Pantheon Report

Generated at 2018-10-10 11:11:55 (UTC).

Data path: GCE Iowa on **ens4** (*local*) →GCE Tokyo on **ens4** (*remote*).

Repeated the test of 18 congestion control schemes 5 times.

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

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.
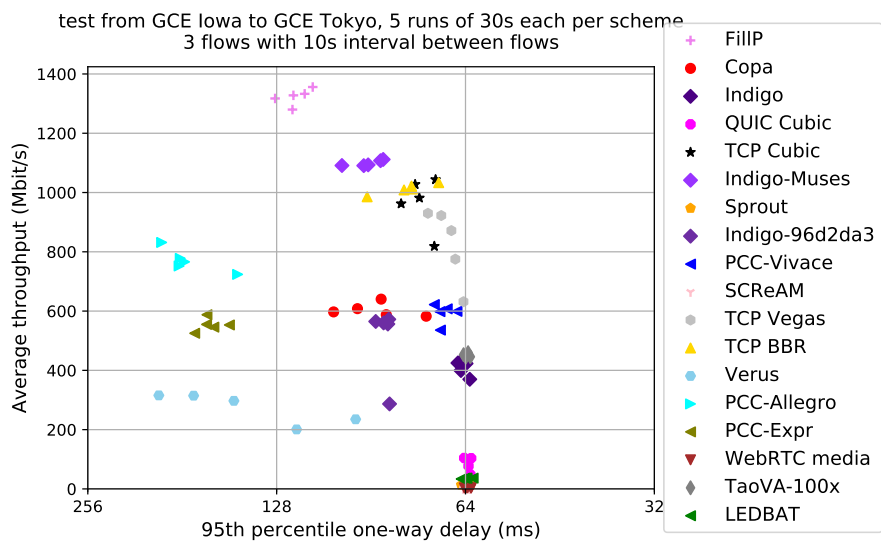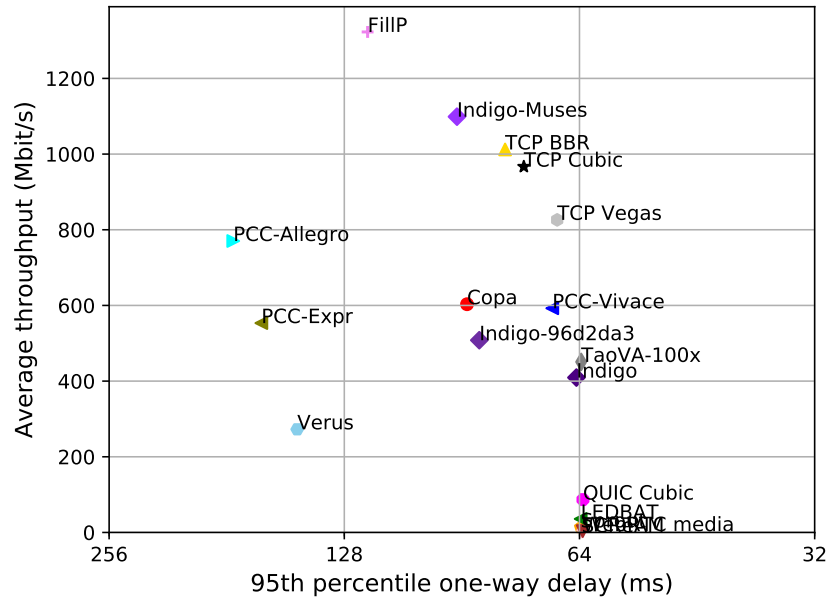
```
System info:
Linux 4.15.0-1021-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
```

```
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from GCE Iowa to GCE Tokyo, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

FillP

Indigo-Muses
TCP BBR
TCP Cubic

TCP Vegas

PCC-Allegro

Copa   PCC-Vivace
PCC-Expr
                Indigo-96d2da3
                                TaoVA-100x
                                Indigo

Verus

                                QUIC Cubic
                                LEDBAT
                                WebRTC media

Average throughput (Mbit/s)
1200
1000
800
600
400
200
0

95th percentile one-way delay (ms)
256   128   64   32

test from GCE Iowa to GCE Tokyo, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

Average throughput (Mbit/s)
1400
1200
1000
800
600
400
200
0

95th percentile one-way delay (ms)
256   128   64   32

Legend:
FillP
Copa
Indigo
QUIC Cubic
TCP Cubic
Indigo-Muses
Sprout
Indigo-96d2da3
PCC-Vivace
SCReAM
TCP Vegas
TCP BBR
Verus
PCC-Allegro
PCC-Expr
WebRTC media
TaoVA-100x
LEDBAT

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	519.93	506.69	466.47	75.39	81.38	79.71	0.03	0.02	0.06
Copa	5	314.81	295.04	276.95	80.78	102.56	93.17	0.00	0.01	0.03
TCP Cubic	5	498.28	467.28	472.80	73.09	74.83	78.14	0.01	0.01	0.04
FillP	5	727.31	638.55	513.57	121.59	117.31	75.19	0.41	0.36	0.03
Indigo	5	215.06	207.50	174.88	64.28	65.00	64.52	0.00	0.00	0.00
Indigo-96d2da3	5	237.72	280.81	259.35	81.24	86.95	88.37	0.00	0.00	0.21
LEDBAT	5	22.86	15.63	7.70	63.82	63.73	63.52	0.00	0.00	0.00
Indigo-Muses	5	598.23	540.75	434.97	92.23	91.91	85.90	0.02	0.01	0.02
PCC-Allegro	5	424.21	383.45	276.81	174.96	167.33	130.99	2.33	2.96	1.32
PCC-Expr	5	317.75	278.68	151.86	151.60	167.19	81.51	3.11	2.57	0.05
QUIC Cubic	5	45.20	46.49	32.90	63.38	63.31	63.34	0.00	0.00	0.00
SCReAM	5	0.22	0.22	0.22	63.52	63.43	63.46	0.00	0.00	0.00
Sprout	5	6.82	6.67	6.46	63.83	63.59	63.68	0.00	0.00	0.00
TaoVA-100x	5	230.86	223.41	213.37	63.65	63.71	63.67	0.00	0.00	0.00
TCP Vegas	5	419.20	419.00	384.85	66.10	65.33	73.30	0.00	0.00	0.00
Verus	5	161.66	119.57	97.12	158.44	118.01	94.92	1.14	0.43	0.00
PCC-Vivace	5	343.68	307.96	133.63	69.33	69.95	67.56	0.00	0.00	0.01
WebRTC media	5	1.85	1.24	0.48	63.38	63.32	63.41	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2018-10-10 06:03:38
End at: 2018-10-10 06:04:08
Local clock offset: -0.022 ms
Remote clock offset: 0.077 ms

# Below is generated by plot.py at 2018-10-10 09:14:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1011.84 Mbit/s
95th percentile per-packet one-way delay: 77.769 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 524.48 Mbit/s
95th percentile per-packet one-way delay: 73.643 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 502.53 Mbit/s
95th percentile per-packet one-way delay: 76.954 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 457.72 Mbit/s
95th percentile per-packet one-way delay: 84.262 ms
Loss rate: 0.10%
```
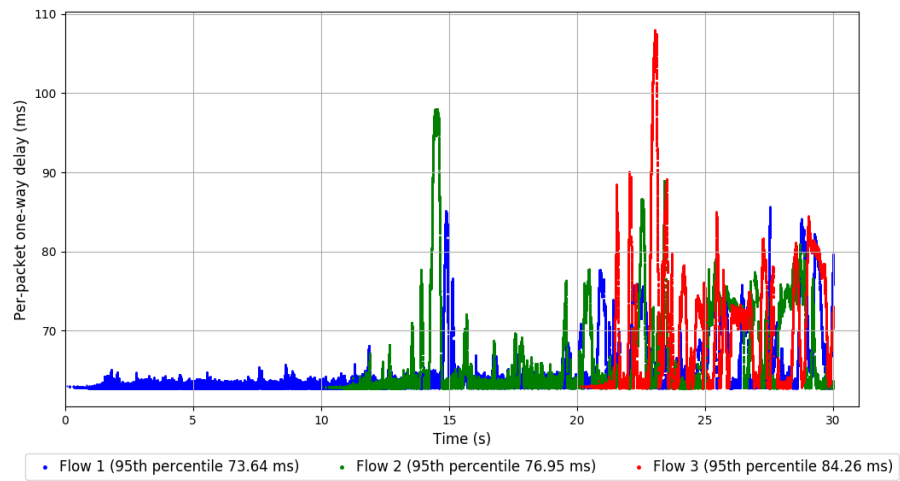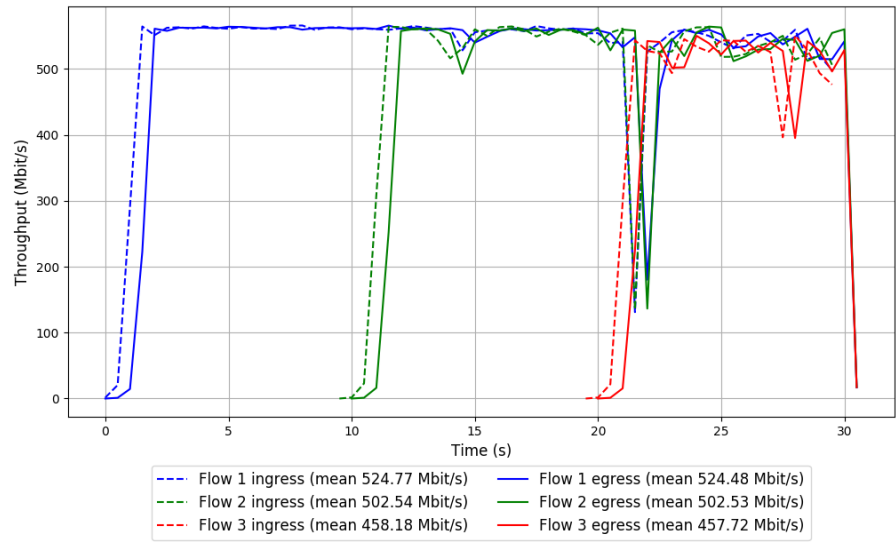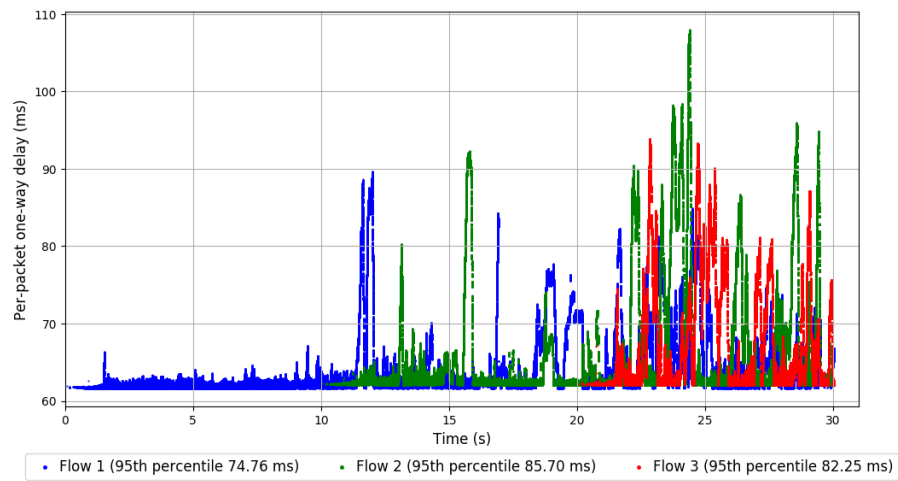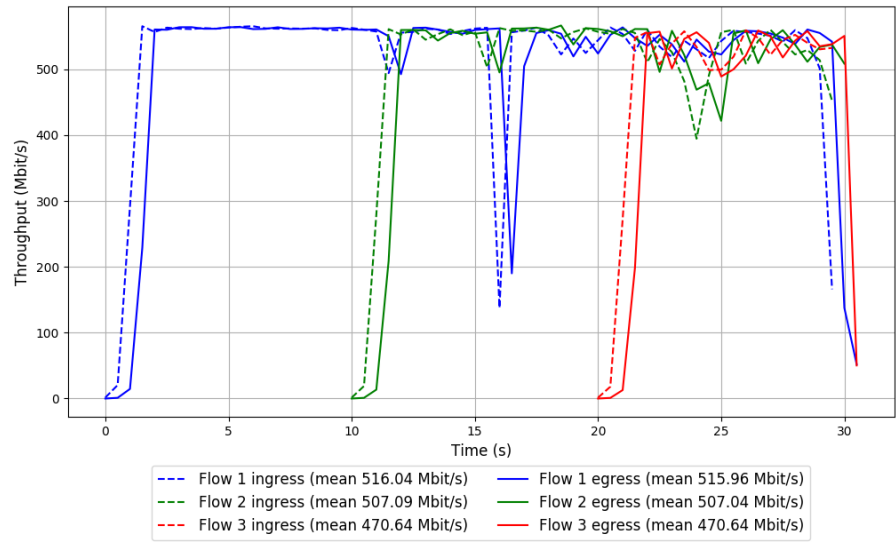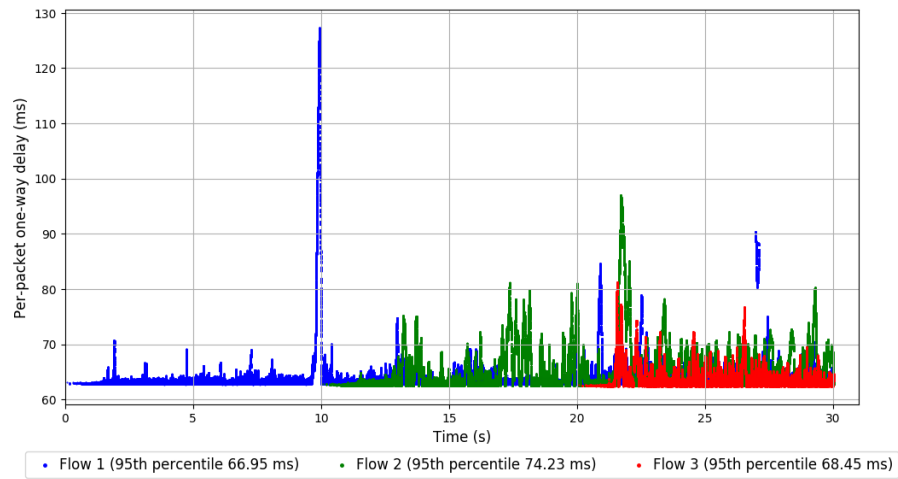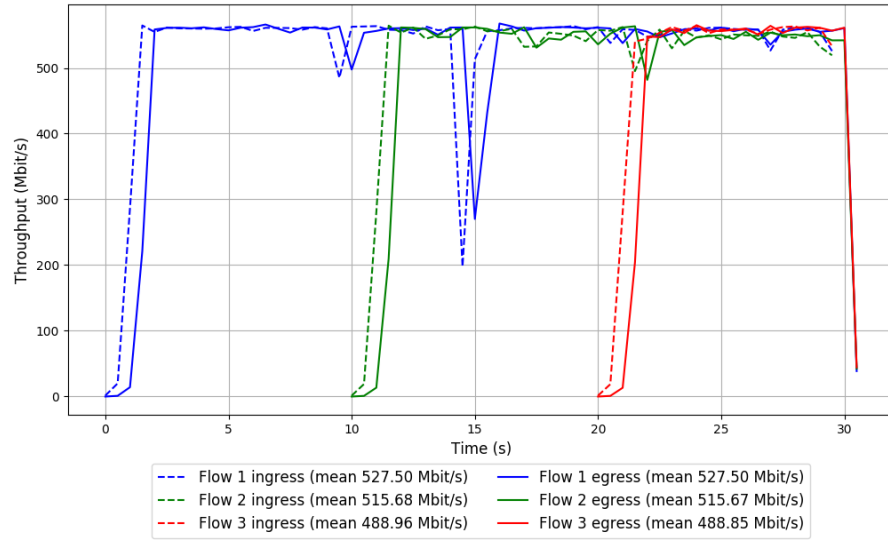
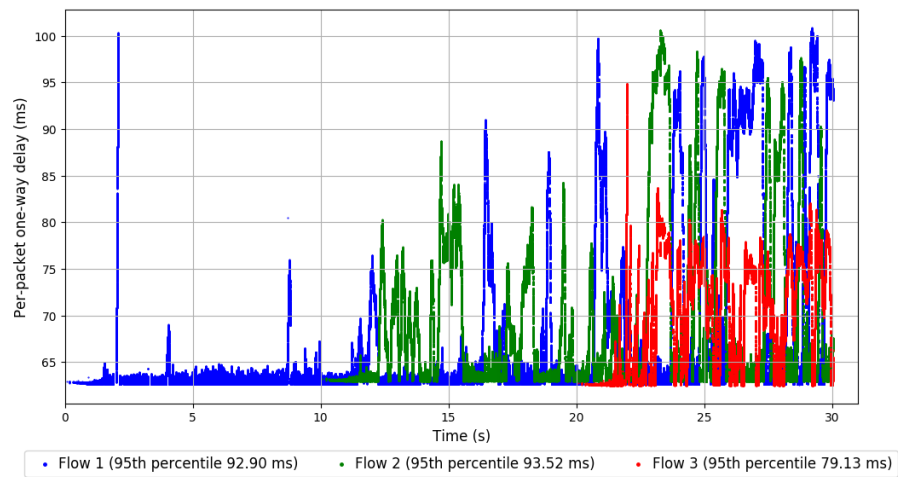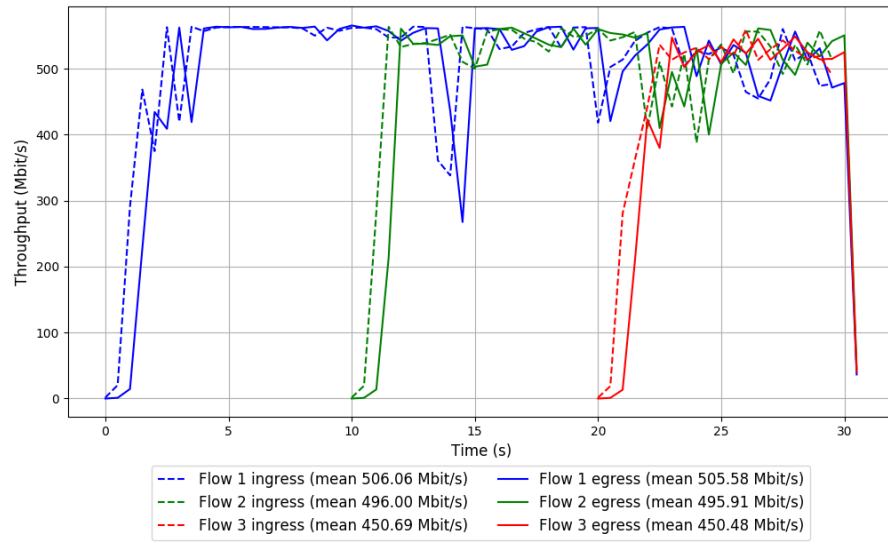Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2018-10-10 06:34:47
End at: 2018-10-10 06:35:17
Local clock offset: -0.022 ms
Remote clock offset: -1.049 ms


# Below is generated by plot.py at 2018-10-10 09:14:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1008.73 Mbit/s
95th percentile per-packet one-way delay: 80.198 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 515.96 Mbit/s
95th percentile per-packet one-way delay: 74.761 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 507.04 Mbit/s
95th percentile per-packet one-way delay: 85.696 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 470.64 Mbit/s
95th percentile per-packet one-way delay: 82.251 ms
Loss rate: 0.00%
```

Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2018-10-10 07:06:20
End at: 2018-10-10 07:06:50
Local clock offset: 0.028 ms
Remote clock offset: -0.247 ms


# Below is generated by plot.py at 2018-10-10 09:14:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1033.30 Mbit/s
95th percentile per-packet one-way delay: 70.622 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 527.50 Mbit/s
95th percentile per-packet one-way delay: 66.953 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 515.67 Mbit/s
95th percentile per-packet one-way delay: 74.235 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 488.85 Mbit/s
95th percentile per-packet one-way delay: 68.451 ms
Loss rate: 0.00%
```
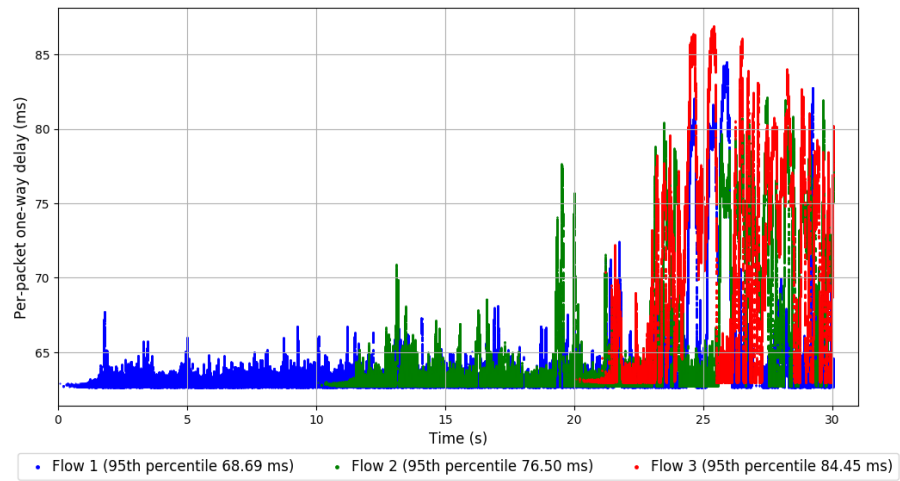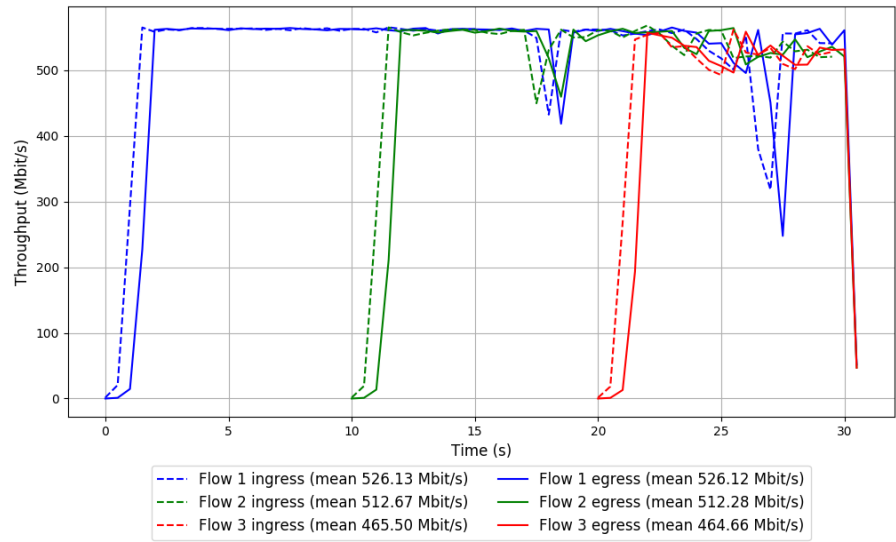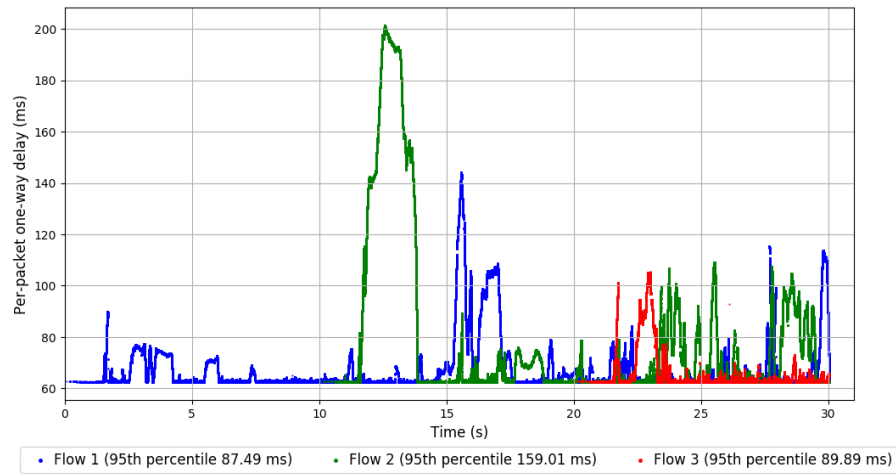
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2018-10-10 07:37:27
End at: 2018-10-10 07:37:57
Local clock offset: -0.023 ms
Remote clock offset: -0.065 ms


# Below is generated by plot.py at 2018-10-10 09:14:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 985.58 Mbit/s
95th percentile per-packet one-way delay: 91.820 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 505.58 Mbit/s
95th percentile per-packet one-way delay: 92.904 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 495.91 Mbit/s
95th percentile per-packet one-way delay: 93.515 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 450.48 Mbit/s
95th percentile per-packet one-way delay: 79.133 ms
Loss rate: 0.03%
```
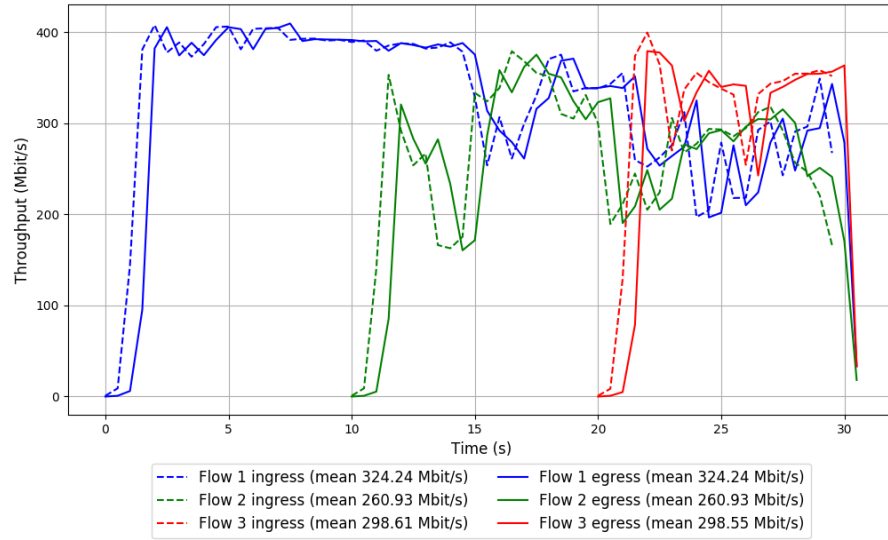
Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2018-10-10 08:08:58
End at: 2018-10-10 08:09:28
Local clock offset: -0.034 ms
Remote clock offset: 0.017 ms


# Below is generated by plot.py at 2018-10-10 09:14:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1021.79 Mbit/s
95th percentile per-packet one-way delay: 78.024 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 526.12 Mbit/s
95th percentile per-packet one-way delay: 68.686 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 512.28 Mbit/s
95th percentile per-packet one-way delay: 76.496 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 464.66 Mbit/s
95th percentile per-packet one-way delay: 84.450 ms
Loss rate: 0.17%
```
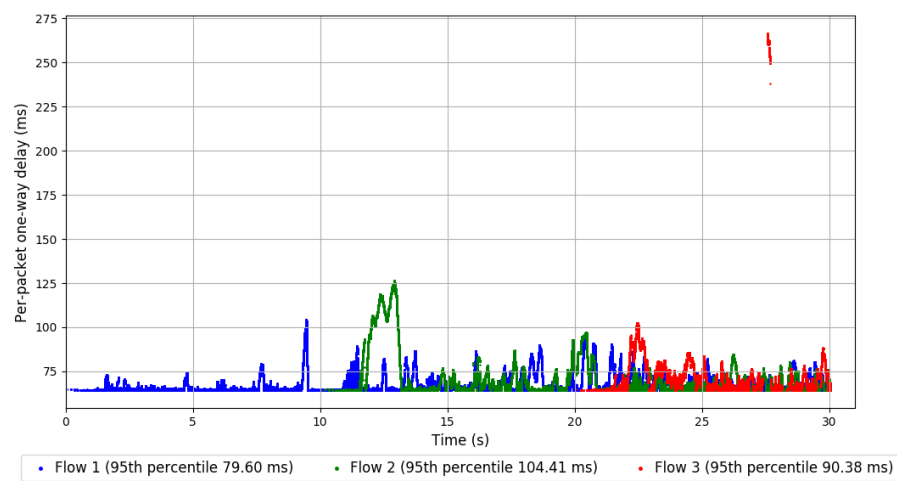
Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2018-10-10 06:28:51
End at: 2018-10-10 06:29:21
Local clock offset: -0.032 ms
Remote clock offset: -0.088 ms


# Below is generated by plot.py at 2018-10-10 09:16:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 597.22 Mbit/s
95th percentile per-packet one-way delay: 103.852 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 324.24 Mbit/s
95th percentile per-packet one-way delay: 87.486 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 260.93 Mbit/s
95th percentile per-packet one-way delay: 159.011 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 298.55 Mbit/s
95th percentile per-packet one-way delay: 89.888 ms
Loss rate: 0.02%
```
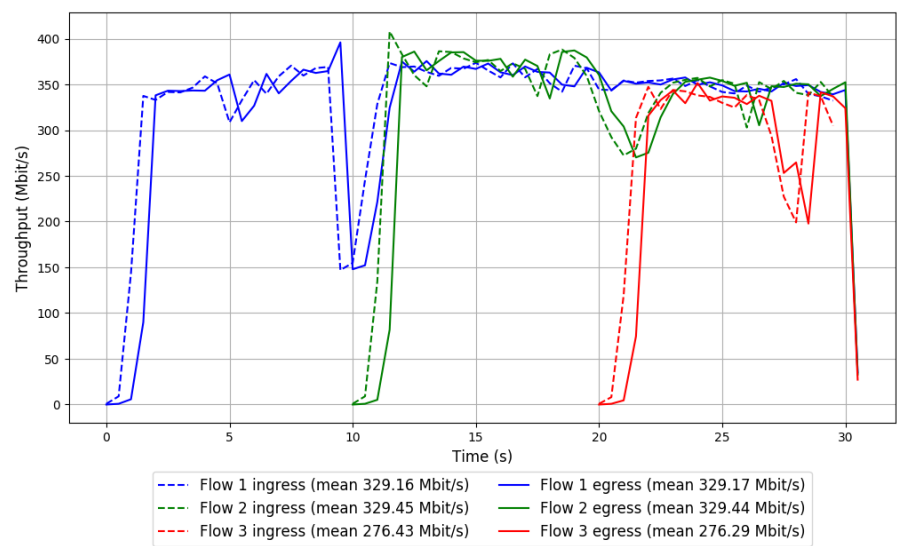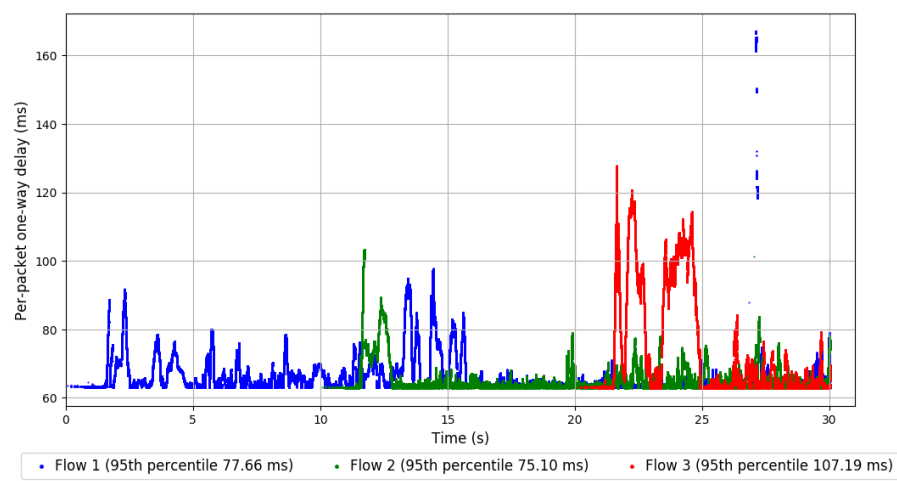
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2018-10-10 07:00:17
End at: 2018-10-10 07:00:47
Local clock offset: -0.02 ms
Remote clock offset: 1.451 ms


# Below is generated by plot.py at 2018-10-10 09:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 640.29 Mbit/s
95th percentile per-packet one-way delay: 87.228 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 329.17 Mbit/s
95th percentile per-packet one-way delay: 79.598 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 329.44 Mbit/s
95th percentile per-packet one-way delay: 104.405 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 276.29 Mbit/s
95th percentile per-packet one-way delay: 90.381 ms
Loss rate: 0.03%
```
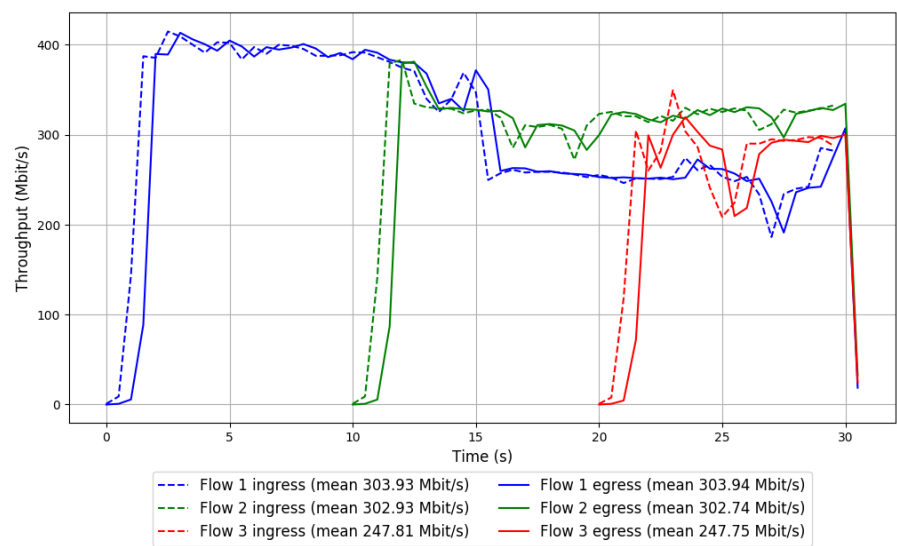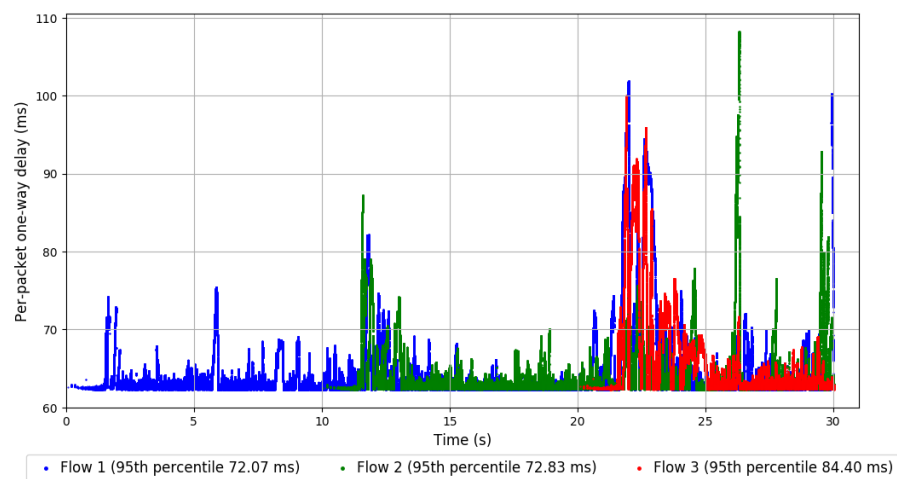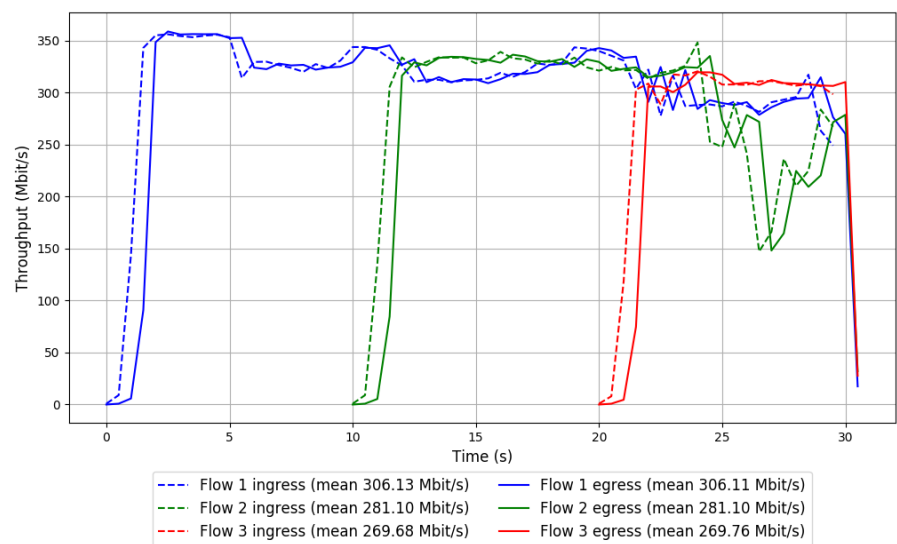
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 329.16 Mbit/s)   Flow 1 egress (mean 329.17 Mbit/s)
Flow 2 ingress (mean 329.45 Mbit/s)   Flow 2 egress (mean 329.44 Mbit/s)
Flow 3 ingress (mean 276.43 Mbit/s)   Flow 3 egress (mean 276.29 Mbit/s)

Flow 1 (95th percentile 79.60 ms)   Flow 2 (95th percentile 104.41 ms)   Flow 3 (95th percentile 90.38 ms)
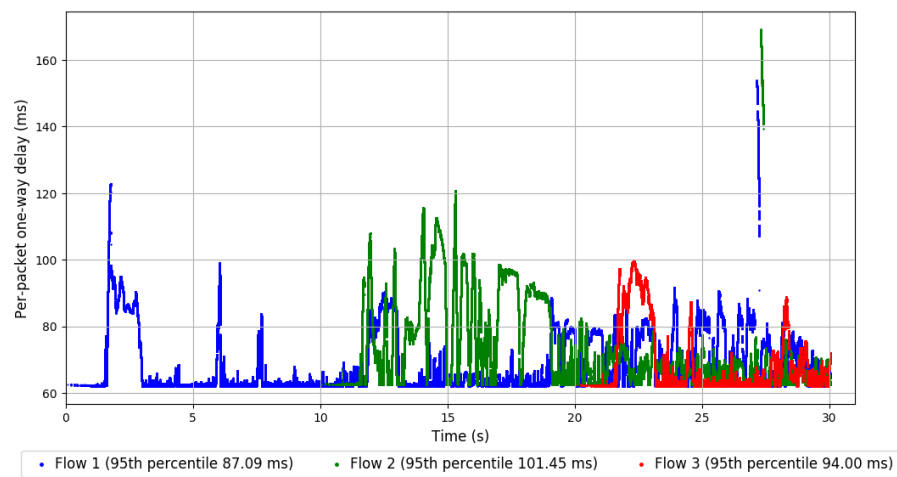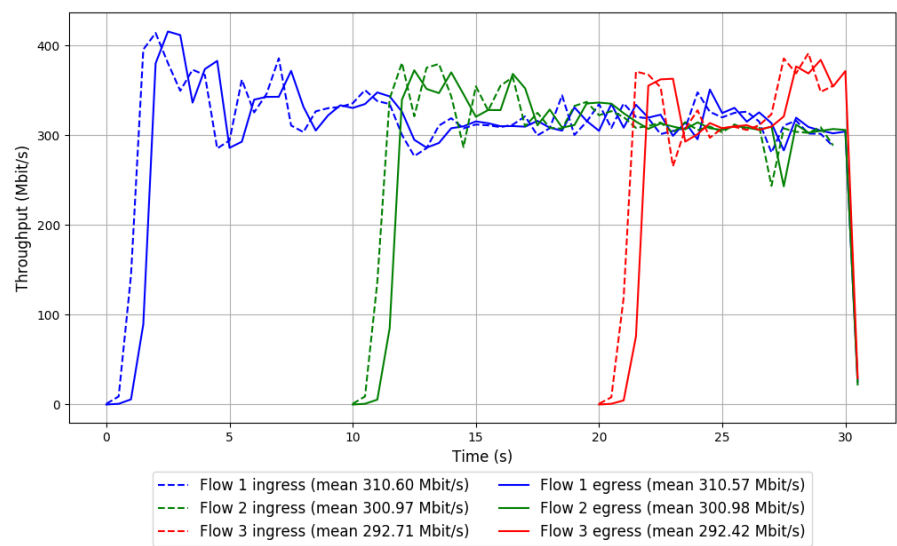
18

```
Run 3: Statistics of Copa

Start at: 2018-10-10 07:31:42
End at: 2018-10-10 07:32:12
Local clock offset: -0.011 ms
Remote clock offset: 0.199 ms


# Below is generated by plot.py at 2018-10-10 09:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 587.86 Mbit/s
95th percentile per-packet one-way delay: 85.600 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 303.94 Mbit/s
95th percentile per-packet one-way delay: 77.662 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 302.74 Mbit/s
95th percentile per-packet one-way delay: 75.102 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 247.75 Mbit/s
95th percentile per-packet one-way delay: 107.187 ms
Loss rate: 0.02%
```

Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2018-10-10 08:03:00
End at: 2018-10-10 08:03:30
Local clock offset: -0.037 ms
Remote clock offset: -0.315 ms

# Below is generated by plot.py at 2018-10-10 09:31:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 582.62 Mbit/s
95th percentile per-packet one-way delay: 73.929 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 306.11 Mbit/s
95th percentile per-packet one-way delay: 72.069 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 281.10 Mbit/s
95th percentile per-packet one-way delay: 72.830 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 269.76 Mbit/s
95th percentile per-packet one-way delay: 84.404 ms
Loss rate: 0.00%
```
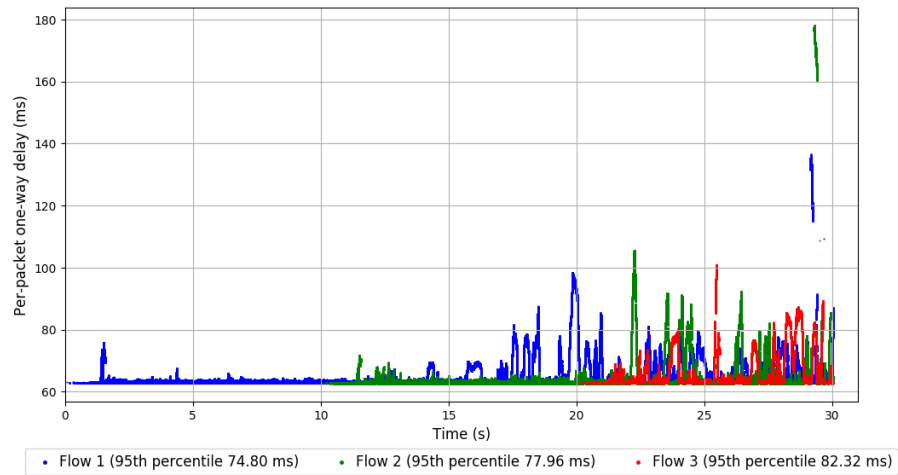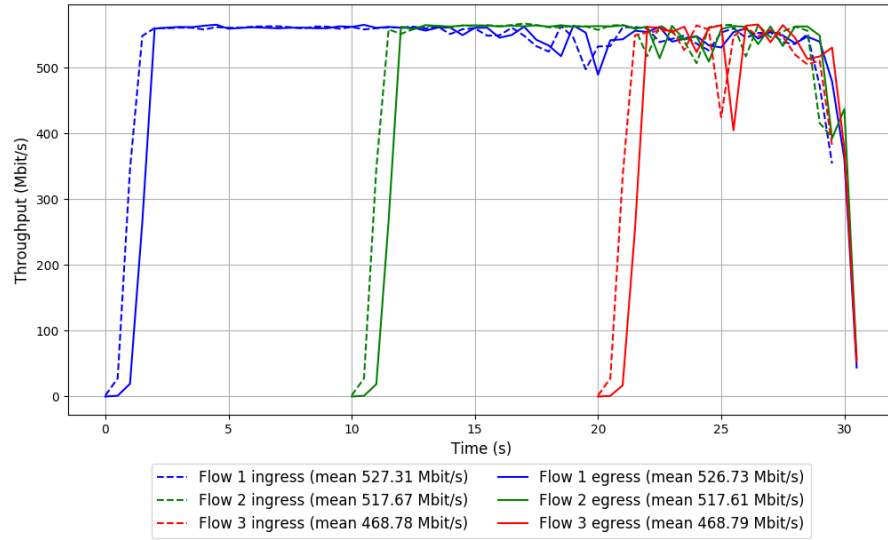
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2018-10-10 08:34:35
End at: 2018-10-10 08:35:05
Local clock offset: -0.043 ms
Remote clock offset: -0.437 ms


# Below is generated by plot.py at 2018-10-10 09:33:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 608.16 Mbit/s
95th percentile per-packet one-way delay: 95.141 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 310.57 Mbit/s
95th percentile per-packet one-way delay: 87.090 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 300.98 Mbit/s
95th percentile per-packet one-way delay: 101.451 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 292.42 Mbit/s
95th percentile per-packet one-way delay: 93.998 ms
Loss rate: 0.09%
```
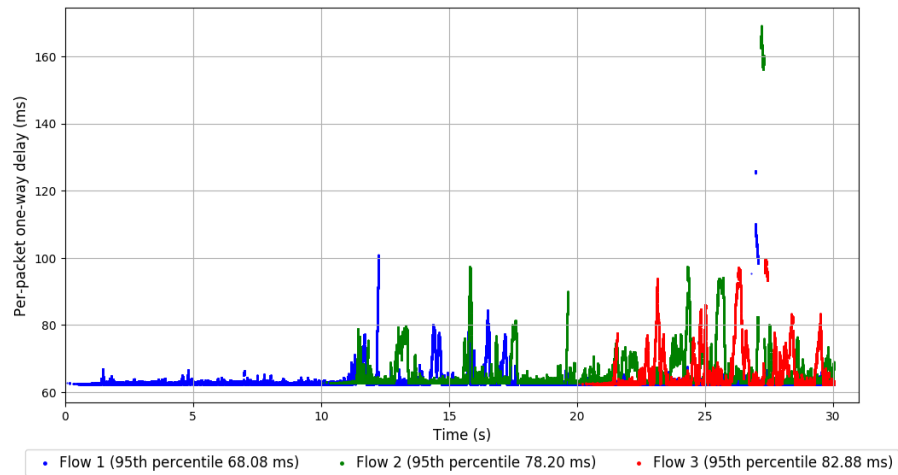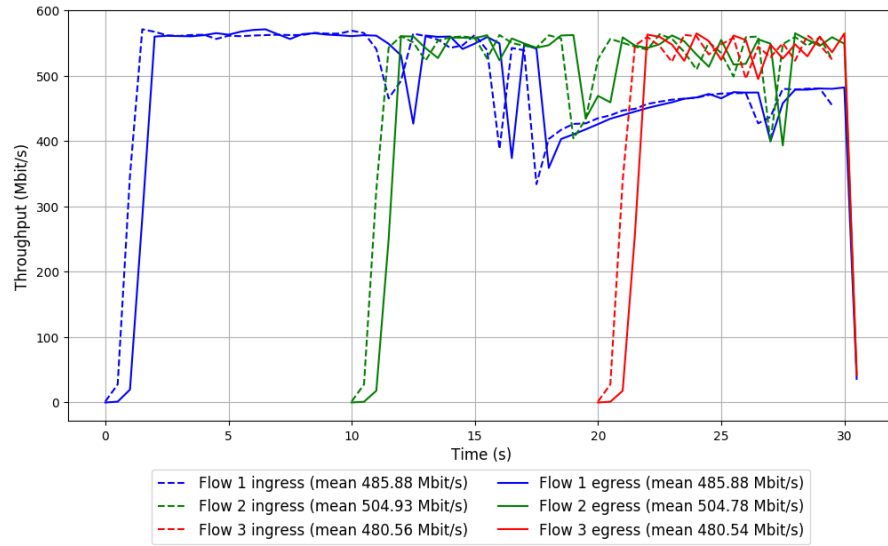
Run 5: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2018-10-10 06:22:35
End at: 2018-10-10 06:23:05
Local clock offset: -0.025 ms
Remote clock offset: -0.005 ms


# Below is generated by plot.py at 2018-10-10 09:33:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1027.27 Mbit/s
95th percentile per-packet one-way delay: 77.002 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 526.73 Mbit/s
95th percentile per-packet one-way delay: 74.795 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 517.61 Mbit/s
95th percentile per-packet one-way delay: 77.959 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 468.79 Mbit/s
95th percentile per-packet one-way delay: 82.320 ms
Loss rate: 0.00%
```
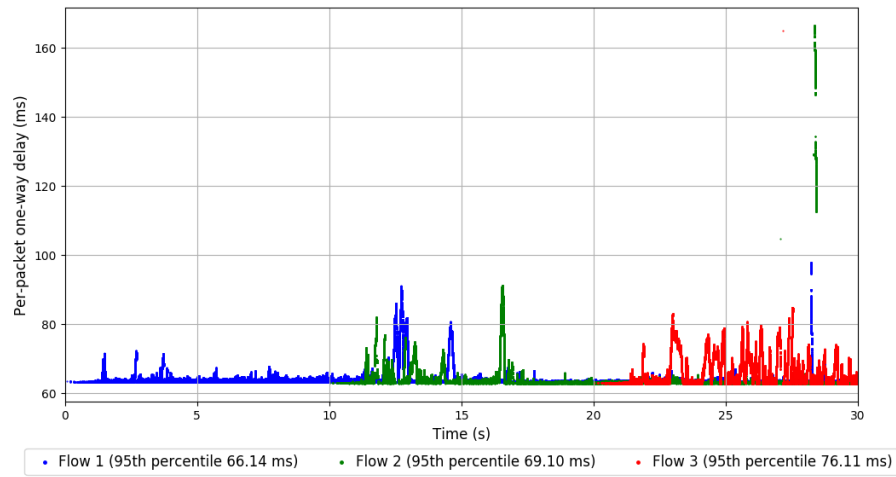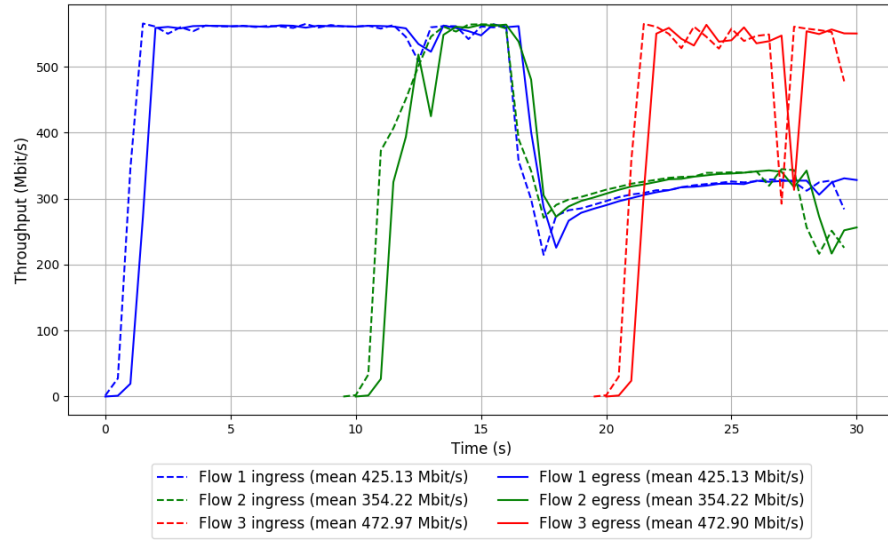
Run 1: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 527.31 Mbit/s) —— Flow 1 egress (mean 526.73 Mbit/s)
- - - Flow 2 ingress (mean 517.67 Mbit/s) —— Flow 2 egress (mean 517.61 Mbit/s)
- - - Flow 3 ingress (mean 468.78 Mbit/s) —— Flow 3 egress (mean 468.79 Mbit/s)

- Flow 1 (95th percentile 74.80 ms)   • Flow 2 (95th percentile 77.96 ms)   • Flow 3 (95th percentile 82.32 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2018-10-10 06:54:05
End at: 2018-10-10 06:54:35
Local clock offset: -0.056 ms
Remote clock offset: -0.417 ms


# Below is generated by plot.py at 2018-10-10 09:33:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 981.77 Mbit/s
95th percentile per-packet one-way delay: 75.800 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 485.88 Mbit/s
95th percentile per-packet one-way delay: 68.076 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 504.78 Mbit/s
95th percentile per-packet one-way delay: 78.204 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 480.54 Mbit/s
95th percentile per-packet one-way delay: 82.883 ms
Loss rate: 0.00%
```
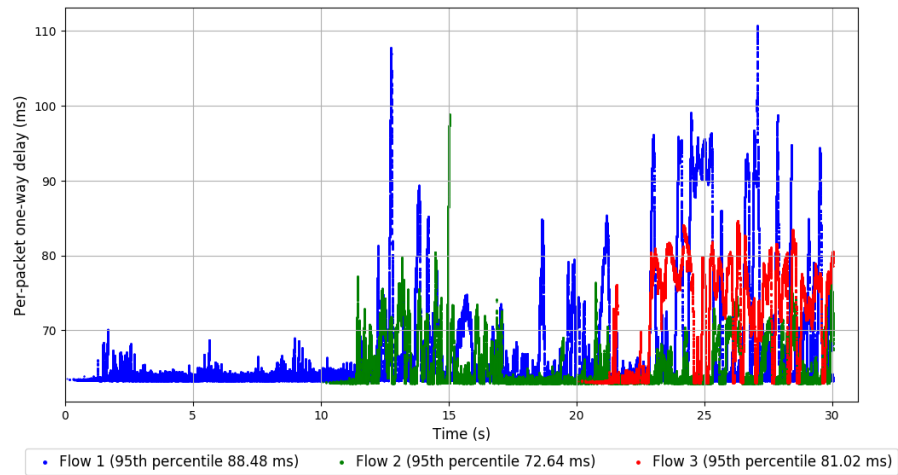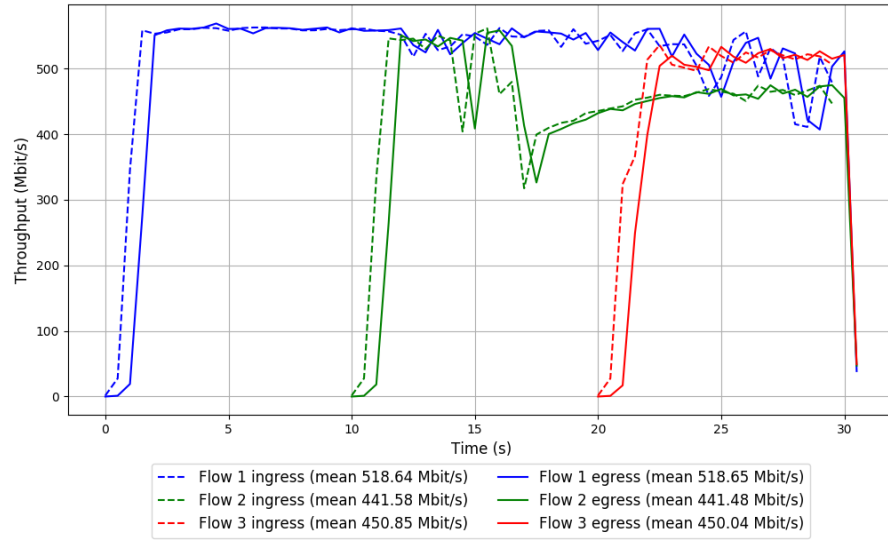
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2018-10-10 07:25:34
End at: 2018-10-10 07:26:04
Local clock offset: -0.019 ms
Remote clock offset: 0.12 ms


# Below is generated by plot.py at 2018-10-10 09:33:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 818.69 Mbit/s
95th percentile per-packet one-way delay: 71.751 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 425.13 Mbit/s
95th percentile per-packet one-way delay: 66.145 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 354.22 Mbit/s
95th percentile per-packet one-way delay: 69.102 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 472.90 Mbit/s
95th percentile per-packet one-way delay: 76.108 ms
Loss rate: 0.01%
```
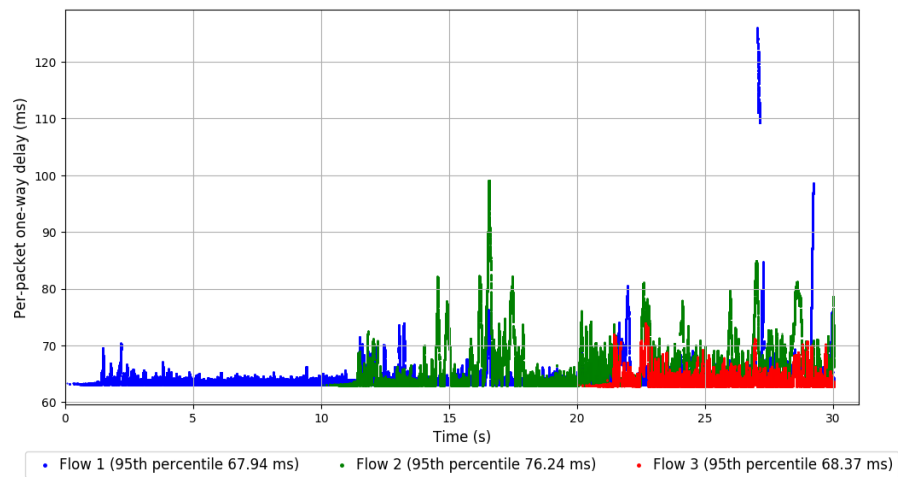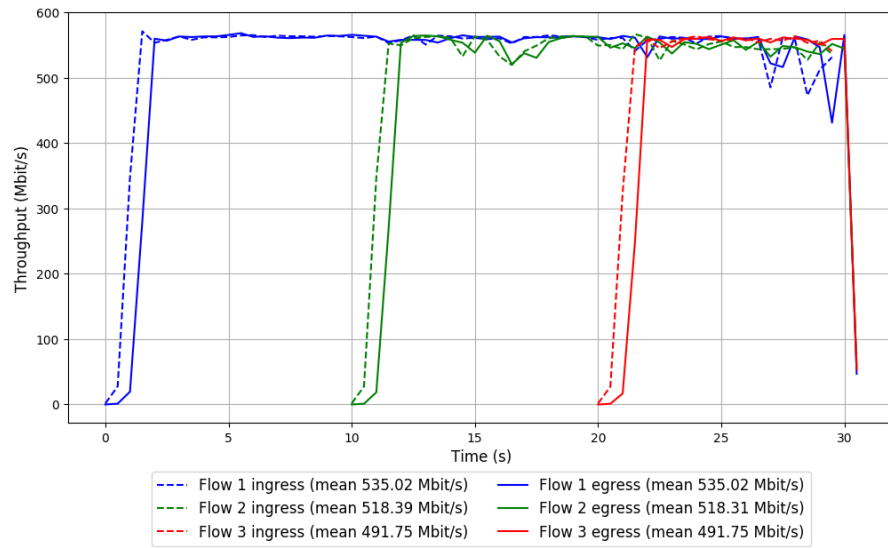
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 425.13 Mbit/s) — — — Flow 1 egress (mean 425.13 Mbit/s)
Flow 2 ingress (mean 354.22 Mbit/s) — — — Flow 2 egress (mean 354.22 Mbit/s)
Flow 3 ingress (mean 472.97 Mbit/s) — — — Flow 3 egress (mean 472.90 Mbit/s)

Flow 1 (95th percentile 66.14 ms)   Flow 2 (95th percentile 69.10 ms)   Flow 3 (95th percentile 76.11 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2018-10-10 07:56:44
End at: 2018-10-10 07:57:14
Local clock offset: -0.05 ms
Remote clock offset: 0.378 ms


# Below is generated by plot.py at 2018-10-10 09:33:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 962.31 Mbit/s
95th percentile per-packet one-way delay: 81.059 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 518.65 Mbit/s
95th percentile per-packet one-way delay: 88.481 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 441.48 Mbit/s
95th percentile per-packet one-way delay: 72.636 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 450.04 Mbit/s
95th percentile per-packet one-way delay: 81.015 ms
Loss rate: 0.17%
```
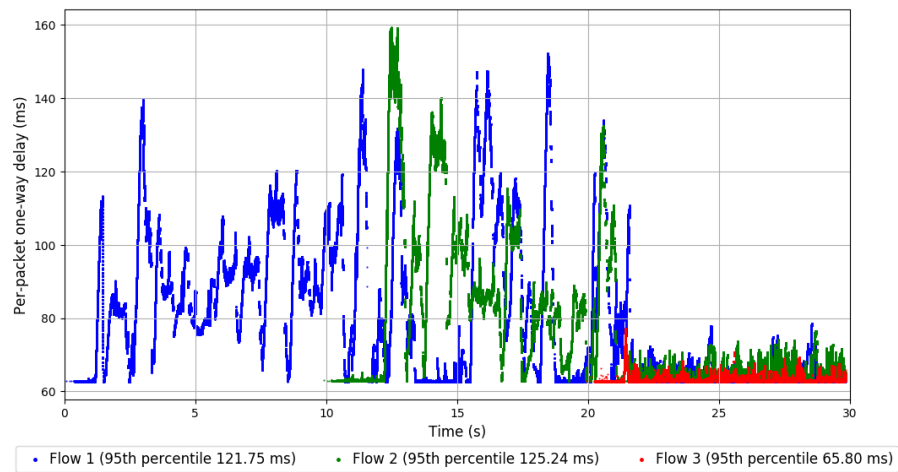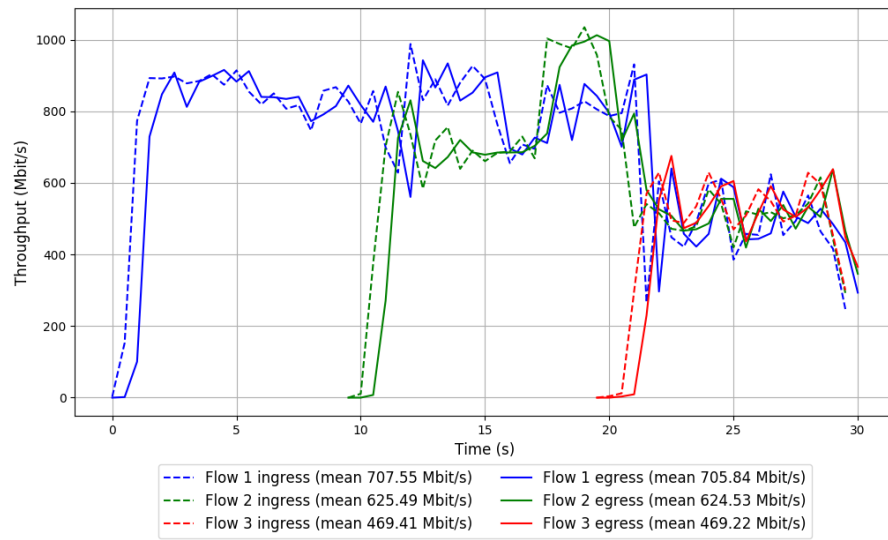
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2018-10-10 08:28:15
End at: 2018-10-10 08:28:45
Local clock offset: -0.016 ms
Remote clock offset: 0.294 ms


# Below is generated by plot.py at 2018-10-10 09:33:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1043.71 Mbit/s
95th percentile per-packet one-way delay: 71.433 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 535.02 Mbit/s
95th percentile per-packet one-way delay: 67.935 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 518.31 Mbit/s
95th percentile per-packet one-way delay: 76.241 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 491.75 Mbit/s
95th percentile per-packet one-way delay: 68.367 ms
Loss rate: 0.00%
```
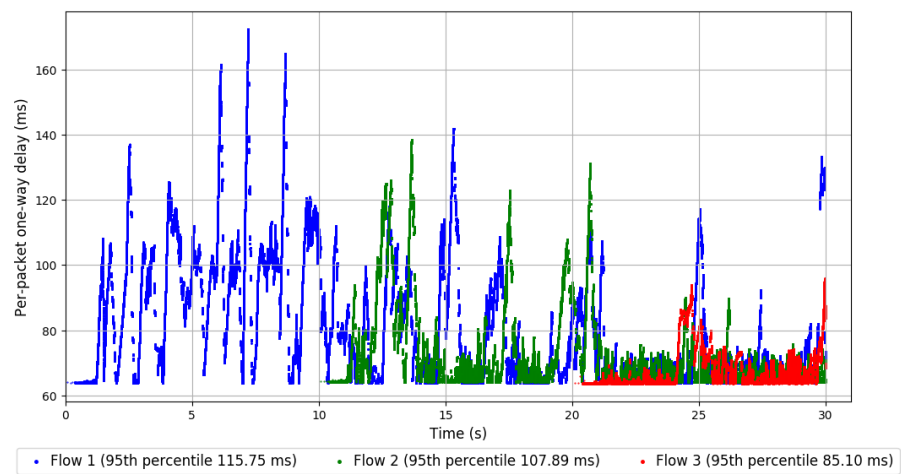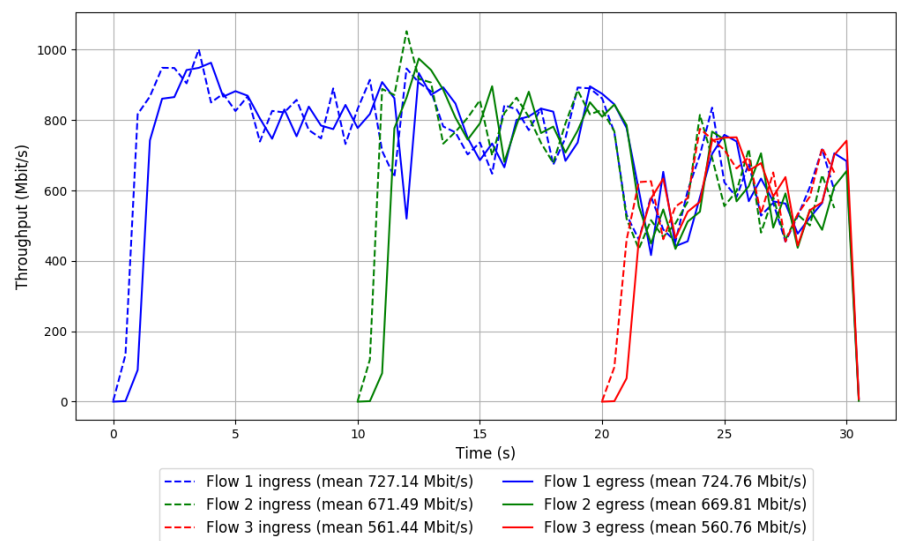
Run 5: Report of TCP Cubic — Data Link

34

```
Run 1: Statistics of FillP

Start at: 2018-10-10 06:13:21
End at: 2018-10-10 06:13:51
Local clock offset: -0.026 ms
Remote clock offset: -0.067 ms


# Below is generated by plot.py at 2018-10-10 09:42:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1279.88 Mbit/s
95th percentile per-packet one-way delay: 120.783 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 705.84 Mbit/s
95th percentile per-packet one-way delay: 121.751 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 624.53 Mbit/s
95th percentile per-packet one-way delay: 125.237 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 469.22 Mbit/s
95th percentile per-packet one-way delay: 65.801 ms
Loss rate: 0.02%
```
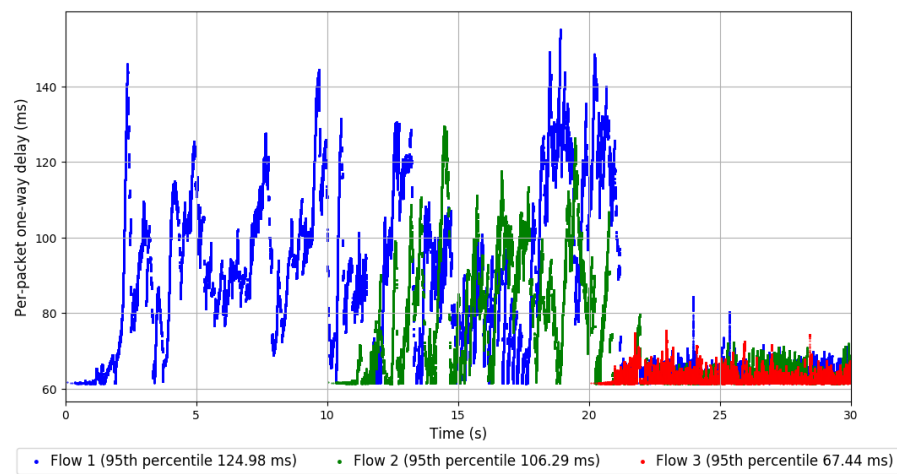
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-10-10 06:44:46
End at: 2018-10-10 06:45:16
Local clock offset: -0.012 ms
Remote clock offset: 1.078 ms


# Below is generated by plot.py at 2018-10-10 09:56:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1355.98 Mbit/s
95th percentile per-packet one-way delay: 112.125 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 724.76 Mbit/s
95th percentile per-packet one-way delay: 115.748 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 669.81 Mbit/s
95th percentile per-packet one-way delay: 107.887 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 560.76 Mbit/s
95th percentile per-packet one-way delay: 85.100 ms
Loss rate: 0.12%
```
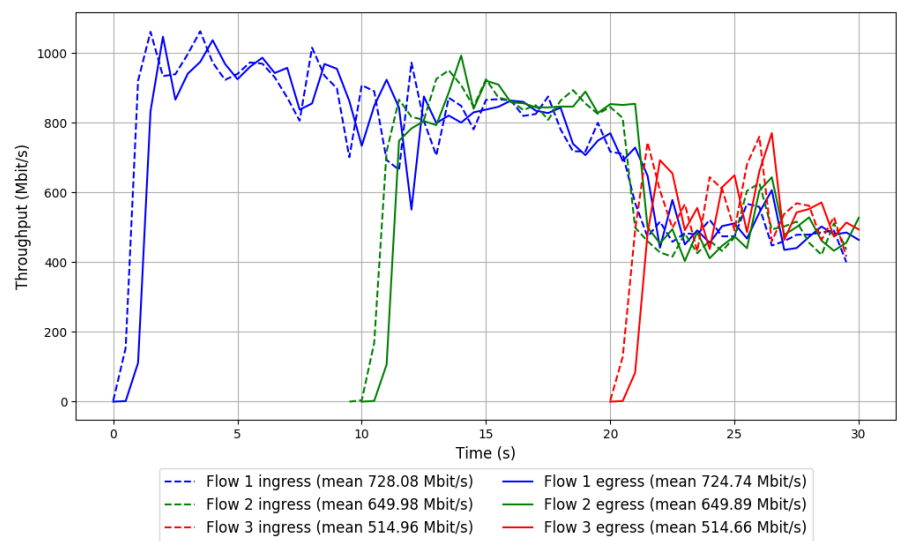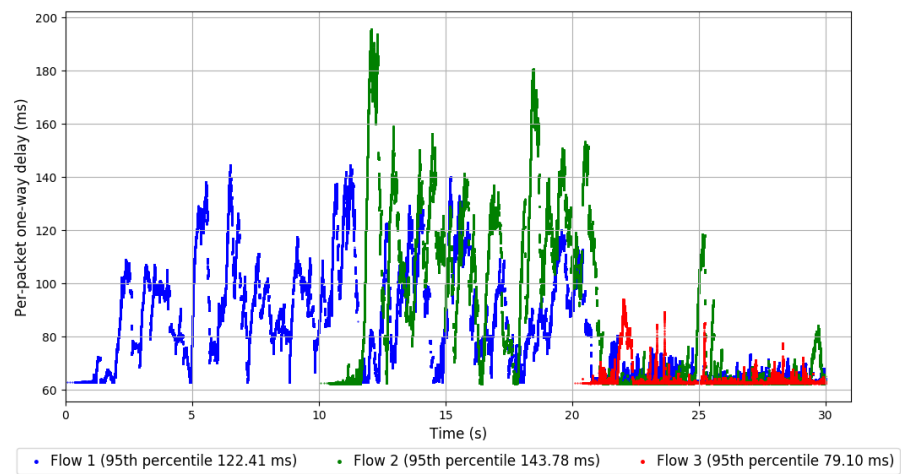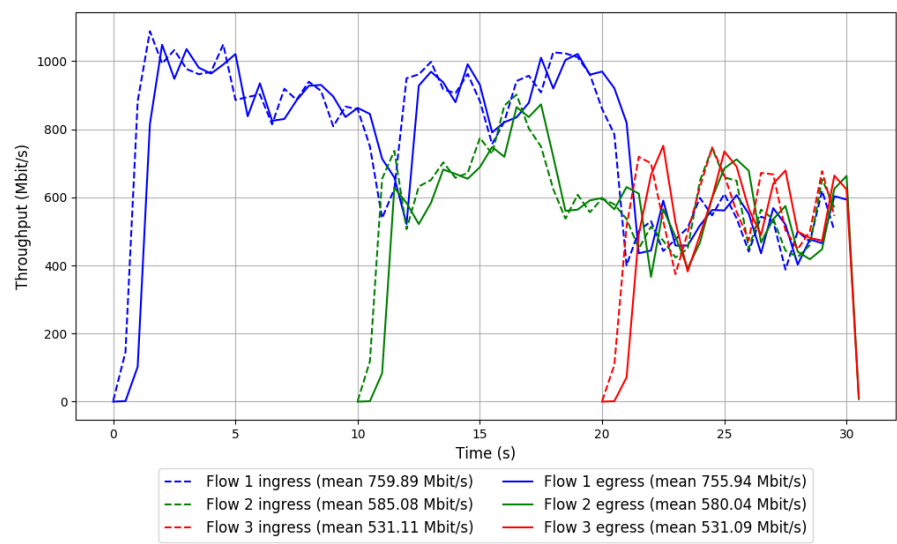
Run 2: Report of FillP — Data Link

- - - Flow 1 ingress (mean 727.14 Mbit/s)   —— Flow 1 egress (mean 724.76 Mbit/s)
- - - Flow 2 ingress (mean 671.49 Mbit/s)   —— Flow 2 egress (mean 669.81 Mbit/s)
- - - Flow 3 ingress (mean 561.44 Mbit/s)   —— Flow 3 egress (mean 560.76 Mbit/s)

• Flow 1 (95th percentile 115.75 ms)   • Flow 2 (95th percentile 107.89 ms)   • Flow 3 (95th percentile 85.10 ms)

38

```
Run 3: Statistics of FillP

Start at: 2018-10-10 07:16:16
End at: 2018-10-10 07:16:46
Local clock offset: -0.019 ms
Remote clock offset: -1.35 ms


# Below is generated by plot.py at 2018-10-10 09:58:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1327.89 Mbit/s
95th percentile per-packet one-way delay: 120.366 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 724.74 Mbit/s
95th percentile per-packet one-way delay: 124.984 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 649.89 Mbit/s
95th percentile per-packet one-way delay: 106.286 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 514.66 Mbit/s
95th percentile per-packet one-way delay: 67.444 ms
Loss rate: 0.00%
```
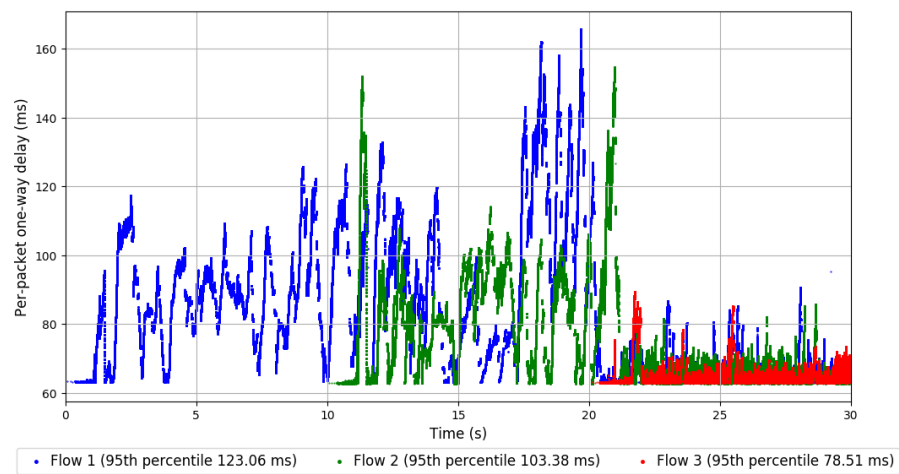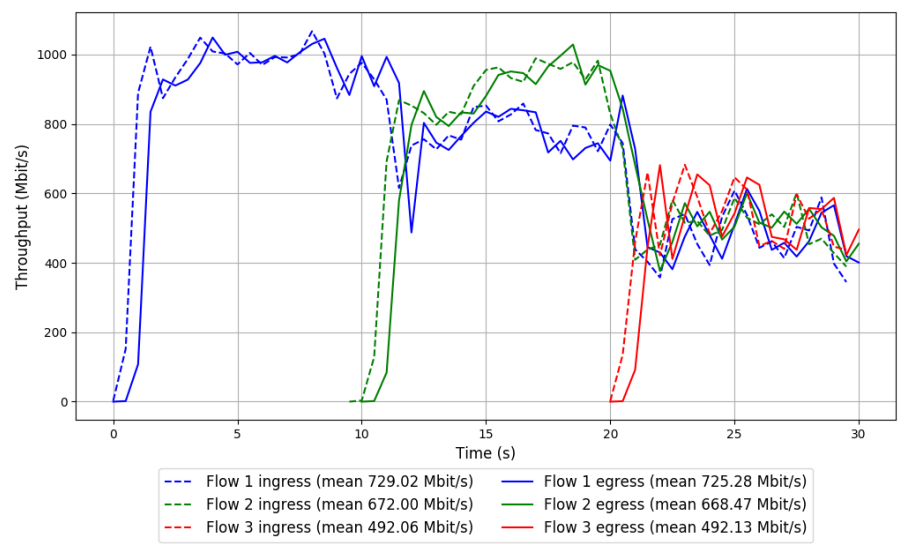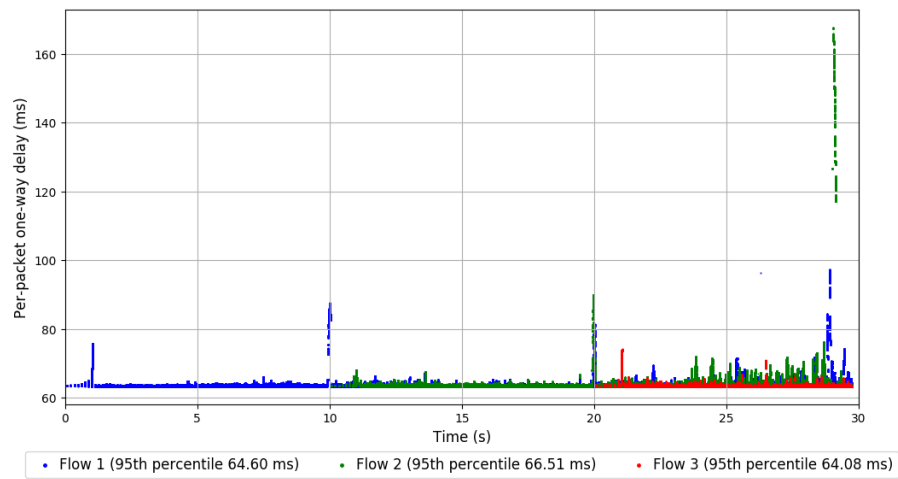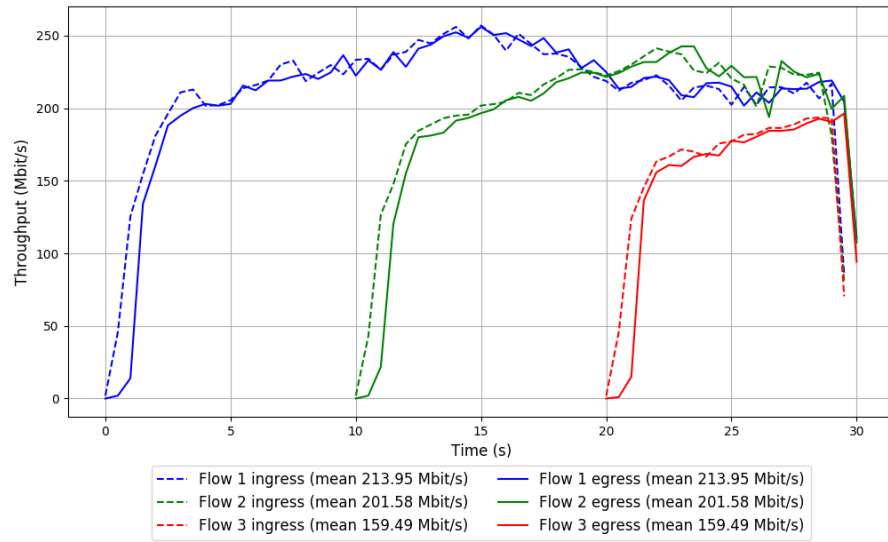
Run 3: Report of FillP — Data Link

- - - Flow 1 ingress (mean 728.08 Mbit/s)   —— Flow 1 egress (mean 724.74 Mbit/s)
- - - Flow 2 ingress (mean 649.98 Mbit/s)   —— Flow 2 egress (mean 649.89 Mbit/s)
- - - Flow 3 ingress (mean 514.96 Mbit/s)   —— Flow 3 egress (mean 514.66 Mbit/s)

- Flow 1 (95th percentile 124.98 ms)   • Flow 2 (95th percentile 106.29 ms)   • Flow 3 (95th percentile 67.44 ms)

40

```
Run 4: Statistics of FillP

Start at: 2018-10-10 07:47:21
End at: 2018-10-10 07:47:51
Local clock offset: -0.024 ms
Remote clock offset: -0.135 ms


# Below is generated by plot.py at 2018-10-10 09:58:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1317.35 Mbit/s
95th percentile per-packet one-way delay: 128.740 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 755.94 Mbit/s
95th percentile per-packet one-way delay: 122.406 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 580.04 Mbit/s
95th percentile per-packet one-way delay: 143.777 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 531.09 Mbit/s
95th percentile per-packet one-way delay: 79.097 ms
Loss rate: 0.00%
```
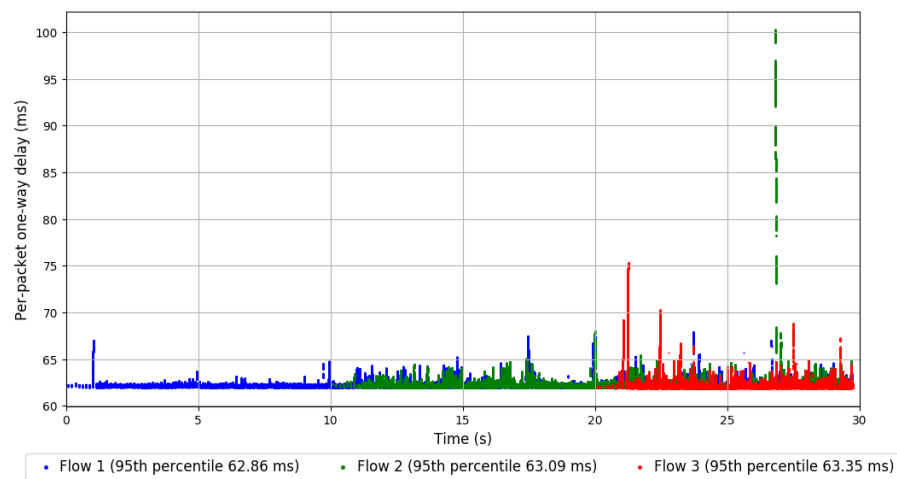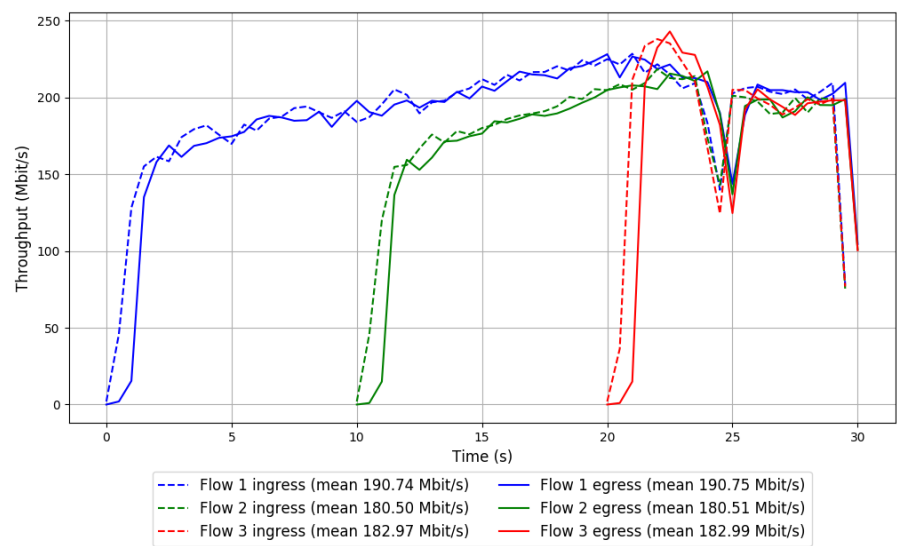
Run 4: Report of FillP — Data Link

42

```
Run 5: Statistics of FillP

Start at: 2018-10-10 08:18:49
End at: 2018-10-10 08:19:19
Local clock offset: -0.043 ms
Remote clock offset: 0.071 ms


# Below is generated by plot.py at 2018-10-10 09:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1332.94 Mbit/s
95th percentile per-packet one-way delay: 115.483 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 725.28 Mbit/s
95th percentile per-packet one-way delay: 123.060 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 668.47 Mbit/s
95th percentile per-packet one-way delay: 103.383 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 492.13 Mbit/s
95th percentile per-packet one-way delay: 78.509 ms
Loss rate: 0.00%
```

Run 5: Report of FillP — Data Link

```
Run 1: Statistics of Indigo

Start at: 2018-10-10 06:25:50
End at: 2018-10-10 06:26:20
Local clock offset: -0.023 ms
Remote clock offset: 0.781 ms


# Below is generated by plot.py at 2018-10-10 09:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 399.53 Mbit/s
95th percentile per-packet one-way delay: 65.083 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 213.95 Mbit/s
95th percentile per-packet one-way delay: 64.604 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 201.58 Mbit/s
95th percentile per-packet one-way delay: 66.509 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 159.49 Mbit/s
95th percentile per-packet one-way delay: 64.076 ms
Loss rate: 0.00%
```
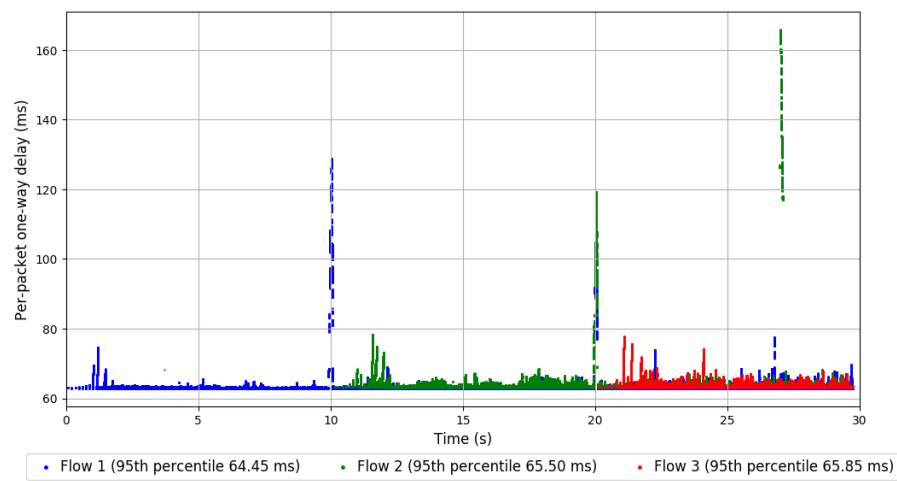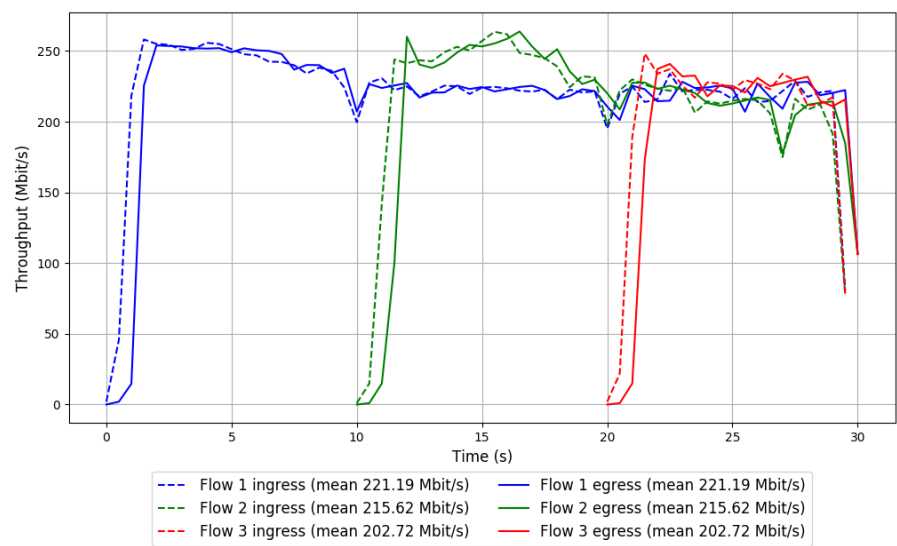
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2018-10-10 06:57:18
End at: 2018-10-10 06:57:48
Local clock offset: -0.031 ms
Remote clock offset: -0.818 ms


# Below is generated by plot.py at 2018-10-10 09:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.90 Mbit/s
95th percentile per-packet one-way delay: 63.006 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 190.75 Mbit/s
95th percentile per-packet one-way delay: 62.862 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 180.51 Mbit/s
95th percentile per-packet one-way delay: 63.092 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 182.99 Mbit/s
95th percentile per-packet one-way delay: 63.354 ms
Loss rate: 0.00%
```
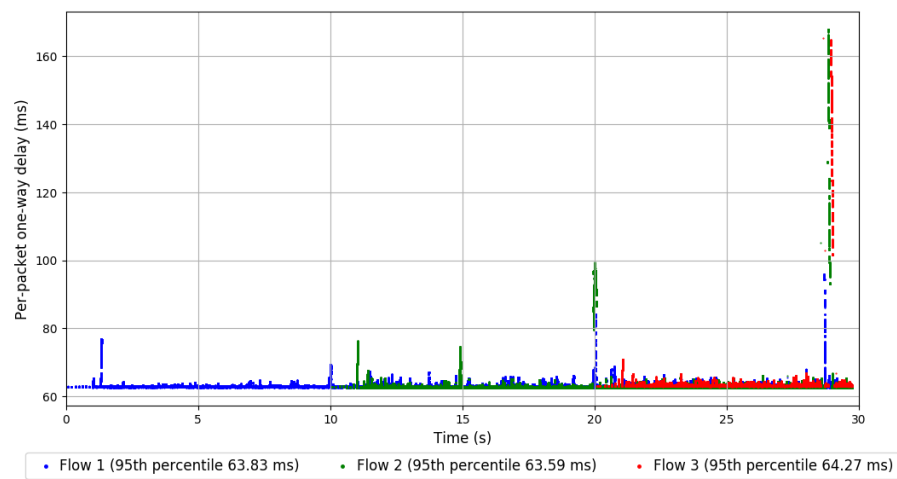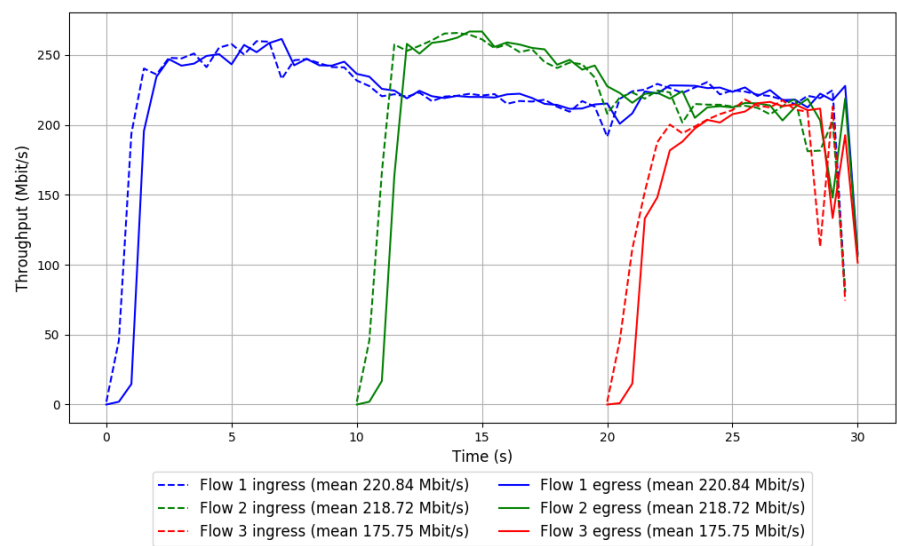
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2018-10-10 07:28:38
End at: 2018-10-10 07:29:08
Local clock offset: -0.019 ms
Remote clock offset: 0.153 ms


# Below is generated by plot.py at 2018-10-10 09:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 429.31 Mbit/s
95th percentile per-packet one-way delay: 65.155 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.19 Mbit/s
95th percentile per-packet one-way delay: 64.447 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 215.62 Mbit/s
95th percentile per-packet one-way delay: 65.499 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 202.72 Mbit/s
95th percentile per-packet one-way delay: 65.853 ms
Loss rate: 0.00%
```
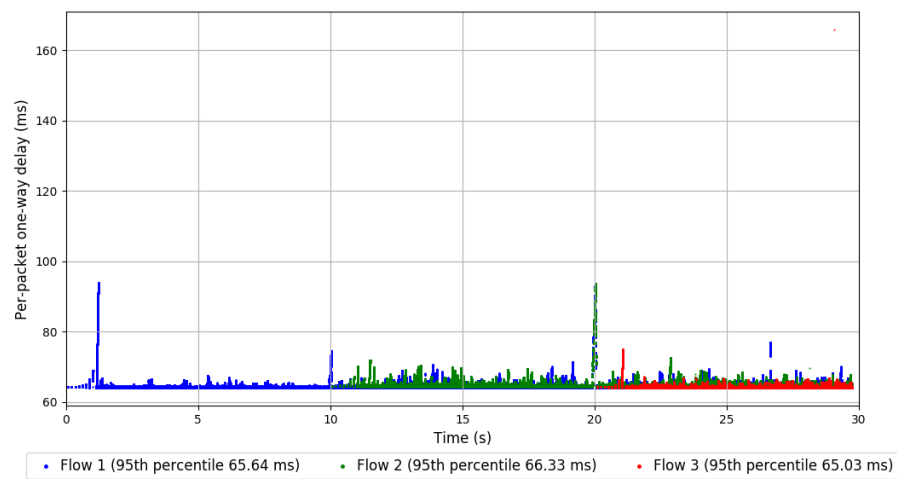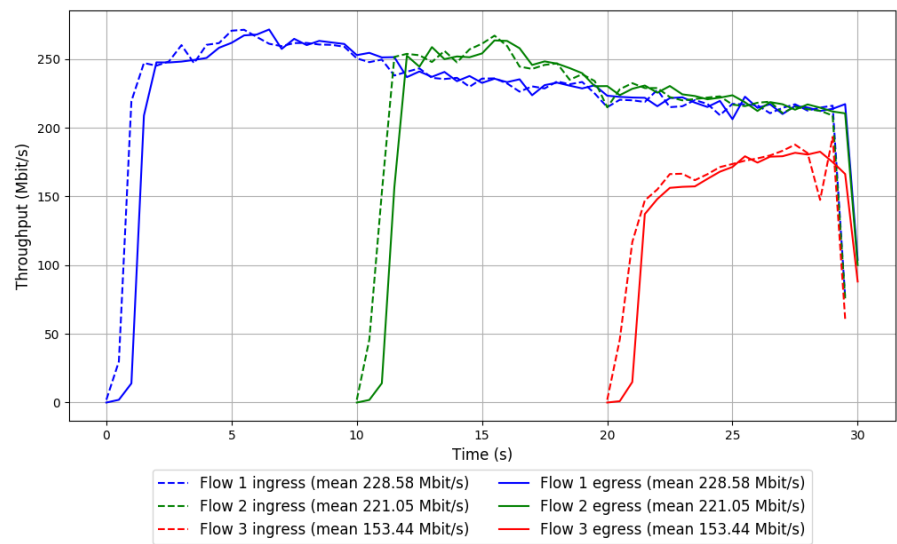
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2018-10-10 07:59:57
End at: 2018-10-10 08:00:27
Local clock offset: -0.053 ms
Remote clock offset: 0.099 ms


# Below is generated by plot.py at 2018-10-10 09:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 423.04 Mbit/s
95th percentile per-packet one-way delay: 63.865 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 220.84 Mbit/s
95th percentile per-packet one-way delay: 63.834 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 218.72 Mbit/s
95th percentile per-packet one-way delay: 63.594 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 175.75 Mbit/s
95th percentile per-packet one-way delay: 64.274 ms
Loss rate: 0.00%
```
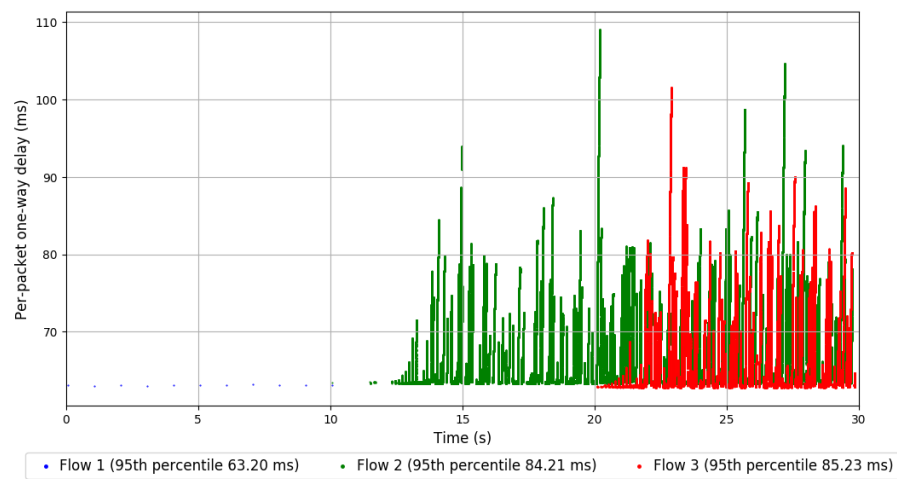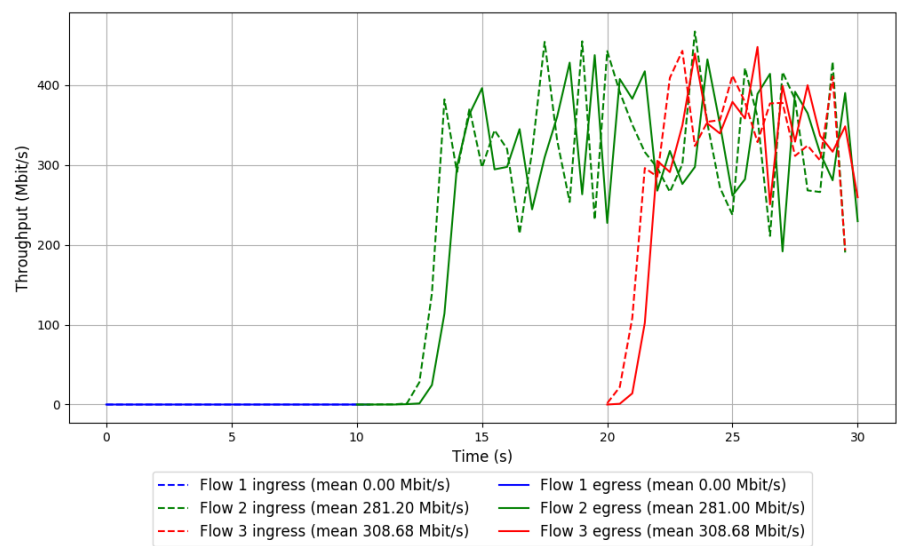
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 220.84 Mbit/s) ---- Flow 1 egress (mean 220.84 Mbit/s) ——
Flow 2 ingress (mean 218.72 Mbit/s) ---- Flow 2 egress (mean 218.72 Mbit/s) ——
Flow 3 ingress (mean 175.75 Mbit/s) ---- Flow 3 egress (mean 175.75 Mbit/s) ——

Flow 1 (95th percentile 63.83 ms)   Flow 2 (95th percentile 63.59 ms)   Flow 3 (95th percentile 64.27 ms)

52

```
Run 5: Statistics of Indigo

Start at: 2018-10-10 08:31:30
End at: 2018-10-10 08:32:00
Local clock offset: -0.017 ms
Remote clock offset: 1.513 ms


# Below is generated by plot.py at 2018-10-10 09:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.89 Mbit/s
95th percentile per-packet one-way delay: 65.808 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 228.58 Mbit/s
95th percentile per-packet one-way delay: 65.639 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 221.05 Mbit/s
95th percentile per-packet one-way delay: 66.329 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 153.44 Mbit/s
95th percentile per-packet one-way delay: 65.027 ms
Loss rate: 0.00%
```
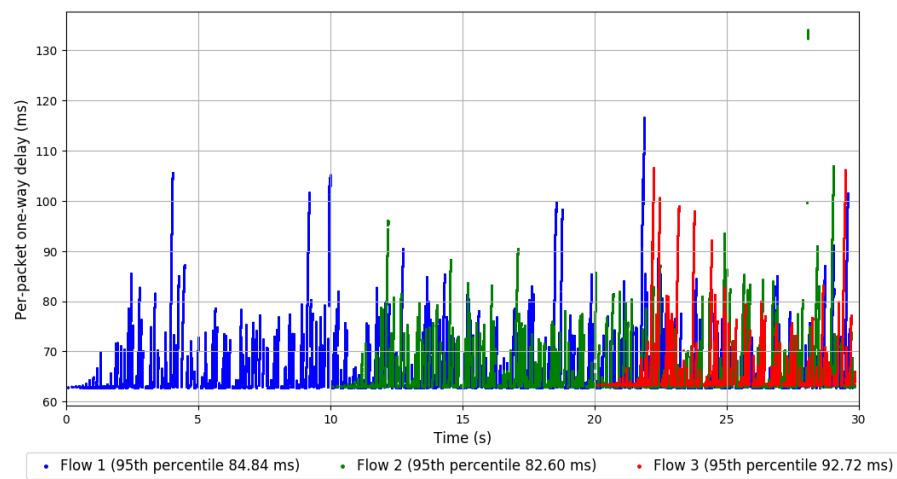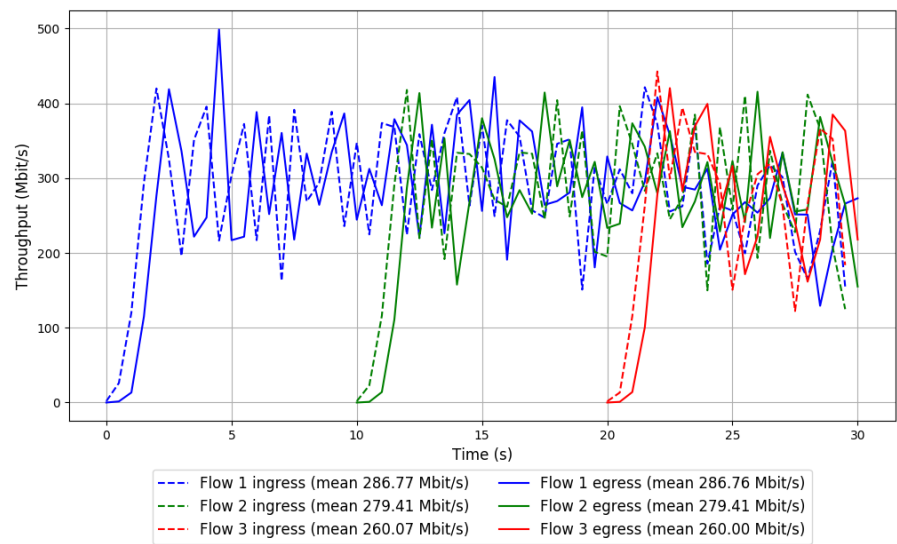
Run 5: Report of Indigo — Data Link

54

```
Run 1: Statistics of Indigo-96d2da3

Start at: 2018-10-10 06:08:34
End at: 2018-10-10 06:09:04
Local clock offset: -0.025 ms
Remote clock offset: 0.305 ms


# Below is generated by plot.py at 2018-10-10 09:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 286.81 Mbit/s
95th percentile per-packet one-way delay: 84.575 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 63.195 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 281.00 Mbit/s
95th percentile per-packet one-way delay: 84.209 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 308.68 Mbit/s
95th percentile per-packet one-way delay: 85.228 ms
Loss rate: 0.00%
```
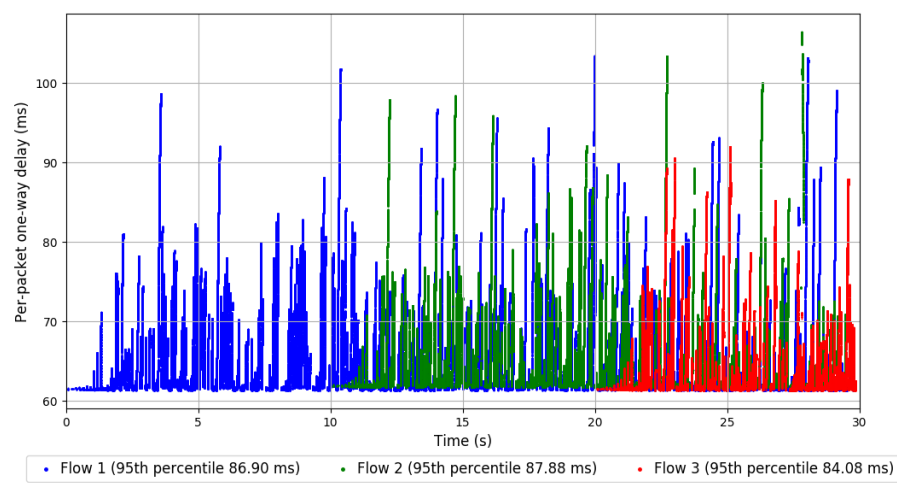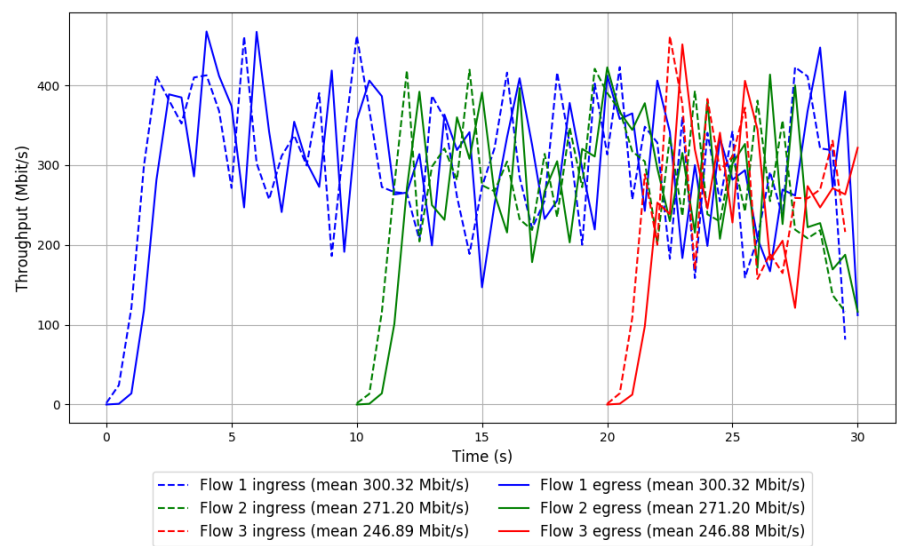
Run 1: Report of Indigo-96d2da3 — Data Link

```
Run 2: Statistics of Indigo-96d2da3

Start at: 2018-10-10 06:39:42
End at: 2018-10-10 06:40:12
Local clock offset: -0.025 ms
Remote clock offset: 0.182 ms

# Below is generated by plot.py at 2018-10-10 09:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 556.35 Mbit/s
95th percentile per-packet one-way delay: 85.107 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 286.76 Mbit/s
95th percentile per-packet one-way delay: 84.845 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 279.41 Mbit/s
95th percentile per-packet one-way delay: 82.598 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 260.00 Mbit/s
95th percentile per-packet one-way delay: 92.715 ms
Loss rate: 0.00%
```
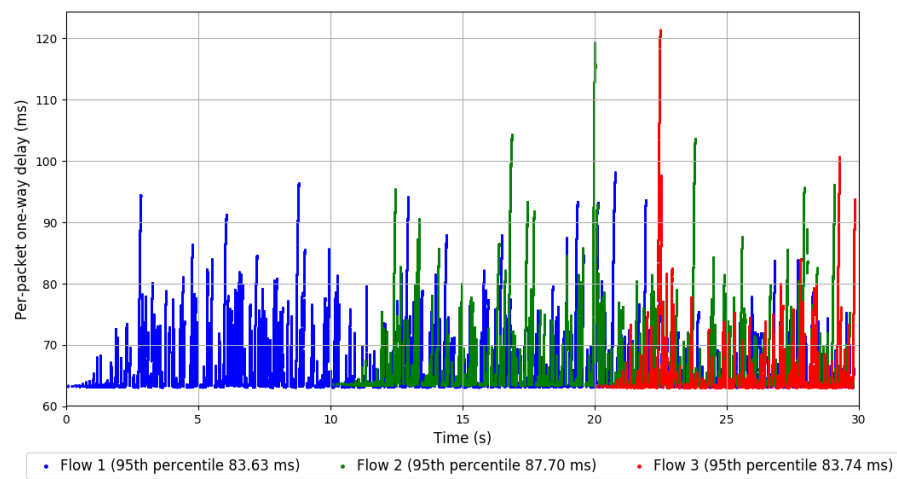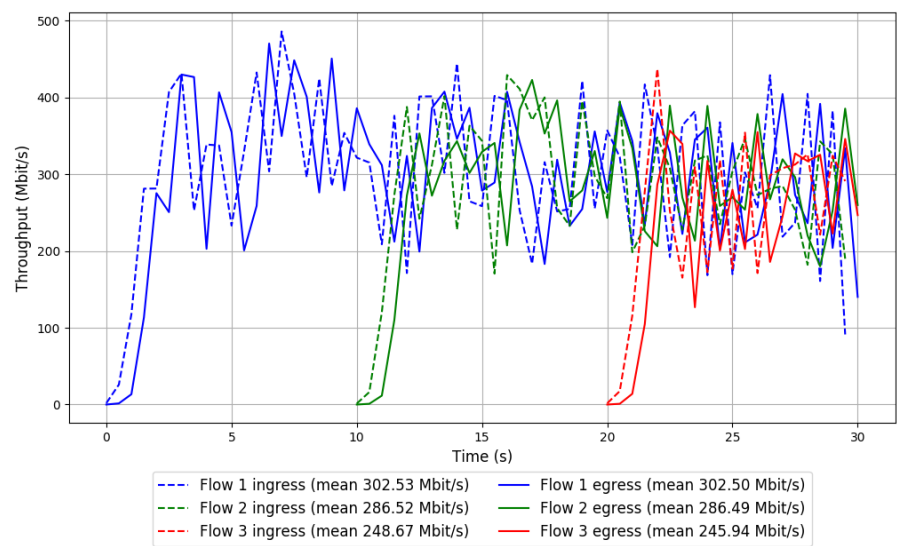
Run 2: Report of Indigo-96d2da3 — Data Link

Flow 1 ingress (mean 286.77 Mbit/s)   Flow 1 egress (mean 286.76 Mbit/s)
Flow 2 ingress (mean 279.41 Mbit/s)   Flow 2 egress (mean 279.41 Mbit/s)
Flow 3 ingress (mean 260.07 Mbit/s)   Flow 3 egress (mean 260.00 Mbit/s)

Flow 1 (95th percentile 84.84 ms)   Flow 2 (95th percentile 82.60 ms)   Flow 3 (95th percentile 92.72 ms)

58

```
Run 3: Statistics of Indigo-96d2da3

Start at: 2018-10-10 07:11:10
End at: 2018-10-10 07:11:40
Local clock offset: 0.005 ms
Remote clock offset: -1.3 ms


# Below is generated by plot.py at 2018-10-10 10:00:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 560.15 Mbit/s
95th percentile per-packet one-way delay: 86.451 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 300.32 Mbit/s
95th percentile per-packet one-way delay: 86.896 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 271.20 Mbit/s
95th percentile per-packet one-way delay: 87.876 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 246.88 Mbit/s
95th percentile per-packet one-way delay: 84.081 ms
Loss rate: 0.00%
```
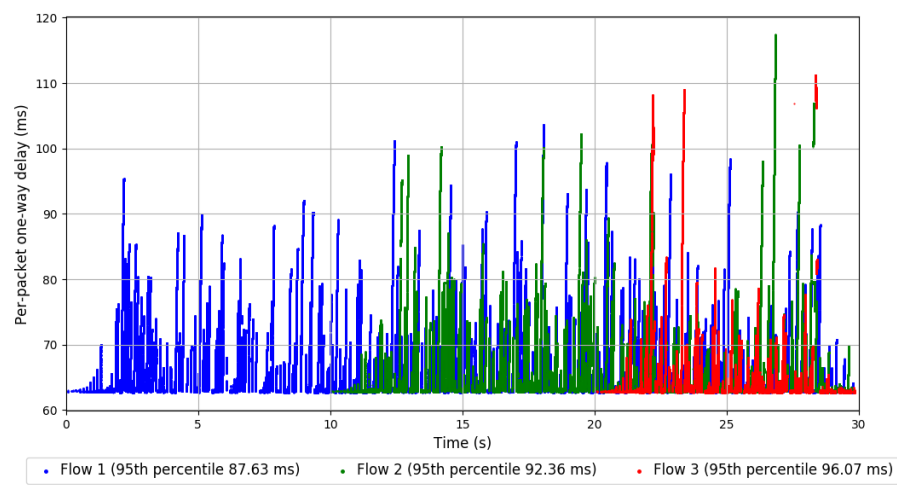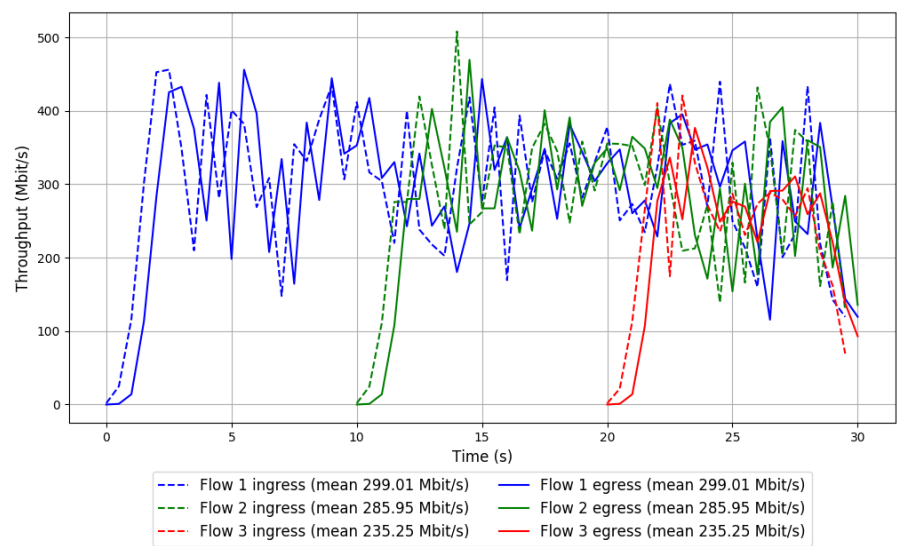
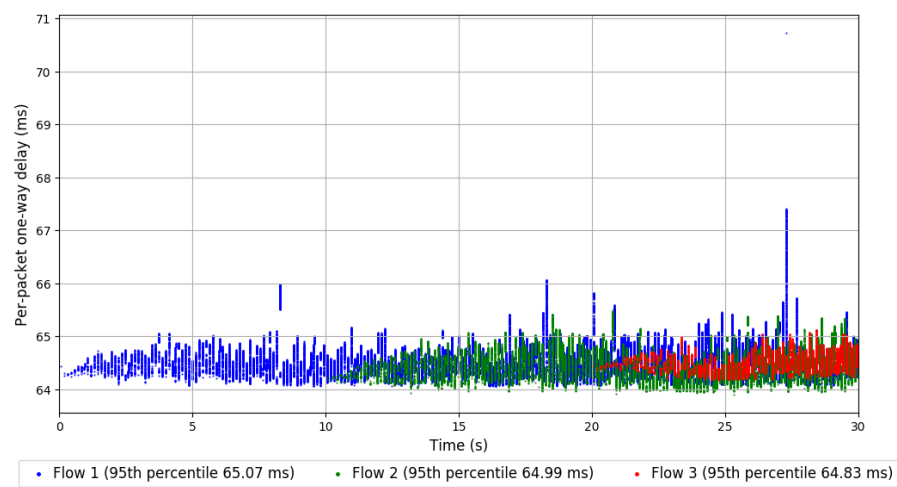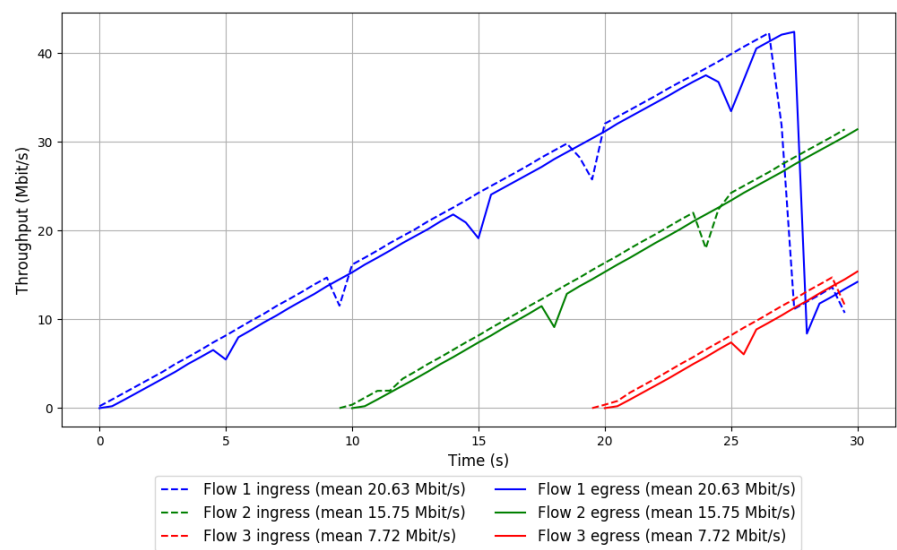Run 3: Report of Indigo-96d2da3 — Data Link

```
Run 4: Statistics of Indigo-96d2da3

Start at: 2018-10-10 07:42:19
End at: 2018-10-10 07:42:49
Local clock offset: -0.011 ms
Remote clock offset: 0.396 ms

# Below is generated by plot.py at 2018-10-10 10:05:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 572.20 Mbit/s
95th percentile per-packet one-way delay: 84.814 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 302.50 Mbit/s
95th percentile per-packet one-way delay: 83.633 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 286.49 Mbit/s
95th percentile per-packet one-way delay: 87.698 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 245.94 Mbit/s
95th percentile per-packet one-way delay: 83.740 ms
Loss rate: 1.06%
```

Run 4: Report of Indigo-96d2da3 — Data Link

```
Run 5: Statistics of Indigo-96d2da3

Start at: 2018-10-10 08:13:45
End at: 2018-10-10 08:14:15
Local clock offset: -0.053 ms
Remote clock offset: 0.122 ms

# Below is generated by plot.py at 2018-10-10 10:05:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 564.99 Mbit/s
95th percentile per-packet one-way delay: 88.981 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 299.01 Mbit/s
95th percentile per-packet one-way delay: 87.626 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 285.95 Mbit/s
95th percentile per-packet one-way delay: 92.359 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 235.25 Mbit/s
95th percentile per-packet one-way delay: 96.074 ms
Loss rate: 0.00%
```
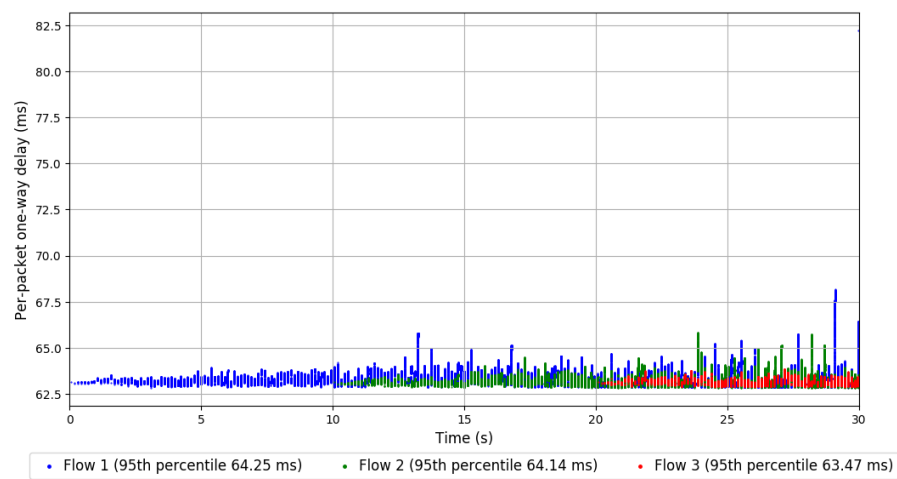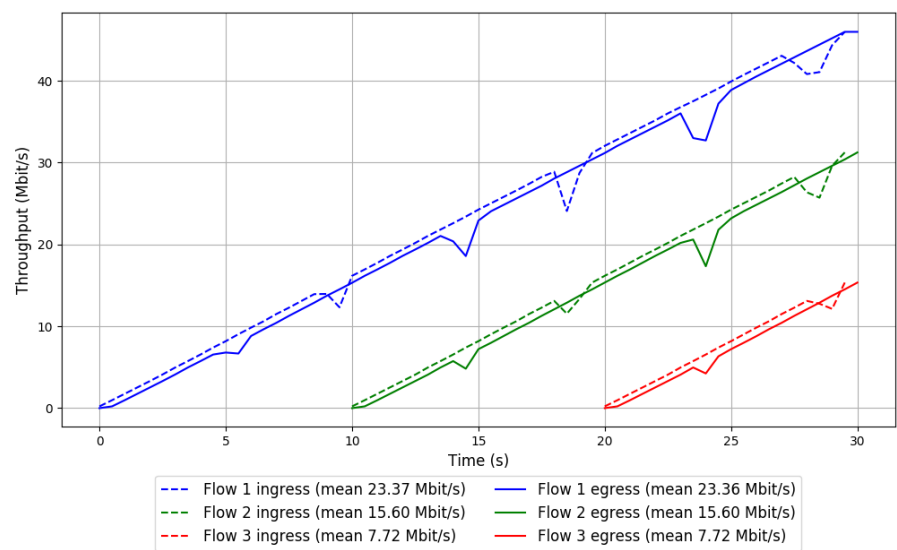
Run 5: Report of Indigo-96d2da3 — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2018-10-10 06:21:20
End at: 2018-10-10 06:21:50
Local clock offset: -0.033 ms
Remote clock offset: 1.435 ms


# Below is generated by plot.py at 2018-10-10 10:05:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.63 Mbit/s
95th percentile per-packet one-way delay: 65.027 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 20.63 Mbit/s
95th percentile per-packet one-way delay: 65.068 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.75 Mbit/s
95th percentile per-packet one-way delay: 64.993 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 64.835 ms
Loss rate: 0.00%
```
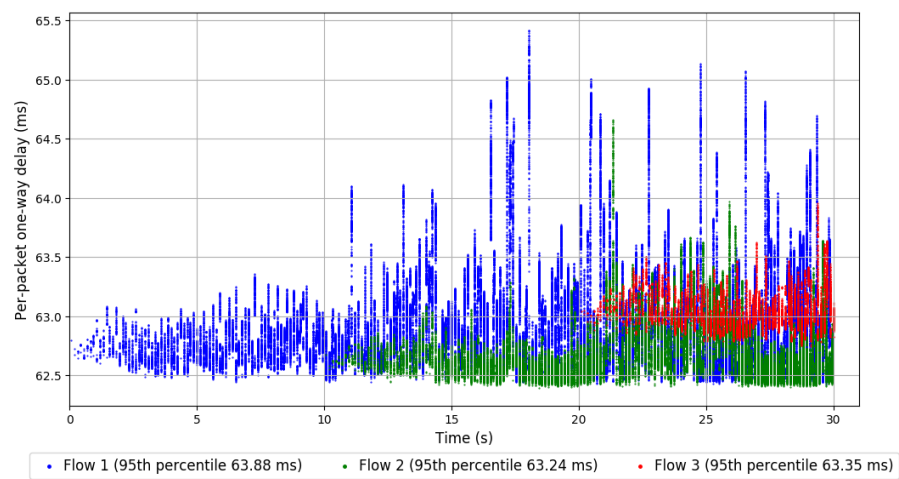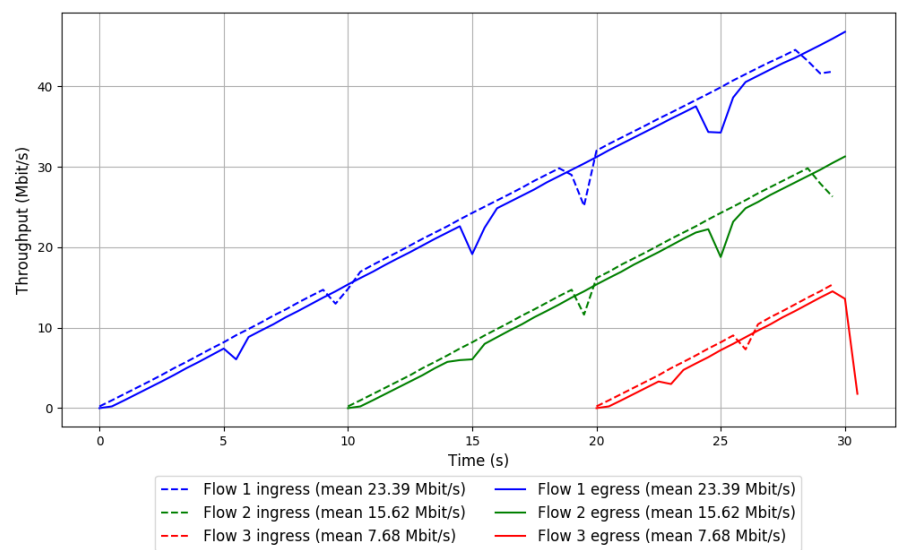
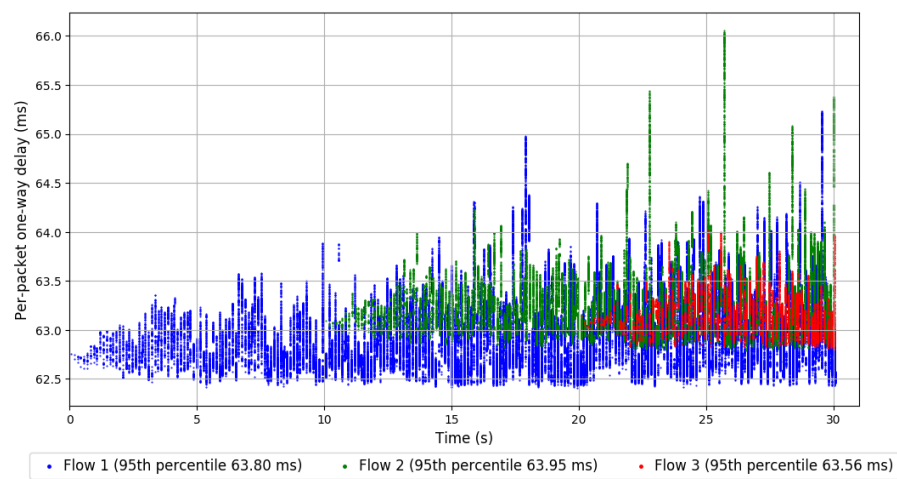# Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-10-10 06:52:50
End at: 2018-10-10 06:53:20
Local clock offset: -0.061 ms
Remote clock offset: 0.122 ms


# Below is generated by plot.py at 2018-10-10 10:05:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.28 Mbit/s
95th percentile per-packet one-way delay: 64.167 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.36 Mbit/s
95th percentile per-packet one-way delay: 64.248 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.60 Mbit/s
95th percentile per-packet one-way delay: 64.138 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 63.471 ms
Loss rate: 0.00%
```
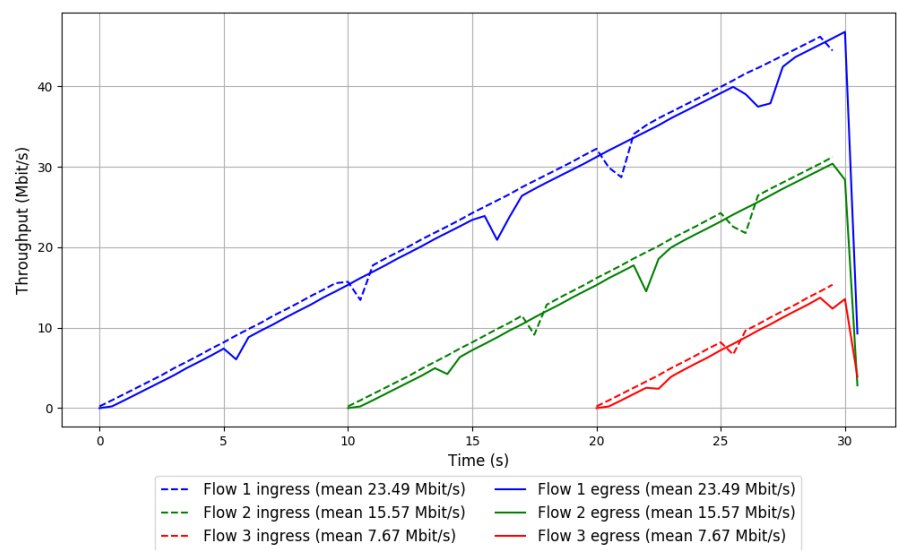
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-10-10 07:24:19
End at: 2018-10-10 07:24:49
Local clock offset: -0.006 ms
Remote clock offset: -0.264 ms


# Below is generated by plot.py at 2018-10-10 10:05:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.27 Mbit/s
95th percentile per-packet one-way delay: 63.640 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.39 Mbit/s
95th percentile per-packet one-way delay: 63.875 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.62 Mbit/s
95th percentile per-packet one-way delay: 63.245 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.68 Mbit/s
95th percentile per-packet one-way delay: 63.354 ms
Loss rate: 0.00%
```
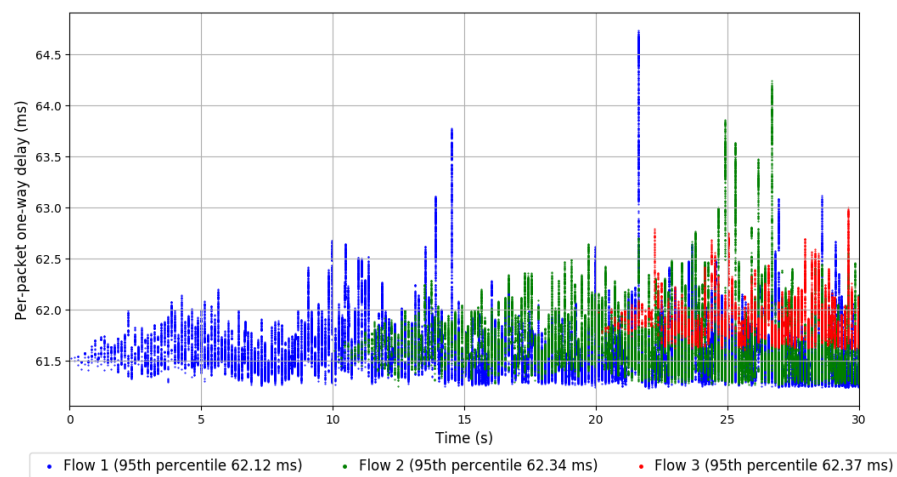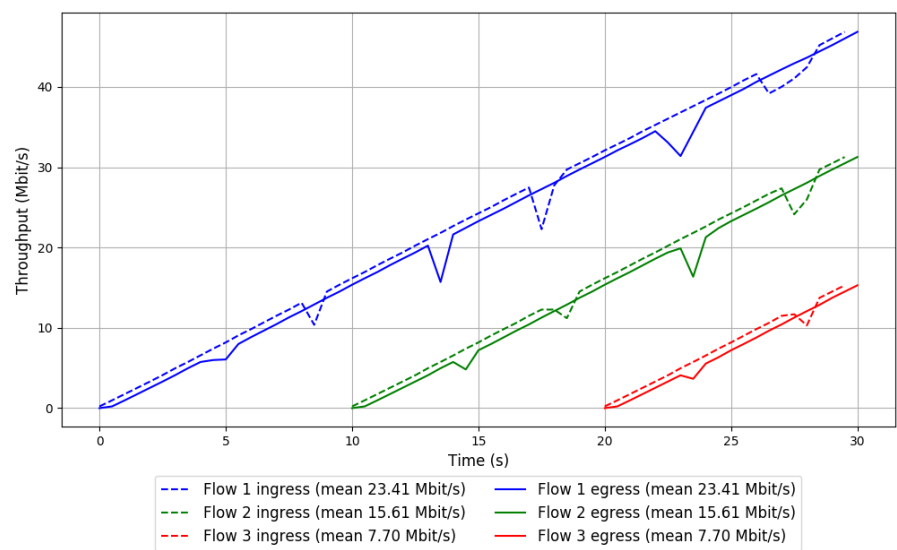
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2018-10-10 07:55:29
End at: 2018-10-10 07:55:59
Local clock offset: -0.006 ms
Remote clock offset: -0.137 ms


# Below is generated by plot.py at 2018-10-10 10:05:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.38 Mbit/s
95th percentile per-packet one-way delay: 63.839 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.49 Mbit/s
95th percentile per-packet one-way delay: 63.803 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.57 Mbit/s
95th percentile per-packet one-way delay: 63.951 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 63.559 ms
Loss rate: 0.00%
```
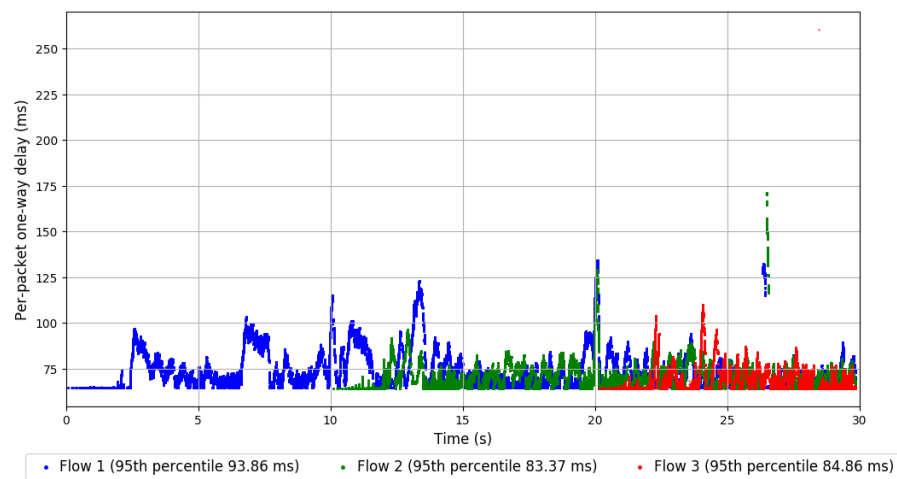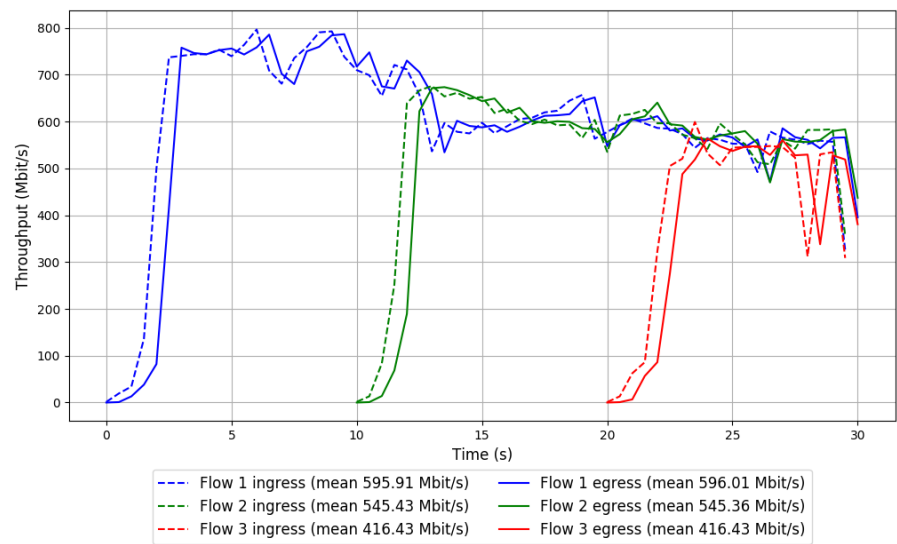
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2018-10-10 08:27:00
End at: 2018-10-10 08:27:30
Local clock offset: -0.041 ms
Remote clock offset: -1.287 ms

# Below is generated by plot.py at 2018-10-10 10:05:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.34 Mbit/s
95th percentile per-packet one-way delay: 62.239 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.41 Mbit/s
95th percentile per-packet one-way delay: 62.124 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.61 Mbit/s
95th percentile per-packet one-way delay: 62.338 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 62.370 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link

74

```
Run 1: Statistics of Indigo-Muses

Start at: 2018-10-10 06:10:01
End at: 2018-10-10 06:10:31
Local clock offset: -0.036 ms
Remote clock offset: 1.446 ms


# Below is generated by plot.py at 2018-10-10 10:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1093.31 Mbit/s
95th percentile per-packet one-way delay: 91.485 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 596.01 Mbit/s
95th percentile per-packet one-way delay: 93.864 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 545.36 Mbit/s
95th percentile per-packet one-way delay: 83.369 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 416.43 Mbit/s
95th percentile per-packet one-way delay: 84.855 ms
Loss rate: 0.00%
```
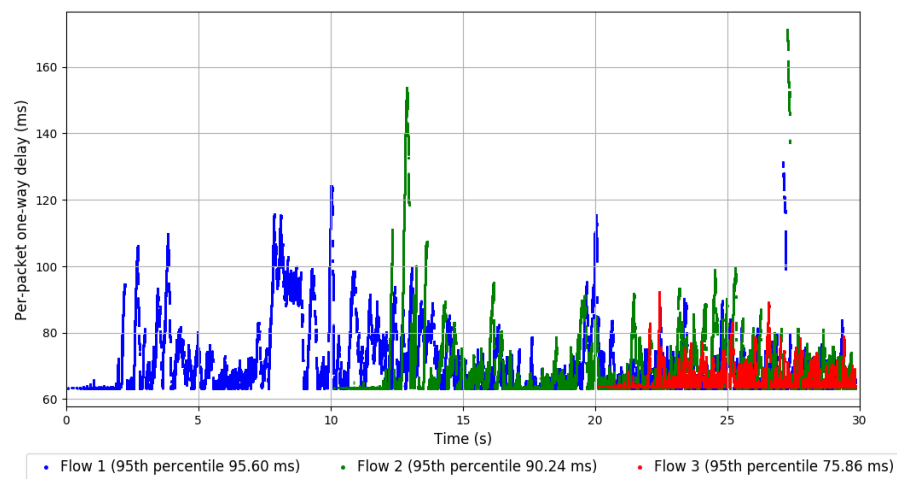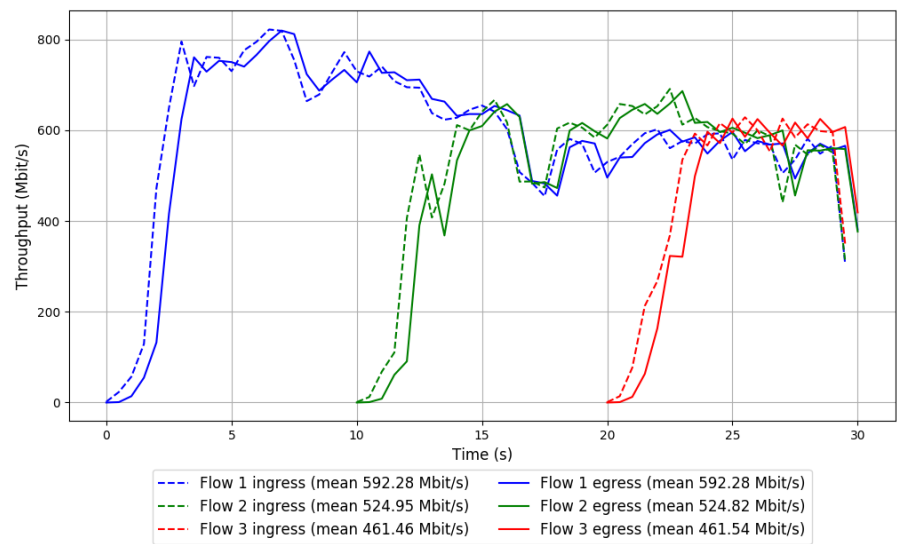
Run 1: Report of Indigo-Muses — Data Link

```
Run 2: Statistics of Indigo-Muses

Start at: 2018-10-10 06:41:22
End at: 2018-10-10 06:41:52
Local clock offset: -0.071 ms
Remote clock offset: 0.611 ms


# Below is generated by plot.py at 2018-10-10 10:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1090.76 Mbit/s
95th percentile per-packet one-way delay: 92.973 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 592.28 Mbit/s
95th percentile per-packet one-way delay: 95.596 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 524.82 Mbit/s
95th percentile per-packet one-way delay: 90.242 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 461.54 Mbit/s
95th percentile per-packet one-way delay: 75.863 ms
Loss rate: 0.00%
```
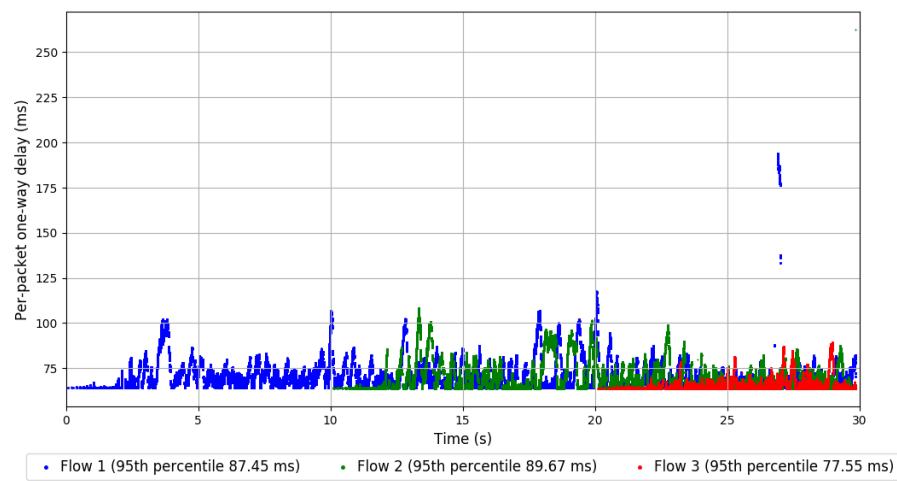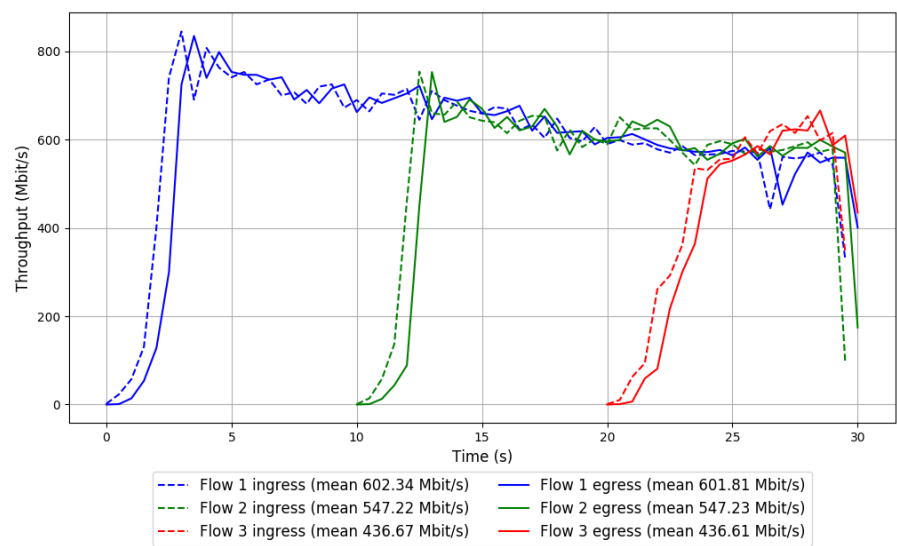
Run 2: Report of Indigo-Muses — Data Link

```
Run 3: Statistics of Indigo-Muses

Start at: 2018-10-10 07:12:50
End at: 2018-10-10 07:13:20
Local clock offset: -0.032 ms
Remote clock offset: 1.214 ms


# Below is generated by plot.py at 2018-10-10 10:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1107.44 Mbit/s
95th percentile per-packet one-way delay: 87.420 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 601.81 Mbit/s
95th percentile per-packet one-way delay: 87.455 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 547.23 Mbit/s
95th percentile per-packet one-way delay: 89.666 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 436.61 Mbit/s
95th percentile per-packet one-way delay: 77.553 ms
Loss rate: 0.00%
```
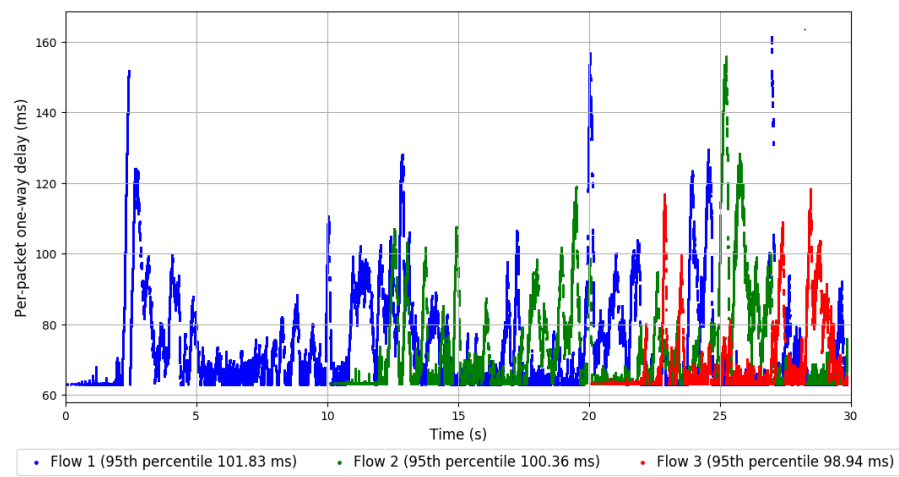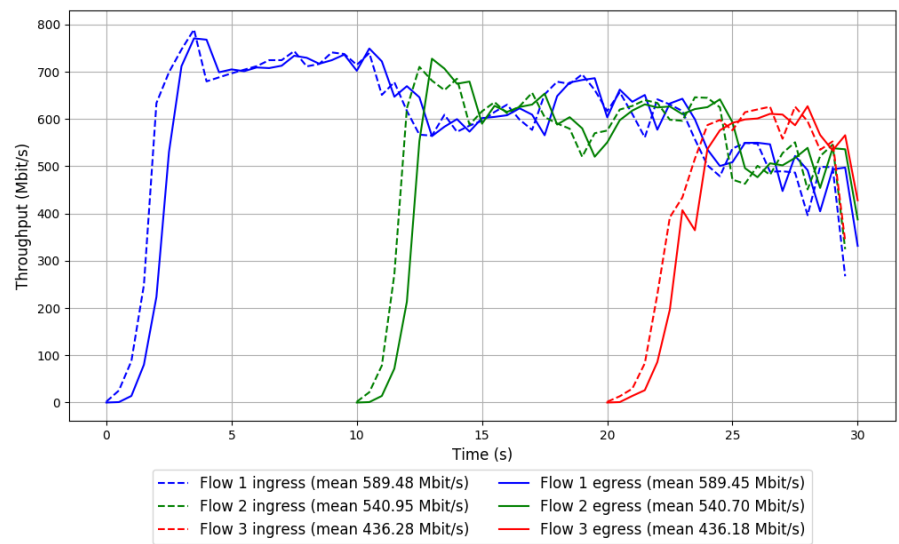
Run 3: Report of Indigo-Muses — Data Link

```
Run 4: Statistics of Indigo-Muses

Start at: 2018-10-10 07:44:00
End at: 2018-10-10 07:44:30
Local clock offset: -0.04 ms
Remote clock offset: 0.289 ms


# Below is generated by plot.py at 2018-10-10 10:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1091.16 Mbit/s
95th percentile per-packet one-way delay: 100.724 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 589.45 Mbit/s
95th percentile per-packet one-way delay: 101.832 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 540.70 Mbit/s
95th percentile per-packet one-way delay: 100.355 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 436.18 Mbit/s
95th percentile per-packet one-way delay: 98.941 ms
Loss rate: 0.01%
```
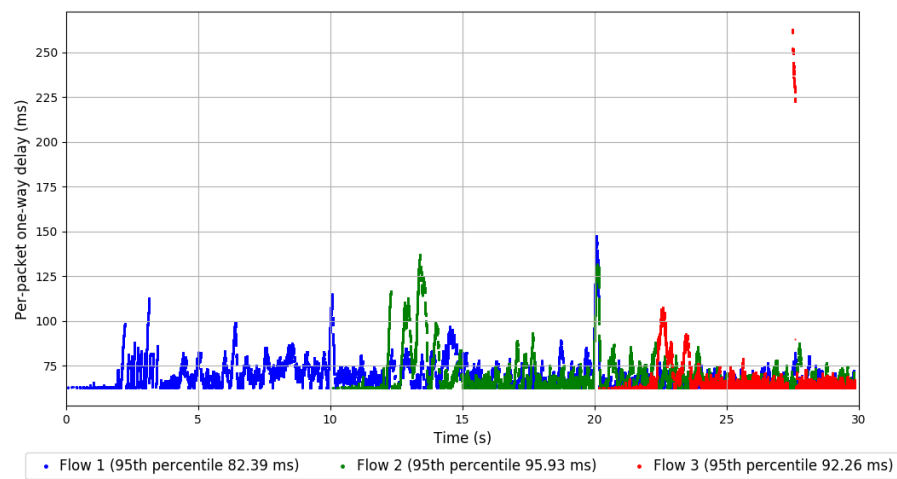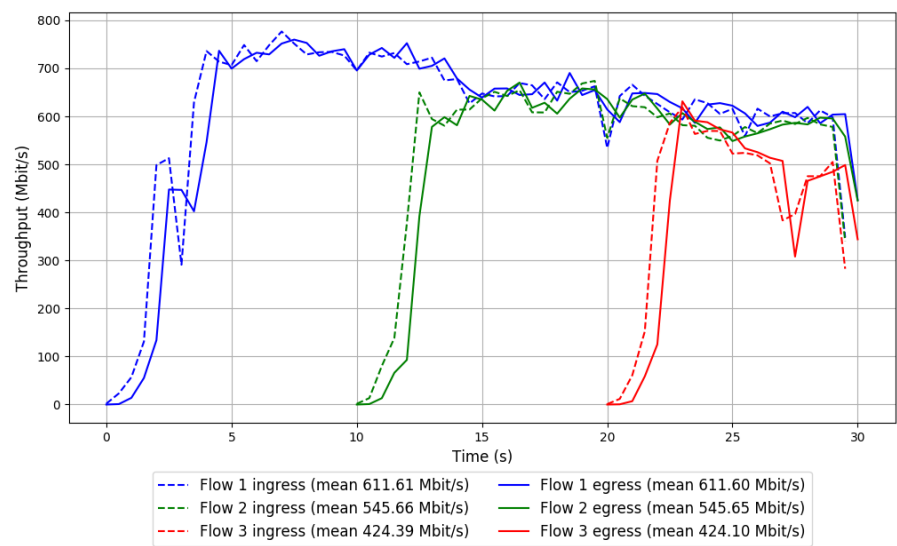
Run 4: Report of Indigo-Muses — Data Link

```
Run 5: Statistics of Indigo-Muses

Start at: 2018-10-10 08:15:25
End at: 2018-10-10 08:15:55
Local clock offset: -0.041 ms
Remote clock offset: 0.1 ms

# Below is generated by plot.py at 2018-10-10 10:17:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1111.64 Mbit/s
95th percentile per-packet one-way delay: 86.569 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 611.60 Mbit/s
95th percentile per-packet one-way delay: 82.388 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 545.65 Mbit/s
95th percentile per-packet one-way delay: 95.931 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 424.10 Mbit/s
95th percentile per-packet one-way delay: 92.263 ms
Loss rate: 0.07%
```
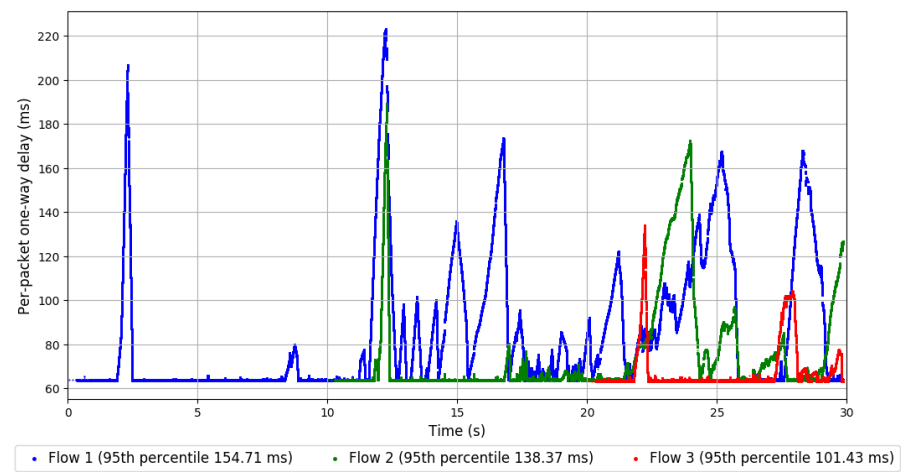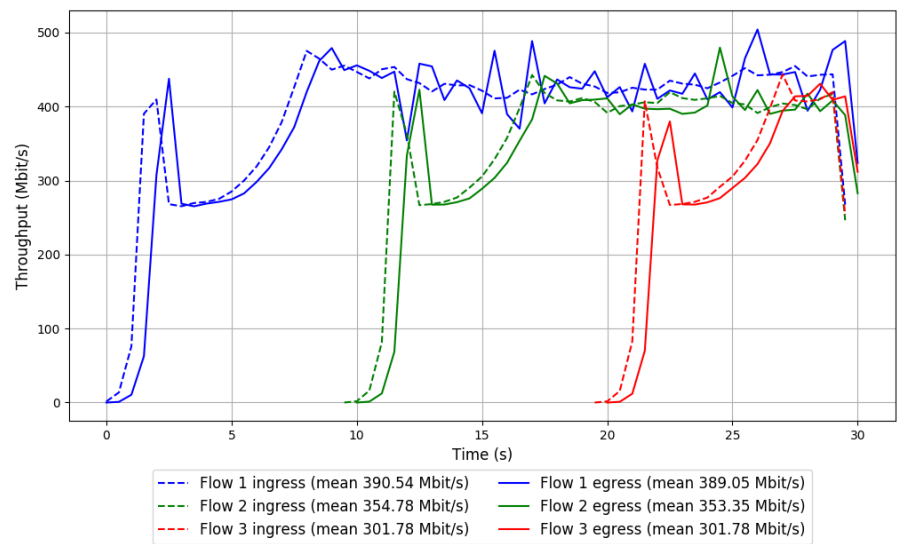
Run 5: Report of Indigo-Muses — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2018-10-10 06:17:18
End at: 2018-10-10 06:17:48
Local clock offset: -0.033 ms
Remote clock offset: 0.576 ms


# Below is generated by plot.py at 2018-10-10 10:21:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 723.82 Mbit/s
95th percentile per-packet one-way delay: 147.708 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 389.05 Mbit/s
95th percentile per-packet one-way delay: 154.709 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 353.35 Mbit/s
95th percentile per-packet one-way delay: 138.366 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 301.78 Mbit/s
95th percentile per-packet one-way delay: 101.431 ms
Loss rate: 0.00%
```

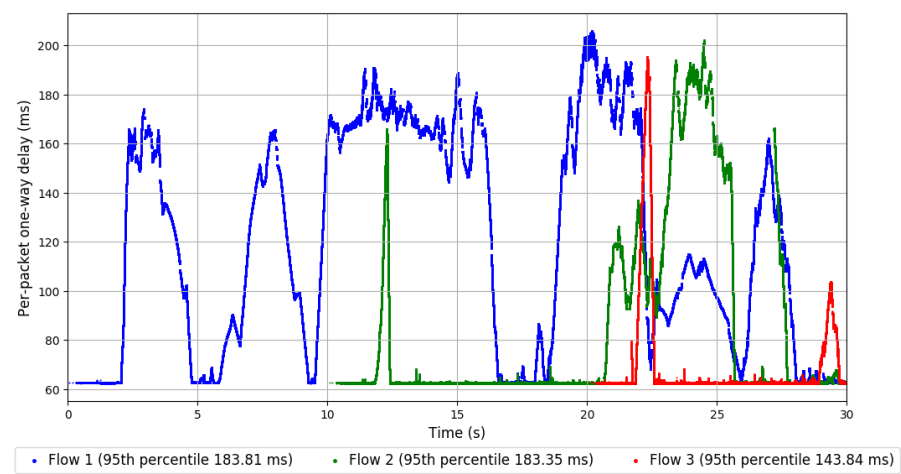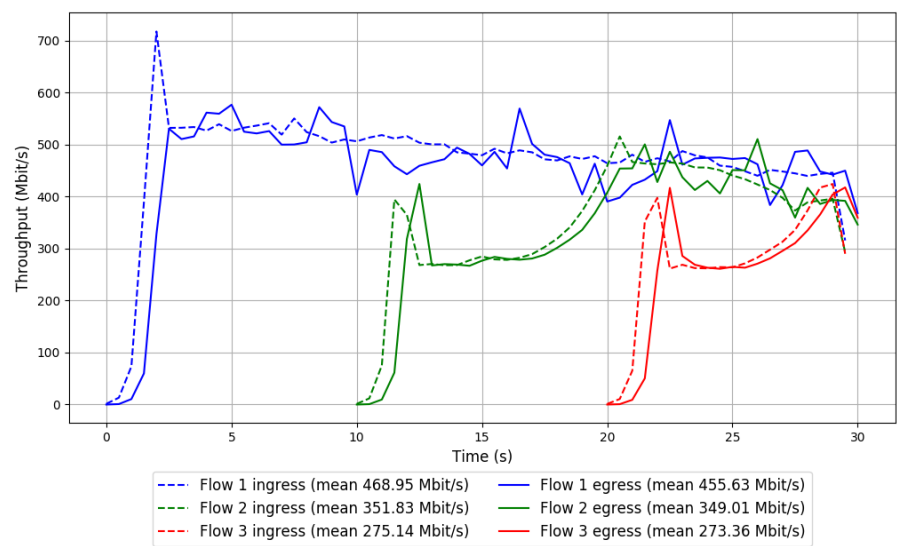Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2018-10-10 06:48:47
End at: 2018-10-10 06:49:17
Local clock offset: -0.058 ms
Remote clock offset: -0.297 ms


# Below is generated by plot.py at 2018-10-10 10:30:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 777.73 Mbit/s
95th percentile per-packet one-way delay: 182.328 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 455.63 Mbit/s
95th percentile per-packet one-way delay: 183.805 ms
Loss rate: 2.84%
-- Flow 2:
Average throughput: 349.01 Mbit/s
95th percentile per-packet one-way delay: 183.348 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 273.36 Mbit/s
95th percentile per-packet one-way delay: 143.842 ms
Loss rate: 0.65%
```

Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2018-10-10 07:20:15
End at: 2018-10-10 07:20:45
Local clock offset: 0.009 ms
Remote clock offset: 0.007 ms


# Below is generated by plot.py at 2018-10-10 10:30:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 752.20 Mbit/s
95th percentile per-packet one-way delay: 183.102 ms
Loss rate: 3.20%
-- Flow 1:
Average throughput: 404.41 Mbit/s
95th percentile per-packet one-way delay: 186.810 ms
Loss rate: 4.62%
-- Flow 2:
Average throughput: 397.46 Mbit/s
95th percentile per-packet one-way delay: 116.487 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 253.88 Mbit/s
95th percentile per-packet one-way delay: 206.464 ms
Loss rate: 5.73%
```
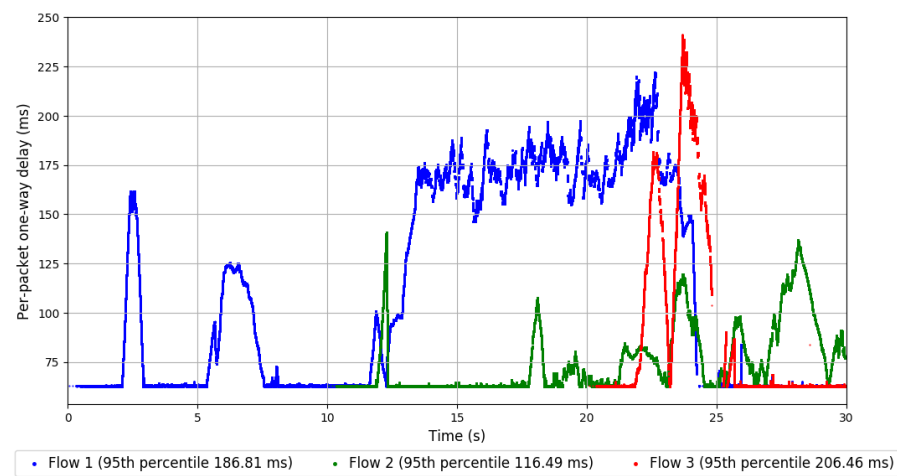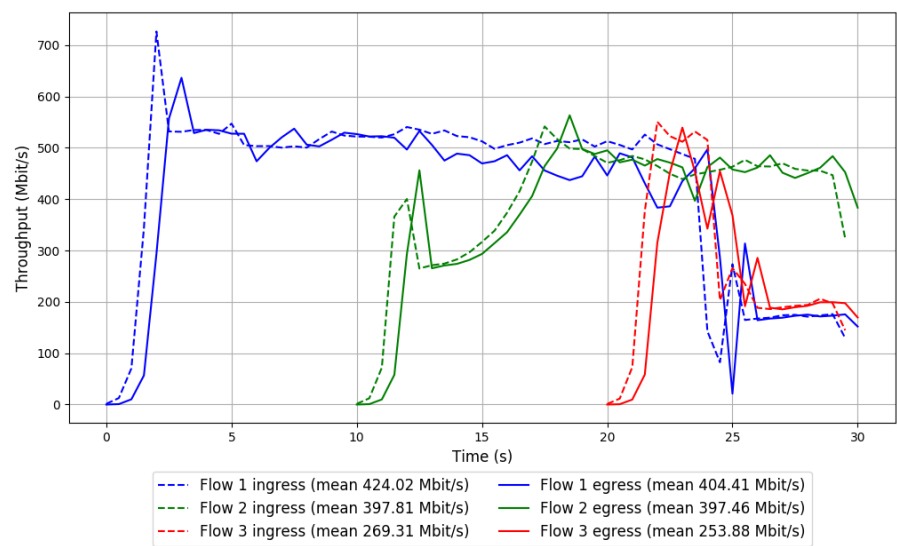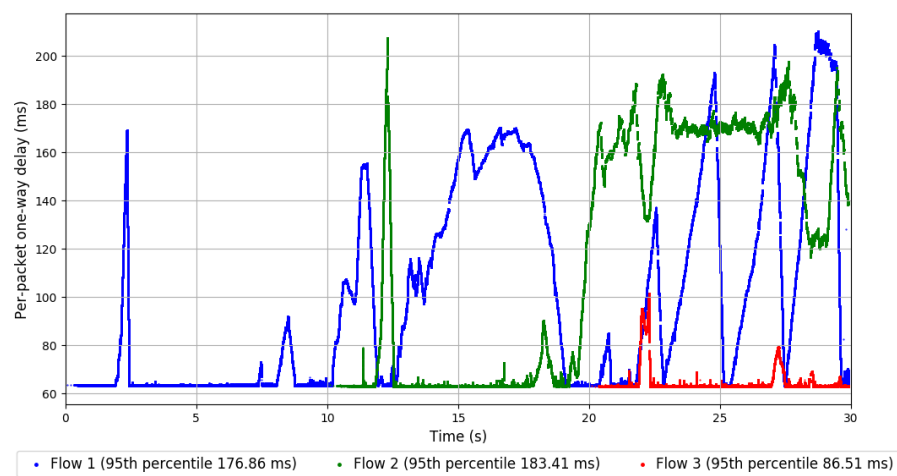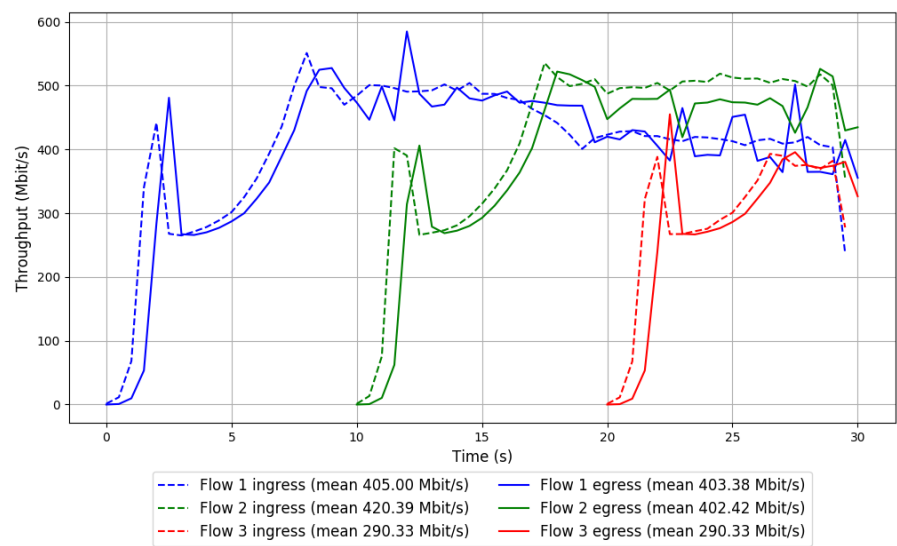
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 424.02 Mbit/s)   Flow 1 egress (mean 404.41 Mbit/s)
Flow 2 ingress (mean 397.81 Mbit/s)   Flow 2 egress (mean 397.46 Mbit/s)
Flow 3 ingress (mean 269.31 Mbit/s)   Flow 3 egress (mean 253.88 Mbit/s)

Flow 1 (95th percentile 186.81 ms)   Flow 2 (95th percentile 116.49 ms)   Flow 3 (95th percentile 206.46 ms)

90

```
Run 4: Statistics of PCC-Allegro

Start at: 2018-10-10 07:51:21
End at: 2018-10-10 07:51:51
Local clock offset: -0.012 ms
Remote clock offset: 0.262 ms


# Below is generated by plot.py at 2018-10-10 10:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 766.05 Mbit/s
95th percentile per-packet one-way delay: 179.472 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 403.38 Mbit/s
95th percentile per-packet one-way delay: 176.856 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 402.42 Mbit/s
95th percentile per-packet one-way delay: 183.413 ms
Loss rate: 4.28%
-- Flow 3:
Average throughput: 290.33 Mbit/s
95th percentile per-packet one-way delay: 86.510 ms
Loss rate: 0.00%
```

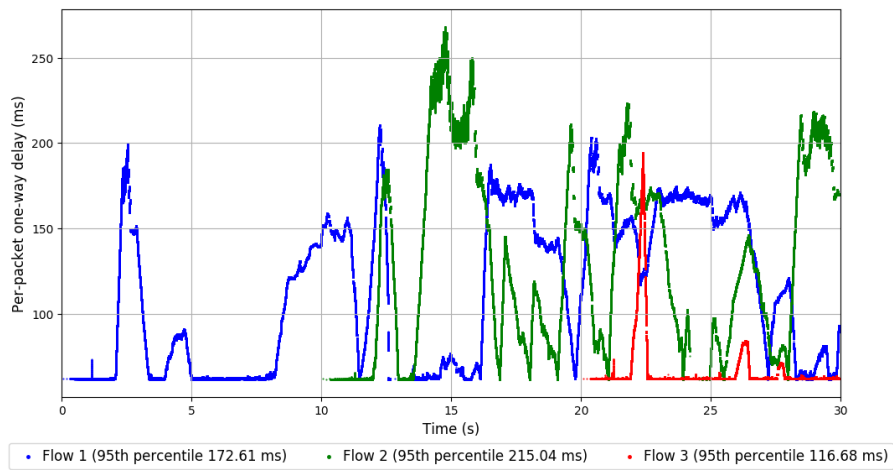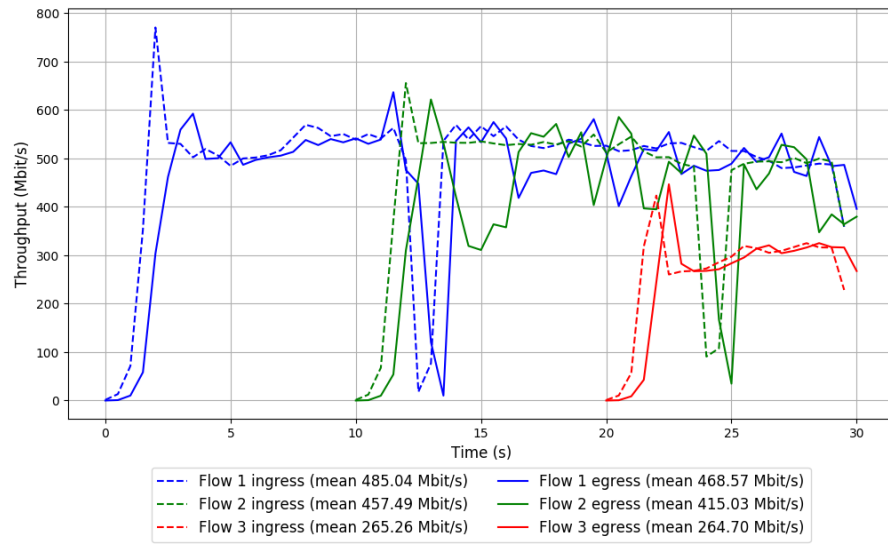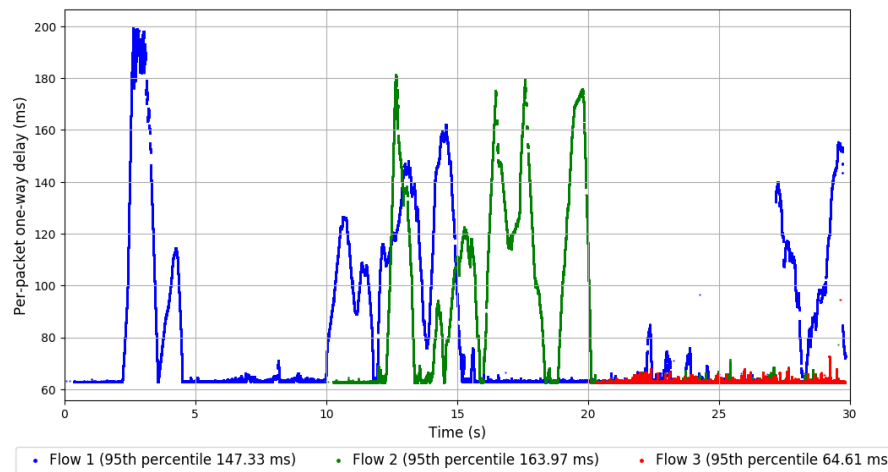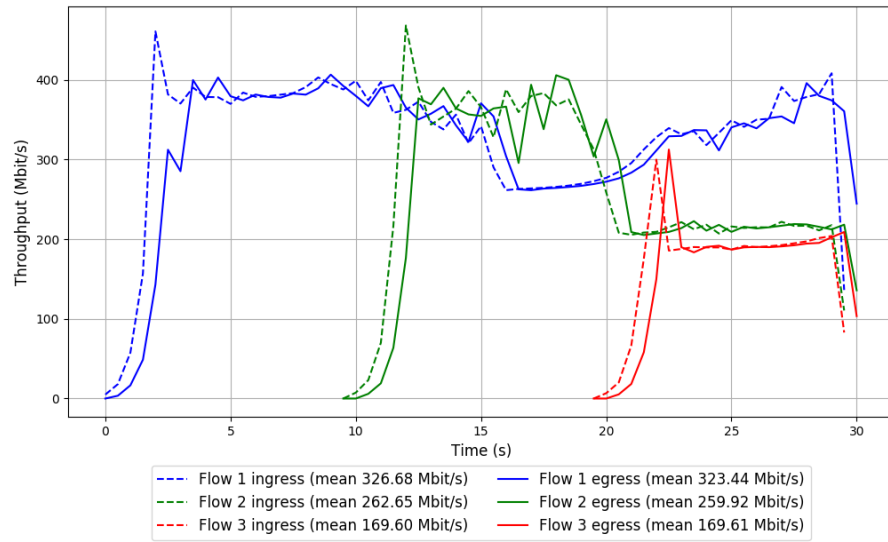# Run 4: Report of PCC-Allegro — Data Link

- - - - Flow 1 ingress (mean 405.00 Mbit/s)   —— Flow 1 egress (mean 403.38 Mbit/s)
- - - - Flow 2 ingress (mean 420.39 Mbit/s)   —— Flow 2 egress (mean 402.42 Mbit/s)
- - - - Flow 3 ingress (mean 290.33 Mbit/s)   —— Flow 3 egress (mean 290.33 Mbit/s)

- Flow 1 (95th percentile 176.86 ms)   • Flow 2 (95th percentile 183.41 ms)   • Flow 3 (95th percentile 86.51 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-10-10 08:22:49
End at: 2018-10-10 08:23:19
Local clock offset: -0.107 ms
Remote clock offset: -0.889 ms


# Below is generated by plot.py at 2018-10-10 10:44:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 831.59 Mbit/s
95th percentile per-packet one-way delay: 195.206 ms
Loss rate: 5.12%
-- Flow 1:
Average throughput: 468.57 Mbit/s
95th percentile per-packet one-way delay: 172.614 ms
Loss rate: 3.39%
-- Flow 2:
Average throughput: 415.03 Mbit/s
95th percentile per-packet one-way delay: 215.037 ms
Loss rate: 9.27%
-- Flow 3:
Average throughput: 264.70 Mbit/s
95th percentile per-packet one-way delay: 116.681 ms
Loss rate: 0.22%
```
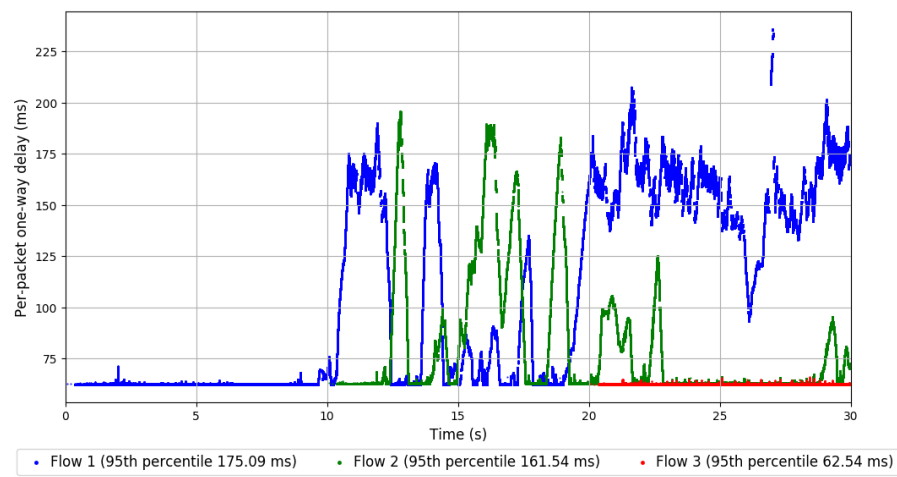
Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2018-10-10 06:19:17
End at: 2018-10-10 06:19:47
Local clock offset: -0.019 ms
Remote clock offset: 0.026 ms


# Below is generated by plot.py at 2018-10-10 10:44:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 553.15 Mbit/s
95th percentile per-packet one-way delay: 152.267 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 323.44 Mbit/s
95th percentile per-packet one-way delay: 147.333 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 259.92 Mbit/s
95th percentile per-packet one-way delay: 163.970 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 169.61 Mbit/s
95th percentile per-packet one-way delay: 64.606 ms
Loss rate: 0.00%
```

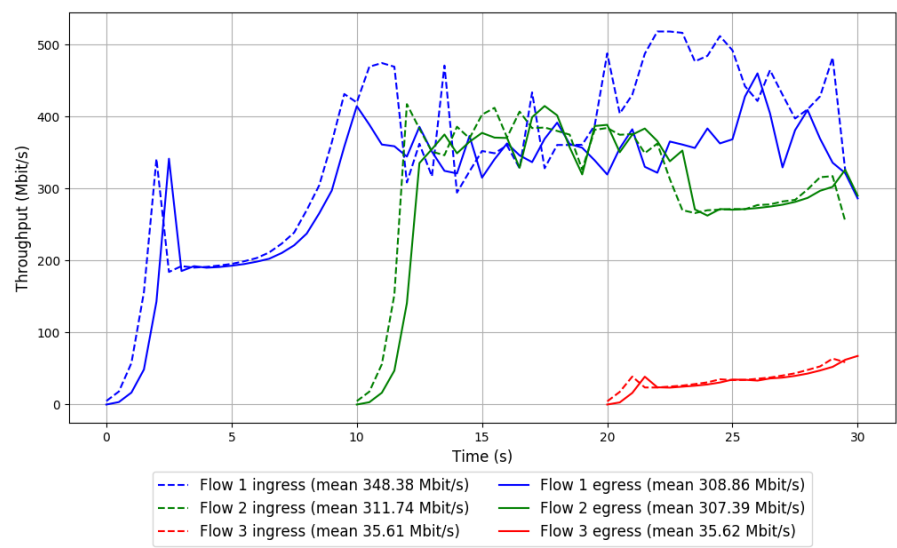# Run 1: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 326.68 Mbit/s) --- Flow 1 egress (mean 323.44 Mbit/s)
Flow 2 ingress (mean 262.65 Mbit/s) --- Flow 2 egress (mean 259.92 Mbit/s)
Flow 3 ingress (mean 169.60 Mbit/s) --- Flow 3 egress (mean 169.61 Mbit/s)

Flow 1 (95th percentile 147.33 ms)   Flow 2 (95th percentile 163.97 ms)   Flow 3 (95th percentile 64.61 ms)

96

```
Run 2: Statistics of PCC-Expr

Start at: 2018-10-10 06:50:50
End at: 2018-10-10 06:51:20
Local clock offset: -0.038 ms
Remote clock offset: -0.508 ms


# Below is generated by plot.py at 2018-10-10 10:44:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 525.06 Mbit/s
95th percentile per-packet one-way delay: 172.937 ms
Loss rate: 7.47%
-- Flow 1:
Average throughput: 308.86 Mbit/s
95th percentile per-packet one-way delay: 175.089 ms
Loss rate: 11.34%
-- Flow 2:
Average throughput: 307.39 Mbit/s
95th percentile per-packet one-way delay: 161.543 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 35.62 Mbit/s
95th percentile per-packet one-way delay: 62.541 ms
Loss rate: 0.00%
```
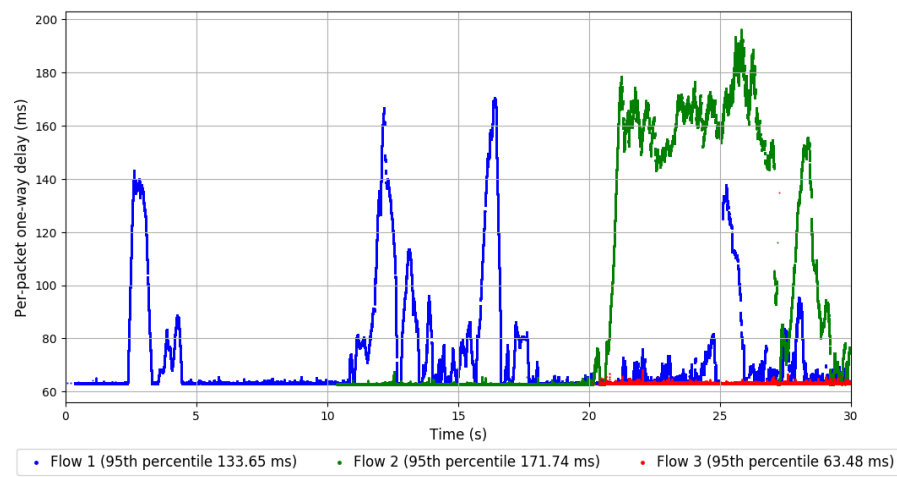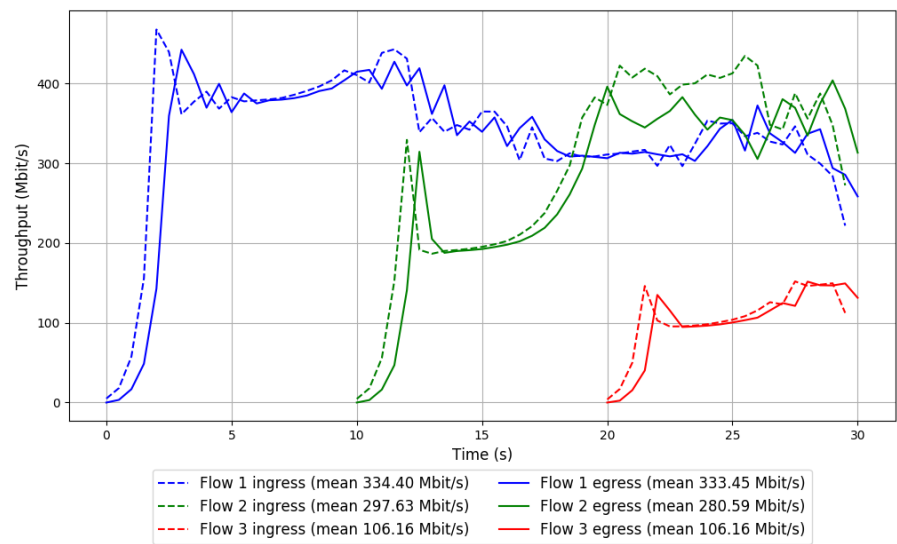
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2018-10-10 07:22:17
End at: 2018-10-10 07:22:47
Local clock offset: -0.009 ms
Remote clock offset: 0.023 ms


# Below is generated by plot.py at 2018-10-10 10:44:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 555.00 Mbit/s
95th percentile per-packet one-way delay: 165.574 ms
Loss rate: 2.16%
-- Flow 1:
Average throughput: 333.45 Mbit/s
95th percentile per-packet one-way delay: 133.645 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 280.59 Mbit/s
95th percentile per-packet one-way delay: 171.739 ms
Loss rate: 5.72%
-- Flow 3:
Average throughput: 106.16 Mbit/s
95th percentile per-packet one-way delay: 63.480 ms
Loss rate: 0.00%
```
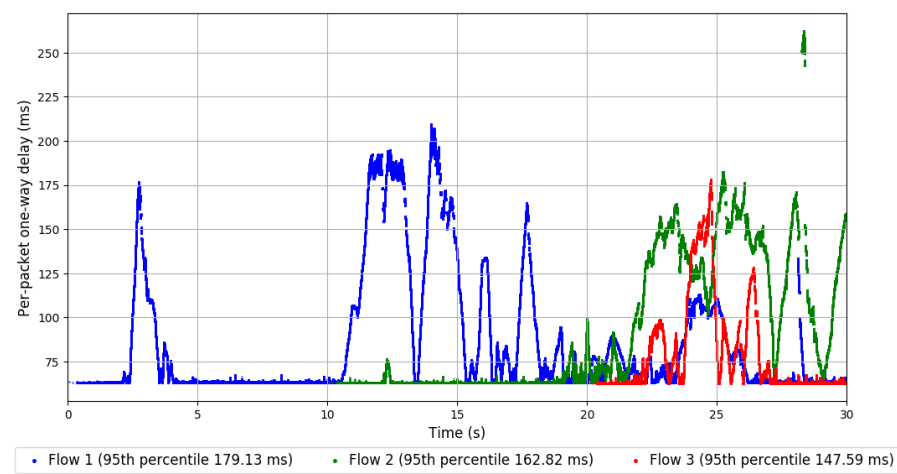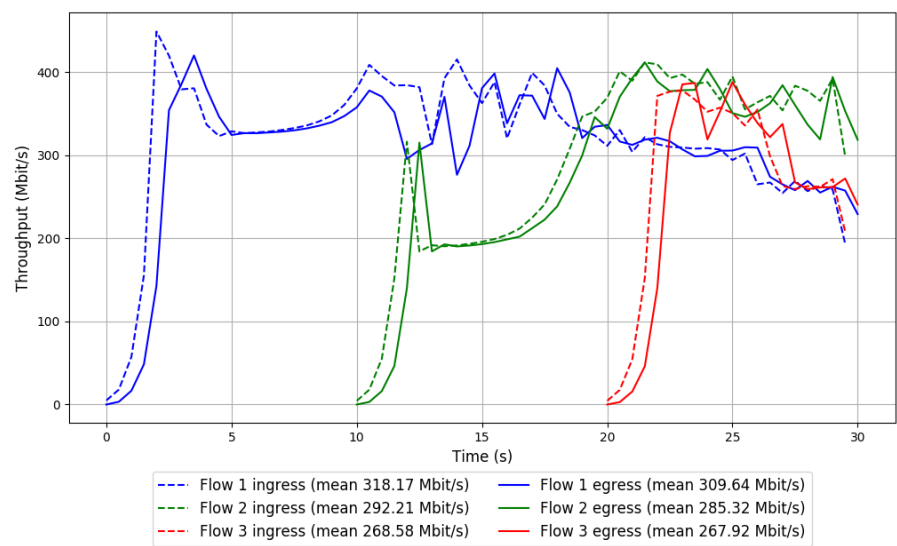
Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2018-10-10 07:53:24
End at: 2018-10-10 07:53:54
Local clock offset: -0.053 ms
Remote clock offset: 0.1 ms


# Below is generated by plot.py at 2018-10-10 10:44:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 587.75 Mbit/s
95th percentile per-packet one-way delay: 165.339 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 309.64 Mbit/s
95th percentile per-packet one-way delay: 179.128 ms
Loss rate: 2.68%
-- Flow 2:
Average throughput: 285.32 Mbit/s
95th percentile per-packet one-way delay: 162.824 ms
Loss rate: 2.36%
-- Flow 3:
Average throughput: 267.92 Mbit/s
95th percentile per-packet one-way delay: 147.588 ms
Loss rate: 0.25%
```
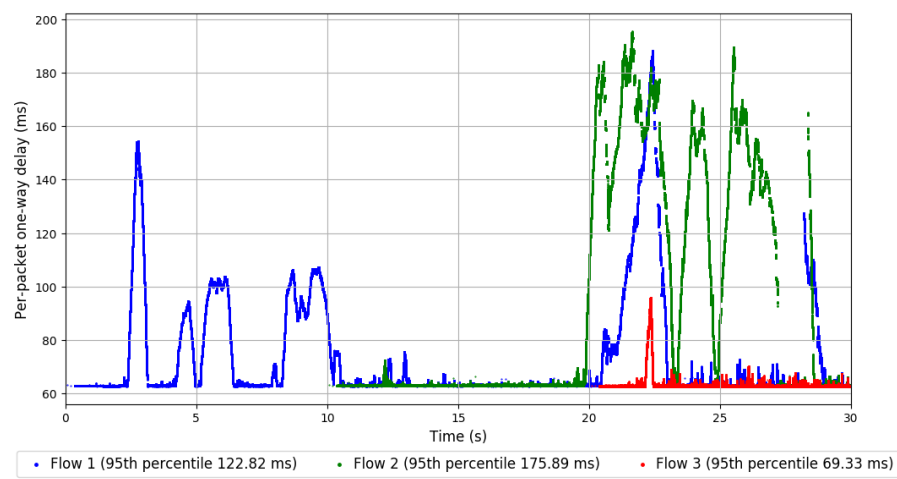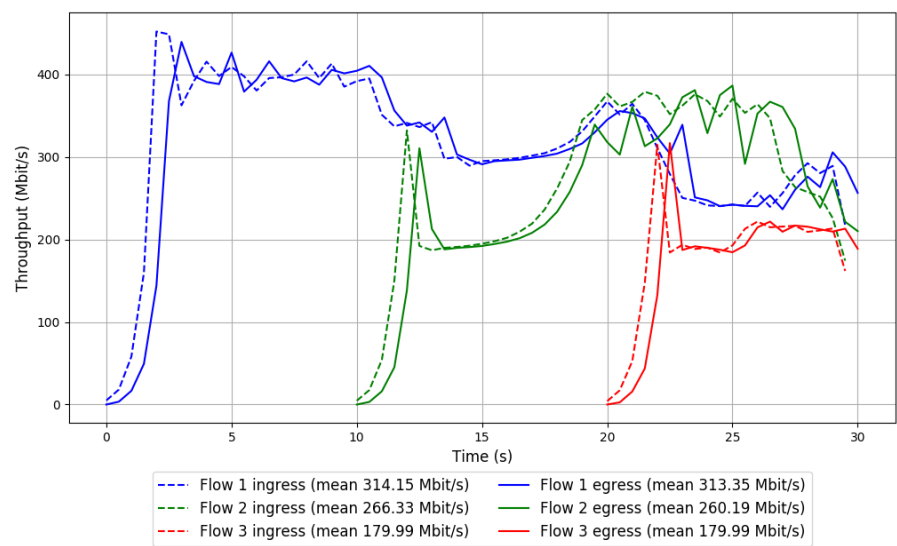
Run 4: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 318.17 Mbit/s)   Flow 1 egress (mean 309.64 Mbit/s)
Flow 2 ingress (mean 292.21 Mbit/s)   Flow 2 egress (mean 285.32 Mbit/s)
Flow 3 ingress (mean 268.58 Mbit/s)   Flow 3 egress (mean 267.92 Mbit/s)

Flow 1 (95th percentile 179.13 ms)   Flow 2 (95th percentile 162.82 ms)   Flow 3 (95th percentile 147.59 ms)

```
Run 5: Statistics of PCC-Expr

Start at: 2018-10-10 08:24:58
End at: 2018-10-10 08:25:28
Local clock offset: -0.049 ms
Remote clock offset: 0.137 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 545.75 Mbit/s
95th percentile per-packet one-way delay: 161.189 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 313.35 Mbit/s
95th percentile per-packet one-way delay: 122.817 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 260.19 Mbit/s
95th percentile per-packet one-way delay: 175.894 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 179.99 Mbit/s
95th percentile per-packet one-way delay: 69.327 ms
Loss rate: 0.00%
```
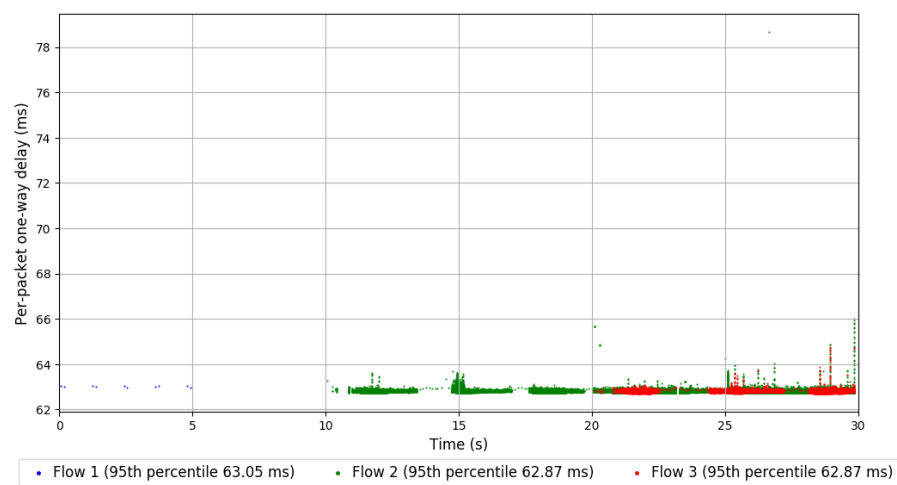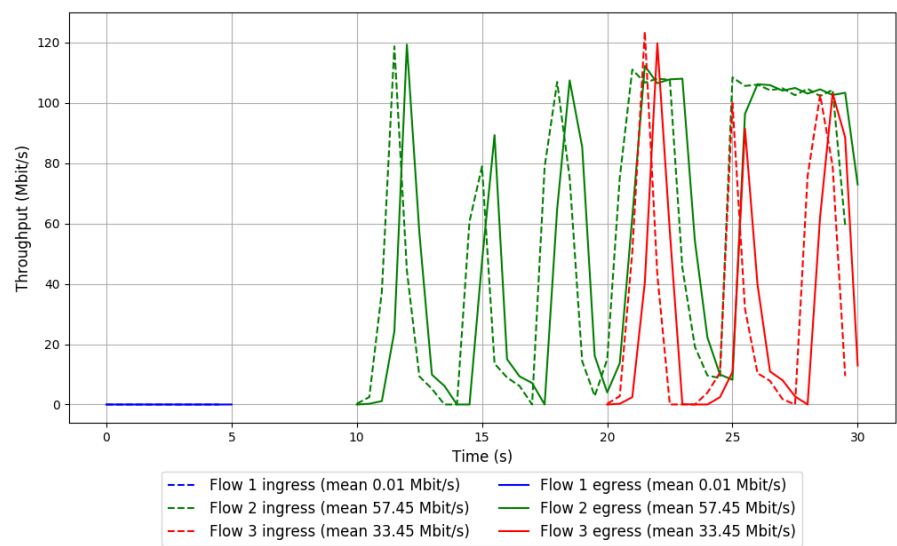
Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-10-10 06:12:07
End at: 2018-10-10 06:12:37
Local clock offset: -0.006 ms
Remote clock offset: 0.033 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.10 Mbit/s
95th percentile per-packet one-way delay: 62.871 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 63.047 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 57.45 Mbit/s
95th percentile per-packet one-way delay: 62.871 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.45 Mbit/s
95th percentile per-packet one-way delay: 62.871 ms
Loss rate: 0.00%
```
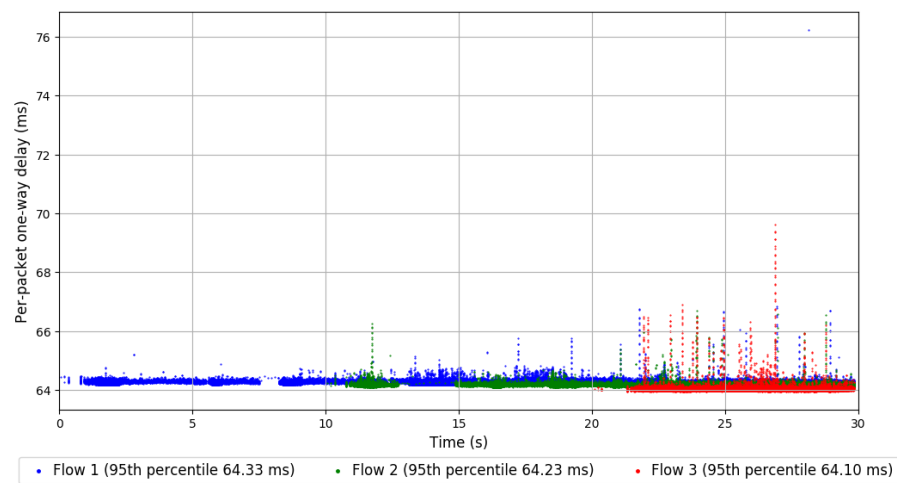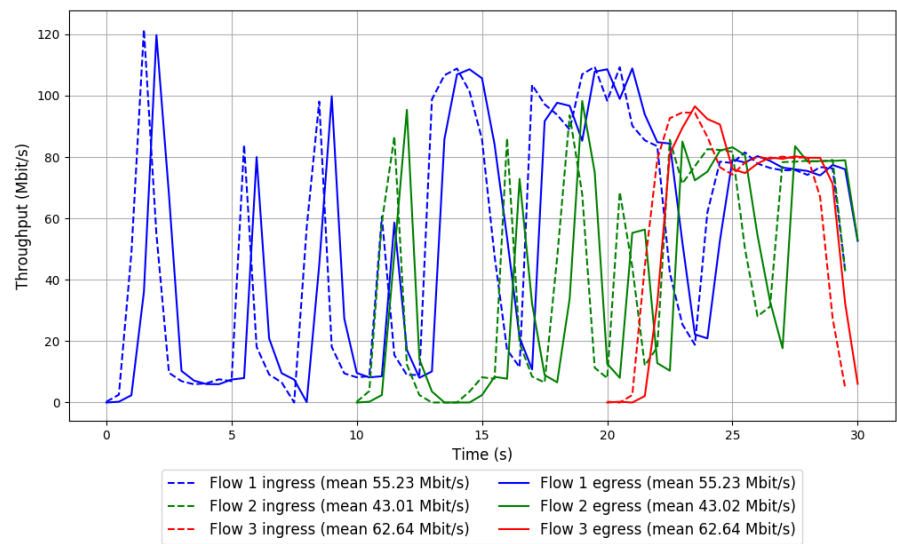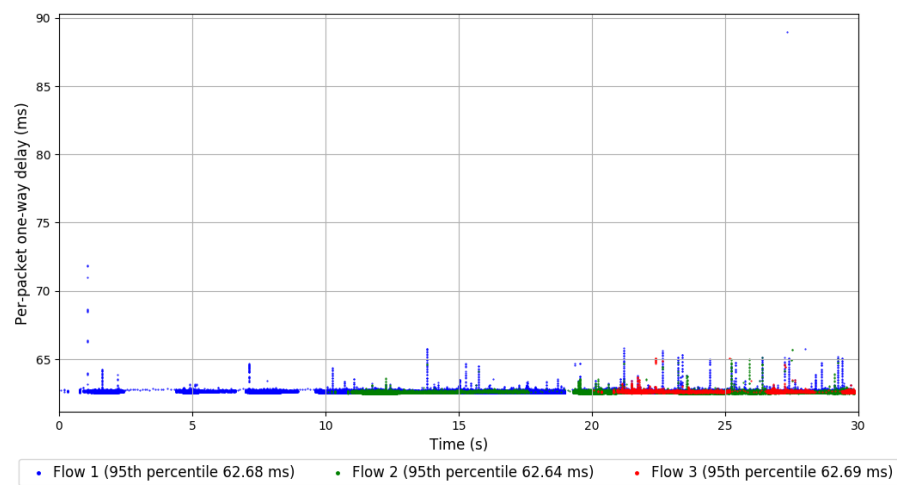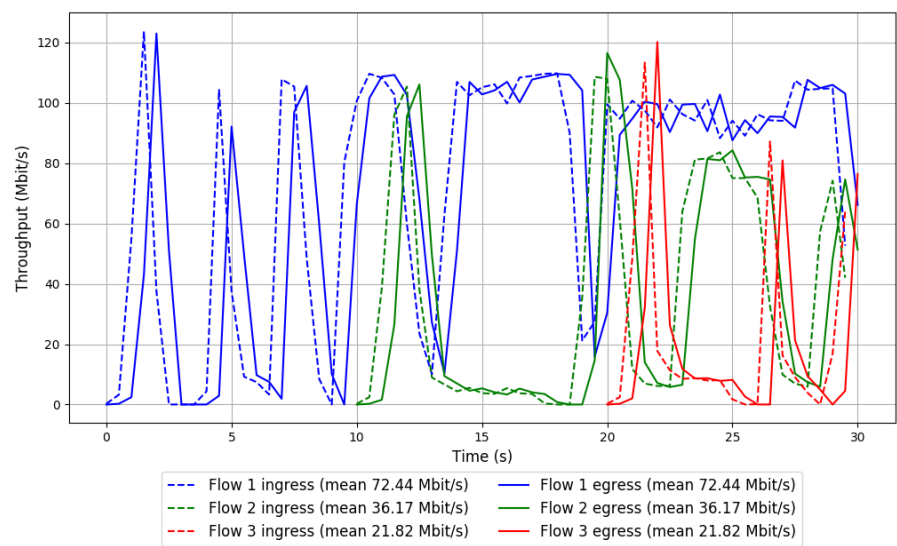
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-10-10 06:43:29
End at: 2018-10-10 06:43:59
Local clock offset: -0.058 ms
Remote clock offset: 1.373 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 104.31 Mbit/s
95th percentile per-packet one-way delay: 64.311 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.23 Mbit/s
95th percentile per-packet one-way delay: 64.330 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.02 Mbit/s
95th percentile per-packet one-way delay: 64.234 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.64 Mbit/s
95th percentile per-packet one-way delay: 64.097 ms
Loss rate: 0.00%
```
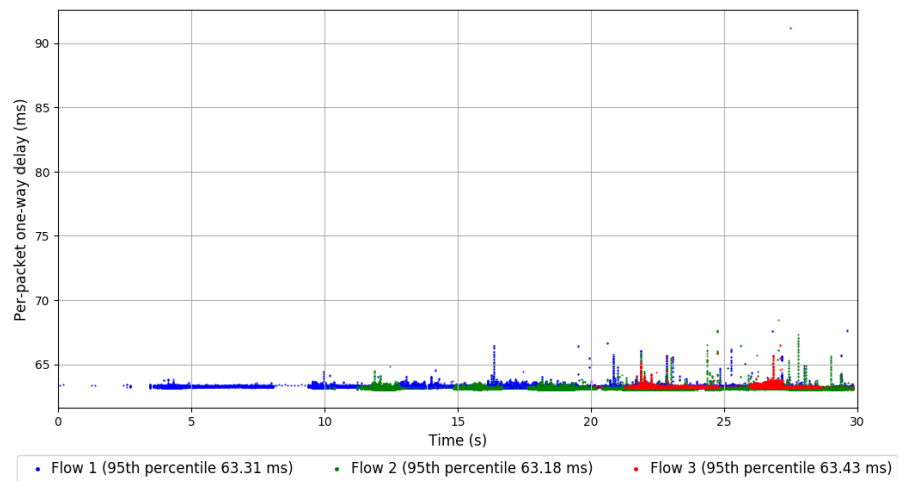
Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 55.23 Mbit/s) --- Flow 1 egress (mean 55.23 Mbit/s)
Flow 2 ingress (mean 43.01 Mbit/s) --- Flow 2 egress (mean 43.02 Mbit/s)
Flow 3 ingress (mean 62.64 Mbit/s) --- Flow 3 egress (mean 62.64 Mbit/s)

Flow 1 (95th percentile 64.33 ms) • Flow 2 (95th percentile 64.23 ms) • Flow 3 (95th percentile 64.10 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-10-10 07:14:57
End at: 2018-10-10 07:15:27
Local clock offset: -0.001 ms
Remote clock offset: -0.158 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.59 Mbit/s
95th percentile per-packet one-way delay: 62.679 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.44 Mbit/s
95th percentile per-packet one-way delay: 62.684 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.17 Mbit/s
95th percentile per-packet one-way delay: 62.642 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.82 Mbit/s
95th percentile per-packet one-way delay: 62.685 ms
Loss rate: 0.00%
```
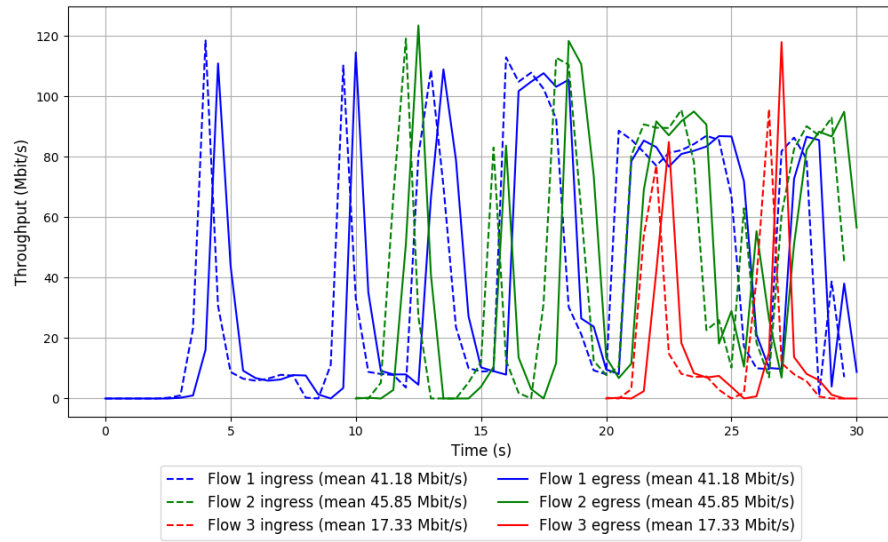
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2018-10-10 07:46:06
End at: 2018-10-10 07:46:36
Local clock offset: -0.009 ms
Remote clock offset: 0.212 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.28 Mbit/s
95th percentile per-packet one-way delay: 63.299 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.18 Mbit/s
95th percentile per-packet one-way delay: 63.312 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.85 Mbit/s
95th percentile per-packet one-way delay: 63.182 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.33 Mbit/s
95th percentile per-packet one-way delay: 63.434 ms
Loss rate: 0.00%
```
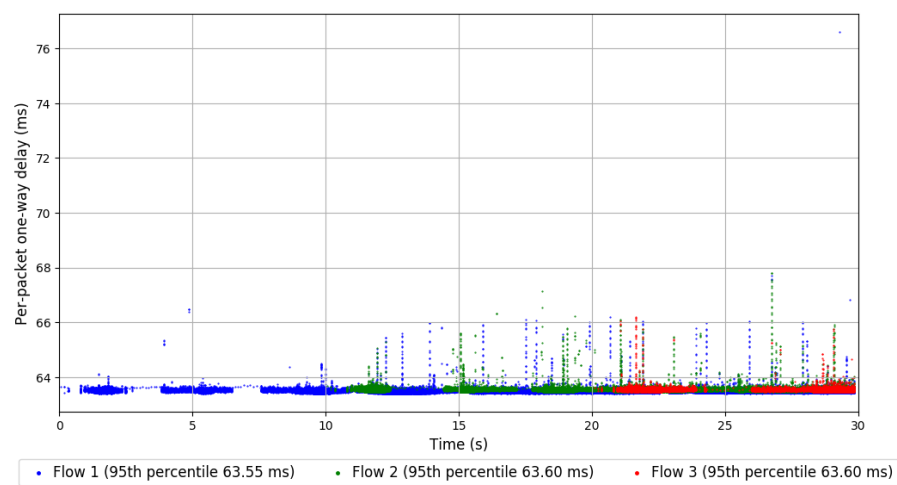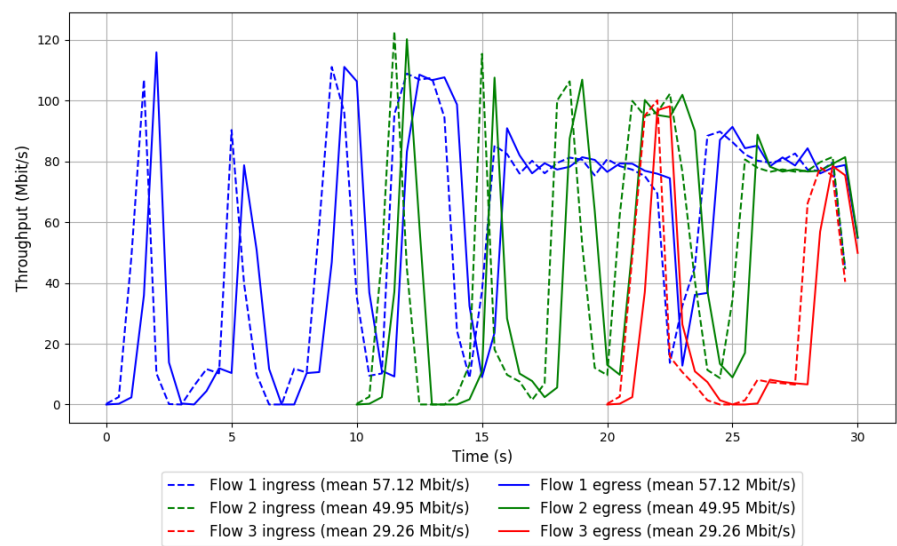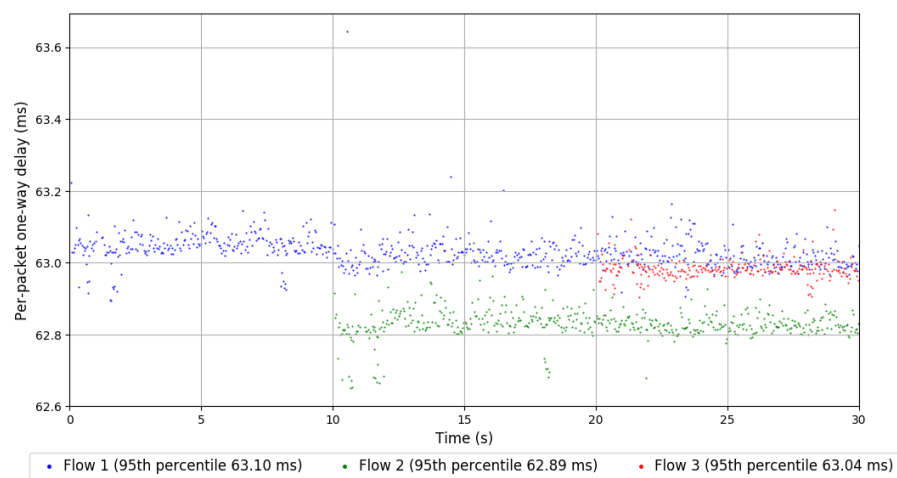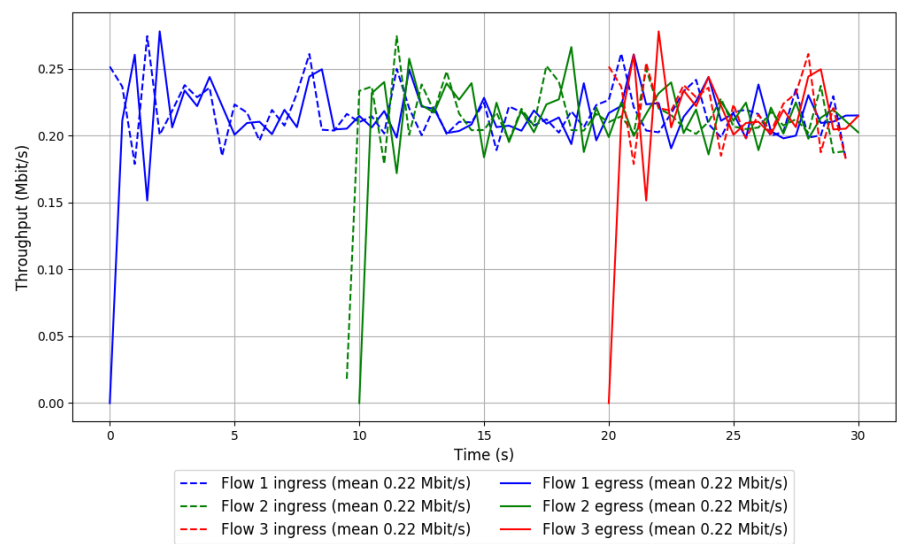
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-10-10 08:17:31
End at: 2018-10-10 08:18:01
Local clock offset: -0.057 ms
Remote clock offset: 0.843 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.87 Mbit/s
95th percentile per-packet one-way delay: 63.583 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.12 Mbit/s
95th percentile per-packet one-way delay: 63.548 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.95 Mbit/s
95th percentile per-packet one-way delay: 63.604 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.26 Mbit/s
95th percentile per-packet one-way delay: 63.599 ms
Loss rate: 0.00%
```
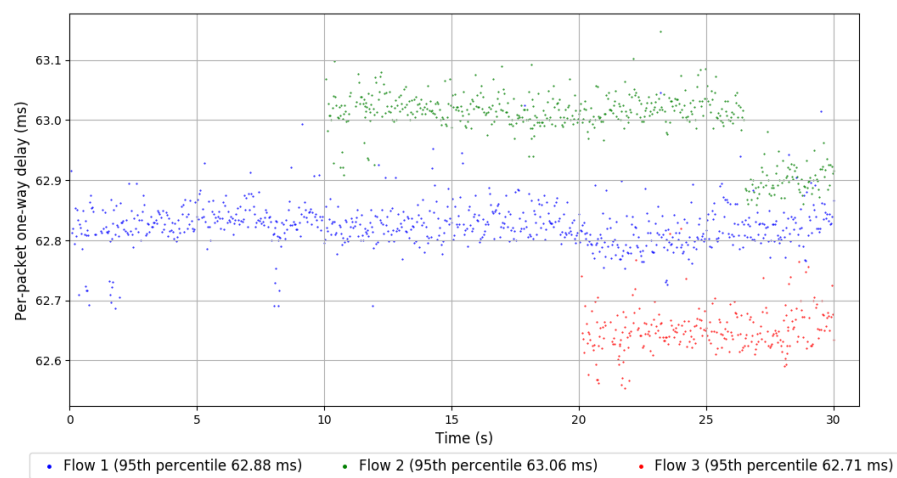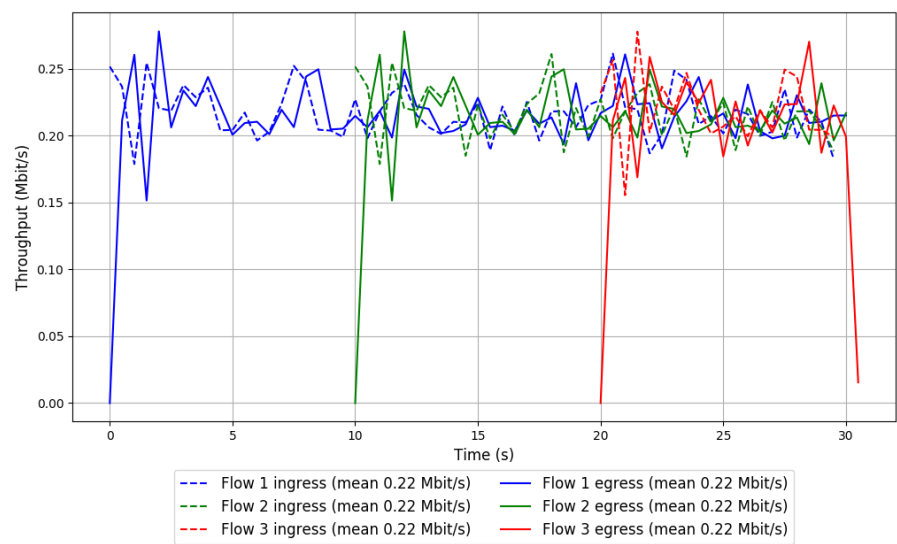
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 57.12 Mbit/s)   Flow 1 egress (mean 57.12 Mbit/s)
Flow 2 ingress (mean 49.95 Mbit/s)   Flow 2 egress (mean 49.95 Mbit/s)
Flow 3 ingress (mean 29.26 Mbit/s)   Flow 3 egress (mean 29.26 Mbit/s)

Flow 1 (95th percentile 63.55 ms)   Flow 2 (95th percentile 63.60 ms)   Flow 3 (95th percentile 63.60 ms)

```
Run 1: Statistics of SCReAM

Start at: 2018-10-10 06:07:23
End at: 2018-10-10 06:07:53
Local clock offset: -0.052 ms
Remote clock offset: -0.052 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.081 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.101 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.894 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.036 ms
Loss rate: 0.00%
```
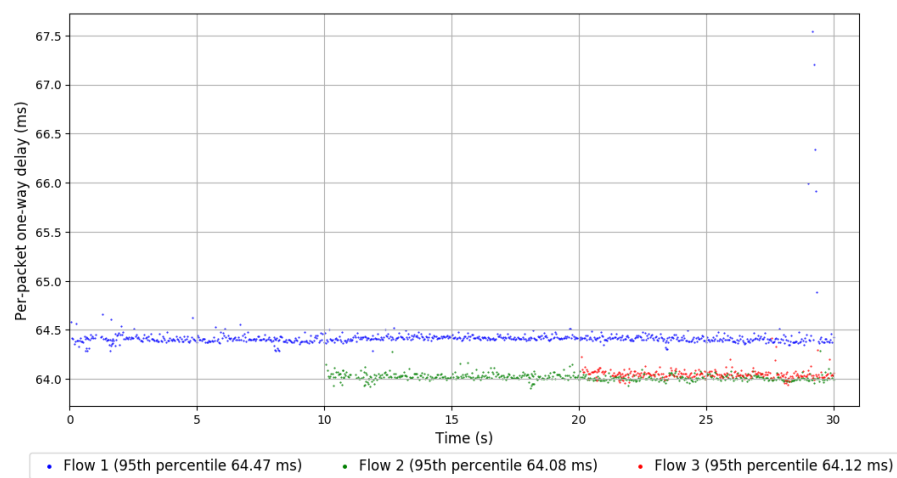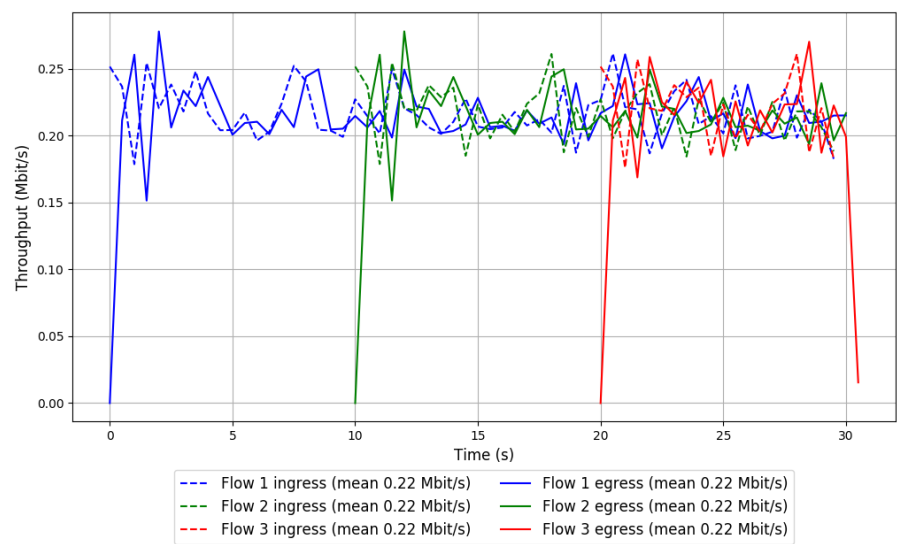
Run 1: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 63.10 ms) · Flow 2 (95th percentile 62.89 ms) · Flow 3 (95th percentile 63.04 ms)

```
Run 2: Statistics of SCReAM

Start at: 2018-10-10 06:38:31
End at: 2018-10-10 06:39:01
Local clock offset: -0.005 ms
Remote clock offset: -0.052 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.038 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.880 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.057 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.710 ms
Loss rate: 0.00%
```
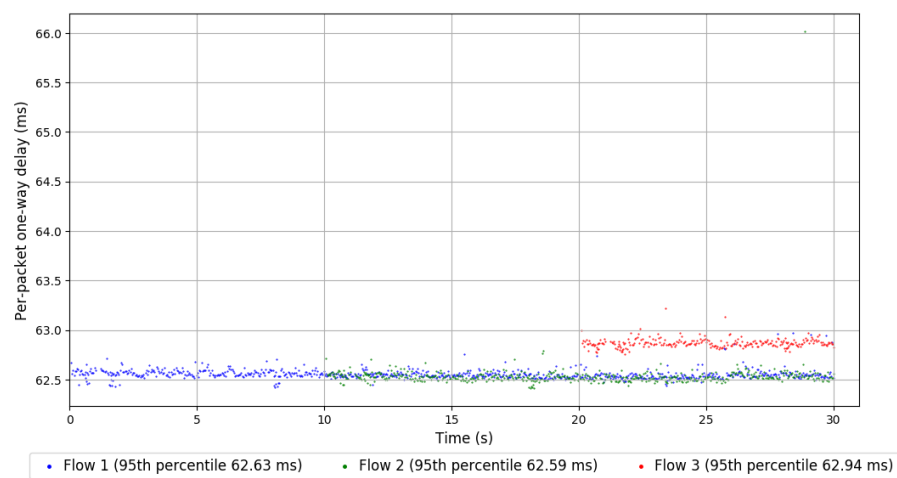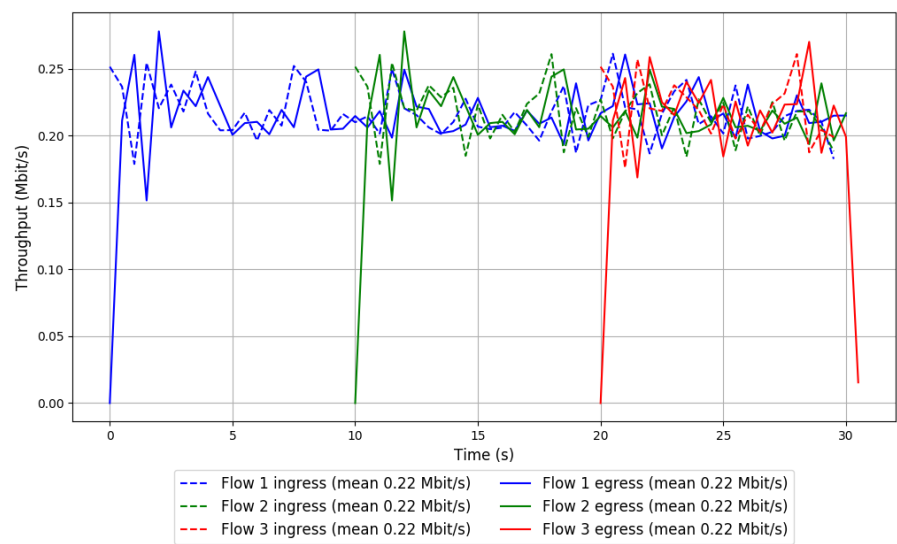
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-10-10 07:09:59
End at: 2018-10-10 07:10:29
Local clock offset: -0.002 ms
Remote clock offset: 1.177 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 64.453 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.474 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.076 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.117 ms
Loss rate: 0.00%
```
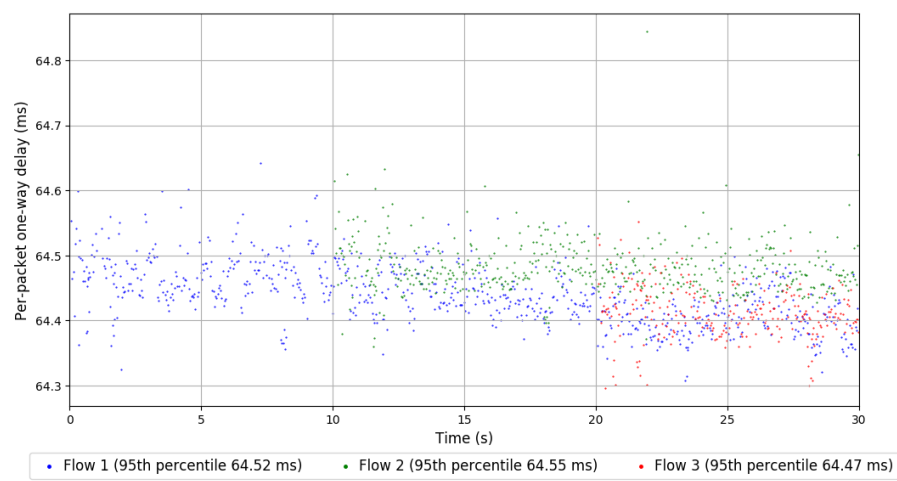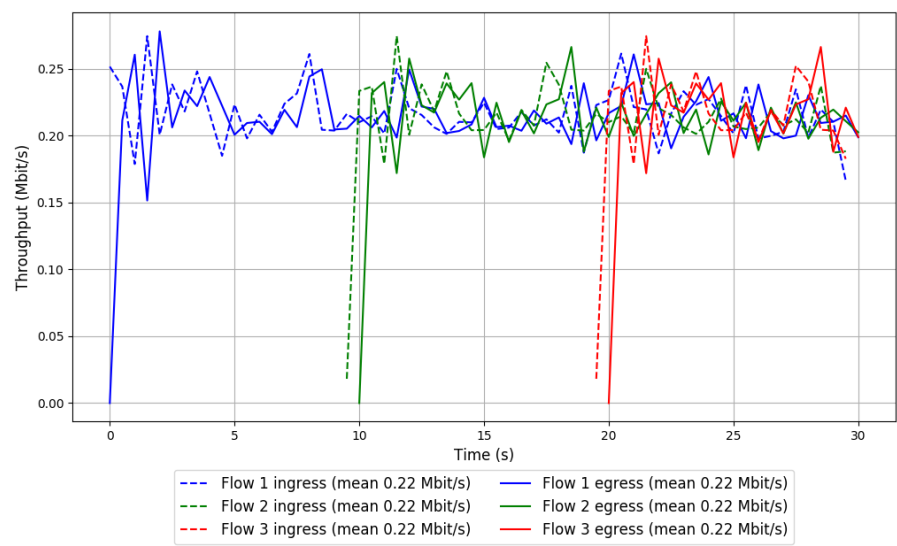
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-10-10 07:41:08
End at: 2018-10-10 07:41:38
Local clock offset: -0.026 ms
Remote clock offset: -0.204 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 62.885 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.627 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.594 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.944 ms
Loss rate: 0.00%
```
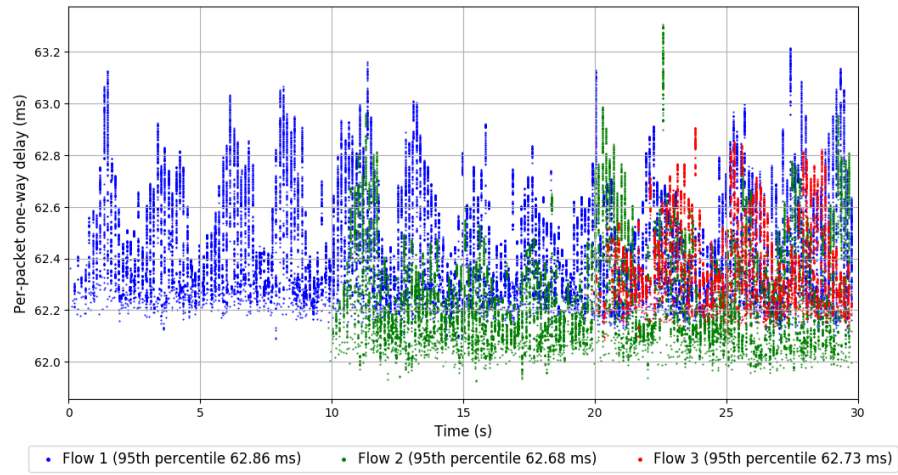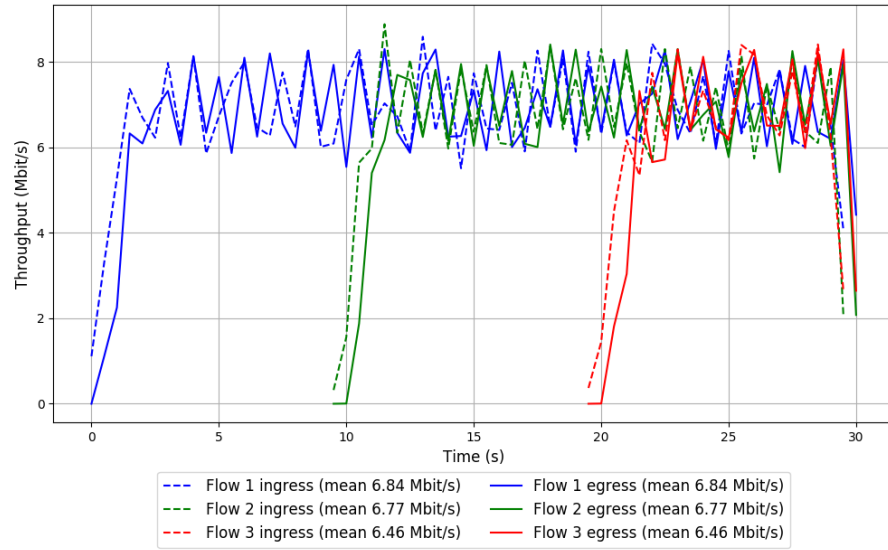
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2018-10-10 08:12:34
End at: 2018-10-10 08:13:04
Local clock offset: -0.043 ms
Remote clock offset: 1.646 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 64.529 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.518 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.545 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.473 ms
Loss rate: 0.00%
```

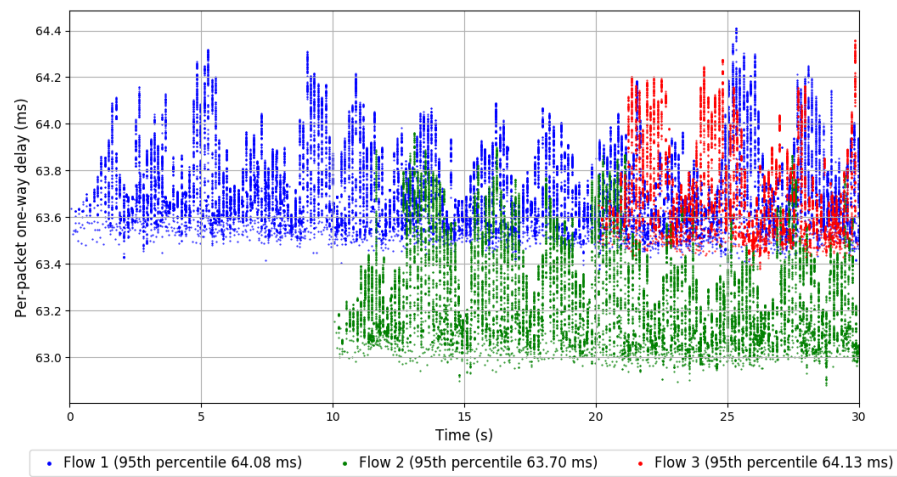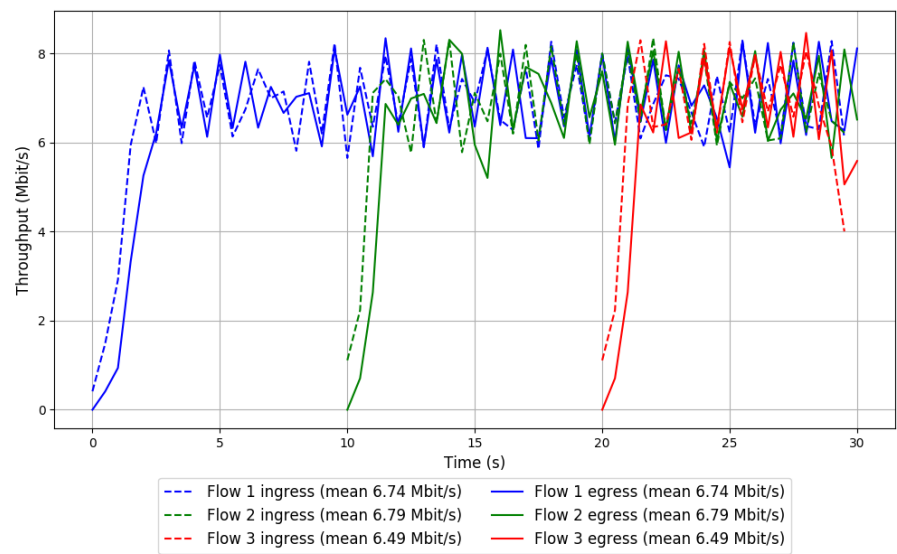# Run 5: Report of SCReAM — Data Link

124

```
Run 1: Statistics of Sprout

Start at: 2018-10-10 06:27:39
End at: 2018-10-10 06:28:09
Local clock offset: -0.018 ms
Remote clock offset: -0.937 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.52 Mbit/s
95th percentile per-packet one-way delay: 62.796 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.84 Mbit/s
95th percentile per-packet one-way delay: 62.860 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.77 Mbit/s
95th percentile per-packet one-way delay: 62.684 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 62.728 ms
Loss rate: 0.00%
```
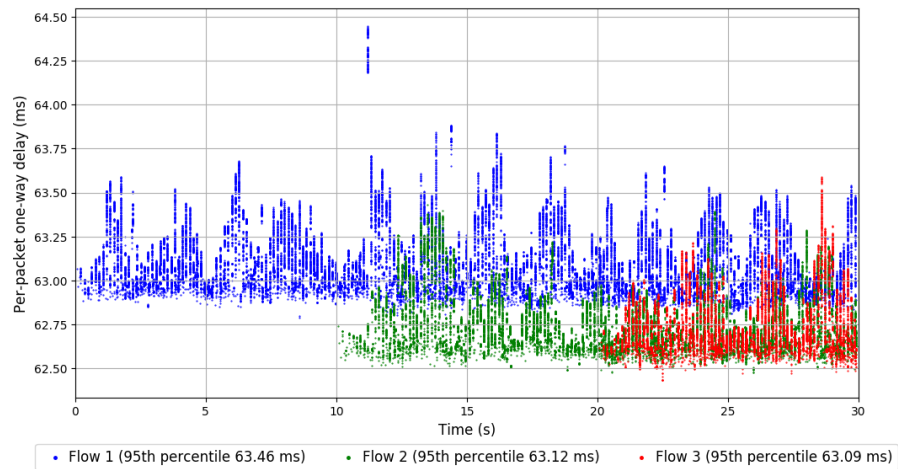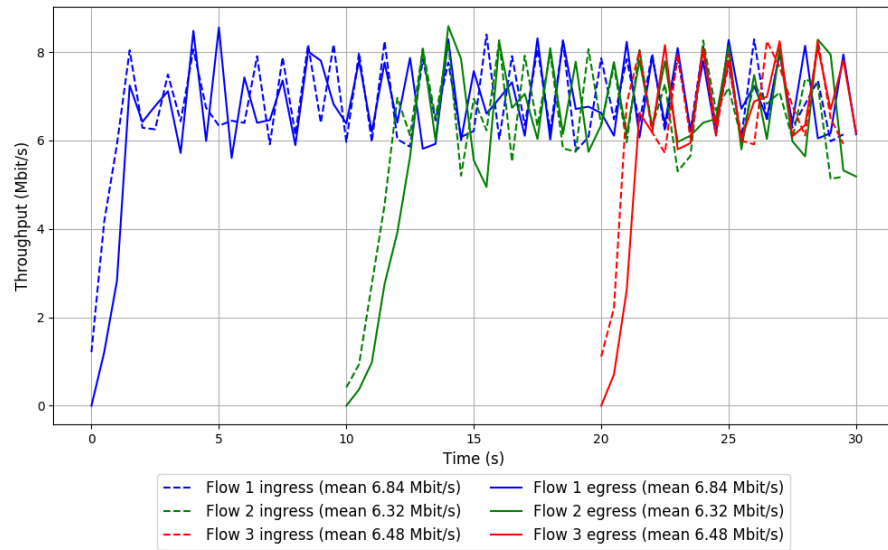
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-10-10 06:59:05
End at: 2018-10-10 06:59:35
Local clock offset: -0.027 ms
Remote clock offset: 0.263 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.39 Mbit/s
95th percentile per-packet one-way delay: 64.052 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.74 Mbit/s
95th percentile per-packet one-way delay: 64.078 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.79 Mbit/s
95th percentile per-packet one-way delay: 63.705 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 64.129 ms
Loss rate: 0.00%
```
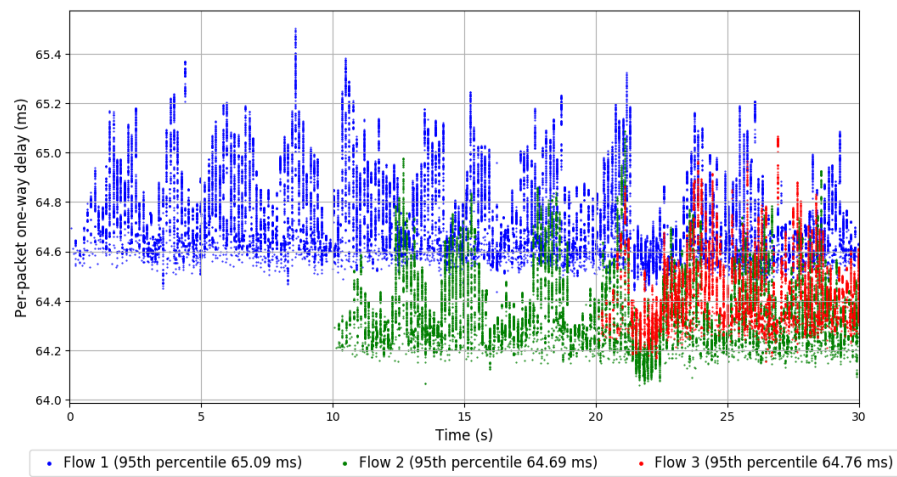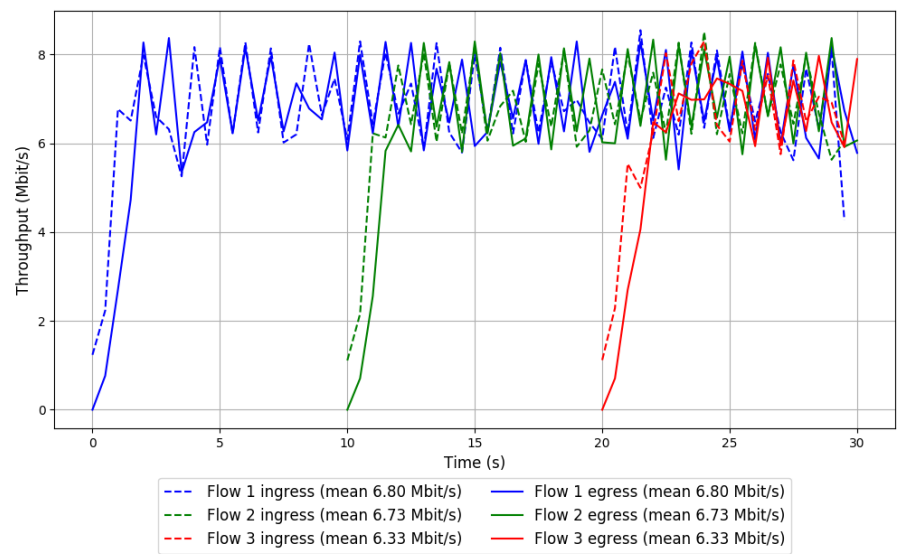
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-10-10 07:30:30
End at: 2018-10-10 07:31:00
Local clock offset: -0.057 ms
Remote clock offset: -0.331 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.17 Mbit/s
95th percentile per-packet one-way delay: 63.390 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.84 Mbit/s
95th percentile per-packet one-way delay: 63.458 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.32 Mbit/s
95th percentile per-packet one-way delay: 63.117 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 63.088 ms
Loss rate: 0.00%
```
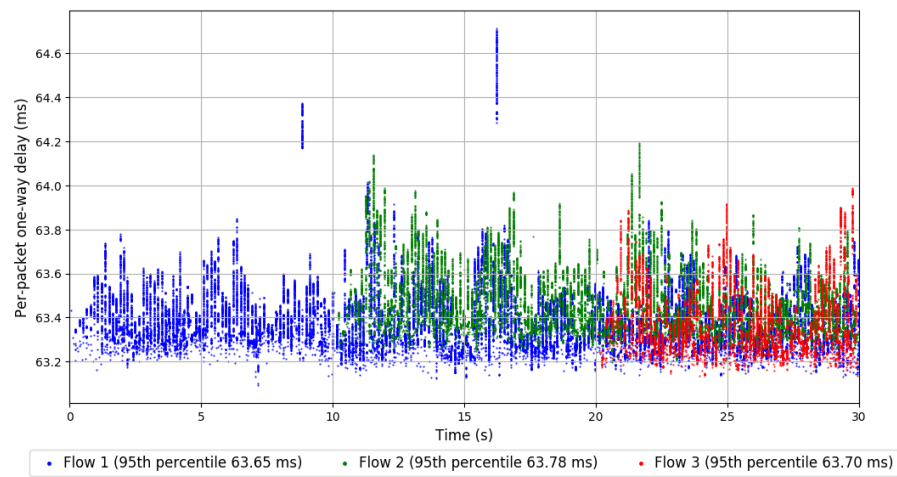
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-10-10 08:01:48
End at: 2018-10-10 08:02:18
Local clock offset: -0.062 ms
Remote clock offset: 1.518 ms

# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.36 Mbit/s
95th percentile per-packet one-way delay: 65.015 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.80 Mbit/s
95th percentile per-packet one-way delay: 65.088 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 64.686 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.33 Mbit/s
95th percentile per-packet one-way delay: 64.761 ms
Loss rate: 0.00%
```
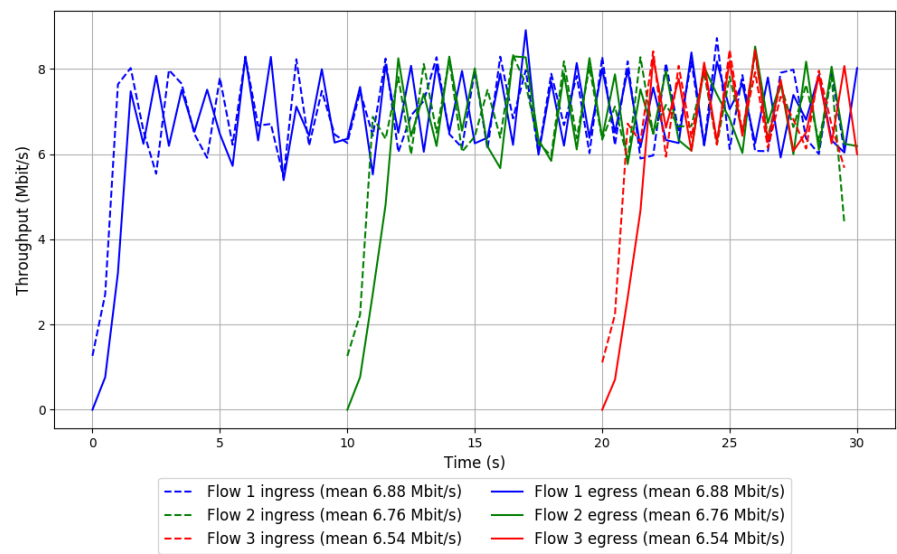
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-10-10 08:33:22
End at: 2018-10-10 08:33:52
Local clock offset: -0.045 ms
Remote clock offset: 0.5 ms


# Below is generated by plot.py at 2018-10-10 10:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.53 Mbit/s
95th percentile per-packet one-way delay: 63.715 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.88 Mbit/s
95th percentile per-packet one-way delay: 63.649 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.76 Mbit/s
95th percentile per-packet one-way delay: 63.782 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.54 Mbit/s
95th percentile per-packet one-way delay: 63.701 ms
Loss rate: 0.00%
```
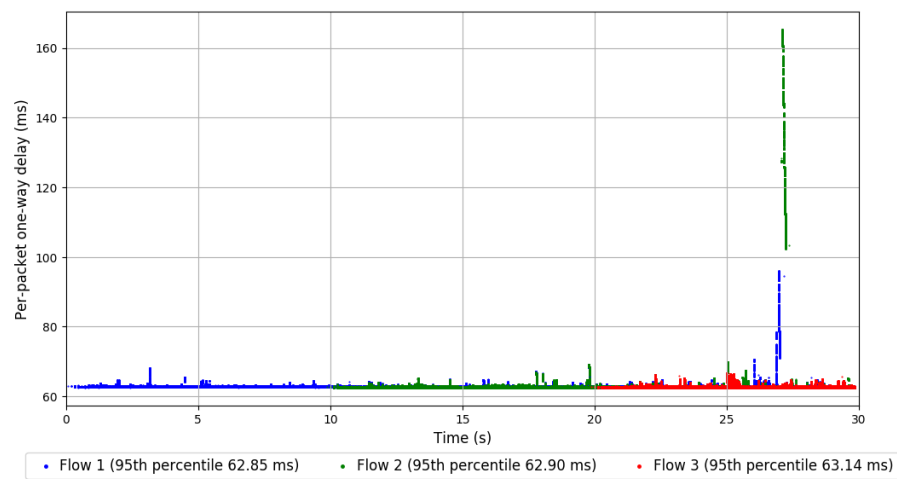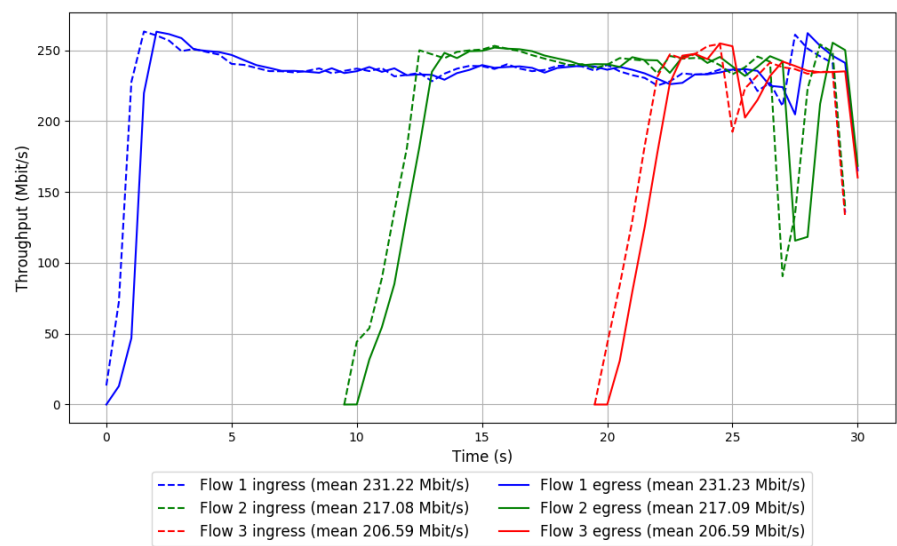
Run 5: Report of Sprout — Data Link

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

Start at: 2018-10-10 06:15:25
End at: 2018-10-10 06:15:55
Local clock offset: -0.038 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-10-10 10:51:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.92 Mbit/s
95th percentile per-packet one-way delay: 62.870 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 231.23 Mbit/s
95th percentile per-packet one-way delay: 62.852 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 217.09 Mbit/s
95th percentile per-packet one-way delay: 62.897 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 206.59 Mbit/s
95th percentile per-packet one-way delay: 63.136 ms
Loss rate: 0.00%
```
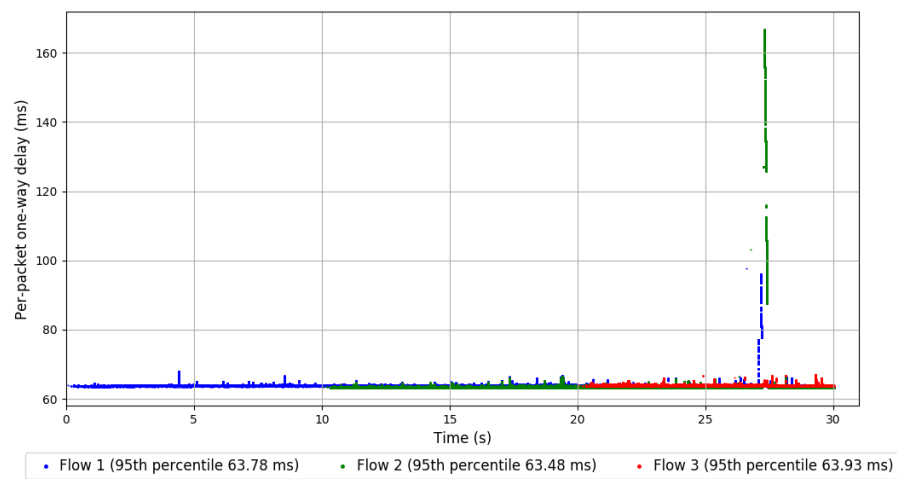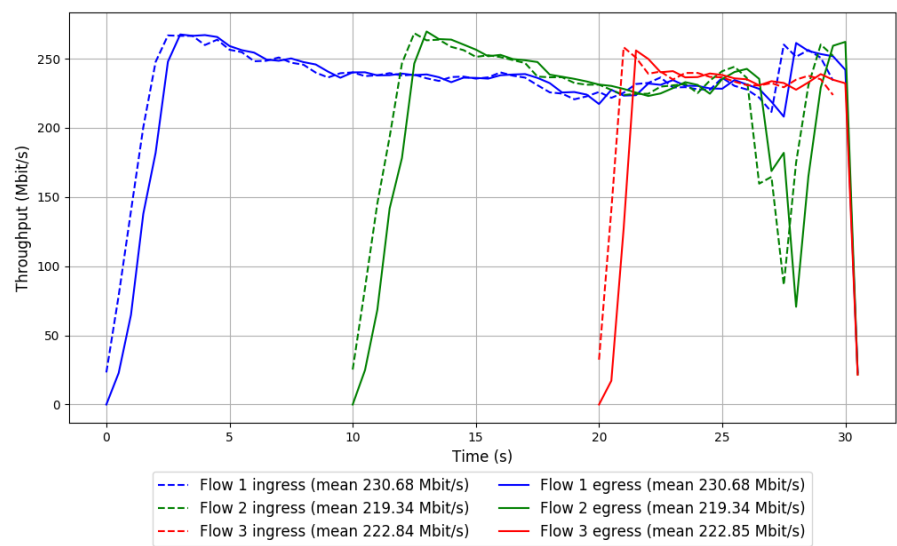
Run 1: Report of TaoVA-100x — Data Link

136

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

Start at: 2018-10-10 06:46:53
End at: 2018-10-10 06:47:23
Local clock offset: -0.061 ms
Remote clock offset: 0.382 ms

# Below is generated by plot.py at 2018-10-10 10:51:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 450.78 Mbit/s
95th percentile per-packet one-way delay: 63.770 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 230.68 Mbit/s
95th percentile per-packet one-way delay: 63.785 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 219.34 Mbit/s
95th percentile per-packet one-way delay: 63.483 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 222.85 Mbit/s
95th percentile per-packet one-way delay: 63.926 ms
Loss rate: 0.00%
```
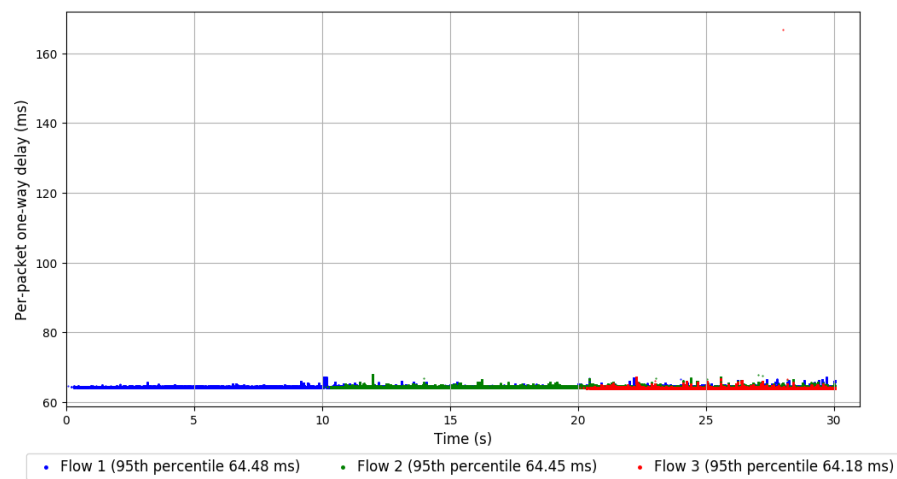
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2018-10-10 07:18:20
End at: 2018-10-10 07:18:50
Local clock offset: -0.027 ms
Remote clock offset: 1.168 ms


# Below is generated by plot.py at 2018-10-10 10:51:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 452.92 Mbit/s
95th percentile per-packet one-way delay: 64.458 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 228.00 Mbit/s
95th percentile per-packet one-way delay: 64.477 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 235.26 Mbit/s
95th percentile per-packet one-way delay: 64.454 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 205.34 Mbit/s
95th percentile per-packet one-way delay: 64.184 ms
Loss rate: 0.00%
```
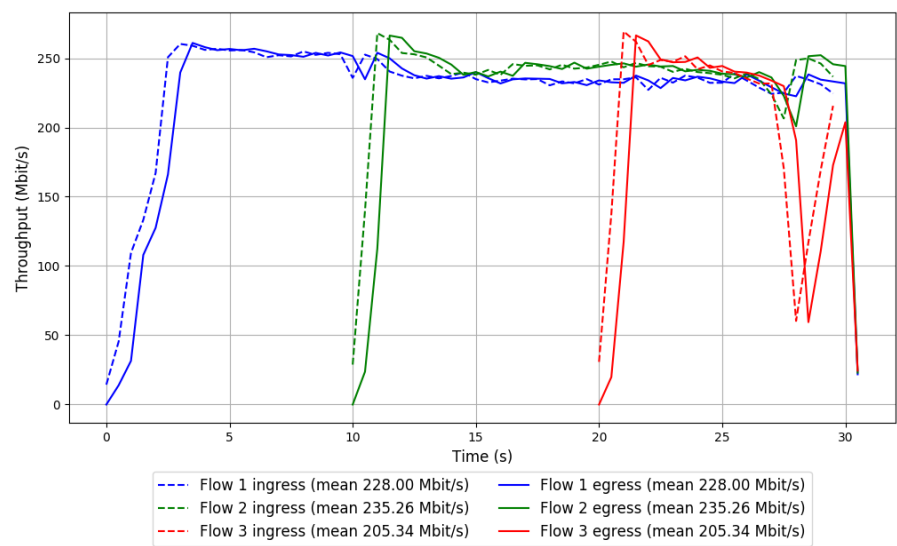
Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2018-10-10 07:49:27
End at: 2018-10-10 07:49:57
Local clock offset: -0.035 ms
Remote clock offset: 0.851 ms


# Below is generated by plot.py at 2018-10-10 10:51:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 444.59 Mbit/s
95th percentile per-packet one-way delay: 63.933 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 226.71 Mbit/s
95th percentile per-packet one-way delay: 63.892 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 225.02 Mbit/s
95th percentile per-packet one-way delay: 64.004 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 204.61 Mbit/s
95th percentile per-packet one-way delay: 63.911 ms
Loss rate: 0.00%
```
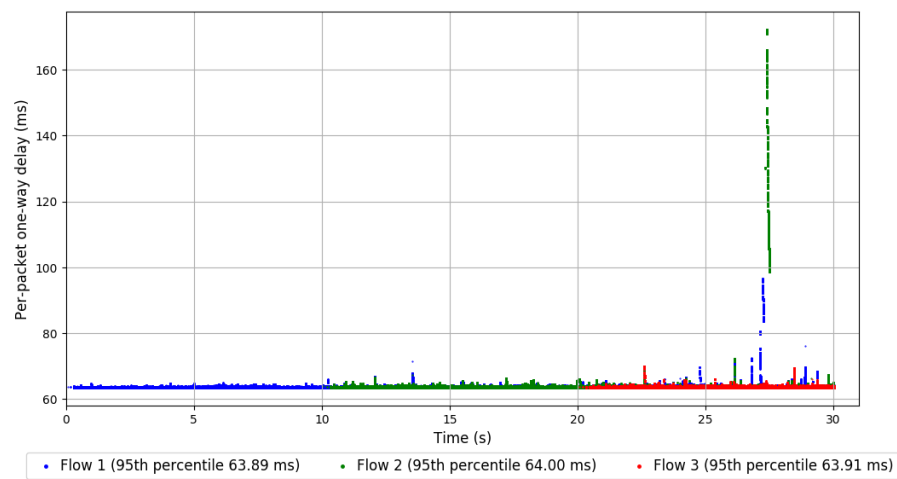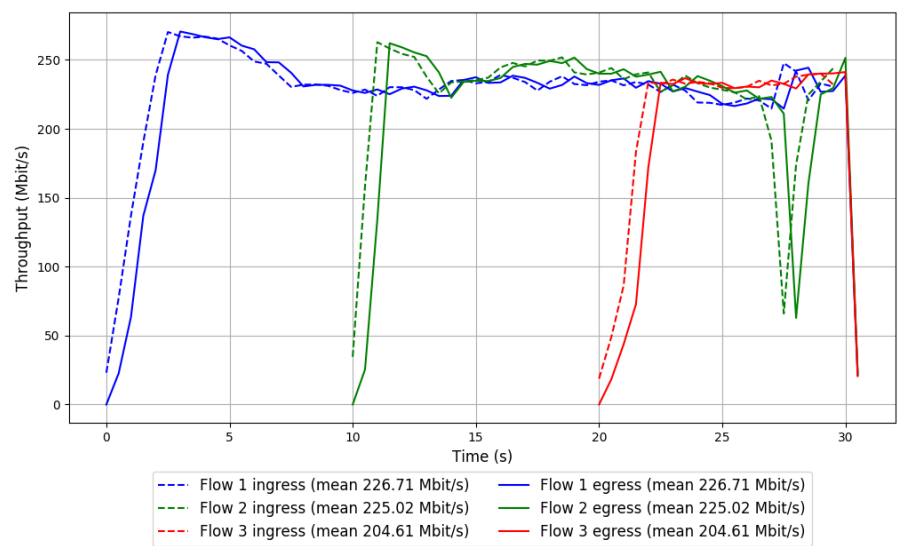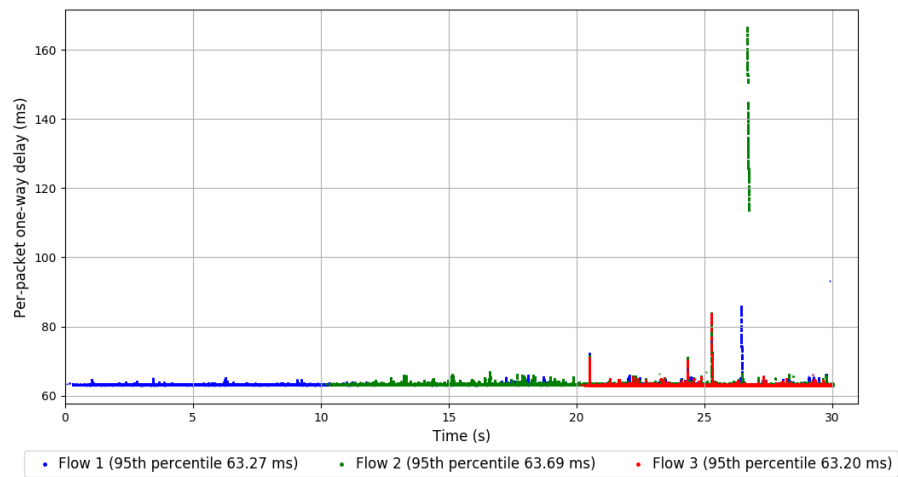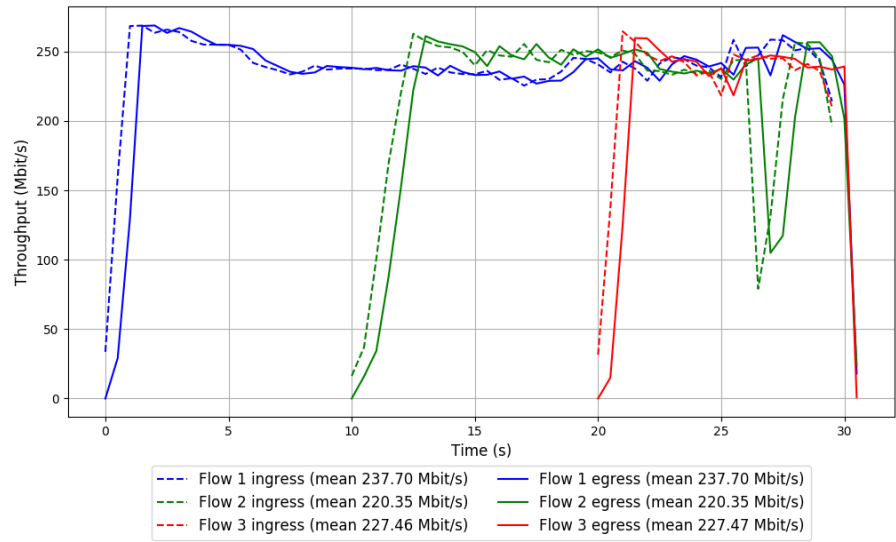
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 226.71 Mbit/s)   Flow 1 egress (mean 226.71 Mbit/s)
Flow 2 ingress (mean 225.02 Mbit/s)   Flow 2 egress (mean 225.02 Mbit/s)
Flow 3 ingress (mean 204.61 Mbit/s)   Flow 3 egress (mean 204.61 Mbit/s)

Flow 1 (95th percentile 63.89 ms)   Flow 2 (95th percentile 64.00 ms)   Flow 3 (95th percentile 63.91 ms)

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

Start at: 2018-10-10 08:20:54
End at: 2018-10-10 08:21:24
Local clock offset: -0.051 ms
Remote clock offset: 0.286 ms


# Below is generated by plot.py at 2018-10-10 10:57:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 459.62 Mbit/s
95th percentile per-packet one-way delay: 63.391 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 237.70 Mbit/s
95th percentile per-packet one-way delay: 63.268 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 220.35 Mbit/s
95th percentile per-packet one-way delay: 63.691 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 227.47 Mbit/s
95th percentile per-packet one-way delay: 63.201 ms
Loss rate: 0.00%
```
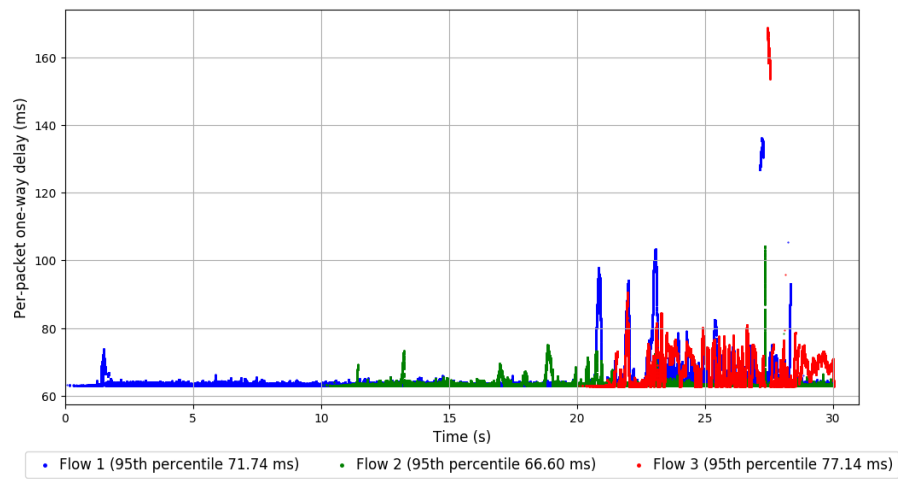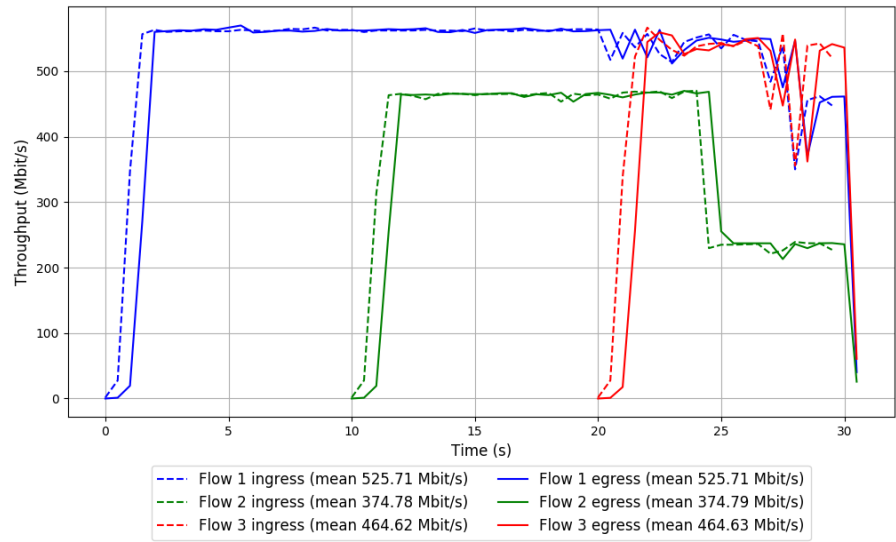
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 237.70 Mbit/s) --- Flow 1 egress (mean 237.70 Mbit/s)
Flow 2 ingress (mean 220.35 Mbit/s) --- Flow 2 egress (mean 220.35 Mbit/s)
Flow 3 ingress (mean 227.46 Mbit/s) --- Flow 3 egress (mean 227.47 Mbit/s)

Flow 1 (95th percentile 63.27 ms)   Flow 2 (95th percentile 63.69 ms)   Flow 3 (95th percentile 63.20 ms)

144

```
Run 1: Statistics of TCP Vegas

Start at: 2018-10-10 06:31:00
End at: 2018-10-10 06:31:30
Local clock offset: -0.045 ms
Remote clock offset: 0.24 ms


# Below is generated by plot.py at 2018-10-10 10:58:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 929.89 Mbit/s
95th percentile per-packet one-way delay: 73.465 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 525.71 Mbit/s
95th percentile per-packet one-way delay: 71.738 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 374.79 Mbit/s
95th percentile per-packet one-way delay: 66.604 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 464.63 Mbit/s
95th percentile per-packet one-way delay: 77.141 ms
Loss rate: 0.00%
```
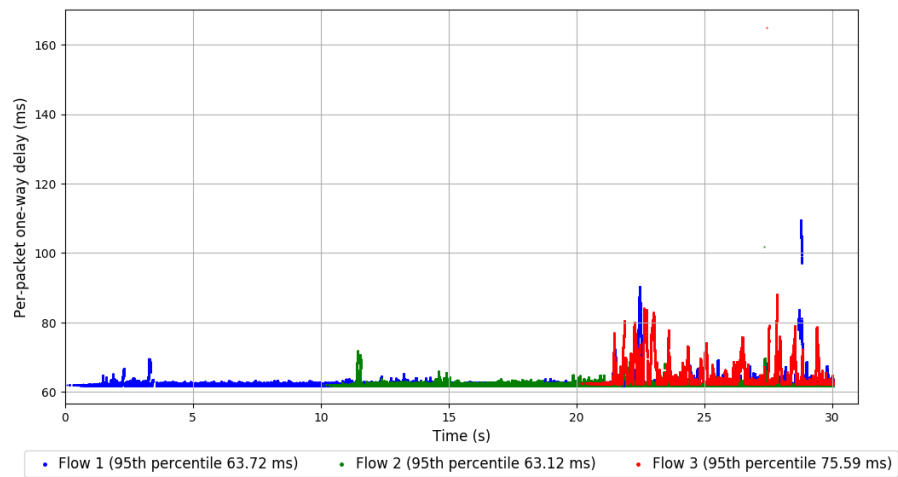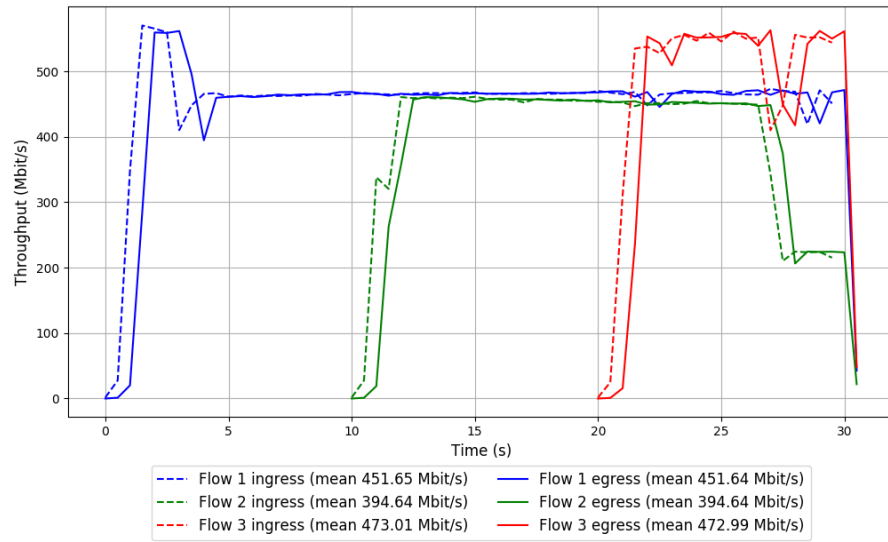
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-10-10 07:02:29
End at: 2018-10-10 07:02:59
Local clock offset: -0.051 ms
Remote clock offset: -0.83 ms


# Below is generated by plot.py at 2018-10-10 11:00:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 871.57 Mbit/s
95th percentile per-packet one-way delay: 67.407 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 451.64 Mbit/s
95th percentile per-packet one-way delay: 63.720 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 394.64 Mbit/s
95th percentile per-packet one-way delay: 63.119 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 472.99 Mbit/s
95th percentile per-packet one-way delay: 75.587 ms
Loss rate: 0.01%
```
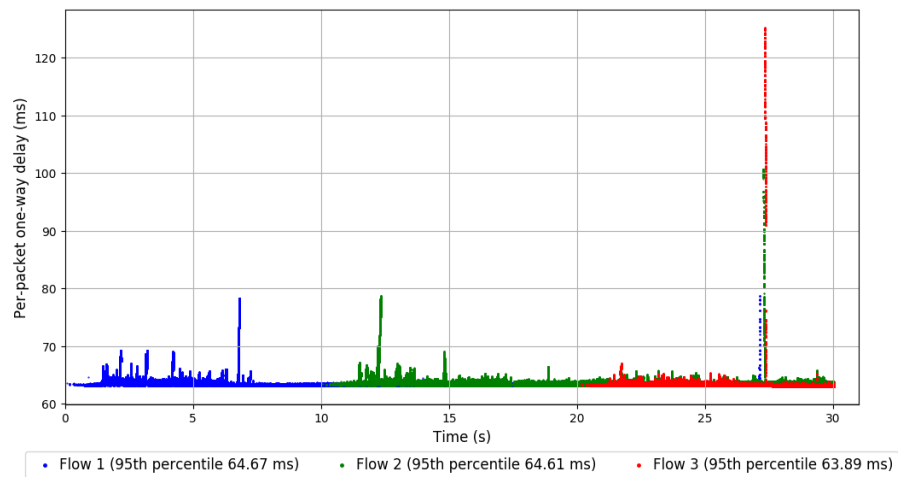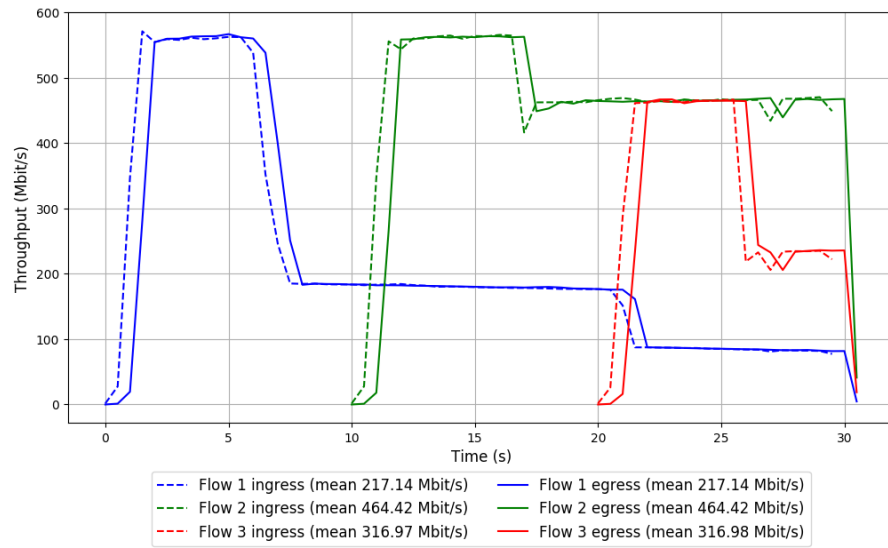
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-10-10 07:33:49
End at: 2018-10-10 07:34:19
Local clock offset: -0.005 ms
Remote clock offset: 0.478 ms


# Below is generated by plot.py at 2018-10-10 11:00:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 631.64 Mbit/s
95th percentile per-packet one-way delay: 64.477 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 217.14 Mbit/s
95th percentile per-packet one-way delay: 64.665 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 464.42 Mbit/s
95th percentile per-packet one-way delay: 64.605 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 316.98 Mbit/s
95th percentile per-packet one-way delay: 63.888 ms
Loss rate: 0.00%
```
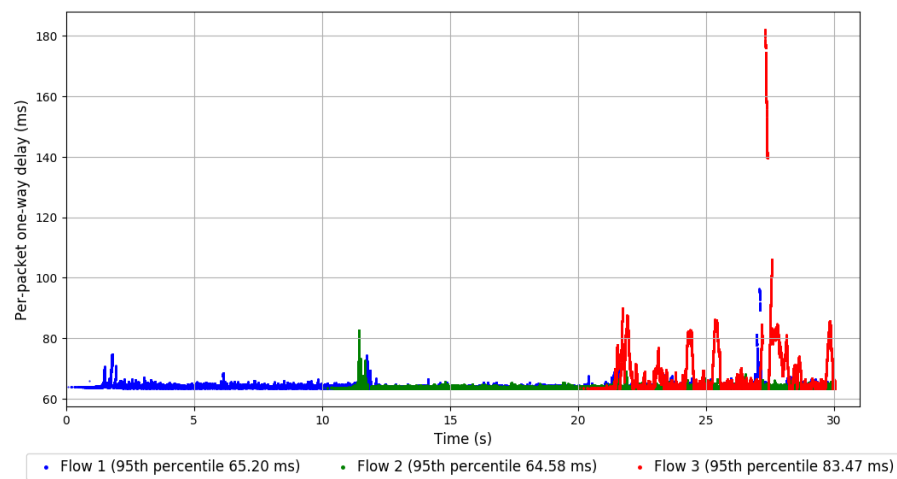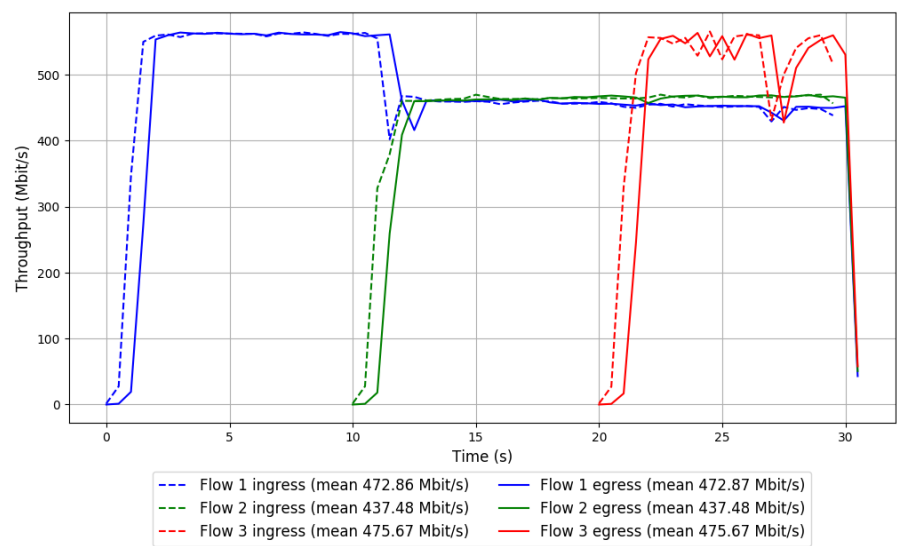
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2018-10-10 08:05:06
End at: 2018-10-10 08:05:36
Local clock offset: -0.048 ms
Remote clock offset: 0.726 ms


# Below is generated by plot.py at 2018-10-10 11:07:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 922.35 Mbit/s
95th percentile per-packet one-way delay: 69.954 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 472.87 Mbit/s
95th percentile per-packet one-way delay: 65.201 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 437.48 Mbit/s
95th percentile per-packet one-way delay: 64.579 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 475.67 Mbit/s
95th percentile per-packet one-way delay: 83.473 ms
Loss rate: 0.00%
```
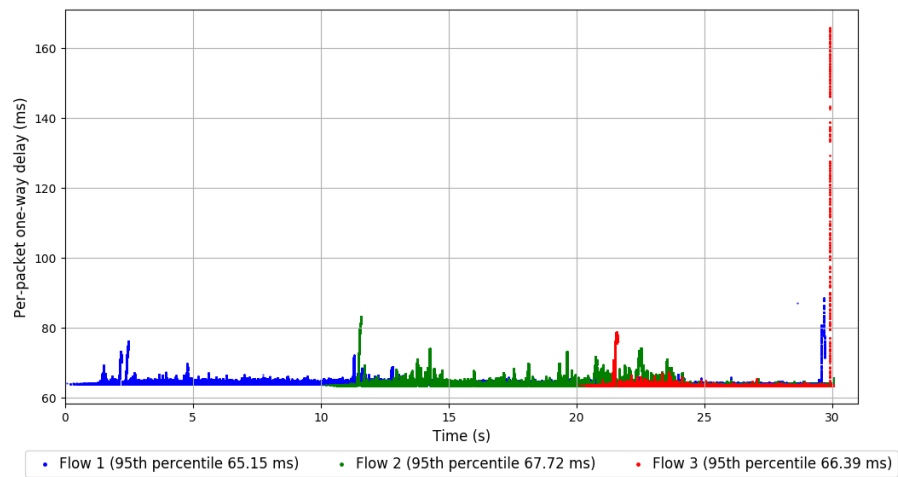
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-10-10 08:36:43
End at: 2018-10-10 08:37:13
Local clock offset: -0.105 ms
Remote clock offset: 0.759 ms


# Below is generated by plot.py at 2018-10-10 11:07:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 775.24 Mbit/s
95th percentile per-packet one-way delay: 66.438 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 428.64 Mbit/s
95th percentile per-packet one-way delay: 65.152 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 423.66 Mbit/s
95th percentile per-packet one-way delay: 67.722 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 193.96 Mbit/s
95th percentile per-packet one-way delay: 66.387 ms
Loss rate: 0.00%
```
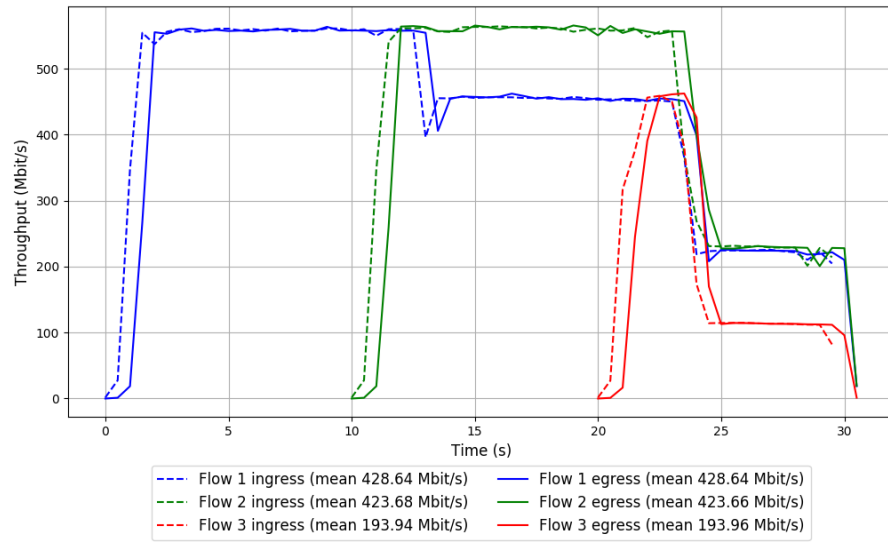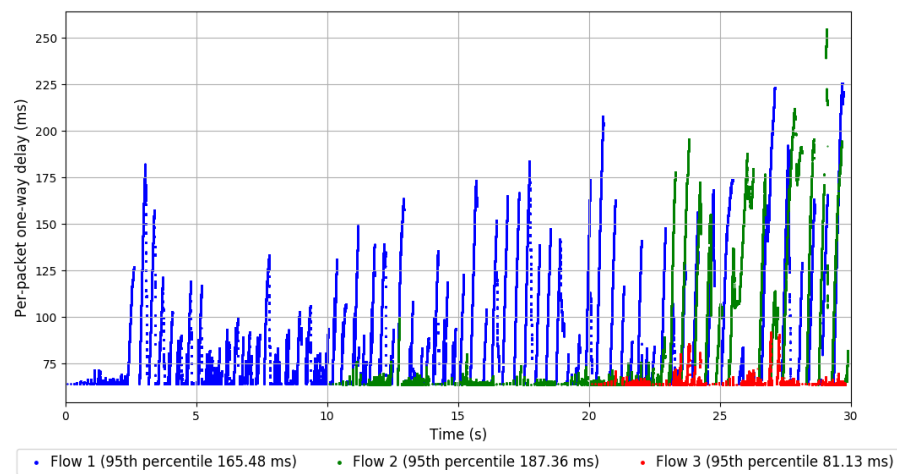
Run 5: Report of TCP Vegas — Data Link

154

```
Run 1: Statistics of Verus

Start at: 2018-10-10 06:05:42
End at: 2018-10-10 06:06:12
Local clock offset: -0.034 ms
Remote clock offset: 1.074 ms


# Below is generated by plot.py at 2018-10-10 11:07:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 314.60 Mbit/s
95th percentile per-packet one-way delay: 173.593 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 193.41 Mbit/s
95th percentile per-packet one-way delay: 165.480 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 147.31 Mbit/s
95th percentile per-packet one-way delay: 187.359 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 75.62 Mbit/s
95th percentile per-packet one-way delay: 81.133 ms
Loss rate: 0.00%
```
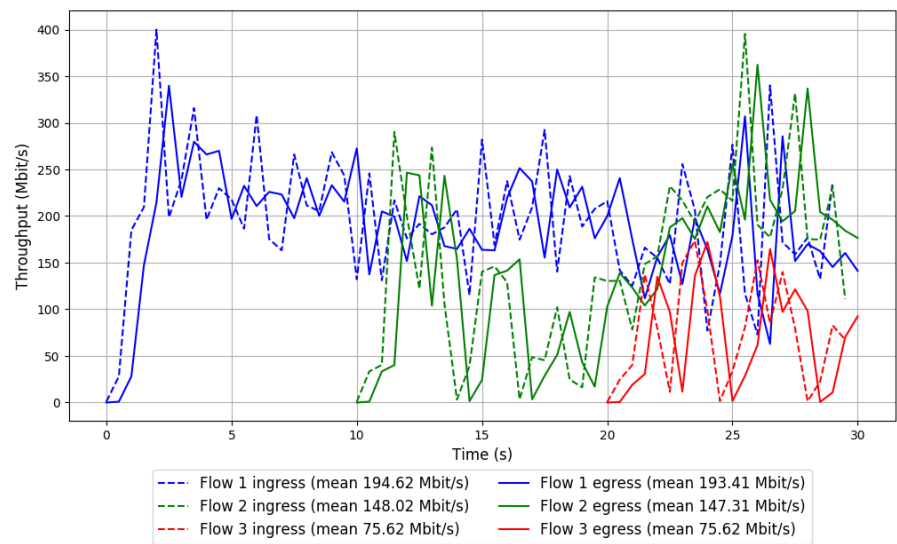
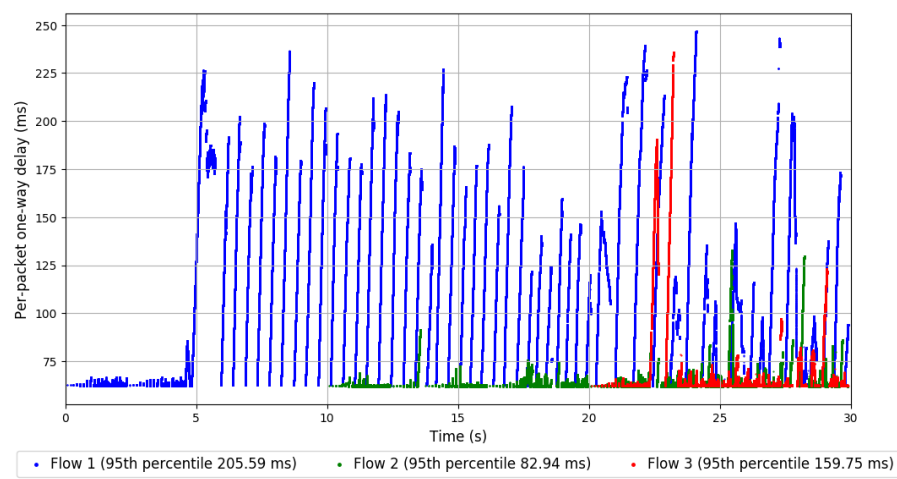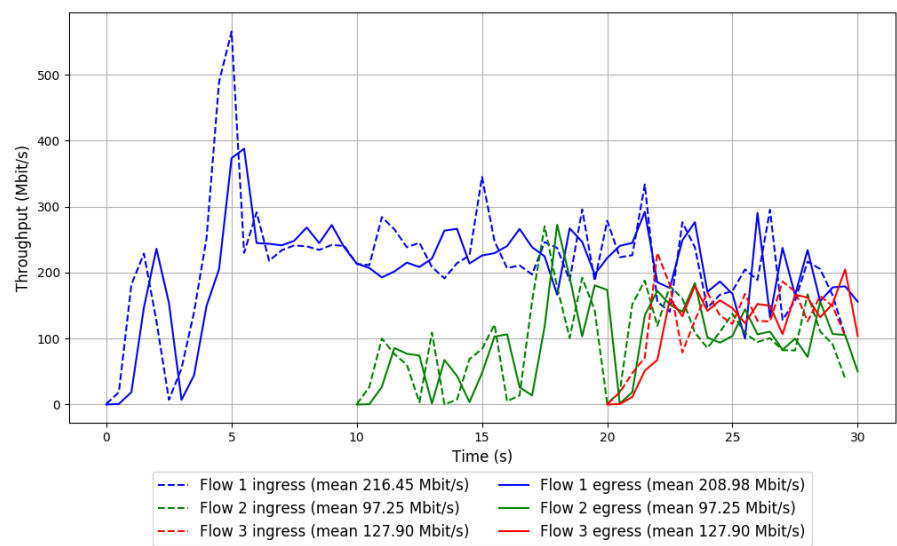Run 1: Report of Verus — Data Link

156

```
Run 2: Statistics of Verus

Start at: 2018-10-10 06:36:49
End at: 2018-10-10 06:37:19
Local clock offset: -0.031 ms
Remote clock offset: -0.707 ms


# Below is generated by plot.py at 2018-10-10 11:07:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 315.59 Mbit/s
95th percentile per-packet one-way delay: 197.245 ms
Loss rate: 2.31%
-- Flow 1:
Average throughput: 208.98 Mbit/s
95th percentile per-packet one-way delay: 205.587 ms
Loss rate: 3.45%
-- Flow 2:
Average throughput: 97.25 Mbit/s
95th percentile per-packet one-way delay: 82.945 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 127.90 Mbit/s
95th percentile per-packet one-way delay: 159.746 ms
Loss rate: 0.00%
```

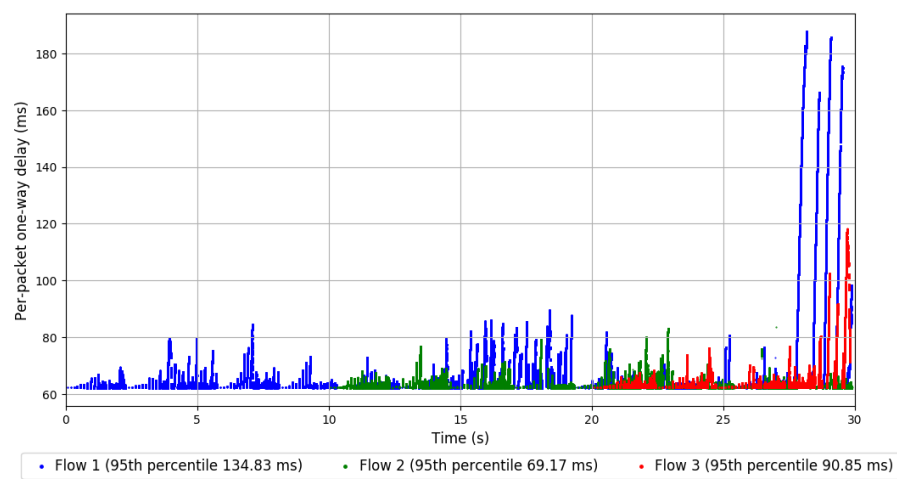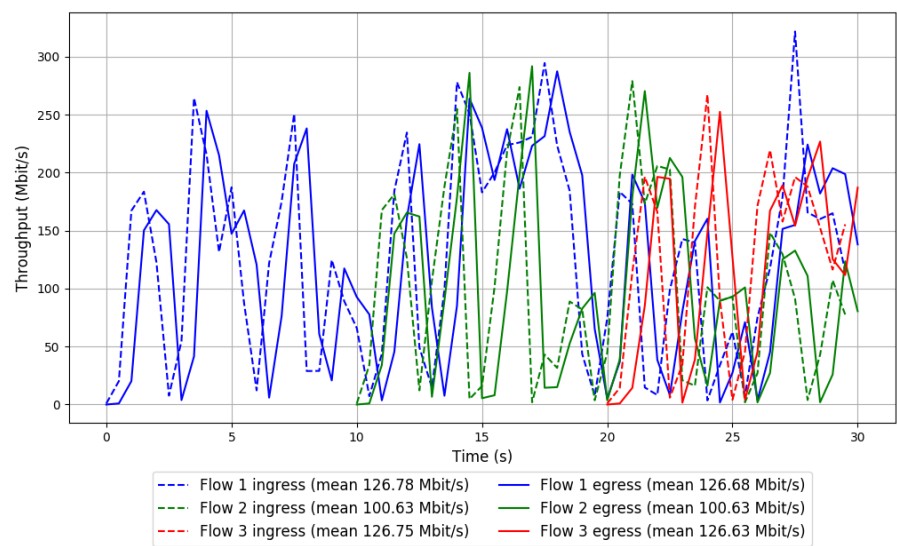Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-10-10 07:08:24
End at: 2018-10-10 07:08:54
Local clock offset: -0.049 ms
Remote clock offset: -0.583 ms


# Below is generated by plot.py at 2018-10-10 11:07:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 234.92 Mbit/s
95th percentile per-packet one-way delay: 95.779 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 126.68 Mbit/s
95th percentile per-packet one-way delay: 134.828 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 100.63 Mbit/s
95th percentile per-packet one-way delay: 69.174 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 126.63 Mbit/s
95th percentile per-packet one-way delay: 90.846 ms
Loss rate: 0.00%
```
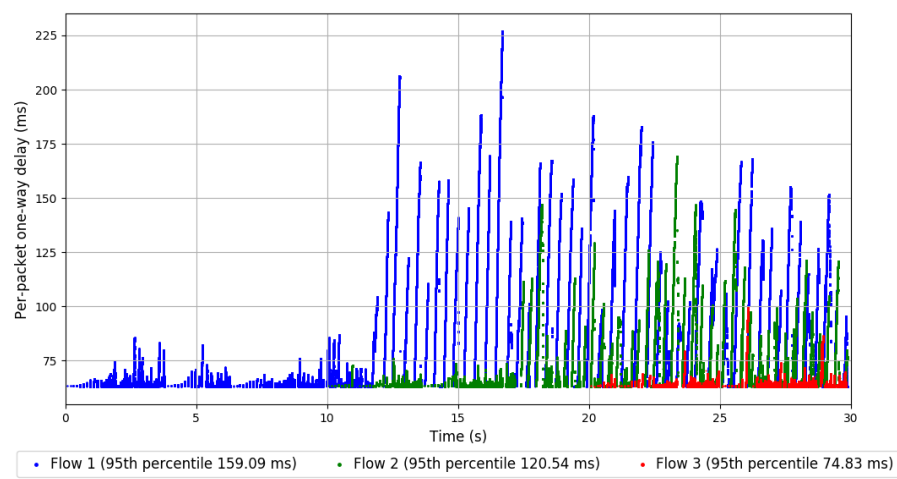
Run 3: Report of Verus — Data Link

- Flow 1 ingress (mean 126.78 Mbit/s)
- Flow 1 egress (mean 126.68 Mbit/s)
- Flow 2 ingress (mean 100.63 Mbit/s)
- Flow 2 egress (mean 100.63 Mbit/s)
- Flow 3 ingress (mean 126.75 Mbit/s)
- Flow 3 egress (mean 126.63 Mbit/s)

- Flow 1 (95th percentile 134.83 ms)
- Flow 2 (95th percentile 69.17 ms)
- Flow 3 (95th percentile 90.85 ms)

```
Run 4: Statistics of Verus

Start at: 2018-10-10 07:39:28
End at: 2018-10-10 07:39:58
Local clock offset: -0.041 ms
Remote clock offset: 0.14 ms


# Below is generated by plot.py at 2018-10-10 11:08:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 297.16 Mbit/s
95th percentile per-packet one-way delay: 149.746 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 172.70 Mbit/s
95th percentile per-packet one-way delay: 159.090 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 147.64 Mbit/s
95th percentile per-packet one-way delay: 120.543 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 80.42 Mbit/s
95th percentile per-packet one-way delay: 74.833 ms
Loss rate: 0.00%
```
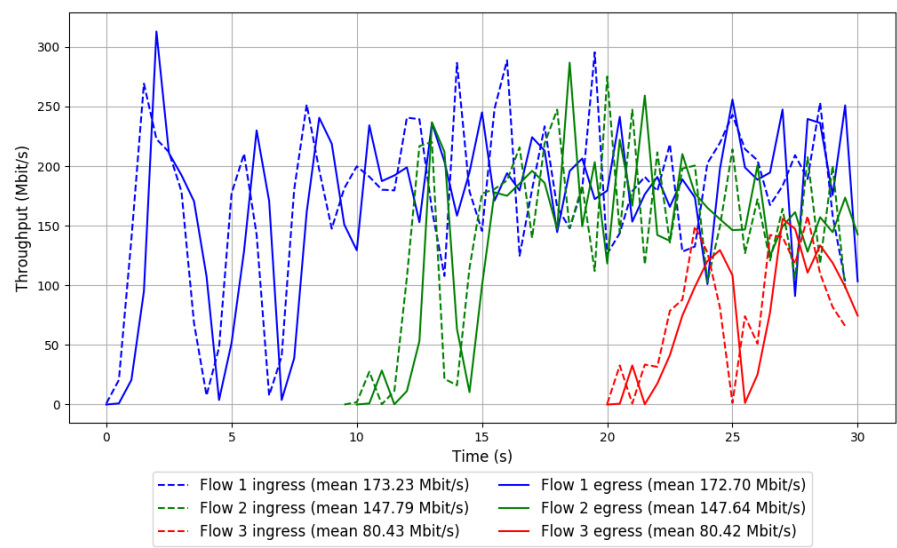
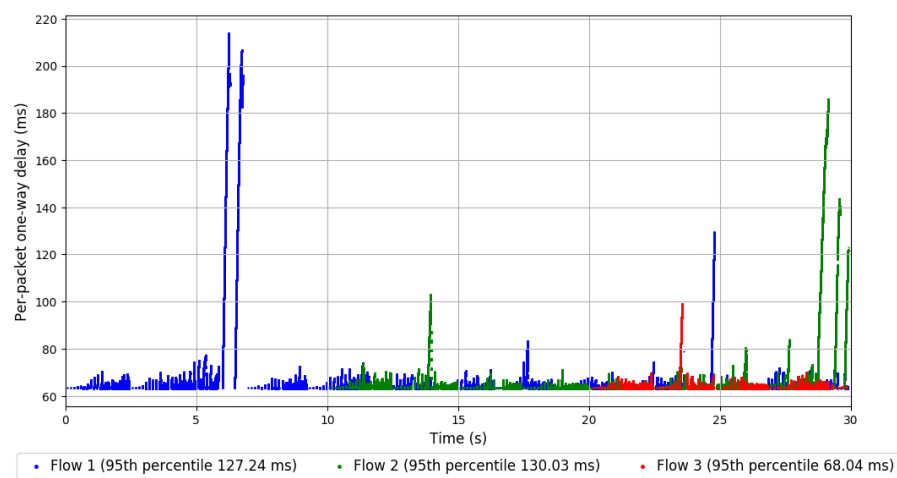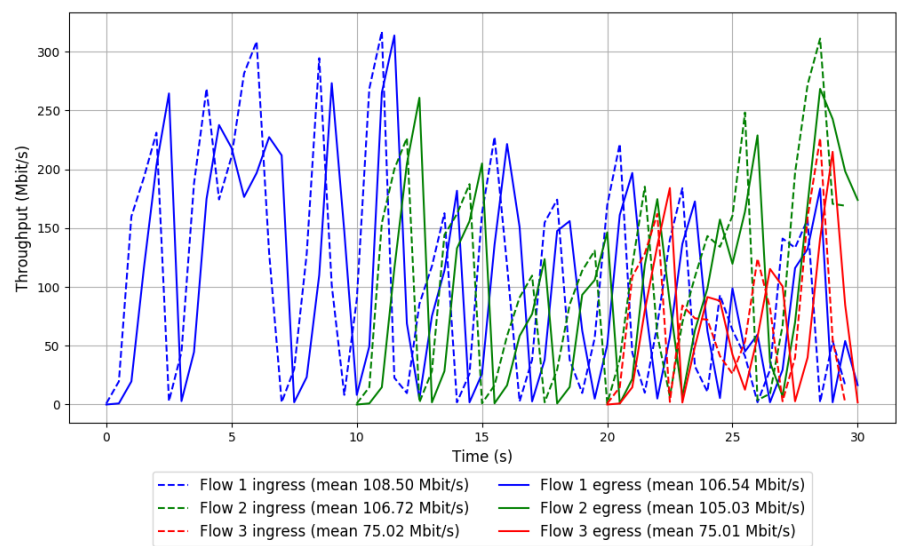Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-10-10 08:11:02
End at: 2018-10-10 08:11:32
Local clock offset: -0.046 ms
Remote clock offset: 0.569 ms


# Below is generated by plot.py at 2018-10-10 11:08:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 200.78 Mbit/s
95th percentile per-packet one-way delay: 118.951 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 106.54 Mbit/s
95th percentile per-packet one-way delay: 127.239 ms
Loss rate: 1.81%
-- Flow 2:
Average throughput: 105.03 Mbit/s
95th percentile per-packet one-way delay: 130.027 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 75.01 Mbit/s
95th percentile per-packet one-way delay: 68.044 ms
Loss rate: 0.00%
```

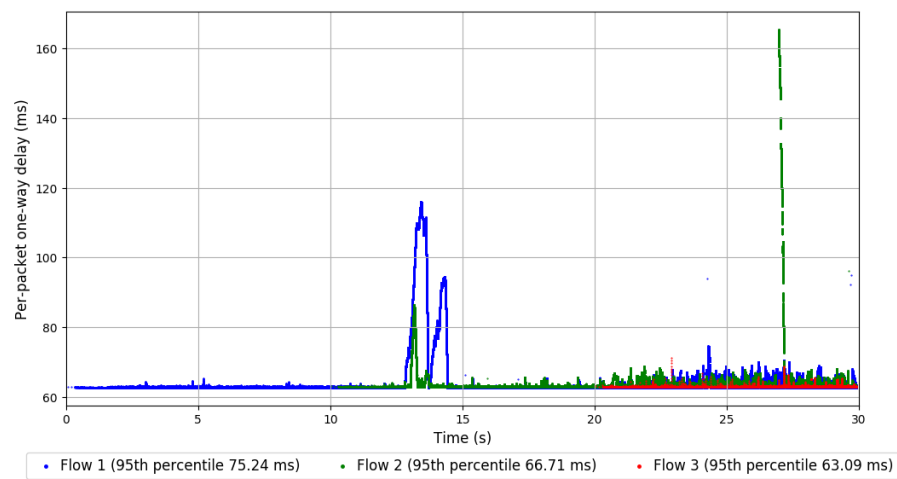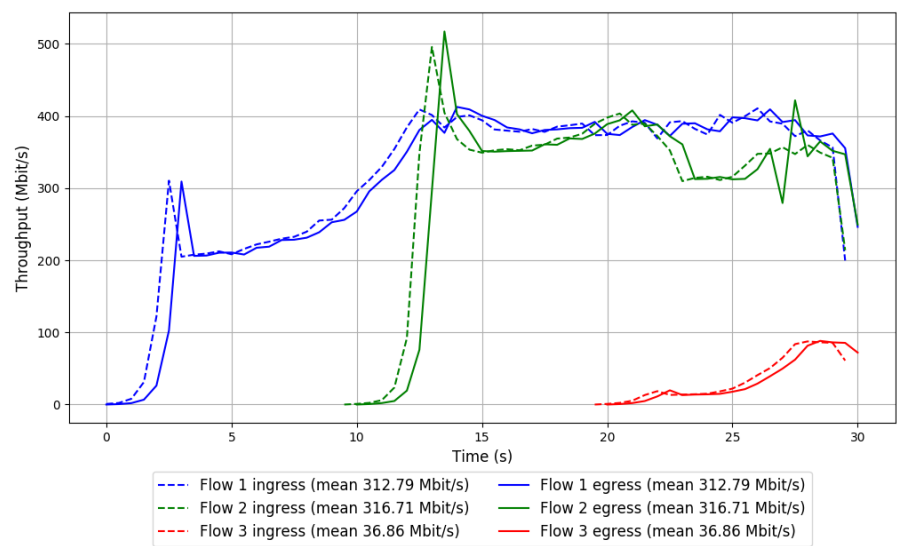Run 5: Report of Verus — Data Link

164

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-10-10 06:32:58
End at: 2018-10-10 06:33:28
Local clock offset: -0.033 ms
Remote clock offset: -0.041 ms


# Below is generated by plot.py at 2018-10-10 11:09:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 535.84 Mbit/s
95th percentile per-packet one-way delay: 70.182 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 312.79 Mbit/s
95th percentile per-packet one-way delay: 75.239 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 316.71 Mbit/s
95th percentile per-packet one-way delay: 66.713 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 36.86 Mbit/s
95th percentile per-packet one-way delay: 63.095 ms
Loss rate: 0.00%
```
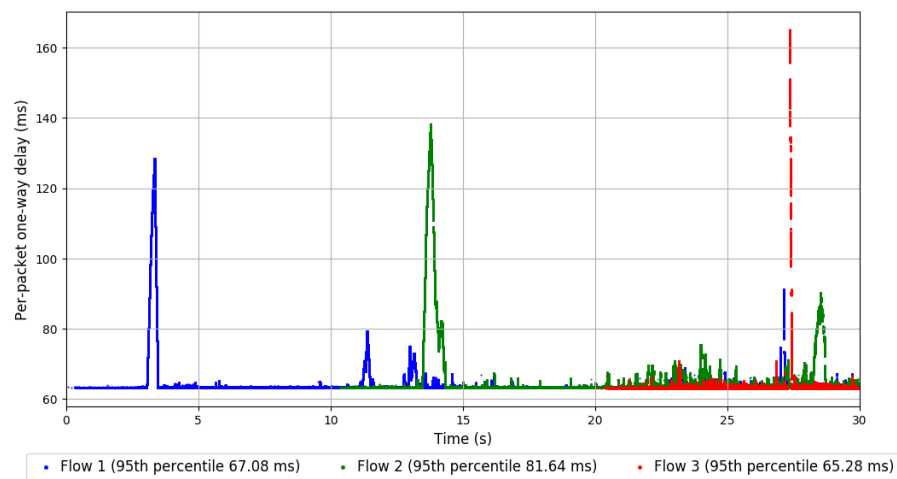
Run 1: Report of PCC-Vivace — Data Link

- Flow 1 ingress (mean 312.79 Mbit/s)
- Flow 1 egress (mean 312.79 Mbit/s)
- Flow 2 ingress (mean 316.71 Mbit/s)
- Flow 2 egress (mean 316.71 Mbit/s)
- Flow 3 ingress (mean 36.86 Mbit/s)
- Flow 3 egress (mean 36.86 Mbit/s)

- Flow 1 (95th percentile 75.24 ms)
- Flow 2 (95th percentile 66.71 ms)
- Flow 3 (95th percentile 63.09 ms)

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-10-10 07:04:26
End at: 2018-10-10 07:04:56
Local clock offset: -0.042 ms
Remote clock offset: 0.359 ms


# Below is generated by plot.py at 2018-10-10 11:11:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 621.88 Mbit/s
95th percentile per-packet one-way delay: 71.769 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 341.21 Mbit/s
95th percentile per-packet one-way delay: 67.084 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 343.24 Mbit/s
95th percentile per-packet one-way delay: 81.640 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 159.71 Mbit/s
95th percentile per-packet one-way delay: 65.285 ms
Loss rate: 0.00%
```
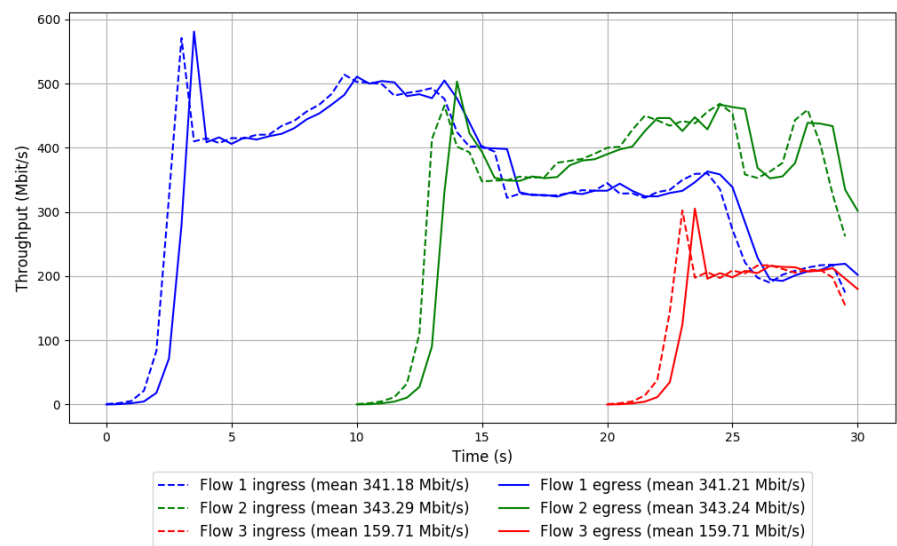
Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2018-10-10 07:35:33
End at: 2018-10-10 07:36:03
Local clock offset: -0.005 ms
Remote clock offset: 0.008 ms


# Below is generated by plot.py at 2018-10-10 11:11:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 599.08 Mbit/s
95th percentile per-packet one-way delay: 66.039 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 357.14 Mbit/s
95th percentile per-packet one-way delay: 65.520 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 335.69 Mbit/s
95th percentile per-packet one-way delay: 66.713 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 57.00 Mbit/s
95th percentile per-packet one-way delay: 62.878 ms
Loss rate: 0.00%
```
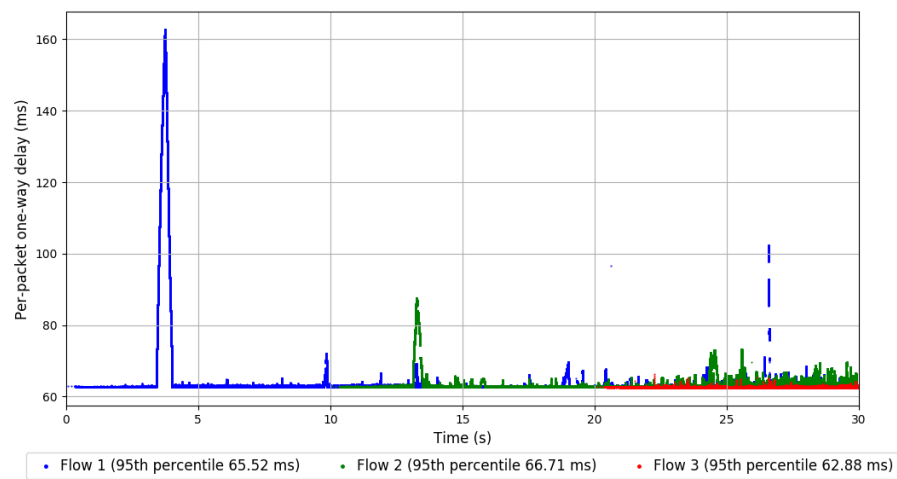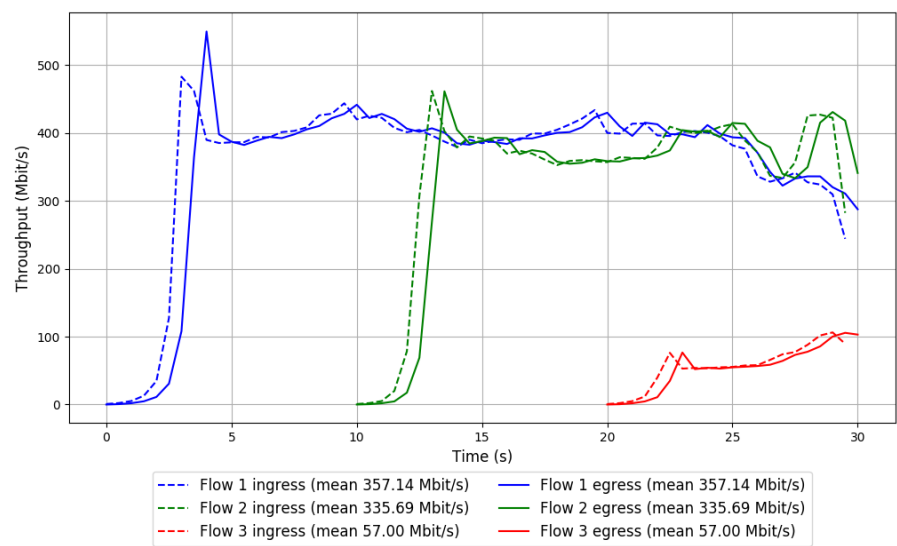
Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2018-10-10 08:07:05
End at: 2018-10-10 08:07:35
Local clock offset: -0.025 ms
Remote clock offset: 1.08 ms


# Below is generated by plot.py at 2018-10-10 11:11:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 607.53 Mbit/s
95th percentile per-packet one-way delay: 68.447 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 345.92 Mbit/s
95th percentile per-packet one-way delay: 67.682 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 328.71 Mbit/s
95th percentile per-packet one-way delay: 71.149 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 130.50 Mbit/s
95th percentile per-packet one-way delay: 64.896 ms
Loss rate: 0.00%
```
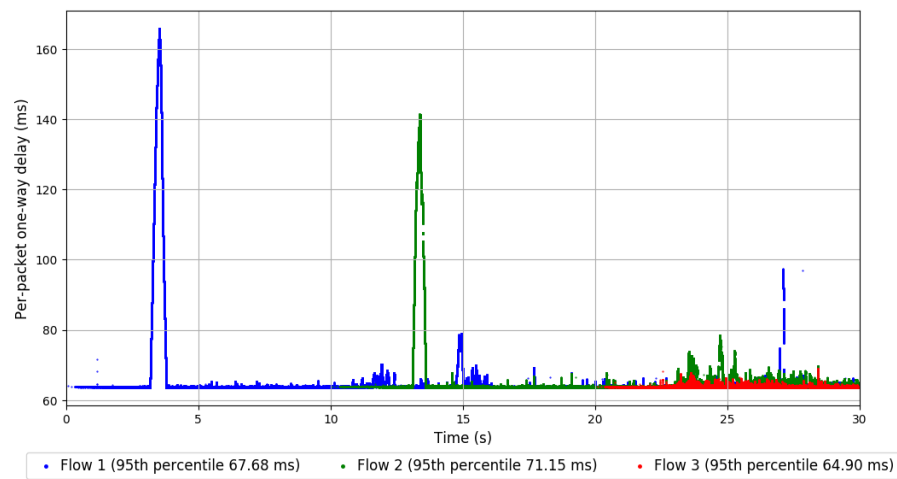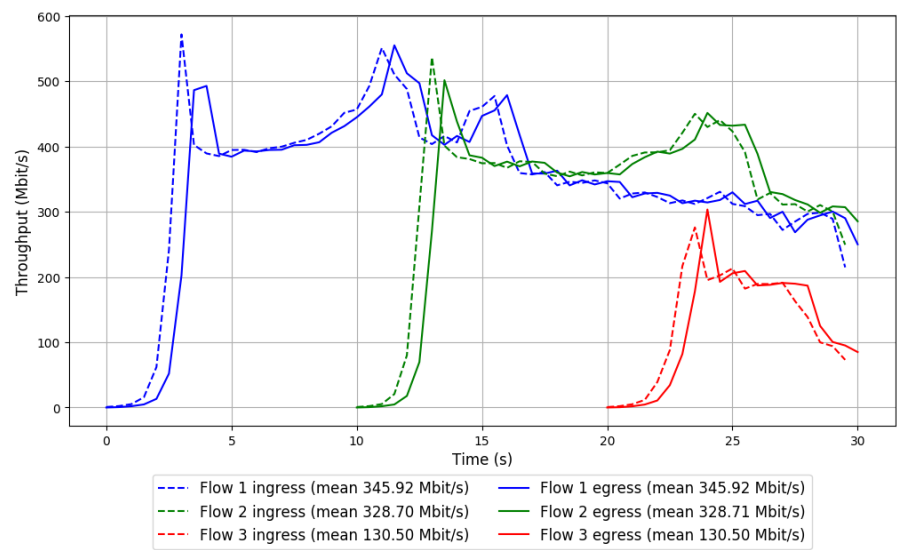
Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2018-10-10 08:38:34
End at: 2018-10-10 08:39:04
Local clock offset: -0.07 ms
Remote clock offset: 0.175 ms


# Below is generated by plot.py at 2018-10-10 11:11:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 598.16 Mbit/s
95th percentile per-packet one-way delay: 70.292 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 361.34 Mbit/s
95th percentile per-packet one-way delay: 71.131 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 215.45 Mbit/s
95th percentile per-packet one-way delay: 63.548 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 284.08 Mbit/s
95th percentile per-packet one-way delay: 81.654 ms
Loss rate: 0.03%
```
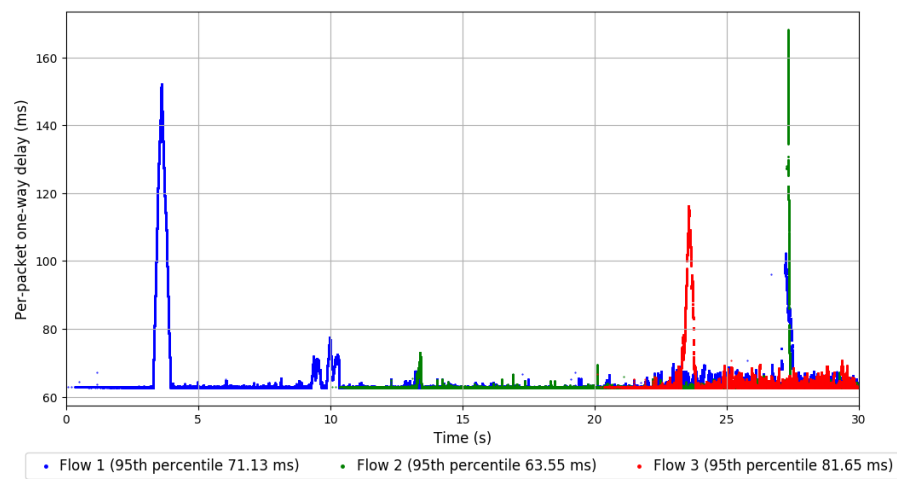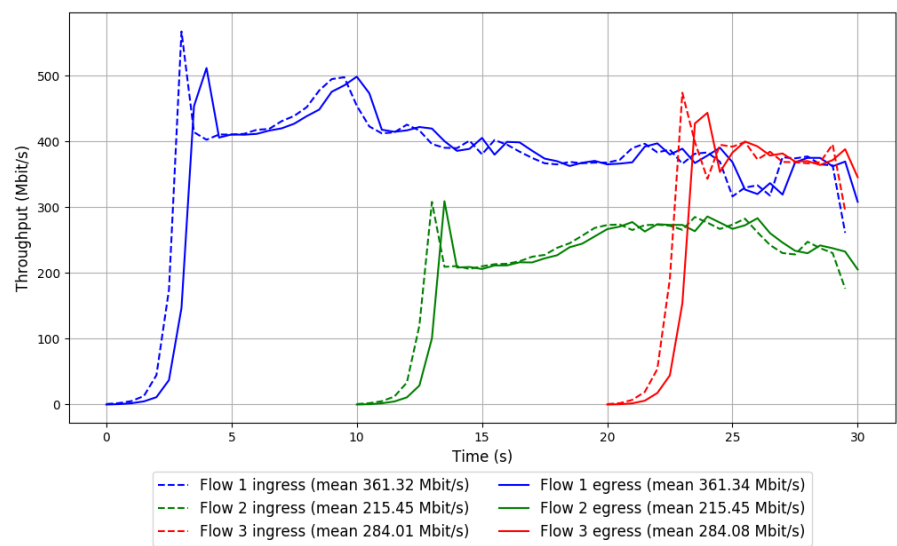
Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-10-10 06:24:38
End at: 2018-10-10 06:25:08
Local clock offset: 0.008 ms
Remote clock offset: -0.41 ms


# Below is generated by plot.py at 2018-10-10 11:11:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 62.707 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 62.607 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 62.692 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 63.159 ms
Loss rate: 0.00%
```
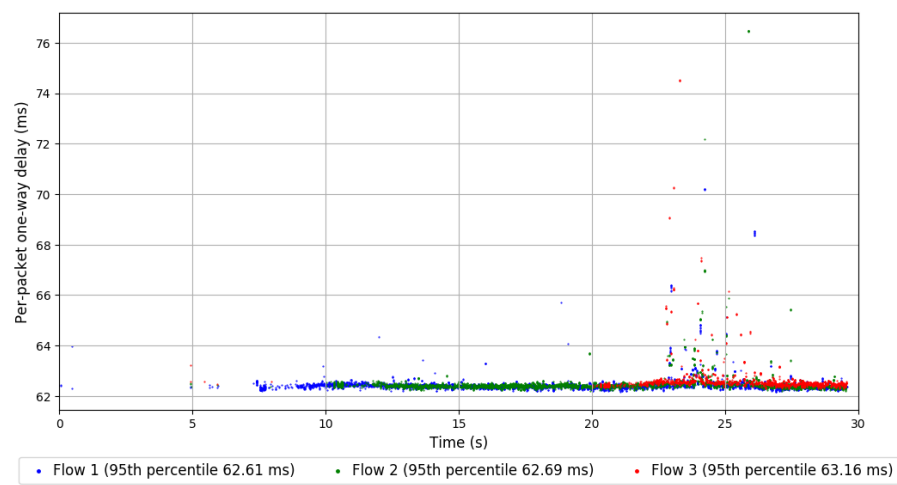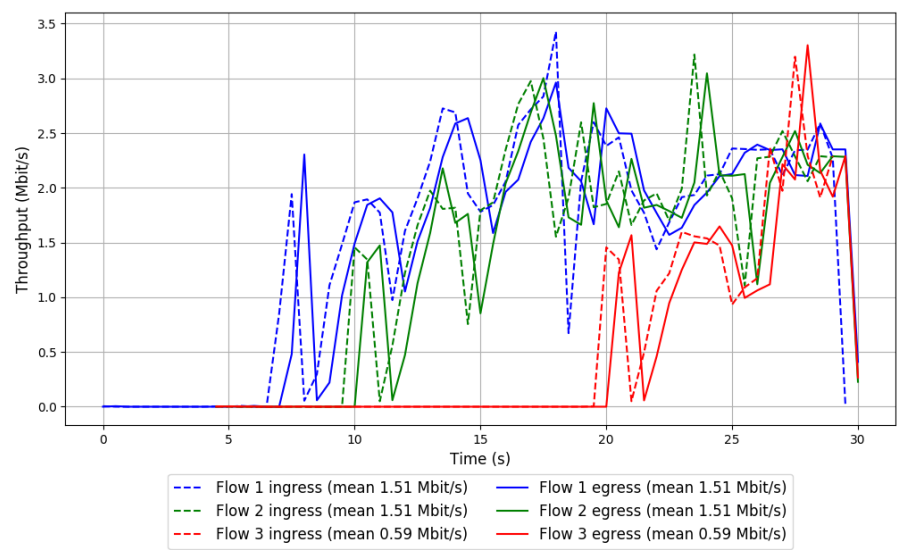
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-10-10 06:56:07
End at: 2018-10-10 06:56:37
Local clock offset: -0.022 ms
Remote clock offset: 1.242 ms


# Below is generated by plot.py at 2018-10-10 11:11:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 64.269 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 64.277 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 64.256 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 64.258 ms
Loss rate: 0.00%
```
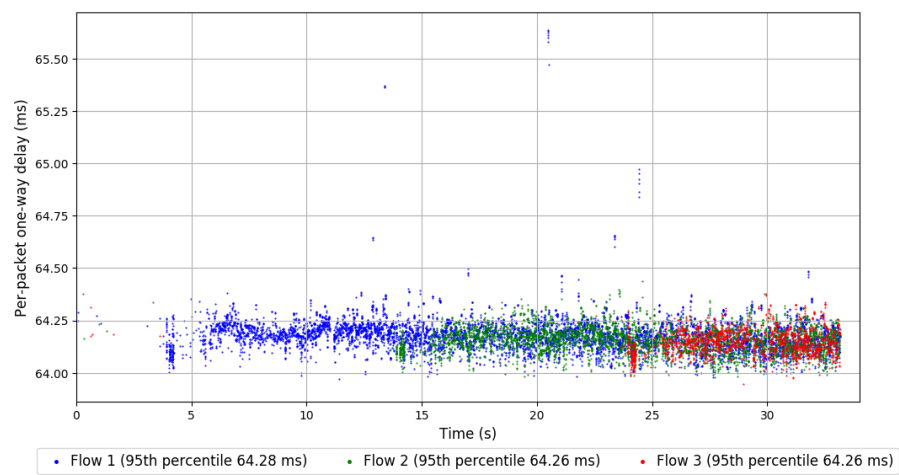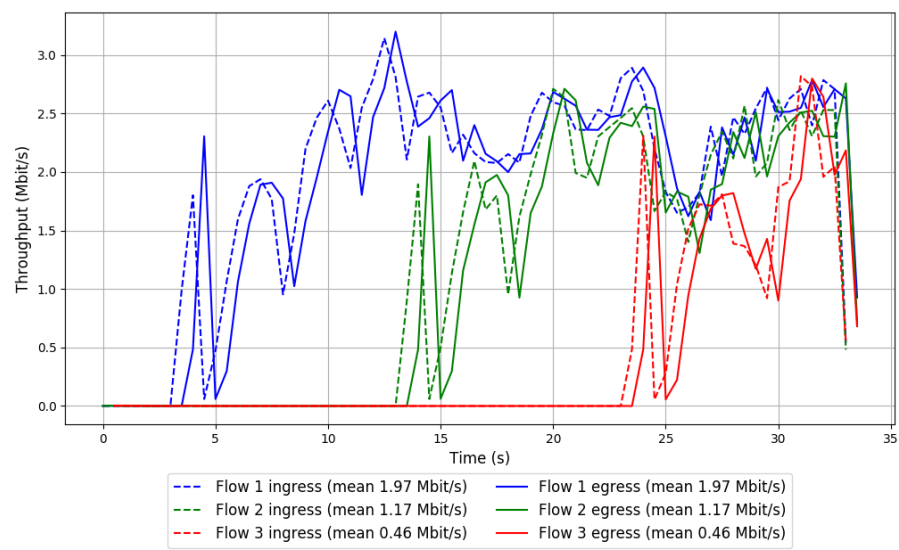
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-10-10 07:27:26
End at: 2018-10-10 07:27:56
Local clock offset: -0.01 ms
Remote clock offset: 0.247 ms


# Below is generated by plot.py at 2018-10-10 11:11:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 63.536 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 63.554 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 63.215 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 63.184 ms
Loss rate: 0.00%
```
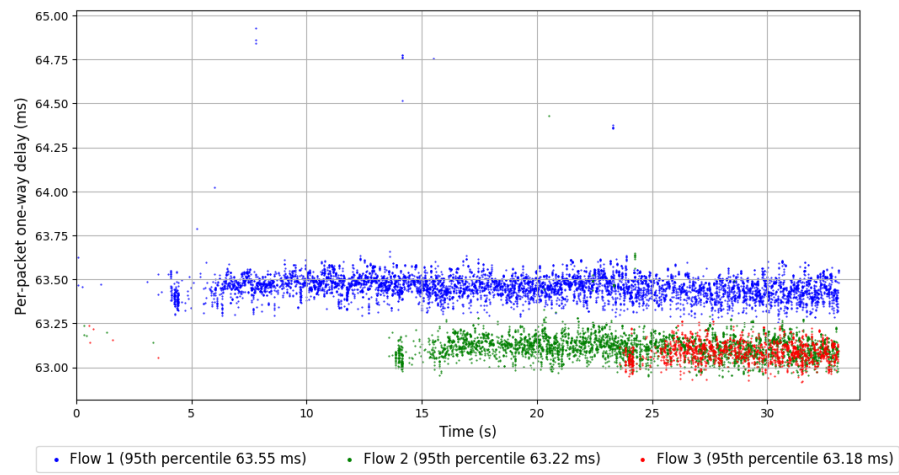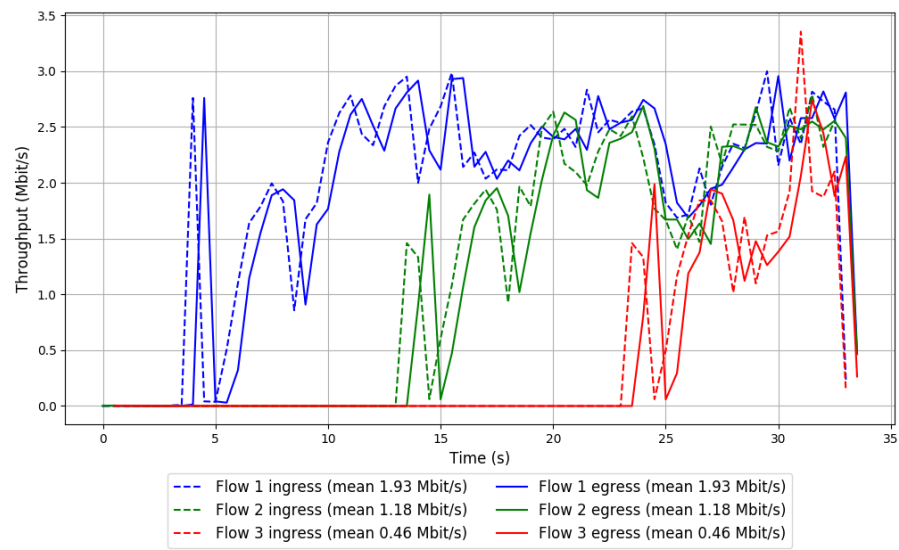
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-10-10 07:58:45
End at: 2018-10-10 07:59:15
Local clock offset: -0.079 ms
Remote clock offset: 0.787 ms


# Below is generated by plot.py at 2018-10-10 11:11:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 63.737 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 63.729 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 63.724 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 63.761 ms
Loss rate: 0.00%
```
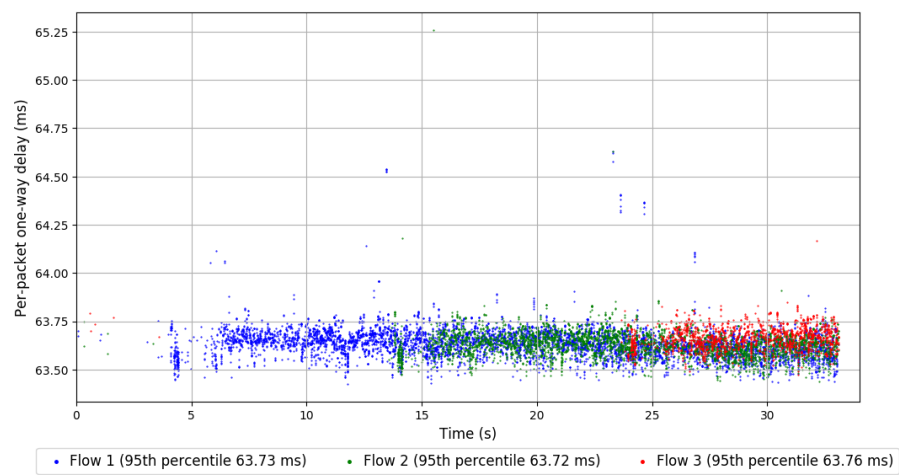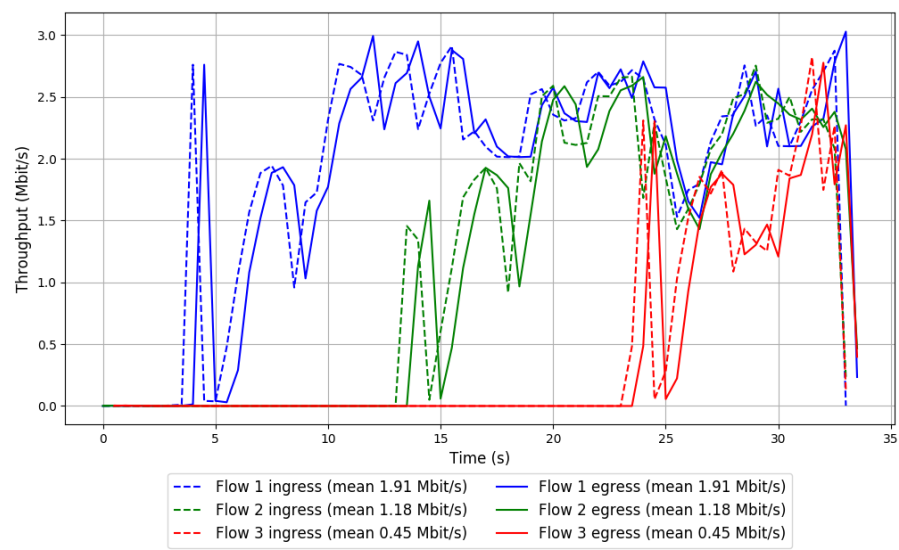
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-10-10 08:30:19
End at: 2018-10-10 08:30:49
Local clock offset: -0.053 ms
Remote clock offset: -0.152 ms


# Below is generated by plot.py at 2018-10-10 11:11:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 62.710 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 62.713 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 62.716 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 62.677 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link