Pantheon Report

Generated at 2018-09-07 16:41:52 (UTC).

Data path: AWS California 2 on ens5 (*local*) →Mexico on em1 (*remote*).

Repeated the test of 18 congestion control schemes 5 times.

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

NTP offsets were measured against time.stanford.edu and have been applied to correct the timestamps in logs.
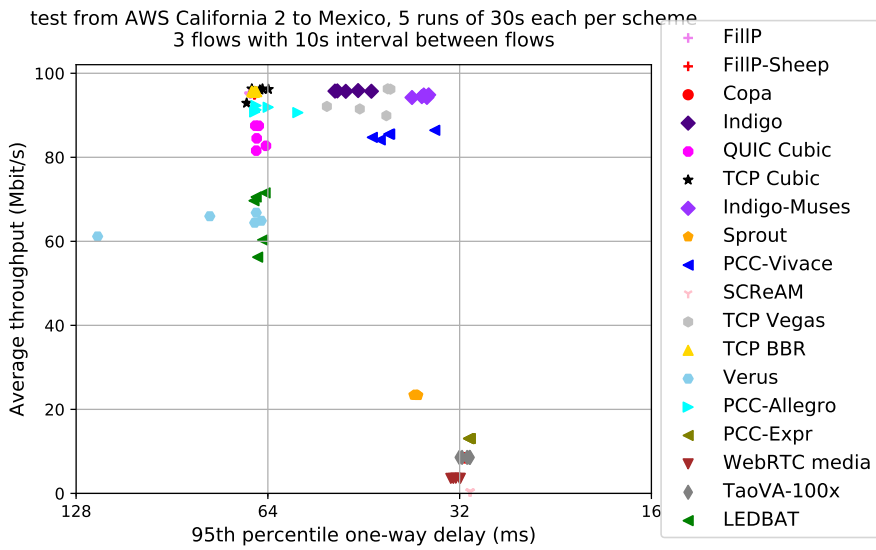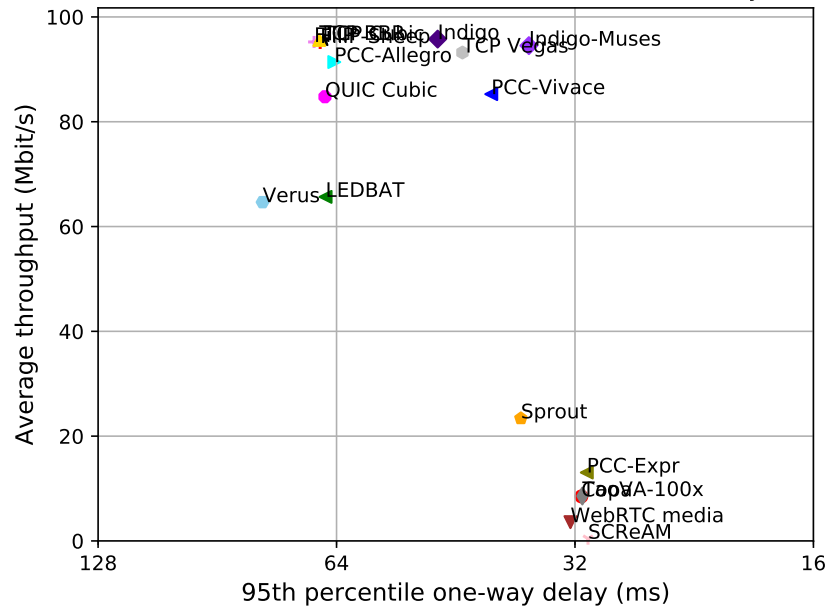
```
System info:
Linux 4.15.0-1020-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 536870912 536870912 536870912
```

```
Git summary:
branch: muses @ e0a9b05ad97d268013b7cc9a9c95637b593a1b4c
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 7631aea3923a3598767c87765ae5103aca0678d3
third_party/pantheon-tunnel @ cbfce6db5ff5740dafe1771f813cd646339e1952
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 AWS California 2 to Mexico, 5 runs of 30s each per scheme
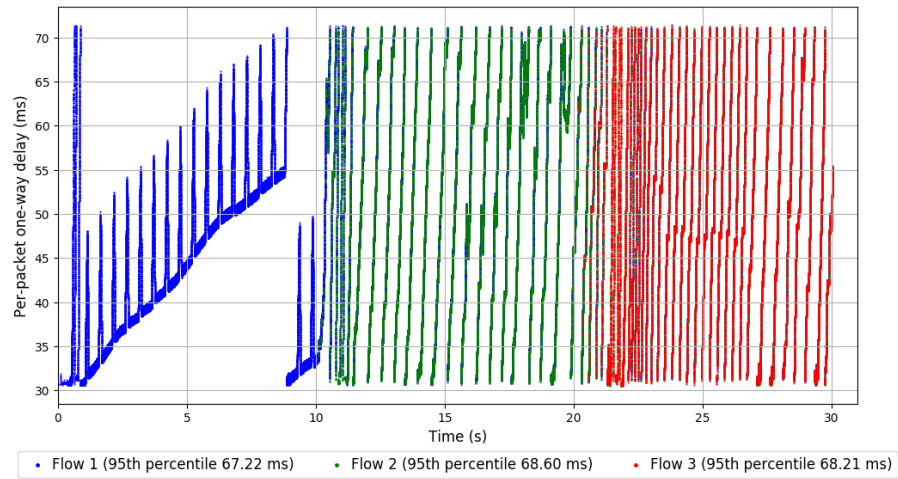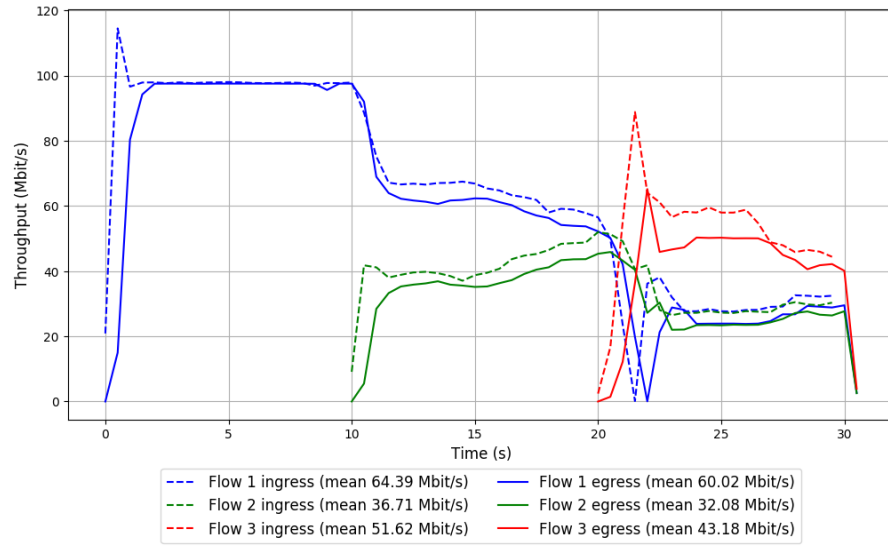## 3 flows with 10s interval between flows (mean of all runs by scheme)

test from AWS California 2 to Mexico, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	62.46	34.48	31.48	66.30	68.21	68.48	6.47	10.91	12.65
Copa	5	0.00	10.41	4.71	30.80	31.88	30.98	98.45	70.72	76.84
TCP Cubic	5	72.11	24.27	21.91	66.30	67.05	64.61	0.95	0.58	0.55
FillP	5	61.15	39.72	23.62	67.94	68.78	68.89	23.08	30.48	38.75
FillP-Sheep	5	58.03	40.52	30.72	65.58	68.28	68.38	14.03	25.30	29.90
Indigo	5	65.09	31.42	30.12	44.68	50.01	54.17	0.06	0.06	0.13
LEDBAT	5	38.94	33.99	12.68	64.89	66.76	67.58	0.17	0.19	0.67
Indigo-Muses	5	62.51	36.63	23.23	37.14	36.22	35.19	0.16	0.02	0.03
PCC-Allegro	5	79.20	13.34	10.09	63.75	66.07	64.67	4.00	5.07	5.20
PCC-Expr	5	8.00	5.45	4.33	30.91	30.93	30.95	42.90	37.35	28.09
QUIC Cubic	5	60.16	23.62	27.10	65.46	66.44	67.62	2.09	1.07	1.16
SCReAM	5	0.21	0.21	0.22	30.79	30.79	30.80	0.00	0.00	0.00
Sprout	5	11.78	11.71	11.57	37.40	37.33	37.75	0.04	0.02	0.03
TaoVA-100x	5	0.00	9.17	7.40	30.77	32.03	31.18	95.92	82.15	66.27
TCP Vegas	5	60.96	31.95	32.95	44.03	42.84	39.10	0.55	0.27	0.18
Verus	5	39.85	32.53	13.42	76.44	85.31	62.98	42.88	54.63	37.96
PCC-Vivace	5	65.42	23.03	13.74	41.30	40.25	37.30	0.03	0.03	0.01
WebRTC media	5	1.93	1.24	0.42	31.82	33.01	33.57	0.04	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2018-09-07 14:29:01
End at: 2018-09-07 14:29:31
Local clock offset: -3.287 ms
Remote clock offset: -0.835 ms


# Below is generated by plot.py at 2018-09-07 16:33:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.74 Mbit/s
95th percentile per-packet one-way delay: 67.835 ms
Loss rate: 9.61%
-- Flow 1:
Average throughput: 60.02 Mbit/s
95th percentile per-packet one-way delay: 67.219 ms
Loss rate: 6.72%
-- Flow 2:
Average throughput: 32.08 Mbit/s
95th percentile per-packet one-way delay: 68.603 ms
Loss rate: 12.51%
-- Flow 3:
Average throughput: 43.18 Mbit/s
95th percentile per-packet one-way delay: 68.213 ms
Loss rate: 16.32%
```
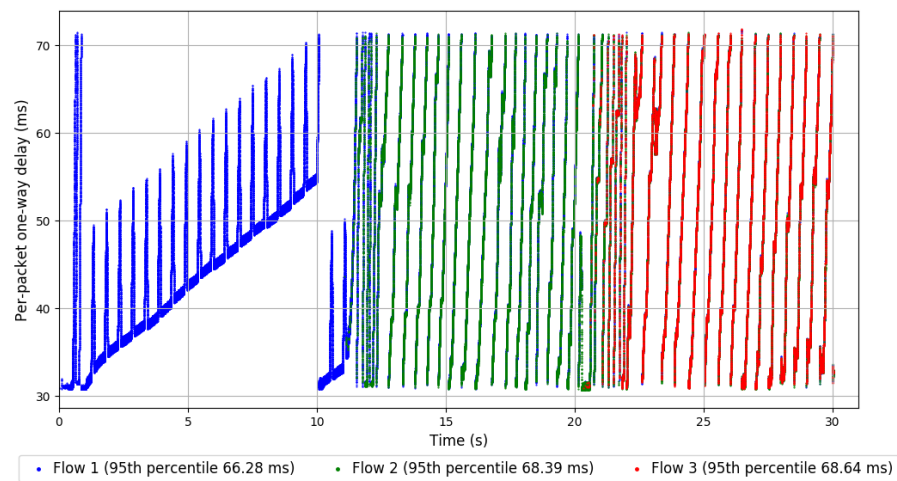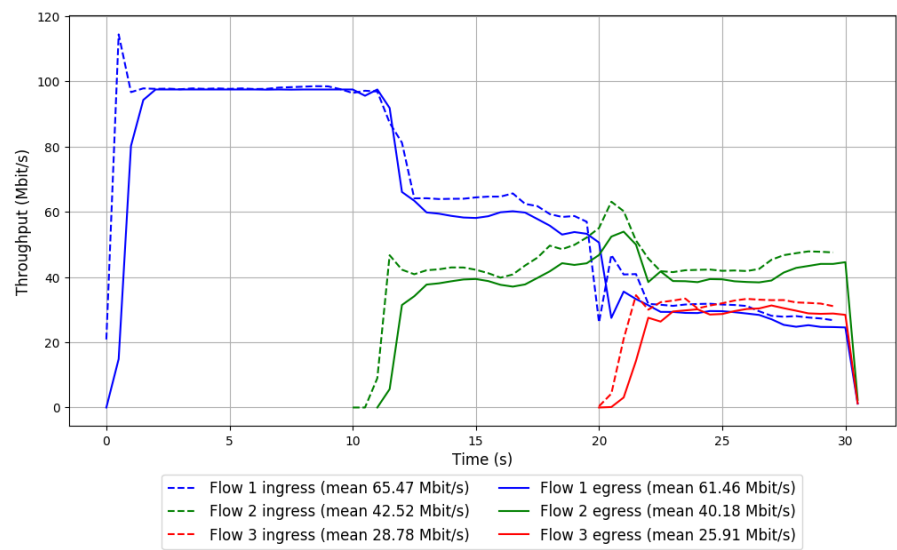
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2018-09-07 14:53:45
End at: 2018-09-07 14:54:15
Local clock offset: -0.874 ms
Remote clock offset: -0.666 ms


# Below is generated by plot.py at 2018-09-07 16:33:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.47 Mbit/s
95th percentile per-packet one-way delay: 67.202 ms
Loss rate: 7.65%
-- Flow 1:
Average throughput: 61.46 Mbit/s
95th percentile per-packet one-way delay: 66.279 ms
Loss rate: 6.12%
-- Flow 2:
Average throughput: 40.18 Mbit/s
95th percentile per-packet one-way delay: 68.395 ms
Loss rate: 10.28%
-- Flow 3:
Average throughput: 25.91 Mbit/s
95th percentile per-packet one-way delay: 68.643 ms
Loss rate: 10.26%
```

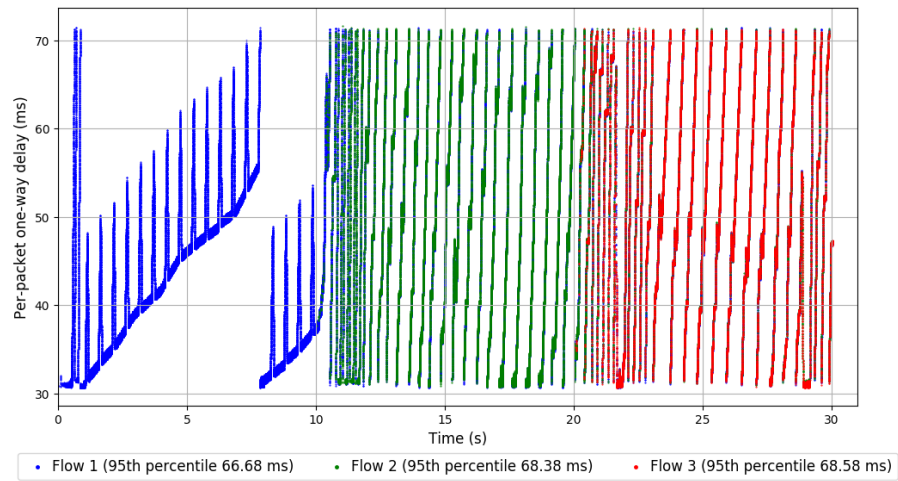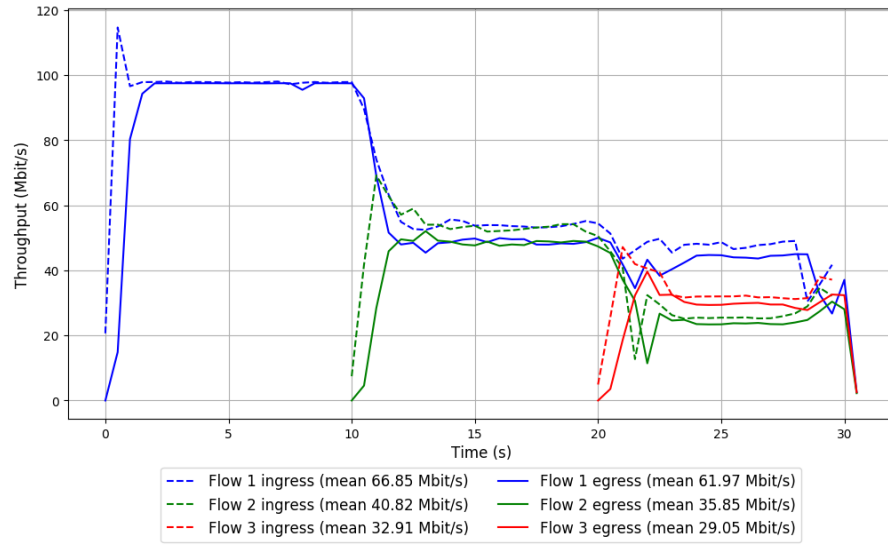Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2018-09-07 15:18:07
End at: 2018-09-07 15:18:37
Local clock offset: 0.879 ms
Remote clock offset: -0.299 ms


# Below is generated by plot.py at 2018-09-07 16:33:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.53 Mbit/s
95th percentile per-packet one-way delay: 67.659 ms
Loss rate: 8.97%
-- Flow 1:
Average throughput: 61.97 Mbit/s
95th percentile per-packet one-way delay: 66.680 ms
Loss rate: 7.25%
-- Flow 2:
Average throughput: 35.85 Mbit/s
95th percentile per-packet one-way delay: 68.377 ms
Loss rate: 12.12%
-- Flow 3:
Average throughput: 29.05 Mbit/s
95th percentile per-packet one-way delay: 68.582 ms
Loss rate: 11.63%
```

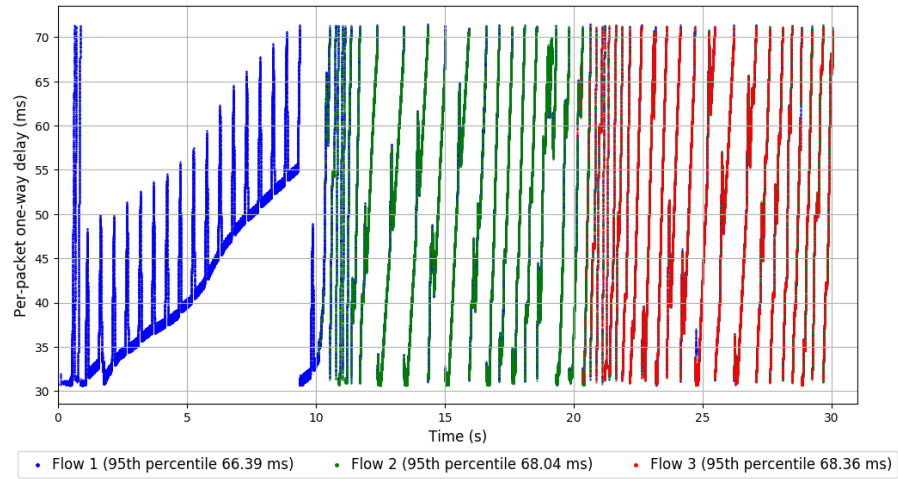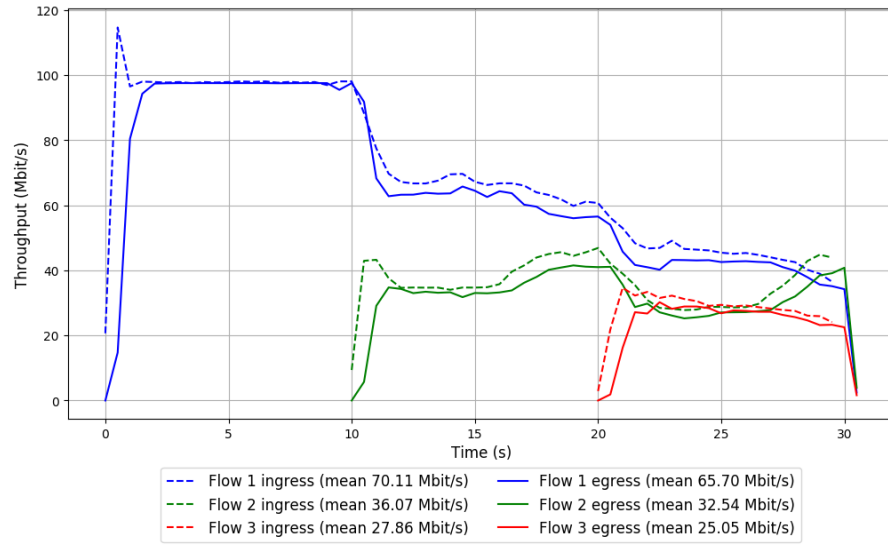Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2018-09-07 15:42:32
End at: 2018-09-07 15:43:02
Local clock offset: 0.718 ms
Remote clock offset: -0.411 ms


# Below is generated by plot.py at 2018-09-07 16:33:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.73 Mbit/s
95th percentile per-packet one-way delay: 67.113 ms
Loss rate: 7.34%
-- Flow 1:
Average throughput: 65.70 Mbit/s
95th percentile per-packet one-way delay: 66.385 ms
Loss rate: 6.20%
-- Flow 2:
Average throughput: 32.54 Mbit/s
95th percentile per-packet one-way delay: 68.036 ms
Loss rate: 9.67%
-- Flow 3:
Average throughput: 25.05 Mbit/s
95th percentile per-packet one-way delay: 68.361 ms
Loss rate: 9.96%
```
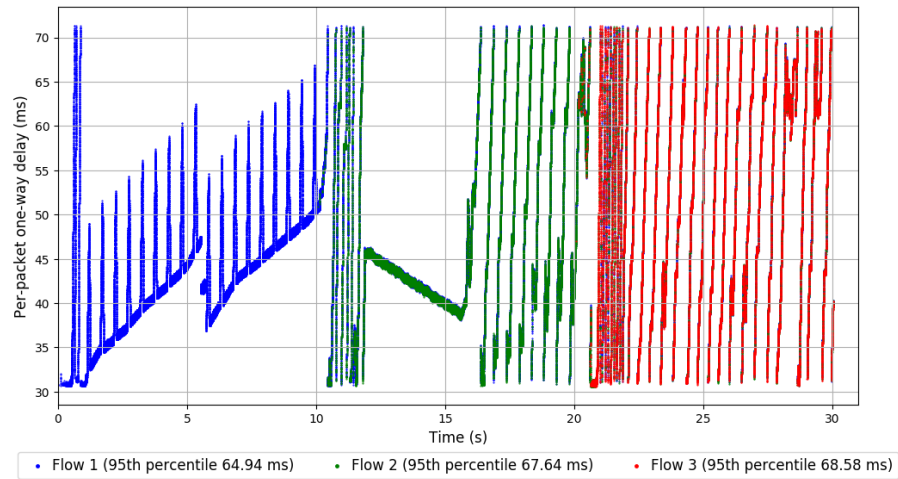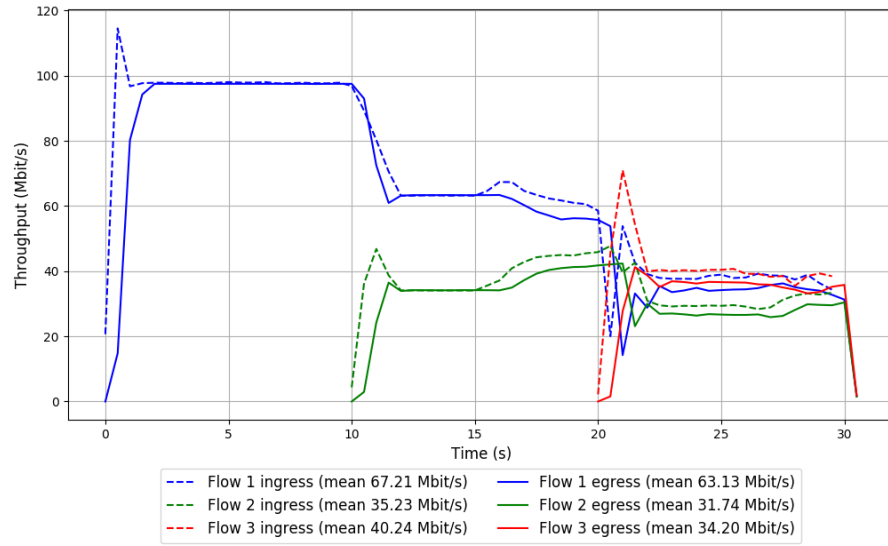
Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2018-09-07 16:06:58
End at: 2018-09-07 16:07:28
Local clock offset: 0.383 ms
Remote clock offset: -0.168 ms


# Below is generated by plot.py at 2018-09-07 16:33:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.62 Mbit/s
95th percentile per-packet one-way delay: 66.636 ms
Loss rate: 8.08%
-- Flow 1:
Average throughput: 63.13 Mbit/s
95th percentile per-packet one-way delay: 64.938 ms
Loss rate: 6.04%
-- Flow 2:
Average throughput: 31.74 Mbit/s
95th percentile per-packet one-way delay: 67.638 ms
Loss rate: 9.95%
-- Flow 3:
Average throughput: 34.20 Mbit/s
95th percentile per-packet one-way delay: 68.580 ms
Loss rate: 15.07%
```
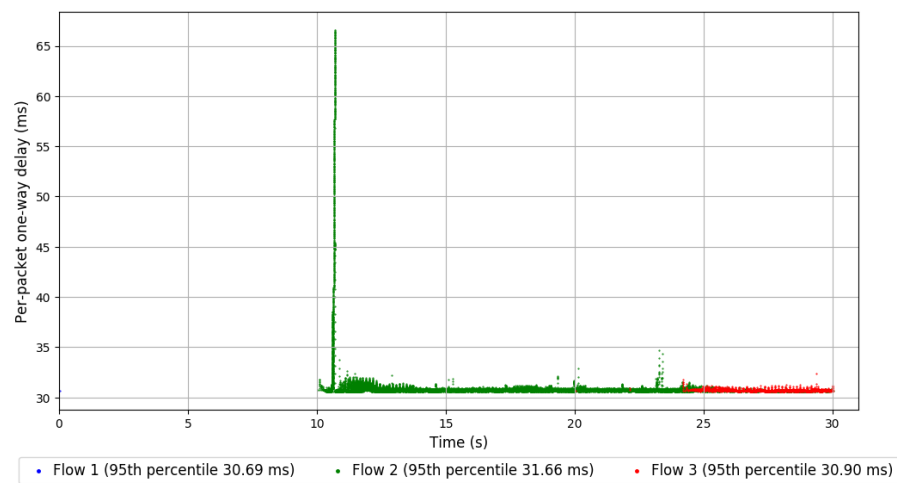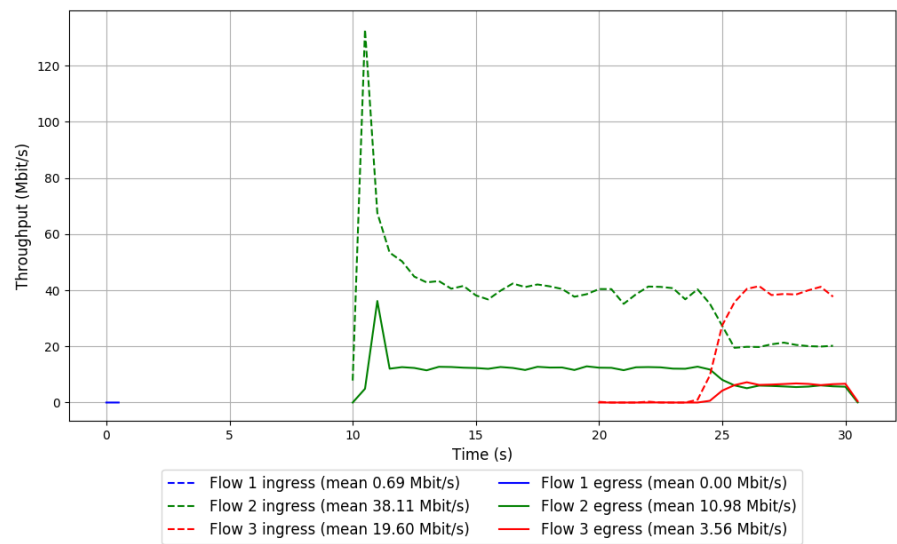
Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2018-09-07 14:30:25
End at: 2018-09-07 14:30:55
Local clock offset: -3.198 ms
Remote clock offset: -0.773 ms


# Below is generated by plot.py at 2018-09-07 16:33:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 31.448 ms
Loss rate: 73.36%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.689 ms
Loss rate: 97.92%
-- Flow 2:
Average throughput: 10.98 Mbit/s
95th percentile per-packet one-way delay: 31.662 ms
Loss rate: 71.18%
-- Flow 3:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 30.903 ms
Loss rate: 81.84%
```

Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 0.69 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 38.11 Mbit/s) --- Flow 2 egress (mean 10.98 Mbit/s)
Flow 3 ingress (mean 19.60 Mbit/s) --- Flow 3 egress (mean 3.56 Mbit/s)

Flow 1 (95th percentile 30.69 ms) • Flow 2 (95th percentile 31.66 ms) • Flow 3 (95th percentile 30.90 ms)
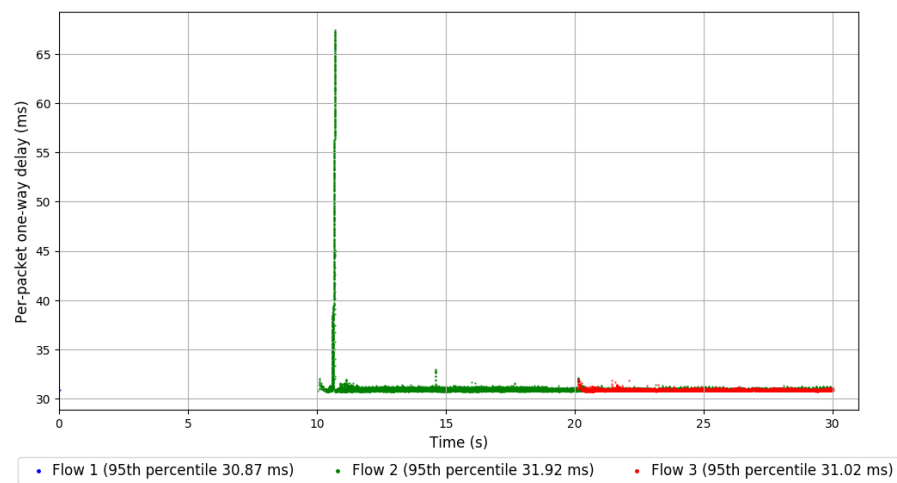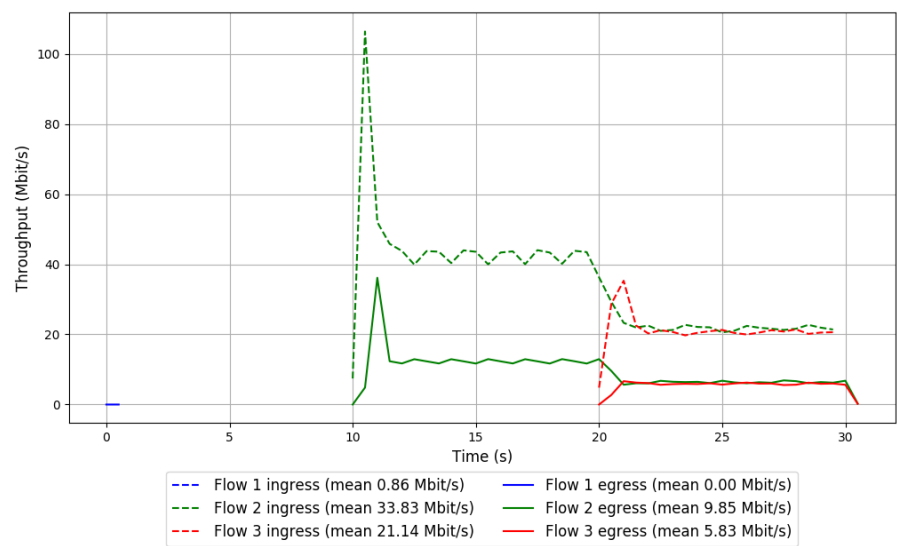
```
Run 2: Statistics of Copa

Start at: 2018-09-07 14:55:08
End at: 2018-09-07 14:55:38
Local clock offset: -0.668 ms
Remote clock offset: -0.652 ms


# Below is generated by plot.py at 2018-09-07 16:33:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 31.262 ms
Loss rate: 71.25%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.869 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 9.85 Mbit/s
95th percentile per-packet one-way delay: 31.917 ms
Loss rate: 70.88%
-- Flow 3:
Average throughput: 5.83 Mbit/s
95th percentile per-packet one-way delay: 31.021 ms
Loss rate: 72.44%
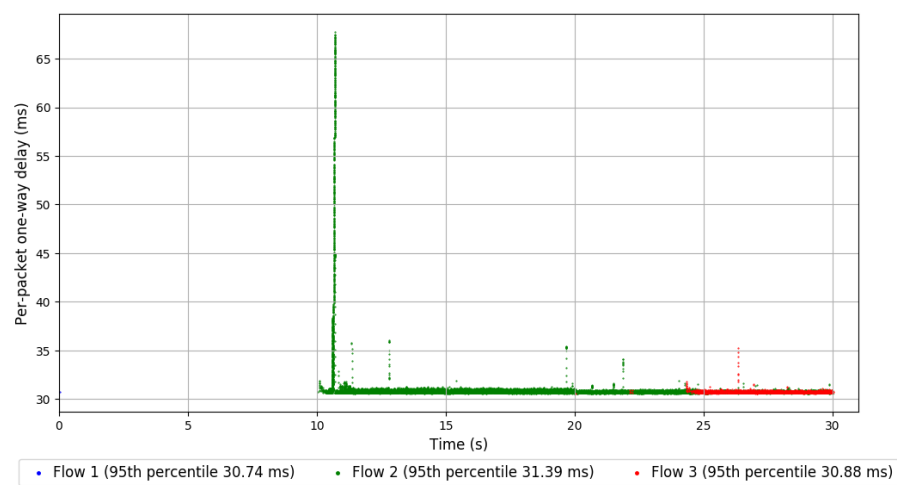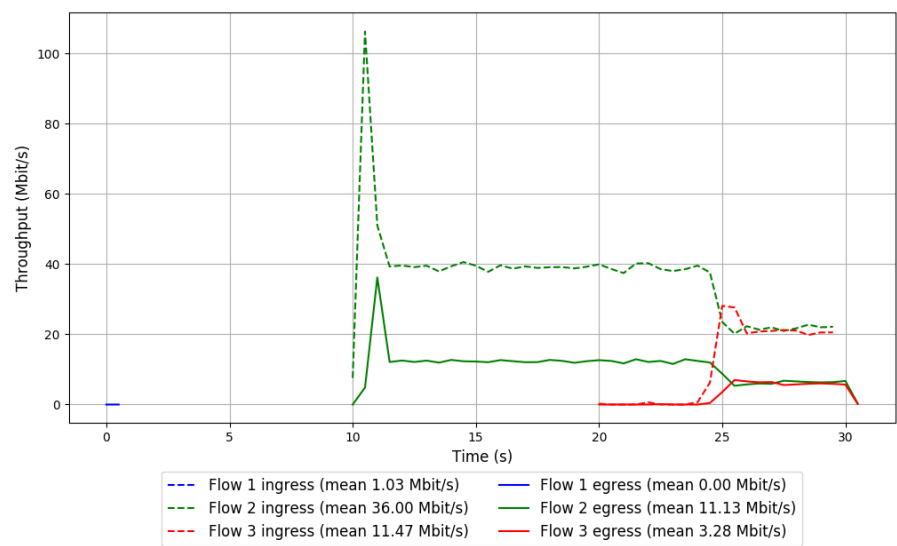```

Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2018-09-07 15:19:30
End at: 2018-09-07 15:20:00
Local clock offset: 0.791 ms
Remote clock offset: -0.437 ms


# Below is generated by plot.py at 2018-09-07 16:33:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 31.166 ms
Loss rate: 69.42%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.744 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 11.13 Mbit/s
95th percentile per-packet one-way delay: 31.385 ms
Loss rate: 69.10%
-- Flow 3:
Average throughput: 3.28 Mbit/s
95th percentile per-packet one-way delay: 30.879 ms
Loss rate: 71.41%
```

Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 1.03 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 36.00 Mbit/s)   Flow 2 egress (mean 11.13 Mbit/s)
Flow 3 ingress (mean 11.47 Mbit/s)   Flow 3 egress (mean 3.28 Mbit/s)

Flow 1 (95th percentile 30.74 ms)   Flow 2 (95th percentile 31.39 ms)   Flow 3 (95th percentile 30.88 ms)
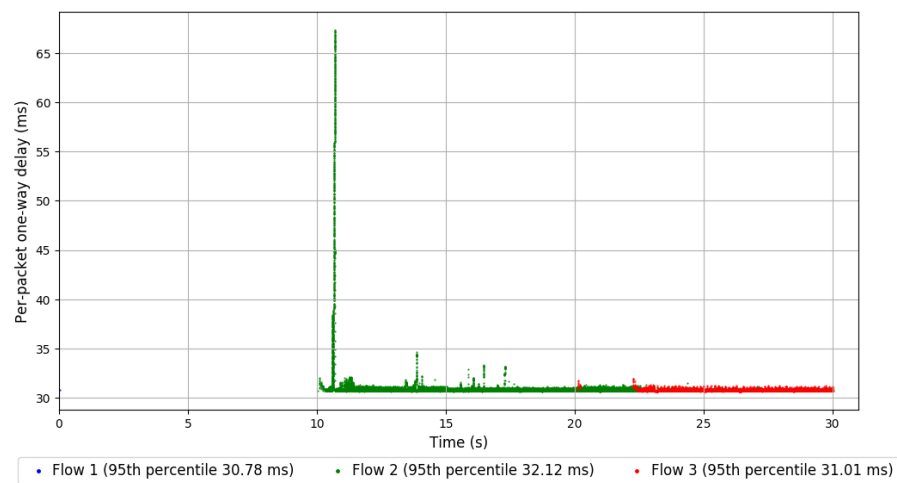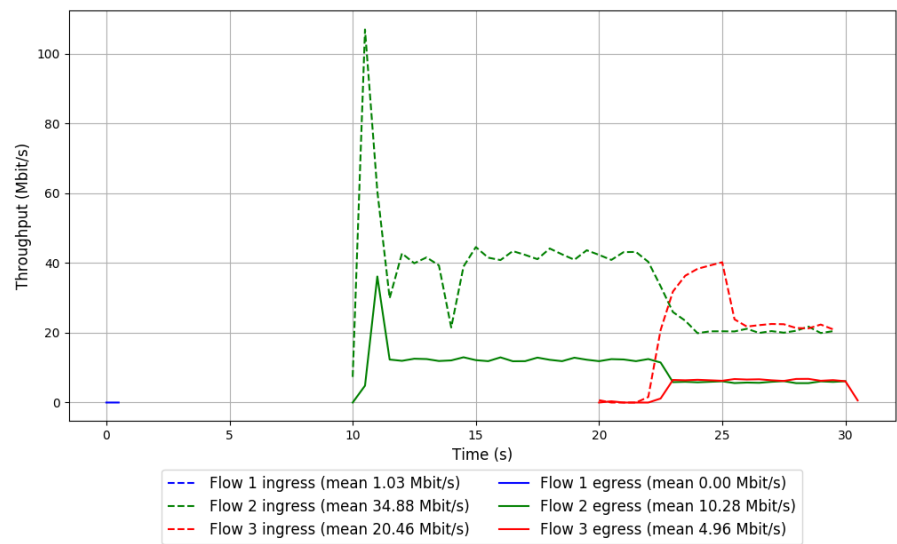
20

```
Run 4: Statistics of Copa

Start at: 2018-09-07 15:43:55
End at: 2018-09-07 15:44:25
Local clock offset: 0.753 ms
Remote clock offset: -0.382 ms


# Below is generated by plot.py at 2018-09-07 16:33:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.49 Mbit/s
95th percentile per-packet one-way delay: 31.461 ms
Loss rate: 71.70%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.777 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 10.28 Mbit/s
95th percentile per-packet one-way delay: 32.115 ms
Loss rate: 70.52%
-- Flow 3:
Average throughput: 4.96 Mbit/s
95th percentile per-packet one-way delay: 31.006 ms
Loss rate: 75.73%
```
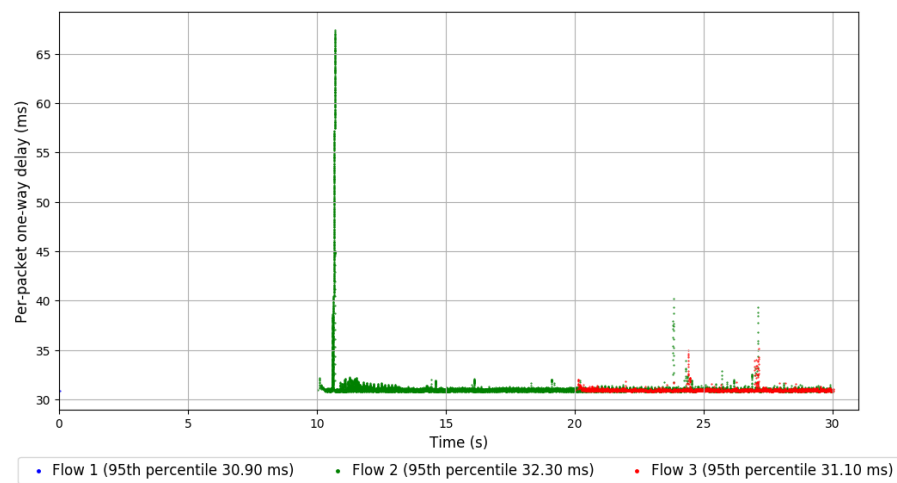
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 1.03 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 34.88 Mbit/s) --- Flow 2 egress (mean 10.28 Mbit/s)
Flow 3 ingress (mean 20.46 Mbit/s) --- Flow 3 egress (mean 4.96 Mbit/s)

Flow 1 (95th percentile 30.78 ms) Flow 2 (95th percentile 32.12 ms) Flow 3 (95th percentile 31.01 ms)
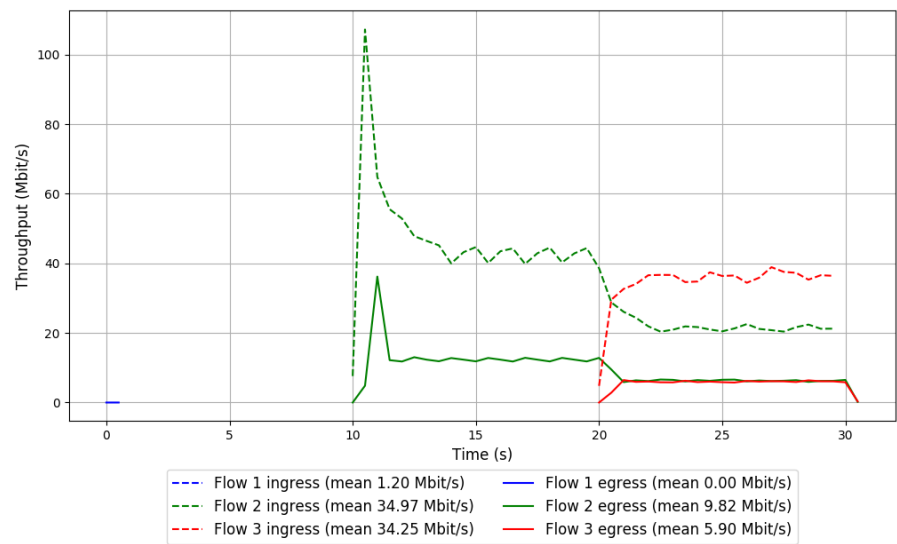
```
Run 5: Statistics of Copa

Start at: 2018-09-07 16:08:21
End at: 2018-09-07 16:08:51
Local clock offset: 0.278 ms
Remote clock offset: -0.073 ms


# Below is generated by plot.py at 2018-09-07 16:33:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 31.734 ms
Loss rate: 75.48%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.904 ms
Loss rate: 98.80%
-- Flow 2:
Average throughput: 9.82 Mbit/s
95th percentile per-packet one-way delay: 32.302 ms
Loss rate: 71.92%
-- Flow 3:
Average throughput: 5.90 Mbit/s
95th percentile per-packet one-way delay: 31.097 ms
Loss rate: 82.76%
```
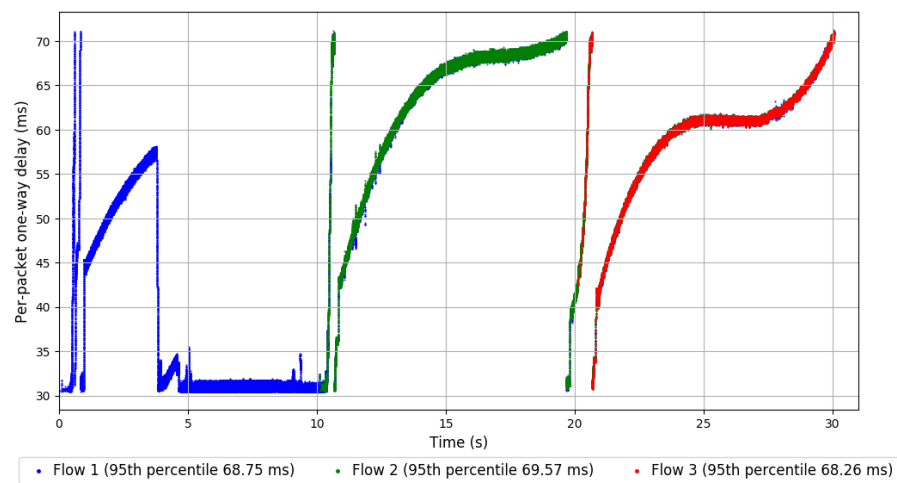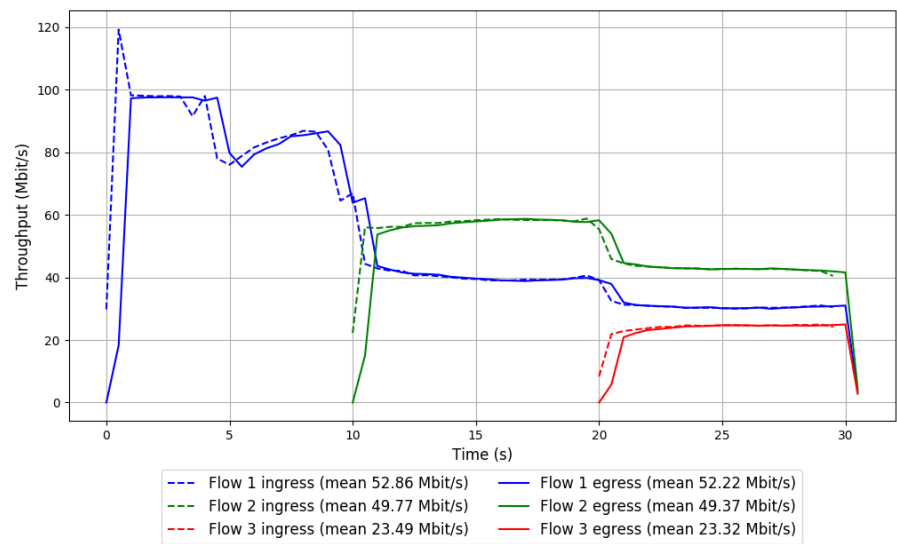
Run 5: Report of Copa — Data Link

- Flow 1 ingress (mean 1.20 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
- Flow 2 ingress (mean 34.97 Mbit/s) --- Flow 2 egress (mean 9.82 Mbit/s)
- Flow 3 ingress (mean 34.25 Mbit/s) --- Flow 3 egress (mean 5.90 Mbit/s)

- Flow 1 (95th percentile 30.90 ms)   • Flow 2 (95th percentile 32.30 ms)   • Flow 3 (95th percentile 31.10 ms)

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```
Run 1: Statistics of TCP Cubic

Start at: 2018-09-07 14:40:04
End at: 2018-09-07 14:40:34
Local clock offset: -3.37 ms
Remote clock offset: -0.945 ms


# Below is generated by plot.py at 2018-09-07 16:33:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.91 Mbit/s
95th percentile per-packet one-way delay: 69.111 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 52.22 Mbit/s
95th percentile per-packet one-way delay: 68.754 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 49.37 Mbit/s
95th percentile per-packet one-way delay: 69.567 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 23.32 Mbit/s
95th percentile per-packet one-way delay: 68.261 ms
Loss rate: 0.42%
```

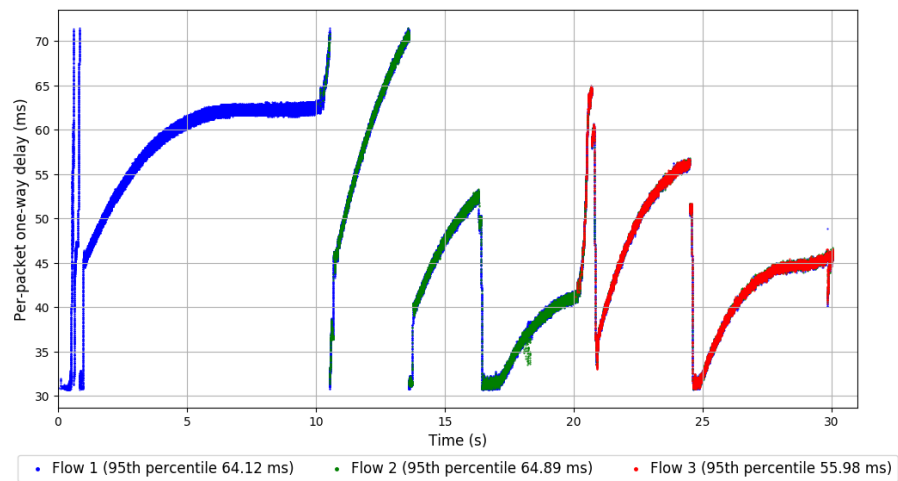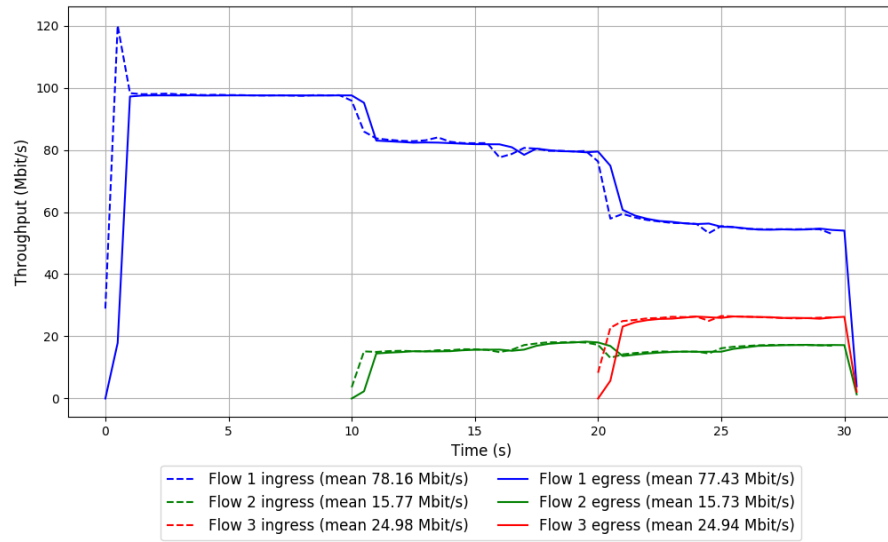Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2018-09-07 15:04:36
End at: 2018-09-07 15:05:06
Local clock offset: 0.428 ms
Remote clock offset: -0.455 ms


# Below is generated by plot.py at 2018-09-07 16:33:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.19 Mbit/s
95th percentile per-packet one-way delay: 63.872 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 77.43 Mbit/s
95th percentile per-packet one-way delay: 64.124 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 15.73 Mbit/s
95th percentile per-packet one-way delay: 64.889 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 24.94 Mbit/s
95th percentile per-packet one-way delay: 55.976 ms
Loss rate: 0.12%
```

Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2018-09-07 15:28:58
End at: 2018-09-07 15:29:28
Local clock offset: 0.486 ms
Remote clock offset: -0.39 ms


# Below is generated by plot.py at 2018-09-07 16:33:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 67.831 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 75.11 Mbit/s
95th percentile per-packet one-way delay: 68.040 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 19.14 Mbit/s
95th percentile per-packet one-way delay: 67.679 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 25.45 Mbit/s
95th percentile per-packet one-way delay: 65.794 ms
Loss rate: 0.80%
```
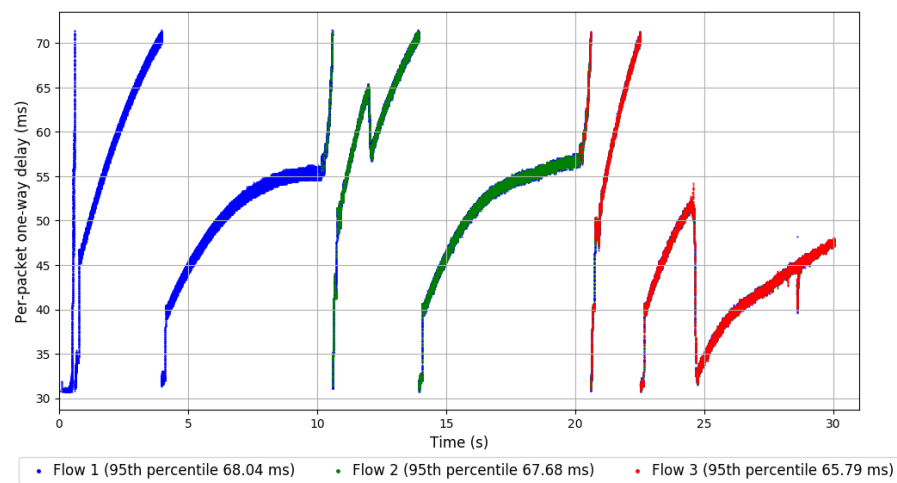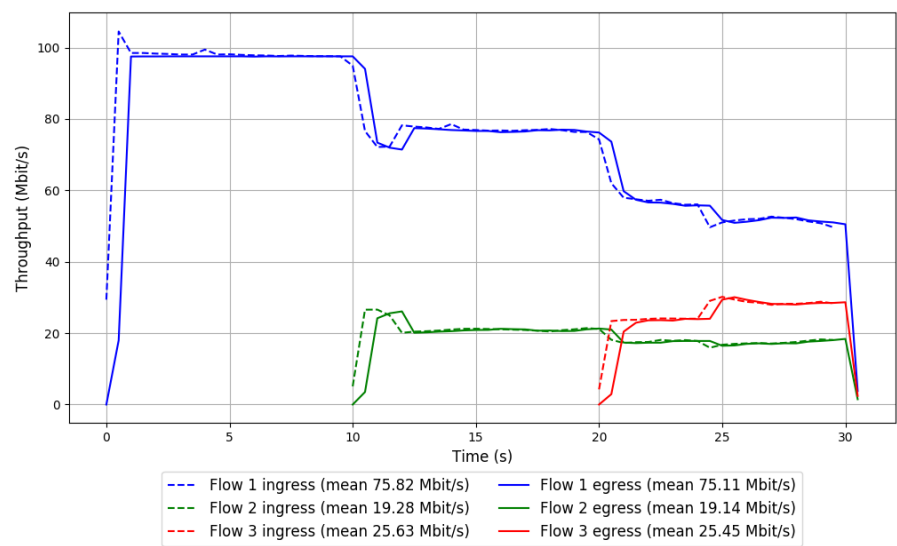
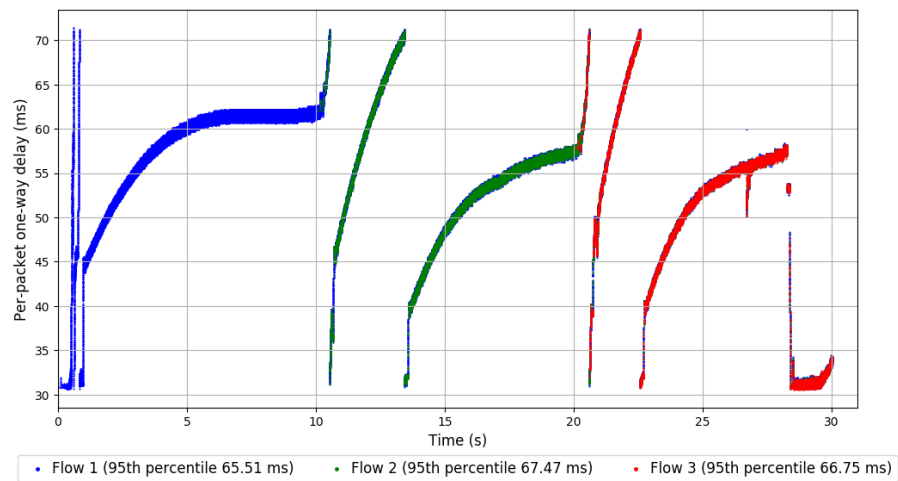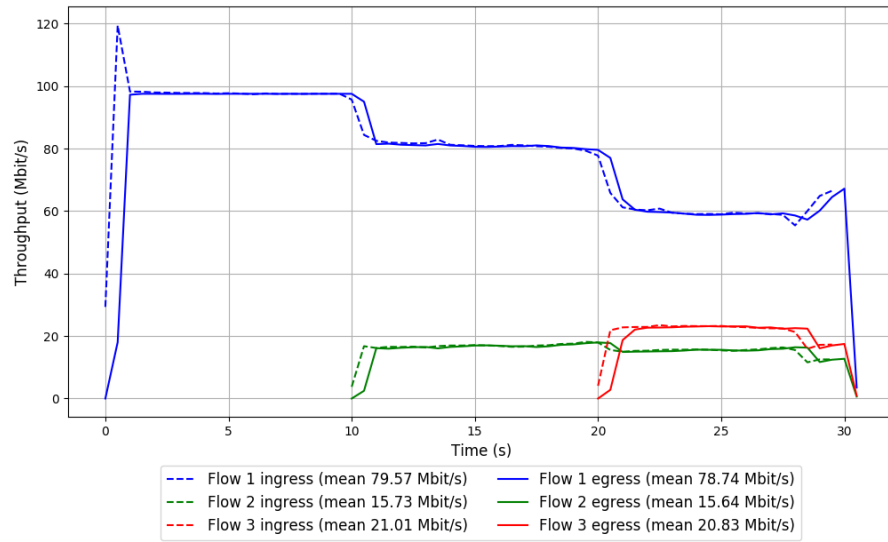Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2018-09-07 15:53:24
End at: 2018-09-07 15:53:54
Local clock offset: 0.459 ms
Remote clock offset: -0.267 ms


# Below is generated by plot.py at 2018-09-07 16:34:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.05 Mbit/s
95th percentile per-packet one-way delay: 65.880 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 78.74 Mbit/s
95th percentile per-packet one-way delay: 65.506 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 15.64 Mbit/s
95th percentile per-packet one-way delay: 67.470 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 20.83 Mbit/s
95th percentile per-packet one-way delay: 66.752 ms
Loss rate: 1.09%
```
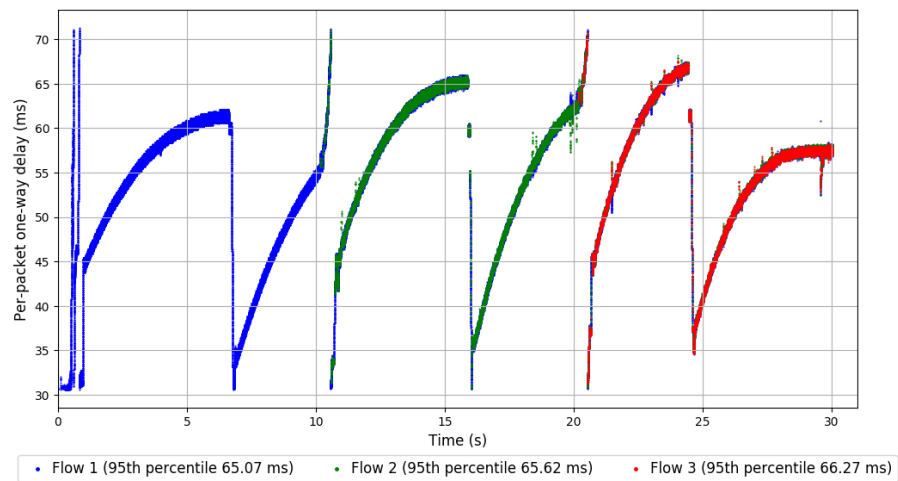
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 79.57 Mbit/s) --- Flow 1 egress (mean 78.74 Mbit/s)
Flow 2 ingress (mean 15.73 Mbit/s) --- Flow 2 egress (mean 15.64 Mbit/s)
Flow 3 ingress (mean 21.01 Mbit/s) --- Flow 3 egress (mean 20.83 Mbit/s)

Flow 1 (95th percentile 65.51 ms)   Flow 2 (95th percentile 67.47 ms)   Flow 3 (95th percentile 66.75 ms)
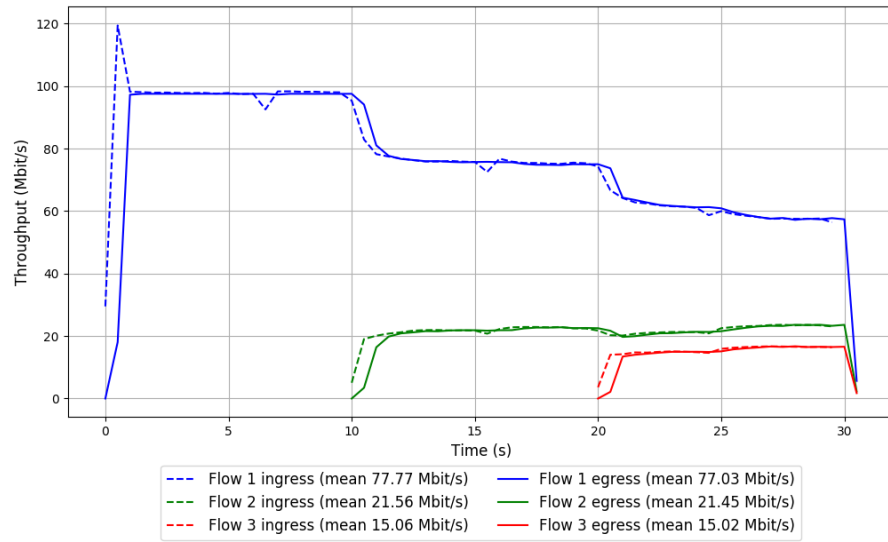
```
Run 5: Statistics of TCP Cubic

Start at: 2018-09-07 16:17:51
End at: 2018-09-07 16:18:21
Local clock offset: 0.35 ms
Remote clock offset: -0.128 ms


# Below is generated by plot.py at 2018-09-07 16:34:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.29 Mbit/s
95th percentile per-packet one-way delay: 65.256 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 77.03 Mbit/s
95th percentile per-packet one-way delay: 65.068 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 21.45 Mbit/s
95th percentile per-packet one-way delay: 65.623 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 15.02 Mbit/s
95th percentile per-packet one-way delay: 66.267 ms
Loss rate: 0.34%
```
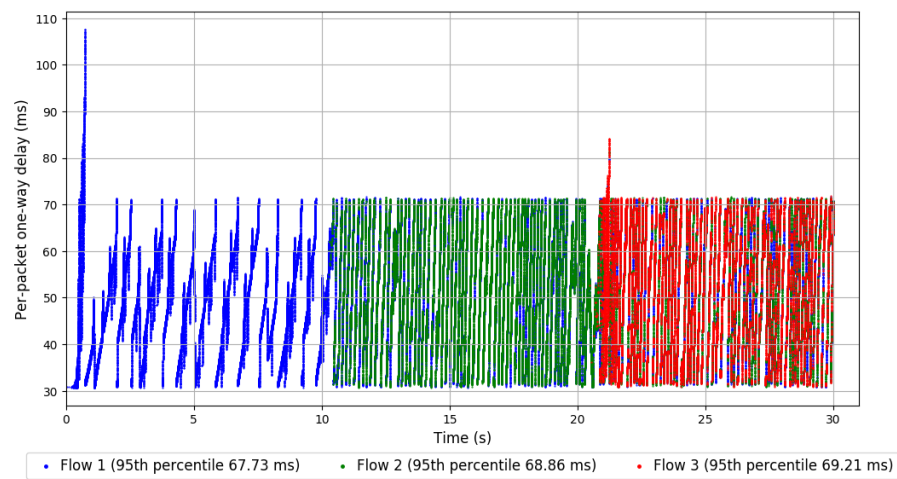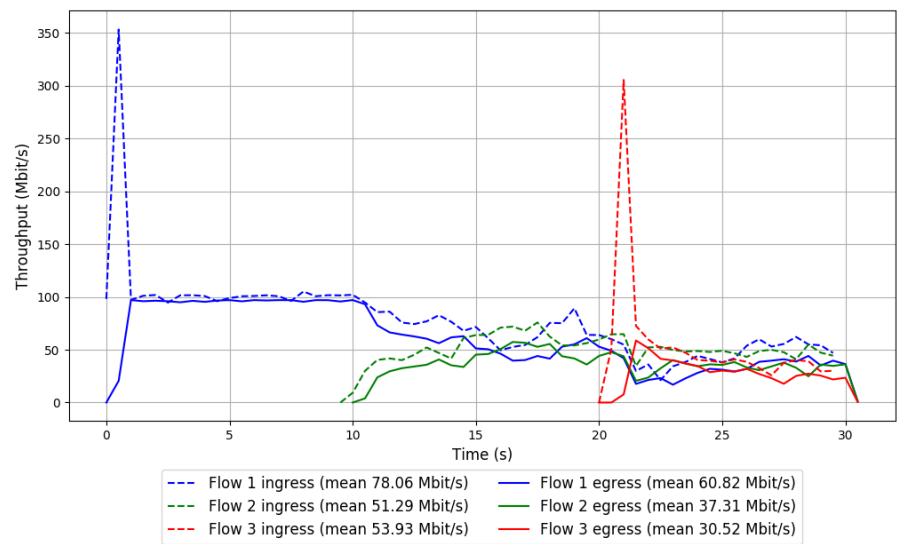
Run 5: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 77.77 Mbit/s)   ——— Flow 1 egress (mean 77.03 Mbit/s)
- - - - Flow 2 ingress (mean 21.56 Mbit/s)   ——— Flow 2 egress (mean 21.45 Mbit/s)
- - - - Flow 3 ingress (mean 15.06 Mbit/s)   ——— Flow 3 egress (mean 15.02 Mbit/s)

• Flow 1 (95th percentile 65.07 ms)   • Flow 2 (95th percentile 65.62 ms)   • Flow 3 (95th percentile 66.27 ms)

```
Run 1: Statistics of FillP

Start at: 2018-09-07 14:49:36
End at: 2018-09-07 14:50:06
Local clock offset: -1.82 ms
Remote clock offset: -0.644 ms


# Below is generated by plot.py at 2018-09-07 16:34:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.38 Mbit/s
95th percentile per-packet one-way delay: 68.332 ms
Loss rate: 26.59%
-- Flow 1:
Average throughput: 60.82 Mbit/s
95th percentile per-packet one-way delay: 67.735 ms
Loss rate: 21.99%
-- Flow 2:
Average throughput: 37.31 Mbit/s
95th percentile per-packet one-way delay: 68.865 ms
Loss rate: 27.16%
-- Flow 3:
Average throughput: 30.52 Mbit/s
95th percentile per-packet one-way delay: 69.211 ms
Loss rate: 45.60%
```

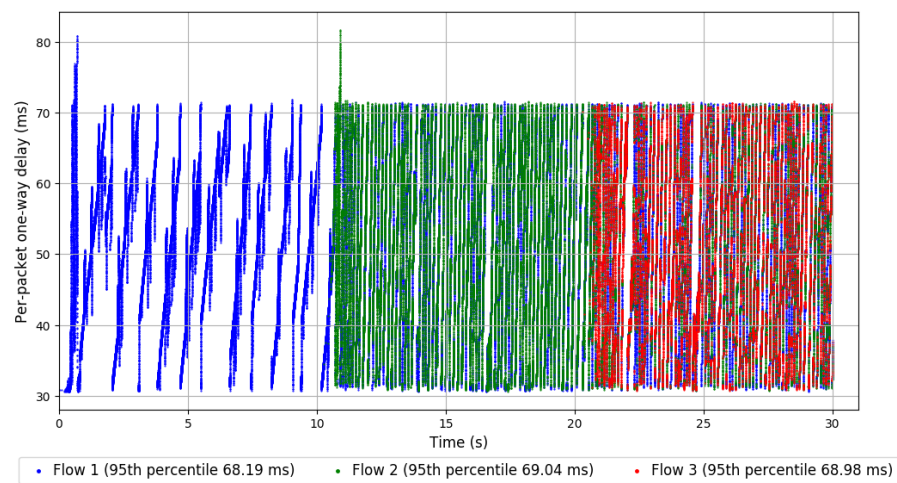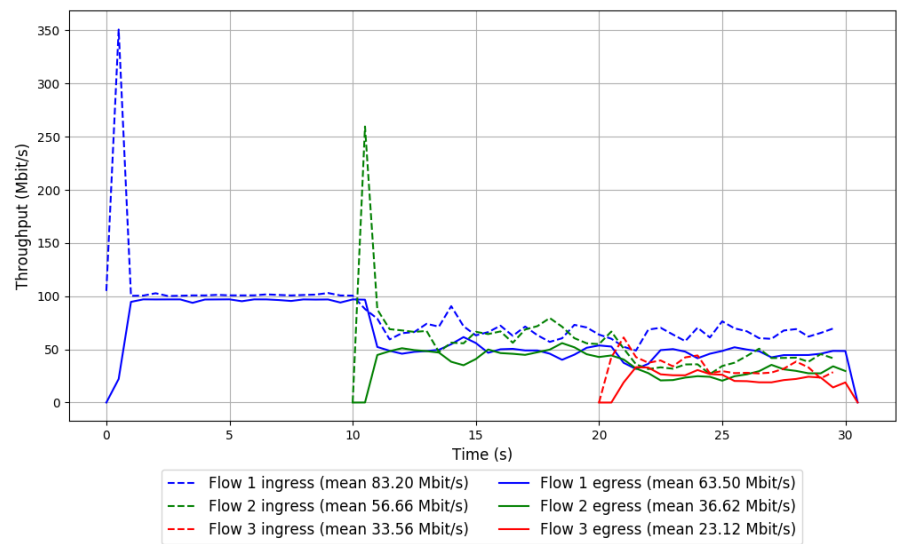Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-09-07 15:14:01
End at: 2018-09-07 15:14:31
Local clock offset: 0.912 ms
Remote clock offset: -0.465 ms


# Below is generated by plot.py at 2018-09-07 16:34:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.32 Mbit/s
95th percentile per-packet one-way delay: 68.499 ms
Loss rate: 27.79%
-- Flow 1:
Average throughput: 63.50 Mbit/s
95th percentile per-packet one-way delay: 68.186 ms
Loss rate: 23.66%
-- Flow 2:
Average throughput: 36.62 Mbit/s
95th percentile per-packet one-way delay: 69.039 ms
Loss rate: 35.46%
-- Flow 3:
Average throughput: 23.12 Mbit/s
95th percentile per-packet one-way delay: 68.982 ms
Loss rate: 32.73%
```
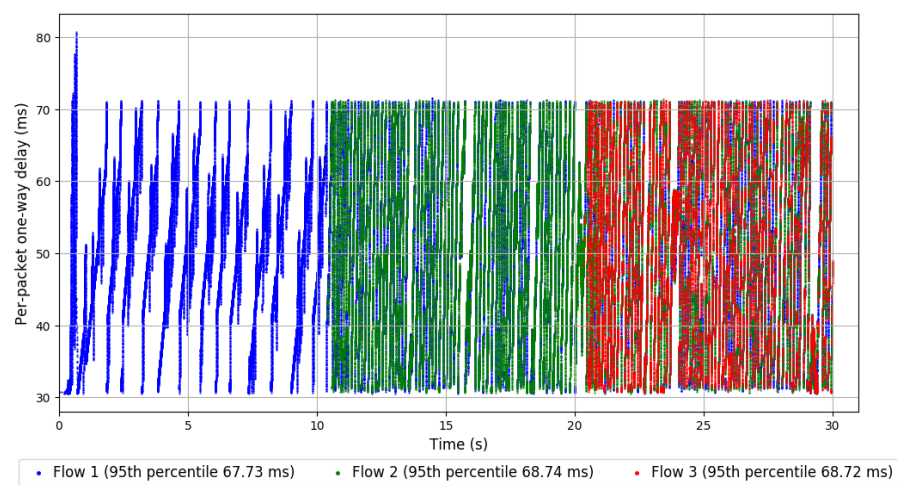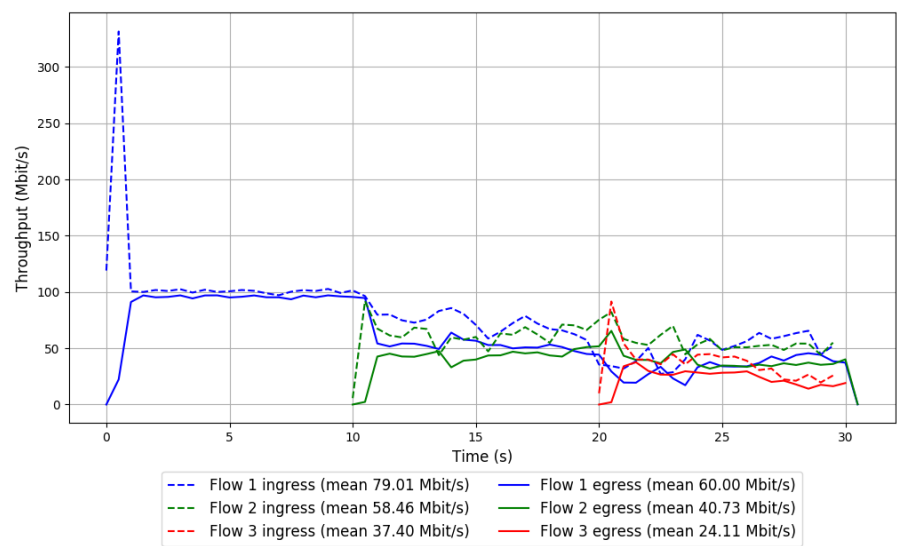
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 83.20 Mbit/s)   Flow 1 egress (mean 63.50 Mbit/s)
Flow 2 ingress (mean 56.66 Mbit/s)   Flow 2 egress (mean 36.62 Mbit/s)
Flow 3 ingress (mean 33.56 Mbit/s)   Flow 3 egress (mean 23.12 Mbit/s)

Flow 1 (95th percentile 68.19 ms)   Flow 2 (95th percentile 69.04 ms)   Flow 3 (95th percentile 68.98 ms)

```
Run 3: Statistics of FillP

Start at: 2018-09-07 15:38:25
End at: 2018-09-07 15:38:55
Local clock offset: 0.65 ms
Remote clock offset: -0.338 ms


# Below is generated by plot.py at 2018-09-07 16:34:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.09 Mbit/s
95th percentile per-packet one-way delay: 68.184 ms
Loss rate: 26.99%
-- Flow 1:
Average throughput: 60.00 Mbit/s
95th percentile per-packet one-way delay: 67.729 ms
Loss rate: 24.02%
-- Flow 2:
Average throughput: 40.73 Mbit/s
95th percentile per-packet one-way delay: 68.743 ms
Loss rate: 30.32%
-- Flow 3:
Average throughput: 24.11 Mbit/s
95th percentile per-packet one-way delay: 68.724 ms
Loss rate: 35.51%
```
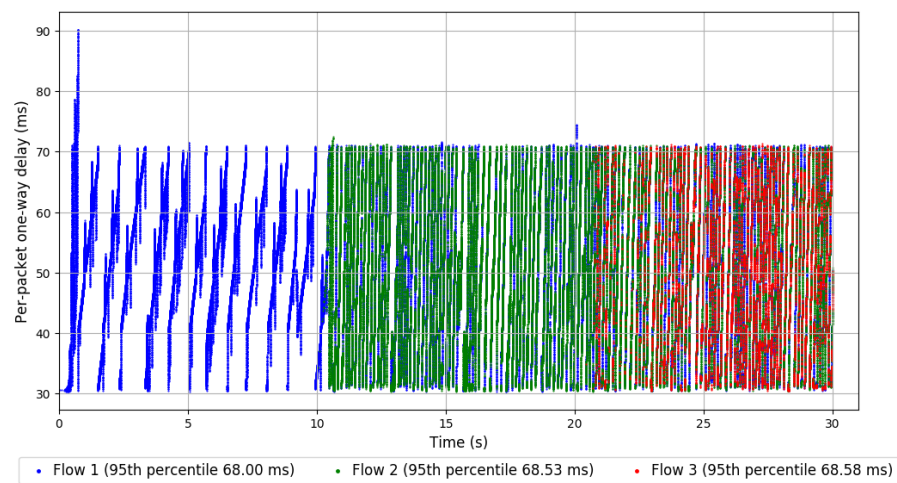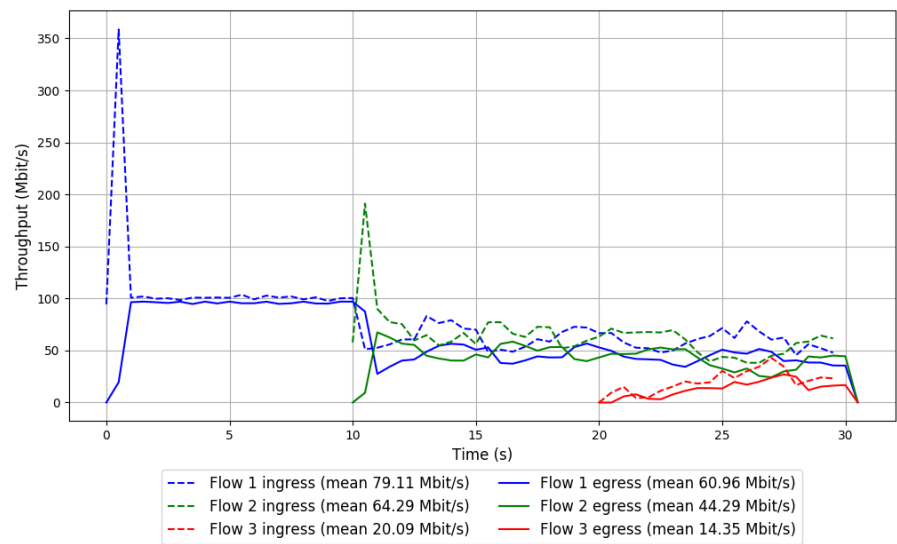
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 79.01 Mbit/s) --- Flow 1 egress (mean 60.00 Mbit/s)
Flow 2 ingress (mean 58.46 Mbit/s) --- Flow 2 egress (mean 40.73 Mbit/s)
Flow 3 ingress (mean 37.40 Mbit/s) --- Flow 3 egress (mean 24.11 Mbit/s)

Flow 1 (95th percentile 67.73 ms)   Flow 2 (95th percentile 68.74 ms)   Flow 3 (95th percentile 68.72 ms)
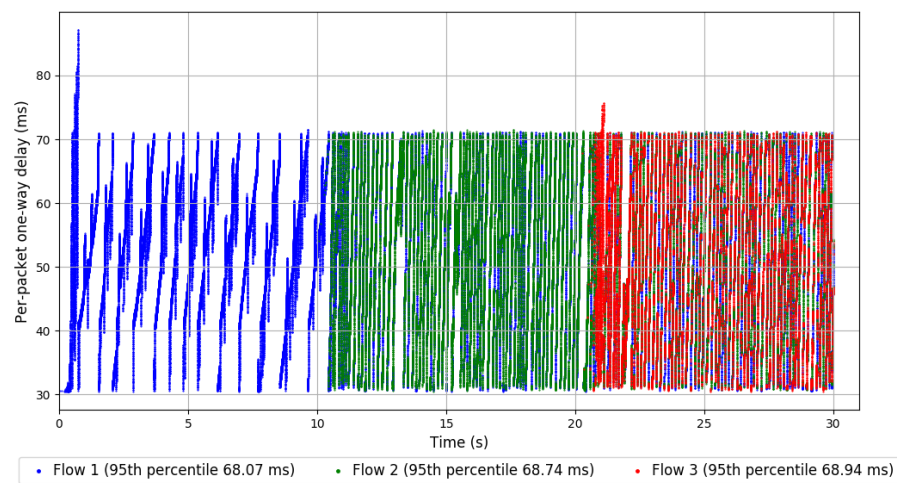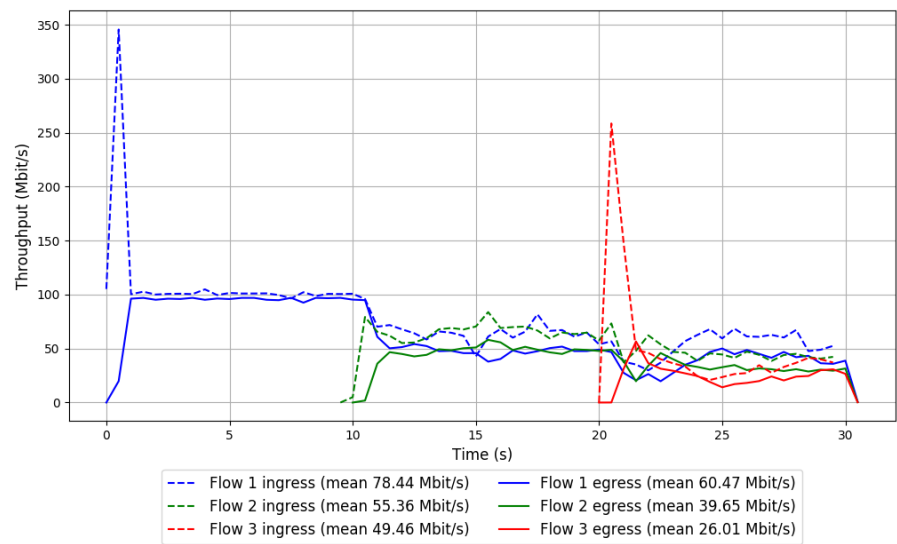
40

```
Run 4: Statistics of FillP

Start at: 2018-09-07 16:02:52
End at: 2018-09-07 16:03:22
Local clock offset: 0.28 ms
Remote clock offset: -0.355 ms


# Below is generated by plot.py at 2018-09-07 16:34:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.04 Mbit/s
95th percentile per-packet one-way delay: 68.206 ms
Loss rate: 26.05%
-- Flow 1:
Average throughput: 60.96 Mbit/s
95th percentile per-packet one-way delay: 68.002 ms
Loss rate: 22.89%
-- Flow 2:
Average throughput: 44.29 Mbit/s
95th percentile per-packet one-way delay: 68.525 ms
Loss rate: 31.06%
-- Flow 3:
Average throughput: 14.35 Mbit/s
95th percentile per-packet one-way delay: 68.585 ms
Loss rate: 31.37%
```
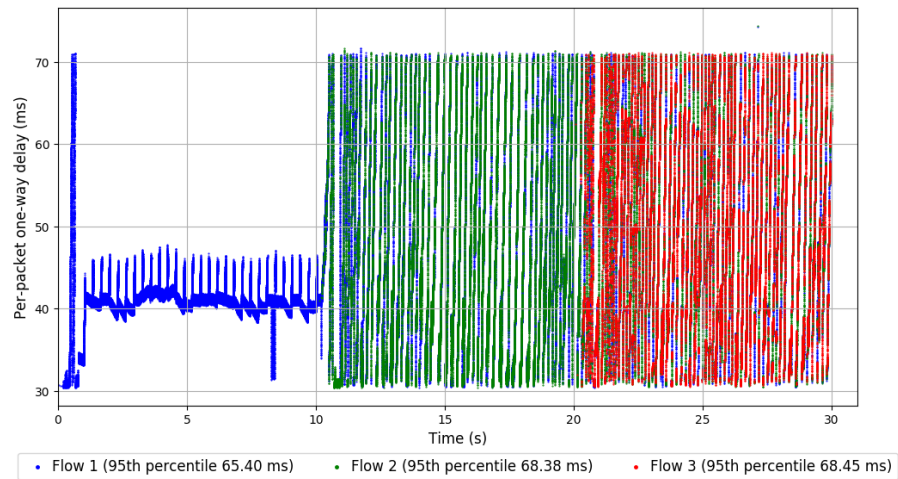
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2018-09-07 16:27:18
End at: 2018-09-07 16:27:48
Local clock offset: 0.193 ms
Remote clock offset: -0.213 ms


# Below is generated by plot.py at 2018-09-07 16:35:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.30 Mbit/s
95th percentile per-packet one-way delay: 68.348 ms
Loss rate: 27.60%
-- Flow 1:
Average throughput: 60.47 Mbit/s
95th percentile per-packet one-way delay: 68.071 ms
Loss rate: 22.85%
-- Flow 2:
Average throughput: 39.65 Mbit/s
95th percentile per-packet one-way delay: 68.744 ms
Loss rate: 28.38%
-- Flow 3:
Average throughput: 26.01 Mbit/s
95th percentile per-packet one-way delay: 68.940 ms
Loss rate: 48.56%
```
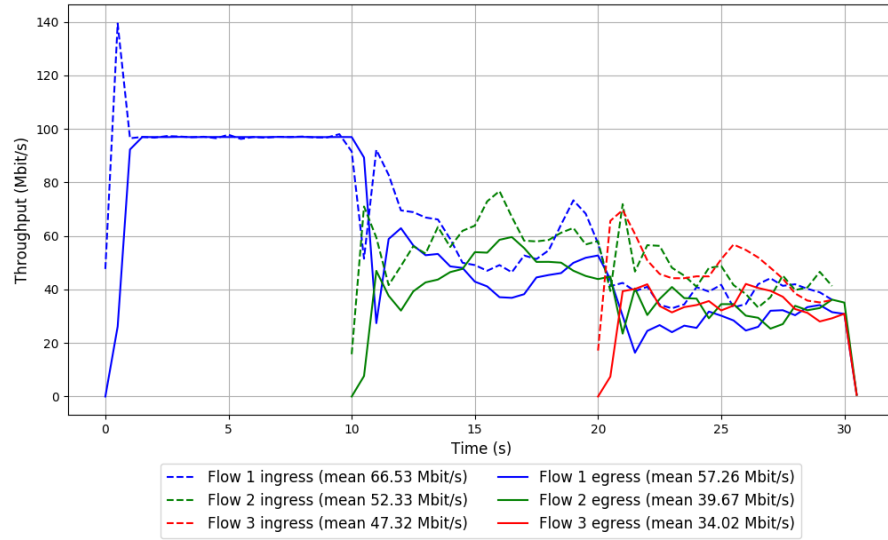
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 78.44 Mbit/s)   Flow 1 egress (mean 60.47 Mbit/s)
Flow 2 ingress (mean 55.36 Mbit/s)   Flow 2 egress (mean 39.65 Mbit/s)
Flow 3 ingress (mean 49.46 Mbit/s)   Flow 3 egress (mean 26.01 Mbit/s)

Flow 1 (95th percentile 68.07 ms)   Flow 2 (95th percentile 68.74 ms)   Flow 3 (95th percentile 68.94 ms)
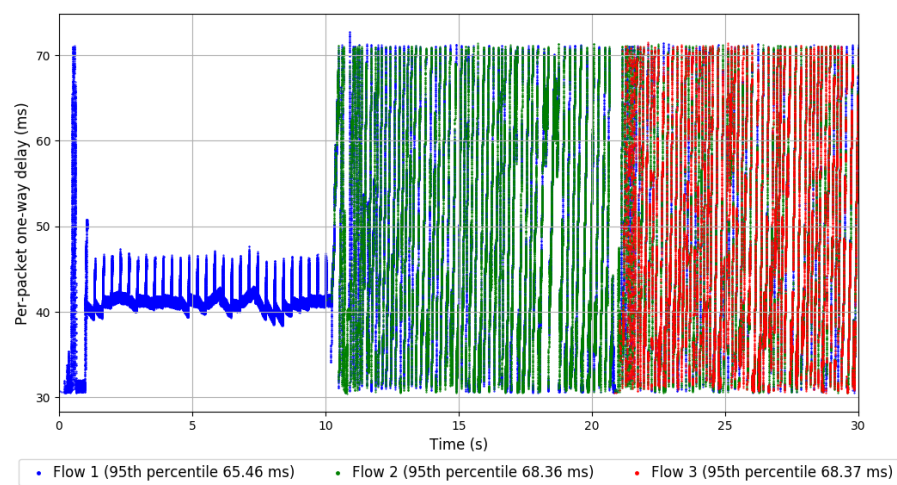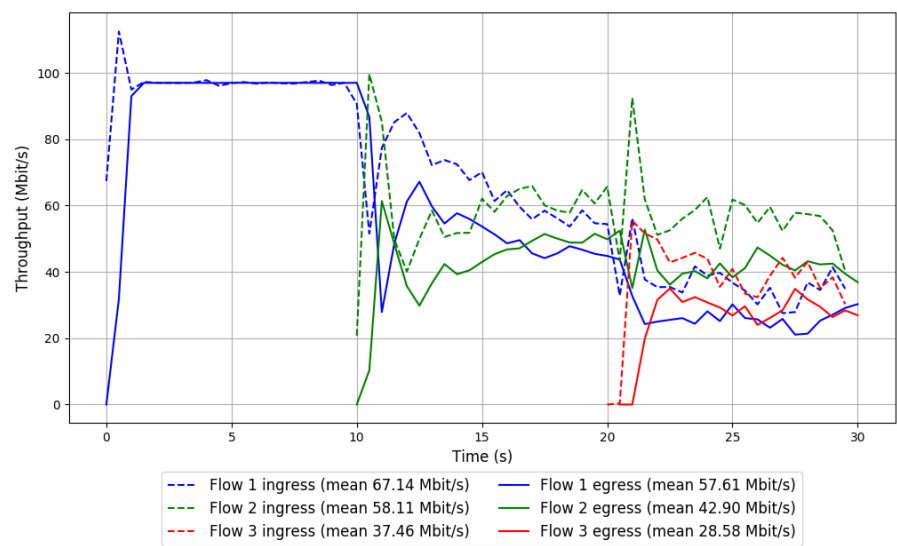
44

```
Run 1: Statistics of FillP-Sheep

Start at: 2018-09-07 14:33:03
End at: 2018-09-07 14:33:33
Local clock offset: -3.208 ms
Remote clock offset: -0.784 ms


# Below is generated by plot.py at 2018-09-07 16:35:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.95 Mbit/s
95th percentile per-packet one-way delay: 67.144 ms
Loss rate: 18.84%
-- Flow 1:
Average throughput: 57.26 Mbit/s
95th percentile per-packet one-way delay: 65.398 ms
Loss rate: 13.86%
-- Flow 2:
Average throughput: 39.67 Mbit/s
95th percentile per-packet one-way delay: 68.379 ms
Loss rate: 24.16%
-- Flow 3:
Average throughput: 34.02 Mbit/s
95th percentile per-packet one-way delay: 68.449 ms
Loss rate: 28.16%
```

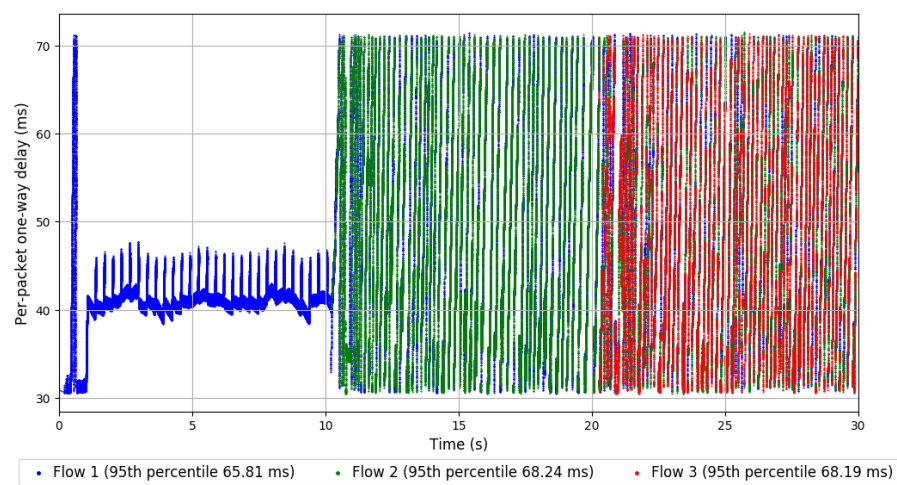Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2018-09-07 14:57:46
End at: 2018-09-07 14:58:16
Local clock offset: -0.251 ms
Remote clock offset: -0.616 ms


# Below is generated by plot.py at 2018-09-07 16:35:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.88 Mbit/s
95th percentile per-packet one-way delay: 67.201 ms
Loss rate: 19.73%
-- Flow 1:
Average throughput: 57.61 Mbit/s
95th percentile per-packet one-way delay: 65.464 ms
Loss rate: 14.16%
-- Flow 2:
Average throughput: 42.90 Mbit/s
95th percentile per-packet one-way delay: 68.362 ms
Loss rate: 26.16%
-- Flow 3:
Average throughput: 28.58 Mbit/s
95th percentile per-packet one-way delay: 68.369 ms
Loss rate: 29.79%
```

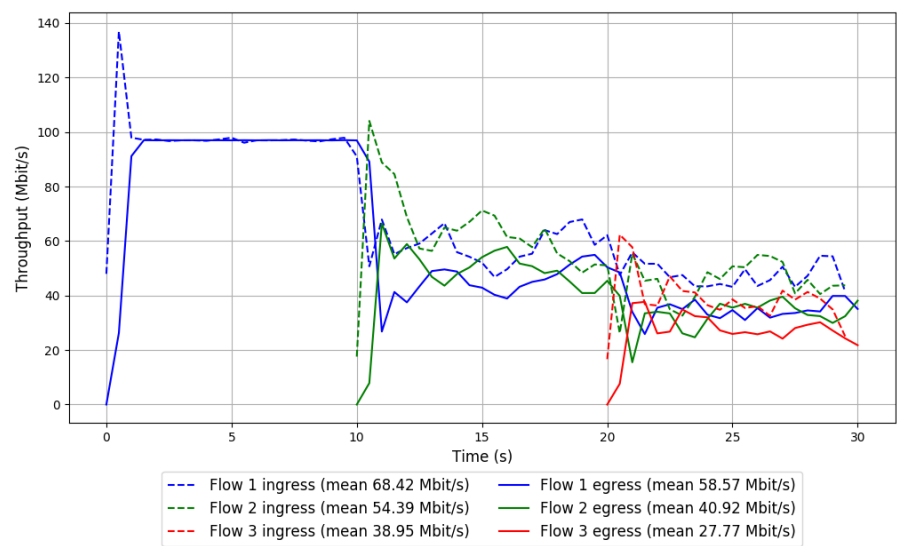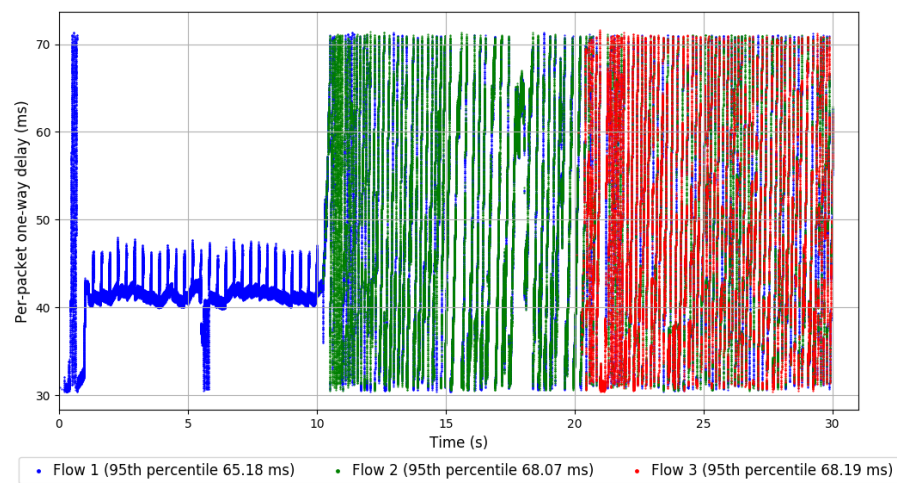Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2018-09-07 15:22:07
End at: 2018-09-07 15:22:37
Local clock offset: 0.588 ms
Remote clock offset: -0.505 ms


# Below is generated by plot.py at 2018-09-07 16:35:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 67.147 ms
Loss rate: 19.16%
-- Flow 1:
Average throughput: 58.57 Mbit/s
95th percentile per-packet one-way delay: 65.813 ms
Loss rate: 14.39%
-- Flow 2:
Average throughput: 40.92 Mbit/s
95th percentile per-packet one-way delay: 68.239 ms
Loss rate: 24.79%
-- Flow 3:
Average throughput: 27.77 Mbit/s
95th percentile per-packet one-way delay: 68.191 ms
Loss rate: 28.69%
```

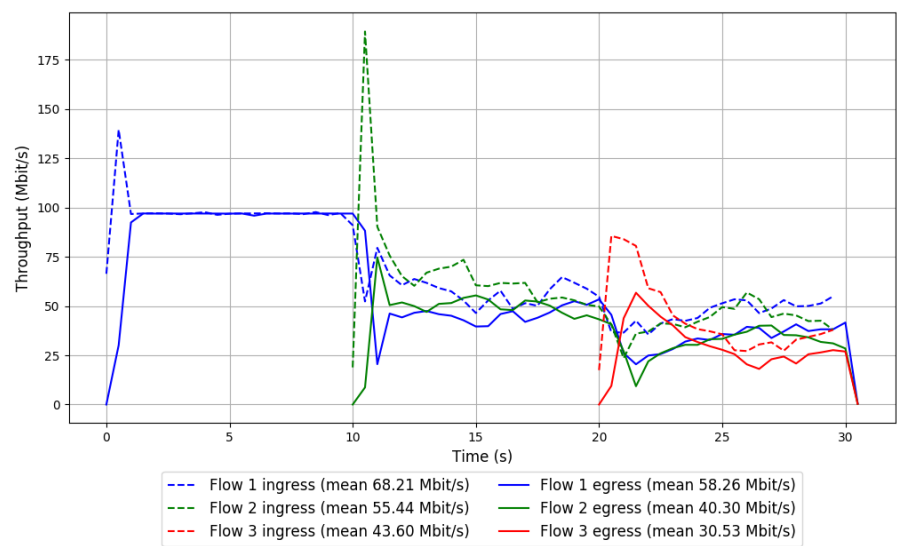Run 3: Report of FillP-Sheep — Data Link

```
Run 4: Statistics of FillP-Sheep

Start at: 2018-09-07 15:46:33
End at: 2018-09-07 15:47:03
Local clock offset: 0.704 ms
Remote clock offset: -0.412 ms


# Below is generated by plot.py at 2018-09-07 16:36:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.22 Mbit/s
95th percentile per-packet one-way delay: 66.810 ms
Loss rate: 20.29%
-- Flow 1:
Average throughput: 58.26 Mbit/s
95th percentile per-packet one-way delay: 65.176 ms
Loss rate: 14.50%
-- Flow 2:
Average throughput: 40.30 Mbit/s
95th percentile per-packet one-way delay: 68.071 ms
Loss rate: 27.24%
-- Flow 3:
Average throughput: 30.53 Mbit/s
95th percentile per-packet one-way delay: 68.188 ms
Loss rate: 29.87%
```
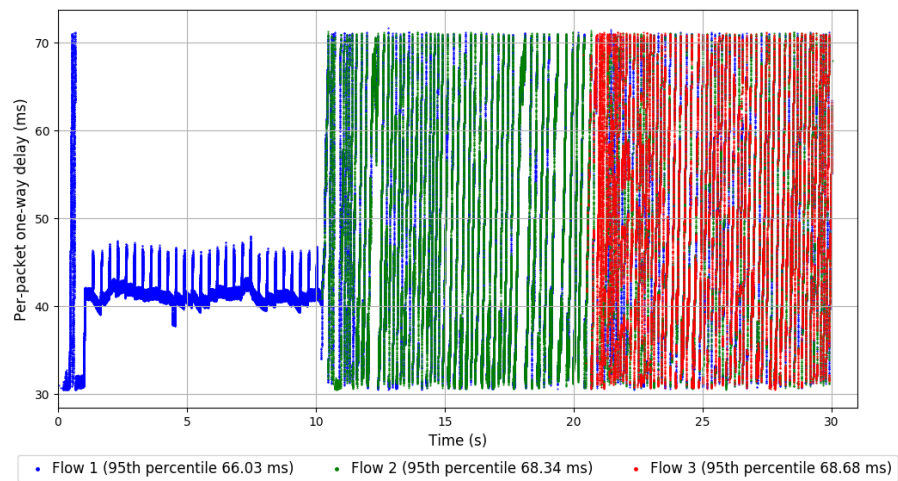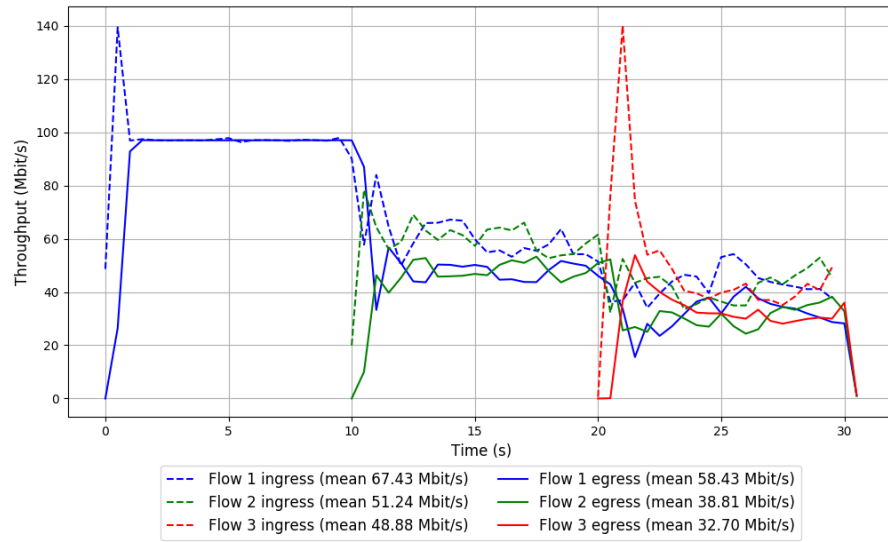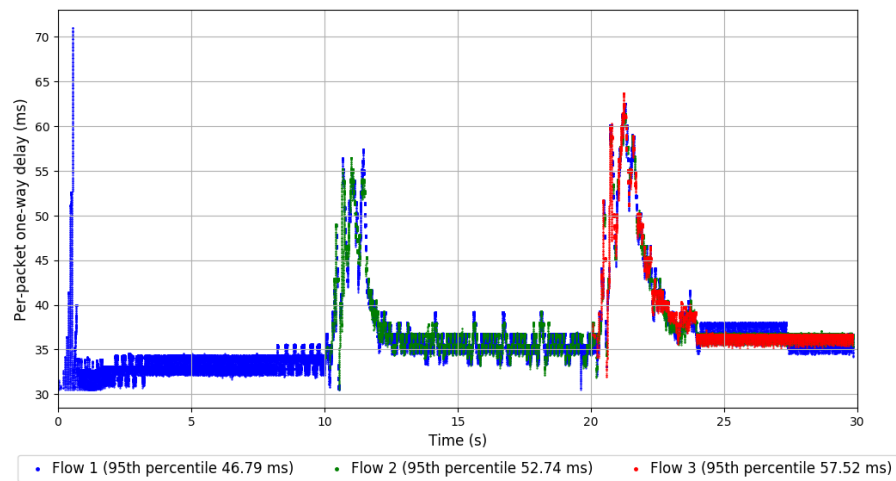
Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 68.21 Mbit/s) --- Flow 1 egress (mean 58.26 Mbit/s)
Flow 2 ingress (mean 55.44 Mbit/s) --- Flow 2 egress (mean 40.30 Mbit/s)
Flow 3 ingress (mean 43.60 Mbit/s) --- Flow 3 egress (mean 30.53 Mbit/s)

Flow 1 (95th percentile 65.18 ms) • Flow 2 (95th percentile 68.07 ms) • Flow 3 (95th percentile 68.19 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2018-09-07 16:10:57
End at: 2018-09-07 16:11:27
Local clock offset: 0.399 ms
Remote clock offset: -0.12 ms


# Below is generated by plot.py at 2018-09-07 16:36:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.11 Mbit/s
95th percentile per-packet one-way delay: 67.287 ms
Loss rate: 19.13%
-- Flow 1:
Average throughput: 58.43 Mbit/s
95th percentile per-packet one-way delay: 66.030 ms
Loss rate: 13.26%
-- Flow 2:
Average throughput: 38.81 Mbit/s
95th percentile per-packet one-way delay: 68.341 ms
Loss rate: 24.15%
-- Flow 3:
Average throughput: 32.70 Mbit/s
95th percentile per-packet one-way delay: 68.682 ms
Loss rate: 33.00%
```

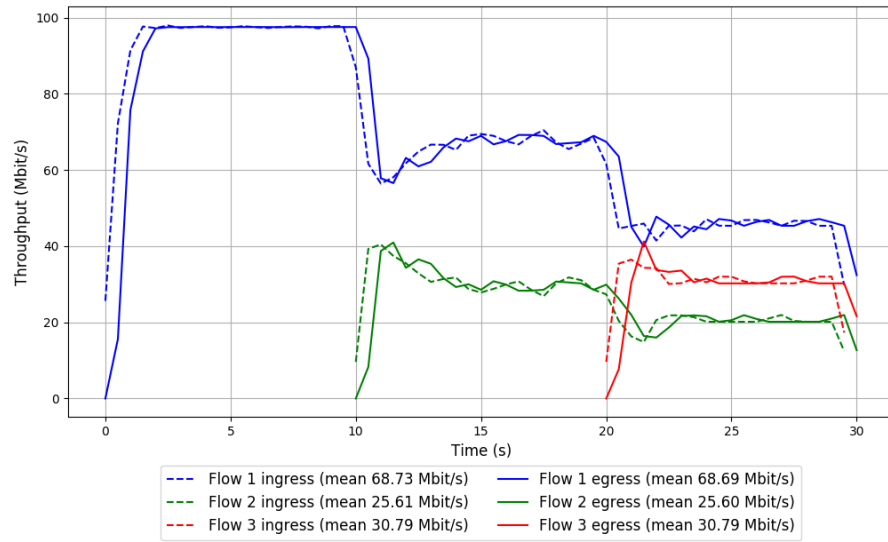Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2018-09-07 14:38:40
End at: 2018-09-07 14:39:10
Local clock offset: -3.255 ms
Remote clock offset: -0.751 ms


# Below is generated by plot.py at 2018-09-07 16:36:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.76 Mbit/s
95th percentile per-packet one-way delay: 50.216 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 68.69 Mbit/s
95th percentile per-packet one-way delay: 46.789 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 25.60 Mbit/s
95th percentile per-packet one-way delay: 52.743 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.79 Mbit/s
95th percentile per-packet one-way delay: 57.519 ms
Loss rate: 0.00%
```
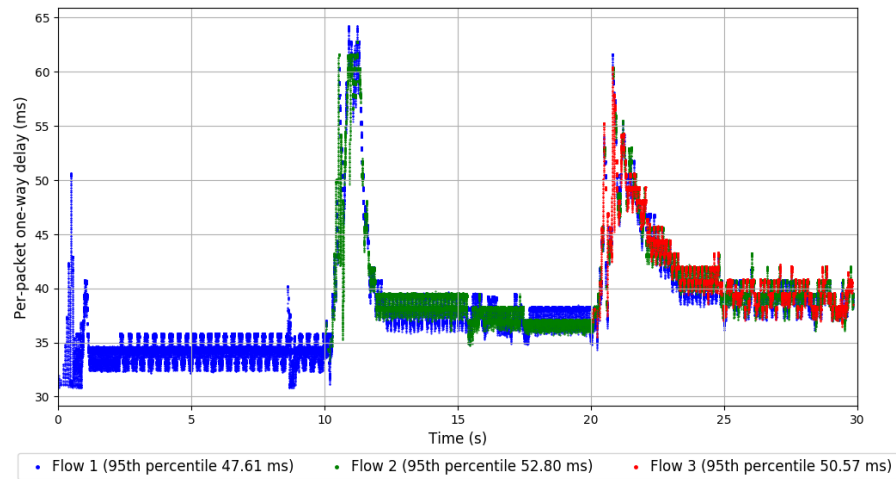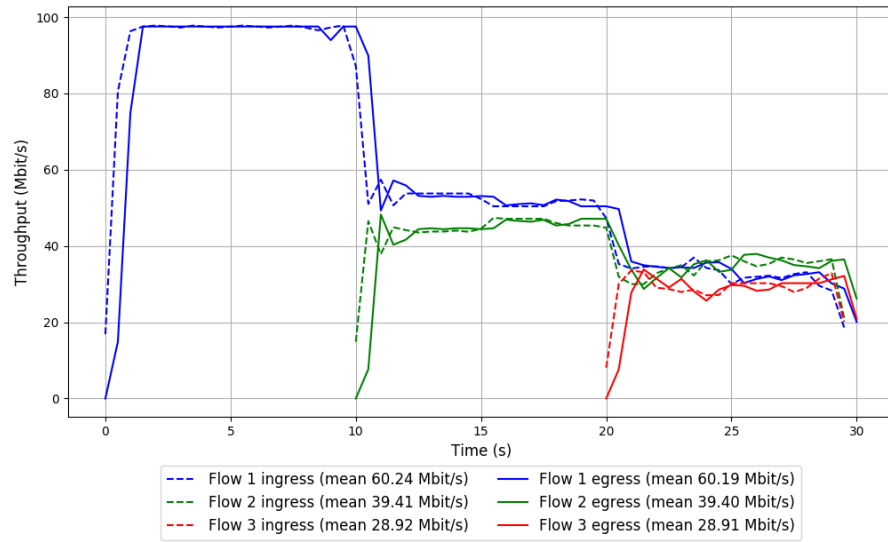
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2018-09-07 15:03:13
End at: 2018-09-07 15:03:43
Local clock offset: 0.235 ms
Remote clock offset: -0.418 ms


# Below is generated by plot.py at 2018-09-07 16:36:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.80 Mbit/s
95th percentile per-packet one-way delay: 49.786 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 60.19 Mbit/s
95th percentile per-packet one-way delay: 47.610 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 39.40 Mbit/s
95th percentile per-packet one-way delay: 52.796 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.91 Mbit/s
95th percentile per-packet one-way delay: 50.568 ms
Loss rate: 0.02%
```
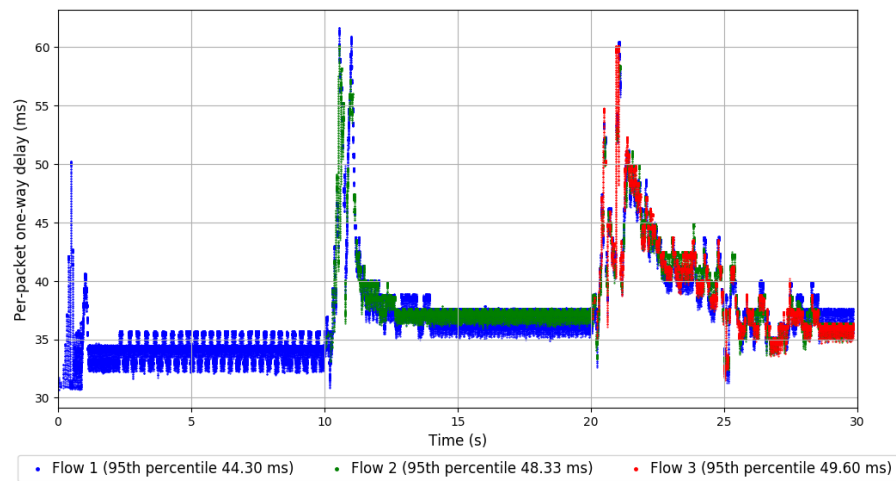
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2018-09-07 15:27:35
End at: 2018-09-07 15:28:05
Local clock offset: 0.492 ms
Remote clock offset: -0.43 ms


# Below is generated by plot.py at 2018-09-07 16:36:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.88 Mbit/s
95th percentile per-packet one-way delay: 46.187 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 64.34 Mbit/s
95th percentile per-packet one-way delay: 44.304 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 33.32 Mbit/s
95th percentile per-packet one-way delay: 48.328 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 28.89 Mbit/s
95th percentile per-packet one-way delay: 49.605 ms
Loss rate: 0.16%
```
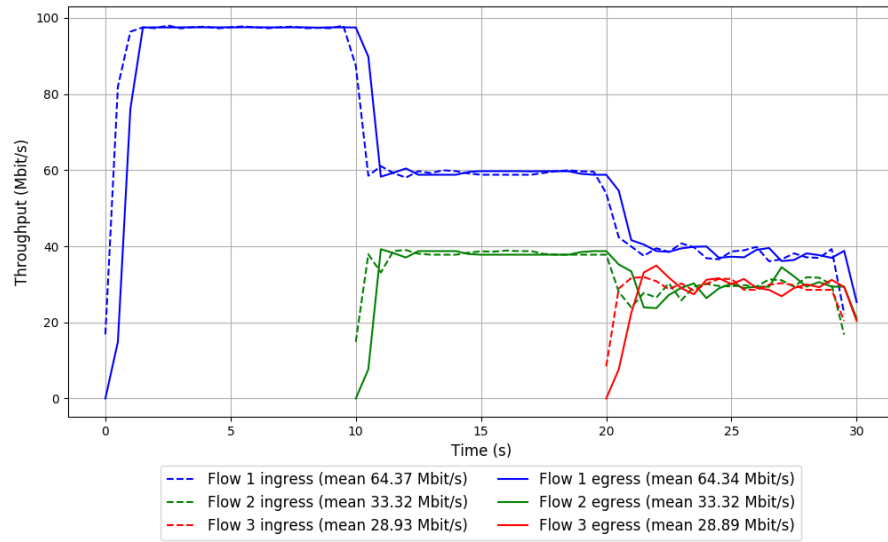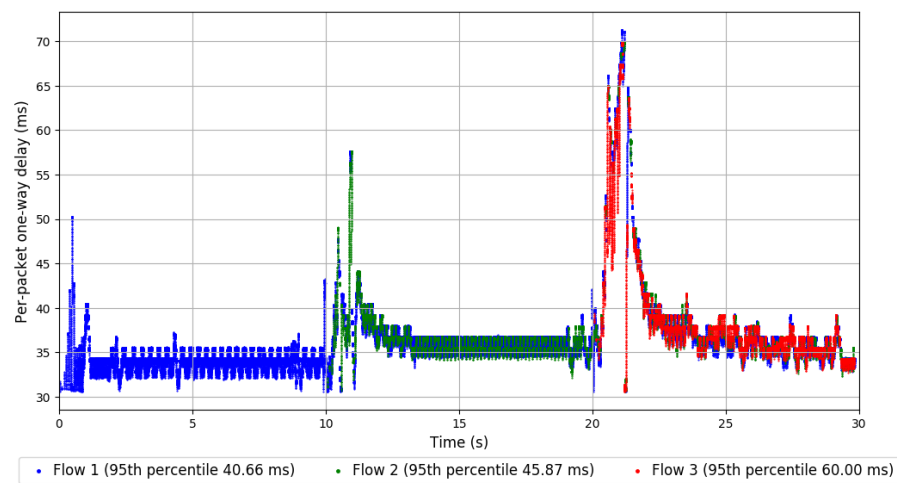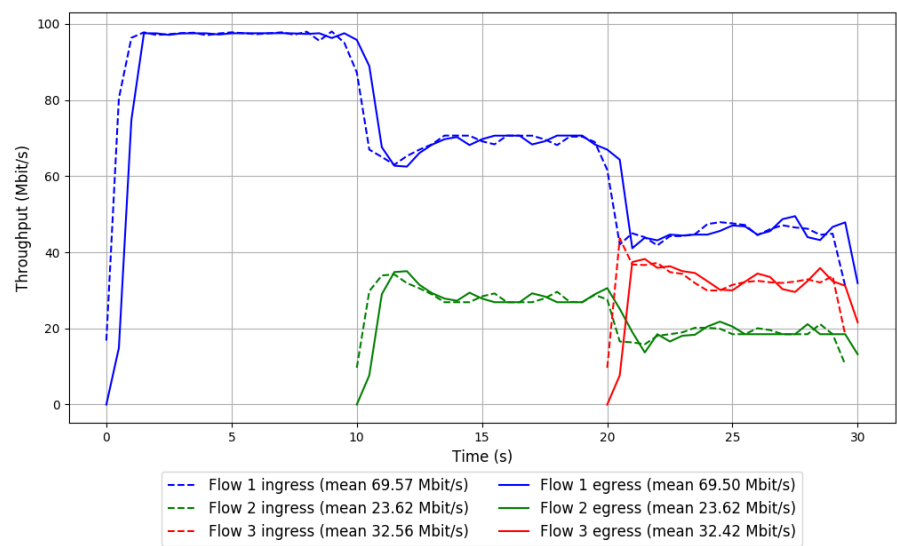
Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 64.37 Mbit/s) --- Flow 1 egress (mean 64.34 Mbit/s)
Flow 2 ingress (mean 33.32 Mbit/s) --- Flow 2 egress (mean 33.32 Mbit/s)
Flow 3 ingress (mean 28.93 Mbit/s) --- Flow 3 egress (mean 28.89 Mbit/s)

Flow 1 (95th percentile 44.30 ms)   Flow 2 (95th percentile 48.33 ms)   Flow 3 (95th percentile 49.60 ms)

60

```
Run 4: Statistics of Indigo

Start at: 2018-09-07 15:52:01
End at: 2018-09-07 15:52:31
Local clock offset: 0.494 ms
Remote clock offset: -0.318 ms


# Below is generated by plot.py at 2018-09-07 16:36:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.72 Mbit/s
95th percentile per-packet one-way delay: 44.024 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 69.50 Mbit/s
95th percentile per-packet one-way delay: 40.663 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 23.62 Mbit/s
95th percentile per-packet one-way delay: 45.871 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.42 Mbit/s
95th percentile per-packet one-way delay: 60.004 ms
Loss rate: 0.48%
```
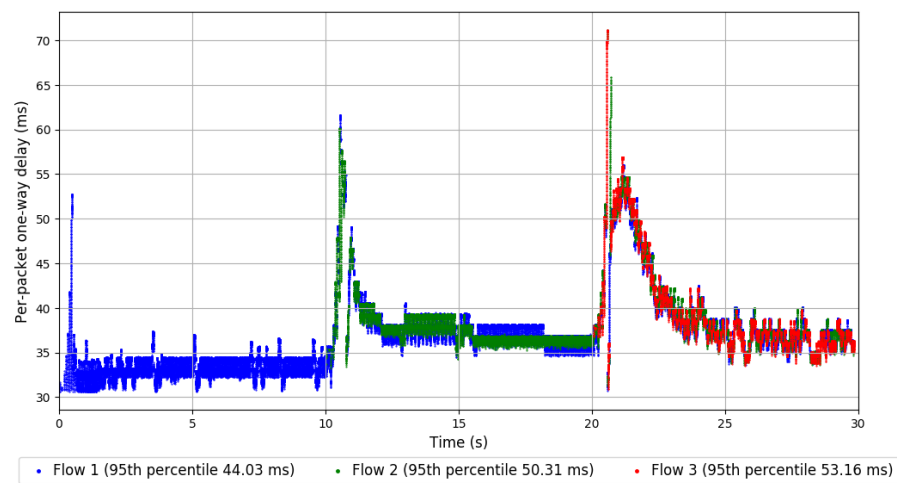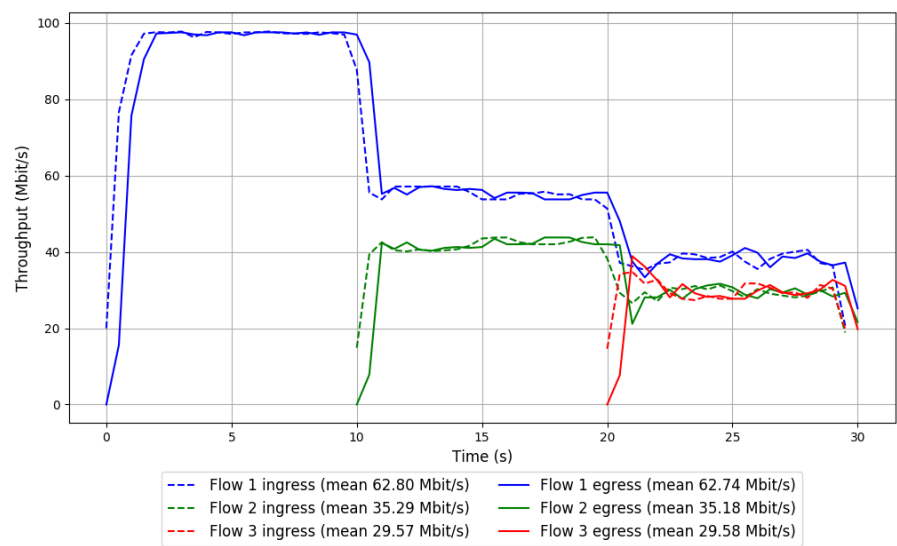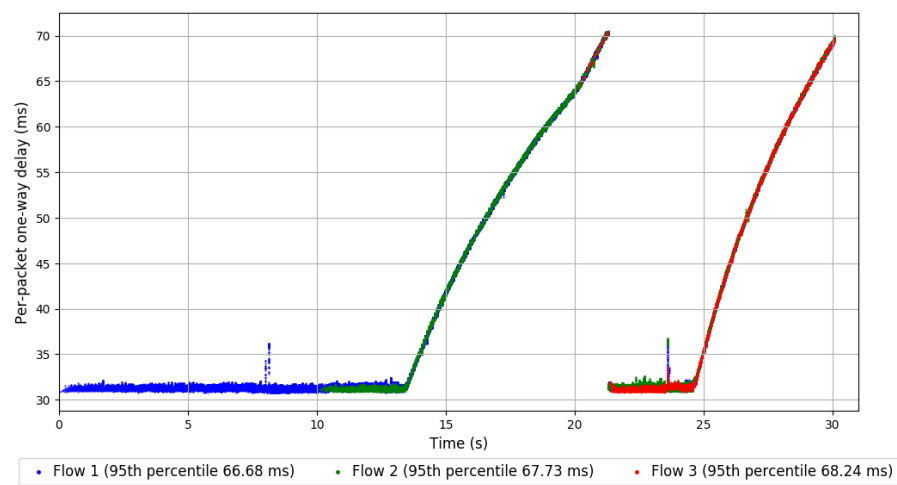
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 69.57 Mbit/s) — Flow 1 egress (mean 69.50 Mbit/s)
Flow 2 ingress (mean 23.62 Mbit/s) — Flow 2 egress (mean 23.62 Mbit/s)
Flow 3 ingress (mean 32.56 Mbit/s) — Flow 3 egress (mean 32.42 Mbit/s)

Flow 1 (95th percentile 40.66 ms)   Flow 2 (95th percentile 45.87 ms)   Flow 3 (95th percentile 60.00 ms)

```
Run 5: Statistics of Indigo

Start at: 2018-09-07 16:16:27
End at: 2018-09-07 16:16:57
Local clock offset: 0.291 ms
Remote clock offset: -0.137 ms


# Below is generated by plot.py at 2018-09-07 16:37:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.70 Mbit/s
95th percentile per-packet one-way delay: 48.295 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 62.74 Mbit/s
95th percentile per-packet one-way delay: 44.031 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 35.18 Mbit/s
95th percentile per-packet one-way delay: 50.315 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 29.58 Mbit/s
95th percentile per-packet one-way delay: 53.163 ms
Loss rate: 0.00%
```
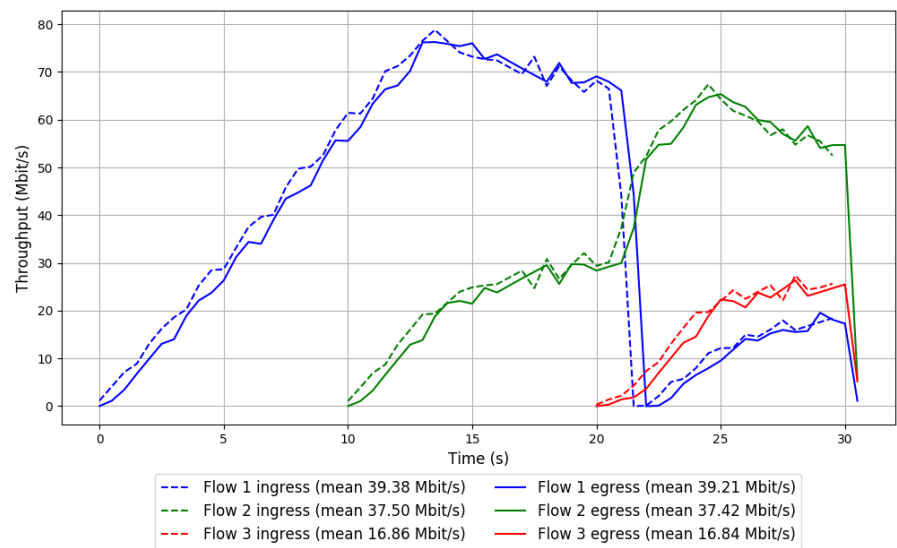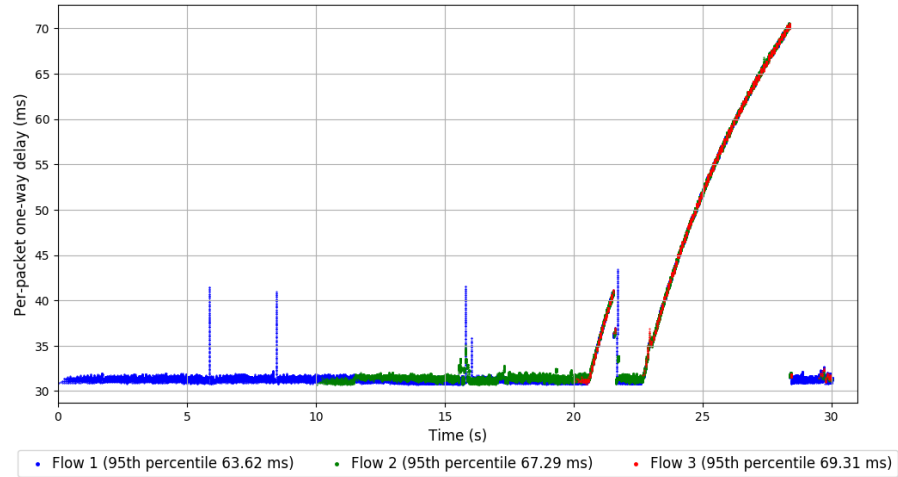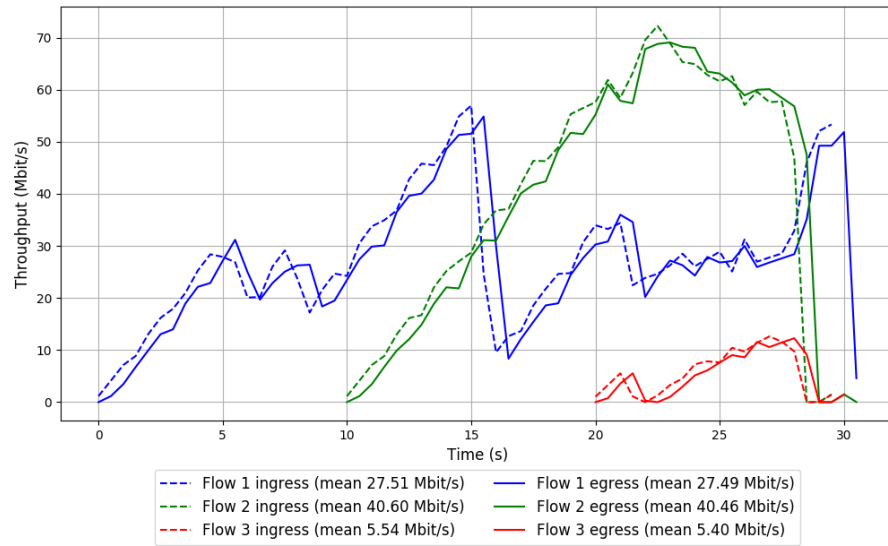
Run 5: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 62.80 Mbit/s) —— Flow 1 egress (mean 62.74 Mbit/s)
- - - Flow 2 ingress (mean 35.29 Mbit/s) —— Flow 2 egress (mean 35.18 Mbit/s)
- - - Flow 3 ingress (mean 29.57 Mbit/s) —— Flow 3 egress (mean 29.58 Mbit/s)

• Flow 1 (95th percentile 44.03 ms)   • Flow 2 (95th percentile 50.31 ms)   • Flow 3 (95th percentile 53.16 ms)

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```
Run 1: Statistics of LEDBAT

Start at: 2018-09-07 14:48:12
End at: 2018-09-07 14:48:42
Local clock offset: -2.272 ms
Remote clock offset: -0.707 ms


# Below is generated by plot.py at 2018-09-07 16:37:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.67 Mbit/s
95th percentile per-packet one-way delay: 67.297 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 39.21 Mbit/s
95th percentile per-packet one-way delay: 66.680 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 37.42 Mbit/s
95th percentile per-packet one-way delay: 67.732 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 16.84 Mbit/s
95th percentile per-packet one-way delay: 68.236 ms
Loss rate: 0.10%
```
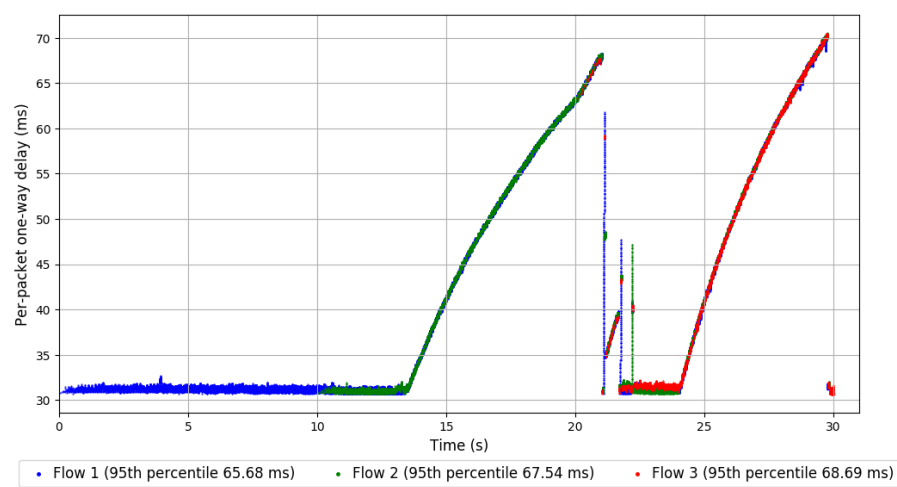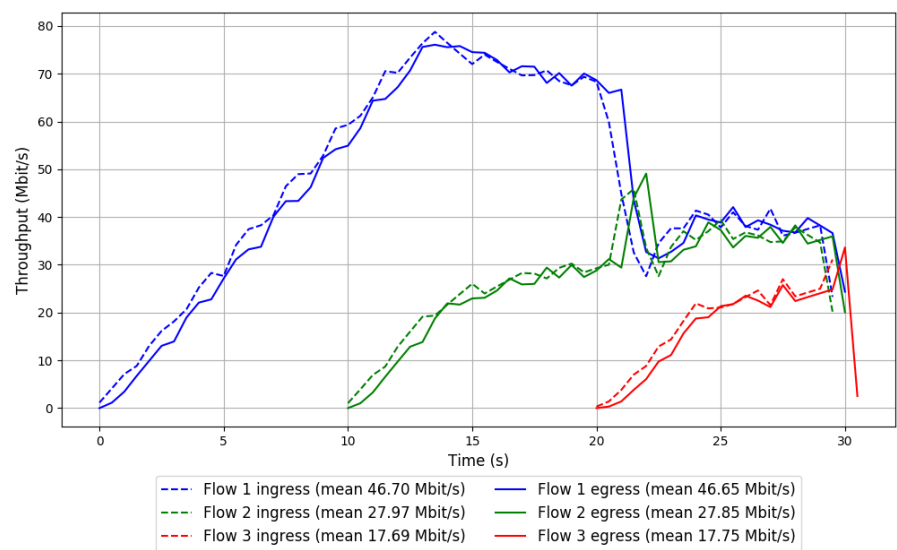
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-09-07 15:12:40
End at: 2018-09-07 15:13:10
Local clock offset: 0.866 ms
Remote clock offset: -0.442 ms

# Below is generated by plot.py at 2018-09-07 16:37:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.23 Mbit/s
95th percentile per-packet one-way delay: 66.412 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 27.49 Mbit/s
95th percentile per-packet one-way delay: 63.621 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 40.46 Mbit/s
95th percentile per-packet one-way delay: 67.294 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 5.40 Mbit/s
95th percentile per-packet one-way delay: 69.310 ms
Loss rate: 2.50%
```
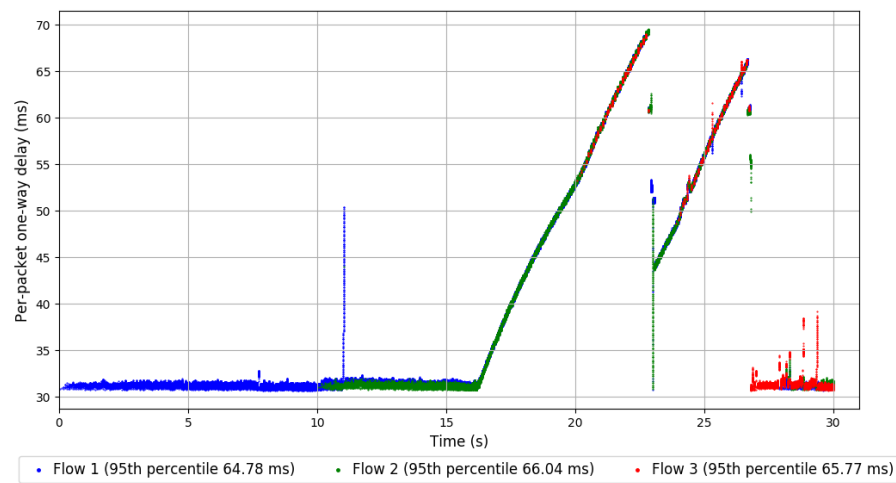
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-09-07 15:37:03
End at: 2018-09-07 15:37:33
Local clock offset: 0.643 ms
Remote clock offset: -0.381 ms


# Below is generated by plot.py at 2018-09-07 16:37:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.55 Mbit/s
95th percentile per-packet one-way delay: 66.774 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 46.65 Mbit/s
95th percentile per-packet one-way delay: 65.676 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 27.85 Mbit/s
95th percentile per-packet one-way delay: 67.541 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 17.75 Mbit/s
95th percentile per-packet one-way delay: 68.685 ms
Loss rate: 0.00%
```

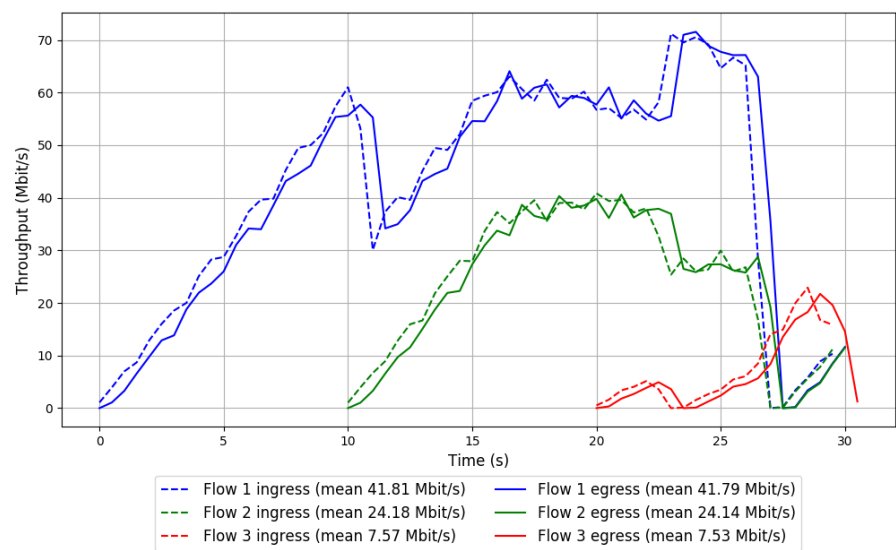Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2018-09-07 16:01:31
End at: 2018-09-07 16:02:01
Local clock offset: 0.284 ms
Remote clock offset: -0.264 ms


# Below is generated by plot.py at 2018-09-07 16:37:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.32 Mbit/s
95th percentile per-packet one-way delay: 65.247 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 41.79 Mbit/s
95th percentile per-packet one-way delay: 64.785 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 24.14 Mbit/s
95th percentile per-packet one-way delay: 66.042 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 7.53 Mbit/s
95th percentile per-packet one-way delay: 65.771 ms
Loss rate: 0.75%
```
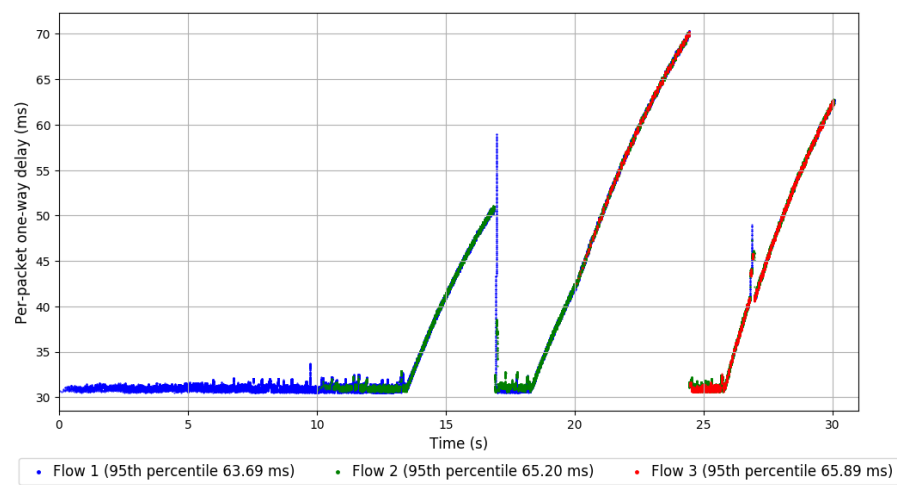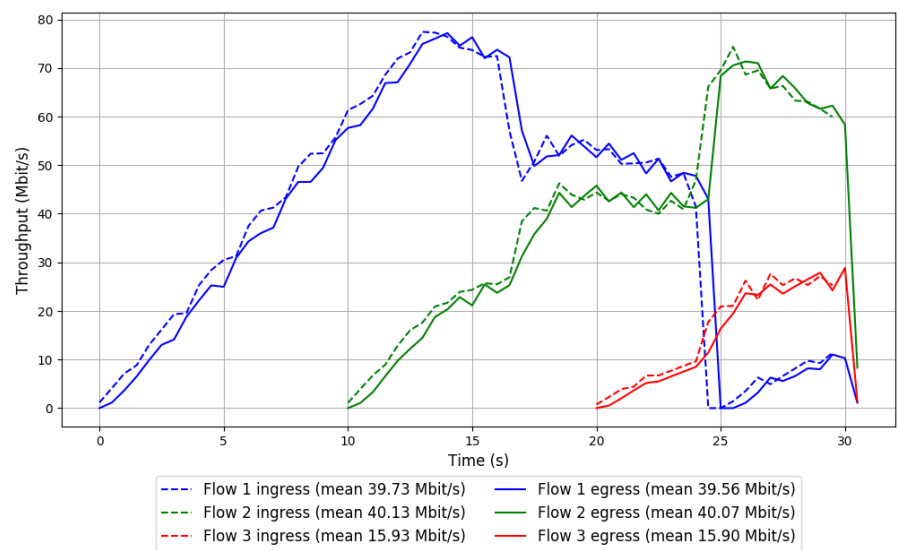
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2018-09-07 16:25:56
End at: 2018-09-07 16:26:26
Local clock offset: 0.126 ms
Remote clock offset: -0.339 ms


# Below is generated by plot.py at 2018-09-07 16:37:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.53 Mbit/s
95th percentile per-packet one-way delay: 64.652 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 39.56 Mbit/s
95th percentile per-packet one-way delay: 63.685 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 40.07 Mbit/s
95th percentile per-packet one-way delay: 65.202 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.90 Mbit/s
95th percentile per-packet one-way delay: 65.888 ms
Loss rate: 0.00%
```
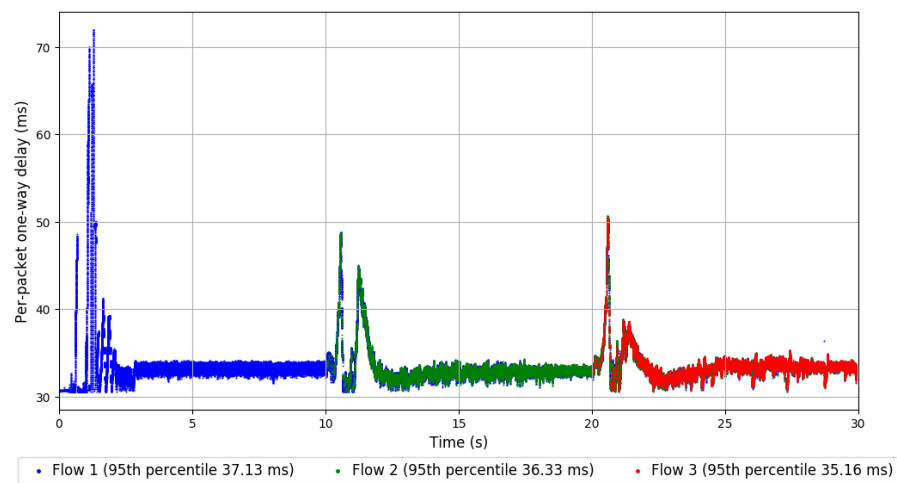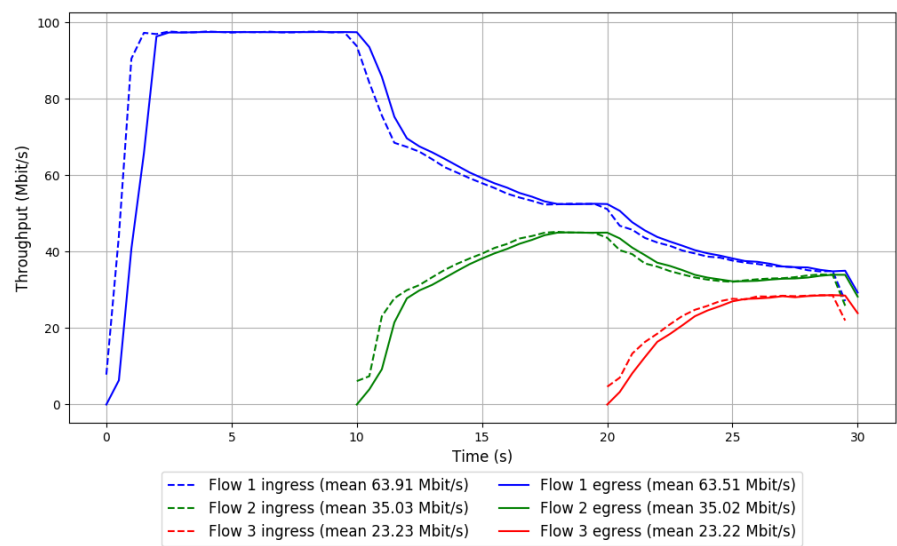
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-07 14:35:50
End at: 2018-09-07 14:36:20
Local clock offset: -3.242 ms
Remote clock offset: -0.753 ms


# Below is generated by plot.py at 2018-09-07 16:37:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.45 Mbit/s
95th percentile per-packet one-way delay: 36.688 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 63.51 Mbit/s
95th percentile per-packet one-way delay: 37.128 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 35.02 Mbit/s
95th percentile per-packet one-way delay: 36.325 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 23.22 Mbit/s
95th percentile per-packet one-way delay: 35.164 ms
Loss rate: 0.07%
```

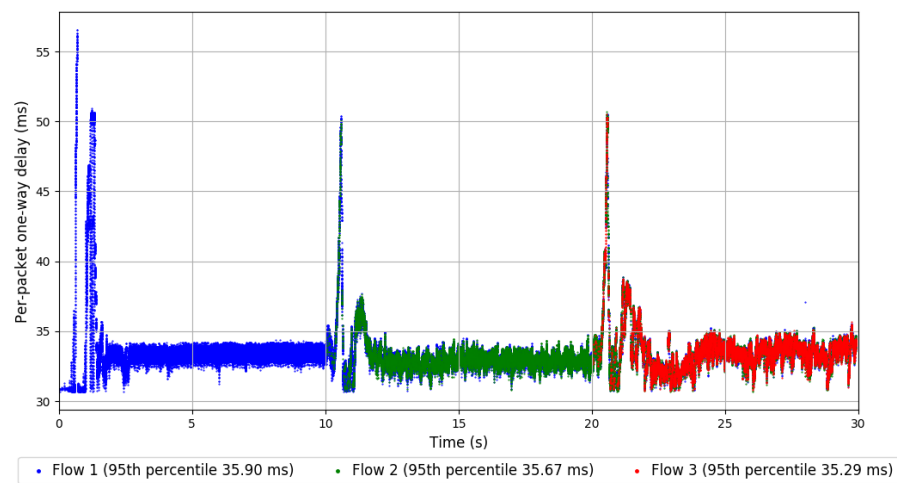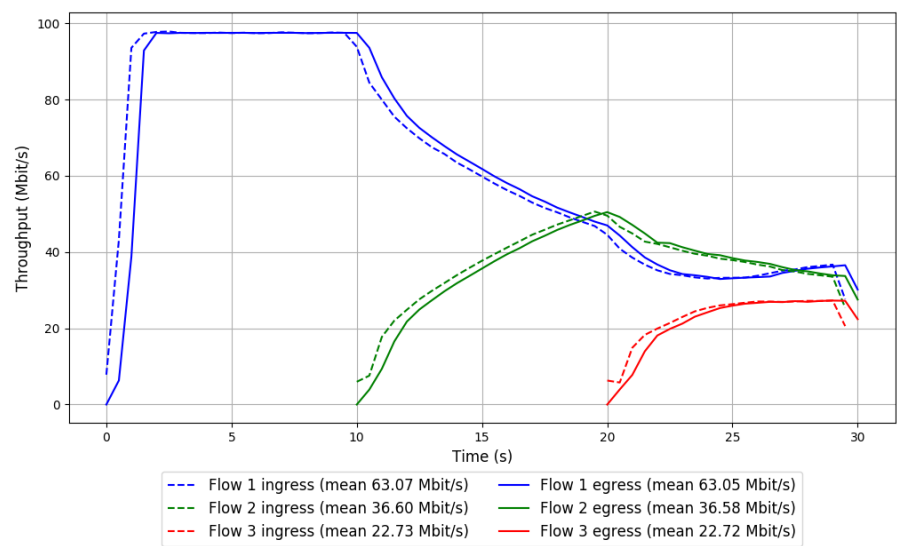Run 1: Report of Indigo-Muses — Data Link

```
Run 2: Statistics of Indigo-Muses

Start at: 2018-09-07 15:00:27
End at: 2018-09-07 15:00:57
Local clock offset: 0.044 ms
Remote clock offset: -0.573 ms


# Below is generated by plot.py at 2018-09-07 16:37:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.87 Mbit/s
95th percentile per-packet one-way delay: 35.792 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 63.05 Mbit/s
95th percentile per-packet one-way delay: 35.901 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 36.58 Mbit/s
95th percentile per-packet one-way delay: 35.674 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 22.72 Mbit/s
95th percentile per-packet one-way delay: 35.291 ms
Loss rate: 0.05%
```

Run 2: Report of Indigo-Muses — Data Link

```
Run 3: Statistics of Indigo-Muses

Start at: 2018-09-07 15:24:49
End at: 2018-09-07 15:25:19
Local clock offset: 0.606 ms
Remote clock offset: -0.66 ms


# Below is generated by plot.py at 2018-09-07 16:37:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.26 Mbit/s
95th percentile per-packet one-way delay: 36.019 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 62.61 Mbit/s
95th percentile per-packet one-way delay: 36.571 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 36.78 Mbit/s
95th percentile per-packet one-way delay: 35.479 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 21.85 Mbit/s
95th percentile per-packet one-way delay: 35.525 ms
Loss rate: 0.01%
```
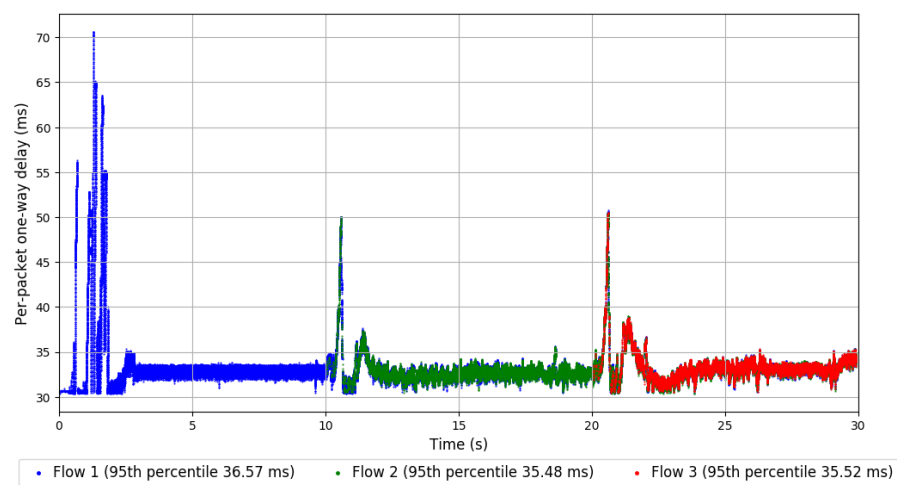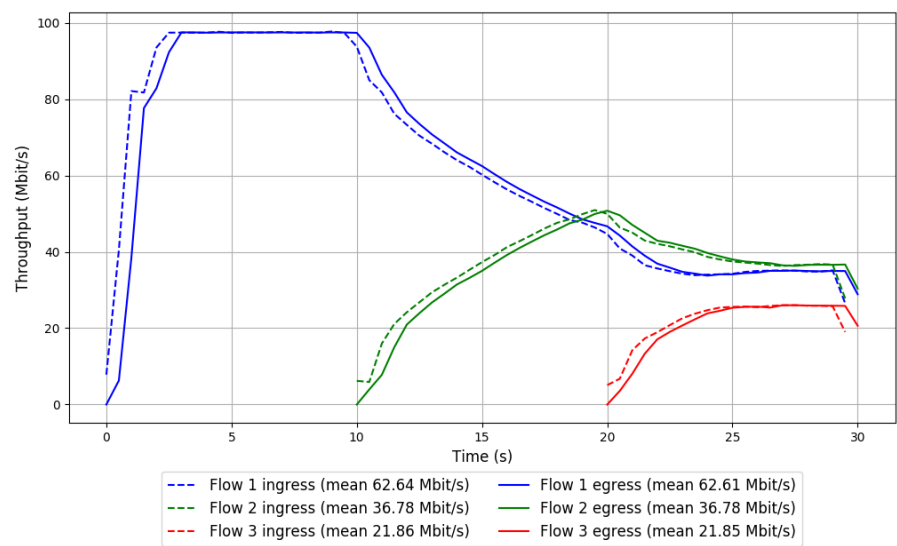
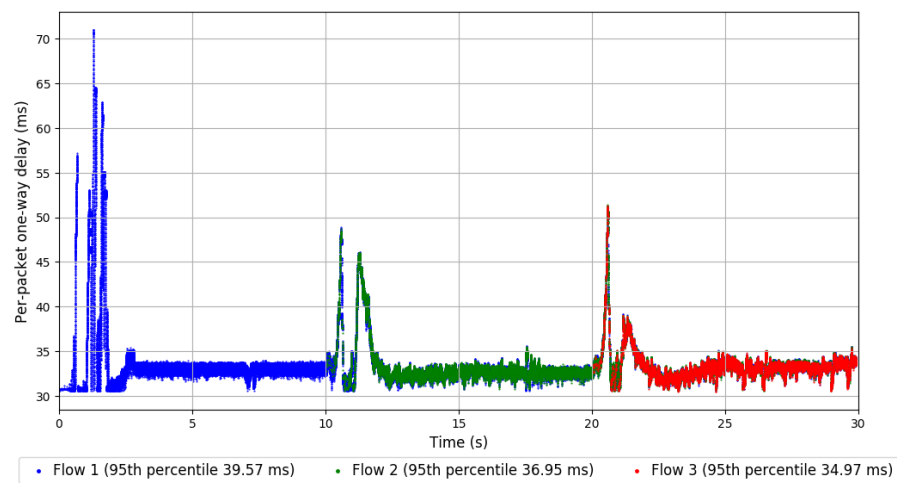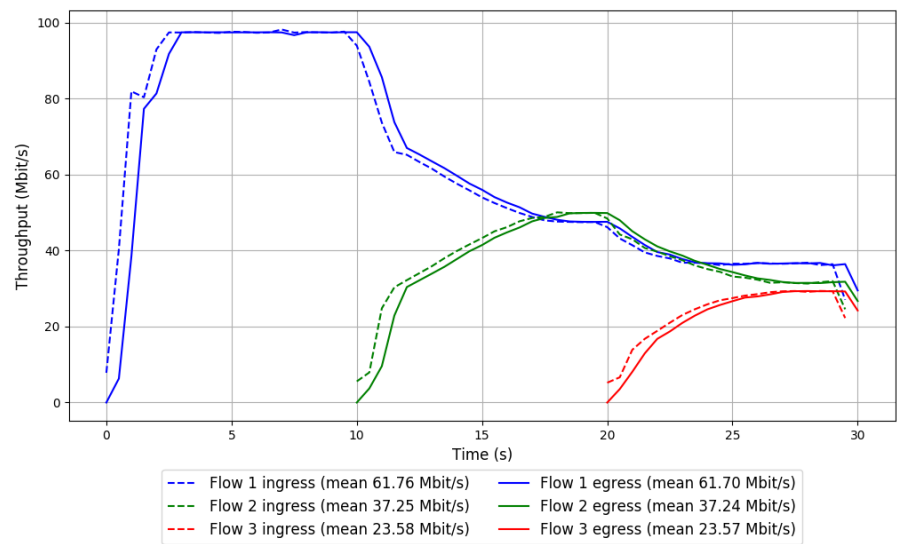Run 3: Report of Indigo-Muses — Data Link

```
Run 4: Statistics of Indigo-Muses

Start at: 2018-09-07 15:49:14
End at: 2018-09-07 15:49:44
Local clock offset: 0.506 ms
Remote clock offset: -0.516 ms


# Below is generated by plot.py at 2018-09-07 16:37:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.23 Mbit/s
95th percentile per-packet one-way delay: 38.011 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 61.70 Mbit/s
95th percentile per-packet one-way delay: 39.567 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 37.24 Mbit/s
95th percentile per-packet one-way delay: 36.950 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 23.57 Mbit/s
95th percentile per-packet one-way delay: 34.974 ms
Loss rate: 0.01%
```

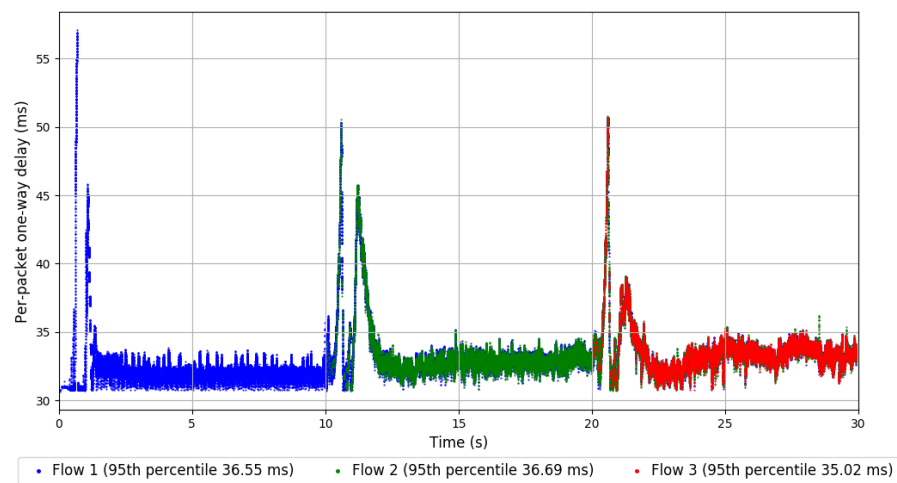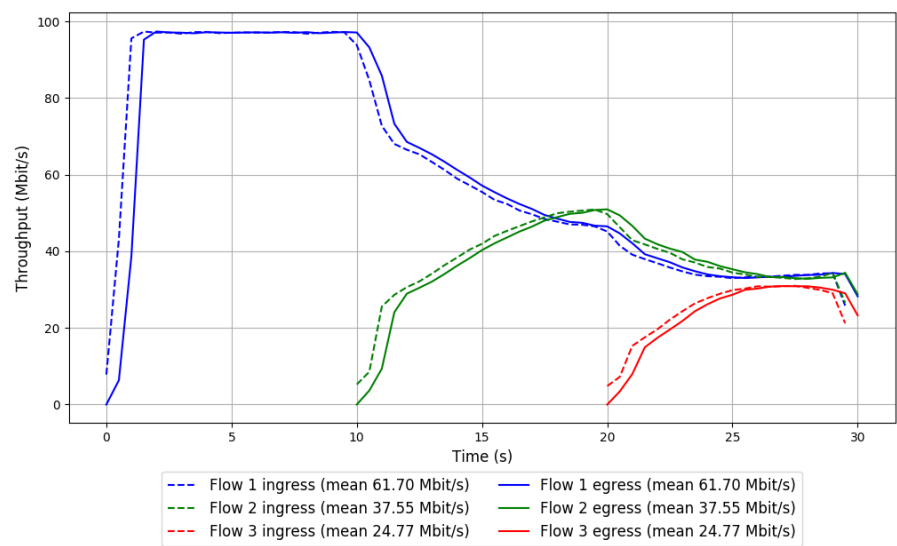Run 4: Report of Indigo-Muses — Data Link

```
Run 5: Statistics of Indigo-Muses

Start at: 2018-09-07 16:13:39
End at: 2018-09-07 16:14:09
Local clock offset: 0.314 ms
Remote clock offset: -0.117 ms


# Below is generated by plot.py at 2018-09-07 16:38:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.82 Mbit/s
95th percentile per-packet one-way delay: 36.434 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.70 Mbit/s
95th percentile per-packet one-way delay: 36.555 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.55 Mbit/s
95th percentile per-packet one-way delay: 36.691 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.77 Mbit/s
95th percentile per-packet one-way delay: 35.016 ms
Loss rate: 0.00%
```

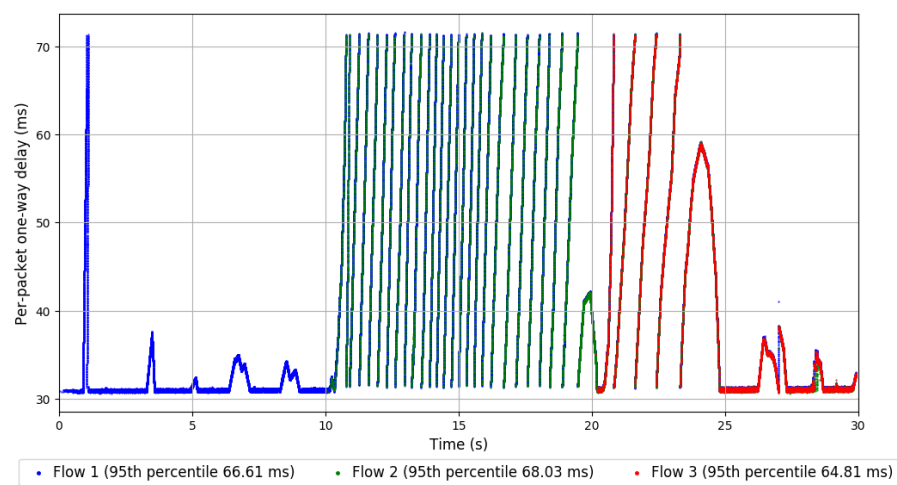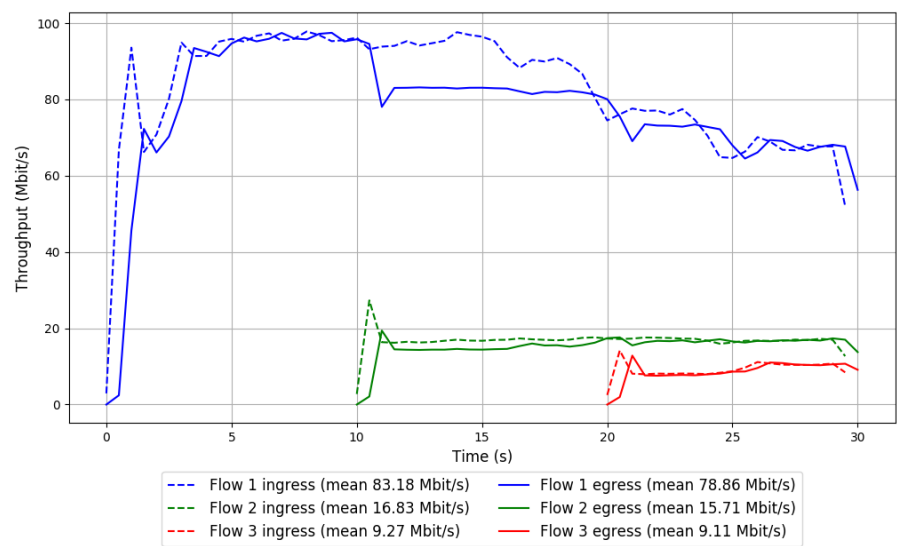Run 5: Report of Indigo-Muses — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-07 14:51:00
End at: 2018-09-07 14:51:30
Local clock offset: -1.485 ms
Remote clock offset: -0.71 ms


# Below is generated by plot.py at 2018-09-07 16:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.31 Mbit/s
95th percentile per-packet one-way delay: 66.806 ms
Loss rate: 5.25%
-- Flow 1:
Average throughput: 78.86 Mbit/s
95th percentile per-packet one-way delay: 66.613 ms
Loss rate: 5.18%
-- Flow 2:
Average throughput: 15.71 Mbit/s
95th percentile per-packet one-way delay: 68.032 ms
Loss rate: 6.70%
-- Flow 3:
Average throughput: 9.11 Mbit/s
95th percentile per-packet one-way delay: 64.808 ms
Loss rate: 1.74%
```

Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 83.18 Mbit/s) --- Flow 1 egress (mean 78.86 Mbit/s)
Flow 2 ingress (mean 16.83 Mbit/s) --- Flow 2 egress (mean 15.71 Mbit/s)
Flow 3 ingress (mean 9.27 Mbit/s) --- Flow 3 egress (mean 9.11 Mbit/s)

Flow 1 (95th percentile 66.61 ms) • Flow 2 (95th percentile 68.03 ms) • Flow 3 (95th percentile 64.81 ms)
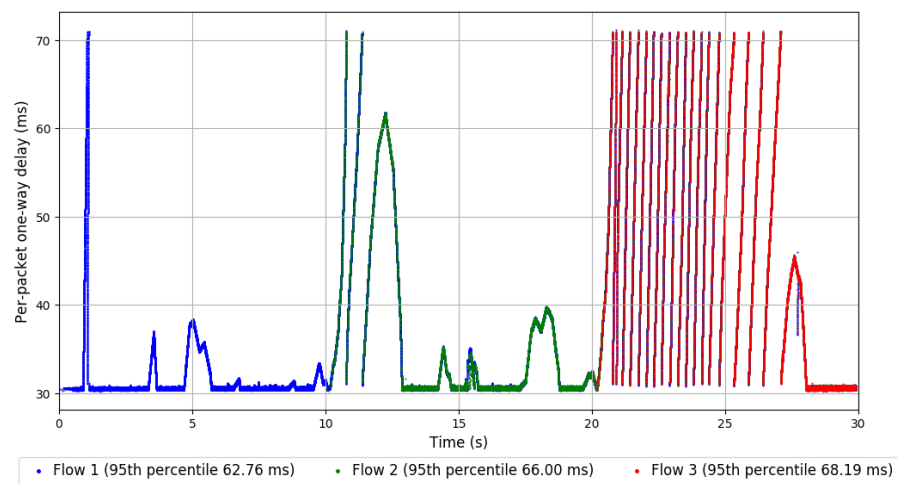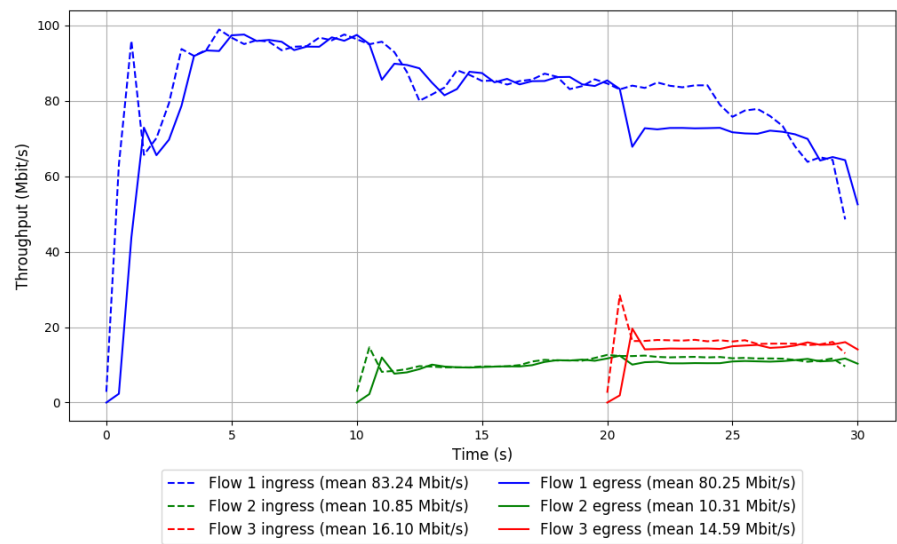
```
Run 2: Statistics of PCC-Allegro

Start at: 2018-09-07 15:15:24
End at: 2018-09-07 15:15:54
Local clock offset: 1.068 ms
Remote clock offset: -0.647 ms


# Below is generated by plot.py at 2018-09-07 16:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.91 Mbit/s
95th percentile per-packet one-way delay: 63.930 ms
Loss rate: 4.03%
-- Flow 1:
Average throughput: 80.25 Mbit/s
95th percentile per-packet one-way delay: 62.761 ms
Loss rate: 3.60%
-- Flow 2:
Average throughput: 10.31 Mbit/s
95th percentile per-packet one-way delay: 66.004 ms
Loss rate: 5.01%
-- Flow 3:
Average throughput: 14.59 Mbit/s
95th percentile per-packet one-way delay: 68.190 ms
Loss rate: 9.39%
```
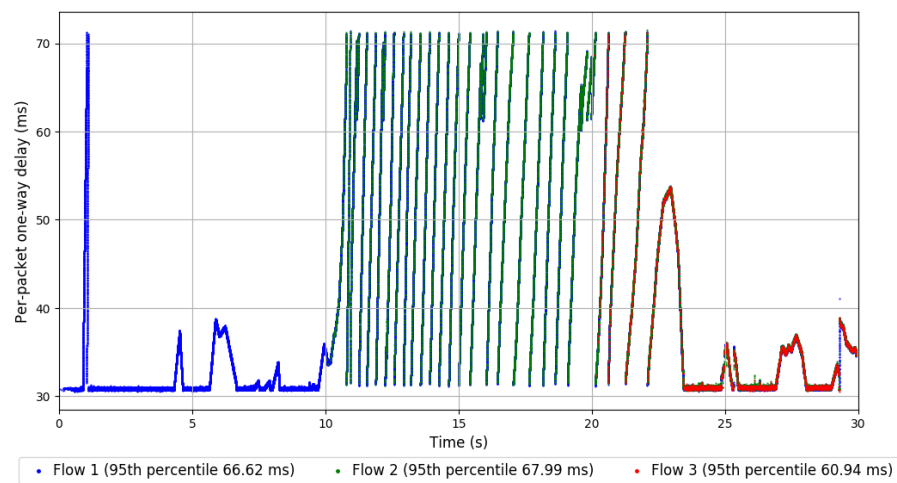
Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 83.24 Mbit/s) --- Flow 1 egress (mean 80.25 Mbit/s)
Flow 2 ingress (mean 10.85 Mbit/s) --- Flow 2 egress (mean 10.31 Mbit/s)
Flow 3 ingress (mean 16.10 Mbit/s) --- Flow 3 egress (mean 14.59 Mbit/s)

Flow 1 (95th percentile 62.76 ms)   Flow 2 (95th percentile 66.00 ms)   Flow 3 (95th percentile 68.19 ms)
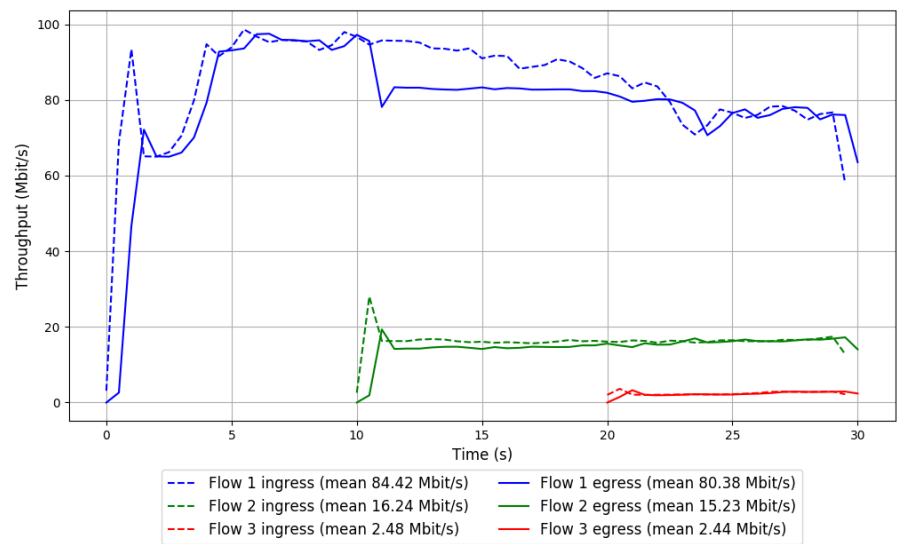
```
Run 3: Statistics of PCC-Allegro

Start at: 2018-09-07 15:39:48
End at: 2018-09-07 15:40:18
Local clock offset: 0.573 ms
Remote clock offset: -0.434 ms


# Below is generated by plot.py at 2018-09-07 16:38:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.30 Mbit/s
95th percentile per-packet one-way delay: 66.805 ms
Loss rate: 4.92%
-- Flow 1:
Average throughput: 80.38 Mbit/s
95th percentile per-packet one-way delay: 66.623 ms
Loss rate: 4.78%
-- Flow 2:
Average throughput: 15.23 Mbit/s
95th percentile per-packet one-way delay: 67.986 ms
Loss rate: 6.25%
-- Flow 3:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 60.937 ms
Loss rate: 1.95%
```
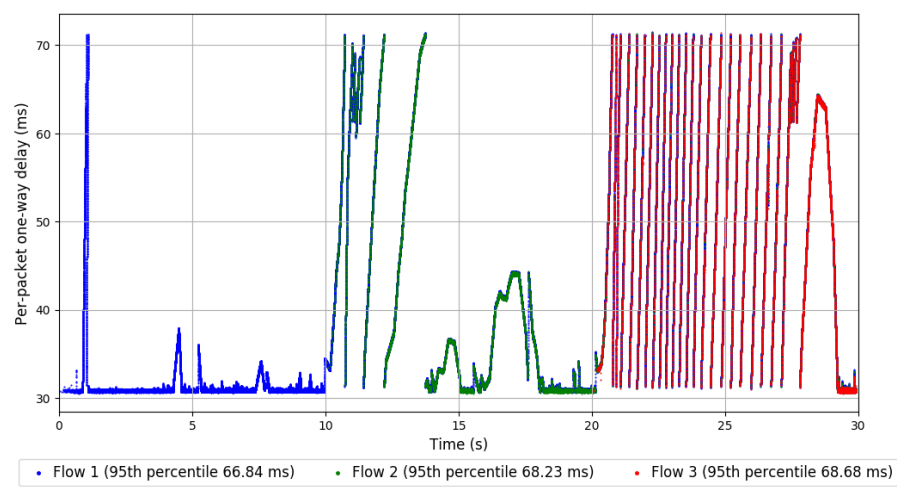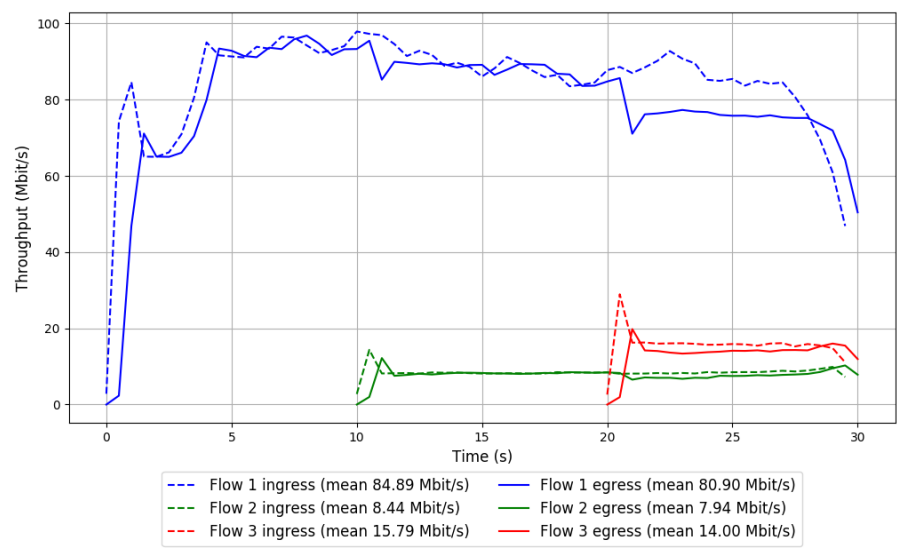
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 84.42 Mbit/s) — Flow 1 egress (mean 80.38 Mbit/s)
Flow 2 ingress (mean 16.24 Mbit/s) — Flow 2 egress (mean 15.23 Mbit/s)
Flow 3 ingress (mean 2.48 Mbit/s) — Flow 3 egress (mean 2.44 Mbit/s)

Flow 1 (95th percentile 66.62 ms) • Flow 2 (95th percentile 67.99 ms) • Flow 3 (95th percentile 60.94 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2018-09-07 16:04:15
End at: 2018-09-07 16:04:45
Local clock offset: 0.363 ms
Remote clock offset: -0.185 ms


# Below is generated by plot.py at 2018-09-07 16:38:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.80 Mbit/s
95th percentile per-packet one-way delay: 67.118 ms
Loss rate: 5.13%
-- Flow 1:
Average throughput: 80.90 Mbit/s
95th percentile per-packet one-way delay: 66.837 ms
Loss rate: 4.70%
-- Flow 2:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 68.231 ms
Loss rate: 5.93%
-- Flow 3:
Average throughput: 14.00 Mbit/s
95th percentile per-packet one-way delay: 68.677 ms
Loss rate: 11.36%
```
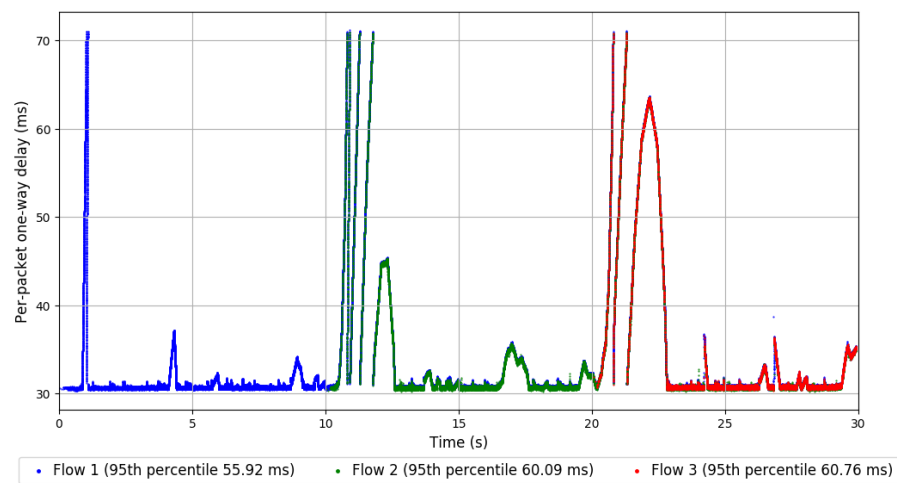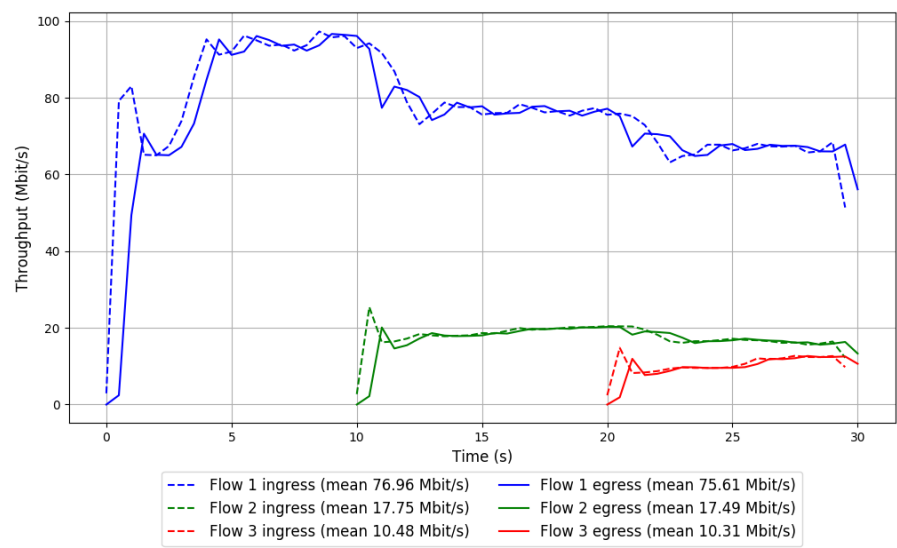
Run 4: Report of PCC-Allegro — Data Link

- - - - Flow 1 ingress (mean 84.89 Mbit/s) —— Flow 1 egress (mean 80.90 Mbit/s)
- - - - Flow 2 ingress (mean 8.44 Mbit/s) —— Flow 2 egress (mean 7.94 Mbit/s)
- - - - Flow 3 ingress (mean 15.79 Mbit/s) —— Flow 3 egress (mean 14.00 Mbit/s)

• Flow 1 (95th percentile 66.84 ms) • Flow 2 (95th percentile 68.23 ms) • Flow 3 (95th percentile 68.68 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-09-07 16:28:40
End at: 2018-09-07 16:29:10
Local clock offset: 0.204 ms
Remote clock offset: -0.38 ms


# Below is generated by plot.py at 2018-09-07 16:38:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.63 Mbit/s
95th percentile per-packet one-way delay: 57.426 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 75.61 Mbit/s
95th percentile per-packet one-way delay: 55.921 ms
Loss rate: 1.74%
-- Flow 2:
Average throughput: 17.49 Mbit/s
95th percentile per-packet one-way delay: 60.091 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 10.31 Mbit/s
95th percentile per-packet one-way delay: 60.761 ms
Loss rate: 1.57%
```

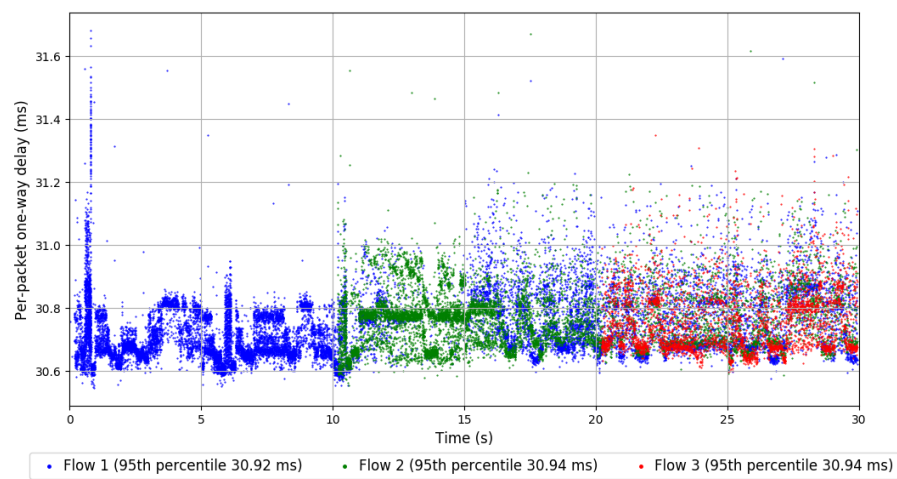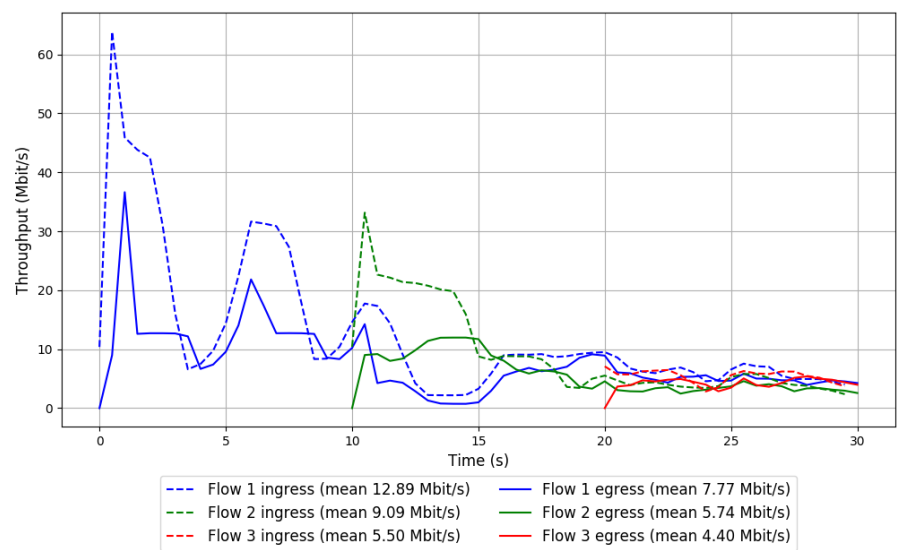Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2018-09-07 14:34:29
End at: 2018-09-07 14:35:00
Local clock offset: -3.216 ms
Remote clock offset: -0.74 ms

# Below is generated by plot.py at 2018-09-07 16:38:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 30.934 ms
Loss rate: 37.12%
-- Flow 1:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 30.923 ms
Loss rate: 39.67%
-- Flow 2:
Average throughput: 5.74 Mbit/s
95th percentile per-packet one-way delay: 30.943 ms
Loss rate: 36.84%
-- Flow 3:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 30.941 ms
Loss rate: 19.95%
```
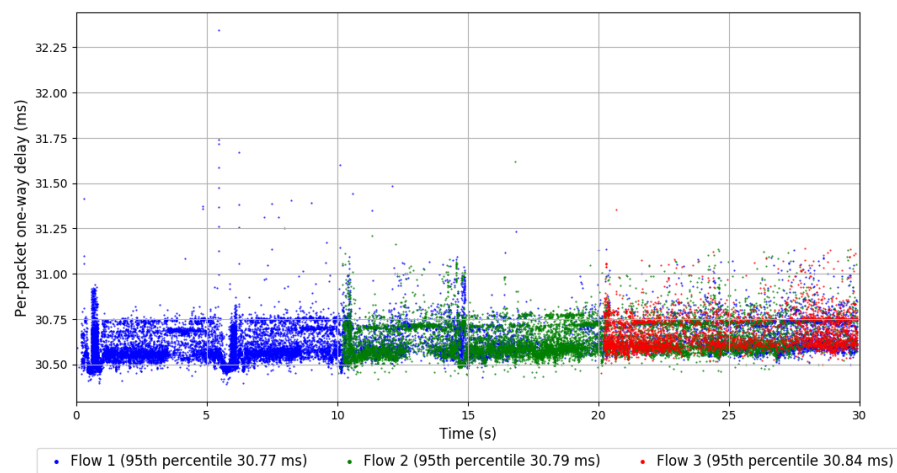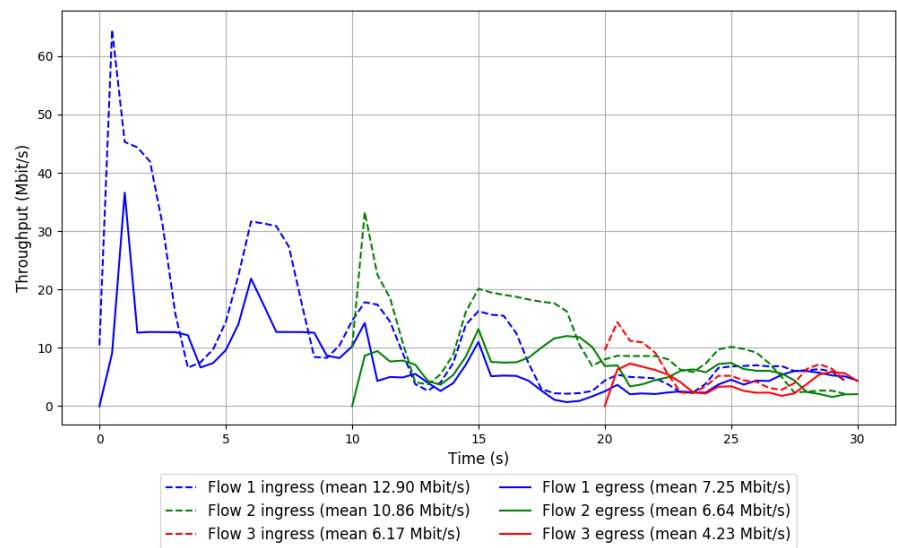
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2018-09-07 14:59:08
End at: 2018-09-07 14:59:38
Local clock offset: -0.083 ms
Remote clock offset: -0.768 ms


# Below is generated by plot.py at 2018-09-07 16:38:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 30.787 ms
Loss rate: 41.06%
-- Flow 1:
Average throughput: 7.25 Mbit/s
95th percentile per-packet one-way delay: 30.772 ms
Loss rate: 43.81%
-- Flow 2:
Average throughput: 6.64 Mbit/s
95th percentile per-packet one-way delay: 30.789 ms
Loss rate: 38.86%
-- Flow 3:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 30.837 ms
Loss rate: 31.47%
```
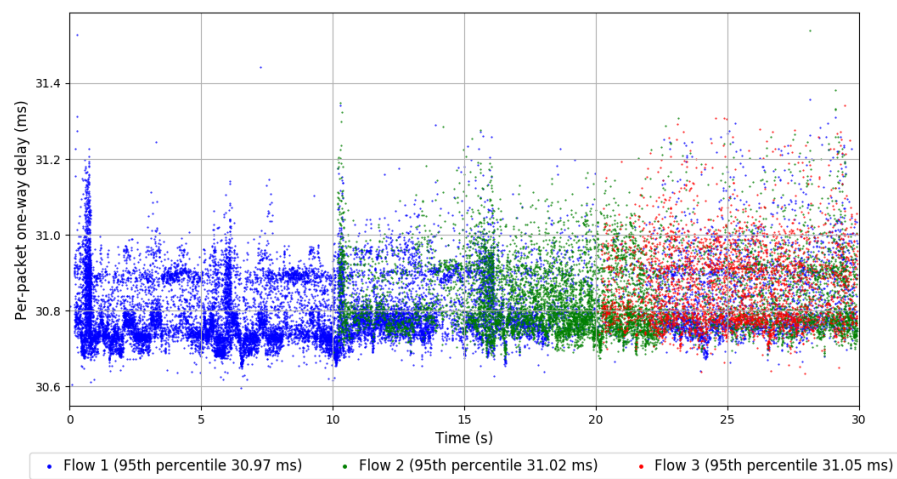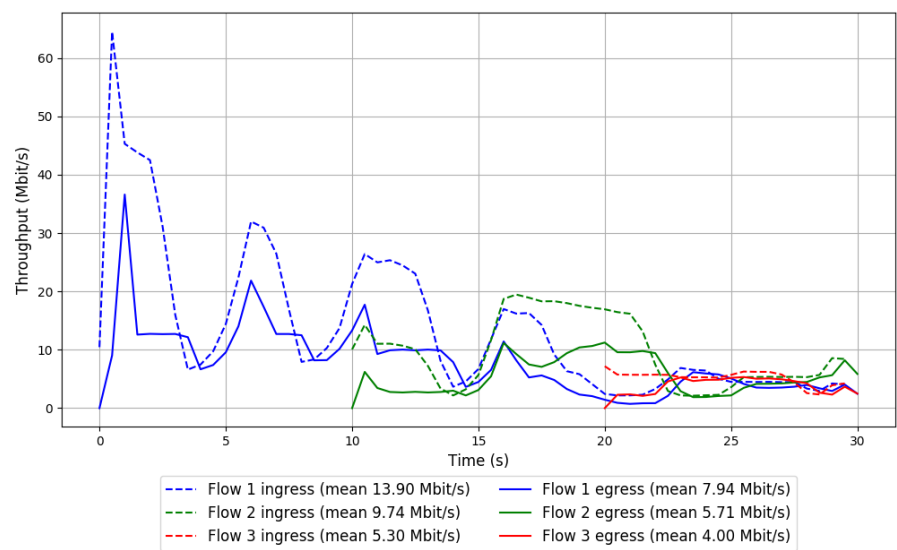
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2018-09-07 15:23:30
End at: 2018-09-07 15:24:00
Local clock offset: 0.549 ms
Remote clock offset: -0.501 ms


# Below is generated by plot.py at 2018-09-07 16:38:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 30.997 ms
Loss rate: 40.96%
-- Flow 1:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 30.967 ms
Loss rate: 42.83%
-- Flow 2:
Average throughput: 5.71 Mbit/s
95th percentile per-packet one-way delay: 31.018 ms
Loss rate: 41.39%
-- Flow 3:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 31.050 ms
Loss rate: 24.47%
```
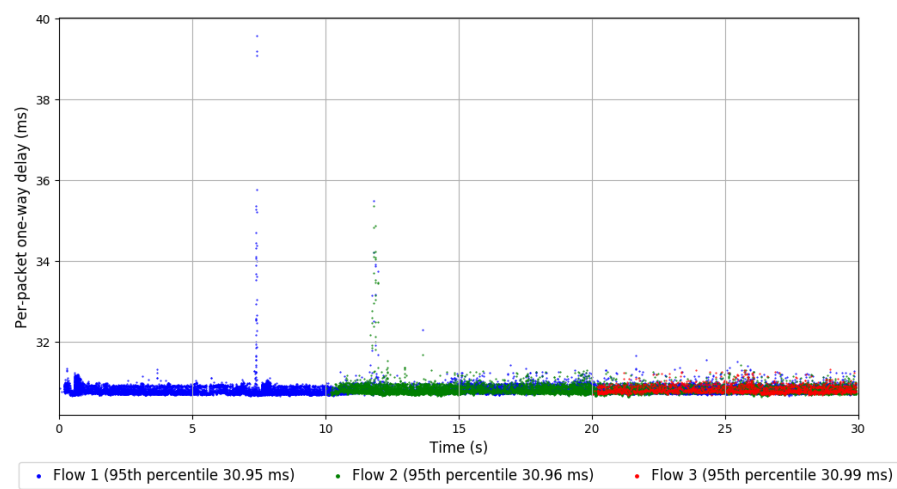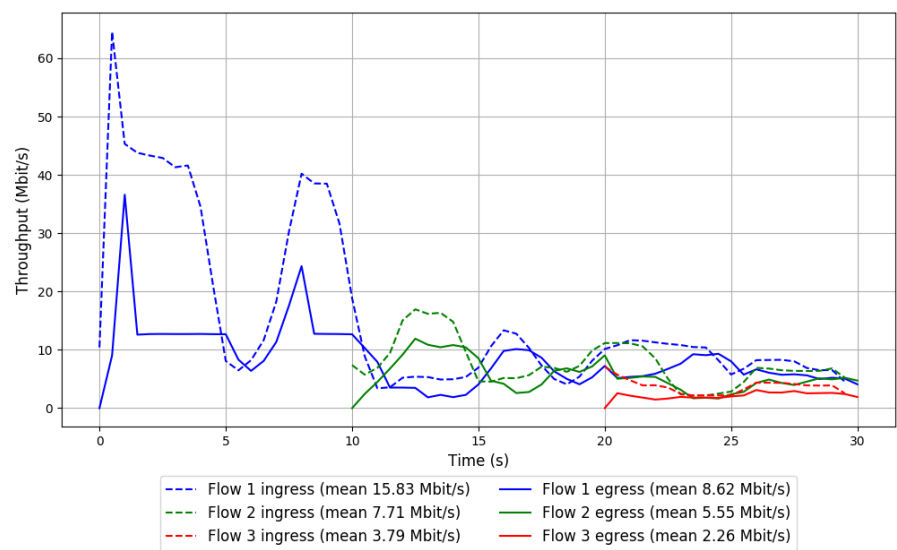
Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2018-09-07 15:47:55
End at: 2018-09-07 15:48:25
Local clock offset: 0.568 ms
Remote clock offset: -0.368 ms


# Below is generated by plot.py at 2018-09-07 16:38:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 30.956 ms
Loss rate: 41.21%
-- Flow 1:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 30.952 ms
Loss rate: 45.55%
-- Flow 2:
Average throughput: 5.55 Mbit/s
95th percentile per-packet one-way delay: 30.962 ms
Loss rate: 28.00%
-- Flow 3:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 30.992 ms
Loss rate: 40.36%
```
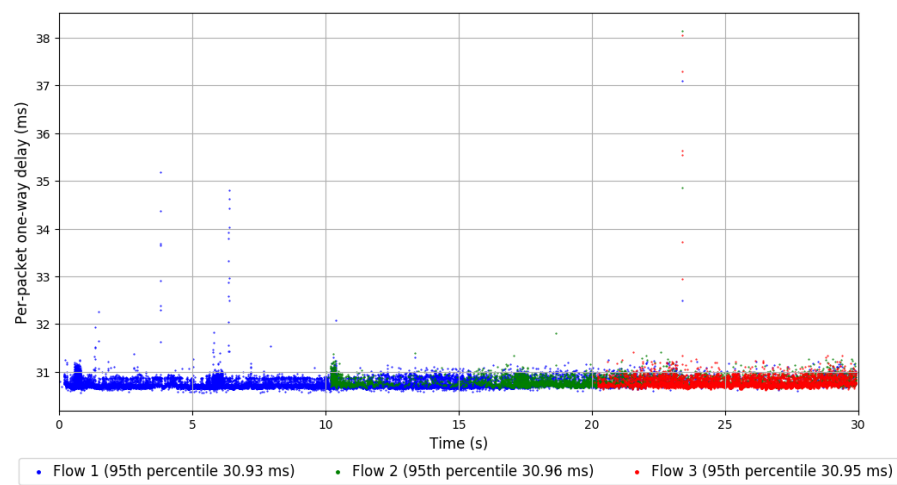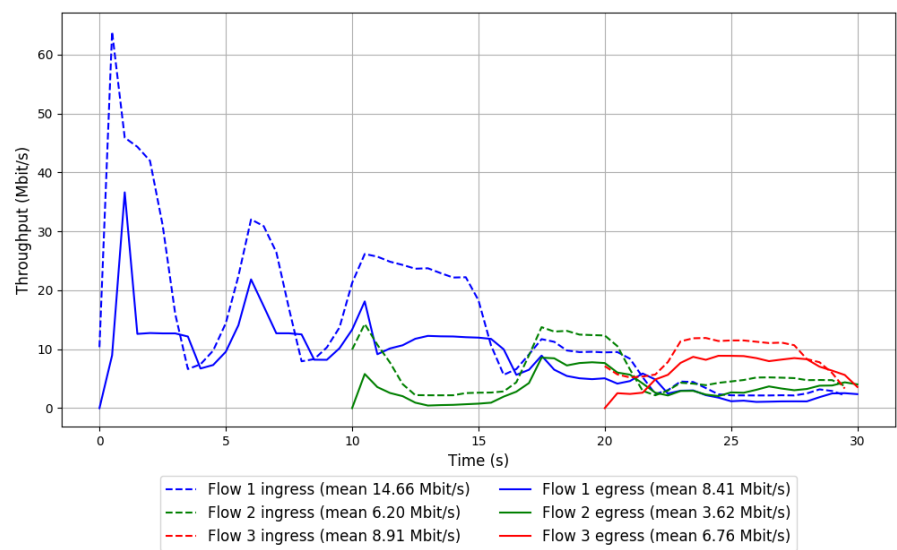
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2018-09-07 16:12:20
End at: 2018-09-07 16:12:50
Local clock offset: 0.391 ms
Remote clock offset: -0.092 ms


# Below is generated by plot.py at 2018-09-07 16:38:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 30.940 ms
Loss rate: 39.96%
-- Flow 1:
Average throughput: 8.41 Mbit/s
95th percentile per-packet one-way delay: 30.927 ms
Loss rate: 42.65%
-- Flow 2:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 30.962 ms
Loss rate: 41.66%
-- Flow 3:
Average throughput: 6.76 Mbit/s
95th percentile per-packet one-way delay: 30.950 ms
Loss rate: 24.18%
```

Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 14.66 Mbit/s)   Flow 1 egress (mean 8.41 Mbit/s)
Flow 2 ingress (mean 6.20 Mbit/s)   Flow 2 egress (mean 3.62 Mbit/s)
Flow 3 ingress (mean 8.91 Mbit/s)   Flow 3 egress (mean 6.76 Mbit/s)

Flow 1 (95th percentile 30.93 ms)   Flow 2 (95th percentile 30.96 ms)   Flow 3 (95th percentile 30.95 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-09-07 14:52:22
End at: 2018-09-07 14:52:52
Local clock offset: -1.171 ms
Remote clock offset: -0.64 ms

# Below is generated by plot.py at 2018-09-07 16:39:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.59 Mbit/s
95th percentile per-packet one-way delay: 66.754 ms
Loss rate: 2.52%
-- Flow 1:
Average throughput: 58.18 Mbit/s
95th percentile per-packet one-way delay: 66.189 ms
Loss rate: 3.01%
-- Flow 2:
Average throughput: 24.17 Mbit/s
95th percentile per-packet one-way delay: 67.197 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 22.39 Mbit/s
95th percentile per-packet one-way delay: 68.132 ms
Loss rate: 1.51%
```
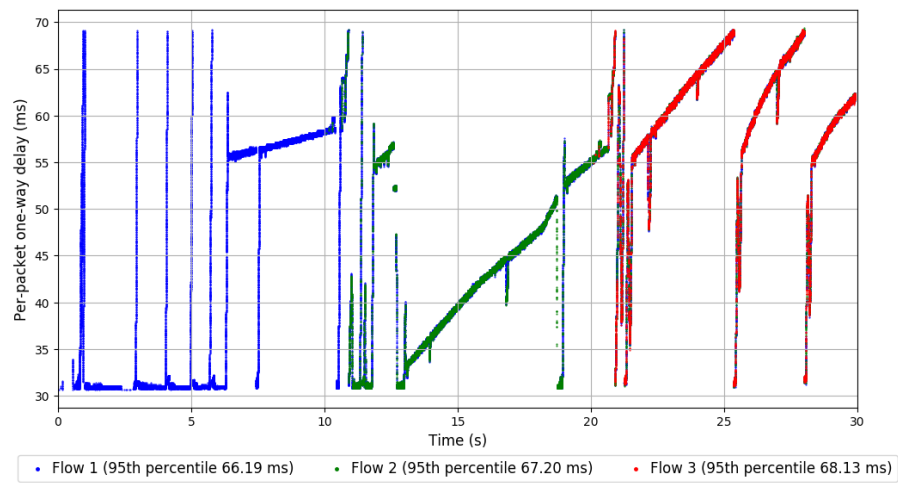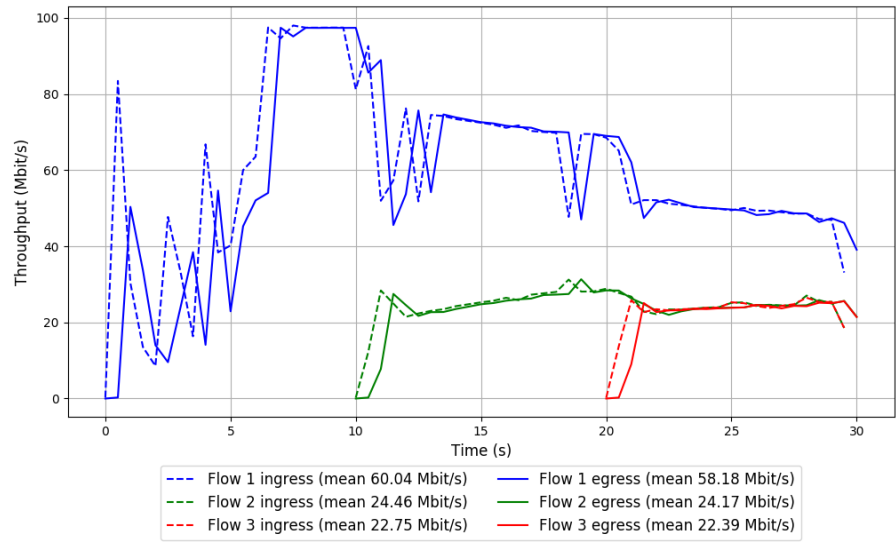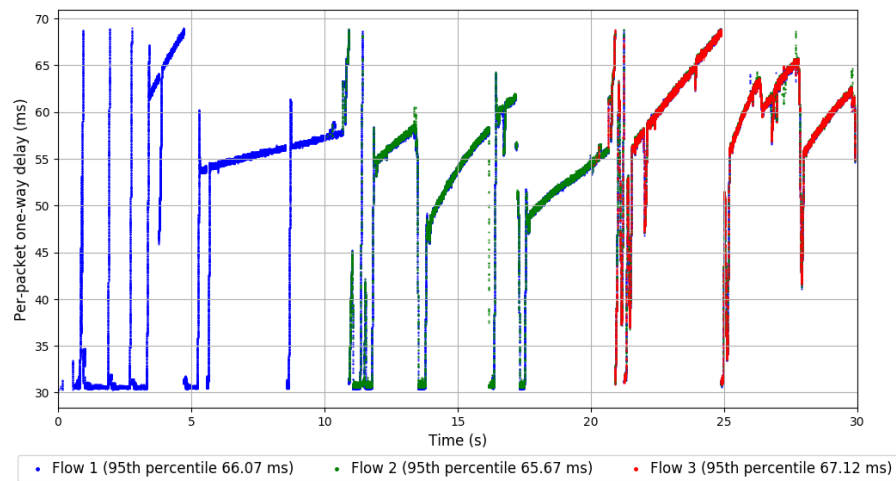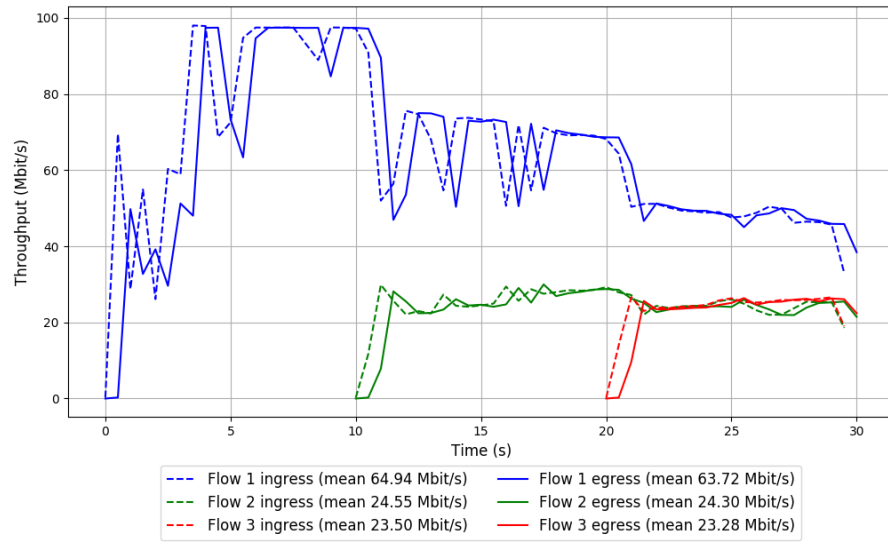
Run 1: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 60.04 Mbit/s) —— Flow 1 egress (mean 58.18 Mbit/s)
- - - Flow 2 ingress (mean 24.46 Mbit/s) —— Flow 2 egress (mean 24.17 Mbit/s)
- - - Flow 3 ingress (mean 22.75 Mbit/s) —— Flow 3 egress (mean 22.39 Mbit/s)

• Flow 1 (95th percentile 66.19 ms)   • Flow 2 (95th percentile 67.20 ms)   • Flow 3 (95th percentile 68.13 ms)

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-09-07 15:16:45
End at: 2018-09-07 15:17:15
Local clock offset: 0.967 ms
Remote clock offset: -0.501 ms


# Below is generated by plot.py at 2018-09-07 16:39:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.50 Mbit/s
95th percentile per-packet one-way delay: 66.149 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 63.72 Mbit/s
95th percentile per-packet one-way delay: 66.073 ms
Loss rate: 1.80%
-- Flow 2:
Average throughput: 24.30 Mbit/s
95th percentile per-packet one-way delay: 65.666 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 23.28 Mbit/s
95th percentile per-packet one-way delay: 67.123 ms
Loss rate: 0.95%
```
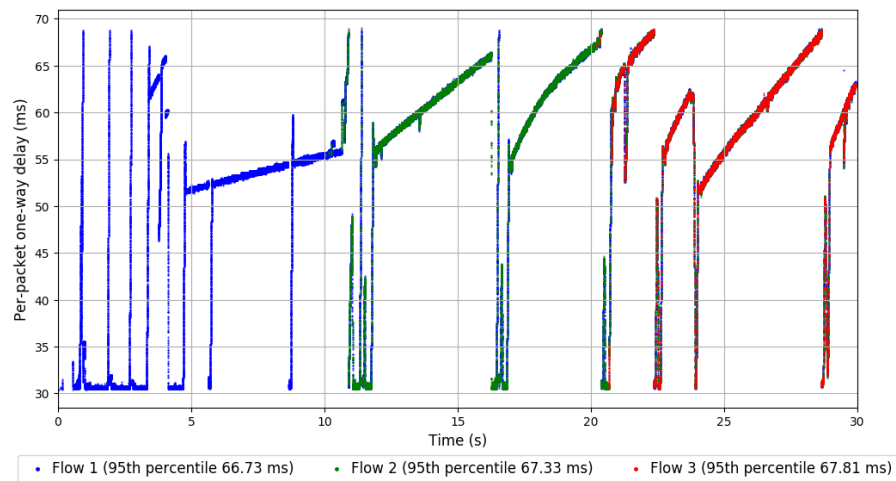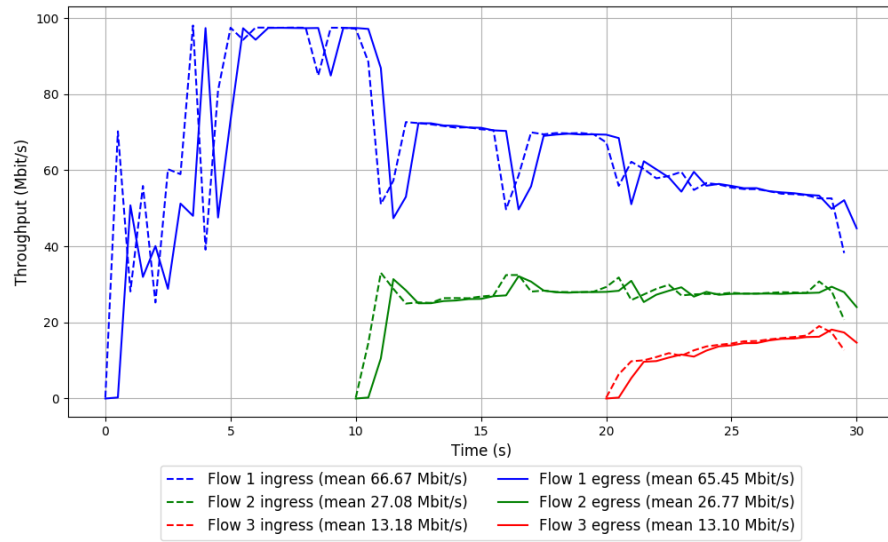
Run 2: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 64.94 Mbit/s) —— Flow 1 egress (mean 63.72 Mbit/s)
- - - Flow 2 ingress (mean 24.55 Mbit/s) —— Flow 2 egress (mean 24.30 Mbit/s)
- - - Flow 3 ingress (mean 23.50 Mbit/s) —— Flow 3 egress (mean 23.28 Mbit/s)

• Flow 1 (95th percentile 66.07 ms)　　• Flow 2 (95th percentile 65.67 ms)　　• Flow 3 (95th percentile 67.12 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-09-07 15:41:09
End at: 2018-09-07 15:41:39
Local clock offset: 0.606 ms
Remote clock offset: -0.538 ms


# Below is generated by plot.py at 2018-09-07 16:39:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.53 Mbit/s
95th percentile per-packet one-way delay: 66.972 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 65.45 Mbit/s
95th percentile per-packet one-way delay: 66.727 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 26.77 Mbit/s
95th percentile per-packet one-way delay: 67.333 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 13.10 Mbit/s
95th percentile per-packet one-way delay: 67.806 ms
Loss rate: 0.67%
```
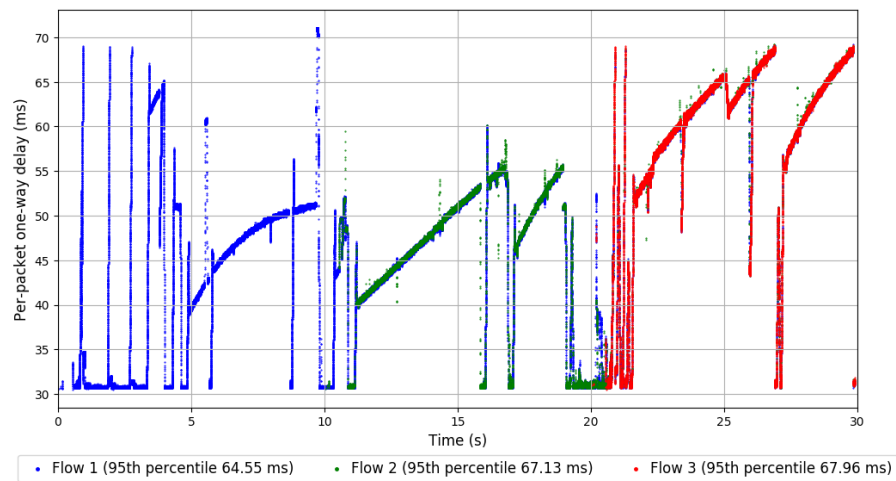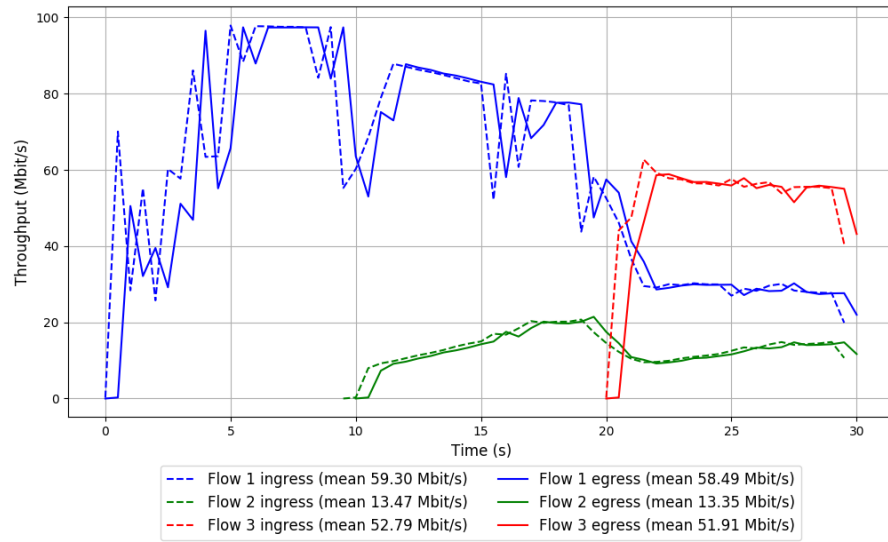
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 66.67 Mbit/s) ---- Flow 1 egress (mean 65.45 Mbit/s) ——
Flow 2 ingress (mean 27.08 Mbit/s) ---- Flow 2 egress (mean 26.77 Mbit/s) ——
Flow 3 ingress (mean 13.18 Mbit/s) ---- Flow 3 egress (mean 13.10 Mbit/s) ——

Flow 1 (95th percentile 66.73 ms)   Flow 2 (95th percentile 67.33 ms)   Flow 3 (95th percentile 67.81 ms)
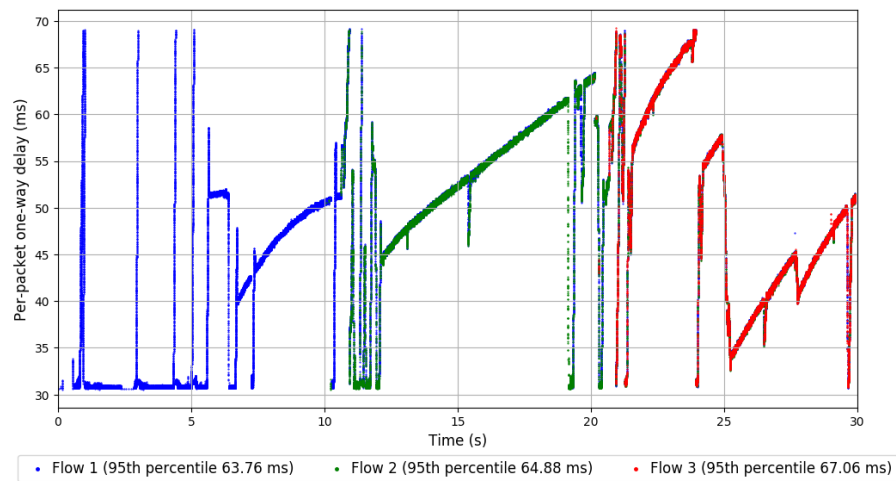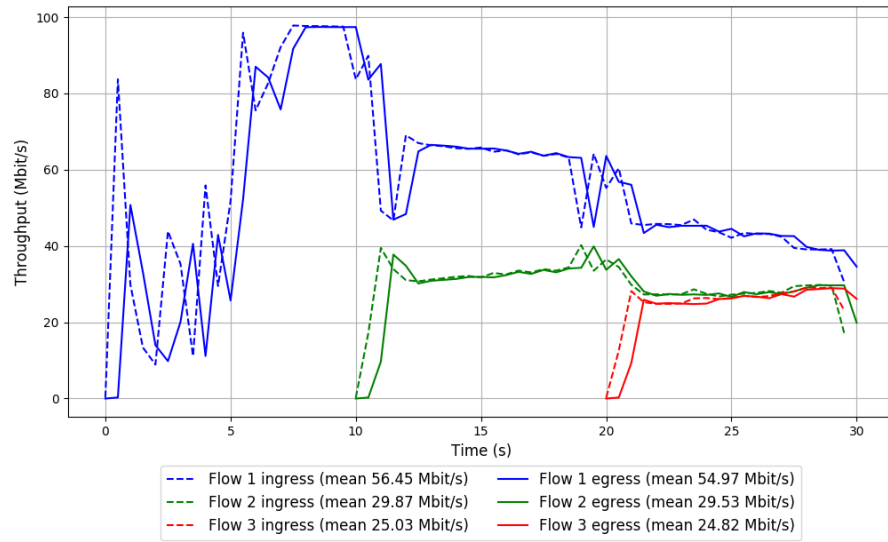
```
Run 4: Statistics of QUIC Cubic

Start at: 2018-09-07 16:05:36
End at: 2018-09-07 16:06:06
Local clock offset: 0.274 ms
Remote clock offset: -0.202 ms


# Below is generated by plot.py at 2018-09-07 16:39:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.50 Mbit/s
95th percentile per-packet one-way delay: 66.640 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 58.49 Mbit/s
95th percentile per-packet one-way delay: 64.545 ms
Loss rate: 1.36%
-- Flow 2:
Average throughput: 13.35 Mbit/s
95th percentile per-packet one-way delay: 67.134 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 51.91 Mbit/s
95th percentile per-packet one-way delay: 67.959 ms
Loss rate: 1.66%
```
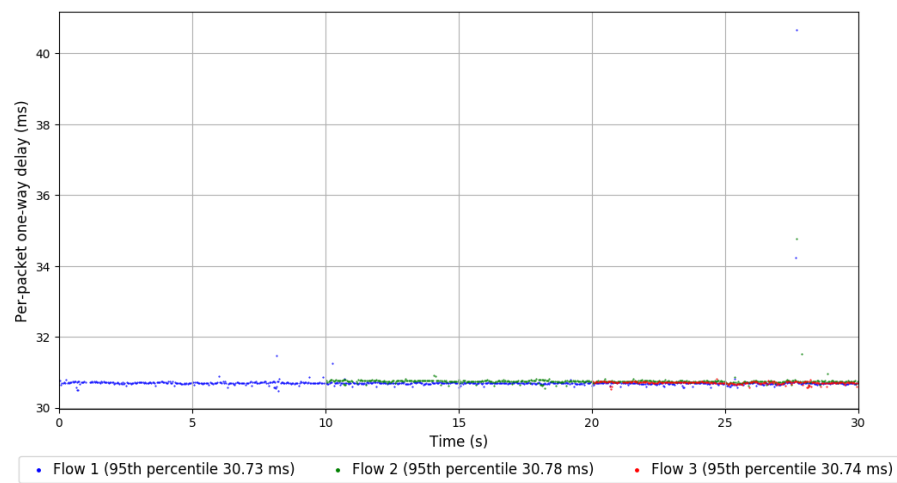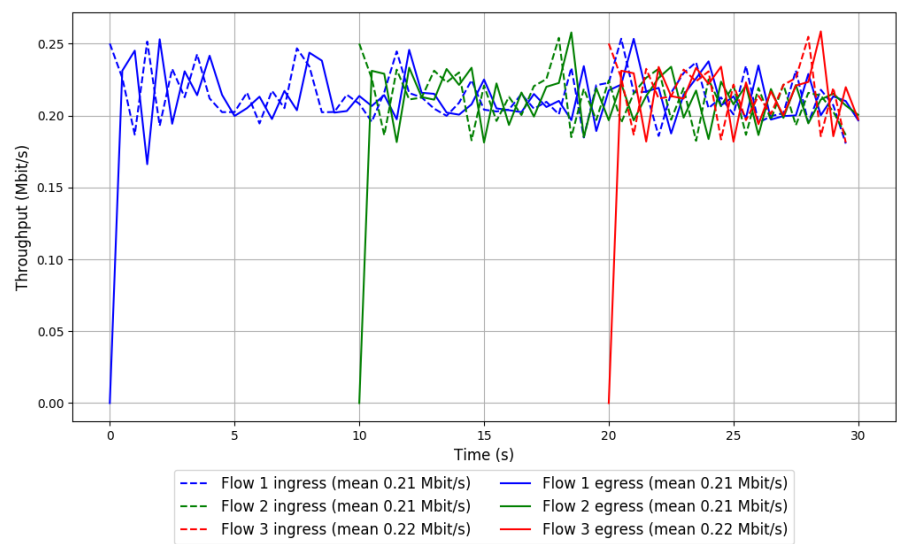
Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 59.30 Mbit/s) — Flow 1 egress (mean 58.49 Mbit/s)
Flow 2 ingress (mean 13.47 Mbit/s) — Flow 2 egress (mean 13.35 Mbit/s)
Flow 3 ingress (mean 52.79 Mbit/s) — Flow 3 egress (mean 51.91 Mbit/s)

Flow 1 (95th percentile 64.55 ms)   Flow 2 (95th percentile 67.13 ms)   Flow 3 (95th percentile 67.96 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-09-07 16:30:02
End at: 2018-09-07 16:30:32
Local clock offset: 0.193 ms
Remote clock offset: -0.126 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.73 Mbit/s
95th percentile per-packet one-way delay: 64.442 ms
Loss rate: 2.06%
-- Flow 1:
Average throughput: 54.97 Mbit/s
95th percentile per-packet one-way delay: 63.764 ms
Loss rate: 2.54%
-- Flow 2:
Average throughput: 29.53 Mbit/s
95th percentile per-packet one-way delay: 64.881 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 24.82 Mbit/s
95th percentile per-packet one-way delay: 67.063 ms
Loss rate: 0.99%
```
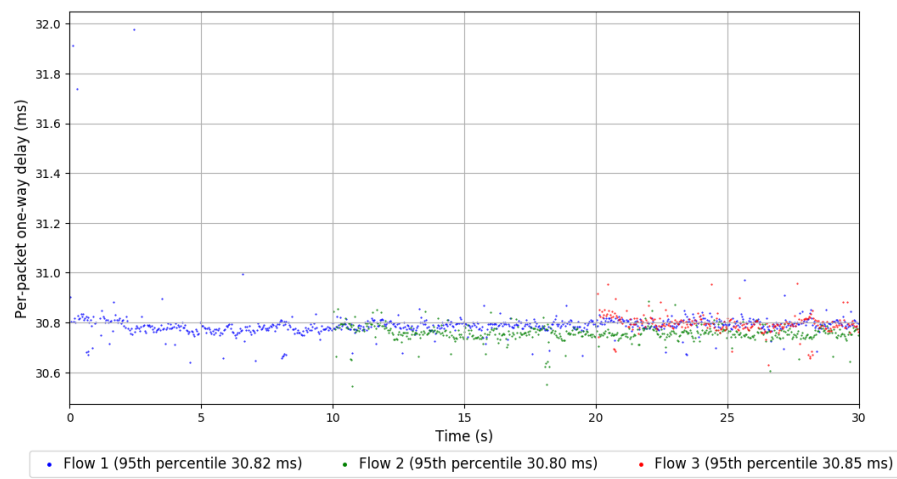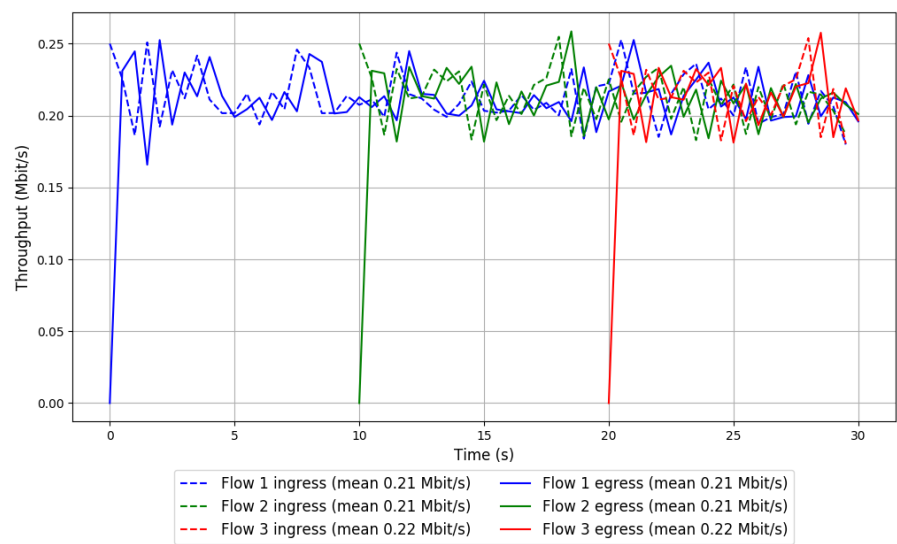
Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2018-09-07 14:41:27
End at: 2018-09-07 14:41:57
Local clock offset: -3.307 ms
Remote clock offset: -0.752 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.769 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.730 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.781 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.739 ms
Loss rate: 0.00%
```
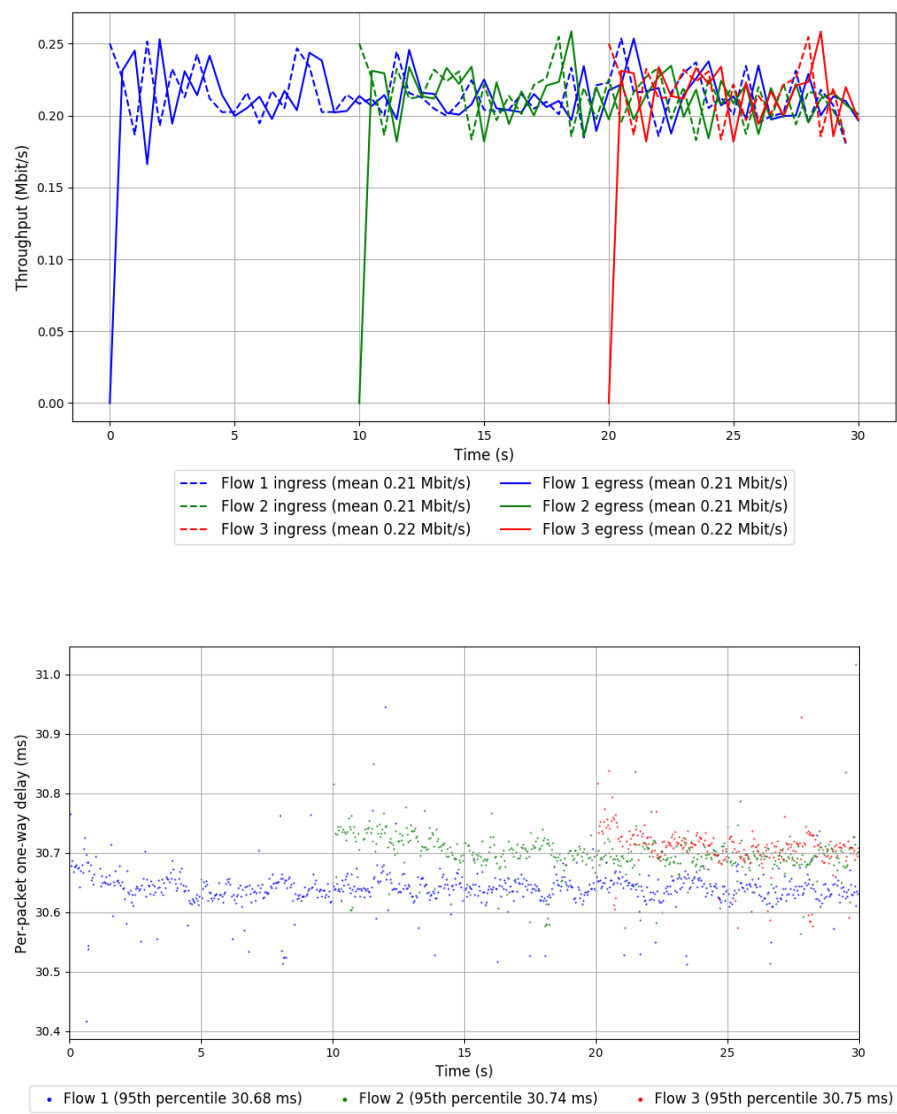
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-09-07 15:05:59
End at: 2018-09-07 15:06:29
Local clock offset: 0.46 ms
Remote clock offset: -0.621 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.826 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.824 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.800 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.849 ms
Loss rate: 0.00%
```
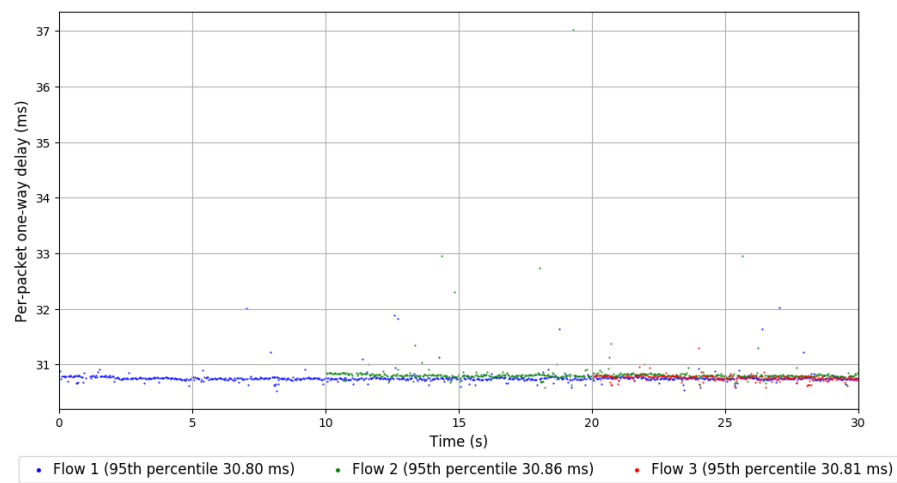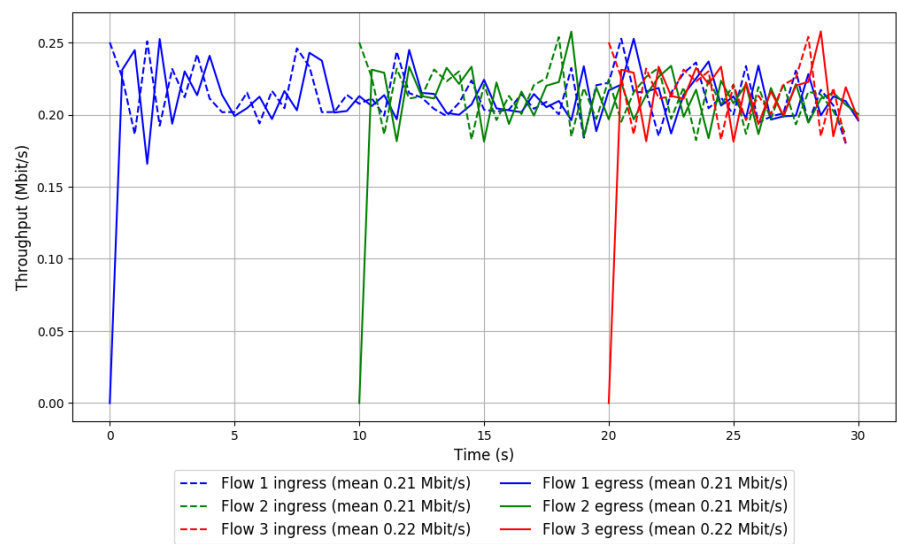
Run 2: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.21 Mbit/s)   Flow 1 egress (mean 0.21 Mbit/s)
Flow 2 ingress (mean 0.21 Mbit/s)   Flow 2 egress (mean 0.21 Mbit/s)
Flow 3 ingress (mean 0.22 Mbit/s)   Flow 3 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 30.82 ms)   Flow 2 (95th percentile 30.80 ms)   Flow 3 (95th percentile 30.85 ms)

```
Run 3: Statistics of SCReAM

Start at: 2018-09-07 15:30:21
End at: 2018-09-07 15:30:51
Local clock offset: 0.486 ms
Remote clock offset: -0.61 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.736 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.675 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.742 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.752 ms
Loss rate: 0.00%
```
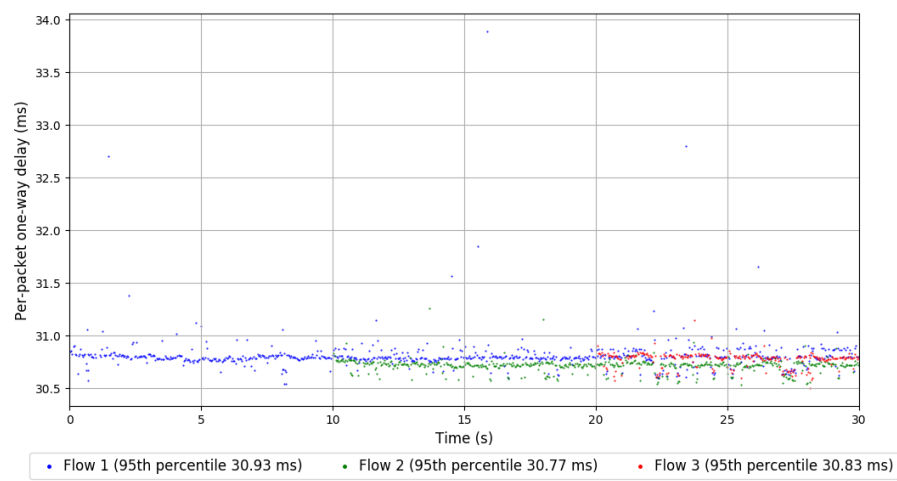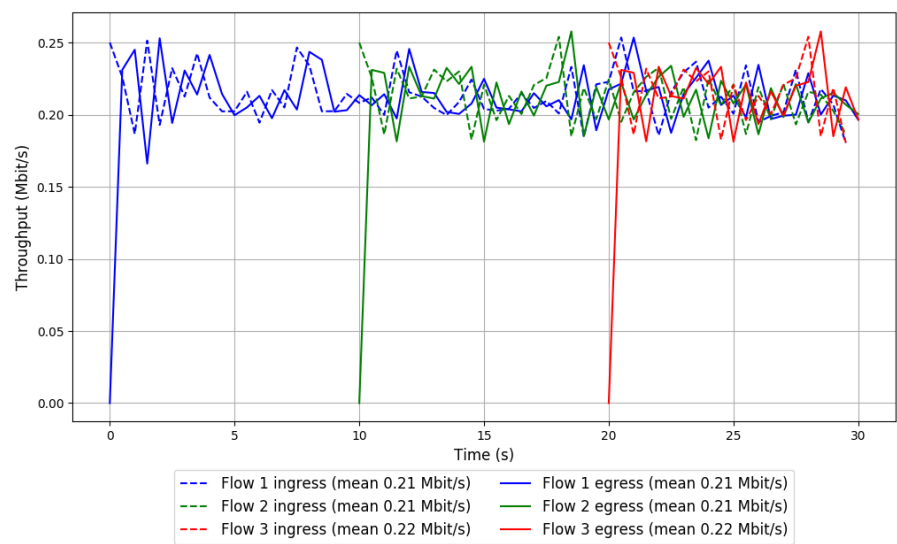
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-09-07 15:54:47
End at: 2018-09-07 15:55:17
Local clock offset: 0.425 ms
Remote clock offset: -0.245 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.845 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.803 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.860 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.809 ms
Loss rate: 0.00%
```
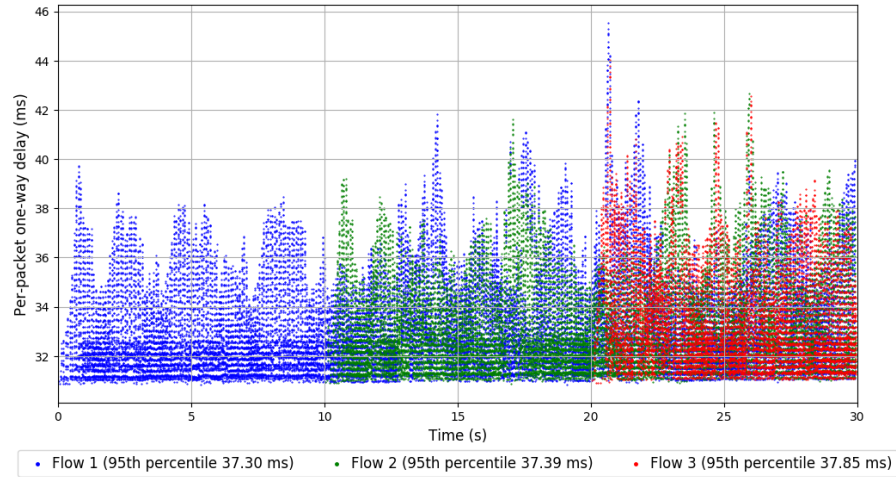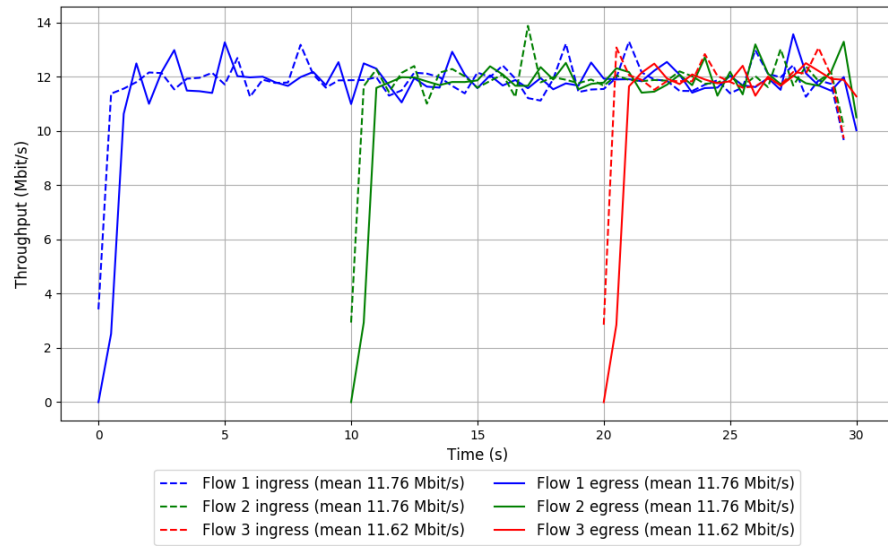
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2018-09-07 16:19:14
End at: 2018-09-07 16:19:44
Local clock offset: 0.292 ms
Remote clock offset: -0.115 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.885 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.925 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.772 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.834 ms
Loss rate: 0.00%
```
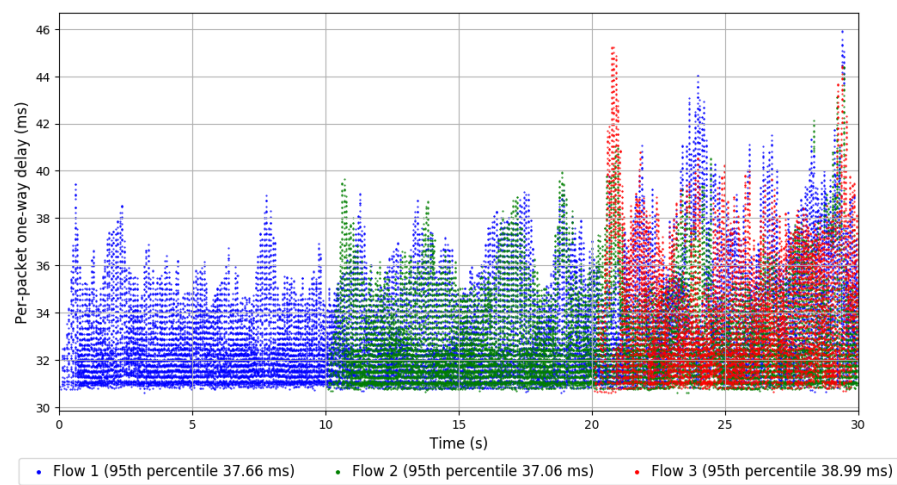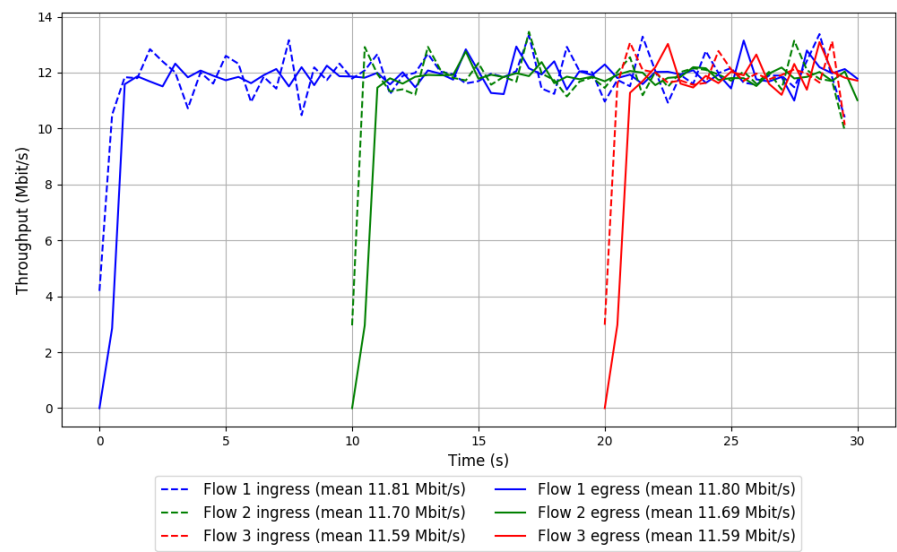
Run 5: Report of SCReAM — Data Link

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```
Run 1: Statistics of Sprout

Start at: 2018-09-07 14:45:27
End at: 2018-09-07 14:45:57
Local clock offset: -3.277 ms
Remote clock offset: -0.668 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.42 Mbit/s
95th percentile per-packet one-way delay: 37.414 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 37.301 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 37.388 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.62 Mbit/s
95th percentile per-packet one-way delay: 37.853 ms
Loss rate: 0.00%
```
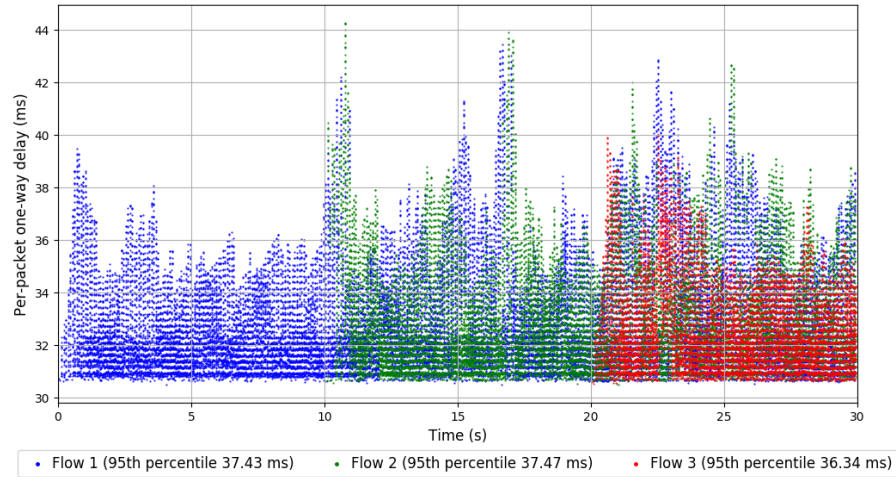
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-09-07 15:09:58
End at: 2018-09-07 15:10:28
Local clock offset: 0.784 ms
Remote clock offset: -0.405 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.41 Mbit/s
95th percentile per-packet one-way delay: 37.779 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 11.80 Mbit/s
95th percentile per-packet one-way delay: 37.656 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 11.69 Mbit/s
95th percentile per-packet one-way delay: 37.064 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 11.59 Mbit/s
95th percentile per-packet one-way delay: 38.989 ms
Loss rate: 0.00%
```

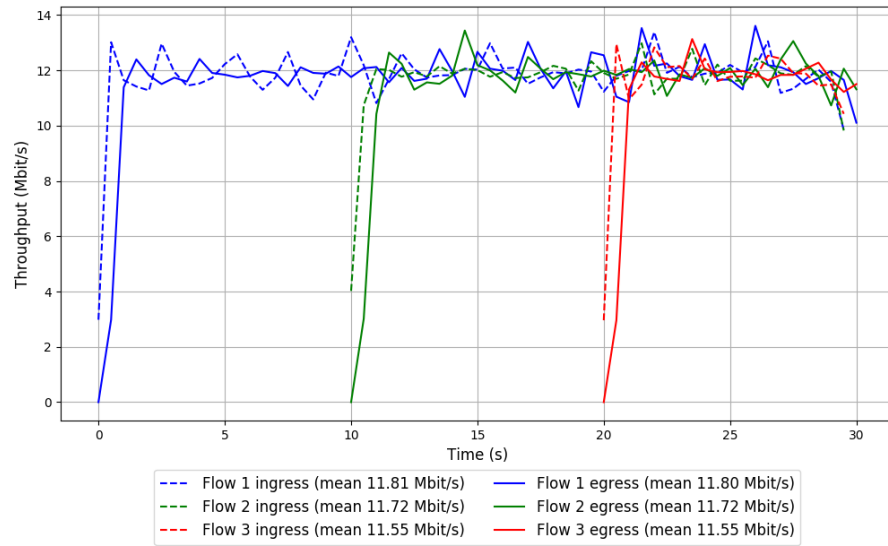## Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-09-07 15:34:20
End at: 2018-09-07 15:34:50
Local clock offset: 0.602 ms
Remote clock offset: -0.419 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.40 Mbit/s
95th percentile per-packet one-way delay: 37.273 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.80 Mbit/s
95th percentile per-packet one-way delay: 37.430 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 37.470 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.55 Mbit/s
95th percentile per-packet one-way delay: 36.337 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-09-07 15:58:47
End at: 2018-09-07 15:59:17
Local clock offset: 0.389 ms
Remote clock offset: -0.103 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.34 Mbit/s
95th percentile per-packet one-way delay: 37.198 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 11.80 Mbit/s
95th percentile per-packet one-way delay: 37.166 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 11.62 Mbit/s
95th percentile per-packet one-way delay: 37.042 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 11.52 Mbit/s
95th percentile per-packet one-way delay: 37.697 ms
Loss rate: 0.15%
```
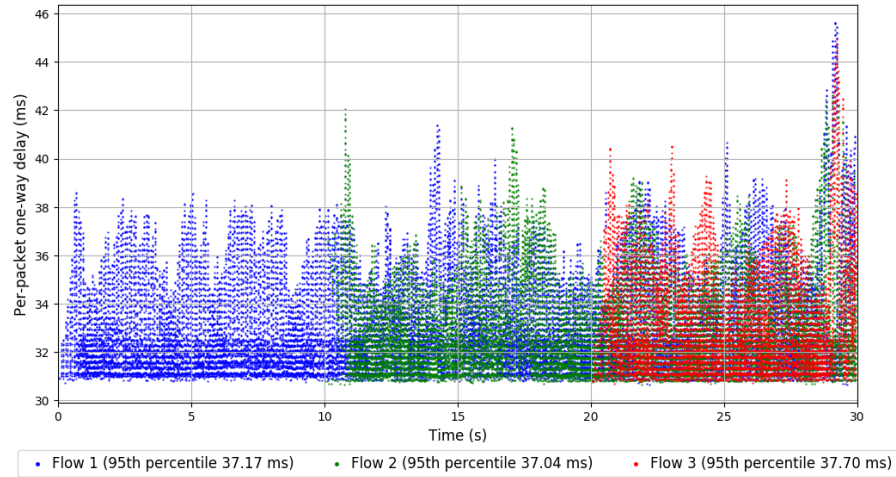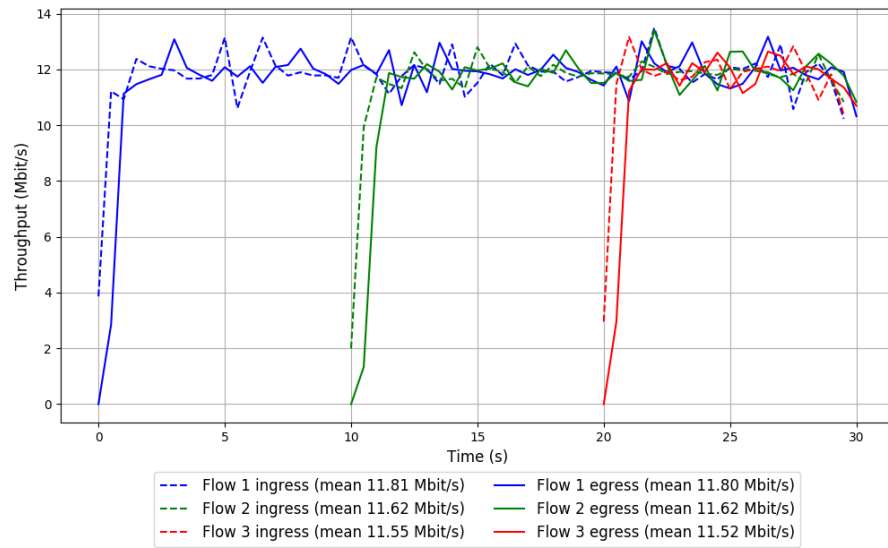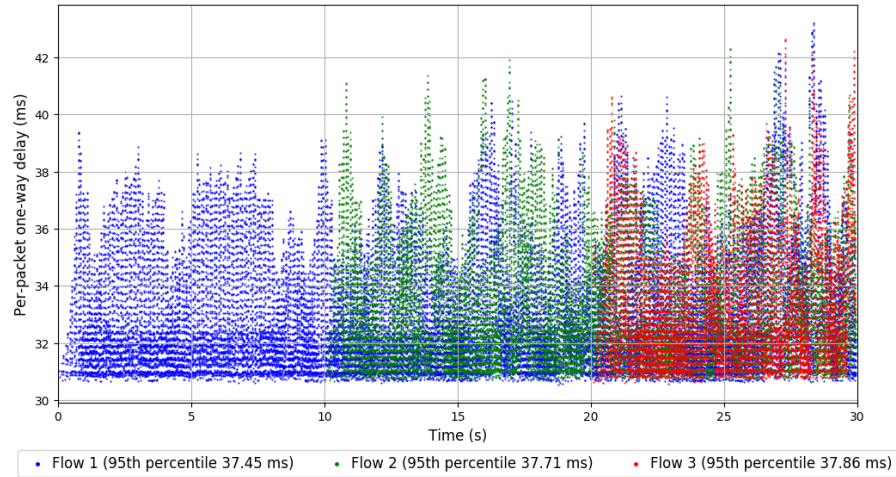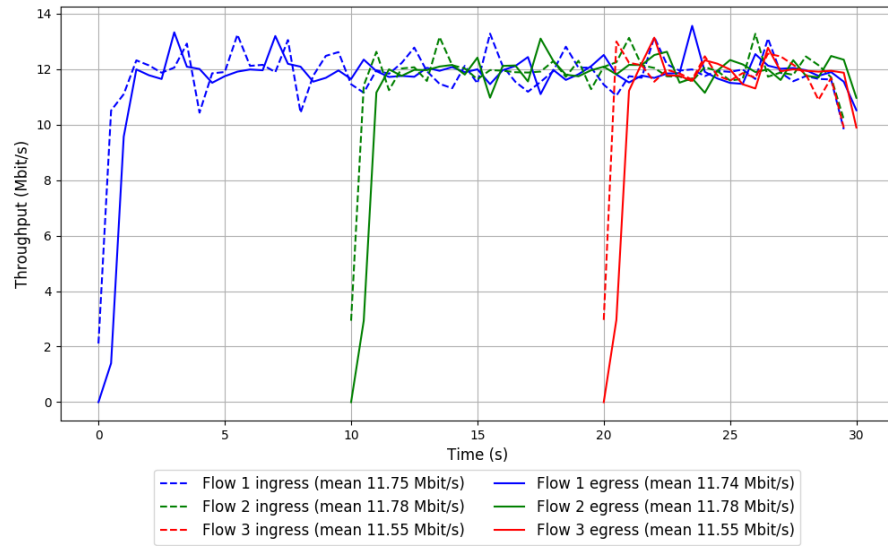
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-09-07 16:23:15
End at: 2018-09-07 16:23:45
Local clock offset: 0.165 ms
Remote clock offset: -0.135 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.39 Mbit/s
95th percentile per-packet one-way delay: 37.595 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 37.450 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 37.710 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.55 Mbit/s
95th percentile per-packet one-way delay: 37.864 ms
Loss rate: 0.00%
```
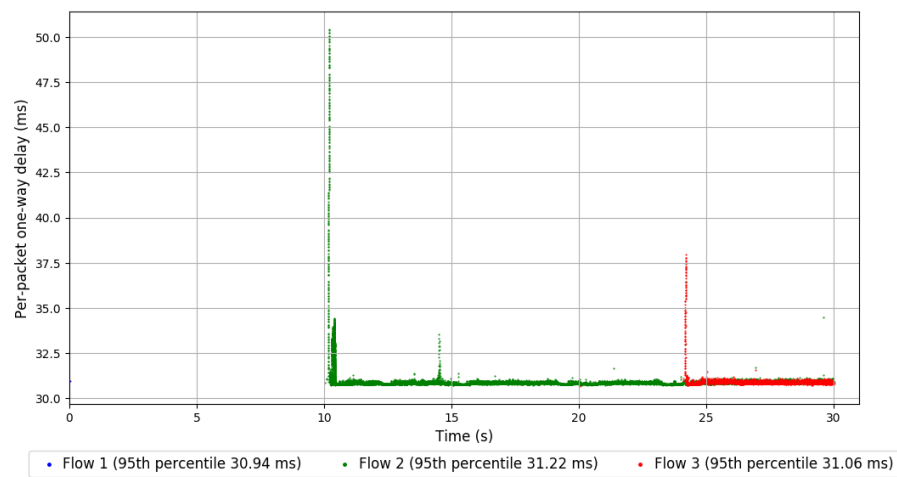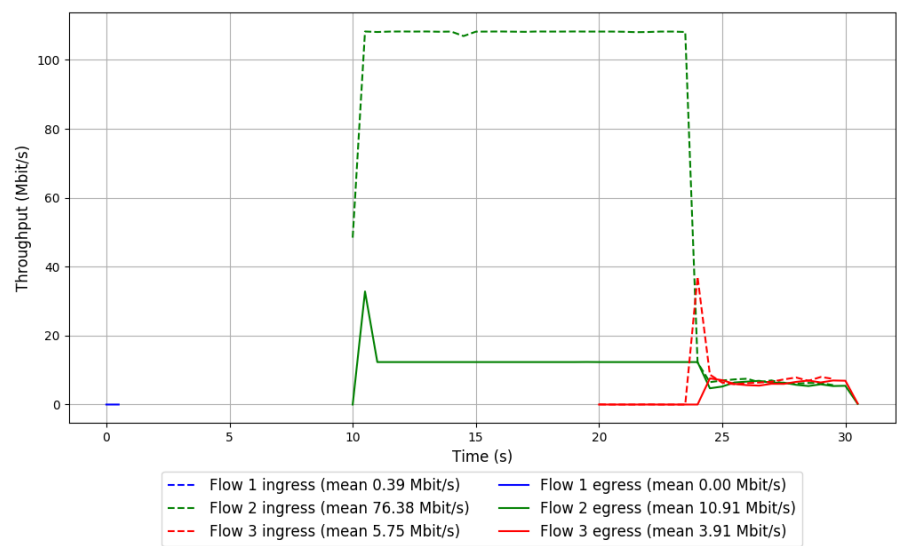
Run 5: Report of Sprout — Data Link

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

Start at: 2018-09-07 14:44:08
End at: 2018-09-07 14:44:38
Local clock offset: -3.438 ms
Remote clock offset: -0.664 ms


# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 31.148 ms
Loss rate: 83.77%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.940 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 10.91 Mbit/s
95th percentile per-packet one-way delay: 31.217 ms
Loss rate: 85.72%
-- Flow 3:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 31.061 ms
Loss rate: 32.08%
```
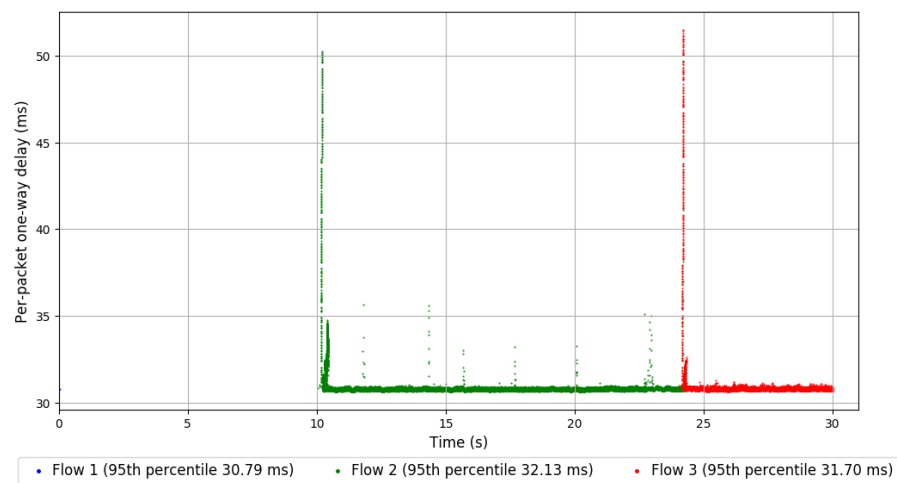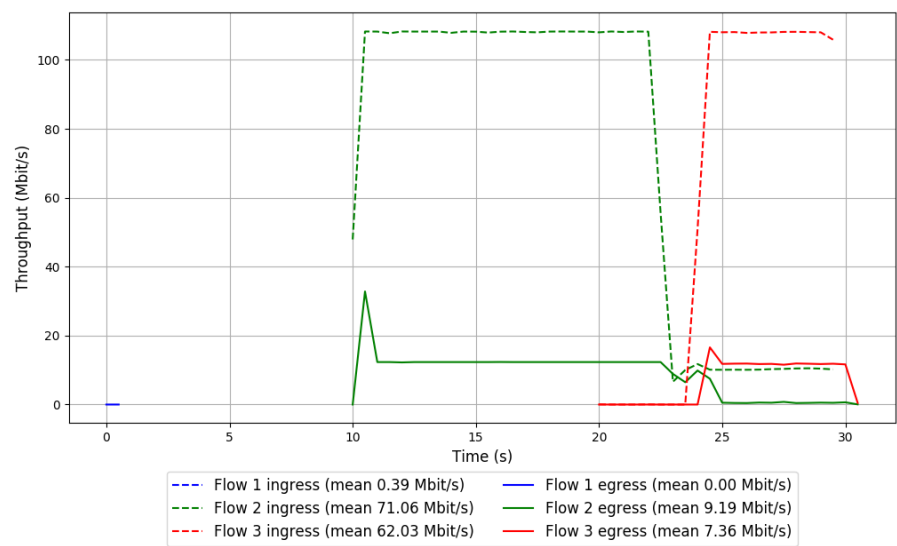
Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 0.39 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 76.38 Mbit/s)   Flow 2 egress (mean 10.91 Mbit/s)
Flow 3 ingress (mean 5.75 Mbit/s)   Flow 3 egress (mean 3.91 Mbit/s)

Flow 1 (95th percentile 30.94 ms)   Flow 2 (95th percentile 31.22 ms)   Flow 3 (95th percentile 31.06 ms)

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

Start at: 2018-09-07 15:08:39
End at: 2018-09-07 15:09:09
Local clock offset: 0.708 ms
Remote clock offset: -0.48 ms

# Below is generated by plot.py at 2018-09-07 16:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 32.035 ms
Loss rate: 87.40%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.792 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.19 Mbit/s
95th percentile per-packet one-way delay: 32.135 ms
Loss rate: 87.07%
-- Flow 3:
Average throughput: 7.36 Mbit/s
95th percentile per-packet one-way delay: 31.696 ms
Loss rate: 88.14%
```
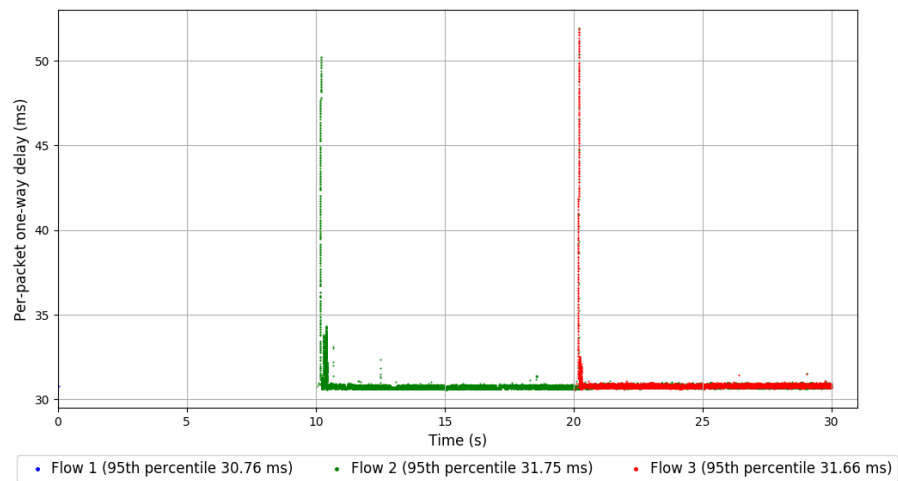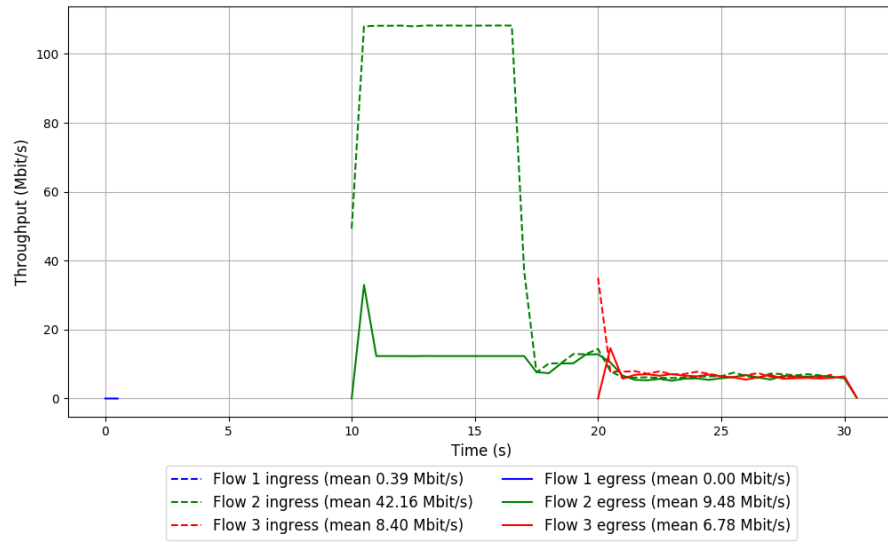
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 0.39 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 71.06 Mbit/s)   Flow 2 egress (mean 9.19 Mbit/s)
Flow 3 ingress (mean 62.03 Mbit/s)   Flow 3 egress (mean 7.36 Mbit/s)

Flow 1 (95th percentile 30.79 ms)   Flow 2 (95th percentile 32.13 ms)   Flow 3 (95th percentile 31.70 ms)

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

Start at: 2018-09-07 15:33:01
End at: 2018-09-07 15:33:31
Local clock offset: 0.585 ms
Remote clock offset: -0.433 ms


# Below is generated by plot.py at 2018-09-07 16:39:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 31.719 ms
Loss rate: 72.26%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.759 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.48 Mbit/s
95th percentile per-packet one-way delay: 31.747 ms
Loss rate: 77.53%
-- Flow 3:
Average throughput: 6.78 Mbit/s
95th percentile per-packet one-way delay: 31.659 ms
Loss rate: 19.31%
```

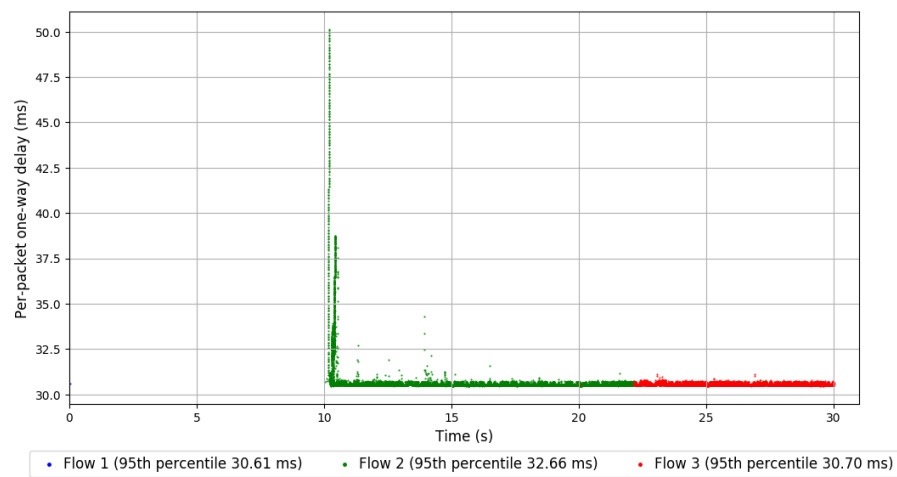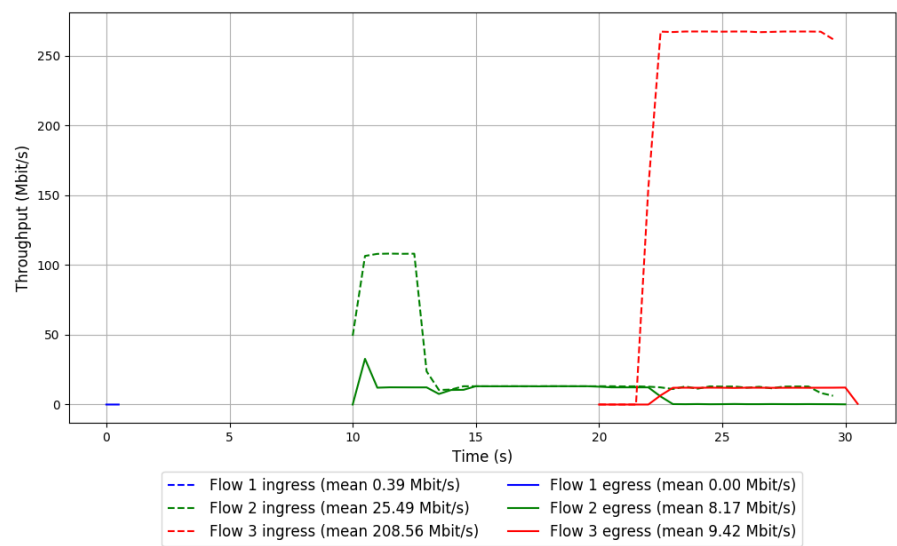Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2018-09-07 15:57:28
End at: 2018-09-07 15:57:58
Local clock offset: 0.319 ms
Remote clock offset: -0.466 ms

# Below is generated by plot.py at 2018-09-07 16:39:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.56 Mbit/s
95th percentile per-packet one-way delay: 30.824 ms
Loss rate: 90.08%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.613 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 32.656 ms
Loss rate: 68.02%
-- Flow 3:
Average throughput: 9.42 Mbit/s
95th percentile per-packet one-way delay: 30.697 ms
Loss rate: 95.49%
```
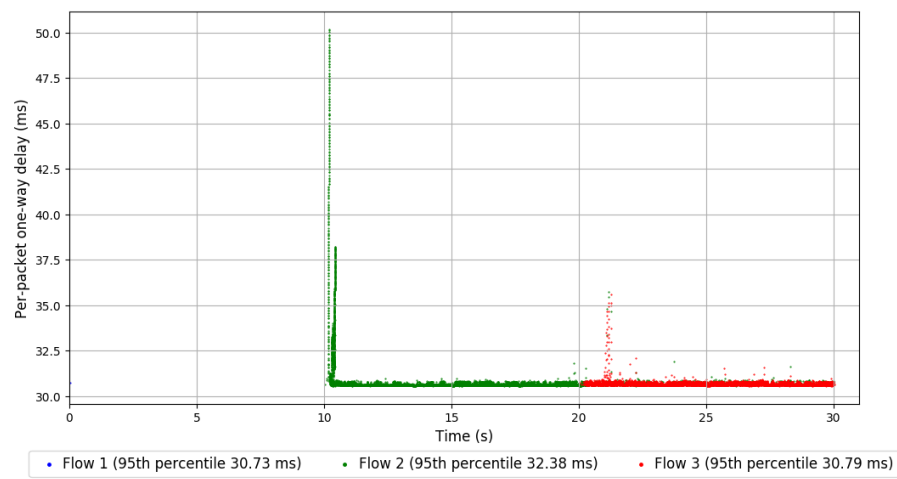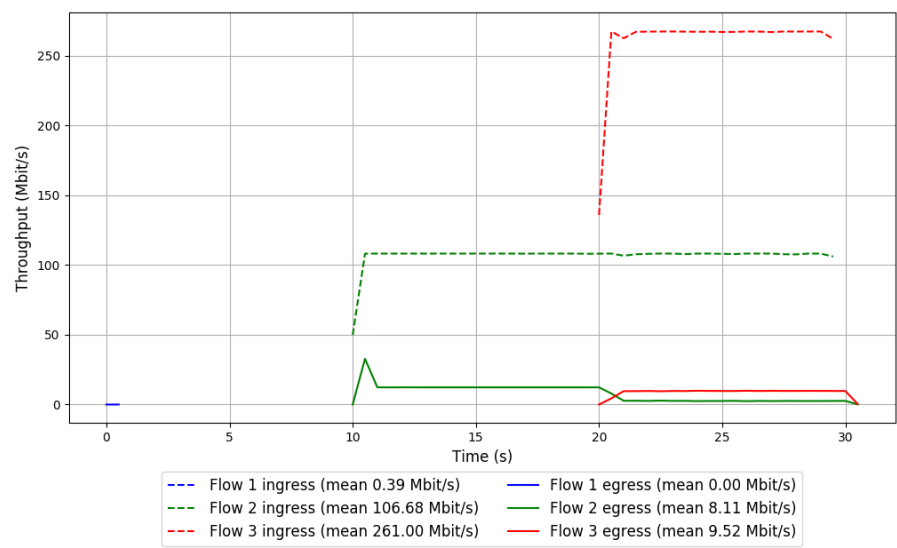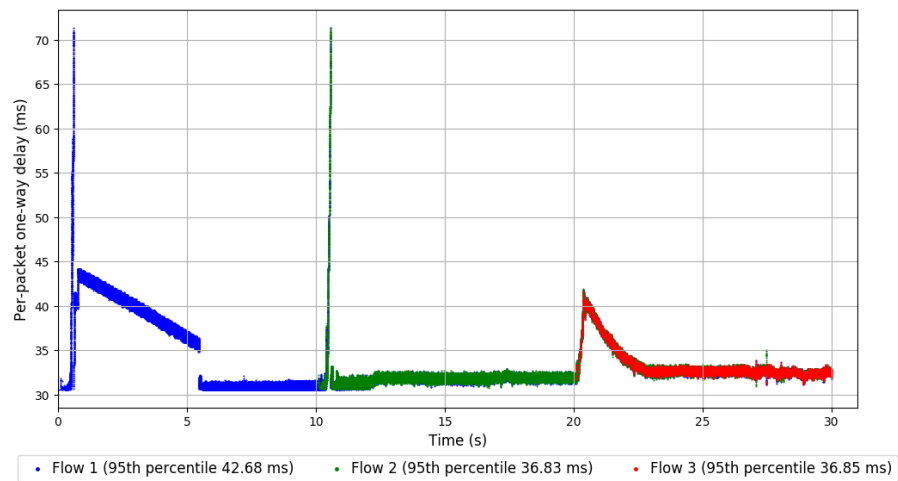
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 0.39 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 25.49 Mbit/s)   Flow 2 egress (mean 8.17 Mbit/s)
Flow 3 ingress (mean 208.56 Mbit/s) Flow 3 egress (mean 9.42 Mbit/s)

Flow 1 (95th percentile 30.61 ms)   Flow 2 (95th percentile 32.66 ms)   Flow 3 (95th percentile 30.70 ms)

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

Start at: 2018-09-07 16:21:54
End at: 2018-09-07 16:22:24
Local clock offset: 0.271 ms
Remote clock offset: -0.181 ms


# Below is generated by plot.py at 2018-09-07 16:39:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 30.891 ms
Loss rate: 94.57%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.725 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 8.11 Mbit/s
95th percentile per-packet one-way delay: 32.376 ms
Loss rate: 92.40%
-- Flow 3:
Average throughput: 9.52 Mbit/s
95th percentile per-packet one-way delay: 30.791 ms
Loss rate: 96.35%
```

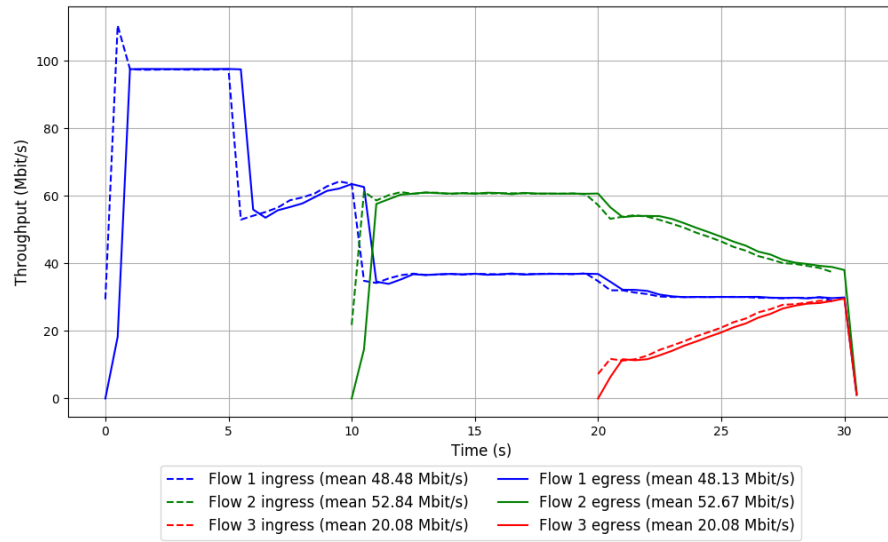Run 5: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2018-09-07 14:42:45
End at: 2018-09-07 14:43:15
Local clock offset: -3.311 ms
Remote clock offset: -0.743 ms


# Below is generated by plot.py at 2018-09-07 16:40:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.90 Mbit/s
95th percentile per-packet one-way delay: 41.707 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 48.13 Mbit/s
95th percentile per-packet one-way delay: 42.680 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 52.67 Mbit/s
95th percentile per-packet one-way delay: 36.832 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 20.08 Mbit/s
95th percentile per-packet one-way delay: 36.846 ms
Loss rate: 0.00%
```

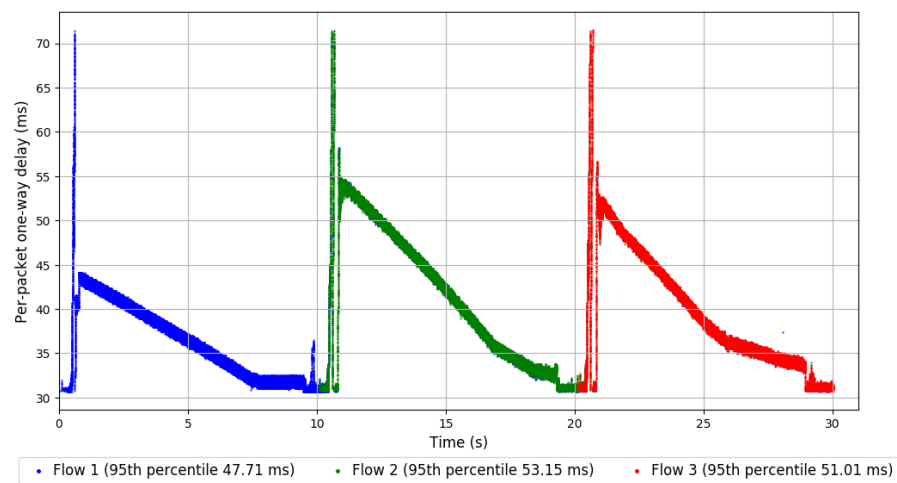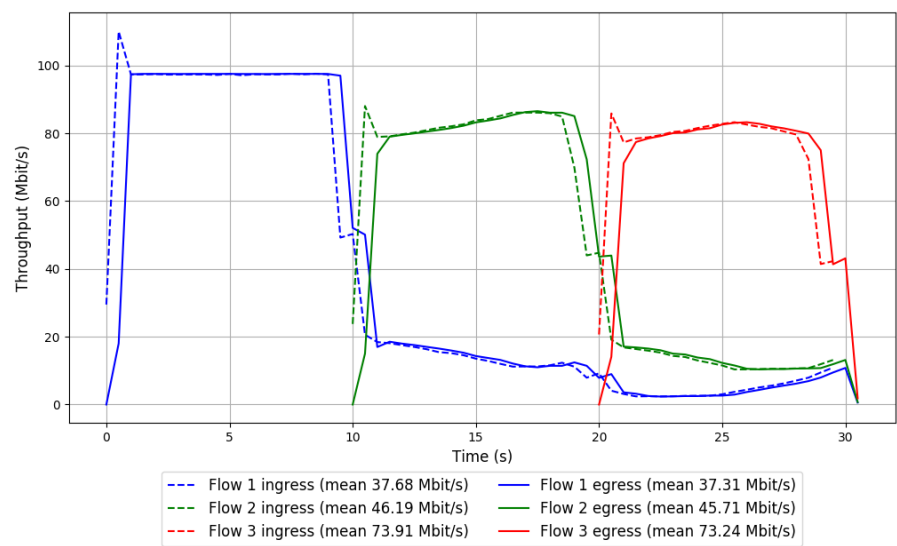Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-09-07 15:07:17
End at: 2018-09-07 15:07:47
Local clock offset: 0.627 ms
Remote clock offset: -0.428 ms


# Below is generated by plot.py at 2018-09-07 16:40:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.11 Mbit/s
95th percentile per-packet one-way delay: 51.708 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 37.31 Mbit/s
95th percentile per-packet one-way delay: 47.706 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 45.71 Mbit/s
95th percentile per-packet one-way delay: 53.148 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 73.24 Mbit/s
95th percentile per-packet one-way delay: 51.011 ms
Loss rate: 0.90%
```
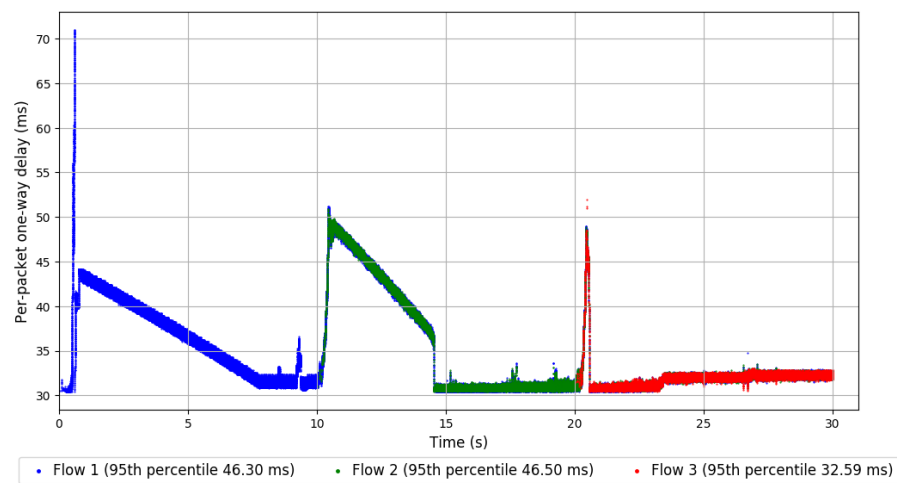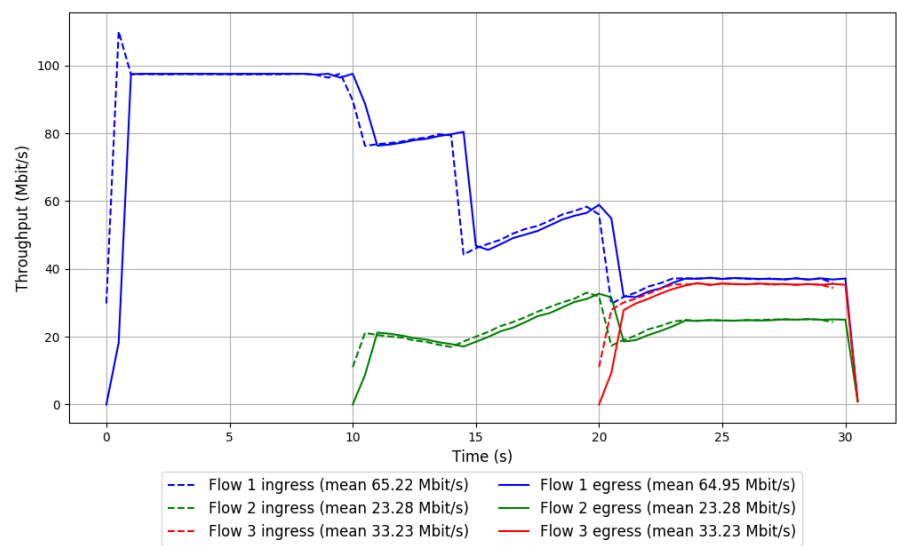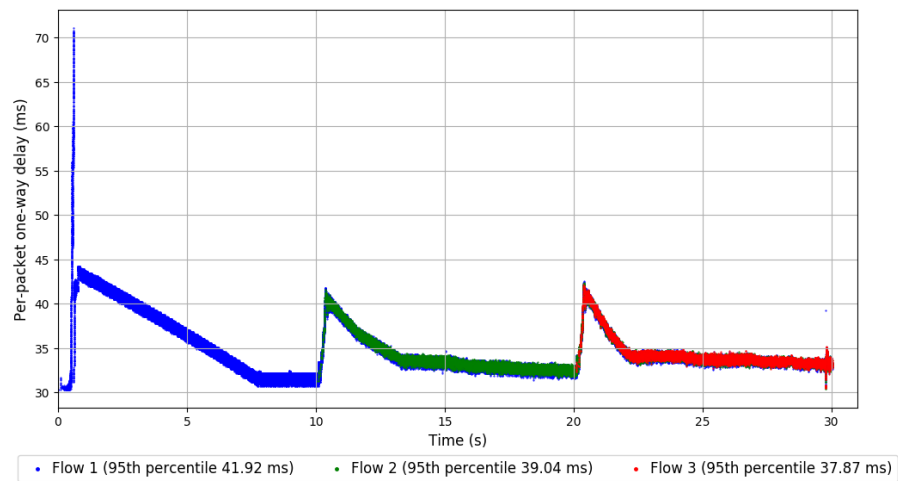
Run 2: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 37.68 Mbit/s) --- Flow 1 egress (mean 37.31 Mbit/s)
Flow 2 ingress (mean 46.19 Mbit/s) --- Flow 2 egress (mean 45.71 Mbit/s)
Flow 3 ingress (mean 73.91 Mbit/s) --- Flow 3 egress (mean 73.24 Mbit/s)

Flow 1 (95th percentile 47.71 ms)   Flow 2 (95th percentile 53.15 ms)   Flow 3 (95th percentile 51.01 ms)

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```
Run 3: Statistics of TCP Vegas

Start at: 2018-09-07 15:31:39
End at: 2018-09-07 15:32:09
Local clock offset: 0.495 ms
Remote clock offset: -0.636 ms


# Below is generated by plot.py at 2018-09-07 16:40:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.51 Mbit/s
95th percentile per-packet one-way delay: 45.906 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 64.95 Mbit/s
95th percentile per-packet one-way delay: 46.300 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 23.28 Mbit/s
95th percentile per-packet one-way delay: 46.501 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.23 Mbit/s
95th percentile per-packet one-way delay: 32.587 ms
Loss rate: 0.01%
```

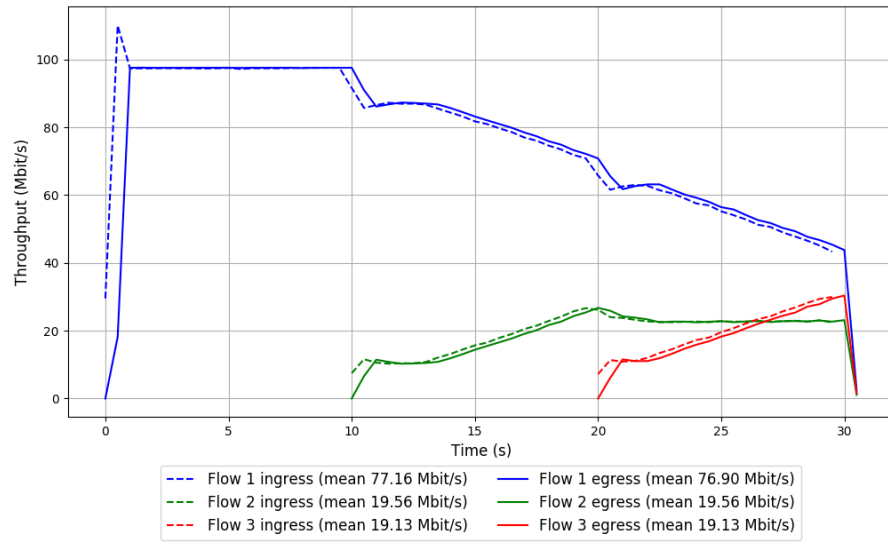Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2018-09-07 15:56:05
End at: 2018-09-07 15:56:35
Local clock offset: 0.424 ms
Remote clock offset: -0.509 ms


# Below is generated by plot.py at 2018-09-07 16:40:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 41.499 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 76.90 Mbit/s
95th percentile per-packet one-way delay: 41.918 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 19.56 Mbit/s
95th percentile per-packet one-way delay: 39.043 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.13 Mbit/s
95th percentile per-packet one-way delay: 37.867 ms
Loss rate: 0.00%
```

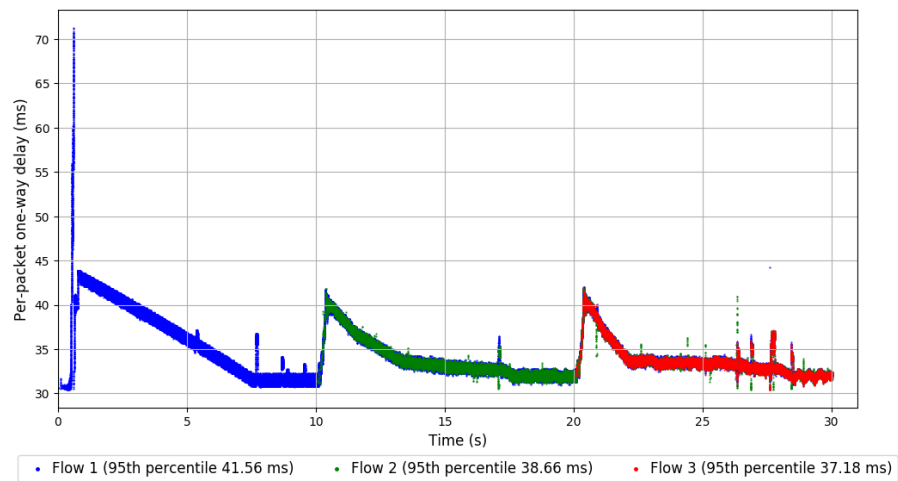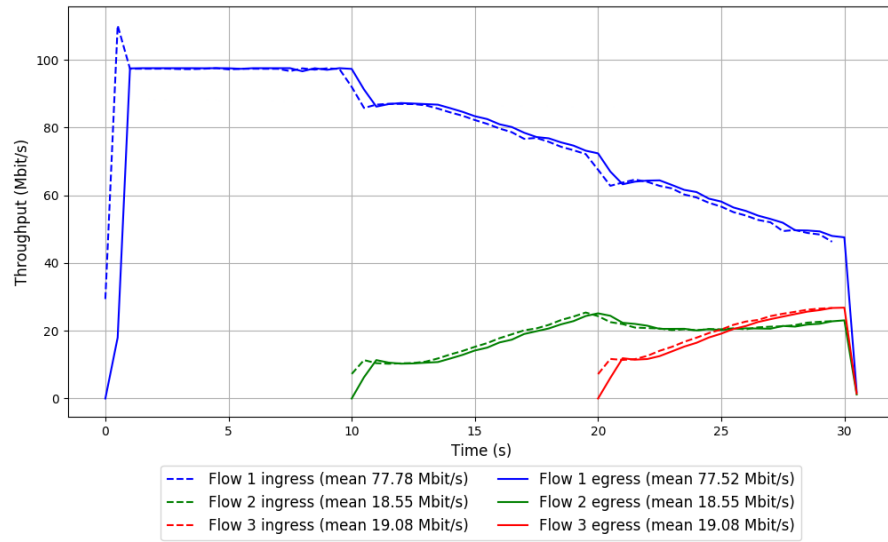Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-09-07 16:20:32
End at: 2018-09-07 16:21:02
Local clock offset: 0.285 ms
Remote clock offset: -0.282 ms


# Below is generated by plot.py at 2018-09-07 16:40:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.22 Mbit/s
95th percentile per-packet one-way delay: 41.100 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 77.52 Mbit/s
95th percentile per-packet one-way delay: 41.561 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 18.55 Mbit/s
95th percentile per-packet one-way delay: 38.663 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.08 Mbit/s
95th percentile per-packet one-way delay: 37.178 ms
Loss rate: 0.00%
```

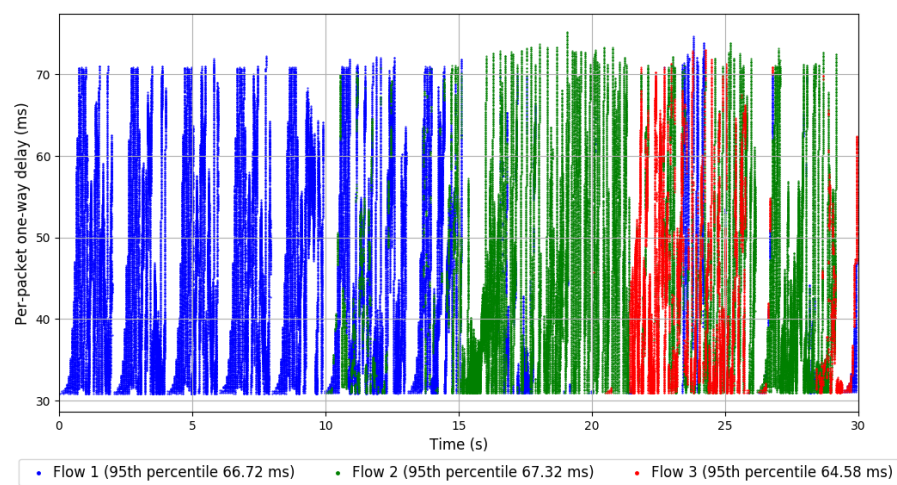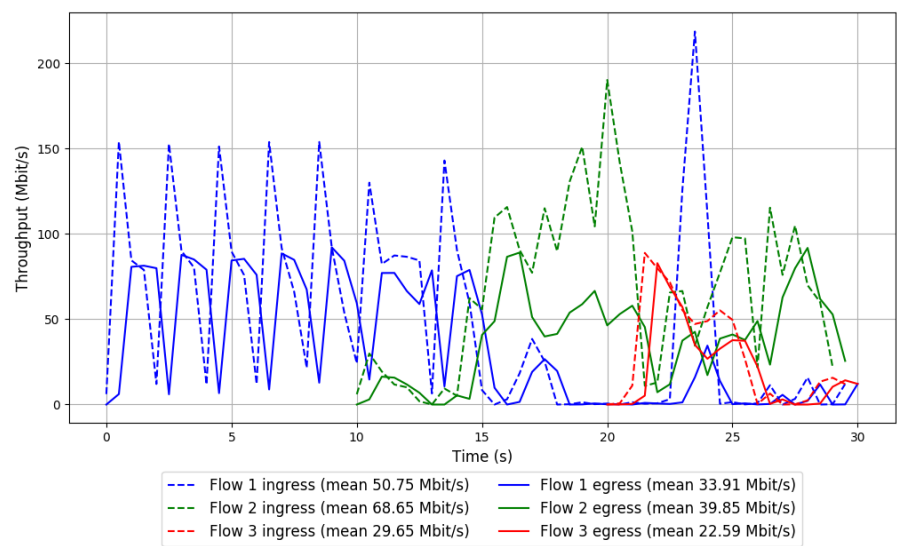Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-09-07 14:46:47
End at: 2018-09-07 14:47:17
Local clock offset: -2.804 ms
Remote clock offset: -0.735 ms


# Below is generated by plot.py at 2018-09-07 16:40:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.81 Mbit/s
95th percentile per-packet one-way delay: 66.745 ms
Loss rate: 35.92%
-- Flow 1:
Average throughput: 33.91 Mbit/s
95th percentile per-packet one-way delay: 66.722 ms
Loss rate: 33.15%
-- Flow 2:
Average throughput: 39.85 Mbit/s
95th percentile per-packet one-way delay: 67.324 ms
Loss rate: 41.85%
-- Flow 3:
Average throughput: 22.59 Mbit/s
95th percentile per-packet one-way delay: 64.576 ms
Loss rate: 23.67%
```

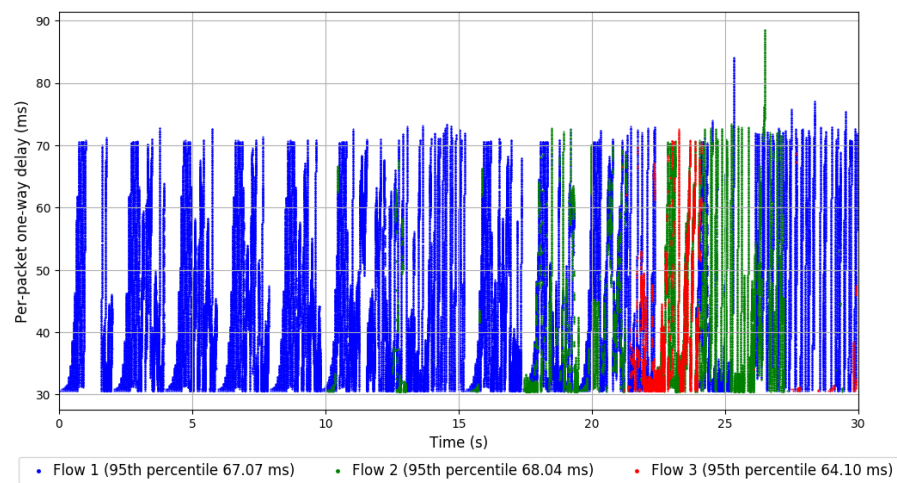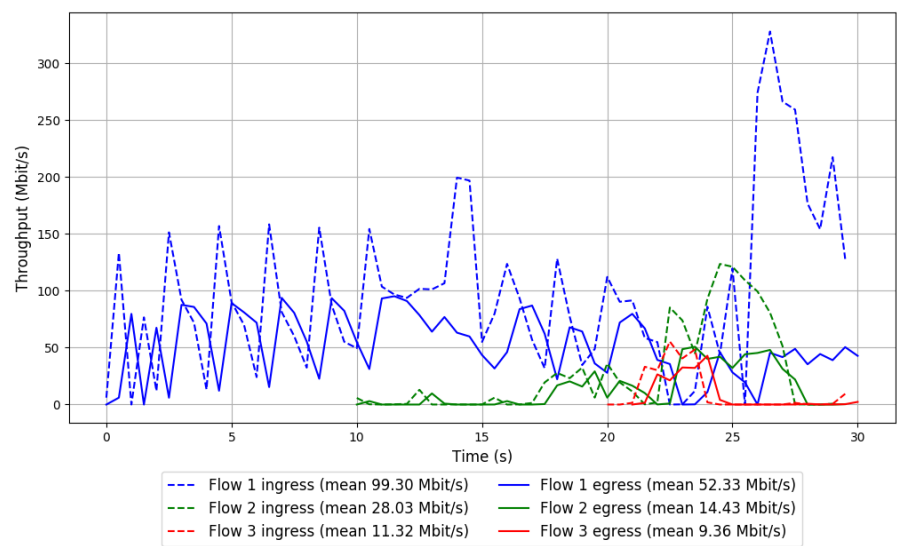Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-09-07 15:11:17
End at: 2018-09-07 15:11:47
Local clock offset: 0.774 ms
Remote clock offset: -0.656 ms

# Below is generated by plot.py at 2018-09-07 16:40:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.42 Mbit/s
95th percentile per-packet one-way delay: 67.122 ms
Loss rate: 46.83%
-- Flow 1:
Average throughput: 52.33 Mbit/s
95th percentile per-packet one-way delay: 67.069 ms
Loss rate: 47.27%
-- Flow 2:
Average throughput: 14.43 Mbit/s
95th percentile per-packet one-way delay: 68.037 ms
Loss rate: 48.69%
-- Flow 3:
Average throughput: 9.36 Mbit/s
95th percentile per-packet one-way delay: 64.096 ms
Loss rate: 26.22%
```
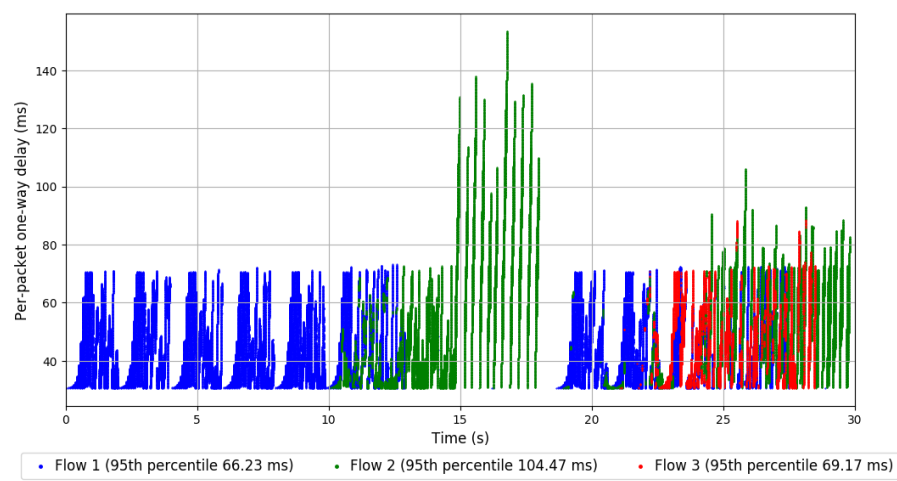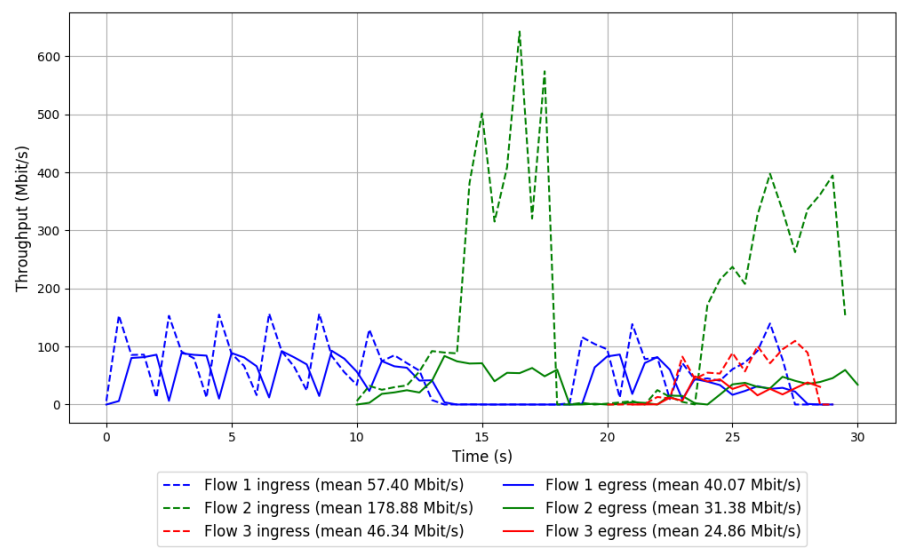
Run 2: Report of Verus — Data Link

- - - Flow 1 ingress (mean 99.30 Mbit/s) —— Flow 1 egress (mean 52.33 Mbit/s)
- - - Flow 2 ingress (mean 28.03 Mbit/s) —— Flow 2 egress (mean 14.43 Mbit/s)
- - - Flow 3 ingress (mean 11.32 Mbit/s) —— Flow 3 egress (mean 9.36 Mbit/s)

· Flow 1 (95th percentile 67.07 ms)   · Flow 2 (95th percentile 68.04 ms)   · Flow 3 (95th percentile 64.10 ms)

```
Run 3: Statistics of Verus

Start at: 2018-09-07 15:35:39
End at: 2018-09-07 15:36:09
Local clock offset: 0.615 ms
Remote clock offset: -0.445 ms


# Below is generated by plot.py at 2018-09-07 16:41:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.97 Mbit/s
95th percentile per-packet one-way delay: 78.946 ms
Loss rate: 65.24%
-- Flow 1:
Average throughput: 40.07 Mbit/s
95th percentile per-packet one-way delay: 66.231 ms
Loss rate: 31.33%
-- Flow 2:
Average throughput: 31.38 Mbit/s
95th percentile per-packet one-way delay: 104.466 ms
Loss rate: 82.41%
-- Flow 3:
Average throughput: 24.86 Mbit/s
95th percentile per-packet one-way delay: 69.165 ms
Loss rate: 57.71%
```
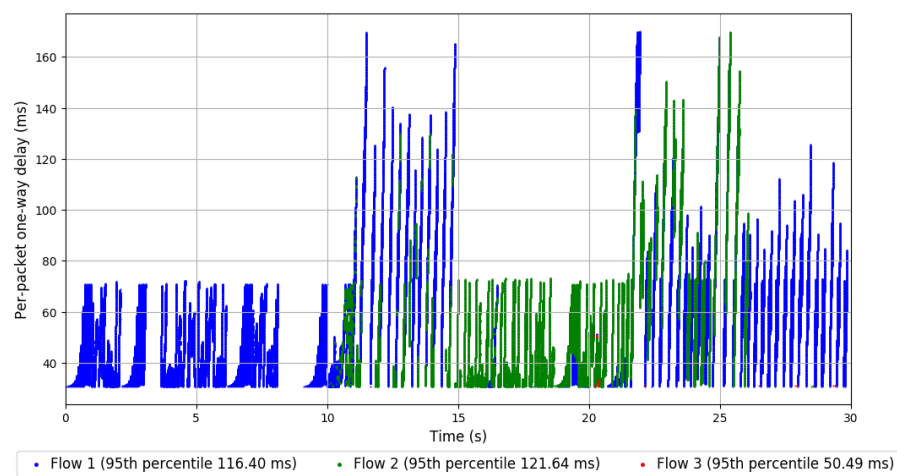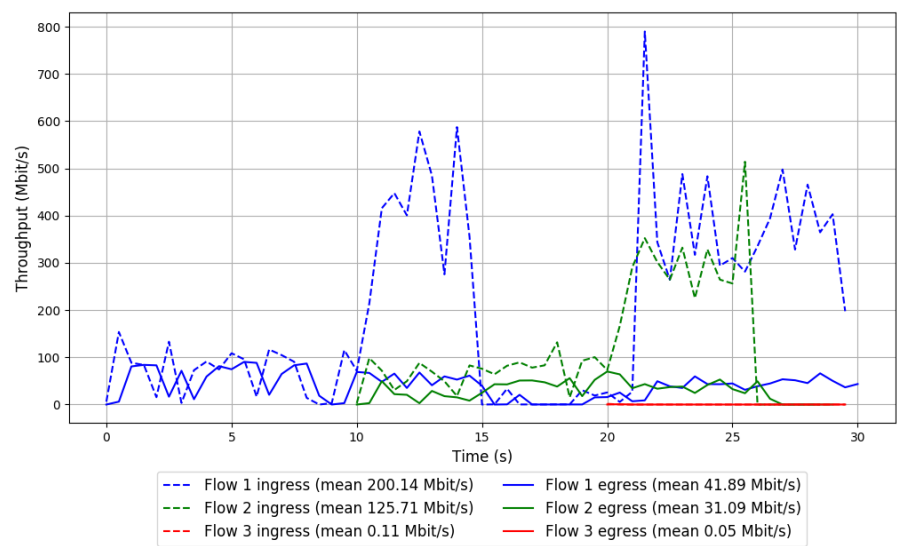
Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 57.40 Mbit/s)   Flow 1 egress (mean 40.07 Mbit/s)
Flow 2 ingress (mean 178.88 Mbit/s)   Flow 2 egress (mean 31.38 Mbit/s)
Flow 3 ingress (mean 46.34 Mbit/s)   Flow 3 egress (mean 24.86 Mbit/s)

Flow 1 (95th percentile 66.23 ms)   Flow 2 (95th percentile 104.47 ms)   Flow 3 (95th percentile 69.17 ms)

```
Run 4: Statistics of Verus

Start at: 2018-09-07 16:00:07
End at: 2018-09-07 16:00:37
Local clock offset: 0.28 ms
Remote clock offset: -0.133 ms


# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.16 Mbit/s
95th percentile per-packet one-way delay: 118.410 ms
Loss rate: 78.11%
-- Flow 1:
Average throughput: 41.89 Mbit/s
95th percentile per-packet one-way delay: 116.404 ms
Loss rate: 79.04%
-- Flow 2:
Average throughput: 31.09 Mbit/s
95th percentile per-packet one-way delay: 121.638 ms
Loss rate: 75.78%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.491 ms
Loss rate: 58.06%
```

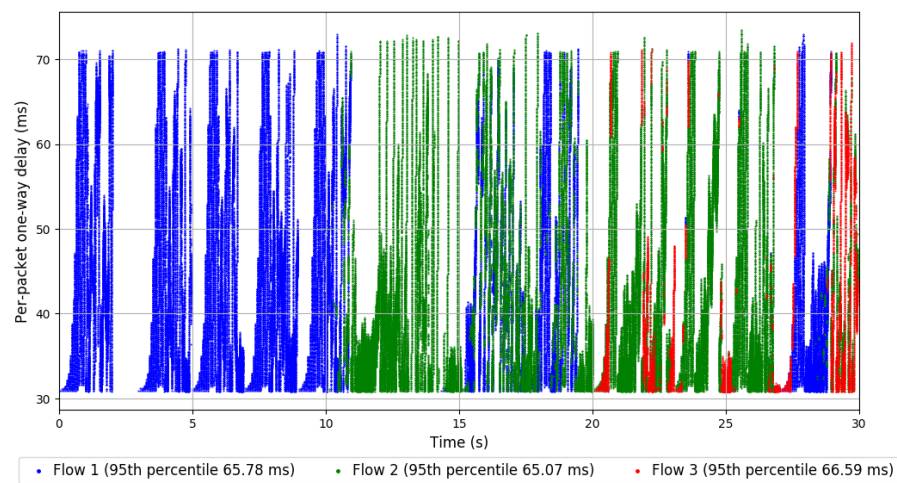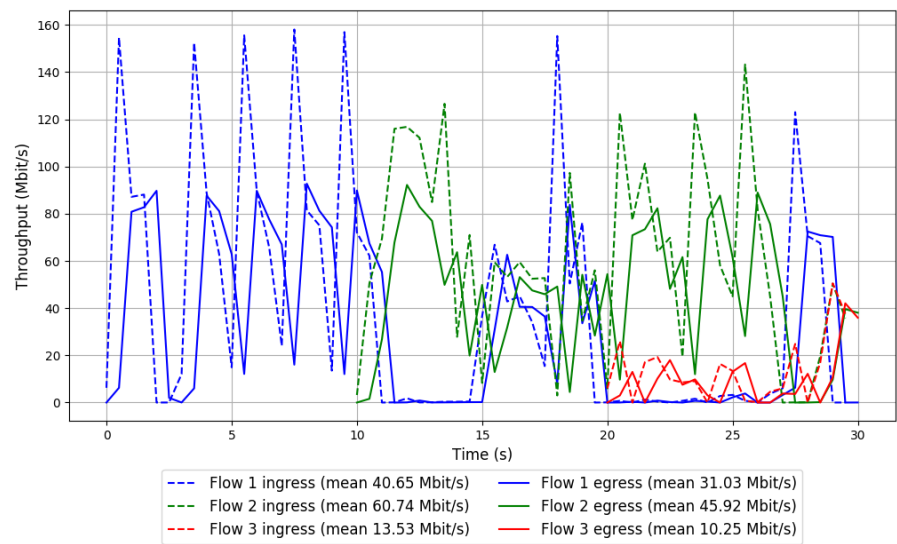## Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-09-07 16:24:34
End at: 2018-09-07 16:25:04
Local clock offset: 0.128 ms
Remote clock offset: -0.015 ms


# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.90 Mbit/s
95th percentile per-packet one-way delay: 65.538 ms
Loss rate: 24.02%
-- Flow 1:
Average throughput: 31.03 Mbit/s
95th percentile per-packet one-way delay: 65.775 ms
Loss rate: 23.63%
-- Flow 2:
Average throughput: 45.92 Mbit/s
95th percentile per-packet one-way delay: 65.073 ms
Loss rate: 24.40%
-- Flow 3:
Average throughput: 10.25 Mbit/s
95th percentile per-packet one-way delay: 66.588 ms
Loss rate: 24.12%
```

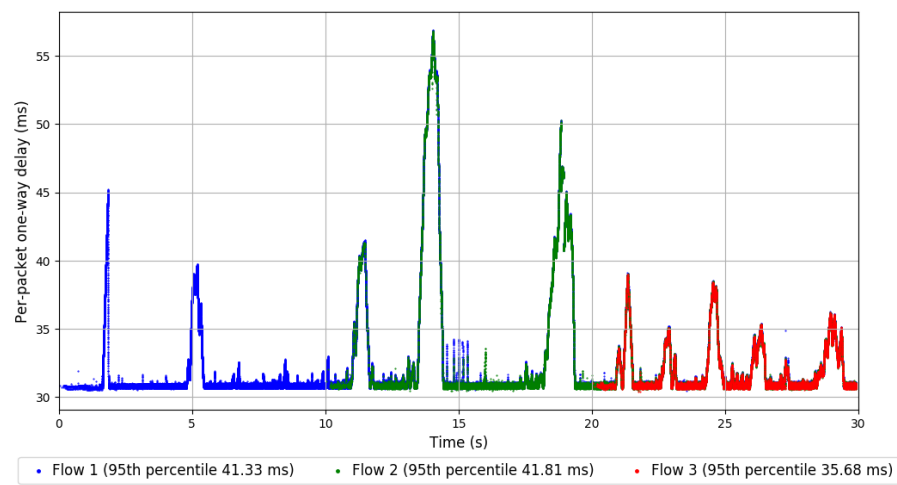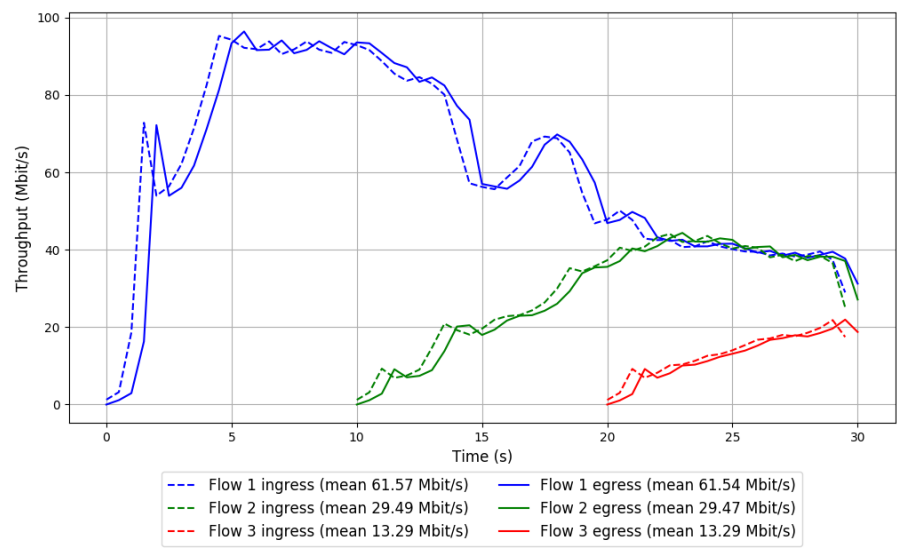Run 5: Report of Verus — Data Link

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```
Run 1: Statistics of PCC-Vivace

Start at: 2018-09-07 14:37:15
End at: 2018-09-07 14:37:45
Local clock offset: -3.252 ms
Remote clock offset: -0.721 ms


# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.53 Mbit/s
95th percentile per-packet one-way delay: 41.211 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 61.54 Mbit/s
95th percentile per-packet one-way delay: 41.329 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 29.47 Mbit/s
95th percentile per-packet one-way delay: 41.812 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 13.29 Mbit/s
95th percentile per-packet one-way delay: 35.683 ms
Loss rate: 0.00%
```

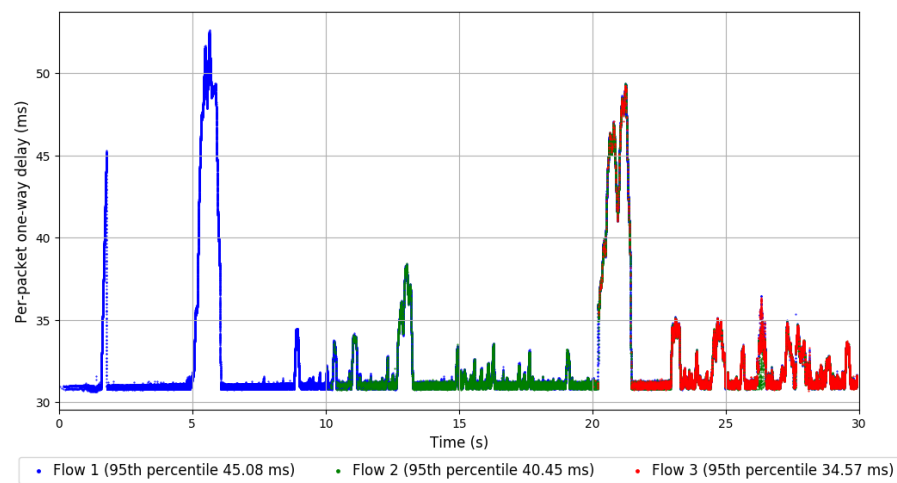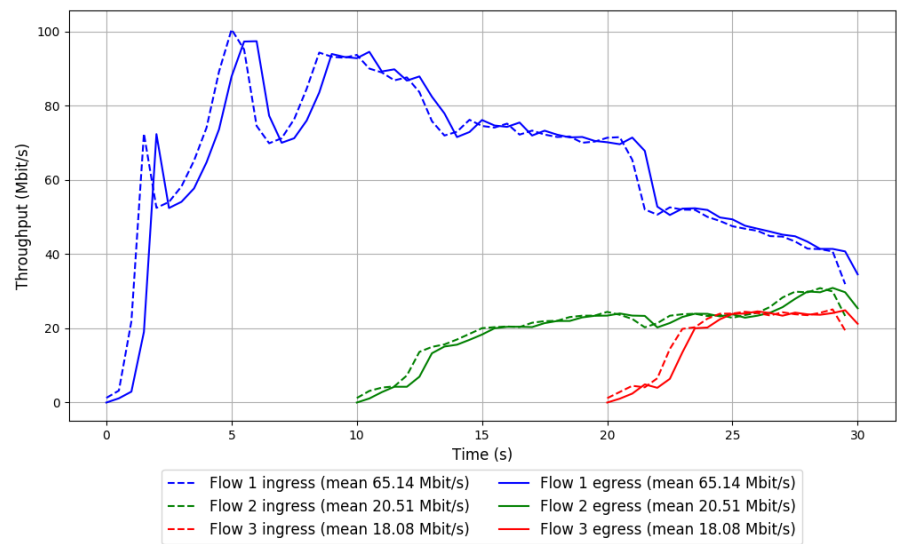Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-09-07 15:01:50
End at: 2018-09-07 15:02:20
Local clock offset: 0.112 ms
Remote clock offset: -0.571 ms


# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.74 Mbit/s
95th percentile per-packet one-way delay: 43.880 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.14 Mbit/s
95th percentile per-packet one-way delay: 45.076 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.51 Mbit/s
95th percentile per-packet one-way delay: 40.446 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.08 Mbit/s
95th percentile per-packet one-way delay: 34.566 ms
Loss rate: 0.00%
```

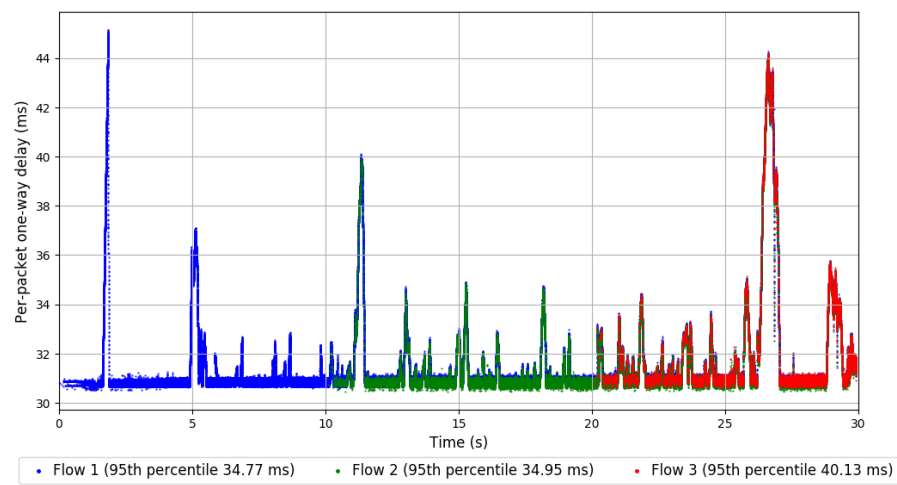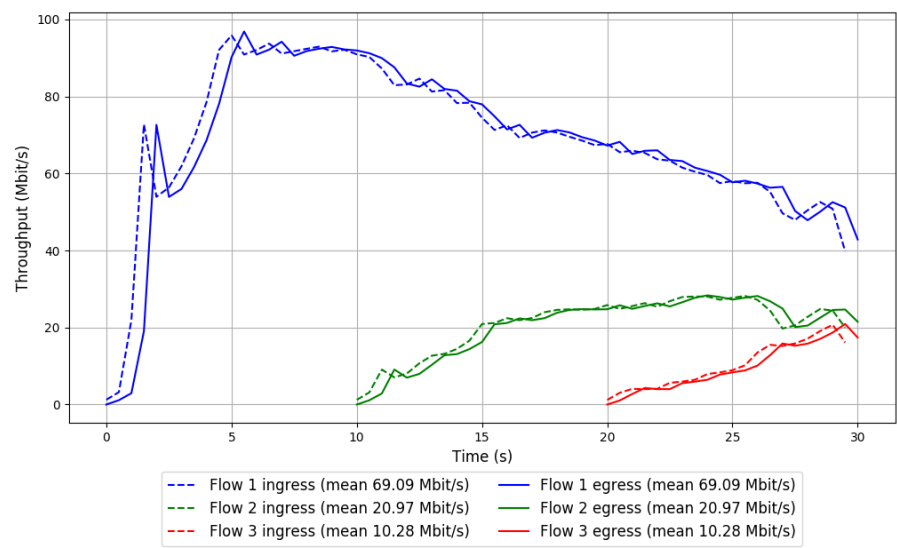Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2018-09-07 15:26:11
End at: 2018-09-07 15:26:41
Local clock offset: 0.598 ms
Remote clock offset: -0.418 ms


# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.43 Mbit/s
95th percentile per-packet one-way delay: 35.011 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.09 Mbit/s
95th percentile per-packet one-way delay: 34.774 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.97 Mbit/s
95th percentile per-packet one-way delay: 34.945 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.28 Mbit/s
95th percentile per-packet one-way delay: 40.133 ms
Loss rate: 0.00%
```
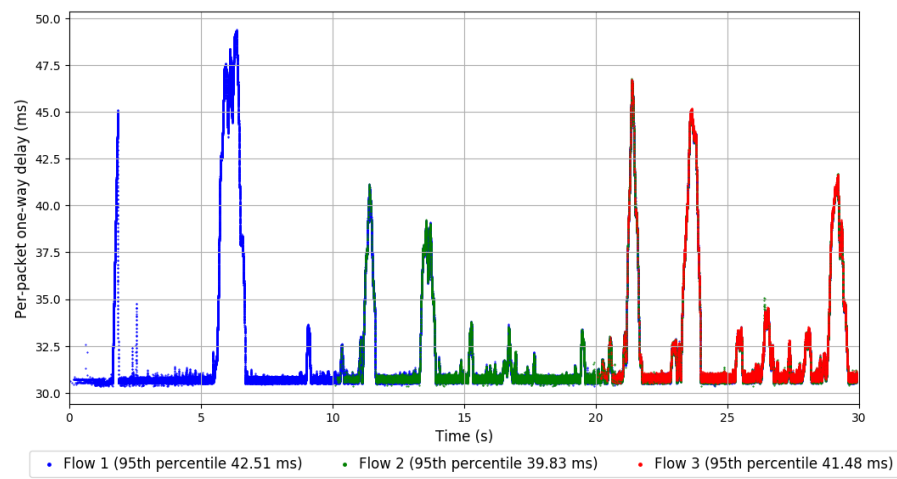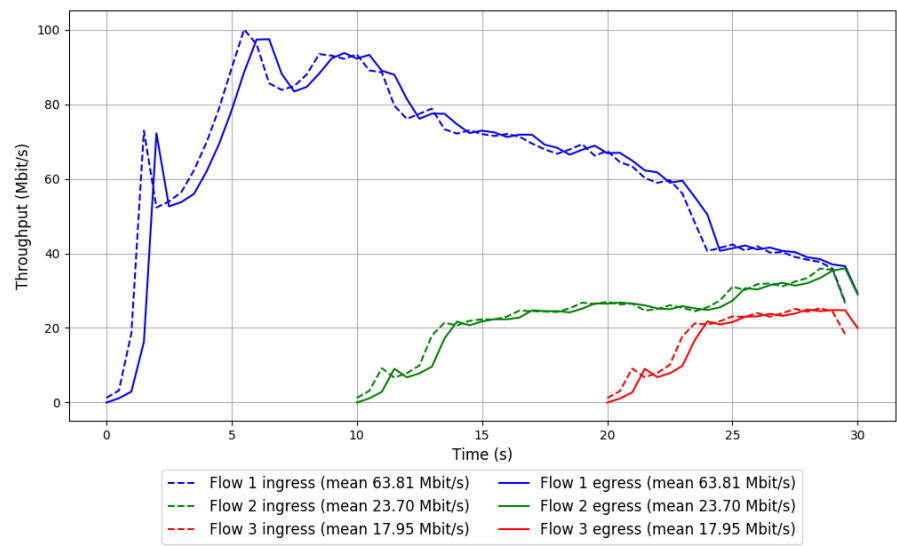
Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 69.09 Mbit/s) — Flow 1 egress (mean 69.09 Mbit/s)
Flow 2 ingress (mean 20.97 Mbit/s) — Flow 2 egress (mean 20.97 Mbit/s)
Flow 3 ingress (mean 10.28 Mbit/s) — Flow 3 egress (mean 10.28 Mbit/s)

Flow 1 (95th percentile 34.77 ms)   Flow 2 (95th percentile 34.95 ms)   Flow 3 (95th percentile 40.13 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2018-09-07 15:50:37
End at: 2018-09-07 15:51:07
Local clock offset: 0.534 ms
Remote clock offset: -0.365 ms


# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.50 Mbit/s
95th percentile per-packet one-way delay: 41.359 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.81 Mbit/s
95th percentile per-packet one-way delay: 42.511 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.70 Mbit/s
95th percentile per-packet one-way delay: 39.831 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.95 Mbit/s
95th percentile per-packet one-way delay: 41.476 ms
Loss rate: 0.00%
```

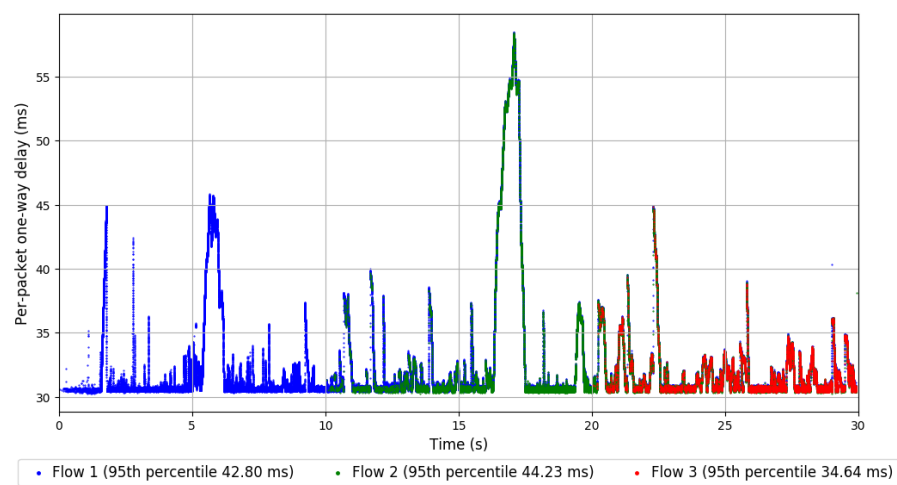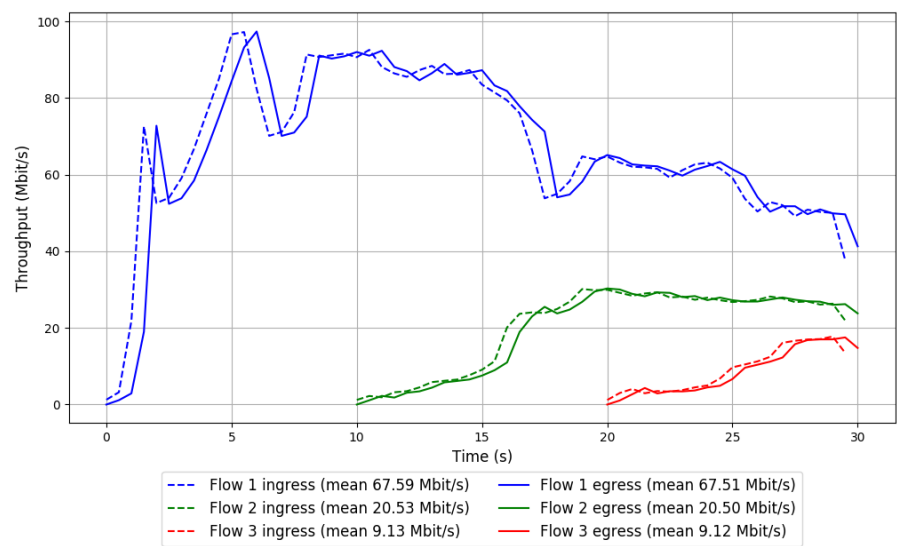## Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2018-09-07 16:15:02
End at: 2018-09-07 16:15:32
Local clock offset: 0.412 ms
Remote clock offset: -0.339 ms


# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.15 Mbit/s
95th percentile per-packet one-way delay: 42.641 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 67.51 Mbit/s
95th percentile per-packet one-way delay: 42.805 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 20.50 Mbit/s
95th percentile per-packet one-way delay: 44.231 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 9.12 Mbit/s
95th percentile per-packet one-way delay: 34.638 ms
Loss rate: 0.07%
```

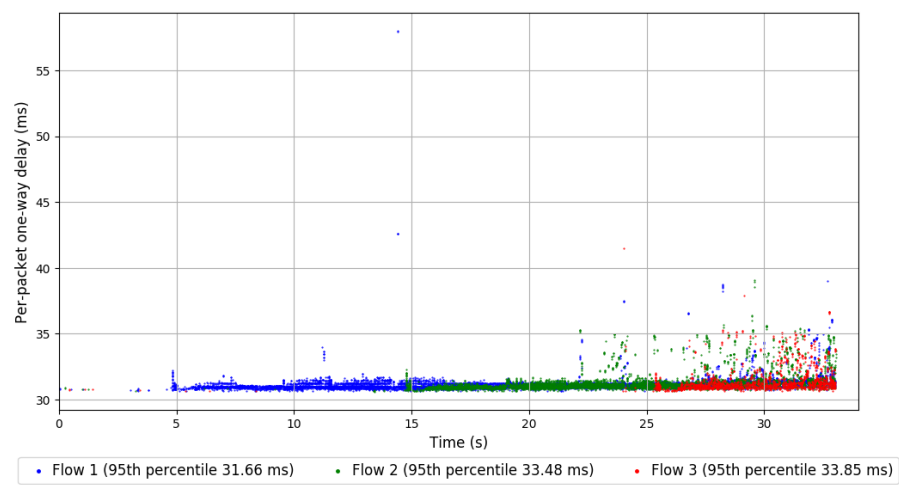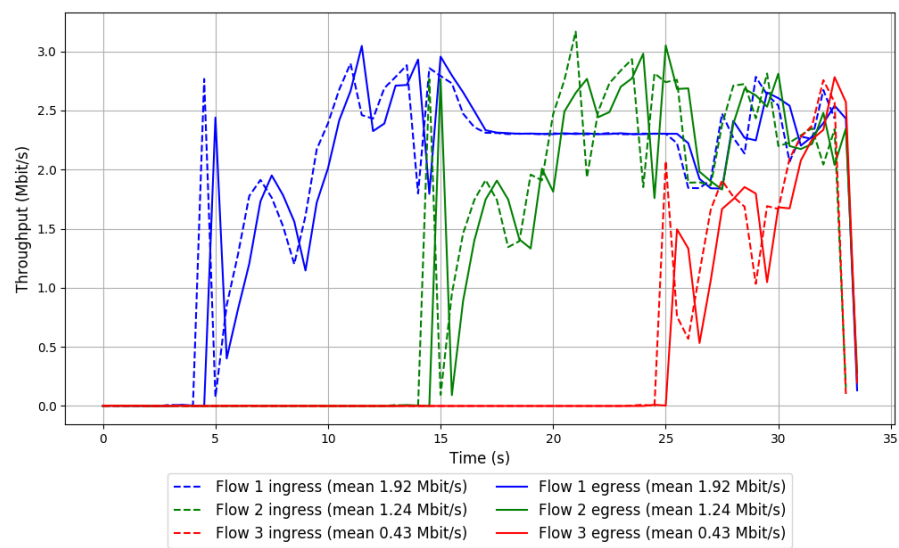Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-09-07 14:31:44
End at: 2018-09-07 14:32:14
Local clock offset: -3.315 ms
Remote clock offset: -0.738 ms

# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 32.738 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 31.659 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 33.484 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.855 ms
Loss rate: 0.00%
```

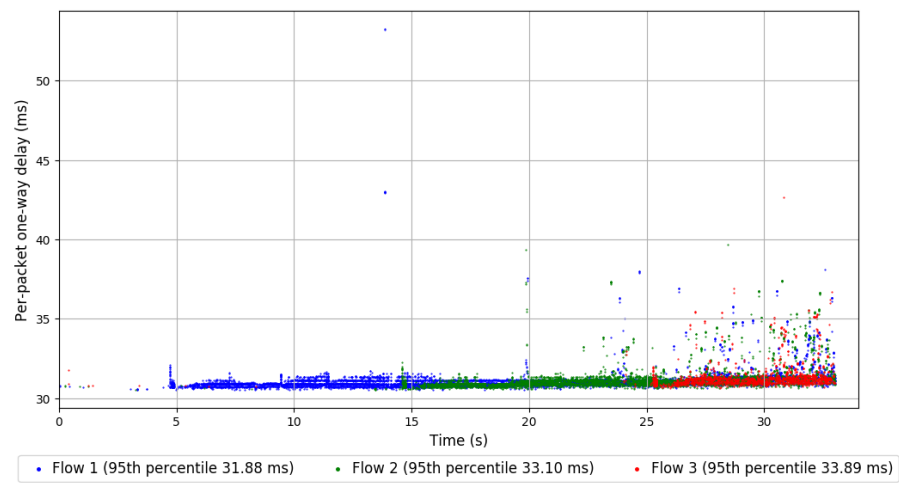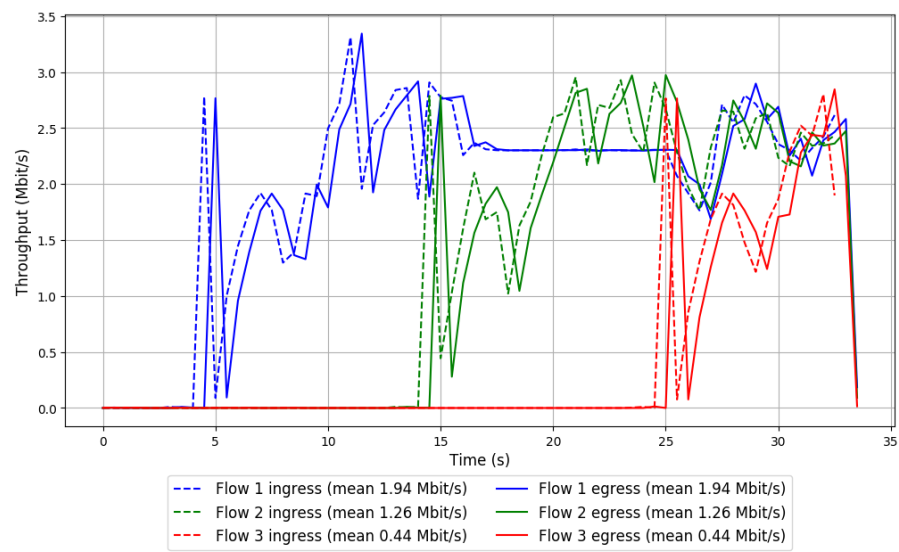Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-09-07 14:56:27
End at: 2018-09-07 14:56:57
Local clock offset: -0.452 ms
Remote clock offset: -0.621 ms


# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 32.449 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 31.879 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 33.097 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 33.889 ms
Loss rate: 0.00%
```

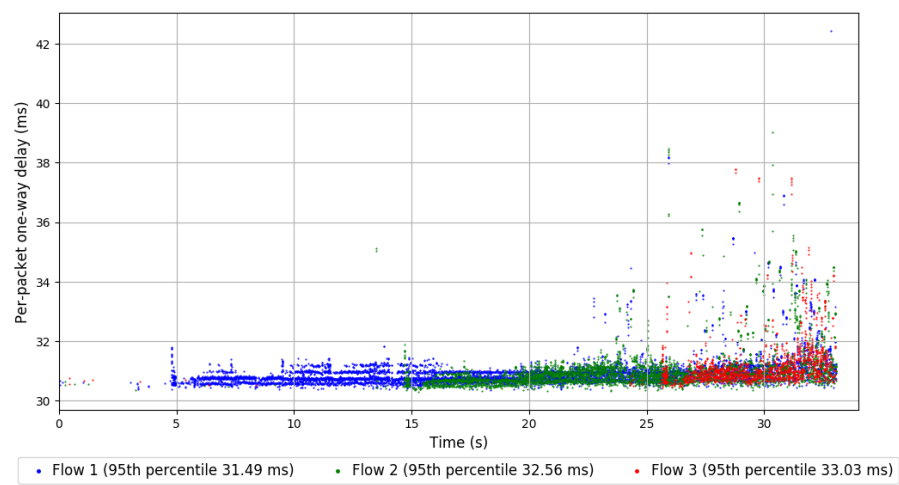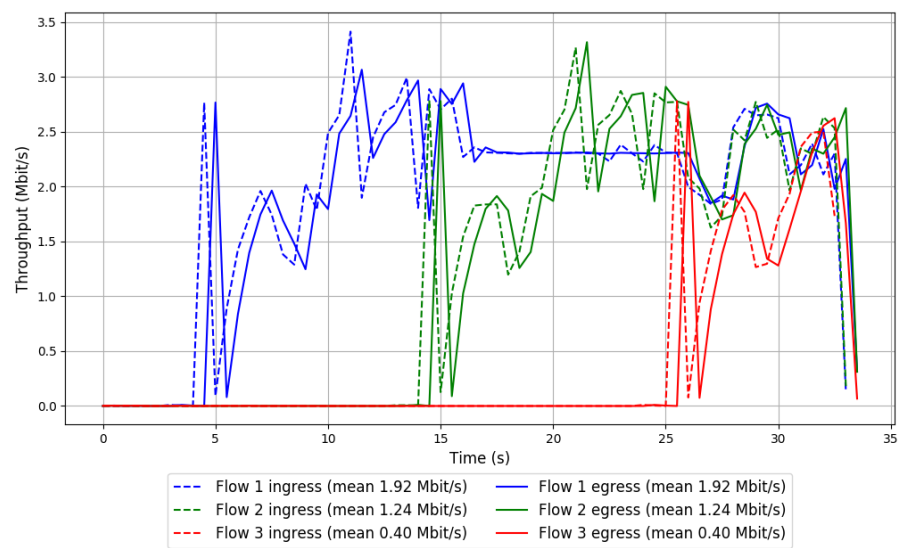Run 2: Report of WebRTC media — Data Link

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```
Run 3: Statistics of WebRTC media

Start at: 2018-09-07 15:20:49
End at: 2018-09-07 15:21:19
Local clock offset: 0.749 ms
Remote clock offset: -0.499 ms


# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 31.993 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 31.491 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 32.560 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 33.027 ms
Loss rate: 0.00%
```

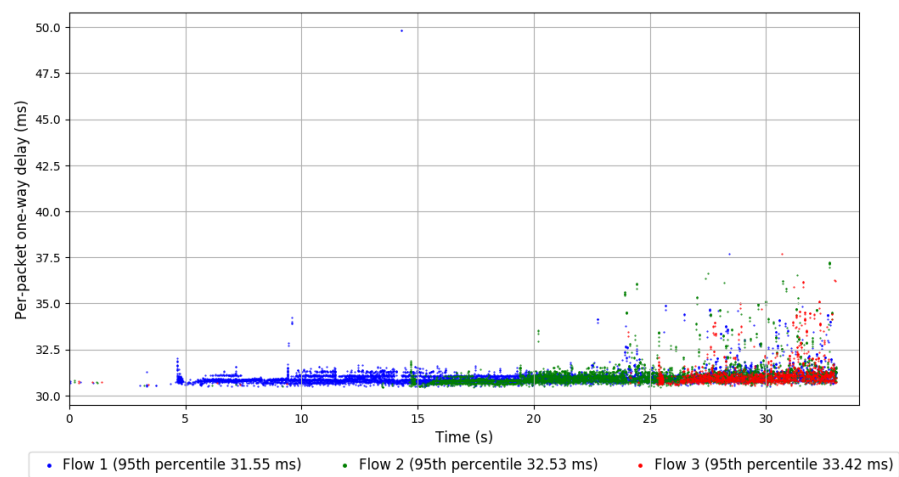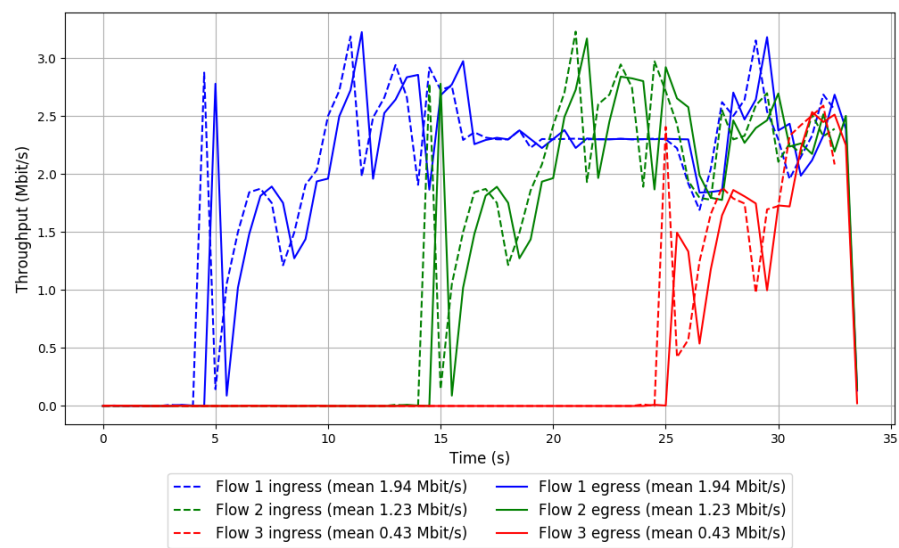Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-09-07 15:45:15
End at: 2018-09-07 15:45:45
Local clock offset: 0.7 ms
Remote clock offset: -0.406 ms


# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 31.925 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 31.549 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 32.533 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.424 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-09-07 16:09:39
End at: 2018-09-07 16:10:09
Local clock offset: 0.292 ms
Remote clock offset: -0.367 ms


# Below is generated by plot.py at 2018-09-07 16:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 33.034 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 32.517 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 33.385 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 33.650 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link