Pantheon Report

Generated at 2018-06-18 19:46:09 (UTC).

Data path: AWS Brazil 1 Ethernet (*local*) →Brazil Ethernet (*remote*).

Repeated the test of 16 congestion control schemes 10 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
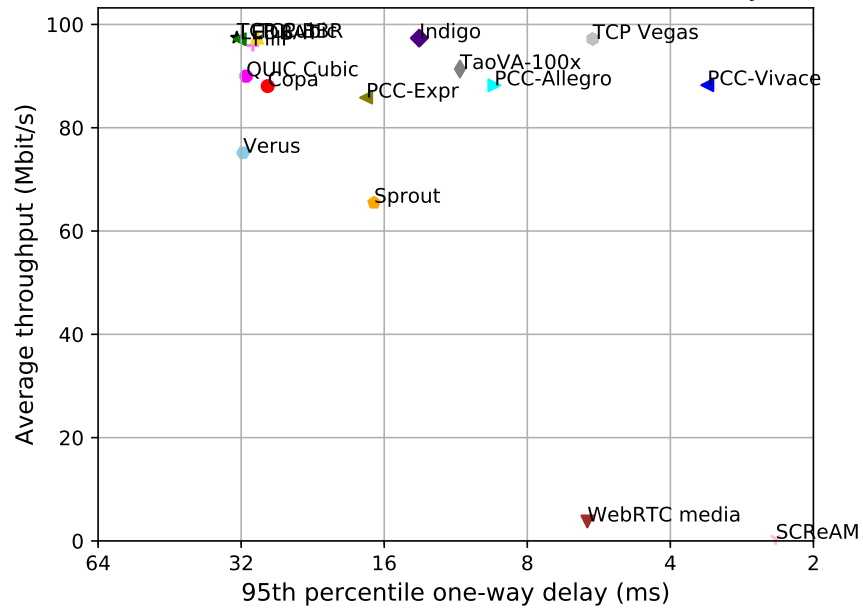
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.
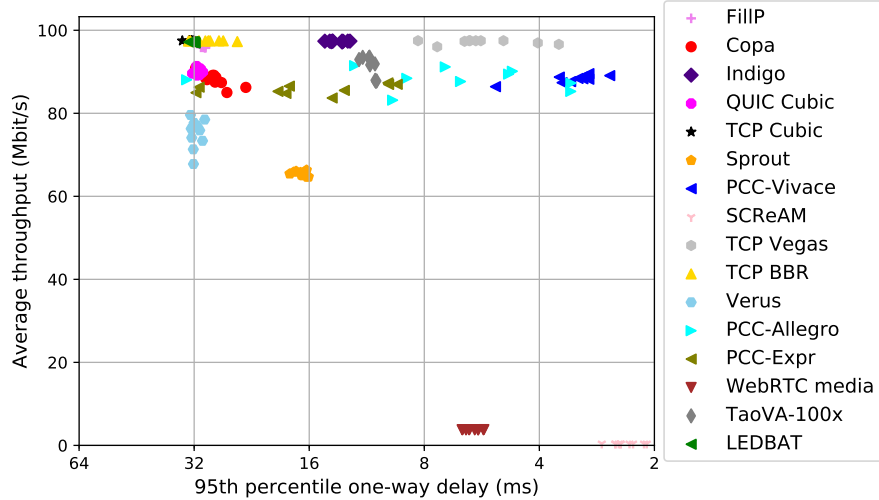
```
Git summary:
branch: master @ 9141c5f9450c85ea5ea2ea755a8e946998d3abf3
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/genericCC @ c7966e494a929986eaa5a9c169a7f381fe1bbbe5
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

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

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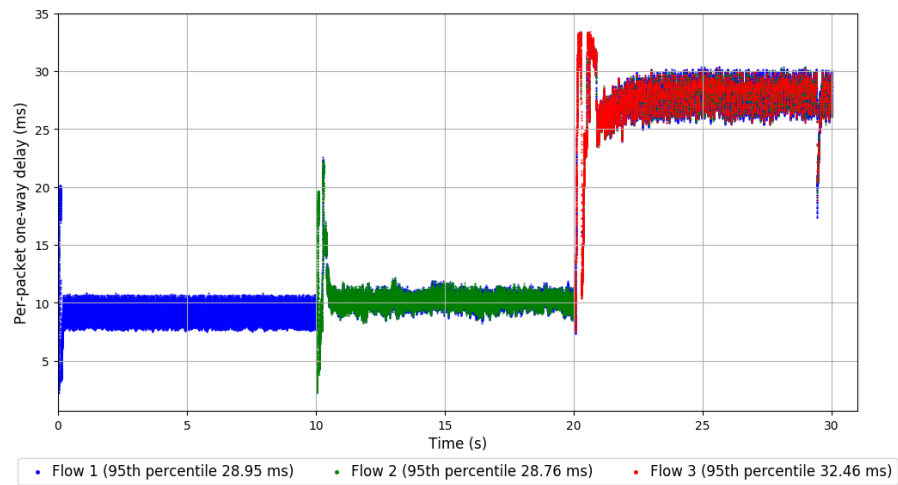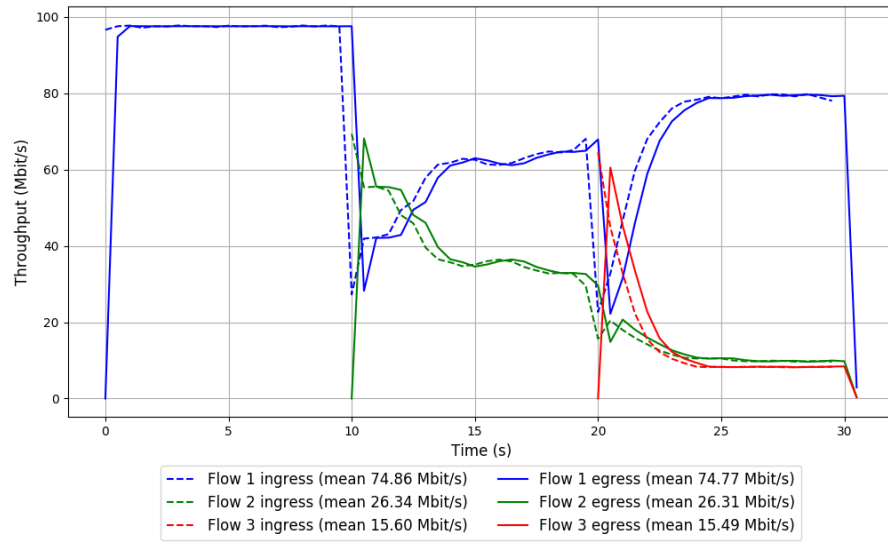3 flows with 10s interval between flows

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	72.70	28.34	17.56	29.55	29.00	31.93	0.14	0.08	1.06
Copa	10	52.49	38.65	29.53	24.88	28.96	30.22	0.01	0.01	0.04
TCP Cubic	10	64.36	35.45	28.59	32.57	32.80	32.90	0.03	0.08	0.13
FillP	10	53.39	45.70	36.61	30.19	30.26	30.25	11.64	21.68	25.46
Indigo	10	46.80	43.78	65.92	11.17	13.80	14.15	0.00	0.00	0.00
LEDBAT	10	62.28	37.58	29.66	32.15	32.35	32.43	0.03	0.06	0.08
PCC-Allegro	10	71.78	20.21	9.08	7.23	11.11	14.33	0.03	0.08	0.16
PCC-Expr	10	51.32	37.61	28.74	16.94	17.49	17.29	0.32	0.10	0.25
QUIC Cubic	10	57.42	34.78	28.70	31.13	31.32	31.46	0.14	0.19	0.22
SCReAM	10	0.22	0.22	0.22	2.41	2.36	2.32	0.00	0.00	0.00
Sprout	10	33.98	32.29	30.33	15.48	16.81	19.13	0.00	0.00	0.00
TaoVA-100x	10	55.36	34.81	38.53	10.60	11.72	13.03	0.02	0.05	0.38
TCP Vegas	10	47.31	46.90	56.03	9.08	4.90	4.93	0.00	0.00	0.00
Verus	10	45.30	30.94	28.32	29.35	32.10	32.60	7.24	14.74	22.75
PCC-Vivace	10	57.24	33.19	27.04	3.12	3.63	5.13	0.00	0.00	0.00
WebRTC media	10	2.01	1.32	0.45	5.97	5.78	6.61	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2018-06-18 16:18:16
End at: 2018-06-18 16:18:46
Local clock offset: -2.037 ms
Remote clock offset: -2.191 ms

# Below is generated by plot.py at 2018-06-18 19:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 29.072 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 74.77 Mbit/s
95th percentile per-packet one-way delay: 28.945 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 26.31 Mbit/s
95th percentile per-packet one-way delay: 28.761 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 15.49 Mbit/s
95th percentile per-packet one-way delay: 32.460 ms
Loss rate: 0.49%
```
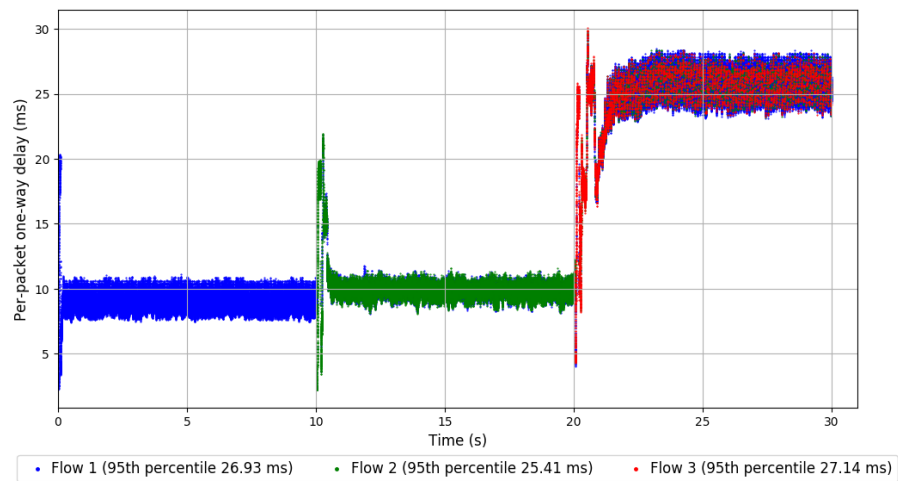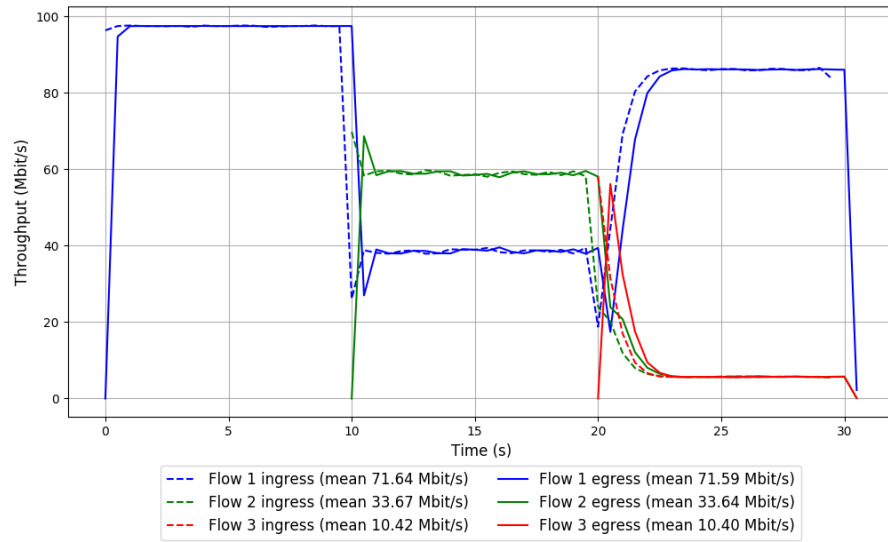
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 74.86 Mbit/s) --- Flow 1 egress (mean 74.77 Mbit/s)
Flow 2 ingress (mean 26.34 Mbit/s) --- Flow 2 egress (mean 26.31 Mbit/s)
Flow 3 ingress (mean 15.60 Mbit/s) --- Flow 3 egress (mean 15.49 Mbit/s)

Flow 1 (95th percentile 28.95 ms)   Flow 2 (95th percentile 28.76 ms)   Flow 3 (95th percentile 32.46 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2018-06-18 16:36:21
End at: 2018-06-18 16:36:51
Local clock offset: -1.874 ms
Remote clock offset: -1.705 ms


# Below is generated by plot.py at 2018-06-18 19:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 26.859 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.59 Mbit/s
95th percentile per-packet one-way delay: 26.934 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 33.64 Mbit/s
95th percentile per-packet one-way delay: 25.406 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.40 Mbit/s
95th percentile per-packet one-way delay: 27.138 ms
Loss rate: 0.00%
```
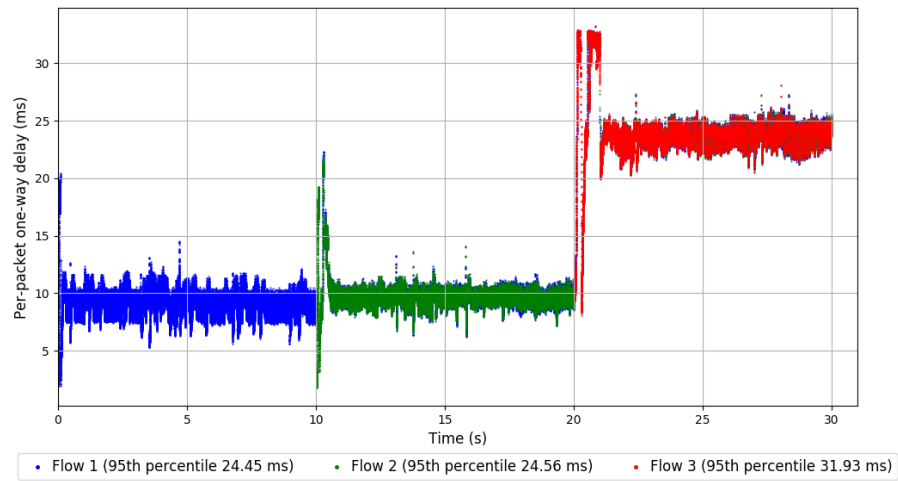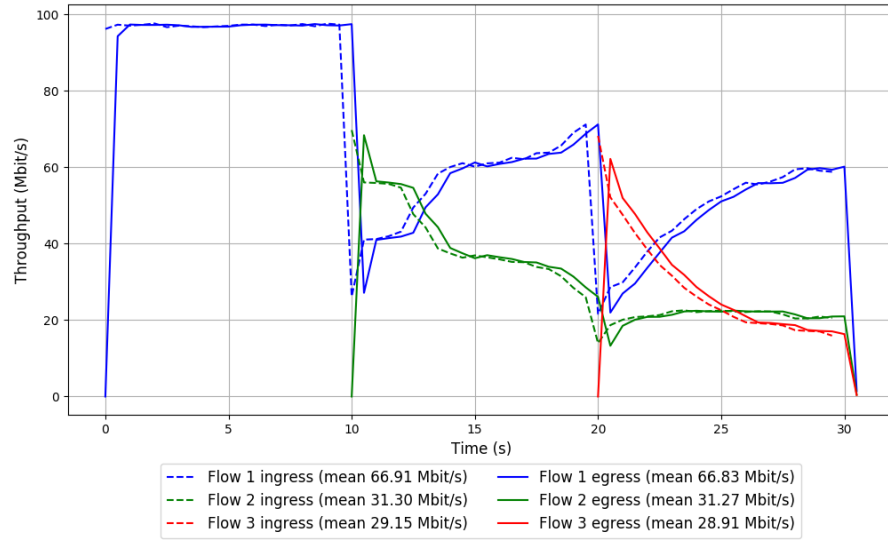
Run 2: Report of TCP BBR — Data Link

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```
Run 3: Statistics of TCP BBR

Start at: 2018-06-18 16:54:26
End at: 2018-06-18 16:54:56
Local clock offset: -2.01 ms
Remote clock offset: 4.843 ms


# Below is generated by plot.py at 2018-06-18 19:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.28 Mbit/s
95th percentile per-packet one-way delay: 24.673 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 66.83 Mbit/s
95th percentile per-packet one-way delay: 24.447 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 31.27 Mbit/s
95th percentile per-packet one-way delay: 24.563 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 28.91 Mbit/s
95th percentile per-packet one-way delay: 31.928 ms
Loss rate: 0.66%
```
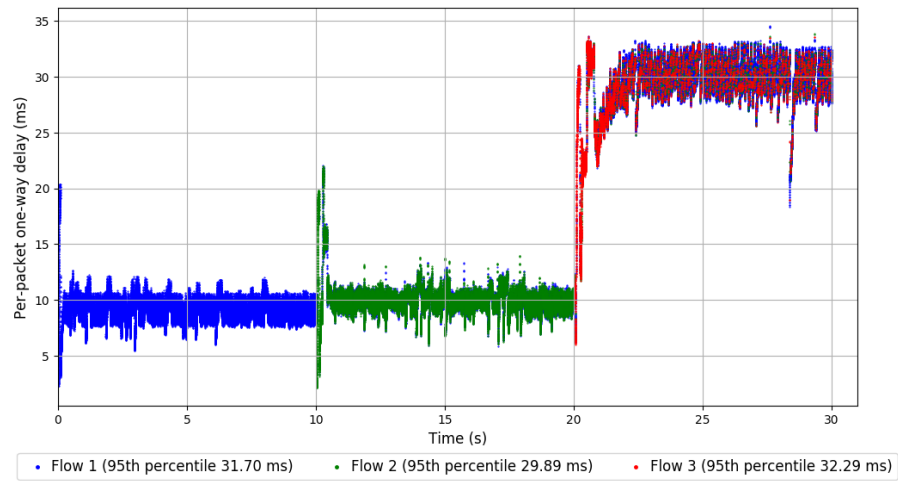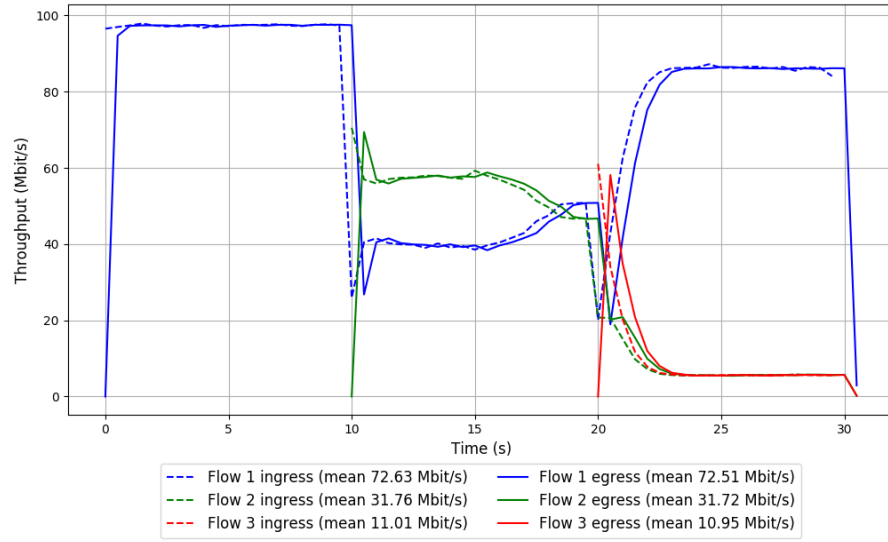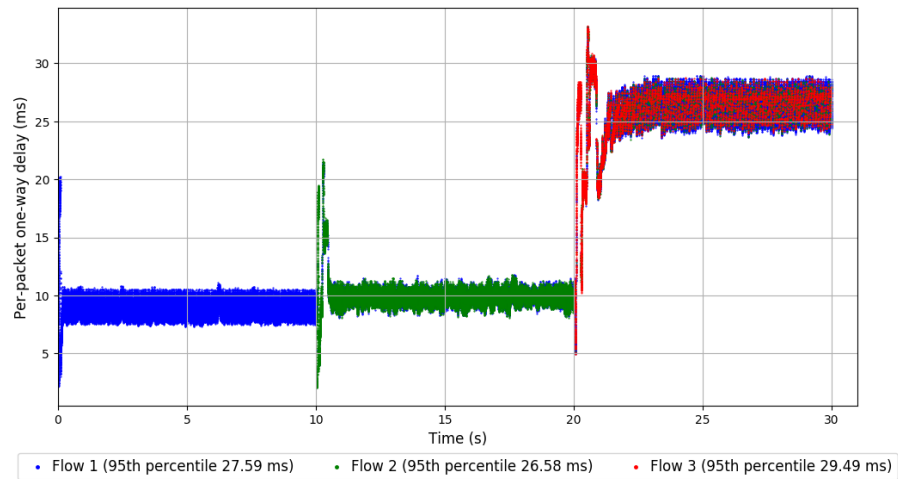
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 66.91 Mbit/s)   Flow 1 egress (mean 66.83 Mbit/s)
Flow 2 ingress (mean 31.30 Mbit/s)   Flow 2 egress (mean 31.27 Mbit/s)
Flow 3 ingress (mean 29.15 Mbit/s)   Flow 3 egress (mean 28.91 Mbit/s)

Flow 1 (95th percentile 24.45 ms)   Flow 2 (95th percentile 24.56 ms)   Flow 3 (95th percentile 31.93 ms)

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```
Run 4: Statistics of TCP BBR

Start at: 2018-06-18 17:12:31
End at: 2018-06-18 17:13:01
Local clock offset: -2.736 ms
Remote clock offset: 14.007 ms


# Below is generated by plot.py at 2018-06-18 19:22:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.29 Mbit/s
95th percentile per-packet one-way delay: 31.596 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 72.51 Mbit/s
95th percentile per-packet one-way delay: 31.700 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 31.72 Mbit/s
95th percentile per-packet one-way delay: 29.892 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 10.95 Mbit/s
95th percentile per-packet one-way delay: 32.288 ms
Loss rate: 0.36%
```

Run 4: Report of TCP BBR — Data Link

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Run 5: Statistics of TCP BBR

Start at: 2018-06-18 17:30:36
End at: 2018-06-18 17:31:06
Local clock offset: -3.298 ms
Remote clock offset: 17.937 ms


# Below is generated by plot.py at 2018-06-18 19:22:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 27.561 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 72.64 Mbit/s
95th percentile per-packet one-way delay: 27.588 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 31.76 Mbit/s
95th percentile per-packet one-way delay: 26.584 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.03 Mbit/s
95th percentile per-packet one-way delay: 29.490 ms
Loss rate: 0.10%
```
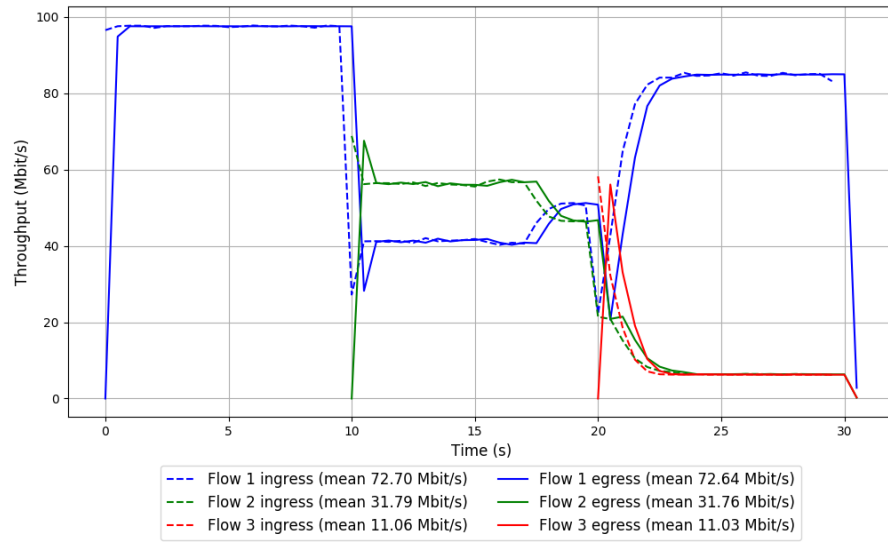
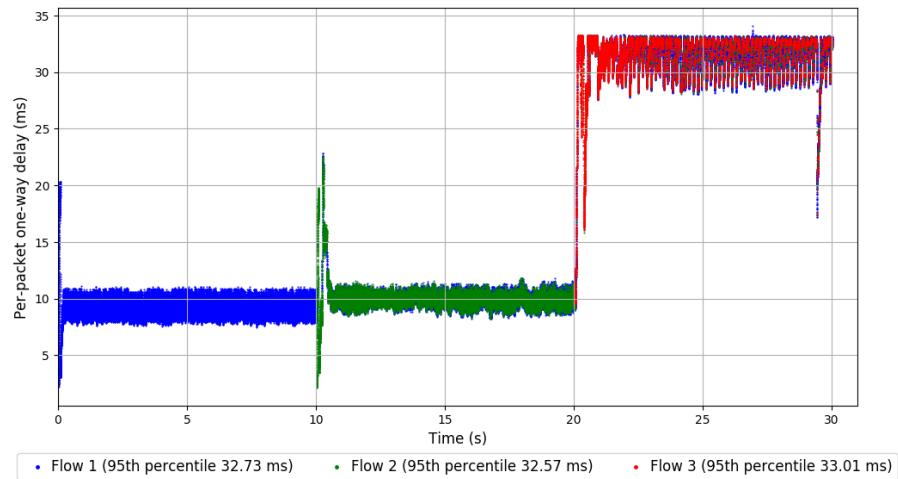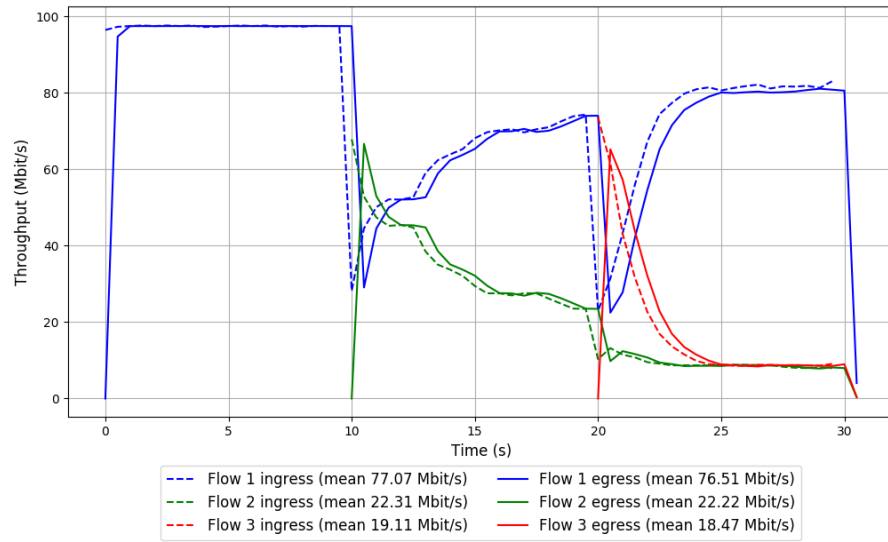Run 5: Report of TCP BBR — Data Link

```
Run 6: Statistics of TCP BBR

Start at: 2018-06-18 17:48:40
End at: 2018-06-18 17:49:10
Local clock offset: -6.8 ms
Remote clock offset: 21.557 ms


# Below is generated by plot.py at 2018-06-18 19:22:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 32.761 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 76.51 Mbit/s
95th percentile per-packet one-way delay: 32.734 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 22.22 Mbit/s
95th percentile per-packet one-way delay: 32.568 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 18.47 Mbit/s
95th percentile per-packet one-way delay: 33.005 ms
Loss rate: 3.16%
```
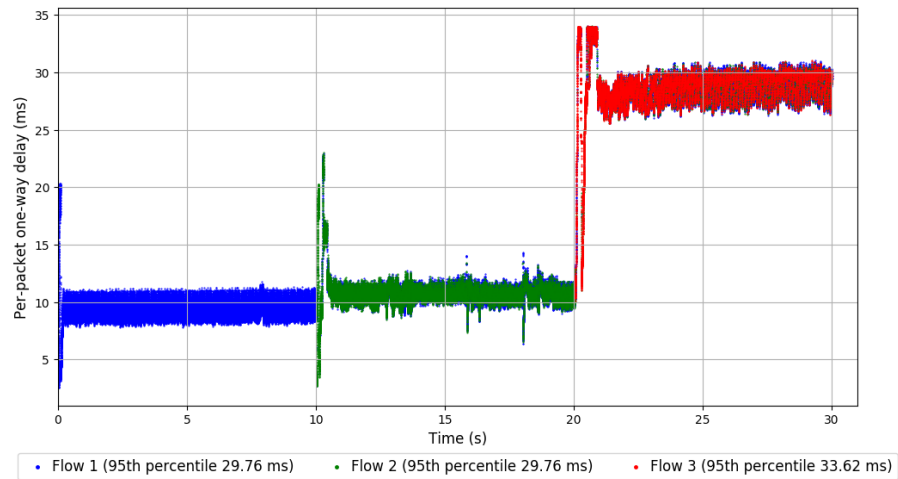
Run 6: Report of TCP BBR — Data Link

```
Run 7: Statistics of TCP BBR

Start at: 2018-06-18 18:06:45
End at: 2018-06-18 18:07:15
Local clock offset: -8.382 ms
Remote clock offset: 3.918 ms


# Below is generated by plot.py at 2018-06-18 19:22:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 29.902 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 72.35 Mbit/s
95th percentile per-packet one-way delay: 29.761 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 26.47 Mbit/s
95th percentile per-packet one-way delay: 29.760 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 22.42 Mbit/s
95th percentile per-packet one-way delay: 33.623 ms
Loss rate: 1.23%
```
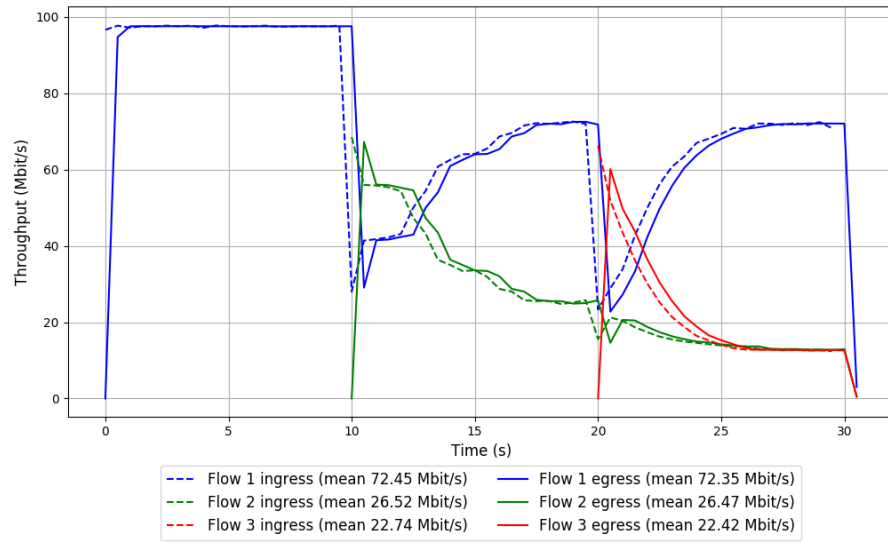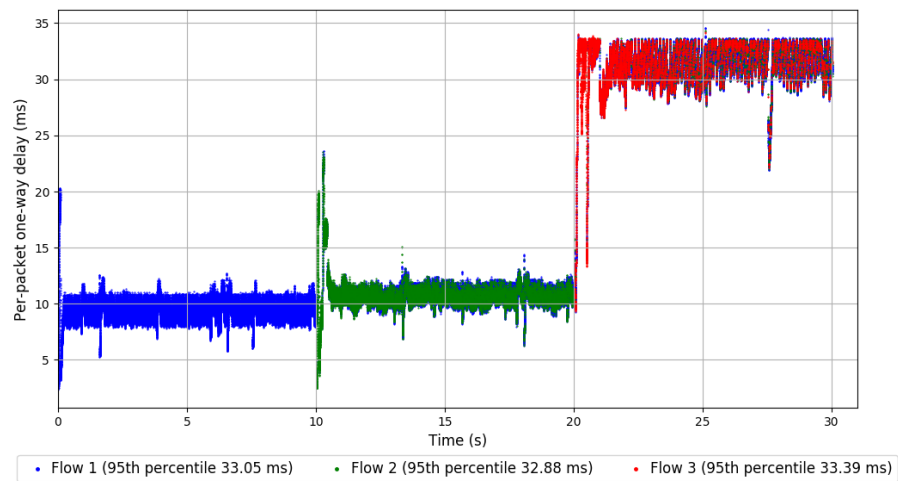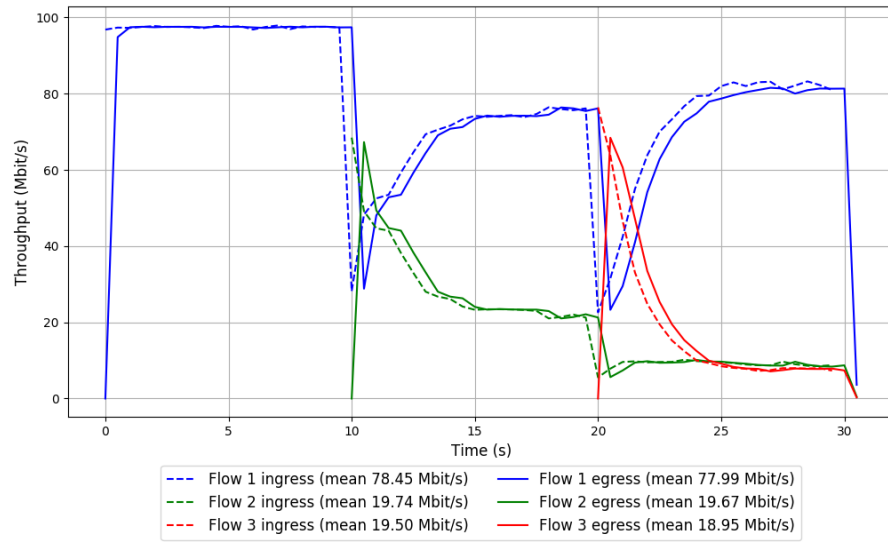
Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 72.45 Mbit/s) --- Flow 1 egress (mean 72.35 Mbit/s)
Flow 2 ingress (mean 26.52 Mbit/s) --- Flow 2 egress (mean 26.47 Mbit/s)
Flow 3 ingress (mean 22.74 Mbit/s) --- Flow 3 egress (mean 22.42 Mbit/s)

Flow 1 (95th percentile 29.76 ms) • Flow 2 (95th percentile 29.76 ms) • Flow 3 (95th percentile 33.62 ms)

```
Run 8: Statistics of TCP BBR

Start at: 2018-06-18 18:24:49
End at: 2018-06-18 18:25:19
Local clock offset: -9.509 ms
Remote clock offset: -8.428 ms


# Below is generated by plot.py at 2018-06-18 19:22:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 33.100 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 77.99 Mbit/s
95th percentile per-packet one-way delay: 33.051 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 19.67 Mbit/s
95th percentile per-packet one-way delay: 32.883 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 18.95 Mbit/s
95th percentile per-packet one-way delay: 33.389 ms
Loss rate: 2.63%
```
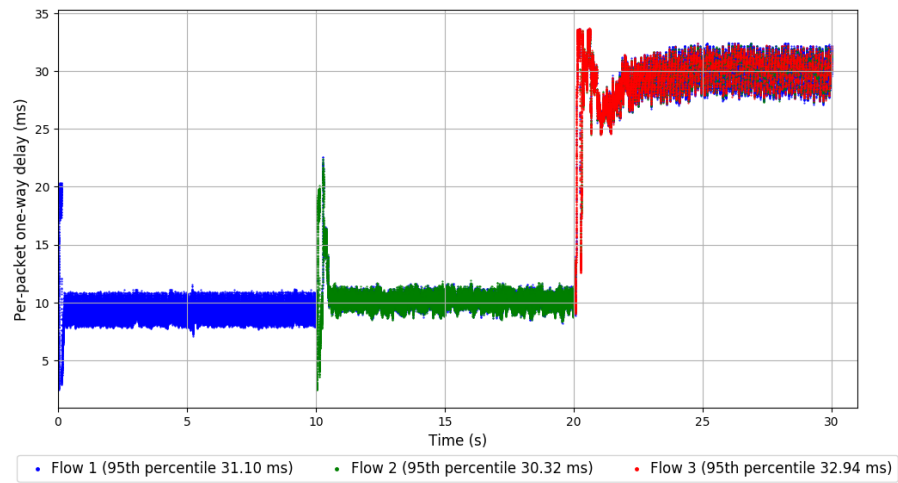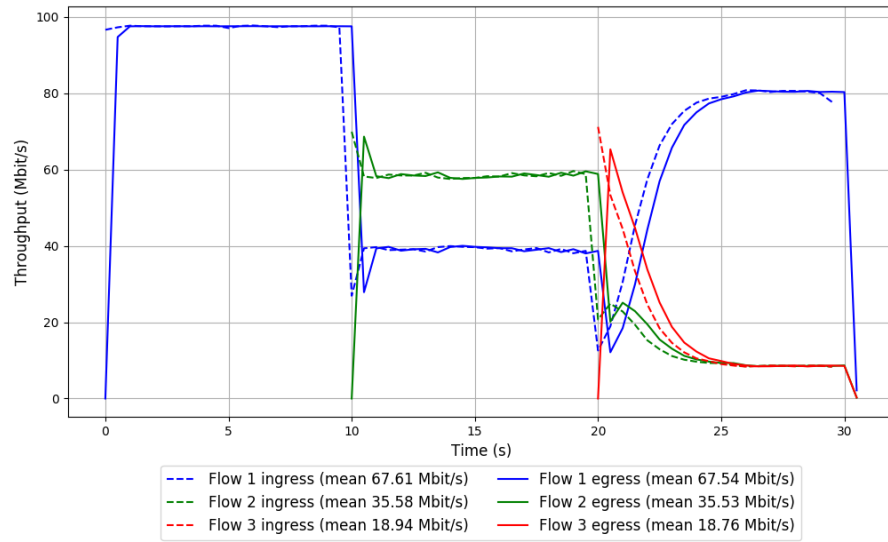
Run 8: Report of TCP BBR — Data Link

Flow 1 ingress (mean 78.45 Mbit/s) — Flow 1 egress (mean 77.99 Mbit/s)
Flow 2 ingress (mean 19.74 Mbit/s) — Flow 2 egress (mean 19.67 Mbit/s)
Flow 3 ingress (mean 19.50 Mbit/s) — Flow 3 egress (mean 18.95 Mbit/s)

Flow 1 (95th percentile 33.05 ms)   Flow 2 (95th percentile 32.88 ms)   Flow 3 (95th percentile 33.39 ms)

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```
Run 9: Statistics of TCP BBR

Start at: 2018-06-18 18:42:54
End at: 2018-06-18 18:43:24
Local clock offset: -4.521 ms
Remote clock offset: -5.833 ms


# Below is generated by plot.py at 2018-06-18 19:23:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 31.098 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 67.54 Mbit/s
95th percentile per-packet one-way delay: 31.099 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 35.53 Mbit/s
95th percentile per-packet one-way delay: 30.317 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 18.76 Mbit/s
95th percentile per-packet one-way delay: 32.944 ms
Loss rate: 0.71%
```
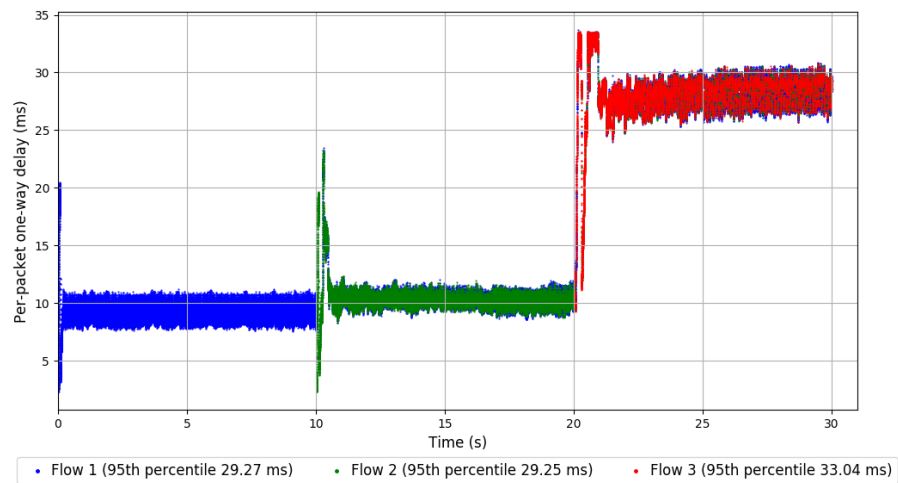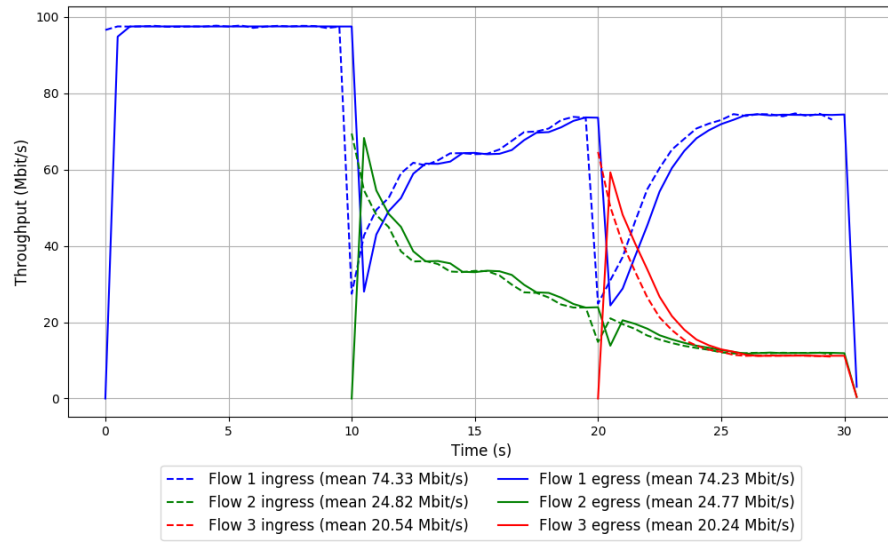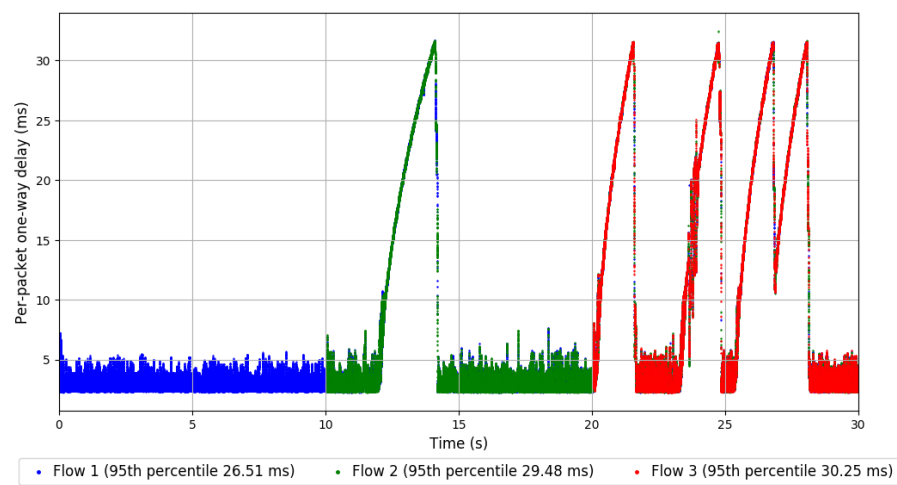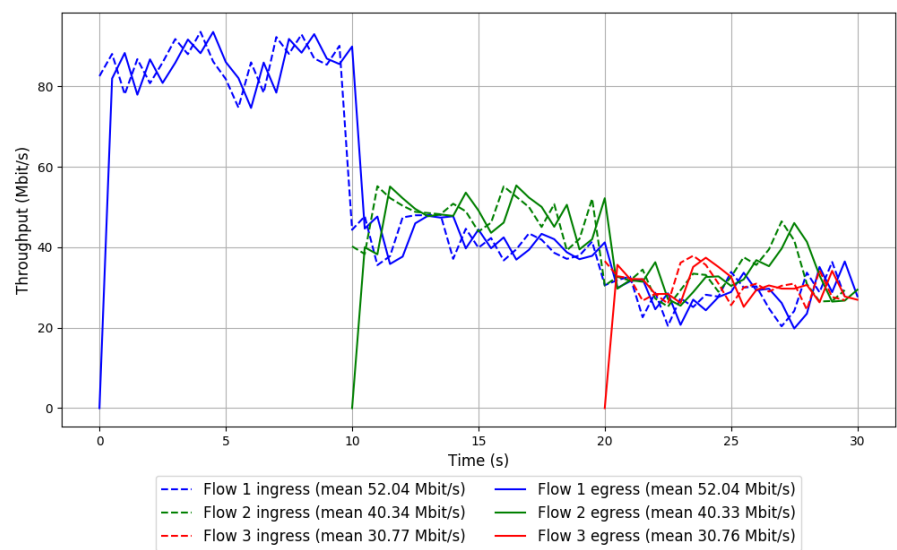
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 67.61 Mbit/s) --- Flow 1 egress (mean 67.54 Mbit/s)
Flow 2 ingress (mean 35.58 Mbit/s) --- Flow 2 egress (mean 35.53 Mbit/s)
Flow 3 ingress (mean 18.94 Mbit/s) --- Flow 3 egress (mean 18.76 Mbit/s)

Flow 1 (95th percentile 31.10 ms)   Flow 2 (95th percentile 30.32 ms)   Flow 3 (95th percentile 32.94 ms)

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```
Run 10: Statistics of TCP BBR

Start at: 2018-06-18 19:00:59
End at: 2018-06-18 19:01:29
Local clock offset: -0.51 ms
Remote clock offset: -5.402 ms


# Below is generated by plot.py at 2018-06-18 19:23:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 29.373 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 74.23 Mbit/s
95th percentile per-packet one-way delay: 29.270 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 24.77 Mbit/s
95th percentile per-packet one-way delay: 29.247 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 20.24 Mbit/s
95th percentile per-packet one-way delay: 33.040 ms
Loss rate: 1.25%
```

Run 10: Report of TCP BBR — Data Link

Flow 1 ingress (mean 74.33 Mbit/s) --- Flow 1 egress (mean 74.23 Mbit/s)
Flow 2 ingress (mean 24.82 Mbit/s) --- Flow 2 egress (mean 24.77 Mbit/s)
Flow 3 ingress (mean 20.54 Mbit/s) --- Flow 3 egress (mean 20.24 Mbit/s)

Flow 1 (95th percentile 29.27 ms)   Flow 2 (95th percentile 29.25 ms)   Flow 3 (95th percentile 33.04 ms)
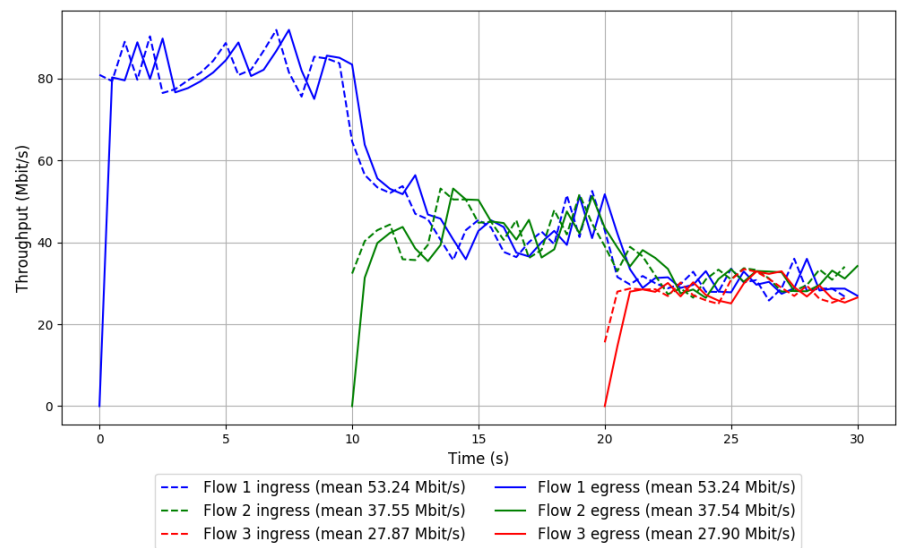
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```
Run 1: Statistics of Copa

Start at: 2018-06-18 16:27:13
End at: 2018-06-18 16:27:43
Local clock offset: -1.945 ms
Remote clock offset: -1.912 ms


# Below is generated by plot.py at 2018-06-18 19:24:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.13 Mbit/s
95th percentile per-packet one-way delay: 28.645 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 52.04 Mbit/s
95th percentile per-packet one-way delay: 26.512 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.33 Mbit/s
95th percentile per-packet one-way delay: 29.479 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 30.76 Mbit/s
95th percentile per-packet one-way delay: 30.255 ms
Loss rate: 0.04%
```
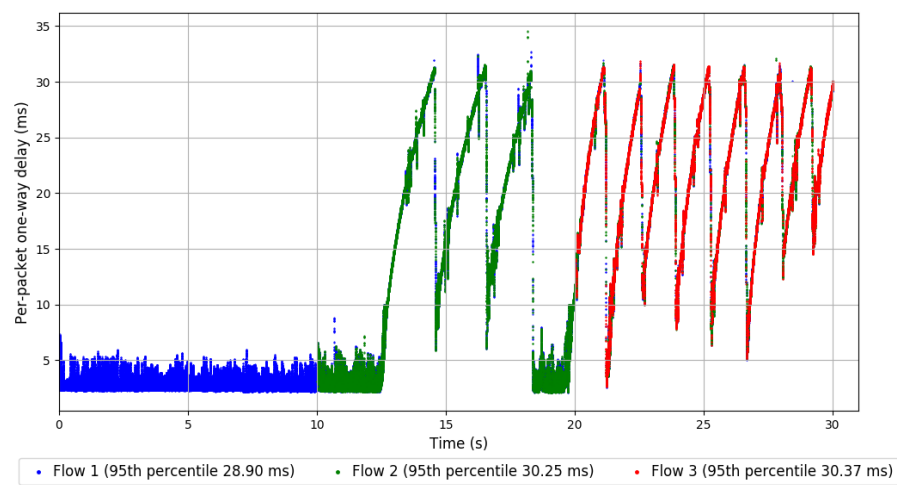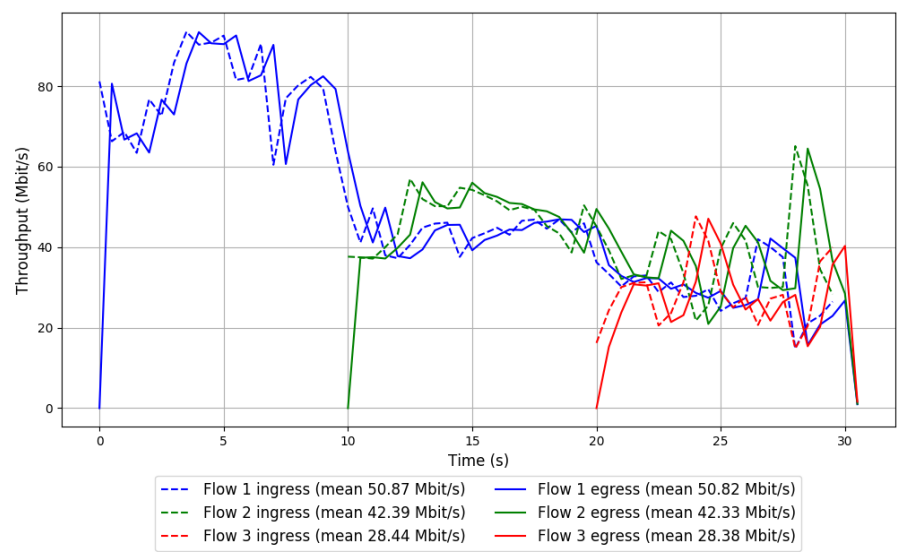
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2018-06-18 16:45:18
End at: 2018-06-18 16:45:48
Local clock offset: -2.04 ms
Remote clock offset: -1.478 ms


# Below is generated by plot.py at 2018-06-18 19:24:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.51 Mbit/s
95th percentile per-packet one-way delay: 28.209 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 53.24 Mbit/s
95th percentile per-packet one-way delay: 26.066 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.54 Mbit/s
95th percentile per-packet one-way delay: 29.092 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 27.90 Mbit/s
95th percentile per-packet one-way delay: 29.976 ms
Loss rate: 0.01%
```
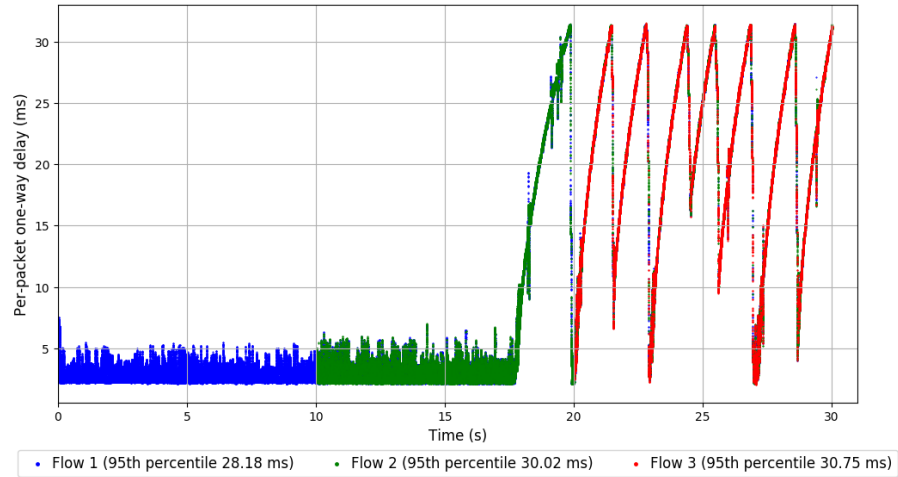
Run 2: Report of Copa — Data Link

- - - Flow 1 ingress (mean 53.24 Mbit/s)   —— Flow 1 egress (mean 53.24 Mbit/s)
- - - Flow 2 ingress (mean 37.55 Mbit/s)   —— Flow 2 egress (mean 37.54 Mbit/s)
- - - Flow 3 ingress (mean 27.87 Mbit/s)   —— Flow 3 egress (mean 27.90 Mbit/s)

- Flow 1 (95th percentile 26.07 ms)   • Flow 2 (95th percentile 29.09 ms)   • Flow 3 (95th percentile 29.98 ms)
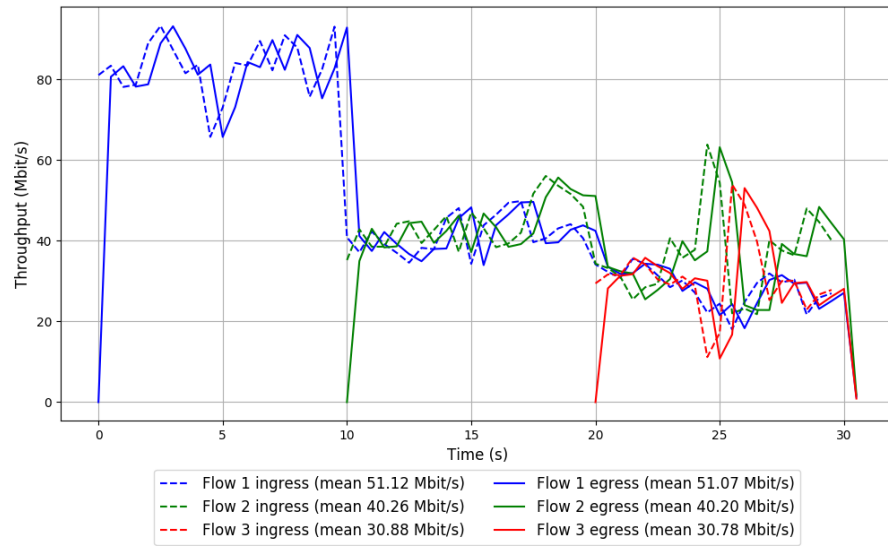
```
Run 3: Statistics of Copa

Start at: 2018-06-18 17:03:23
End at: 2018-06-18 17:03:53
Local clock offset: -1.998 ms
Remote clock offset: 10.914 ms


# Below is generated by plot.py at 2018-06-18 19:24:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.47 Mbit/s
95th percentile per-packet one-way delay: 29.868 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 50.82 Mbit/s
95th percentile per-packet one-way delay: 28.897 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 42.33 Mbit/s
95th percentile per-packet one-way delay: 30.248 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 28.38 Mbit/s
95th percentile per-packet one-way delay: 30.372 ms
Loss rate: 0.03%
```
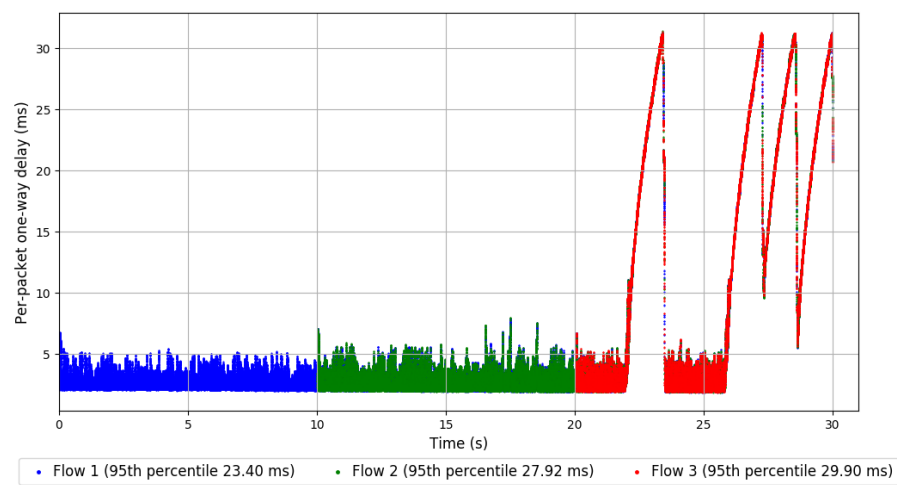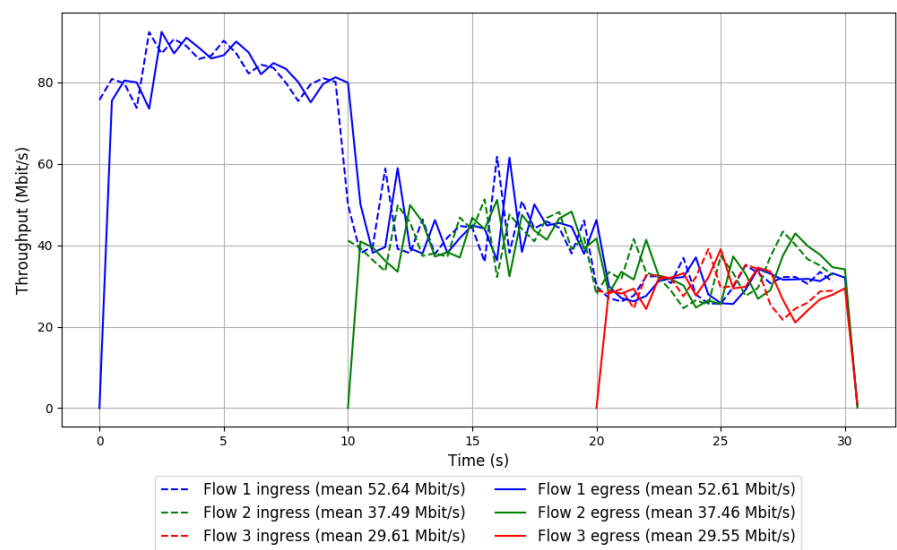
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 50.87 Mbit/s) --- Flow 1 egress (mean 50.82 Mbit/s)
Flow 2 ingress (mean 42.39 Mbit/s) --- Flow 2 egress (mean 42.33 Mbit/s)
Flow 3 ingress (mean 28.44 Mbit/s) --- Flow 3 egress (mean 28.38 Mbit/s)

Flow 1 (95th percentile 28.90 ms) • Flow 2 (95th percentile 30.25 ms) • Flow 3 (95th percentile 30.37 ms)

29

```
Run 4: Statistics of Copa

Start at: 2018-06-18 17:21:28
End at: 2018-06-18 17:21:58
Local clock offset: -3.098 ms
Remote clock offset: 16.142 ms


# Below is generated by plot.py at 2018-06-18 19:24:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.10 Mbit/s
95th percentile per-packet one-way delay: 29.616 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 51.07 Mbit/s
95th percentile per-packet one-way delay: 28.180 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.20 Mbit/s
95th percentile per-packet one-way delay: 30.015 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 30.78 Mbit/s
95th percentile per-packet one-way delay: 30.748 ms
Loss rate: 0.03%
```
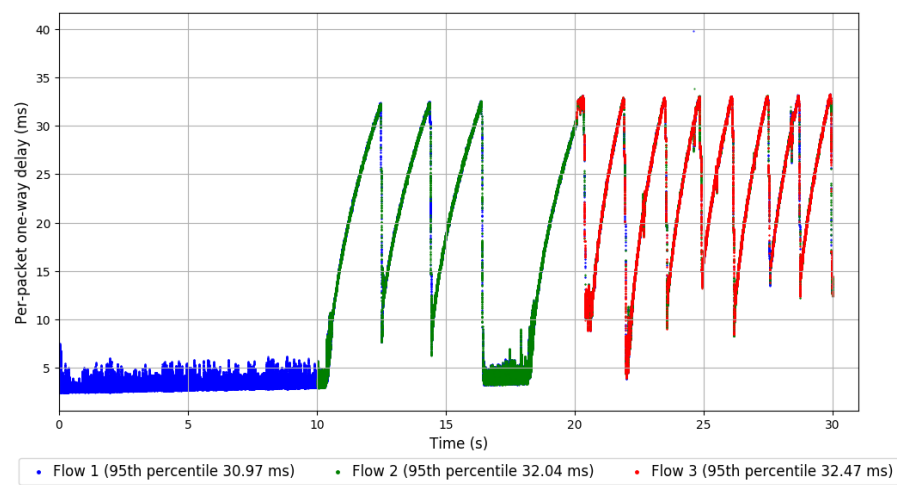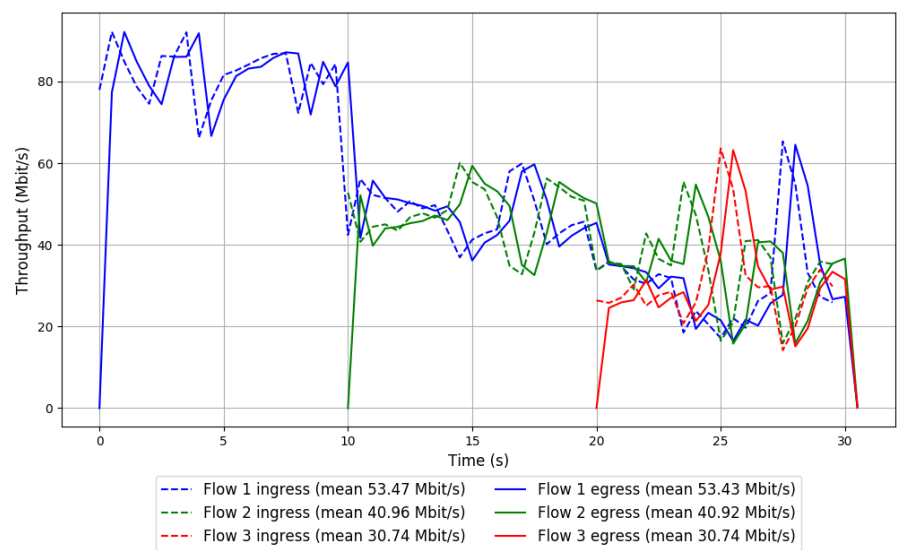
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 51.12 Mbit/s)   Flow 1 egress (mean 51.07 Mbit/s)
Flow 2 ingress (mean 40.26 Mbit/s)   Flow 2 egress (mean 40.20 Mbit/s)
Flow 3 ingress (mean 30.88 Mbit/s)   Flow 3 egress (mean 30.78 Mbit/s)

Flow 1 (95th percentile 28.18 ms)   Flow 2 (95th percentile 30.02 ms)   Flow 3 (95th percentile 30.75 ms)

```
Run 5: Statistics of Copa

Start at: 2018-06-18 17:39:32
End at: 2018-06-18 17:40:02
Local clock offset: -5.163 ms
Remote clock offset: 19.69 ms


# Below is generated by plot.py at 2018-06-18 19:24:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.40 Mbit/s
95th percentile per-packet one-way delay: 27.152 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 52.61 Mbit/s
95th percentile per-packet one-way delay: 23.398 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.46 Mbit/s
95th percentile per-packet one-way delay: 27.920 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.55 Mbit/s
95th percentile per-packet one-way delay: 29.897 ms
Loss rate: 0.03%
```
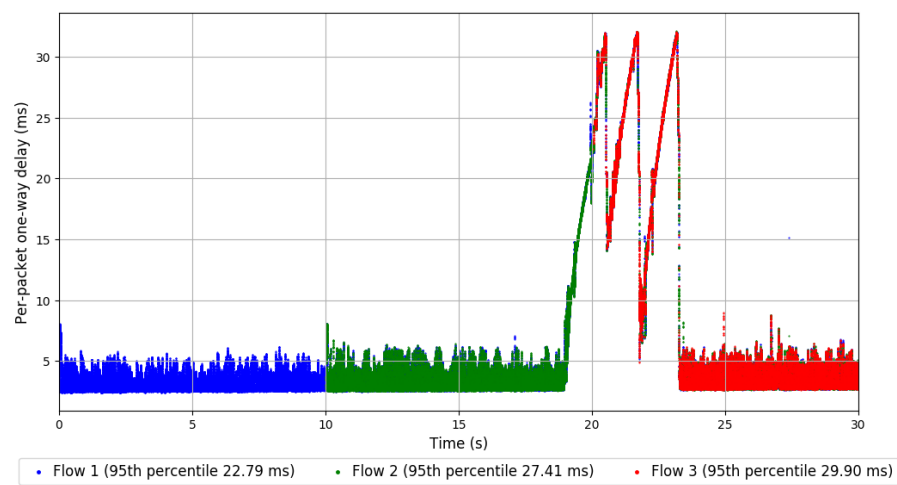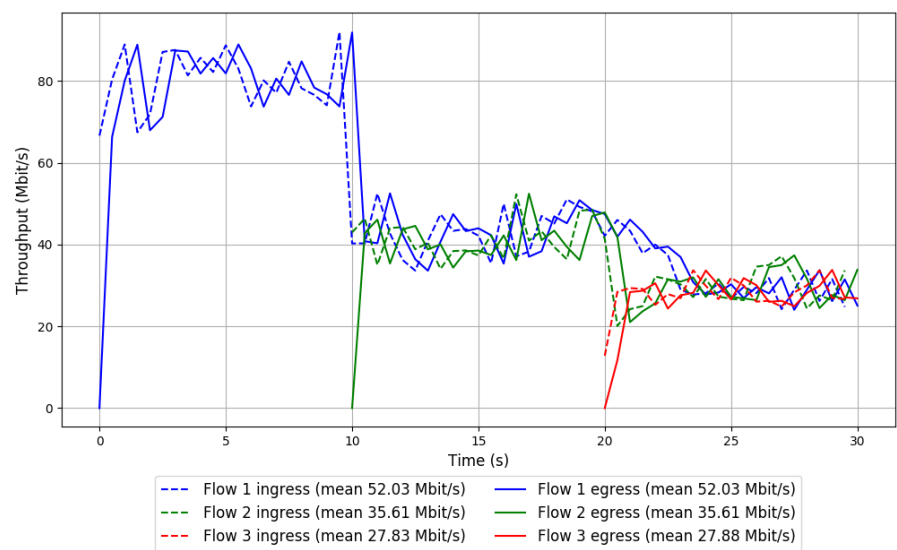
Run 5: Report of Copa — Data Link

```
Run 6: Statistics of Copa

Start at: 2018-06-18 17:57:38
End at: 2018-06-18 17:58:08
Local clock offset: -7.691 ms
Remote clock offset: 22.44 ms


# Below is generated by plot.py at 2018-06-18 19:24:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.89 Mbit/s
95th percentile per-packet one-way delay: 31.723 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 53.43 Mbit/s
95th percentile per-packet one-way delay: 30.968 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 40.92 Mbit/s
95th percentile per-packet one-way delay: 32.040 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 30.74 Mbit/s
95th percentile per-packet one-way delay: 32.472 ms
Loss rate: 0.15%
```
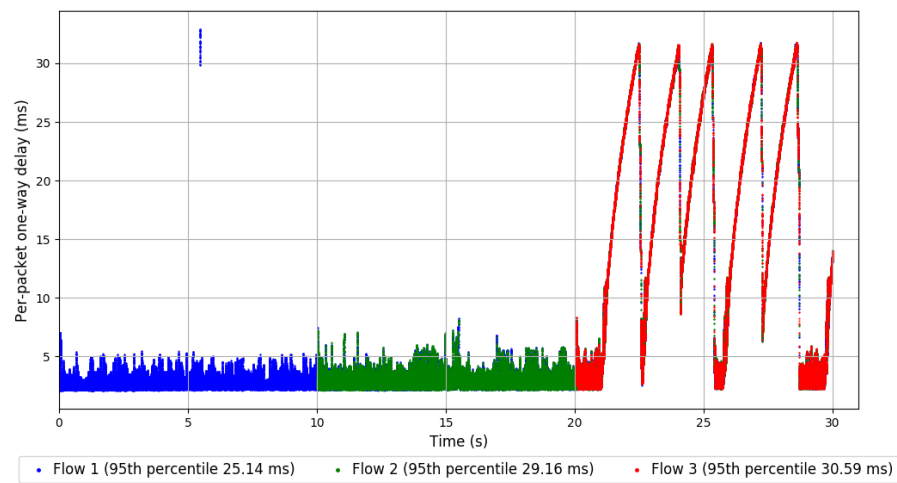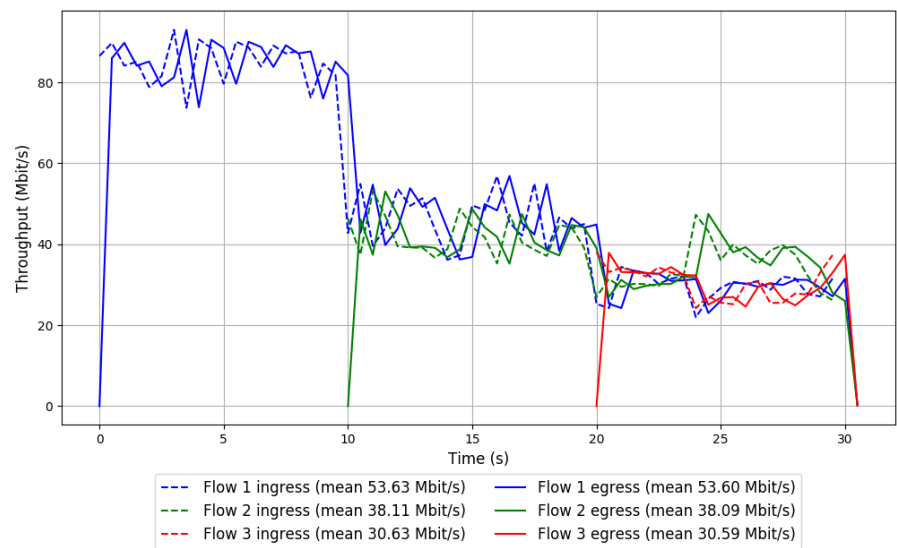
Run 6: Report of Copa — Data Link

```
Run 7: Statistics of Copa

Start at: 2018-06-18 18:15:42
End at: 2018-06-18 18:16:12
Local clock offset: -9.027 ms
Remote clock offset: -4.056 ms


# Below is generated by plot.py at 2018-06-18 19:25:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.00 Mbit/s
95th percentile per-packet one-way delay: 26.272 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 52.03 Mbit/s
95th percentile per-packet one-way delay: 22.788 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.61 Mbit/s
95th percentile per-packet one-way delay: 27.406 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 27.88 Mbit/s
95th percentile per-packet one-way delay: 29.902 ms
Loss rate: 0.01%
```
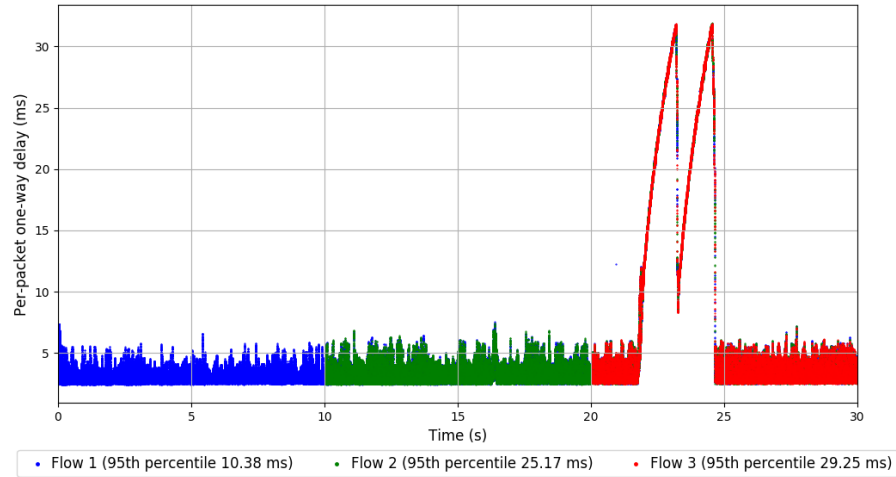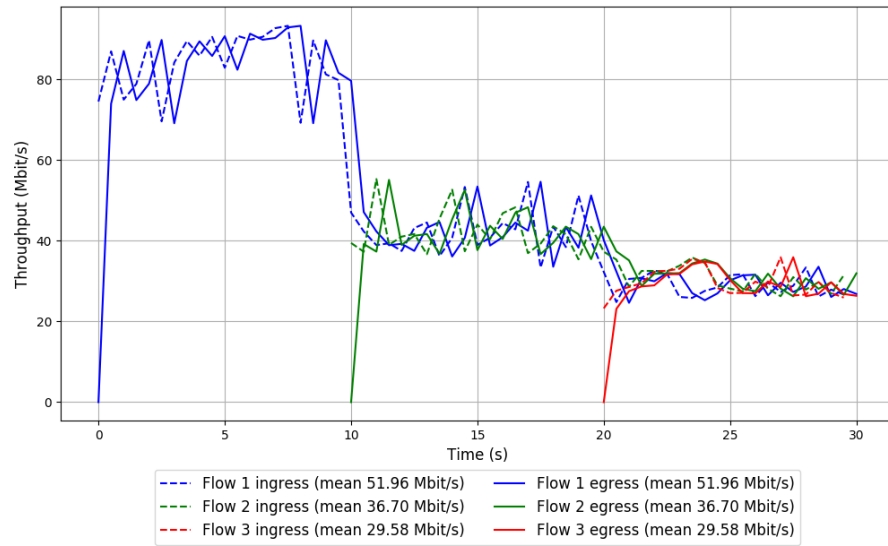
Run 7: Report of Copa — Data Link

```
Run 8: Statistics of Copa

Start at: 2018-06-18 18:33:46
End at: 2018-06-18 18:34:16
Local clock offset: -10.125 ms
Remote clock offset: -9.38 ms


# Below is generated by plot.py at 2018-06-18 19:25:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.16 Mbit/s
95th percentile per-packet one-way delay: 28.407 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 53.60 Mbit/s
95th percentile per-packet one-way delay: 25.140 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.09 Mbit/s
95th percentile per-packet one-way delay: 29.165 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 30.59 Mbit/s
95th percentile per-packet one-way delay: 30.588 ms
Loss rate: 0.03%
```
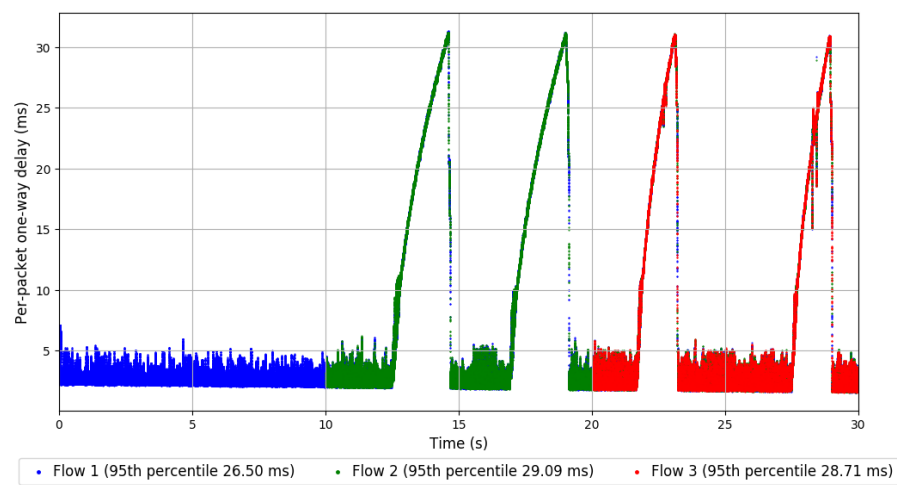
Run 8: Report of Copa — Data Link

Flow 1 ingress (mean 53.63 Mbit/s)   Flow 1 egress (mean 53.60 Mbit/s)
Flow 2 ingress (mean 38.11 Mbit/s)   Flow 2 egress (mean 38.09 Mbit/s)
Flow 3 ingress (mean 30.63 Mbit/s)   Flow 3 egress (mean 30.59 Mbit/s)

Flow 1 (95th percentile 25.14 ms)   Flow 2 (95th percentile 29.16 ms)   Flow 3 (95th percentile 30.59 ms)

```
Run 9: Statistics of Copa

Start at: 2018-06-18 18:51:51
End at: 2018-06-18 18:52:21
Local clock offset: -1.919 ms
Remote clock offset: -5.082 ms


# Below is generated by plot.py at 2018-06-18 19:26:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.24 Mbit/s
95th percentile per-packet one-way delay: 23.442 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.96 Mbit/s
95th percentile per-packet one-way delay: 10.385 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.70 Mbit/s
95th percentile per-packet one-way delay: 25.168 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.58 Mbit/s
95th percentile per-packet one-way delay: 29.252 ms
Loss rate: 0.00%
```
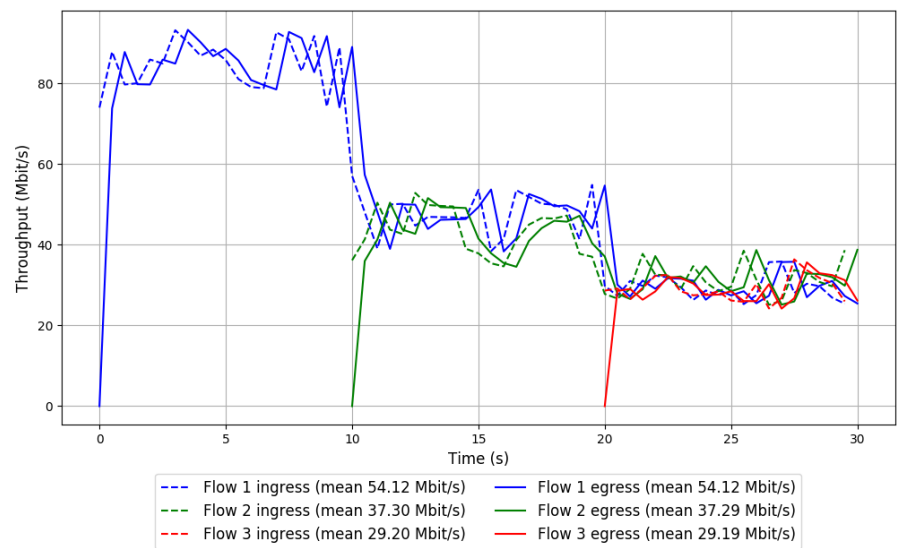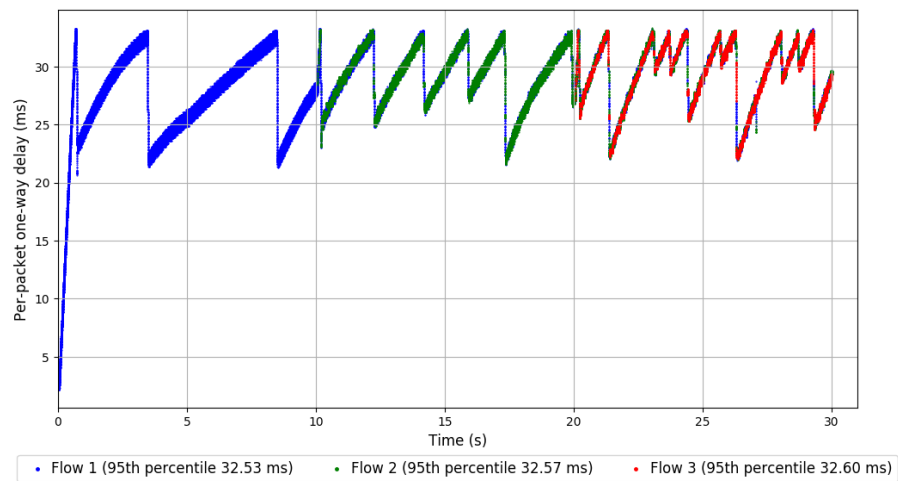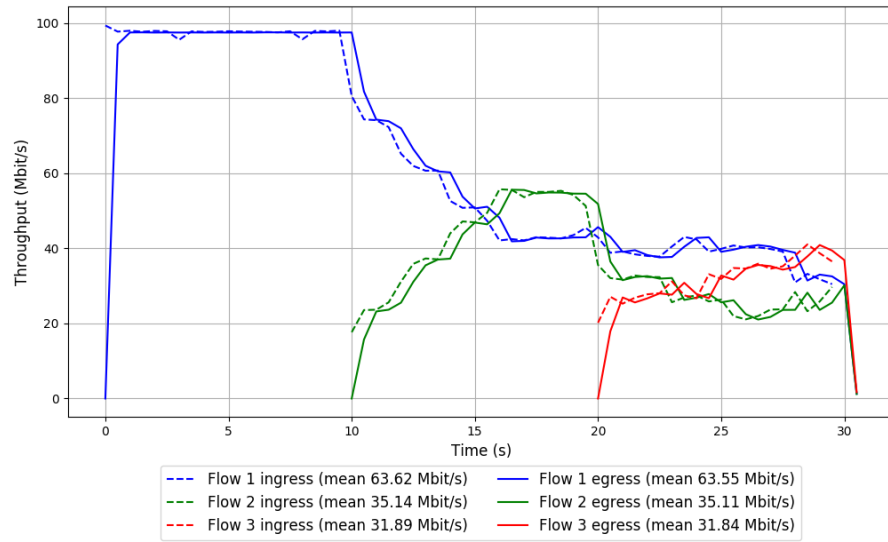
Run 9: Report of Copa — Data Link

Flow 1 ingress (mean 51.96 Mbit/s) — Flow 1 egress (mean 51.96 Mbit/s)
Flow 2 ingress (mean 36.70 Mbit/s) — Flow 2 egress (mean 36.70 Mbit/s)
Flow 3 ingress (mean 29.58 Mbit/s) — Flow 3 egress (mean 29.58 Mbit/s)

Flow 1 (95th percentile 10.38 ms) • Flow 2 (95th percentile 25.17 ms) • Flow 3 (95th percentile 29.25 ms)

```
Run 10: Statistics of Copa

Start at: 2018-06-18 19:09:55
End at: 2018-06-18 19:10:25
Local clock offset: -1.119 ms
Remote clock offset: 0.721 ms


# Below is generated by plot.py at 2018-06-18 19:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.66 Mbit/s
95th percentile per-packet one-way delay: 28.068 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 54.12 Mbit/s
95th percentile per-packet one-way delay: 26.496 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.29 Mbit/s
95th percentile per-packet one-way delay: 29.091 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 29.19 Mbit/s
95th percentile per-packet one-way delay: 28.710 ms
Loss rate: 0.02%
```
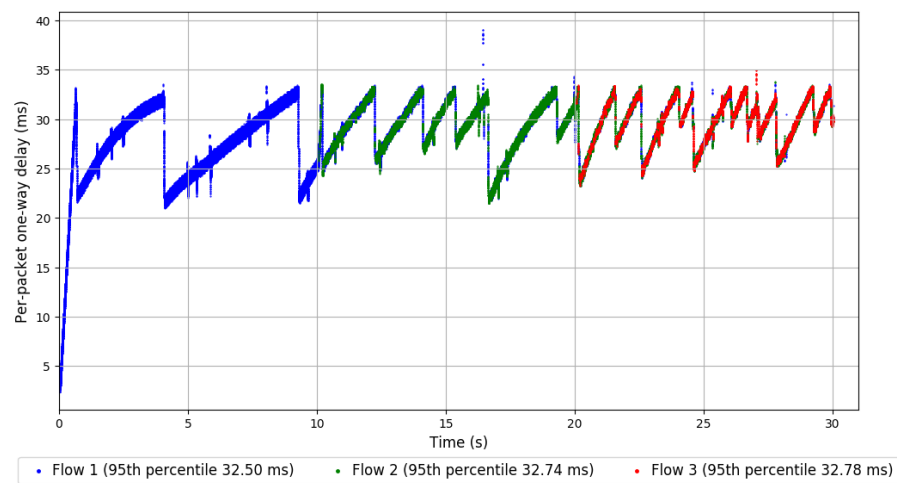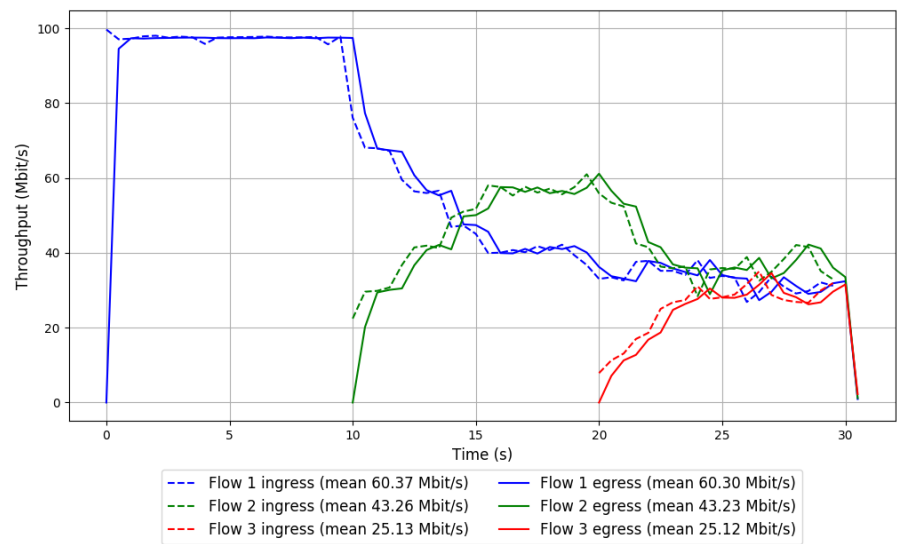
Run 10: Report of Copa — Data Link

Flow 1 ingress (mean 54.12 Mbit/s)   Flow 1 egress (mean 54.12 Mbit/s)
Flow 2 ingress (mean 37.30 Mbit/s)   Flow 2 egress (mean 37.29 Mbit/s)
Flow 3 ingress (mean 29.20 Mbit/s)   Flow 3 egress (mean 29.19 Mbit/s)

• Flow 1 (95th percentile 26.50 ms)   • Flow 2 (95th percentile 29.09 ms)   • Flow 3 (95th percentile 28.71 ms)
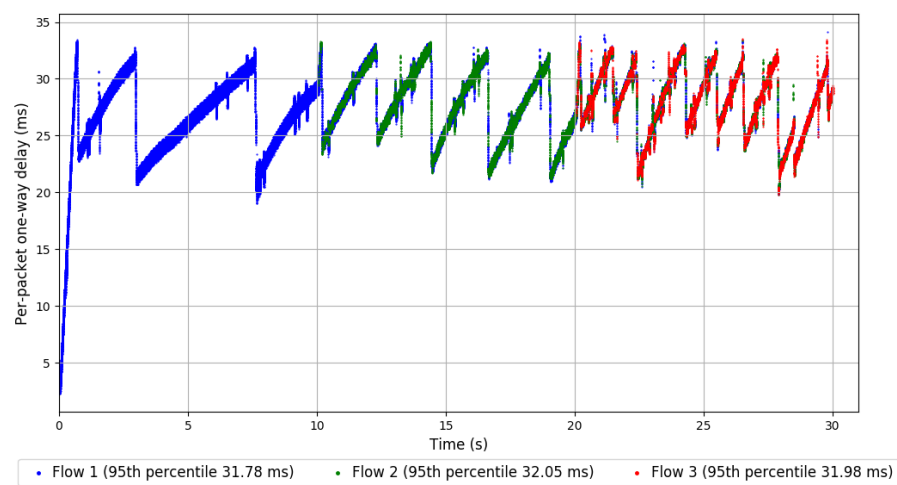
```
Run 1: Statistics of TCP Cubic

Start at: 2018-06-18 16:28:23
End at: 2018-06-18 16:28:53
Local clock offset: -1.874 ms
Remote clock offset: -1.981 ms


# Below is generated by plot.py at 2018-06-18 19:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.551 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 63.55 Mbit/s
95th percentile per-packet one-way delay: 32.527 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 35.11 Mbit/s
95th percentile per-packet one-way delay: 32.571 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 31.84 Mbit/s
95th percentile per-packet one-way delay: 32.598 ms
Loss rate: 0.13%
```
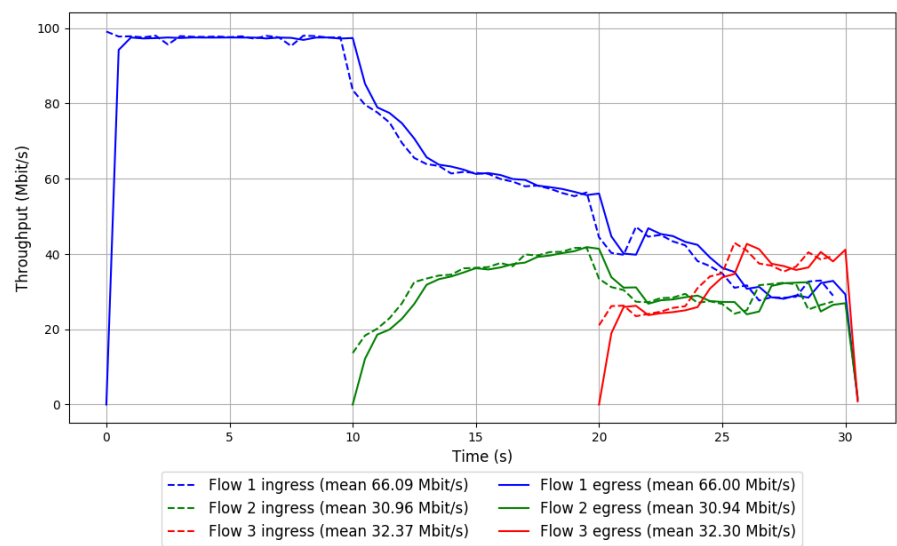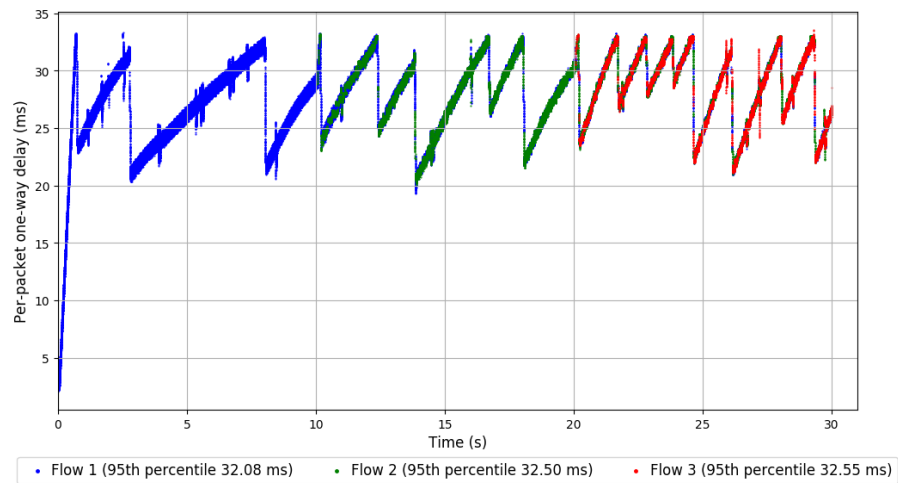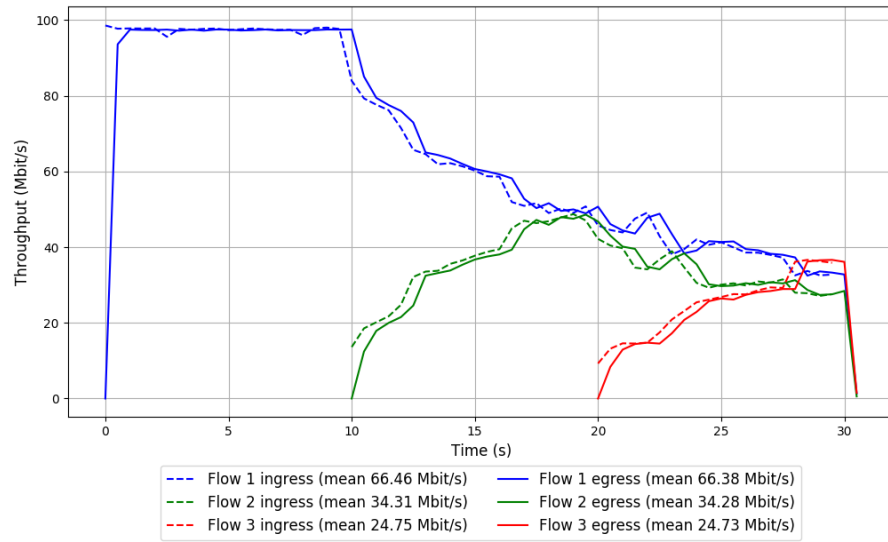
Run 1: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 63.62 Mbit/s) —— Flow 1 egress (mean 63.55 Mbit/s)
- - - Flow 2 ingress (mean 35.14 Mbit/s) —— Flow 2 egress (mean 35.11 Mbit/s)
- - - Flow 3 ingress (mean 31.89 Mbit/s) —— Flow 3 egress (mean 31.84 Mbit/s)

• Flow 1 (95th percentile 32.53 ms)   • Flow 2 (95th percentile 32.57 ms)   • Flow 3 (95th percentile 32.60 ms)

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```
Run 2: Statistics of TCP Cubic

Start at: 2018-06-18 16:46:28
End at: 2018-06-18 16:46:58
Local clock offset: -2.034 ms
Remote clock offset: -1.42 ms


# Below is generated by plot.py at 2018-06-18 19:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 32.552 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 60.30 Mbit/s
95th percentile per-packet one-way delay: 32.502 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 43.23 Mbit/s
95th percentile per-packet one-way delay: 32.744 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 25.12 Mbit/s
95th percentile per-packet one-way delay: 32.784 ms
Loss rate: 0.06%
```
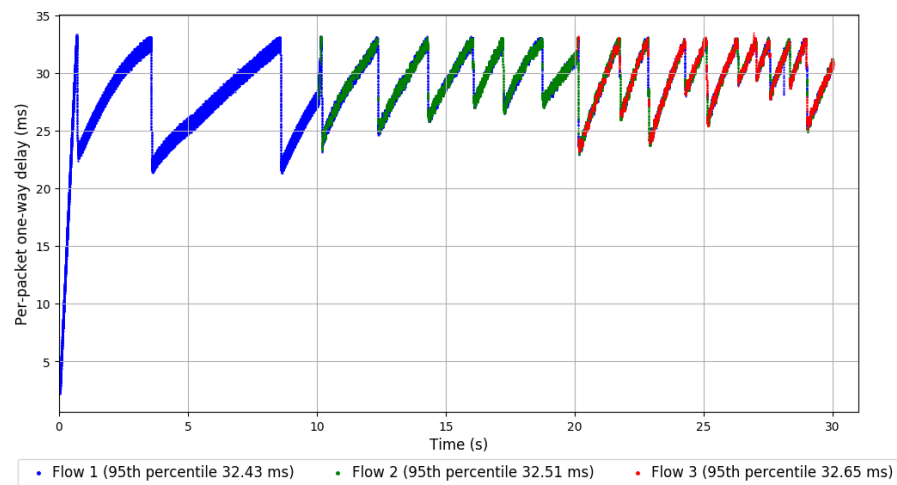
Run 2: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 60.37 Mbit/s) —— Flow 1 egress (mean 60.30 Mbit/s)
- - - Flow 2 ingress (mean 43.26 Mbit/s) —— Flow 2 egress (mean 43.23 Mbit/s)
- - - Flow 3 ingress (mean 25.13 Mbit/s) —— Flow 3 egress (mean 25.12 Mbit/s)

• Flow 1 (95th percentile 32.50 ms)   • Flow 2 (95th percentile 32.74 ms)   • Flow 3 (95th percentile 32.78 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2018-06-18 17:04:33
End at: 2018-06-18 17:05:03
Local clock offset: -2.108 ms
Remote clock offset: 11.384 ms


# Below is generated by plot.py at 2018-06-18 19:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 31.850 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 66.00 Mbit/s
95th percentile per-packet one-way delay: 31.780 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 30.94 Mbit/s
95th percentile per-packet one-way delay: 32.045 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 32.30 Mbit/s
95th percentile per-packet one-way delay: 31.975 ms
Loss rate: 0.19%
```
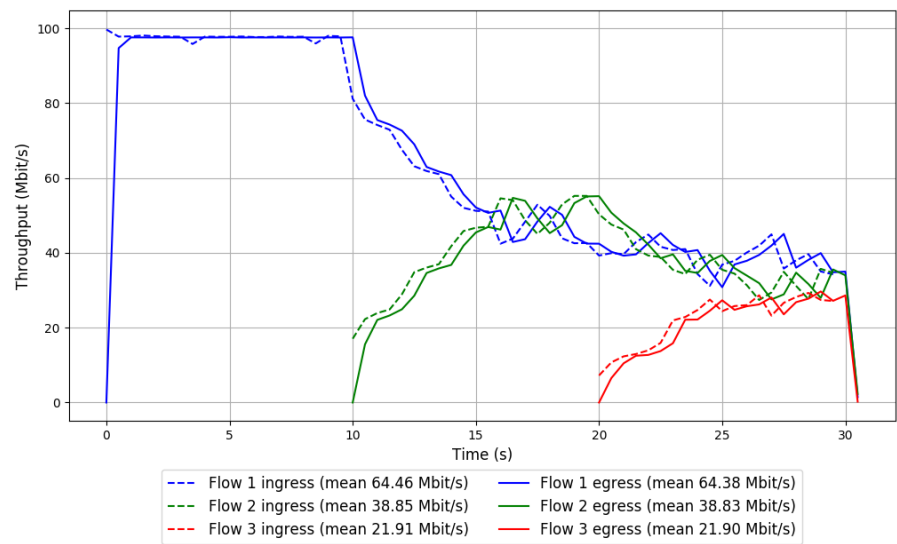
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2018-06-18 17:22:38
End at: 2018-06-18 17:23:08
Local clock offset: -3.124 ms
Remote clock offset: 16.381 ms


# Below is generated by plot.py at 2018-06-18 19:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 32.268 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 66.38 Mbit/s
95th percentile per-packet one-way delay: 32.075 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 34.28 Mbit/s
95th percentile per-packet one-way delay: 32.503 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 24.73 Mbit/s
95th percentile per-packet one-way delay: 32.548 ms
Loss rate: 0.09%
```
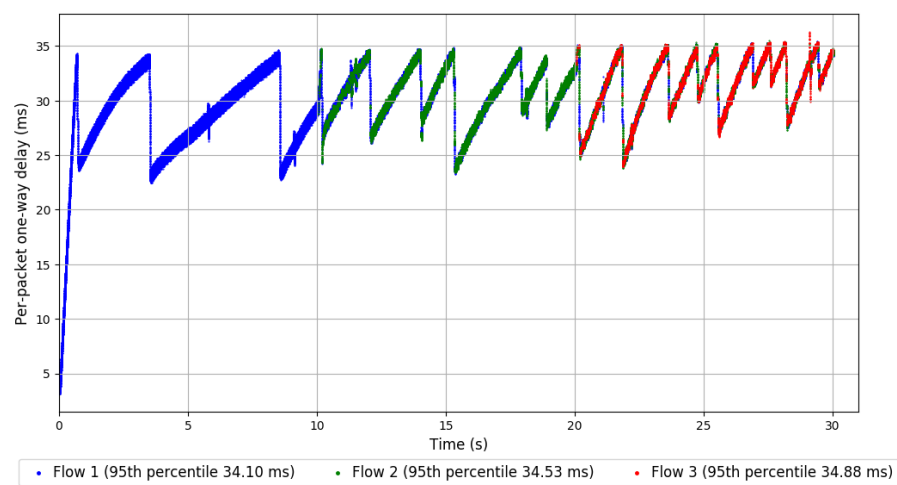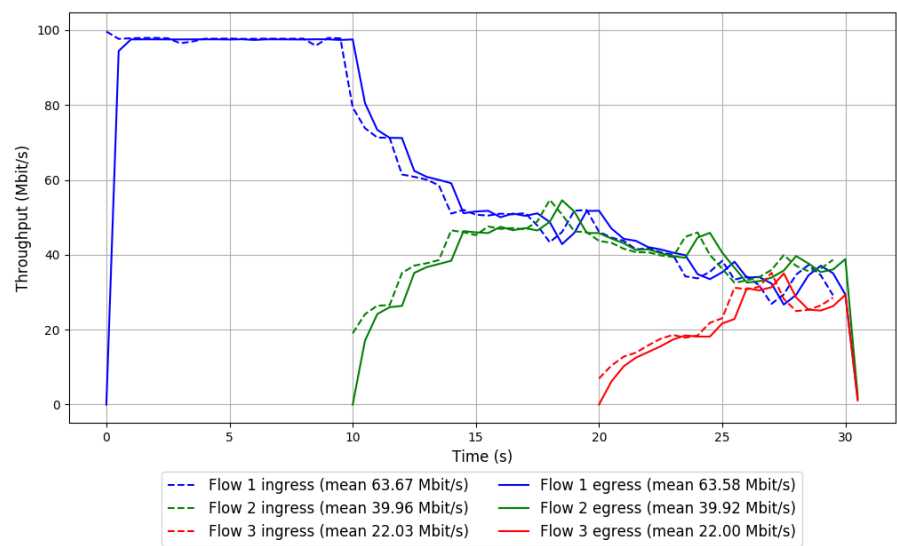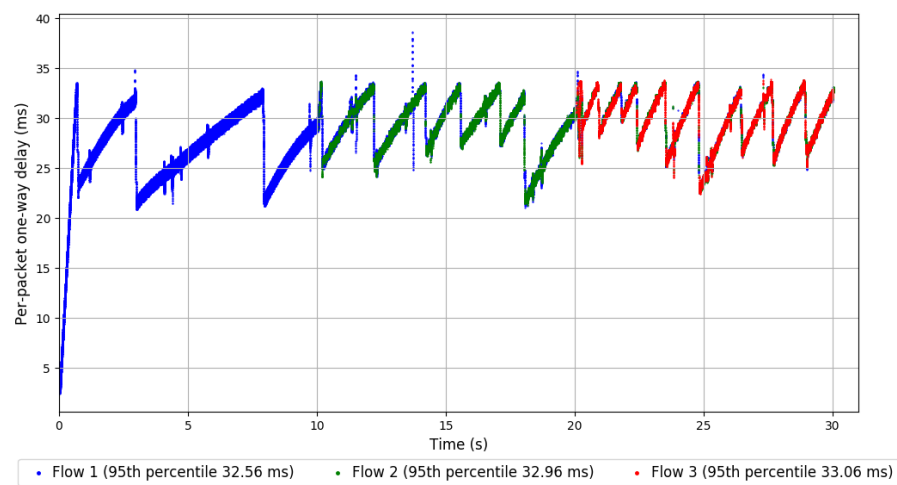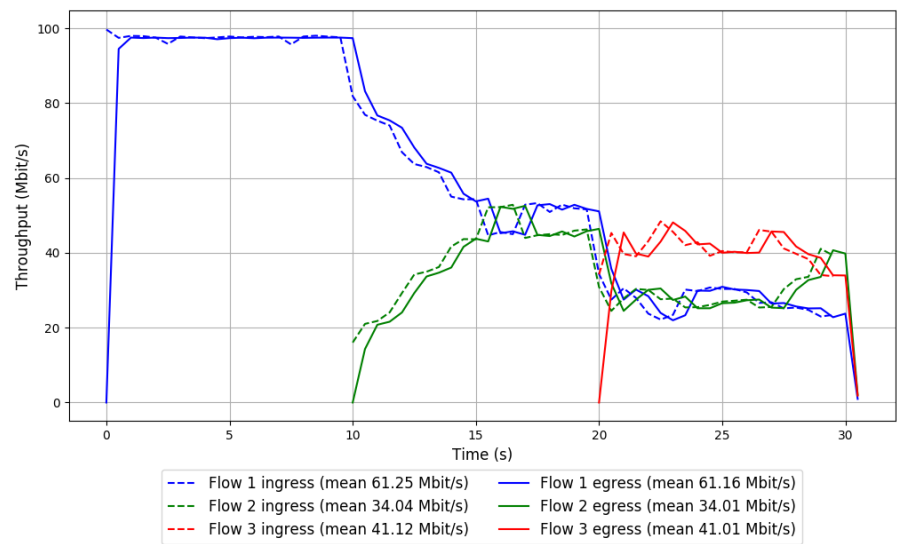
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2018-06-18 17:40:43
End at: 2018-06-18 17:41:13
Local clock offset: -5.439 ms
Remote clock offset: 20.05 ms


# Below is generated by plot.py at 2018-06-18 19:26:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 32.478 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 64.38 Mbit/s
95th percentile per-packet one-way delay: 32.428 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 38.83 Mbit/s
95th percentile per-packet one-way delay: 32.511 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 21.90 Mbit/s
95th percentile per-packet one-way delay: 32.653 ms
Loss rate: 0.07%
```
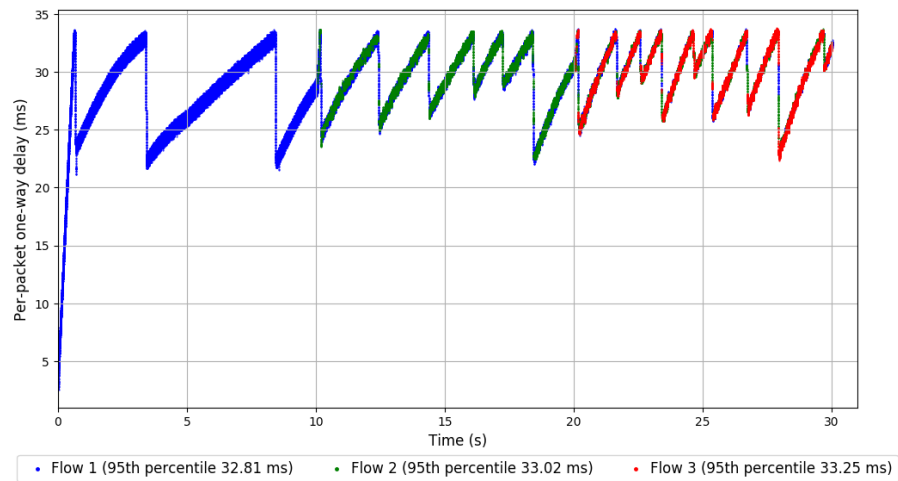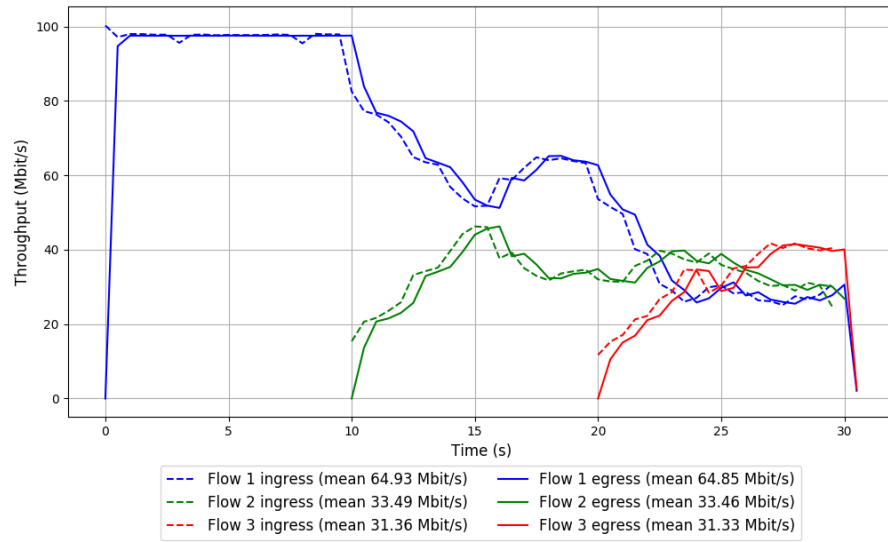
Run 5: Report of TCP Cubic — Data Link

- Flow 1 ingress (mean 64.46 Mbit/s) --- Flow 1 egress (mean 64.38 Mbit/s)
- Flow 2 ingress (mean 38.85 Mbit/s) --- Flow 2 egress (mean 38.83 Mbit/s)
- Flow 3 ingress (mean 21.91 Mbit/s) --- Flow 3 egress (mean 21.90 Mbit/s)

- Flow 1 (95th percentile 32.43 ms)   - Flow 2 (95th percentile 32.51 ms)   - Flow 3 (95th percentile 32.65 ms)

```
Run 6: Statistics of TCP Cubic

Start at: 2018-06-18 17:58:48
End at: 2018-06-18 17:59:18
Local clock offset: -7.805 ms
Remote clock offset: 19.66 ms


# Below is generated by plot.py at 2018-06-18 19:26:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 34.360 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 63.58 Mbit/s
95th percentile per-packet one-way delay: 34.096 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 39.92 Mbit/s
95th percentile per-packet one-way delay: 34.533 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 22.00 Mbit/s
95th percentile per-packet one-way delay: 34.885 ms
Loss rate: 0.11%
```
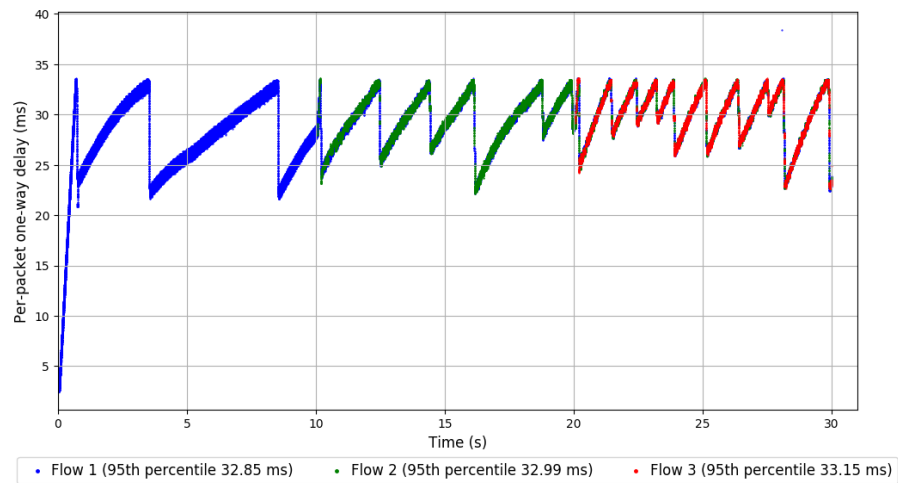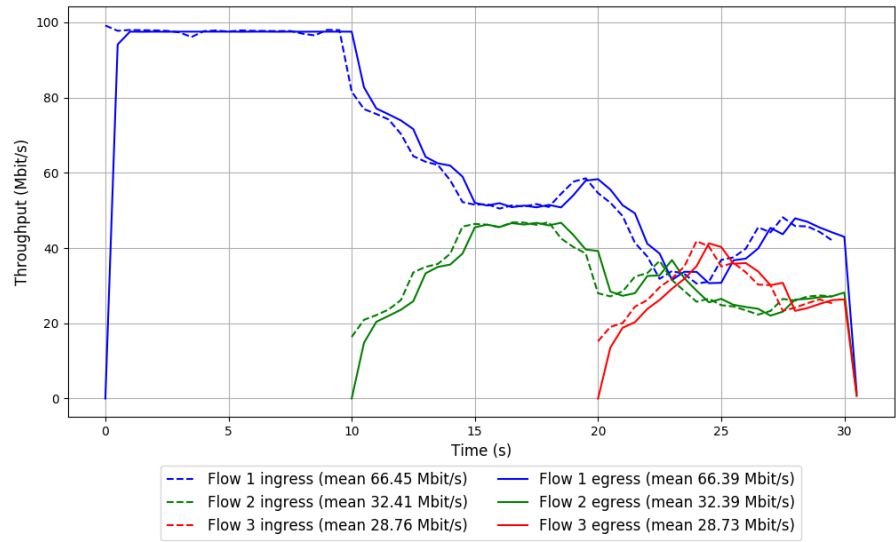
Run 6: Report of TCP Cubic — Data Link

```
Run 7: Statistics of TCP Cubic

Start at: 2018-06-18 18:16:52
End at: 2018-06-18 18:17:22
Local clock offset: -9.021 ms
Remote clock offset: -4.686 ms


# Below is generated by plot.py at 2018-06-18 19:26:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 32.787 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 61.16 Mbit/s
95th percentile per-packet one-way delay: 32.565 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 34.01 Mbit/s
95th percentile per-packet one-way delay: 32.961 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 41.01 Mbit/s
95th percentile per-packet one-way delay: 33.058 ms
Loss rate: 0.25%
```

Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2018-06-18 18:34:56
End at: 2018-06-18 18:35:26
Local clock offset: -9.357 ms
Remote clock offset: -8.613 ms


# Below is generated by plot.py at 2018-06-18 19:26:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 32.960 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 64.85 Mbit/s
95th percentile per-packet one-way delay: 32.814 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 33.46 Mbit/s
95th percentile per-packet one-way delay: 33.023 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 31.33 Mbit/s
95th percentile per-packet one-way delay: 33.253 ms
Loss rate: 0.06%
```
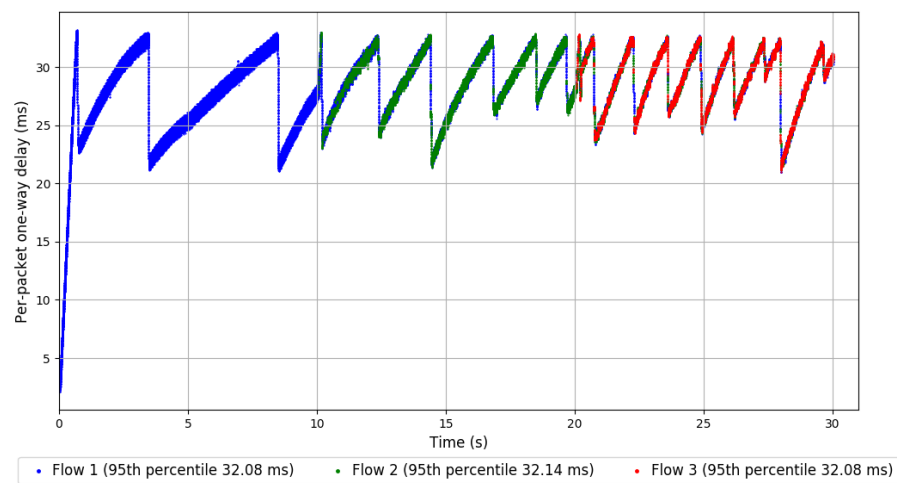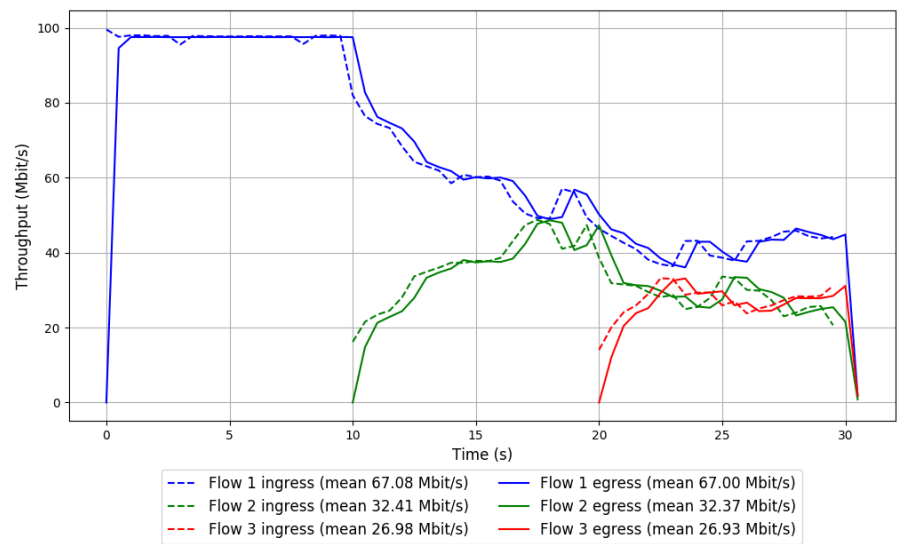
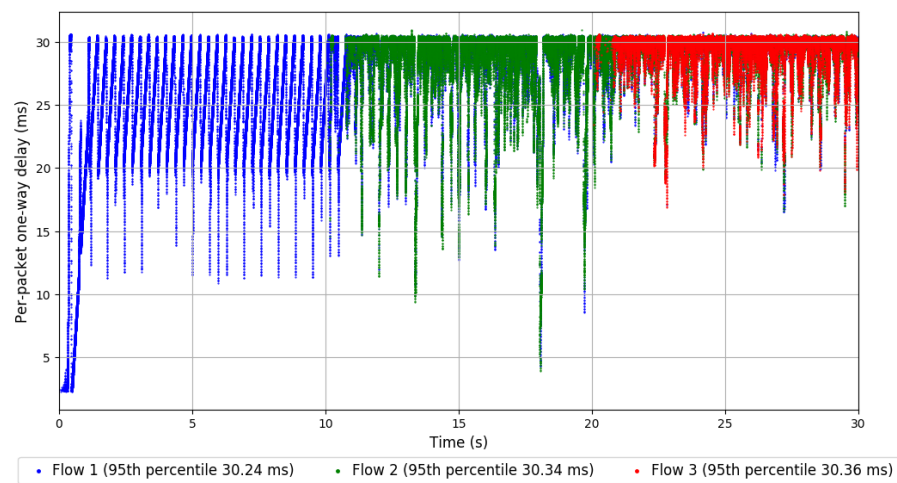Run 8: Report of TCP Cubic — Data Link

```
Run 9: Statistics of TCP Cubic

Start at: 2018-06-18 18:53:01
End at: 2018-06-18 18:53:31
Local clock offset: -1.737 ms
Remote clock offset: -5.084 ms


# Below is generated by plot.py at 2018-06-18 19:26:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.912 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 66.39 Mbit/s
95th percentile per-packet one-way delay: 32.849 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 32.39 Mbit/s
95th percentile per-packet one-way delay: 32.986 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 28.73 Mbit/s
95th percentile per-packet one-way delay: 33.149 ms
Loss rate: 0.13%
```
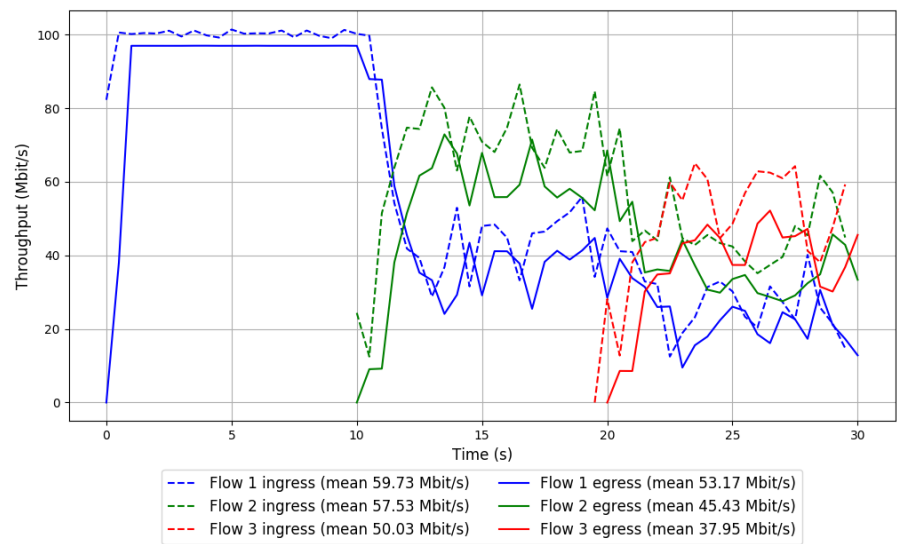
Run 9: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 66.45 Mbit/s)   —— Flow 1 egress (mean 66.39 Mbit/s)
- - - Flow 2 ingress (mean 32.41 Mbit/s)   —— Flow 2 egress (mean 32.39 Mbit/s)
- - - Flow 3 ingress (mean 28.76 Mbit/s)   —— Flow 3 egress (mean 28.73 Mbit/s)

• Flow 1 (95th percentile 32.85 ms)   • Flow 2 (95th percentile 32.99 ms)   • Flow 3 (95th percentile 33.15 ms)

```
Run 10: Statistics of TCP Cubic

Start at: 2018-06-18 19:11:05
End at: 2018-06-18 19:11:35
Local clock offset: -1.218 ms
Remote clock offset: 1.831 ms


# Below is generated by plot.py at 2018-06-18 19:27:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 32.093 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 67.00 Mbit/s
95th percentile per-packet one-way delay: 32.076 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 32.37 Mbit/s
95th percentile per-packet one-way delay: 32.138 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 26.93 Mbit/s
95th percentile per-packet one-way delay: 32.082 ms
Loss rate: 0.17%
```

Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2018-06-18 16:22:47
End at: 2018-06-18 16:23:17
Local clock offset: -1.985 ms
Remote clock offset: -2.009 ms

# Below is generated by plot.py at 2018-06-18 19:28:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.00 Mbit/s
95th percentile per-packet one-way delay: 30.311 ms
Loss rate: 16.20%
-- Flow 1:
Average throughput: 53.17 Mbit/s
95th percentile per-packet one-way delay: 30.238 ms
Loss rate: 10.90%
-- Flow 2:
Average throughput: 45.43 Mbit/s
95th percentile per-packet one-way delay: 30.344 ms
Loss rate: 21.02%
-- Flow 3:
Average throughput: 37.95 Mbit/s
95th percentile per-packet one-way delay: 30.357 ms
Loss rate: 24.14%
```
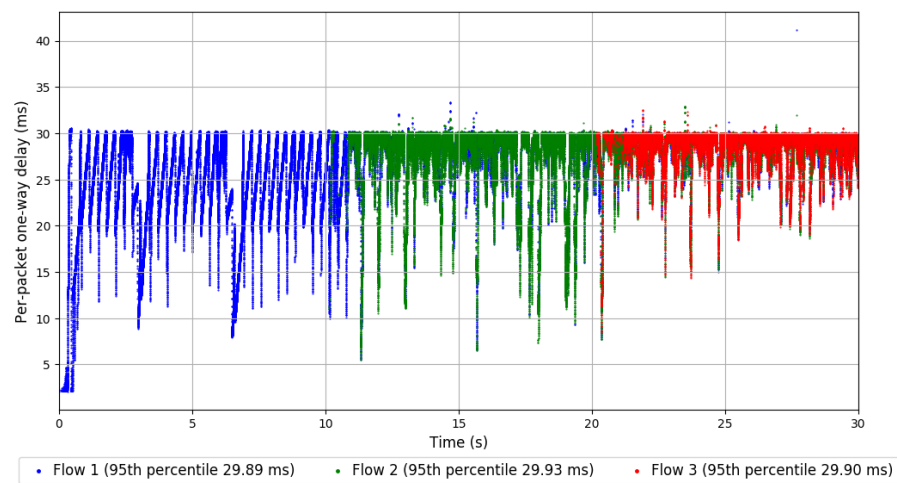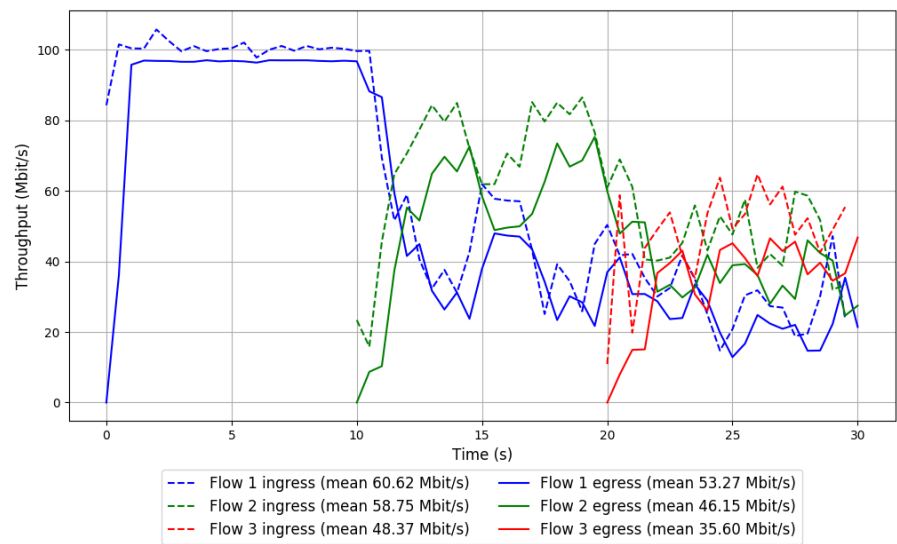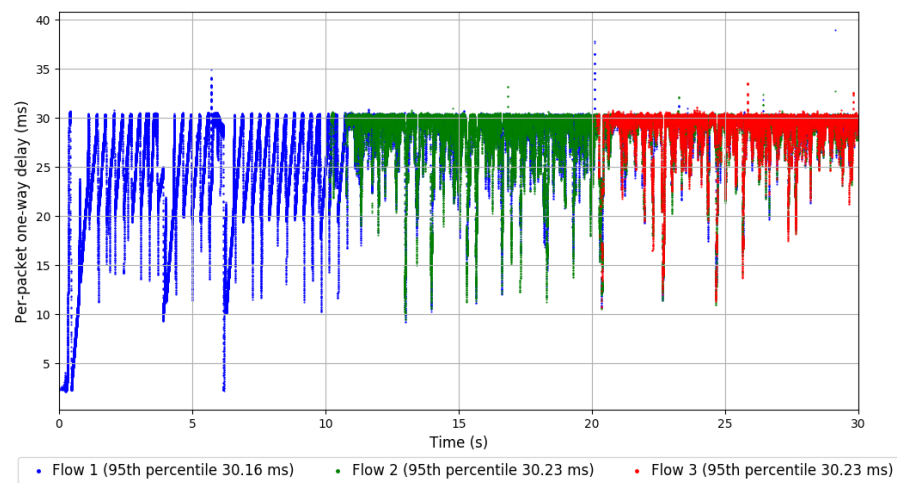
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-06-18 16:40:52
End at: 2018-06-18 16:41:22
Local clock offset: -1.949 ms
Remote clock offset: -1.577 ms


# Below is generated by plot.py at 2018-06-18 19:28:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.92 Mbit/s
95th percentile per-packet one-way delay: 30.254 ms
Loss rate: 17.28%
-- Flow 1:
Average throughput: 52.68 Mbit/s
95th percentile per-packet one-way delay: 30.178 ms
Loss rate: 11.43%
-- Flow 2:
Average throughput: 46.83 Mbit/s
95th percentile per-packet one-way delay: 30.293 ms
Loss rate: 21.66%
-- Flow 3:
Average throughput: 36.52 Mbit/s
95th percentile per-packet one-way delay: 30.302 ms
Loss rate: 27.66%
```
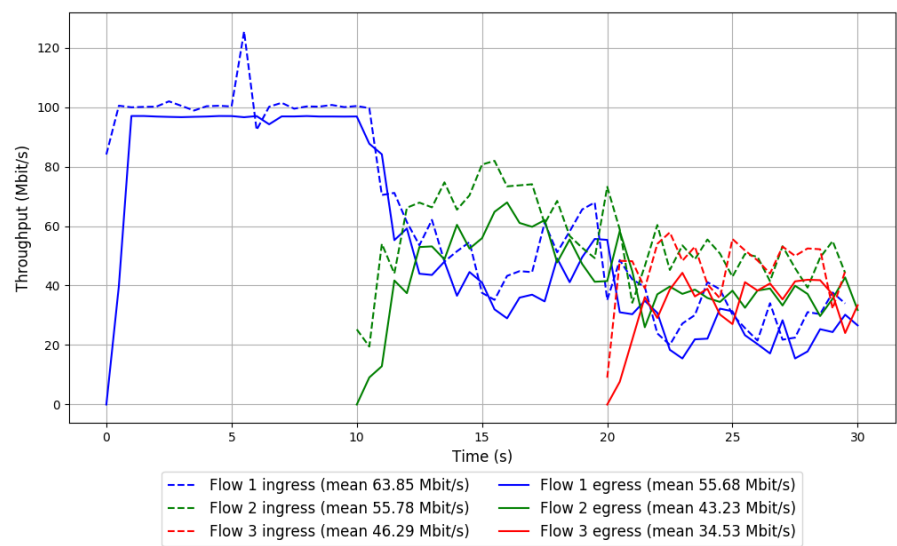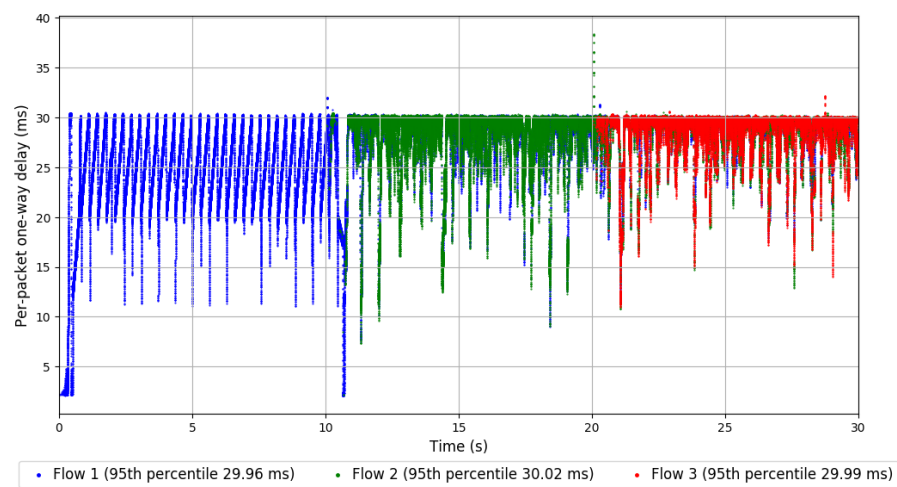
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 59.53 Mbit/s) --- Flow 1 egress (mean 52.68 Mbit/s)
Flow 2 ingress (mean 59.79 Mbit/s) --- Flow 2 egress (mean 46.83 Mbit/s)
Flow 3 ingress (mean 50.49 Mbit/s) --- Flow 3 egress (mean 36.52 Mbit/s)

Flow 1 (95th percentile 30.18 ms)   Flow 2 (95th percentile 30.29 ms)   Flow 3 (95th percentile 30.30 ms)
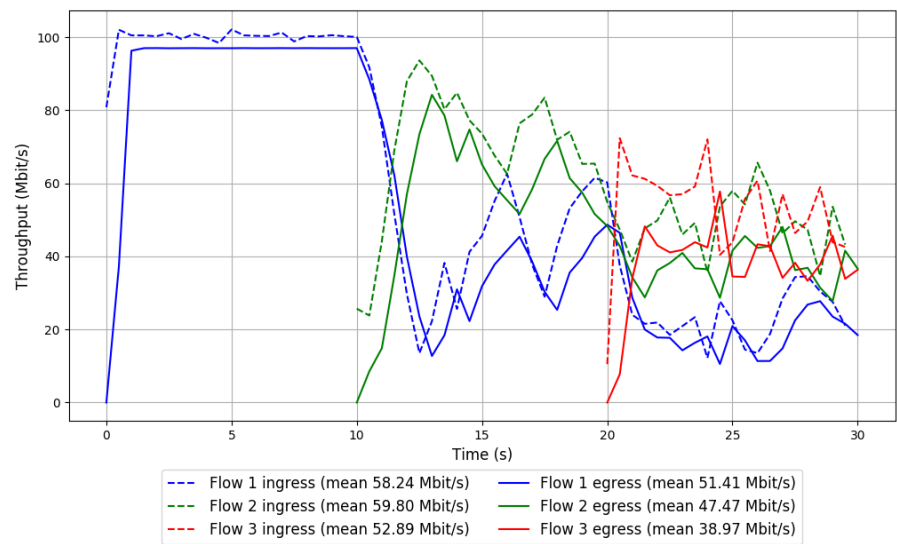
67

```
Run 3: Statistics of FillP

Start at: 2018-06-18 16:58:57
End at: 2018-06-18 16:59:27
Local clock offset: -1.988 ms
Remote clock offset: 8.408 ms


# Below is generated by plot.py at 2018-06-18 19:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.76 Mbit/s
95th percentile per-packet one-way delay: 29.908 ms
Loss rate: 17.20%
-- Flow 1:
Average throughput: 53.27 Mbit/s
95th percentile per-packet one-way delay: 29.890 ms
Loss rate: 12.04%
-- Flow 2:
Average throughput: 46.15 Mbit/s
95th percentile per-packet one-way delay: 29.931 ms
Loss rate: 21.43%
-- Flow 3:
Average throughput: 35.60 Mbit/s
95th percentile per-packet one-way delay: 29.902 ms
Loss rate: 26.38%
```

Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 60.62 Mbit/s) ---- Flow 1 egress (mean 53.27 Mbit/s)
Flow 2 ingress (mean 58.75 Mbit/s) ---- Flow 2 egress (mean 46.15 Mbit/s)
Flow 3 ingress (mean 48.37 Mbit/s) ---- Flow 3 egress (mean 35.60 Mbit/s)

Flow 1 (95th percentile 29.89 ms) Flow 2 (95th percentile 29.93 ms) Flow 3 (95th percentile 29.90 ms)

69

```
Run 4: Statistics of FillP

Start at: 2018-06-18 17:17:02
End at: 2018-06-18 17:17:32
Local clock offset: -2.95 ms
Remote clock offset: 15.232 ms


# Below is generated by plot.py at 2018-06-18 19:28:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.88 Mbit/s
95th percentile per-packet one-way delay: 30.202 ms
Loss rate: 17.50%
-- Flow 1:
Average throughput: 55.68 Mbit/s
95th percentile per-packet one-way delay: 30.158 ms
Loss rate: 12.71%
-- Flow 2:
Average throughput: 43.23 Mbit/s
95th percentile per-packet one-way delay: 30.230 ms
Loss rate: 22.48%
-- Flow 3:
Average throughput: 34.53 Mbit/s
95th percentile per-packet one-way delay: 30.233 ms
Loss rate: 25.40%
```
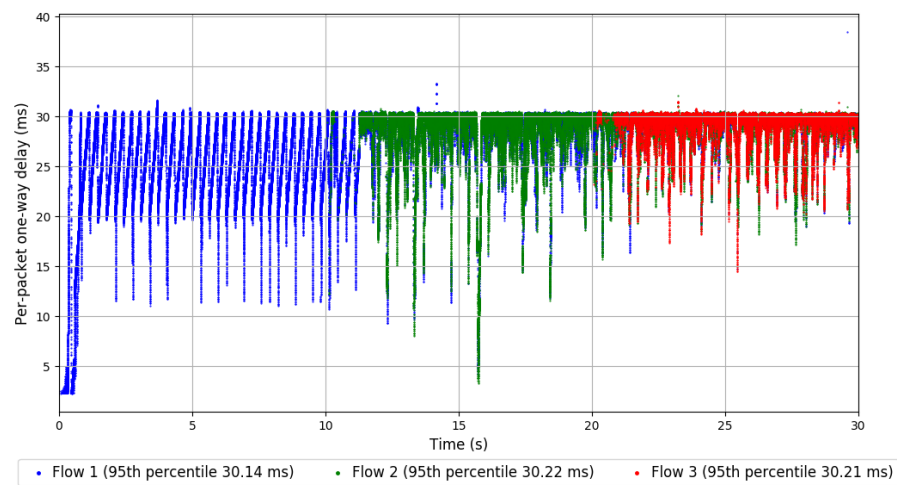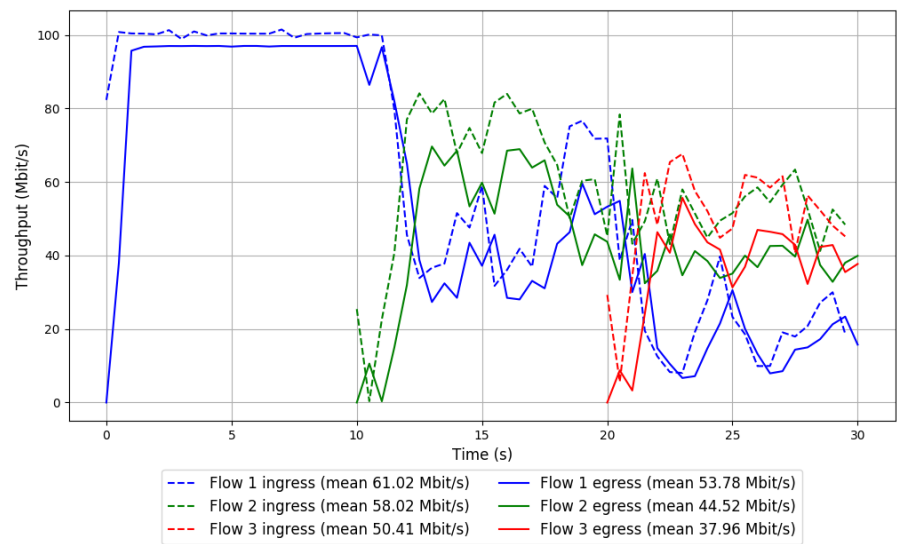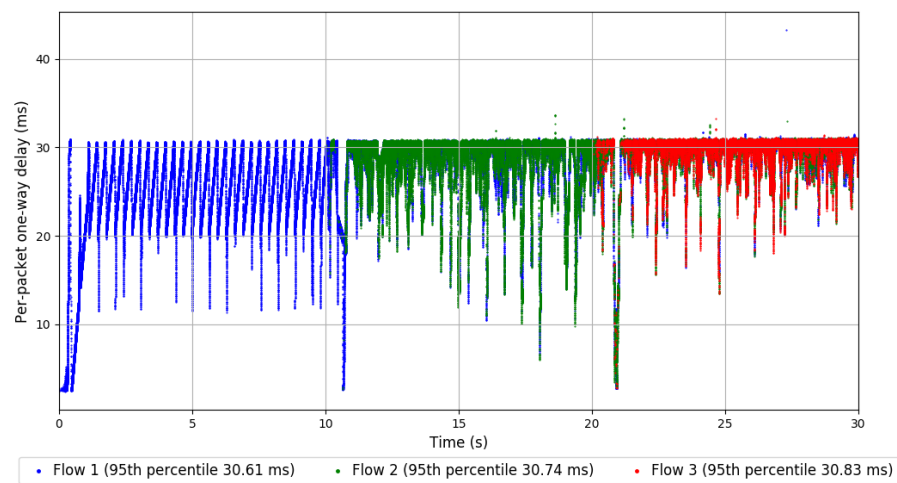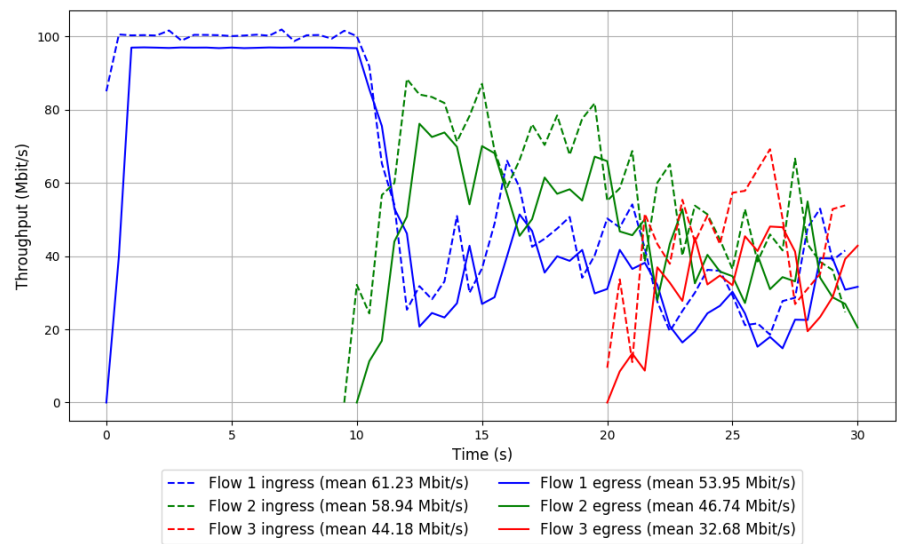
Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 63.85 Mbit/s) --- Flow 1 egress (mean 55.68 Mbit/s)
Flow 2 ingress (mean 55.78 Mbit/s) --- Flow 2 egress (mean 43.23 Mbit/s)
Flow 3 ingress (mean 46.29 Mbit/s) --- Flow 3 egress (mean 34.53 Mbit/s)

Flow 1 (95th percentile 30.16 ms)   Flow 2 (95th percentile 30.23 ms)   Flow 3 (95th percentile 30.23 ms)

71

```
Run 5: Statistics of FillP

Start at: 2018-06-18 17:35:07
End at: 2018-06-18 17:35:37
Local clock offset: -3.832 ms
Remote clock offset: 18.927 ms


# Below is generated by plot.py at 2018-06-18 19:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.89 Mbit/s
95th percentile per-packet one-way delay: 29.992 ms
Loss rate: 16.97%
-- Flow 1:
Average throughput: 51.41 Mbit/s
95th percentile per-packet one-way delay: 29.958 ms
Loss rate: 11.65%
-- Flow 2:
Average throughput: 47.47 Mbit/s
95th percentile per-packet one-way delay: 30.018 ms
Loss rate: 20.62%
-- Flow 3:
Average throughput: 38.97 Mbit/s
95th percentile per-packet one-way delay: 29.993 ms
Loss rate: 26.33%
```
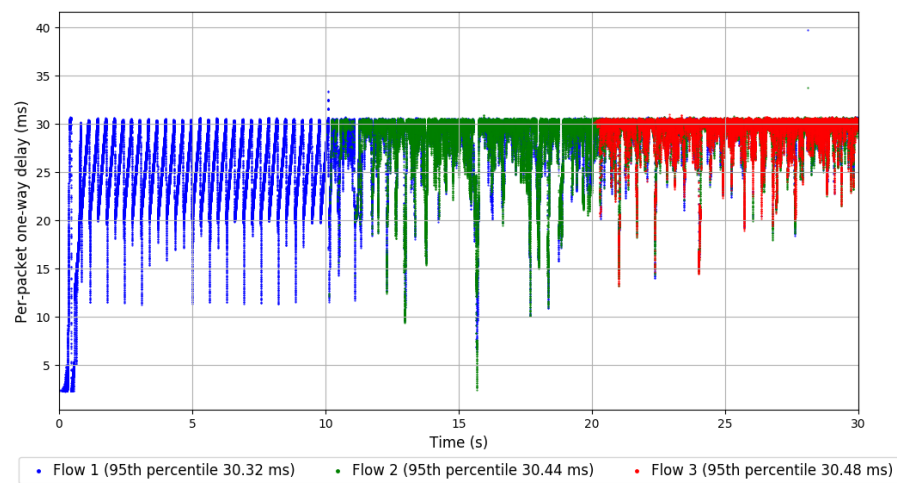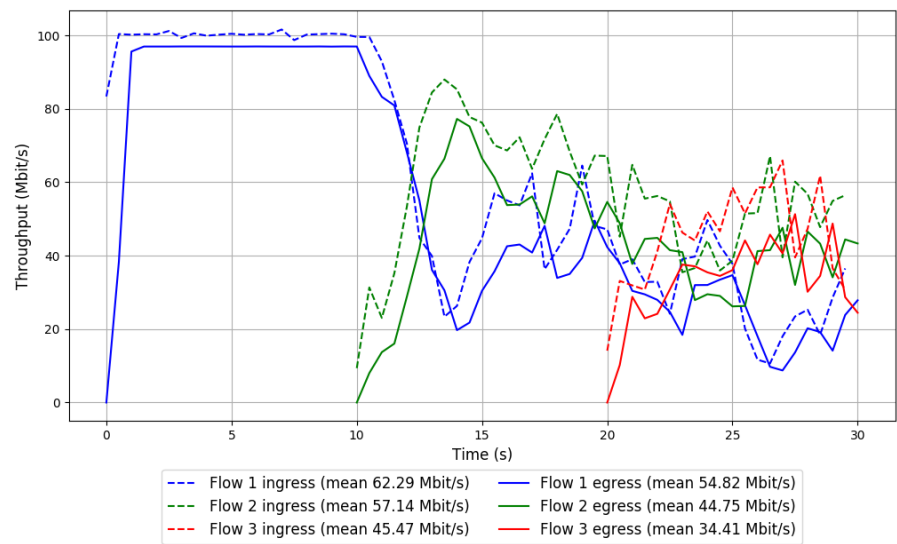
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 58.24 Mbit/s)   Flow 1 egress (mean 51.41 Mbit/s)
Flow 2 ingress (mean 59.80 Mbit/s)   Flow 2 egress (mean 47.47 Mbit/s)
Flow 3 ingress (mean 52.89 Mbit/s)   Flow 3 egress (mean 38.97 Mbit/s)

Flow 1 (95th percentile 29.96 ms)   Flow 2 (95th percentile 30.02 ms)   Flow 3 (95th percentile 29.99 ms)

```
Run 6: Statistics of FillP

Start at: 2018-06-18 17:53:11
End at: 2018-06-18 17:53:41
Local clock offset: -7.369 ms
Remote clock offset: 22.42 ms


# Below is generated by plot.py at 2018-06-18 19:28:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.96 Mbit/s
95th percentile per-packet one-way delay: 30.187 ms
Loss rate: 17.46%
-- Flow 1:
Average throughput: 53.78 Mbit/s
95th percentile per-packet one-way delay: 30.136 ms
Loss rate: 11.79%
-- Flow 2:
Average throughput: 44.52 Mbit/s
95th percentile per-packet one-way delay: 30.216 ms
Loss rate: 23.28%
-- Flow 3:
Average throughput: 37.96 Mbit/s
95th percentile per-packet one-way delay: 30.209 ms
Loss rate: 24.70%
```
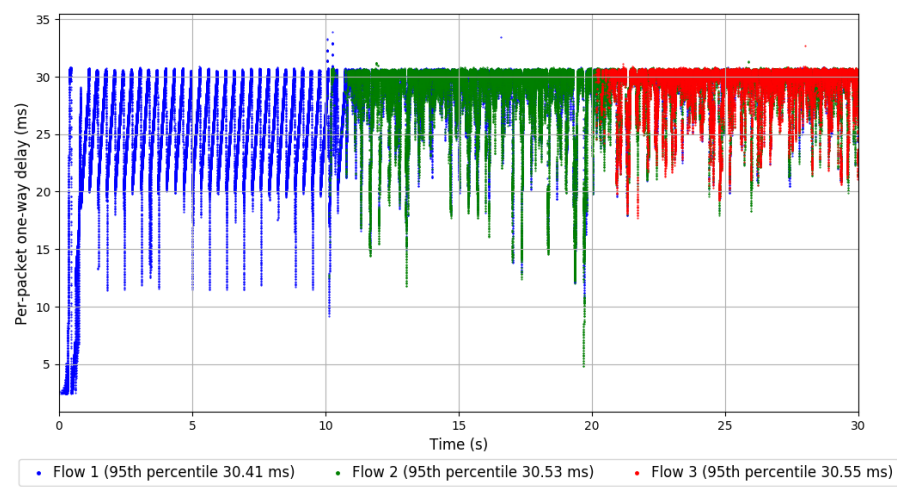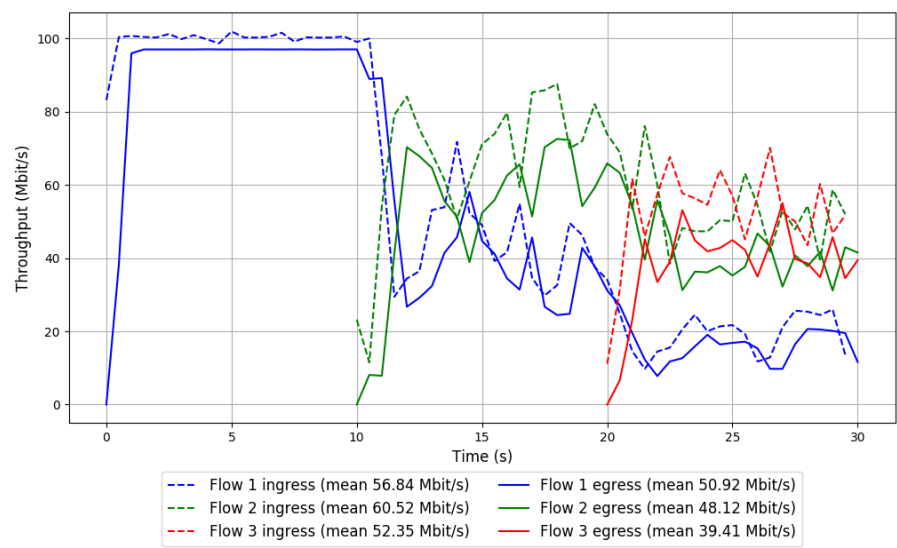
Run 6: Report of FillP — Data Link

```
Run 7: Statistics of FillP

Start at: 2018-06-18 18:11:16
End at: 2018-06-18 18:11:46
Local clock offset: -8.678 ms
Remote clock offset: -0.797 ms


# Below is generated by plot.py at 2018-06-18 19:28:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.90 Mbit/s
95th percentile per-packet one-way delay: 30.712 ms
Loss rate: 16.66%
-- Flow 1:
Average throughput: 53.95 Mbit/s
95th percentile per-packet one-way delay: 30.615 ms
Loss rate: 11.80%
-- Flow 2:
Average throughput: 46.74 Mbit/s
95th percentile per-packet one-way delay: 30.741 ms
Loss rate: 20.71%
-- Flow 3:
Average throughput: 32.68 Mbit/s
95th percentile per-packet one-way delay: 30.829 ms
Loss rate: 26.05%
```
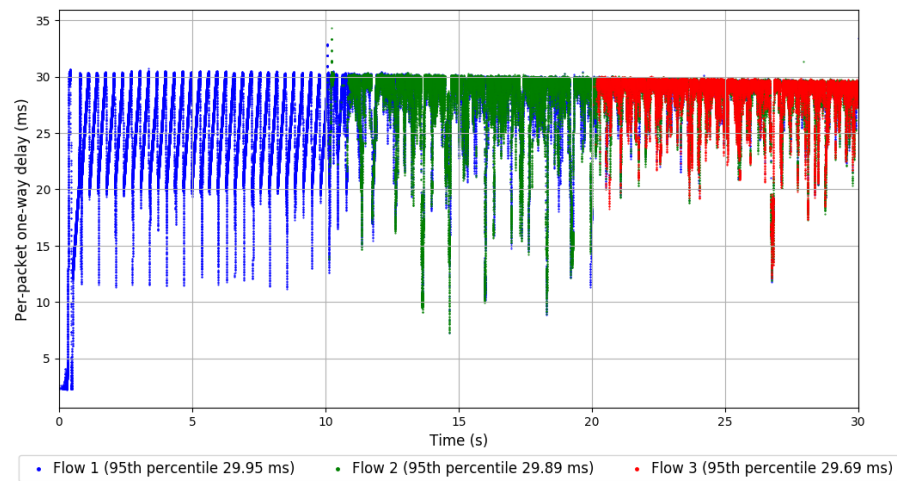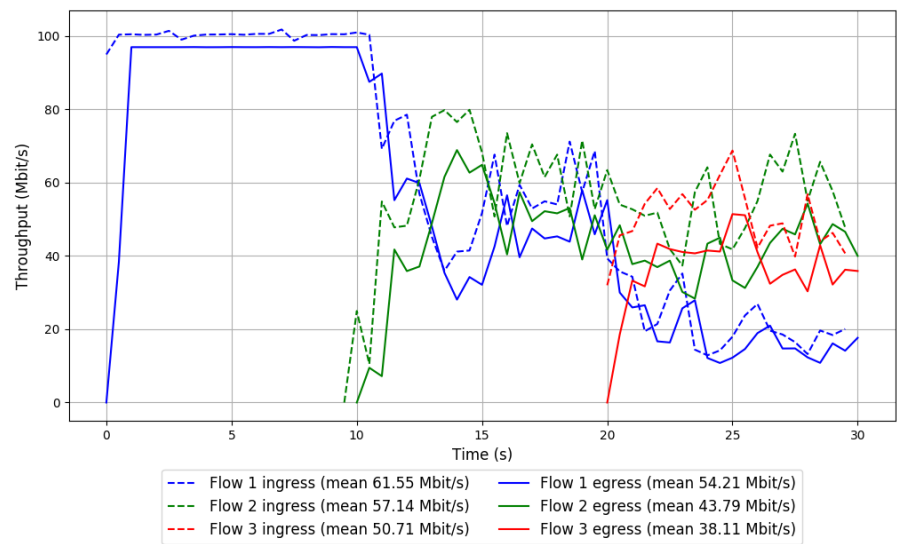
Run 7: Report of FillP — Data Link

Flow 1 ingress (mean 61.23 Mbit/s) --- Flow 1 egress (mean 53.95 Mbit/s)
Flow 2 ingress (mean 58.94 Mbit/s) --- Flow 2 egress (mean 46.74 Mbit/s)
Flow 3 ingress (mean 44.18 Mbit/s) --- Flow 3 egress (mean 32.68 Mbit/s)

Flow 1 (95th percentile 30.61 ms) • Flow 2 (95th percentile 30.74 ms) • Flow 3 (95th percentile 30.83 ms)

77

```
Run 8: Statistics of FillP

Start at: 2018-06-18 18:29:20
End at: 2018-06-18 18:29:50
Local clock offset: -9.796 ms
Remote clock offset: -10.15 ms

# Below is generated by plot.py at 2018-06-18 19:28:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 30.402 ms
Loss rate: 16.76%
-- Flow 1:
Average throughput: 54.82 Mbit/s
95th percentile per-packet one-way delay: 30.324 ms
Loss rate: 11.91%
-- Flow 2:
Average throughput: 44.75 Mbit/s
95th percentile per-packet one-way delay: 30.439 ms
Loss rate: 21.70%
-- Flow 3:
Average throughput: 34.41 Mbit/s
95th percentile per-packet one-way delay: 30.475 ms
Loss rate: 24.33%
```
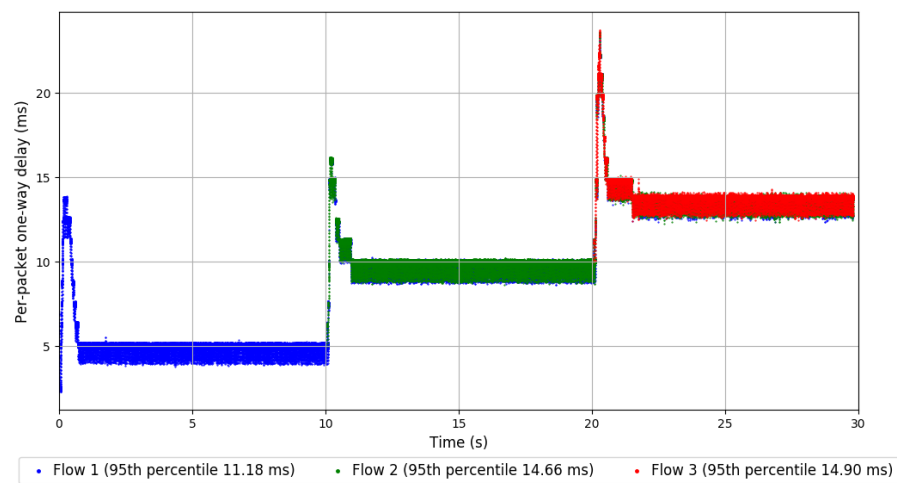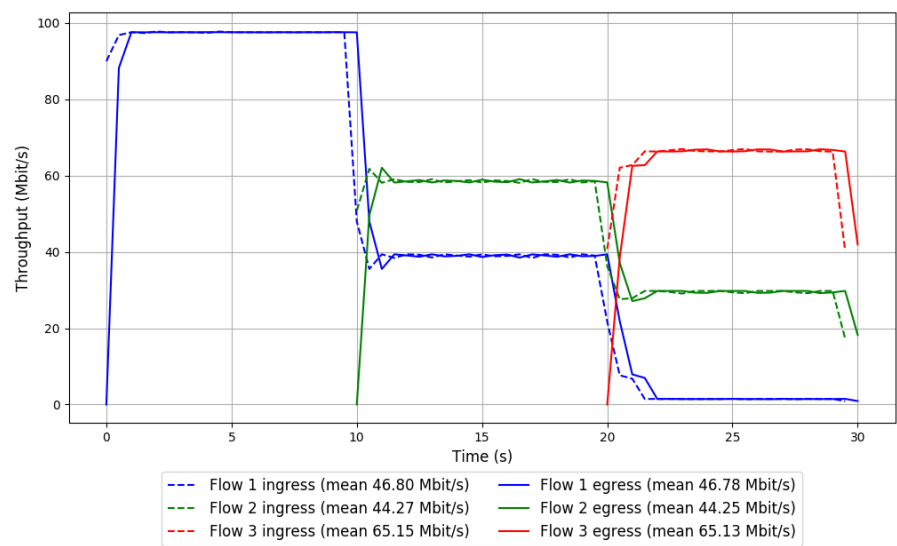
Run 8: Report of FillP — Data Link

Flow 1 ingress (mean 62.29 Mbit/s) --- Flow 1 egress (mean 54.82 Mbit/s)
Flow 2 ingress (mean 57.14 Mbit/s) --- Flow 2 egress (mean 44.75 Mbit/s)
Flow 3 ingress (mean 45.47 Mbit/s) --- Flow 3 egress (mean 34.41 Mbit/s)

Flow 1 (95th percentile 30.32 ms)   Flow 2 (95th percentile 30.44 ms)   Flow 3 (95th percentile 30.48 ms)

```
Run 9: Statistics of FillP

Start at: 2018-06-18 18:47:25
End at: 2018-06-18 18:47:55
Local clock offset: -3.003 ms
Remote clock offset: -5.289 ms


# Below is generated by plot.py at 2018-06-18 19:29:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 30.496 ms
Loss rate: 16.11%
-- Flow 1:
Average throughput: 50.92 Mbit/s
95th percentile per-packet one-way delay: 30.410 ms
Loss rate: 10.35%
-- Flow 2:
Average throughput: 48.12 Mbit/s
95th percentile per-packet one-way delay: 30.526 ms
Loss rate: 20.50%
-- Flow 3:
Average throughput: 39.41 Mbit/s
95th percentile per-packet one-way delay: 30.555 ms
Loss rate: 24.74%
```
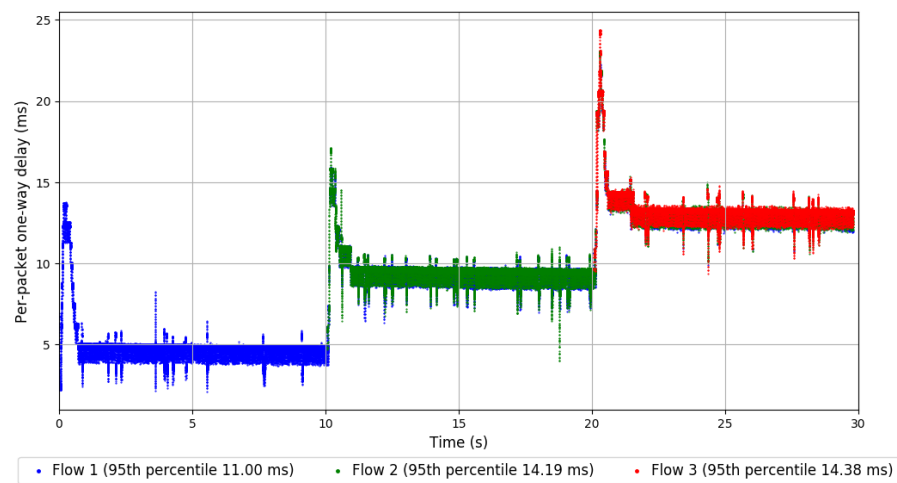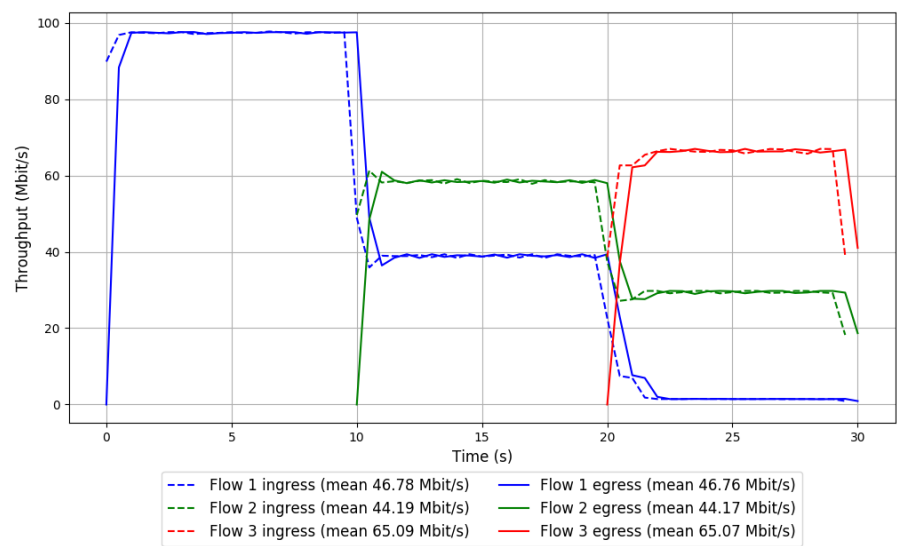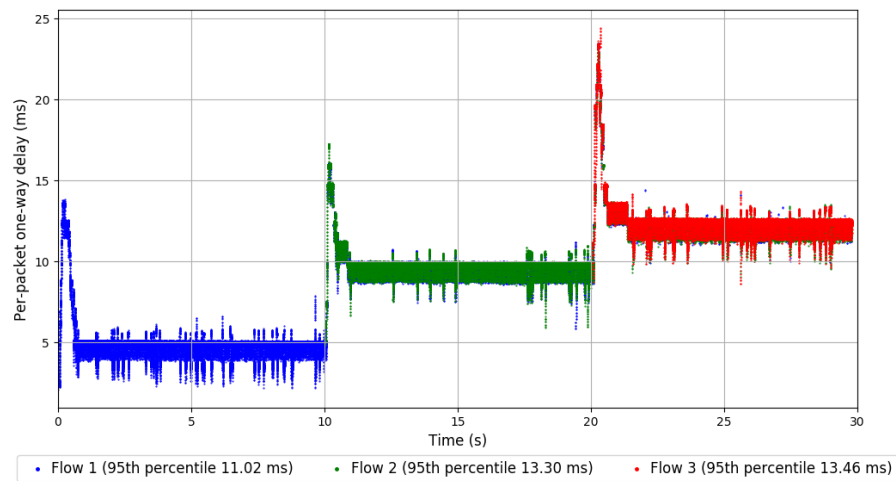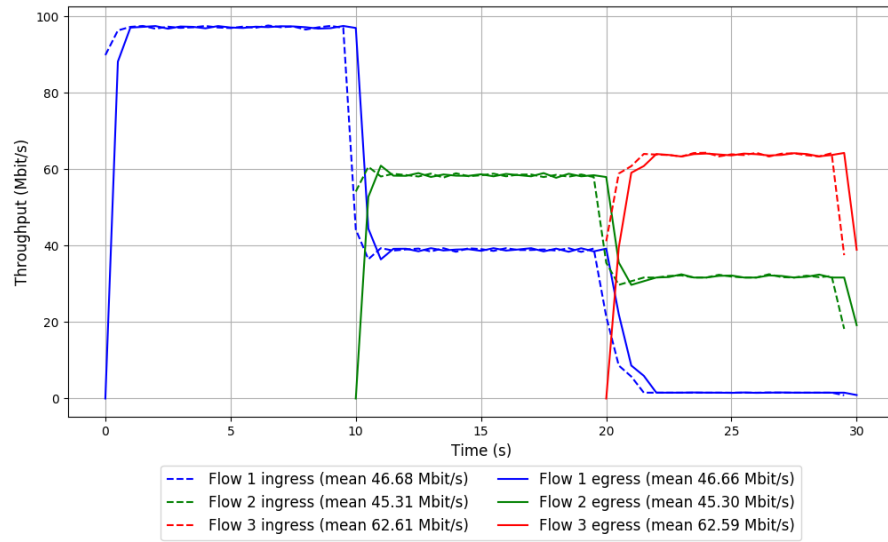
Run 9: Report of FillP — Data Link

```
Run 10: Statistics of FillP

Start at: 2018-06-18 19:05:29
End at: 2018-06-18 19:05:59
Local clock offset: -0.453 ms
Remote clock offset: -5.607 ms


# Below is generated by plot.py at 2018-06-18 19:29:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 29.900 ms
Loss rate: 17.48%
-- Flow 1:
Average throughput: 54.21 Mbit/s
95th percentile per-packet one-way delay: 29.951 ms
Loss rate: 11.83%
-- Flow 2:
Average throughput: 43.79 Mbit/s
95th percentile per-packet one-way delay: 29.895 ms
Loss rate: 23.36%
-- Flow 3:
Average throughput: 38.11 Mbit/s
95th percentile per-packet one-way delay: 29.689 ms
Loss rate: 24.83%
```

Run 10: Report of FillP — Data Link

Flow 1 ingress (mean 61.55 Mbit/s) --- Flow 1 egress (mean 54.21 Mbit/s)
Flow 2 ingress (mean 57.14 Mbit/s) --- Flow 2 egress (mean 43.79 Mbit/s)
Flow 3 ingress (mean 50.71 Mbit/s) --- Flow 3 egress (mean 38.11 Mbit/s)

Flow 1 (95th percentile 29.95 ms) Flow 2 (95th percentile 29.89 ms) Flow 3 (95th percentile 29.69 ms)
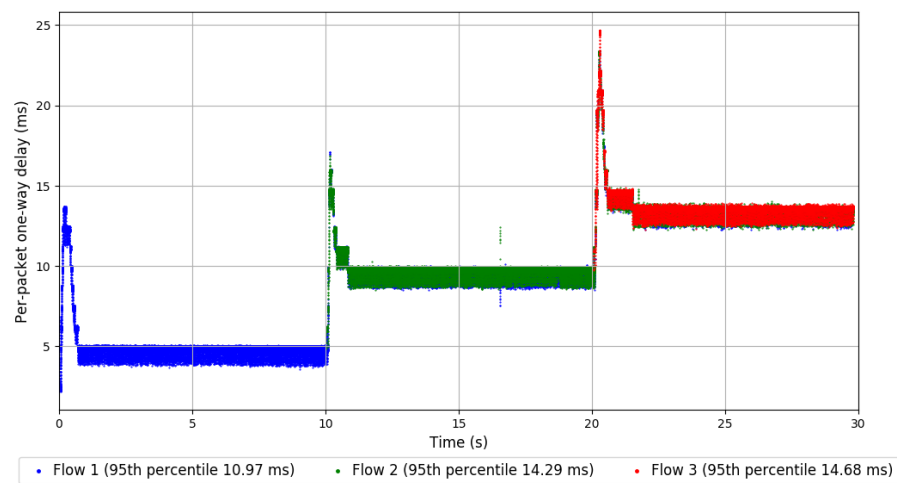
83

```
Run 1: Statistics of Indigo

Start at: 2018-06-18 16:34:05
End at: 2018-06-18 16:34:35
Local clock offset: -1.823 ms
Remote clock offset: -1.664 ms


# Below is generated by plot.py at 2018-06-18 19:29:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 14.145 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.78 Mbit/s
95th percentile per-packet one-way delay: 11.182 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.25 Mbit/s
95th percentile per-packet one-way delay: 14.659 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.13 Mbit/s
95th percentile per-packet one-way delay: 14.902 ms
Loss rate: 0.00%
```
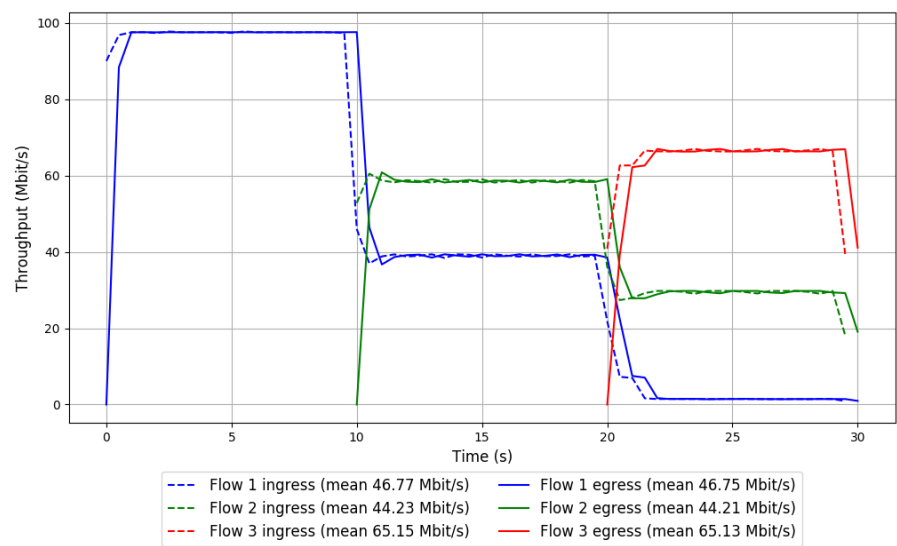
Run 1: Report of Indigo — Data Link

Flow 1 ingress (mean 46.80 Mbit/s) — Flow 1 egress (mean 46.78 Mbit/s)
Flow 2 ingress (mean 44.27 Mbit/s) — Flow 2 egress (mean 44.25 Mbit/s)
Flow 3 ingress (mean 65.15 Mbit/s) — Flow 3 egress (mean 65.13 Mbit/s)

Flow 1 (95th percentile 11.18 ms)   Flow 2 (95th percentile 14.66 ms)   Flow 3 (95th percentile 14.90 ms)

```
Run 2: Statistics of Indigo

Start at: 2018-06-18 16:52:10
End at: 2018-06-18 16:52:40
Local clock offset: -2.005 ms
Remote clock offset: 2.699 ms


# Below is generated by plot.py at 2018-06-18 19:29:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.25 Mbit/s
95th percentile per-packet one-way delay: 14.010 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.76 Mbit/s
95th percentile per-packet one-way delay: 11.004 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.17 Mbit/s
95th percentile per-packet one-way delay: 14.191 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.07 Mbit/s
95th percentile per-packet one-way delay: 14.381 ms
Loss rate: 0.00%
```
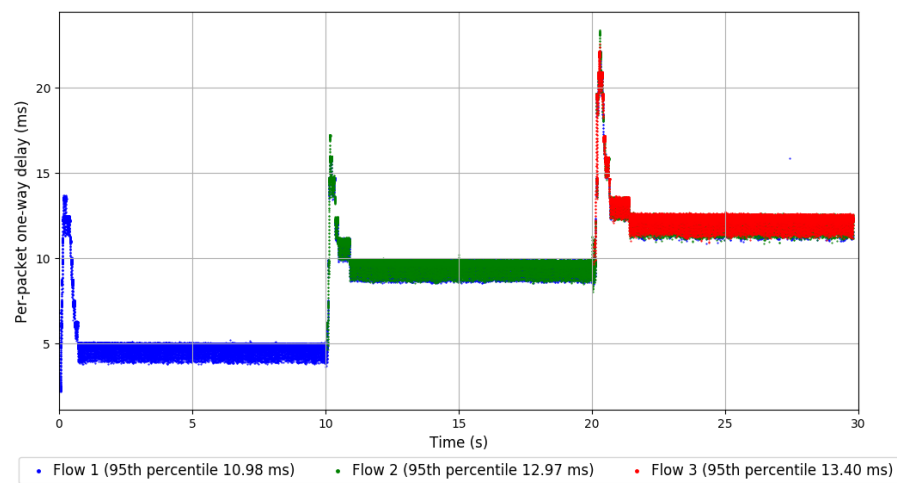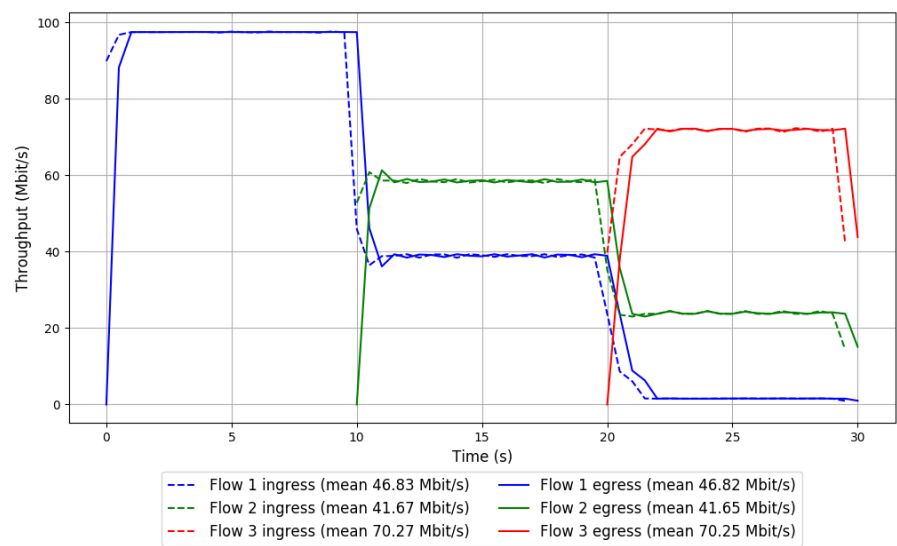
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2018-06-18 17:10:15
End at: 2018-06-18 17:10:45
Local clock offset: -2.593 ms
Remote clock offset: 13.368 ms


# Below is generated by plot.py at 2018-06-18 19:29:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.17 Mbit/s
95th percentile per-packet one-way delay: 13.125 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.66 Mbit/s
95th percentile per-packet one-way delay: 11.022 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.30 Mbit/s
95th percentile per-packet one-way delay: 13.301 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.59 Mbit/s
95th percentile per-packet one-way delay: 13.463 ms
Loss rate: 0.00%
```
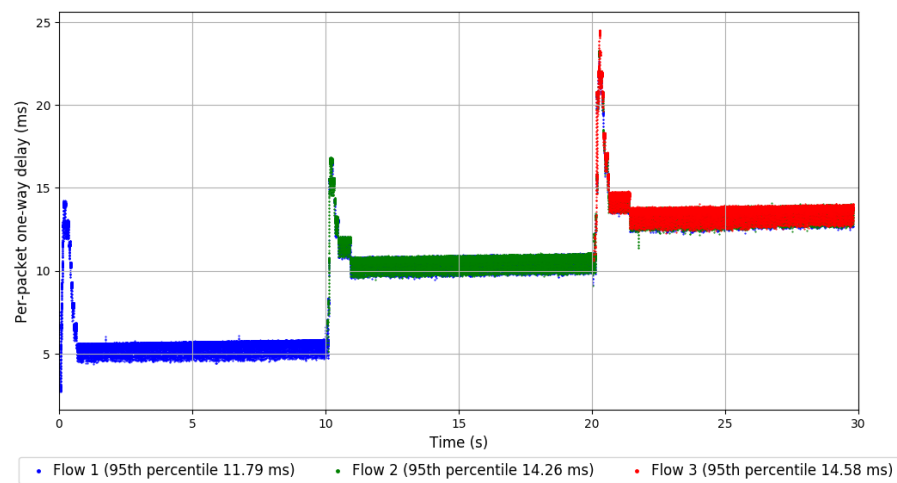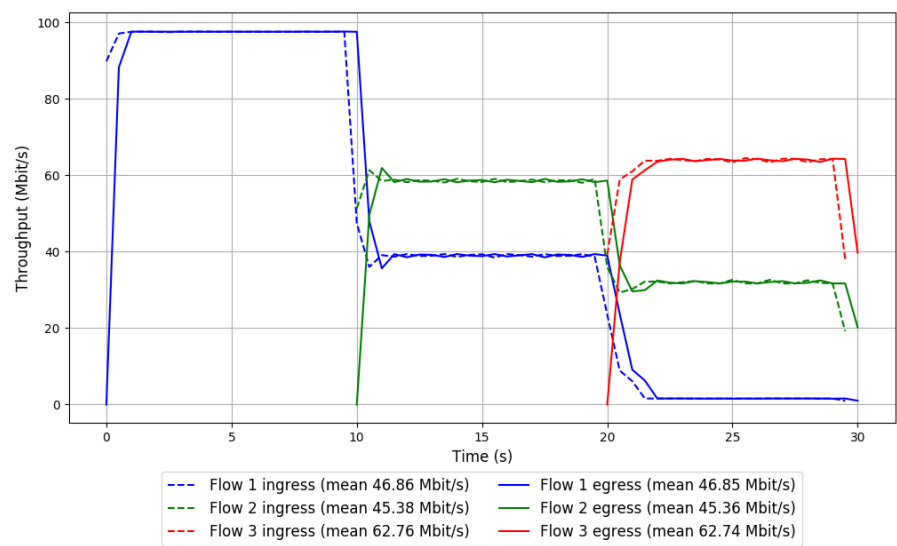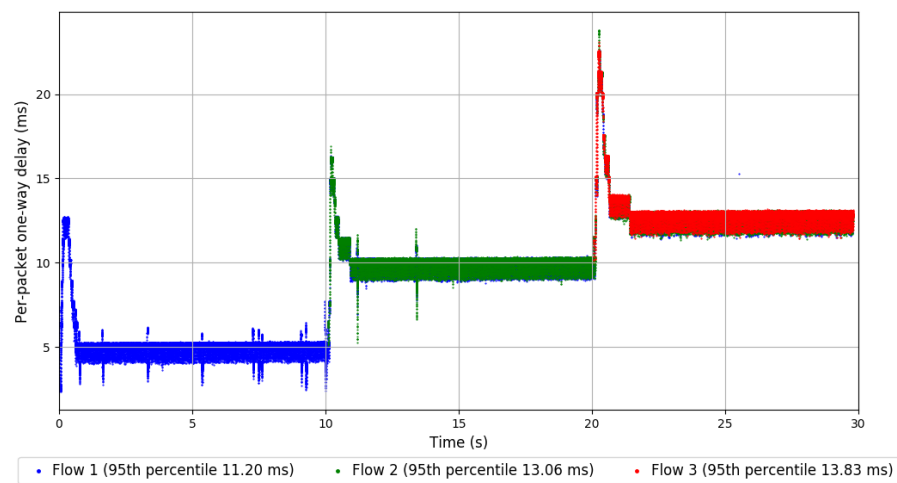
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2018-06-18 17:28:20
End at: 2018-06-18 17:28:50
Local clock offset: -3.248 ms
Remote clock offset: 17.535 ms


# Below is generated by plot.py at 2018-06-18 19:29:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 13.883 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.75 Mbit/s
95th percentile per-packet one-way delay: 10.970 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.21 Mbit/s
95th percentile per-packet one-way delay: 14.288 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.13 Mbit/s
95th percentile per-packet one-way delay: 14.684 ms
Loss rate: 0.00%
```
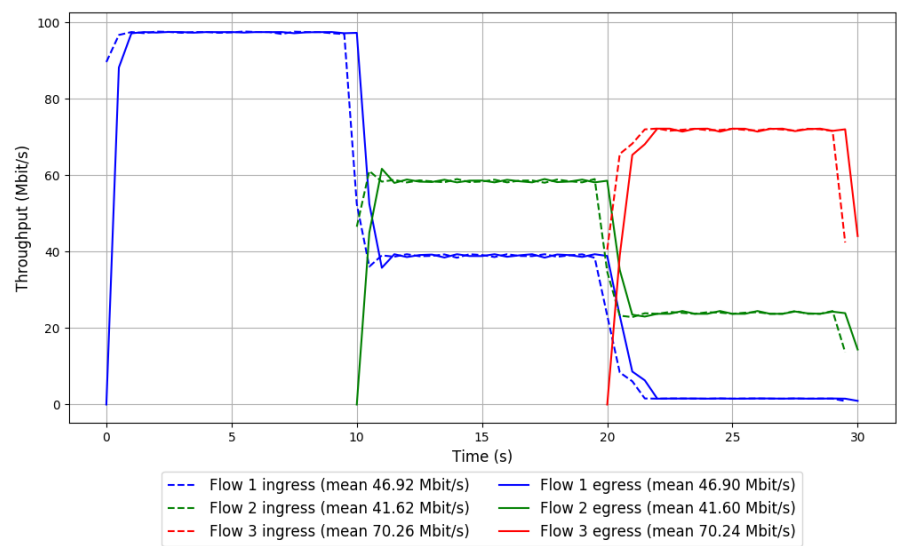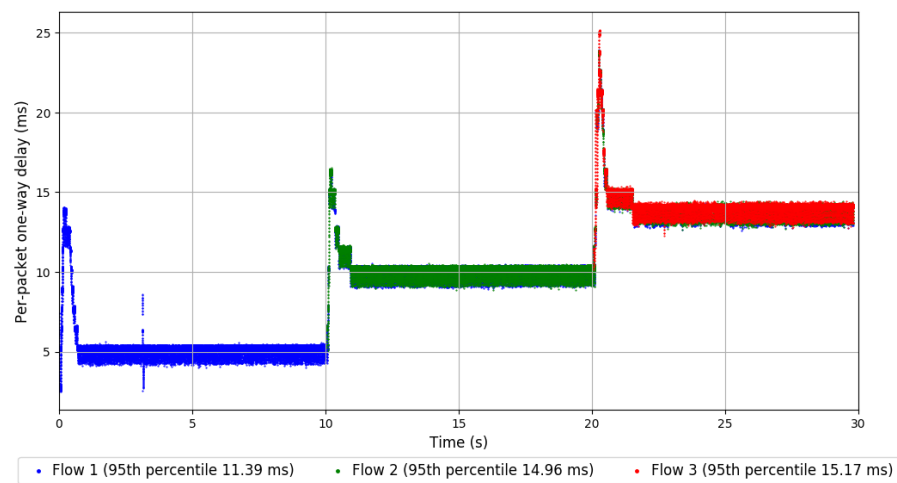
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 46.77 Mbit/s) --- Flow 1 egress (mean 46.75 Mbit/s)
Flow 2 ingress (mean 44.23 Mbit/s) --- Flow 2 egress (mean 44.21 Mbit/s)
Flow 3 ingress (mean 65.15 Mbit/s) --- Flow 3 egress (mean 65.13 Mbit/s)

Flow 1 (95th percentile 10.97 ms)   Flow 2 (95th percentile 14.29 ms)   Flow 3 (95th percentile 14.68 ms)

Run 5: Statistics of Indigo

Start at: 2018-06-18 17:46:24
End at: 2018-06-18 17:46:54
Local clock offset: -6.523 ms
Remote clock offset: 21.04 ms

Below is generated by plot.py at 2018-06-18 19:29:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 12.684 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.82 Mbit/s
95th percentile per-packet one-way delay: 10.981 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.65 Mbit/s
95th percentile per-packet one-way delay: 12.973 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 70.25 Mbit/s
95th percentile per-packet one-way delay: 13.396 ms
Loss rate: 0.00%
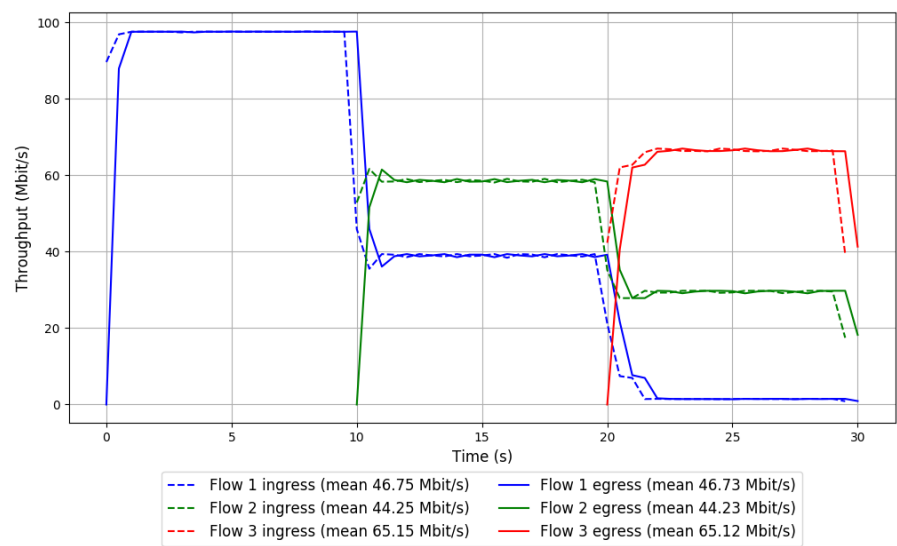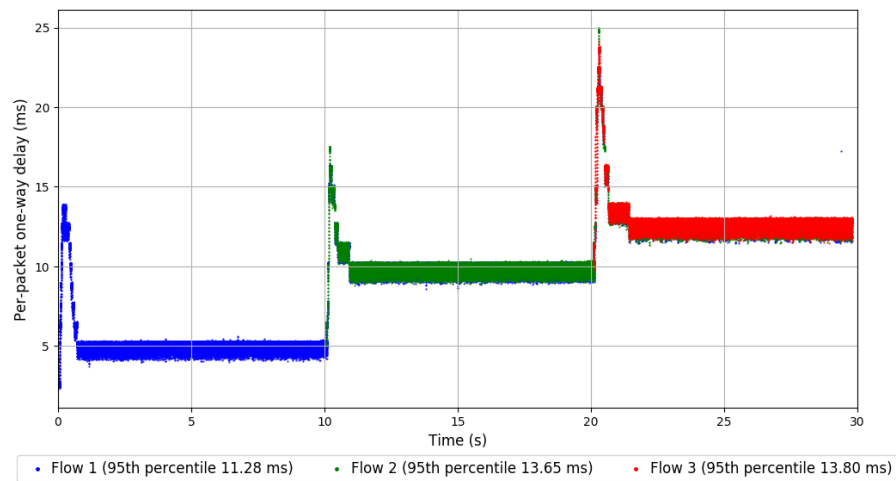
Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2018-06-18 18:04:29
End at: 2018-06-18 18:04:59
Local clock offset: -8.275 ms
Remote clock offset: 7.252 ms


# Below is generated by plot.py at 2018-06-18 19:29:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 13.928 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.85 Mbit/s
95th percentile per-packet one-way delay: 11.787 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.36 Mbit/s
95th percentile per-packet one-way delay: 14.262 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.74 Mbit/s
95th percentile per-packet one-way delay: 14.583 ms
Loss rate: 0.00%
```
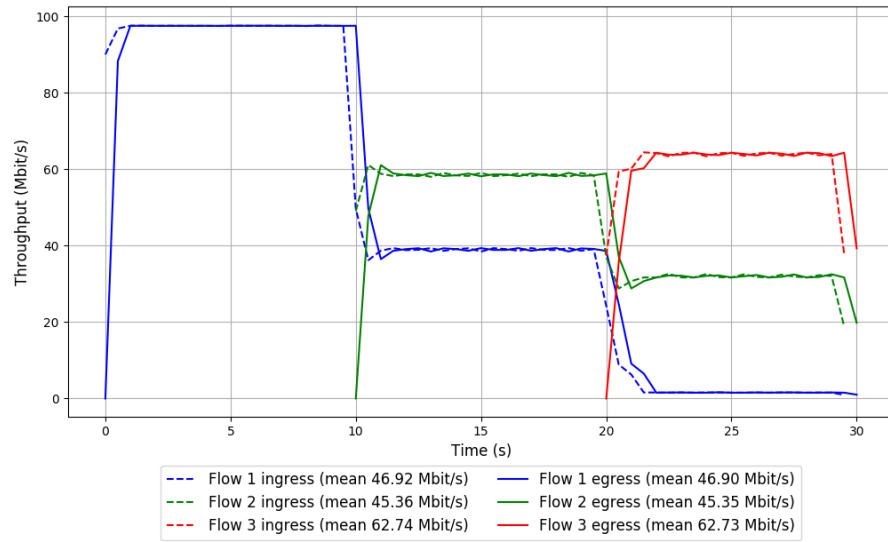
Run 6: Report of Indigo — Data Link

```
Run 7: Statistics of Indigo

Start at: 2018-06-18 18:22:33
End at: 2018-06-18 18:23:03
Local clock offset: -9.373 ms
Remote clock offset: -7.562 ms


# Below is generated by plot.py at 2018-06-18 19:30:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 13.045 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.90 Mbit/s
95th percentile per-packet one-way delay: 11.201 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.60 Mbit/s
95th percentile per-packet one-way delay: 13.064 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 70.24 Mbit/s
95th percentile per-packet one-way delay: 13.833 ms
Loss rate: 0.00%
```
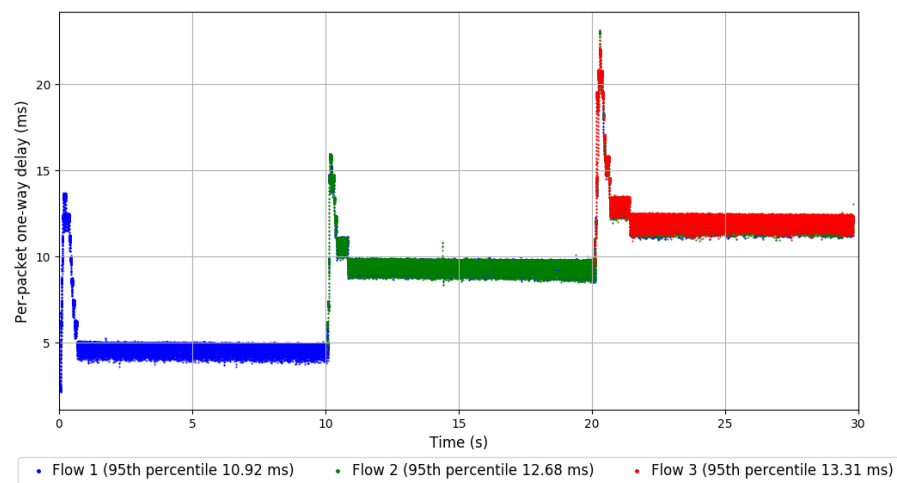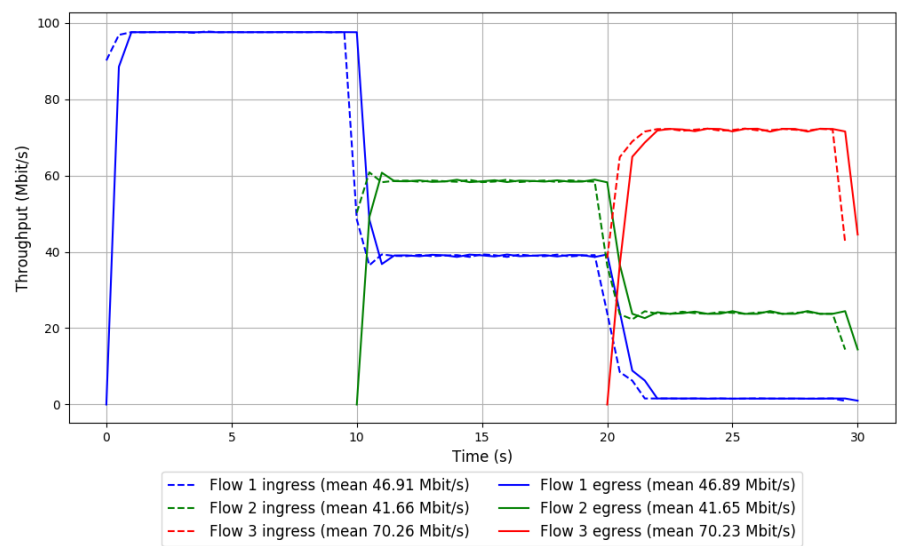
Run 7: Report of Indigo — Data Link

Flow 1 ingress (mean 46.92 Mbit/s) ---- Flow 1 egress (mean 46.90 Mbit/s)
Flow 2 ingress (mean 41.62 Mbit/s) ---- Flow 2 egress (mean 41.60 Mbit/s)
Flow 3 ingress (mean 70.26 Mbit/s) ---- Flow 3 egress (mean 70.24 Mbit/s)

Flow 1 (95th percentile 11.20 ms) • Flow 2 (95th percentile 13.06 ms) • Flow 3 (95th percentile 13.83 ms)

```
Run 8: Statistics of Indigo

Start at: 2018-06-18 18:40:38
End at: 2018-06-18 18:41:08
Local clock offset: -5.537 ms
Remote clock offset: -6.283 ms


# Below is generated by plot.py at 2018-06-18 19:30:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 14.565 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.73 Mbit/s
95th percentile per-packet one-way delay: 11.395 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.23 Mbit/s
95th percentile per-packet one-way delay: 14.957 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.12 Mbit/s
95th percentile per-packet one-way delay: 15.170 ms
Loss rate: 0.00%
```
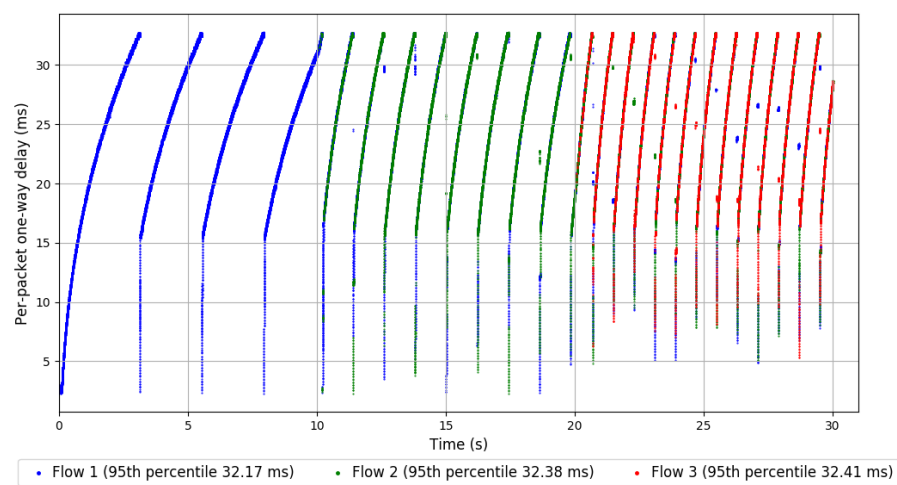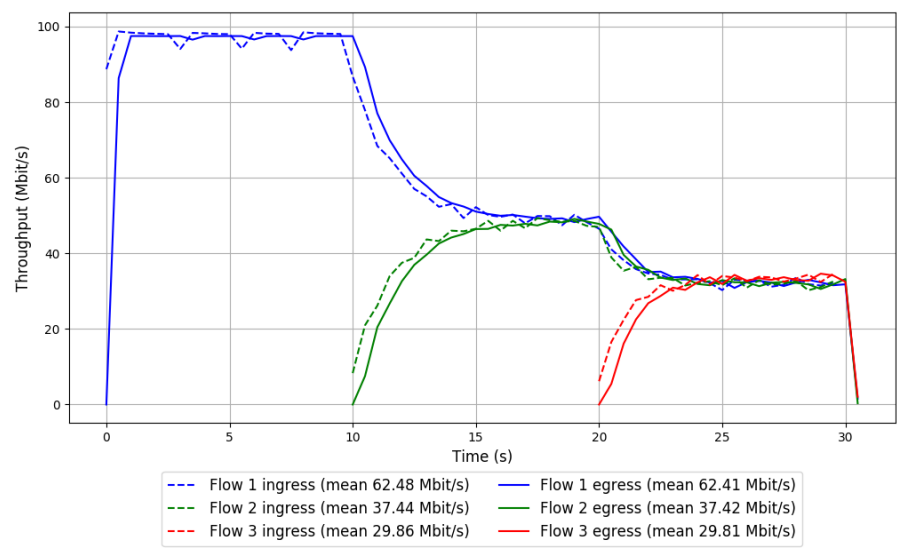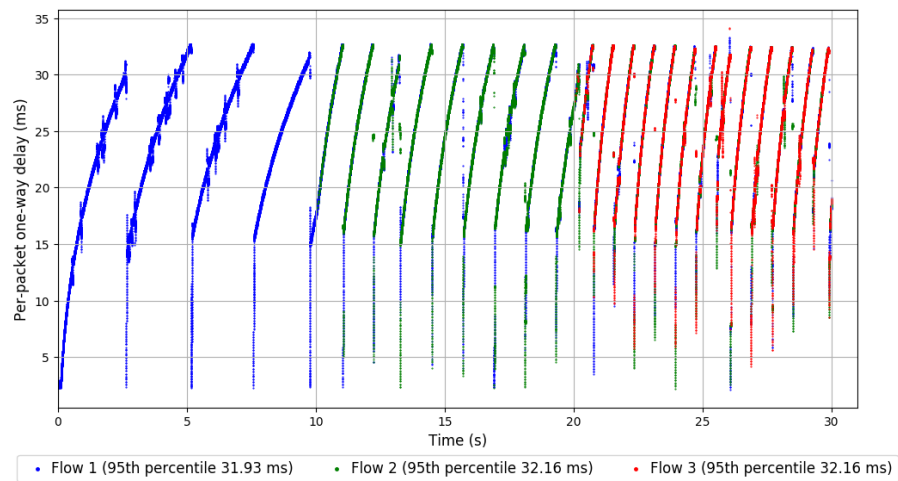
Run 8: Report of Indigo — Data Link

```
Run 9: Statistics of Indigo

Start at: 2018-06-18 18:58:42
End at: 2018-06-18 18:59:12
Local clock offset: -0.811 ms
Remote clock offset: -5.249 ms


# Below is generated by plot.py at 2018-06-18 19:30:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 13.131 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.90 Mbit/s
95th percentile per-packet one-way delay: 11.280 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.35 Mbit/s
95th percentile per-packet one-way delay: 13.652 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.73 Mbit/s
95th percentile per-packet one-way delay: 13.805 ms
Loss rate: 0.00%
```
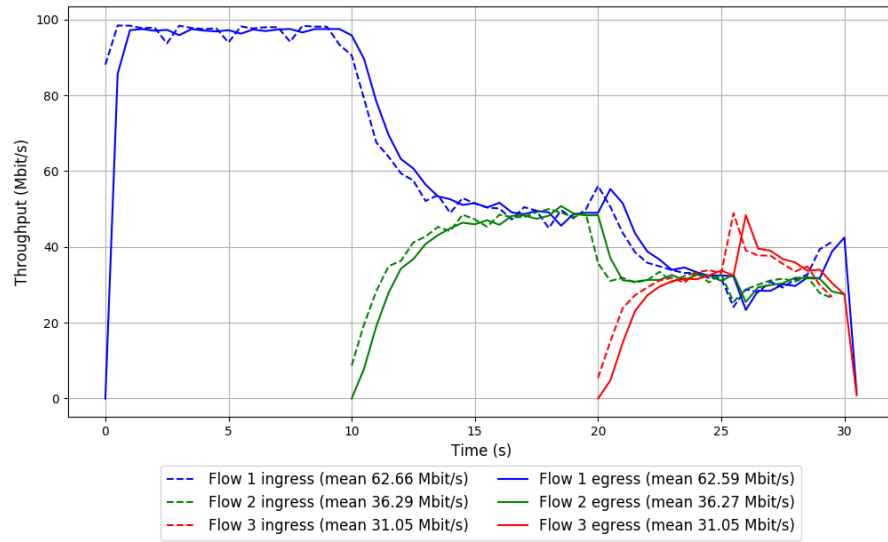
Run 9: Report of Indigo — Data Link

```
Run 10: Statistics of Indigo

Start at: 2018-06-18 19:16:46
End at: 2018-06-18 19:17:16
Local clock offset: -1.471 ms
Remote clock offset: 6.435 ms


# Below is generated by plot.py at 2018-06-18 19:30:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 12.519 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.89 Mbit/s
95th percentile per-packet one-way delay: 10.917 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.65 Mbit/s
95th percentile per-packet one-way delay: 12.679 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 70.23 Mbit/s
95th percentile per-packet one-way delay: 13.307 ms
Loss rate: 0.00%
```
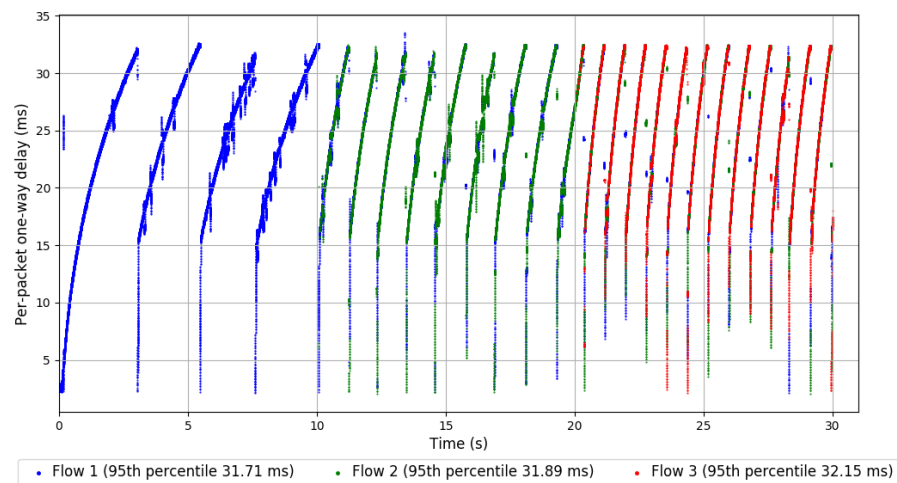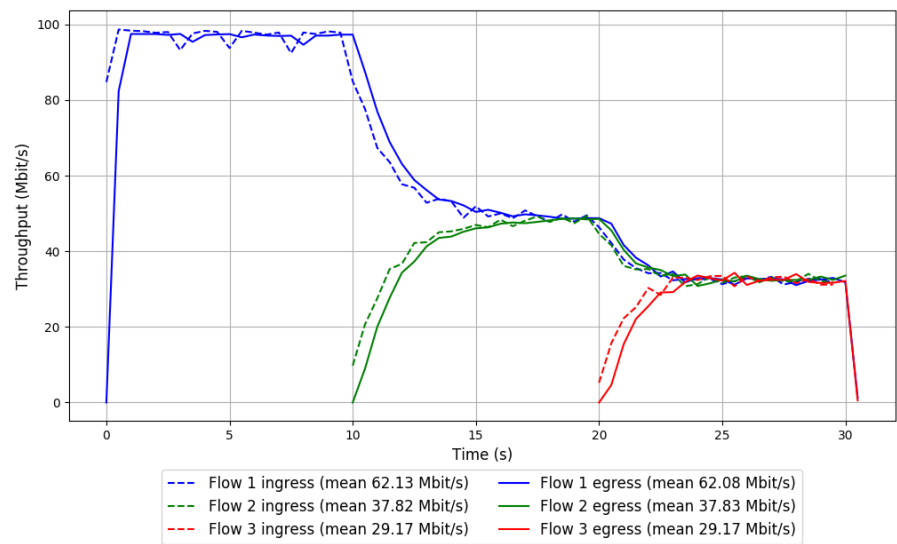
Run 10: Report of Indigo — Data Link

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```
Run 1: Statistics of LEDBAT

Start at: 2018-06-18 16:30:38
End at: 2018-06-18 16:31:08
Local clock offset: -1.911 ms
Remote clock offset: -1.846 ms

# Below is generated by plot.py at 2018-06-18 19:31:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 32.196 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.41 Mbit/s
95th percentile per-packet one-way delay: 32.166 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.42 Mbit/s
95th percentile per-packet one-way delay: 32.382 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 29.81 Mbit/s
95th percentile per-packet one-way delay: 32.405 ms
Loss rate: 0.08%
```
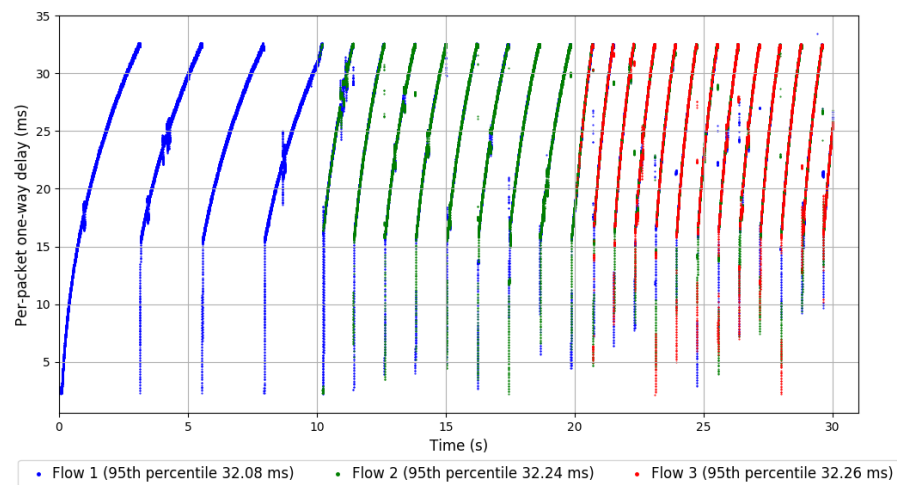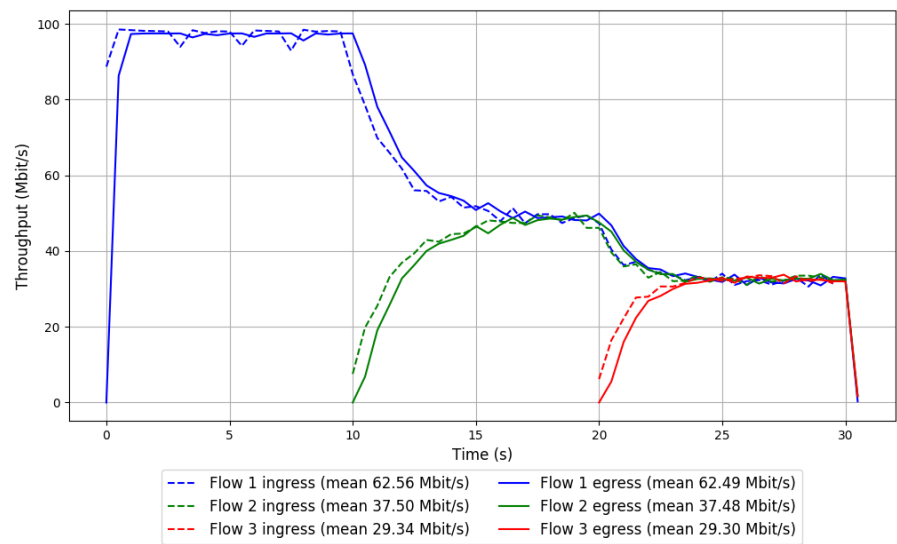
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-06-18 16:48:43
End at: 2018-06-18 16:49:13
Local clock offset: -1.993 ms
Remote clock offset: -1.402 ms


# Below is generated by plot.py at 2018-06-18 19:31:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.03 Mbit/s
95th percentile per-packet one-way delay: 32.005 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 62.59 Mbit/s
95th percentile per-packet one-way delay: 31.930 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 36.27 Mbit/s
95th percentile per-packet one-way delay: 32.159 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 31.05 Mbit/s
95th percentile per-packet one-way delay: 32.159 ms
Loss rate: 0.08%
```
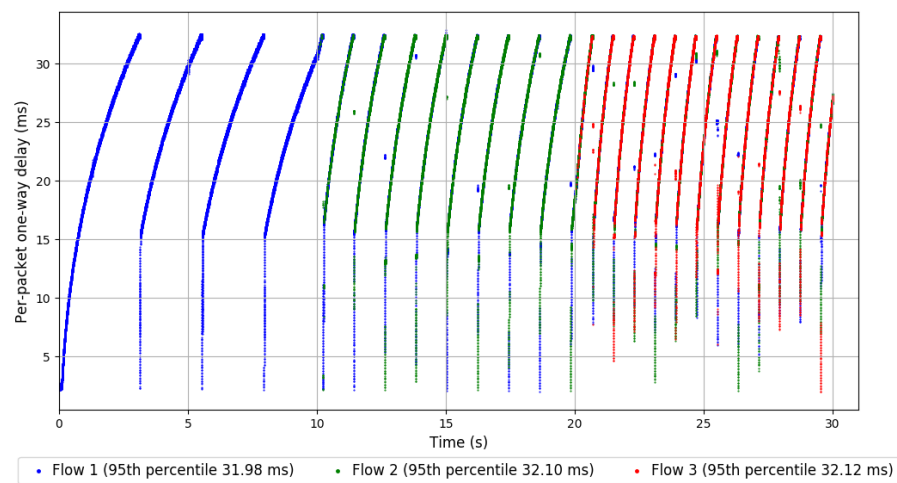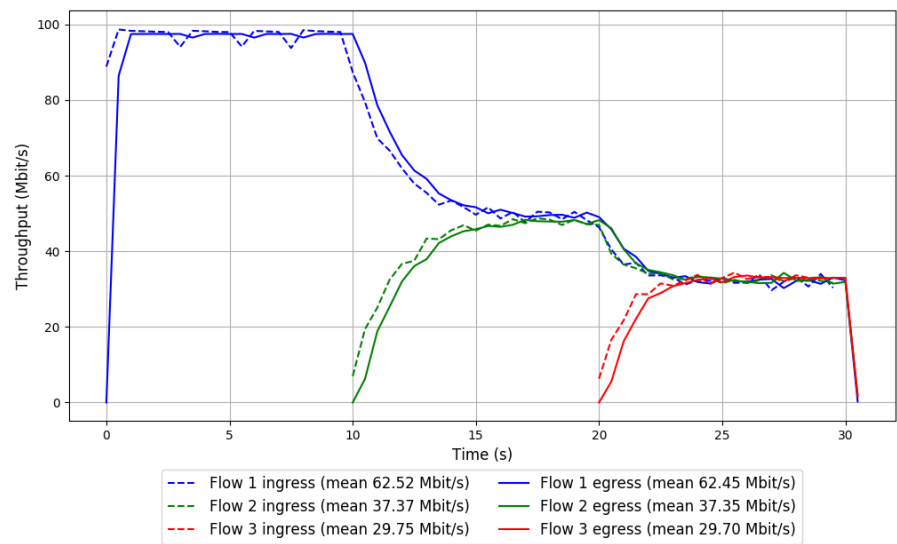
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-06-18 17:06:48
End at: 2018-06-18 17:07:18
Local clock offset: -2.296 ms
Remote clock offset: 12.269 ms

# Below is generated by plot.py at 2018-06-18 19:31:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.91 Mbit/s
95th percentile per-packet one-way delay: 31.809 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 62.08 Mbit/s
95th percentile per-packet one-way delay: 31.715 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 37.83 Mbit/s
95th percentile per-packet one-way delay: 31.891 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 29.17 Mbit/s
95th percentile per-packet one-way delay: 32.154 ms
Loss rate: 0.10%
```
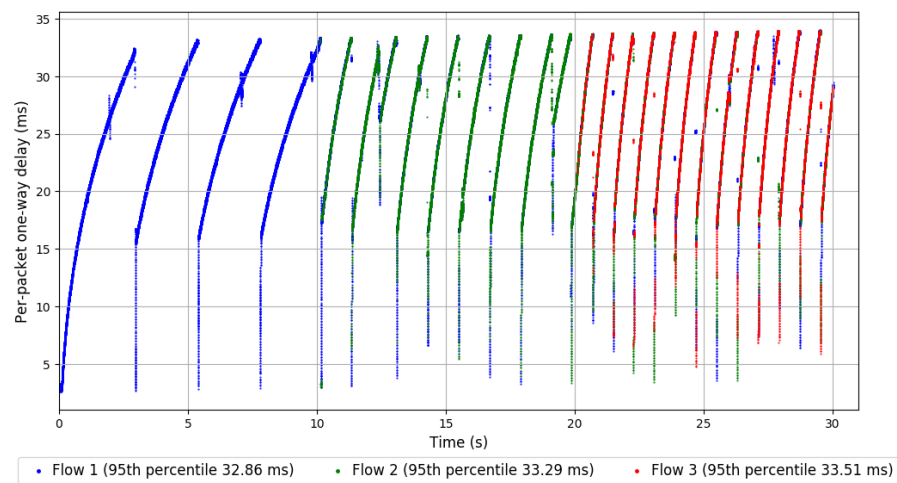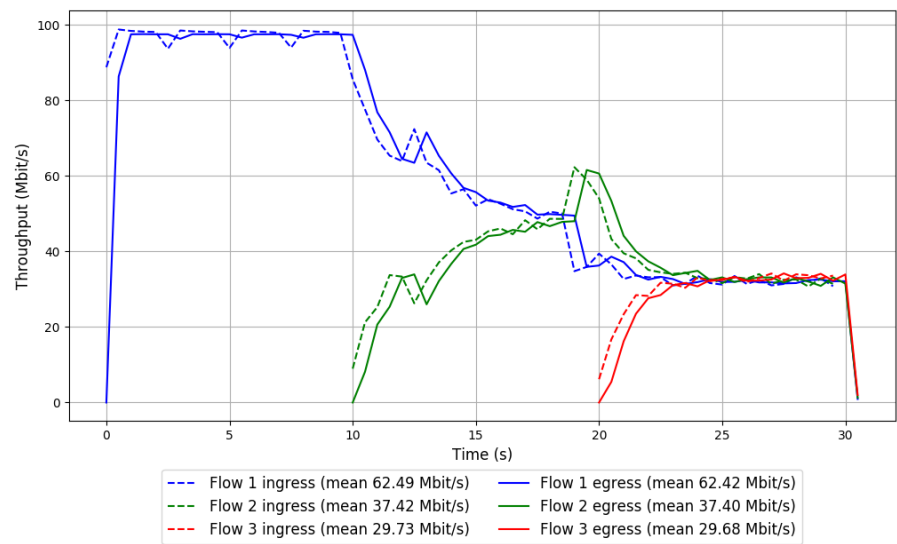
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 62.13 Mbit/s) --- Flow 1 egress (mean 62.08 Mbit/s)
Flow 2 ingress (mean 37.82 Mbit/s) --- Flow 2 egress (mean 37.83 Mbit/s)
Flow 3 ingress (mean 29.17 Mbit/s) --- Flow 3 egress (mean 29.17 Mbit/s)

Flow 1 (95th percentile 31.71 ms)   Flow 2 (95th percentile 31.89 ms)   Flow 3 (95th percentile 32.15 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2018-06-18 17:24:53
End at: 2018-06-18 17:25:23
Local clock offset: -3.18 ms
Remote clock offset: 16.919 ms


# Below is generated by plot.py at 2018-06-18 19:31:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.13 Mbit/s
95th percentile per-packet one-way delay: 32.104 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.49 Mbit/s
95th percentile per-packet one-way delay: 32.081 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.48 Mbit/s
95th percentile per-packet one-way delay: 32.241 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 29.30 Mbit/s
95th percentile per-packet one-way delay: 32.258 ms
Loss rate: 0.09%
```
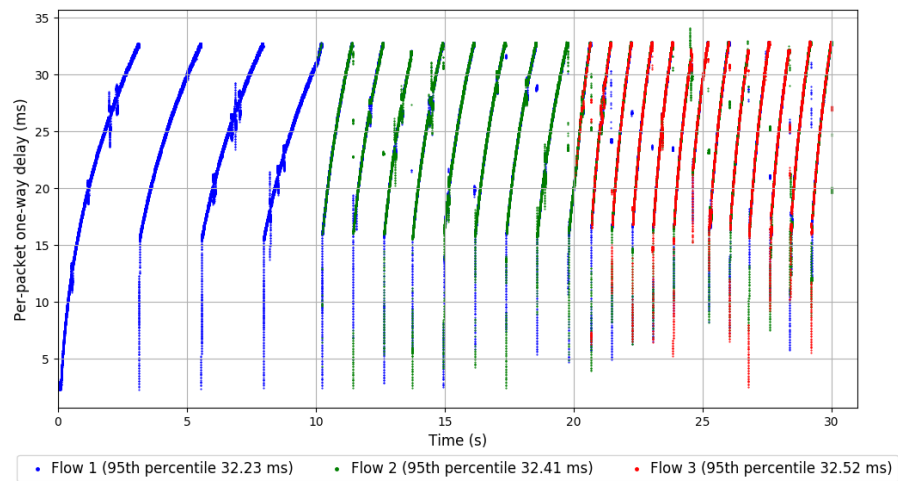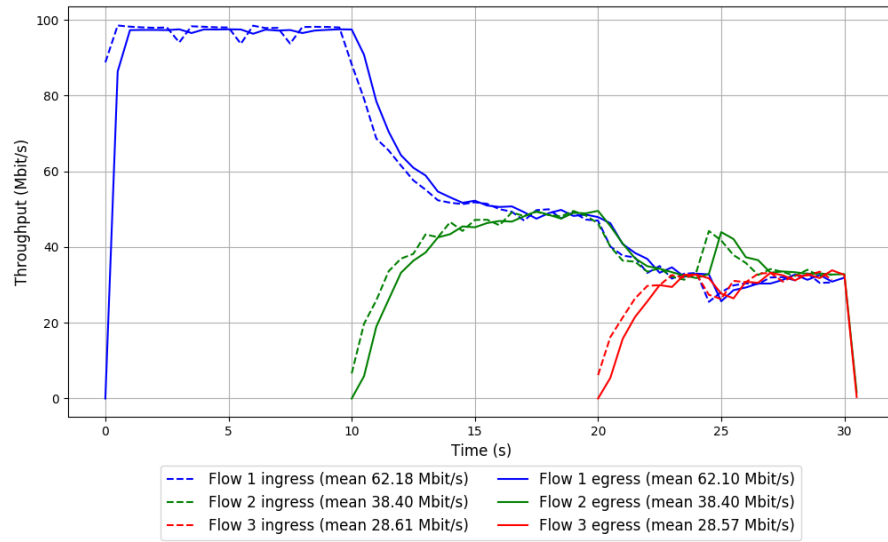
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 62.56 Mbit/s)   Flow 1 egress (mean 62.49 Mbit/s)
Flow 2 ingress (mean 37.50 Mbit/s)   Flow 2 egress (mean 37.48 Mbit/s)
Flow 3 ingress (mean 29.34 Mbit/s)   Flow 3 egress (mean 29.30 Mbit/s)

Flow 1 (95th percentile 32.08 ms)   Flow 2 (95th percentile 32.24 ms)   Flow 3 (95th percentile 32.26 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2018-06-18 17:42:57
End at: 2018-06-18 17:43:27
Local clock offset: -5.932 ms
Remote clock offset: 20.411 ms


# Below is generated by plot.py at 2018-06-18 19:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.17 Mbit/s
95th percentile per-packet one-way delay: 32.021 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.45 Mbit/s
95th percentile per-packet one-way delay: 31.982 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.35 Mbit/s
95th percentile per-packet one-way delay: 32.104 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 29.70 Mbit/s
95th percentile per-packet one-way delay: 32.119 ms
Loss rate: 0.08%
```
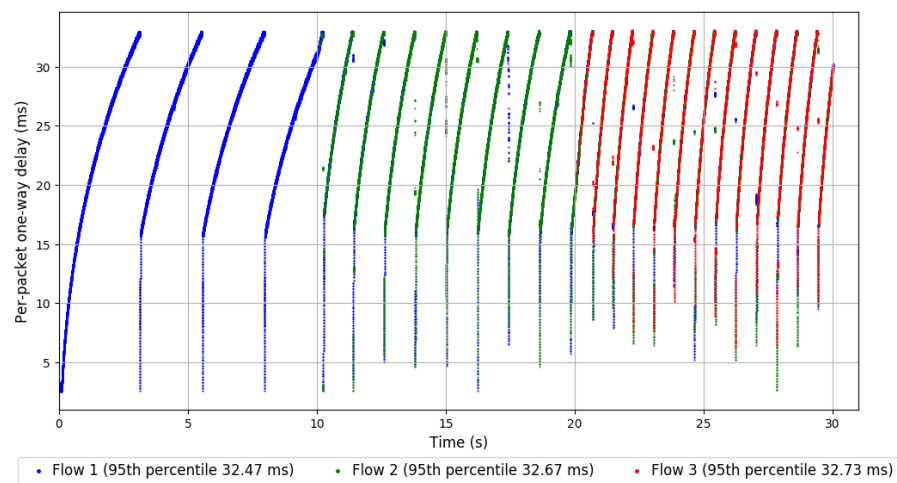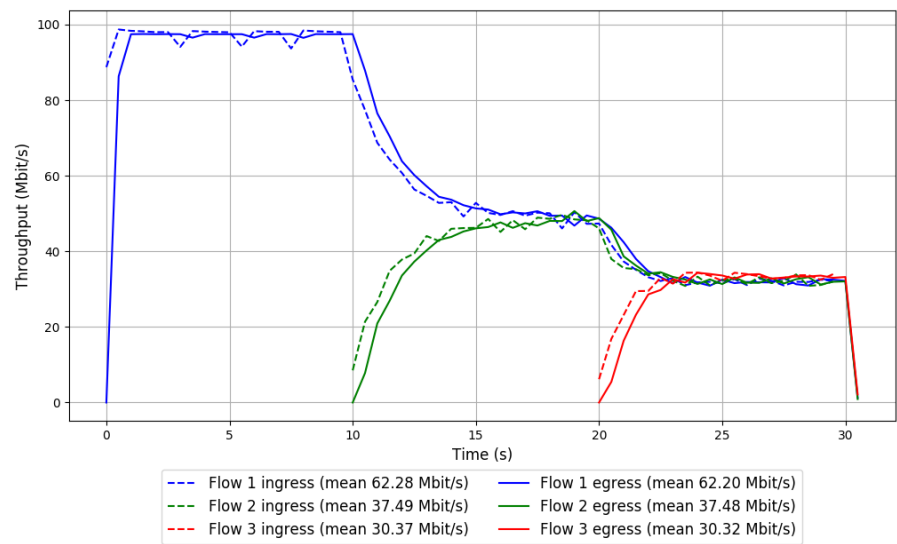
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 62.52 Mbit/s)   Flow 1 egress (mean 62.45 Mbit/s)
Flow 2 ingress (mean 37.37 Mbit/s)   Flow 2 egress (mean 37.35 Mbit/s)
Flow 3 ingress (mean 29.75 Mbit/s)   Flow 3 egress (mean 29.70 Mbit/s)

Flow 1 (95th percentile 31.98 ms)   Flow 2 (95th percentile 32.10 ms)   Flow 3 (95th percentile 32.12 ms)

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```
Run 6: Statistics of LEDBAT

Start at: 2018-06-18 18:01:03
End at: 2018-06-18 18:01:33
Local clock offset: -7.986 ms
Remote clock offset: 13.545 ms


# Below is generated by plot.py at 2018-06-18 19:32:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.15 Mbit/s
95th percentile per-packet one-way delay: 33.050 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 62.42 Mbit/s
95th percentile per-packet one-way delay: 32.860 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.40 Mbit/s
95th percentile per-packet one-way delay: 33.291 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 29.68 Mbit/s
95th percentile per-packet one-way delay: 33.512 ms
Loss rate: 0.09%
```
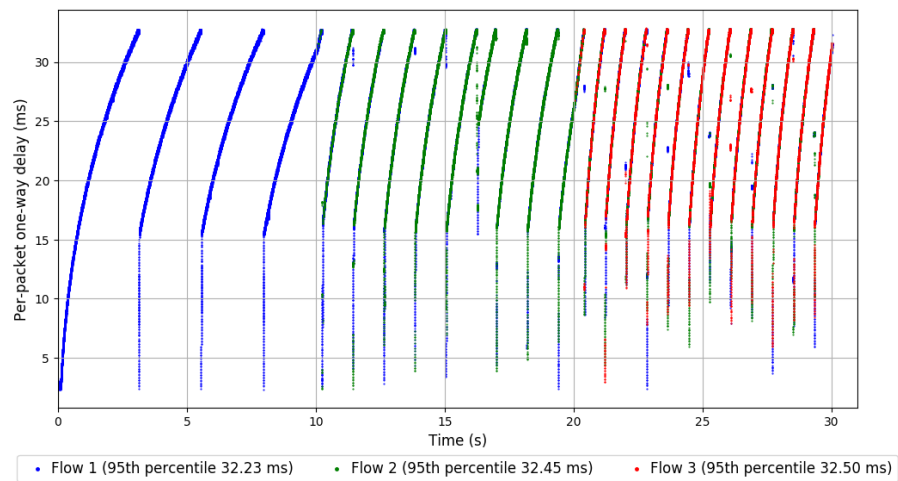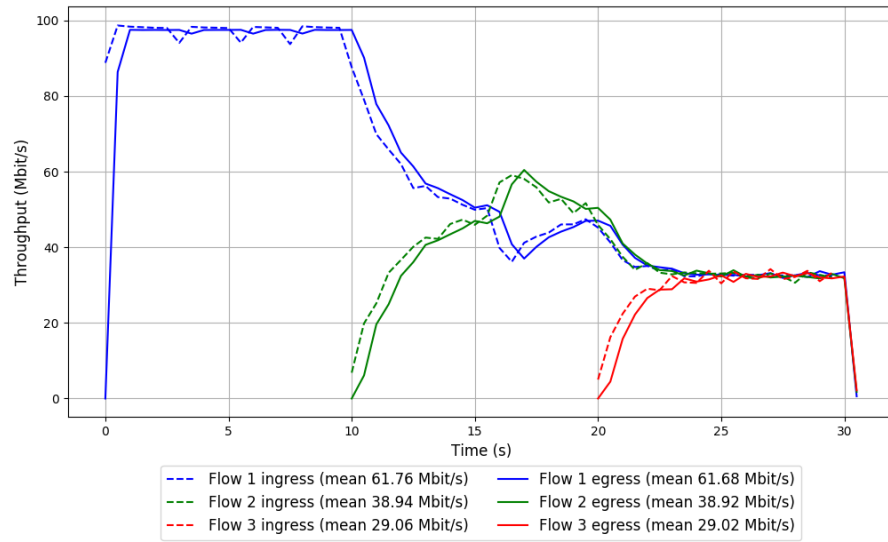
Run 6: Report of LEDBAT — Data Link

- - - Flow 1 ingress (mean 62.49 Mbit/s) —— Flow 1 egress (mean 62.42 Mbit/s)
- - - Flow 2 ingress (mean 37.42 Mbit/s) —— Flow 2 egress (mean 37.40 Mbit/s)
- - - Flow 3 ingress (mean 29.73 Mbit/s) —— Flow 3 egress (mean 29.68 Mbit/s)

• Flow 1 (95th percentile 32.86 ms)   • Flow 2 (95th percentile 33.29 ms)   • Flow 3 (95th percentile 33.51 ms)

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```
Run 7: Statistics of LEDBAT

Start at: 2018-06-18 18:19:07
End at: 2018-06-18 18:19:37
Local clock offset: -9.169 ms
Remote clock offset: -6.017 ms


# Below is generated by plot.py at 2018-06-18 19:32:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.11 Mbit/s
95th percentile per-packet one-way delay: 32.297 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.10 Mbit/s
95th percentile per-packet one-way delay: 32.235 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 38.40 Mbit/s
95th percentile per-packet one-way delay: 32.405 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 28.57 Mbit/s
95th percentile per-packet one-way delay: 32.515 ms
Loss rate: 0.08%
```
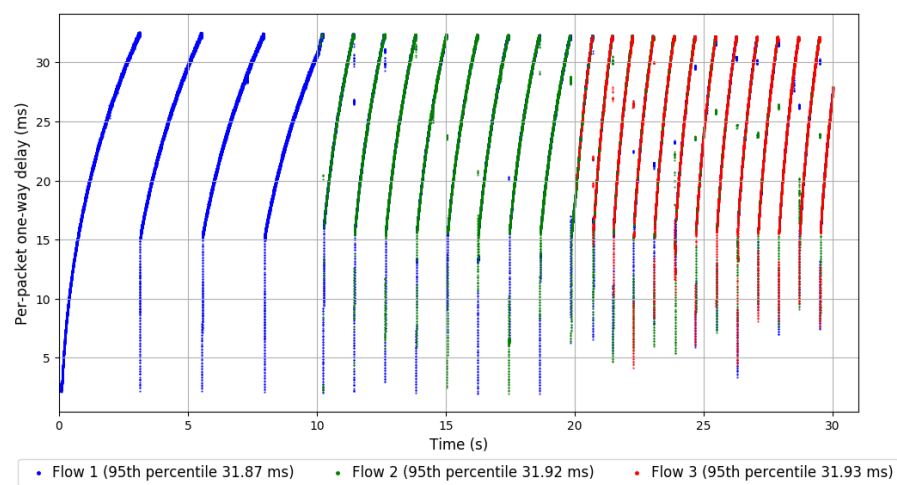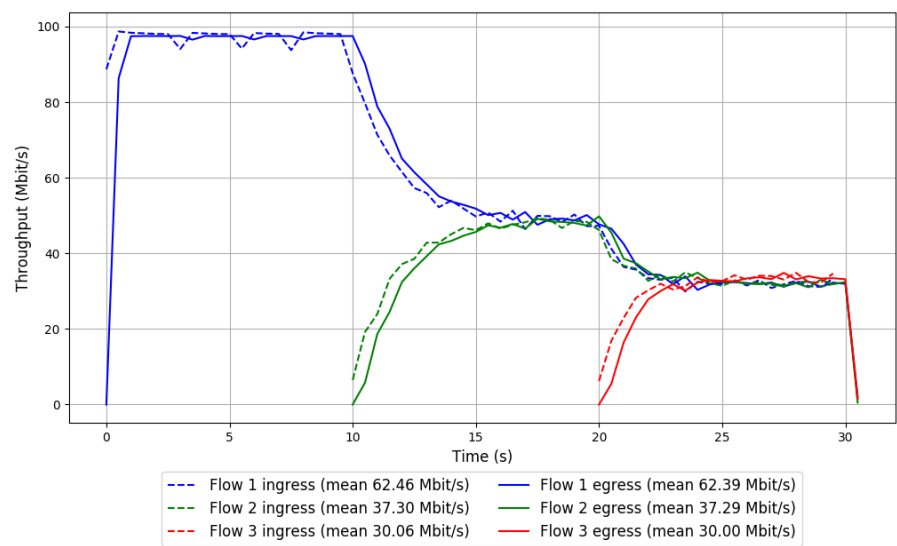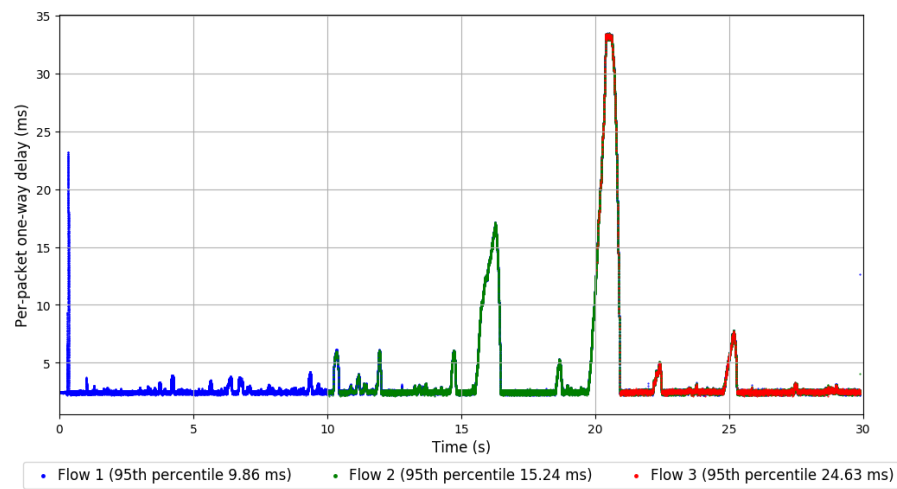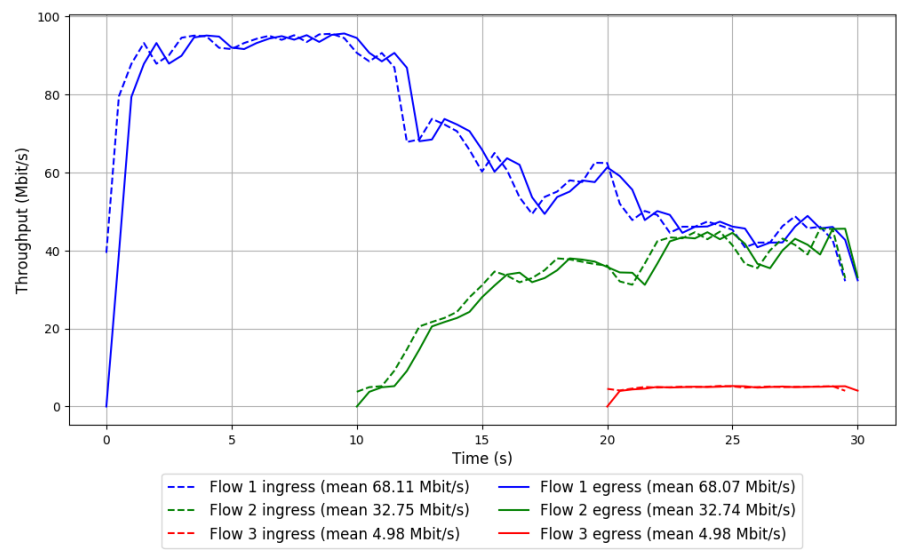
Run 7: Report of LEDBAT — Data Link

Flow 1 ingress (mean 62.18 Mbit/s) --- Flow 1 egress (mean 62.10 Mbit/s)
Flow 2 ingress (mean 38.40 Mbit/s) --- Flow 2 egress (mean 38.40 Mbit/s)
Flow 3 ingress (mean 28.61 Mbit/s) --- Flow 3 egress (mean 28.57 Mbit/s)

Flow 1 (95th percentile 32.23 ms)   Flow 2 (95th percentile 32.41 ms)   Flow 3 (95th percentile 32.52 ms)

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```
Run 8: Statistics of LEDBAT

Start at: 2018-06-18 18:37:11
End at: 2018-06-18 18:37:41
Local clock offset: -7.557 ms
Remote clock offset: -7.397 ms


# Below is generated by plot.py at 2018-06-18 19:32:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 32.521 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.20 Mbit/s
95th percentile per-packet one-way delay: 32.471 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.48 Mbit/s
95th percentile per-packet one-way delay: 32.669 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 30.32 Mbit/s
95th percentile per-packet one-way delay: 32.733 ms
Loss rate: 0.07%
```
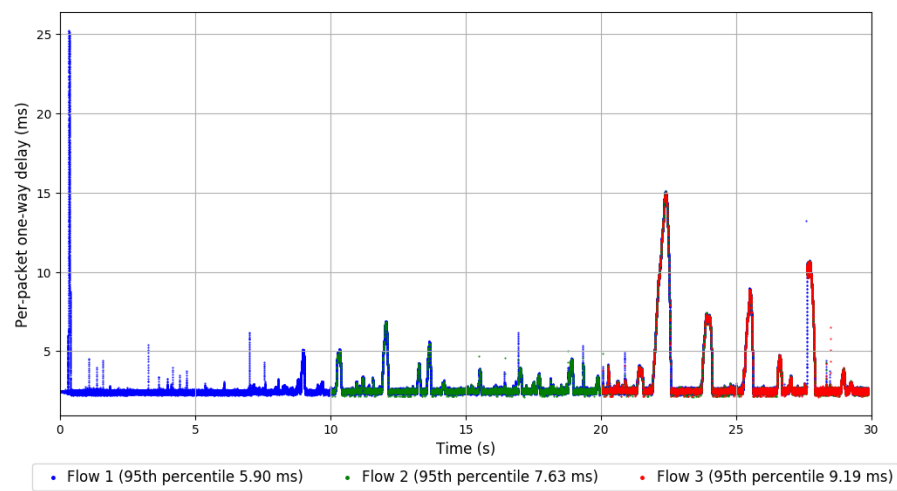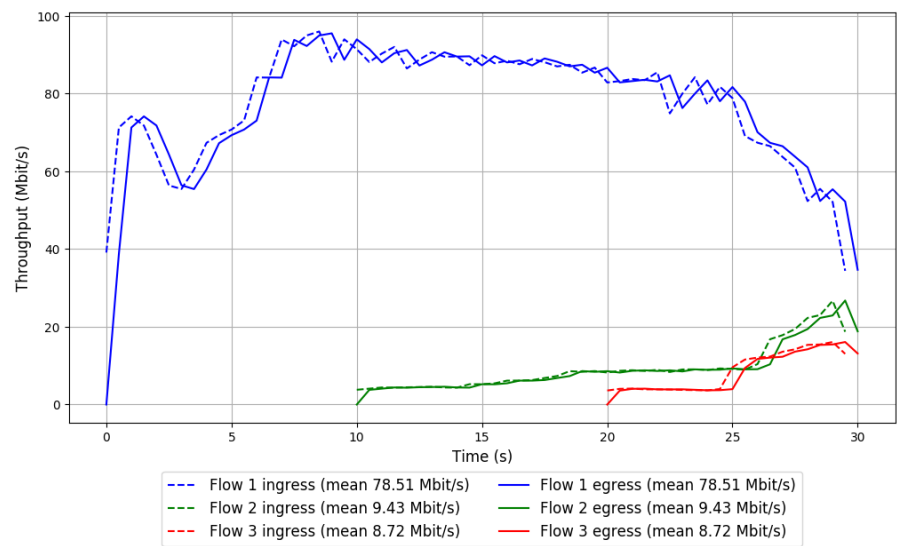
Run 8: Report of LEDBAT — Data Link

```
Run 9: Statistics of LEDBAT

Start at: 2018-06-18 18:55:16
End at: 2018-06-18 18:55:46
Local clock offset: -1.287 ms
Remote clock offset: -5.156 ms


# Below is generated by plot.py at 2018-06-18 19:32:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 32.281 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 61.68 Mbit/s
95th percentile per-packet one-way delay: 32.232 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 38.92 Mbit/s
95th percentile per-packet one-way delay: 32.454 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 29.02 Mbit/s
95th percentile per-packet one-way delay: 32.499 ms
Loss rate: 0.09%
```

Run 9: Report of LEDBAT — Data Link

Flow 1 ingress (mean 61.76 Mbit/s) Flow 1 egress (mean 61.68 Mbit/s)
Flow 2 ingress (mean 38.94 Mbit/s) Flow 2 egress (mean 38.92 Mbit/s)
Flow 3 ingress (mean 29.06 Mbit/s) Flow 3 egress (mean 29.02 Mbit/s)

Flow 1 (95th percentile 32.23 ms)   Flow 2 (95th percentile 32.45 ms)   Flow 3 (95th percentile 32.50 ms)

```
Run 10: Statistics of LEDBAT

Start at: 2018-06-18 19:13:20
End at: 2018-06-18 19:13:50
Local clock offset: -1.43 ms
Remote clock offset: 3.985 ms


# Below is generated by plot.py at 2018-06-18 19:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.18 Mbit/s
95th percentile per-packet one-way delay: 31.906 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.39 Mbit/s
95th percentile per-packet one-way delay: 31.871 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 37.29 Mbit/s
95th percentile per-packet one-way delay: 31.919 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 30.00 Mbit/s
95th percentile per-packet one-way delay: 31.932 ms
Loss rate: 0.09%
```
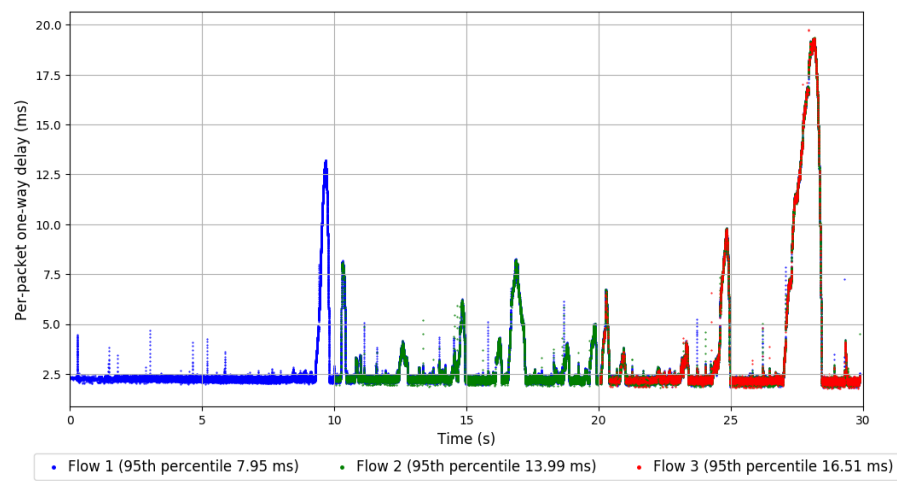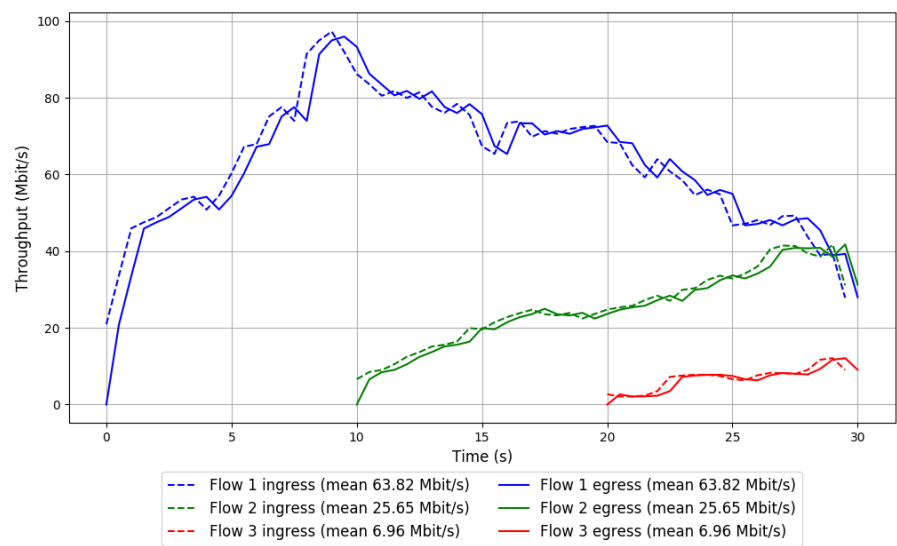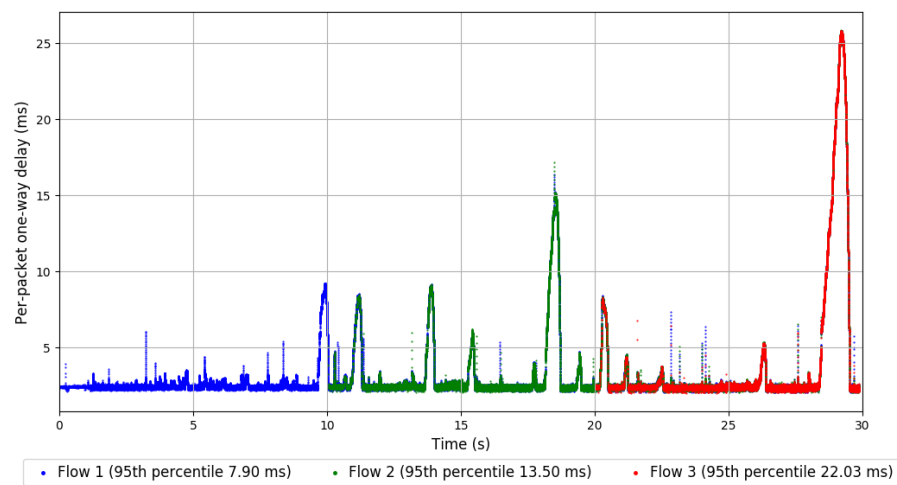
Run 10: Report of LEDBAT — Data Link

Flow 1 ingress (mean 62.46 Mbit/s) --- Flow 1 egress (mean 62.39 Mbit/s)
Flow 2 ingress (mean 37.30 Mbit/s) --- Flow 2 egress (mean 37.29 Mbit/s)
Flow 3 ingress (mean 30.06 Mbit/s) --- Flow 3 egress (mean 30.00 Mbit/s)

Flow 1 (95th percentile 31.87 ms)   Flow 2 (95th percentile 31.92 ms)   Flow 3 (95th percentile 31.93 ms)
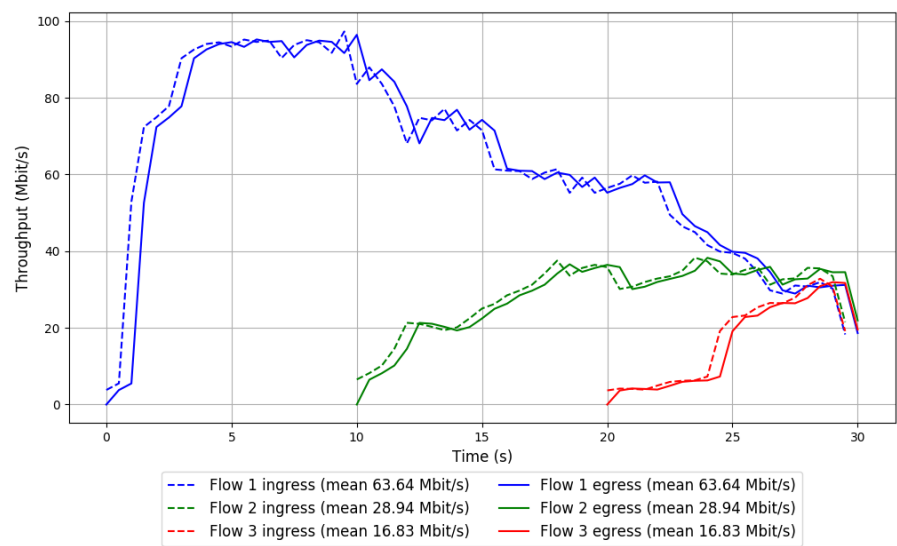
```
Run 1: Statistics of PCC-Allegro

Start at: 2018-06-18 16:24:59
End at: 2018-06-18 16:25:29
Local clock offset: -1.965 ms
Remote clock offset: -1.953 ms


# Below is generated by plot.py at 2018-06-18 19:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.48 Mbit/s
95th percentile per-packet one-way delay: 12.172 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 68.07 Mbit/s
95th percentile per-packet one-way delay: 9.864 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 32.74 Mbit/s
95th percentile per-packet one-way delay: 15.236 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 4.98 Mbit/s
95th percentile per-packet one-way delay: 24.634 ms
Loss rate: 0.25%
```
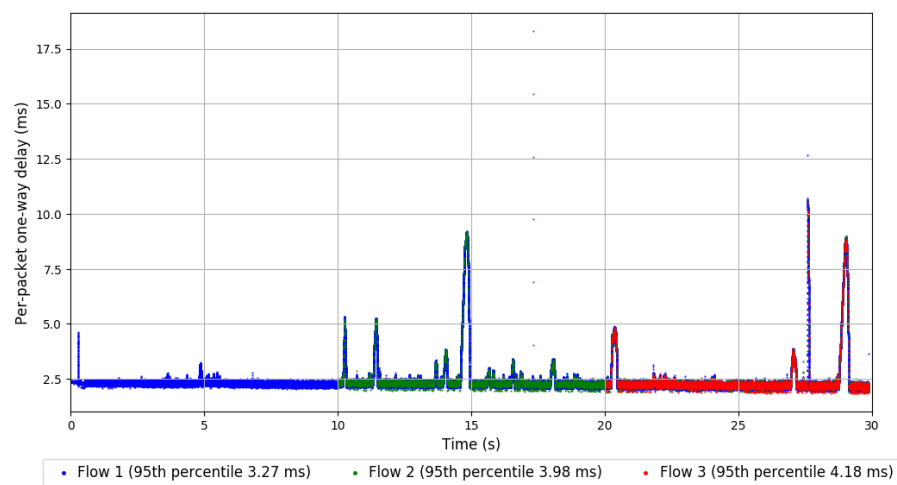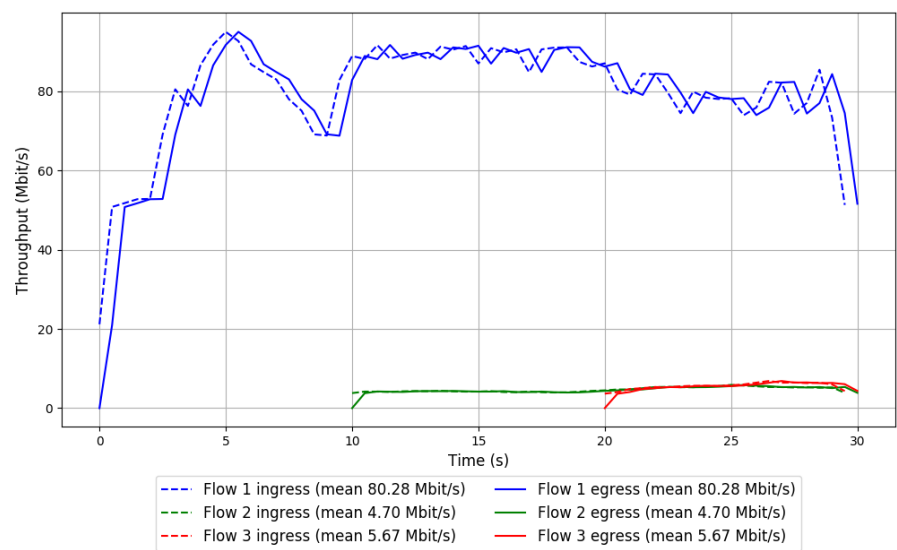
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2018-06-18 16:43:04
End at: 2018-06-18 16:43:34
Local clock offset: -1.976 ms
Remote clock offset: -1.489 ms


# Below is generated by plot.py at 2018-06-18 19:32:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.66 Mbit/s
95th percentile per-packet one-way delay: 6.431 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 78.51 Mbit/s
95th percentile per-packet one-way delay: 5.904 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.43 Mbit/s
95th percentile per-packet one-way delay: 7.632 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.72 Mbit/s
95th percentile per-packet one-way delay: 9.186 ms
Loss rate: 0.00%
```
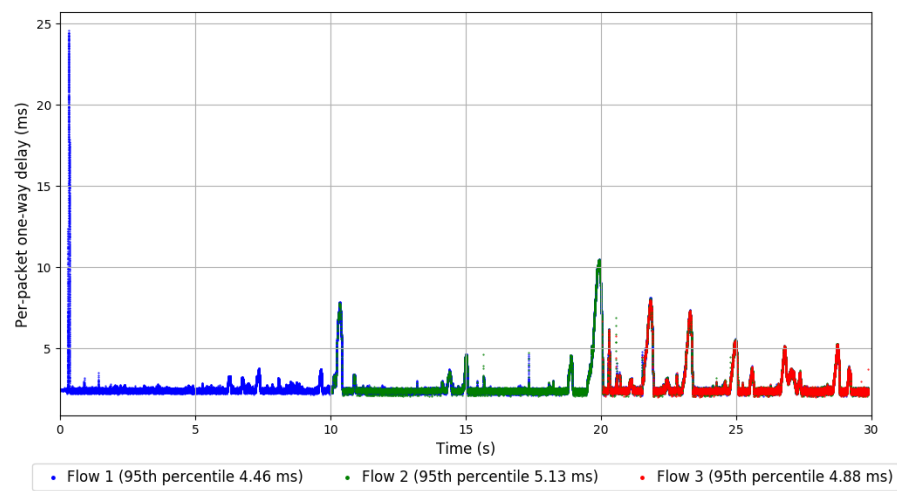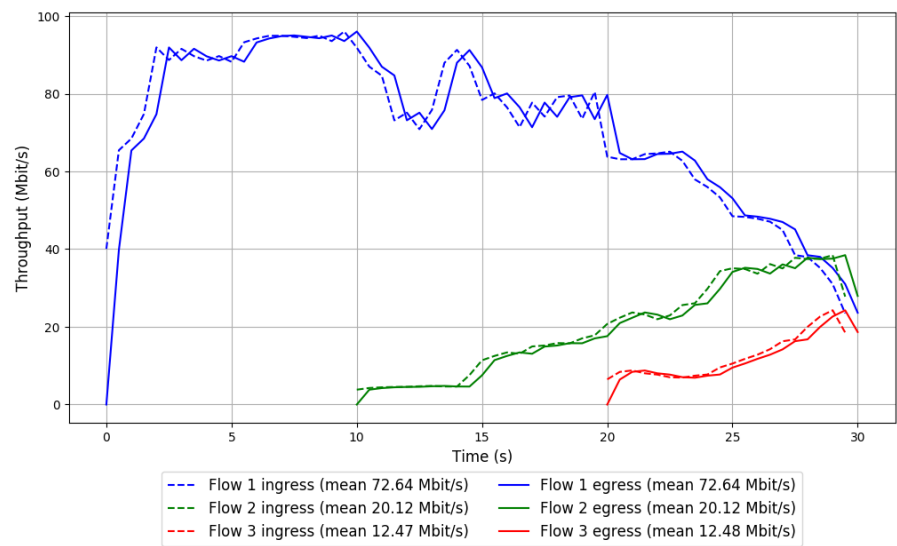
Run 2: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 78.51 Mbit/s) ——— Flow 1 egress (mean 78.51 Mbit/s)
- - - Flow 2 ingress (mean 9.43 Mbit/s) ——— Flow 2 egress (mean 9.43 Mbit/s)
- - - Flow 3 ingress (mean 8.72 Mbit/s) ——— Flow 3 egress (mean 8.72 Mbit/s)

- Flow 1 (95th percentile 5.90 ms)　　• Flow 2 (95th percentile 7.63 ms)　　• Flow 3 (95th percentile 9.19 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2018-06-18 17:01:09
End at: 2018-06-18 17:01:39
Local clock offset: -1.998 ms
Remote clock offset: 9.73 ms


# Below is generated by plot.py at 2018-06-18 19:33:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.16 Mbit/s
95th percentile per-packet one-way delay: 9.680 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.82 Mbit/s
95th percentile per-packet one-way delay: 7.952 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.65 Mbit/s
95th percentile per-packet one-way delay: 13.995 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 16.514 ms
Loss rate: 0.00%
```
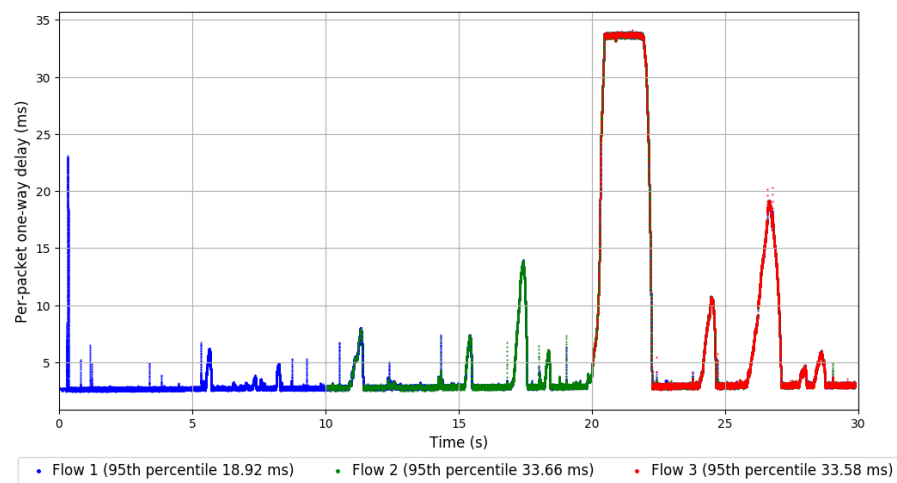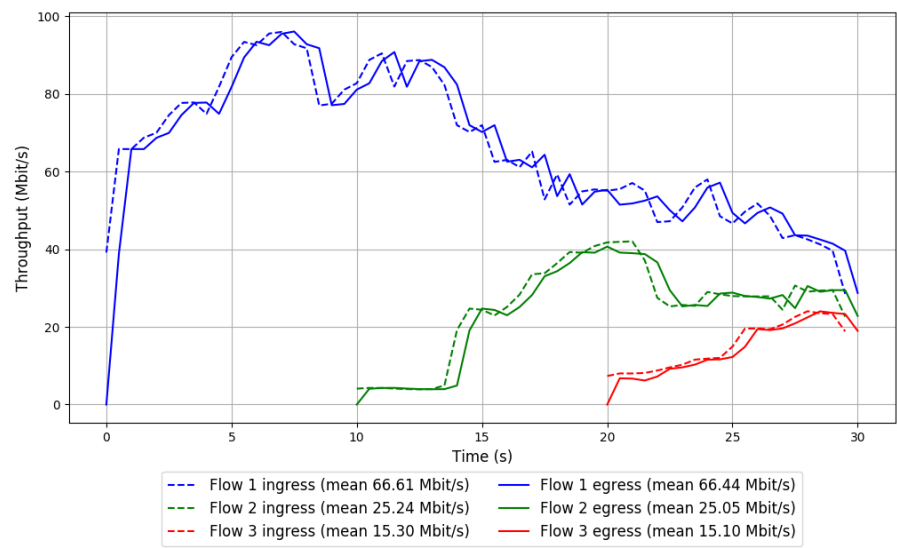
Run 3: Report of PCC-Allegro — Data Link

```
Run 4: Statistics of PCC-Allegro

Start at: 2018-06-18 17:19:13
End at: 2018-06-18 17:19:43
Local clock offset: -3.082 ms
Remote clock offset: 15.699 ms


# Below is generated by plot.py at 2018-06-18 19:33:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.42 Mbit/s
95th percentile per-packet one-way delay: 8.887 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.64 Mbit/s
95th percentile per-packet one-way delay: 7.899 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.94 Mbit/s
95th percentile per-packet one-way delay: 13.502 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 16.83 Mbit/s
95th percentile per-packet one-way delay: 22.034 ms
Loss rate: 0.00%
```
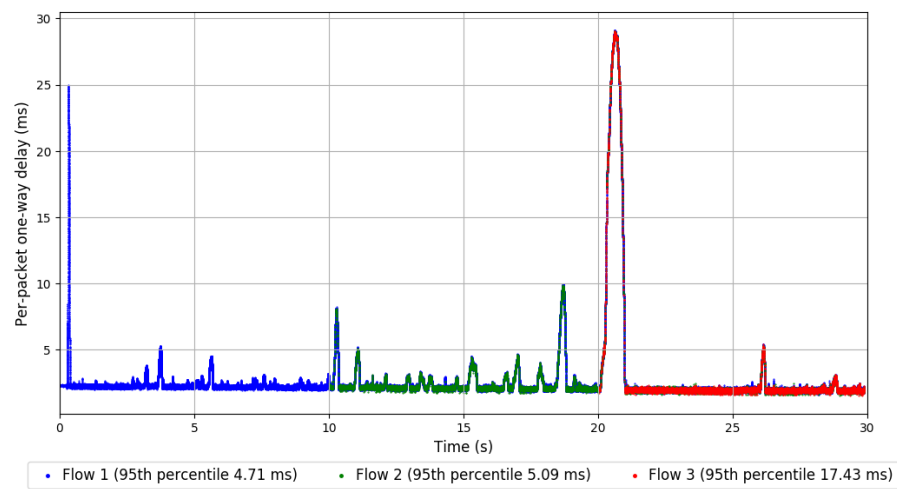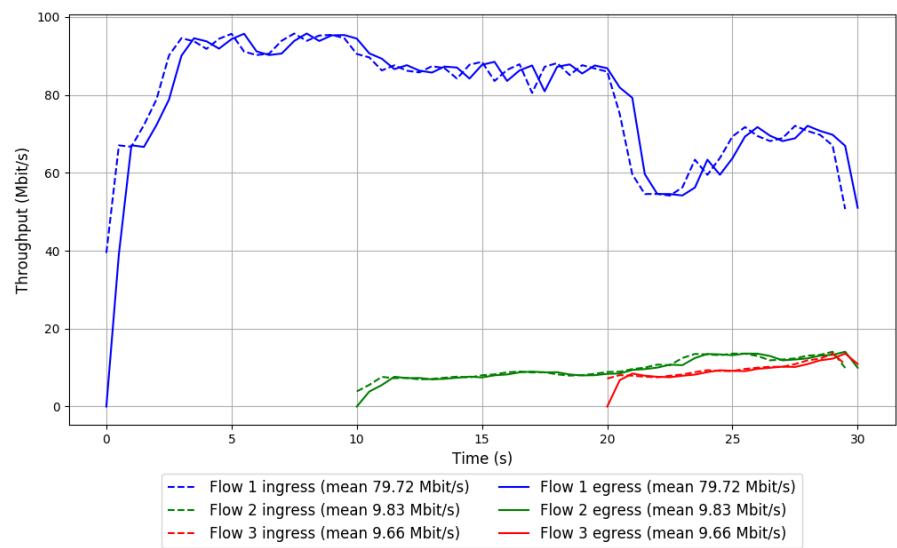
Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-06-18 17:37:18
End at: 2018-06-18 17:37:48
Local clock offset: -4.617 ms
Remote clock offset: 19.382 ms


# Below is generated by plot.py at 2018-06-18 19:33:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.27 Mbit/s
95th percentile per-packet one-way delay: 3.310 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 80.28 Mbit/s
95th percentile per-packet one-way delay: 3.270 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.70 Mbit/s
95th percentile per-packet one-way delay: 3.979 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.67 Mbit/s
95th percentile per-packet one-way delay: 4.184 ms
Loss rate: 0.00%
```
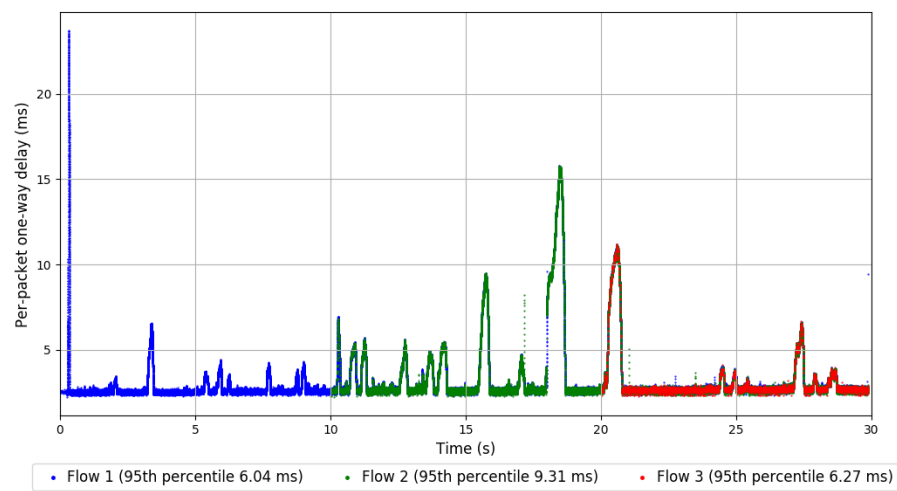
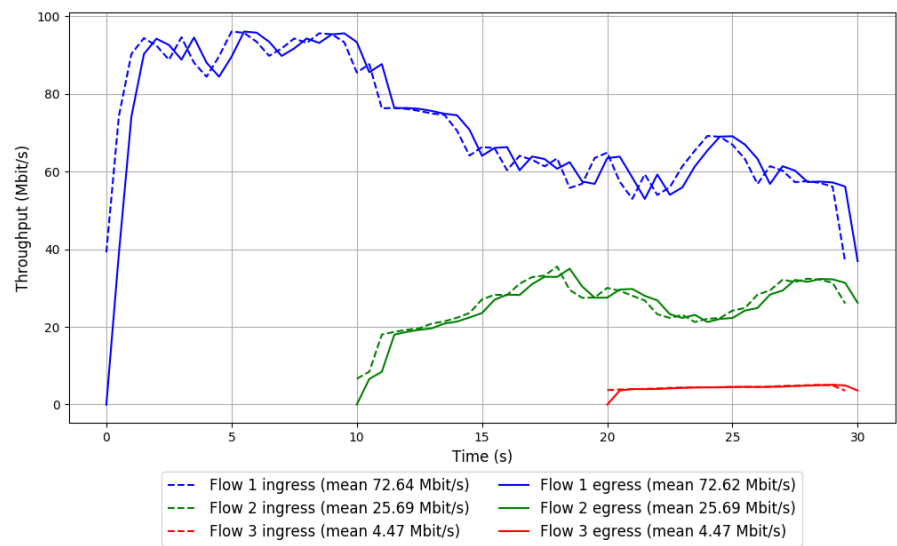Run 5: Report of PCC-Allegro — Data Link

```
Run 6: Statistics of PCC-Allegro

Start at: 2018-06-18 17:55:23
End at: 2018-06-18 17:55:53
Local clock offset: -7.584 ms
Remote clock offset: 22.847 ms


# Below is generated by plot.py at 2018-06-18 19:33:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.13 Mbit/s
95th percentile per-packet one-way delay: 4.706 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.64 Mbit/s
95th percentile per-packet one-way delay: 4.464 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.12 Mbit/s
95th percentile per-packet one-way delay: 5.135 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.48 Mbit/s
95th percentile per-packet one-way delay: 4.876 ms
Loss rate: 0.00%
```
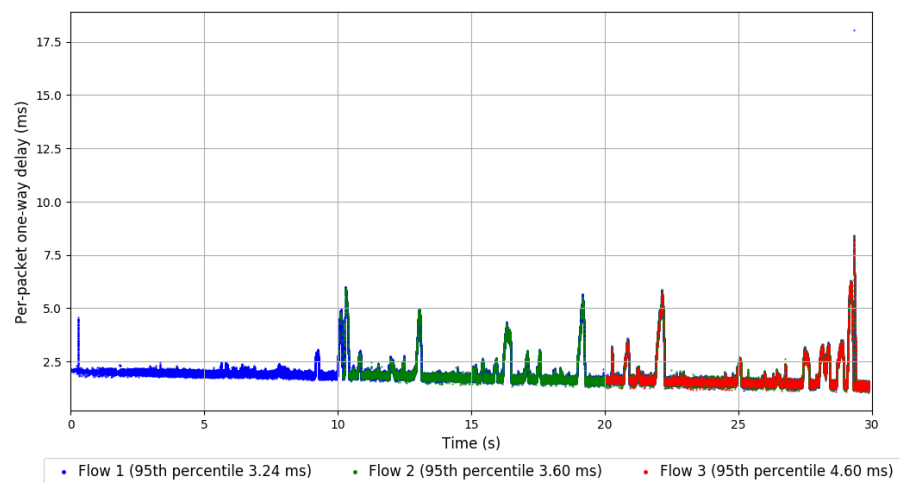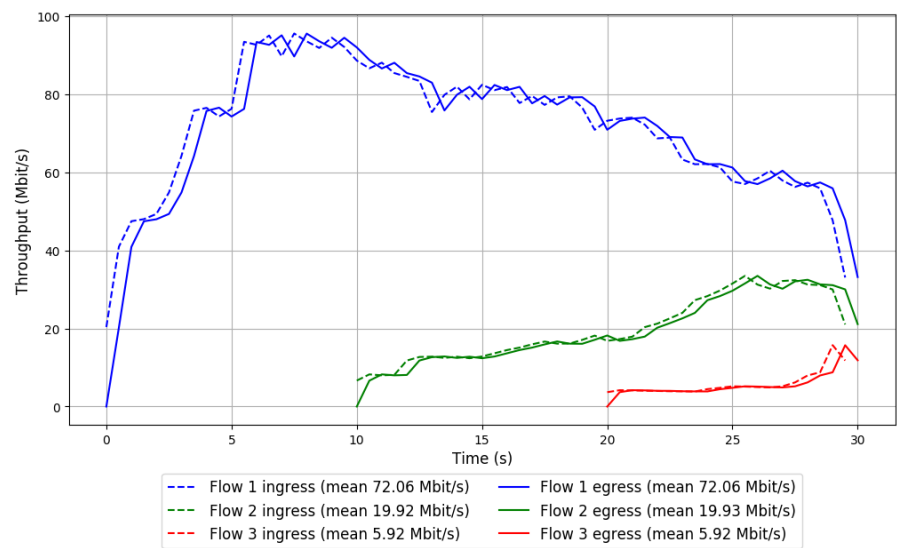
Run 6: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 72.64 Mbit/s) ---- Flow 1 egress (mean 72.64 Mbit/s)
Flow 2 ingress (mean 20.12 Mbit/s) ---- Flow 2 egress (mean 20.12 Mbit/s)
Flow 3 ingress (mean 12.47 Mbit/s) ---- Flow 3 egress (mean 12.48 Mbit/s)

• Flow 1 (95th percentile 4.46 ms)   • Flow 2 (95th percentile 5.13 ms)   • Flow 3 (95th percentile 4.88 ms)

```
Run 7: Statistics of PCC-Allegro

Start at: 2018-06-18 18:13:28
End at: 2018-06-18 18:13:58
Local clock offset: -8.873 ms
Remote clock offset: -2.495 ms


# Below is generated by plot.py at 2018-06-18 19:33:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.07 Mbit/s
95th percentile per-packet one-way delay: 33.483 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 66.44 Mbit/s
95th percentile per-packet one-way delay: 18.921 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 25.05 Mbit/s
95th percentile per-packet one-way delay: 33.665 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 15.10 Mbit/s
95th percentile per-packet one-way delay: 33.580 ms
Loss rate: 1.37%
```
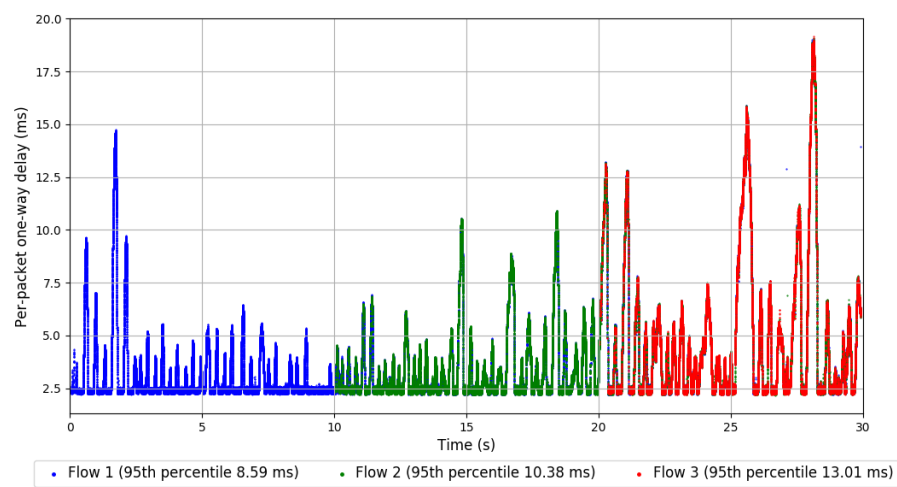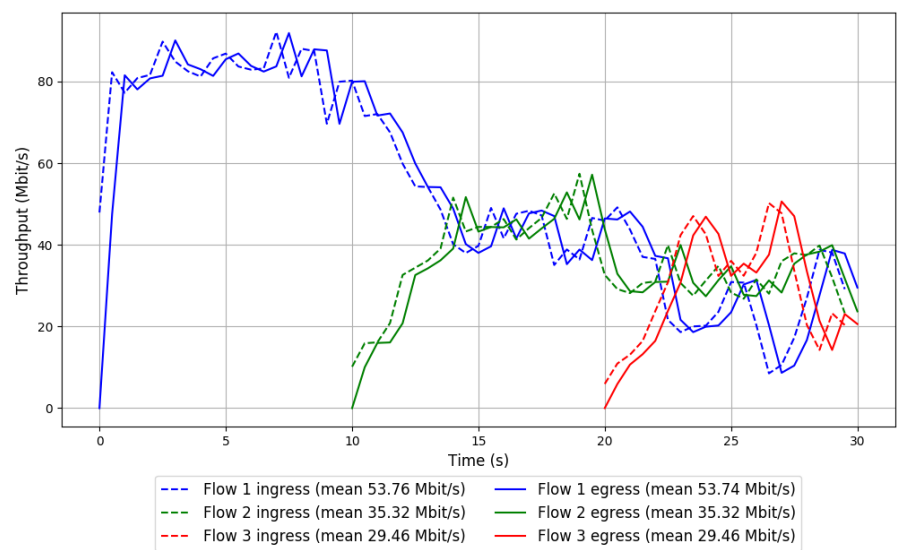
Run 7: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 66.61 Mbit/s)   Flow 1 egress (mean 66.44 Mbit/s)
Flow 2 ingress (mean 25.24 Mbit/s)   Flow 2 egress (mean 25.05 Mbit/s)
Flow 3 ingress (mean 15.30 Mbit/s)   Flow 3 egress (mean 15.10 Mbit/s)

Flow 1 (95th percentile 18.92 ms)   Flow 2 (95th percentile 33.66 ms)   Flow 3 (95th percentile 33.58 ms)

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```
Run 8: Statistics of PCC-Allegro

Start at: 2018-06-18 18:31:32
End at: 2018-06-18 18:32:02
Local clock offset: -9.928 ms
Remote clock offset: -10.919 ms


# Below is generated by plot.py at 2018-06-18 19:33:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.44 Mbit/s
95th percentile per-packet one-way delay: 4.814 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 79.72 Mbit/s
95th percentile per-packet one-way delay: 4.706 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.83 Mbit/s
95th percentile per-packet one-way delay: 5.087 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.66 Mbit/s
95th percentile per-packet one-way delay: 17.426 ms
Loss rate: 0.00%
```
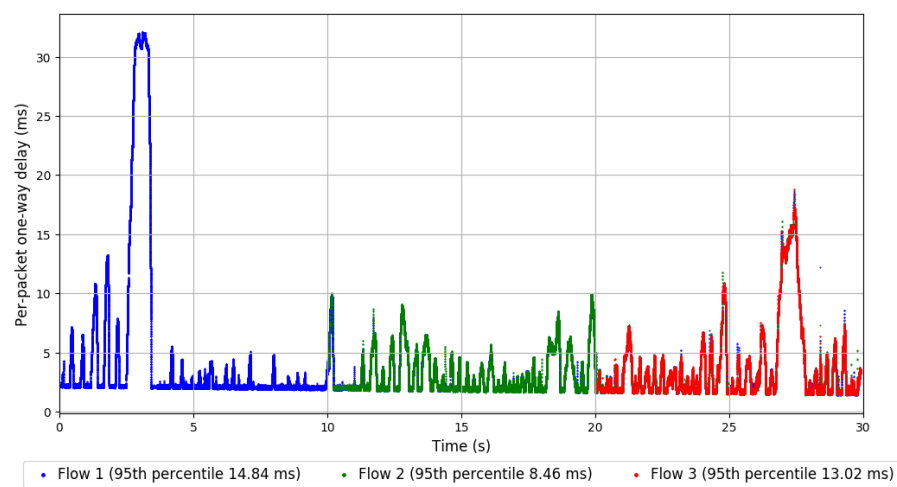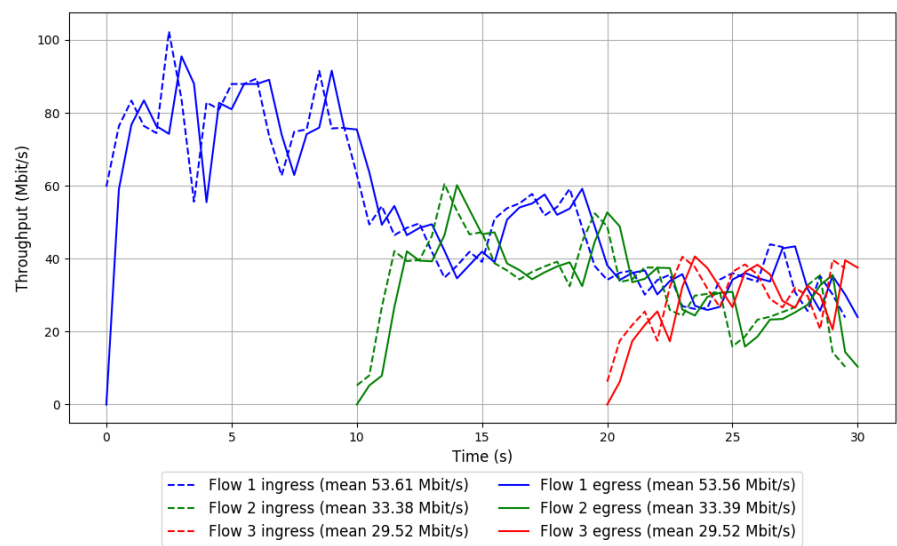
Run 8: Report of PCC-Allegro — Data Link

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```
Run 9: Statistics of PCC-Allegro

Start at: 2018-06-18 18:49:36
End at: 2018-06-18 18:50:06
Local clock offset: -2.369 ms
Remote clock offset: -5.124 ms


# Below is generated by plot.py at 2018-06-18 19:33:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.17 Mbit/s
95th percentile per-packet one-way delay: 7.049 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.62 Mbit/s
95th percentile per-packet one-way delay: 6.040 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.69 Mbit/s
95th percentile per-packet one-way delay: 9.313 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 6.271 ms
Loss rate: 0.00%
```

Run 9: Report of PCC-Allegro — Data Link

```
Run 10: Statistics of PCC-Allegro

Start at: 2018-06-18 19:07:41
End at: 2018-06-18 19:08:11
Local clock offset: -0.91 ms
Remote clock offset: -2.518 ms


# Below is generated by plot.py at 2018-06-18 19:33:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.26 Mbit/s
95th percentile per-packet one-way delay: 3.308 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.06 Mbit/s
95th percentile per-packet one-way delay: 3.237 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 19.93 Mbit/s
95th percentile per-packet one-way delay: 3.601 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.92 Mbit/s
95th percentile per-packet one-way delay: 4.601 ms
Loss rate: 0.00%
```
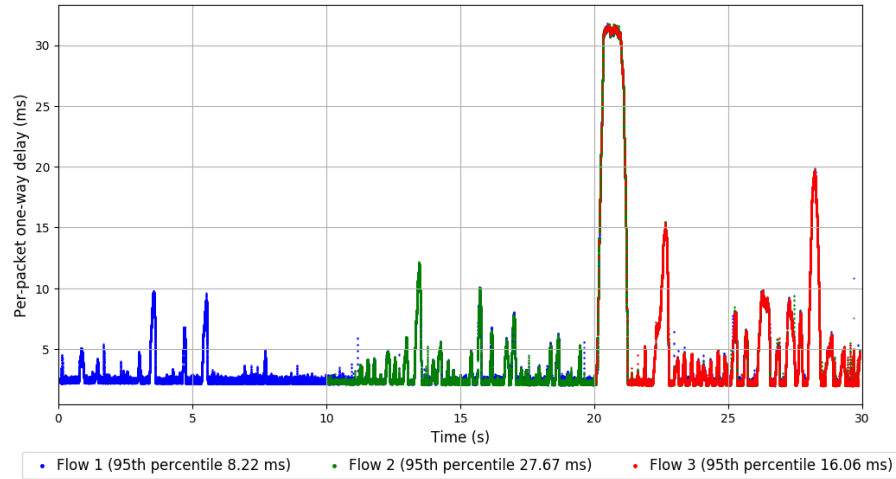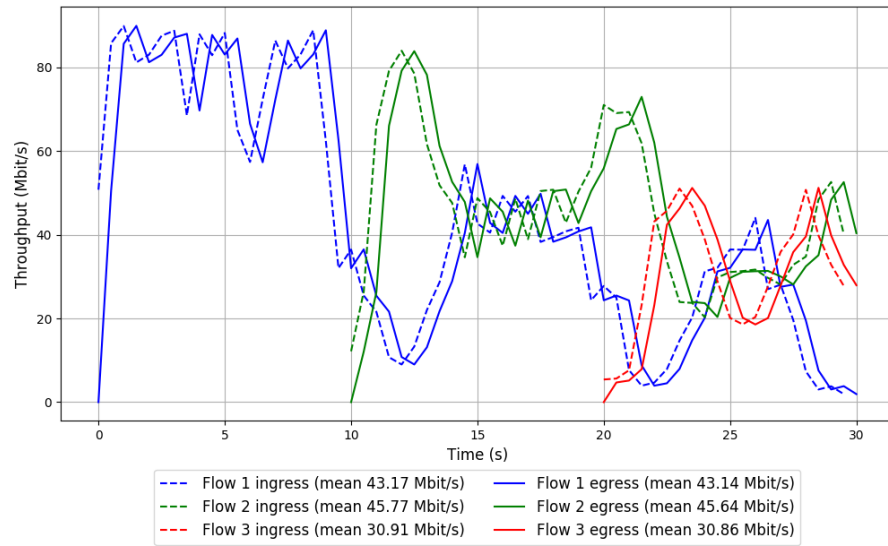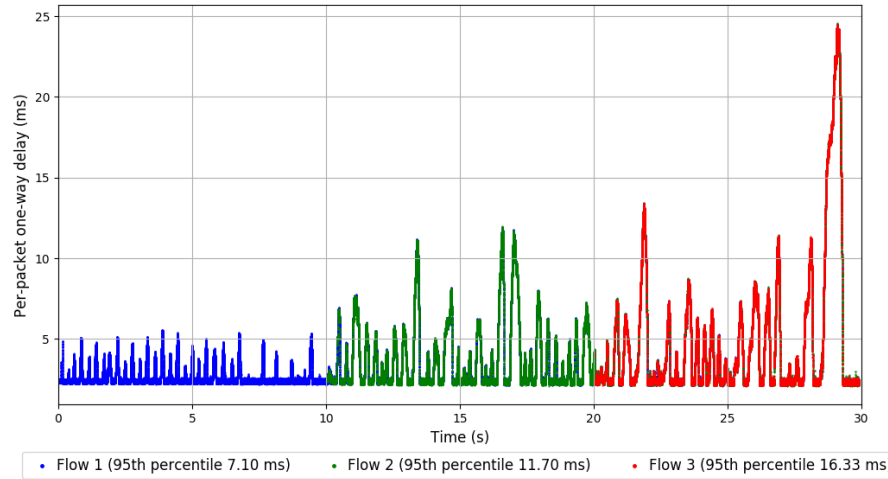
Run 10: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 72.06 Mbit/s)   Flow 1 egress (mean 72.06 Mbit/s)
Flow 2 ingress (mean 19.92 Mbit/s)   Flow 2 egress (mean 19.93 Mbit/s)
Flow 3 ingress (mean 5.92 Mbit/s)   Flow 3 egress (mean 5.92 Mbit/s)

Flow 1 (95th percentile 3.24 ms)   Flow 2 (95th percentile 3.60 ms)   Flow 3 (95th percentile 4.60 ms)
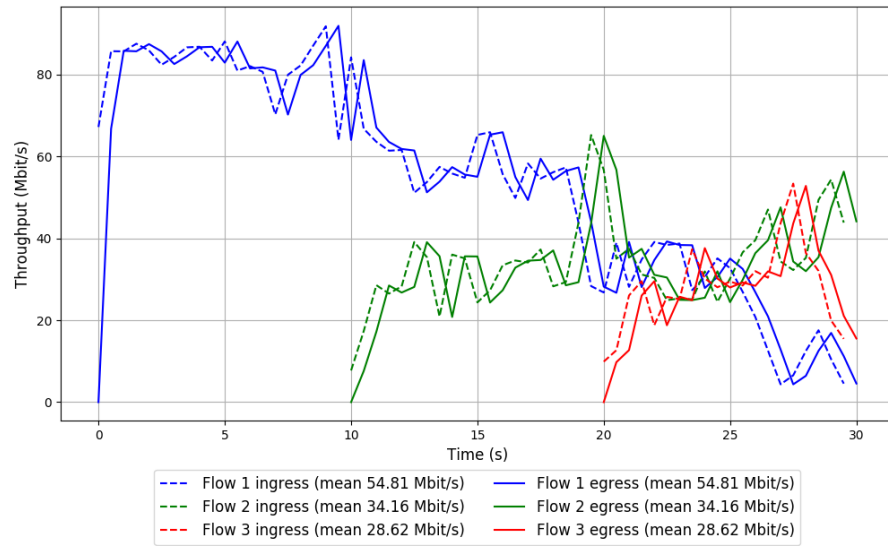
```
Run 1: Statistics of PCC-Expr

Start at: 2018-06-18 16:32:55
End at: 2018-06-18 16:33:25
Local clock offset: -1.85 ms
Remote clock offset: -1.784 ms


# Below is generated by plot.py at 2018-06-18 19:35:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.95 Mbit/s
95th percentile per-packet one-way delay: 9.919 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.74 Mbit/s
95th percentile per-packet one-way delay: 8.593 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.32 Mbit/s
95th percentile per-packet one-way delay: 10.381 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.46 Mbit/s
95th percentile per-packet one-way delay: 13.014 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2018-06-18 16:51:00
End at: 2018-06-18 16:51:30
Local clock offset: -2.006 ms
Remote clock offset: 1.161 ms


# Below is generated by plot.py at 2018-06-18 19:35:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.52 Mbit/s
95th percentile per-packet one-way delay: 12.952 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 53.56 Mbit/s
95th percentile per-packet one-way delay: 14.841 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 33.39 Mbit/s
95th percentile per-packet one-way delay: 8.458 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.52 Mbit/s
95th percentile per-packet one-way delay: 13.024 ms
Loss rate: 0.00%
```
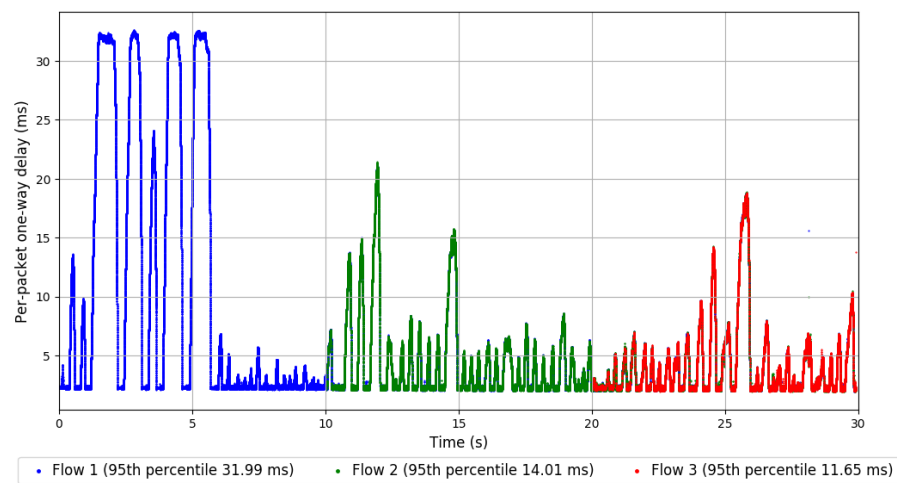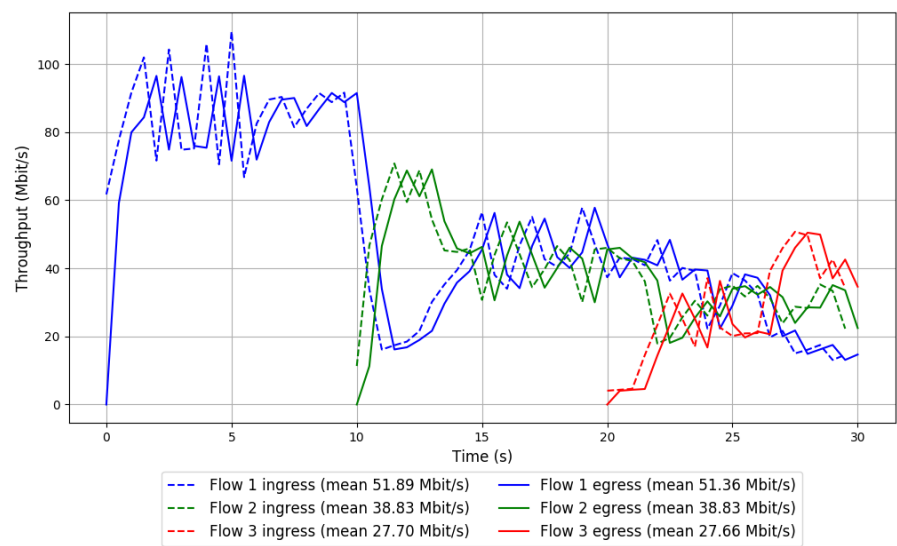
Run 2: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 53.61 Mbit/s) --- Flow 1 egress (mean 53.56 Mbit/s)
Flow 2 ingress (mean 33.38 Mbit/s) --- Flow 2 egress (mean 33.39 Mbit/s)
Flow 3 ingress (mean 29.52 Mbit/s) --- Flow 3 egress (mean 29.52 Mbit/s)

Flow 1 (95th percentile 14.84 ms)   Flow 2 (95th percentile 8.46 ms)   Flow 3 (95th percentile 13.02 ms)

```
Run 3: Statistics of PCC-Expr

Start at: 2018-06-18 17:09:04
End at: 2018-06-18 17:09:34
Local clock offset: -2.512 ms
Remote clock offset: 12.98 ms


# Below is generated by plot.py at 2018-06-18 19:35:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.69 Mbit/s
95th percentile per-packet one-way delay: 13.939 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 43.14 Mbit/s
95th percentile per-packet one-way delay: 8.224 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 45.64 Mbit/s
95th percentile per-packet one-way delay: 27.667 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 30.86 Mbit/s
95th percentile per-packet one-way delay: 16.060 ms
Loss rate: 0.14%
```
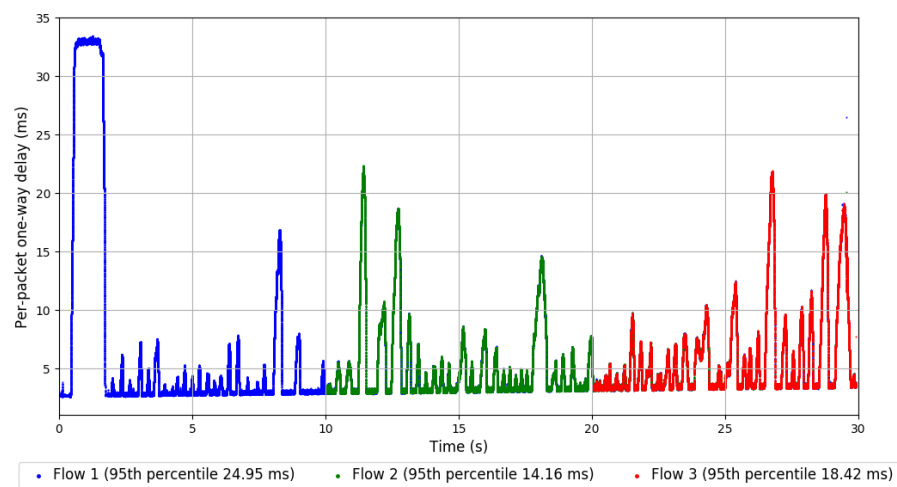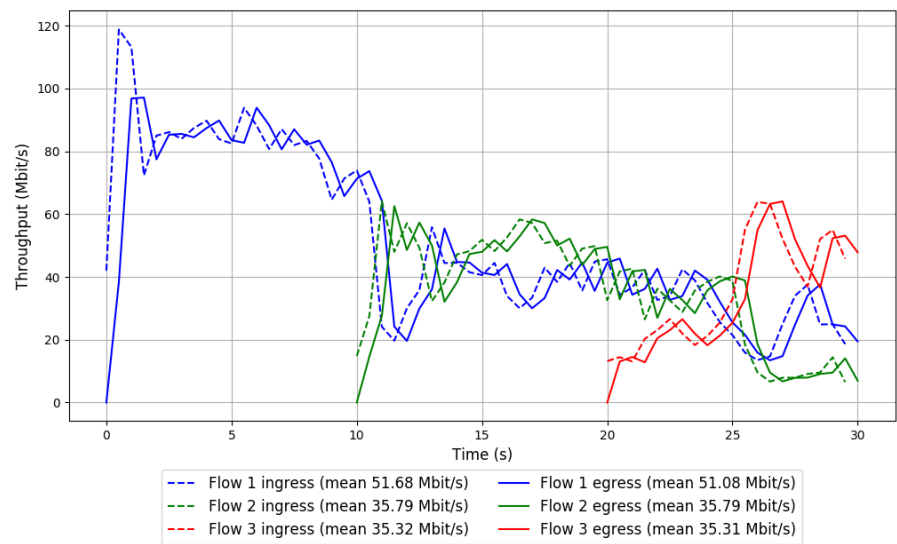
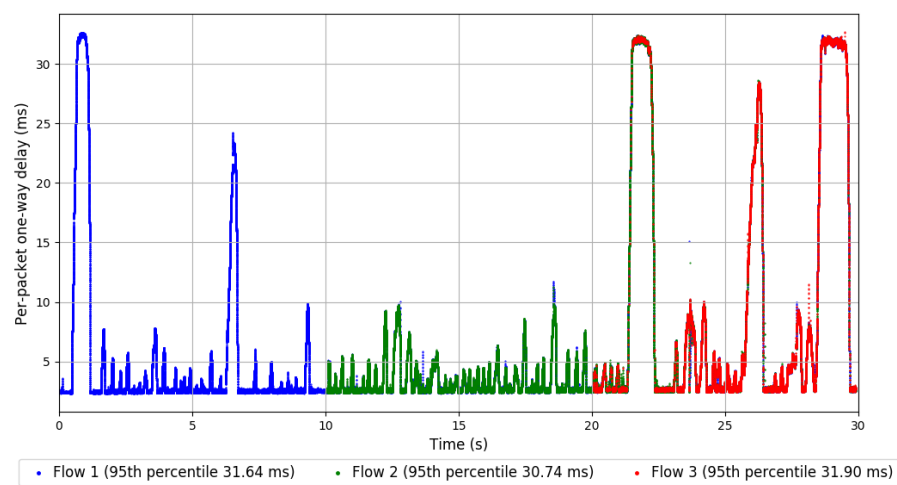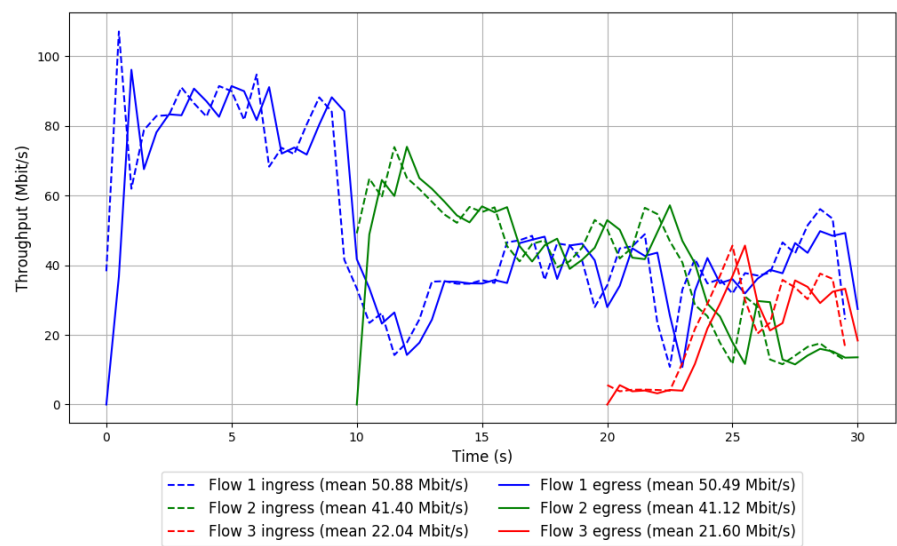## Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2018-06-18 17:27:09
End at: 2018-06-18 17:27:39
Local clock offset: -3.226 ms
Remote clock offset: 17.357 ms


# Below is generated by plot.py at 2018-06-18 19:35:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.98 Mbit/s
95th percentile per-packet one-way delay: 9.419 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.81 Mbit/s
95th percentile per-packet one-way delay: 7.097 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.16 Mbit/s
95th percentile per-packet one-way delay: 11.701 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.62 Mbit/s
95th percentile per-packet one-way delay: 16.333 ms
Loss rate: 0.00%
```
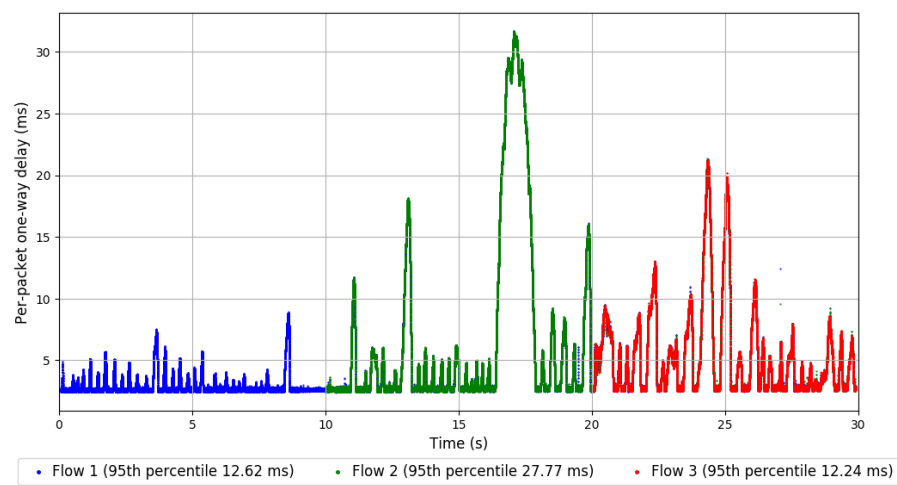
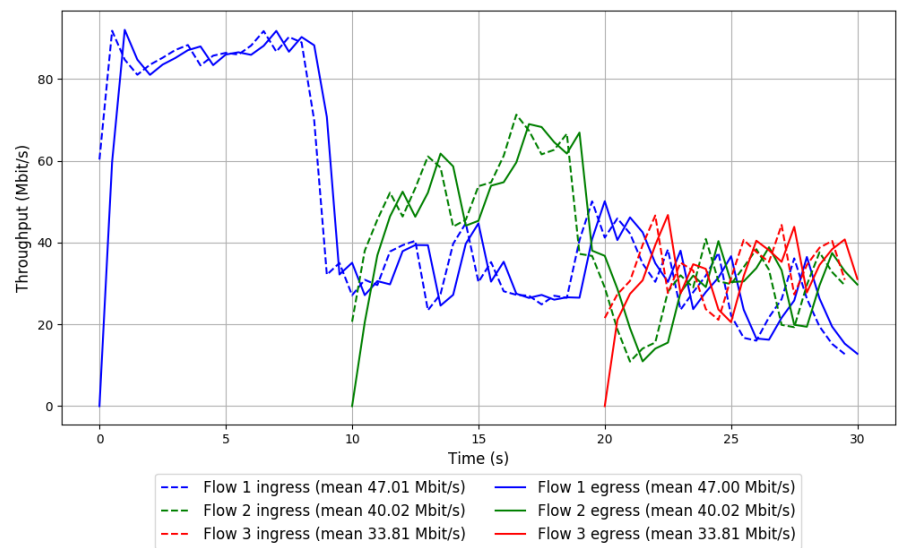Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2018-06-18 17:45:14
End at: 2018-06-18 17:45:44
Local clock offset: -6.306 ms
Remote clock offset: 20.87 ms


# Below is generated by plot.py at 2018-06-18 19:35:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.29 Mbit/s
95th percentile per-packet one-way delay: 31.060 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 51.36 Mbit/s
95th percentile per-packet one-way delay: 31.991 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 38.83 Mbit/s
95th percentile per-packet one-way delay: 14.007 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.66 Mbit/s
95th percentile per-packet one-way delay: 11.648 ms
Loss rate: 0.00%
```

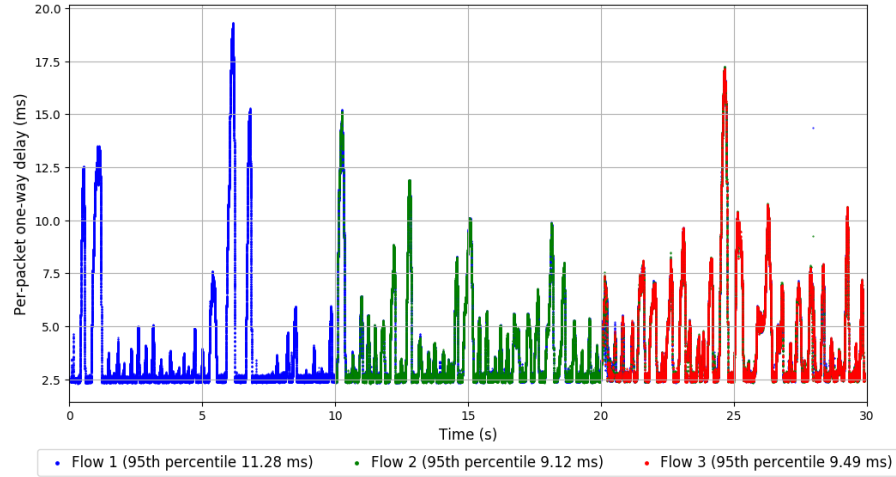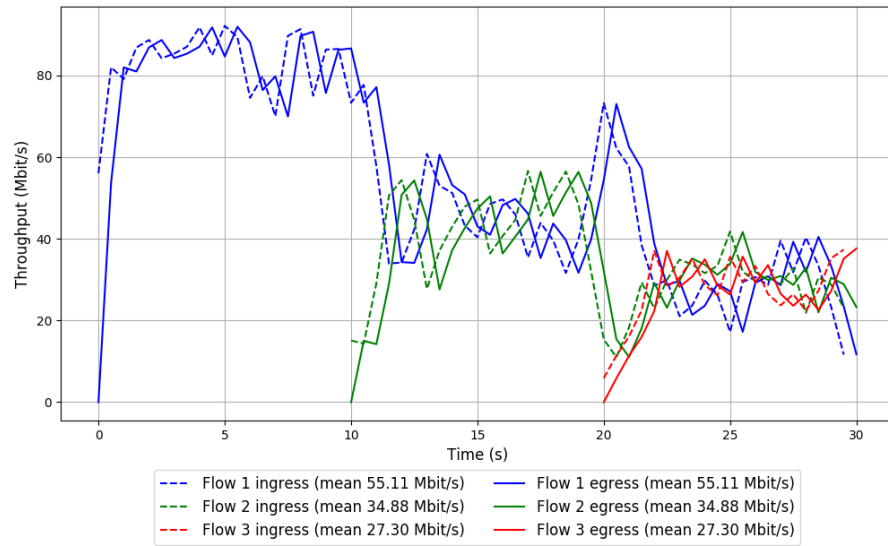Run 5: Report of PCC-Expr — Data Link

```
Run 6: Statistics of PCC-Expr

Start at: 2018-06-18 18:03:19
End at: 2018-06-18 18:03:49
Local clock offset: -8.147 ms
Remote clock offset: 9.09 ms


# Below is generated by plot.py at 2018-06-18 19:35:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.54 Mbit/s
95th percentile per-packet one-way delay: 18.037 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 51.08 Mbit/s
95th percentile per-packet one-way delay: 24.949 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 35.79 Mbit/s
95th percentile per-packet one-way delay: 14.160 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.31 Mbit/s
95th percentile per-packet one-way delay: 18.420 ms
Loss rate: 0.00%
```

Run 6: Report of PCC-Expr — Data Link

```
Run 7: Statistics of PCC-Expr

Start at: 2018-06-18 18:21:23
End at: 2018-06-18 18:21:53
Local clock offset: -9.315 ms
Remote clock offset: -7.095 ms


# Below is generated by plot.py at 2018-06-18 19:35:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.97 Mbit/s
95th percentile per-packet one-way delay: 31.663 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 50.49 Mbit/s
95th percentile per-packet one-way delay: 31.636 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 41.12 Mbit/s
95th percentile per-packet one-way delay: 30.742 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 21.60 Mbit/s
95th percentile per-packet one-way delay: 31.898 ms
Loss rate: 1.99%
```
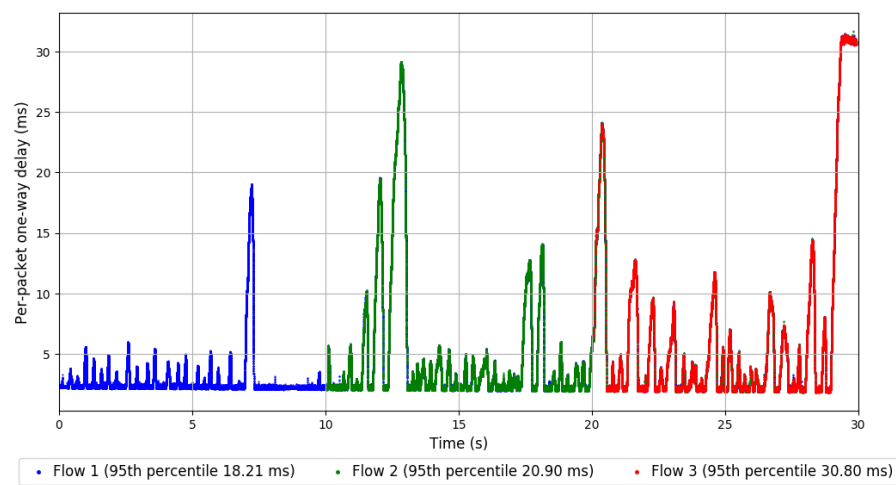
Run 7: Report of PCC-Expr — Data Link

```
Run 8: Statistics of PCC-Expr

Start at: 2018-06-18 18:39:28
End at: 2018-06-18 18:39:58
Local clock offset: -6.099 ms
Remote clock offset: -6.615 ms


# Below is generated by plot.py at 2018-06-18 19:35:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.79 Mbit/s
95th percentile per-packet one-way delay: 18.411 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.00 Mbit/s
95th percentile per-packet one-way delay: 12.619 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.02 Mbit/s
95th percentile per-packet one-way delay: 27.773 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.81 Mbit/s
95th percentile per-packet one-way delay: 12.245 ms
Loss rate: 0.00%
```
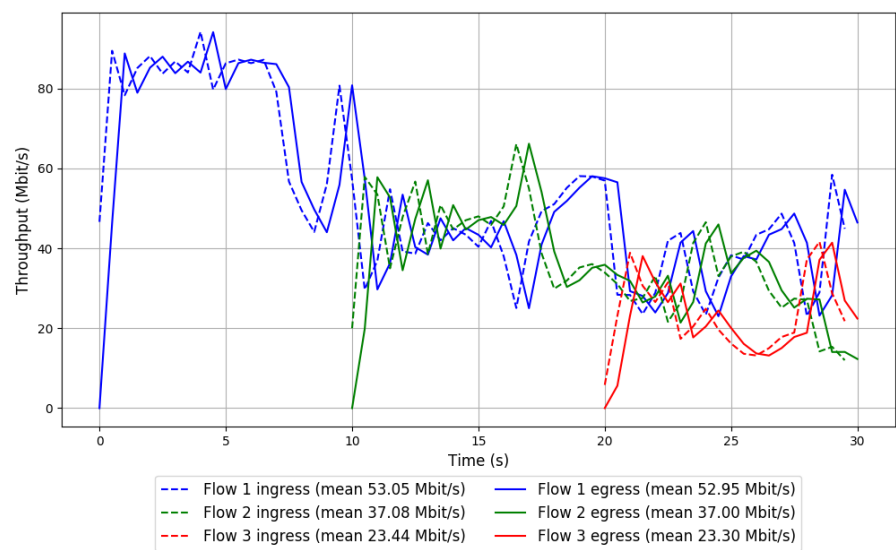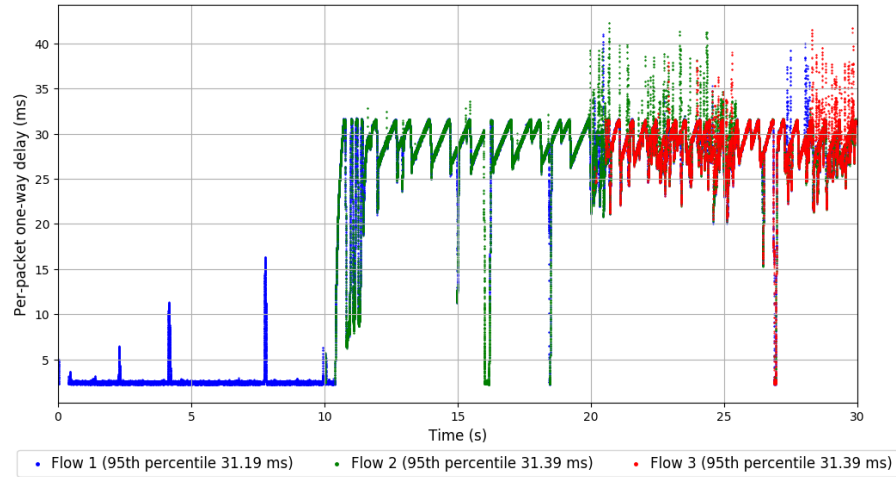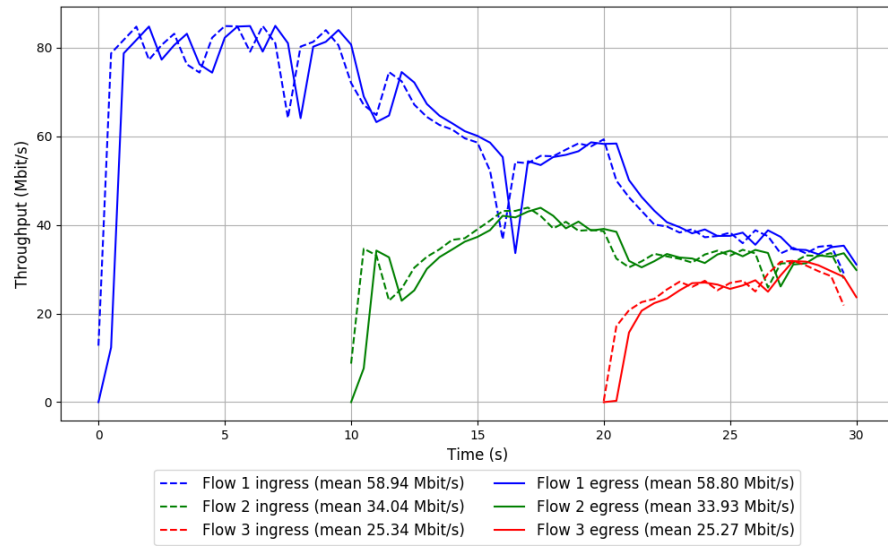
Run 8: Report of PCC-Expr — Data Link

```
Run 9: Statistics of PCC-Expr

Start at: 2018-06-18 18:57:32
End at: 2018-06-18 18:58:02
Local clock offset: -0.971 ms
Remote clock offset: -5.228 ms


# Below is generated by plot.py at 2018-06-18 19:37:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.32 Mbit/s
95th percentile per-packet one-way delay: 9.960 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.11 Mbit/s
95th percentile per-packet one-way delay: 11.280 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.88 Mbit/s
95th percentile per-packet one-way delay: 9.116 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.30 Mbit/s
95th percentile per-packet one-way delay: 9.489 ms
Loss rate: 0.00%
```
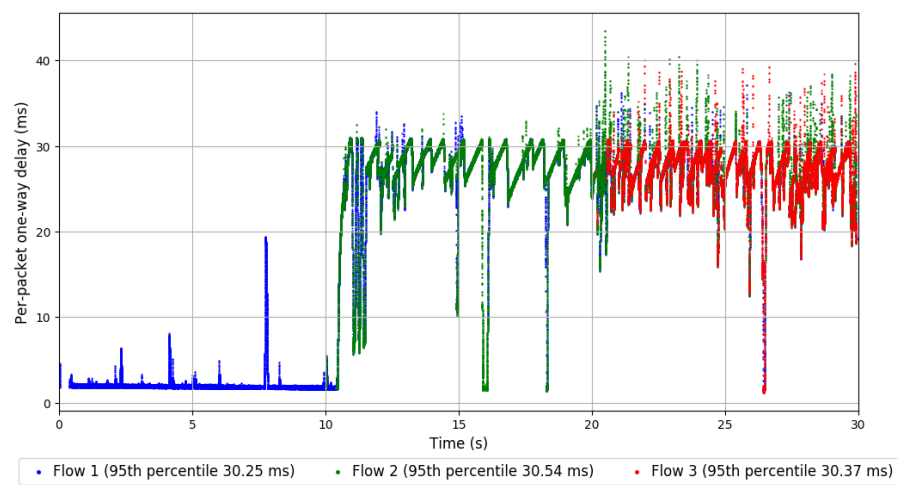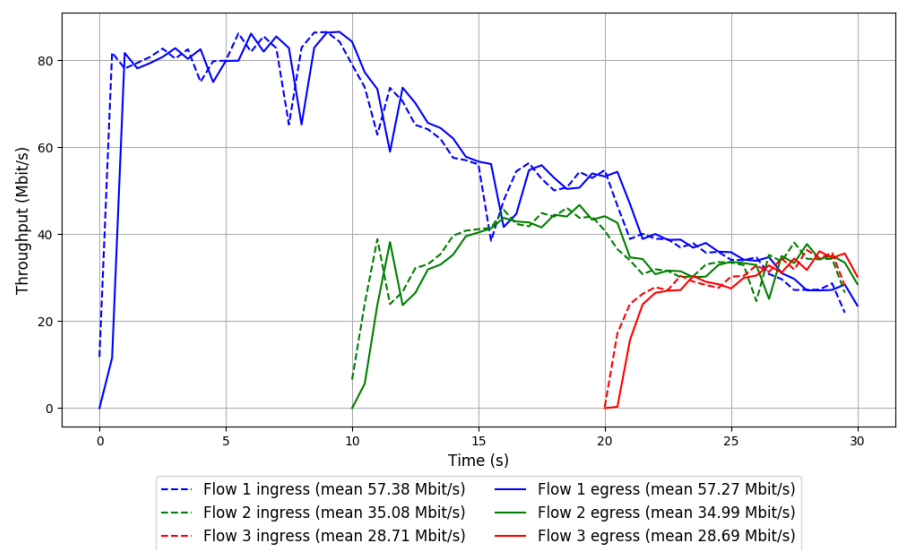
Run 9: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 55.11 Mbit/s)   Flow 1 egress (mean 55.11 Mbit/s)
Flow 2 ingress (mean 34.88 Mbit/s)   Flow 2 egress (mean 34.88 Mbit/s)
Flow 3 ingress (mean 27.30 Mbit/s)   Flow 3 egress (mean 27.30 Mbit/s)

Flow 1 (95th percentile 11.28 ms)   Flow 2 (95th percentile 9.12 ms)   Flow 3 (95th percentile 9.49 ms)

```
Run 10: Statistics of PCC-Expr

Start at: 2018-06-18 19:15:36
End at: 2018-06-18 19:16:06
Local clock offset: -1.452 ms
Remote clock offset: 5.734 ms


# Below is generated by plot.py at 2018-06-18 19:37:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.28 Mbit/s
95th percentile per-packet one-way delay: 19.316 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 52.95 Mbit/s
95th percentile per-packet one-way delay: 18.210 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 37.00 Mbit/s
95th percentile per-packet one-way delay: 20.896 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 23.30 Mbit/s
95th percentile per-packet one-way delay: 30.805 ms
Loss rate: 0.34%
```

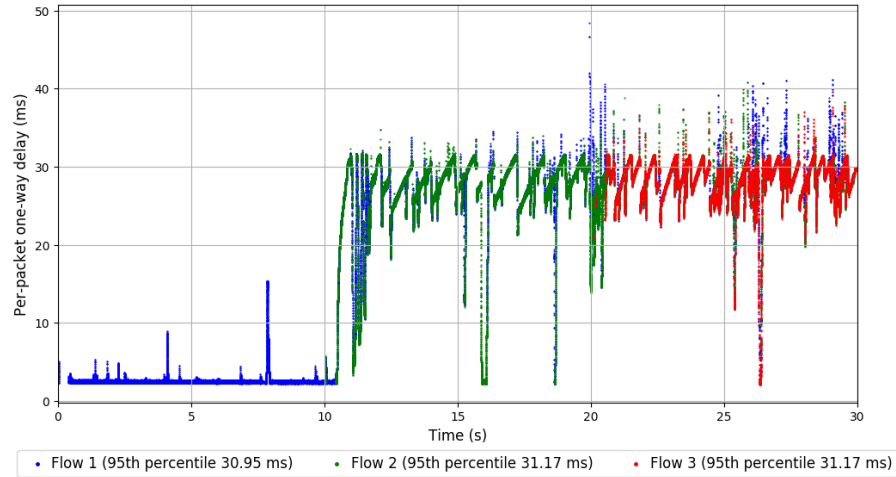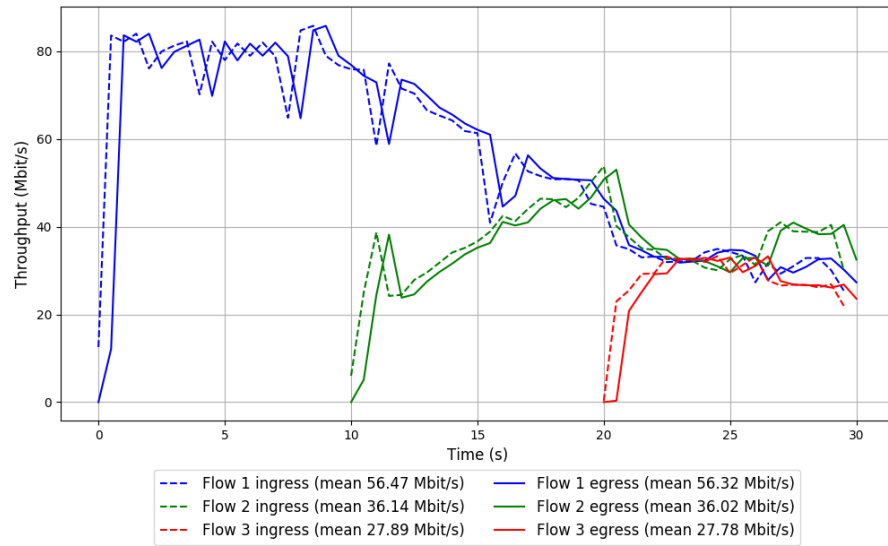# Run 10: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-06-18 16:31:47
End at: 2018-06-18 16:32:17
Local clock offset: -1.915 ms
Remote clock offset: -1.843 ms


# Below is generated by plot.py at 2018-06-18 19:37:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.68 Mbit/s
95th percentile per-packet one-way delay: 31.286 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 58.80 Mbit/s
95th percentile per-packet one-way delay: 31.192 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 33.93 Mbit/s
95th percentile per-packet one-way delay: 31.393 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 25.27 Mbit/s
95th percentile per-packet one-way delay: 31.394 ms
Loss rate: 0.20%
```
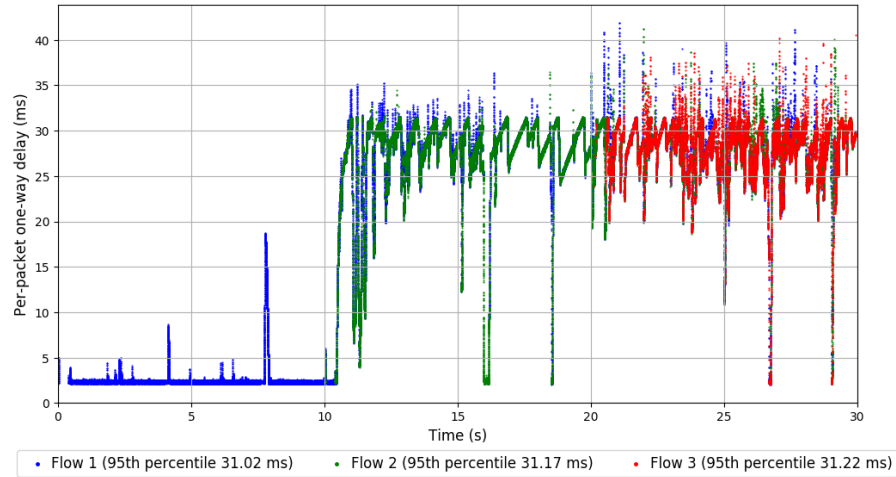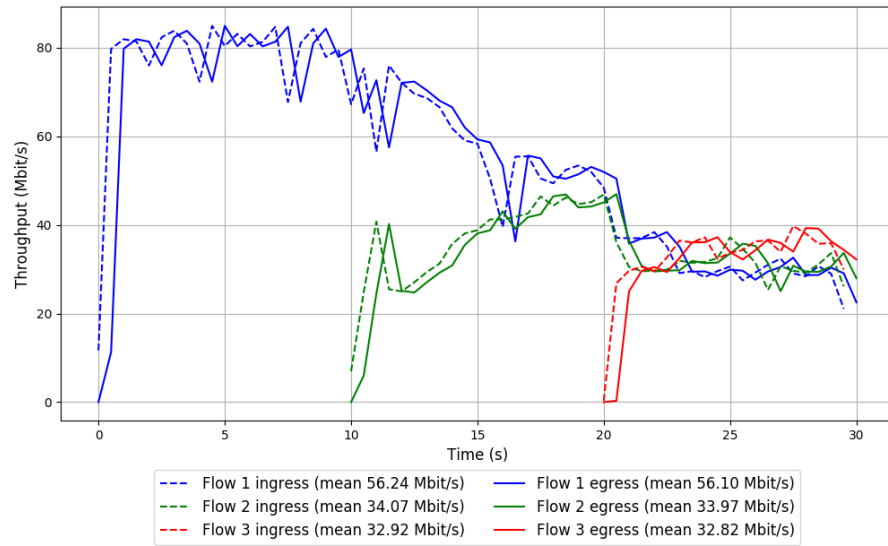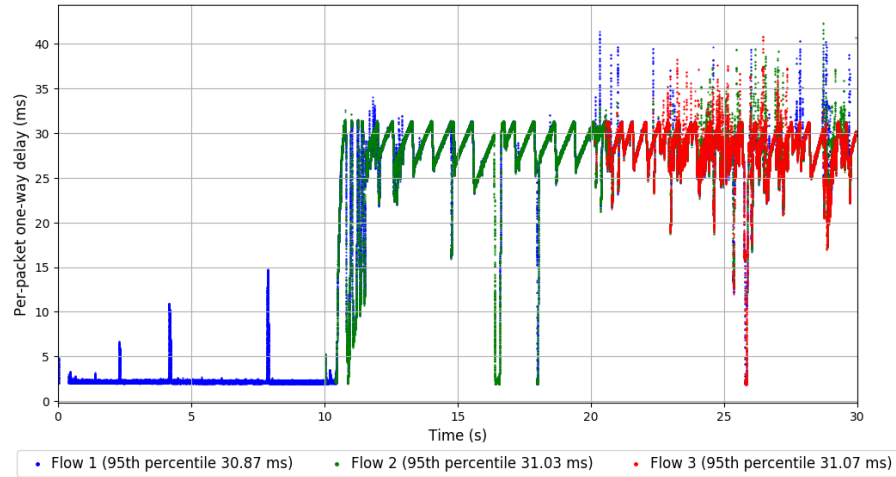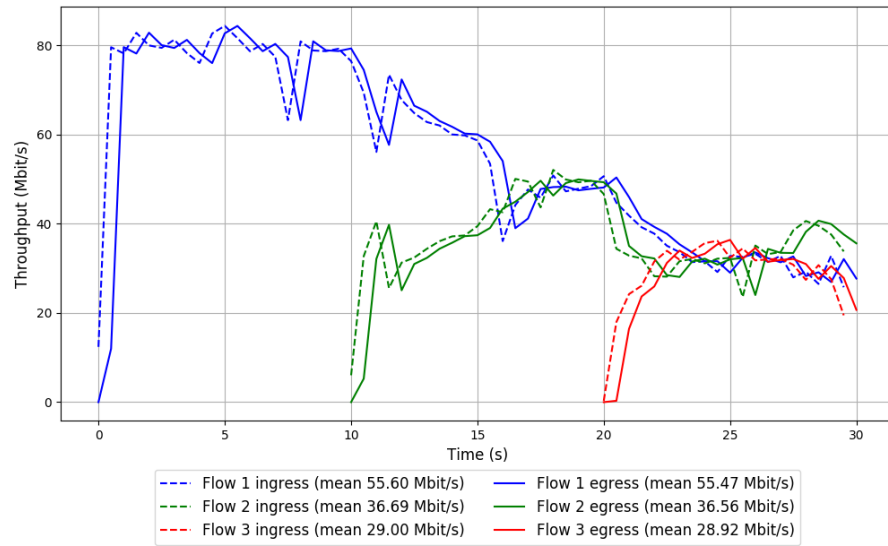
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-06-18 16:49:52
End at: 2018-06-18 16:50:22
Local clock offset: -2.0 ms
Remote clock offset: -0.568 ms


# Below is generated by plot.py at 2018-06-18 19:37:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.95 Mbit/s
95th percentile per-packet one-way delay: 30.363 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 57.27 Mbit/s
95th percentile per-packet one-way delay: 30.249 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 34.99 Mbit/s
95th percentile per-packet one-way delay: 30.535 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 28.69 Mbit/s
95th percentile per-packet one-way delay: 30.373 ms
Loss rate: 0.18%
```

Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 57.38 Mbit/s)   Flow 1 egress (mean 57.27 Mbit/s)
Flow 2 ingress (mean 35.08 Mbit/s)   Flow 2 egress (mean 34.99 Mbit/s)
Flow 3 ingress (mean 28.71 Mbit/s)   Flow 3 egress (mean 28.69 Mbit/s)

Flow 1 (95th percentile 30.25 ms)   Flow 2 (95th percentile 30.54 ms)   Flow 3 (95th percentile 30.37 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-06-18 17:07:57
End at: 2018-06-18 17:08:27
Local clock offset: -2.472 ms
Remote clock offset: 12.707 ms


# Below is generated by plot.py at 2018-06-18 19:37:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.41 Mbit/s
95th percentile per-packet one-way delay: 31.076 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 56.32 Mbit/s
95th percentile per-packet one-way delay: 30.946 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 36.02 Mbit/s
95th percentile per-packet one-way delay: 31.168 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 27.78 Mbit/s
95th percentile per-packet one-way delay: 31.172 ms
Loss rate: 0.30%
```
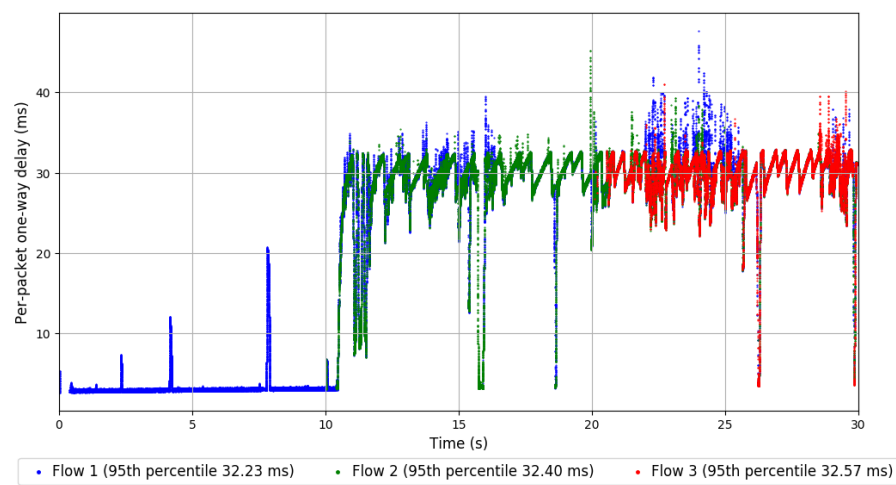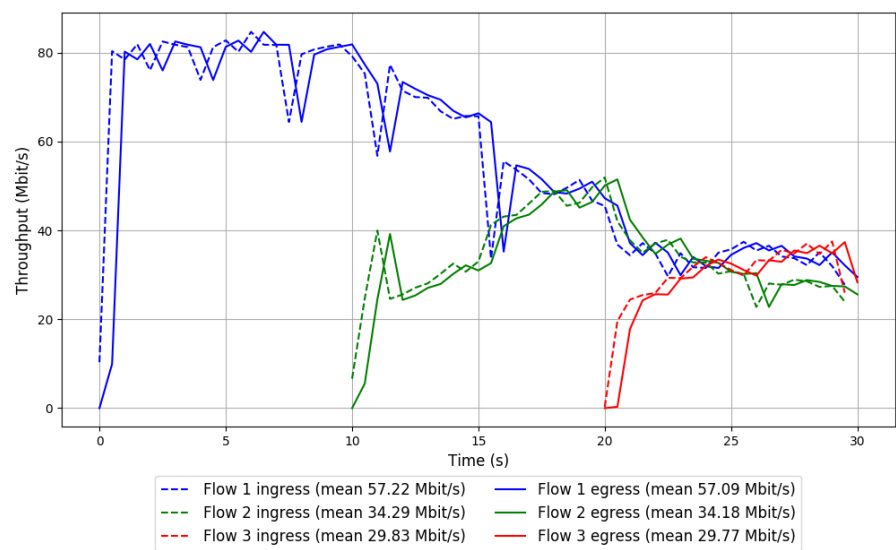
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2018-06-18 17:26:02
End at: 2018-06-18 17:26:32
Local clock offset: -3.212 ms
Remote clock offset: 17.101 ms


# Below is generated by plot.py at 2018-06-18 19:37:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.45 Mbit/s
95th percentile per-packet one-way delay: 31.095 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 56.10 Mbit/s
95th percentile per-packet one-way delay: 31.022 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 33.97 Mbit/s
95th percentile per-packet one-way delay: 31.168 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 32.82 Mbit/s
95th percentile per-packet one-way delay: 31.220 ms
Loss rate: 0.11%
```
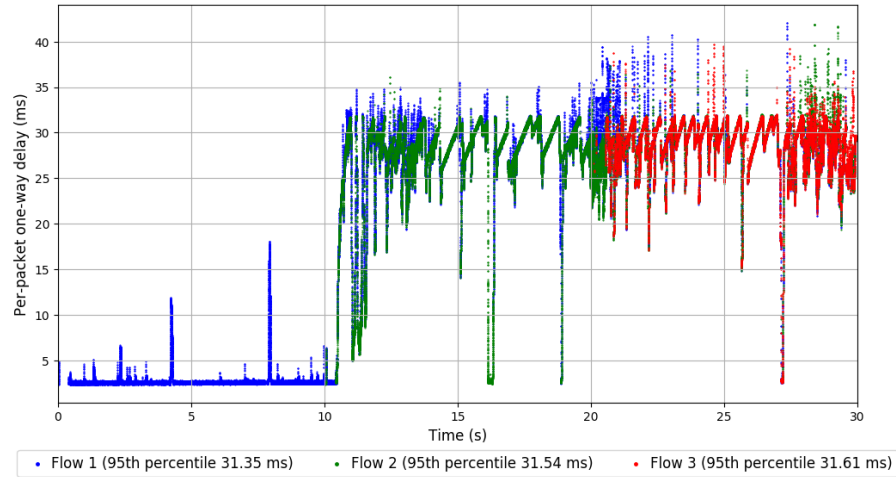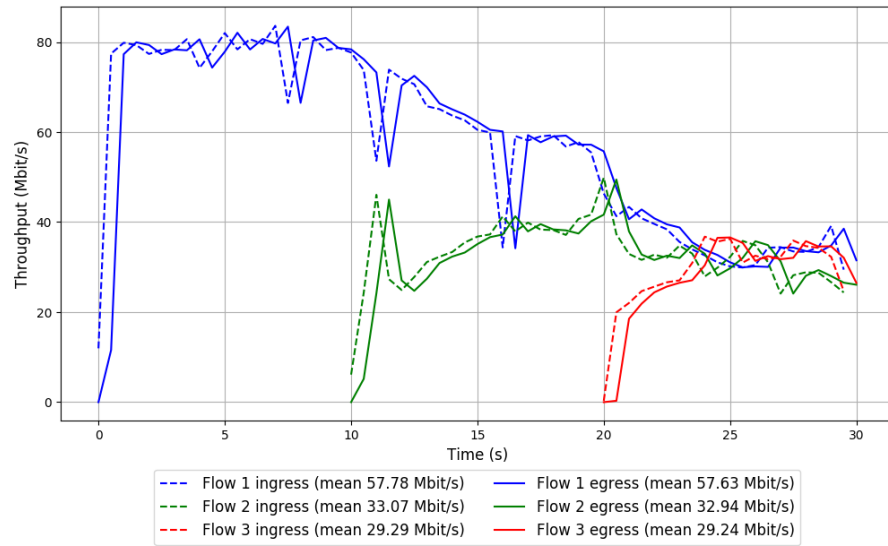
Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 56.24 Mbit/s)   Flow 1 egress (mean 56.10 Mbit/s)
Flow 2 ingress (mean 34.07 Mbit/s)   Flow 2 egress (mean 33.97 Mbit/s)
Flow 3 ingress (mean 32.92 Mbit/s)   Flow 3 egress (mean 32.82 Mbit/s)

Flow 1 (95th percentile 31.02 ms)   Flow 2 (95th percentile 31.17 ms)   Flow 3 (95th percentile 31.22 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-06-18 17:44:06
End at: 2018-06-18 17:44:36
Local clock offset: -6.117 ms
Remote clock offset: 20.568 ms


# Below is generated by plot.py at 2018-06-18 19:37:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.28 Mbit/s
95th percentile per-packet one-way delay: 30.951 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 55.47 Mbit/s
95th percentile per-packet one-way delay: 30.867 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 36.56 Mbit/s
95th percentile per-packet one-way delay: 31.026 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 28.92 Mbit/s
95th percentile per-packet one-way delay: 31.068 ms
Loss rate: 0.26%
```
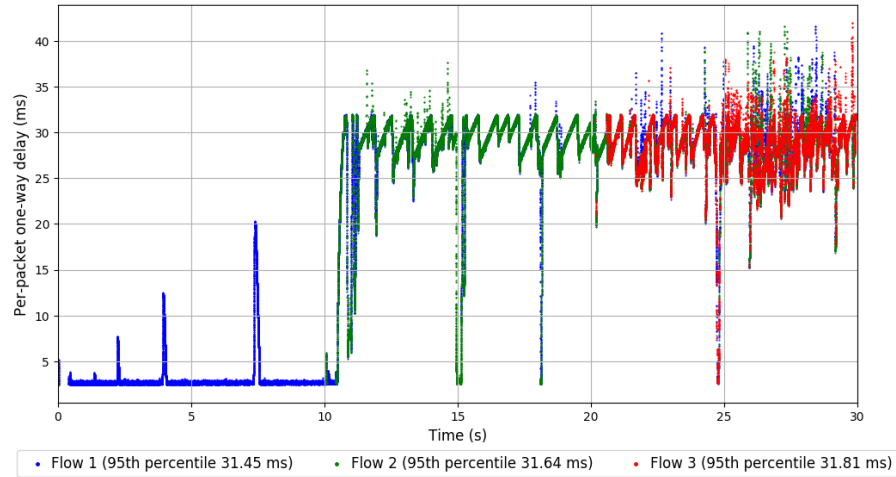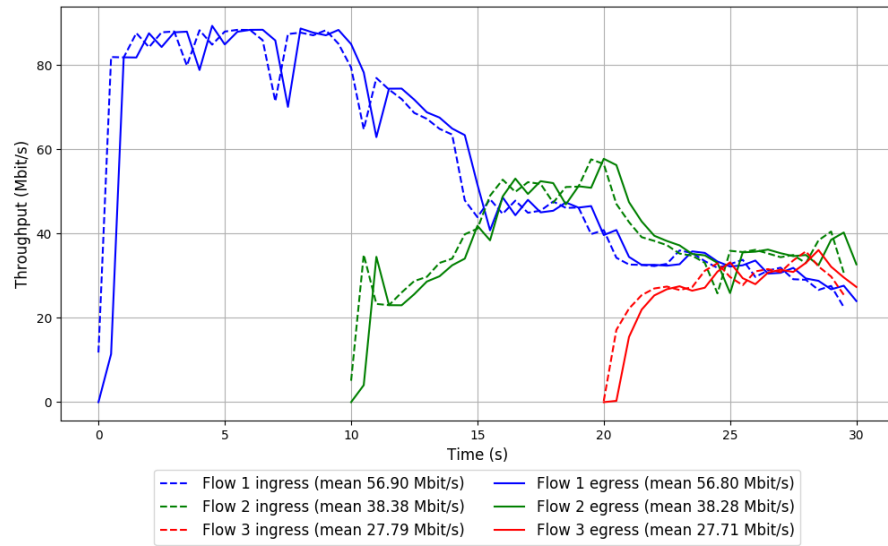
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 55.60 Mbit/s) --- Flow 1 egress (mean 55.47 Mbit/s)
Flow 2 ingress (mean 36.69 Mbit/s) --- Flow 2 egress (mean 36.56 Mbit/s)
Flow 3 ingress (mean 29.00 Mbit/s) --- Flow 3 egress (mean 28.92 Mbit/s)

Flow 1 (95th percentile 30.87 ms)   Flow 2 (95th percentile 31.03 ms)   Flow 3 (95th percentile 31.07 ms)

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```
Run 6: Statistics of QUIC Cubic

Start at: 2018-06-18 18:02:12
End at: 2018-06-18 18:02:42
Local clock offset: -8.057 ms
Remote clock offset: 11.315 ms


# Below is generated by plot.py at 2018-06-18 19:37:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.61 Mbit/s
95th percentile per-packet one-way delay: 32.352 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 57.09 Mbit/s
95th percentile per-packet one-way delay: 32.227 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 34.18 Mbit/s
95th percentile per-packet one-way delay: 32.397 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 29.77 Mbit/s
95th percentile per-packet one-way delay: 32.568 ms
Loss rate: 0.17%
```
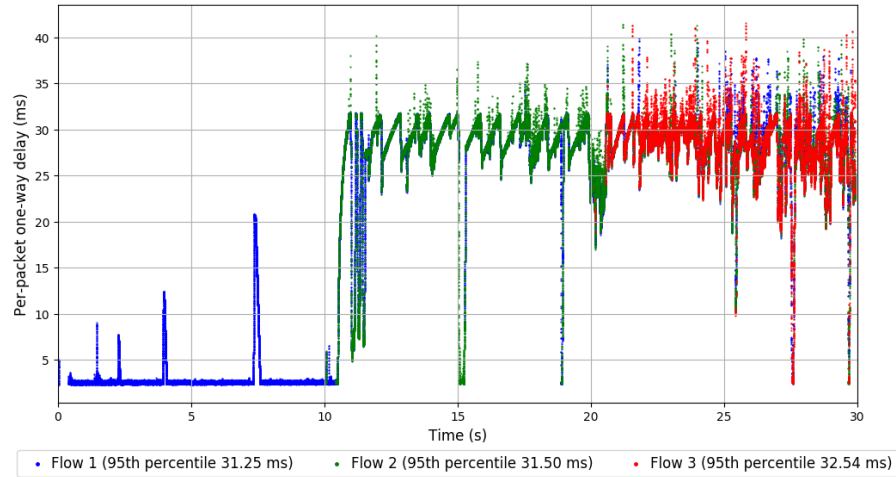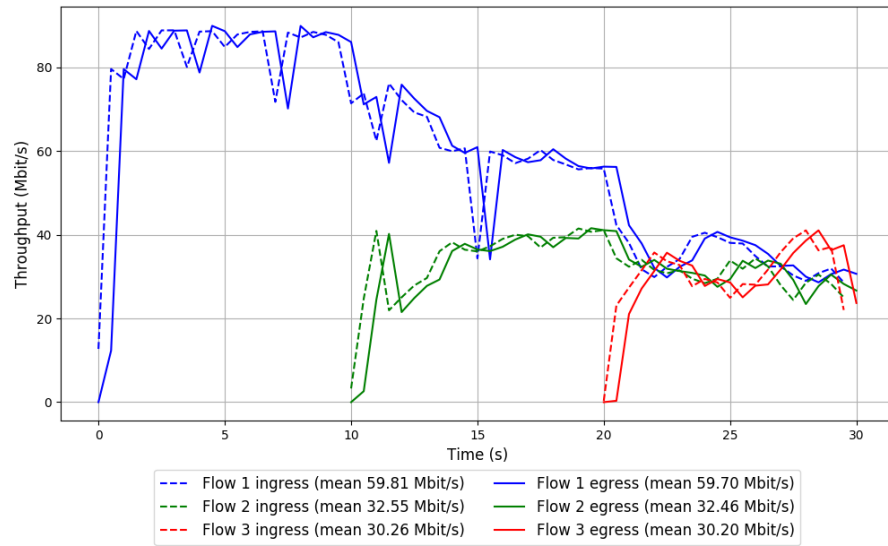
Run 6: Report of QUIC Cubic — Data Link

```
Run 7: Statistics of QUIC Cubic

Start at: 2018-06-18 18:20:15
End at: 2018-06-18 18:20:46
Local clock offset: -9.3 ms
Remote clock offset: -6.572 ms


# Below is generated by plot.py at 2018-06-18 19:37:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.14 Mbit/s
95th percentile per-packet one-way delay: 31.456 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 57.63 Mbit/s
95th percentile per-packet one-way delay: 31.350 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 32.94 Mbit/s
95th percentile per-packet one-way delay: 31.542 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 29.24 Mbit/s
95th percentile per-packet one-way delay: 31.615 ms
Loss rate: 0.15%
```
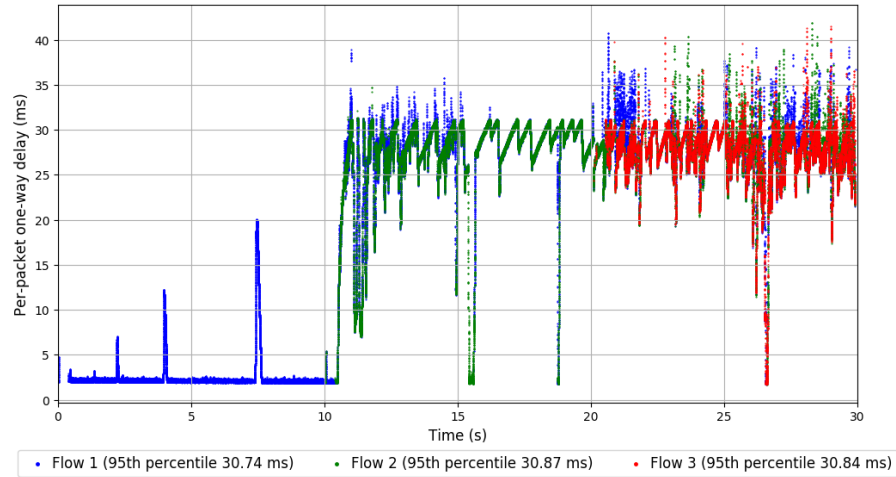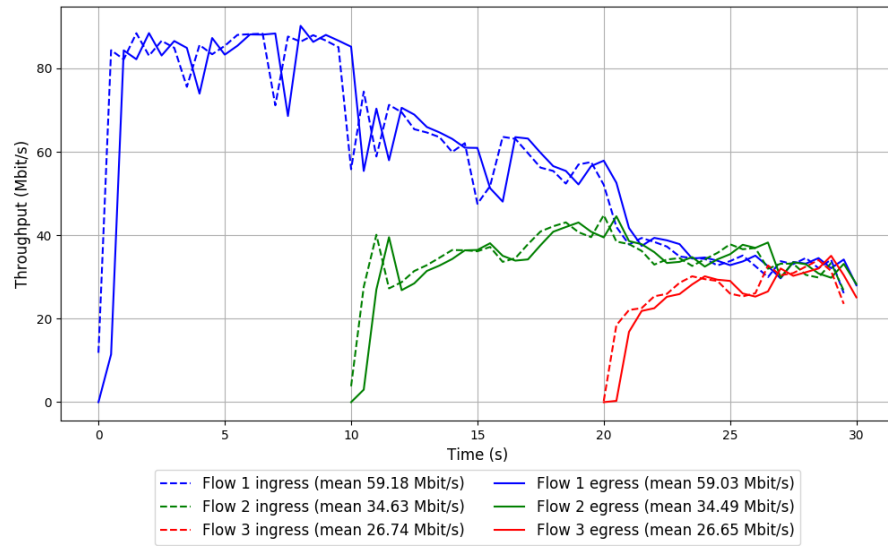
Run 7: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 57.78 Mbit/s) --- Flow 1 egress (mean 57.63 Mbit/s)
Flow 2 ingress (mean 33.07 Mbit/s) --- Flow 2 egress (mean 32.94 Mbit/s)
Flow 3 ingress (mean 29.29 Mbit/s) --- Flow 3 egress (mean 29.24 Mbit/s)

Flow 1 (95th percentile 31.35 ms)   Flow 2 (95th percentile 31.54 ms)   Flow 3 (95th percentile 31.61 ms)

```
Run 8: Statistics of QUIC Cubic

Start at: 2018-06-18 18:38:20
End at: 2018-06-18 18:38:50
Local clock offset: -6.733 ms
Remote clock offset: -6.905 ms


# Below is generated by plot.py at 2018-06-18 19:37:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.34 Mbit/s
95th percentile per-packet one-way delay: 31.566 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 56.80 Mbit/s
95th percentile per-packet one-way delay: 31.452 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 38.28 Mbit/s
95th percentile per-packet one-way delay: 31.643 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 27.71 Mbit/s
95th percentile per-packet one-way delay: 31.814 ms
Loss rate: 0.27%
```
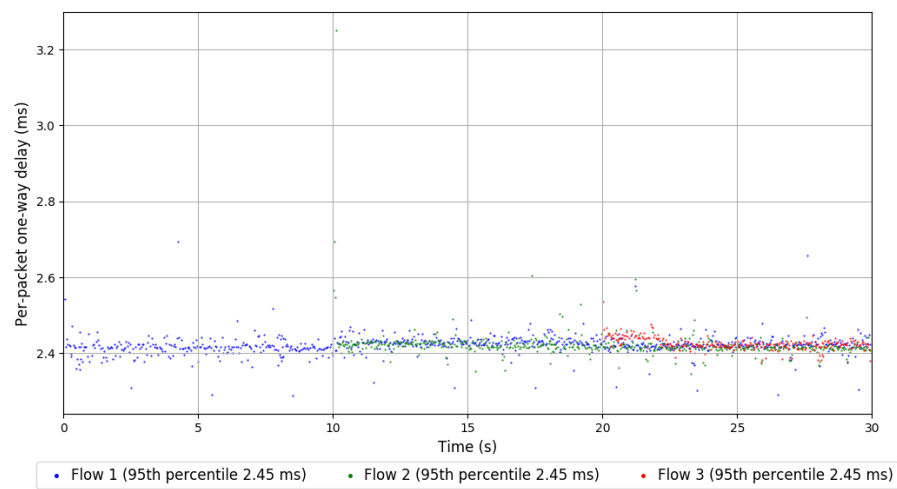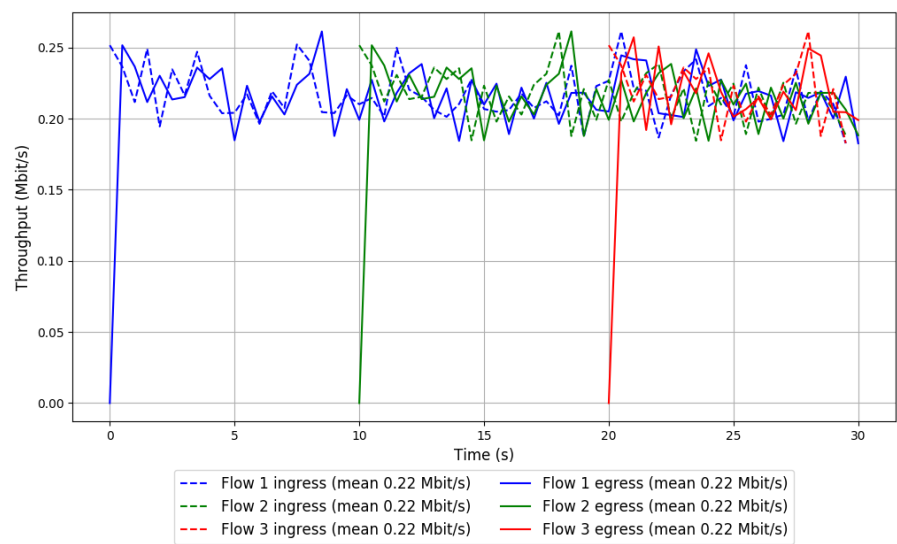
Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 56.90 Mbit/s)   Flow 1 egress (mean 56.80 Mbit/s)
Flow 2 ingress (mean 38.38 Mbit/s)   Flow 2 egress (mean 38.28 Mbit/s)
Flow 3 ingress (mean 27.79 Mbit/s)   Flow 3 egress (mean 27.71 Mbit/s)

Flow 1 (95th percentile 31.45 ms)   Flow 2 (95th percentile 31.64 ms)   Flow 3 (95th percentile 31.81 ms)

```
Run 9: Statistics of QUIC Cubic

Start at: 2018-06-18 18:56:25
End at: 2018-06-18 18:56:55
Local clock offset: -1.143 ms
Remote clock offset: -5.178 ms


# Below is generated by plot.py at 2018-06-18 19:37:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.20 Mbit/s
95th percentile per-packet one-way delay: 31.387 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 59.70 Mbit/s
95th percentile per-packet one-way delay: 31.249 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 32.46 Mbit/s
95th percentile per-packet one-way delay: 31.497 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 30.20 Mbit/s
95th percentile per-packet one-way delay: 32.539 ms
Loss rate: 0.21%
```
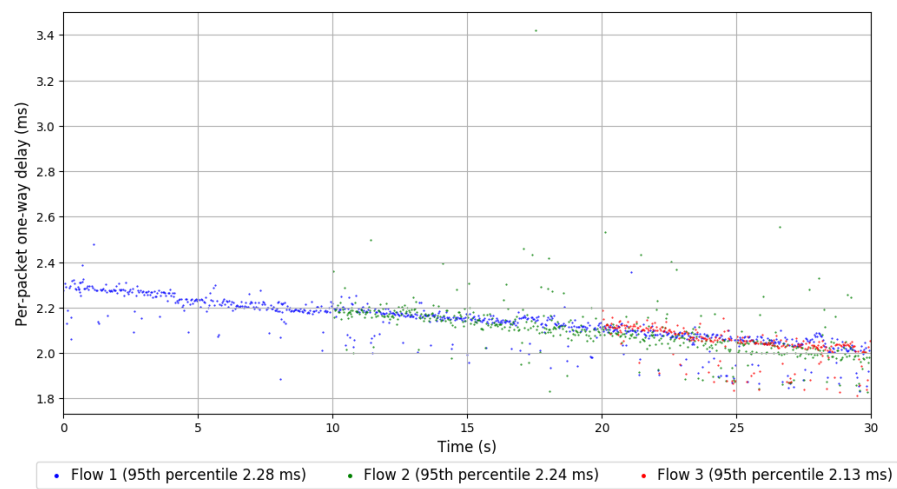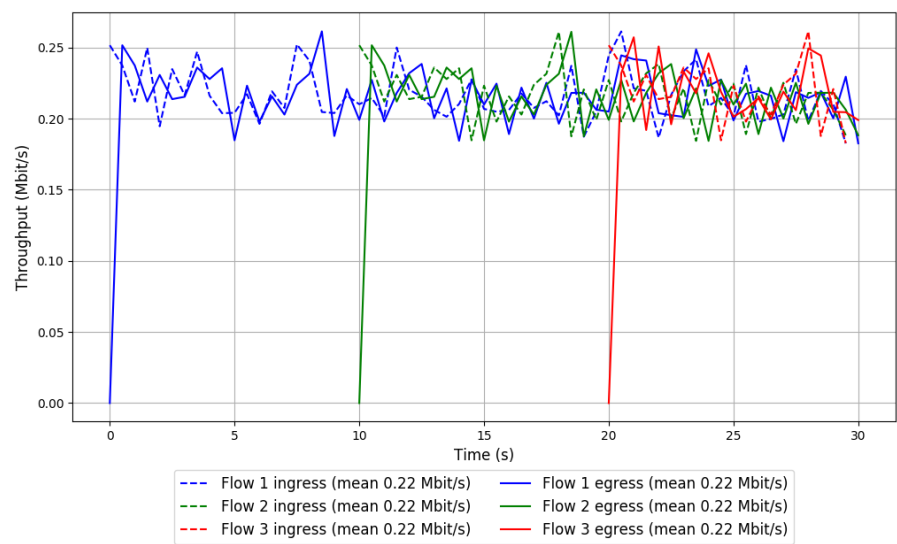
Run 9: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 59.81 Mbit/s) --- Flow 1 egress (mean 59.70 Mbit/s)
Flow 2 ingress (mean 32.55 Mbit/s) --- Flow 2 egress (mean 32.46 Mbit/s)
Flow 3 ingress (mean 30.26 Mbit/s) --- Flow 3 egress (mean 30.20 Mbit/s)

Flow 1 (95th percentile 31.25 ms) • Flow 2 (95th percentile 31.50 ms) • Flow 3 (95th percentile 32.54 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2018-06-18 19:14:28
End at: 2018-06-18 19:14:58
Local clock offset: -1.414 ms
Remote clock offset: 4.801 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.72 Mbit/s
95th percentile per-packet one-way delay: 30.791 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 59.03 Mbit/s
95th percentile per-packet one-way delay: 30.743 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 34.49 Mbit/s
95th percentile per-packet one-way delay: 30.868 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 26.65 Mbit/s
95th percentile per-packet one-way delay: 30.838 ms
Loss rate: 0.31%
```

Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 59.18 Mbit/s)   Flow 1 egress (mean 59.03 Mbit/s)
Flow 2 ingress (mean 34.63 Mbit/s)   Flow 2 egress (mean 34.49 Mbit/s)
Flow 3 ingress (mean 26.74 Mbit/s)   Flow 3 egress (mean 26.65 Mbit/s)

Flow 1 (95th percentile 30.74 ms)   Flow 2 (95th percentile 30.87 ms)   Flow 3 (95th percentile 30.84 ms)

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```
Run 1: Statistics of SCReAM

Start at: 2018-06-18 16:23:55
End at: 2018-06-18 16:24:25
Local clock offset: -1.901 ms
Remote clock offset: -1.927 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.450 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.452 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.449 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.452 ms
Loss rate: 0.00%
```
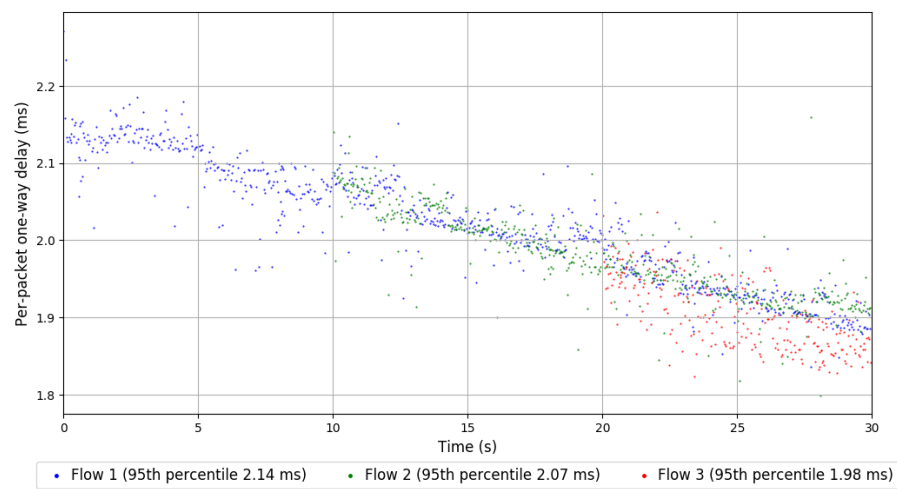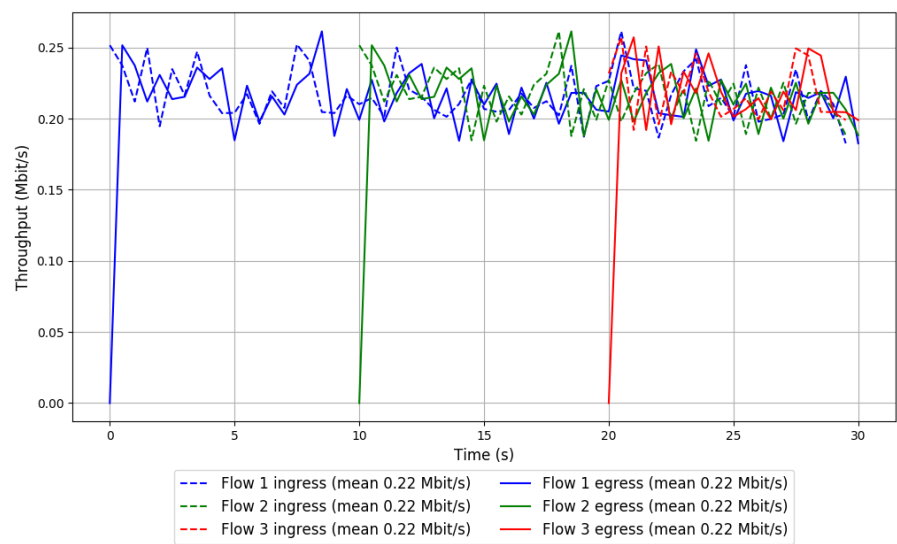
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-06-18 16:42:00
End at: 2018-06-18 16:42:30
Local clock offset: -1.966 ms
Remote clock offset: -1.531 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.454 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.454 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.453 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.454 ms
Loss rate: 0.00%
```
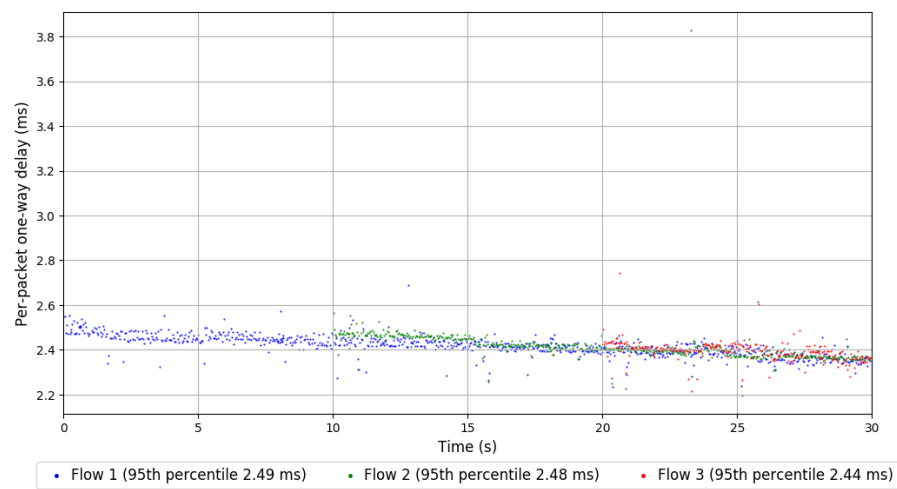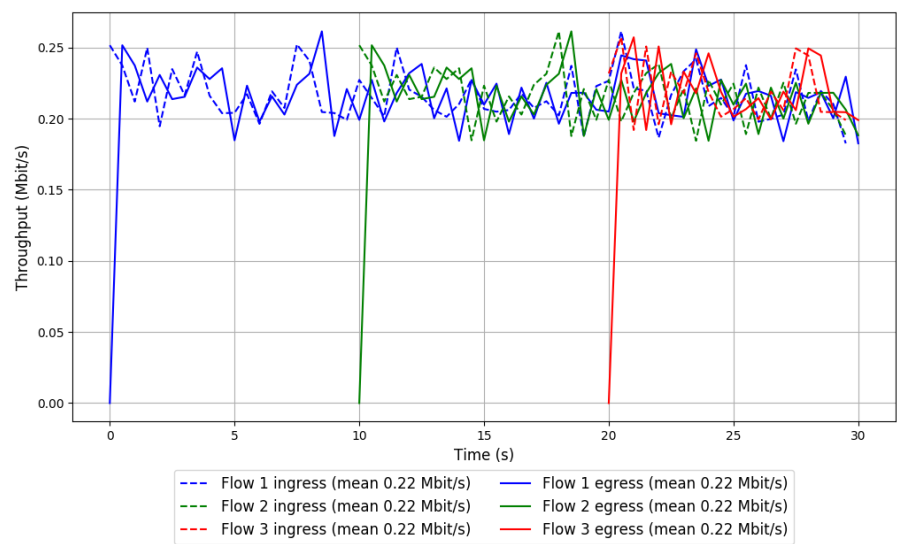
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-06-18 17:00:05
End at: 2018-06-18 17:00:35
Local clock offset: -1.999 ms
Remote clock offset: 9.108 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.275 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.281 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.244 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.131 ms
Loss rate: 0.00%
```
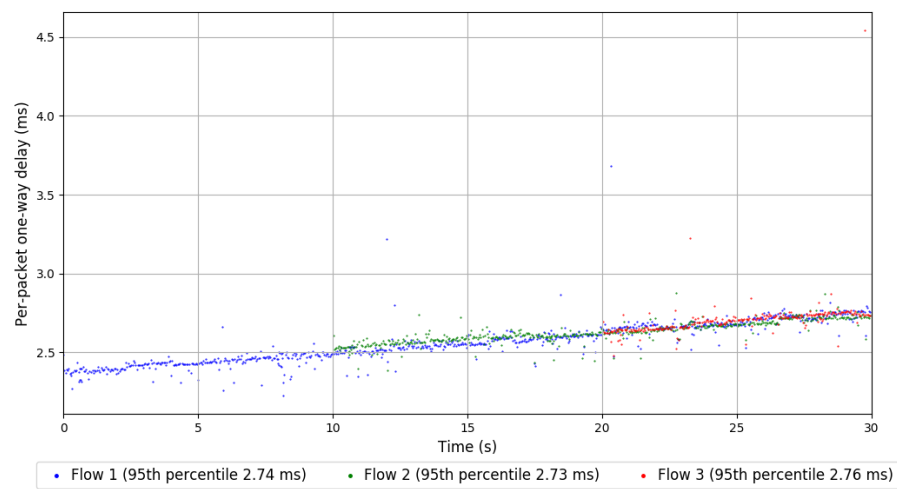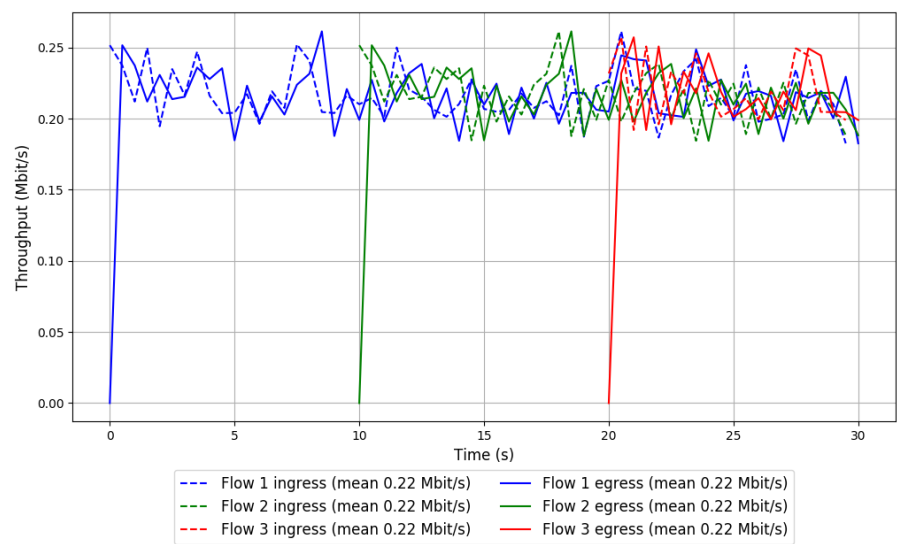
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-06-18 17:18:10
End at: 2018-06-18 17:18:40
Local clock offset: -2.994 ms
Remote clock offset: 15.411 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.324 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.324 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.295 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.420 ms
Loss rate: 0.00%
```
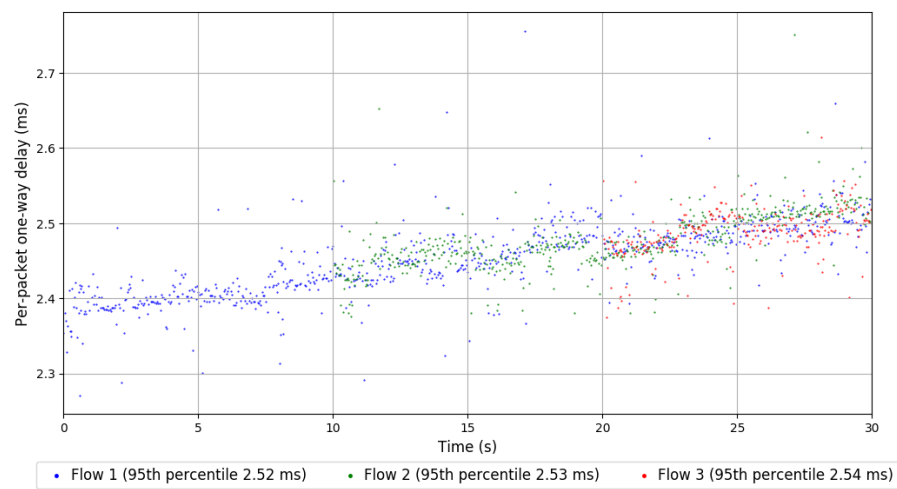
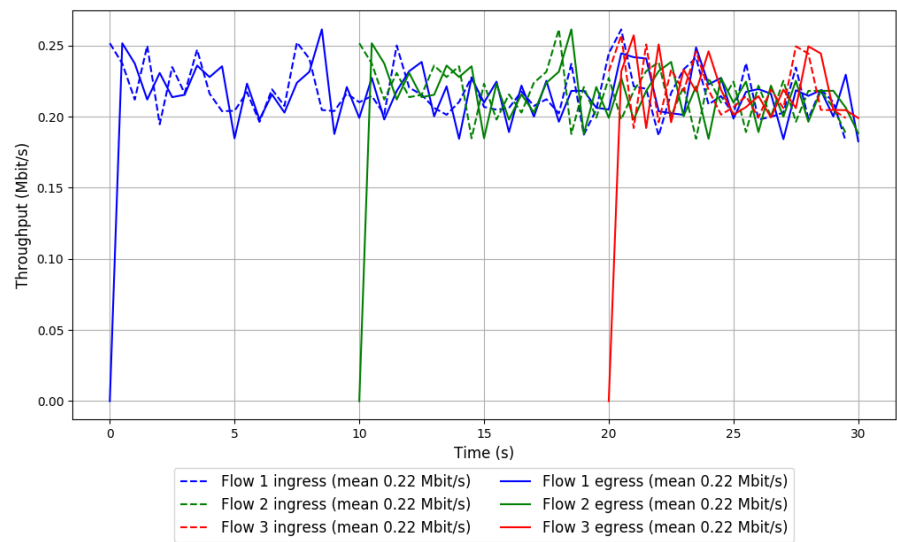# Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2018-06-18 17:36:14
End at: 2018-06-18 17:36:44
Local clock offset: -4.22 ms
Remote clock offset: 19.005 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.129 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.139 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.073 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.976 ms
Loss rate: 0.00%
```

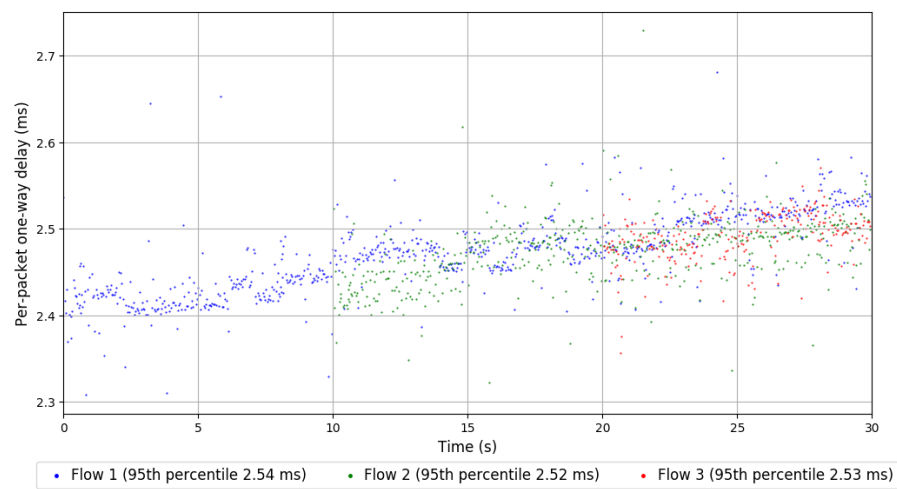# Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2018-06-18 17:54:19
End at: 2018-06-18 17:54:49
Local clock offset: -7.49 ms
Remote clock offset: 22.722 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.479 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.486 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.475 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.435 ms
Loss rate: 0.00%
```
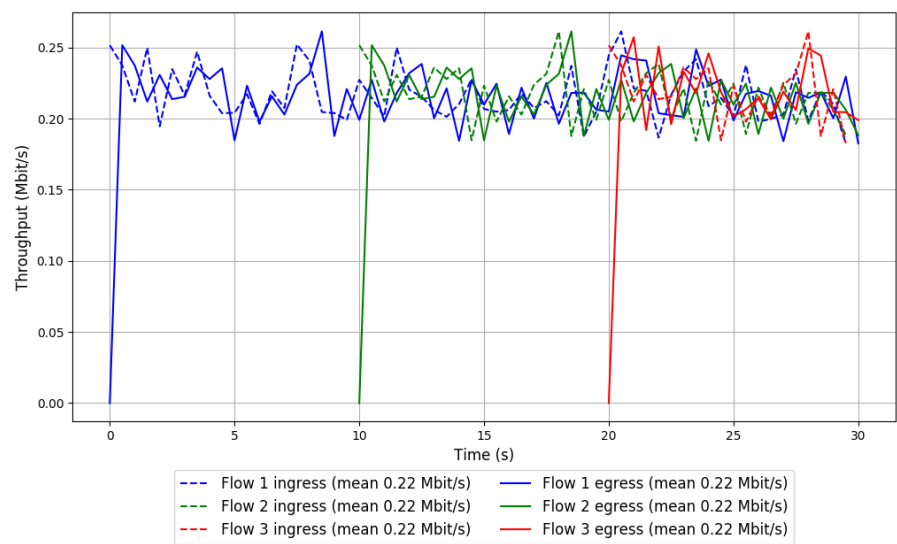
Run 6: Report of SCReAM — Data Link

```
Run 7: Statistics of SCReAM

Start at: 2018-06-18 18:12:24
End at: 2018-06-18 18:12:54
Local clock offset: -8.733 ms
Remote clock offset: -1.891 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.746 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.742 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.728 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.760 ms
Loss rate: 0.00%
```
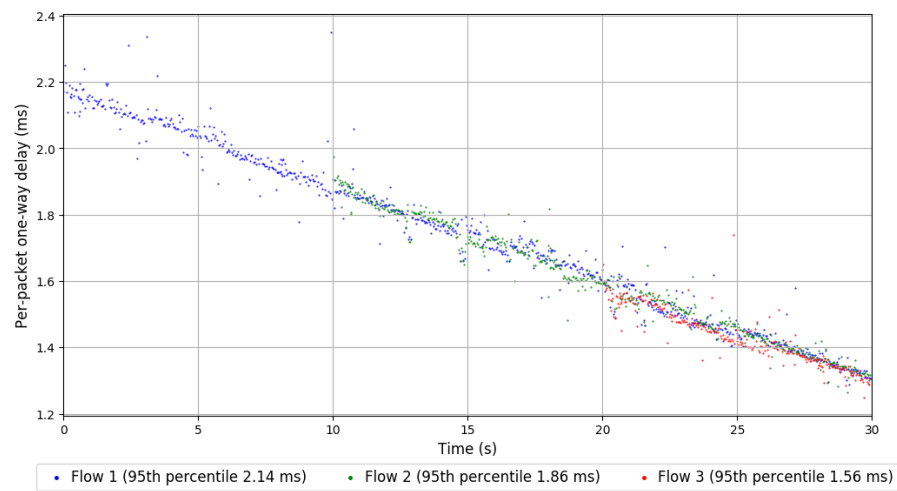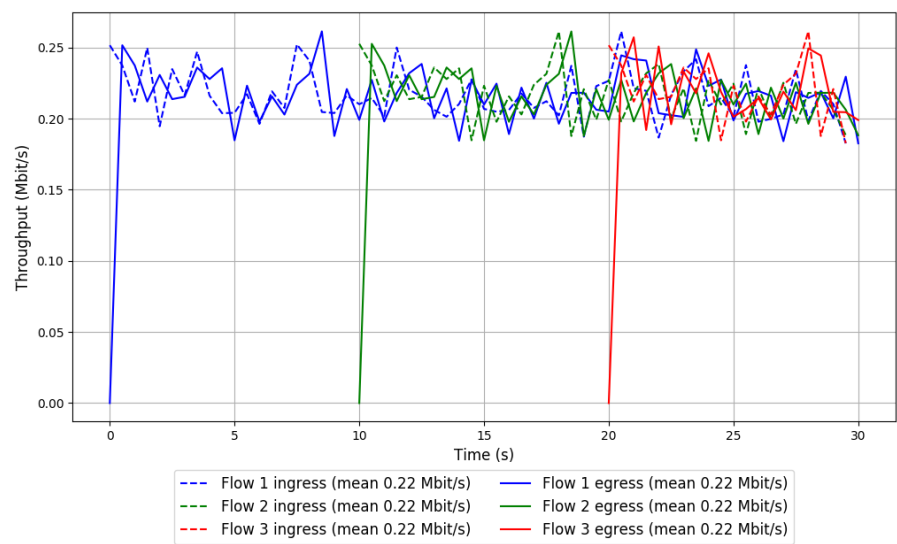
Run 7: Report of SCReAM — Data Link

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```
Run 8: Statistics of SCReAM

Start at: 2018-06-18 18:30:28
End at: 2018-06-18 18:30:58
Local clock offset: -9.84 ms
Remote clock offset: -10.572 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.527 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.521 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.531 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.537 ms
Loss rate: 0.00%
```
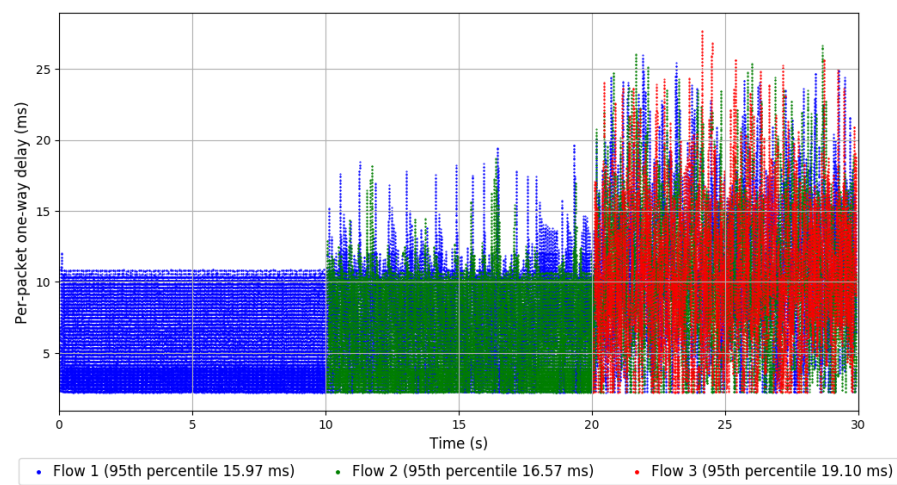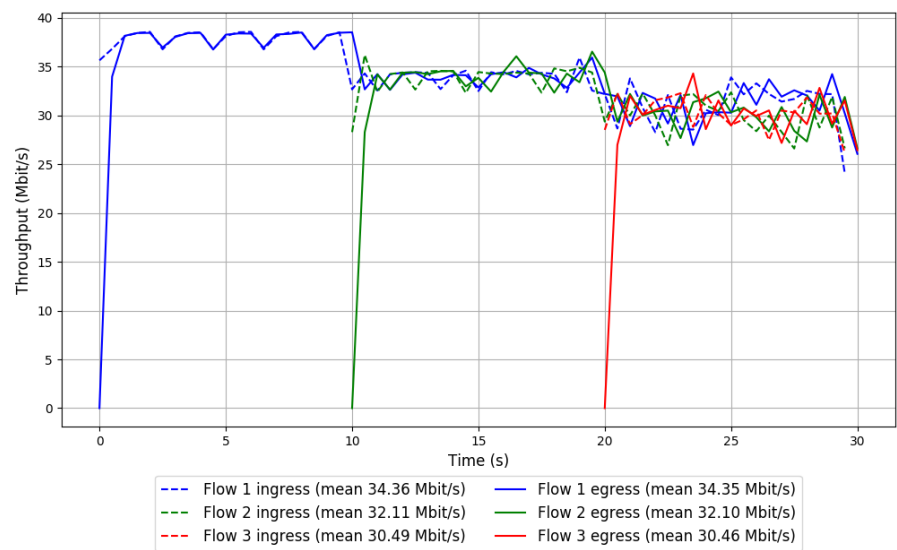
Run 8: Report of SCReAM — Data Link

```
Run 9: Statistics of SCReAM

Start at: 2018-06-18 18:48:33
End at: 2018-06-18 18:49:03
Local clock offset: -2.636 ms
Remote clock offset: -5.286 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.533 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.541 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.523 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.527 ms
Loss rate: 0.00%
```
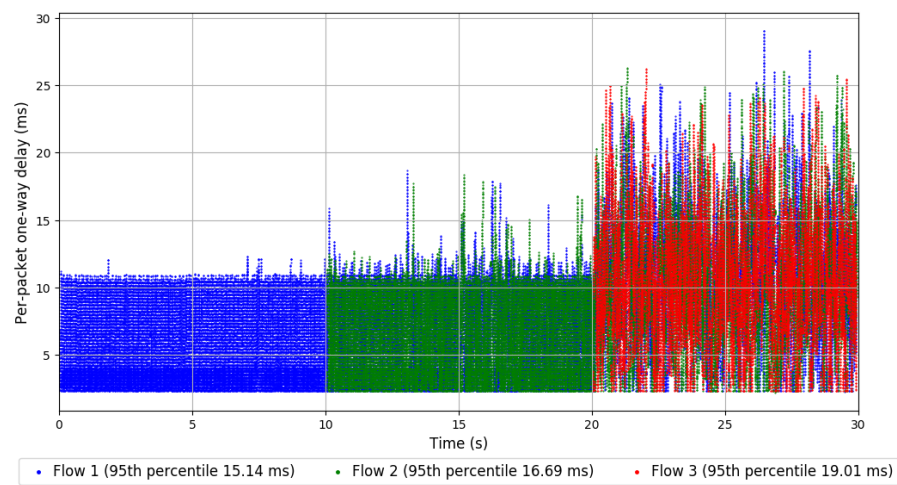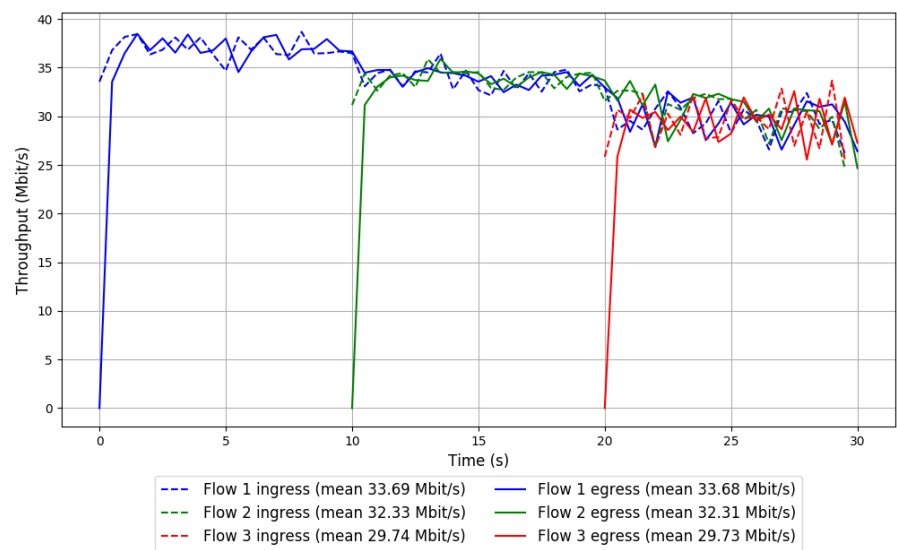
Run 9: Report of SCReAM — Data Link

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```
Run 10: Statistics of SCReAM

Start at: 2018-06-18 19:06:37
End at: 2018-06-18 19:07:07
Local clock offset: -0.706 ms
Remote clock offset: -4.067 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.094 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.141 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.862 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.556 ms
Loss rate: 0.00%
```
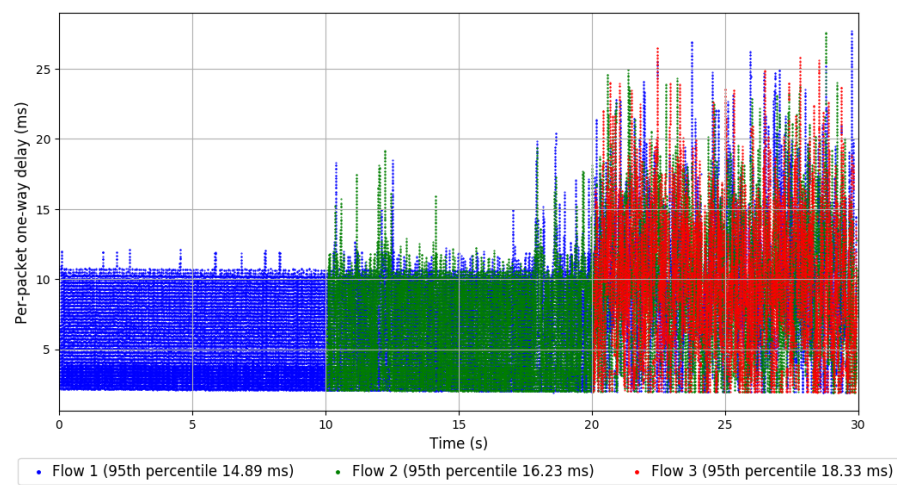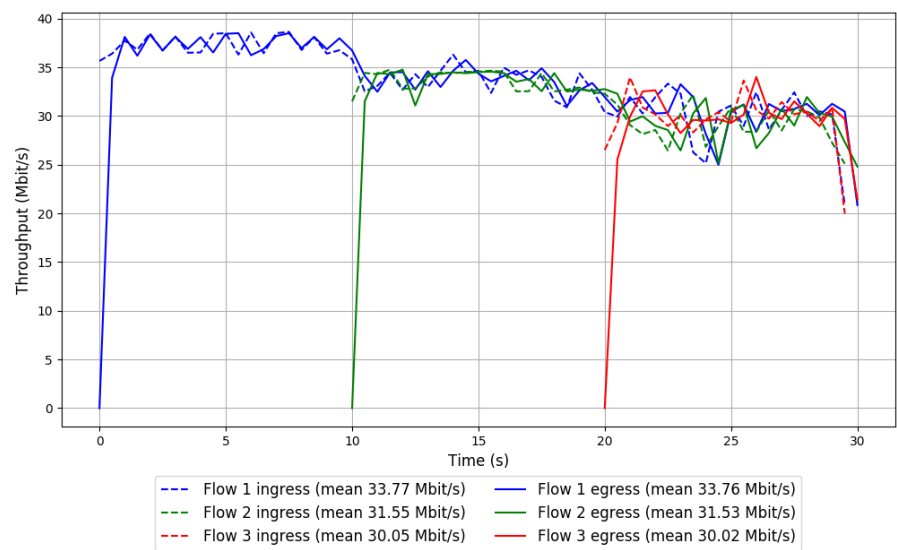
Run 10: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-06-18 16:29:31
End at: 2018-06-18 16:30:01
Local clock offset: -1.851 ms
Remote clock offset: -1.834 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.76 Mbit/s
95th percentile per-packet one-way delay: 16.861 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.35 Mbit/s
95th percentile per-packet one-way delay: 15.968 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.10 Mbit/s
95th percentile per-packet one-way delay: 16.573 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.46 Mbit/s
95th percentile per-packet one-way delay: 19.097 ms
Loss rate: 0.00%
```
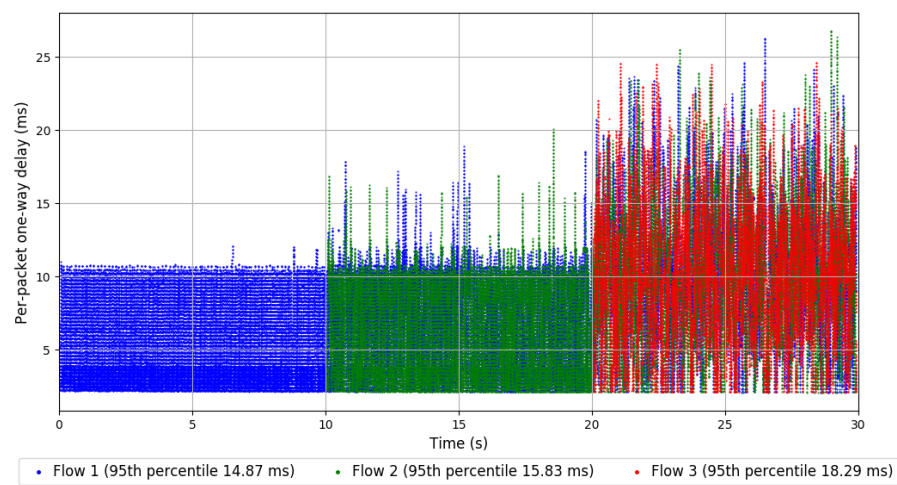
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-06-18 16:47:36
End at: 2018-06-18 16:48:06
Local clock offset: -2.049 ms
Remote clock offset: -1.412 ms


# Below is generated by plot.py at 2018-06-18 19:38:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.98 Mbit/s
95th percentile per-packet one-way delay: 16.640 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.68 Mbit/s
95th percentile per-packet one-way delay: 15.145 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.31 Mbit/s
95th percentile per-packet one-way delay: 16.693 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.73 Mbit/s
95th percentile per-packet one-way delay: 19.013 ms
Loss rate: 0.00%
```
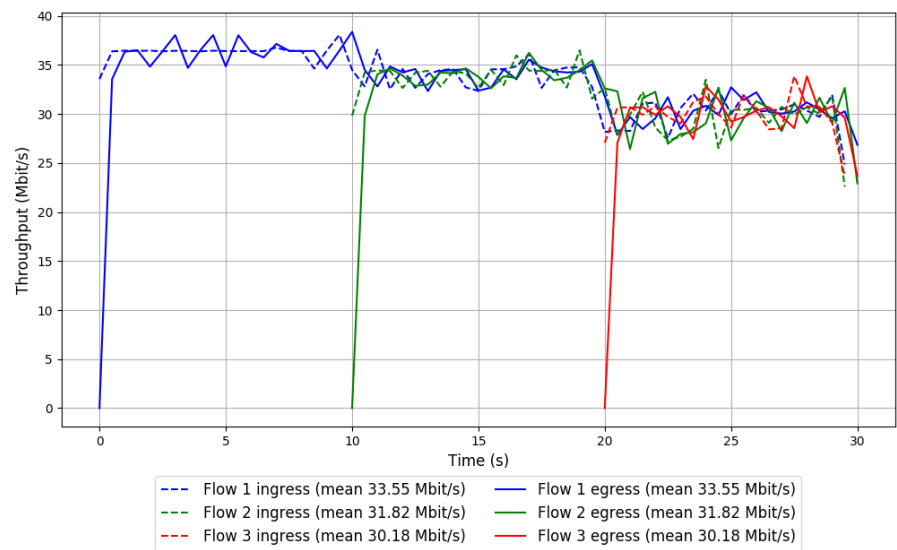
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-06-18 17:05:41
End at: 2018-06-18 17:06:11
Local clock offset: -2.179 ms
Remote clock offset: 11.797 ms


# Below is generated by plot.py at 2018-06-18 19:38:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.65 Mbit/s
95th percentile per-packet one-way delay: 16.188 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 33.76 Mbit/s
95th percentile per-packet one-way delay: 14.893 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.53 Mbit/s
95th percentile per-packet one-way delay: 16.226 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 30.02 Mbit/s
95th percentile per-packet one-way delay: 18.331 ms
Loss rate: 0.00%
```
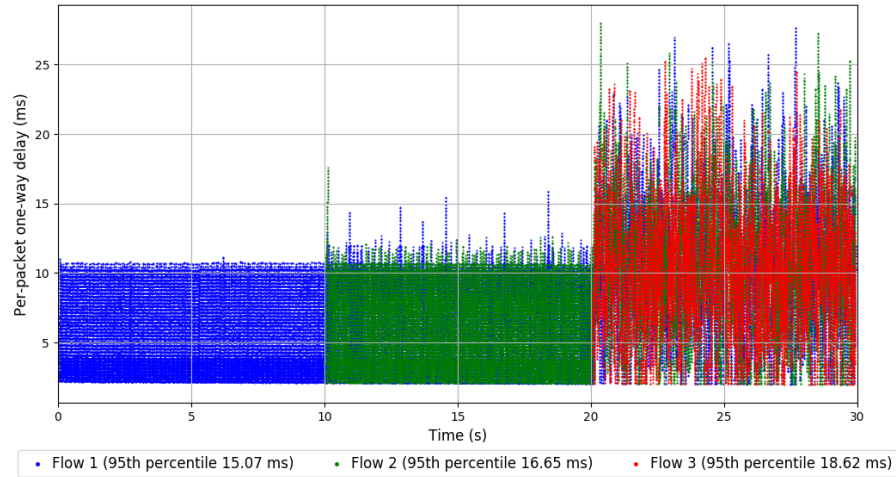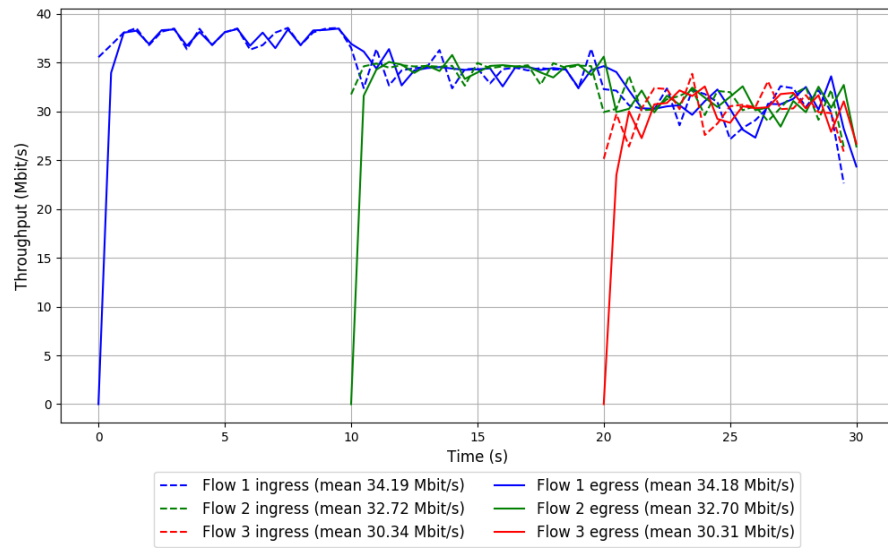
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-06-18 17:23:46
End at: 2018-06-18 17:24:16
Local clock offset: -3.155 ms
Remote clock offset: 16.674 ms


# Below is generated by plot.py at 2018-06-18 19:38:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.69 Mbit/s
95th percentile per-packet one-way delay: 16.065 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.55 Mbit/s
95th percentile per-packet one-way delay: 14.871 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.82 Mbit/s
95th percentile per-packet one-way delay: 15.834 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.18 Mbit/s
95th percentile per-packet one-way delay: 18.294 ms
Loss rate: 0.00%
```
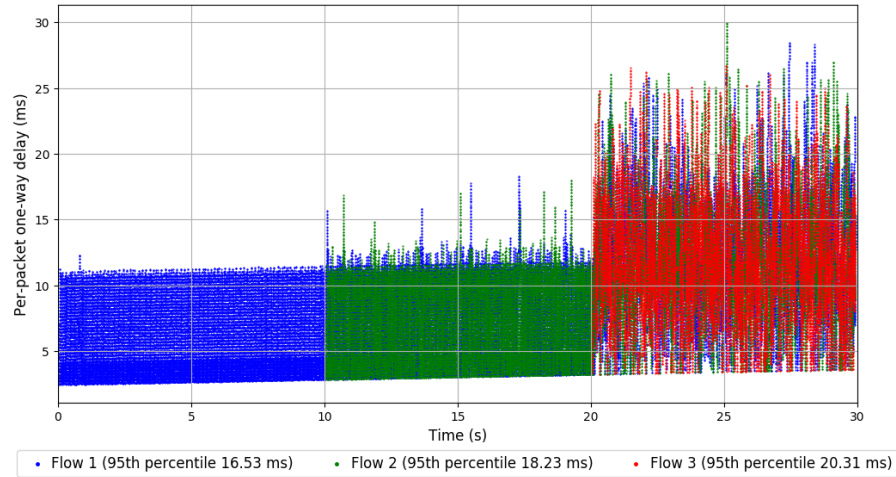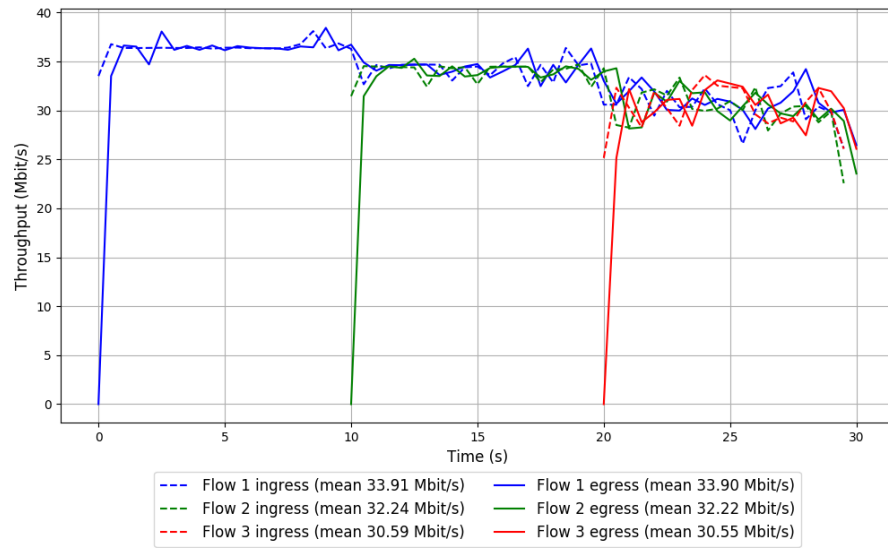
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-06-18 17:41:50
End at: 2018-06-18 17:42:20
Local clock offset: -5.744 ms
Remote clock offset: 20.206 ms


# Below is generated by plot.py at 2018-06-18 19:38:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.95 Mbit/s
95th percentile per-packet one-way delay: 16.424 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.18 Mbit/s
95th percentile per-packet one-way delay: 15.068 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.70 Mbit/s
95th percentile per-packet one-way delay: 16.653 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.31 Mbit/s
95th percentile per-packet one-way delay: 18.619 ms
Loss rate: 0.00%
```
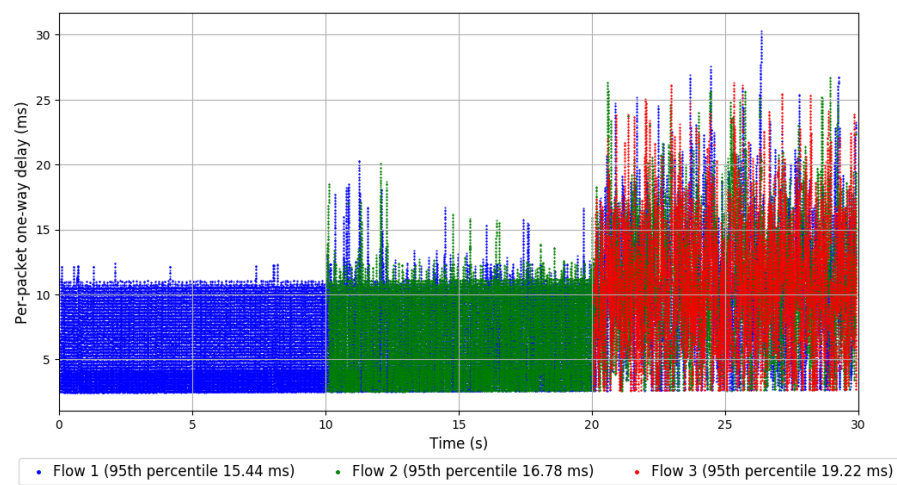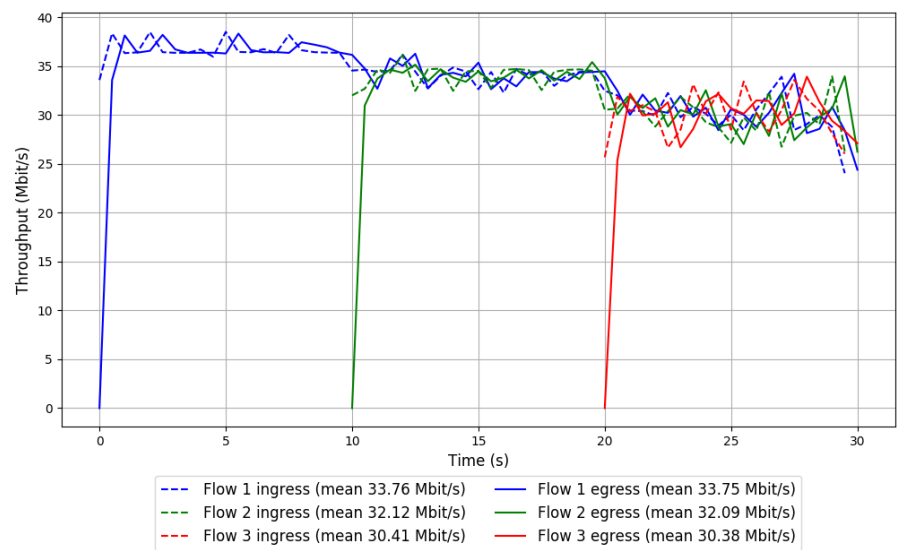
Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 34.19 Mbit/s) --- Flow 1 egress (mean 34.18 Mbit/s)
Flow 2 ingress (mean 32.72 Mbit/s) --- Flow 2 egress (mean 32.70 Mbit/s)
Flow 3 ingress (mean 30.34 Mbit/s) --- Flow 3 egress (mean 30.31 Mbit/s)

Flow 1 (95th percentile 15.07 ms)   Flow 2 (95th percentile 16.65 ms)   Flow 3 (95th percentile 18.62 ms)

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```
Run 6: Statistics of Sprout

Start at: 2018-06-18 17:59:55
End at: 2018-06-18 18:00:25
Local clock offset: -7.943 ms
Remote clock offset: 15.999 ms


# Below is generated by plot.py at 2018-06-18 19:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.43 Mbit/s
95th percentile per-packet one-way delay: 17.993 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.90 Mbit/s
95th percentile per-packet one-way delay: 16.531 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.22 Mbit/s
95th percentile per-packet one-way delay: 18.234 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.55 Mbit/s
95th percentile per-packet one-way delay: 20.311 ms
Loss rate: 0.00%
```
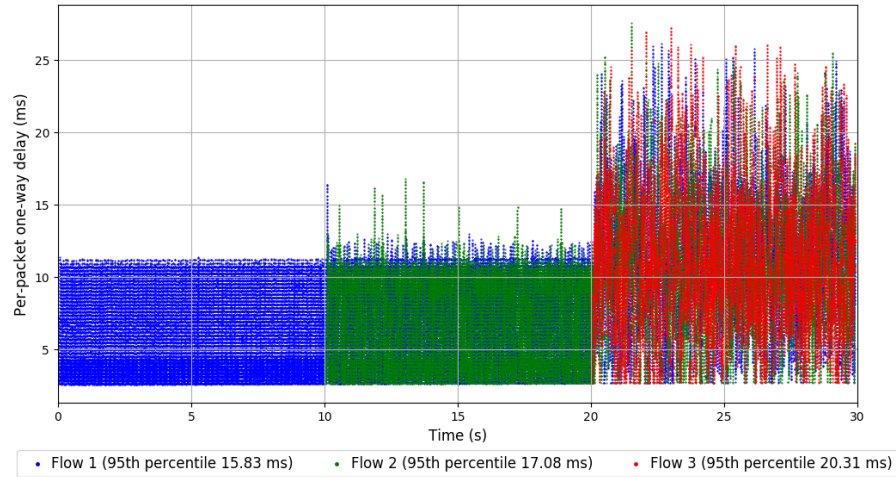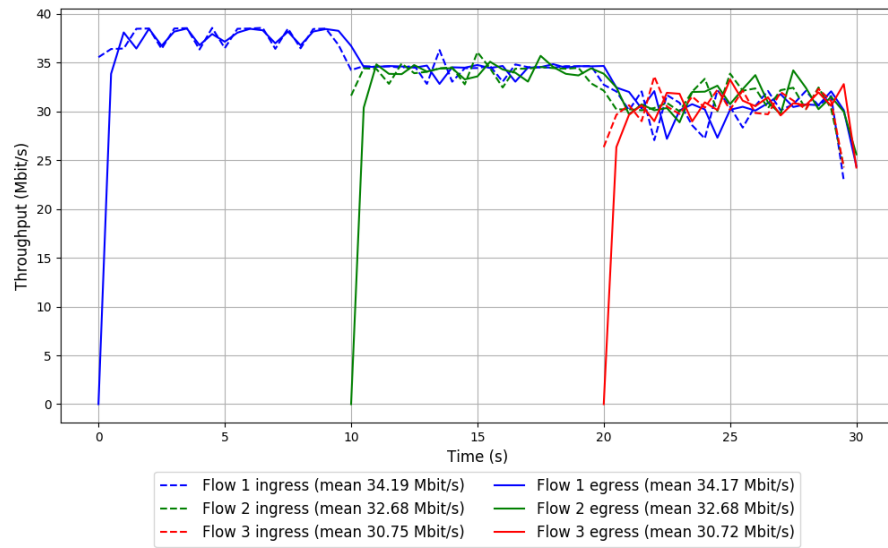
Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2018-06-18 18:17:59
End at: 2018-06-18 18:18:29
Local clock offset: -9.153 ms
Remote clock offset: -5.33 ms


# Below is generated by plot.py at 2018-06-18 19:38:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.14 Mbit/s
95th percentile per-packet one-way delay: 16.779 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.75 Mbit/s
95th percentile per-packet one-way delay: 15.436 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.09 Mbit/s
95th percentile per-packet one-way delay: 16.778 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.38 Mbit/s
95th percentile per-packet one-way delay: 19.223 ms
Loss rate: 0.00%
```
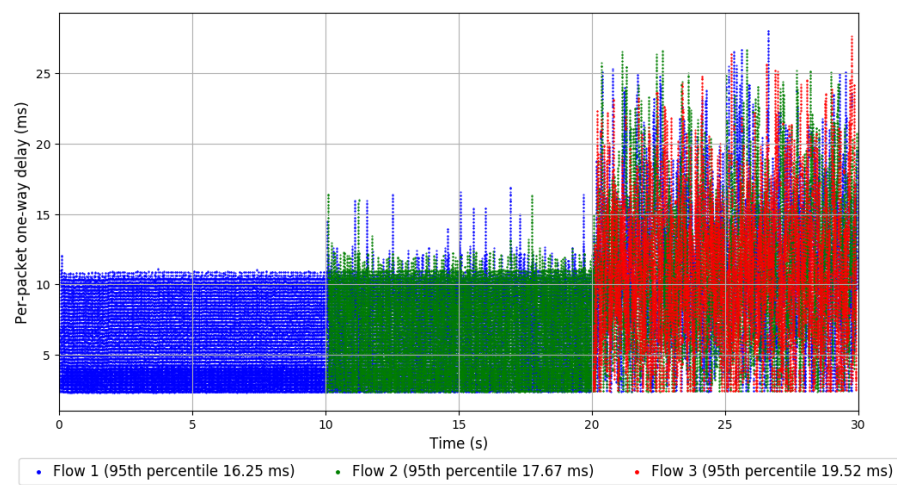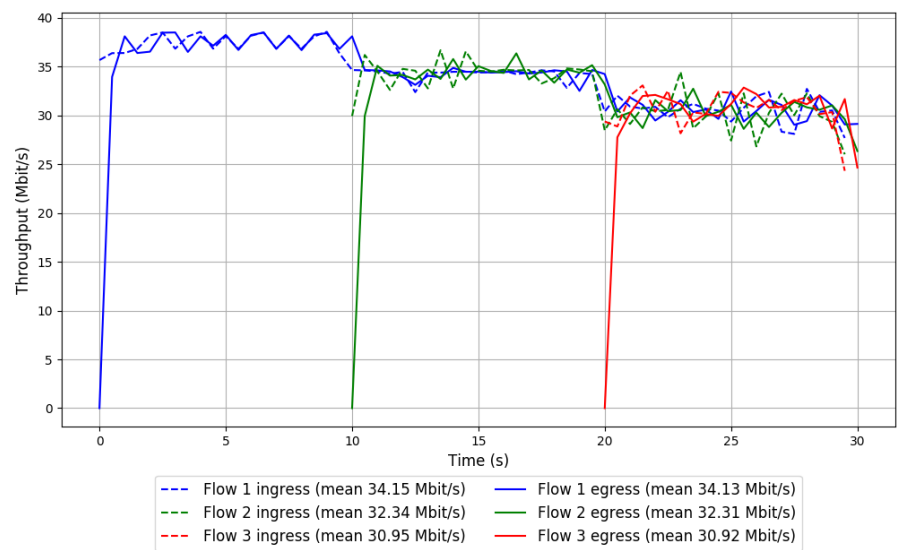
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2018-06-18 18:36:04
End at: 2018-06-18 18:36:34
Local clock offset: -8.456 ms
Remote clock offset: -7.919 ms


# Below is generated by plot.py at 2018-06-18 19:38:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.04 Mbit/s
95th percentile per-packet one-way delay: 17.313 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.17 Mbit/s
95th percentile per-packet one-way delay: 15.830 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.68 Mbit/s
95th percentile per-packet one-way delay: 17.083 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.72 Mbit/s
95th percentile per-packet one-way delay: 20.307 ms
Loss rate: 0.00%
```
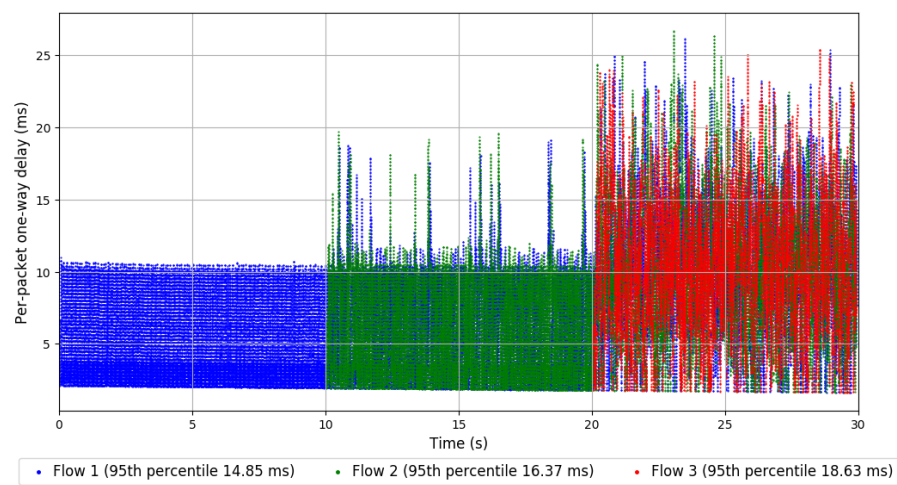
Run 8: Report of Sprout — Data Link

```
Run 9: Statistics of Sprout

Start at: 2018-06-18 18:54:08
End at: 2018-06-18 18:54:38
Local clock offset: -1.561 ms
Remote clock offset: -5.164 ms


# Below is generated by plot.py at 2018-06-18 19:38:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.84 Mbit/s
95th percentile per-packet one-way delay: 17.575 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.13 Mbit/s
95th percentile per-packet one-way delay: 16.253 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.31 Mbit/s
95th percentile per-packet one-way delay: 17.666 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.92 Mbit/s
95th percentile per-packet one-way delay: 19.516 ms
Loss rate: 0.00%
```

Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2018-06-18 19:12:12
End at: 2018-06-18 19:12:42
Local clock offset: -1.375 ms
Remote clock offset: 2.958 ms


# Below is generated by plot.py at 2018-06-18 19:38:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.33 Mbit/s
95th percentile per-packet one-way delay: 16.258 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.35 Mbit/s
95th percentile per-packet one-way delay: 14.850 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 33.13 Mbit/s
95th percentile per-packet one-way delay: 16.367 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.07 Mbit/s
95th percentile per-packet one-way delay: 18.634 ms
Loss rate: 0.00%
```
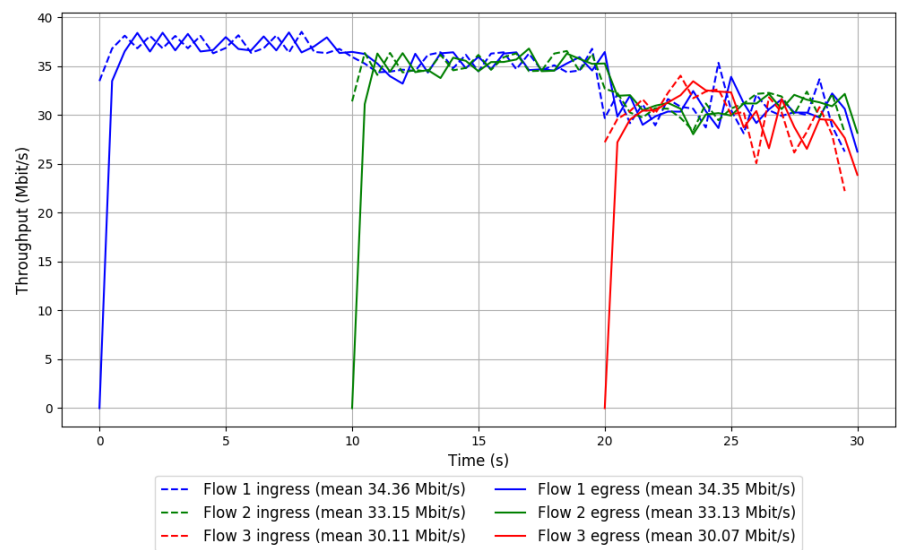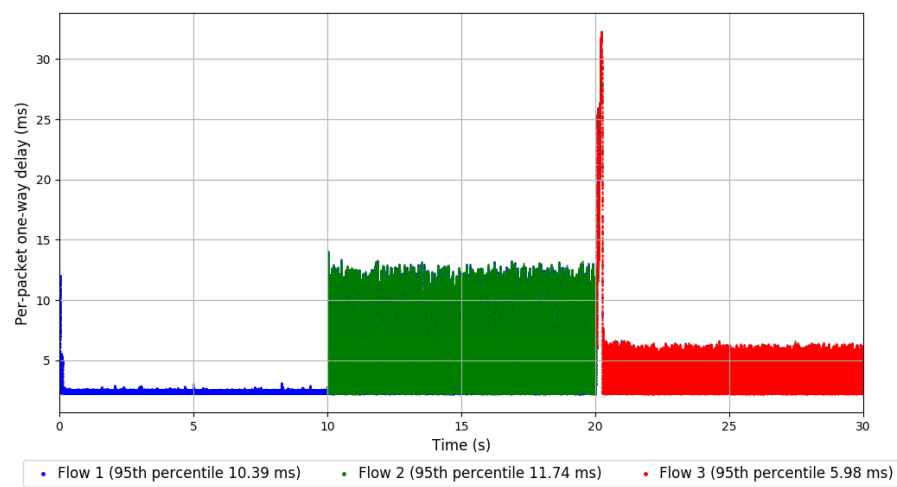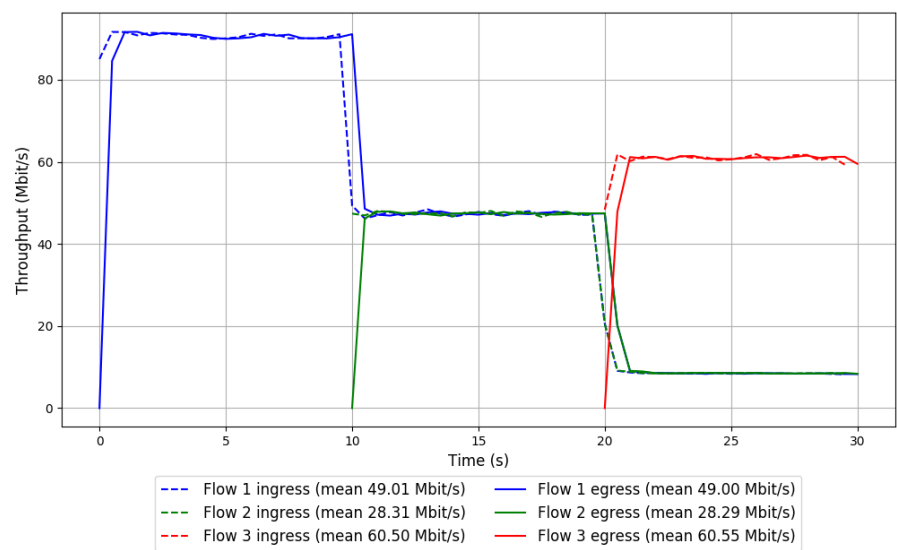
Run 10: Report of Sprout — Data Link

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

Start at: 2018-06-18 16:20:28
End at: 2018-06-18 16:20:58
Local clock offset: -1.926 ms
Remote clock offset: -2.055 ms


# Below is generated by plot.py at 2018-06-18 19:40:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.95 Mbit/s
95th percentile per-packet one-way delay: 10.752 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 49.00 Mbit/s
95th percentile per-packet one-way delay: 10.390 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 28.29 Mbit/s
95th percentile per-packet one-way delay: 11.743 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 60.55 Mbit/s
95th percentile per-packet one-way delay: 5.982 ms
Loss rate: 0.02%
```
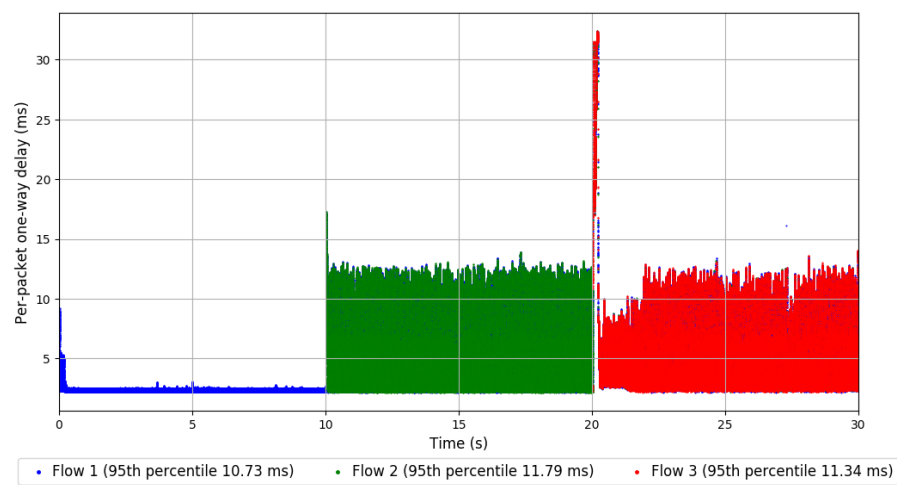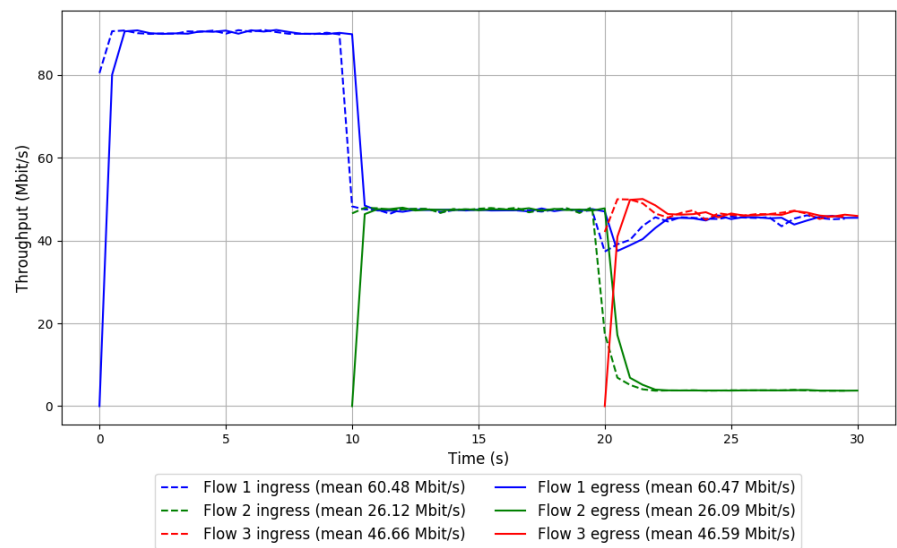
Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 49.01 Mbit/s)   Flow 1 egress (mean 49.00 Mbit/s)
Flow 2 ingress (mean 28.31 Mbit/s)   Flow 2 egress (mean 28.29 Mbit/s)
Flow 3 ingress (mean 60.50 Mbit/s)   Flow 3 egress (mean 60.55 Mbit/s)

• Flow 1 (95th percentile 10.39 ms)   • Flow 2 (95th percentile 11.74 ms)   • Flow 3 (95th percentile 5.98 ms)

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

Start at: 2018-06-18 16:38:33
End at: 2018-06-18 16:39:03
Local clock offset: -1.896 ms
Remote clock offset: -1.655 ms


# Below is generated by plot.py at 2018-06-18 19:40:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.34 Mbit/s
95th percentile per-packet one-way delay: 11.171 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 60.47 Mbit/s
95th percentile per-packet one-way delay: 10.730 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.09 Mbit/s
95th percentile per-packet one-way delay: 11.788 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 46.59 Mbit/s
95th percentile per-packet one-way delay: 11.339 ms
Loss rate: 0.10%
```
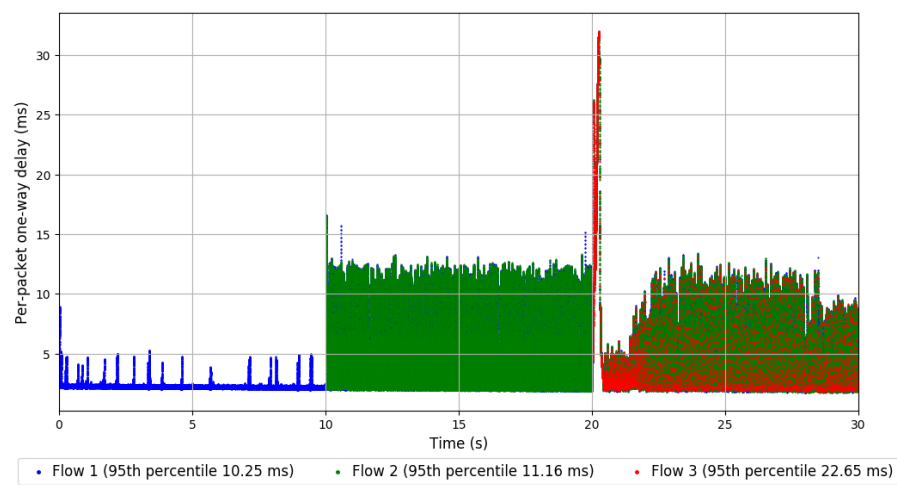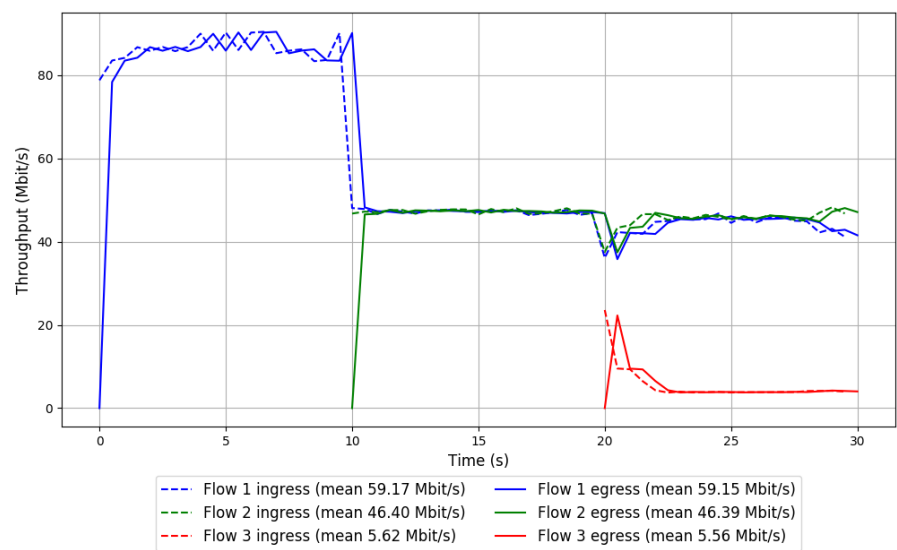
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2018-06-18 16:56:38
End at: 2018-06-18 16:57:08
Local clock offset: -2.069 ms
Remote clock offset: 6.768 ms


# Below is generated by plot.py at 2018-06-18 19:40:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.90 Mbit/s
95th percentile per-packet one-way delay: 10.765 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 59.15 Mbit/s
95th percentile per-packet one-way delay: 10.251 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 46.39 Mbit/s
95th percentile per-packet one-way delay: 11.163 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.56 Mbit/s
95th percentile per-packet one-way delay: 22.650 ms
Loss rate: 1.11%
```

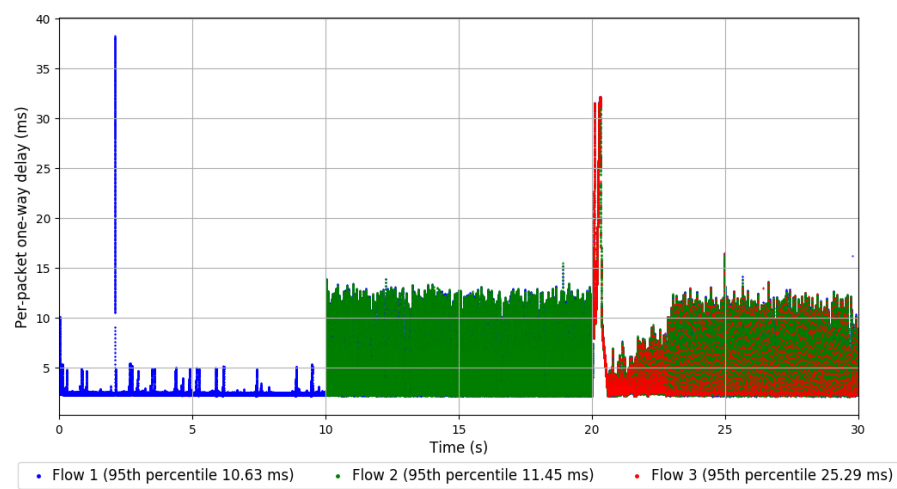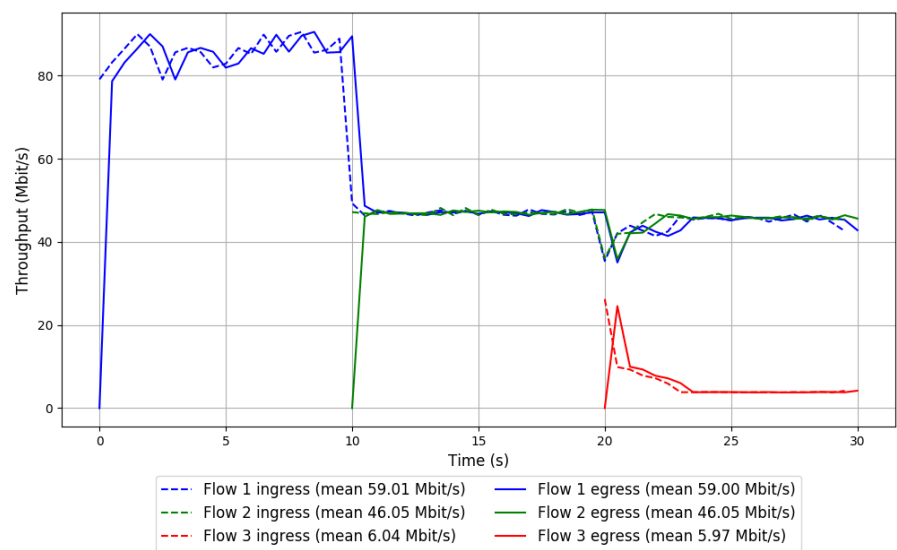Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2018-06-18 17:14:43
End at: 2018-06-18 17:15:13
Local clock offset: -2.852 ms
Remote clock offset: 14.615 ms


# Below is generated by plot.py at 2018-06-18 19:40:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.66 Mbit/s
95th percentile per-packet one-way delay: 11.099 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 59.00 Mbit/s
95th percentile per-packet one-way delay: 10.631 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 46.05 Mbit/s
95th percentile per-packet one-way delay: 11.446 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 5.97 Mbit/s
95th percentile per-packet one-way delay: 25.292 ms
Loss rate: 1.29%
```

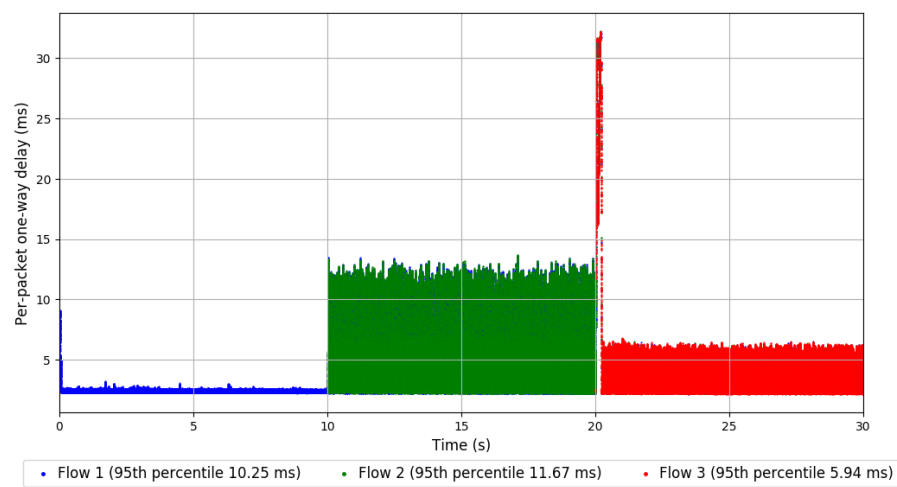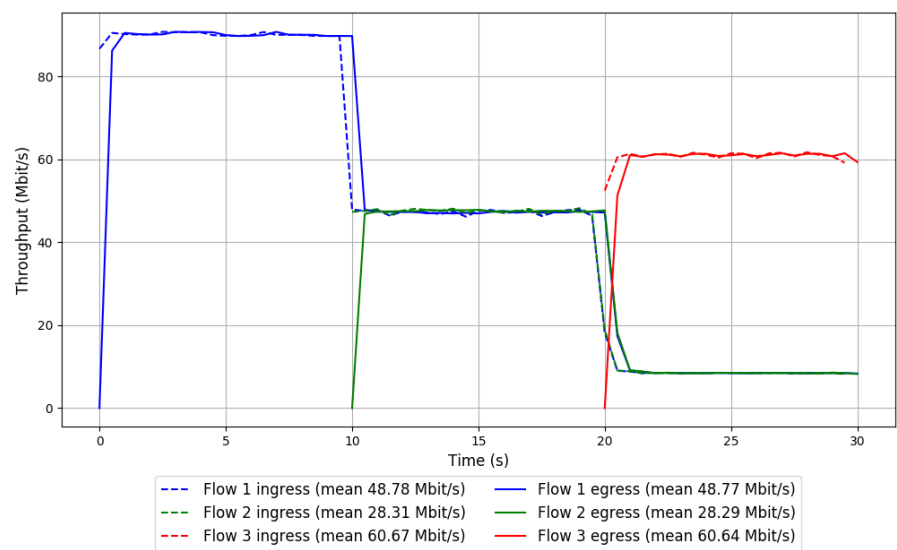# Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2018-06-18 17:32:48
End at: 2018-06-18 17:33:18
Local clock offset: -3.377 ms
Remote clock offset: 18.502 ms


# Below is generated by plot.py at 2018-06-18 19:40:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.80 Mbit/s
95th percentile per-packet one-way delay: 10.660 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 48.77 Mbit/s
95th percentile per-packet one-way delay: 10.254 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 28.29 Mbit/s
95th percentile per-packet one-way delay: 11.674 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 60.64 Mbit/s
95th percentile per-packet one-way delay: 5.944 ms
Loss rate: 0.04%
```
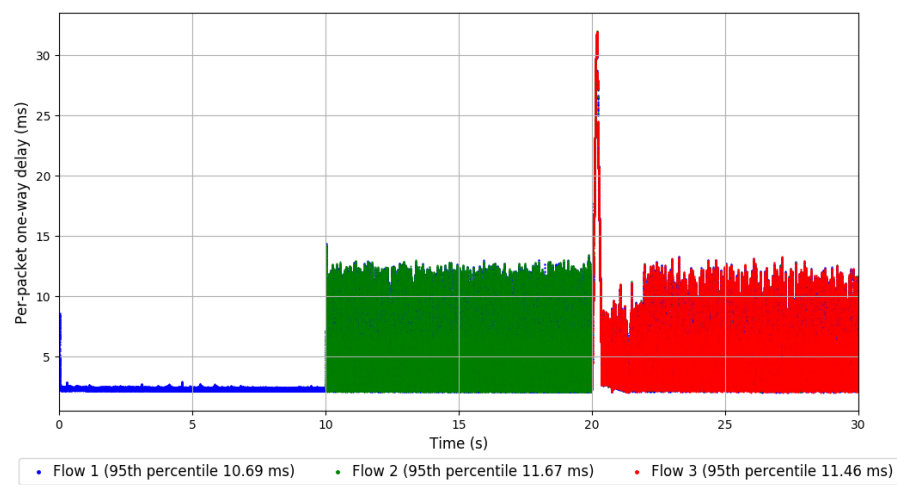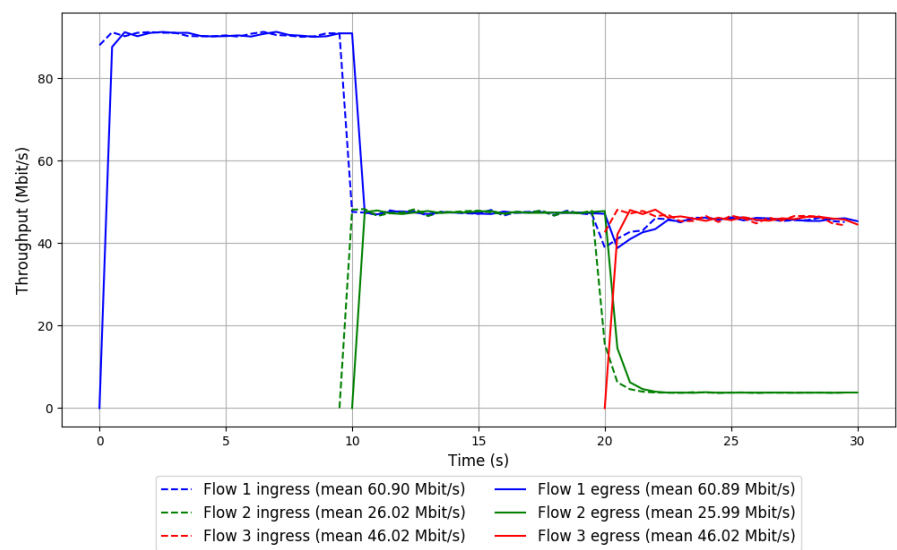
Run 5: Report of TaoVA-100x — Data Link

- - - - Flow 1 ingress (mean 48.78 Mbit/s)   —— Flow 1 egress (mean 48.77 Mbit/s)
- - - - Flow 2 ingress (mean 28.31 Mbit/s)   —— Flow 2 egress (mean 28.29 Mbit/s)
- - - - Flow 3 ingress (mean 60.67 Mbit/s)   —— Flow 3 egress (mean 60.64 Mbit/s)

- Flow 1 (95th percentile 10.25 ms)   • Flow 2 (95th percentile 11.67 ms)   • Flow 3 (95th percentile 5.94 ms)

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

Start at: 2018-06-18 17:50:52
End at: 2018-06-18 17:51:22
Local clock offset: -7.056 ms
Remote clock offset: 21.947 ms


# Below is generated by plot.py at 2018-06-18 19:41:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.53 Mbit/s
95th percentile per-packet one-way delay: 11.130 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 60.89 Mbit/s
95th percentile per-packet one-way delay: 10.693 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.99 Mbit/s
95th percentile per-packet one-way delay: 11.671 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 46.02 Mbit/s
95th percentile per-packet one-way delay: 11.455 ms
Loss rate: 0.02%
```
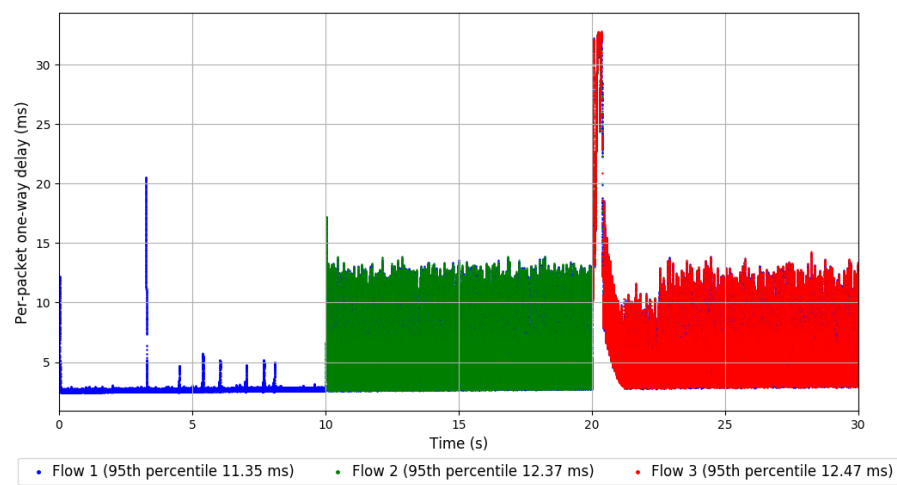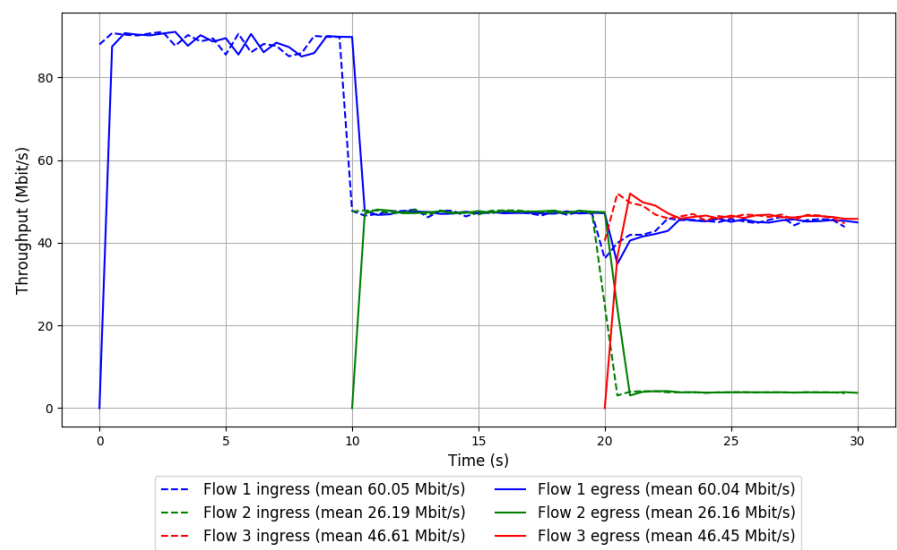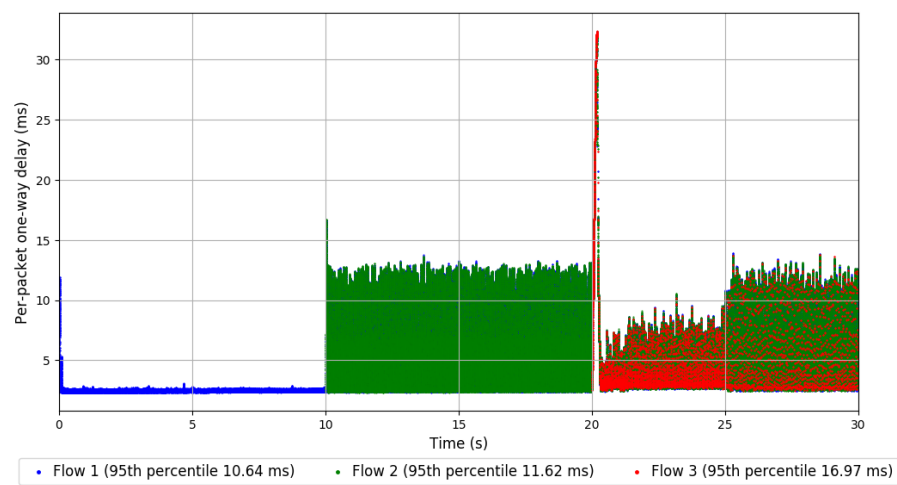
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 60.90 Mbit/s)   Flow 1 egress (mean 60.89 Mbit/s)
Flow 2 ingress (mean 26.02 Mbit/s)   Flow 2 egress (mean 25.99 Mbit/s)
Flow 3 ingress (mean 46.02 Mbit/s)   Flow 3 egress (mean 46.02 Mbit/s)

Flow 1 (95th percentile 10.69 ms)   Flow 2 (95th percentile 11.67 ms)   Flow 3 (95th percentile 11.46 ms)

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

Start at: 2018-06-18 18:08:57
End at: 2018-06-18 18:09:27
Local clock offset: -8.528 ms
Remote clock offset: 1.377 ms

# Below is generated by plot.py at 2018-06-18 19:41:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.94 Mbit/s
95th percentile per-packet one-way delay: 11.853 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 60.04 Mbit/s
95th percentile per-packet one-way delay: 11.349 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 26.16 Mbit/s
95th percentile per-packet one-way delay: 12.374 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 46.45 Mbit/s
95th percentile per-packet one-way delay: 12.466 ms
Loss rate: 0.32%
```
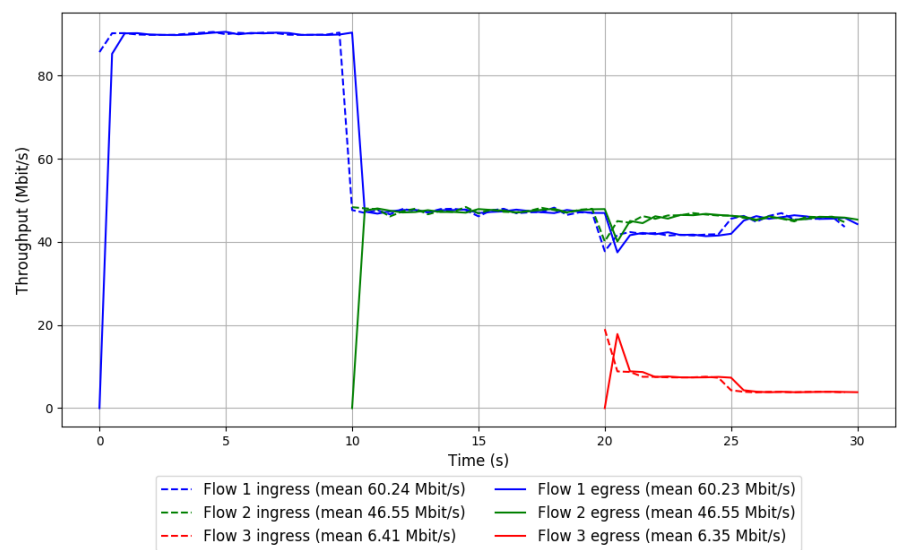
Run 7: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 60.05 Mbit/s) --- Flow 1 egress (mean 60.04 Mbit/s)
Flow 2 ingress (mean 26.19 Mbit/s) --- Flow 2 egress (mean 26.16 Mbit/s)
Flow 3 ingress (mean 46.61 Mbit/s) --- Flow 3 egress (mean 46.45 Mbit/s)

Flow 1 (95th percentile 11.35 ms) • Flow 2 (95th percentile 12.37 ms) • Flow 3 (95th percentile 12.47 ms)
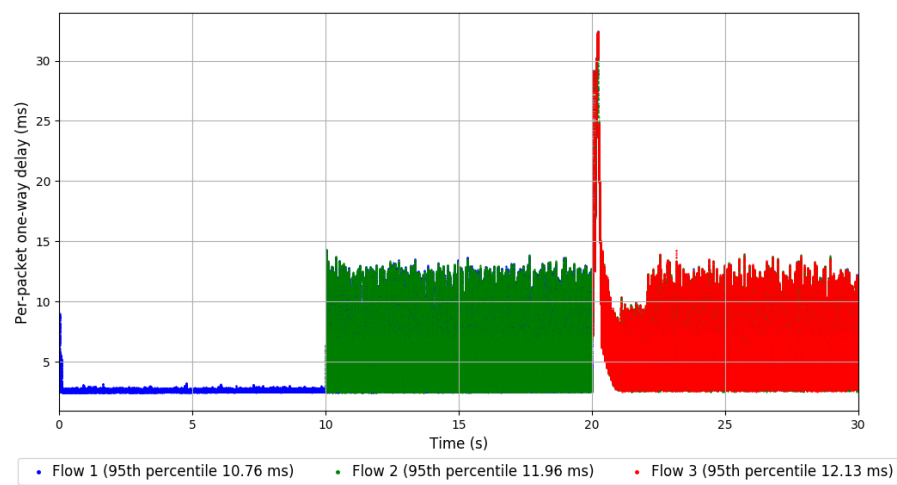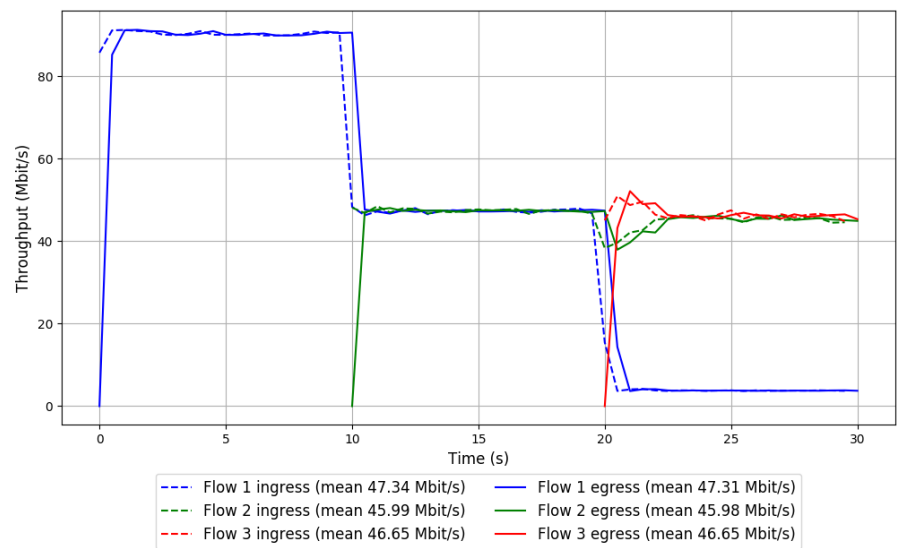
237

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

Start at: 2018-06-18 18:27:01
End at: 2018-06-18 18:27:31
Local clock offset: -9.655 ms
Remote clock offset: -9.335 ms

# Below is generated by plot.py at 2018-06-18 19:41:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.37 Mbit/s
95th percentile per-packet one-way delay: 11.152 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 60.23 Mbit/s
95th percentile per-packet one-way delay: 10.642 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 46.55 Mbit/s
95th percentile per-packet one-way delay: 11.616 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 16.966 ms
Loss rate: 0.86%
```
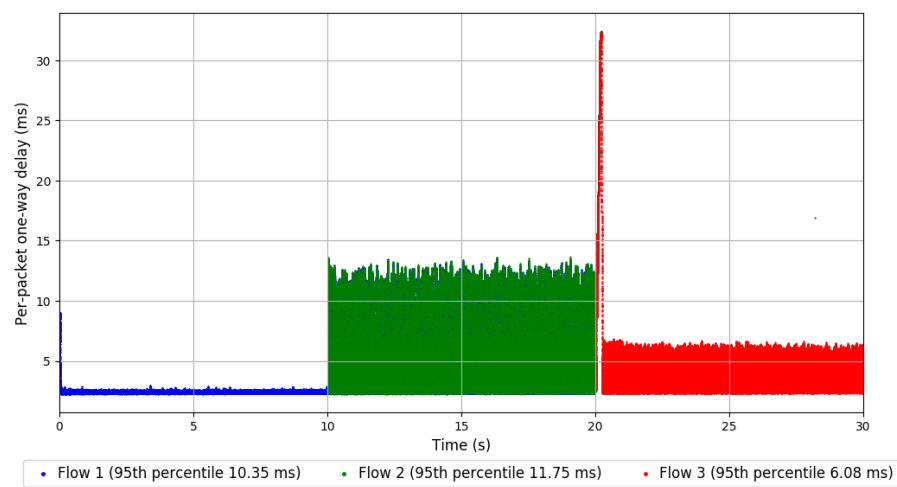
Run 8: Report of TaoVA-100x — Data Link

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

Start at: 2018-06-18 18:45:06
End at: 2018-06-18 18:45:36
Local clock offset: -3.649 ms
Remote clock offset: -5.425 ms


# Below is generated by plot.py at 2018-06-18 19:42:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.48 Mbit/s
95th percentile per-packet one-way delay: 11.593 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 47.31 Mbit/s
95th percentile per-packet one-way delay: 10.756 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 45.98 Mbit/s
95th percentile per-packet one-way delay: 11.956 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 46.65 Mbit/s
95th percentile per-packet one-way delay: 12.130 ms
Loss rate: 0.02%
```
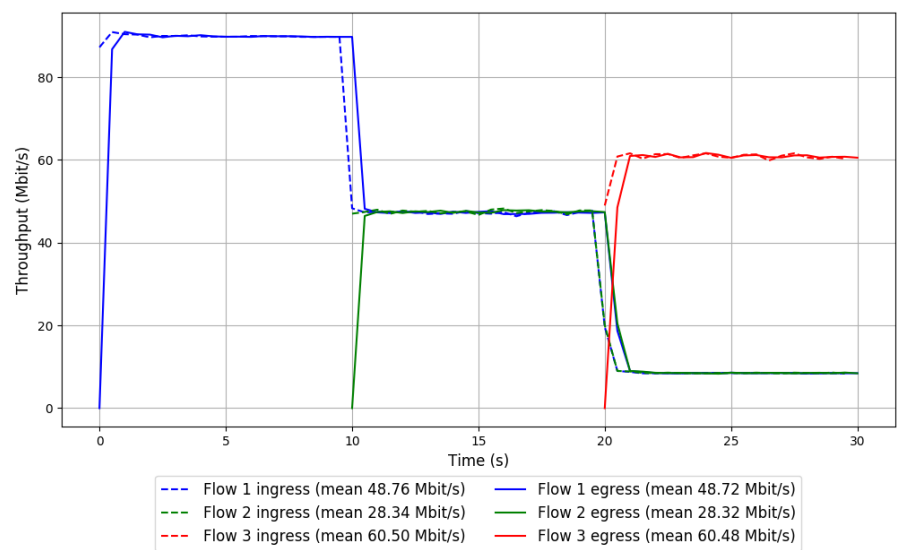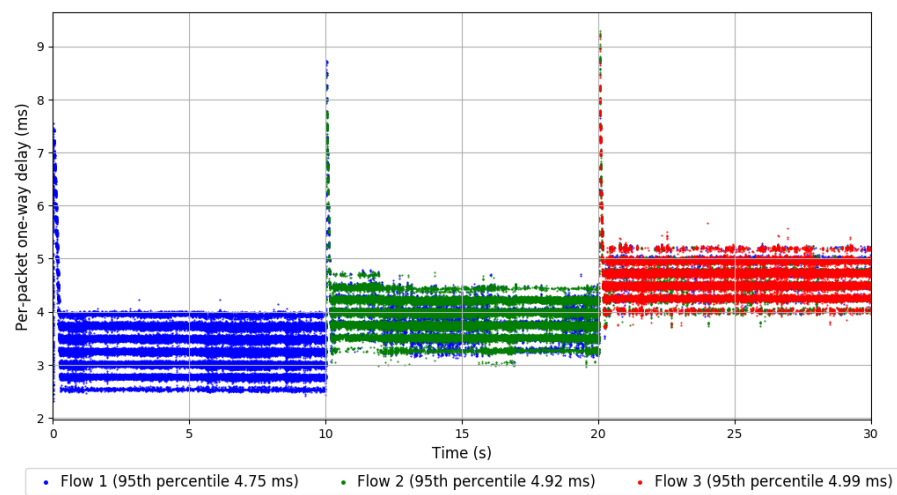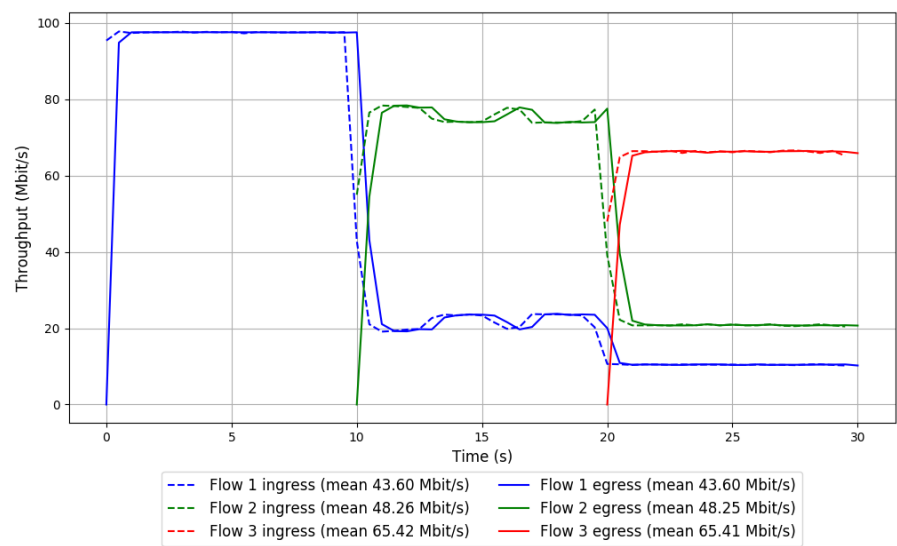
Run 9: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 47.34 Mbit/s) — Flow 1 egress (mean 47.31 Mbit/s)
Flow 2 ingress (mean 45.99 Mbit/s) — Flow 2 egress (mean 45.98 Mbit/s)
Flow 3 ingress (mean 46.65 Mbit/s) — Flow 3 egress (mean 46.65 Mbit/s)

Flow 1 (95th percentile 10.76 ms)   Flow 2 (95th percentile 11.96 ms)   Flow 3 (95th percentile 12.13 ms)

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

Start at: 2018-06-18 19:03:10
End at: 2018-06-18 19:03:40
Local clock offset: -0.257 ms
Remote clock offset: -5.567 ms


# Below is generated by plot.py at 2018-06-18 19:42:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.70 Mbit/s
95th percentile per-packet one-way delay: 10.712 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 48.72 Mbit/s
95th percentile per-packet one-way delay: 10.353 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 28.32 Mbit/s
95th percentile per-packet one-way delay: 11.751 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 60.48 Mbit/s
95th percentile per-packet one-way delay: 6.079 ms
Loss rate: 0.01%
```

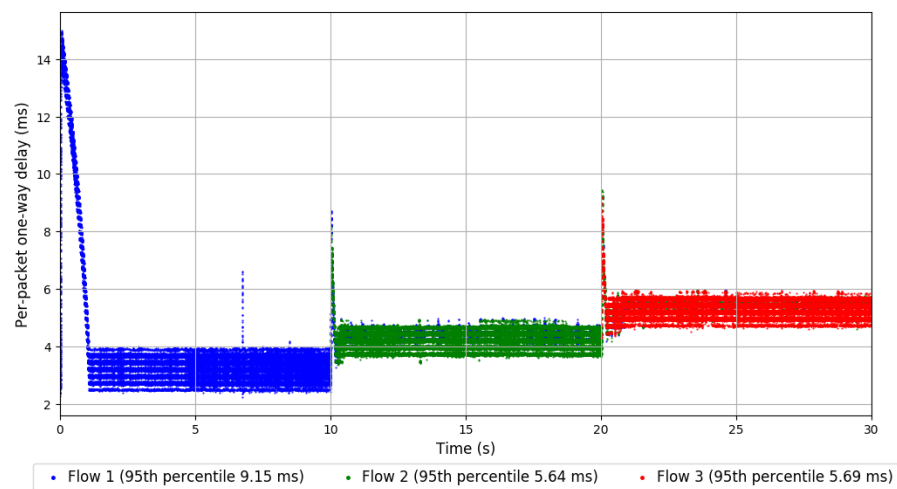Run 10: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2018-06-18 16:17:09
End at: 2018-06-18 16:17:39
Local clock offset: -2.057 ms
Remote clock offset: -2.159 ms


# Below is generated by plot.py at 2018-06-18 19:42:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 4.965 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.60 Mbit/s
95th percentile per-packet one-way delay: 4.753 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 48.25 Mbit/s
95th percentile per-packet one-way delay: 4.917 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.41 Mbit/s
95th percentile per-packet one-way delay: 4.994 ms
Loss rate: 0.00%
```

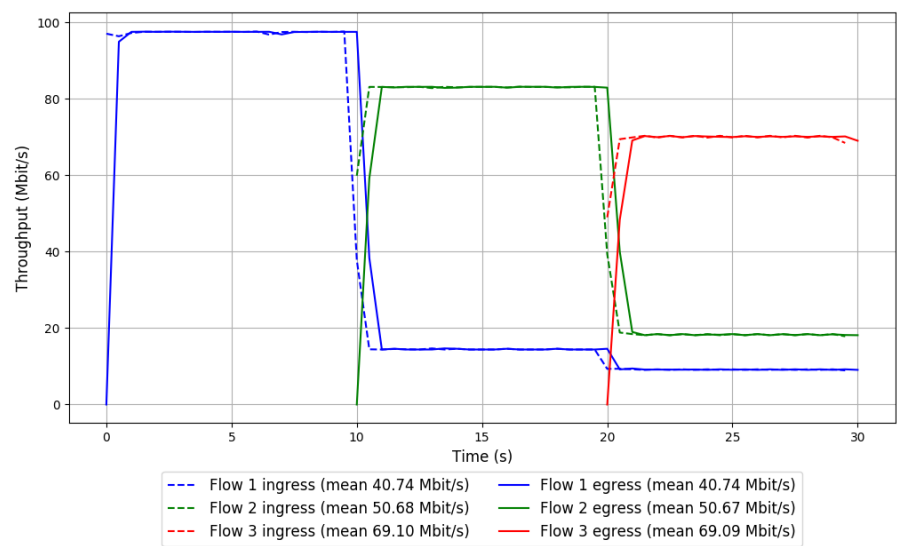Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-06-18 16:35:14
End at: 2018-06-18 16:35:44
Local clock offset: -1.918 ms
Remote clock offset: -1.747 ms


# Below is generated by plot.py at 2018-06-18 19:42:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 5.692 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.74 Mbit/s
95th percentile per-packet one-way delay: 9.155 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.67 Mbit/s
95th percentile per-packet one-way delay: 5.639 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 69.09 Mbit/s
95th percentile per-packet one-way delay: 5.690 ms
Loss rate: 0.00%
```

Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-06-18 16:53:18
End at: 2018-06-18 16:53:48
Local clock offset: -2.006 ms
Remote clock offset: 3.765 ms


# Below is generated by plot.py at 2018-06-18 19:42:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.61 Mbit/s
95th percentile per-packet one-way delay: 3.557 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.63 Mbit/s
95th percentile per-packet one-way delay: 5.856 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.10 Mbit/s
95th percentile per-packet one-way delay: 3.200 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 37.83 Mbit/s
95th percentile per-packet one-way delay: 3.314 ms
Loss rate: 0.00%
```
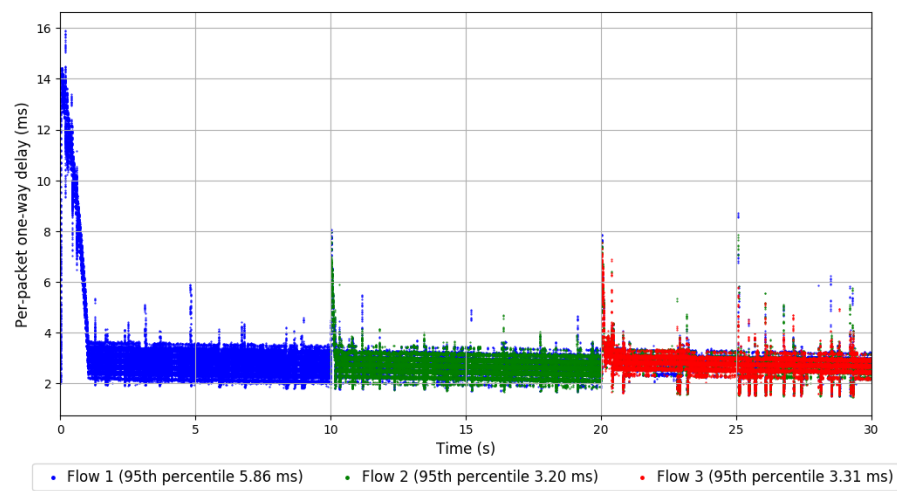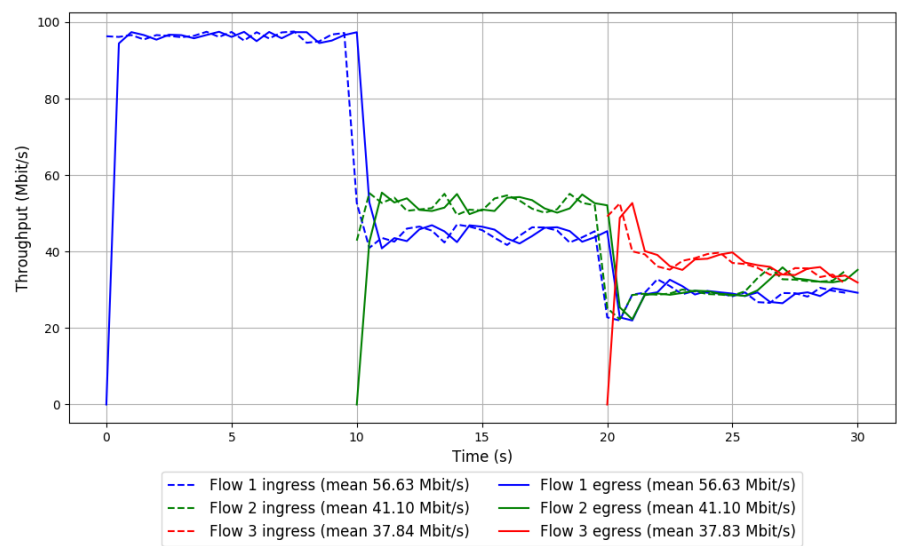
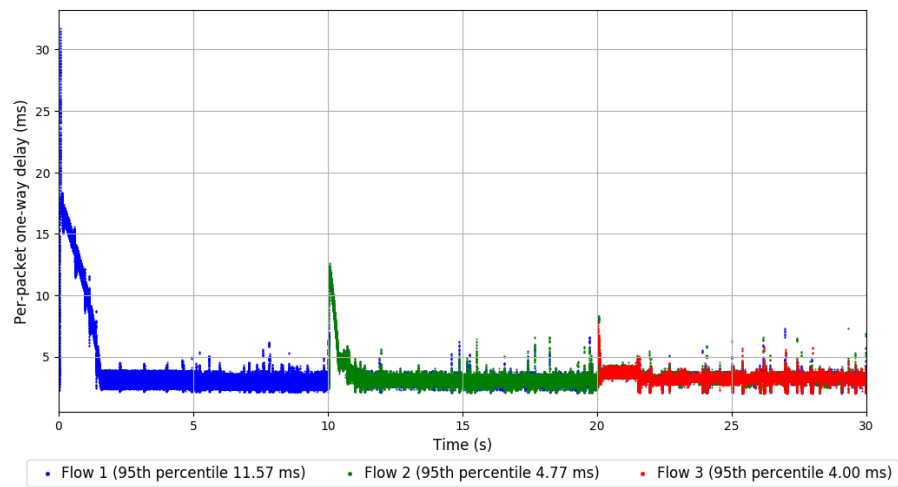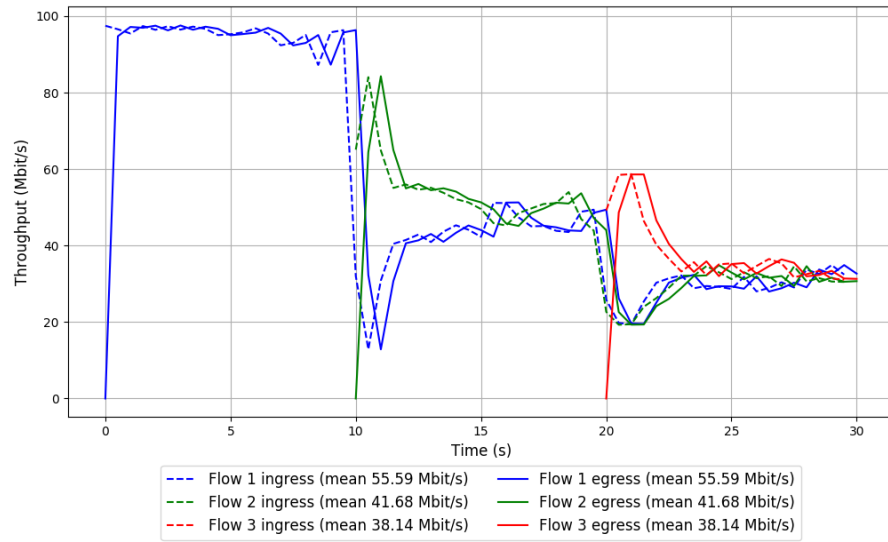## Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2018-06-18 17:11:23
End at: 2018-06-18 17:11:53
Local clock offset: -2.656 ms
Remote clock offset: 13.708 ms


# Below is generated by plot.py at 2018-06-18 19:42:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.03 Mbit/s
95th percentile per-packet one-way delay: 7.401 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.59 Mbit/s
95th percentile per-packet one-way delay: 11.568 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.68 Mbit/s
95th percentile per-packet one-way delay: 4.774 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.14 Mbit/s
95th percentile per-packet one-way delay: 4.002 ms
Loss rate: 0.00%
```

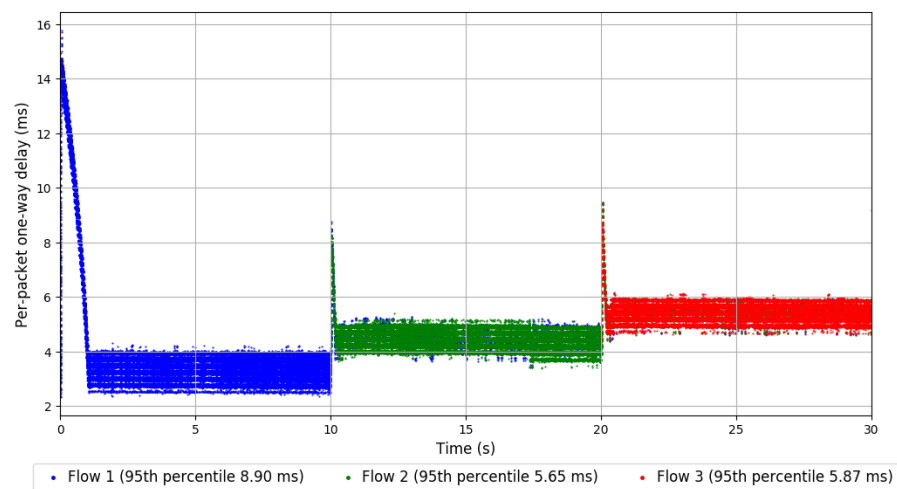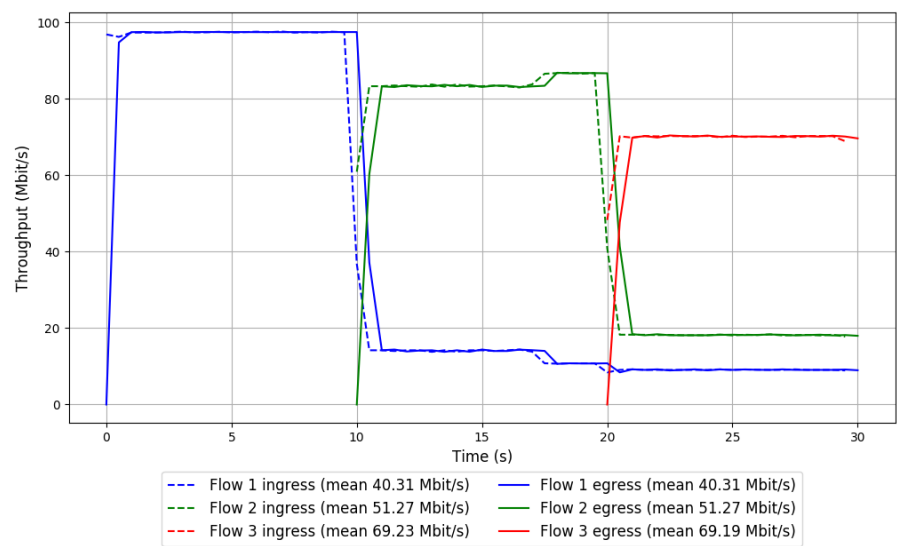Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-06-18 17:29:28
End at: 2018-06-18 17:29:58
Local clock offset: -3.35 ms
Remote clock offset: 17.839 ms


# Below is generated by plot.py at 2018-06-18 19:42:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 5.867 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.31 Mbit/s
95th percentile per-packet one-way delay: 8.903 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 51.27 Mbit/s
95th percentile per-packet one-way delay: 5.654 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 69.19 Mbit/s
95th percentile per-packet one-way delay: 5.865 ms
Loss rate: 0.01%
```

Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 40.31 Mbit/s) --- Flow 1 egress (mean 40.31 Mbit/s)
Flow 2 ingress (mean 51.27 Mbit/s) --- Flow 2 egress (mean 51.27 Mbit/s)
Flow 3 ingress (mean 69.23 Mbit/s) --- Flow 3 egress (mean 69.19 Mbit/s)

Flow 1 (95th percentile 8.90 ms) • Flow 2 (95th percentile 5.65 ms) • Flow 3 (95th percentile 5.87 ms)

```
Run 6: Statistics of TCP Vegas

Start at: 2018-06-18 17:47:33
End at: 2018-06-18 17:48:03
Local clock offset: -6.647 ms
Remote clock offset: 21.36 ms


# Below is generated by plot.py at 2018-06-18 19:42:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 6.073 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.09 Mbit/s
95th percentile per-packet one-way delay: 13.385 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 52.99 Mbit/s
95th percentile per-packet one-way delay: 4.935 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 63.54 Mbit/s
95th percentile per-packet one-way delay: 5.030 ms
Loss rate: 0.00%
```
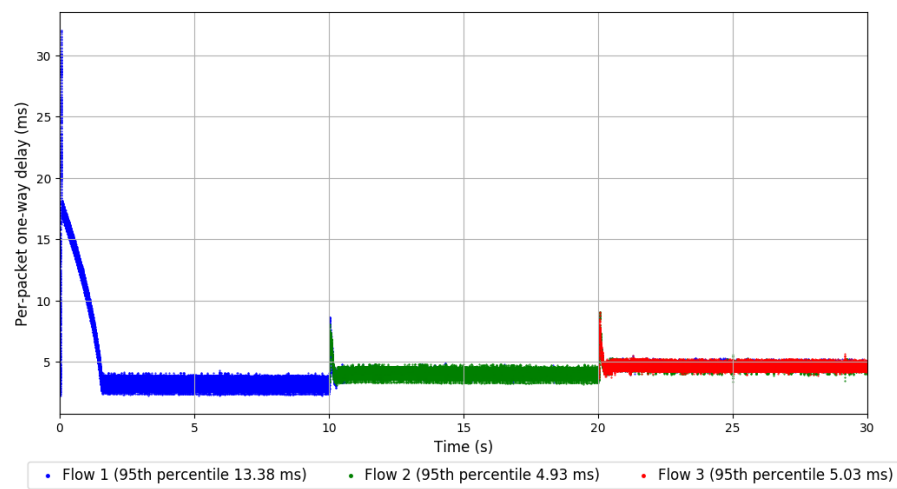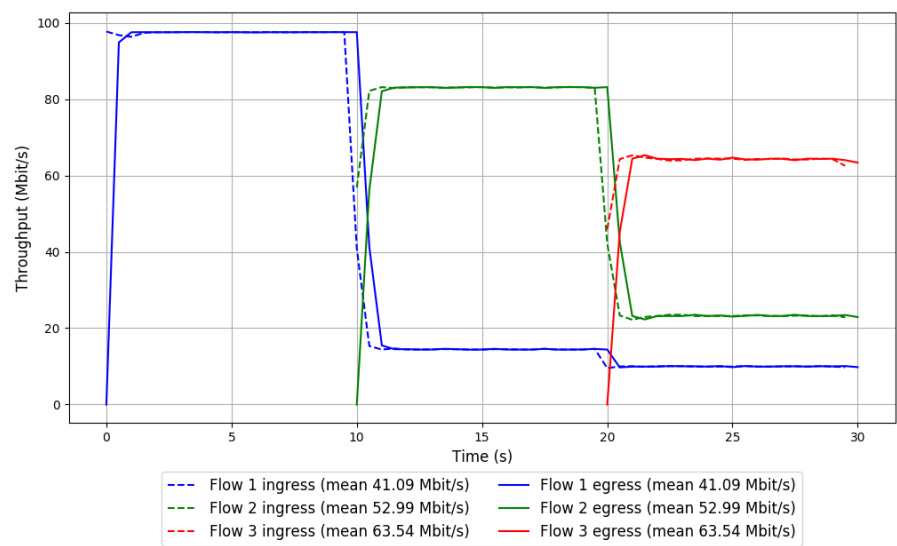
Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2018-06-18 18:05:38
End at: 2018-06-18 18:06:08
Local clock offset: -8.317 ms
Remote clock offset: 5.519 ms


# Below is generated by plot.py at 2018-06-18 19:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.34 Mbit/s
95th percentile per-packet one-way delay: 6.277 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.73 Mbit/s
95th percentile per-packet one-way delay: 12.056 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.10 Mbit/s
95th percentile per-packet one-way delay: 5.058 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 58.83 Mbit/s
95th percentile per-packet one-way delay: 5.241 ms
Loss rate: 0.00%
```
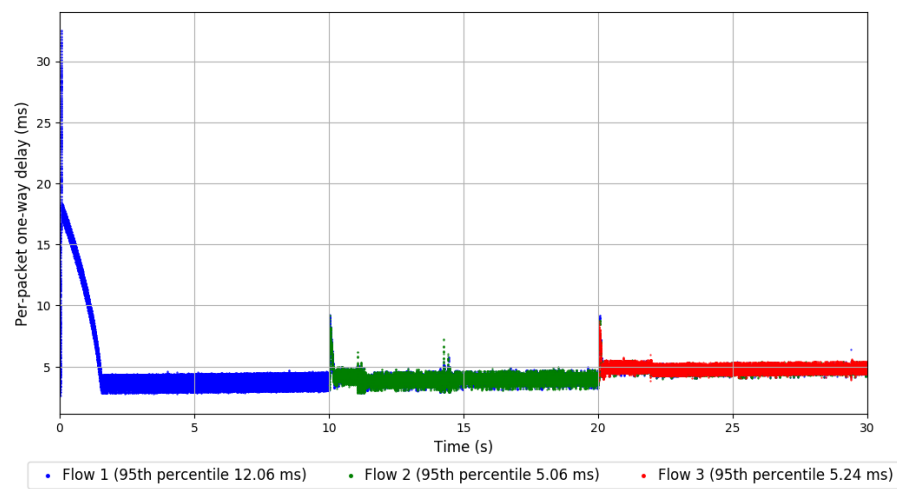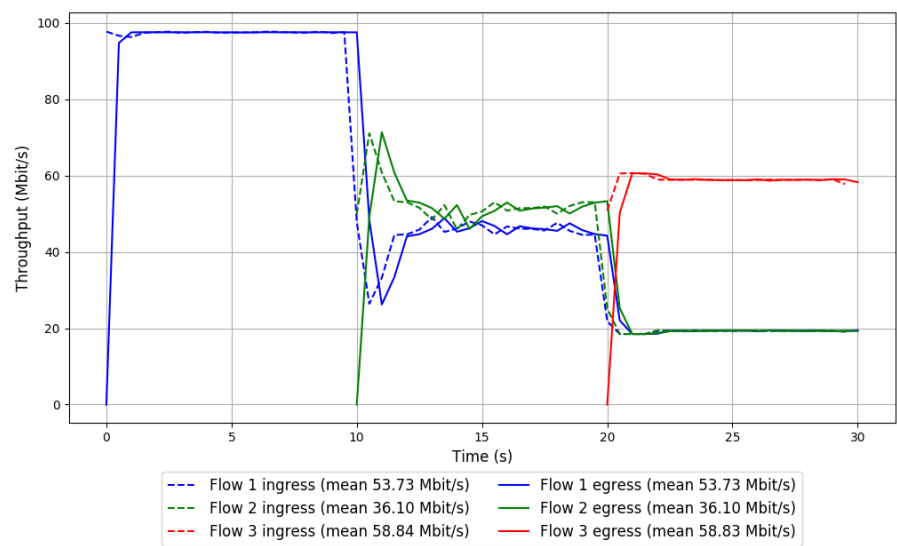
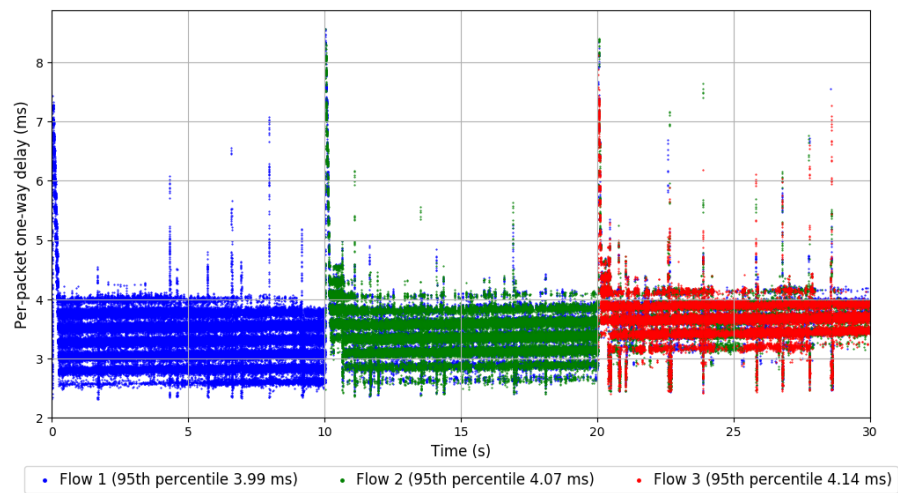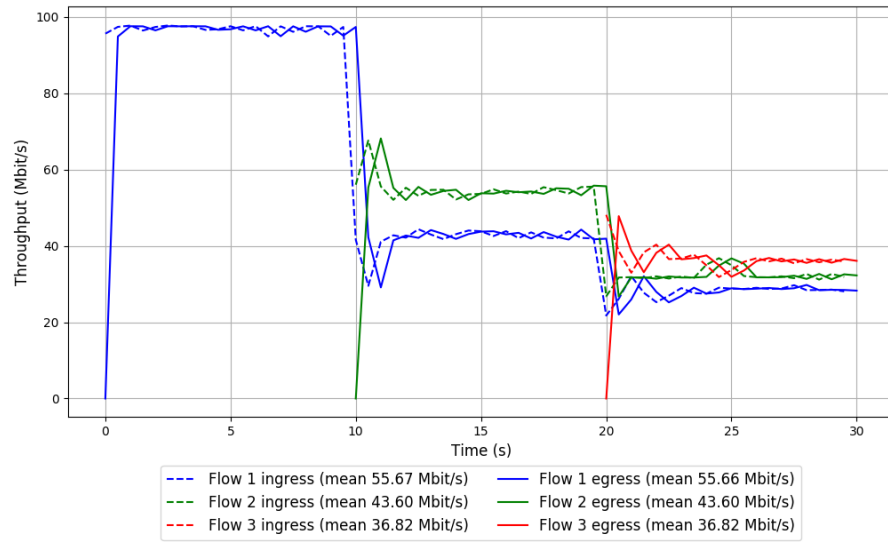## Run 7: Report of TCP Vegas — Data Link

```
Run 8: Statistics of TCP Vegas

Start at: 2018-06-18 18:23:42
End at: 2018-06-18 18:24:12
Local clock offset: -9.437 ms
Remote clock offset: -8.024 ms


# Below is generated by plot.py at 2018-06-18 19:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.96 Mbit/s
95th percentile per-packet one-way delay: 4.037 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.66 Mbit/s
95th percentile per-packet one-way delay: 3.990 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.60 Mbit/s
95th percentile per-packet one-way delay: 4.071 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 36.82 Mbit/s
95th percentile per-packet one-way delay: 4.140 ms
Loss rate: 0.00%
```

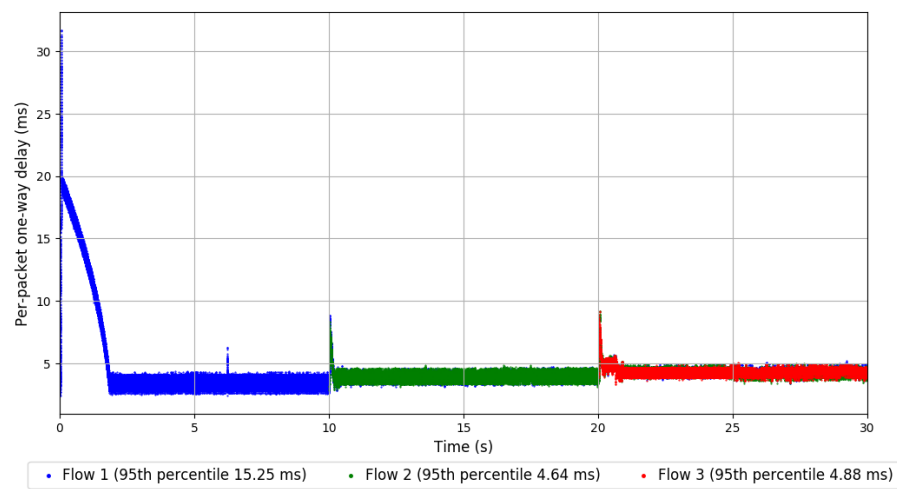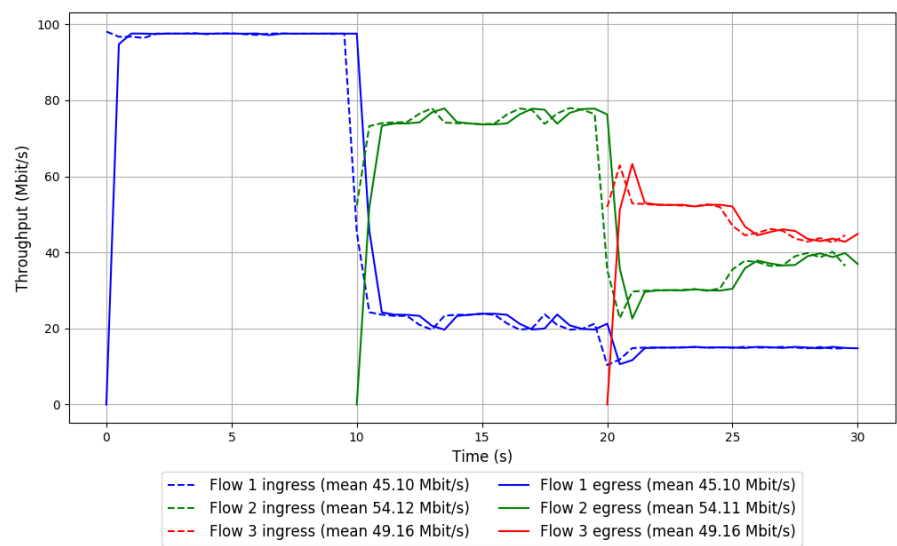## Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2018-06-18 18:41:47
End at: 2018-06-18 18:42:17
Local clock offset: -4.928 ms
Remote clock offset: -6.055 ms


# Below is generated by plot.py at 2018-06-18 19:43:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 8.310 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.10 Mbit/s
95th percentile per-packet one-way delay: 15.248 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 54.11 Mbit/s
95th percentile per-packet one-way delay: 4.640 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.16 Mbit/s
95th percentile per-packet one-way delay: 4.879 ms
Loss rate: 0.00%
```

Run 9: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 45.10 Mbit/s) — Flow 1 egress (mean 45.10 Mbit/s)
Flow 2 ingress (mean 54.12 Mbit/s) — Flow 2 egress (mean 54.11 Mbit/s)
Flow 3 ingress (mean 49.16 Mbit/s) — Flow 3 egress (mean 49.16 Mbit/s)

Flow 1 (95th percentile 15.25 ms)   Flow 2 (95th percentile 4.64 ms)   Flow 3 (95th percentile 4.88 ms)
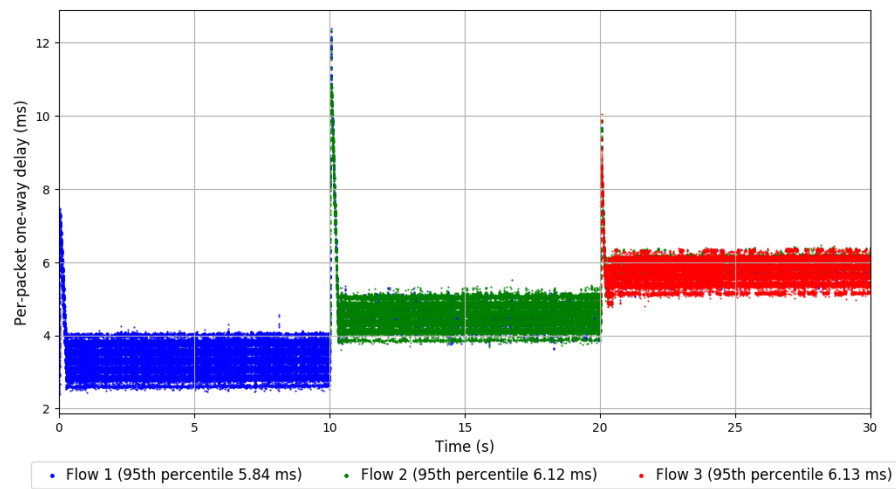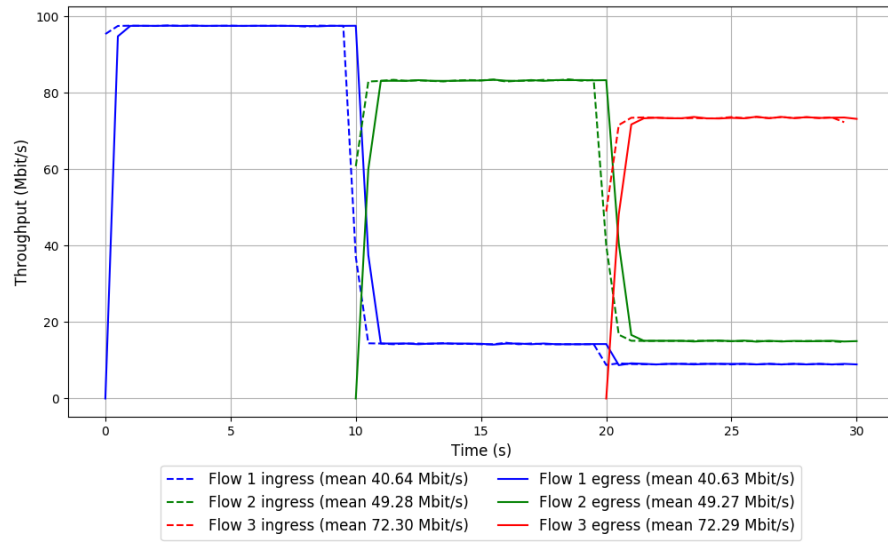
```
Run 10: Statistics of TCP Vegas

Start at: 2018-06-18 18:59:51
End at: 2018-06-18 19:00:21
Local clock offset: -0.644 ms
Remote clock offset: -5.279 ms


# Below is generated by plot.py at 2018-06-18 19:43:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 6.107 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.63 Mbit/s
95th percentile per-packet one-way delay: 5.843 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.27 Mbit/s
95th percentile per-packet one-way delay: 6.124 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 72.29 Mbit/s
95th percentile per-packet one-way delay: 6.132 ms
Loss rate: 0.00%
```
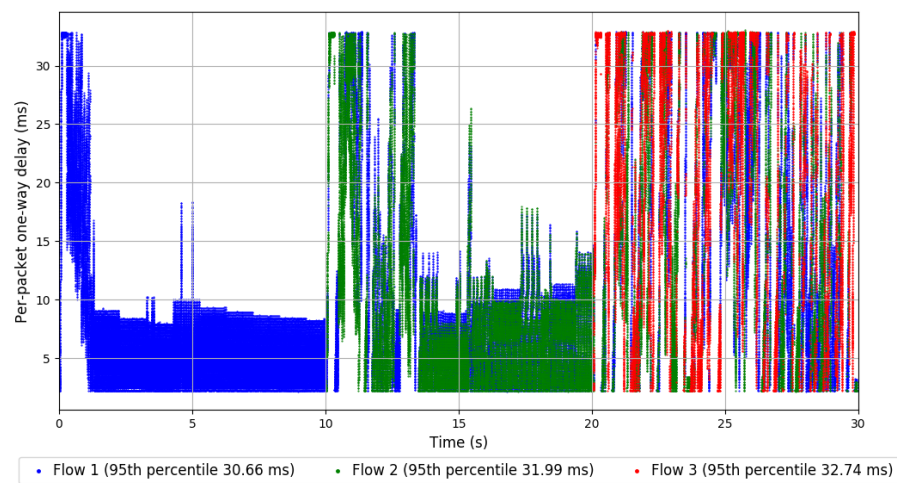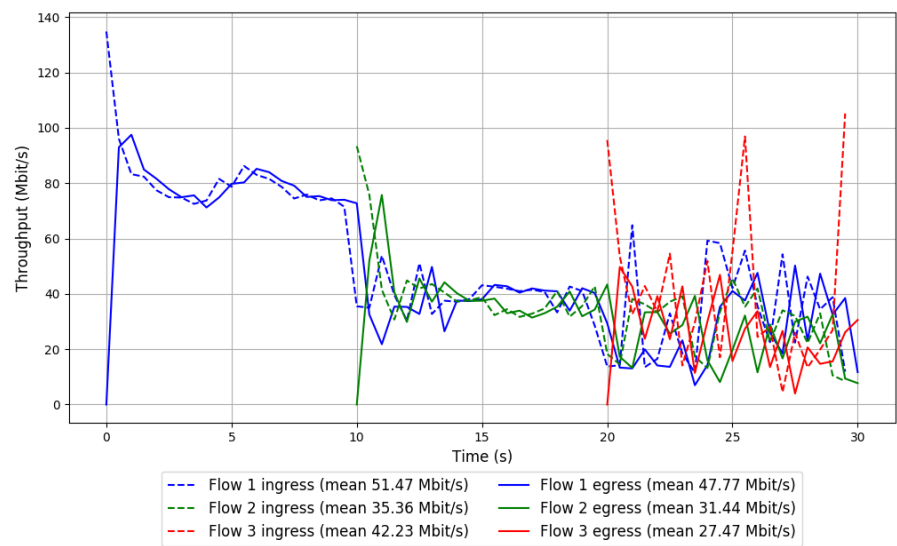
Run 10: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 40.64 Mbit/s) --- Flow 1 egress (mean 40.63 Mbit/s)
Flow 2 ingress (mean 49.28 Mbit/s) --- Flow 2 egress (mean 49.27 Mbit/s)
Flow 3 ingress (mean 72.30 Mbit/s) --- Flow 3 egress (mean 72.29 Mbit/s)

Flow 1 (95th percentile 5.84 ms)   Flow 2 (95th percentile 6.12 ms)   Flow 3 (95th percentile 6.13 ms)

263

```
Run 1: Statistics of Verus

Start at: 2018-06-18 16:26:05
End at: 2018-06-18 16:26:35
Local clock offset: -1.879 ms
Remote clock offset: -1.989 ms


# Below is generated by plot.py at 2018-06-18 19:43:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.68 Mbit/s
95th percentile per-packet one-way delay: 32.021 ms
Loss rate: 12.50%
-- Flow 1:
Average throughput: 47.77 Mbit/s
95th percentile per-packet one-way delay: 30.656 ms
Loss rate: 7.18%
-- Flow 2:
Average throughput: 31.44 Mbit/s
95th percentile per-packet one-way delay: 31.994 ms
Loss rate: 11.08%
-- Flow 3:
Average throughput: 27.47 Mbit/s
95th percentile per-packet one-way delay: 32.736 ms
Loss rate: 34.77%
```
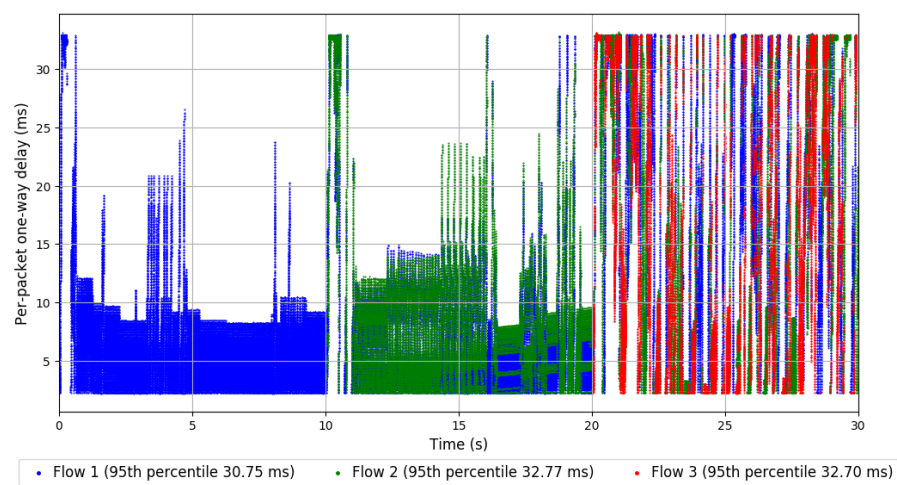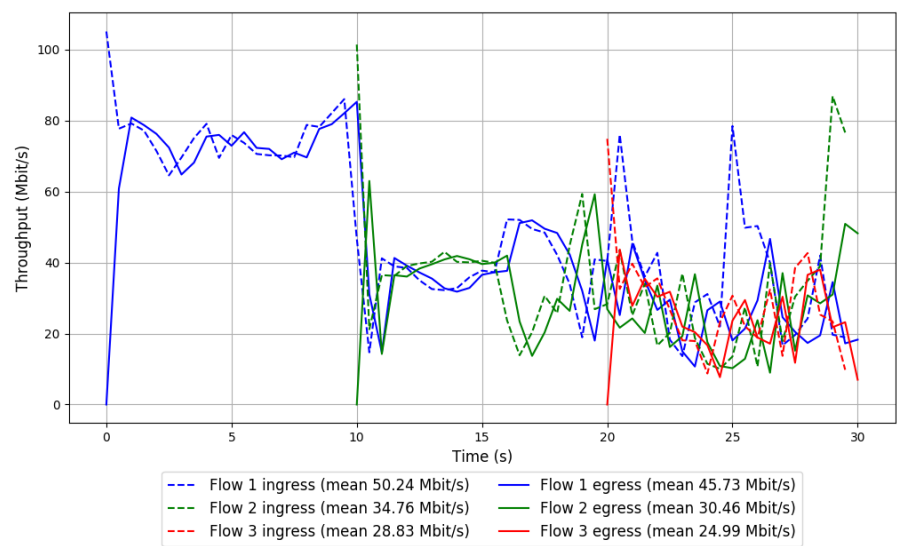
Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 51.47 Mbit/s) ---- Flow 1 egress (mean 47.77 Mbit/s)
Flow 2 ingress (mean 35.36 Mbit/s) ---- Flow 2 egress (mean 31.44 Mbit/s)
Flow 3 ingress (mean 42.23 Mbit/s) ---- Flow 3 egress (mean 27.47 Mbit/s)

Flow 1 (95th percentile 30.66 ms)   Flow 2 (95th percentile 31.99 ms)   Flow 3 (95th percentile 32.74 ms)

265

```
Run 2: Statistics of Verus

Start at: 2018-06-18 16:44:10
End at: 2018-06-18 16:44:40
Local clock offset: -1.97 ms
Remote clock offset: -1.518 ms


# Below is generated by plot.py at 2018-06-18 19:43:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.12 Mbit/s
95th percentile per-packet one-way delay: 32.466 ms
Loss rate: 10.32%
-- Flow 1:
Average throughput: 45.73 Mbit/s
95th percentile per-packet one-way delay: 30.752 ms
Loss rate: 8.89%
-- Flow 2:
Average throughput: 30.46 Mbit/s
95th percentile per-packet one-way delay: 32.769 ms
Loss rate: 12.30%
-- Flow 3:
Average throughput: 24.99 Mbit/s
95th percentile per-packet one-way delay: 32.704 ms
Loss rate: 13.07%
```

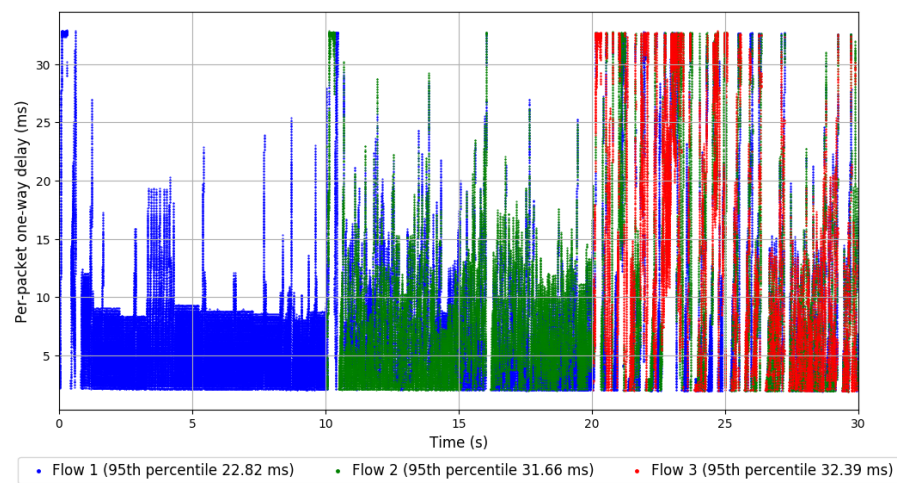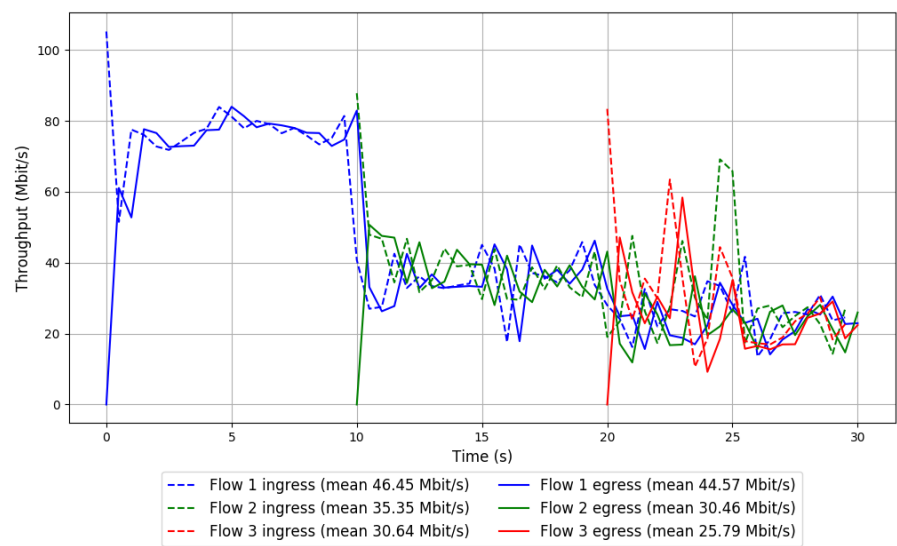Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-06-18 17:02:15
End at: 2018-06-18 17:02:45
Local clock offset: -2.006 ms
Remote clock offset: 10.268 ms


# Below is generated by plot.py at 2018-06-18 19:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.37 Mbit/s
95th percentile per-packet one-way delay: 30.428 ms
Loss rate: 8.42%
-- Flow 1:
Average throughput: 44.57 Mbit/s
95th percentile per-packet one-way delay: 22.822 ms
Loss rate: 4.04%
-- Flow 2:
Average throughput: 30.46 Mbit/s
95th percentile per-packet one-way delay: 31.663 ms
Loss rate: 13.85%
-- Flow 3:
Average throughput: 25.79 Mbit/s
95th percentile per-packet one-way delay: 32.391 ms
Loss rate: 15.84%
```
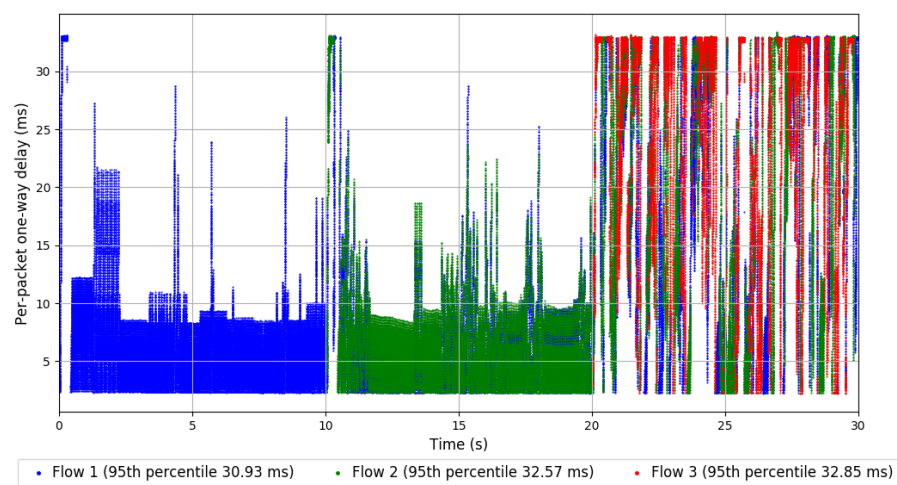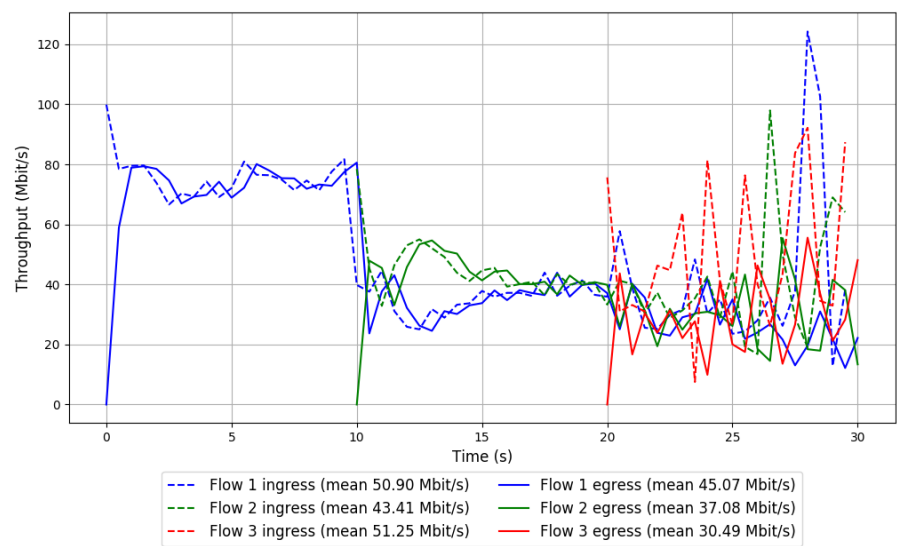
Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 46.45 Mbit/s) --- Flow 1 egress (mean 44.57 Mbit/s)
Flow 2 ingress (mean 35.35 Mbit/s) --- Flow 2 egress (mean 30.46 Mbit/s)
Flow 3 ingress (mean 30.64 Mbit/s) --- Flow 3 egress (mean 25.79 Mbit/s)

Flow 1 (95th percentile 22.82 ms)   Flow 2 (95th percentile 31.66 ms)   Flow 3 (95th percentile 32.39 ms)

```
Run 4: Statistics of Verus

Start at: 2018-06-18 17:20:20
End at: 2018-06-18 17:20:50
Local clock offset: -3.131 ms
Remote clock offset: 15.998 ms


# Below is generated by plot.py at 2018-06-18 19:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.60 Mbit/s
95th percentile per-packet one-way delay: 32.717 ms
Loss rate: 17.31%
-- Flow 1:
Average throughput: 45.07 Mbit/s
95th percentile per-packet one-way delay: 30.935 ms
Loss rate: 11.36%
-- Flow 2:
Average throughput: 37.08 Mbit/s
95th percentile per-packet one-way delay: 32.574 ms
Loss rate: 14.45%
-- Flow 3:
Average throughput: 30.49 Mbit/s
95th percentile per-packet one-way delay: 32.847 ms
Loss rate: 40.36%
```
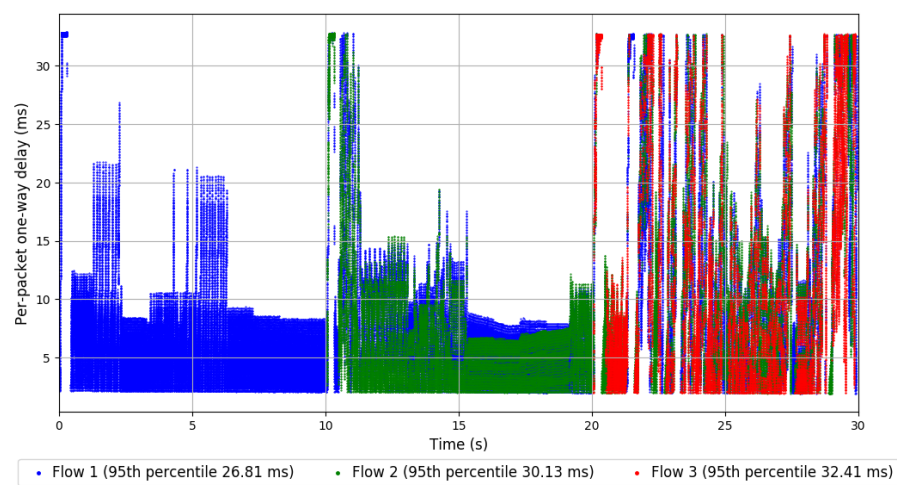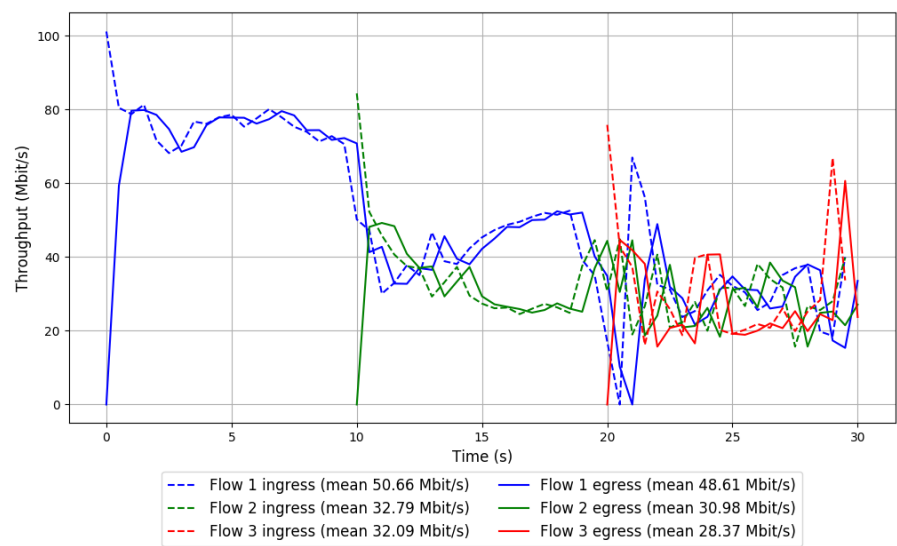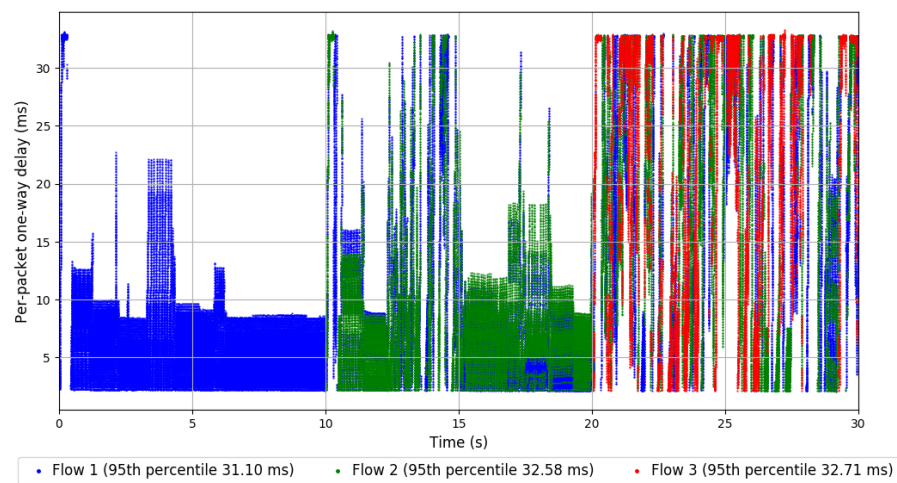
Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 50.90 Mbit/s) --- Flow 1 egress (mean 45.07 Mbit/s)
Flow 2 ingress (mean 43.41 Mbit/s) --- Flow 2 egress (mean 37.08 Mbit/s)
Flow 3 ingress (mean 51.25 Mbit/s) --- Flow 3 egress (mean 30.49 Mbit/s)

Flow 1 (95th percentile 30.93 ms) Flow 2 (95th percentile 32.57 ms) Flow 3 (95th percentile 32.85 ms)

```
Run 5: Statistics of Verus

Start at: 2018-06-18 17:38:24
End at: 2018-06-18 17:38:54
Local clock offset: -4.867 ms
Remote clock offset: 19.598 ms


# Below is generated by plot.py at 2018-06-18 19:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.49 Mbit/s
95th percentile per-packet one-way delay: 30.029 ms
Loss rate: 5.27%
-- Flow 1:
Average throughput: 48.61 Mbit/s
95th percentile per-packet one-way delay: 26.809 ms
Loss rate: 3.95%
-- Flow 2:
Average throughput: 30.98 Mbit/s
95th percentile per-packet one-way delay: 30.127 ms
Loss rate: 5.38%
-- Flow 3:
Average throughput: 28.37 Mbit/s
95th percentile per-packet one-way delay: 32.414 ms
Loss rate: 11.39%
```
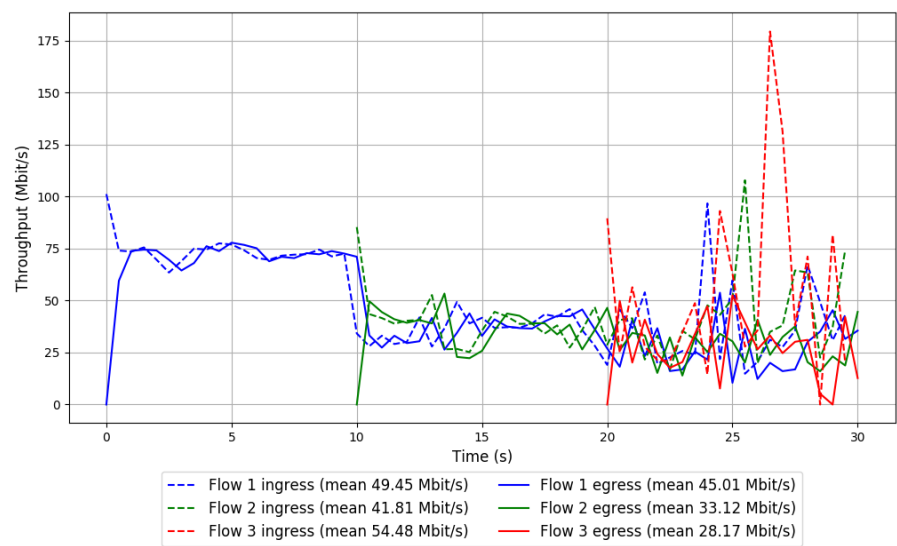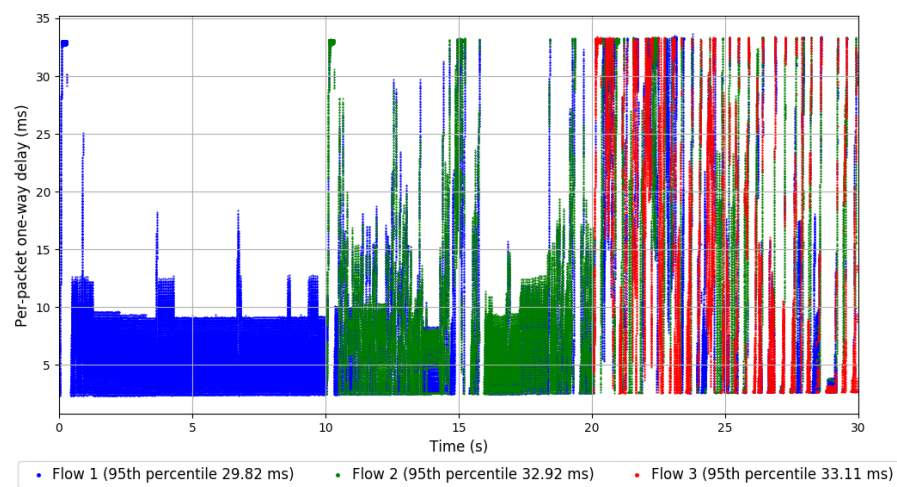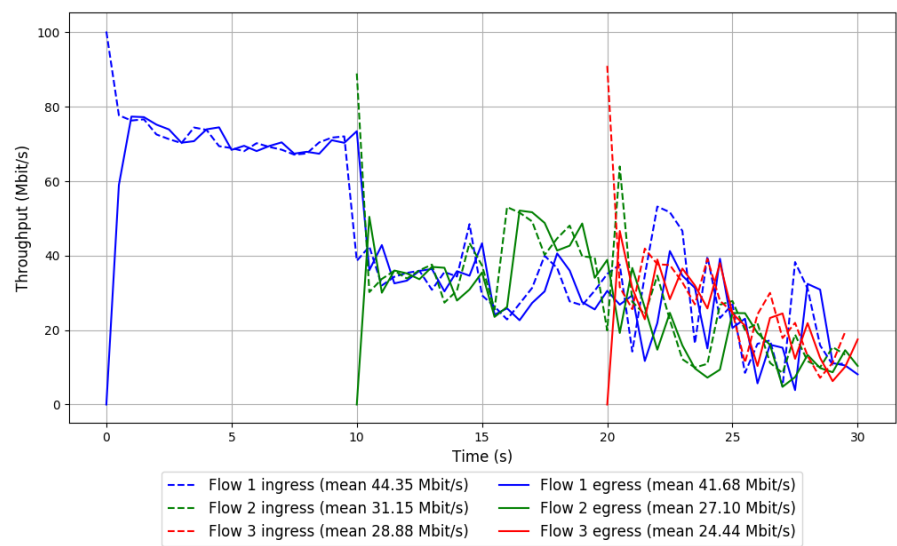
Run 5: Report of Verus — Data Link

- - - Flow 1 ingress (mean 50.66 Mbit/s) —— Flow 1 egress (mean 48.61 Mbit/s)
- - - Flow 2 ingress (mean 32.79 Mbit/s) —— Flow 2 egress (mean 30.98 Mbit/s)
- - - Flow 3 ingress (mean 32.09 Mbit/s) —— Flow 3 egress (mean 28.37 Mbit/s)

· Flow 1 (95th percentile 26.81 ms)   · Flow 2 (95th percentile 30.13 ms)   · Flow 3 (95th percentile 32.41 ms)

```
Run 6: Statistics of Verus

Start at: 2018-06-18 17:56:30
End at: 2018-06-18 17:57:00
Local clock offset: -7.626 ms
Remote clock offset: 23.057 ms


# Below is generated by plot.py at 2018-06-18 19:44:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.29 Mbit/s
95th percentile per-packet one-way delay: 32.578 ms
Loss rate: 19.76%
-- Flow 1:
Average throughput: 45.01 Mbit/s
95th percentile per-packet one-way delay: 31.103 ms
Loss rate: 8.89%
-- Flow 2:
Average throughput: 33.12 Mbit/s
95th percentile per-packet one-way delay: 32.575 ms
Loss rate: 20.68%
-- Flow 3:
Average throughput: 28.17 Mbit/s
95th percentile per-packet one-way delay: 32.710 ms
Loss rate: 48.16%
```
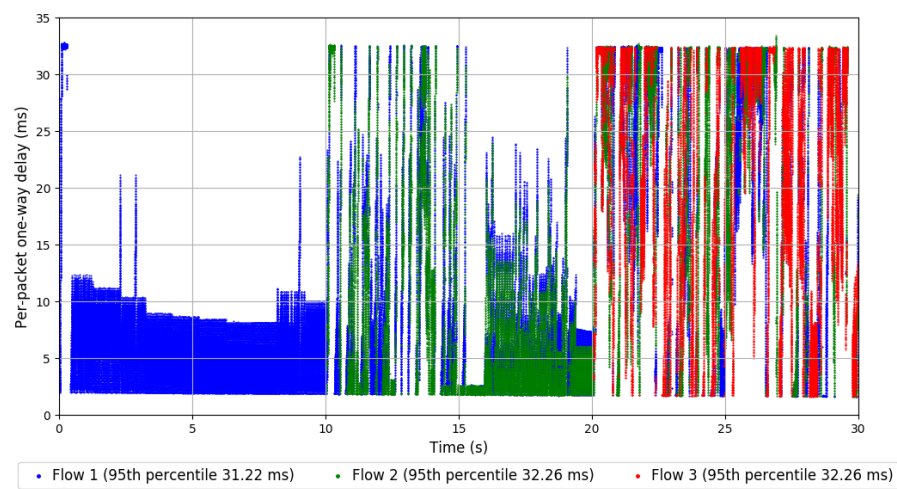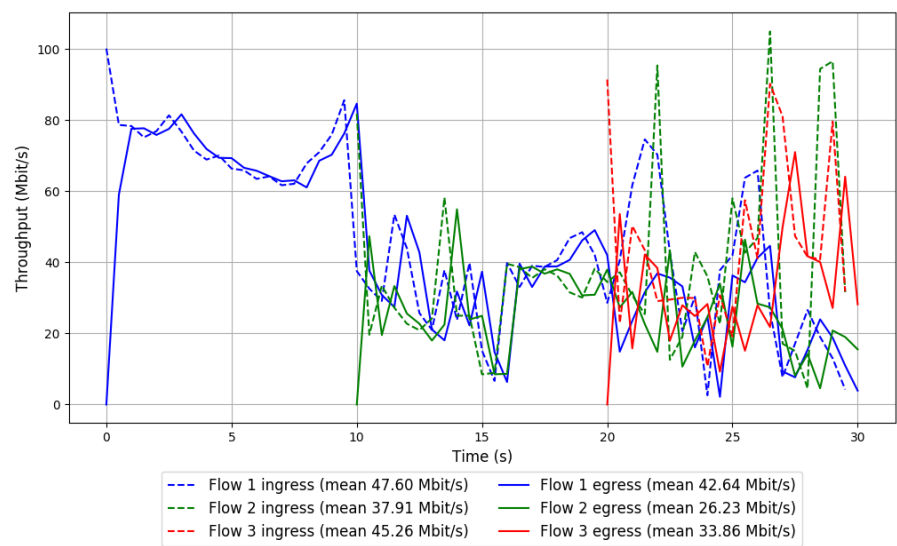
Run 6: Report of Verus — Data Link

Flow 1 ingress (mean 49.45 Mbit/s)   Flow 1 egress (mean 45.01 Mbit/s)
Flow 2 ingress (mean 41.81 Mbit/s)   Flow 2 egress (mean 33.12 Mbit/s)
Flow 3 ingress (mean 54.48 Mbit/s)   Flow 3 egress (mean 28.17 Mbit/s)

Flow 1 (95th percentile 31.10 ms)   Flow 2 (95th percentile 32.58 ms)   Flow 3 (95th percentile 32.71 ms)

275

```
Run 7: Statistics of Verus

Start at: 2018-06-18 18:14:34
End at: 2018-06-18 18:15:04
Local clock offset: -8.881 ms
Remote clock offset: -3.344 ms


# Below is generated by plot.py at 2018-06-18 19:44:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.78 Mbit/s
95th percentile per-packet one-way delay: 32.133 ms
Loss rate: 9.14%
-- Flow 1:
Average throughput: 41.68 Mbit/s
95th percentile per-packet one-way delay: 29.816 ms
Loss rate: 6.03%
-- Flow 2:
Average throughput: 27.10 Mbit/s
95th percentile per-packet one-way delay: 32.916 ms
Loss rate: 12.91%
-- Flow 3:
Average throughput: 24.44 Mbit/s
95th percentile per-packet one-way delay: 33.107 ms
Loss rate: 15.40%
```
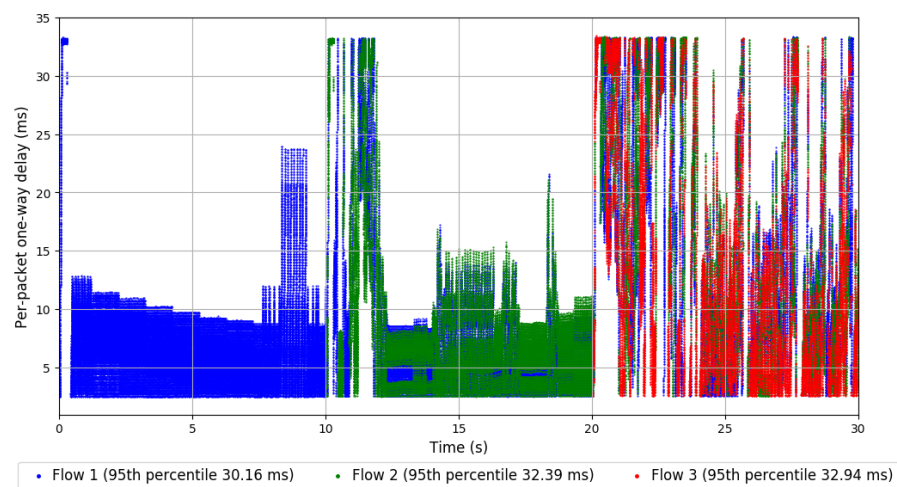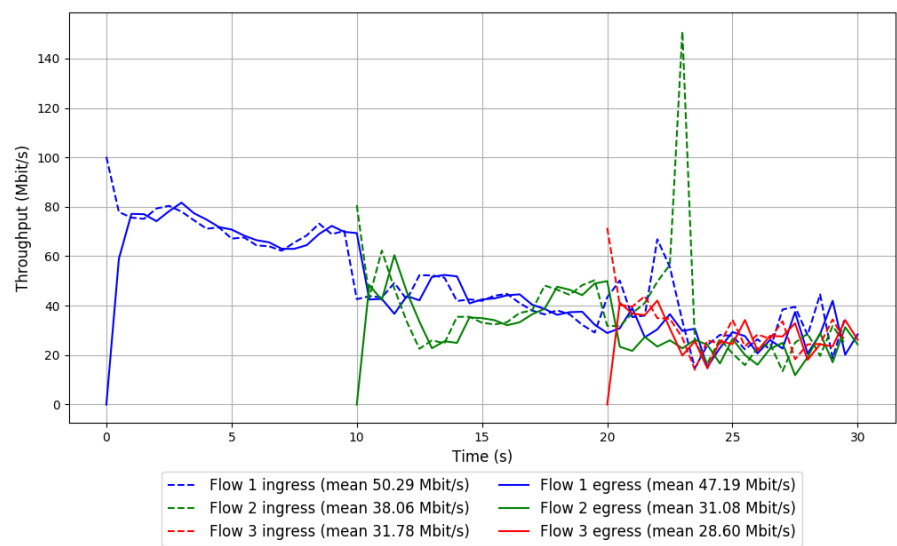
Run 7: Report of Verus — Data Link

Flow 1 ingress (mean 44.35 Mbit/s) ----   Flow 1 egress (mean 41.68 Mbit/s) ——
Flow 2 ingress (mean 31.15 Mbit/s) ----   Flow 2 egress (mean 27.10 Mbit/s) ——
Flow 3 ingress (mean 28.88 Mbit/s) ----   Flow 3 egress (mean 24.44 Mbit/s) ——

• Flow 1 (95th percentile 29.82 ms)   • Flow 2 (95th percentile 32.92 ms)   • Flow 3 (95th percentile 33.11 ms)

```
Run 8: Statistics of Verus

Start at: 2018-06-18 18:32:38
End at: 2018-06-18 18:33:09
Local clock offset: -9.986 ms
Remote clock offset: -10.141 ms


# Below is generated by plot.py at 2018-06-18 19:44:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.32 Mbit/s
95th percentile per-packet one-way delay: 32.165 ms
Loss rate: 18.74%
-- Flow 1:
Average throughput: 42.64 Mbit/s
95th percentile per-packet one-way delay: 31.221 ms
Loss rate: 10.36%
-- Flow 2:
Average throughput: 26.23 Mbit/s
95th percentile per-packet one-way delay: 32.263 ms
Loss rate: 30.75%
-- Flow 3:
Average throughput: 33.86 Mbit/s
95th percentile per-packet one-way delay: 32.263 ms
Loss rate: 25.12%
```
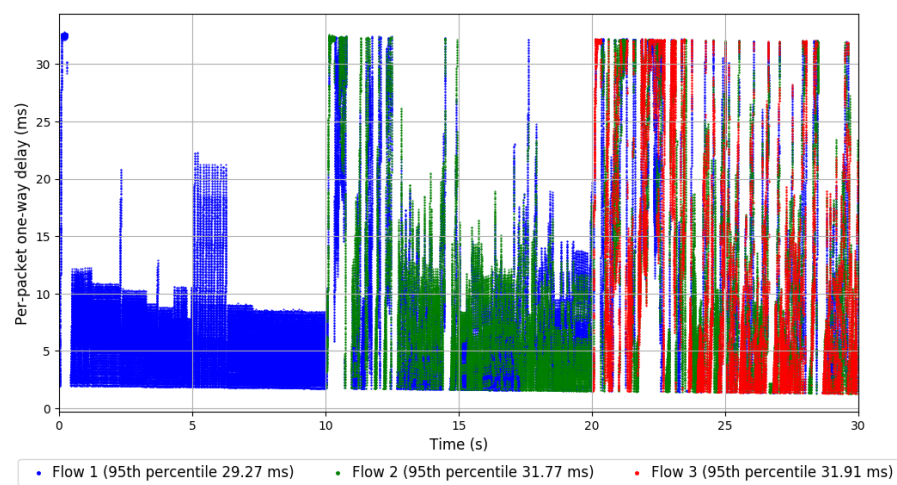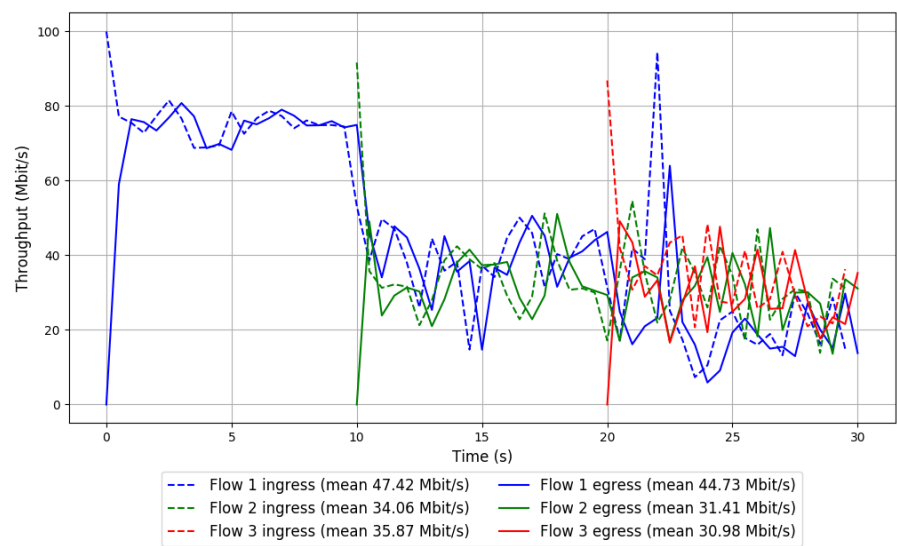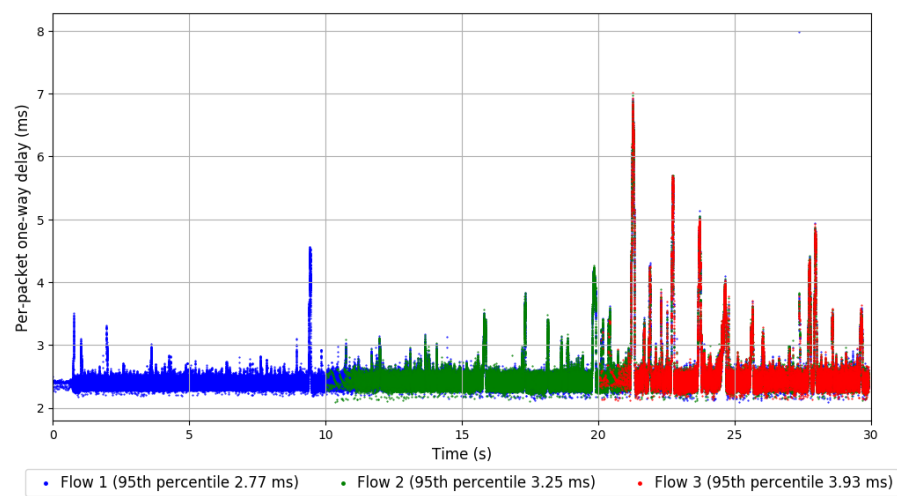
Run 8: Report of Verus — Data Link

Flow 1 ingress (mean 47.60 Mbit/s)   Flow 1 egress (mean 42.64 Mbit/s)
Flow 2 ingress (mean 37.91 Mbit/s)   Flow 2 egress (mean 26.23 Mbit/s)
Flow 3 ingress (mean 45.26 Mbit/s)   Flow 3 egress (mean 33.86 Mbit/s)

Flow 1 (95th percentile 31.22 ms)   Flow 2 (95th percentile 32.26 ms)   Flow 3 (95th percentile 32.26 ms)

279

```
Run 9: Statistics of Verus

Start at: 2018-06-18 18:50:43
End at: 2018-06-18 18:51:13
Local clock offset: -2.222 ms
Remote clock offset: -5.065 ms


# Below is generated by plot.py at 2018-06-18 19:44:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.05 Mbit/s
95th percentile per-packet one-way delay: 31.498 ms
Loss rate: 10.14%
-- Flow 1:
Average throughput: 47.19 Mbit/s
95th percentile per-packet one-way delay: 30.156 ms
Loss rate: 6.06%
-- Flow 2:
Average throughput: 31.08 Mbit/s
95th percentile per-packet one-way delay: 32.387 ms
Loss rate: 18.27%
-- Flow 3:
Average throughput: 28.60 Mbit/s
95th percentile per-packet one-way delay: 32.938 ms
Loss rate: 9.92%
```
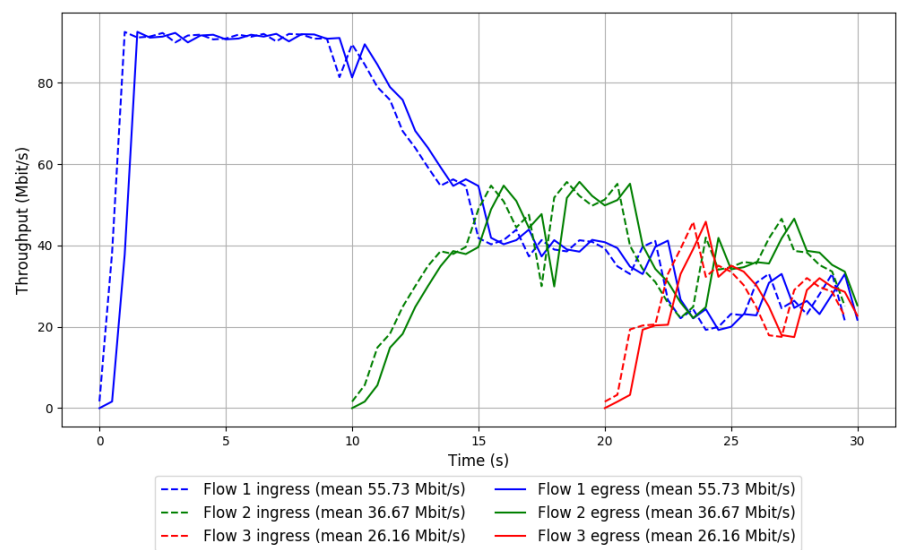
Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2018-06-18 19:08:47
End at: 2018-06-18 19:09:17
Local clock offset: -1.01 ms
Remote clock offset: -0.925 ms


# Below is generated by plot.py at 2018-06-18 19:44:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.89 Mbit/s
95th percentile per-packet one-way delay: 30.944 ms
Loss rate: 7.34%
-- Flow 1:
Average throughput: 44.73 Mbit/s
95th percentile per-packet one-way delay: 29.274 ms
Loss rate: 5.63%
-- Flow 2:
Average throughput: 31.41 Mbit/s
95th percentile per-packet one-way delay: 31.765 ms
Loss rate: 7.70%
-- Flow 3:
Average throughput: 30.98 Mbit/s
95th percentile per-packet one-way delay: 31.907 ms
Loss rate: 13.51%
```
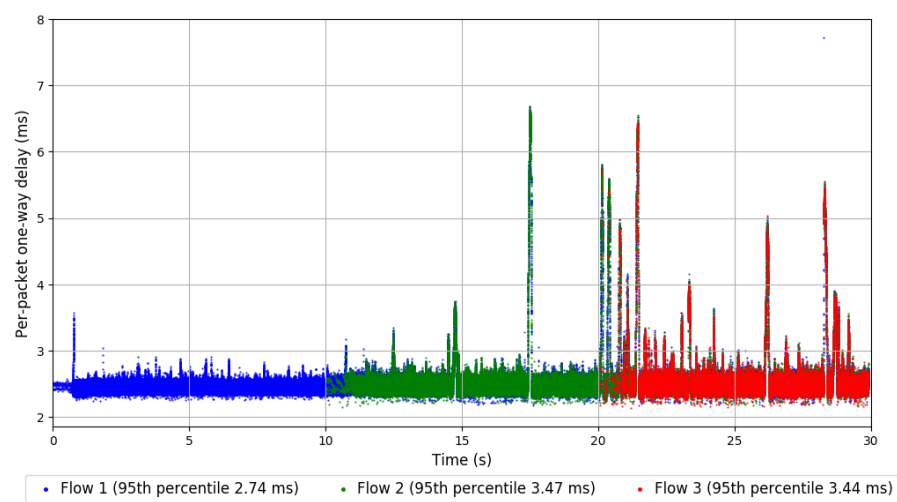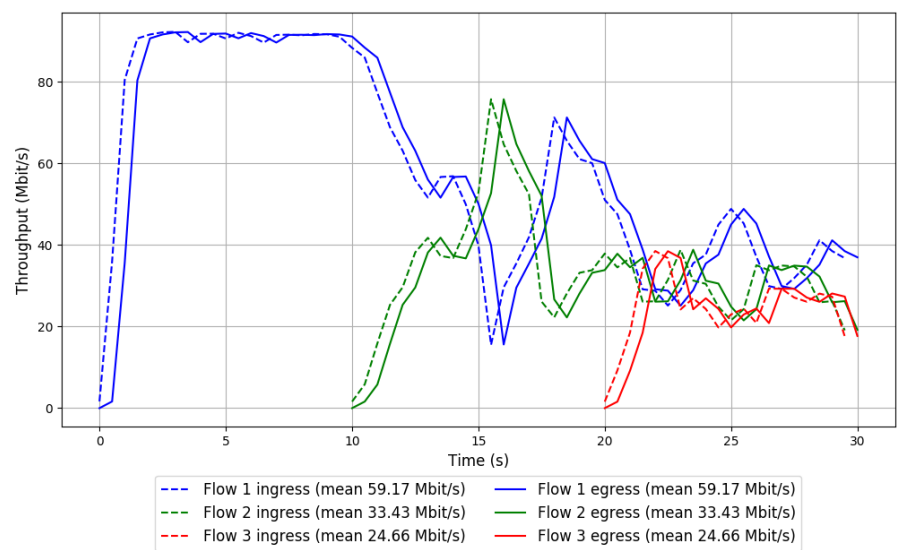
Run 10: Report of Verus — Data Link

283

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-06-18 16:21:38
End at: 2018-06-18 16:22:08
Local clock offset: -1.99 ms
Remote clock offset: -2.064 ms


# Below is generated by plot.py at 2018-06-18 19:45:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.76 Mbit/s
95th percentile per-packet one-way delay: 3.085 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.73 Mbit/s
95th percentile per-packet one-way delay: 2.772 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.67 Mbit/s
95th percentile per-packet one-way delay: 3.255 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.16 Mbit/s
95th percentile per-packet one-way delay: 3.930 ms
Loss rate: 0.00%
```
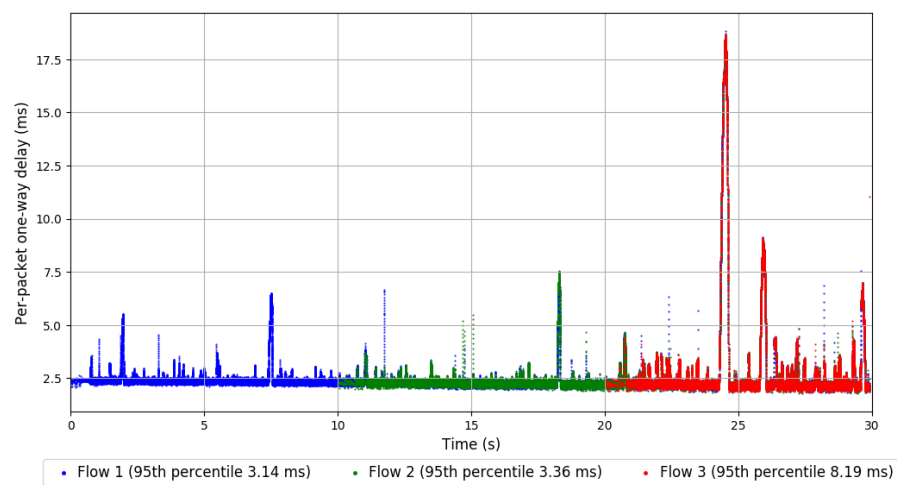
Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-06-18 16:39:43
End at: 2018-06-18 16:40:13
Local clock offset: -1.932 ms
Remote clock offset: -1.531 ms


# Below is generated by plot.py at 2018-06-18 19:45:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.55 Mbit/s
95th percentile per-packet one-way delay: 2.968 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.17 Mbit/s
95th percentile per-packet one-way delay: 2.739 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 33.43 Mbit/s
95th percentile per-packet one-way delay: 3.468 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.66 Mbit/s
95th percentile per-packet one-way delay: 3.445 ms
Loss rate: 0.00%
```
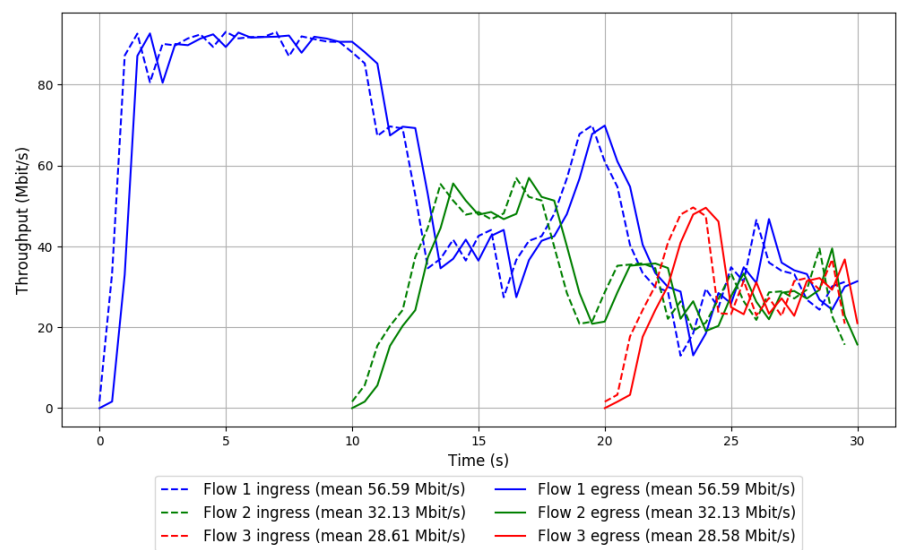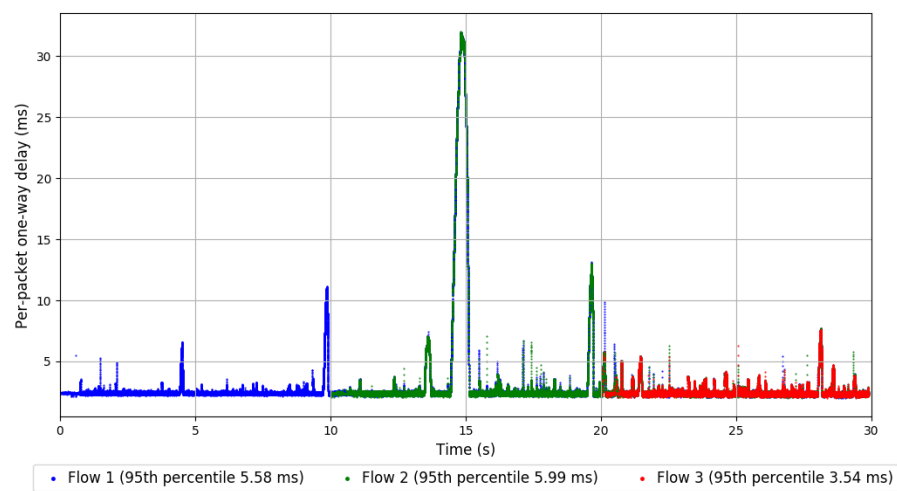
Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2018-06-18 16:57:48
End at: 2018-06-18 16:58:18
Local clock offset: -2.0 ms
Remote clock offset: 7.83 ms


# Below is generated by plot.py at 2018-06-18 19:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.38 Mbit/s
95th percentile per-packet one-way delay: 3.489 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.59 Mbit/s
95th percentile per-packet one-way delay: 3.139 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.13 Mbit/s
95th percentile per-packet one-way delay: 3.362 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.58 Mbit/s
95th percentile per-packet one-way delay: 8.192 ms
Loss rate: 0.00%
```
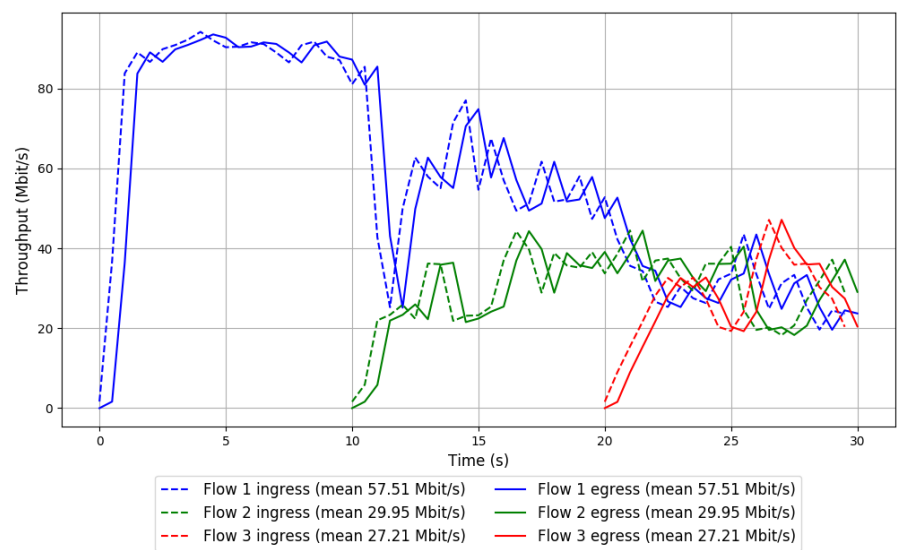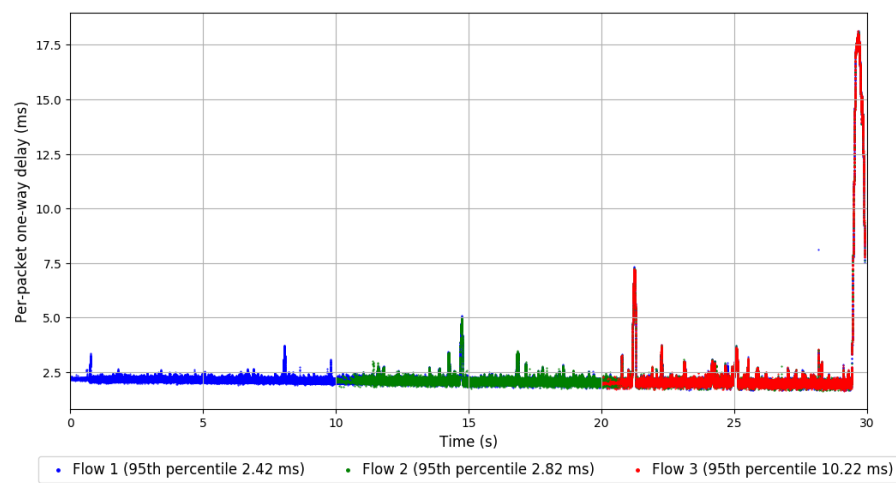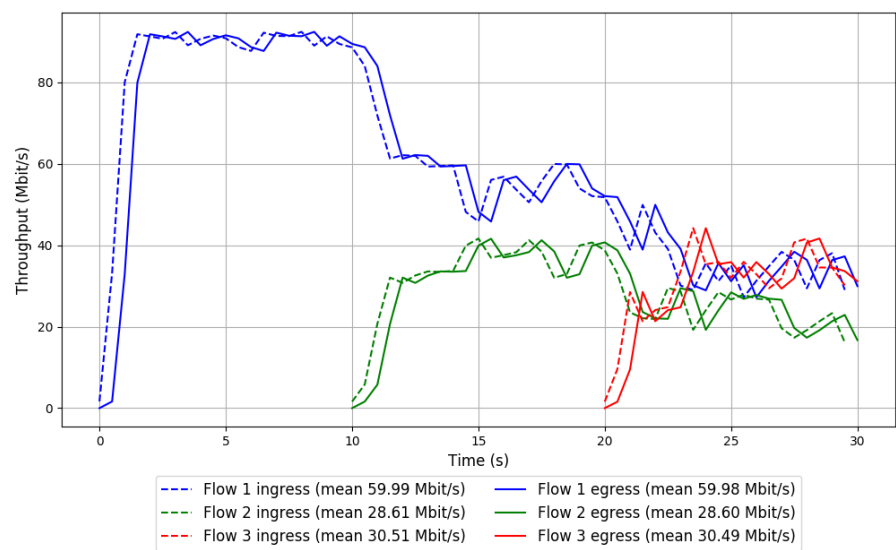
Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2018-06-18 17:15:53
End at: 2018-06-18 17:16:23
Local clock offset: -2.901 ms
Remote clock offset: 14.95 ms


# Below is generated by plot.py at 2018-06-18 19:45:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.41 Mbit/s
95th percentile per-packet one-way delay: 5.211 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.51 Mbit/s
95th percentile per-packet one-way delay: 5.578 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.95 Mbit/s
95th percentile per-packet one-way delay: 5.985 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.21 Mbit/s
95th percentile per-packet one-way delay: 3.543 ms
Loss rate: 0.00%
```
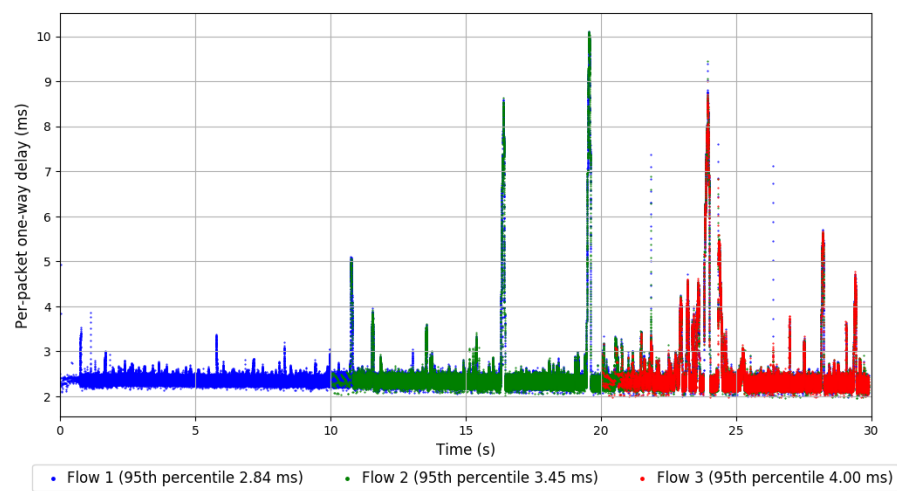
Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2018-06-18 17:33:58
End at: 2018-06-18 17:34:28
Local clock offset: -3.348 ms
Remote clock offset: 18.665 ms


# Below is generated by plot.py at 2018-06-18 19:45:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.08 Mbit/s
95th percentile per-packet one-way delay: 2.618 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.98 Mbit/s
95th percentile per-packet one-way delay: 2.417 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.60 Mbit/s
95th percentile per-packet one-way delay: 2.822 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.49 Mbit/s
95th percentile per-packet one-way delay: 10.216 ms
Loss rate: 0.00%
```
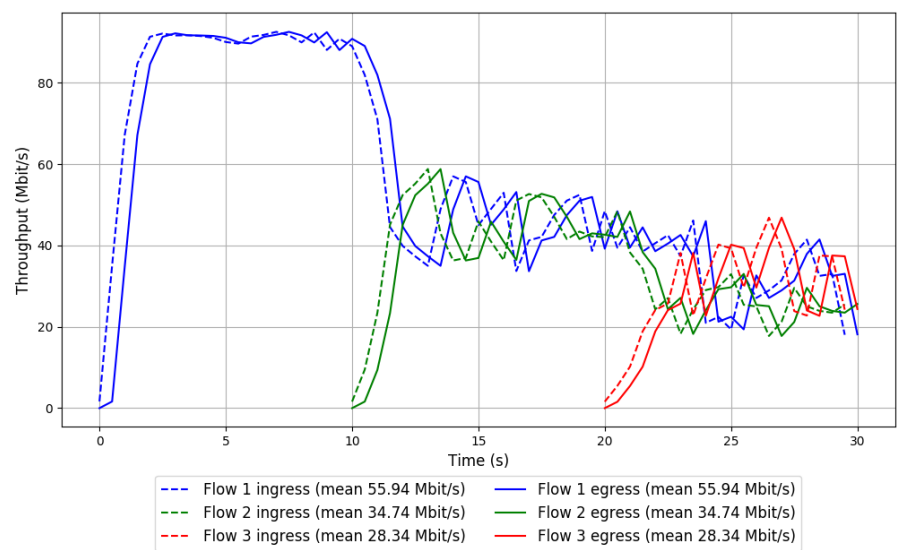
Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 59.99 Mbit/s) --- Flow 1 egress (mean 59.98 Mbit/s)
Flow 2 ingress (mean 28.61 Mbit/s) --- Flow 2 egress (mean 28.60 Mbit/s)
Flow 3 ingress (mean 30.51 Mbit/s) --- Flow 3 egress (mean 30.49 Mbit/s)

Flow 1 (95th percentile 2.42 ms) • Flow 2 (95th percentile 2.82 ms) • Flow 3 (95th percentile 10.22 ms)

```
Run 6: Statistics of PCC-Vivace

Start at: 2018-06-18 17:52:03
End at: 2018-06-18 17:52:33
Local clock offset: -7.184 ms
Remote clock offset: 22.257 ms


# Below is generated by plot.py at 2018-06-18 19:45:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.40 Mbit/s
95th percentile per-packet one-way delay: 3.169 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.94 Mbit/s
95th percentile per-packet one-way delay: 2.842 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.74 Mbit/s
95th percentile per-packet one-way delay: 3.451 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.34 Mbit/s
95th percentile per-packet one-way delay: 4.005 ms
Loss rate: 0.00%
```
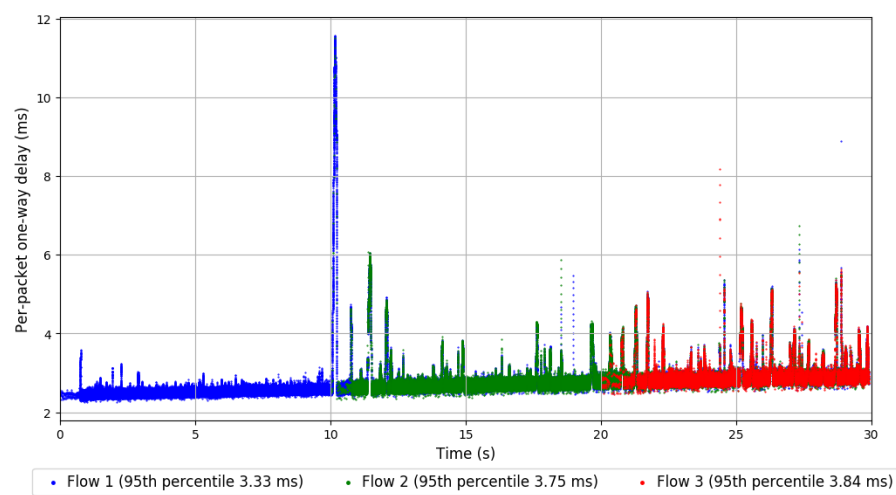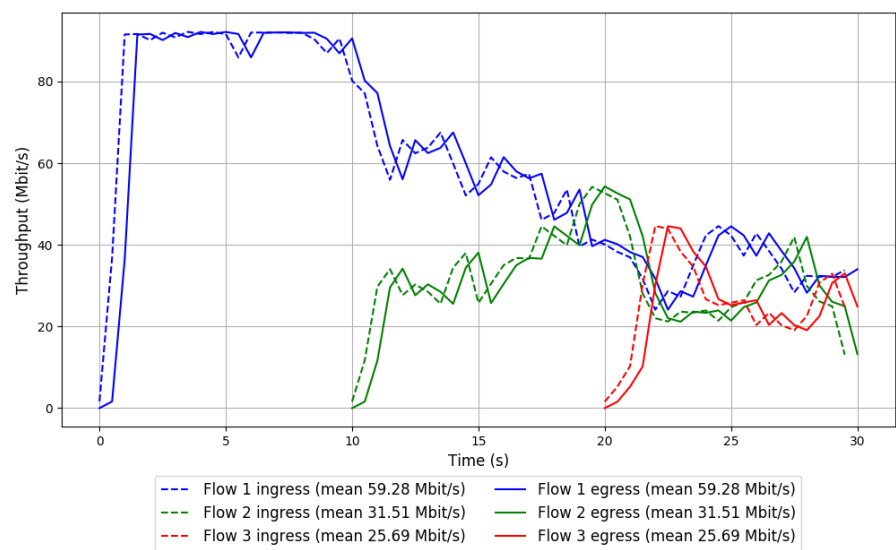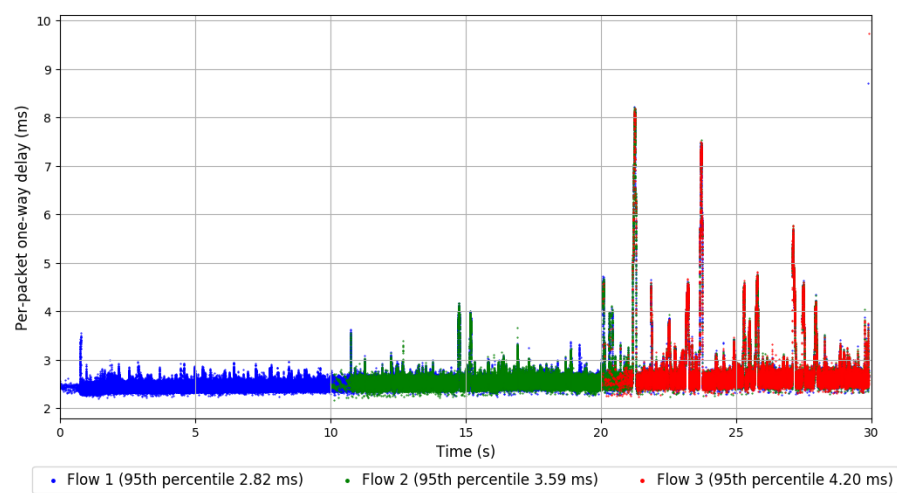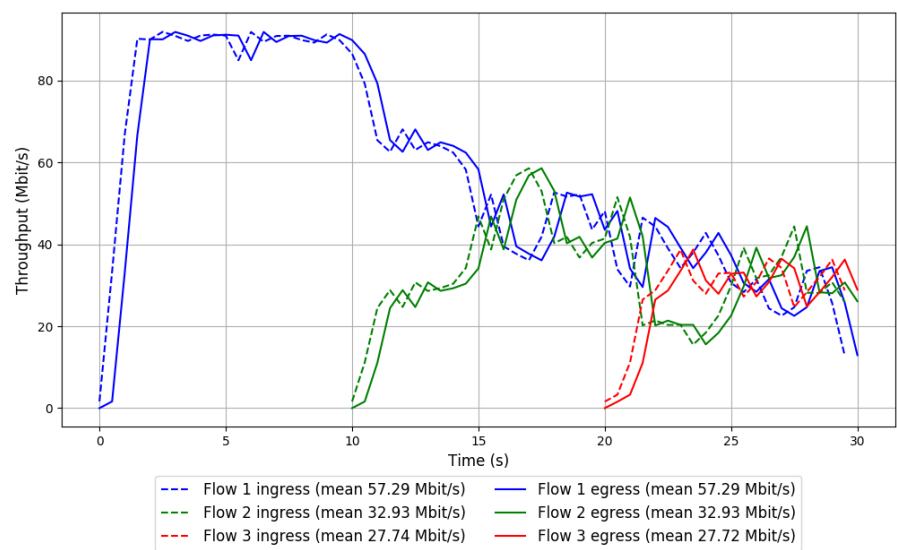
Run 6: Report of PCC-Vivace — Data Link

Throughput (Mbit/s) vs Time (s)

- Flow 1 ingress (mean 55.94 Mbit/s) — Flow 1 egress (mean 55.94 Mbit/s)
- Flow 2 ingress (mean 34.74 Mbit/s) — Flow 2 egress (mean 34.74 Mbit/s)
- Flow 3 ingress (mean 28.34 Mbit/s) — Flow 3 egress (mean 28.34 Mbit/s)

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

- Flow 1 (95th percentile 2.84 ms)
- Flow 2 (95th percentile 3.45 ms)
- Flow 3 (95th percentile 4.00 ms)

```
Run 7: Statistics of PCC-Vivace

Start at: 2018-06-18 18:10:08
End at: 2018-06-18 18:10:38
Local clock offset: -8.66 ms
Remote clock offset: 0.043 ms


# Below is generated by plot.py at 2018-06-18 19:45:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.72 Mbit/s
95th percentile per-packet one-way delay: 3.548 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.28 Mbit/s
95th percentile per-packet one-way delay: 3.332 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.51 Mbit/s
95th percentile per-packet one-way delay: 3.751 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.69 Mbit/s
95th percentile per-packet one-way delay: 3.839 ms
Loss rate: 0.00%
```
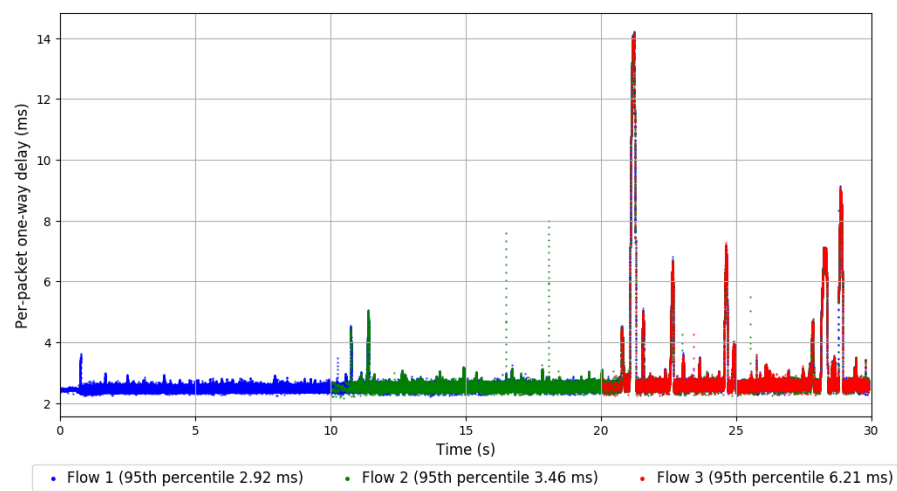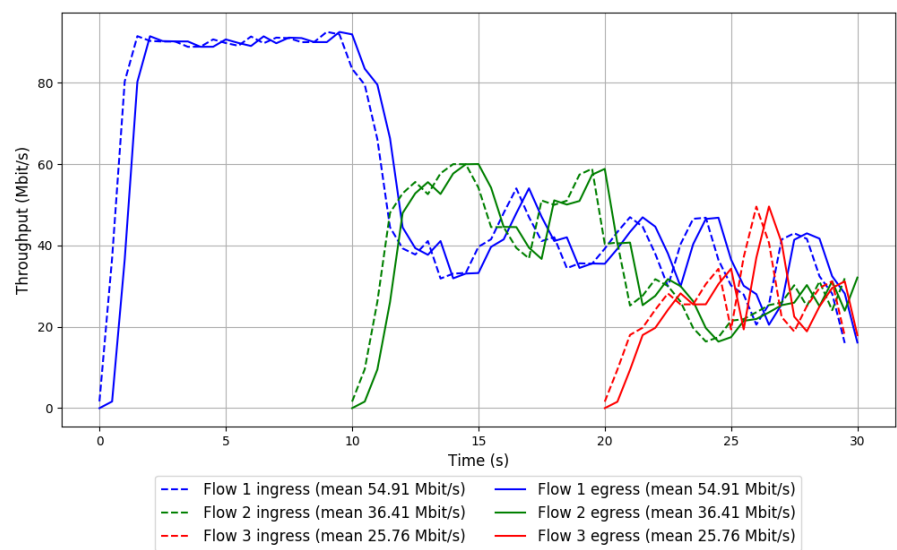
Run 7: Report of PCC-Vivace — Data Link

```
Run 8: Statistics of PCC-Vivace

Start at: 2018-06-18 18:28:12
End at: 2018-06-18 18:28:42
Local clock offset: -9.711 ms
Remote clock offset: -9.743 ms


# Below is generated by plot.py at 2018-06-18 19:45:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.32 Mbit/s
95th percentile per-packet one-way delay: 3.077 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.29 Mbit/s
95th percentile per-packet one-way delay: 2.822 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.93 Mbit/s
95th percentile per-packet one-way delay: 3.590 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.72 Mbit/s
95th percentile per-packet one-way delay: 4.198 ms
Loss rate: 0.00%
```

Run 8: Report of PCC-Vivace — Data Link

```
Run 9: Statistics of PCC-Vivace

Start at: 2018-06-18 18:46:16
End at: 2018-06-18 18:46:46
Local clock offset: -3.261 ms
Remote clock offset: -5.393 ms


# Below is generated by plot.py at 2018-06-18 19:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.63 Mbit/s
95th percentile per-packet one-way delay: 3.313 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.91 Mbit/s
95th percentile per-packet one-way delay: 2.918 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.41 Mbit/s
95th percentile per-packet one-way delay: 3.458 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.76 Mbit/s
95th percentile per-packet one-way delay: 6.212 ms
Loss rate: 0.00%
```
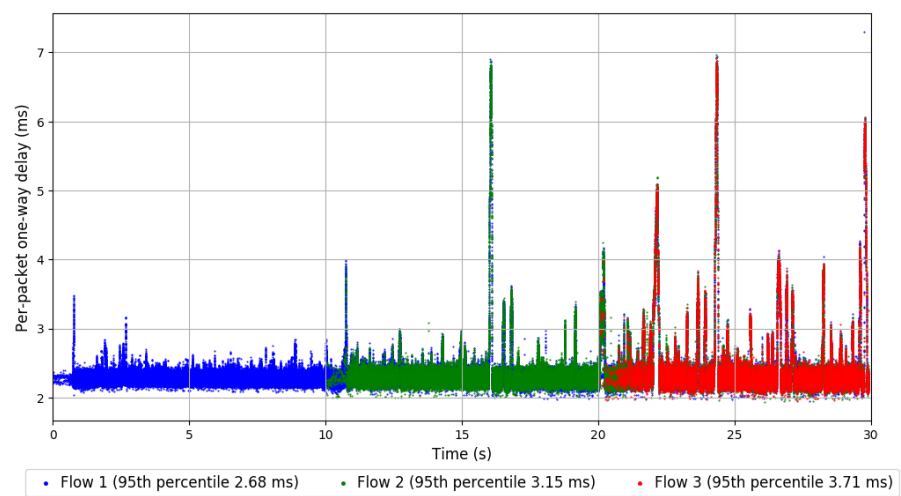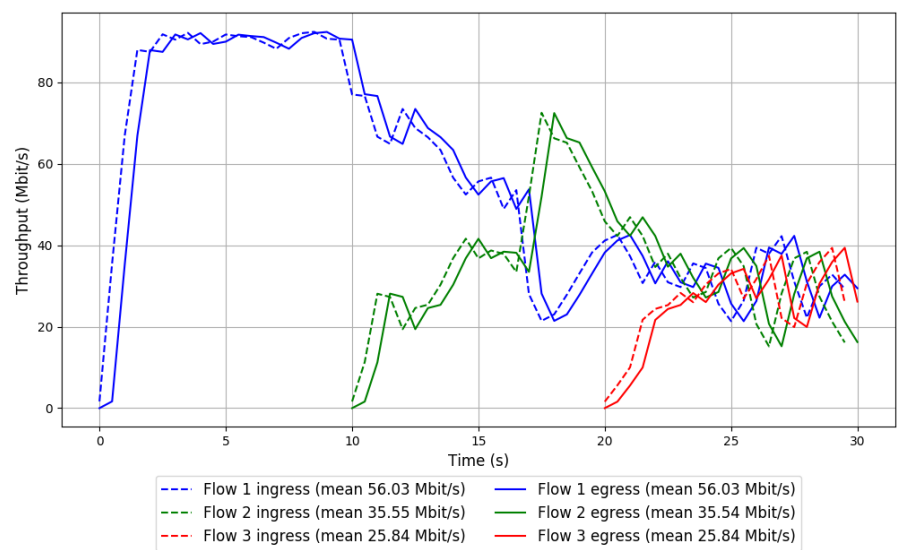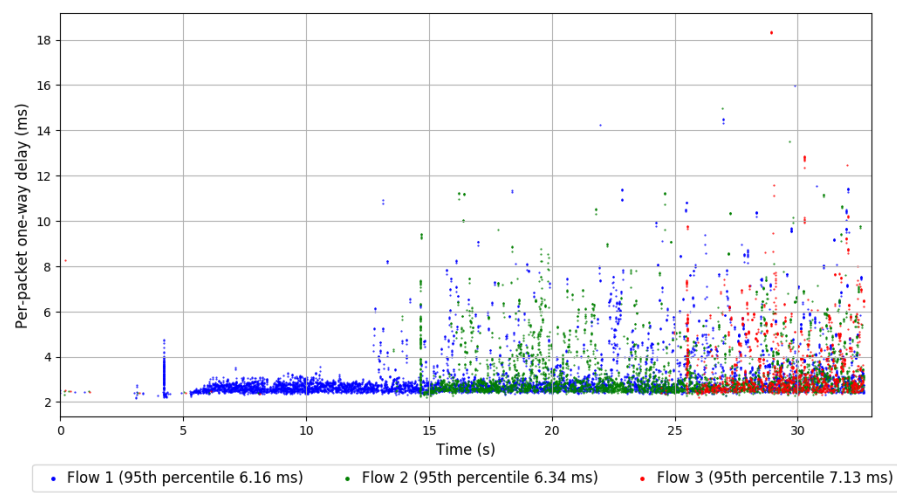
Run 9: Report of PCC-Vivace — Data Link

```
Run 10: Statistics of PCC-Vivace

Start at: 2018-06-18 19:04:20
End at: 2018-06-18 19:04:50
Local clock offset: -0.17 ms
Remote clock offset: -5.56 ms


# Below is generated by plot.py at 2018-06-18 19:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.20 Mbit/s
95th percentile per-packet one-way delay: 2.969 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.03 Mbit/s
95th percentile per-packet one-way delay: 2.678 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.54 Mbit/s
95th percentile per-packet one-way delay: 3.151 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.84 Mbit/s
95th percentile per-packet one-way delay: 3.710 ms
Loss rate: 0.00%
```

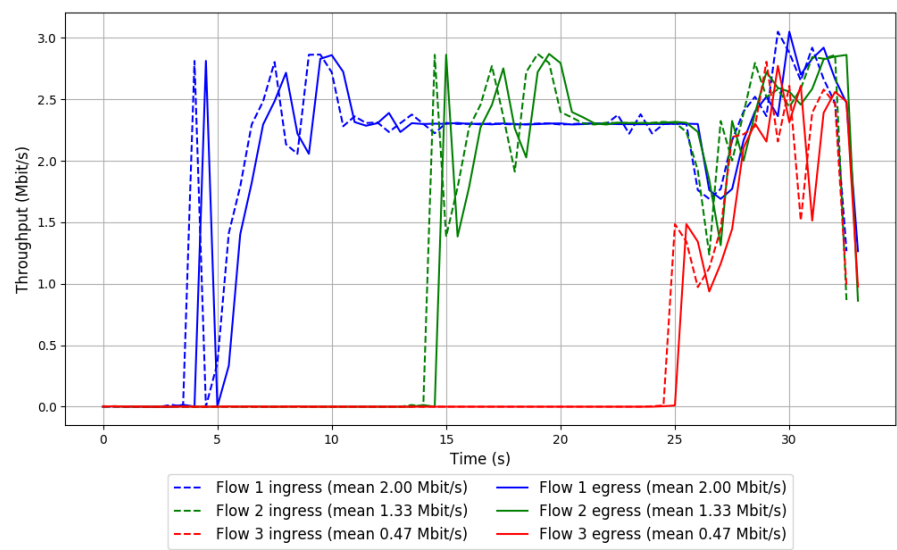Run 10: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-06-18 16:19:24
End at: 2018-06-18 16:19:54
Local clock offset: -2.02 ms
Remote clock offset: -2.112 ms


# Below is generated by plot.py at 2018-06-18 19:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 6.352 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 6.156 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 6.340 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 7.133 ms
Loss rate: 0.00%
```

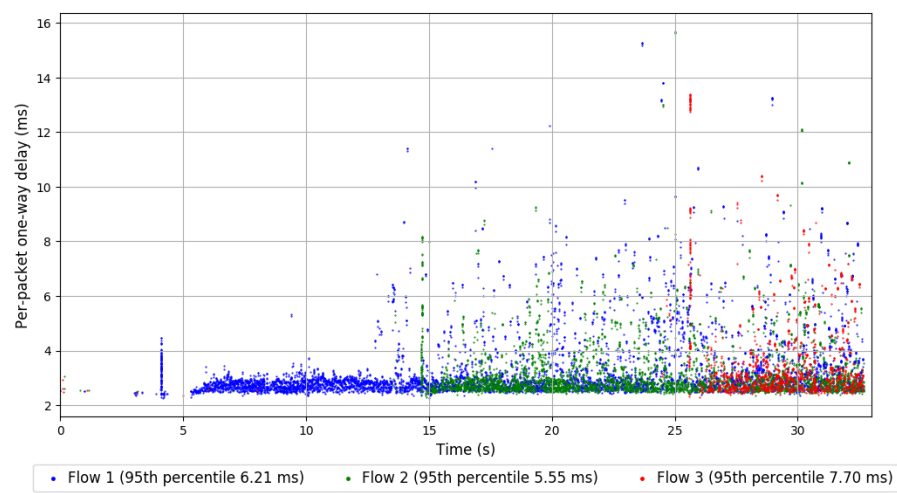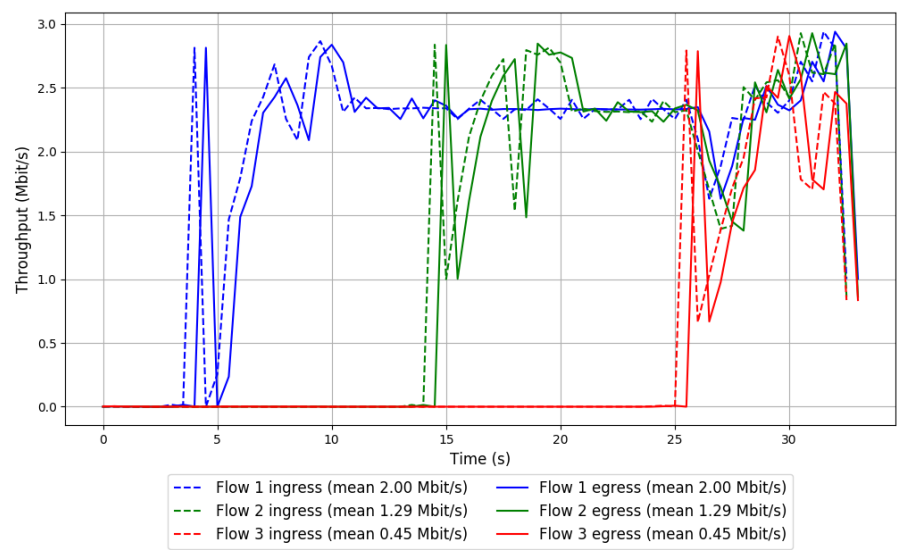Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-06-18 16:37:29
End at: 2018-06-18 16:37:59
Local clock offset: -1.967 ms
Remote clock offset: -1.625 ms


# Below is generated by plot.py at 2018-06-18 19:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 6.222 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 6.214 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 5.552 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 7.701 ms
Loss rate: 0.00%
```
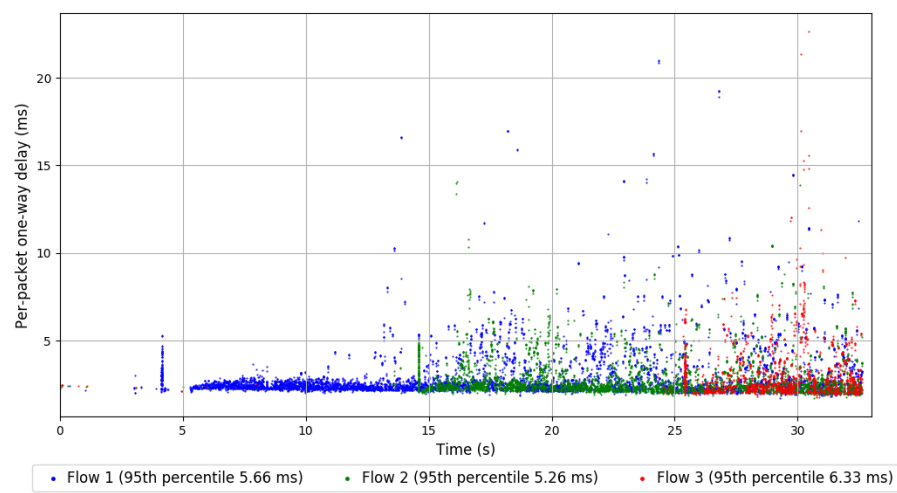
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-06-18 16:55:34
End at: 2018-06-18 16:56:04
Local clock offset: -2.009 ms
Remote clock offset: 6.052 ms


# Below is generated by plot.py at 2018-06-18 19:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.76 Mbit/s
95th percentile per-packet one-way delay: 5.603 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 5.662 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 5.258 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 6.331 ms
Loss rate: 0.00%
```
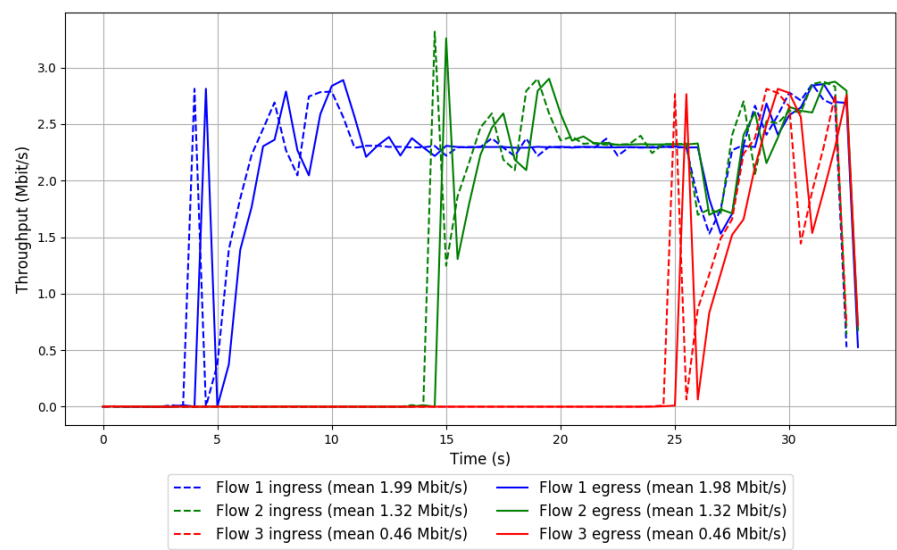
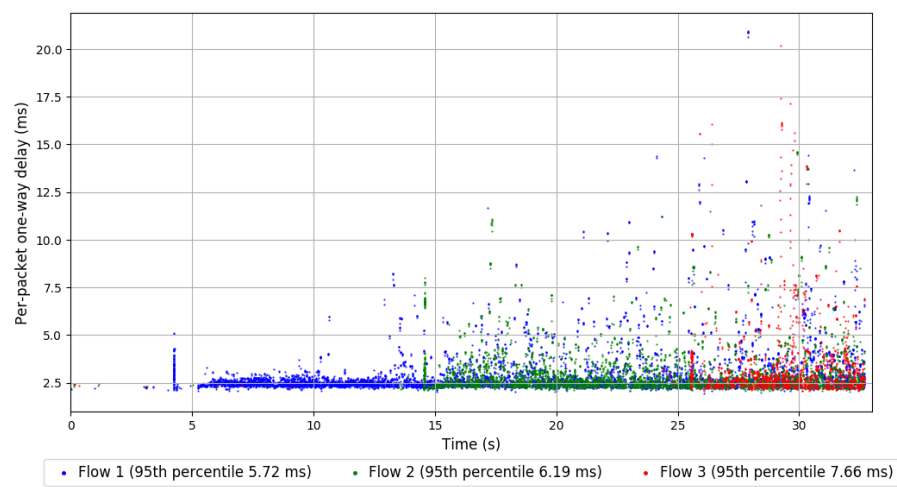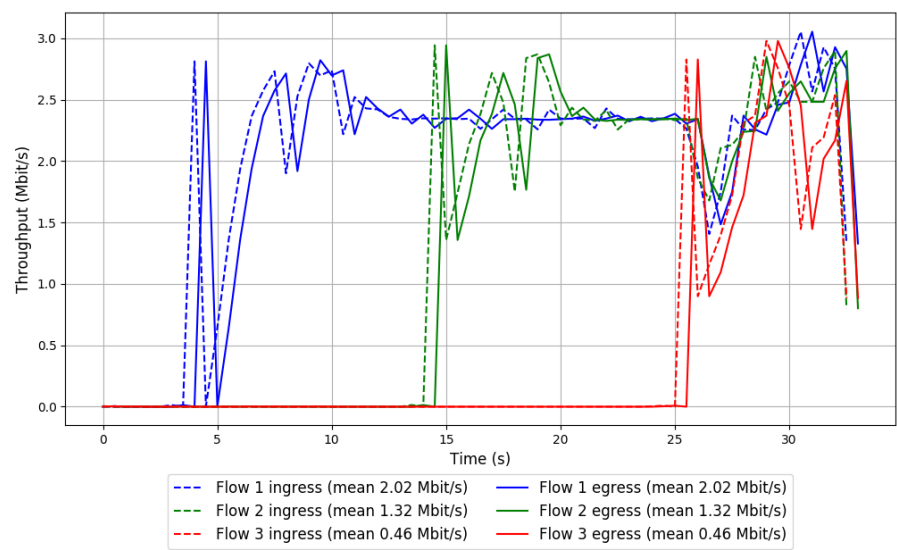Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-06-18 17:13:39
End at: 2018-06-18 17:14:09
Local clock offset: -2.779 ms
Remote clock offset: 14.322 ms


# Below is generated by plot.py at 2018-06-18 19:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.80 Mbit/s
95th percentile per-packet one-way delay: 6.096 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 5.724 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 6.194 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 7.663 ms
Loss rate: 0.00%
```

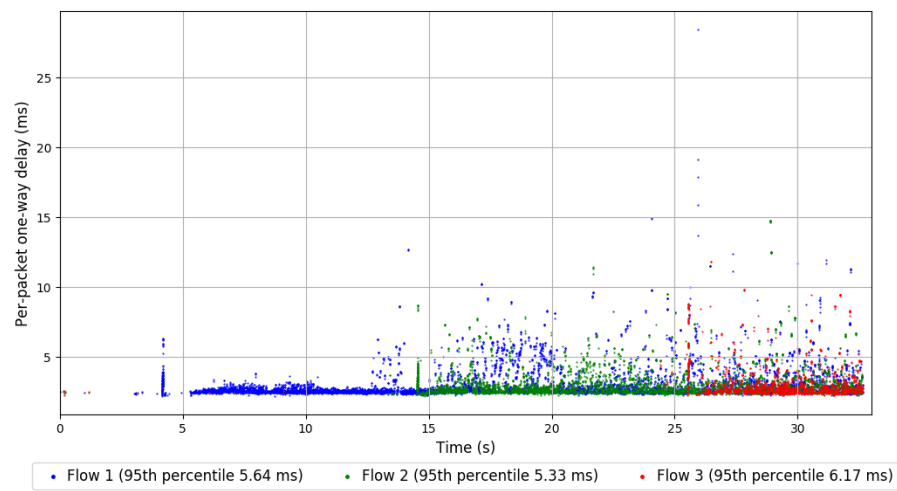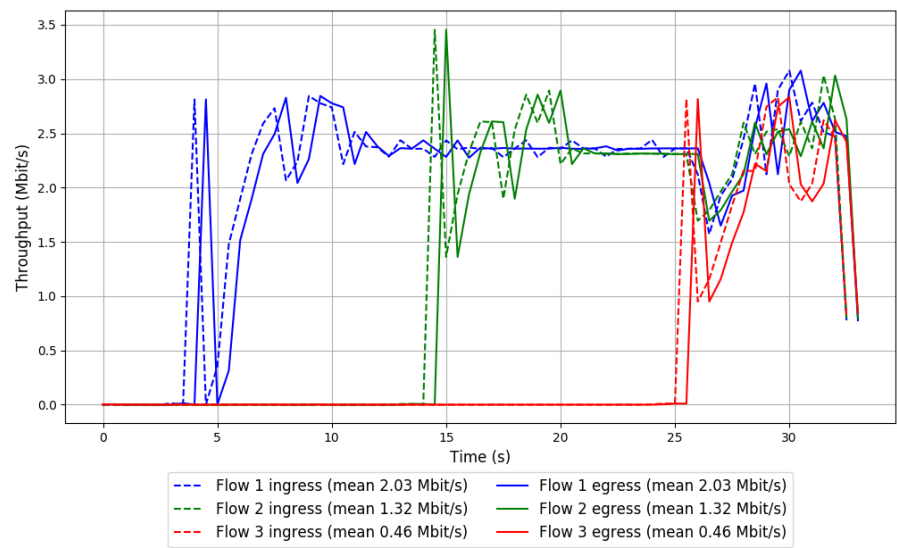Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-06-18 17:31:44
End at: 2018-06-18 17:32:14
Local clock offset: -3.391 ms
Remote clock offset: 18.277 ms


# Below is generated by plot.py at 2018-06-18 19:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.80 Mbit/s
95th percentile per-packet one-way delay: 5.588 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 5.639 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 5.327 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 6.165 ms
Loss rate: 0.00%
```

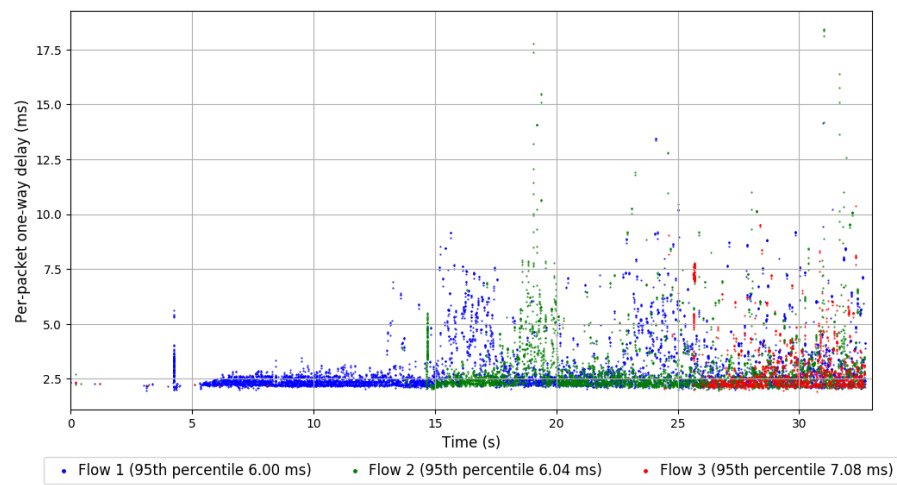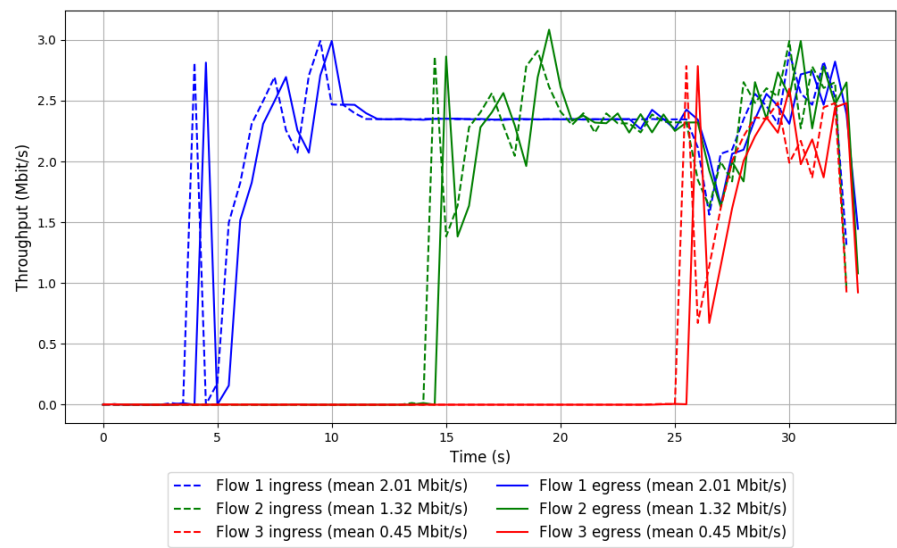Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2018-06-18 17:49:48
End at: 2018-06-18 17:50:18
Local clock offset: -6.929 ms
Remote clock offset: 21.687 ms


# Below is generated by plot.py at 2018-06-18 19:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 6.112 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 6.002 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 6.045 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 7.084 ms
Loss rate: 0.00%
```

Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2018-06-18 18:07:53
End at: 2018-06-18 18:08:23
Local clock offset: -8.471 ms
Remote clock offset: 2.623 ms


# Below is generated by plot.py at 2018-06-18 19:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 6.369 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 6.436 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 6.272 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 6.369 ms
Loss rate: 0.00%
```
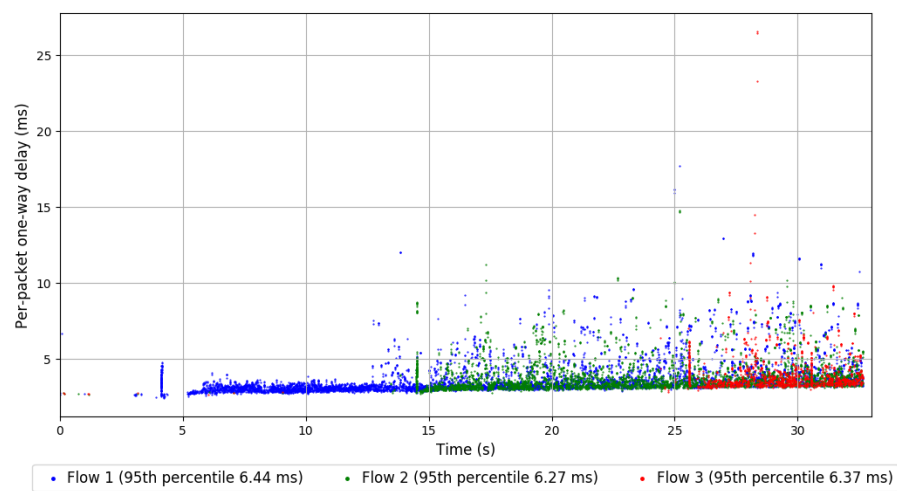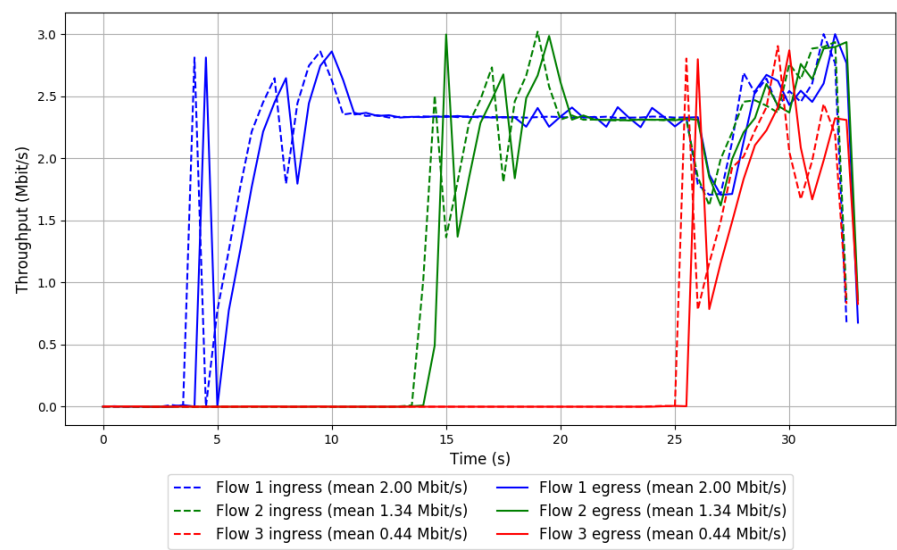
Run 7: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.00 Mbit/s)   Flow 1 egress (mean 2.00 Mbit/s)
Flow 2 ingress (mean 1.34 Mbit/s)   Flow 2 egress (mean 1.34 Mbit/s)
Flow 3 ingress (mean 0.44 Mbit/s)   Flow 3 egress (mean 0.44 Mbit/s)

Flow 1 (95th percentile 6.44 ms)   Flow 2 (95th percentile 6.27 ms)   Flow 3 (95th percentile 6.37 ms)
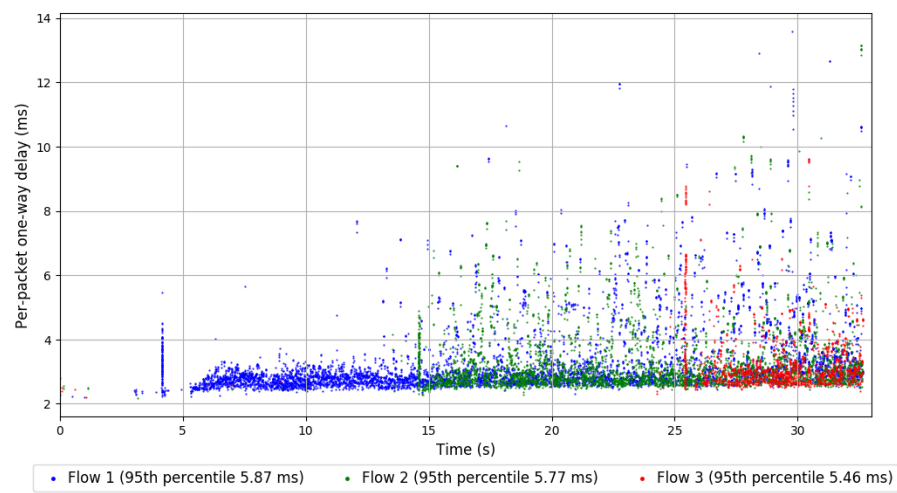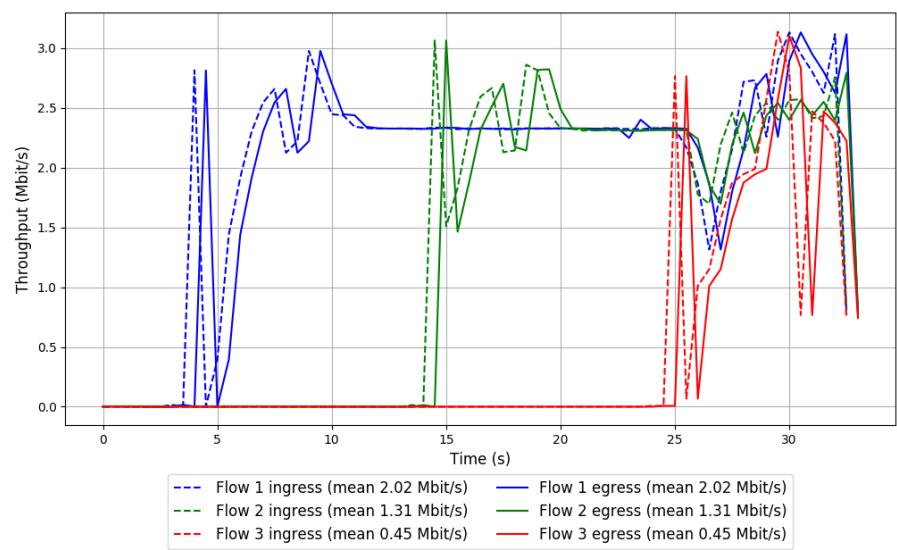
```
Run 8: Statistics of WebRTC media

Start at: 2018-06-18 18:25:57
End at: 2018-06-18 18:26:27
Local clock offset: -9.59 ms
Remote clock offset: -8.944 ms


# Below is generated by plot.py at 2018-06-18 19:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 5.778 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 5.869 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 5.774 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 5.457 ms
Loss rate: 0.00%
```
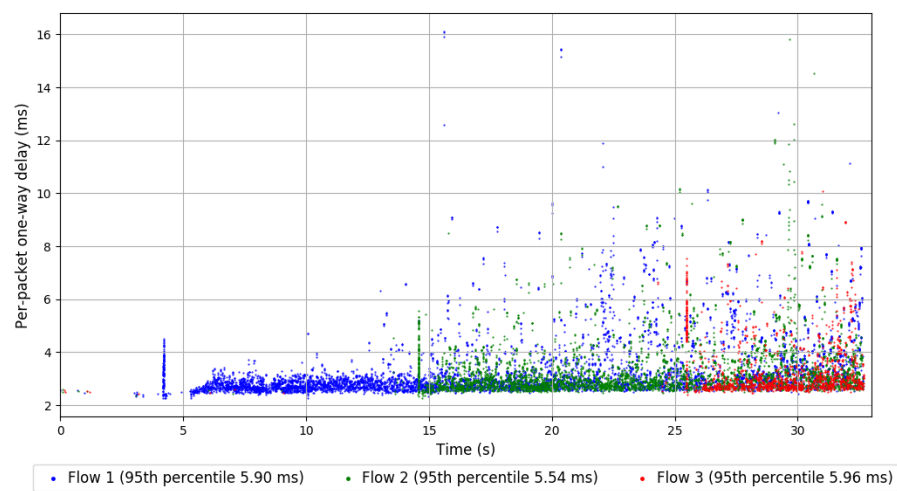
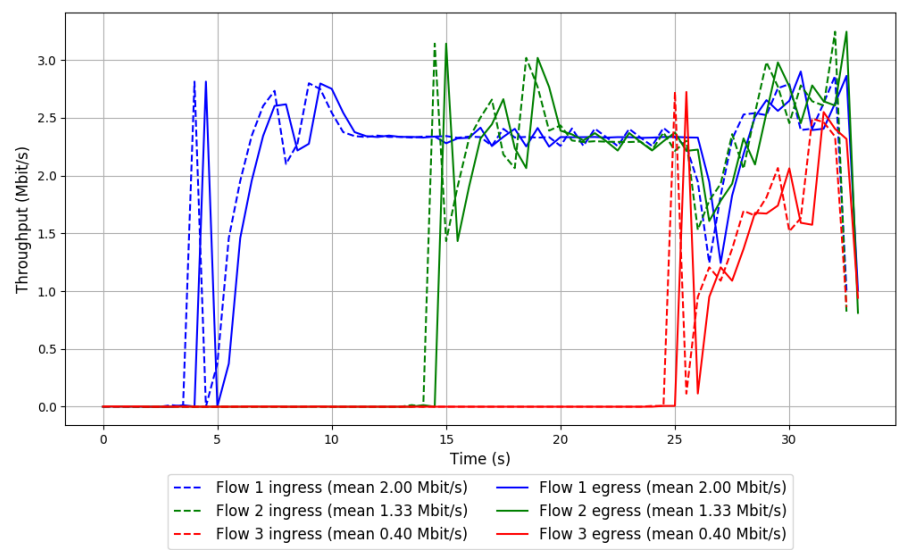Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2018-06-18 18:44:02
End at: 2018-06-18 18:44:32
Local clock offset: -3.986 ms
Remote clock offset: -5.643 ms


# Below is generated by plot.py at 2018-06-18 19:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.72 Mbit/s
95th percentile per-packet one-way delay: 5.786 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 5.902 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 5.540 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 5.961 ms
Loss rate: 0.00%
```

Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2018-06-18 19:02:06
End at: 2018-06-18 19:02:36
Local clock offset: -0.378 ms
Remote clock offset: -5.478 ms


# Below is generated by plot.py at 2018-06-18 19:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 5.904 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 6.085 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 5.479 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 6.277 ms
Loss rate: 0.00%
```

Run 10: Report of WebRTC media — Data Link