Pantheon Report

Generated at 2018-07-12 11:02:11 (UTC).

Data path: GCE London Ethernet (*local*) →GCE Iowa Ethernet (*remote*).

Repeated the test of 17 congestion control schemes 10 times.

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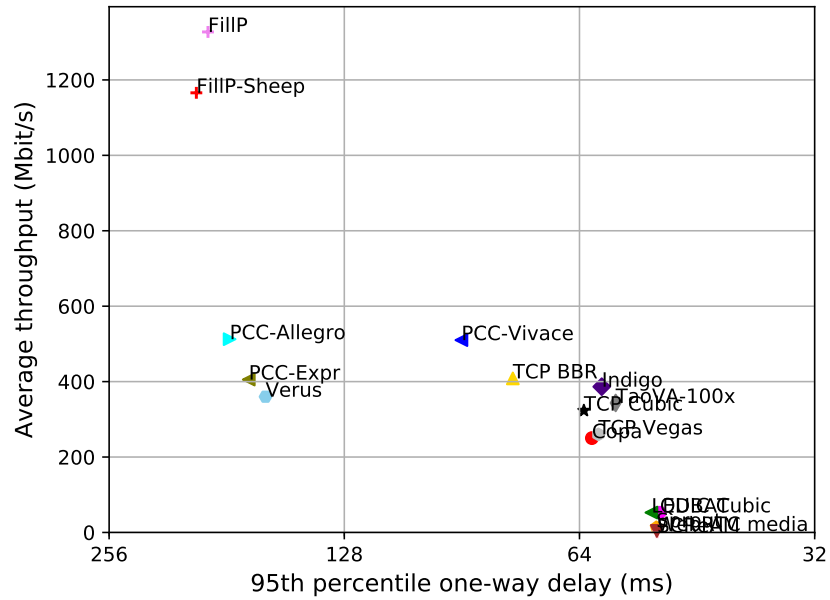
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.
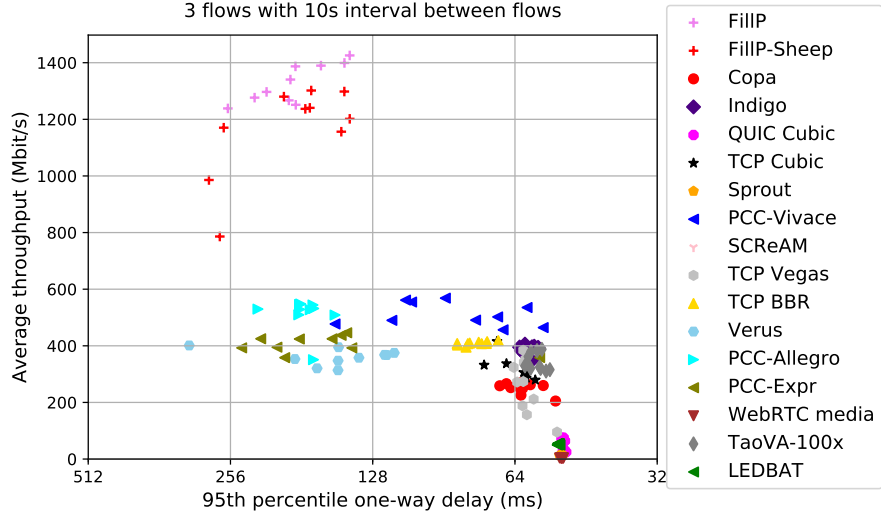
```
Git summary:
branch: master @ 9250dbeec7fb57193cdff1ba8c440b4e16ab30f0
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ 37162fe9af85249aeccac061c93e75640ef710b5
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
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
```

1

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

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

2

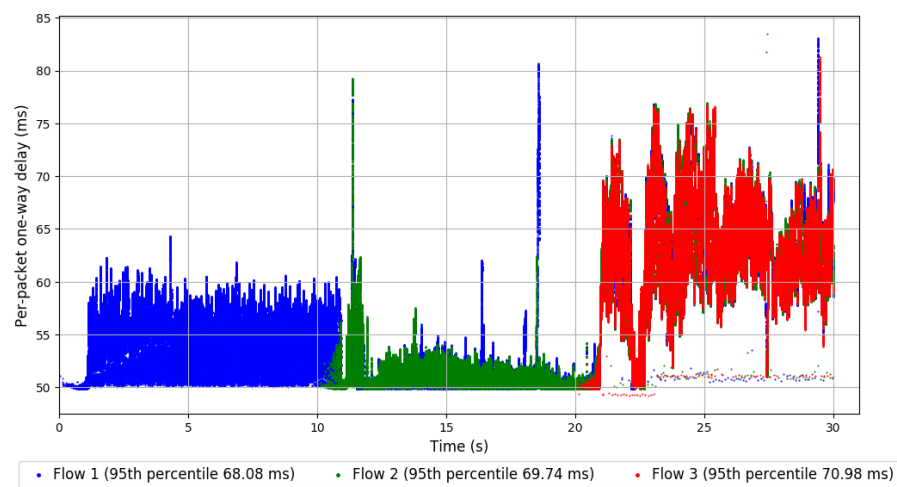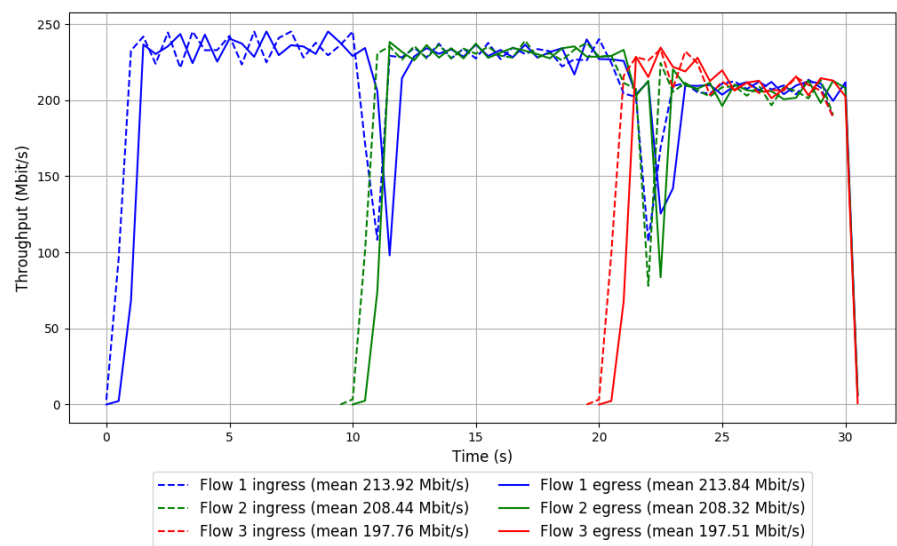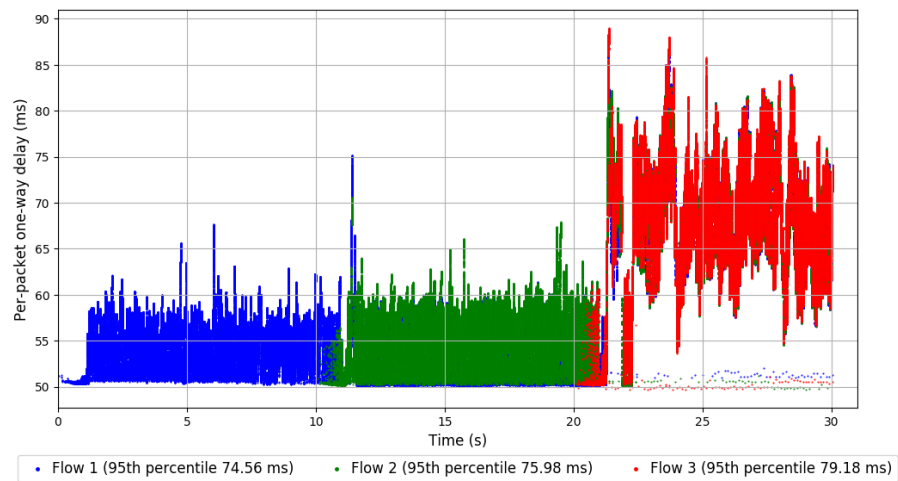| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	210.85	203.72	186.39	75.81	77.90	80.98	0.04	0.09	0.18
Copa	10	139.44	115.78	104.87	62.47	57.76	60.51	0.00	0.00	0.00
TCP Cubic	10	190.32	153.56	91.95	63.14	60.70	61.11	0.04	0.02	0.07
FillP	10	707.55	678.61	506.74	186.31	181.32	167.37	3.61	4.57	3.91
FillP-Sheep	10	582.75	608.85	537.10	204.84	178.70	137.86	5.13	3.77	3.08
Indigo	10	204.97	196.21	158.77	58.93	60.17	61.86	0.01	0.01	0.09
LEDBAT	10	34.66	22.04	10.42	51.91	51.64	51.25	0.00	0.00	0.00
PCC-Allegro	10	434.49	100.43	34.15	180.02	169.34	141.78	1.09	0.94	0.85
PCC-Expr	10	248.68	200.27	71.31	180.37	150.63	104.31	2.04	0.99	1.28
QUIC Cubic	10	26.60	30.95	18.82	50.44	50.48	50.35	0.00	0.00	0.00
SCReAM	10	0.22	0.22	0.22	50.91	50.68	50.30	0.00	0.00	0.00
Sprout	10	6.92	6.85	6.55	51.04	50.99	51.03	0.00	0.00	0.00
TaoVA-100x	10	203.88	145.98	128.63	56.29	56.05	60.77	0.00	0.07	0.03
TCP Vegas	10	161.75	111.39	72.45	59.16	58.01	57.18	0.01	0.02	0.09
Verus	10	205.91	174.36	117.14	135.12	173.68	152.51	1.23	3.39	0.99
PCC-Vivace	10	297.65	265.09	109.31	88.73	94.98	53.69	0.04	0.01	0.00
WebRTC media	10	2.13	1.36	0.55	50.92	50.92	50.77	0.01	0.00	0.01

```
Run 1: Statistics of TCP BBR

Start at: 2018-07-12 03:48:51
End at: 2018-07-12 03:49:21
Local clock offset: -0.442 ms
Remote clock offset: -0.017 ms


# Below is generated by plot.py at 2018-07-12 08:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 418.39 Mbit/s
95th percentile per-packet one-way delay: 69.420 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 213.84 Mbit/s
95th percentile per-packet one-way delay: 68.079 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 208.32 Mbit/s
95th percentile per-packet one-way delay: 69.736 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 197.51 Mbit/s
95th percentile per-packet one-way delay: 70.984 ms
Loss rate: 0.11%
```

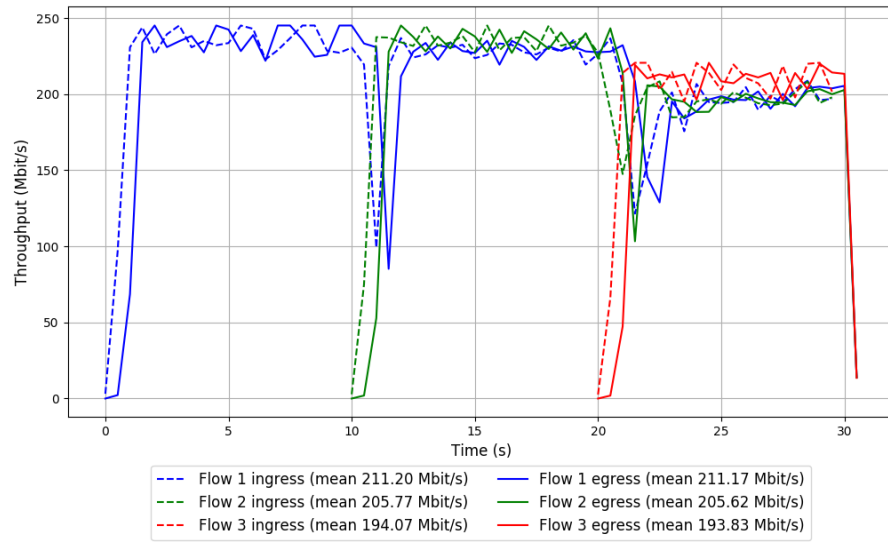Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2018-07-12 04:14:06
End at: 2018-07-12 04:14:36
Local clock offset: -0.09 ms
Remote clock offset: -0.011 ms


# Below is generated by plot.py at 2018-07-12 08:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 412.52 Mbit/s
95th percentile per-packet one-way delay: 76.380 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 211.17 Mbit/s
95th percentile per-packet one-way delay: 74.561 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 205.62 Mbit/s
95th percentile per-packet one-way delay: 75.981 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 193.83 Mbit/s
95th percentile per-packet one-way delay: 79.184 ms
Loss rate: 0.14%
```
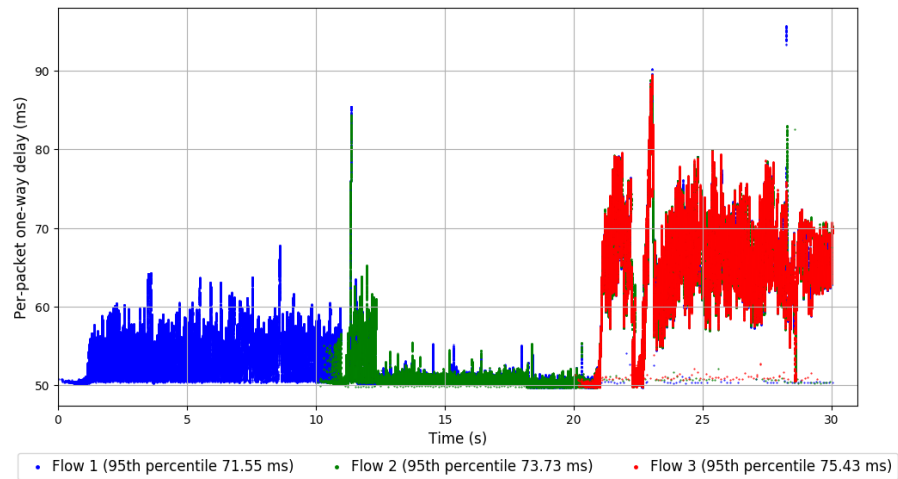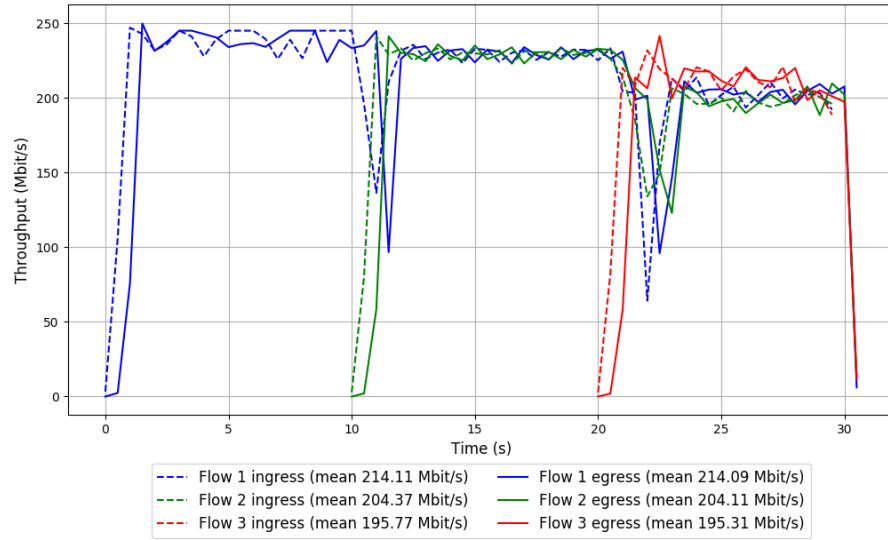
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2018-07-12 04:39:16
End at: 2018-07-12 04:39:46
Local clock offset: -0.112 ms
Remote clock offset: 0.01 ms


# Below is generated by plot.py at 2018-07-12 08:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 414.82 Mbit/s
95th percentile per-packet one-way delay: 73.291 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 214.09 Mbit/s
95th percentile per-packet one-way delay: 71.550 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 204.11 Mbit/s
95th percentile per-packet one-way delay: 73.734 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 195.31 Mbit/s
95th percentile per-packet one-way delay: 75.430 ms
Loss rate: 0.18%
```
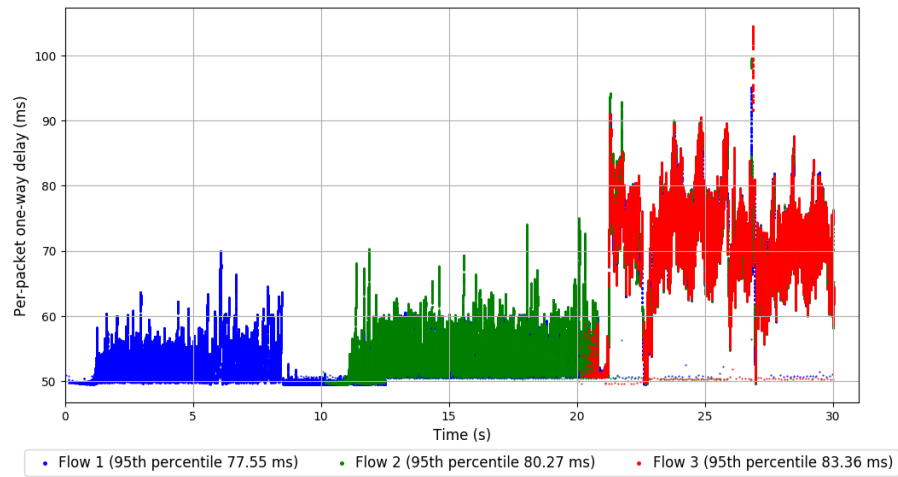
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2018-07-12 05:04:41
End at: 2018-07-12 05:05:11
Local clock offset: -0.126 ms
Remote clock offset: 0.013 ms


# Below is generated by plot.py at 2018-07-12 08:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 409.70 Mbit/s
95th percentile per-packet one-way delay: 79.806 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 210.80 Mbit/s
95th percentile per-packet one-way delay: 77.545 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 204.32 Mbit/s
95th percentile per-packet one-way delay: 80.265 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 189.04 Mbit/s
95th percentile per-packet one-way delay: 83.359 ms
Loss rate: 0.27%
```
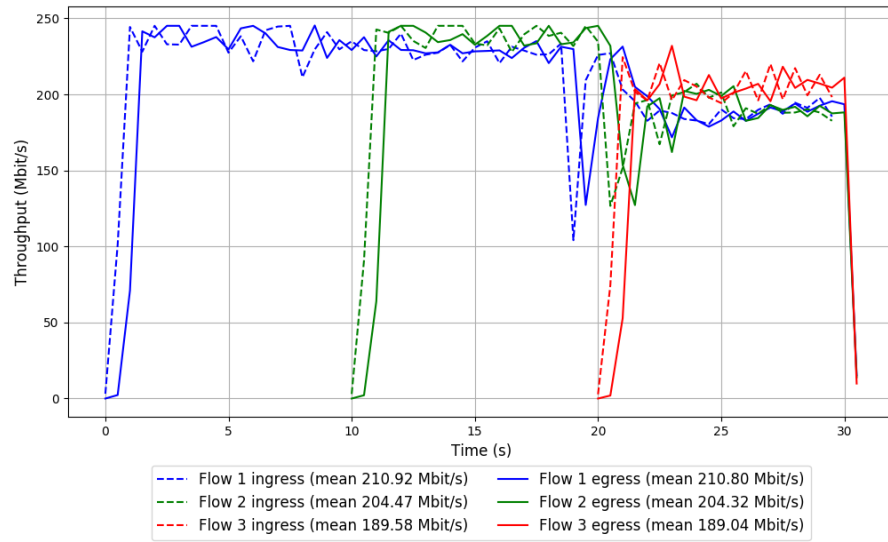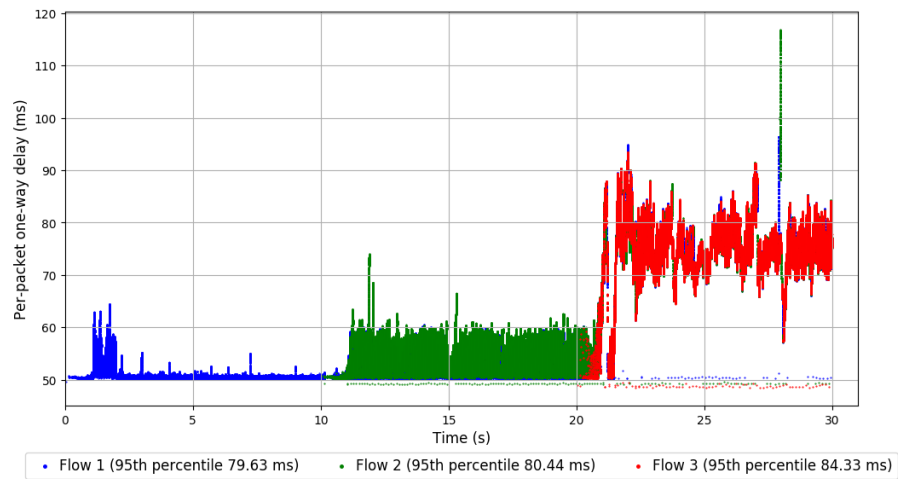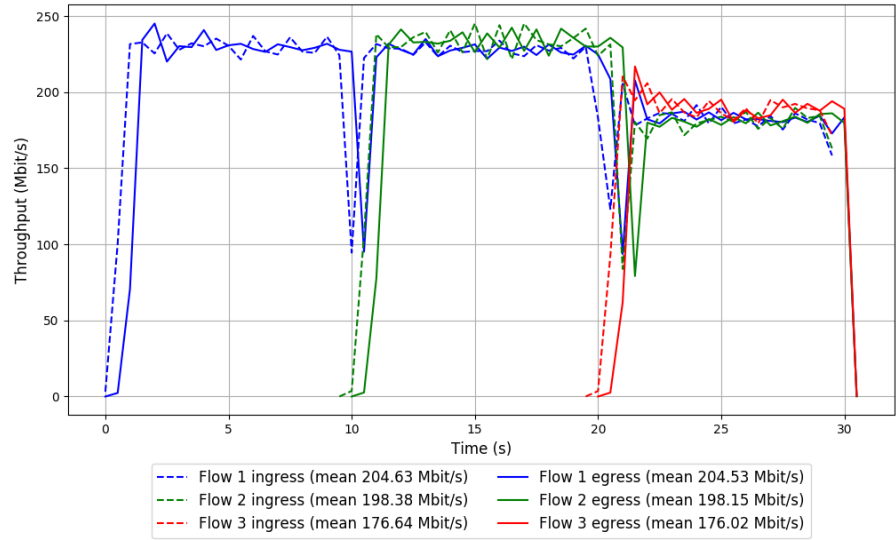
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 210.92 Mbit/s) — Flow 1 egress (mean 210.80 Mbit/s)
Flow 2 ingress (mean 204.47 Mbit/s) — Flow 2 egress (mean 204.32 Mbit/s)
Flow 3 ingress (mean 189.58 Mbit/s) — Flow 3 egress (mean 189.04 Mbit/s)

Flow 1 (95th percentile 77.55 ms) • Flow 2 (95th percentile 80.27 ms) • Flow 3 (95th percentile 83.36 ms)

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```
Run 5: Statistics of TCP BBR

Start at: 2018-07-12 05:30:04
End at: 2018-07-12 05:30:34
Local clock offset: 0.296 ms
Remote clock offset: 0.016 ms


# Below is generated by plot.py at 2018-07-12 08:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.24 Mbit/s
95th percentile per-packet one-way delay: 81.210 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 204.53 Mbit/s
95th percentile per-packet one-way delay: 79.628 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 198.15 Mbit/s
95th percentile per-packet one-way delay: 80.440 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 176.02 Mbit/s
95th percentile per-packet one-way delay: 84.335 ms
Loss rate: 0.19%
```
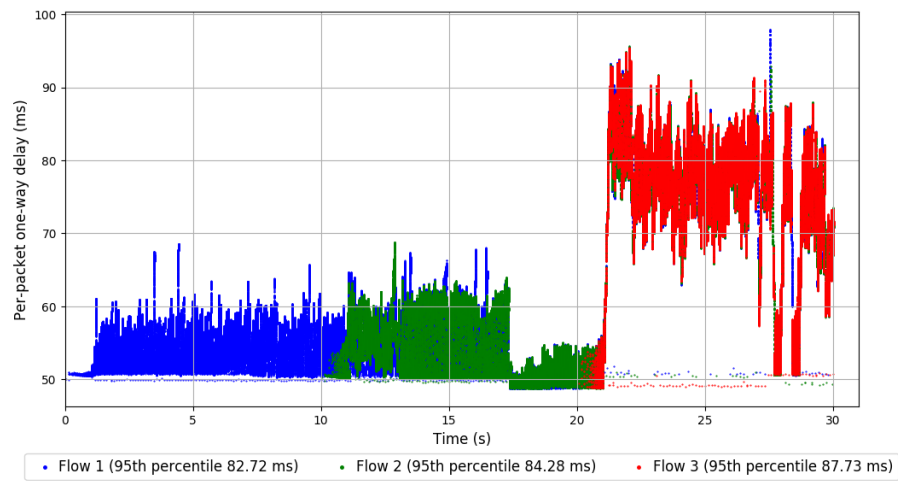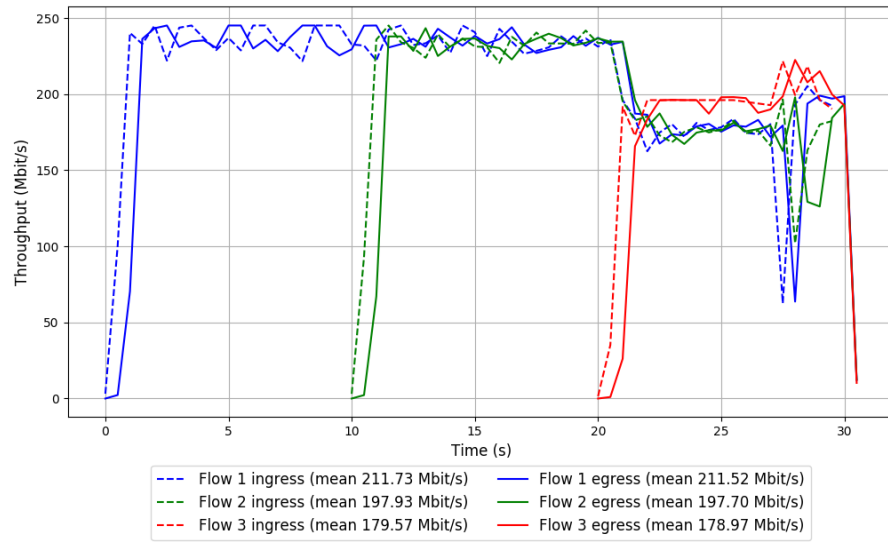
Run 5: Report of TCP BBR — Data Link

```
Run 6: Statistics of TCP BBR

Start at: 2018-07-12 05:55:17
End at: 2018-07-12 05:55:47
Local clock offset: -0.1 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2018-07-12 08:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.67 Mbit/s
95th percentile per-packet one-way delay: 84.654 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 211.52 Mbit/s
95th percentile per-packet one-way delay: 82.719 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 197.70 Mbit/s
95th percentile per-packet one-way delay: 84.279 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 178.97 Mbit/s
95th percentile per-packet one-way delay: 87.734 ms
Loss rate: 0.33%
```
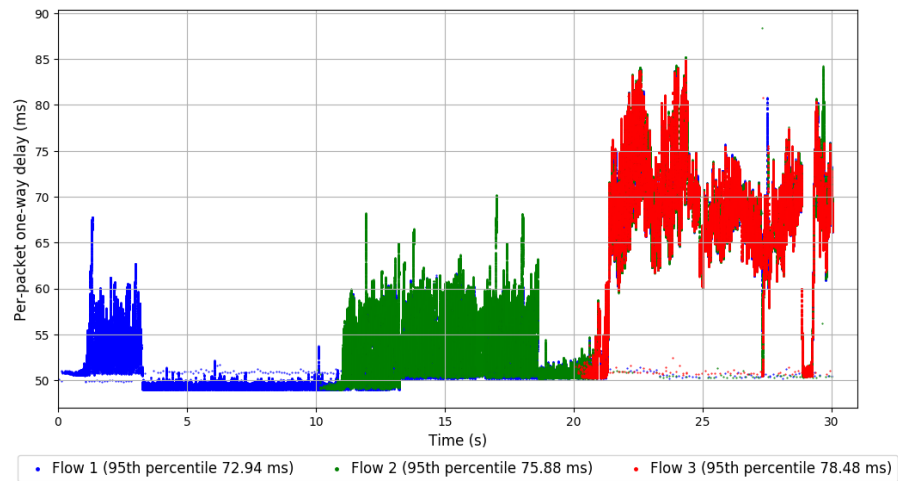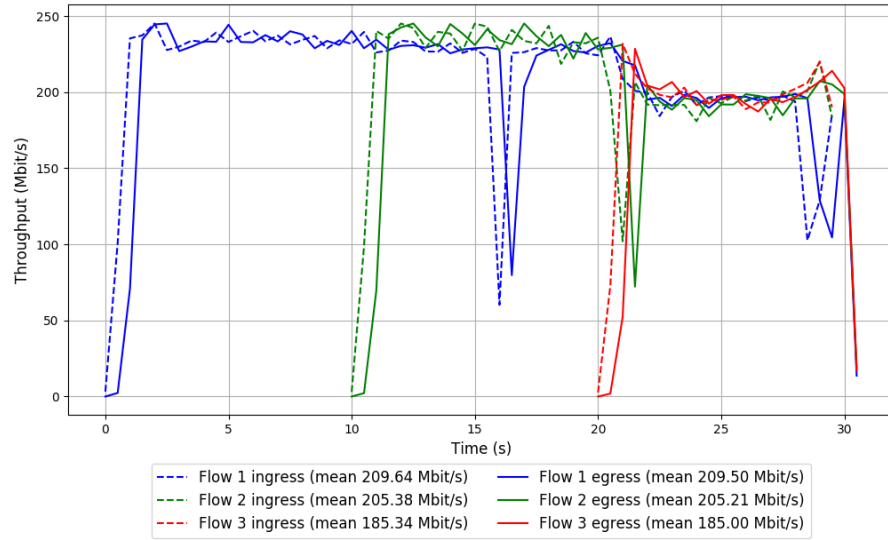
Run 6: Report of TCP BBR — Data Link

Flow 1 ingress (mean 211.73 Mbit/s) Flow 1 egress (mean 211.52 Mbit/s)
Flow 2 ingress (mean 197.93 Mbit/s) Flow 2 egress (mean 197.70 Mbit/s)
Flow 3 ingress (mean 179.57 Mbit/s) Flow 3 egress (mean 178.97 Mbit/s)

Flow 1 (95th percentile 82.72 ms)   Flow 2 (95th percentile 84.28 ms)   Flow 3 (95th percentile 87.73 ms)

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```
Run 7: Statistics of TCP BBR

Start at: 2018-07-12 06:20:01
End at: 2018-07-12 06:20:31
Local clock offset: -0.123 ms
Remote clock offset: 0.008 ms


# Below is generated by plot.py at 2018-07-12 08:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 407.69 Mbit/s
95th percentile per-packet one-way delay: 75.275 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 209.50 Mbit/s
95th percentile per-packet one-way delay: 72.939 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 205.21 Mbit/s
95th percentile per-packet one-way delay: 75.880 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 185.00 Mbit/s
95th percentile per-packet one-way delay: 78.476 ms
Loss rate: 0.03%
```

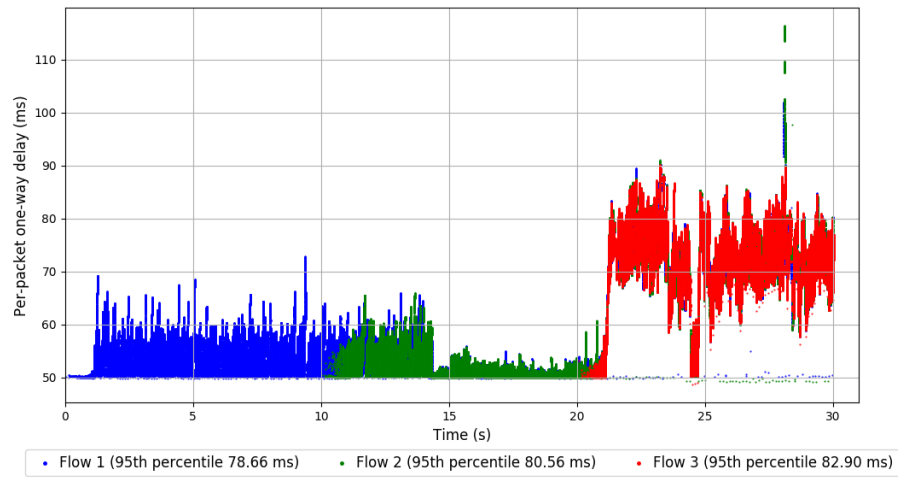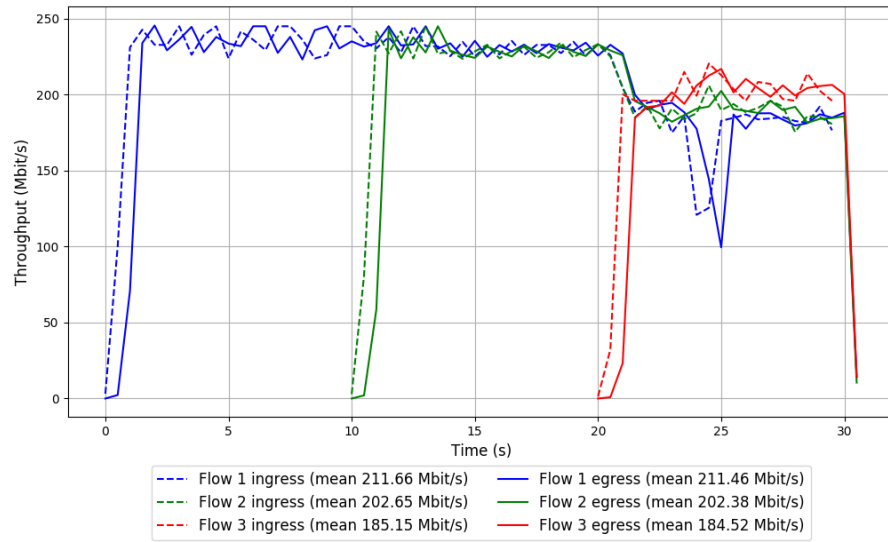Run 7: Report of TCP BBR — Data Link

```
Run 8: Statistics of TCP BBR

Start at: 2018-07-12 06:45:00
End at: 2018-07-12 06:45:30
Local clock offset: 0.281 ms
Remote clock offset: -0.025 ms


# Below is generated by plot.py at 2018-07-12 08:26:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 407.58 Mbit/s
95th percentile per-packet one-way delay: 80.523 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 211.46 Mbit/s
95th percentile per-packet one-way delay: 78.659 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 202.38 Mbit/s
95th percentile per-packet one-way delay: 80.555 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 184.52 Mbit/s
95th percentile per-packet one-way delay: 82.900 ms
Loss rate: 0.28%
```
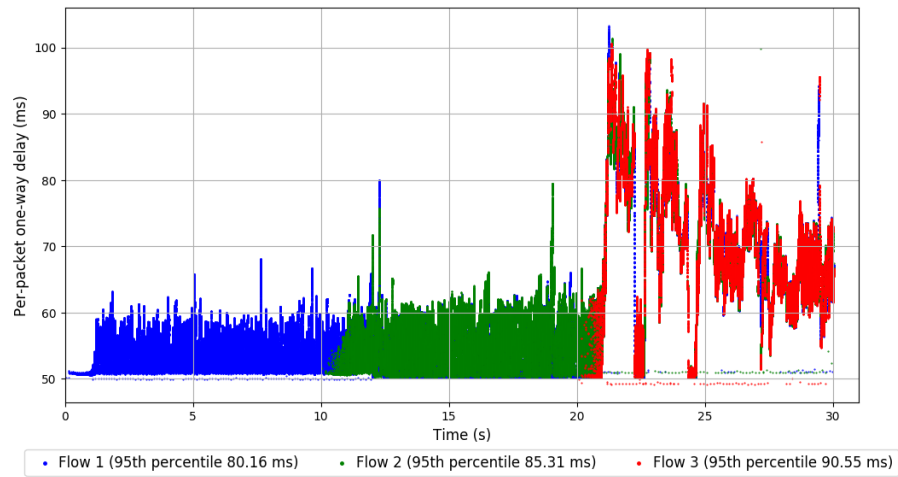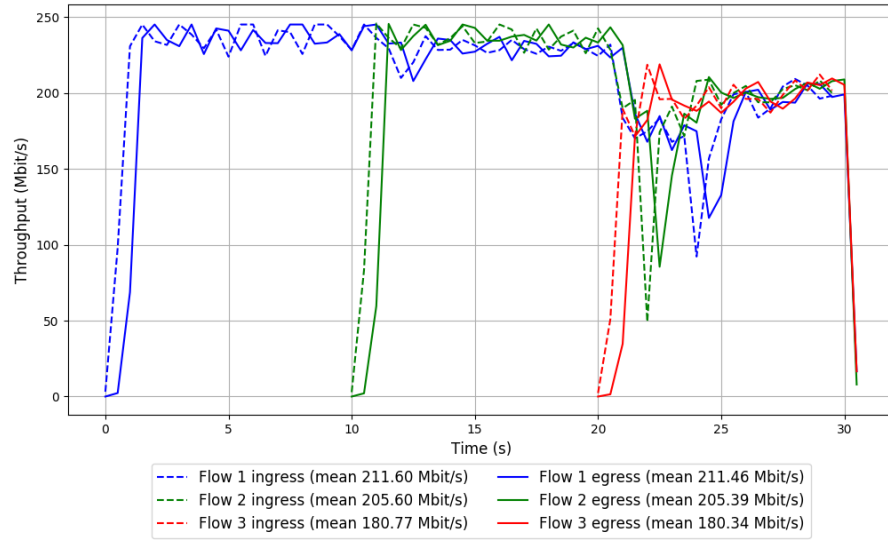
Run 8: Report of TCP BBR — Data Link

Flow 1 ingress (mean 211.66 Mbit/s)   Flow 1 egress (mean 211.46 Mbit/s)
Flow 2 ingress (mean 202.65 Mbit/s)   Flow 2 egress (mean 202.38 Mbit/s)
Flow 3 ingress (mean 185.15 Mbit/s)   Flow 3 egress (mean 184.52 Mbit/s)

Flow 1 (95th percentile 78.66 ms)   Flow 2 (95th percentile 80.56 ms)   Flow 3 (95th percentile 82.90 ms)
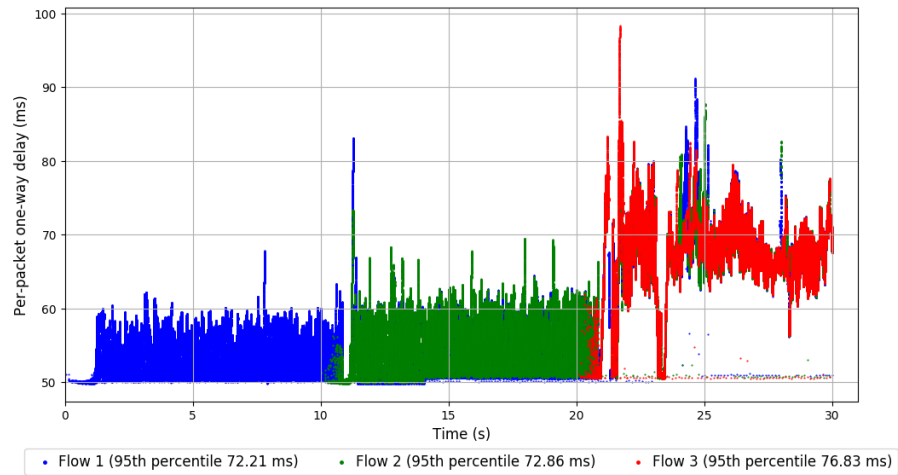
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```
Run 9: Statistics of TCP BBR

Start at: 2018-07-12 07:09:42
End at: 2018-07-12 07:10:12
Local clock offset: -0.388 ms
Remote clock offset: -0.014 ms


# Below is generated by plot.py at 2018-07-12 08:32:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 408.19 Mbit/s
95th percentile per-packet one-way delay: 84.806 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 211.46 Mbit/s
95th percentile per-packet one-way delay: 80.159 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 205.39 Mbit/s
95th percentile per-packet one-way delay: 85.311 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 180.34 Mbit/s
95th percentile per-packet one-way delay: 90.549 ms
Loss rate: 0.18%
```
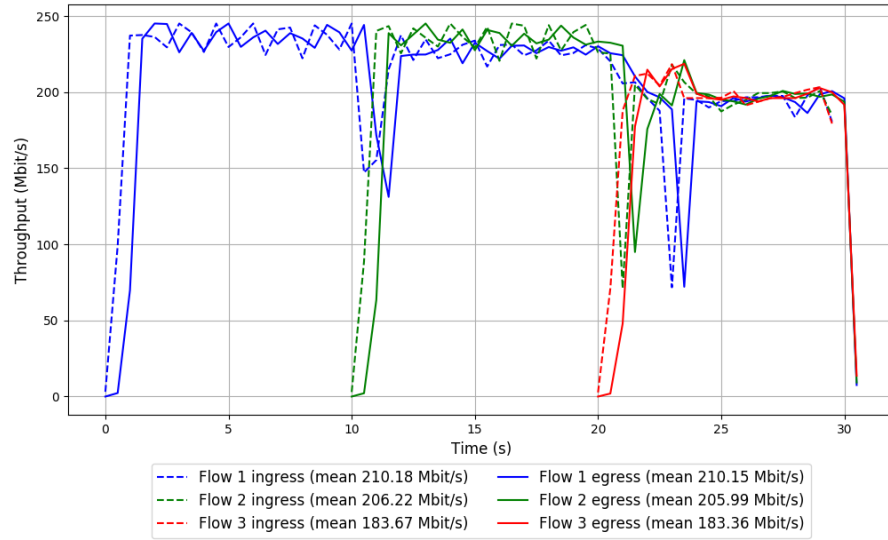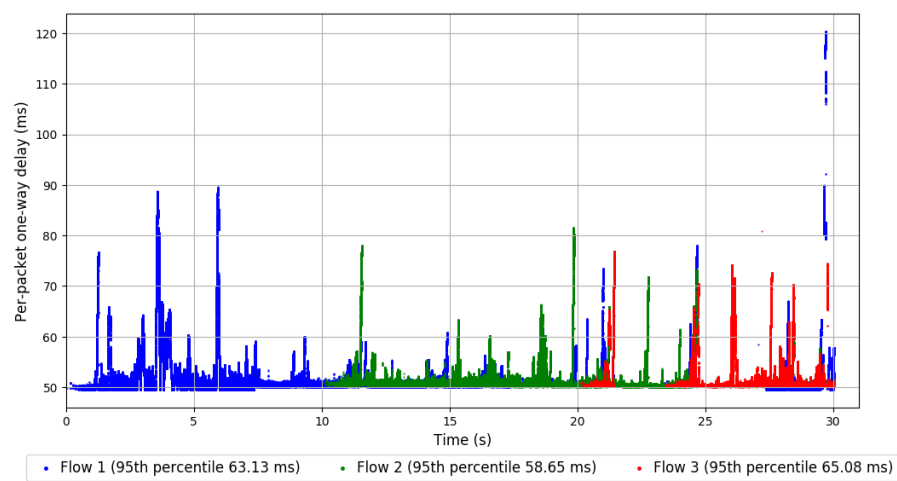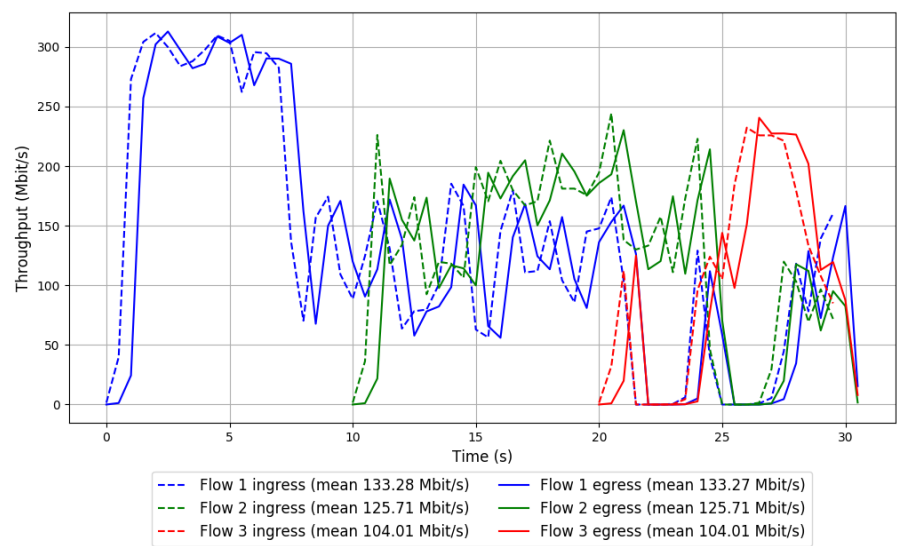
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 211.60 Mbit/s) — — — Flow 1 egress (mean 211.46 Mbit/s)
Flow 2 ingress (mean 205.60 Mbit/s) — — — Flow 2 egress (mean 205.39 Mbit/s)
Flow 3 ingress (mean 180.77 Mbit/s) — — — Flow 3 egress (mean 180.34 Mbit/s)

Flow 1 (95th percentile 80.16 ms) Flow 2 (95th percentile 85.31 ms) Flow 3 (95th percentile 90.55 ms)

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```
Run 10: Statistics of TCP BBR

Start at: 2018-07-12 07:34:40
End at: 2018-07-12 07:35:10
Local clock offset: -0.348 ms
Remote clock offset: -0.034 ms


# Below is generated by plot.py at 2018-07-12 08:32:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 408.18 Mbit/s
95th percentile per-packet one-way delay: 73.579 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 210.15 Mbit/s
95th percentile per-packet one-way delay: 72.214 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 205.99 Mbit/s
95th percentile per-packet one-way delay: 72.856 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 183.36 Mbit/s
95th percentile per-packet one-way delay: 76.835 ms
Loss rate: 0.05%
```

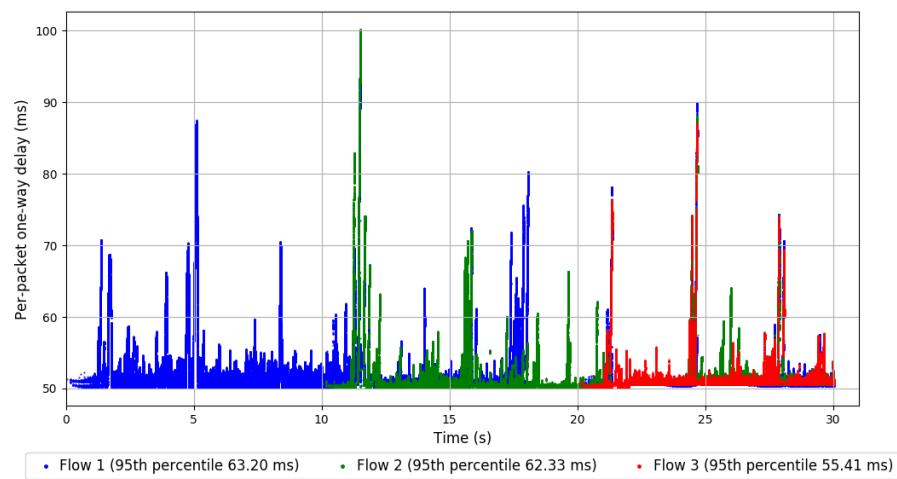Run 10: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2018-07-12 04:00:47
End at: 2018-07-12 04:01:17
Local clock offset: -0.109 ms
Remote clock offset: -0.055 ms


# Below is generated by plot.py at 2018-07-12 08:33:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 251.55 Mbit/s
95th percentile per-packet one-way delay: 62.499 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 133.27 Mbit/s
95th percentile per-packet one-way delay: 63.129 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 125.71 Mbit/s
95th percentile per-packet one-way delay: 58.649 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 104.01 Mbit/s
95th percentile per-packet one-way delay: 65.079 ms
Loss rate: 0.00%
```

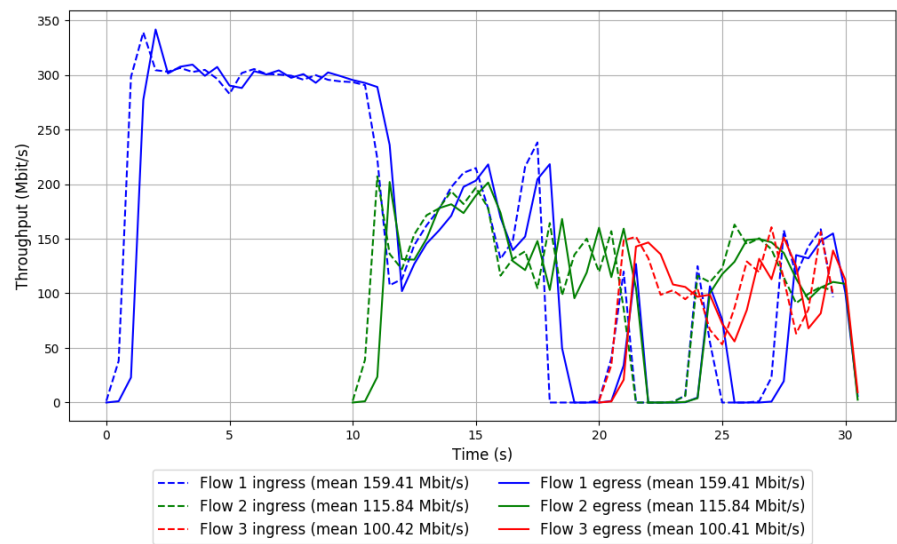Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2018-07-12 04:26:02
End at: 2018-07-12 04:26:32
Local clock offset: -0.131 ms
Remote clock offset: -0.041 ms


# Below is generated by plot.py at 2018-07-12 08:34:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 269.93 Mbit/s
95th percentile per-packet one-way delay: 62.085 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 159.41 Mbit/s
95th percentile per-packet one-way delay: 63.201 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 115.84 Mbit/s
95th percentile per-packet one-way delay: 62.334 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 100.41 Mbit/s
95th percentile per-packet one-way delay: 55.407 ms
Loss rate: 0.01%
```
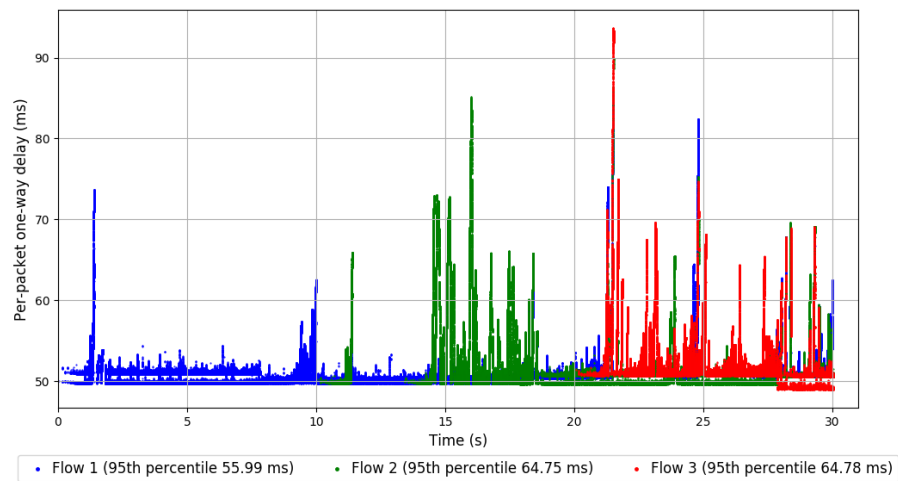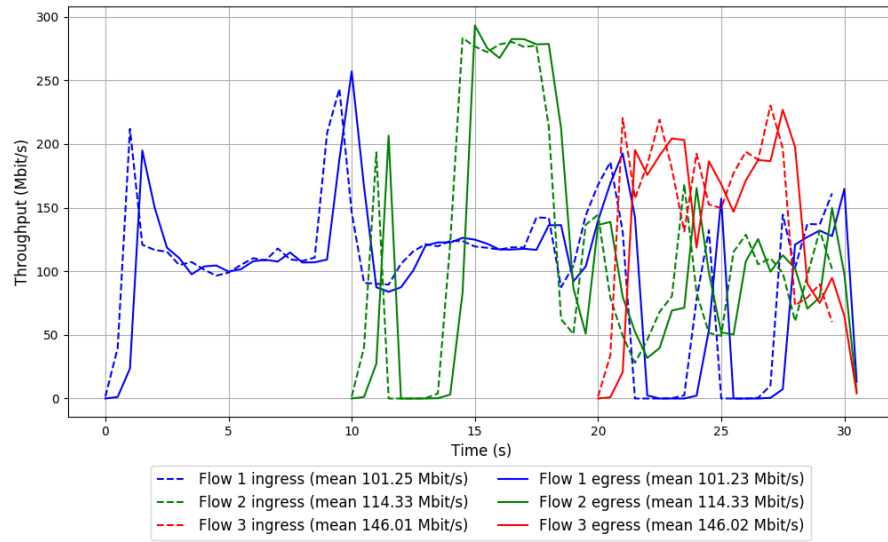
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2018-07-12 04:51:16
End at: 2018-07-12 04:51:46
Local clock offset: -0.105 ms
Remote clock offset: 0.016 ms


# Below is generated by plot.py at 2018-07-12 08:34:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 225.86 Mbit/s
95th percentile per-packet one-way delay: 62.161 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 101.23 Mbit/s
95th percentile per-packet one-way delay: 55.987 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 114.33 Mbit/s
95th percentile per-packet one-way delay: 64.754 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 146.02 Mbit/s
95th percentile per-packet one-way delay: 64.775 ms
Loss rate: 0.00%
```
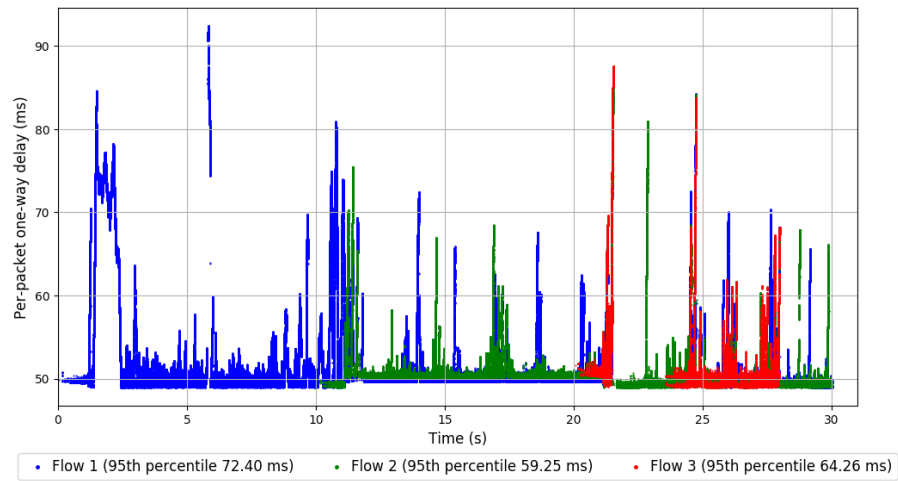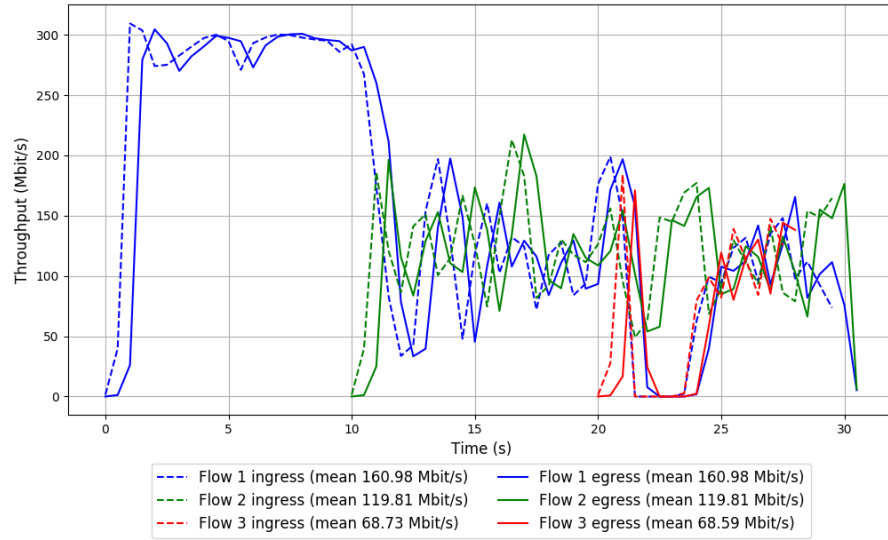
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2018-07-12 05:16:43
End at: 2018-07-12 05:17:13
Local clock offset: -0.052 ms
Remote clock offset: 0.037 ms


# Below is generated by plot.py at 2018-07-12 08:34:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 258.88 Mbit/s
95th percentile per-packet one-way delay: 68.916 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 160.98 Mbit/s
95th percentile per-packet one-way delay: 72.402 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 119.81 Mbit/s
95th percentile per-packet one-way delay: 59.252 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 68.59 Mbit/s
95th percentile per-packet one-way delay: 64.257 ms
Loss rate: 0.00%
```
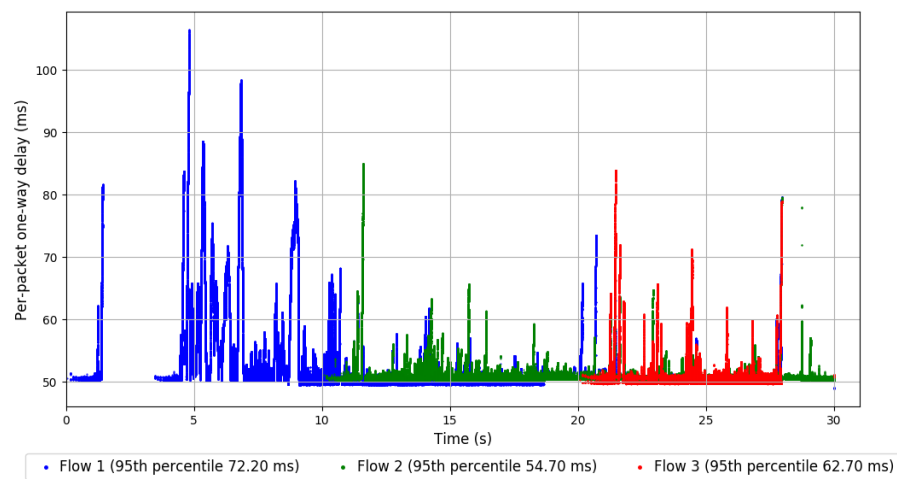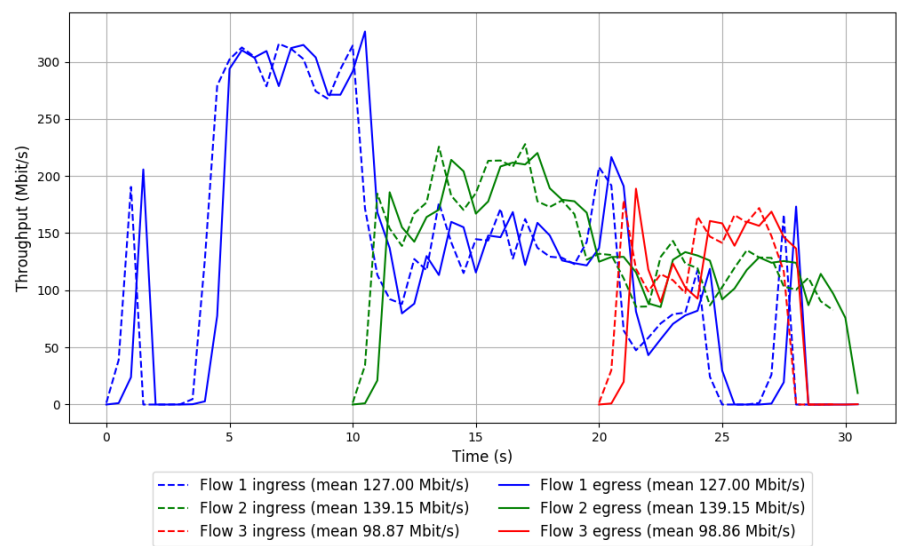
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 160.98 Mbit/s) -- Flow 1 egress (mean 160.98 Mbit/s)
Flow 2 ingress (mean 119.81 Mbit/s) -- Flow 2 egress (mean 119.81 Mbit/s)
Flow 3 ingress (mean 68.73 Mbit/s) -- Flow 3 egress (mean 68.59 Mbit/s)

Flow 1 (95th percentile 72.40 ms)   Flow 2 (95th percentile 59.25 ms)   Flow 3 (95th percentile 64.26 ms)

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```
Run 5: Statistics of Copa

Start at: 2018-07-12 05:41:55
End at: 2018-07-12 05:42:25
Local clock offset: -0.121 ms
Remote clock offset: 0.024 ms


# Below is generated by plot.py at 2018-07-12 08:34:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 252.32 Mbit/s
95th percentile per-packet one-way delay: 65.313 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 127.00 Mbit/s
95th percentile per-packet one-way delay: 72.205 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 139.15 Mbit/s
95th percentile per-packet one-way delay: 54.698 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 98.86 Mbit/s
95th percentile per-packet one-way delay: 62.697 ms
Loss rate: 0.00%
```
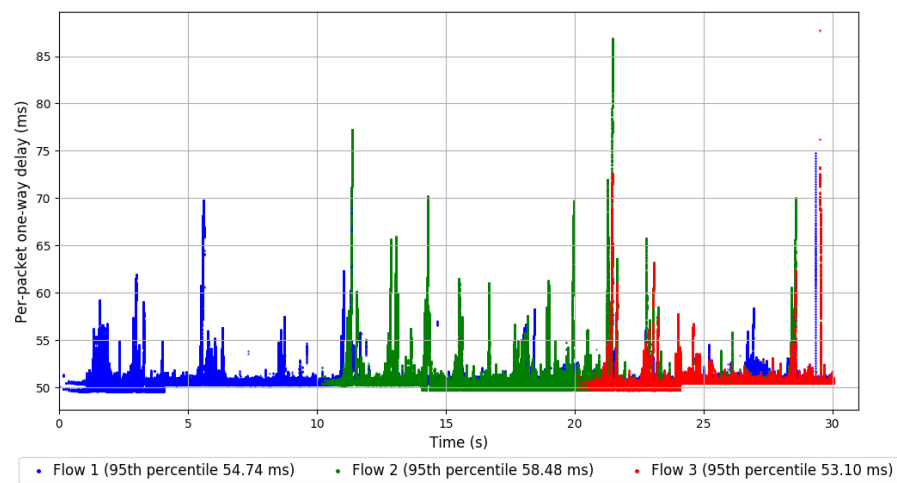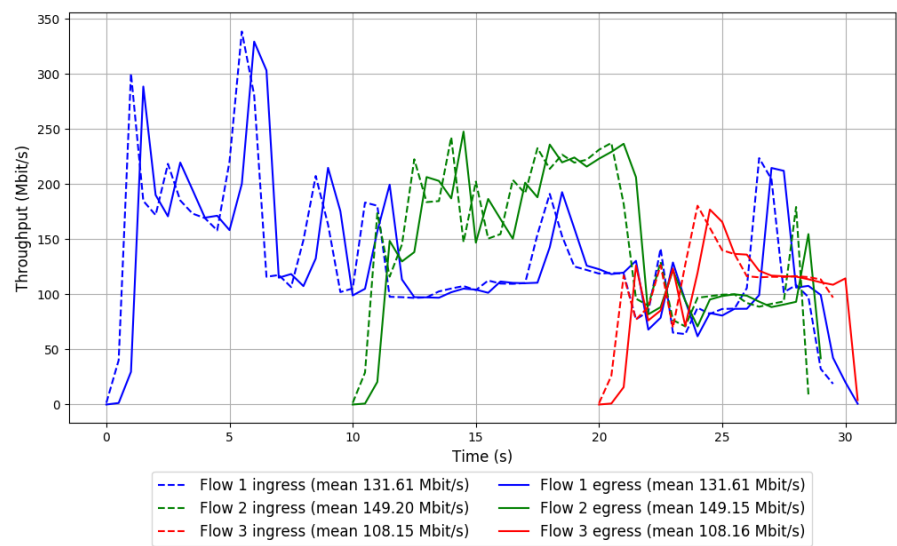
Run 5: Report of Copa — Data Link

```
Run 6: Statistics of Copa

Start at: 2018-07-12 06:06:40
End at: 2018-07-12 06:07:10
Local clock offset: -0.141 ms
Remote clock offset: 0.011 ms


# Below is generated by plot.py at 2018-07-12 08:34:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 259.67 Mbit/s
95th percentile per-packet one-way delay: 55.755 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 131.61 Mbit/s
95th percentile per-packet one-way delay: 54.744 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 149.15 Mbit/s
95th percentile per-packet one-way delay: 58.479 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 108.16 Mbit/s
95th percentile per-packet one-way delay: 53.102 ms
Loss rate: 0.00%
```

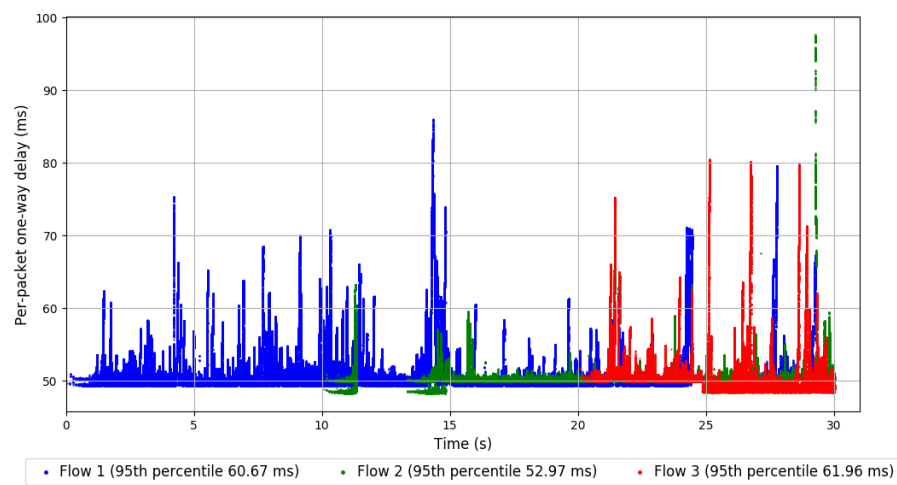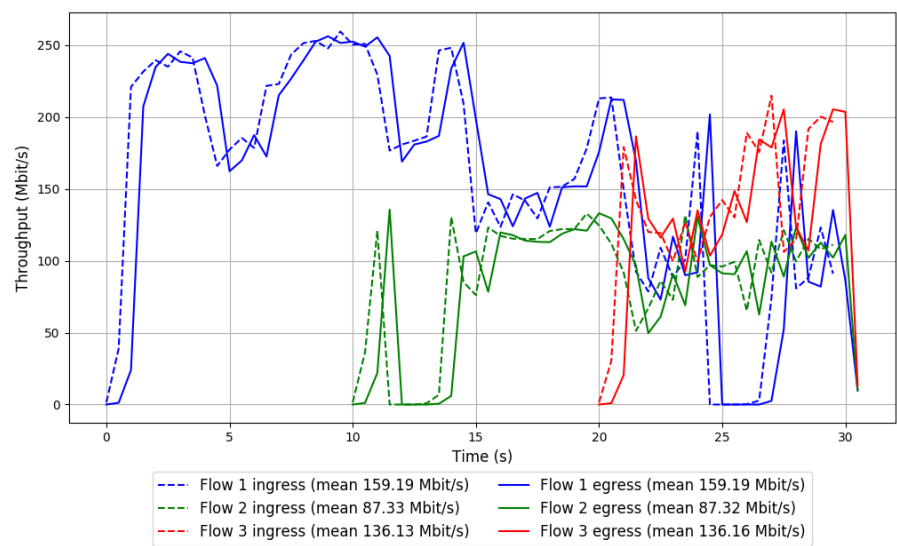Run 6: Report of Copa — Data Link

```
Run 7: Statistics of Copa

Start at: 2018-07-12 06:31:49
End at: 2018-07-12 06:32:19
Local clock offset: 0.257 ms
Remote clock offset: -0.027 ms


# Below is generated by plot.py at 2018-07-12 08:40:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 262.54 Mbit/s
95th percentile per-packet one-way delay: 59.397 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 159.19 Mbit/s
95th percentile per-packet one-way delay: 60.667 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 87.32 Mbit/s
95th percentile per-packet one-way delay: 52.973 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 136.16 Mbit/s
95th percentile per-packet one-way delay: 61.960 ms
Loss rate: 0.00%
```
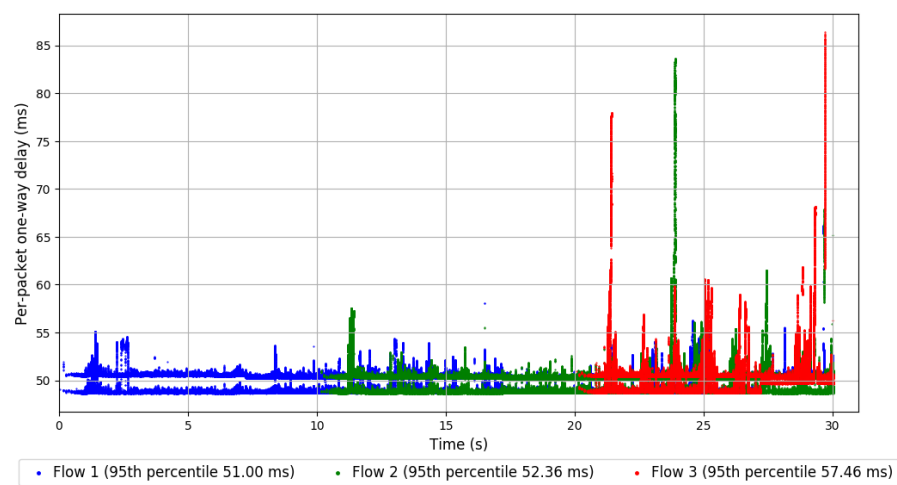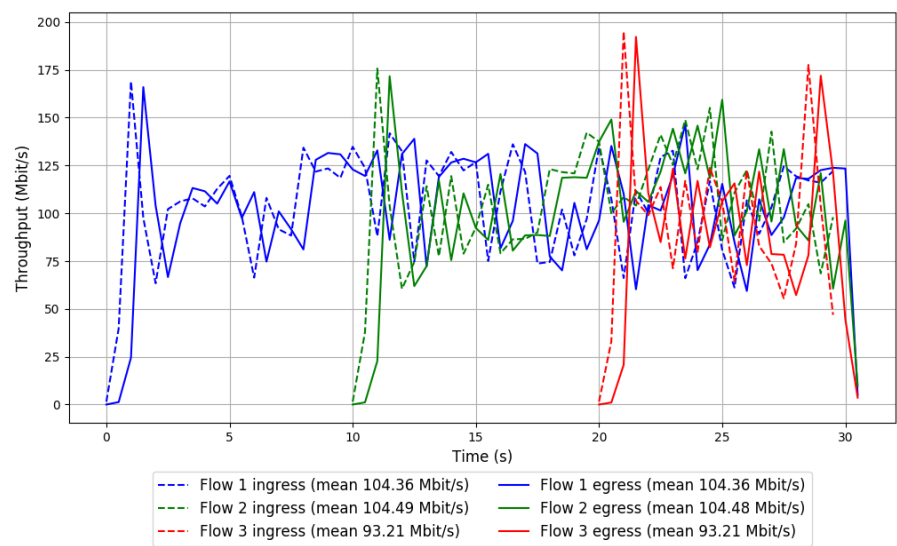
Run 7: Report of Copa — Data Link

Flow 1 ingress (mean 159.19 Mbit/s) --- Flow 1 egress (mean 159.19 Mbit/s)
Flow 2 ingress (mean 87.33 Mbit/s) --- Flow 2 egress (mean 87.32 Mbit/s)
Flow 3 ingress (mean 136.13 Mbit/s) --- Flow 3 egress (mean 136.16 Mbit/s)

Flow 1 (95th percentile 60.67 ms)   Flow 2 (95th percentile 52.97 ms)   Flow 3 (95th percentile 61.96 ms)

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```
Run 8: Statistics of Copa

Start at: 2018-07-12 06:56:37
End at: 2018-07-12 06:57:07
Local clock offset: 0.043 ms
Remote clock offset: -0.001 ms


# Below is generated by plot.py at 2018-07-12 08:40:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 204.93 Mbit/s
95th percentile per-packet one-way delay: 52.514 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 104.36 Mbit/s
95th percentile per-packet one-way delay: 50.996 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 104.48 Mbit/s
95th percentile per-packet one-way delay: 52.359 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 93.21 Mbit/s
95th percentile per-packet one-way delay: 57.464 ms
Loss rate: 0.00%
```
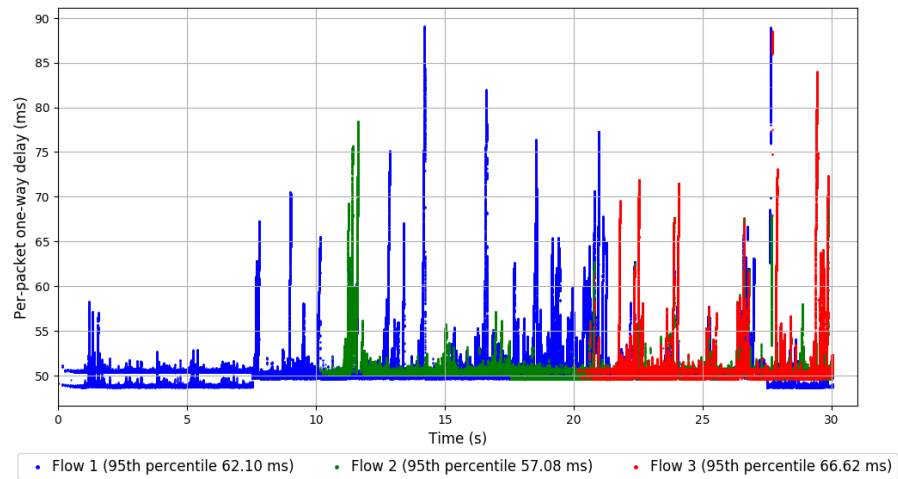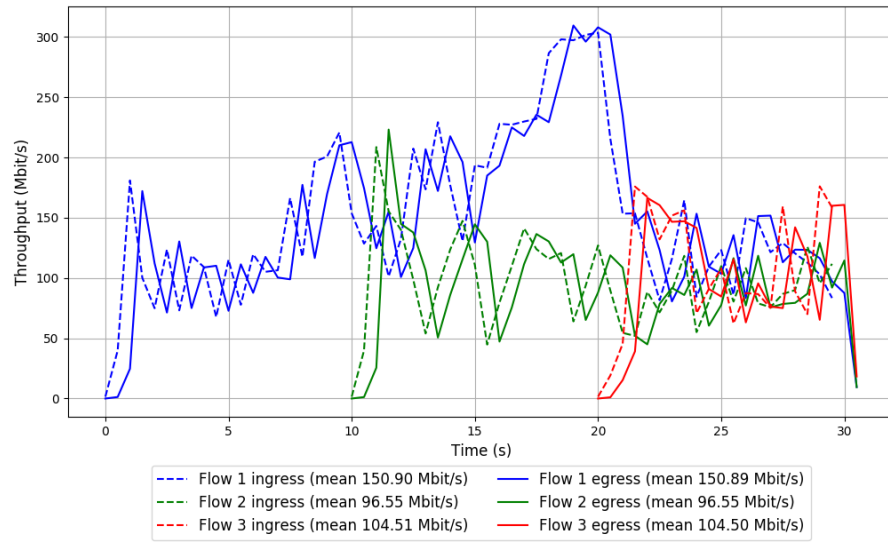
Run 8: Report of Copa — Data Link

```
Run 9: Statistics of Copa

Start at: 2018-07-12 07:21:26
End at: 2018-07-12 07:21:56
Local clock offset: -0.049 ms
Remote clock offset: -0.079 ms


# Below is generated by plot.py at 2018-07-12 08:40:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 249.89 Mbit/s
95th percentile per-packet one-way delay: 61.658 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 150.89 Mbit/s
95th percentile per-packet one-way delay: 62.097 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 96.55 Mbit/s
95th percentile per-packet one-way delay: 57.076 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 104.50 Mbit/s
95th percentile per-packet one-way delay: 66.617 ms
Loss rate: 0.02%
```

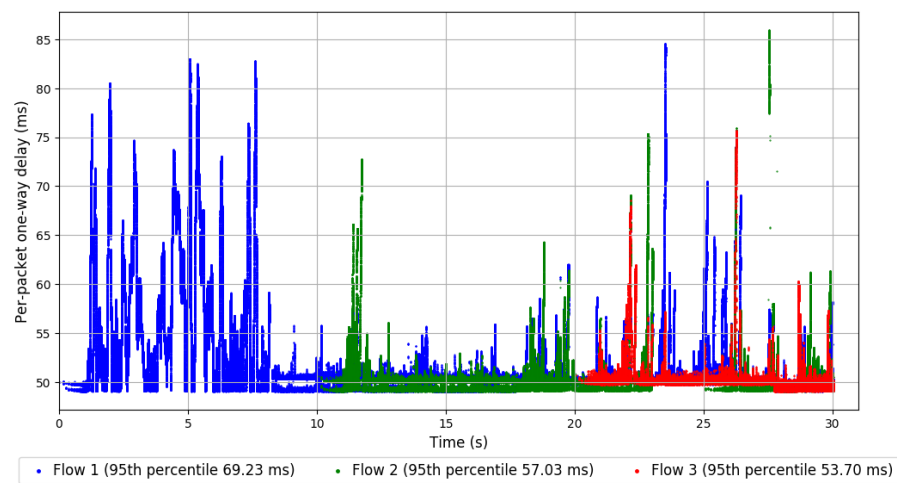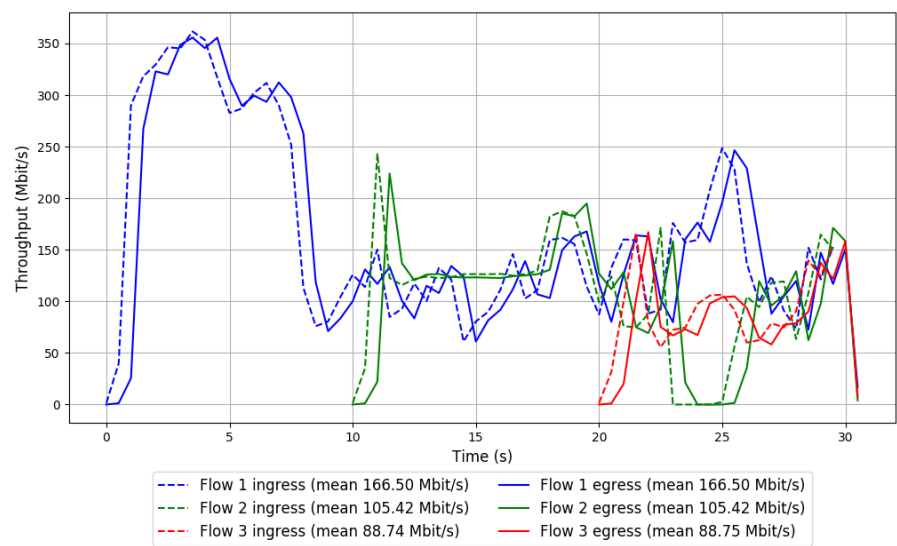Run 9: Report of Copa — Data Link

```
Run 10: Statistics of Copa

Start at: 2018-07-12 07:46:26
End at: 2018-07-12 07:46:56
Local clock offset: 0.34 ms
Remote clock offset: -0.084 ms


# Below is generated by plot.py at 2018-07-12 08:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 266.18 Mbit/s
95th percentile per-packet one-way delay: 66.728 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 166.50 Mbit/s
95th percentile per-packet one-way delay: 69.229 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 105.42 Mbit/s
95th percentile per-packet one-way delay: 57.029 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 88.75 Mbit/s
95th percentile per-packet one-way delay: 53.703 ms
Loss rate: 0.00%
```

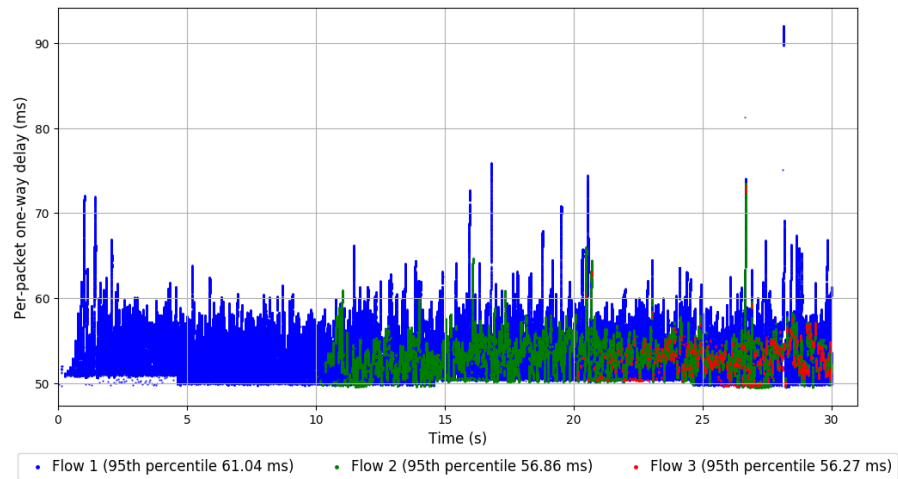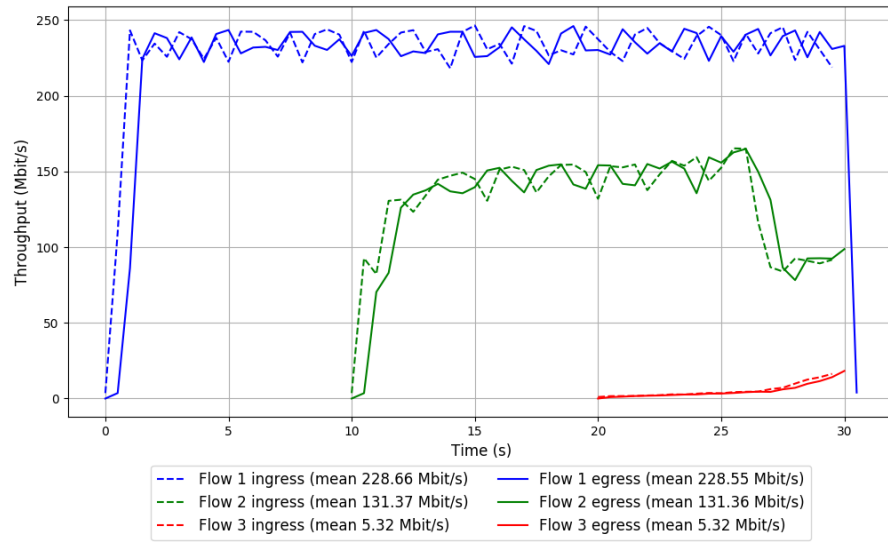Run 10: Report of Copa — Data Link

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```
Run 1: Statistics of TCP Cubic

Start at: 2018-07-12 03:50:19
End at: 2018-07-12 03:50:49
Local clock offset: -0.11 ms
Remote clock offset: -0.018 ms


# Below is generated by plot.py at 2018-07-12 08:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.72 Mbit/s
95th percentile per-packet one-way delay: 60.307 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 228.55 Mbit/s
95th percentile per-packet one-way delay: 61.036 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 131.36 Mbit/s
95th percentile per-packet one-way delay: 56.856 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.32 Mbit/s
95th percentile per-packet one-way delay: 56.270 ms
Loss rate: 0.05%
```

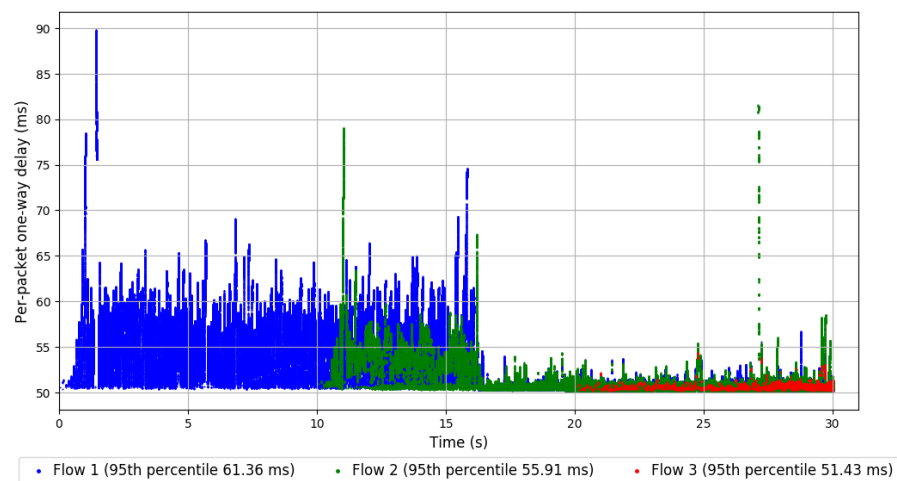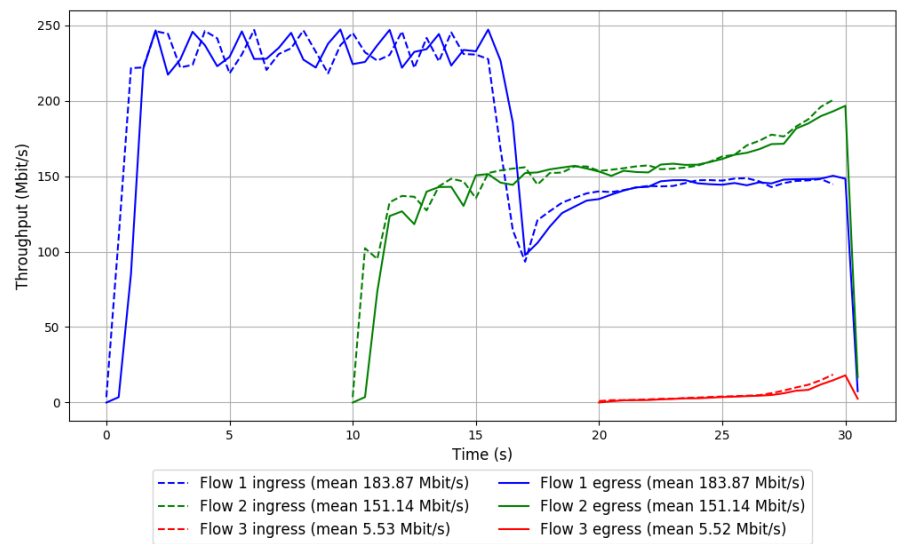Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2018-07-12 04:15:34
End at: 2018-07-12 04:16:04
Local clock offset: -0.096 ms
Remote clock offset: -0.023 ms


# Below is generated by plot.py at 2018-07-12 08:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 286.35 Mbit/s
95th percentile per-packet one-way delay: 60.583 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 183.87 Mbit/s
95th percentile per-packet one-way delay: 61.360 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 151.14 Mbit/s
95th percentile per-packet one-way delay: 55.906 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.52 Mbit/s
95th percentile per-packet one-way delay: 51.434 ms
Loss rate: 0.11%
```

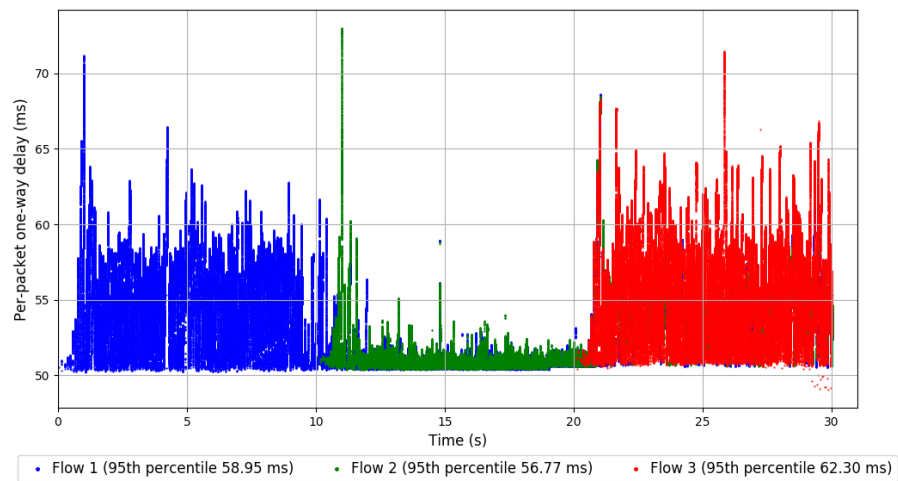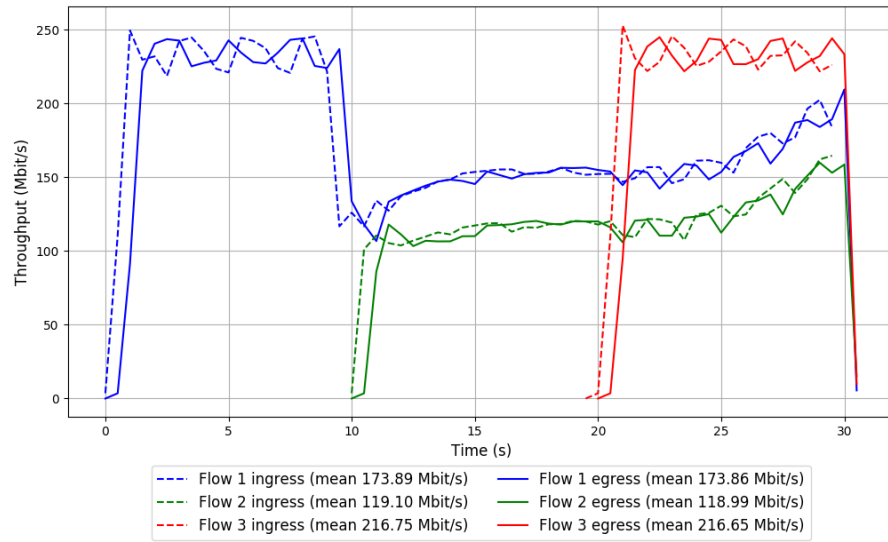Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2018-07-12 04:40:45
End at: 2018-07-12 04:41:15
Local clock offset: -0.094 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2018-07-12 08:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.10 Mbit/s
95th percentile per-packet one-way delay: 59.937 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 173.86 Mbit/s
95th percentile per-packet one-way delay: 58.955 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 118.99 Mbit/s
95th percentile per-packet one-way delay: 56.771 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 216.65 Mbit/s
95th percentile per-packet one-way delay: 62.304 ms
Loss rate: 0.00%
```

Run 3: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 173.89 Mbit/s)   —— Flow 1 egress (mean 173.86 Mbit/s)
- - - - Flow 2 ingress (mean 119.10 Mbit/s)   —— Flow 2 egress (mean 118.99 Mbit/s)
- - - - Flow 3 ingress (mean 216.75 Mbit/s)   —— Flow 3 egress (mean 216.65 Mbit/s)

- Flow 1 (95th percentile 58.95 ms)   • Flow 2 (95th percentile 56.77 ms)   • Flow 3 (95th percentile 62.30 ms)
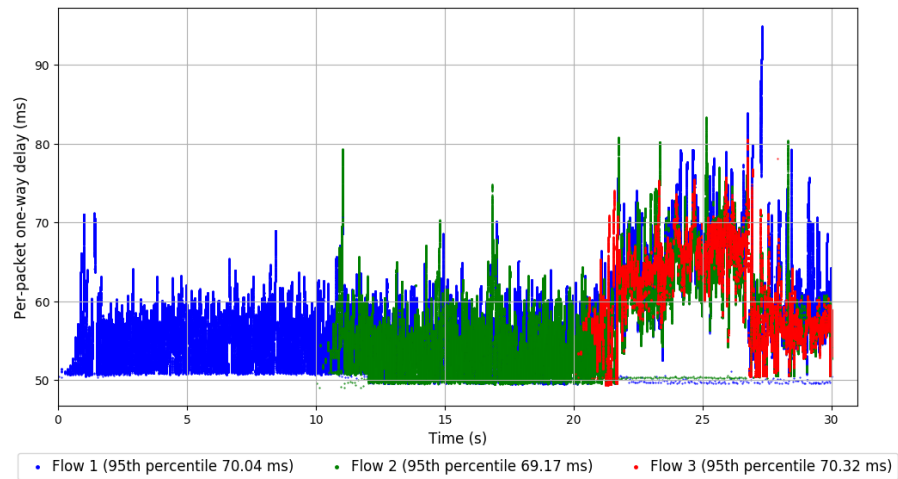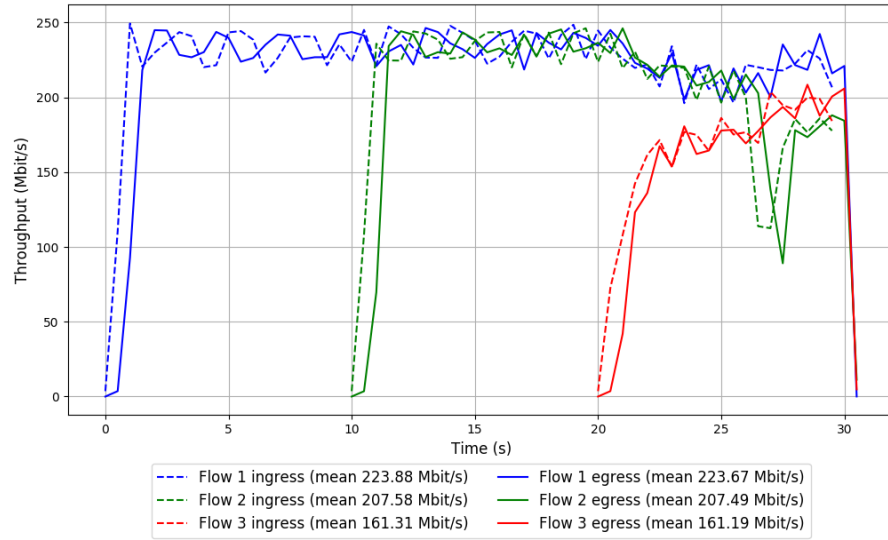
49

```
Run 4: Statistics of TCP Cubic

Start at: 2018-07-12 05:06:12
End at: 2018-07-12 05:06:42
Local clock offset: -0.068 ms
Remote clock offset: -0.007 ms


# Below is generated by plot.py at 2018-07-12 08:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 415.46 Mbit/s
95th percentile per-packet one-way delay: 69.845 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 223.67 Mbit/s
95th percentile per-packet one-way delay: 70.036 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 207.49 Mbit/s
95th percentile per-packet one-way delay: 69.172 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 161.19 Mbit/s
95th percentile per-packet one-way delay: 70.319 ms
Loss rate: 0.00%
```
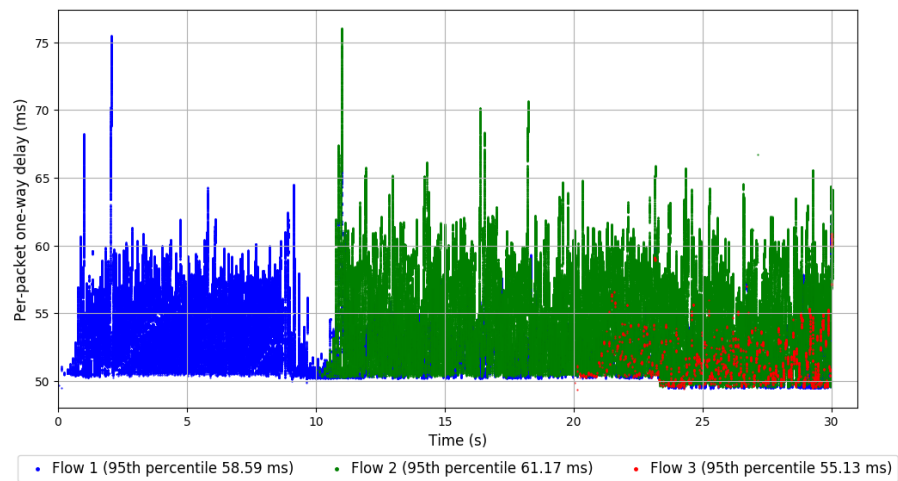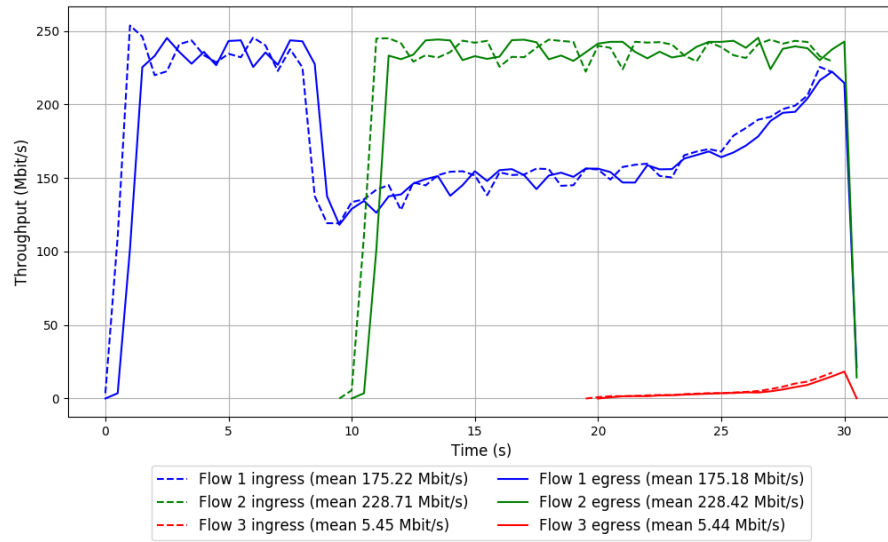
Run 4: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 223.88 Mbit/s)   —— Flow 1 egress (mean 223.67 Mbit/s)
- - - Flow 2 ingress (mean 207.58 Mbit/s)   —— Flow 2 egress (mean 207.49 Mbit/s)
- - - Flow 3 ingress (mean 161.31 Mbit/s)   —— Flow 3 egress (mean 161.19 Mbit/s)

• Flow 1 (95th percentile 70.04 ms)   • Flow 2 (95th percentile 69.17 ms)   • Flow 3 (95th percentile 70.32 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2018-07-12 05:31:31
End at: 2018-07-12 05:32:01
Local clock offset: 0.248 ms
Remote clock offset: 0.03 ms


# Below is generated by plot.py at 2018-07-12 08:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 329.23 Mbit/s
95th percentile per-packet one-way delay: 60.332 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 175.18 Mbit/s
95th percentile per-packet one-way delay: 58.593 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 228.42 Mbit/s
95th percentile per-packet one-way delay: 61.166 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 5.44 Mbit/s
95th percentile per-packet one-way delay: 55.134 ms
Loss rate: 0.11%
```
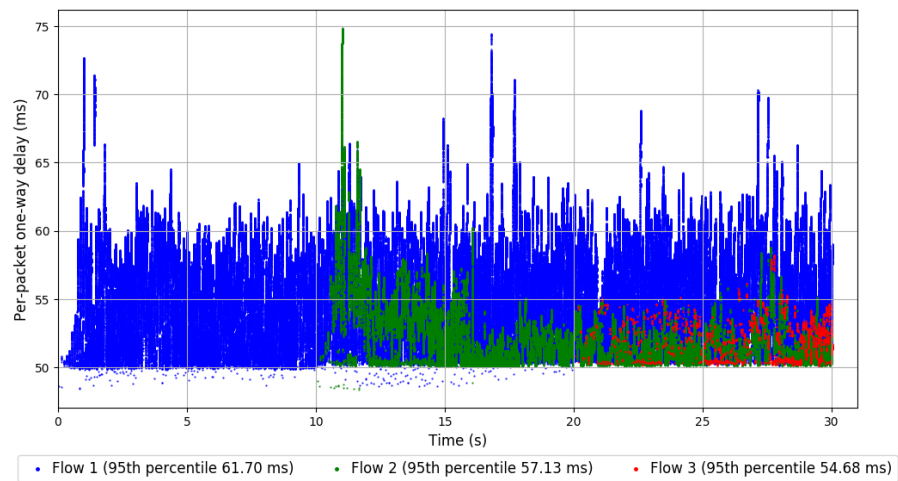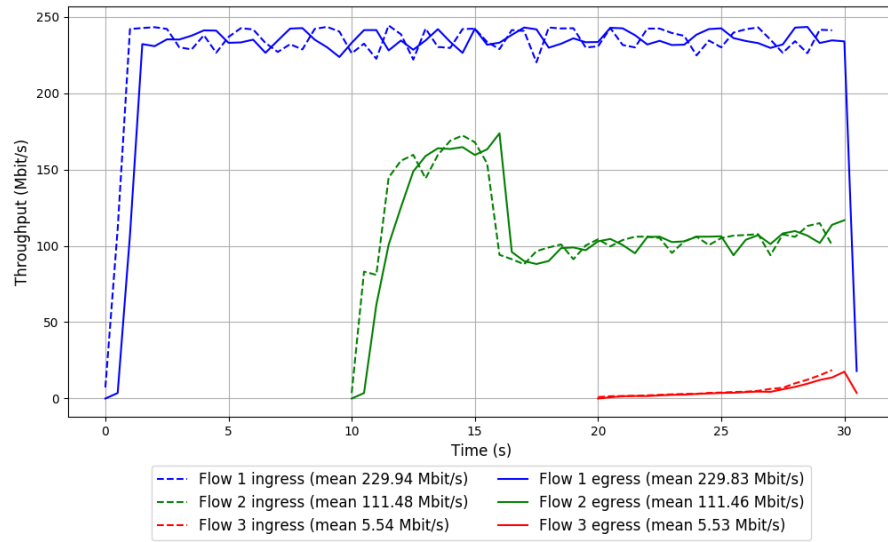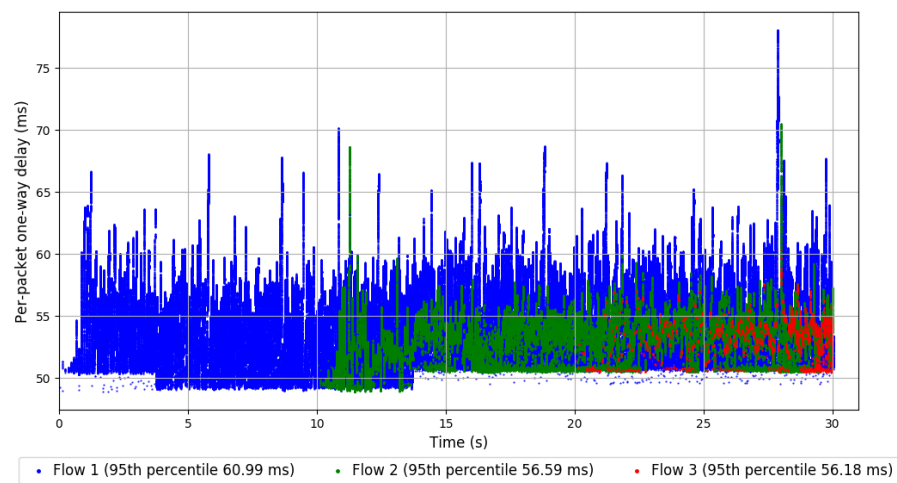
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 175.22 Mbit/s) --- Flow 1 egress (mean 175.18 Mbit/s)
Flow 2 ingress (mean 228.71 Mbit/s) --- Flow 2 egress (mean 228.42 Mbit/s)
Flow 3 ingress (mean 5.45 Mbit/s) --- Flow 3 egress (mean 5.44 Mbit/s)

• Flow 1 (95th percentile 58.59 ms)   • Flow 2 (95th percentile 61.17 ms)   • Flow 3 (95th percentile 55.13 ms)

```
Run 6: Statistics of TCP Cubic

Start at: 2018-07-12 05:56:44
End at: 2018-07-12 05:57:14
Local clock offset: 0.255 ms
Remote clock offset: -0.072 ms


# Below is generated by plot.py at 2018-07-12 08:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 305.83 Mbit/s
95th percentile per-packet one-way delay: 61.329 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 229.83 Mbit/s
95th percentile per-packet one-way delay: 61.705 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 111.46 Mbit/s
95th percentile per-packet one-way delay: 57.134 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.53 Mbit/s
95th percentile per-packet one-way delay: 54.678 ms
Loss rate: 0.11%
```
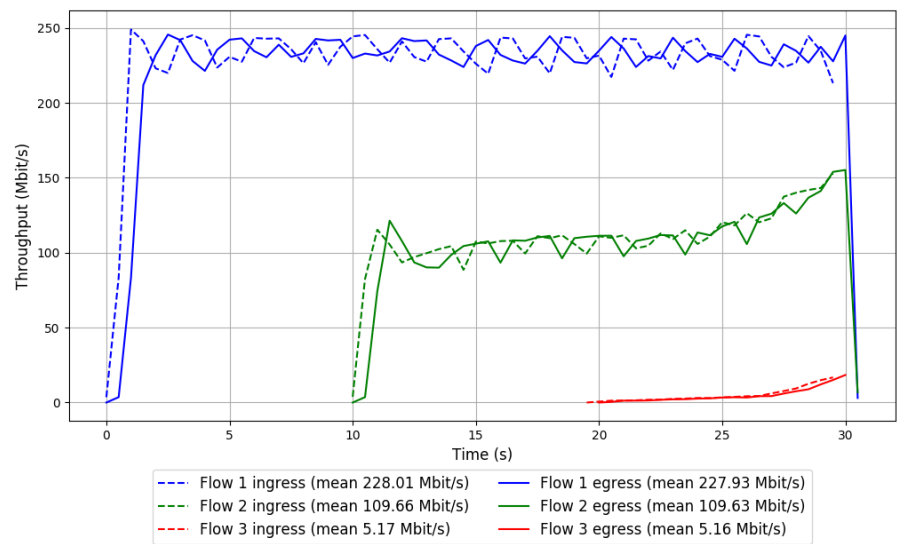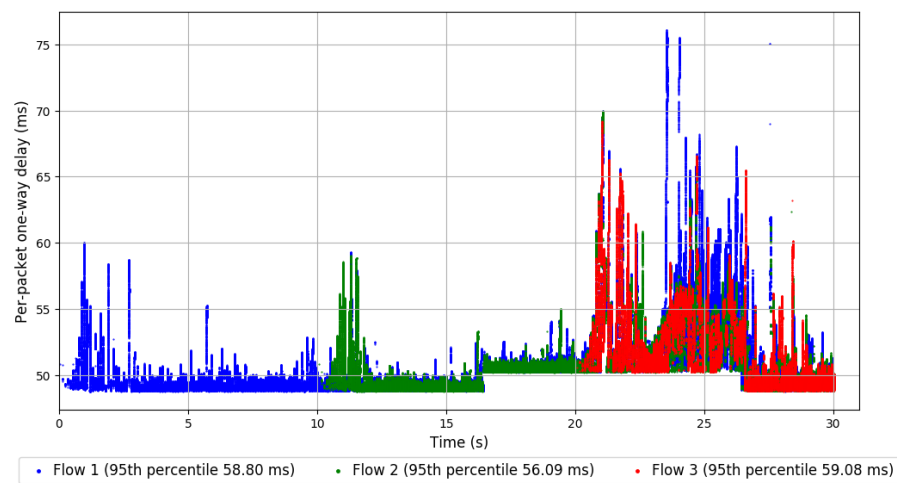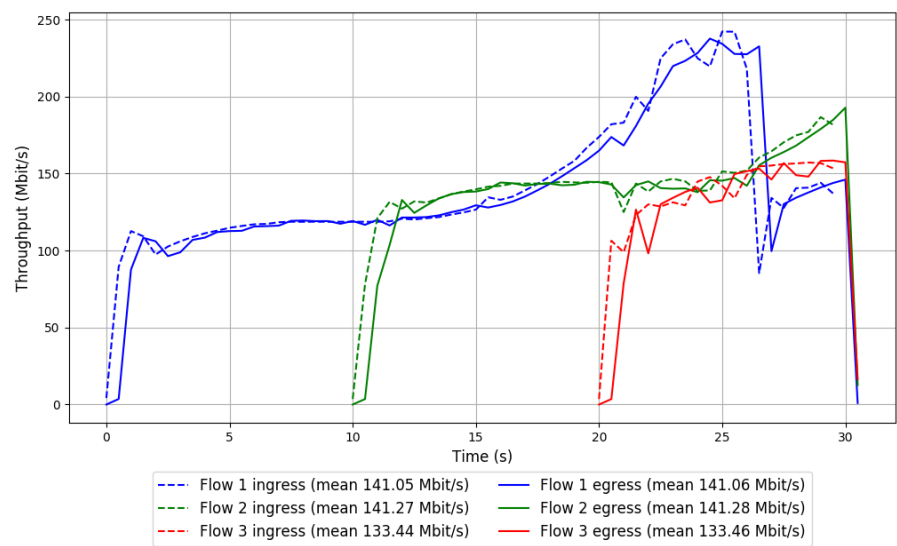
Run 6: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 229.94 Mbit/s) ——— Flow 1 egress (mean 229.83 Mbit/s)
- - - - Flow 2 ingress (mean 111.48 Mbit/s) ——— Flow 2 egress (mean 111.46 Mbit/s)
- - - - Flow 3 ingress (mean 5.54 Mbit/s) ——— Flow 3 egress (mean 5.53 Mbit/s)

• Flow 1 (95th percentile 61.70 ms) • Flow 2 (95th percentile 57.13 ms) • Flow 3 (95th percentile 54.68 ms)

```
Run 7: Statistics of TCP Cubic

Start at: 2018-07-12 06:21:30
End at: 2018-07-12 06:22:00
Local clock offset: -0.078 ms
Remote clock offset: -0.047 ms


# Below is generated by plot.py at 2018-07-12 08:43:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 302.62 Mbit/s
95th percentile per-packet one-way delay: 60.408 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 227.93 Mbit/s
95th percentile per-packet one-way delay: 60.992 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 109.63 Mbit/s
95th percentile per-packet one-way delay: 56.592 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.16 Mbit/s
95th percentile per-packet one-way delay: 56.176 ms
Loss rate: 0.19%
```
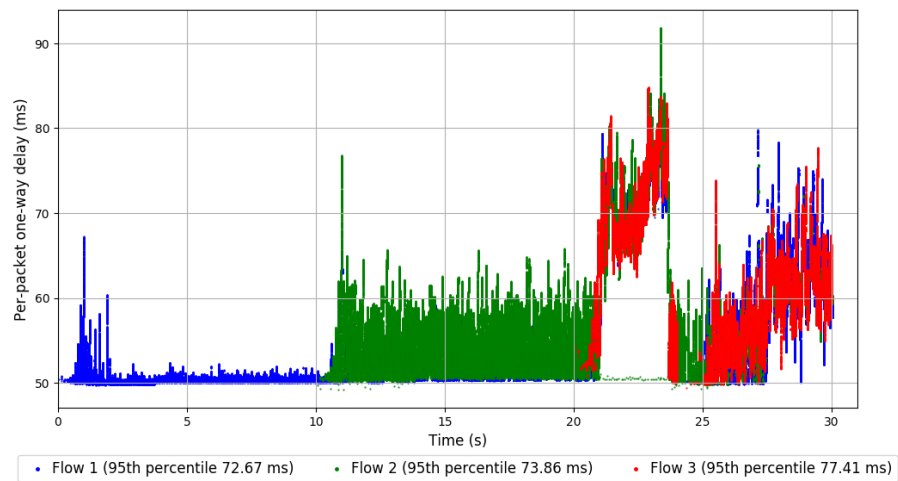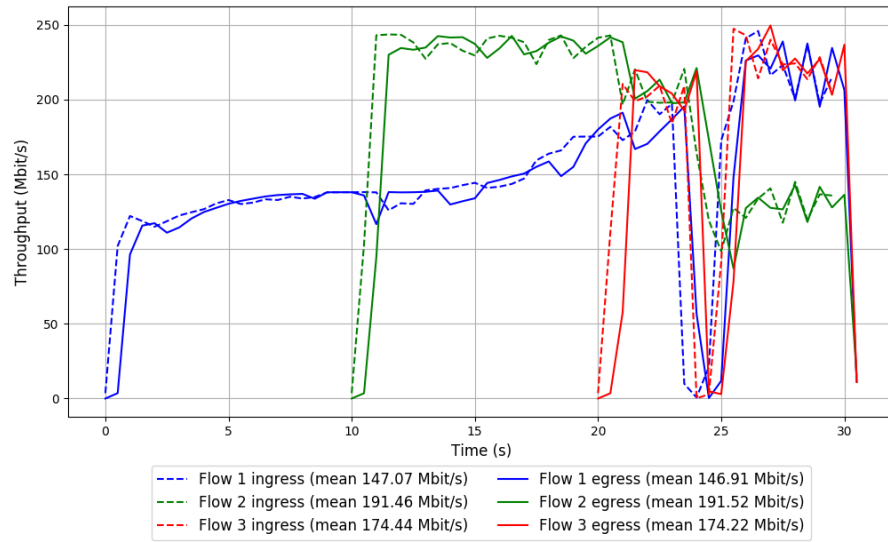
Run 7: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 228.01 Mbit/s) ---- Flow 1 egress (mean 227.93 Mbit/s)
Flow 2 ingress (mean 109.66 Mbit/s) ---- Flow 2 egress (mean 109.63 Mbit/s)
Flow 3 ingress (mean 5.17 Mbit/s) ---- Flow 3 egress (mean 5.16 Mbit/s)

Flow 1 (95th percentile 60.99 ms) • Flow 2 (95th percentile 56.59 ms) • Flow 3 (95th percentile 56.18 ms)

```
Run 8: Statistics of TCP Cubic

Start at: 2018-07-12 06:46:28
End at: 2018-07-12 06:46:58
Local clock offset: -0.107 ms
Remote clock offset: -0.044 ms


# Below is generated by plot.py at 2018-07-12 08:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 279.51 Mbit/s
95th percentile per-packet one-way delay: 57.960 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 141.06 Mbit/s
95th percentile per-packet one-way delay: 58.795 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 141.28 Mbit/s
95th percentile per-packet one-way delay: 56.087 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 133.46 Mbit/s
95th percentile per-packet one-way delay: 59.076 ms
Loss rate: 0.00%
```

Run 8: Report of TCP Cubic — Data Link

```
Run 9: Statistics of TCP Cubic

Start at: 2018-07-12 07:11:10
End at: 2018-07-12 07:11:40
Local clock offset: 0.311 ms
Remote clock offset: -0.041 ms


# Below is generated by plot.py at 2018-07-12 08:45:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.14 Mbit/s
95th percentile per-packet one-way delay: 74.372 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 146.91 Mbit/s
95th percentile per-packet one-way delay: 72.672 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 191.52 Mbit/s
95th percentile per-packet one-way delay: 73.863 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 174.22 Mbit/s
95th percentile per-packet one-way delay: 77.411 ms
Loss rate: 0.00%
```
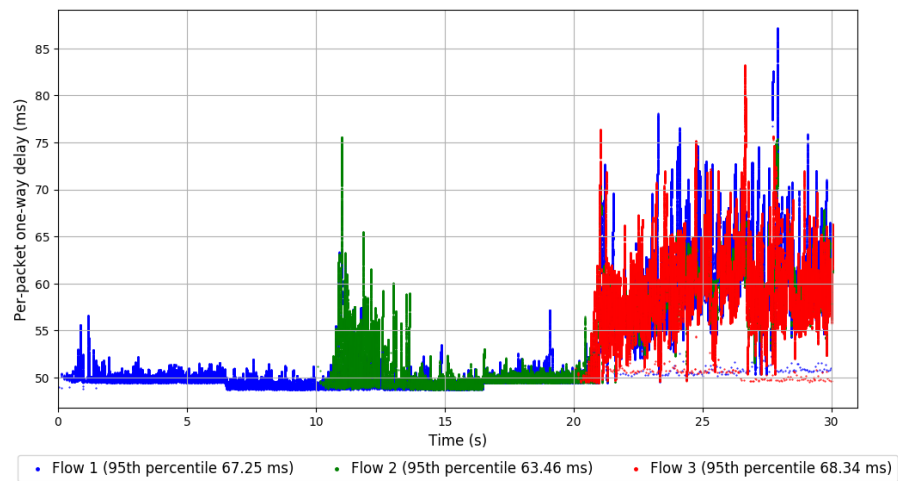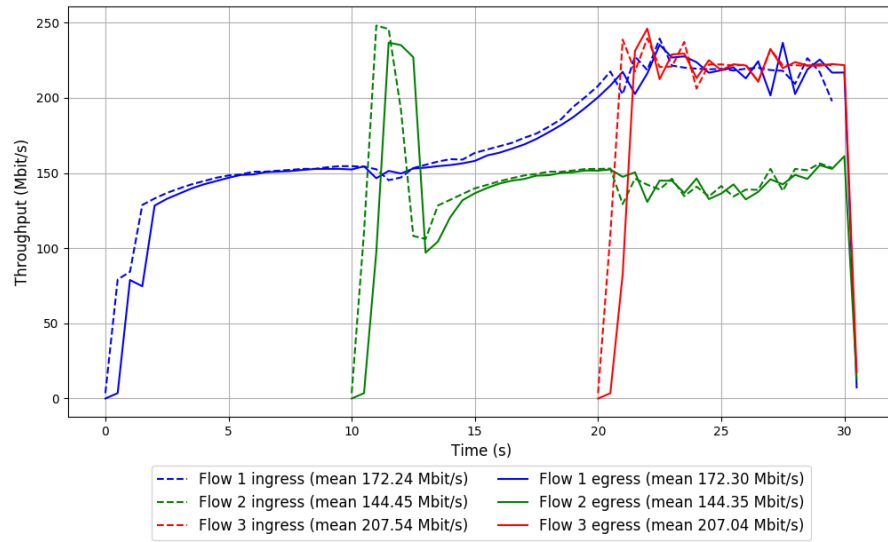
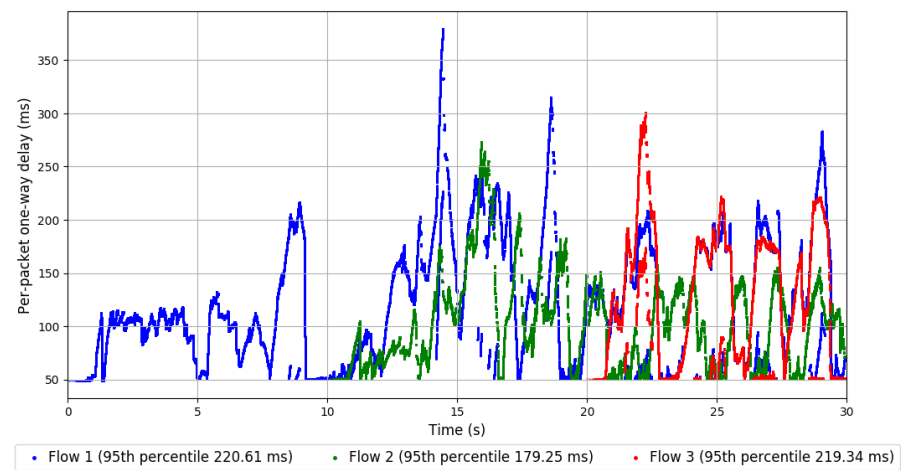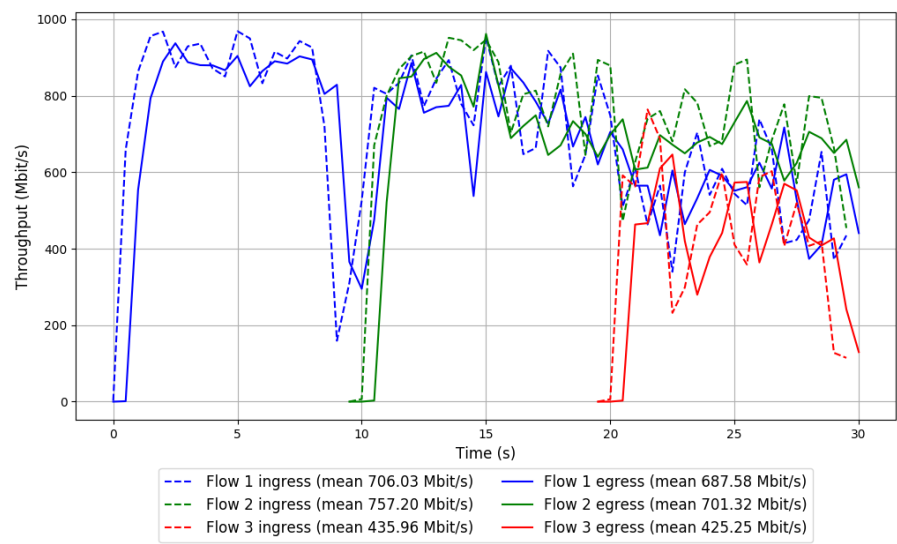## Run 9: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 147.07 Mbit/s)   ——— Flow 1 egress (mean 146.91 Mbit/s)
- - - - Flow 2 ingress (mean 191.46 Mbit/s)   ——— Flow 2 egress (mean 191.52 Mbit/s)
- - - - Flow 3 ingress (mean 174.44 Mbit/s)   ——— Flow 3 egress (mean 174.22 Mbit/s)

- Flow 1 (95th percentile 72.67 ms)   • Flow 2 (95th percentile 73.86 ms)   • Flow 3 (95th percentile 77.41 ms)

61

```
Run 10: Statistics of TCP Cubic

Start at: 2018-07-12 07:36:07
End at: 2018-07-12 07:36:38
Local clock offset: 0.016 ms
Remote clock offset: 0.014 ms


# Below is generated by plot.py at 2018-07-12 08:45:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 337.10 Mbit/s
95th percentile per-packet one-way delay: 66.705 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 172.30 Mbit/s
95th percentile per-packet one-way delay: 67.246 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 144.35 Mbit/s
95th percentile per-packet one-way delay: 63.462 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 207.04 Mbit/s
95th percentile per-packet one-way delay: 68.344 ms
Loss rate: 0.17%
```

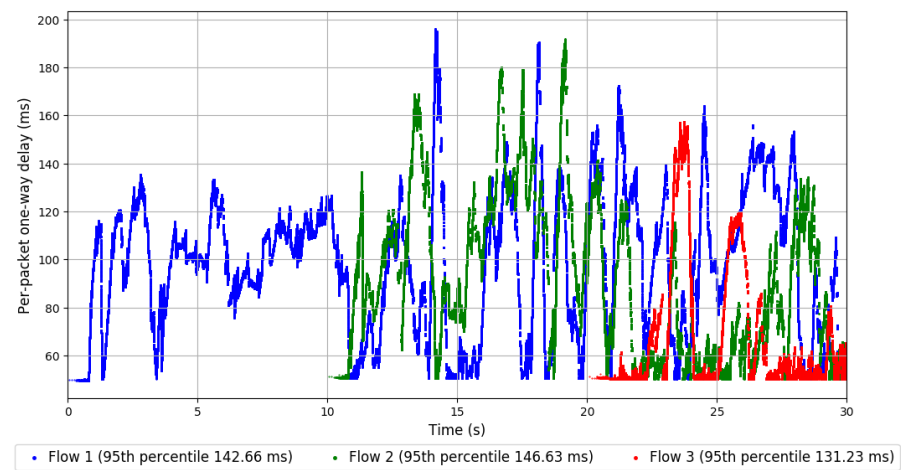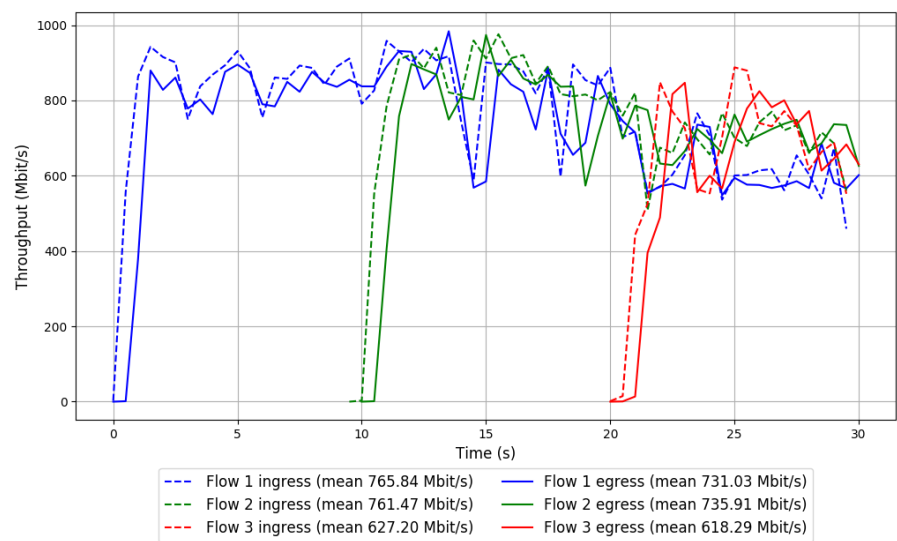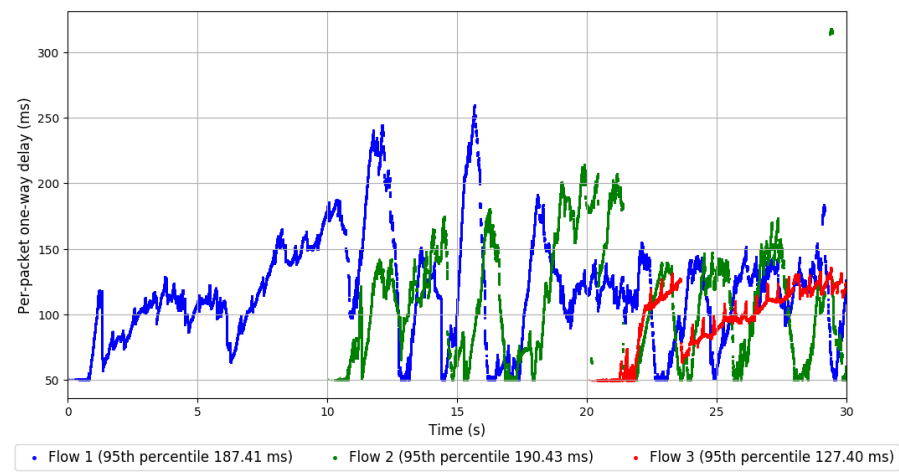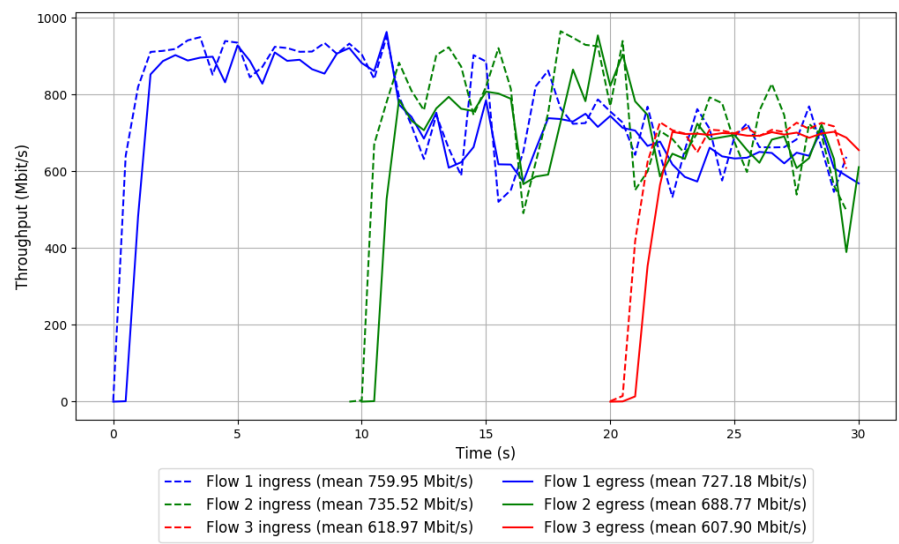## Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2018-07-12 04:06:40
End at: 2018-07-12 04:07:10
Local clock offset: -0.108 ms
Remote clock offset: -0.017 ms


# Below is generated by plot.py at 2018-07-12 09:06:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1296.86 Mbit/s
95th percentile per-packet one-way delay: 214.701 ms
Loss rate: 4.37%
-- Flow 1:
Average throughput: 687.58 Mbit/s
95th percentile per-packet one-way delay: 220.610 ms
Loss rate: 2.61%
-- Flow 2:
Average throughput: 701.32 Mbit/s
95th percentile per-packet one-way delay: 179.249 ms
Loss rate: 7.38%
-- Flow 3:
Average throughput: 425.25 Mbit/s
95th percentile per-packet one-way delay: 219.337 ms
Loss rate: 2.46%
```

Run 1: Report of FillP — Data Link

- - - - Flow 1 ingress (mean 706.03 Mbit/s)   —— Flow 1 egress (mean 687.58 Mbit/s)
- - - - Flow 2 ingress (mean 757.20 Mbit/s)   —— Flow 2 egress (mean 701.32 Mbit/s)
- - - - Flow 3 ingress (mean 435.96 Mbit/s)   —— Flow 3 egress (mean 425.25 Mbit/s)

• Flow 1 (95th percentile 220.61 ms)   • Flow 2 (95th percentile 179.25 ms)   • Flow 3 (95th percentile 219.34 ms)

```
Run 2: Statistics of FillP

Start at: 2018-07-12 04:31:43
End at: 2018-07-12 04:32:13
Local clock offset: -0.092 ms
Remote clock offset: -0.045 ms


# Below is generated by plot.py at 2018-07-12 09:09:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1425.70 Mbit/s
95th percentile per-packet one-way delay: 143.190 ms
Loss rate: 3.68%
-- Flow 1:
Average throughput: 731.03 Mbit/s
95th percentile per-packet one-way delay: 142.662 ms
Loss rate: 4.52%
-- Flow 2:
Average throughput: 735.91 Mbit/s
95th percentile per-packet one-way delay: 146.634 ms
Loss rate: 3.36%
-- Flow 3:
Average throughput: 618.29 Mbit/s
95th percentile per-packet one-way delay: 131.231 ms
Loss rate: 1.38%
```
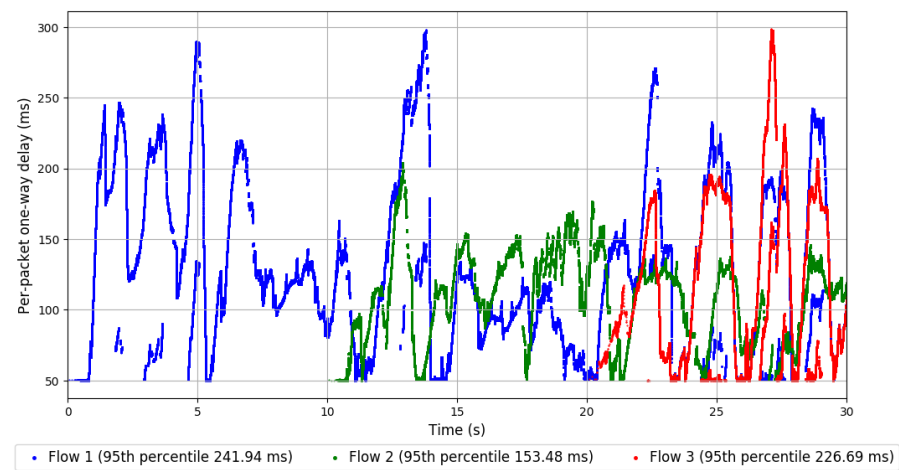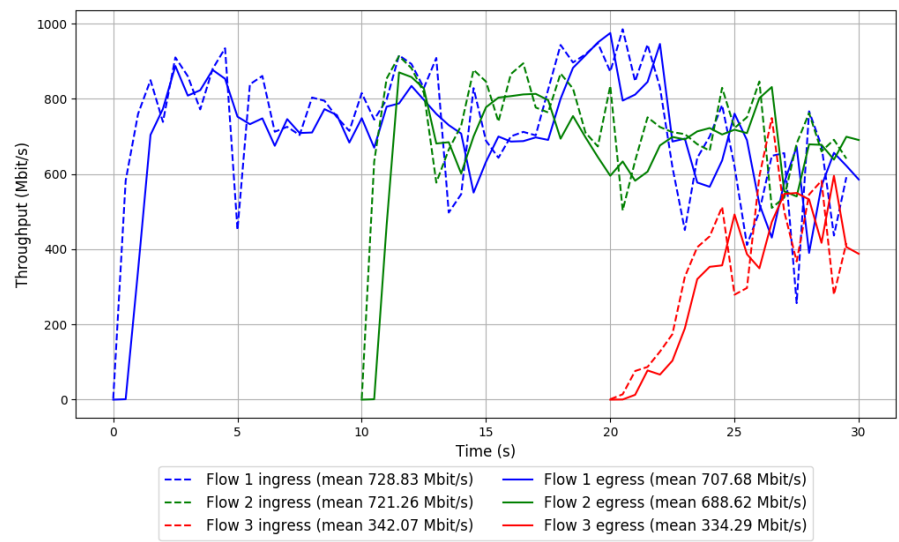
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 765.84 Mbit/s)   Flow 1 egress (mean 731.03 Mbit/s)
Flow 2 ingress (mean 761.47 Mbit/s)   Flow 2 egress (mean 735.91 Mbit/s)
Flow 3 ingress (mean 627.20 Mbit/s)   Flow 3 egress (mean 618.29 Mbit/s)

Flow 1 (95th percentile 142.66 ms)   Flow 2 (95th percentile 146.63 ms)   Flow 3 (95th percentile 131.23 ms)
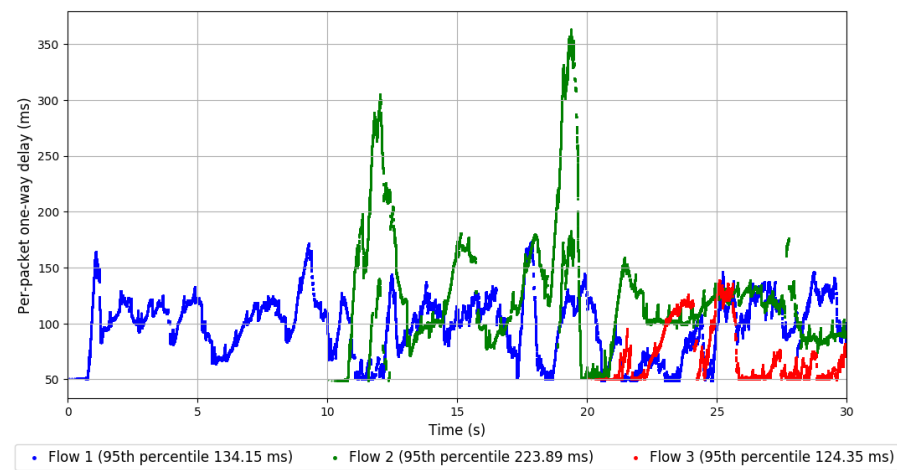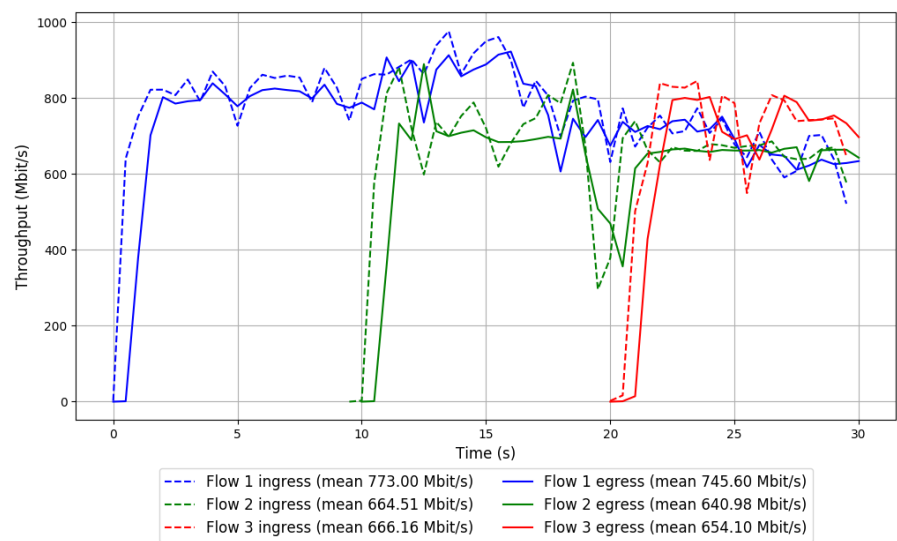
```
Run 3: Statistics of FillP

Start at: 2018-07-12 04:57:05
End at: 2018-07-12 04:57:35
Local clock offset: -0.083 ms
Remote clock offset: -0.018 ms


# Below is generated by plot.py at 2018-07-12 09:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1387.06 Mbit/s
95th percentile per-packet one-way delay: 186.505 ms
Loss rate: 4.65%
-- Flow 1:
Average throughput: 727.18 Mbit/s
95th percentile per-packet one-way delay: 187.413 ms
Loss rate: 4.31%
-- Flow 2:
Average throughput: 688.77 Mbit/s
95th percentile per-packet one-way delay: 190.433 ms
Loss rate: 6.36%
-- Flow 3:
Average throughput: 607.90 Mbit/s
95th percentile per-packet one-way delay: 127.403 ms
Loss rate: 1.80%
```
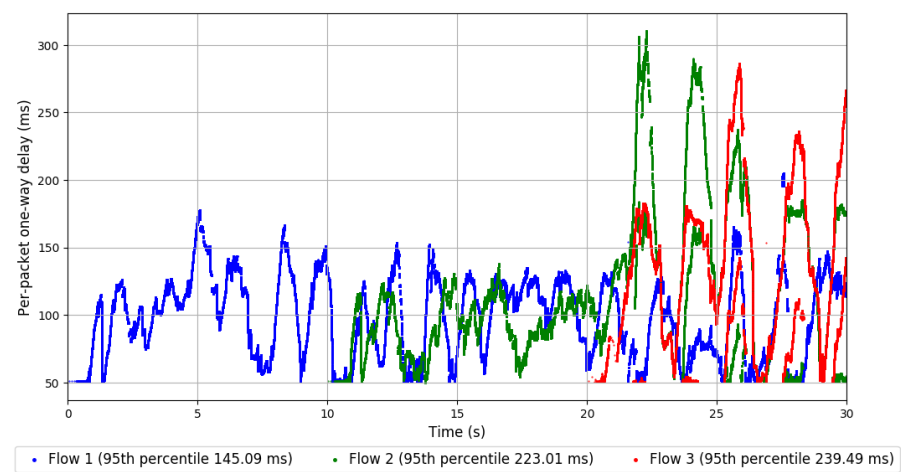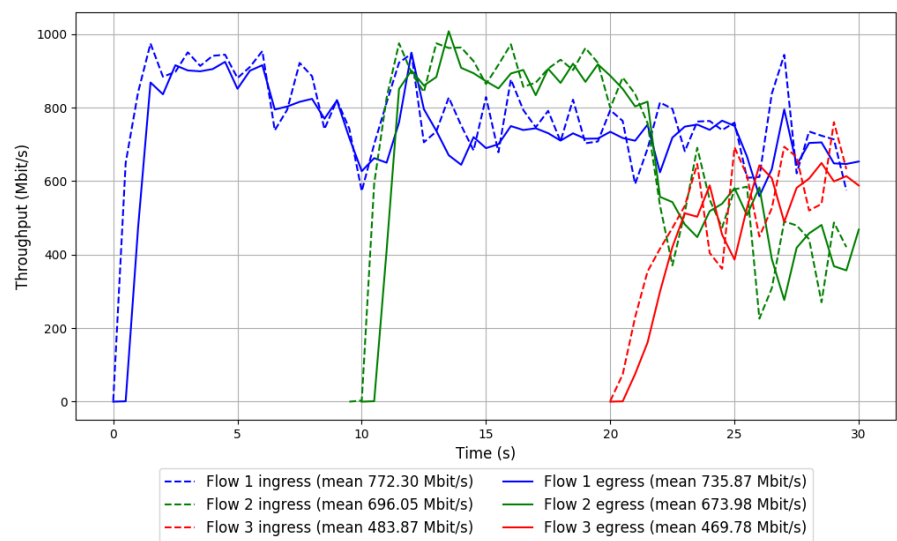
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2018-07-12 05:22:32
End at: 2018-07-12 05:23:02
Local clock offset: -0.454 ms
Remote clock offset: 0.044 ms

# Below is generated by plot.py at 2018-07-12 09:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1276.60 Mbit/s
95th percentile per-packet one-way delay: 227.594 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 707.68 Mbit/s
95th percentile per-packet one-way delay: 241.940 ms
Loss rate: 2.90%
-- Flow 2:
Average throughput: 688.62 Mbit/s
95th percentile per-packet one-way delay: 153.476 ms
Loss rate: 4.52%
-- Flow 3:
Average throughput: 334.29 Mbit/s
95th percentile per-packet one-way delay: 226.695 ms
Loss rate: 2.25%
```

Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2018-07-12 05:47:44
End at: 2018-07-12 05:48:14
Local clock offset: -0.043 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2018-07-12 09:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1389.66 Mbit/s
95th percentile per-packet one-way delay: 164.729 ms
Loss rate: 3.27%
-- Flow 1:
Average throughput: 745.60 Mbit/s
95th percentile per-packet one-way delay: 134.145 ms
Loss rate: 3.54%
-- Flow 2:
Average throughput: 640.98 Mbit/s
95th percentile per-packet one-way delay: 223.893 ms
Loss rate: 3.52%
-- Flow 3:
Average throughput: 654.10 Mbit/s
95th percentile per-packet one-way delay: 124.354 ms
Loss rate: 1.81%
```
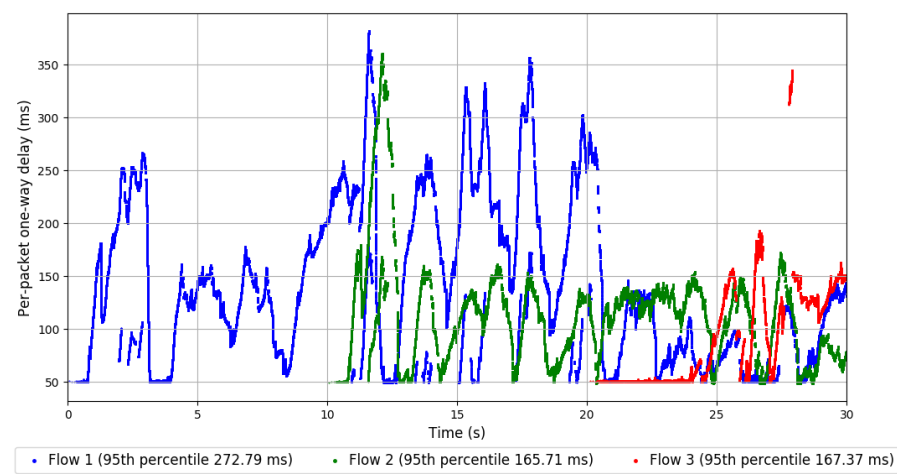
Run 5: Report of FillP — Data Link

```
Run 6: Statistics of FillP

Start at: 2018-07-12 06:12:31
End at: 2018-07-12 06:13:01
Local clock offset: -0.127 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-07-12 09:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1340.45 Mbit/s
95th percentile per-packet one-way delay: 191.144 ms
Loss rate: 3.99%
-- Flow 1:
Average throughput: 735.87 Mbit/s
95th percentile per-packet one-way delay: 145.091 ms
Loss rate: 4.72%
-- Flow 2:
Average throughput: 673.98 Mbit/s
95th percentile per-packet one-way delay: 223.007 ms
Loss rate: 3.16%
-- Flow 3:
Average throughput: 469.78 Mbit/s
95th percentile per-packet one-way delay: 239.487 ms
Loss rate: 2.92%
```
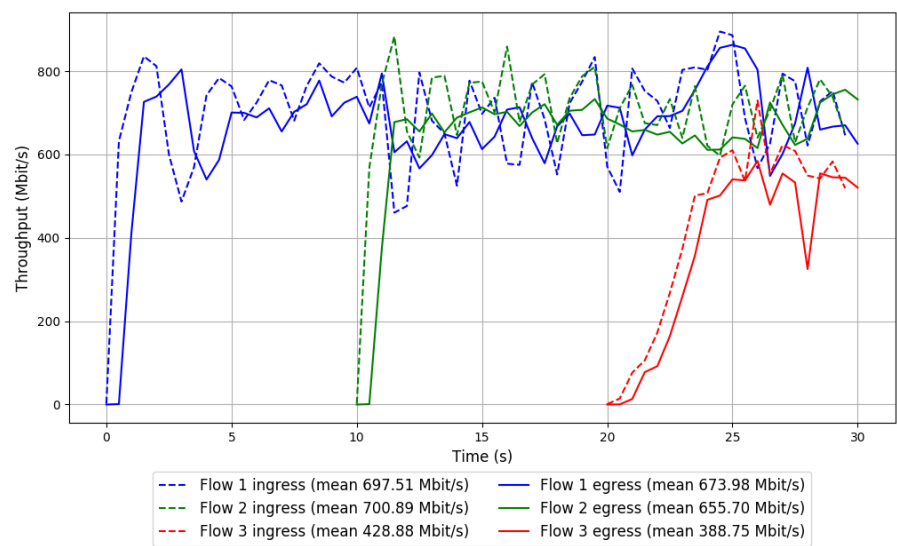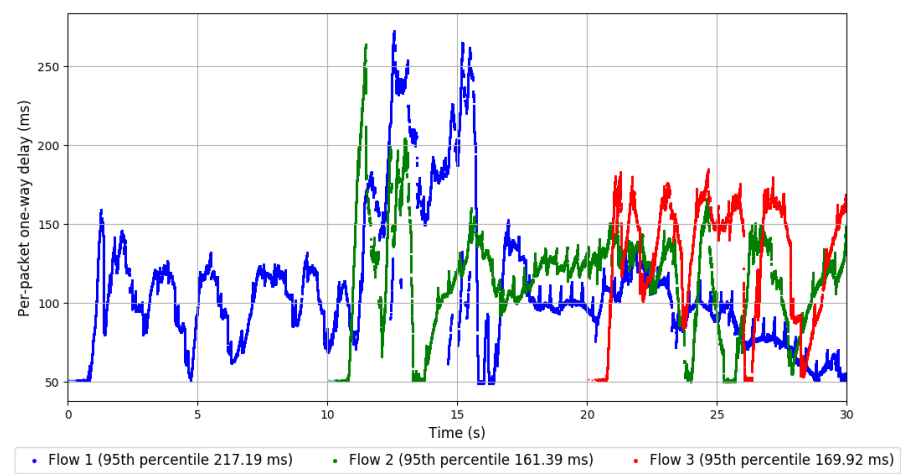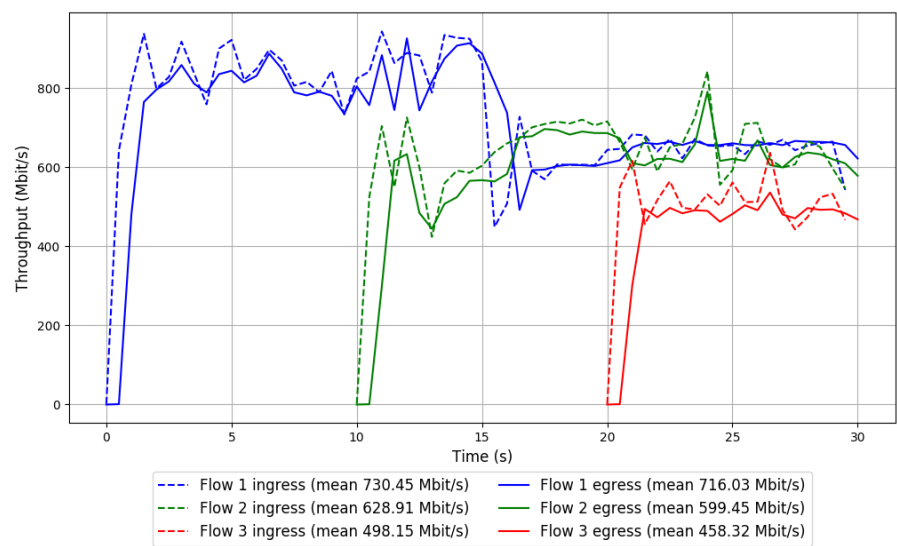
Run 6: Report of FillP — Data Link

Flow 1 ingress (mean 772.30 Mbit/s)   Flow 1 egress (mean 735.87 Mbit/s)
Flow 2 ingress (mean 696.05 Mbit/s)   Flow 2 egress (mean 673.98 Mbit/s)
Flow 3 ingress (mean 483.87 Mbit/s)   Flow 3 egress (mean 469.78 Mbit/s)

Flow 1 (95th percentile 145.09 ms)   Flow 2 (95th percentile 223.01 ms)   Flow 3 (95th percentile 239.49 ms)

75

```
Run 7: Statistics of FillP

Start at: 2018-07-12 06:37:34
End at: 2018-07-12 06:38:04
Local clock offset: 0.28 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2018-07-12 09:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1238.48 Mbit/s
95th percentile per-packet one-way delay: 259.273 ms
Loss rate: 5.11%
-- Flow 1:
Average throughput: 673.98 Mbit/s
95th percentile per-packet one-way delay: 272.794 ms
Loss rate: 3.37%
-- Flow 2:
Average throughput: 655.70 Mbit/s
95th percentile per-packet one-way delay: 165.706 ms
Loss rate: 6.44%
-- Flow 3:
Average throughput: 388.75 Mbit/s
95th percentile per-packet one-way delay: 167.368 ms
Loss rate: 9.35%
```
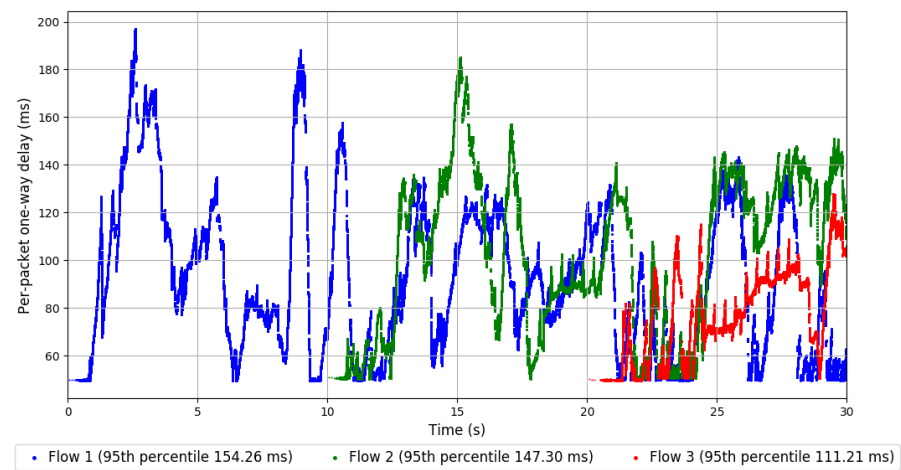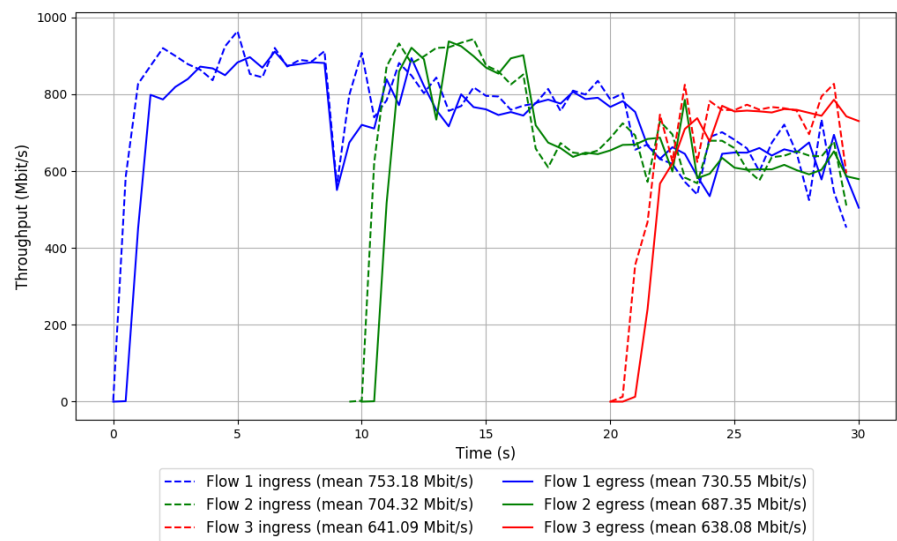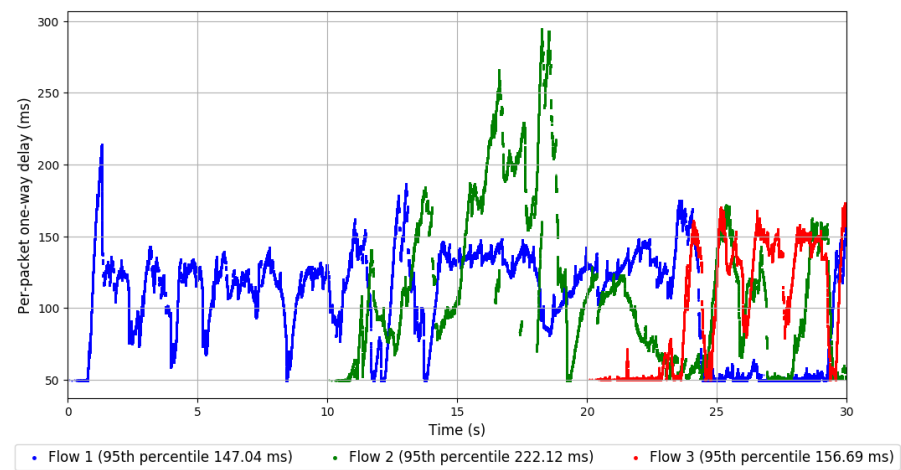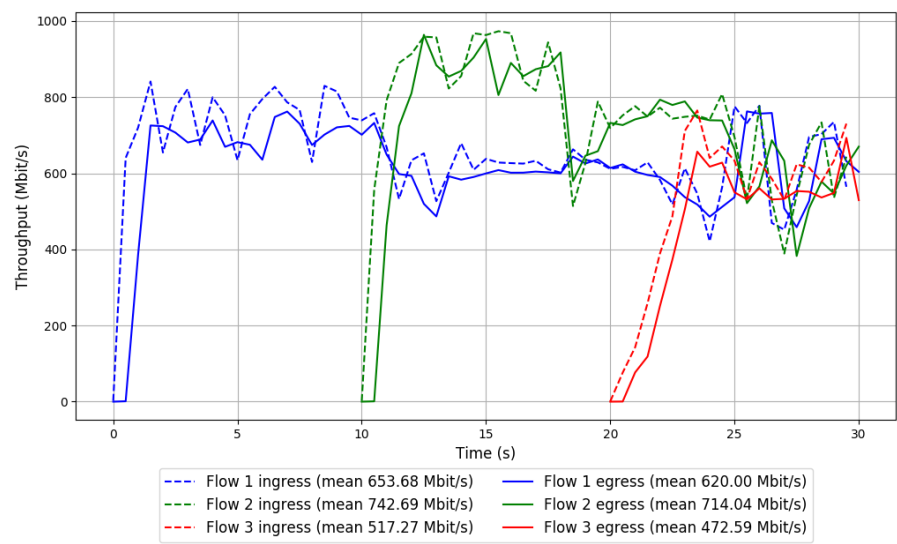
Run 7: Report of FillP — Data Link

```
Run 8: Statistics of FillP

Start at: 2018-07-12 07:02:16
End at: 2018-07-12 07:02:46
Local clock offset: -0.05 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2018-07-12 09:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1266.93 Mbit/s
95th percentile per-packet one-way delay: 192.639 ms
Loss rate: 3.60%
-- Flow 1:
Average throughput: 716.03 Mbit/s
95th percentile per-packet one-way delay: 217.187 ms
Loss rate: 1.98%
-- Flow 2:
Average throughput: 599.45 Mbit/s
95th percentile per-packet one-way delay: 161.393 ms
Loss rate: 4.69%
-- Flow 3:
Average throughput: 458.32 Mbit/s
95th percentile per-packet one-way delay: 169.917 ms
Loss rate: 8.00%
```

Run 8: Report of FillP — Data Link

Flow 1 ingress (mean 730.45 Mbit/s)   Flow 1 egress (mean 716.03 Mbit/s)
Flow 2 ingress (mean 628.91 Mbit/s)   Flow 2 egress (mean 599.45 Mbit/s)
Flow 3 ingress (mean 498.15 Mbit/s)   Flow 3 egress (mean 458.32 Mbit/s)

Flow 1 (95th percentile 217.19 ms)   Flow 2 (95th percentile 161.39 ms)   Flow 3 (95th percentile 169.92 ms)
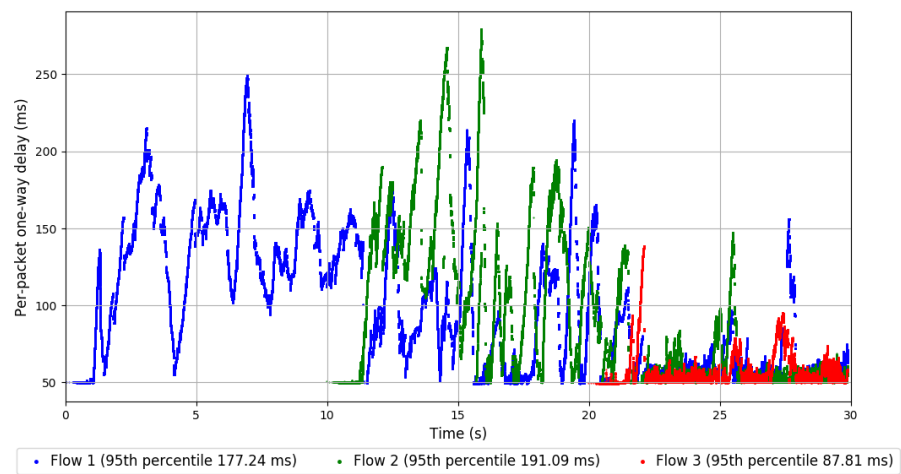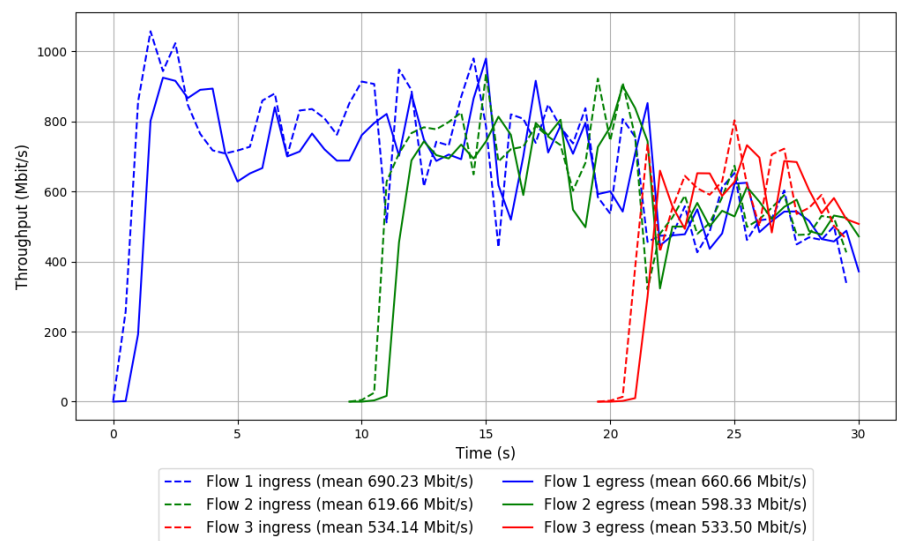
79

```
Run 9: Statistics of FillP

Start at: 2018-07-12 07:27:11
End at: 2018-07-12 07:27:41
Local clock offset: -0.015 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2018-07-12 09:35:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1399.16 Mbit/s
95th percentile per-packet one-way delay: 146.904 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 730.55 Mbit/s
95th percentile per-packet one-way delay: 154.256 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 687.35 Mbit/s
95th percentile per-packet one-way delay: 147.300 ms
Loss rate: 2.41%
-- Flow 3:
Average throughput: 638.08 Mbit/s
95th percentile per-packet one-way delay: 111.206 ms
Loss rate: 0.46%
```
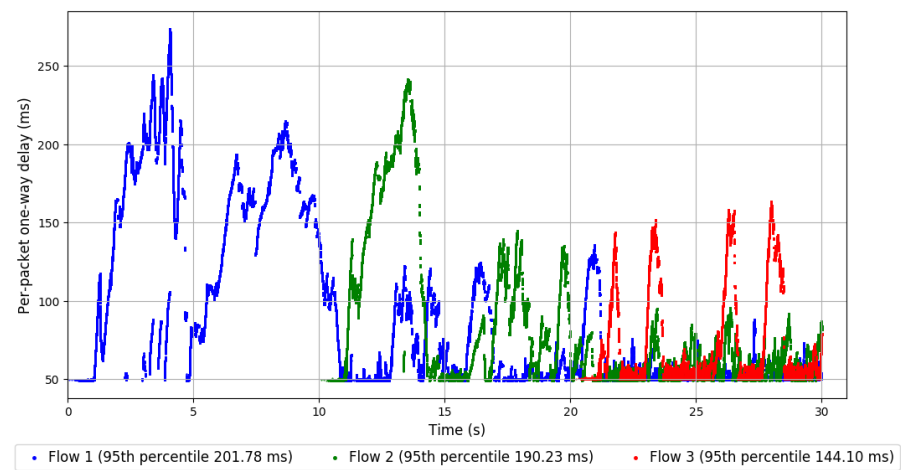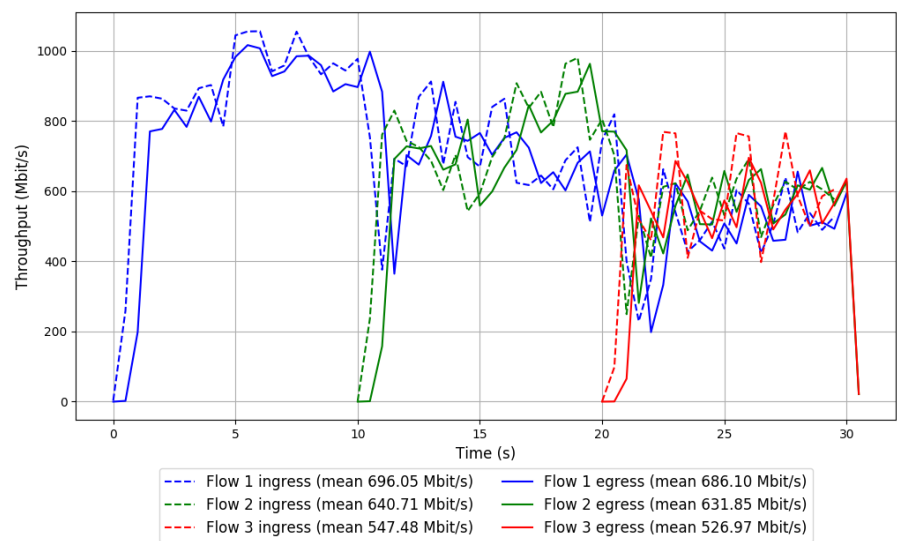
Run 9: Report of FillP — Data Link

```
Run 10: Statistics of FillP

Start at: 2018-07-12 07:52:14
End at: 2018-07-12 07:52:44
Local clock offset: -0.044 ms
Remote clock offset: -0.019 ms


# Below is generated by plot.py at 2018-07-12 09:35:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1251.24 Mbit/s
95th percentile per-packet one-way delay: 186.237 ms
Loss rate: 5.11%
-- Flow 1:
Average throughput: 620.00 Mbit/s
95th percentile per-packet one-way delay: 147.041 ms
Loss rate: 5.14%
-- Flow 2:
Average throughput: 714.04 Mbit/s
95th percentile per-packet one-way delay: 222.121 ms
Loss rate: 3.86%
-- Flow 3:
Average throughput: 472.59 Mbit/s
95th percentile per-packet one-way delay: 156.693 ms
Loss rate: 8.65%
```

Run 10: Report of FillP — Data Link

Flow 1 ingress (mean 653.68 Mbit/s) --- Flow 1 egress (mean 620.00 Mbit/s)
Flow 2 ingress (mean 742.69 Mbit/s) --- Flow 2 egress (mean 714.04 Mbit/s)
Flow 3 ingress (mean 517.27 Mbit/s) --- Flow 3 egress (mean 472.59 Mbit/s)

Flow 1 (95th percentile 147.04 ms) • Flow 2 (95th percentile 222.12 ms) • Flow 3 (95th percentile 156.69 ms)
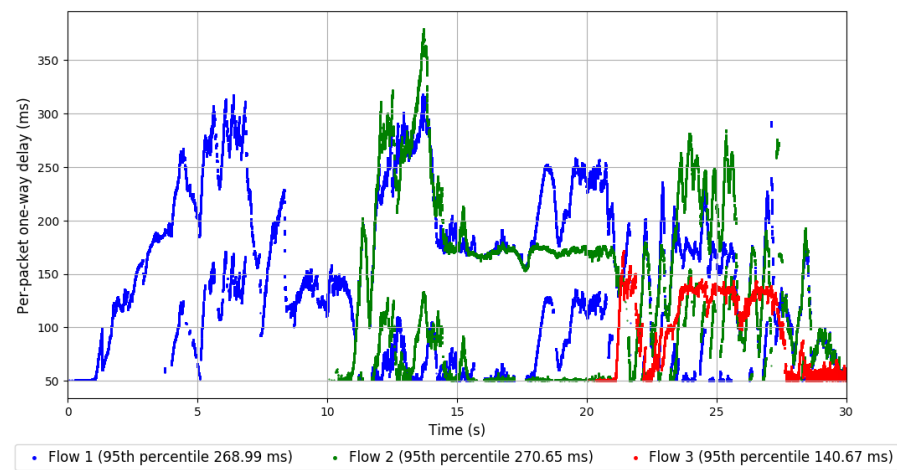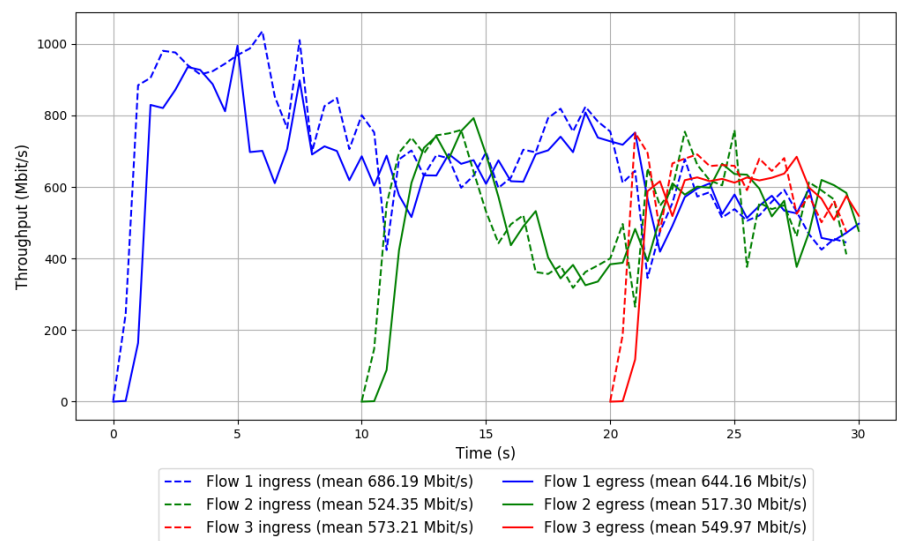
```
Run 1: Statistics of FillP-Sheep

Start at: 2018-07-12 03:51:43
End at: 2018-07-12 03:52:13
Local clock offset: 0.267 ms
Remote clock offset: -0.041 ms


# Below is generated by plot.py at 2018-07-12 09:35:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1237.04 Mbit/s
95th percentile per-packet one-way delay: 177.764 ms
Loss rate: 3.44%
-- Flow 1:
Average throughput: 660.66 Mbit/s
95th percentile per-packet one-way delay: 177.240 ms
Loss rate: 4.29%
-- Flow 2:
Average throughput: 598.33 Mbit/s
95th percentile per-packet one-way delay: 191.087 ms
Loss rate: 3.45%
-- Flow 3:
Average throughput: 533.50 Mbit/s
95th percentile per-packet one-way delay: 87.807 ms
Loss rate: 0.12%
```

Run 1: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 690.23 Mbit/s) --- Flow 1 egress (mean 660.66 Mbit/s)
Flow 2 ingress (mean 619.66 Mbit/s) --- Flow 2 egress (mean 598.33 Mbit/s)
Flow 3 ingress (mean 534.14 Mbit/s) --- Flow 3 egress (mean 533.50 Mbit/s)

Flow 1 (95th percentile 177.24 ms)   Flow 2 (95th percentile 191.09 ms)   Flow 3 (95th percentile 87.81 ms)

```
Run 2: Statistics of FillP-Sheep

Start at: 2018-07-12 04:16:57
End at: 2018-07-12 04:17:27
Local clock offset: 0.267 ms
Remote clock offset: -0.047 ms


# Below is generated by plot.py at 2018-07-12 09:35:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1280.13 Mbit/s
95th percentile per-packet one-way delay: 197.323 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 686.10 Mbit/s
95th percentile per-packet one-way delay: 201.782 ms
Loss rate: 1.42%
-- Flow 2:
Average throughput: 631.85 Mbit/s
95th percentile per-packet one-way delay: 190.234 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 526.97 Mbit/s
95th percentile per-packet one-way delay: 144.104 ms
Loss rate: 3.57%
```
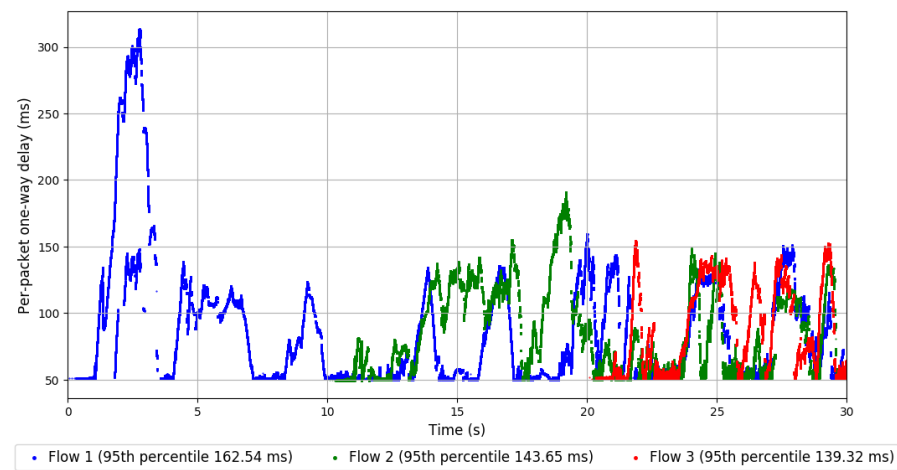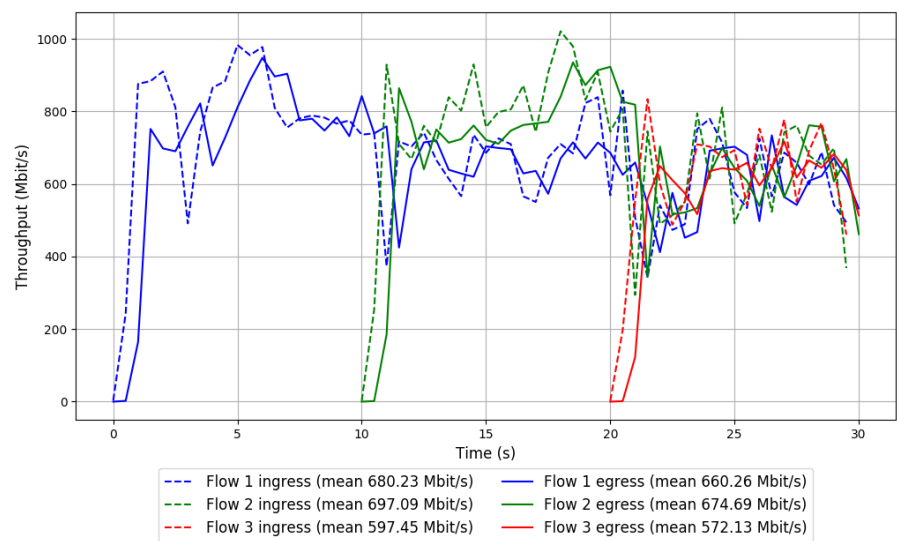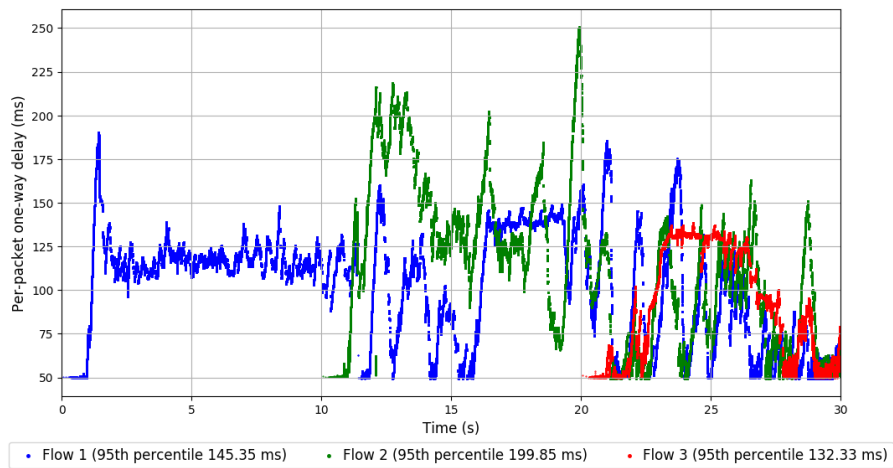
Run 2: Report of FillP-Sheep — Data Link

- Flow 1 ingress (mean 696.05 Mbit/s)
- Flow 1 egress (mean 686.10 Mbit/s)
- Flow 2 ingress (mean 640.71 Mbit/s)
- Flow 2 egress (mean 631.85 Mbit/s)
- Flow 3 ingress (mean 547.48 Mbit/s)
- Flow 3 egress (mean 526.97 Mbit/s)

- Flow 1 (95th percentile 201.78 ms)
- Flow 2 (95th percentile 190.23 ms)
- Flow 3 (95th percentile 144.10 ms)

87

```
Run 3: Statistics of FillP-Sheep

Start at: 2018-07-12 04:42:09
End at: 2018-07-12 04:42:39
Local clock offset: -0.116 ms
Remote clock offset: -0.006 ms


# Below is generated by plot.py at 2018-07-12 09:35:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1170.44 Mbit/s
95th percentile per-packet one-way delay: 264.550 ms
Loss rate: 4.43%
-- Flow 1:
Average throughput: 644.16 Mbit/s
95th percentile per-packet one-way delay: 268.987 ms
Loss rate: 6.11%
-- Flow 2:
Average throughput: 517.30 Mbit/s
95th percentile per-packet one-way delay: 270.652 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 549.97 Mbit/s
95th percentile per-packet one-way delay: 140.673 ms
Loss rate: 4.05%
```
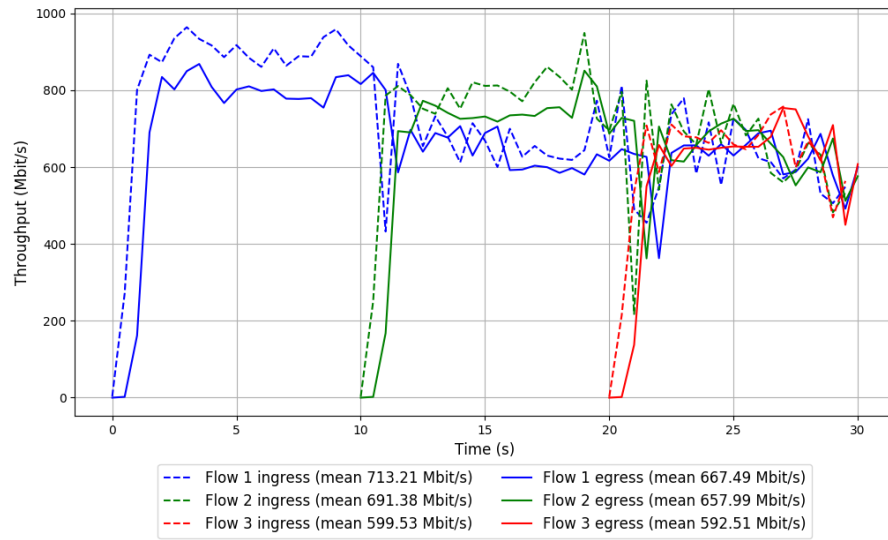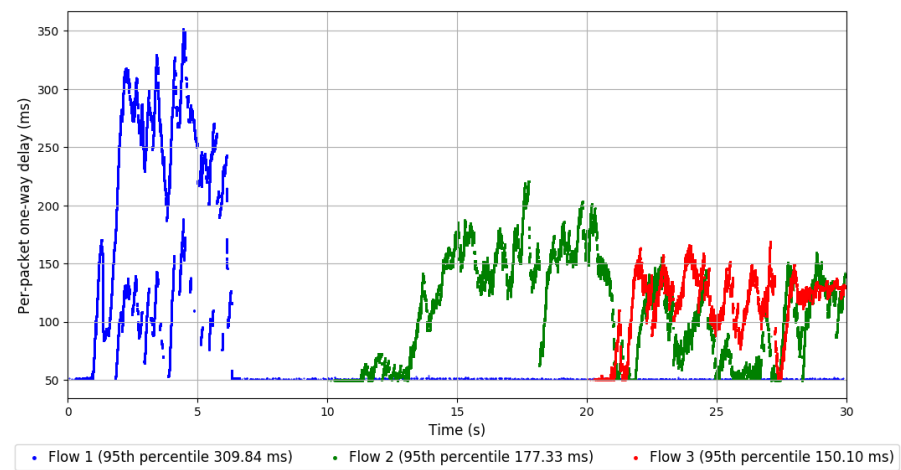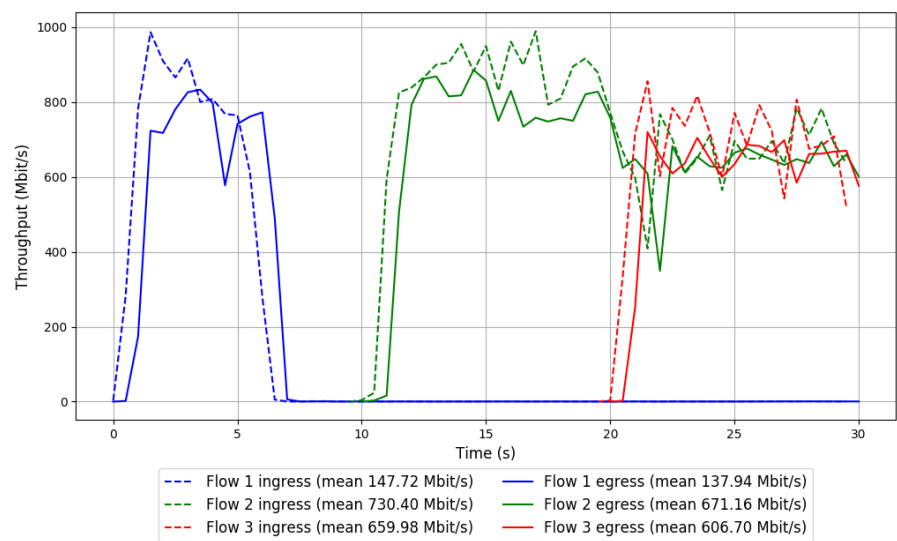
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 686.19 Mbit/s) --- Flow 1 egress (mean 644.16 Mbit/s)
Flow 2 ingress (mean 524.35 Mbit/s) --- Flow 2 egress (mean 517.30 Mbit/s)
Flow 3 ingress (mean 573.21 Mbit/s) --- Flow 3 egress (mean 549.97 Mbit/s)

Flow 1 (95th percentile 268.99 ms) · Flow 2 (95th percentile 270.65 ms) · Flow 3 (95th percentile 140.67 ms)
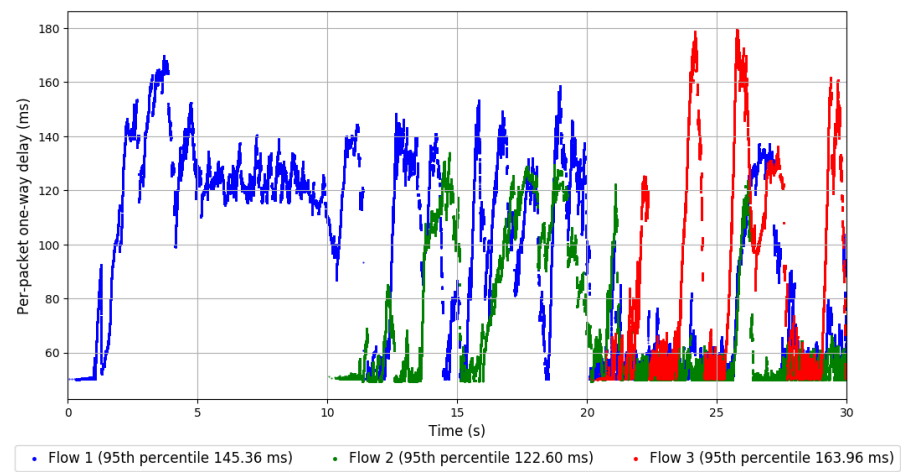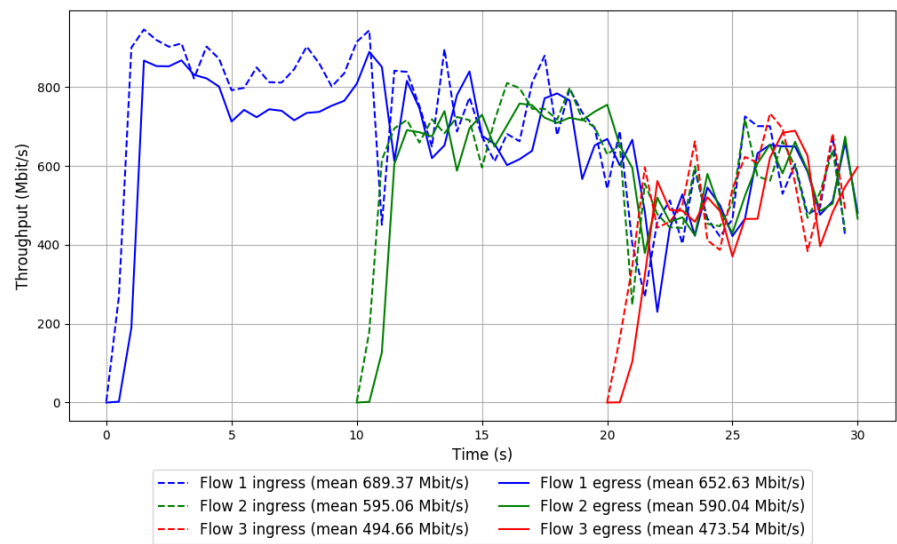
```
Run 4: Statistics of FillP-Sheep

Start at: 2018-07-12 05:07:42
End at: 2018-07-12 05:08:12
Local clock offset: -0.428 ms
Remote clock offset: 0.019 ms


# Below is generated by plot.py at 2018-07-12 09:37:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1298.18 Mbit/s
95th percentile per-packet one-way delay: 146.983 ms
Loss rate: 3.22%
-- Flow 1:
Average throughput: 660.26 Mbit/s
95th percentile per-packet one-way delay: 162.543 ms
Loss rate: 2.94%
-- Flow 2:
Average throughput: 674.69 Mbit/s
95th percentile per-packet one-way delay: 143.651 ms
Loss rate: 3.20%
-- Flow 3:
Average throughput: 572.13 Mbit/s
95th percentile per-packet one-way delay: 139.319 ms
Loss rate: 4.24%
```

Run 4: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 680.23 Mbit/s) — Flow 1 egress (mean 660.26 Mbit/s)
- - - - Flow 2 ingress (mean 697.09 Mbit/s) — Flow 2 egress (mean 674.69 Mbit/s)
- - - - Flow 3 ingress (mean 597.45 Mbit/s) — Flow 3 egress (mean 572.13 Mbit/s)

- Flow 1 (95th percentile 162.54 ms)   - Flow 2 (95th percentile 143.65 ms)   - Flow 3 (95th percentile 139.32 ms)
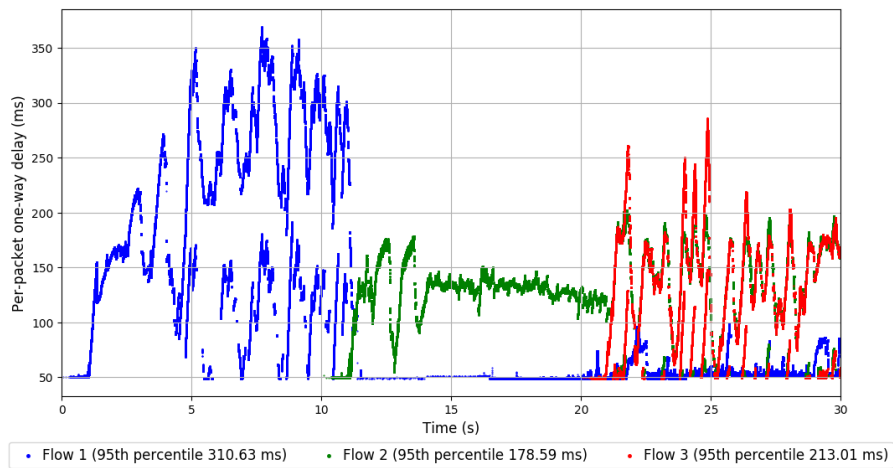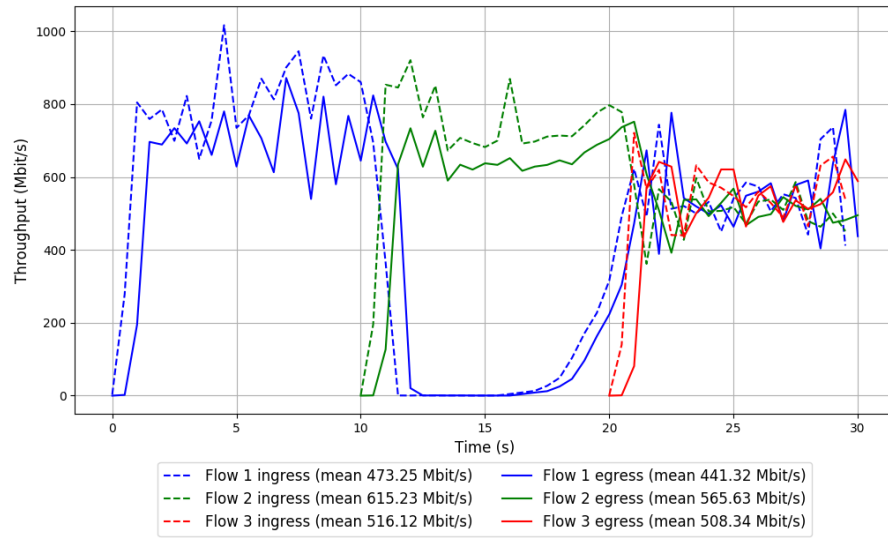
```
Run 5: Statistics of FillP-Sheep

Start at: 2018-07-12 05:32:56
End at: 2018-07-12 05:33:26
Local clock offset: 0.279 ms
Remote clock offset: 0.01 ms


# Below is generated by plot.py at 2018-07-12 09:37:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1301.81 Mbit/s
95th percentile per-packet one-way delay: 172.725 ms
Loss rate: 5.11%
-- Flow 1:
Average throughput: 667.49 Mbit/s
95th percentile per-packet one-way delay: 145.346 ms
Loss rate: 6.39%
-- Flow 2:
Average throughput: 657.99 Mbit/s
95th percentile per-packet one-way delay: 199.854 ms
Loss rate: 4.83%
-- Flow 3:
Average throughput: 592.51 Mbit/s
95th percentile per-packet one-way delay: 132.333 ms
Loss rate: 1.13%
```
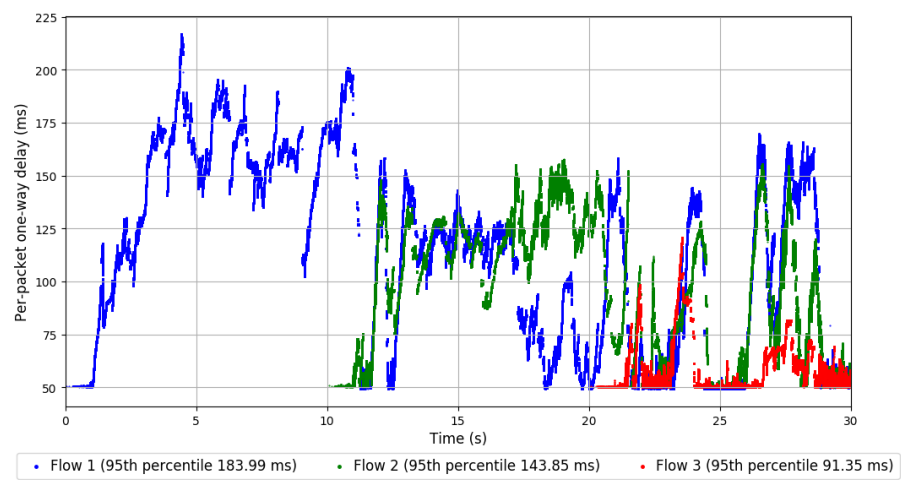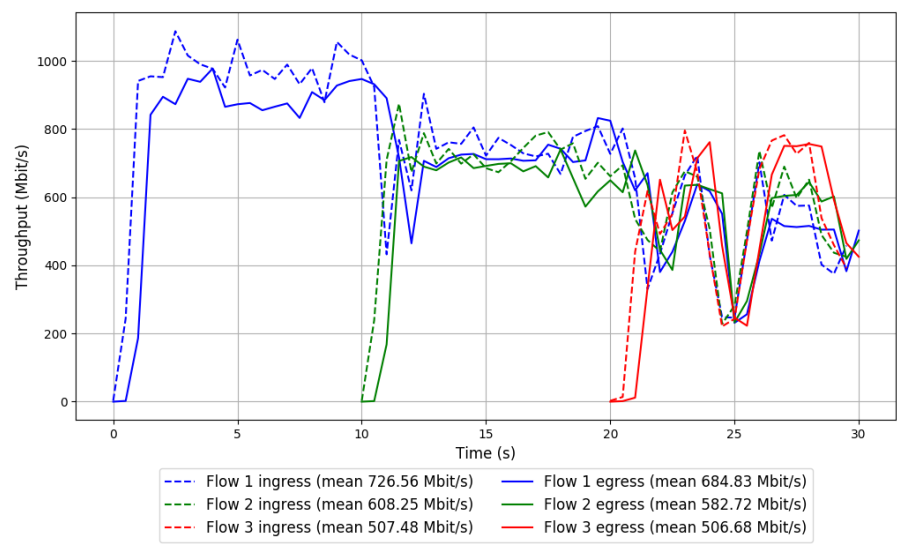
Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 713.21 Mbit/s)   Flow 1 egress (mean 667.49 Mbit/s)
Flow 2 ingress (mean 691.38 Mbit/s)   Flow 2 egress (mean 657.99 Mbit/s)
Flow 3 ingress (mean 599.53 Mbit/s)   Flow 3 egress (mean 592.51 Mbit/s)

Flow 1 (95th percentile 145.35 ms)   Flow 2 (95th percentile 199.85 ms)   Flow 3 (95th percentile 132.33 ms)
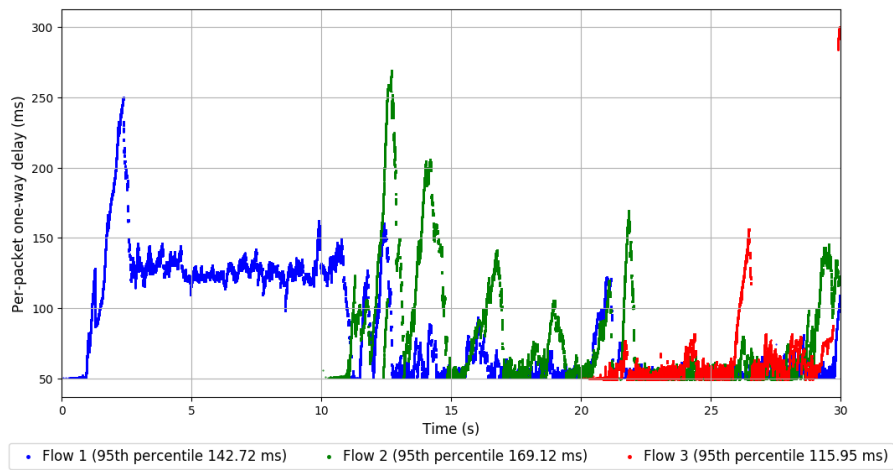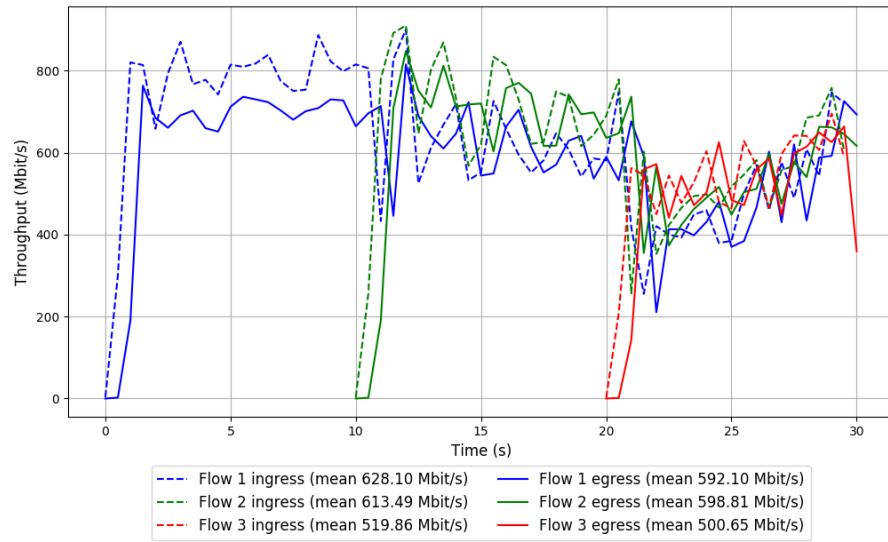
93

```
Run 6: Statistics of FillP-Sheep

Start at: 2018-07-12 05:58:07
End at: 2018-07-12 05:58:37
Local clock offset: -0.05 ms
Remote clock offset: 0.021 ms


# Below is generated by plot.py at 2018-07-12 09:37:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 786.11 Mbit/s
95th percentile per-packet one-way delay: 269.664 ms
Loss rate: 7.83%
-- Flow 1:
Average throughput: 137.94 Mbit/s
95th percentile per-packet one-way delay: 309.840 ms
Loss rate: 6.62%
-- Flow 2:
Average throughput: 671.16 Mbit/s
95th percentile per-packet one-way delay: 177.327 ms
Loss rate: 8.10%
-- Flow 3:
Average throughput: 606.70 Mbit/s
95th percentile per-packet one-way delay: 150.100 ms
Loss rate: 8.07%
```

Run 6: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 147.72 Mbit/s) ——— Flow 1 egress (mean 137.94 Mbit/s)
- - - - Flow 2 ingress (mean 730.40 Mbit/s) ——— Flow 2 egress (mean 671.16 Mbit/s)
- - - - Flow 3 ingress (mean 659.98 Mbit/s) ——— Flow 3 egress (mean 606.70 Mbit/s)

- Flow 1 (95th percentile 309.84 ms)　　• Flow 2 (95th percentile 177.33 ms)　　• Flow 3 (95th percentile 150.10 ms)

95

```
Run 7: Statistics of FillP-Sheep

Start at: 2018-07-12 06:22:53
End at: 2018-07-12 06:23:23
Local clock offset: 0.225 ms
Remote clock offset: -0.013 ms


# Below is generated by plot.py at 2018-07-12 09:54:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1201.71 Mbit/s
95th percentile per-packet one-way delay: 143.167 ms
Loss rate: 3.77%
-- Flow 1:
Average throughput: 652.63 Mbit/s
95th percentile per-packet one-way delay: 145.364 ms
Loss rate: 5.33%
-- Flow 2:
Average throughput: 590.04 Mbit/s
95th percentile per-packet one-way delay: 122.599 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 473.54 Mbit/s
95th percentile per-packet one-way delay: 163.959 ms
Loss rate: 4.28%
```

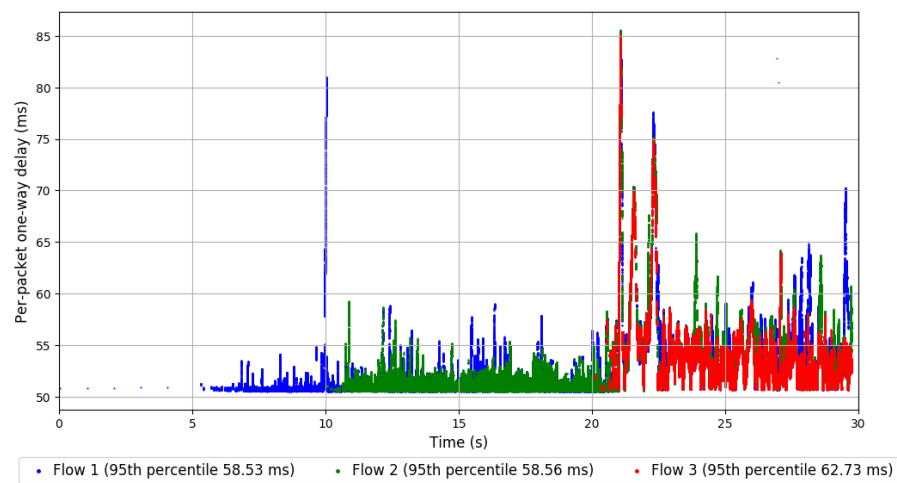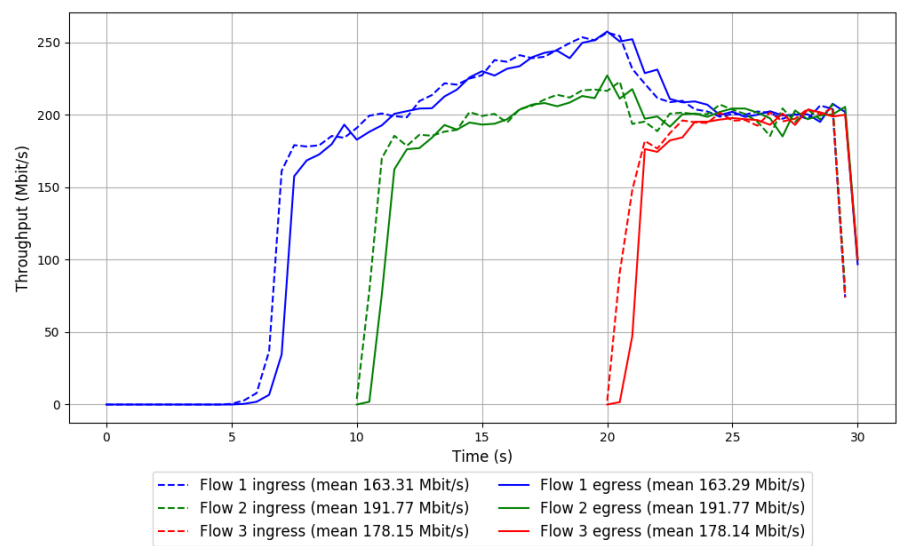Run 7: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 689.37 Mbit/s)   Flow 1 egress (mean 652.63 Mbit/s)
Flow 2 ingress (mean 595.06 Mbit/s)   Flow 2 egress (mean 590.04 Mbit/s)
Flow 3 ingress (mean 494.66 Mbit/s)   Flow 3 egress (mean 473.54 Mbit/s)

Flow 1 (95th percentile 145.36 ms)   Flow 2 (95th percentile 122.60 ms)   Flow 3 (95th percentile 163.96 ms)
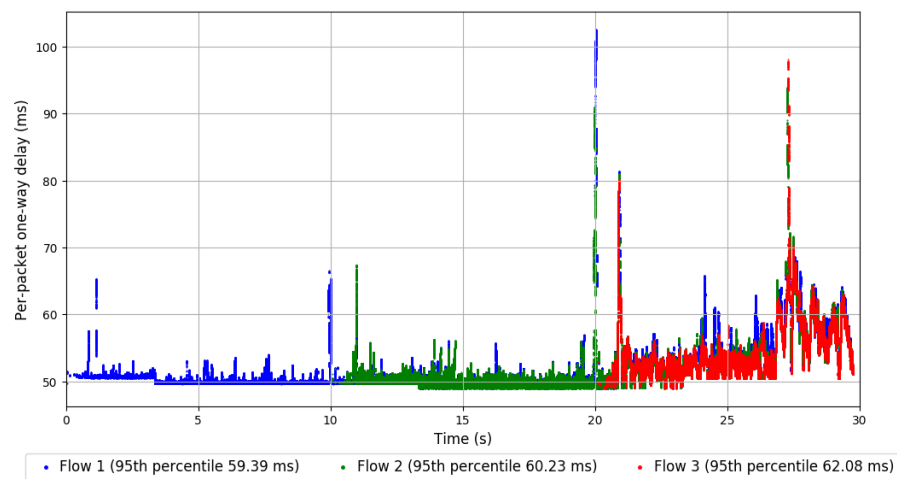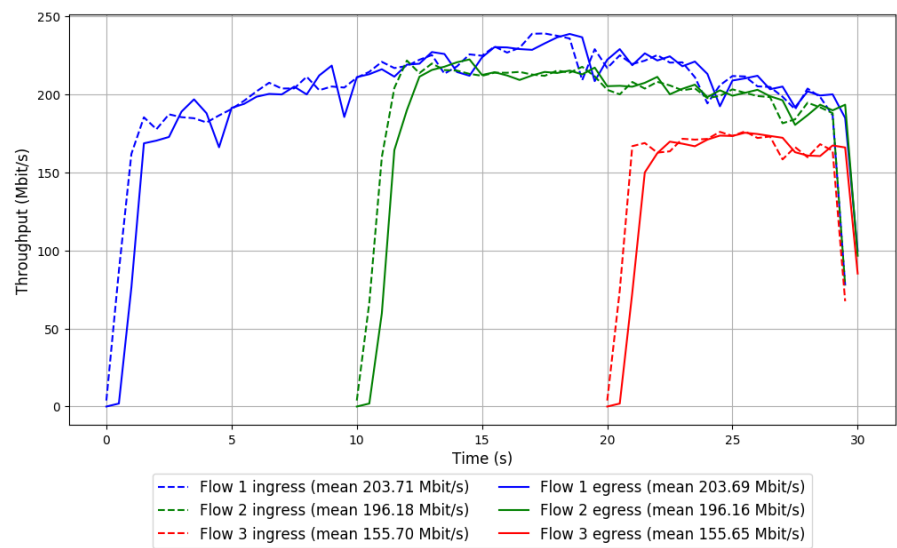
```
Run 8: Statistics of FillP-Sheep

Start at: 2018-07-12 06:47:50
End at: 2018-07-12 06:48:20
Local clock offset: -0.092 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2018-07-12 09:54:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 985.73 Mbit/s
95th percentile per-packet one-way delay: 284.307 ms
Loss rate: 6.41%
-- Flow 1:
Average throughput: 441.32 Mbit/s
95th percentile per-packet one-way delay: 310.630 ms
Loss rate: 6.75%
-- Flow 2:
Average throughput: 565.63 Mbit/s
95th percentile per-packet one-way delay: 178.586 ms
Loss rate: 8.07%
-- Flow 3:
Average throughput: 508.34 Mbit/s
95th percentile per-packet one-way delay: 213.013 ms
Loss rate: 1.49%
```

Run 8: Report of FillP-Sheep — Data Link

```
Run 9: Statistics of FillP-Sheep

Start at: 2018-07-12 07:12:35
End at: 2018-07-12 07:13:05
Local clock offset: 0.319 ms
Remote clock offset: -0.036 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1240.49 Mbit/s
95th percentile per-packet one-way delay: 173.898 ms
Loss rate: 4.54%
-- Flow 1:
Average throughput: 684.83 Mbit/s
95th percentile per-packet one-way delay: 183.987 ms
Loss rate: 5.74%
-- Flow 2:
Average throughput: 582.72 Mbit/s
95th percentile per-packet one-way delay: 143.849 ms
Loss rate: 4.20%
-- Flow 3:
Average throughput: 506.68 Mbit/s
95th percentile per-packet one-way delay: 91.349 ms
Loss rate: 0.16%
```

Run 9: Report of FillP-Sheep — Data Link
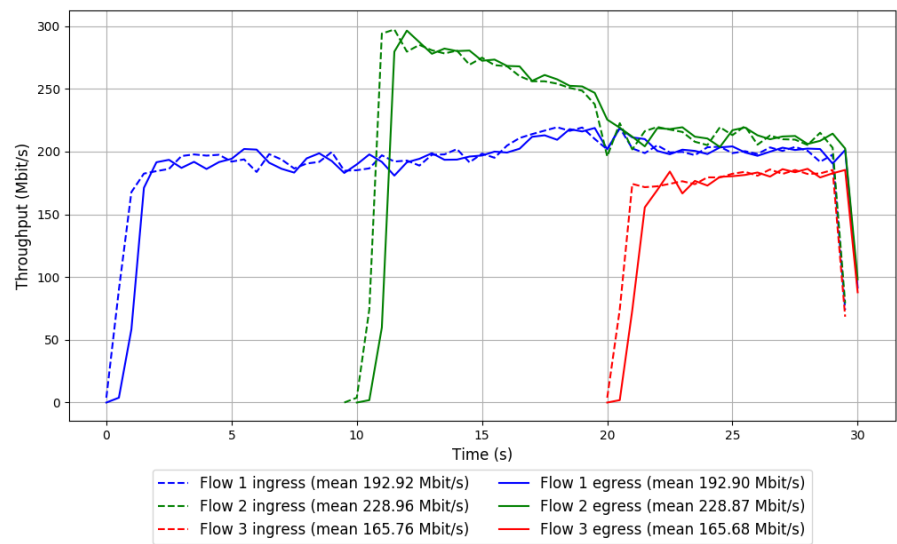

Flow 1 ingress (mean 726.56 Mbit/s) --- Flow 1 egress (mean 684.83 Mbit/s)
Flow 2 ingress (mean 608.25 Mbit/s) --- Flow 2 egress (mean 582.72 Mbit/s)
Flow 3 ingress (mean 507.48 Mbit/s) --- Flow 3 egress (mean 506.68 Mbit/s)

Flow 1 (95th percentile 183.99 ms) Flow 2 (95th percentile 143.85 ms) Flow 3 (95th percentile 91.35 ms)

```
Run 10: Statistics of FillP-Sheep

Start at: 2018-07-12 07:37:33
End at: 2018-07-12 07:38:03
Local clock offset: 0.013 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1156.30 Mbit/s
95th percentile per-packet one-way delay: 149.172 ms
Loss rate: 4.32%
-- Flow 1:
Average throughput: 592.10 Mbit/s
95th percentile per-packet one-way delay: 142.716 ms
Loss rate: 5.73%
-- Flow 2:
Average throughput: 598.81 Mbit/s
95th percentile per-packet one-way delay: 169.118 ms
Loss rate: 2.41%
-- Flow 3:
Average throughput: 500.65 Mbit/s
95th percentile per-packet one-way delay: 115.955 ms
Loss rate: 3.67%
```
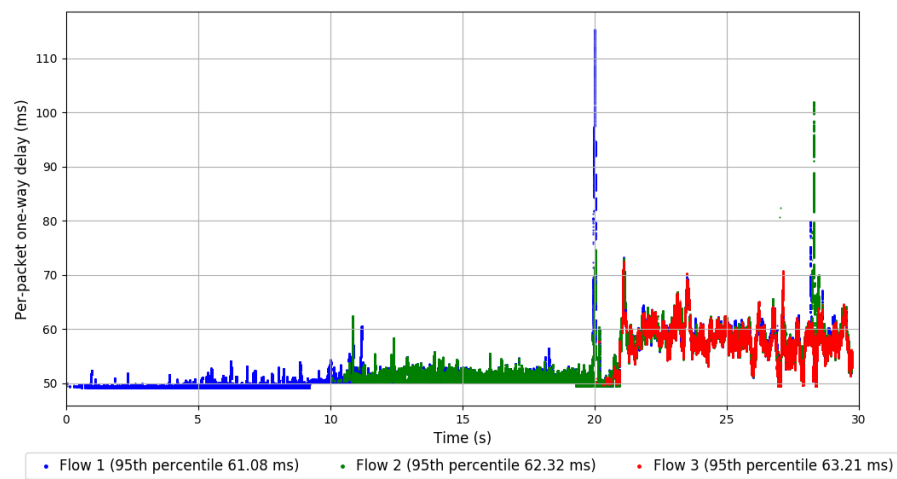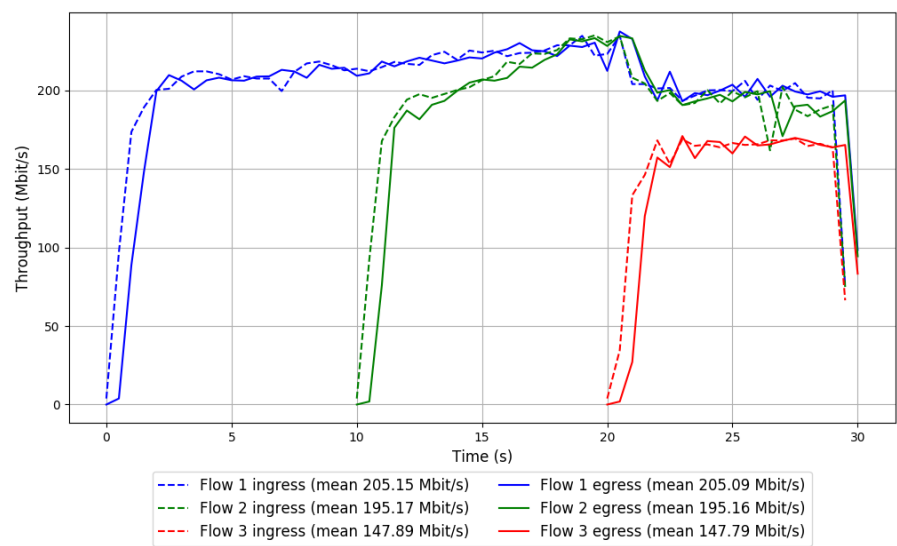
Run 10: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 628.10 Mbit/s) --- Flow 1 egress (mean 592.10 Mbit/s)
Flow 2 ingress (mean 613.49 Mbit/s) --- Flow 2 egress (mean 598.81 Mbit/s)
Flow 3 ingress (mean 519.86 Mbit/s) --- Flow 3 egress (mean 500.65 Mbit/s)

Flow 1 (95th percentile 142.72 ms)   Flow 2 (95th percentile 169.12 ms)   Flow 3 (95th percentile 115.95 ms)
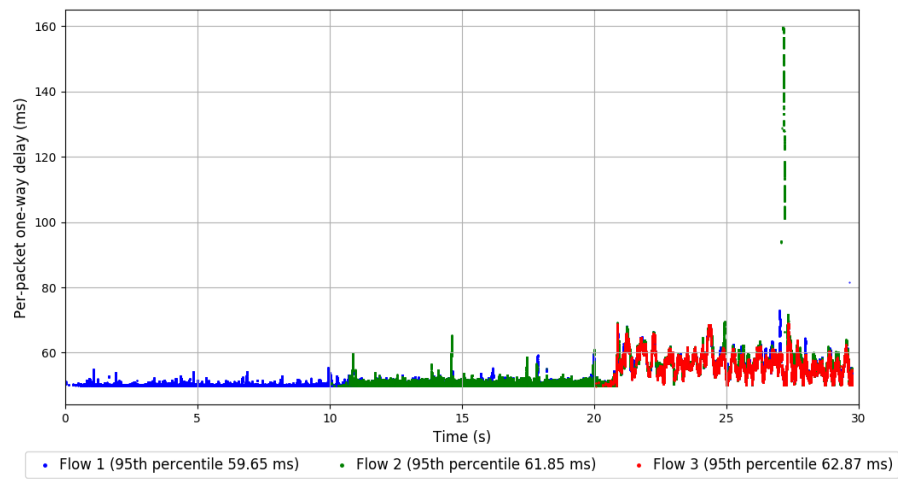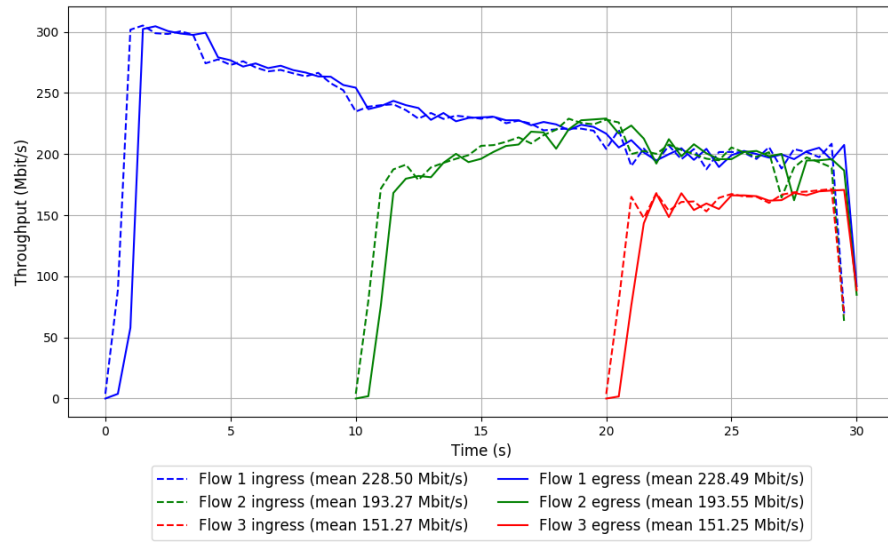
```
Run 1: Statistics of Indigo

Start at: 2018-07-12 04:09:51
End at: 2018-07-12 04:10:21
Local clock offset: -0.453 ms
Remote clock offset: 0.002 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 348.12 Mbit/s
95th percentile per-packet one-way delay: 58.932 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 163.29 Mbit/s
95th percentile per-packet one-way delay: 58.529 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 191.77 Mbit/s
95th percentile per-packet one-way delay: 58.557 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 178.14 Mbit/s
95th percentile per-packet one-way delay: 62.734 ms
Loss rate: 0.03%
```
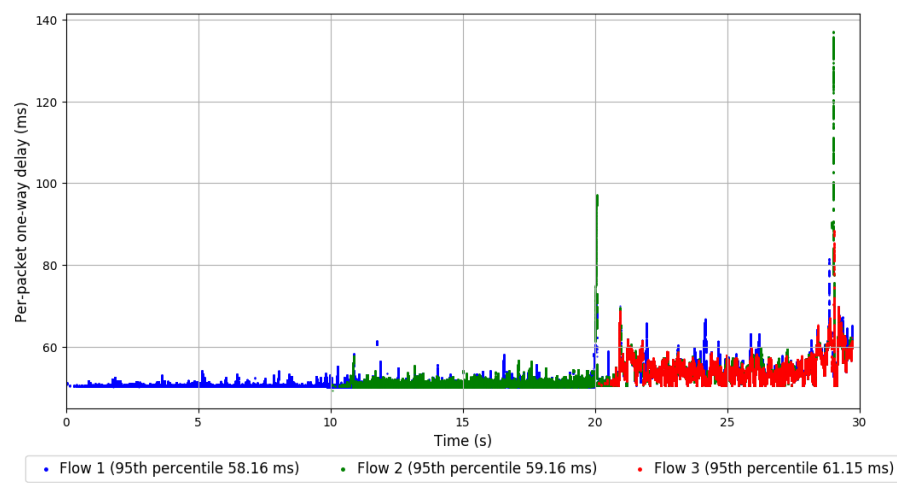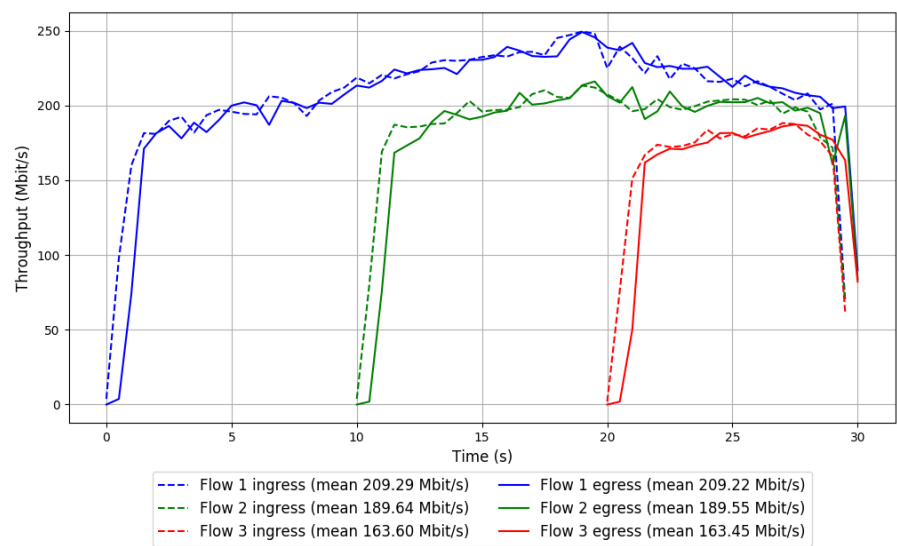
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2018-07-12 04:35:00
End at: 2018-07-12 04:35:30
Local clock offset: -0.099 ms
Remote clock offset: -0.017 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.25 Mbit/s
95th percentile per-packet one-way delay: 60.392 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 203.69 Mbit/s
95th percentile per-packet one-way delay: 59.388 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 196.16 Mbit/s
95th percentile per-packet one-way delay: 60.225 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 155.65 Mbit/s
95th percentile per-packet one-way delay: 62.076 ms
Loss rate: 0.01%
```

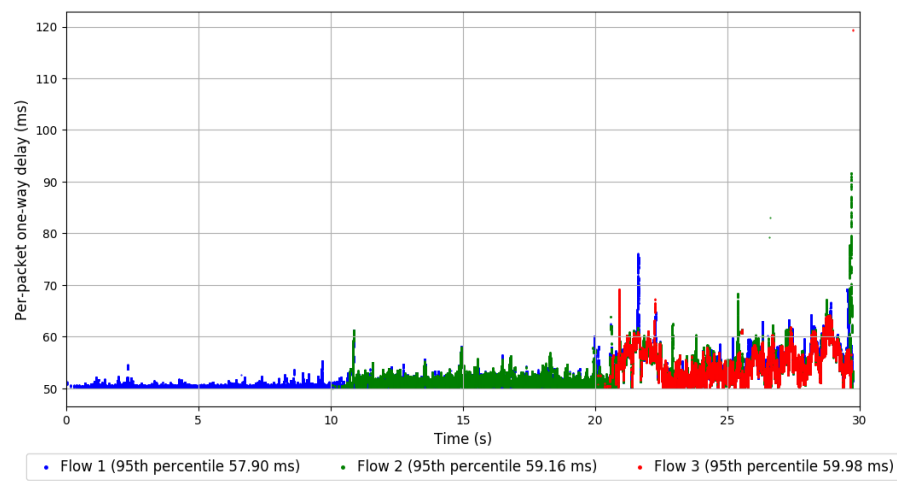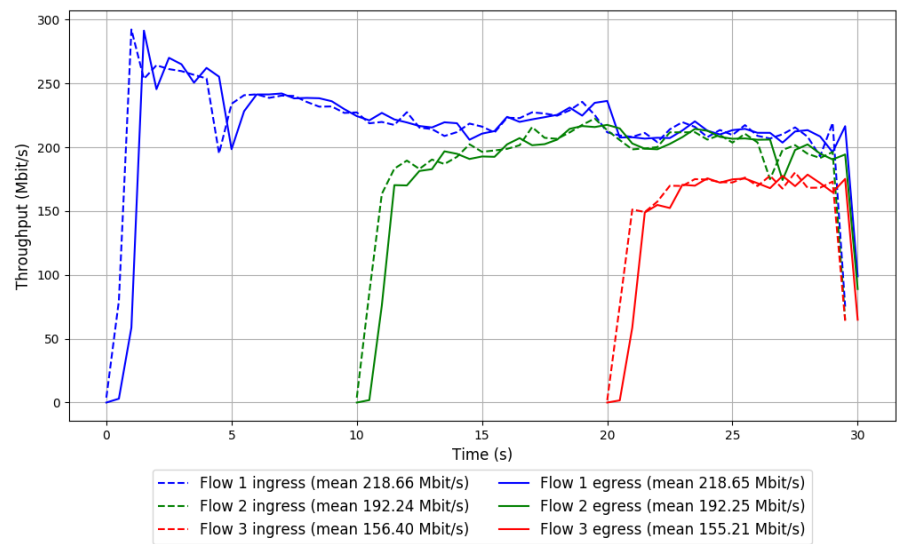Run 2: Report of Indigo — Data Link

Run 3: Statistics of Indigo

Start at: 2018-07-12 05:00:22
End at: 2018-07-12 05:00:52
Local clock offset: -0.447 ms
Remote clock offset: -0.023 ms

Below is generated by plot.py at 2018-07-12 09:59:56
Datalink statistics
-- Total of 3 flows:
Average throughput: 398.53 Mbit/s
95th percentile per-packet one-way delay: 58.260 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 192.90 Mbit/s
95th percentile per-packet one-way delay: 57.417 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 228.87 Mbit/s
95th percentile per-packet one-way delay: 58.800 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 165.68 Mbit/s
95th percentile per-packet one-way delay: 58.949 ms
Loss rate: 0.05%
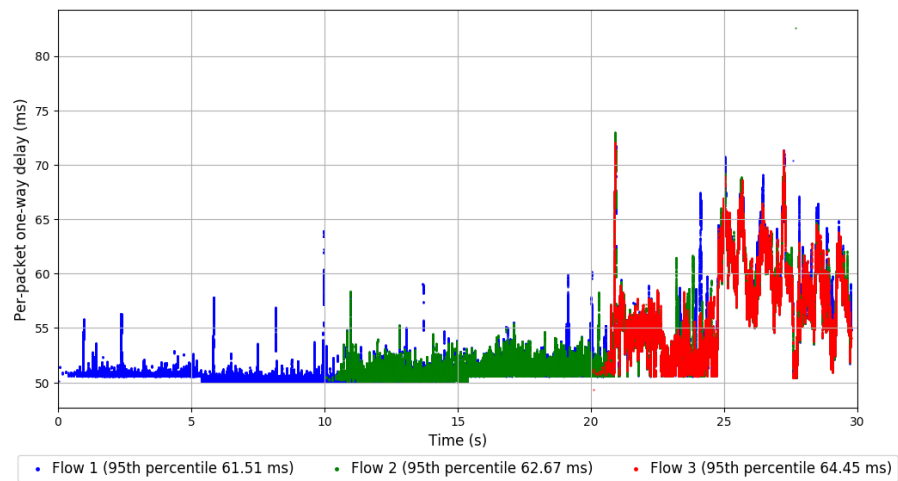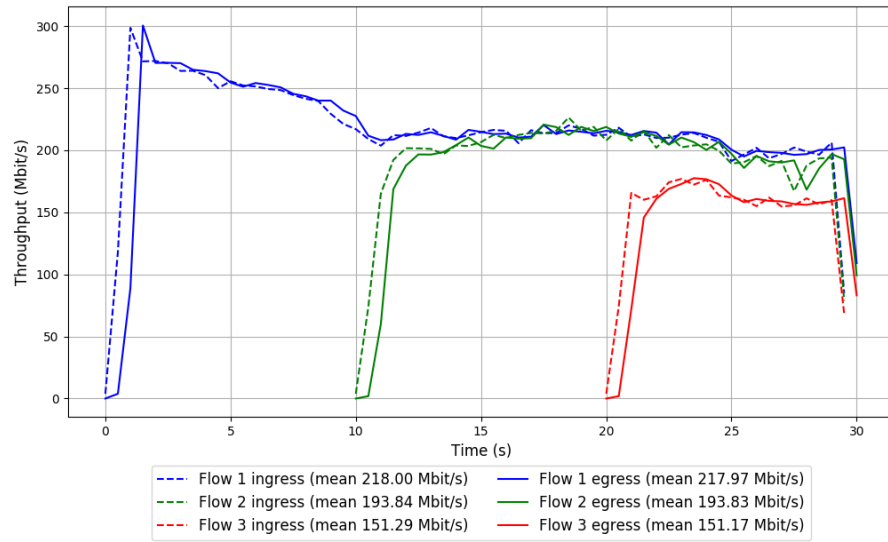
Run 3: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 192.92 Mbit/s) — Flow 1 egress (mean 192.90 Mbit/s)
- - - Flow 2 ingress (mean 228.96 Mbit/s) — Flow 2 egress (mean 228.87 Mbit/s)
- - - Flow 3 ingress (mean 165.76 Mbit/s) — Flow 3 egress (mean 165.68 Mbit/s)

• Flow 1 (95th percentile 57.42 ms)   • Flow 2 (95th percentile 58.80 ms)   • Flow 3 (95th percentile 58.95 ms)

Run 4: Statistics of Indigo

Start at: 2018-07-12 05:25:44
End at: 2018-07-12 05:26:14
Local clock offset: 0.238 ms
Remote clock offset: 0.017 ms

Below is generated by plot.py at 2018-07-12 09:59:56
Datalink statistics
-- Total of 3 flows:
Average throughput: 382.59 Mbit/s
95th percentile per-packet one-way delay: 62.026 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 205.09 Mbit/s
95th percentile per-packet one-way delay: 61.076 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 195.16 Mbit/s
95th percentile per-packet one-way delay: 62.317 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 147.79 Mbit/s
95th percentile per-packet one-way delay: 63.212 ms
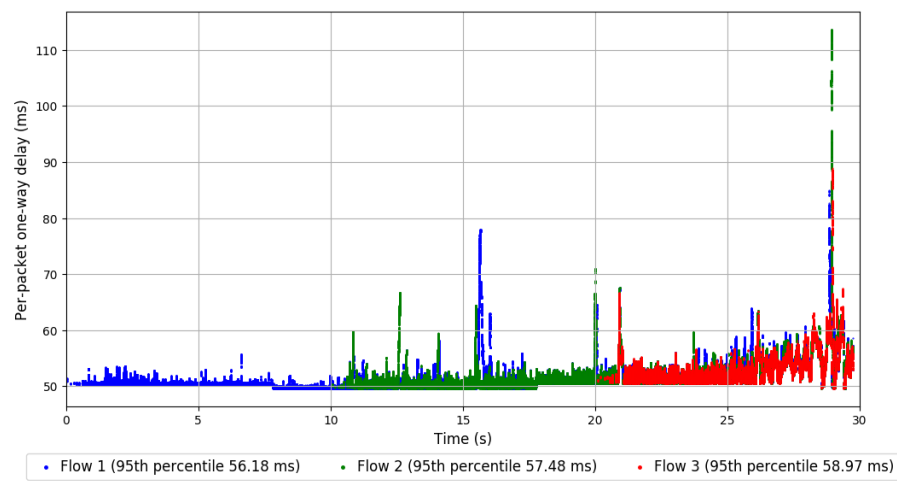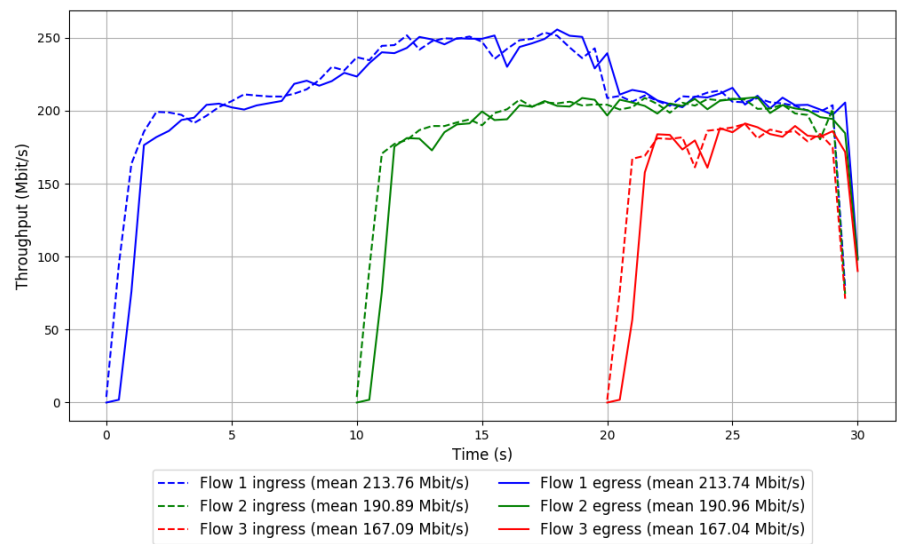Loss rate: 0.05%

Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2018-07-12 05:51:00
End at: 2018-07-12 05:51:30
Local clock offset: 0.24 ms
Remote clock offset: -0.034 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 405.81 Mbit/s
95th percentile per-packet one-way delay: 60.956 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 228.49 Mbit/s
95th percentile per-packet one-way delay: 59.648 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 193.55 Mbit/s
95th percentile per-packet one-way delay: 61.847 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 151.25 Mbit/s
95th percentile per-packet one-way delay: 62.870 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2018-07-12 06:15:44
End at: 2018-07-12 06:16:14
Local clock offset: -0.127 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.68 Mbit/s
95th percentile per-packet one-way delay: 59.102 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 209.22 Mbit/s
95th percentile per-packet one-way delay: 58.161 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 189.55 Mbit/s
95th percentile per-packet one-way delay: 59.162 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 163.45 Mbit/s
95th percentile per-packet one-way delay: 61.151 ms
Loss rate: 0.08%
```
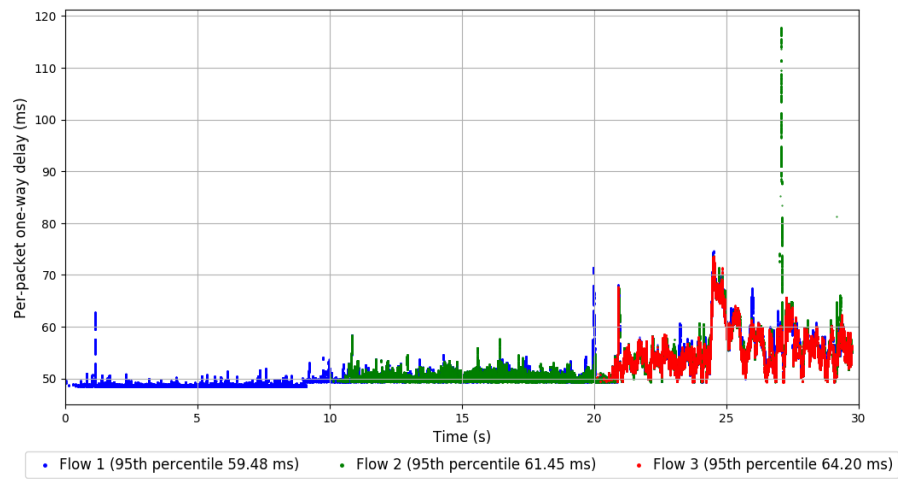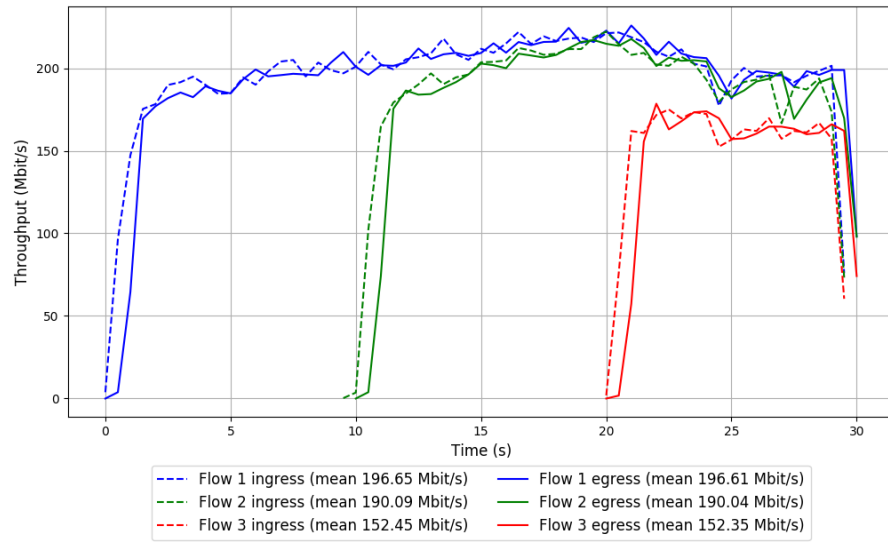
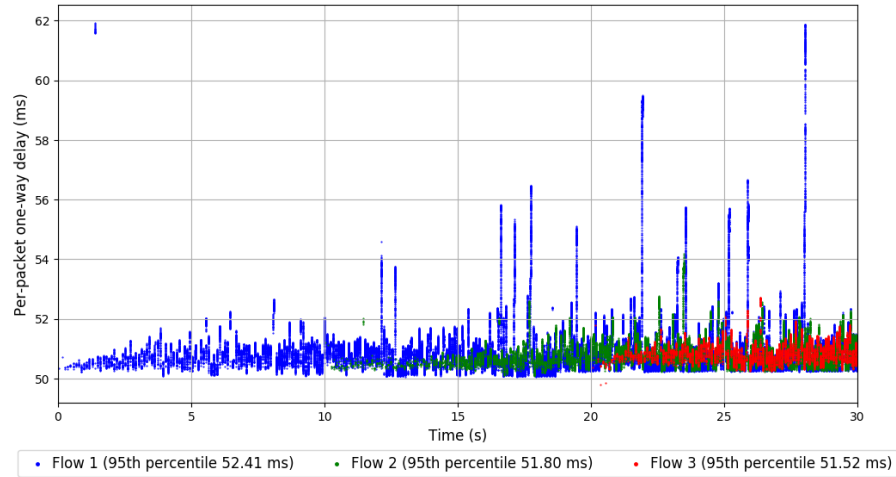# Run 6: Report of Indigo — Data Link

```
Run 7: Statistics of Indigo

Start at: 2018-07-12 06:40:43
End at: 2018-07-12 06:41:13
Local clock offset: -0.071 ms
Remote clock offset: -0.043 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 396.29 Mbit/s
95th percentile per-packet one-way delay: 58.892 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 218.65 Mbit/s
95th percentile per-packet one-way delay: 57.900 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 192.25 Mbit/s
95th percentile per-packet one-way delay: 59.160 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 155.21 Mbit/s
95th percentile per-packet one-way delay: 59.979 ms
Loss rate: 0.59%
```
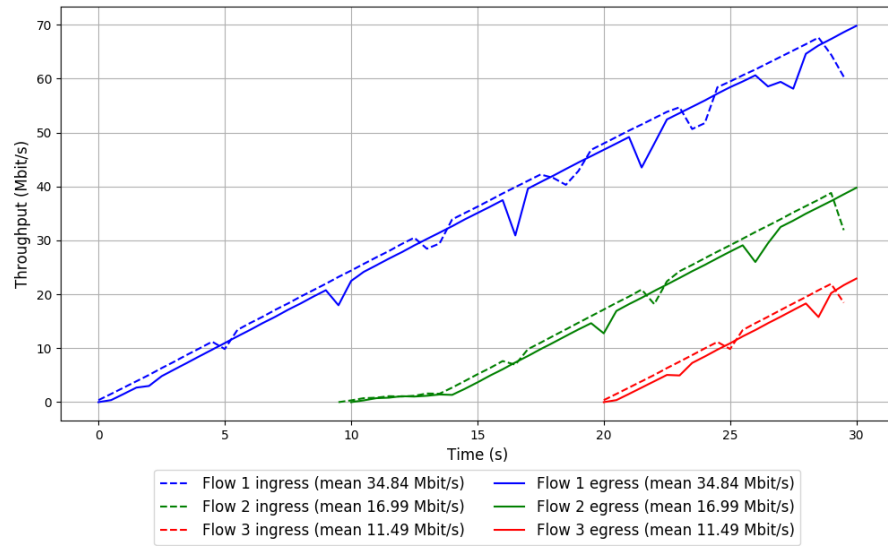
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2018-07-12 07:05:28
End at: 2018-07-12 07:05:58
Local clock offset: -0.383 ms
Remote clock offset: -0.026 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.62 Mbit/s
95th percentile per-packet one-way delay: 62.576 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 217.97 Mbit/s
95th percentile per-packet one-way delay: 61.511 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 193.83 Mbit/s
95th percentile per-packet one-way delay: 62.671 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 151.17 Mbit/s
95th percentile per-packet one-way delay: 64.451 ms
Loss rate: 0.04%
```
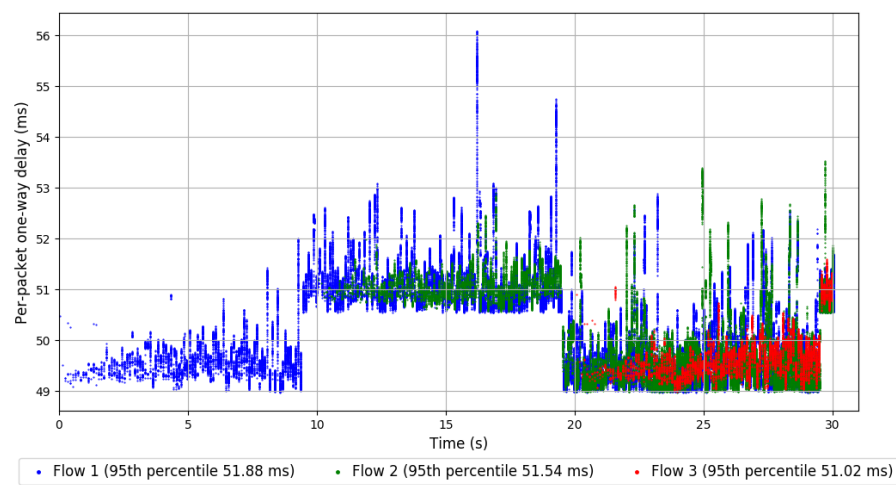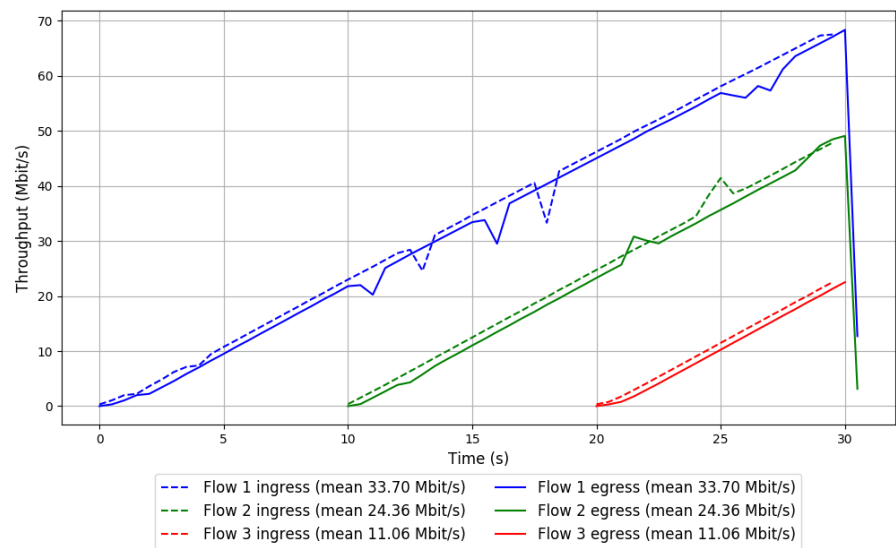
Run 8: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 218.00 Mbit/s) —— Flow 1 egress (mean 217.97 Mbit/s)
- - - Flow 2 ingress (mean 193.84 Mbit/s) —— Flow 2 egress (mean 193.83 Mbit/s)
- - - Flow 3 ingress (mean 151.29 Mbit/s) —— Flow 3 egress (mean 151.17 Mbit/s)

• Flow 1 (95th percentile 61.51 ms)   • Flow 2 (95th percentile 62.67 ms)   • Flow 3 (95th percentile 64.45 ms)

```
Run 9: Statistics of Indigo

Start at: 2018-07-12 07:30:26
End at: 2018-07-12 07:30:56
Local clock offset: -0.048 ms
Remote clock offset: -0.029 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 394.51 Mbit/s
95th percentile per-packet one-way delay: 57.177 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 213.74 Mbit/s
95th percentile per-packet one-way delay: 56.179 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 190.96 Mbit/s
95th percentile per-packet one-way delay: 57.480 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 167.04 Mbit/s
95th percentile per-packet one-way delay: 58.971 ms
Loss rate: 0.03%
```
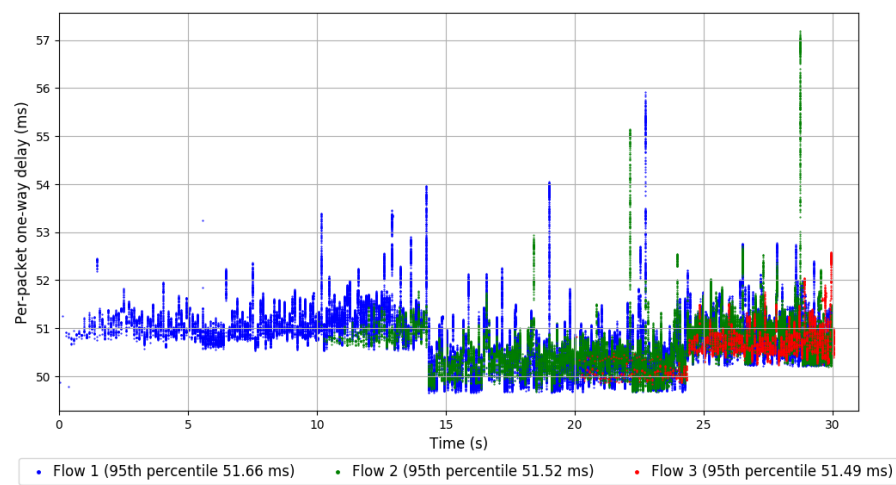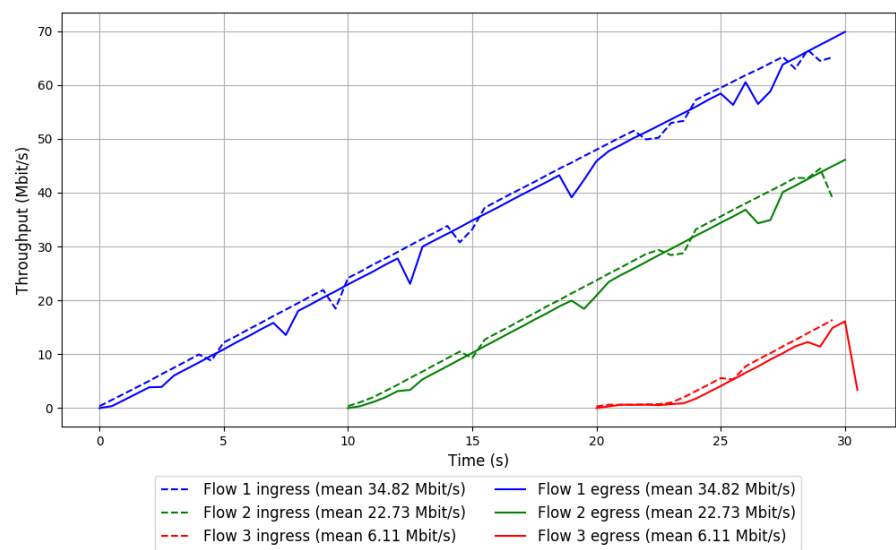
Run 9: Report of Indigo — Data Link

```
Run 10: Statistics of Indigo

Start at: 2018-07-12 07:55:25
End at: 2018-07-12 07:55:55
Local clock offset: 0.297 ms
Remote clock offset: 0.053 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 372.04 Mbit/s
95th percentile per-packet one-way delay: 61.078 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 196.61 Mbit/s
95th percentile per-packet one-way delay: 59.482 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 190.04 Mbit/s
95th percentile per-packet one-way delay: 61.452 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 152.35 Mbit/s
95th percentile per-packet one-way delay: 64.197 ms
Loss rate: 0.00%
```
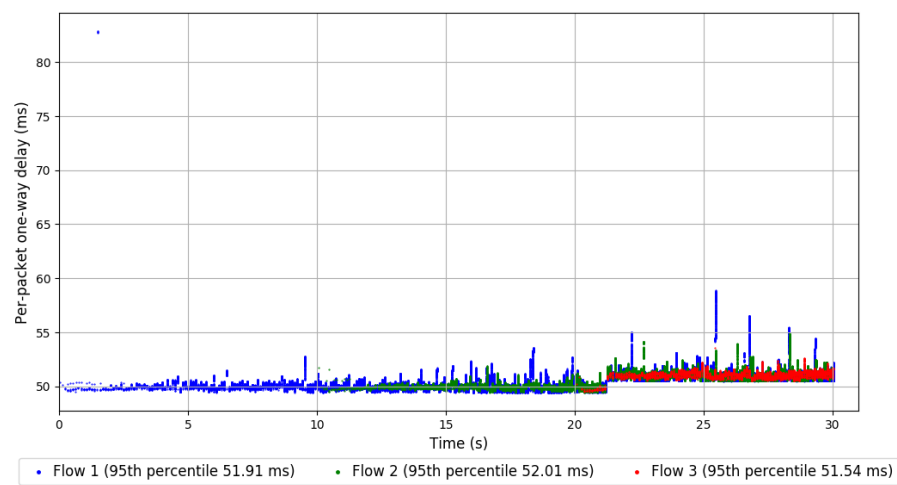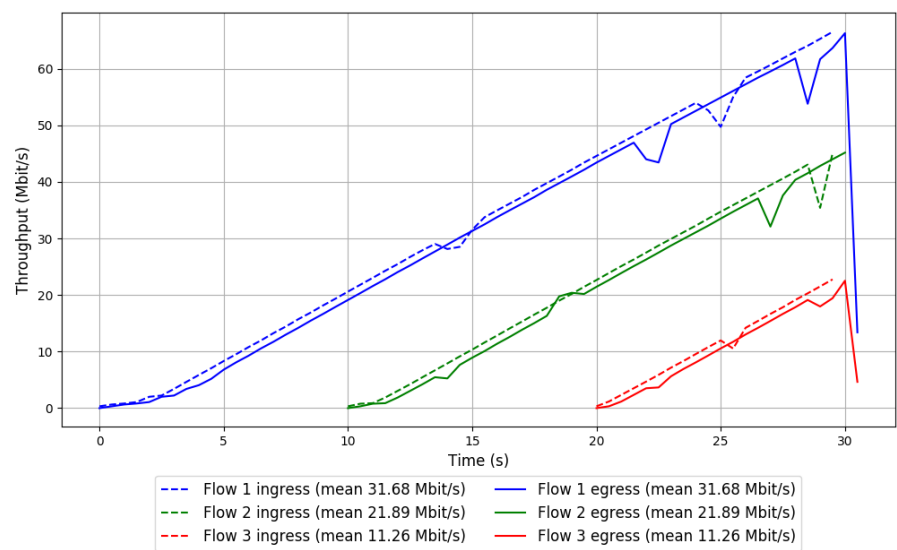
Run 10: Report of Indigo — Data Link

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```
Run 1: Statistics of LEDBAT

Start at: 2018-07-12 04:12:55
End at: 2018-07-12 04:13:25
Local clock offset: -0.105 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.94 Mbit/s
95th percentile per-packet one-way delay: 52.106 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.84 Mbit/s
95th percentile per-packet one-way delay: 52.407 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 16.99 Mbit/s
95th percentile per-packet one-way delay: 51.802 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.49 Mbit/s
95th percentile per-packet one-way delay: 51.522 ms
Loss rate: 0.00%
```
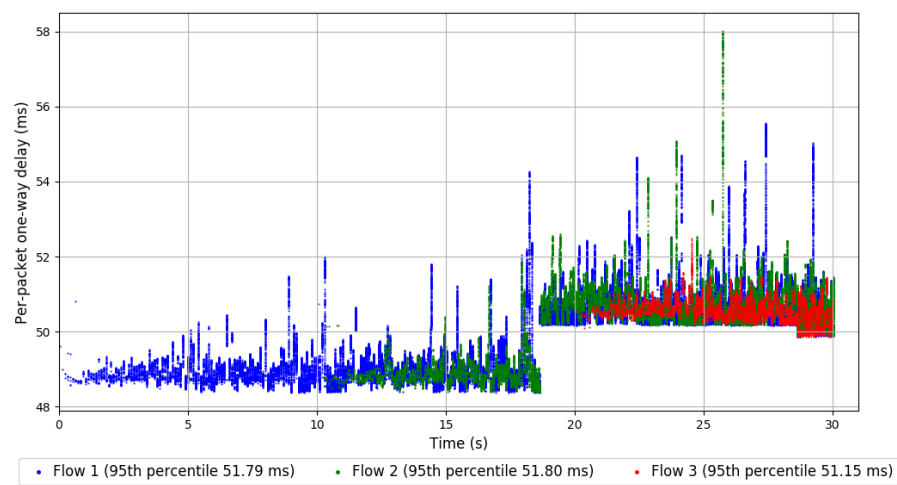
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-07-12 04:38:04
End at: 2018-07-12 04:38:34
Local clock offset: -0.096 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.56 Mbit/s
95th percentile per-packet one-way delay: 51.743 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.70 Mbit/s
95th percentile per-packet one-way delay: 51.881 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.36 Mbit/s
95th percentile per-packet one-way delay: 51.543 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.06 Mbit/s
95th percentile per-packet one-way delay: 51.018 ms
Loss rate: 0.00%
```
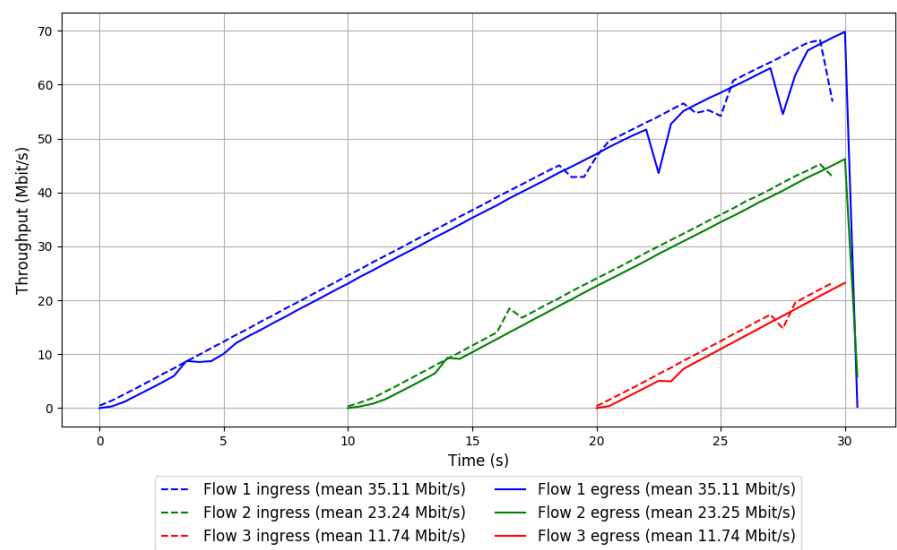
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-07-12 05:03:30
End at: 2018-07-12 05:04:00
Local clock offset: -0.104 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.88 Mbit/s
95th percentile per-packet one-way delay: 51.618 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.82 Mbit/s
95th percentile per-packet one-way delay: 51.659 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.73 Mbit/s
95th percentile per-packet one-way delay: 51.516 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.11 Mbit/s
95th percentile per-packet one-way delay: 51.486 ms
Loss rate: 0.00%
```
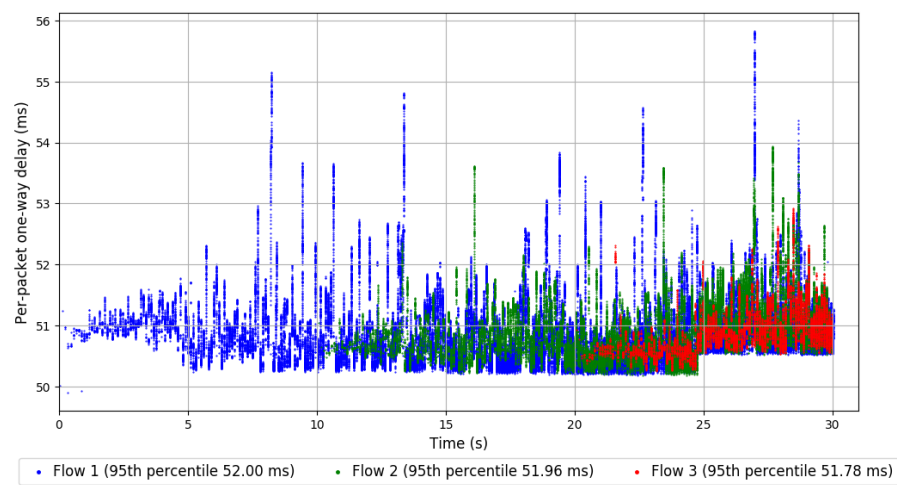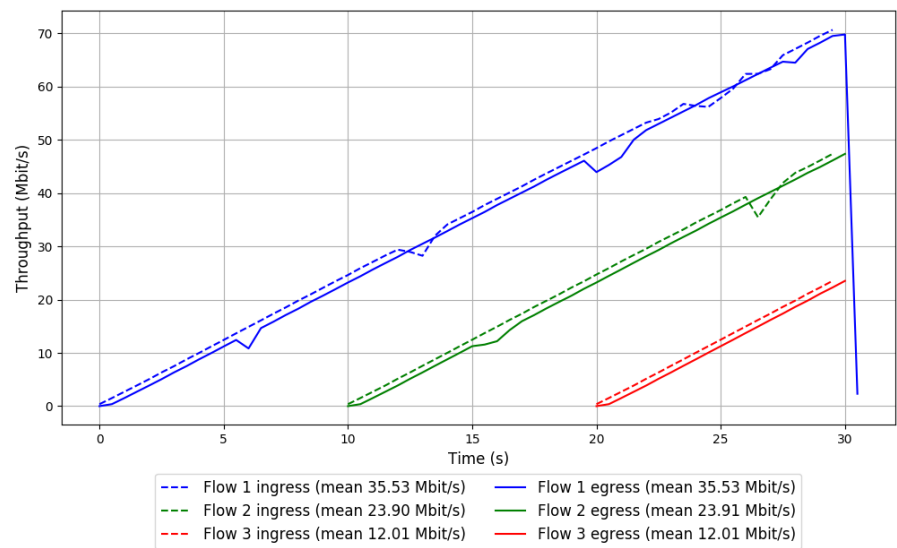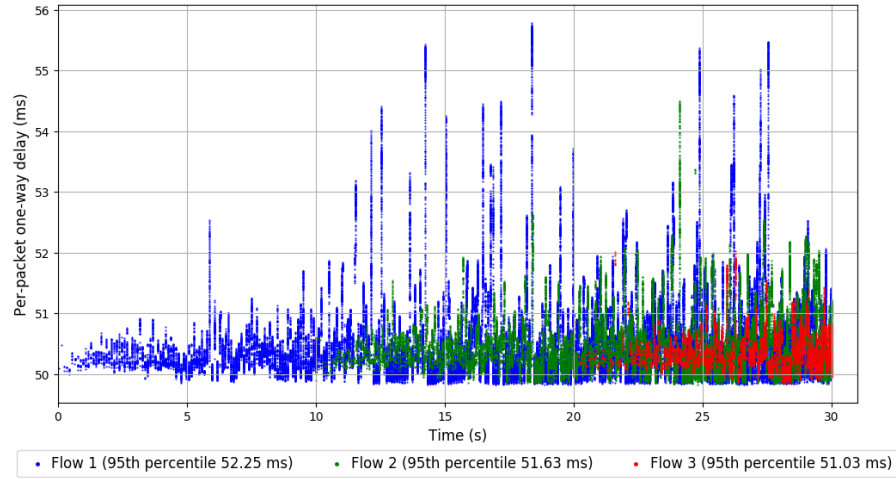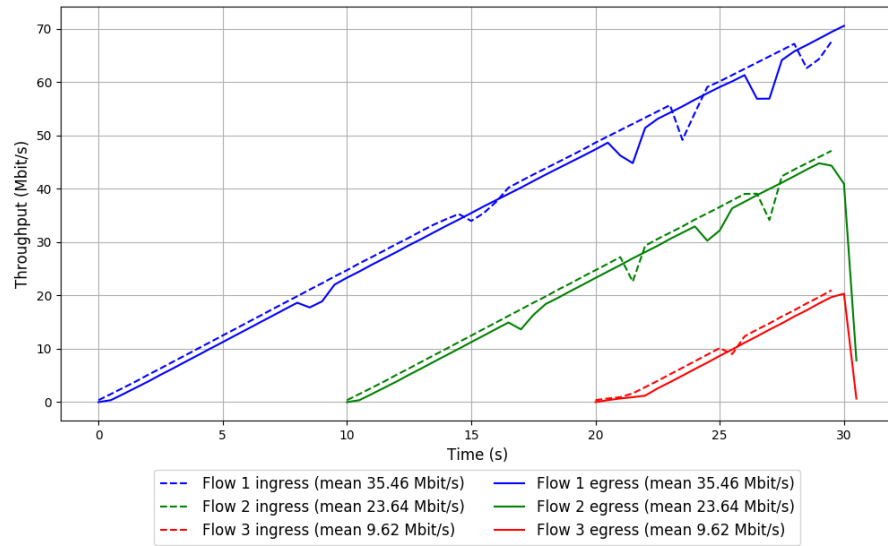
Run 3: Report of LEDBAT — Data Link

Legend:
- Flow 1 ingress (mean 34.82 Mbit/s) — Flow 1 egress (mean 34.82 Mbit/s)
- Flow 2 ingress (mean 22.73 Mbit/s) — Flow 2 egress (mean 22.73 Mbit/s)
- Flow 3 ingress (mean 6.11 Mbit/s) — Flow 3 egress (mean 6.11 Mbit/s)

Legend:
- Flow 1 (95th percentile 51.66 ms)
- Flow 2 (95th percentile 51.52 ms)
- Flow 3 (95th percentile 51.49 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2018-07-12 05:28:53
End at: 2018-07-12 05:29:23
Local clock offset: -0.098 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.95 Mbit/s
95th percentile per-packet one-way delay: 51.909 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 31.68 Mbit/s
95th percentile per-packet one-way delay: 51.912 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.89 Mbit/s
95th percentile per-packet one-way delay: 52.009 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.26 Mbit/s
95th percentile per-packet one-way delay: 51.540 ms
Loss rate: 0.00%
```
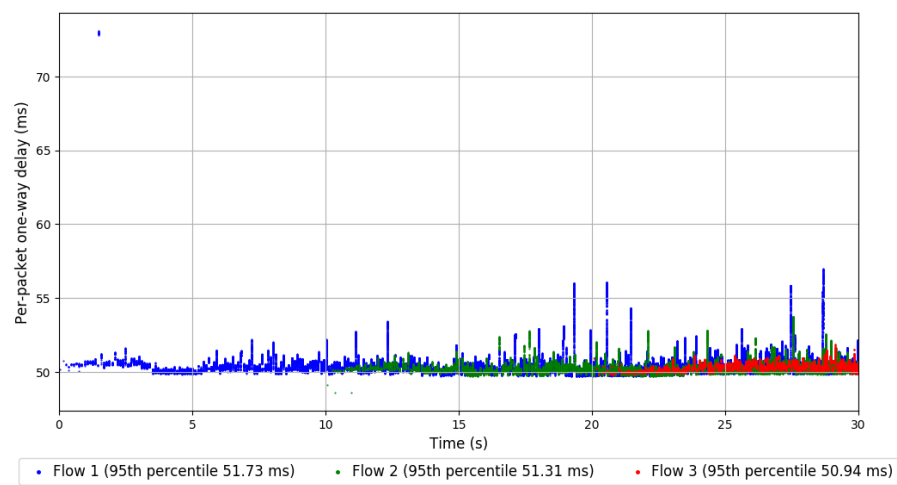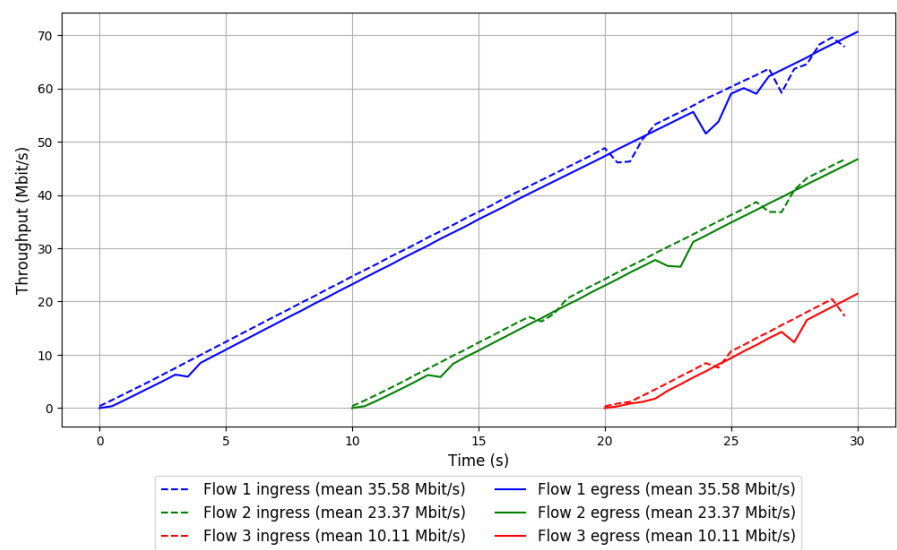
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2018-07-12 05:54:05
End at: 2018-07-12 05:54:35
Local clock offset: 0.258 ms
Remote clock offset: 0.005 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.47 Mbit/s
95th percentile per-packet one-way delay: 51.749 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.11 Mbit/s
95th percentile per-packet one-way delay: 51.793 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.25 Mbit/s
95th percentile per-packet one-way delay: 51.805 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 51.148 ms
Loss rate: 0.00%
```
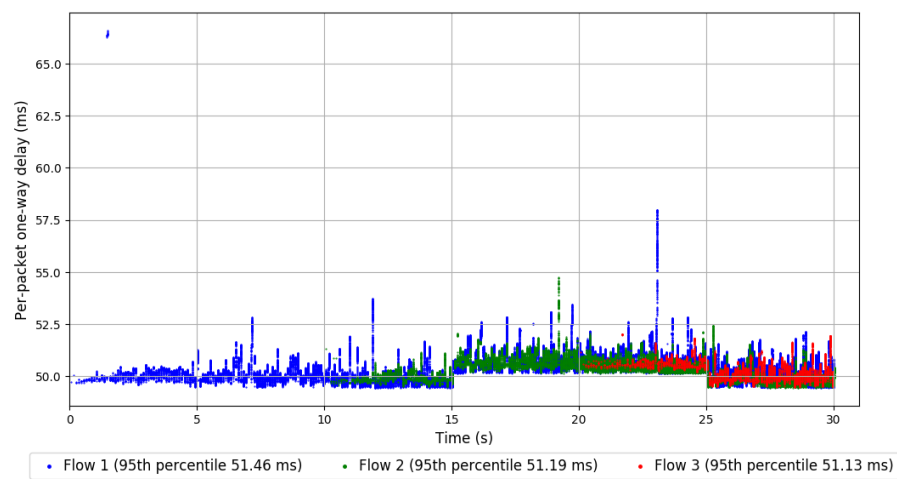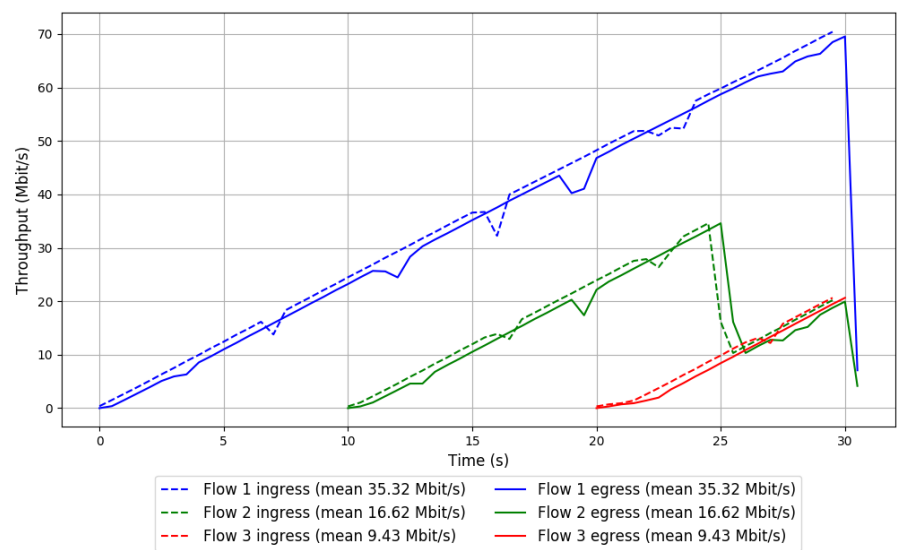
Run 5: Report of LEDBAT — Data Link

```
Run 6: Statistics of LEDBAT

Start at: 2018-07-12 06:18:49
End at: 2018-07-12 06:19:19
Local clock offset: -0.124 ms
Remote clock offset: 0.029 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.37 Mbit/s
95th percentile per-packet one-way delay: 51.965 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.53 Mbit/s
95th percentile per-packet one-way delay: 51.996 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.91 Mbit/s
95th percentile per-packet one-way delay: 51.964 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.01 Mbit/s
95th percentile per-packet one-way delay: 51.779 ms
Loss rate: 0.00%
```
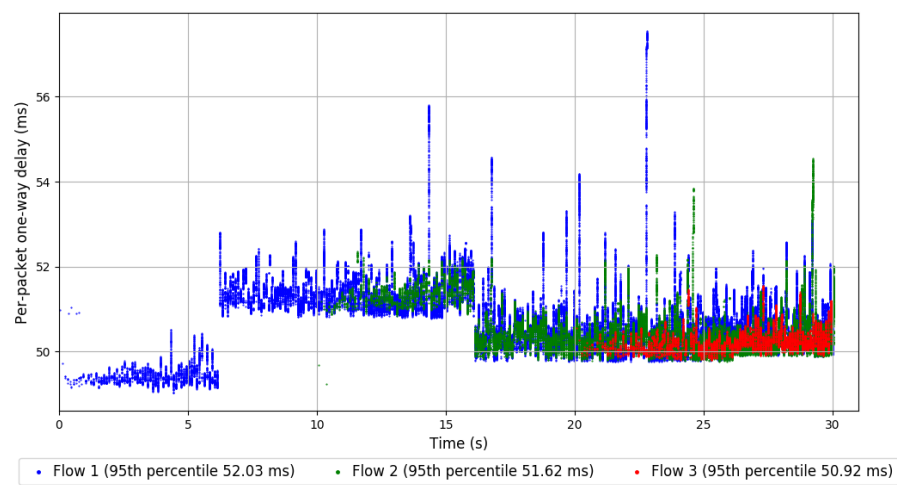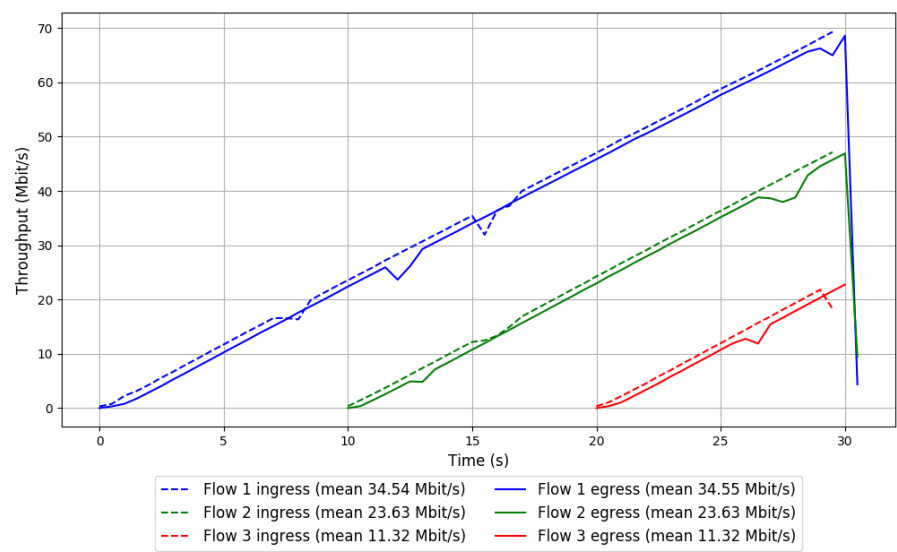
Run 6: Report of LEDBAT — Data Link

```
Run 7: Statistics of LEDBAT

Start at: 2018-07-12 06:43:49
End at: 2018-07-12 06:44:19
Local clock offset: 0.258 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.35 Mbit/s
95th percentile per-packet one-way delay: 51.885 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.46 Mbit/s
95th percentile per-packet one-way delay: 52.250 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.64 Mbit/s
95th percentile per-packet one-way delay: 51.634 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 51.026 ms
Loss rate: 0.00%
```
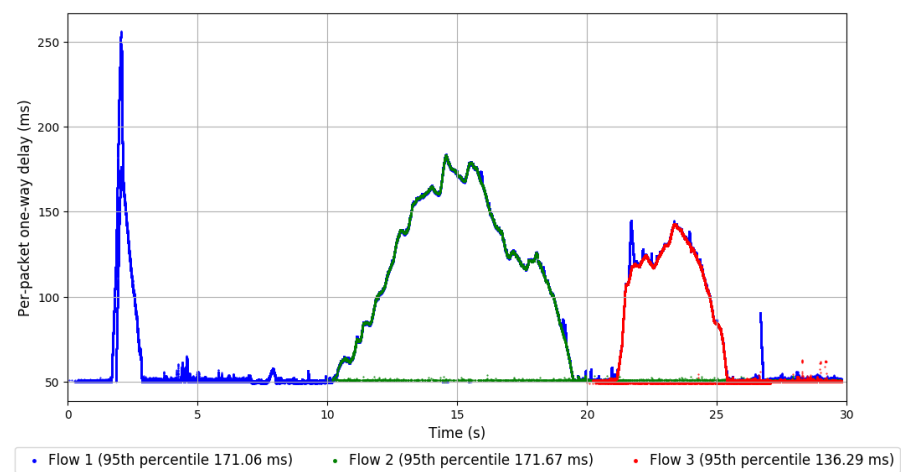
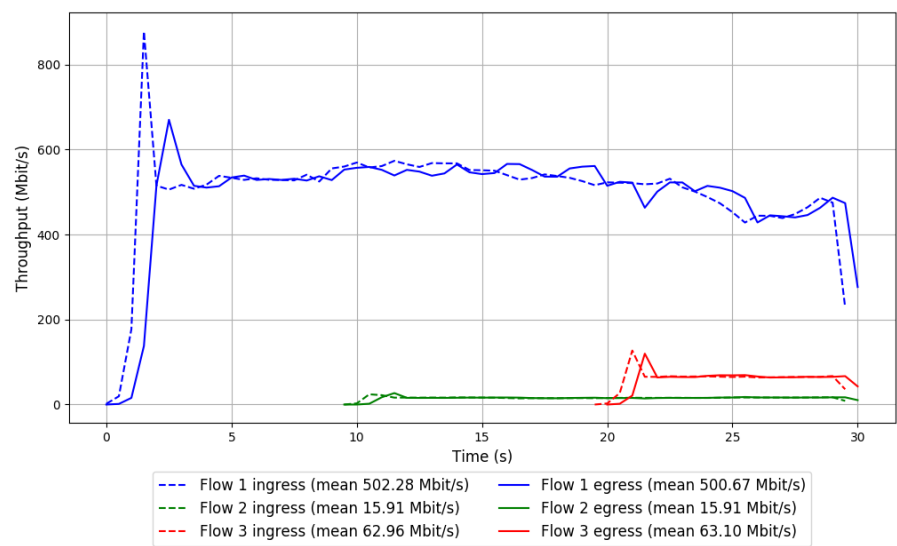## Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2018-07-12 07:08:31
End at: 2018-07-12 07:09:01
Local clock offset: 0.321 ms
Remote clock offset: -0.048 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.46 Mbit/s
95th percentile per-packet one-way delay: 51.537 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.58 Mbit/s
95th percentile per-packet one-way delay: 51.725 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.37 Mbit/s
95th percentile per-packet one-way delay: 51.313 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.11 Mbit/s
95th percentile per-packet one-way delay: 50.935 ms
Loss rate: 0.00%
```
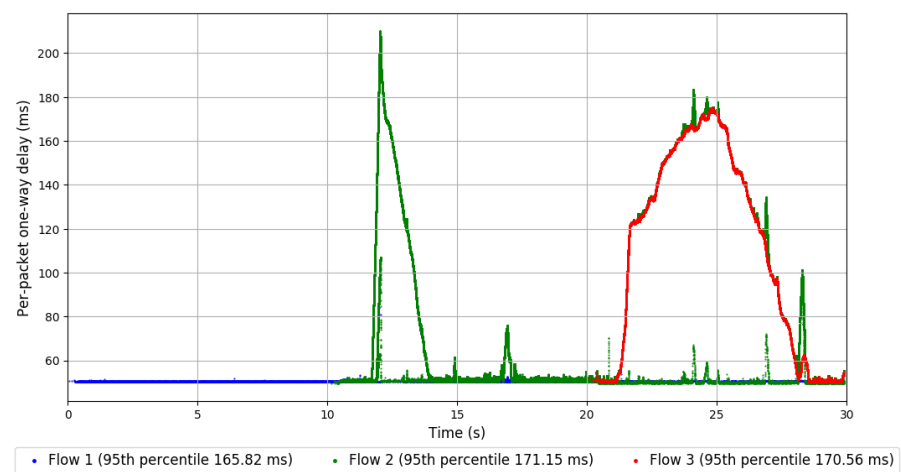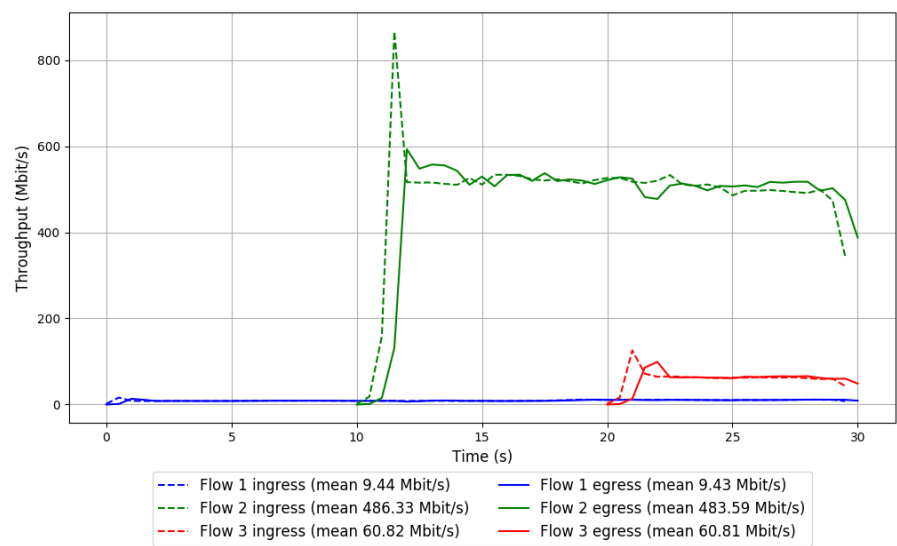
Run 8: Report of LEDBAT — Data Link

```
Run 9: Statistics of LEDBAT

Start at: 2018-07-12 07:33:29
End at: 2018-07-12 07:33:59
Local clock offset: -0.03 ms
Remote clock offset: -0.072 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.50 Mbit/s
95th percentile per-packet one-way delay: 51.389 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.32 Mbit/s
95th percentile per-packet one-way delay: 51.462 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 16.62 Mbit/s
95th percentile per-packet one-way delay: 51.193 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.43 Mbit/s
95th percentile per-packet one-way delay: 51.126 ms
Loss rate: 0.00%
```

Run 9: Report of LEDBAT — Data Link

```
Run 10: Statistics of LEDBAT

Start at: 2018-07-12 07:58:28
End at: 2018-07-12 07:58:58
Local clock offset: -0.401 ms
Remote clock offset: -0.046 ms


# Below is generated by plot.py at 2018-07-12 09:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.98 Mbit/s
95th percentile per-packet one-way delay: 51.885 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.55 Mbit/s
95th percentile per-packet one-way delay: 52.031 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.63 Mbit/s
95th percentile per-packet one-way delay: 51.623 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.32 Mbit/s
95th percentile per-packet one-way delay: 50.918 ms
Loss rate: 0.00%
```
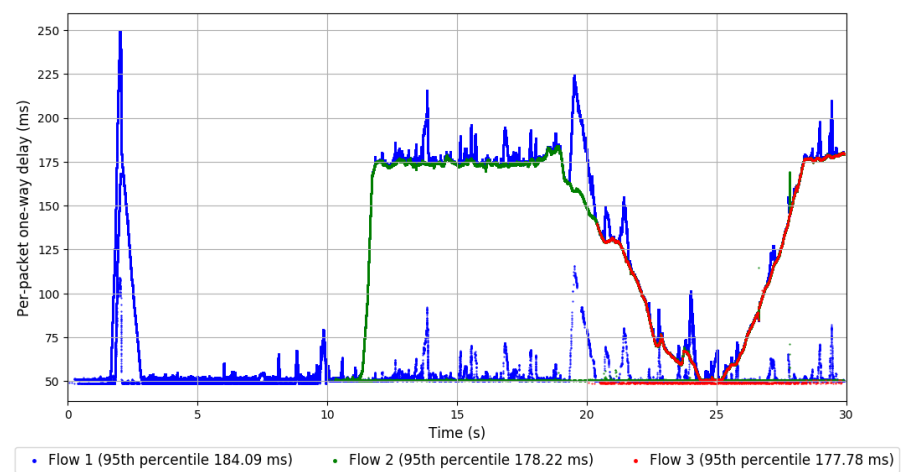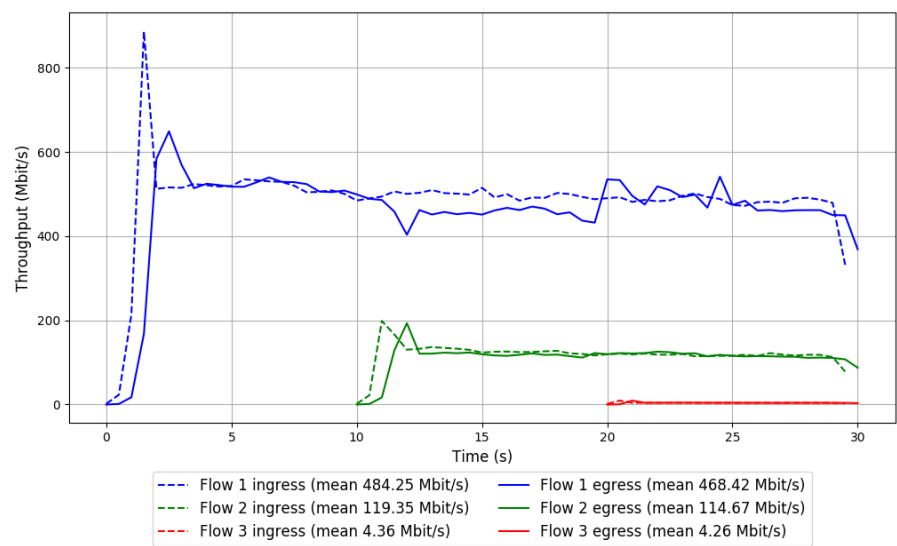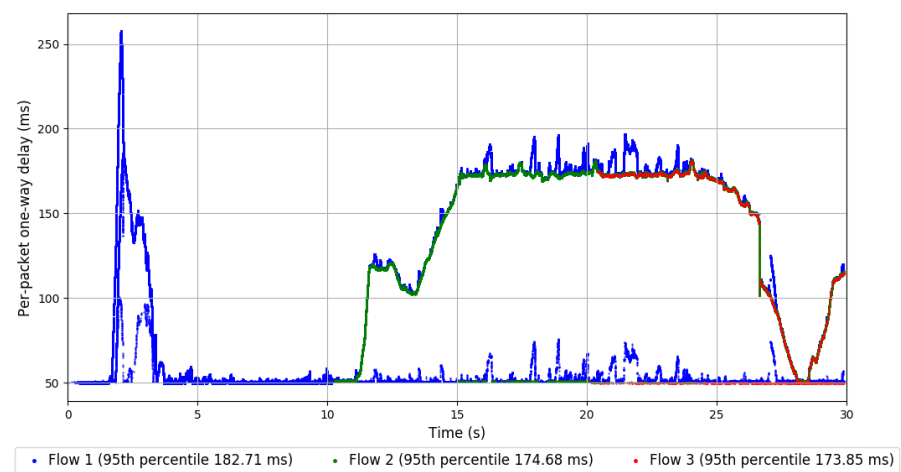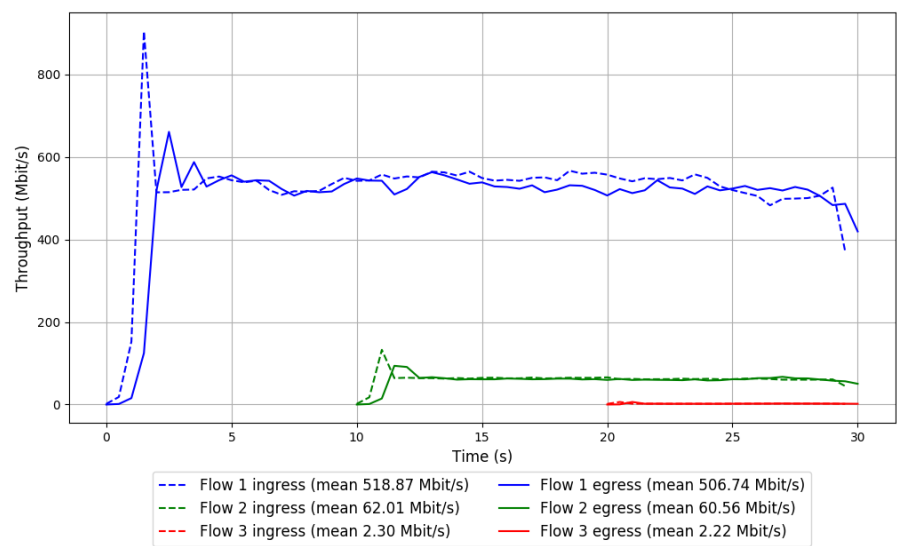
Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2018-07-12 04:02:17
End at: 2018-07-12 04:02:47
Local clock offset: -0.473 ms
Remote clock offset: -0.037 ms


# Below is generated by plot.py at 2018-07-12 10:03:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 531.88 Mbit/s
95th percentile per-packet one-way delay: 170.611 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 500.67 Mbit/s
95th percentile per-packet one-way delay: 171.062 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 15.91 Mbit/s
95th percentile per-packet one-way delay: 171.674 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 63.10 Mbit/s
95th percentile per-packet one-way delay: 136.287 ms
Loss rate: 0.01%
```

Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 502.28 Mbit/s)   Flow 1 egress (mean 500.67 Mbit/s)
Flow 2 ingress (mean 15.91 Mbit/s)   Flow 2 egress (mean 15.91 Mbit/s)
Flow 3 ingress (mean 62.96 Mbit/s)   Flow 3 egress (mean 63.10 Mbit/s)

Flow 1 (95th percentile 171.06 ms)   Flow 2 (95th percentile 171.67 ms)   Flow 3 (95th percentile 136.29 ms)
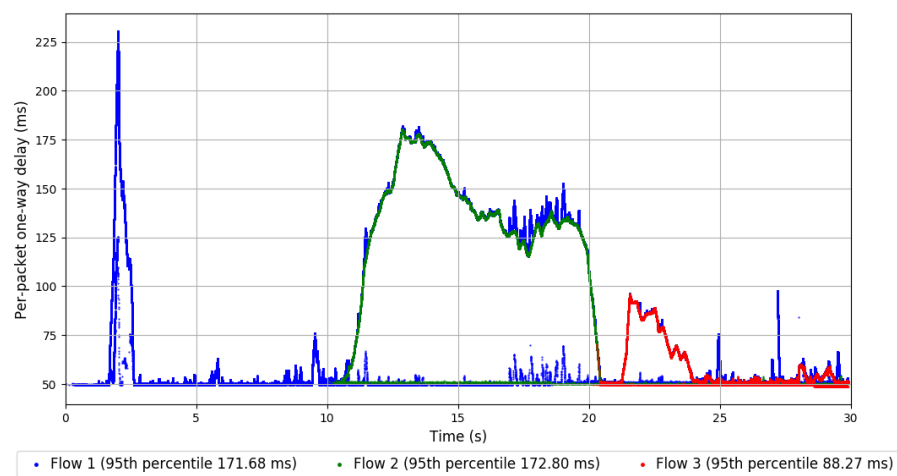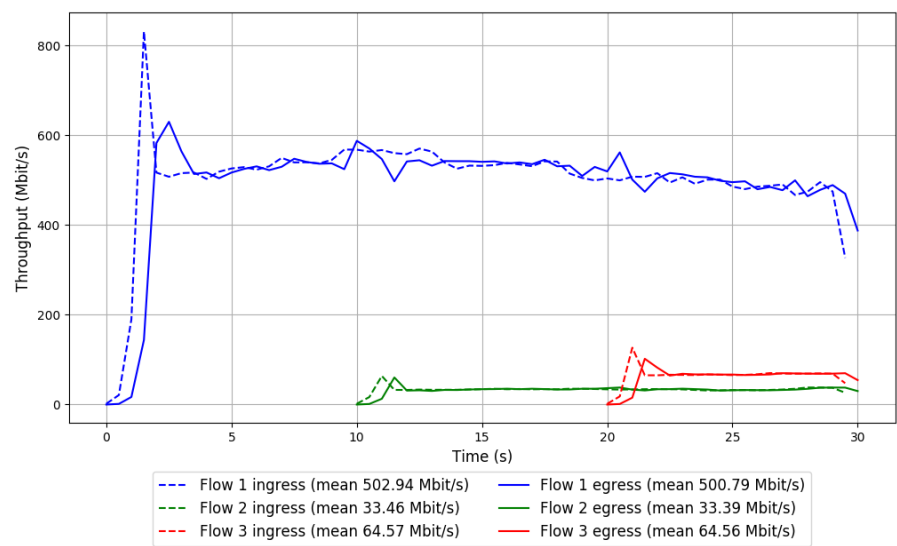
```
Run 2: Statistics of PCC-Allegro

Start at: 2018-07-12 04:27:33
End at: 2018-07-12 04:28:03
Local clock offset: -0.062 ms
Remote clock offset: -0.045 ms


# Below is generated by plot.py at 2018-07-12 10:03:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 350.98 Mbit/s
95th percentile per-packet one-way delay: 170.816 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 9.43 Mbit/s
95th percentile per-packet one-way delay: 165.823 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 483.59 Mbit/s
95th percentile per-packet one-way delay: 171.145 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 60.81 Mbit/s
95th percentile per-packet one-way delay: 170.563 ms
Loss rate: 0.03%
```

Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 9.44 Mbit/s) --- Flow 1 egress (mean 9.43 Mbit/s)
Flow 2 ingress (mean 486.33 Mbit/s) --- Flow 2 egress (mean 483.59 Mbit/s)
Flow 3 ingress (mean 60.82 Mbit/s) --- Flow 3 egress (mean 60.81 Mbit/s)

Flow 1 (95th percentile 165.82 ms)   Flow 2 (95th percentile 171.15 ms)   Flow 3 (95th percentile 170.56 ms)
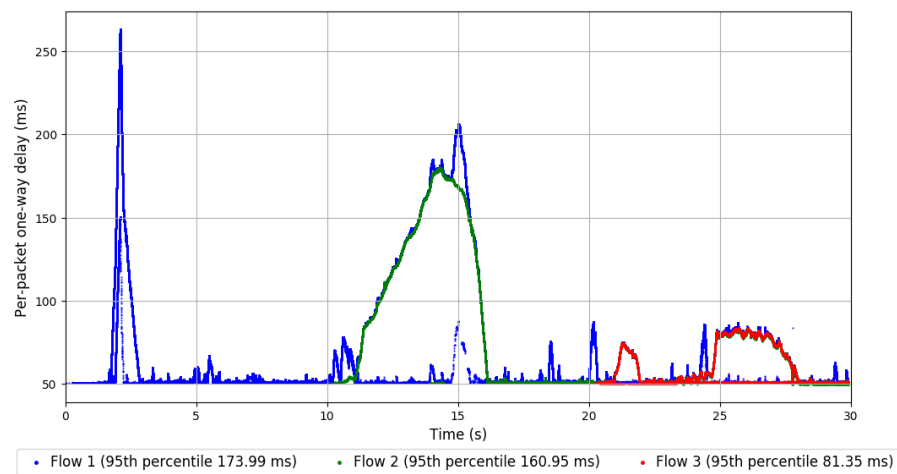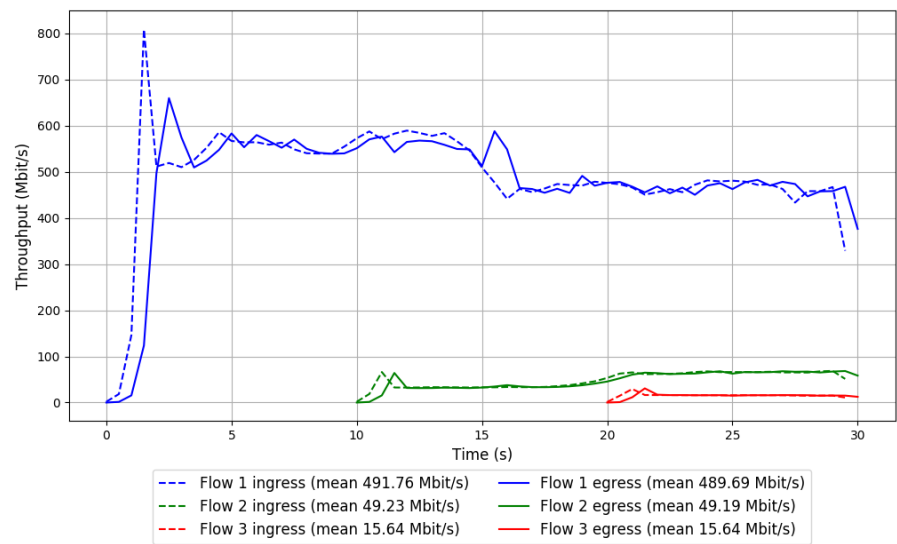
```
Run 3: Statistics of PCC-Allegro

Start at: 2018-07-12 04:52:44
End at: 2018-07-12 04:53:14
Local clock offset: -0.093 ms
Remote clock offset: 0.004 ms


# Below is generated by plot.py at 2018-07-12 10:04:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 546.05 Mbit/s
95th percentile per-packet one-way delay: 182.805 ms
Loss rate: 3.35%
-- Flow 1:
Average throughput: 468.42 Mbit/s
95th percentile per-packet one-way delay: 184.088 ms
Loss rate: 3.26%
-- Flow 2:
Average throughput: 114.67 Mbit/s
95th percentile per-packet one-way delay: 178.225 ms
Loss rate: 3.92%
-- Flow 3:
Average throughput: 4.26 Mbit/s
95th percentile per-packet one-way delay: 177.782 ms
Loss rate: 2.21%
```
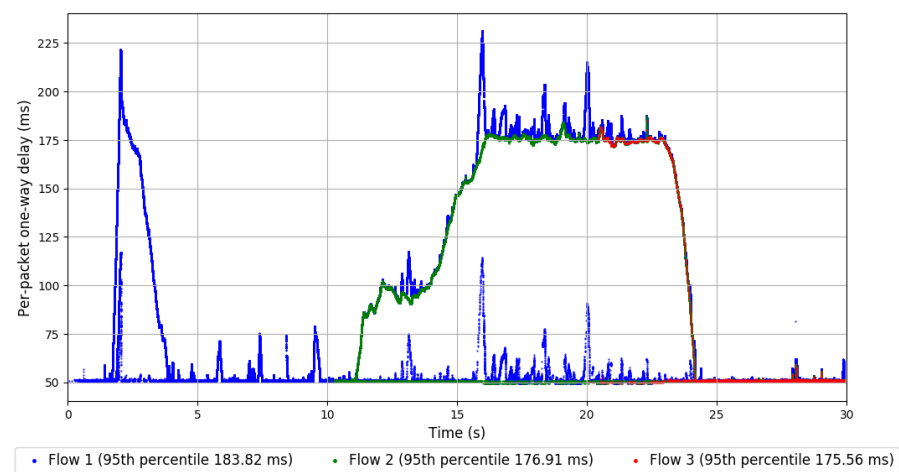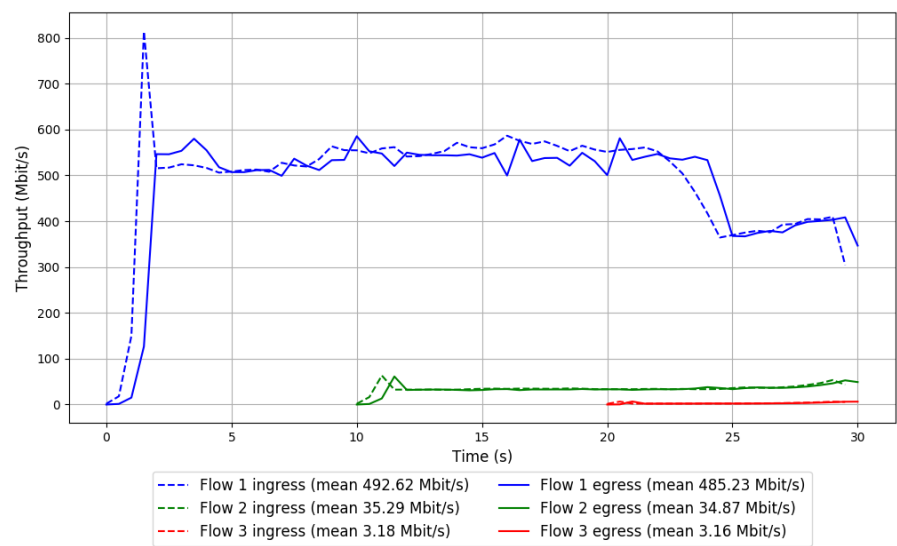
Run 3: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 484.25 Mbit/s) —— Flow 1 egress (mean 468.42 Mbit/s)
- - - Flow 2 ingress (mean 119.35 Mbit/s) —— Flow 2 egress (mean 114.67 Mbit/s)
- - - Flow 3 ingress (mean 4.36 Mbit/s) —— Flow 3 egress (mean 4.26 Mbit/s)

• Flow 1 (95th percentile 184.09 ms)   • Flow 2 (95th percentile 178.22 ms)   • Flow 3 (95th percentile 177.78 ms)
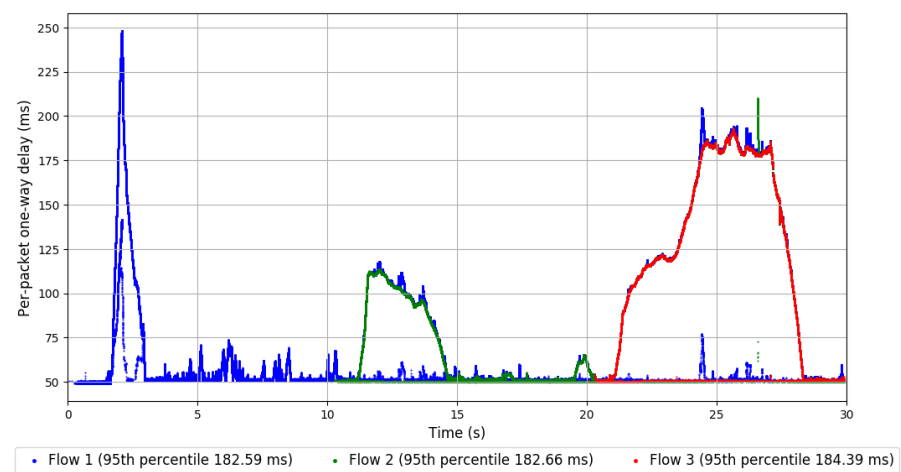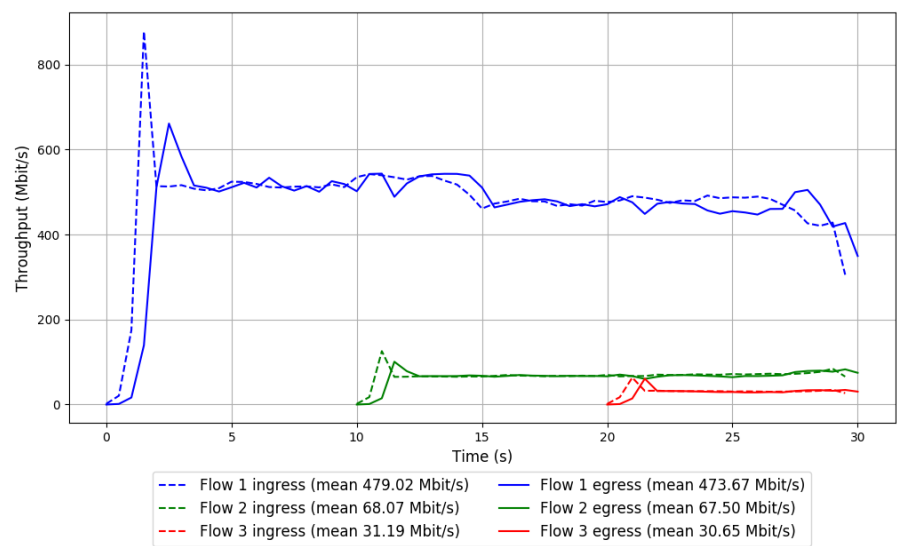
```
Run 4: Statistics of PCC-Allegro

Start at: 2018-07-12 05:18:14
End at: 2018-07-12 05:18:44
Local clock offset: -0.428 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2018-07-12 10:04:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 547.73 Mbit/s
95th percentile per-packet one-way delay: 181.786 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 506.74 Mbit/s
95th percentile per-packet one-way delay: 182.712 ms
Loss rate: 2.33%
-- Flow 2:
Average throughput: 60.56 Mbit/s
95th percentile per-packet one-way delay: 174.681 ms
Loss rate: 2.34%
-- Flow 3:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 173.853 ms
Loss rate: 3.44%
```

Run 4: Report of PCC-Allegro — Data Link

- Flow 1 ingress (mean 518.87 Mbit/s)
- Flow 2 ingress (mean 62.01 Mbit/s)
- Flow 3 ingress (mean 2.30 Mbit/s)
- Flow 1 egress (mean 506.74 Mbit/s)
- Flow 2 egress (mean 60.56 Mbit/s)
- Flow 3 egress (mean 2.22 Mbit/s)

- Flow 1 (95th percentile 182.71 ms)
- Flow 2 (95th percentile 174.68 ms)
- Flow 3 (95th percentile 173.85 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-07-12 05:43:25
End at: 2018-07-12 05:43:55
Local clock offset: -0.122 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2018-07-12 10:04:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 544.26 Mbit/s
95th percentile per-packet one-way delay: 171.231 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 500.79 Mbit/s
95th percentile per-packet one-way delay: 171.676 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 33.39 Mbit/s
95th percentile per-packet one-way delay: 172.797 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 64.56 Mbit/s
95th percentile per-packet one-way delay: 88.274 ms
Loss rate: 0.00%
```
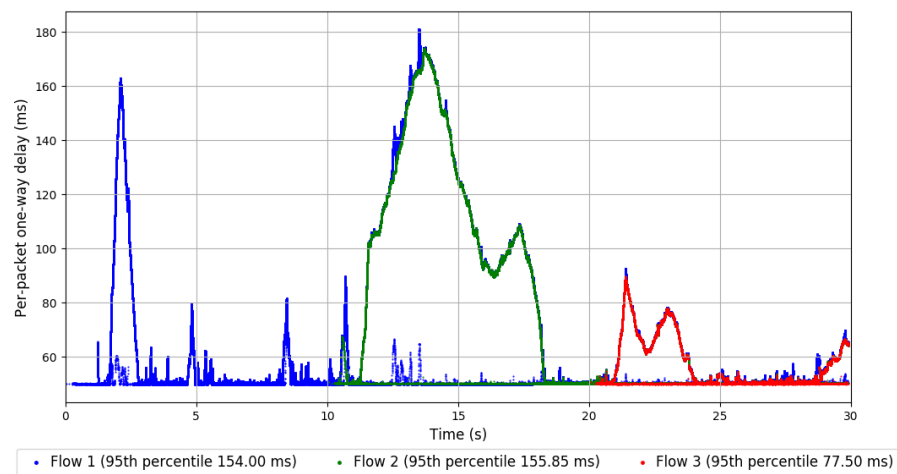
Run 5: Report of PCC-Allegro — Data Link

```
Run 6: Statistics of PCC-Allegro

Start at: 2018-07-12 06:08:10
End at: 2018-07-12 06:08:40
Local clock offset: -0.506 ms
Remote clock offset: -0.076 ms


# Below is generated by plot.py at 2018-07-12 10:04:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 527.54 Mbit/s
95th percentile per-packet one-way delay: 173.544 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 489.69 Mbit/s
95th percentile per-packet one-way delay: 173.994 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 49.19 Mbit/s
95th percentile per-packet one-way delay: 160.947 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 15.64 Mbit/s
95th percentile per-packet one-way delay: 81.351 ms
Loss rate: 0.00%
```
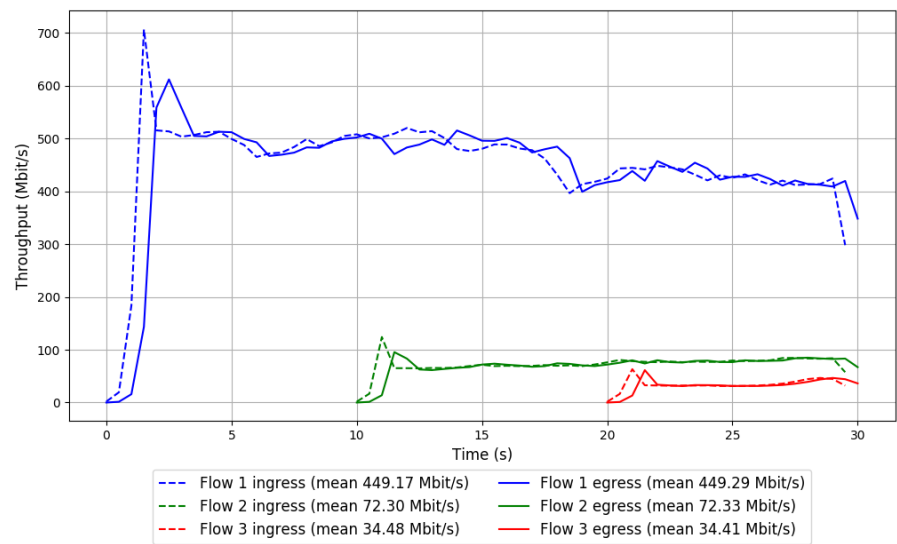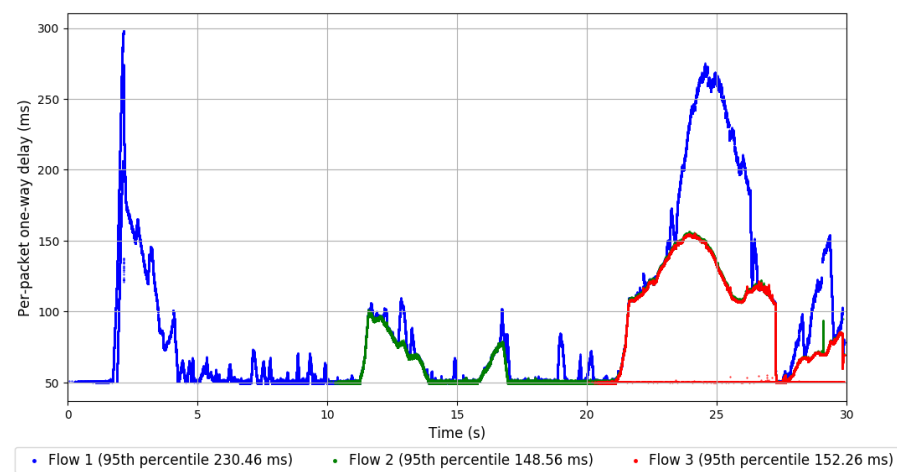
Run 6: Report of PCC-Allegro — Data Link

```
Run 7: Statistics of PCC-Allegro

Start at: 2018-07-12 06:33:21
End at: 2018-07-12 06:33:51
Local clock offset: -0.122 ms
Remote clock offset: -0.029 ms


# Below is generated by plot.py at 2018-07-12 10:07:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 509.44 Mbit/s
95th percentile per-packet one-way delay: 183.492 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 485.23 Mbit/s
95th percentile per-packet one-way delay: 183.821 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 34.87 Mbit/s
95th percentile per-packet one-way delay: 176.905 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 3.16 Mbit/s
95th percentile per-packet one-way delay: 175.565 ms
Loss rate: 0.77%
```
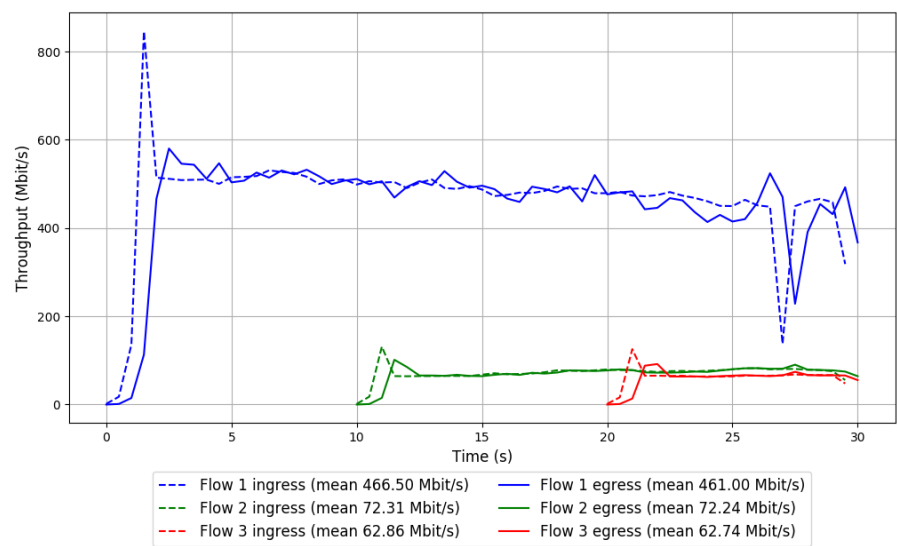
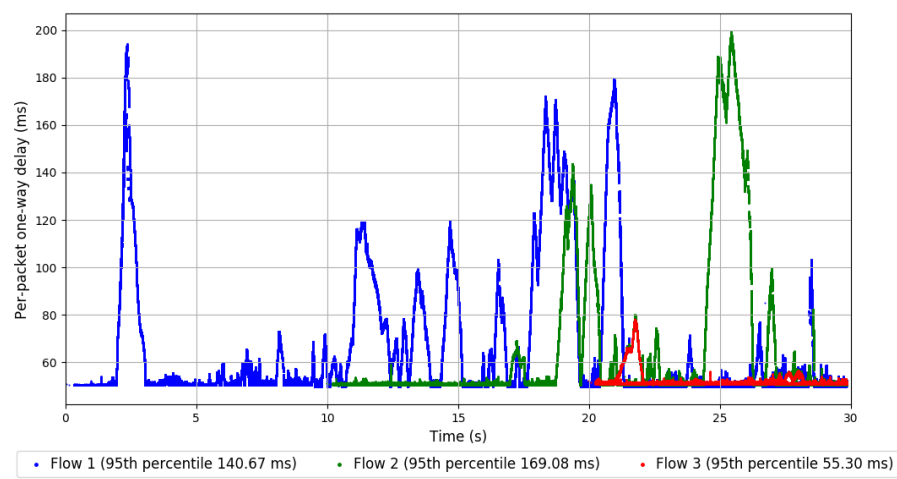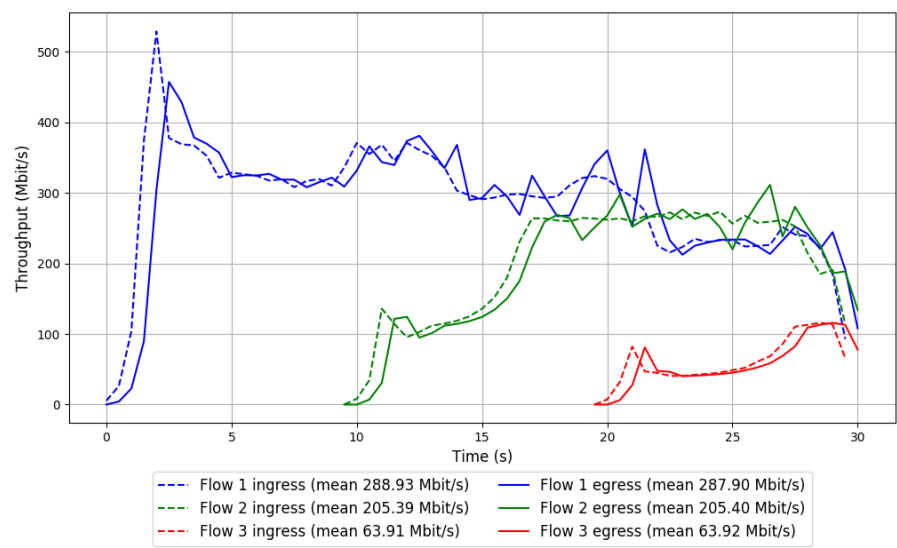## Run 7: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 492.62 Mbit/s) — Flow 1 egress (mean 485.23 Mbit/s)
Flow 2 ingress (mean 35.29 Mbit/s) — Flow 2 egress (mean 34.87 Mbit/s)
Flow 3 ingress (mean 3.18 Mbit/s) — Flow 3 egress (mean 3.16 Mbit/s)

Flow 1 (95th percentile 183.82 ms)   Flow 2 (95th percentile 176.91 ms)   Flow 3 (95th percentile 175.56 ms)
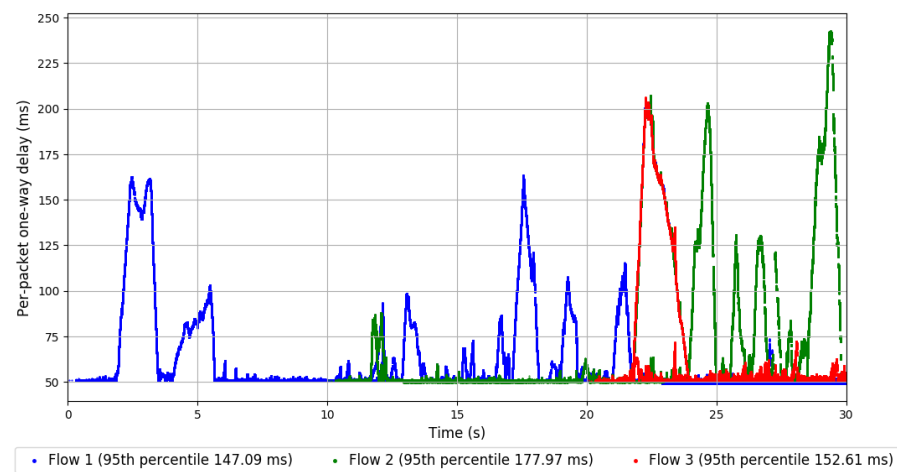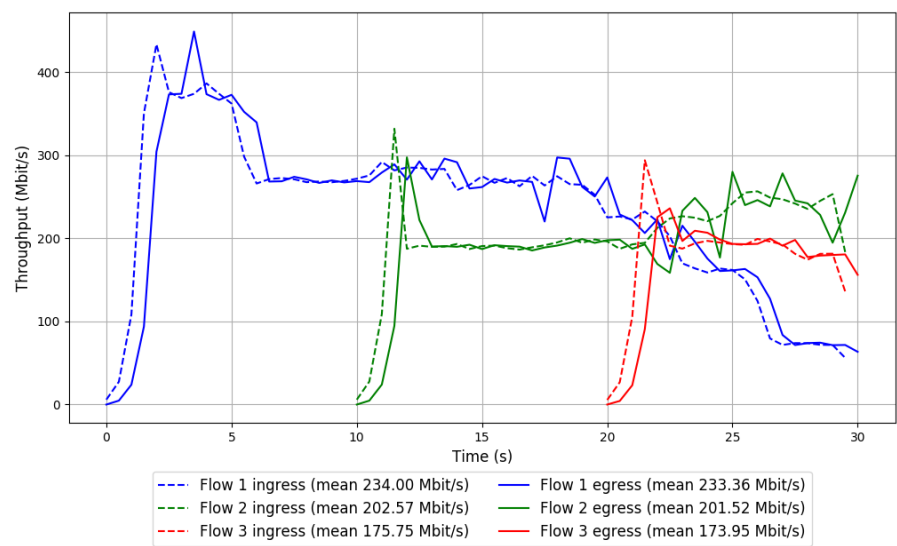
```
Run 8: Statistics of PCC-Allegro

Start at: 2018-07-12 06:58:02
End at: 2018-07-12 06:58:32
Local clock offset: -0.367 ms
Remote clock offset: -0.017 ms


# Below is generated by plot.py at 2018-07-12 10:09:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 528.64 Mbit/s
95th percentile per-packet one-way delay: 182.701 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 473.67 Mbit/s
95th percentile per-packet one-way delay: 182.591 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 67.50 Mbit/s
95th percentile per-packet one-way delay: 182.661 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 30.65 Mbit/s
95th percentile per-packet one-way delay: 184.390 ms
Loss rate: 1.71%
```

Run 8: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 479.02 Mbit/s) — Flow 1 egress (mean 473.67 Mbit/s)
Flow 2 ingress (mean 68.07 Mbit/s) — Flow 2 egress (mean 67.50 Mbit/s)
Flow 3 ingress (mean 31.19 Mbit/s) — Flow 3 egress (mean 30.65 Mbit/s)

Flow 1 (95th percentile 182.59 ms) • Flow 2 (95th percentile 182.66 ms) • Flow 3 (95th percentile 184.39 ms)

```
Run 9: Statistics of PCC-Allegro

Start at: 2018-07-12 07:22:56
End at: 2018-07-12 07:23:26
Local clock offset: 0.313 ms
Remote clock offset: -0.05 ms


# Below is generated by plot.py at 2018-07-12 10:09:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 508.67 Mbit/s
95th percentile per-packet one-way delay: 153.767 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 449.29 Mbit/s
95th percentile per-packet one-way delay: 153.995 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 72.33 Mbit/s
95th percentile per-packet one-way delay: 155.850 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 34.41 Mbit/s
95th percentile per-packet one-way delay: 77.505 ms
Loss rate: 0.17%
```
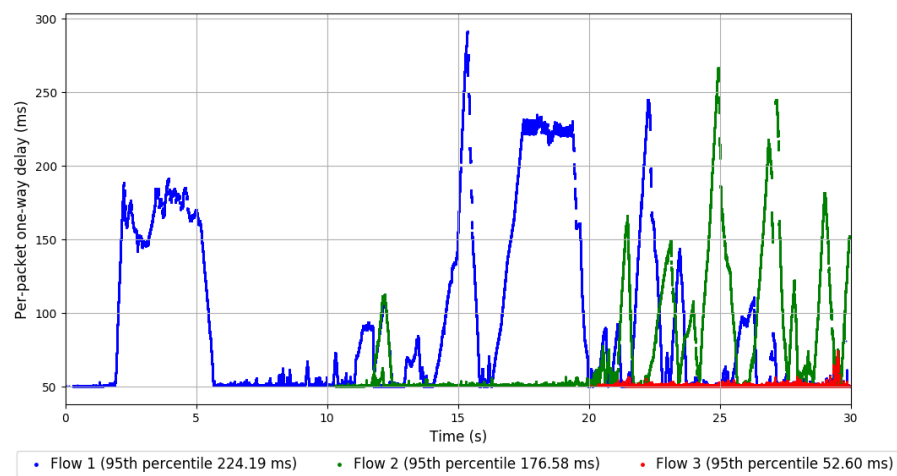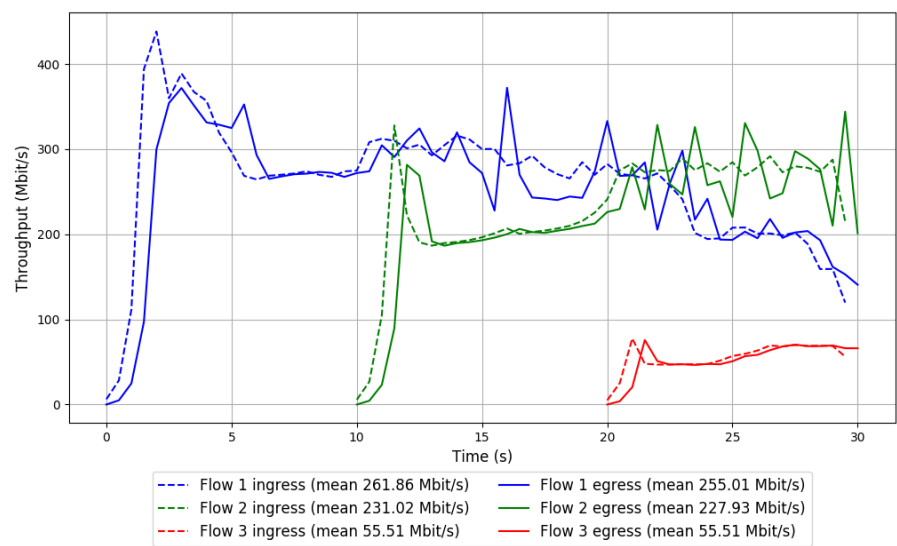
Run 9: Report of PCC-Allegro — Data Link

```
Run 10: Statistics of PCC-Allegro

Start at: 2018-07-12 07:47:57
End at: 2018-07-12 07:48:27
Local clock offset: 0.003 ms
Remote clock offset: 0.006 ms


# Below is generated by plot.py at 2018-07-12 10:11:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.68 Mbit/s
95th percentile per-packet one-way delay: 223.881 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 461.00 Mbit/s
95th percentile per-packet one-way delay: 230.458 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 72.24 Mbit/s
95th percentile per-packet one-way delay: 148.565 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 62.74 Mbit/s
95th percentile per-packet one-way delay: 152.264 ms
Loss rate: 0.20%
```
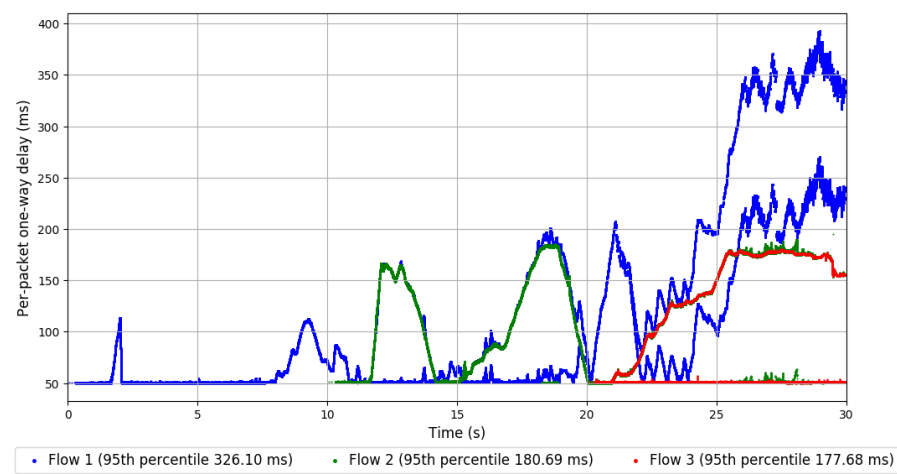
Run 10: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2018-07-12 03:56:44
End at: 2018-07-12 03:57:14
Local clock offset: -0.118 ms
Remote clock offset: 0.009 ms


# Below is generated by plot.py at 2018-07-12 10:17:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 446.10 Mbit/s
95th percentile per-packet one-way delay: 145.289 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 287.90 Mbit/s
95th percentile per-packet one-way delay: 140.673 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 205.40 Mbit/s
95th percentile per-packet one-way delay: 169.077 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 63.92 Mbit/s
95th percentile per-packet one-way delay: 55.301 ms
Loss rate: 0.00%
```
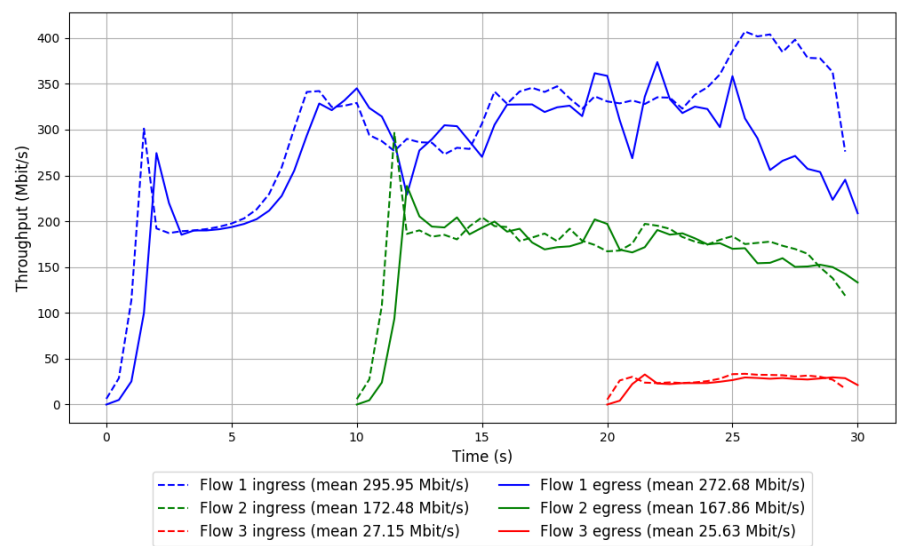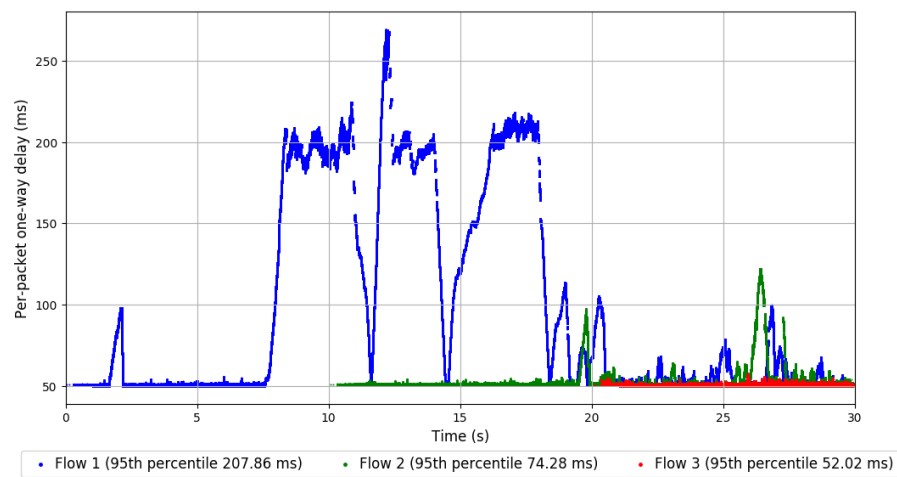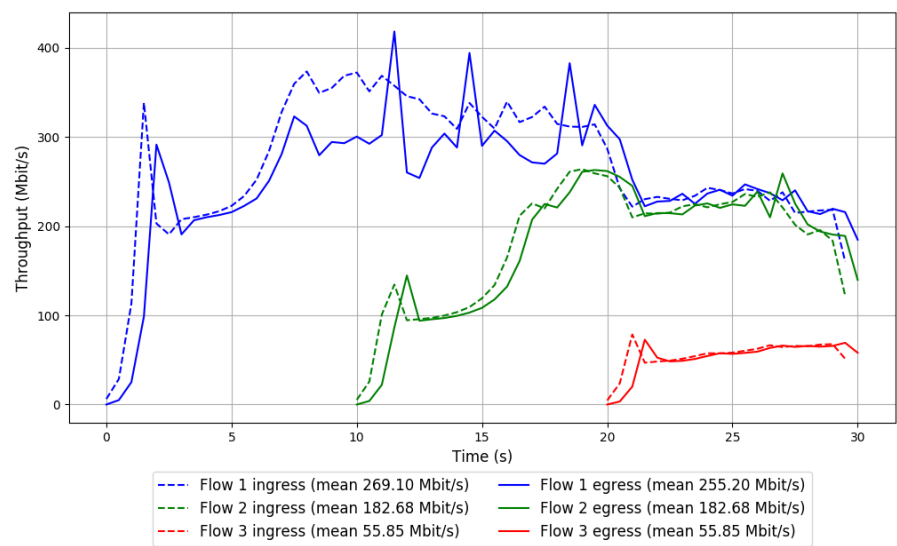
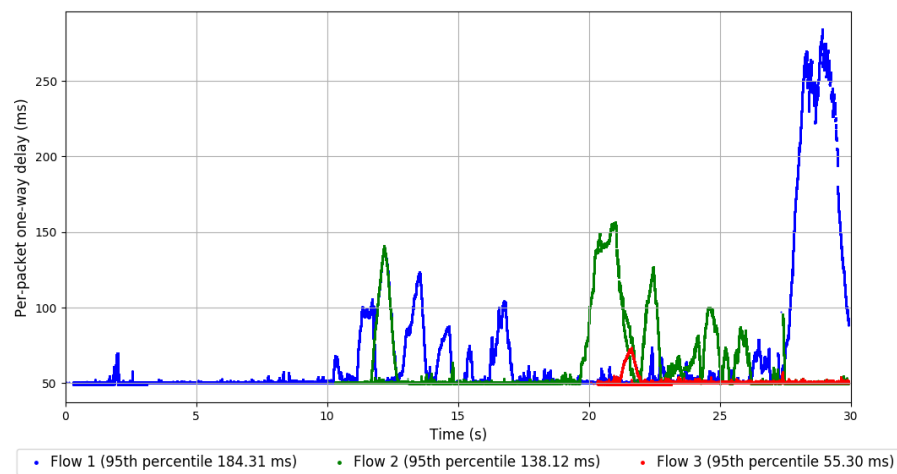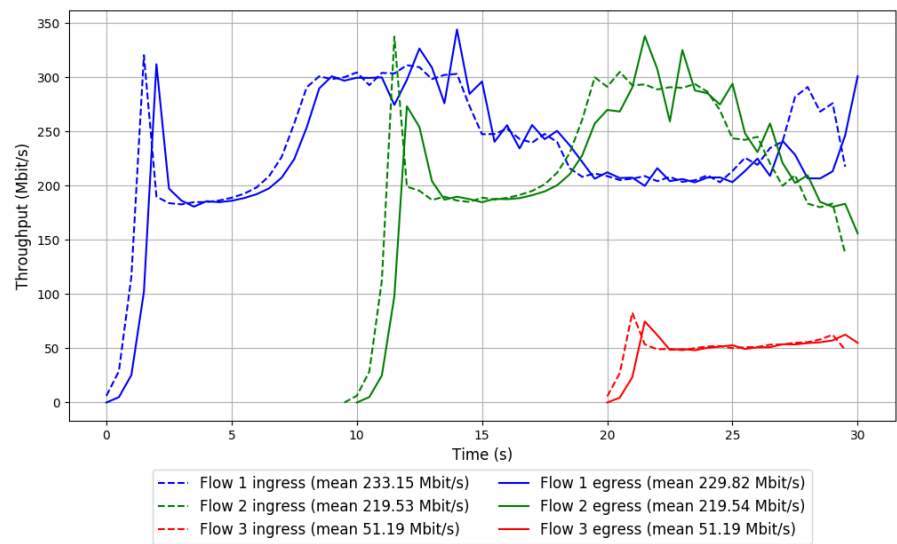Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2018-07-12 04:22:01
End at: 2018-07-12 04:22:31
Local clock offset: -0.435 ms
Remote clock offset: -0.027 ms


# Below is generated by plot.py at 2018-07-12 10:17:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.76 Mbit/s
95th percentile per-packet one-way delay: 156.079 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 233.36 Mbit/s
95th percentile per-packet one-way delay: 147.089 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 201.52 Mbit/s
95th percentile per-packet one-way delay: 177.965 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 173.95 Mbit/s
95th percentile per-packet one-way delay: 152.606 ms
Loss rate: 1.02%
```

Run 2: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 234.00 Mbit/s) — Flow 1 egress (mean 233.36 Mbit/s)
Flow 2 ingress (mean 202.57 Mbit/s) — Flow 2 egress (mean 201.52 Mbit/s)
Flow 3 ingress (mean 175.75 Mbit/s) — Flow 3 egress (mean 173.95 Mbit/s)

Flow 1 (95th percentile 147.09 ms) • Flow 2 (95th percentile 177.97 ms) • Flow 3 (95th percentile 152.61 ms)

```
Run 3: Statistics of PCC-Expr

Start at: 2018-07-12 04:47:12
End at: 2018-07-12 04:47:42
Local clock offset: -0.116 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2018-07-12 10:17:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.90 Mbit/s
95th percentile per-packet one-way delay: 220.973 ms
Loss rate: 2.05%
-- Flow 1:
Average throughput: 255.01 Mbit/s
95th percentile per-packet one-way delay: 224.194 ms
Loss rate: 2.61%
-- Flow 2:
Average throughput: 227.93 Mbit/s
95th percentile per-packet one-way delay: 176.580 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 55.51 Mbit/s
95th percentile per-packet one-way delay: 52.598 ms
Loss rate: 0.00%
```
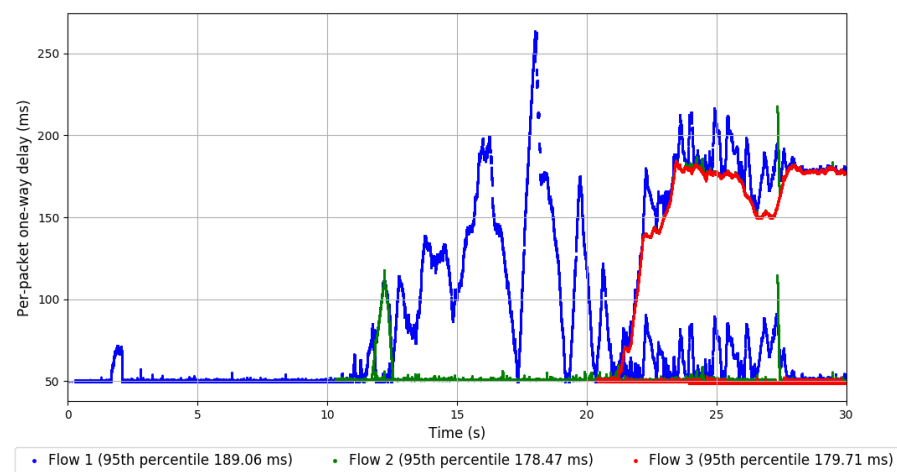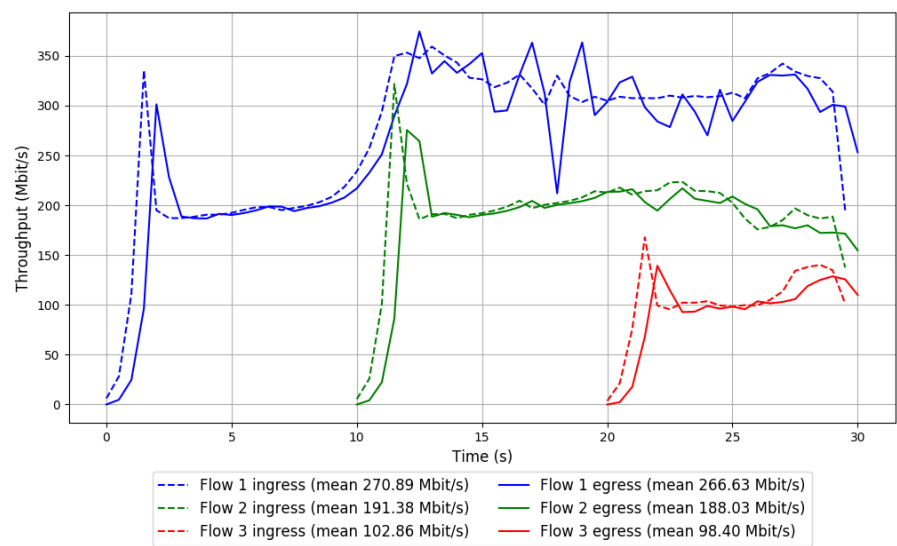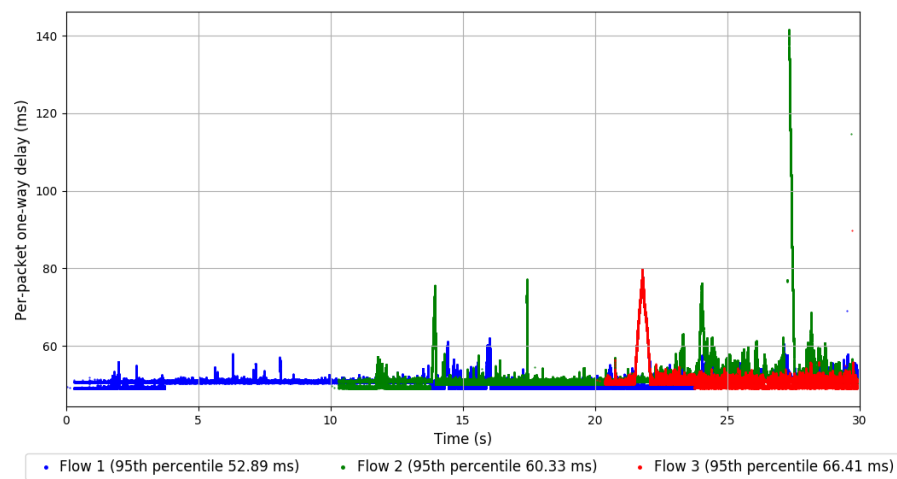
Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2018-07-12 05:12:46
End at: 2018-07-12 05:13:16
Local clock offset: -0.45 ms
Remote clock offset: 0.013 ms


# Below is generated by plot.py at 2018-07-12 10:17:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.76 Mbit/s
95th percentile per-packet one-way delay: 242.458 ms
Loss rate: 6.40%
-- Flow 1:
Average throughput: 272.68 Mbit/s
95th percentile per-packet one-way delay: 326.102 ms
Loss rate: 7.86%
-- Flow 2:
Average throughput: 167.86 Mbit/s
95th percentile per-packet one-way delay: 180.686 ms
Loss rate: 2.68%
-- Flow 3:
Average throughput: 25.63 Mbit/s
95th percentile per-packet one-way delay: 177.683 ms
Loss rate: 5.59%
```
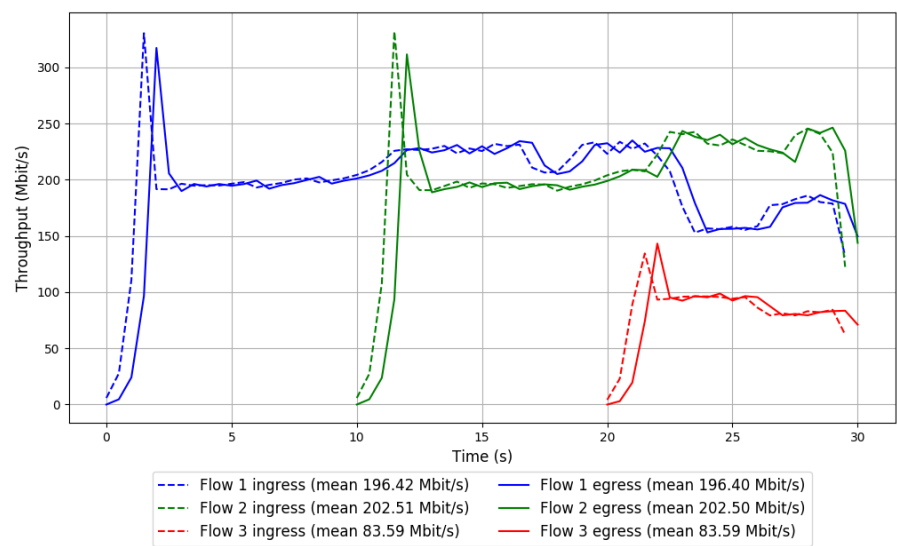
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2018-07-12 05:37:53
End at: 2018-07-12 05:38:23
Local clock offset: -0.479 ms
Remote clock offset: 0.008 ms


# Below is generated by plot.py at 2018-07-12 10:20:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.05 Mbit/s
95th percentile per-packet one-way delay: 204.165 ms
Loss rate: 3.40%
-- Flow 1:
Average throughput: 255.20 Mbit/s
95th percentile per-packet one-way delay: 207.860 ms
Loss rate: 5.17%
-- Flow 2:
Average throughput: 182.68 Mbit/s
95th percentile per-packet one-way delay: 74.278 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 55.85 Mbit/s
95th percentile per-packet one-way delay: 52.019 ms
Loss rate: 0.00%
```

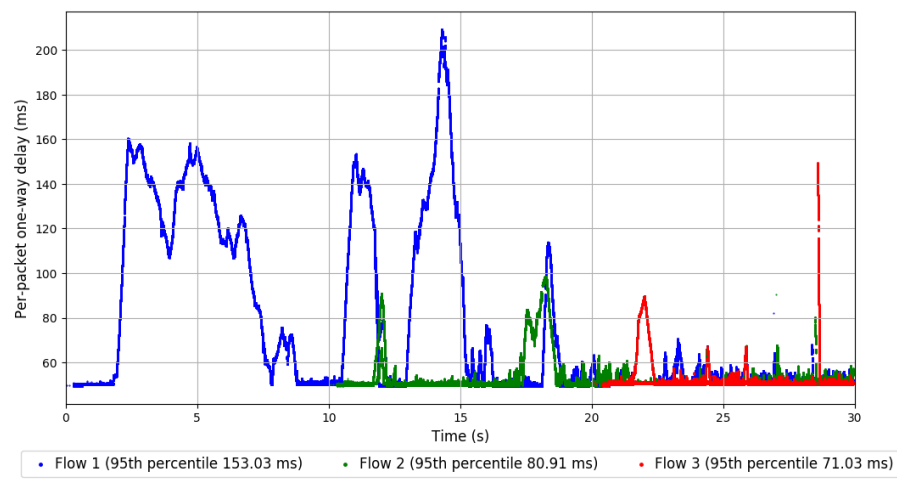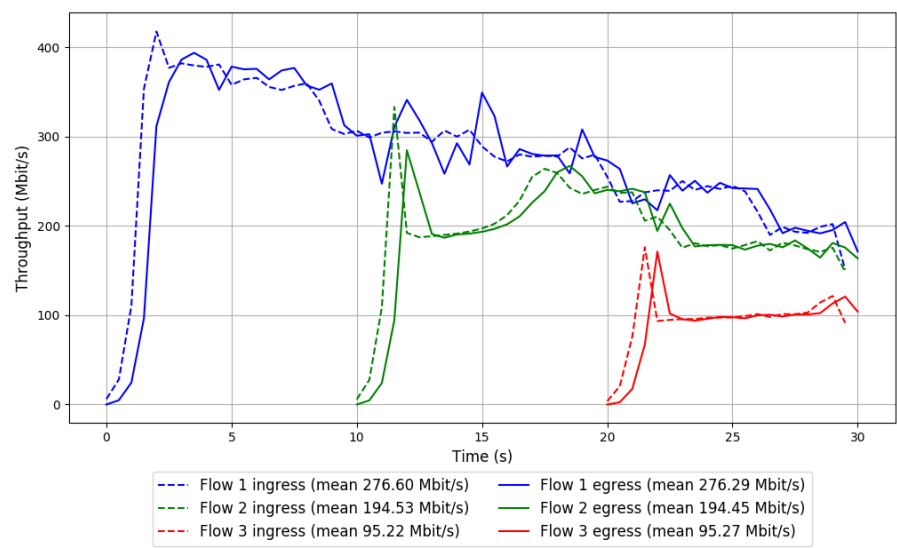# Run 5: Report of PCC-Expr — Data Link

```
Run 6: Statistics of PCC-Expr

Start at: 2018-07-12 06:02:41
End at: 2018-07-12 06:03:11
Local clock offset: 0.251 ms
Remote clock offset: -0.013 ms


# Below is generated by plot.py at 2018-07-12 10:22:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.79 Mbit/s
95th percentile per-packet one-way delay: 141.746 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 229.82 Mbit/s
95th percentile per-packet one-way delay: 184.313 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 219.54 Mbit/s
95th percentile per-packet one-way delay: 138.123 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 51.19 Mbit/s
95th percentile per-packet one-way delay: 55.299 ms
Loss rate: 0.00%
```

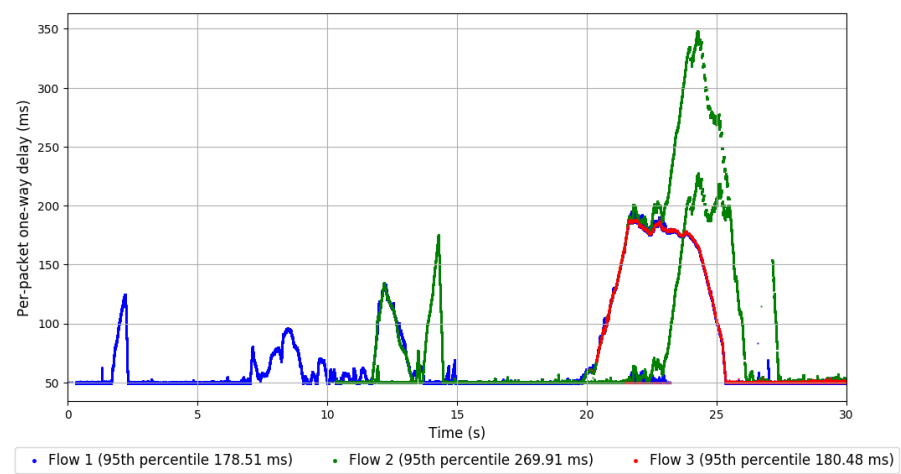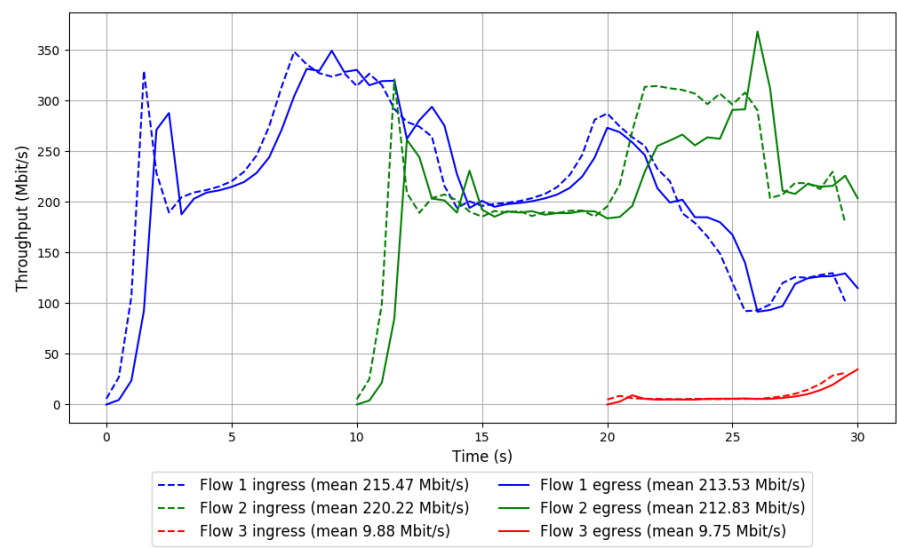# Run 6: Report of PCC-Expr — Data Link

```
Run 7: Statistics of PCC-Expr

Start at: 2018-07-12 06:27:50
End at: 2018-07-12 06:28:20
Local clock offset: -0.108 ms
Remote clock offset: -0.027 ms


# Below is generated by plot.py at 2018-07-12 10:23:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.07 Mbit/s
95th percentile per-packet one-way delay: 183.063 ms
Loss rate: 2.03%
-- Flow 1:
Average throughput: 266.63 Mbit/s
95th percentile per-packet one-way delay: 189.062 ms
Loss rate: 1.71%
-- Flow 2:
Average throughput: 188.03 Mbit/s
95th percentile per-packet one-way delay: 178.471 ms
Loss rate: 1.97%
-- Flow 3:
Average throughput: 98.40 Mbit/s
95th percentile per-packet one-way delay: 179.705 ms
Loss rate: 4.74%
```

Run 7: Report of PCC-Expr — Data Link

- Flow 1 ingress (mean 270.89 Mbit/s)
- Flow 1 egress (mean 266.63 Mbit/s)
- Flow 2 ingress (mean 191.38 Mbit/s)
- Flow 2 egress (mean 188.03 Mbit/s)
- Flow 3 ingress (mean 102.86 Mbit/s)
- Flow 3 egress (mean 98.40 Mbit/s)

- Flow 1 (95th percentile 189.06 ms)
- Flow 2 (95th percentile 178.47 ms)
- Flow 3 (95th percentile 179.71 ms)

```
Run 8: Statistics of PCC-Expr

Start at: 2018-07-12 06:52:40
End at: 2018-07-12 06:53:10
Local clock offset: -0.395 ms
Remote clock offset: -0.008 ms


# Below is generated by plot.py at 2018-07-12 10:24:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.68 Mbit/s
95th percentile per-packet one-way delay: 56.752 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 196.40 Mbit/s
95th percentile per-packet one-way delay: 52.894 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 202.50 Mbit/s
95th percentile per-packet one-way delay: 60.327 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 83.59 Mbit/s
95th percentile per-packet one-way delay: 66.405 ms
Loss rate: 0.01%
```
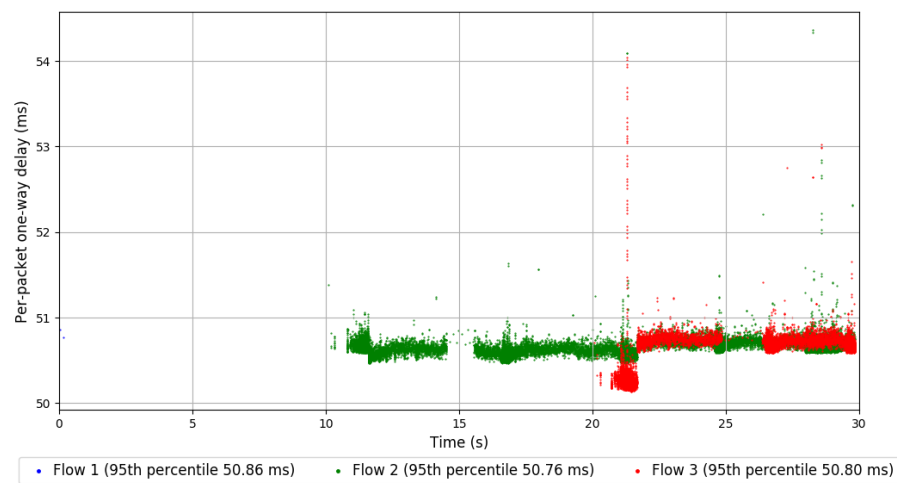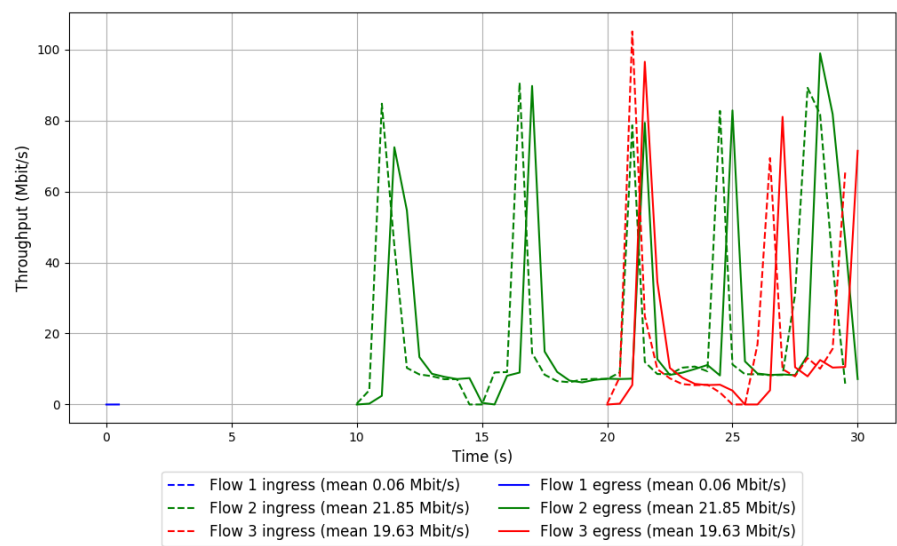
Run 8: Report of PCC-Expr — Data Link

```
Run 9: Statistics of PCC-Expr

Start at: 2018-07-12 07:17:23
End at: 2018-07-12 07:17:53
Local clock offset: 0.021 ms
Remote clock offset: -0.051 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.02 Mbit/s
95th percentile per-packet one-way delay: 149.324 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 276.29 Mbit/s
95th percentile per-packet one-way delay: 153.031 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 194.45 Mbit/s
95th percentile per-packet one-way delay: 80.912 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 95.27 Mbit/s
95th percentile per-packet one-way delay: 71.033 ms
Loss rate: 0.00%
```
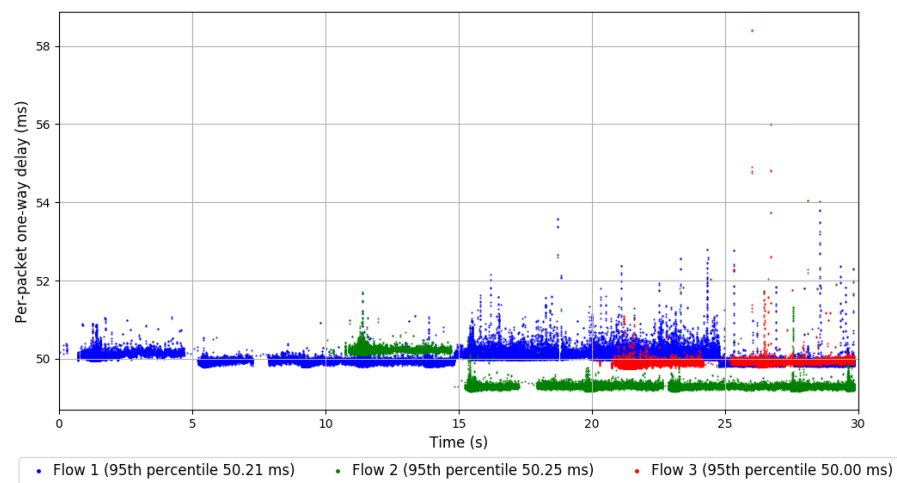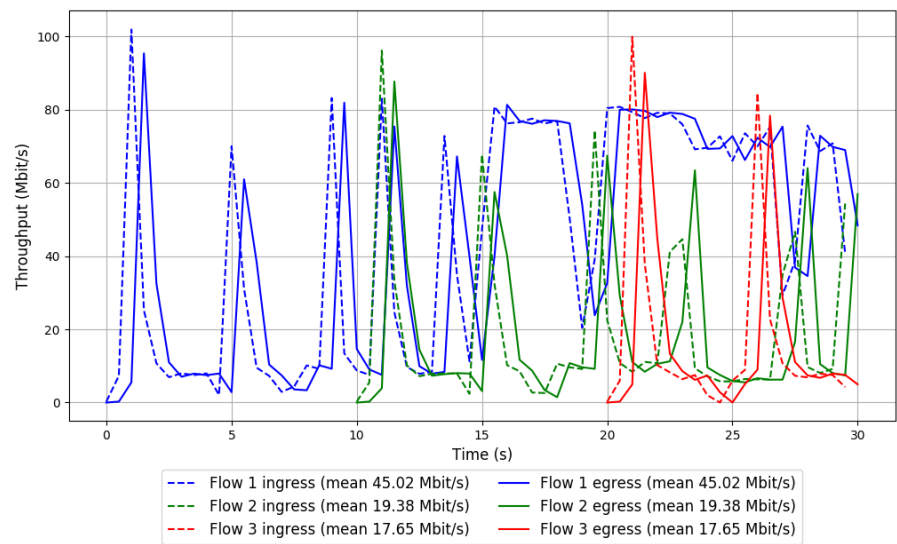
Run 9: Report of PCC-Expr — Data Link

```
Run 10: Statistics of PCC-Expr

Start at: 2018-07-12 07:42:31
End at: 2018-07-12 07:43:01
Local clock offset: 0.327 ms
Remote clock offset: -0.025 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.24 Mbit/s
95th percentile per-packet one-way delay: 196.586 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 213.53 Mbit/s
95th percentile per-packet one-way delay: 178.513 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 212.83 Mbit/s
95th percentile per-packet one-way delay: 269.909 ms
Loss rate: 3.36%
-- Flow 3:
Average throughput: 9.75 Mbit/s
95th percentile per-packet one-way delay: 180.476 ms
Loss rate: 1.46%
```
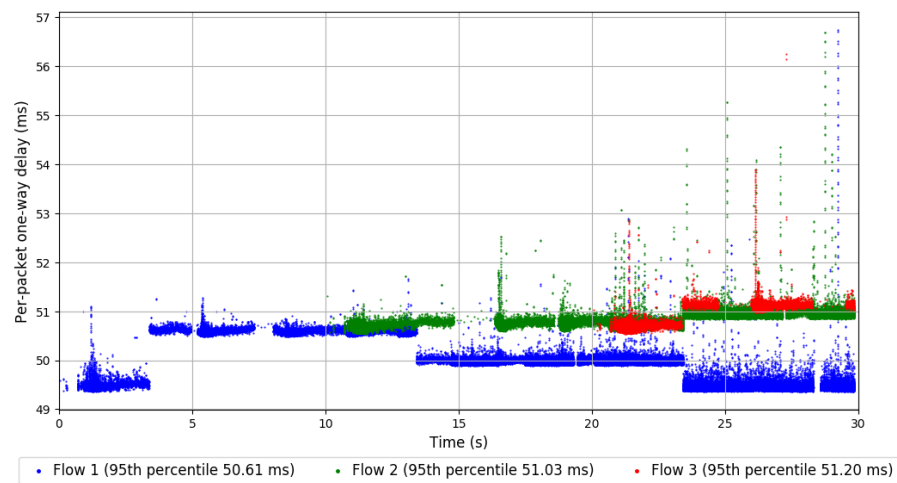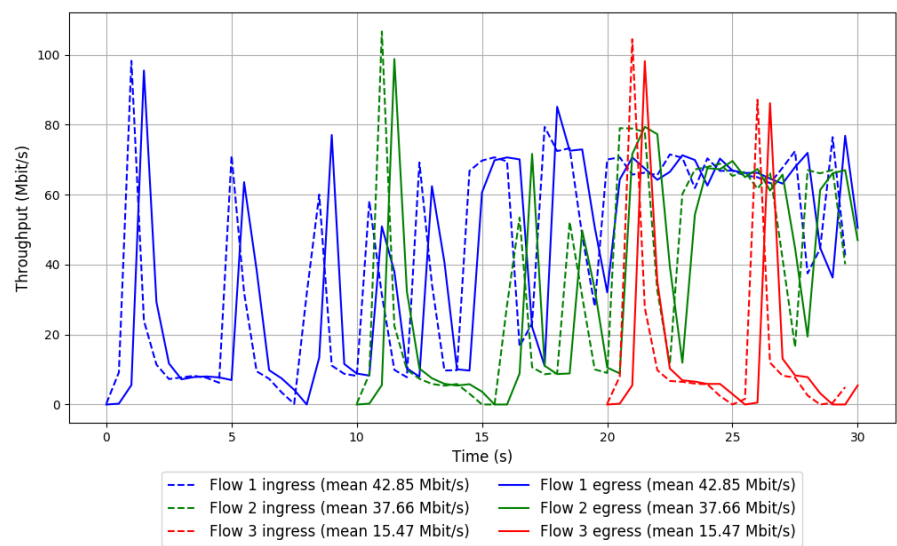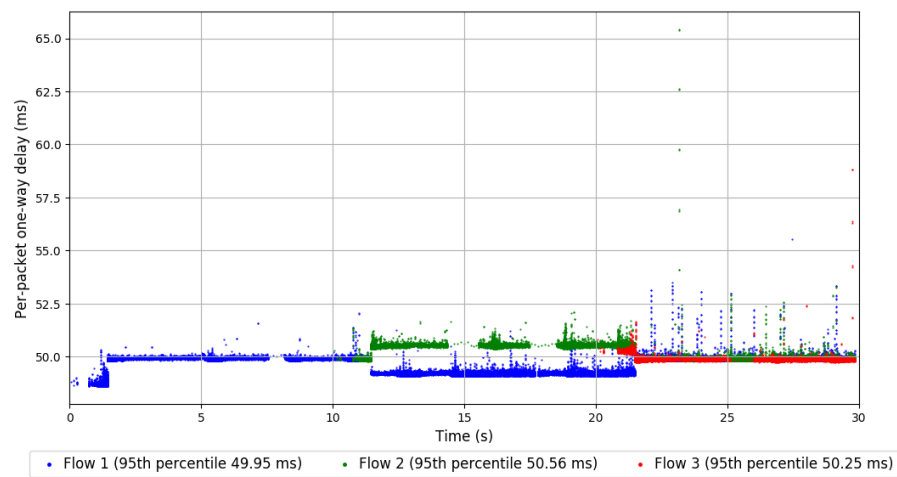
Run 10: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 215.47 Mbit/s) --- Flow 1 egress (mean 213.53 Mbit/s)
Flow 2 ingress (mean 220.22 Mbit/s) --- Flow 2 egress (mean 212.83 Mbit/s)
Flow 3 ingress (mean 9.88 Mbit/s) --- Flow 3 egress (mean 9.75 Mbit/s)

Flow 1 (95th percentile 178.51 ms)   Flow 2 (95th percentile 269.91 ms)   Flow 3 (95th percentile 180.48 ms)
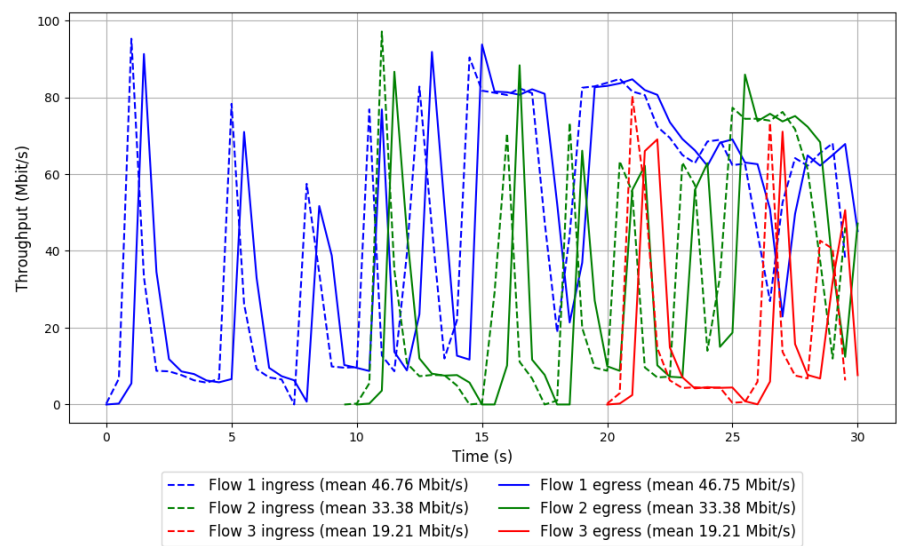
```
Run 1: Statistics of QUIC Cubic

Start at: 2018-07-12 04:08:42
End at: 2018-07-12 04:09:12
Local clock offset: -0.116 ms
Remote clock offset: -0.02 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.93 Mbit/s
95th percentile per-packet one-way delay: 50.775 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.862 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.85 Mbit/s
95th percentile per-packet one-way delay: 50.762 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.63 Mbit/s
95th percentile per-packet one-way delay: 50.798 ms
Loss rate: 0.00%
```
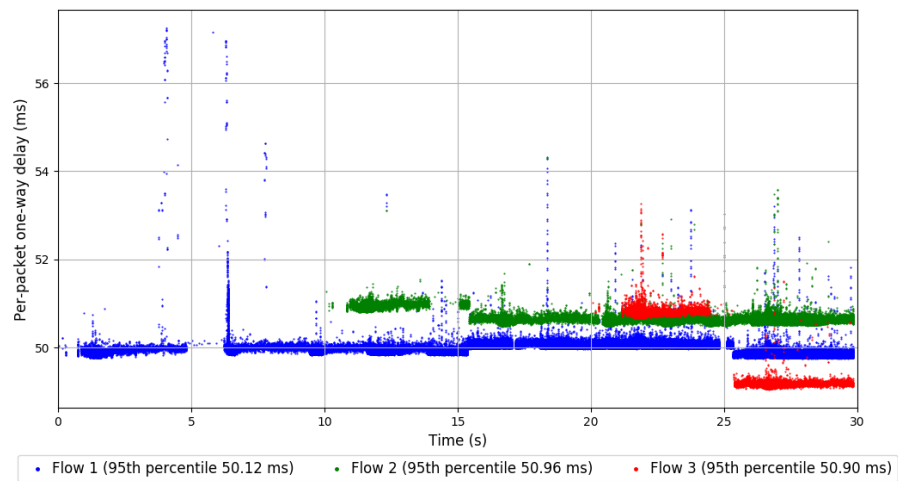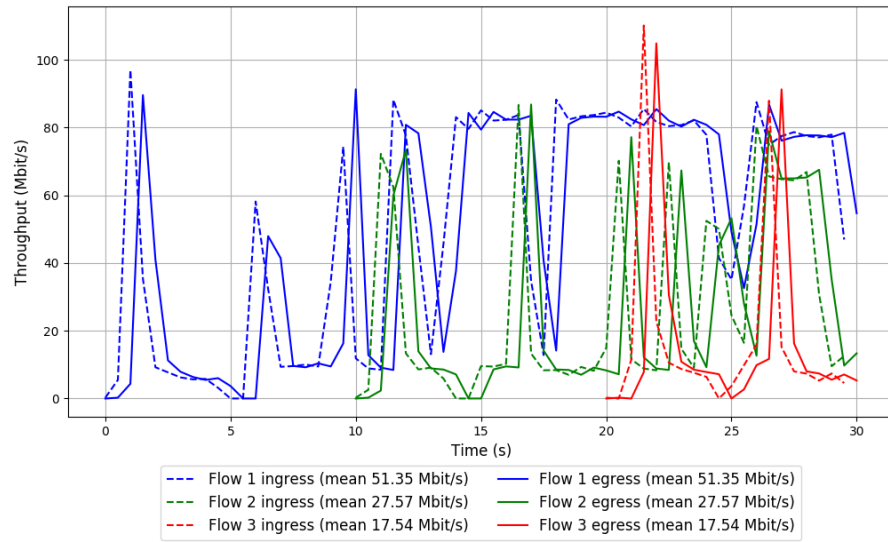
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-07-12 04:33:49
End at: 2018-07-12 04:34:19
Local clock offset: 0.275 ms
Remote clock offset: -0.04 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.67 Mbit/s
95th percentile per-packet one-way delay: 50.221 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.02 Mbit/s
95th percentile per-packet one-way delay: 50.208 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 19.38 Mbit/s
95th percentile per-packet one-way delay: 50.248 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.65 Mbit/s
95th percentile per-packet one-way delay: 49.997 ms
Loss rate: 0.00%
```

Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-07-12 04:59:10
End at: 2018-07-12 04:59:40
Local clock offset: -0.441 ms
Remote clock offset: 0.037 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.93 Mbit/s
95th percentile per-packet one-way delay: 51.023 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.85 Mbit/s
95th percentile per-packet one-way delay: 50.608 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.66 Mbit/s
95th percentile per-packet one-way delay: 51.028 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.47 Mbit/s
95th percentile per-packet one-way delay: 51.202 ms
Loss rate: 0.00%
```
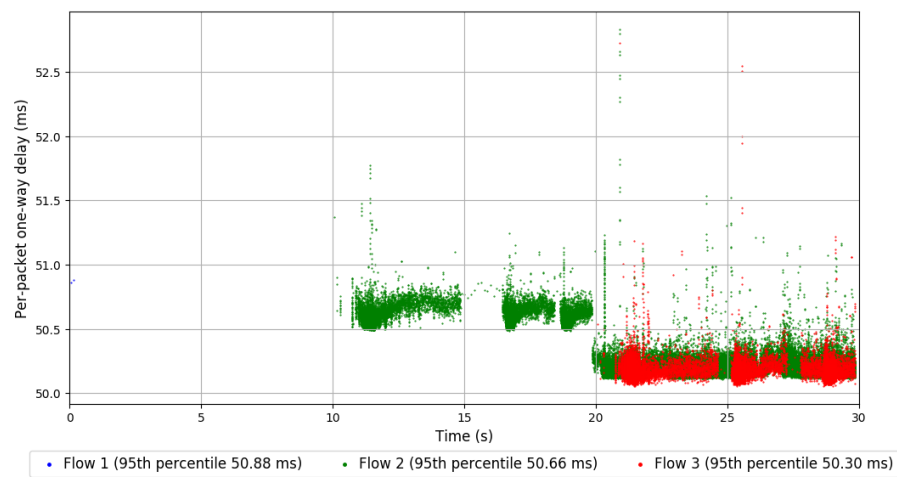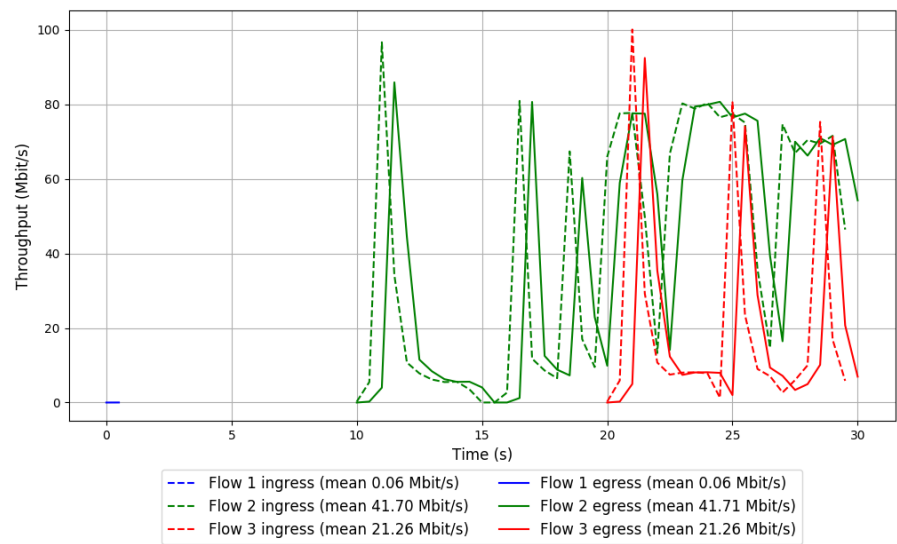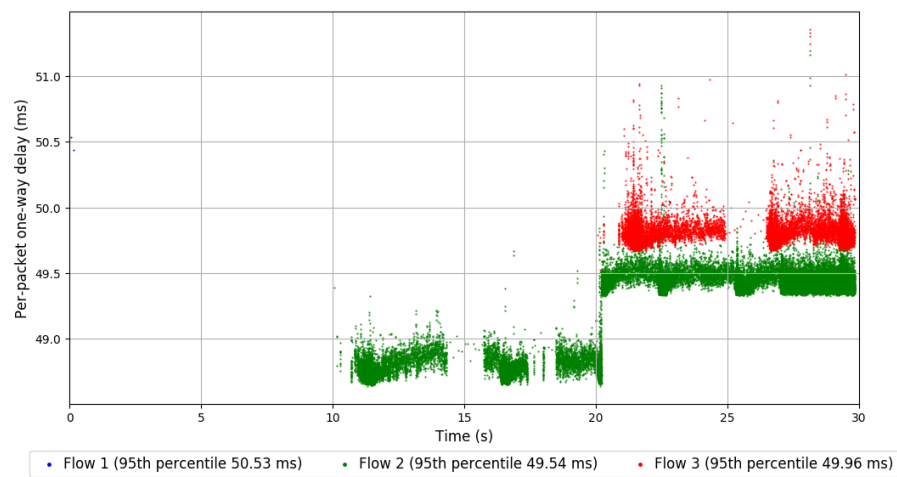
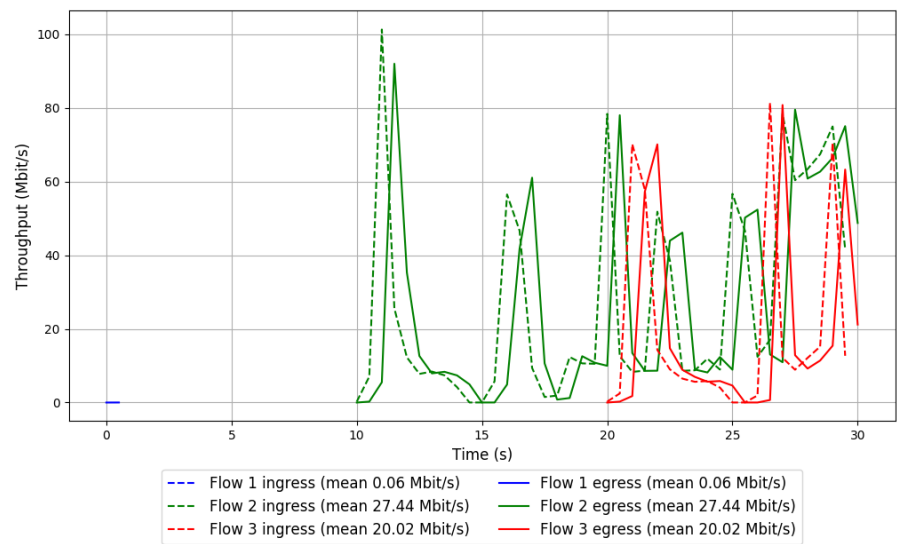Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2018-07-12 05:24:32
End at: 2018-07-12 05:25:02
Local clock offset: 0.265 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.24 Mbit/s
95th percentile per-packet one-way delay: 50.480 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.75 Mbit/s
95th percentile per-packet one-way delay: 49.954 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 33.38 Mbit/s
95th percentile per-packet one-way delay: 50.563 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.21 Mbit/s
95th percentile per-packet one-way delay: 50.247 ms
Loss rate: 0.00%
```

Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 46.76 Mbit/s) --- Flow 1 egress (mean 46.75 Mbit/s)
Flow 2 ingress (mean 33.38 Mbit/s) --- Flow 2 egress (mean 33.38 Mbit/s)
Flow 3 ingress (mean 19.21 Mbit/s) --- Flow 3 egress (mean 19.21 Mbit/s)

Flow 1 (95th percentile 49.95 ms) · Flow 2 (95th percentile 50.56 ms) · Flow 3 (95th percentile 50.25 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-07-12 05:49:48
End at: 2018-07-12 05:50:18
Local clock offset: -0.449 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.41 Mbit/s
95th percentile per-packet one-way delay: 50.845 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.35 Mbit/s
95th percentile per-packet one-way delay: 50.121 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.57 Mbit/s
95th percentile per-packet one-way delay: 50.958 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 17.54 Mbit/s
95th percentile per-packet one-way delay: 50.896 ms
Loss rate: 0.00%
```
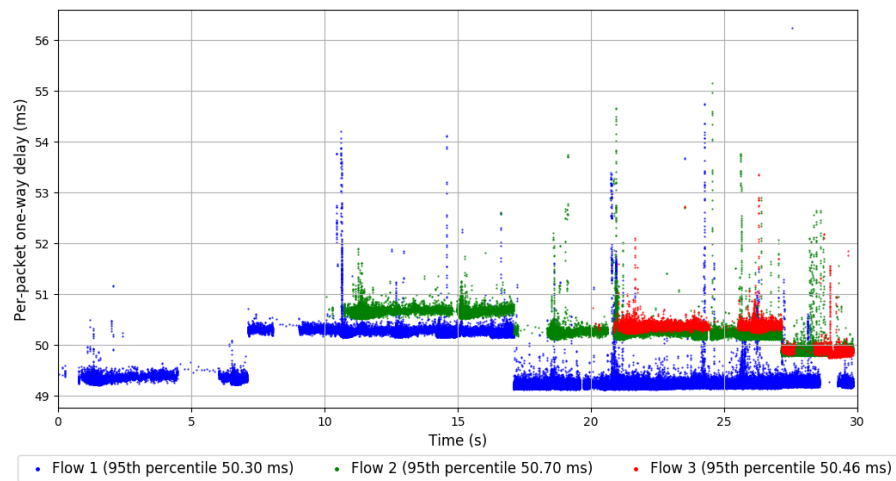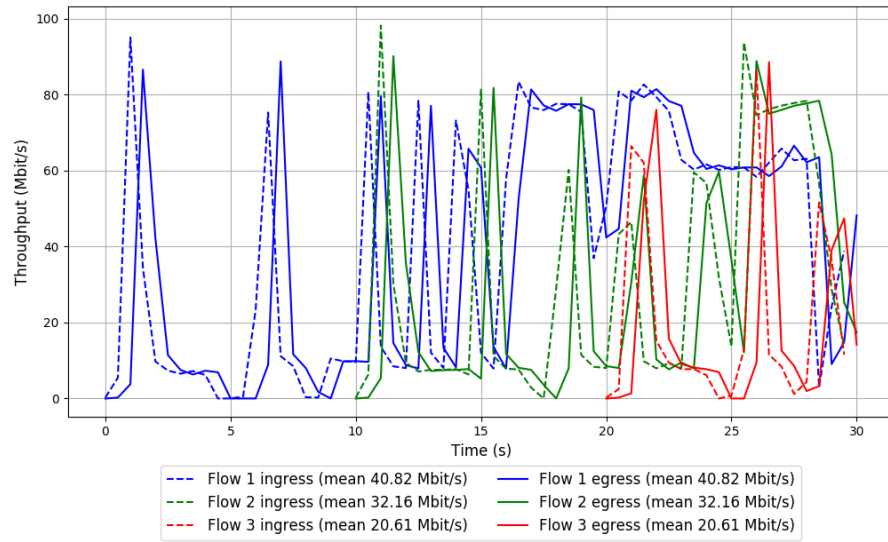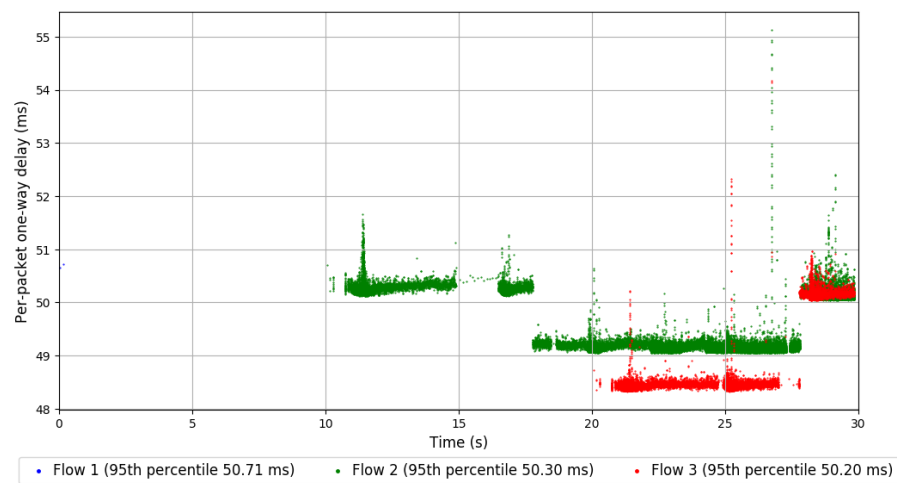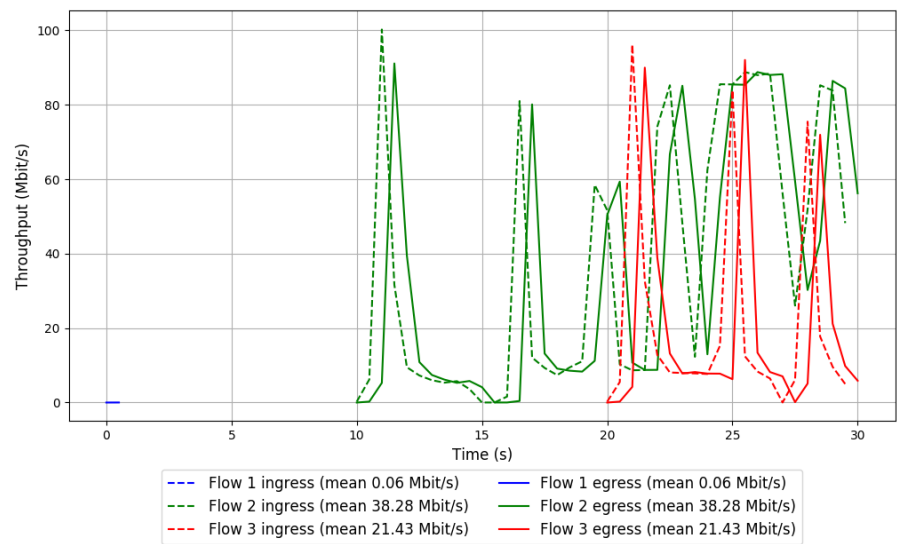
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 51.35 Mbit/s) ---- Flow 1 egress (mean 51.35 Mbit/s)
Flow 2 ingress (mean 27.57 Mbit/s) ---- Flow 2 egress (mean 27.57 Mbit/s)
Flow 3 ingress (mean 17.54 Mbit/s) ---- Flow 3 egress (mean 17.54 Mbit/s)

Flow 1 (95th percentile 50.12 ms)   Flow 2 (95th percentile 50.96 ms)   Flow 3 (95th percentile 50.90 ms)

```
Run 6: Statistics of QUIC Cubic

Start at: 2018-07-12 06:14:34
End at: 2018-07-12 06:15:04
Local clock offset: -0.072 ms
Remote clock offset: -0.03 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.67 Mbit/s
95th percentile per-packet one-way delay: 50.644 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.881 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.71 Mbit/s
95th percentile per-packet one-way delay: 50.659 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.26 Mbit/s
95th percentile per-packet one-way delay: 50.298 ms
Loss rate: 0.00%
```
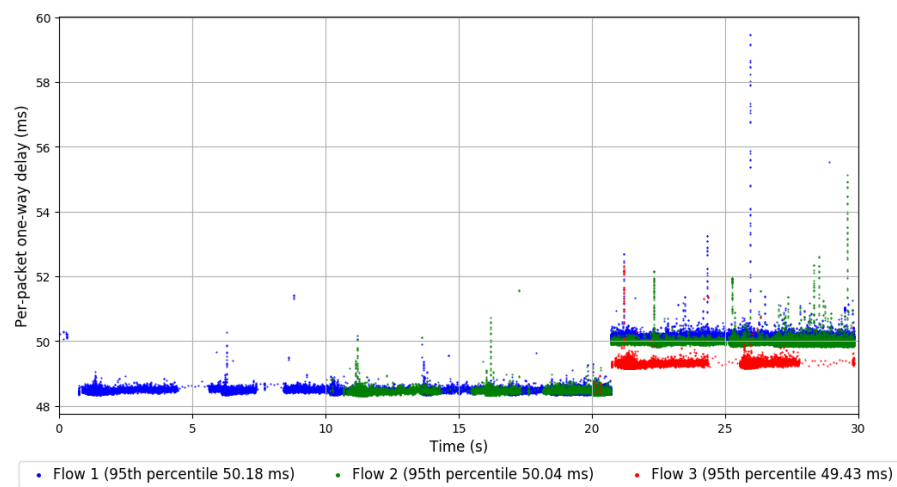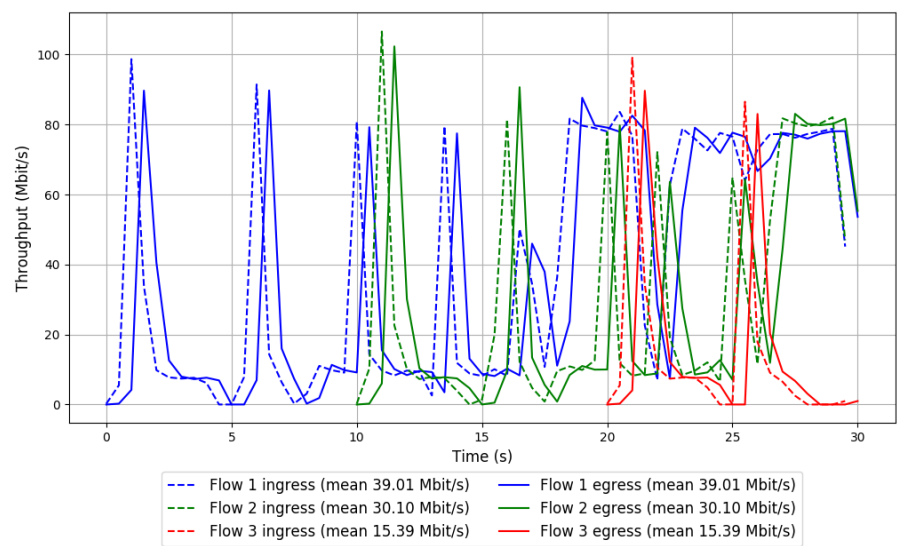
Run 6: Report of QUIC Cubic — Data Link

```
Run 7: Statistics of QUIC Cubic

Start at: 2018-07-12 06:39:34
End at: 2018-07-12 06:40:04
Local clock offset: -0.029 ms
Remote clock offset: -0.045 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.78 Mbit/s
95th percentile per-packet one-way delay: 49.860 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.535 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.44 Mbit/s
95th percentile per-packet one-way delay: 49.544 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.02 Mbit/s
95th percentile per-packet one-way delay: 49.964 ms
Loss rate: 0.00%
```
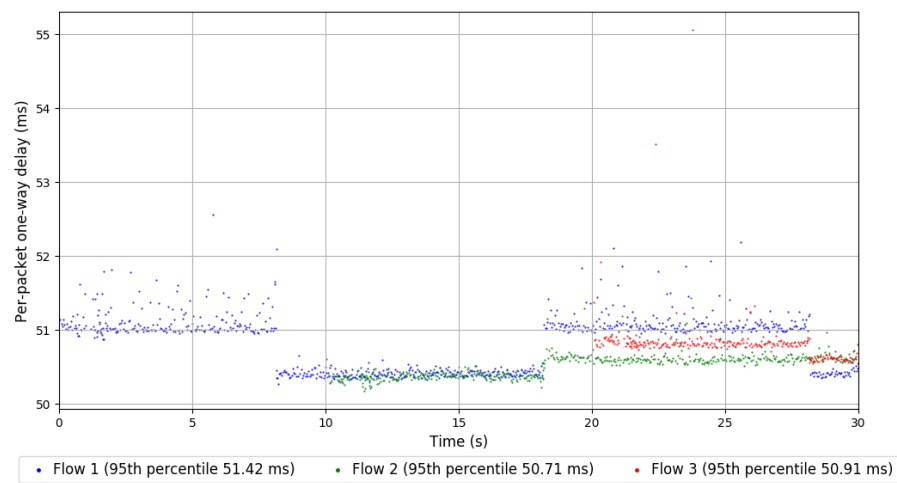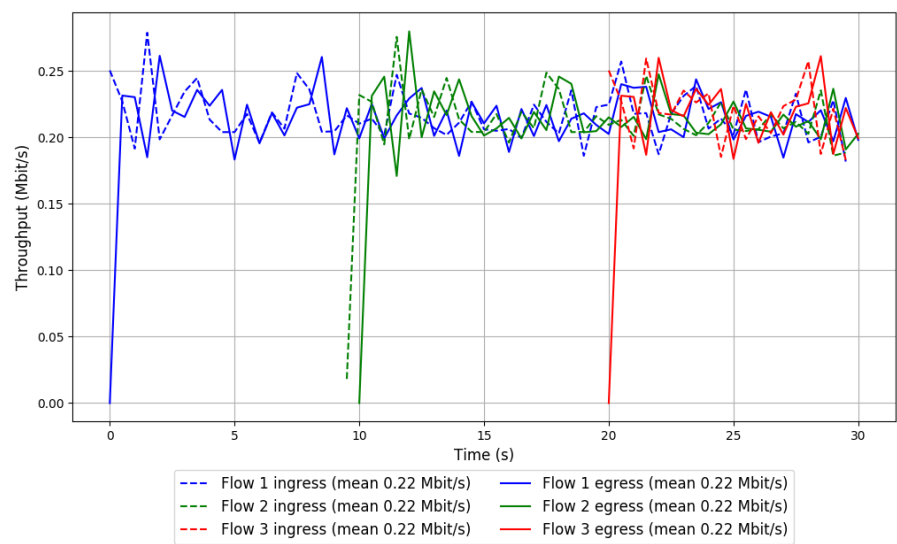
Run 7: Report of QUIC Cubic — Data Link

```
Run 8: Statistics of QUIC Cubic

Start at: 2018-07-12 07:04:17
End at: 2018-07-12 07:04:47
Local clock offset: 0.32 ms
Remote clock offset: 0.008 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.93 Mbit/s
95th percentile per-packet one-way delay: 50.618 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.82 Mbit/s
95th percentile per-packet one-way delay: 50.300 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.16 Mbit/s
95th percentile per-packet one-way delay: 50.705 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.61 Mbit/s
95th percentile per-packet one-way delay: 50.464 ms
Loss rate: 0.00%
```
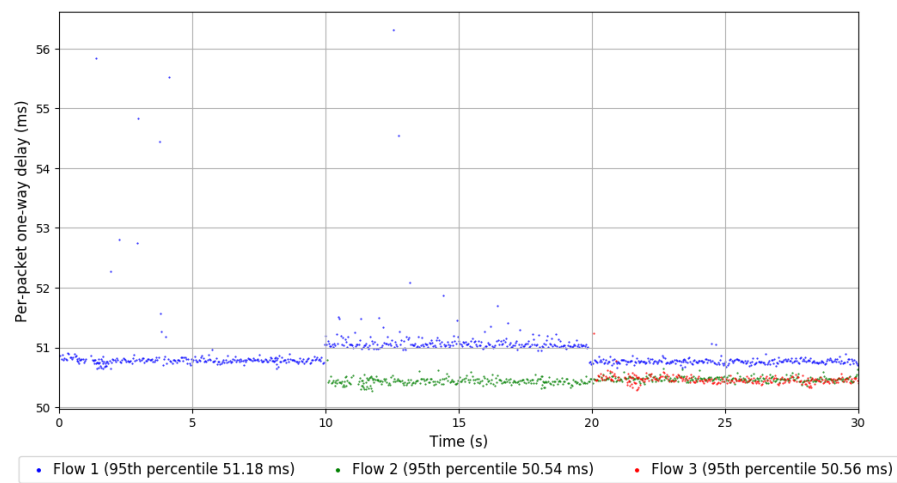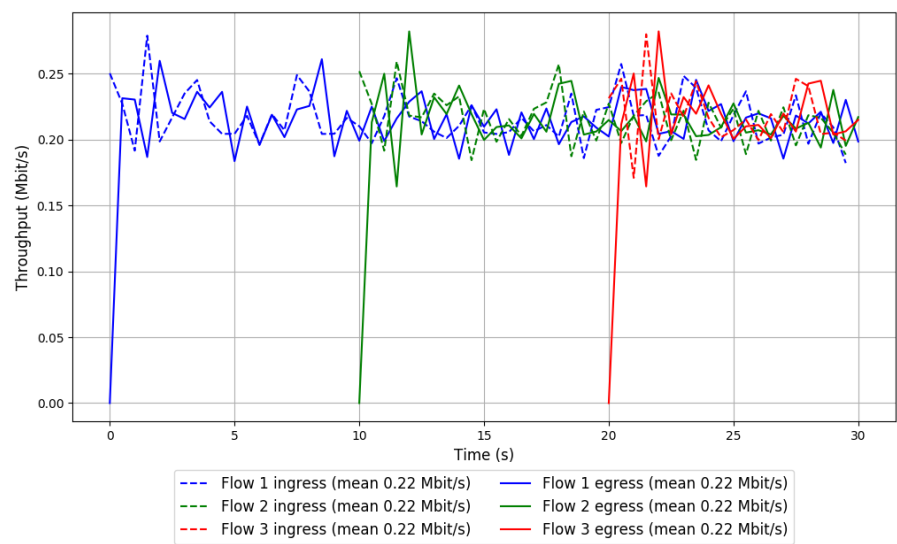
Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 40.82 Mbit/s) — Flow 1 egress (mean 40.82 Mbit/s)
Flow 2 ingress (mean 32.16 Mbit/s) — Flow 2 egress (mean 32.16 Mbit/s)
Flow 3 ingress (mean 20.61 Mbit/s) — Flow 3 egress (mean 20.61 Mbit/s)

Flow 1 (95th percentile 50.30 ms) · Flow 2 (95th percentile 50.70 ms) · Flow 3 (95th percentile 50.46 ms)

```
Run 9: Statistics of QUIC Cubic

Start at: 2018-07-12 07:29:16
End at: 2018-07-12 07:29:46
Local clock offset: 0.318 ms
Remote clock offset: -0.056 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.46 Mbit/s
95th percentile per-packet one-way delay: 50.287 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.714 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.28 Mbit/s
95th percentile per-packet one-way delay: 50.299 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.43 Mbit/s
95th percentile per-packet one-way delay: 50.203 ms
Loss rate: 0.00%
```
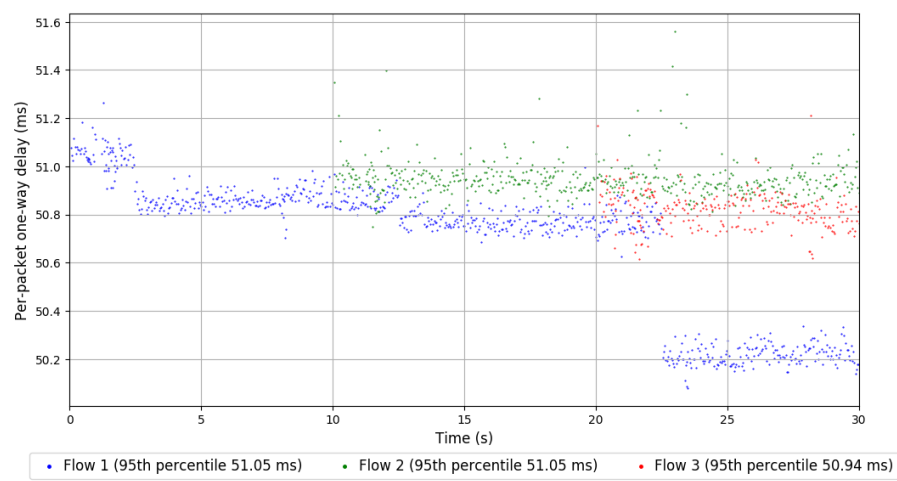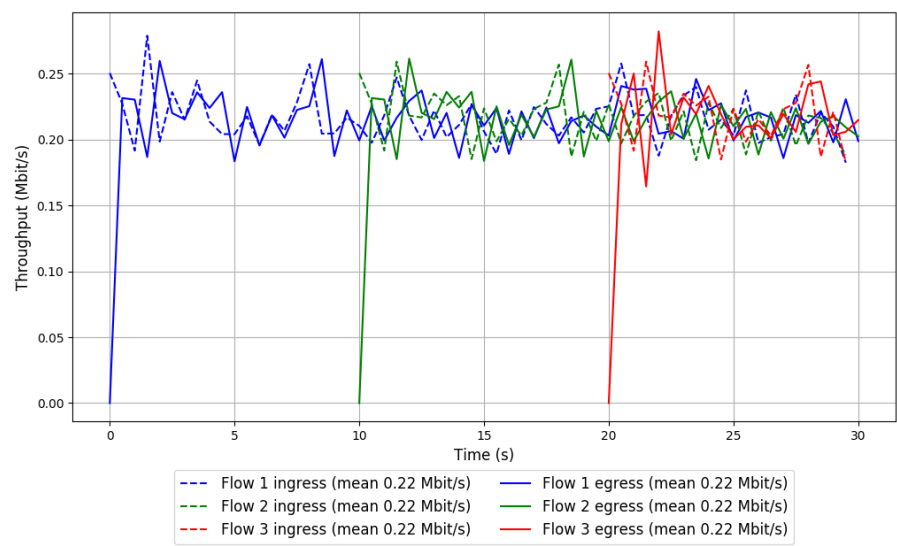
Run 9: Report of QUIC Cubic — Data Link

```
Run 10: Statistics of QUIC Cubic

Start at: 2018-07-12 07:54:13
End at: 2018-07-12 07:54:43
Local clock offset: 0.32 ms
Remote clock offset: -0.004 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.05 Mbit/s
95th percentile per-packet one-way delay: 50.168 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 39.01 Mbit/s
95th percentile per-packet one-way delay: 50.184 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 30.10 Mbit/s
95th percentile per-packet one-way delay: 50.042 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.39 Mbit/s
95th percentile per-packet one-way delay: 49.430 ms
Loss rate: 0.00%
```

Run 10: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2018-07-12 04:03:46
End at: 2018-07-12 04:04:16
Local clock offset: -0.089 ms
Remote clock offset: 0.006 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.242 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.420 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.710 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.915 ms
Loss rate: 0.00%
```
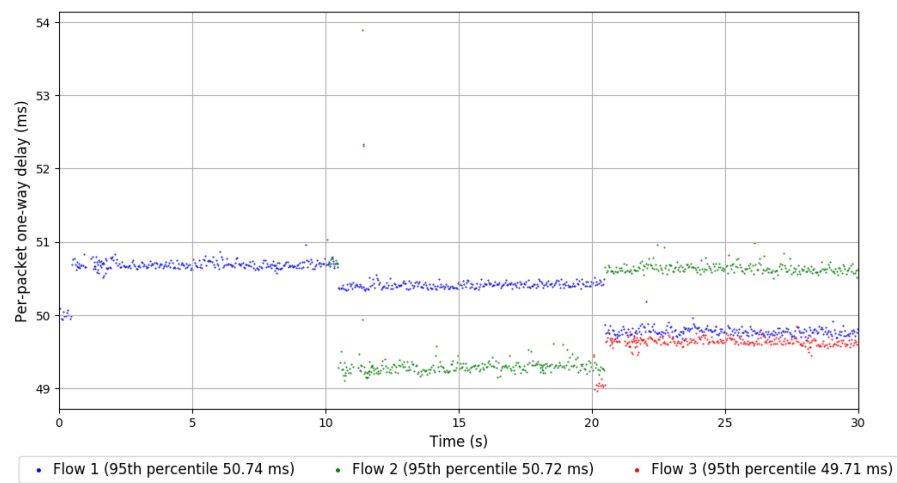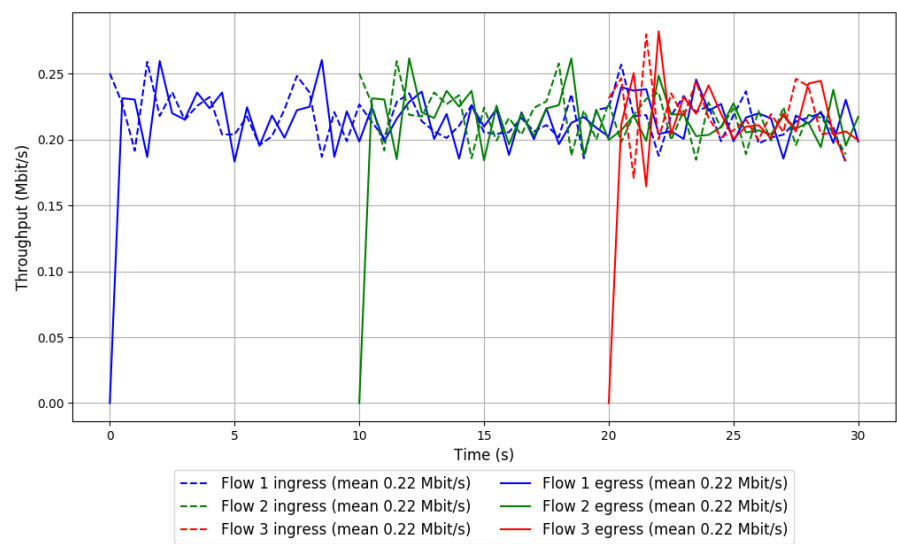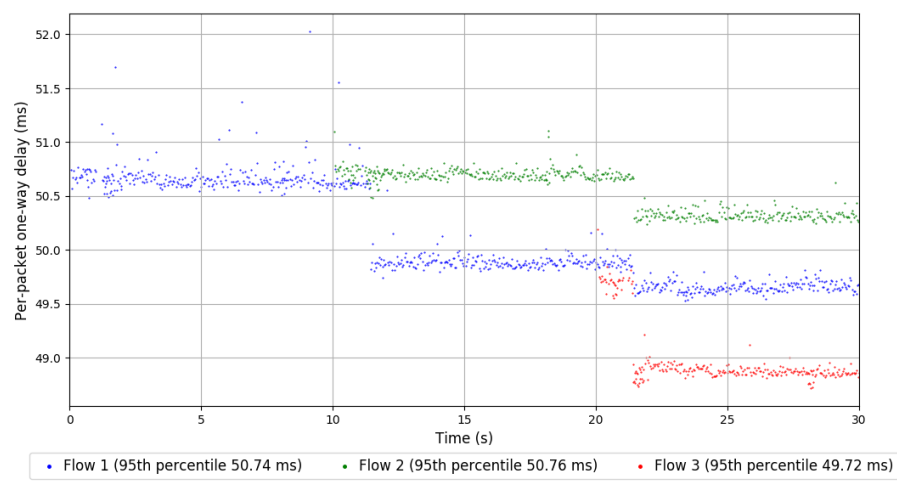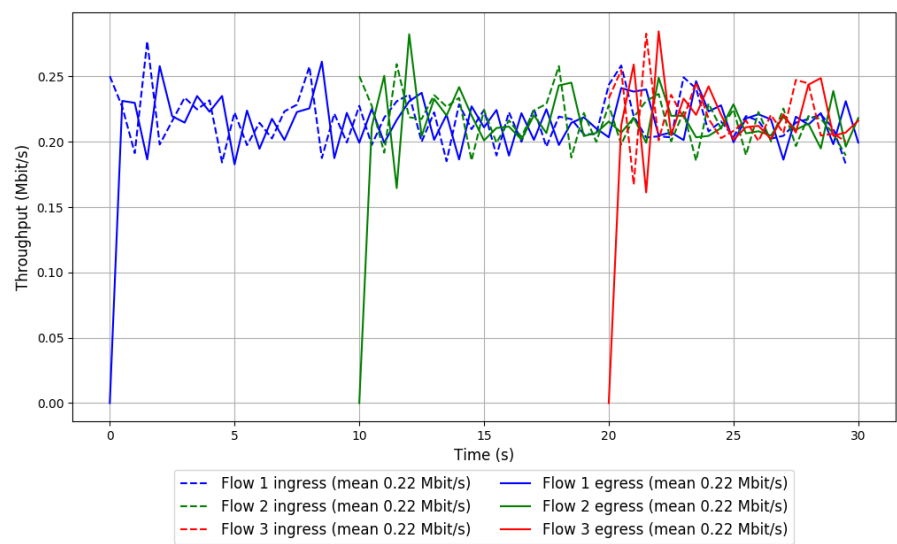
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-07-12 04:28:54
End at: 2018-07-12 04:29:24
Local clock offset: -0.103 ms
Remote clock offset: -0.009 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.101 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.180 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.541 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.561 ms
Loss rate: 0.00%
```
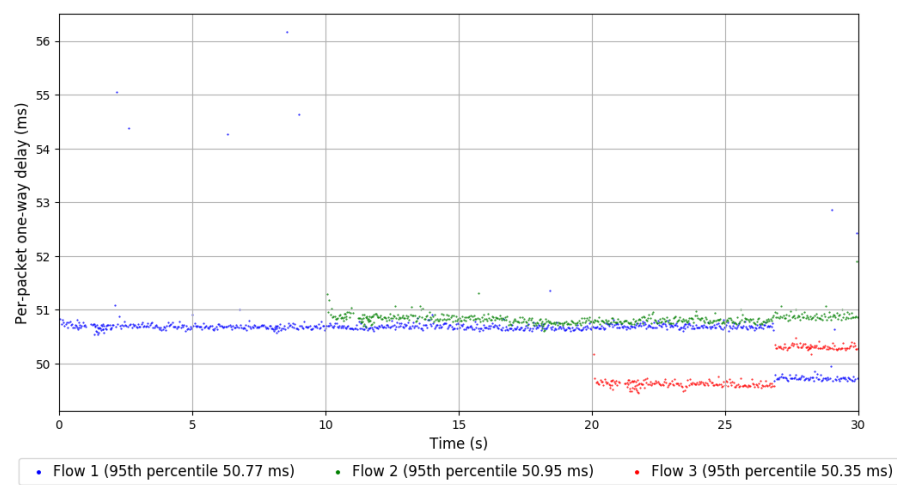
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-07-12 04:54:11
End at: 2018-07-12 04:54:41
Local clock offset: -0.426 ms
Remote clock offset: 0.015 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.037 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.047 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.051 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.942 ms
Loss rate: 0.00%
```
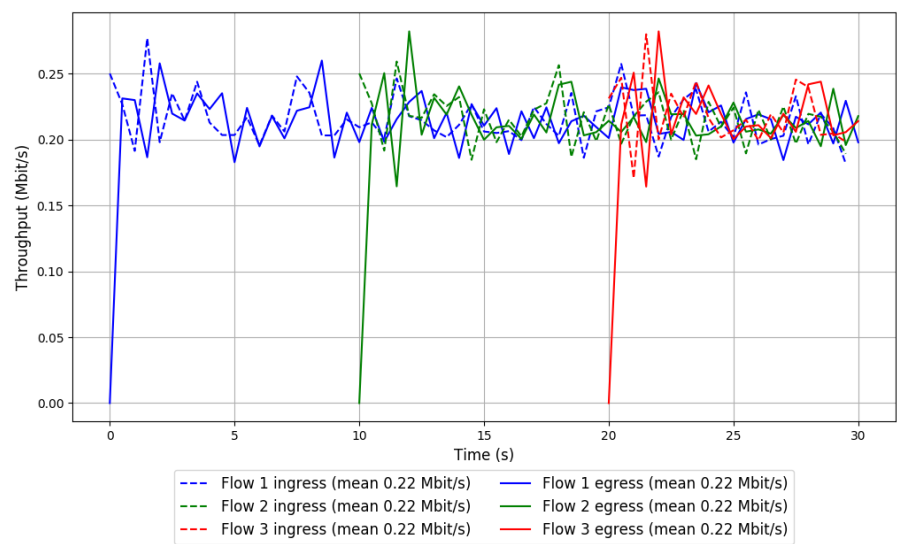
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-07-12 05:19:43
End at: 2018-07-12 05:20:13
Local clock offset: -0.081 ms
Remote clock offset: 0.0 ms


# Below is generated by plot.py at 2018-07-12 10:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.728 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.743 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.718 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.706 ms
Loss rate: 0.00%
```
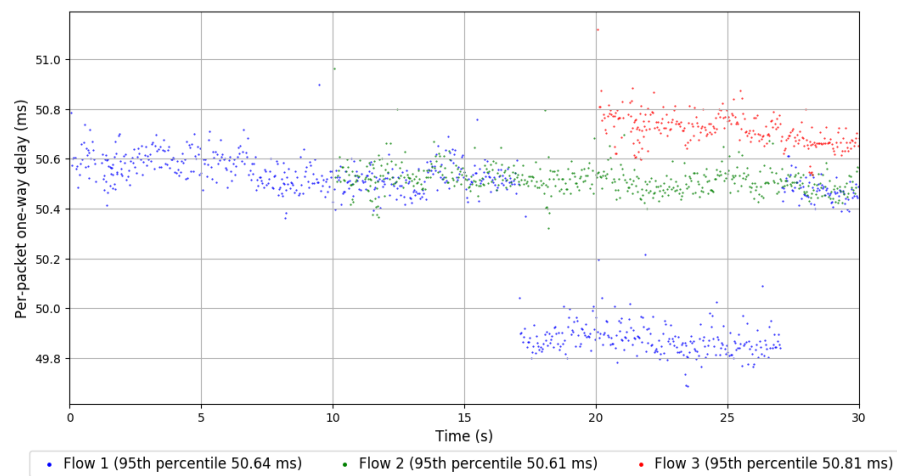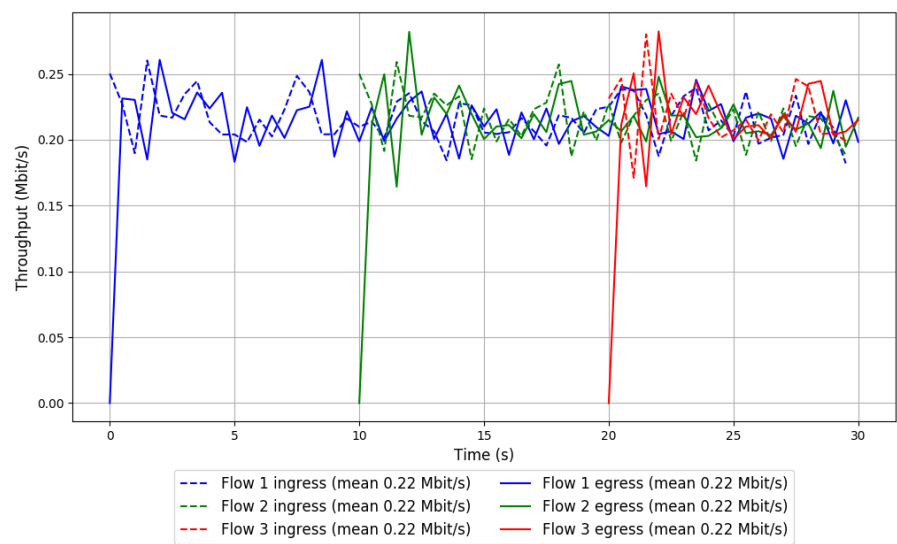
Run 4: Report of SCReAM — Data Link

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```
Run 5: Statistics of SCReAM

Start at: 2018-07-12 05:44:52
End at: 2018-07-12 05:45:22
Local clock offset: -0.049 ms
Remote clock offset: -0.018 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 50.748 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.744 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.761 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.719 ms
Loss rate: 0.00%
```
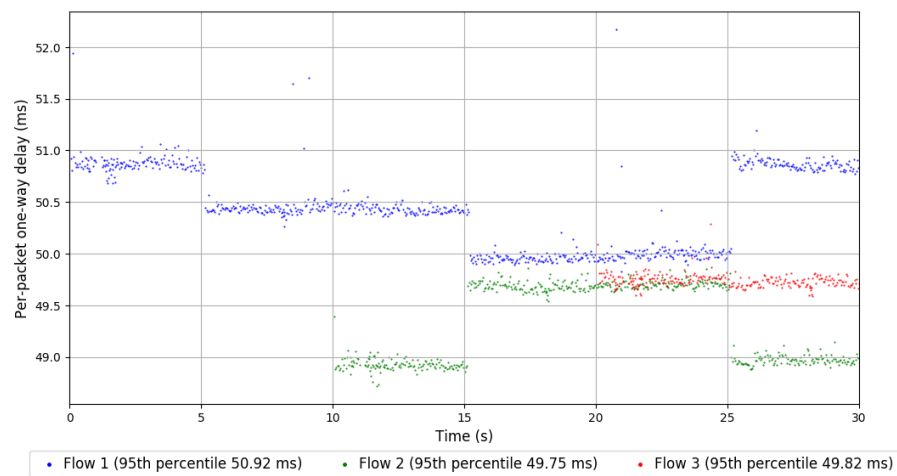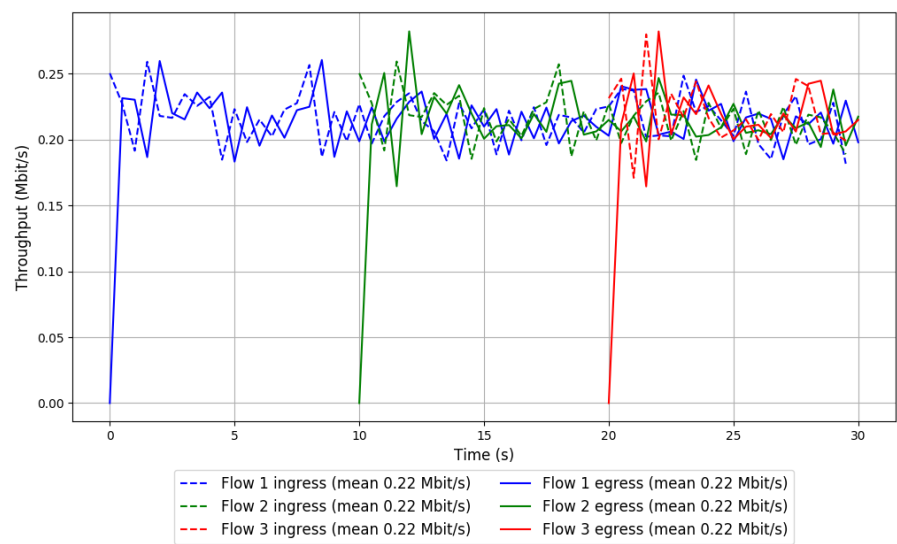
Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2018-07-12 06:09:37
End at: 2018-07-12 06:10:07
Local clock offset: -0.083 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.901 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.771 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.953 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.353 ms
Loss rate: 0.00%
```
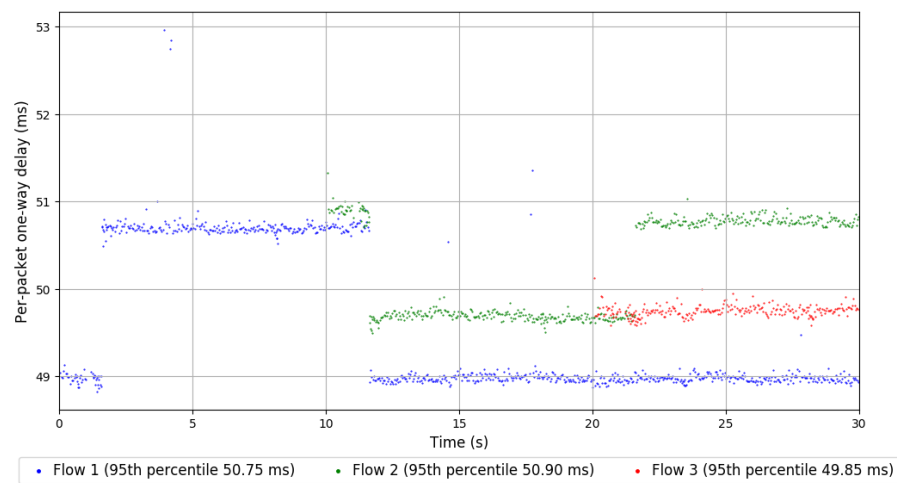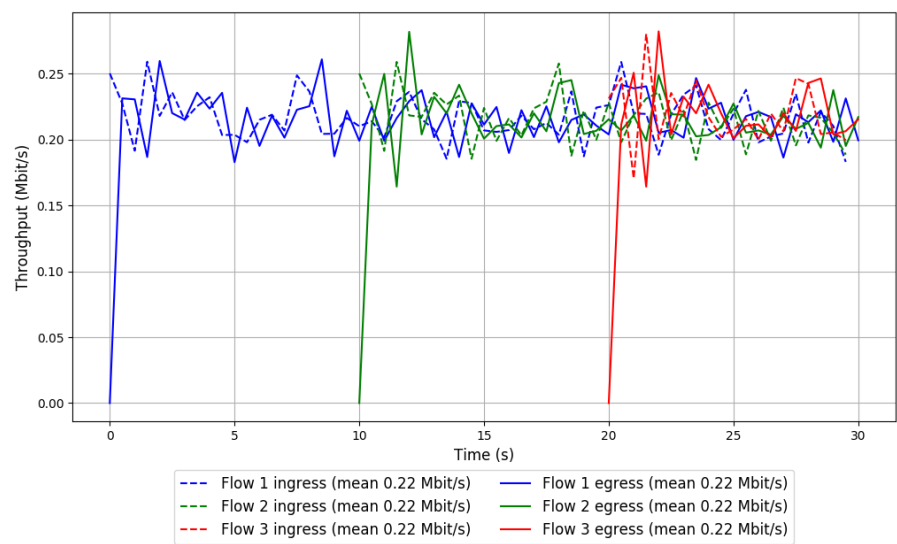
Run 6: Report of SCReAM — Data Link

```
Run 7: Statistics of SCReAM

Start at: 2018-07-12 06:34:47
End at: 2018-07-12 06:35:17
Local clock offset: -0.116 ms
Remote clock offset: -0.011 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.755 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.640 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.606 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.813 ms
Loss rate: 0.00%
```
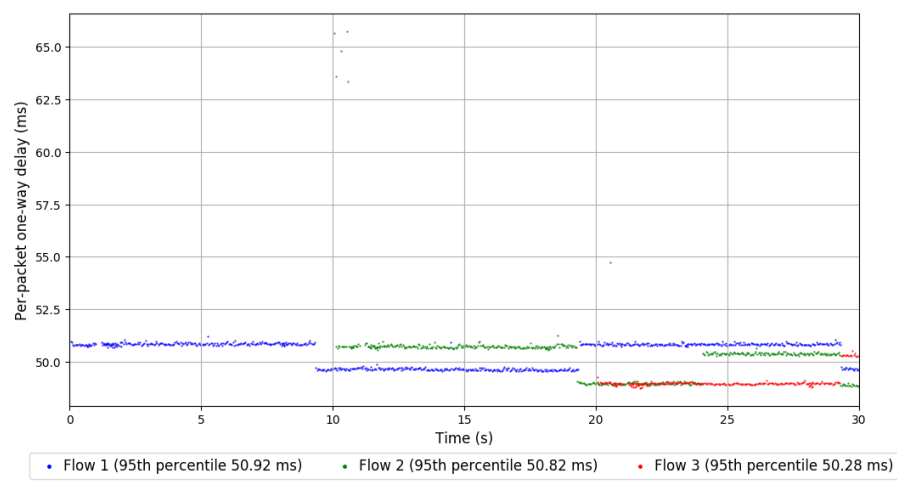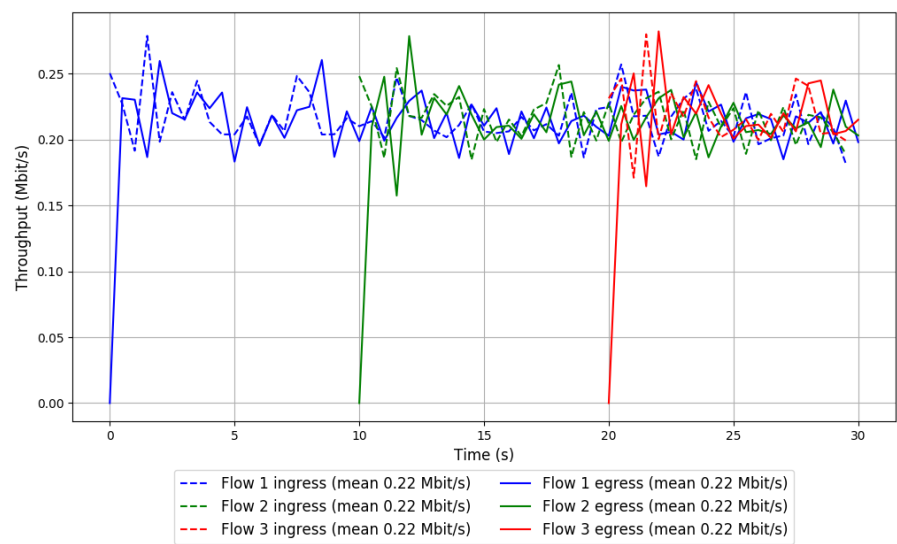
Run 7: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 50.64 ms) · Flow 2 (95th percentile 50.61 ms) · Flow 3 (95th percentile 50.81 ms)

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```
Run 8: Statistics of SCReAM

Start at: 2018-07-12 06:59:29
End at: 2018-07-12 06:59:59
Local clock offset: -0.048 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.895 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.925 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.749 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.824 ms
Loss rate: 0.00%
```

Run 8: Report of SCReAM — Data Link

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```
Run 9: Statistics of SCReAM

Start at: 2018-07-12 07:24:22
End at: 2018-07-12 07:24:52
Local clock offset: -0.022 ms
Remote clock offset: -0.042 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.838 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.747 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.902 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.851 ms
Loss rate: 0.00%
```
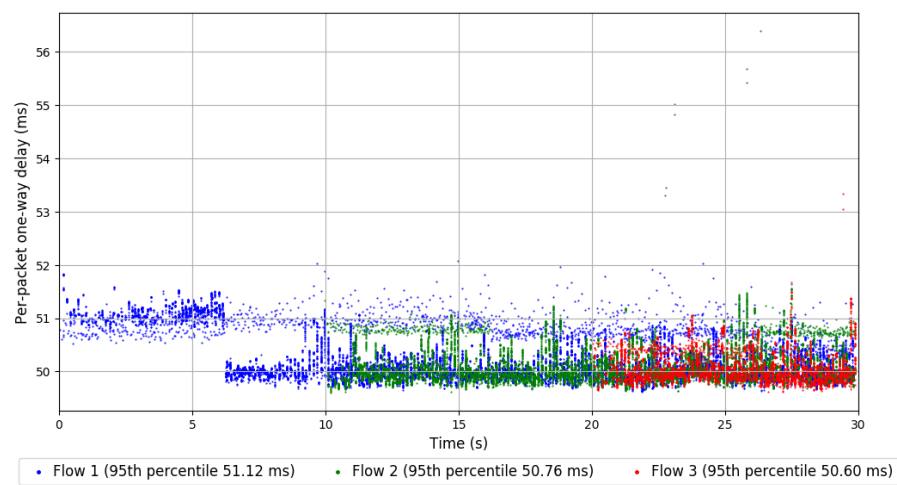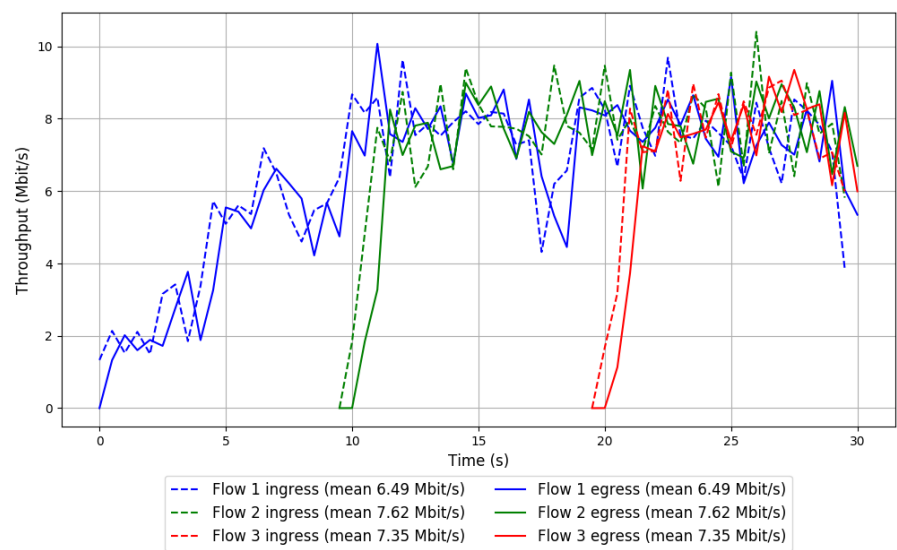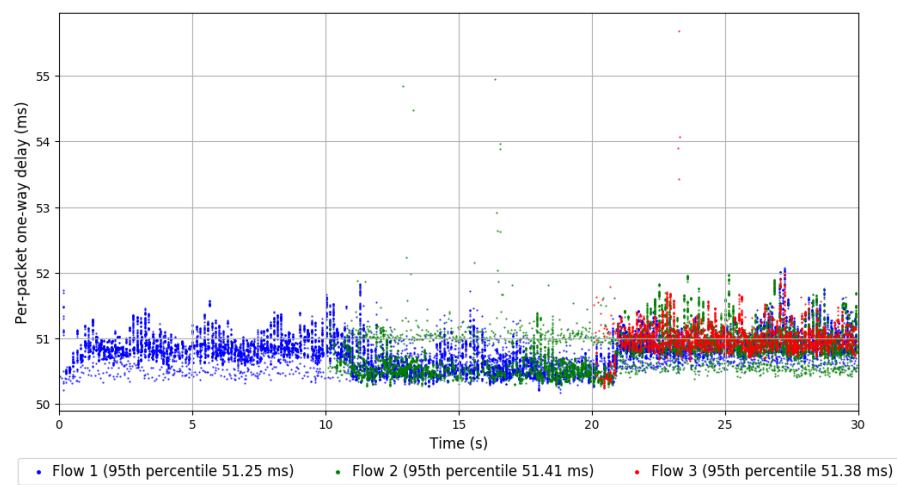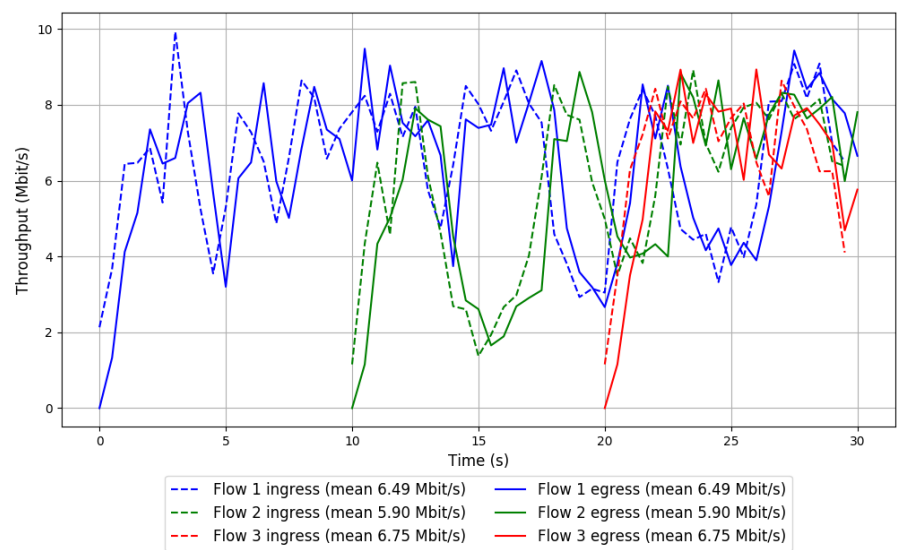
Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2018-07-12 07:49:25
End at: 2018-07-12 07:49:55
Local clock offset: -0.031 ms
Remote clock offset: -0.068 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.897 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.920 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.819 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.280 ms
Loss rate: 0.00%
```

Run 10: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-07-12 03:59:38
End at: 2018-07-12 04:00:08
Local clock offset: -0.132 ms
Remote clock offset: 0.028 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.00 Mbit/s
95th percentile per-packet one-way delay: 50.984 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 51.122 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.62 Mbit/s
95th percentile per-packet one-way delay: 50.755 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.35 Mbit/s
95th percentile per-packet one-way delay: 50.598 ms
Loss rate: 0.00%
```
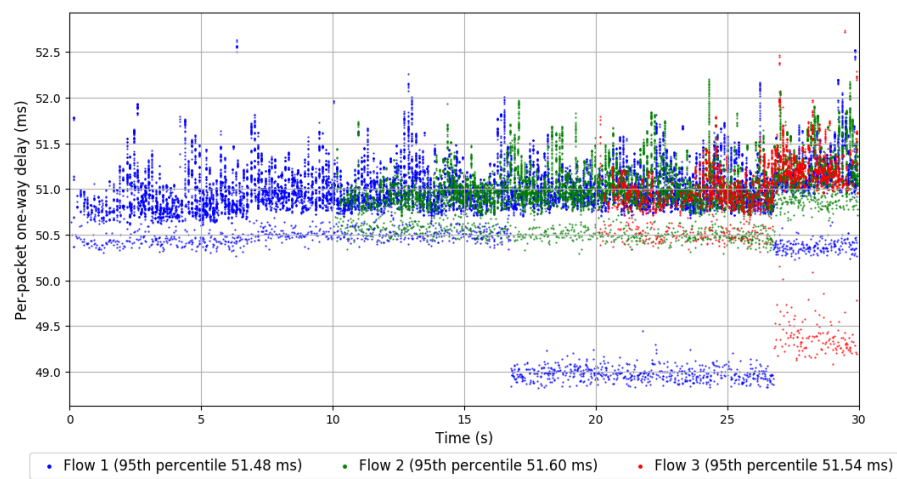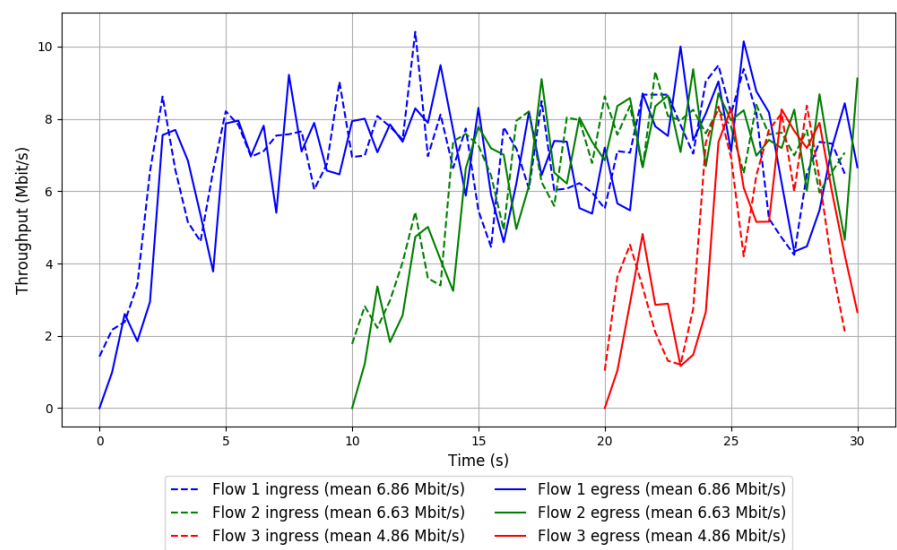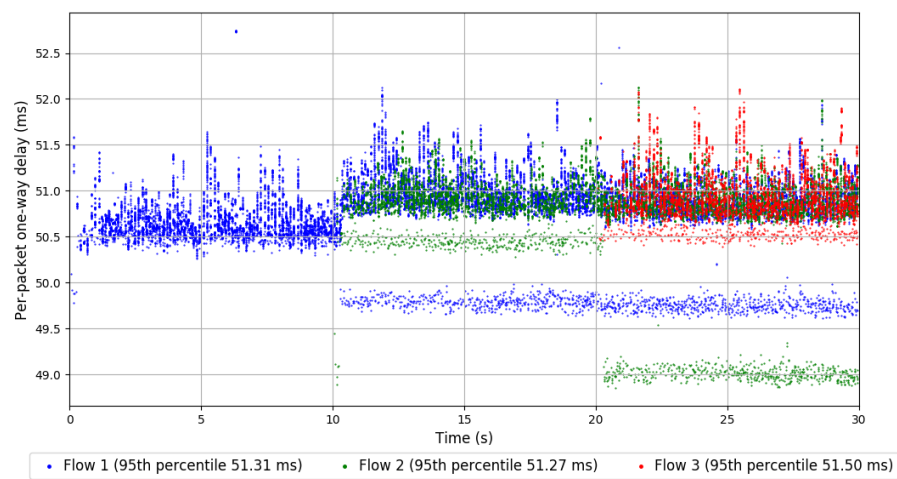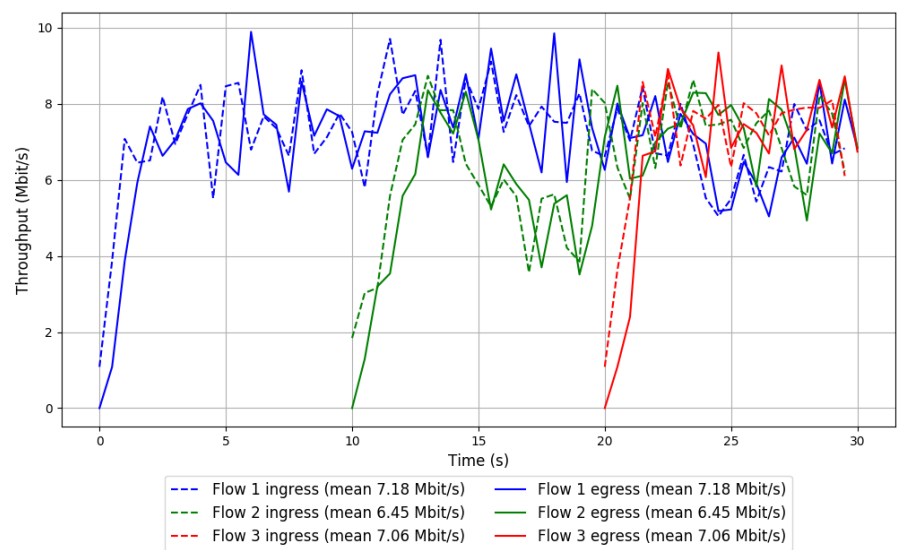
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-07-12 04:24:53
End at: 2018-07-12 04:25:23
Local clock offset: -0.089 ms
Remote clock offset: -0.012 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.63 Mbit/s
95th percentile per-packet one-way delay: 51.328 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 51.247 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 5.90 Mbit/s
95th percentile per-packet one-way delay: 51.414 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 51.382 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-07-12 04:50:07
End at: 2018-07-12 04:50:37
Local clock offset: -0.105 ms
Remote clock offset: 0.015 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.86 Mbit/s
95th percentile per-packet one-way delay: 51.536 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.86 Mbit/s
95th percentile per-packet one-way delay: 51.483 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 51.598 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.86 Mbit/s
95th percentile per-packet one-way delay: 51.542 ms
Loss rate: 0.00%
```
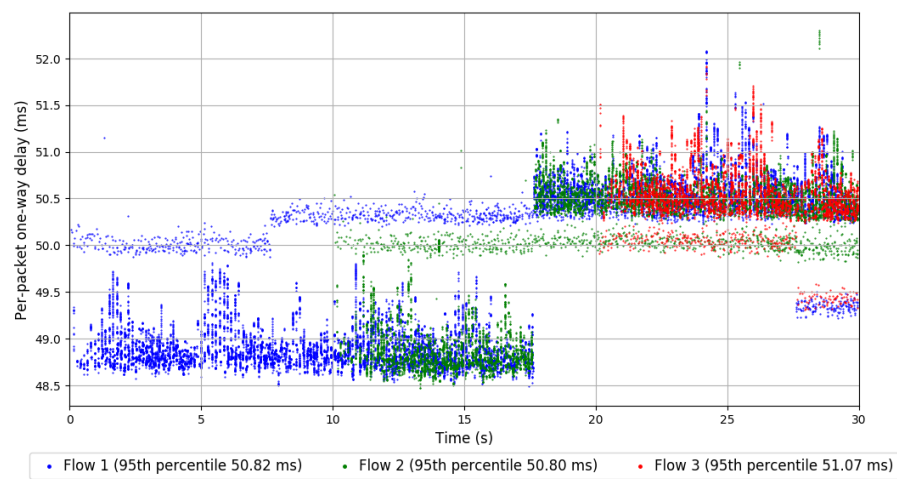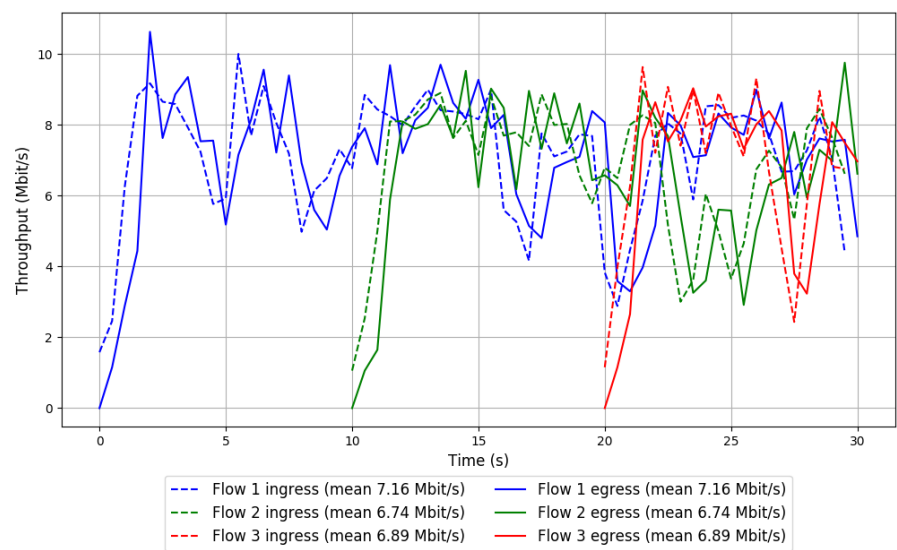
Run 3: Report of Sprout — Data Link

Flow 1 ingress (mean 6.86 Mbit/s)   Flow 1 egress (mean 6.86 Mbit/s)
Flow 2 ingress (mean 6.63 Mbit/s)   Flow 2 egress (mean 6.63 Mbit/s)
Flow 3 ingress (mean 4.86 Mbit/s)   Flow 3 egress (mean 4.86 Mbit/s)

• Flow 1 (95th percentile 51.48 ms)   • Flow 2 (95th percentile 51.60 ms)   • Flow 3 (95th percentile 51.54 ms)
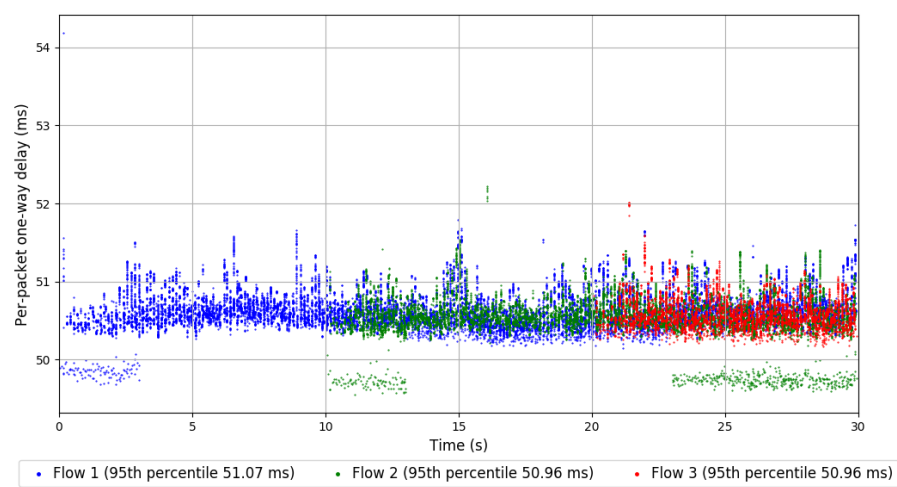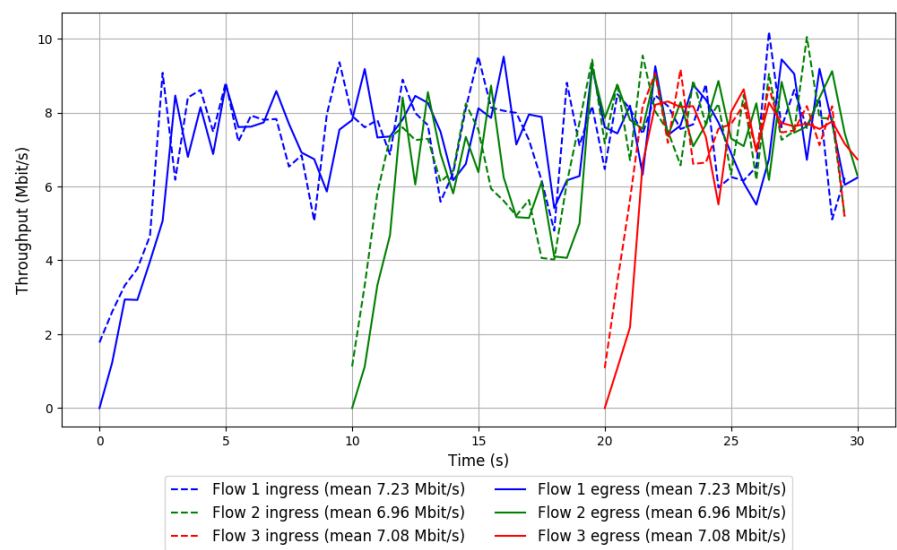
229

```
Run 4: Statistics of Sprout

Start at: 2018-07-12 05:15:34
End at: 2018-07-12 05:16:04
Local clock offset: -0.111 ms
Remote clock offset: 0.061 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.80 Mbit/s
95th percentile per-packet one-way delay: 51.325 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.18 Mbit/s
95th percentile per-packet one-way delay: 51.312 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.45 Mbit/s
95th percentile per-packet one-way delay: 51.270 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.06 Mbit/s
95th percentile per-packet one-way delay: 51.497 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-07-12 05:40:46
End at: 2018-07-12 05:41:16
Local clock offset: 0.248 ms
Remote clock offset: 0.021 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.92 Mbit/s
95th percentile per-packet one-way delay: 50.865 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.16 Mbit/s
95th percentile per-packet one-way delay: 50.816 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.74 Mbit/s
95th percentile per-packet one-way delay: 50.797 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 51.071 ms
Loss rate: 0.00%
```
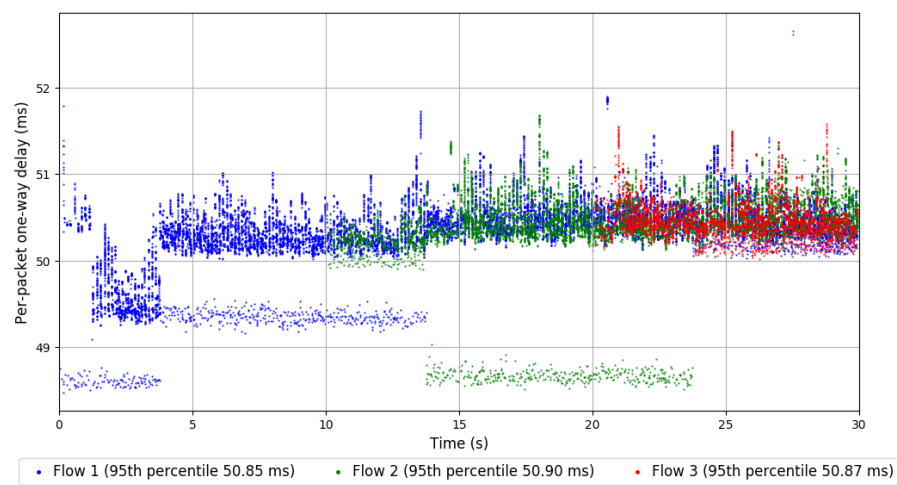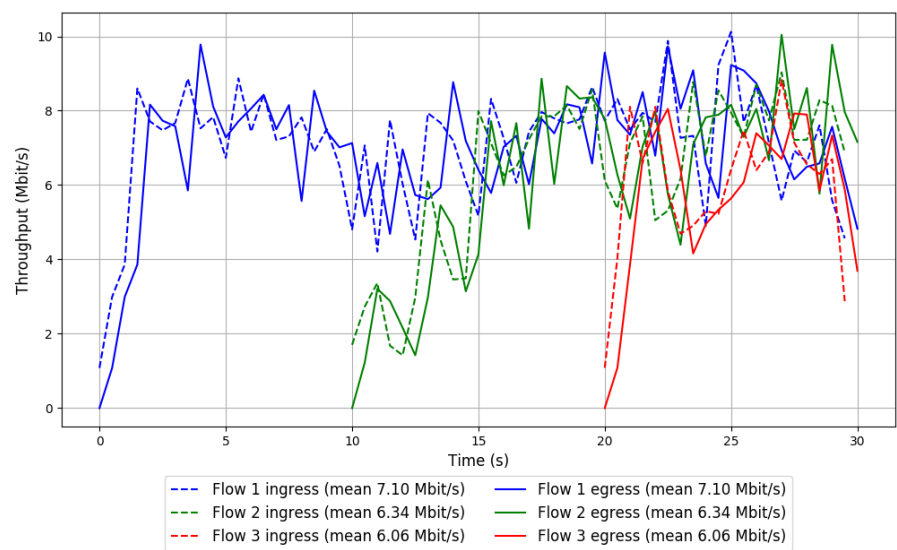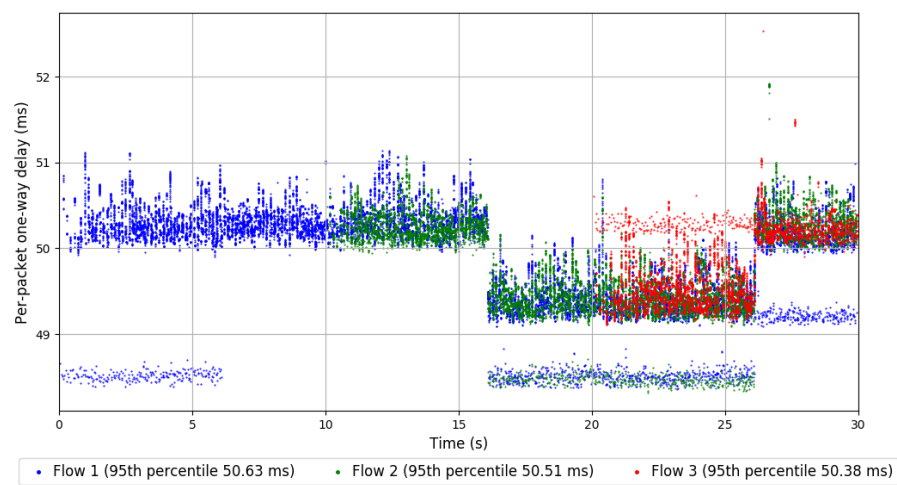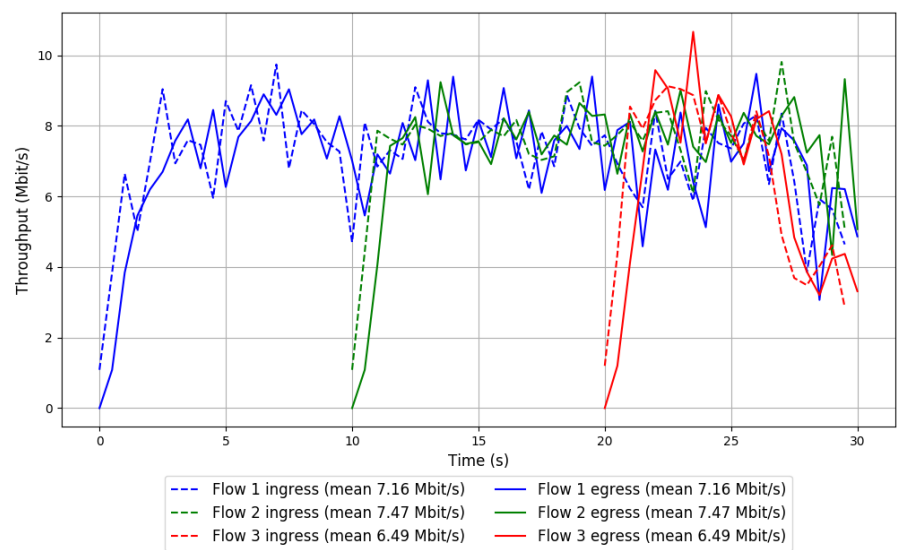
Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2018-07-12 06:05:31
End at: 2018-07-12 06:06:01
Local clock offset: -0.078 ms
Remote clock offset: -0.053 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.19 Mbit/s
95th percentile per-packet one-way delay: 51.024 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.23 Mbit/s
95th percentile per-packet one-way delay: 51.073 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 50.957 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.08 Mbit/s
95th percentile per-packet one-way delay: 50.961 ms
Loss rate: 0.00%
```

Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2018-07-12 06:30:40
End at: 2018-07-12 06:31:10
Local clock offset: 0.212 ms
Remote clock offset: 0.004 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.31 Mbit/s
95th percentile per-packet one-way delay: 50.871 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.10 Mbit/s
95th percentile per-packet one-way delay: 50.846 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.34 Mbit/s
95th percentile per-packet one-way delay: 50.895 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.06 Mbit/s
95th percentile per-packet one-way delay: 50.866 ms
Loss rate: 0.00%
```
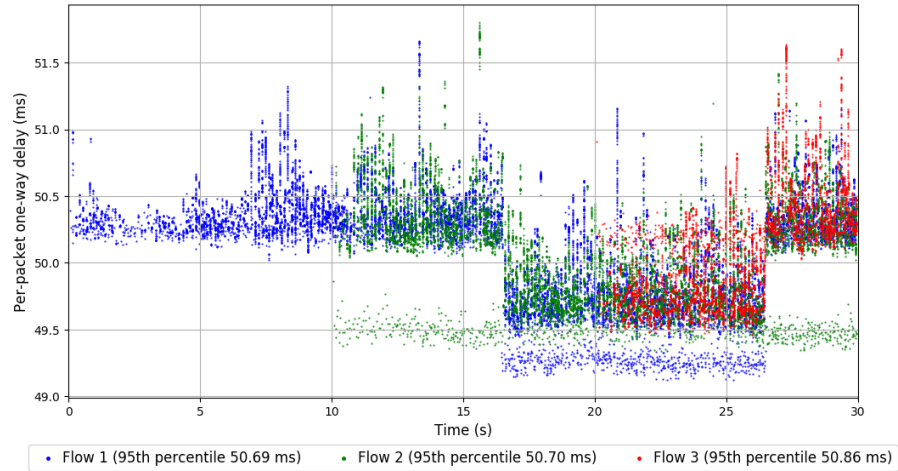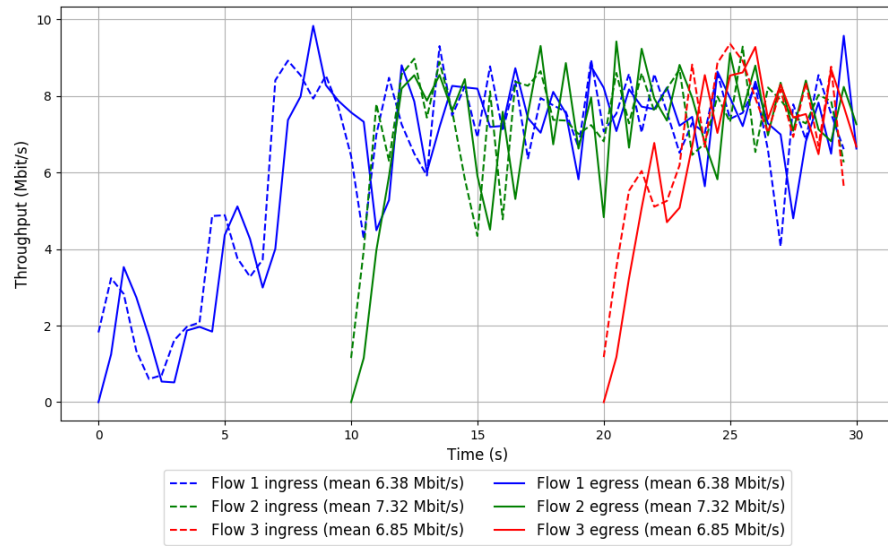
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2018-07-12 06:55:28
End at: 2018-07-12 06:55:58
Local clock offset: 0.37 ms
Remote clock offset: -0.013 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.26 Mbit/s
95th percentile per-packet one-way delay: 50.560 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.16 Mbit/s
95th percentile per-packet one-way delay: 50.630 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 50.514 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 50.380 ms
Loss rate: 0.00%
```

Run 8: Report of Sprout — Data Link

```
Run 9: Statistics of Sprout

Start at: 2018-07-12 07:20:17
End at: 2018-07-12 07:20:47
Local clock offset: 0.345 ms
Remote clock offset: -0.063 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.50 Mbit/s
95th percentile per-packet one-way delay: 50.718 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.38 Mbit/s
95th percentile per-packet one-way delay: 50.691 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.32 Mbit/s
95th percentile per-packet one-way delay: 50.703 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 50.859 ms
Loss rate: 0.00%
```
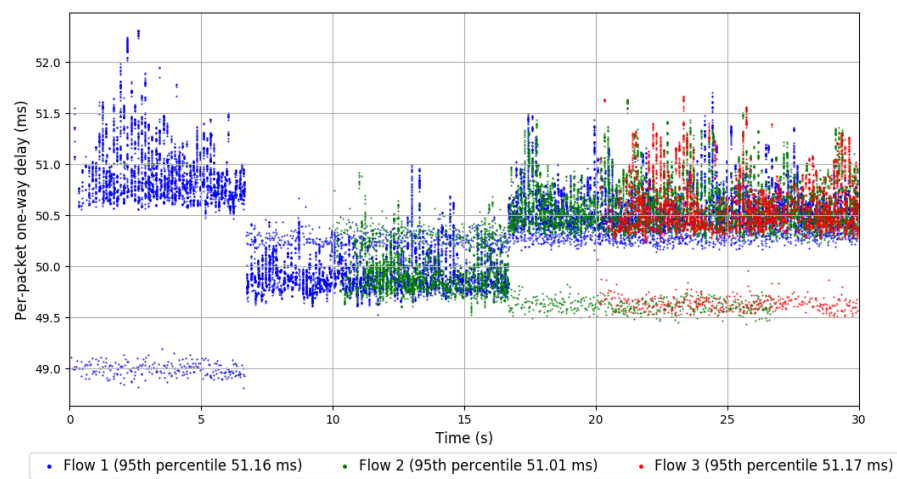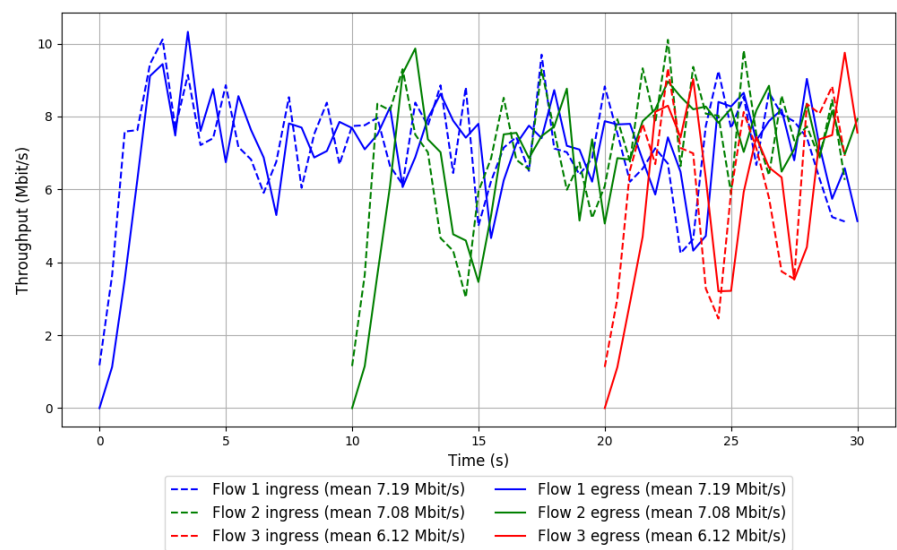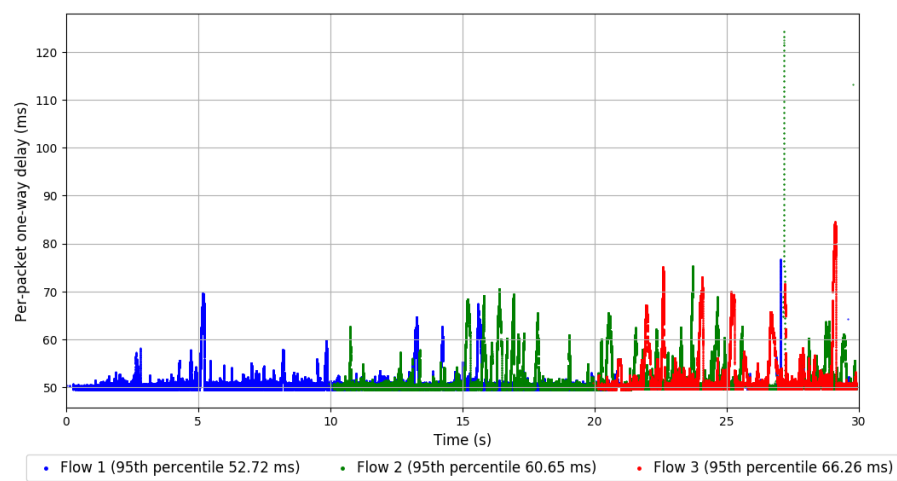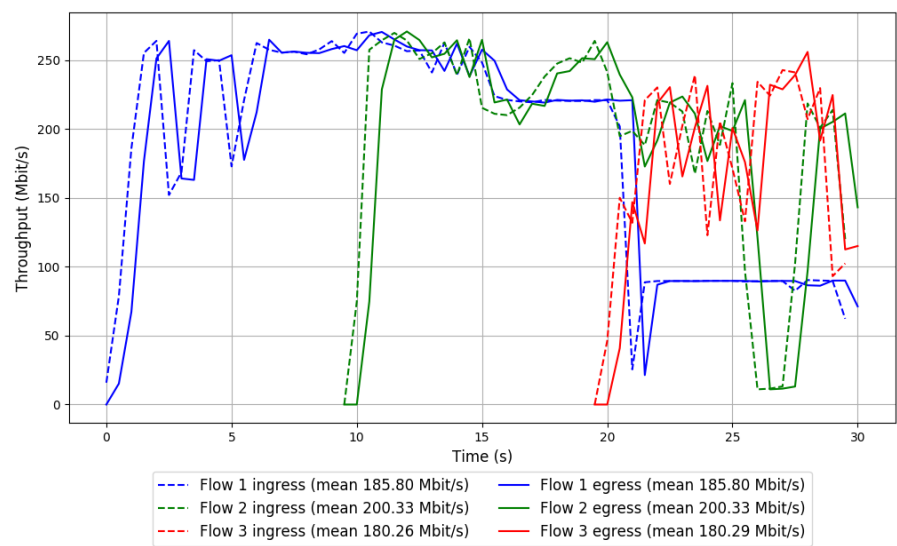
Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2018-07-12 07:45:17
End at: 2018-07-12 07:45:47
Local clock offset: -0.049 ms
Remote clock offset: -0.01 ms


# Below is generated by plot.py at 2018-07-12 10:30:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.92 Mbit/s
95th percentile per-packet one-way delay: 51.116 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.19 Mbit/s
95th percentile per-packet one-way delay: 51.161 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.08 Mbit/s
95th percentile per-packet one-way delay: 51.010 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.12 Mbit/s
95th percentile per-packet one-way delay: 51.169 ms
Loss rate: 0.00%
```
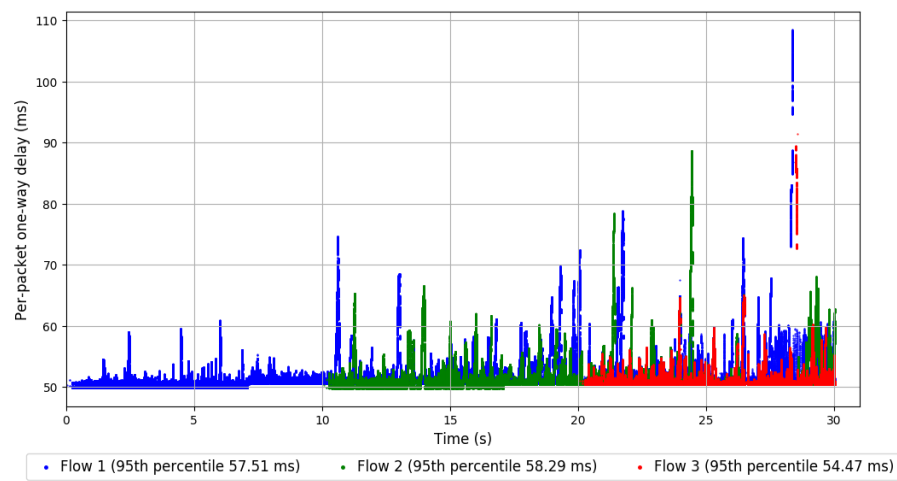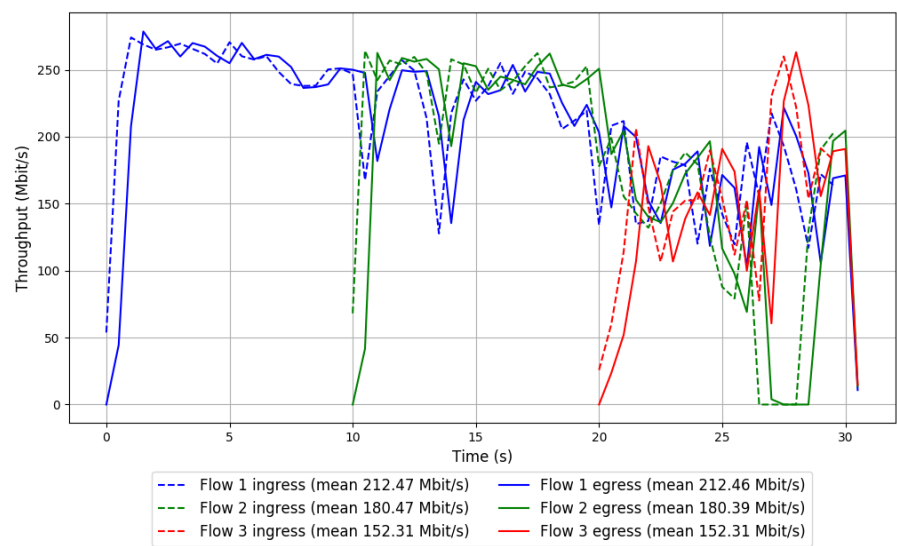
Run 10: Report of Sprout — Data Link

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

Start at: 2018-07-12 03:55:02
End at: 2018-07-12 03:55:32
Local clock offset: -0.105 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2018-07-12 10:34:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 379.94 Mbit/s
95th percentile per-packet one-way delay: 59.181 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 185.80 Mbit/s
95th percentile per-packet one-way delay: 52.721 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 200.33 Mbit/s
95th percentile per-packet one-way delay: 60.647 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 180.29 Mbit/s
95th percentile per-packet one-way delay: 66.260 ms
Loss rate: 0.00%
```

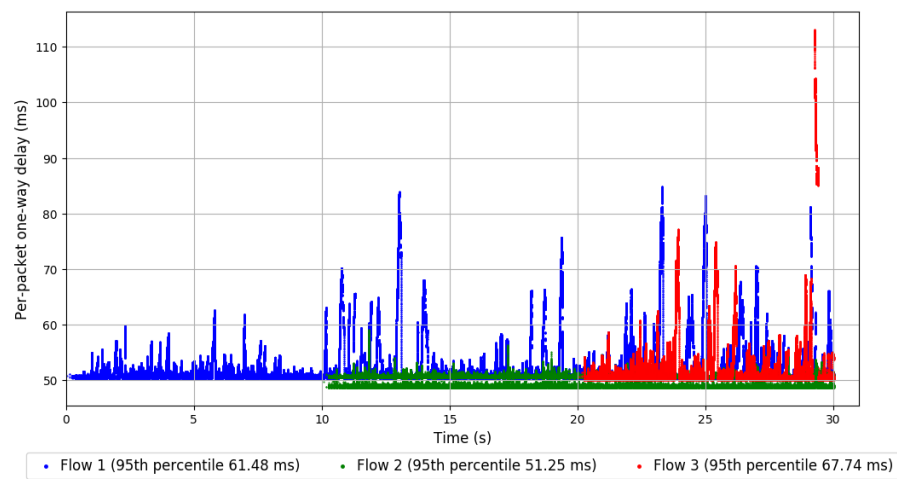Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2018-07-12 04:20:17
End at: 2018-07-12 04:20:47
Local clock offset: -0.467 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-07-12 10:34:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.23 Mbit/s
95th percentile per-packet one-way delay: 57.480 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 212.46 Mbit/s
95th percentile per-packet one-way delay: 57.514 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 180.39 Mbit/s
95th percentile per-packet one-way delay: 58.287 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 152.31 Mbit/s
95th percentile per-packet one-way delay: 54.469 ms
Loss rate: 0.00%
```

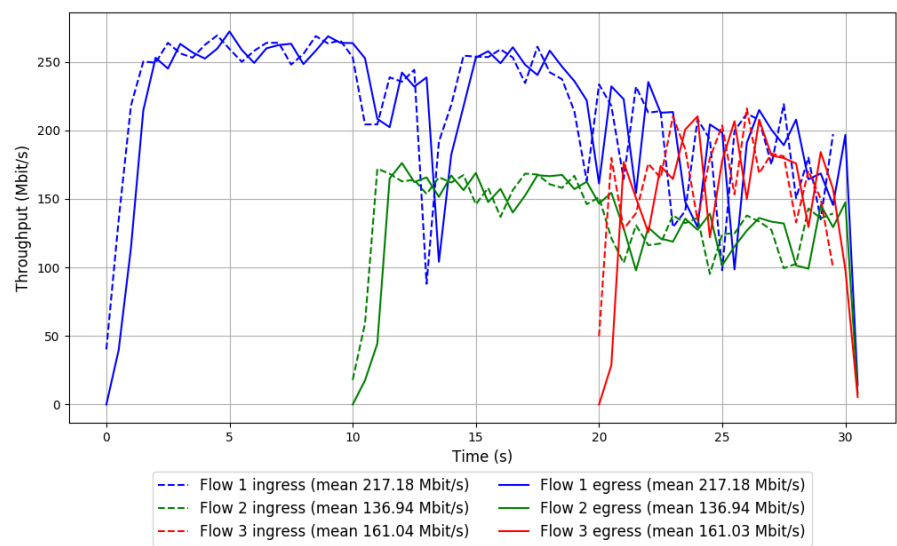Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 212.47 Mbit/s)   Flow 1 egress (mean 212.46 Mbit/s)
Flow 2 ingress (mean 180.47 Mbit/s)   Flow 2 egress (mean 180.39 Mbit/s)
Flow 3 ingress (mean 152.31 Mbit/s)   Flow 3 egress (mean 152.31 Mbit/s)

Flow 1 (95th percentile 57.51 ms)   Flow 2 (95th percentile 58.29 ms)   Flow 3 (95th percentile 54.47 ms)

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

Start at: 2018-07-12 04:45:32
End at: 2018-07-12 04:46:02
Local clock offset: -0.054 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-07-12 10:34:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 361.88 Mbit/s
95th percentile per-packet one-way delay: 59.984 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 217.18 Mbit/s
95th percentile per-packet one-way delay: 61.477 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 136.94 Mbit/s
95th percentile per-packet one-way delay: 51.249 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 161.03 Mbit/s
95th percentile per-packet one-way delay: 67.738 ms
Loss rate: 0.00%
```
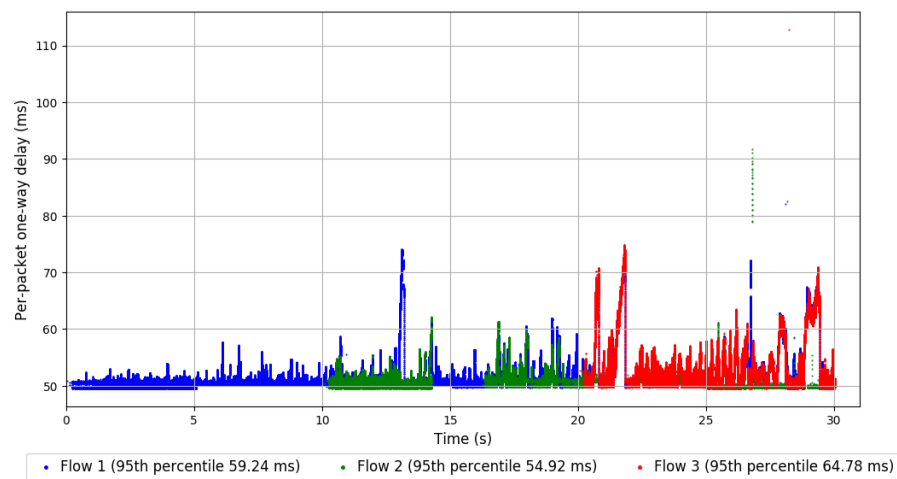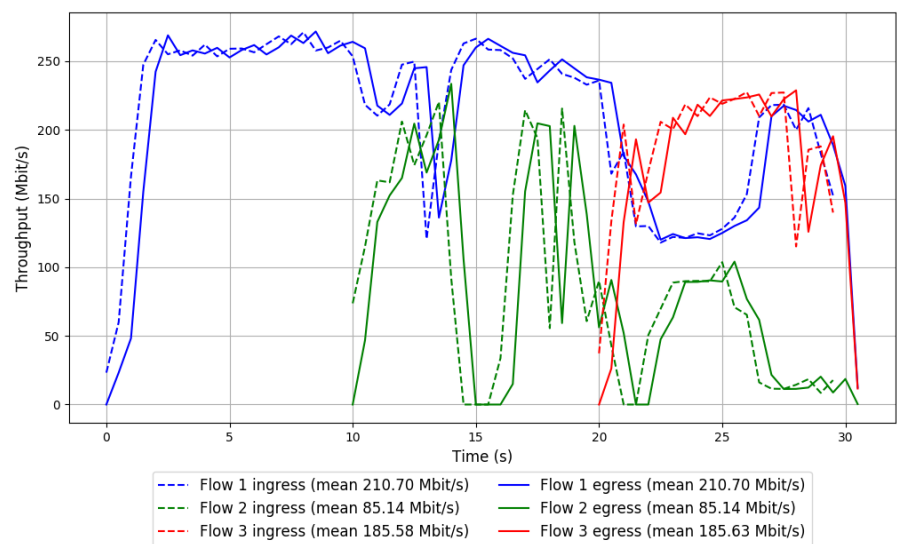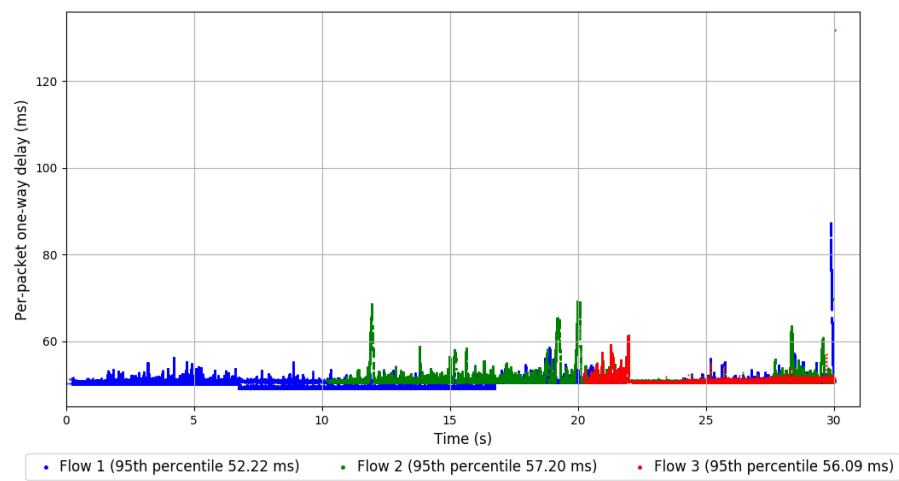
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 217.18 Mbit/s) — Flow 1 egress (mean 217.18 Mbit/s)
Flow 2 ingress (mean 136.94 Mbit/s) — Flow 2 egress (mean 136.94 Mbit/s)
Flow 3 ingress (mean 161.04 Mbit/s) — Flow 3 egress (mean 161.03 Mbit/s)

Flow 1 (95th percentile 61.48 ms) · Flow 2 (95th percentile 51.25 ms) · Flow 3 (95th percentile 67.74 ms)

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

Start at: 2018-07-12 05:11:09
End at: 2018-07-12 05:11:39
Local clock offset: -0.117 ms
Remote clock offset: 0.076 ms


# Below is generated by plot.py at 2018-07-12 10:34:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 329.00 Mbit/s
95th percentile per-packet one-way delay: 60.976 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 210.70 Mbit/s
95th percentile per-packet one-way delay: 59.236 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 85.14 Mbit/s
95th percentile per-packet one-way delay: 54.916 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 185.63 Mbit/s
95th percentile per-packet one-way delay: 64.784 ms
Loss rate: 0.00%
```
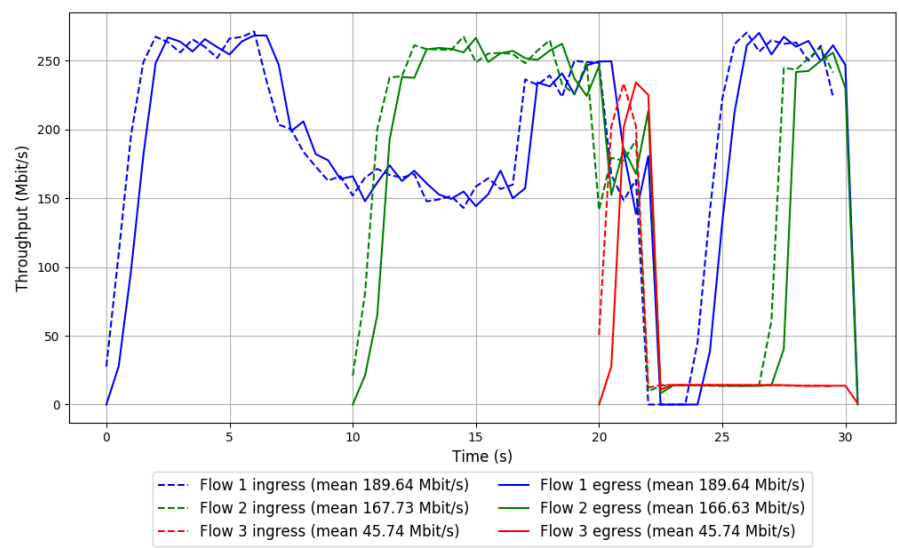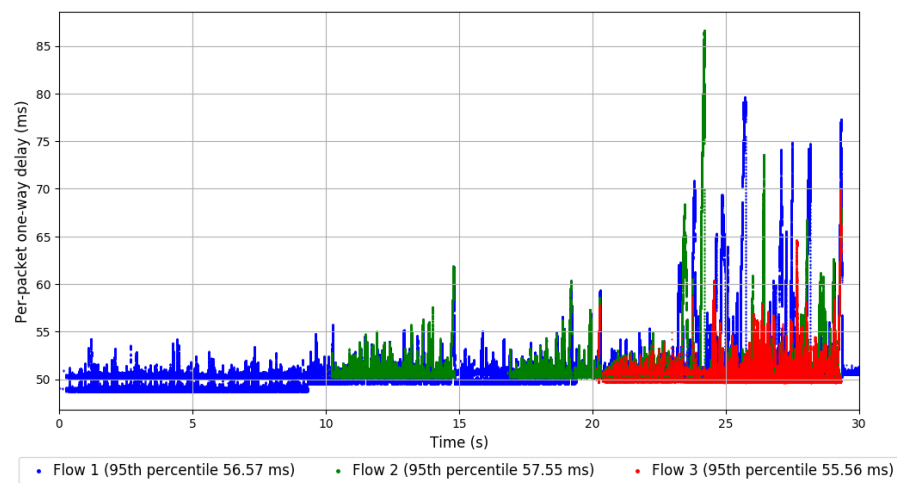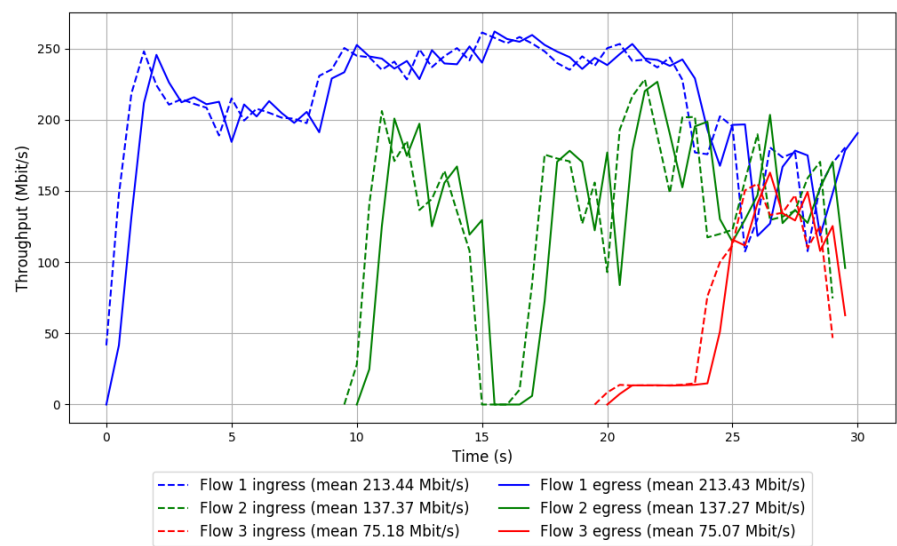
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 210.70 Mbit/s)   Flow 1 egress (mean 210.70 Mbit/s)
Flow 2 ingress (mean 85.14 Mbit/s)   Flow 2 egress (mean 85.14 Mbit/s)
Flow 3 ingress (mean 185.58 Mbit/s)   Flow 3 egress (mean 185.63 Mbit/s)

Flow 1 (95th percentile 59.24 ms)   Flow 2 (95th percentile 54.92 ms)   Flow 3 (95th percentile 64.78 ms)
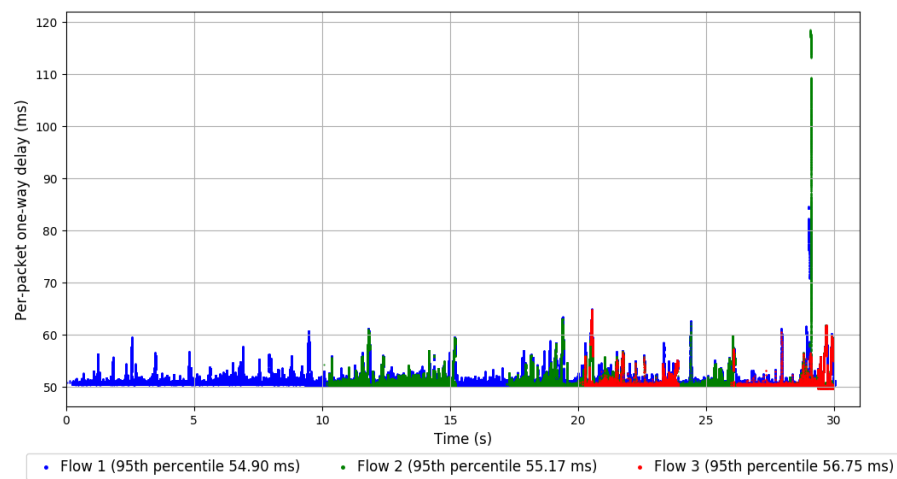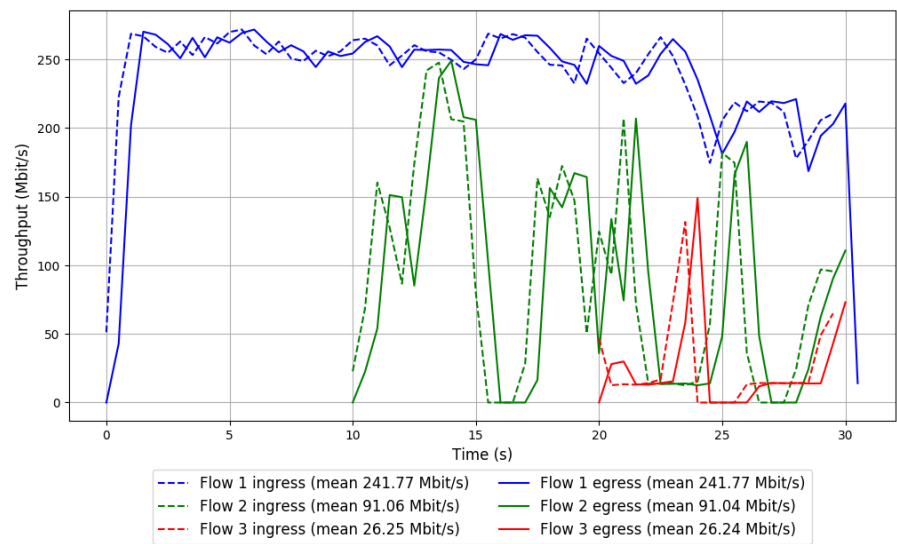
```
Run 5: Statistics of TaoVA-100x

Start at: 2018-07-12 05:36:17
End at: 2018-07-12 05:36:47
Local clock offset: -0.438 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2018-07-12 10:34:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 315.75 Mbit/s
95th percentile per-packet one-way delay: 53.984 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 189.64 Mbit/s
95th percentile per-packet one-way delay: 52.217 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 166.63 Mbit/s
95th percentile per-packet one-way delay: 57.199 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 45.74 Mbit/s
95th percentile per-packet one-way delay: 56.091 ms
Loss rate: 0.00%
```

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

Flow 1 ingress (mean 189.64 Mbit/s) --- Flow 1 egress (mean 189.64 Mbit/s)
Flow 2 ingress (mean 167.73 Mbit/s) --- Flow 2 egress (mean 166.63 Mbit/s)
Flow 3 ingress (mean 45.74 Mbit/s) --- Flow 3 egress (mean 45.74 Mbit/s)

Flow 1 (95th percentile 52.22 ms)   Flow 2 (95th percentile 57.20 ms)   Flow 3 (95th percentile 56.09 ms)
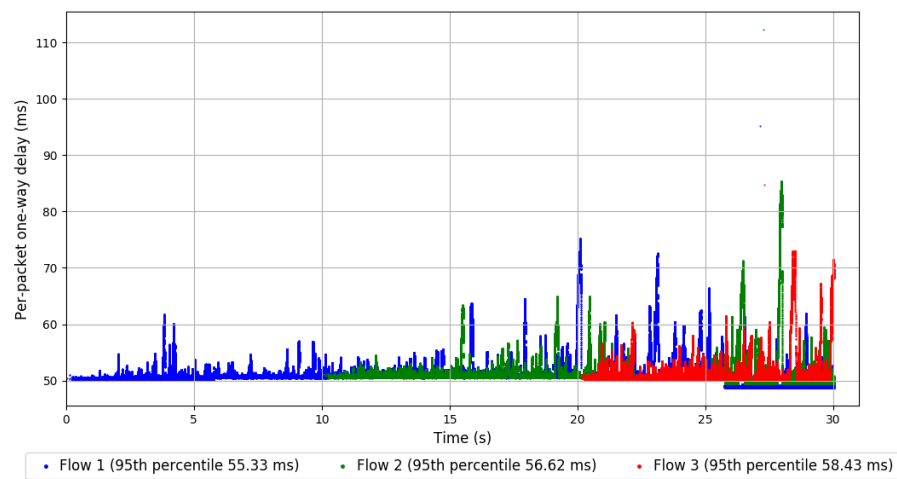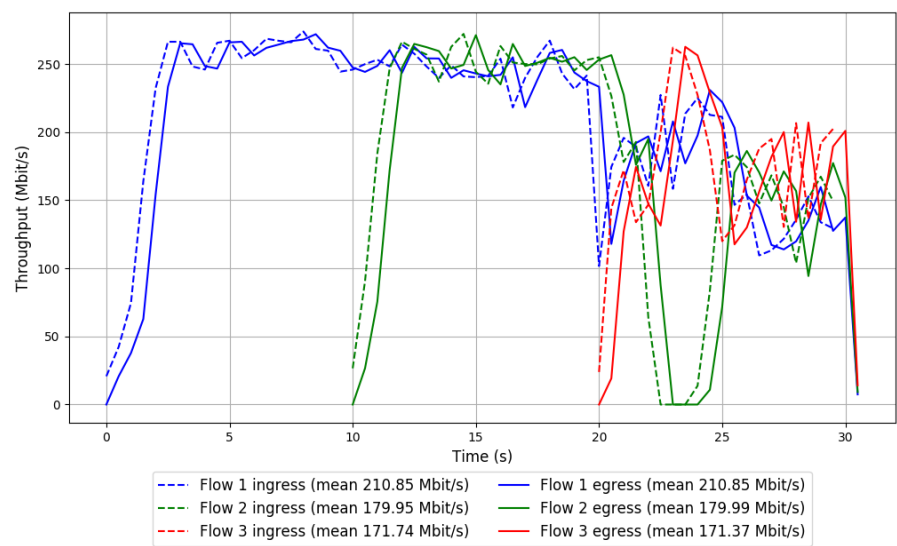
```
Run 6: Statistics of TaoVA-100x

Start at: 2018-07-12 06:01:05
End at: 2018-07-12 06:01:35
Local clock offset: -0.098 ms
Remote clock offset: 0.003 ms


# Below is generated by plot.py at 2018-07-12 10:34:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.12 Mbit/s
95th percentile per-packet one-way delay: 56.745 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 213.43 Mbit/s
95th percentile per-packet one-way delay: 56.573 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 137.27 Mbit/s
95th percentile per-packet one-way delay: 57.545 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 75.07 Mbit/s
95th percentile per-packet one-way delay: 55.563 ms
Loss rate: 0.00%
```

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

Flow 1 ingress (mean 213.44 Mbit/s) ---- Flow 1 egress (mean 213.43 Mbit/s) ——
Flow 2 ingress (mean 137.37 Mbit/s) ---- Flow 2 egress (mean 137.27 Mbit/s) ——
Flow 3 ingress (mean 75.18 Mbit/s) ---- Flow 3 egress (mean 75.07 Mbit/s) ——

Flow 1 (95th percentile 56.57 ms)   Flow 2 (95th percentile 57.55 ms)   Flow 3 (95th percentile 55.56 ms)

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

Start at: 2018-07-12 06:26:15
End at: 2018-07-12 06:26:45
Local clock offset: -0.126 ms
Remote clock offset: -0.004 ms


# Below is generated by plot.py at 2018-07-12 10:38:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 310.82 Mbit/s
95th percentile per-packet one-way delay: 54.995 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 241.77 Mbit/s
95th percentile per-packet one-way delay: 54.903 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 91.04 Mbit/s
95th percentile per-packet one-way delay: 55.170 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.24 Mbit/s
95th percentile per-packet one-way delay: 56.750 ms
Loss rate: 0.00%
```
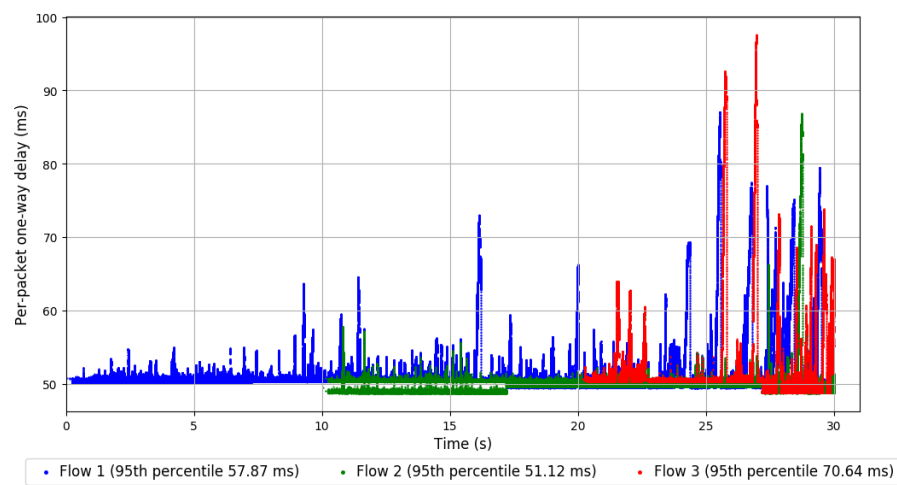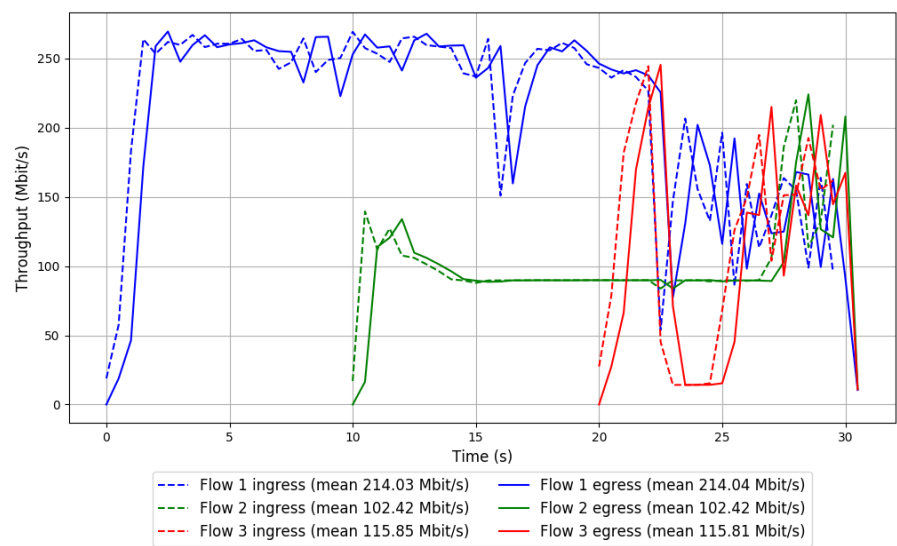
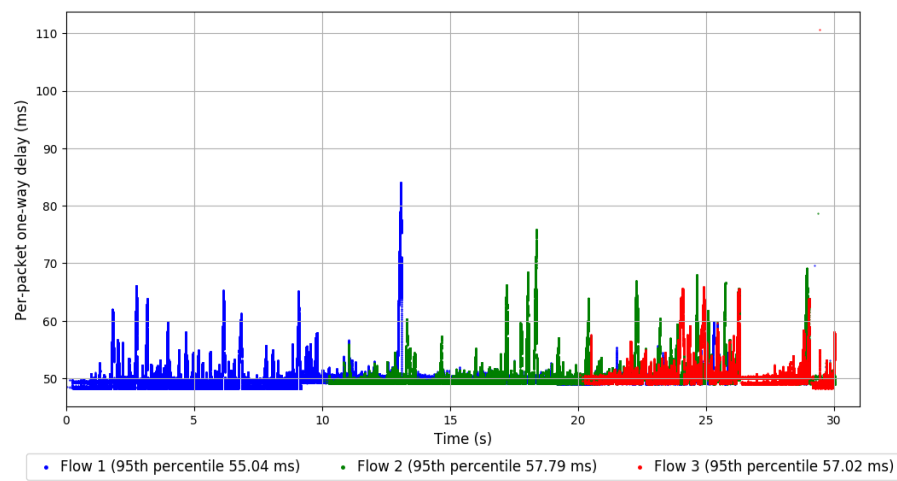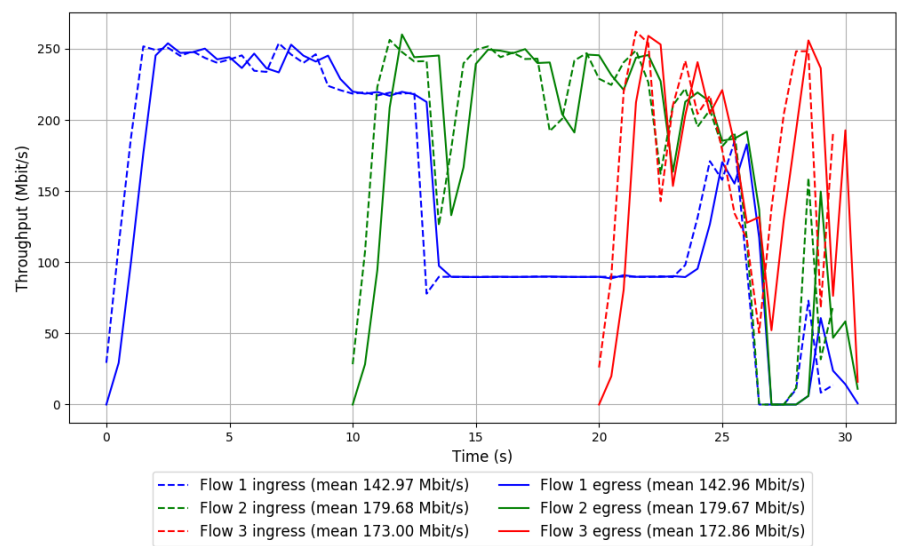# Run 7: Report of TaoVA-100x — Data Link

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

Start at: 2018-07-12 06:50:58
End at: 2018-07-12 06:51:28
Local clock offset: -0.037 ms
Remote clock offset: -0.047 ms


# Below is generated by plot.py at 2018-07-12 10:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.63 Mbit/s
95th percentile per-packet one-way delay: 56.127 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 210.85 Mbit/s
95th percentile per-packet one-way delay: 55.329 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 179.99 Mbit/s
95th percentile per-packet one-way delay: 56.620 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 171.37 Mbit/s
95th percentile per-packet one-way delay: 58.427 ms
Loss rate: 0.22%
```
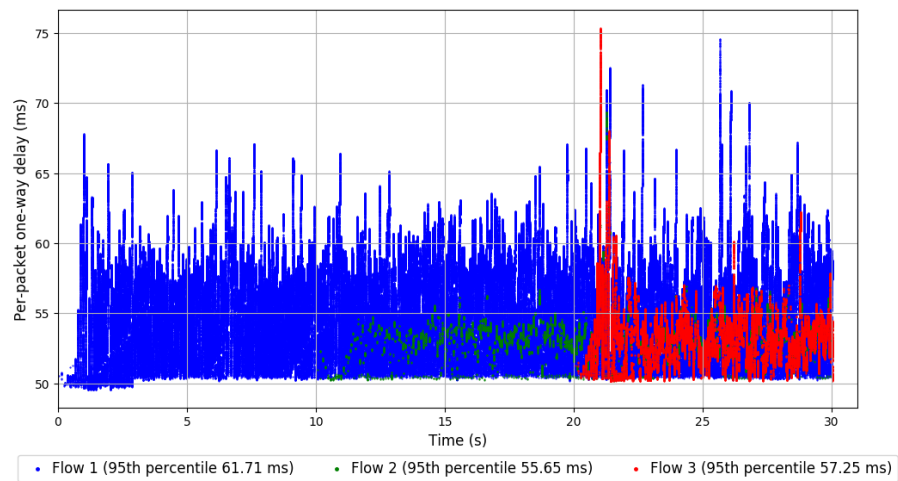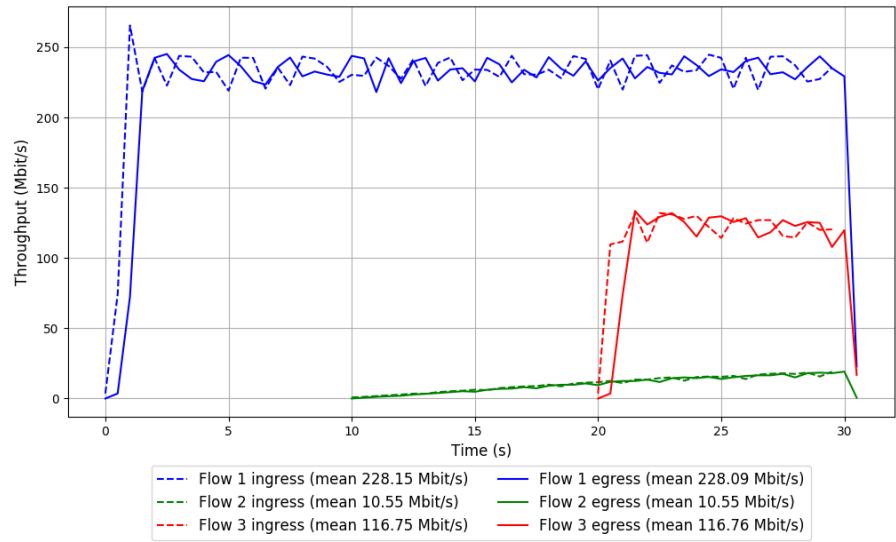
Run 8: Report of TaoVA-100x — Data Link

- - - - Flow 1 ingress (mean 210.85 Mbit/s) —— Flow 1 egress (mean 210.85 Mbit/s)
- - - - Flow 2 ingress (mean 179.95 Mbit/s) —— Flow 2 egress (mean 179.99 Mbit/s)
- - - - Flow 3 ingress (mean 171.74 Mbit/s) —— Flow 3 egress (mean 171.37 Mbit/s)

• Flow 1 (95th percentile 55.33 ms) • Flow 2 (95th percentile 56.62 ms) • Flow 3 (95th percentile 58.43 ms)

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

Start at: 2018-07-12 07:15:47
End at: 2018-07-12 07:16:17
Local clock offset: -0.038 ms
Remote clock offset: -0.02 ms


# Below is generated by plot.py at 2018-07-12 10:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.73 Mbit/s
95th percentile per-packet one-way delay: 59.316 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 214.04 Mbit/s
95th percentile per-packet one-way delay: 57.866 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 102.42 Mbit/s
95th percentile per-packet one-way delay: 51.118 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 115.81 Mbit/s
95th percentile per-packet one-way delay: 70.642 ms
Loss rate: 0.00%
```

Run 9: Report of TaoVA-100x — Data Link

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

Start at: 2018-07-12 07:40:55
End at: 2018-07-12 07:41:25
Local clock offset: 0.353 ms
Remote clock offset: -0.082 ms


# Below is generated by plot.py at 2018-07-12 10:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.02 Mbit/s
95th percentile per-packet one-way delay: 56.484 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 142.96 Mbit/s
95th percentile per-packet one-way delay: 55.037 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 179.67 Mbit/s
95th percentile per-packet one-way delay: 57.788 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 172.86 Mbit/s
95th percentile per-packet one-way delay: 57.018 ms
Loss rate: 0.08%
```
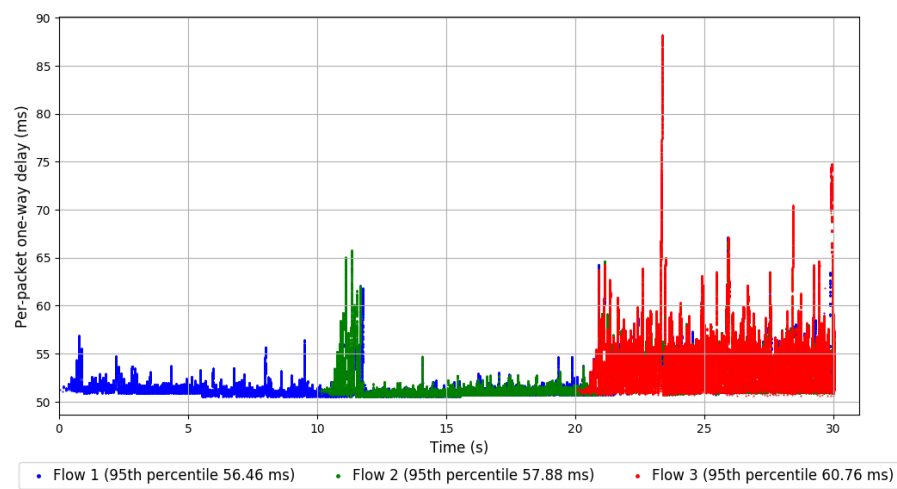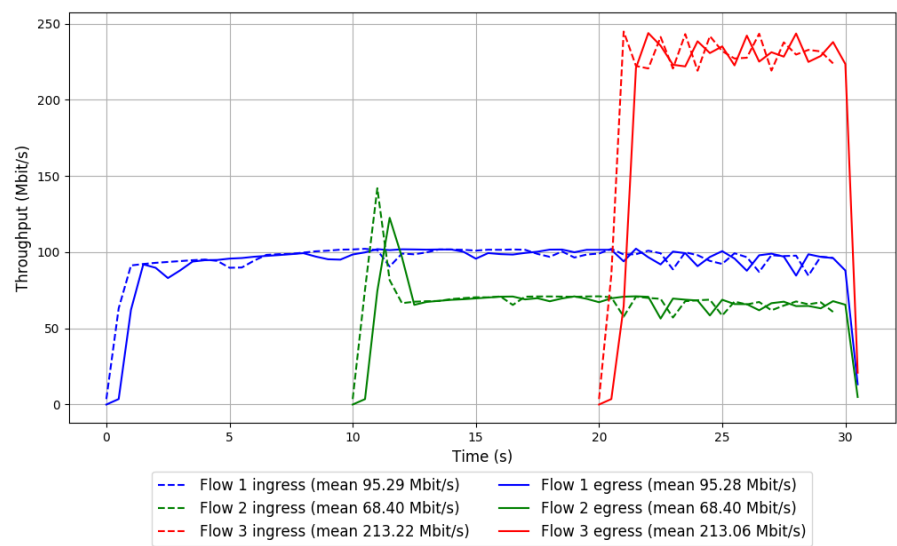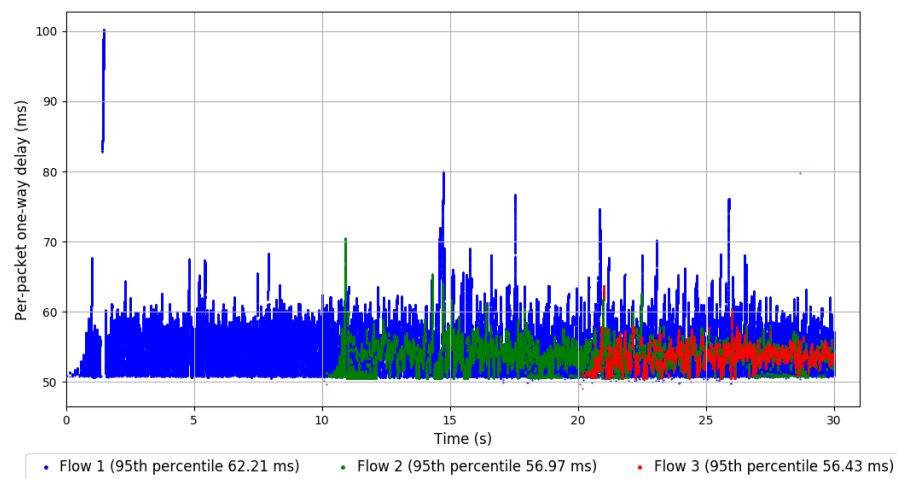
Run 10: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 142.97 Mbit/s)   Flow 1 egress (mean 142.96 Mbit/s)
Flow 2 ingress (mean 179.68 Mbit/s)   Flow 2 egress (mean 179.67 Mbit/s)
Flow 3 ingress (mean 173.00 Mbit/s)   Flow 3 egress (mean 172.86 Mbit/s)

Flow 1 (95th percentile 55.04 ms)   Flow 2 (95th percentile 57.79 ms)   Flow 3 (95th percentile 57.02 ms)

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```
Run 1: Statistics of TCP Vegas

Start at: 2018-07-12 03:53:41
End at: 2018-07-12 03:54:11
Local clock offset: -0.14 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2018-07-12 10:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 273.85 Mbit/s
95th percentile per-packet one-way delay: 61.457 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 228.09 Mbit/s
95th percentile per-packet one-way delay: 61.714 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.55 Mbit/s
95th percentile per-packet one-way delay: 55.654 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 116.76 Mbit/s
95th percentile per-packet one-way delay: 57.247 ms
Loss rate: 0.00%
```
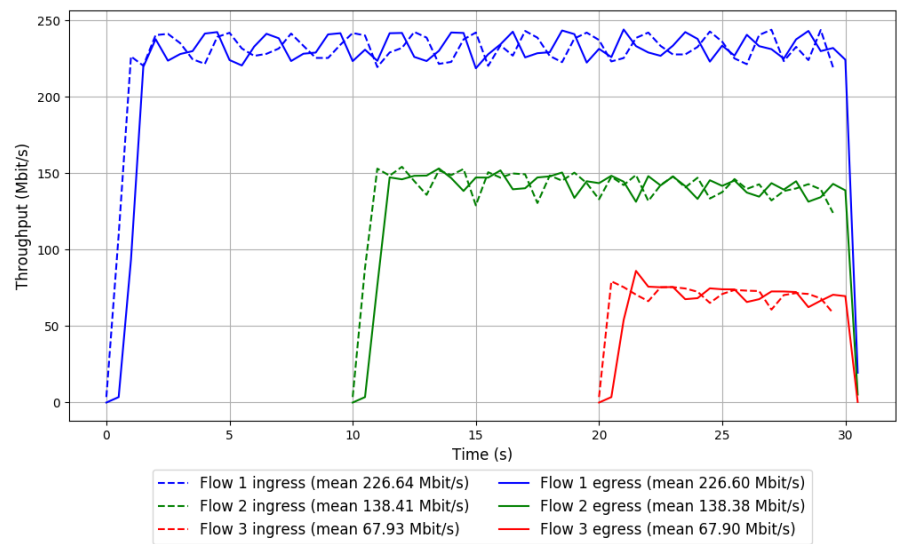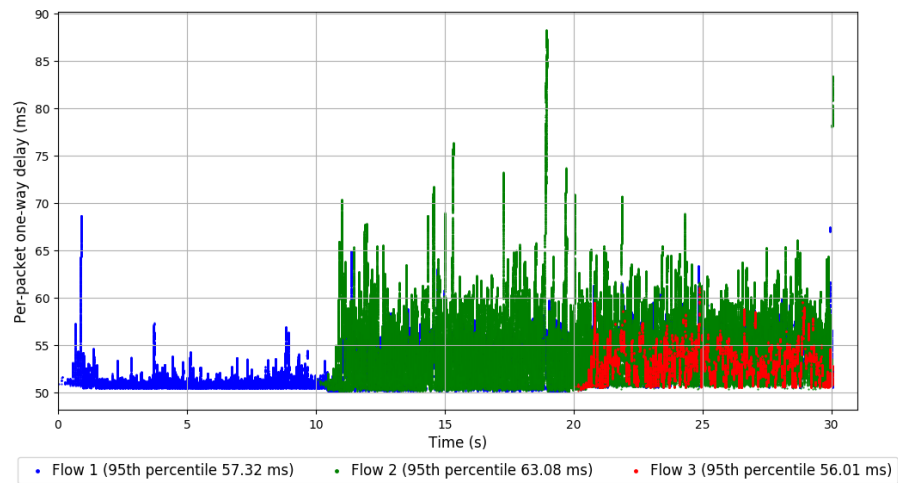
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-07-12 04:18:58
End at: 2018-07-12 04:19:28
Local clock offset: -0.437 ms
Remote clock offset: 0.013 ms


# Below is generated by plot.py at 2018-07-12 10:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.62 Mbit/s
95th percentile per-packet one-way delay: 58.425 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 95.28 Mbit/s
95th percentile per-packet one-way delay: 56.462 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 68.40 Mbit/s
95th percentile per-packet one-way delay: 57.878 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 213.06 Mbit/s
95th percentile per-packet one-way delay: 60.758 ms
Loss rate: 0.03%
```
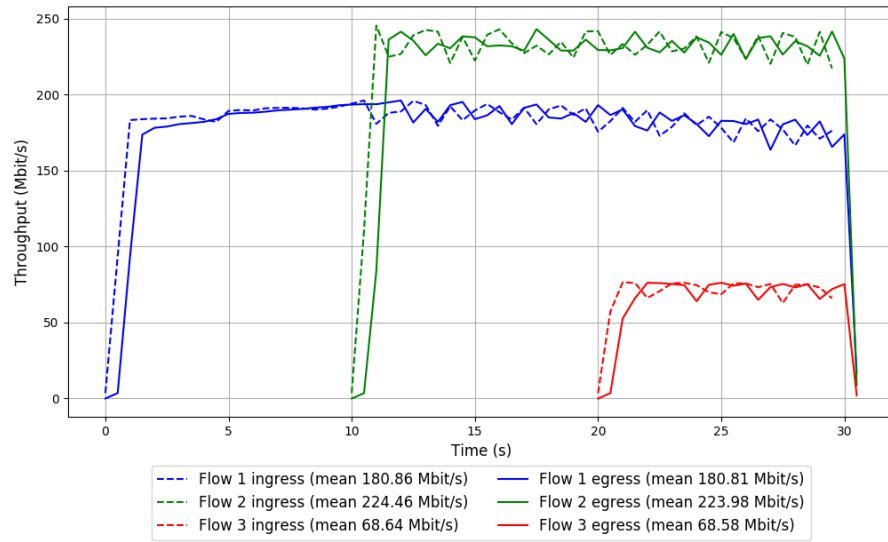
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-07-12 04:44:07
End at: 2018-07-12 04:44:37
Local clock offset: -0.097 ms
Remote clock offset: -0.03 ms


# Below is generated by plot.py at 2018-07-12 10:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 341.26 Mbit/s
95th percentile per-packet one-way delay: 61.288 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 226.60 Mbit/s
95th percentile per-packet one-way delay: 62.212 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 138.38 Mbit/s
95th percentile per-packet one-way delay: 56.972 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 67.90 Mbit/s
95th percentile per-packet one-way delay: 56.426 ms
Loss rate: 0.00%
```
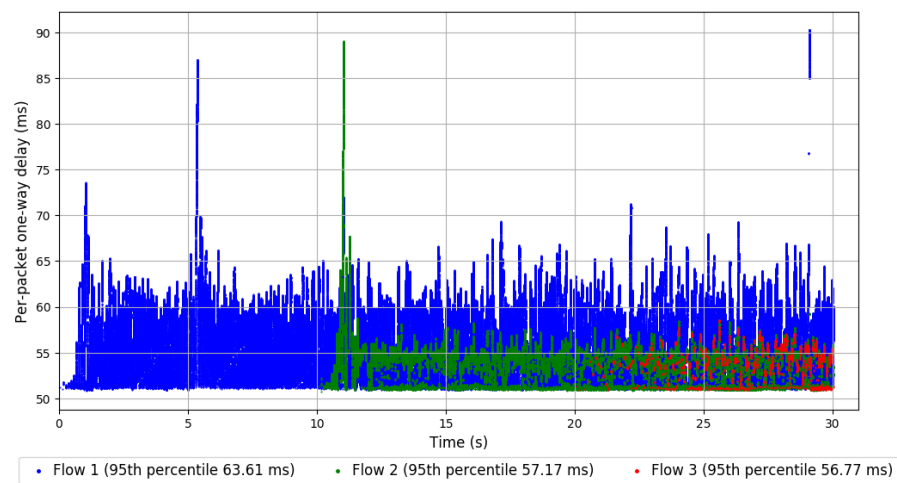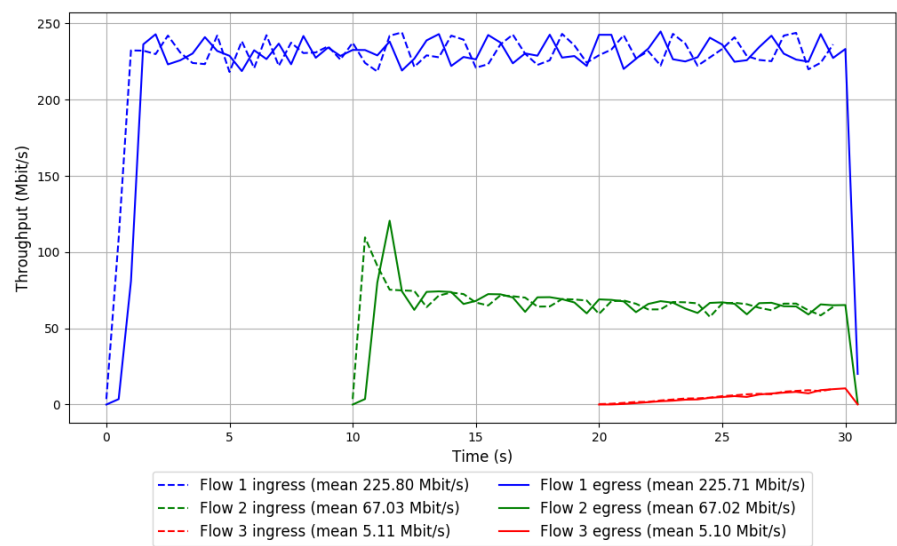
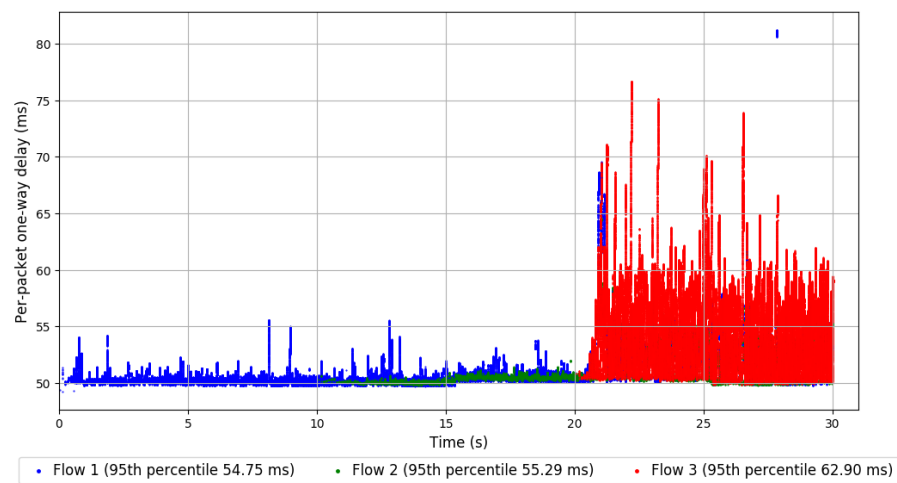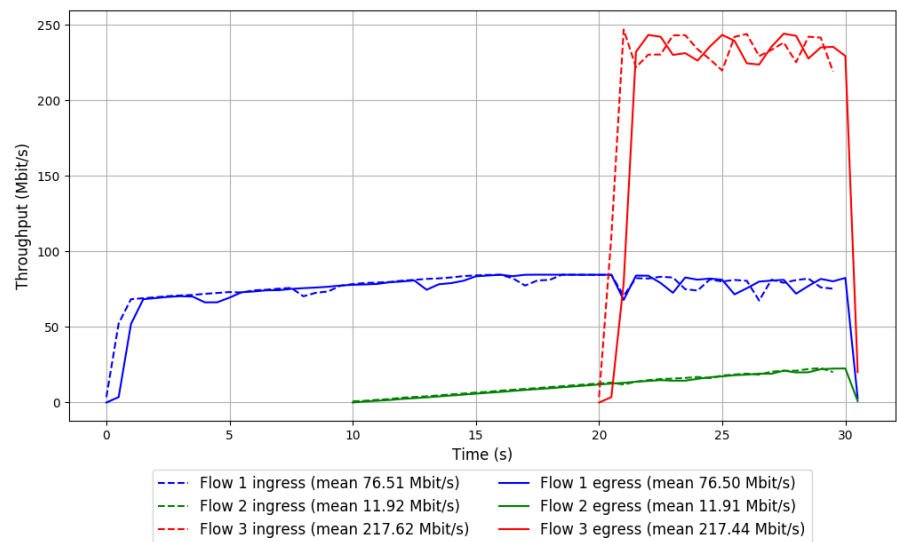## Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2018-07-12 05:09:43
End at: 2018-07-12 05:10:13
Local clock offset: -0.049 ms
Remote clock offset: 0.049 ms


# Below is generated by plot.py at 2018-07-12 10:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.82 Mbit/s
95th percentile per-packet one-way delay: 60.839 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 180.81 Mbit/s
95th percentile per-packet one-way delay: 57.319 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 223.98 Mbit/s
95th percentile per-packet one-way delay: 63.079 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 68.58 Mbit/s
95th percentile per-packet one-way delay: 56.005 ms
Loss rate: 0.09%
```

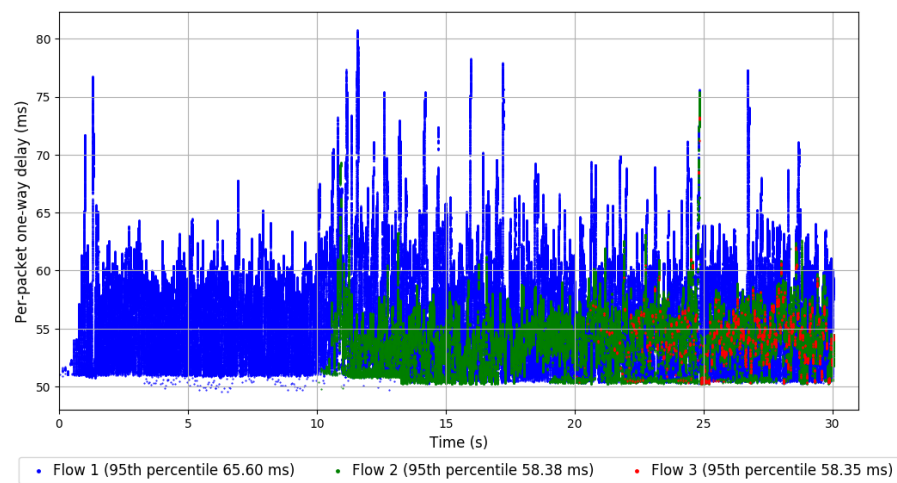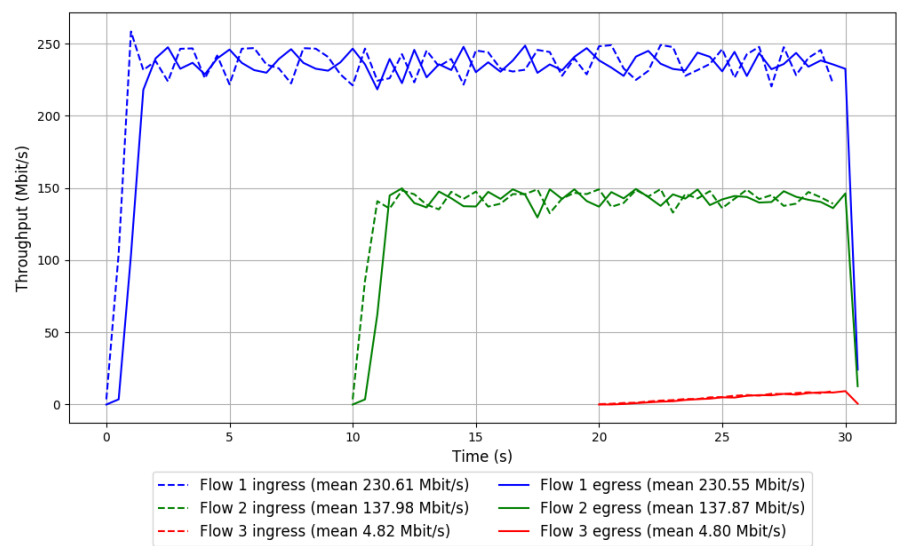Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-07-12 05:34:56
End at: 2018-07-12 05:35:26
Local clock offset: -0.436 ms
Remote clock offset: 0.006 ms


# Below is generated by plot.py at 2018-07-12 10:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 272.03 Mbit/s
95th percentile per-packet one-way delay: 63.318 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 225.71 Mbit/s
95th percentile per-packet one-way delay: 63.610 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 67.02 Mbit/s
95th percentile per-packet one-way delay: 57.175 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.10 Mbit/s
95th percentile per-packet one-way delay: 56.766 ms
Loss rate: 0.24%
```

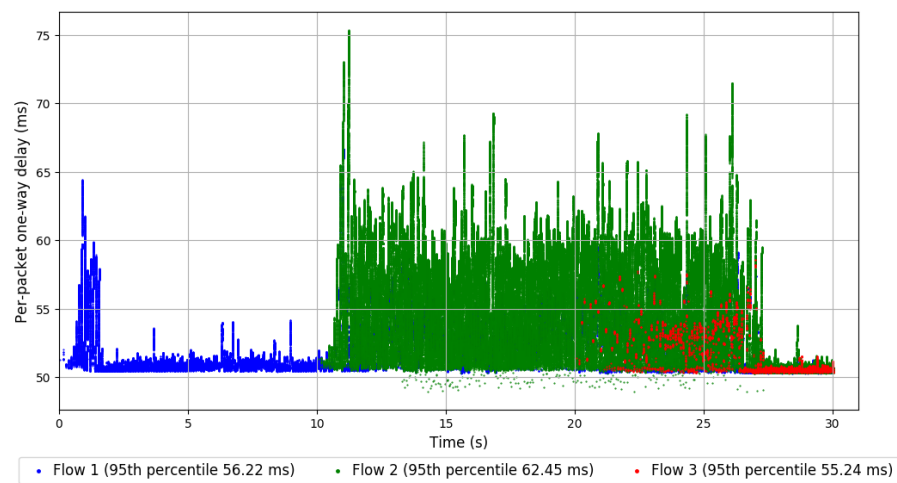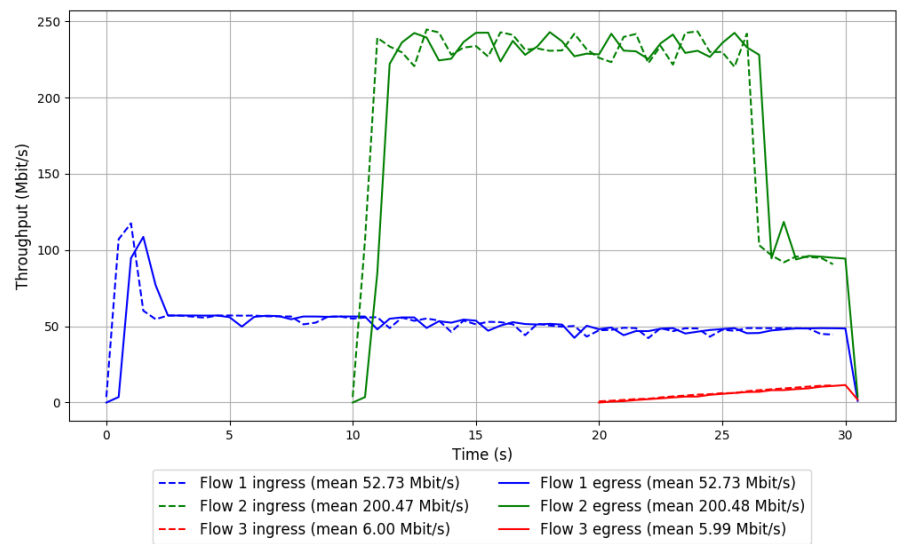# Run 5: Report of TCP Vegas — Data Link

```
Run 6: Statistics of TCP Vegas

Start at: 2018-07-12 05:59:49
End at: 2018-07-12 06:00:19
Local clock offset: 0.278 ms
Remote clock offset: -0.029 ms


# Below is generated by plot.py at 2018-07-12 10:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 156.61 Mbit/s
95th percentile per-packet one-way delay: 60.393 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 76.50 Mbit/s
95th percentile per-packet one-way delay: 54.753 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.91 Mbit/s
95th percentile per-packet one-way delay: 55.294 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 217.44 Mbit/s
95th percentile per-packet one-way delay: 62.896 ms
Loss rate: 0.00%
```
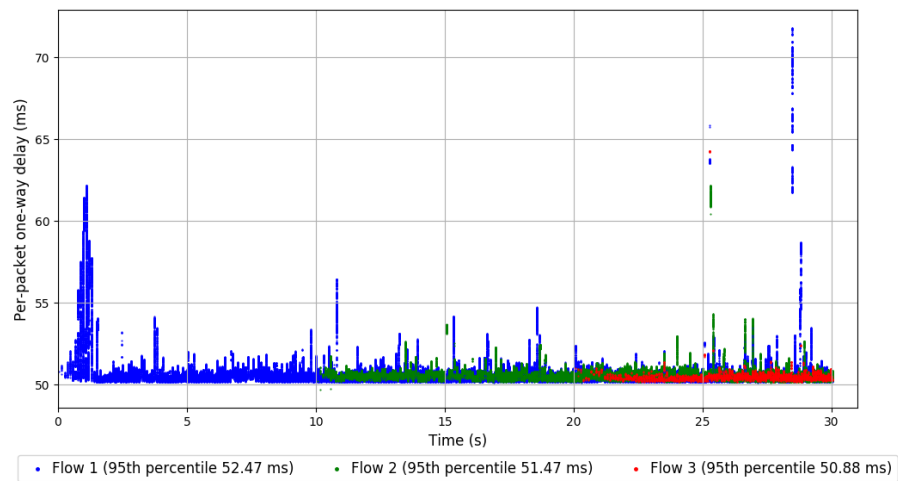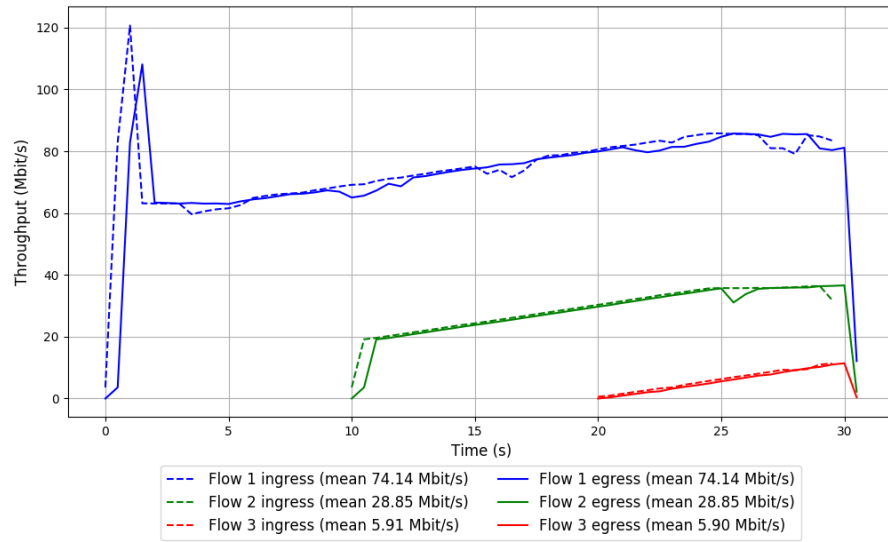
Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2018-07-12 06:24:51
End at: 2018-07-12 06:25:21
Local clock offset: -0.1 ms
Remote clock offset: -0.054 ms


# Below is generated by plot.py at 2018-07-12 10:44:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.99 Mbit/s
95th percentile per-packet one-way delay: 64.399 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 230.55 Mbit/s
95th percentile per-packet one-way delay: 65.598 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 137.87 Mbit/s
95th percentile per-packet one-way delay: 58.384 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 58.347 ms
Loss rate: 0.25%
```

Run 7: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 230.61 Mbit/s)   Flow 1 egress (mean 230.55 Mbit/s)
Flow 2 ingress (mean 137.98 Mbit/s)   Flow 2 egress (mean 137.87 Mbit/s)
Flow 3 ingress (mean 4.82 Mbit/s)   Flow 3 egress (mean 4.80 Mbit/s)

Flow 1 (95th percentile 65.60 ms)   Flow 2 (95th percentile 58.38 ms)   Flow 3 (95th percentile 58.35 ms)

```
Run 8: Statistics of TCP Vegas

Start at: 2018-07-12 06:49:41
End at: 2018-07-12 06:50:11
Local clock offset: -0.13 ms
Remote clock offset: -0.021 ms


# Below is generated by plot.py at 2018-07-12 10:44:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 188.25 Mbit/s
95th percentile per-packet one-way delay: 61.689 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 52.73 Mbit/s
95th percentile per-packet one-way delay: 56.217 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 200.48 Mbit/s
95th percentile per-packet one-way delay: 62.453 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.99 Mbit/s
95th percentile per-packet one-way delay: 55.245 ms
Loss rate: 0.12%
```
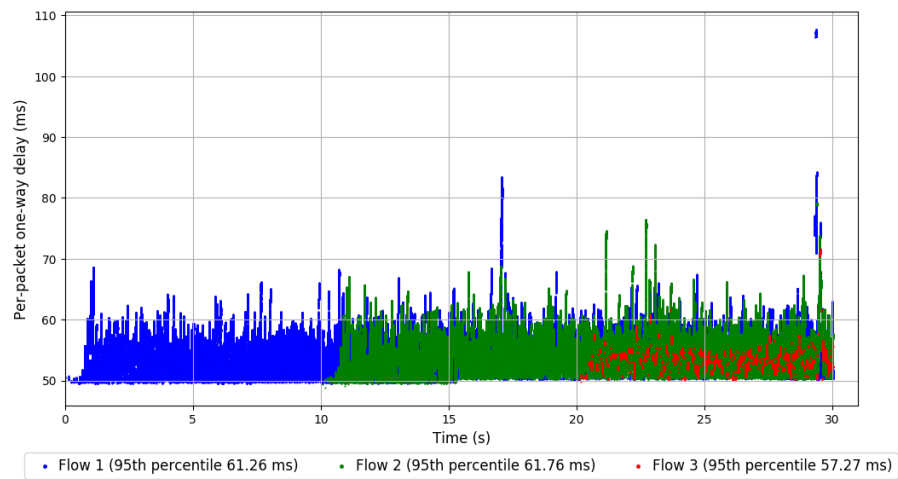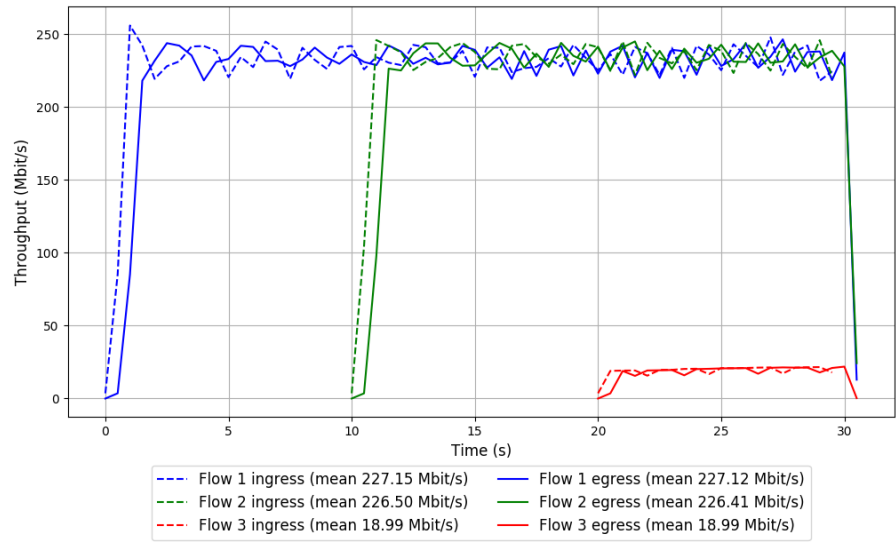
Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2018-07-12 07:14:34
End at: 2018-07-12 07:15:04
Local clock offset: -0.066 ms
Remote clock offset: -0.022 ms


# Below is generated by plot.py at 2018-07-12 10:44:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.30 Mbit/s
95th percentile per-packet one-way delay: 52.129 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 74.14 Mbit/s
95th percentile per-packet one-way delay: 52.465 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.85 Mbit/s
95th percentile per-packet one-way delay: 51.472 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.90 Mbit/s
95th percentile per-packet one-way delay: 50.880 ms
Loss rate: 0.16%
```
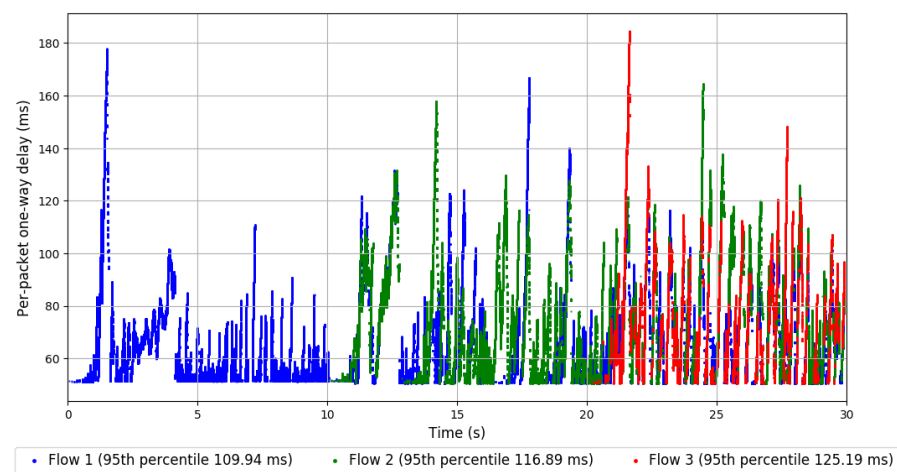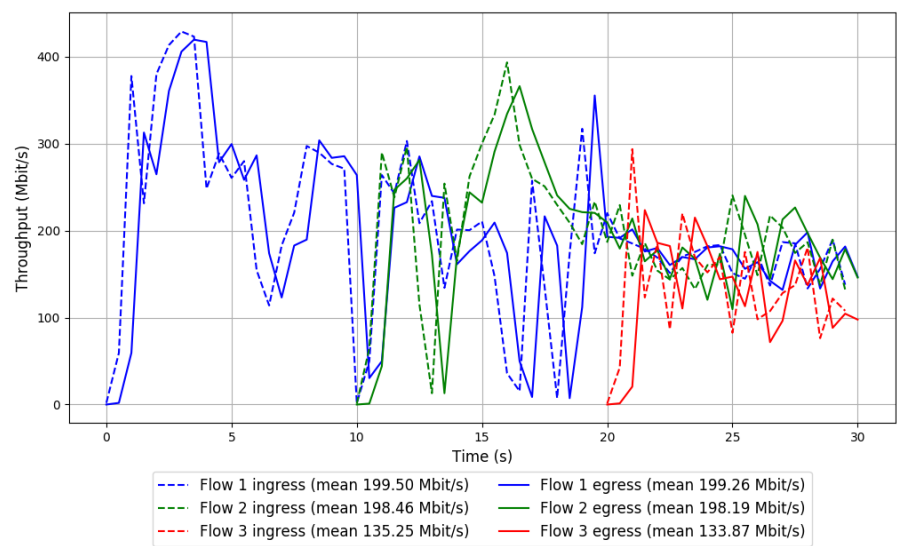
Run 9: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 74.14 Mbit/s) —— Flow 1 egress (mean 74.14 Mbit/s)
Flow 2 ingress (mean 28.85 Mbit/s) —— Flow 2 egress (mean 28.85 Mbit/s)
Flow 3 ingress (mean 5.91 Mbit/s) —— Flow 3 egress (mean 5.90 Mbit/s)

Flow 1 (95th percentile 52.47 ms) • Flow 2 (95th percentile 51.47 ms) • Flow 3 (95th percentile 50.88 ms)
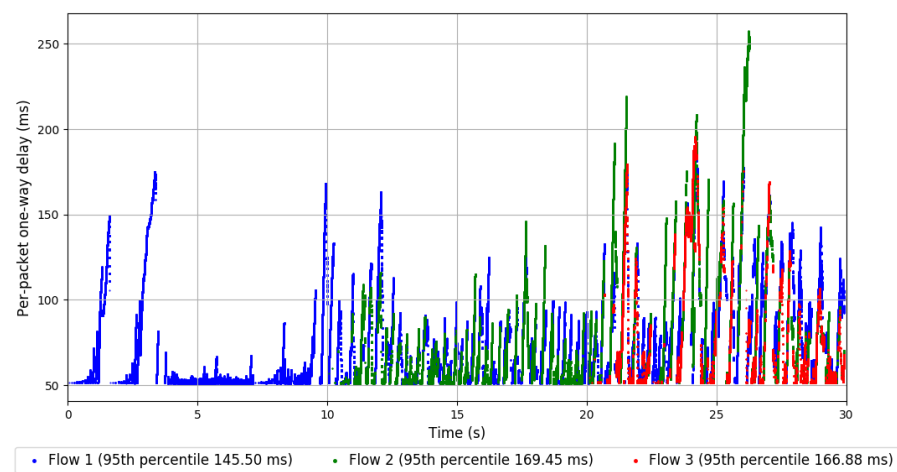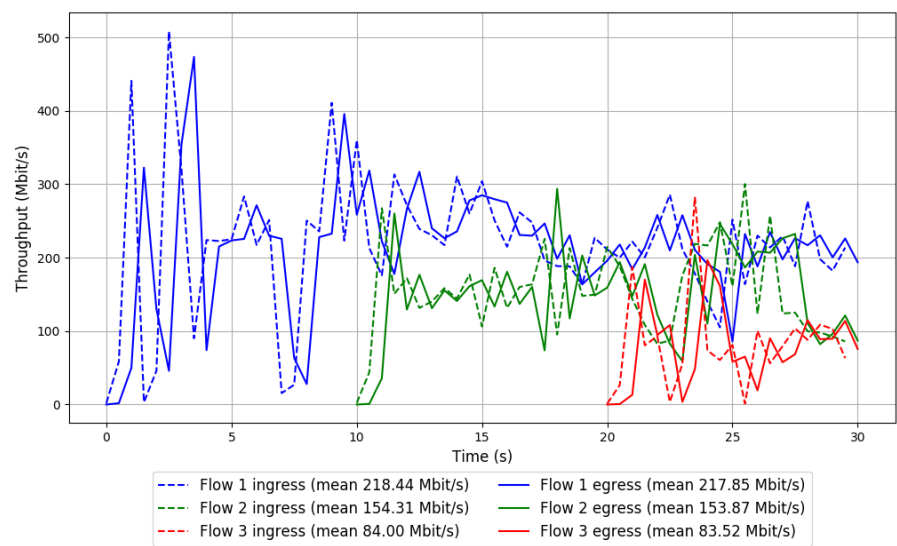
```
Run 10: Statistics of TCP Vegas

Start at: 2018-07-12 07:39:29
End at: 2018-07-12 07:39:59
Local clock offset: -0.027 ms
Remote clock offset: -0.059 ms


# Below is generated by plot.py at 2018-07-12 10:47:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.18 Mbit/s
95th percentile per-packet one-way delay: 61.466 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 227.12 Mbit/s
95th percentile per-packet one-way delay: 61.255 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 226.41 Mbit/s
95th percentile per-packet one-way delay: 61.764 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.99 Mbit/s
95th percentile per-packet one-way delay: 57.267 ms
Loss rate: 0.00%
```

Run 10: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 227.15 Mbit/s)   Flow 1 egress (mean 227.12 Mbit/s)
Flow 2 ingress (mean 226.50 Mbit/s)   Flow 2 egress (mean 226.41 Mbit/s)
Flow 3 ingress (mean 18.99 Mbit/s)   Flow 3 egress (mean 18.99 Mbit/s)

Flow 1 (95th percentile 61.26 ms)   Flow 2 (95th percentile 61.76 ms)   Flow 3 (95th percentile 57.27 ms)
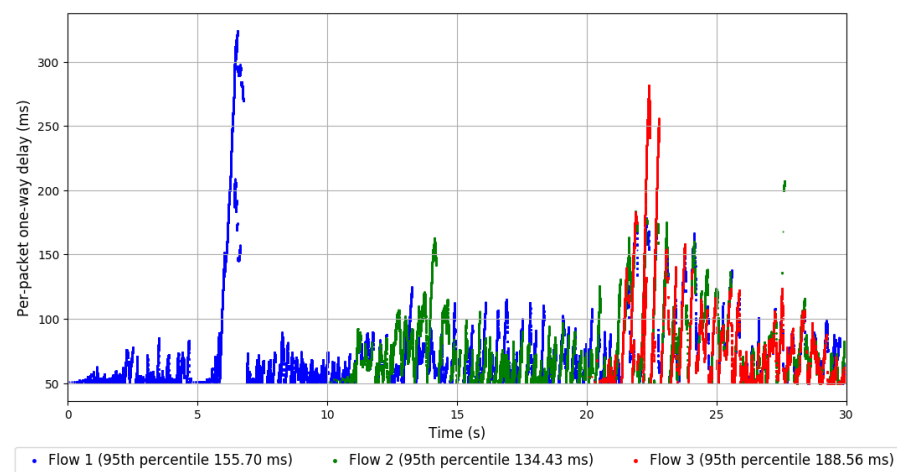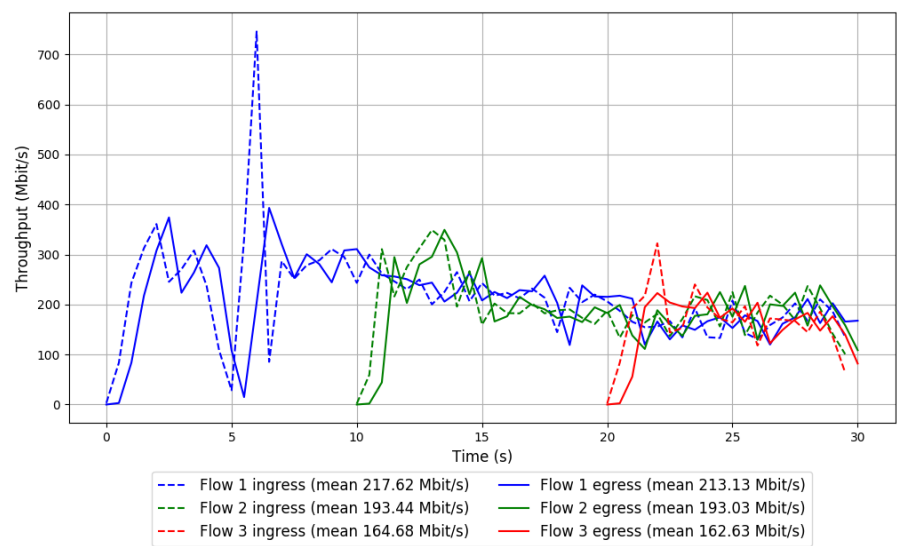
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```
Run 1: Statistics of Verus

Start at: 2018-07-12 04:11:23
End at: 2018-07-12 04:11:53
Local clock offset: -0.474 ms
Remote clock offset: 0.013 ms


# Below is generated by plot.py at 2018-07-12 10:48:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 375.05 Mbit/s
95th percentile per-packet one-way delay: 115.256 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 199.26 Mbit/s
95th percentile per-packet one-way delay: 109.939 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 198.19 Mbit/s
95th percentile per-packet one-way delay: 116.890 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 133.87 Mbit/s
95th percentile per-packet one-way delay: 125.191 ms
Loss rate: 1.04%
```

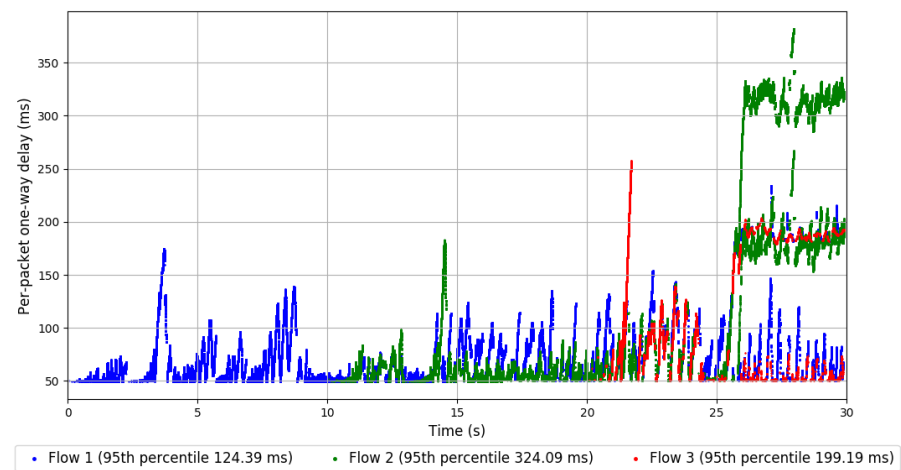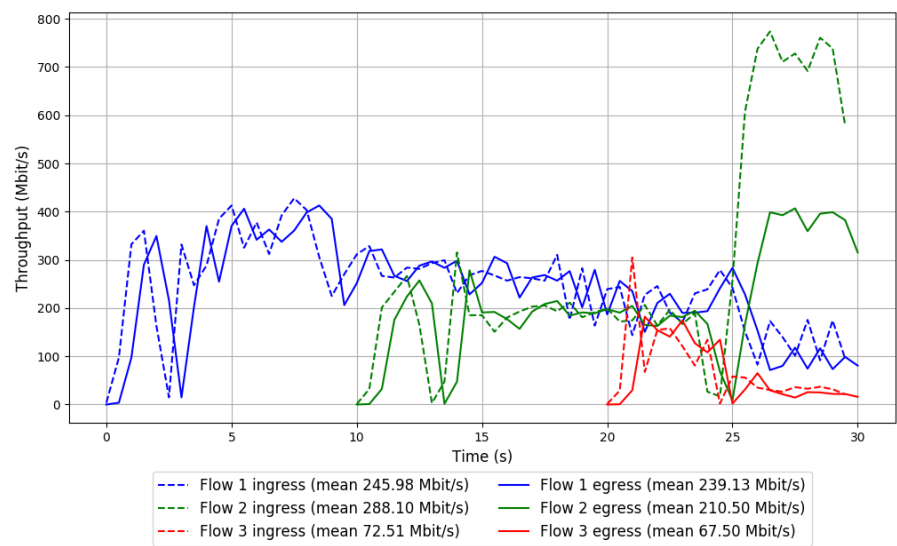Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-07-12 04:36:34
End at: 2018-07-12 04:37:04
Local clock offset: -0.452 ms
Remote clock offset: -0.039 ms


# Below is generated by plot.py at 2018-07-12 10:48:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 347.50 Mbit/s
95th percentile per-packet one-way delay: 151.526 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 217.85 Mbit/s
95th percentile per-packet one-way delay: 145.496 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 153.87 Mbit/s
95th percentile per-packet one-way delay: 169.450 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 83.52 Mbit/s
95th percentile per-packet one-way delay: 166.885 ms
Loss rate: 0.64%
```
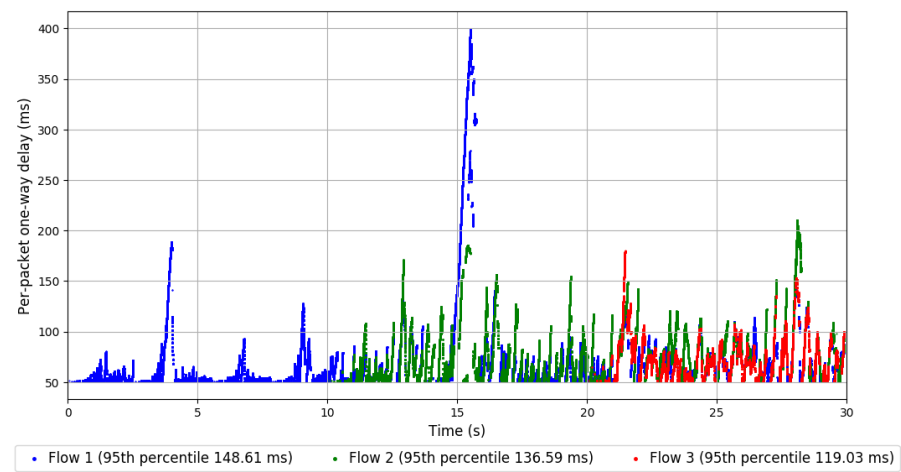
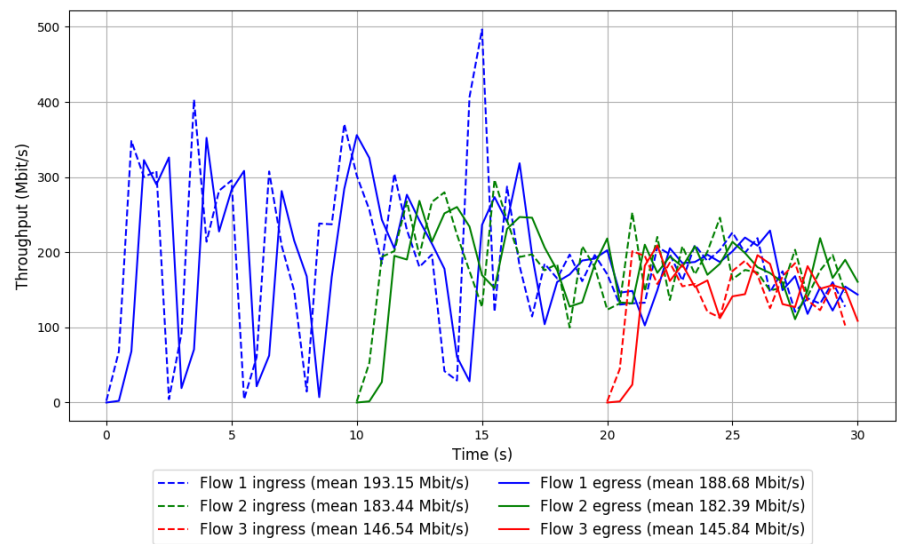## Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-07-12 05:01:56
End at: 2018-07-12 05:02:26
Local clock offset: -0.466 ms
Remote clock offset: -0.002 ms


# Below is generated by plot.py at 2018-07-12 10:49:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.05 Mbit/s
95th percentile per-packet one-way delay: 151.158 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 213.13 Mbit/s
95th percentile per-packet one-way delay: 155.701 ms
Loss rate: 2.06%
-- Flow 2:
Average throughput: 193.03 Mbit/s
95th percentile per-packet one-way delay: 134.425 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 162.63 Mbit/s
95th percentile per-packet one-way delay: 188.562 ms
Loss rate: 1.29%
```
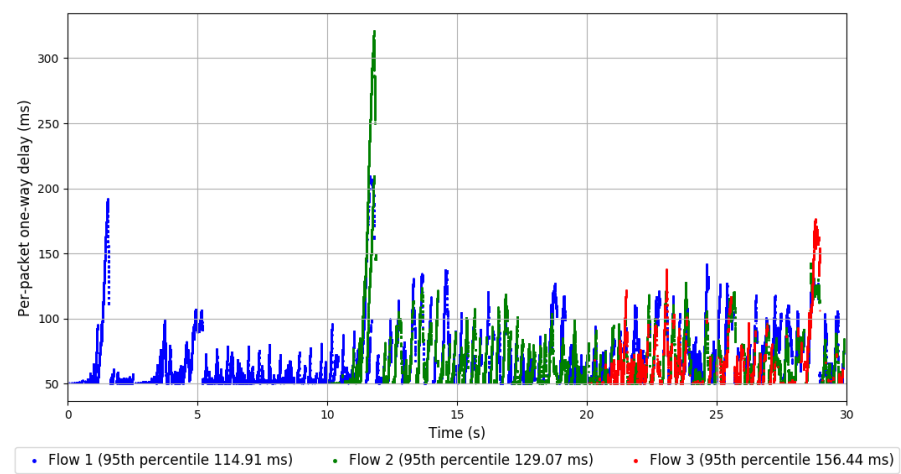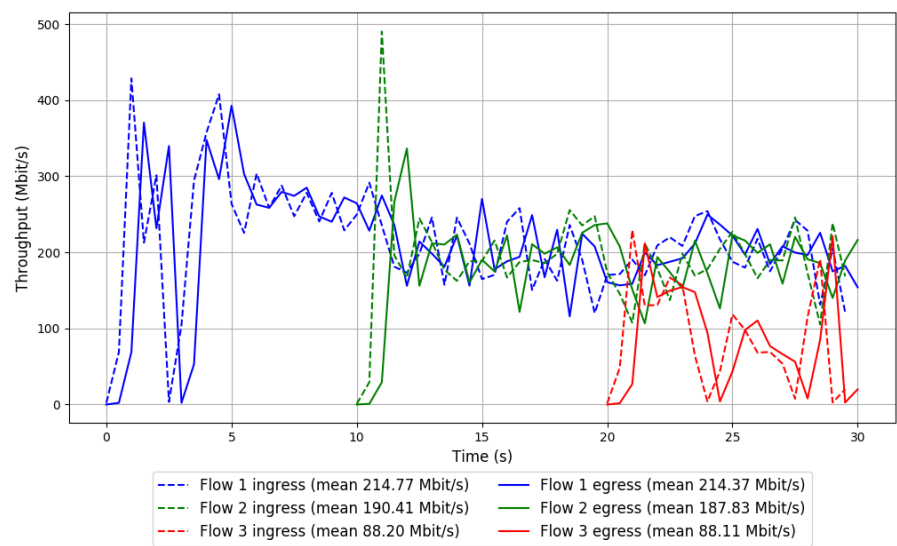
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2018-07-12 05:27:17
End at: 2018-07-12 05:27:47
Local clock offset: 0.252 ms
Remote clock offset: -0.005 ms


# Below is generated by plot.py at 2018-07-12 10:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 401.23 Mbit/s
95th percentile per-packet one-way delay: 312.962 ms
Loss rate: 12.93%
-- Flow 1:
Average throughput: 239.13 Mbit/s
95th percentile per-packet one-way delay: 124.386 ms
Loss rate: 2.61%
-- Flow 2:
Average throughput: 210.50 Mbit/s
95th percentile per-packet one-way delay: 324.088 ms
Loss rate: 26.94%
-- Flow 3:
Average throughput: 67.50 Mbit/s
95th percentile per-packet one-way delay: 199.191 ms
Loss rate: 6.50%
```
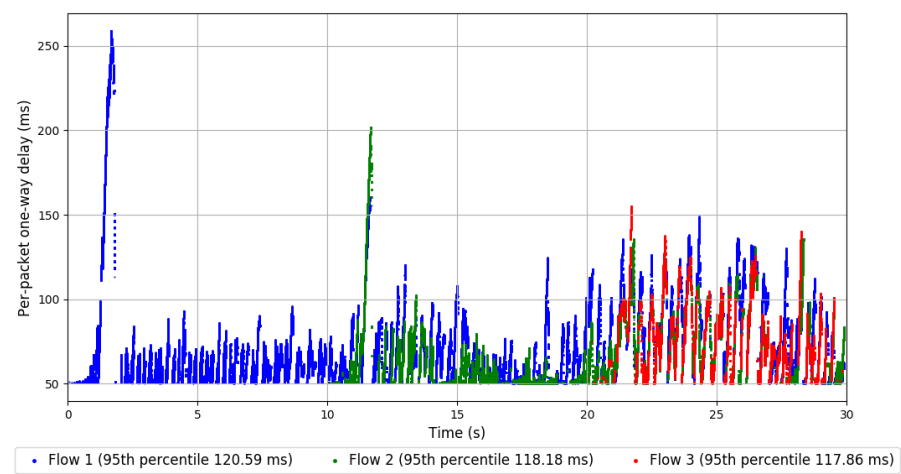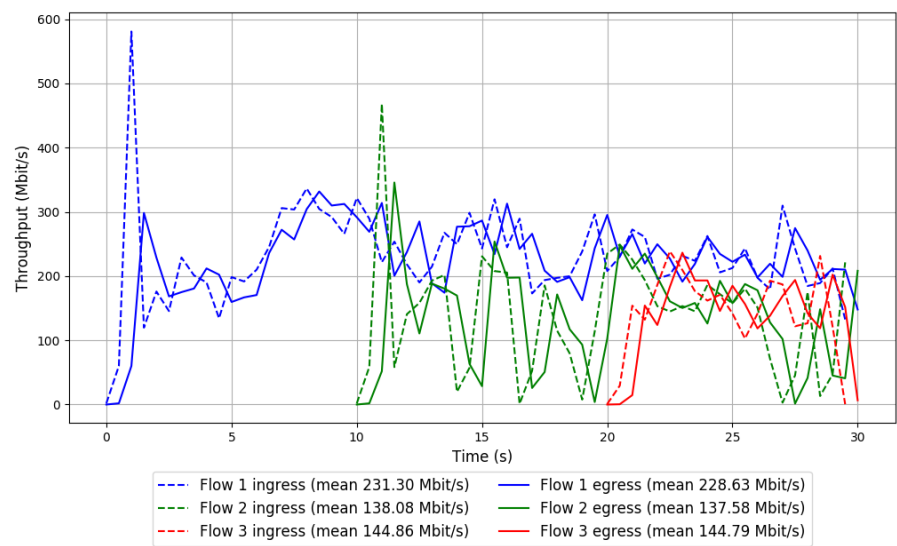
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-07-12 05:52:34
End at: 2018-07-12 05:53:04
Local clock offset: -0.441 ms
Remote clock offset: -0.019 ms


# Below is generated by plot.py at 2018-07-12 10:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.89 Mbit/s
95th percentile per-packet one-way delay: 136.895 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 188.68 Mbit/s
95th percentile per-packet one-way delay: 148.612 ms
Loss rate: 2.25%
-- Flow 2:
Average throughput: 182.39 Mbit/s
95th percentile per-packet one-way delay: 136.591 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 145.84 Mbit/s
95th percentile per-packet one-way delay: 119.032 ms
Loss rate: 0.00%
```

Run 5: Report of Verus — Data Link

- Flow 1 ingress (mean 193.15 Mbit/s)
- Flow 1 egress (mean 188.68 Mbit/s)
- Flow 2 ingress (mean 183.44 Mbit/s)
- Flow 2 egress (mean 182.39 Mbit/s)
- Flow 3 ingress (mean 146.54 Mbit/s)
- Flow 3 egress (mean 145.84 Mbit/s)

- Flow 1 (95th percentile 148.61 ms)
- Flow 2 (95th percentile 136.59 ms)
- Flow 3 (95th percentile 119.03 ms)

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```
Run 6: Statistics of Verus

Start at: 2018-07-12 06:17:17
End at: 2018-07-12 06:17:47
Local clock offset: -0.101 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2018-07-12 10:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 368.05 Mbit/s
95th percentile per-packet one-way delay: 120.779 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 214.37 Mbit/s
95th percentile per-packet one-way delay: 114.906 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 187.83 Mbit/s
95th percentile per-packet one-way delay: 129.073 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 88.11 Mbit/s
95th percentile per-packet one-way delay: 156.438 ms
Loss rate: 0.00%
```
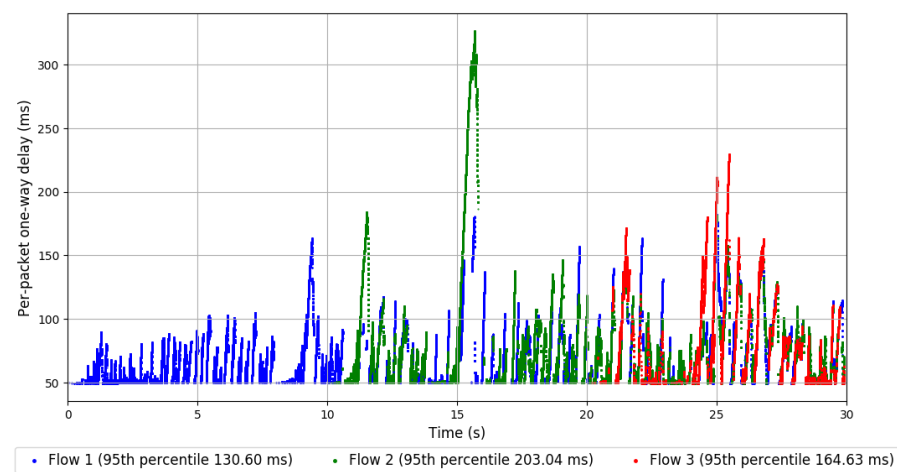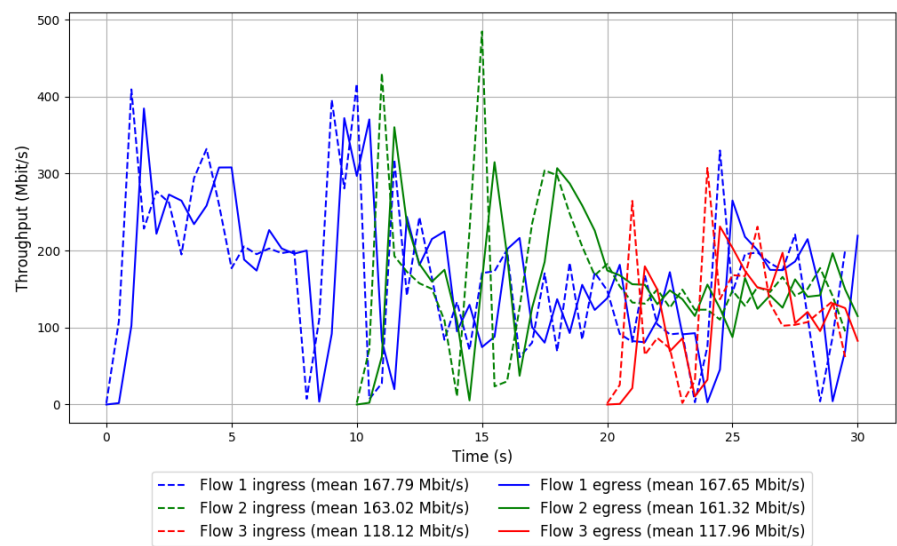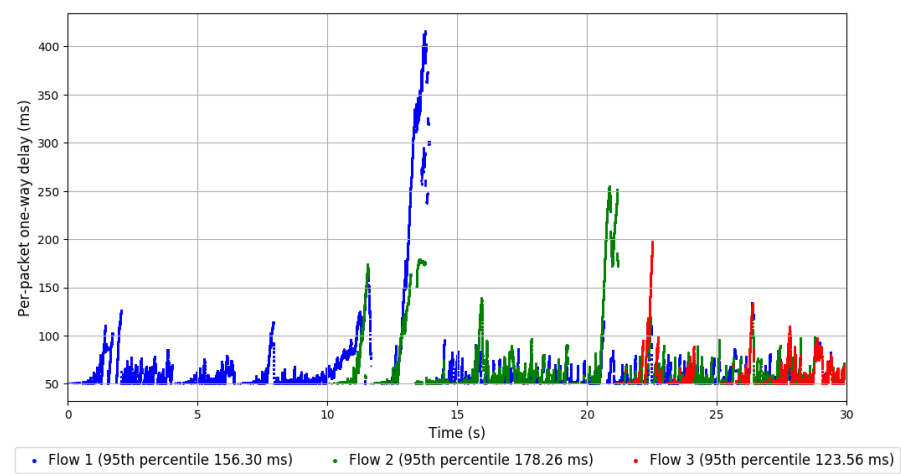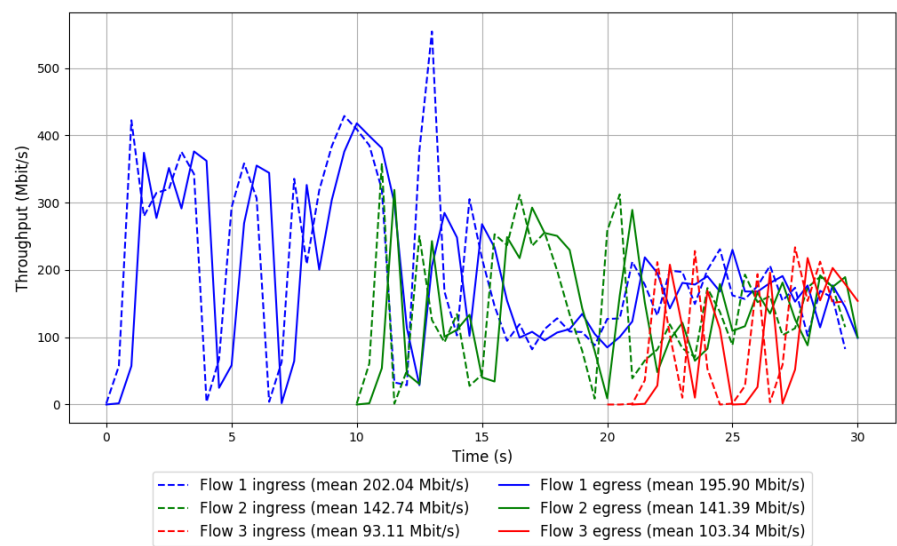
Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2018-07-12 06:42:16
End at: 2018-07-12 06:42:46
Local clock offset: -0.065 ms
Remote clock offset: -0.001 ms


# Below is generated by plot.py at 2018-07-12 10:50:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.46 Mbit/s
95th percentile per-packet one-way delay: 119.546 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 228.63 Mbit/s
95th percentile per-packet one-way delay: 120.590 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 137.58 Mbit/s
95th percentile per-packet one-way delay: 118.181 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 144.79 Mbit/s
95th percentile per-packet one-way delay: 117.856 ms
Loss rate: 0.00%
```
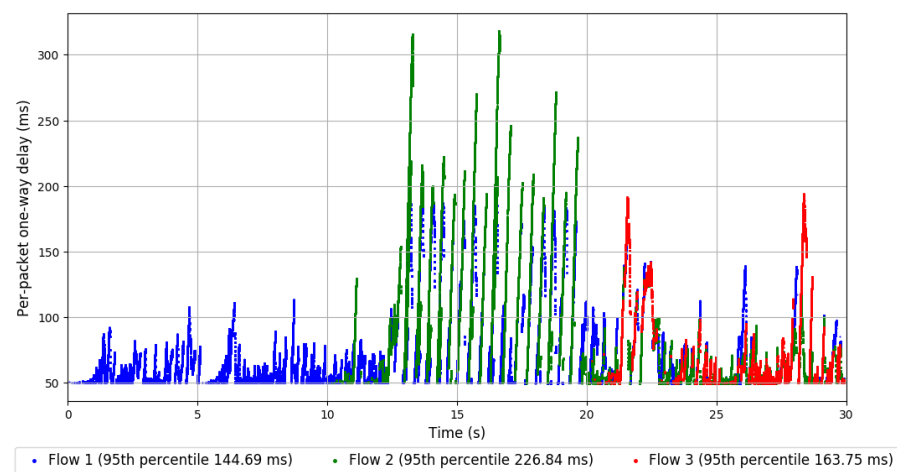
Run 7: Report of Verus — Data Link

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```
Run 8: Statistics of Verus

Start at: 2018-07-12 07:07:02
End at: 2018-07-12 07:07:32
Local clock offset: 0.283 ms
Remote clock offset: 0.013 ms


# Below is generated by plot.py at 2018-07-12 10:52:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 313.64 Mbit/s
95th percentile per-packet one-way delay: 151.583 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 167.65 Mbit/s
95th percentile per-packet one-way delay: 130.600 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 161.32 Mbit/s
95th percentile per-packet one-way delay: 203.040 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 117.96 Mbit/s
95th percentile per-packet one-way delay: 164.628 ms
Loss rate: 0.15%
```

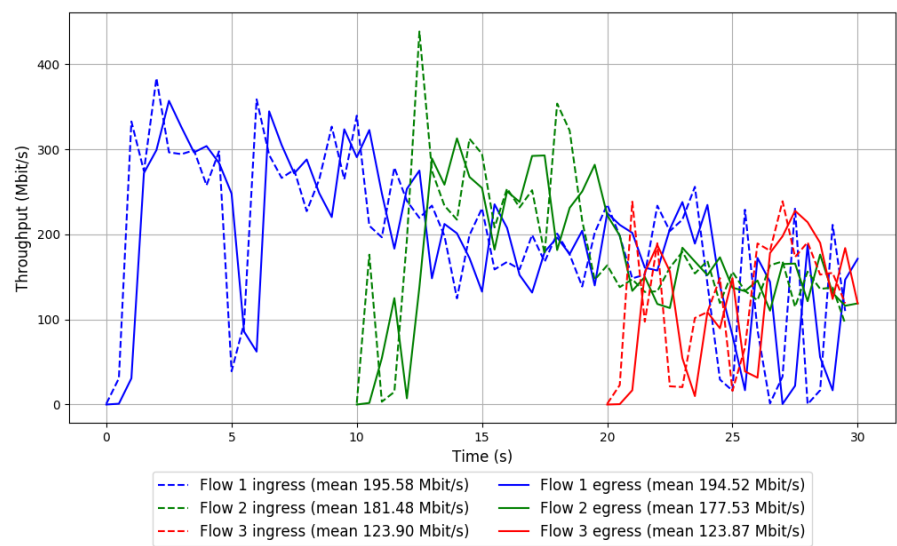## Run 8: Report of Verus — Data Link

```
Run 9: Statistics of Verus

Start at: 2018-07-12 07:32:00
End at: 2018-07-12 07:32:30
Local clock offset: -0.054 ms
Remote clock offset: 0.006 ms


# Below is generated by plot.py at 2018-07-12 10:52:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.48 Mbit/s
95th percentile per-packet one-way delay: 167.869 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 195.90 Mbit/s
95th percentile per-packet one-way delay: 156.297 ms
Loss rate: 3.05%
-- Flow 2:
Average throughput: 141.39 Mbit/s
95th percentile per-packet one-way delay: 178.260 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 103.34 Mbit/s
95th percentile per-packet one-way delay: 123.556 ms
Loss rate: 0.26%
```
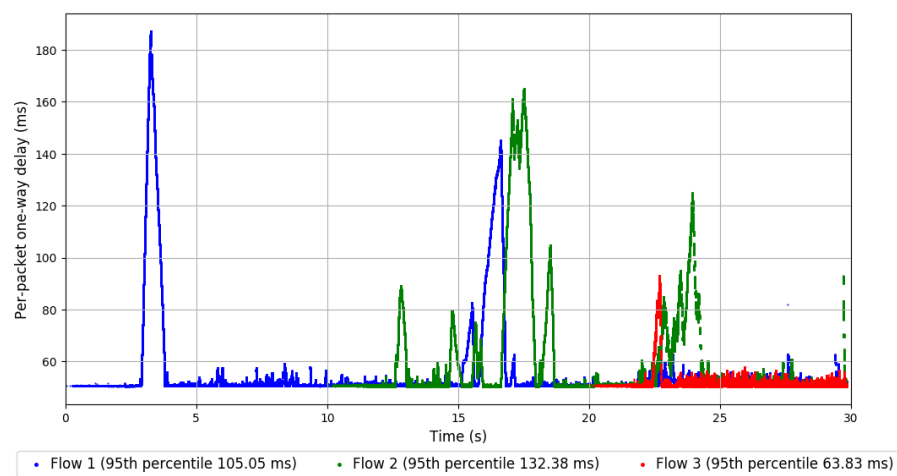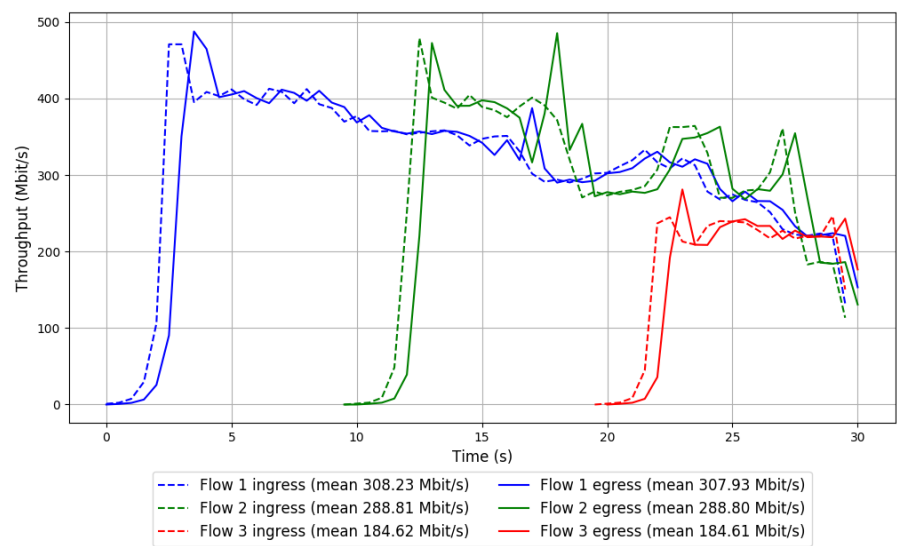
Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2018-07-12 07:56:57
End at: 2018-07-12 07:57:27
Local clock offset: 0.32 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2018-07-12 10:53:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 353.32 Mbit/s
95th percentile per-packet one-way delay: 187.000 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 194.52 Mbit/s
95th percentile per-packet one-way delay: 144.689 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 177.53 Mbit/s
95th percentile per-packet one-way delay: 226.835 ms
Loss rate: 2.17%
-- Flow 3:
Average throughput: 123.87 Mbit/s
95th percentile per-packet one-way delay: 163.748 ms
Loss rate: 0.00%
```
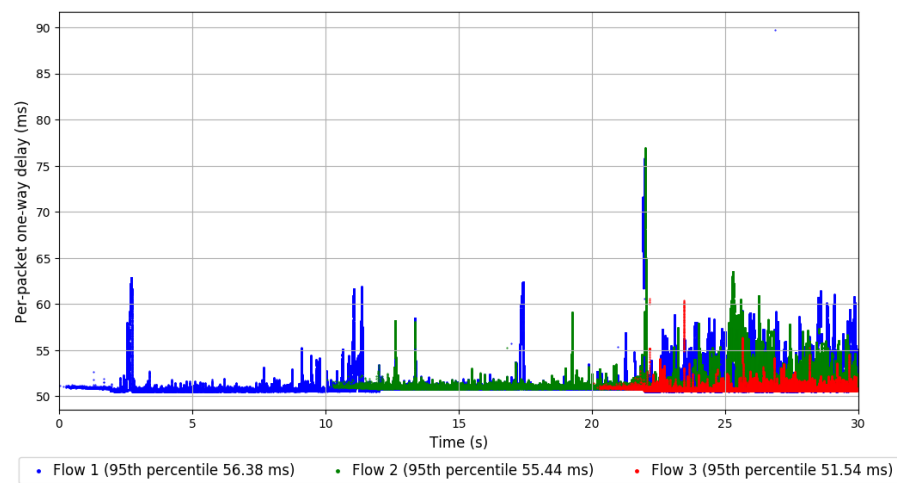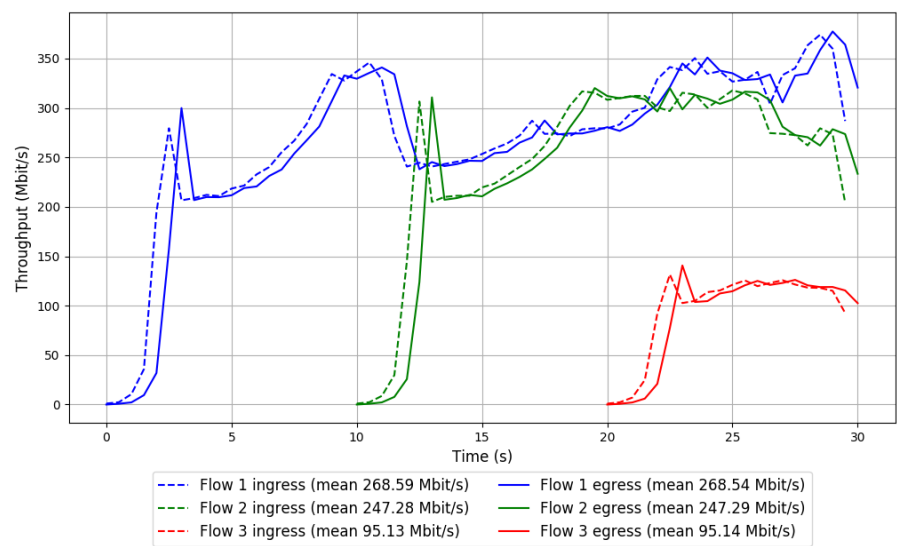
Run 10: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-07-12 04:04:54
End at: 2018-07-12 04:05:24
Local clock offset: -0.47 ms
Remote clock offset: -0.043 ms


# Below is generated by plot.py at 2018-07-12 10:58:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 561.48 Mbit/s
95th percentile per-packet one-way delay: 109.107 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 307.93 Mbit/s
95th percentile per-packet one-way delay: 105.049 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 288.80 Mbit/s
95th percentile per-packet one-way delay: 132.385 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 184.61 Mbit/s
95th percentile per-packet one-way delay: 63.826 ms
Loss rate: 0.00%
```

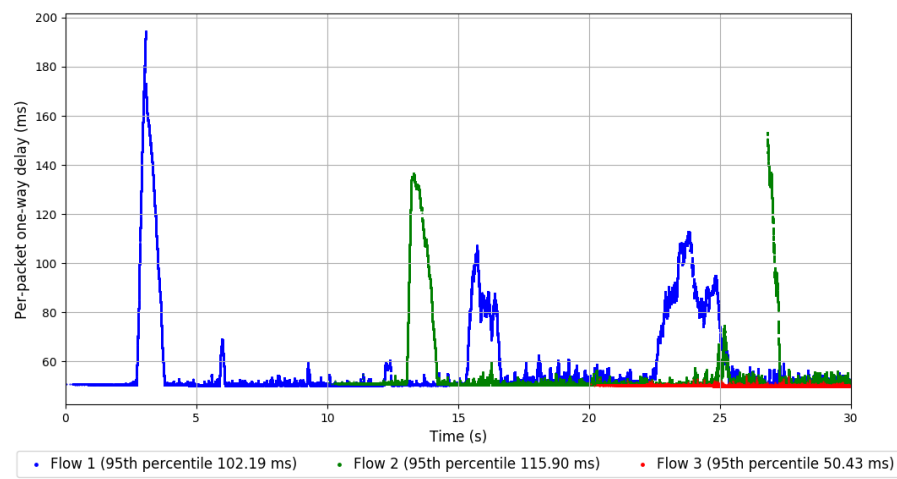# Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-07-12 04:30:02
End at: 2018-07-12 04:30:32
Local clock offset: -0.449 ms
Remote clock offset: -0.012 ms


# Below is generated by plot.py at 2018-07-12 10:58:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 464.37 Mbit/s
95th percentile per-packet one-way delay: 55.786 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 268.54 Mbit/s
95th percentile per-packet one-way delay: 56.377 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 247.29 Mbit/s
95th percentile per-packet one-way delay: 55.439 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 95.14 Mbit/s
95th percentile per-packet one-way delay: 51.539 ms
Loss rate: 0.02%
```

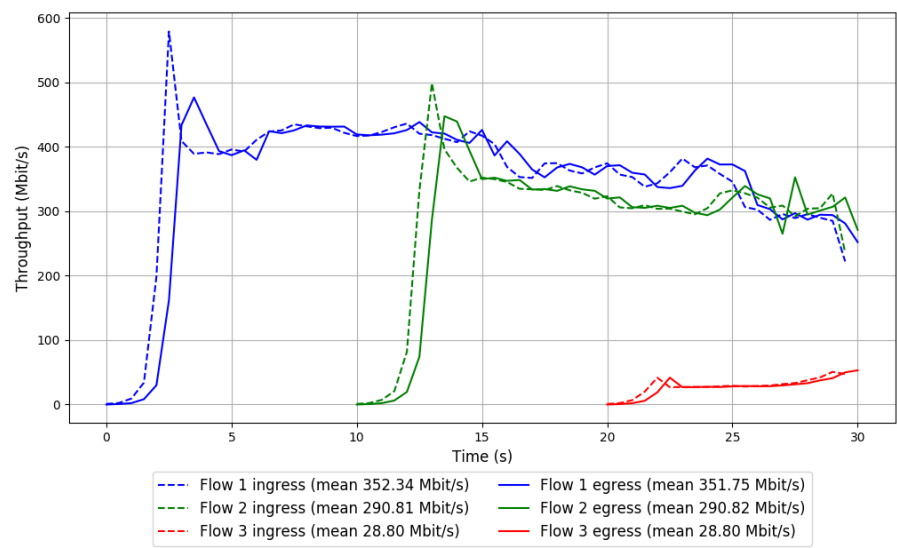Run 2: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 268.59 Mbit/s)   Flow 1 egress (mean 268.54 Mbit/s)
Flow 2 ingress (mean 247.28 Mbit/s)   Flow 2 egress (mean 247.29 Mbit/s)
Flow 3 ingress (mean 95.13 Mbit/s)   Flow 3 egress (mean 95.14 Mbit/s)

Flow 1 (95th percentile 56.38 ms)   Flow 2 (95th percentile 55.44 ms)   Flow 3 (95th percentile 51.54 ms)

```
Run 3: Statistics of PCC-Vivace

Start at: 2018-07-12 04:55:19
End at: 2018-07-12 04:55:49
Local clock offset: -0.121 ms
Remote clock offset: -0.003 ms


# Below is generated by plot.py at 2018-07-12 10:58:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 554.65 Mbit/s
95th percentile per-packet one-way delay: 105.915 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 351.75 Mbit/s
95th percentile per-packet one-way delay: 102.191 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 290.82 Mbit/s
95th percentile per-packet one-way delay: 115.902 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.80 Mbit/s
95th percentile per-packet one-way delay: 50.432 ms
Loss rate: 0.00%
```
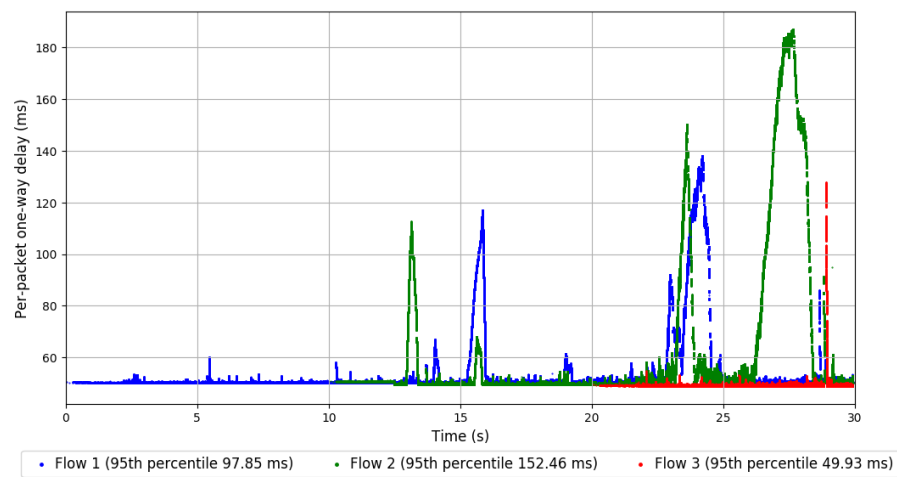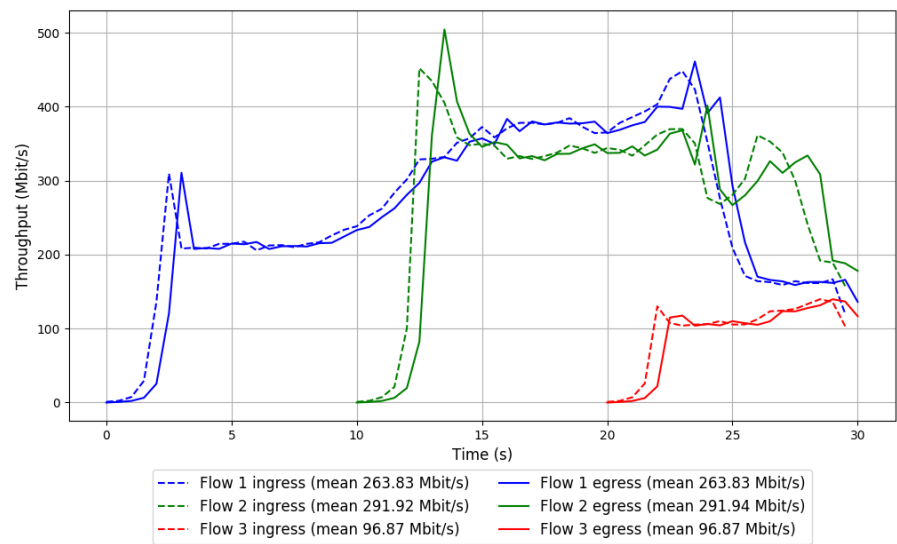
Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2018-07-12 05:20:51
End at: 2018-07-12 05:21:21
Local clock offset: -0.111 ms
Remote clock offset: 0.011 ms


# Below is generated by plot.py at 2018-07-12 10:58:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 489.89 Mbit/s
95th percentile per-packet one-way delay: 116.609 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 263.83 Mbit/s
95th percentile per-packet one-way delay: 97.847 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 291.94 Mbit/s
95th percentile per-packet one-way delay: 152.463 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 49.927 ms
Loss rate: 0.00%
```
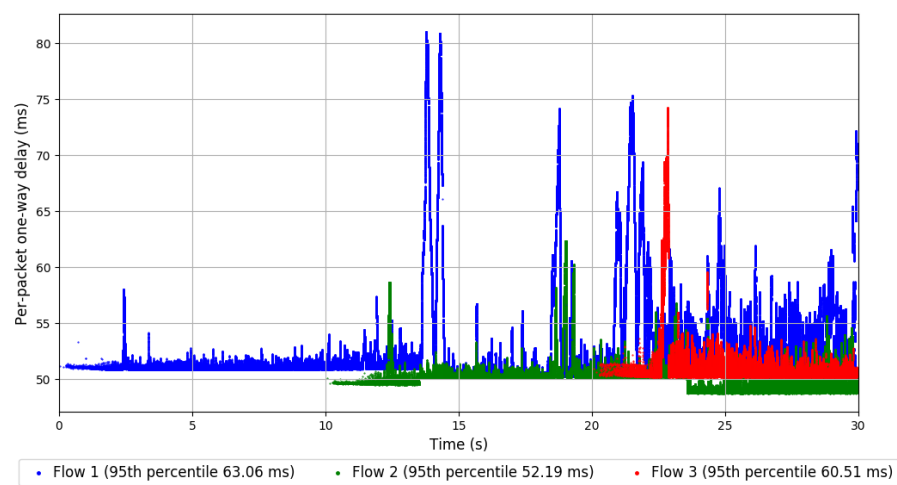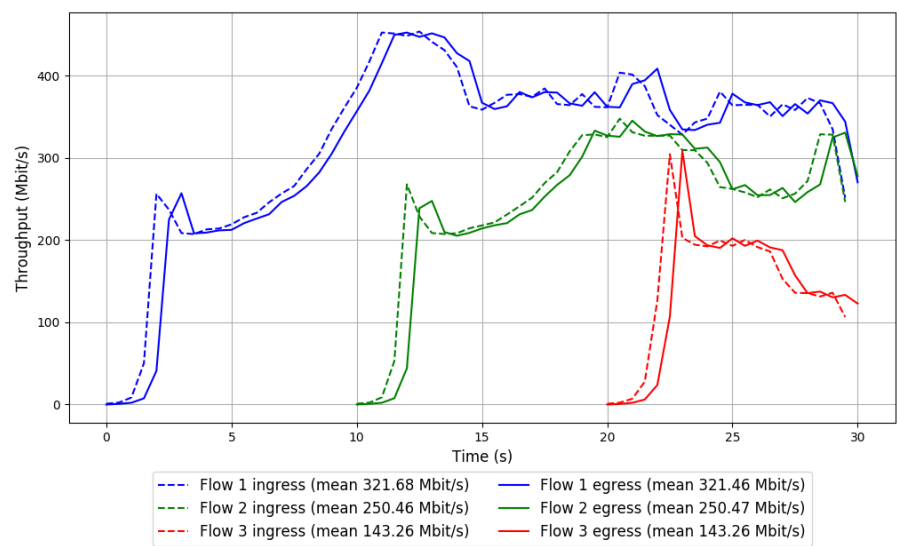
Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2018-07-12 05:46:00
End at: 2018-07-12 05:46:30
Local clock offset: -0.122 ms
Remote clock offset: 0.002 ms


# Below is generated by plot.py at 2018-07-12 11:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 535.29 Mbit/s
95th percentile per-packet one-way delay: 60.341 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 321.46 Mbit/s
95th percentile per-packet one-way delay: 63.058 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 250.47 Mbit/s
95th percentile per-packet one-way delay: 52.191 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 143.26 Mbit/s
95th percentile per-packet one-way delay: 60.510 ms
Loss rate: 0.00%
```
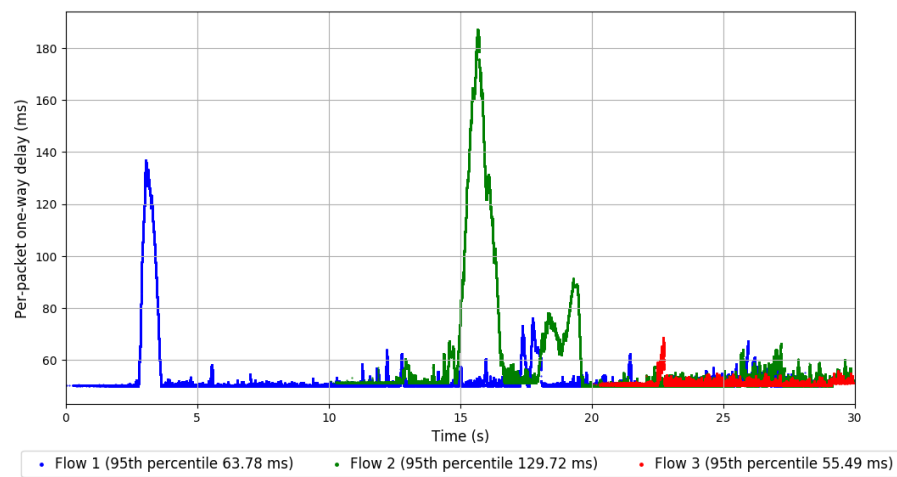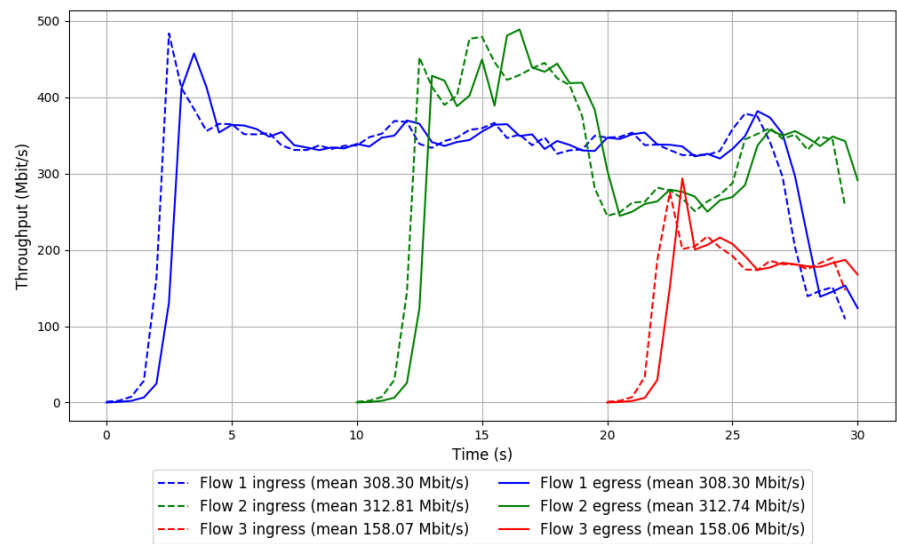
Run 5: Report of PCC-Vivace — Data Link

- Flow 1 ingress (mean 321.68 Mbit/s)
- Flow 1 egress (mean 321.46 Mbit/s)
- Flow 2 ingress (mean 250.46 Mbit/s)
- Flow 2 egress (mean 250.47 Mbit/s)
- Flow 3 ingress (mean 143.26 Mbit/s)
- Flow 3 egress (mean 143.26 Mbit/s)

- Flow 1 (95th percentile 63.06 ms)
- Flow 2 (95th percentile 52.19 ms)
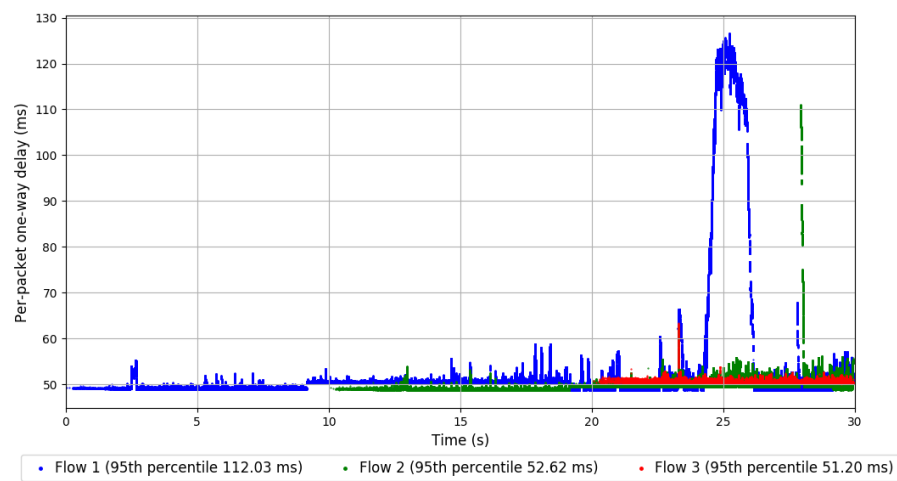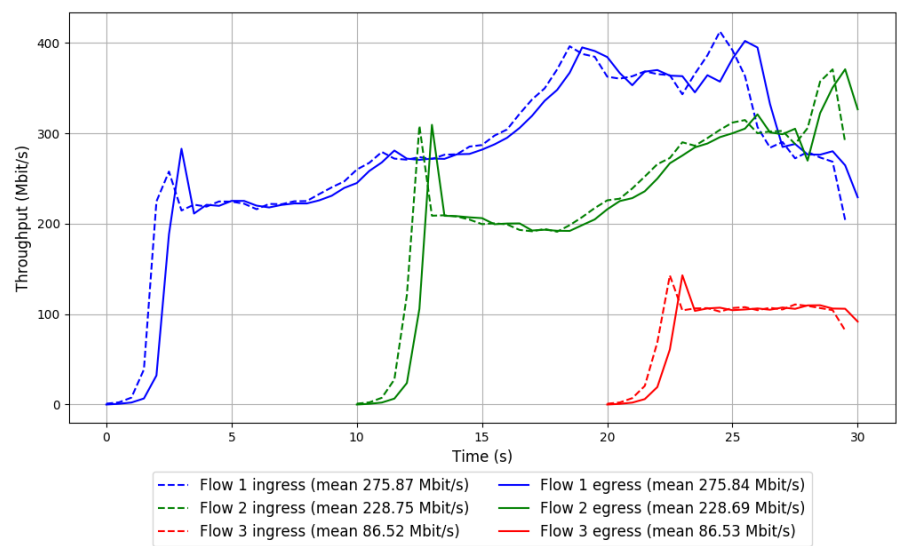- Flow 3 (95th percentile 60.51 ms)

```
Run 6: Statistics of PCC-Vivace

Start at: 2018-07-12 06:10:45
End at: 2018-07-12 06:11:15
Local clock offset: -0.497 ms
Remote clock offset: 0.013 ms


# Below is generated by plot.py at 2018-07-12 11:01:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 568.39 Mbit/s
95th percentile per-packet one-way delay: 89.870 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 308.30 Mbit/s
95th percentile per-packet one-way delay: 63.781 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 312.74 Mbit/s
95th percentile per-packet one-way delay: 129.723 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 158.06 Mbit/s
95th percentile per-packet one-way delay: 55.494 ms
Loss rate: 0.00%
```

Run 6: Report of PCC-Vivace — Data Link

```
Run 7: Statistics of PCC-Vivace

Start at: 2018-07-12 06:35:55
End at: 2018-07-12 06:36:25
Local clock offset: -0.092 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2018-07-12 11:01:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 456.48 Mbit/s
95th percentile per-packet one-way delay: 67.821 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 275.84 Mbit/s
95th percentile per-packet one-way delay: 112.034 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 228.69 Mbit/s
95th percentile per-packet one-way delay: 52.619 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 86.53 Mbit/s
95th percentile per-packet one-way delay: 51.196 ms
Loss rate: 0.00%
```
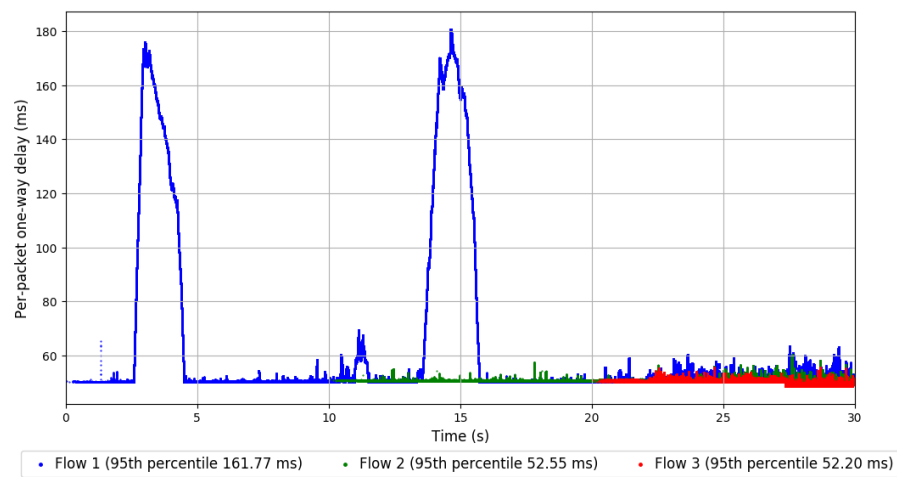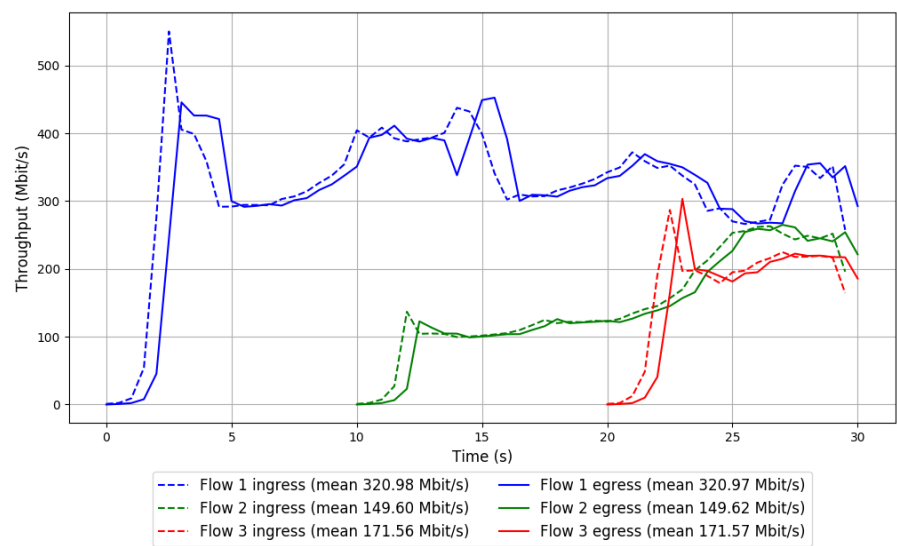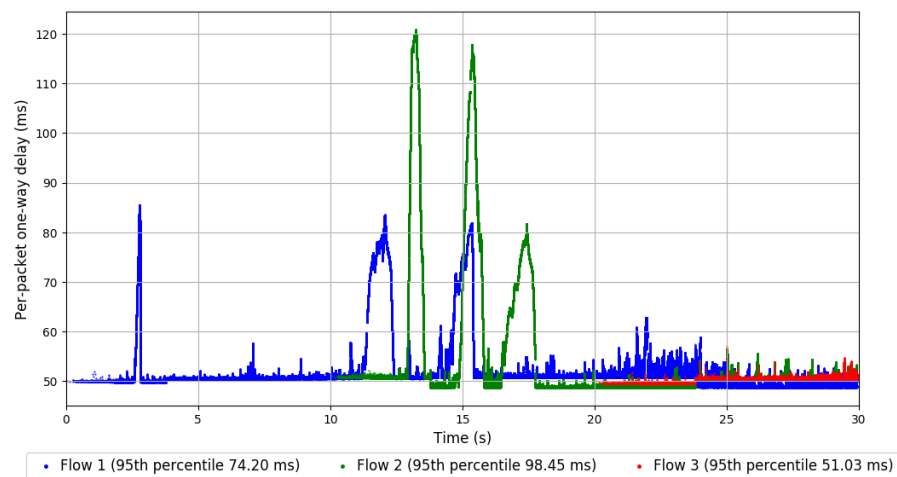
Run 7: Report of PCC-Vivace — Data Link

- - - Flow 1 ingress (mean 275.87 Mbit/s)   —— Flow 1 egress (mean 275.84 Mbit/s)
- - - Flow 2 ingress (mean 228.75 Mbit/s)   —— Flow 2 egress (mean 228.69 Mbit/s)
- - - Flow 3 ingress (mean 86.52 Mbit/s)   —— Flow 3 egress (mean 86.53 Mbit/s)

- Flow 1 (95th percentile 112.03 ms)   • Flow 2 (95th percentile 52.62 ms)   • Flow 3 (95th percentile 51.20 ms)
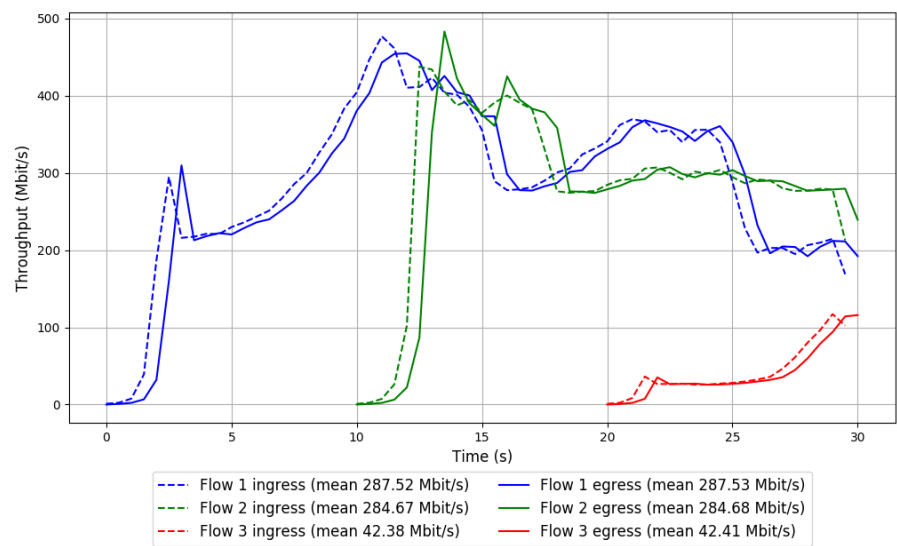
317

```
Run 8: Statistics of PCC-Vivace

Start at: 2018-07-12 07:00:37
End at: 2018-07-12 07:01:07
Local clock offset: -0.024 ms
Remote clock offset: 0.007 ms


# Below is generated by plot.py at 2018-07-12 11:01:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 477.13 Mbit/s
95th percentile per-packet one-way delay: 153.810 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 320.97 Mbit/s
95th percentile per-packet one-way delay: 161.767 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 149.62 Mbit/s
95th percentile per-packet one-way delay: 52.552 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 171.57 Mbit/s
95th percentile per-packet one-way delay: 52.205 ms
Loss rate: 0.00%
```

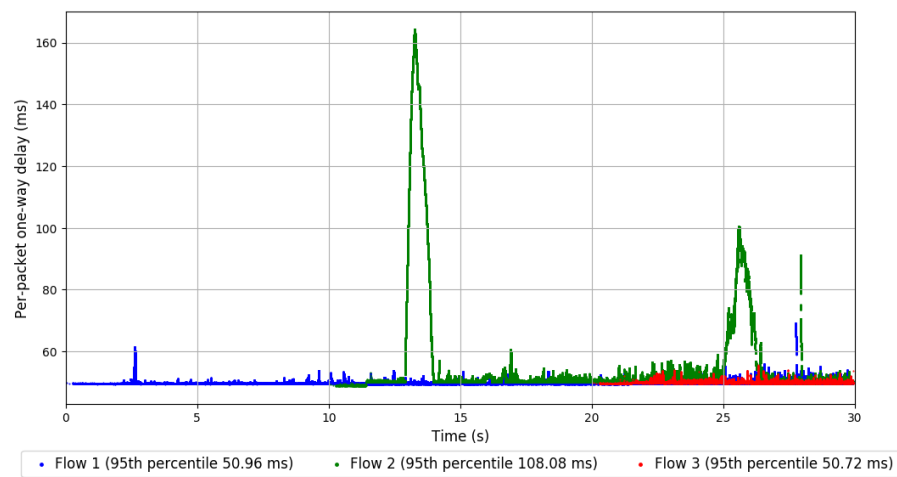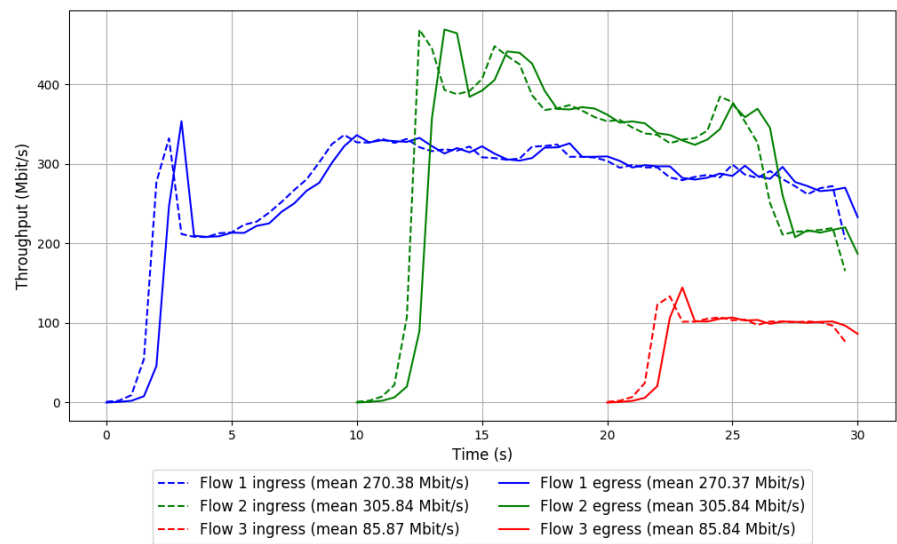# Run 8: Report of PCC-Vivace — Data Link

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```
Run 9: Statistics of PCC-Vivace

Start at: 2018-07-12 07:25:30
End at: 2018-07-12 07:26:00
Local clock offset: -0.028 ms
Remote clock offset: -0.036 ms


# Below is generated by plot.py at 2018-07-12 11:01:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 490.80 Mbit/s
95th percentile per-packet one-way delay: 77.547 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 287.53 Mbit/s
95th percentile per-packet one-way delay: 74.198 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 284.68 Mbit/s
95th percentile per-packet one-way delay: 98.454 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 42.41 Mbit/s
95th percentile per-packet one-way delay: 51.029 ms
Loss rate: 0.00%
```

Run 9: Report of PCC-Vivace — Data Link

```
Run 10: Statistics of PCC-Vivace

Start at: 2018-07-12 07:50:32
End at: 2018-07-12 07:51:02
Local clock offset: 0.012 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2018-07-12 11:02:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 501.99 Mbit/s
95th percentile per-packet one-way delay: 69.644 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 270.37 Mbit/s
95th percentile per-packet one-way delay: 50.959 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 305.84 Mbit/s
95th percentile per-packet one-way delay: 108.080 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 85.84 Mbit/s
95th percentile per-packet one-way delay: 50.718 ms
Loss rate: 0.00%
```
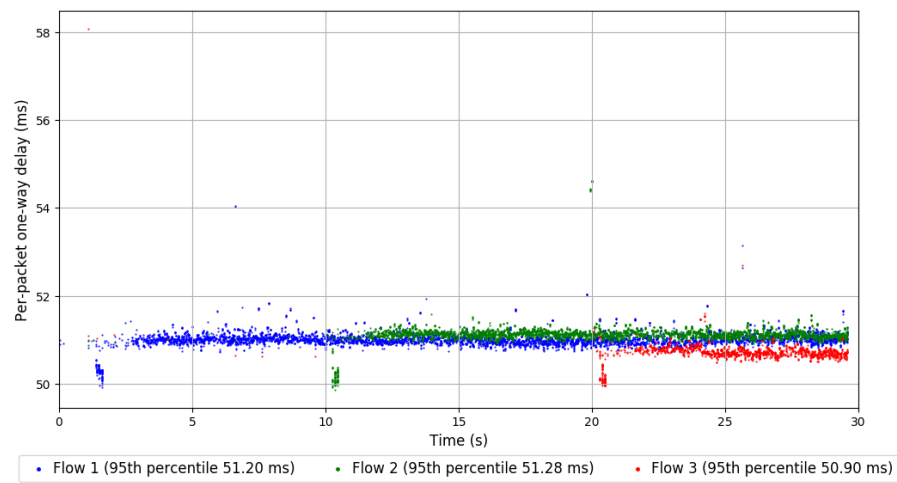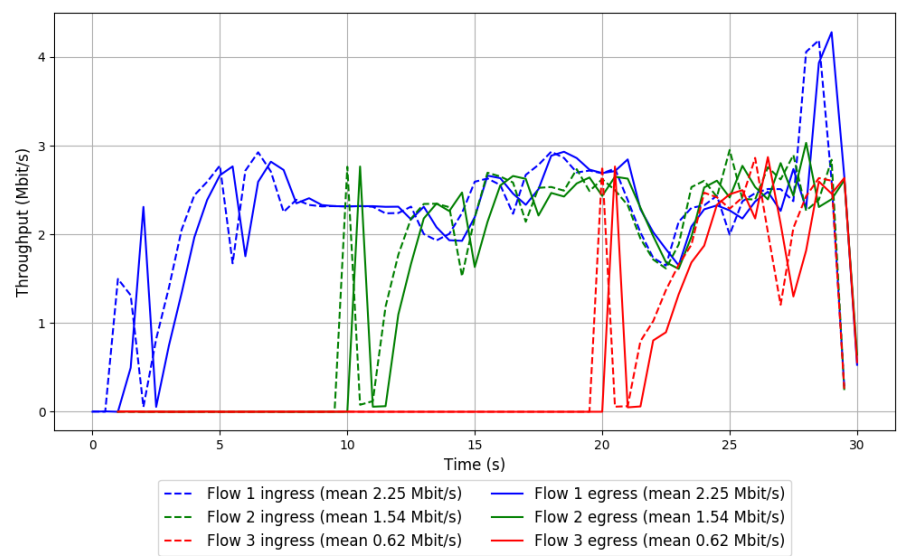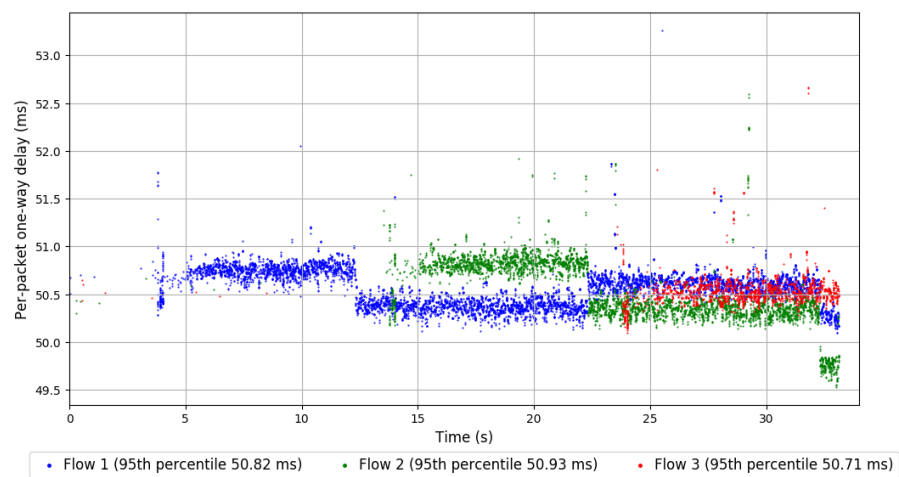
Run 10: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-07-12 03:58:29
End at: 2018-07-12 03:58:59
Local clock offset: -0.413 ms
Remote clock offset: 0.015 ms


# Below is generated by plot.py at 2018-07-12 11:02:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 51.238 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 51.195 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 51.284 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 50.904 ms
Loss rate: 0.00%
```

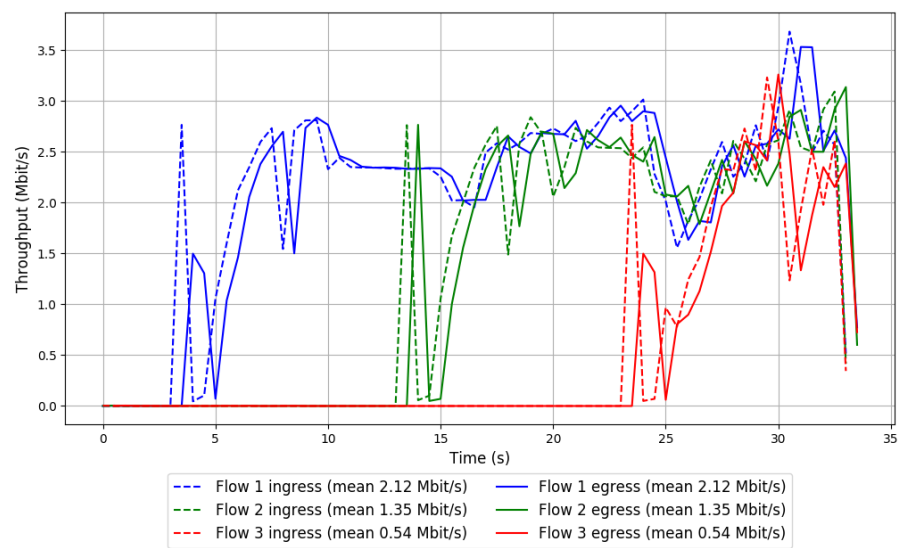Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-07-12 04:23:45
End at: 2018-07-12 04:24:15
Local clock offset: -0.065 ms
Remote clock offset: -0.052 ms


# Below is generated by plot.py at 2018-07-12 11:02:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 50.875 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 50.818 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 50.927 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 50.710 ms
Loss rate: 0.05%
```
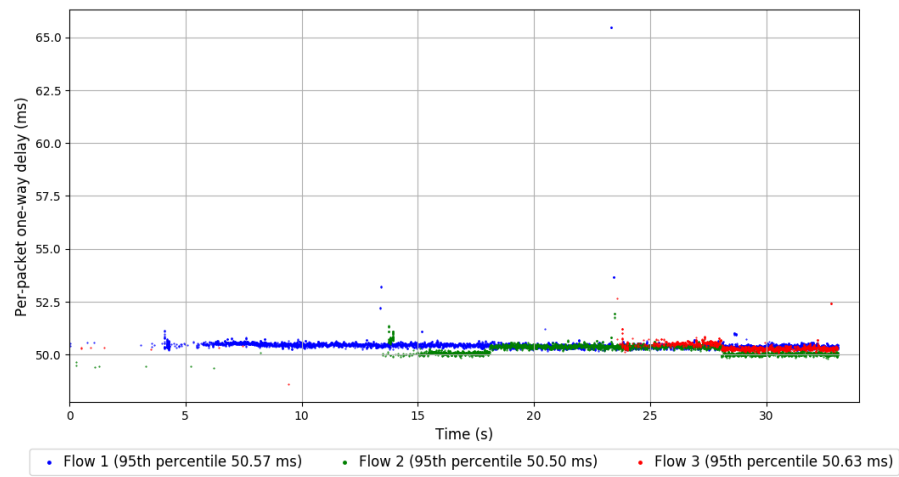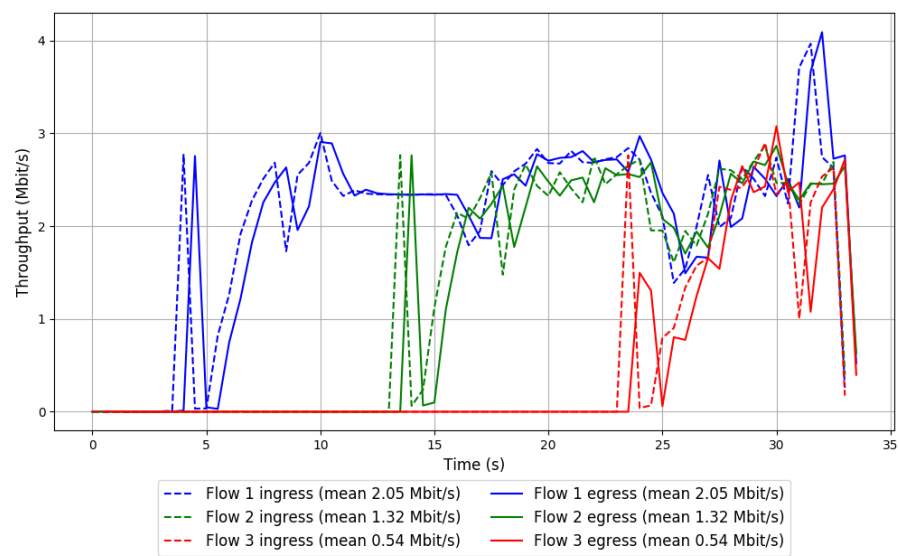
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-07-12 04:48:59
End at: 2018-07-12 04:49:29
Local clock offset: 0.269 ms
Remote clock offset: 0.002 ms


# Below is generated by plot.py at 2018-07-12 11:02:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 50.565 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 50.566 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 50.504 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 50.626 ms
Loss rate: 0.00%
```
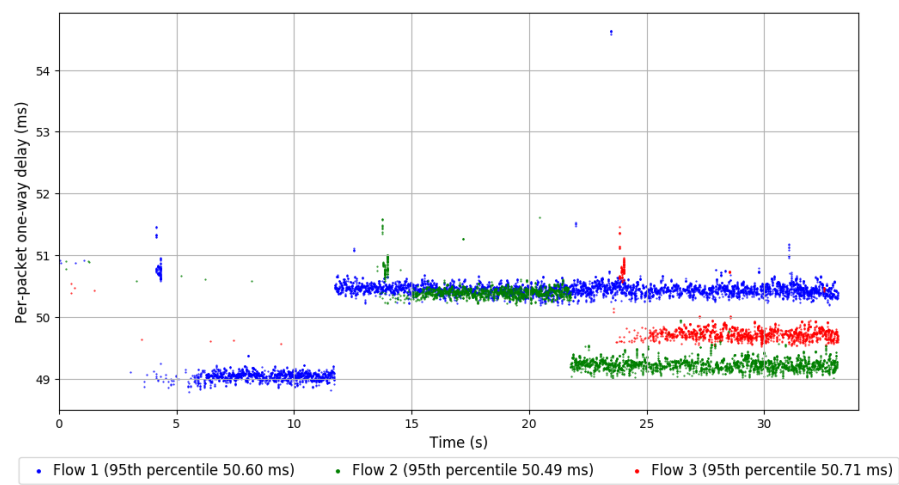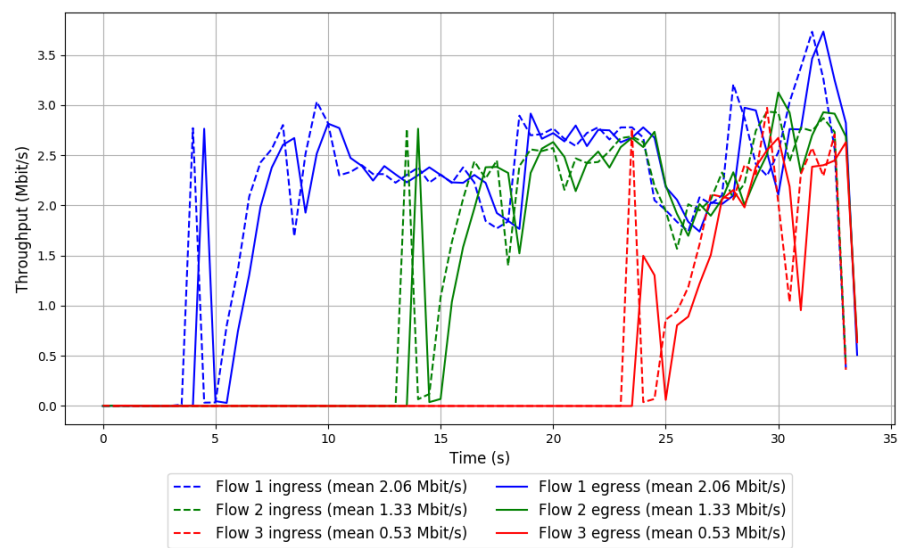
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-07-12 05:14:25
End at: 2018-07-12 05:14:55
Local clock offset: -0.073 ms
Remote clock offset: 0.014 ms


# Below is generated by plot.py at 2018-07-12 11:02:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 50.583 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 50.597 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 50.489 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 50.706 ms
Loss rate: 0.00%
```
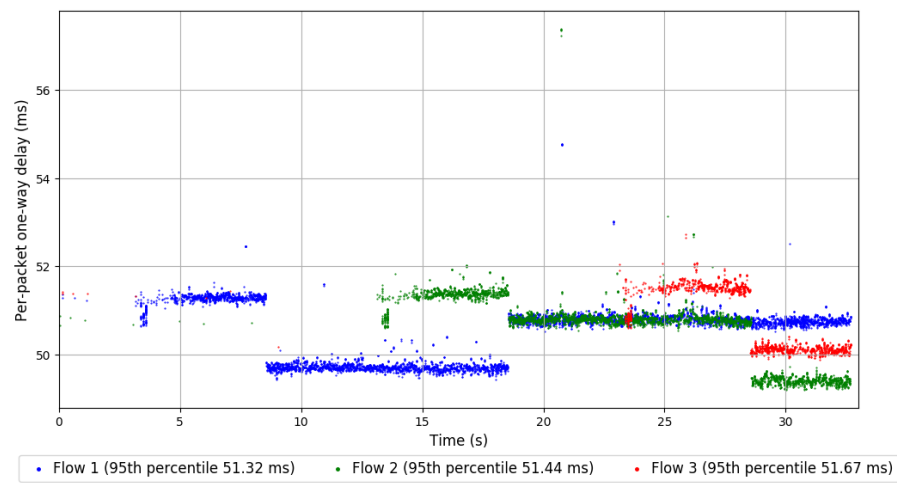
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-07-12 05:39:38
End at: 2018-07-12 05:40:08
Local clock offset: -0.441 ms
Remote clock offset: 0.013 ms


# Below is generated by plot.py at 2018-07-12 11:02:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 51.478 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 51.319 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 51.438 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 51.673 ms
Loss rate: 0.00%
```
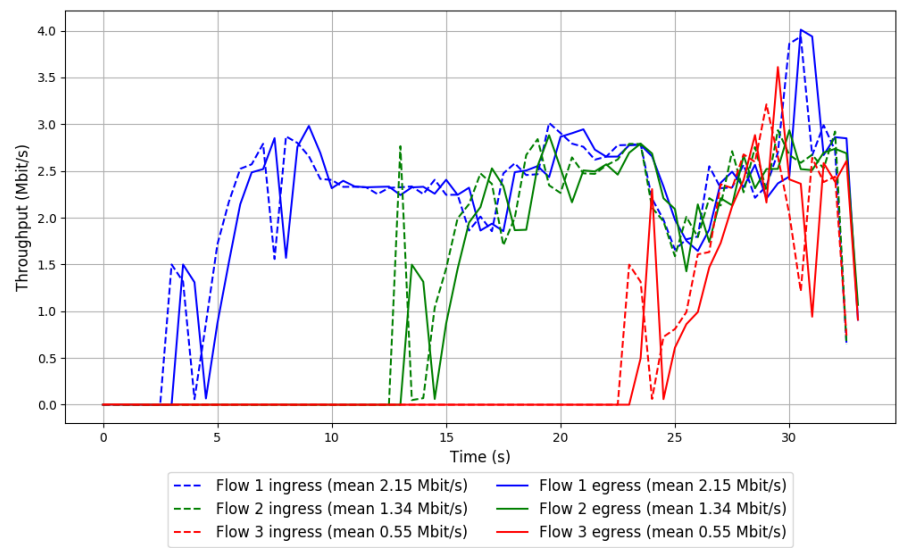
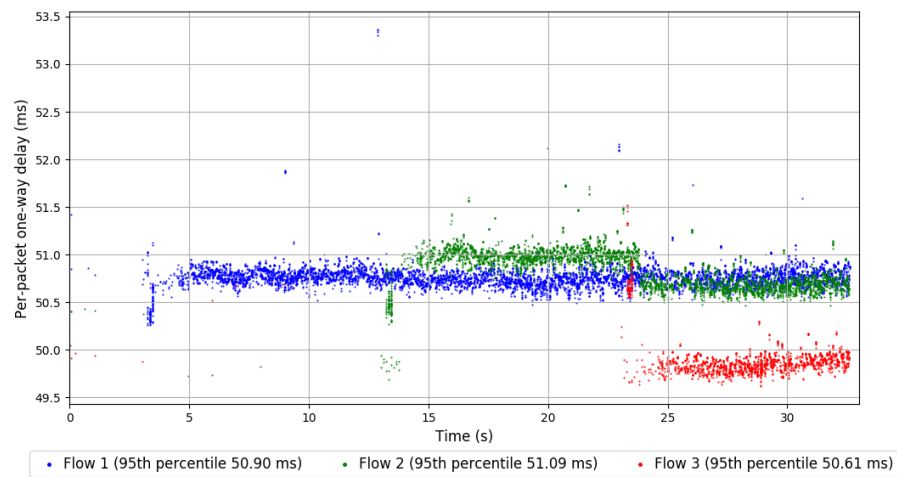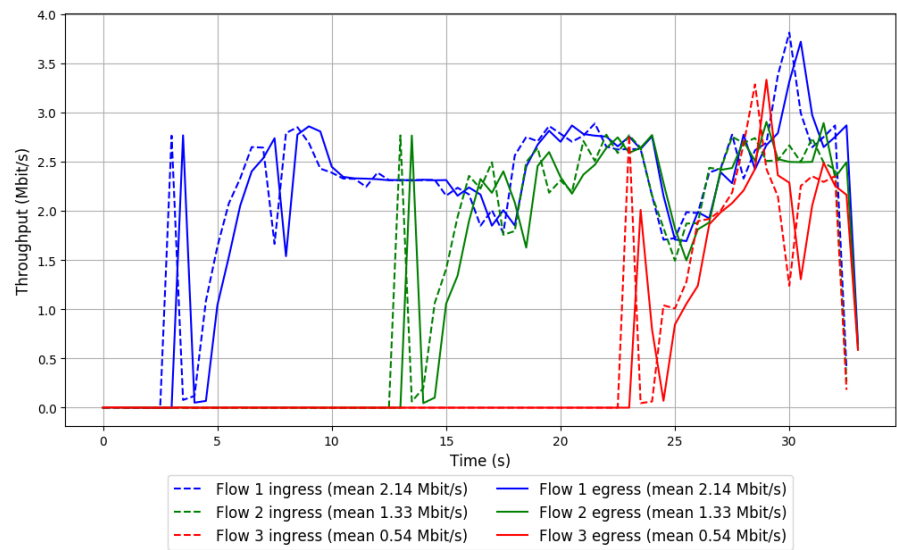Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2018-07-12 06:04:23
End at: 2018-07-12 06:04:53
Local clock offset: -0.086 ms
Remote clock offset: -0.019 ms


# Below is generated by plot.py at 2018-07-12 11:02:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.01 Mbit/s
95th percentile per-packet one-way delay: 51.031 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 50.896 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 51.091 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 50.613 ms
Loss rate: 0.00%
```

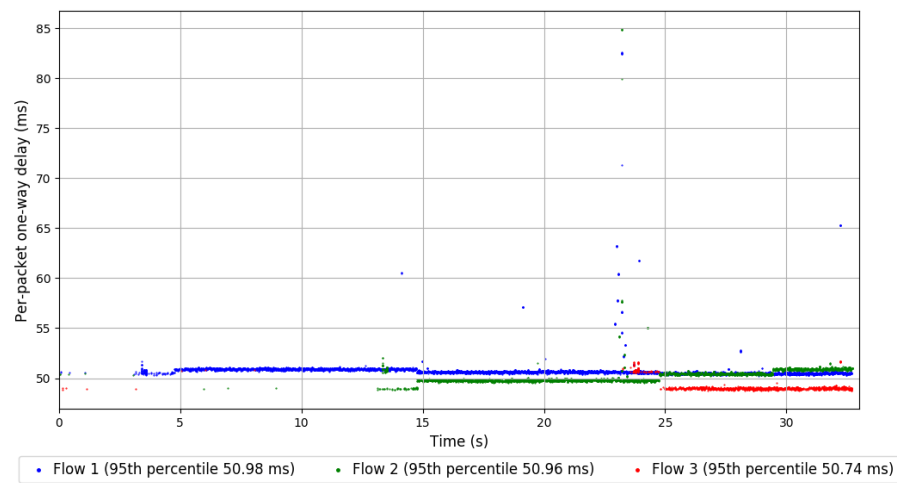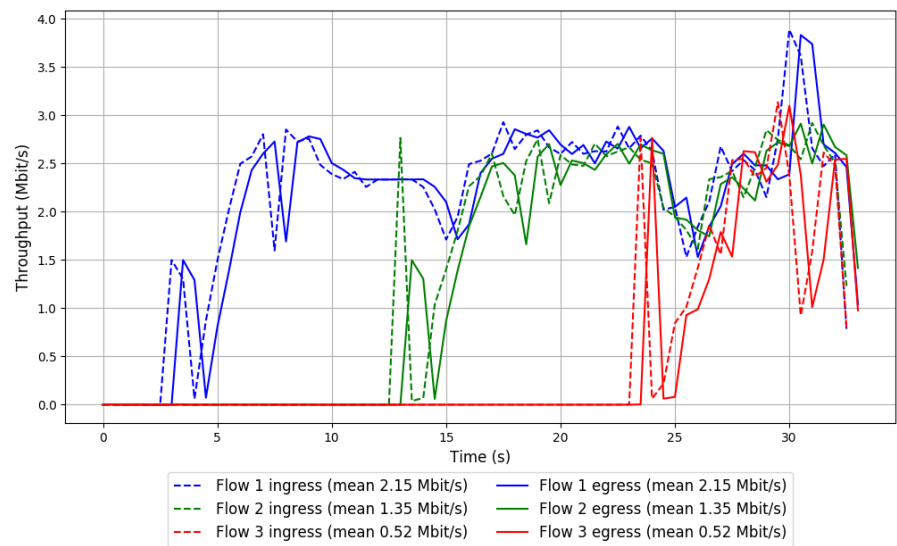Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2018-07-12 06:29:32
End at: 2018-07-12 06:30:02
Local clock offset: -0.124 ms
Remote clock offset: -0.012 ms


# Below is generated by plot.py at 2018-07-12 11:02:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 50.973 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 50.983 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 50.964 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 50.740 ms
Loss rate: 0.00%
```

Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2018-07-12 06:54:20
End at: 2018-07-12 06:54:50
Local clock offset: -0.049 ms
Remote clock offset: 0.011 ms


# Below is generated by plot.py at 2018-07-12 11:02:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 51.000 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 51.003 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 51.012 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 50.577 ms
Loss rate: 0.00%
```
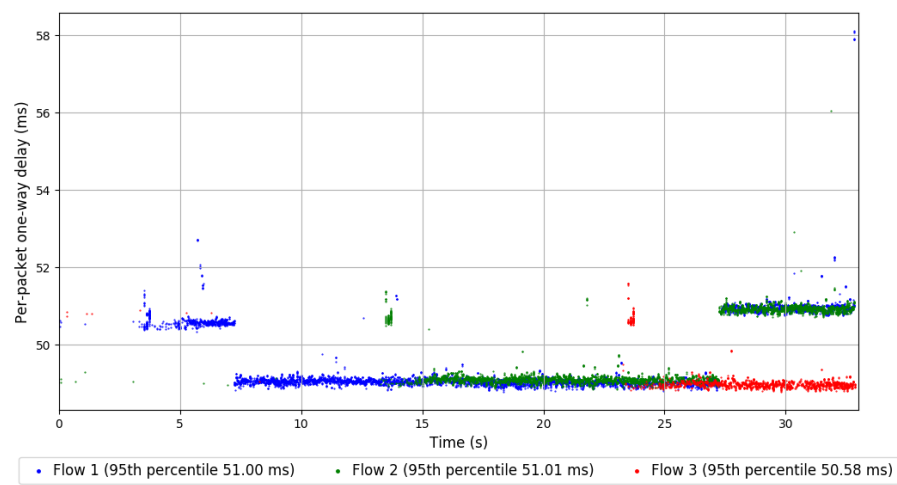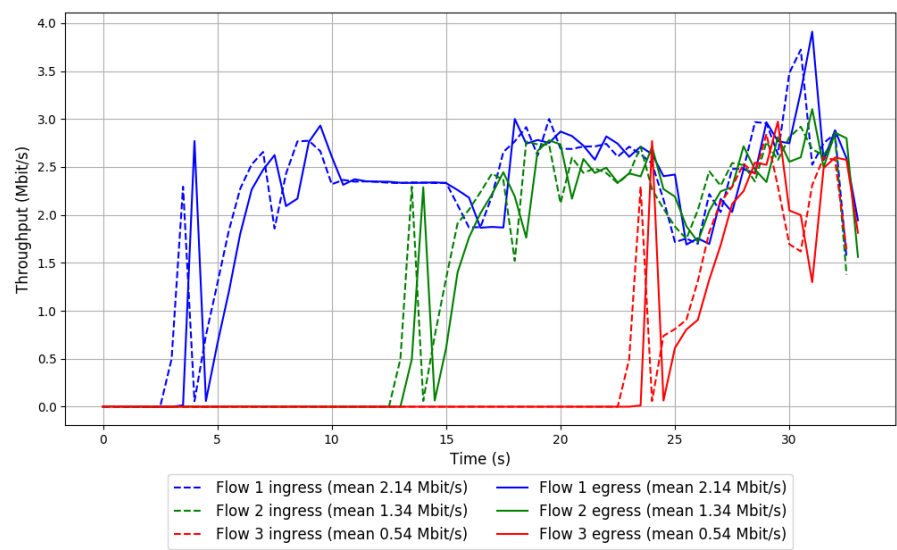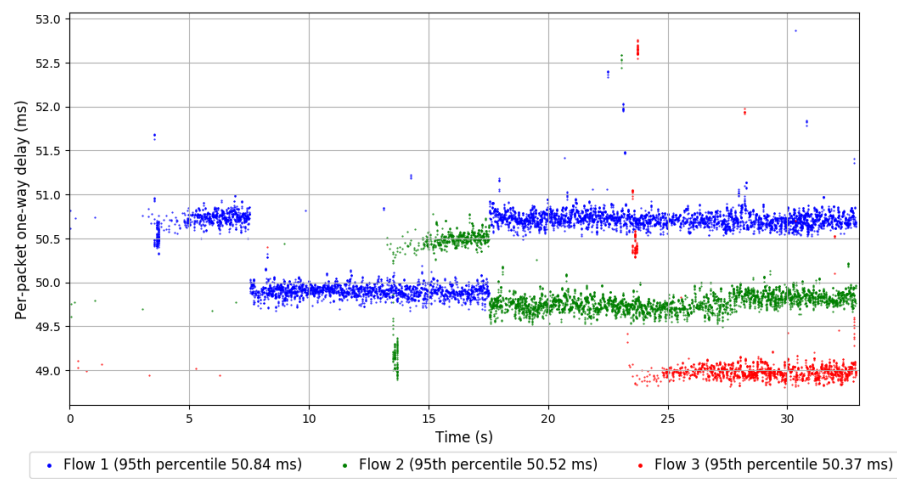
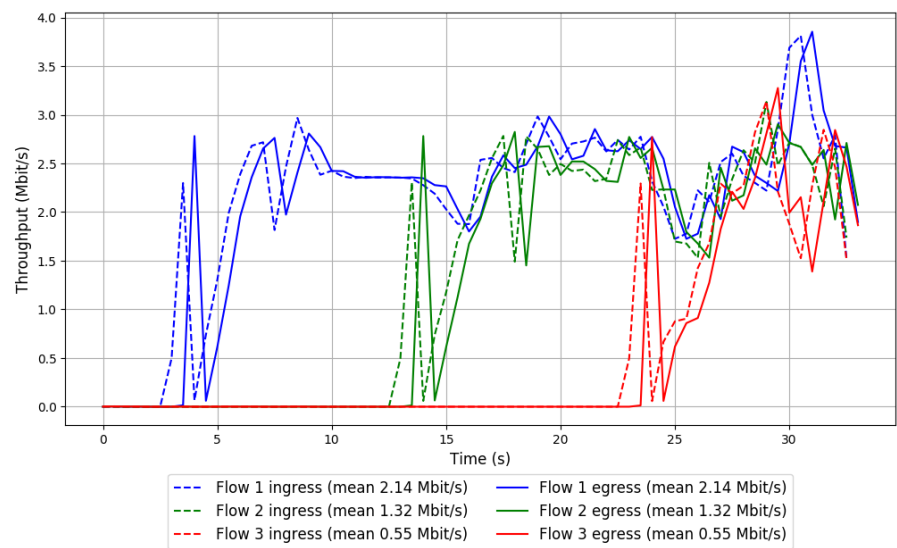Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2018-07-12 07:19:09
End at: 2018-07-12 07:19:39
Local clock offset: -0.056 ms
Remote clock offset: -0.013 ms


# Below is generated by plot.py at 2018-07-12 11:02:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.01 Mbit/s
95th percentile per-packet one-way delay: 50.810 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 50.837 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 50.519 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 50.366 ms
Loss rate: 0.00%
```

Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2018-07-12 07:44:09
End at: 2018-07-12 07:44:39
Local clock offset: -0.009 ms
Remote clock offset: -0.018 ms


# Below is generated by plot.py at 2018-07-12 11:02:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 50.980 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 50.964 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 51.013 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 50.818 ms
Loss rate: 0.00%
```

Run 10: Report of WebRTC media — Data Link