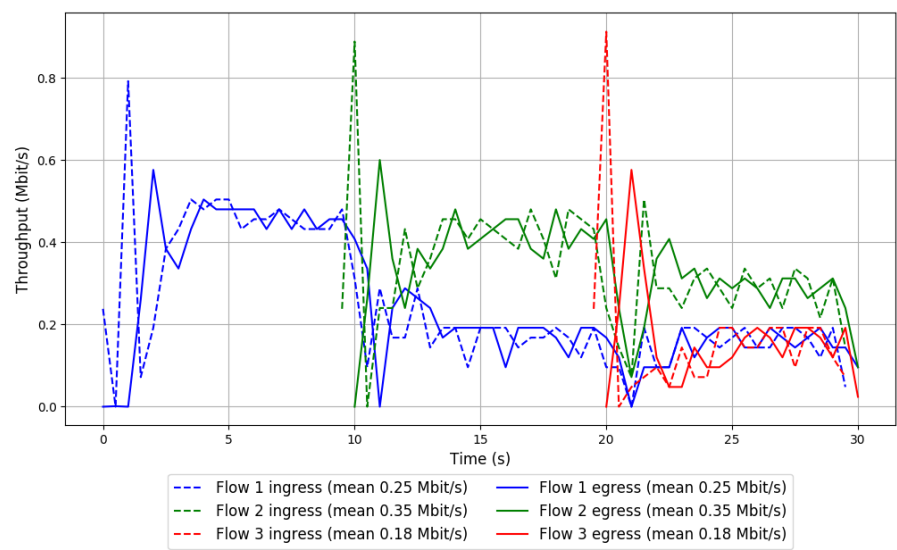
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2018-05-25 08:56:52
End at: 2018-05-25 08:57:22
Local clock offset: -2.168 ms
Remote clock offset: 7.946 ms


# Below is generated by plot.py at 2018-05-25 10:39:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 620.948 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 521.019 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 660.858 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 649.716 ms
Loss rate: 2.99%
```
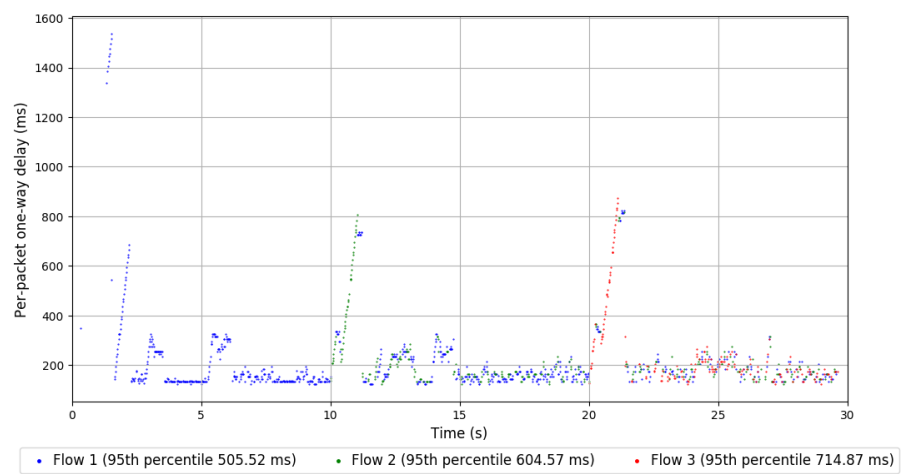
Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2018-05-25 09:15:52
End at: 2018-05-25 09:16:22
Local clock offset: -2.85 ms
Remote clock offset: 9.068 ms


# Below is generated by plot.py at 2018-05-25 10:39:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 657.635 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 486.881 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 757.473 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 776.976 ms
Loss rate: 2.60%
```
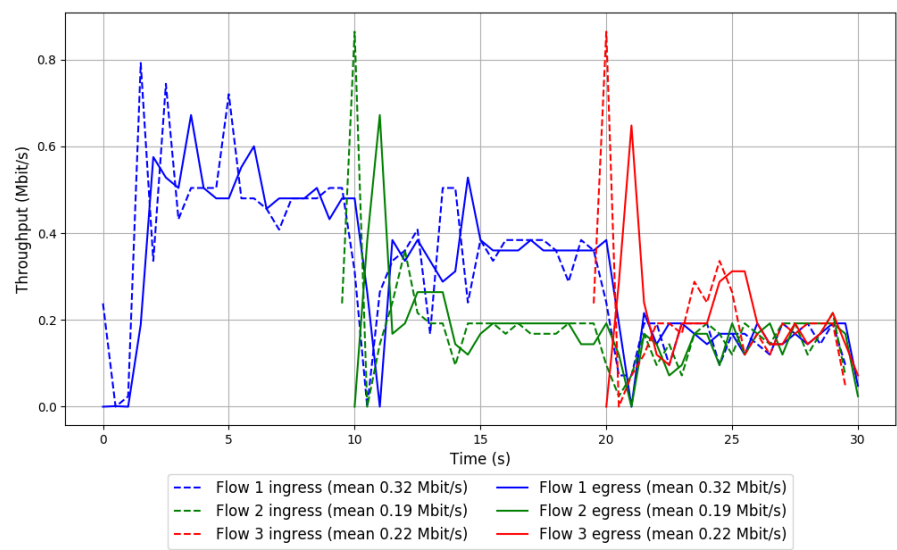
# Run 6: Report of Indigo — Data Link

```
Run 7: Statistics of Indigo

Start at: 2018-05-25 09:34:55
End at: 2018-05-25 09:35:25
Local clock offset: -5.658 ms
Remote clock offset: 3.572 ms


# Below is generated by plot.py at 2018-05-25 10:39:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 618.371 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 468.892 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 599.050 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 798.496 ms
Loss rate: 2.33%
```
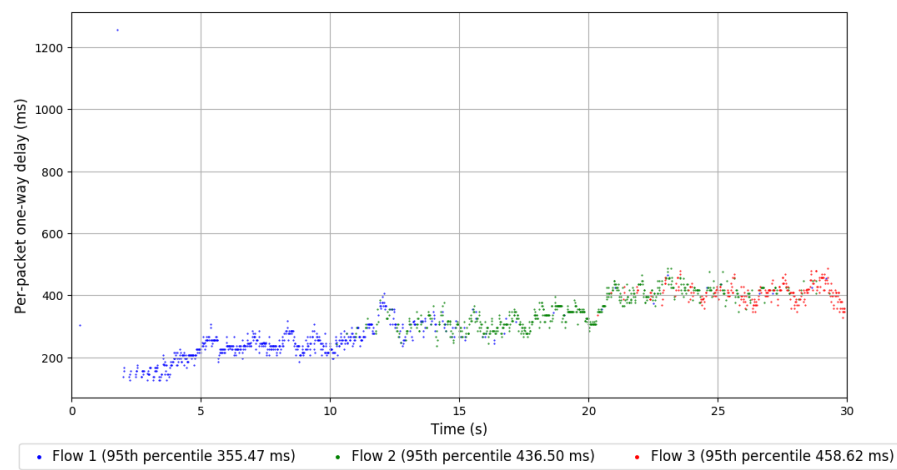
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2018-05-25 09:54:00
End at: 2018-05-25 09:54:30
Local clock offset: -7.755 ms
Remote clock offset: 12.394 ms

# Below is generated by plot.py at 2018-05-25 10:39:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 654.513 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 614.497 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 584.892 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 764.909 ms
Loss rate: 2.58%
```
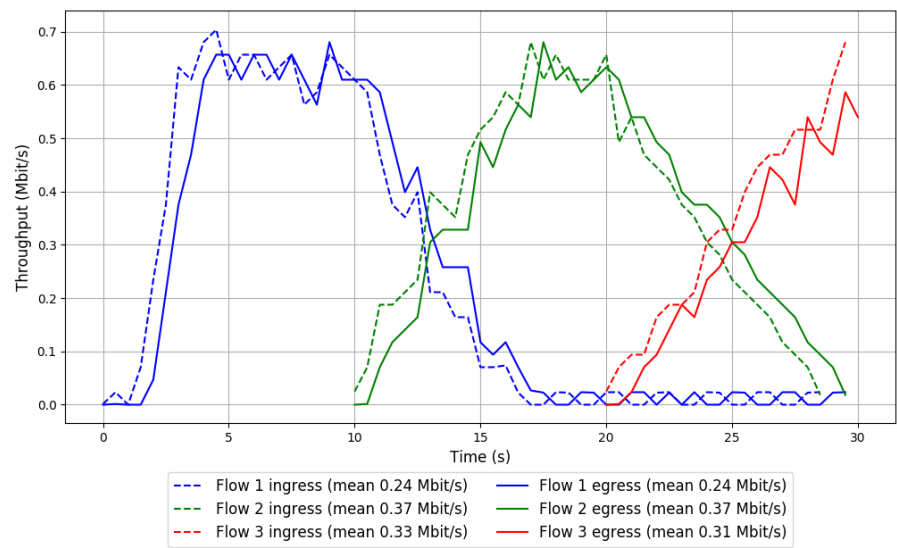
Run 8: Report of Indigo — Data Link





99

```
Run 9: Statistics of Indigo

Start at: 2018-05-25 10:13:03
End at: 2018-05-25 10:13:33
Local clock offset: -2.459 ms
Remote clock offset: 15.976 ms


# Below is generated by plot.py at 2018-05-25 10:39:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 651.365 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 561.177 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 522.116 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 881.539 ms
Loss rate: 2.10%
```
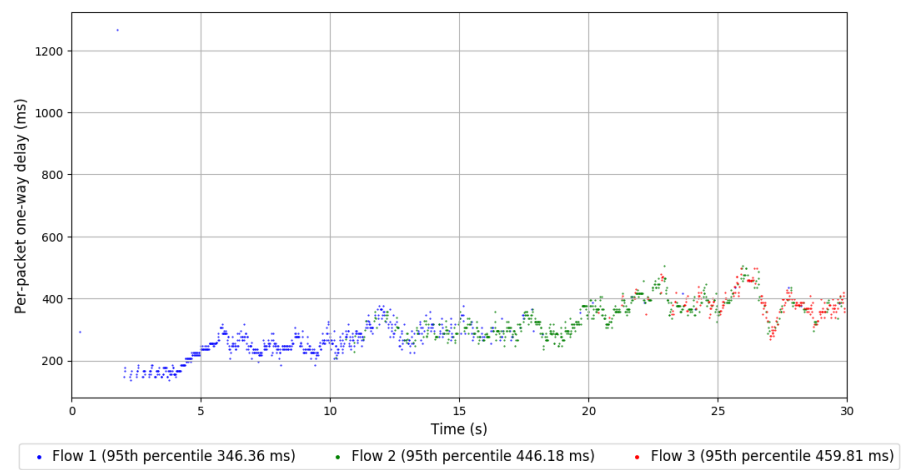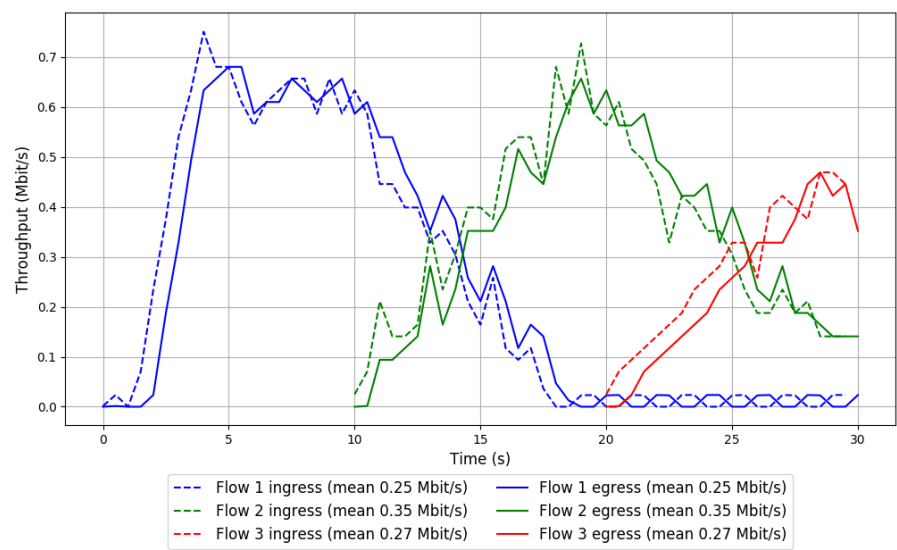
## Run 9: Report of Indigo — Data Link

```
Run 10: Statistics of Indigo

Start at: 2018-05-25 10:32:05
End at: 2018-05-25 10:32:35
Local clock offset: -2.541 ms
Remote clock offset: 20.316 ms


# Below is generated by plot.py at 2018-05-25 10:39:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 604.571 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 505.519 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 604.571 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 714.873 ms
Loss rate: 1.65%
```
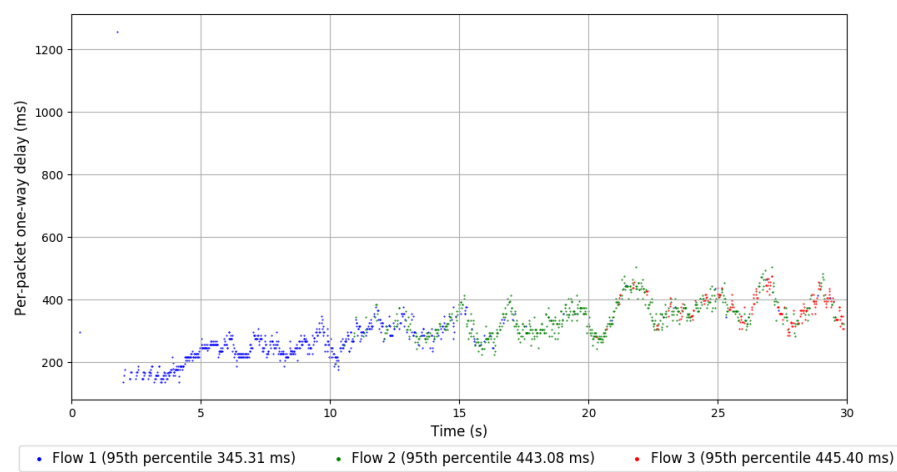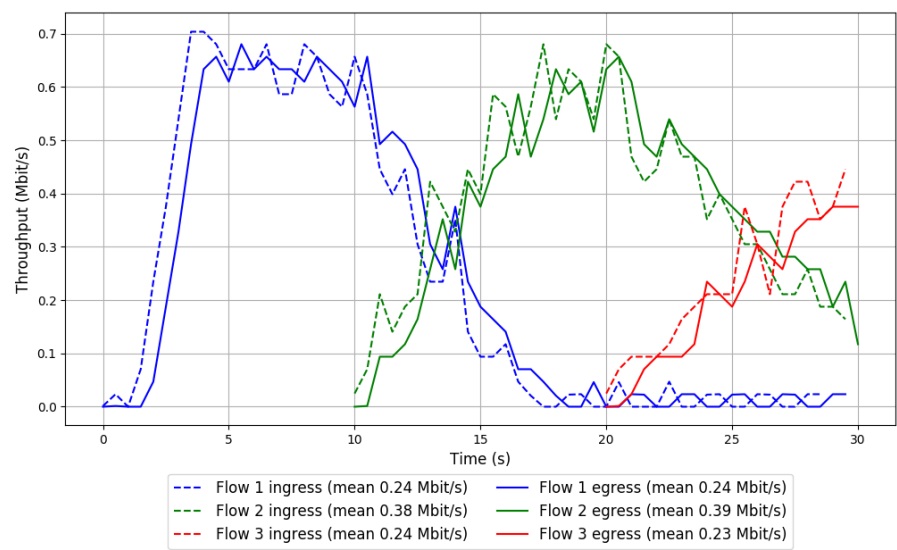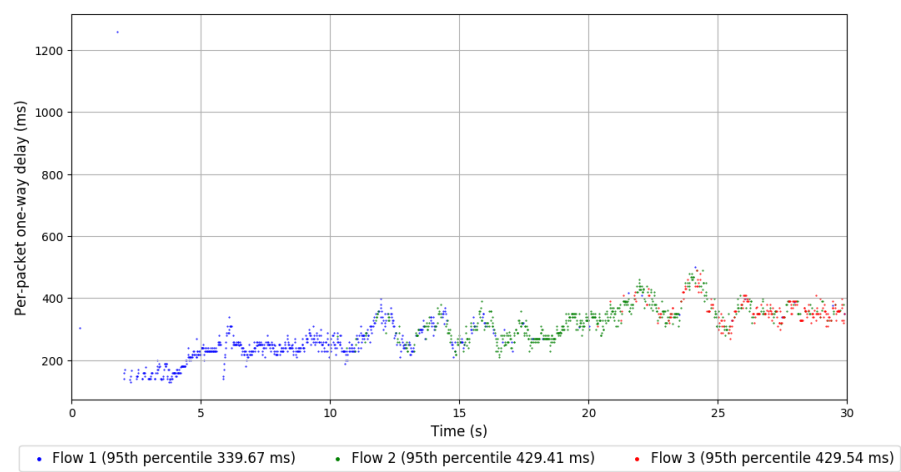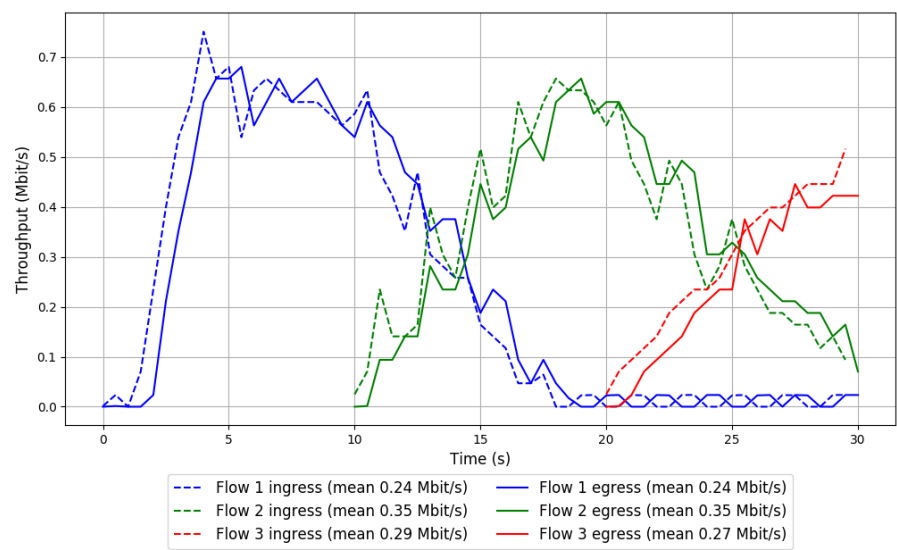
# Run 10: Report of Indigo — Data Link





103

```
Run 1: Statistics of LEDBAT

Start at: 2018-05-25 07:45:29
End at: 2018-05-25 07:45:59
Local clock offset: -1.659 ms
Remote clock offset: 8.684 ms


# Below is generated by plot.py at 2018-05-25 10:39:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 438.569 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 355.467 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 436.504 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 458.620 ms
Loss rate: 9.22%
```

Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-05-25 08:04:30
End at: 2018-05-25 08:05:00
Local clock offset: -2.43 ms
Remote clock offset: 5.058 ms


# Below is generated by plot.py at 2018-05-25 10:39:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 435.195 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 346.357 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 446.177 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 459.809 ms
Loss rate: 7.29%
```
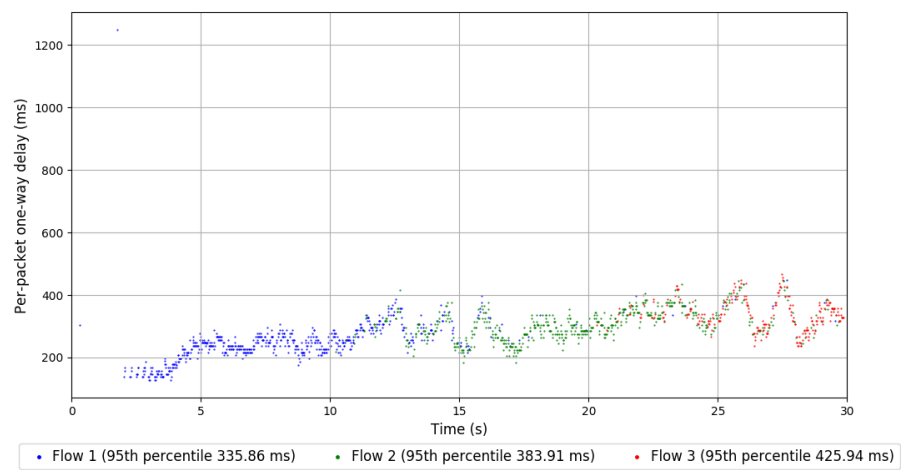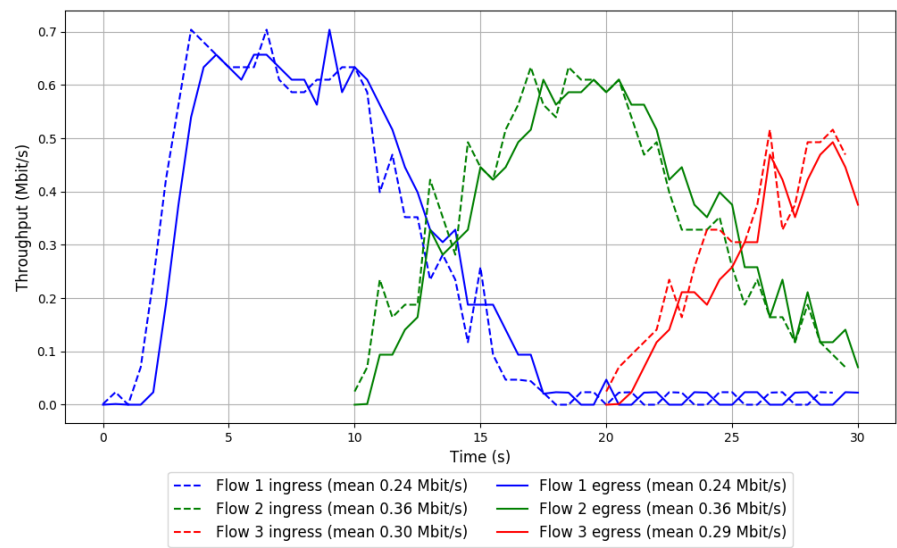
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-05-25 08:23:31
End at: 2018-05-25 08:24:01
Local clock offset: -2.96 ms
Remote clock offset: 2.877 ms

# Below is generated by plot.py at 2018-05-25 10:39:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 433.511 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 345.311 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 443.082 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 445.396 ms
Loss rate: 8.37%
```
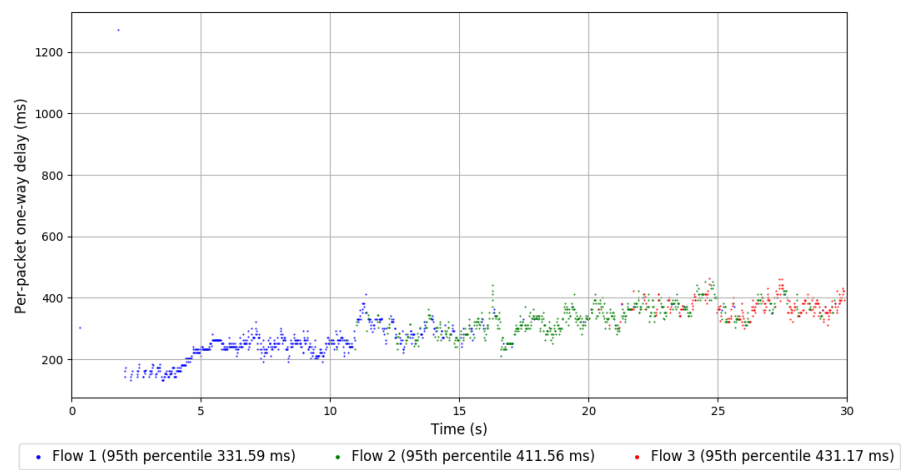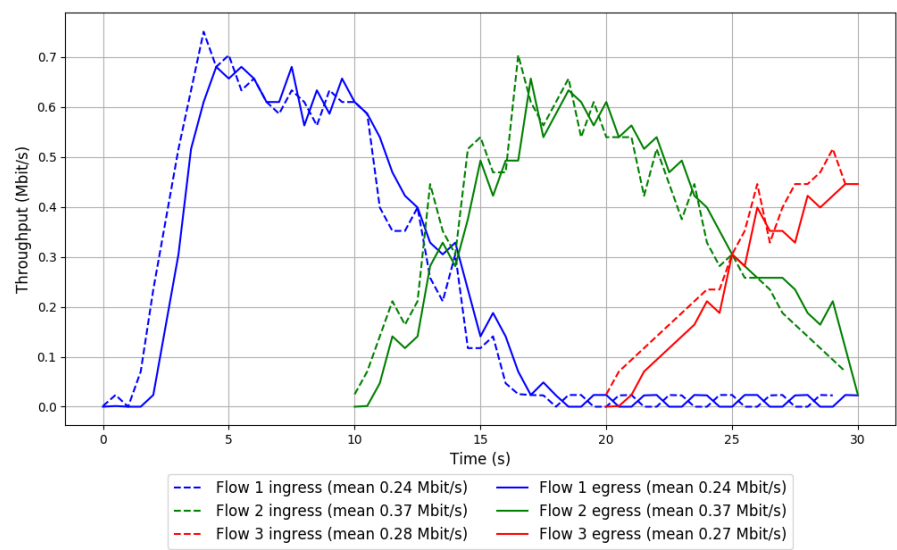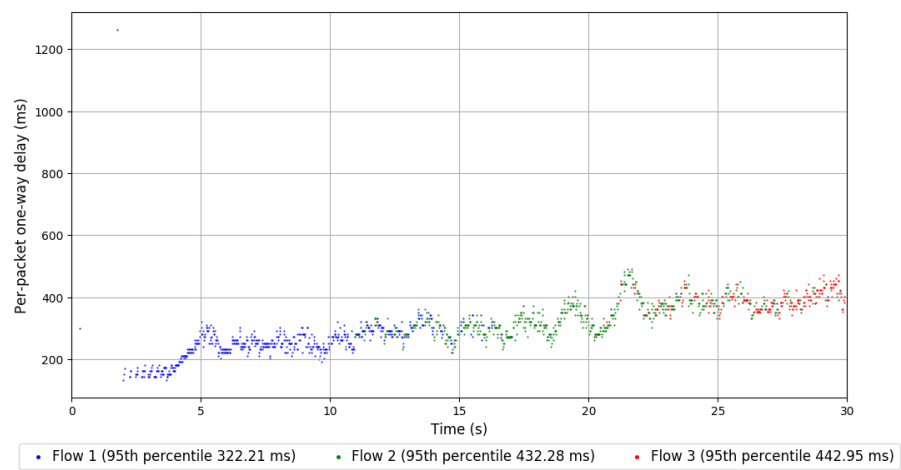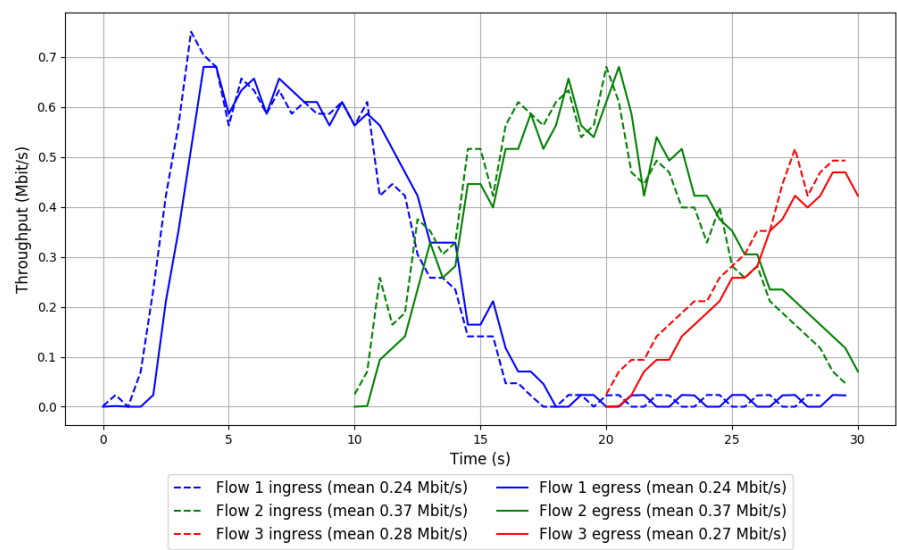
Run 3: Report of LEDBAT — Data Link



Flow 1 ingress (mean 0.24 Mbit/s)    Flow 1 egress (mean 0.24 Mbit/s)
Flow 2 ingress (mean 0.38 Mbit/s)    Flow 2 egress (mean 0.39 Mbit/s)
Flow 3 ingress (mean 0.24 Mbit/s)    Flow 3 egress (mean 0.23 Mbit/s)



Flow 1 (95th percentile 345.31 ms)    Flow 2 (95th percentile 443.08 ms)    Flow 3 (95th percentile 445.40 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2018-05-25 08:42:37
End at: 2018-05-25 08:43:07
Local clock offset: -2.186 ms
Remote clock offset: 8.066 ms


# Below is generated by plot.py at 2018-05-25 10:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 409.382 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 339.673 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 429.411 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 429.540 ms
Loss rate: 7.85%
```
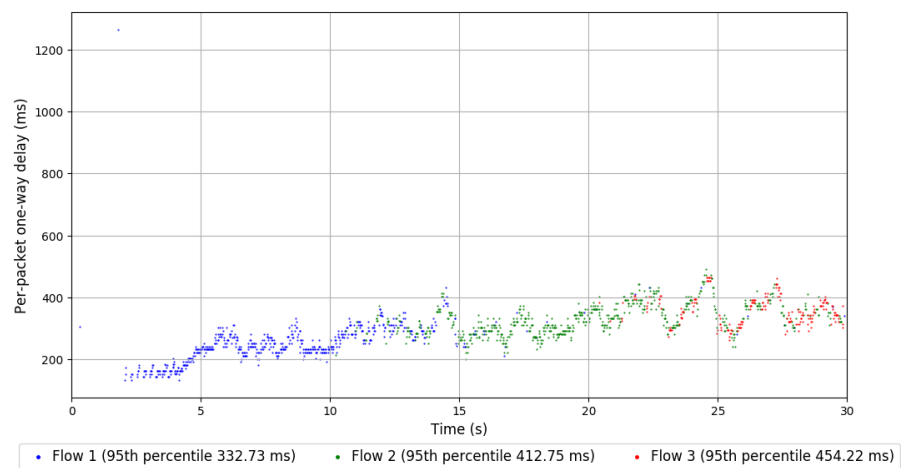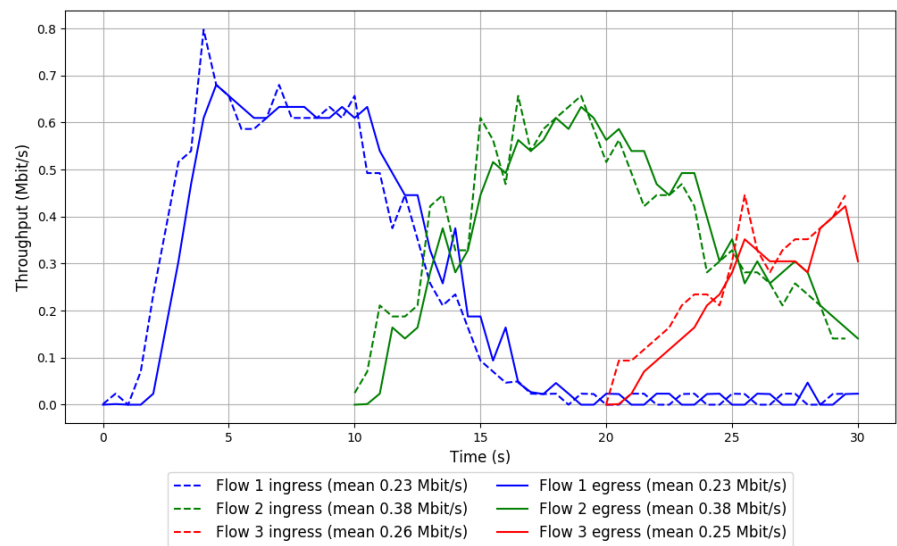
Run 4: Report of LEDBAT — Data Link





111

```
Run 5: Statistics of LEDBAT

Start at: 2018-05-25 09:01:37
End at: 2018-05-25 09:02:07
Local clock offset: -2.5 ms
Remote clock offset: 9.704 ms


# Below is generated by plot.py at 2018-05-25 10:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 385.952 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 335.863 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 383.910 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 425.935 ms
Loss rate: 7.11%
```
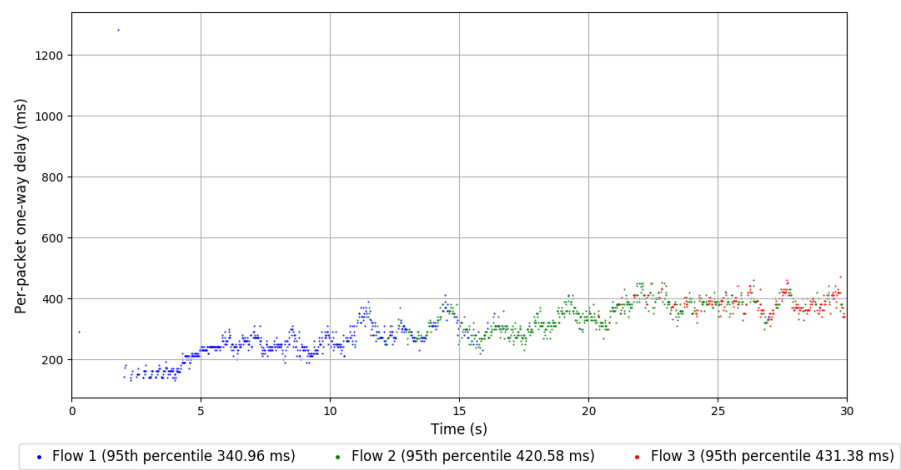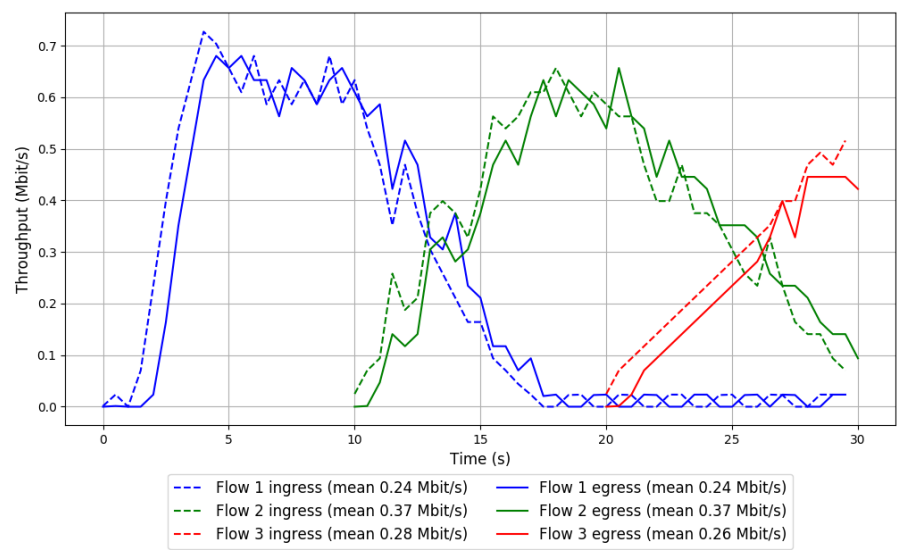
# Run 5: Report of LEDBAT — Data Link





113

```
Run 6: Statistics of LEDBAT

Start at: 2018-05-25 09:20:39
End at: 2018-05-25 09:21:09
Local clock offset: -2.162 ms
Remote clock offset: 7.817 ms


# Below is generated by plot.py at 2018-05-25 10:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 402.992 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 331.594 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 411.560 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 431.166 ms
Loss rate: 8.33%
```
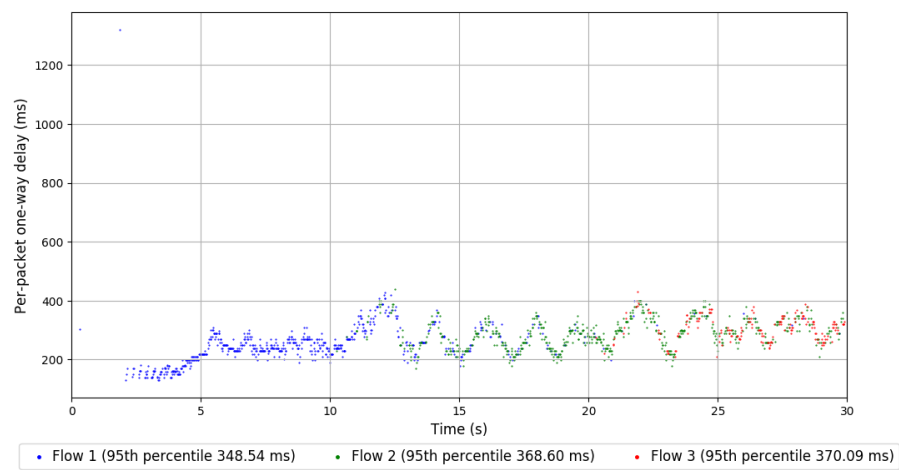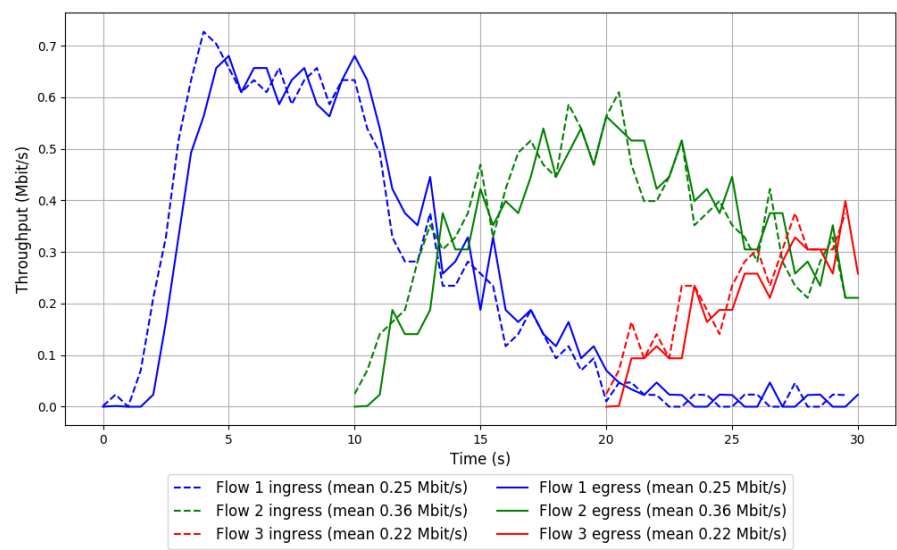
Run 6: Report of LEDBAT — Data Link

```
Run 7: Statistics of LEDBAT

Start at: 2018-05-25 09:39:41
End at: 2018-05-25 09:40:11
Local clock offset: -5.653 ms
Remote clock offset: 2.685 ms

# Below is generated by plot.py at 2018-05-25 10:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 432.057 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 322.208 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 432.280 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 442.955 ms
Loss rate: 8.40%
```

Flow 1 ingress (mean 0.24 Mbit/s) --- Flow 1 egress (mean 0.24 Mbit/s)
Flow 2 ingress (mean 0.37 Mbit/s) --- Flow 2 egress (mean 0.37 Mbit/s)
Flow 3 ingress (mean 0.28 Mbit/s) --- Flow 3 egress (mean 0.27 Mbit/s)



Flow 1 (95th percentile 322.21 ms)  Flow 2 (95th percentile 432.28 ms)  Flow 3 (95th percentile 442.95 ms)

117

```
Run 8: Statistics of LEDBAT

Start at: 2018-05-25 09:58:46
End at: 2018-05-25 09:59:16
Local clock offset: -5.473 ms
Remote clock offset: 10.232 ms


# Below is generated by plot.py at 2018-05-25 10:39:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 404.406 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 332.732 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 412.751 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 454.222 ms
Loss rate: 7.80%
```

## Run 8: Report of LEDBAT — Data Link



Flow 1 ingress (mean 0.23 Mbit/s)    Flow 1 egress (mean 0.23 Mbit/s)
Flow 2 ingress (mean 0.38 Mbit/s)    Flow 2 egress (mean 0.38 Mbit/s)
Flow 3 ingress (mean 0.26 Mbit/s)    Flow 3 egress (mean 0.25 Mbit/s)



Flow 1 (95th percentile 332.73 ms)    Flow 2 (95th percentile 412.75 ms)    Flow 3 (95th percentile 454.22 ms)

```
Run 9: Statistics of LEDBAT

Start at: 2018-05-25 10:17:50
End at: 2018-05-25 10:18:20
Local clock offset: -2.857 ms
Remote clock offset: 17.535 ms

# Below is generated by plot.py at 2018-05-25 10:39:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 412.358 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 340.959 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 420.585 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 431.377 ms
Loss rate: 8.51%
```

Run 9: Report of LEDBAT — Data Link

```
Run 10: Statistics of LEDBAT

Start at: 2018-05-25 10:36:51
End at: 2018-05-25 10:37:21
Local clock offset: -2.503 ms
Remote clock offset: 20.099 ms


# Below is generated by plot.py at 2018-05-25 10:39:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 368.463 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 348.542 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 368.600 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 370.087 ms
Loss rate: 6.38%
```

# Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2018-05-25 07:35:58
End at: 2018-05-25 07:36:28
Local clock offset: -1.474 ms
Remote clock offset: 7.954 ms
```
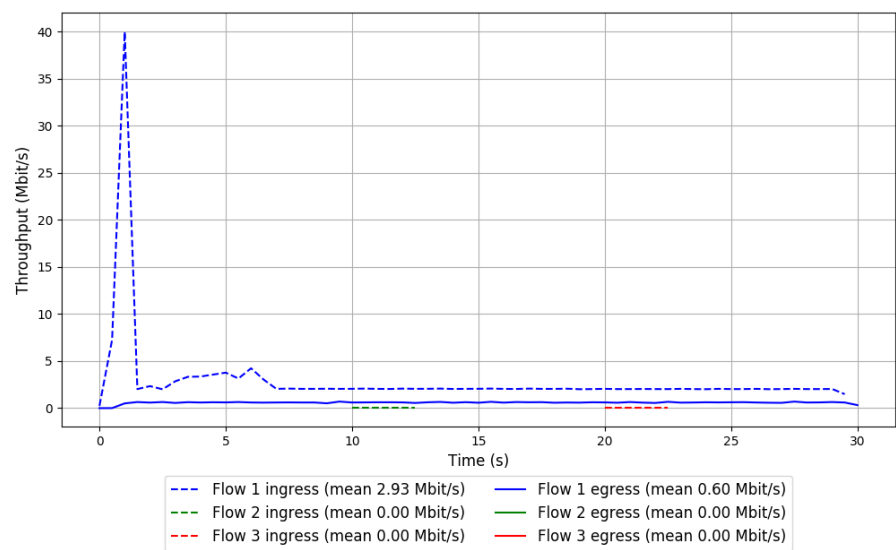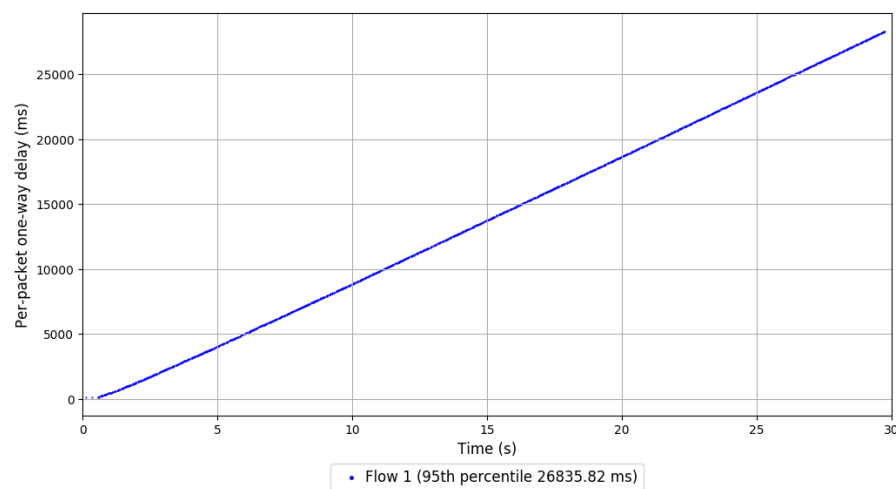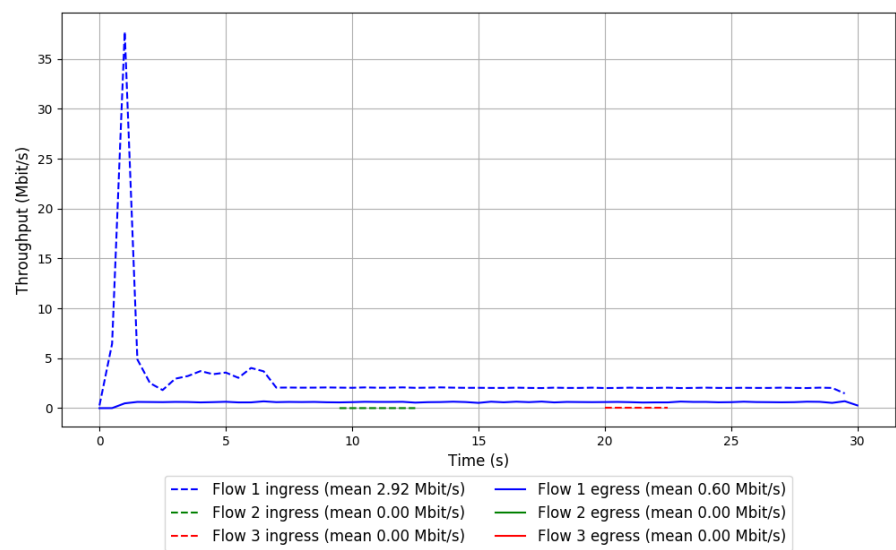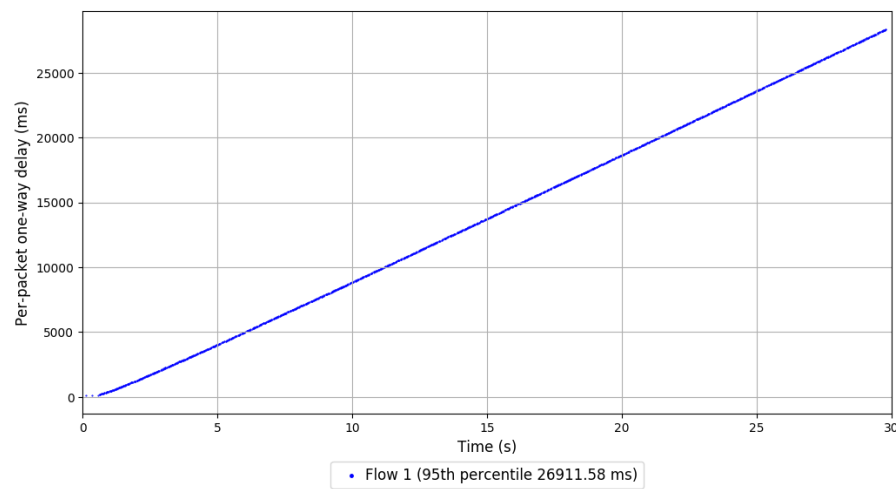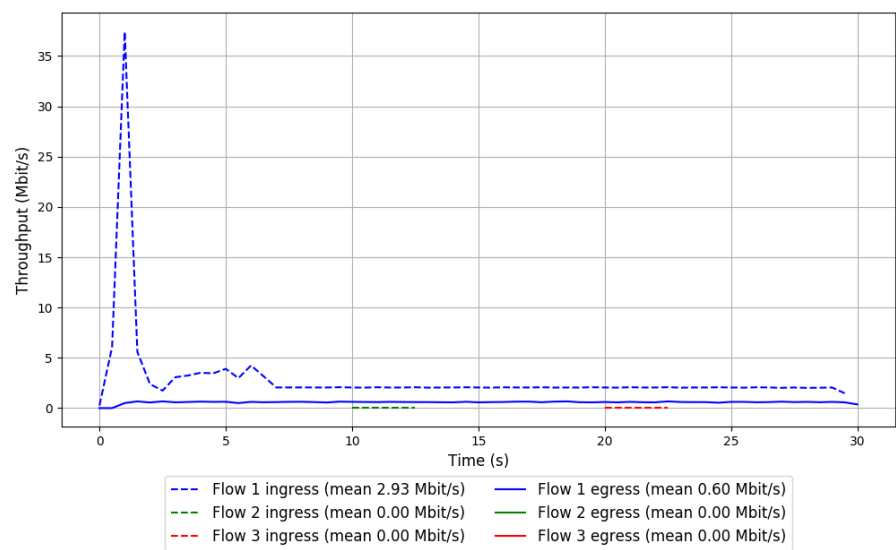
Run 1: Report of PCC-Allegro — Data Link



Flow 1 ingress (mean 2.93 Mbit/s) --- Flow 1 egress (mean 0.60 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s) --- Flow 2 egress (mean 0.00 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s) --- Flow 3 egress (mean 0.00 Mbit/s)



• Flow 1 (95th percentile 26833.77 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2018-05-25 07:54:59
End at: 2018-05-25 07:55:29
Local clock offset: -1.638 ms
Remote clock offset: 9.759 ms
```

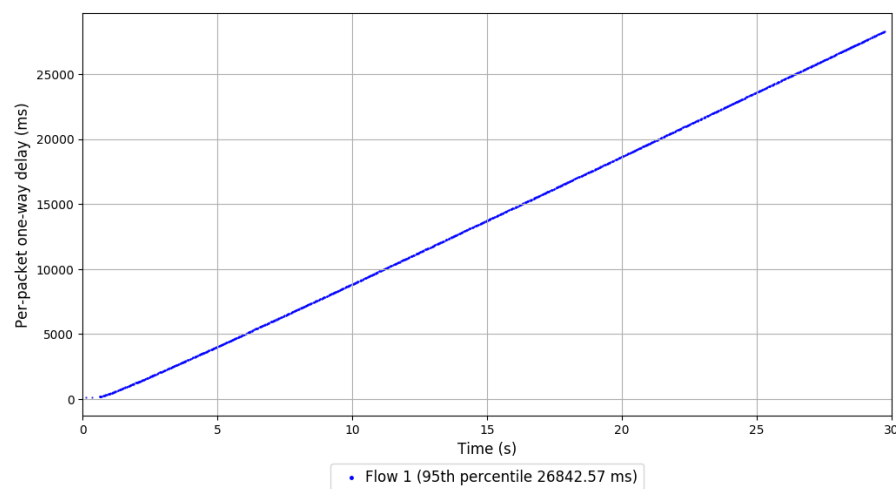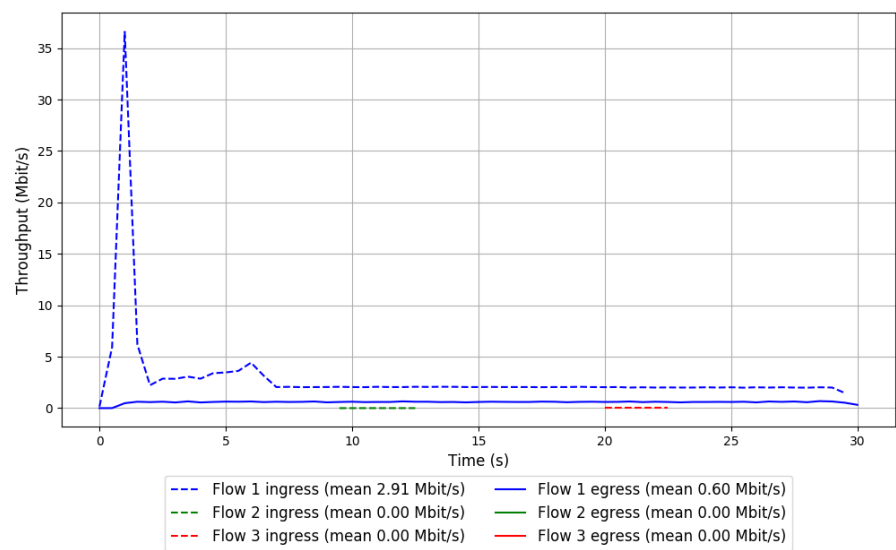Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2018-05-25 08:14:01
End at: 2018-05-25 08:14:31
Local clock offset: -2.769 ms
Remote clock offset: 8.639 ms
```

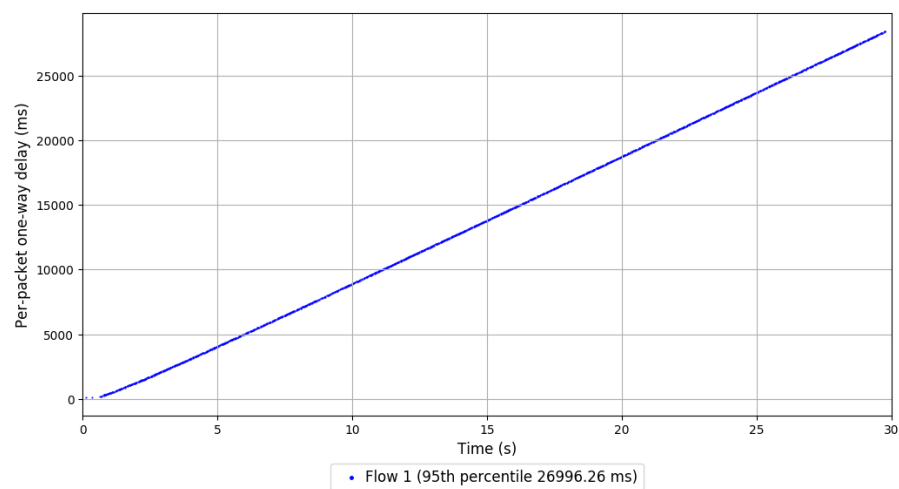Run 3: Report of PCC-Allegro — Data Link

```
Run 4: Statistics of PCC-Allegro

Start at: 2018-05-25 08:33:01
End at: 2018-05-25 08:33:31
Local clock offset: -2.576 ms
Remote clock offset: 2.867 ms
```

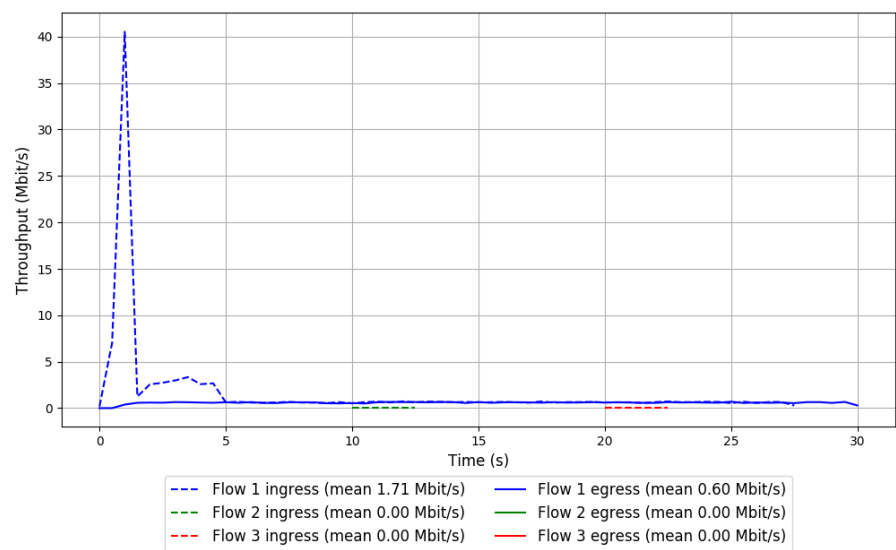Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-05-25 08:52:07
End at: 2018-05-25 08:52:37
Local clock offset: -2.066 ms
Remote clock offset: 3.962 ms
```

Run 5: Report of PCC-Allegro — Data Link

```
Run 6: Statistics of PCC-Allegro

Start at: 2018-05-25 09:11:07
End at: 2018-05-25 09:11:37
Local clock offset: -2.765 ms
Remote clock offset: 5.05 ms
```

Run 6: Report of PCC-Allegro — Data Link

```
Run 7: Statistics of PCC-Allegro

Start at: 2018-05-25 09:30:10
End at: 2018-05-25 09:30:40
Local clock offset: -5.31 ms
Remote clock offset: 8.339 ms
```

Run 7: Report of PCC-Allegro — Data Link

```
Run 8: Statistics of PCC-Allegro

Start at: 2018-05-25 09:49:12
End at: 2018-05-25 09:49:42
Local clock offset: -8.108 ms
Remote clock offset: 9.466 ms
```

Run 8: Report of PCC-Allegro — Data Link

```
Run 9: Statistics of PCC-Allegro

Start at: 2018-05-25 10:08:18
End at: 2018-05-25 10:08:48
Local clock offset: -3.779 ms
Remote clock offset: 16.887 ms
```

Run 9: Report of PCC-Allegro — Data Link





141

```
Run 10: Statistics of PCC-Allegro

Start at: 2018-05-25 10:27:20
End at: 2018-05-25 10:27:50
Local clock offset: -1.754 ms
Remote clock offset: 18.78 ms
```

## Run 10: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2018-05-25 07:32:24
End at: 2018-05-25 07:32:54
Local clock offset: -1.285 ms
Remote clock offset: 7.689 ms
```

Run 1: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 2: Statistics of PCC-Expr

Start at: 2018-05-25 07:51:26
End at: 2018-05-25 07:51:56
Local clock offset: -1.709 ms
Remote clock offset: 4.21 ms
```

Run 2: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 3: Statistics of PCC-Expr

Start at: 2018-05-25 08:10:27
End at: 2018-05-25 08:10:57
Local clock offset: -2.763 ms
Remote clock offset: 8.066 ms
```

Run 3: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 4: Statistics of PCC-Expr

Start at: 2018-05-25 08:29:28
End at: 2018-05-25 08:29:58
Local clock offset: -2.743 ms
Remote clock offset: 6.585 ms
```

Run 4: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 5: Statistics of PCC-Expr

Start at: 2018-05-25 08:48:33
End at: 2018-05-25 08:49:03
Local clock offset: -2.105 ms
Remote clock offset: 3.894 ms
```

Run 5: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 6: Statistics of PCC-Expr

Start at: 2018-05-25 09:07:34
End at: 2018-05-25 09:08:04
Local clock offset: -2.685 ms
Remote clock offset: 8.977 ms
```

Run 6: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 7: Statistics of PCC-Expr

Start at: 2018-05-25 09:26:36
End at: 2018-05-25 09:27:06
Local clock offset: -4.192 ms
Remote clock offset: 3.711 ms
```

Run 7: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 8: Statistics of PCC-Expr

Start at: 2018-05-25 09:45:38
End at: 2018-05-25 09:46:08
Local clock offset: -7.814 ms
Remote clock offset: 7.756 ms
```

Run 8: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 9: Statistics of PCC-Expr

Start at: 2018-05-25 10:04:43
End at: 2018-05-25 10:05:13
Local clock offset: -4.418 ms
Remote clock offset: 16.215 ms
```

Run 9: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 10: Statistics of PCC-Expr

Start at: 2018-05-25 10:23:46
End at: 2018-05-25 10:24:16
Local clock offset: -3.334 ms
Remote clock offset: 13.852 ms
```

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-05-25 07:30:01
End at: 2018-05-25 07:30:31
Local clock offset: -0.977 ms
Remote clock offset: 3.5 ms


# Below is generated by plot.py at 2018-05-25 10:39:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 8831.525 ms
Loss rate: 30.54%
-- Flow 1:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 8821.027 ms
Loss rate: 30.54%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 6050.268 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9190.535 ms
Loss rate: 50.00%
```
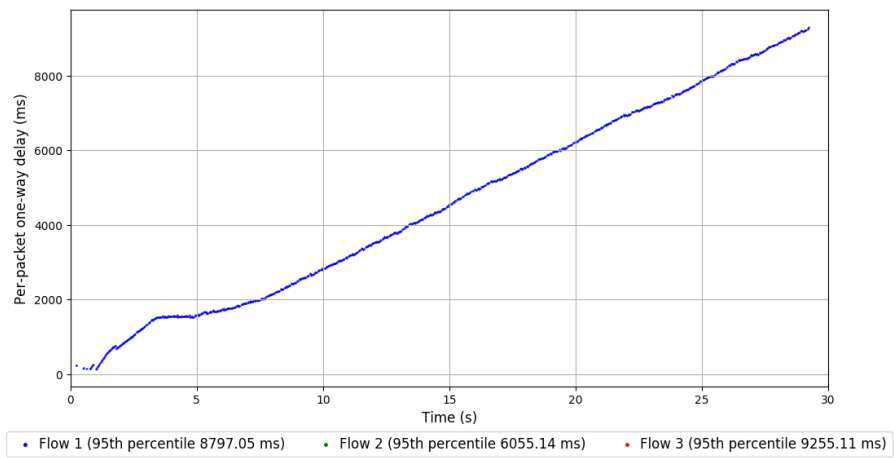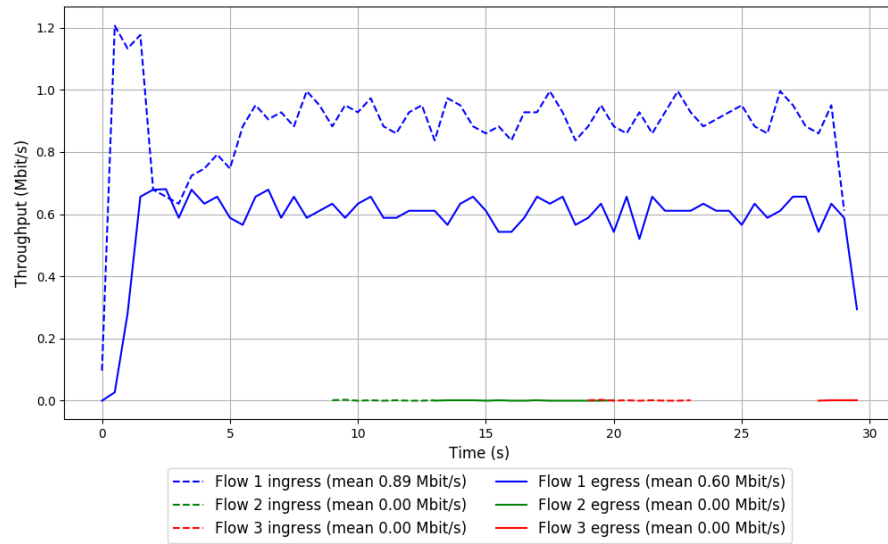
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-05-25 07:49:03
End at: 2018-05-25 07:49:33
Local clock offset: -1.665 ms
Remote clock offset: 4.145 ms


# Below is generated by plot.py at 2018-05-25 10:39:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 8823.125 ms
Loss rate: 30.36%
-- Flow 1:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 8793.719 ms
Loss rate: 30.36%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5863.981 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9196.534 ms
Loss rate: 50.00%
```
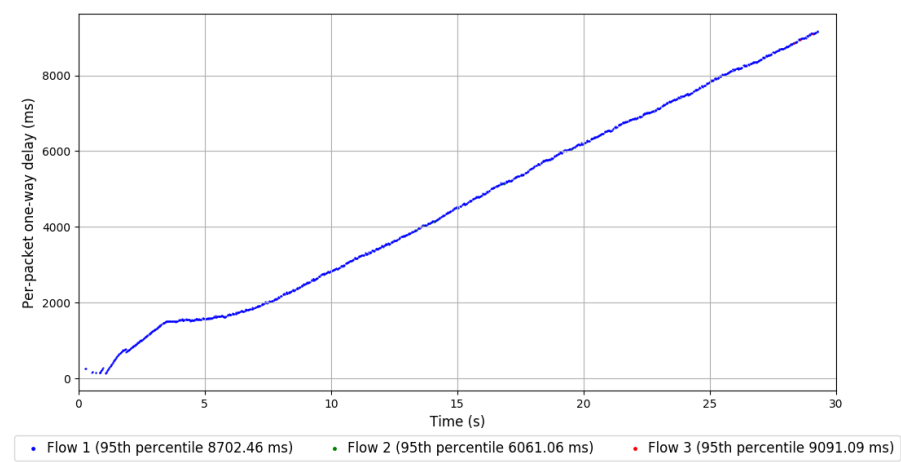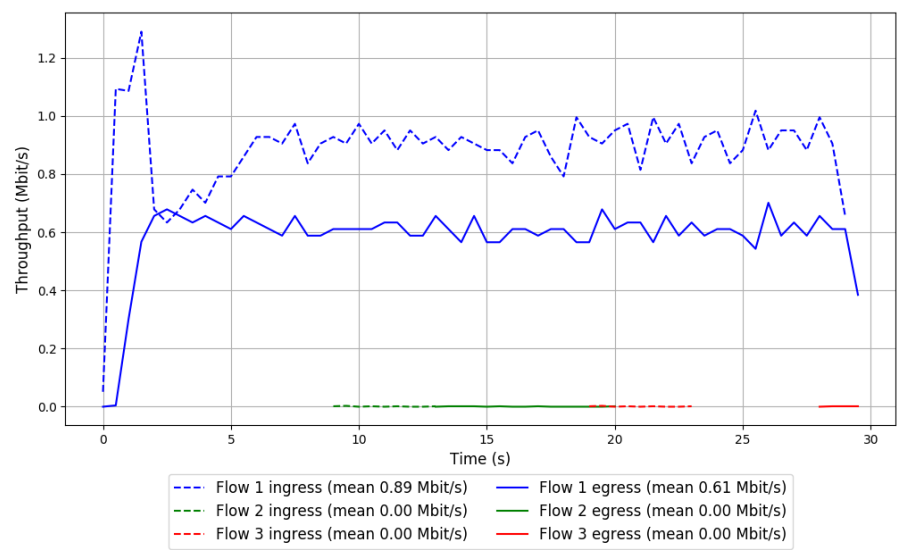
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-05-25 08:08:05
End at: 2018-05-25 08:08:35
Local clock offset: -2.586 ms
Remote clock offset: 8.297 ms


# Below is generated by plot.py at 2018-05-25 10:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 8806.639 ms
Loss rate: 32.80%
-- Flow 1:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 8797.053 ms
Loss rate: 32.80%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 6055.140 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9255.110 ms
Loss rate: 50.00%
```
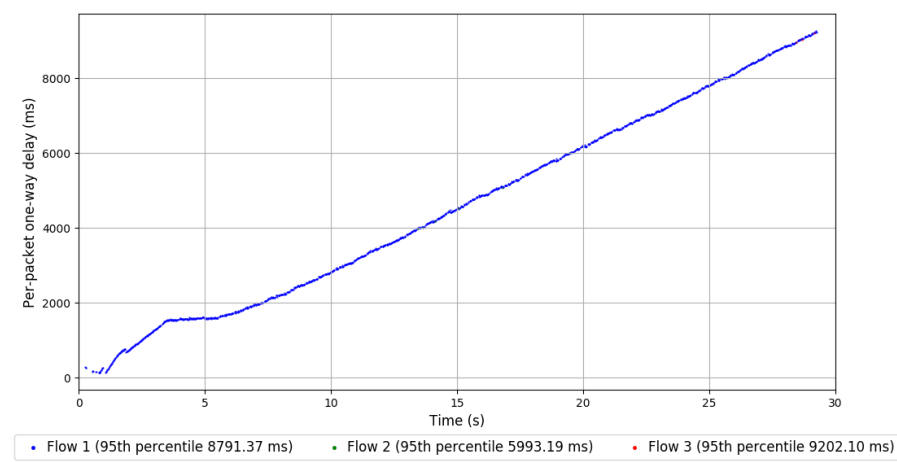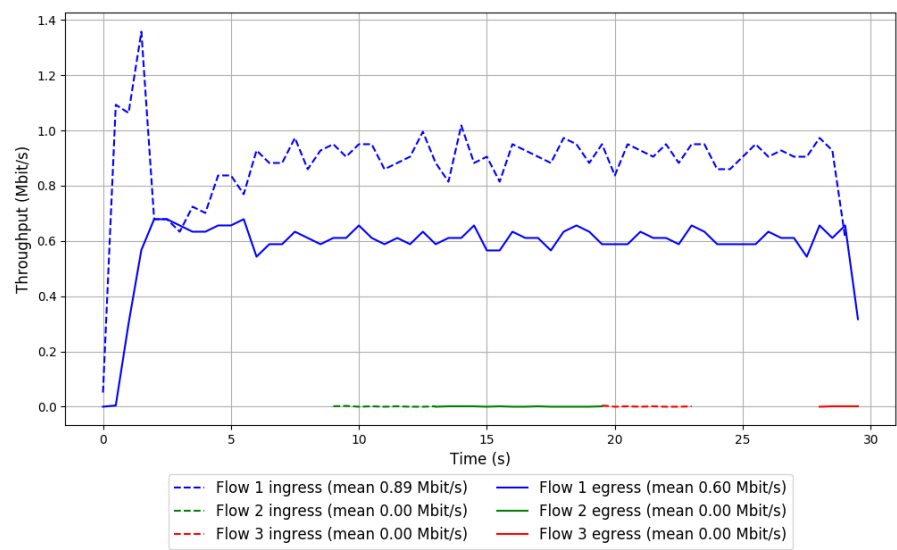
Run 3: Report of QUIC Cubic — Data Link



- - - Flow 1 ingress (mean 0.89 Mbit/s) ——— Flow 1 egress (mean 0.60 Mbit/s)
- - - Flow 2 ingress (mean 0.00 Mbit/s) ——— Flow 2 egress (mean 0.00 Mbit/s)
- - - Flow 3 ingress (mean 0.00 Mbit/s) ——— Flow 3 egress (mean 0.00 Mbit/s)



• Flow 1 (95th percentile 8797.05 ms)　　• Flow 2 (95th percentile 6055.14 ms)　　• Flow 3 (95th percentile 9255.11 ms)

169

```
Run 4: Statistics of QUIC Cubic

Start at: 2018-05-25 08:27:05
End at: 2018-05-25 08:27:35
Local clock offset: -2.786 ms
Remote clock offset: 3.71 ms


# Below is generated by plot.py at 2018-05-25 10:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 8712.810 ms
Loss rate: 32.70%
-- Flow 1:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 8702.459 ms
Loss rate: 32.70%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 6061.057 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9091.092 ms
Loss rate: 50.00%
```
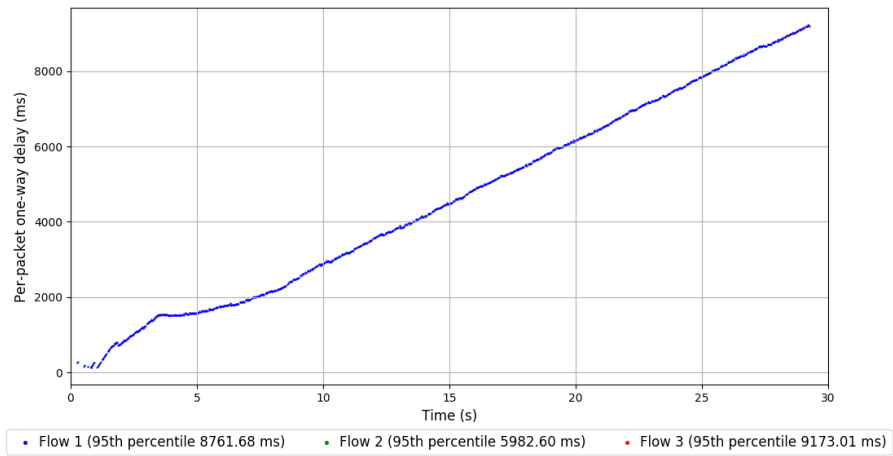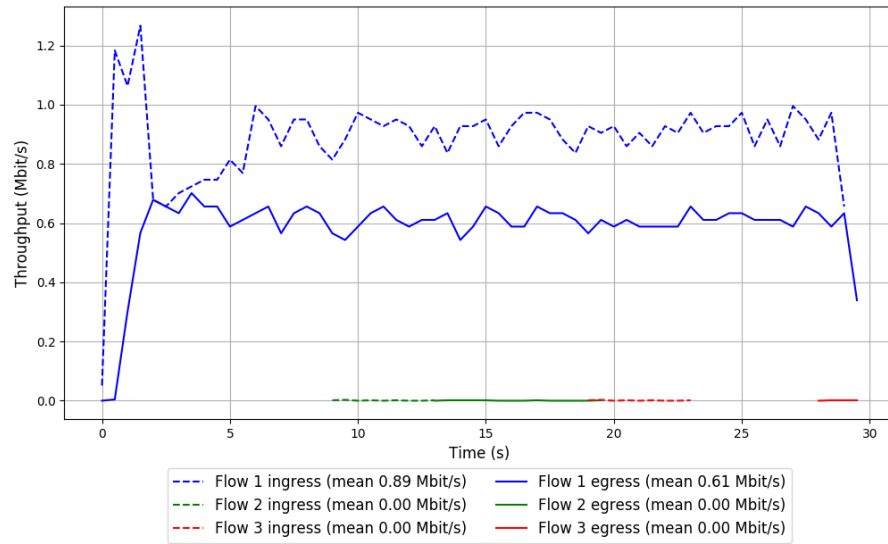
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-05-25 08:46:11
End at: 2018-05-25 08:46:41
Local clock offset: -2.138 ms
Remote clock offset: 8.356 ms


# Below is generated by plot.py at 2018-05-25 10:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 8801.656 ms
Loss rate: 32.74%
-- Flow 1:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 8791.369 ms
Loss rate: 32.75%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5993.191 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9202.104 ms
Loss rate: 50.00%
```
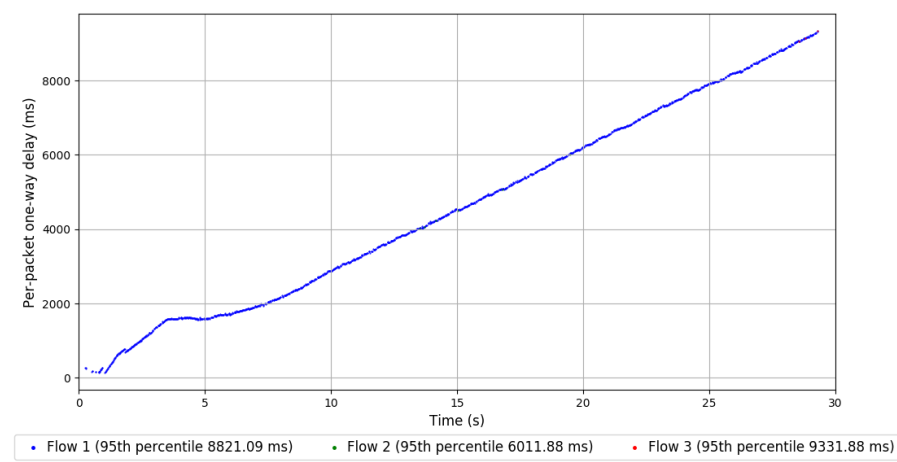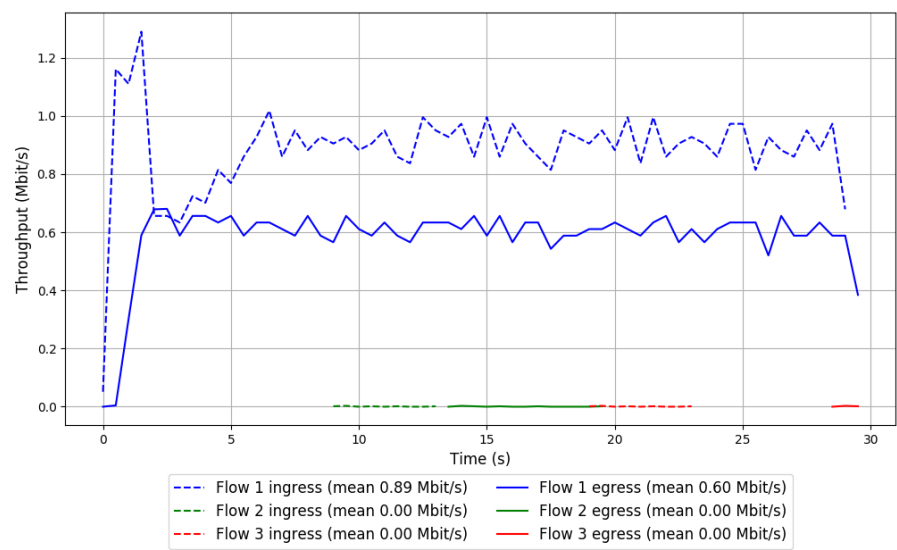
## Run 5: Report of QUIC Cubic — Data Link



- Flow 1 ingress (mean 0.89 Mbit/s) --- Flow 1 egress (mean 0.60 Mbit/s)
- Flow 2 ingress (mean 0.00 Mbit/s) --- Flow 2 egress (mean 0.00 Mbit/s)
- Flow 3 ingress (mean 0.00 Mbit/s) --- Flow 3 egress (mean 0.00 Mbit/s)



- Flow 1 (95th percentile 8791.37 ms)   • Flow 2 (95th percentile 5993.19 ms)   • Flow 3 (95th percentile 9202.10 ms)

```
Run 6: Statistics of QUIC Cubic

Start at: 2018-05-25 09:05:11
End at: 2018-05-25 09:05:41
Local clock offset: -2.631 ms
Remote clock offset: 8.192 ms


# Below is generated by plot.py at 2018-05-25 10:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 8772.058 ms
Loss rate: 32.76%
-- Flow 1:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 8761.679 ms
Loss rate: 32.76%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5982.601 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9173.006 ms
Loss rate: 50.00%
```
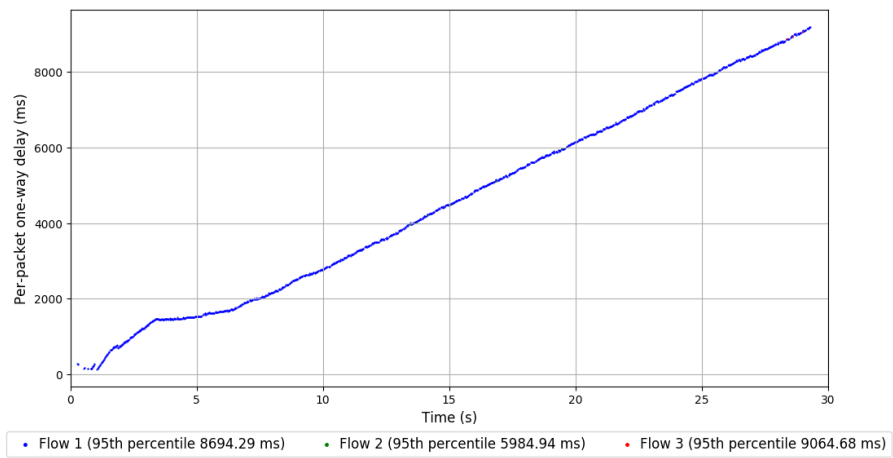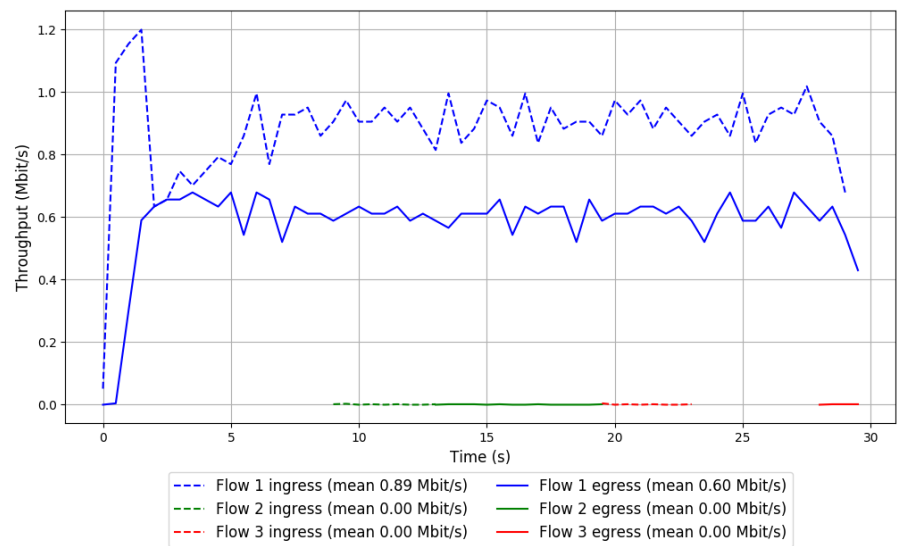
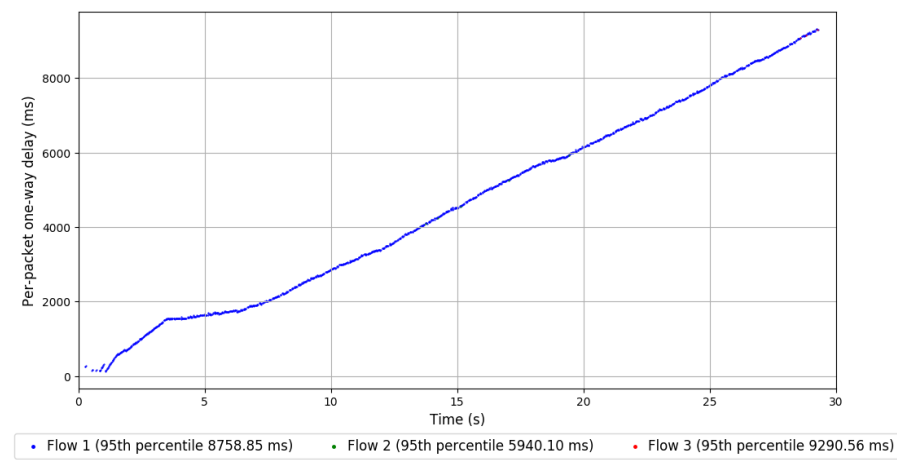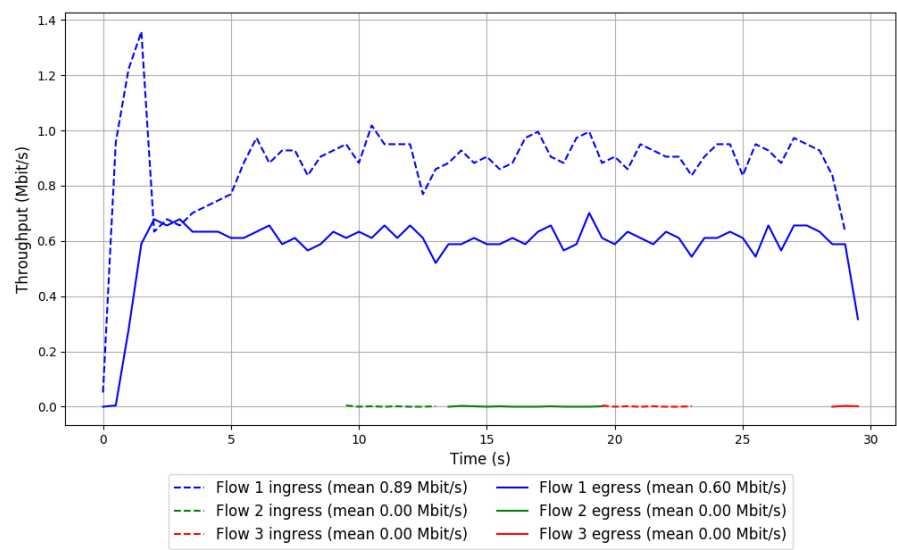# Run 6: Report of QUIC Cubic — Data Link





175

```
Run 7: Statistics of QUIC Cubic

Start at: 2018-05-25 09:24:13
End at: 2018-05-25 09:24:43
Local clock offset: -2.178 ms
Remote clock offset: 3.87 ms


# Below is generated by plot.py at 2018-05-25 10:39:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 8821.901 ms
Loss rate: 32.82%
-- Flow 1:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 8821.094 ms
Loss rate: 32.82%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 6011.884 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9331.883 ms
Loss rate: 50.00%
```

Run 7: Report of QUIC Cubic — Data Link



Flow 1 ingress (mean 0.89 Mbit/s)  Flow 1 egress (mean 0.60 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s)  Flow 2 egress (mean 0.00 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s)  Flow 3 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 8821.09 ms)    Flow 2 (95th percentile 6011.88 ms)    Flow 3 (95th percentile 9331.88 ms)

177

```
Run 8: Statistics of QUIC Cubic

Start at: 2018-05-25 09:43:16
End at: 2018-05-25 09:43:46
Local clock offset: -6.113 ms
Remote clock offset: 2.591 ms


# Below is generated by plot.py at 2018-05-25 10:39:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 8713.924 ms
Loss rate: 32.64%
-- Flow 1:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 8694.290 ms
Loss rate: 32.64%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5984.937 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9064.679 ms
Loss rate: 50.00%
```
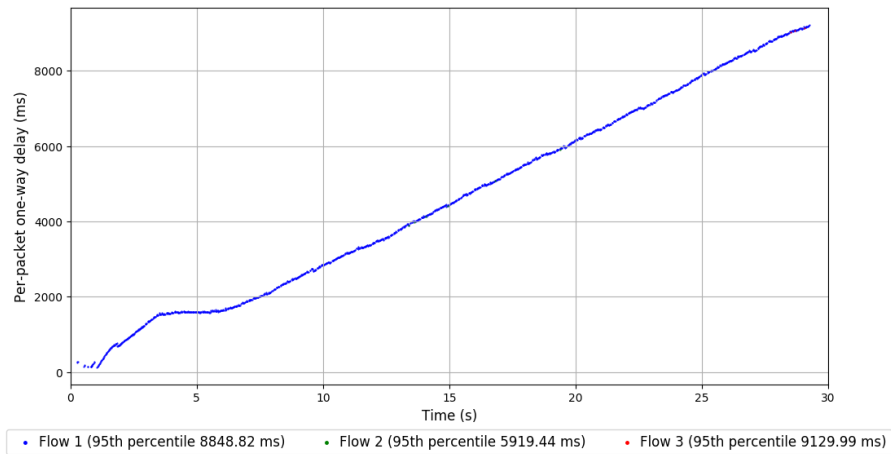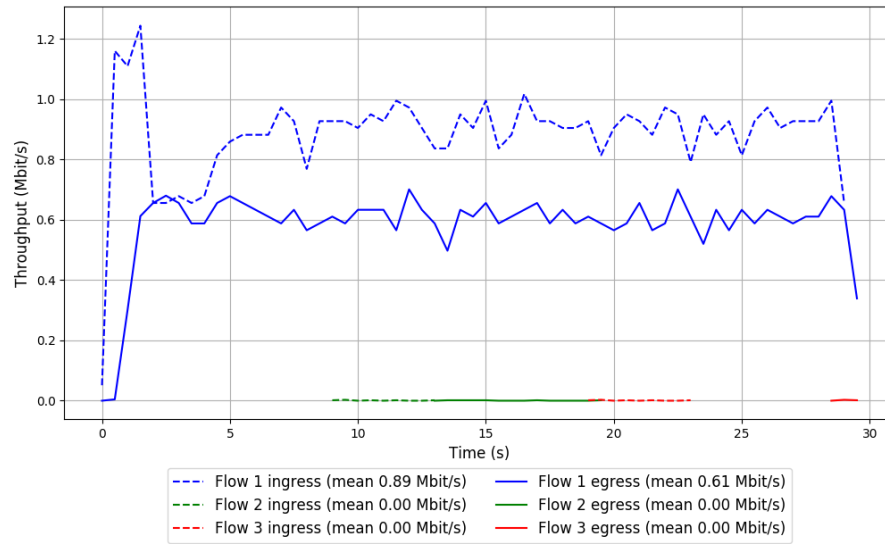
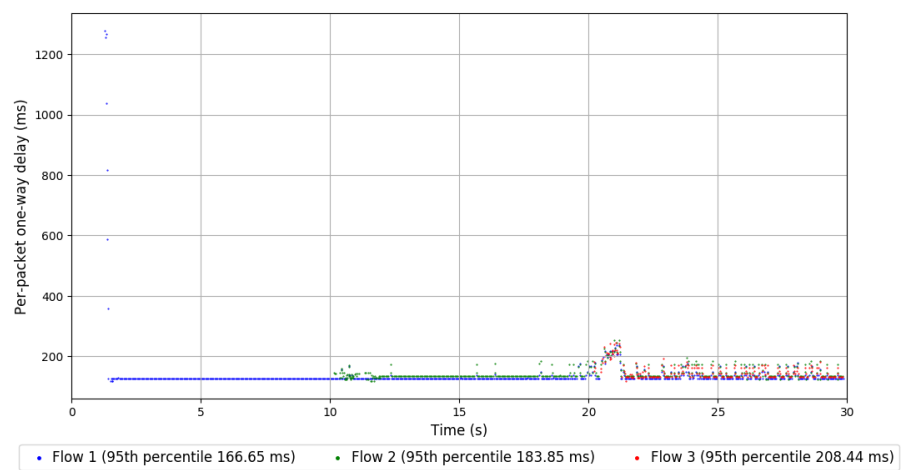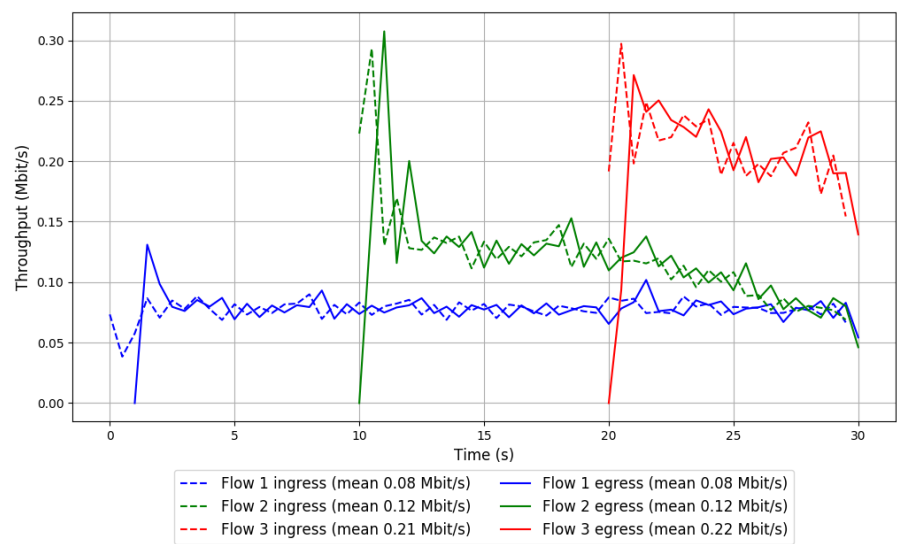## Run 8: Report of QUIC Cubic — Data Link



Flow 1 ingress (mean 0.89 Mbit/s)    Flow 1 egress (mean 0.60 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s)    Flow 2 egress (mean 0.00 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s)    Flow 3 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 8694.29 ms)    Flow 2 (95th percentile 5984.94 ms)    Flow 3 (95th percentile 9064.68 ms)

```
Run 9: Statistics of QUIC Cubic

Start at: 2018-05-25 10:02:21
End at: 2018-05-25 10:02:51
Local clock offset: -4.317 ms
Remote clock offset: 14.875 ms


# Below is generated by plot.py at 2018-05-25 10:39:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 8778.821 ms
Loss rate: 32.77%
-- Flow 1:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 8758.846 ms
Loss rate: 32.77%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5940.103 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9290.564 ms
Loss rate: 50.00%
```
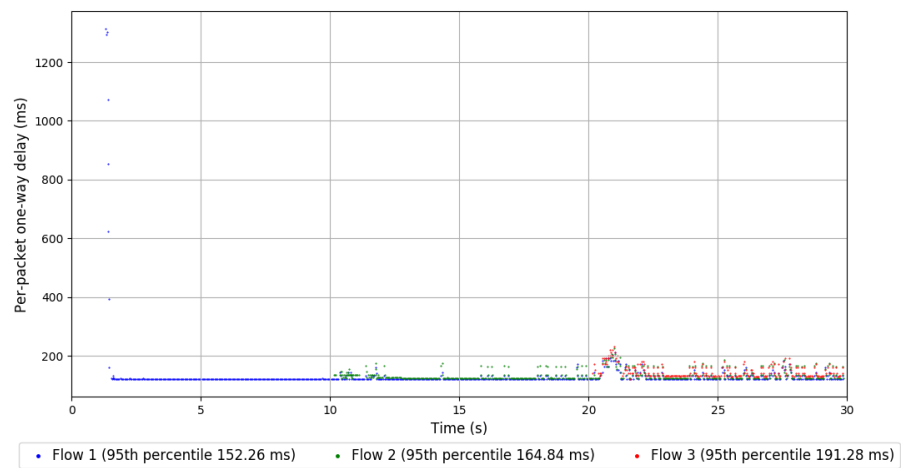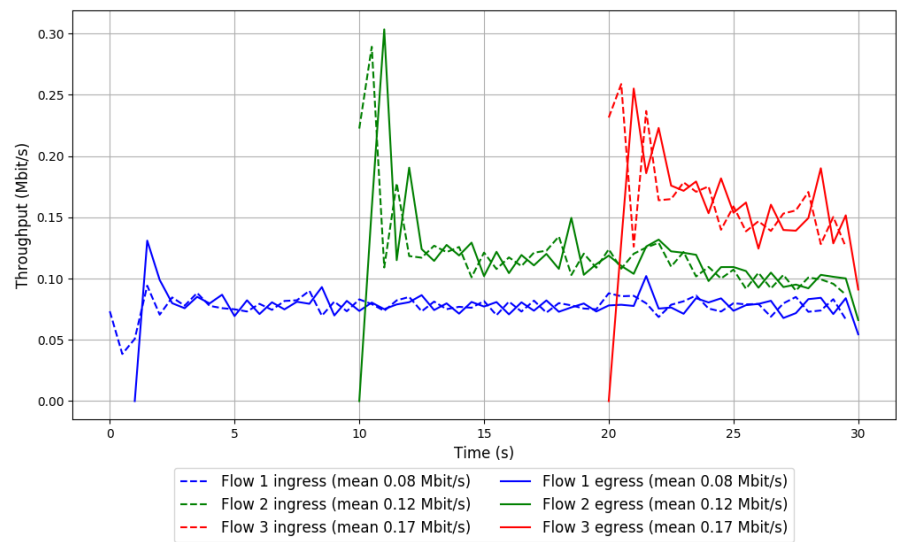
Run 9: Report of QUIC Cubic — Data Link



Flow 1 ingress (mean 0.89 Mbit/s)    Flow 1 egress (mean 0.60 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s)    Flow 2 egress (mean 0.00 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s)    Flow 3 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 8758.85 ms)    Flow 2 (95th percentile 5940.10 ms)    Flow 3 (95th percentile 9290.56 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2018-05-25 10:21:24
End at: 2018-05-25 10:21:54
Local clock offset: -2.658 ms
Remote clock offset: 18.06 ms


# Below is generated by plot.py at 2018-05-25 10:39:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 8858.854 ms
Loss rate: 32.73%
-- Flow 1:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 8848.819 ms
Loss rate: 32.73%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5919.435 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9129.993 ms
Loss rate: 50.00%
```

Run 10: Report of QUIC Cubic — Data Link
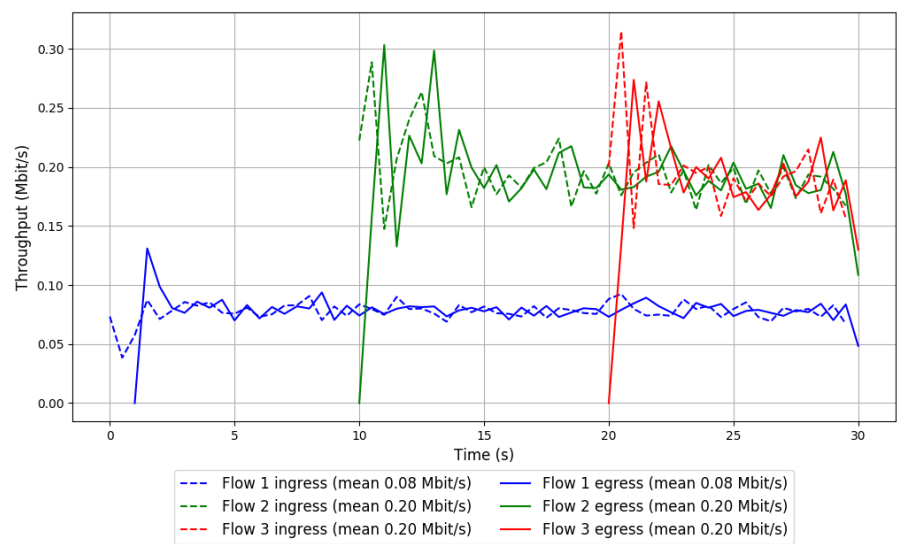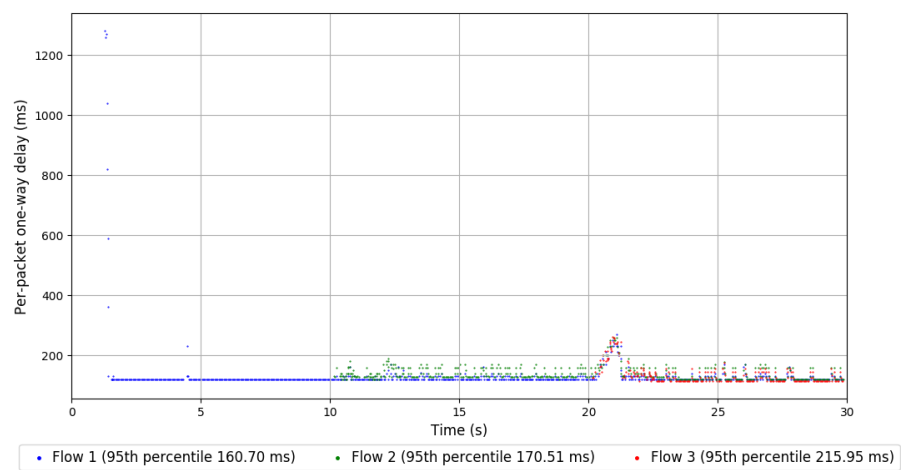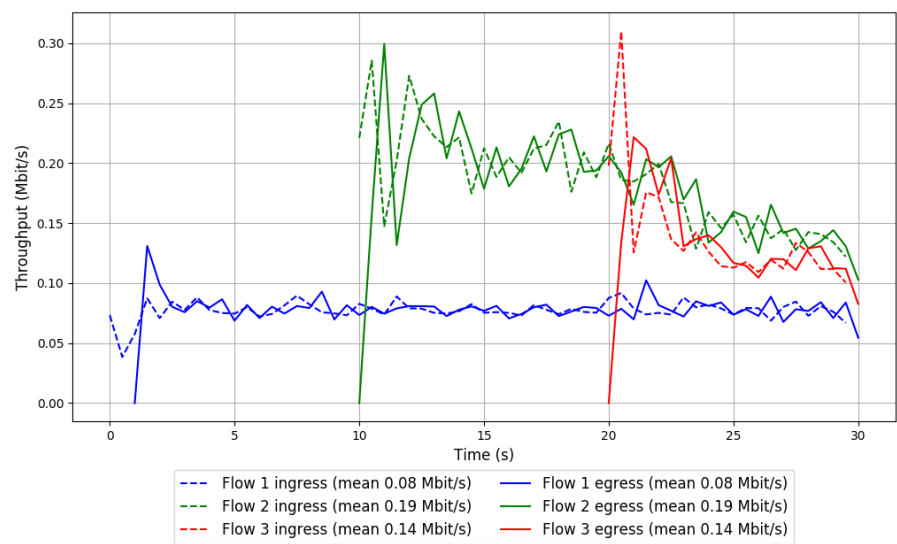
```
Run 1: Statistics of SCReAM

Start at: 2018-05-25 07:38:20
End at: 2018-05-25 07:38:50
Local clock offset: -1.521 ms
Remote clock offset: 4.427 ms

# Below is generated by plot.py at 2018-05-25 10:39:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 183.828 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 166.654 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 183.848 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 208.444 ms
Loss rate: 1.79%
```

# Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-05-25 07:57:21
End at: 2018-05-25 07:57:51
Local clock offset: -1.84 ms
Remote clock offset: 9.038 ms


# Below is generated by plot.py at 2018-05-25 10:39:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 171.301 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 152.258 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 164.837 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 191.279 ms
Loss rate: 2.04%
```
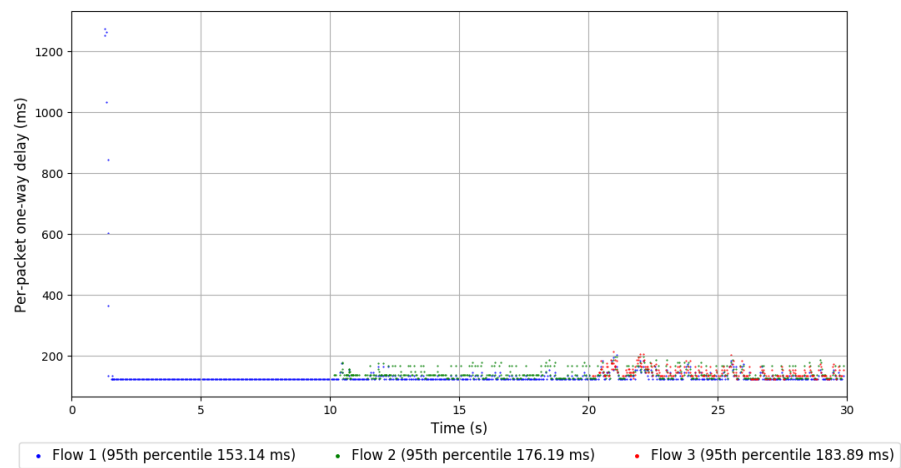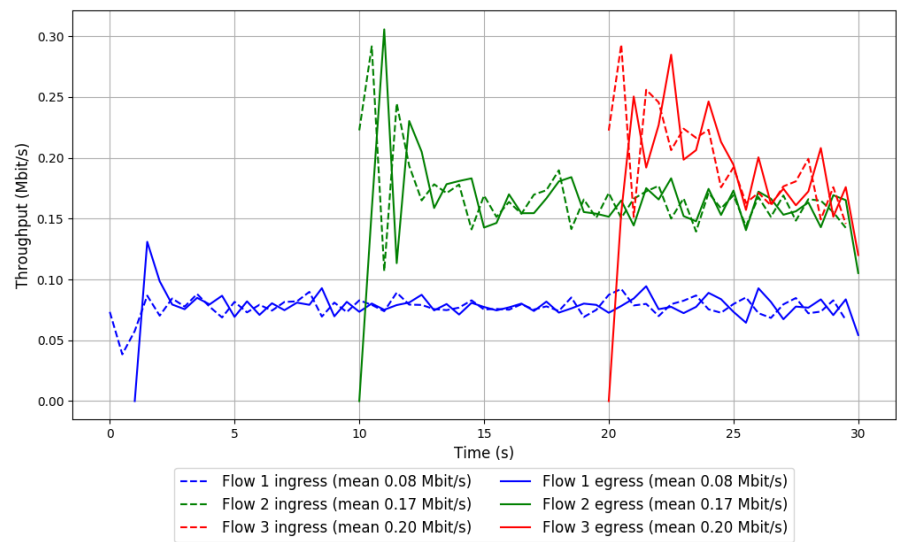
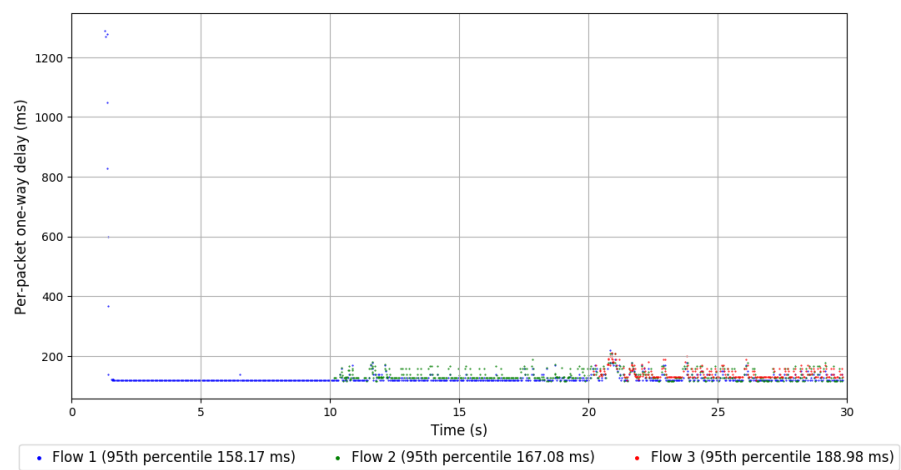# Run 2: Report of SCReAM — Data Link





187

```
Run 3: Statistics of SCReAM

Start at: 2018-05-25 08:16:23
End at: 2018-05-25 08:16:53
Local clock offset: -2.818 ms
Remote clock offset: 3.875 ms


# Below is generated by plot.py at 2018-05-25 10:39:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 172.196 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 153.004 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 172.187 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 182.437 ms
Loss rate: 2.15%
```
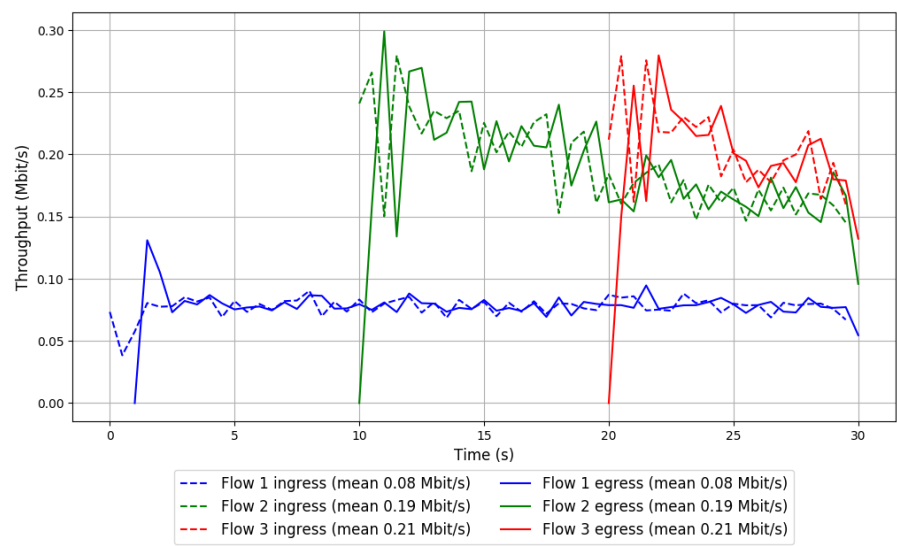
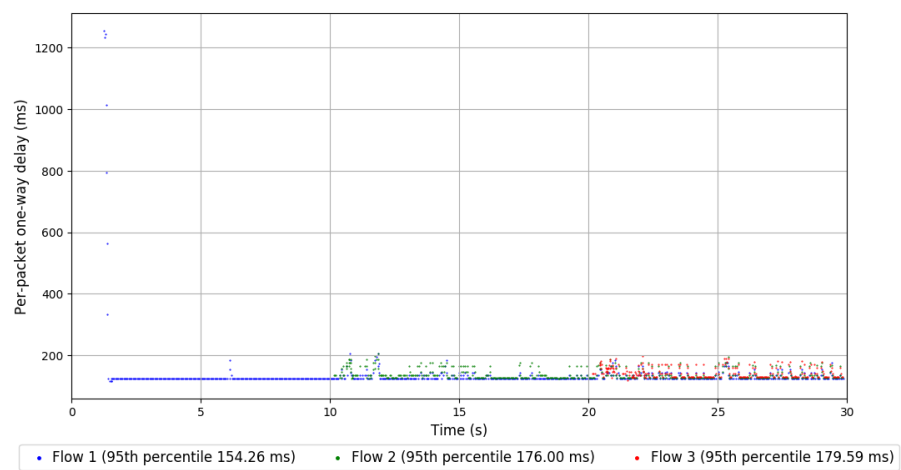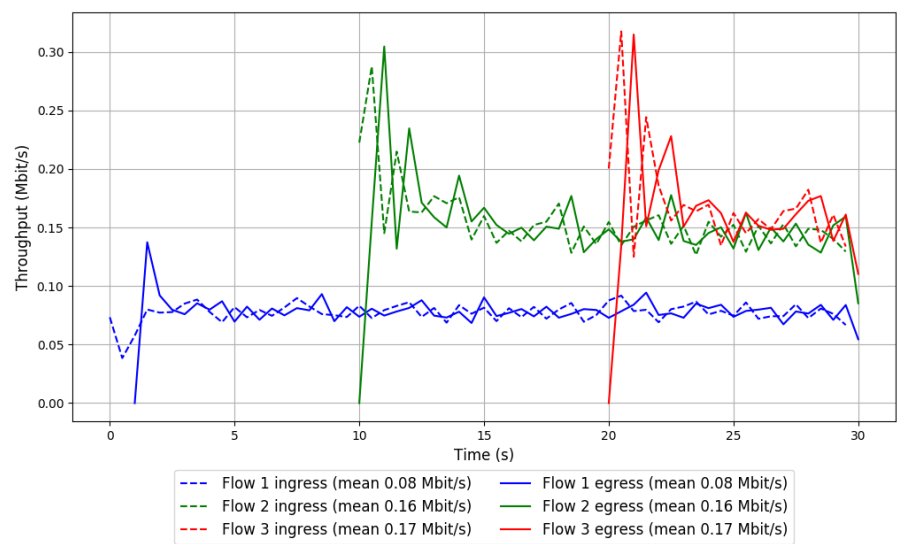# Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-05-25 08:35:23
End at: 2018-05-25 08:35:53
Local clock offset: -2.363 ms
Remote clock offset: 7.485 ms


# Below is generated by plot.py at 2018-05-25 10:39:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 175.279 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 160.704 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 170.512 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 215.949 ms
Loss rate: 1.62%
```

# Run 4: Report of SCReAM — Data Link





191

```
Run 5: Statistics of SCReAM

Start at: 2018-05-25 08:54:29
End at: 2018-05-25 08:54:59
Local clock offset: -2.034 ms
Remote clock offset: 3.946 ms


# Below is generated by plot.py at 2018-05-25 10:39:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 173.174 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 153.144 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 176.193 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 183.893 ms
Loss rate: 1.98%
```
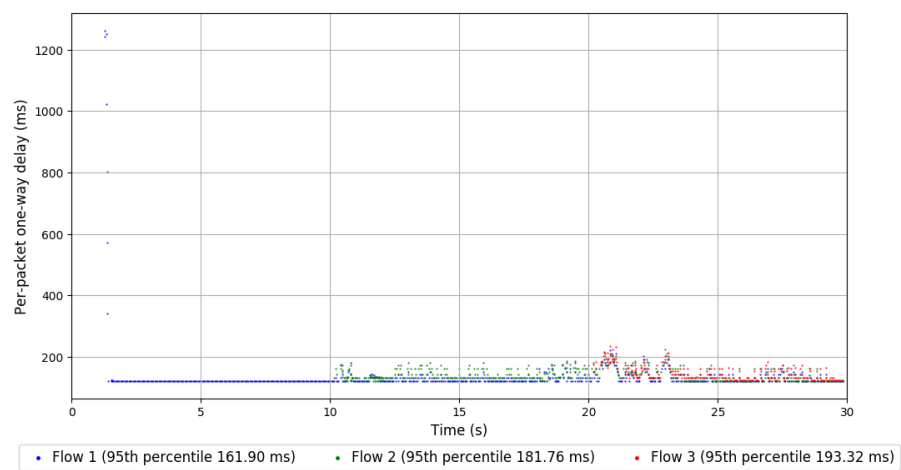
## Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2018-05-25 09:13:30
End at: 2018-05-25 09:14:00
Local clock offset: -2.052 ms
Remote clock offset: 8.53 ms

# Below is generated by plot.py at 2018-05-25 10:39:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 168.141 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 158.170 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 167.083 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 188.984 ms
Loss rate: 2.08%
```
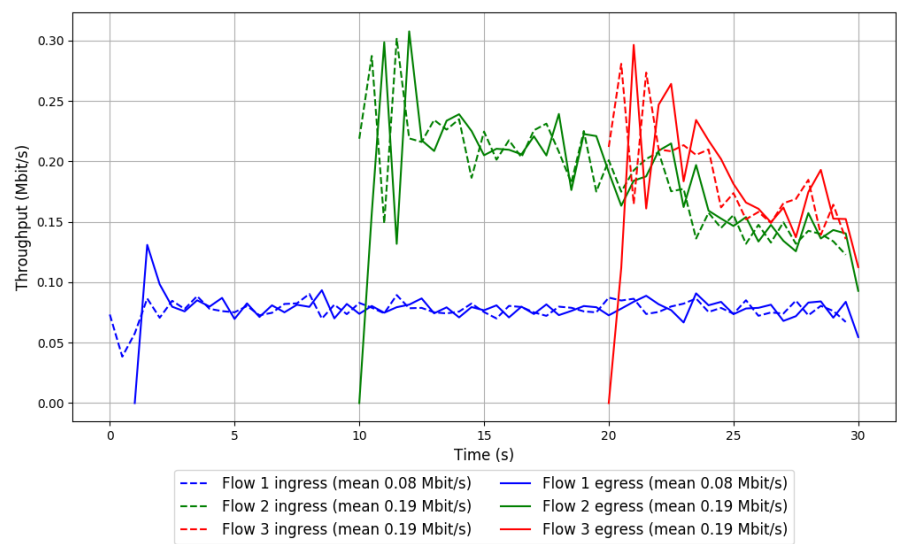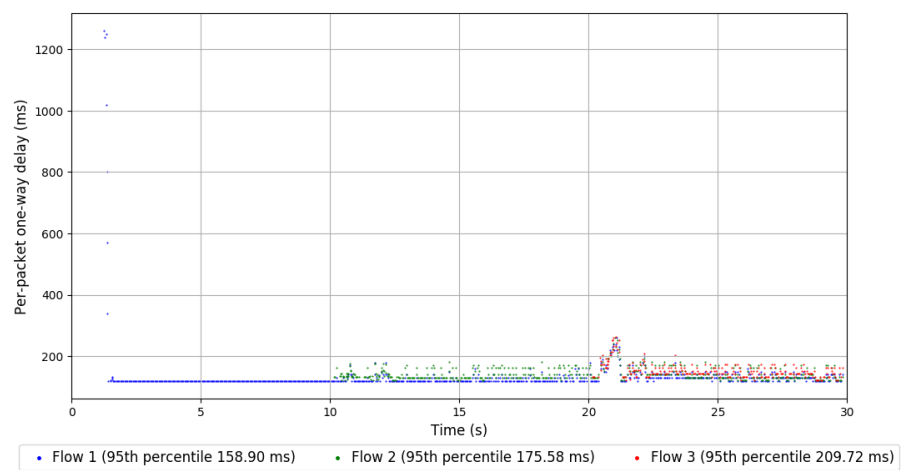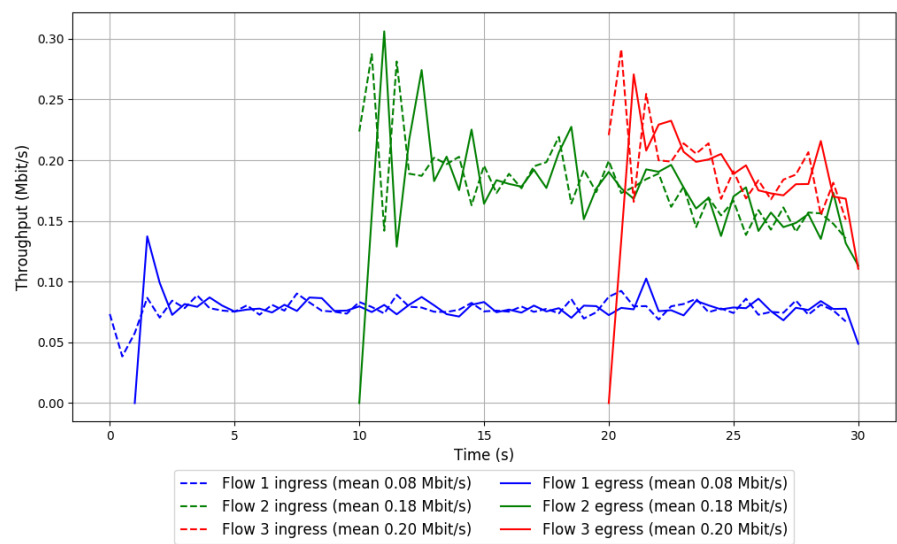
# Run 6: Report of SCReAM — Data Link





195

```
Run 7: Statistics of SCReAM

Start at: 2018-05-25 09:32:32
End at: 2018-05-25 09:33:02
Local clock offset: -4.432 ms
Remote clock offset: 7.382 ms

# Below is generated by plot.py at 2018-05-25 10:39:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 169.819 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 154.258 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 175.996 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 179.594 ms
Loss rate: 2.08%
```
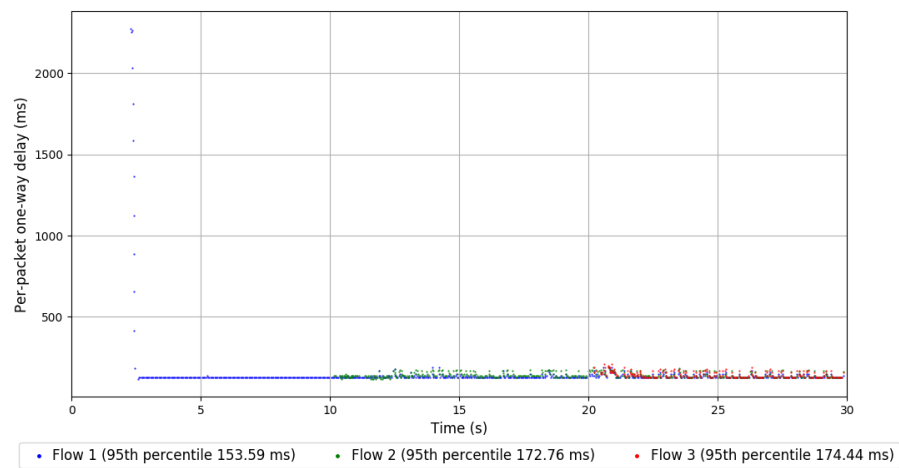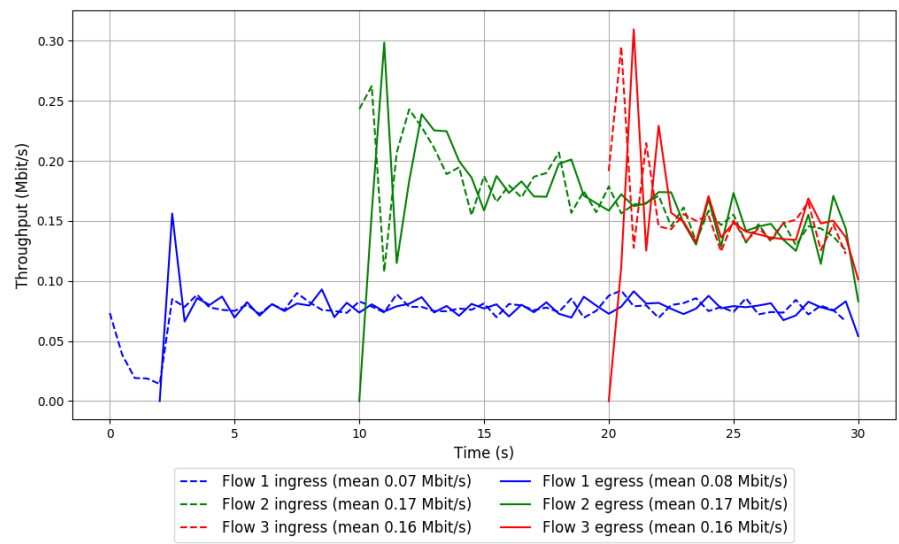
## Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2018-05-25 09:51:34
End at: 2018-05-25 09:52:04
Local clock offset: -6.772 ms
Remote clock offset: 7.608 ms


# Below is generated by plot.py at 2018-05-25 10:39:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 181.795 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 161.901 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 181.764 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 193.324 ms
Loss rate: 1.93%
```

## Run 8: Report of SCReAM — Data Link

```
Run 9: Statistics of SCReAM

Start at: 2018-05-25 10:10:40
End at: 2018-05-25 10:11:10
Local clock offset: -2.696 ms
Remote clock offset: 12.601 ms


# Below is generated by plot.py at 2018-05-25 10:39:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 179.528 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 158.900 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 175.577 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 209.719 ms
Loss rate: 2.42%
```
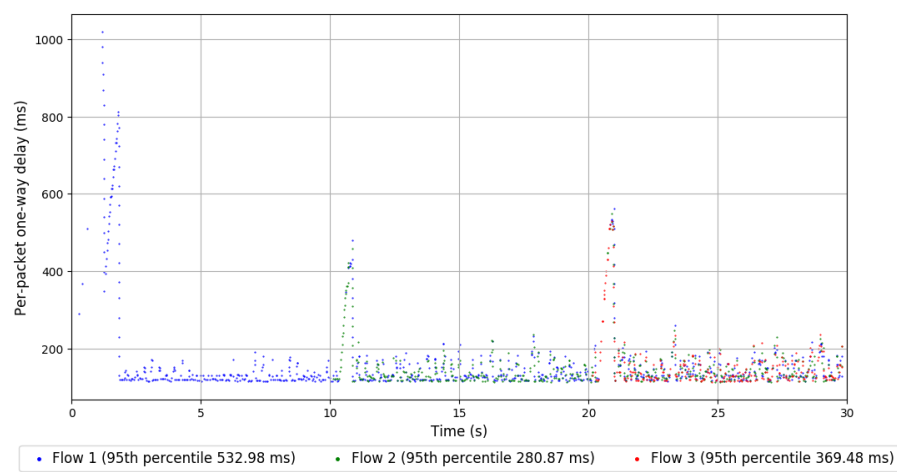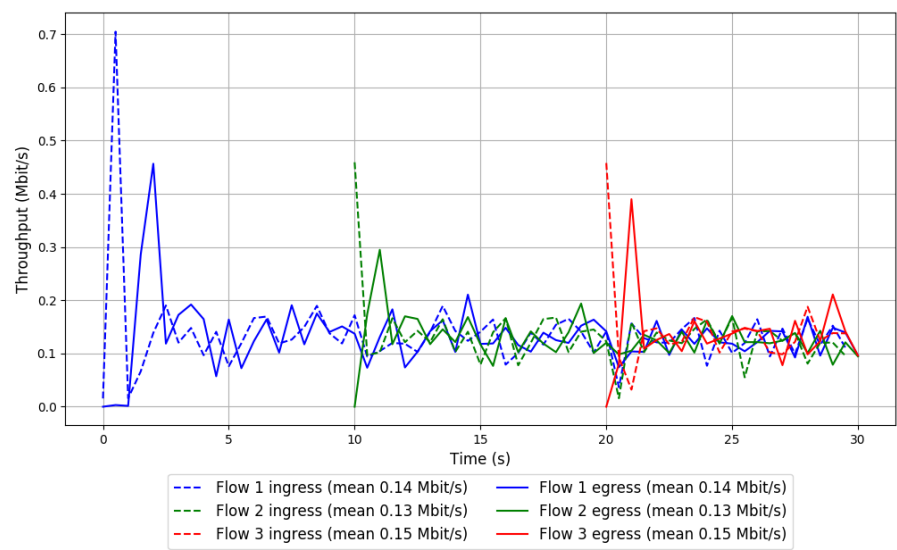
# Run 9: Report of SCReAM — Data Link





201

```
Run 10: Statistics of SCReAM

Start at: 2018-05-25 10:29:42
End at: 2018-05-25 10:30:12
Local clock offset: -2.521 ms
Remote clock offset: 18.396 ms


# Below is generated by plot.py at 2018-05-25 10:39:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 165.452 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 153.594 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 172.763 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 174.445 ms
Loss rate: 2.09%
```
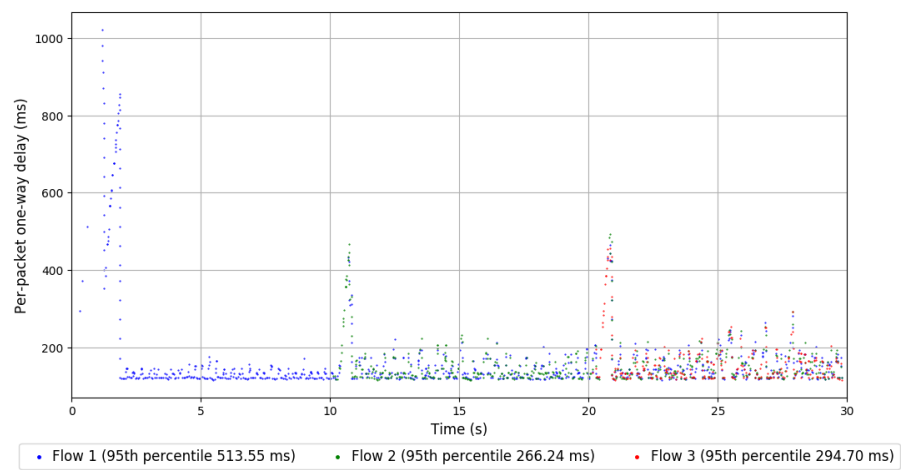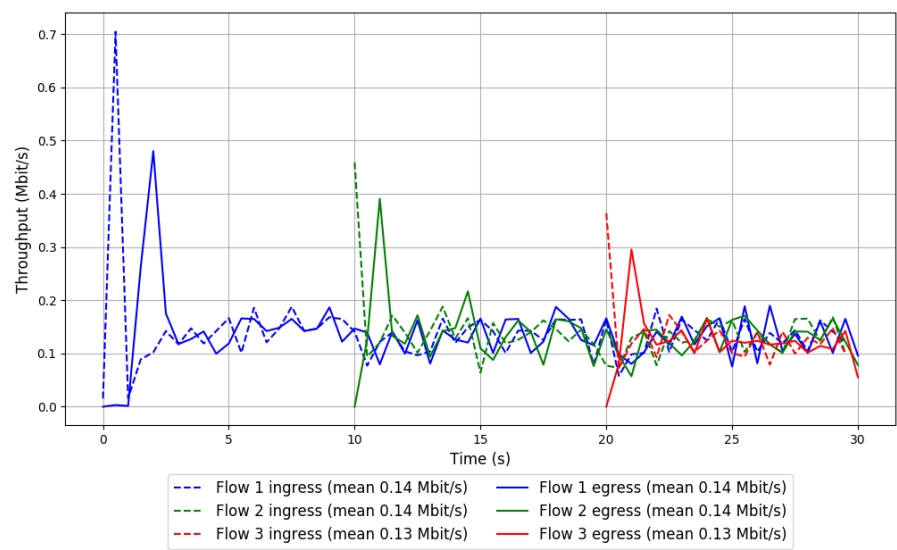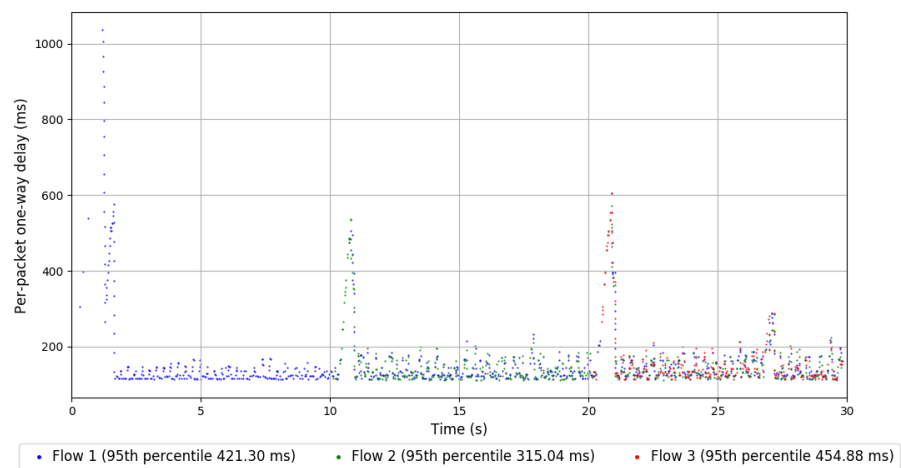
Run 10: Report of SCReAM — Data Link





203

Run 1: Statistics of Sprout

Start at: 2018-05-25 07:39:31
End at: 2018-05-25 07:40:01
Local clock offset: -1.557 ms
Remote clock offset: 7.48 ms


# Below is generated by plot.py at 2018-05-25 10:39:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 420.995 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 532.983 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 280.865 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 369.477 ms
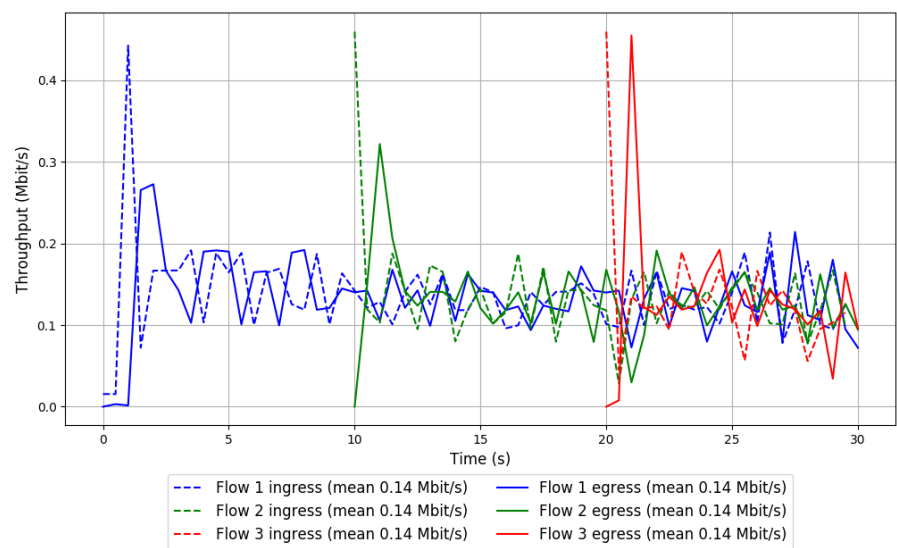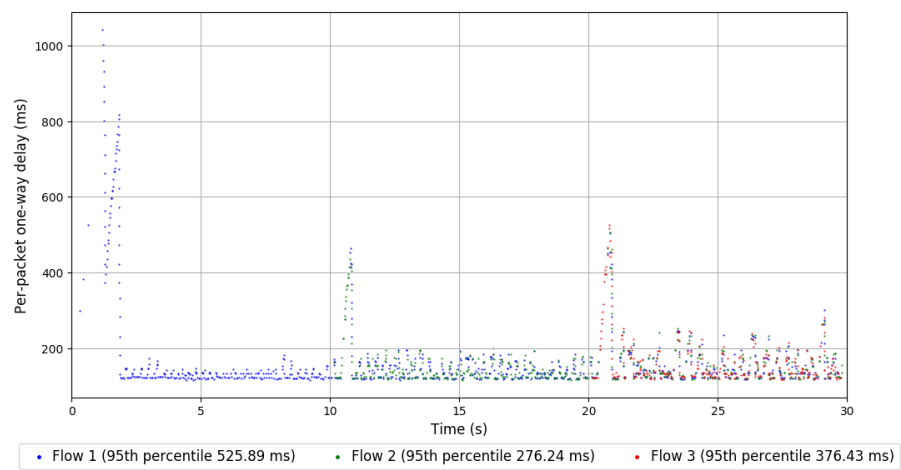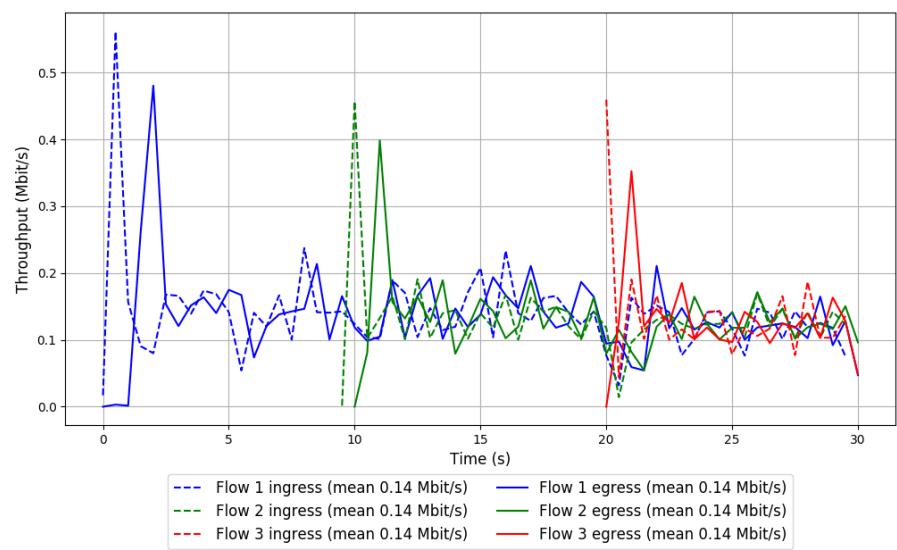Loss rate: 1.56%

Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-05-25 07:58:33
End at: 2018-05-25 07:59:03
Local clock offset: -2.015 ms
Remote clock offset: 5.237 ms


# Below is generated by plot.py at 2018-05-25 10:39:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 386.071 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 513.551 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 266.240 ms
Loss rate: 1.70%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 294.702 ms
Loss rate: 3.56%
```
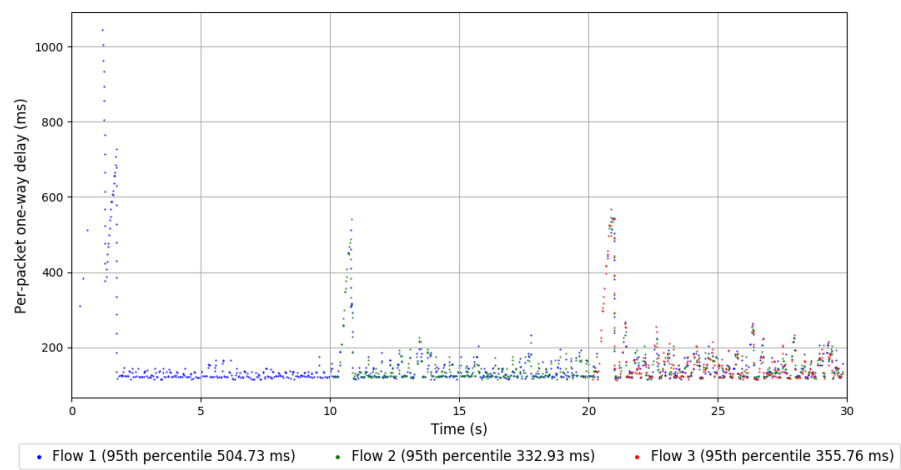
Run 2: Report of Sprout — Data Link





207

```
Run 3: Statistics of Sprout

Start at: 2018-05-25 08:17:34
End at: 2018-05-25 08:18:04
Local clock offset: -2.939 ms
Remote clock offset: 8.669 ms


# Below is generated by plot.py at 2018-05-25 10:39:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 395.341 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 421.303 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 315.040 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 454.877 ms
Loss rate: 0.90%
```
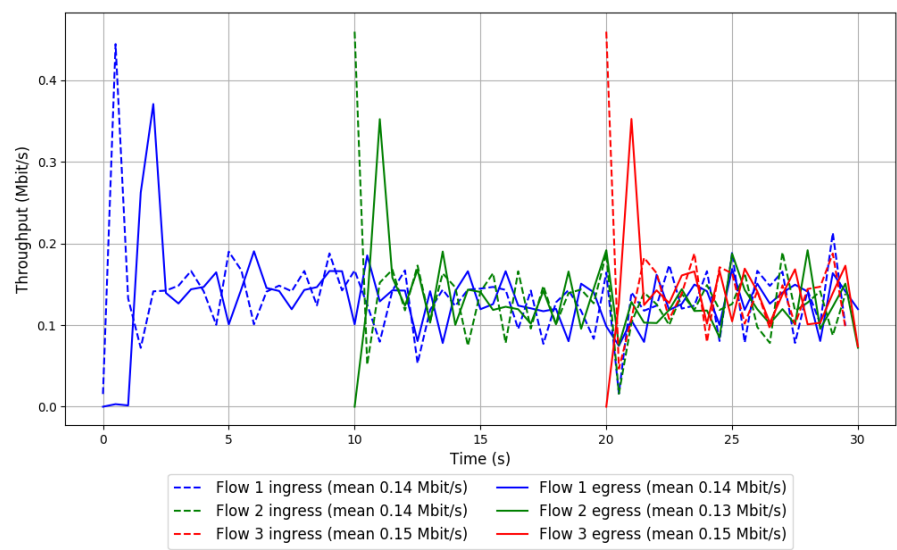
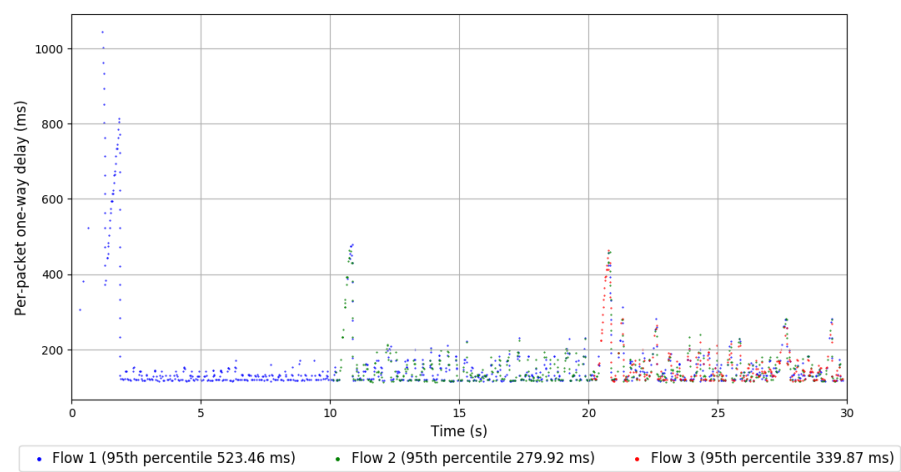# Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-05-25 08:36:35
End at: 2018-05-25 08:37:05
Local clock offset: -2.333 ms
Remote clock offset: 3.669 ms


# Below is generated by plot.py at 2018-05-25 10:39:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 406.252 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 525.895 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 276.243 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 376.434 ms
Loss rate: 3.35%
```
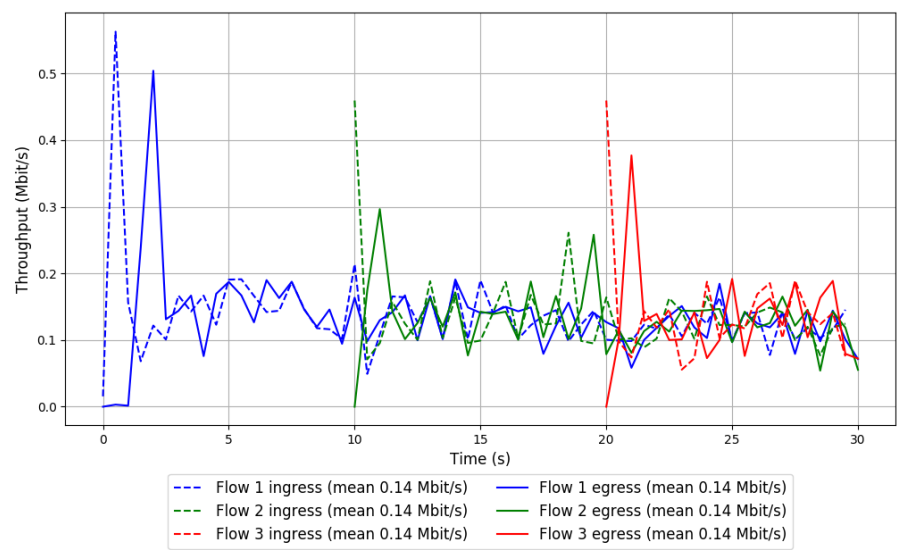
Run 4: Report of Sprout — Data Link





211

```
Run 5: Statistics of Sprout

Start at: 2018-05-25 08:55:40
End at: 2018-05-25 08:56:10
Local clock offset: -2.047 ms
Remote clock offset: 8.779 ms


# Below is generated by plot.py at 2018-05-25 10:39:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 429.470 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 504.731 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 332.932 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 355.765 ms
Loss rate: 3.05%
```
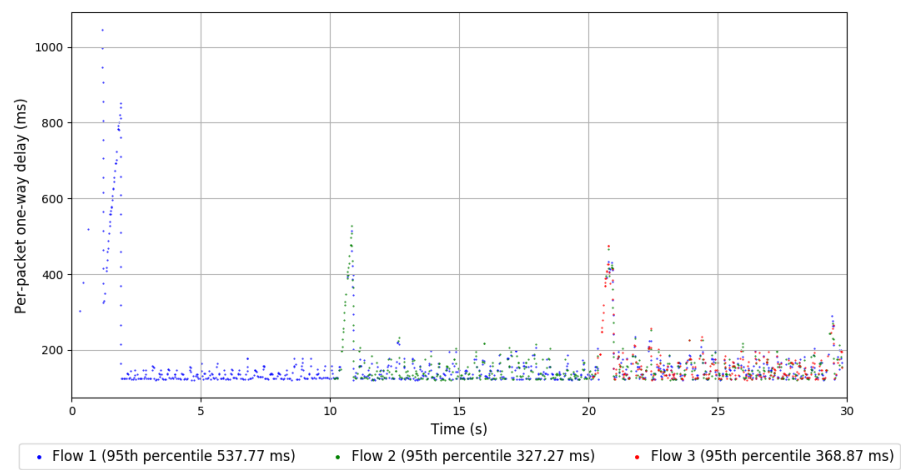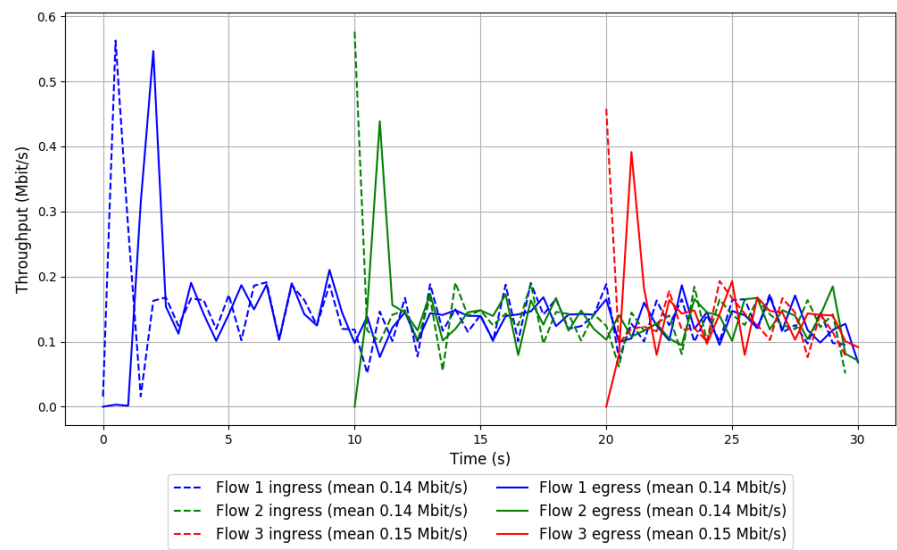
# Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2018-05-25 09:14:41
End at: 2018-05-25 09:15:11
Local clock offset: -2.056 ms
Remote clock offset: 9.227 ms


# Below is generated by plot.py at 2018-05-25 10:39:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 406.958 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 523.459 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 279.920 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 339.868 ms
Loss rate: 2.45%
```
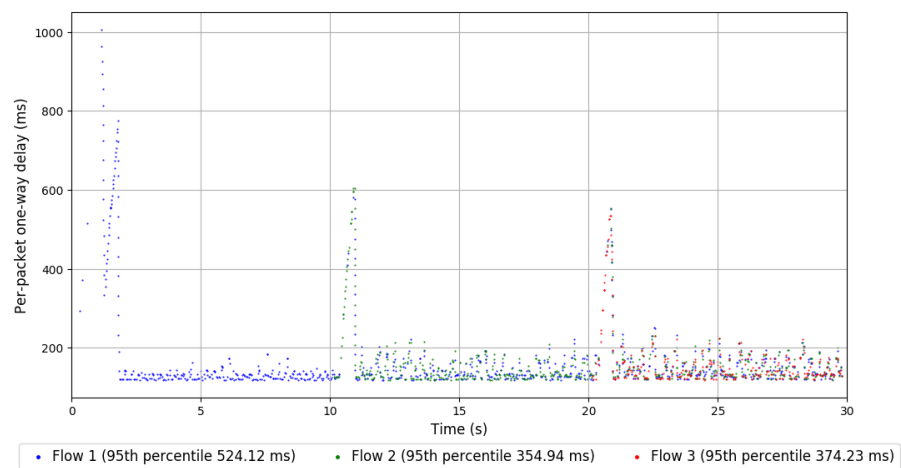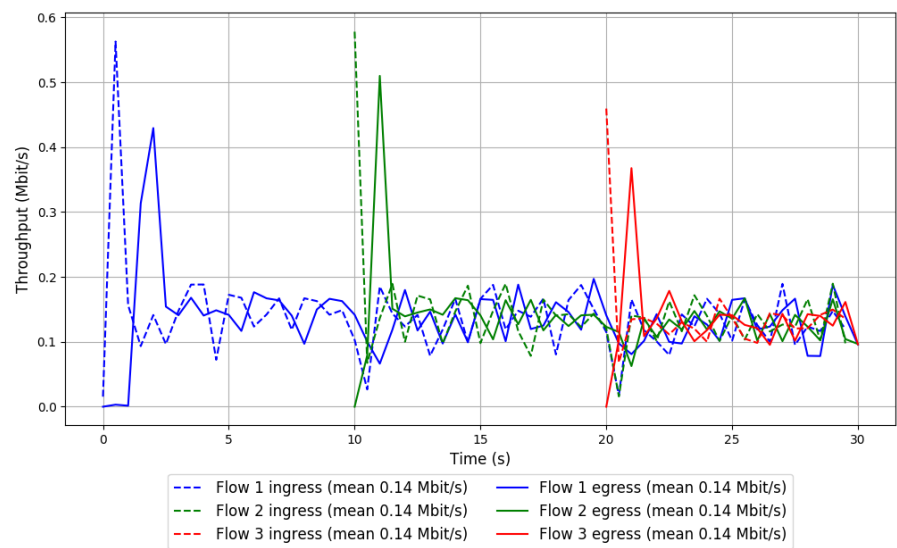
# Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2018-05-25 09:33:44
End at: 2018-05-25 09:34:14
Local clock offset: -4.663 ms
Remote clock offset: 2.658 ms


# Below is generated by plot.py at 2018-05-25 10:39:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 414.777 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 537.774 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 327.268 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 368.867 ms
Loss rate: 0.22%
```
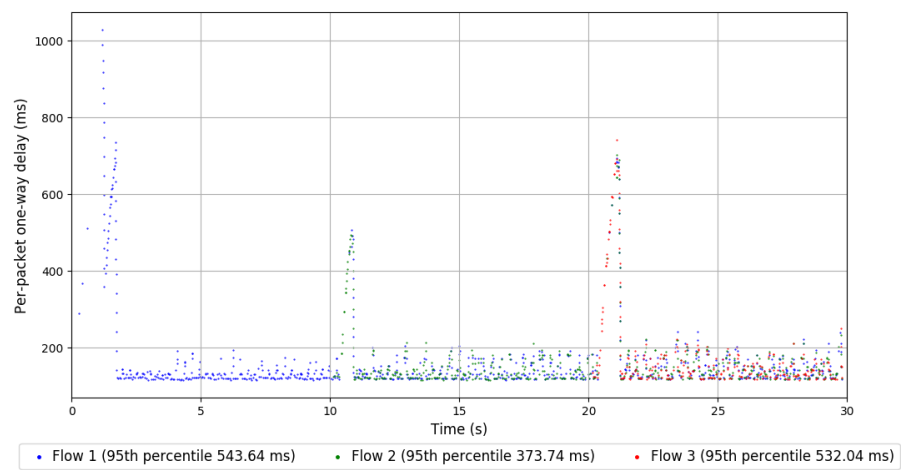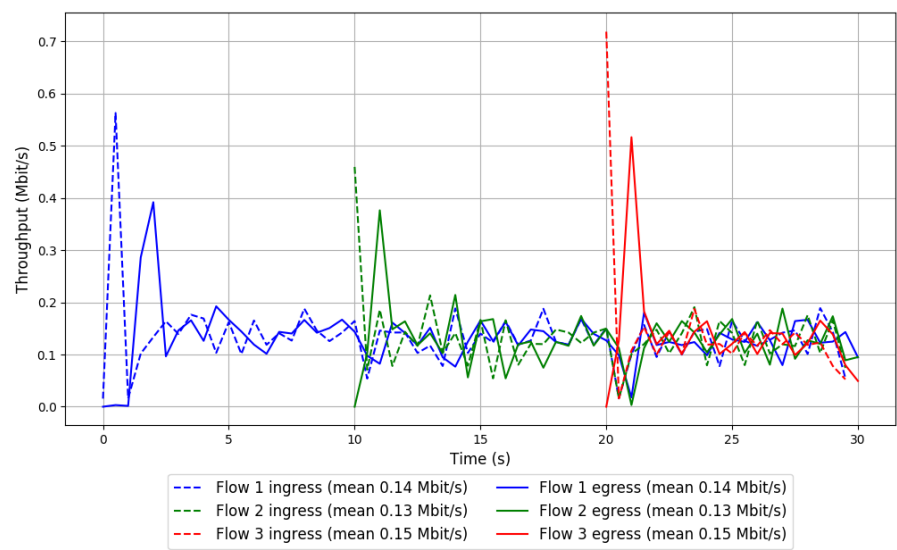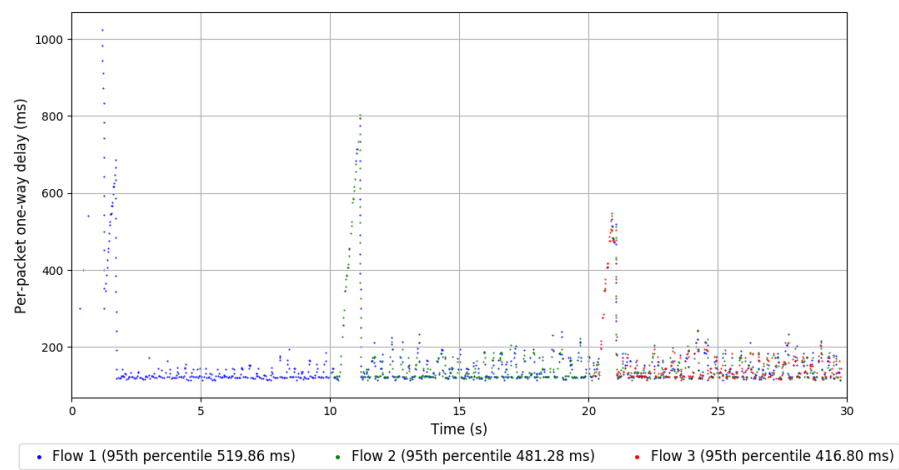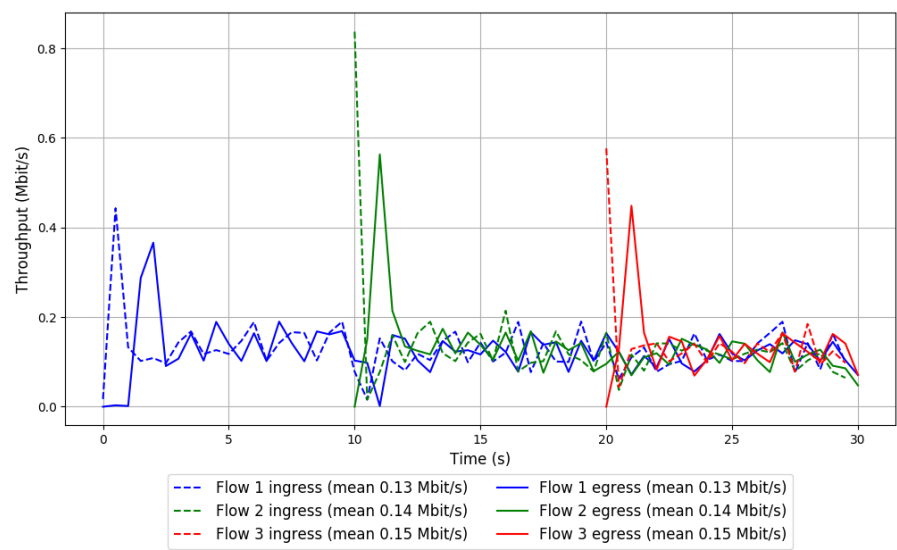
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2018-05-25 09:52:48
End at: 2018-05-25 09:53:18
Local clock offset: -6.925 ms
Remote clock offset: 8.103 ms


# Below is generated by plot.py at 2018-05-25 10:39:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 444.249 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 524.123 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 354.945 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 374.233 ms
Loss rate: 2.43%
```

# Run 8: Report of Sprout — Data Link





219

```
Run 9: Statistics of Sprout

Start at: 2018-05-25 10:11:52
End at: 2018-05-25 10:12:22
Local clock offset: -3.336 ms
Remote clock offset: 15.783 ms


# Below is generated by plot.py at 2018-05-25 10:39:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 491.375 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 543.643 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 373.743 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 532.038 ms
Loss rate: 0.22%
```

Run 9: Report of Sprout — Data Link





221

```
Run 10: Statistics of Sprout

Start at: 2018-05-25 10:30:54
End at: 2018-05-25 10:31:24
Local clock offset: -3.359 ms
Remote clock offset: 18.487 ms


# Below is generated by plot.py at 2018-05-25 10:39:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 483.845 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 519.863 ms
Loss rate: 1.24%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 481.276 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 416.797 ms
Loss rate: 1.05%
```
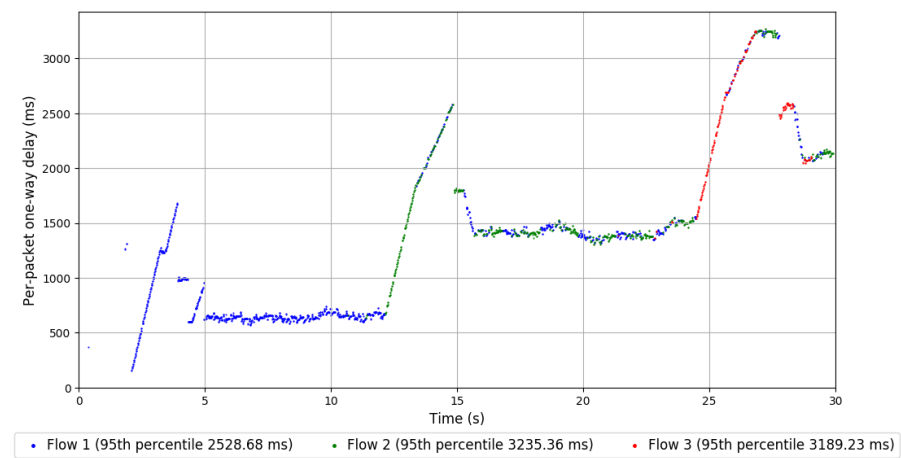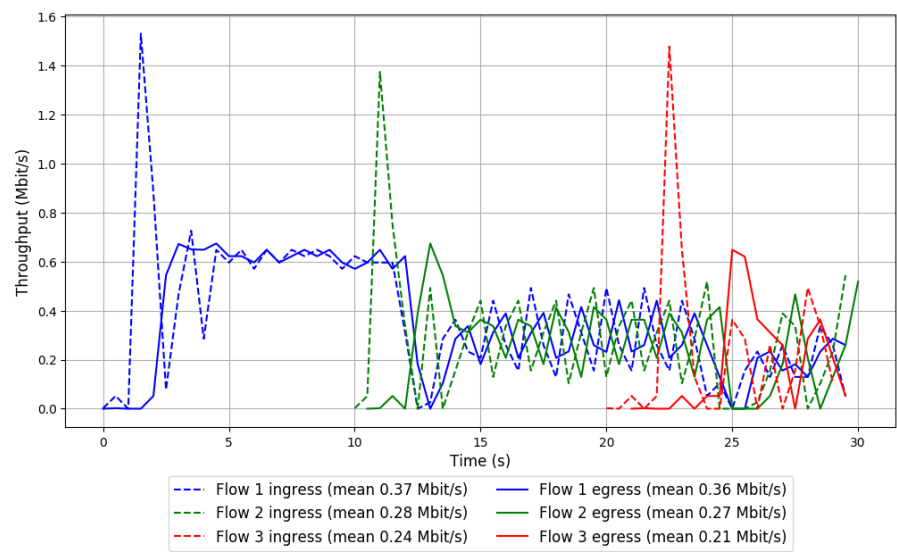
Run 10: Report of Sprout — Data Link





223

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

Start at: 2018-05-25 07:46:40
End at: 2018-05-25 07:47:10
Local clock offset: -1.664 ms
Remote clock offset: 4.08 ms

# Below is generated by plot.py at 2018-05-25 10:39:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 3059.253 ms
Loss rate: 7.73%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 2528.676 ms
Loss rate: 4.18%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 3235.355 ms
Loss rate: 7.91%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 3189.233 ms
Loss rate: 24.99%
```
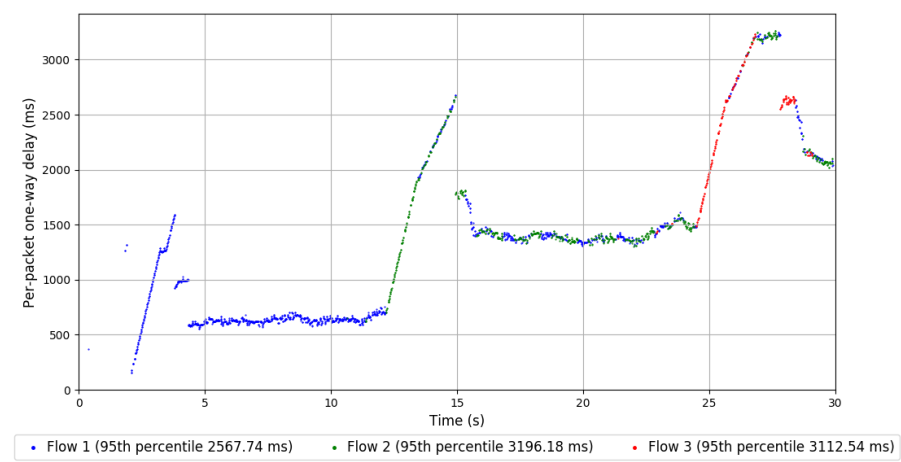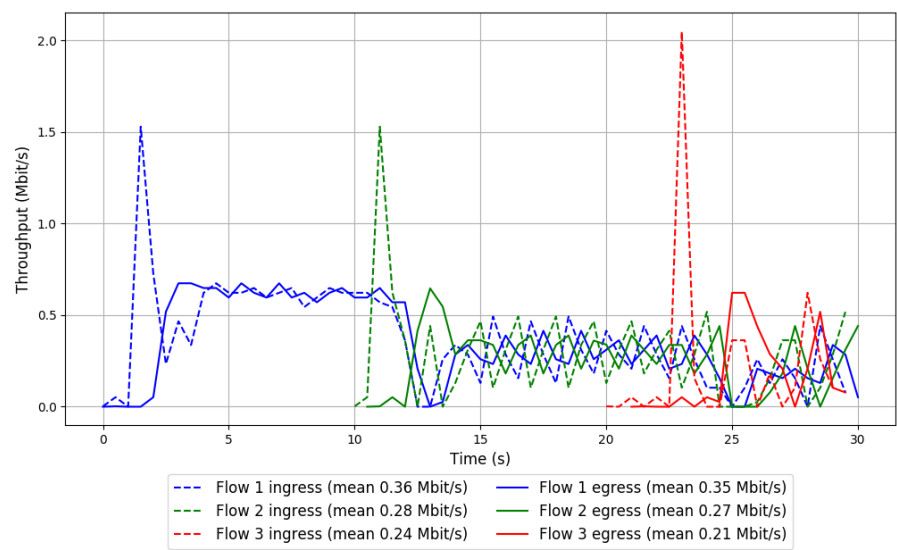
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2018-05-25 08:05:42
End at: 2018-05-25 08:06:12
Local clock offset: -2.489 ms
Remote clock offset: 8.475 ms


# Below is generated by plot.py at 2018-05-25 10:39:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 2978.210 ms
Loss rate: 7.73%
-- Flow 1:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 2567.743 ms
Loss rate: 4.06%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 3196.175 ms
Loss rate: 8.12%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 3112.540 ms
Loss rate: 25.29%
```
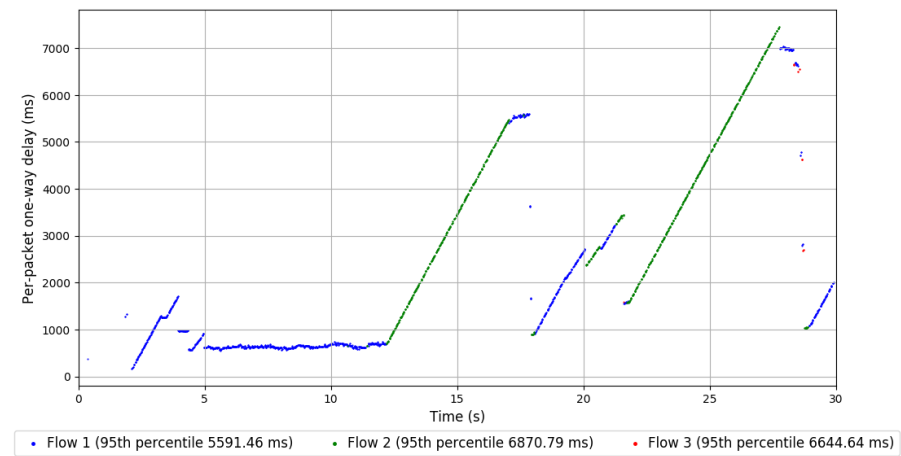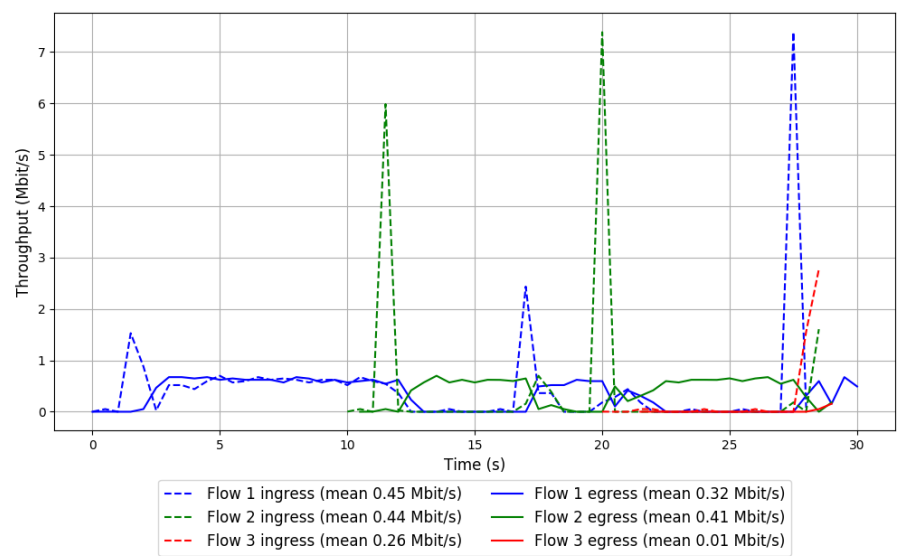
# Run 2: Report of TaoVA-100x — Data Link



Flow 1 ingress (mean 0.36 Mbit/s) — Flow 1 egress (mean 0.35 Mbit/s)
Flow 2 ingress (mean 0.28 Mbit/s) — Flow 2 egress (mean 0.27 Mbit/s)
Flow 3 ingress (mean 0.24 Mbit/s) — Flow 3 egress (mean 0.21 Mbit/s)



Flow 1 (95th percentile 2567.74 ms)   Flow 2 (95th percentile 3196.18 ms)   Flow 3 (95th percentile 3112.54 ms)

227

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

Start at: 2018-05-25 08:24:43
End at: 2018-05-25 08:25:13
Local clock offset: -3.049 ms
Remote clock offset: 3.627 ms


# Below is generated by plot.py at 2018-05-25 10:40:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 6681.984 ms
Loss rate: 26.22%
-- Flow 1:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 5591.464 ms
Loss rate: 24.56%
-- Flow 2:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 6870.788 ms
Loss rate: 9.75%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 6644.642 ms
Loss rate: 95.39%
```
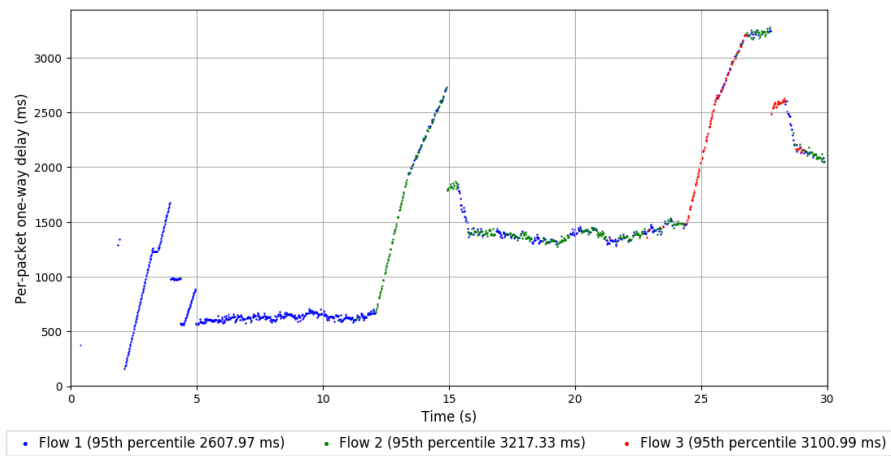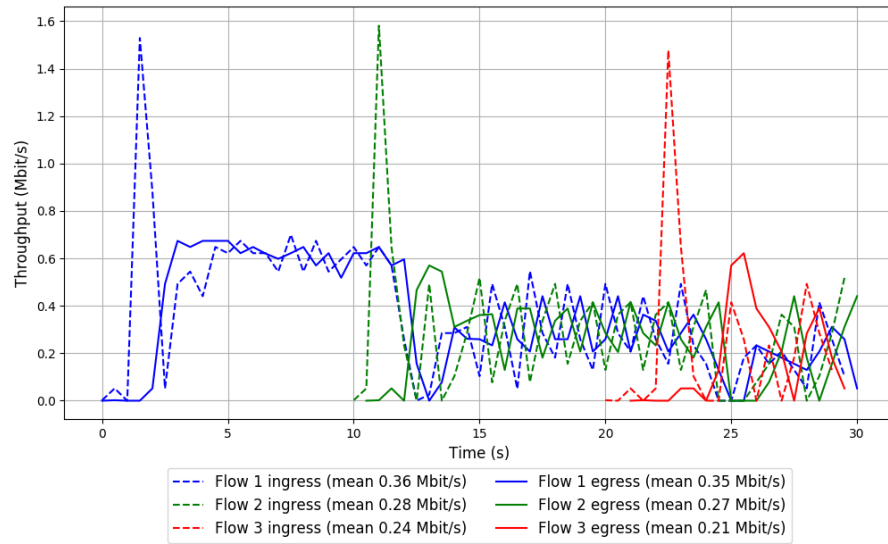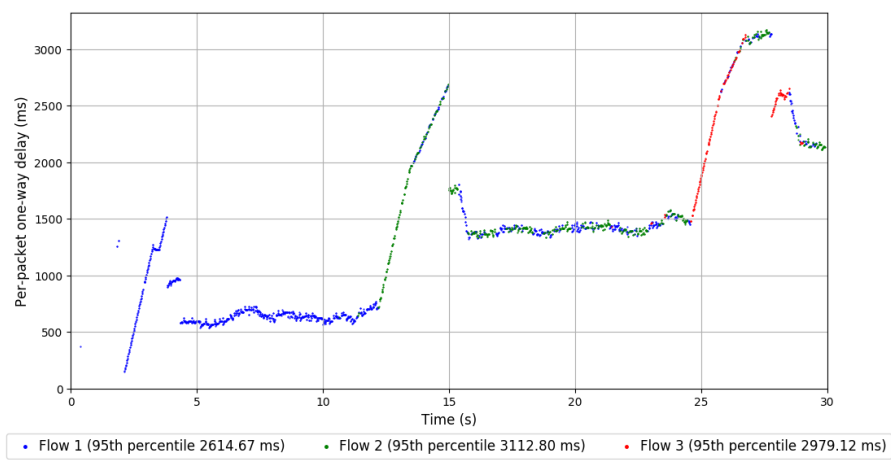
# Run 3: Report of TaoVA-100x — Data Link



- Flow 1 ingress (mean 0.45 Mbit/s)
- Flow 1 egress (mean 0.32 Mbit/s)
- Flow 2 ingress (mean 0.44 Mbit/s)
- Flow 2 egress (mean 0.41 Mbit/s)
- Flow 3 ingress (mean 0.26 Mbit/s)
- Flow 3 egress (mean 0.01 Mbit/s)



- Flow 1 (95th percentile 5591.46 ms)
- Flow 2 (95th percentile 6870.79 ms)
- Flow 3 (95th percentile 6644.64 ms)

229

```
Run 4: Statistics of TaoVA-100x

Start at: 2018-05-25 08:43:48
End at: 2018-05-25 08:44:18
Local clock offset: -2.166 ms
Remote clock offset: 8.246 ms

# Below is generated by plot.py at 2018-05-25 10:40:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 3001.143 ms
Loss rate: 7.80%
-- Flow 1:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 2607.967 ms
Loss rate: 4.18%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 3217.327 ms
Loss rate: 8.12%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 3100.990 ms
Loss rate: 25.14%
```
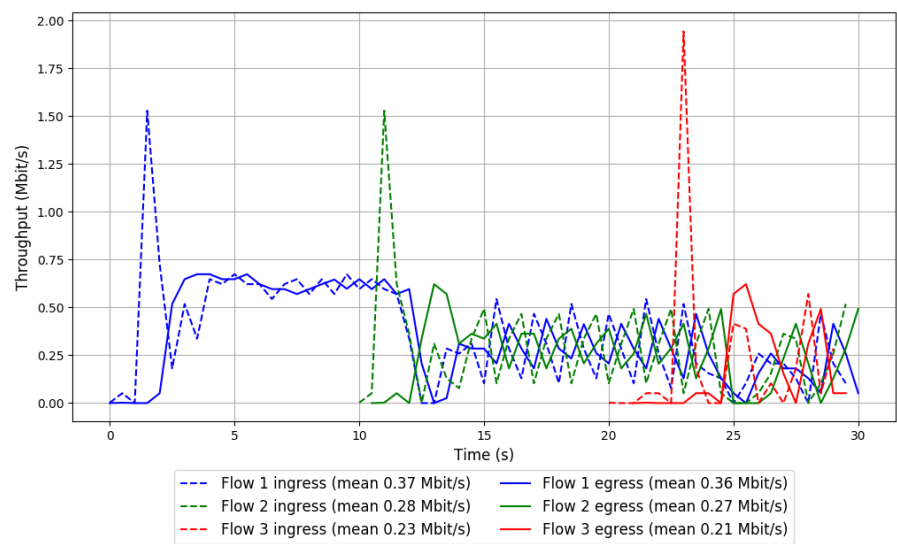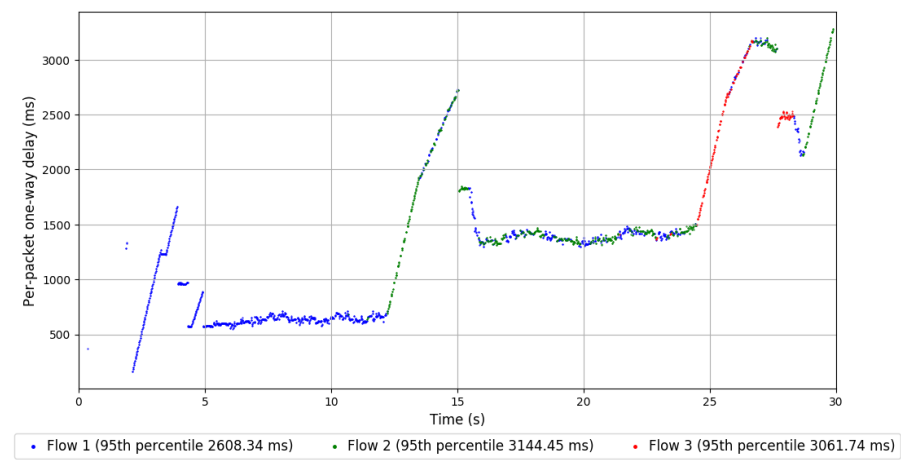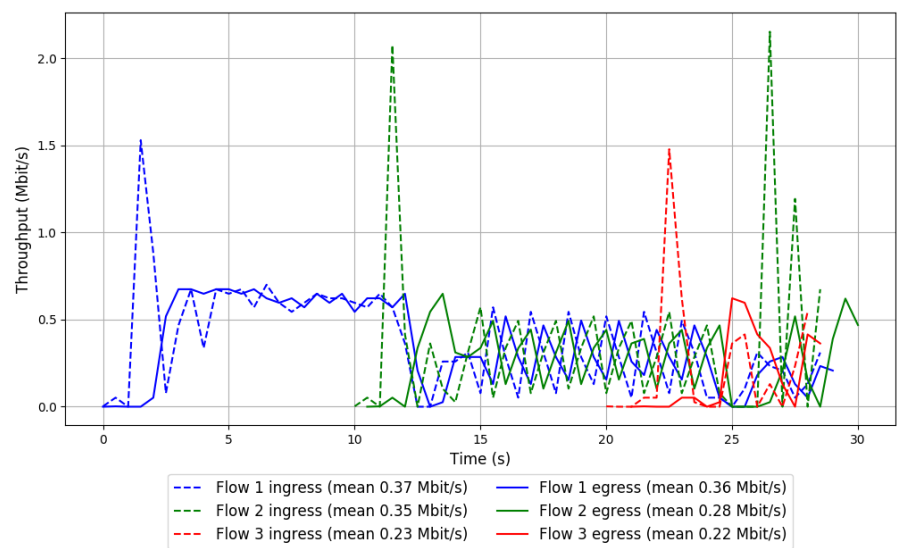
# Run 4: Report of TaoVA-100x — Data Link



Flow 1 ingress (mean 0.36 Mbit/s)     Flow 1 egress (mean 0.35 Mbit/s)
Flow 2 ingress (mean 0.28 Mbit/s)     Flow 2 egress (mean 0.27 Mbit/s)
Flow 3 ingress (mean 0.24 Mbit/s)     Flow 3 egress (mean 0.21 Mbit/s)



Flow 1 (95th percentile 2607.97 ms)     Flow 2 (95th percentile 3217.33 ms)     Flow 3 (95th percentile 3100.99 ms)

231

```
Run 5: Statistics of TaoVA-100x

Start at: 2018-05-25 09:02:48
End at: 2018-05-25 09:03:18
Local clock offset: -2.577 ms
Remote clock offset: 4.127 ms


# Below is generated by plot.py at 2018-05-25 10:40:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 2904.304 ms
Loss rate: 7.76%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 2614.668 ms
Loss rate: 4.18%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 3112.796 ms
Loss rate: 7.91%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 2979.120 ms
Loss rate: 25.75%
```
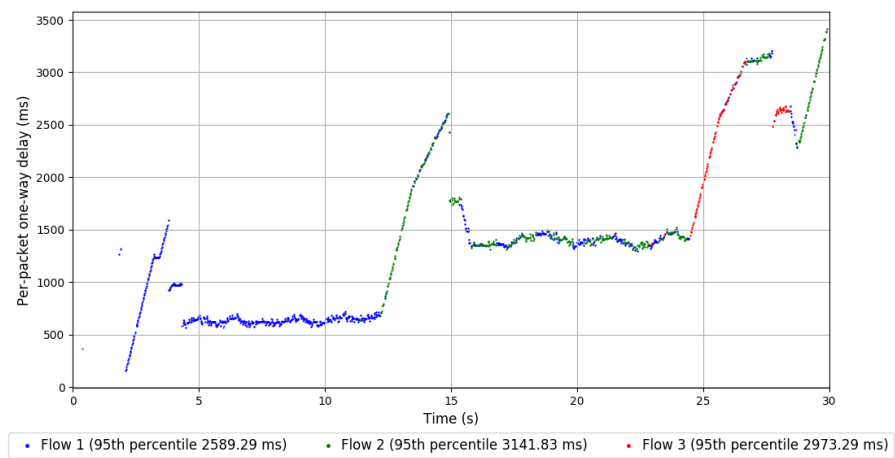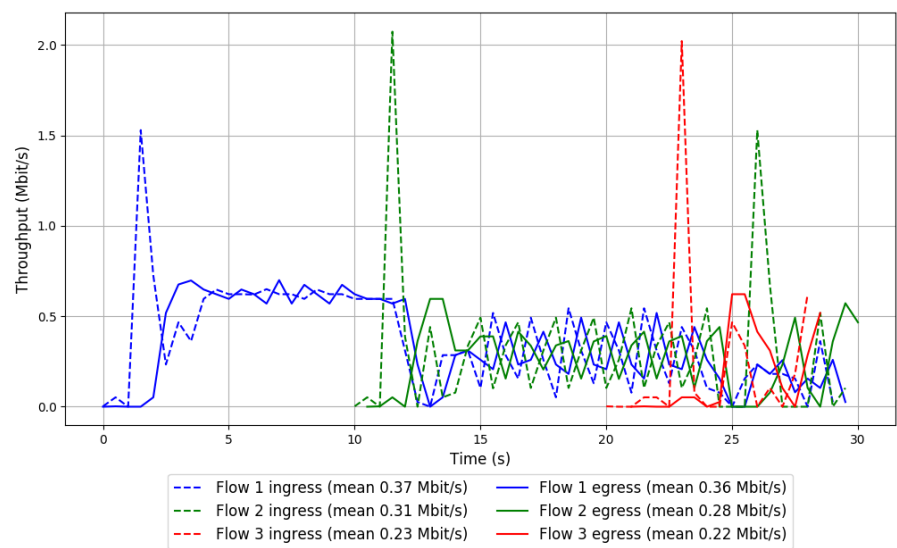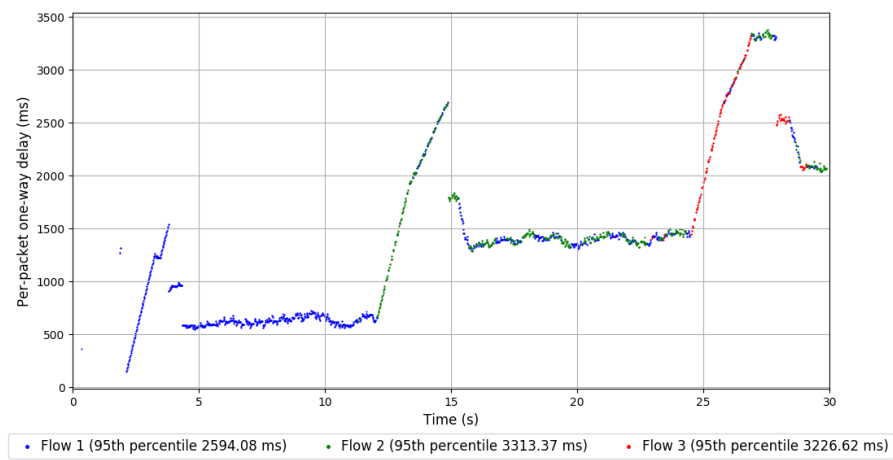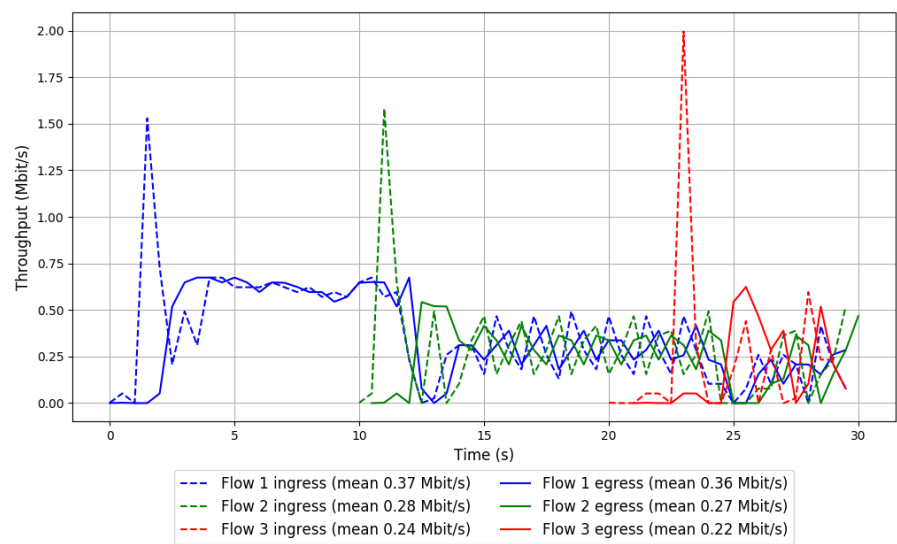
# Run 5: Report of TaoVA-100x — Data Link



Flow 1 ingress (mean 0.37 Mbit/s) — Flow 1 egress (mean 0.36 Mbit/s)
Flow 2 ingress (mean 0.28 Mbit/s) — Flow 2 egress (mean 0.27 Mbit/s)
Flow 3 ingress (mean 0.23 Mbit/s) — Flow 3 egress (mean 0.21 Mbit/s)



Flow 1 (95th percentile 2614.67 ms)   Flow 2 (95th percentile 3112.80 ms)   Flow 3 (95th percentile 2979.12 ms)

233

```
Run 6: Statistics of TaoVA-100x

Start at: 2018-05-25 09:21:50
End at: 2018-05-25 09:22:20
Local clock offset: -3.77 ms
Remote clock offset: 3.197 ms


# Below is generated by plot.py at 2018-05-25 10:40:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 3078.833 ms
Loss rate: 11.25%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 2608.342 ms
Loss rate: 4.24%
-- Flow 2:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 3144.450 ms
Loss rate: 18.99%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3061.739 ms
Loss rate: 23.17%
```

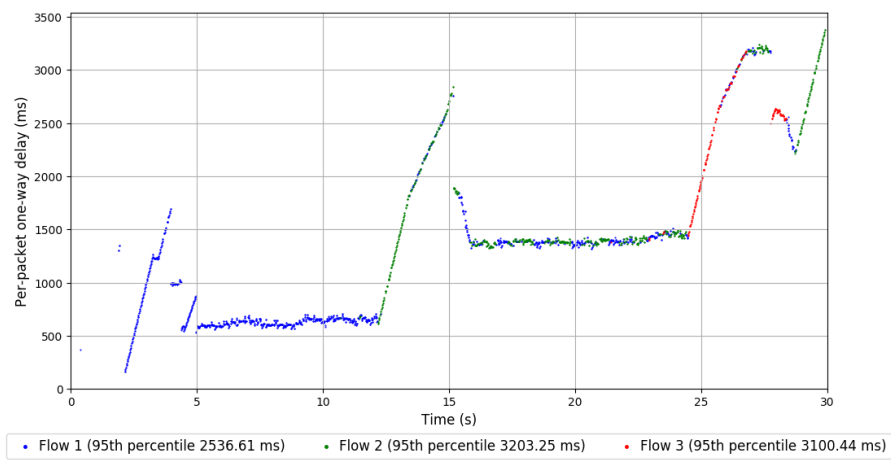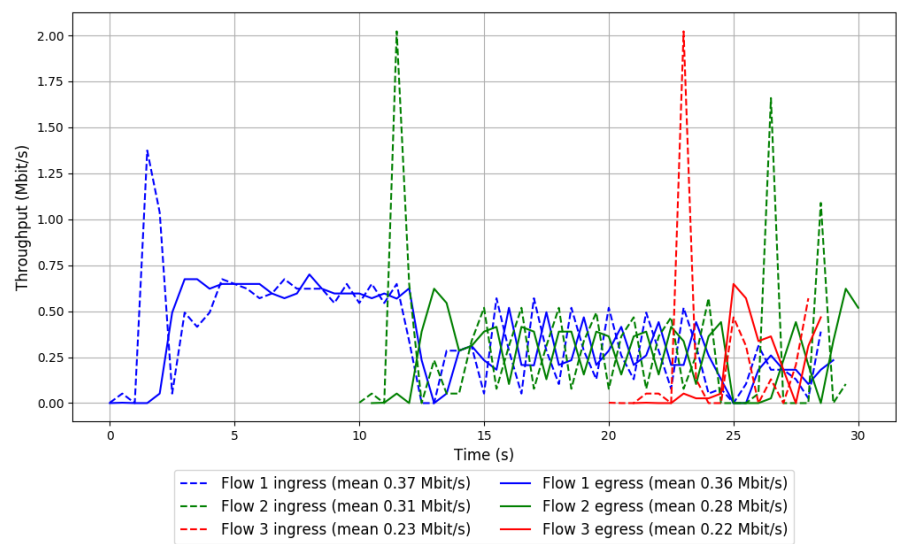Run 6: Report of TaoVA-100x — Data Link



Flow 1 ingress (mean 0.37 Mbit/s)    Flow 1 egress (mean 0.36 Mbit/s)
Flow 2 ingress (mean 0.35 Mbit/s)    Flow 2 egress (mean 0.28 Mbit/s)
Flow 3 ingress (mean 0.23 Mbit/s)    Flow 3 egress (mean 0.22 Mbit/s)



Flow 1 (95th percentile 2608.34 ms)    Flow 2 (95th percentile 3144.45 ms)    Flow 3 (95th percentile 3061.74 ms)

235

```
Run 7: Statistics of TaoVA-100x

Start at: 2018-05-25 09:40:53
End at: 2018-05-25 09:41:23
Local clock offset: -5.808 ms
Remote clock offset: 6.338 ms


# Below is generated by plot.py at 2018-05-25 10:40:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 3079.623 ms
Loss rate: 8.64%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 2589.286 ms
Loss rate: 4.24%
-- Flow 2:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 3141.831 ms
Loss rate: 11.70%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2973.289 ms
Loss rate: 23.17%
```

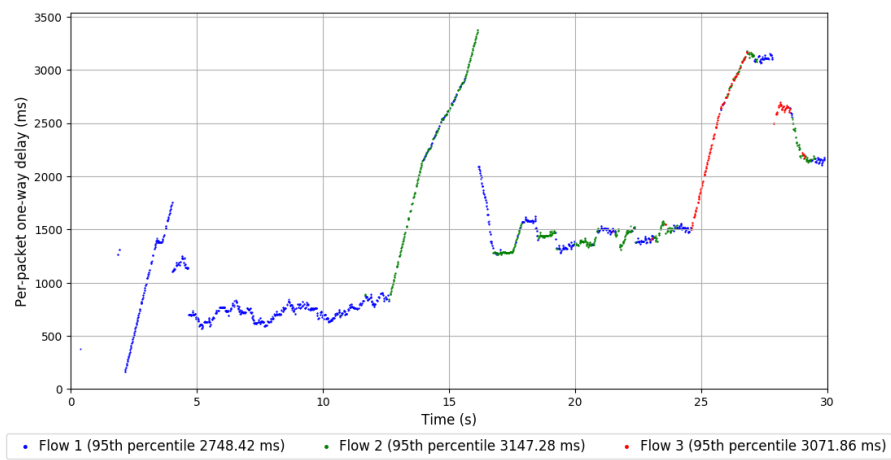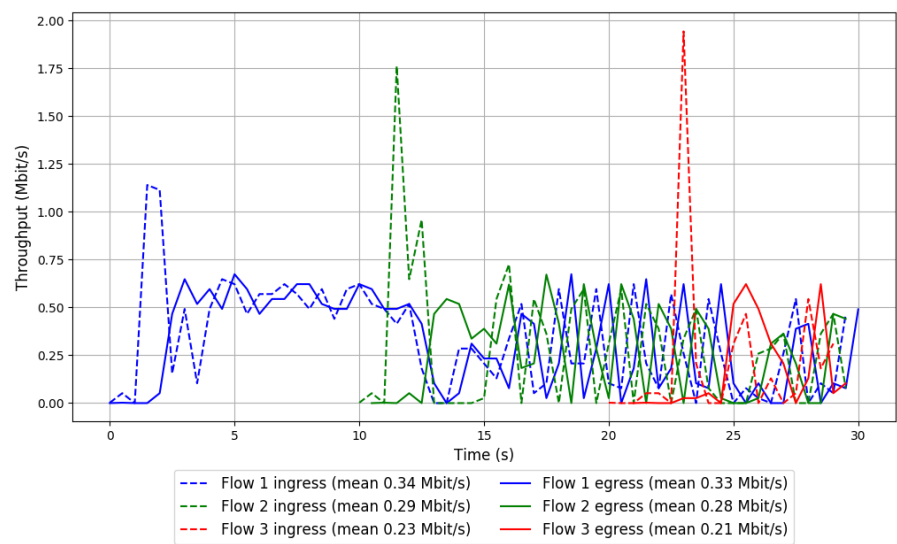Run 7: Report of TaoVA-100x — Data Link



Flow 1 ingress (mean 0.37 Mbit/s)    Flow 1 egress (mean 0.36 Mbit/s)
Flow 2 ingress (mean 0.31 Mbit/s)    Flow 2 egress (mean 0.28 Mbit/s)
Flow 3 ingress (mean 0.23 Mbit/s)    Flow 3 egress (mean 0.22 Mbit/s)



Flow 1 (95th percentile 2589.29 ms)    Flow 2 (95th percentile 3141.83 ms)    Flow 3 (95th percentile 2973.29 ms)

237

```
Run 8: Statistics of TaoVA-100x

Start at: 2018-05-25 09:59:58
End at: 2018-05-25 10:00:28
Local clock offset: -5.761 ms
Remote clock offset: 10.471 ms


# Below is generated by plot.py at 2018-05-25 10:40:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 3051.448 ms
Loss rate: 7.80%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 2594.080 ms
Loss rate: 4.19%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 3313.366 ms
Loss rate: 8.12%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3226.616 ms
Loss rate: 24.69%
```
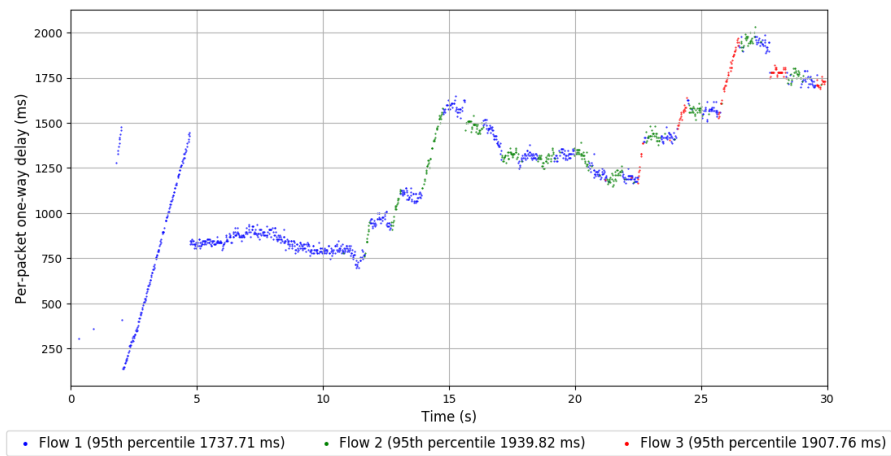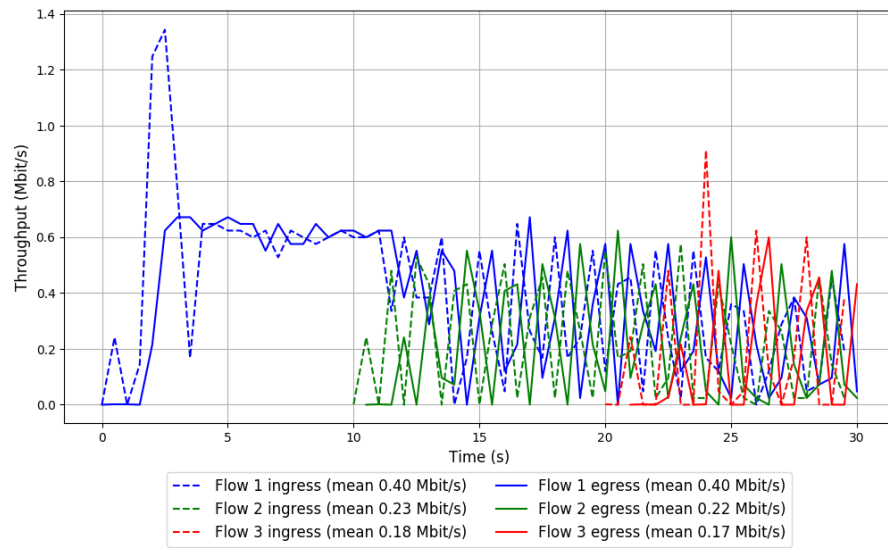
# Run 8: Report of TaoVA-100x — Data Link





239

```
Run 9: Statistics of TaoVA-100x

Start at: 2018-05-25 10:19:01
End at: 2018-05-25 10:19:31
Local clock offset: -2.008 ms
Remote clock offset: 13.877 ms


# Below is generated by plot.py at 2018-05-25 10:40:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 3128.794 ms
Loss rate: 8.65%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 2536.611 ms
Loss rate: 4.27%
-- Flow 2:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 3203.252 ms
Loss rate: 11.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3100.438 ms
Loss rate: 23.01%
```
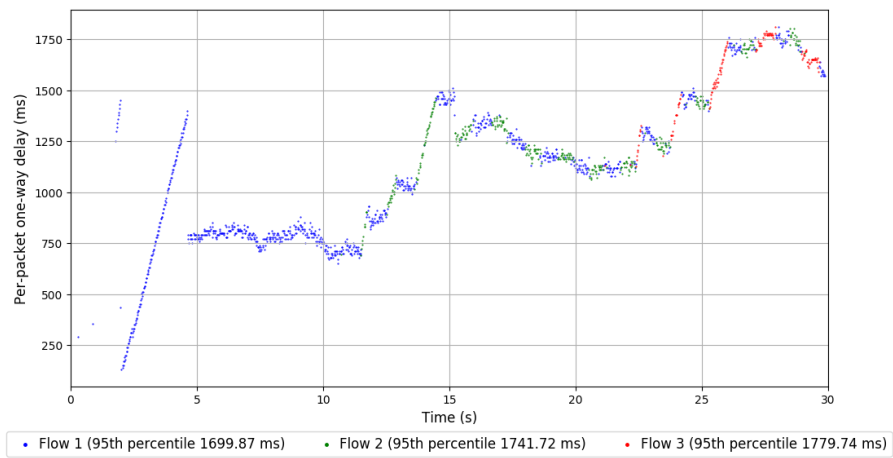
# Run 9: Report of TaoVA-100x — Data Link





241

```
Run 10: Statistics of TaoVA-100x

Start at: 2018-05-25 10:38:03
End at: 2018-05-25 10:38:33
Local clock offset: -2.503 ms
Remote clock offset: 16.394 ms


# Below is generated by plot.py at 2018-05-25 10:40:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 3089.856 ms
Loss rate: 7.98%
-- Flow 1:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 2748.421 ms
Loss rate: 4.23%
-- Flow 2:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 3147.281 ms
Loss rate: 8.06%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 3071.860 ms
Loss rate: 25.60%
```
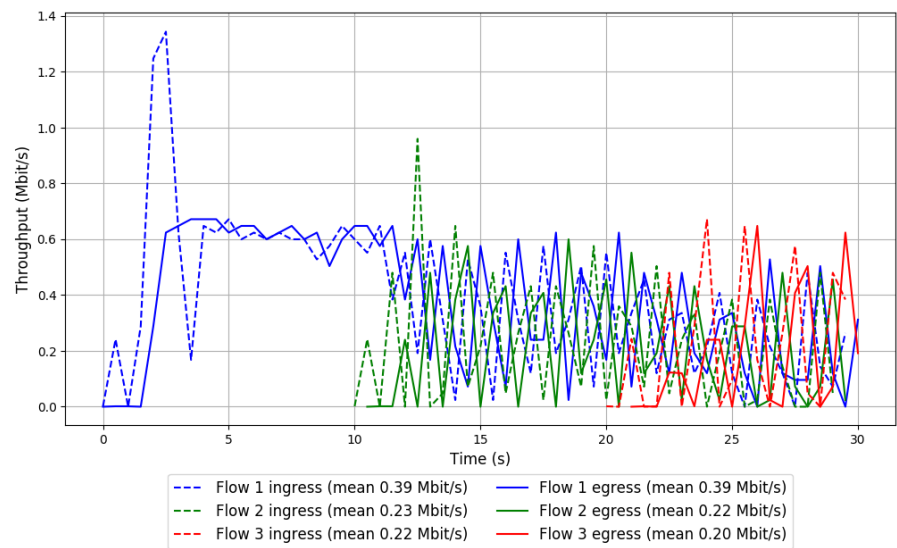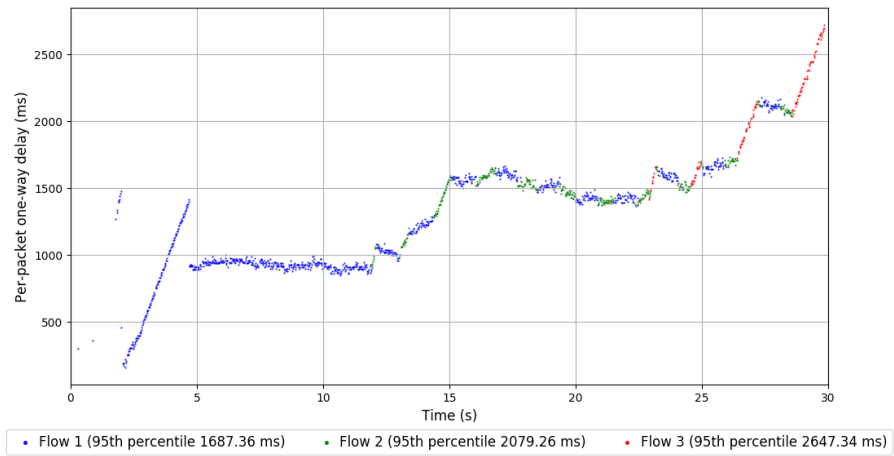
Run 10: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2018-05-25 07:28:49
End at: 2018-05-25 07:29:19
Local clock offset: -0.782 ms
Remote clock offset: 3.282 ms


# Below is generated by plot.py at 2018-05-25 10:40:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1867.775 ms
Loss rate: 5.76%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 1737.712 ms
Loss rate: 3.20%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1939.820 ms
Loss rate: 6.93%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 1907.759 ms
Loss rate: 19.84%
```
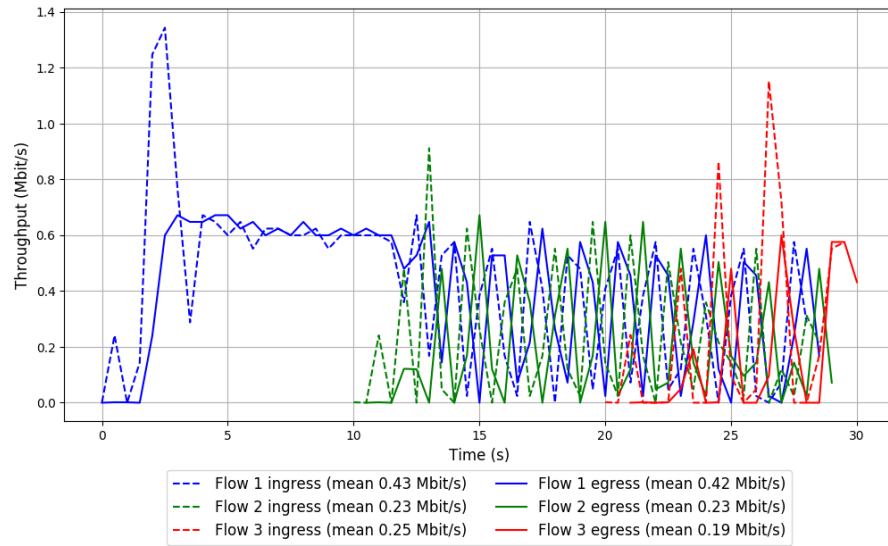
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-05-25 07:47:52
End at: 2018-05-25 07:48:22
Local clock offset: -1.724 ms
Remote clock offset: 8.688 ms


# Below is generated by plot.py at 2018-05-25 10:40:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 1731.738 ms
Loss rate: 5.56%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 1699.868 ms
Loss rate: 2.75%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1741.723 ms
Loss rate: 6.01%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 1779.742 ms
Loss rate: 19.86%
```
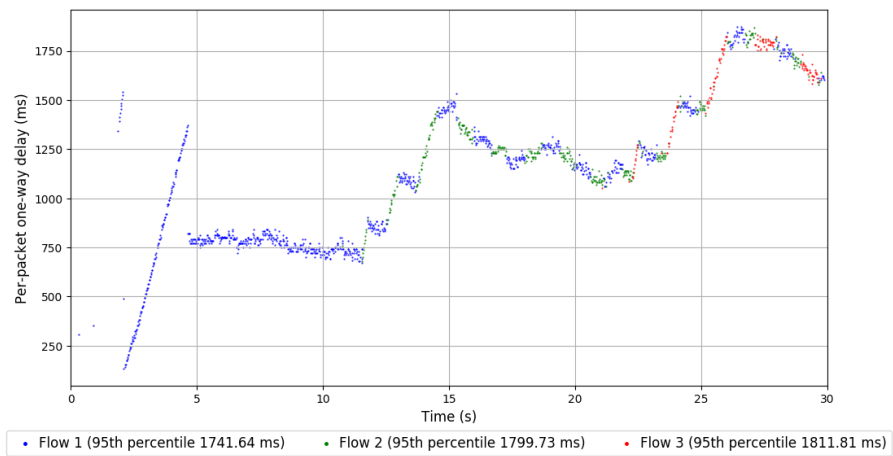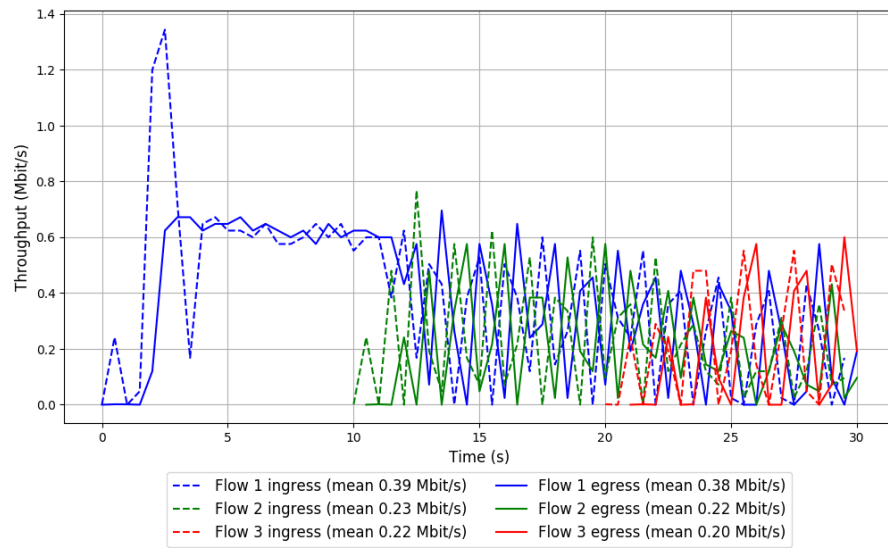
## Run 2: Report of TCP Vegas — Data Link





247

```
Run 3: Statistics of TCP Vegas

Start at: 2018-05-25 08:06:53
End at: 2018-05-25 08:07:23
Local clock offset: -2.551 ms
Remote clock offset: 7.656 ms


# Below is generated by plot.py at 2018-05-25 10:40:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 2137.145 ms
Loss rate: 8.58%
-- Flow 1:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 1687.362 ms
Loss rate: 3.86%
-- Flow 2:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 2079.257 ms
Loss rate: 7.80%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 2647.335 ms
Loss rate: 33.29%
```
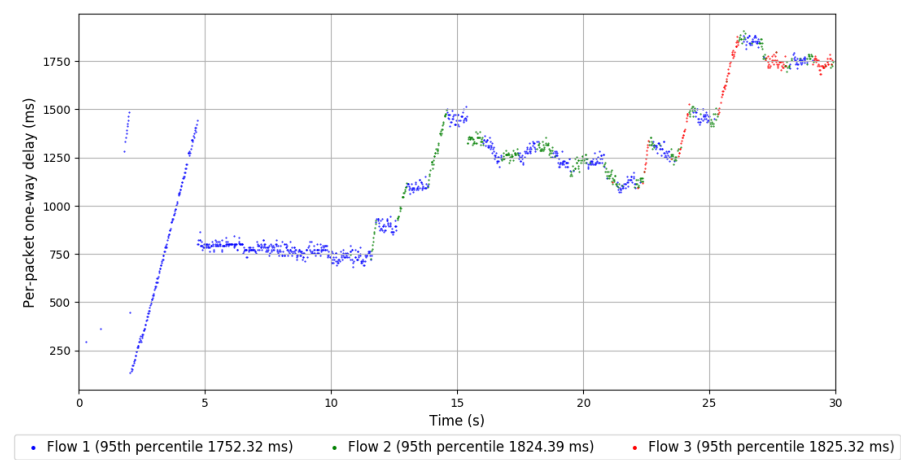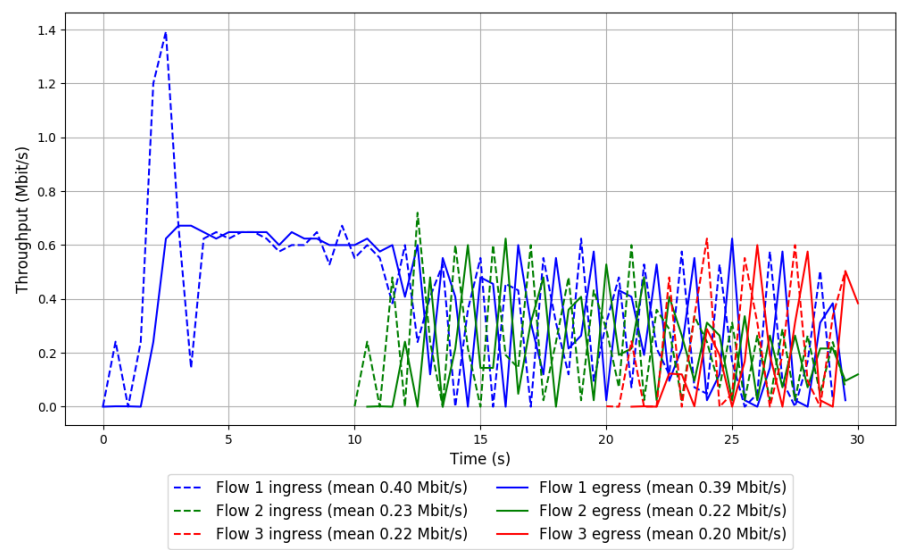
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2018-05-25 08:25:54
End at: 2018-05-25 08:26:24
Local clock offset: -3.011 ms
Remote clock offset: 7.625 ms


# Below is generated by plot.py at 2018-05-25 10:40:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1791.496 ms
Loss rate: 5.64%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 1741.645 ms
Loss rate: 2.89%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1799.726 ms
Loss rate: 6.10%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 1811.812 ms
Loss rate: 19.64%
```
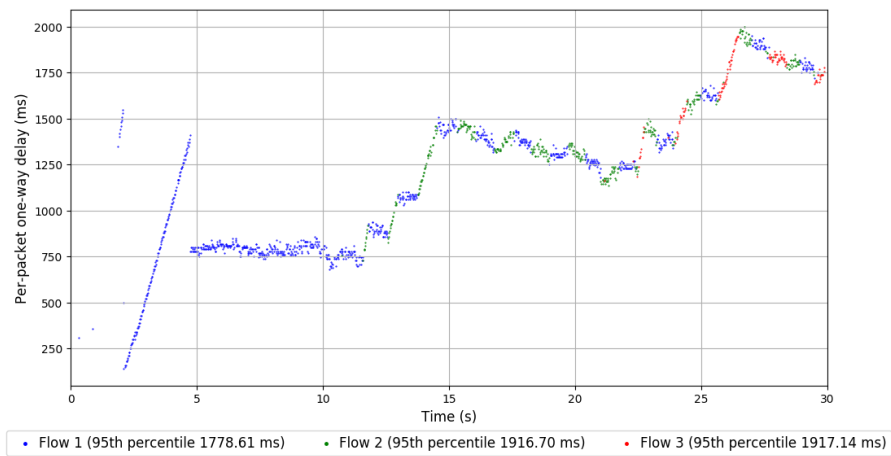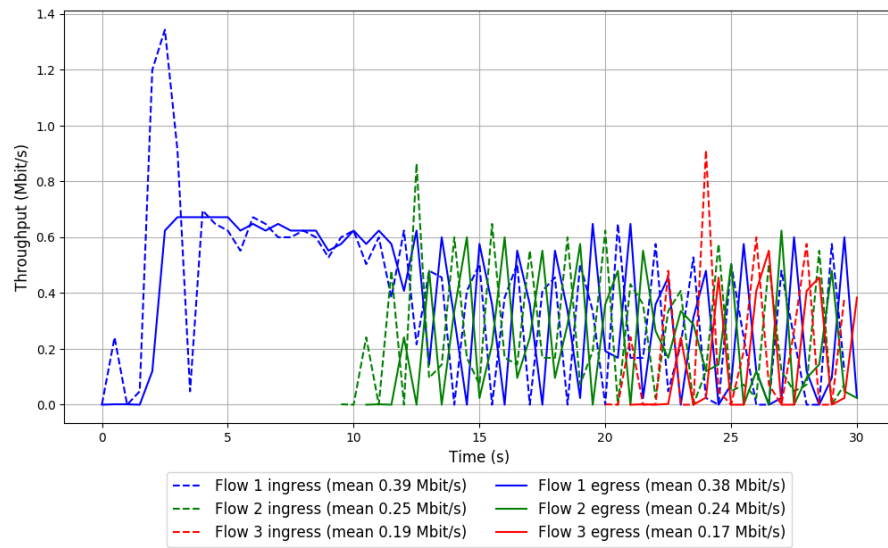
Run 4: Report of TCP Vegas — Data Link



251

```
Run 5: Statistics of TCP Vegas

Start at: 2018-05-25 08:44:59
End at: 2018-05-25 08:45:29
Local clock offset: -2.155 ms
Remote clock offset: 4.456 ms


# Below is generated by plot.py at 2018-05-25 10:40:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1784.177 ms
Loss rate: 5.63%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 1752.318 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1824.393 ms
Loss rate: 5.80%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 1825.317 ms
Loss rate: 19.42%
```
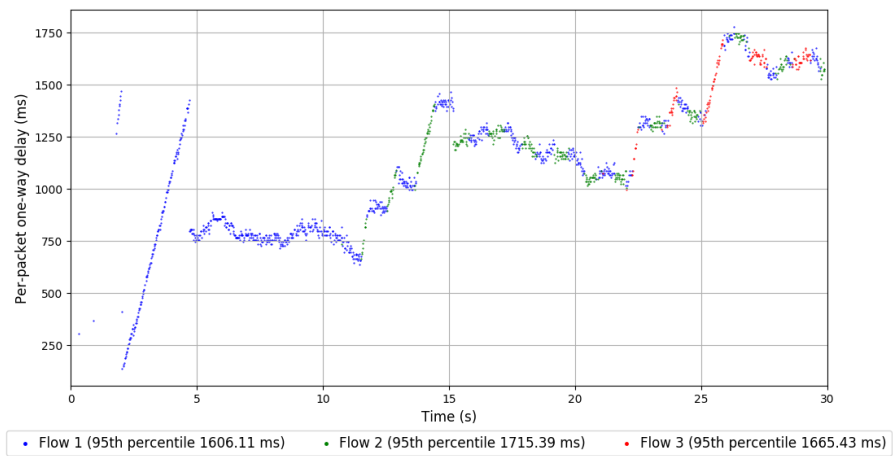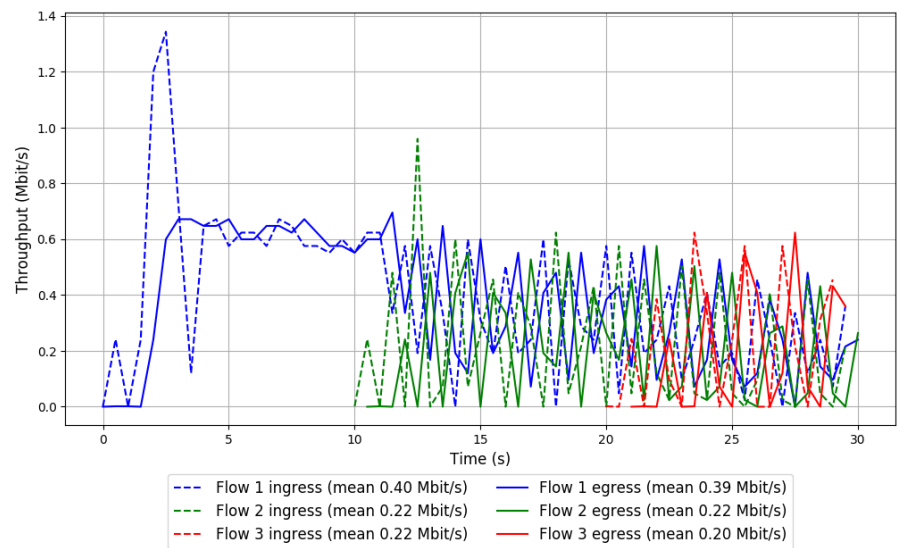
Run 5: Report of TCP Vegas — Data Link

```
Run 6: Statistics of TCP Vegas

Start at: 2018-05-25 09:04:00
End at: 2018-05-25 09:04:30
Local clock offset: -2.583 ms
Remote clock offset: 4.183 ms


# Below is generated by plot.py at 2018-05-25 10:40:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1847.273 ms
Loss rate: 5.96%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 1778.614 ms
Loss rate: 3.01%
-- Flow 2:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 1916.696 ms
Loss rate: 6.88%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 1917.140 ms
Loss rate: 21.62%
```
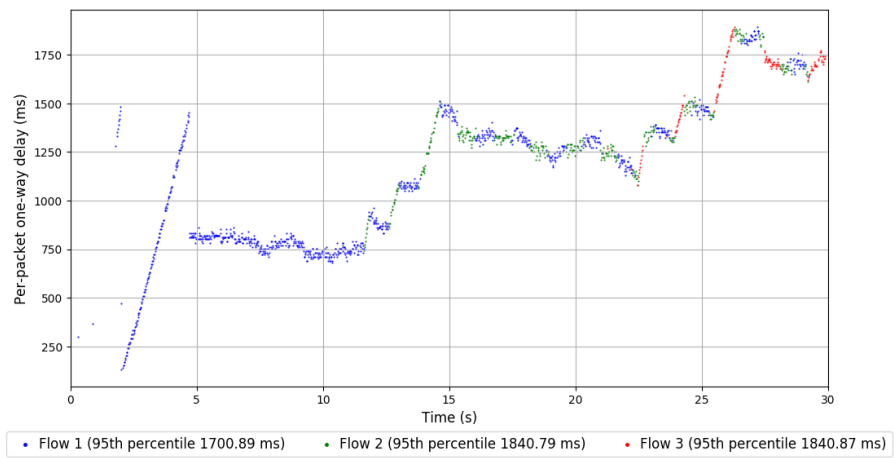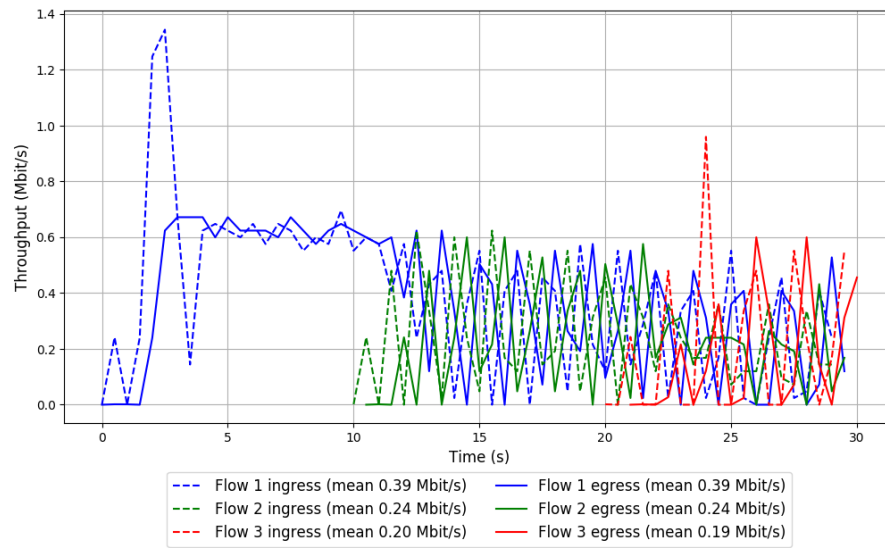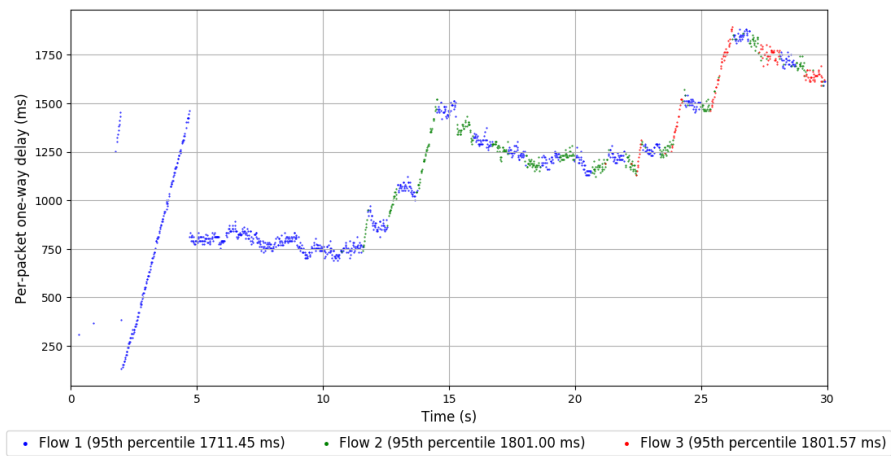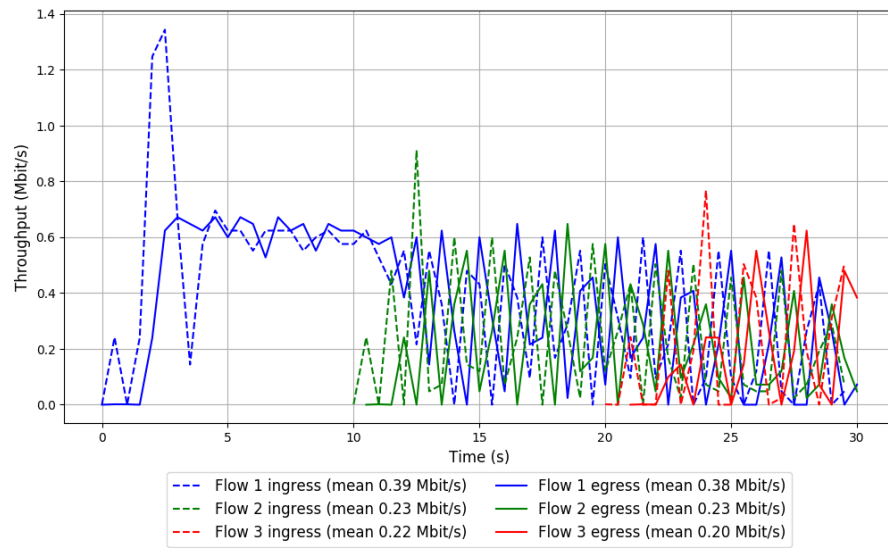
Run 6: Report of TCP Vegas — Data Link





255

```
Run 7: Statistics of TCP Vegas

Start at: 2018-05-25 09:23:02
End at: 2018-05-25 09:23:32
Local clock offset: -2.178 ms
Remote clock offset: 3.024 ms


# Below is generated by plot.py at 2018-05-25 10:40:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1645.481 ms
Loss rate: 5.20%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 1606.106 ms
Loss rate: 2.84%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1715.389 ms
Loss rate: 5.22%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 1665.430 ms
Loss rate: 18.91%
```
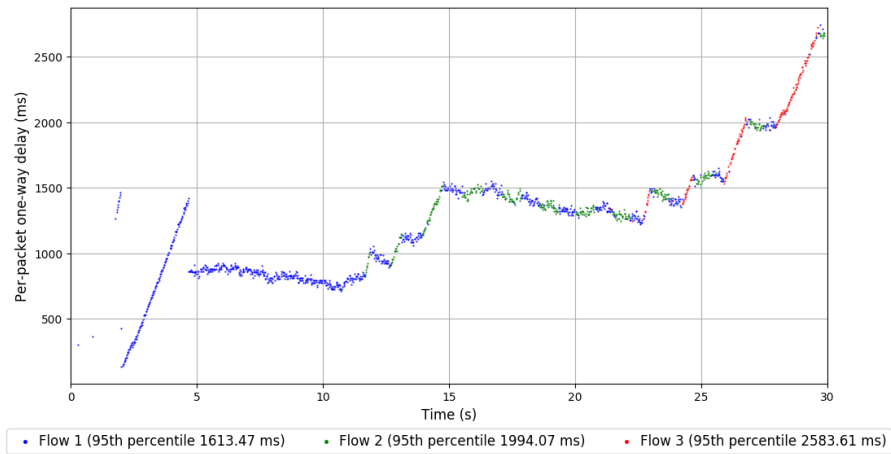
# Run 7: Report of TCP Vegas — Data Link





257

```
Run 8: Statistics of TCP Vegas

Start at: 2018-05-25 09:42:05
End at: 2018-05-25 09:42:35
Local clock offset: -6.687 ms
Remote clock offset: 6.339 ms


# Below is generated by plot.py at 2018-05-25 10:40:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1770.909 ms
Loss rate: 5.63%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 1700.886 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 1840.791 ms
Loss rate: 6.65%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 1840.867 ms
Loss rate: 18.54%
```
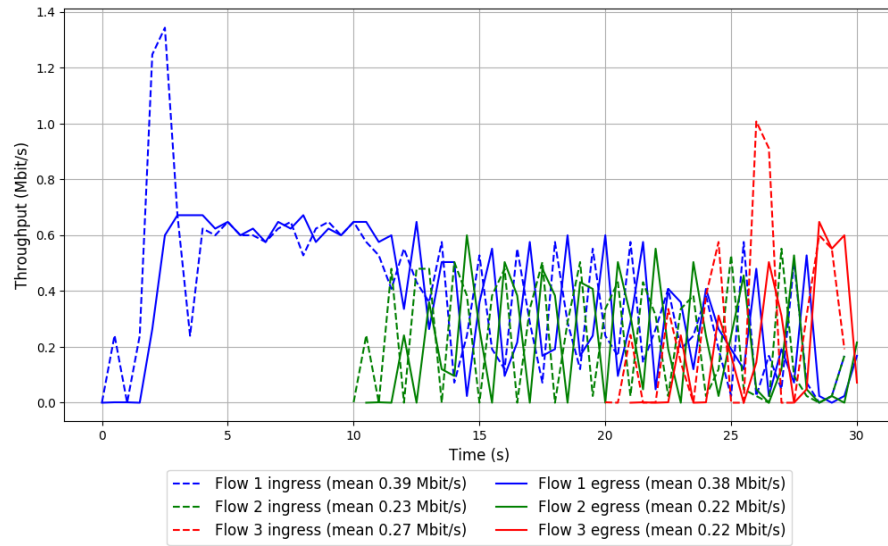
Run 8: Report of TCP Vegas — Data Link





259

```
Run 9: Statistics of TCP Vegas

Start at: 2018-05-25 10:01:09
End at: 2018-05-25 10:01:39
Local clock offset: -5.412 ms
Remote clock offset: 10.823 ms


# Below is generated by plot.py at 2018-05-25 10:40:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1771.560 ms
Loss rate: 5.63%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 1711.446 ms
Loss rate: 2.91%
-- Flow 2:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 1801.004 ms
Loss rate: 6.20%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 1801.570 ms
Loss rate: 19.18%
```
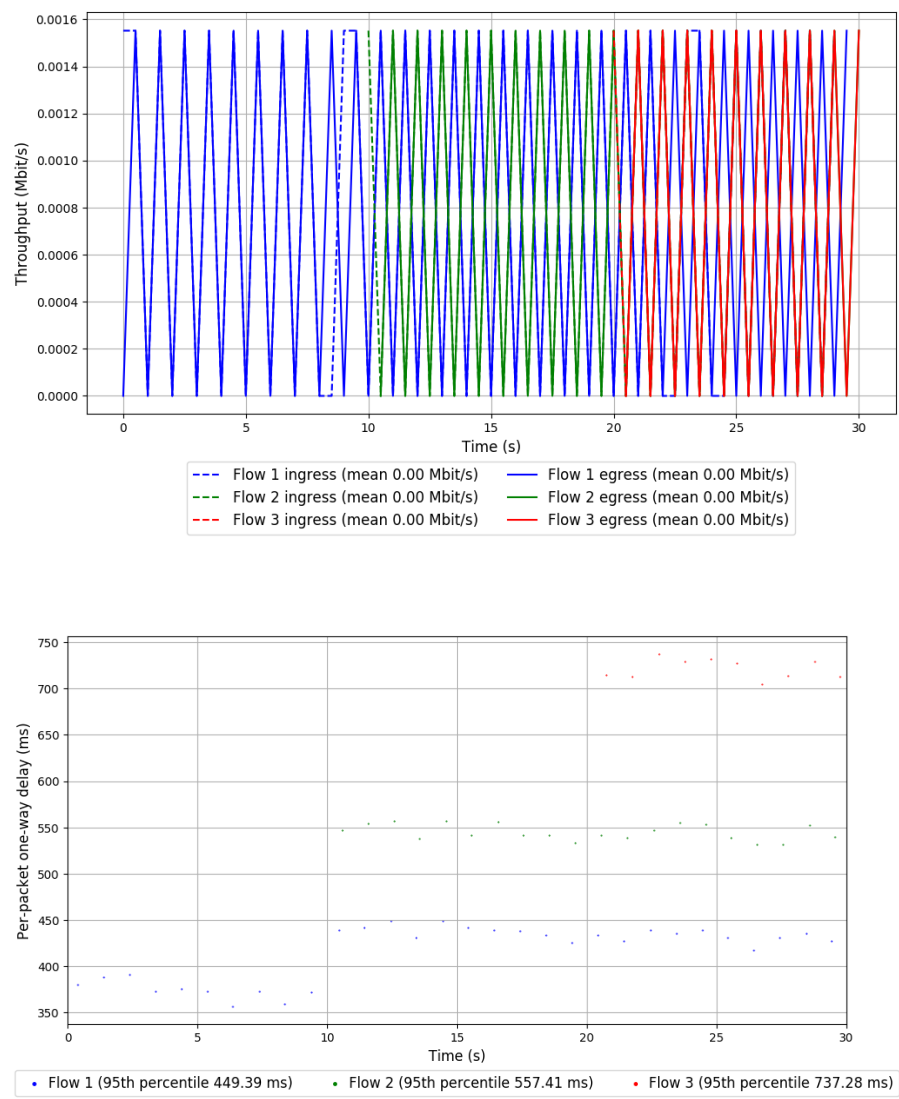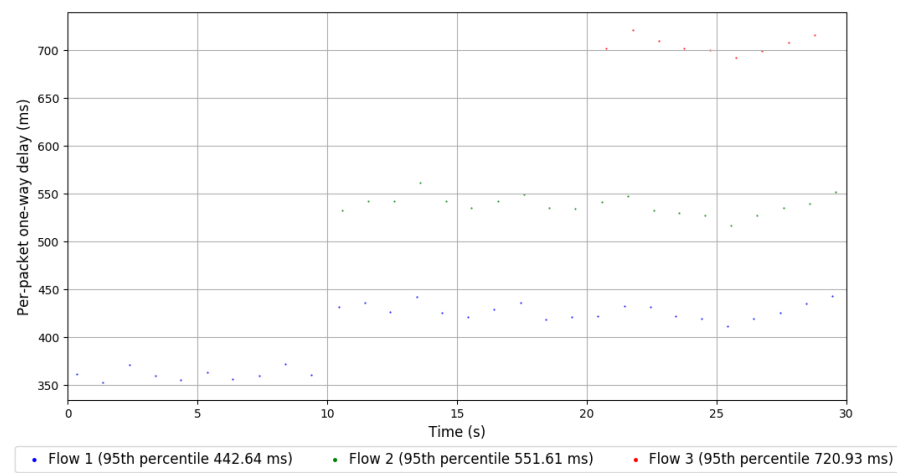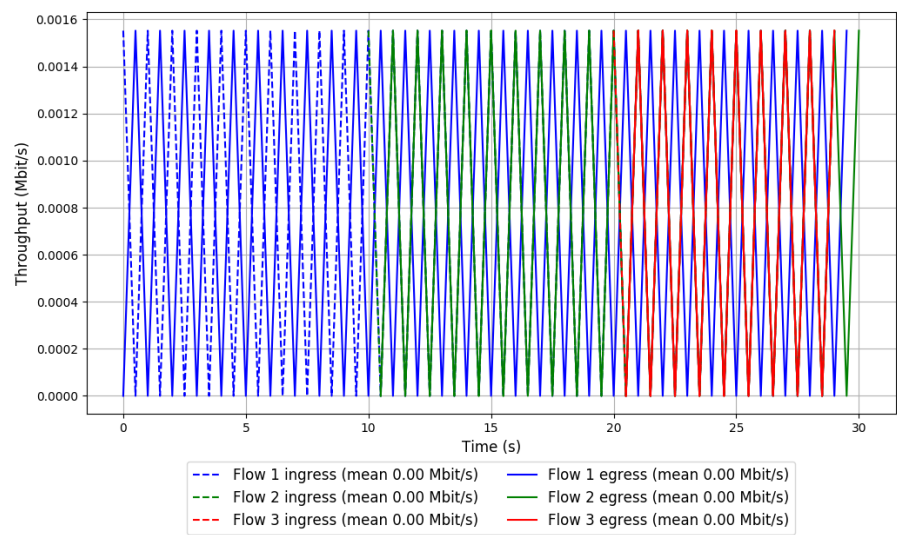
Run 9: Report of TCP Vegas — Data Link



Flow 1 ingress (mean 0.39 Mbit/s)    Flow 1 egress (mean 0.38 Mbit/s)
Flow 2 ingress (mean 0.23 Mbit/s)    Flow 2 egress (mean 0.23 Mbit/s)
Flow 3 ingress (mean 0.22 Mbit/s)    Flow 3 egress (mean 0.20 Mbit/s)



Flow 1 (95th percentile 1711.45 ms)    Flow 2 (95th percentile 1801.00 ms)    Flow 3 (95th percentile 1801.57 ms)

```
Run 10: Statistics of TCP Vegas

Start at: 2018-05-25 10:20:12
End at: 2018-05-25 10:20:42
Local clock offset: -2.764 ms
Remote clock offset: 17.951 ms


# Below is generated by plot.py at 2018-05-25 10:40:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 2133.450 ms
Loss rate: 8.22%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 1613.475 ms
Loss rate: 3.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1994.070 ms
Loss rate: 7.22%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2583.613 ms
Loss rate: 31.47%
```

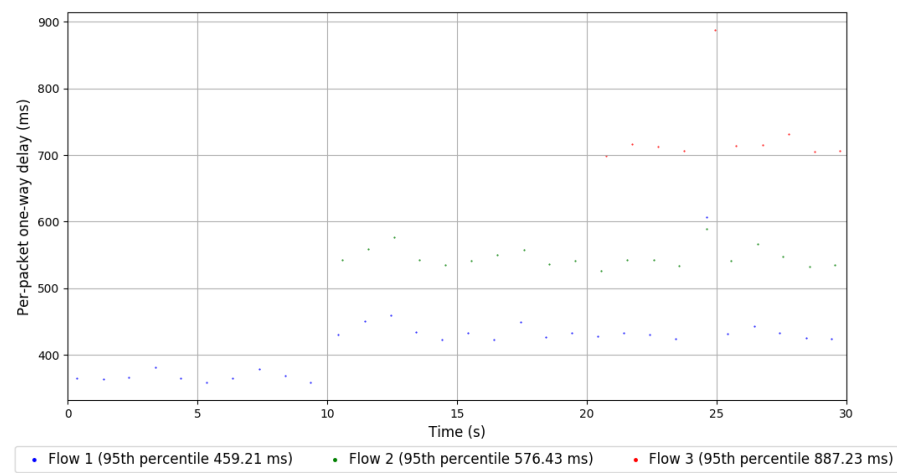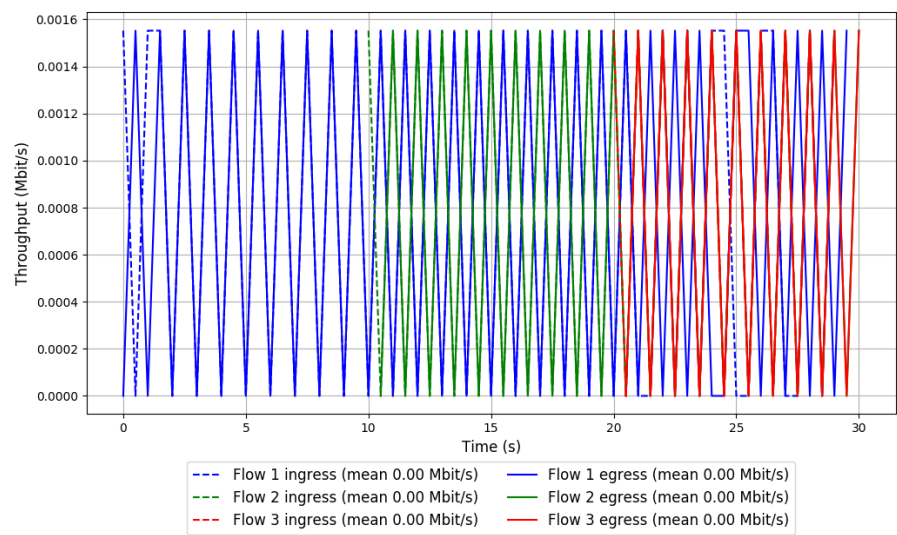Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-05-25 07:33:36
End at: 2018-05-25 07:34:06
Local clock offset: -1.399 ms
Remote clock offset: 3.995 ms


# Below is generated by plot.py at 2018-05-25 10:40:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 729.305 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 449.392 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 557.415 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 737.285 ms
Loss rate: 0.00%
```
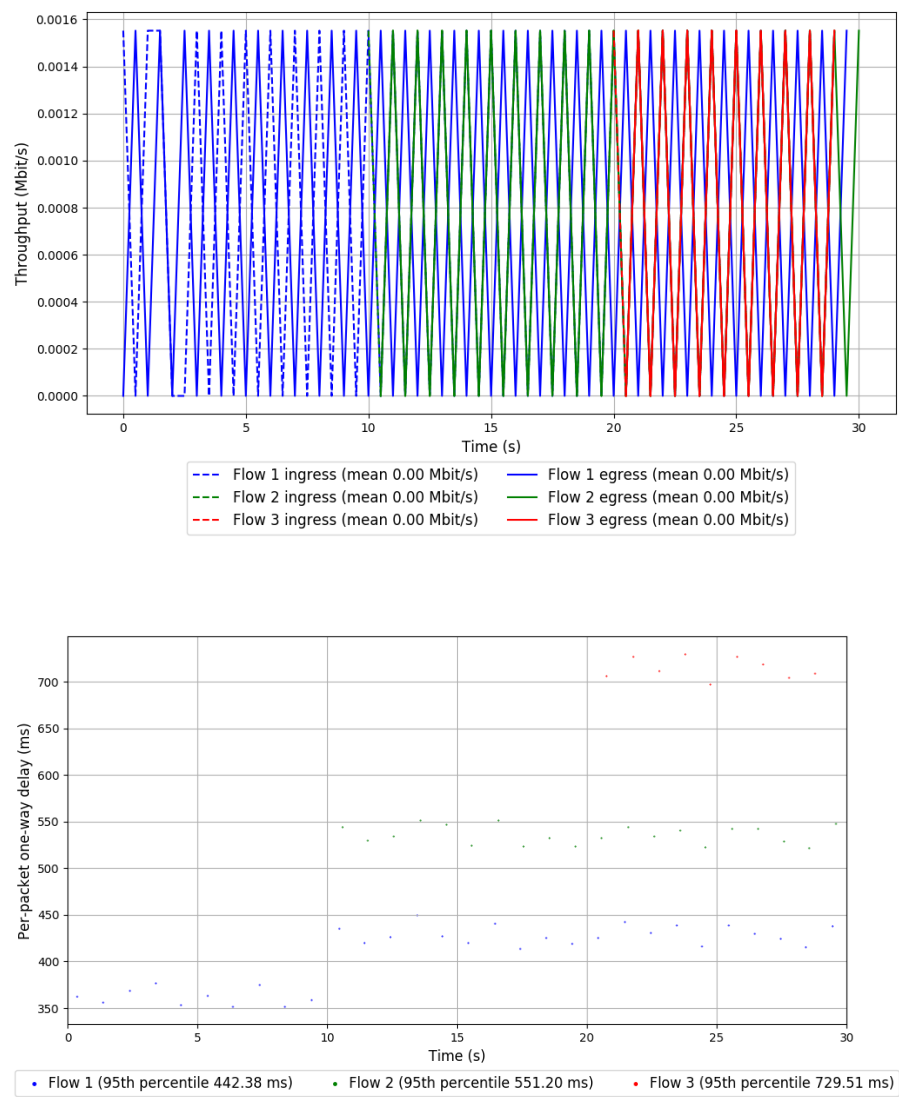
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-05-25 07:52:37
End at: 2018-05-25 07:53:07
Local clock offset: -1.624 ms
Remote clock offset: 8.828 ms


# Below is generated by plot.py at 2018-05-25 10:40:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 707.706 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 442.636 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 551.606 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 720.933 ms
Loss rate: 10.00%
```
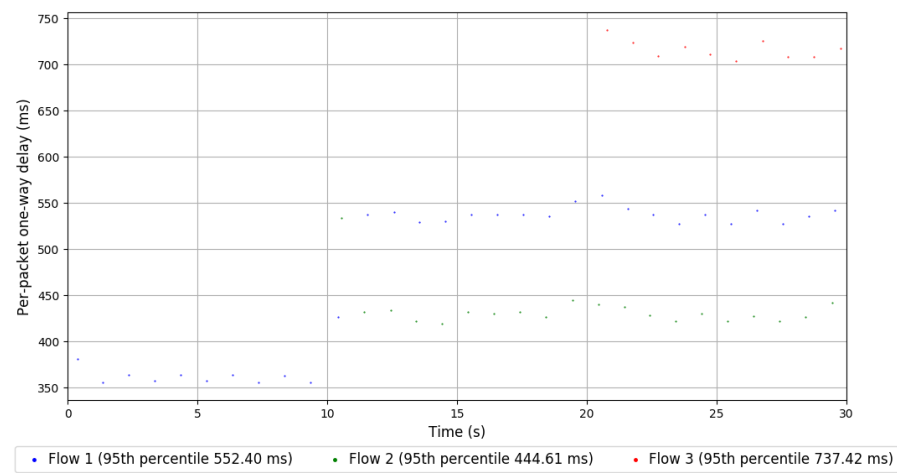
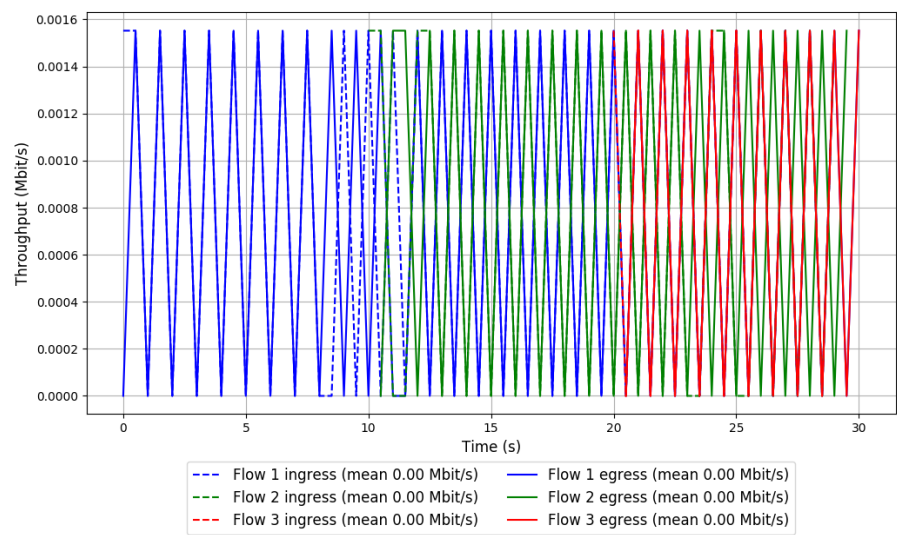## Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-05-25 08:11:39
End at: 2018-05-25 08:12:09
Local clock offset: -2.701 ms
Remote clock offset: 3.452 ms


# Below is generated by plot.py at 2018-05-25 10:40:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 714.694 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 459.214 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 576.432 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 887.229 ms
Loss rate: 0.00%
```
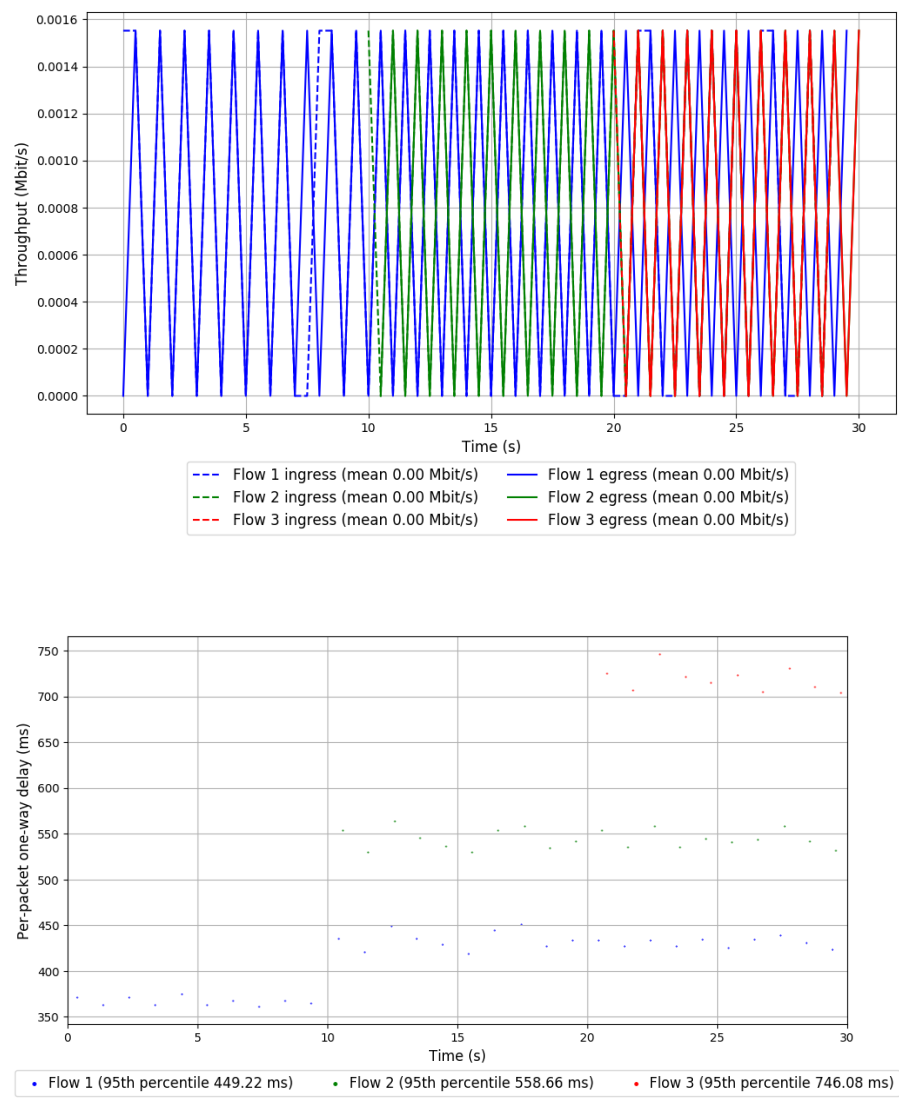
## Run 3: Report of Verus — Data Link





269

```
Run 4: Statistics of Verus

Start at: 2018-05-25 08:30:39
End at: 2018-05-25 08:31:09
Local clock offset: -2.557 ms
Remote clock offset: 2.914 ms


# Below is generated by plot.py at 2018-05-25 10:40:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 719.330 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 442.384 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 551.200 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 729.511 ms
Loss rate: 10.00%
```

## Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-05-25 08:49:44
End at: 2018-05-25 08:50:14
Local clock offset: -2.087 ms
Remote clock offset: 4.808 ms


# Below is generated by plot.py at 2018-05-25 10:40:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 719.403 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 552.404 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 444.613 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 737.416 ms
Loss rate: 0.00%
```
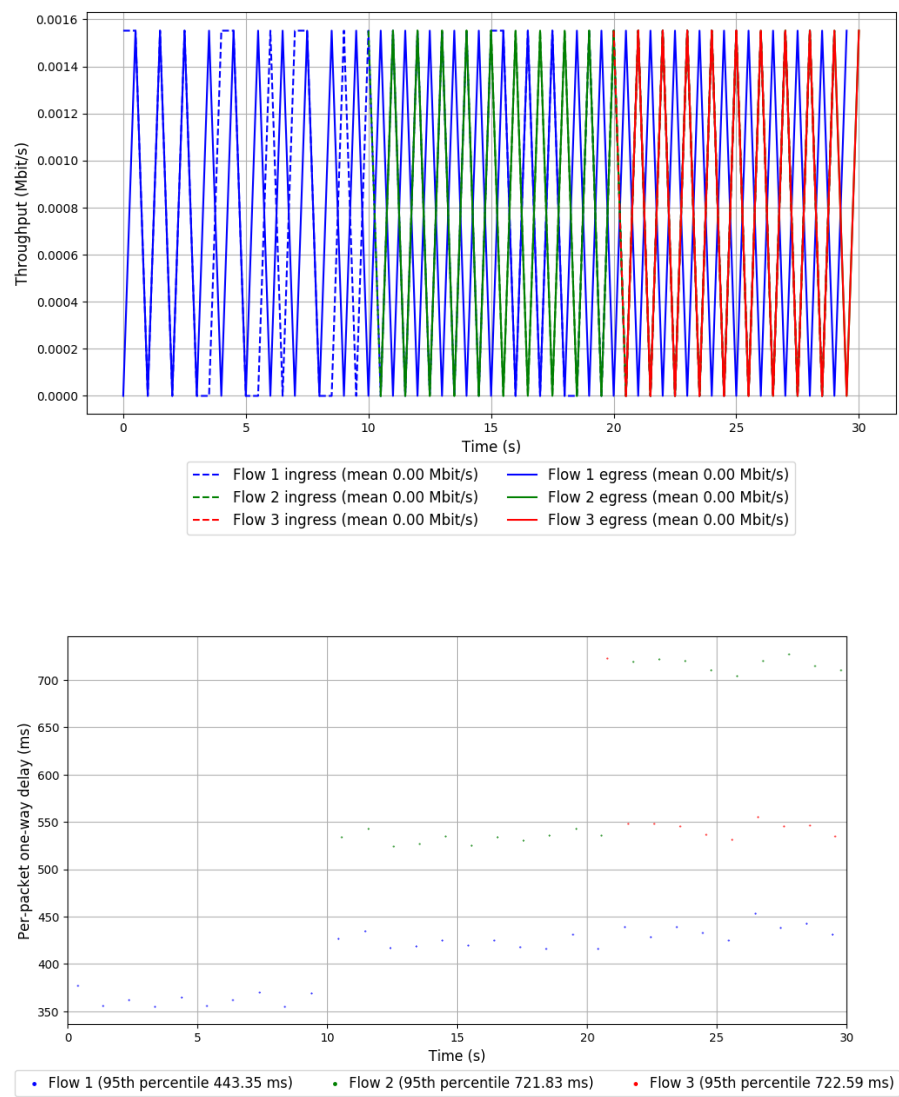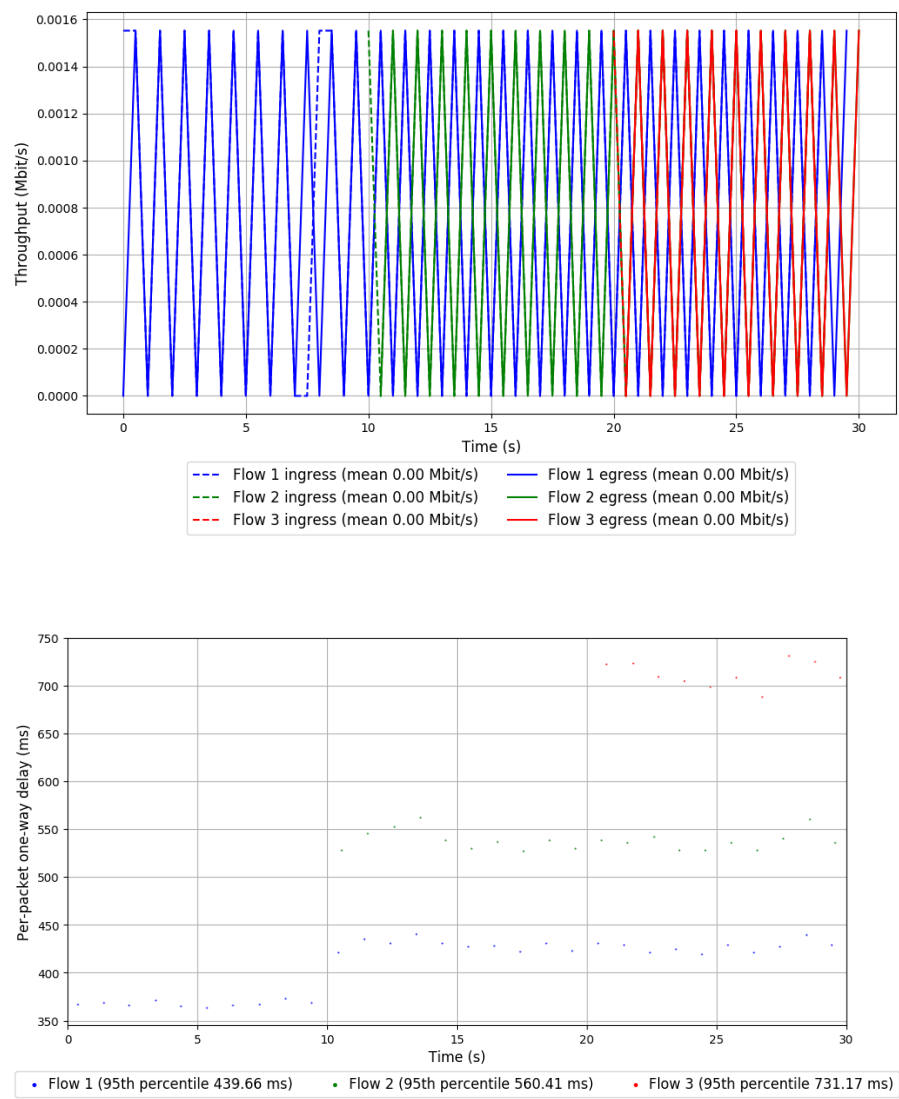
Run 5: Report of Verus — Data Link





273

```
Run 6: Statistics of Verus

Start at: 2018-05-25 09:08:45
End at: 2018-05-25 09:09:15
Local clock offset: -2.772 ms
Remote clock offset: 8.981 ms

# Below is generated by plot.py at 2018-05-25 10:40:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 723.522 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 449.221 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 558.665 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 746.077 ms
Loss rate: 0.00%
```
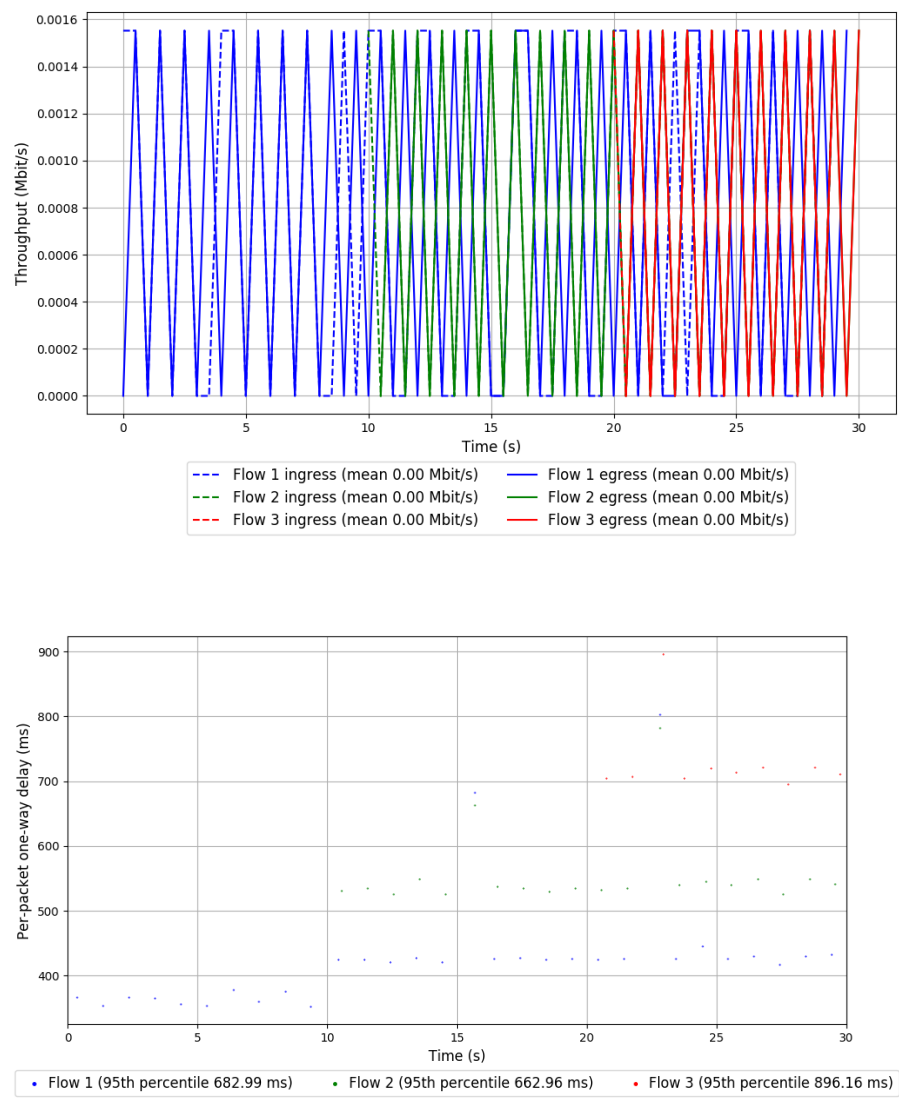
## Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2018-05-25 09:27:47
End at: 2018-05-25 09:28:17
Local clock offset: -3.045 ms
Remote clock offset: 7.637 ms


# Below is generated by plot.py at 2018-05-25 10:40:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 720.651 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 443.348 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 721.831 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 722.586 ms
Loss rate: 0.00%
```
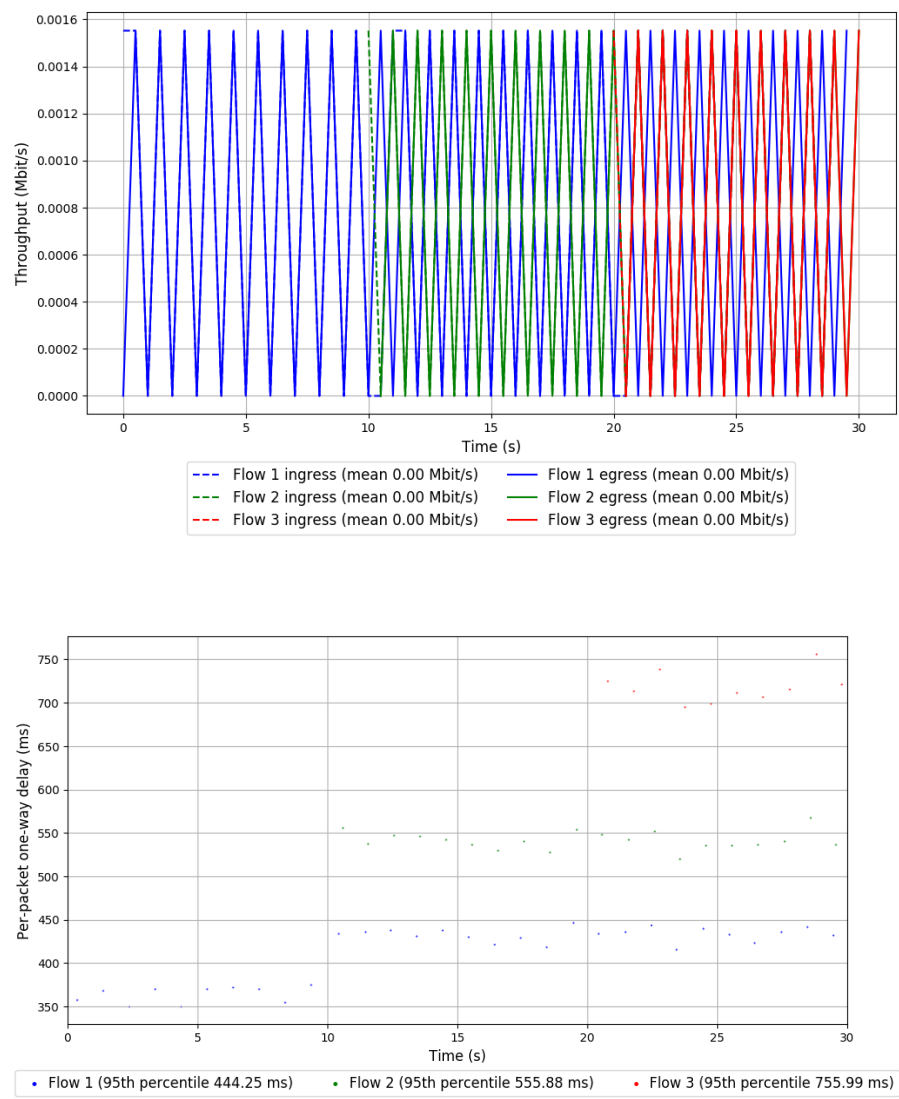
# Run 7: Report of Verus — Data Link





277

```
Run 8: Statistics of Verus

Start at: 2018-05-25 09:46:50
End at: 2018-05-25 09:47:20
Local clock offset: -6.404 ms
Remote clock offset: 8.665 ms


# Below is generated by plot.py at 2018-05-25 10:40:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 723.115 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 439.658 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 560.408 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 731.170 ms
Loss rate: 0.00%
```

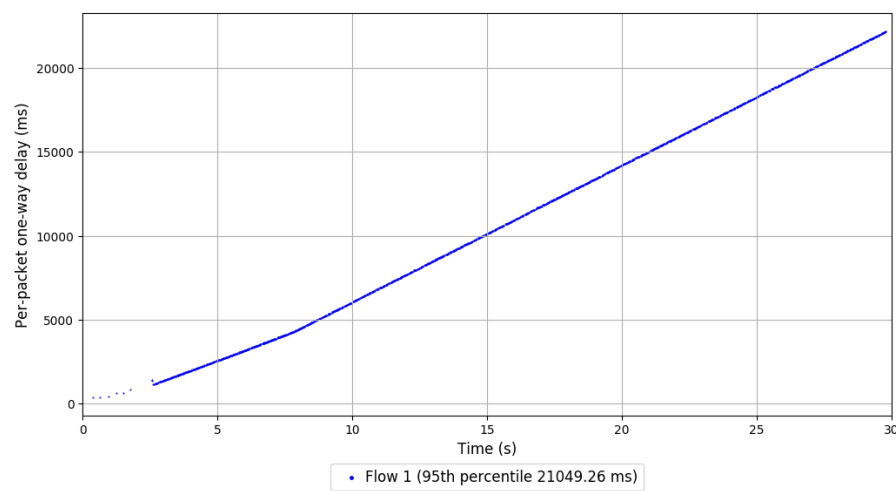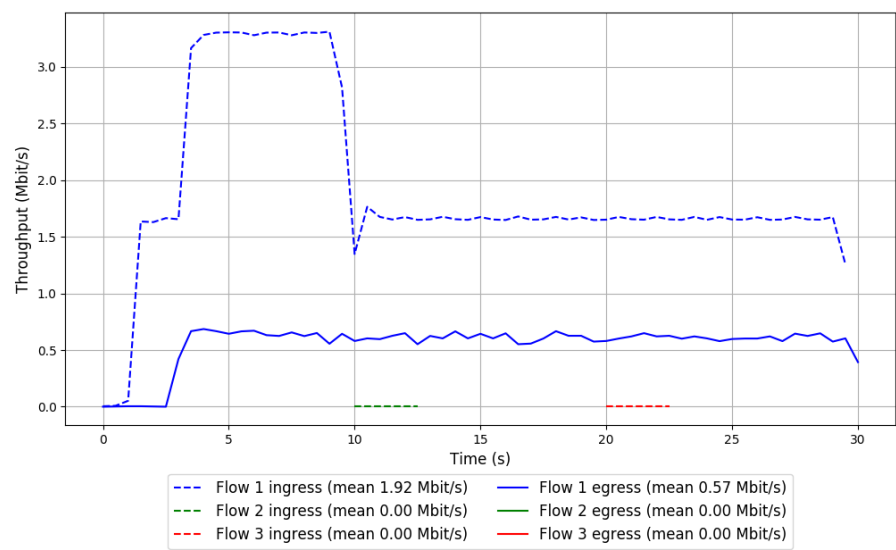## Run 8: Report of Verus — Data Link





279

```
Run 9: Statistics of Verus

Start at: 2018-05-25 10:05:55
End at: 2018-05-25 10:06:25
Local clock offset: -5.01 ms
Remote clock offset: 10.905 ms


# Below is generated by plot.py at 2018-05-25 10:40:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 721.124 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 682.985 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 662.959 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 896.158 ms
Loss rate: 0.00%
```

Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2018-05-25 10:24:58
End at: 2018-05-25 10:25:28
Local clock offset: -3.285 ms
Remote clock offset: 13.896 ms


# Below is generated by plot.py at 2018-05-25 10:40:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 721.050 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 444.249 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 555.875 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 755.990 ms
Loss rate: 0.00%
```

## Run 10: Report of Verus — Data Link





283

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-05-25 07:31:13
End at: 2018-05-25 07:31:44
Local clock offset: -1.155 ms
Remote clock offset: 7.592 ms
```

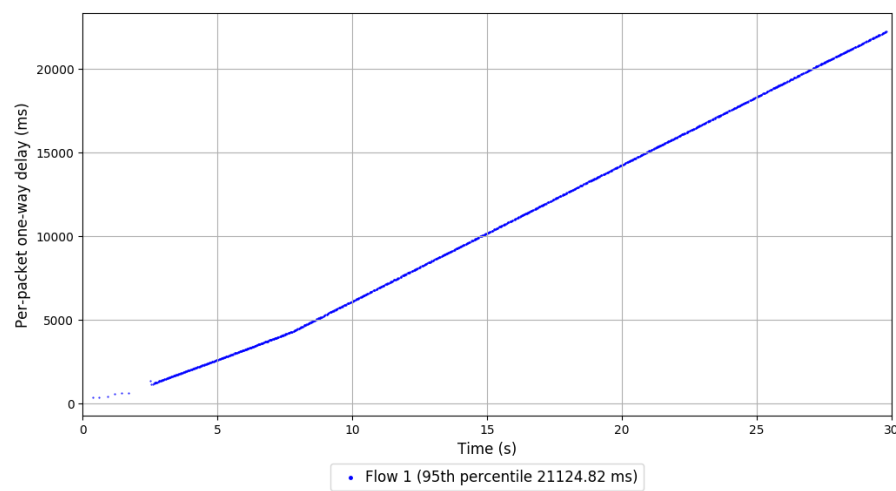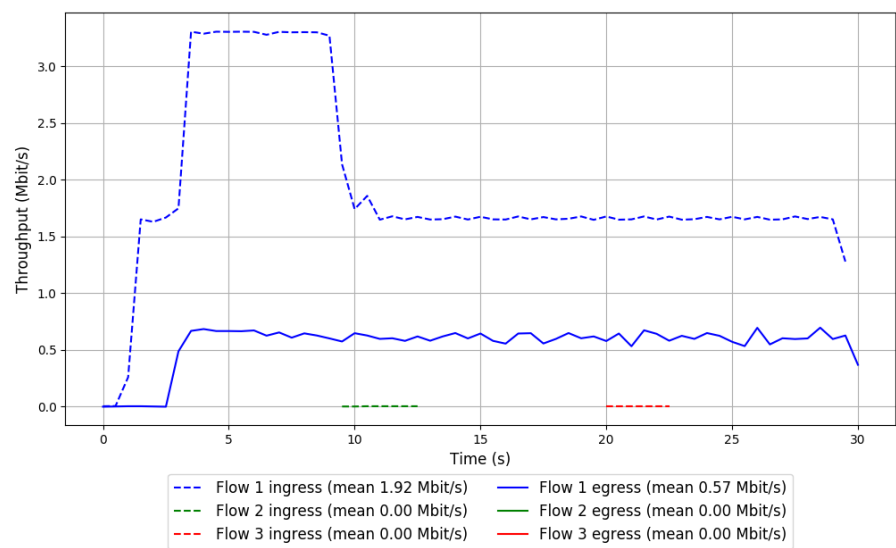# Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-05-25 07:50:15
End at: 2018-05-25 07:50:45
Local clock offset: -1.705 ms
Remote clock offset: 9.609 ms
```

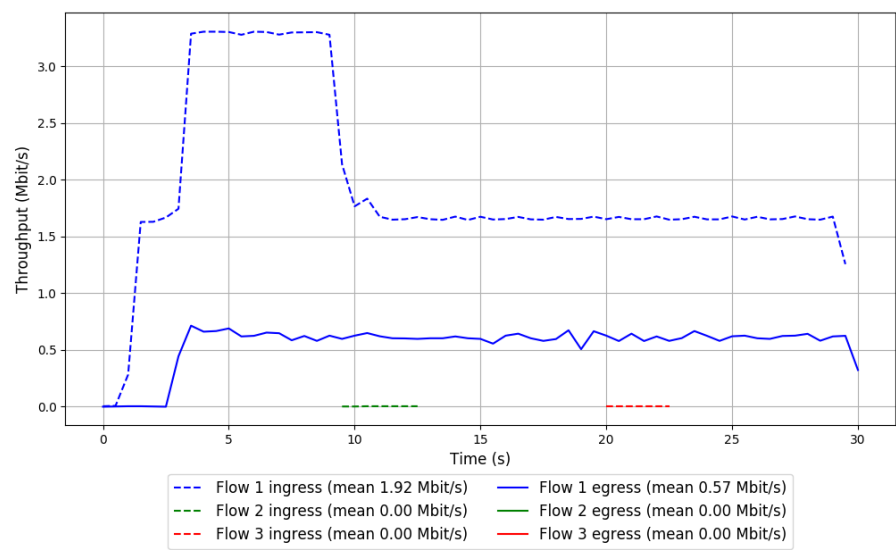# Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2018-05-25 08:09:16
End at: 2018-05-25 08:09:46
Local clock offset: -2.638 ms
Remote clock offset: 8.239 ms
```

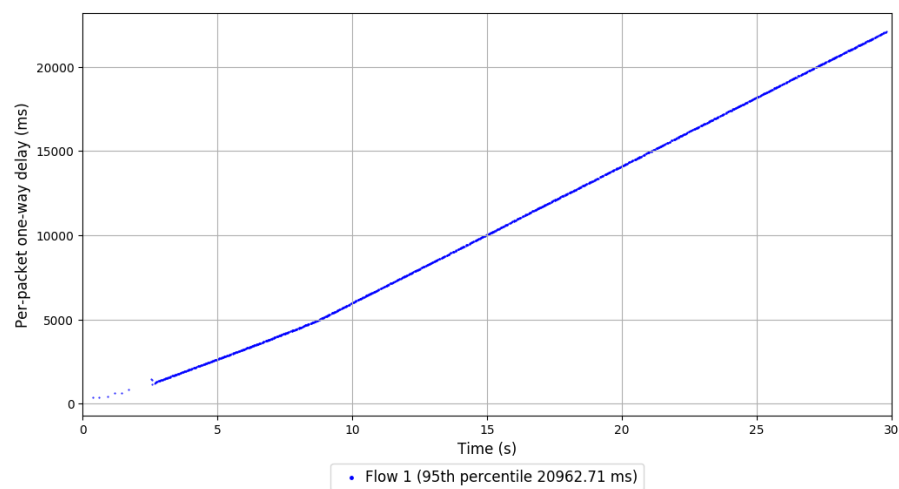Run 3: Report of PCC-Vivace — Data Link
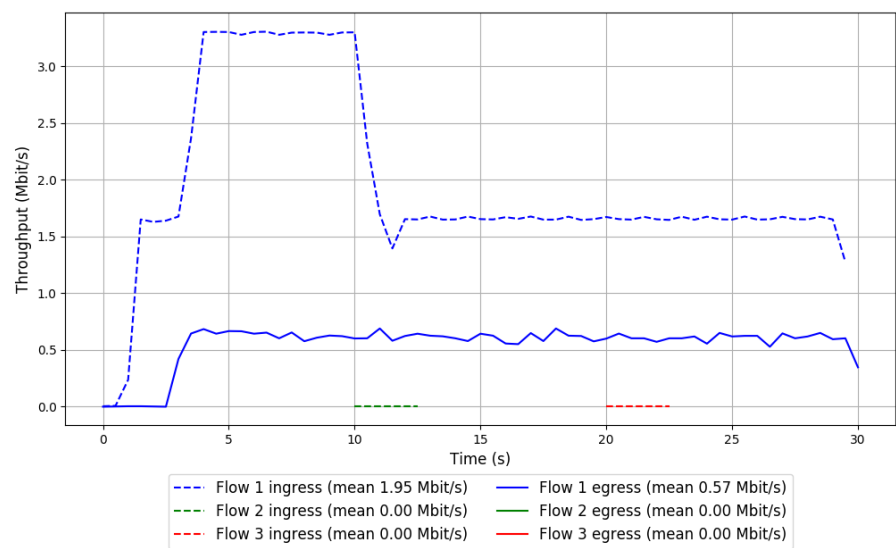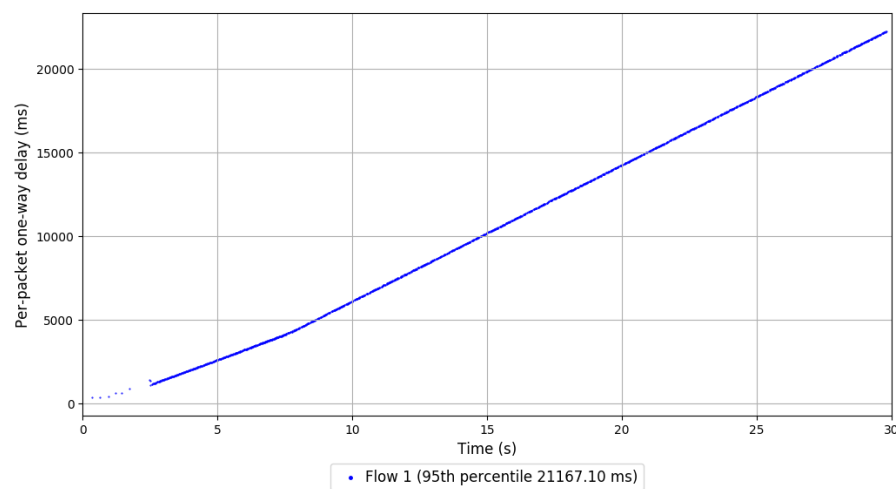
```
Run 4: Statistics of PCC-Vivace

Start at: 2018-05-25 08:28:17
End at: 2018-05-25 08:28:47
Local clock offset: -2.766 ms
Remote clock offset: 3.637 ms
```
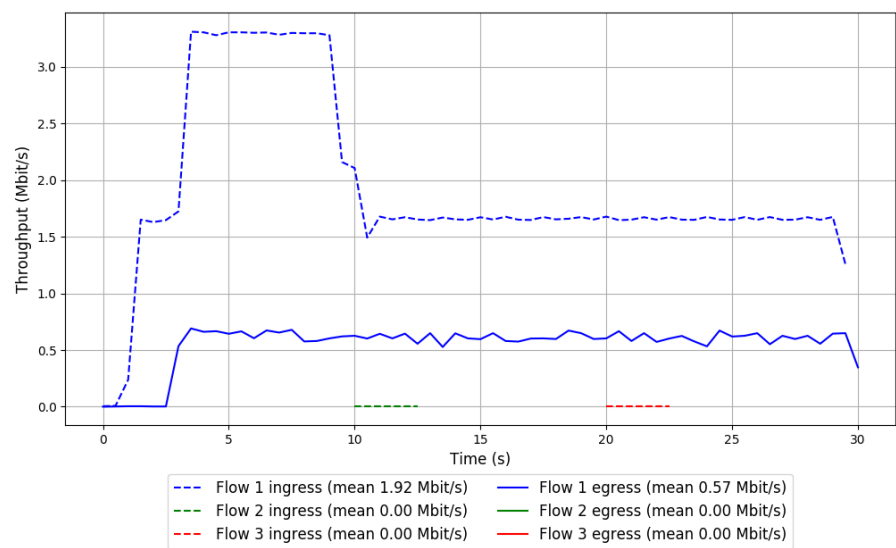
# Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2018-05-25 08:47:22
End at: 2018-05-25 08:47:52
Local clock offset: -2.235 ms
Remote clock offset: 8.403 ms
```

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

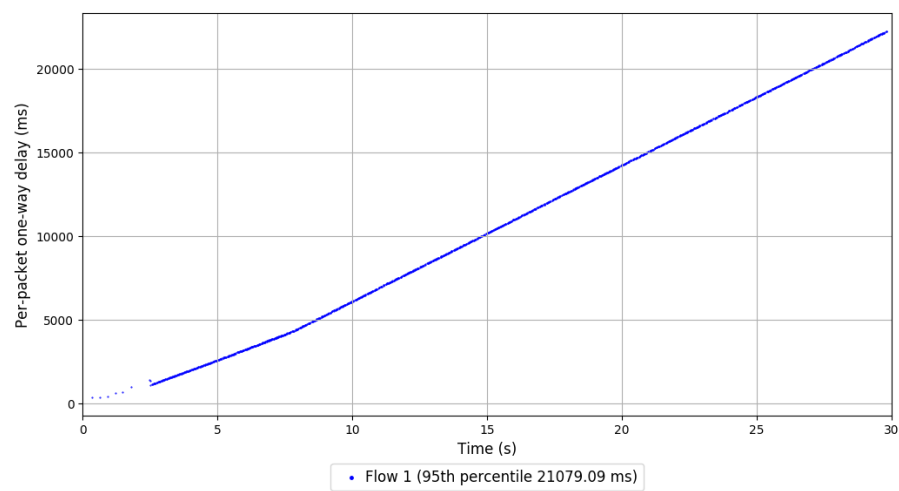



293

```
Run 6: Statistics of PCC-Vivace

Start at: 2018-05-25 09:06:23
End at: 2018-05-25 09:06:53
Local clock offset: -3.424 ms
Remote clock offset: 5.066 ms
```

Run 6: Report of PCC-Vivace — Data Link



Flow 1 ingress (mean 1.95 Mbit/s)    Flow 1 egress (mean 0.57 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s)    Flow 2 egress (mean 0.00 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s)    Flow 3 egress (mean 0.00 Mbit/s)



• Flow 1 (95th percentile 20962.71 ms)

```
Run 7: Statistics of PCC-Vivace

Start at: 2018-05-25 09:25:25
End at: 2018-05-25 09:25:55
Local clock offset: -2.966 ms
Remote clock offset: 3.079 ms
```

# Run 7: Report of PCC-Vivace — Data Link

```
Run 8: Statistics of PCC-Vivace

Start at: 2018-05-25 09:44:28
End at: 2018-05-25 09:44:58
Local clock offset: -6.939 ms
Remote clock offset: 3.289 ms
```
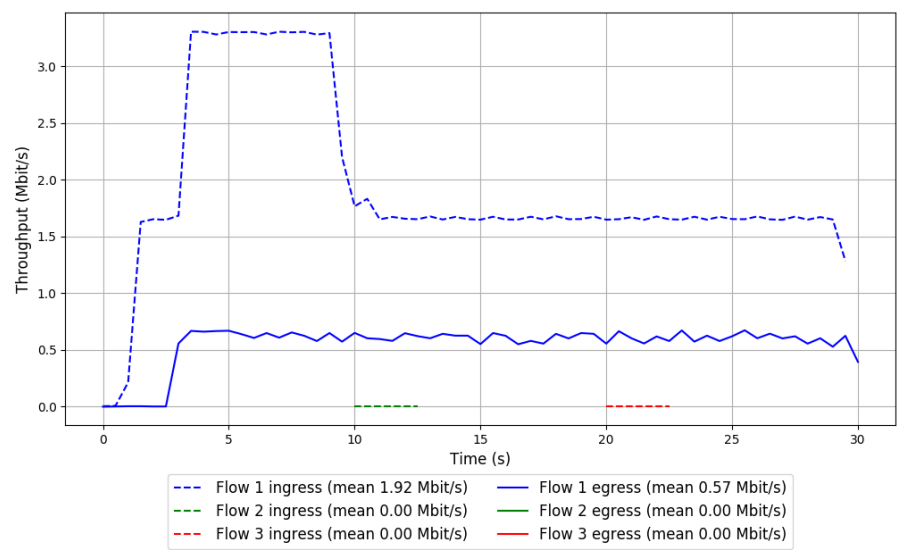
# Run 8: Report of PCC-Vivace — Data Link

```
Run 9: Statistics of PCC-Vivace

Start at: 2018-05-25 10:03:33
End at: 2018-05-25 10:04:03
Local clock offset: -3.904 ms
Remote clock offset: 10.502 ms
```
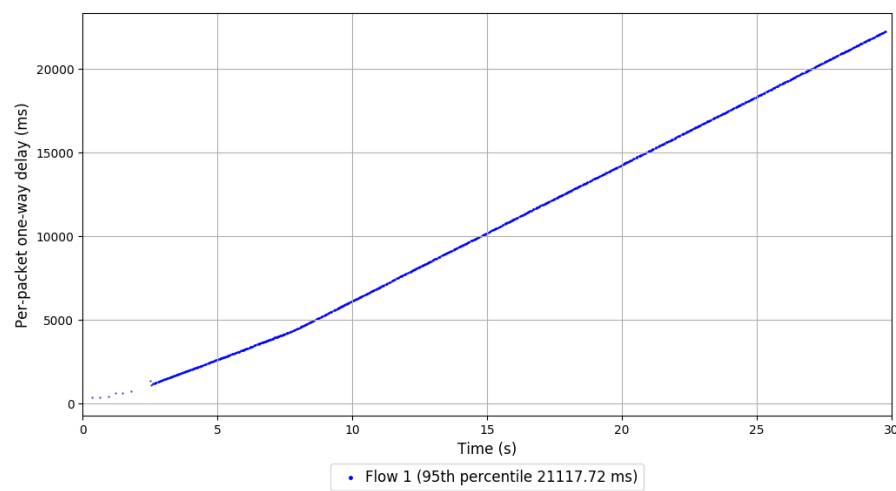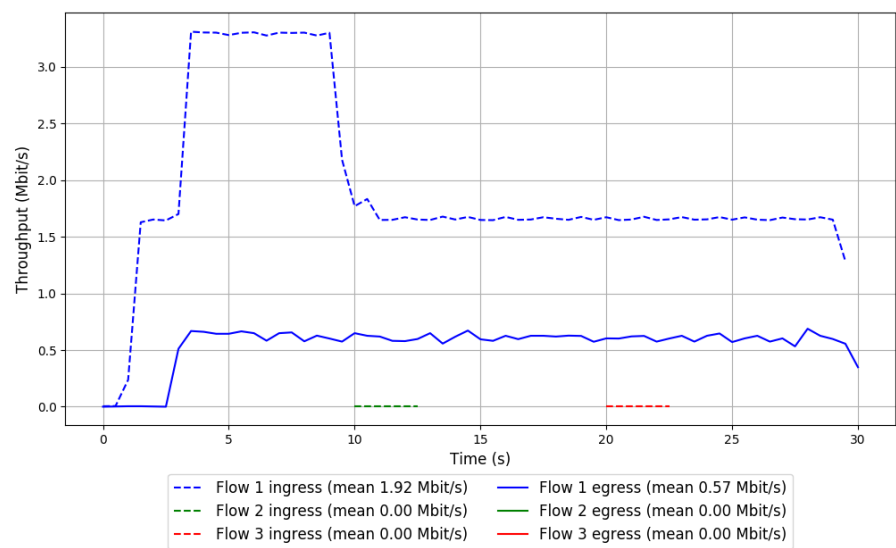
Run 9: Report of PCC-Vivace — Data Link
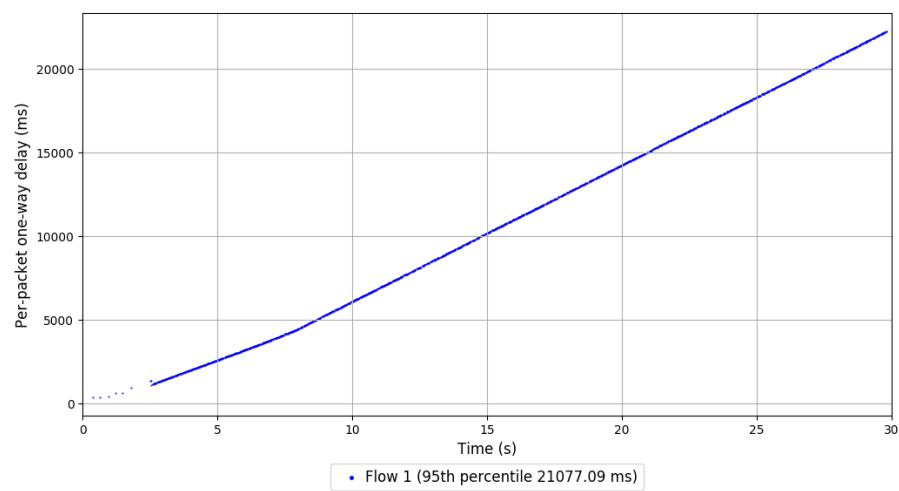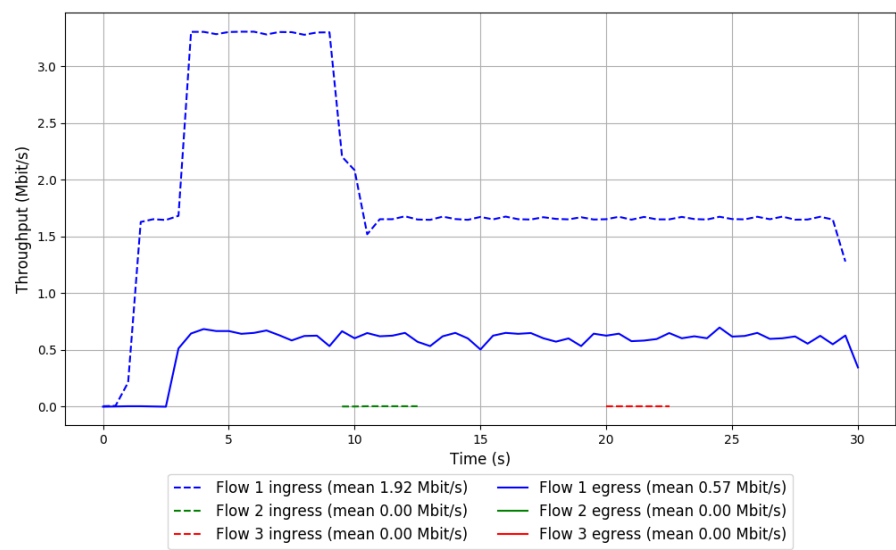
Run 10: Statistics of PCC-Vivace

Start at: 2018-05-25 10:22:35
End at: 2018-05-25 10:23:05
Local clock offset: -2.609 ms
Remote clock offset: 13.601 ms

Run 10: Report of PCC-Vivace — Data Link



Flow 1 ingress (mean 1.92 Mbit/s)    Flow 1 egress (mean 0.57 Mbit/s)
Flow 2 ingress (mean 0.00 Mbit/s)    Flow 2 egress (mean 0.00 Mbit/s)
Flow 3 ingress (mean 0.00 Mbit/s)    Flow 3 egress (mean 0.00 Mbit/s)



• Flow 1 (95th percentile 21077.09 ms)

303

```
Run 1: Statistics of WebRTC media

Start at: 2018-05-25 07:41:54
End at: 2018-05-25 07:42:24
Local clock offset: -1.671 ms
Remote clock offset: 8.447 ms


# Below is generated by plot.py at 2018-05-25 10:40:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 1984.386 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 1981.914 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 1955.408 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2055.483 ms
Loss rate: 0.96%
```
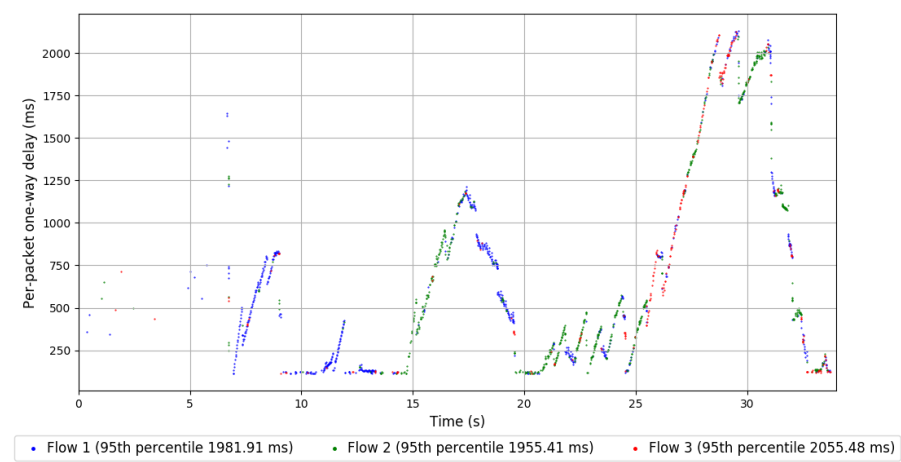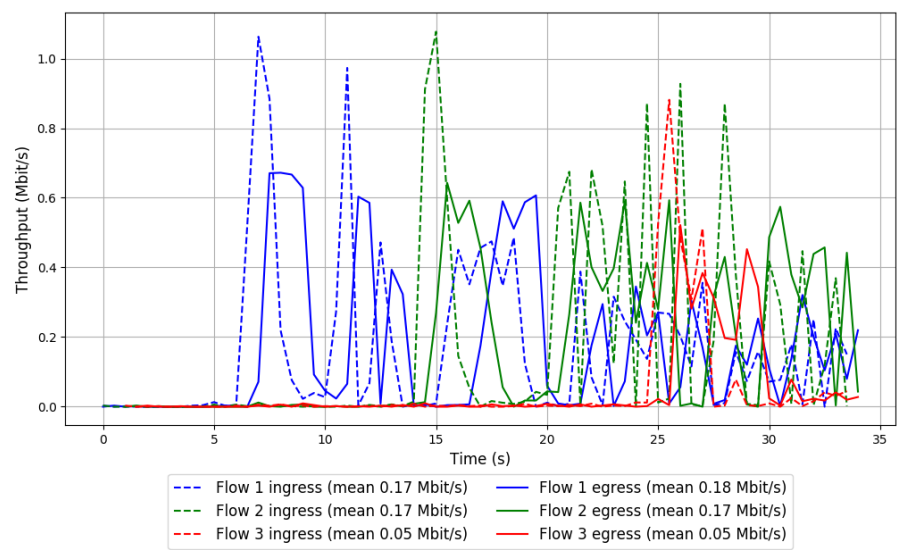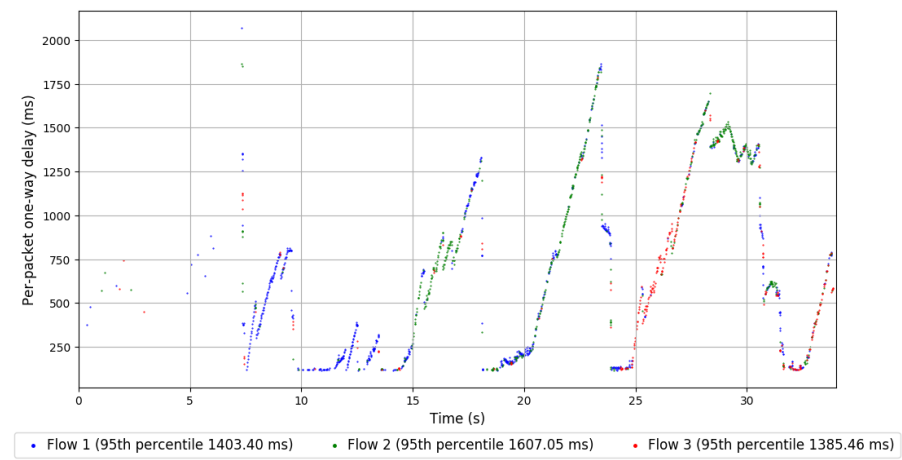
Run 1: Report of WebRTC media — Data Link



Flow 1 ingress (mean 0.17 Mbit/s)    Flow 1 egress (mean 0.18 Mbit/s)
Flow 2 ingress (mean 0.17 Mbit/s)    Flow 2 egress (mean 0.17 Mbit/s)
Flow 3 ingress (mean 0.05 Mbit/s)    Flow 3 egress (mean 0.05 Mbit/s)



Flow 1 (95th percentile 1981.91 ms)    Flow 2 (95th percentile 1955.41 ms)    Flow 3 (95th percentile 2055.48 ms)

```
Run 2: Statistics of WebRTC media

Start at: 2018-05-25 08:00:56
End at: 2018-05-25 08:01:26
Local clock offset: -2.312 ms
Remote clock offset: 5.255 ms


# Below is generated by plot.py at 2018-05-25 10:40:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 1503.673 ms
Loss rate: 5.35%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 1403.402 ms
Loss rate: 2.95%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1607.046 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 1385.460 ms
Loss rate: 22.55%
```
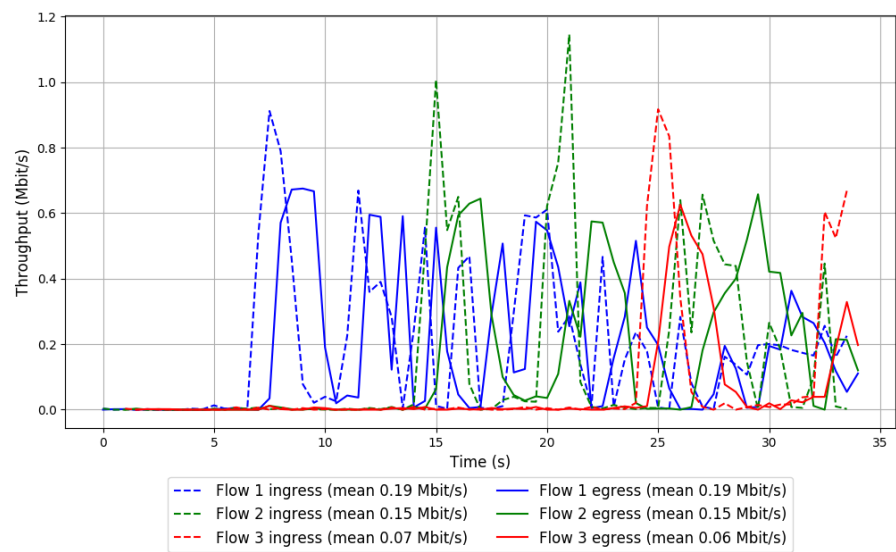
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-05-25 08:19:57
End at: 2018-05-25 08:20:27
Local clock offset: -2.934 ms
Remote clock offset: 8.433 ms


# Below is generated by plot.py at 2018-05-25 10:40:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 1820.393 ms
Loss rate: 3.95%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 1730.443 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1854.598 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 1733.599 ms
Loss rate: 20.55%
```
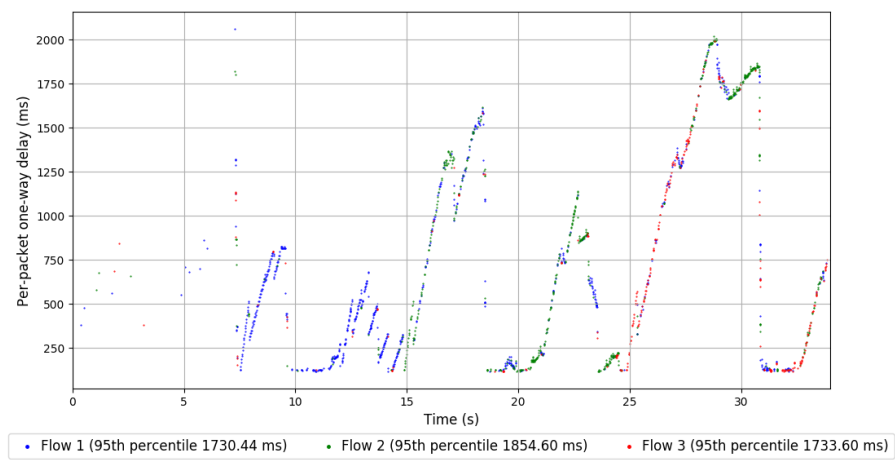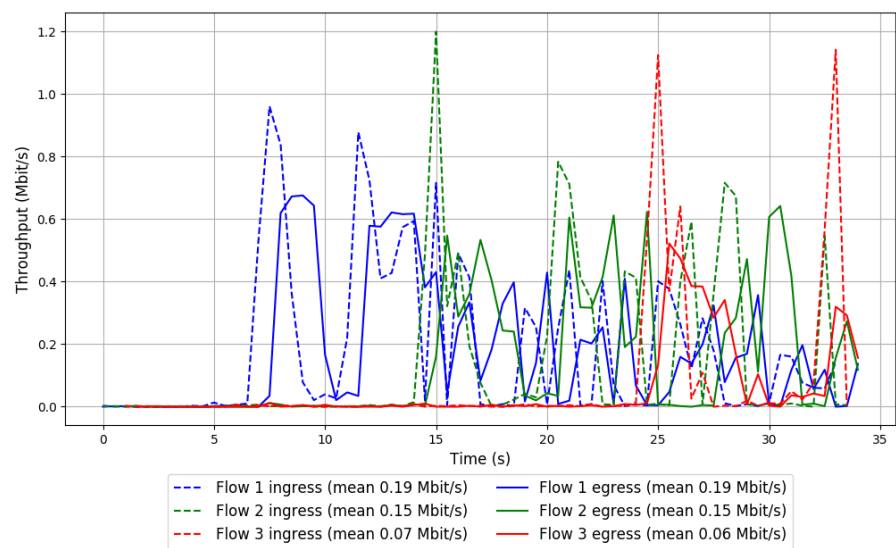
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-05-25 08:38:57
End at: 2018-05-25 08:39:28
Local clock offset: -2.326 ms
Remote clock offset: 8.589 ms


# Below is generated by plot.py at 2018-05-25 10:40:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 1932.130 ms
Loss rate: 3.56%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 1630.343 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 2023.182 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 1979.642 ms
Loss rate: 12.93%
```
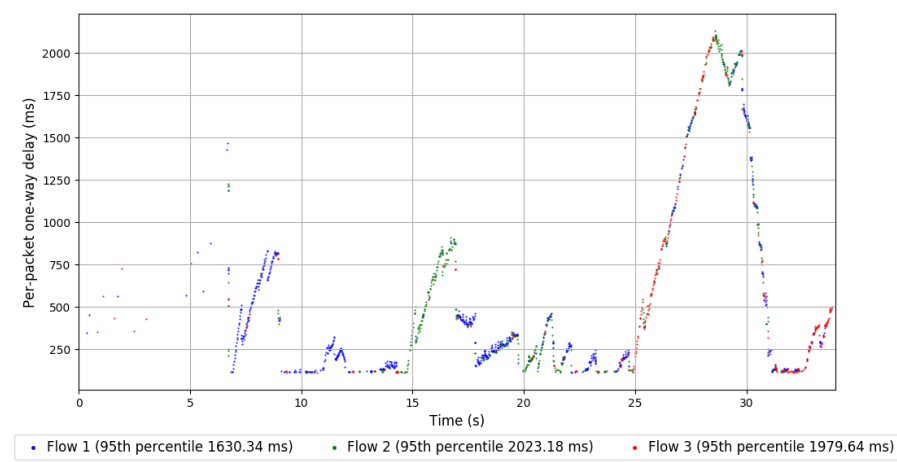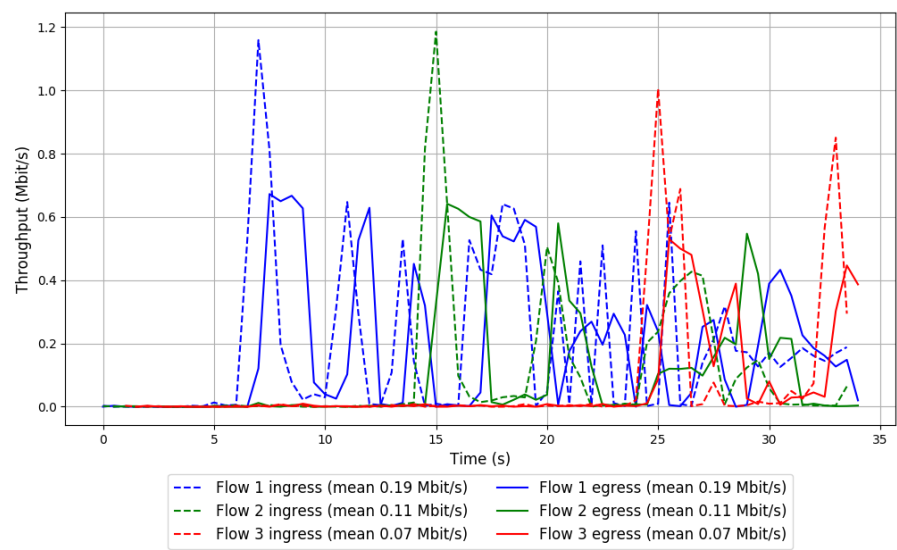
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-05-25 08:58:03
End at: 2018-05-25 08:58:33
Local clock offset: -2.311 ms
Remote clock offset: 7.828 ms


# Below is generated by plot.py at 2018-05-25 10:40:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 1794.057 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 1845.702 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1733.230 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1603.465 ms
Loss rate: 10.85%
```
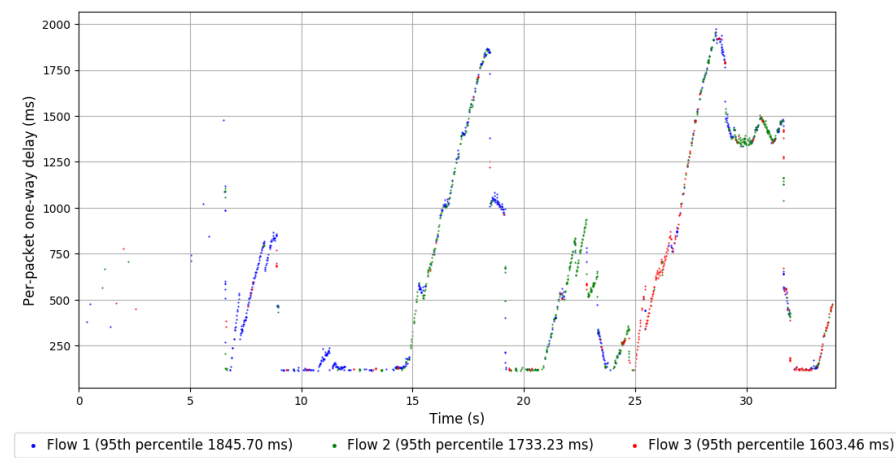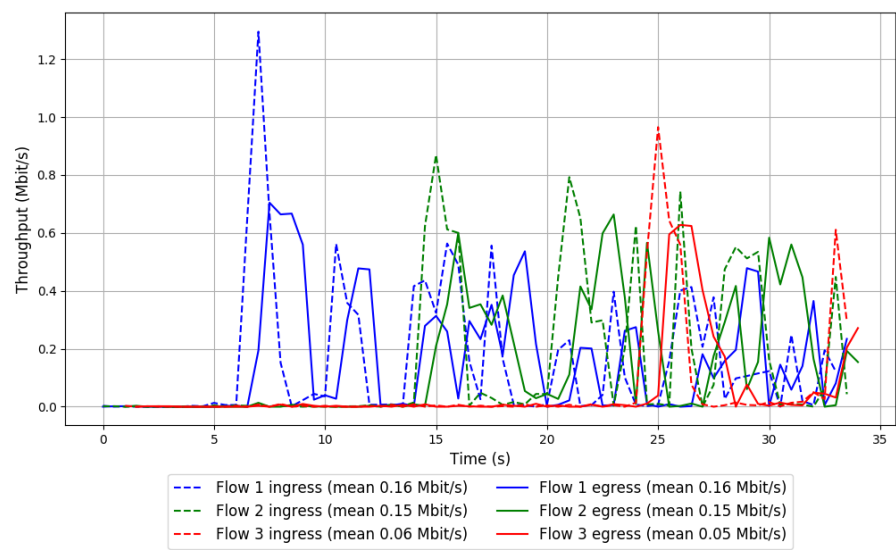
Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2018-05-25 09:17:04
End at: 2018-05-25 09:17:34
Local clock offset: -2.859 ms
Remote clock offset: 3.474 ms


# Below is generated by plot.py at 2018-05-25 10:40:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 1786.404 ms
Loss rate: 5.43%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 1722.982 ms
Loss rate: 2.17%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 1801.558 ms
Loss rate: 4.13%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 1790.198 ms
Loss rate: 16.97%
```
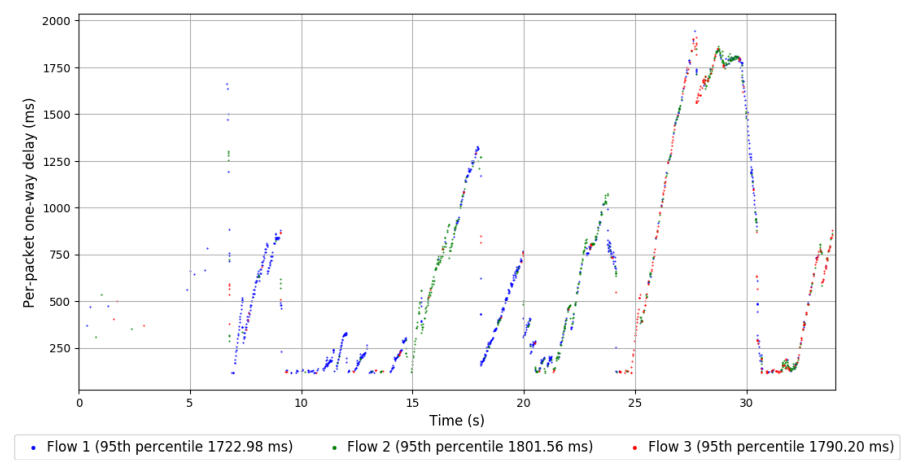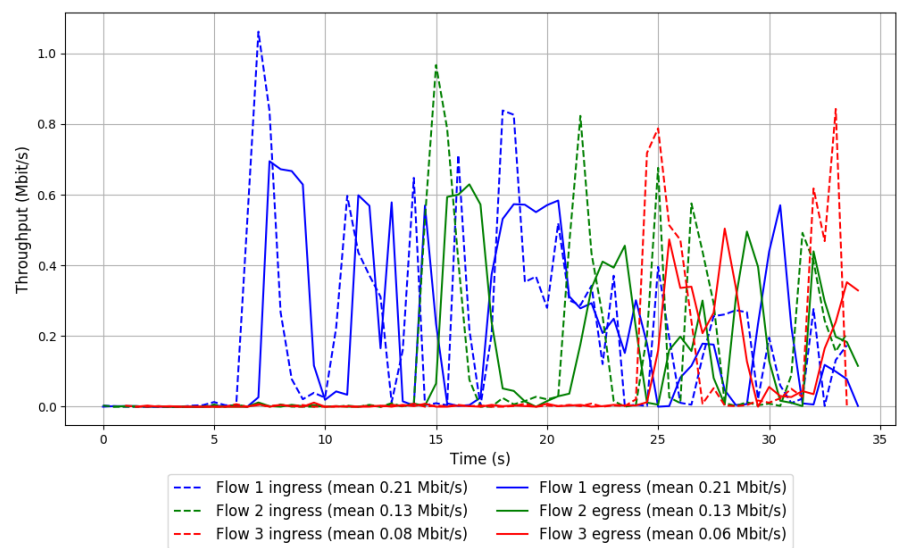
Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2018-05-25 09:36:07
End at: 2018-05-25 09:36:37
Local clock offset: -5.876 ms
Remote clock offset: 8.074 ms


# Below is generated by plot.py at 2018-05-25 10:40:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 1234.823 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1043.003 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1223.880 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 1283.747 ms
Loss rate: 0.00%
```
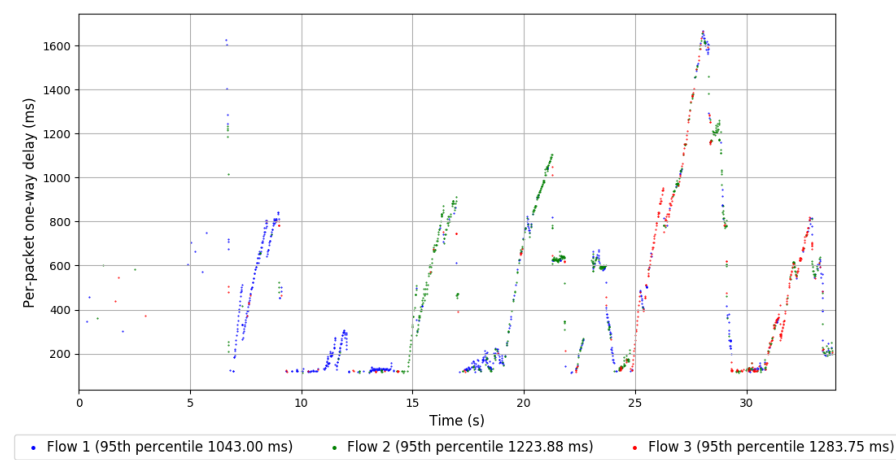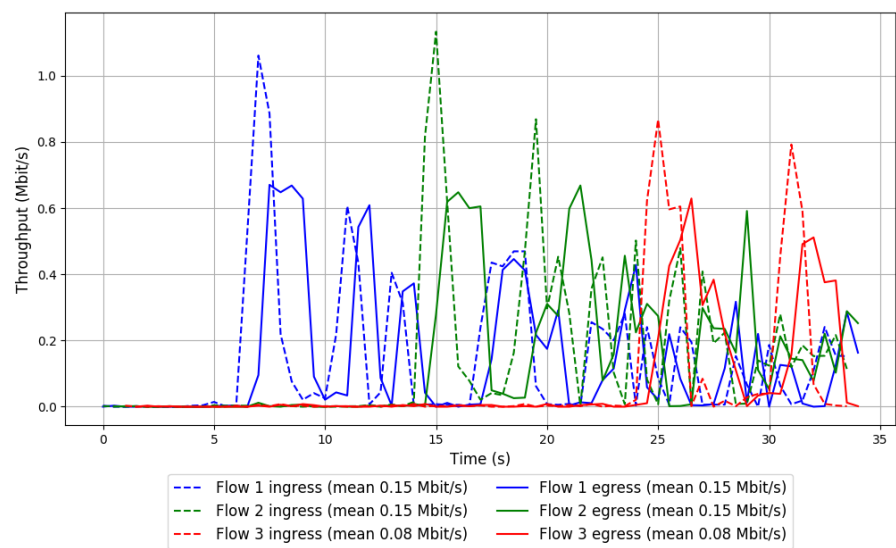
Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2018-05-25 09:55:11
End at: 2018-05-25 09:55:41
Local clock offset: -7.793 ms
Remote clock offset: 8.237 ms


# Below is generated by plot.py at 2018-05-25 10:40:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 2200.347 ms
Loss rate: 3.51%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 1550.937 ms
Loss rate: 2.30%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 2487.679 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 2380.811 ms
Loss rate: 14.64%
```
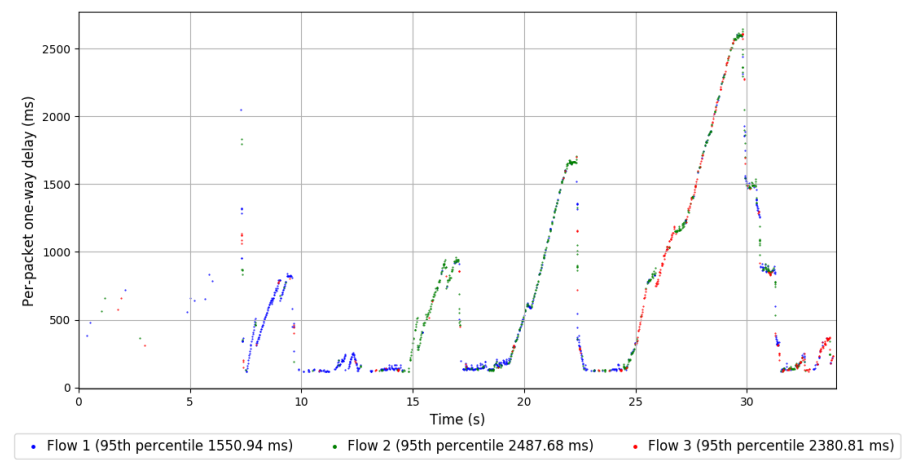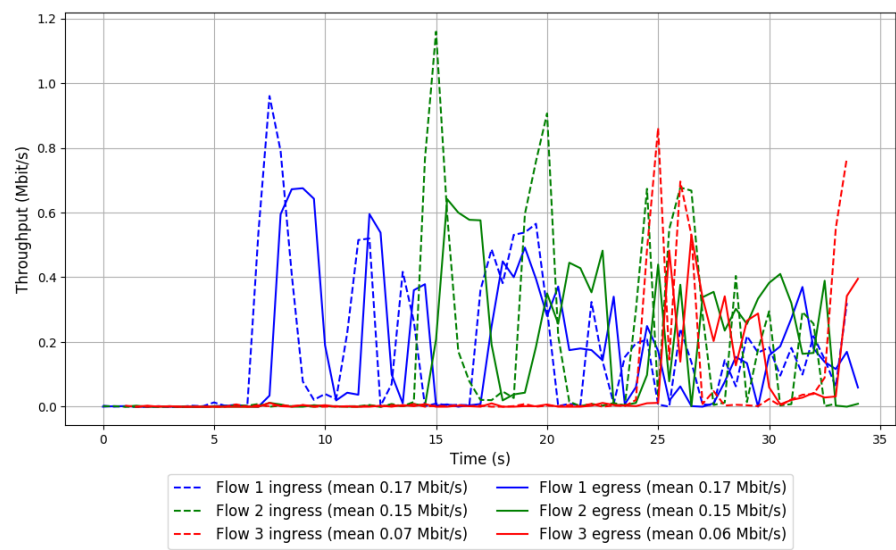
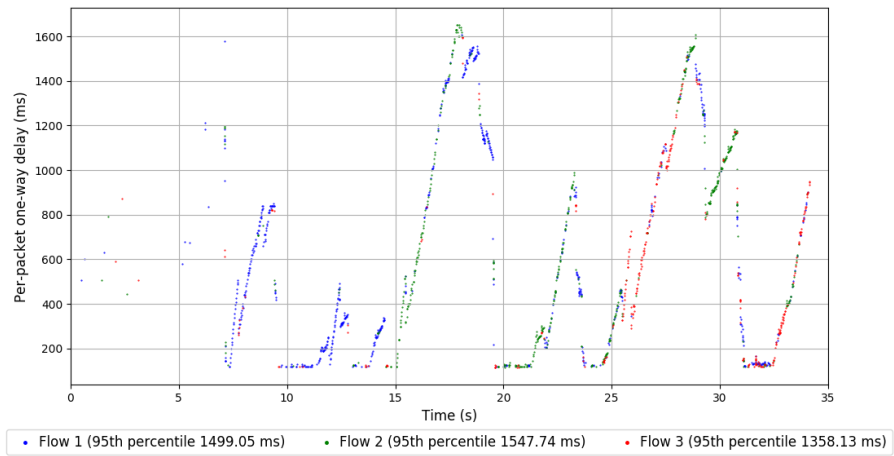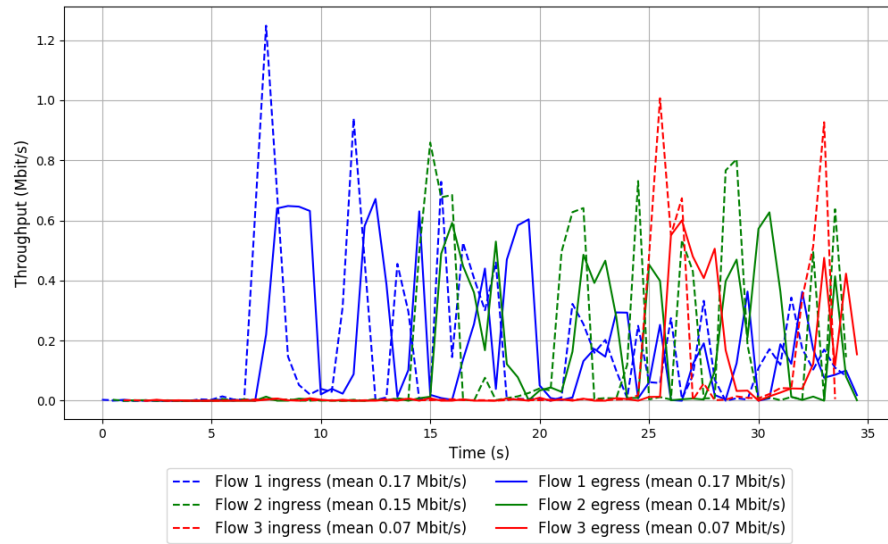Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2018-05-25 10:14:15
End at: 2018-05-25 10:14:45
Local clock offset: -3.104 ms
Remote clock offset: 16.066 ms


# Below is generated by plot.py at 2018-05-25 10:40:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 1510.893 ms
Loss rate: 5.97%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 1499.052 ms
Loss rate: 2.26%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1547.739 ms
Loss rate: 8.10%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 1358.134 ms
Loss rate: 10.56%
```

## Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2018-05-25 10:33:17
End at: 2018-05-25 10:33:47
Local clock offset: -2.53 ms
Remote clock offset: 18.788 ms


# Below is generated by plot.py at 2018-05-25 10:40:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 1213.567 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 1083.453 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 1143.337 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 1360.273 ms
Loss rate: 6.46%
```

# Run 10: Report of WebRTC media — Data Link