Pantheon Report

Generated at 2018-12-12 04:54:04 (UTC).

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

Repeated the test of 19 congestion control schemes 5 times.

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

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.
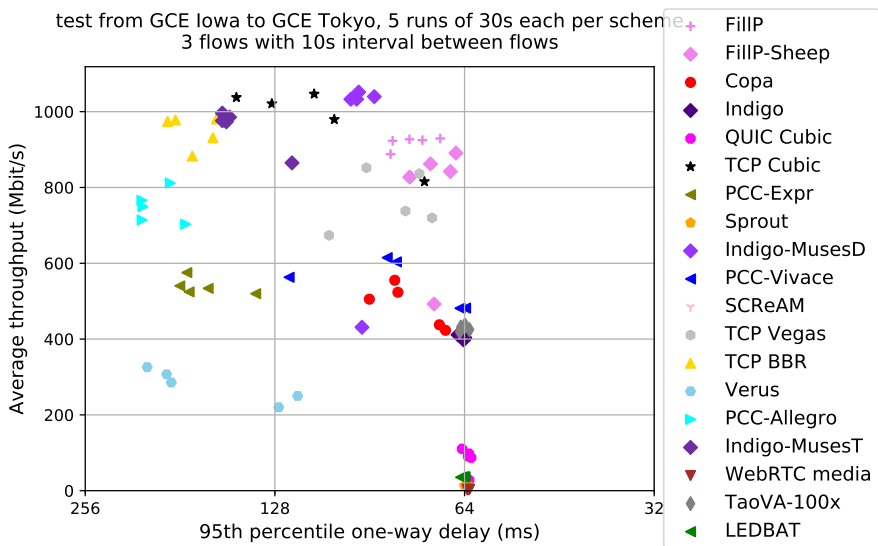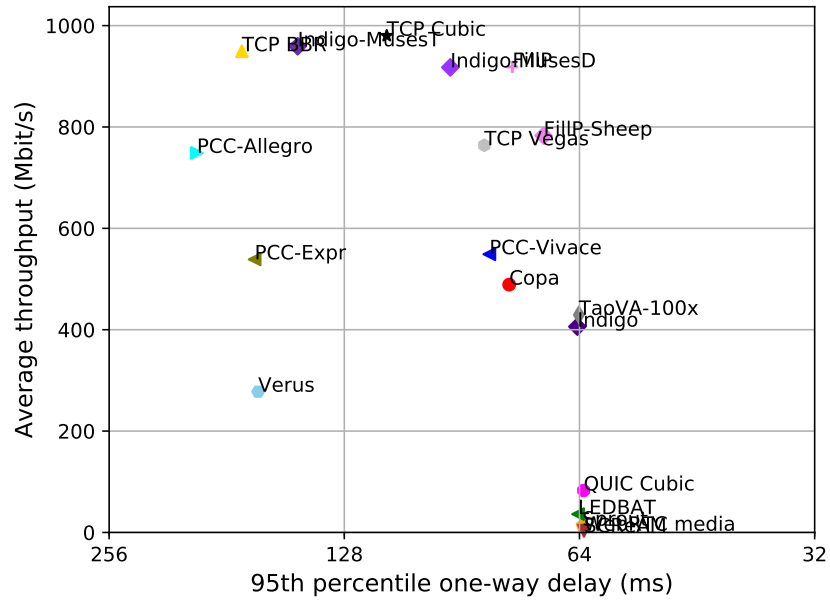
```
System info:
Linux 4.15.0-1024-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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

```
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from GCE Iowa to GCE Tokyo, 5 runs of 30s each per scheme
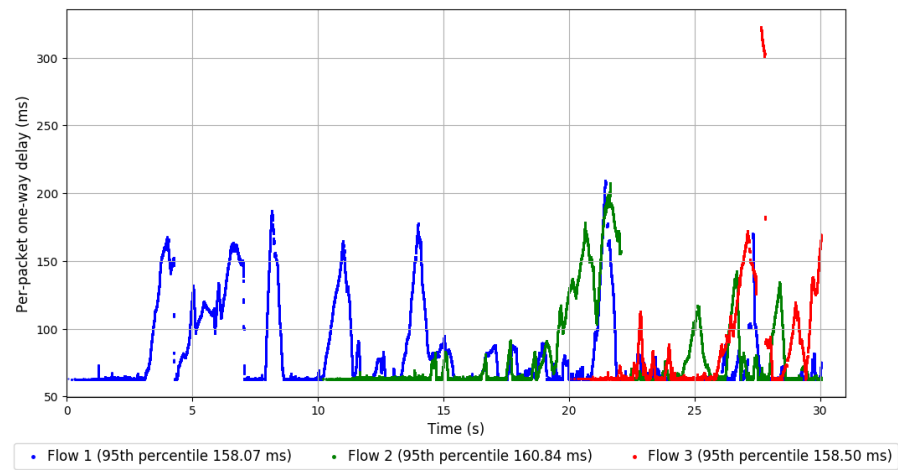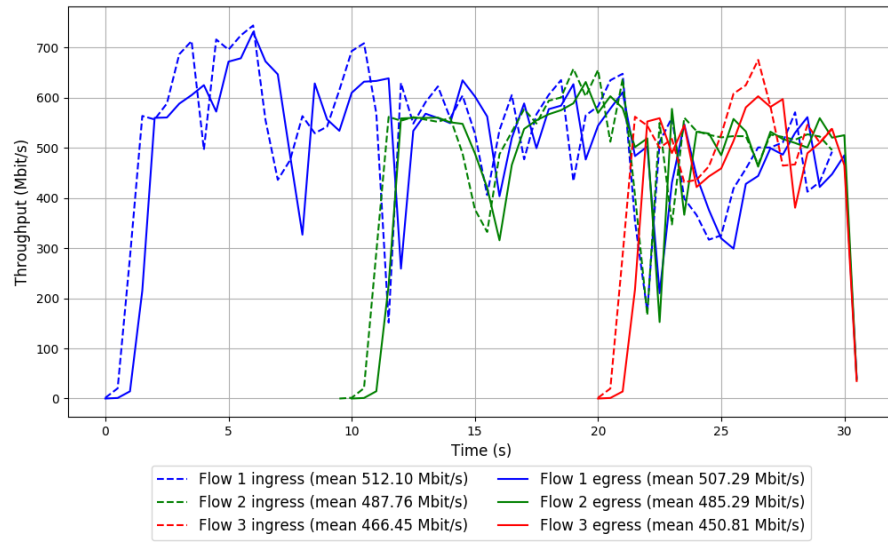### 3 flows with 10s interval between flows (mean of all runs by scheme)

test from GCE Iowa to GCE Tokyo, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

3

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	487.96	481.54	423.68	165.90	165.12	163.17	0.74	1.51	2.47
Copa	5	254.25	235.55	234.06	74.06	75.85	84.79	0.01	0.03	0.07
TCP Cubic	5	515.84	493.18	408.55	97.15	101.00	115.37	0.06	0.09	0.26
FillP	5	582.26	370.53	270.47	87.23	67.92	67.29	0.12	0.00	0.01
FillP-Sheep	5	474.02	342.16	246.54	78.40	68.37	65.97	0.06	0.00	0.01
Indigo	5	215.56	203.99	170.86	64.25	64.49	64.37	0.00	0.00	0.00
Indigo-MusesD	5	462.22	483.75	411.30	88.44	95.24	88.03	0.01	0.03	0.14
Indigo-MusesT	5	622.75	408.81	253.38	148.42	120.90	83.79	0.18	0.34	0.00
LEDBAT	5	23.20	15.61	7.70	64.36	64.10	63.87	0.00	0.00	0.00
PCC-Allegro	5	433.58	319.44	314.22	201.57	128.72	142.52	5.92	1.86	3.39
PCC-Expr	5	305.27	252.85	197.34	159.13	156.83	103.01	3.04	1.49	0.75
QUIC Cubic	5	41.27	45.39	34.83	63.19	63.16	63.11	0.00	0.00	0.00
SCReAM	5	0.22	0.22	0.22	63.18	63.10	63.11	0.00	0.00	0.00
Sprout	5	6.77	6.71	6.48	63.40	63.50	63.33	0.00	0.00	0.00
TaoVA-100x	5	220.09	212.16	204.49	63.75	64.39	64.95	0.00	0.00	0.00
TCP Vegas	5	397.93	330.50	437.83	68.30	70.95	96.83	0.00	0.00	0.08
Verus	5	166.68	124.24	87.52	158.69	119.43	126.86	2.02	0.08	1.26
PCC-Vivace	5	327.12	257.28	152.90	90.56	87.39	72.28	0.06	0.13	0.00
WebRTC media	5	1.83	1.22	0.46	63.14	63.00	63.18	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2018-12-11 23:30:59
End at: 2018-12-11 23:31:29
Local clock offset: -0.02 ms
Remote clock offset: -0.064 ms


# Below is generated by plot.py at 2018-12-12 02:38:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 980.67 Mbit/s
95th percentile per-packet one-way delay: 158.470 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 507.29 Mbit/s
95th percentile per-packet one-way delay: 158.067 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 485.29 Mbit/s
95th percentile per-packet one-way delay: 160.835 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 450.81 Mbit/s
95th percentile per-packet one-way delay: 158.500 ms
Loss rate: 3.34%
```
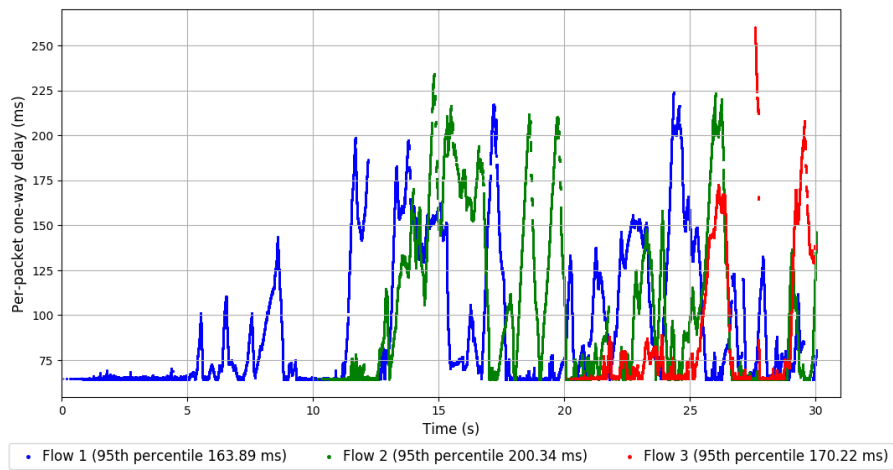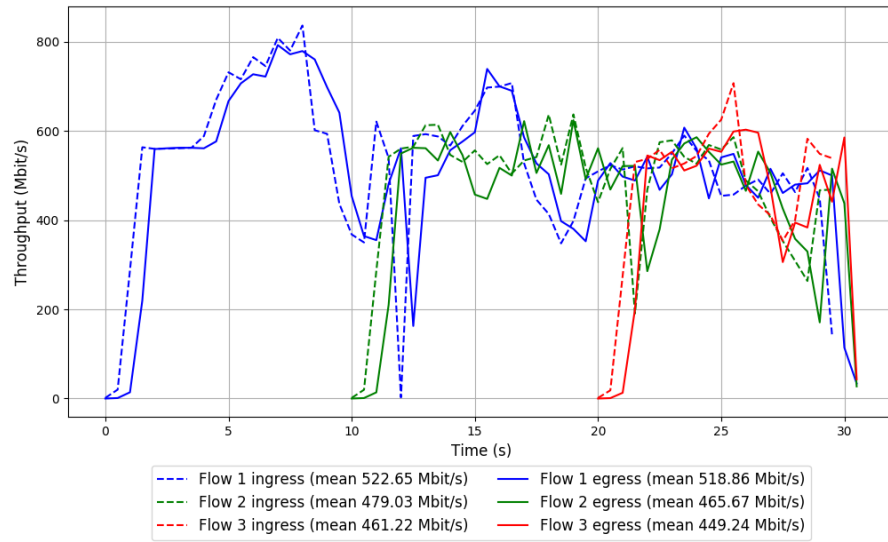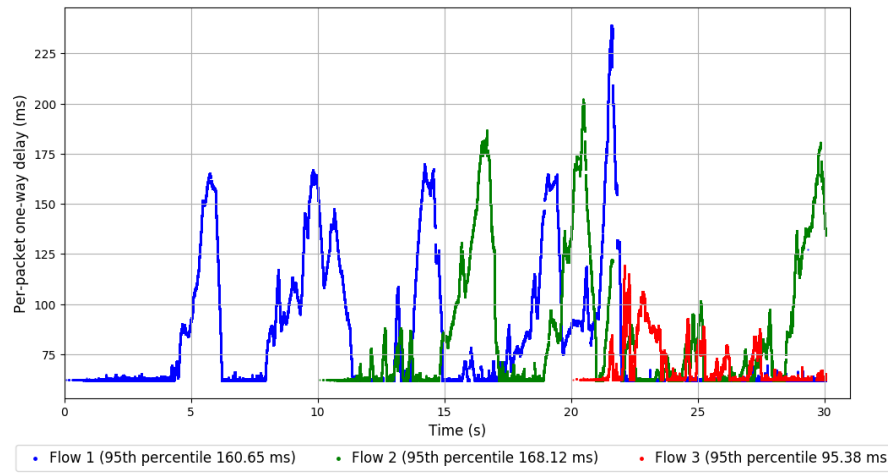
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 512.10 Mbit/s) — Flow 1 egress (mean 507.29 Mbit/s)
Flow 2 ingress (mean 487.76 Mbit/s) — Flow 2 egress (mean 485.29 Mbit/s)
Flow 3 ingress (mean 466.45 Mbit/s) — Flow 3 egress (mean 450.81 Mbit/s)

Flow 1 (95th percentile 158.07 ms)   Flow 2 (95th percentile 160.84 ms)   Flow 3 (95th percentile 158.50 ms)
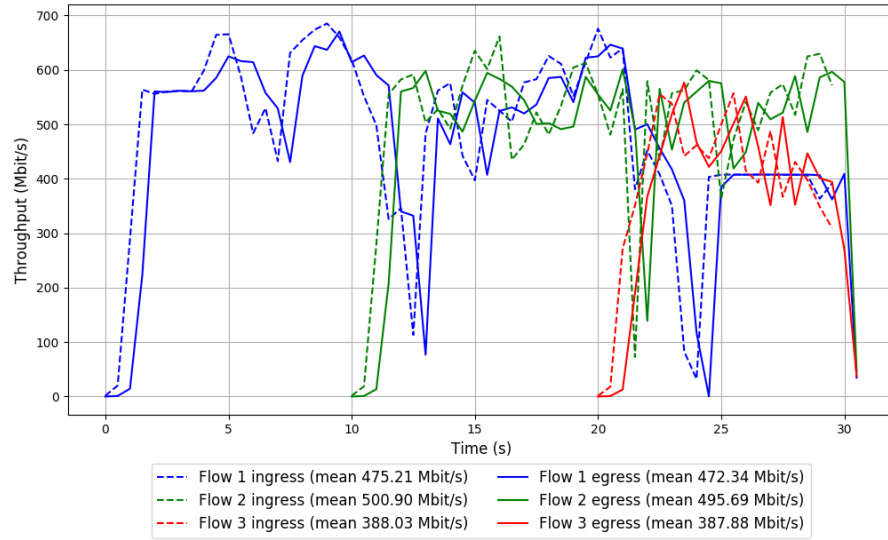
```
Run 2: Statistics of TCP BBR

Start at: 2018-12-12 00:04:45
End at: 2018-12-12 00:05:15
Local clock offset: -0.094 ms
Remote clock offset: 1.39 ms


# Below is generated by plot.py at 2018-12-12 02:38:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 978.16 Mbit/s
95th percentile per-packet one-way delay: 184.094 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 518.86 Mbit/s
95th percentile per-packet one-way delay: 163.887 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 465.67 Mbit/s
95th percentile per-packet one-way delay: 200.337 ms
Loss rate: 2.79%
-- Flow 3:
Average throughput: 449.24 Mbit/s
95th percentile per-packet one-way delay: 170.219 ms
Loss rate: 2.60%
```
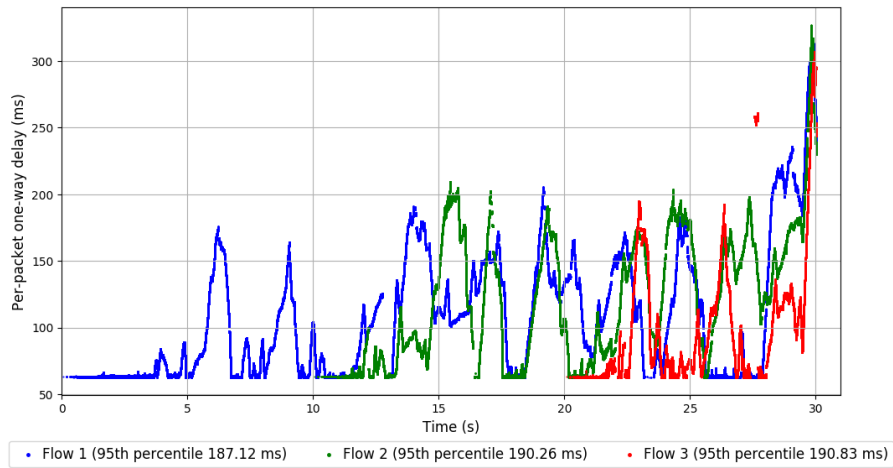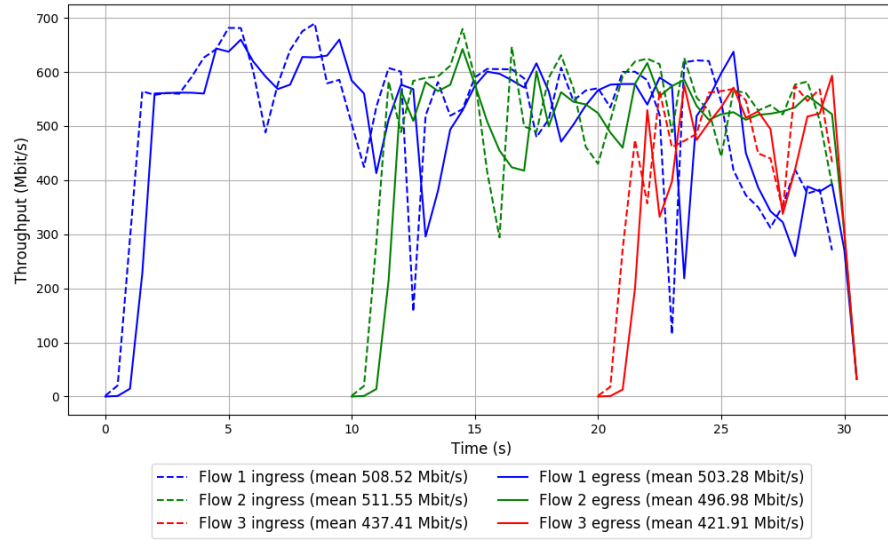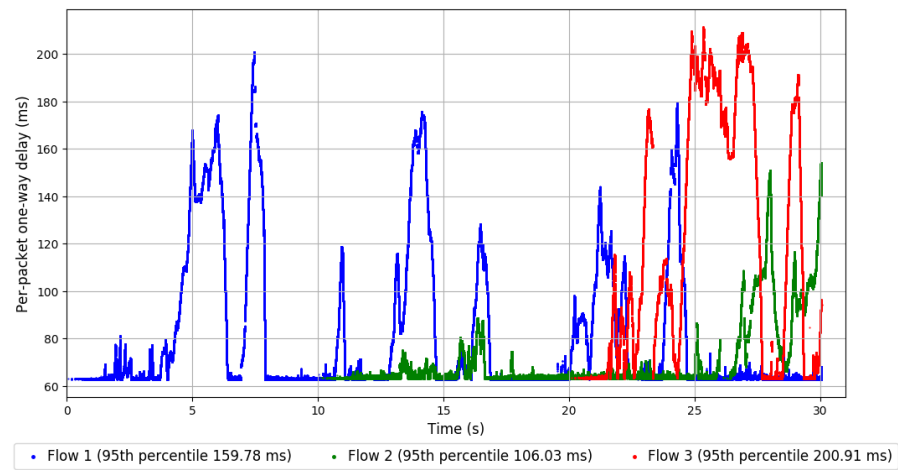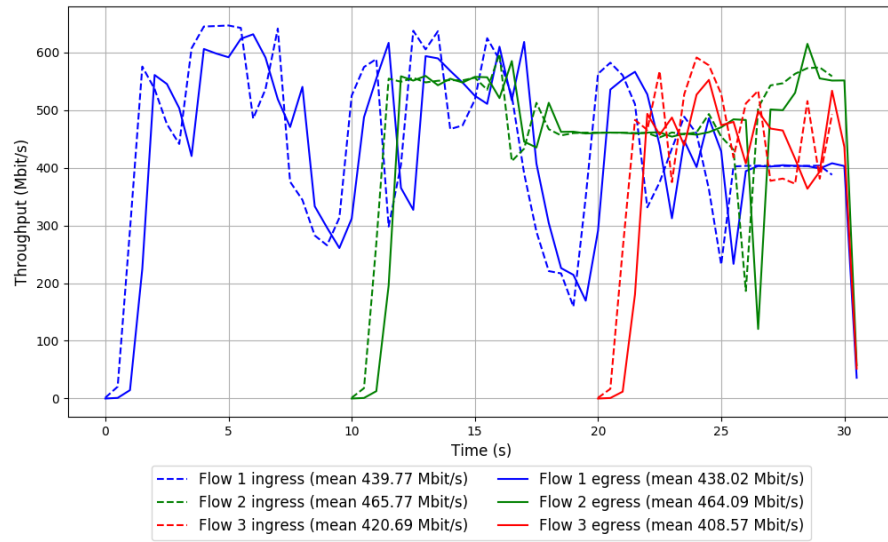
Run 2: Report of TCP BBR — Data Link

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Run 3: Statistics of TCP BBR

Start at: 2018-12-12 00:38:28
End at: 2018-12-12 00:38:58
Local clock offset: -0.084 ms
Remote clock offset: -0.854 ms


# Below is generated by plot.py at 2018-12-12 02:38:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 931.32 Mbit/s
95th percentile per-packet one-way delay: 160.550 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 472.34 Mbit/s
95th percentile per-packet one-way delay: 160.648 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 495.69 Mbit/s
95th percentile per-packet one-way delay: 168.115 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 387.88 Mbit/s
95th percentile per-packet one-way delay: 95.376 ms
Loss rate: 0.04%
```

Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 475.21 Mbit/s) --- Flow 1 egress (mean 472.34 Mbit/s)
Flow 2 ingress (mean 500.90 Mbit/s) --- Flow 2 egress (mean 495.69 Mbit/s)
Flow 3 ingress (mean 388.03 Mbit/s) --- Flow 3 egress (mean 387.88 Mbit/s)

Flow 1 (95th percentile 160.65 ms)   Flow 2 (95th percentile 168.12 ms)   Flow 3 (95th percentile 95.38 ms)

10

```
Run 4: Statistics of TCP BBR

Start at: 2018-12-12 01:12:04
End at: 2018-12-12 01:12:34
Local clock offset: -0.078 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2018-12-12 02:38:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 974.40 Mbit/s
95th percentile per-packet one-way delay: 189.432 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 503.28 Mbit/s
95th percentile per-packet one-way delay: 187.116 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 496.98 Mbit/s
95th percentile per-packet one-way delay: 190.260 ms
Loss rate: 2.84%
-- Flow 3:
Average throughput: 421.91 Mbit/s
95th percentile per-packet one-way delay: 190.834 ms
Loss rate: 3.52%
```
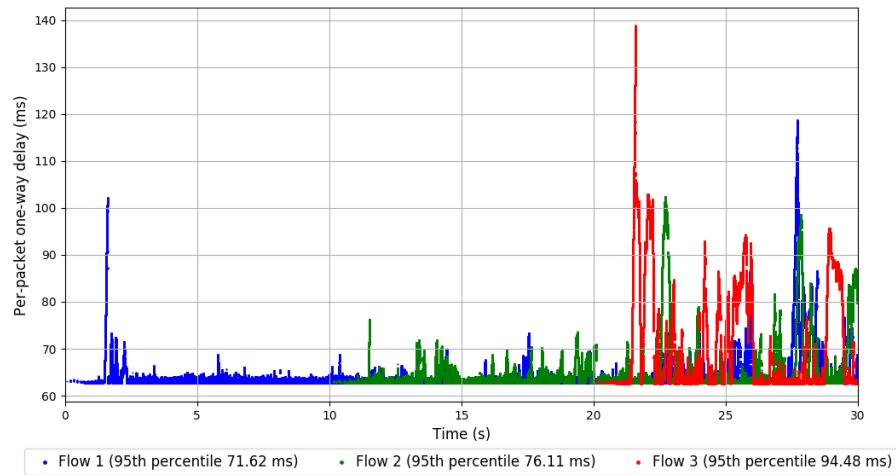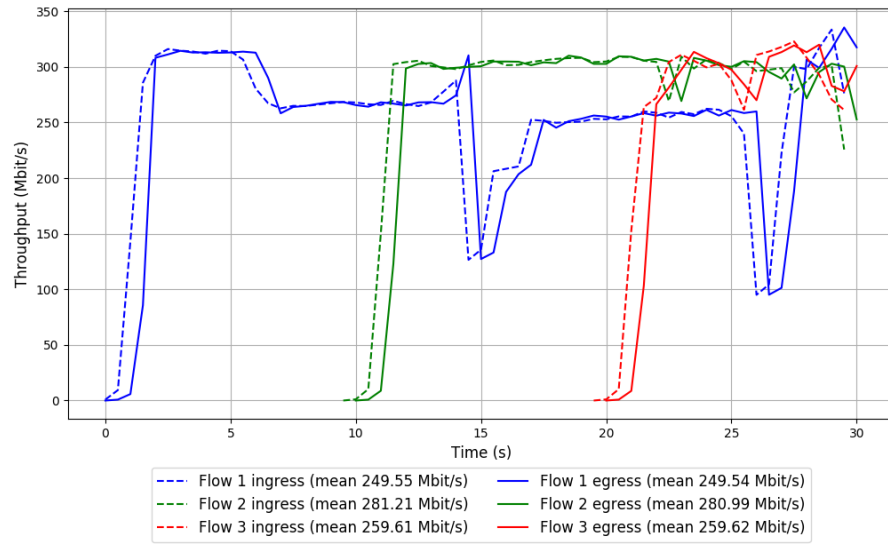
Run 4: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 508.52 Mbit/s) —— Flow 1 egress (mean 503.28 Mbit/s)
- - - Flow 2 ingress (mean 511.55 Mbit/s) —— Flow 2 egress (mean 496.98 Mbit/s)
- - - Flow 3 ingress (mean 437.41 Mbit/s) —— Flow 3 egress (mean 421.91 Mbit/s)

• Flow 1 (95th percentile 187.12 ms) • Flow 2 (95th percentile 190.26 ms) • Flow 3 (95th percentile 190.83 ms)
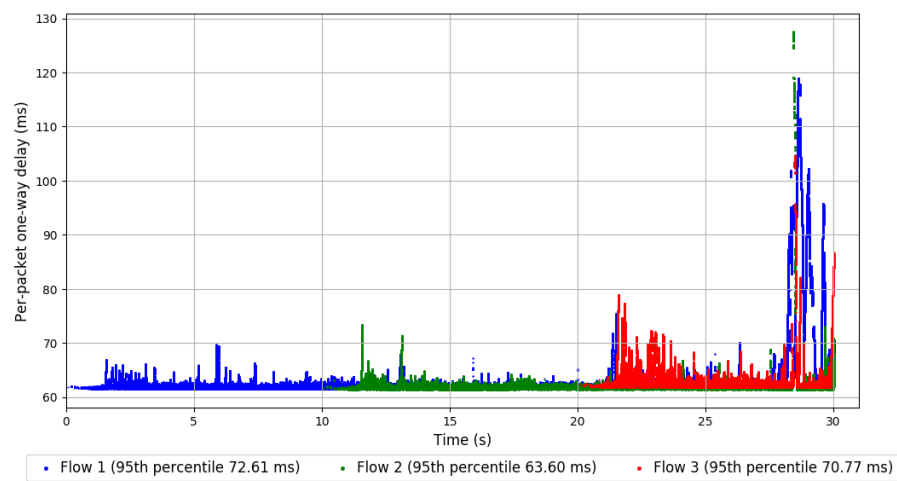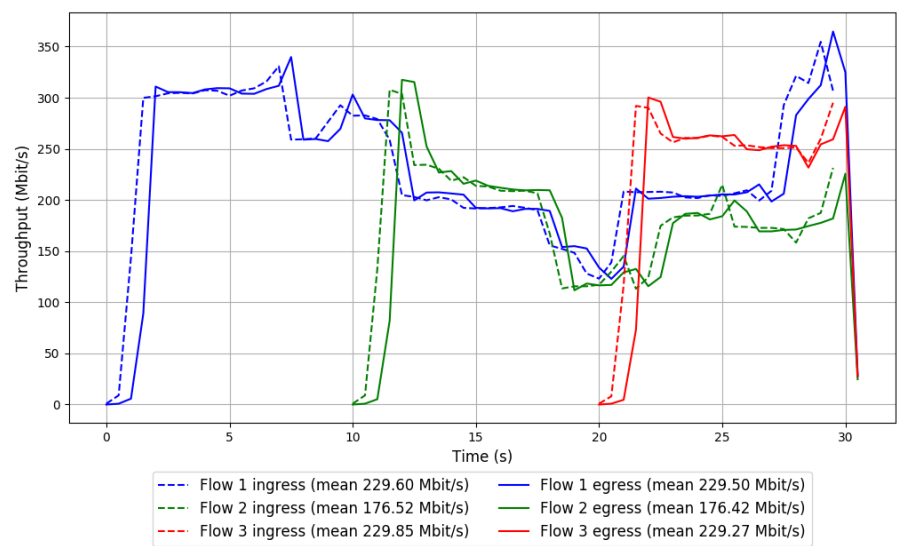
```
Run 5: Statistics of TCP BBR

Start at: 2018-12-12 01:46:34
End at: 2018-12-12 01:47:04
Local clock offset: -0.04 ms
Remote clock offset: -0.035 ms


# Below is generated by plot.py at 2018-12-12 02:38:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 882.62 Mbit/s
95th percentile per-packet one-way delay: 173.048 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 438.02 Mbit/s
95th percentile per-packet one-way delay: 159.775 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 464.09 Mbit/s
95th percentile per-packet one-way delay: 106.031 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 408.57 Mbit/s
95th percentile per-packet one-way delay: 200.906 ms
Loss rate: 2.87%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 439.77 Mbit/s) --- Flow 1 egress (mean 438.02 Mbit/s)
Flow 2 ingress (mean 465.77 Mbit/s) --- Flow 2 egress (mean 464.09 Mbit/s)
Flow 3 ingress (mean 420.69 Mbit/s) --- Flow 3 egress (mean 408.57 Mbit/s)

Flow 1 (95th percentile 159.78 ms)   Flow 2 (95th percentile 106.03 ms)   Flow 3 (95th percentile 200.91 ms)
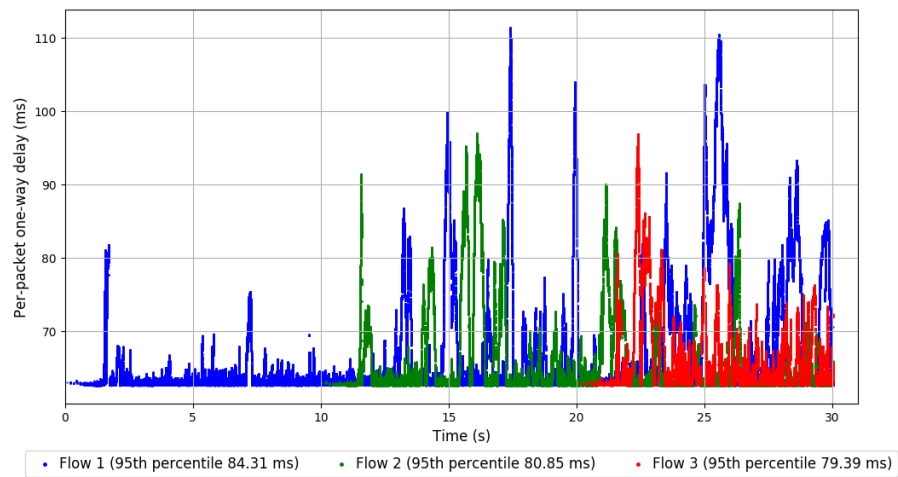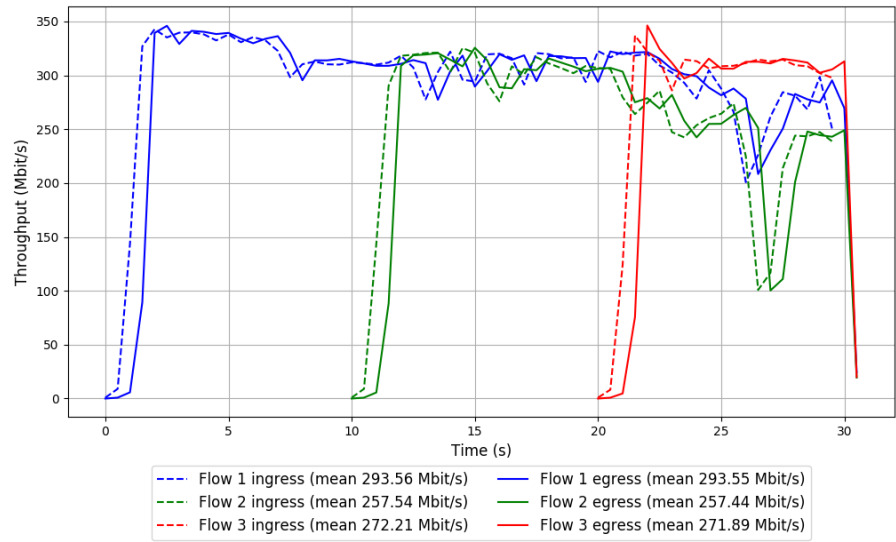
```
Run 1: Statistics of Copa

Start at: 2018-12-11 23:28:55
End at: 2018-12-11 23:29:25
Local clock offset: -0.053 ms
Remote clock offset: -0.342 ms


# Below is generated by plot.py at 2018-12-12 02:38:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 523.49 Mbit/s
95th percentile per-packet one-way delay: 81.660 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 249.54 Mbit/s
95th percentile per-packet one-way delay: 71.619 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 280.99 Mbit/s
95th percentile per-packet one-way delay: 76.110 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 259.62 Mbit/s
95th percentile per-packet one-way delay: 94.476 ms
Loss rate: 0.00%
```
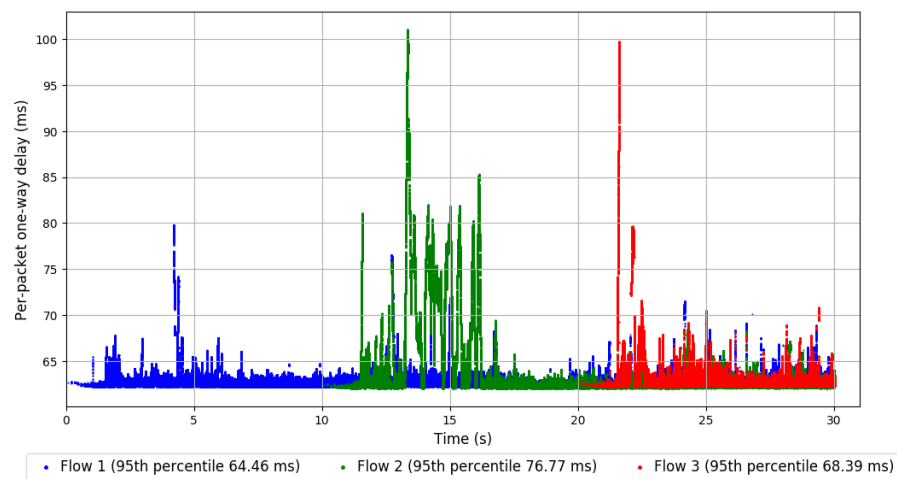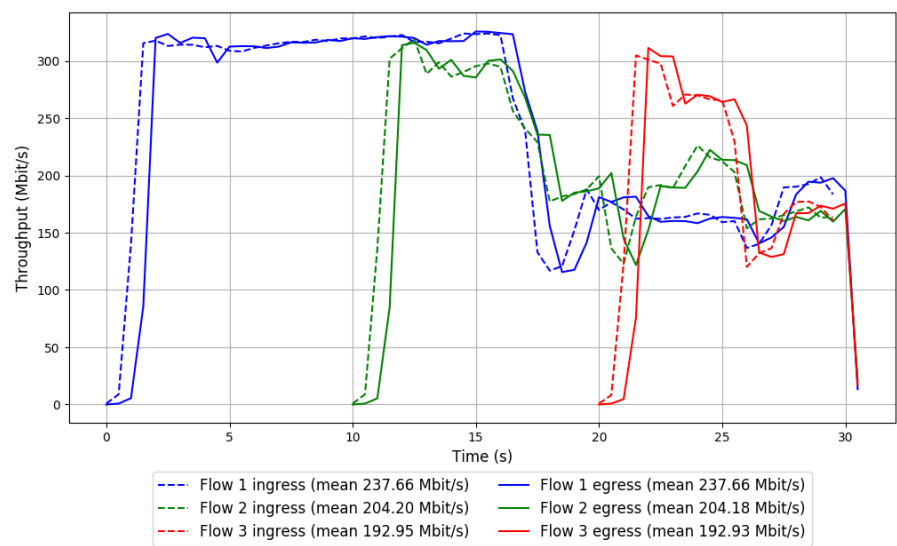
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2018-12-12 00:02:52
End at: 2018-12-12 00:03:22
Local clock offset: -0.079 ms
Remote clock offset: -1.322 ms


# Below is generated by plot.py at 2018-12-12 02:38:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 423.14 Mbit/s
95th percentile per-packet one-way delay: 68.605 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 229.50 Mbit/s
95th percentile per-packet one-way delay: 72.610 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 176.42 Mbit/s
95th percentile per-packet one-way delay: 63.602 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 229.27 Mbit/s
95th percentile per-packet one-way delay: 70.768 ms
Loss rate: 0.23%
```

Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 229.60 Mbit/s) --- Flow 1 egress (mean 229.50 Mbit/s)
Flow 2 ingress (mean 176.52 Mbit/s) --- Flow 2 egress (mean 176.42 Mbit/s)
Flow 3 ingress (mean 229.85 Mbit/s) --- Flow 3 egress (mean 229.27 Mbit/s)

Flow 1 (95th percentile 72.61 ms)   Flow 2 (95th percentile 63.60 ms)   Flow 3 (95th percentile 70.77 ms)

```
Run 3: Statistics of Copa

Start at: 2018-12-12 00:36:21
End at: 2018-12-12 00:36:51
Local clock offset: -0.061 ms
Remote clock offset: -0.029 ms


# Below is generated by plot.py at 2018-12-12 02:39:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 555.21 Mbit/s
95th percentile per-packet one-way delay: 82.602 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 293.55 Mbit/s
95th percentile per-packet one-way delay: 84.312 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 257.44 Mbit/s
95th percentile per-packet one-way delay: 80.854 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 271.89 Mbit/s
95th percentile per-packet one-way delay: 79.394 ms
Loss rate: 0.12%
```
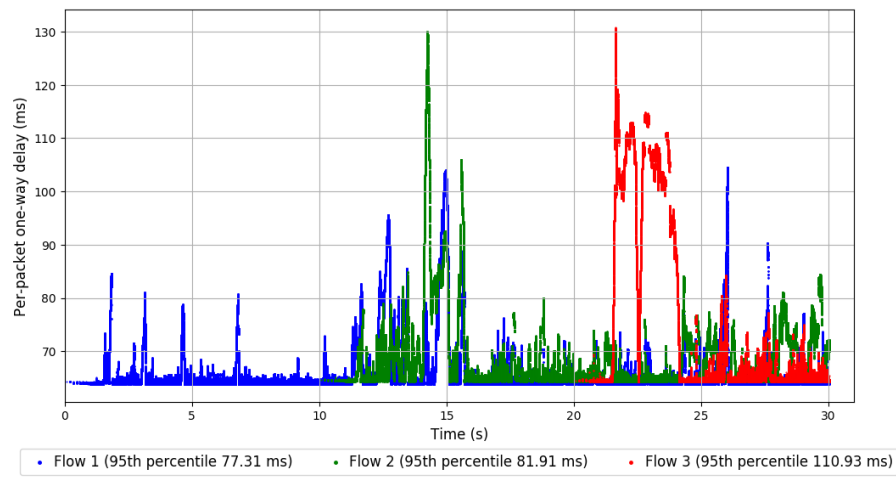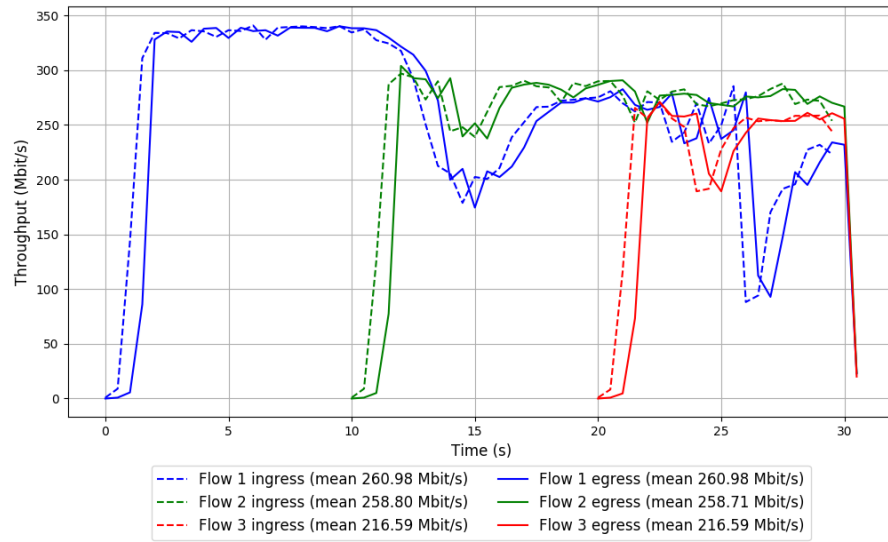
Run 3: Report of Copa — Data Link

- - - - Flow 1 ingress (mean 293.56 Mbit/s) —— Flow 1 egress (mean 293.55 Mbit/s)
- - - - Flow 2 ingress (mean 257.54 Mbit/s) —— Flow 2 egress (mean 257.44 Mbit/s)
- - - - Flow 3 ingress (mean 272.21 Mbit/s) —— Flow 3 egress (mean 271.89 Mbit/s)

- Flow 1 (95th percentile 84.31 ms)   • Flow 2 (95th percentile 80.85 ms)   • Flow 3 (95th percentile 79.39 ms)

```
Run 4: Statistics of Copa

Start at: 2018-12-12 01:10:09
End at: 2018-12-12 01:10:39
Local clock offset: -0.072 ms
Remote clock offset: -0.766 ms


# Below is generated by plot.py at 2018-12-12 02:47:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.72 Mbit/s
95th percentile per-packet one-way delay: 70.166 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 237.66 Mbit/s
95th percentile per-packet one-way delay: 64.457 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 204.18 Mbit/s
95th percentile per-packet one-way delay: 76.772 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 192.93 Mbit/s
95th percentile per-packet one-way delay: 68.395 ms
Loss rate: 0.01%
```
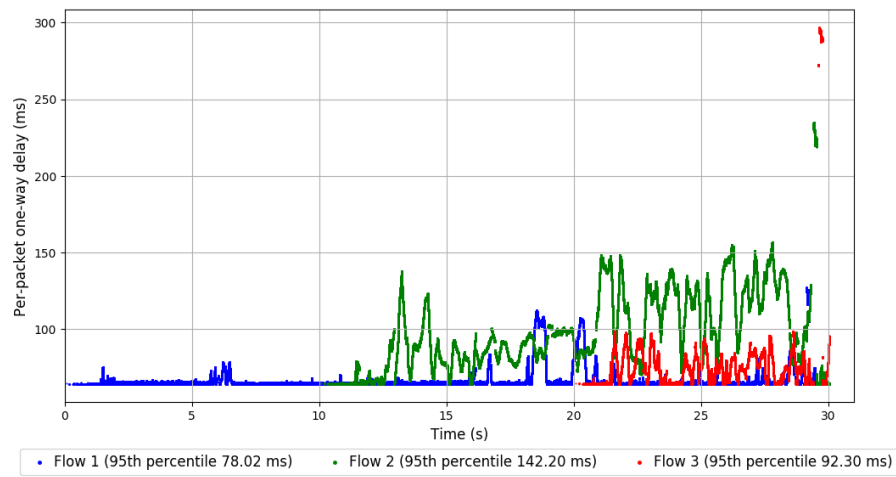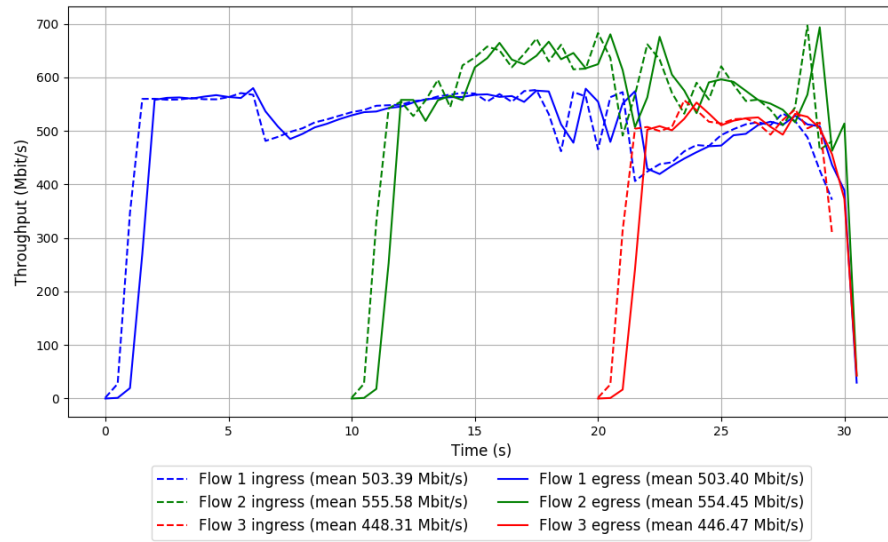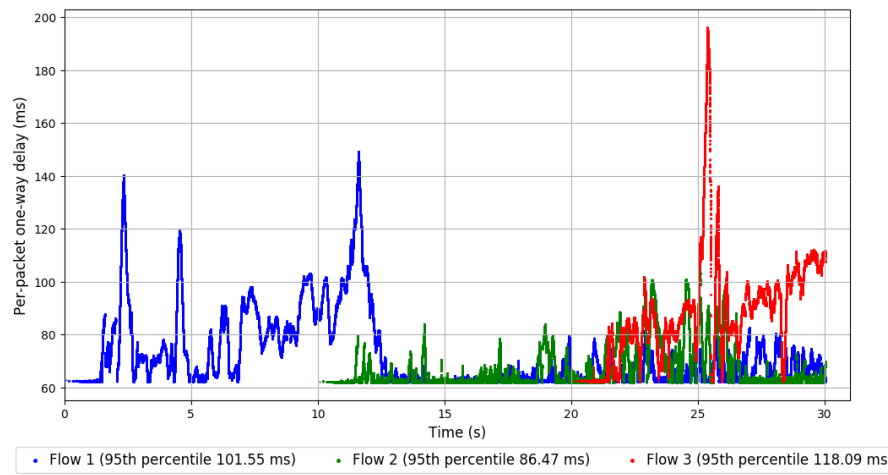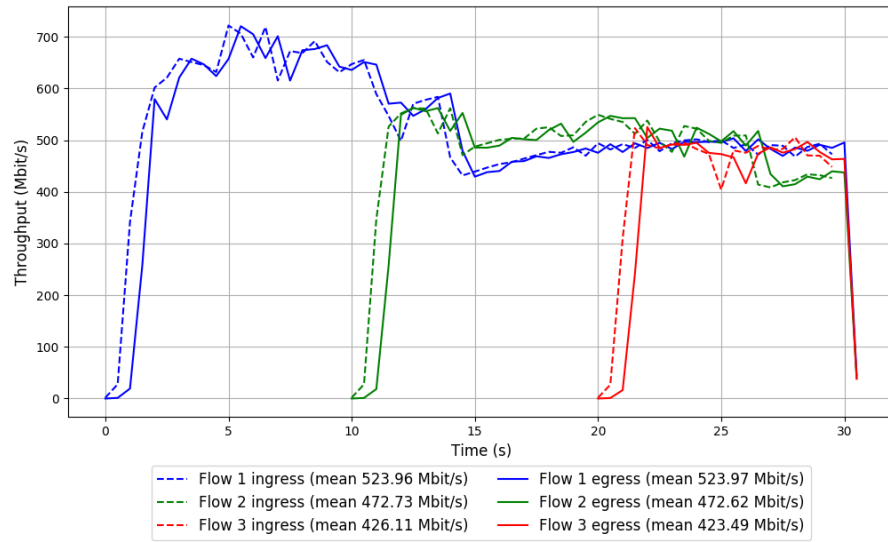
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2018-12-12 01:44:22
End at: 2018-12-12 01:44:52
Local clock offset: 0.016 ms
Remote clock offset: 1.244 ms

# Below is generated by plot.py at 2018-12-12 02:53:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 505.25 Mbit/s
95th percentile per-packet one-way delay: 90.628 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 260.98 Mbit/s
95th percentile per-packet one-way delay: 77.310 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 258.71 Mbit/s
95th percentile per-packet one-way delay: 81.908 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 216.59 Mbit/s
95th percentile per-packet one-way delay: 110.927 ms
Loss rate: 0.00%
```

Run 5: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2018-12-11 23:35:00
End at: 2018-12-11 23:35:30
Local clock offset: -0.056 ms
Remote clock offset: 1.138 ms


# Below is generated by plot.py at 2018-12-12 02:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1020.95 Mbit/s
95th percentile per-packet one-way delay: 129.436 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 503.40 Mbit/s
95th percentile per-packet one-way delay: 78.021 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 554.45 Mbit/s
95th percentile per-packet one-way delay: 142.200 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 446.47 Mbit/s
95th percentile per-packet one-way delay: 92.301 ms
Loss rate: 0.40%
```
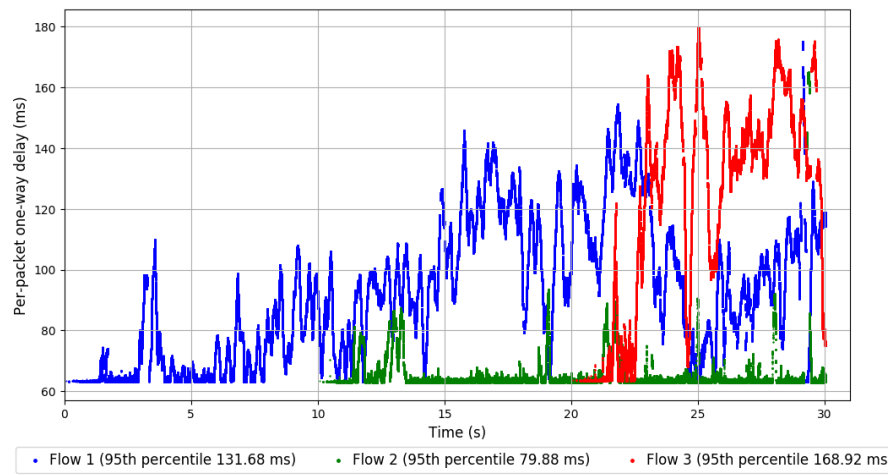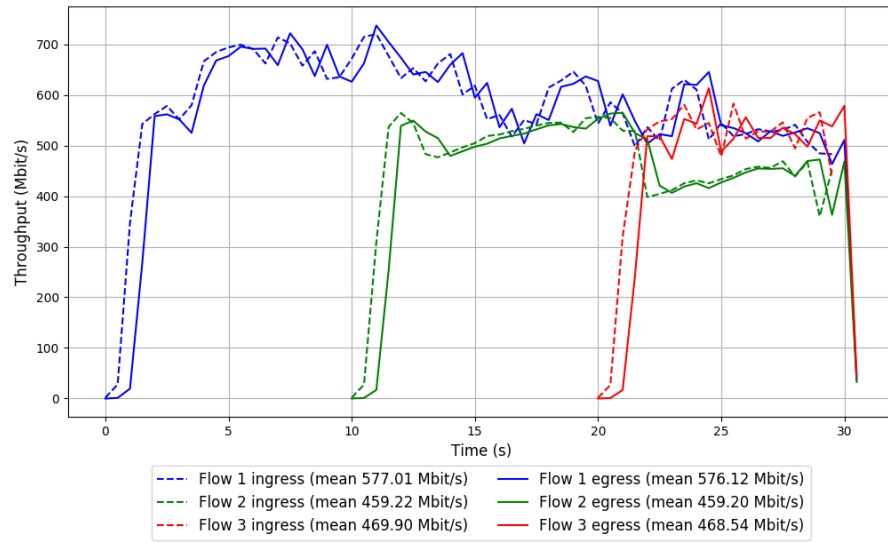
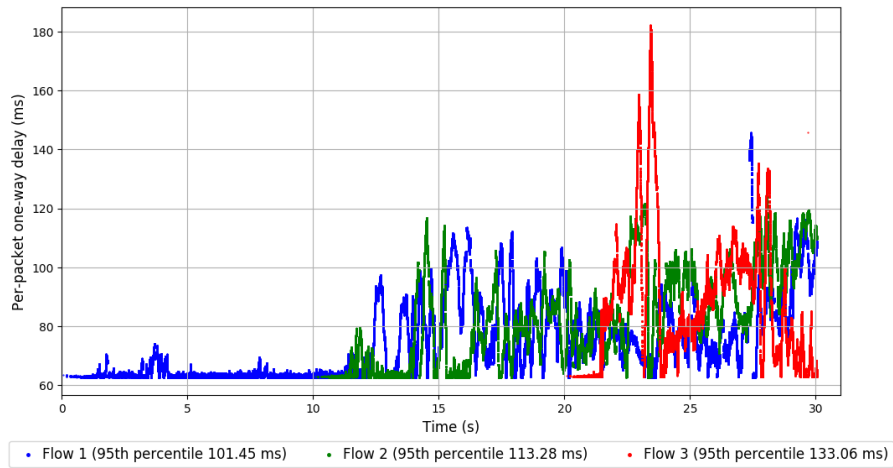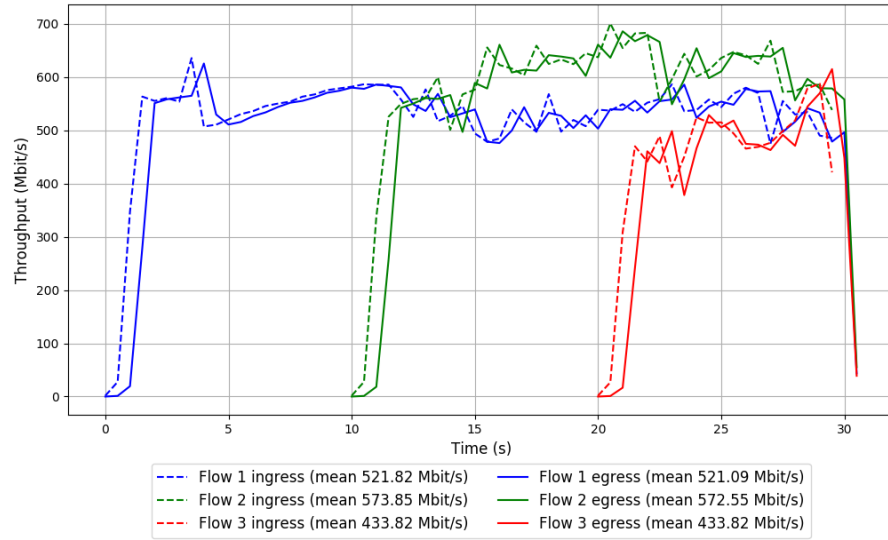Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2018-12-12 00:08:44
End at: 2018-12-12 00:09:14
Local clock offset: -0.088 ms
Remote clock offset: -0.778 ms


# Below is generated by plot.py at 2018-12-12 02:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 979.45 Mbit/s
95th percentile per-packet one-way delay: 103.018 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 523.97 Mbit/s
95th percentile per-packet one-way delay: 101.552 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 472.62 Mbit/s
95th percentile per-packet one-way delay: 86.465 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 423.49 Mbit/s
95th percentile per-packet one-way delay: 118.087 ms
Loss rate: 0.60%
```

Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2018-12-12 00:42:25
End at: 2018-12-12 00:42:55
Local clock offset: -0.099 ms
Remote clock offset: 0.217 ms


# Below is generated by plot.py at 2018-12-12 02:57:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1037.54 Mbit/s
95th percentile per-packet one-way delay: 147.335 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 576.12 Mbit/s
95th percentile per-packet one-way delay: 131.683 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 459.20 Mbit/s
95th percentile per-packet one-way delay: 79.882 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 468.54 Mbit/s
95th percentile per-packet one-way delay: 168.916 ms
Loss rate: 0.28%
```
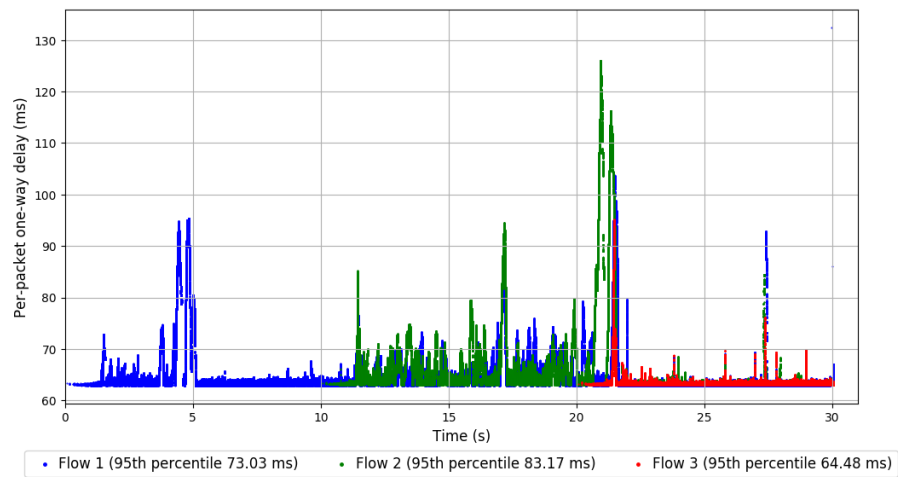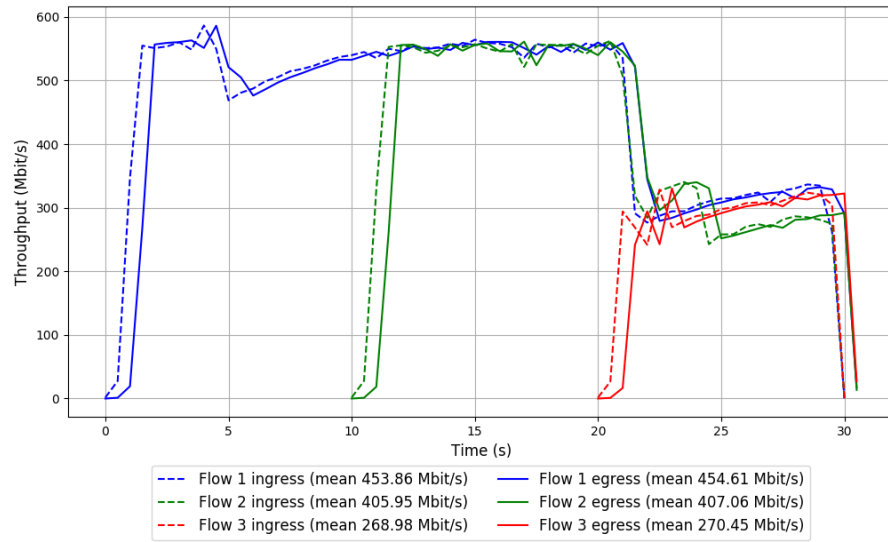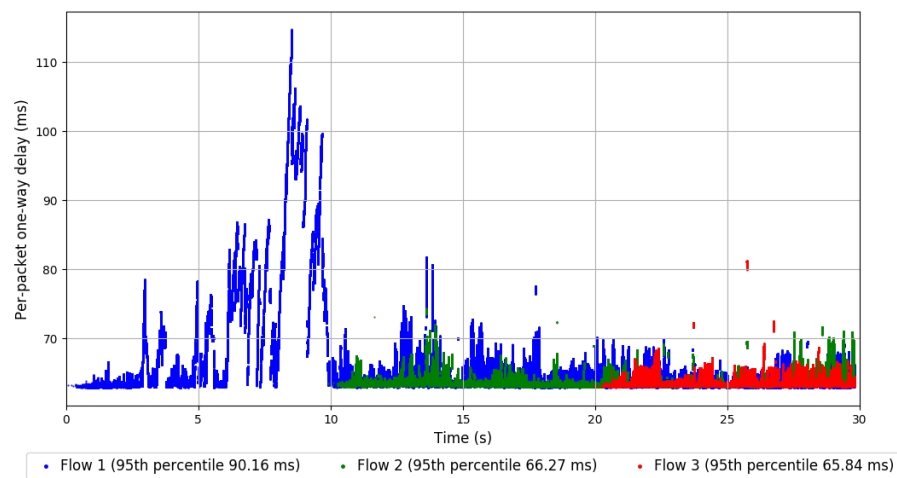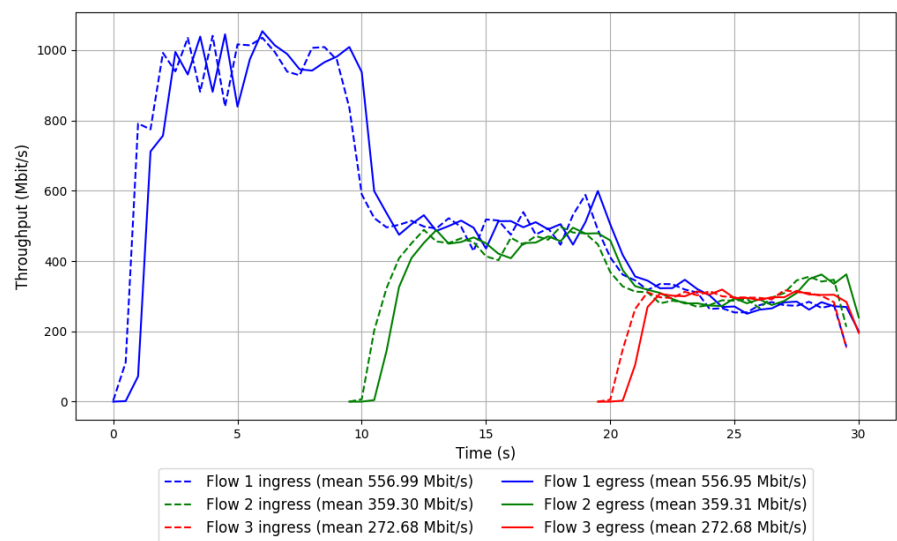
Run 3: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 577.01 Mbit/s) —— Flow 1 egress (mean 576.12 Mbit/s)
- - - Flow 2 ingress (mean 459.22 Mbit/s) —— Flow 2 egress (mean 459.20 Mbit/s)
- - - Flow 3 ingress (mean 469.90 Mbit/s) —— Flow 3 egress (mean 468.54 Mbit/s)

- Flow 1 (95th percentile 131.68 ms)   - Flow 2 (95th percentile 79.88 ms)   - Flow 3 (95th percentile 168.92 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2018-12-12 01:16:02
End at: 2018-12-12 01:16:32
Local clock offset: -0.046 ms
Remote clock offset: -0.171 ms


# Below is generated by plot.py at 2018-12-12 02:57:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1046.64 Mbit/s
95th percentile per-packet one-way delay: 110.876 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 521.09 Mbit/s
95th percentile per-packet one-way delay: 101.454 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 572.55 Mbit/s
95th percentile per-packet one-way delay: 113.275 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 433.82 Mbit/s
95th percentile per-packet one-way delay: 133.063 ms
Loss rate: 0.00%
```

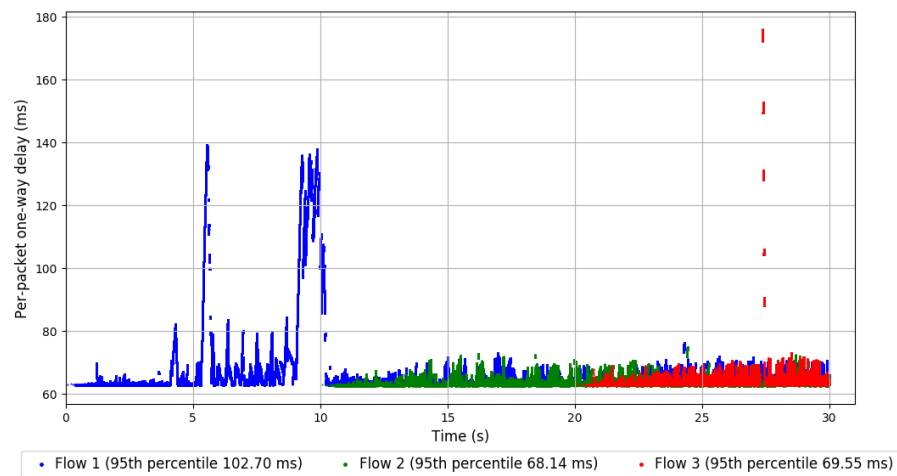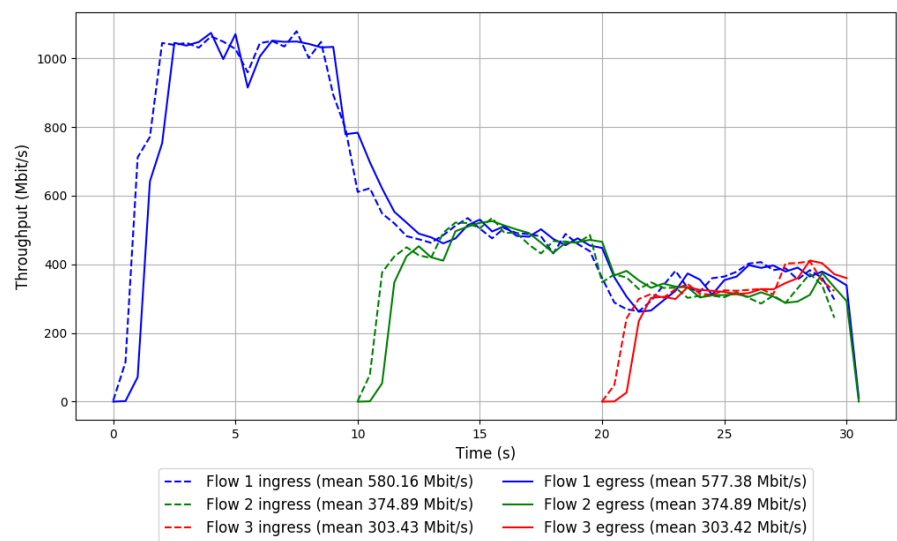Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2018-12-12 01:50:22
End at: 2018-12-12 01:50:52
Local clock offset: -0.04 ms
Remote clock offset: 0.101 ms


# Below is generated by plot.py at 2018-12-12 02:57:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 815.51 Mbit/s
95th percentile per-packet one-way delay: 74.094 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 454.61 Mbit/s
95th percentile per-packet one-way delay: 73.029 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 407.06 Mbit/s
95th percentile per-packet one-way delay: 83.165 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 270.45 Mbit/s
95th percentile per-packet one-way delay: 64.476 ms
Loss rate: 0.00%
```
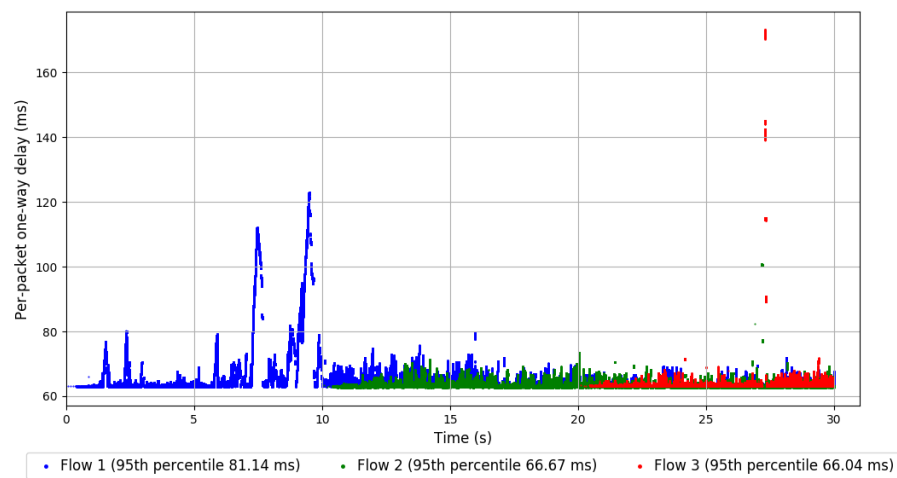
Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2018-12-11 23:37:07
End at: 2018-12-11 23:37:37
Local clock offset: -0.045 ms
Remote clock offset: 0.094 ms


# Below is generated by plot.py at 2018-12-12 02:58:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 887.93 Mbit/s
95th percentile per-packet one-way delay: 83.867 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 556.95 Mbit/s
95th percentile per-packet one-way delay: 90.164 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 359.31 Mbit/s
95th percentile per-packet one-way delay: 66.273 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 272.68 Mbit/s
95th percentile per-packet one-way delay: 65.845 ms
Loss rate: 0.00%
```

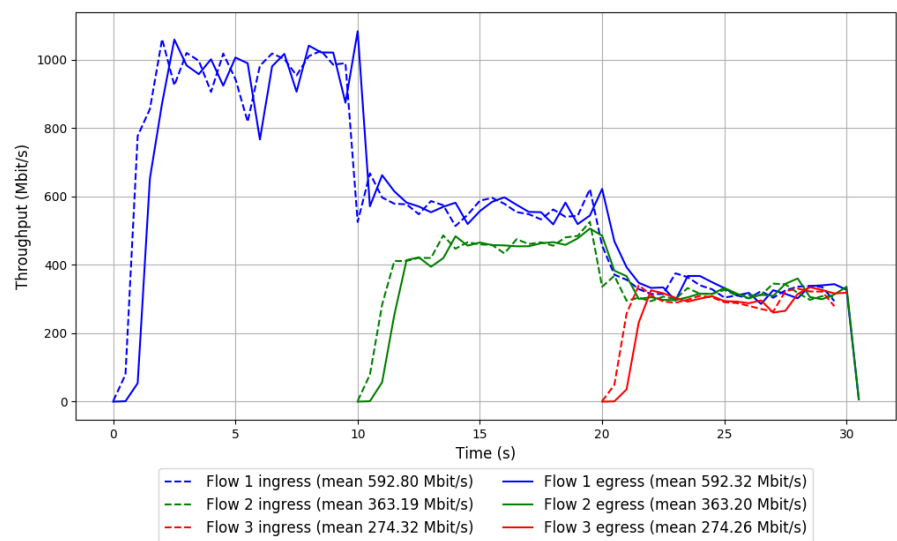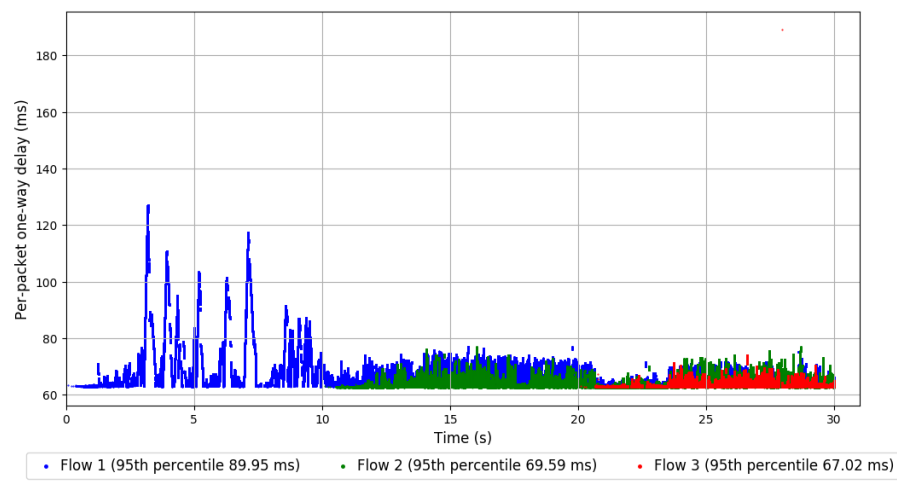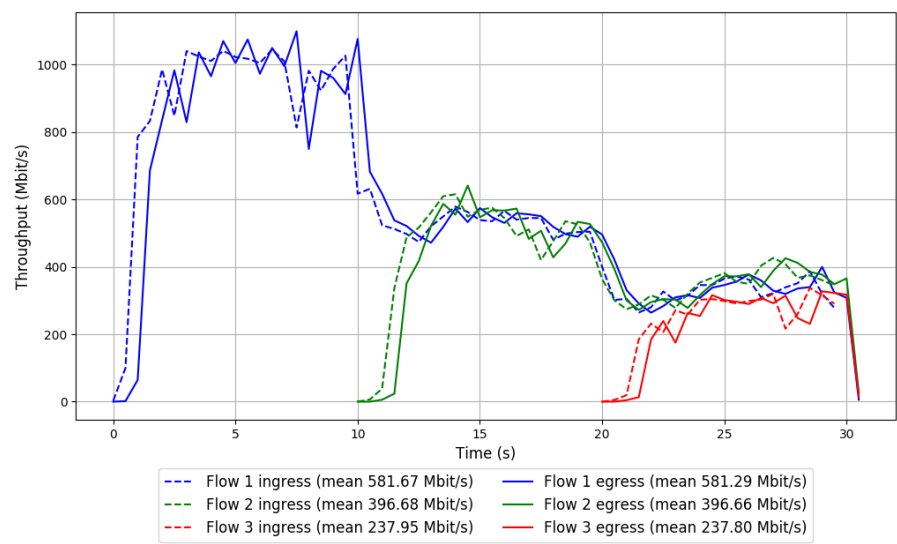Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-12-12 00:10:49
End at: 2018-12-12 00:11:19
Local clock offset: -0.071 ms
Remote clock offset: -0.254 ms


# Below is generated by plot.py at 2018-12-12 03:08:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 927.02 Mbit/s
95th percentile per-packet one-way delay: 78.265 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 577.38 Mbit/s
95th percentile per-packet one-way delay: 102.700 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 374.89 Mbit/s
95th percentile per-packet one-way delay: 68.144 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 303.42 Mbit/s
95th percentile per-packet one-way delay: 69.549 ms
Loss rate: 0.00%
```

Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 580.16 Mbit/s)   Flow 1 egress (mean 577.38 Mbit/s)
Flow 2 ingress (mean 374.89 Mbit/s)   Flow 2 egress (mean 374.89 Mbit/s)
Flow 3 ingress (mean 303.43 Mbit/s)   Flow 3 egress (mean 303.42 Mbit/s)

Flow 1 (95th percentile 102.70 ms)   Flow 2 (95th percentile 68.14 ms)   Flow 3 (95th percentile 69.55 ms)

```
Run 3: Statistics of FillP

Start at: 2018-12-12 00:44:31
End at: 2018-12-12 00:45:01
Local clock offset: -0.072 ms
Remote clock offset: -0.133 ms


# Below is generated by plot.py at 2018-12-12 03:14:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 924.79 Mbit/s
95th percentile per-packet one-way delay: 74.655 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 592.32 Mbit/s
95th percentile per-packet one-way delay: 81.140 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 363.20 Mbit/s
95th percentile per-packet one-way delay: 66.666 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 274.26 Mbit/s
95th percentile per-packet one-way delay: 66.036 ms
Loss rate: 0.00%
```
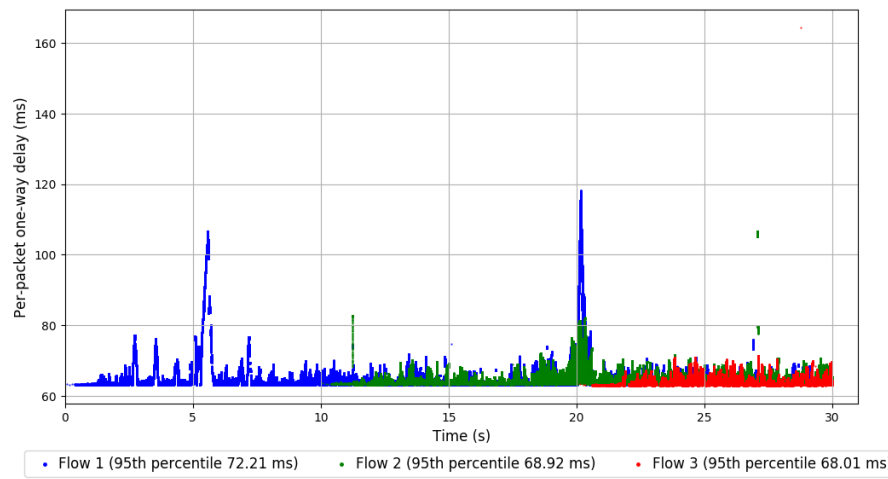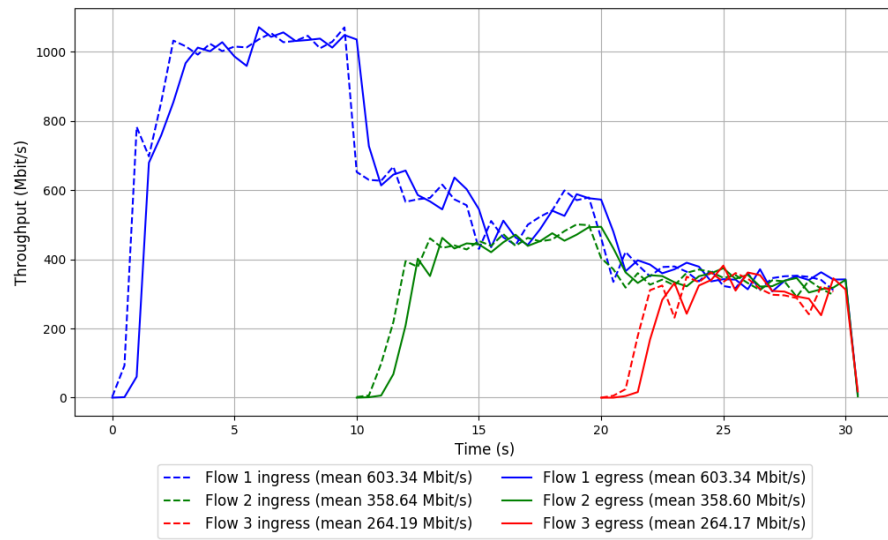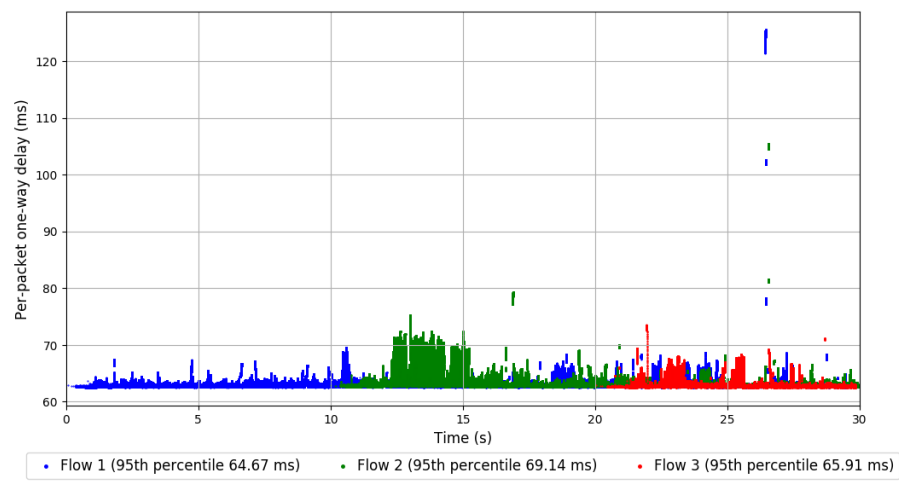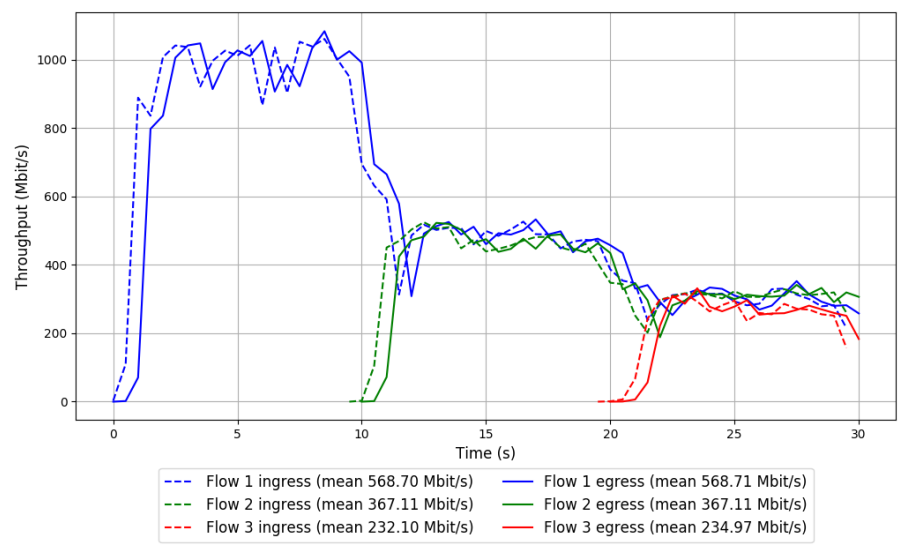
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2018-12-12 01:18:09
End at: 2018-12-12 01:18:39
Local clock offset: -0.075 ms
Remote clock offset: -0.125 ms


# Below is generated by plot.py at 2018-12-12 03:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 923.02 Mbit/s
95th percentile per-packet one-way delay: 83.227 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 581.29 Mbit/s
95th percentile per-packet one-way delay: 89.951 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 396.66 Mbit/s
95th percentile per-packet one-way delay: 69.595 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 237.80 Mbit/s
95th percentile per-packet one-way delay: 67.018 ms
Loss rate: 0.06%
```
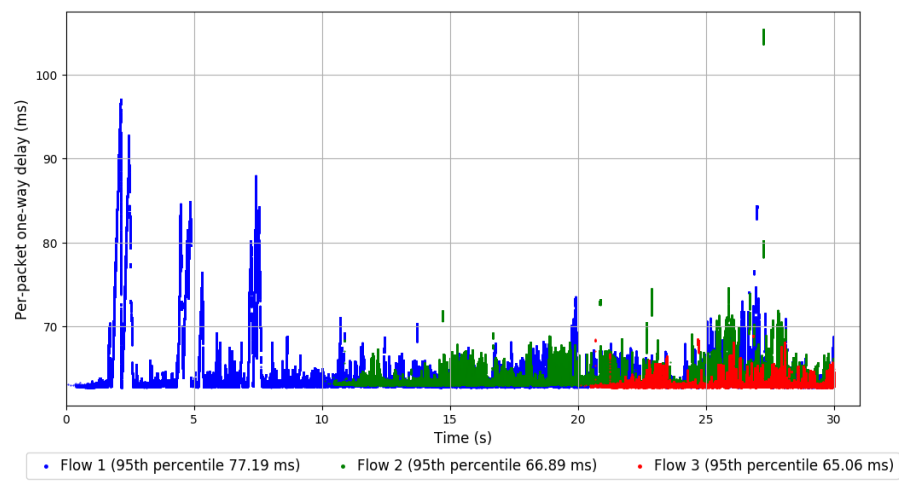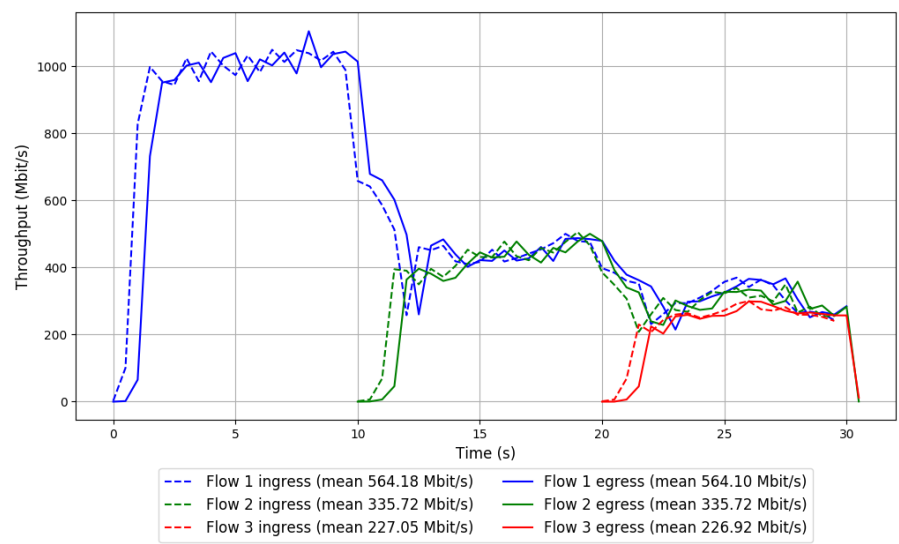
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2018-12-12 01:52:18
End at: 2018-12-12 01:52:48
Local clock offset: -0.016 ms
Remote clock offset: 0.281 ms

# Below is generated by plot.py at 2018-12-12 03:17:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 929.27 Mbit/s
95th percentile per-packet one-way delay: 69.967 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 603.34 Mbit/s
95th percentile per-packet one-way delay: 72.211 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 358.60 Mbit/s
95th percentile per-packet one-way delay: 68.920 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 264.17 Mbit/s
95th percentile per-packet one-way delay: 68.006 ms
Loss rate: 0.00%
```

Run 5: Report of FillP — Data Link

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```
Run 1: Statistics of FillP-Sheep

Start at: 2018-12-11 23:33:10
End at: 2018-12-11 23:33:40
Local clock offset: -0.035 ms
Remote clock offset: -0.342 ms


# Below is generated by plot.py at 2018-12-12 03:17:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 890.59 Mbit/s
95th percentile per-packet one-way delay: 66.051 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 568.71 Mbit/s
95th percentile per-packet one-way delay: 64.668 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 367.11 Mbit/s
95th percentile per-packet one-way delay: 69.136 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 234.97 Mbit/s
95th percentile per-packet one-way delay: 65.907 ms
Loss rate: 0.00%
```
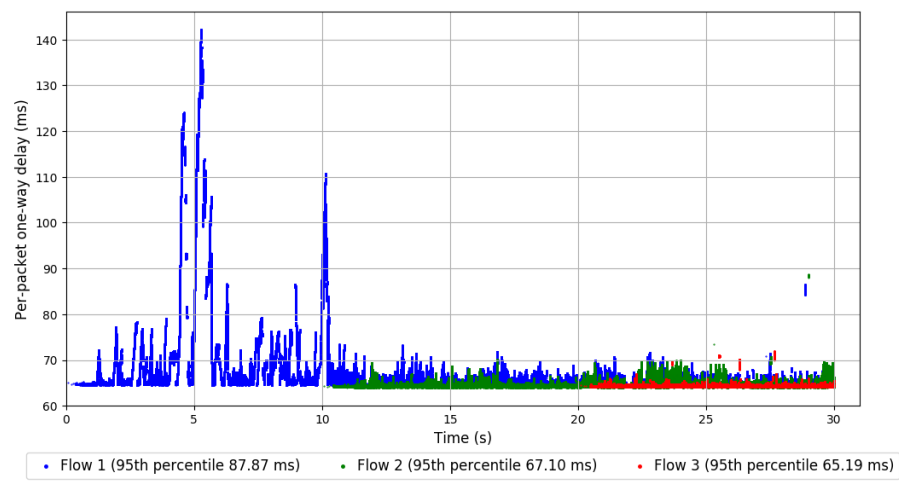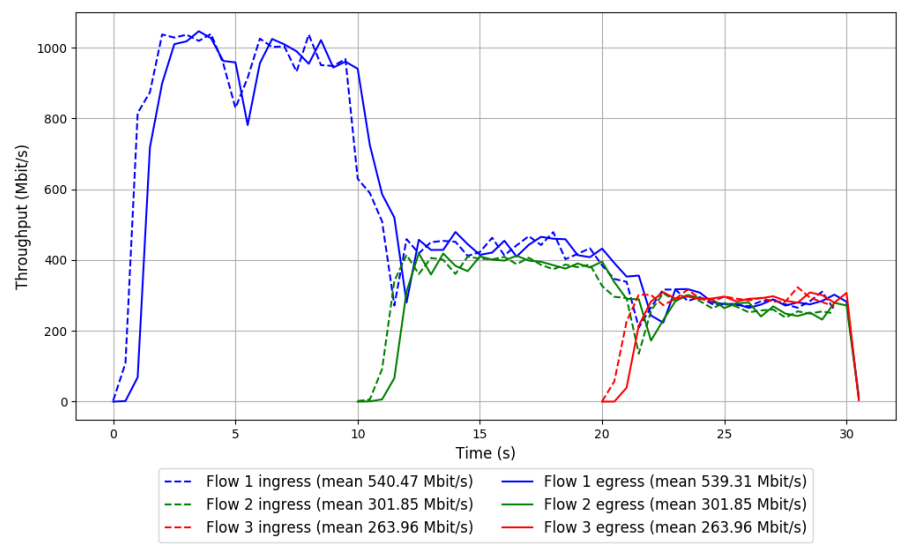
Run 1: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 568.70 Mbit/s) --- Flow 1 egress (mean 568.71 Mbit/s)
Flow 2 ingress (mean 367.11 Mbit/s) --- Flow 2 egress (mean 367.11 Mbit/s)
Flow 3 ingress (mean 232.10 Mbit/s) --- Flow 3 egress (mean 234.97 Mbit/s)

Flow 1 (95th percentile 64.67 ms)   Flow 2 (95th percentile 69.14 ms)   Flow 3 (95th percentile 65.91 ms)

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```
Run 2: Statistics of FillP-Sheep

Start at: 2018-12-12 00:06:55
End at: 2018-12-12 00:07:25
Local clock offset: -0.053 ms
Remote clock offset: -0.061 ms


# Below is generated by plot.py at 2018-12-12 03:17:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 861.93 Mbit/s
95th percentile per-packet one-way delay: 72.490 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 564.10 Mbit/s
95th percentile per-packet one-way delay: 77.188 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 335.72 Mbit/s
95th percentile per-packet one-way delay: 66.888 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 226.92 Mbit/s
95th percentile per-packet one-way delay: 65.055 ms
Loss rate: 0.06%
```
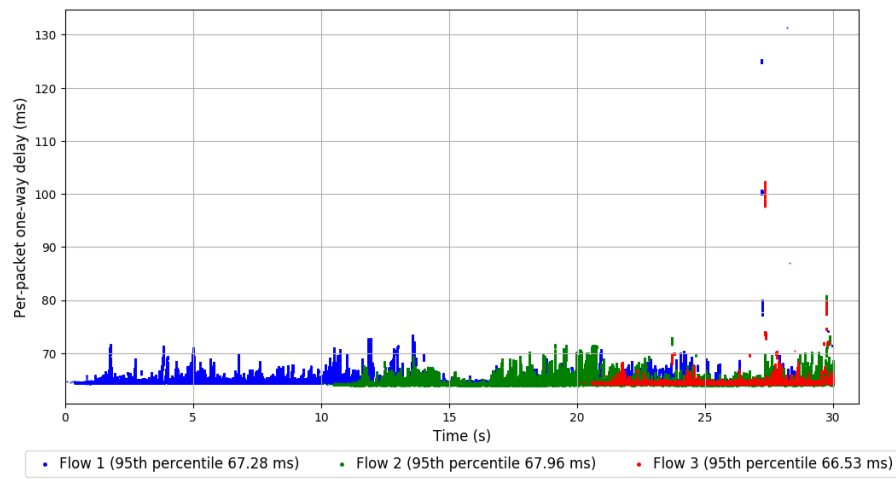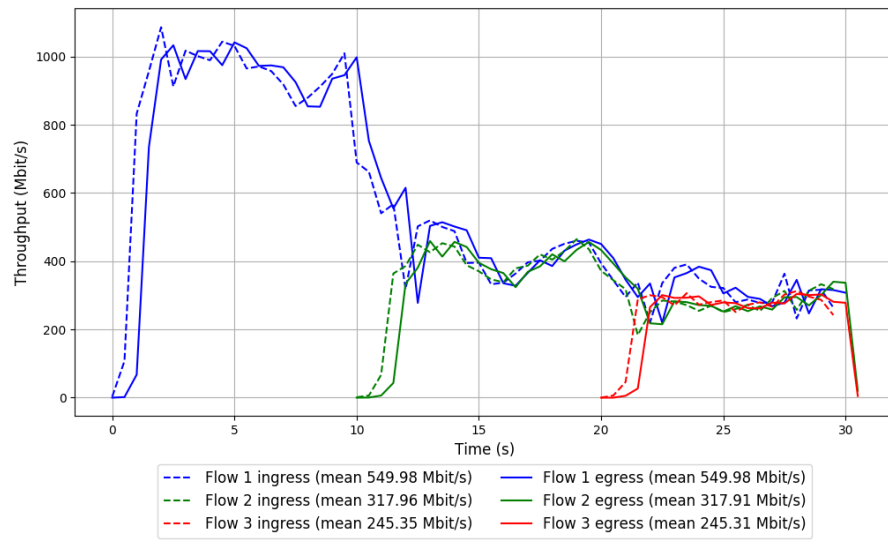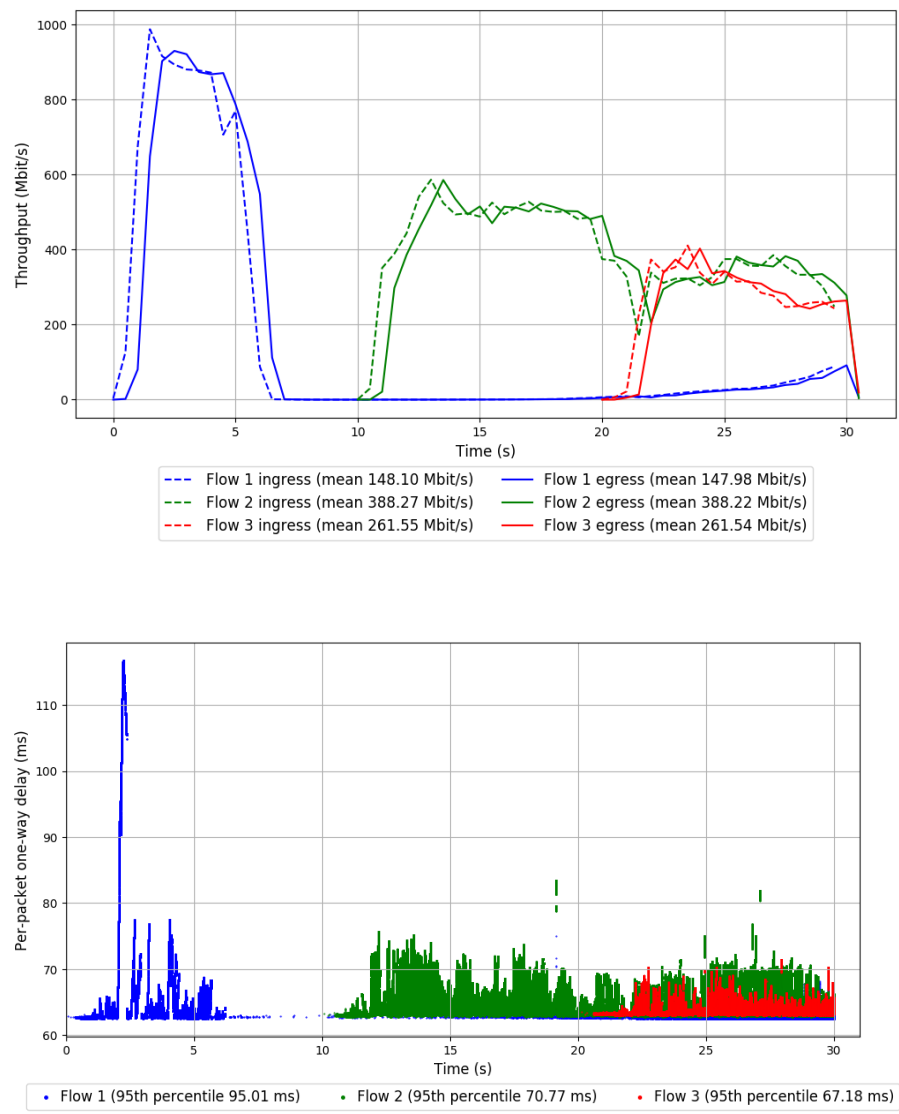
Run 2: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 564.18 Mbit/s) ——— Flow 1 egress (mean 564.10 Mbit/s)
- - - - Flow 2 ingress (mean 335.72 Mbit/s) ——— Flow 2 egress (mean 335.72 Mbit/s)
- - - - Flow 3 ingress (mean 227.05 Mbit/s) ——— Flow 3 egress (mean 226.92 Mbit/s)

• Flow 1 (95th percentile 77.19 ms)   • Flow 2 (95th percentile 66.89 ms)   • Flow 3 (95th percentile 65.06 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2018-12-12 00:40:37
End at: 2018-12-12 00:41:07
Local clock offset: -0.048 ms
Remote clock offset: 1.314 ms


# Below is generated by plot.py at 2018-12-12 03:17:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 827.30 Mbit/s
95th percentile per-packet one-way delay: 78.196 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 539.31 Mbit/s
95th percentile per-packet one-way delay: 87.871 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 301.85 Mbit/s
95th percentile per-packet one-way delay: 67.101 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 263.96 Mbit/s
95th percentile per-packet one-way delay: 65.192 ms
Loss rate: 0.00%
```

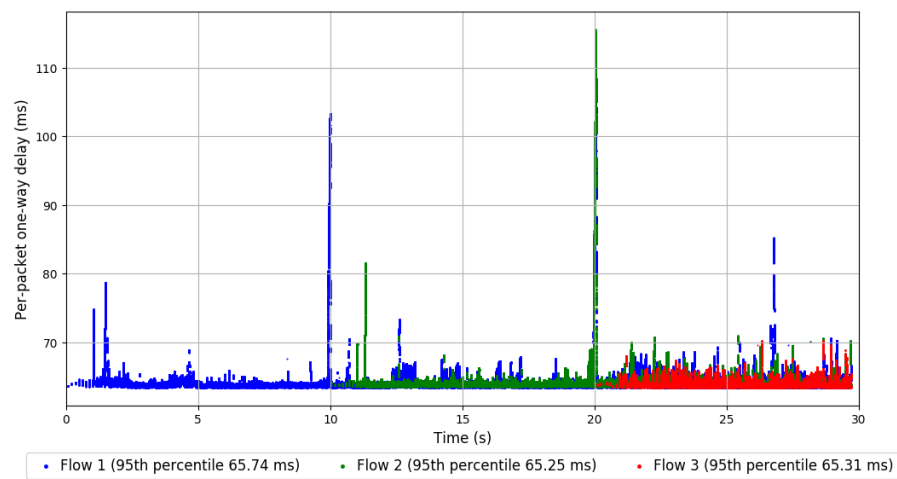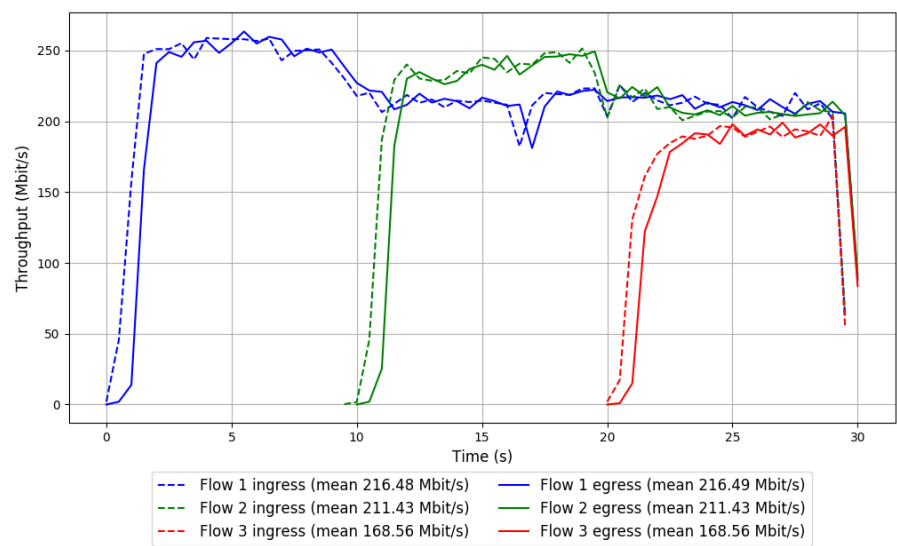## Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 540.47 Mbit/s)
Flow 1 egress (mean 539.31 Mbit/s)
Flow 2 ingress (mean 301.85 Mbit/s)
Flow 2 egress (mean 301.85 Mbit/s)
Flow 3 ingress (mean 263.96 Mbit/s)
Flow 3 egress (mean 263.96 Mbit/s)

Flow 1 (95th percentile 87.87 ms)
Flow 2 (95th percentile 67.10 ms)
Flow 3 (95th percentile 65.19 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2018-12-12 01:14:13
End at: 2018-12-12 01:14:43
Local clock offset: -0.06 ms
Remote clock offset: 1.234 ms


# Below is generated by plot.py at 2018-12-12 03:18:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 842.08 Mbit/s
95th percentile per-packet one-way delay: 67.417 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 549.98 Mbit/s
95th percentile per-packet one-way delay: 67.280 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 317.91 Mbit/s
95th percentile per-packet one-way delay: 67.957 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 245.31 Mbit/s
95th percentile per-packet one-way delay: 66.530 ms
Loss rate: 0.00%
```

Run 4: Report of FillP-Sheep — Data Link
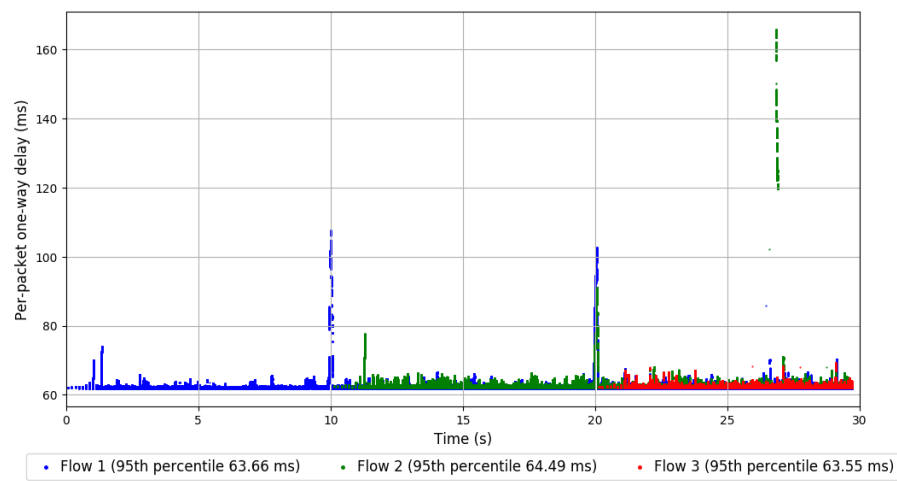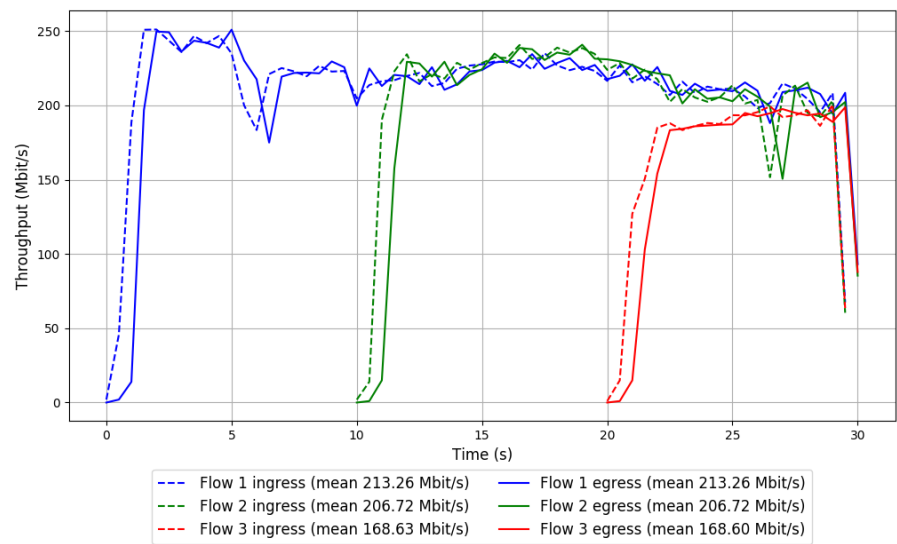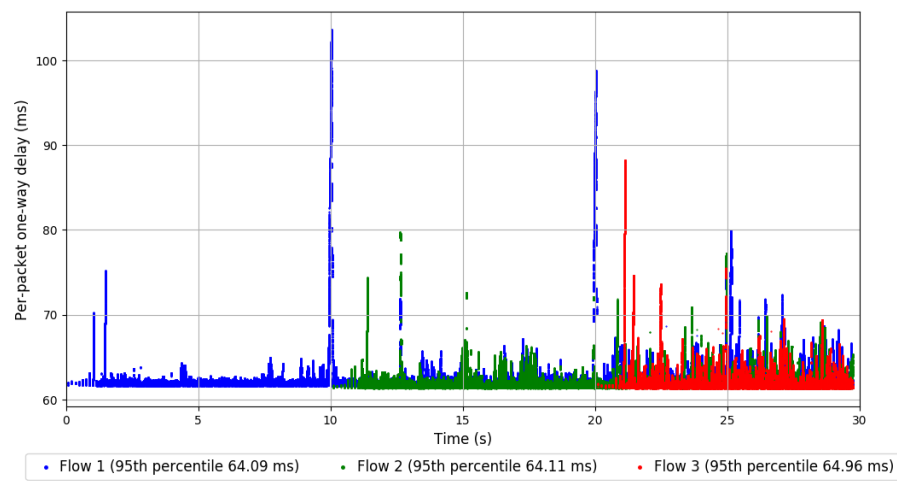

Flow 1 ingress (mean 549.98 Mbit/s) — — — | Flow 1 egress (mean 549.98 Mbit/s) ——
Flow 2 ingress (mean 317.96 Mbit/s) — — — | Flow 2 egress (mean 317.91 Mbit/s) ——
Flow 3 ingress (mean 245.35 Mbit/s) — — — | Flow 3 egress (mean 245.31 Mbit/s) ——

Flow 1 (95th percentile 67.28 ms) · | Flow 2 (95th percentile 67.96 ms) · | Flow 3 (95th percentile 66.53 ms) ·

```
Run 5: Statistics of FillP-Sheep

Start at: 2018-12-12 01:48:46
End at: 2018-12-12 01:49:16
Local clock offset: -0.056 ms
Remote clock offset: -0.151 ms


# Below is generated by plot.py at 2018-12-12 03:21:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 492.49 Mbit/s
95th percentile per-packet one-way delay: 71.534 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 147.98 Mbit/s
95th percentile per-packet one-way delay: 95.013 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 388.22 Mbit/s
95th percentile per-packet one-way delay: 70.767 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 261.54 Mbit/s
95th percentile per-packet one-way delay: 67.181 ms
Loss rate: 0.00%
```

Run 5: Report of FillP-Sheep — Data Link
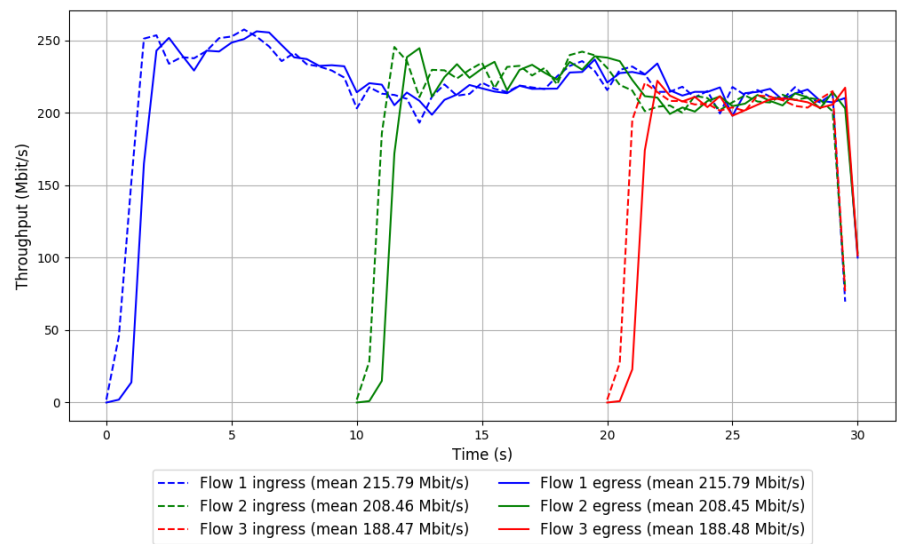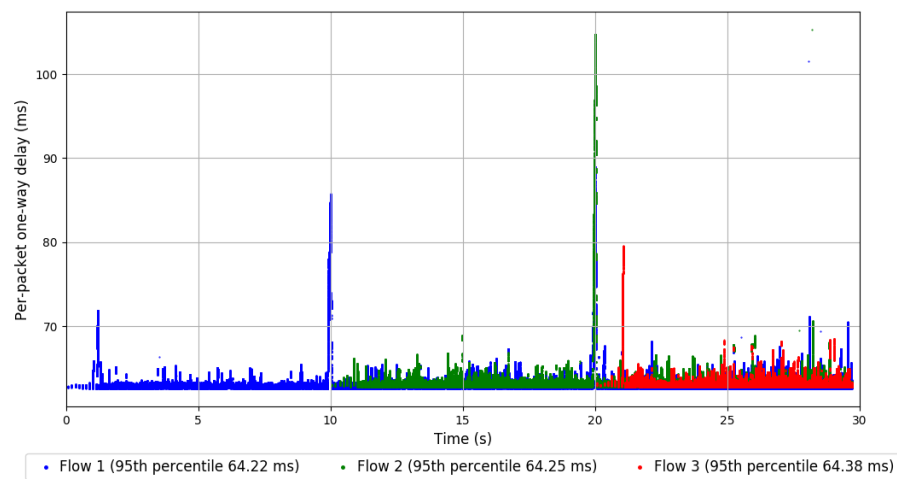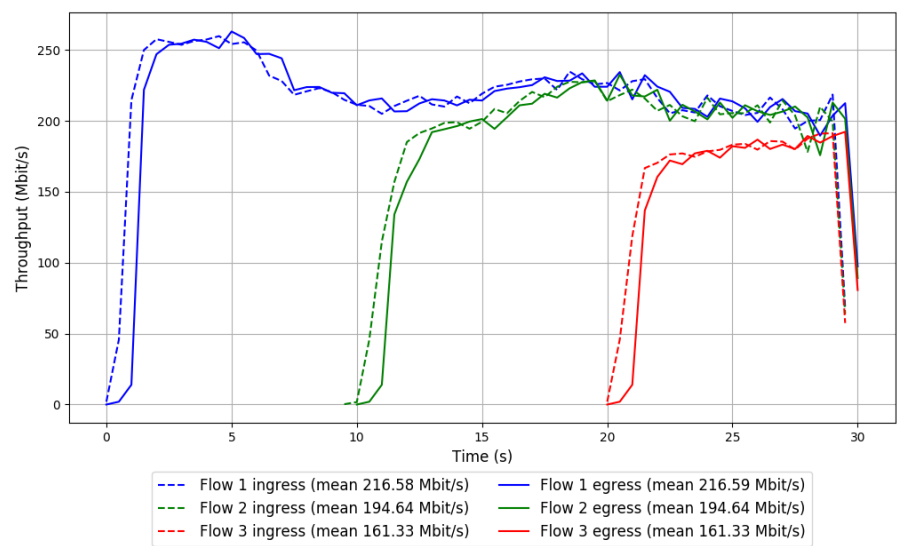

Flow 1 ingress (mean 148.10 Mbit/s) --- Flow 1 egress (mean 147.98 Mbit/s)
Flow 2 ingress (mean 388.27 Mbit/s) --- Flow 2 egress (mean 388.22 Mbit/s)
Flow 3 ingress (mean 261.55 Mbit/s) --- Flow 3 egress (mean 261.54 Mbit/s)

Flow 1 (95th percentile 95.01 ms) • Flow 2 (95th percentile 70.77 ms) • Flow 3 (95th percentile 67.18 ms)

```
Run 1: Statistics of Indigo

Start at: 2018-12-11 23:44:09
End at: 2018-12-11 23:44:39
Local clock offset: -0.024 ms
Remote clock offset: 0.643 ms


# Below is generated by plot.py at 2018-12-12 03:29:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.31 Mbit/s
95th percentile per-packet one-way delay: 65.536 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 216.49 Mbit/s
95th percentile per-packet one-way delay: 65.743 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 211.43 Mbit/s
95th percentile per-packet one-way delay: 65.254 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 168.56 Mbit/s
95th percentile per-packet one-way delay: 65.309 ms
Loss rate: 0.00%
```
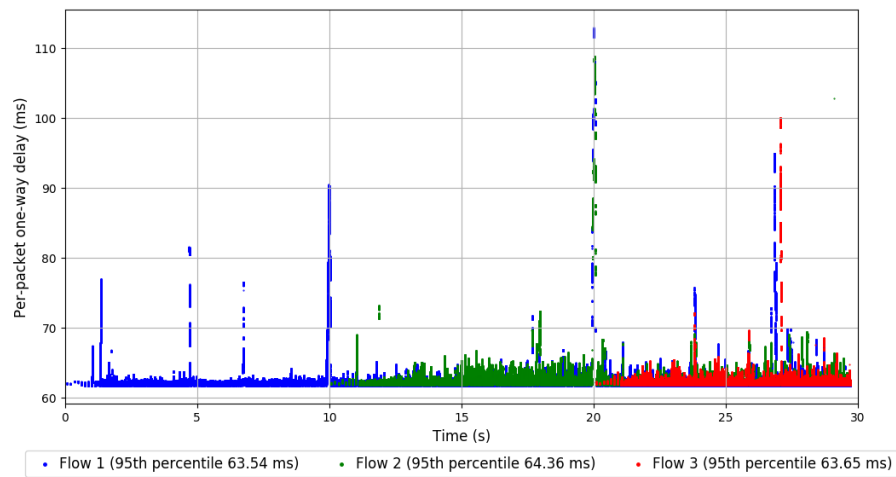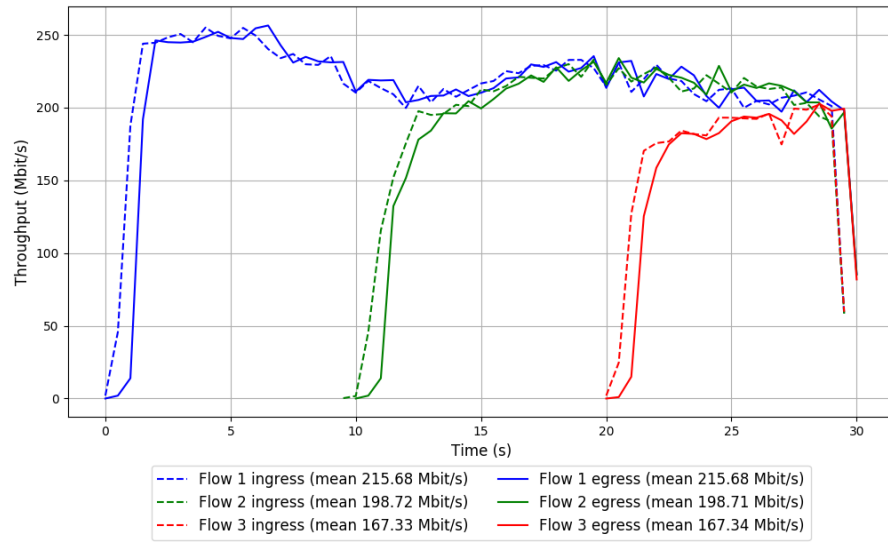
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2018-12-12 00:17:56
End at: 2018-12-12 00:18:26
Local clock offset: -0.119 ms
Remote clock offset: -1.013 ms


# Below is generated by plot.py at 2018-12-12 03:29:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 404.15 Mbit/s
95th percentile per-packet one-way delay: 63.982 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 213.26 Mbit/s
95th percentile per-packet one-way delay: 63.661 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 206.72 Mbit/s
95th percentile per-packet one-way delay: 64.486 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 168.60 Mbit/s
95th percentile per-packet one-way delay: 63.555 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2018-12-12 00:51:39
End at: 2018-12-12 00:52:09
Local clock offset: -0.053 ms
Remote clock offset: -1.353 ms


# Below is generated by plot.py at 2018-12-12 03:31:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 415.03 Mbit/s
95th percentile per-packet one-way delay: 64.287 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 215.79 Mbit/s
95th percentile per-packet one-way delay: 64.093 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 208.45 Mbit/s
95th percentile per-packet one-way delay: 64.111 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 188.48 Mbit/s
95th percentile per-packet one-way delay: 64.956 ms
Loss rate: 0.00%
```
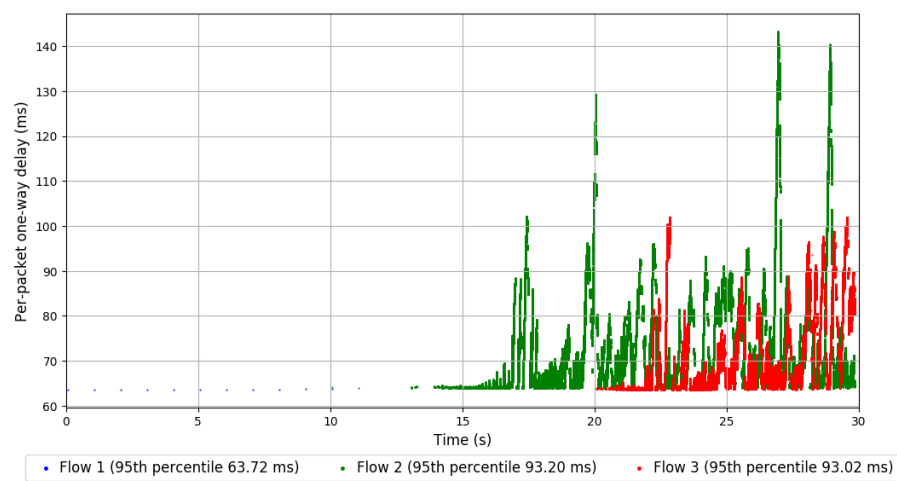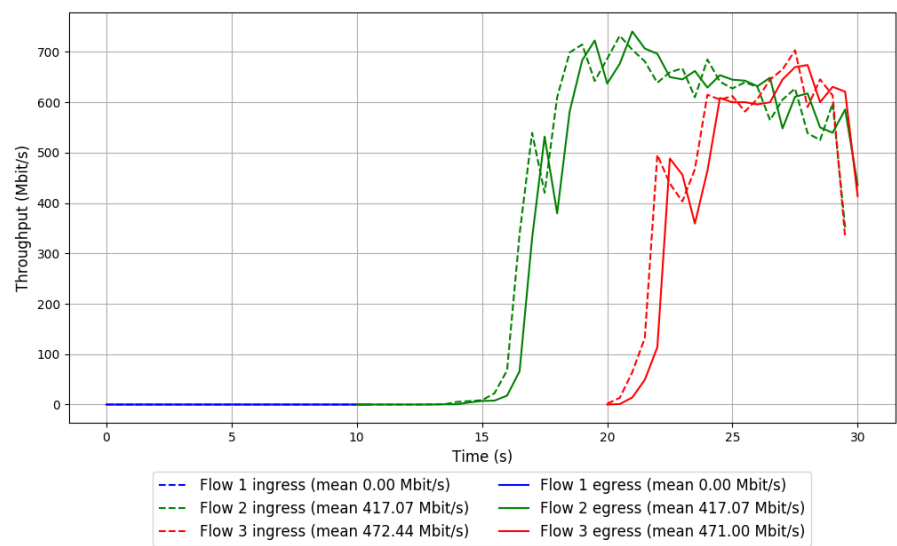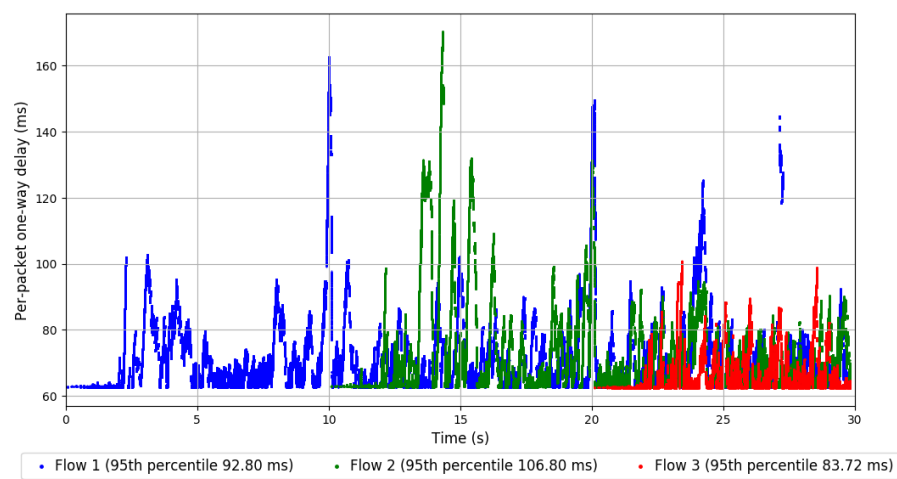
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2018-12-12 01:25:21
End at: 2018-12-12 01:25:51
Local clock offset: -0.098 ms
Remote clock offset: -0.142 ms


# Below is generated by plot.py at 2018-12-12 03:31:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 398.12 Mbit/s
95th percentile per-packet one-way delay: 64.254 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 216.59 Mbit/s
95th percentile per-packet one-way delay: 64.221 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 194.64 Mbit/s
95th percentile per-packet one-way delay: 64.251 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 161.33 Mbit/s
95th percentile per-packet one-way delay: 64.376 ms
Loss rate: 0.00%
```
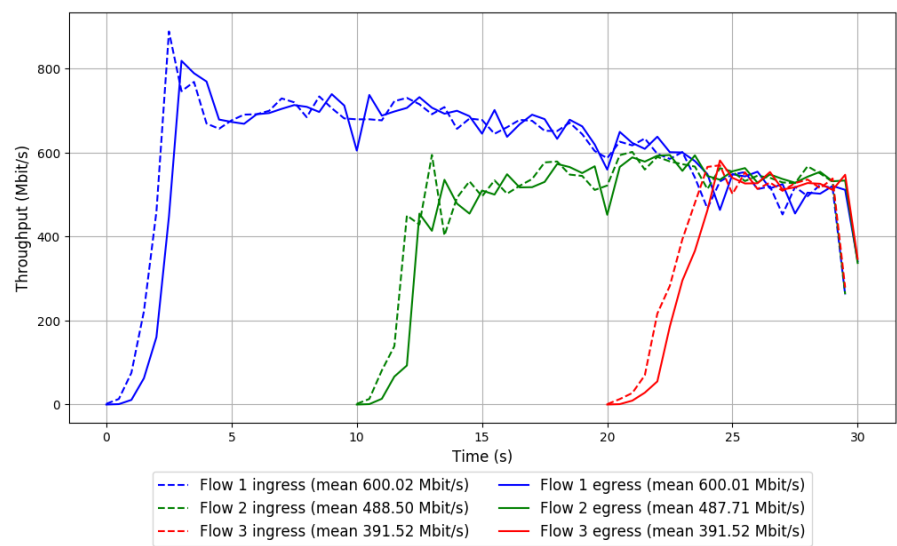
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2018-12-12 01:59:29
End at: 2018-12-12 01:59:59
Local clock offset: 0.001 ms
Remote clock offset: -1.036 ms

# Below is generated by plot.py at 2018-12-12 03:31:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 401.65 Mbit/s
95th percentile per-packet one-way delay: 63.932 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 215.68 Mbit/s
95th percentile per-packet one-way delay: 63.538 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 198.71 Mbit/s
95th percentile per-packet one-way delay: 64.364 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 167.34 Mbit/s
95th percentile per-packet one-way delay: 63.649 ms
Loss rate: 0.00%
```
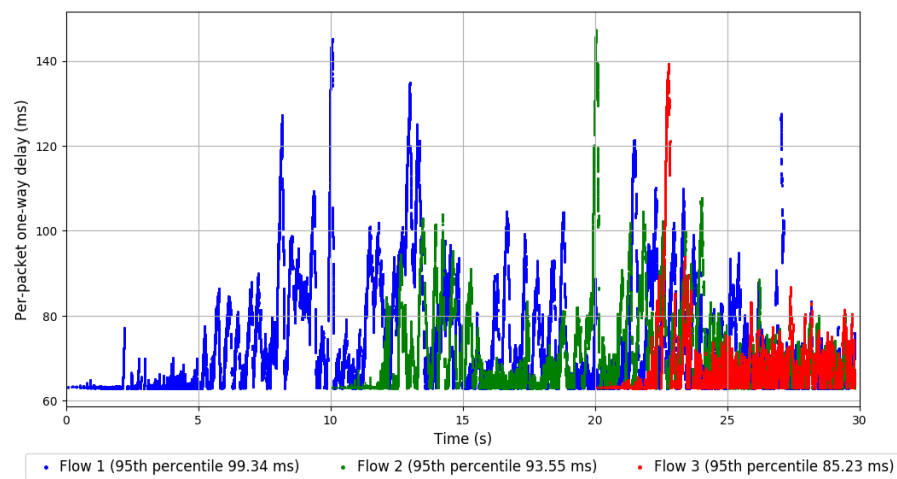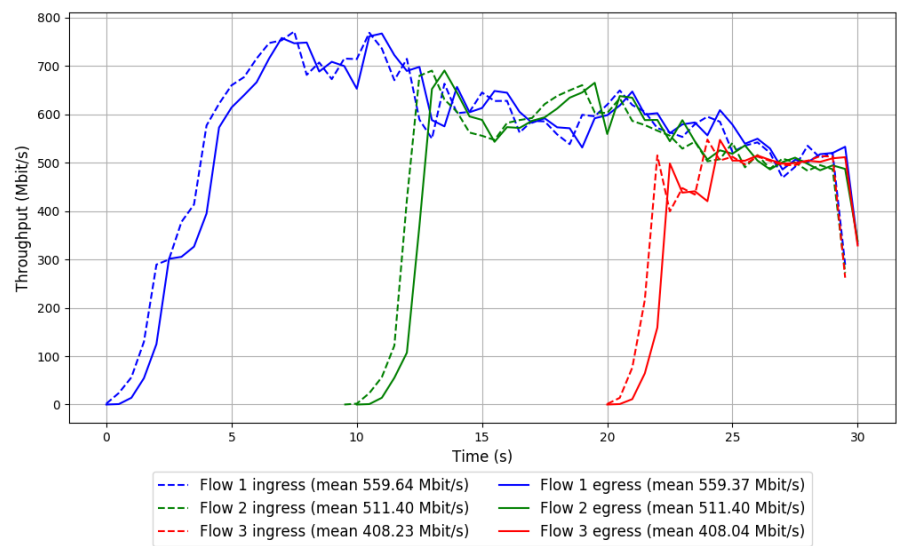
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesD

Start at: 2018-12-11 23:23:16
End at: 2018-12-11 23:23:46
Local clock offset: -0.059 ms
Remote clock offset: 0.609 ms

# Below is generated by plot.py at 2018-12-12 03:31:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 431.27 Mbit/s
95th percentile per-packet one-way delay: 93.111 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 63.722 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 417.07 Mbit/s
95th percentile per-packet one-way delay: 93.203 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 471.00 Mbit/s
95th percentile per-packet one-way delay: 93.020 ms
Loss rate: 0.28%
```

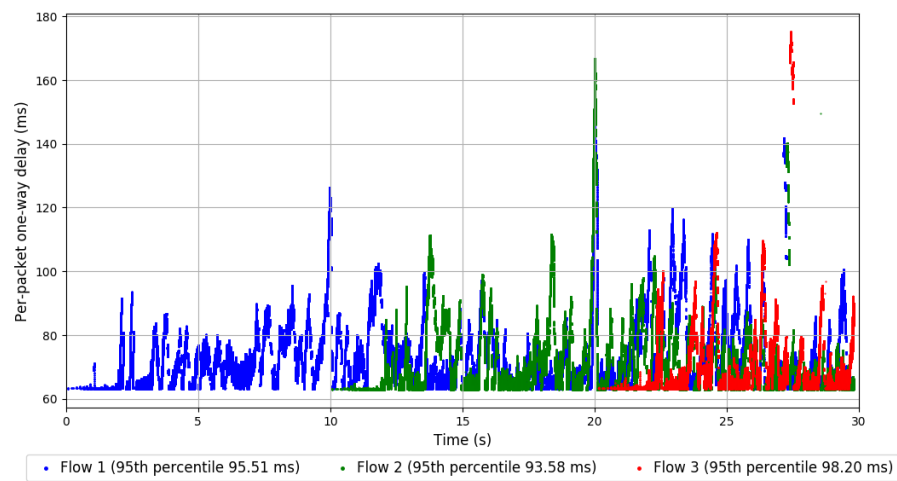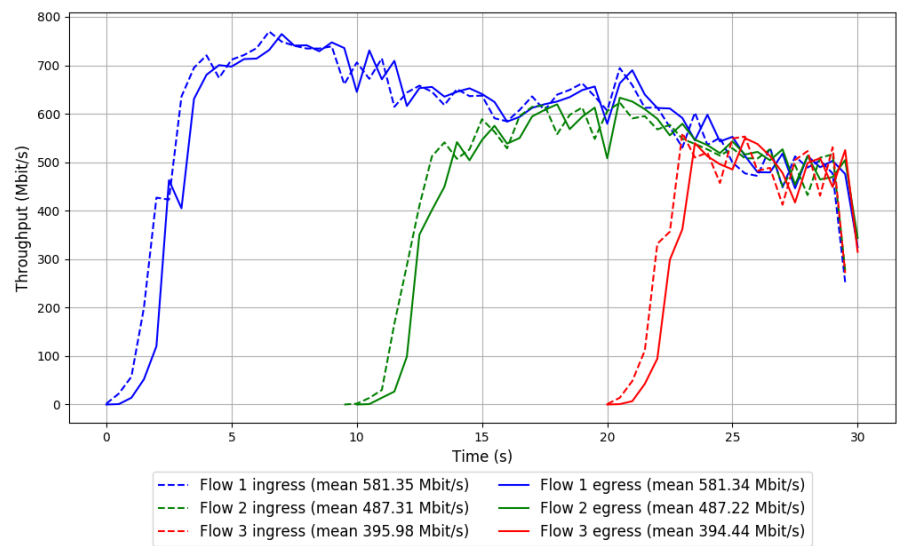Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2018-12-11 23:56:43
End at: 2018-12-11 23:57:13
Local clock offset: -0.063 ms
Remote clock offset: -0.293 ms


# Below is generated by plot.py at 2018-12-12 03:37:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1051.62 Mbit/s
95th percentile per-packet one-way delay: 94.222 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 600.01 Mbit/s
95th percentile per-packet one-way delay: 92.802 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 487.71 Mbit/s
95th percentile per-packet one-way delay: 106.798 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 391.52 Mbit/s
95th percentile per-packet one-way delay: 83.724 ms
Loss rate: 0.00%
```

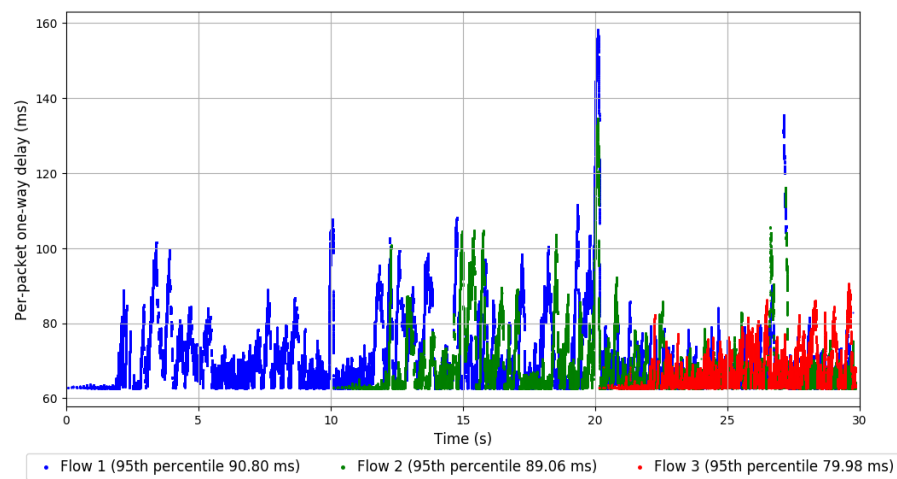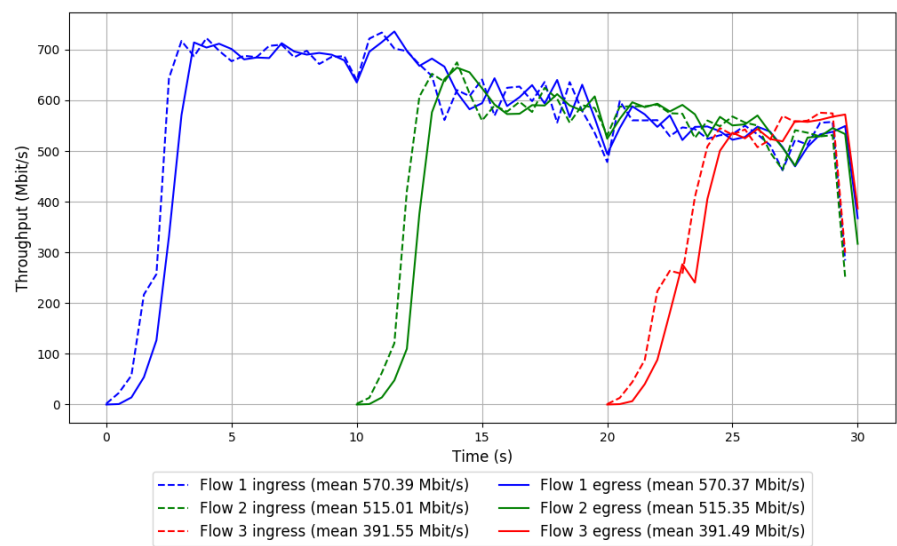Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2018-12-12 00:30:06
End at: 2018-12-12 00:30:36
Local clock offset: -0.122 ms
Remote clock offset: -0.163 ms


# Below is generated by plot.py at 2018-12-12 03:40:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1032.78 Mbit/s
95th percentile per-packet one-way delay: 96.956 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 559.37 Mbit/s
95th percentile per-packet one-way delay: 99.343 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 511.40 Mbit/s
95th percentile per-packet one-way delay: 93.553 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 408.04 Mbit/s
95th percentile per-packet one-way delay: 85.232 ms
Loss rate: 0.02%
```

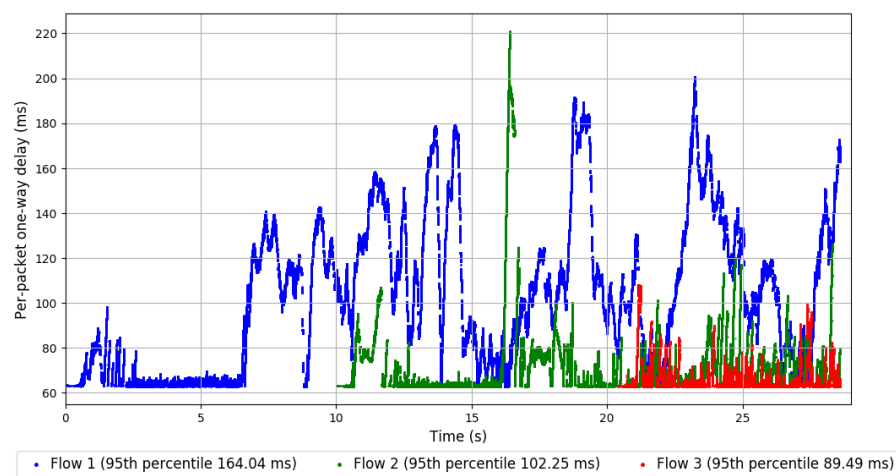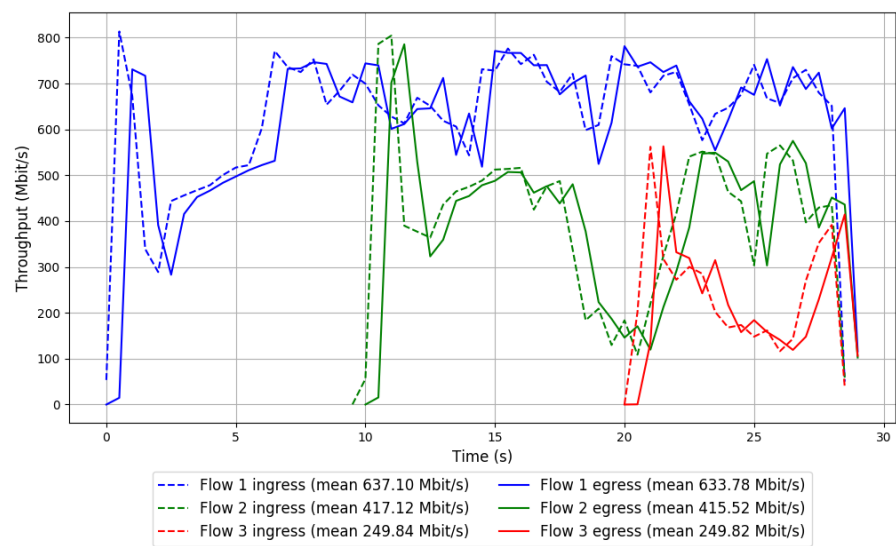Run 3: Report of Indigo-MusesD — Data Link

- - - Flow 1 ingress (mean 559.64 Mbit/s) —— Flow 1 egress (mean 559.37 Mbit/s)
- - - Flow 2 ingress (mean 511.40 Mbit/s) —— Flow 2 egress (mean 511.40 Mbit/s)
- - - Flow 3 ingress (mean 408.23 Mbit/s) —— Flow 3 egress (mean 408.04 Mbit/s)

• Flow 1 (95th percentile 99.34 ms)   • Flow 2 (95th percentile 93.55 ms)   • Flow 3 (95th percentile 85.23 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2018-12-12 01:03:53
End at: 2018-12-12 01:04:24
Local clock offset: -0.071 ms
Remote clock offset: -0.131 ms


# Below is generated by plot.py at 2018-12-12 03:46:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1033.00 Mbit/s
95th percentile per-packet one-way delay: 94.956 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 581.34 Mbit/s
95th percentile per-packet one-way delay: 95.506 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 487.22 Mbit/s
95th percentile per-packet one-way delay: 93.575 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 394.44 Mbit/s
95th percentile per-packet one-way delay: 98.202 ms
Loss rate: 0.35%
```

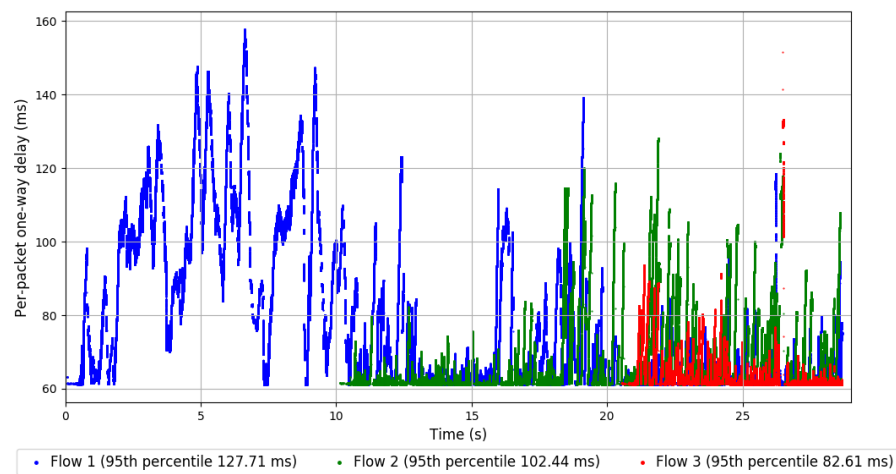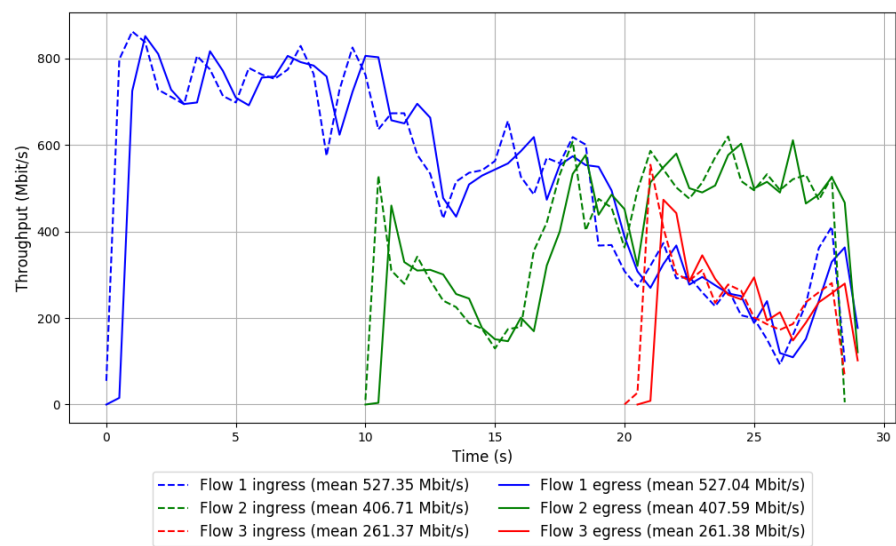Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2018-12-12 01:37:57
End at: 2018-12-12 01:38:27
Local clock offset: -0.047 ms
Remote clock offset: -0.157 ms


# Below is generated by plot.py at 2018-12-12 03:50:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1039.59 Mbit/s
95th percentile per-packet one-way delay: 89.015 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 570.37 Mbit/s
95th percentile per-packet one-way delay: 90.804 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 515.35 Mbit/s
95th percentile per-packet one-way delay: 89.063 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 391.49 Mbit/s
95th percentile per-packet one-way delay: 79.979 ms
Loss rate: 0.03%
```

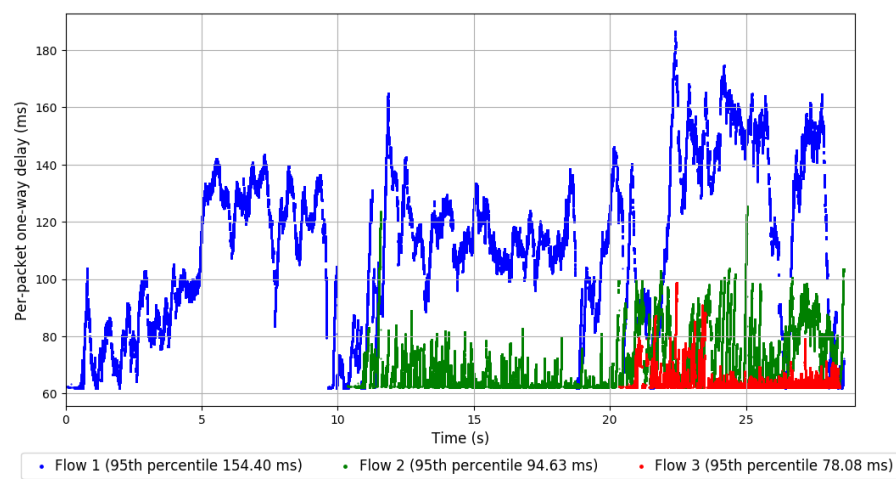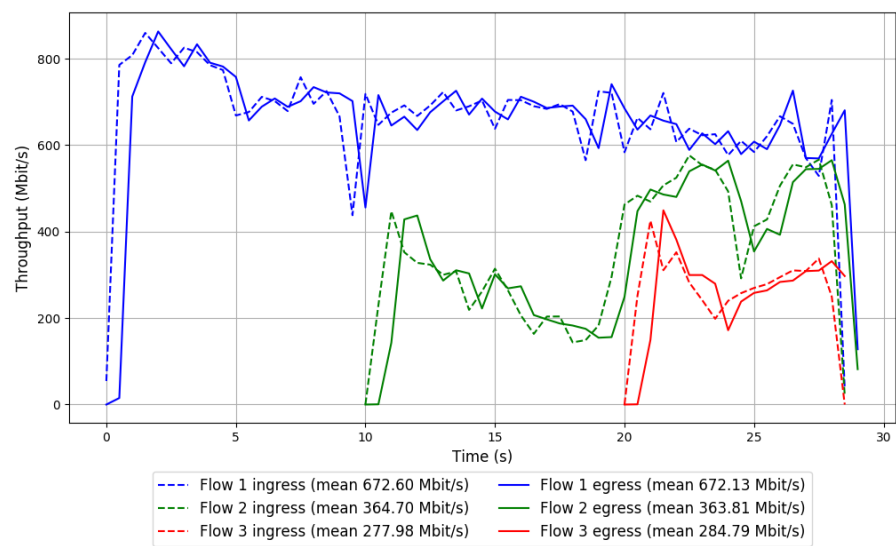Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2018-12-11 23:38:58
End at: 2018-12-11 23:39:28
Local clock offset: -0.046 ms
Remote clock offset: -0.096 ms


# Below is generated by plot.py at 2018-12-12 03:50:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 976.21 Mbit/s
95th percentile per-packet one-way delay: 155.059 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 633.78 Mbit/s
95th percentile per-packet one-way delay: 164.040 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 415.52 Mbit/s
95th percentile per-packet one-way delay: 102.247 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 249.82 Mbit/s
95th percentile per-packet one-way delay: 89.486 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2018-12-12 00:12:41
End at: 2018-12-12 00:13:11
Local clock offset: -0.068 ms
Remote clock offset: -1.568 ms


# Below is generated by plot.py at 2018-12-12 03:50:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 864.88 Mbit/s
95th percentile per-packet one-way delay: 120.244 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 527.04 Mbit/s
95th percentile per-packet one-way delay: 127.711 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 407.59 Mbit/s
95th percentile per-packet one-way delay: 102.438 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 261.38 Mbit/s
95th percentile per-packet one-way delay: 82.612 ms
Loss rate: 0.00%
```
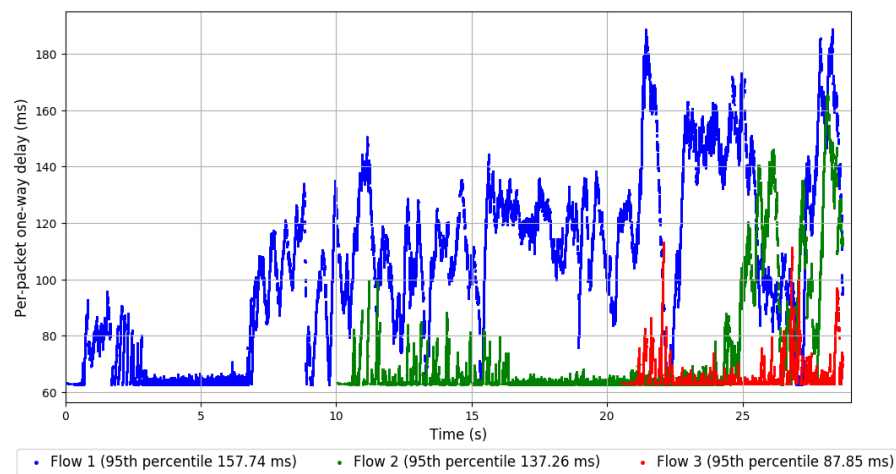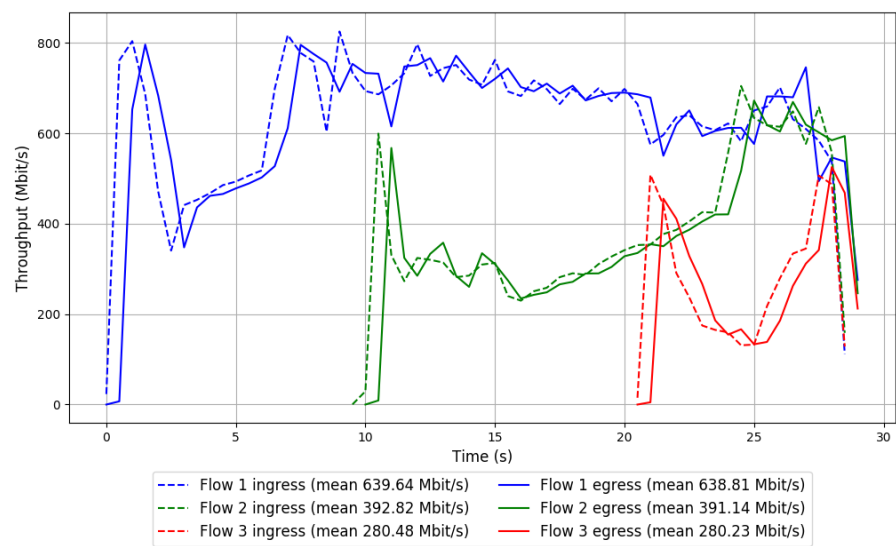
Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2018-12-12 00:46:23
End at: 2018-12-12 00:46:53
Local clock offset: -0.058 ms
Remote clock offset: -0.817 ms


# Below is generated by plot.py at 2018-12-12 03:50:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 985.43 Mbit/s
95th percentile per-packet one-way delay: 151.049 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 672.13 Mbit/s
95th percentile per-packet one-way delay: 154.397 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 363.81 Mbit/s
95th percentile per-packet one-way delay: 94.629 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 284.79 Mbit/s
95th percentile per-packet one-way delay: 78.078 ms
Loss rate: 0.00%
```
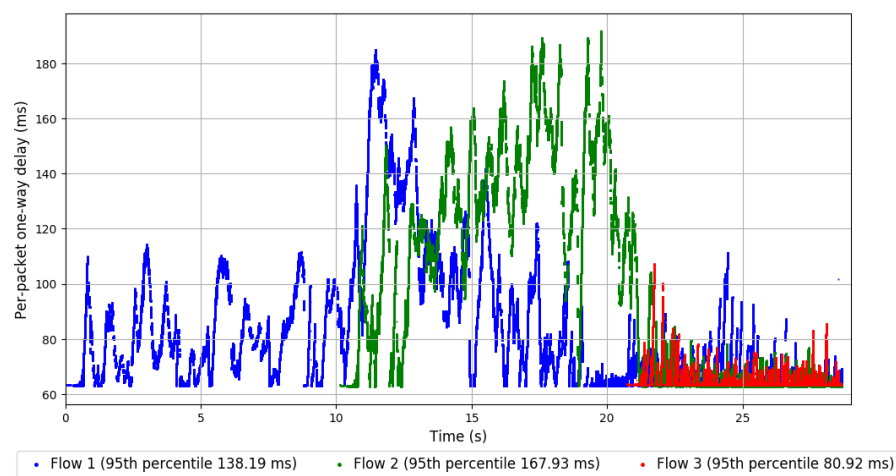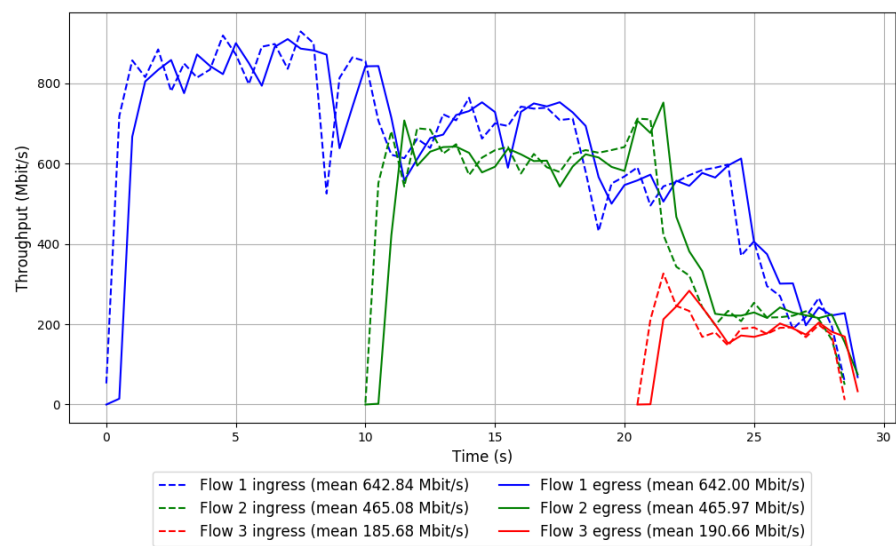
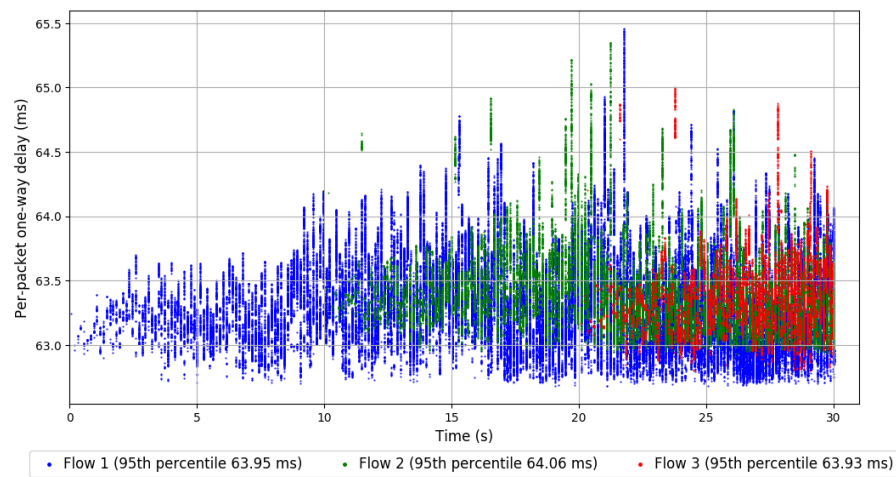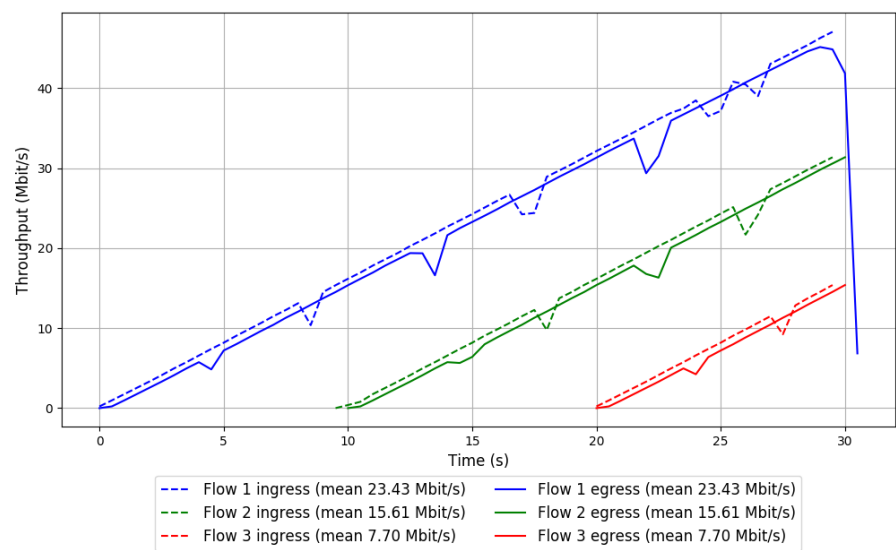Run 3: Report of Indigo-MusesT — Data Link

```
Run 4: Statistics of Indigo-MusesT

Start at: 2018-12-12 01:20:02
End at: 2018-12-12 01:20:32
Local clock offset: -0.001 ms
Remote clock offset: 0.068 ms


# Below is generated by plot.py at 2018-12-12 03:50:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 973.22 Mbit/s
95th percentile per-packet one-way delay: 152.856 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 638.81 Mbit/s
95th percentile per-packet one-way delay: 157.737 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 391.14 Mbit/s
95th percentile per-packet one-way delay: 137.261 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 280.23 Mbit/s
95th percentile per-packet one-way delay: 87.854 ms
Loss rate: 0.01%
```

Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2018-12-12 01:54:12
End at: 2018-12-12 01:54:42
Local clock offset: -0.037 ms
Remote clock offset: 0.136 ms


# Below is generated by plot.py at 2018-12-12 03:56:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 996.13 Mbit/s
95th percentile per-packet one-way delay: 155.093 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 642.00 Mbit/s
95th percentile per-packet one-way delay: 138.194 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 465.97 Mbit/s
95th percentile per-packet one-way delay: 167.930 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 190.66 Mbit/s
95th percentile per-packet one-way delay: 80.917 ms
Loss rate: 0.00%
```
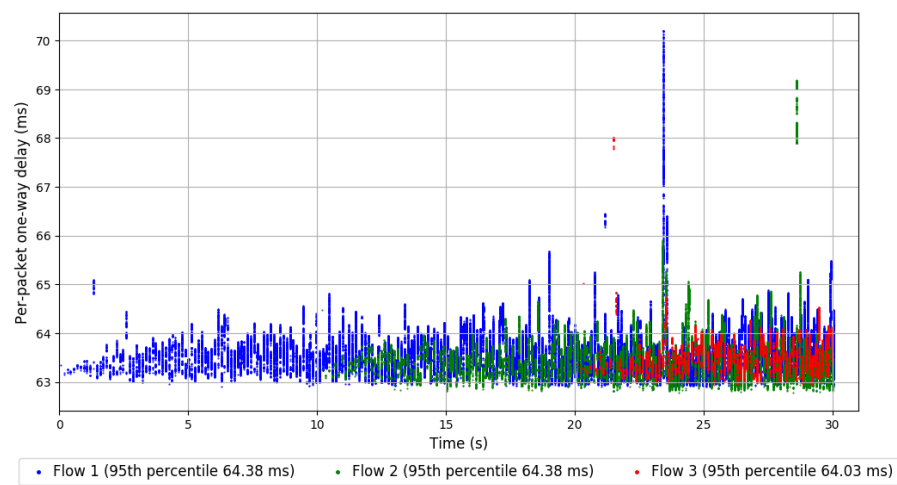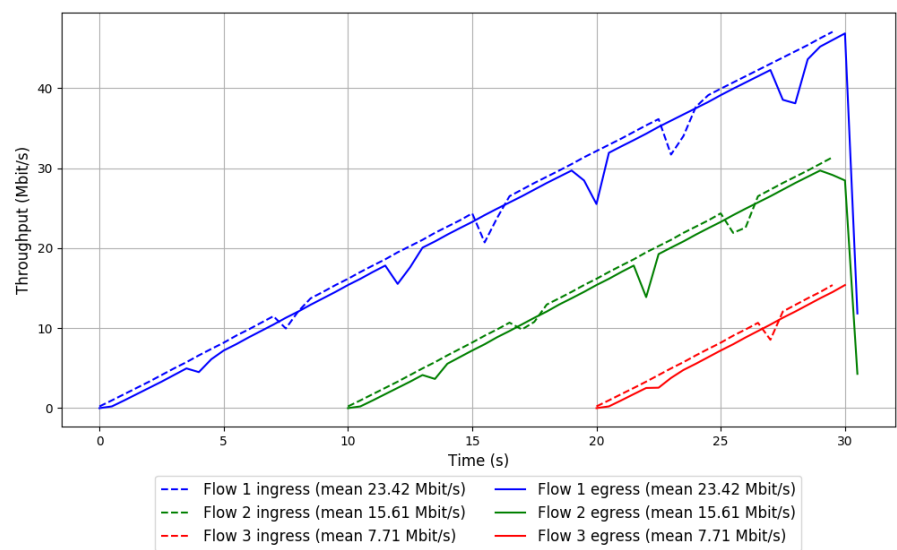
Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2018-12-11 23:14:47
End at: 2018-12-11 23:15:17
Local clock offset: -0.027 ms
Remote clock offset: -0.104 ms


# Below is generated by plot.py at 2018-12-12 03:56:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.36 Mbit/s
95th percentile per-packet one-way delay: 63.977 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.43 Mbit/s
95th percentile per-packet one-way delay: 63.955 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.61 Mbit/s
95th percentile per-packet one-way delay: 64.055 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 63.933 ms
Loss rate: 0.00%
```
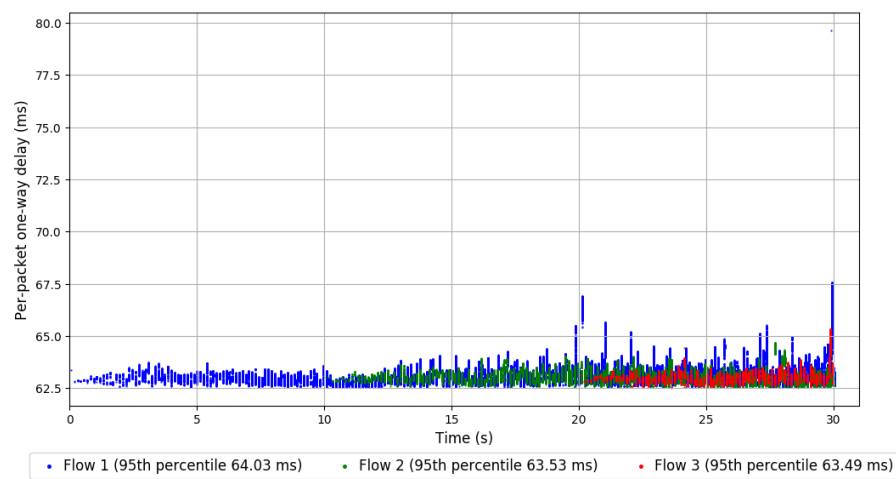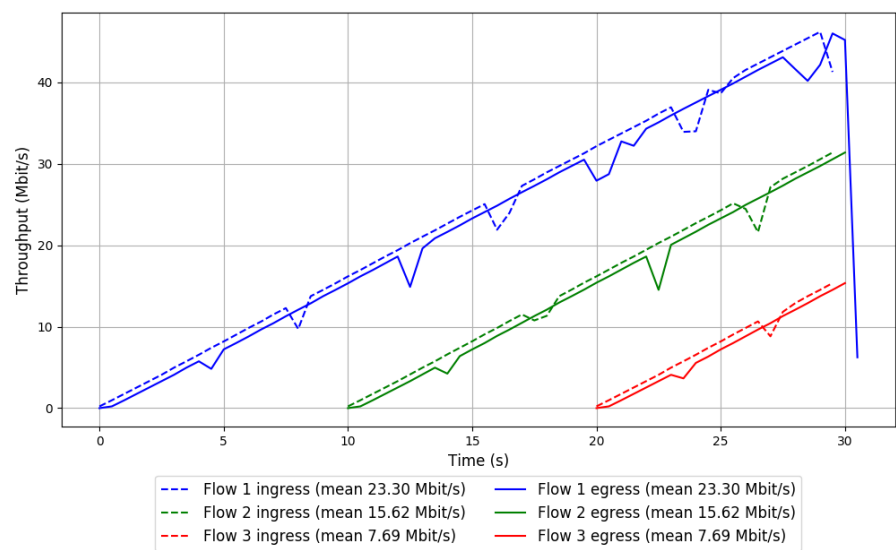
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-12-11 23:48:06
End at: 2018-12-11 23:48:36
Local clock offset: -0.054 ms
Remote clock offset: 0.103 ms

# Below is generated by plot.py at 2018-12-12 03:56:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.34 Mbit/s
95th percentile per-packet one-way delay: 64.355 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.42 Mbit/s
95th percentile per-packet one-way delay: 64.382 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.61 Mbit/s
95th percentile per-packet one-way delay: 64.378 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.71 Mbit/s
95th percentile per-packet one-way delay: 64.027 ms
Loss rate: 0.00%
```
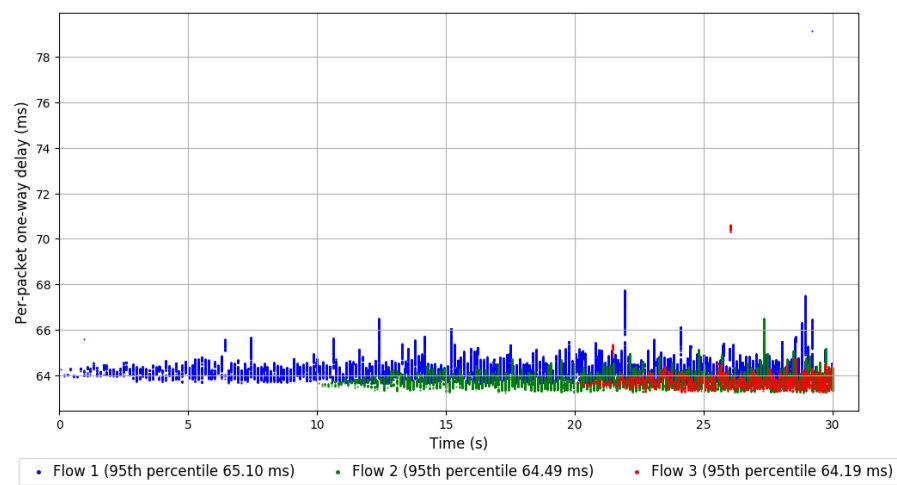
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-12-12 00:21:52
End at: 2018-12-12 00:22:22
Local clock offset: -0.08 ms
Remote clock offset: -0.148 ms


# Below is generated by plot.py at 2018-12-12 03:56:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.22 Mbit/s
95th percentile per-packet one-way delay: 63.889 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.30 Mbit/s
95th percentile per-packet one-way delay: 64.027 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.62 Mbit/s
95th percentile per-packet one-way delay: 63.530 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.69 Mbit/s
95th percentile per-packet one-way delay: 63.493 ms
Loss rate: 0.00%
```
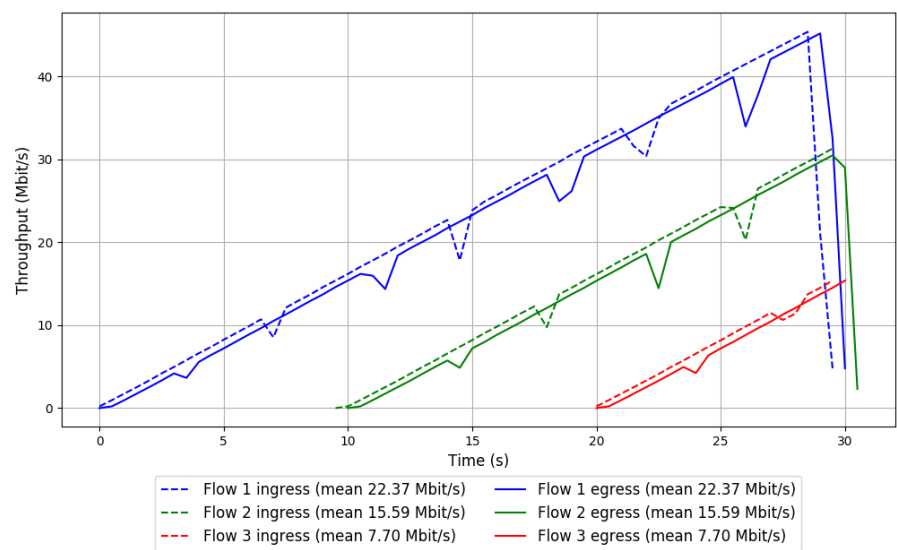
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2018-12-12 00:55:35
End at: 2018-12-12 00:56:05
Local clock offset: -0.077 ms
Remote clock offset: 0.546 ms

# Below is generated by plot.py at 2018-12-12 03:56:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.27 Mbit/s
95th percentile per-packet one-way delay: 64.933 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 22.37 Mbit/s
95th percentile per-packet one-way delay: 65.101 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.59 Mbit/s
95th percentile per-packet one-way delay: 64.492 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 64.191 ms
Loss rate: 0.00%
```
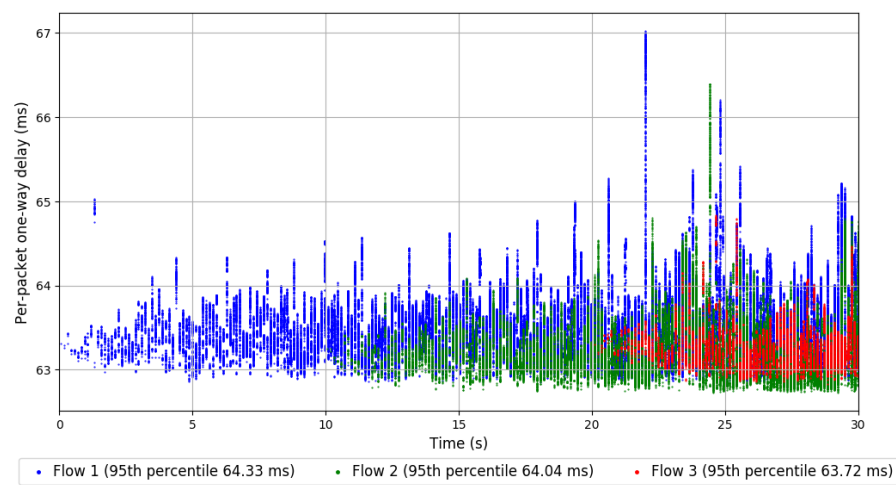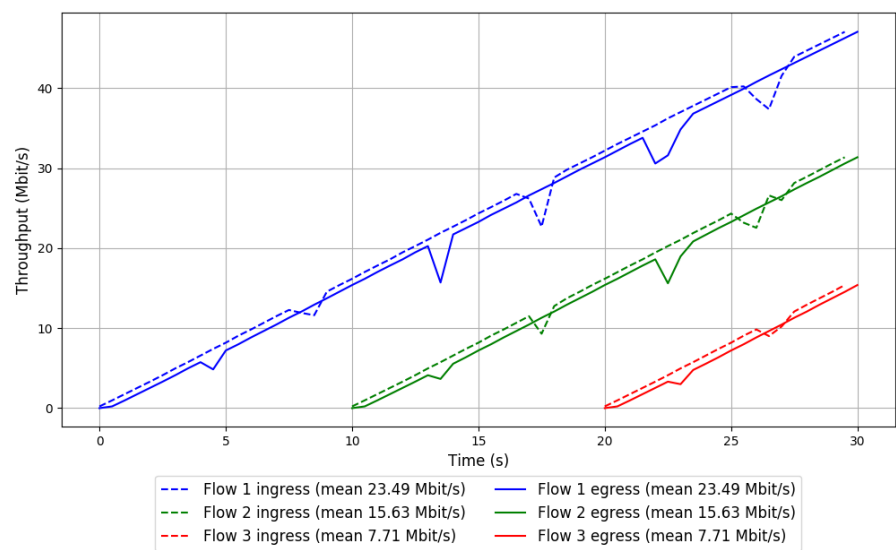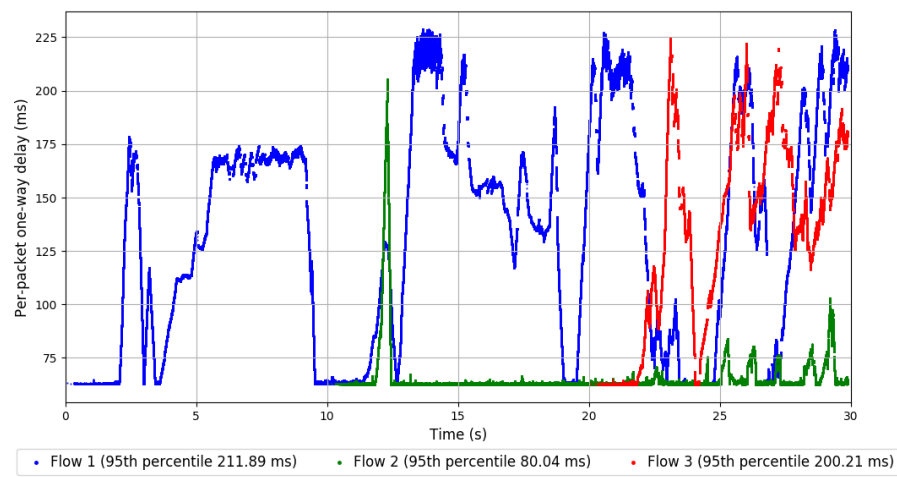
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2018-12-12 01:29:29
End at: 2018-12-12 01:29:59
Local clock offset: -0.051 ms
Remote clock offset: 0.053 ms


# Below is generated by plot.py at 2018-12-12 03:56:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.43 Mbit/s
95th percentile per-packet one-way delay: 64.245 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.49 Mbit/s
95th percentile per-packet one-way delay: 64.325 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.63 Mbit/s
95th percentile per-packet one-way delay: 64.042 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.71 Mbit/s
95th percentile per-packet one-way delay: 63.719 ms
Loss rate: 0.00%
```
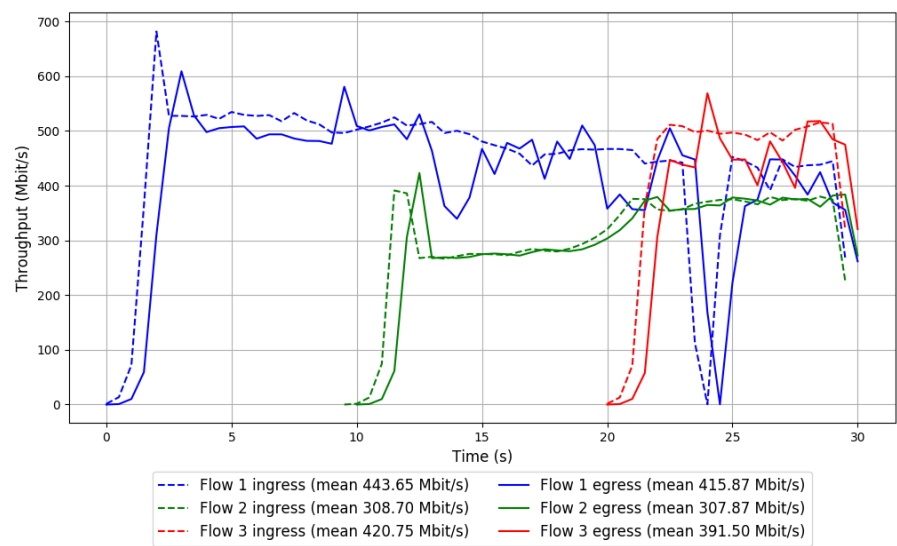
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2018-12-11 23:21:11
End at: 2018-12-11 23:21:41
Local clock offset: -0.022 ms
Remote clock offset: -0.483 ms


# Below is generated by plot.py at 2018-12-12 04:16:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 749.34 Mbit/s
95th percentile per-packet one-way delay: 207.251 ms
Loss rate: 4.83%
-- Flow 1:
Average throughput: 415.87 Mbit/s
95th percentile per-packet one-way delay: 211.889 ms
Loss rate: 6.26%
-- Flow 2:
Average throughput: 307.87 Mbit/s
95th percentile per-packet one-way delay: 80.042 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 391.50 Mbit/s
95th percentile per-packet one-way delay: 200.214 ms
Loss rate: 7.01%
```
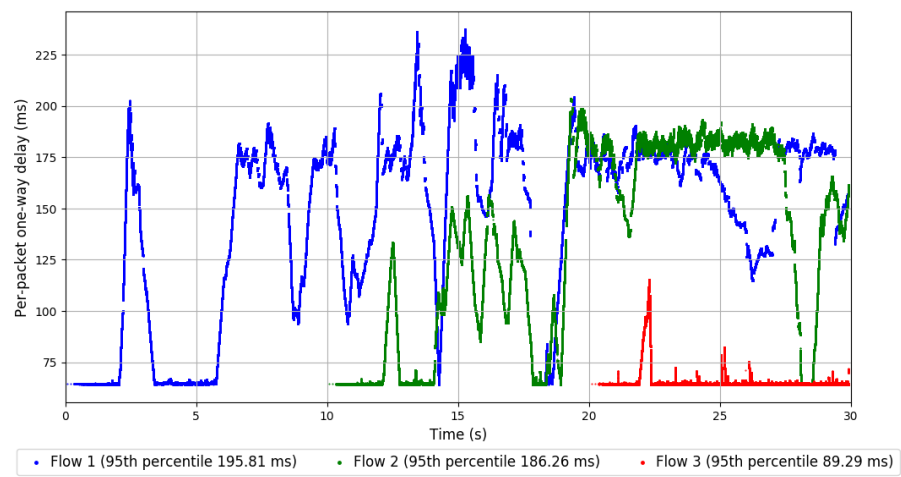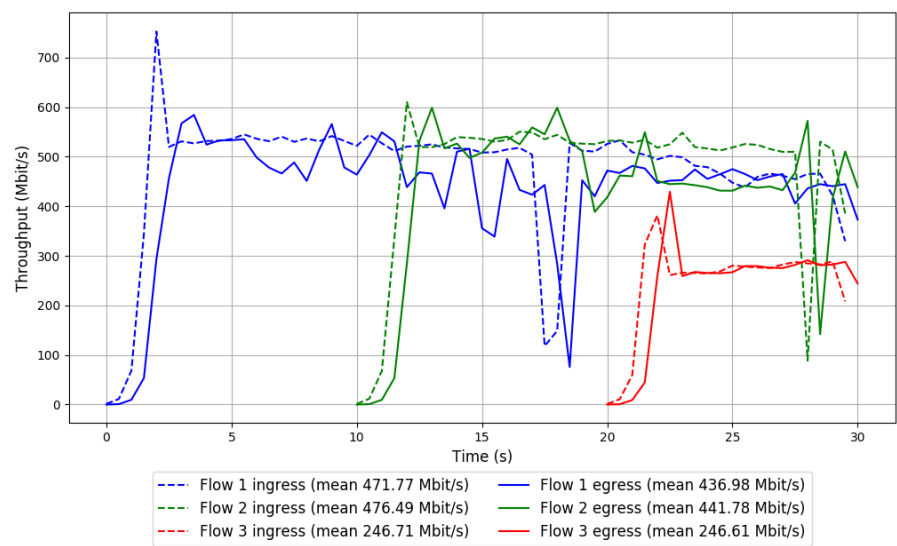
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2018-12-11 23:54:34
End at: 2018-12-11 23:55:04
Local clock offset: -0.083 ms
Remote clock offset: 1.331 ms


# Below is generated by plot.py at 2018-12-12 04:18:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 811.69 Mbit/s
95th percentile per-packet one-way delay: 187.558 ms
Loss rate: 6.65%
-- Flow 1:
Average throughput: 436.98 Mbit/s
95th percentile per-packet one-way delay: 195.812 ms
Loss rate: 7.37%
-- Flow 2:
Average throughput: 441.78 Mbit/s
95th percentile per-packet one-way delay: 186.261 ms
Loss rate: 7.27%
-- Flow 3:
Average throughput: 246.61 Mbit/s
95th percentile per-packet one-way delay: 89.286 ms
Loss rate: 0.03%
```
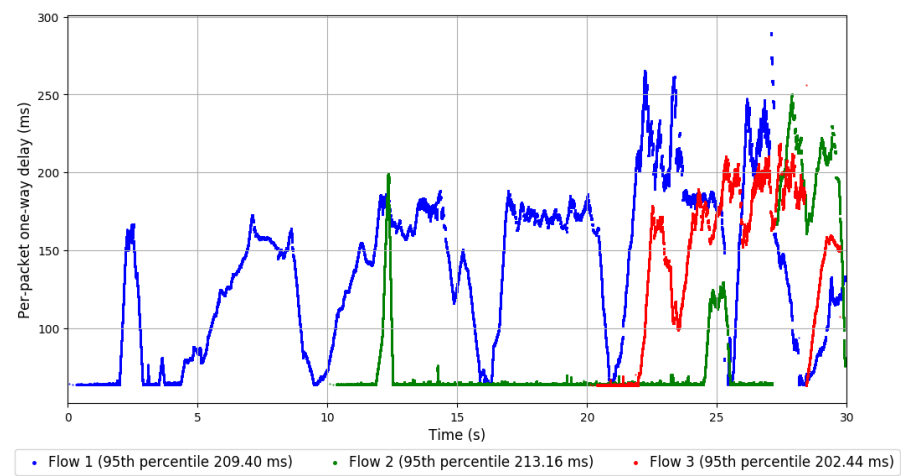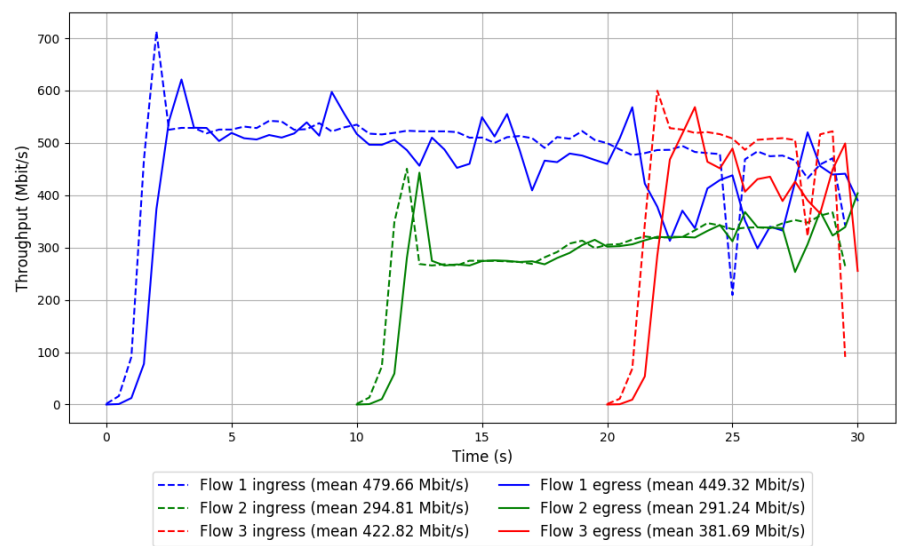
Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 471.77 Mbit/s) --- Flow 1 egress (mean 436.98 Mbit/s)
Flow 2 ingress (mean 476.49 Mbit/s) --- Flow 2 egress (mean 441.78 Mbit/s)
Flow 3 ingress (mean 246.71 Mbit/s) --- Flow 3 egress (mean 246.61 Mbit/s)

Flow 1 (95th percentile 195.81 ms)   Flow 2 (95th percentile 186.26 ms)   Flow 3 (95th percentile 89.29 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2018-12-12 00:28:00
End at: 2018-12-12 00:28:30
Local clock offset: -0.101 ms
Remote clock offset: 0.531 ms


# Below is generated by plot.py at 2018-12-12 04:18:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 766.02 Mbit/s
95th percentile per-packet one-way delay: 208.073 ms
Loss rate: 5.59%
-- Flow 1:
Average throughput: 449.32 Mbit/s
95th percentile per-packet one-way delay: 209.404 ms
Loss rate: 6.33%
-- Flow 2:
Average throughput: 291.24 Mbit/s
95th percentile per-packet one-way delay: 213.159 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 381.69 Mbit/s
95th percentile per-packet one-way delay: 202.438 ms
Loss rate: 9.31%
```
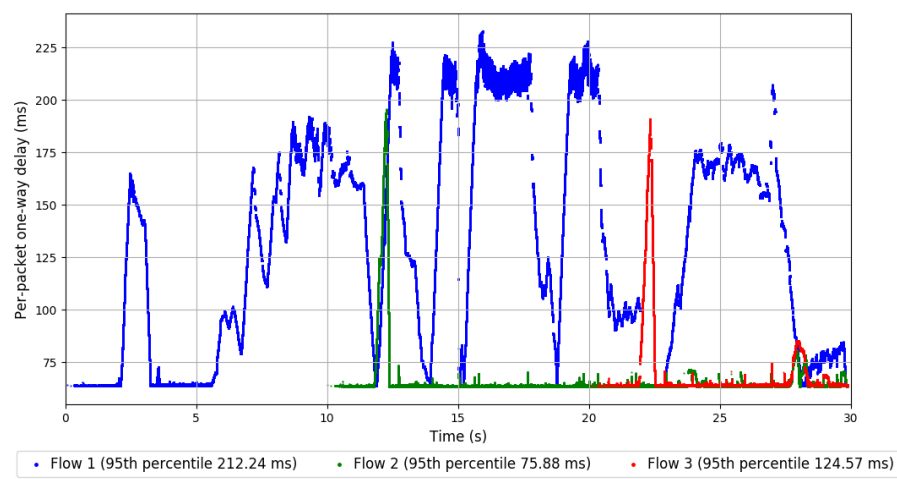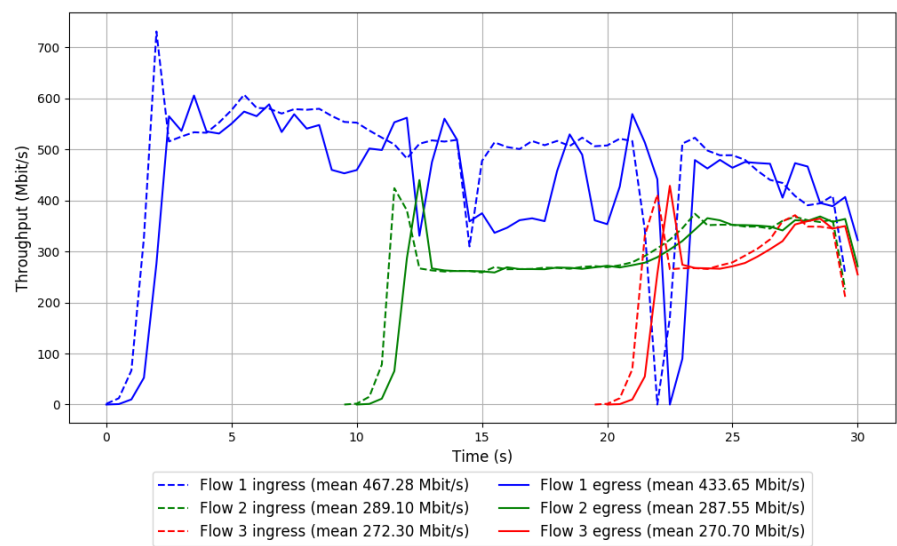
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 479.66 Mbit/s)   Flow 1 egress (mean 449.32 Mbit/s)
Flow 2 ingress (mean 294.81 Mbit/s)   Flow 2 egress (mean 291.24 Mbit/s)
Flow 3 ingress (mean 422.82 Mbit/s)   Flow 3 egress (mean 381.69 Mbit/s)

Flow 1 (95th percentile 209.40 ms)   Flow 2 (95th percentile 213.16 ms)   Flow 3 (95th percentile 202.44 ms)
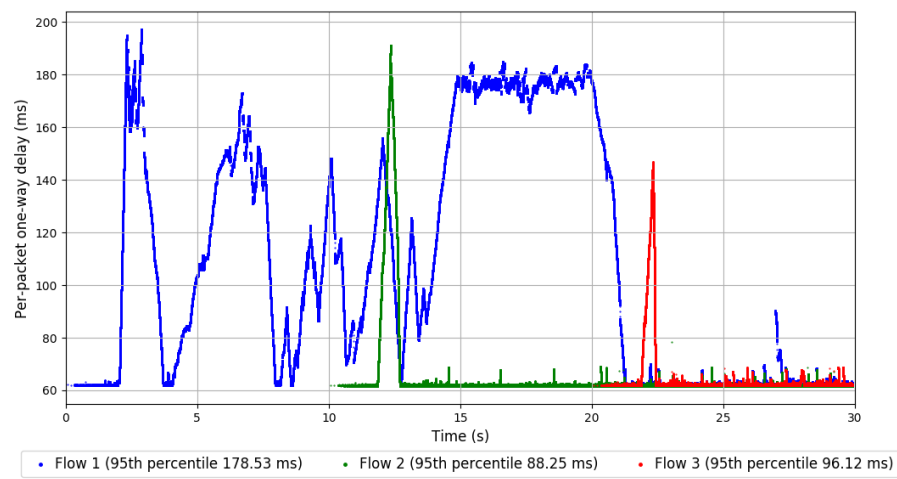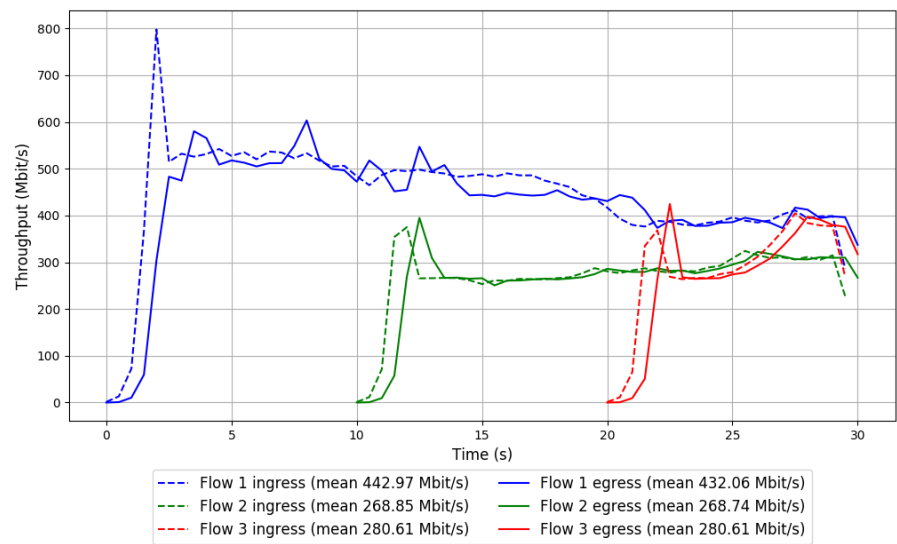
```
Run 4: Statistics of PCC-Allegro

Start at: 2018-12-12 01:01:51
End at: 2018-12-12 01:02:21
Local clock offset: -0.038 ms
Remote clock offset: 0.67 ms


# Below is generated by plot.py at 2018-12-12 04:18:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 714.21 Mbit/s
95th percentile per-packet one-way delay: 207.940 ms
Loss rate: 4.70%
-- Flow 1:
Average throughput: 433.65 Mbit/s
95th percentile per-packet one-way delay: 212.243 ms
Loss rate: 7.20%
-- Flow 2:
Average throughput: 287.55 Mbit/s
95th percentile per-packet one-way delay: 75.876 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 270.70 Mbit/s
95th percentile per-packet one-way delay: 124.566 ms
Loss rate: 0.59%
```

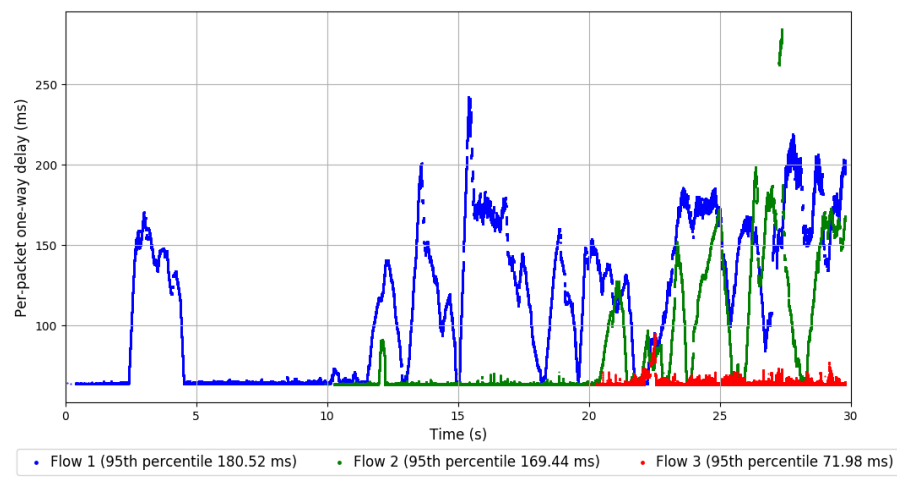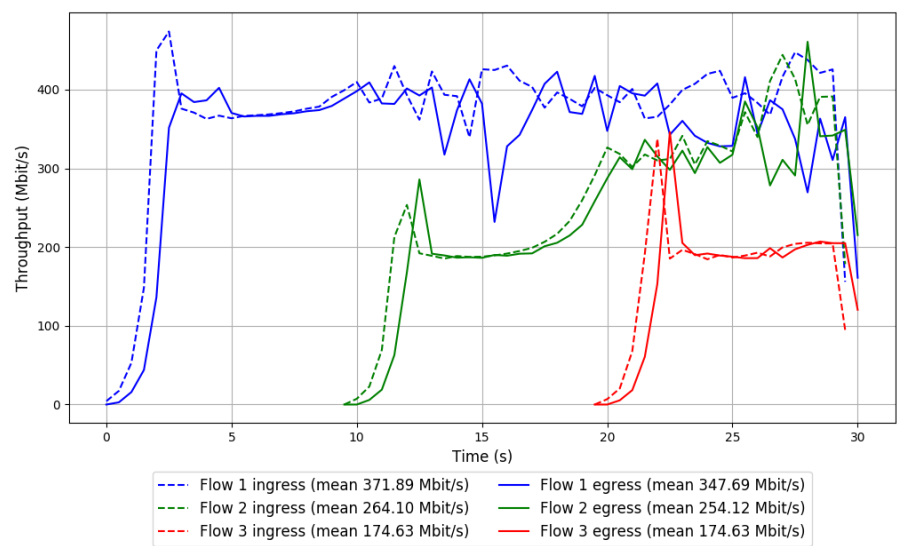# Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 467.28 Mbit/s)   Flow 1 egress (mean 433.65 Mbit/s)
Flow 2 ingress (mean 289.10 Mbit/s)   Flow 2 egress (mean 287.55 Mbit/s)
Flow 3 ingress (mean 272.30 Mbit/s)   Flow 3 egress (mean 270.70 Mbit/s)

Flow 1 (95th percentile 212.24 ms)   Flow 2 (95th percentile 75.88 ms)   Flow 3 (95th percentile 124.57 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-12-12 01:35:48
End at: 2018-12-12 01:36:19
Local clock offset: -0.067 ms
Remote clock offset: -1.399 ms


# Below is generated by plot.py at 2018-12-12 04:18:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 703.06 Mbit/s
95th percentile per-packet one-way delay: 177.343 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 432.06 Mbit/s
95th percentile per-packet one-way delay: 178.527 ms
Loss rate: 2.46%
-- Flow 2:
Average throughput: 268.74 Mbit/s
95th percentile per-packet one-way delay: 88.249 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 280.61 Mbit/s
95th percentile per-packet one-way delay: 96.116 ms
Loss rate: 0.00%
```
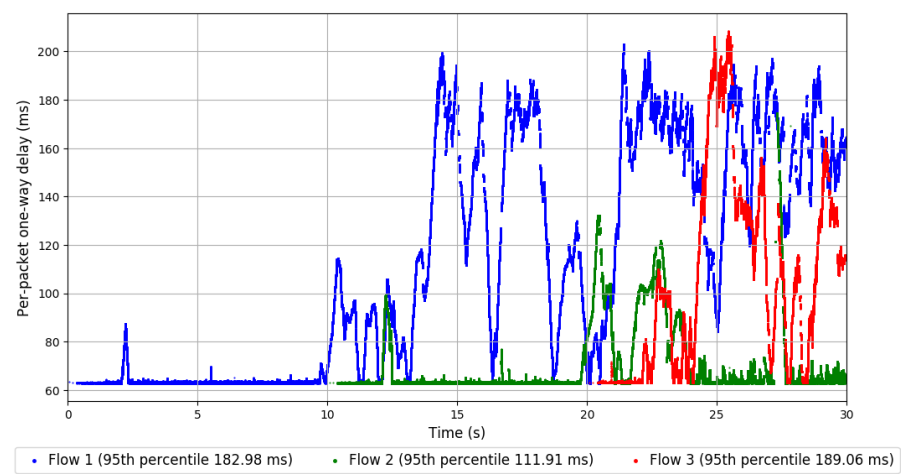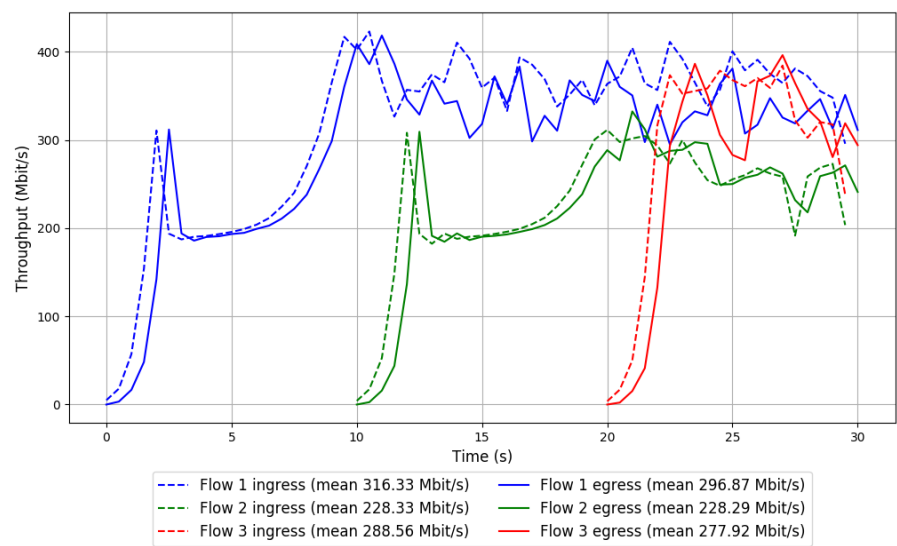
Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2018-12-11 23:12:39
End at: 2018-12-11 23:13:09
Local clock offset: -0.028 ms
Remote clock offset: 0.462 ms


# Below is generated by plot.py at 2018-12-12 04:18:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 575.40 Mbit/s
95th percentile per-packet one-way delay: 176.623 ms
Loss rate: 5.09%
-- Flow 1:
Average throughput: 347.69 Mbit/s
95th percentile per-packet one-way delay: 180.523 ms
Loss rate: 6.51%
-- Flow 2:
Average throughput: 254.12 Mbit/s
95th percentile per-packet one-way delay: 169.444 ms
Loss rate: 3.78%
-- Flow 3:
Average throughput: 174.63 Mbit/s
95th percentile per-packet one-way delay: 71.982 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2018-12-11 23:46:02
End at: 2018-12-11 23:46:32
Local clock offset: -0.024 ms
Remote clock offset: -0.031 ms


# Below is generated by plot.py at 2018-12-12 04:18:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 540.39 Mbit/s
95th percentile per-packet one-way delay: 181.217 ms
Loss rate: 4.09%
-- Flow 1:
Average throughput: 296.87 Mbit/s
95th percentile per-packet one-way delay: 182.976 ms
Loss rate: 6.15%
-- Flow 2:
Average throughput: 228.29 Mbit/s
95th percentile per-packet one-way delay: 111.906 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 277.92 Mbit/s
95th percentile per-packet one-way delay: 189.060 ms
Loss rate: 3.74%
```
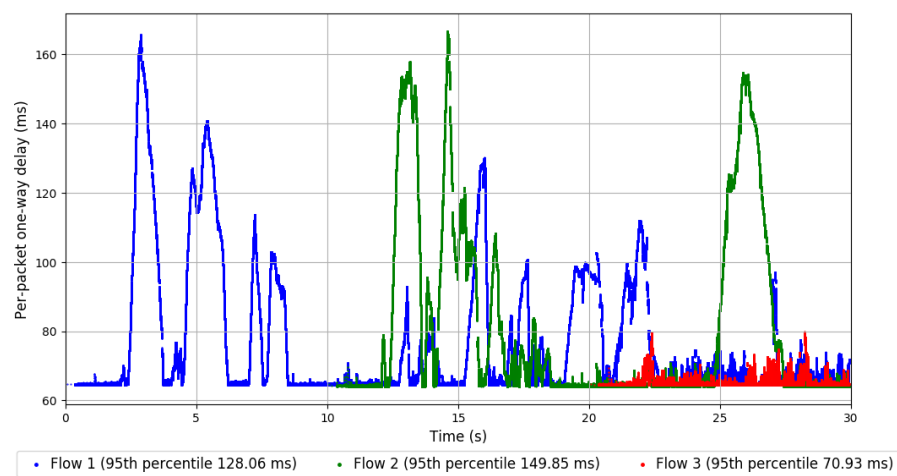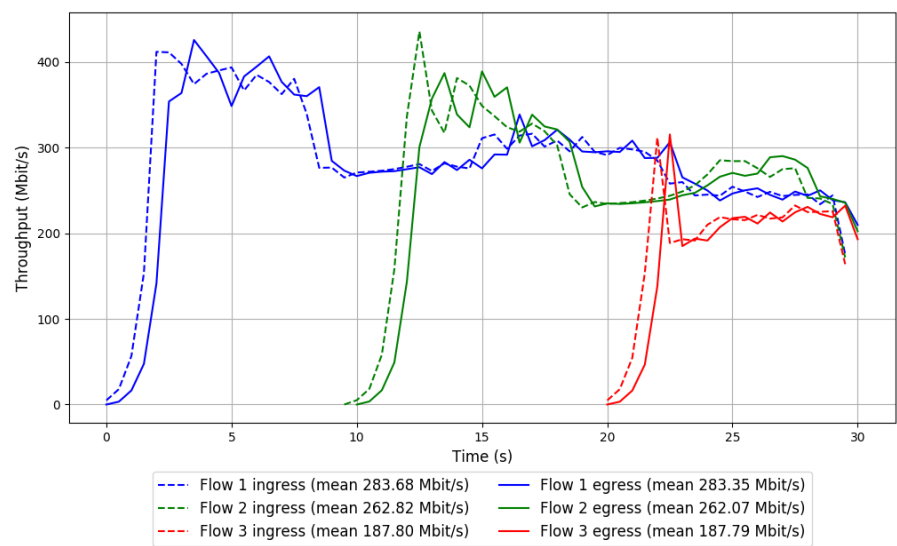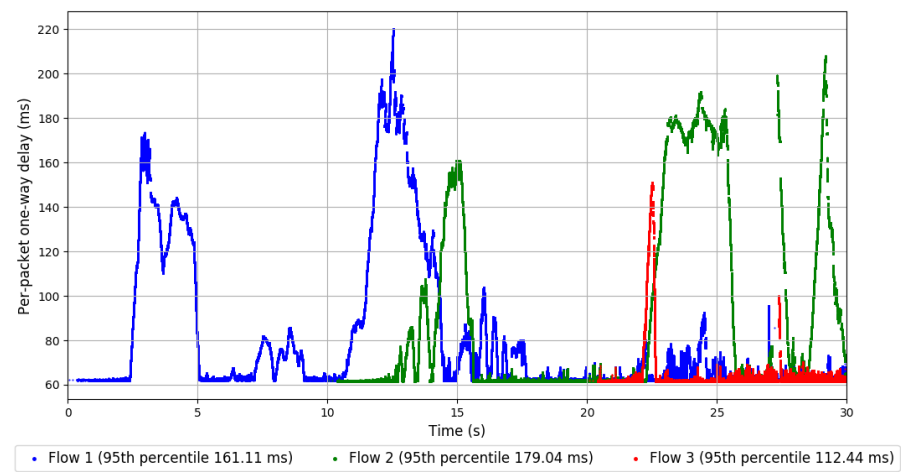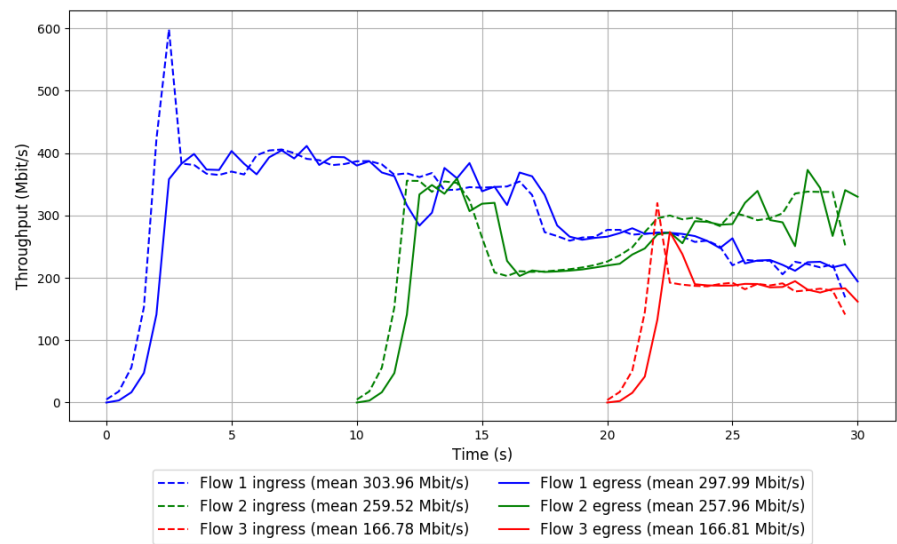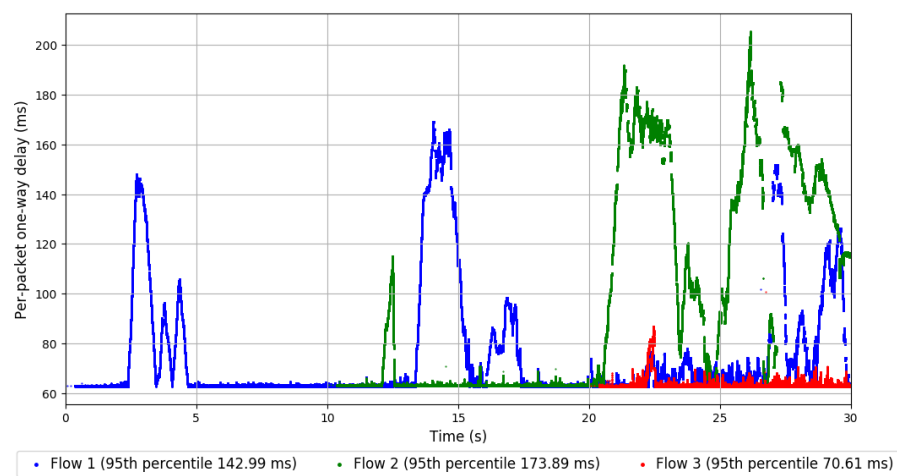
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2018-12-12 00:19:49
End at: 2018-12-12 00:20:19
Local clock offset: -0.068 ms
Remote clock offset: 1.412 ms


# Below is generated by plot.py at 2018-12-12 04:18:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 519.74 Mbit/s
95th percentile per-packet one-way delay: 137.317 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 283.35 Mbit/s
95th percentile per-packet one-way delay: 128.065 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 262.07 Mbit/s
95th percentile per-packet one-way delay: 149.849 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 187.79 Mbit/s
95th percentile per-packet one-way delay: 70.930 ms
Loss rate: 0.01%
```
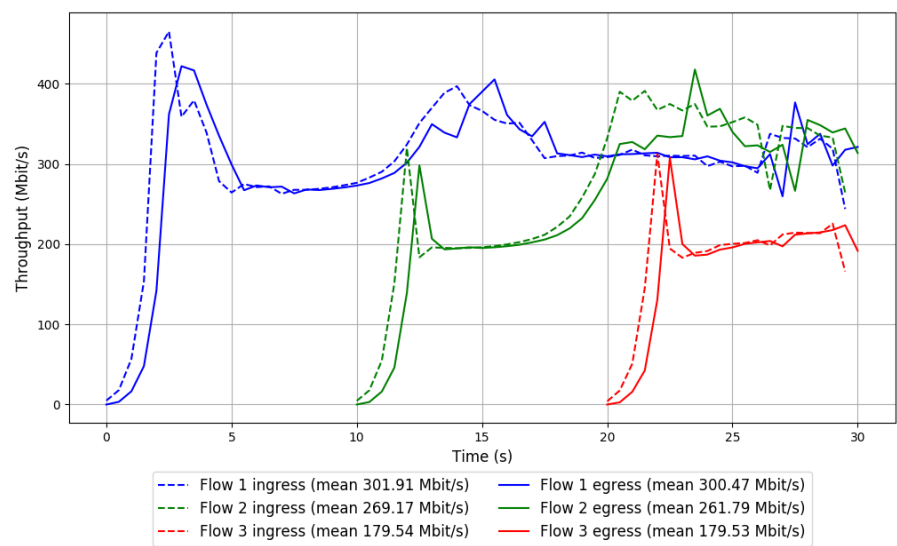
Run 3: Report of PCC-Expr — Data Link

Legend:
- Flow 1 ingress (mean 283.68 Mbit/s)
- Flow 1 egress (mean 283.35 Mbit/s)
- Flow 2 ingress (mean 262.82 Mbit/s)
- Flow 2 egress (mean 262.07 Mbit/s)
- Flow 3 ingress (mean 187.80 Mbit/s)
- Flow 3 egress (mean 187.79 Mbit/s)

Legend:
- Flow 1 (95th percentile 128.06 ms)
- Flow 2 (95th percentile 149.85 ms)
- Flow 3 (95th percentile 70.93 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2018-12-12 00:53:32
End at: 2018-12-12 00:54:02
Local clock offset: -0.105 ms
Remote clock offset: -1.437 ms


# Below is generated by plot.py at 2018-12-12 04:27:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 524.53 Mbit/s
95th percentile per-packet one-way delay: 175.138 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 297.99 Mbit/s
95th percentile per-packet one-way delay: 161.114 ms
Loss rate: 1.95%
-- Flow 2:
Average throughput: 257.96 Mbit/s
95th percentile per-packet one-way delay: 179.040 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 166.81 Mbit/s
95th percentile per-packet one-way delay: 112.441 ms
Loss rate: 0.00%
```
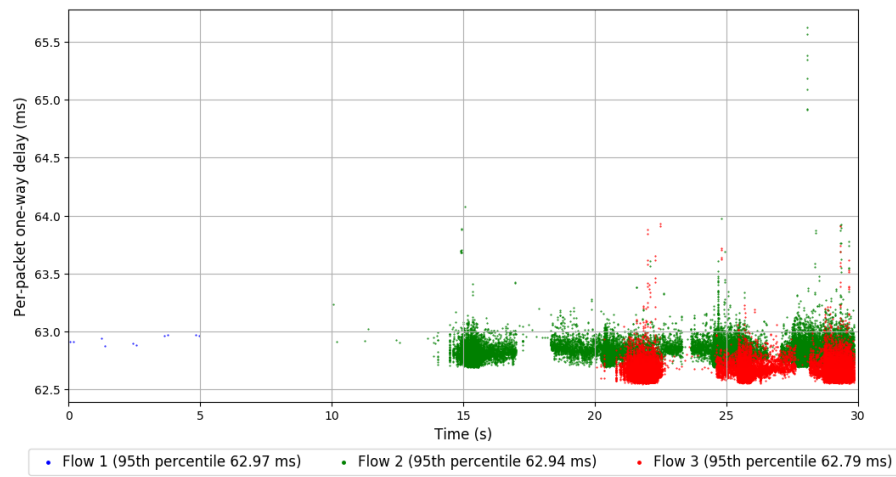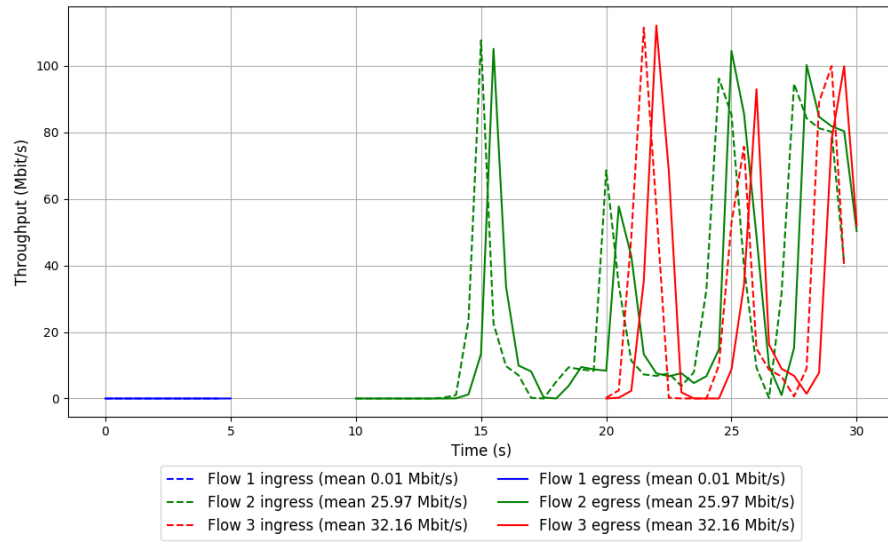
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2018-12-12 01:27:17
End at: 2018-12-12 01:27:47
Local clock offset: -0.077 ms
Remote clock offset: -0.105 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 533.79 Mbit/s
95th percentile per-packet one-way delay: 163.365 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 300.47 Mbit/s
95th percentile per-packet one-way delay: 142.991 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 261.79 Mbit/s
95th percentile per-packet one-way delay: 173.892 ms
Loss rate: 2.74%
-- Flow 3:
Average throughput: 179.53 Mbit/s
95th percentile per-packet one-way delay: 70.614 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 301.91 Mbit/s) --- Flow 1 egress (mean 300.47 Mbit/s)
Flow 2 ingress (mean 269.17 Mbit/s) --- Flow 2 egress (mean 261.79 Mbit/s)
Flow 3 ingress (mean 179.54 Mbit/s) --- Flow 3 egress (mean 179.53 Mbit/s)

Flow 1 (95th percentile 142.99 ms)   Flow 2 (95th percentile 173.89 ms)   Flow 3 (95th percentile 70.61 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-12-11 23:42:54
End at: 2018-12-11 23:43:24
Local clock offset: -0.038 ms
Remote clock offset: -0.108 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.78 Mbit/s
95th percentile per-packet one-way delay: 62.918 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 62.973 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.97 Mbit/s
95th percentile per-packet one-way delay: 62.944 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.16 Mbit/s
95th percentile per-packet one-way delay: 62.791 ms
Loss rate: 0.00%
```
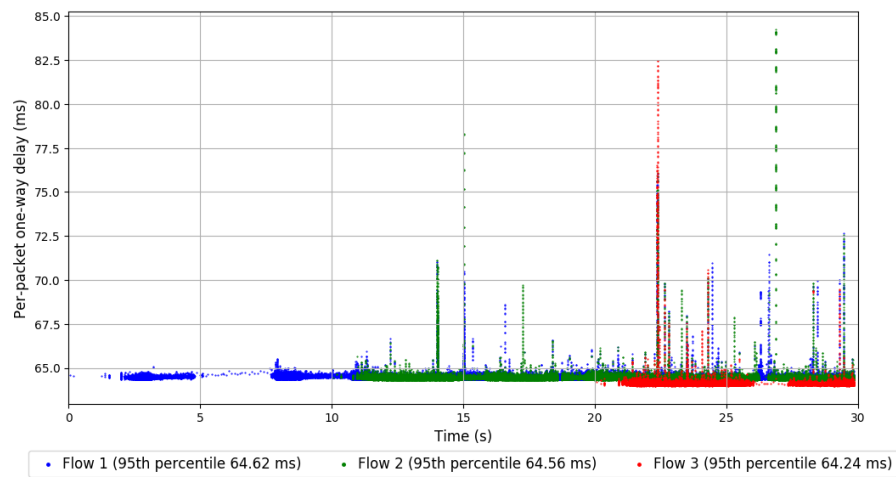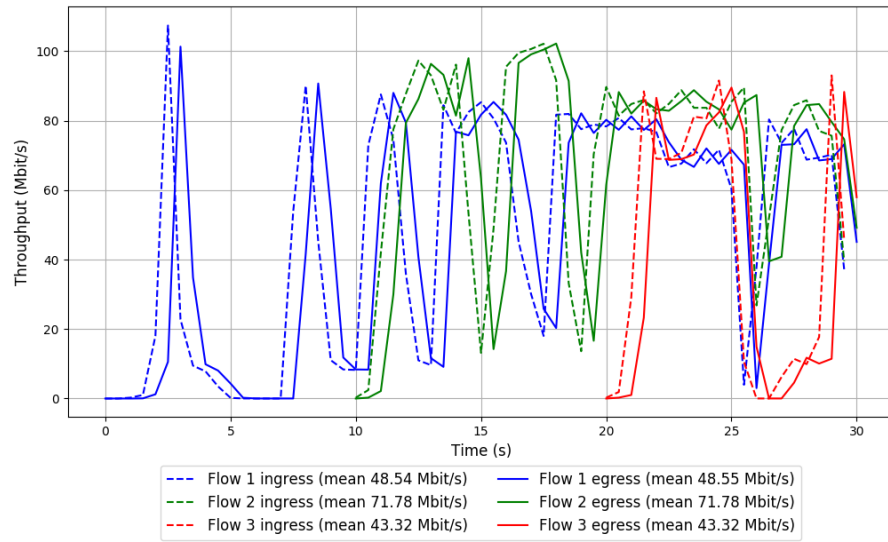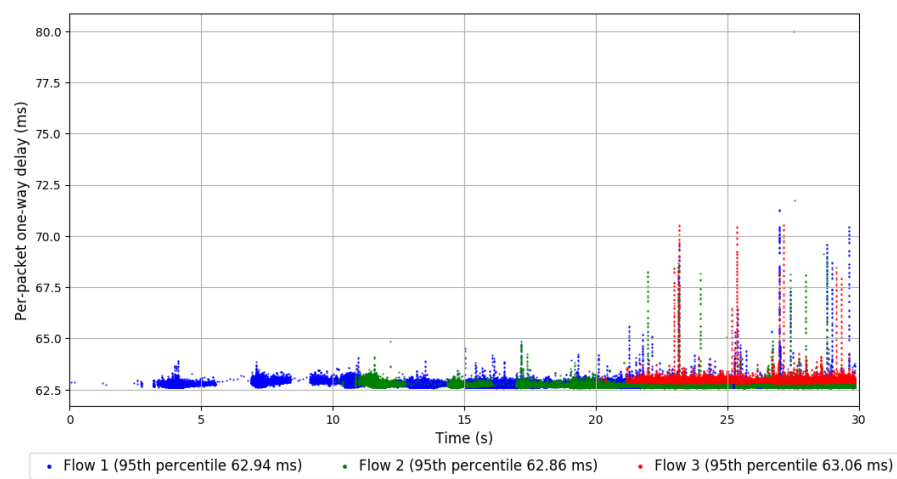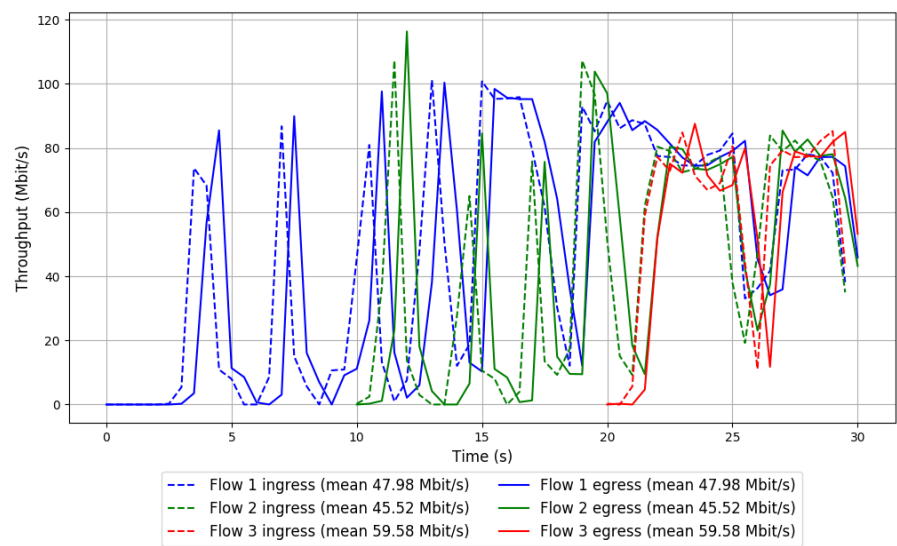
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-12-12 00:16:34
End at: 2018-12-12 00:17:05
Local clock offset: -0.08 ms
Remote clock offset: 1.295 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 110.40 Mbit/s
95th percentile per-packet one-way delay: 64.590 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.55 Mbit/s
95th percentile per-packet one-way delay: 64.622 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 71.78 Mbit/s
95th percentile per-packet one-way delay: 64.565 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 43.32 Mbit/s
95th percentile per-packet one-way delay: 64.240 ms
Loss rate: 0.00%
```

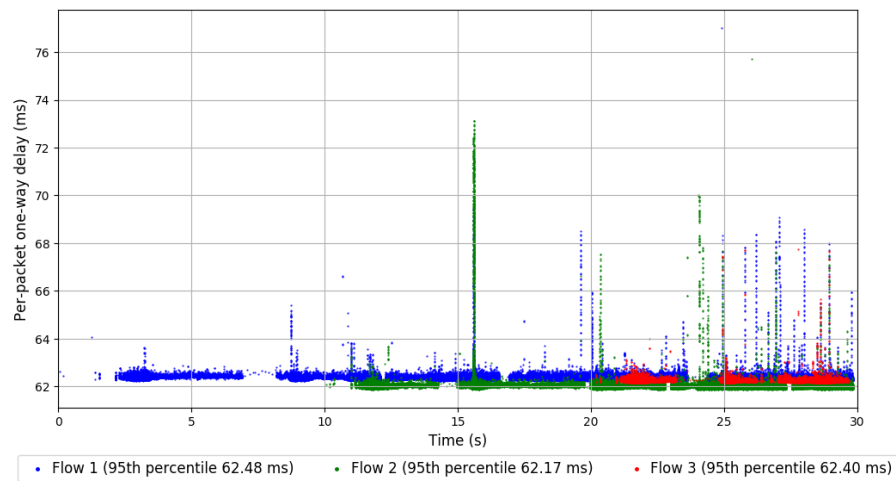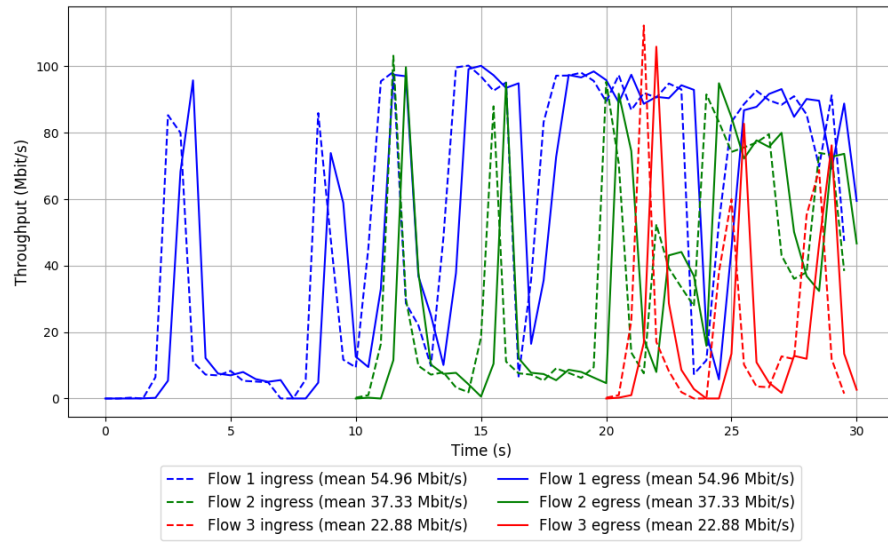Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-12-12 00:50:20
End at: 2018-12-12 00:50:50
Local clock offset: -0.086 ms
Remote clock offset: -0.257 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.66 Mbit/s
95th percentile per-packet one-way delay: 62.981 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.98 Mbit/s
95th percentile per-packet one-way delay: 62.939 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.52 Mbit/s
95th percentile per-packet one-way delay: 62.860 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 59.58 Mbit/s
95th percentile per-packet one-way delay: 63.056 ms
Loss rate: 0.00%
```
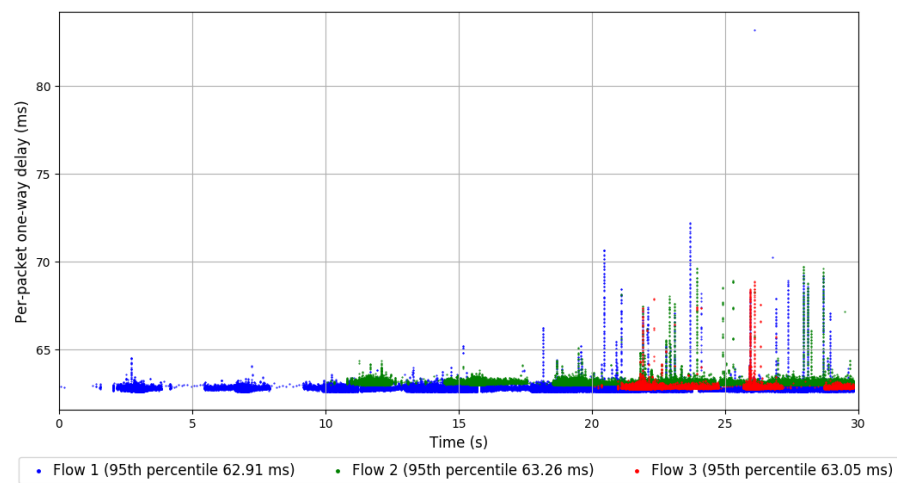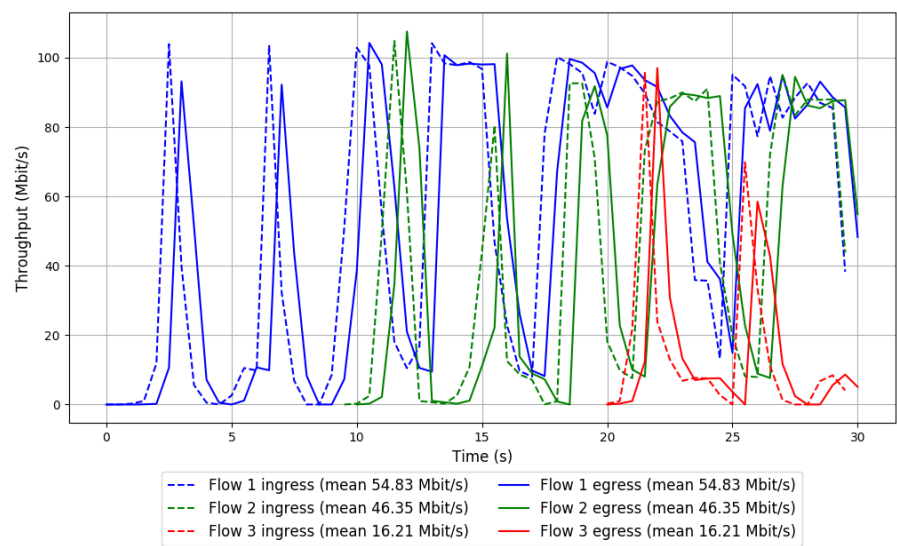
Run 3: Report of QUIC Cubic — Data Link

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```
Run 4: Statistics of QUIC Cubic

Start at: 2018-12-12 01:24:02
End at: 2018-12-12 01:24:32
Local clock offset: -0.086 ms
Remote clock offset: -0.815 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.16 Mbit/s
95th percentile per-packet one-way delay: 62.462 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.96 Mbit/s
95th percentile per-packet one-way delay: 62.484 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.33 Mbit/s
95th percentile per-packet one-way delay: 62.167 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 22.88 Mbit/s
95th percentile per-packet one-way delay: 62.395 ms
Loss rate: 0.00%
```
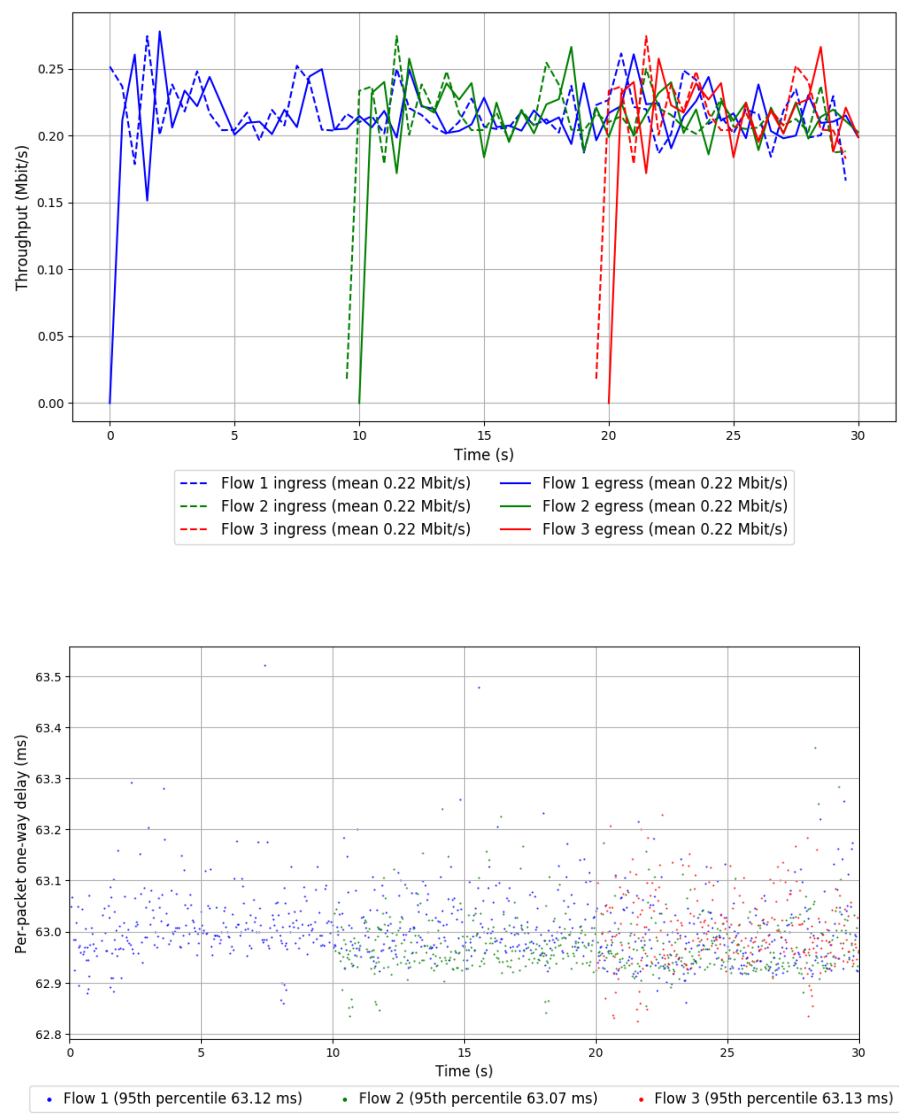
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-12-12 01:58:10
End at: 2018-12-12 01:58:40
Local clock offset: 0.022 ms
Remote clock offset: -0.067 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.92 Mbit/s
95th percentile per-packet one-way delay: 63.181 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.83 Mbit/s
95th percentile per-packet one-way delay: 62.914 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.35 Mbit/s
95th percentile per-packet one-way delay: 63.261 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 16.21 Mbit/s
95th percentile per-packet one-way delay: 63.048 ms
Loss rate: 0.00%
```
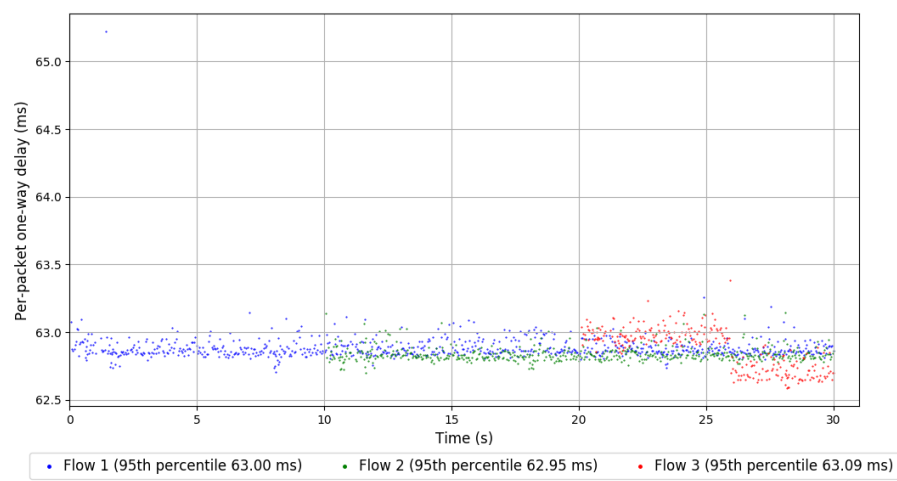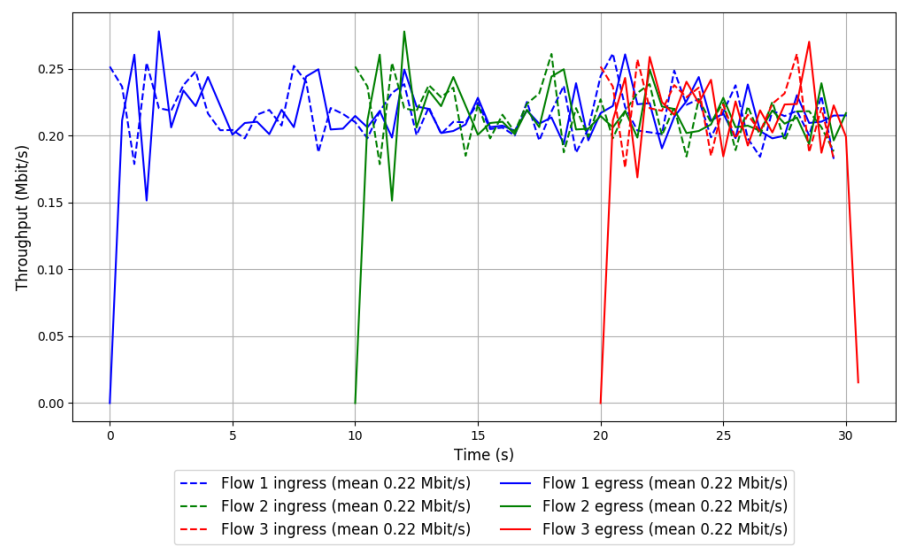
Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2018-12-11 23:27:42
End at: 2018-12-11 23:28:12
Local clock offset: -0.01 ms
Remote clock offset: -0.133 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.116 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.123 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.072 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.129 ms
Loss rate: 0.00%
```
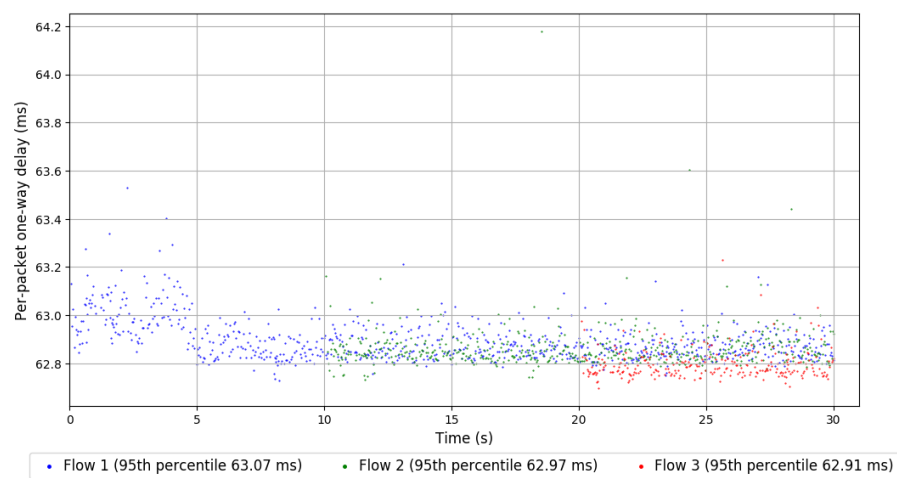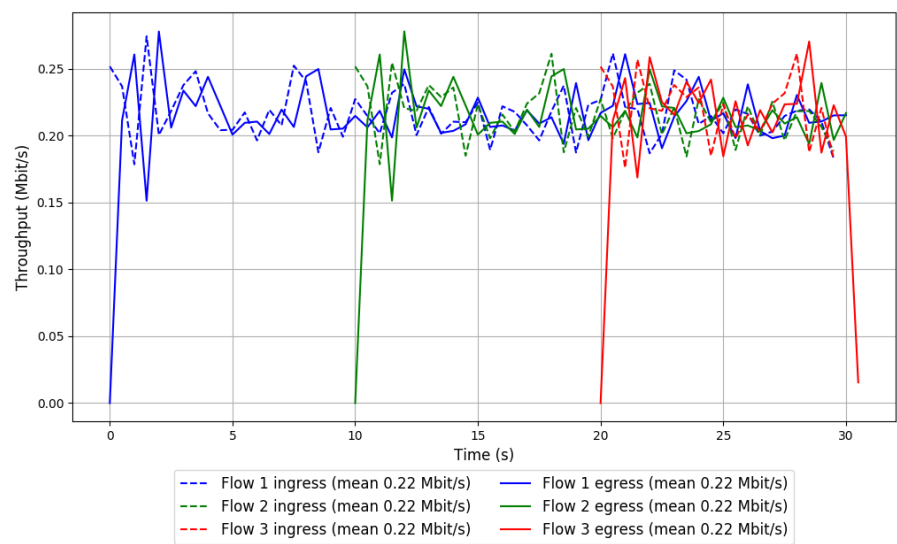
Run 1: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 63.12 ms)   Flow 2 (95th percentile 63.07 ms)   Flow 3 (95th percentile 63.13 ms)

```
Run 2: Statistics of SCReAM

Start at: 2018-12-12 00:01:39
End at: 2018-12-12 00:02:09
Local clock offset: -0.084 ms
Remote clock offset: -0.276 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.019 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.003 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.946 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.091 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

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```
Run 3: Statistics of SCReAM

Start at: 2018-12-12 00:35:09
End at: 2018-12-12 00:35:39
Local clock offset: -0.044 ms
Remote clock offset: -0.471 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.029 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.070 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.973 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.906 ms
Loss rate: 0.00%
```
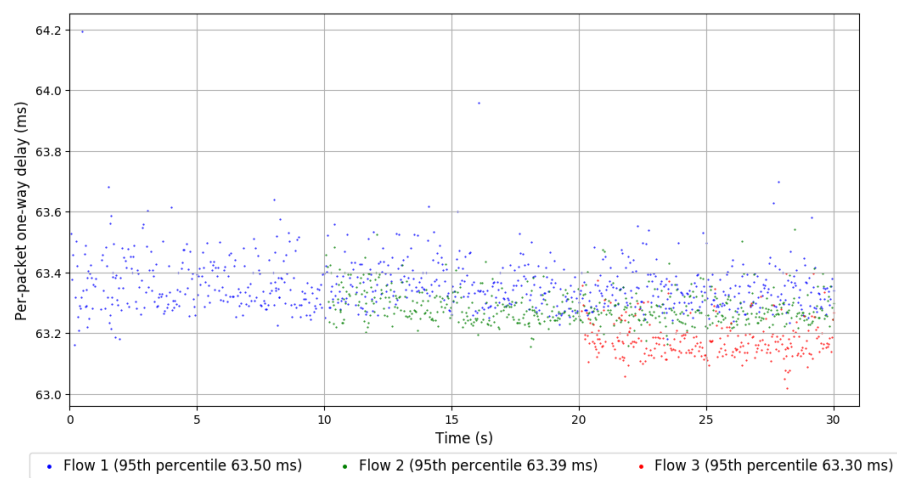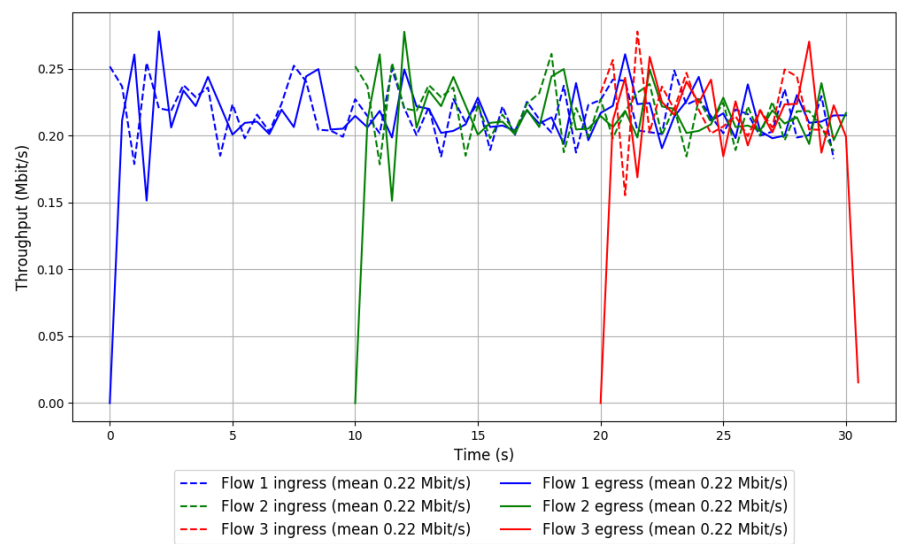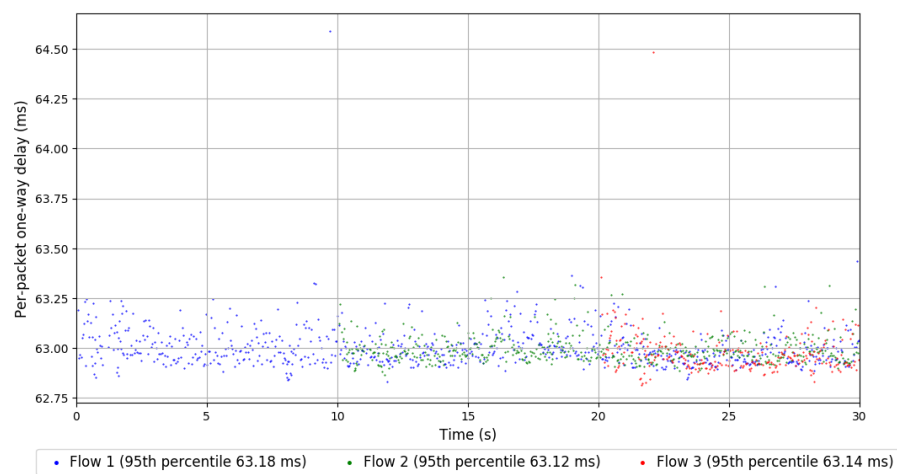
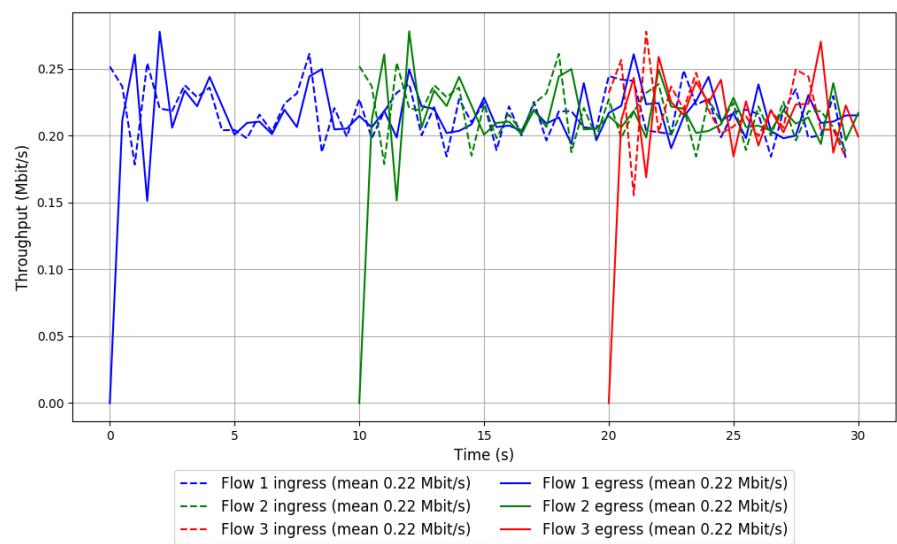# Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-12-12 01:08:56
End at: 2018-12-12 01:09:26
Local clock offset: -0.097 ms
Remote clock offset: 0.032 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.467 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.503 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.394 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.300 ms
Loss rate: 0.00%
```
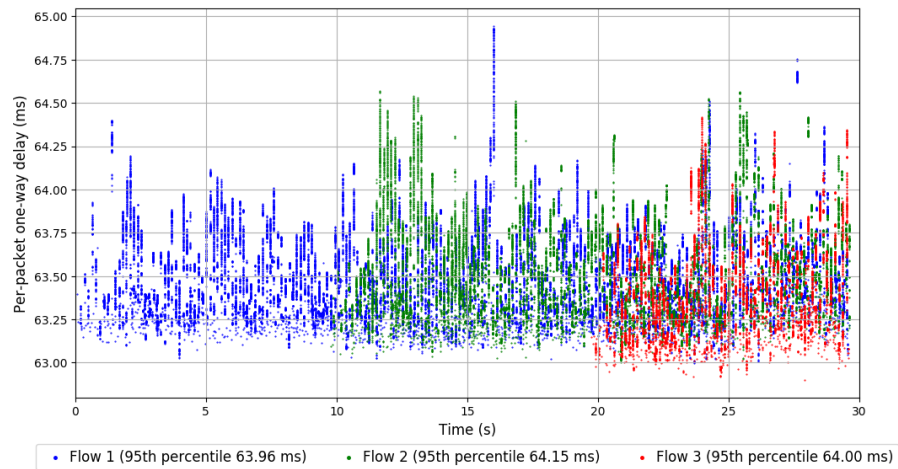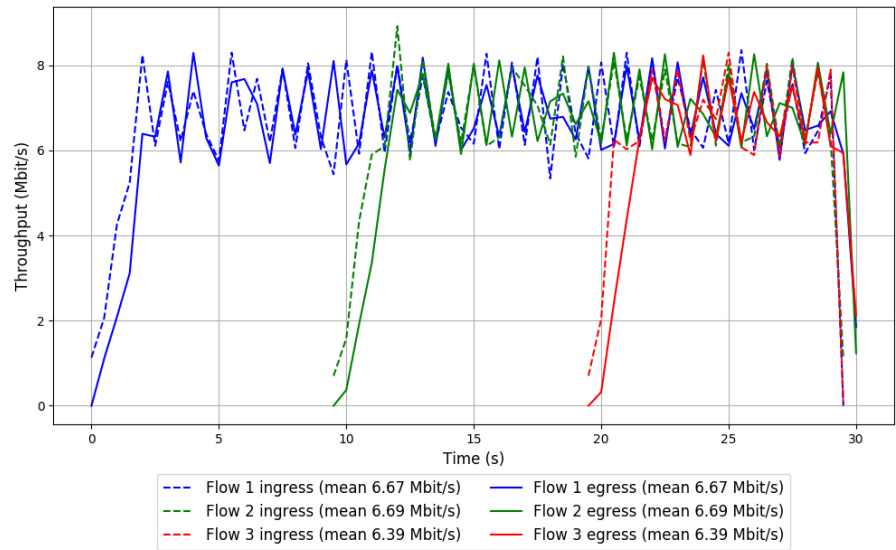
Run 4: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 63.50 ms) · Flow 2 (95th percentile 63.39 ms) · Flow 3 (95th percentile 63.30 ms)

```
Run 5: Statistics of SCReAM

Start at: 2018-12-12 01:43:10
End at: 2018-12-12 01:43:40
Local clock offset: -0.041 ms
Remote clock offset: -0.225 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.157 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.177 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.117 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.136 ms
Loss rate: 0.00%
```
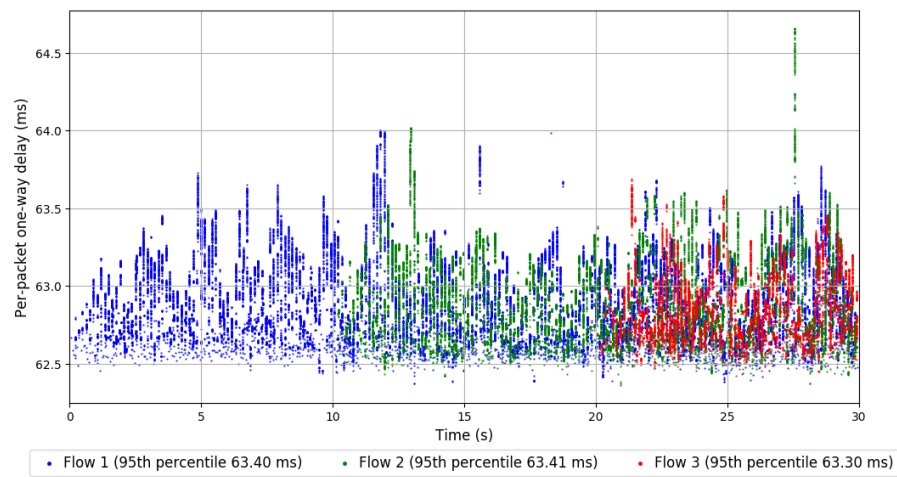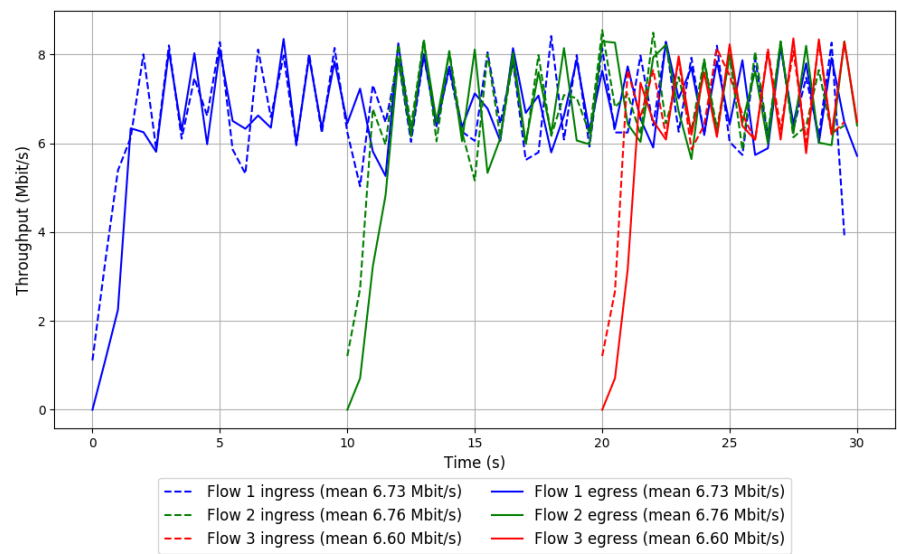
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-12-11 23:16:04
End at: 2018-12-11 23:16:34
Local clock offset: -0.057 ms
Remote clock offset: -0.193 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.29 Mbit/s
95th percentile per-packet one-way delay: 64.038 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.67 Mbit/s
95th percentile per-packet one-way delay: 63.963 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.69 Mbit/s
95th percentile per-packet one-way delay: 64.153 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 63.999 ms
Loss rate: 0.00%
```
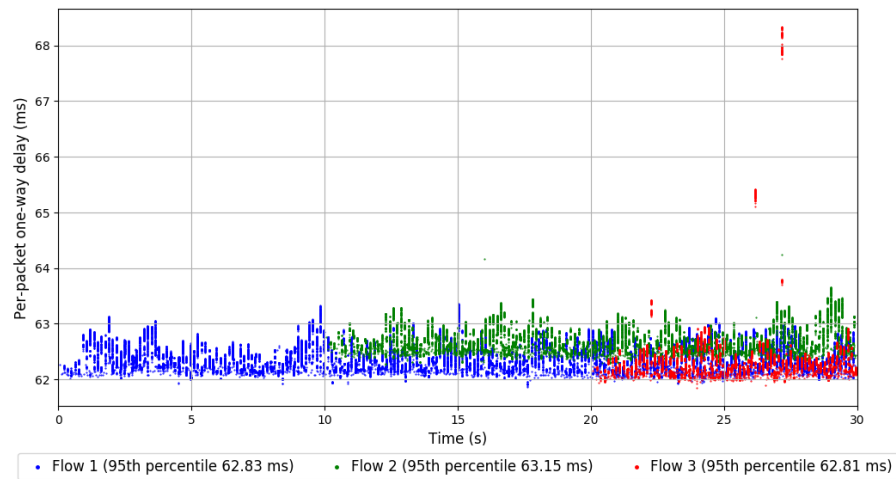
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-12-11 23:49:23
End at: 2018-12-11 23:49:53
Local clock offset: -0.089 ms
Remote clock offset: -0.557 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.40 Mbit/s
95th percentile per-packet one-way delay: 63.382 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 63.402 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.76 Mbit/s
95th percentile per-packet one-way delay: 63.412 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 63.295 ms
Loss rate: 0.00%
```
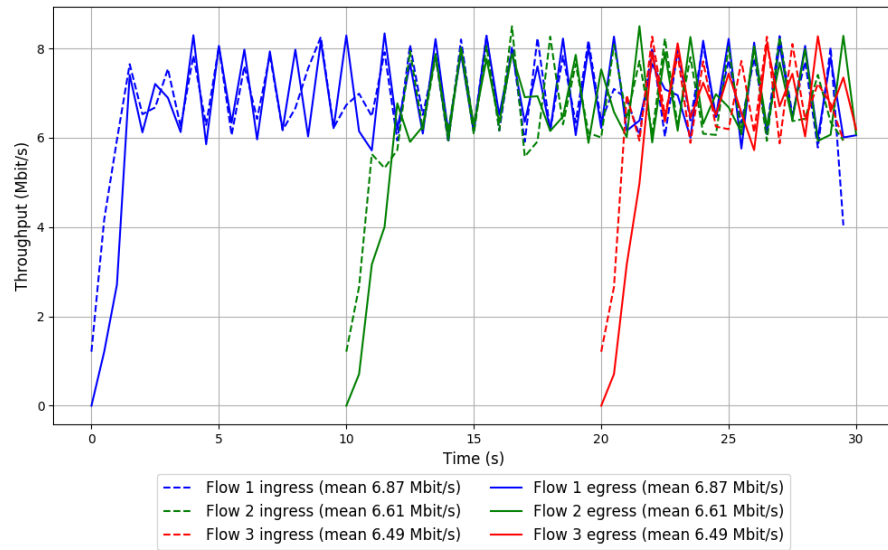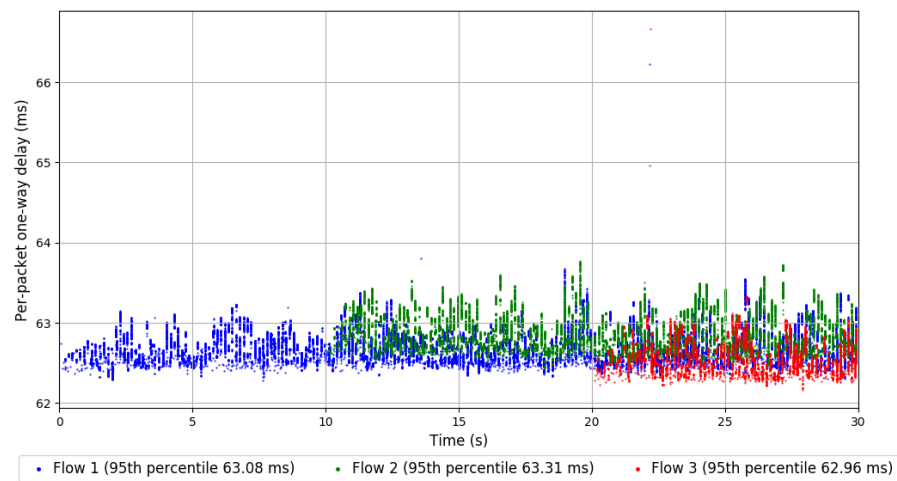
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-12-12 00:23:09
End at: 2018-12-12 00:23:39
Local clock offset: -0.074 ms
Remote clock offset: -0.838 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.41 Mbit/s
95th percentile per-packet one-way delay: 62.998 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.87 Mbit/s
95th percentile per-packet one-way delay: 62.831 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.61 Mbit/s
95th percentile per-packet one-way delay: 63.149 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 62.814 ms
Loss rate: 0.00%
```
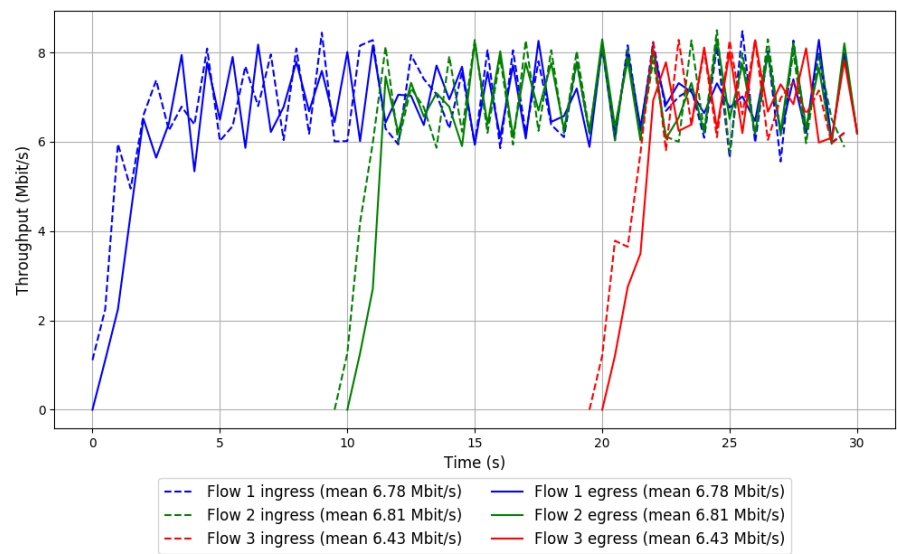
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-12-12 00:56:52
End at: 2018-12-12 00:57:22
Local clock offset: -0.068 ms
Remote clock offset: -0.629 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.44 Mbit/s
95th percentile per-packet one-way delay: 63.193 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.78 Mbit/s
95th percentile per-packet one-way delay: 63.077 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 63.315 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.43 Mbit/s
95th percentile per-packet one-way delay: 62.959 ms
Loss rate: 0.00%
```
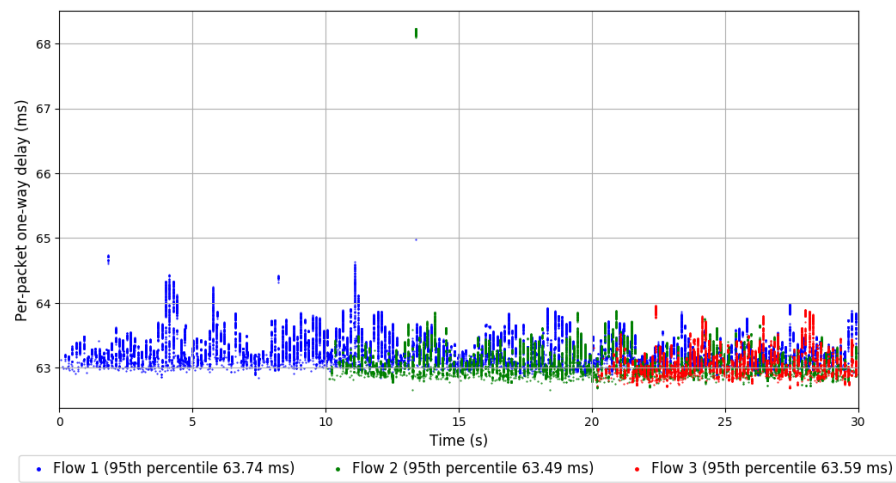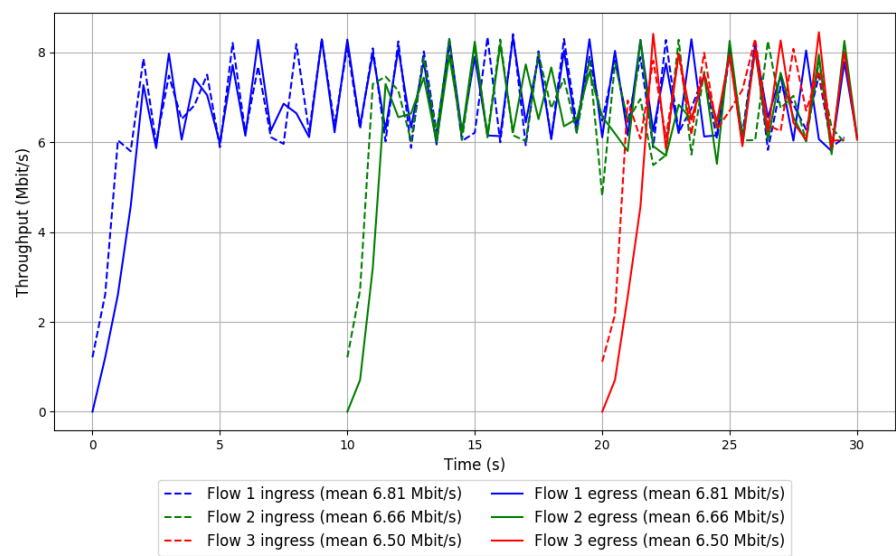
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-12-12 01:30:46
End at: 2018-12-12 01:31:16
Local clock offset: -0.069 ms
Remote clock offset: -0.248 ms


# Below is generated by plot.py at 2018-12-12 04:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.37 Mbit/s
95th percentile per-packet one-way delay: 63.655 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 63.736 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.66 Mbit/s
95th percentile per-packet one-way delay: 63.486 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 63.587 ms
Loss rate: 0.00%
```
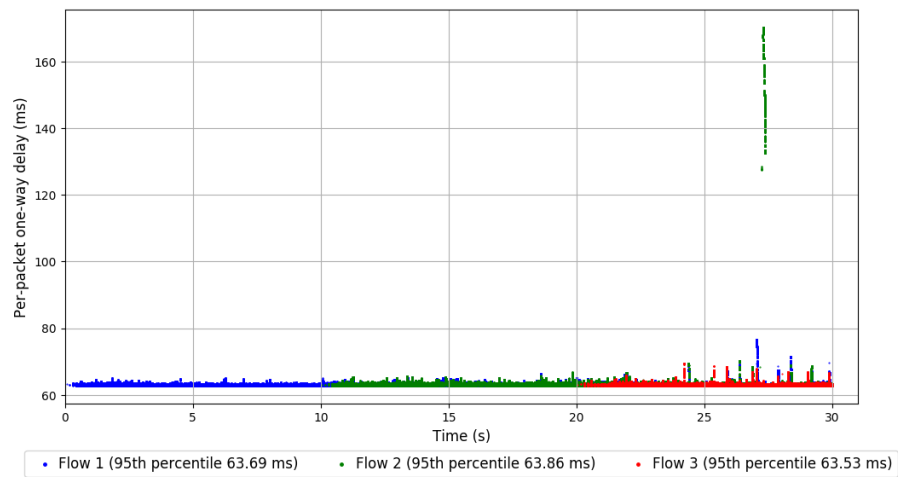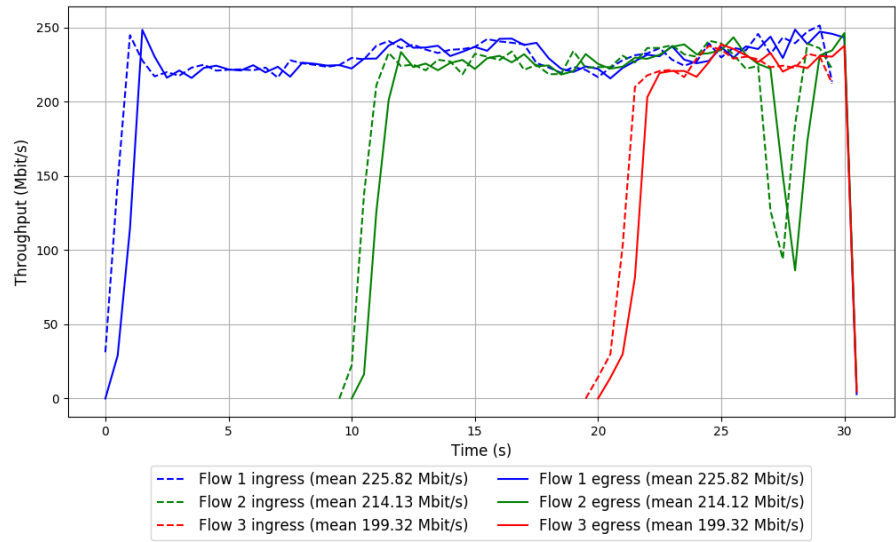
Run 5: Report of Sprout — Data Link

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

Start at: 2018-12-11 23:41:00
End at: 2018-12-11 23:41:30
Local clock offset: -0.041 ms
Remote clock offset: -0.033 ms


# Below is generated by plot.py at 2018-12-12 04:34:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 434.84 Mbit/s
95th percentile per-packet one-way delay: 63.734 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 225.82 Mbit/s
95th percentile per-packet one-way delay: 63.692 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 214.12 Mbit/s
95th percentile per-packet one-way delay: 63.857 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 199.32 Mbit/s
95th percentile per-packet one-way delay: 63.534 ms
Loss rate: 0.00%
```

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

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

Start at: 2018-12-12 00:14:38
End at: 2018-12-12 00:15:08
Local clock offset: -0.092 ms
Remote clock offset: 0.752 ms

# Below is generated by plot.py at 2018-12-12 04:34:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 431.54 Mbit/s
95th percentile per-packet one-way delay: 64.891 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 218.97 Mbit/s
95th percentile per-packet one-way delay: 64.518 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 213.08 Mbit/s
95th percentile per-packet one-way delay: 65.153 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 213.34 Mbit/s
95th percentile per-packet one-way delay: 65.327 ms
Loss rate: 0.00%
```
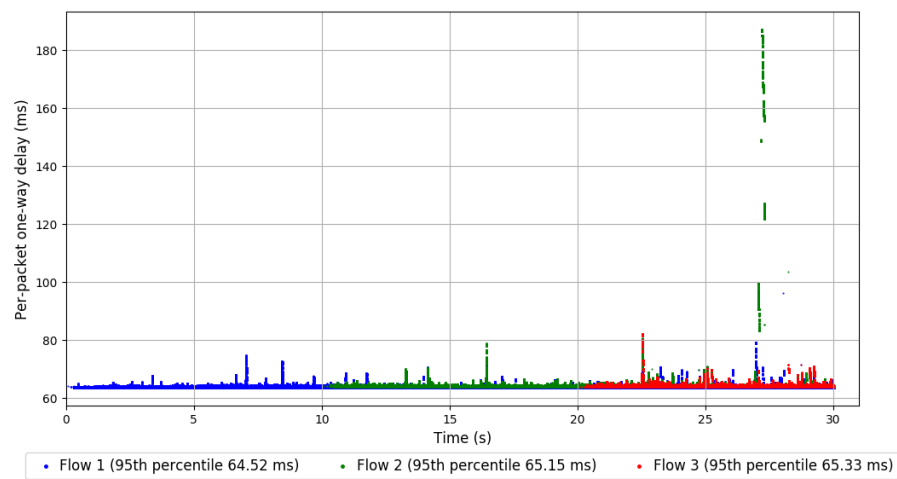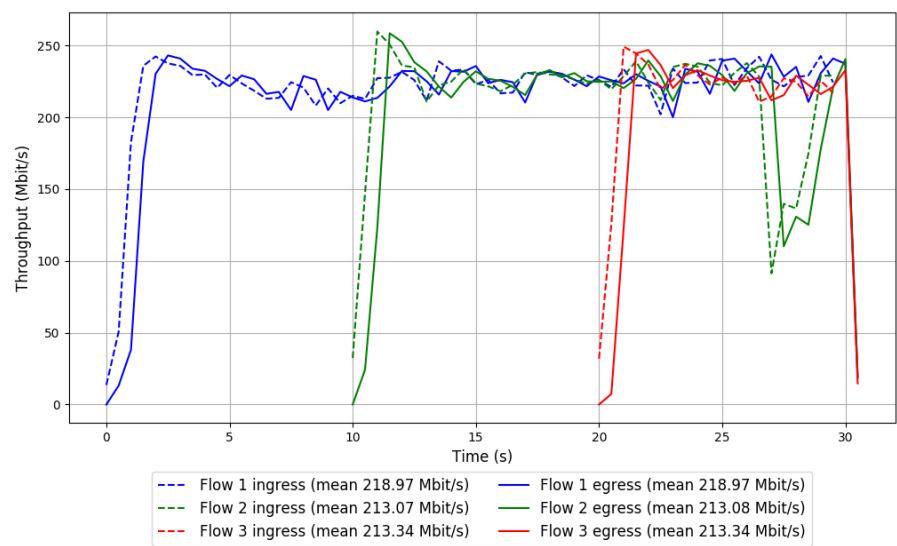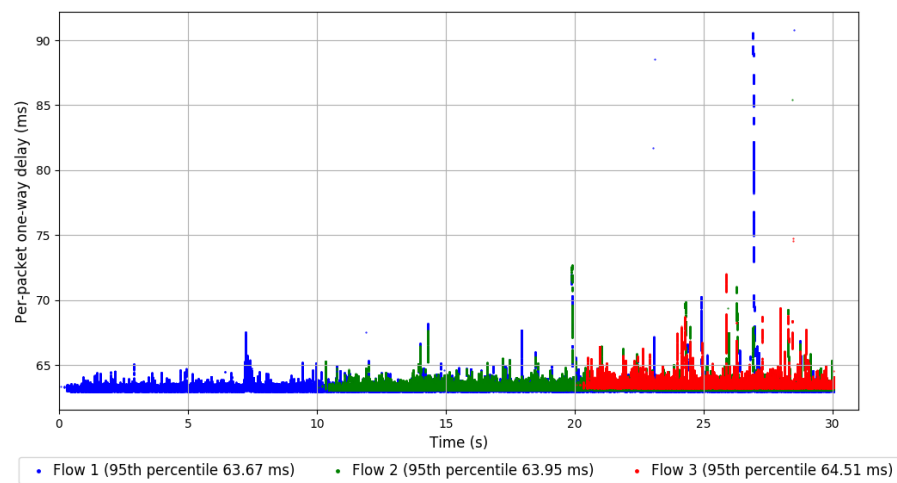
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 218.97 Mbit/s) — — — Flow 1 egress (mean 218.97 Mbit/s)
Flow 2 ingress (mean 213.07 Mbit/s) — — — Flow 2 egress (mean 213.08 Mbit/s)
Flow 3 ingress (mean 213.34 Mbit/s) — — — Flow 3 egress (mean 213.34 Mbit/s)

Flow 1 (95th percentile 64.52 ms) • Flow 2 (95th percentile 65.15 ms) • Flow 3 (95th percentile 65.33 ms)

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

Start at: 2018-12-12 00:48:25
End at: 2018-12-12 00:48:55
Local clock offset: -0.045 ms
Remote clock offset: 0.274 ms


# Below is generated by plot.py at 2018-12-12 04:34:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 436.64 Mbit/s
95th percentile per-packet one-way delay: 63.961 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 220.13 Mbit/s
95th percentile per-packet one-way delay: 63.672 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 217.10 Mbit/s
95th percentile per-packet one-way delay: 63.949 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 216.42 Mbit/s
95th percentile per-packet one-way delay: 64.508 ms
Loss rate: 0.00%
```
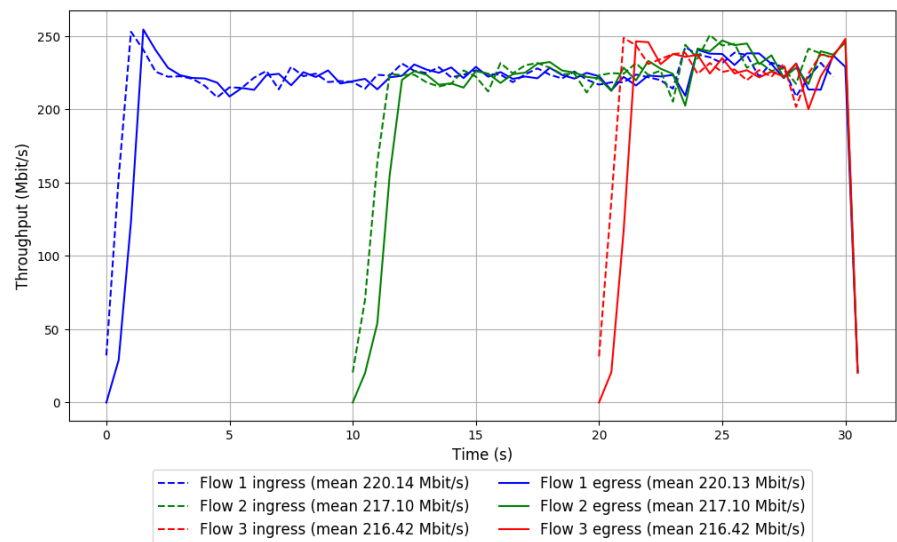
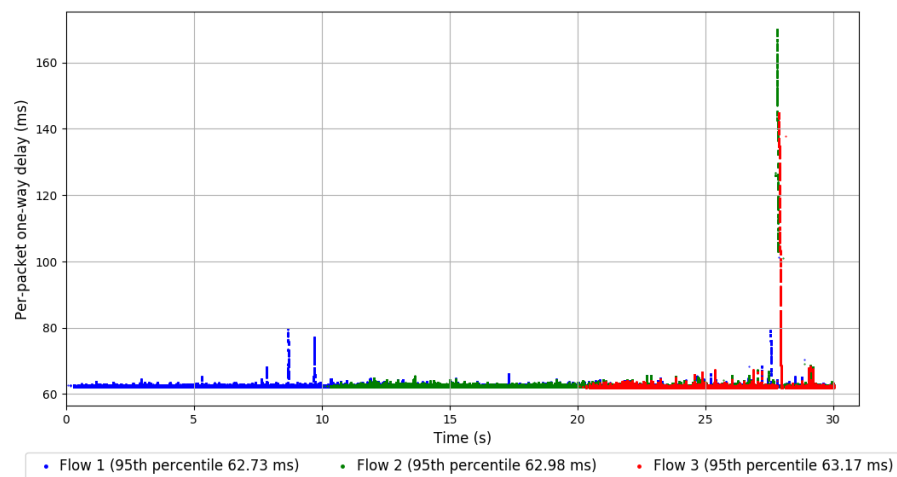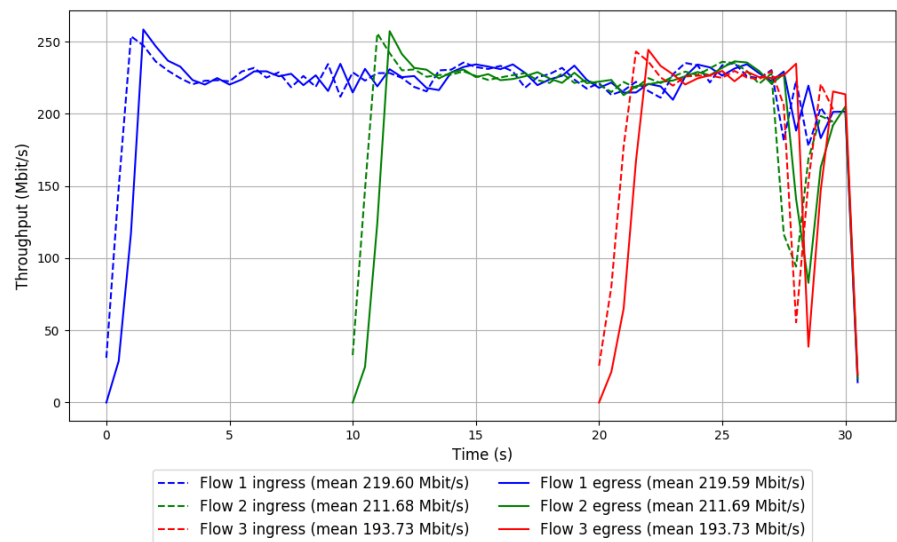Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2018-12-12 01:22:05
End at: 2018-12-12 01:22:35
Local clock offset: -0.005 ms
Remote clock offset: -0.827 ms


# Below is generated by plot.py at 2018-12-12 04:34:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.93 Mbit/s
95th percentile per-packet one-way delay: 62.839 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 219.59 Mbit/s
95th percentile per-packet one-way delay: 62.728 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 211.69 Mbit/s
95th percentile per-packet one-way delay: 62.980 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 193.73 Mbit/s
95th percentile per-packet one-way delay: 63.173 ms
Loss rate: 0.00%
```

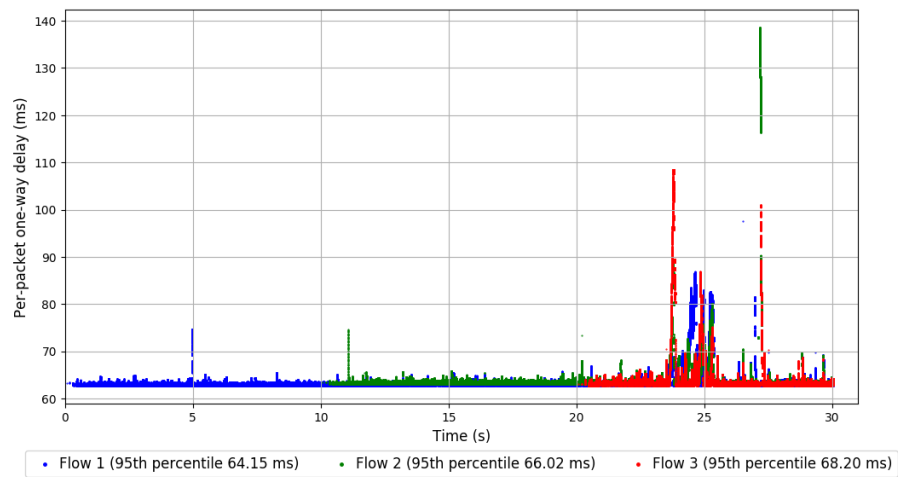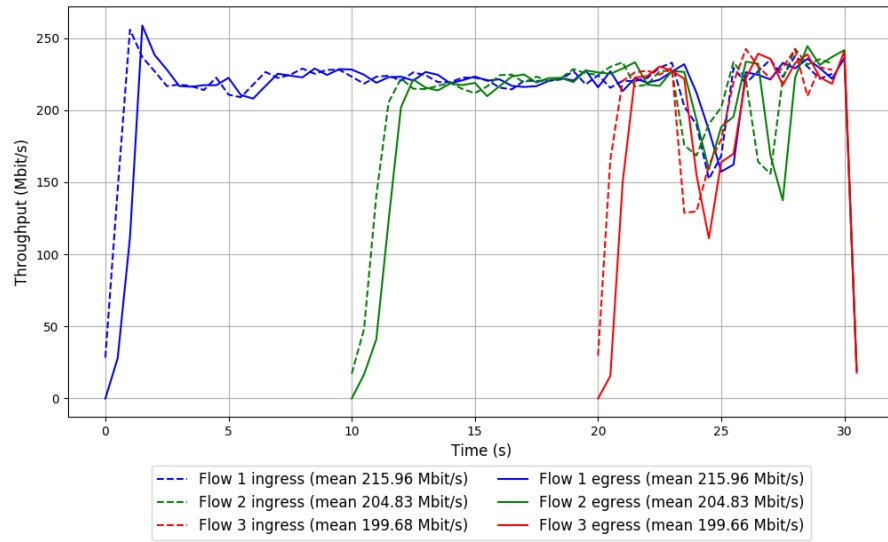Run 4: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 219.60 Mbit/s) — Flow 1 egress (mean 219.59 Mbit/s)
- - - Flow 2 ingress (mean 211.68 Mbit/s) — Flow 2 egress (mean 211.69 Mbit/s)
- - - Flow 3 ingress (mean 193.73 Mbit/s) — Flow 3 egress (mean 193.73 Mbit/s)

- Flow 1 (95th percentile 62.73 ms)   · Flow 2 (95th percentile 62.98 ms)   · Flow 3 (95th percentile 63.17 ms)

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

Start at: 2018-12-12 01:56:15
End at: 2018-12-12 01:56:45
Local clock offset: -0.034 ms
Remote clock offset: -0.031 ms


# Below is generated by plot.py at 2018-12-12 04:34:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 418.71 Mbit/s
95th percentile per-packet one-way delay: 65.146 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 215.96 Mbit/s
95th percentile per-packet one-way delay: 64.150 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 204.83 Mbit/s
95th percentile per-packet one-way delay: 66.022 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 199.66 Mbit/s
95th percentile per-packet one-way delay: 68.196 ms
Loss rate: 0.01%
```

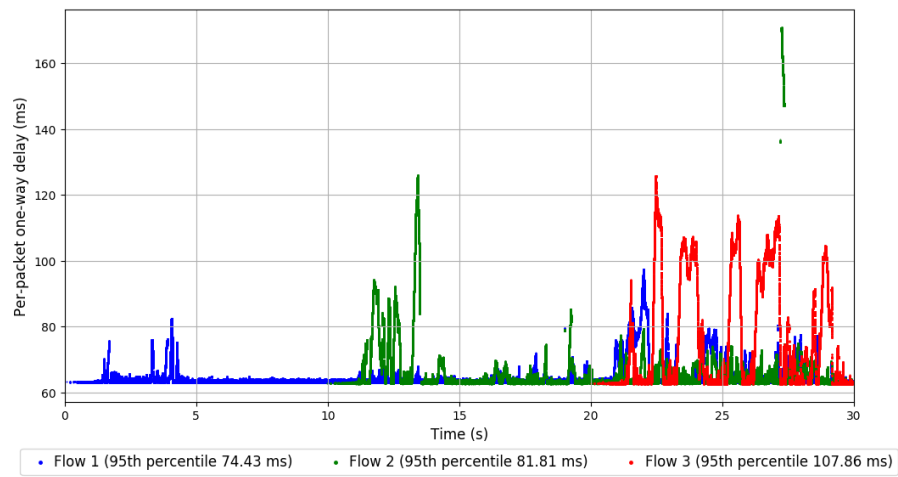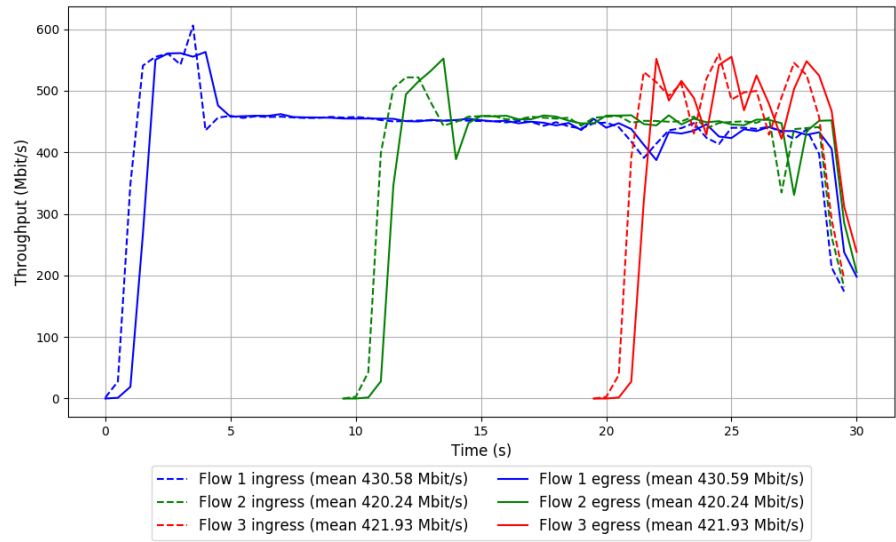# Run 5: Report of TaoVA-100x — Data Link

- - - - Flow 1 ingress (mean 215.96 Mbit/s) —— Flow 1 egress (mean 215.96 Mbit/s)
- - - - Flow 2 ingress (mean 204.83 Mbit/s) —— Flow 2 egress (mean 204.83 Mbit/s)
- - - - Flow 3 ingress (mean 199.68 Mbit/s) —— Flow 3 egress (mean 199.66 Mbit/s)

- Flow 1 (95th percentile 64.15 ms)   - Flow 2 (95th percentile 66.02 ms)   - Flow 3 (95th percentile 68.20 ms)
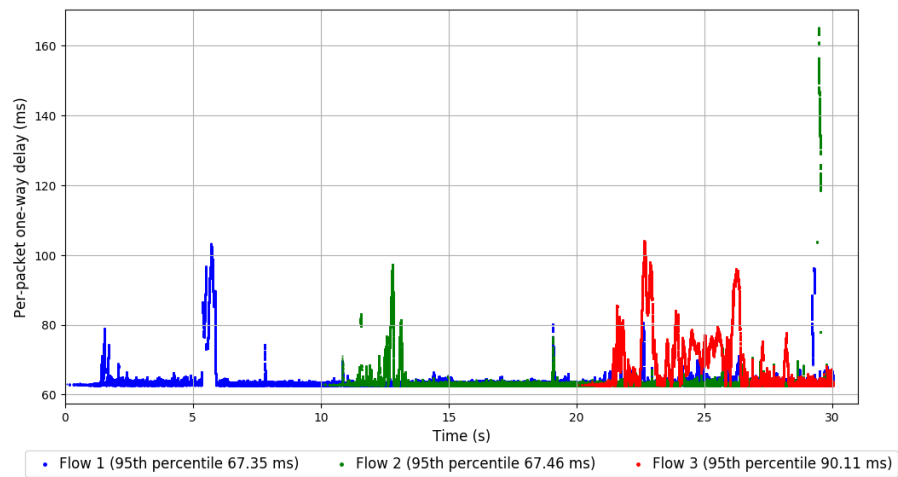
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```
Run 1: Statistics of TCP Vegas

Start at: 2018-12-11 23:17:18
End at: 2018-12-11 23:17:48
Local clock offset: -0.033 ms
Remote clock offset: -0.376 ms


# Below is generated by plot.py at 2018-12-12 04:35:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 851.82 Mbit/s
95th percentile per-packet one-way delay: 91.600 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 430.59 Mbit/s
95th percentile per-packet one-way delay: 74.433 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 420.24 Mbit/s
95th percentile per-packet one-way delay: 81.806 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 421.93 Mbit/s
95th percentile per-packet one-way delay: 107.859 ms
Loss rate: 0.00%
```

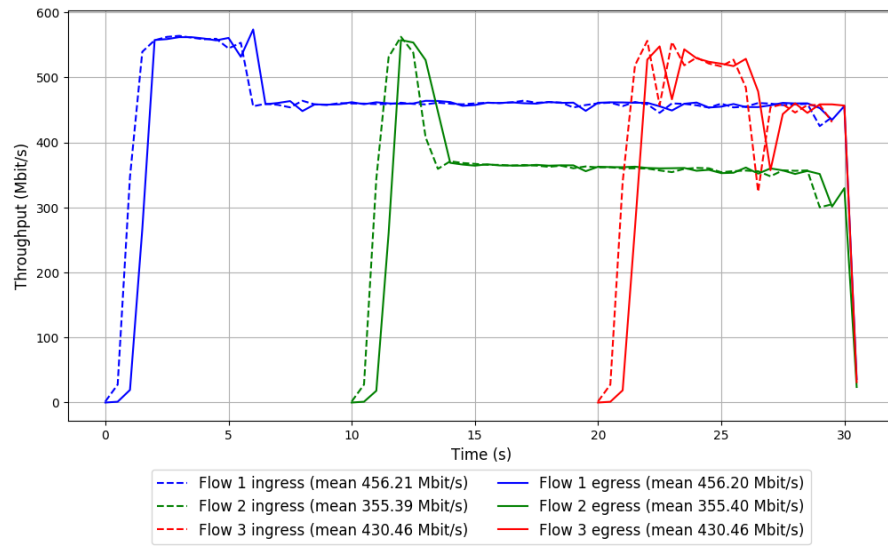Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-12-11 23:50:38
End at: 2018-12-11 23:51:08
Local clock offset: -0.023 ms
Remote clock offset: -0.229 ms


# Below is generated by plot.py at 2018-12-12 04:45:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 836.24 Mbit/s
95th percentile per-packet one-way delay: 75.472 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 456.20 Mbit/s
95th percentile per-packet one-way delay: 67.350 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 355.40 Mbit/s
95th percentile per-packet one-way delay: 67.459 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 430.46 Mbit/s
95th percentile per-packet one-way delay: 90.114 ms
Loss rate: 0.00%
```
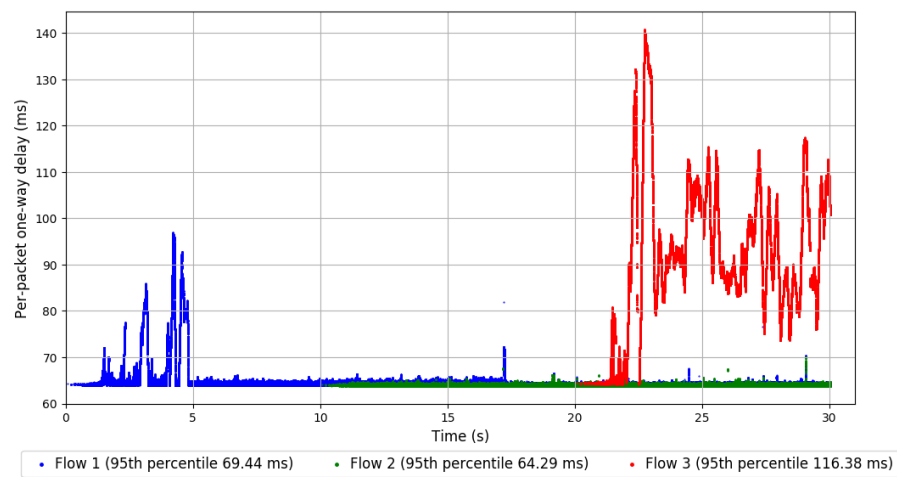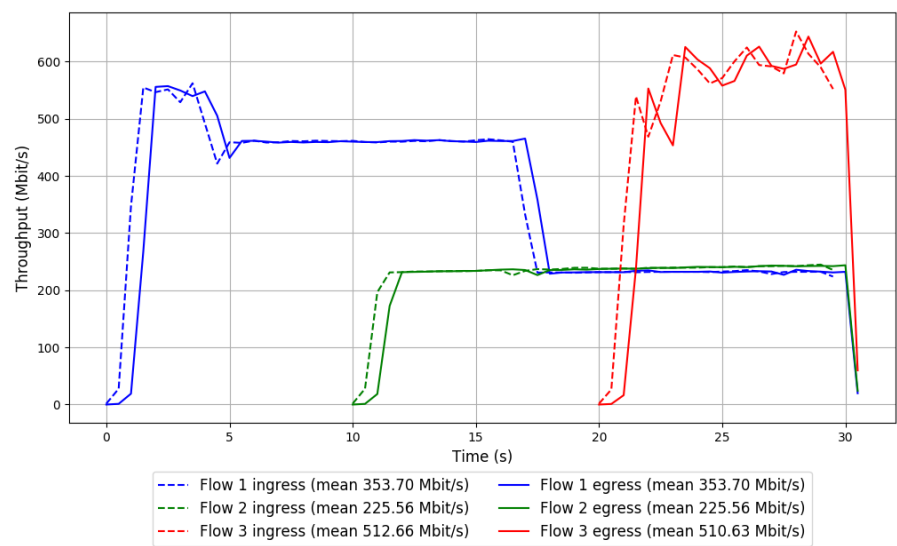
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-12-12 00:24:23
End at: 2018-12-12 00:24:53
Local clock offset: -0.096 ms
Remote clock offset: 1.083 ms


# Below is generated by plot.py at 2018-12-12 04:45:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 673.63 Mbit/s
95th percentile per-packet one-way delay: 105.033 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 353.70 Mbit/s
95th percentile per-packet one-way delay: 69.445 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 225.56 Mbit/s
95th percentile per-packet one-way delay: 64.289 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 510.63 Mbit/s
95th percentile per-packet one-way delay: 116.378 ms
Loss rate: 0.39%
```
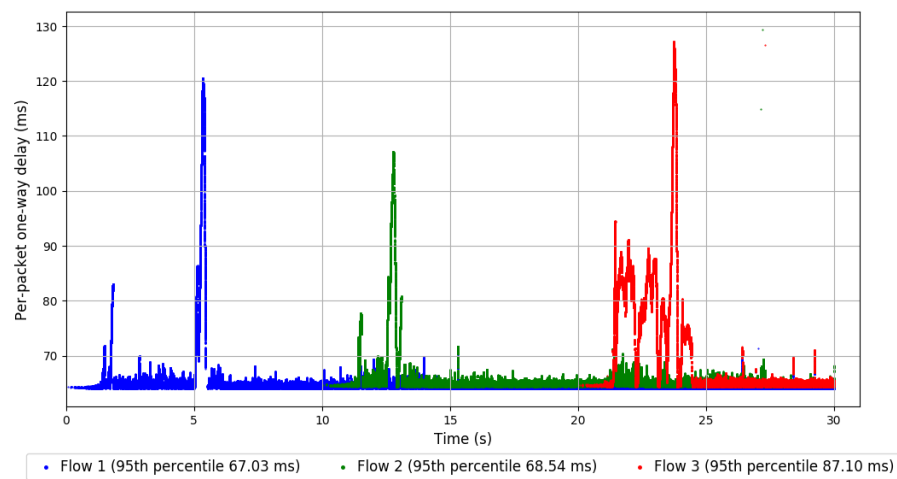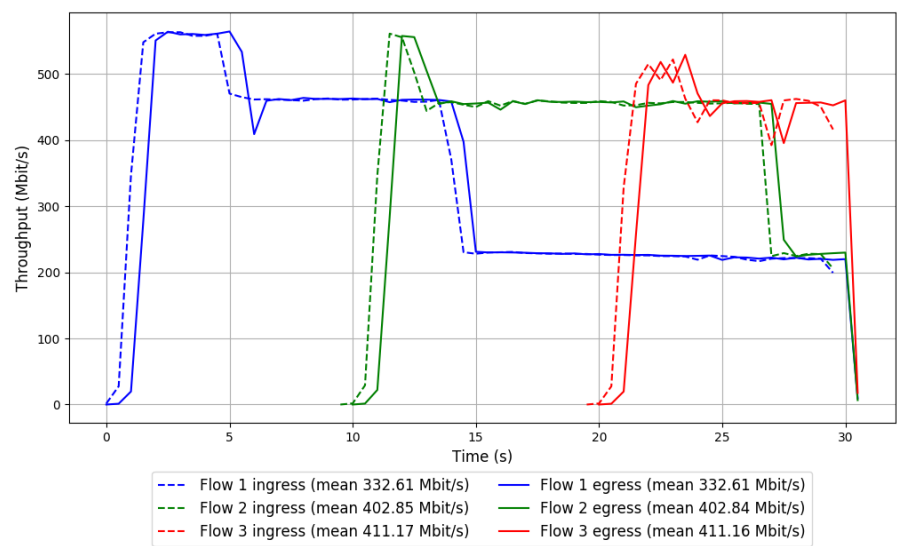
Run 3: Report of TCP Vegas — Data Link

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```
Run 4: Statistics of TCP Vegas

Start at: 2018-12-12 00:58:06
End at: 2018-12-12 00:58:36
Local clock offset: -0.106 ms
Remote clock offset: 1.25 ms


# Below is generated by plot.py at 2018-12-12 04:48:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 737.91 Mbit/s
95th percentile per-packet one-way delay: 79.432 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 332.61 Mbit/s
95th percentile per-packet one-way delay: 67.028 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 402.84 Mbit/s
95th percentile per-packet one-way delay: 68.543 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 411.16 Mbit/s
95th percentile per-packet one-way delay: 87.096 ms
Loss rate: 0.00%
```
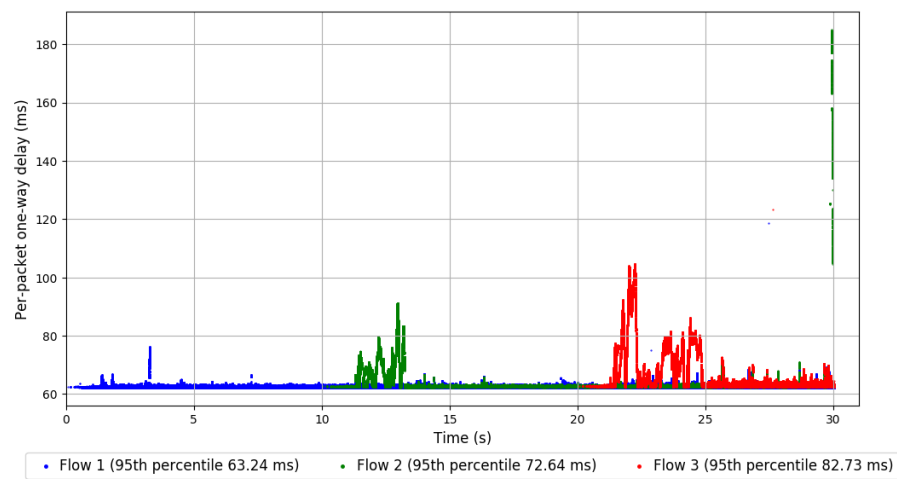
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-12-12 01:32:00
End at: 2018-12-12 01:32:30
Local clock offset: -0.039 ms
Remote clock offset: -0.66 ms


# Below is generated by plot.py at 2018-12-12 04:48:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 719.77 Mbit/s
95th percentile per-packet one-way delay: 72.069 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 416.57 Mbit/s
95th percentile per-packet one-way delay: 63.236 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 248.47 Mbit/s
95th percentile per-packet one-way delay: 72.637 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 414.99 Mbit/s
95th percentile per-packet one-way delay: 82.726 ms
Loss rate: 0.00%
```
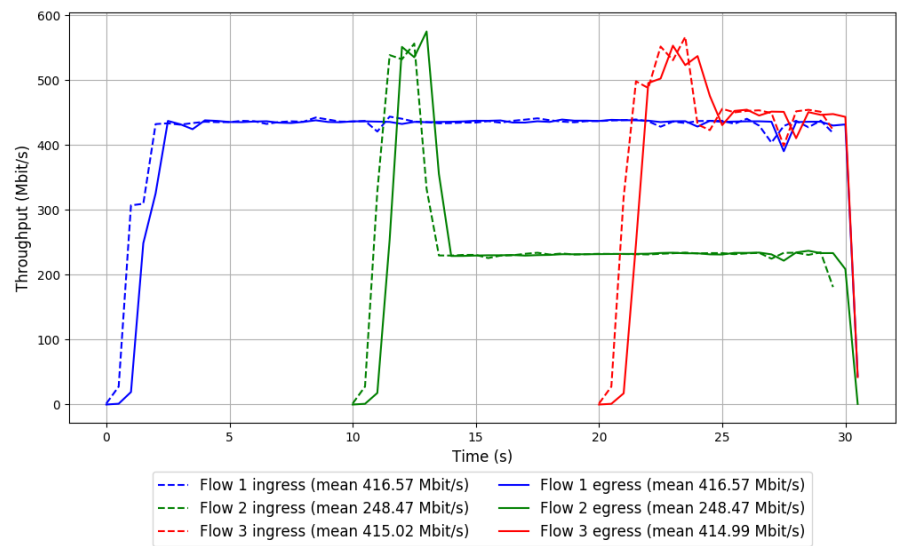
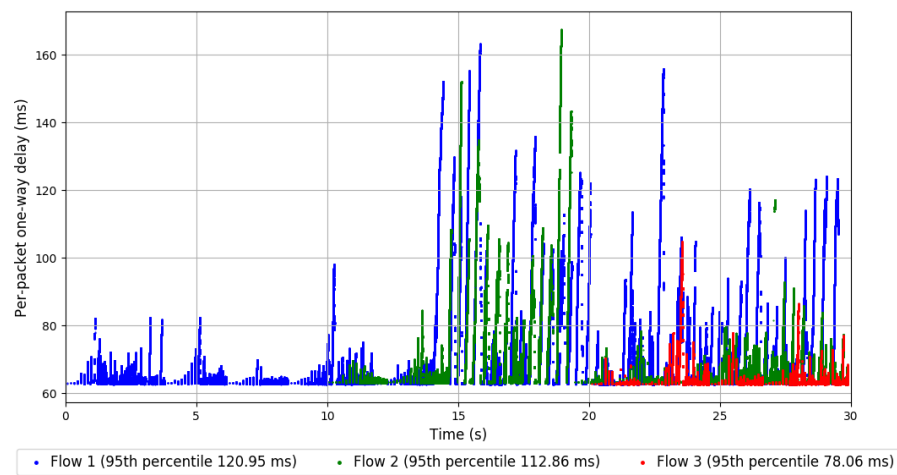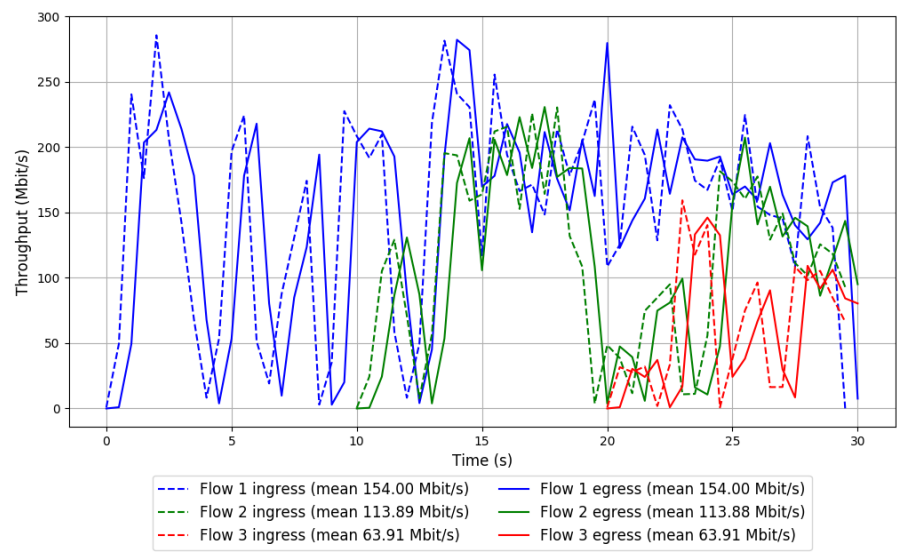Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-12-11 23:24:51
End at: 2018-12-11 23:25:21
Local clock offset: -0.042 ms
Remote clock offset: -0.193 ms


# Below is generated by plot.py at 2018-12-12 04:48:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 249.93 Mbit/s
95th percentile per-packet one-way delay: 117.772 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 154.00 Mbit/s
95th percentile per-packet one-way delay: 120.946 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 113.88 Mbit/s
95th percentile per-packet one-way delay: 112.863 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 63.91 Mbit/s
95th percentile per-packet one-way delay: 78.060 ms
Loss rate: 0.00%
```

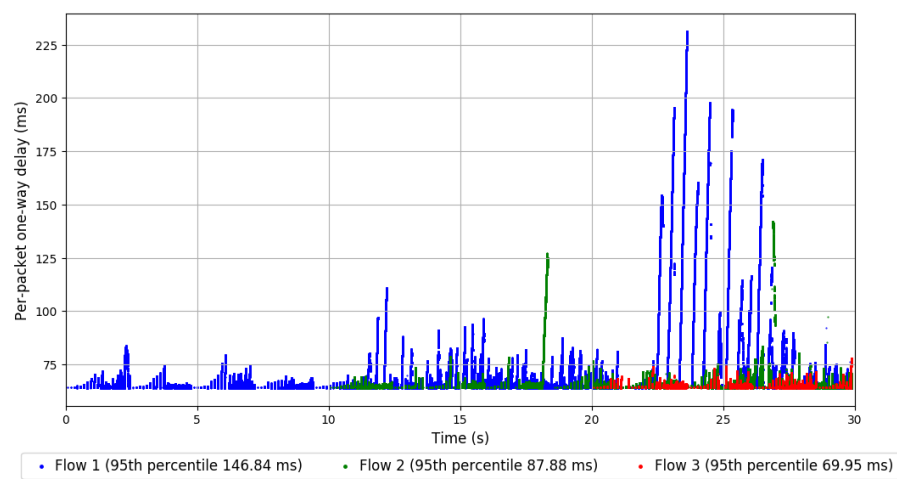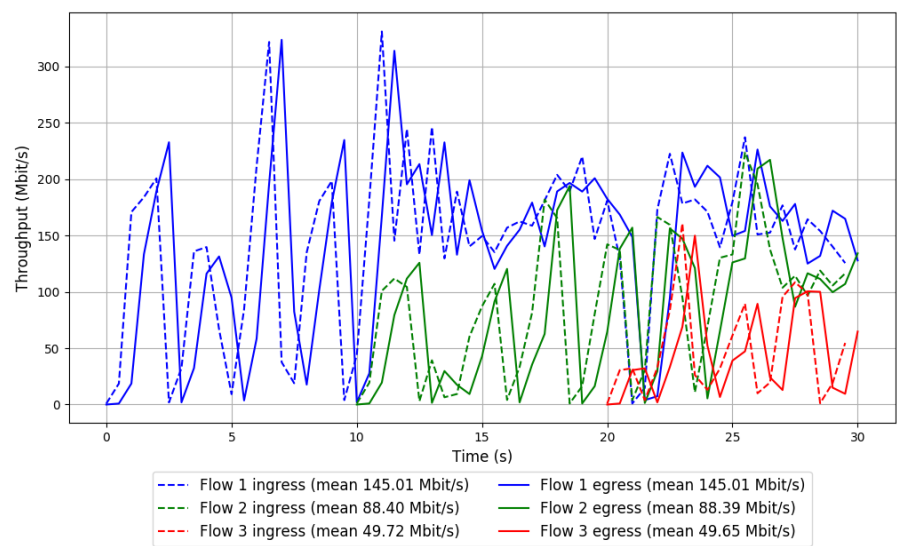Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-12-11 23:58:51
End at: 2018-12-11 23:59:21
Local clock offset: -0.085 ms
Remote clock offset: 1.214 ms


# Below is generated by plot.py at 2018-12-12 04:48:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 220.05 Mbit/s
95th percentile per-packet one-way delay: 126.212 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 145.01 Mbit/s
95th percentile per-packet one-way delay: 146.841 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 88.39 Mbit/s
95th percentile per-packet one-way delay: 87.877 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.65 Mbit/s
95th percentile per-packet one-way delay: 69.949 ms
Loss rate: 0.00%
```
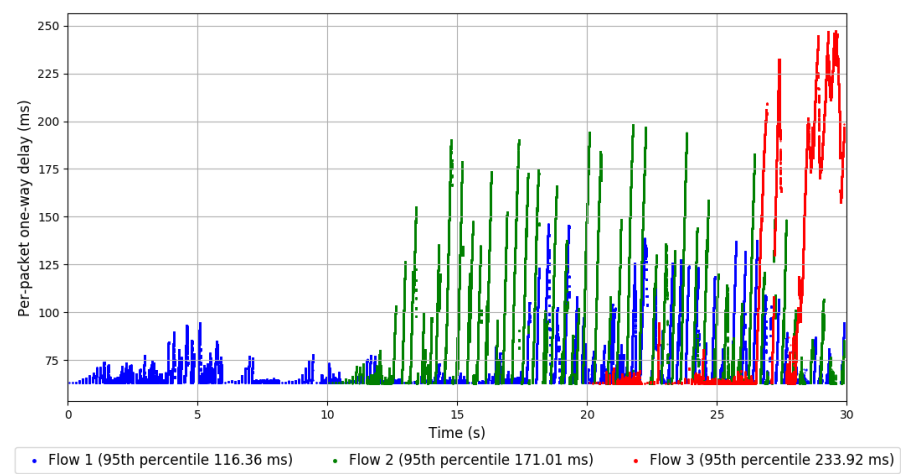
Run 2: Report of Verus — Data Link

- - - Flow 1 ingress (mean 145.01 Mbit/s) —— Flow 1 egress (mean 145.01 Mbit/s)
- - - Flow 2 ingress (mean 88.40 Mbit/s) —— Flow 2 egress (mean 88.39 Mbit/s)
- - - Flow 3 ingress (mean 49.72 Mbit/s) —— Flow 3 egress (mean 49.65 Mbit/s)

• Flow 1 (95th percentile 146.84 ms)   • Flow 2 (95th percentile 87.88 ms)   • Flow 3 (95th percentile 69.95 ms)
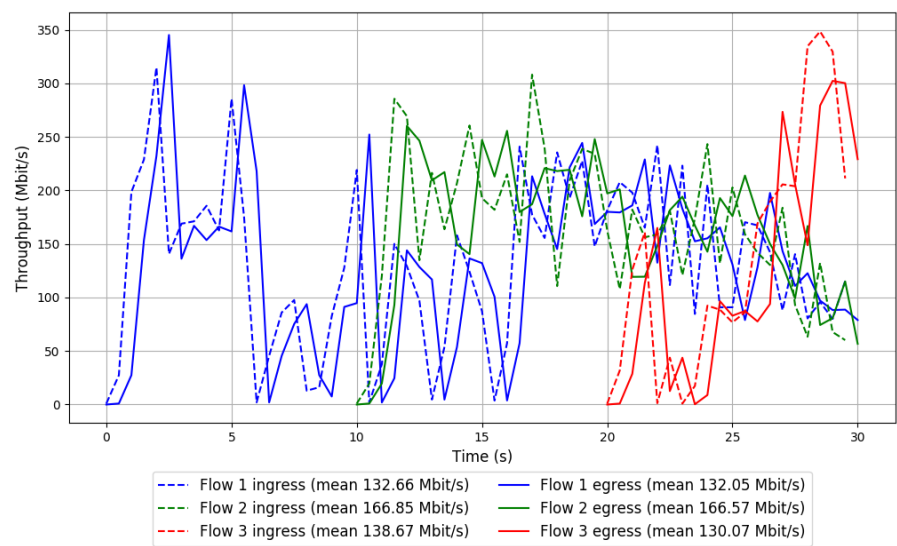
```
Run 3: Statistics of Verus

Start at: 2018-12-12 00:32:14
End at: 2018-12-12 00:32:44
Local clock offset: -0.094 ms
Remote clock offset: 0.085 ms

# Below is generated by plot.py at 2018-12-12 04:48:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 285.52 Mbit/s
95th percentile per-packet one-way delay: 186.914 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 132.05 Mbit/s
95th percentile per-packet one-way delay: 116.357 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 166.57 Mbit/s
95th percentile per-packet one-way delay: 171.012 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 130.07 Mbit/s
95th percentile per-packet one-way delay: 233.920 ms
Loss rate: 6.18%
```

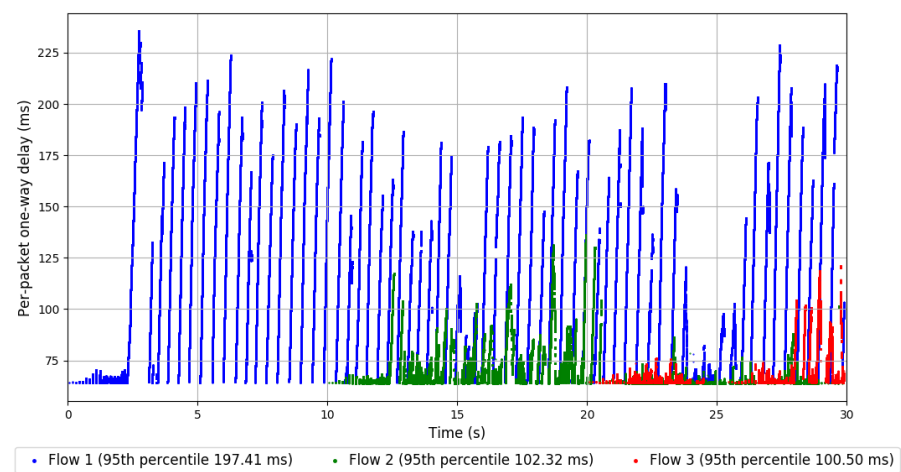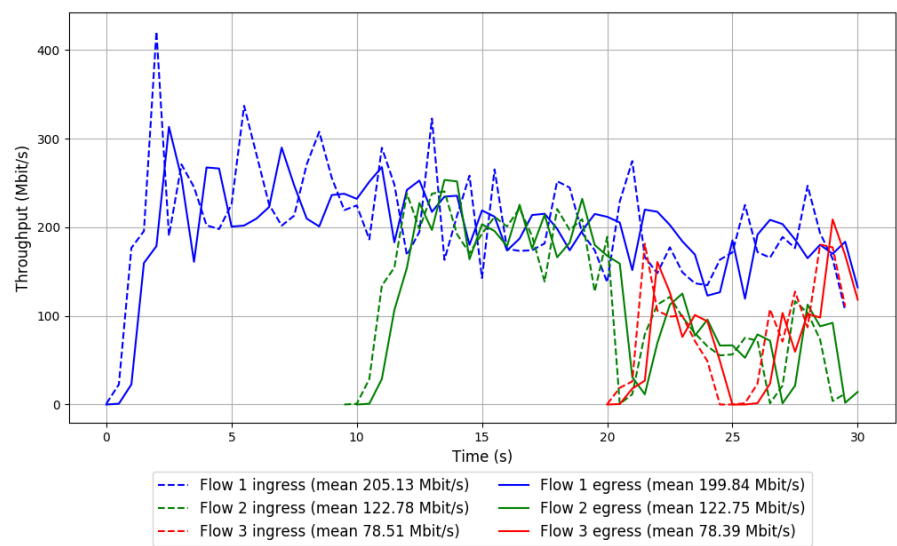Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2018-12-12 01:06:00
End at: 2018-12-12 01:06:30
Local clock offset: -0.099 ms
Remote clock offset: 1.158 ms


# Below is generated by plot.py at 2018-12-12 04:48:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 307.01 Mbit/s
95th percentile per-packet one-way delay: 190.143 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 199.84 Mbit/s
95th percentile per-packet one-way delay: 197.410 ms
Loss rate: 2.58%
-- Flow 2:
Average throughput: 122.75 Mbit/s
95th percentile per-packet one-way delay: 102.320 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 78.39 Mbit/s
95th percentile per-packet one-way delay: 100.499 ms
Loss rate: 0.14%
```
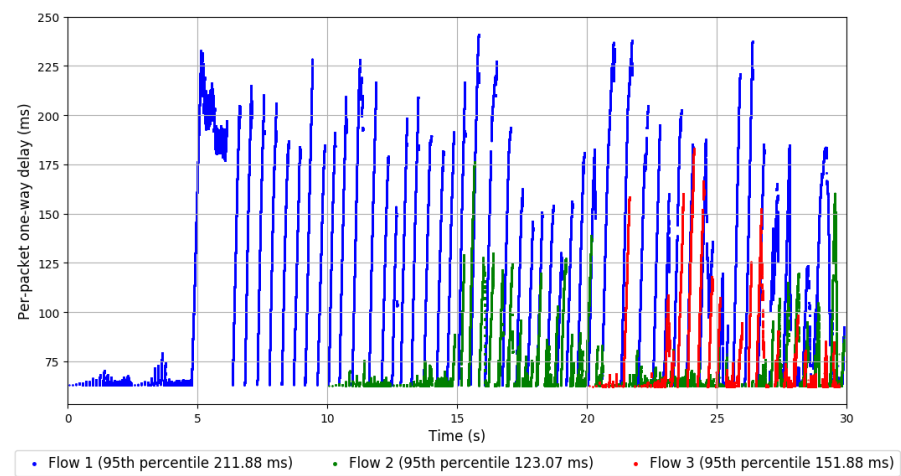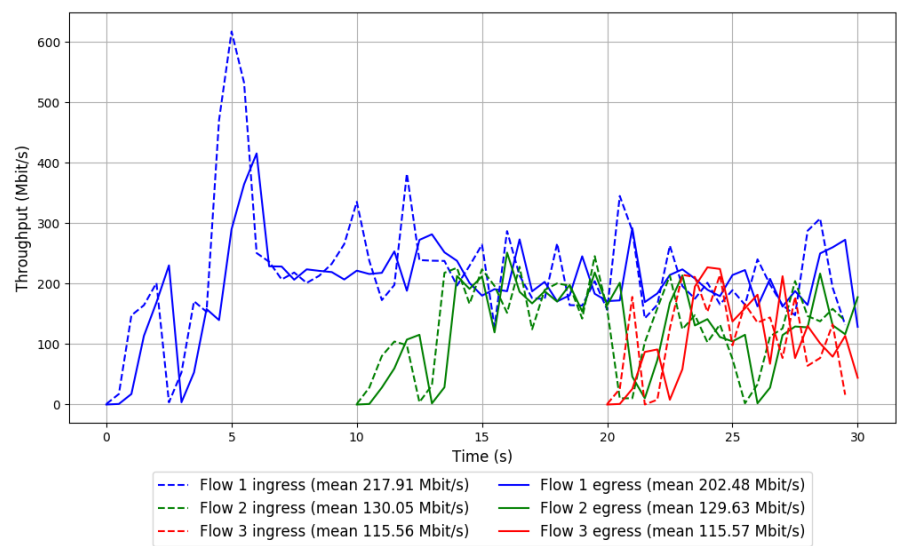
Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 205.13 Mbit/s) --- Flow 1 egress (mean 199.84 Mbit/s)
Flow 2 ingress (mean 122.78 Mbit/s) --- Flow 2 egress (mean 122.75 Mbit/s)
Flow 3 ingress (mean 78.51 Mbit/s) --- Flow 3 egress (mean 78.39 Mbit/s)

Flow 1 (95th percentile 197.41 ms)   Flow 2 (95th percentile 102.32 ms)   Flow 3 (95th percentile 100.50 ms)

```
Run 5: Statistics of Verus

Start at: 2018-12-12 01:40:11
End at: 2018-12-12 01:40:41
Local clock offset: -0.062 ms
Remote clock offset: -0.311 ms


# Below is generated by plot.py at 2018-12-12 04:53:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.86 Mbit/s
95th percentile per-packet one-way delay: 204.138 ms
Loss rate: 4.60%
-- Flow 1:
Average throughput: 202.48 Mbit/s
95th percentile per-packet one-way delay: 211.876 ms
Loss rate: 7.08%
-- Flow 2:
Average throughput: 129.63 Mbit/s
95th percentile per-packet one-way delay: 123.070 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 115.57 Mbit/s
95th percentile per-packet one-way delay: 151.883 ms
Loss rate: 0.00%
```
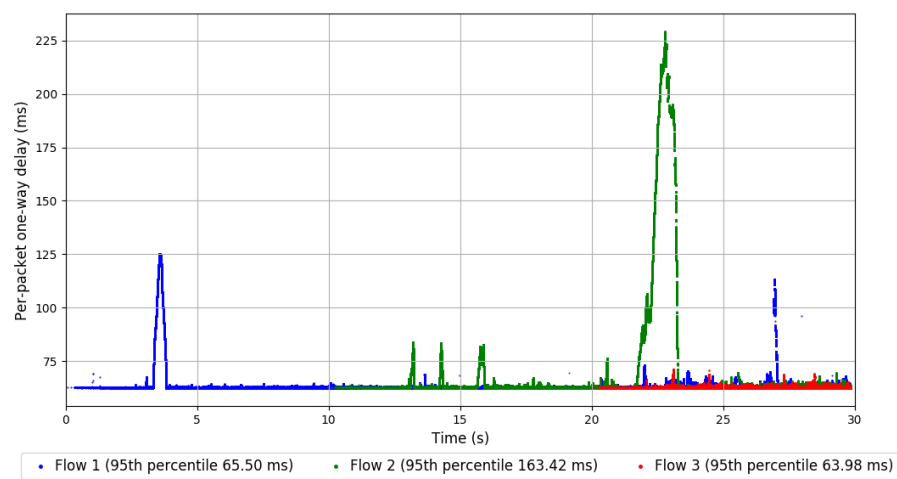
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-12-11 23:19:15
End at: 2018-12-11 23:19:46
Local clock offset: -0.052 ms
Remote clock offset: -0.37 ms

# Below is generated by plot.py at 2018-12-12 04:53:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 603.69 Mbit/s
95th percentile per-packet one-way delay: 82.103 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 342.71 Mbit/s
95th percentile per-packet one-way delay: 65.500 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 314.96 Mbit/s
95th percentile per-packet one-way delay: 163.422 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 153.74 Mbit/s
95th percentile per-packet one-way delay: 63.982 ms
Loss rate: 0.00%
```
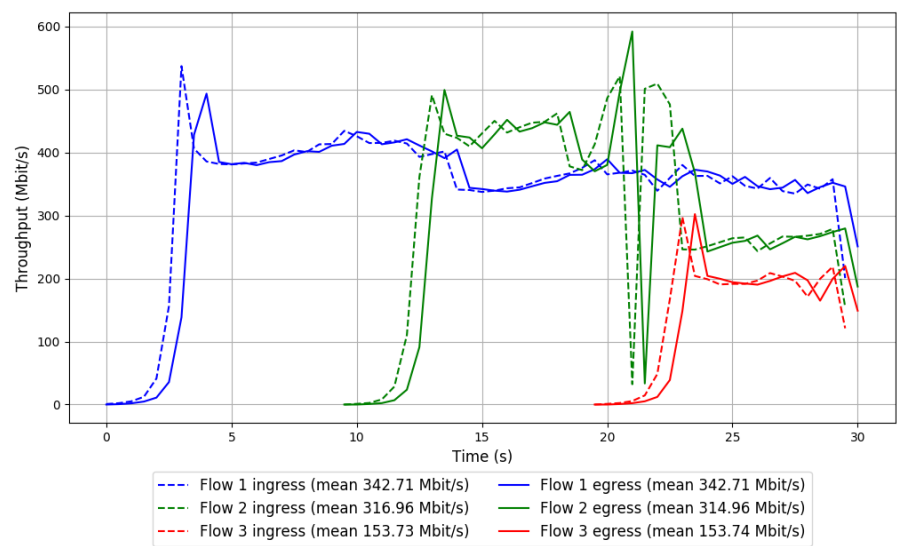
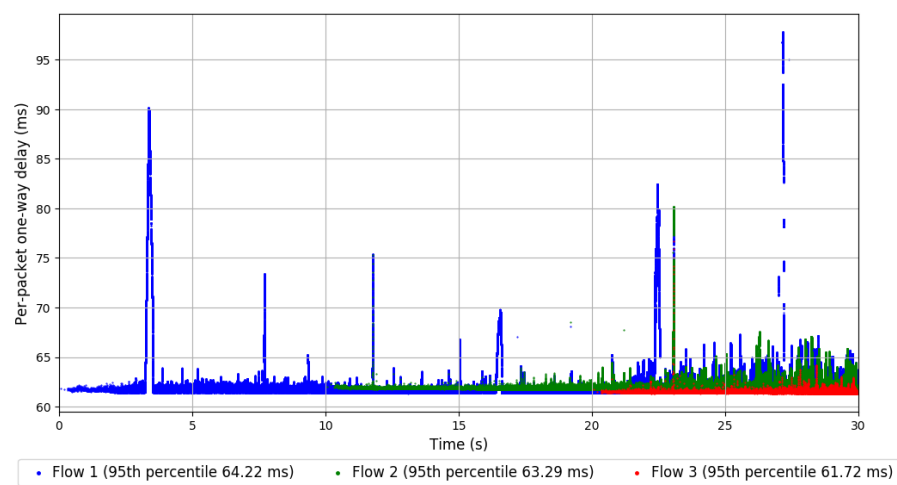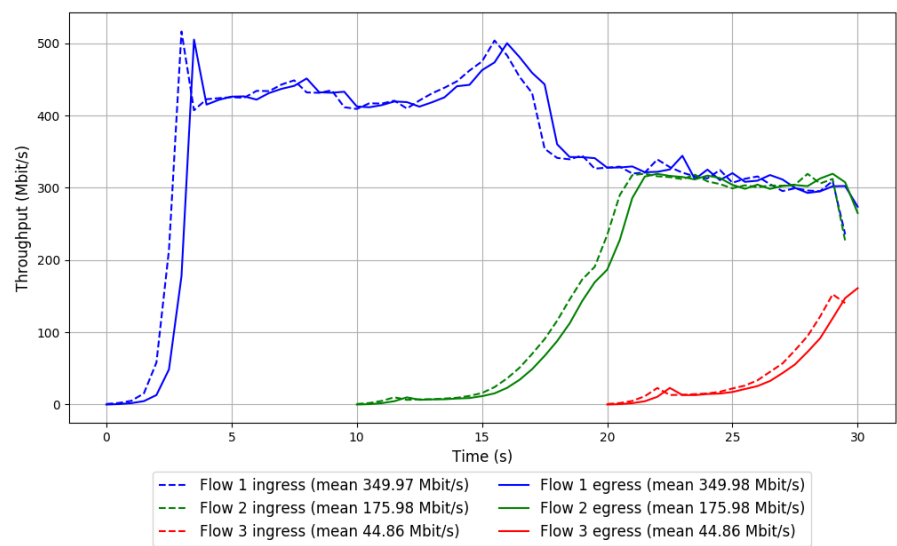Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-12-11 23:52:47
End at: 2018-12-11 23:53:17
Local clock offset: -0.032 ms
Remote clock offset: -1.461 ms


# Below is generated by plot.py at 2018-12-12 04:53:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 481.80 Mbit/s
95th percentile per-packet one-way delay: 63.762 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 349.98 Mbit/s
95th percentile per-packet one-way delay: 64.222 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 175.98 Mbit/s
95th percentile per-packet one-way delay: 63.293 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 44.86 Mbit/s
95th percentile per-packet one-way delay: 61.719 ms
Loss rate: 0.00%
```

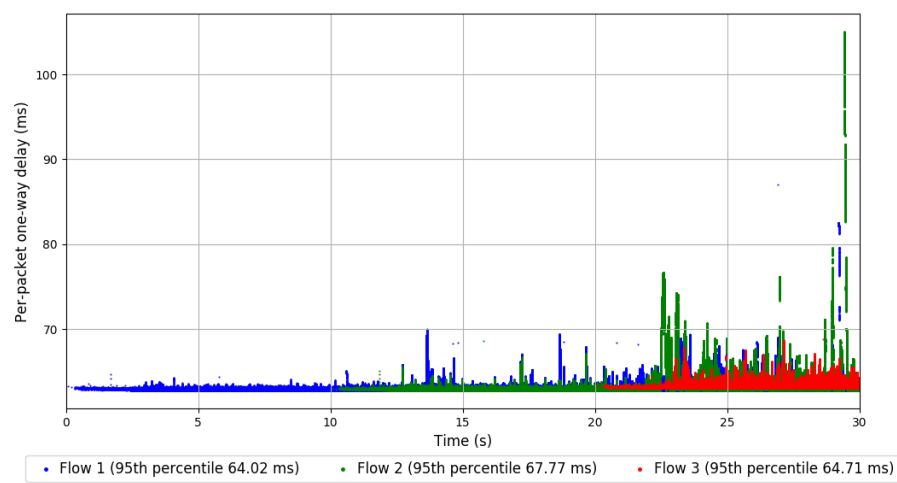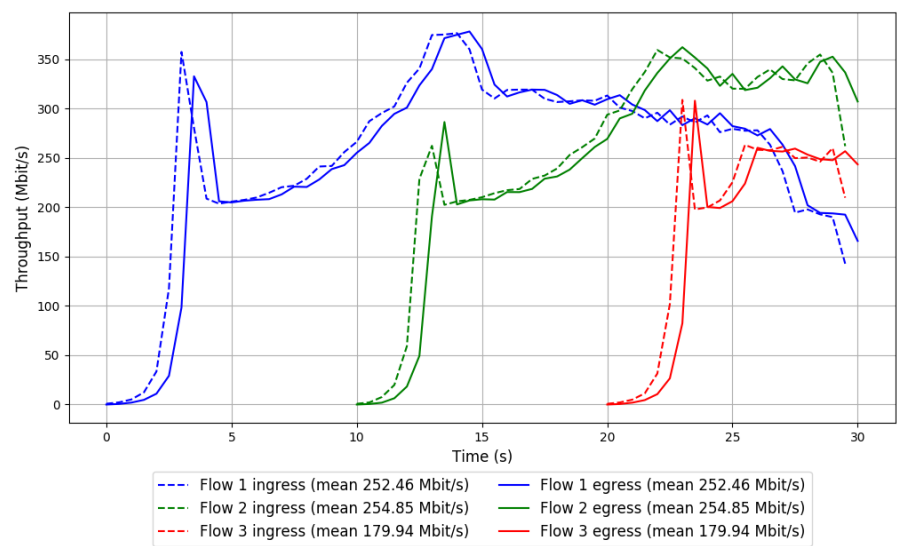Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2018-12-12 00:26:12
End at: 2018-12-12 00:26:42
Local clock offset: -0.088 ms
Remote clock offset: -0.042 ms


# Below is generated by plot.py at 2018-12-12 04:53:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 481.27 Mbit/s
95th percentile per-packet one-way delay: 65.087 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 252.46 Mbit/s
95th percentile per-packet one-way delay: 64.022 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 254.85 Mbit/s
95th percentile per-packet one-way delay: 67.769 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 179.94 Mbit/s
95th percentile per-packet one-way delay: 64.709 ms
Loss rate: 0.00%
```

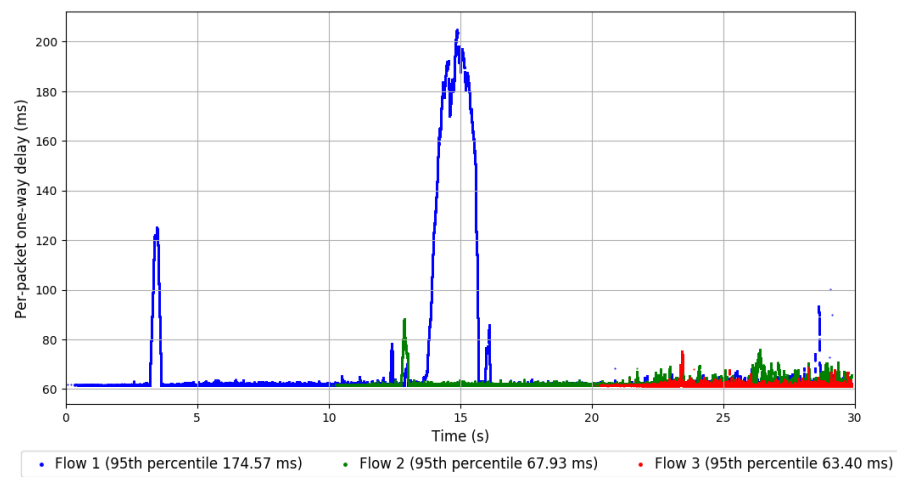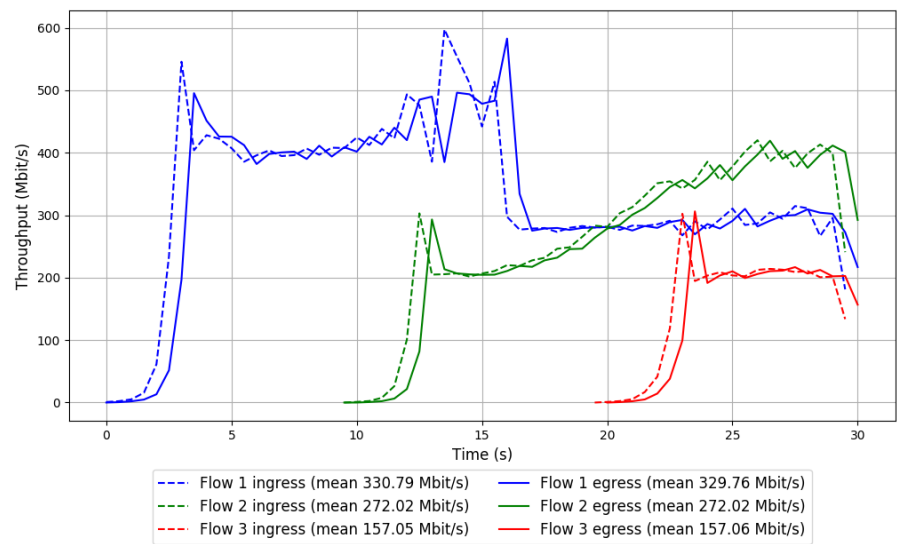# Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 252.46 Mbit/s) --- Flow 1 egress (mean 252.46 Mbit/s)
Flow 2 ingress (mean 254.85 Mbit/s) --- Flow 2 egress (mean 254.85 Mbit/s)
Flow 3 ingress (mean 179.94 Mbit/s) --- Flow 3 egress (mean 179.94 Mbit/s)

Flow 1 (95th percentile 64.02 ms) Flow 2 (95th percentile 67.77 ms) Flow 3 (95th percentile 64.71 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2018-12-12 00:59:58
End at: 2018-12-12 01:00:28
Local clock offset: -0.058 ms
Remote clock offset: -1.429 ms


# Below is generated by plot.py at 2018-12-12 04:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 563.01 Mbit/s
95th percentile per-packet one-way delay: 121.523 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 329.76 Mbit/s
95th percentile per-packet one-way delay: 174.567 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 272.02 Mbit/s
95th percentile per-packet one-way delay: 67.929 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 157.06 Mbit/s
95th percentile per-packet one-way delay: 63.397 ms
Loss rate: 0.00%
```

Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2018-12-12 01:33:51
End at: 2018-12-12 01:34:21
Local clock offset: -0.054 ms
Remote clock offset: 0.427 ms


# Below is generated by plot.py at 2018-12-12 04:53:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 614.81 Mbit/s
95th percentile per-packet one-way delay: 84.916 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 360.68 Mbit/s
95th percentile per-packet one-way delay: 84.514 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 268.60 Mbit/s
95th percentile per-packet one-way delay: 74.561 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 228.89 Mbit/s
95th percentile per-packet one-way delay: 107.601 ms
Loss rate: 0.00%
```
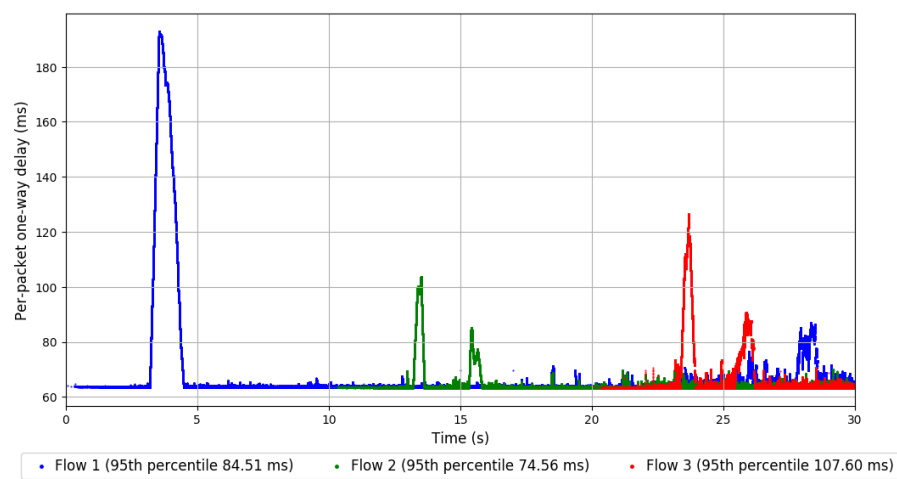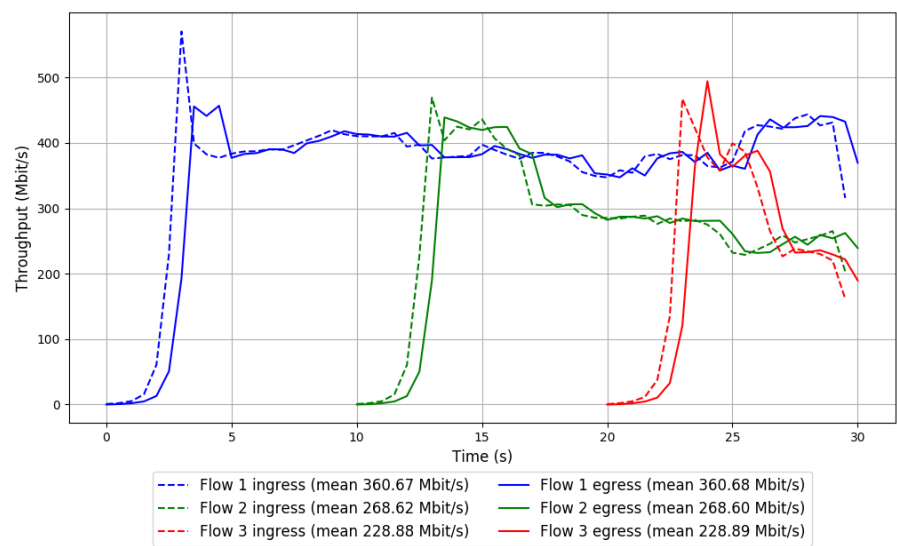
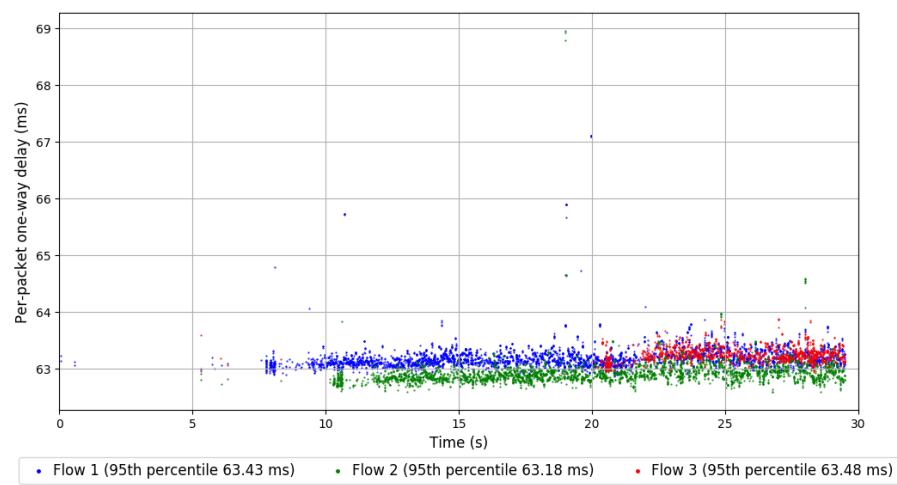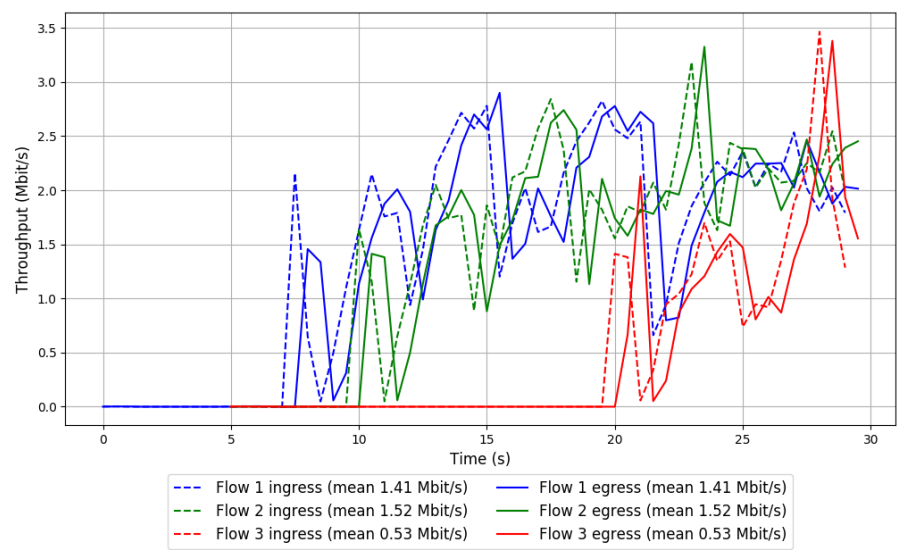Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-12-11 23:26:29
End at: 2018-12-11 23:26:59
Local clock offset: -0.053 ms
Remote clock offset: -0.174 ms


# Below is generated by plot.py at 2018-12-12 04:53:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 63.411 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 63.434 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 63.181 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 63.477 ms
Loss rate: 0.00%
```

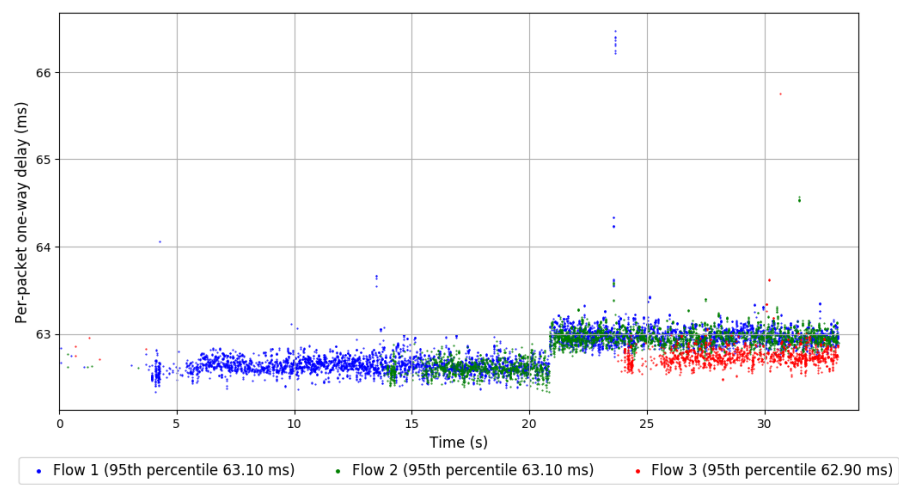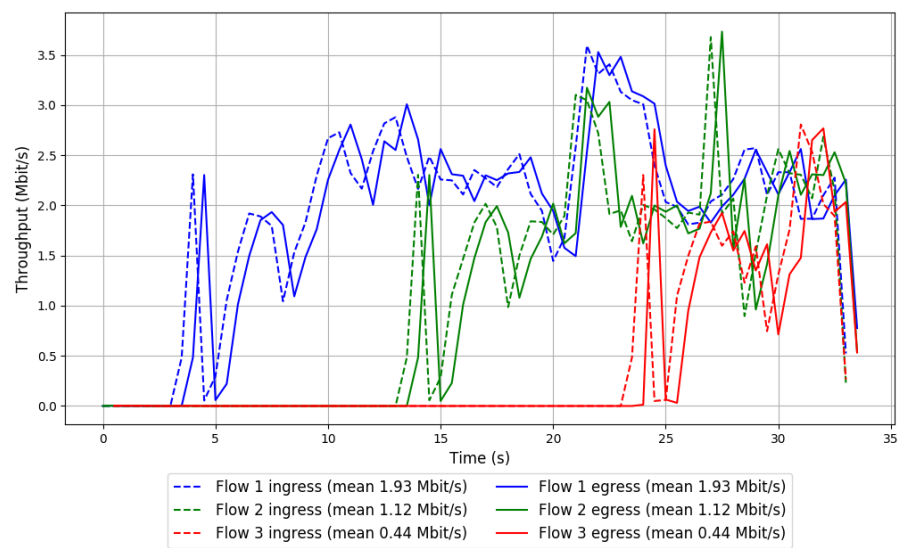Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-12-12 00:00:26
End at: 2018-12-12 00:00:56
Local clock offset: -0.051 ms
Remote clock offset: -0.347 ms


# Below is generated by plot.py at 2018-12-12 04:53:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.48 Mbit/s
95th percentile per-packet one-way delay: 63.096 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 63.105 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 63.105 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 62.902 ms
Loss rate: 0.00%
```

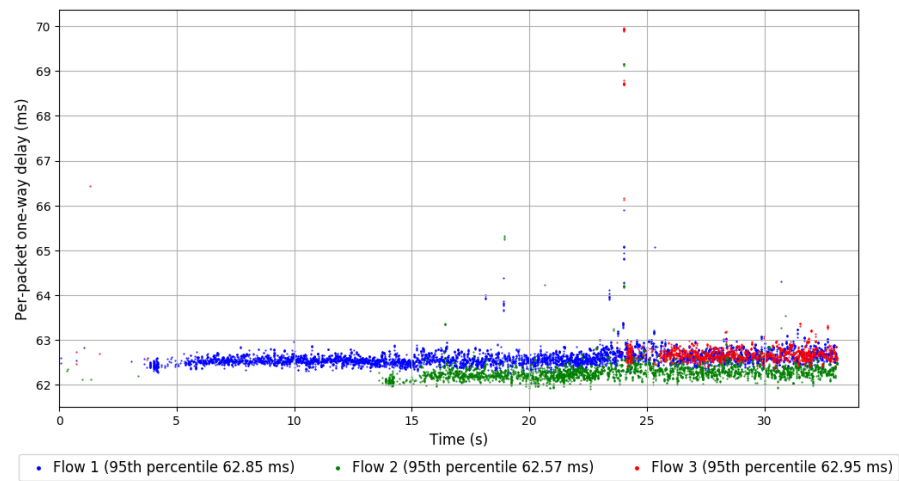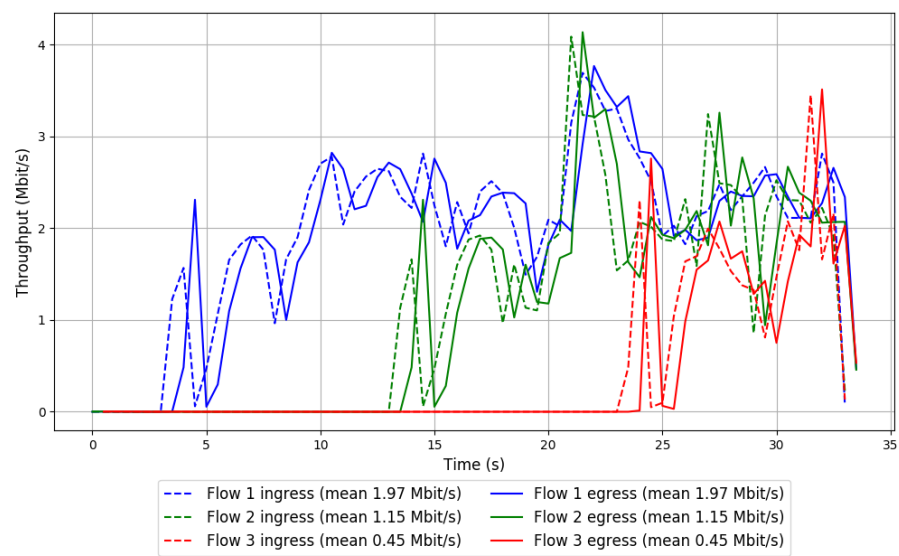Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-12-12 00:33:55
End at: 2018-12-12 00:34:25
Local clock offset: -0.084 ms
Remote clock offset: -0.824 ms


# Below is generated by plot.py at 2018-12-12 04:53:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 62.842 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 62.853 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 62.573 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 62.955 ms
Loss rate: 0.00%
```

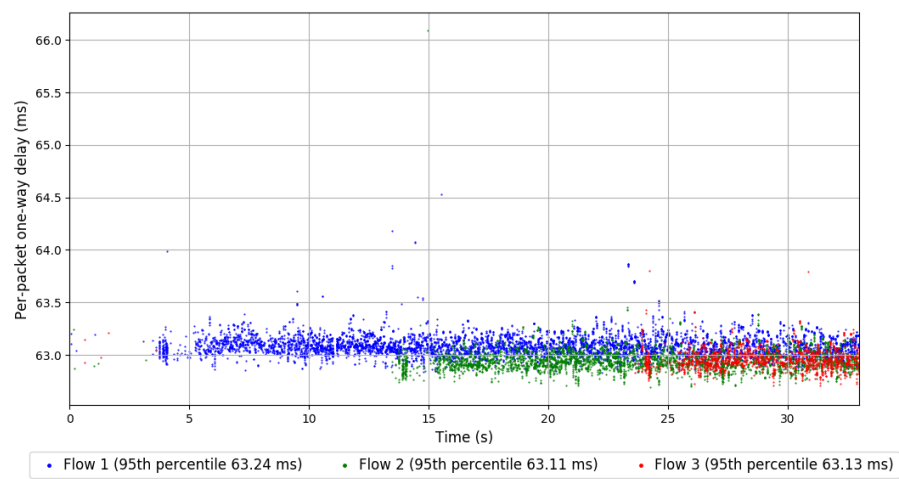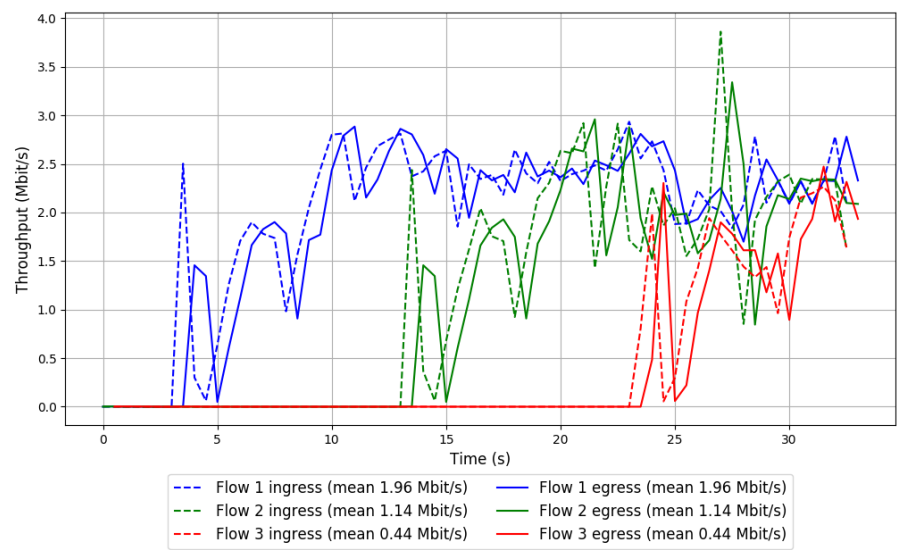Run 3: Report of WebRTC media — Data Link

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```
Run 4: Statistics of WebRTC media

Start at: 2018-12-12 01:07:43
End at: 2018-12-12 01:08:13
Local clock offset: -0.047 ms
Remote clock offset: -0.004 ms


# Below is generated by plot.py at 2018-12-12 04:53:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 63.216 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 63.239 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 63.108 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.128 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-12-12 01:41:56
End at: 2018-12-12 01:42:26
Local clock offset: -0.085 ms
Remote clock offset: -0.241 ms


# Below is generated by plot.py at 2018-12-12 04:53:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.45 Mbit/s
95th percentile per-packet one-way delay: 63.253 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 63.046 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 63.022 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.419 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link