Pantheon Report

Generated at 2018-12-20 11:12:34 (UTC).

Data path: Stanford on **eno1** (*remote*) →AWS California 1 on **ens5** (*local*).

Repeated the test of 19 congestion control schemes 5 times.

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

NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.
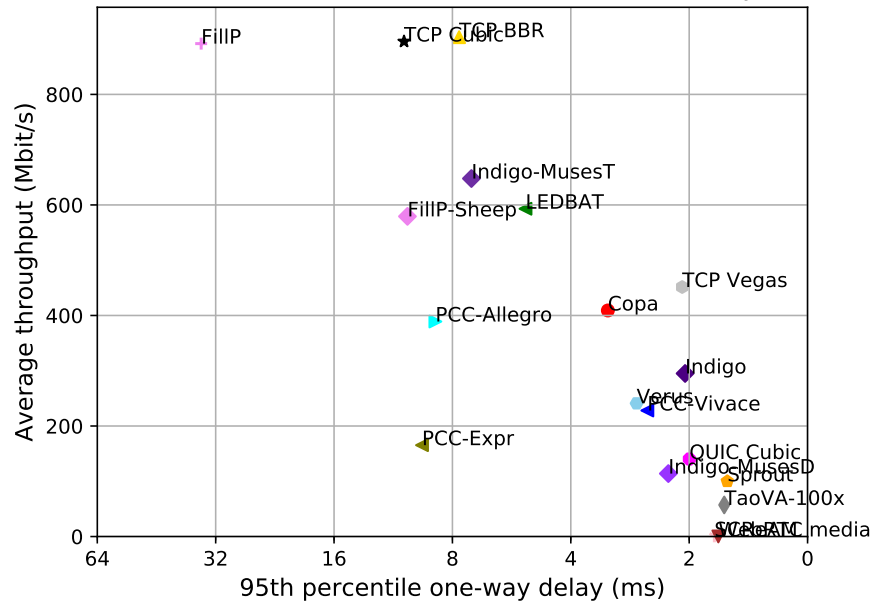
```
System info:
Linux 4.15.0-1029-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ c654af0b7d59d4ef4b914cfac404e1fc2e96dc68
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/muses-refactored @ 31f8f0ba8ef8b1da76c2bc0cd0a7850c33ff64fb
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
```
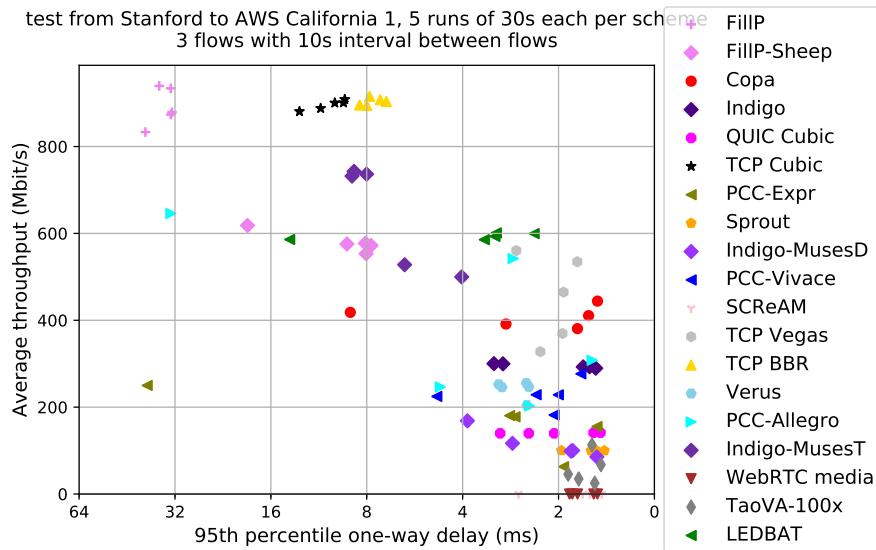
```
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from Stanford to AWS California 1, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from Stanford to AWS California 1, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

3

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	525.80	403.24	328.27	7.46	7.52	8.38	0.02	0.03	0.08
Copa	5	239.17	193.14	124.18	3.69	2.04	1.75	0.00	0.01	0.01
TCP Cubic	5	522.71	399.74	320.72	11.06	8.31	8.29	0.03	0.03	0.08
FillP	5	566.50	349.68	280.24	32.02	28.35	34.53	0.10	0.14	0.31
FillP-Sheep	5	428.68	205.30	42.99	10.99	6.23	4.39	0.00	0.00	0.00
Indigo	5	158.90	145.77	119.29	2.03	2.09	2.06	0.01	0.02	0.02
Indigo-MusesD	5	57.06	47.83	75.63	2.17	2.33	2.24	0.01	0.01	0.04
Indigo-MusesT	5	331.24	371.90	270.43	5.98	7.57	9.45	0.02	0.04	0.06
LEDBAT	5	353.67	257.27	205.17	5.38	3.33	3.33	0.00	0.01	0.02
PCC-Allegro	5	302.72	113.29	33.58	9.89	2.58	2.46	0.01	0.02	0.03
PCC-Expr	5	135.09	35.64	19.77	12.01	1.99	1.46	0.16	0.00	0.01
QUIC Cubic	5	76.54	68.45	54.81	2.03	1.96	2.05	0.00	0.01	0.02
SCReAM	5	0.22	0.22	0.22	1.61	1.62	1.31	0.00	0.00	0.07
Sprout	5	50.23	50.16	49.96	1.35	1.36	1.37	0.02	0.01	0.00
TaoVA-100x	5	21.92	33.94	38.18	1.46	1.56	1.33	0.01	0.01	0.02
TCP Vegas	5	218.69	224.50	250.62	1.97	2.01	2.40	0.01	0.01	0.02
Verus	5	153.38	92.03	79.44	2.89	2.24	1.67	0.01	0.01	0.07
PCC-Vivace	5	149.24	82.51	72.56	3.14	1.63	1.97	0.01	0.02	0.02
WebRTC media	5	0.05	0.05	0.05	1.48	1.59	1.40	0.00	0.03	0.01

```
Run 1: Statistics of TCP BBR

Start at: 2018-12-20 07:57:22
End at: 2018-12-20 07:57:52
Local clock offset: 0.097 ms
Remote clock offset: 1.864 ms


# Below is generated by plot.py at 2018-12-20 10:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 915.79 Mbit/s
95th percentile per-packet one-way delay: 7.838 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 537.11 Mbit/s
95th percentile per-packet one-way delay: 7.760 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 404.38 Mbit/s
95th percentile per-packet one-way delay: 7.651 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 329.12 Mbit/s
95th percentile per-packet one-way delay: 8.472 ms
Loss rate: 0.08%
```
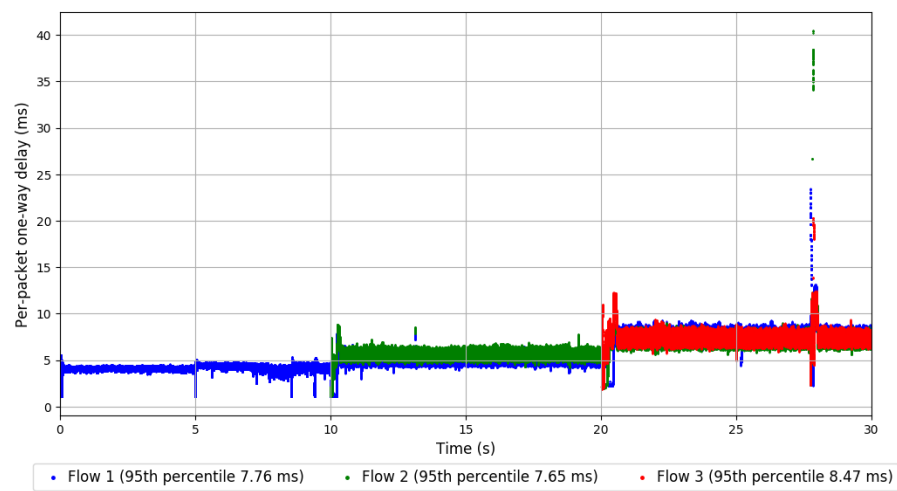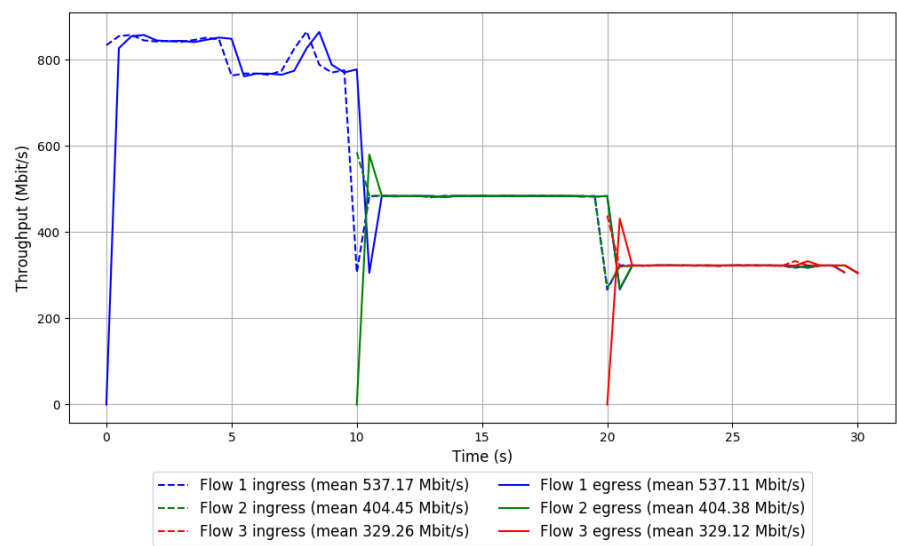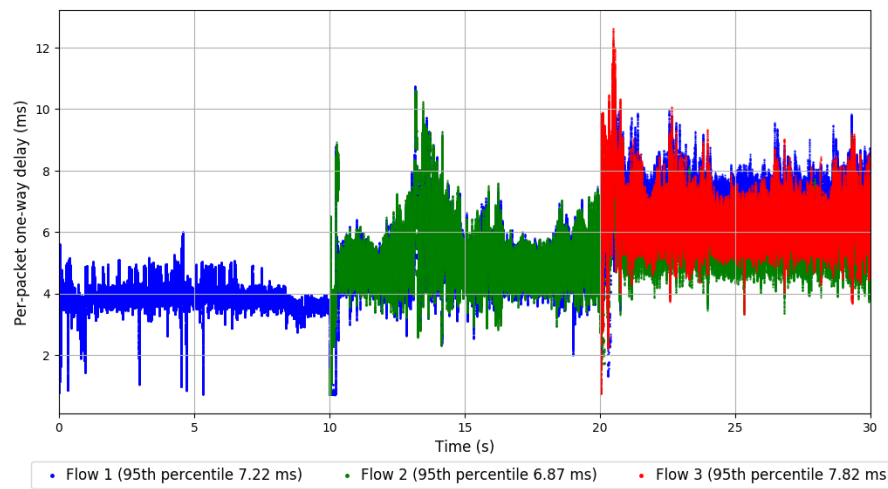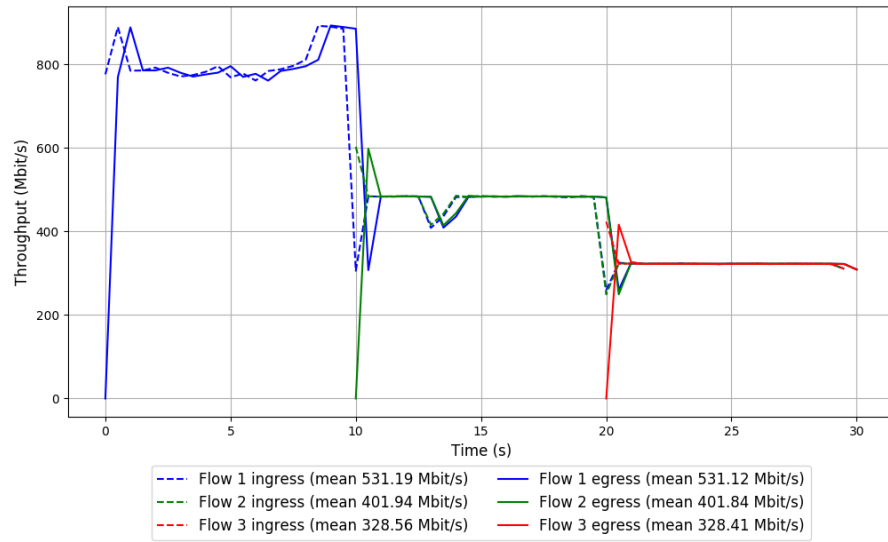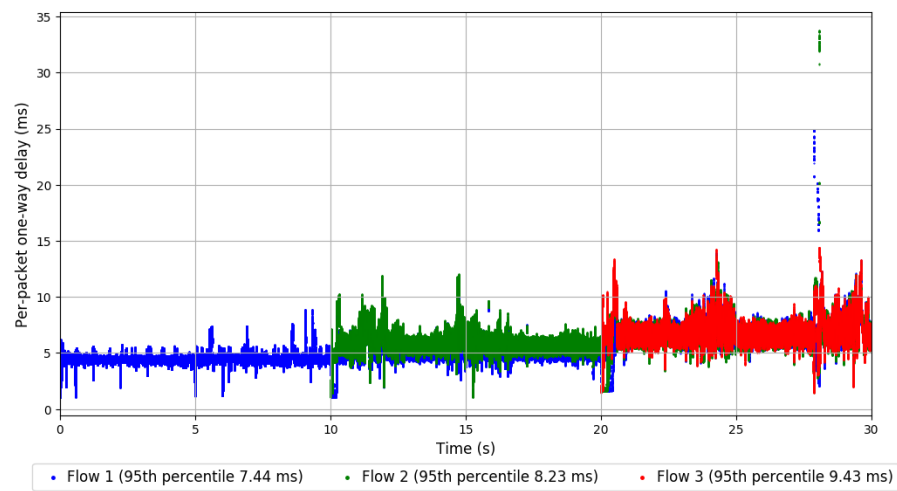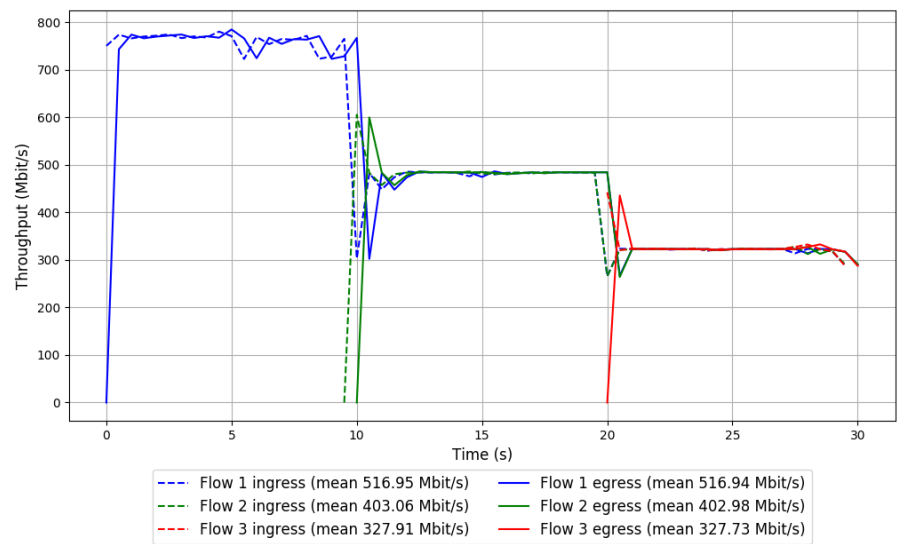
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2018-12-20 08:25:02
End at: 2018-12-20 08:25:32
Local clock offset: 3.199 ms
Remote clock offset: 1.833 ms


# Below is generated by plot.py at 2018-12-20 10:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 907.87 Mbit/s
95th percentile per-packet one-way delay: 7.257 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 531.12 Mbit/s
95th percentile per-packet one-way delay: 7.219 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 401.84 Mbit/s
95th percentile per-packet one-way delay: 6.870 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 328.41 Mbit/s
95th percentile per-packet one-way delay: 7.816 ms
Loss rate: 0.09%
```
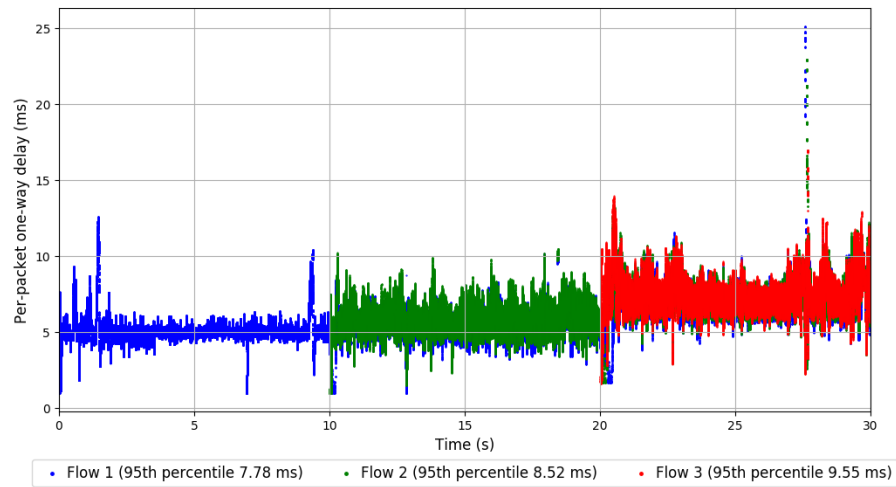
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2018-12-20 08:52:19
End at: 2018-12-20 08:52:49
Local clock offset: 0.303 ms
Remote clock offset: -0.582 ms


# Below is generated by plot.py at 2018-12-20 10:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 894.52 Mbit/s
95th percentile per-packet one-way delay: 7.998 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 516.94 Mbit/s
95th percentile per-packet one-way delay: 7.443 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 402.98 Mbit/s
95th percentile per-packet one-way delay: 8.227 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 327.73 Mbit/s
95th percentile per-packet one-way delay: 9.429 ms
Loss rate: 0.07%
```
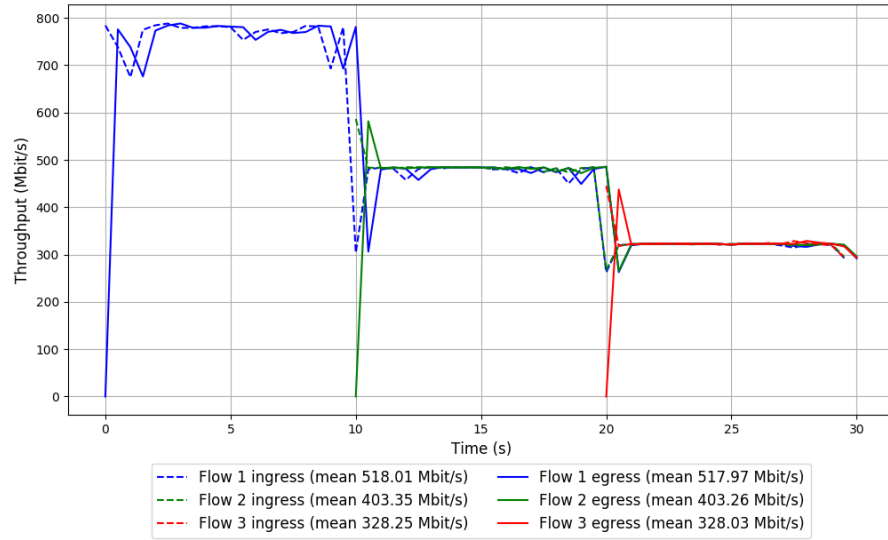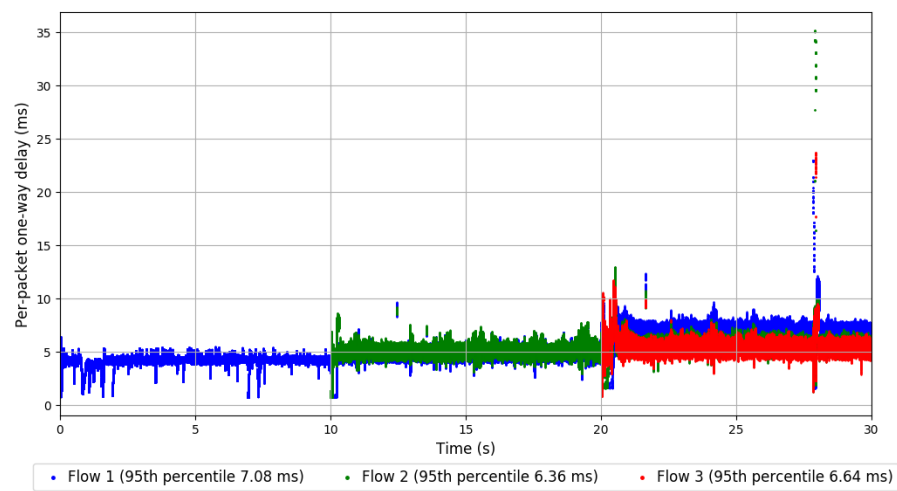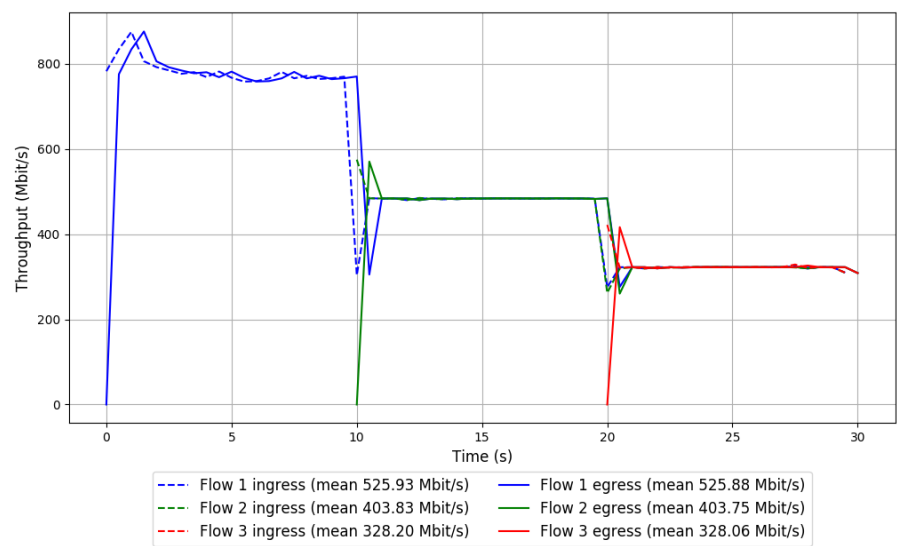
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 516.95 Mbit/s) --- Flow 1 egress (mean 516.94 Mbit/s)
Flow 2 ingress (mean 403.06 Mbit/s) --- Flow 2 egress (mean 402.98 Mbit/s)
Flow 3 ingress (mean 327.91 Mbit/s) --- Flow 3 egress (mean 327.73 Mbit/s)

Flow 1 (95th percentile 7.44 ms) • Flow 2 (95th percentile 8.23 ms) • Flow 3 (95th percentile 9.43 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2018-12-20 09:20:04
End at: 2018-12-20 09:20:34
Local clock offset: -0.298 ms
Remote clock offset: -0.605 ms

# Below is generated by plot.py at 2018-12-20 10:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 895.68 Mbit/s
95th percentile per-packet one-way delay: 8.426 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 517.97 Mbit/s
95th percentile per-packet one-way delay: 7.776 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 403.26 Mbit/s
95th percentile per-packet one-way delay: 8.516 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 328.03 Mbit/s
95th percentile per-packet one-way delay: 9.550 ms
Loss rate: 0.09%
```
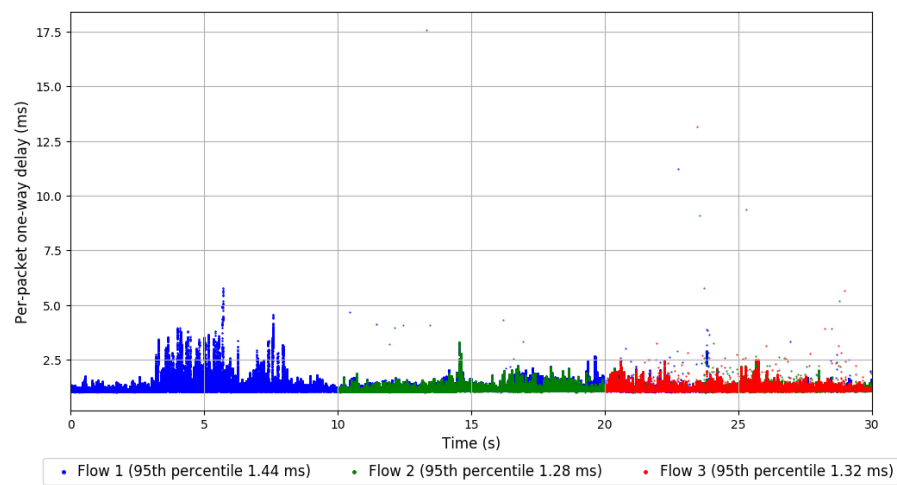
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 518.01 Mbit/s) --- Flow 1 egress (mean 517.97 Mbit/s)
Flow 2 ingress (mean 403.35 Mbit/s) --- Flow 2 egress (mean 403.26 Mbit/s)
Flow 3 ingress (mean 328.25 Mbit/s) --- Flow 3 egress (mean 328.03 Mbit/s)

Flow 1 (95th percentile 7.78 ms)   Flow 2 (95th percentile 8.52 ms)   Flow 3 (95th percentile 9.55 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2018-12-20 09:47:52
End at: 2018-12-20 09:48:22
Local clock offset: 2.483 ms
Remote clock offset: -0.127 ms


# Below is generated by plot.py at 2018-12-20 10:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 903.82 Mbit/s
95th percentile per-packet one-way delay: 6.944 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 525.88 Mbit/s
95th percentile per-packet one-way delay: 7.077 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 403.75 Mbit/s
95th percentile per-packet one-way delay: 6.360 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 328.06 Mbit/s
95th percentile per-packet one-way delay: 6.643 ms
Loss rate: 0.07%
```
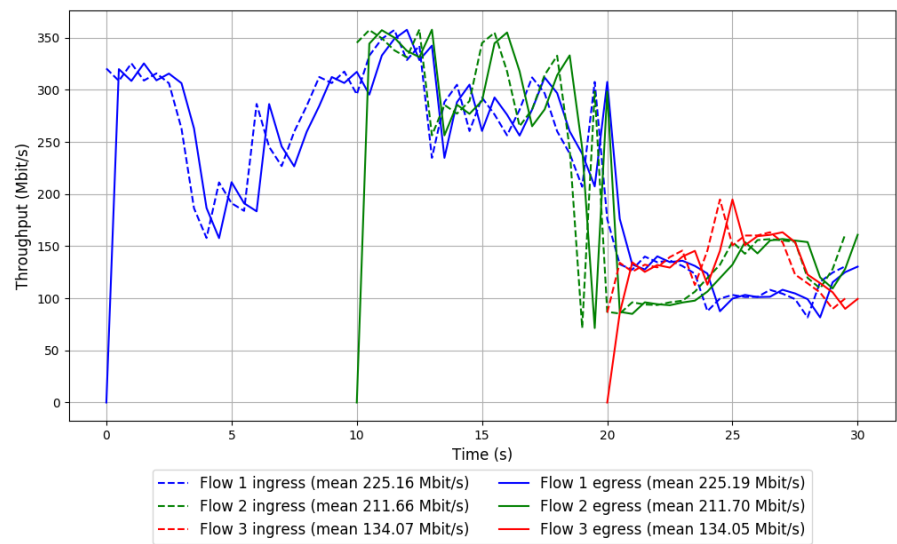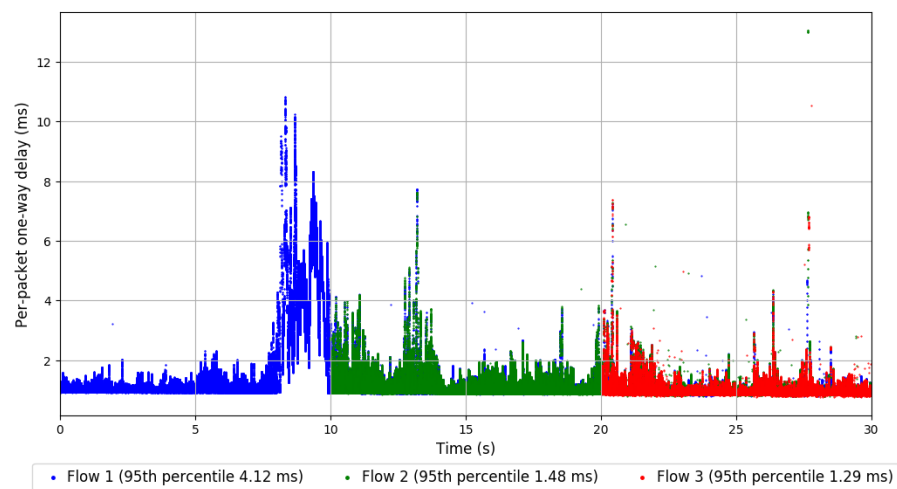
Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2018-12-20 08:03:25
End at: 2018-12-20 08:03:55
Local clock offset: -0.206 ms
Remote clock offset: 2.62 ms


# Below is generated by plot.py at 2018-12-20 10:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 410.69 Mbit/s
95th percentile per-packet one-way delay: 1.373 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 225.19 Mbit/s
95th percentile per-packet one-way delay: 1.436 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 211.70 Mbit/s
95th percentile per-packet one-way delay: 1.285 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 134.05 Mbit/s
95th percentile per-packet one-way delay: 1.324 ms
Loss rate: 0.01%
```
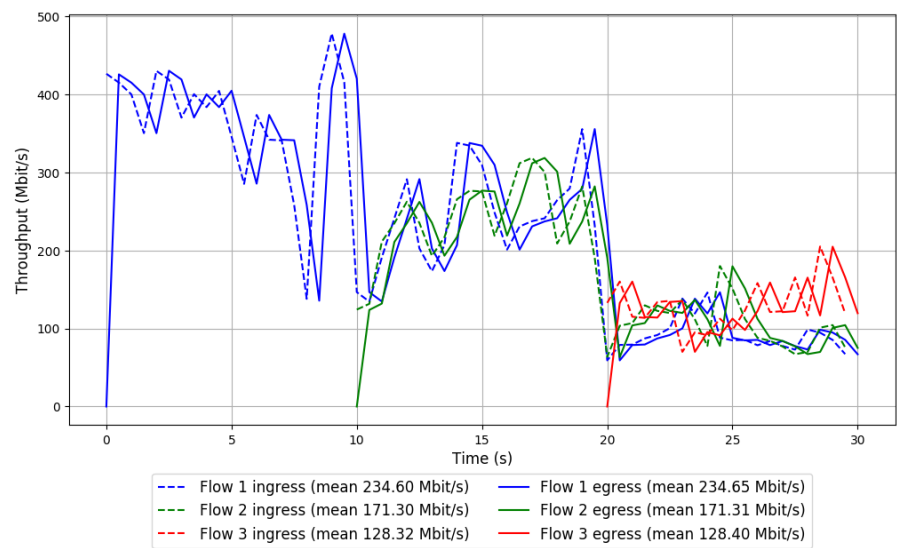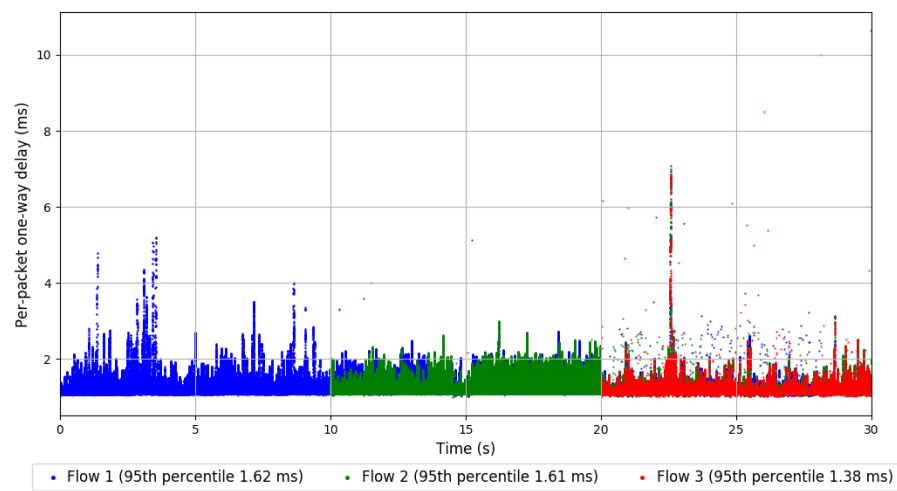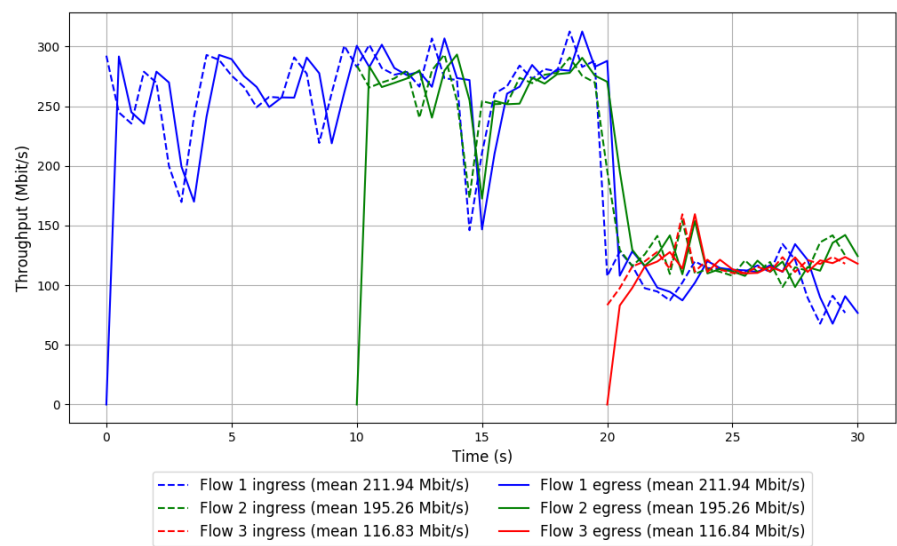
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 225.16 Mbit/s) - - - Flow 1 egress (mean 225.19 Mbit/s) ——
Flow 2 ingress (mean 211.66 Mbit/s) - - - Flow 2 egress (mean 211.70 Mbit/s) ——
Flow 3 ingress (mean 134.07 Mbit/s) - - - Flow 3 egress (mean 134.05 Mbit/s) ——

Flow 1 (95th percentile 1.44 ms)   Flow 2 (95th percentile 1.28 ms)   Flow 3 (95th percentile 1.32 ms)

```
Run 2: Statistics of Copa

Start at: 2018-12-20 08:31:07
End at: 2018-12-20 08:31:37
Local clock offset: 3.521 ms
Remote clock offset: 0.646 ms


# Below is generated by plot.py at 2018-12-20 10:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 391.37 Mbit/s
95th percentile per-packet one-way delay: 2.924 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 234.65 Mbit/s
95th percentile per-packet one-way delay: 4.124 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 171.31 Mbit/s
95th percentile per-packet one-way delay: 1.475 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 128.40 Mbit/s
95th percentile per-packet one-way delay: 1.289 ms
Loss rate: 0.00%
```
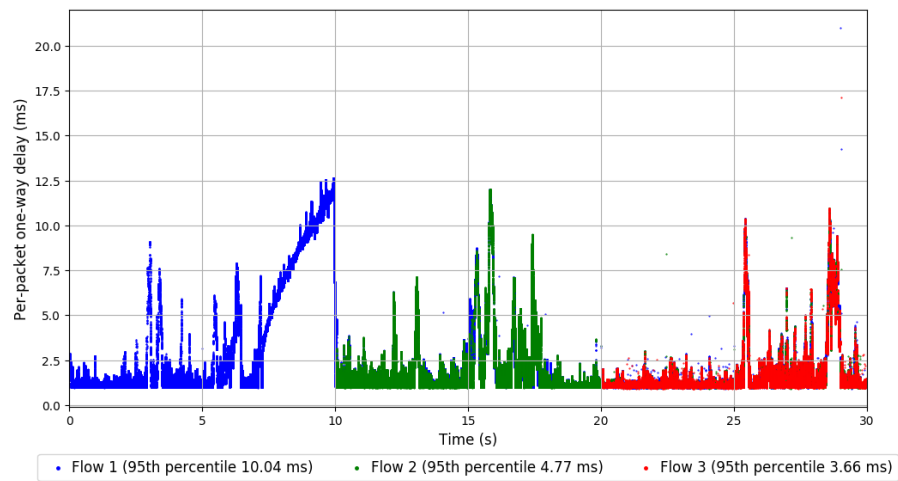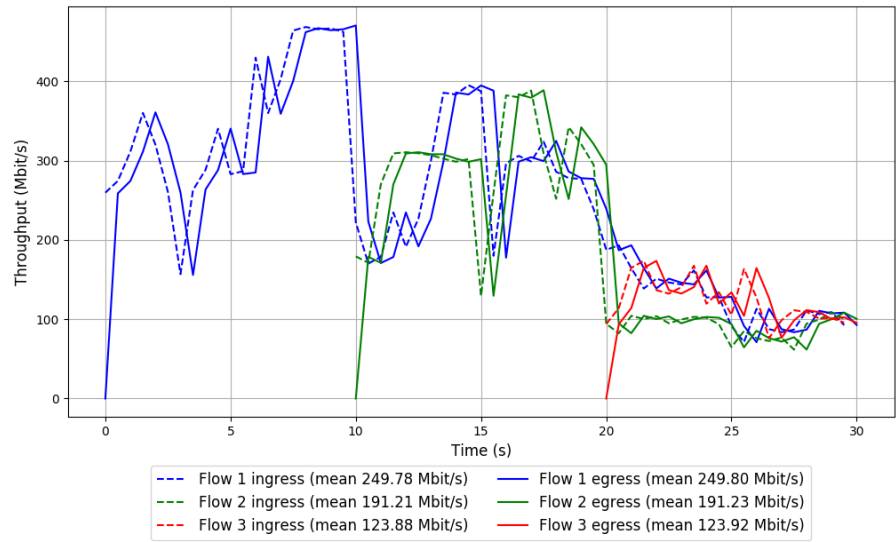
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 234.60 Mbit/s)   Flow 1 egress (mean 234.65 Mbit/s)
Flow 2 ingress (mean 171.30 Mbit/s)   Flow 2 egress (mean 171.31 Mbit/s)
Flow 3 ingress (mean 128.32 Mbit/s)   Flow 3 egress (mean 128.40 Mbit/s)

Flow 1 (95th percentile 4.12 ms)   Flow 2 (95th percentile 1.48 ms)   Flow 3 (95th percentile 1.29 ms)

```
Run 3: Statistics of Copa

Start at: 2018-12-20 08:58:29
End at: 2018-12-20 08:58:59
Local clock offset: -0.099 ms
Remote clock offset: -0.522 ms


# Below is generated by plot.py at 2018-12-20 10:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 380.82 Mbit/s
95th percentile per-packet one-way delay: 1.605 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 211.94 Mbit/s
95th percentile per-packet one-way delay: 1.625 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 195.26 Mbit/s
95th percentile per-packet one-way delay: 1.613 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 116.84 Mbit/s
95th percentile per-packet one-way delay: 1.378 ms
Loss rate: 0.01%
```
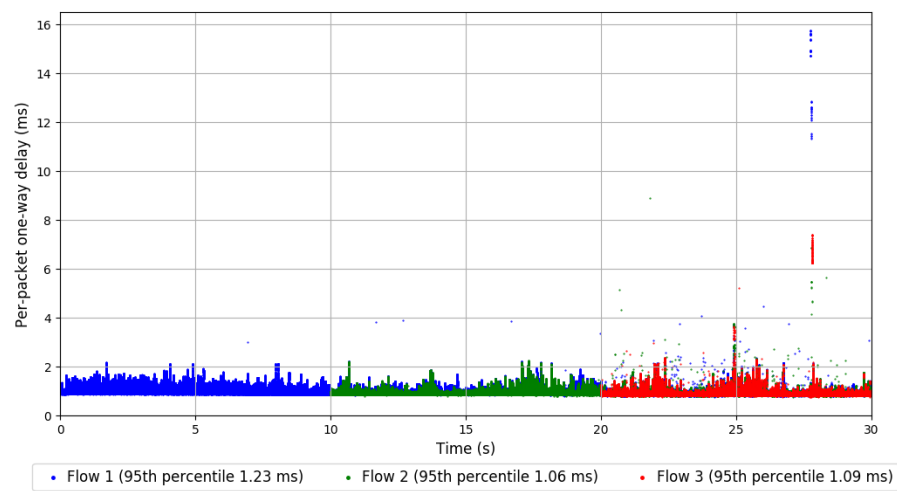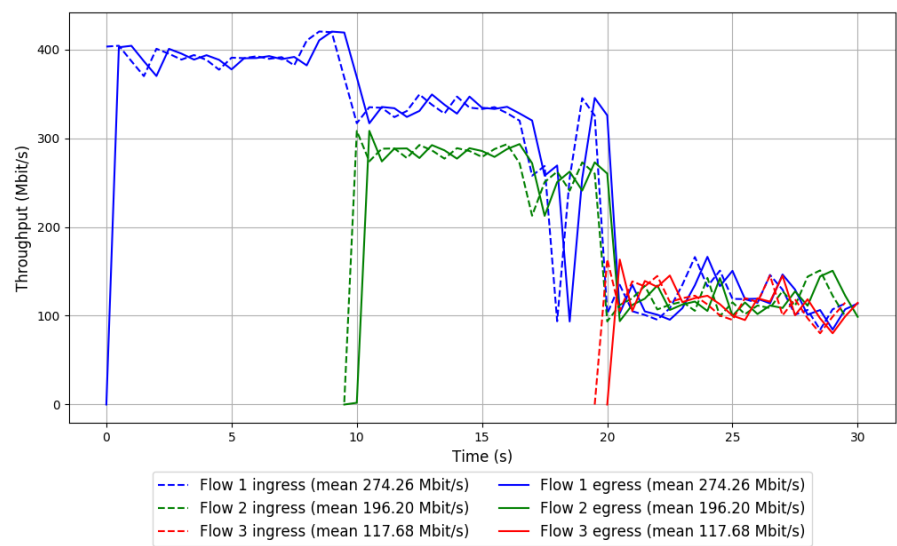
Run 3: Report of Copa — Data Link

- - - Flow 1 ingress (mean 211.94 Mbit/s) ——— Flow 1 egress (mean 211.94 Mbit/s)
- - - Flow 2 ingress (mean 195.26 Mbit/s) ——— Flow 2 egress (mean 195.26 Mbit/s)
- - - Flow 3 ingress (mean 116.83 Mbit/s) ——— Flow 3 egress (mean 116.84 Mbit/s)

- Flow 1 (95th percentile 1.62 ms)   • Flow 2 (95th percentile 1.61 ms)   • Flow 3 (95th percentile 1.38 ms)

```
Run 4: Statistics of Copa

Start at: 2018-12-20 09:26:07
End at: 2018-12-20 09:26:37
Local clock offset: -0.339 ms
Remote clock offset: -0.715 ms


# Below is generated by plot.py at 2018-12-20 10:33:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 418.24 Mbit/s
95th percentile per-packet one-way delay: 9.010 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 249.80 Mbit/s
95th percentile per-packet one-way delay: 10.035 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 191.23 Mbit/s
95th percentile per-packet one-way delay: 4.766 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 123.92 Mbit/s
95th percentile per-packet one-way delay: 3.662 ms
Loss rate: 0.01%
```
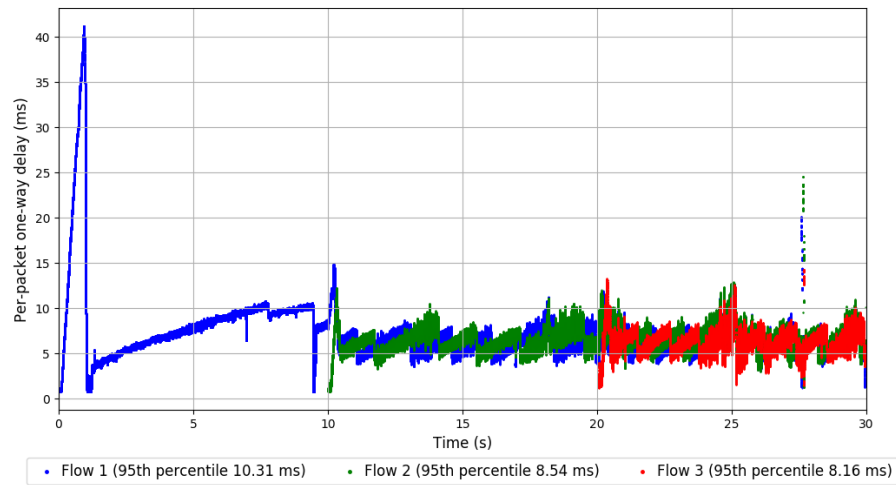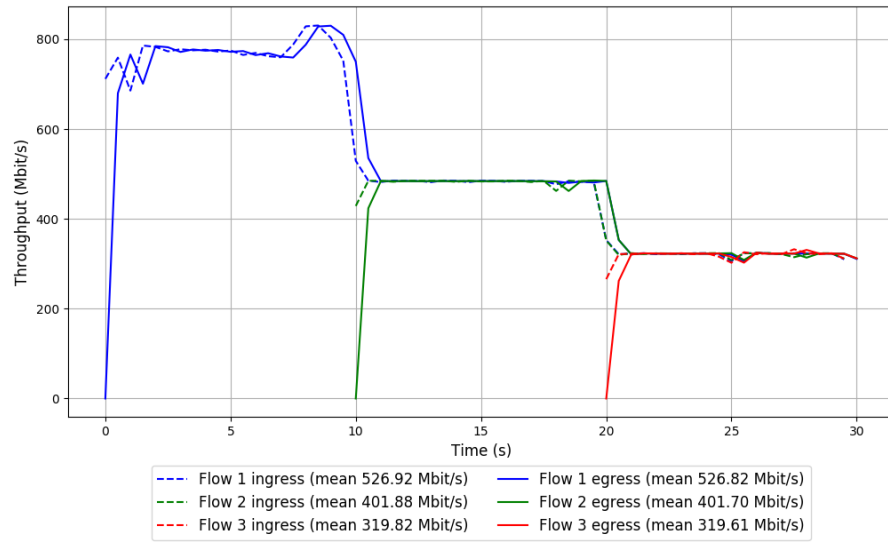
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2018-12-20 09:53:56
End at: 2018-12-20 09:54:26
Local clock offset: 3.104 ms
Remote clock offset: -0.21 ms


# Below is generated by plot.py at 2018-12-20 10:34:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 444.11 Mbit/s
95th percentile per-packet one-way delay: 1.187 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 274.26 Mbit/s
95th percentile per-packet one-way delay: 1.232 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 196.20 Mbit/s
95th percentile per-packet one-way delay: 1.059 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 117.68 Mbit/s
95th percentile per-packet one-way delay: 1.089 ms
Loss rate: 0.01%
```
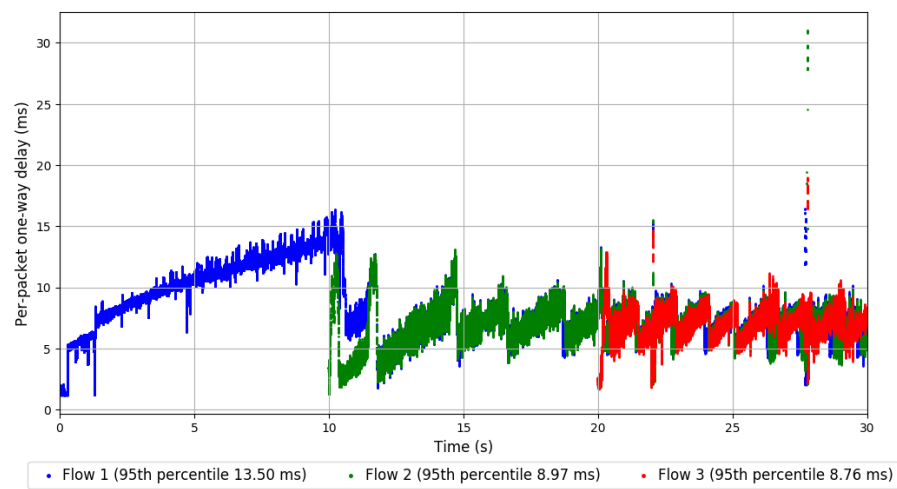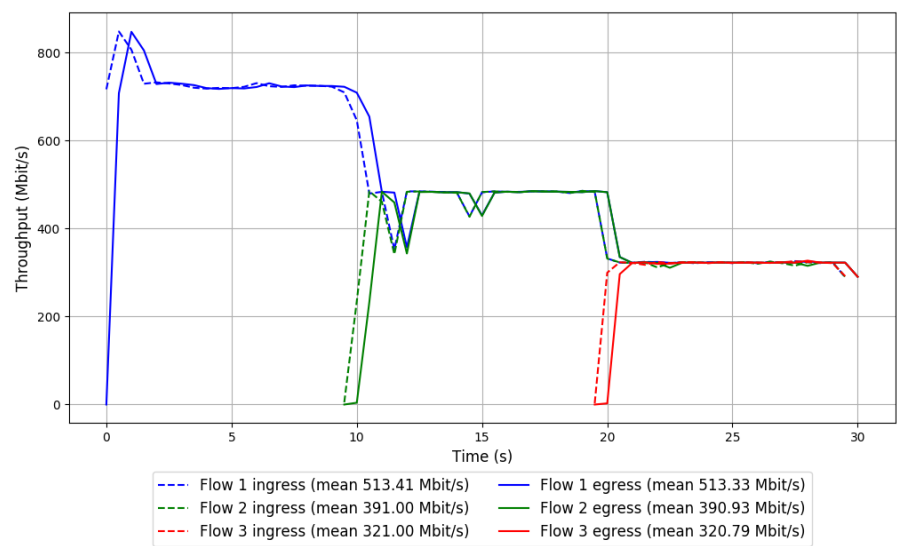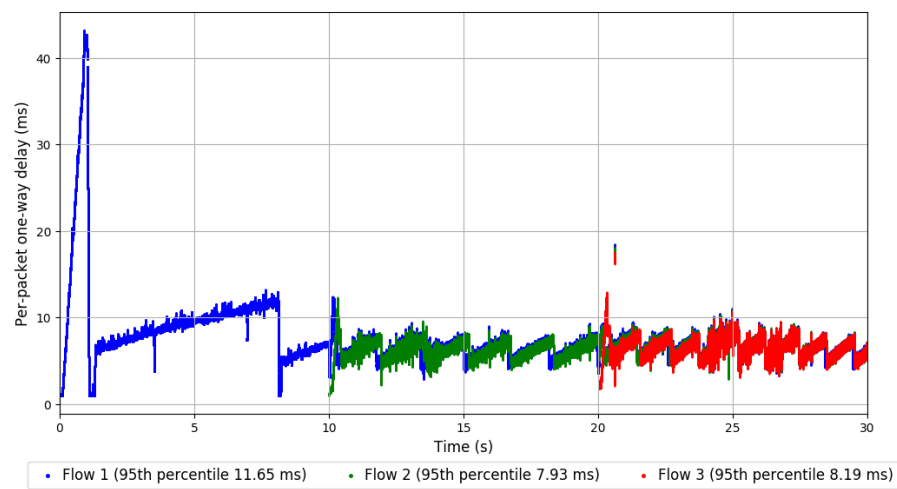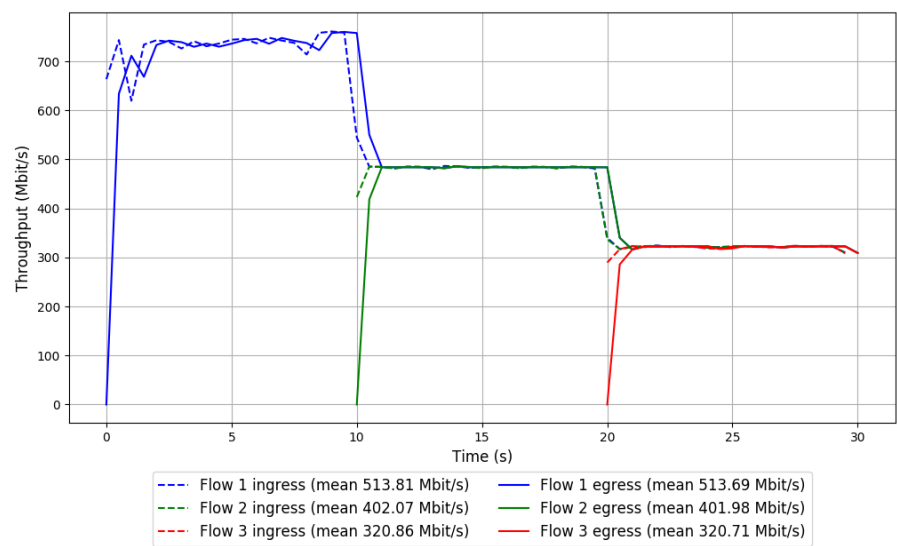
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 274.26 Mbit/s) --- Flow 1 egress (mean 274.26 Mbit/s)
Flow 2 ingress (mean 196.20 Mbit/s) --- Flow 2 egress (mean 196.20 Mbit/s)
Flow 3 ingress (mean 117.68 Mbit/s) --- Flow 3 egress (mean 117.68 Mbit/s)

Flow 1 (95th percentile 1.23 ms)   Flow 2 (95th percentile 1.06 ms)   Flow 3 (95th percentile 1.09 ms)

24

```
Run 1: Statistics of TCP Cubic

Start at: 2018-12-20 08:09:14
End at: 2018-12-20 08:09:44
Local clock offset: 0.908 ms
Remote clock offset: 3.12 ms


# Below is generated by plot.py at 2018-12-20 10:34:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 900.46 Mbit/s
95th percentile per-packet one-way delay: 10.078 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 526.82 Mbit/s
95th percentile per-packet one-way delay: 10.309 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 401.70 Mbit/s
95th percentile per-packet one-way delay: 8.536 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 319.61 Mbit/s
95th percentile per-packet one-way delay: 8.157 ms
Loss rate: 0.08%
```
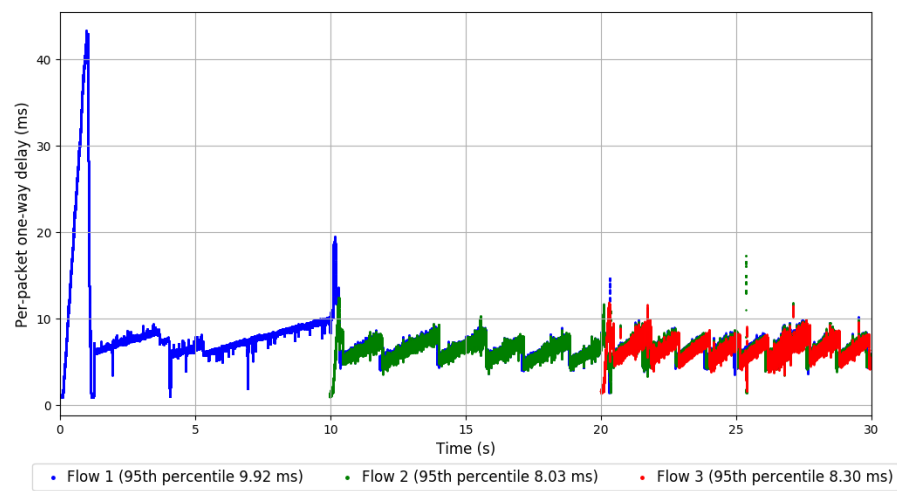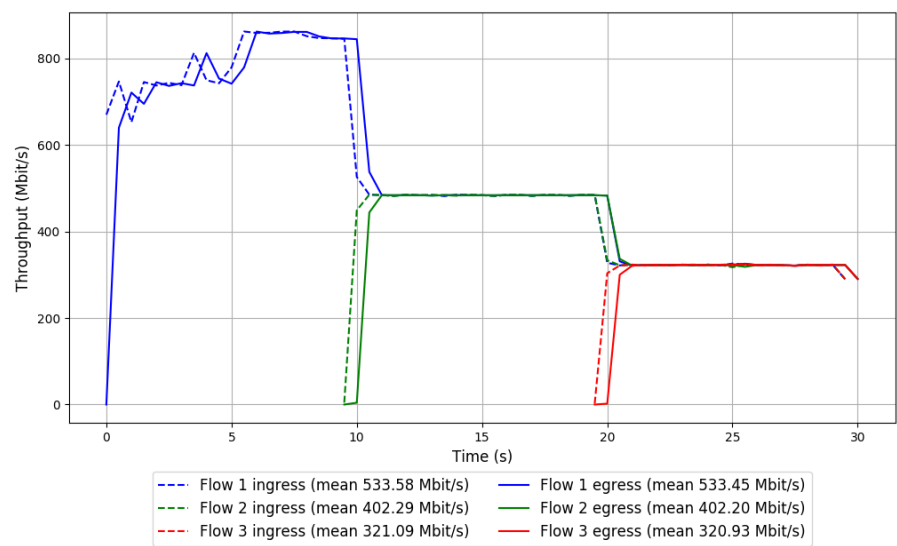
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2018-12-20 08:36:52
End at: 2018-12-20 08:37:22
Local clock offset: 3.24 ms
Remote clock offset: 0.134 ms


# Below is generated by plot.py at 2018-12-20 10:35:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 880.78 Mbit/s
95th percentile per-packet one-way delay: 13.011 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 513.33 Mbit/s
95th percentile per-packet one-way delay: 13.498 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 390.93 Mbit/s
95th percentile per-packet one-way delay: 8.971 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 320.79 Mbit/s
95th percentile per-packet one-way delay: 8.755 ms
Loss rate: 0.09%
```
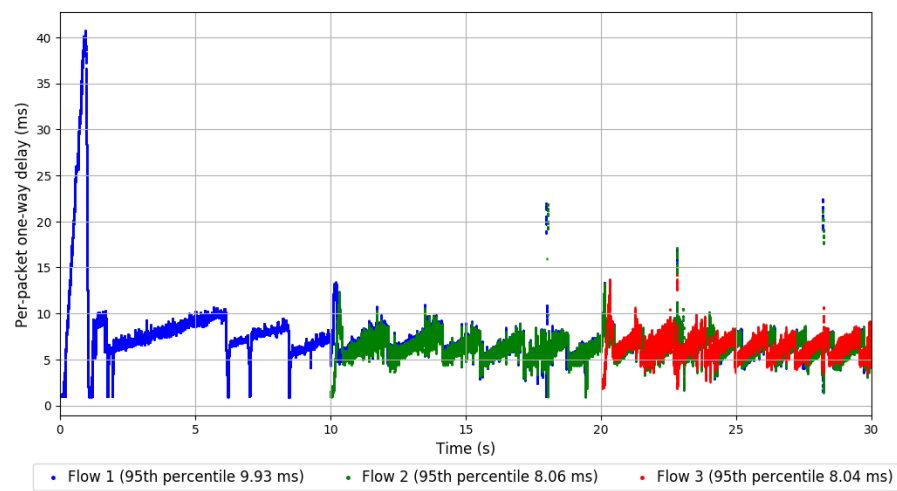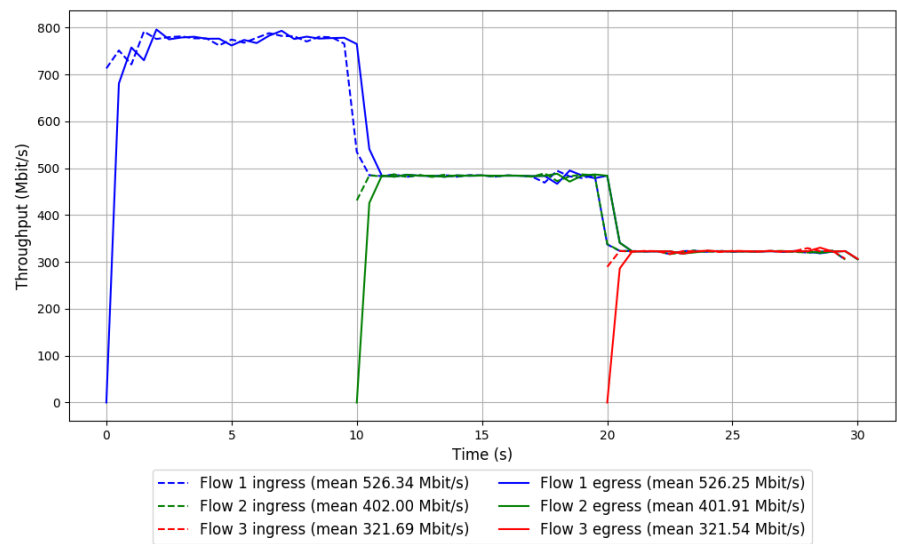
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2018-12-20 09:04:23
End at: 2018-12-20 09:04:53
Local clock offset: -0.376 ms
Remote clock offset: -0.428 ms


# Below is generated by plot.py at 2018-12-20 10:35:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 887.98 Mbit/s
95th percentile per-packet one-way delay: 11.164 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 513.69 Mbit/s
95th percentile per-packet one-way delay: 11.653 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 401.98 Mbit/s
95th percentile per-packet one-way delay: 7.935 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 320.71 Mbit/s
95th percentile per-packet one-way delay: 8.187 ms
Loss rate: 0.07%
```
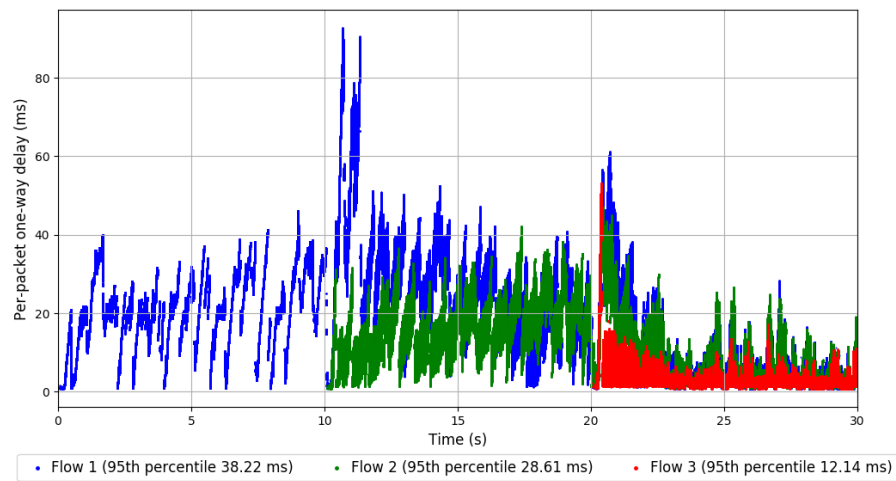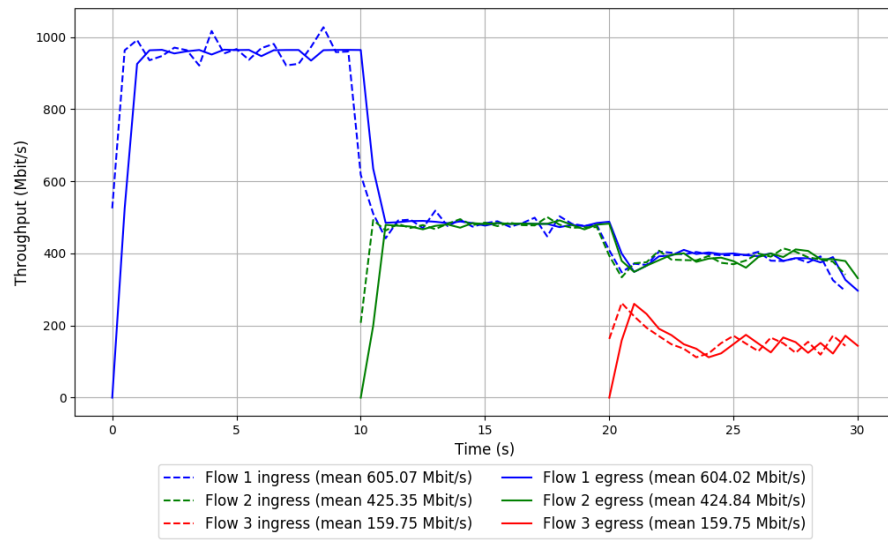
Run 3: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 513.81 Mbit/s)   —— Flow 1 egress (mean 513.69 Mbit/s)
- - - Flow 2 ingress (mean 402.07 Mbit/s)   —— Flow 2 egress (mean 401.98 Mbit/s)
- - - Flow 3 ingress (mean 320.86 Mbit/s)   —— Flow 3 egress (mean 320.71 Mbit/s)

• Flow 1 (95th percentile 11.65 ms)   • Flow 2 (95th percentile 7.93 ms)   • Flow 3 (95th percentile 8.19 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2018-12-20 09:32:03
End at: 2018-12-20 09:32:33
Local clock offset: -0.427 ms
Remote clock offset: -0.405 ms


# Below is generated by plot.py at 2018-12-20 10:36:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 908.49 Mbit/s
95th percentile per-packet one-way delay: 9.381 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 533.45 Mbit/s
95th percentile per-packet one-way delay: 9.917 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 402.20 Mbit/s
95th percentile per-packet one-way delay: 8.029 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 320.93 Mbit/s
95th percentile per-packet one-way delay: 8.305 ms
Loss rate: 0.07%
```
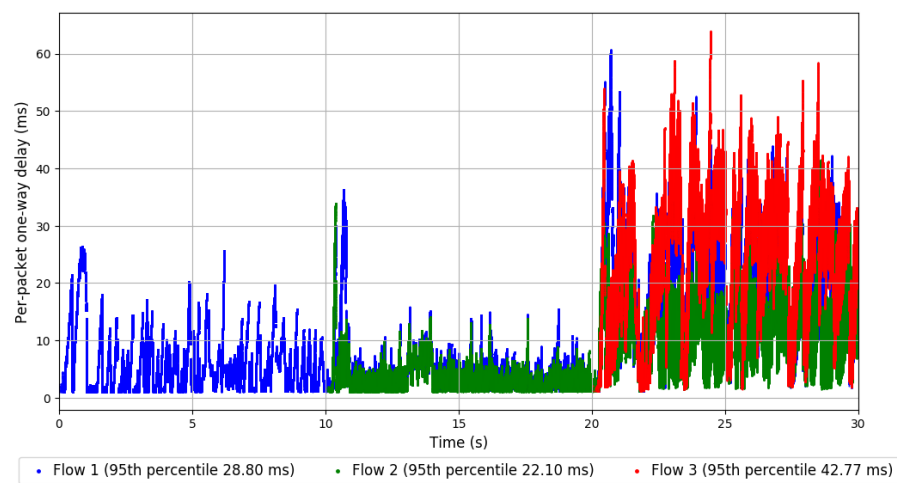
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2018-12-20 09:59:51
End at: 2018-12-20 10:00:21
Local clock offset: 3.484 ms
Remote clock offset: -0.259 ms


# Below is generated by plot.py at 2018-12-20 10:36:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 900.89 Mbit/s
95th percentile per-packet one-way delay: 9.468 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 526.25 Mbit/s
95th percentile per-packet one-way delay: 9.931 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 401.91 Mbit/s
95th percentile per-packet one-way delay: 8.060 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 321.54 Mbit/s
95th percentile per-packet one-way delay: 8.040 ms
Loss rate: 0.08%
```
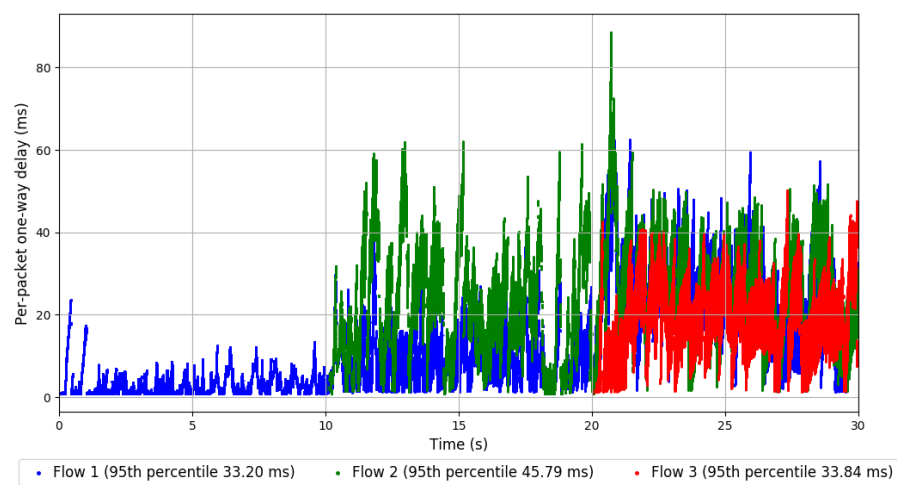
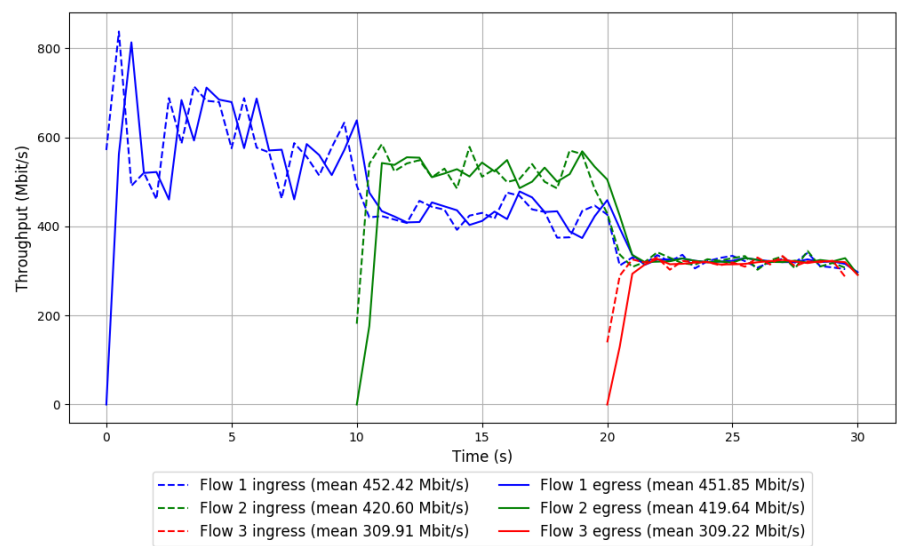Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2018-12-20 08:12:15
End at: 2018-12-20 08:12:45
Local clock offset: 1.687 ms
Remote clock offset: 3.323 ms


# Below is generated by plot.py at 2018-12-20 10:39:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 939.59 Mbit/s
95th percentile per-packet one-way delay: 35.854 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 604.02 Mbit/s
95th percentile per-packet one-way delay: 38.223 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 424.84 Mbit/s
95th percentile per-packet one-way delay: 28.608 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 159.75 Mbit/s
95th percentile per-packet one-way delay: 12.144 ms
Loss rate: 0.00%
```
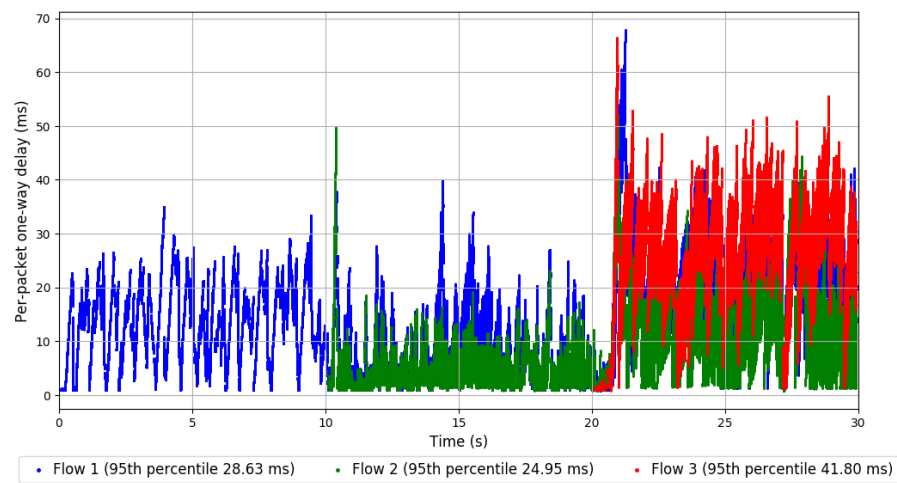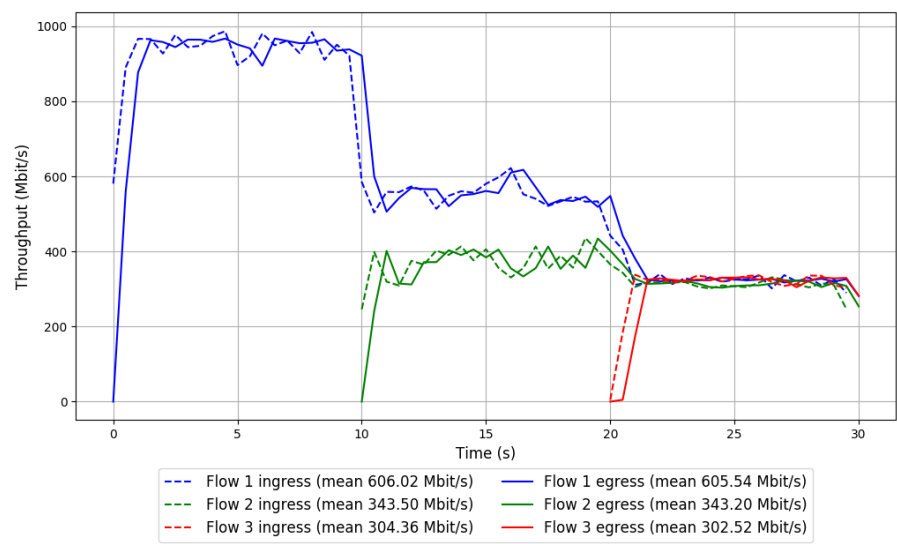
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-12-20 08:39:52
End at: 2018-12-20 08:40:22
Local clock offset: 2.294 ms
Remote clock offset: -0.001 ms


# Below is generated by plot.py at 2018-12-20 10:45:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 873.66 Mbit/s
95th percentile per-packet one-way delay: 33.001 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 578.02 Mbit/s
95th percentile per-packet one-way delay: 28.804 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 283.39 Mbit/s
95th percentile per-packet one-way delay: 22.098 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 323.90 Mbit/s
95th percentile per-packet one-way delay: 42.769 ms
Loss rate: 0.40%
```
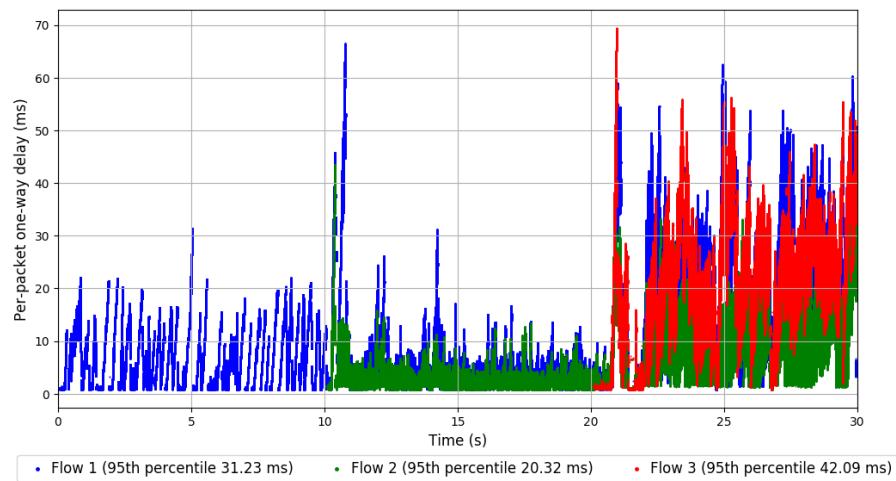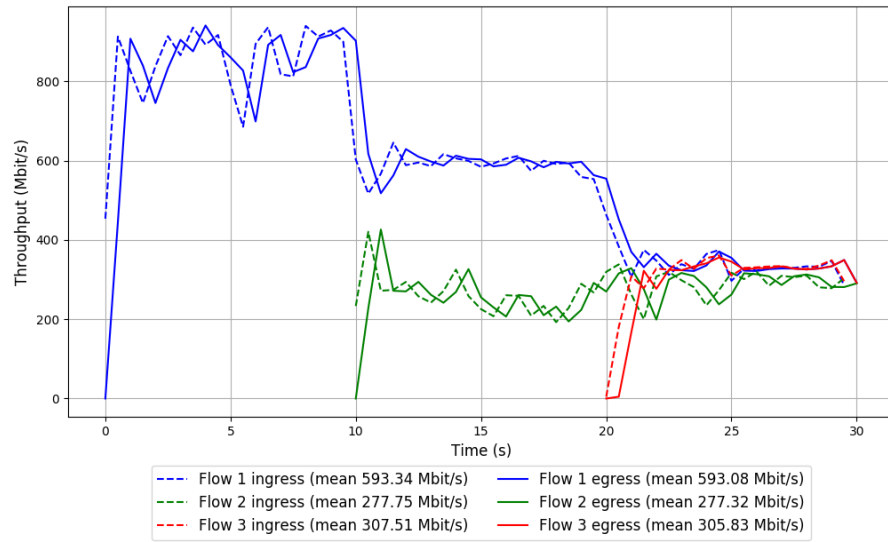
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 578.78 Mbit/s)   Flow 1 egress (mean 578.02 Mbit/s)
Flow 2 ingress (mean 283.97 Mbit/s)   Flow 2 egress (mean 283.39 Mbit/s)
Flow 3 ingress (mean 325.32 Mbit/s)   Flow 3 egress (mean 323.90 Mbit/s)

Flow 1 (95th percentile 28.80 ms)   Flow 2 (95th percentile 22.10 ms)   Flow 3 (95th percentile 42.77 ms)

```
Run 3: Statistics of FillP

Start at: 2018-12-20 09:07:26
End at: 2018-12-20 09:07:56
Local clock offset: -0.344 ms
Remote clock offset: -0.464 ms

# Below is generated by plot.py at 2018-12-20 10:45:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 833.31 Mbit/s
95th percentile per-packet one-way delay: 39.632 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 451.85 Mbit/s
95th percentile per-packet one-way delay: 33.197 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 419.64 Mbit/s
95th percentile per-packet one-way delay: 45.792 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 309.22 Mbit/s
95th percentile per-packet one-way delay: 33.837 ms
Loss rate: 0.19%
```
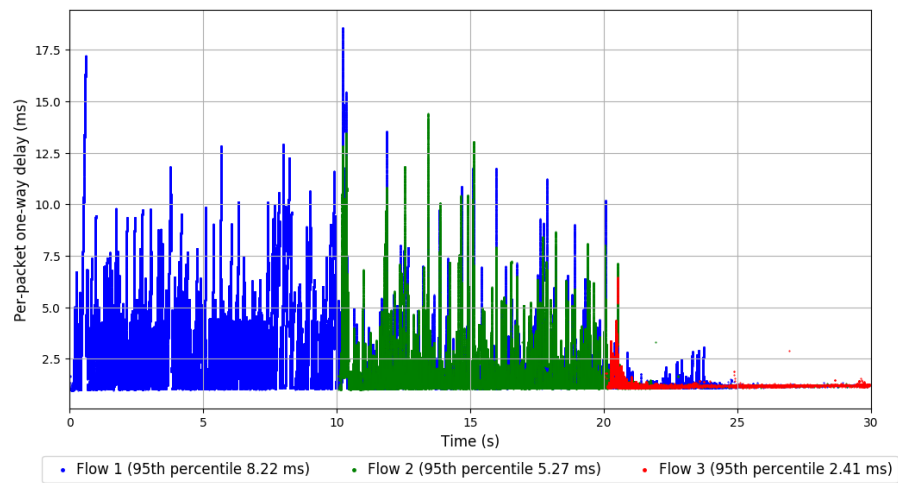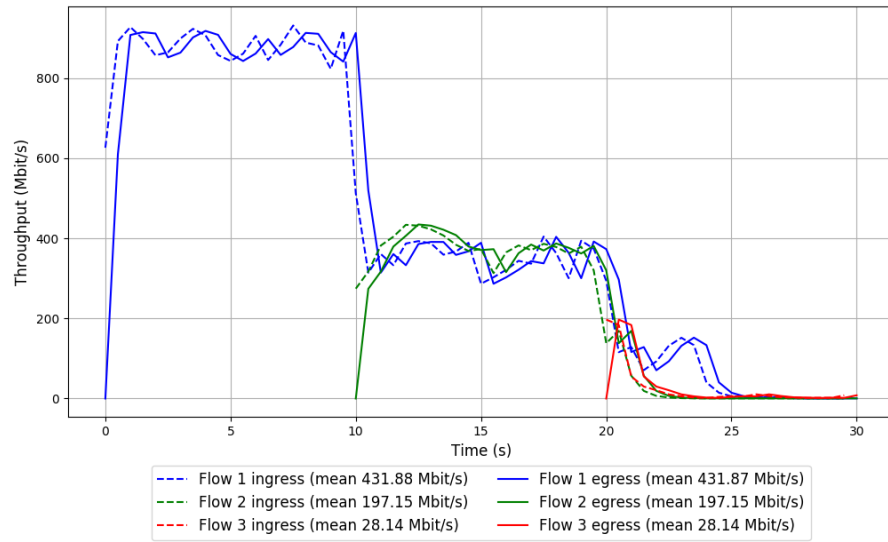
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 452.42 Mbit/s)   Flow 1 egress (mean 451.85 Mbit/s)
Flow 2 ingress (mean 420.60 Mbit/s)   Flow 2 egress (mean 419.64 Mbit/s)
Flow 3 ingress (mean 309.91 Mbit/s)   Flow 3 egress (mean 309.22 Mbit/s)

Flow 1 (95th percentile 33.20 ms)   Flow 2 (95th percentile 45.79 ms)   Flow 3 (95th percentile 33.84 ms)

```
Run 4: Statistics of FillP

Start at: 2018-12-20 09:35:03
End at: 2018-12-20 09:35:33
Local clock offset: -0.483 ms
Remote clock offset: -0.372 ms

# Below is generated by plot.py at 2018-12-20 10:47:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 934.02 Mbit/s
95th percentile per-packet one-way delay: 32.988 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 605.54 Mbit/s
95th percentile per-packet one-way delay: 28.630 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 343.20 Mbit/s
95th percentile per-packet one-way delay: 24.946 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 302.52 Mbit/s
95th percentile per-packet one-way delay: 41.797 ms
Loss rate: 0.59%
```
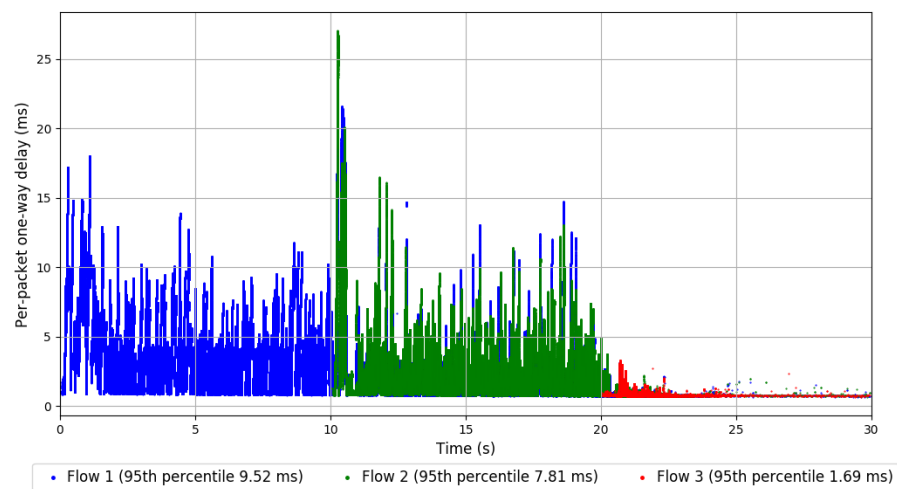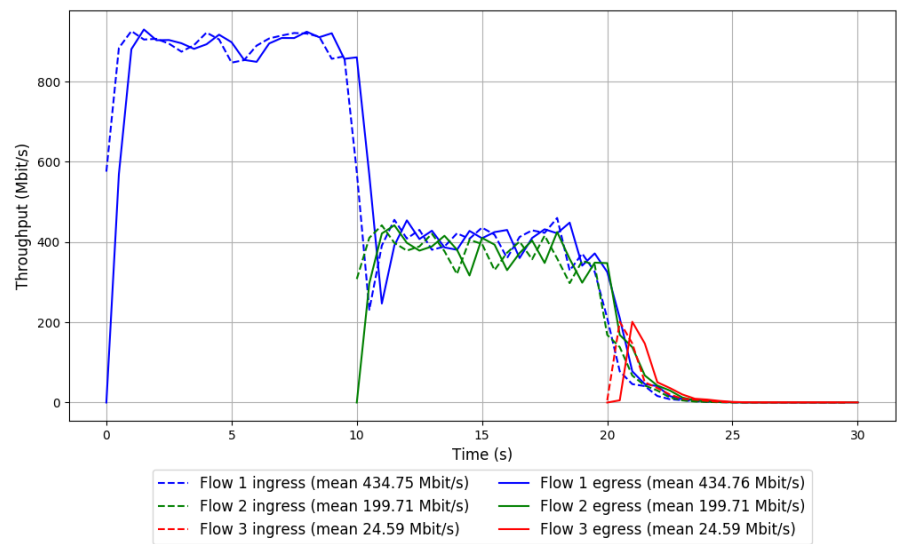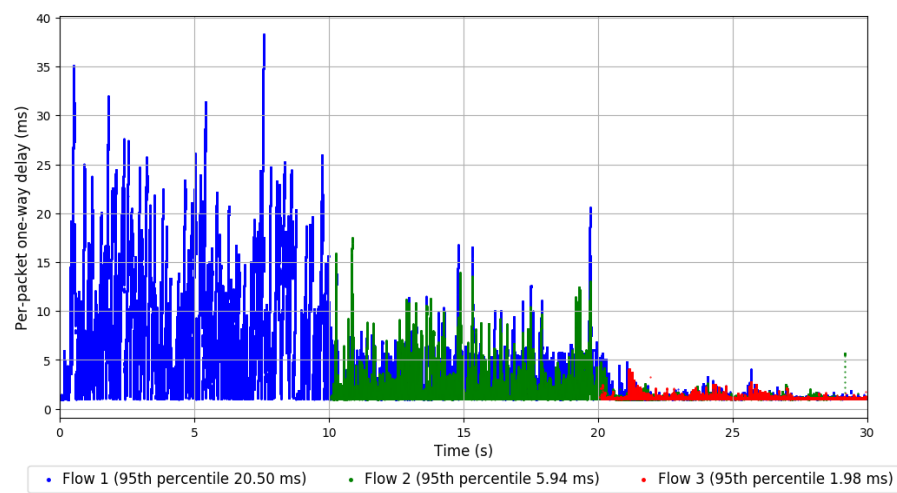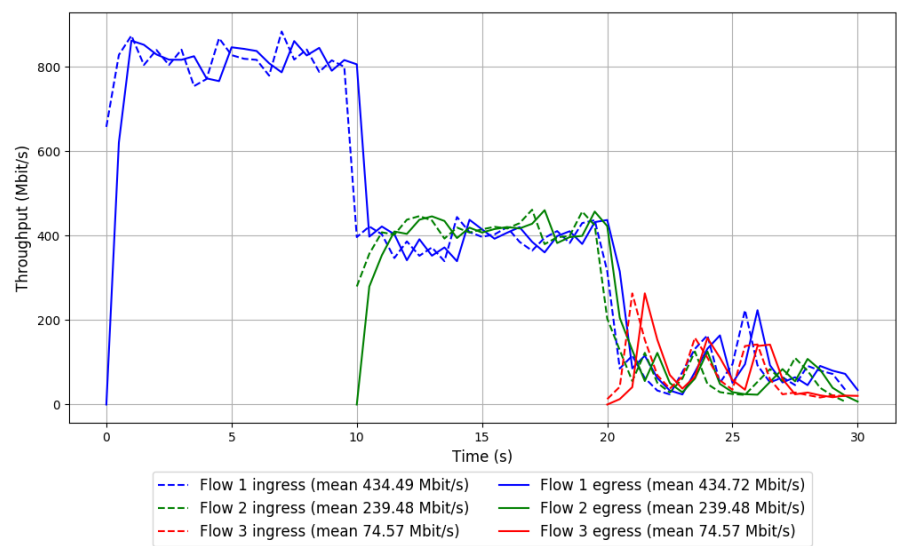
Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 606.02 Mbit/s) --- Flow 1 egress (mean 605.54 Mbit/s)
Flow 2 ingress (mean 343.50 Mbit/s) --- Flow 2 egress (mean 343.20 Mbit/s)
Flow 3 ingress (mean 304.36 Mbit/s) --- Flow 3 egress (mean 302.52 Mbit/s)

Flow 1 (95th percentile 28.63 ms)   Flow 2 (95th percentile 24.95 ms)   Flow 3 (95th percentile 41.80 ms)

42

```
Run 5: Statistics of FillP

Start at: 2018-12-20 10:02:53
End at: 2018-12-20 10:03:23
Local clock offset: 3.63 ms
Remote clock offset: -0.161 ms


# Below is generated by plot.py at 2018-12-20 10:47:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 878.80 Mbit/s
95th percentile per-packet one-way delay: 32.704 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 593.08 Mbit/s
95th percentile per-packet one-way delay: 31.235 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 277.32 Mbit/s
95th percentile per-packet one-way delay: 20.322 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 305.83 Mbit/s
95th percentile per-packet one-way delay: 42.087 ms
Loss rate: 0.38%
```
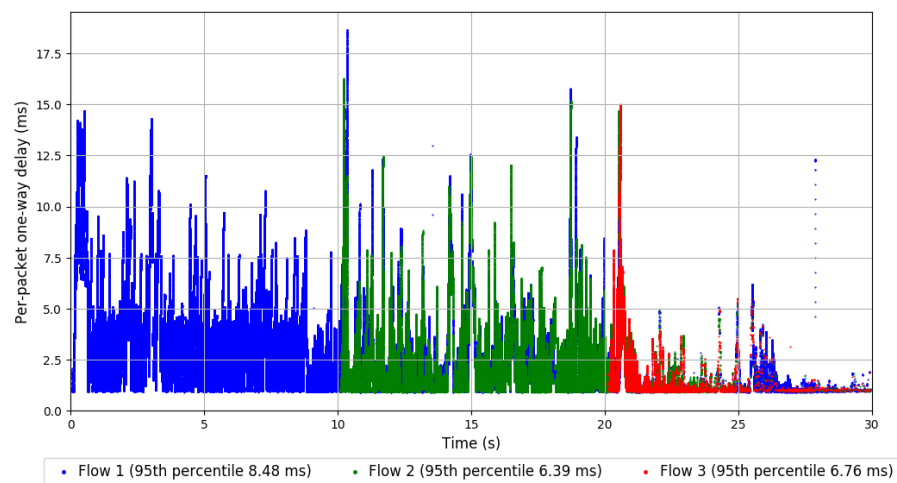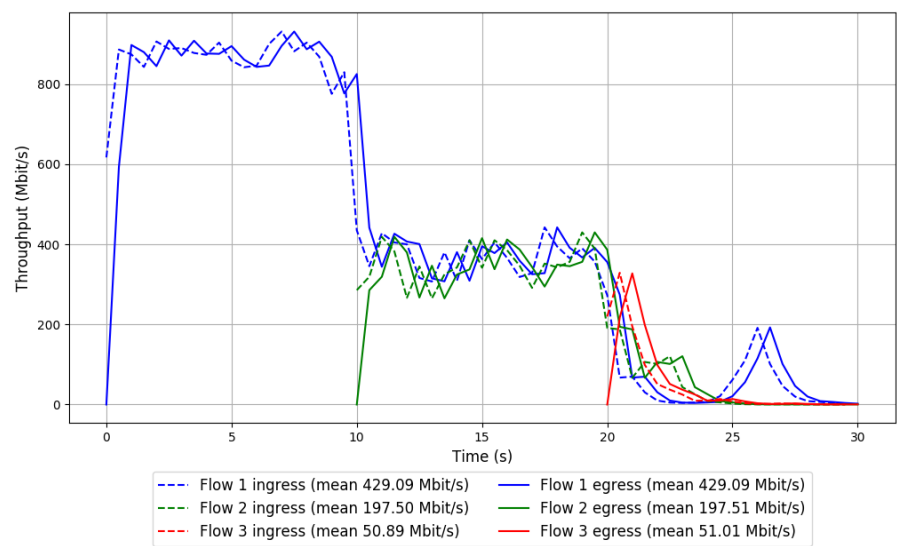
Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2018-12-20 07:53:23
End at: 2018-12-20 07:53:53
Local clock offset: 0.35 ms
Remote clock offset: 1.138 ms


# Below is generated by plot.py at 2018-12-20 10:47:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 572.03 Mbit/s
95th percentile per-packet one-way delay: 7.758 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 431.87 Mbit/s
95th percentile per-packet one-way delay: 8.223 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 197.15 Mbit/s
95th percentile per-packet one-way delay: 5.271 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.14 Mbit/s
95th percentile per-packet one-way delay: 2.414 ms
Loss rate: 0.00%
```
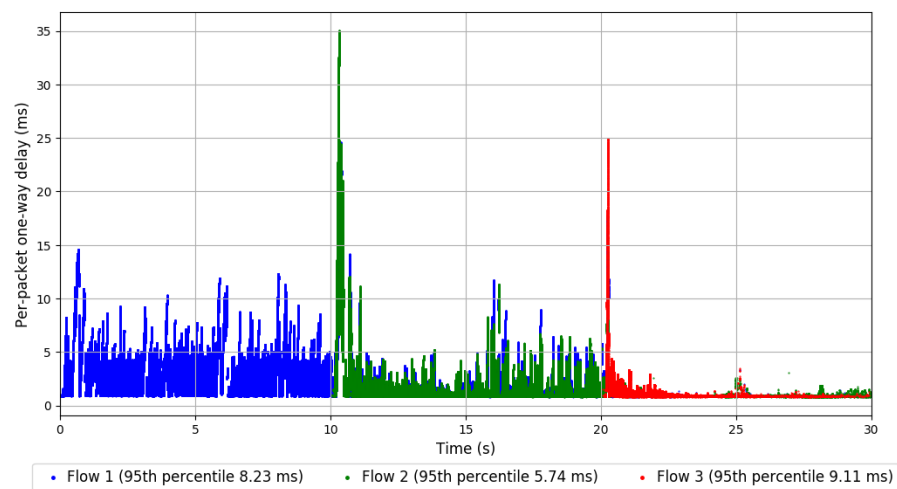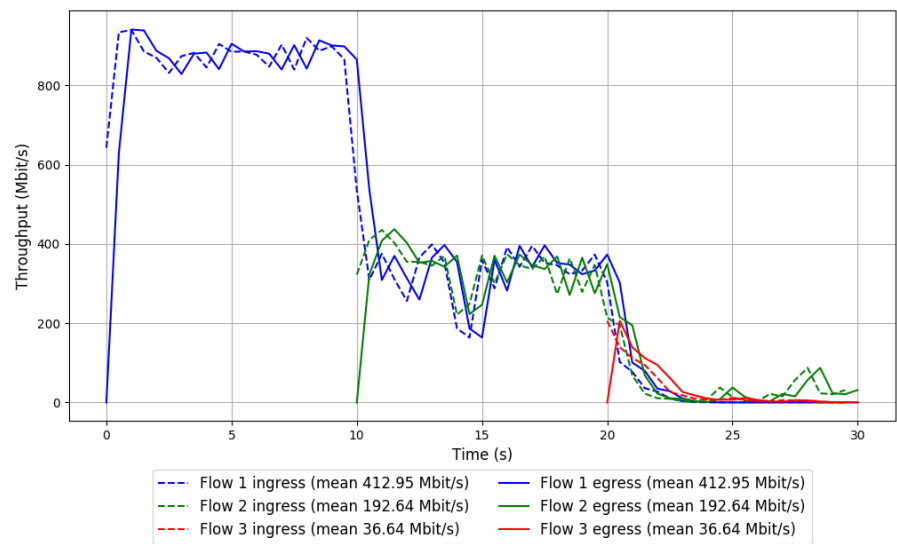
Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2018-12-20 08:21:04
End at: 2018-12-20 08:21:34
Local clock offset: 2.902 ms
Remote clock offset: 2.819 ms


# Below is generated by plot.py at 2018-12-20 10:47:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 575.60 Mbit/s
95th percentile per-packet one-way delay: 9.234 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 434.76 Mbit/s
95th percentile per-packet one-way delay: 9.518 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 199.71 Mbit/s
95th percentile per-packet one-way delay: 7.812 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.59 Mbit/s
95th percentile per-packet one-way delay: 1.690 ms
Loss rate: 0.00%
```

Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2018-12-20 08:48:19
End at: 2018-12-20 08:48:49
Local clock offset: 0.689 ms
Remote clock offset: -0.422 ms


# Below is generated by plot.py at 2018-12-20 10:47:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 618.40 Mbit/s
95th percentile per-packet one-way delay: 18.947 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 434.72 Mbit/s
95th percentile per-packet one-way delay: 20.500 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 239.48 Mbit/s
95th percentile per-packet one-way delay: 5.937 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 74.57 Mbit/s
95th percentile per-packet one-way delay: 1.979 ms
Loss rate: 0.00%
```
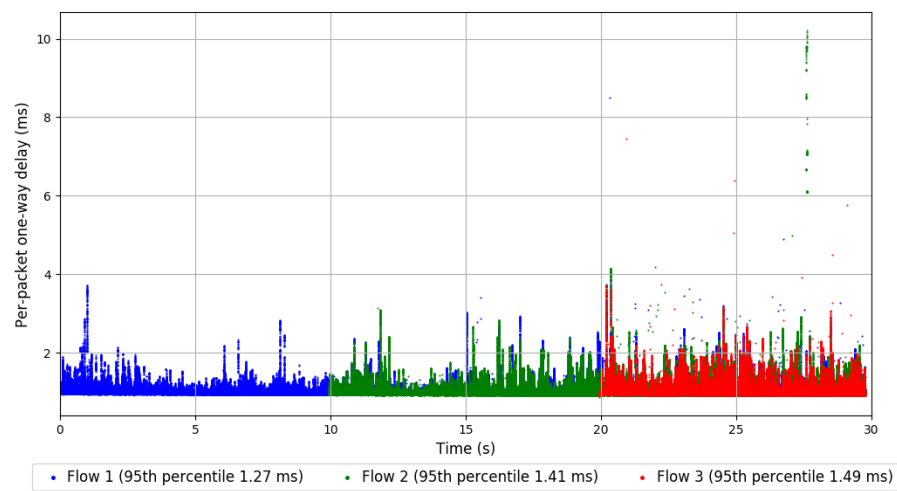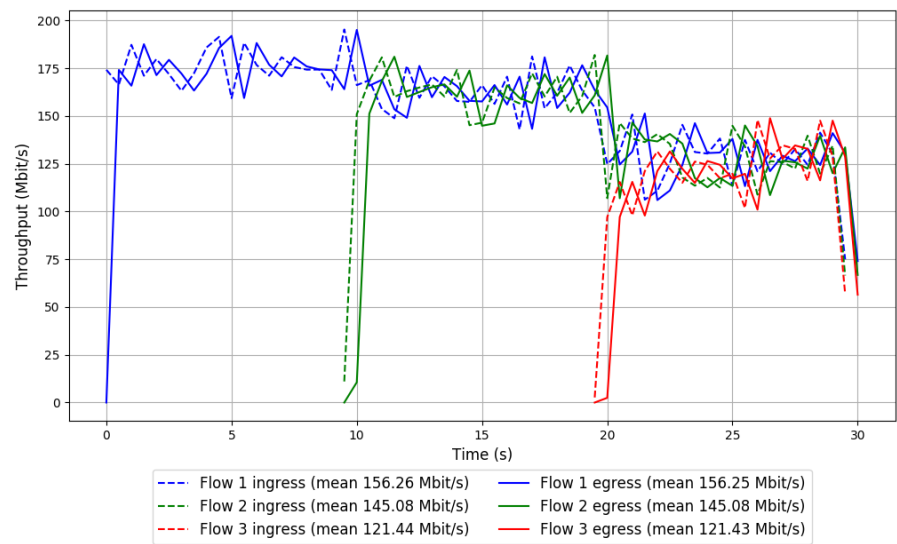
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 434.49 Mbit/s)   Flow 1 egress (mean 434.72 Mbit/s)
Flow 2 ingress (mean 239.48 Mbit/s)   Flow 2 egress (mean 239.48 Mbit/s)
Flow 3 ingress (mean 74.57 Mbit/s)   Flow 3 egress (mean 74.57 Mbit/s)

Flow 1 (95th percentile 20.50 ms)   Flow 2 (95th percentile 5.94 ms)   Flow 3 (95th percentile 1.98 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2018-12-20 09:16:05
End at: 2018-12-20 09:16:35
Local clock offset: -0.258 ms
Remote clock offset: -0.533 ms


# Below is generated by plot.py at 2018-12-20 10:48:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 577.28 Mbit/s
95th percentile per-packet one-way delay: 8.077 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 429.09 Mbit/s
95th percentile per-packet one-way delay: 8.477 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 197.51 Mbit/s
95th percentile per-packet one-way delay: 6.387 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 51.01 Mbit/s
95th percentile per-packet one-way delay: 6.760 ms
Loss rate: 0.00%
```
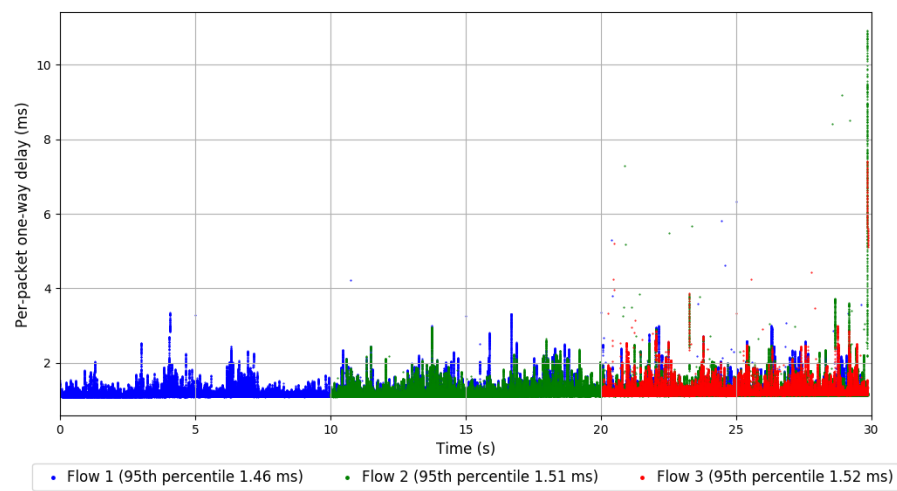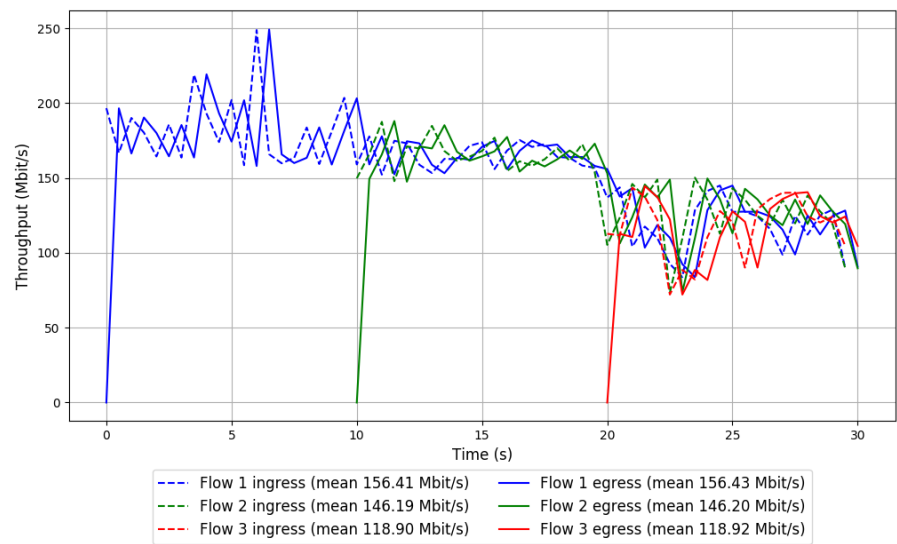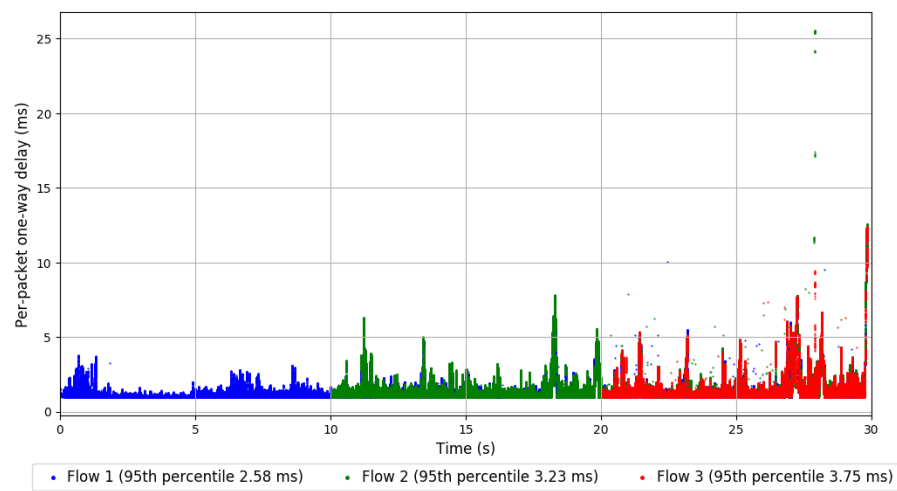
Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 429.09 Mbit/s) — Flow 1 egress (mean 429.09 Mbit/s)
Flow 2 ingress (mean 197.50 Mbit/s) — Flow 2 egress (mean 197.51 Mbit/s)
Flow 3 ingress (mean 50.89 Mbit/s) — Flow 3 egress (mean 51.01 Mbit/s)

Flow 1 (95th percentile 8.48 ms) · Flow 2 (95th percentile 6.39 ms) · Flow 3 (95th percentile 6.76 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2018-12-20 09:43:54
End at: 2018-12-20 09:44:24
Local clock offset: 1.896 ms
Remote clock offset: -0.281 ms


# Below is generated by plot.py at 2018-12-20 10:51:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 553.13 Mbit/s
95th percentile per-packet one-way delay: 8.040 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 412.95 Mbit/s
95th percentile per-packet one-way delay: 8.232 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 192.64 Mbit/s
95th percentile per-packet one-way delay: 5.740 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 36.64 Mbit/s
95th percentile per-packet one-way delay: 9.113 ms
Loss rate: 0.00%
```
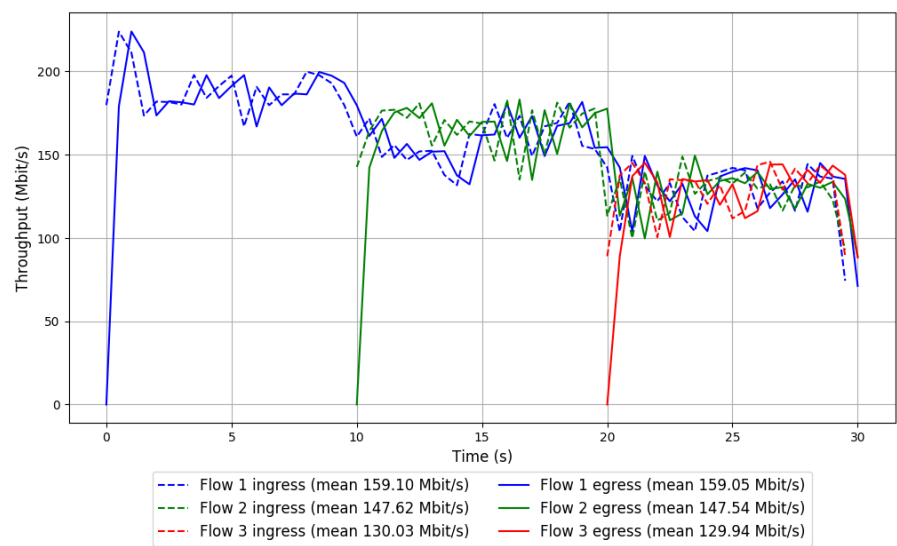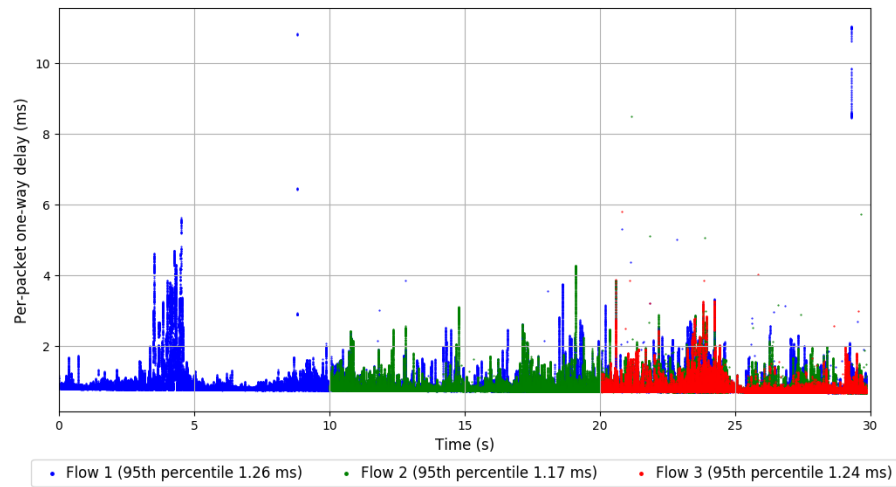
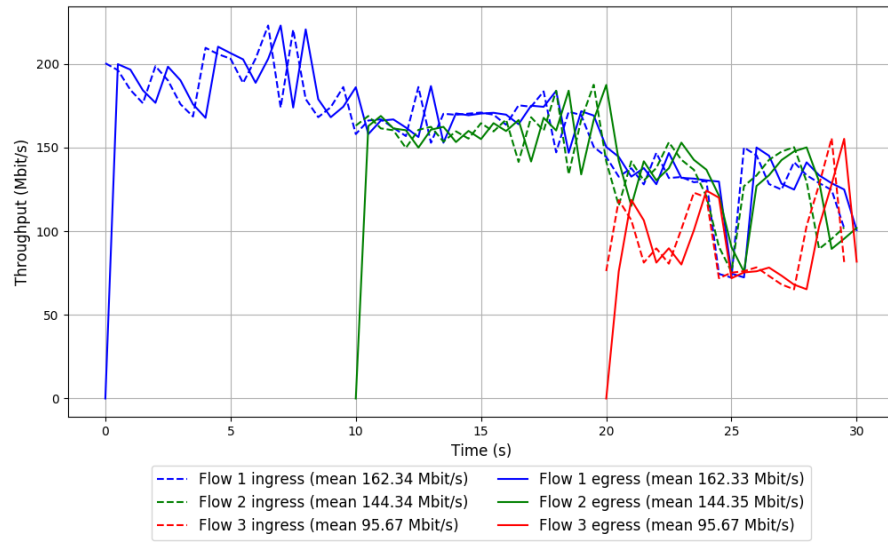Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2018-12-20 08:17:59
End at: 2018-12-20 08:18:29
Local clock offset: 2.565 ms
Remote clock offset: 3.588 ms


# Below is generated by plot.py at 2018-12-20 10:51:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.03 Mbit/s
95th percentile per-packet one-way delay: 1.354 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 156.25 Mbit/s
95th percentile per-packet one-way delay: 1.271 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 145.08 Mbit/s
95th percentile per-packet one-way delay: 1.412 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 121.43 Mbit/s
95th percentile per-packet one-way delay: 1.494 ms
Loss rate: 0.02%
```
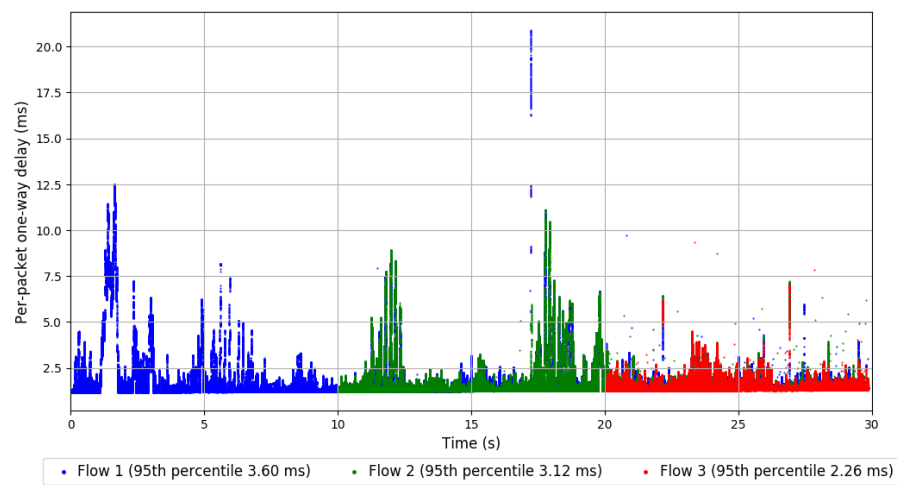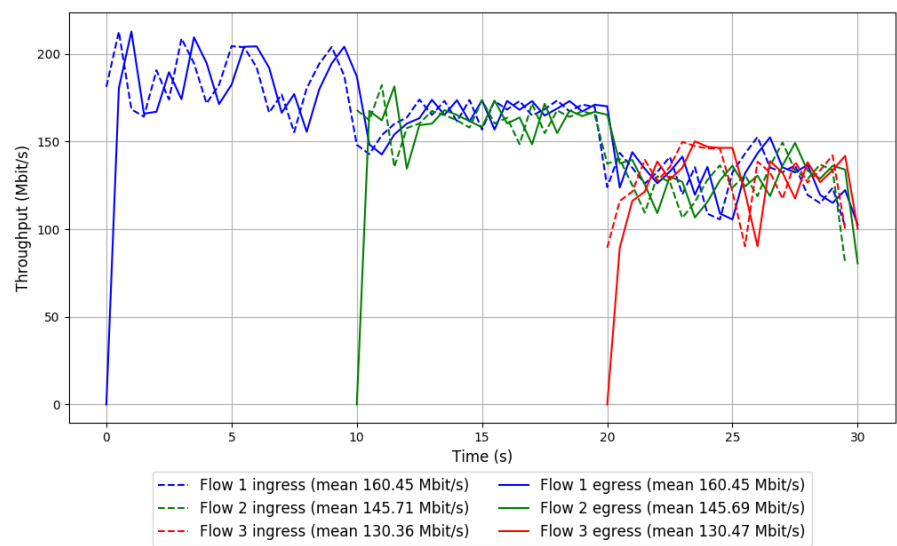
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2018-12-20 08:45:21
End at: 2018-12-20 08:45:51
Local clock offset: 1.133 ms
Remote clock offset: -0.32 ms

# Below is generated by plot.py at 2018-12-20 10:51:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.73 Mbit/s
95th percentile per-packet one-way delay: 1.485 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 156.43 Mbit/s
95th percentile per-packet one-way delay: 1.456 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 146.20 Mbit/s
95th percentile per-packet one-way delay: 1.512 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 118.92 Mbit/s
95th percentile per-packet one-way delay: 1.524 ms
Loss rate: 0.01%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2018-12-20 09:13:00
End at: 2018-12-20 09:13:30
Local clock offset: -0.267 ms
Remote clock offset: -0.52 ms


# Below is generated by plot.py at 2018-12-20 10:51:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 299.78 Mbit/s
95th percentile per-packet one-way delay: 2.989 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 159.05 Mbit/s
95th percentile per-packet one-way delay: 2.576 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 147.54 Mbit/s
95th percentile per-packet one-way delay: 3.225 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 129.94 Mbit/s
95th percentile per-packet one-way delay: 3.754 ms
Loss rate: 0.05%
```
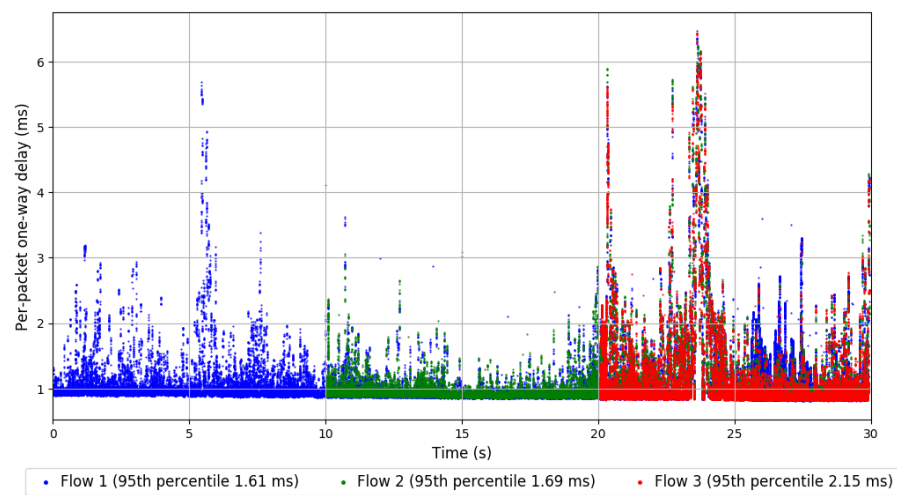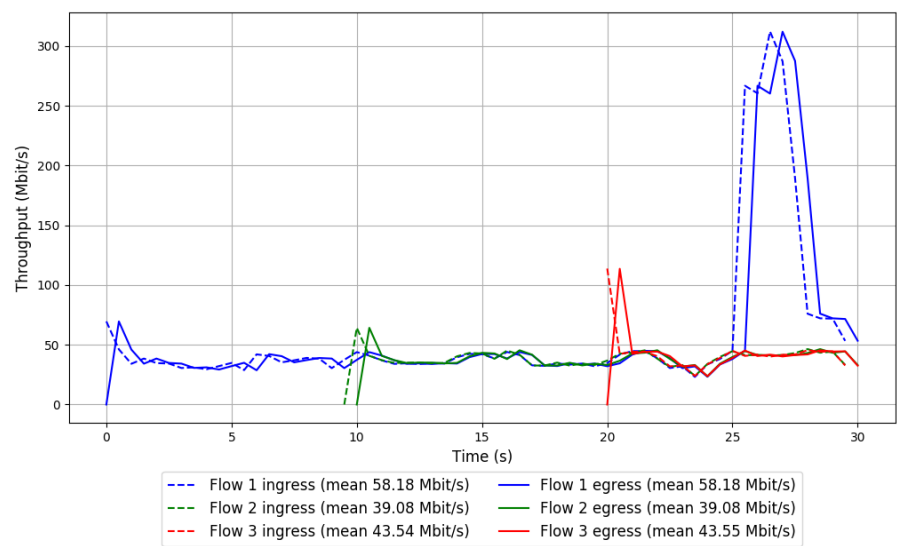
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2018-12-20 09:40:49
End at: 2018-12-20 09:41:19
Local clock offset: 1.258 ms
Remote clock offset: -0.215 ms


# Below is generated by plot.py at 2018-12-20 10:51:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.64 Mbit/s
95th percentile per-packet one-way delay: 1.224 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 162.33 Mbit/s
95th percentile per-packet one-way delay: 1.260 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 144.35 Mbit/s
95th percentile per-packet one-way delay: 1.167 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 1.243 ms
Loss rate: 0.01%
```
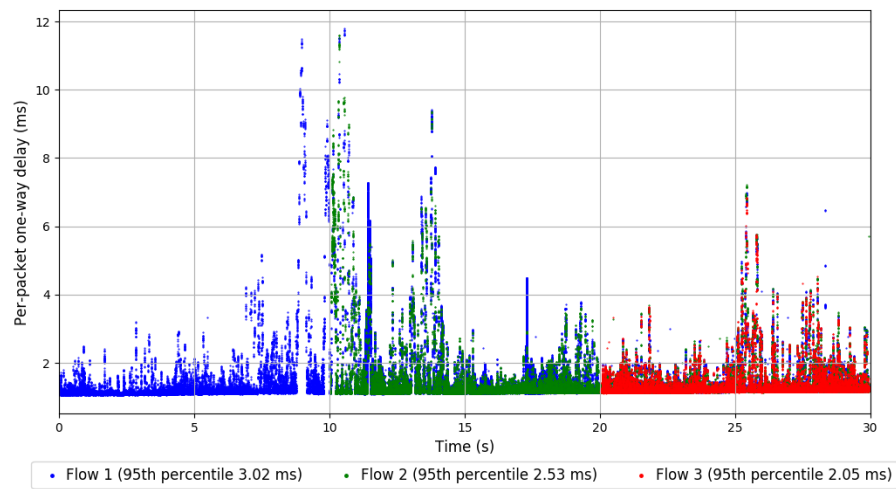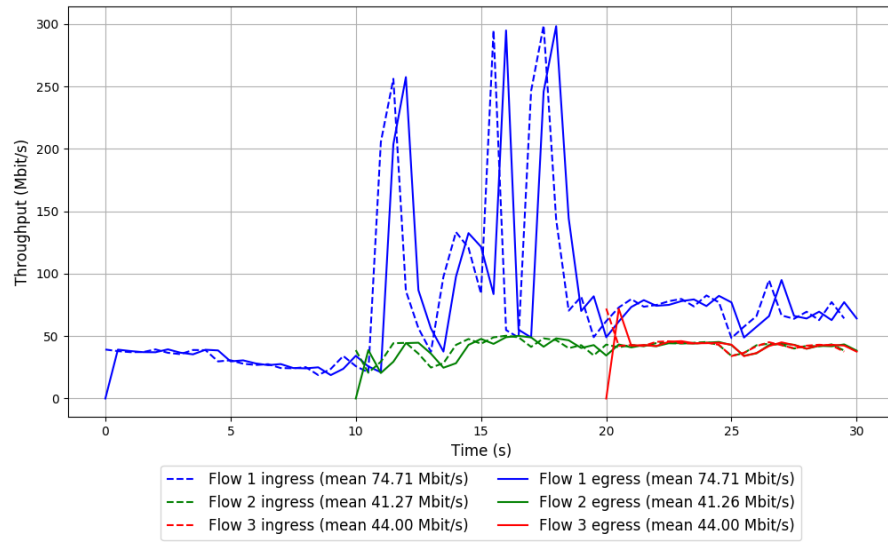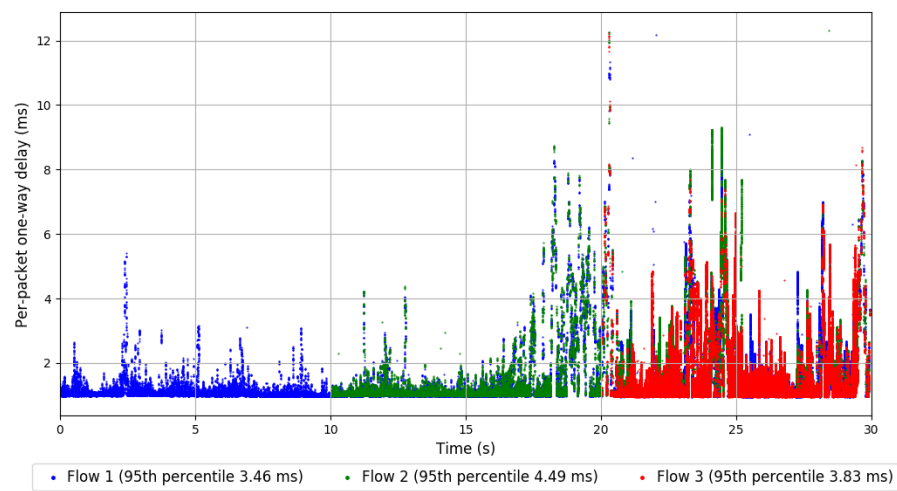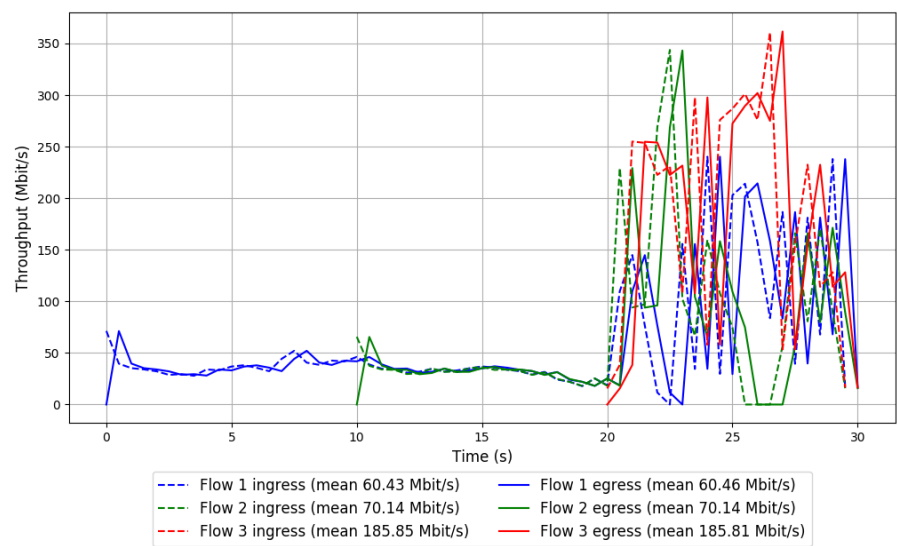
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2018-12-20 10:08:36
End at: 2018-12-20 10:09:06
Local clock offset: 2.699 ms
Remote clock offset: -0.192 ms


# Below is generated by plot.py at 2018-12-20 10:51:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.17 Mbit/s
95th percentile per-packet one-way delay: 3.190 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 160.45 Mbit/s
95th percentile per-packet one-way delay: 3.598 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 145.69 Mbit/s
95th percentile per-packet one-way delay: 3.116 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 130.47 Mbit/s
95th percentile per-packet one-way delay: 2.262 ms
Loss rate: 0.00%
```
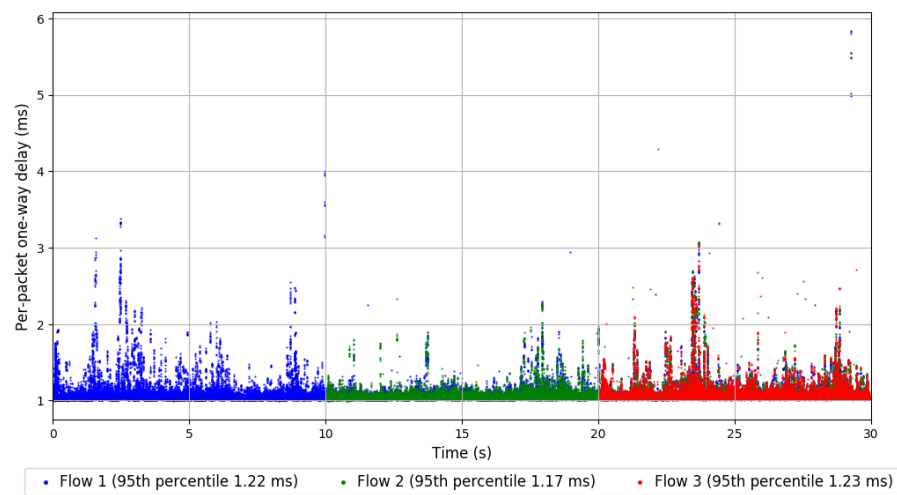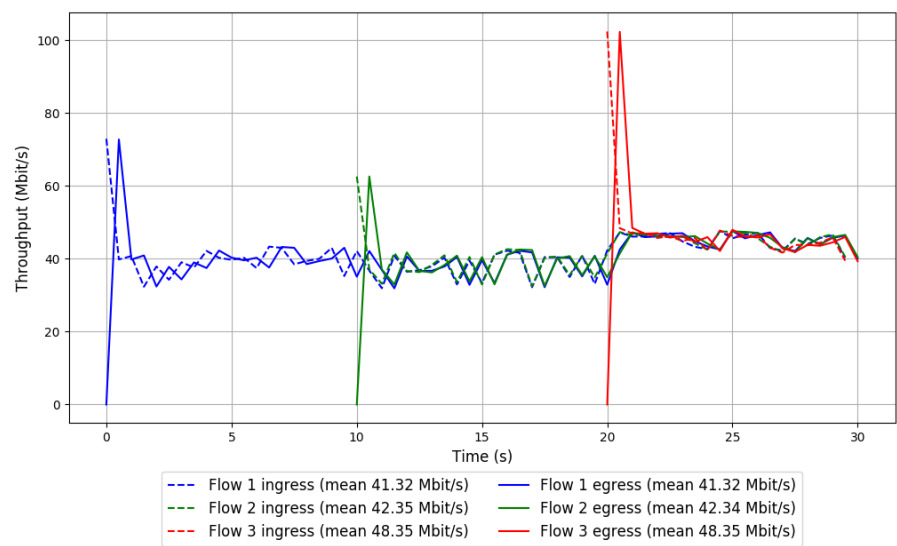
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesD

Start at: 2018-12-20 08:10:58
End at: 2018-12-20 08:11:28
Local clock offset: 1.43 ms
Remote clock offset: 3.247 ms

# Below is generated by plot.py at 2018-12-20 10:51:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 98.64 Mbit/s
95th percentile per-packet one-way delay: 1.738 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 58.18 Mbit/s
95th percentile per-packet one-way delay: 1.611 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 39.08 Mbit/s
95th percentile per-packet one-way delay: 1.693 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 43.55 Mbit/s
95th percentile per-packet one-way delay: 2.154 ms
Loss rate: 0.03%
```
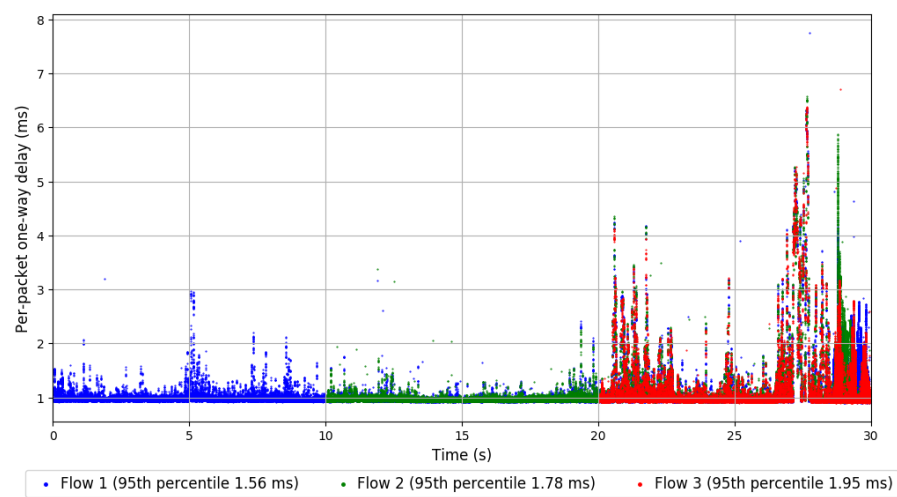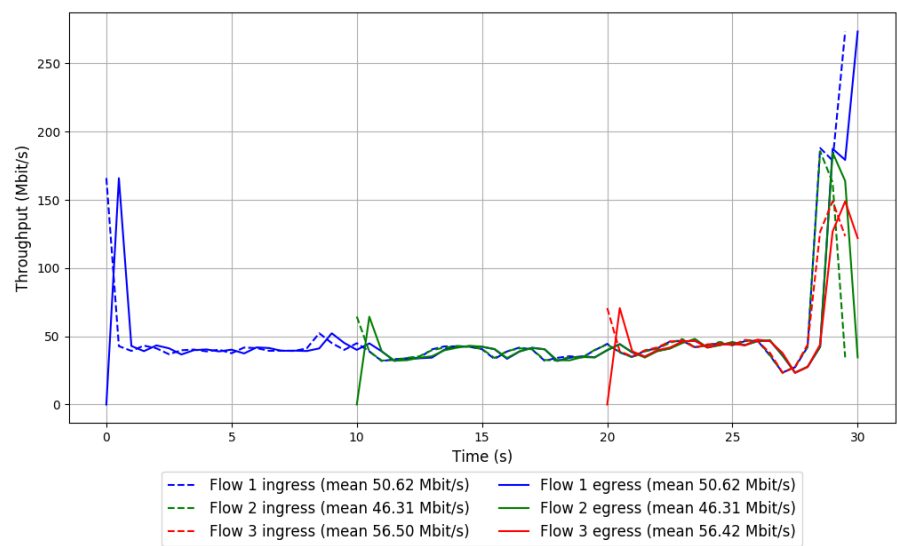
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2018-12-20 08:38:35
End at: 2018-12-20 08:39:05
Local clock offset: 2.654 ms
Remote clock offset: 0.128 ms


# Below is generated by plot.py at 2018-12-20 10:51:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 116.75 Mbit/s
95th percentile per-packet one-way delay: 2.790 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 74.71 Mbit/s
95th percentile per-packet one-way delay: 3.021 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 41.26 Mbit/s
95th percentile per-packet one-way delay: 2.528 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 44.00 Mbit/s
95th percentile per-packet one-way delay: 2.048 ms
Loss rate: 0.02%
```

Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2018-12-20 09:06:06
End at: 2018-12-20 09:06:36
Local clock offset: -0.41 ms
Remote clock offset: -0.461 ms


# Below is generated by plot.py at 2018-12-20 10:51:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 168.60 Mbit/s
95th percentile per-packet one-way delay: 3.864 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.46 Mbit/s
95th percentile per-packet one-way delay: 3.461 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 70.14 Mbit/s
95th percentile per-packet one-way delay: 4.489 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 185.81 Mbit/s
95th percentile per-packet one-way delay: 3.832 ms
Loss rate: 0.00%
```
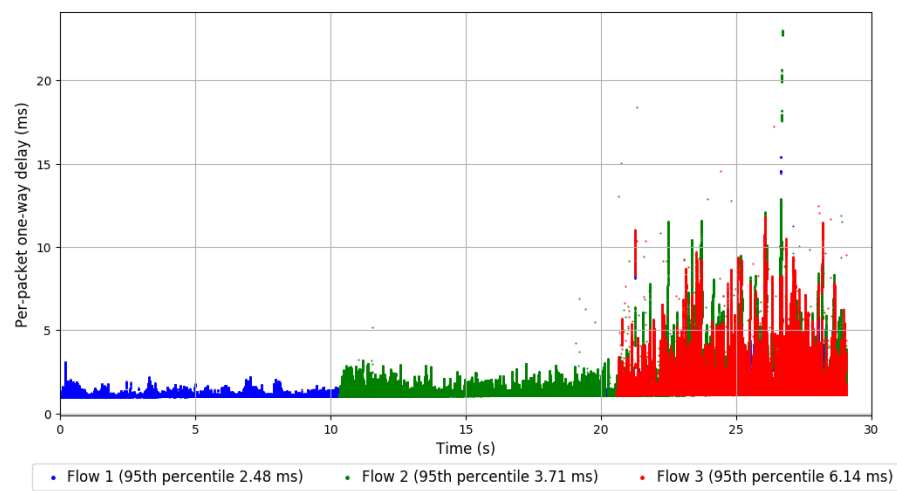
Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2018-12-20 09:33:47
End at: 2018-12-20 09:34:17
Local clock offset: -0.452 ms
Remote clock offset: -0.415 ms

# Below is generated by plot.py at 2018-12-20 10:51:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.50 Mbit/s
95th percentile per-packet one-way delay: 1.201 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 41.32 Mbit/s
95th percentile per-packet one-way delay: 1.216 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 42.34 Mbit/s
95th percentile per-packet one-way delay: 1.166 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 48.35 Mbit/s
95th percentile per-packet one-way delay: 1.228 ms
Loss rate: 0.01%
```
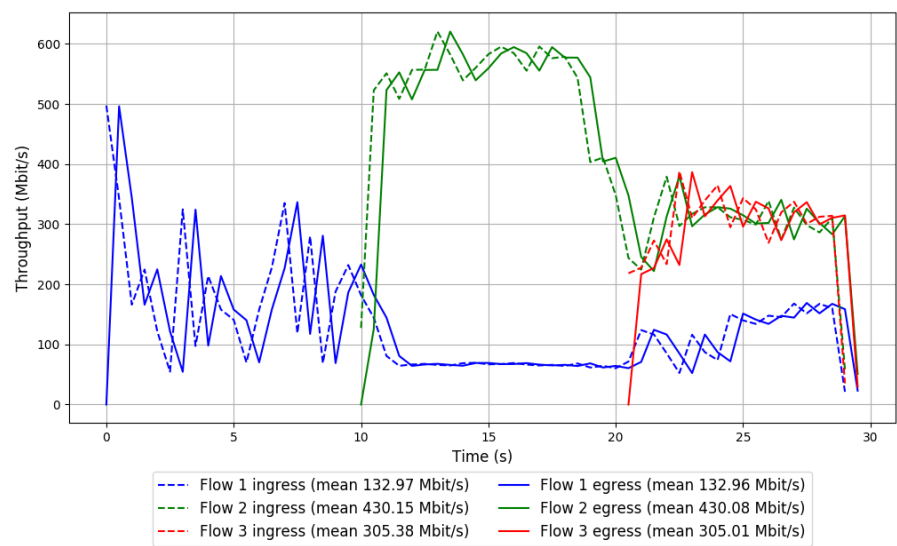
Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2018-12-20 10:01:35
End at: 2018-12-20 10:02:05
Local clock offset: 3.585 ms
Remote clock offset: -0.219 ms


# Below is generated by plot.py at 2018-12-20 10:51:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.11 Mbit/s
95th percentile per-packet one-way delay: 1.705 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 50.62 Mbit/s
95th percentile per-packet one-way delay: 1.561 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.31 Mbit/s
95th percentile per-packet one-way delay: 1.783 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 56.42 Mbit/s
95th percentile per-packet one-way delay: 1.951 ms
Loss rate: 0.14%
```
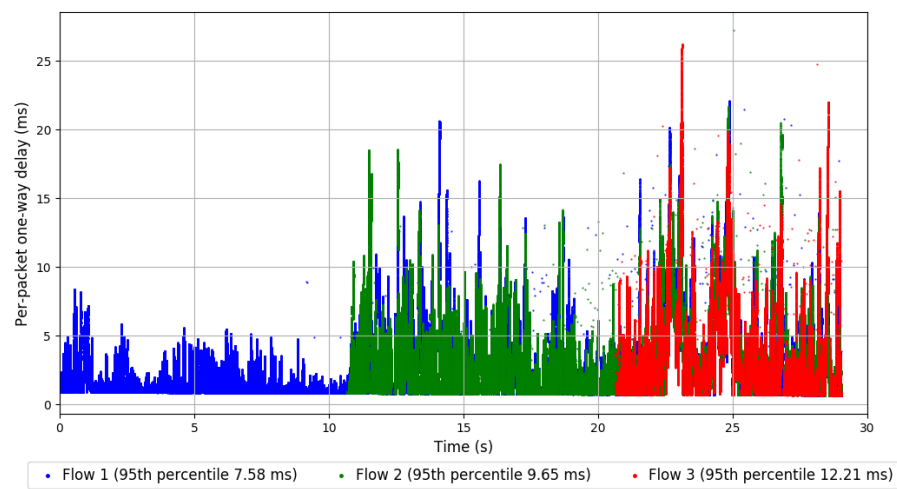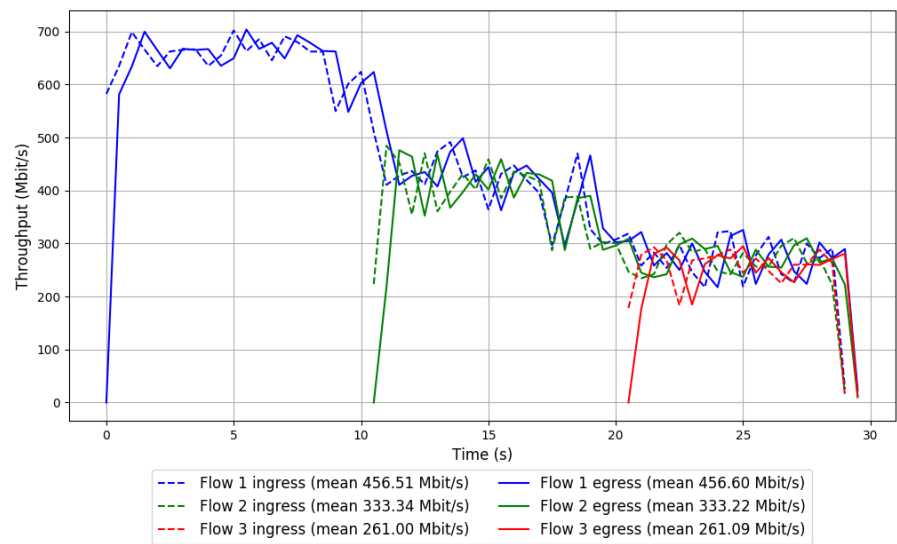
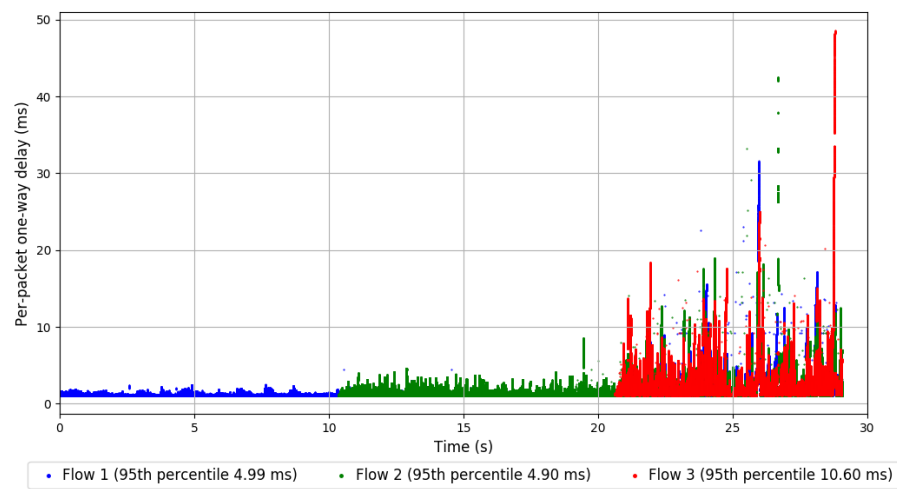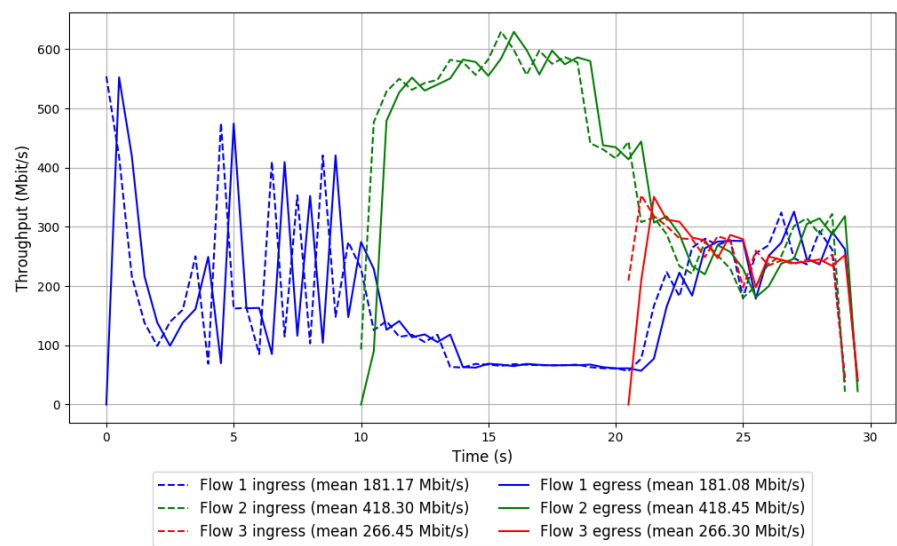Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2018-12-20 07:51:52
End at: 2018-12-20 07:52:22
Local clock offset: 0.486 ms
Remote clock offset: 0.817 ms

# Below is generated by plot.py at 2018-12-20 10:53:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 499.86 Mbit/s
95th percentile per-packet one-way delay: 4.027 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 132.96 Mbit/s
95th percentile per-packet one-way delay: 2.481 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 430.08 Mbit/s
95th percentile per-packet one-way delay: 3.710 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 305.01 Mbit/s
95th percentile per-packet one-way delay: 6.140 ms
Loss rate: 0.16%
```
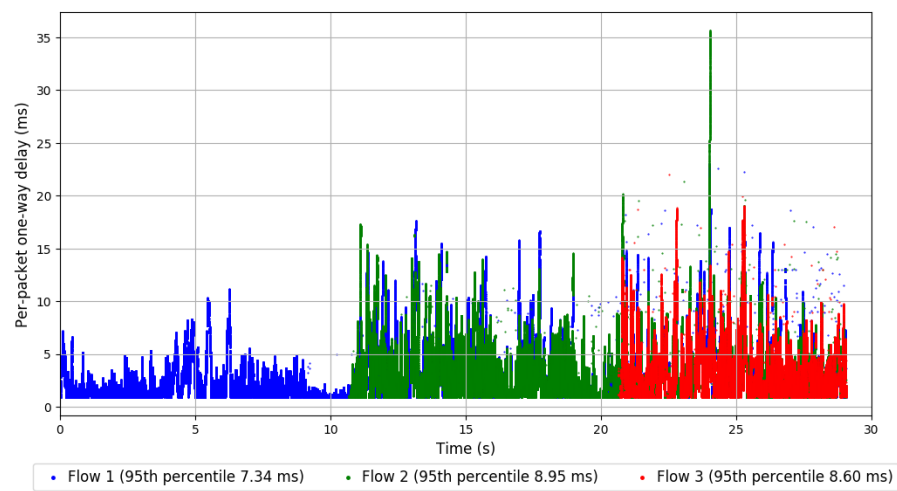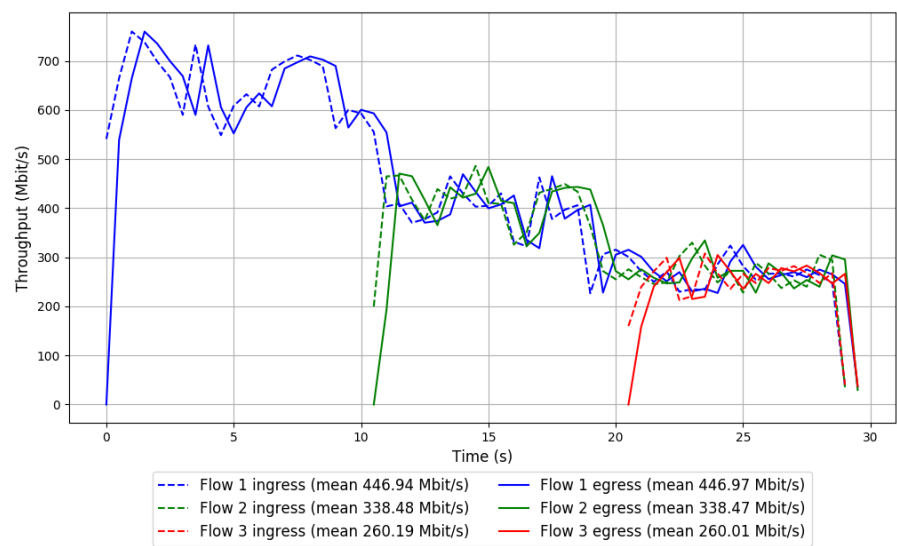
Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2018-12-20 08:19:26
End at: 2018-12-20 08:19:56
Local clock offset: 2.755 ms
Remote clock offset: 3.407 ms


# Below is generated by plot.py at 2018-12-20 10:56:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 742.73 Mbit/s
95th percentile per-packet one-way delay: 8.769 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 456.60 Mbit/s
95th percentile per-packet one-way delay: 7.576 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 333.22 Mbit/s
95th percentile per-packet one-way delay: 9.647 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 261.09 Mbit/s
95th percentile per-packet one-way delay: 12.209 ms
Loss rate: 0.00%
```

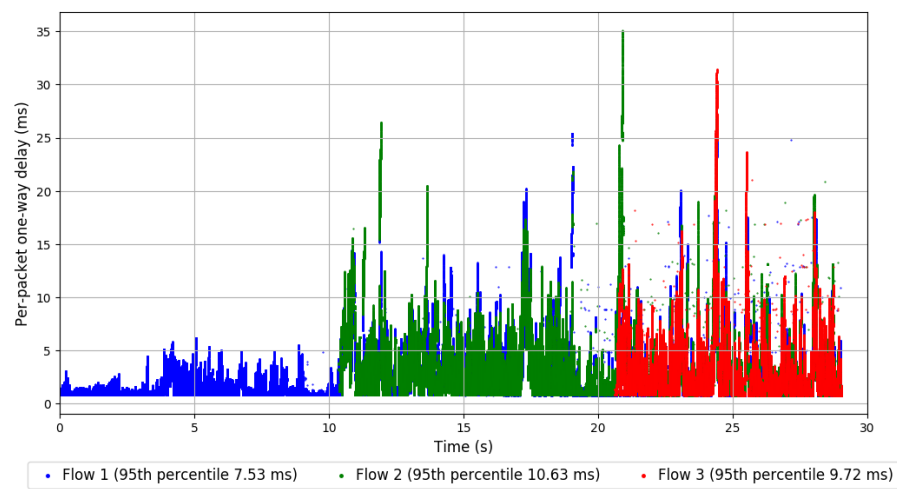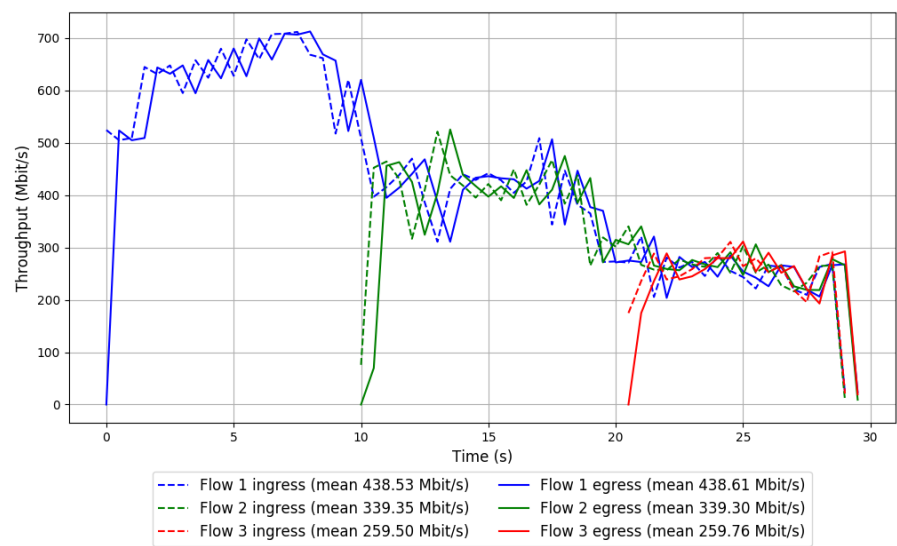Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2018-12-20 08:46:48
End at: 2018-12-20 08:47:18
Local clock offset: 0.903 ms
Remote clock offset: -0.386 ms


# Below is generated by plot.py at 2018-12-20 10:56:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 527.90 Mbit/s
95th percentile per-packet one-way delay: 6.084 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 181.08 Mbit/s
95th percentile per-packet one-way delay: 4.987 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 418.45 Mbit/s
95th percentile per-packet one-way delay: 4.899 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 266.30 Mbit/s
95th percentile per-packet one-way delay: 10.597 ms
Loss rate: 0.00%
```

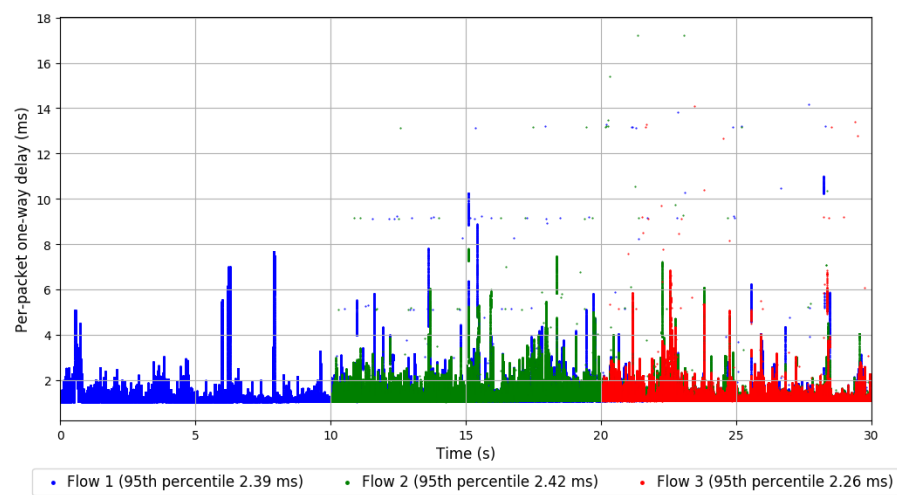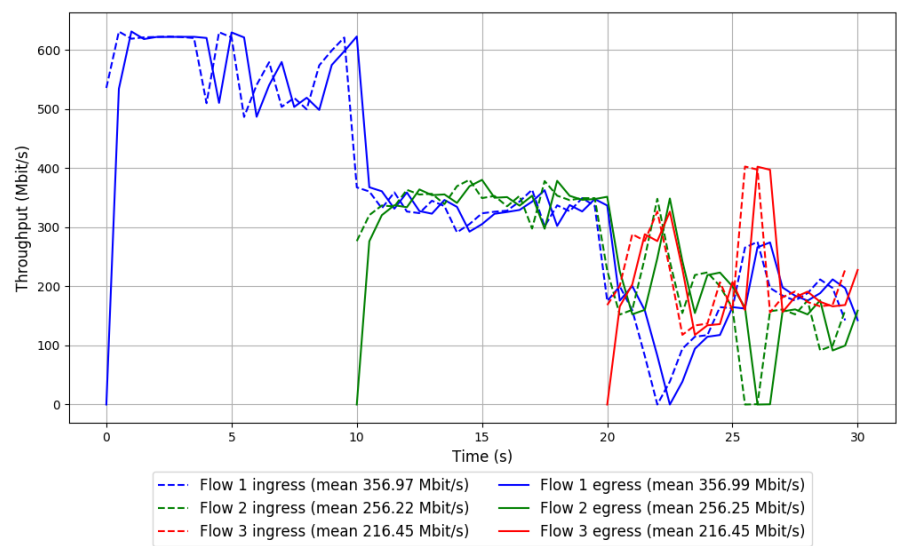Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 181.17 Mbit/s) --- Flow 1 egress (mean 181.08 Mbit/s)
Flow 2 ingress (mean 418.30 Mbit/s) --- Flow 2 egress (mean 418.45 Mbit/s)
Flow 3 ingress (mean 266.45 Mbit/s) --- Flow 3 egress (mean 266.30 Mbit/s)

Flow 1 (95th percentile 4.99 ms)   Flow 2 (95th percentile 4.90 ms)   Flow 3 (95th percentile 10.60 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2018-12-20 09:14:27
End at: 2018-12-20 09:14:57
Local clock offset: -0.282 ms
Remote clock offset: -0.499 ms


# Below is generated by plot.py at 2018-12-20 10:56:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 736.41 Mbit/s
95th percentile per-packet one-way delay: 8.010 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 446.97 Mbit/s
95th percentile per-packet one-way delay: 7.339 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 338.47 Mbit/s
95th percentile per-packet one-way delay: 8.952 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 260.01 Mbit/s
95th percentile per-packet one-way delay: 8.600 ms
Loss rate: 0.12%
```
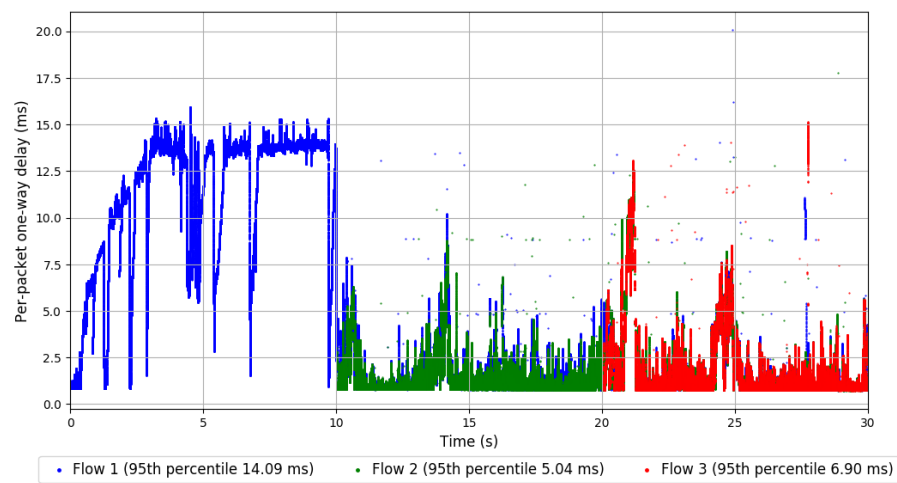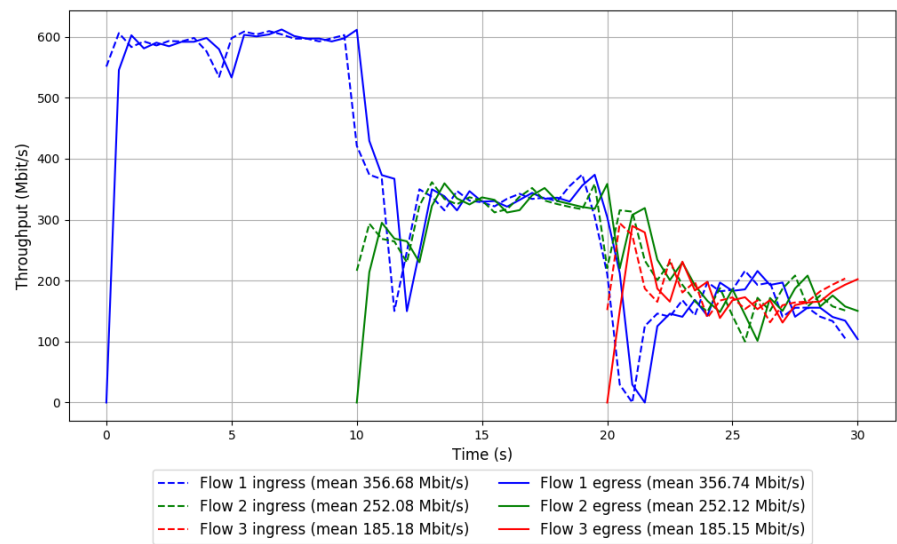
Run 4: Report of Indigo-MusesT — Data Link

- - - - Flow 1 ingress (mean 446.94 Mbit/s) ——— Flow 1 egress (mean 446.97 Mbit/s)
- - - - Flow 2 ingress (mean 338.48 Mbit/s) ——— Flow 2 egress (mean 338.47 Mbit/s)
- - - - Flow 3 ingress (mean 260.19 Mbit/s) ——— Flow 3 egress (mean 260.01 Mbit/s)

- Flow 1 (95th percentile 7.34 ms)   • Flow 2 (95th percentile 8.95 ms)   • Flow 3 (95th percentile 8.60 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2018-12-20 09:42:16
End at: 2018-12-20 09:42:46
Local clock offset: 1.563 ms
Remote clock offset: -0.268 ms


# Below is generated by plot.py at 2018-12-20 10:57:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 732.02 Mbit/s
95th percentile per-packet one-way delay: 8.900 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 438.61 Mbit/s
95th percentile per-packet one-way delay: 7.525 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 339.30 Mbit/s
95th percentile per-packet one-way delay: 10.630 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 259.76 Mbit/s
95th percentile per-packet one-way delay: 9.725 ms
Loss rate: 0.04%
```

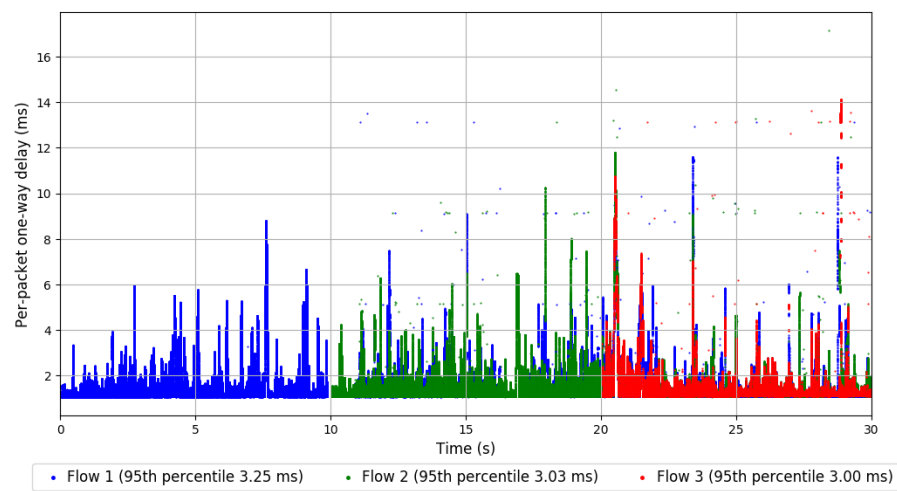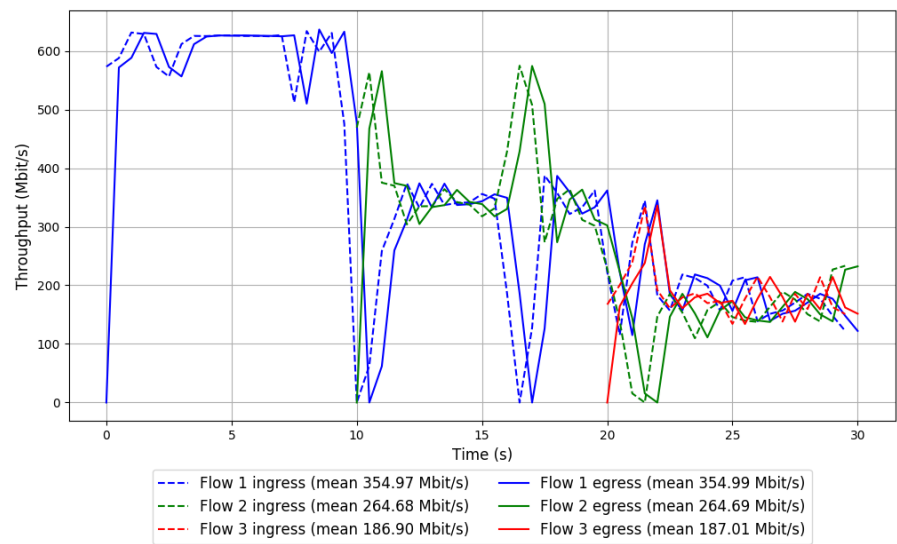Run 5: Report of Indigo-MusesT — Data Link

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```
Run 1: Statistics of LEDBAT

Start at: 2018-12-20 08:00:21
End at: 2018-12-20 08:00:51
Local clock offset: -0.069 ms
Remote clock offset: 2.287 ms


# Below is generated by plot.py at 2018-12-20 10:57:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 599.53 Mbit/s
95th percentile per-packet one-way delay: 2.386 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 356.99 Mbit/s
95th percentile per-packet one-way delay: 2.393 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 256.25 Mbit/s
95th percentile per-packet one-way delay: 2.421 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 216.45 Mbit/s
95th percentile per-packet one-way delay: 2.260 ms
Loss rate: 0.02%
```
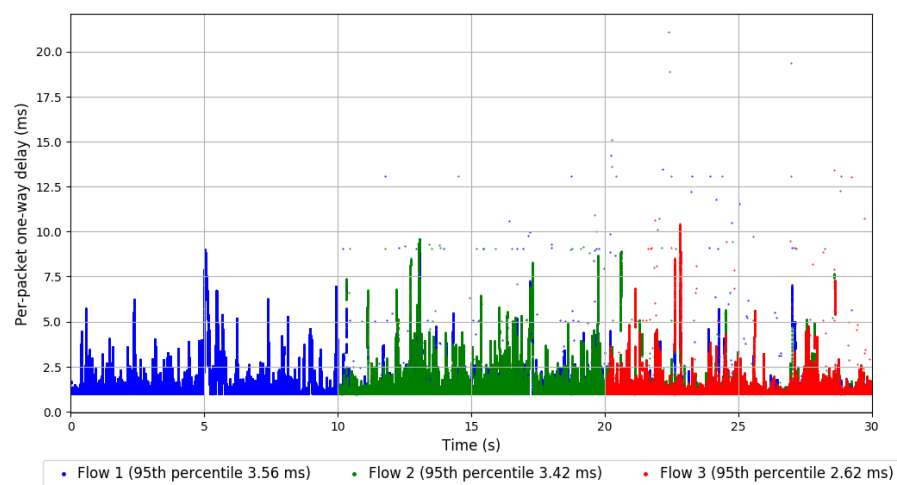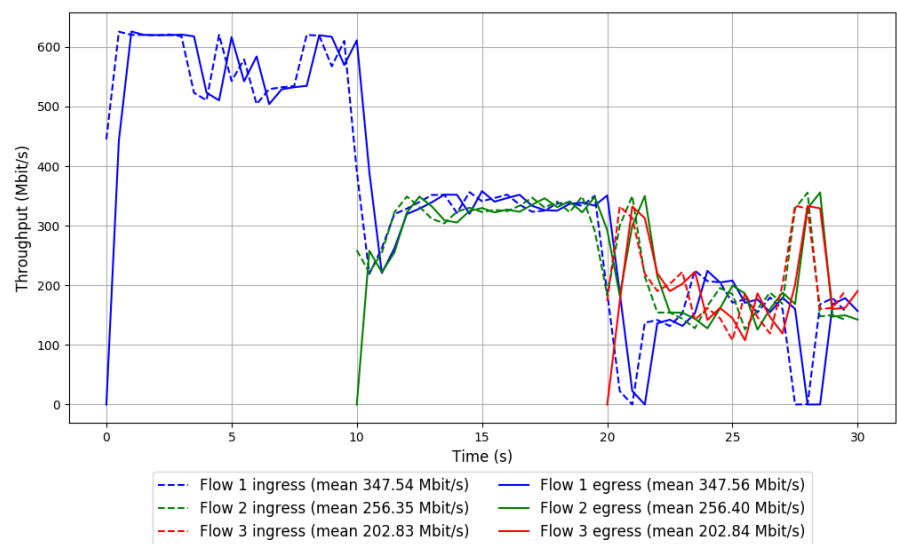
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-12-20 08:28:02
End at: 2018-12-20 08:28:33
Local clock offset: 3.366 ms
Remote clock offset: 1.15 ms


# Below is generated by plot.py at 2018-12-20 10:57:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 586.00 Mbit/s
95th percentile per-packet one-way delay: 13.968 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 356.74 Mbit/s
95th percentile per-packet one-way delay: 14.088 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 252.12 Mbit/s
95th percentile per-packet one-way delay: 5.044 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 185.15 Mbit/s
95th percentile per-packet one-way delay: 6.899 ms
Loss rate: 0.05%
```
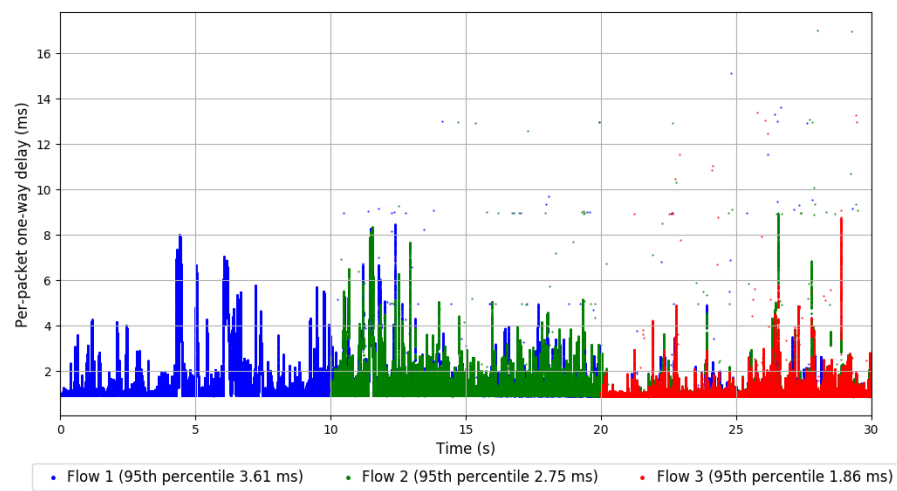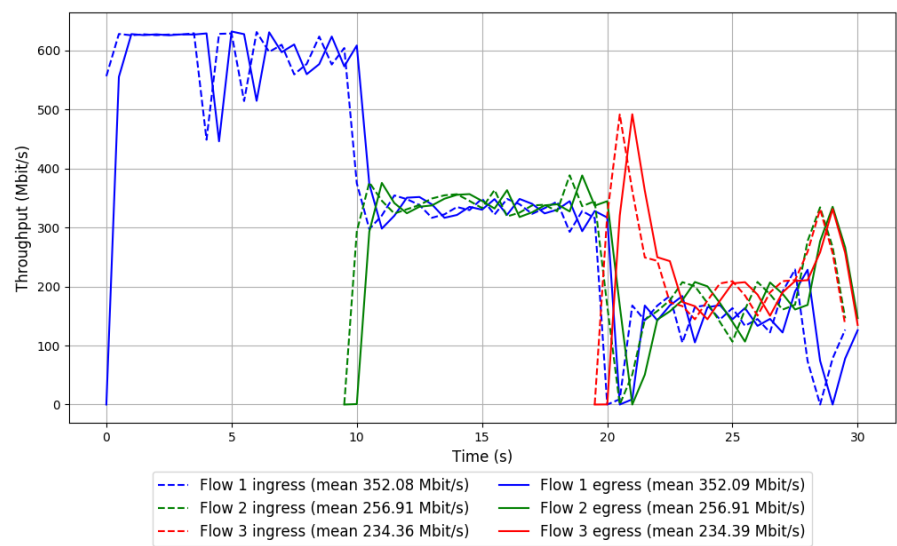
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-12-20 08:55:23
End at: 2018-12-20 08:55:53
Local clock offset: 0.068 ms
Remote clock offset: -0.574 ms


# Below is generated by plot.py at 2018-12-20 10:57:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 593.14 Mbit/s
95th percentile per-packet one-way delay: 3.168 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 354.99 Mbit/s
95th percentile per-packet one-way delay: 3.245 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 264.69 Mbit/s
95th percentile per-packet one-way delay: 3.026 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 187.01 Mbit/s
95th percentile per-packet one-way delay: 2.999 ms
Loss rate: 0.00%
```
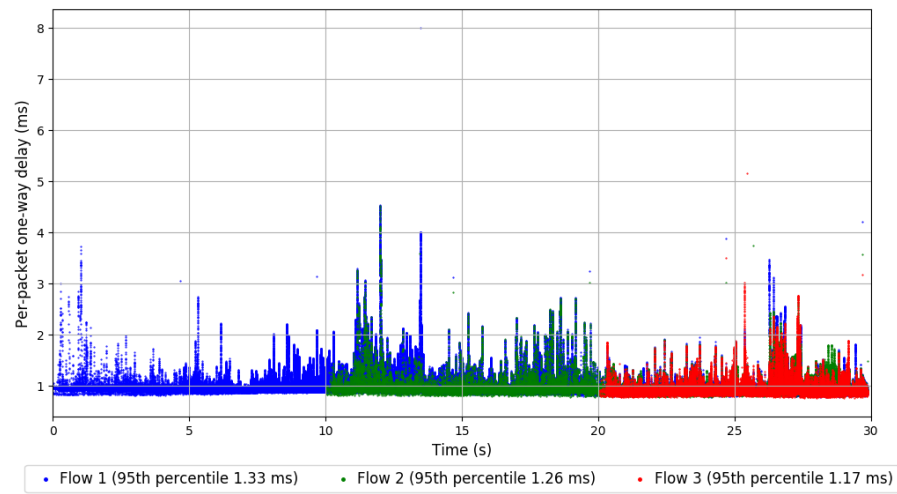
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 354.97 Mbit/s)   Flow 1 egress (mean 354.99 Mbit/s)
Flow 2 ingress (mean 264.68 Mbit/s)   Flow 2 egress (mean 264.69 Mbit/s)
Flow 3 ingress (mean 186.90 Mbit/s)   Flow 3 egress (mean 187.01 Mbit/s)

Flow 1 (95th percentile 3.25 ms)   Flow 2 (95th percentile 3.03 ms)   Flow 3 (95th percentile 3.00 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2018-12-20 09:23:03
End at: 2018-12-20 09:23:33
Local clock offset: -0.292 ms
Remote clock offset: -0.655 ms

# Below is generated by plot.py at 2018-12-20 11:00:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 585.64 Mbit/s
95th percentile per-packet one-way delay: 3.422 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 347.56 Mbit/s
95th percentile per-packet one-way delay: 3.564 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 256.40 Mbit/s
95th percentile per-packet one-way delay: 3.415 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 202.84 Mbit/s
95th percentile per-packet one-way delay: 2.617 ms
Loss rate: 0.02%
```
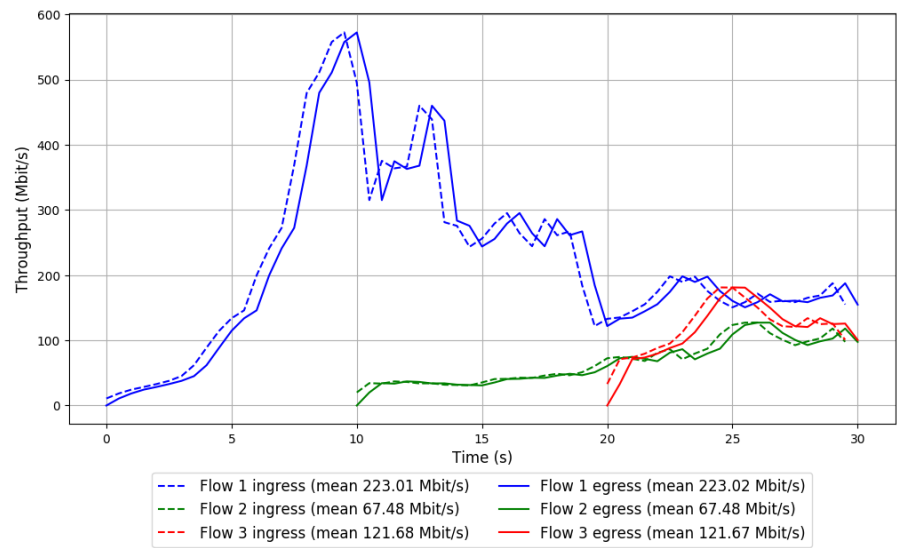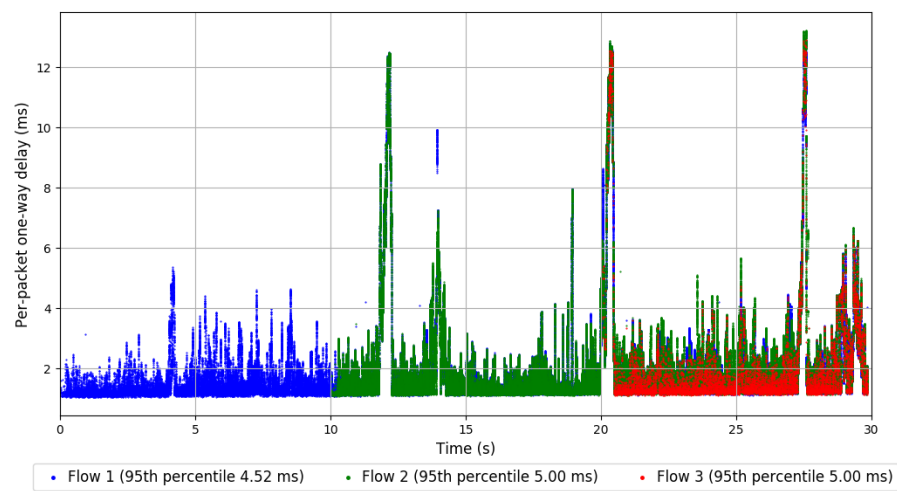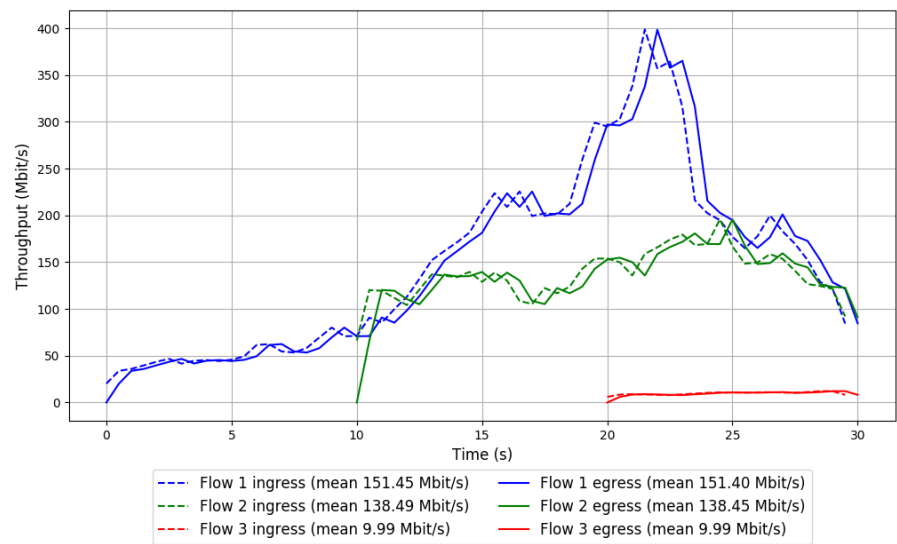
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2018-12-20 09:50:54
End at: 2018-12-20 09:51:24
Local clock offset: 2.846 ms
Remote clock offset: -0.246 ms


# Below is generated by plot.py at 2018-12-20 11:01:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 601.26 Mbit/s
95th percentile per-packet one-way delay: 3.136 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 352.09 Mbit/s
95th percentile per-packet one-way delay: 3.608 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 256.91 Mbit/s
95th percentile per-packet one-way delay: 2.752 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 234.39 Mbit/s
95th percentile per-packet one-way delay: 1.861 ms
Loss rate: 0.01%
```
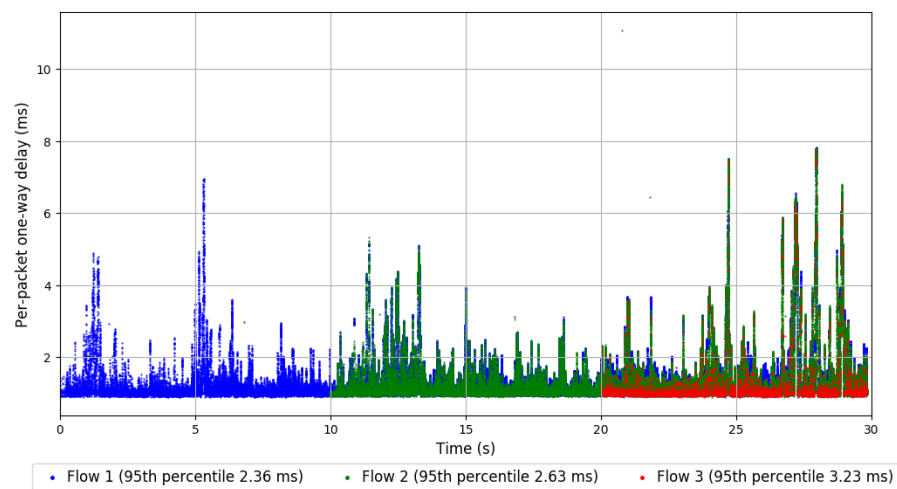
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2018-12-20 08:13:55
End at: 2018-12-20 08:14:25
Local clock offset: 2.003 ms
Remote clock offset: 3.421 ms

# Below is generated by plot.py at 2018-12-20 11:01:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 307.90 Mbit/s
95th percentile per-packet one-way delay: 1.298 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 223.02 Mbit/s
95th percentile per-packet one-way delay: 1.330 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 67.48 Mbit/s
95th percentile per-packet one-way delay: 1.260 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 121.67 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.02%
```
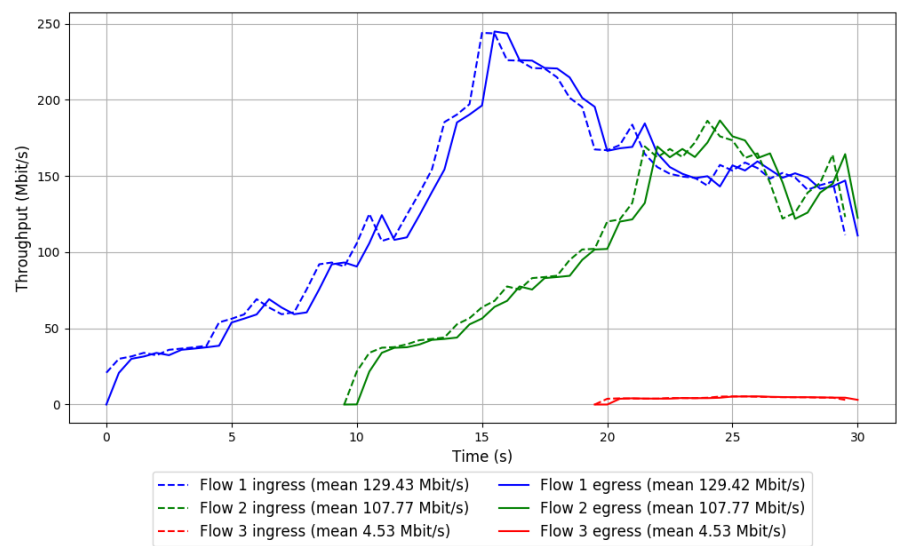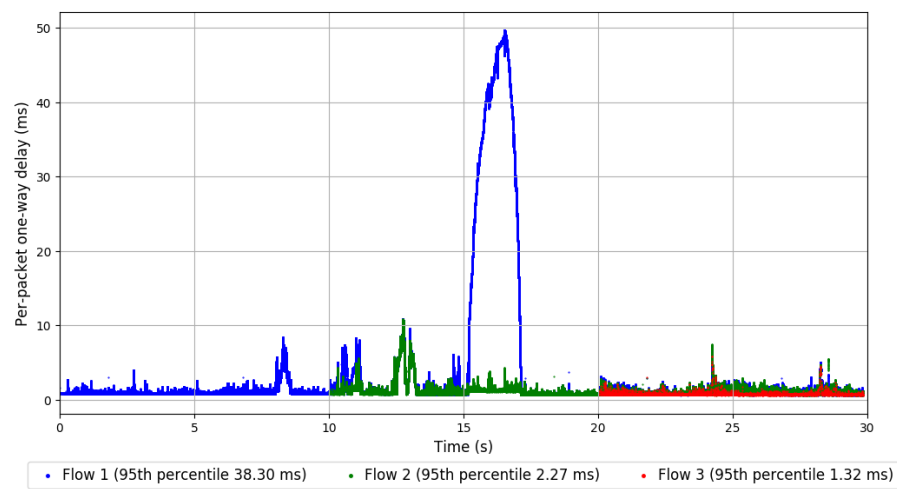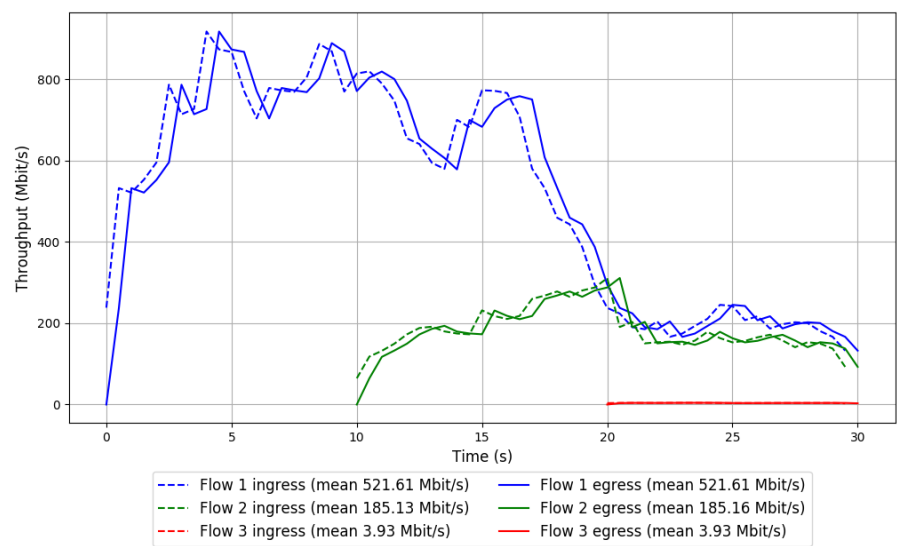
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2018-12-20 08:41:30
End at: 2018-12-20 08:42:00
Local clock offset: 1.857 ms
Remote clock offset: -0.154 ms


# Below is generated by plot.py at 2018-12-20 11:01:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 246.67 Mbit/s
95th percentile per-packet one-way delay: 4.700 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 151.40 Mbit/s
95th percentile per-packet one-way delay: 4.516 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 138.45 Mbit/s
95th percentile per-packet one-way delay: 4.999 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 9.99 Mbit/s
95th percentile per-packet one-way delay: 5.003 ms
Loss rate: 0.09%
```
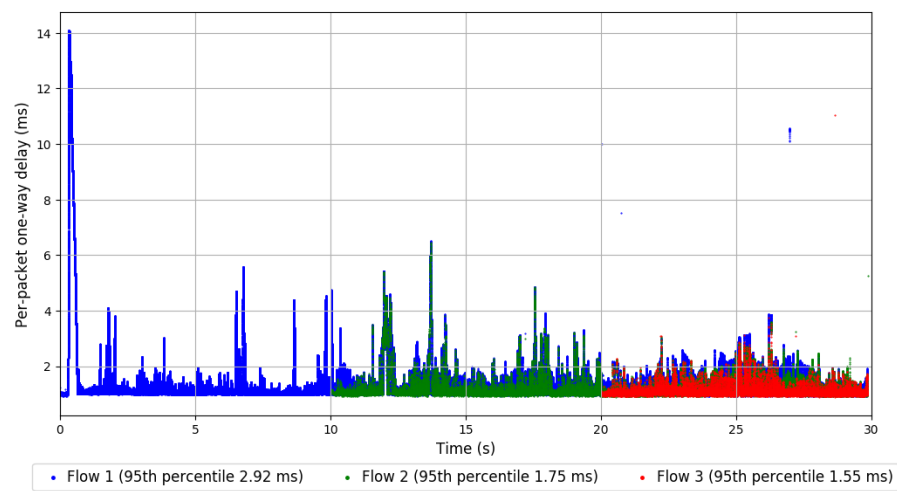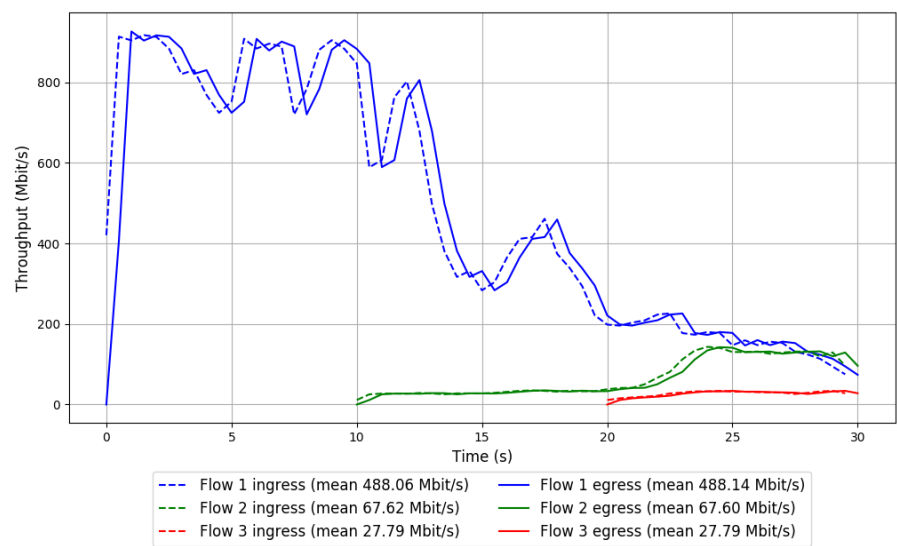
Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 151.45 Mbit/s) — Flow 1 egress (mean 151.40 Mbit/s)
Flow 2 ingress (mean 138.49 Mbit/s) — Flow 2 egress (mean 138.45 Mbit/s)
Flow 3 ingress (mean 9.99 Mbit/s) — Flow 3 egress (mean 9.99 Mbit/s)

Flow 1 (95th percentile 4.52 ms) • Flow 2 (95th percentile 5.00 ms) • Flow 3 (95th percentile 5.00 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2018-12-20 09:09:03
End at: 2018-12-20 09:09:33
Local clock offset: -0.287 ms
Remote clock offset: -0.45 ms


# Below is generated by plot.py at 2018-12-20 11:01:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 202.63 Mbit/s
95th percentile per-packet one-way delay: 2.467 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 129.42 Mbit/s
95th percentile per-packet one-way delay: 2.357 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 107.77 Mbit/s
95th percentile per-packet one-way delay: 2.635 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 4.53 Mbit/s
95th percentile per-packet one-way delay: 3.234 ms
Loss rate: 0.00%
```
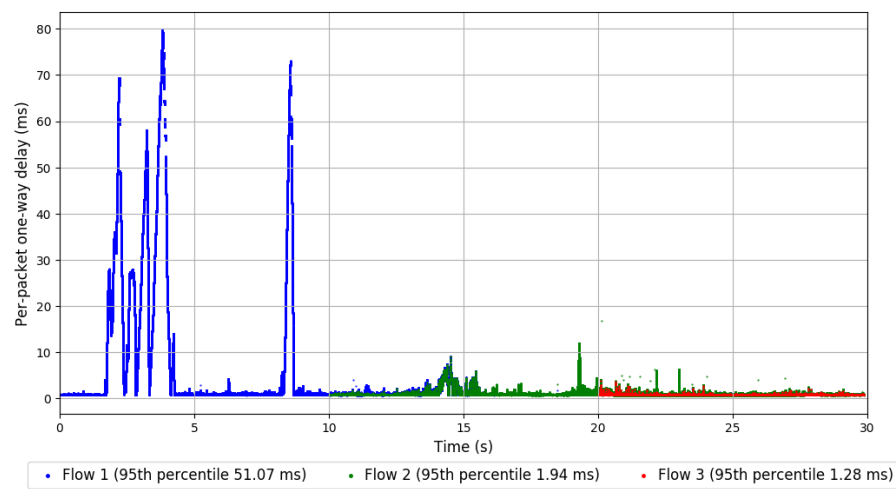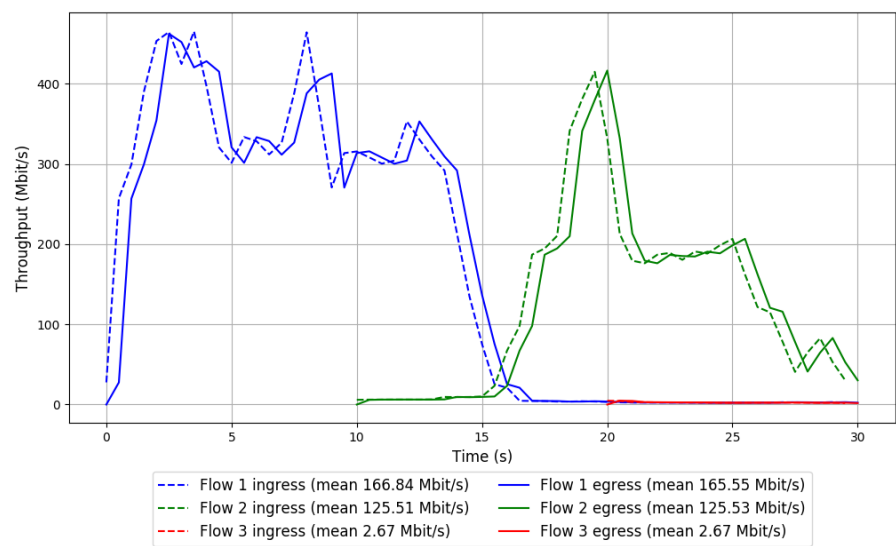
Run 3: Report of PCC-Allegro — Data Link

```
Run 4: Statistics of PCC-Allegro

Start at: 2018-12-20 09:36:43
End at: 2018-12-20 09:37:13
Local clock offset: -0.051 ms
Remote clock offset: -0.359 ms


# Below is generated by plot.py at 2018-12-20 11:04:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 645.94 Mbit/s
95th percentile per-packet one-way delay: 32.951 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 521.61 Mbit/s
95th percentile per-packet one-way delay: 38.305 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 185.16 Mbit/s
95th percentile per-packet one-way delay: 2.273 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.93 Mbit/s
95th percentile per-packet one-way delay: 1.318 ms
Loss rate: 0.00%
```
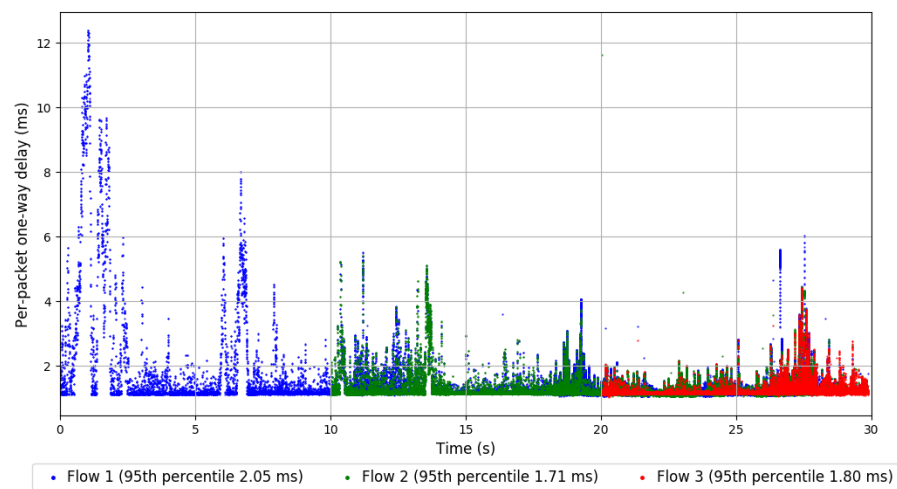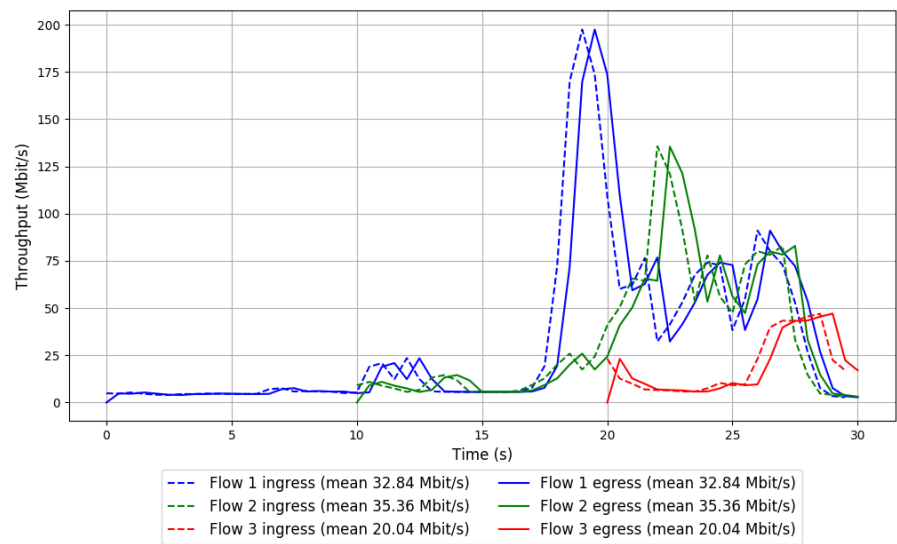
Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-12-20 10:04:31
End at: 2018-12-20 10:05:01
Local clock offset: 3.716 ms
Remote clock offset: -0.241 ms

# Below is generated by plot.py at 2018-12-20 11:04:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 542.09 Mbit/s
95th percentile per-packet one-way delay: 2.776 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 488.14 Mbit/s
95th percentile per-packet one-way delay: 2.925 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 67.60 Mbit/s
95th percentile per-packet one-way delay: 1.750 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 27.79 Mbit/s
95th percentile per-packet one-way delay: 1.550 ms
Loss rate: 0.02%
```
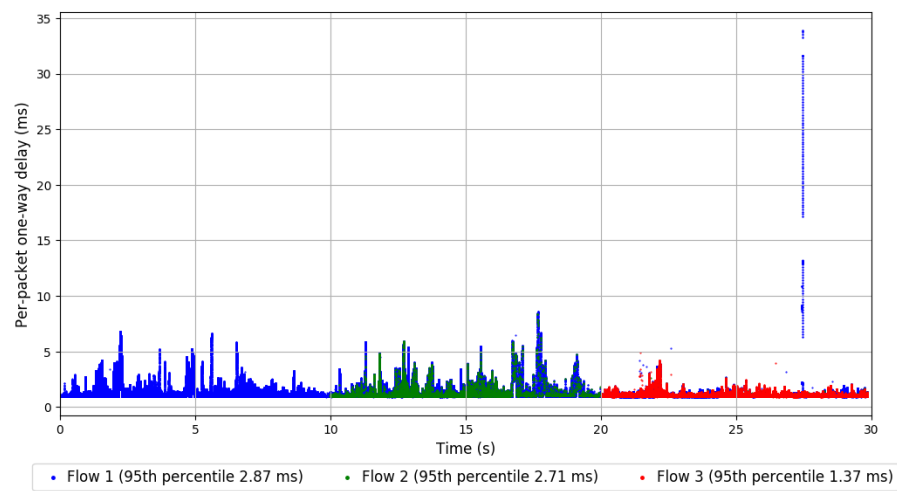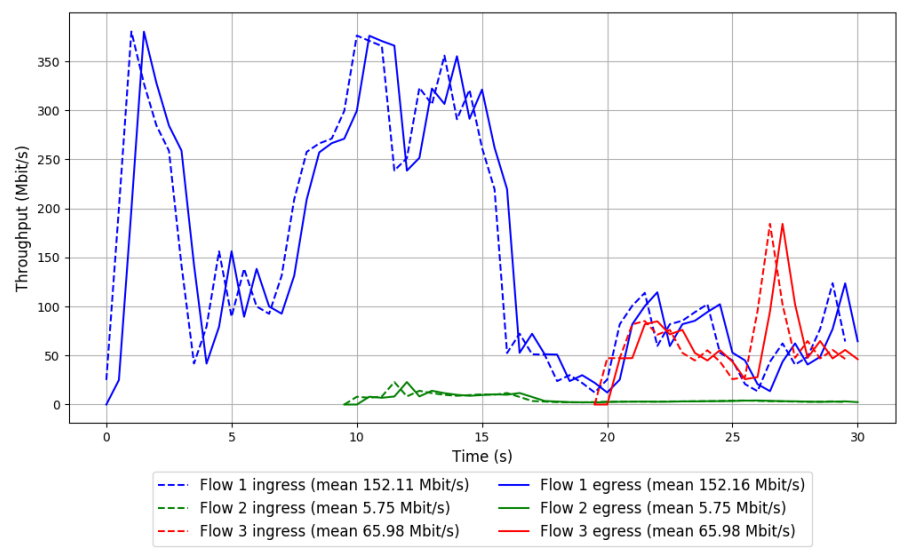
Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 488.06 Mbit/s)   Flow 1 egress (mean 488.14 Mbit/s)
Flow 2 ingress (mean 67.62 Mbit/s)   Flow 2 egress (mean 67.60 Mbit/s)
Flow 3 ingress (mean 27.79 Mbit/s)   Flow 3 egress (mean 27.79 Mbit/s)

Flow 1 (95th percentile 2.92 ms)   Flow 2 (95th percentile 1.75 ms)   Flow 3 (95th percentile 1.55 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2018-12-20 08:15:16
End at: 2018-12-20 08:15:46
Local clock offset: 2.22 ms
Remote clock offset: 3.588 ms


# Below is generated by plot.py at 2018-12-20 11:04:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 249.91 Mbit/s
95th percentile per-packet one-way delay: 39.123 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 165.55 Mbit/s
95th percentile per-packet one-way delay: 51.072 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 125.53 Mbit/s
95th percentile per-packet one-way delay: 1.942 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 1.278 ms
Loss rate: 0.00%
```
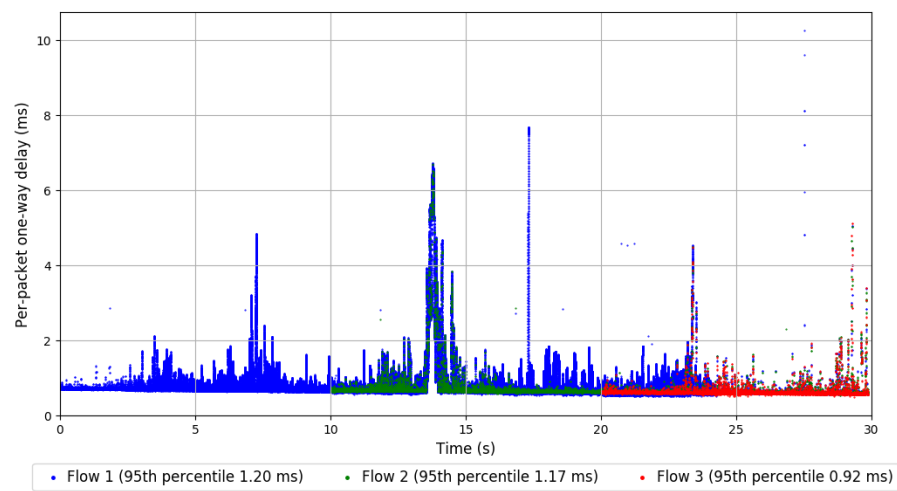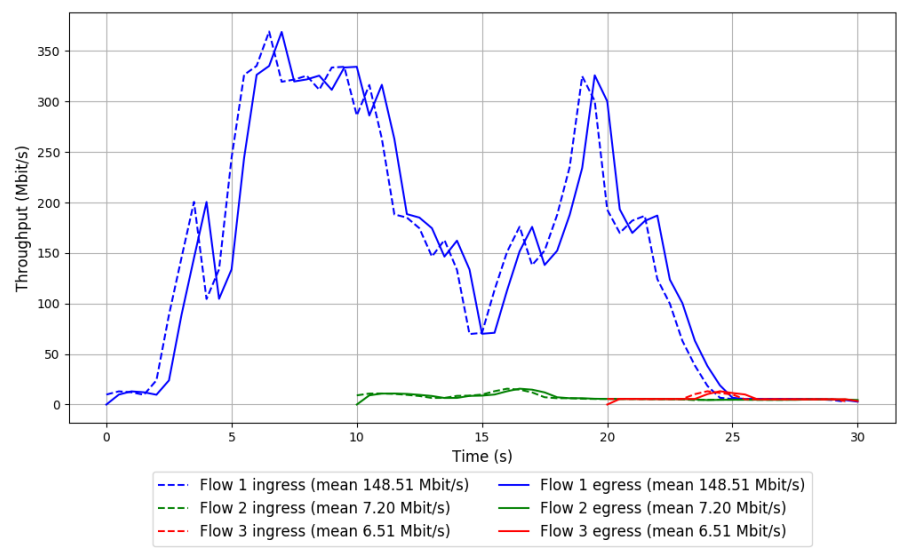
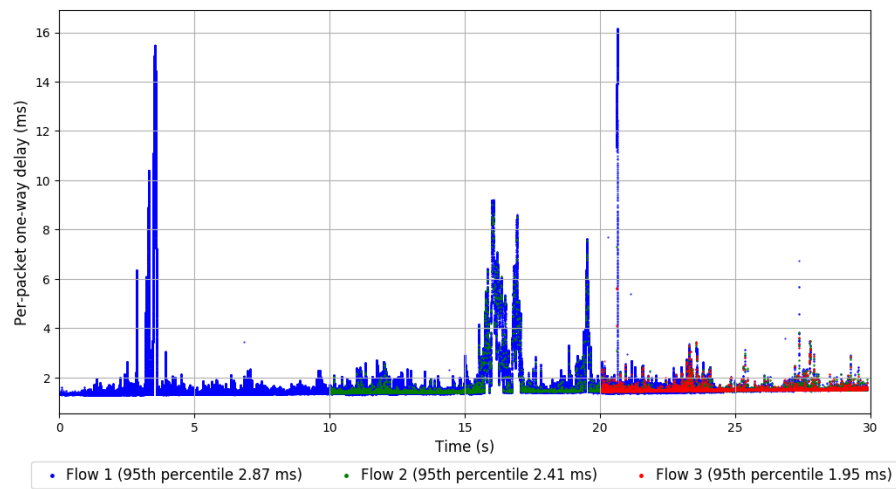# Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2018-12-20 08:42:50
End at: 2018-12-20 08:43:20
Local clock offset: 1.537 ms
Remote clock offset: -0.241 ms


# Below is generated by plot.py at 2018-12-20 11:04:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.98 Mbit/s
95th percentile per-packet one-way delay: 1.895 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 32.84 Mbit/s
95th percentile per-packet one-way delay: 2.046 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.36 Mbit/s
95th percentile per-packet one-way delay: 1.712 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.04 Mbit/s
95th percentile per-packet one-way delay: 1.802 ms
Loss rate: 0.02%
```
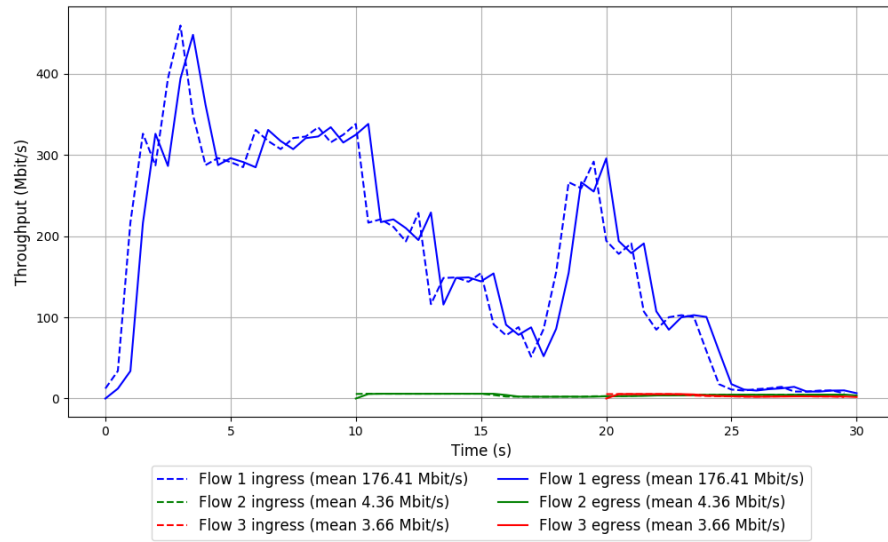
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2018-12-20 09:10:22
End at: 2018-12-20 09:10:52
Local clock offset: -0.275 ms
Remote clock offset: -0.482 ms


# Below is generated by plot.py at 2018-12-20 11:04:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 177.80 Mbit/s
95th percentile per-packet one-way delay: 2.739 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 152.16 Mbit/s
95th percentile per-packet one-way delay: 2.870 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 2.706 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.98 Mbit/s
95th percentile per-packet one-way delay: 1.374 ms
Loss rate: 0.03%
```
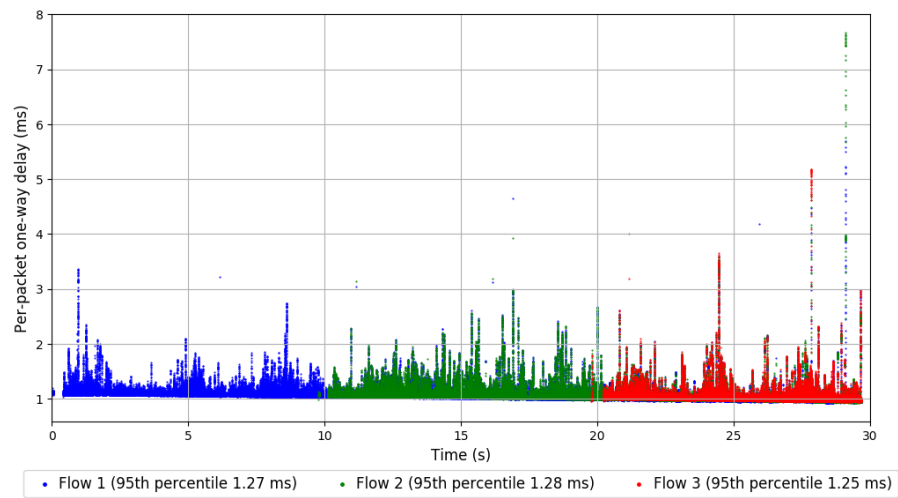
Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2018-12-20 09:38:12
End at: 2018-12-20 09:38:42
Local clock offset: 0.451 ms
Remote clock offset: -0.223 ms

# Below is generated by plot.py at 2018-12-20 11:04:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 155.44 Mbit/s
95th percentile per-packet one-way delay: 1.198 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 148.51 Mbit/s
95th percentile per-packet one-way delay: 1.202 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.20 Mbit/s
95th percentile per-packet one-way delay: 1.173 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 6.51 Mbit/s
95th percentile per-packet one-way delay: 0.923 ms
Loss rate: 0.00%
```
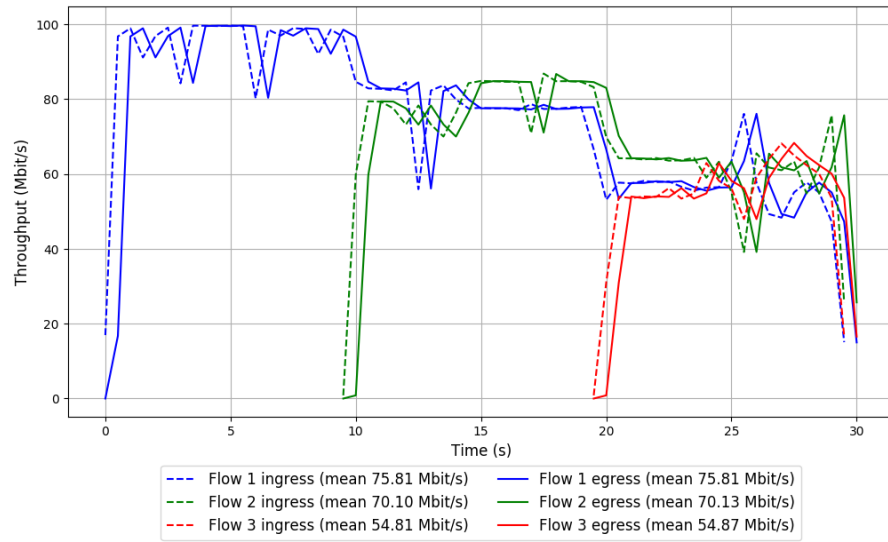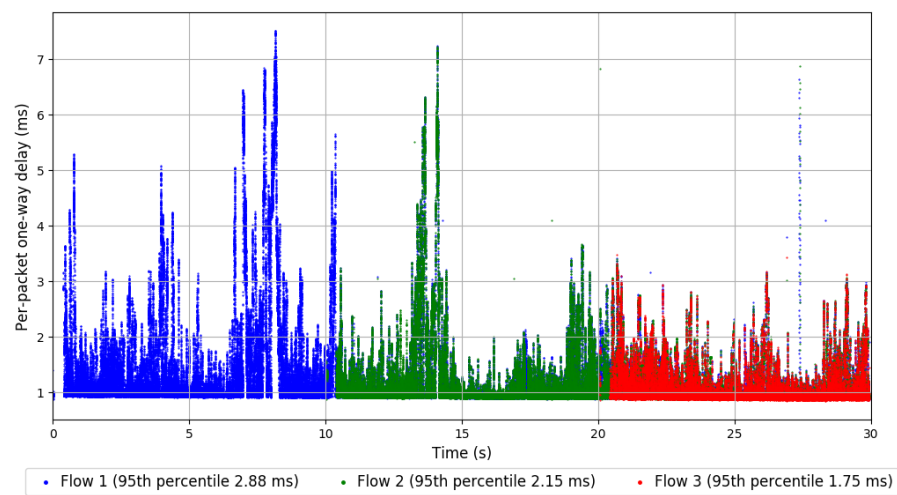
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2018-12-20 10:05:58
End at: 2018-12-20 10:06:28
Local clock offset: 3.694 ms
Remote clock offset: -0.23 ms


# Below is generated by plot.py at 2018-12-20 11:04:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 180.52 Mbit/s
95th percentile per-packet one-way delay: 2.848 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 176.41 Mbit/s
95th percentile per-packet one-way delay: 2.872 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 2.413 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 3.66 Mbit/s
95th percentile per-packet one-way delay: 1.946 ms
Loss rate: 0.00%
```
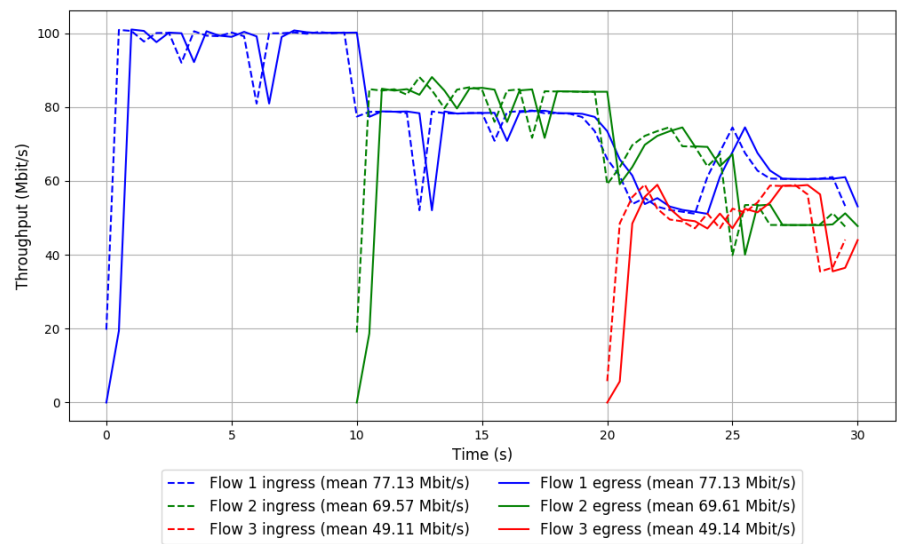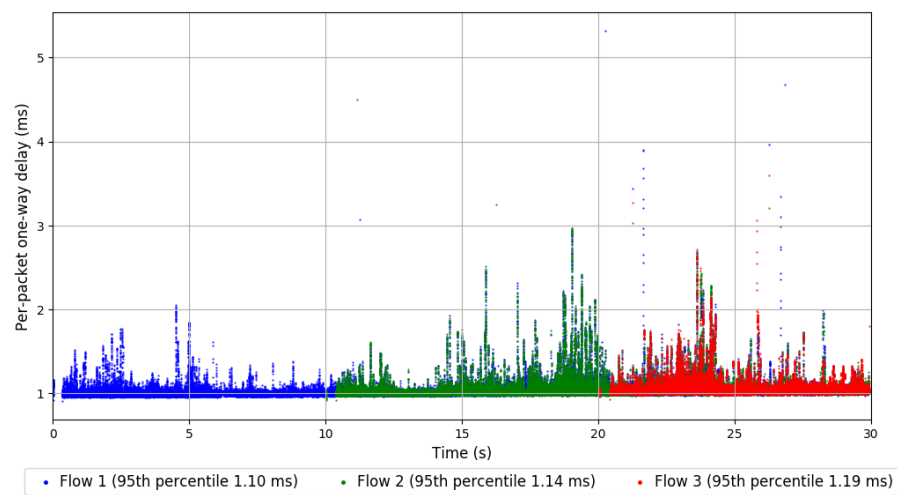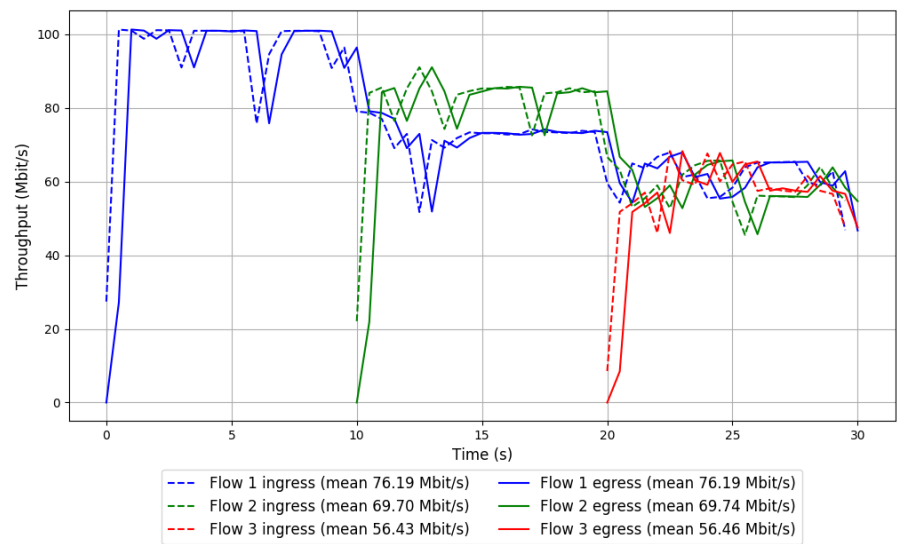
Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-12-20 08:05:05
End at: 2018-12-20 08:05:35
Local clock offset: -0.265 ms
Remote clock offset: 2.758 ms


# Below is generated by plot.py at 2018-12-20 11:04:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.16 Mbit/s
95th percentile per-packet one-way delay: 1.269 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 75.81 Mbit/s
95th percentile per-packet one-way delay: 1.267 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 70.13 Mbit/s
95th percentile per-packet one-way delay: 1.281 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 54.87 Mbit/s
95th percentile per-packet one-way delay: 1.254 ms
Loss rate: 0.02%
```
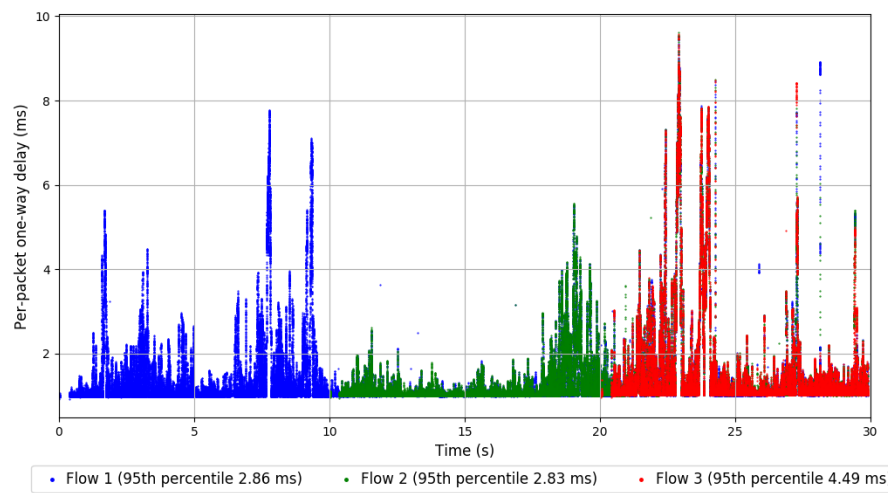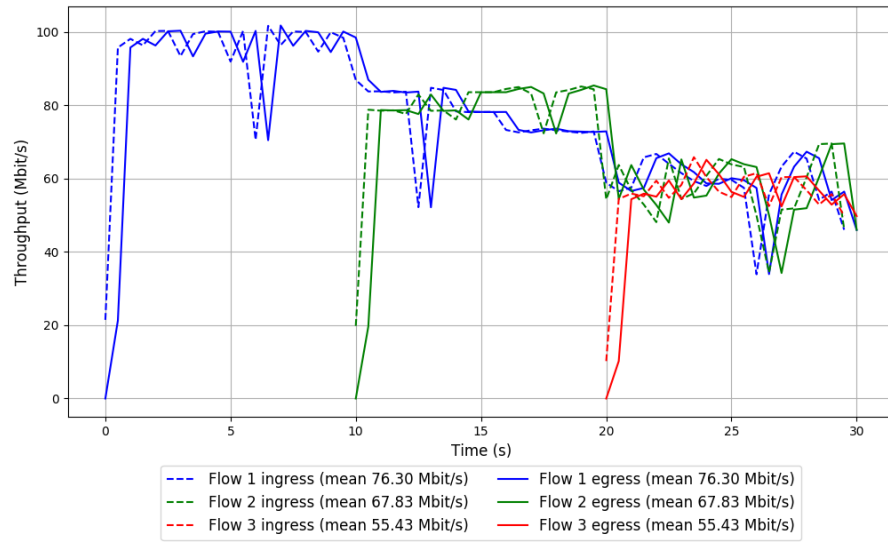
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-12-20 08:32:46
End at: 2018-12-20 08:33:16
Local clock offset: 3.581 ms
Remote clock offset: 0.472 ms


# Below is generated by plot.py at 2018-12-20 11:04:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.68 Mbit/s
95th percentile per-packet one-way delay: 2.481 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 77.13 Mbit/s
95th percentile per-packet one-way delay: 2.882 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 69.61 Mbit/s
95th percentile per-packet one-way delay: 2.154 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.14 Mbit/s
95th percentile per-packet one-way delay: 1.755 ms
Loss rate: 0.02%
```
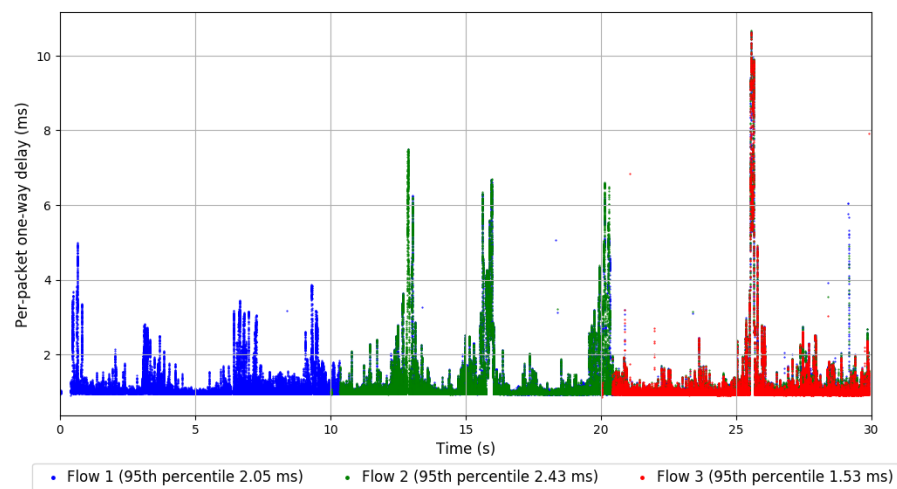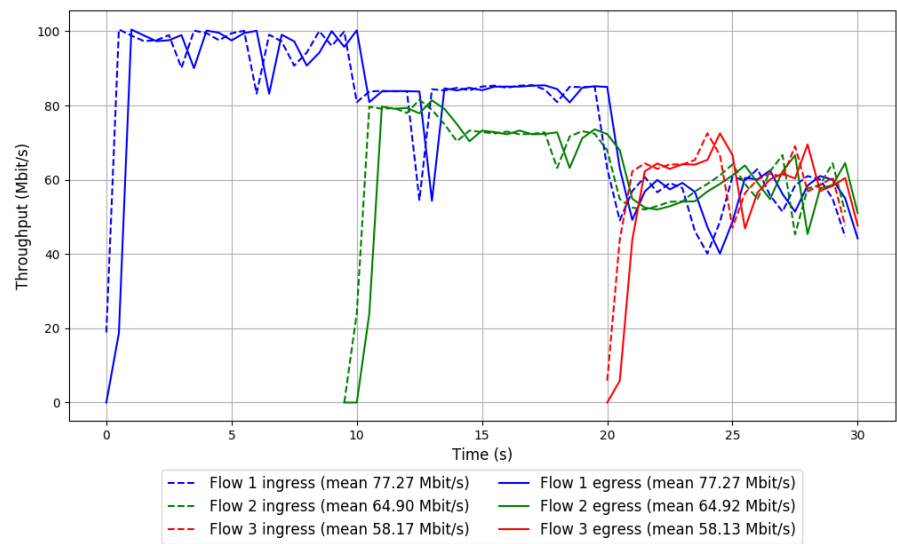
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-12-20 09:00:08
End at: 2018-12-20 09:00:38
Local clock offset: -0.195 ms
Remote clock offset: -0.425 ms

# Below is generated by plot.py at 2018-12-20 11:04:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.25 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 76.19 Mbit/s
95th percentile per-packet one-way delay: 1.099 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 69.74 Mbit/s
95th percentile per-packet one-way delay: 1.135 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 56.46 Mbit/s
95th percentile per-packet one-way delay: 1.194 ms
Loss rate: 0.02%
```
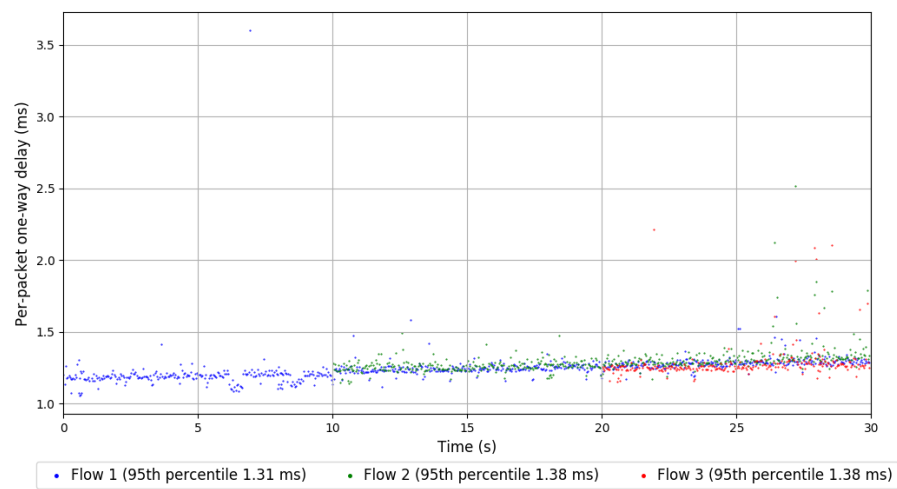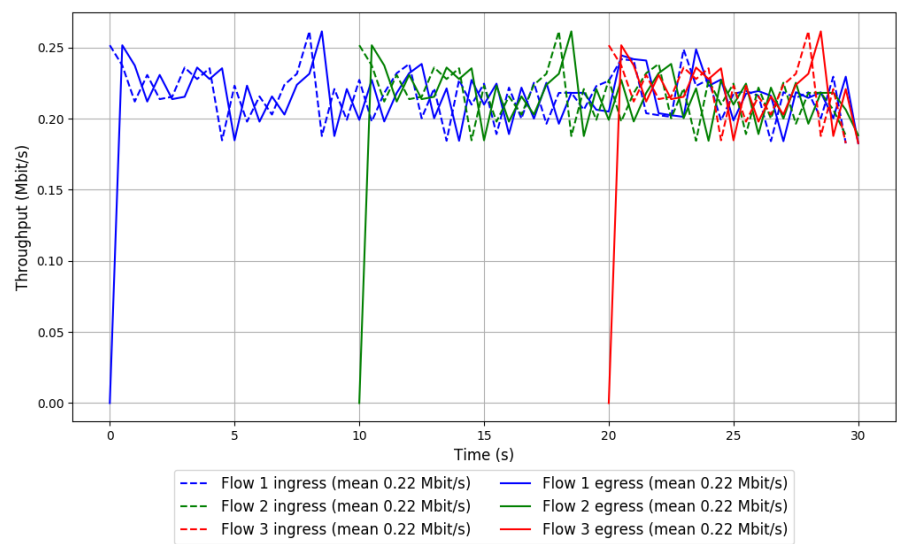
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 76.19 Mbit/s)   Flow 1 egress (mean 76.19 Mbit/s)
Flow 2 ingress (mean 69.70 Mbit/s)   Flow 2 egress (mean 69.74 Mbit/s)
Flow 3 ingress (mean 56.43 Mbit/s)   Flow 3 egress (mean 56.46 Mbit/s)

Flow 1 (95th percentile 1.10 ms)   Flow 2 (95th percentile 1.14 ms)   Flow 3 (95th percentile 1.19 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2018-12-20 09:27:48
End at: 2018-12-20 09:28:18
Local clock offset: -0.354 ms
Remote clock offset: -0.638 ms


# Below is generated by plot.py at 2018-12-20 11:04:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.73 Mbit/s
95th percentile per-packet one-way delay: 3.050 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 76.30 Mbit/s
95th percentile per-packet one-way delay: 2.859 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 67.83 Mbit/s
95th percentile per-packet one-way delay: 2.828 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 55.43 Mbit/s
95th percentile per-packet one-way delay: 4.494 ms
Loss rate: 0.02%
```

Run 4: Report of QUIC Cubic — Data Link

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```
Run 5: Statistics of QUIC Cubic

Start at: 2018-12-20 09:55:38
End at: 2018-12-20 09:56:08
Local clock offset: 3.214 ms
Remote clock offset: -0.281 ms


# Below is generated by plot.py at 2018-12-20 11:05:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.67 Mbit/s
95th percentile per-packet one-way delay: 2.064 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 77.27 Mbit/s
95th percentile per-packet one-way delay: 2.053 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 64.92 Mbit/s
95th percentile per-packet one-way delay: 2.426 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 58.13 Mbit/s
95th percentile per-packet one-way delay: 1.531 ms
Loss rate: 0.02%
```
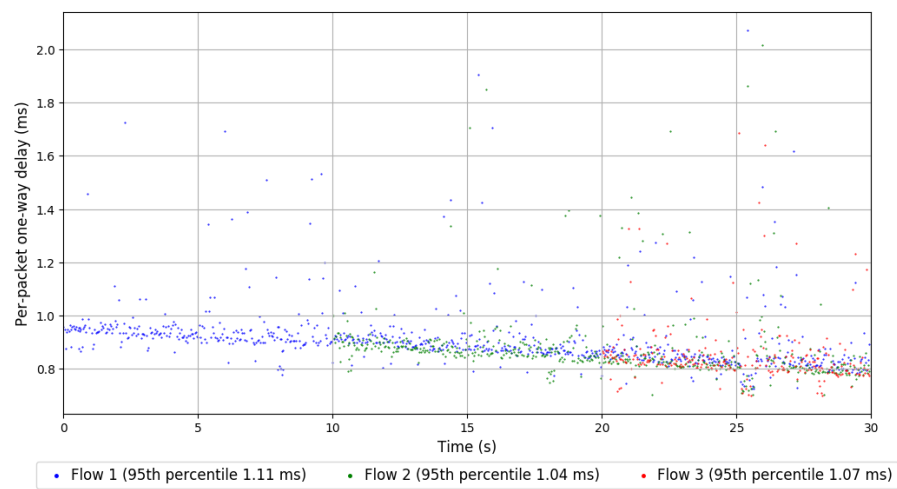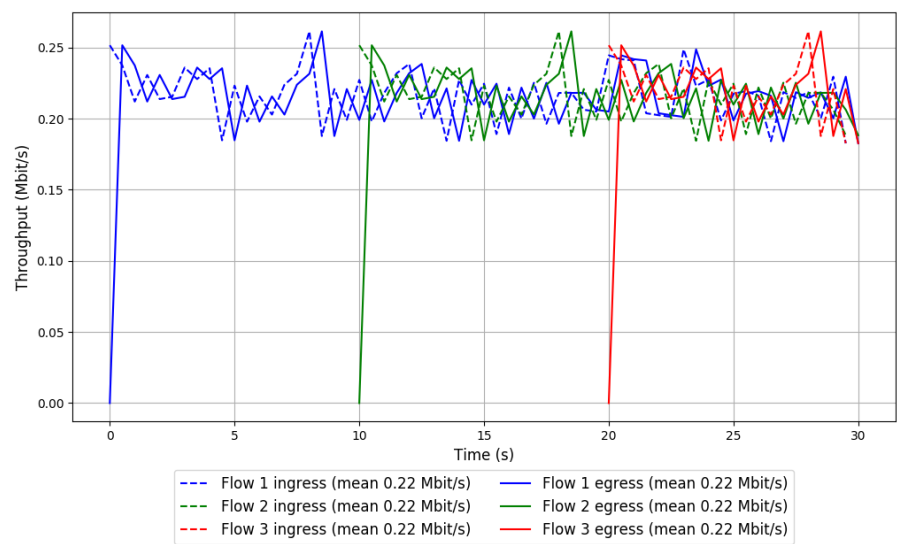
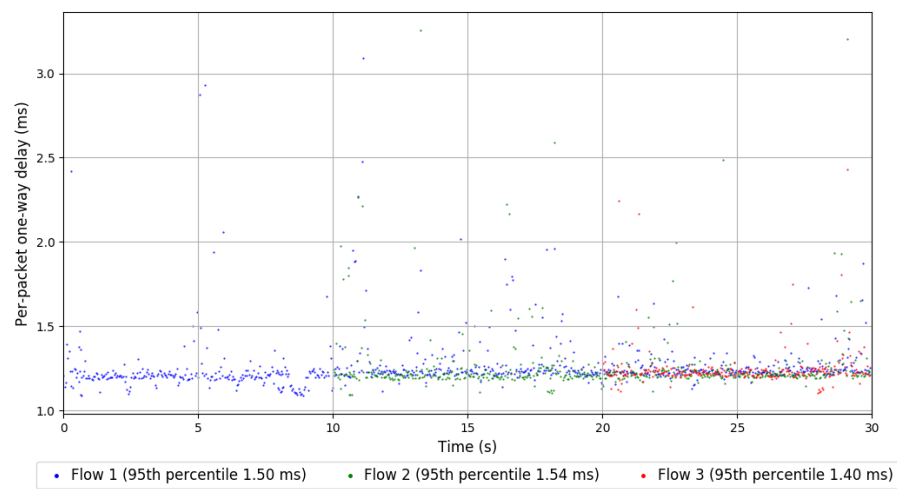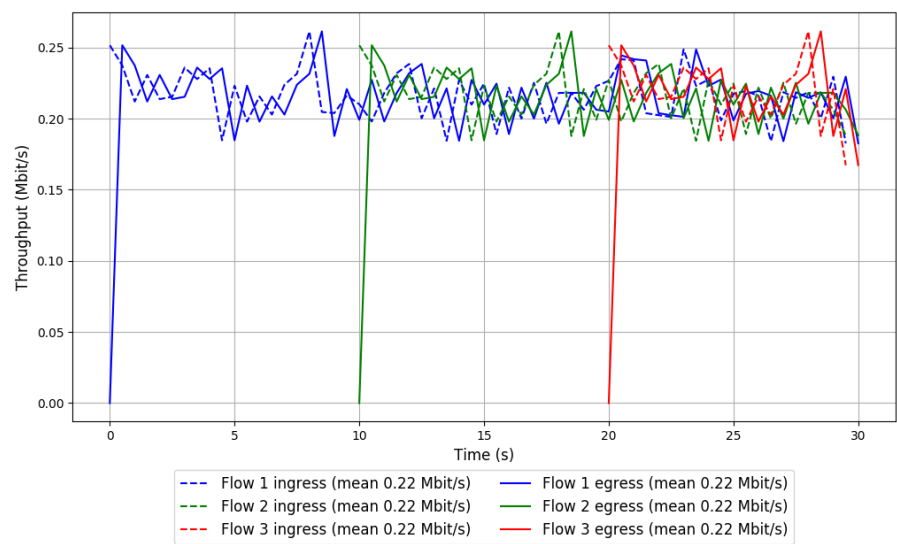Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2018-12-20 07:56:08
End at: 2018-12-20 07:56:38
Local clock offset: 0.182 ms
Remote clock offset: 1.702 ms


# Below is generated by plot.py at 2018-12-20 11:05:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.349 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.310 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.376 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.378 ms
Loss rate: 0.00%
```
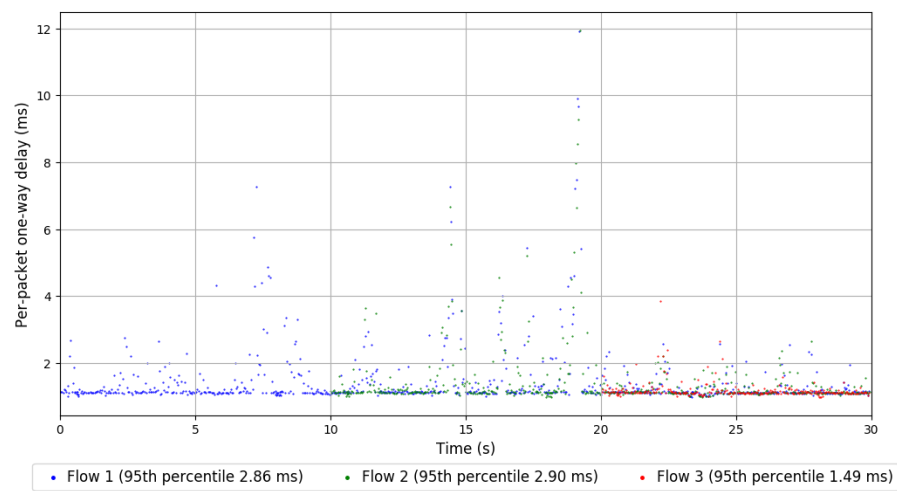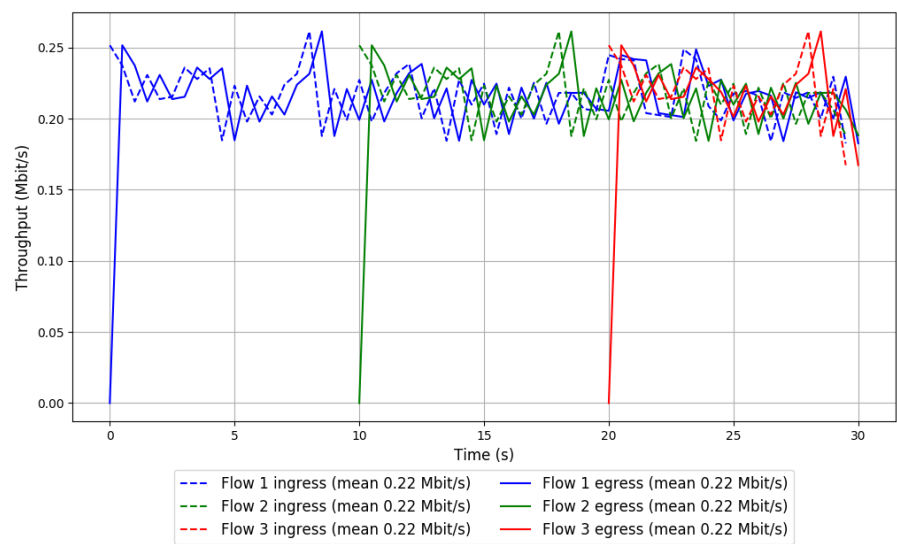
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-12-20 08:23:49
End at: 2018-12-20 08:24:19
Local clock offset: 3.13 ms
Remote clock offset: 2.085 ms

# Below is generated by plot.py at 2018-12-20 11:05:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.097 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.109 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.042 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.066 ms
Loss rate: 0.00%
```
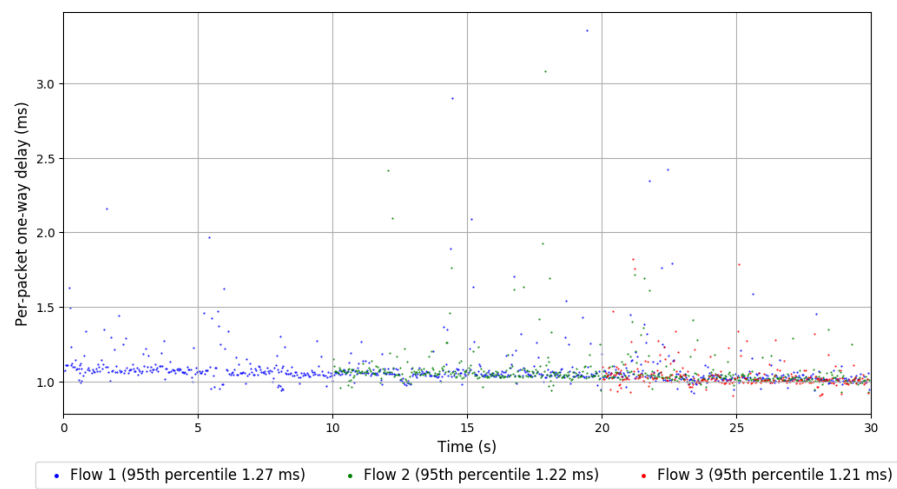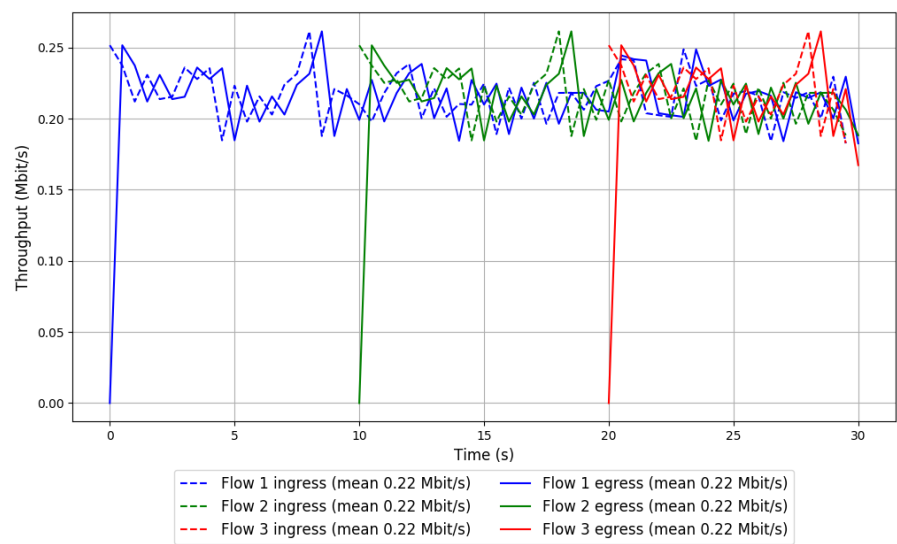
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-12-20 08:51:05
End at: 2018-12-20 08:51:35
Local clock offset: 0.433 ms
Remote clock offset: -0.528 ms


# Below is generated by plot.py at 2018-12-20 11:05:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.496 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.500 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.545 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.399 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-12-20 09:18:50
End at: 2018-12-20 09:19:20
Local clock offset: -0.259 ms
Remote clock offset: -0.556 ms

# Below is generated by plot.py at 2018-12-20 11:05:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.671 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.859 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.904 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.492 ms
Loss rate: 0.00%
```
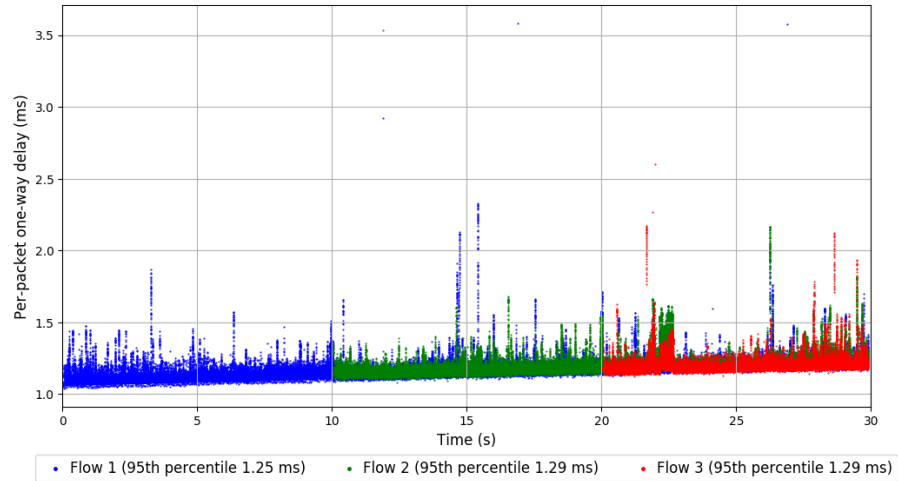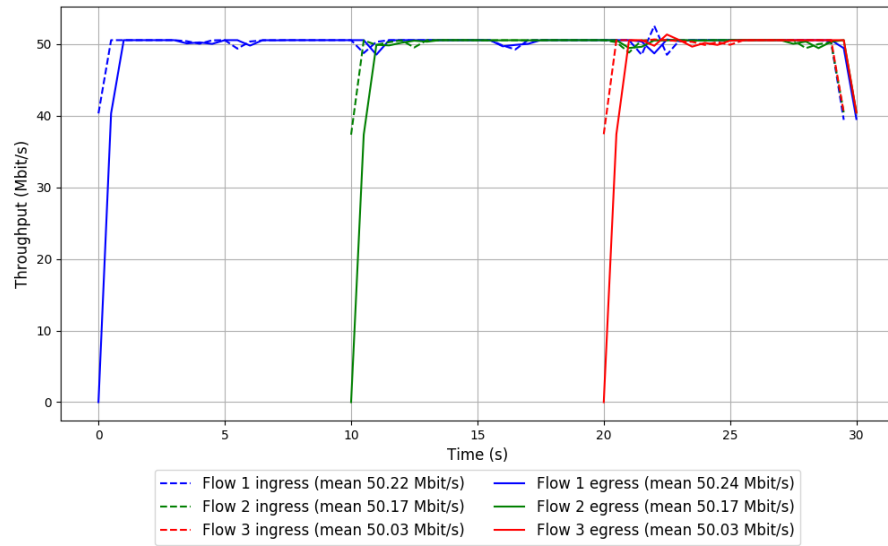
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2018-12-20 09:46:38
End at: 2018-12-20 09:47:08
Local clock offset: 2.34 ms
Remote clock offset: -0.269 ms


# Below is generated by plot.py at 2018-12-20 11:05:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.258 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.272 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.218 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.213 ms
Loss rate: 0.35%
```
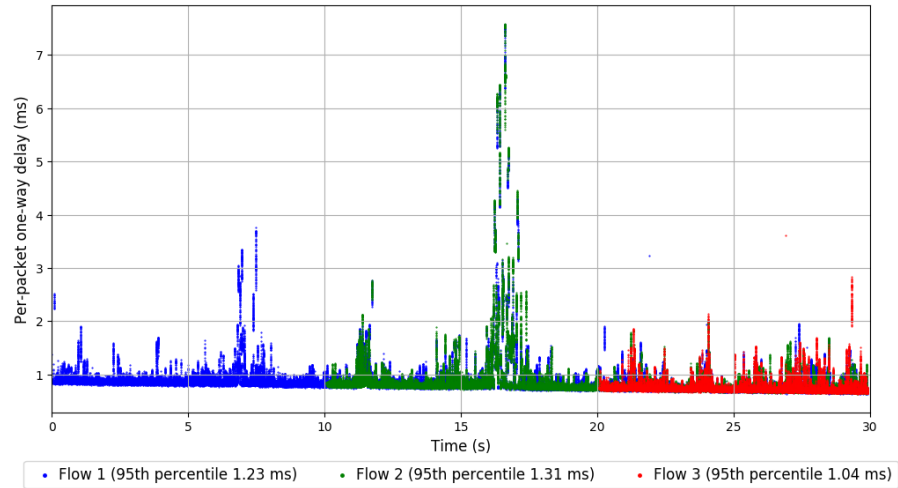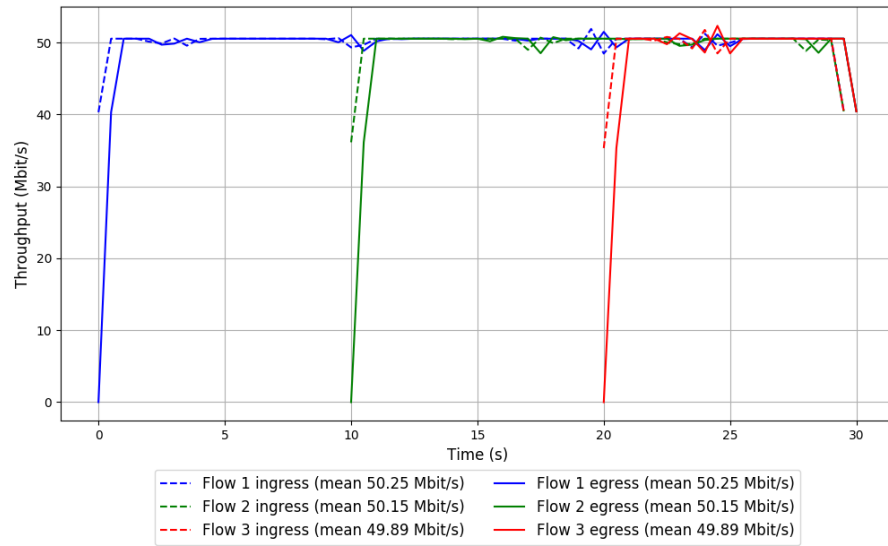
Run 5: Report of SCReAM — Data Link

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```
Run 1: Statistics of Sprout

Start at: 2018-12-20 07:54:52
End at: 2018-12-20 07:55:22
Local clock offset: 0.261 ms
Remote clock offset: 1.457 ms

# Below is generated by plot.py at 2018-12-20 11:05:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.04 Mbit/s
95th percentile per-packet one-way delay: 1.270 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 50.24 Mbit/s
95th percentile per-packet one-way delay: 1.247 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 50.17 Mbit/s
95th percentile per-packet one-way delay: 1.294 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 50.03 Mbit/s
95th percentile per-packet one-way delay: 1.289 ms
Loss rate: 0.00%
```
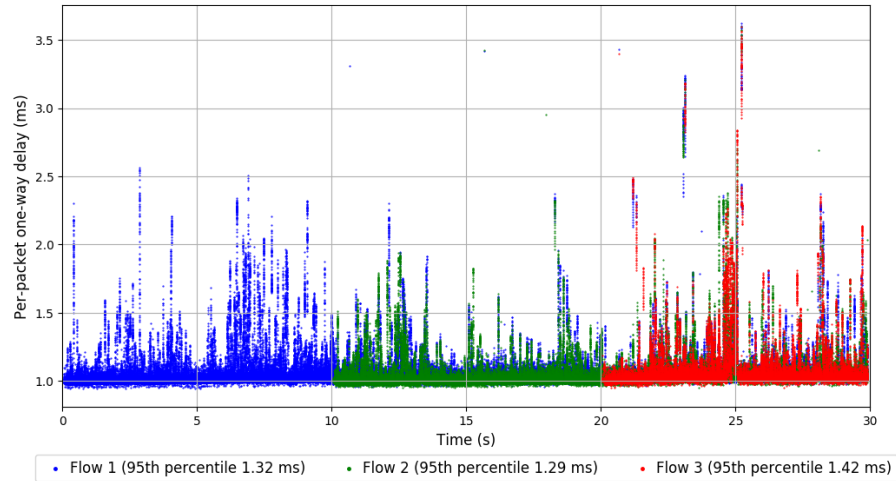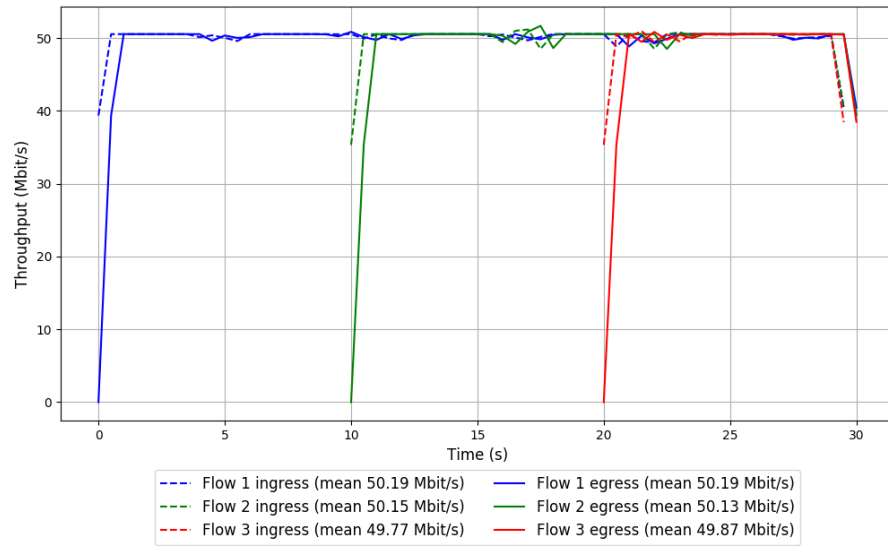
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-12-20 08:22:33
End at: 2018-12-20 08:23:03
Local clock offset: 3.042 ms
Remote clock offset: 2.435 ms

# Below is generated by plot.py at 2018-12-20 11:05:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.00 Mbit/s
95th percentile per-packet one-way delay: 1.206 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.25 Mbit/s
95th percentile per-packet one-way delay: 1.233 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.15 Mbit/s
95th percentile per-packet one-way delay: 1.312 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.89 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.00%
```
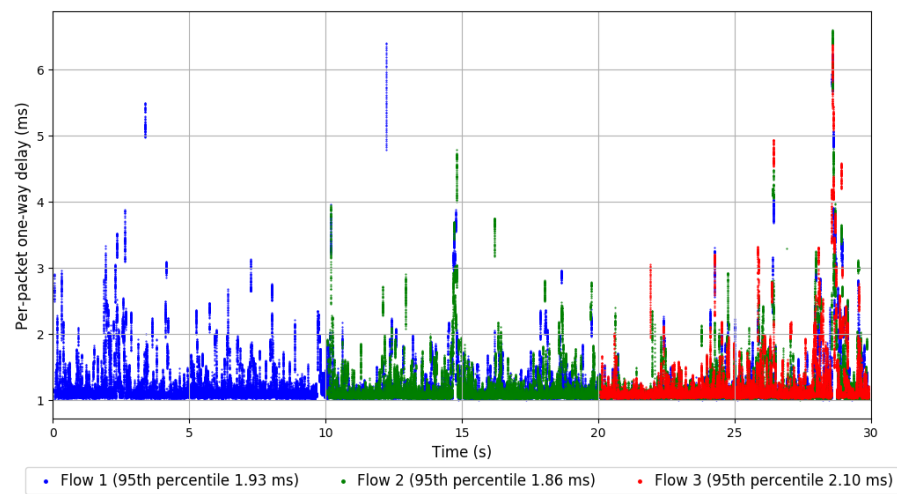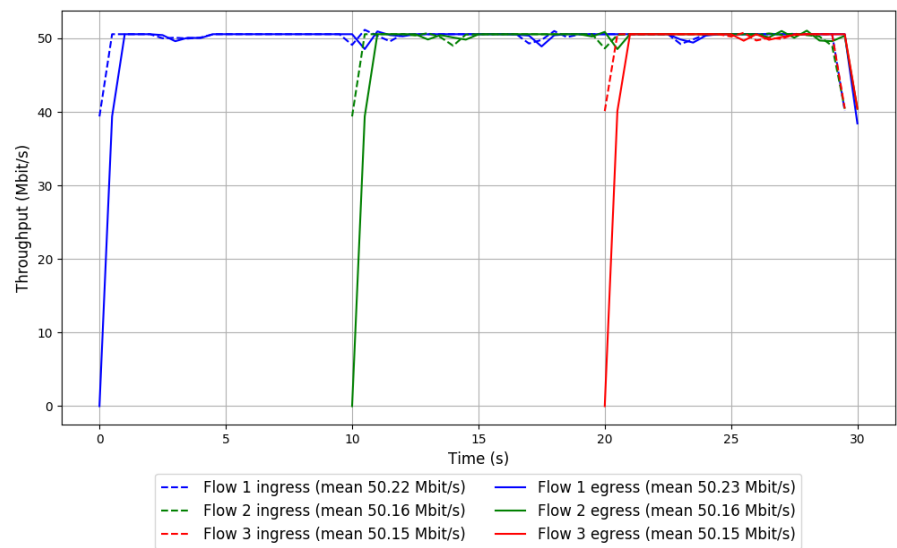
Run 2: Report of Sprout — Data Link

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```
Run 3: Statistics of Sprout

Start at: 2018-12-20 08:49:49
End at: 2018-12-20 08:50:19
Local clock offset: 0.548 ms
Remote clock offset: -0.387 ms


# Below is generated by plot.py at 2018-12-20 11:05:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.89 Mbit/s
95th percentile per-packet one-way delay: 1.323 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 50.19 Mbit/s
95th percentile per-packet one-way delay: 1.318 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.13 Mbit/s
95th percentile per-packet one-way delay: 1.288 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 49.87 Mbit/s
95th percentile per-packet one-way delay: 1.423 ms
Loss rate: 0.00%
```
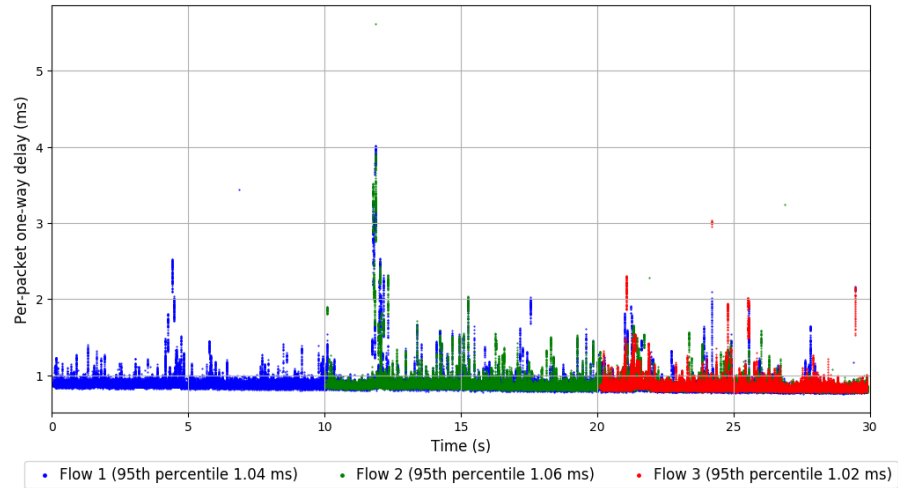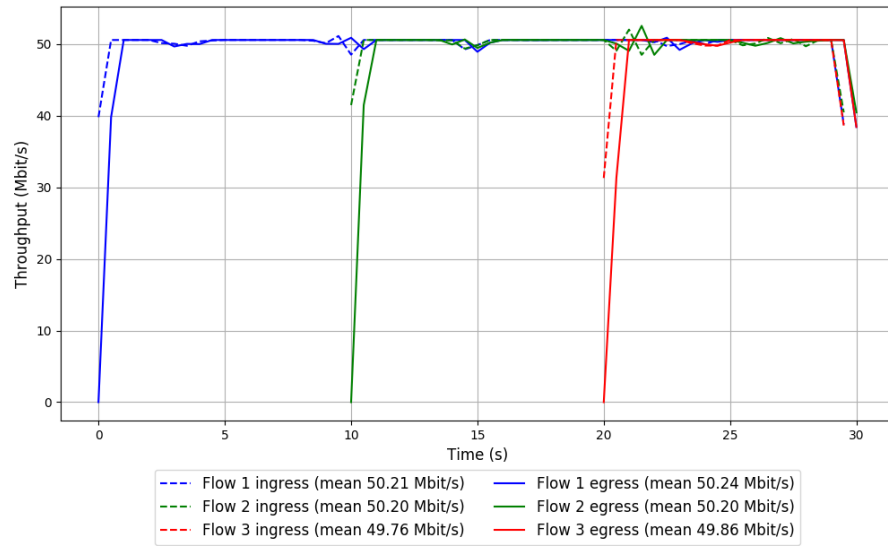
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-12-20 09:17:34
End at: 2018-12-20 09:18:04
Local clock offset: -0.245 ms
Remote clock offset: -0.57 ms

# Below is generated by plot.py at 2018-12-20 11:05:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.10 Mbit/s
95th percentile per-packet one-way delay: 1.940 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 50.23 Mbit/s
95th percentile per-packet one-way delay: 1.930 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 50.16 Mbit/s
95th percentile per-packet one-way delay: 1.864 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 50.15 Mbit/s
95th percentile per-packet one-way delay: 2.103 ms
Loss rate: 0.00%
```
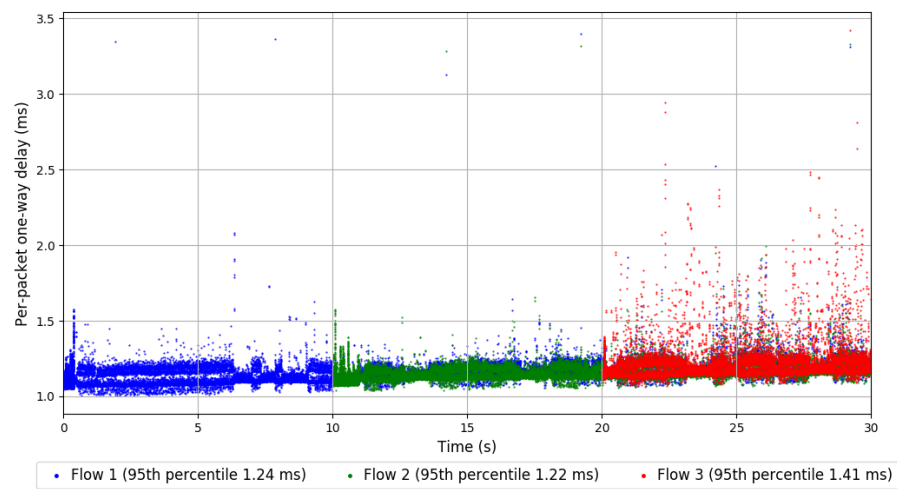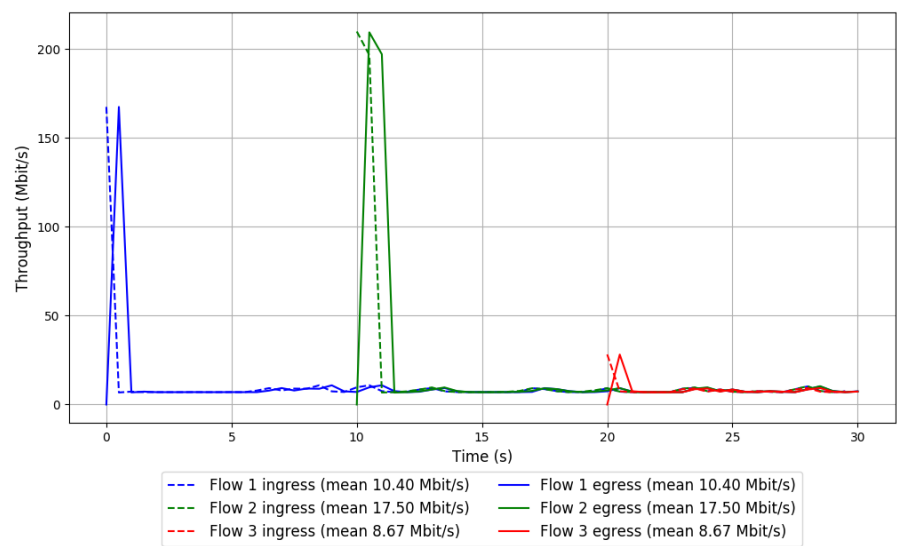
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-12-20 09:45:22
End at: 2018-12-20 09:45:52
Local clock offset: 2.169 ms
Remote clock offset: -0.162 ms


# Below is generated by plot.py at 2018-12-20 11:05:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.98 Mbit/s
95th percentile per-packet one-way delay: 1.043 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 50.24 Mbit/s
95th percentile per-packet one-way delay: 1.043 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 50.20 Mbit/s
95th percentile per-packet one-way delay: 1.056 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.86 Mbit/s
95th percentile per-packet one-way delay: 1.017 ms
Loss rate: 0.02%
```

Run 5: Report of Sprout — Data Link

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

Start at: 2018-12-20 07:59:06
End at: 2018-12-20 07:59:36
Local clock offset: -0.0 ms
Remote clock offset: 2.129 ms

# Below is generated by plot.py at 2018-12-20 11:05:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.93 Mbit/s
95th percentile per-packet one-way delay: 1.245 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 10.40 Mbit/s
95th percentile per-packet one-way delay: 1.238 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 17.50 Mbit/s
95th percentile per-packet one-way delay: 1.222 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 8.67 Mbit/s
95th percentile per-packet one-way delay: 1.414 ms
Loss rate: 0.02%
```
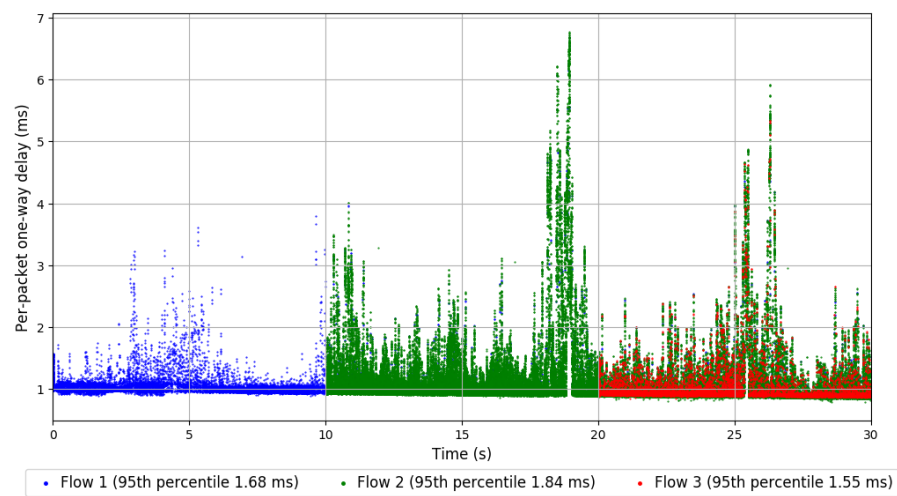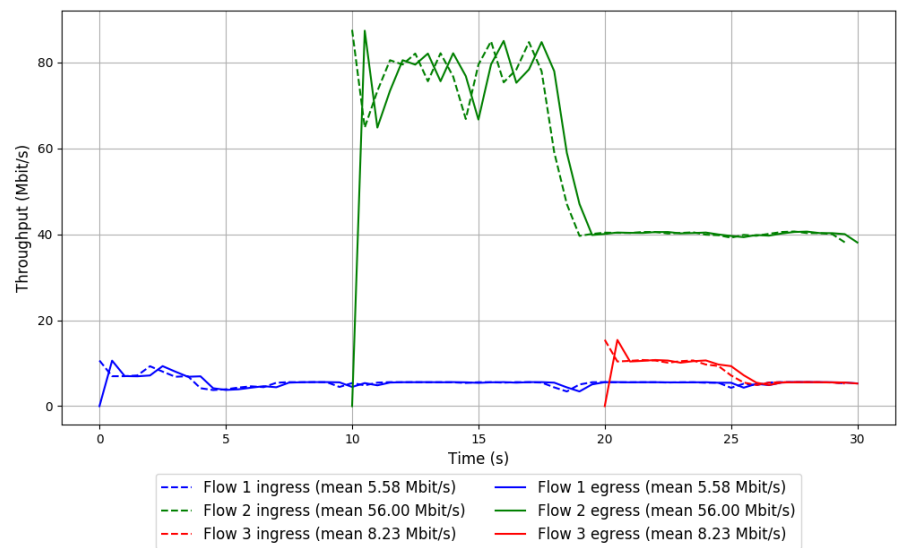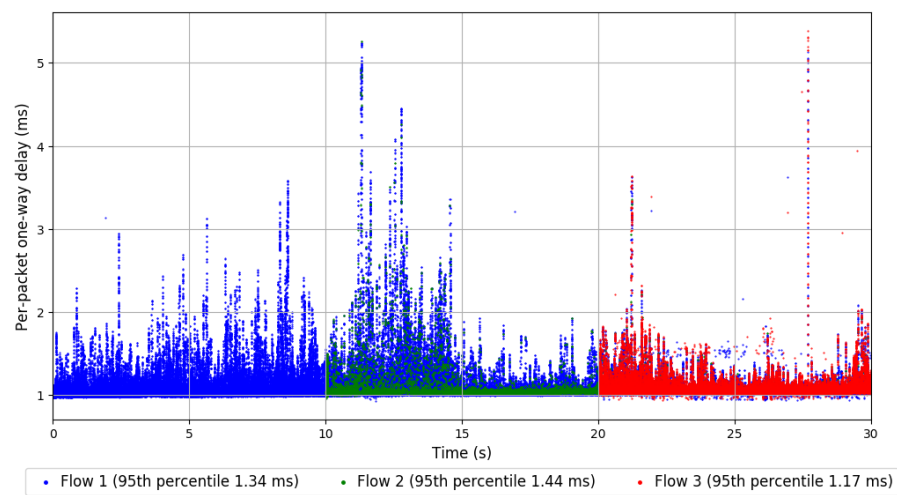
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2018-12-20 08:26:46
End at: 2018-12-20 08:27:16
Local clock offset: 3.301 ms
Remote clock offset: 1.255 ms

# Below is generated by plot.py at 2018-12-20 11:05:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.62 Mbit/s
95th percentile per-packet one-way delay: 1.799 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 5.58 Mbit/s
95th percentile per-packet one-way delay: 1.681 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 56.00 Mbit/s
95th percentile per-packet one-way delay: 1.842 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 1.548 ms
Loss rate: 0.02%
```
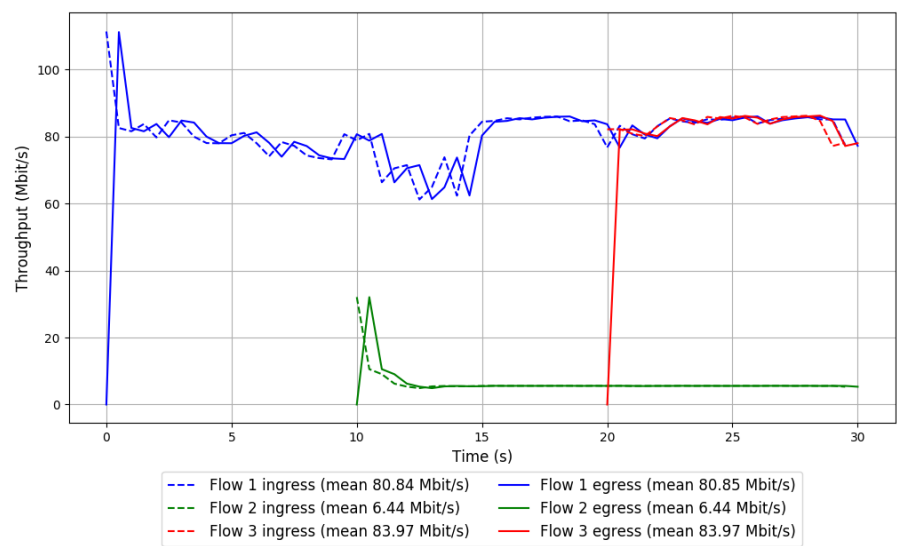
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2018-12-20 08:54:02
End at: 2018-12-20 08:54:32
Local clock offset: 0.189 ms
Remote clock offset: -0.501 ms

# Below is generated by plot.py at 2018-12-20 11:07:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.02 Mbit/s
95th percentile per-packet one-way delay: 1.302 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 80.85 Mbit/s
95th percentile per-packet one-way delay: 1.345 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 1.438 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 83.97 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.02%
```
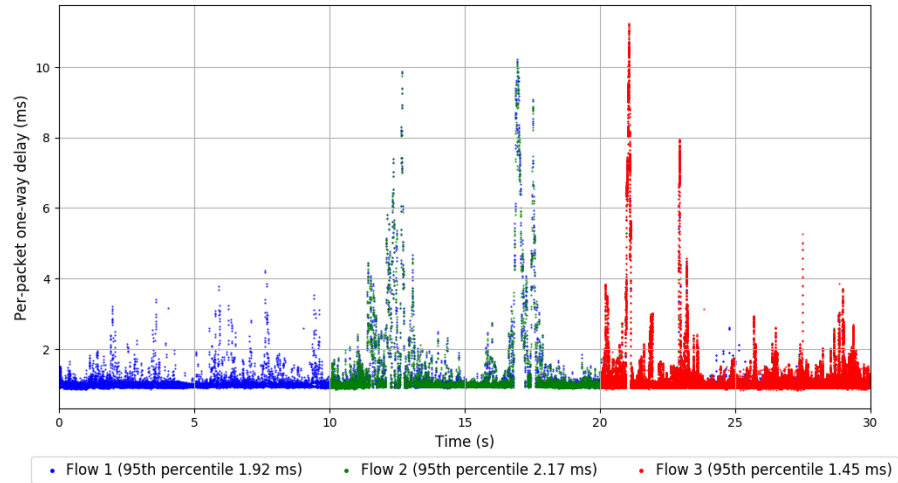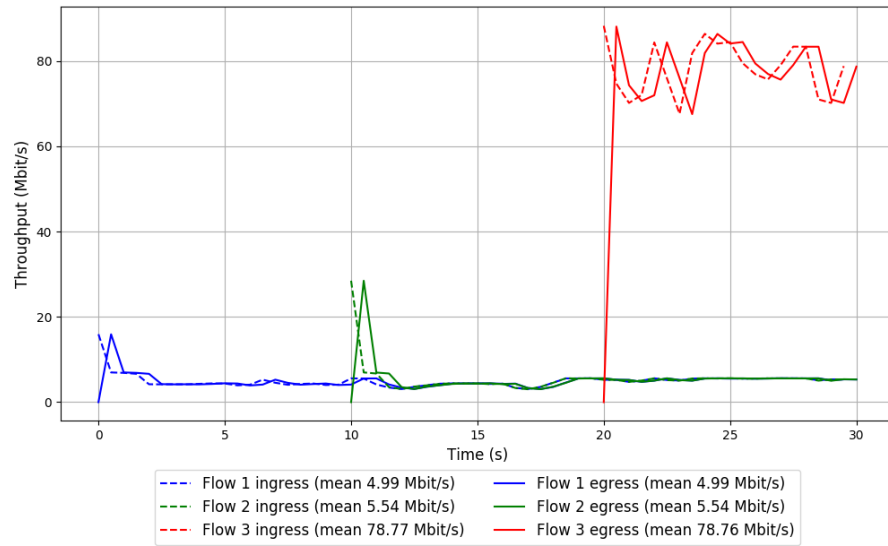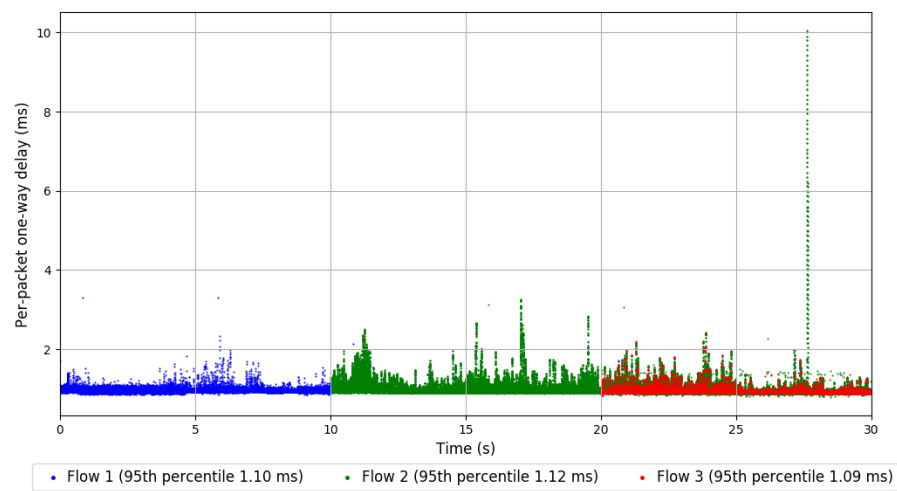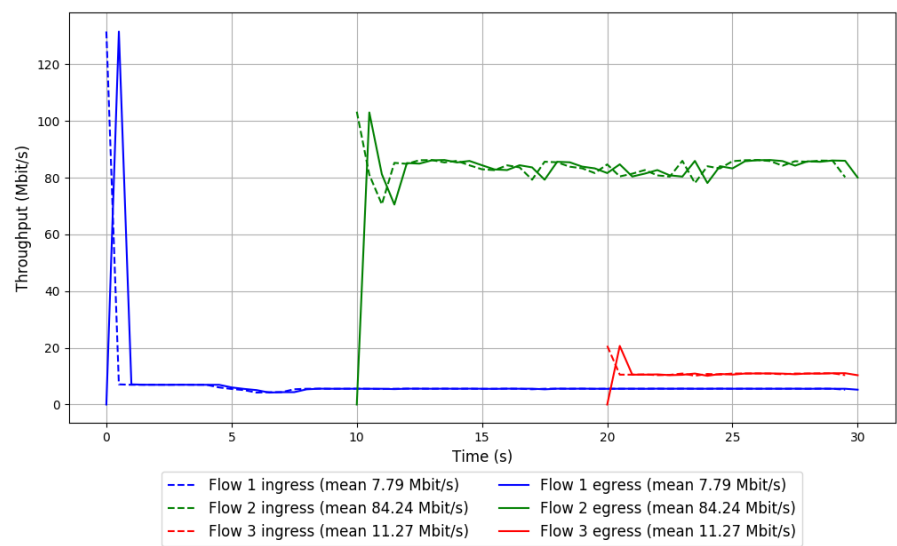
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 80.84 Mbit/s) --- Flow 1 egress (mean 80.85 Mbit/s)
Flow 2 ingress (mean 6.44 Mbit/s) --- Flow 2 egress (mean 6.44 Mbit/s)
Flow 3 ingress (mean 83.97 Mbit/s) --- Flow 3 egress (mean 83.97 Mbit/s)

Flow 1 (95th percentile 1.34 ms) • Flow 2 (95th percentile 1.44 ms) • Flow 3 (95th percentile 1.17 ms)

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

Start at: 2018-12-20 09:21:47
End at: 2018-12-20 09:22:17
Local clock offset: -0.279 ms
Remote clock offset: -0.552 ms


# Below is generated by plot.py at 2018-12-20 11:07:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.80 Mbit/s
95th percentile per-packet one-way delay: 1.579 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 4.99 Mbit/s
95th percentile per-packet one-way delay: 1.918 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 5.54 Mbit/s
95th percentile per-packet one-way delay: 2.174 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 78.76 Mbit/s
95th percentile per-packet one-way delay: 1.447 ms
Loss rate: 0.02%
```

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

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

Start at: 2018-12-20 09:49:36
End at: 2018-12-20 09:50:06
Local clock offset: 2.688 ms
Remote clock offset: -0.271 ms


# Below is generated by plot.py at 2018-12-20 11:07:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.59 Mbit/s
95th percentile per-packet one-way delay: 1.115 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 7.79 Mbit/s
95th percentile per-packet one-way delay: 1.102 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 84.24 Mbit/s
95th percentile per-packet one-way delay: 1.119 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.27 Mbit/s
95th percentile per-packet one-way delay: 1.094 ms
Loss rate: 0.01%
```
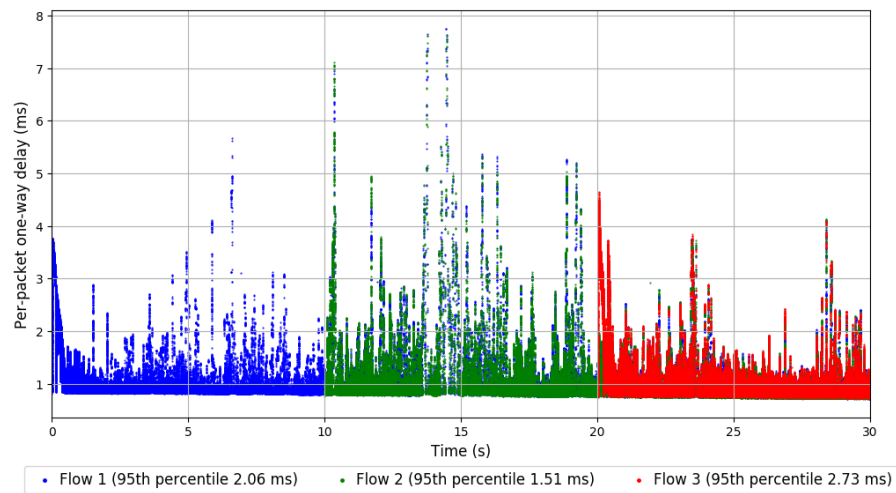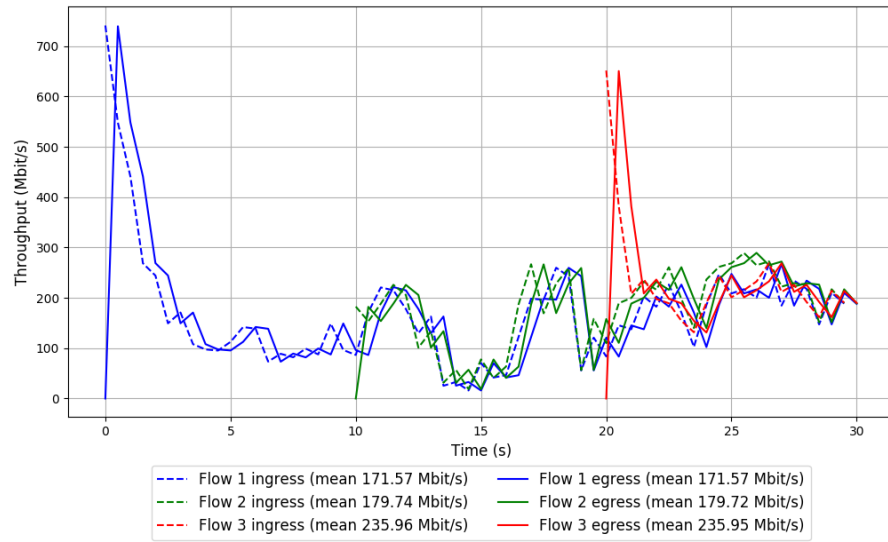
Run 5: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2018-12-20 08:07:48
End at: 2018-12-20 08:08:18
Local clock offset: 0.505 ms
Remote clock offset: 3.016 ms


# Below is generated by plot.py at 2018-12-20 11:08:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.68 Mbit/s
95th percentile per-packet one-way delay: 1.918 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 171.57 Mbit/s
95th percentile per-packet one-way delay: 2.058 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 179.72 Mbit/s
95th percentile per-packet one-way delay: 1.510 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 235.95 Mbit/s
95th percentile per-packet one-way delay: 2.733 ms
Loss rate: 0.02%
```
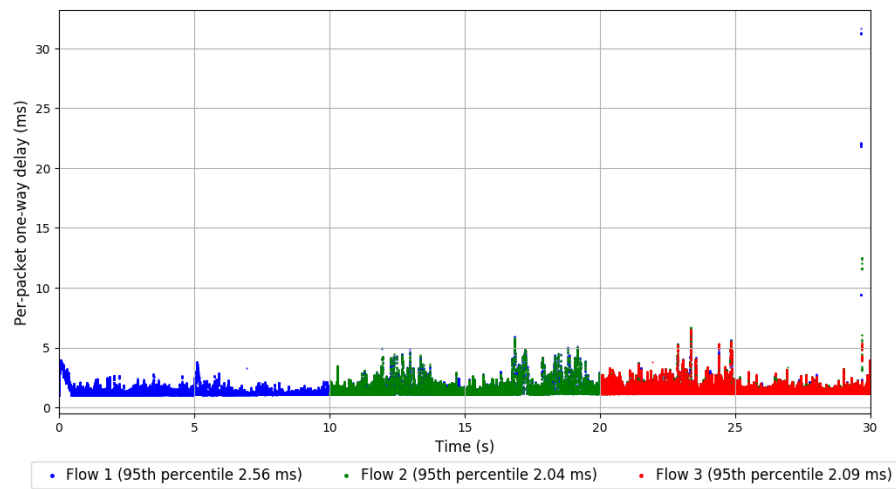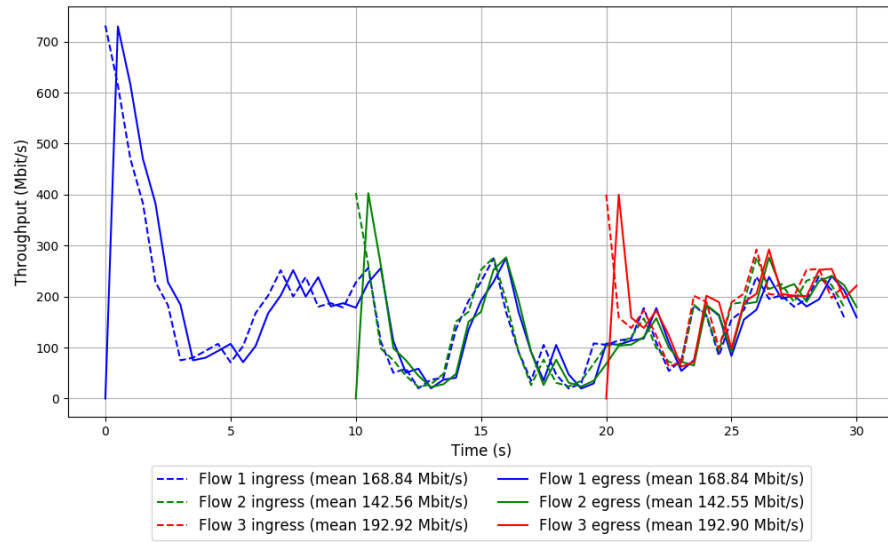
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-12-20 08:35:27
End at: 2018-12-20 08:35:57
Local clock offset: 3.696 ms
Remote clock offset: 0.321 ms


# Below is generated by plot.py at 2018-12-20 11:08:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.79 Mbit/s
95th percentile per-packet one-way delay: 2.281 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 168.84 Mbit/s
95th percentile per-packet one-way delay: 2.562 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 142.55 Mbit/s
95th percentile per-packet one-way delay: 2.040 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 192.90 Mbit/s
95th percentile per-packet one-way delay: 2.086 ms
Loss rate: 0.03%
```
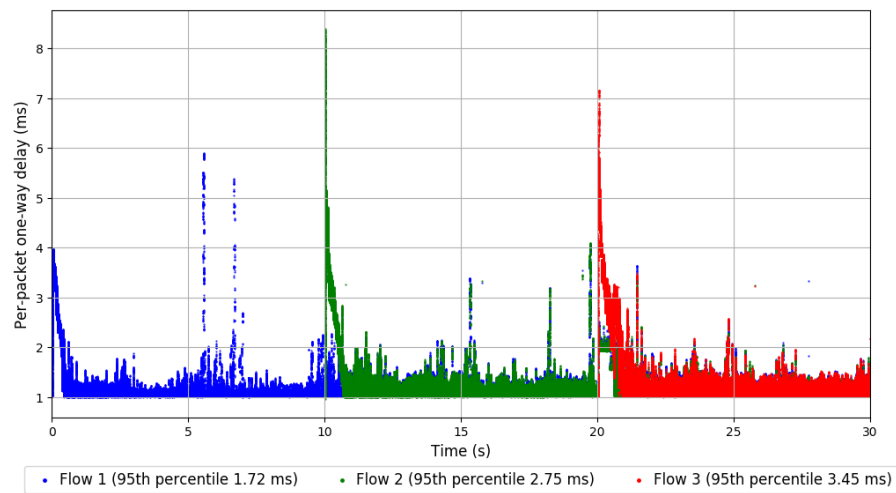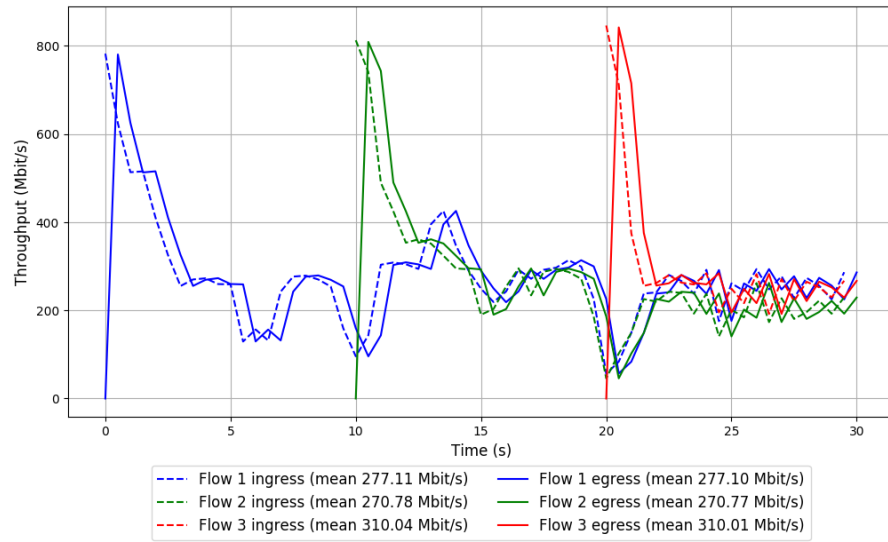
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-12-20 09:02:51
End at: 2018-12-20 09:03:21
Local clock offset: -0.312 ms
Remote clock offset: -0.44 ms


# Below is generated by plot.py at 2018-12-20 11:11:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 560.50 Mbit/s
95th percentile per-packet one-way delay: 2.715 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 277.10 Mbit/s
95th percentile per-packet one-way delay: 1.718 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 270.77 Mbit/s
95th percentile per-packet one-way delay: 2.755 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 310.01 Mbit/s
95th percentile per-packet one-way delay: 3.451 ms
Loss rate: 0.02%
```
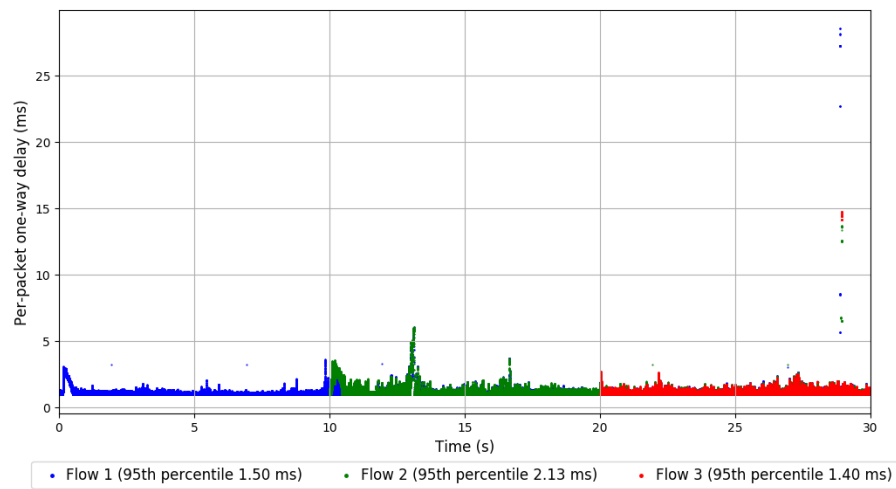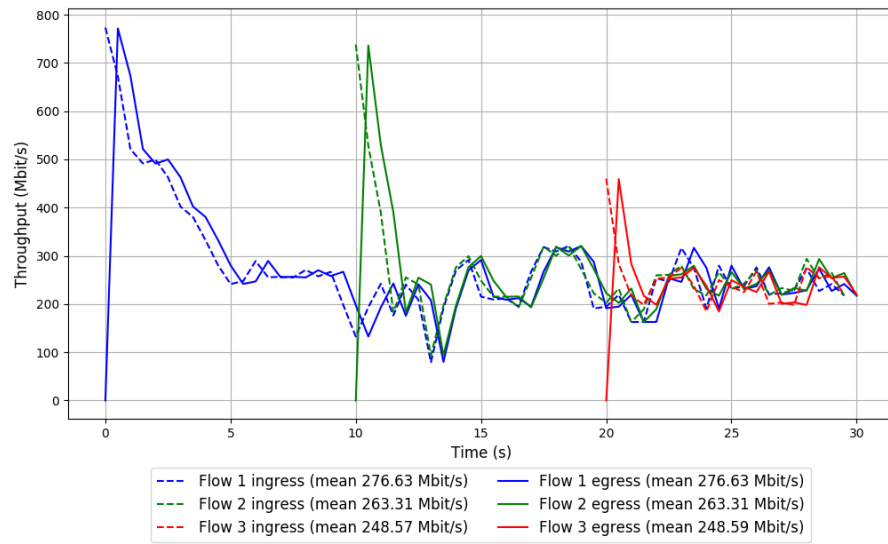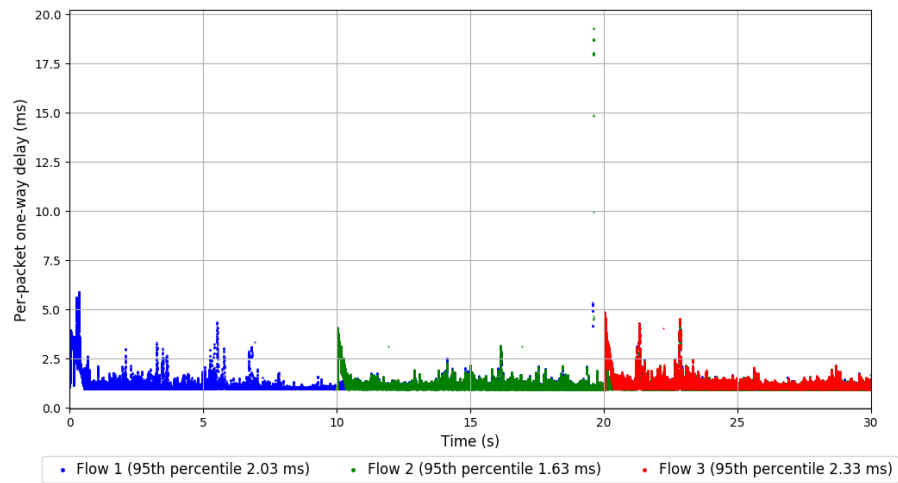
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 277.11 Mbit/s) --- Flow 1 egress (mean 277.10 Mbit/s)
Flow 2 ingress (mean 270.78 Mbit/s) --- Flow 2 egress (mean 270.77 Mbit/s)
Flow 3 ingress (mean 310.04 Mbit/s) --- Flow 3 egress (mean 310.01 Mbit/s)

Flow 1 (95th percentile 1.72 ms)   Flow 2 (95th percentile 2.75 ms)   Flow 3 (95th percentile 3.45 ms)

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```
Run 4: Statistics of TCP Vegas

Start at: 2018-12-20 09:30:31
End at: 2018-12-20 09:31:01
Local clock offset: -0.404 ms
Remote clock offset: -0.516 ms


# Below is generated by plot.py at 2018-12-20 11:11:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 534.64 Mbit/s
95th percentile per-packet one-way delay: 1.609 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 276.63 Mbit/s
95th percentile per-packet one-way delay: 1.500 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 263.31 Mbit/s
95th percentile per-packet one-way delay: 2.129 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 248.59 Mbit/s
95th percentile per-packet one-way delay: 1.402 ms
Loss rate: 0.01%
```

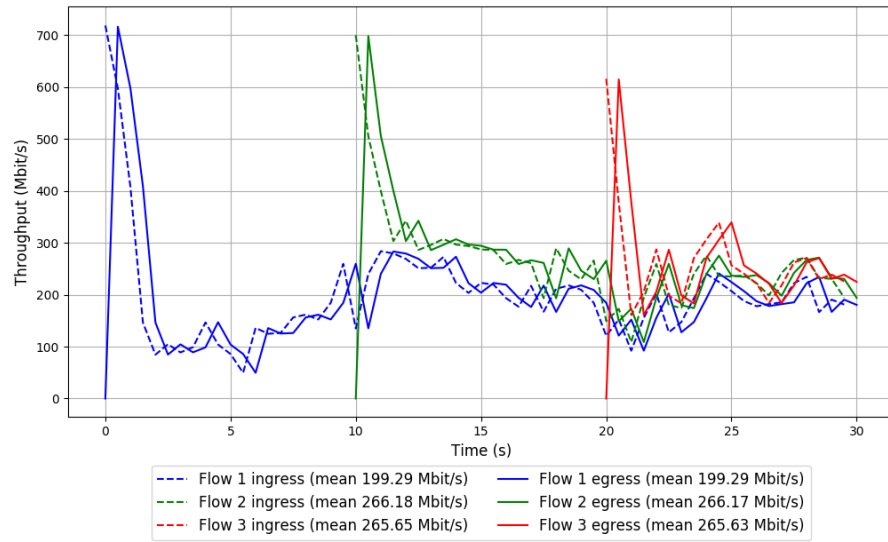Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-12-20 09:58:22
End at: 2018-12-20 09:58:52
Local clock offset: 3.394 ms
Remote clock offset: -0.281 ms


# Below is generated by plot.py at 2018-12-20 11:11:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 464.84 Mbit/s
95th percentile per-packet one-way delay: 1.895 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 199.29 Mbit/s
95th percentile per-packet one-way delay: 2.029 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 266.17 Mbit/s
95th percentile per-packet one-way delay: 1.631 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 265.63 Mbit/s
95th percentile per-packet one-way delay: 2.329 ms
Loss rate: 0.02%
```
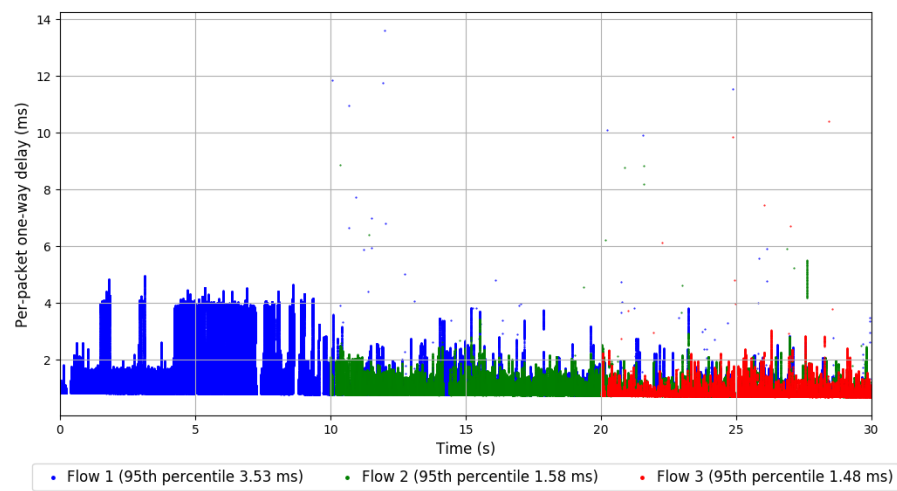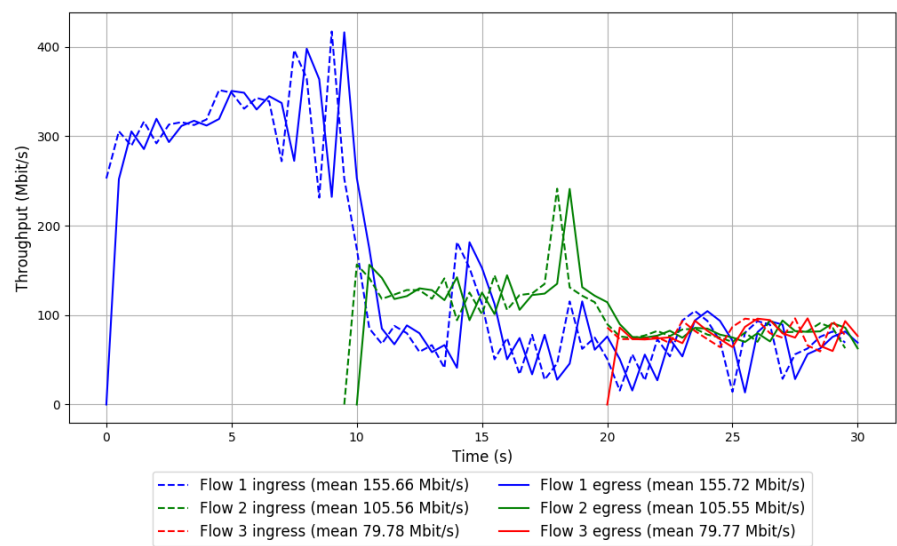
Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-12-20 08:06:24
End at: 2018-12-20 08:06:54
Local clock offset: 0.035 ms
Remote clock offset: 2.932 ms


# Below is generated by plot.py at 2018-12-20 11:11:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 252.47 Mbit/s
95th percentile per-packet one-way delay: 3.082 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 155.72 Mbit/s
95th percentile per-packet one-way delay: 3.528 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 105.55 Mbit/s
95th percentile per-packet one-way delay: 1.580 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 79.77 Mbit/s
95th percentile per-packet one-way delay: 1.477 ms
Loss rate: 0.06%
```
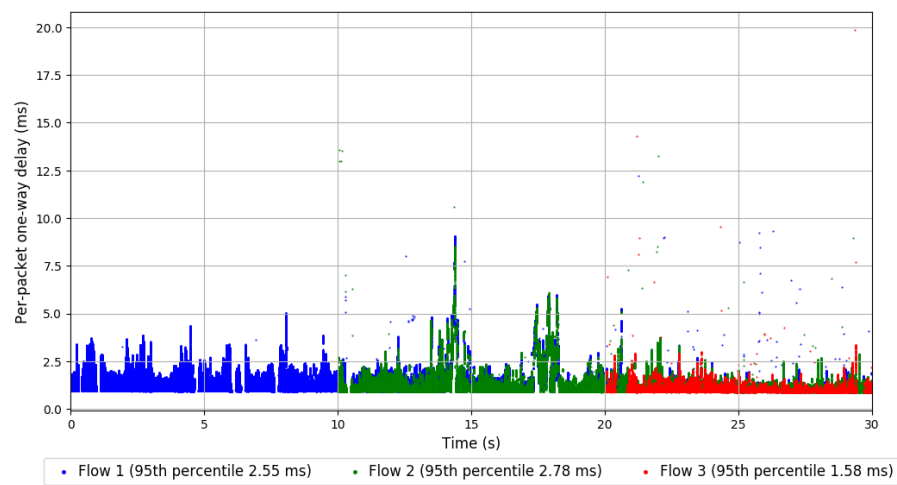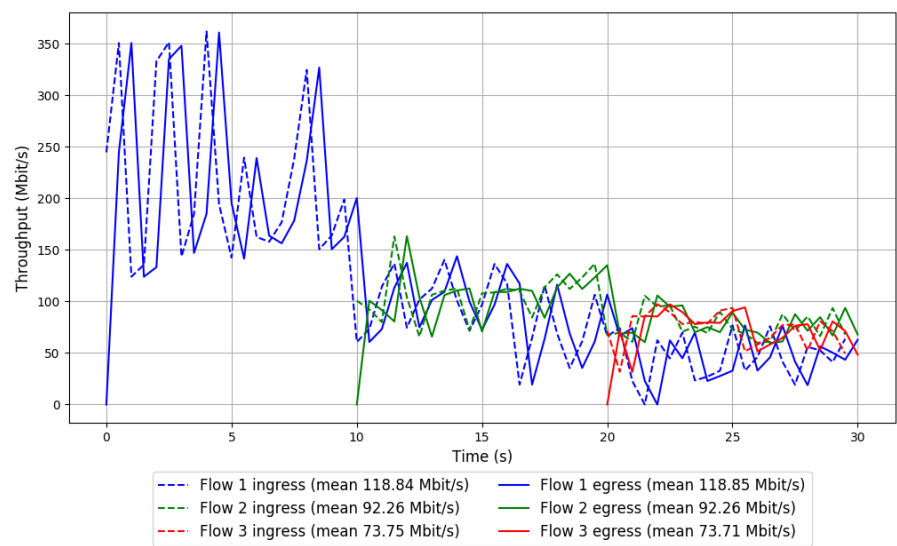
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-12-20 08:34:04
End at: 2018-12-20 08:34:34
Local clock offset: 3.647 ms
Remote clock offset: 0.359 ms

# Below is generated by plot.py at 2018-12-20 11:11:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 204.74 Mbit/s
95th percentile per-packet one-way delay: 2.513 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 118.85 Mbit/s
95th percentile per-packet one-way delay: 2.554 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 92.26 Mbit/s
95th percentile per-packet one-way delay: 2.777 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 73.71 Mbit/s
95th percentile per-packet one-way delay: 1.582 ms
Loss rate: 0.07%
```
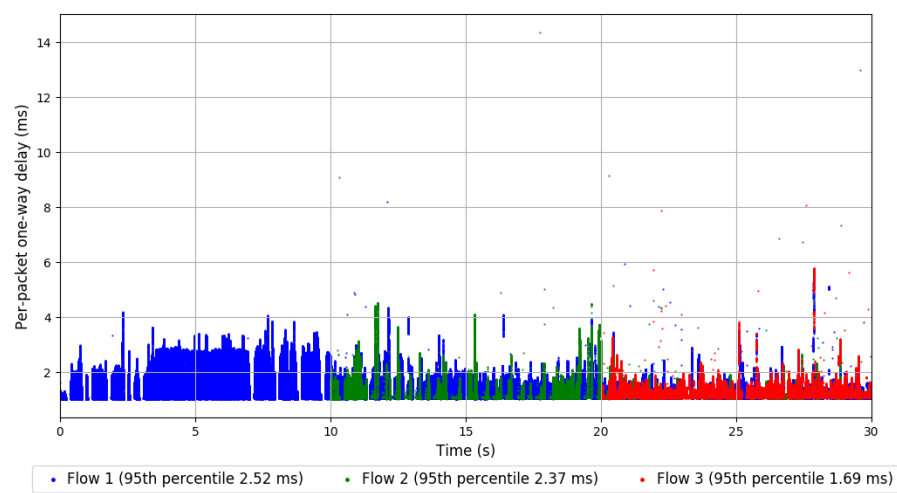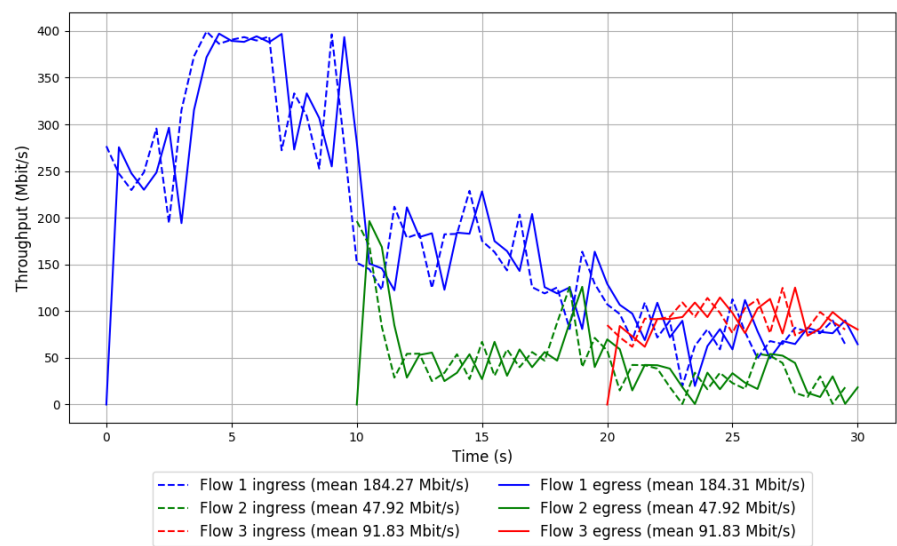
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-12-20 09:01:26
End at: 2018-12-20 09:01:56
Local clock offset: -0.259 ms
Remote clock offset: -0.473 ms


# Below is generated by plot.py at 2018-12-20 11:11:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 246.70 Mbit/s
95th percentile per-packet one-way delay: 2.479 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 184.31 Mbit/s
95th percentile per-packet one-way delay: 2.520 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 47.92 Mbit/s
95th percentile per-packet one-way delay: 2.370 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 91.83 Mbit/s
95th percentile per-packet one-way delay: 1.687 ms
Loss rate: 0.04%
```
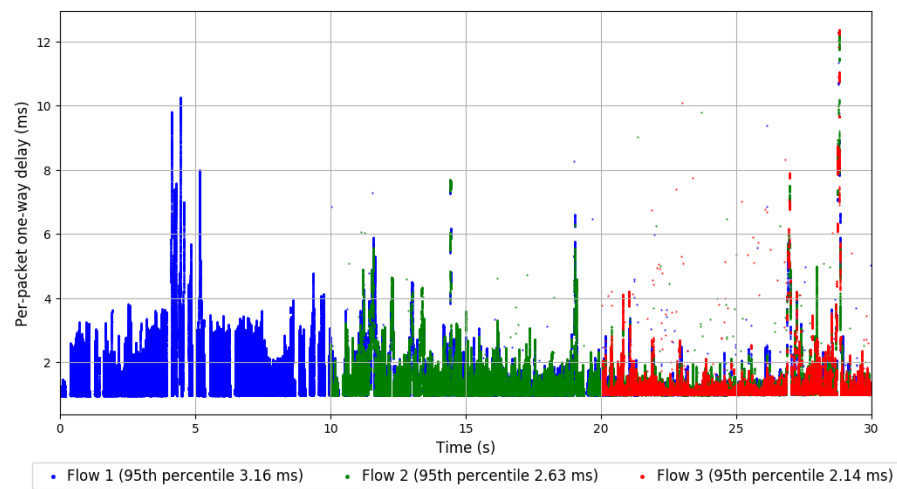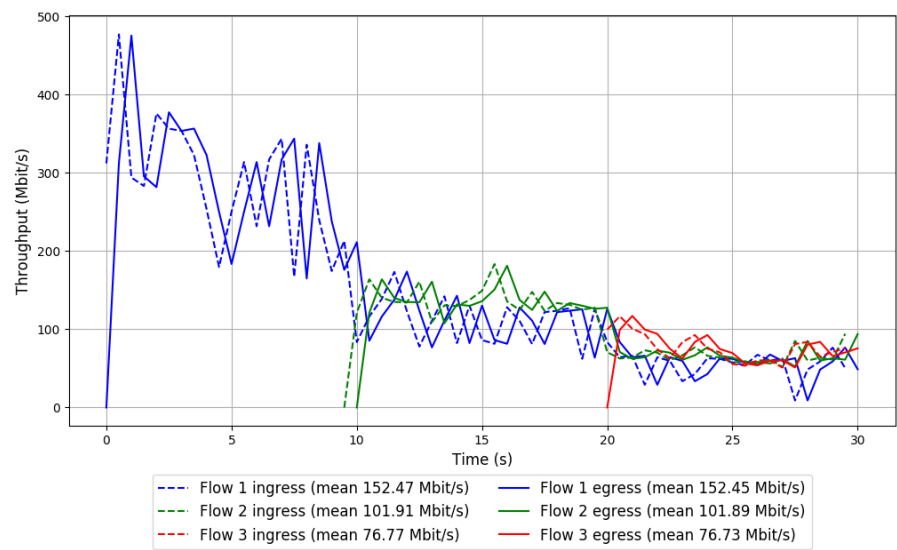
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2018-12-20 09:29:06
End at: 2018-12-20 09:29:36
Local clock offset: -0.37 ms
Remote clock offset: -0.552 ms

# Below is generated by plot.py at 2018-12-20 11:11:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 245.82 Mbit/s
95th percentile per-packet one-way delay: 3.009 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 152.45 Mbit/s
95th percentile per-packet one-way delay: 3.156 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 101.89 Mbit/s
95th percentile per-packet one-way delay: 2.626 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 76.73 Mbit/s
95th percentile per-packet one-way delay: 2.140 ms
Loss rate: 0.06%
```
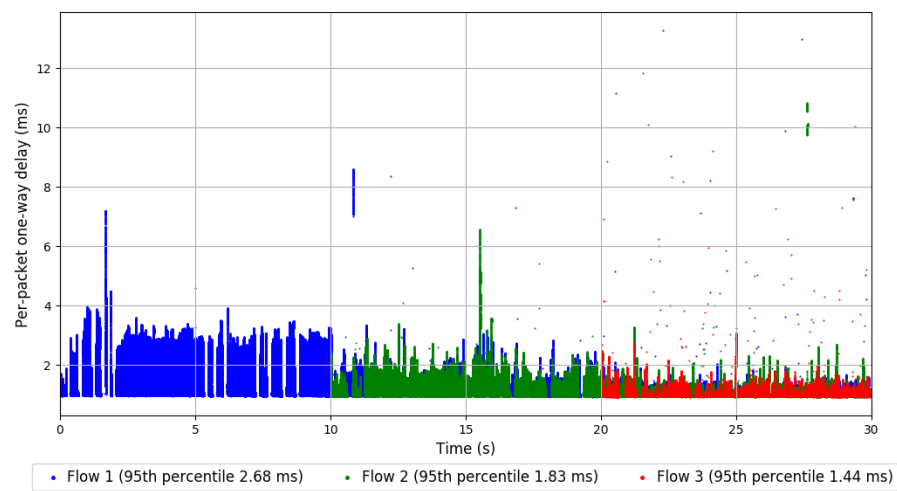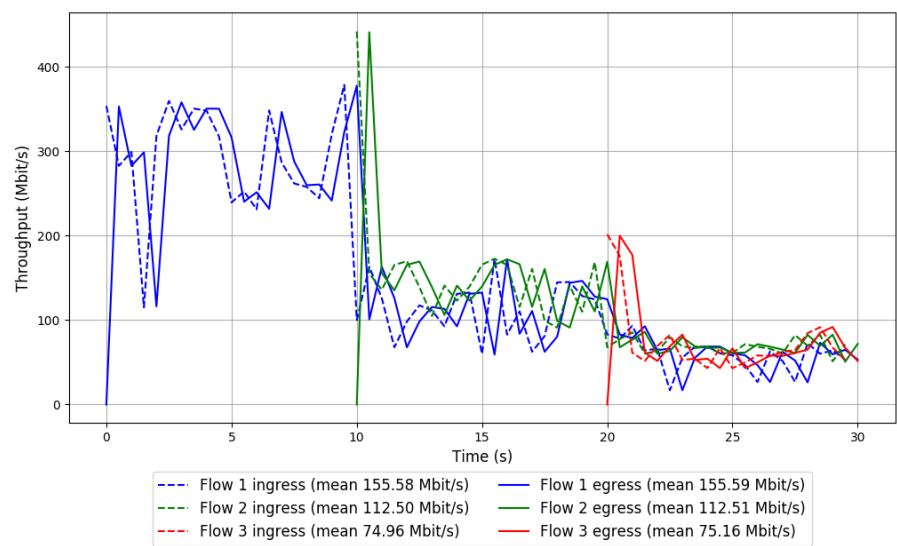
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-12-20 09:56:56
End at: 2018-12-20 09:57:26
Local clock offset: 3.295 ms
Remote clock offset: -0.275 ms

# Below is generated by plot.py at 2018-12-20 11:11:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 255.38 Mbit/s
95th percentile per-packet one-way delay: 2.525 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 155.59 Mbit/s
95th percentile per-packet one-way delay: 2.684 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 112.51 Mbit/s
95th percentile per-packet one-way delay: 1.830 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 75.16 Mbit/s
95th percentile per-packet one-way delay: 1.443 ms
Loss rate: 0.10%
```

Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-12-20 08:02:01
End at: 2018-12-20 08:02:31
Local clock offset: -0.154 ms
Remote clock offset: 2.467 ms


# Below is generated by plot.py at 2018-12-20 11:11:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 224.70 Mbit/s
95th percentile per-packet one-way delay: 4.821 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 138.46 Mbit/s
95th percentile per-packet one-way delay: 6.616 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 92.01 Mbit/s
95th percentile per-packet one-way delay: 1.637 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 75.64 Mbit/s
95th percentile per-packet one-way delay: 1.656 ms
Loss rate: 0.00%
```
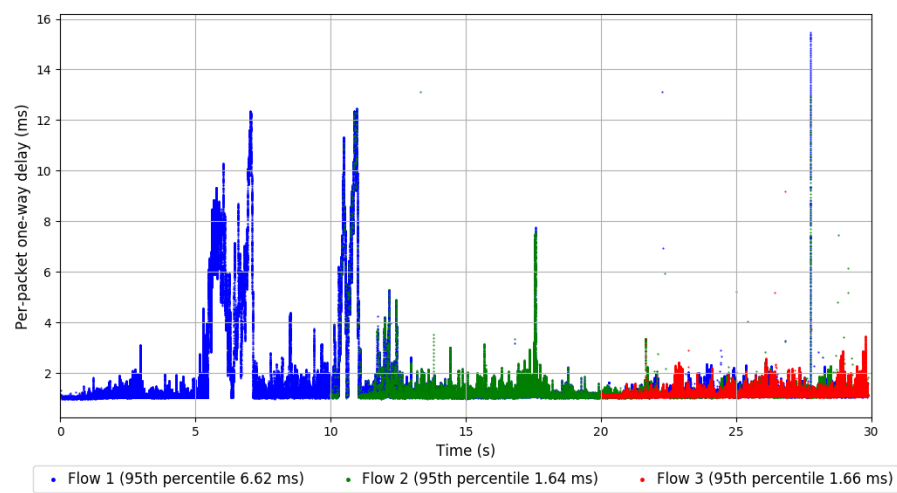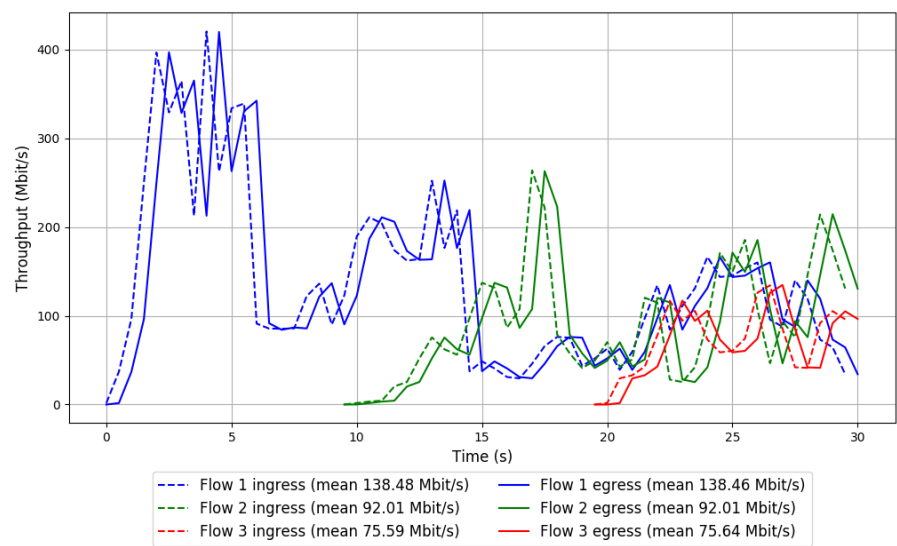
Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-12-20 08:29:43
End at: 2018-12-20 08:30:13
Local clock offset: 3.444 ms
Remote clock offset: 0.821 ms

# Below is generated by plot.py at 2018-12-20 11:11:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 228.55 Mbit/s
95th percentile per-packet one-way delay: 2.352 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 153.57 Mbit/s
95th percentile per-packet one-way delay: 2.588 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 72.59 Mbit/s
95th percentile per-packet one-way delay: 1.645 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 80.98 Mbit/s
95th percentile per-packet one-way delay: 2.711 ms
Loss rate: 0.03%
```
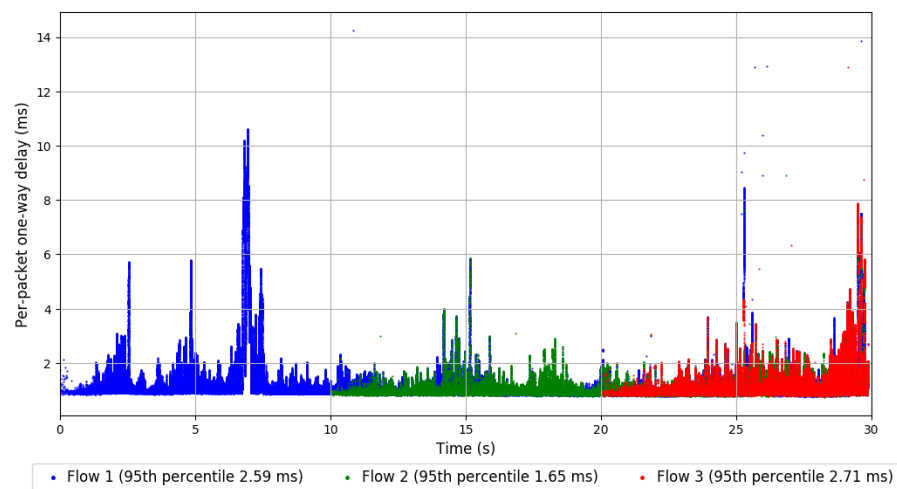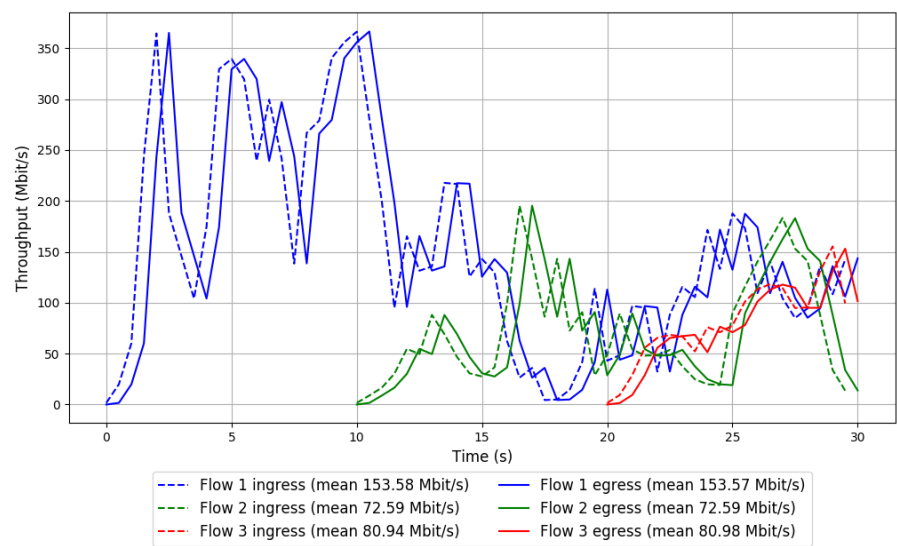
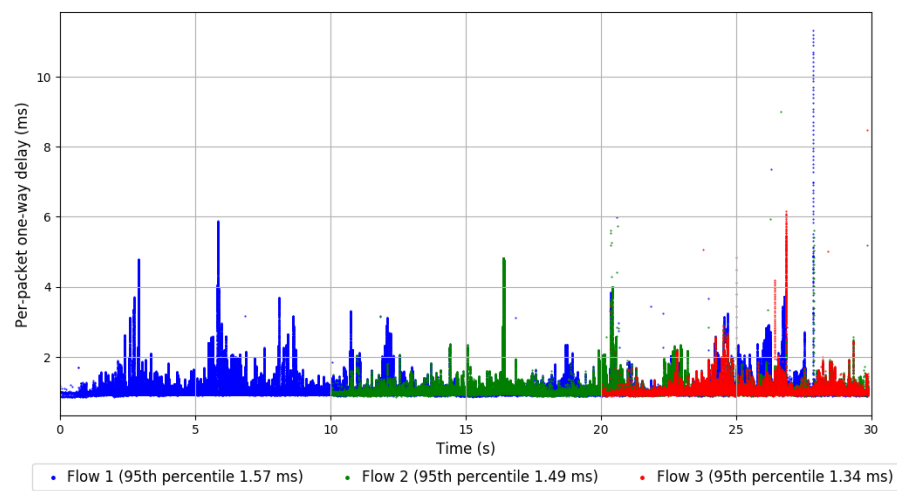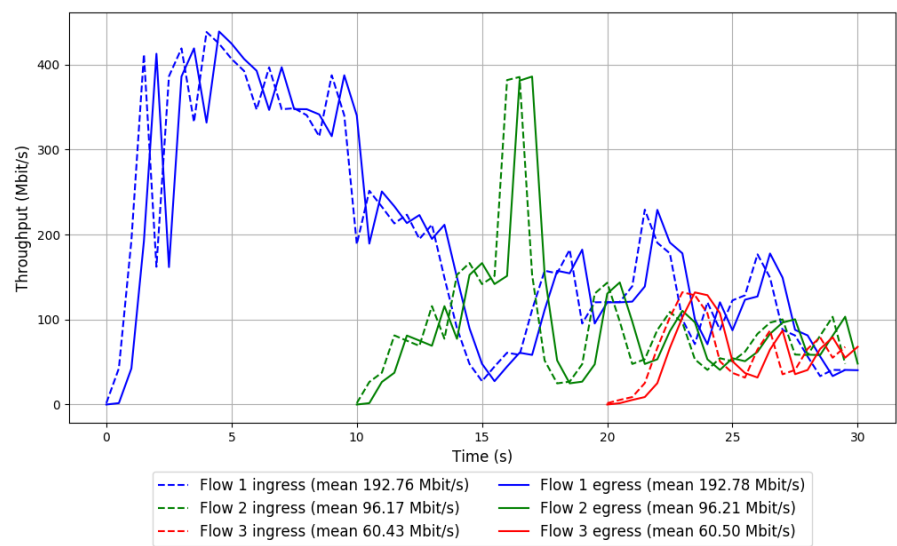Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2018-12-20 08:57:03
End at: 2018-12-20 08:57:33
Local clock offset: -0.025 ms
Remote clock offset: -0.412 ms

# Below is generated by plot.py at 2018-12-20 11:12:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 276.71 Mbit/s
95th percentile per-packet one-way delay: 1.535 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 192.78 Mbit/s
95th percentile per-packet one-way delay: 1.569 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 96.21 Mbit/s
95th percentile per-packet one-way delay: 1.494 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 60.50 Mbit/s
95th percentile per-packet one-way delay: 1.340 ms
Loss rate: 0.00%
```

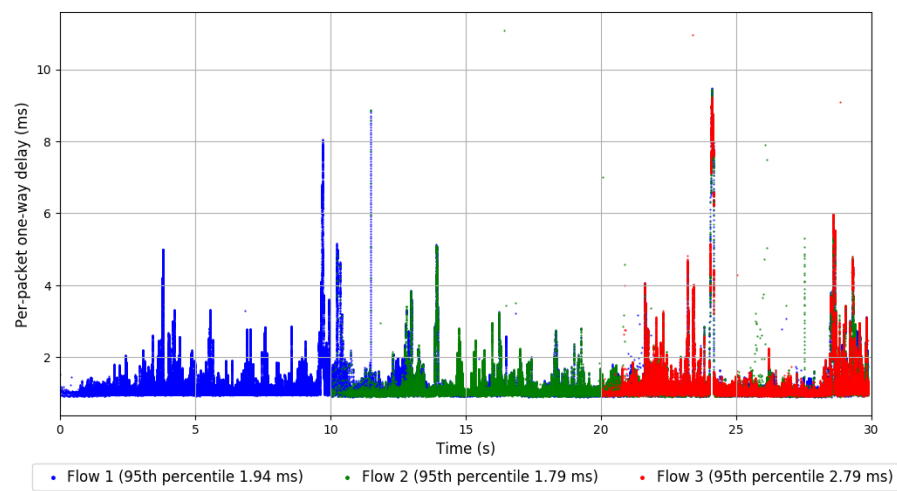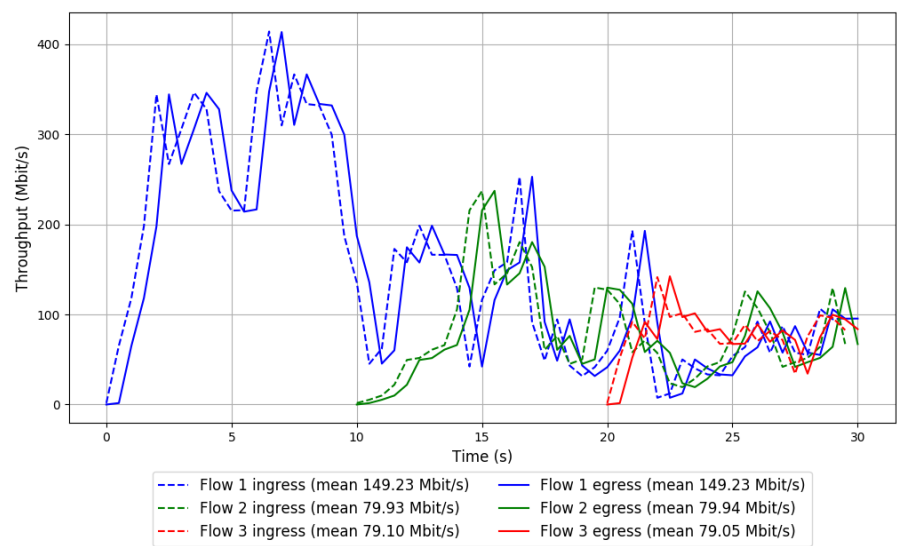Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2018-12-20 09:24:43
End at: 2018-12-20 09:25:13
Local clock offset: -0.332 ms
Remote clock offset: -0.678 ms


# Below is generated by plot.py at 2018-12-20 11:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 228.46 Mbit/s
95th percentile per-packet one-way delay: 2.003 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 149.23 Mbit/s
95th percentile per-packet one-way delay: 1.942 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 79.94 Mbit/s
95th percentile per-packet one-way delay: 1.788 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 79.05 Mbit/s
95th percentile per-packet one-way delay: 2.788 ms
Loss rate: 0.05%
```

Run 4: Report of PCC-Vivace — Data Link

- - - - Flow 1 ingress (mean 149.23 Mbit/s) — Flow 1 egress (mean 149.23 Mbit/s)
- - - - Flow 2 ingress (mean 79.93 Mbit/s) — Flow 2 egress (mean 79.94 Mbit/s)
- - - - Flow 3 ingress (mean 79.10 Mbit/s) — Flow 3 egress (mean 79.05 Mbit/s)

- Flow 1 (95th percentile 1.94 ms) • Flow 2 (95th percentile 1.79 ms) • Flow 3 (95th percentile 2.79 ms)
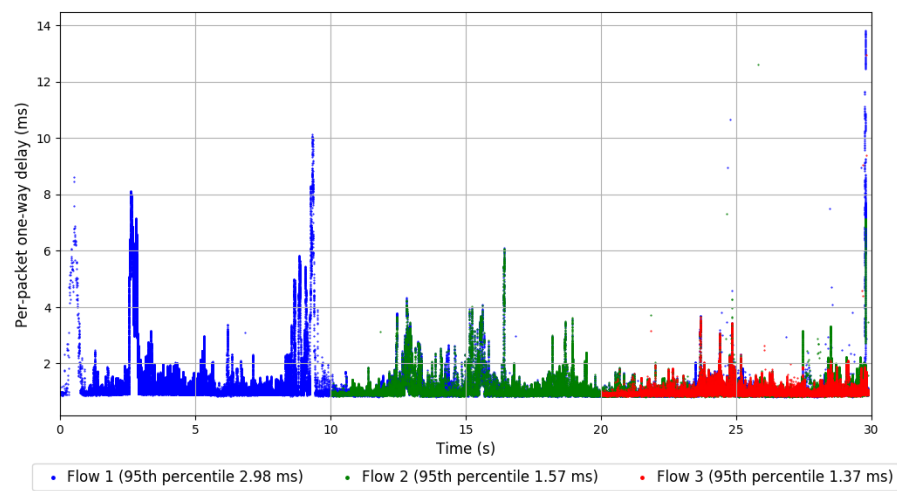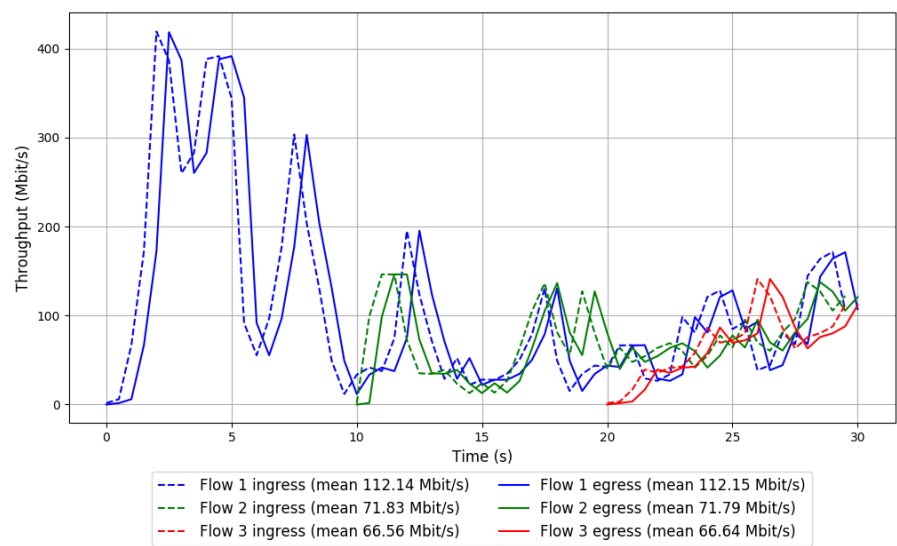
```
Run 5: Statistics of PCC-Vivace

Start at: 2018-12-20 09:52:34
End at: 2018-12-20 09:53:04
Local clock offset: 2.969 ms
Remote clock offset: -0.273 ms


# Below is generated by plot.py at 2018-12-20 11:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 181.90 Mbit/s
95th percentile per-packet one-way delay: 2.066 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 112.15 Mbit/s
95th percentile per-packet one-way delay: 2.978 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 71.79 Mbit/s
95th percentile per-packet one-way delay: 1.566 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 66.64 Mbit/s
95th percentile per-packet one-way delay: 1.368 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-12-20 08:16:45
End at: 2018-12-20 08:17:15
Local clock offset: 2.423 ms
Remote clock offset: 3.53 ms


# Below is generated by plot.py at 2018-12-20 11:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1.188 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.134 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.217 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.100 ms
Loss rate: 0.00%
```
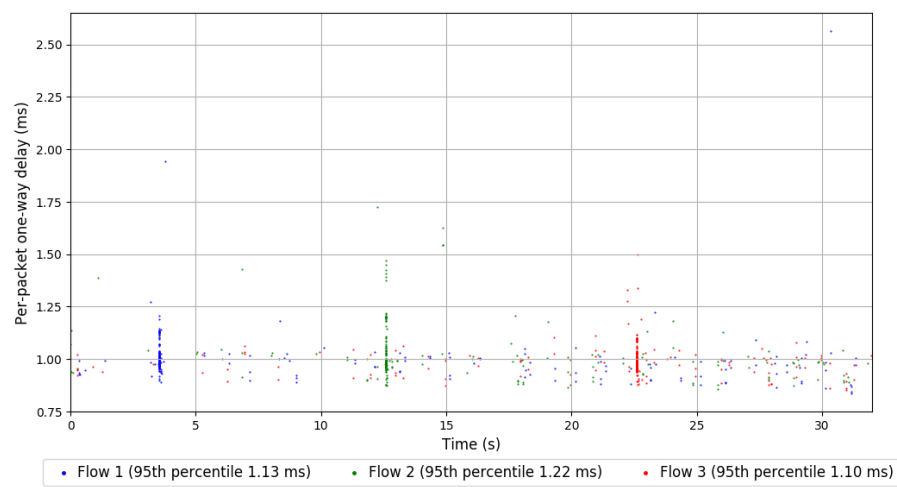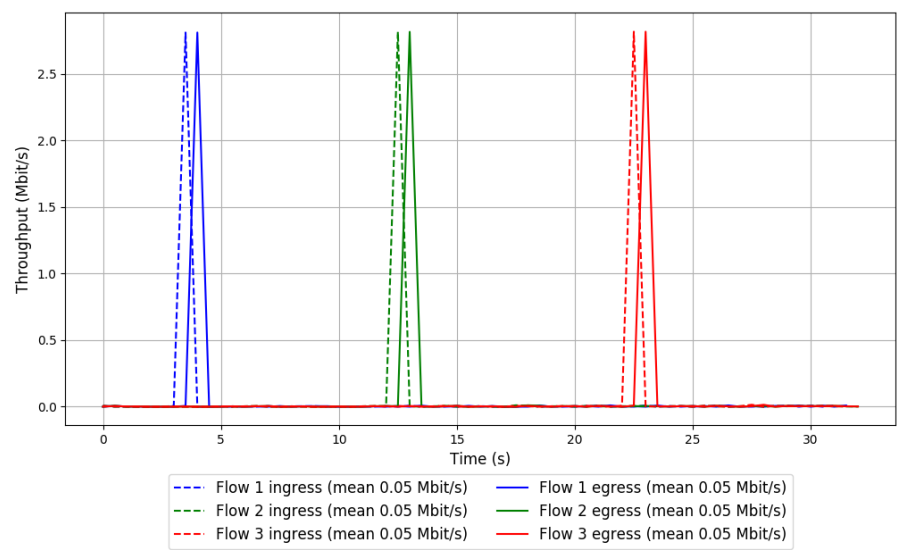
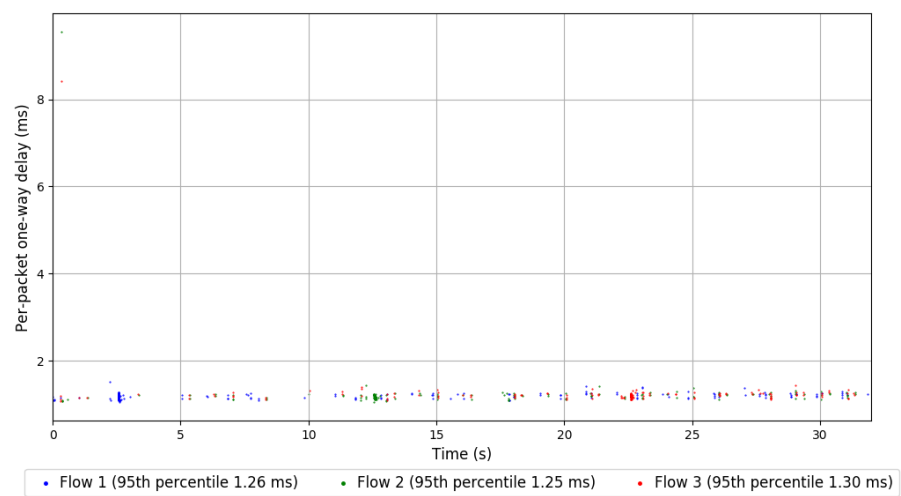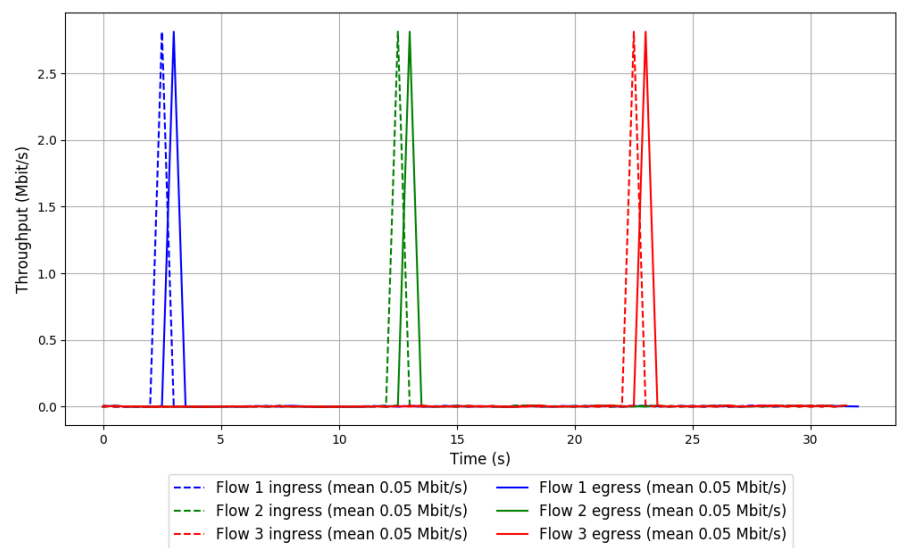Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-12-20 08:44:08
End at: 2018-12-20 08:44:38
Local clock offset: 1.322 ms
Remote clock offset: -0.292 ms

# Below is generated by plot.py at 2018-12-20 11:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1.265 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.256 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.255 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.298 ms
Loss rate: 0.00%
```
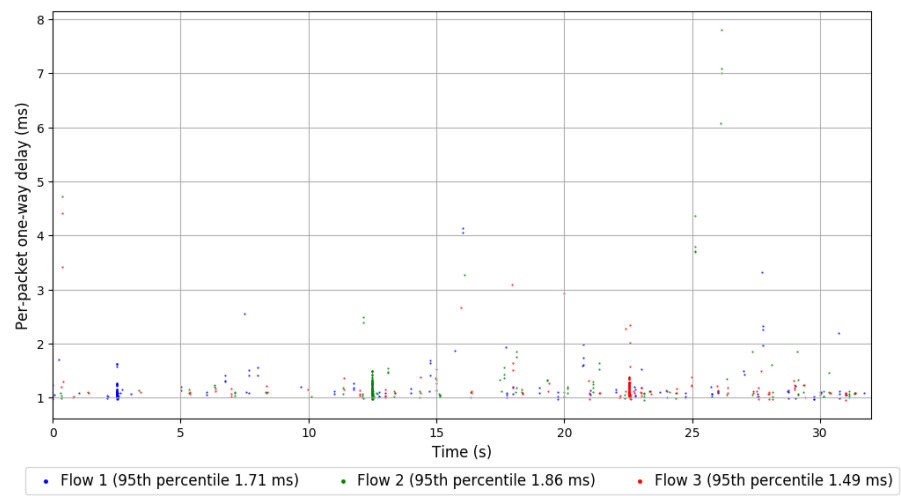
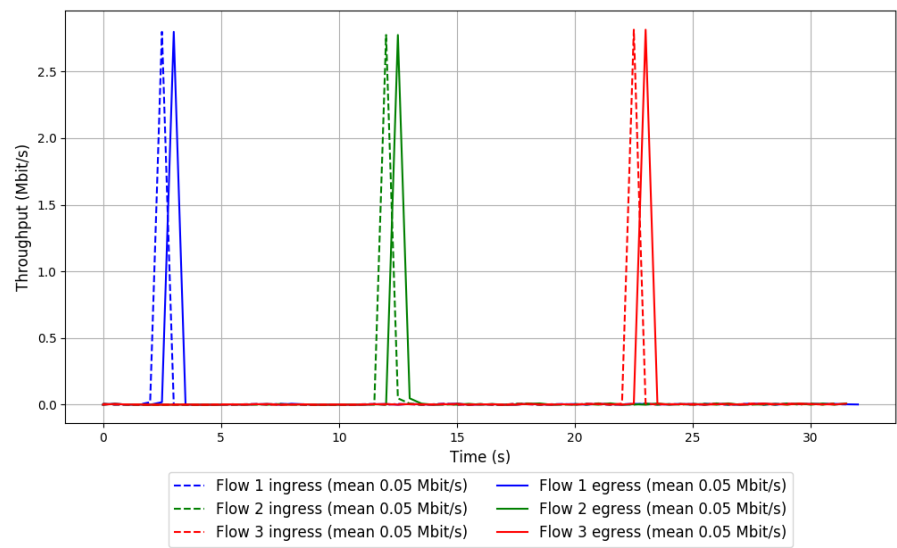Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-12-20 09:11:46
End at: 2018-12-20 09:12:16
Local clock offset: -0.259 ms
Remote clock offset: -0.515 ms


# Below is generated by plot.py at 2018-12-20 11:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1.712 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.712 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.858 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.494 ms
Loss rate: 0.00%
```

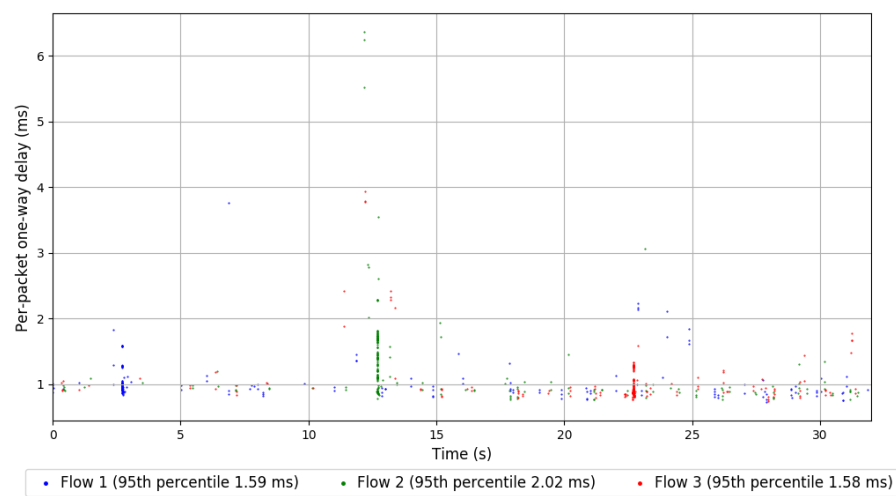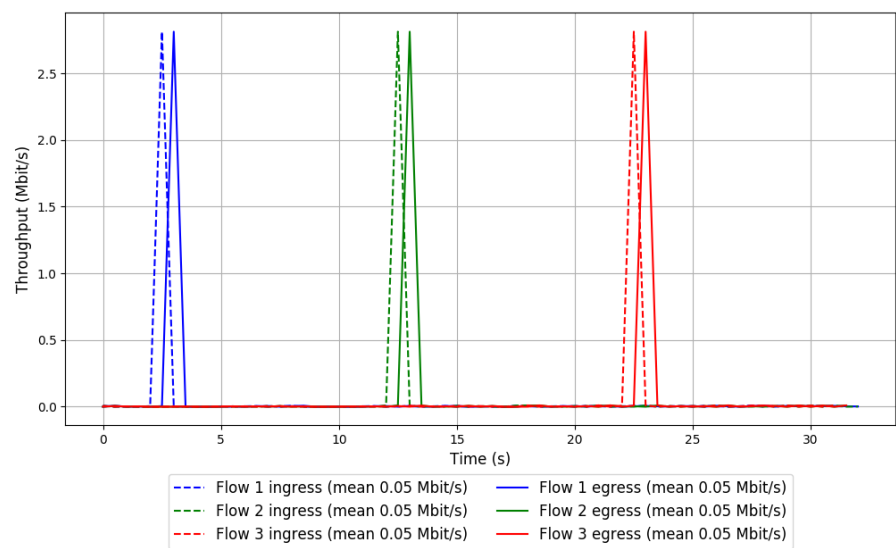Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-12-20 09:39:36
End at: 2018-12-20 09:40:06
Local clock offset: 0.931 ms
Remote clock offset: -0.325 ms


# Below is generated by plot.py at 2018-12-20 11:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1.770 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.587 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.020 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.585 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-12-20 10:07:23
End at: 2018-12-20 10:07:53
Local clock offset: 3.054 ms
Remote clock offset: -0.188 ms


# Below is generated by plot.py at 2018-12-20 11:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1.604 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.694 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.590 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.498 ms
Loss rate: 0.05%
```

Run 5: Report of WebRTC media — Data Link