Pantheon Report

Generated at 2018-09-11 16:10:47 (UTC).

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

Repeated the test of 18 congestion control schemes 5 times.

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

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.
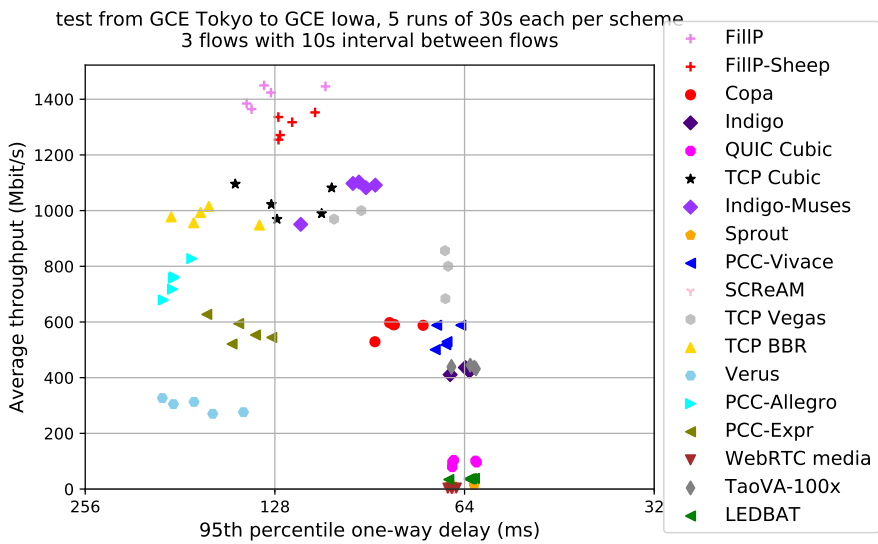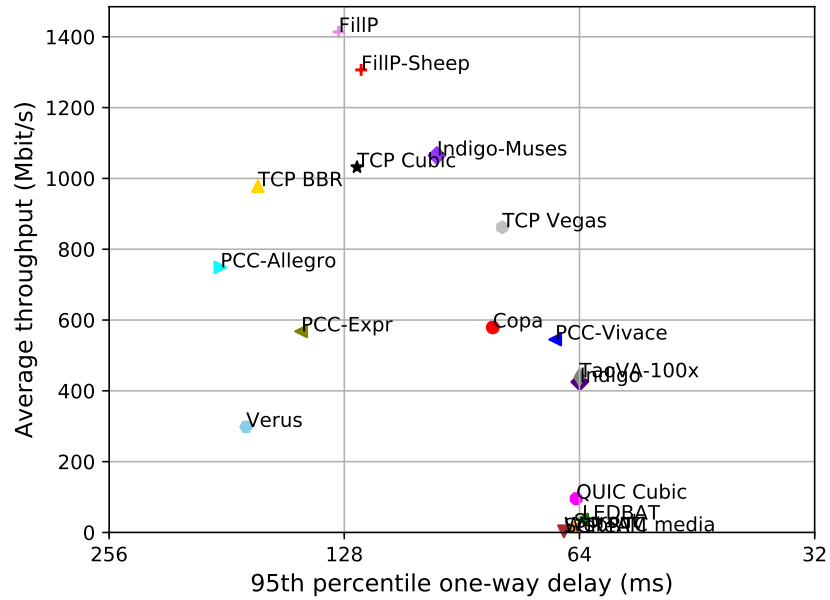
```
System info:
Linux 4.15.0-1018-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 190986 254651 381972

Git summary:
branch: muses @ f30bceca2aec2ef14a3cf71e25642f4a30905a03
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
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 GCE Tokyo to GCE Iowa, 5 runs of 30s each per scheme
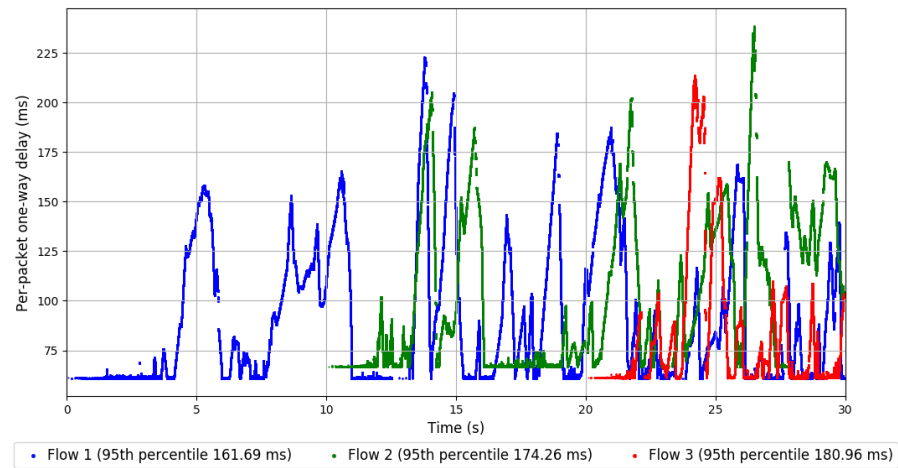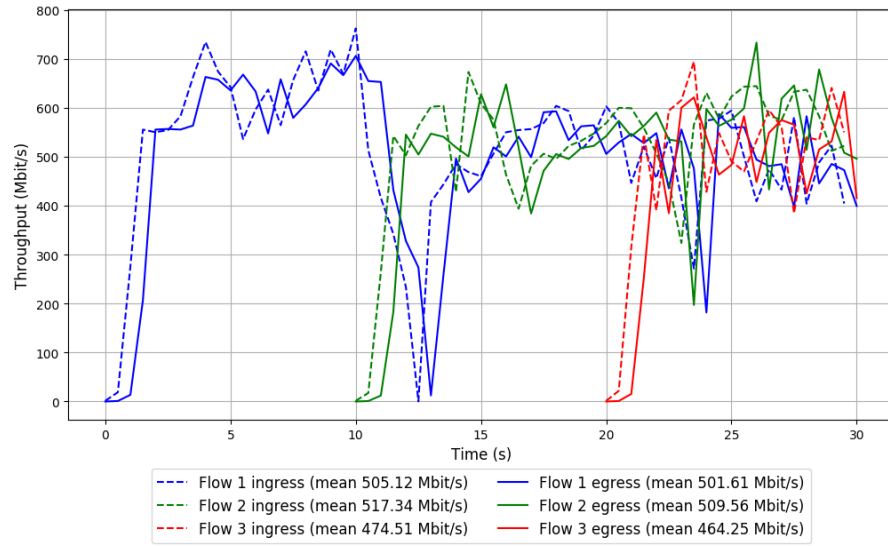3 flows with 10s interval between flows (mean of all runs by scheme)

test from GCE Tokyo to GCE Iowa, 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	502.40	488.74	457.71	147.32	149.61	173.54	1.20	1.32	3.50
Copa	5	305.09	285.72	255.39	78.21	85.38	76.28	0.38	0.70	1.47
TCP Cubic	5	570.10	507.65	377.45	123.63	103.71	119.70	0.43	0.69	1.47
FillP	5	748.85	699.00	610.69	128.24	130.72	105.42	2.91	3.14	1.93
FillP-Sheep	5	704.33	646.91	525.71	124.43	121.85	88.33	1.02	1.44	1.32
Indigo	5	220.52	214.70	184.31	62.93	64.18	62.89	0.42	0.63	1.53
LEDBAT	5	23.55	15.72	7.71	62.54	63.33	61.88	0.83	1.26	2.55
Indigo-Muses	5	577.93	526.81	419.26	99.56	94.82	87.14	0.46	0.73	1.90
PCC-Allegro	5	385.81	394.77	309.60	185.36	164.36	124.09	3.81	4.29	2.40
PCC-Expr	5	307.76	290.51	206.35	119.73	147.62	120.37	0.66	1.70	2.66
QUIC Cubic	5	55.56	42.74	30.26	62.36	62.34	62.98	0.29	1.26	1.15
SCReAM	5	0.22	0.22	0.22	62.30	65.16	63.66	0.38	0.69	1.23
Sprout	5	6.85	6.76	6.42	62.13	64.14	63.16	0.32	0.69	1.34
TaoVA-100x	5	227.14	220.22	197.10	62.92	62.08	64.34	0.45	0.69	1.59
TCP Vegas	5	475.61	388.52	388.36	80.04	69.59	78.34	0.28	0.52	1.34
Verus	5	190.10	126.40	75.76	160.28	121.24	102.54	1.04	1.01	1.66
PCC-Vivace	5	350.04	262.39	63.67	70.60	64.46	61.99	0.41	0.73	2.28
WebRTC media	5	1.61	1.20	0.48	66.51	62.71	62.11	0.70	0.99	1.35

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```
Run 1: Statistics of TCP BBR

Start at: 2018-09-11 10:35:01
End at: 2018-09-11 10:35:31
Local clock offset: 0.129 ms
Remote clock offset: -0.217 ms


# Below is generated by plot.py at 2018-09-11 13:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 993.11 Mbit/s
95th percentile per-packet one-way delay: 167.991 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 501.61 Mbit/s
95th percentile per-packet one-way delay: 161.695 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 509.56 Mbit/s
95th percentile per-packet one-way delay: 174.261 ms
Loss rate: 2.13%
-- Flow 3:
Average throughput: 464.25 Mbit/s
95th percentile per-packet one-way delay: 180.961 ms
Loss rate: 3.37%
```
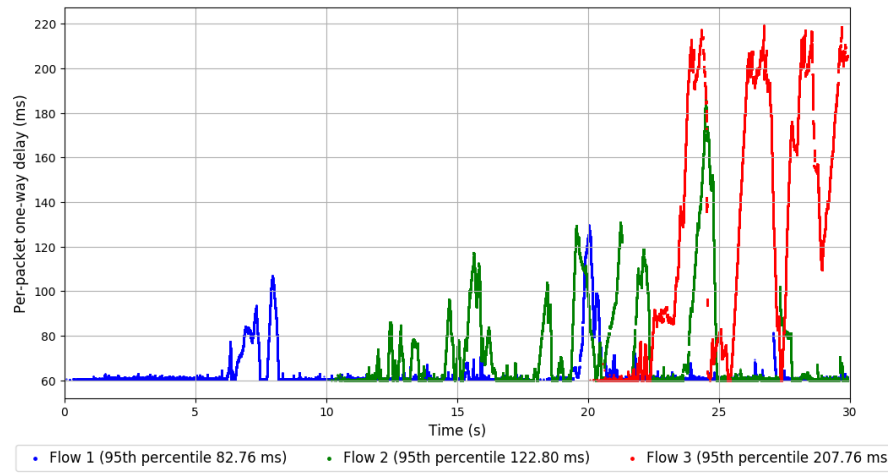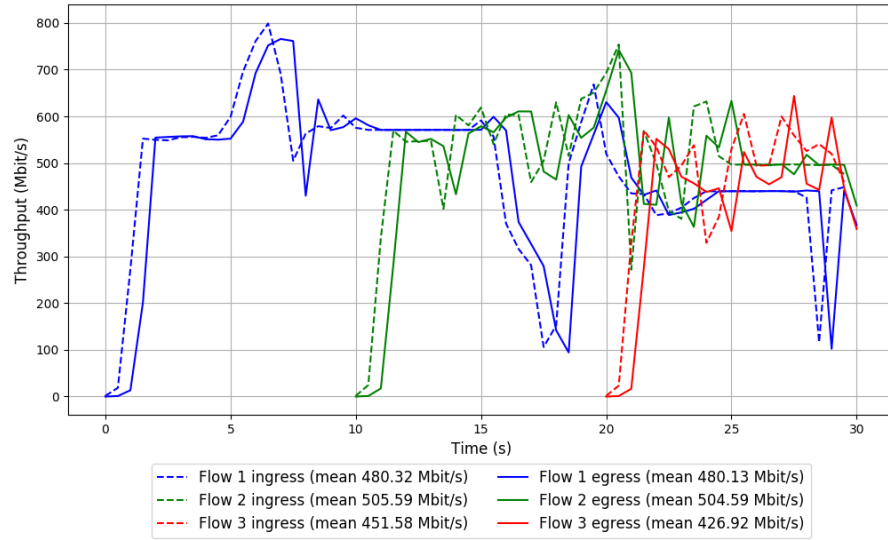
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2018-09-11 11:06:58
End at: 2018-09-11 11:07:28
Local clock offset: 0.201 ms
Remote clock offset: 0.642 ms


# Below is generated by plot.py at 2018-09-11 13:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 956.37 Mbit/s
95th percentile per-packet one-way delay: 172.232 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 480.13 Mbit/s
95th percentile per-packet one-way delay: 82.759 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 504.59 Mbit/s
95th percentile per-packet one-way delay: 122.800 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 426.92 Mbit/s
95th percentile per-packet one-way delay: 207.757 ms
Loss rate: 6.68%
```
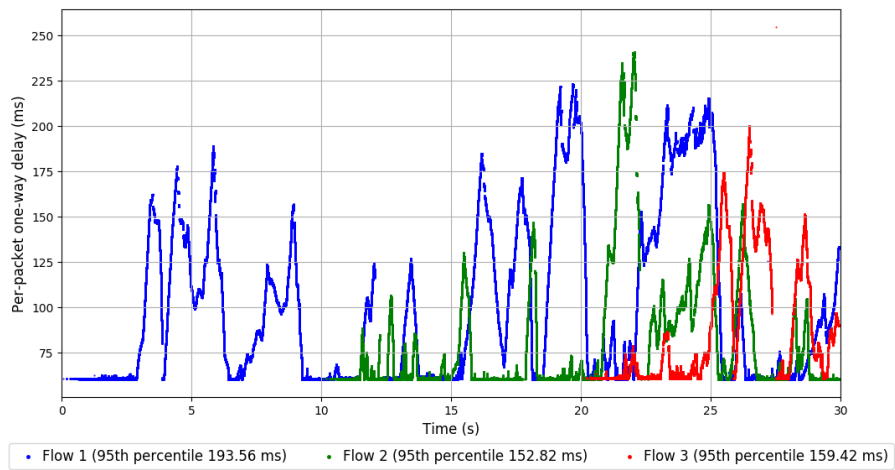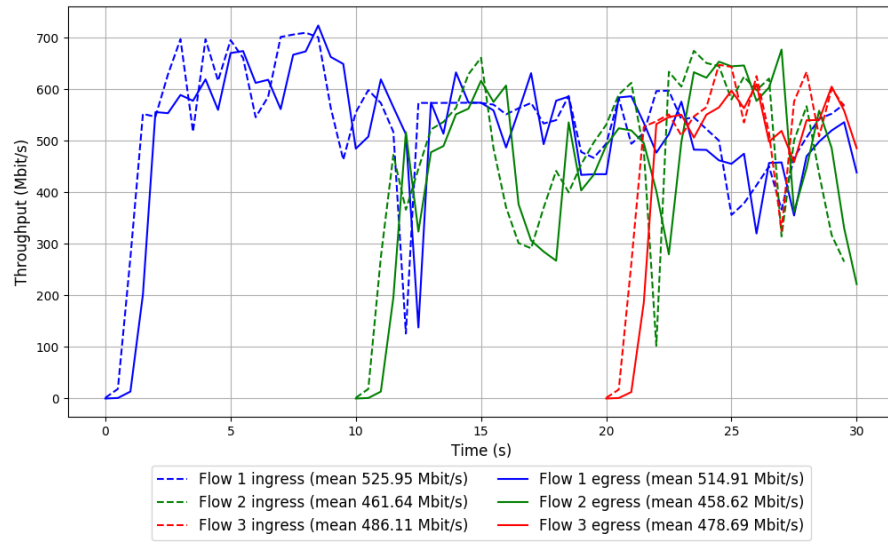
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 480.32 Mbit/s) —— Flow 1 egress (mean 480.13 Mbit/s)
Flow 2 ingress (mean 505.59 Mbit/s) —— Flow 2 egress (mean 504.59 Mbit/s)
Flow 3 ingress (mean 451.58 Mbit/s) —— Flow 3 egress (mean 426.92 Mbit/s)

Flow 1 (95th percentile 82.76 ms) • Flow 2 (95th percentile 122.80 ms) • Flow 3 (95th percentile 207.76 ms)
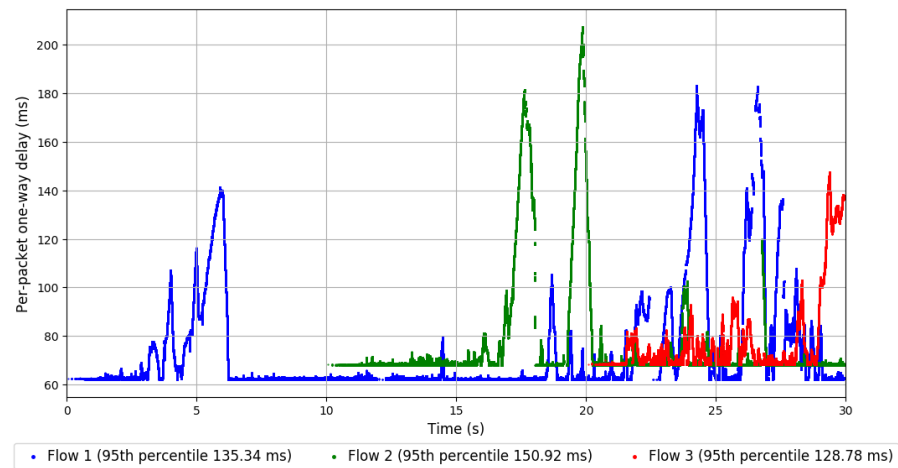
```
Run 3: Statistics of TCP BBR

Start at: 2018-09-11 11:39:03
End at: 2018-09-11 11:39:33
Local clock offset: 0.27 ms
Remote clock offset: 0.561 ms


# Below is generated by plot.py at 2018-09-11 13:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 977.65 Mbit/s
95th percentile per-packet one-way delay: 186.991 ms
Loss rate: 2.19%
-- Flow 1:
Average throughput: 514.91 Mbit/s
95th percentile per-packet one-way delay: 193.559 ms
Loss rate: 2.52%
-- Flow 2:
Average throughput: 458.62 Mbit/s
95th percentile per-packet one-way delay: 152.823 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 478.69 Mbit/s
95th percentile per-packet one-way delay: 159.424 ms
Loss rate: 2.80%
```

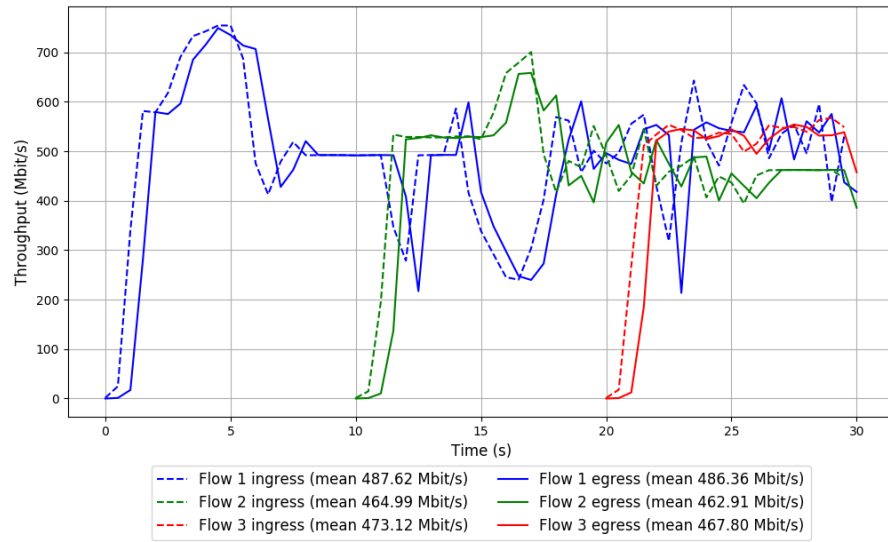Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2018-09-11 12:11:04
End at: 2018-09-11 12:11:34
Local clock offset: 0.355 ms
Remote clock offset: -1.532 ms


# Below is generated by plot.py at 2018-09-11 13:51:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 948.22 Mbit/s
95th percentile per-packet one-way delay: 135.446 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 486.36 Mbit/s
95th percentile per-packet one-way delay: 135.338 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 462.91 Mbit/s
95th percentile per-packet one-way delay: 150.922 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 467.80 Mbit/s
95th percentile per-packet one-way delay: 128.775 ms
Loss rate: 2.46%
```
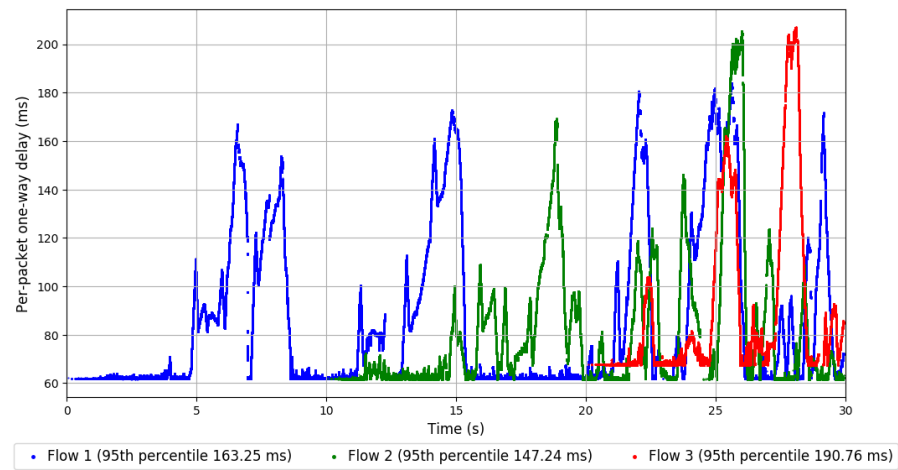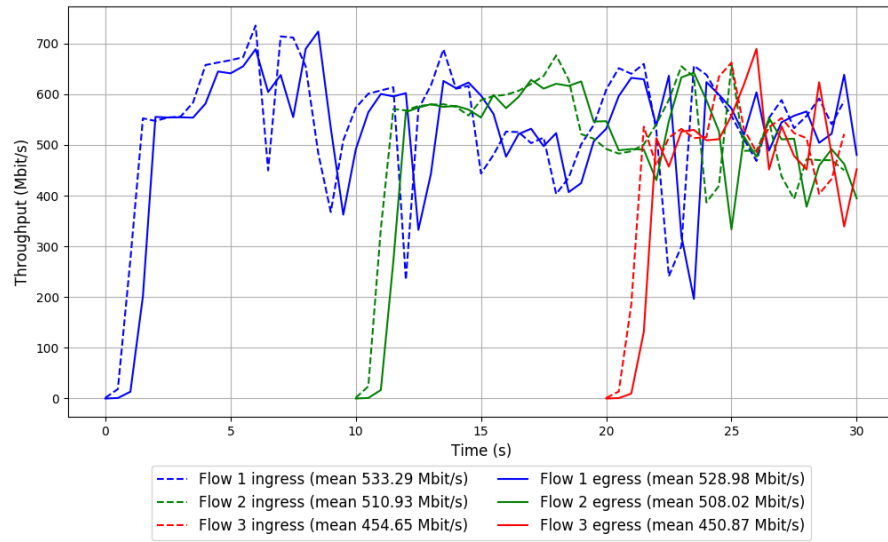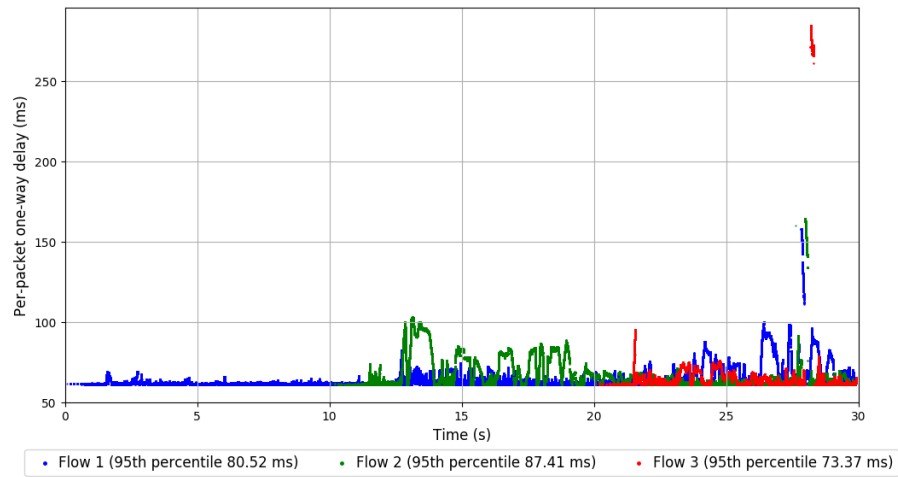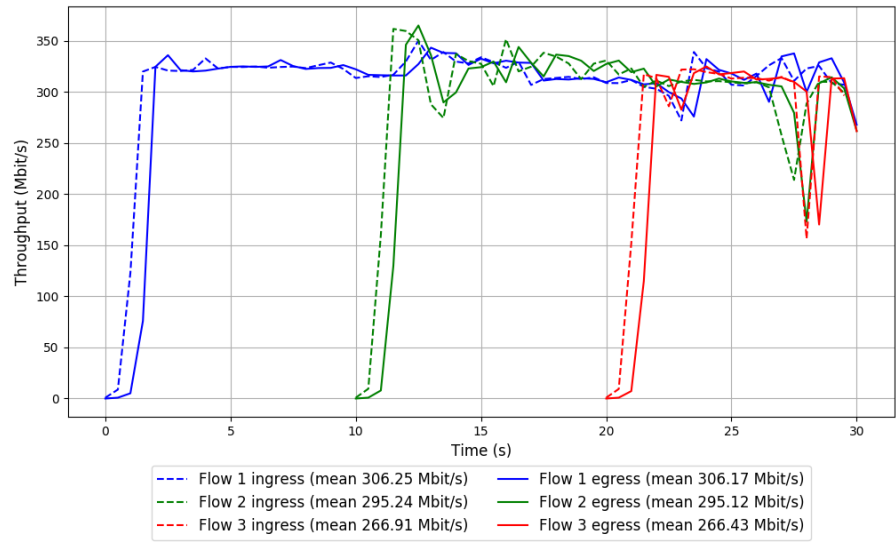
Run 4: Report of TCP BBR — Data Link

- --- Flow 1 ingress (mean 487.62 Mbit/s)   —— Flow 1 egress (mean 486.36 Mbit/s)
- --- Flow 2 ingress (mean 464.99 Mbit/s)   —— Flow 2 egress (mean 462.91 Mbit/s)
- --- Flow 3 ingress (mean 473.12 Mbit/s)   —— Flow 3 egress (mean 467.80 Mbit/s)

- Flow 1 (95th percentile 135.34 ms)   • Flow 2 (95th percentile 150.92 ms)   • Flow 3 (95th percentile 128.78 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2018-09-11 12:43:03
End at: 2018-09-11 12:43:33
Local clock offset: 0.42 ms
Remote clock offset: -1.003 ms


# Below is generated by plot.py at 2018-09-11 13:51:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1015.23 Mbit/s
95th percentile per-packet one-way delay: 162.931 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 528.98 Mbit/s
95th percentile per-packet one-way delay: 163.246 ms
Loss rate: 1.24%
-- Flow 2:
Average throughput: 508.02 Mbit/s
95th percentile per-packet one-way delay: 147.235 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 450.87 Mbit/s
95th percentile per-packet one-way delay: 190.765 ms
Loss rate: 2.18%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 533.29 Mbit/s) ---- Flow 1 egress (mean 528.98 Mbit/s) ——
Flow 2 ingress (mean 510.93 Mbit/s) ---- Flow 2 egress (mean 508.02 Mbit/s) ——
Flow 3 ingress (mean 454.65 Mbit/s) ---- Flow 3 egress (mean 450.87 Mbit/s) ——

Flow 1 (95th percentile 163.25 ms)   Flow 2 (95th percentile 147.24 ms)   Flow 3 (95th percentile 190.76 ms)

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```
Run 1: Statistics of Copa

Start at: 2018-09-11 10:56:38
End at: 2018-09-11 10:57:08
Local clock offset: 0.198 ms
Remote clock offset: -0.251 ms


# Below is generated by plot.py at 2018-09-11 13:53:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 590.24 Mbit/s
95th percentile per-packet one-way delay: 83.018 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 306.17 Mbit/s
95th percentile per-packet one-way delay: 80.519 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 295.12 Mbit/s
95th percentile per-packet one-way delay: 87.413 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 266.43 Mbit/s
95th percentile per-packet one-way delay: 73.371 ms
Loss rate: 1.41%
```
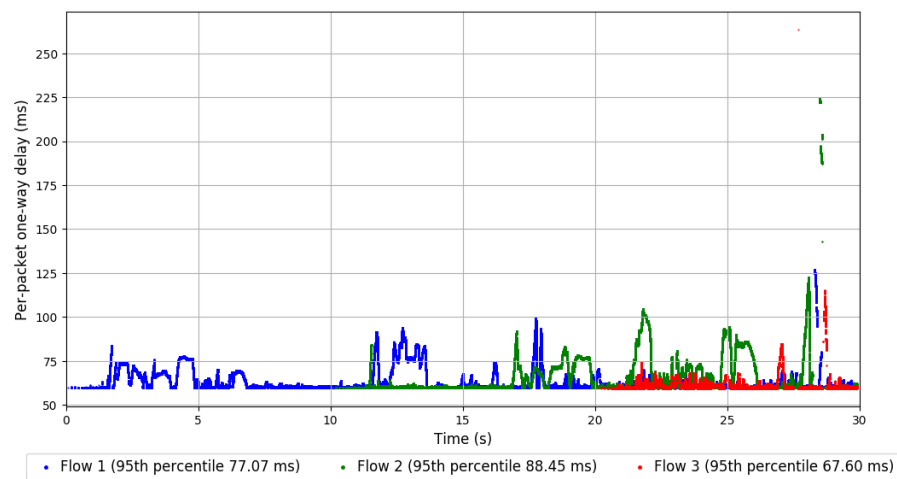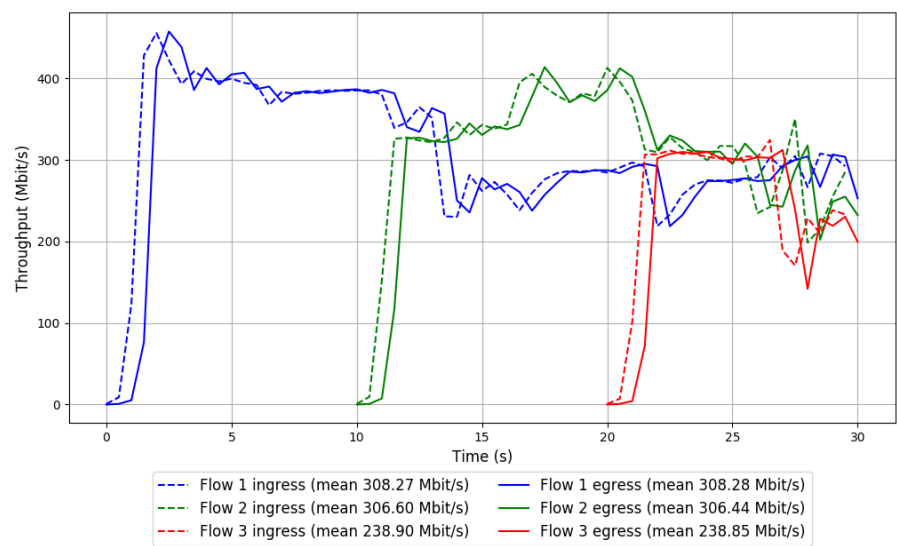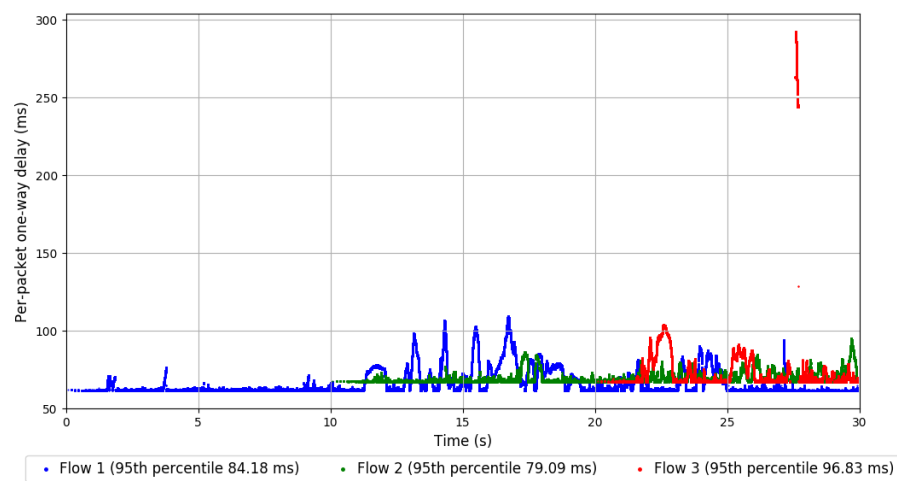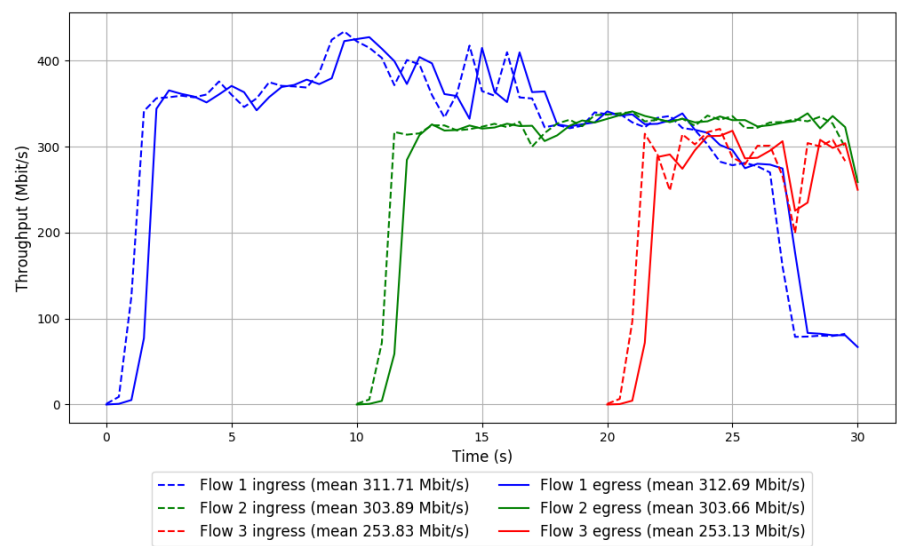
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2018-09-11 11:28:30
End at: 2018-09-11 11:29:00
Local clock offset: 0.27 ms
Remote clock offset: 1.209 ms


# Below is generated by plot.py at 2018-09-11 13:53:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 590.55 Mbit/s
95th percentile per-packet one-way delay: 82.713 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 308.28 Mbit/s
95th percentile per-packet one-way delay: 77.068 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 306.44 Mbit/s
95th percentile per-packet one-way delay: 88.446 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 238.85 Mbit/s
95th percentile per-packet one-way delay: 67.602 ms
Loss rate: 1.30%
```
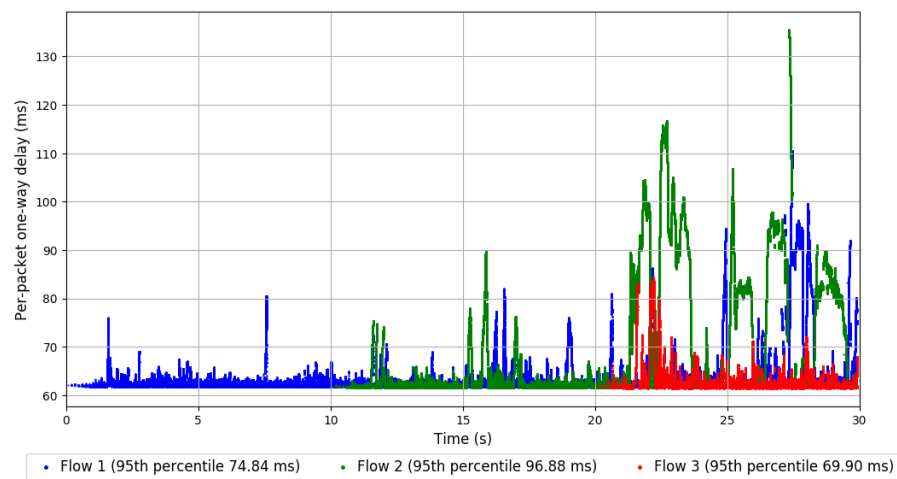
Run 2: Report of Copa — Data Link

- - - - Flow 1 ingress (mean 308.27 Mbit/s) ——— Flow 1 egress (mean 308.28 Mbit/s)
- - - - Flow 2 ingress (mean 306.60 Mbit/s) ——— Flow 2 egress (mean 306.44 Mbit/s)
- - - - Flow 3 ingress (mean 238.90 Mbit/s) ——— Flow 3 egress (mean 238.85 Mbit/s)

• Flow 1 (95th percentile 77.07 ms)   • Flow 2 (95th percentile 88.45 ms)   • Flow 3 (95th percentile 67.60 ms)

```
Run 3: Statistics of Copa

Start at: 2018-09-11 12:00:44
End at: 2018-09-11 12:01:14
Local clock offset: 0.363 ms
Remote clock offset: -0.846 ms


# Below is generated by plot.py at 2018-09-11 13:53:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 597.68 Mbit/s
95th percentile per-packet one-way delay: 84.165 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 312.69 Mbit/s
95th percentile per-packet one-way delay: 84.178 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 303.66 Mbit/s
95th percentile per-packet one-way delay: 79.093 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 253.13 Mbit/s
95th percentile per-packet one-way delay: 96.829 ms
Loss rate: 1.56%
```
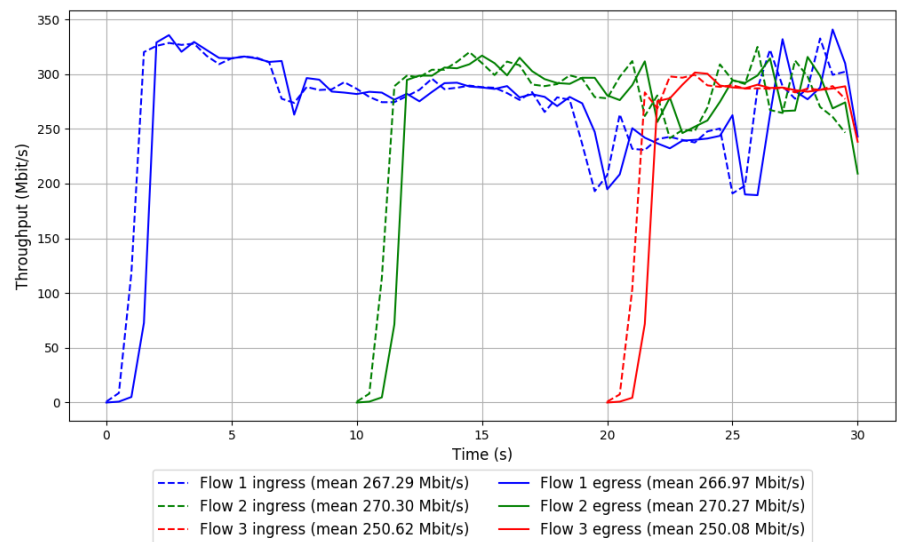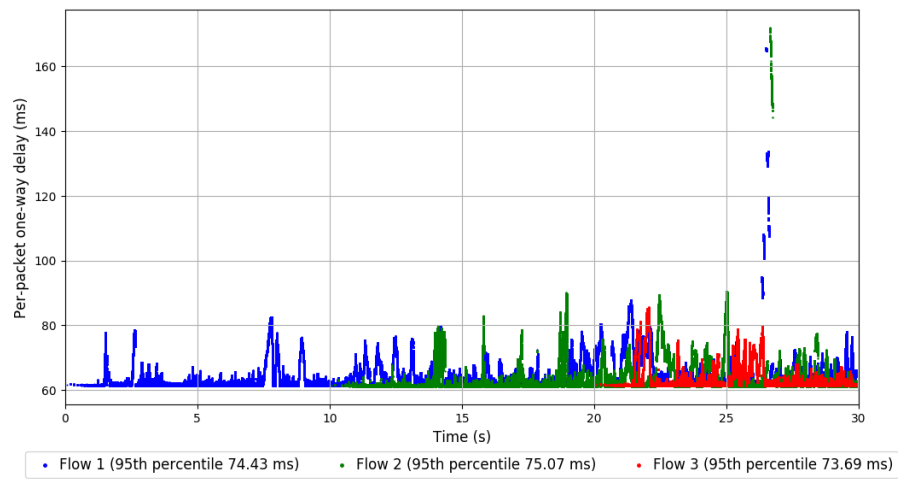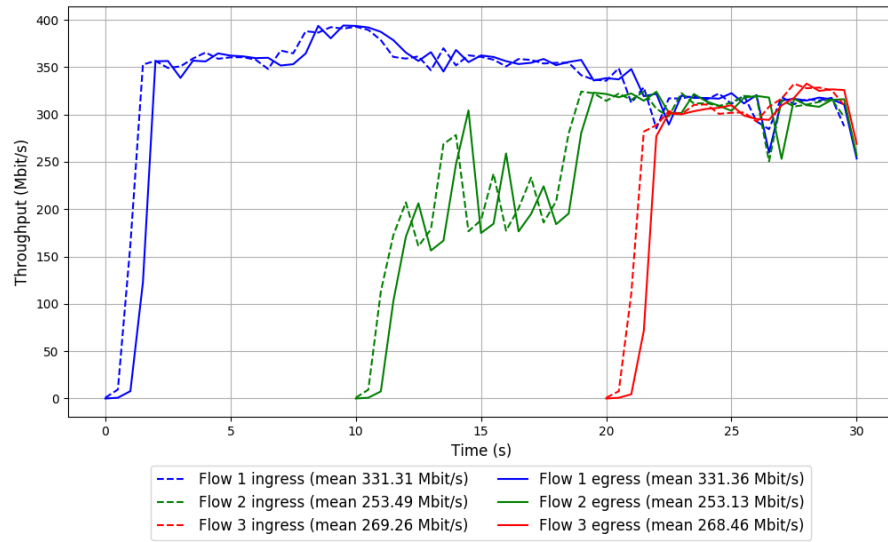
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2018-09-11 12:32:40
End at: 2018-09-11 12:33:10
Local clock offset: 0.404 ms
Remote clock offset: -0.6 ms


# Below is generated by plot.py at 2018-09-11 14:07:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.04 Mbit/s
95th percentile per-packet one-way delay: 88.799 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 266.97 Mbit/s
95th percentile per-packet one-way delay: 74.841 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 270.27 Mbit/s
95th percentile per-packet one-way delay: 96.883 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 250.08 Mbit/s
95th percentile per-packet one-way delay: 69.903 ms
Loss rate: 1.50%
```
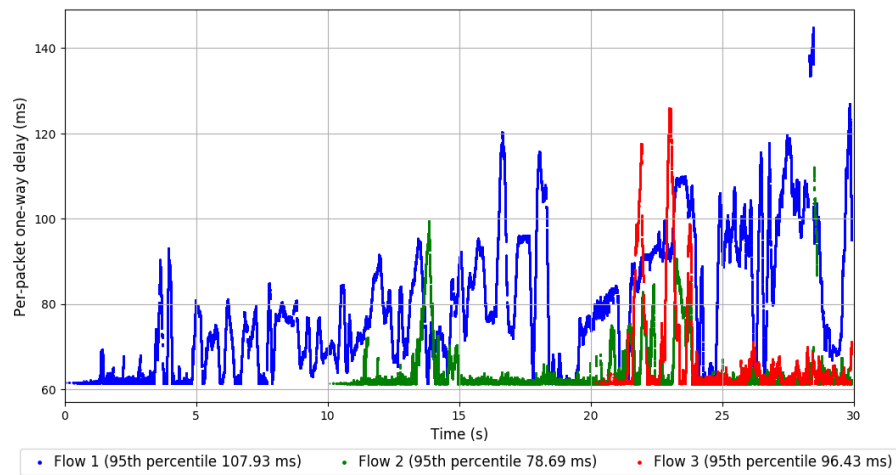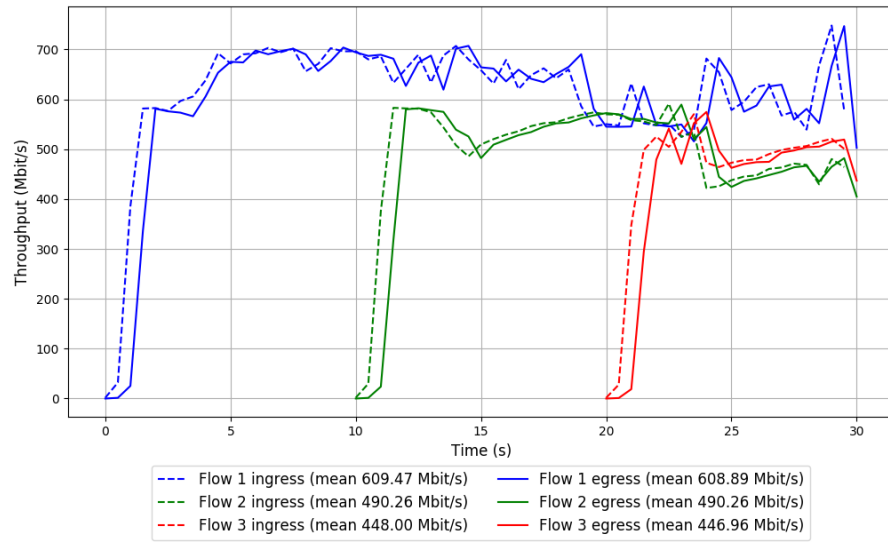
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2018-09-11 13:05:01
End at: 2018-09-11 13:05:31
Local clock offset: 0.012 ms
Remote clock offset: -0.554 ms


# Below is generated by plot.py at 2018-09-11 14:09:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 588.01 Mbit/s
95th percentile per-packet one-way delay: 74.467 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 331.36 Mbit/s
95th percentile per-packet one-way delay: 74.434 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 253.13 Mbit/s
95th percentile per-packet one-way delay: 75.074 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 268.46 Mbit/s
95th percentile per-packet one-way delay: 73.688 ms
Loss rate: 1.57%
```
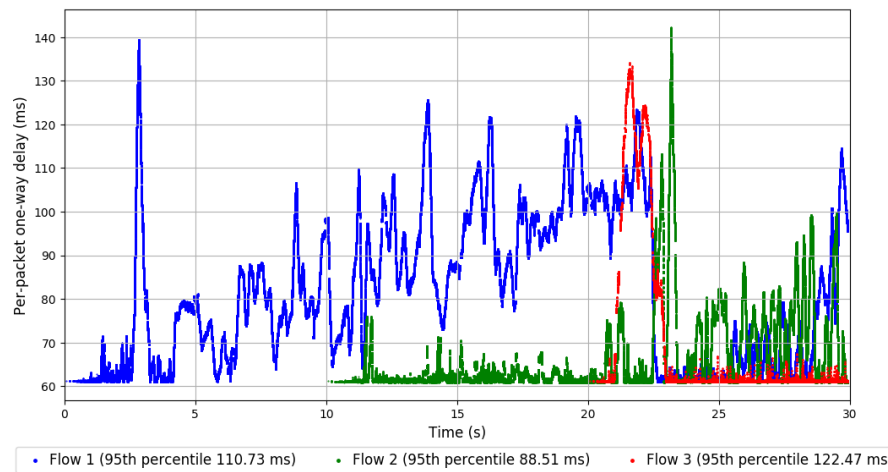
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 331.31 Mbit/s) ---- Flow 1 egress (mean 331.36 Mbit/s)
Flow 2 ingress (mean 253.49 Mbit/s) ---- Flow 2 egress (mean 253.13 Mbit/s)
Flow 3 ingress (mean 269.26 Mbit/s) ---- Flow 3 egress (mean 268.46 Mbit/s)

Flow 1 (95th percentile 74.43 ms) Flow 2 (95th percentile 75.07 ms) Flow 3 (95th percentile 73.69 ms)
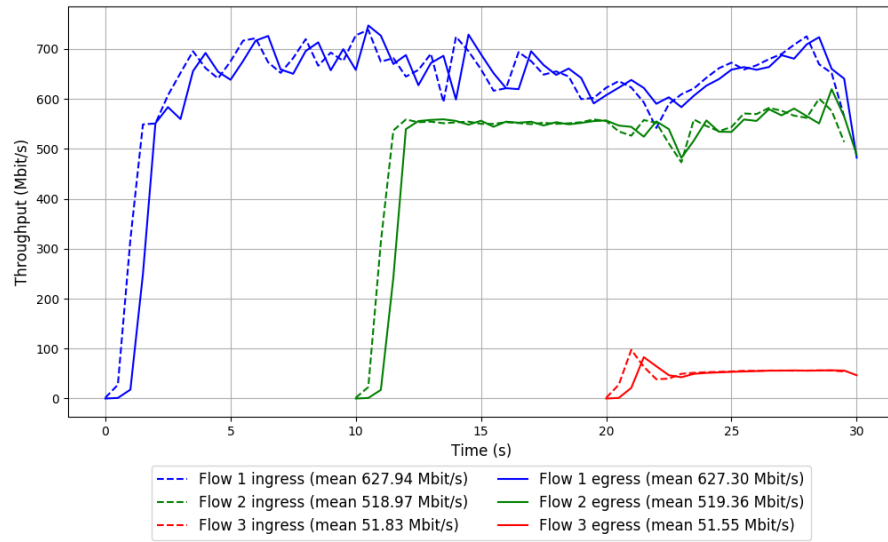
```
Run 1: Statistics of TCP Cubic

Start at: 2018-09-11 10:59:55
End at: 2018-09-11 11:00:25
Local clock offset: 0.206 ms
Remote clock offset: -0.502 ms


# Below is generated by plot.py at 2018-09-11 14:09:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1081.88 Mbit/s
95th percentile per-packet one-way delay: 104.009 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 608.89 Mbit/s
95th percentile per-packet one-way delay: 107.934 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 490.26 Mbit/s
95th percentile per-packet one-way delay: 78.695 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 446.96 Mbit/s
95th percentile per-packet one-way delay: 96.426 ms
Loss rate: 1.46%
```

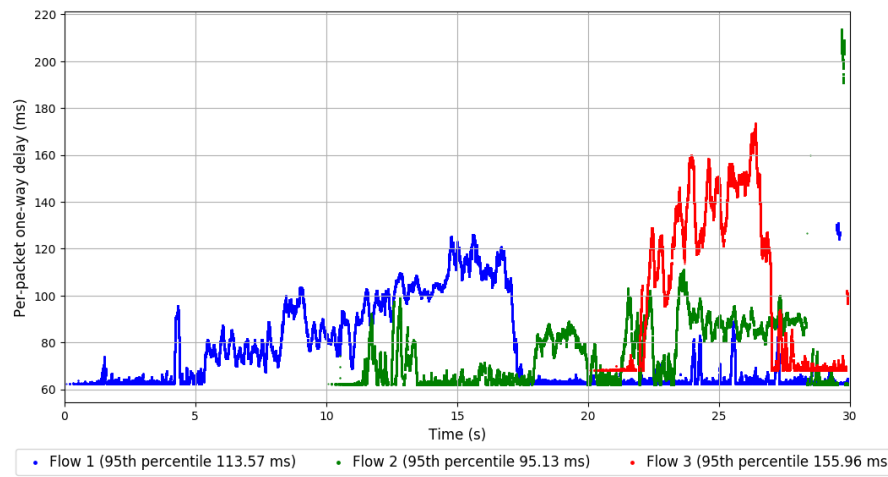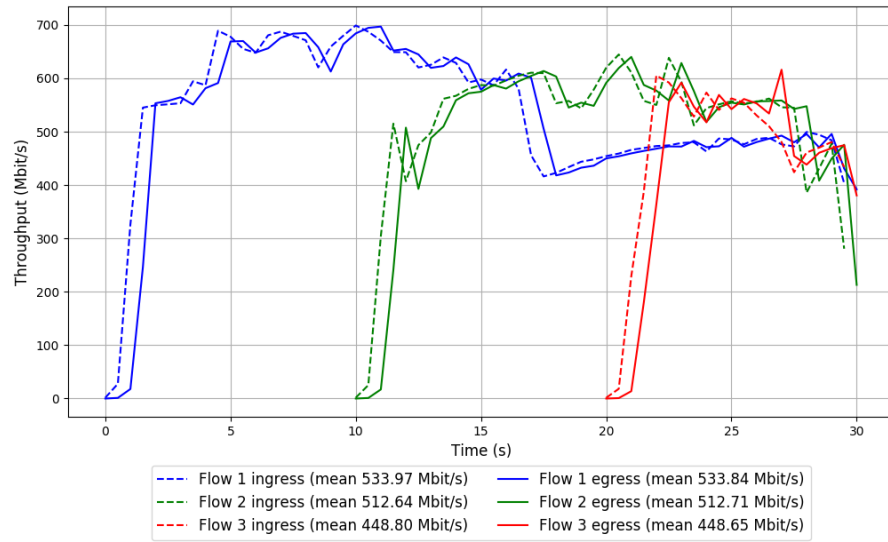Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2018-09-11 11:31:50
End at: 2018-09-11 11:32:20
Local clock offset: 0.254 ms
Remote clock offset: -0.294 ms


# Below is generated by plot.py at 2018-09-11 14:09:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 989.56 Mbit/s
95th percentile per-packet one-way delay: 107.895 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 627.30 Mbit/s
95th percentile per-packet one-way delay: 110.728 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 519.36 Mbit/s
95th percentile per-packet one-way delay: 88.513 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 51.55 Mbit/s
95th percentile per-packet one-way delay: 122.467 ms
Loss rate: 1.74%
```

Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 627.94 Mbit/s)   Flow 1 egress (mean 627.30 Mbit/s)
Flow 2 ingress (mean 518.97 Mbit/s)   Flow 2 egress (mean 519.36 Mbit/s)
Flow 3 ingress (mean 51.83 Mbit/s)   Flow 3 egress (mean 51.55 Mbit/s)

Flow 1 (95th percentile 110.73 ms)   Flow 2 (95th percentile 88.51 ms)   Flow 3 (95th percentile 122.47 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2018-09-11 12:04:05
End at: 2018-09-11 12:04:35
Local clock offset: 0.348 ms
Remote clock offset: -1.465 ms


# Below is generated by plot.py at 2018-09-11 14:09:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1022.45 Mbit/s
95th percentile per-packet one-way delay: 129.650 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 533.84 Mbit/s
95th percentile per-packet one-way delay: 113.566 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 512.71 Mbit/s
95th percentile per-packet one-way delay: 95.133 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 448.65 Mbit/s
95th percentile per-packet one-way delay: 155.963 ms
Loss rate: 1.38%
```
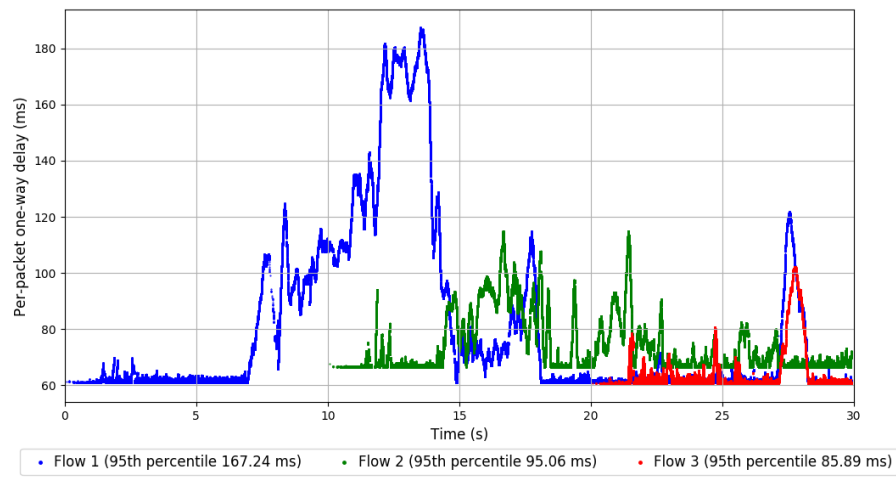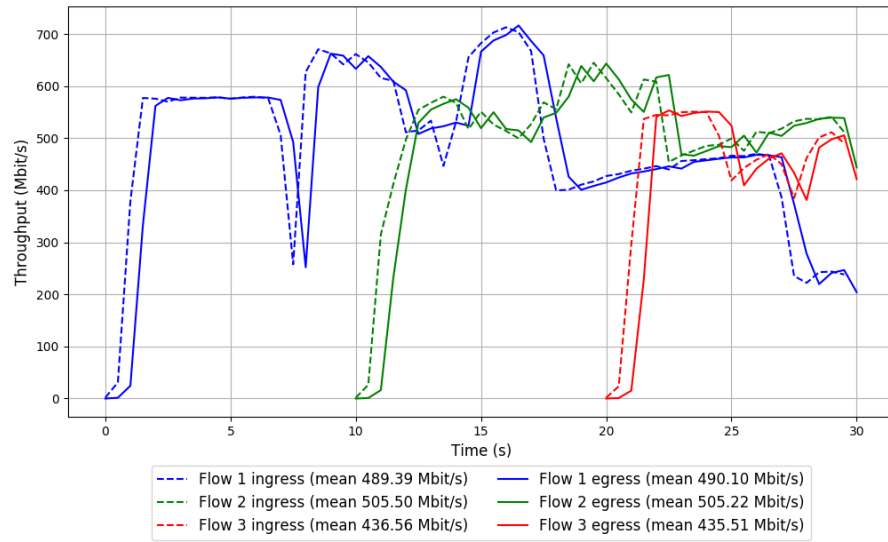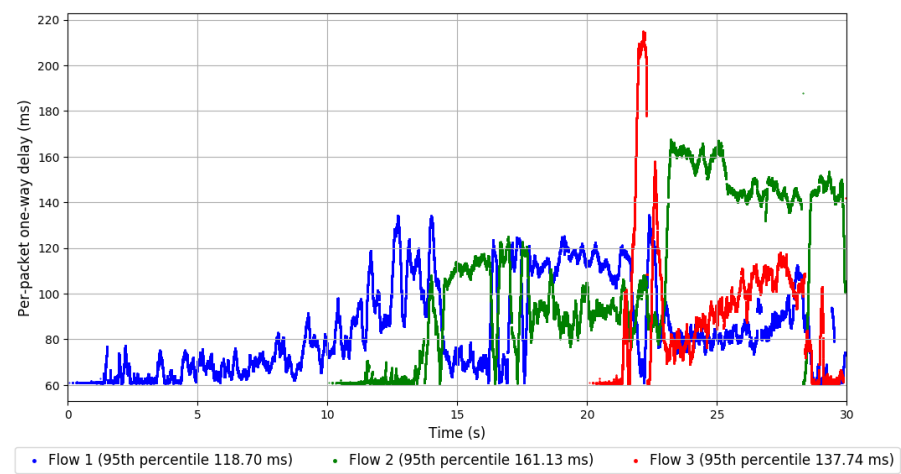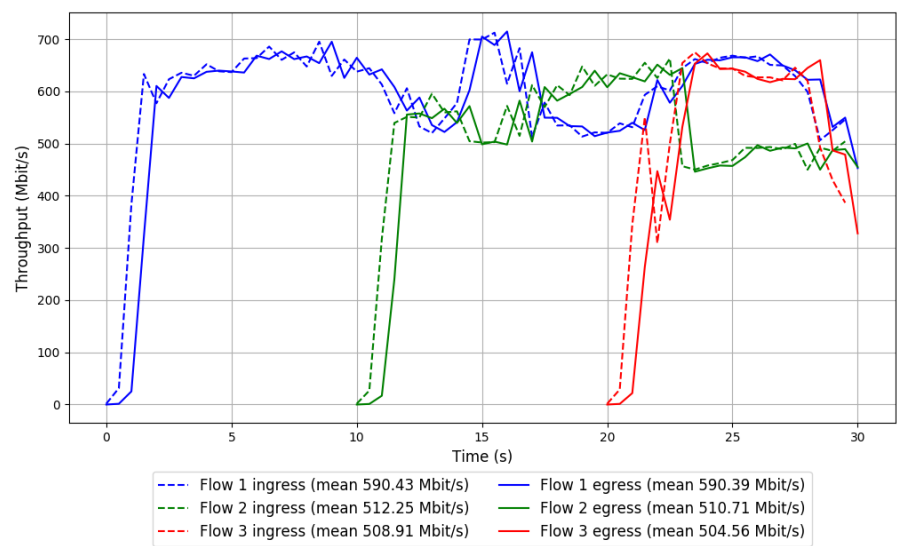
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2018-09-11 12:35:54
End at: 2018-09-11 12:36:24
Local clock offset: 0.408 ms
Remote clock offset: 0.274 ms


# Below is generated by plot.py at 2018-09-11 14:10:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 969.15 Mbit/s
95th percentile per-packet one-way delay: 127.000 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 490.10 Mbit/s
95th percentile per-packet one-way delay: 167.244 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 505.22 Mbit/s
95th percentile per-packet one-way delay: 95.059 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 435.51 Mbit/s
95th percentile per-packet one-way delay: 85.888 ms
Loss rate: 1.52%
```
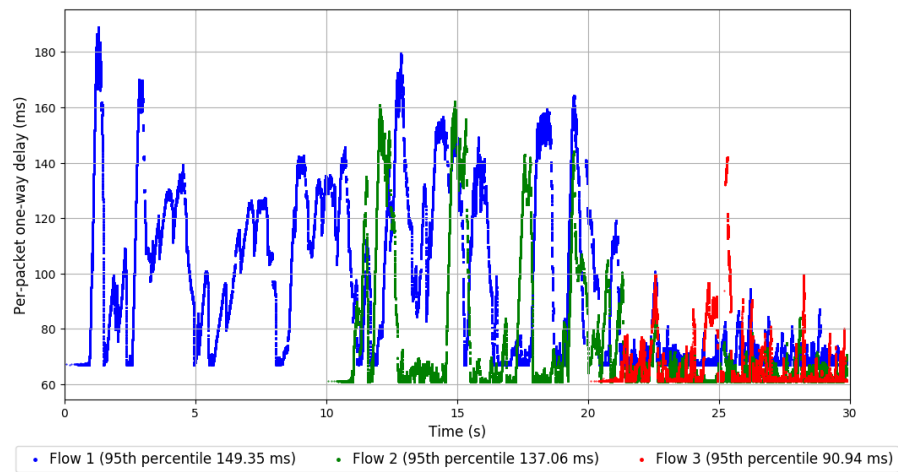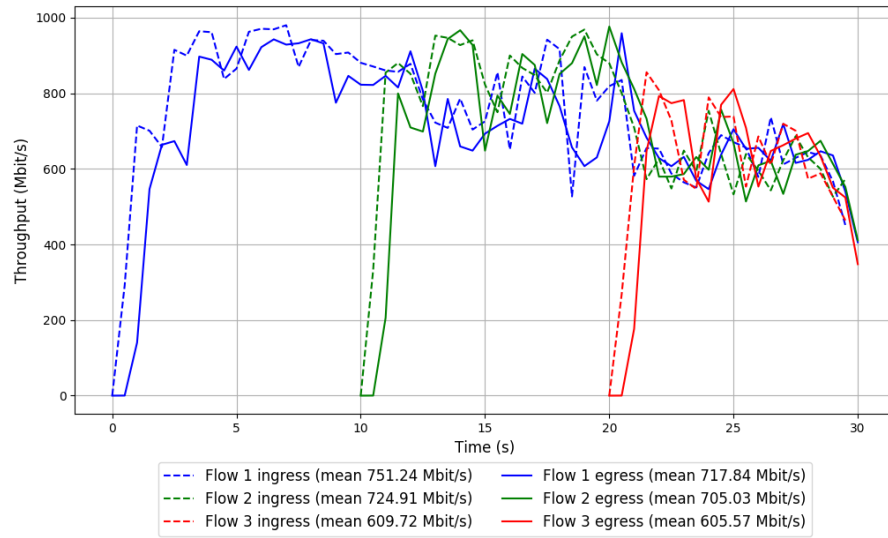
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2018-09-11 13:08:20
End at: 2018-09-11 13:08:50
Local clock offset: -0.09 ms
Remote clock offset: 0.028 ms


# Below is generated by plot.py at 2018-09-11 14:12:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1095.56 Mbit/s
95th percentile per-packet one-way delay: 147.919 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 590.39 Mbit/s
95th percentile per-packet one-way delay: 118.696 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 510.71 Mbit/s
95th percentile per-packet one-way delay: 161.134 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 504.56 Mbit/s
95th percentile per-packet one-way delay: 137.744 ms
Loss rate: 1.27%
```

Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 590.43 Mbit/s) --- Flow 1 egress (mean 590.39 Mbit/s)
Flow 2 ingress (mean 512.25 Mbit/s) --- Flow 2 egress (mean 510.71 Mbit/s)
Flow 3 ingress (mean 508.91 Mbit/s) --- Flow 3 egress (mean 504.56 Mbit/s)

Flow 1 (95th percentile 118.70 ms)   Flow 2 (95th percentile 161.13 ms)   Flow 3 (95th percentile 137.74 ms)

```
Run 1: Statistics of FillP

Start at: 2018-09-11 10:48:24
End at: 2018-09-11 10:48:54
Local clock offset: 0.151 ms
Remote clock offset: -0.235 ms


# Below is generated by plot.py at 2018-09-11 14:21:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1384.62 Mbit/s
95th percentile per-packet one-way delay: 141.901 ms
Loss rate: 3.93%
-- Flow 1:
Average throughput: 717.84 Mbit/s
95th percentile per-packet one-way delay: 149.353 ms
Loss rate: 4.85%
-- Flow 2:
Average throughput: 705.03 Mbit/s
95th percentile per-packet one-way delay: 137.060 ms
Loss rate: 3.33%
-- Flow 3:
Average throughput: 605.57 Mbit/s
95th percentile per-packet one-way delay: 90.940 ms
Loss rate: 1.90%
```
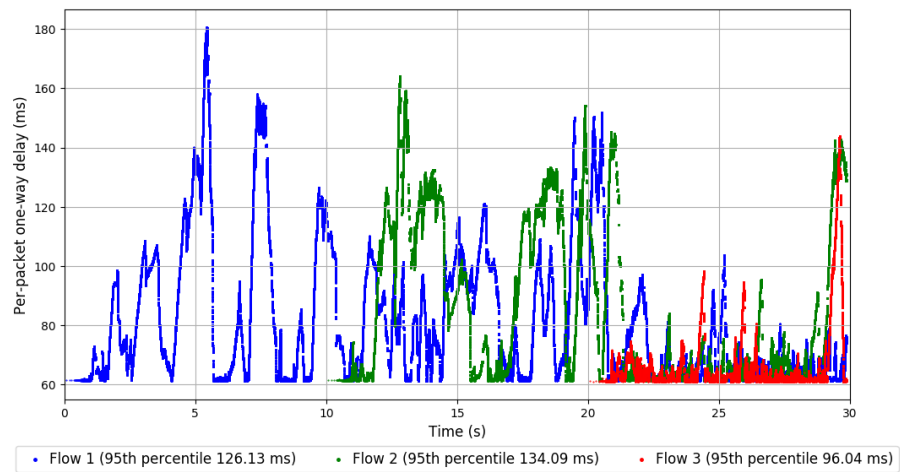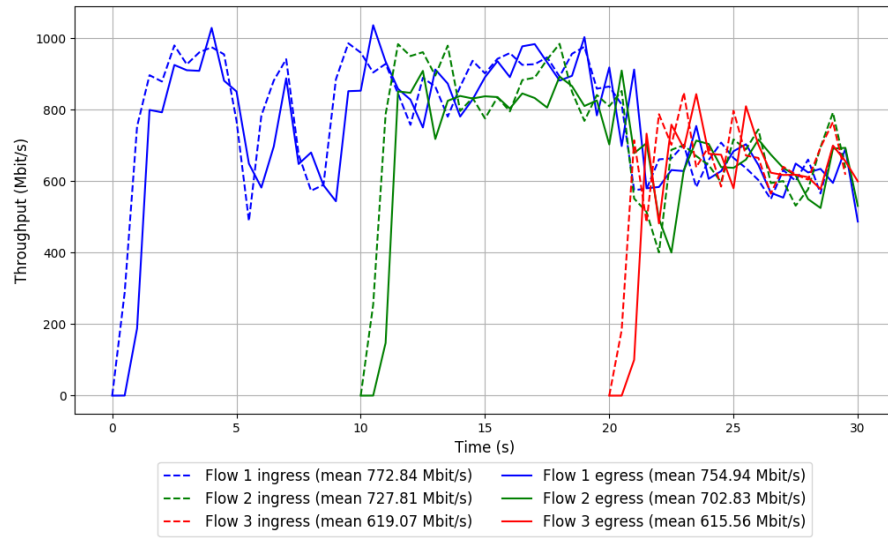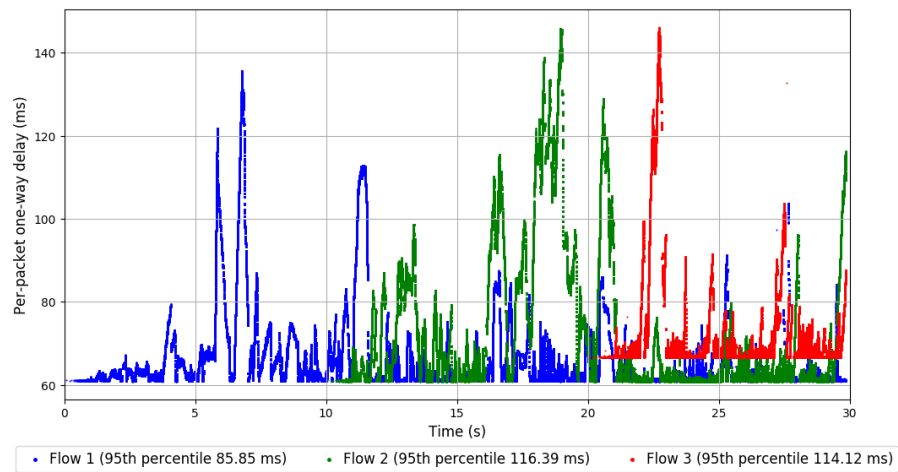
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 751.24 Mbit/s)
Flow 2 ingress (mean 724.91 Mbit/s)
Flow 3 ingress (mean 609.72 Mbit/s)
Flow 1 egress (mean 717.84 Mbit/s)
Flow 2 egress (mean 705.03 Mbit/s)
Flow 3 egress (mean 605.57 Mbit/s)

Flow 1 (95th percentile 149.35 ms)
Flow 2 (95th percentile 137.06 ms)
Flow 3 (95th percentile 90.94 ms)

```
Run 2: Statistics of FillP

Start at: 2018-09-11 11:20:20
End at: 2018-09-11 11:20:50
Local clock offset: 0.234 ms
Remote clock offset: -0.31 ms

# Below is generated by plot.py at 2018-09-11 14:37:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1423.83 Mbit/s
95th percentile per-packet one-way delay: 129.856 ms
Loss rate: 3.05%
-- Flow 1:
Average throughput: 754.94 Mbit/s
95th percentile per-packet one-way delay: 126.126 ms
Loss rate: 2.73%
-- Flow 2:
Average throughput: 702.83 Mbit/s
95th percentile per-packet one-way delay: 134.092 ms
Loss rate: 4.06%
-- Flow 3:
Average throughput: 615.56 Mbit/s
95th percentile per-packet one-way delay: 96.037 ms
Loss rate: 1.84%
```
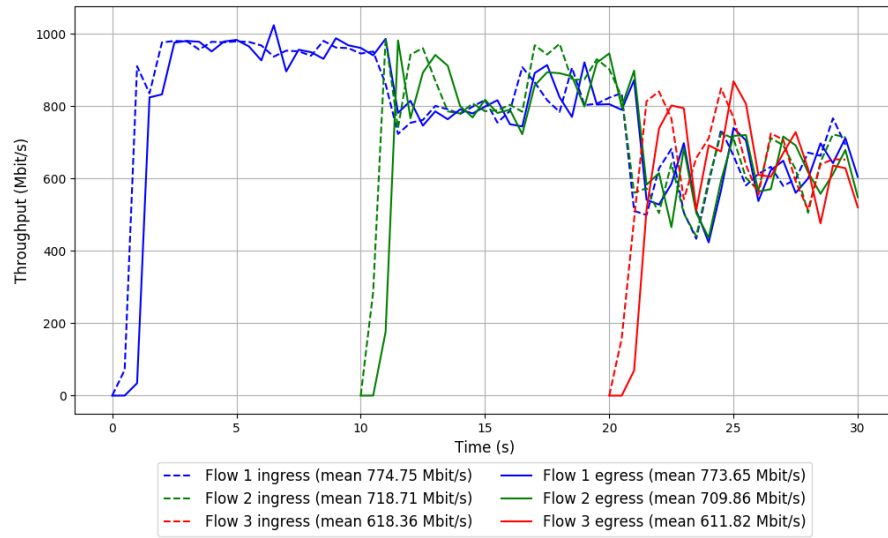
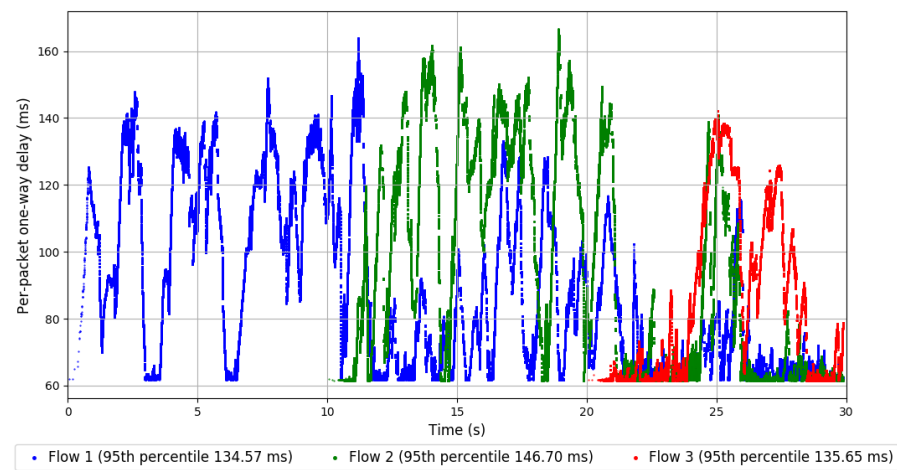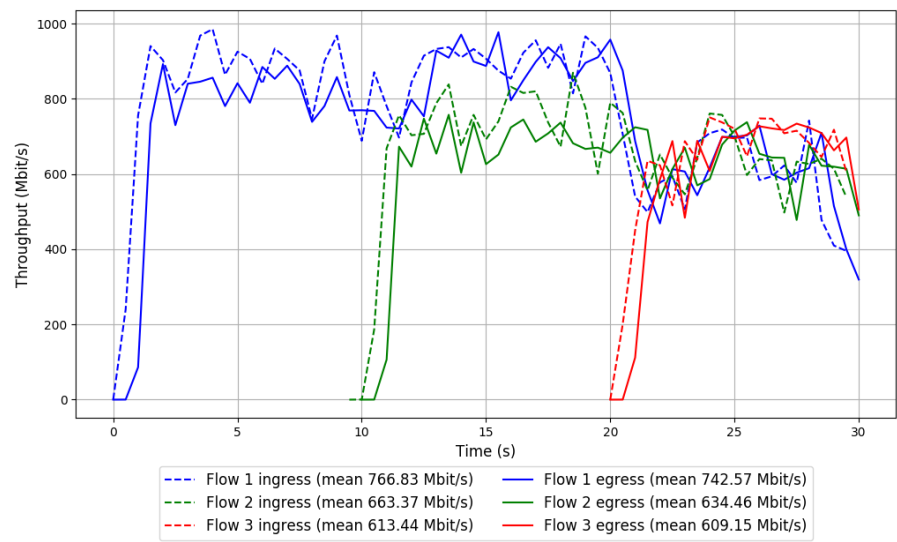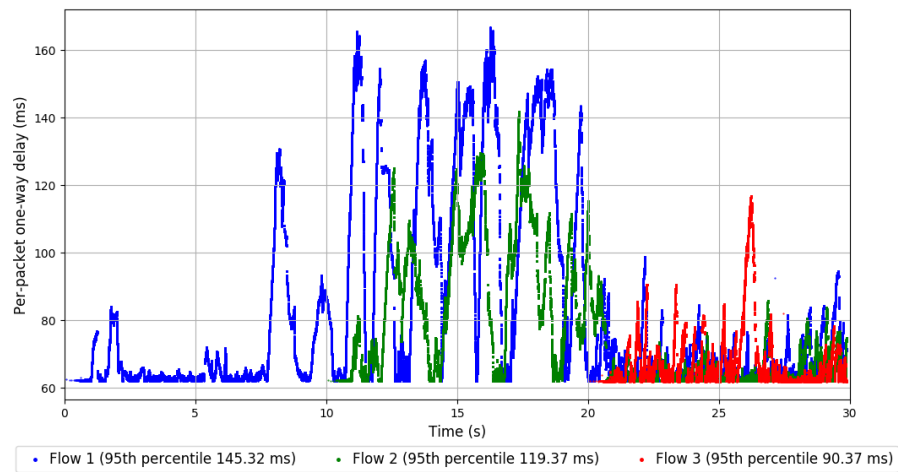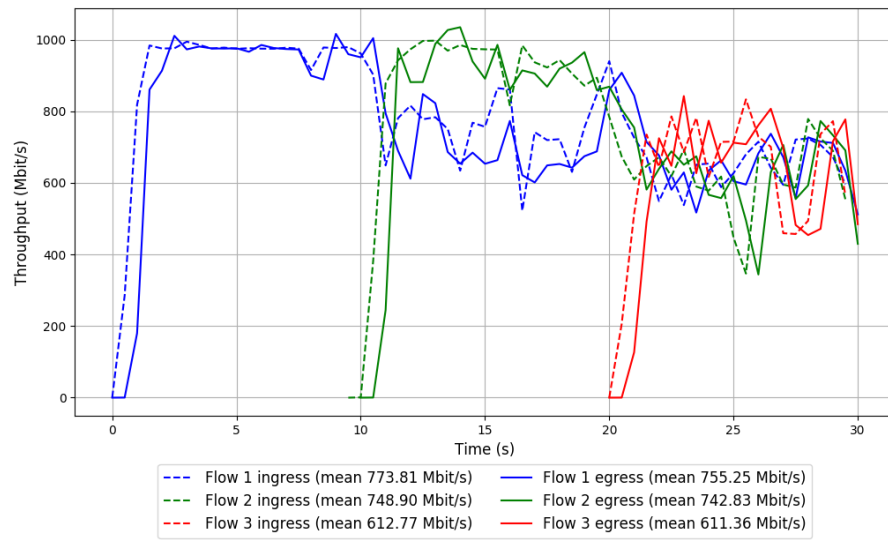Run 2: Report of FillP — Data Link

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```
Run 3: Statistics of FillP

Start at: 2018-09-11 11:52:26
End at: 2018-09-11 11:52:56
Local clock offset: 0.305 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-09-11 14:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1446.09 Mbit/s
95th percentile per-packet one-way delay: 106.396 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 773.65 Mbit/s
95th percentile per-packet one-way delay: 85.847 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 709.86 Mbit/s
95th percentile per-packet one-way delay: 116.387 ms
Loss rate: 1.87%
-- Flow 3:
Average throughput: 611.82 Mbit/s
95th percentile per-packet one-way delay: 114.122 ms
Loss rate: 2.41%
```

Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 774.75 Mbit/s) Flow 1 egress (mean 773.65 Mbit/s)
Flow 2 ingress (mean 718.71 Mbit/s) Flow 2 egress (mean 709.86 Mbit/s)
Flow 3 ingress (mean 618.36 Mbit/s) Flow 3 egress (mean 611.82 Mbit/s)

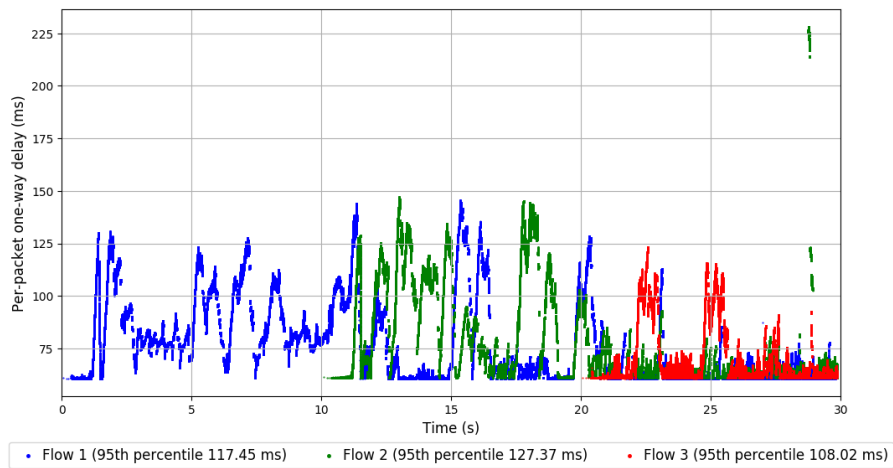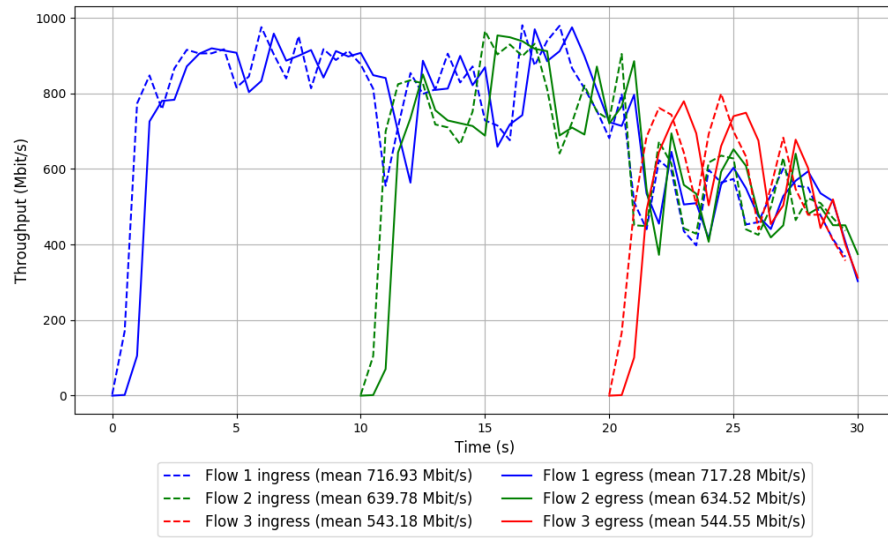Flow 1 (95th percentile 85.85 ms) Flow 2 (95th percentile 116.39 ms) Flow 3 (95th percentile 114.12 ms)

```
Run 4: Statistics of FillP

Start at: 2018-09-11 12:24:31
End at: 2018-09-11 12:25:01
Local clock offset: 0.37 ms
Remote clock offset: -0.567 ms


# Below is generated by plot.py at 2018-09-11 14:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1364.49 Mbit/s
95th percentile per-packet one-way delay: 139.390 ms
Loss rate: 3.79%
-- Flow 1:
Average throughput: 742.57 Mbit/s
95th percentile per-packet one-way delay: 134.570 ms
Loss rate: 3.58%
-- Flow 2:
Average throughput: 634.46 Mbit/s
95th percentile per-packet one-way delay: 146.703 ms
Loss rate: 4.97%
-- Flow 3:
Average throughput: 609.15 Mbit/s
95th percentile per-packet one-way delay: 135.646 ms
Loss rate: 1.99%
```

Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 766.83 Mbit/s) --- Flow 1 egress (mean 742.57 Mbit/s)
Flow 2 ingress (mean 663.37 Mbit/s) --- Flow 2 egress (mean 634.46 Mbit/s)
Flow 3 ingress (mean 613.44 Mbit/s) --- Flow 3 egress (mean 609.15 Mbit/s)

Flow 1 (95th percentile 134.57 ms) • Flow 2 (95th percentile 146.70 ms) • Flow 3 (95th percentile 135.65 ms)

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```
Run 5: Statistics of FillP

Start at: 2018-09-11 12:56:44
End at: 2018-09-11 12:57:14
Local clock offset: 0.283 ms
Remote clock offset: -0.883 ms

# Below is generated by plot.py at 2018-09-11 14:40:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1449.56 Mbit/s
95th percentile per-packet one-way delay: 133.153 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 755.25 Mbit/s
95th percentile per-packet one-way delay: 145.320 ms
Loss rate: 2.82%
-- Flow 2:
Average throughput: 742.83 Mbit/s
95th percentile per-packet one-way delay: 119.368 ms
Loss rate: 1.45%
-- Flow 3:
Average throughput: 611.36 Mbit/s
95th percentile per-packet one-way delay: 90.369 ms
Loss rate: 1.52%
```
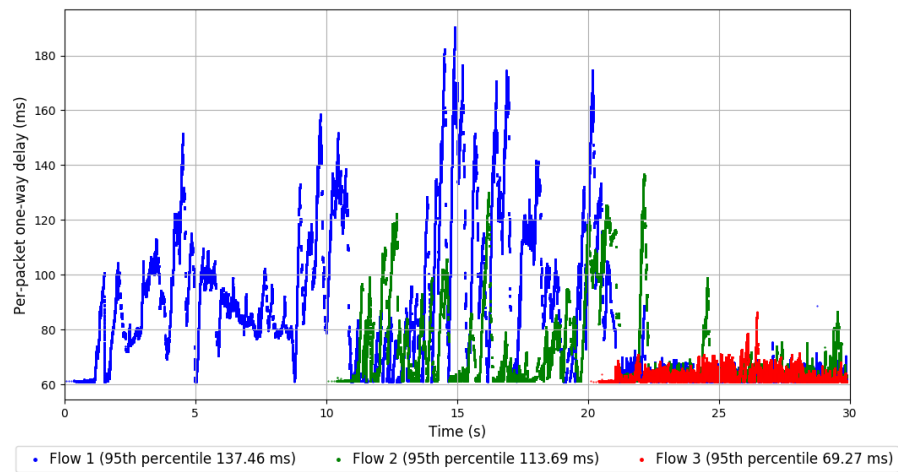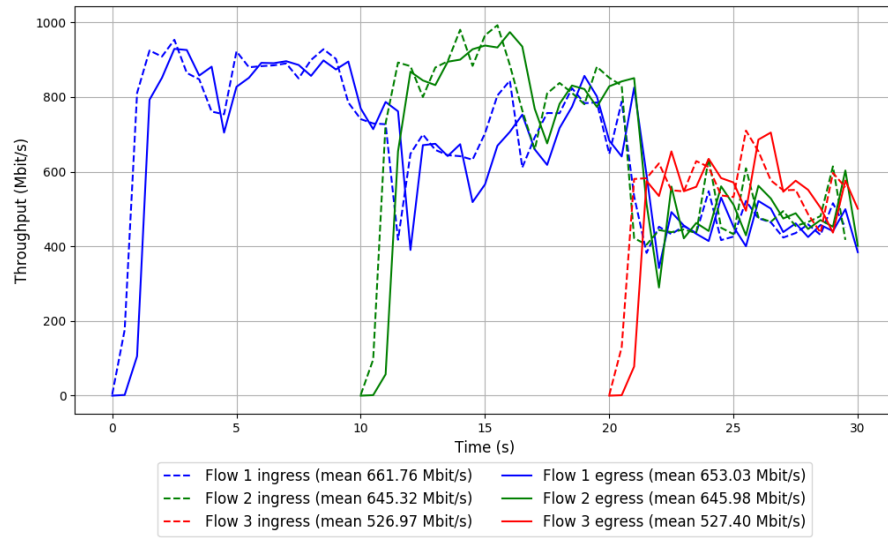
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 773.81 Mbit/s) --- Flow 1 egress (mean 755.25 Mbit/s)
Flow 2 ingress (mean 748.90 Mbit/s) --- Flow 2 egress (mean 742.83 Mbit/s)
Flow 3 ingress (mean 612.77 Mbit/s) --- Flow 3 egress (mean 611.36 Mbit/s)

Flow 1 (95th percentile 145.32 ms) • Flow 2 (95th percentile 119.37 ms) • Flow 3 (95th percentile 90.37 ms)

```
Run 1: Statistics of FillP-Sheep

Start at: 2018-09-11 10:50:32
End at: 2018-09-11 10:51:02
Local clock offset: 0.198 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2018-09-11 14:40:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1317.47 Mbit/s
95th percentile per-packet one-way delay: 120.180 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 717.28 Mbit/s
95th percentile per-packet one-way delay: 117.448 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 634.52 Mbit/s
95th percentile per-packet one-way delay: 127.372 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 544.55 Mbit/s
95th percentile per-packet one-way delay: 108.015 ms
Loss rate: 0.96%
```
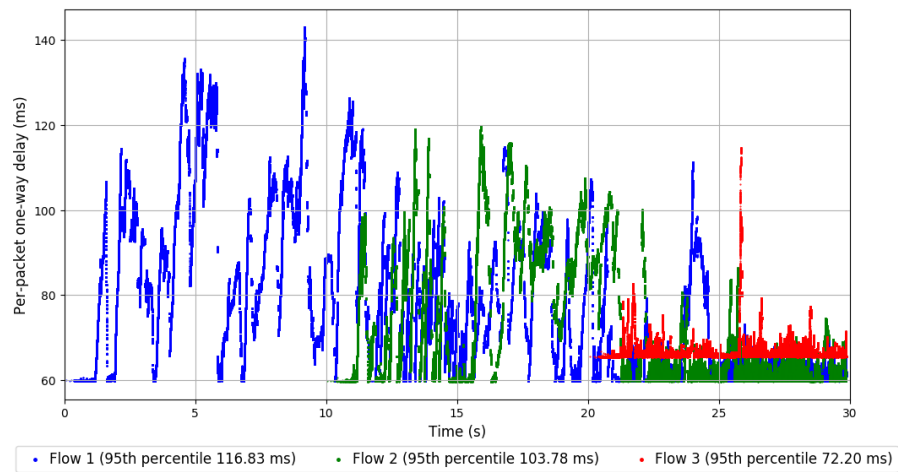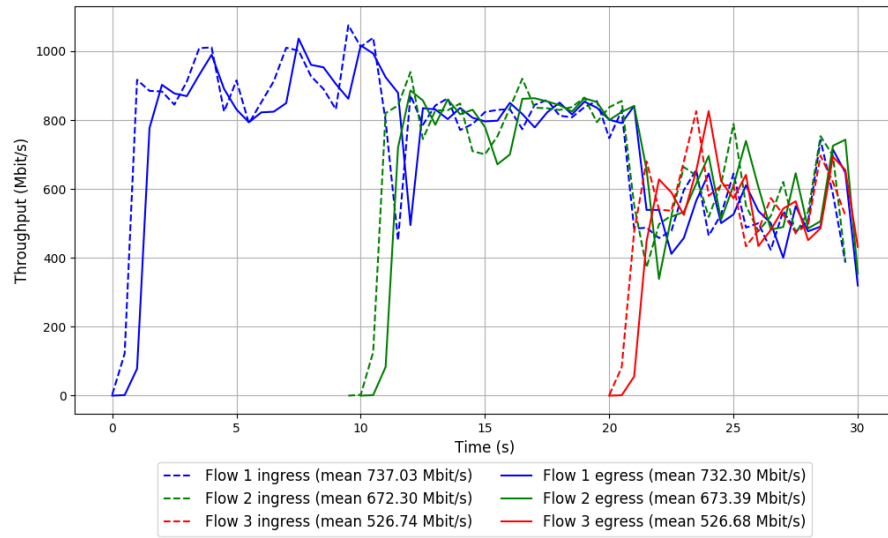
Run 1: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 716.93 Mbit/s)   —— Flow 1 egress (mean 717.28 Mbit/s)
- - - - Flow 2 ingress (mean 639.78 Mbit/s)   —— Flow 2 egress (mean 634.52 Mbit/s)
- - - - Flow 3 ingress (mean 543.18 Mbit/s)   —— Flow 3 egress (mean 544.55 Mbit/s)

- Flow 1 (95th percentile 117.45 ms)   • Flow 2 (95th percentile 127.37 ms)   • Flow 3 (95th percentile 108.02 ms)
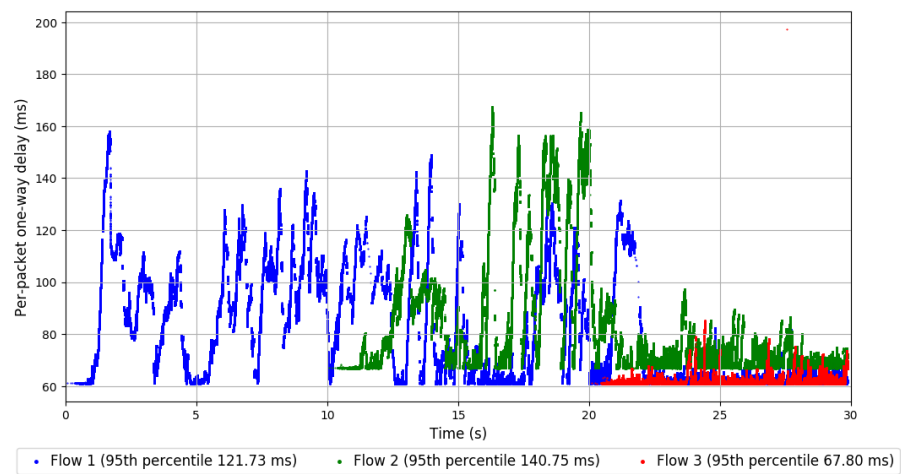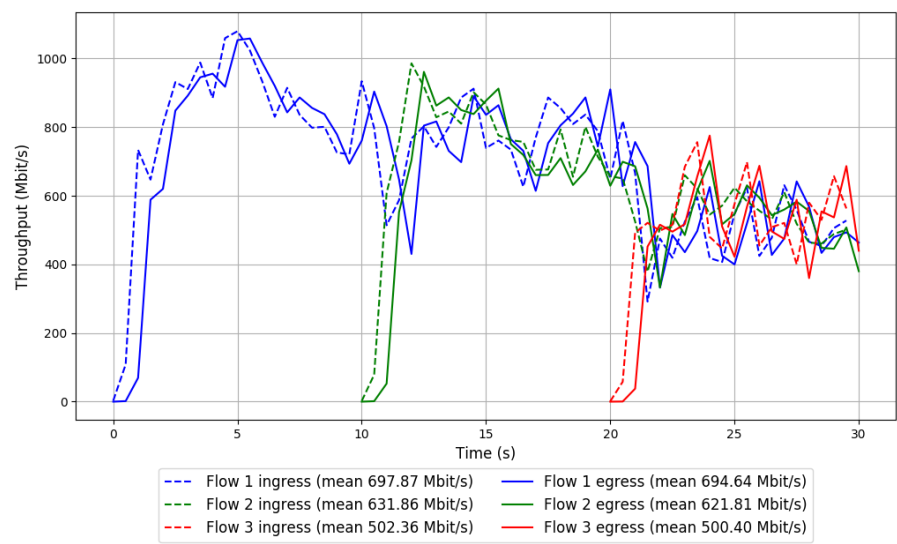
```
Run 2: Statistics of FillP-Sheep

Start at: 2018-09-11 11:22:32
End at: 2018-09-11 11:23:02
Local clock offset: 0.259 ms
Remote clock offset: -0.227 ms


# Below is generated by plot.py at 2018-09-11 14:40:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1254.66 Mbit/s
95th percentile per-packet one-way delay: 126.322 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 653.03 Mbit/s
95th percentile per-packet one-way delay: 137.457 ms
Loss rate: 1.74%
-- Flow 2:
Average throughput: 645.98 Mbit/s
95th percentile per-packet one-way delay: 113.694 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 527.40 Mbit/s
95th percentile per-packet one-way delay: 69.268 ms
Loss rate: 1.23%
```

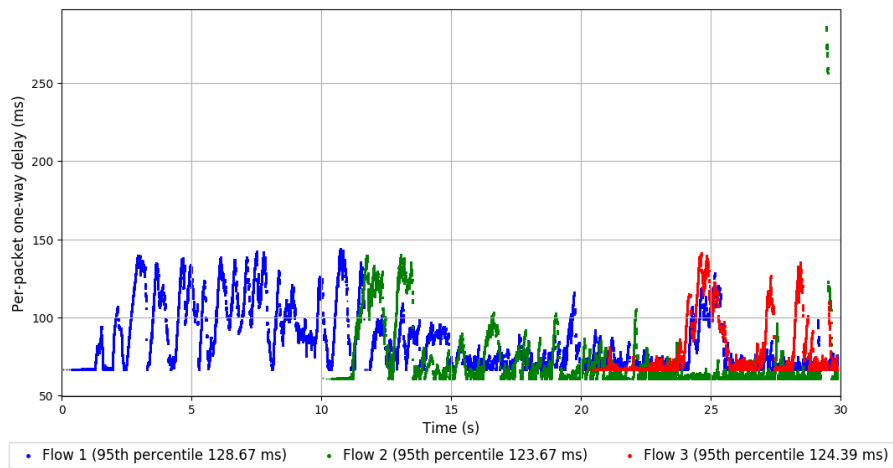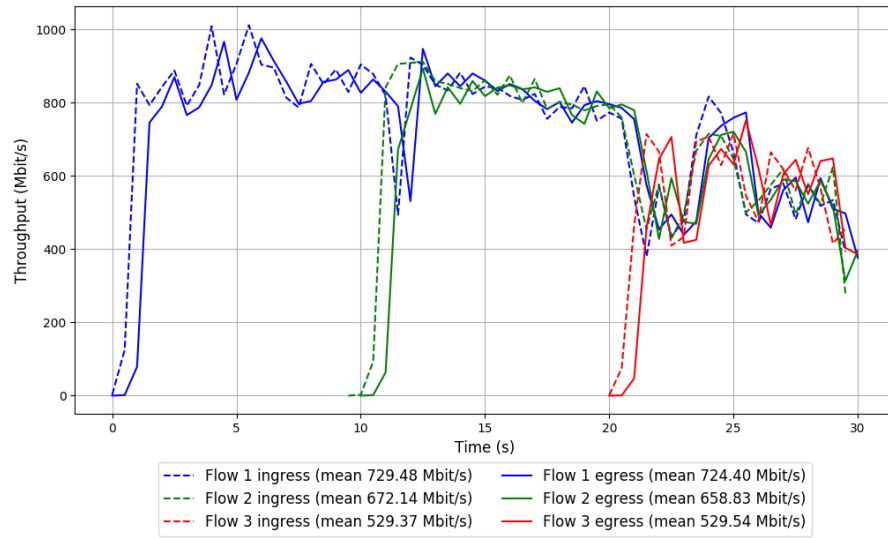Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 661.76 Mbit/s) --- Flow 1 egress (mean 653.03 Mbit/s)
Flow 2 ingress (mean 645.32 Mbit/s) --- Flow 2 egress (mean 645.98 Mbit/s)
Flow 3 ingress (mean 526.97 Mbit/s) --- Flow 3 egress (mean 527.40 Mbit/s)

Flow 1 (95th percentile 137.46 ms)   Flow 2 (95th percentile 113.69 ms)   Flow 3 (95th percentile 69.27 ms)

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```
Run 3: Statistics of FillP-Sheep

Start at: 2018-09-11 11:54:38
End at: 2018-09-11 11:55:08
Local clock offset: 0.325 ms
Remote clock offset: 1.121 ms


# Below is generated by plot.py at 2018-09-11 14:41:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1352.59 Mbit/s
95th percentile per-packet one-way delay: 110.518 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 732.30 Mbit/s
95th percentile per-packet one-way delay: 116.825 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 673.39 Mbit/s
95th percentile per-packet one-way delay: 103.779 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 526.68 Mbit/s
95th percentile per-packet one-way delay: 72.200 ms
Loss rate: 1.38%
```

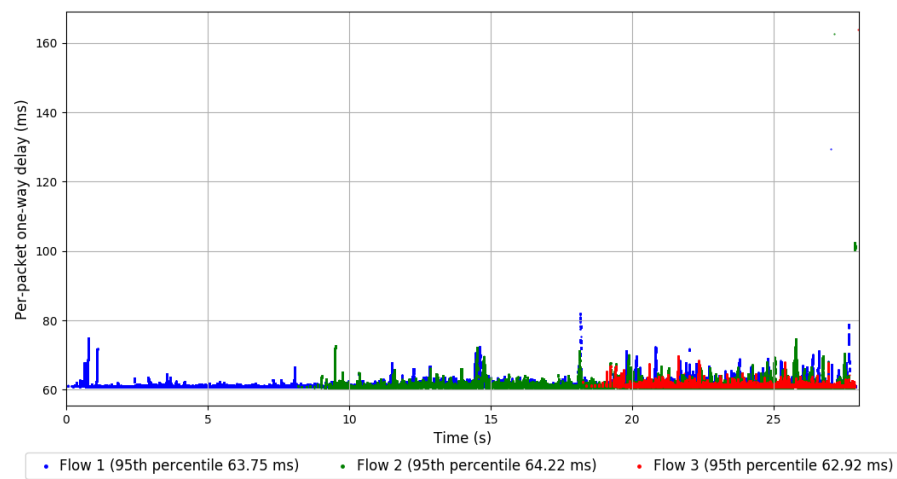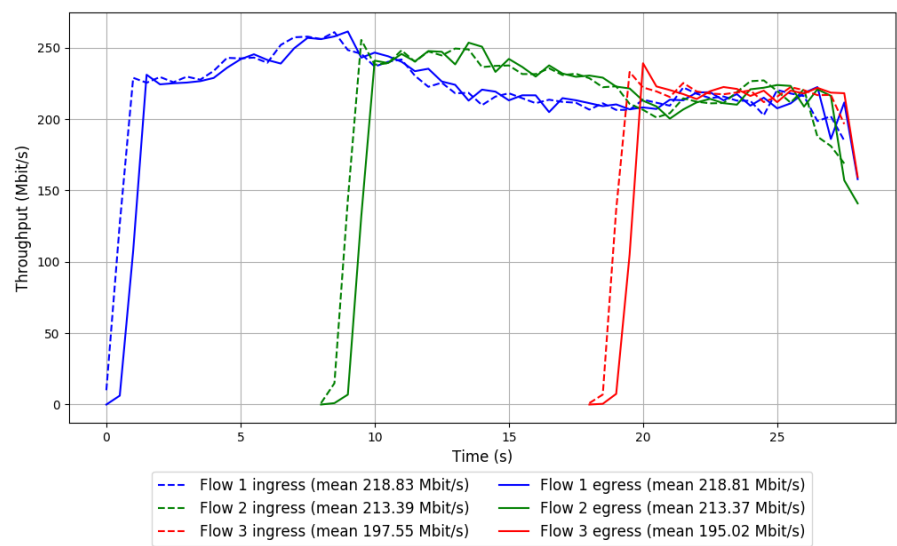# Run 3: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 737.03 Mbit/s) ——— Flow 1 egress (mean 732.30 Mbit/s)
- - - - Flow 2 ingress (mean 672.30 Mbit/s) ——— Flow 2 egress (mean 673.39 Mbit/s)
- - - - Flow 3 ingress (mean 526.74 Mbit/s) ——— Flow 3 egress (mean 526.68 Mbit/s)

- Flow 1 (95th percentile 116.83 ms)   - Flow 2 (95th percentile 103.78 ms)   - Flow 3 (95th percentile 72.20 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2018-09-11 12:26:41
End at: 2018-09-11 12:27:11
Local clock offset: 0.391 ms
Remote clock offset: -0.203 ms


# Below is generated by plot.py at 2018-09-11 14:52:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1271.41 Mbit/s
95th percentile per-packet one-way delay: 125.599 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 694.64 Mbit/s
95th percentile per-packet one-way delay: 121.735 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 621.81 Mbit/s
95th percentile per-packet one-way delay: 140.755 ms
Loss rate: 2.26%
-- Flow 3:
Average throughput: 500.40 Mbit/s
95th percentile per-packet one-way delay: 67.798 ms
Loss rate: 1.69%
```

Run 4: Report of FillP-Sheep — Data Link
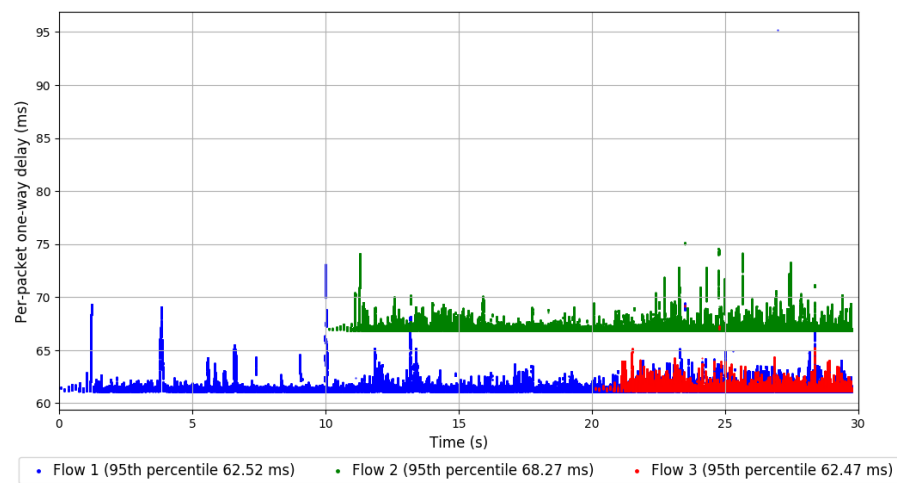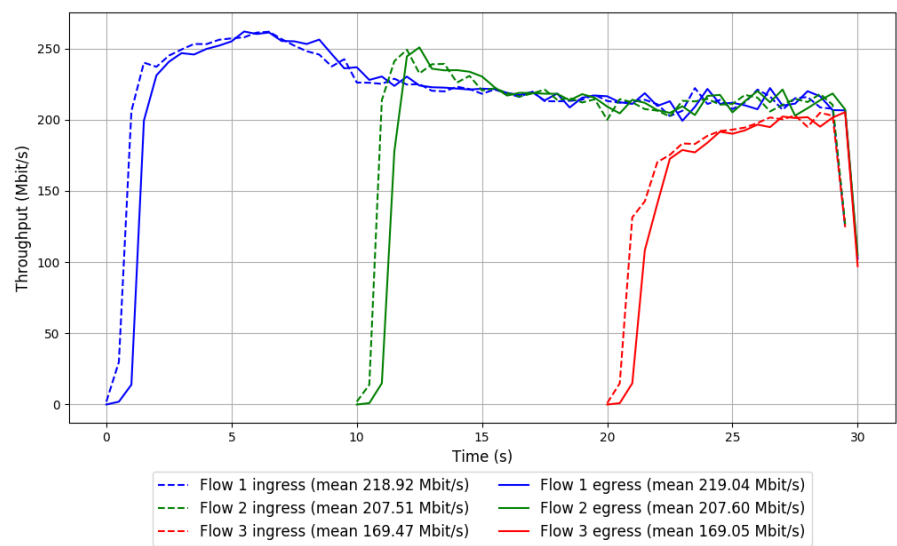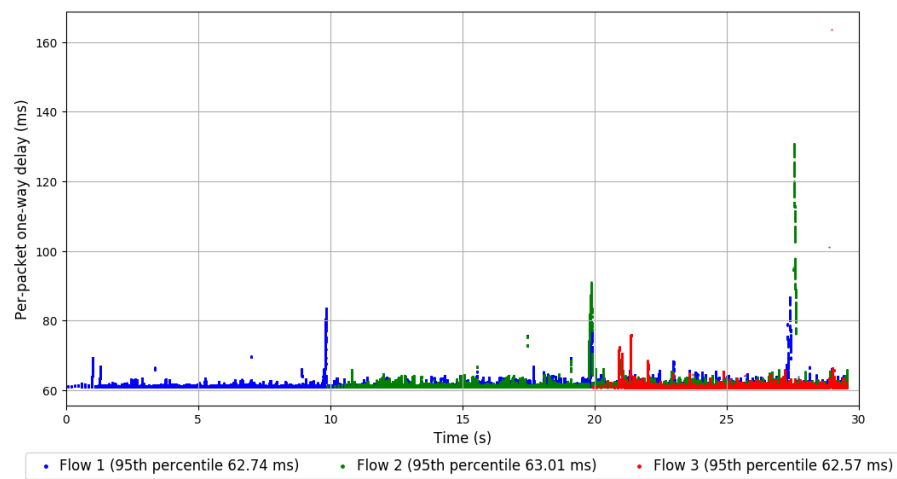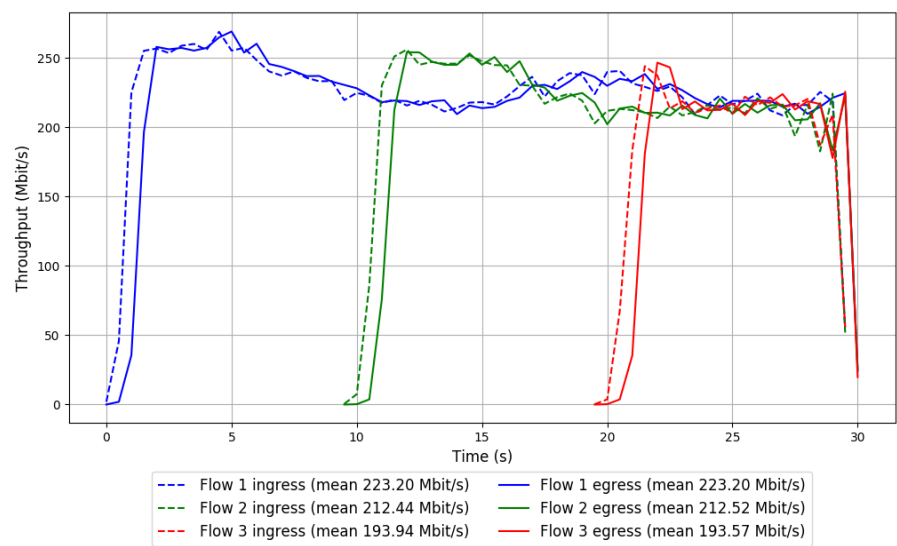

- - - Flow 1 ingress (mean 697.87 Mbit/s) —— Flow 1 egress (mean 694.64 Mbit/s)
- - - Flow 2 ingress (mean 631.86 Mbit/s) —— Flow 2 egress (mean 621.81 Mbit/s)
- - - Flow 3 ingress (mean 502.36 Mbit/s) —— Flow 3 egress (mean 500.40 Mbit/s)

• Flow 1 (95th percentile 121.73 ms)   • Flow 2 (95th percentile 140.75 ms)   • Flow 3 (95th percentile 67.80 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2018-09-11 12:58:57
End at: 2018-09-11 12:59:27
Local clock offset: 0.147 ms
Remote clock offset: -0.146 ms


# Below is generated by plot.py at 2018-09-11 15:05:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1336.01 Mbit/s
95th percentile per-packet one-way delay: 126.401 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 724.40 Mbit/s
95th percentile per-packet one-way delay: 128.674 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 658.83 Mbit/s
95th percentile per-packet one-way delay: 123.670 ms
Loss rate: 2.61%
-- Flow 3:
Average throughput: 529.54 Mbit/s
95th percentile per-packet one-way delay: 124.389 ms
Loss rate: 1.33%
```

Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 729.48 Mbit/s) --- Flow 1 egress (mean 724.40 Mbit/s)
Flow 2 ingress (mean 672.14 Mbit/s) --- Flow 2 egress (mean 658.83 Mbit/s)
Flow 3 ingress (mean 529.37 Mbit/s) --- Flow 3 egress (mean 529.54 Mbit/s)

Flow 1 (95th percentile 128.67 ms)   Flow 2 (95th percentile 123.67 ms)   Flow 3 (95th percentile 124.39 ms)
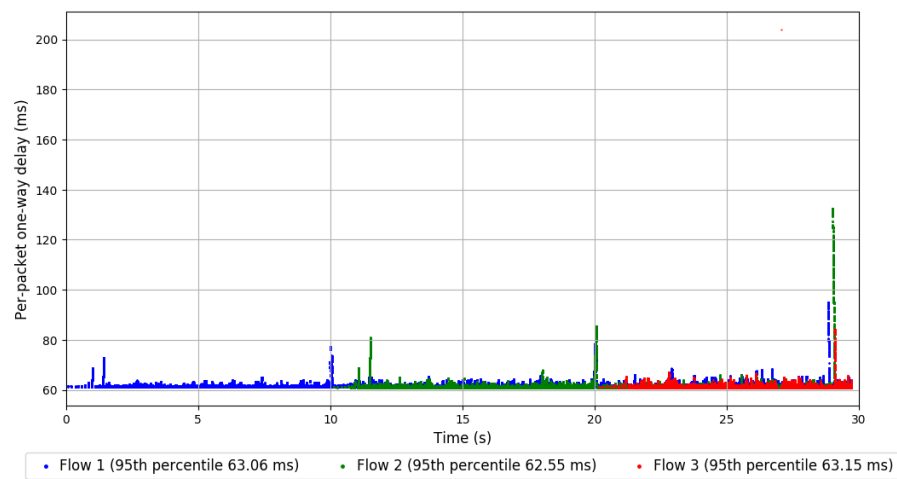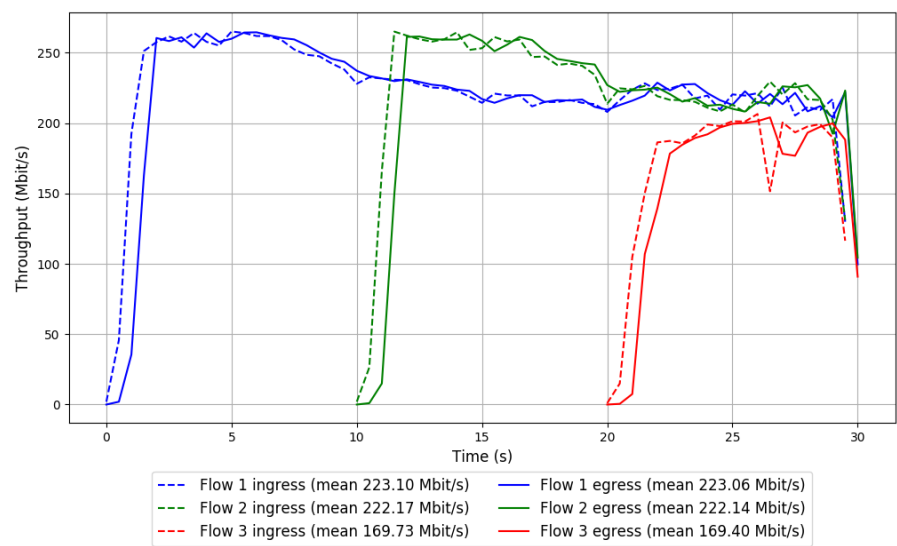
```
Run 1: Statistics of Indigo

Start at: 2018-09-11 11:03:17
End at: 2018-09-11 11:03:47
Local clock offset: 0.168 ms
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2018-09-11 15:05:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 436.48 Mbit/s
95th percentile per-packet one-way delay: 63.812 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 218.81 Mbit/s
95th percentile per-packet one-way delay: 63.752 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 213.37 Mbit/s
95th percentile per-packet one-way delay: 64.215 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 195.02 Mbit/s
95th percentile per-packet one-way delay: 62.925 ms
Loss rate: 1.56%
```
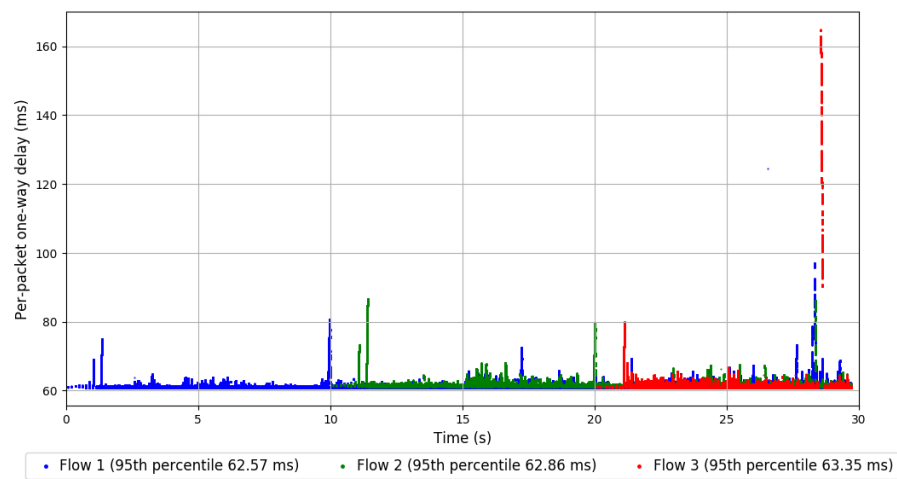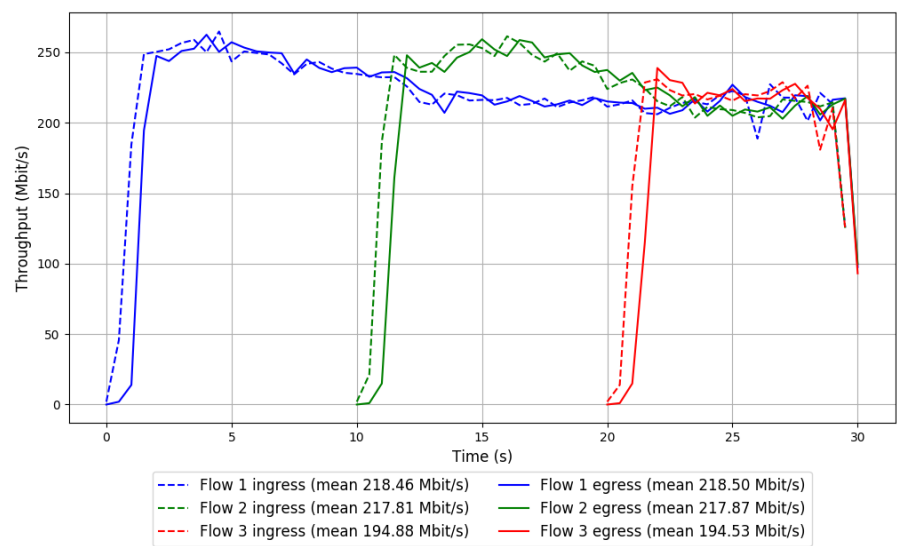
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2018-09-11 11:35:08
End at: 2018-09-11 11:35:38
Local clock offset: 0.282 ms
Remote clock offset: -0.258 ms


# Below is generated by plot.py at 2018-09-11 15:05:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 410.94 Mbit/s
95th percentile per-packet one-way delay: 67.460 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 219.04 Mbit/s
95th percentile per-packet one-way delay: 62.521 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 207.60 Mbit/s
95th percentile per-packet one-way delay: 68.272 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 169.05 Mbit/s
95th percentile per-packet one-way delay: 62.473 ms
Loss rate: 1.58%
```
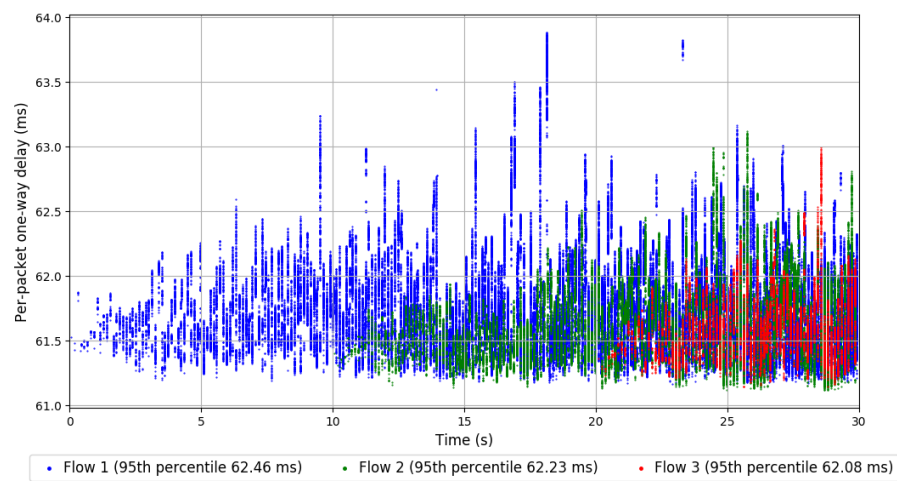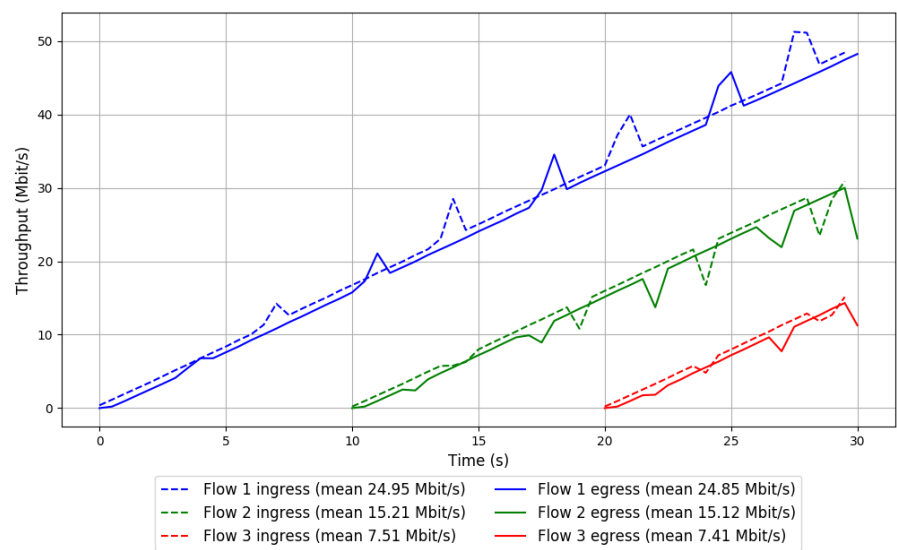
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2018-09-11 12:07:24
End at: 2018-09-11 12:07:54
Local clock offset: 0.339 ms
Remote clock offset: -0.264 ms


# Below is generated by plot.py at 2018-09-11 15:05:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 428.07 Mbit/s
95th percentile per-packet one-way delay: 62.809 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 223.20 Mbit/s
95th percentile per-packet one-way delay: 62.738 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 212.52 Mbit/s
95th percentile per-packet one-way delay: 63.006 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 193.57 Mbit/s
95th percentile per-packet one-way delay: 62.573 ms
Loss rate: 1.50%
```
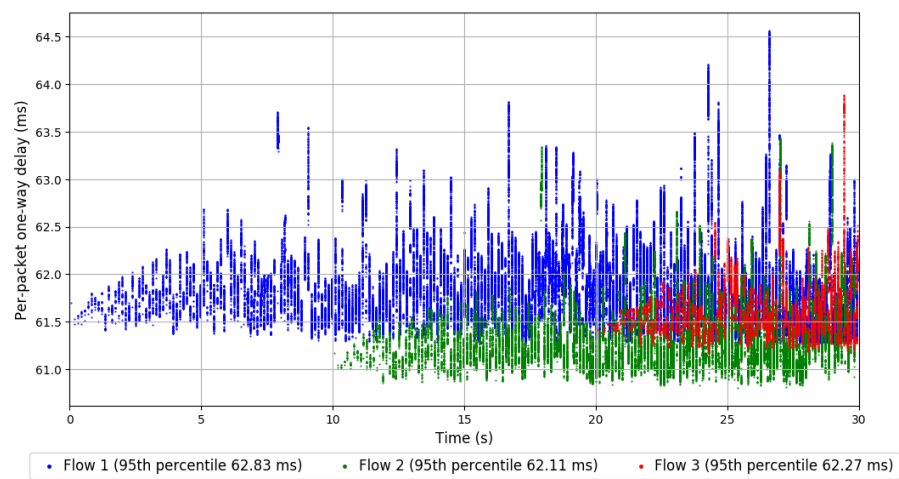
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2018-09-11 12:39:13
End at: 2018-09-11 12:39:43
Local clock offset: 0.426 ms
Remote clock offset: -0.306 ms


# Below is generated by plot.py at 2018-09-11 15:05:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.15 Mbit/s
95th percentile per-packet one-way delay: 62.908 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 223.06 Mbit/s
95th percentile per-packet one-way delay: 63.064 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 222.14 Mbit/s
95th percentile per-packet one-way delay: 62.553 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 169.40 Mbit/s
95th percentile per-packet one-way delay: 63.151 ms
Loss rate: 1.55%
```
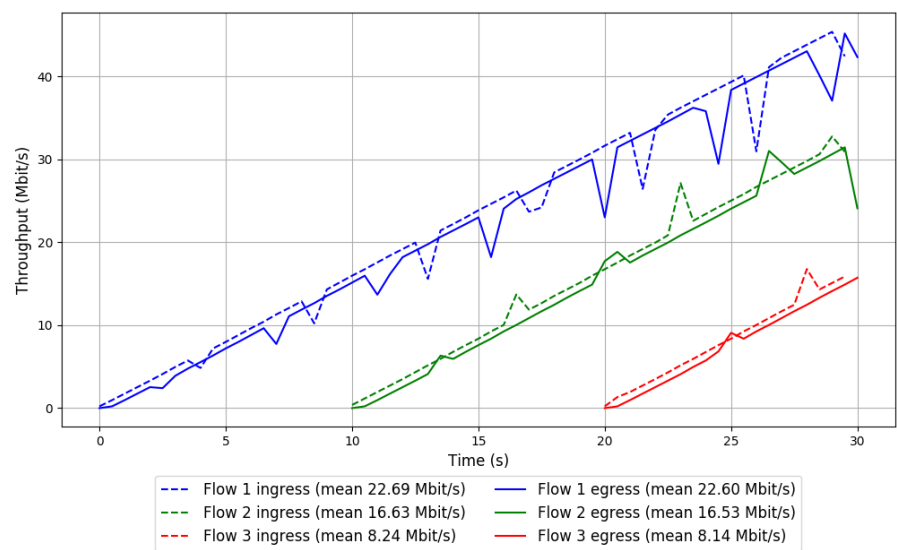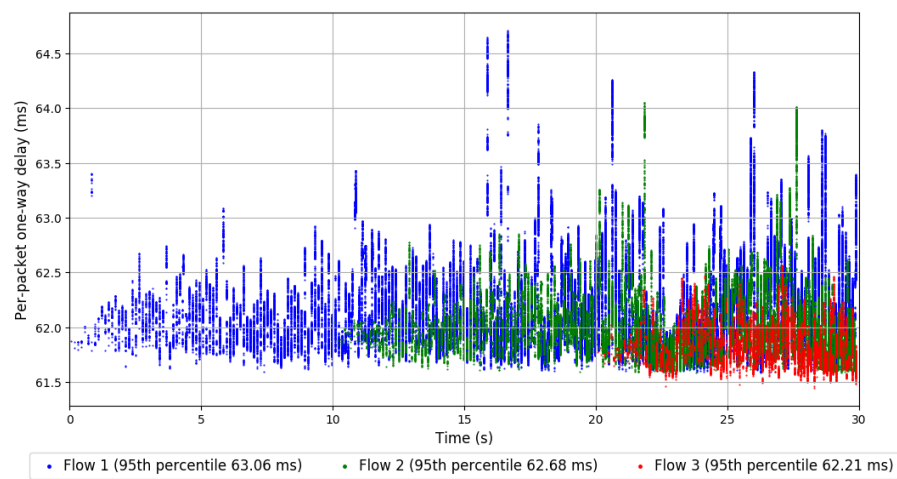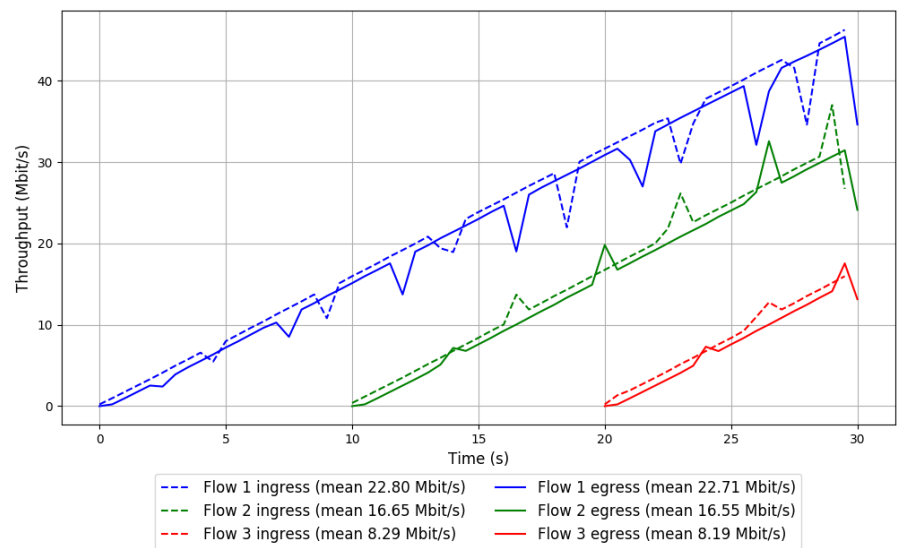
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 223.10 Mbit/s) --- Flow 1 egress (mean 223.06 Mbit/s)
Flow 2 ingress (mean 222.17 Mbit/s) --- Flow 2 egress (mean 222.14 Mbit/s)
Flow 3 ingress (mean 169.73 Mbit/s) --- Flow 3 egress (mean 169.40 Mbit/s)

Flow 1 (95th percentile 63.06 ms)   Flow 2 (95th percentile 62.55 ms)   Flow 3 (95th percentile 63.15 ms)

```
Run 5: Statistics of Indigo

Start at: 2018-09-11 13:11:44
End at: 2018-09-11 13:12:14
Local clock offset: -0.126 ms
Remote clock offset: -0.158 ms


# Below is generated by plot.py at 2018-09-11 15:05:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 425.68 Mbit/s
95th percentile per-packet one-way delay: 62.792 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 218.50 Mbit/s
95th percentile per-packet one-way delay: 62.568 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 217.87 Mbit/s
95th percentile per-packet one-way delay: 62.864 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 194.53 Mbit/s
95th percentile per-packet one-way delay: 63.351 ms
Loss rate: 1.48%
```

Run 5: Report of Indigo — Data Link

Flow 1 ingress (mean 218.46 Mbit/s) — — —   Flow 1 egress (mean 218.50 Mbit/s) ———
Flow 2 ingress (mean 217.81 Mbit/s) — — —   Flow 2 egress (mean 217.87 Mbit/s) ———
Flow 3 ingress (mean 194.88 Mbit/s) — — —   Flow 3 egress (mean 194.53 Mbit/s) ———

Flow 1 (95th percentile 62.57 ms)   •   Flow 2 (95th percentile 62.86 ms)   •   Flow 3 (95th percentile 63.35 ms)
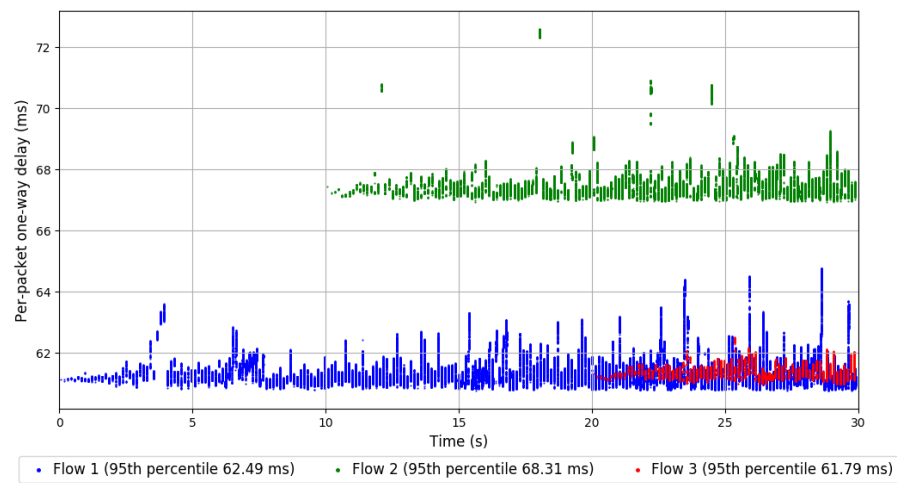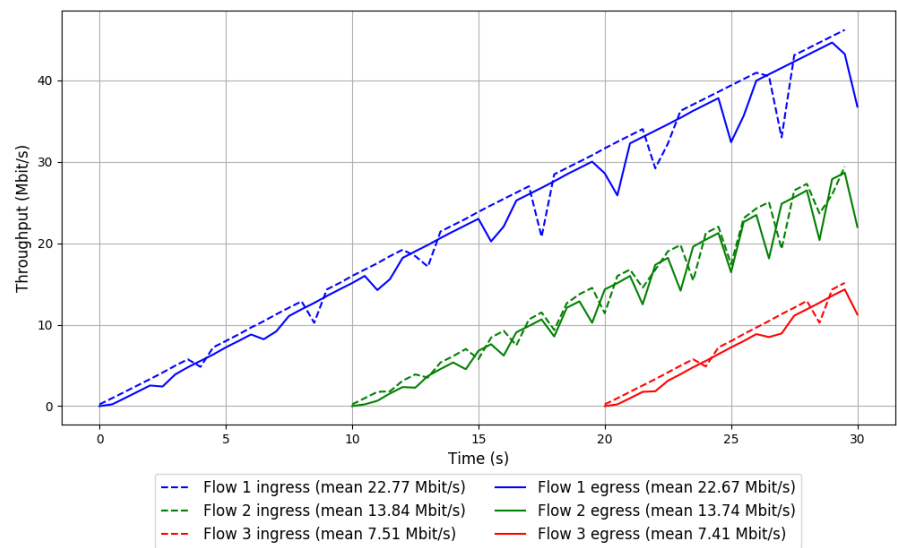
64

```
Run 1: Statistics of LEDBAT

Start at: 2018-09-11 11:02:02
End at: 2018-09-11 11:02:32
Local clock offset: 0.204 ms
Remote clock offset: -0.316 ms

# Below is generated by plot.py at 2018-09-11 15:05:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.28 Mbit/s
95th percentile per-packet one-way delay: 62.374 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 24.85 Mbit/s
95th percentile per-packet one-way delay: 62.462 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 15.12 Mbit/s
95th percentile per-packet one-way delay: 62.231 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 7.41 Mbit/s
95th percentile per-packet one-way delay: 62.076 ms
Loss rate: 2.61%
```

Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-09-11 11:33:53
End at: 2018-09-11 11:34:23
Local clock offset: 0.271 ms
Remote clock offset: -0.263 ms

# Below is generated by plot.py at 2018-09-11 15:05:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.22 Mbit/s
95th percentile per-packet one-way delay: 62.700 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 22.60 Mbit/s
95th percentile per-packet one-way delay: 62.829 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 16.53 Mbit/s
95th percentile per-packet one-way delay: 62.111 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 62.269 ms
Loss rate: 2.43%
```
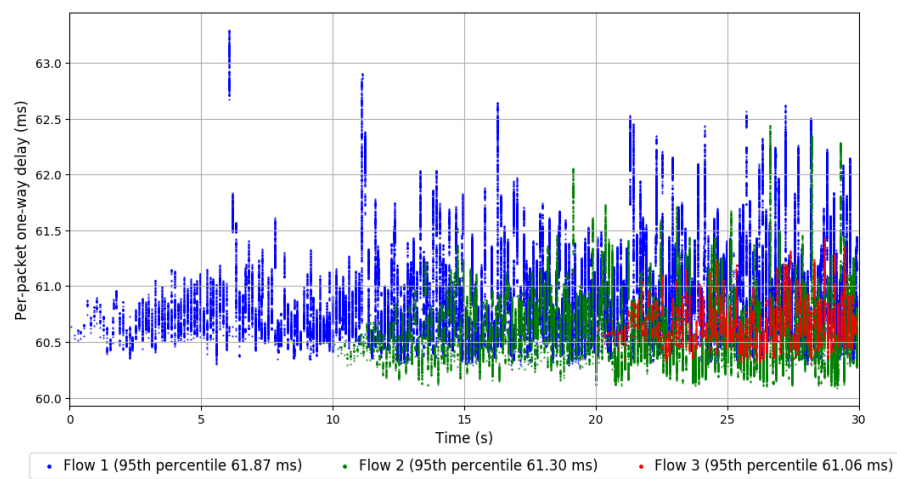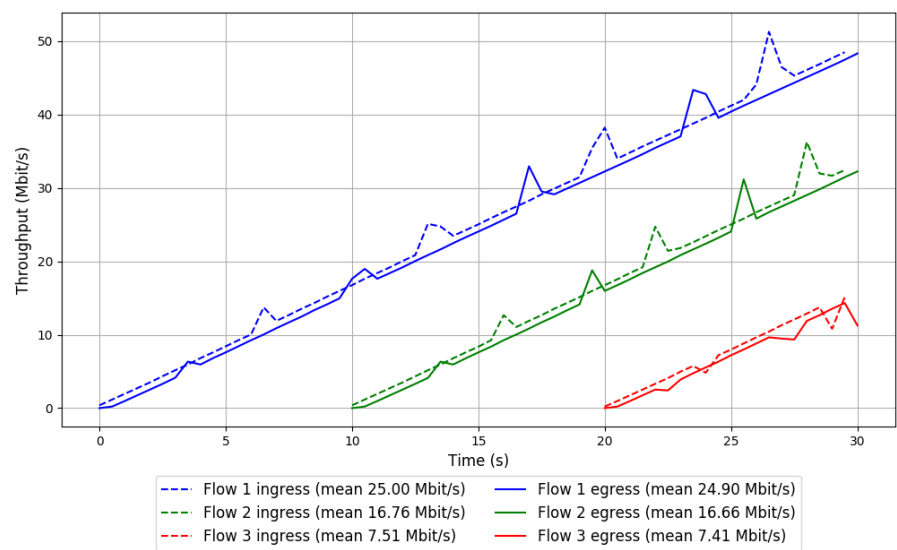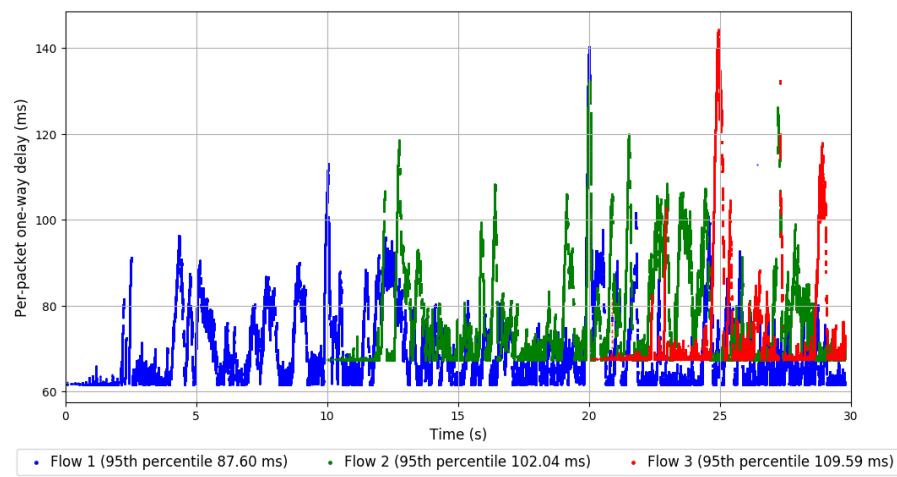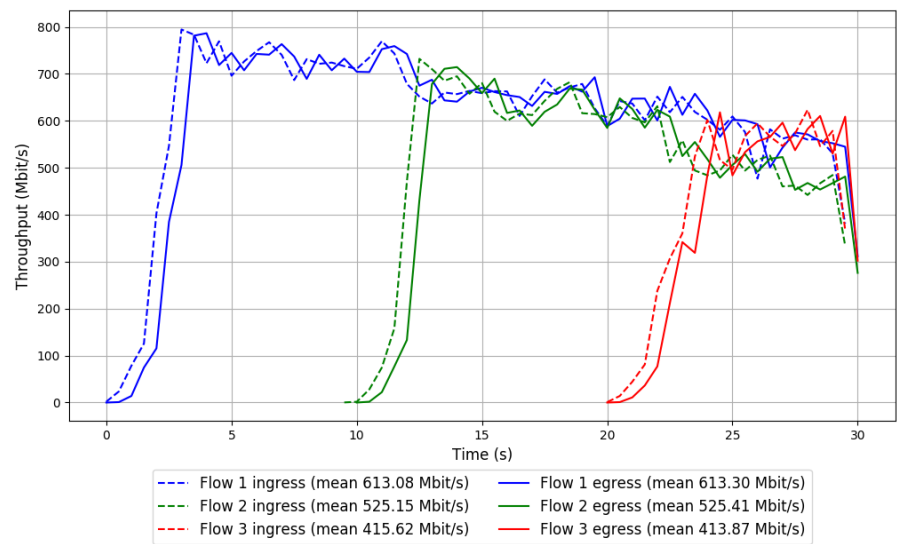
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-09-11 12:06:09
End at: 2018-09-11 12:06:39
Local clock offset: 0.366 ms
Remote clock offset: -0.875 ms


# Below is generated by plot.py at 2018-09-11 15:05:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.36 Mbit/s
95th percentile per-packet one-way delay: 62.941 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 22.71 Mbit/s
95th percentile per-packet one-way delay: 63.056 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 16.55 Mbit/s
95th percentile per-packet one-way delay: 62.678 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 62.207 ms
Loss rate: 2.47%
```
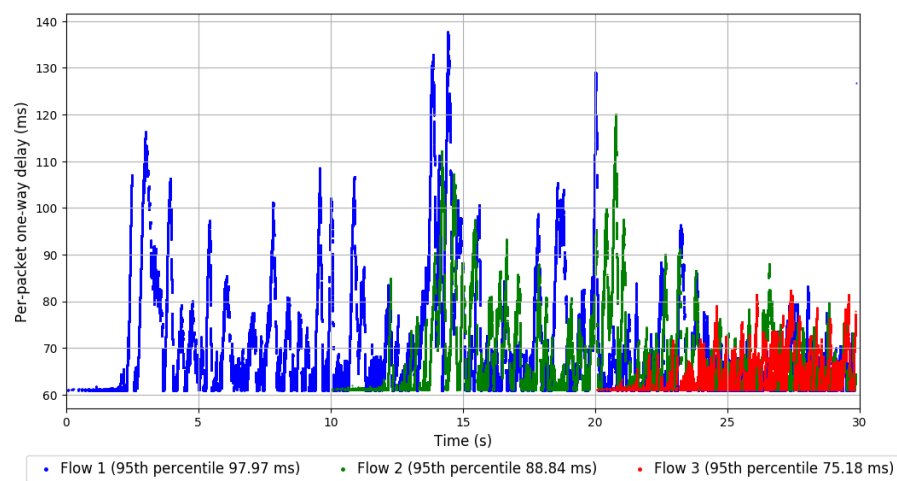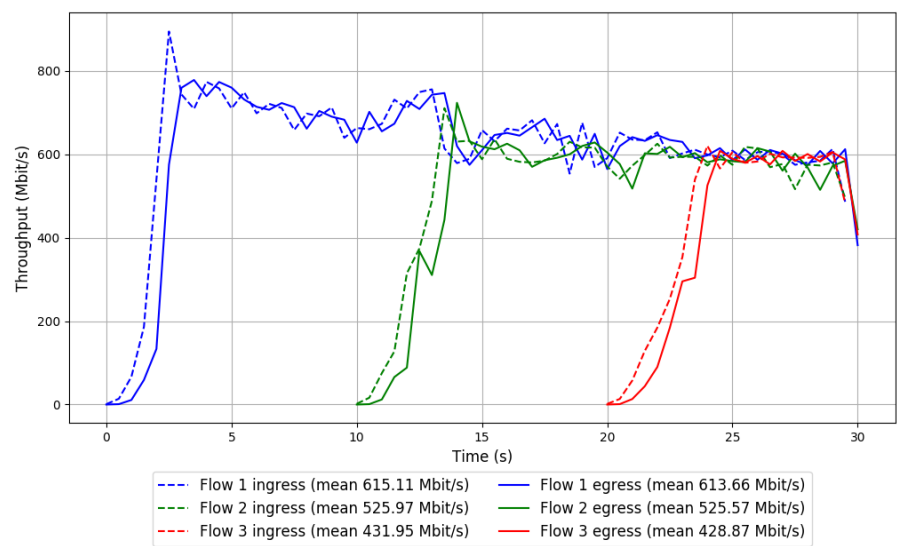
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2018-09-11 12:37:58
End at: 2018-09-11 12:38:28
Local clock offset: 0.399 ms
Remote clock offset: -0.203 ms

# Below is generated by plot.py at 2018-09-11 15:05:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.22 Mbit/s
95th percentile per-packet one-way delay: 67.795 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 22.67 Mbit/s
95th percentile per-packet one-way delay: 62.495 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 13.74 Mbit/s
95th percentile per-packet one-way delay: 68.313 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 7.41 Mbit/s
95th percentile per-packet one-way delay: 61.792 ms
Loss rate: 2.61%
```

Run 4: Report of LEDBAT — Data Link

- Flow 1 ingress (mean 22.77 Mbit/s)
- Flow 1 egress (mean 22.67 Mbit/s)
- Flow 2 ingress (mean 13.84 Mbit/s)
- Flow 2 egress (mean 13.74 Mbit/s)
- Flow 3 ingress (mean 7.51 Mbit/s)
- Flow 3 egress (mean 7.41 Mbit/s)

- Flow 1 (95th percentile 62.49 ms)
- Flow 2 (95th percentile 68.31 ms)
- Flow 3 (95th percentile 61.79 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2018-09-11 13:10:28
End at: 2018-09-11 13:10:58
Local clock offset: -0.101 ms
Remote clock offset: 0.464 ms

# Below is generated by plot.py at 2018-09-11 15:05:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.37 Mbit/s
95th percentile per-packet one-way delay: 61.728 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 24.90 Mbit/s
95th percentile per-packet one-way delay: 61.868 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 16.66 Mbit/s
95th percentile per-packet one-way delay: 61.300 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 7.41 Mbit/s
95th percentile per-packet one-way delay: 61.063 ms
Loss rate: 2.61%
```
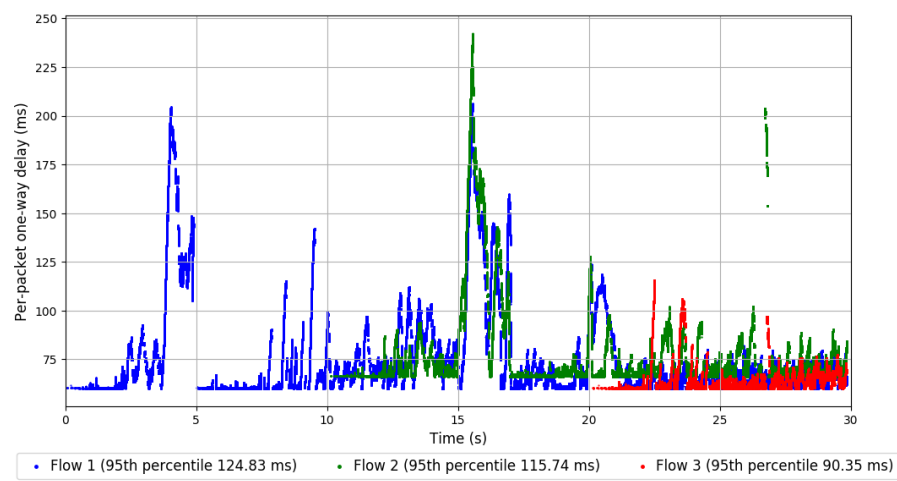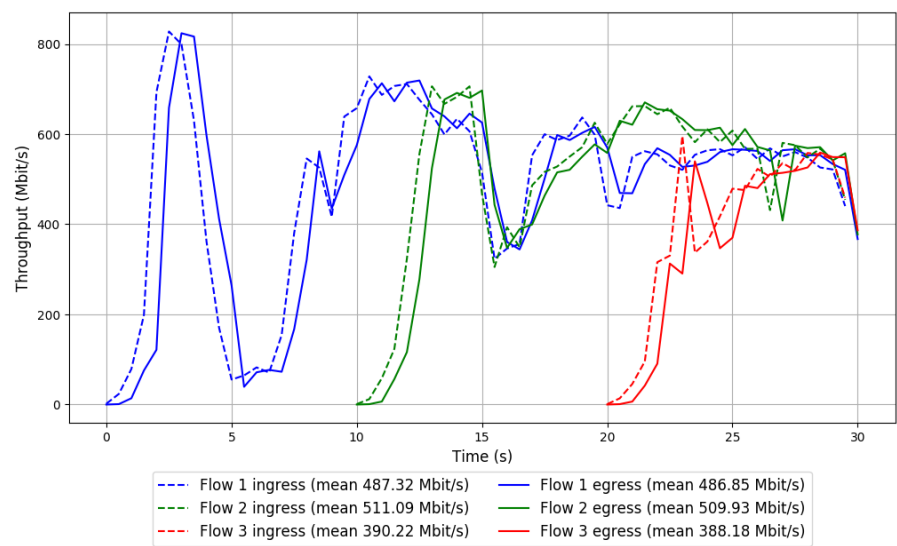
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-11 10:42:32
End at: 2018-09-11 10:43:02
Local clock offset: 0.167 ms
Remote clock offset: -0.857 ms


# Below is generated by plot.py at 2018-09-11 15:08:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1097.50 Mbit/s
95th percentile per-packet one-way delay: 96.235 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 613.30 Mbit/s
95th percentile per-packet one-way delay: 87.602 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 525.41 Mbit/s
95th percentile per-packet one-way delay: 102.041 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 413.87 Mbit/s
95th percentile per-packet one-way delay: 109.590 ms
Loss rate: 1.73%
```
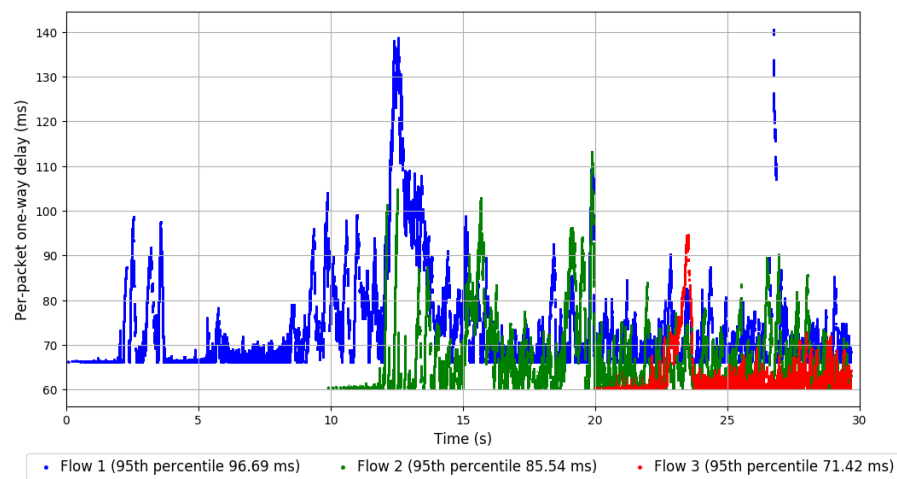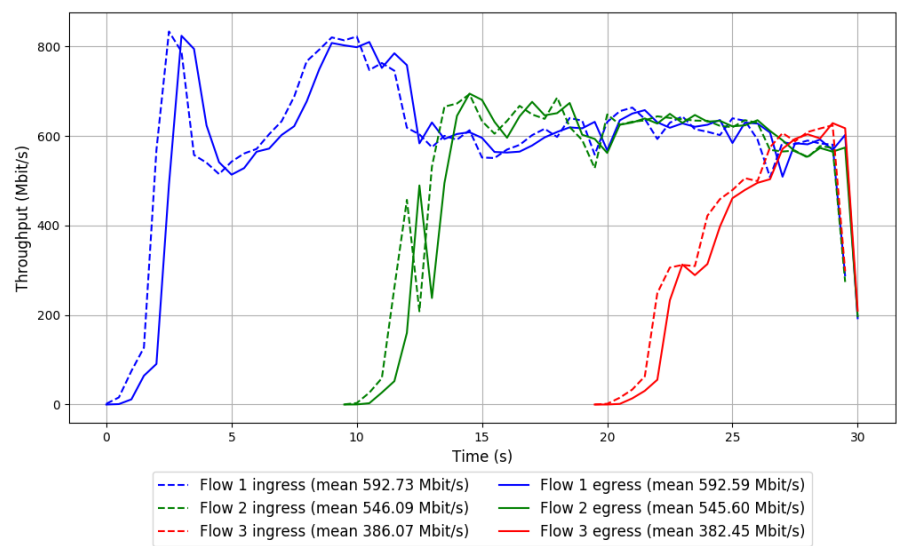
Run 1: Report of Indigo-Muses — Data Link

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```
Run 2: Statistics of Indigo-Muses

Start at: 2018-09-11 11:14:25
End at: 2018-09-11 11:14:55
Local clock offset: 0.214 ms
Remote clock offset: -0.207 ms


# Below is generated by plot.py at 2018-09-11 15:11:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1102.64 Mbit/s
95th percentile per-packet one-way delay: 94.140 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 613.66 Mbit/s
95th percentile per-packet one-way delay: 97.975 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 525.57 Mbit/s
95th percentile per-packet one-way delay: 88.845 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 428.87 Mbit/s
95th percentile per-packet one-way delay: 75.178 ms
Loss rate: 1.92%
```
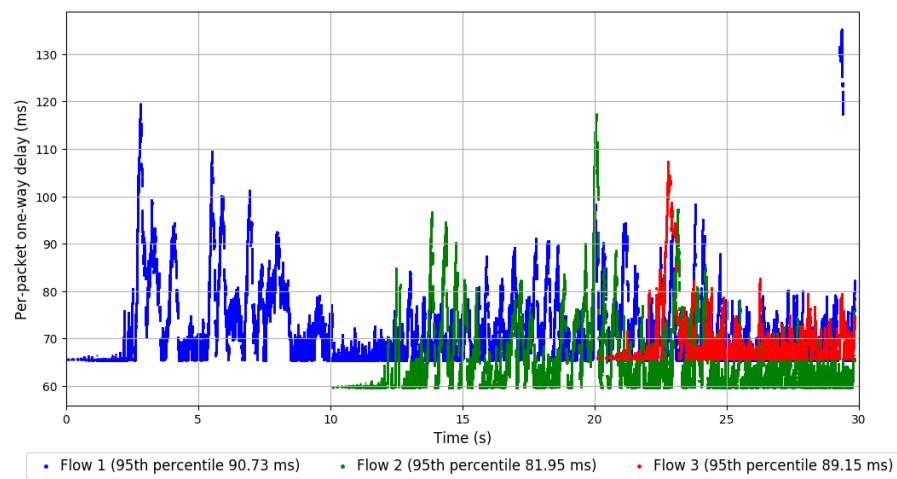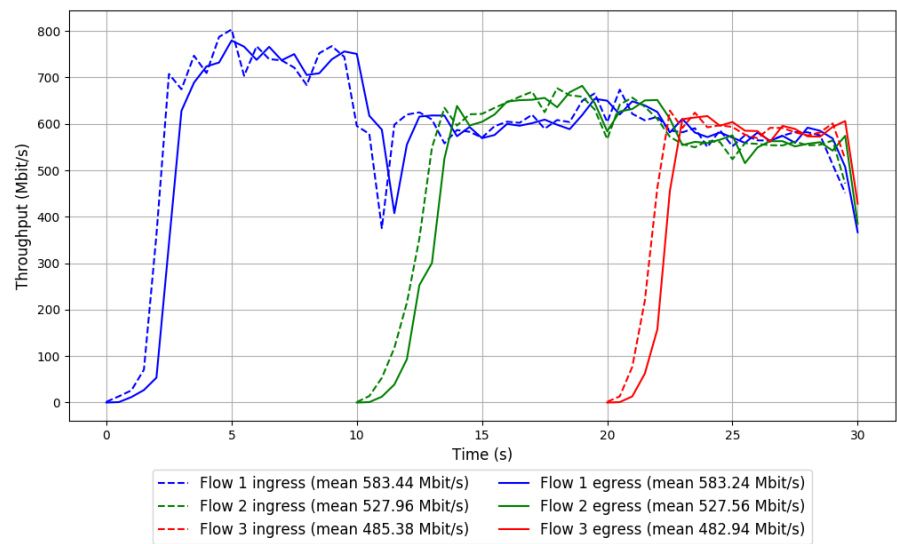
Run 2: Report of Indigo-Muses — Data Link

```
Run 3: Statistics of Indigo-Muses

Start at: 2018-09-11 11:46:32
End at: 2018-09-11 11:47:02
Local clock offset: 0.304 ms
Remote clock offset: 0.52 ms


# Below is generated by plot.py at 2018-09-11 15:11:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 950.68 Mbit/s
95th percentile per-packet one-way delay: 116.463 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 486.85 Mbit/s
95th percentile per-packet one-way delay: 124.825 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 509.93 Mbit/s
95th percentile per-packet one-way delay: 115.744 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 388.18 Mbit/s
95th percentile per-packet one-way delay: 90.351 ms
Loss rate: 1.87%
```
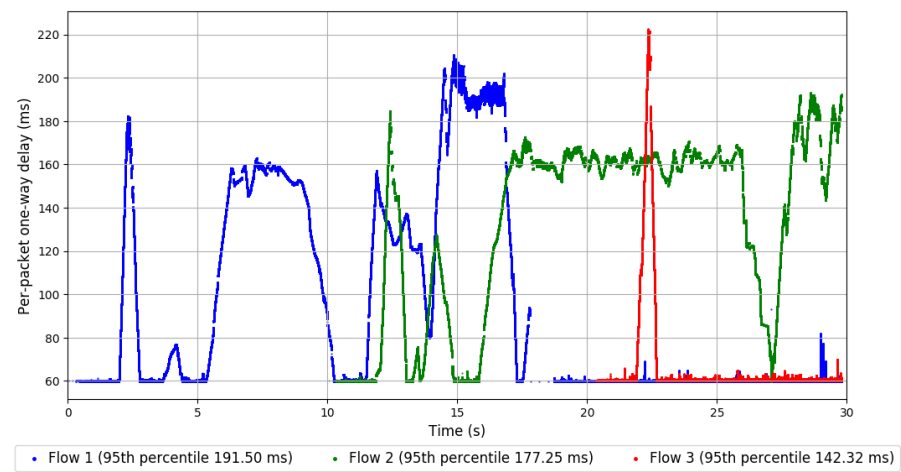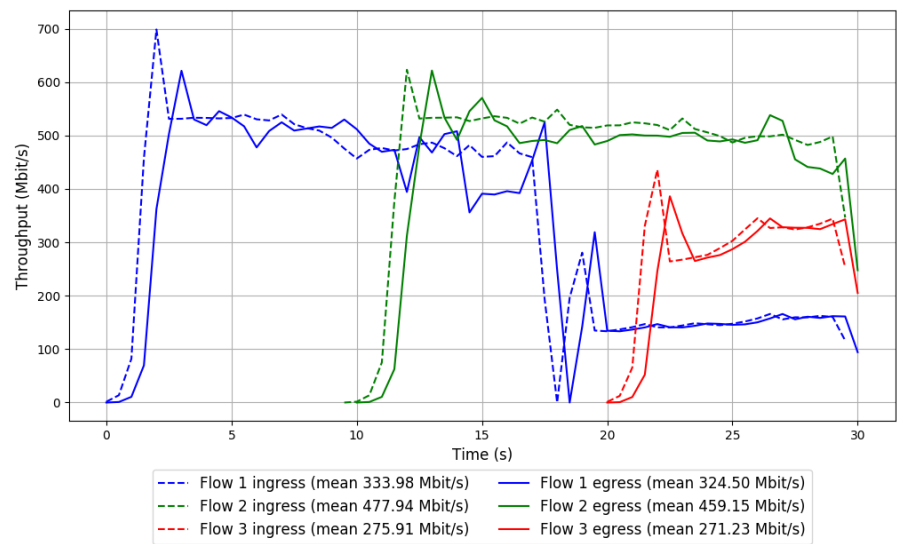
Run 3: Report of Indigo-Muses — Data Link

- - - Flow 1 ingress (mean 487.32 Mbit/s) —— Flow 1 egress (mean 486.85 Mbit/s)
- - - Flow 2 ingress (mean 511.09 Mbit/s) —— Flow 2 egress (mean 509.93 Mbit/s)
- - - Flow 3 ingress (mean 390.22 Mbit/s) —— Flow 3 egress (mean 388.18 Mbit/s)

• Flow 1 (95th percentile 124.83 ms)   • Flow 2 (95th percentile 115.74 ms)   • Flow 3 (95th percentile 90.35 ms)
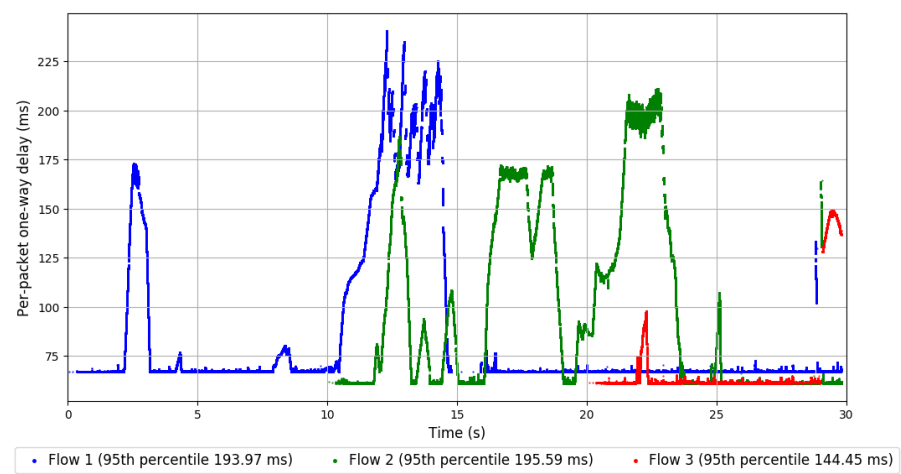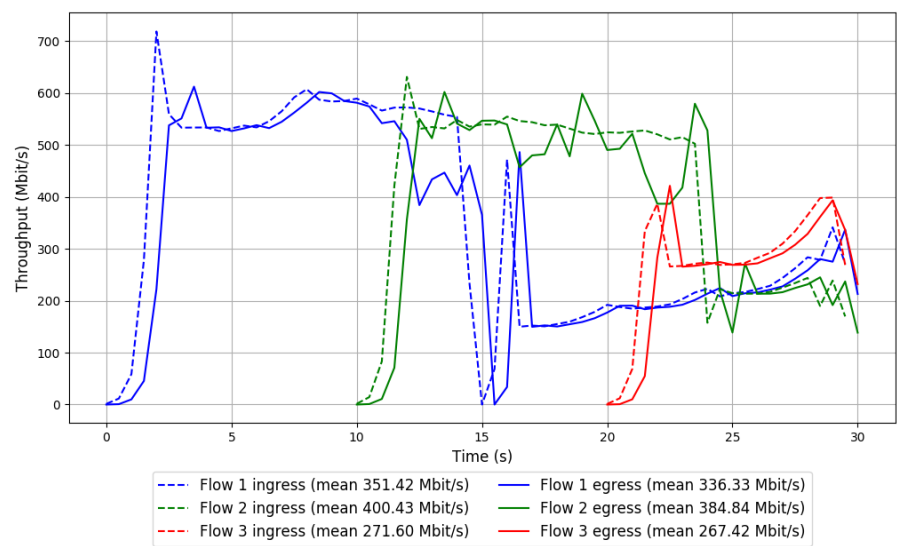
```
Run 4: Statistics of Indigo-Muses

Start at: 2018-09-11 12:18:28
End at: 2018-09-11 12:18:59
Local clock offset: 0.38 ms
Remote clock offset: 0.415 ms


# Below is generated by plot.py at 2018-09-11 15:12:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1082.14 Mbit/s
95th percentile per-packet one-way delay: 91.748 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 592.59 Mbit/s
95th percentile per-packet one-way delay: 96.687 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 545.60 Mbit/s
95th percentile per-packet one-way delay: 85.539 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 382.45 Mbit/s
95th percentile per-packet one-way delay: 71.417 ms
Loss rate: 2.19%
```

Run 4: Report of Indigo-Muses — Data Link

```
Run 5: Statistics of Indigo-Muses

Start at: 2018-09-11 12:50:38
End at: 2018-09-11 12:51:08
Local clock offset: 0.477 ms
Remote clock offset: 1.207 ms

# Below is generated by plot.py at 2018-09-11 15:13:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1091.45 Mbit/s
95th percentile per-packet one-way delay: 88.672 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 583.24 Mbit/s
95th percentile per-packet one-way delay: 90.734 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 527.56 Mbit/s
95th percentile per-packet one-way delay: 81.955 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 482.94 Mbit/s
95th percentile per-packet one-way delay: 89.154 ms
Loss rate: 1.80%
```

Run 5: Report of Indigo-Muses — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-11 10:46:24
End at: 2018-09-11 10:46:54
Local clock offset: 0.161 ms
Remote clock offset: 0.951 ms


# Below is generated by plot.py at 2018-09-11 15:17:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 717.82 Mbit/s
95th percentile per-packet one-way delay: 186.062 ms
Loss rate: 3.75%
-- Flow 1:
Average throughput: 324.50 Mbit/s
95th percentile per-packet one-way delay: 191.495 ms
Loss rate: 3.24%
-- Flow 2:
Average throughput: 459.15 Mbit/s
95th percentile per-packet one-way delay: 177.255 ms
Loss rate: 4.53%
-- Flow 3:
Average throughput: 271.23 Mbit/s
95th percentile per-packet one-way delay: 142.321 ms
Loss rate: 2.93%
```
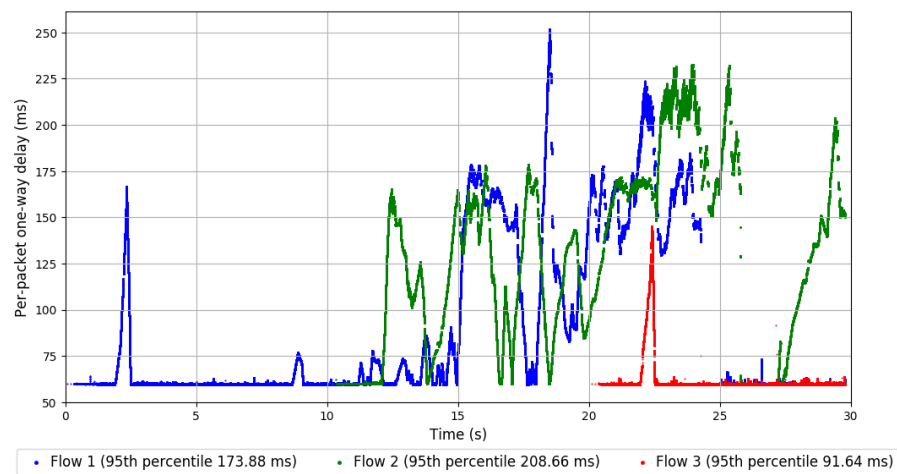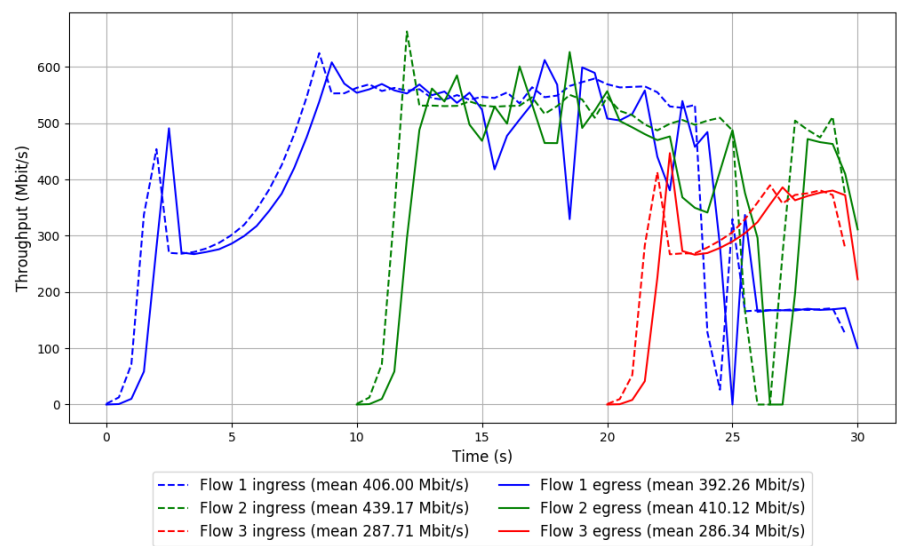
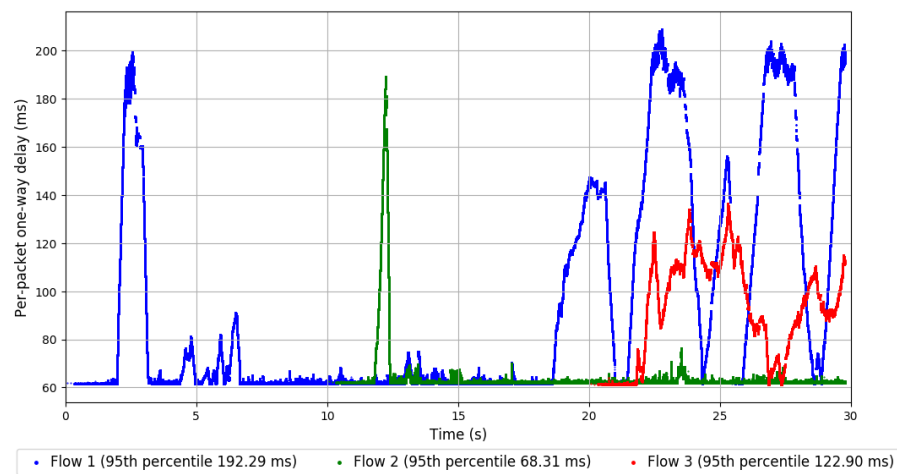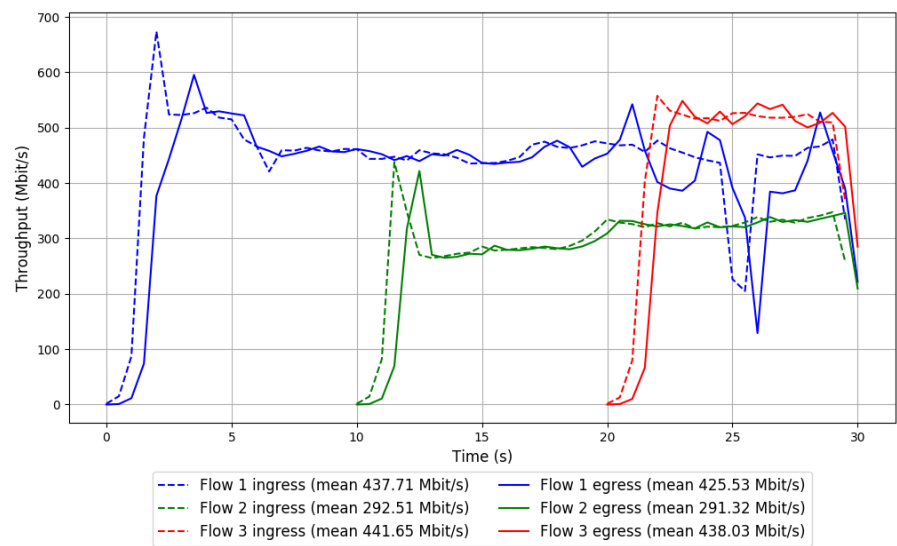Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2018-09-11 11:18:22
End at: 2018-09-11 11:18:52
Local clock offset: 0.258 ms
Remote clock offset: -0.366 ms


# Below is generated by plot.py at 2018-09-11 15:18:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 679.00 Mbit/s
95th percentile per-packet one-way delay: 192.365 ms
Loss rate: 4.41%
-- Flow 1:
Average throughput: 336.33 Mbit/s
95th percentile per-packet one-way delay: 193.969 ms
Loss rate: 4.73%
-- Flow 2:
Average throughput: 384.84 Mbit/s
95th percentile per-packet one-way delay: 195.589 ms
Loss rate: 4.52%
-- Flow 3:
Average throughput: 267.42 Mbit/s
95th percentile per-packet one-way delay: 144.449 ms
Loss rate: 2.82%
```

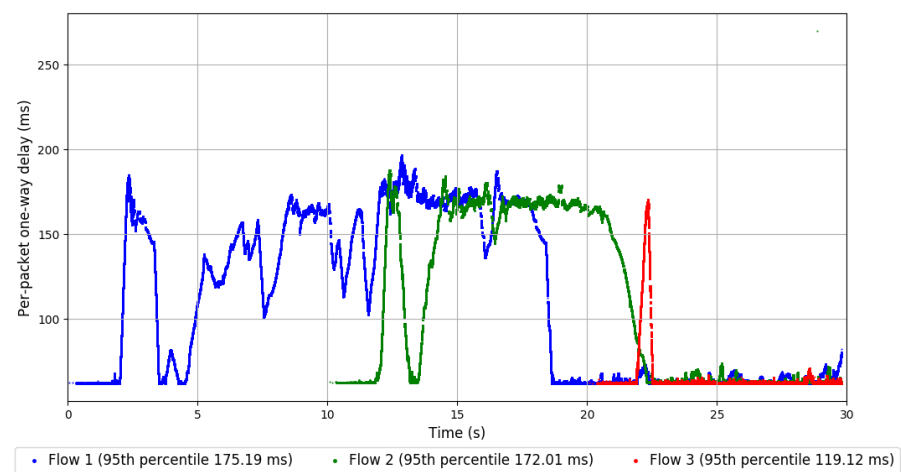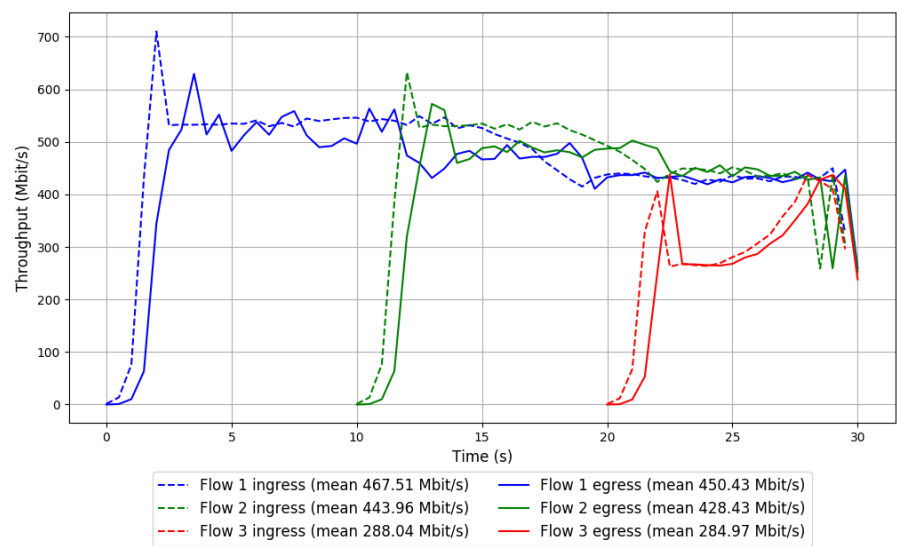Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 351.42 Mbit/s) — Flow 1 egress (mean 336.33 Mbit/s)
Flow 2 ingress (mean 400.43 Mbit/s) — Flow 2 egress (mean 384.84 Mbit/s)
Flow 3 ingress (mean 271.60 Mbit/s) — Flow 3 egress (mean 267.42 Mbit/s)

Flow 1 (95th percentile 193.97 ms) — Flow 2 (95th percentile 195.59 ms) — Flow 3 (95th percentile 144.45 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2018-09-11 11:50:21
End at: 2018-09-11 11:50:51
Local clock offset: 0.334 ms
Remote clock offset: 0.924 ms


# Below is generated by plot.py at 2018-09-11 15:33:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 757.47 Mbit/s
95th percentile per-packet one-way delay: 185.431 ms
Loss rate: 4.82%
-- Flow 1:
Average throughput: 392.26 Mbit/s
95th percentile per-packet one-way delay: 173.879 ms
Loss rate: 3.80%
-- Flow 2:
Average throughput: 410.12 Mbit/s
95th percentile per-packet one-way delay: 208.656 ms
Loss rate: 7.22%
-- Flow 3:
Average throughput: 286.34 Mbit/s
95th percentile per-packet one-way delay: 91.637 ms
Loss rate: 1.77%
```

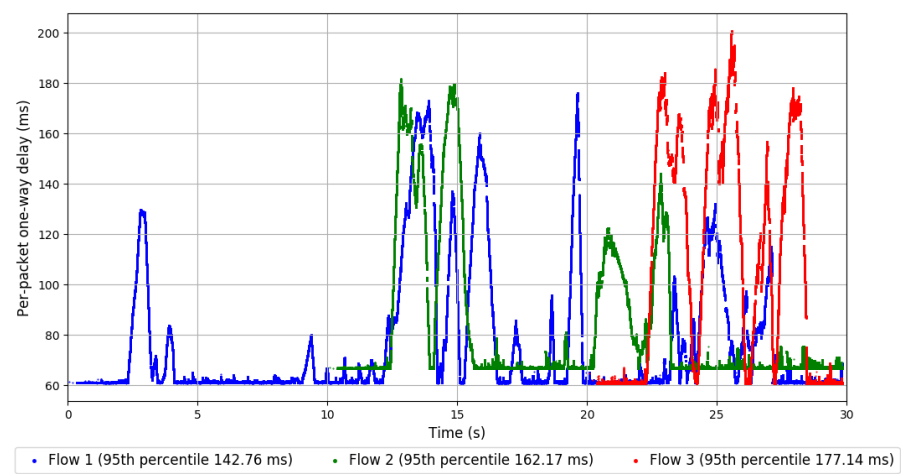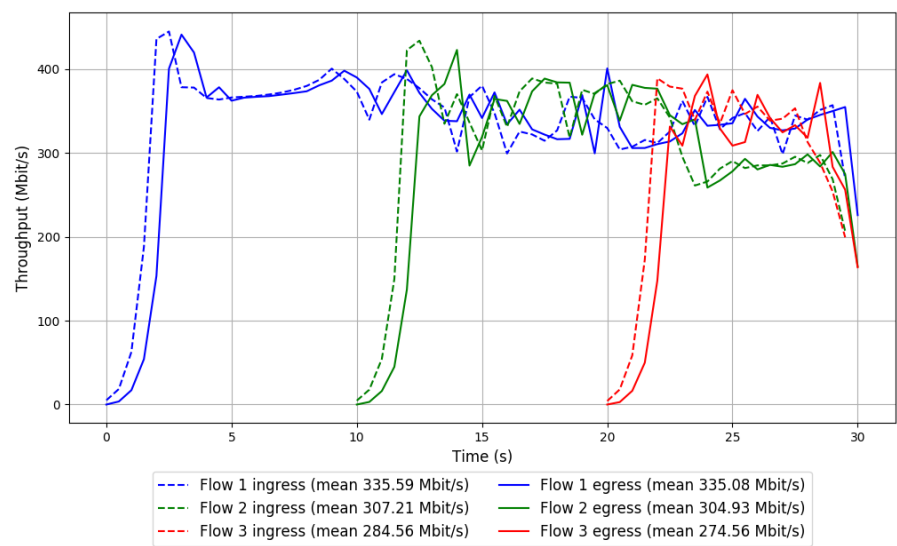Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 406.00 Mbit/s)   Flow 1 egress (mean 392.26 Mbit/s)
Flow 2 ingress (mean 439.17 Mbit/s)   Flow 2 egress (mean 410.12 Mbit/s)
Flow 3 ingress (mean 287.71 Mbit/s)   Flow 3 egress (mean 286.34 Mbit/s)

Flow 1 (95th percentile 173.88 ms)   Flow 2 (95th percentile 208.66 ms)   Flow 3 (95th percentile 91.64 ms)
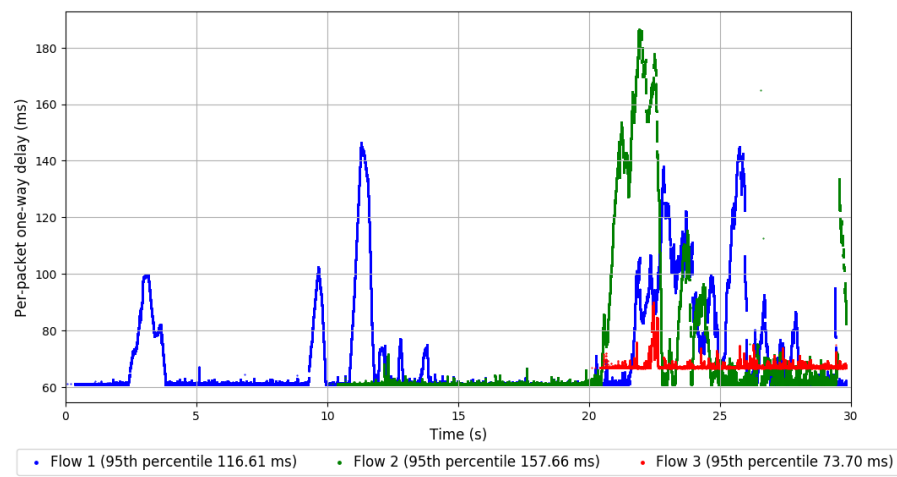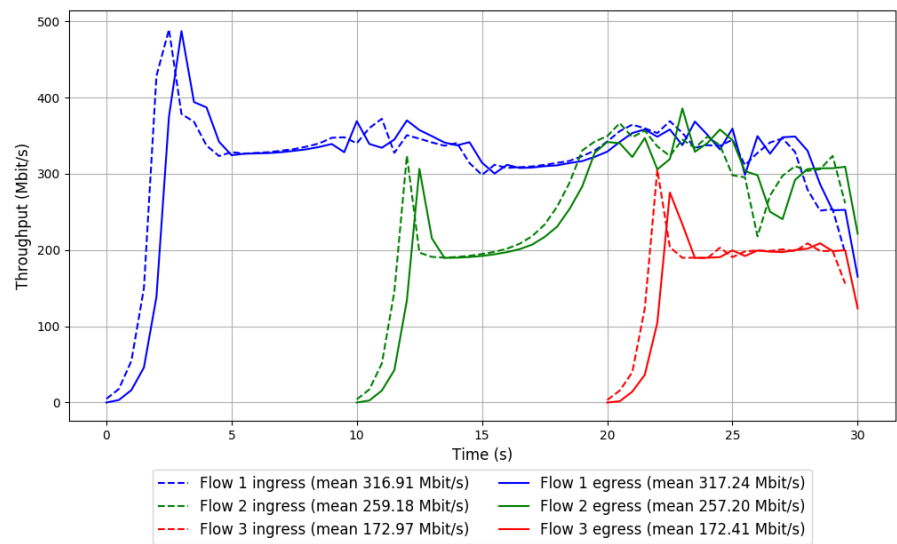
```
Run 4: Statistics of PCC-Allegro

Start at: 2018-09-11 12:22:28
End at: 2018-09-11 12:22:58
Local clock offset: 0.392 ms
Remote clock offset: -0.717 ms


# Below is generated by plot.py at 2018-09-11 15:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 761.91 Mbit/s
95th percentile per-packet one-way delay: 184.920 ms
Loss rate: 2.46%
-- Flow 1:
Average throughput: 425.53 Mbit/s
95th percentile per-packet one-way delay: 192.286 ms
Loss rate: 3.20%
-- Flow 2:
Average throughput: 291.32 Mbit/s
95th percentile per-packet one-way delay: 68.310 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 438.03 Mbit/s
95th percentile per-packet one-way delay: 122.898 ms
Loss rate: 2.12%
```

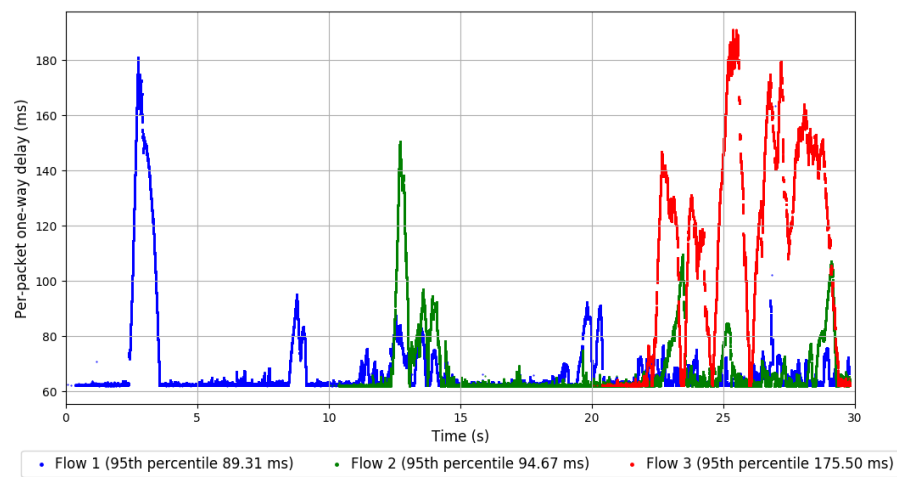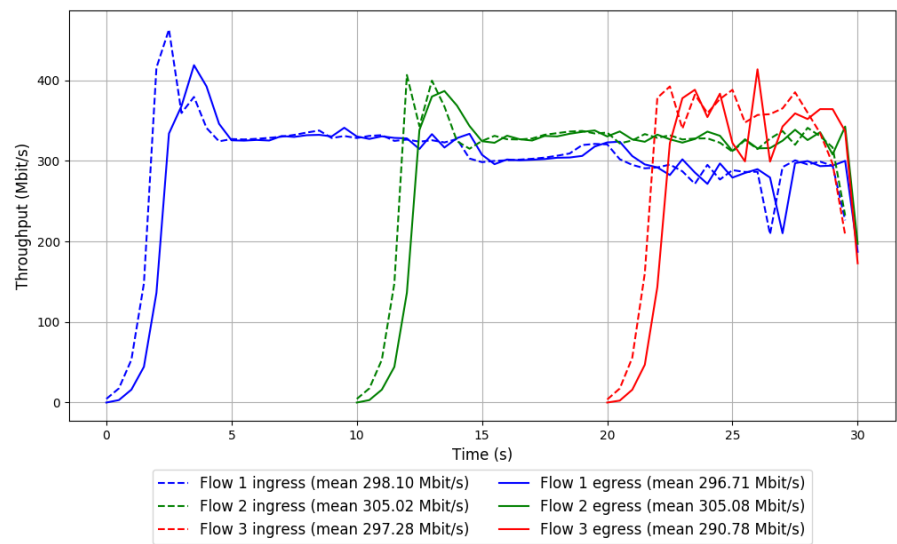Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-09-11 12:54:37
End at: 2018-09-11 12:55:07
Local clock offset: 0.394 ms
Remote clock offset: -1.412 ms


# Below is generated by plot.py at 2018-09-11 15:39:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 827.55 Mbit/s
95th percentile per-packet one-way delay: 173.399 ms
Loss rate: 3.89%
-- Flow 1:
Average throughput: 450.43 Mbit/s
95th percentile per-packet one-way delay: 175.190 ms
Loss rate: 4.06%
-- Flow 2:
Average throughput: 428.43 Mbit/s
95th percentile per-packet one-way delay: 172.014 ms
Loss rate: 4.12%
-- Flow 3:
Average throughput: 284.97 Mbit/s
95th percentile per-packet one-way delay: 119.125 ms
Loss rate: 2.36%
```

Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 467.51 Mbit/s)   Flow 1 egress (mean 450.43 Mbit/s)
Flow 2 ingress (mean 443.96 Mbit/s)   Flow 2 egress (mean 428.43 Mbit/s)
Flow 3 ingress (mean 288.04 Mbit/s)   Flow 3 egress (mean 284.97 Mbit/s)

Flow 1 (95th percentile 175.19 ms)   Flow 2 (95th percentile 172.01 ms)   Flow 3 (95th percentile 119.12 ms)
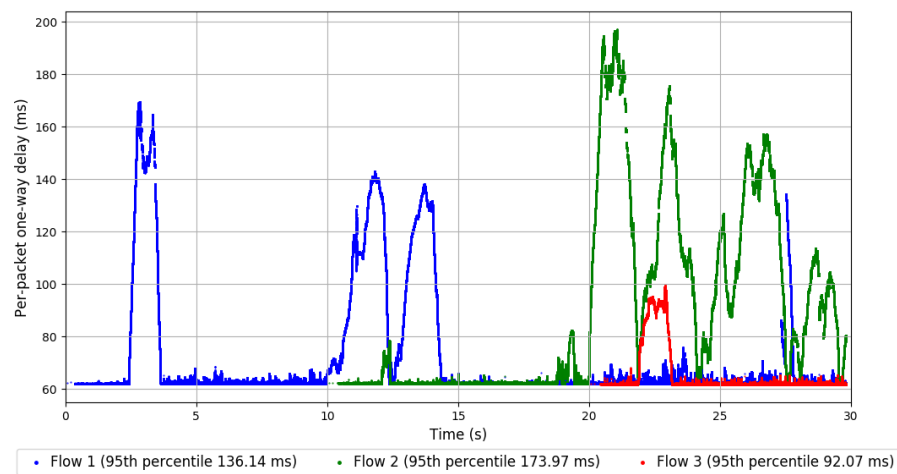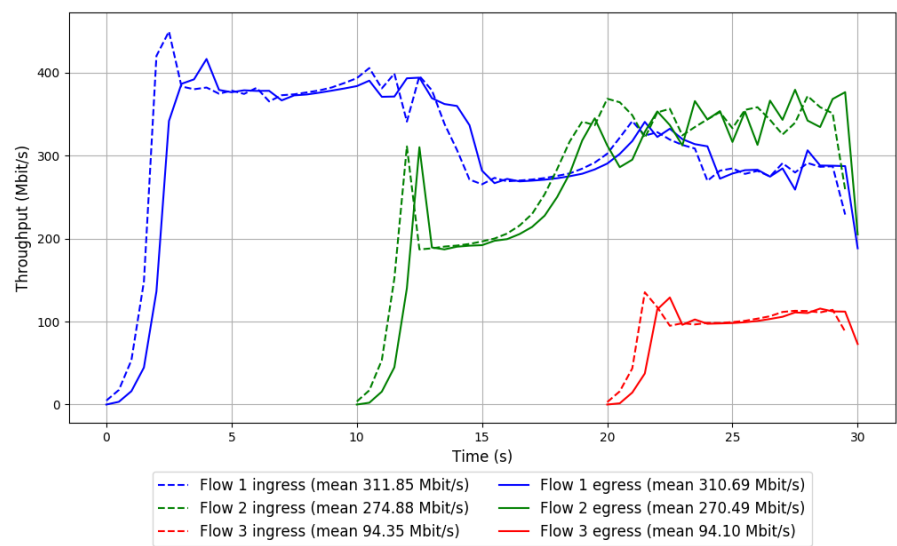
94

```
Run 1: Statistics of PCC-Expr

Start at: 2018-09-11 10:54:30
End at: 2018-09-11 10:55:00
Local clock offset: 0.19 ms
Remote clock offset: -0.093 ms


# Below is generated by plot.py at 2018-09-11 15:39:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 627.21 Mbit/s
95th percentile per-packet one-way delay: 164.176 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 335.08 Mbit/s
95th percentile per-packet one-way delay: 142.764 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 304.93 Mbit/s
95th percentile per-packet one-way delay: 162.174 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 274.56 Mbit/s
95th percentile per-packet one-way delay: 177.139 ms
Loss rate: 4.76%
```

Run 1: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 335.59 Mbit/s)   Flow 1 egress (mean 335.08 Mbit/s)
Flow 2 ingress (mean 307.21 Mbit/s)   Flow 2 egress (mean 304.93 Mbit/s)
Flow 3 ingress (mean 284.56 Mbit/s)   Flow 3 egress (mean 274.56 Mbit/s)

Flow 1 (95th percentile 142.76 ms)   Flow 2 (95th percentile 162.17 ms)   Flow 3 (95th percentile 177.14 ms)

```
Run 2: Statistics of PCC-Expr

Start at: 2018-09-11 11:26:29
End at: 2018-09-11 11:26:59
Local clock offset: 0.263 ms
Remote clock offset: -0.198 ms


# Below is generated by plot.py at 2018-09-11 15:39:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 544.31 Mbit/s
95th percentile per-packet one-way delay: 129.466 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 317.24 Mbit/s
95th percentile per-packet one-way delay: 116.610 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 257.20 Mbit/s
95th percentile per-packet one-way delay: 157.660 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 172.41 Mbit/s
95th percentile per-packet one-way delay: 73.700 ms
Loss rate: 1.68%
```
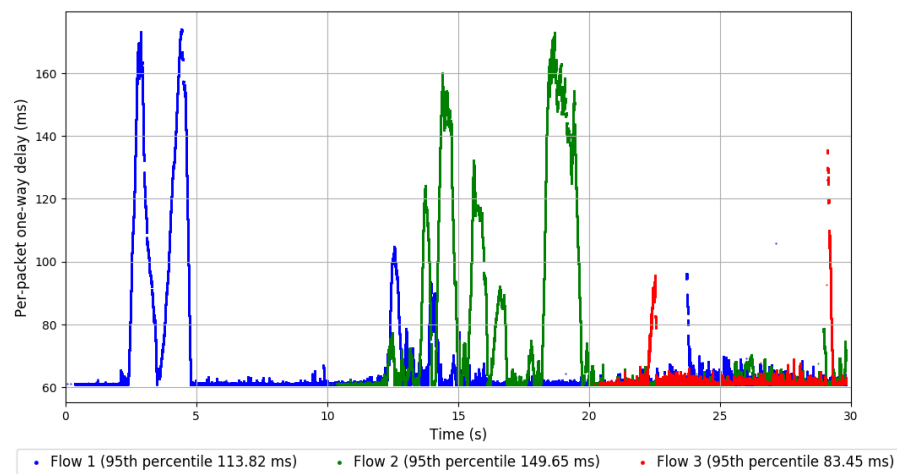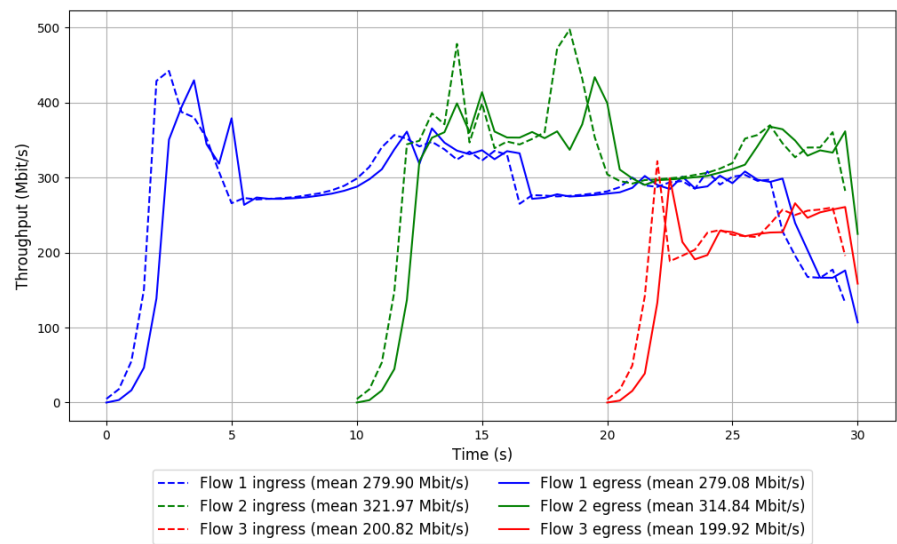
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2018-09-11 11:58:39
End at: 2018-09-11 11:59:09
Local clock offset: 0.374 ms
Remote clock offset: -1.048 ms


# Below is generated by plot.py at 2018-09-11 15:39:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 594.25 Mbit/s
95th percentile per-packet one-way delay: 146.125 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 296.71 Mbit/s
95th percentile per-packet one-way delay: 89.314 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 305.08 Mbit/s
95th percentile per-packet one-way delay: 94.669 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 290.78 Mbit/s
95th percentile per-packet one-way delay: 175.496 ms
Loss rate: 3.51%
```
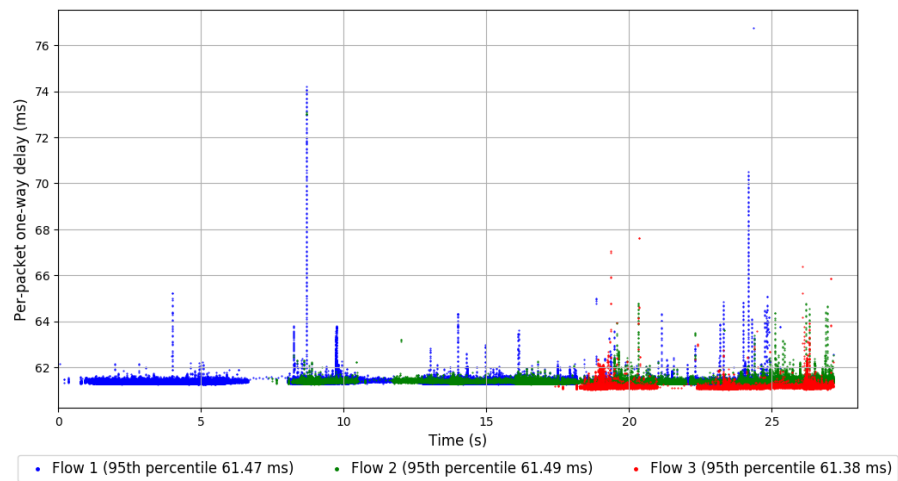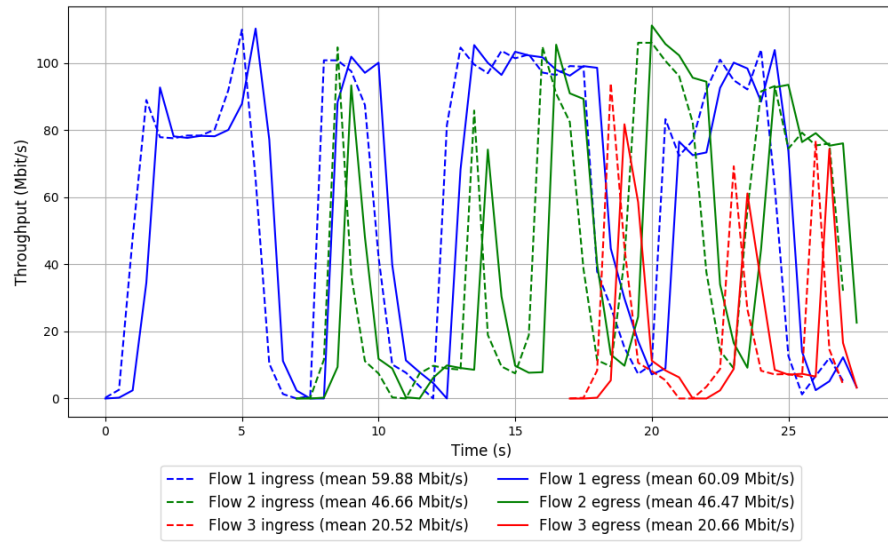
Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 298.10 Mbit/s)   Flow 1 egress (mean 296.71 Mbit/s)
Flow 2 ingress (mean 305.02 Mbit/s)   Flow 2 egress (mean 305.08 Mbit/s)
Flow 3 ingress (mean 297.28 Mbit/s)   Flow 3 egress (mean 290.78 Mbit/s)

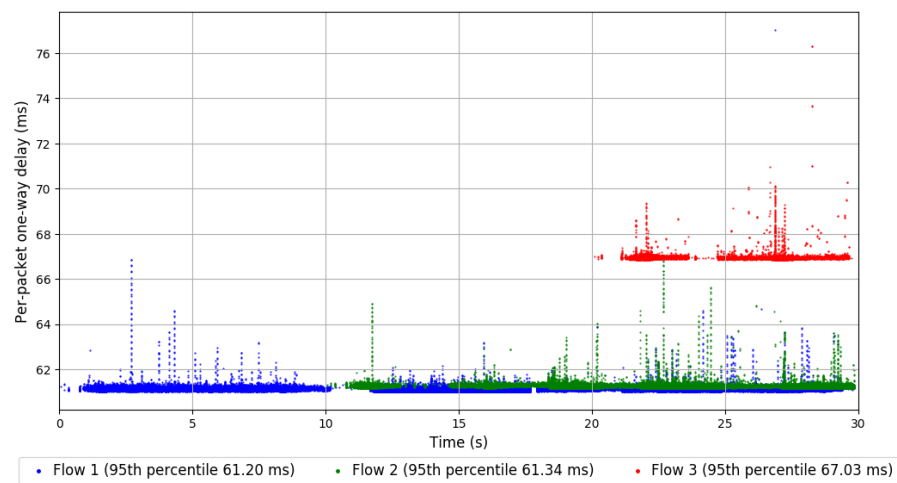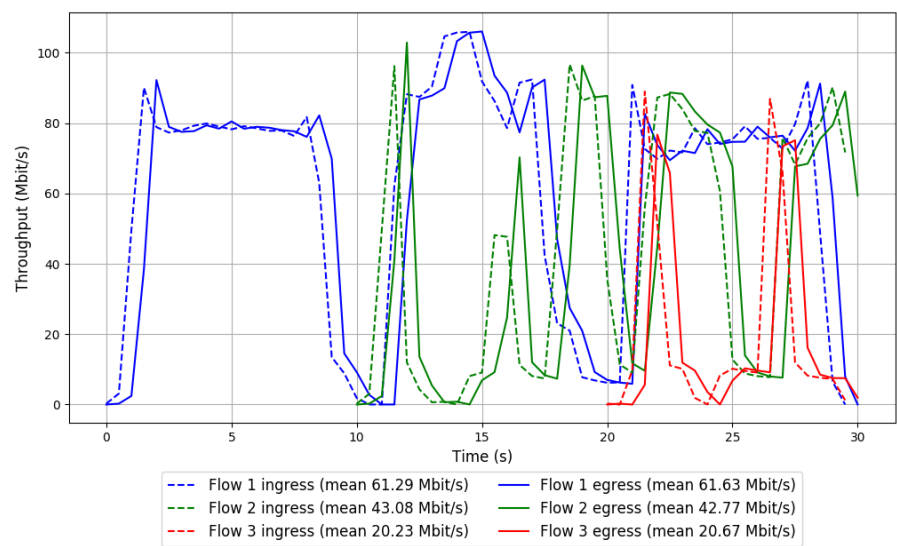Flow 1 (95th percentile 89.31 ms)   Flow 2 (95th percentile 94.67 ms)   Flow 3 (95th percentile 175.50 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2018-09-11 12:30:40
End at: 2018-09-11 12:31:10
Local clock offset: 0.43 ms
Remote clock offset: -0.927 ms


# Below is generated by plot.py at 2018-09-11 15:39:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 520.99 Mbit/s
95th percentile per-packet one-way delay: 149.686 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 310.69 Mbit/s
95th percentile per-packet one-way delay: 136.140 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 270.49 Mbit/s
95th percentile per-packet one-way delay: 173.969 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 94.10 Mbit/s
95th percentile per-packet one-way delay: 92.071 ms
Loss rate: 1.61%
```
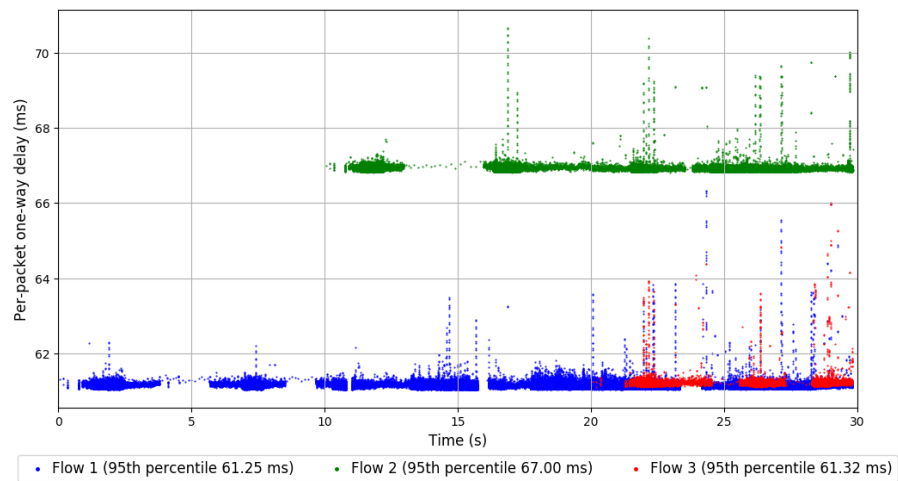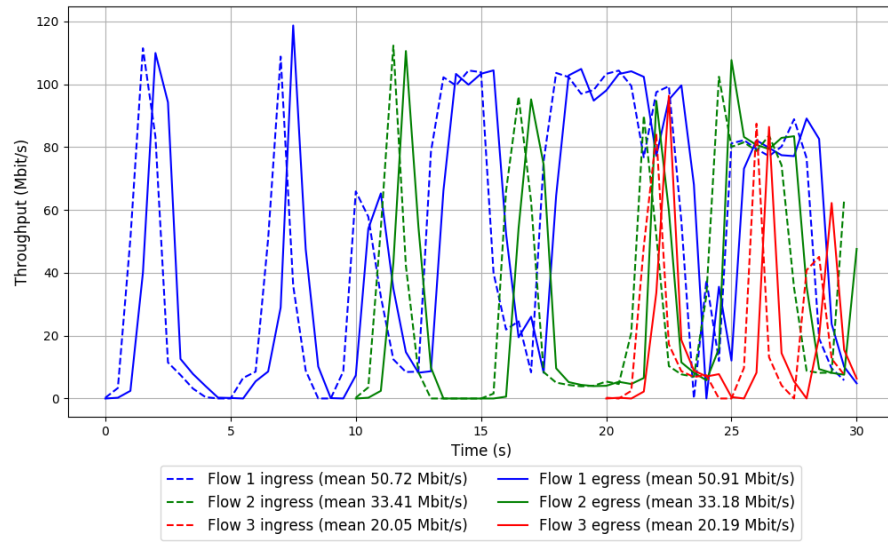
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2018-09-11 13:02:58
End at: 2018-09-11 13:03:28
Local clock offset: 0.017 ms
Remote clock offset: -0.13 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 553.38 Mbit/s
95th percentile per-packet one-way delay: 137.423 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 279.08 Mbit/s
95th percentile per-packet one-way delay: 113.816 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 314.84 Mbit/s
95th percentile per-packet one-way delay: 149.645 ms
Loss rate: 2.85%
-- Flow 3:
Average throughput: 199.92 Mbit/s
95th percentile per-packet one-way delay: 83.449 ms
Loss rate: 1.75%
```

Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 279.90 Mbit/s) Flow 1 egress (mean 279.08 Mbit/s)
Flow 2 ingress (mean 321.97 Mbit/s) Flow 2 egress (mean 314.84 Mbit/s)
Flow 3 ingress (mean 200.82 Mbit/s) Flow 3 egress (mean 199.92 Mbit/s)

Flow 1 (95th percentile 113.82 ms) Flow 2 (95th percentile 149.65 ms) Flow 3 (95th percentile 83.45 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-09-11 10:37:09
End at: 2018-09-11 10:37:39
Local clock offset: 0.14 ms
Remote clock offset: -0.24 ms

# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 101.44 Mbit/s
95th percentile per-packet one-way delay: 61.477 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 60.09 Mbit/s
95th percentile per-packet one-way delay: 61.468 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 46.47 Mbit/s
95th percentile per-packet one-way delay: 61.495 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 20.66 Mbit/s
95th percentile per-packet one-way delay: 61.377 ms
Loss rate: 0.60%
```
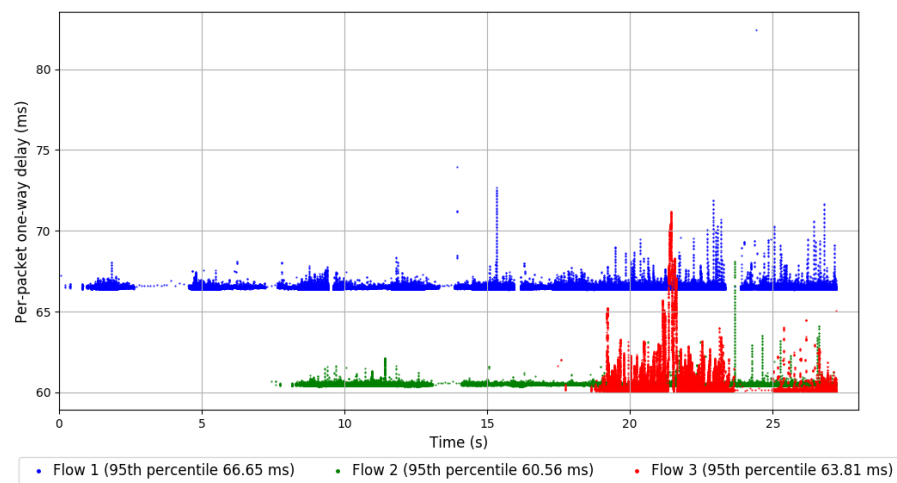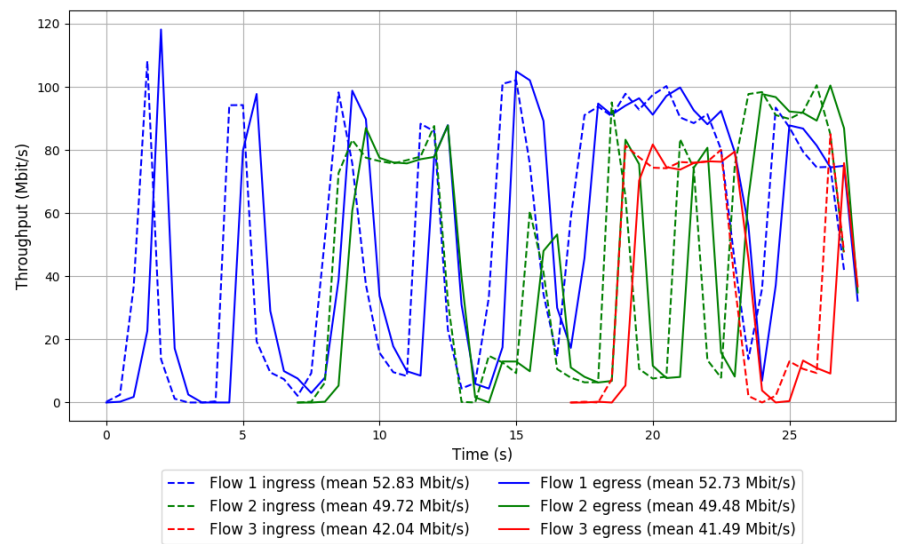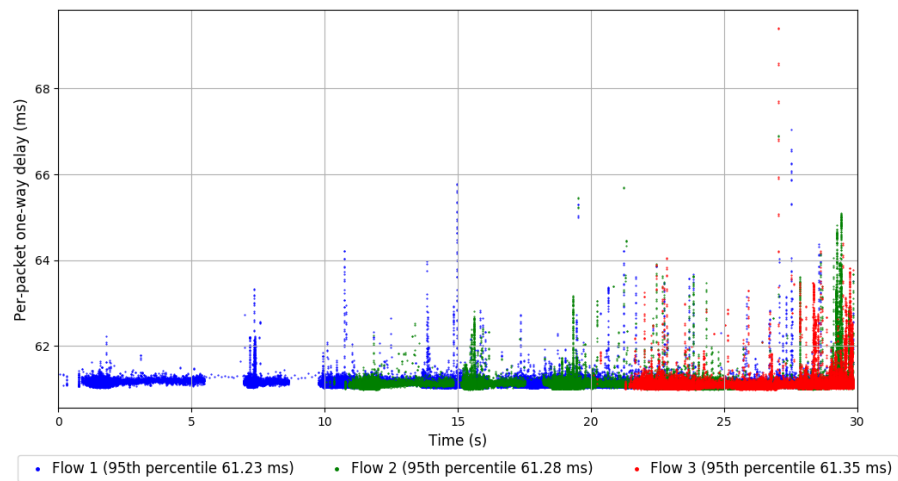
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-09-11 11:09:03
End at: 2018-09-11 11:09:33
Local clock offset: 0.227 ms
Remote clock offset: -0.301 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.61 Mbit/s
95th percentile per-packet one-way delay: 66.896 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 61.63 Mbit/s
95th percentile per-packet one-way delay: 61.199 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.77 Mbit/s
95th percentile per-packet one-way delay: 61.344 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 20.67 Mbit/s
95th percentile per-packet one-way delay: 67.033 ms
Loss rate: 0.04%
```

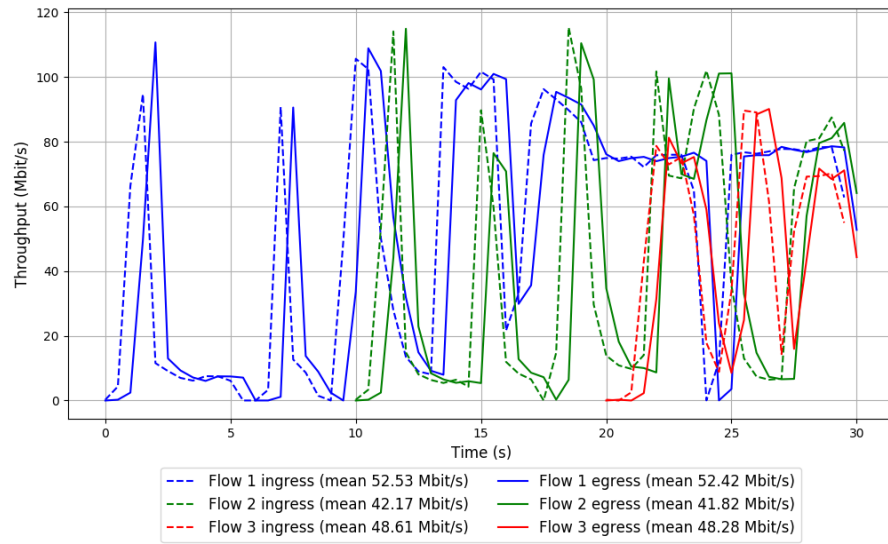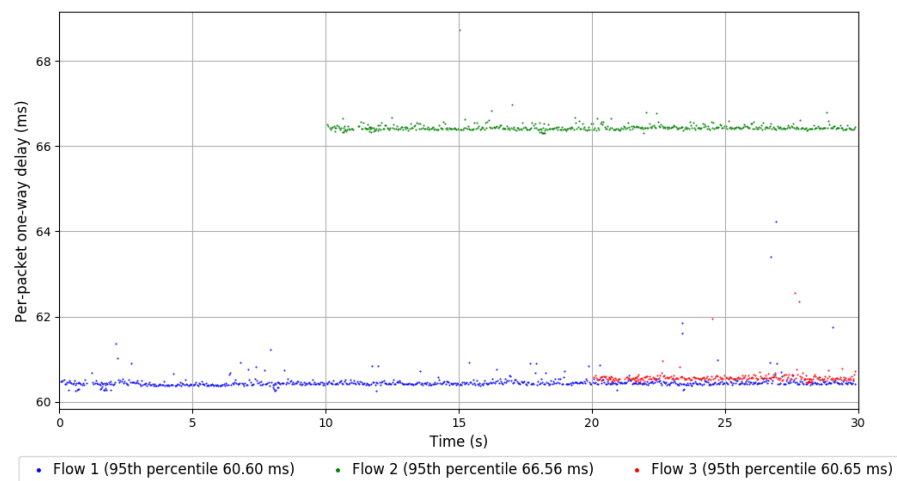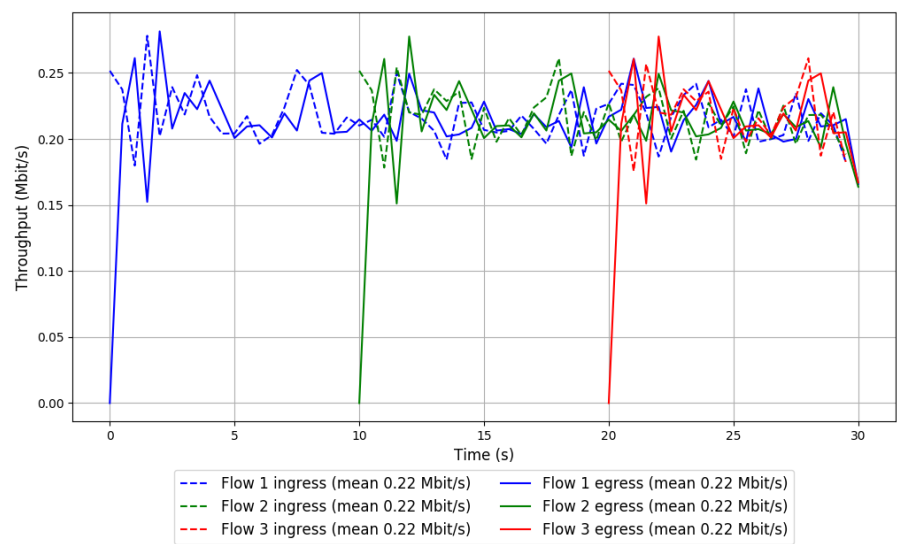Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-09-11 11:41:12
End at: 2018-09-11 11:41:42
Local clock offset: 0.267 ms
Remote clock offset: -0.372 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.54 Mbit/s
95th percentile per-packet one-way delay: 66.940 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 50.91 Mbit/s
95th percentile per-packet one-way delay: 61.247 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 33.18 Mbit/s
95th percentile per-packet one-way delay: 66.999 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 20.19 Mbit/s
95th percentile per-packet one-way delay: 61.318 ms
Loss rate: 0.62%
```

Run 3: Report of QUIC Cubic — Data Link
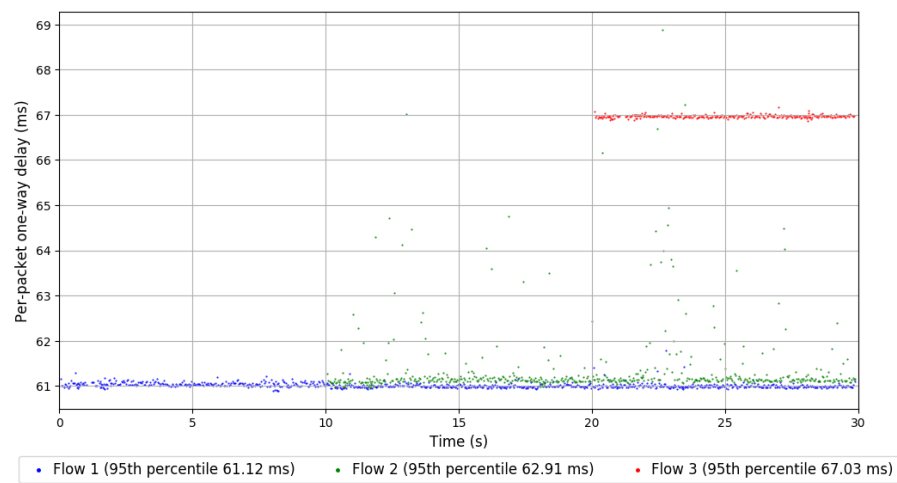
```
Run 4: Statistics of QUIC Cubic

Start at: 2018-09-11 12:13:08
End at: 2018-09-11 12:13:38
Local clock offset: 0.359 ms
Remote clock offset: 0.488 ms

# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.66 Mbit/s
95th percentile per-packet one-way delay: 66.575 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 52.73 Mbit/s
95th percentile per-packet one-way delay: 66.648 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 49.48 Mbit/s
95th percentile per-packet one-way delay: 60.557 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 41.49 Mbit/s
95th percentile per-packet one-way delay: 63.814 ms
Loss rate: 2.57%
```
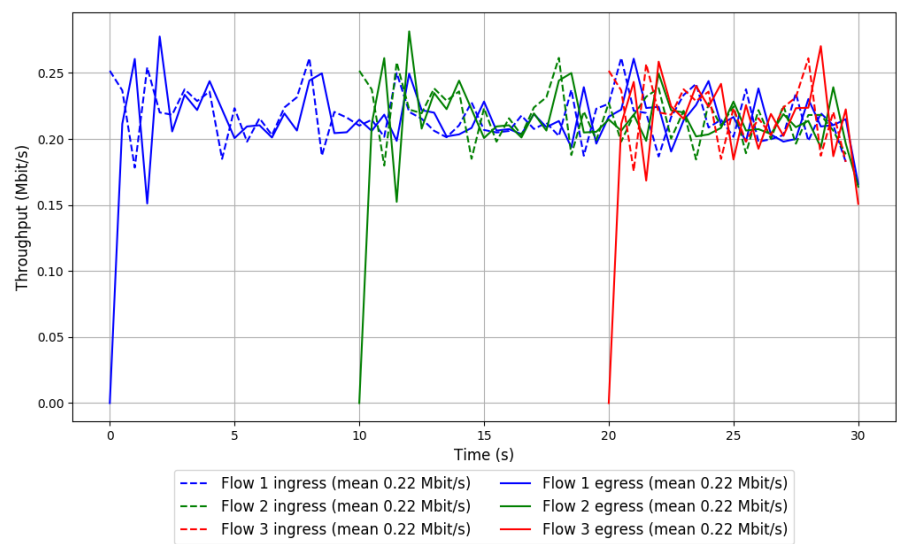
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-09-11 12:45:12
End at: 2018-09-11 12:45:42
Local clock offset: 0.444 ms
Remote clock offset: -0.266 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.01 Mbit/s
95th percentile per-packet one-way delay: 61.243 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 52.42 Mbit/s
95th percentile per-packet one-way delay: 61.225 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 41.82 Mbit/s
95th percentile per-packet one-way delay: 61.284 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 48.28 Mbit/s
95th percentile per-packet one-way delay: 61.348 ms
Loss rate: 1.92%
```
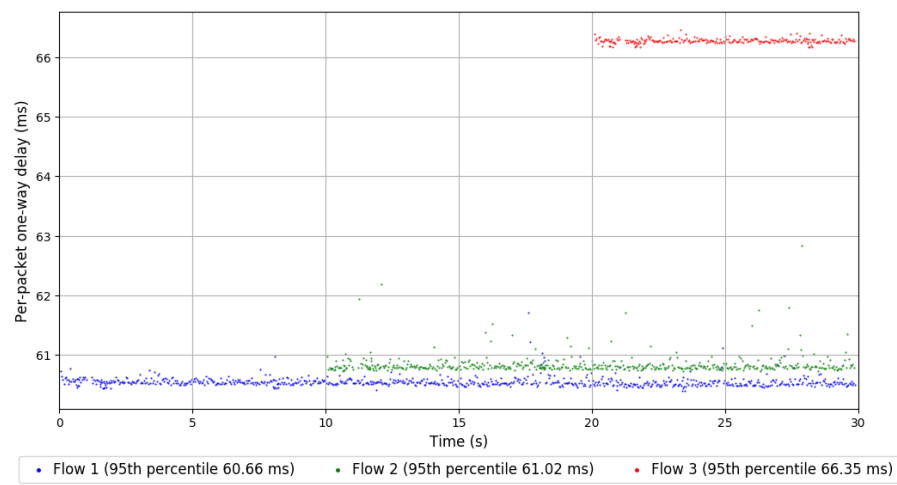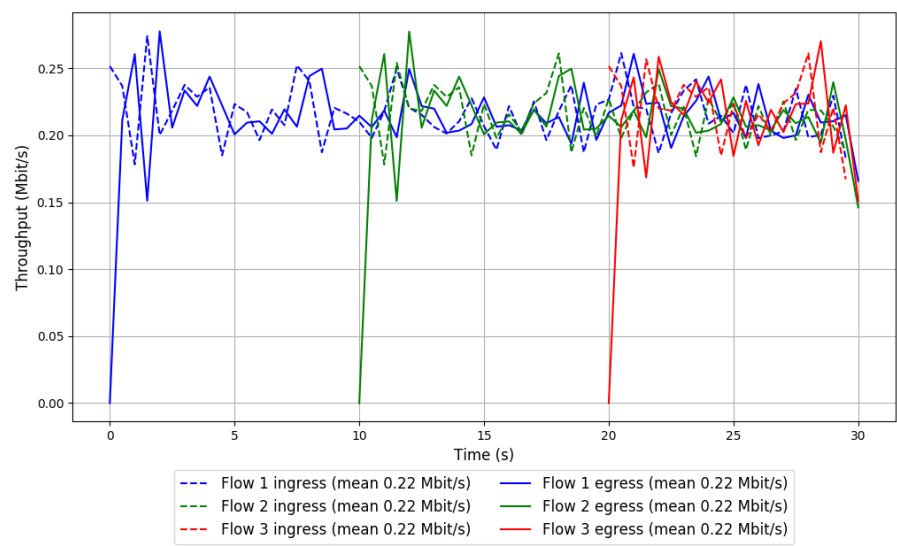
Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2018-09-11 10:58:45
End at: 2018-09-11 10:59:15
Local clock offset: 0.178 ms
Remote clock offset: 0.556 ms

# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 66.487 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.604 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 66.563 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.649 ms
Loss rate: 1.08%
```
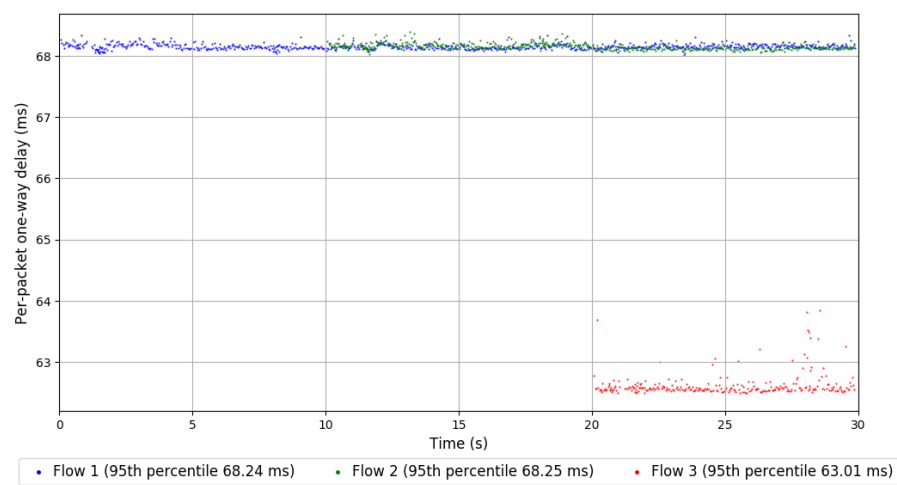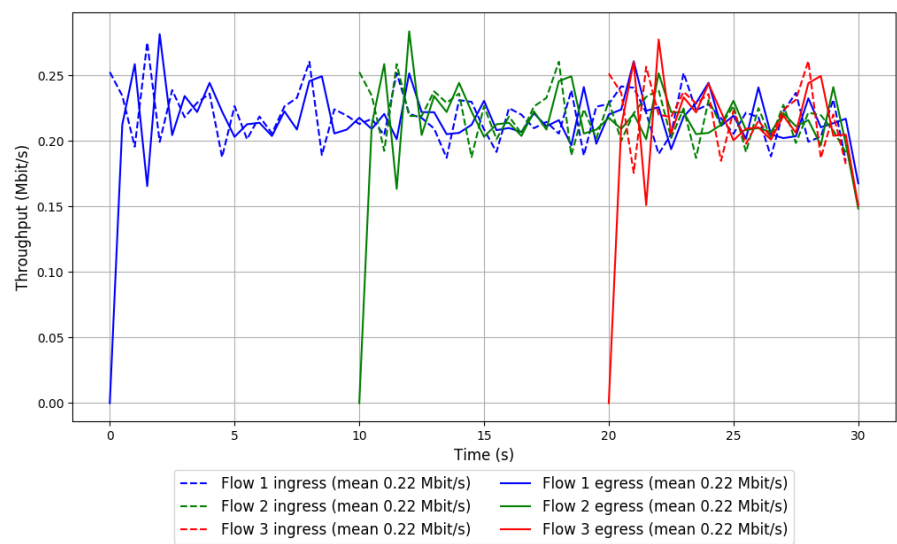
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-09-11 11:30:39
End at: 2018-09-11 11:31:09
Local clock offset: 0.241 ms
Remote clock offset: -0.226 ms

# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 66.976 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.116 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.907 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 67.029 ms
Loss rate: 1.45%
```

Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-09-11 12:02:54
End at: 2018-09-11 12:03:24
Local clock offset: 0.341 ms
Remote clock offset: 0.51 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 66.294 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.661 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.017 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 66.351 ms
Loss rate: 1.10%
```
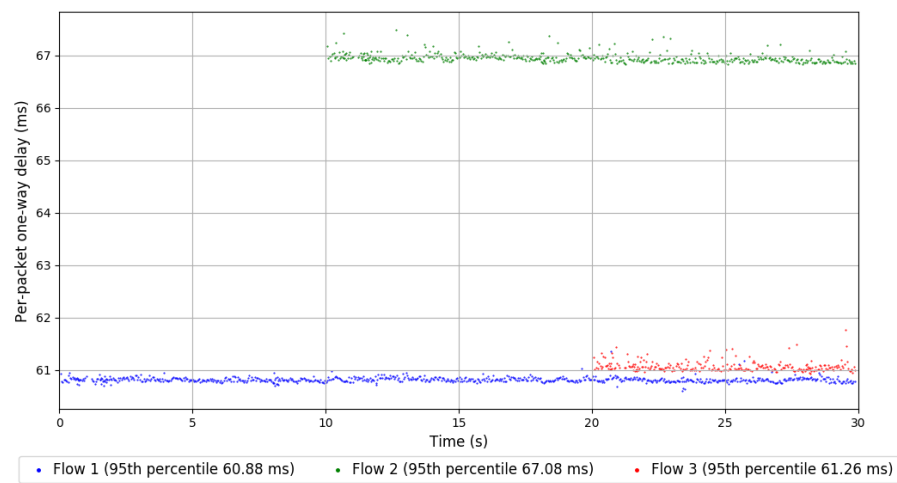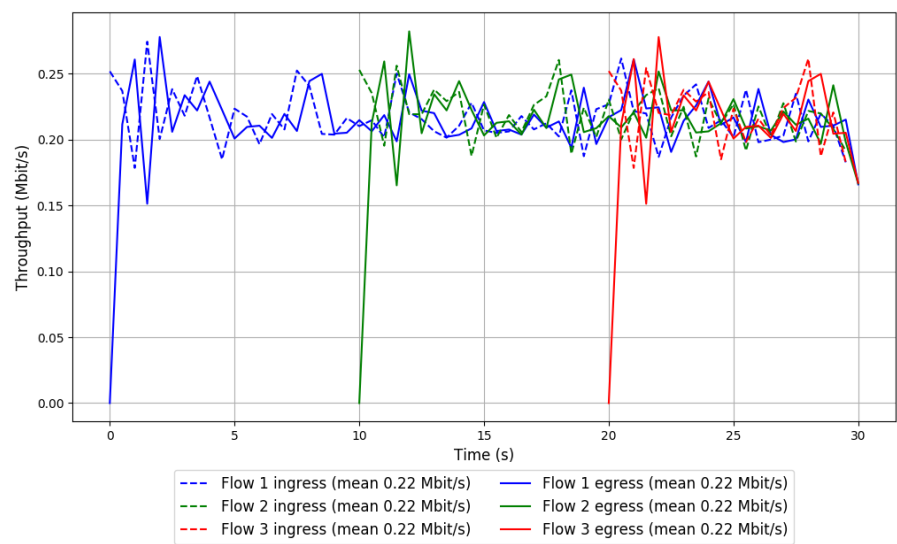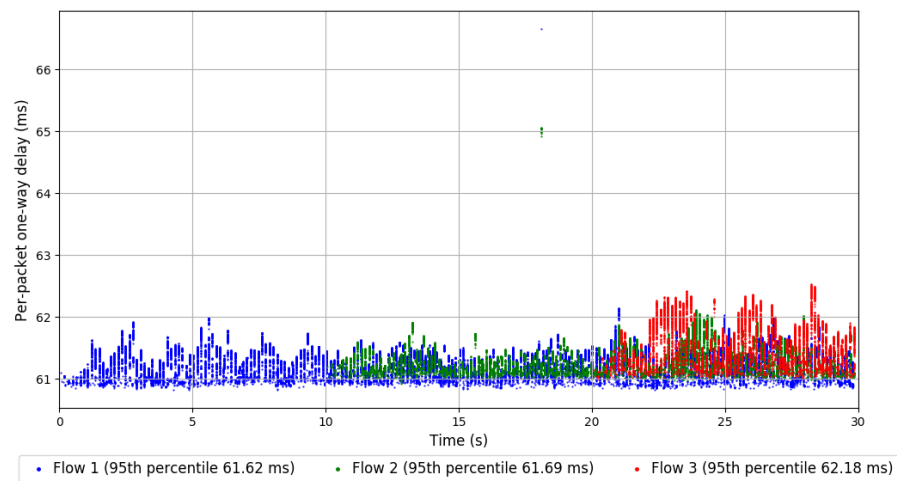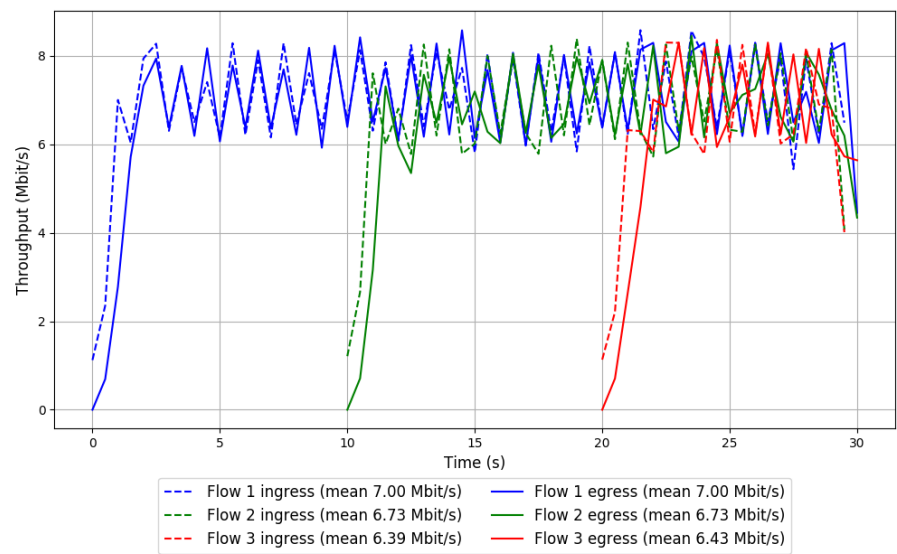
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-09-11 12:34:43
End at: 2018-09-11 12:35:13
Local clock offset: 0.45 ms
Remote clock offset: -1.323 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 68.235 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 68.238 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 68.247 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.007 ms
Loss rate: 1.45%
```

Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2018-09-11 13:07:09
End at: 2018-09-11 13:07:39
Local clock offset: -0.055 ms
Remote clock offset: 0.207 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 67.009 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.884 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 67.084 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.262 ms
Loss rate: 1.08%
```
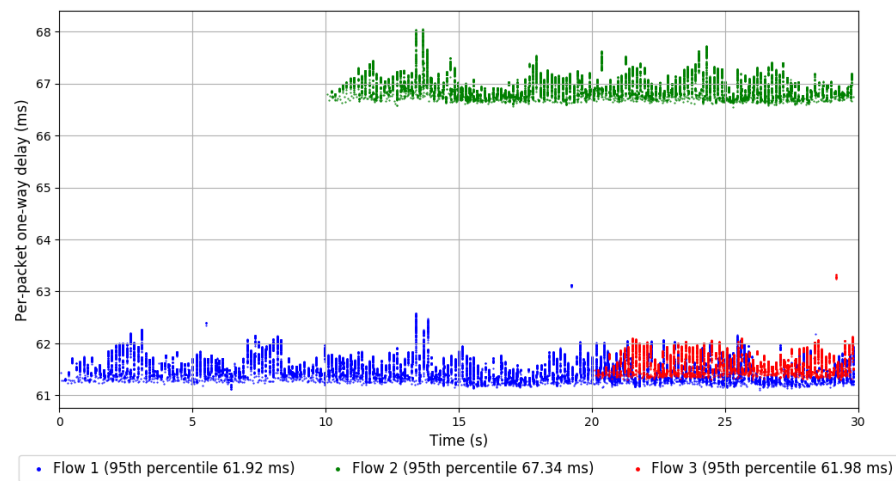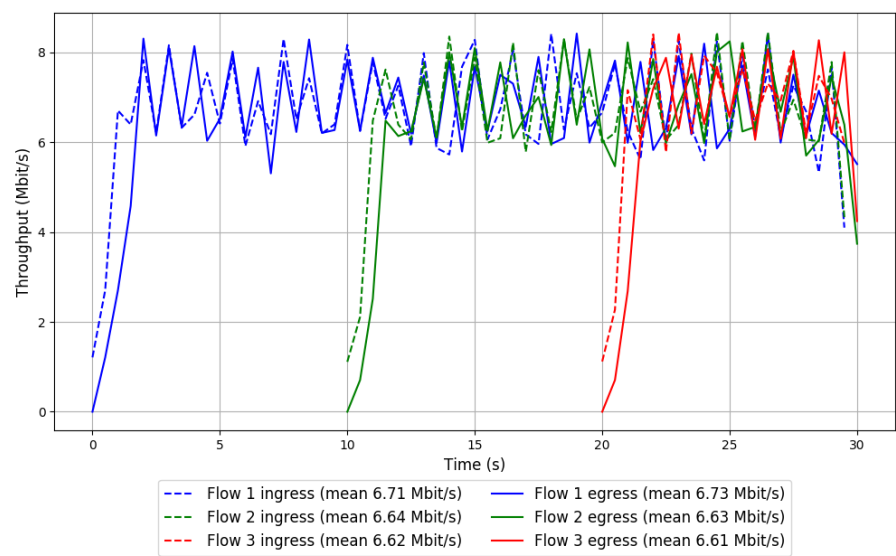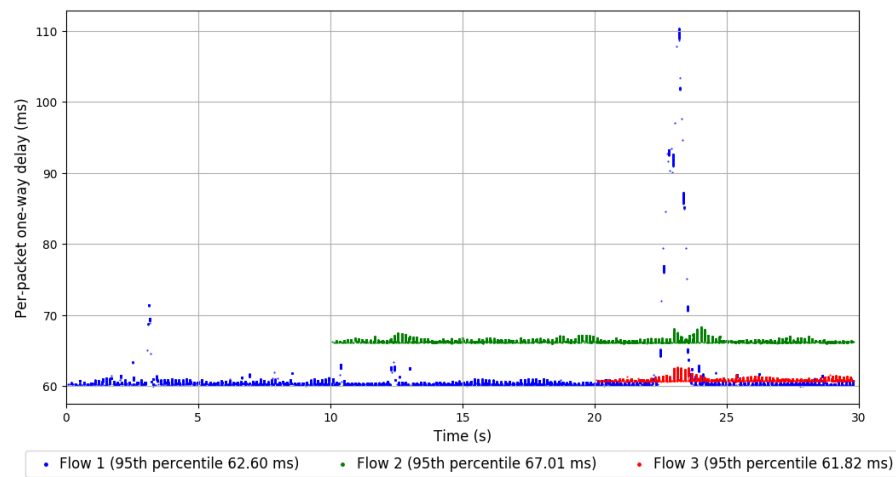
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-09-11 10:41:19
End at: 2018-09-11 10:41:49
Local clock offset: 0.14 ms
Remote clock offset: -0.168 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.56 Mbit/s
95th percentile per-packet one-way delay: 61.823 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 7.00 Mbit/s
95th percentile per-packet one-way delay: 61.624 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 61.691 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 6.43 Mbit/s
95th percentile per-packet one-way delay: 62.180 ms
Loss rate: 0.27%
```
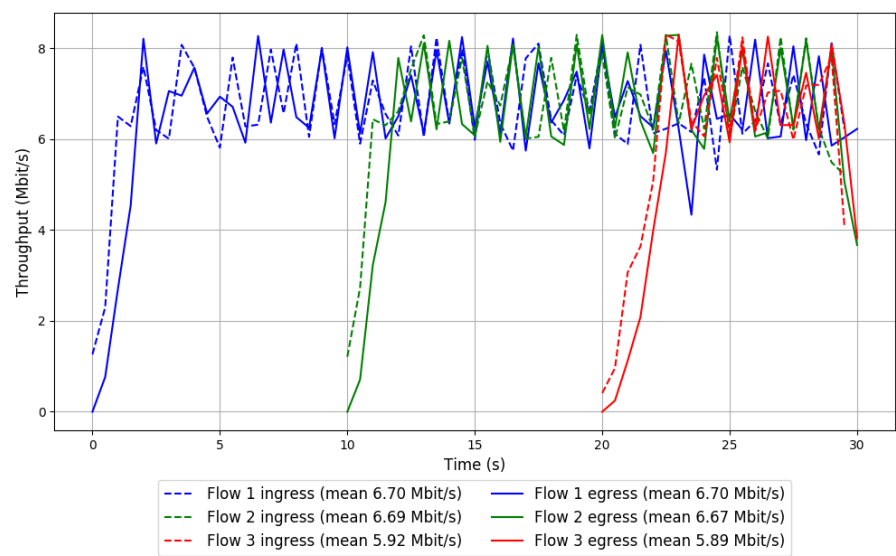
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-09-11 11:13:13
End at: 2018-09-11 11:13:43
Local clock offset: 0.225 ms
Remote clock offset: -0.166 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.28 Mbit/s
95th percentile per-packet one-way delay: 67.178 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 61.921 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 67.339 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 6.61 Mbit/s
95th percentile per-packet one-way delay: 61.976 ms
Loss rate: 1.53%
```
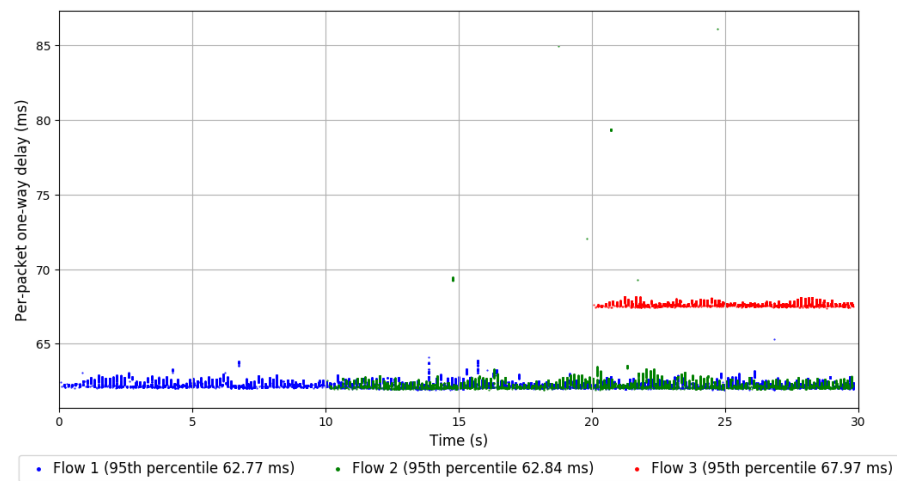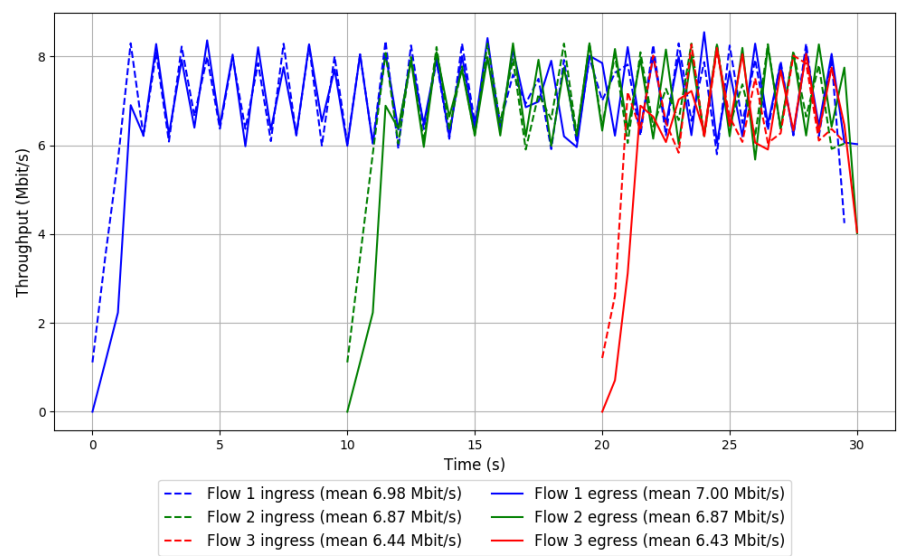
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-09-11 11:45:19
End at: 2018-09-11 11:45:49
Local clock offset: 0.341 ms
Remote clock offset: 0.657 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.04 Mbit/s
95th percentile per-packet one-way delay: 66.844 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 6.70 Mbit/s
95th percentile per-packet one-way delay: 62.603 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 6.67 Mbit/s
95th percentile per-packet one-way delay: 67.014 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 5.89 Mbit/s
95th percentile per-packet one-way delay: 61.820 ms
Loss rate: 1.73%
```
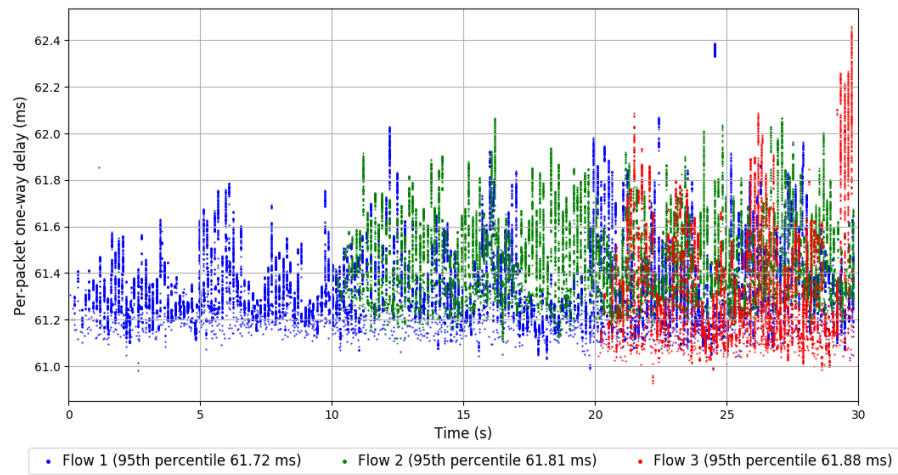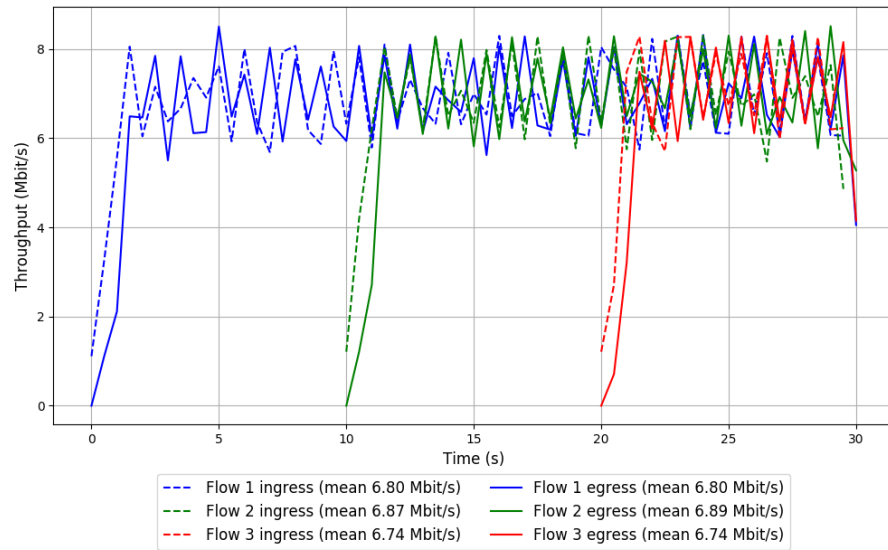
Run 3: Report of Sprout — Data Link

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```
Run 4: Statistics of Sprout

Start at: 2018-09-11 12:17:16
End at: 2018-09-11 12:17:46
Local clock offset: 0.355 ms
Remote clock offset: -0.751 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.66 Mbit/s
95th percentile per-packet one-way delay: 67.739 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 7.00 Mbit/s
95th percentile per-packet one-way delay: 62.767 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 6.87 Mbit/s
95th percentile per-packet one-way delay: 62.842 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 6.43 Mbit/s
95th percentile per-packet one-way delay: 67.969 ms
Loss rate: 1.60%
```
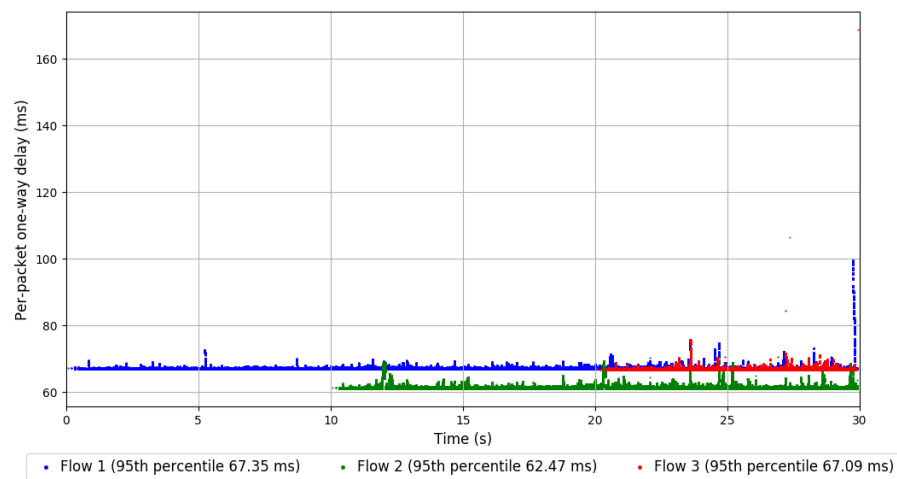
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-09-11 12:49:25
End at: 2018-09-11 12:49:55
Local clock offset: 0.389 ms
Remote clock offset: -0.388 ms


# Below is generated by plot.py at 2018-09-11 15:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.57 Mbit/s
95th percentile per-packet one-way delay: 61.784 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 6.80 Mbit/s
95th percentile per-packet one-way delay: 61.717 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 61.808 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 6.74 Mbit/s
95th percentile per-packet one-way delay: 61.877 ms
Loss rate: 1.56%
```
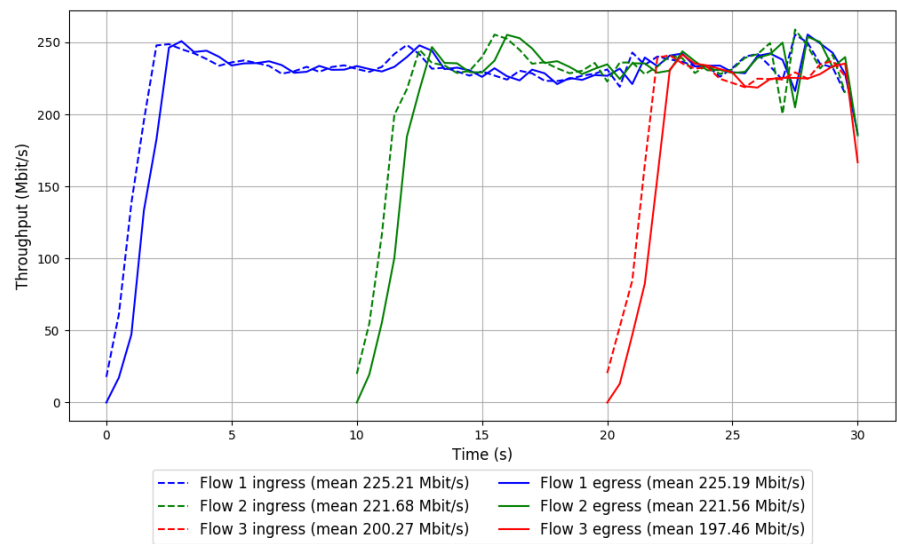
Run 5: Report of Sprout — Data Link

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

Start at: 2018-09-11 10:52:36
End at: 2018-09-11 10:53:06
Local clock offset: 0.196 ms
Remote clock offset: -0.176 ms


# Below is generated by plot.py at 2018-09-11 15:51:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.27 Mbit/s
95th percentile per-packet one-way delay: 67.154 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 225.19 Mbit/s
95th percentile per-packet one-way delay: 67.346 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 221.56 Mbit/s
95th percentile per-packet one-way delay: 62.466 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 197.46 Mbit/s
95th percentile per-packet one-way delay: 67.094 ms
Loss rate: 2.30%
```

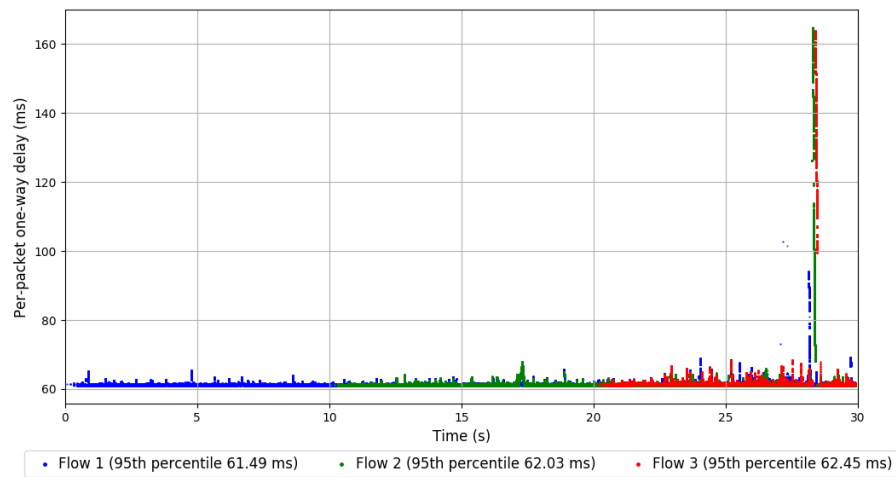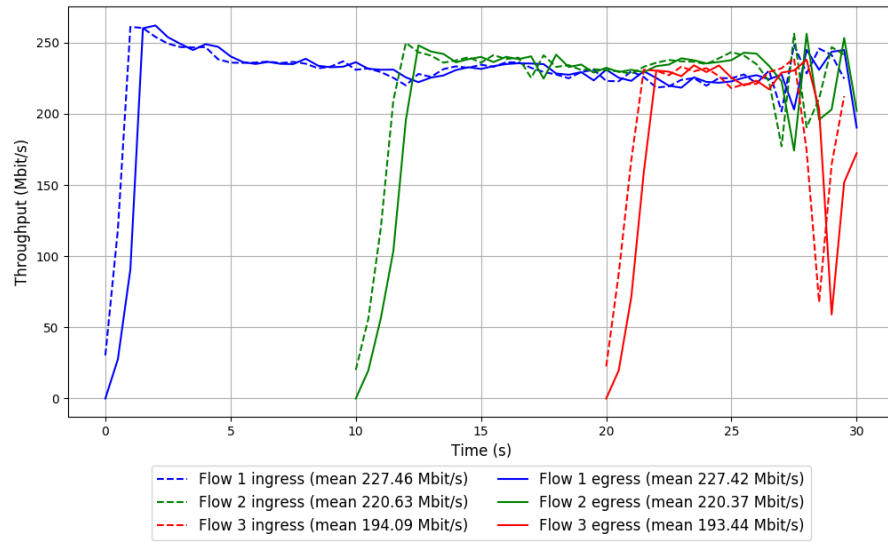# Run 1: Report of TaoVA-100x — Data Link

- --- Flow 1 ingress (mean 225.21 Mbit/s) — Flow 1 egress (mean 225.19 Mbit/s)
- --- Flow 2 ingress (mean 221.68 Mbit/s) — Flow 2 egress (mean 221.56 Mbit/s)
- --- Flow 3 ingress (mean 200.27 Mbit/s) — Flow 3 egress (mean 197.46 Mbit/s)

- Flow 1 (95th percentile 67.35 ms)   • Flow 2 (95th percentile 62.47 ms)   • Flow 3 (95th percentile 67.09 ms)
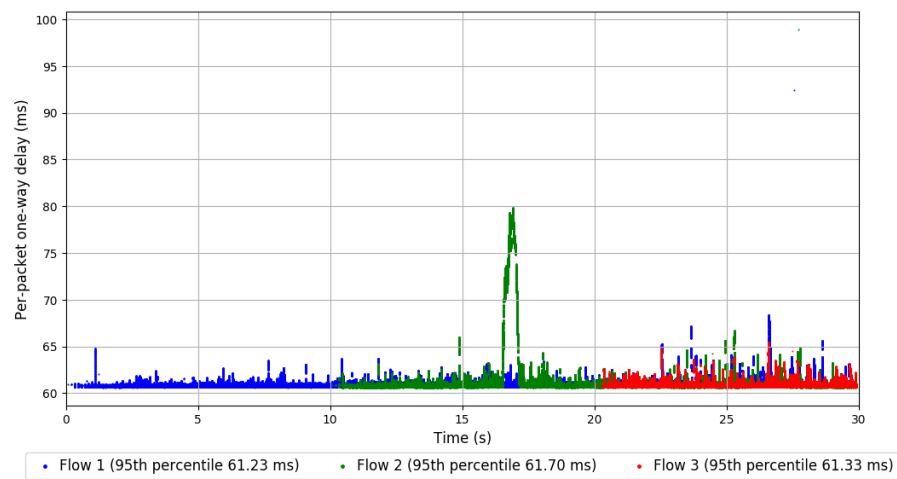
```
Run 2: Statistics of TaoVA-100x

Start at: 2018-09-11 11:24:35
End at: 2018-09-11 11:25:05
Local clock offset: 0.243 ms
Remote clock offset: -0.197 ms

# Below is generated by plot.py at 2018-09-11 15:51:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.63 Mbit/s
95th percentile per-packet one-way delay: 61.743 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 227.42 Mbit/s
95th percentile per-packet one-way delay: 61.493 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 220.37 Mbit/s
95th percentile per-packet one-way delay: 62.032 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 193.44 Mbit/s
95th percentile per-packet one-way delay: 62.449 ms
Loss rate: 1.62%
```
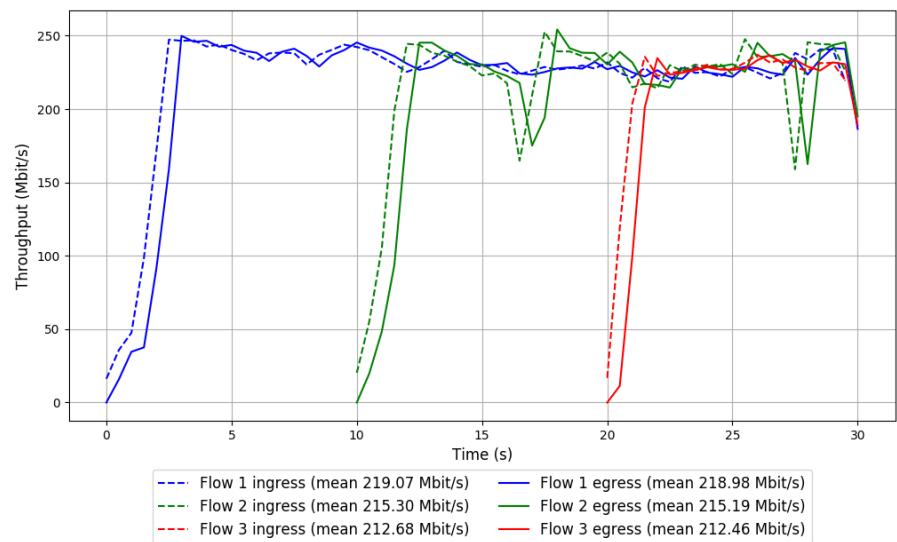
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 227.46 Mbit/s) --- Flow 1 egress (mean 227.42 Mbit/s)
Flow 2 ingress (mean 220.63 Mbit/s) --- Flow 2 egress (mean 220.37 Mbit/s)
Flow 3 ingress (mean 194.09 Mbit/s) --- Flow 3 egress (mean 193.44 Mbit/s)

Flow 1 (95th percentile 61.49 ms)   Flow 2 (95th percentile 62.03 ms)   Flow 3 (95th percentile 62.45 ms)
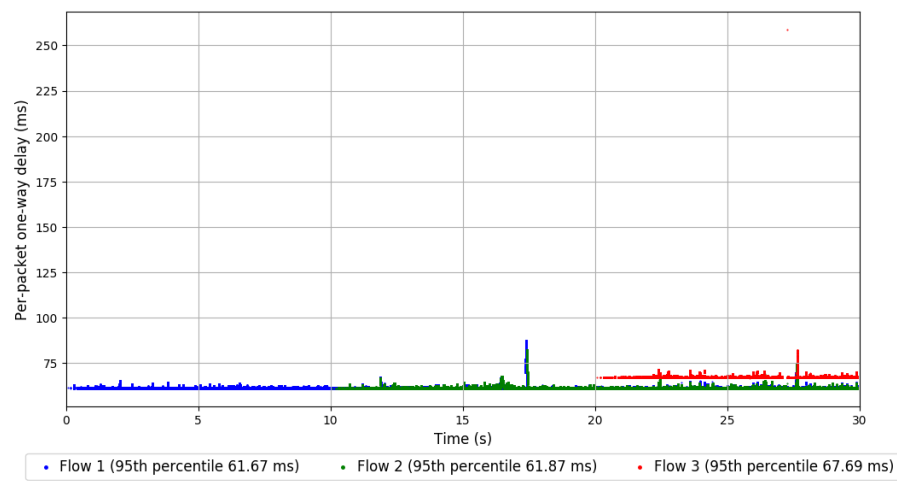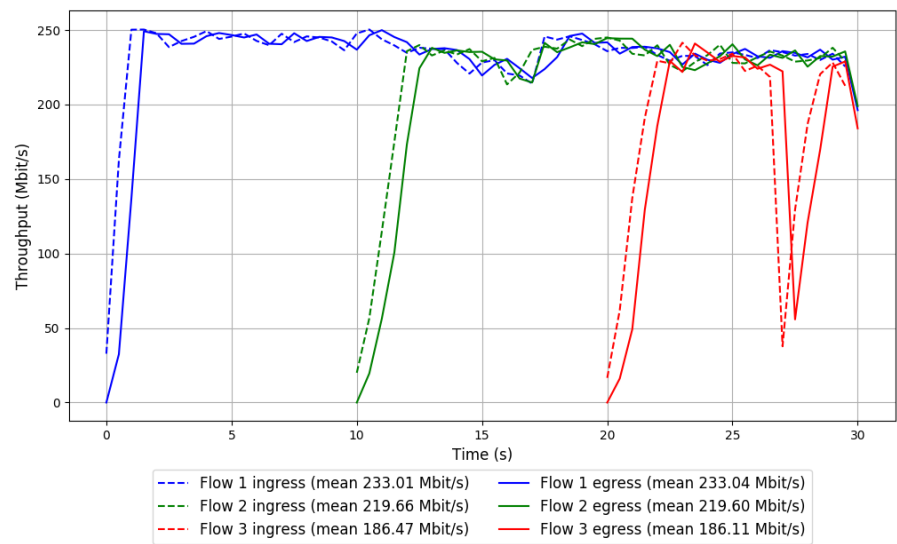
```
Run 3: Statistics of TaoVA-100x

Start at: 2018-09-11 11:56:45
End at: 2018-09-11 11:57:15
Local clock offset: 0.322 ms
Remote clock offset: -0.053 ms


# Below is generated by plot.py at 2018-09-11 15:51:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 431.89 Mbit/s
95th percentile per-packet one-way delay: 61.364 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 218.98 Mbit/s
95th percentile per-packet one-way delay: 61.232 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 215.19 Mbit/s
95th percentile per-packet one-way delay: 61.695 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 212.46 Mbit/s
95th percentile per-packet one-way delay: 61.326 ms
Loss rate: 1.40%
```

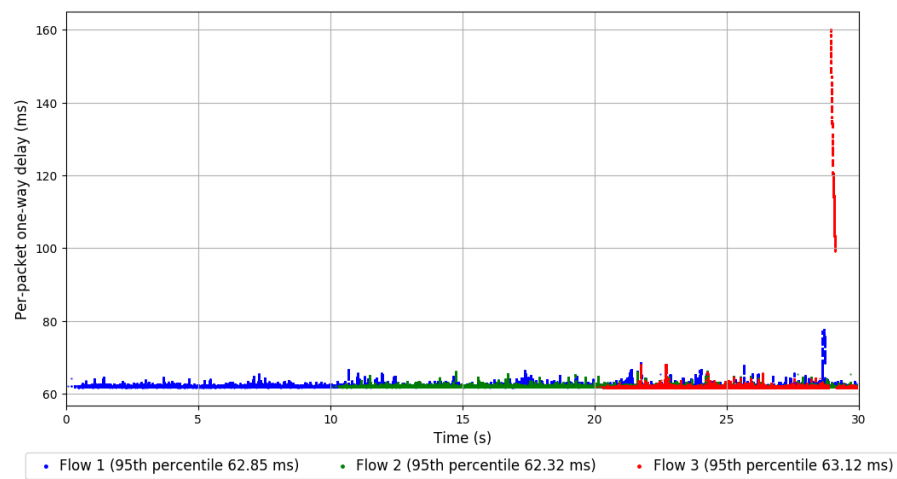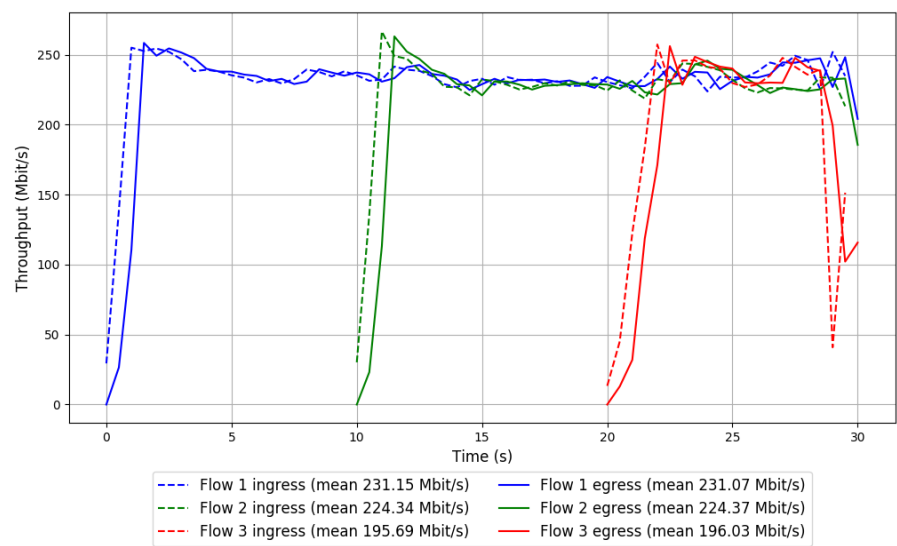Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 219.07 Mbit/s) —— Flow 1 egress (mean 218.98 Mbit/s)
Flow 2 ingress (mean 215.30 Mbit/s) —— Flow 2 egress (mean 215.19 Mbit/s)
Flow 3 ingress (mean 212.68 Mbit/s) —— Flow 3 egress (mean 212.46 Mbit/s)

• Flow 1 (95th percentile 61.23 ms)   • Flow 2 (95th percentile 61.70 ms)   • Flow 3 (95th percentile 61.33 ms)

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

Start at: 2018-09-11 12:28:45
End at: 2018-09-11 12:29:15
Local clock offset: 0.401 ms
Remote clock offset: -0.482 ms

# Below is generated by plot.py at 2018-09-11 15:51:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 440.26 Mbit/s
95th percentile per-packet one-way delay: 67.134 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 233.04 Mbit/s
95th percentile per-packet one-way delay: 61.669 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 219.60 Mbit/s
95th percentile per-packet one-way delay: 61.869 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 186.11 Mbit/s
95th percentile per-packet one-way delay: 67.688 ms
Loss rate: 1.54%
```
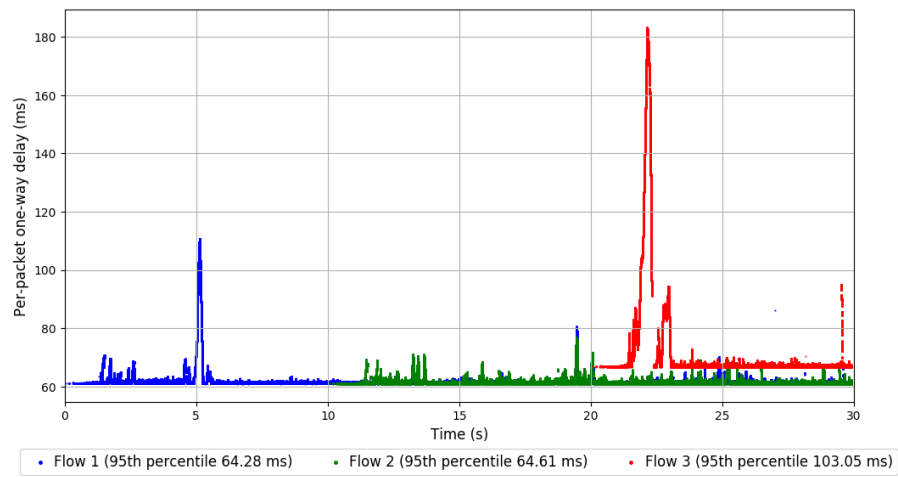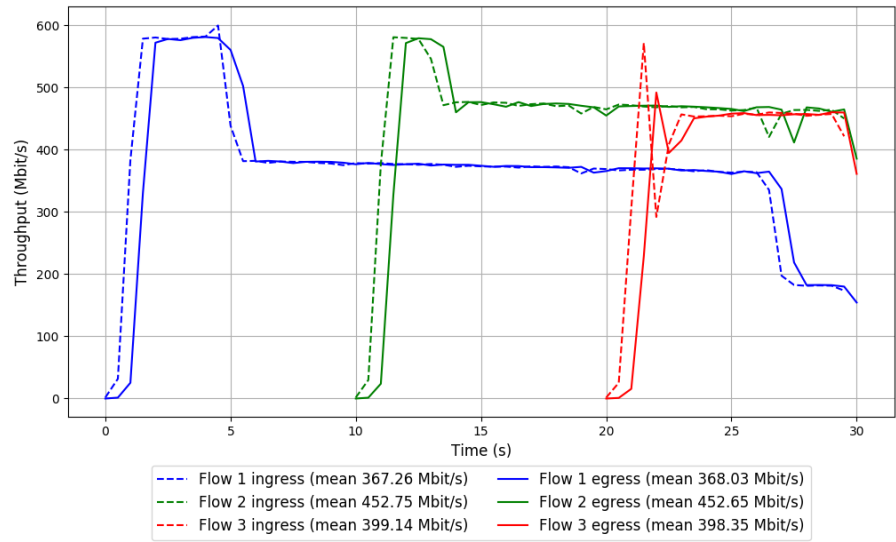
Run 4: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 233.01 Mbit/s) —— Flow 1 egress (mean 233.04 Mbit/s)
- - - Flow 2 ingress (mean 219.66 Mbit/s) —— Flow 2 egress (mean 219.60 Mbit/s)
- - - Flow 3 ingress (mean 186.47 Mbit/s) —— Flow 3 egress (mean 186.11 Mbit/s)

• Flow 1 (95th percentile 61.67 ms)   • Flow 2 (95th percentile 61.87 ms)   • Flow 3 (95th percentile 67.69 ms)
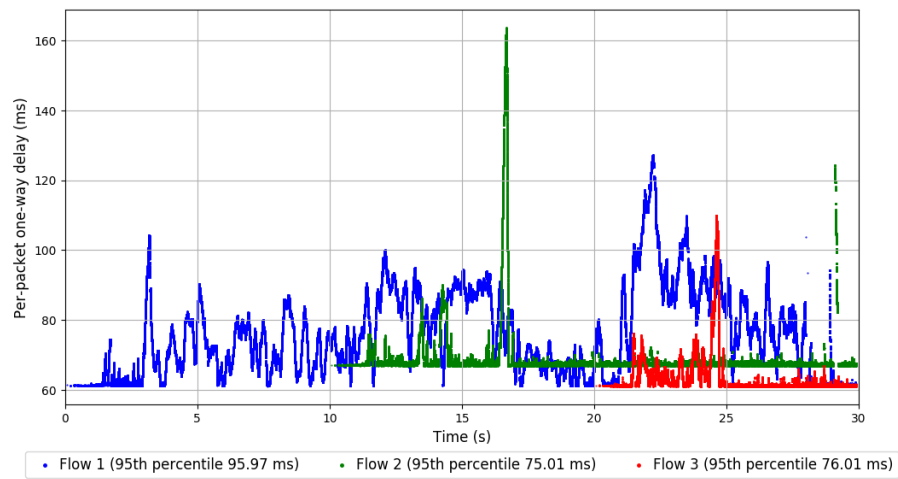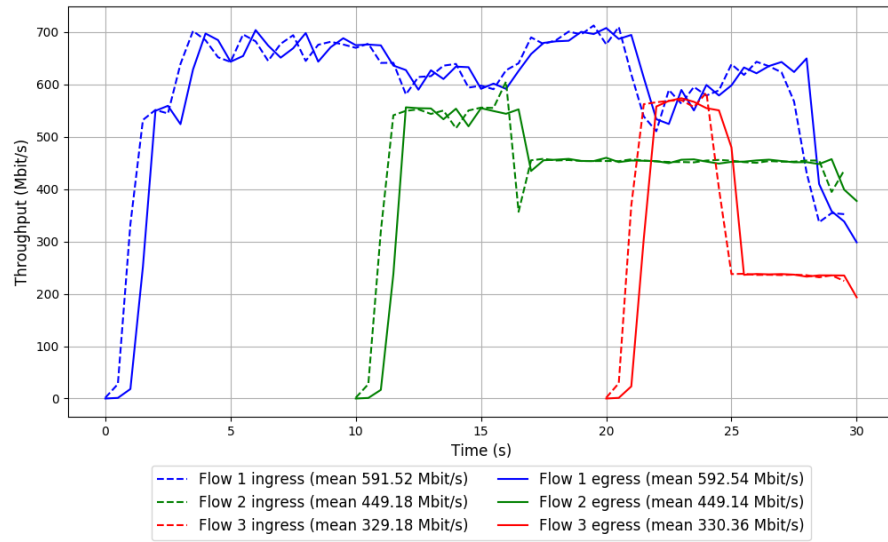
```
Run 5: Statistics of TaoVA-100x

Start at: 2018-09-11 13:01:04
End at: 2018-09-11 13:01:34
Local clock offset: 0.118 ms
Remote clock offset: -1.023 ms


# Below is generated by plot.py at 2018-09-11 15:52:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 444.81 Mbit/s
95th percentile per-packet one-way delay: 62.668 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 231.07 Mbit/s
95th percentile per-packet one-way delay: 62.852 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 224.37 Mbit/s
95th percentile per-packet one-way delay: 62.319 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 196.03 Mbit/s
95th percentile per-packet one-way delay: 63.124 ms
Loss rate: 1.10%
```

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

- - - - Flow 1 ingress (mean 231.15 Mbit/s) —— Flow 1 egress (mean 231.07 Mbit/s)
- - - - Flow 2 ingress (mean 224.34 Mbit/s) —— Flow 2 egress (mean 224.37 Mbit/s)
- - - - Flow 3 ingress (mean 195.69 Mbit/s) —— Flow 3 egress (mean 196.03 Mbit/s)

- Flow 1 (95th percentile 62.85 ms) ・ Flow 2 (95th percentile 62.32 ms) ・ Flow 3 (95th percentile 63.12 ms)
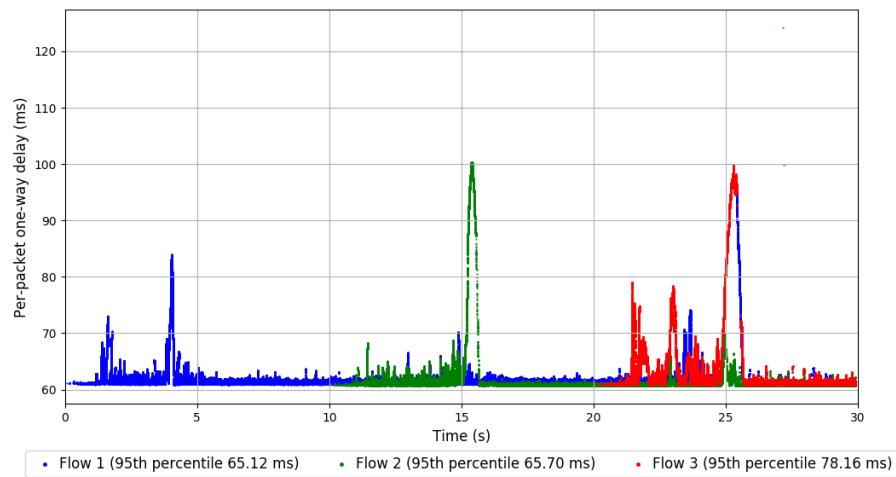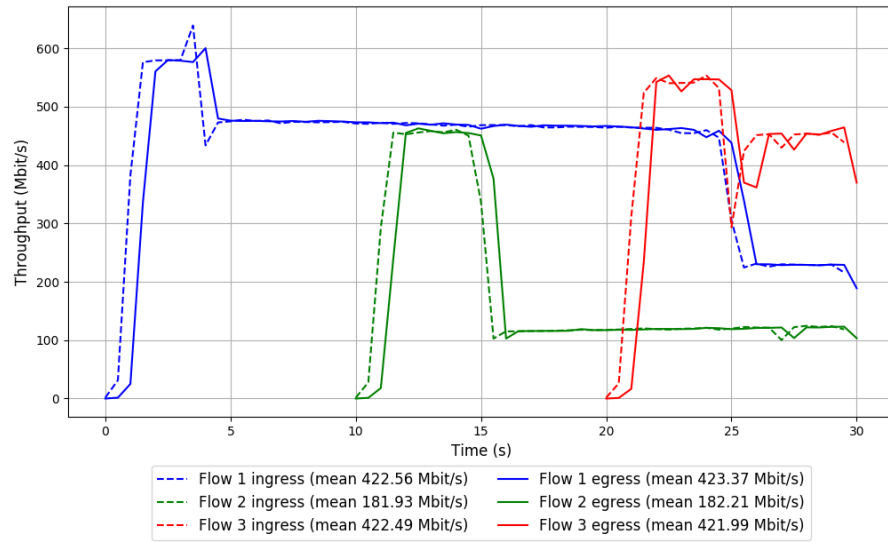
```
Run 1: Statistics of TCP Vegas

Start at: 2018-09-11 11:05:06
End at: 2018-09-11 11:05:36
Local clock offset: 0.254 ms
Remote clock offset: -0.192 ms


# Below is generated by plot.py at 2018-09-11 15:52:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 800.22 Mbit/s
95th percentile per-packet one-way delay: 67.950 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 368.03 Mbit/s
95th percentile per-packet one-way delay: 64.278 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 452.65 Mbit/s
95th percentile per-packet one-way delay: 64.609 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 398.35 Mbit/s
95th percentile per-packet one-way delay: 103.051 ms
Loss rate: 1.48%
```

Run 1: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 367.26 Mbit/s) --- Flow 1 egress (mean 368.03 Mbit/s)
Flow 2 ingress (mean 452.75 Mbit/s) --- Flow 2 egress (mean 452.65 Mbit/s)
Flow 3 ingress (mean 399.14 Mbit/s) --- Flow 3 egress (mean 398.35 Mbit/s)

Flow 1 (95th percentile 64.28 ms)   Flow 2 (95th percentile 64.61 ms)   Flow 3 (95th percentile 103.05 ms)
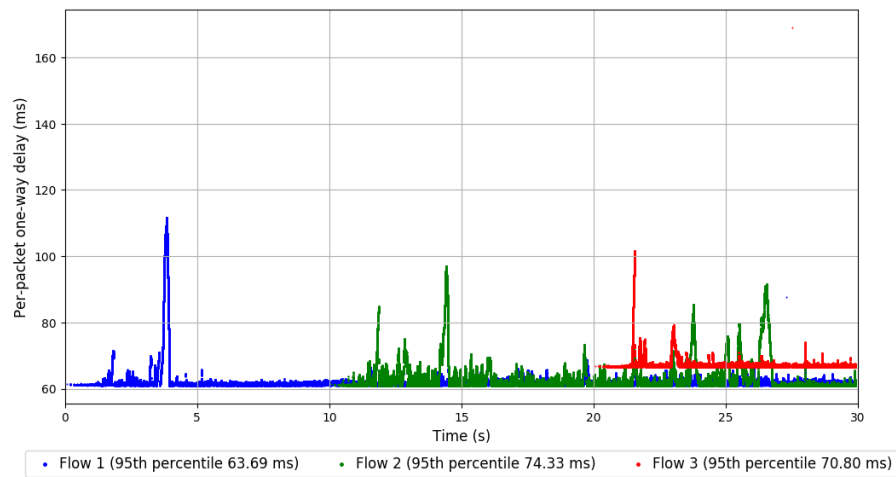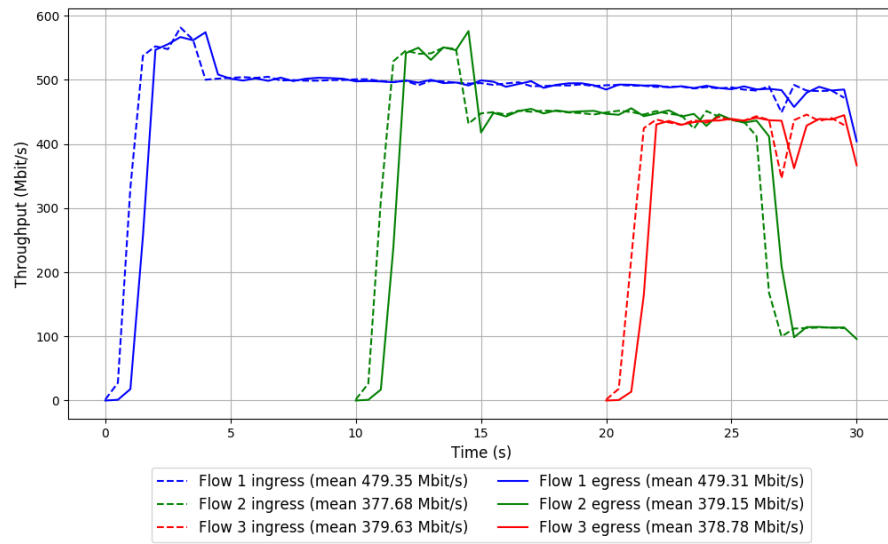
```
Run 2: Statistics of TCP Vegas

Start at: 2018-09-11 11:36:59
End at: 2018-09-11 11:37:29
Local clock offset: 0.293 ms
Remote clock offset: -0.233 ms


# Below is generated by plot.py at 2018-09-11 15:59:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 999.90 Mbit/s
95th percentile per-packet one-way delay: 93.367 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 592.54 Mbit/s
95th percentile per-packet one-way delay: 95.973 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 449.14 Mbit/s
95th percentile per-packet one-way delay: 75.011 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 330.36 Mbit/s
95th percentile per-packet one-way delay: 76.012 ms
Loss rate: 0.87%
```

Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-09-11 12:09:17
End at: 2018-09-11 12:09:47
Local clock offset: 0.348 ms
Remote clock offset: -0.165 ms


# Below is generated by plot.py at 2018-09-11 15:59:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 683.65 Mbit/s
95th percentile per-packet one-way delay: 68.638 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 423.37 Mbit/s
95th percentile per-packet one-way delay: 65.123 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 182.21 Mbit/s
95th percentile per-packet one-way delay: 65.696 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 421.99 Mbit/s
95th percentile per-packet one-way delay: 78.155 ms
Loss rate: 1.40%
```
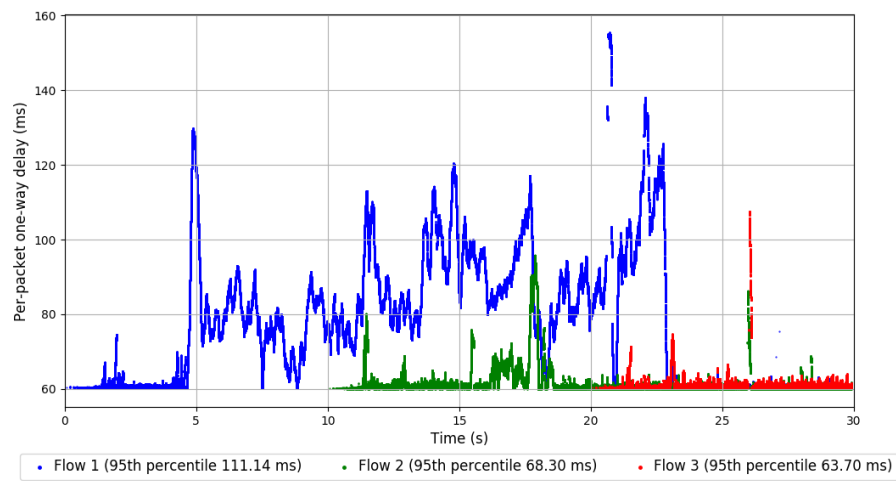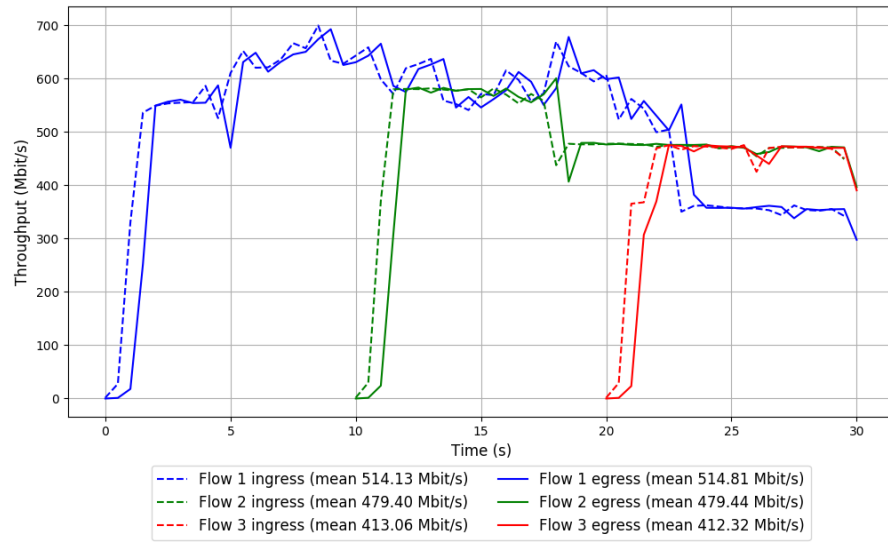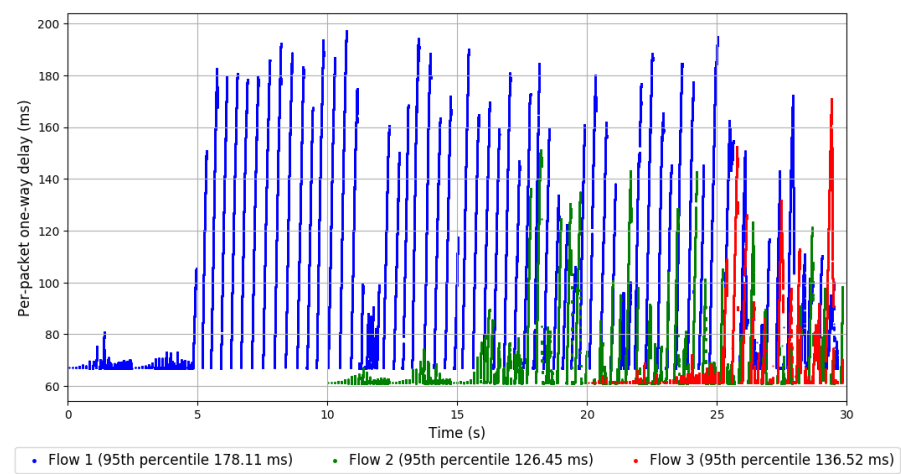
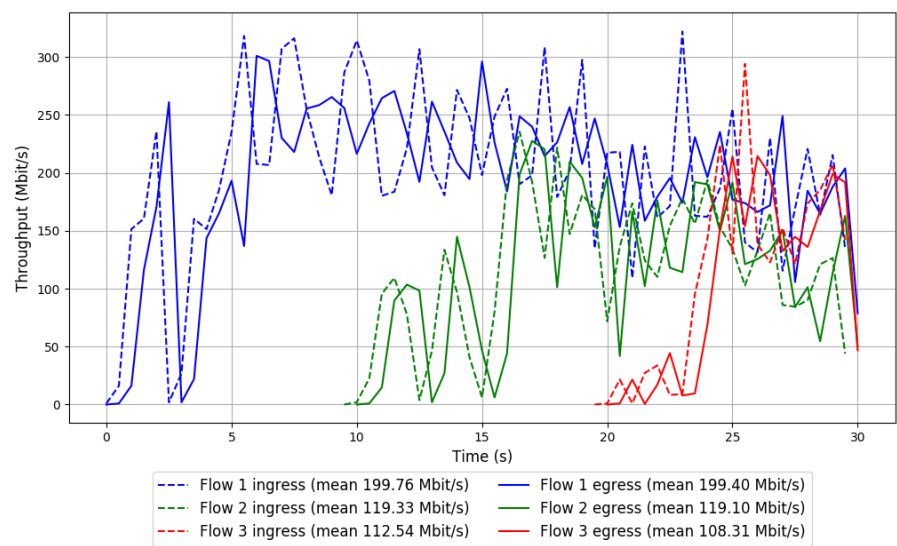Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2018-09-11 12:41:06
End at: 2018-09-11 12:41:36
Local clock offset: 0.432 ms
Remote clock offset: -0.088 ms


# Below is generated by plot.py at 2018-09-11 16:07:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 856.14 Mbit/s
95th percentile per-packet one-way delay: 68.741 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 479.31 Mbit/s
95th percentile per-packet one-way delay: 63.686 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 379.15 Mbit/s
95th percentile per-packet one-way delay: 74.328 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 378.78 Mbit/s
95th percentile per-packet one-way delay: 70.796 ms
Loss rate: 1.57%
```

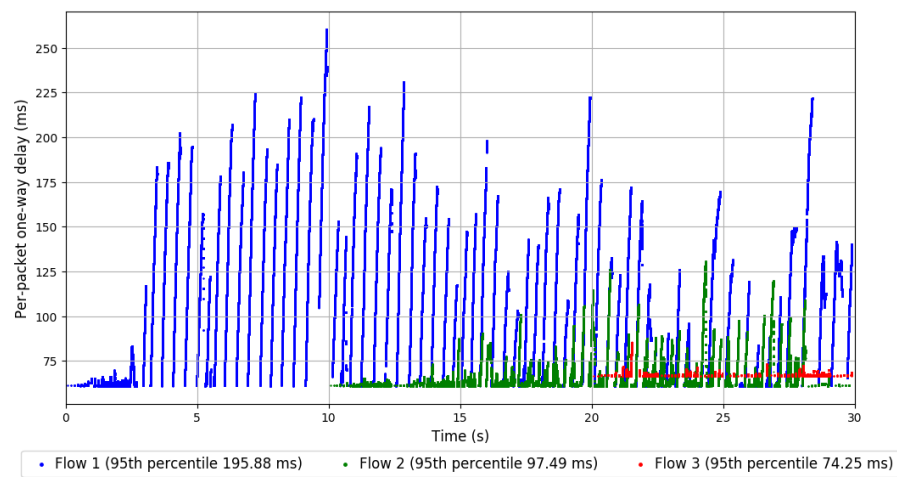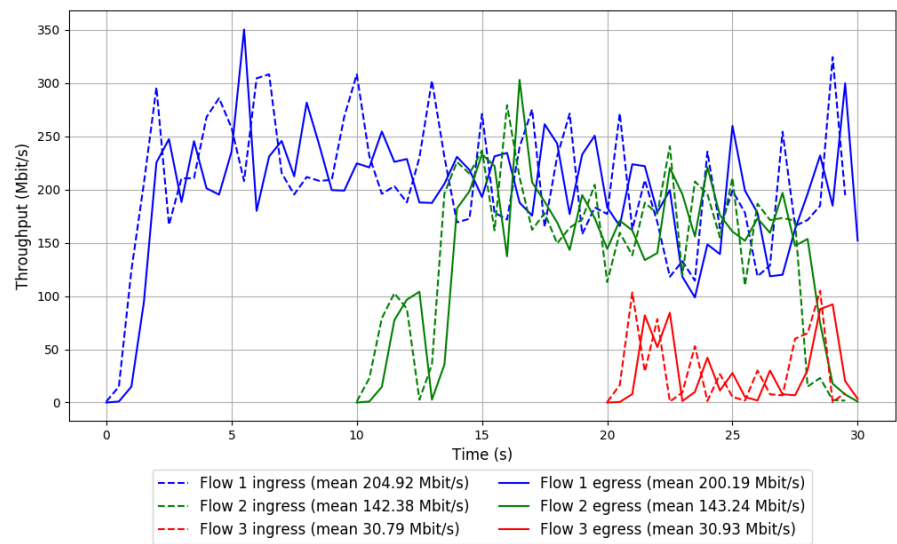Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-09-11 13:13:36
End at: 2018-09-11 13:14:06
Local clock offset: -0.19 ms
Remote clock offset: 0.551 ms


# Below is generated by plot.py at 2018-09-11 16:08:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 969.45 Mbit/s
95th percentile per-packet one-way delay: 103.092 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 514.81 Mbit/s
95th percentile per-packet one-way delay: 111.137 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 479.44 Mbit/s
95th percentile per-packet one-way delay: 68.296 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 412.32 Mbit/s
95th percentile per-packet one-way delay: 63.695 ms
Loss rate: 1.40%
```

Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 514.13 Mbit/s)   Flow 1 egress (mean 514.81 Mbit/s)
Flow 2 ingress (mean 479.40 Mbit/s)   Flow 2 egress (mean 479.44 Mbit/s)
Flow 3 ingress (mean 413.06 Mbit/s)   Flow 3 egress (mean 412.32 Mbit/s)

Flow 1 (95th percentile 111.14 ms)   Flow 2 (95th percentile 68.30 ms)   Flow 3 (95th percentile 63.70 ms)
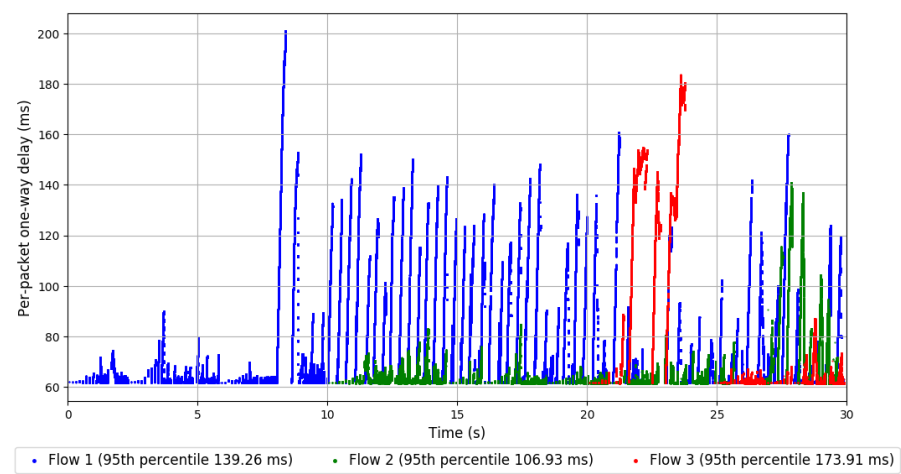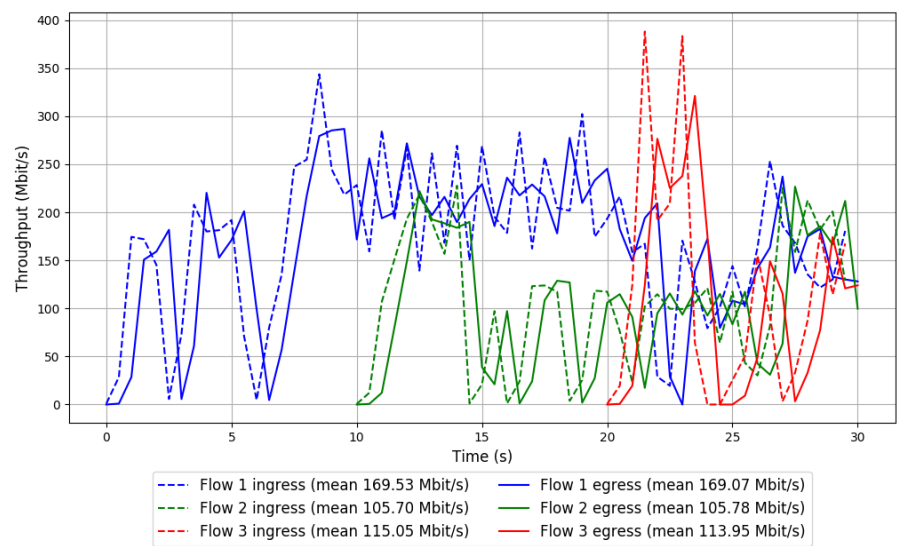
```
Run 1: Statistics of Verus

Start at: 2018-09-11 10:39:38
End at: 2018-09-11 10:40:08
Local clock offset: 0.165 ms
Remote clock offset: -0.302 ms


# Below is generated by plot.py at 2018-09-11 16:08:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 312.96 Mbit/s
95th percentile per-packet one-way delay: 172.018 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 199.40 Mbit/s
95th percentile per-packet one-way delay: 178.111 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 119.10 Mbit/s
95th percentile per-packet one-way delay: 126.453 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 108.31 Mbit/s
95th percentile per-packet one-way delay: 136.519 ms
Loss rate: 4.95%
```
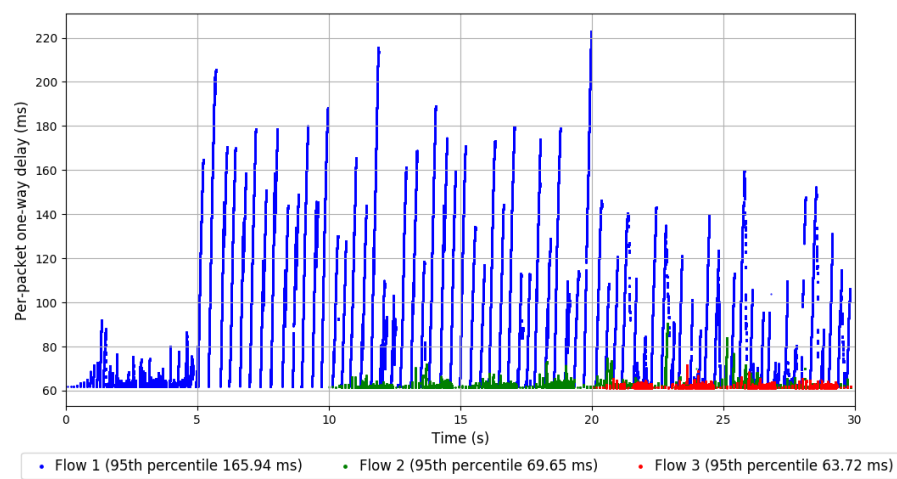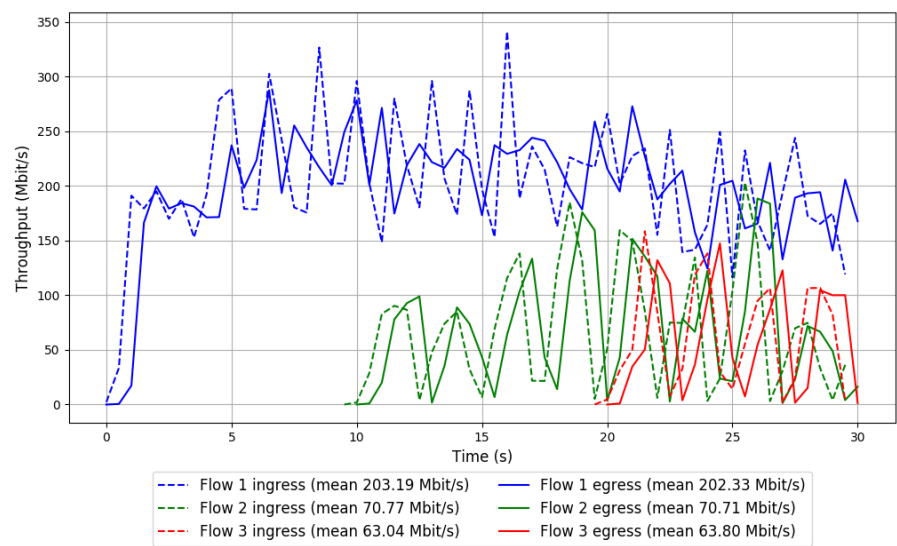
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-09-11 11:11:32
End at: 2018-09-11 11:12:02
Local clock offset: 0.223 ms
Remote clock offset: -0.242 ms


# Below is generated by plot.py at 2018-09-11 16:08:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 304.99 Mbit/s
95th percentile per-packet one-way delay: 185.442 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 200.19 Mbit/s
95th percentile per-packet one-way delay: 195.881 ms
Loss rate: 2.28%
-- Flow 2:
Average throughput: 143.24 Mbit/s
95th percentile per-packet one-way delay: 97.491 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 30.93 Mbit/s
95th percentile per-packet one-way delay: 74.254 ms
Loss rate: 0.92%
```
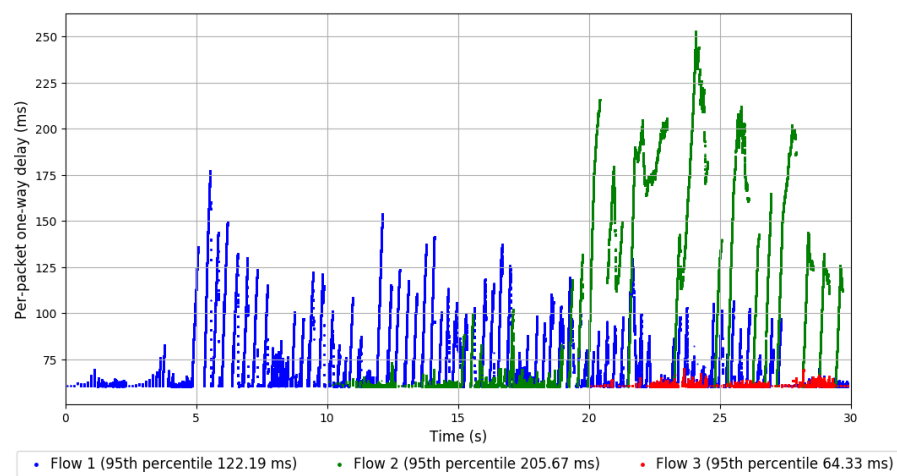
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-09-11 11:43:40
End at: 2018-09-11 11:44:10
Local clock offset: 0.318 ms
Remote clock offset: -0.711 ms


# Below is generated by plot.py at 2018-09-11 16:08:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 276.08 Mbit/s
95th percentile per-packet one-way delay: 143.575 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 169.07 Mbit/s
95th percentile per-packet one-way delay: 139.264 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 105.78 Mbit/s
95th percentile per-packet one-way delay: 106.926 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 113.95 Mbit/s
95th percentile per-packet one-way delay: 173.909 ms
Loss rate: 2.24%
```

Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2018-09-11 12:15:37
End at: 2018-09-11 12:16:07
Local clock offset: 0.381 ms
Remote clock offset: -0.469 ms


# Below is generated by plot.py at 2018-09-11 16:08:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.24 Mbit/s
95th percentile per-packet one-way delay: 160.652 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 202.33 Mbit/s
95th percentile per-packet one-way delay: 165.938 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 70.71 Mbit/s
95th percentile per-packet one-way delay: 69.651 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 63.80 Mbit/s
95th percentile per-packet one-way delay: 63.716 ms
Loss rate: 0.12%
```
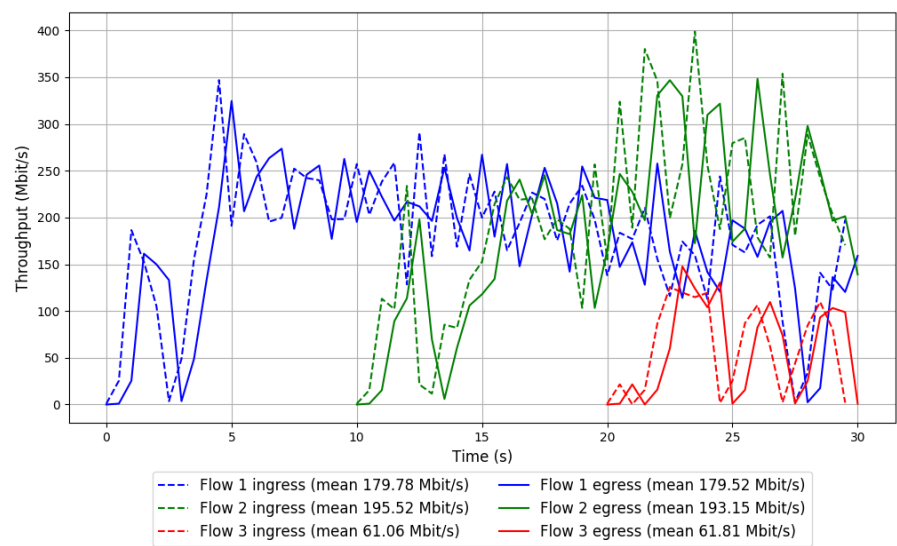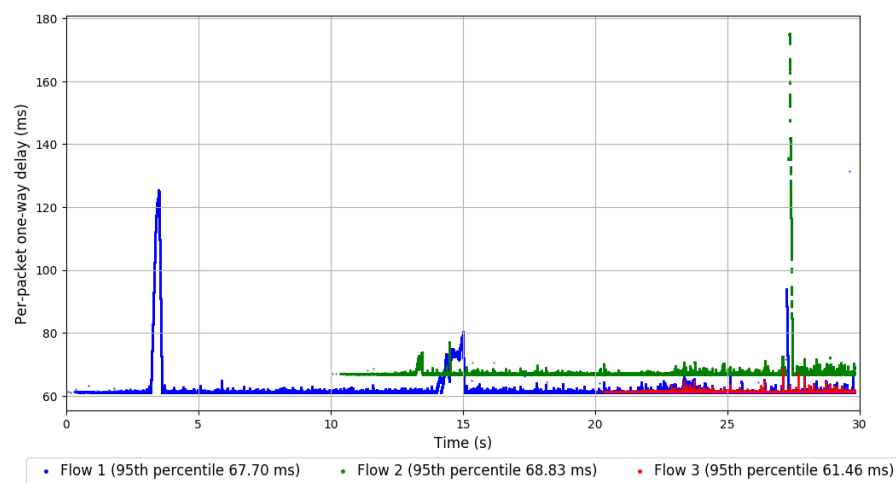
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-09-11 12:47:41
End at: 2018-09-11 12:48:11
Local clock offset: 0.444 ms
Remote clock offset: 0.471 ms


# Below is generated by plot.py at 2018-09-11 16:08:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.83 Mbit/s
95th percentile per-packet one-way delay: 193.117 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 179.52 Mbit/s
95th percentile per-packet one-way delay: 122.189 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 193.15 Mbit/s
95th percentile per-packet one-way delay: 205.672 ms
Loss rate: 2.87%
-- Flow 3:
Average throughput: 61.81 Mbit/s
95th percentile per-packet one-way delay: 64.325 ms
Loss rate: 0.09%
```
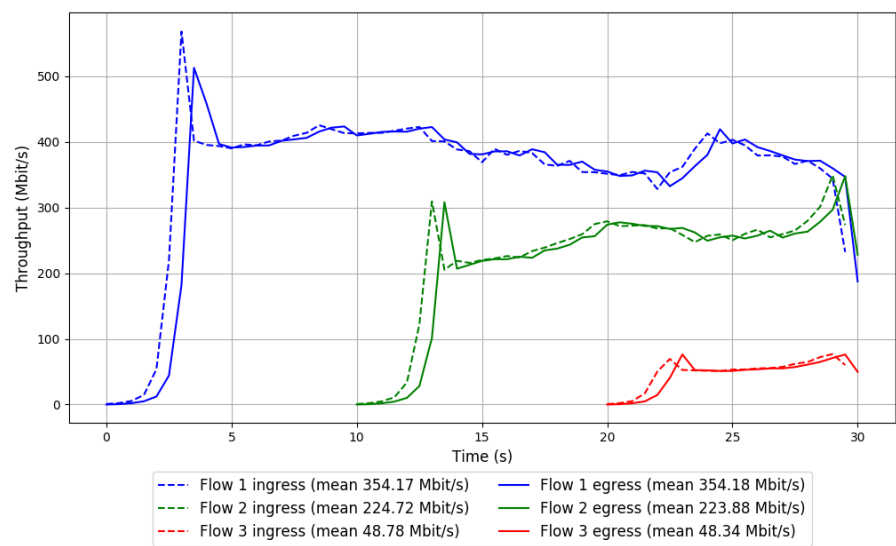
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-09-11 10:44:37
End at: 2018-09-11 10:45:07
Local clock offset: 0.165 ms
Remote clock offset: -0.41 ms


# Below is generated by plot.py at 2018-09-11 16:08:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 518.56 Mbit/s
95th percentile per-packet one-way delay: 68.538 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 354.18 Mbit/s
95th percentile per-packet one-way delay: 67.702 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 223.88 Mbit/s
95th percentile per-packet one-way delay: 68.832 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 48.34 Mbit/s
95th percentile per-packet one-way delay: 61.459 ms
Loss rate: 2.14%
```
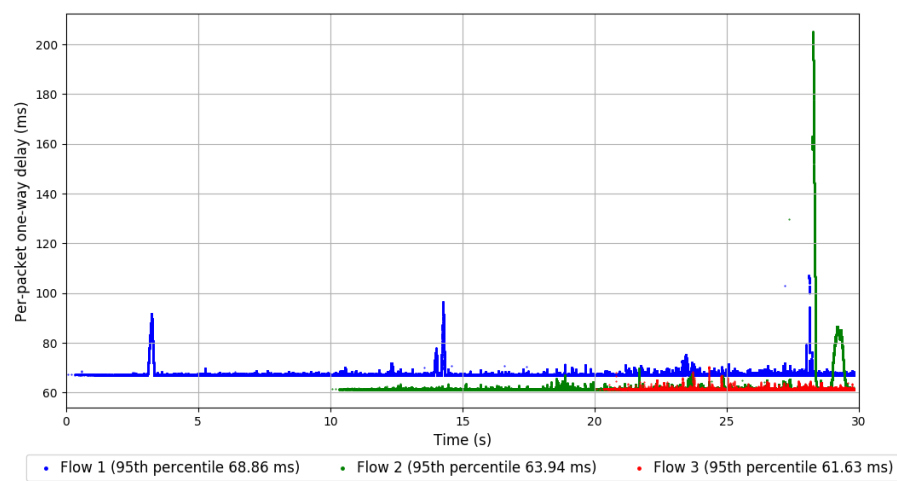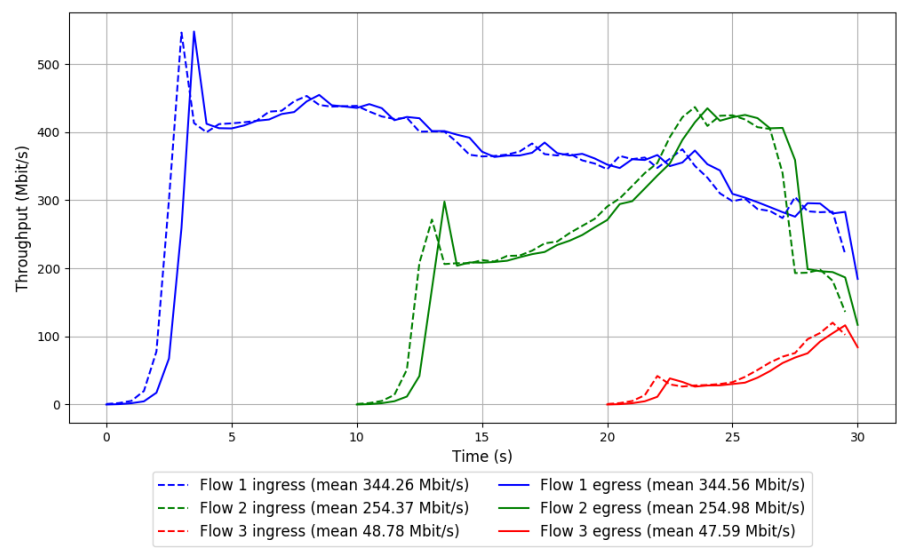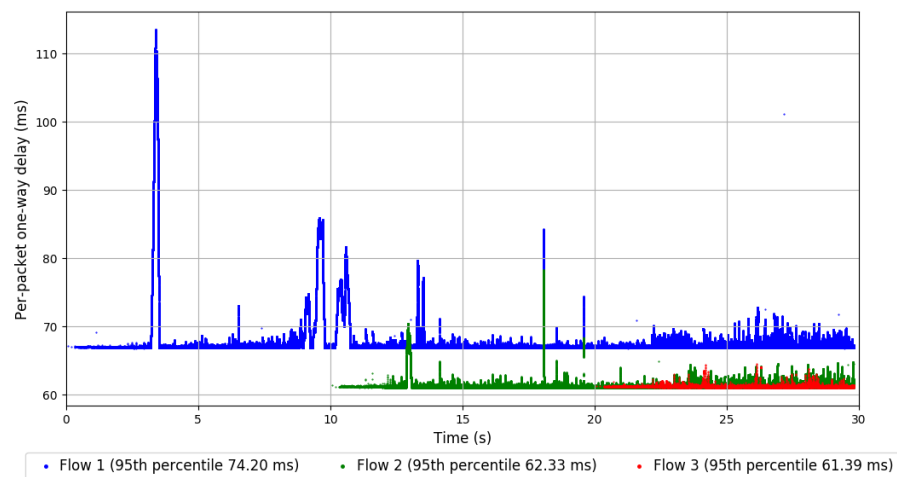
Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-09-11 11:16:33
End at: 2018-09-11 11:17:03
Local clock offset: 0.299 ms
Remote clock offset: -0.42 ms

# Below is generated by plot.py at 2018-09-11 16:10:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.36 Mbit/s
95th percentile per-packet one-way delay: 68.249 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 344.56 Mbit/s
95th percentile per-packet one-way delay: 68.864 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 254.98 Mbit/s
95th percentile per-packet one-way delay: 63.943 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 47.59 Mbit/s
95th percentile per-packet one-way delay: 61.628 ms
Loss rate: 3.71%
```

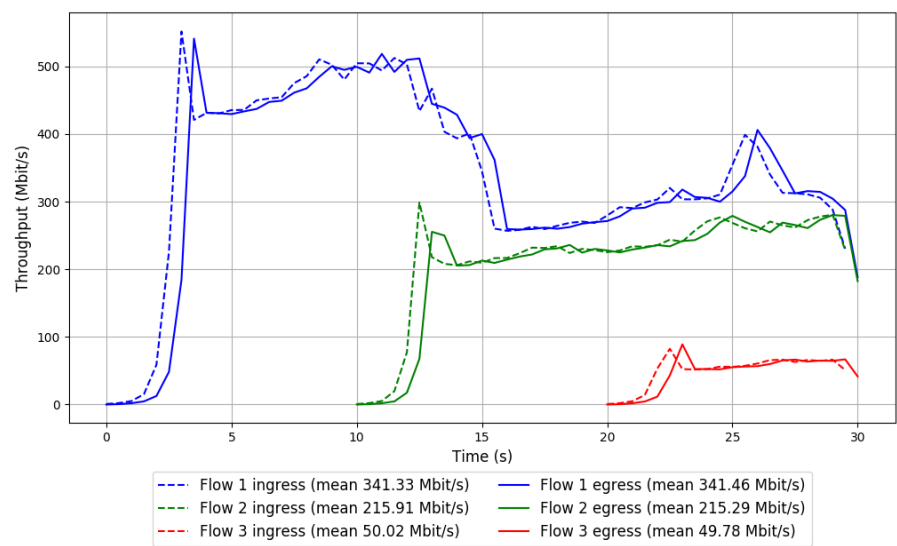# Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2018-09-11 11:48:33
End at: 2018-09-11 11:49:03
Local clock offset: 0.321 ms
Remote clock offset: -0.269 ms


# Below is generated by plot.py at 2018-09-11 16:10:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 500.63 Mbit/s
95th percentile per-packet one-way delay: 71.245 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 341.46 Mbit/s
95th percentile per-packet one-way delay: 74.198 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 215.29 Mbit/s
95th percentile per-packet one-way delay: 62.328 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 49.78 Mbit/s
95th percentile per-packet one-way delay: 61.391 ms
Loss rate: 1.77%
```

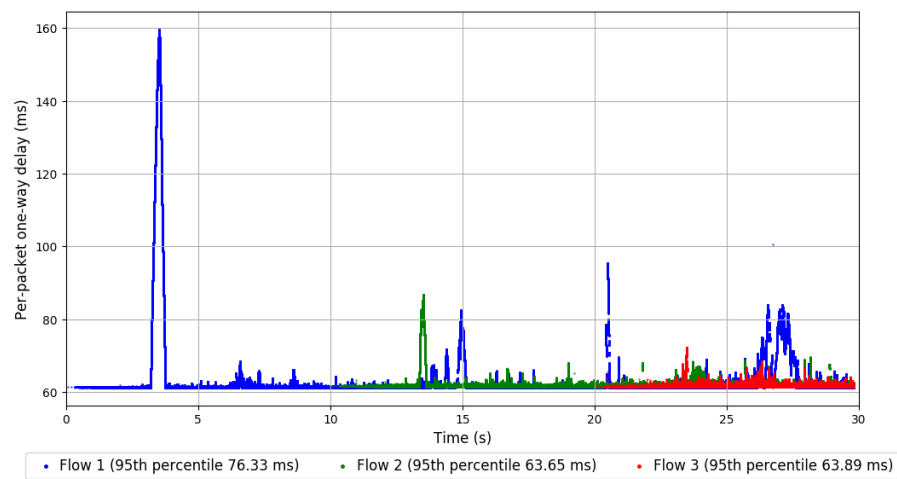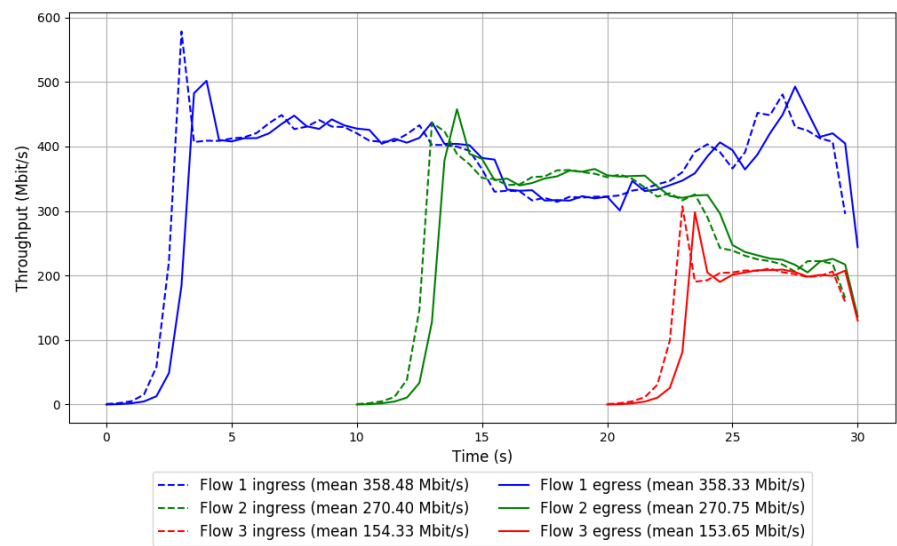Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2018-09-11 12:20:35
End at: 2018-09-11 12:21:05
Local clock offset: 0.44 ms
Remote clock offset: -0.257 ms


# Below is generated by plot.py at 2018-09-11 16:10:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 588.26 Mbit/s
95th percentile per-packet one-way delay: 70.870 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 358.33 Mbit/s
95th percentile per-packet one-way delay: 76.333 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 270.75 Mbit/s
95th percentile per-packet one-way delay: 63.647 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 153.65 Mbit/s
95th percentile per-packet one-way delay: 63.886 ms
Loss rate: 1.74%
```

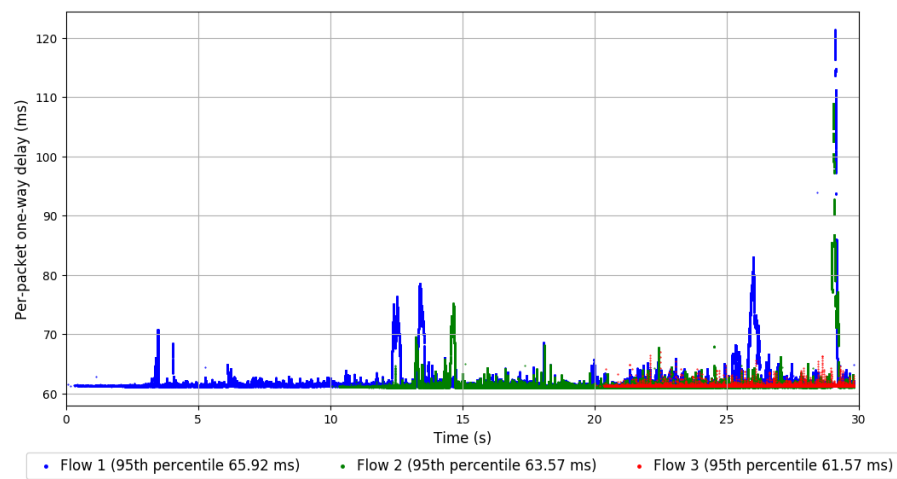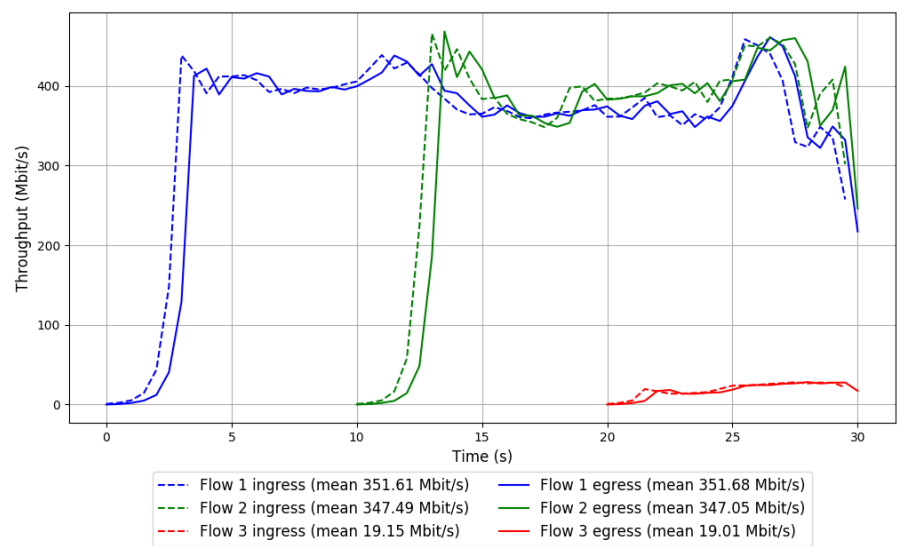Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2018-09-11 12:52:44
End at: 2018-09-11 12:53:14
Local clock offset: 0.497 ms
Remote clock offset: -0.269 ms


# Below is generated by plot.py at 2018-09-11 16:10:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 588.19 Mbit/s
95th percentile per-packet one-way delay: 64.879 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 351.68 Mbit/s
95th percentile per-packet one-way delay: 65.923 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 347.05 Mbit/s
95th percentile per-packet one-way delay: 63.571 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 19.01 Mbit/s
95th percentile per-packet one-way delay: 61.569 ms
Loss rate: 2.05%
```

Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-09-11 10:38:26
End at: 2018-09-11 10:38:56
Local clock offset: 0.158 ms
Remote clock offset: -0.15 ms


# Below is generated by plot.py at 2018-09-11 16:10:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.85 Mbit/s
95th percentile per-packet one-way delay: 67.089 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 61.271 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 67.130 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 61.125 ms
Loss rate: 1.90%
```
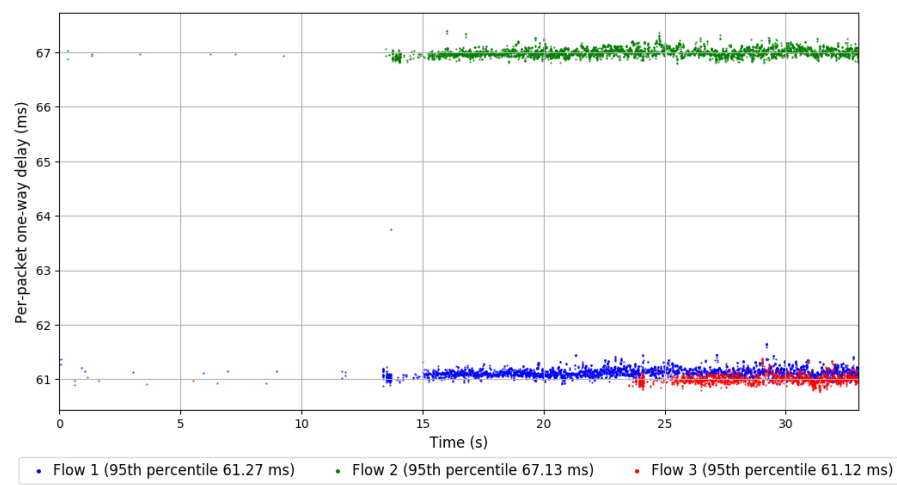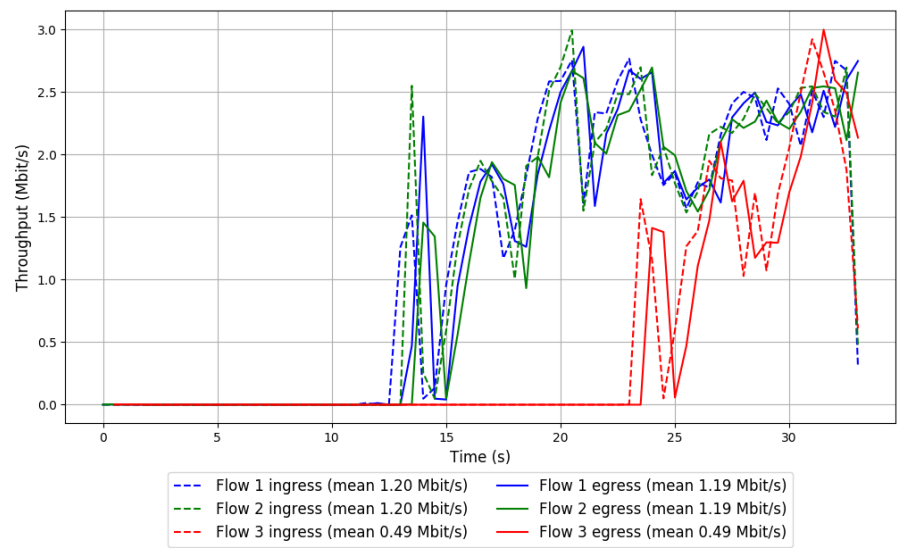
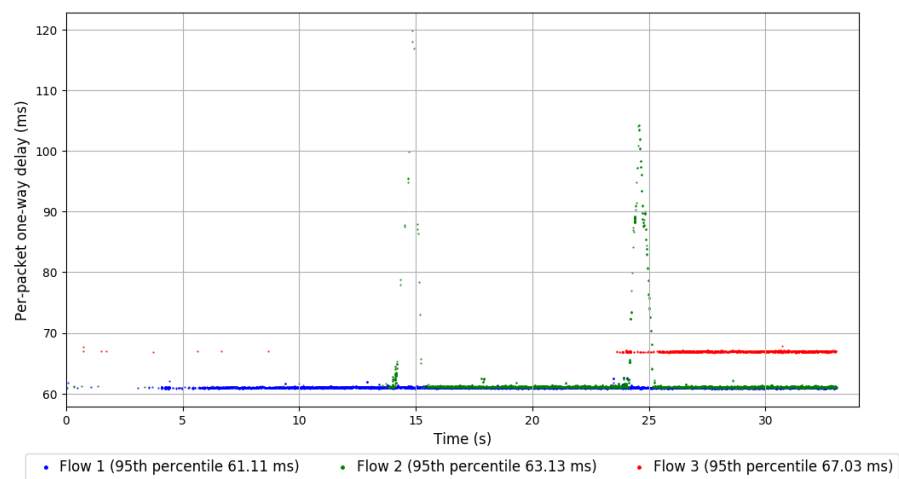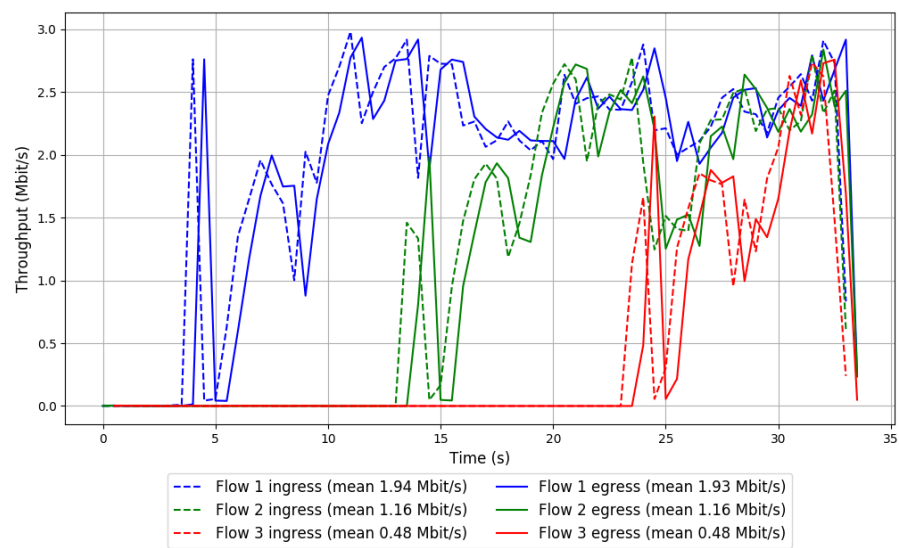Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-09-11 11:10:20
End at: 2018-09-11 11:10:50
Local clock offset: 0.21 ms
Remote clock offset: -0.144 ms


# Below is generated by plot.py at 2018-09-11 16:10:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 66.965 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 61.110 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 63.129 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 67.031 ms
Loss rate: 0.77%
```

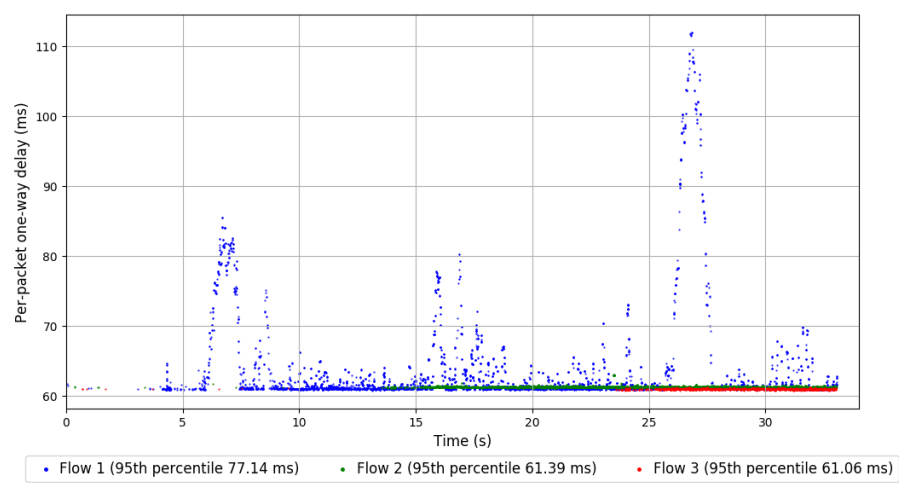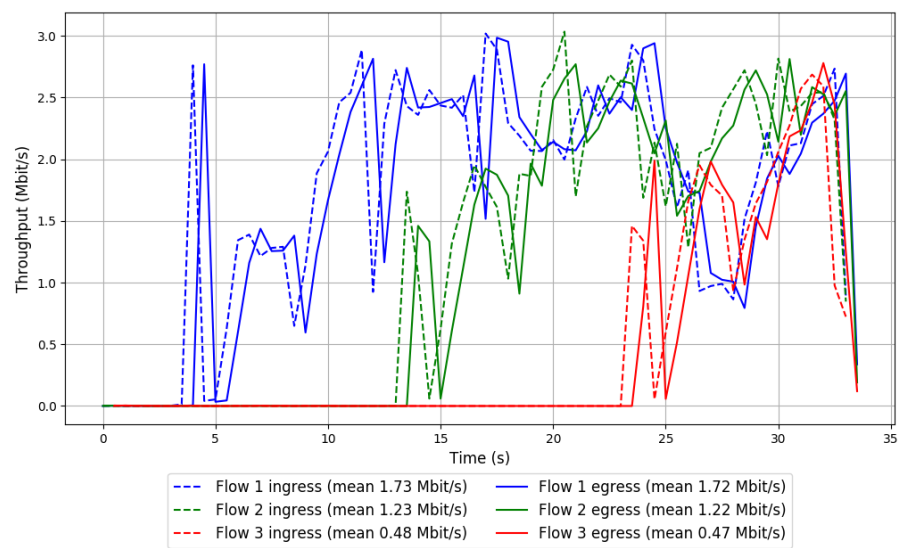Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-09-11 11:42:28
End at: 2018-09-11 11:42:58
Local clock offset: 0.291 ms
Remote clock offset: -0.152 ms


# Below is generated by plot.py at 2018-09-11 16:10:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.39 Mbit/s
95th percentile per-packet one-way delay: 68.004 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 77.135 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 61.394 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 61.059 ms
Loss rate: 2.31%
```
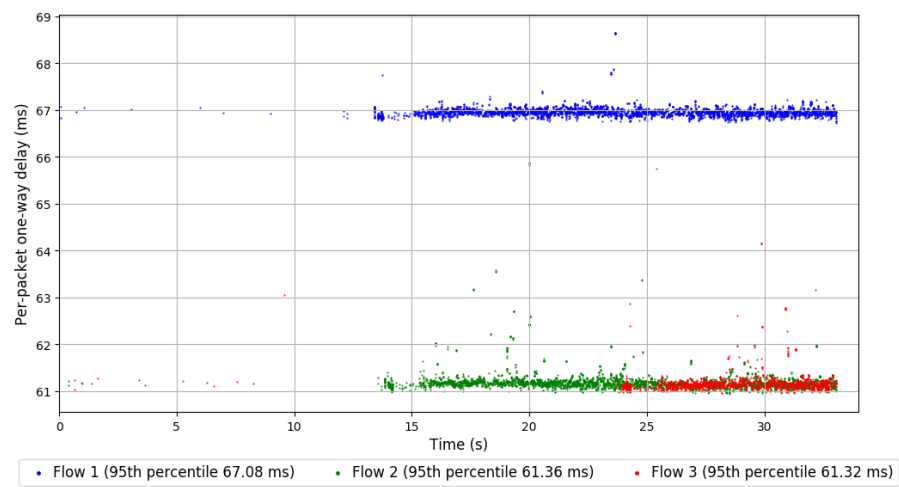
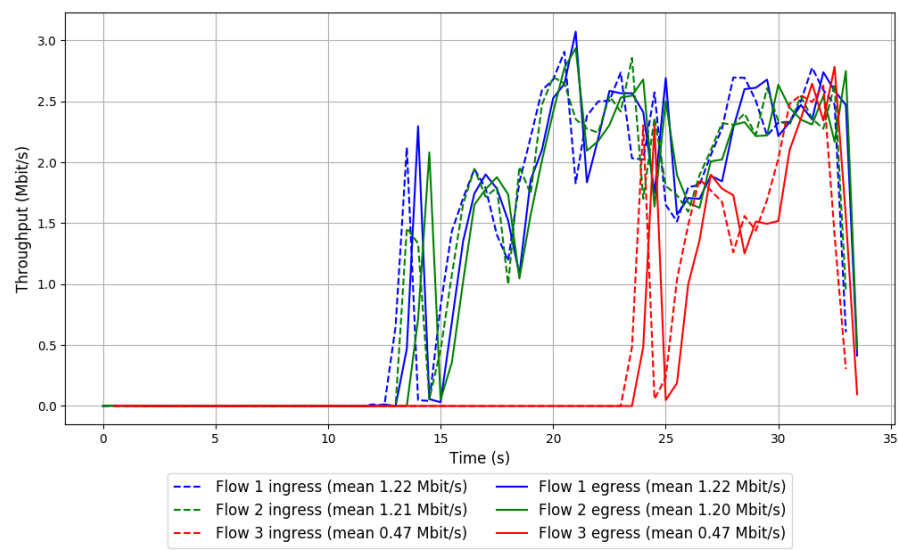Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-09-11 12:14:25
End at: 2018-09-11 12:14:55
Local clock offset: 0.374 ms
Remote clock offset: -0.191 ms


# Below is generated by plot.py at 2018-09-11 16:10:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.87 Mbit/s
95th percentile per-packet one-way delay: 67.037 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 67.080 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 61.364 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 61.321 ms
Loss rate: 0.98%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-09-11 12:46:30
End at: 2018-09-11 12:47:00
Local clock offset: 0.412 ms
Remote clock offset: 0.923 ms


# Below is generated by plot.py at 2018-09-11 16:10:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 65.940 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 65.967 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 60.552 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 60.004 ms
Loss rate: 0.80%
```

Run 5: Report of WebRTC media — Data Link

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