Pantheon Report

Generated at 2019-12-11 07:39:00 (UTC).

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

Repeated the test of 24 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.
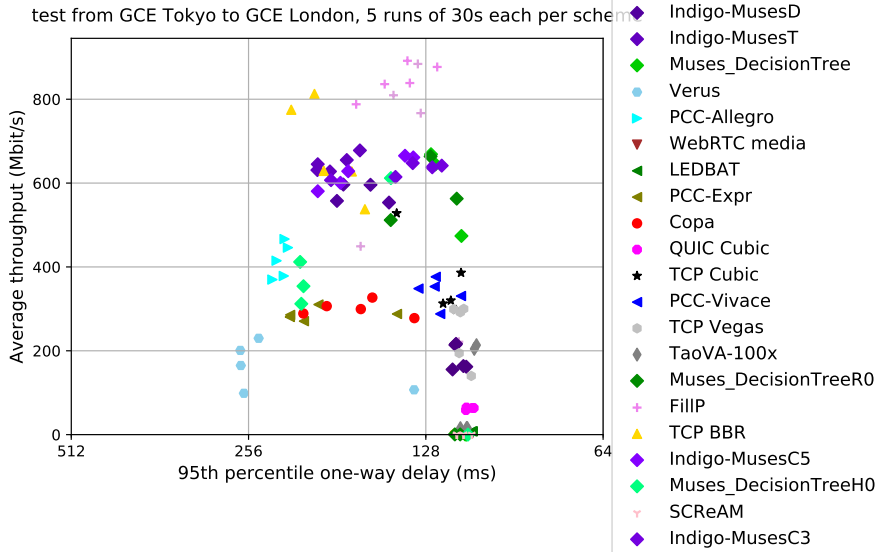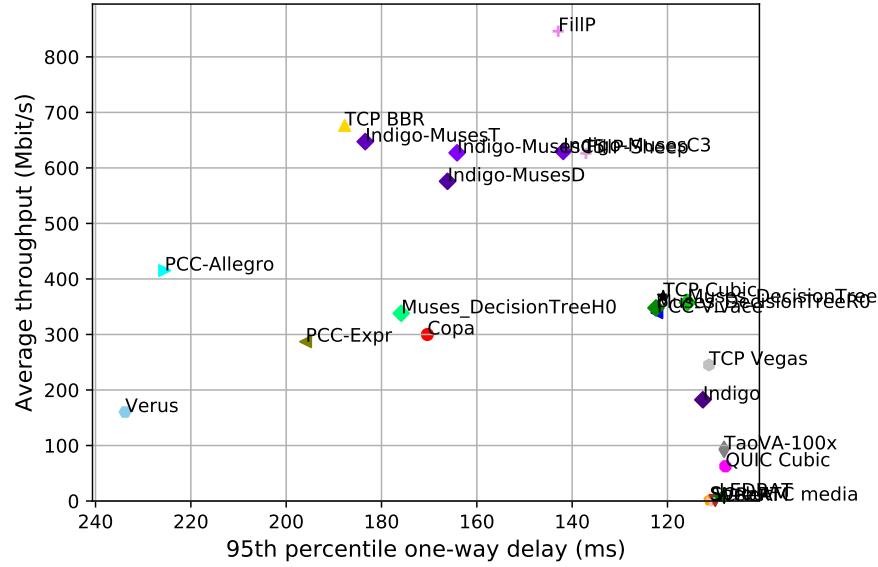
```
System info:
Linux 5.0.0-1025-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

```
Git summary:
branch: muses @ de42328552b3776a75a932a94dfafd722537b0ec
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 387225f7b5f61ddbe92d708a8869ffbb84eb3200
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 Tokyo to GCE London, 5 runs of 30s each per scheme
(mean of all runs by scheme)

test from GCE Tokyo to GCE London, 5 runs of 30s each per scheme

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scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	676.43	187.72	3.06
Copa	5	299.95	170.38	0.05
TCP Cubic	5	368.86	120.89	0.01
FillP	5	846.27	142.93	0.41
FillP-Sheep	5	626.25	137.11	0.29
Indigo	5	182.31	112.58	0.00
Indigo-MusesC3	5	629.70	141.87	0.05
Indigo-MusesC5	5	627.20	164.14	0.20
Indigo-MusesD	4	575.86	166.15	0.16
Indigo-MusesT	5	647.35	183.42	0.32
LEDBAT	5	7.86	109.18	0.00
Muses_DecisionTree	5	357.62	115.80	0.05
Muses_DecisionTreeH0	5	338.02	175.87	5.42
Muses_DecisionTreeR0	5	347.86	122.41	0.12
PCC-Allegro	5	415.13	225.50	3.45
PCC-Expr	5	287.00	195.93	1.99
QUIC Cubic	4	62.59	107.85	0.00
SCReAM	5	0.20	110.94	0.00
Sprout	5	1.80	111.14	0.72
TaoVA-100x	5	93.05	108.13	0.00
TCP Vegas	5	245.13	111.30	0.00
Verus	5	160.25	233.79	6.80
PCC-Vivace	5	339.32	122.23	0.19
WebRTC media	5	0.83	109.98	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-12-11 02:40:23
End at: 2019-12-11 02:40:53
Local clock offset: 5.222 ms
Remote clock offset: 26.165 ms

# Below is generated by plot.py at 2019-12-11 06:04:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 812.63 Mbit/s
95th percentile per-packet one-way delay: 197.832 ms
Loss rate: 3.81%
-- Flow 1:
Average throughput: 812.63 Mbit/s
95th percentile per-packet one-way delay: 197.832 ms
Loss rate: 3.81%
```
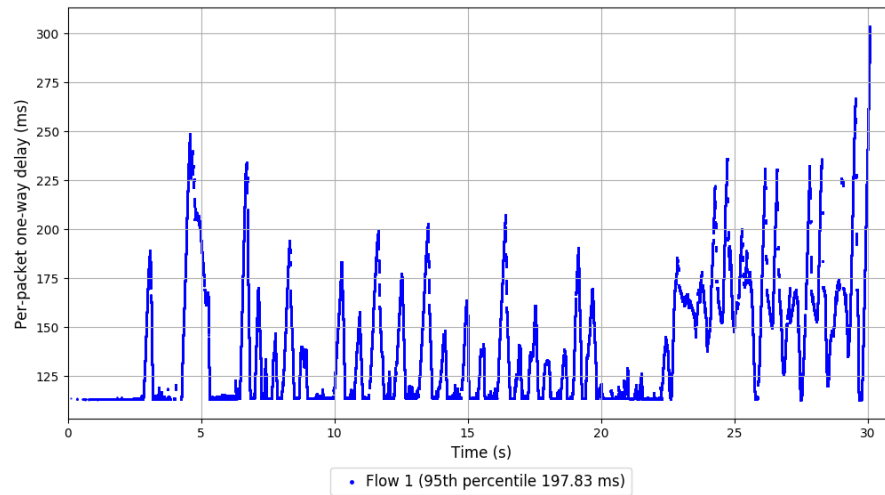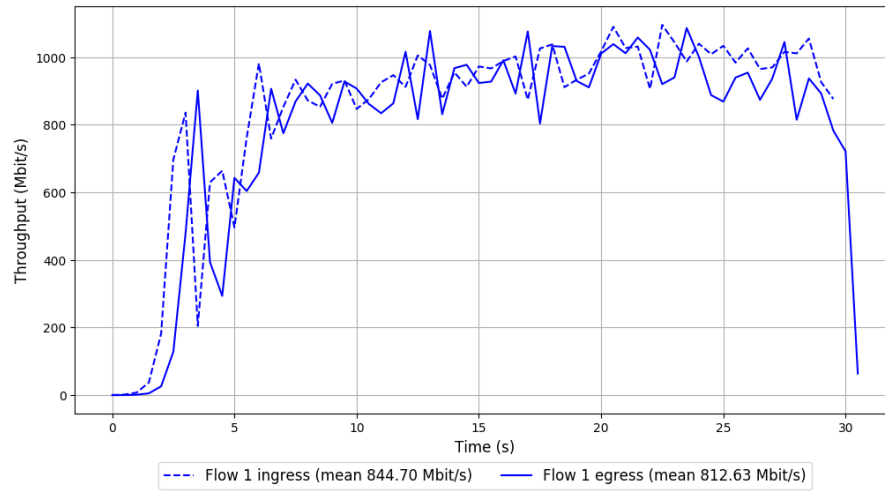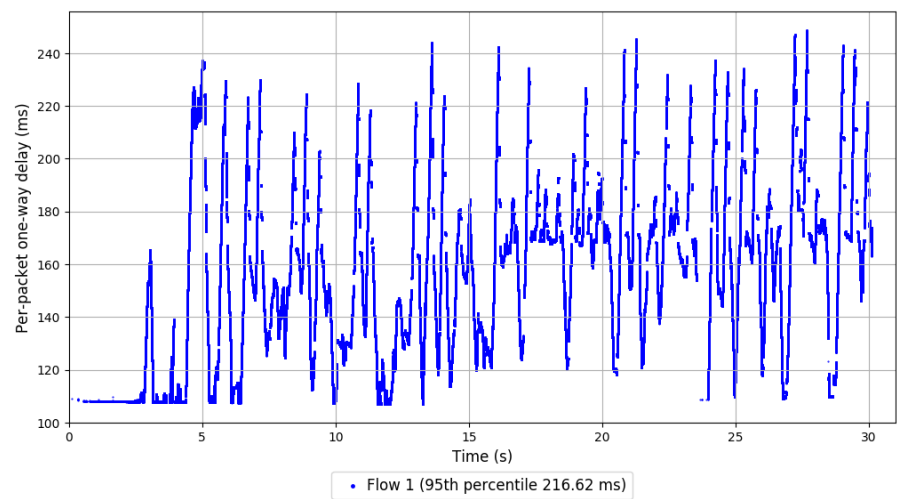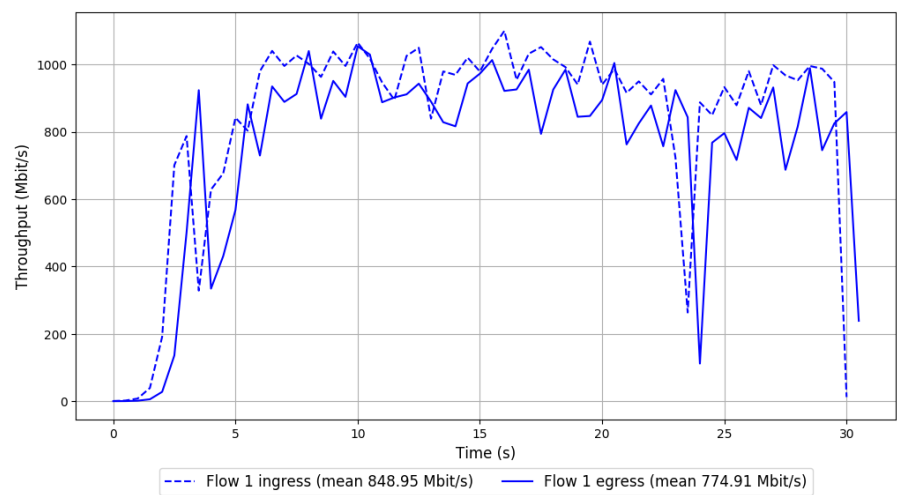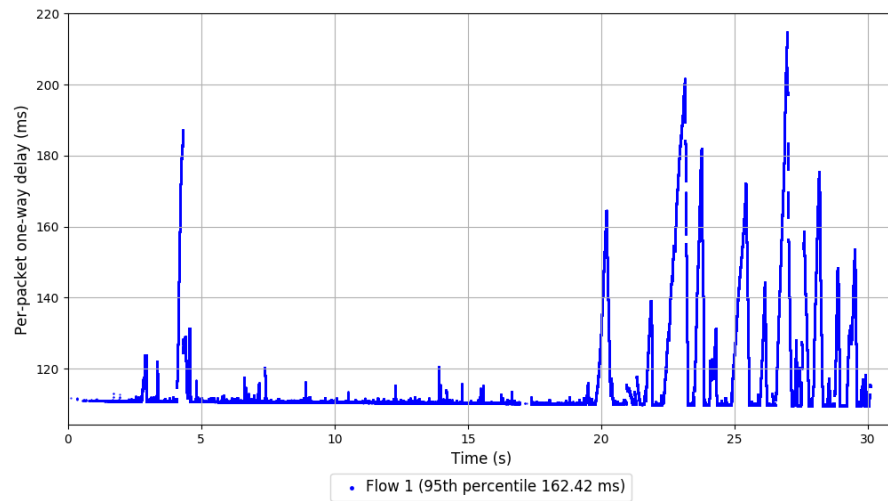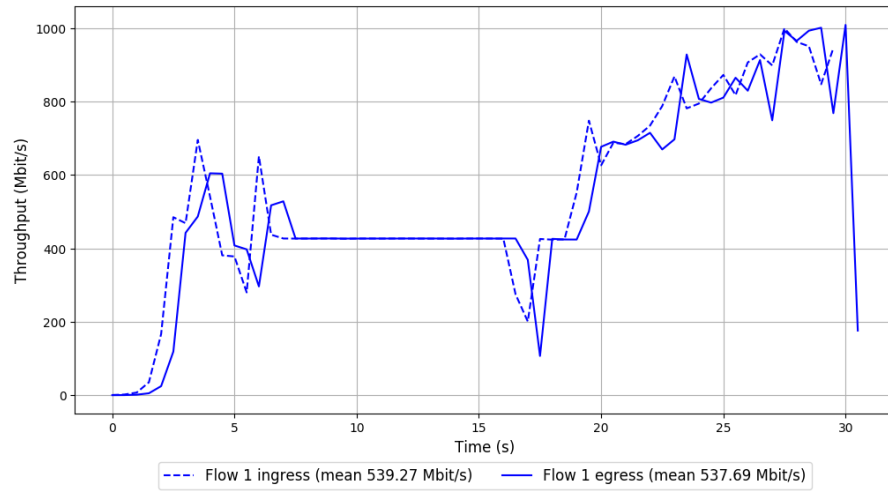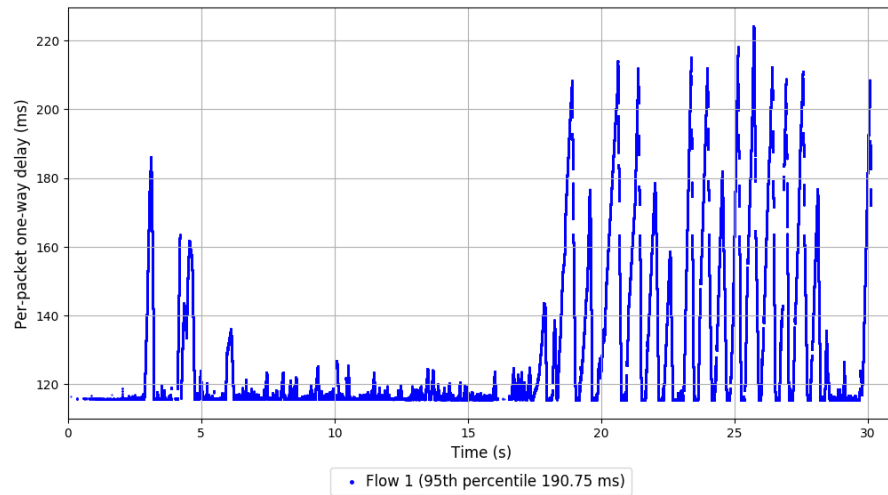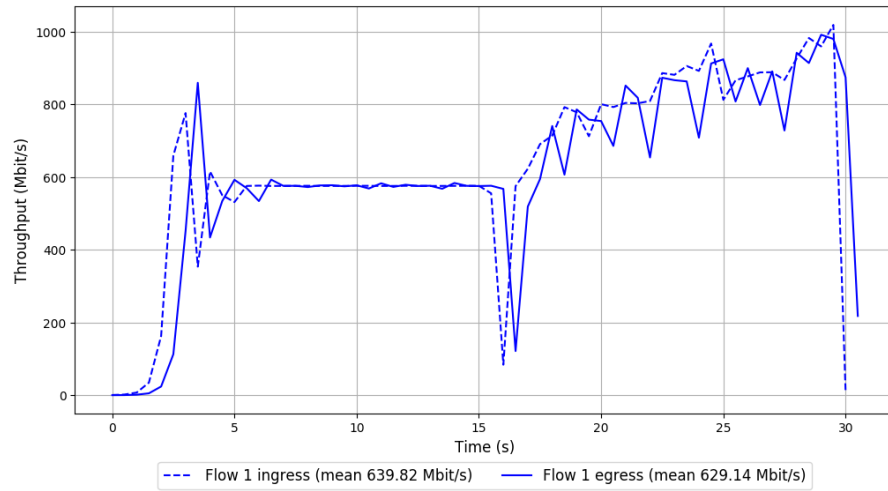
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 844.70 Mbit/s)   Flow 1 egress (mean 812.63 Mbit/s)

Flow 1 (95th percentile 197.83 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2019-12-11 03:16:03
End at: 2019-12-11 03:16:33
Local clock offset: 22.21 ms
Remote clock offset: 69.113 ms


# Below is generated by plot.py at 2019-12-11 06:04:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 774.91 Mbit/s
95th percentile per-packet one-way delay: 216.625 ms
Loss rate: 8.71%
-- Flow 1:
Average throughput: 774.91 Mbit/s
95th percentile per-packet one-way delay: 216.625 ms
Loss rate: 8.71%
```

Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 848.95 Mbit/s) ----   Flow 1 egress (mean 774.91 Mbit/s) ——

Flow 1 (95th percentile 216.62 ms)

```
Run 3: Statistics of TCP BBR

Start at: 2019-12-11 03:51:37
End at: 2019-12-11 03:52:07
Local clock offset: 25.607 ms
Remote clock offset: 31.228 ms


# Below is generated by plot.py at 2019-12-11 06:04:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 537.69 Mbit/s
95th percentile per-packet one-way delay: 162.420 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 537.69 Mbit/s
95th percentile per-packet one-way delay: 162.420 ms
Loss rate: 0.31%
```
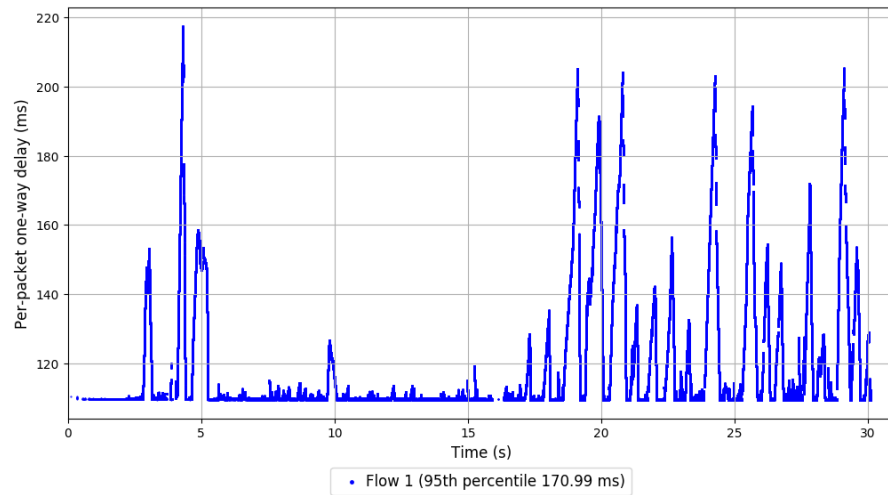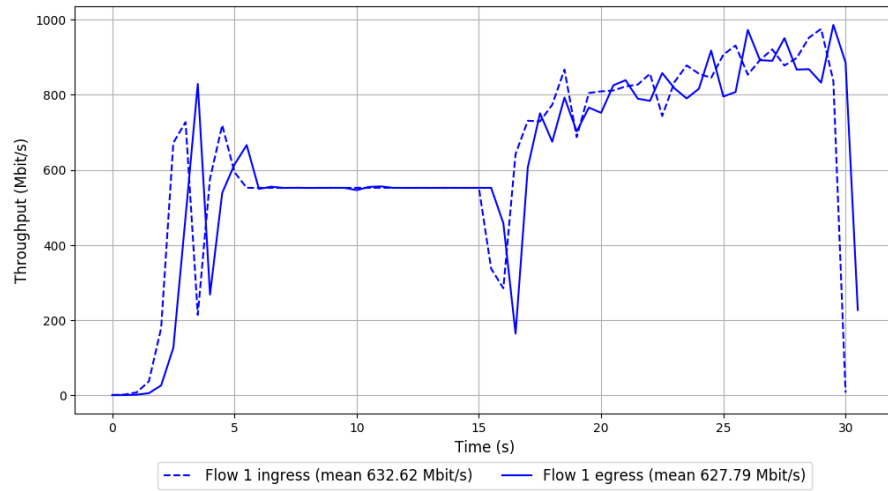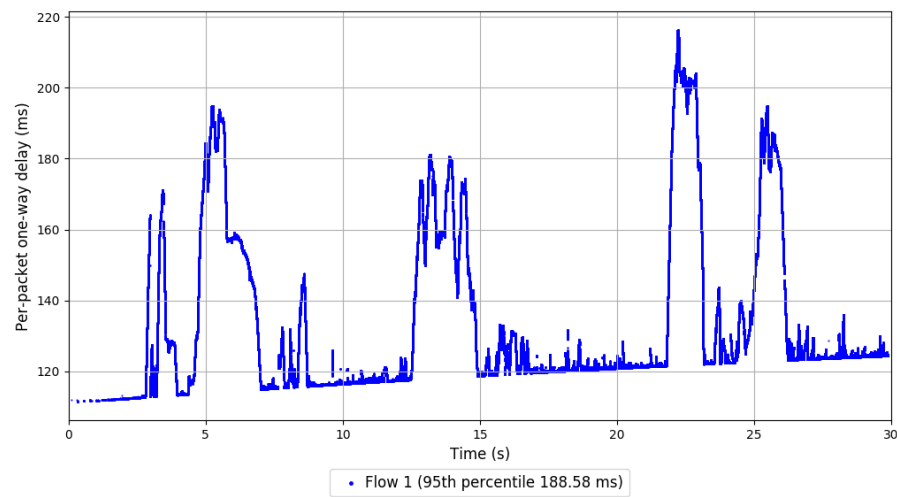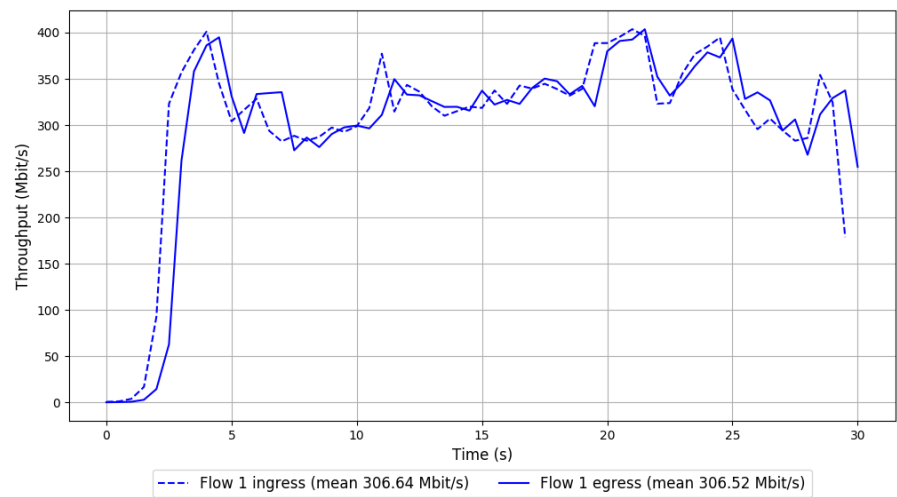
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 539.27 Mbit/s) --- Flow 1 egress (mean 537.69 Mbit/s)

Flow 1 (95th percentile 162.42 ms)

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```
Run 4: Statistics of TCP BBR

Start at: 2019-12-11 04:26:46
End at: 2019-12-11 04:27:16
Local clock offset: 11.59 ms
Remote clock offset: 12.177 ms


# Below is generated by plot.py at 2019-12-11 06:04:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 629.14 Mbit/s
95th percentile per-packet one-way delay: 190.751 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 629.14 Mbit/s
95th percentile per-packet one-way delay: 190.751 ms
Loss rate: 1.69%
```

Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 639.82 Mbit/s) — — — Flow 1 egress (mean 629.14 Mbit/s)
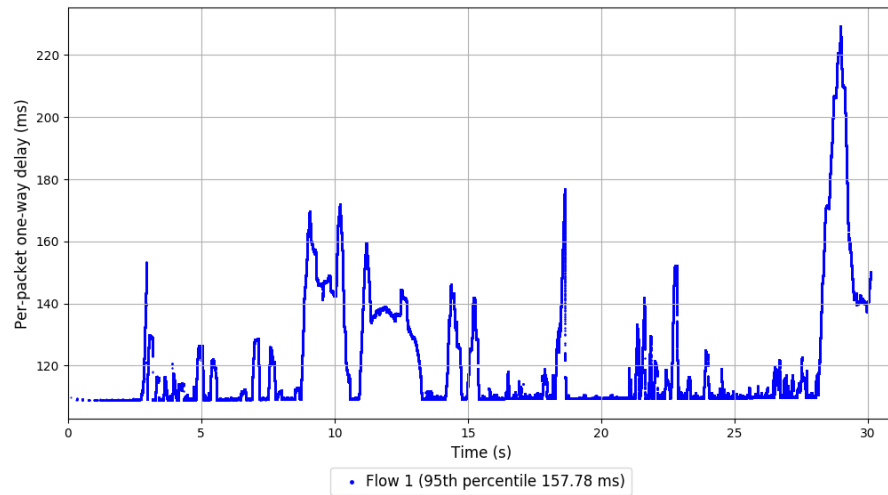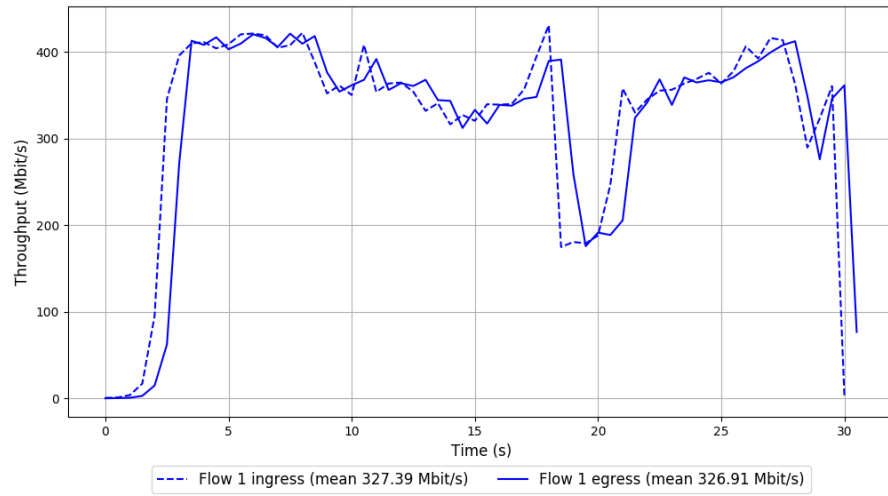

Flow 1 (95th percentile 190.75 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-12-11 05:01:58
End at: 2019-12-11 05:02:28
Local clock offset: 5.376 ms
Remote clock offset: 4.537 ms


# Below is generated by plot.py at 2019-12-11 06:04:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 627.79 Mbit/s
95th percentile per-packet one-way delay: 170.994 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 627.79 Mbit/s
95th percentile per-packet one-way delay: 170.994 ms
Loss rate: 0.77%
```
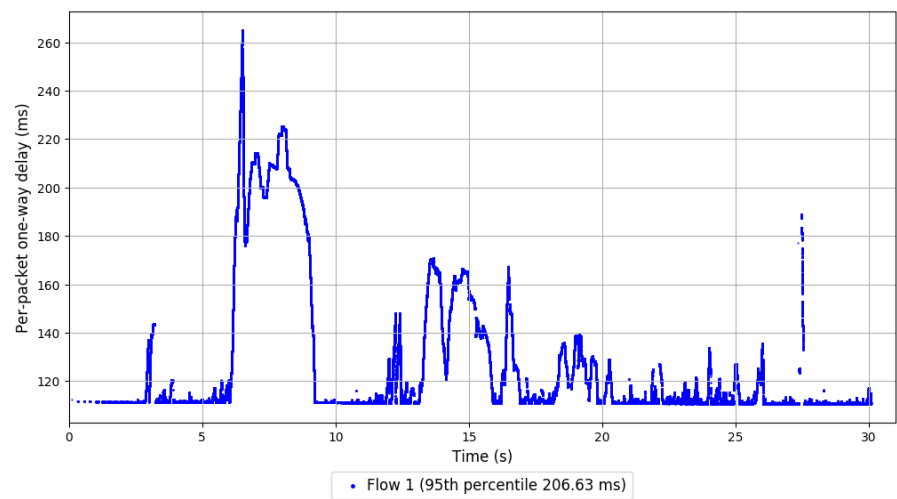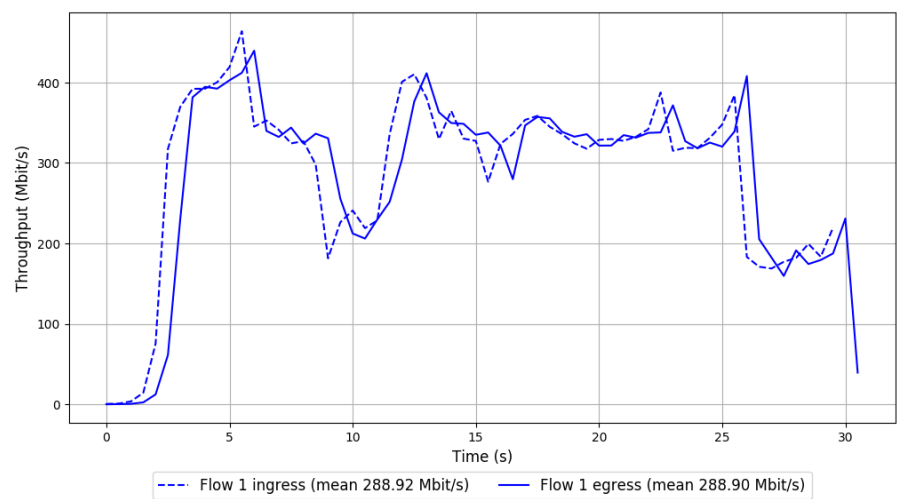
Run 5: Report of TCP BBR — Data Link

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```
Run 1: Statistics of Copa

Start at: 2019-12-11 02:46:45
End at: 2019-12-11 02:47:16
Local clock offset: 12.275 ms
Remote clock offset: 53.166 ms


# Below is generated by plot.py at 2019-12-11 06:04:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 306.52 Mbit/s
95th percentile per-packet one-way delay: 188.580 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 306.52 Mbit/s
95th percentile per-packet one-way delay: 188.580 ms
Loss rate: 0.01%
```
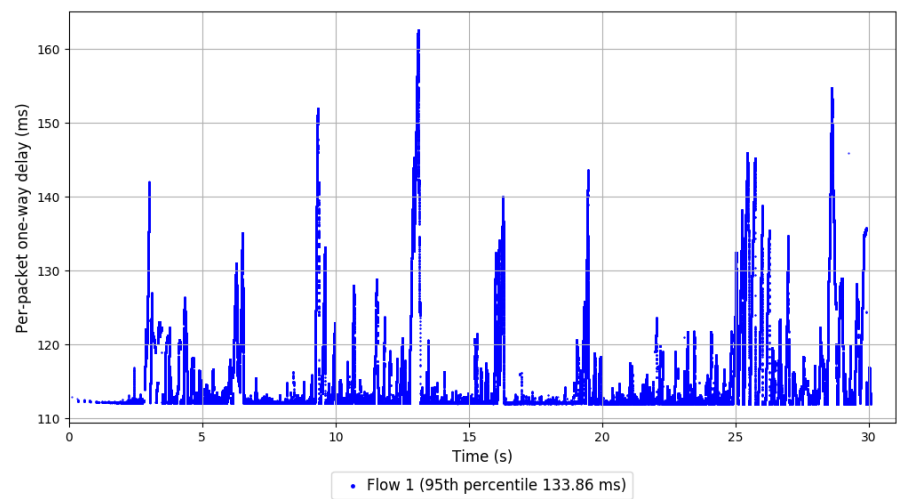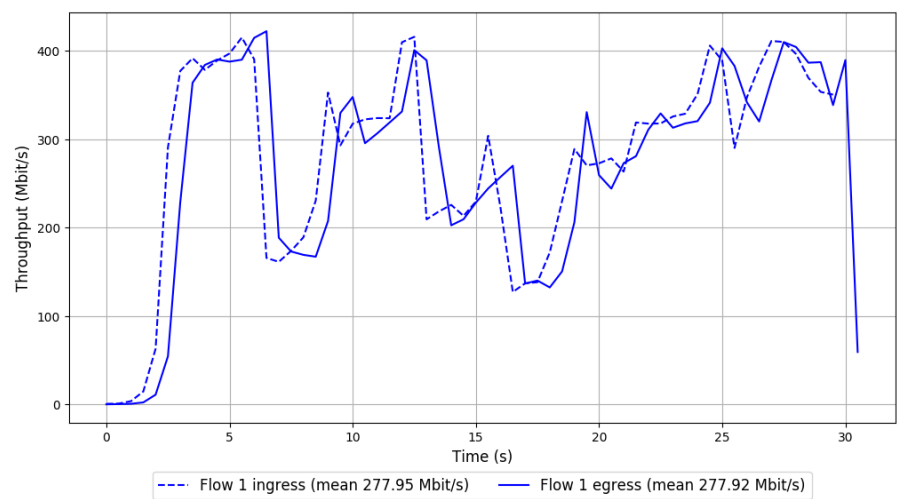
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 306.64 Mbit/s) ----   Flow 1 egress (mean 306.52 Mbit/s) ——

• Flow 1 (95th percentile 188.58 ms)

```
Run 2: Statistics of Copa

Start at: 2019-12-11 03:22:34
End at: 2019-12-11 03:23:04
Local clock offset: 20.271 ms
Remote clock offset: 29.262 ms


# Below is generated by plot.py at 2019-12-11 06:04:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 326.91 Mbit/s
95th percentile per-packet one-way delay: 157.778 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 326.91 Mbit/s
95th percentile per-packet one-way delay: 157.778 ms
Loss rate: 0.14%
```

Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-12-11 03:57:52
End at: 2019-12-11 03:58:22
Local clock offset: 17.495 ms
Remote clock offset: 38.299 ms


# Below is generated by plot.py at 2019-12-11 06:04:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 288.90 Mbit/s
95th percentile per-packet one-way delay: 206.628 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 288.90 Mbit/s
95th percentile per-packet one-way delay: 206.628 ms
Loss rate: 0.01%
```
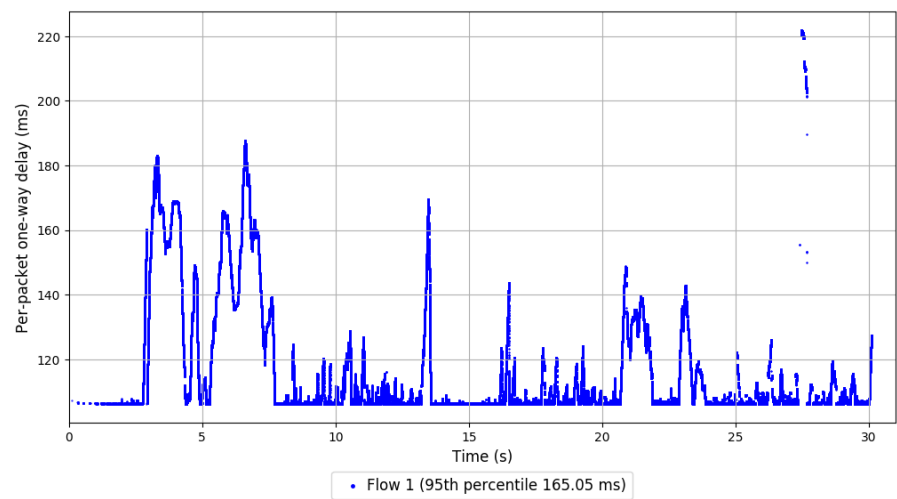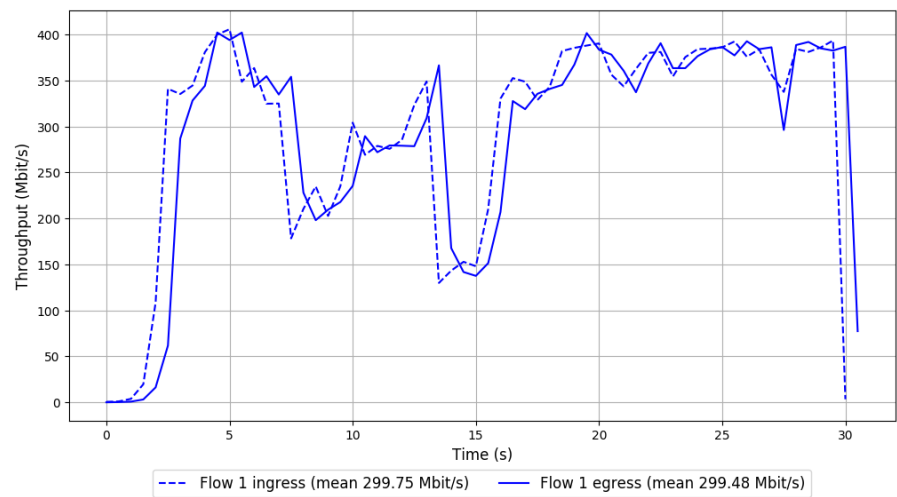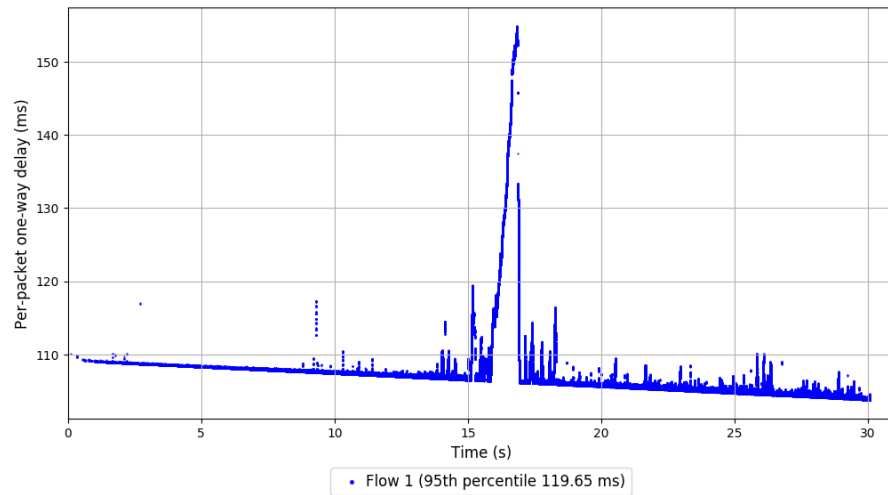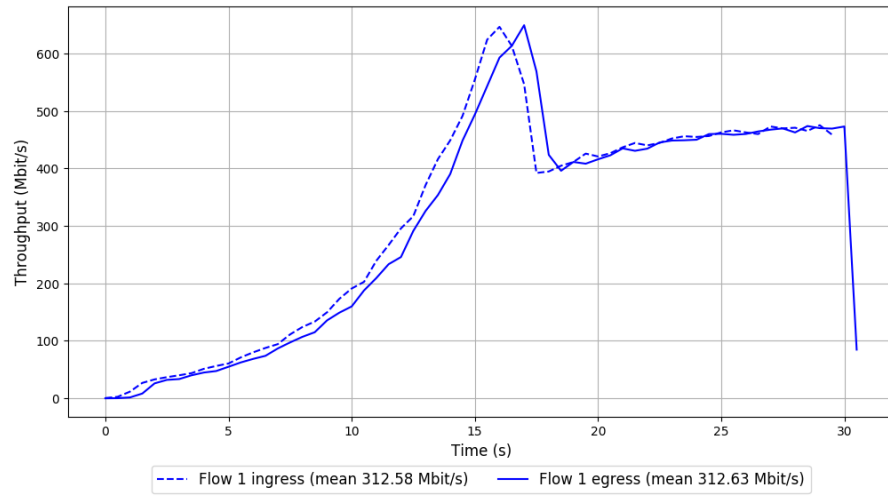
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-12-11 04:33:00
End at: 2019-12-11 04:33:31
Local clock offset: 8.387 ms
Remote clock offset: 11.445 ms

# Below is generated by plot.py at 2019-12-11 06:08:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 277.92 Mbit/s
95th percentile per-packet one-way delay: 133.863 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 277.92 Mbit/s
95th percentile per-packet one-way delay: 133.863 ms
Loss rate: 0.02%
```
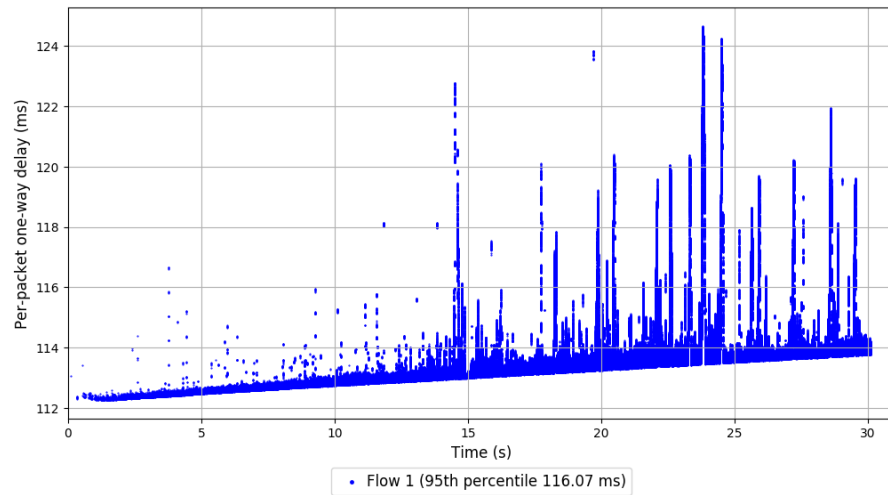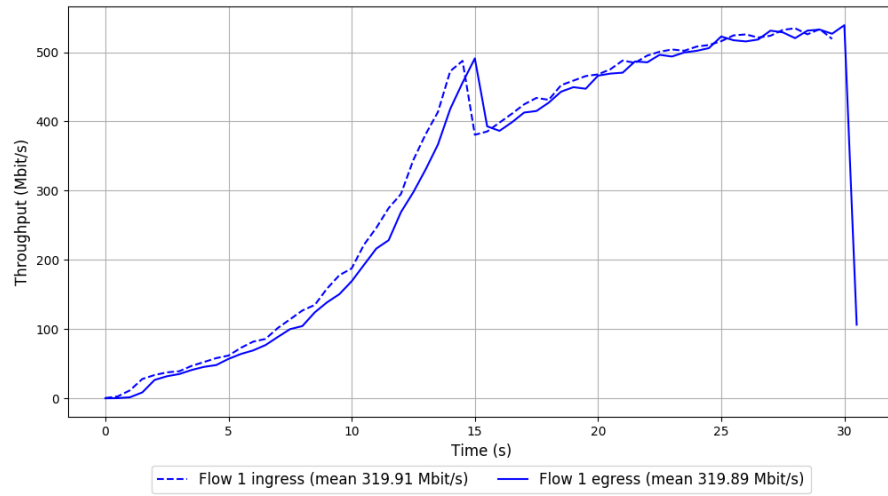
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2019-12-11 05:08:35
End at: 2019-12-11 05:09:05
Local clock offset: 3.811 ms
Remote clock offset: 4.591 ms


# Below is generated by plot.py at 2019-12-11 06:08:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 299.48 Mbit/s
95th percentile per-packet one-way delay: 165.049 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 299.48 Mbit/s
95th percentile per-packet one-way delay: 165.049 ms
Loss rate: 0.08%
```
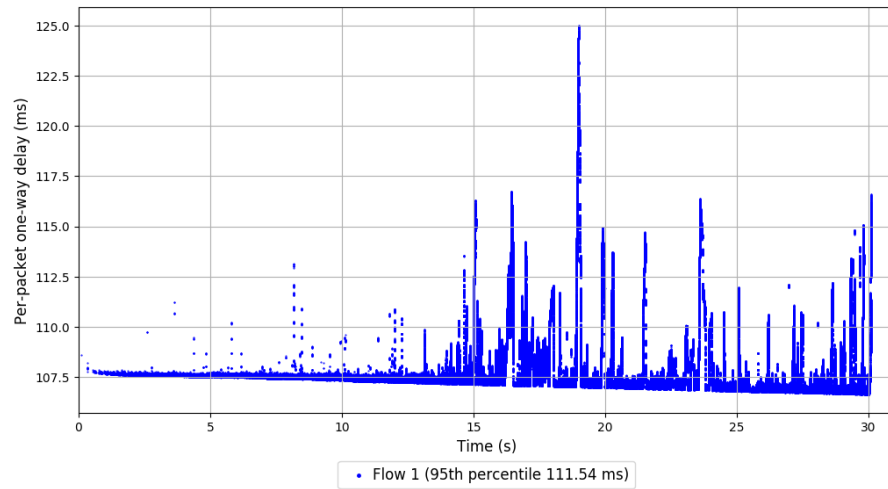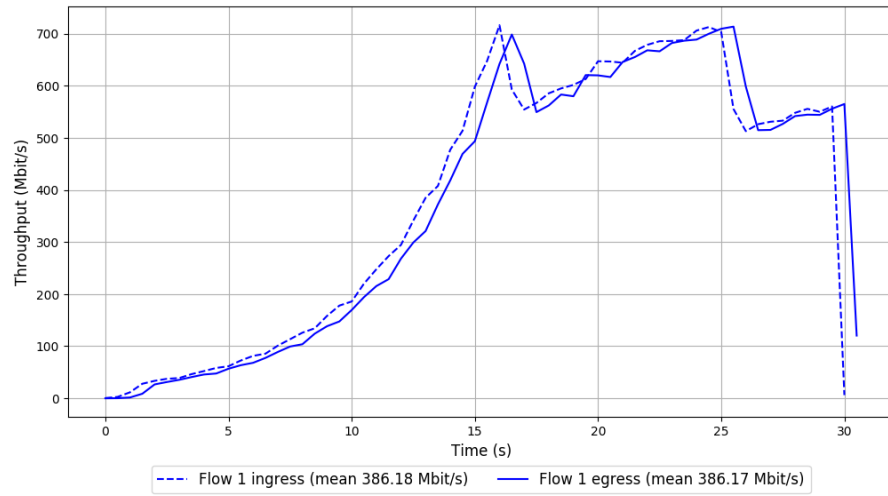
Run 5: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2019-12-11 02:45:19
End at: 2019-12-11 02:45:49
Local clock offset: 8.588 ms
Remote clock offset: 47.544 ms


# Below is generated by plot.py at 2019-12-11 06:08:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 312.63 Mbit/s
95th percentile per-packet one-way delay: 119.646 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 312.63 Mbit/s
95th percentile per-packet one-way delay: 119.646 ms
Loss rate: 0.01%
```
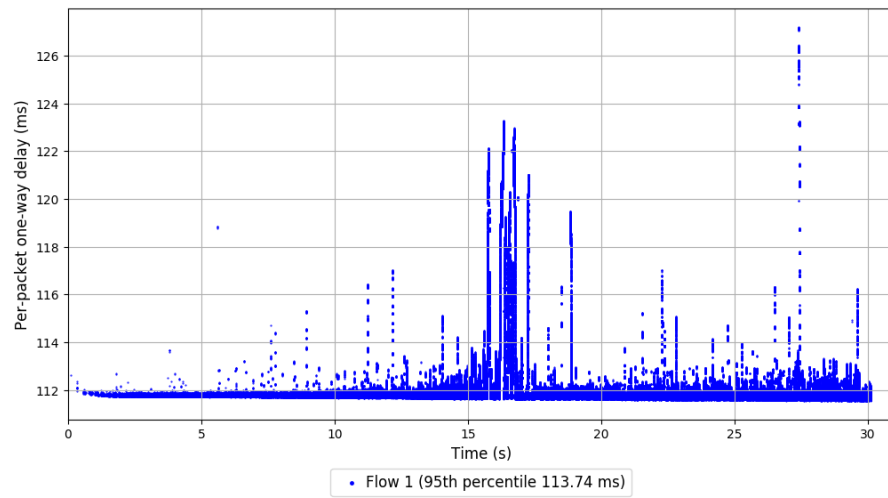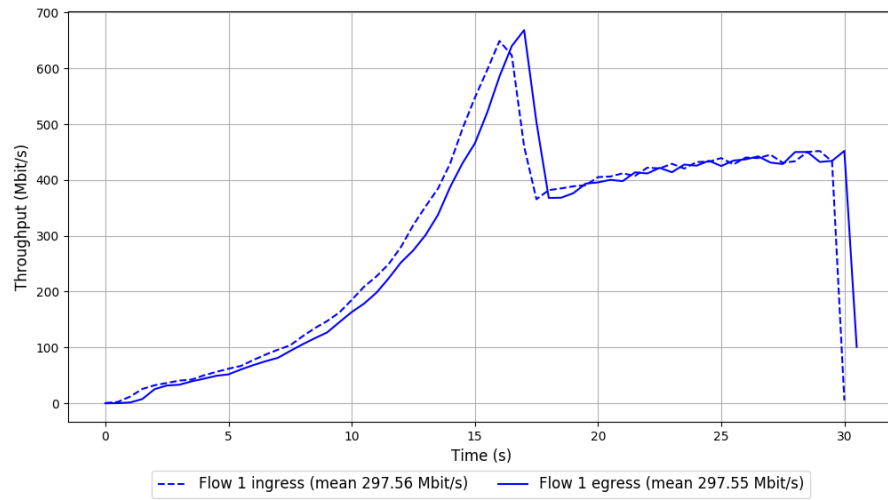
Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 312.58 Mbit/s)   Flow 1 egress (mean 312.63 Mbit/s)

Flow 1 (95th percentile 119.65 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2019-12-11 03:21:07
End at: 2019-12-11 03:21:37
Local clock offset: 20.302 ms
Remote clock offset: 33.463 ms


# Below is generated by plot.py at 2019-12-11 06:08:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 319.89 Mbit/s
95th percentile per-packet one-way delay: 116.072 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 319.89 Mbit/s
95th percentile per-packet one-way delay: 116.072 ms
Loss rate: 0.01%
```

Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-12-11 03:56:21
End at: 2019-12-11 03:56:51
Local clock offset: 18.677 ms
Remote clock offset: 36.519 ms


# Below is generated by plot.py at 2019-12-11 06:08:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 386.17 Mbit/s
95th percentile per-packet one-way delay: 111.538 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 386.17 Mbit/s
95th percentile per-packet one-way delay: 111.538 ms
Loss rate: 0.00%
```
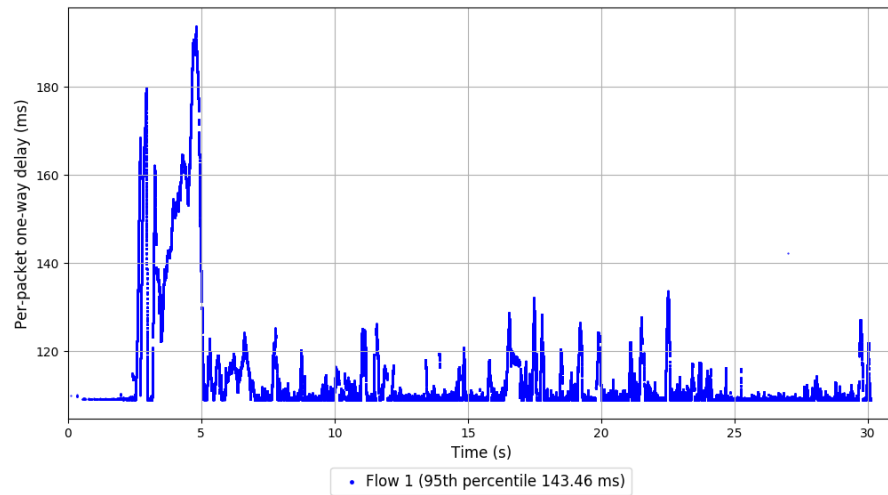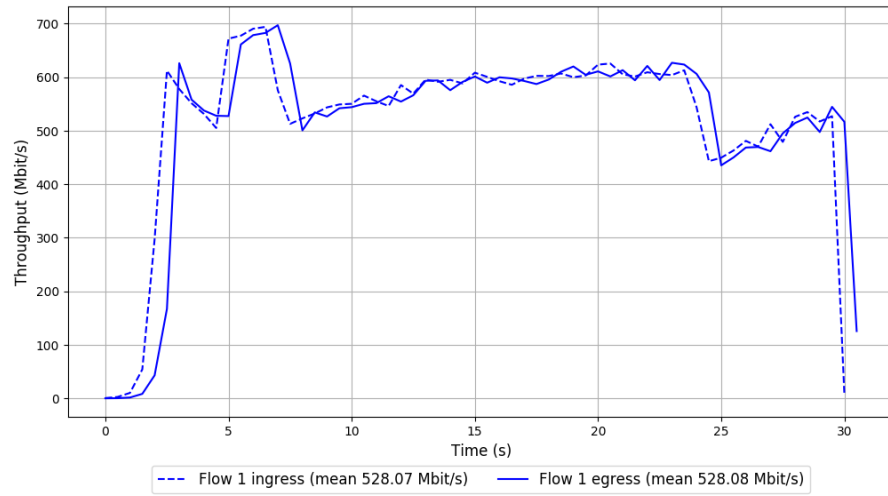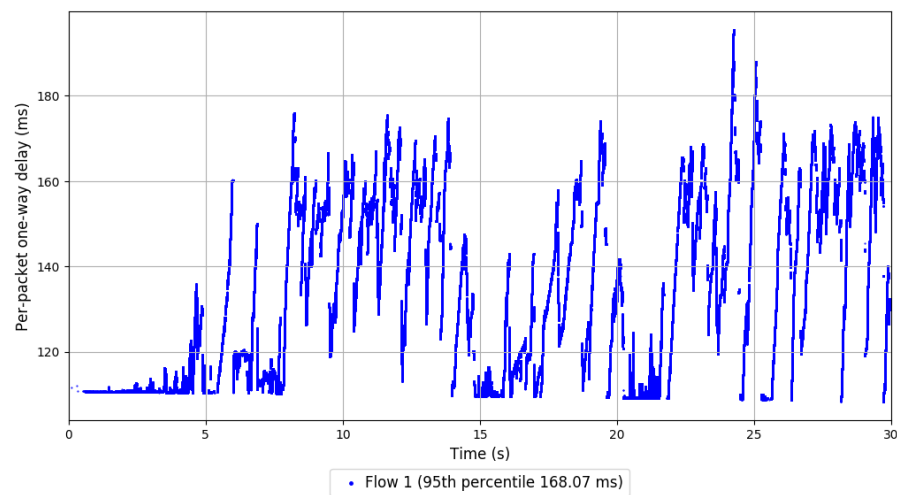
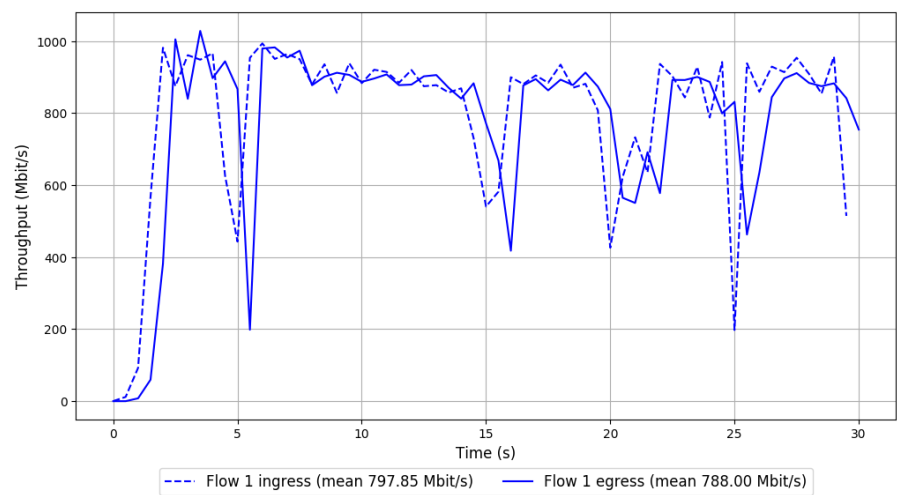Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2019-12-11 04:31:35
End at: 2019-12-11 04:32:05
Local clock offset: 8.862 ms
Remote clock offset: 11.474 ms


# Below is generated by plot.py at 2019-12-11 06:08:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 297.55 Mbit/s
95th percentile per-packet one-way delay: 113.737 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 297.55 Mbit/s
95th percentile per-packet one-way delay: 113.737 ms
Loss rate: 0.01%
```

Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 297.56 Mbit/s)   Flow 1 egress (mean 297.55 Mbit/s)

Flow 1 (95th percentile 113.74 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-12-11 05:06:57
End at: 2019-12-11 05:07:27
Local clock offset: 3.956 ms
Remote clock offset: 4.824 ms


# Below is generated by plot.py at 2019-12-11 06:12:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 528.08 Mbit/s
95th percentile per-packet one-way delay: 143.457 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 528.08 Mbit/s
95th percentile per-packet one-way delay: 143.457 ms
Loss rate: 0.00%
```

Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 528.07 Mbit/s)   Flow 1 egress (mean 528.08 Mbit/s)
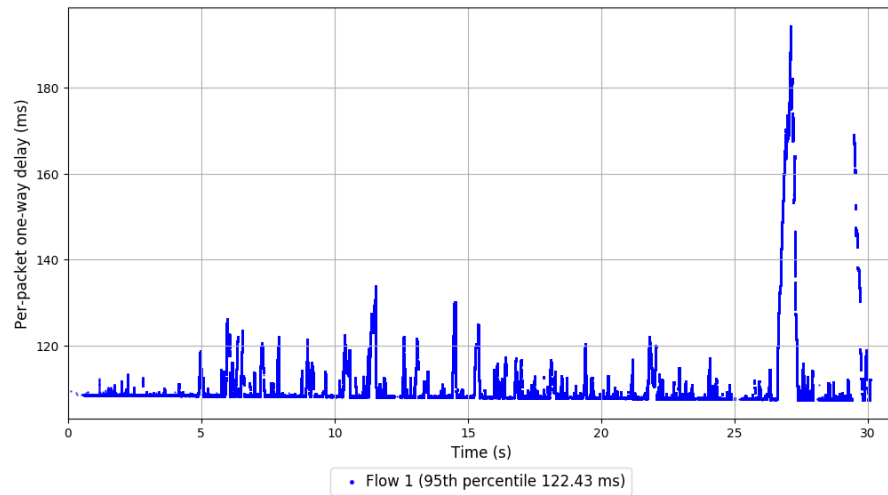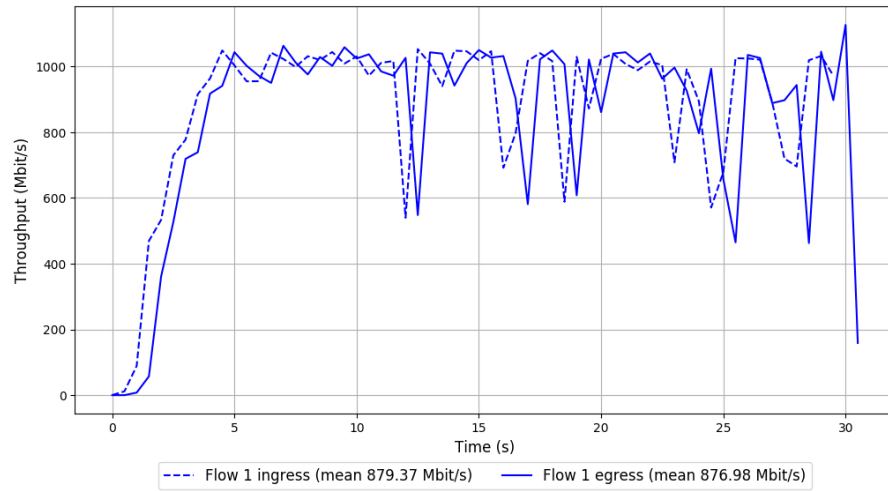

Flow 1 (95th percentile 143.46 ms)

```
Run 1: Statistics of FillP

Start at: 2019-12-11 02:43:36
End at: 2019-12-11 02:44:06
Local clock offset: 6.264 ms
Remote clock offset: 31.973 ms


# Below is generated by plot.py at 2019-12-11 06:22:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 788.00 Mbit/s
95th percentile per-packet one-way delay: 168.071 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 788.00 Mbit/s
95th percentile per-packet one-way delay: 168.071 ms
Loss rate: 1.26%
```

Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 797.85 Mbit/s)   Flow 1 egress (mean 788.00 Mbit/s)

• Flow 1 (95th percentile 168.07 ms)

```
Run 2: Statistics of FillP

Start at: 2019-12-11 03:19:19
End at: 2019-12-11 03:19:49
Local clock offset: 20.264 ms
Remote clock offset: 43.024 ms


# Below is generated by plot.py at 2019-12-11 06:24:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 891.70 Mbit/s
95th percentile per-packet one-way delay: 137.539 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 891.70 Mbit/s
95th percentile per-packet one-way delay: 137.539 ms
Loss rate: 0.32%
```
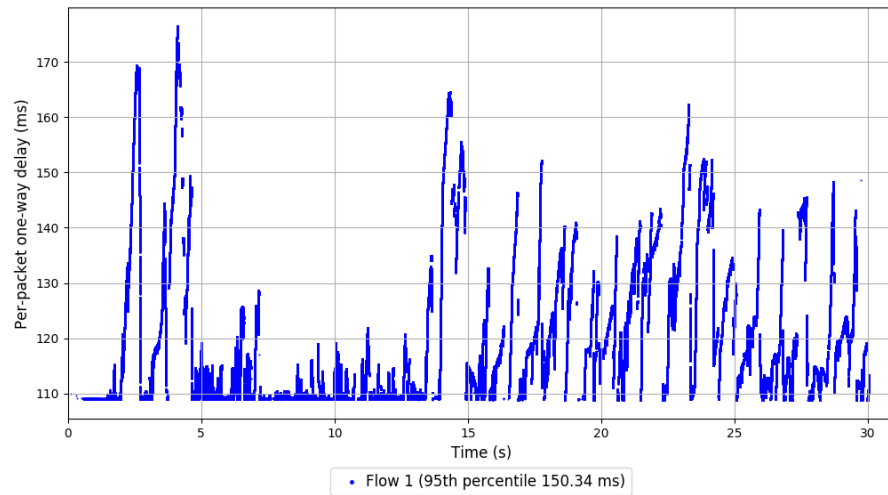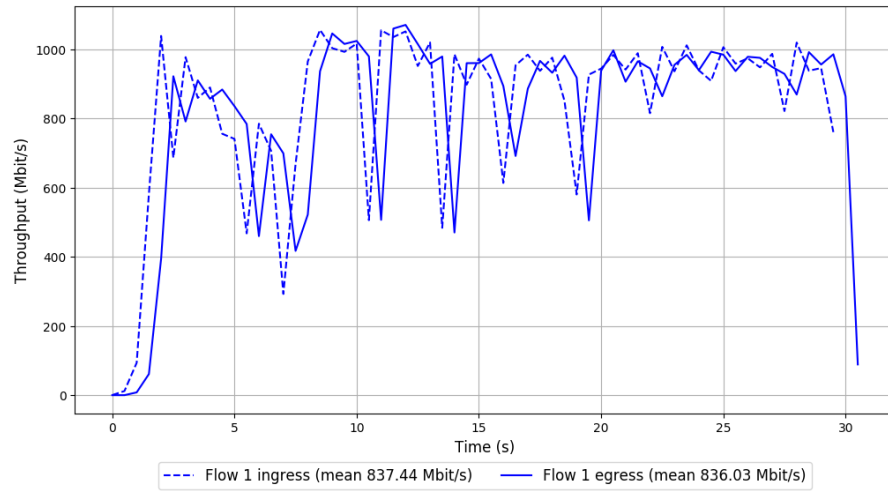
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-12-11 03:54:34
End at: 2019-12-11 03:55:04
Local clock offset: 20.62 ms
Remote clock offset: 34.511 ms


# Below is generated by plot.py at 2019-12-11 06:25:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 876.98 Mbit/s
95th percentile per-packet one-way delay: 122.428 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 876.98 Mbit/s
95th percentile per-packet one-way delay: 122.428 ms
Loss rate: 0.28%
```
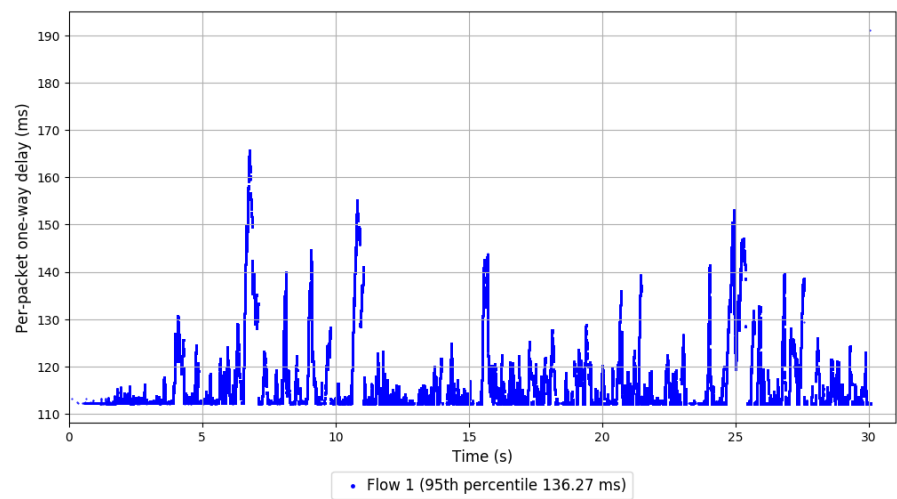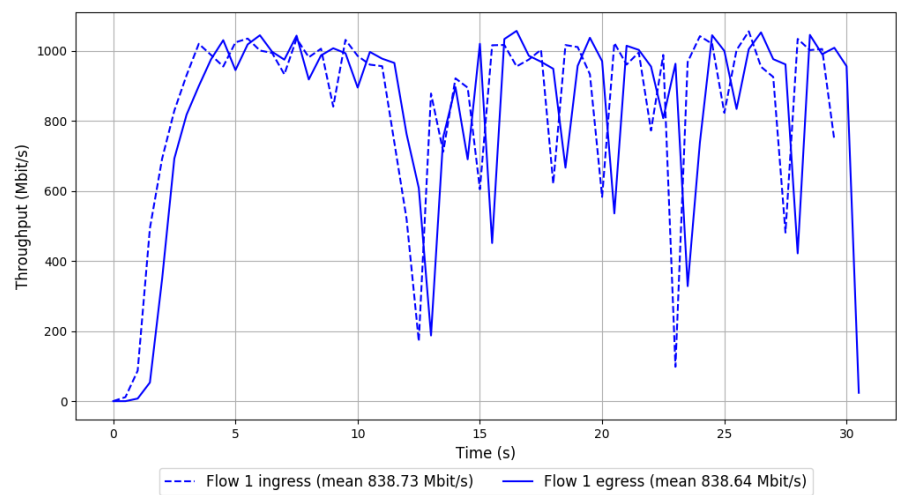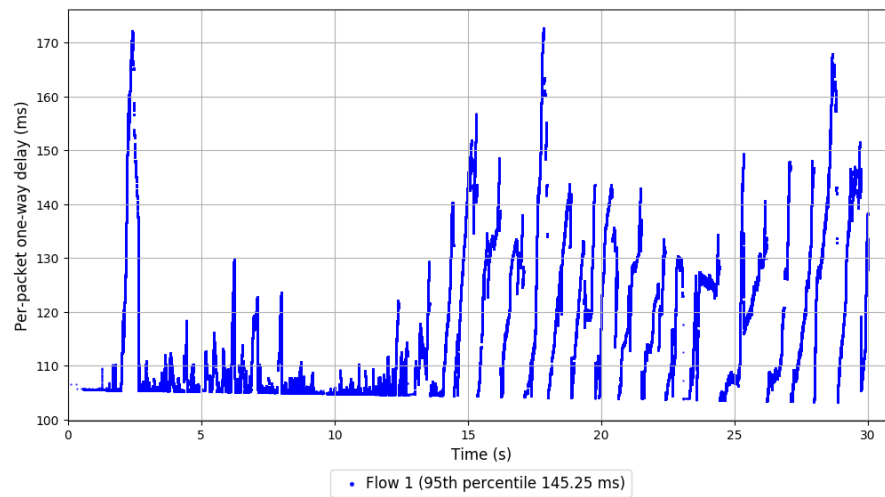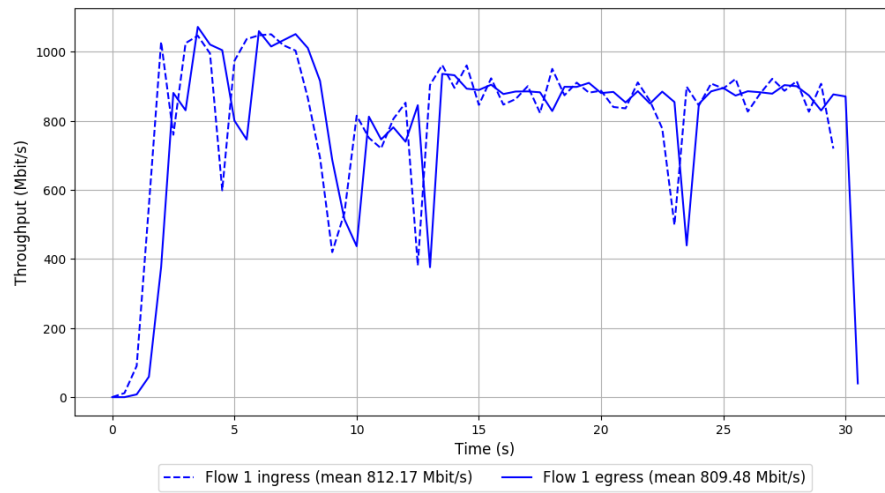
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 879.37 Mbit/s)   Flow 1 egress (mean 876.98 Mbit/s)

• Flow 1 (95th percentile 122.43 ms)

40

```
Run 4: Statistics of FillP

Start at: 2019-12-11 04:29:48
End at: 2019-12-11 04:30:18
Local clock offset: 9.588 ms
Remote clock offset: 11.53 ms


# Below is generated by plot.py at 2019-12-11 06:25:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 836.03 Mbit/s
95th percentile per-packet one-way delay: 150.341 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 836.03 Mbit/s
95th percentile per-packet one-way delay: 150.341 ms
Loss rate: 0.17%
```
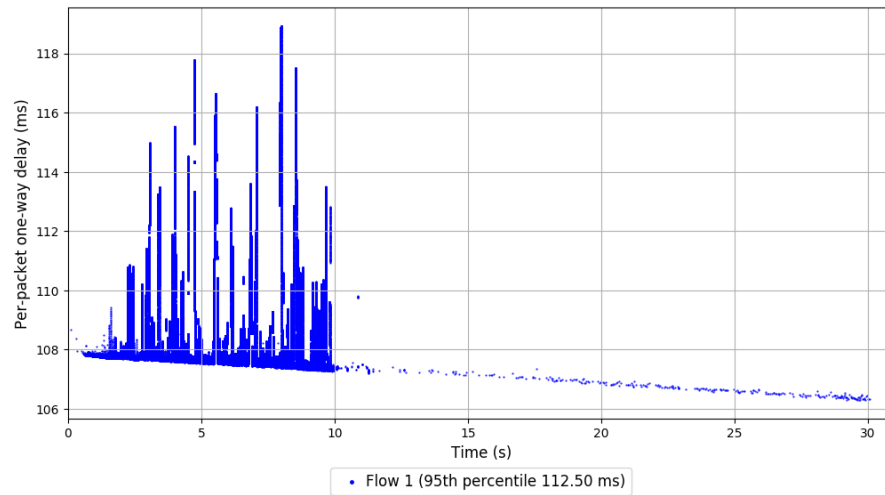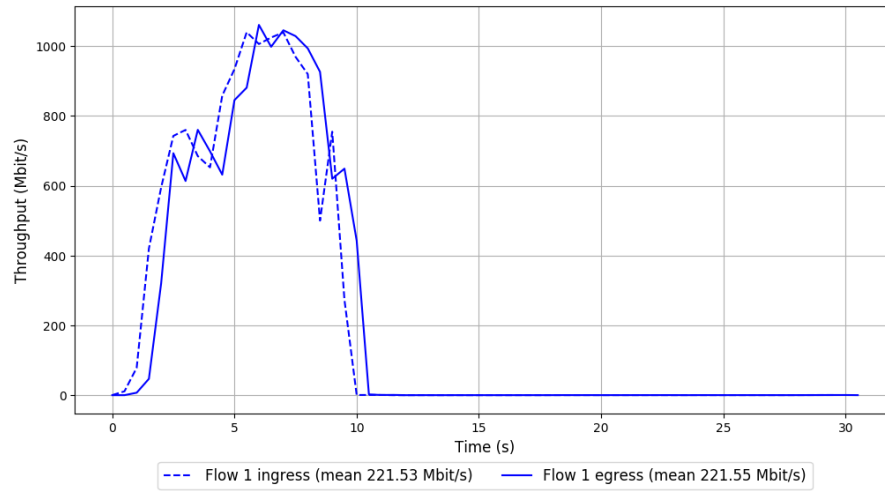
Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 837.44 Mbit/s)   Flow 1 egress (mean 836.03 Mbit/s)

Flow 1 (95th percentile 150.34 ms)

```
Run 5: Statistics of FillP

Start at: 2019-12-11 05:05:09
End at: 2019-12-11 05:05:39
Local clock offset: 4.334 ms
Remote clock offset: 4.672 ms


# Below is generated by plot.py at 2019-12-11 06:25:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 838.64 Mbit/s
95th percentile per-packet one-way delay: 136.268 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 838.64 Mbit/s
95th percentile per-packet one-way delay: 136.268 ms
Loss rate: 0.01%
```
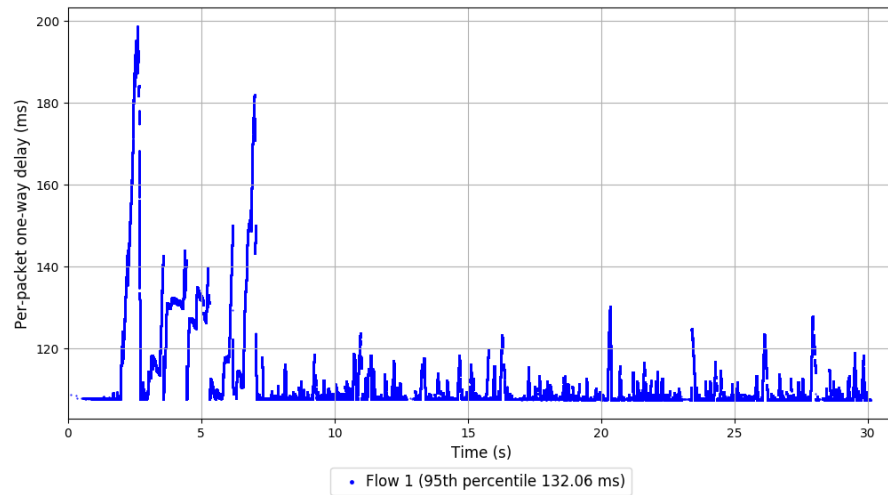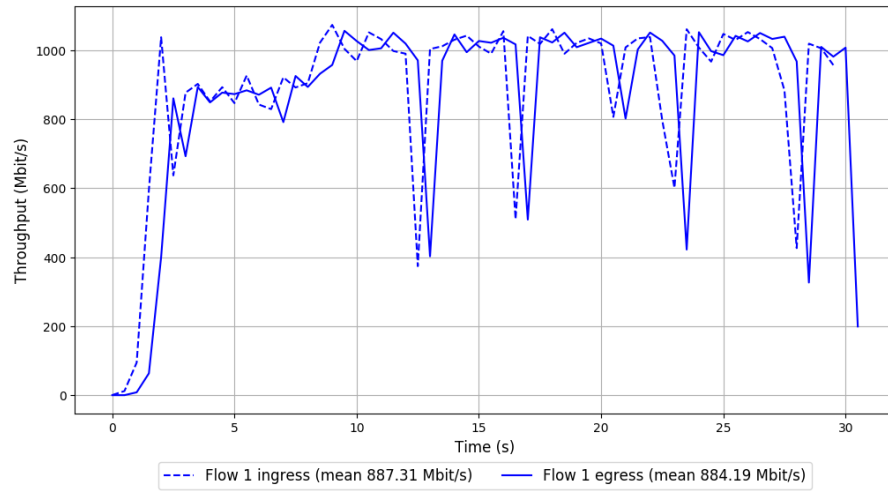
Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-12-11 03:14:19
End at: 2019-12-11 03:14:49
Local clock offset: 23.837 ms
Remote clock offset: 62.162 ms


# Below is generated by plot.py at 2019-12-11 06:25:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 809.48 Mbit/s
95th percentile per-packet one-way delay: 145.249 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 809.48 Mbit/s
95th percentile per-packet one-way delay: 145.249 ms
Loss rate: 0.33%
```

Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-12-11 03:50:17
End at: 2019-12-11 03:50:47
Local clock offset: 28.973 ms
Remote clock offset: 30.094 ms


# Below is generated by plot.py at 2019-12-11 06:25:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.55 Mbit/s
95th percentile per-packet one-way delay: 112.501 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.55 Mbit/s
95th percentile per-packet one-way delay: 112.501 ms
Loss rate: 0.00%
```
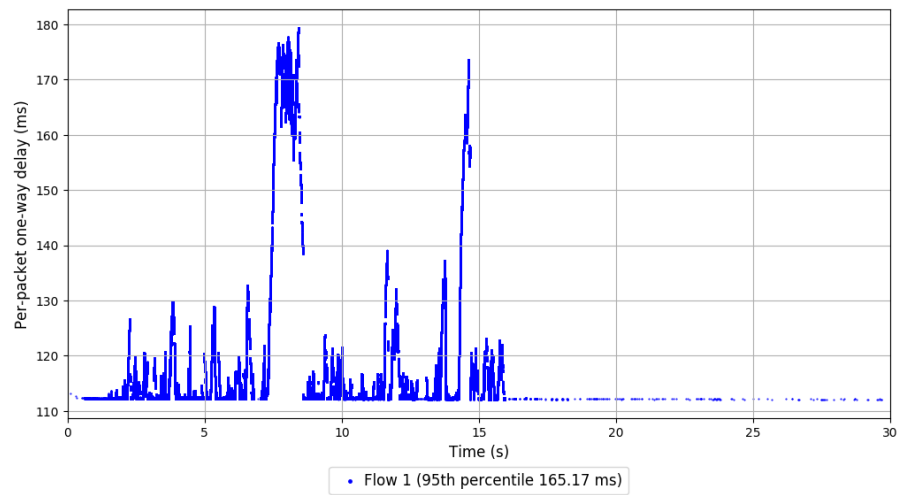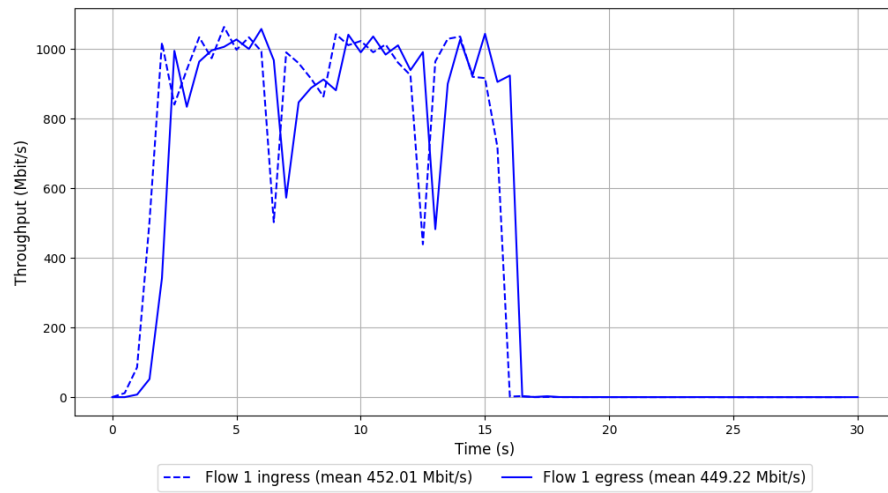
Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-12-11 04:24:58
End at: 2019-12-11 04:25:29
Local clock offset: 13.877 ms
Remote clock offset: 12.839 ms


# Below is generated by plot.py at 2019-12-11 06:32:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 884.19 Mbit/s
95th percentile per-packet one-way delay: 132.062 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 884.19 Mbit/s
95th percentile per-packet one-way delay: 132.062 ms
Loss rate: 0.36%
```
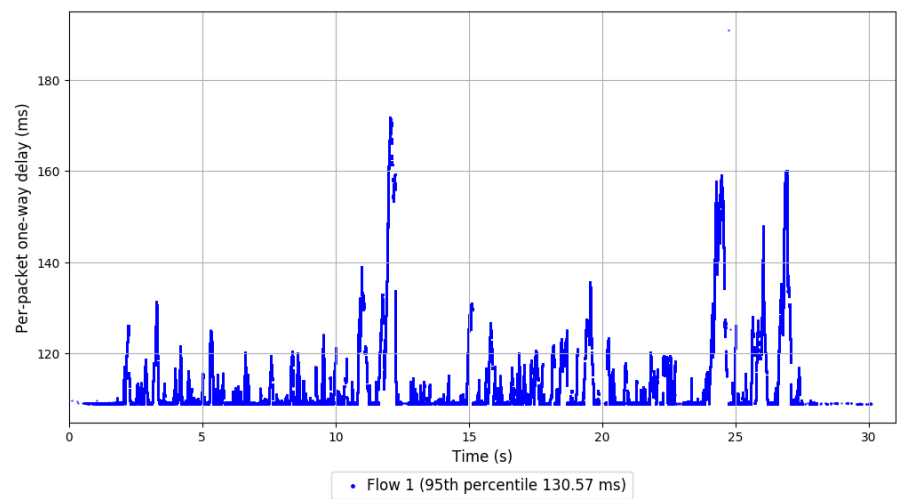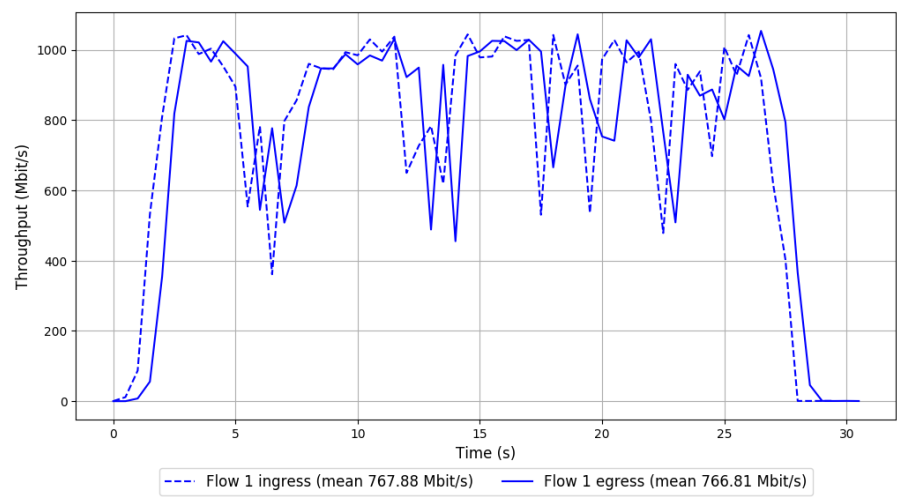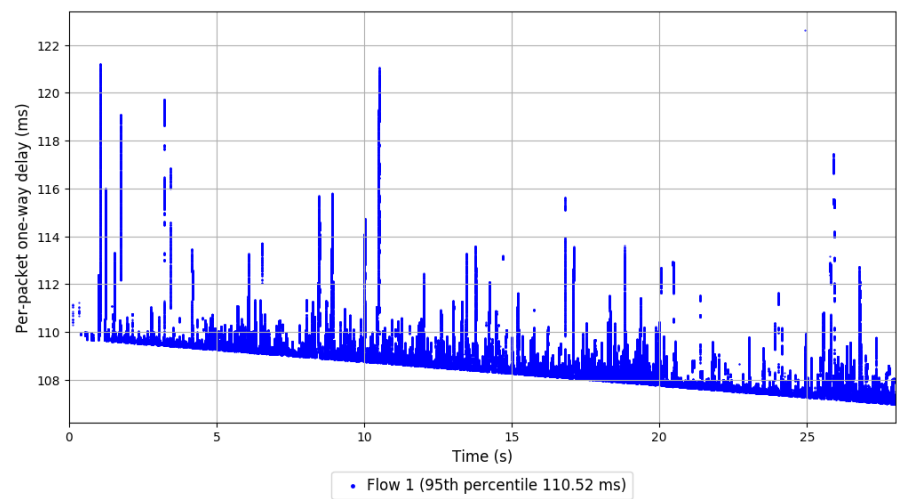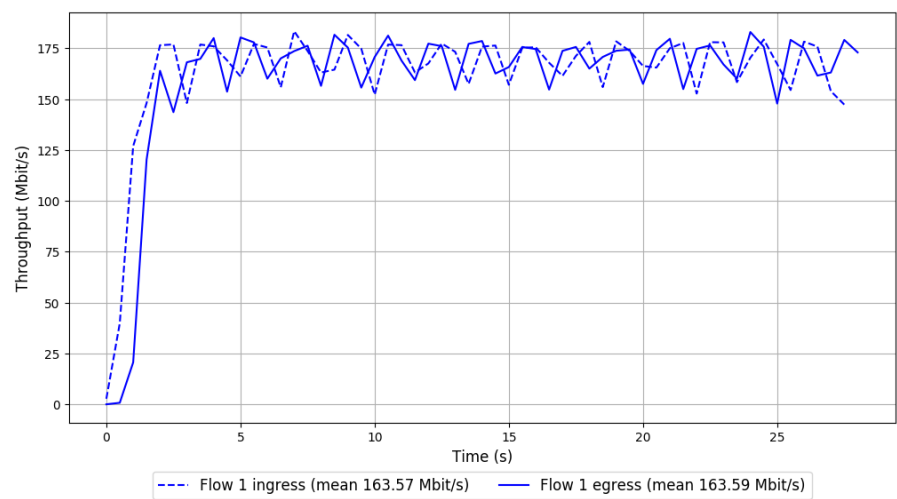
Run 3: Report of FillP-Sheep — Data Link

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-12-11 05:00:28
End at: 2019-12-11 05:00:59
Local clock offset: 5.738 ms
Remote clock offset: 4.542 ms


# Below is generated by plot.py at 2019-12-11 06:32:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 449.22 Mbit/s
95th percentile per-packet one-way delay: 165.173 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 449.22 Mbit/s
95th percentile per-packet one-way delay: 165.173 ms
Loss rate: 0.62%
```

Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 452.01 Mbit/s)   Flow 1 egress (mean 449.22 Mbit/s)

Flow 1 (95th percentile 165.17 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-12-11 05:37:04
End at: 2019-12-11 05:37:34
Local clock offset: 2.195 ms
Remote clock offset: 2.107 ms


# Below is generated by plot.py at 2019-12-11 06:38:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 766.81 Mbit/s
95th percentile per-packet one-way delay: 130.567 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 766.81 Mbit/s
95th percentile per-packet one-way delay: 130.567 ms
Loss rate: 0.14%
```
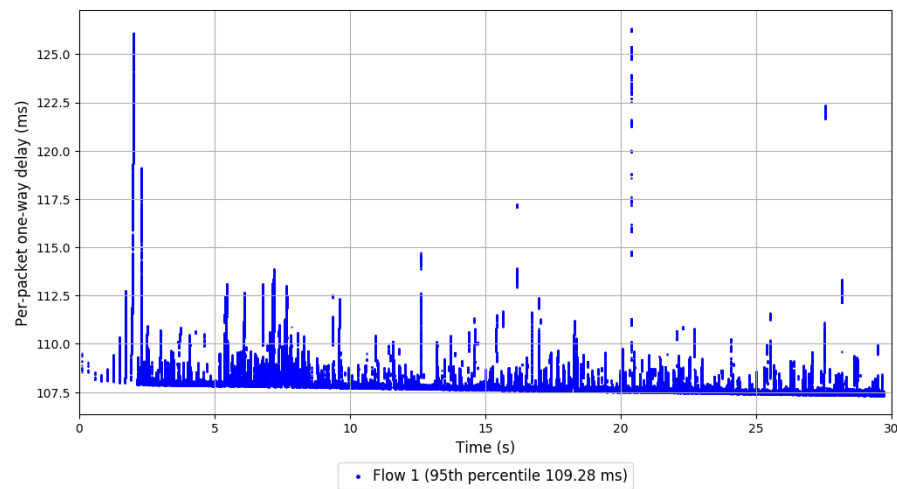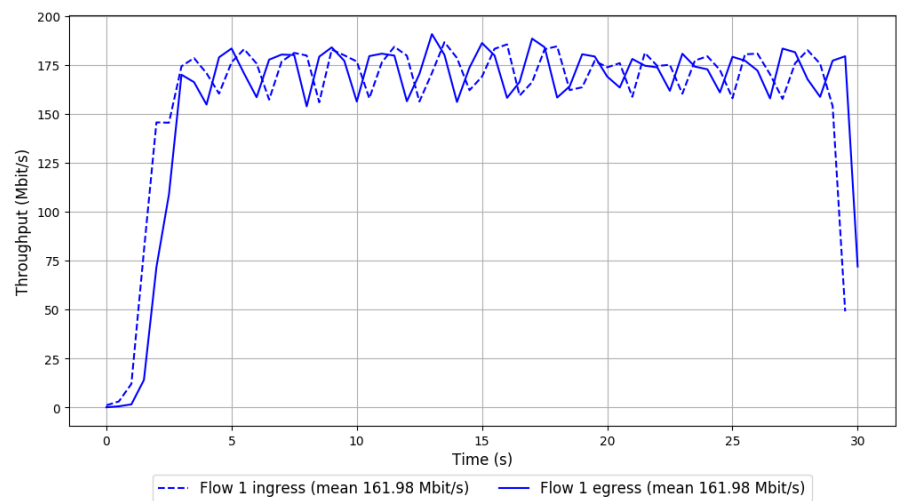
Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2019-12-11 02:54:44
End at: 2019-12-11 02:55:14
Local clock offset: 17.297 ms
Remote clock offset: 26.075 ms


# Below is generated by plot.py at 2019-12-11 06:38:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 163.59 Mbit/s
95th percentile per-packet one-way delay: 110.521 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 163.59 Mbit/s
95th percentile per-packet one-way delay: 110.521 ms
Loss rate: 0.00%
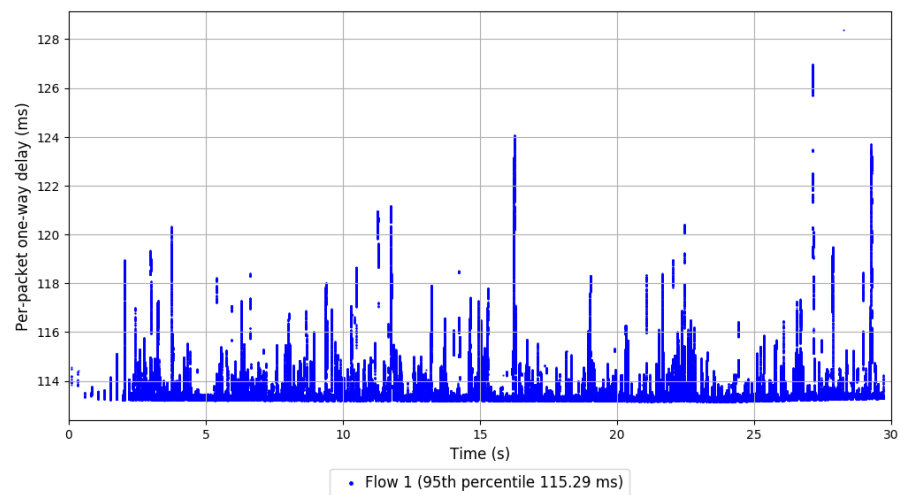```
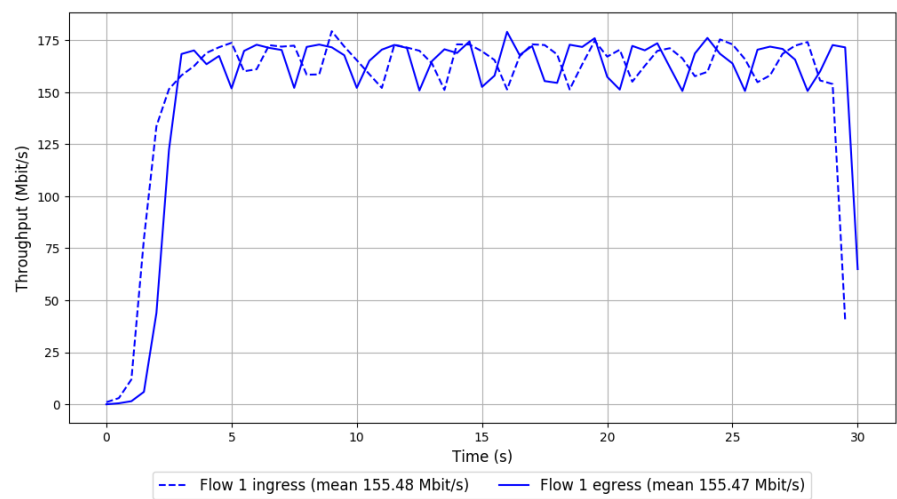
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-12-11 03:30:46
End at: 2019-12-11 03:31:16
Local clock offset: 25.143 ms
Remote clock offset: 31.537 ms


# Below is generated by plot.py at 2019-12-11 06:38:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 214.03 Mbit/s
95th percentile per-packet one-way delay: 114.042 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 214.03 Mbit/s
95th percentile per-packet one-way delay: 114.042 ms
Loss rate: 0.01%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-12-11 04:06:10
End at: 2019-12-11 04:06:40
Local clock offset: 15.747 ms
Remote clock offset: 49.516 ms


# Below is generated by plot.py at 2019-12-11 06:38:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 161.98 Mbit/s
95th percentile per-packet one-way delay: 109.282 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 161.98 Mbit/s
95th percentile per-packet one-way delay: 109.282 ms
Loss rate: 0.00%
```
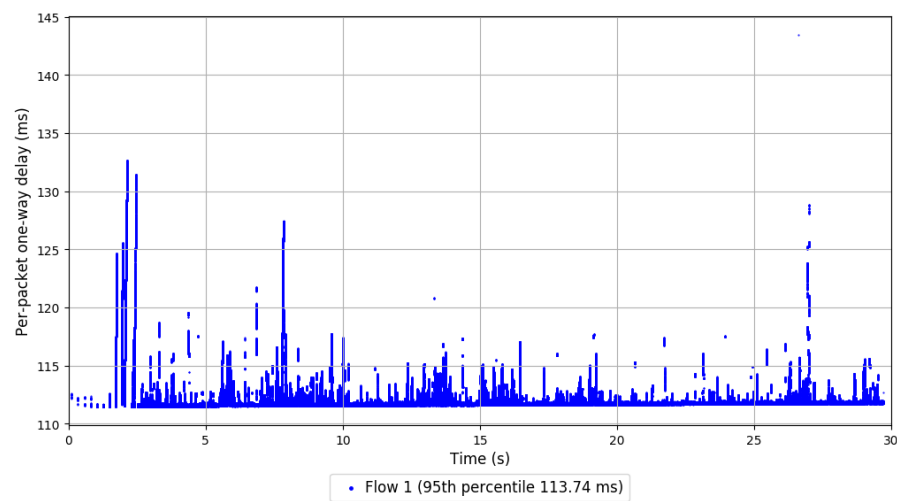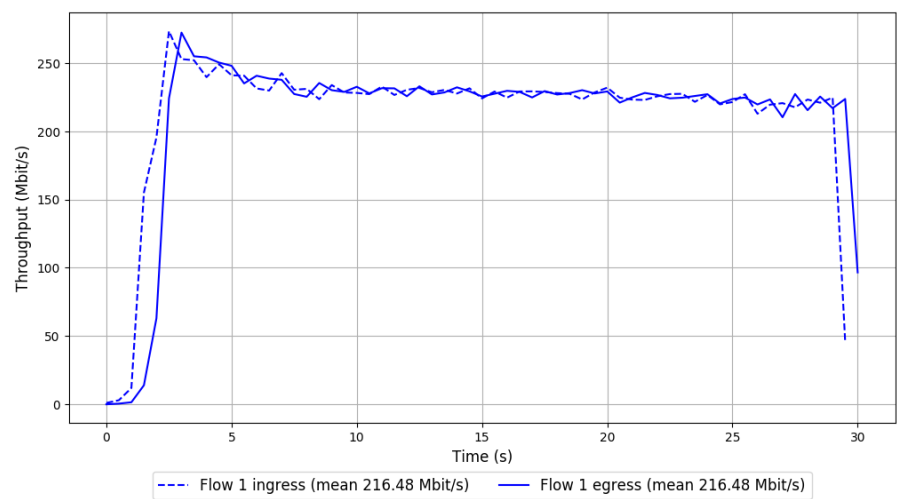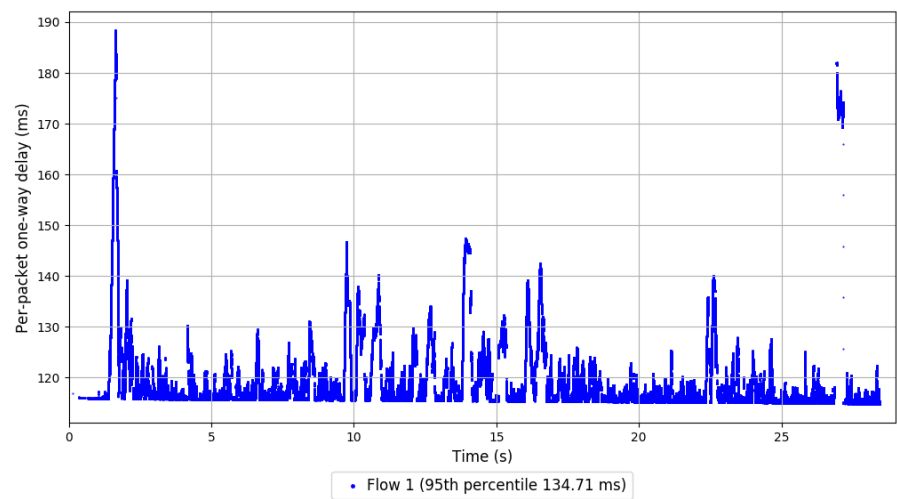
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-12-11 04:41:16
End at: 2019-12-11 04:41:46
Local clock offset: 7.761 ms
Remote clock offset: 12.804 ms


# Below is generated by plot.py at 2019-12-11 06:38:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 155.47 Mbit/s
95th percentile per-packet one-way delay: 115.294 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 155.47 Mbit/s
95th percentile per-packet one-way delay: 115.294 ms
Loss rate: 0.01%
```
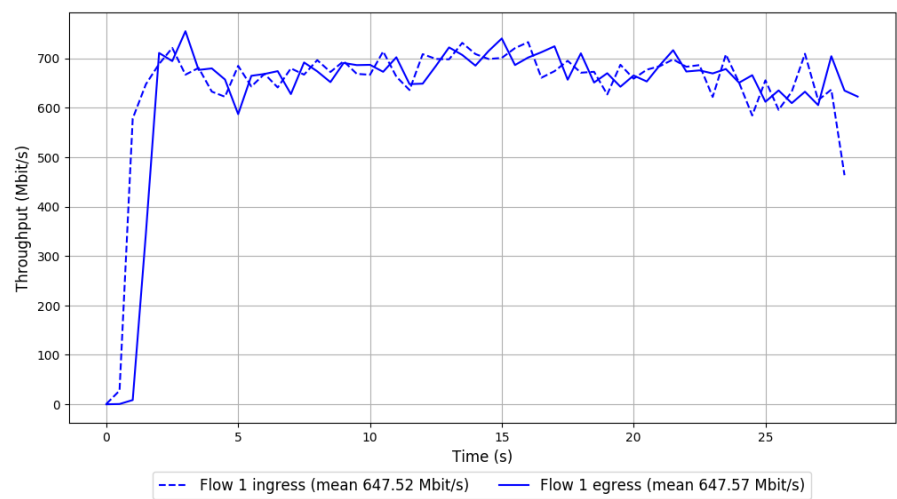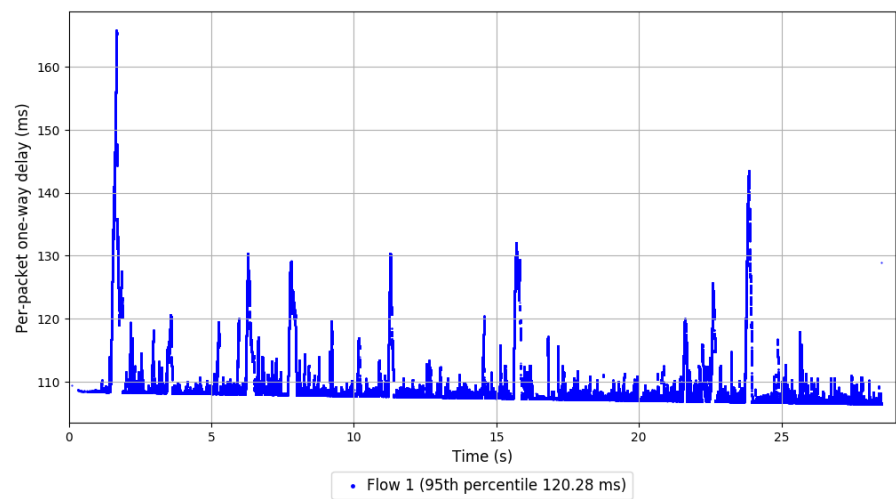
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-12-11 05:16:50
End at: 2019-12-11 05:17:20
Local clock offset: 3.734 ms
Remote clock offset: 5.33 ms


# Below is generated by plot.py at 2019-12-11 06:38:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 216.48 Mbit/s
95th percentile per-packet one-way delay: 113.741 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 216.48 Mbit/s
95th percentile per-packet one-way delay: 113.741 ms
Loss rate: 0.00%
```
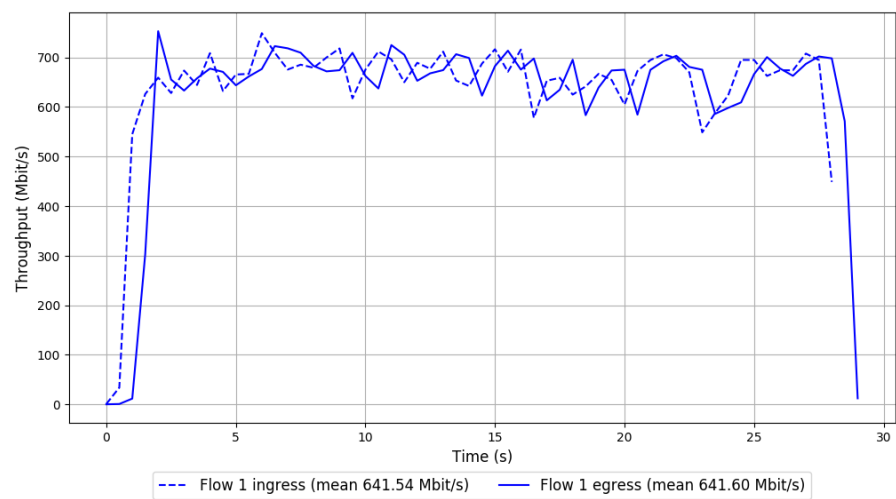
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-12-11 03:11:25
End at: 2019-12-11 03:11:55
Local clock offset: 26.036 ms
Remote clock offset: 52.217 ms


# Below is generated by plot.py at 2019-12-11 06:38:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 647.57 Mbit/s
95th percentile per-packet one-way delay: 134.711 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 647.57 Mbit/s
95th percentile per-packet one-way delay: 134.711 ms
Loss rate: 0.02%
```
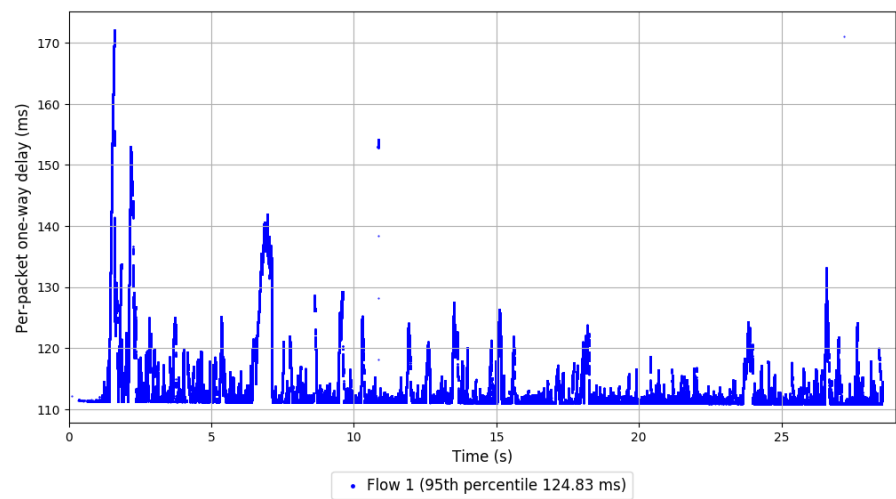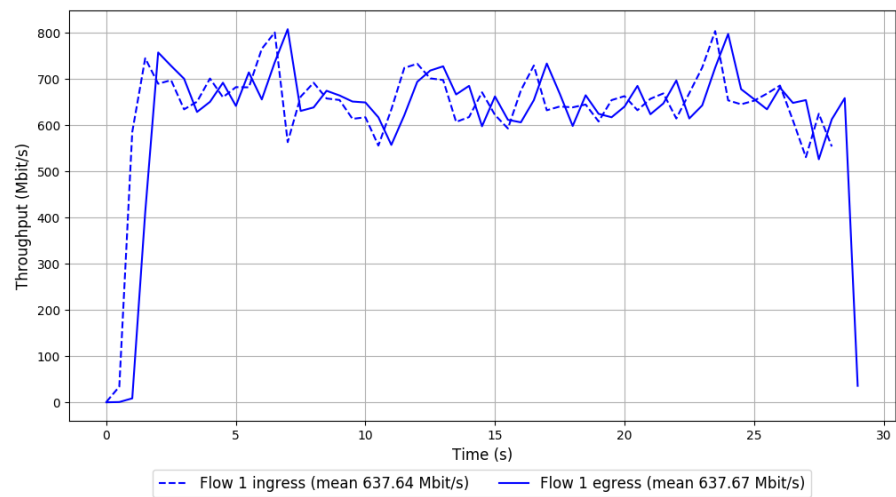
Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-12-11 03:47:04
End at: 2019-12-11 03:47:34
Local clock offset: 38.172 ms
Remote clock offset: 27.652 ms


# Below is generated by plot.py at 2019-12-11 06:40:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 641.60 Mbit/s
95th percentile per-packet one-way delay: 120.277 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 641.60 Mbit/s
95th percentile per-packet one-way delay: 120.277 ms
Loss rate: 0.00%
```
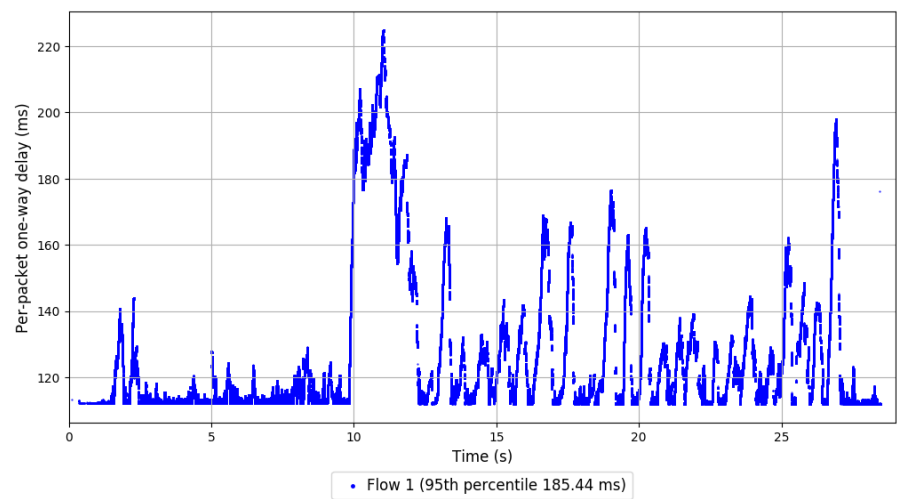
Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-12-11 04:21:47
End at: 2019-12-11 04:22:17
Local clock offset: 18.587 ms
Remote clock offset: 14.681 ms


# Below is generated by plot.py at 2019-12-11 06:41:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 637.67 Mbit/s
95th percentile per-packet one-way delay: 124.827 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 637.67 Mbit/s
95th percentile per-packet one-way delay: 124.827 ms
Loss rate: 0.01%
```
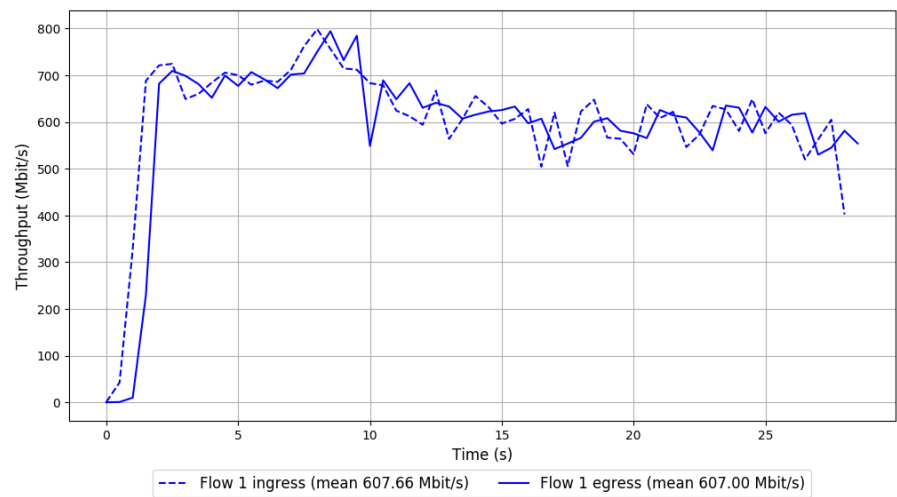
Run 3: Report of Indigo-MusesC3 — Data Link

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-12-11 04:57:35
End at: 2019-12-11 04:58:05
Local clock offset: 7.47 ms
Remote clock offset: 5.003 ms


# Below is generated by plot.py at 2019-12-11 06:41:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 607.00 Mbit/s
95th percentile per-packet one-way delay: 185.439 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 607.00 Mbit/s
95th percentile per-packet one-way delay: 185.439 ms
Loss rate: 0.12%
```
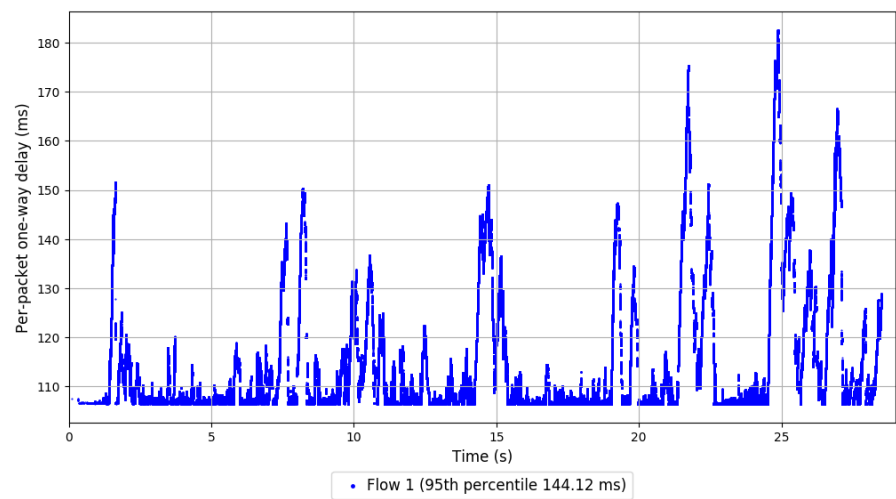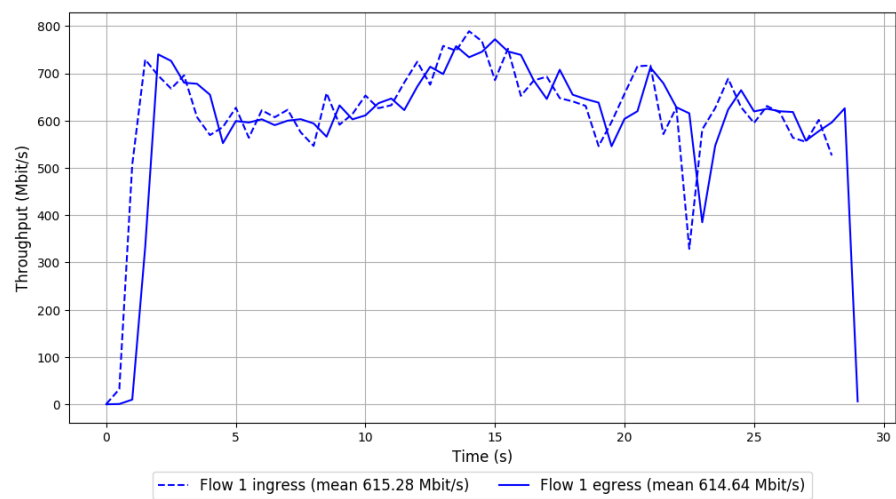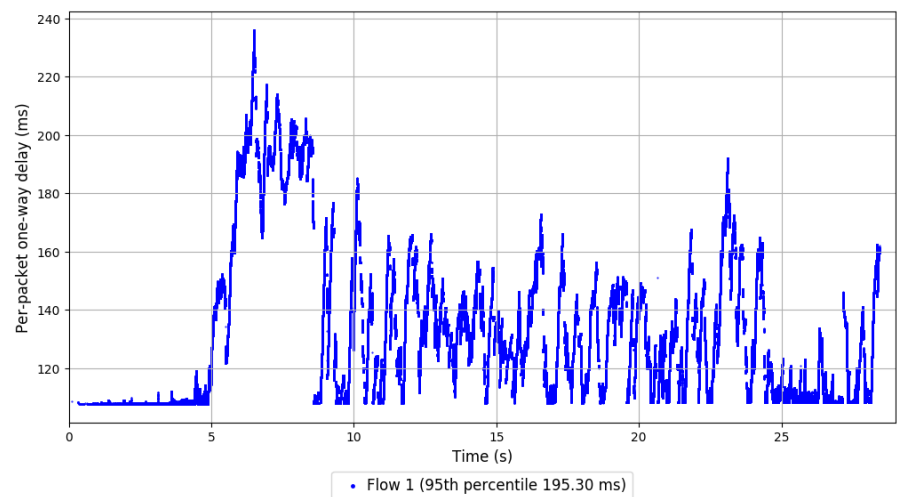
Run 4: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 607.66 Mbit/s)   Flow 1 egress (mean 607.00 Mbit/s)
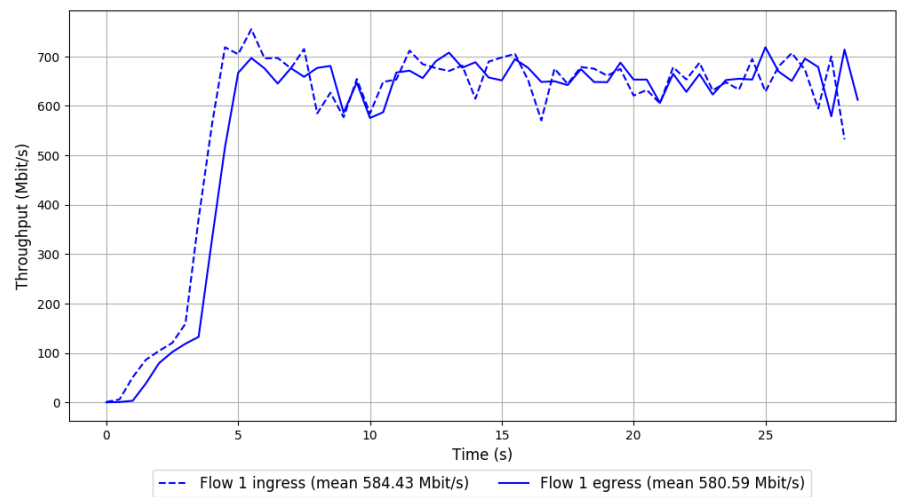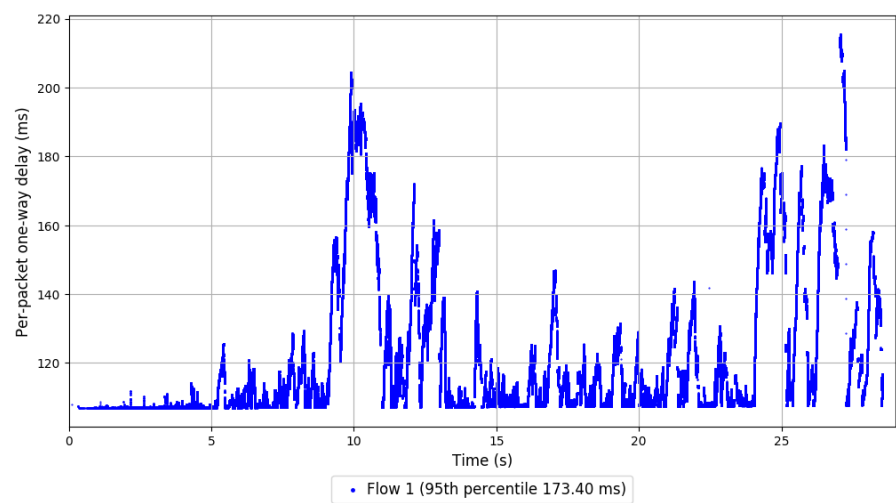

• Flow 1 (95th percentile 185.44 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-12-11 05:34:11
End at: 2019-12-11 05:34:41
Local clock offset: 2.813 ms
Remote clock offset: 2.093 ms


# Below is generated by plot.py at 2019-12-11 06:42:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 614.64 Mbit/s
95th percentile per-packet one-way delay: 144.120 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 614.64 Mbit/s
95th percentile per-packet one-way delay: 144.120 ms
Loss rate: 0.09%
```

Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 615.28 Mbit/s)   Flow 1 egress (mean 614.64 Mbit/s)
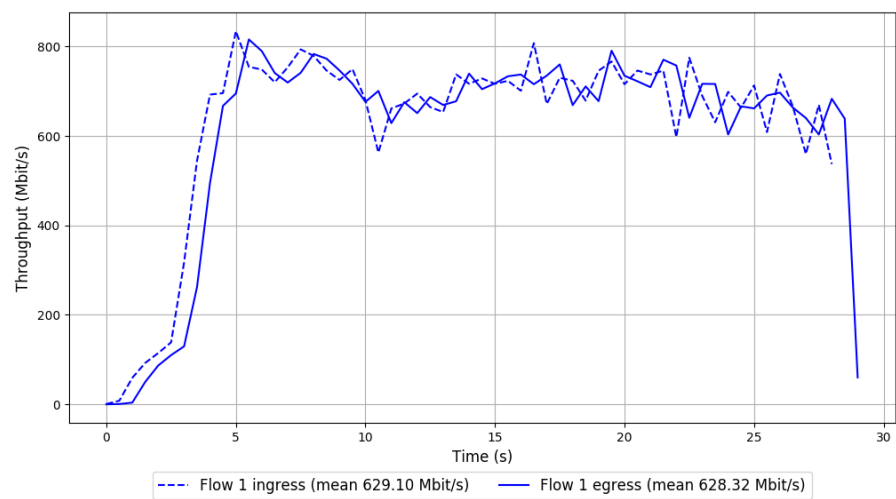

• Flow 1 (95th percentile 144.12 ms)

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-12-11 03:02:40
End at: 2019-12-11 03:03:10
Local clock offset: 14.98 ms
Remote clock offset: 35.624 ms

# Below is generated by plot.py at 2019-12-11 06:42:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 580.59 Mbit/s
95th percentile per-packet one-way delay: 195.302 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 580.59 Mbit/s
95th percentile per-packet one-way delay: 195.302 ms
Loss rate: 0.64%
```
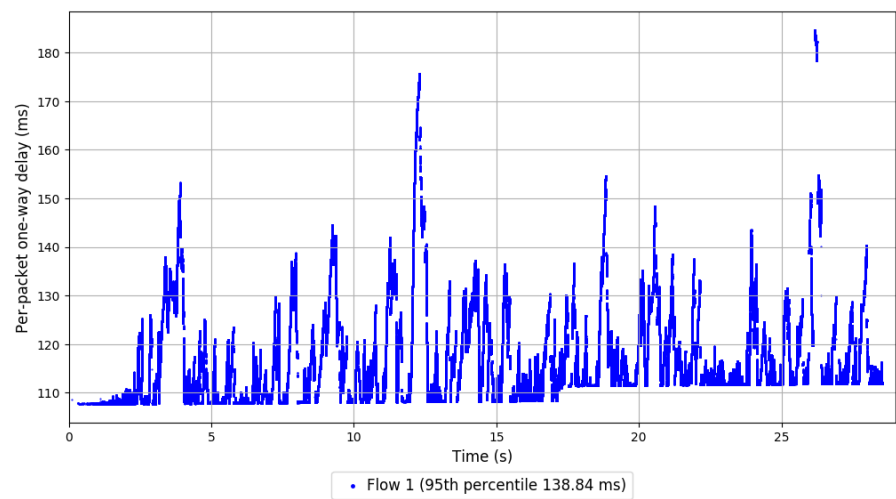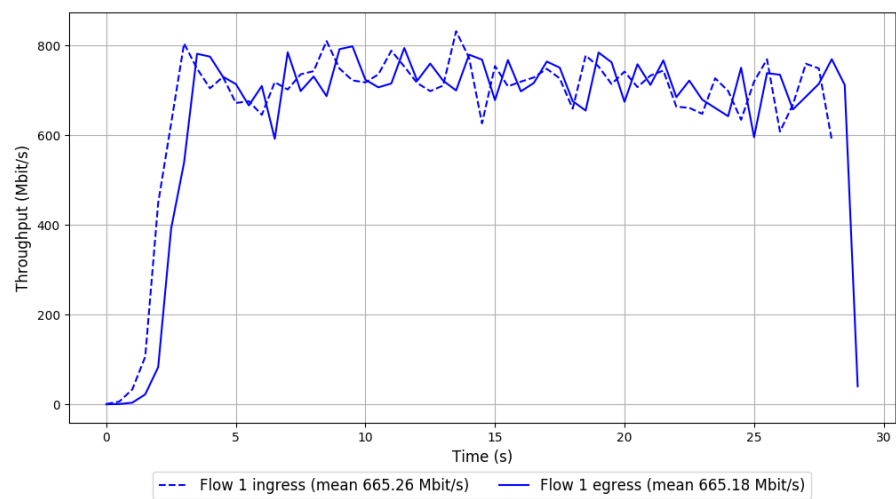
Run 1: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 584.43 Mbit/s)   Flow 1 egress (mean 580.59 Mbit/s)

• Flow 1 (95th percentile 195.30 ms)

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-12-11 03:38:25
End at: 2019-12-11 03:38:55
Local clock offset: 32.329 ms
Remote clock offset: 27.149 ms


# Below is generated by plot.py at 2019-12-11 06:44:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 628.32 Mbit/s
95th percentile per-packet one-way delay: 173.396 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 628.32 Mbit/s
95th percentile per-packet one-way delay: 173.396 ms
Loss rate: 0.11%
```
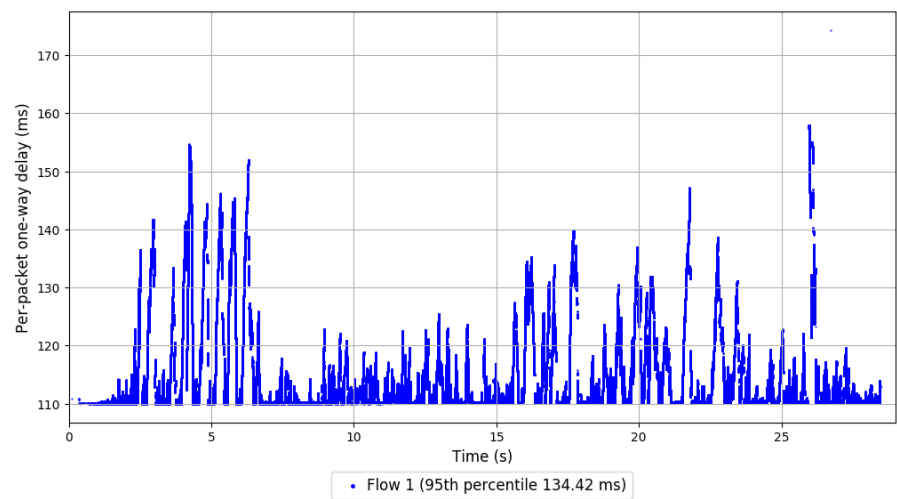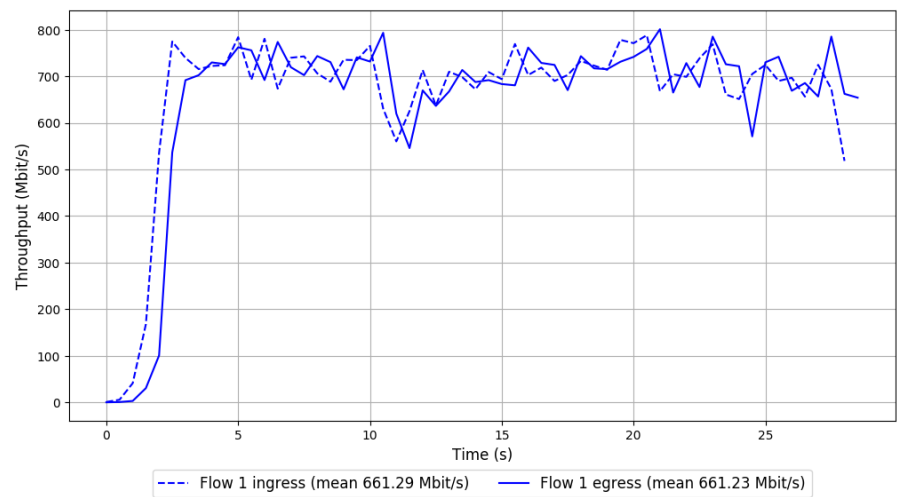
Run 2: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 629.10 Mbit/s)   Flow 1 egress (mean 628.32 Mbit/s)

• Flow 1 (95th percentile 173.40 ms)

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-12-11 04:13:52
End at: 2019-12-11 04:14:22
Local clock offset: 17.713 ms
Remote clock offset: 27.179 ms


# Below is generated by plot.py at 2019-12-11 06:49:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 665.18 Mbit/s
95th percentile per-packet one-way delay: 138.837 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 665.18 Mbit/s
95th percentile per-packet one-way delay: 138.837 ms
Loss rate: 0.00%
```
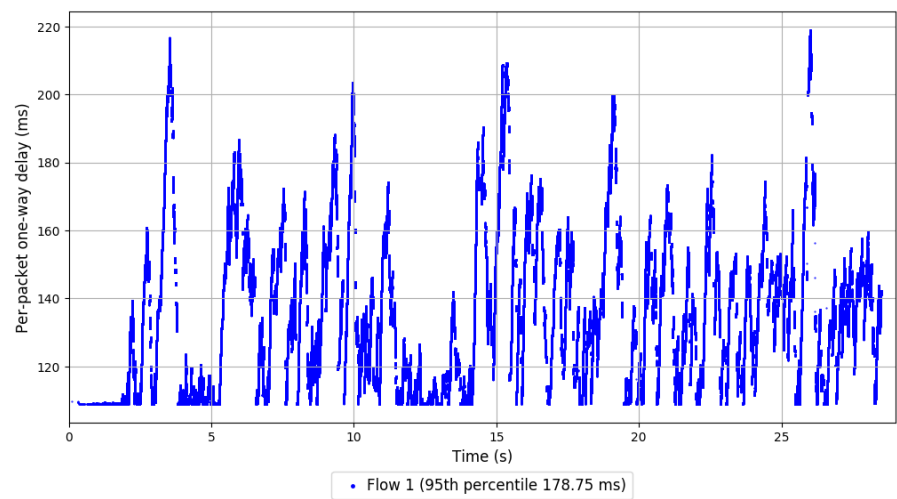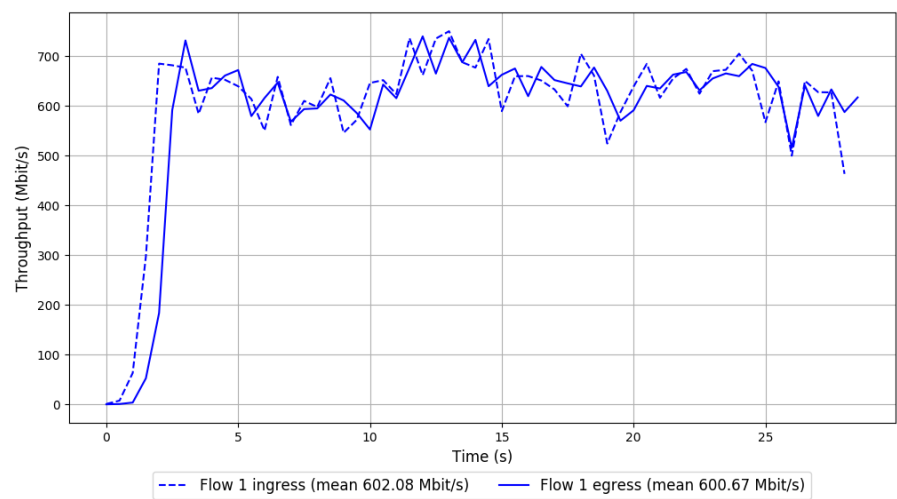
Run 3: Report of Indigo-MusesC5 — Data Link
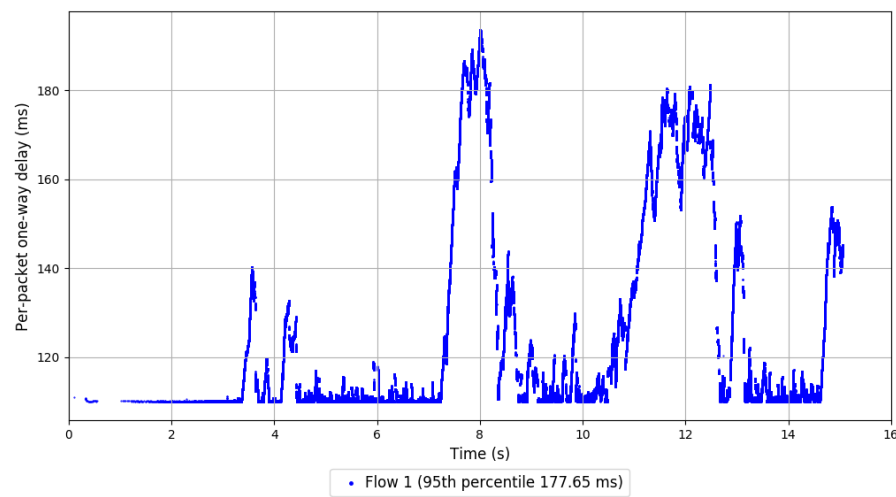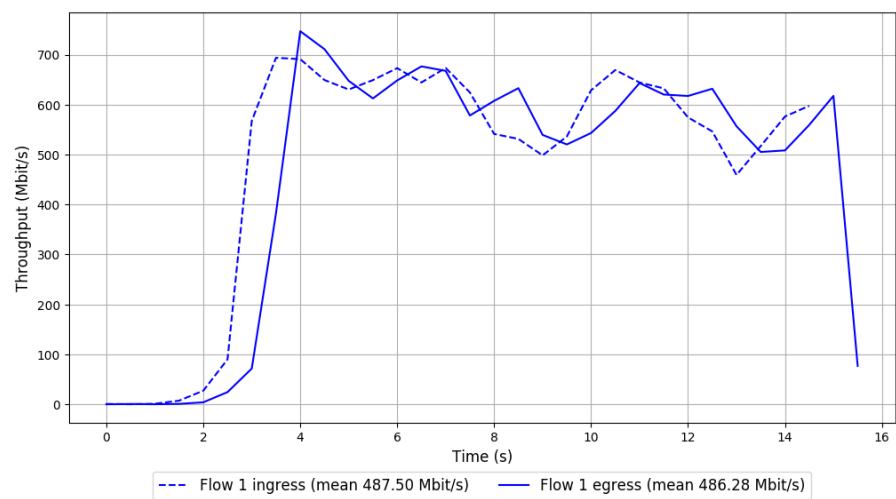
```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-12-11 04:49:18
End at: 2019-12-11 04:49:48
Local clock offset: 8.797 ms
Remote clock offset: 6.677 ms


# Below is generated by plot.py at 2019-12-11 06:50:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 661.23 Mbit/s
95th percentile per-packet one-way delay: 134.424 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 661.23 Mbit/s
95th percentile per-packet one-way delay: 134.424 ms
Loss rate: 0.01%
```

Run 4: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 661.29 Mbit/s)   Flow 1 egress (mean 661.23 Mbit/s)

• Flow 1 (95th percentile 134.42 ms)

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-12-11 05:25:07
End at: 2019-12-11 05:25:37
Local clock offset: 4.487 ms
Remote clock offset: 2.703 ms


# Below is generated by plot.py at 2019-12-11 06:50:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 600.67 Mbit/s
95th percentile per-packet one-way delay: 178.748 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 600.67 Mbit/s
95th percentile per-packet one-way delay: 178.748 ms
Loss rate: 0.23%
```
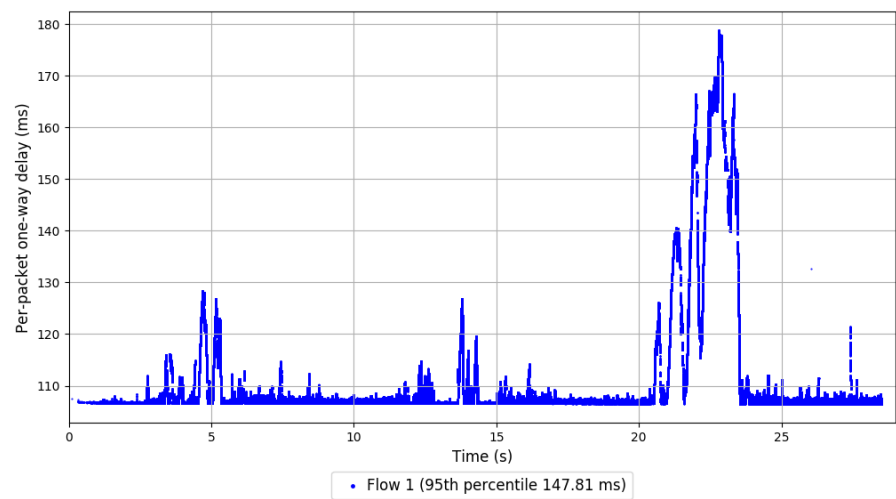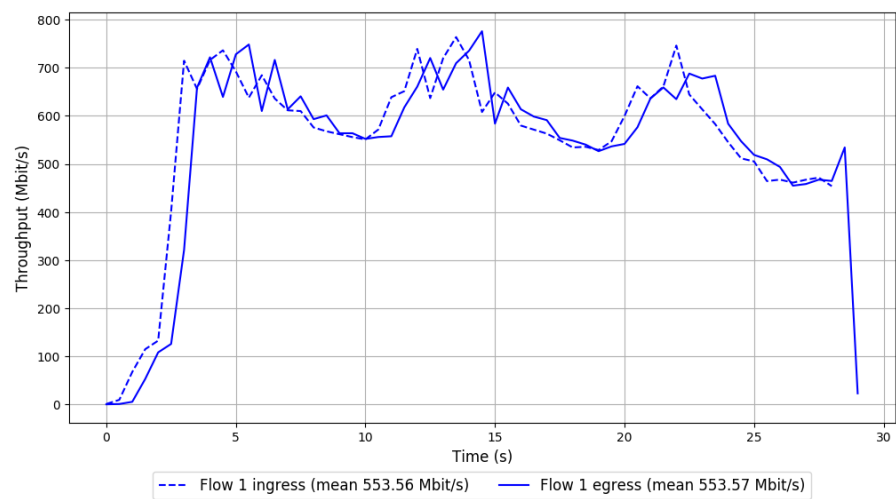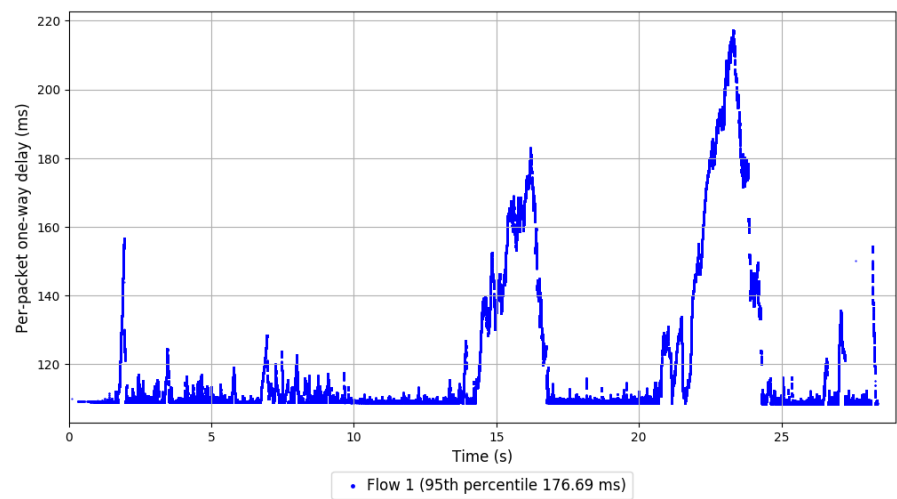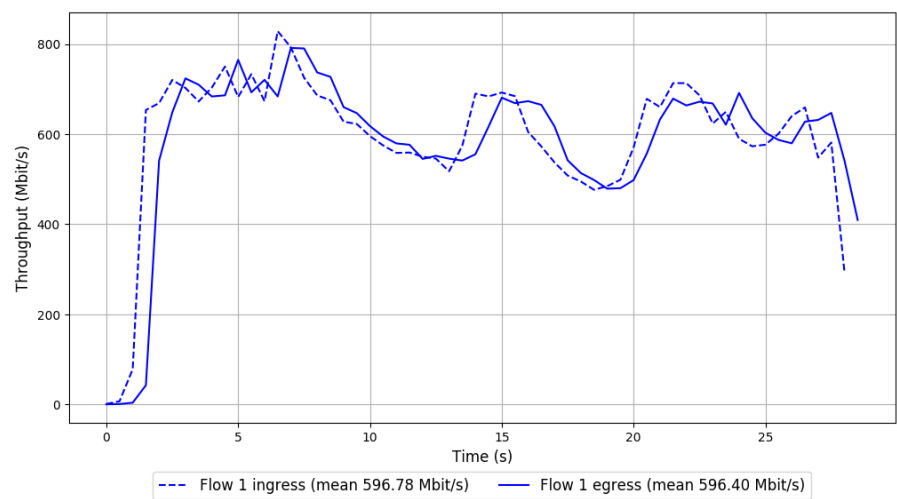
Run 5: Report of Indigo-MusesC5 — Data Link

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-12-11 02:53:21
End at: 2019-12-11 02:53:51
Local clock offset: 14.517 ms
Remote clock offset: 23.831 ms
```

Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-12-11 03:29:08
End at: 2019-12-11 03:29:39
Local clock offset: 23.89 ms
Remote clock offset: 29.095 ms


# Below is generated by plot.py at 2019-12-11 06:50:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 553.57 Mbit/s
95th percentile per-packet one-way delay: 147.810 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 553.57 Mbit/s
95th percentile per-packet one-way delay: 147.810 ms
Loss rate: 0.00%
```
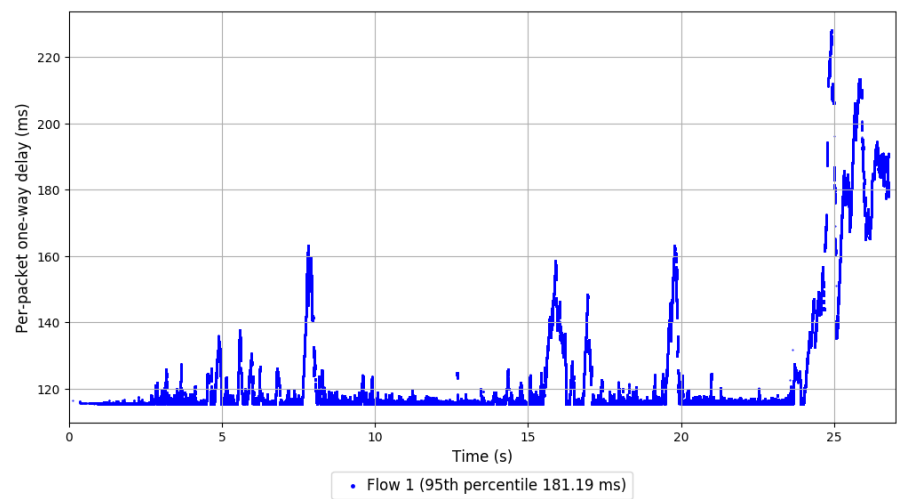
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-12-11 04:04:31
End at: 2019-12-11 04:05:01
Local clock offset: 15.542 ms
Remote clock offset: 47.439 ms


# Below is generated by plot.py at 2019-12-11 06:52:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 596.40 Mbit/s
95th percentile per-packet one-way delay: 176.690 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 596.40 Mbit/s
95th percentile per-packet one-way delay: 176.690 ms
Loss rate: 0.07%
```
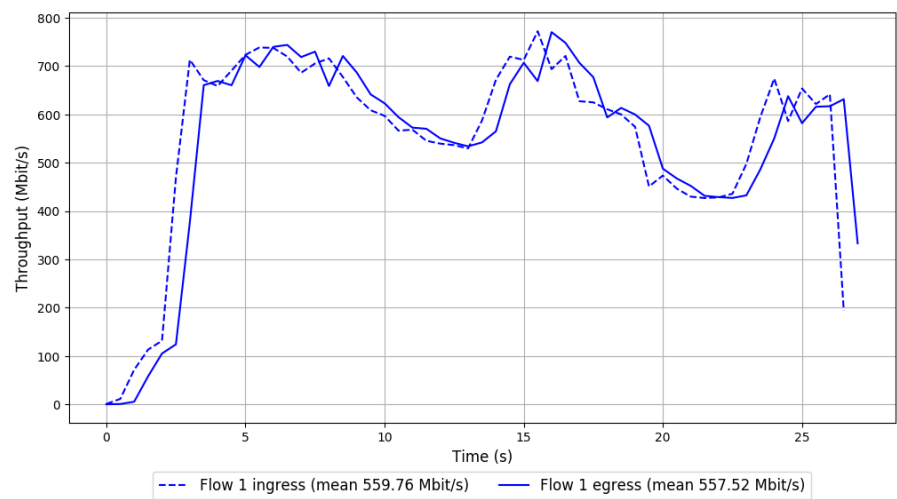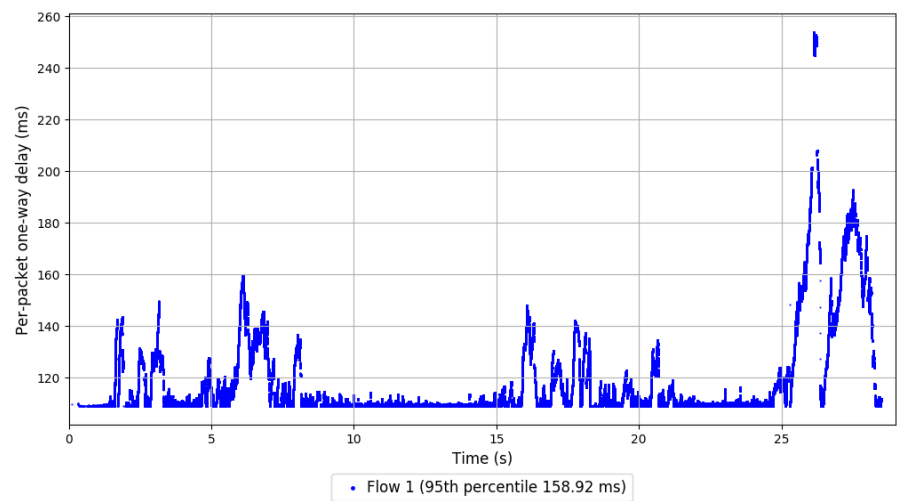
Run 3: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 596.78 Mbit/s) — — — Flow 1 egress (mean 596.40 Mbit/s)

• Flow 1 (95th percentile 176.69 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-12-11 04:39:39
End at: 2019-12-11 04:40:09
Local clock offset: 7.687 ms
Remote clock offset: 12.378 ms


# Below is generated by plot.py at 2019-12-11 06:52:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 557.52 Mbit/s
95th percentile per-packet one-way delay: 181.186 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 557.52 Mbit/s
95th percentile per-packet one-way delay: 181.186 ms
Loss rate: 0.38%
```
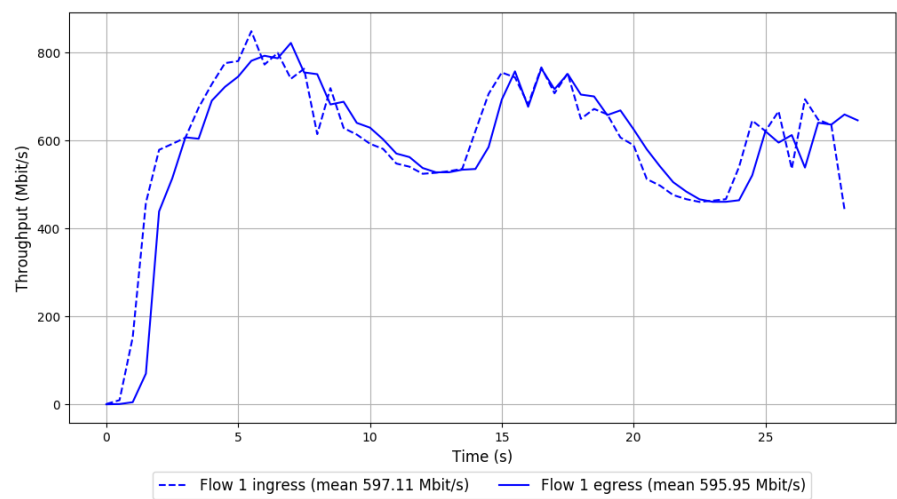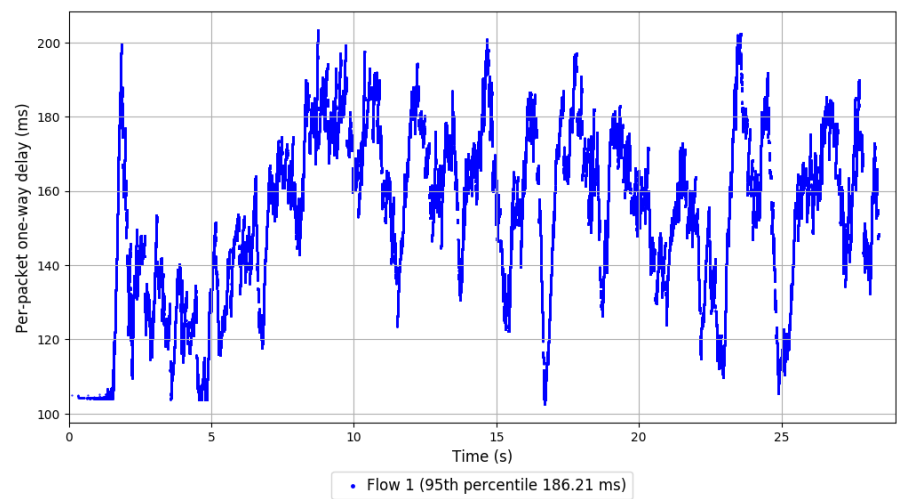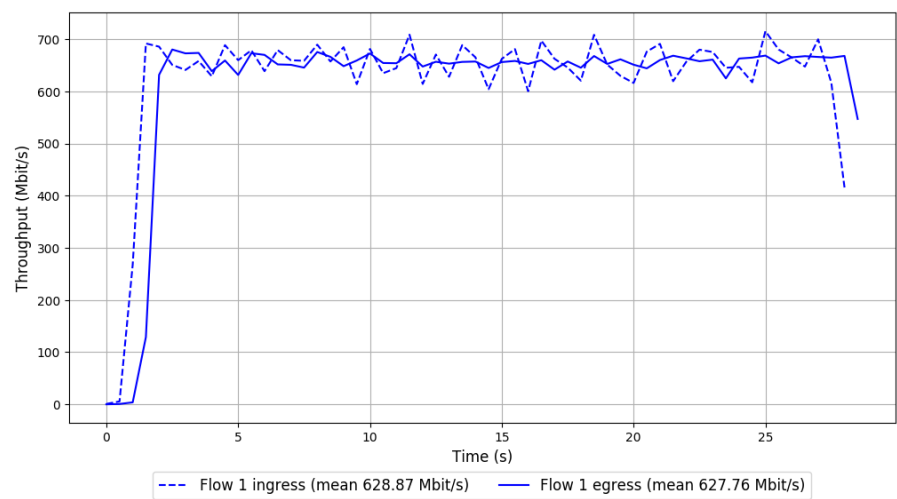
Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 559.76 Mbit/s)   Flow 1 egress (mean 557.52 Mbit/s)

Flow 1 (95th percentile 181.19 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-12-11 05:15:11
End at: 2019-12-11 05:15:41
Local clock offset: 3.566 ms
Remote clock offset: 5.773 ms


# Below is generated by plot.py at 2019-12-11 06:54:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 595.95 Mbit/s
95th percentile per-packet one-way delay: 158.916 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 595.95 Mbit/s
95th percentile per-packet one-way delay: 158.916 ms
Loss rate: 0.19%
```
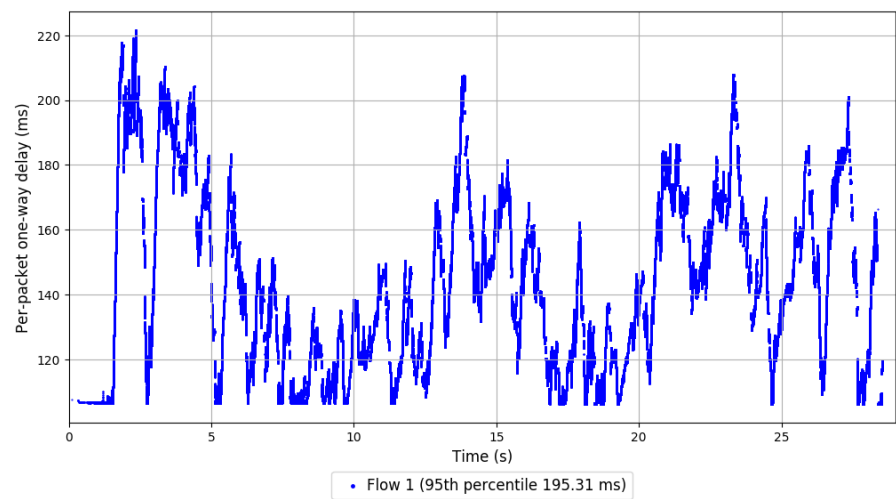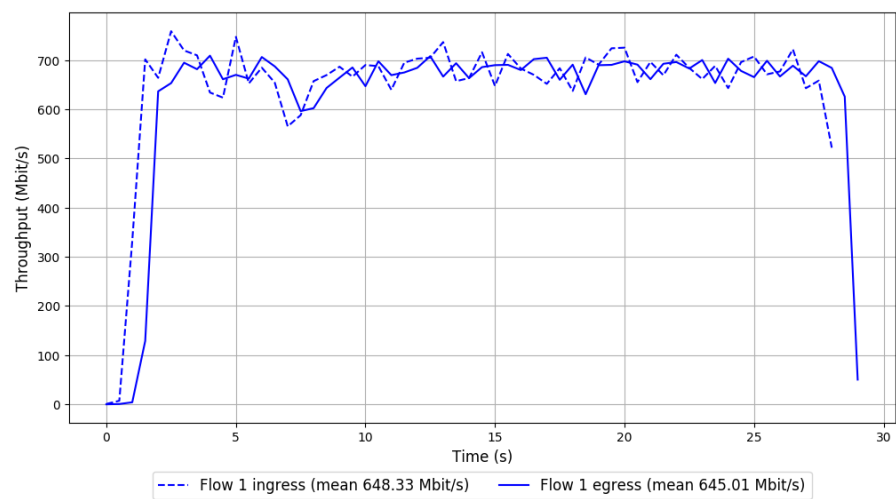
Run 5: Report of Indigo-MusesD — Data Link

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```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-12-11 02:56:09
End at: 2019-12-11 02:56:39
Local clock offset: 16.56 ms
Remote clock offset: 31.009 ms

# Below is generated by plot.py at 2019-12-11 06:56:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 627.76 Mbit/s
95th percentile per-packet one-way delay: 186.205 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 627.76 Mbit/s
95th percentile per-packet one-way delay: 186.205 ms
Loss rate: 0.17%
```
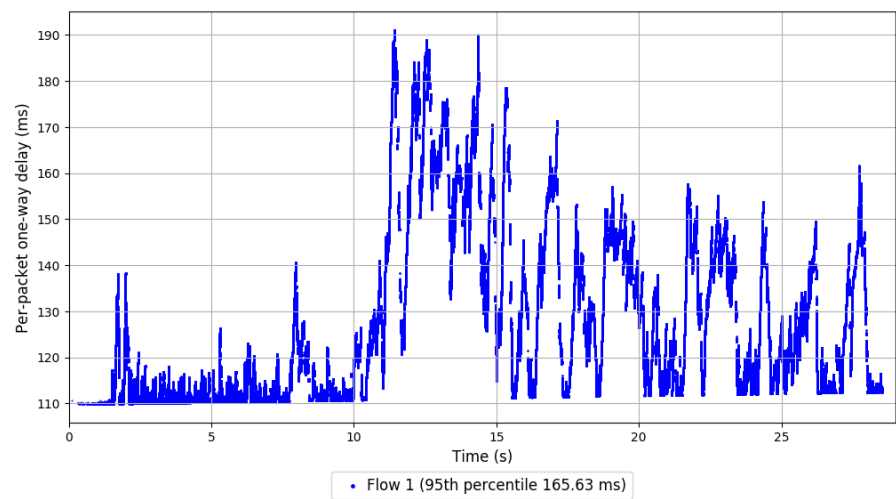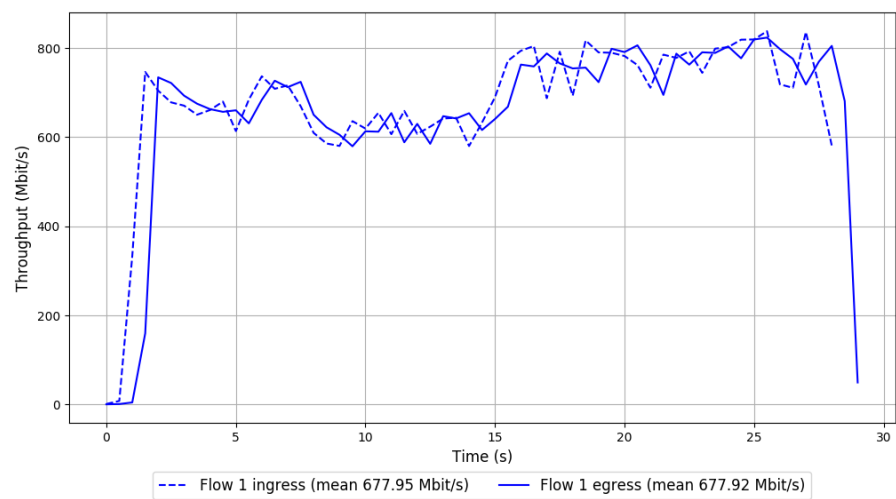
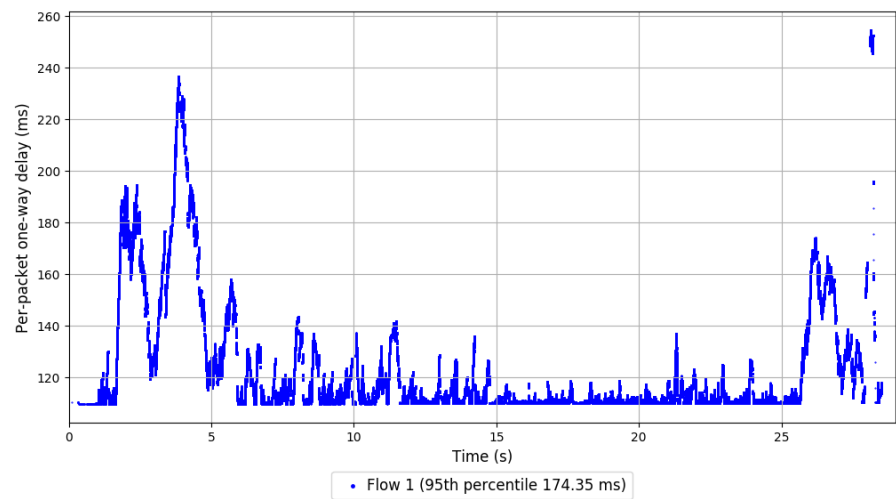Run 1: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 628.87 Mbit/s) — — — Flow 1 egress (mean 627.76 Mbit/s)

• Flow 1 (95th percentile 186.21 ms)

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-12-11 03:32:17
End at: 2019-12-11 03:32:47
Local clock offset: 26.433 ms
Remote clock offset: 33.454 ms


# Below is generated by plot.py at 2019-12-11 07:00:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 645.01 Mbit/s
95th percentile per-packet one-way delay: 195.311 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 645.01 Mbit/s
95th percentile per-packet one-way delay: 195.311 ms
Loss rate: 0.51%
```
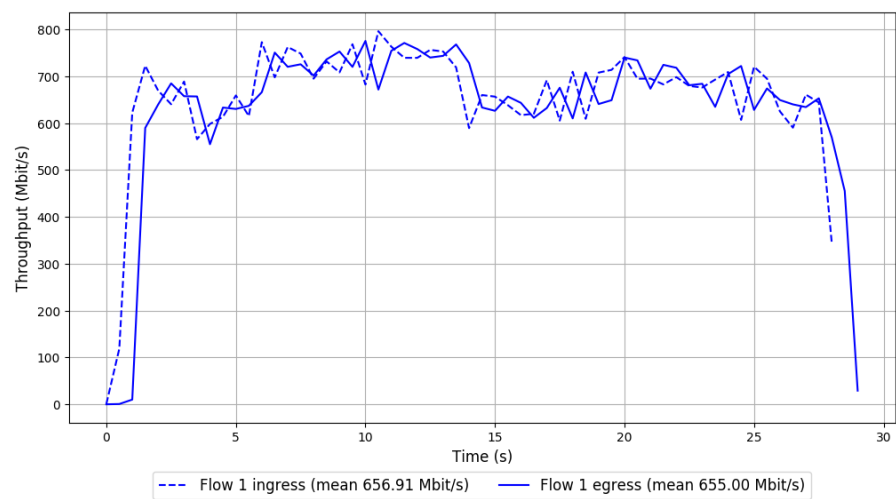
Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-12-11 04:07:36
End at: 2019-12-11 04:08:06
Local clock offset: 15.84 ms
Remote clock offset: 51.796 ms


# Below is generated by plot.py at 2019-12-11 07:02:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 677.92 Mbit/s
95th percentile per-packet one-way delay: 165.633 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 677.92 Mbit/s
95th percentile per-packet one-way delay: 165.633 ms
Loss rate: 0.00%
```
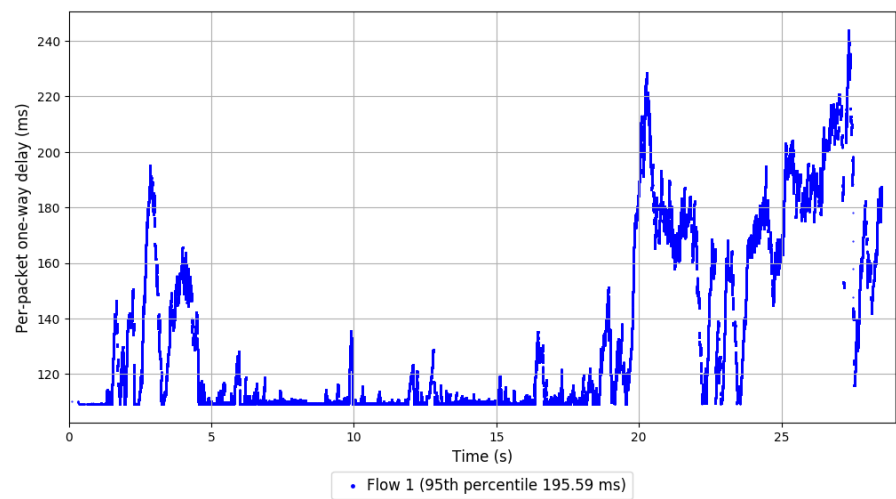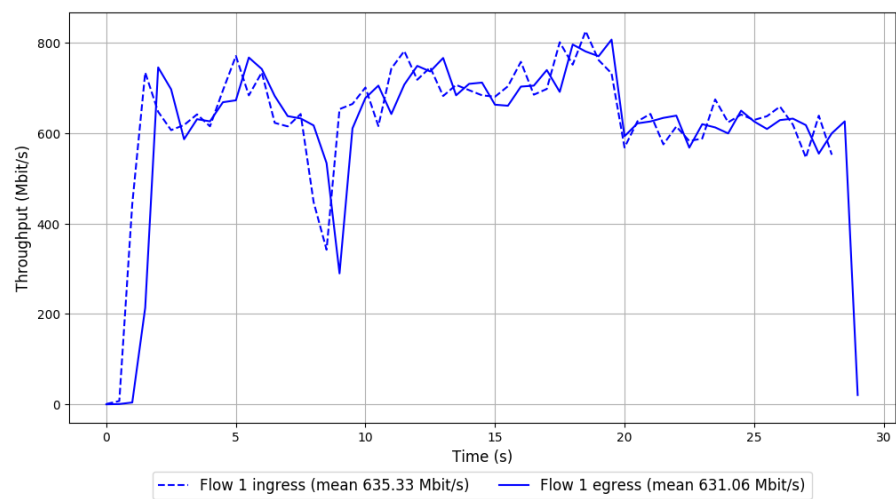
Run 3: Report of Indigo-MusesT — Data Link

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-12-11 04:42:41
End at: 2019-12-11 04:43:11
Local clock offset: 7.874 ms
Remote clock offset: 12.066 ms


# Below is generated by plot.py at 2019-12-11 07:02:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 655.00 Mbit/s
95th percentile per-packet one-way delay: 174.346 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 655.00 Mbit/s
95th percentile per-packet one-way delay: 174.346 ms
Loss rate: 0.29%
```
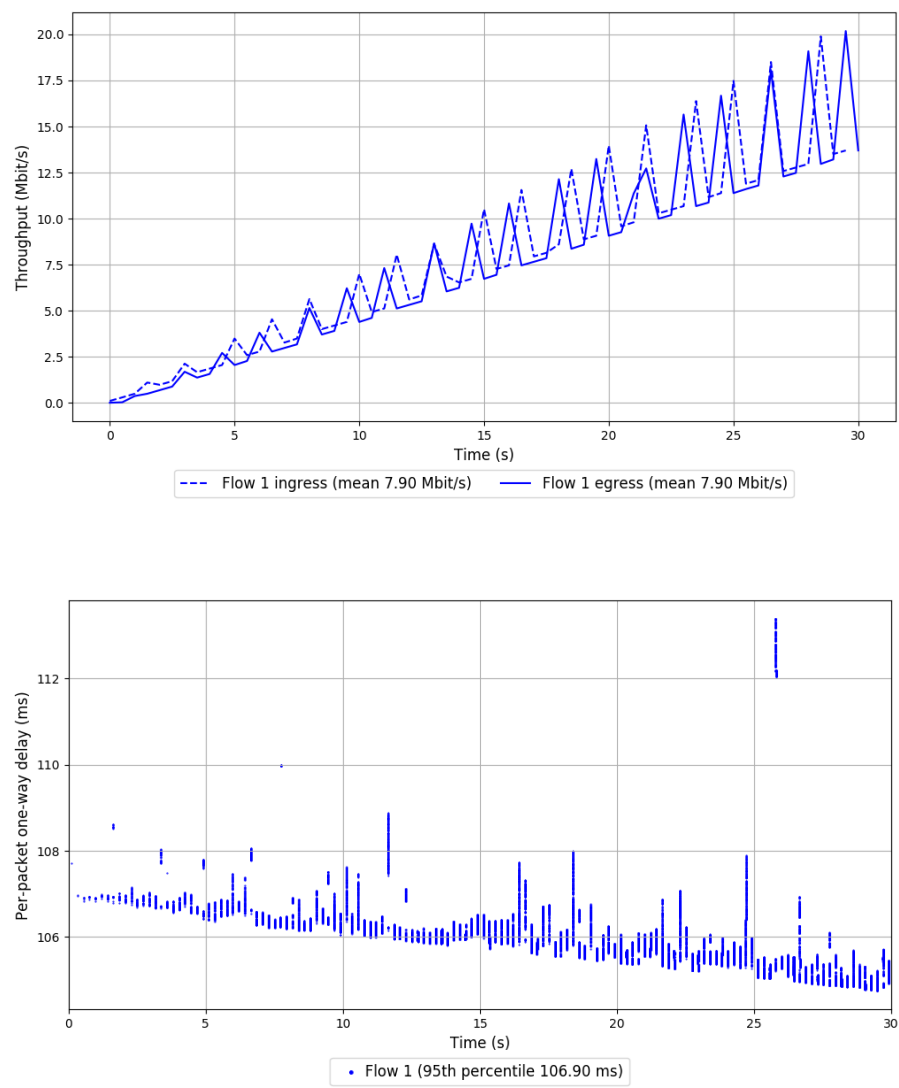
Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-12-11 05:18:21
End at: 2019-12-11 05:18:51
Local clock offset: 3.683 ms
Remote clock offset: 4.626 ms


# Below is generated by plot.py at 2019-12-11 07:02:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 631.06 Mbit/s
95th percentile per-packet one-way delay: 195.592 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 631.06 Mbit/s
95th percentile per-packet one-way delay: 195.592 ms
Loss rate: 0.64%
```

Run 5: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 635.33 Mbit/s)   Flow 1 egress (mean 631.06 Mbit/s)
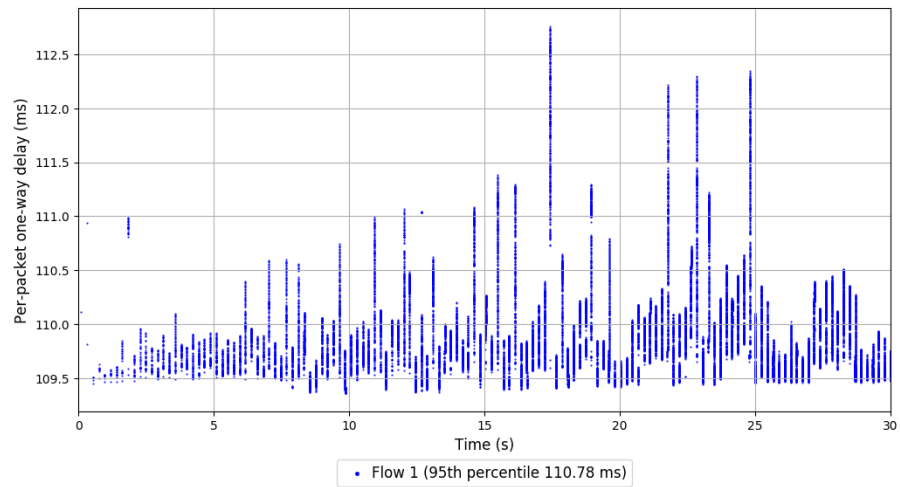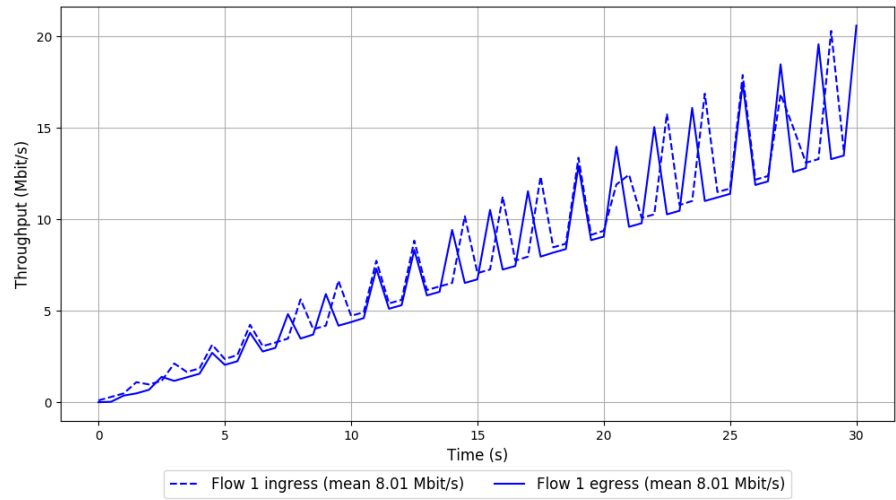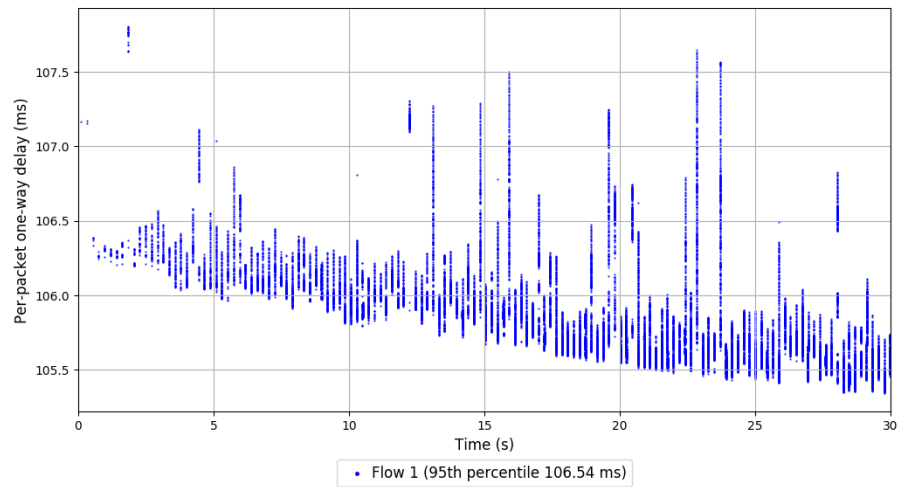

• Flow 1 (95th percentile 195.59 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2019-12-11 02:49:34
End at: 2019-12-11 02:50:04
Local clock offset: 9.254 ms
Remote clock offset: 26.004 ms


# Below is generated by plot.py at 2019-12-11 07:02:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.90 Mbit/s
95th percentile per-packet one-way delay: 106.901 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.90 Mbit/s
95th percentile per-packet one-way delay: 106.901 ms
Loss rate: 0.00%
```

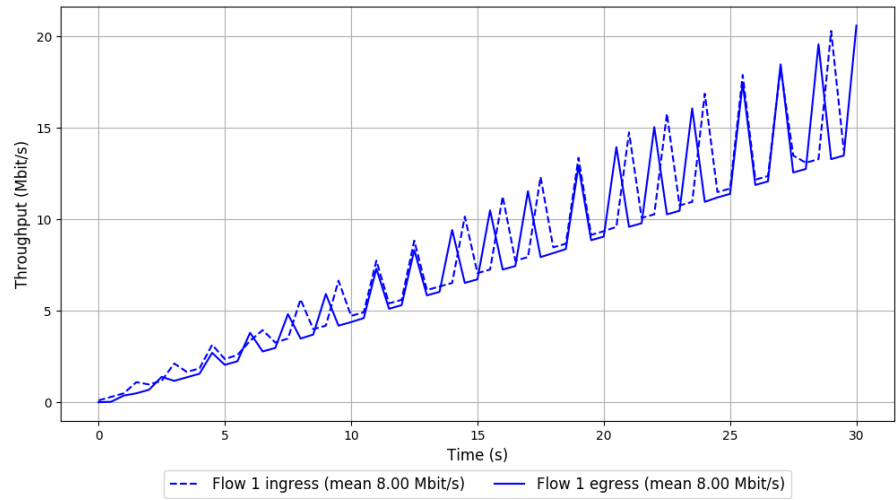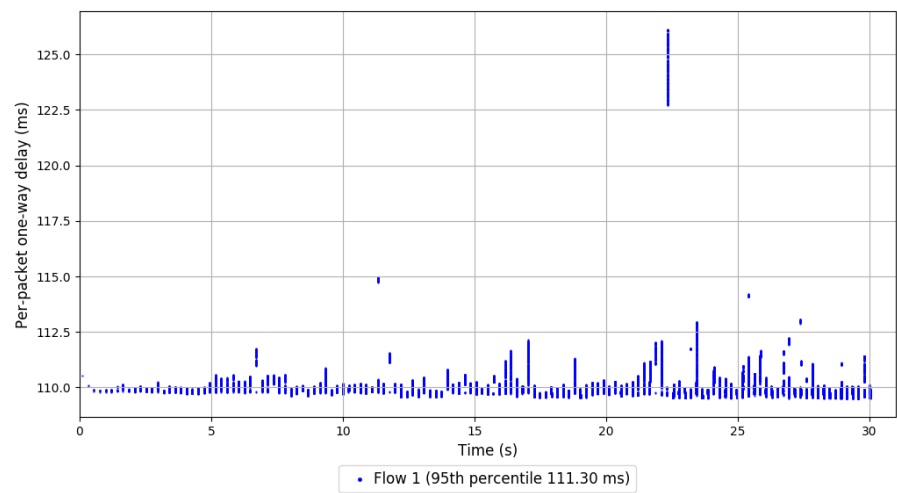Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-12-11 03:25:30
End at: 2019-12-11 03:26:00
Local clock offset: 21.484 ms
Remote clock offset: 26.775 ms


# Below is generated by plot.py at 2019-12-11 07:02:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 110.781 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 110.781 ms
Loss rate: 0.00%
```

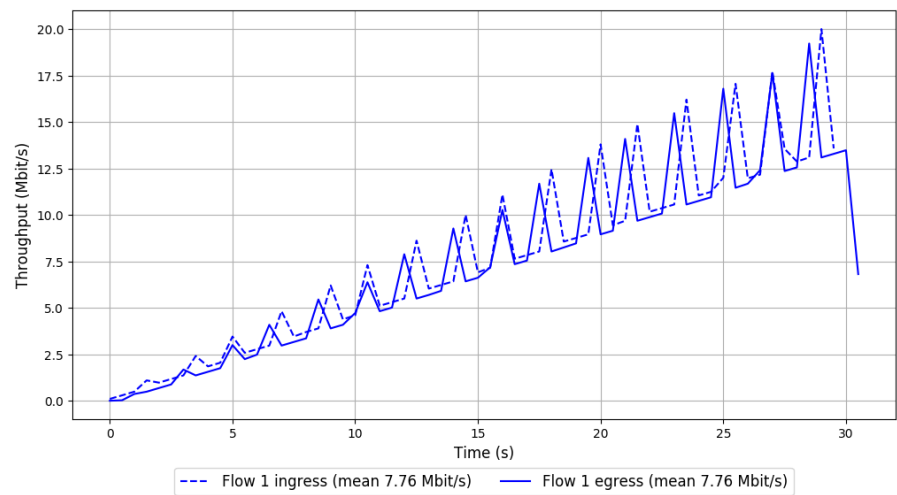Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-12-11 04:00:44
End at: 2019-12-11 04:01:14
Local clock offset: 16.209 ms
Remote clock offset: 42.126 ms


# Below is generated by plot.py at 2019-12-11 07:02:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.00 Mbit/s
95th percentile per-packet one-way delay: 106.540 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.00 Mbit/s
95th percentile per-packet one-way delay: 106.540 ms
Loss rate: 0.00%
```
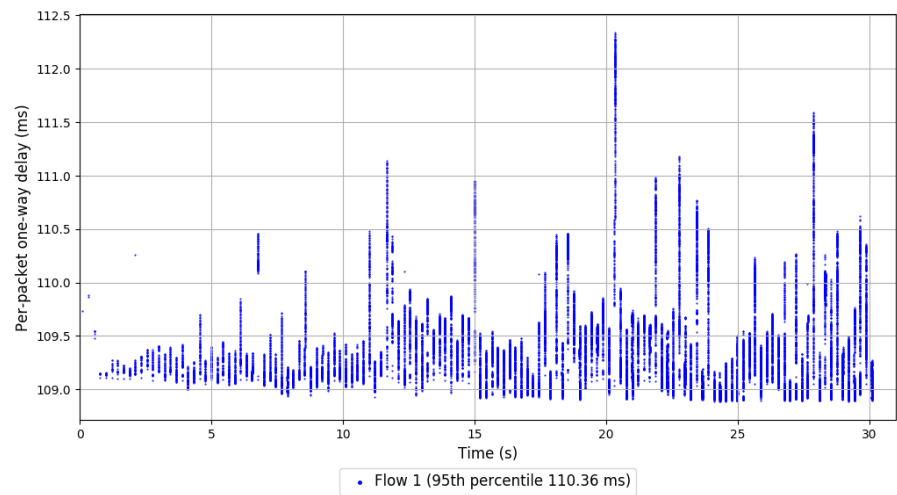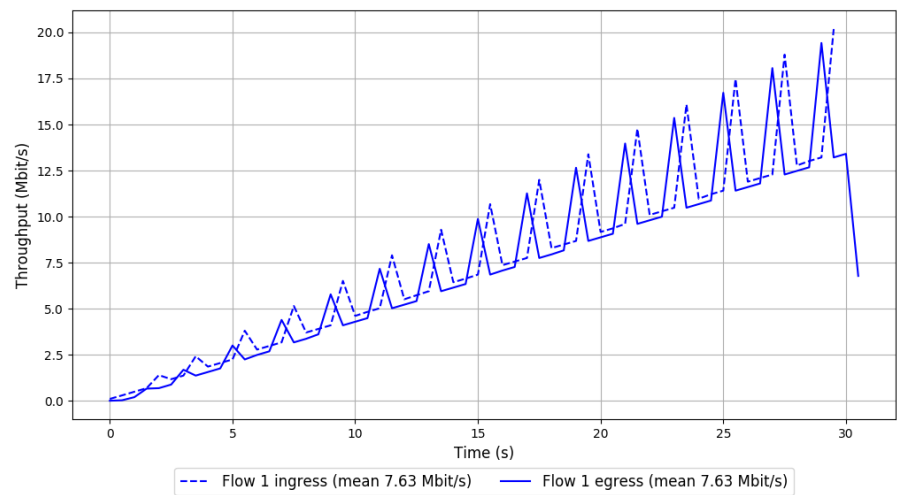
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-12-11 04:35:52
End at: 2019-12-11 04:36:22
Local clock offset: 7.714 ms
Remote clock offset: 11.715 ms


# Below is generated by plot.py at 2019-12-11 07:02:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 111.297 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 111.297 ms
Loss rate: 0.00%
```

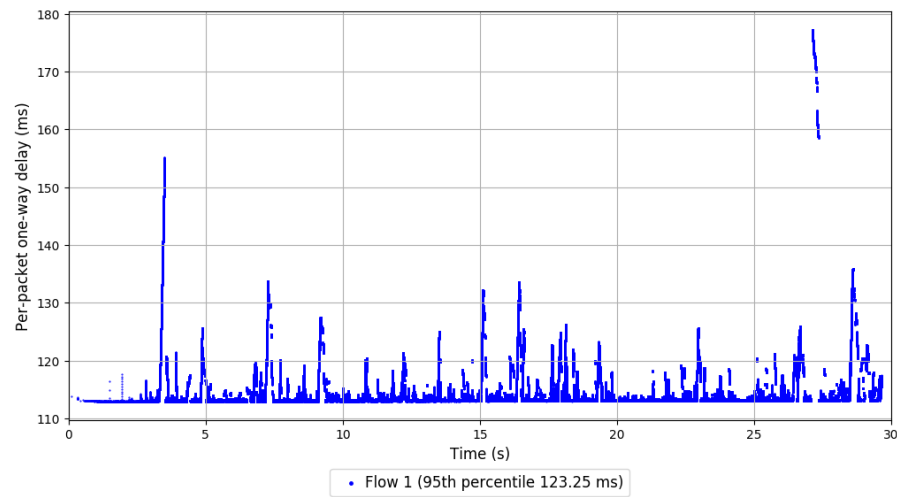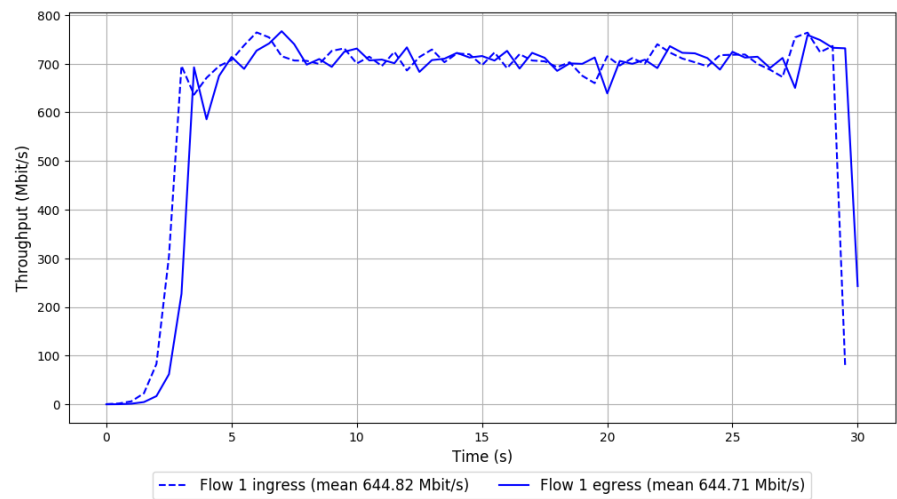Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-12-11 05:11:29
End at: 2019-12-11 05:11:59
Local clock offset: 3.665 ms
Remote clock offset: 5.311 ms


# Below is generated by plot.py at 2019-12-11 07:02:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 110.362 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 110.362 ms
Loss rate: 0.00%
```
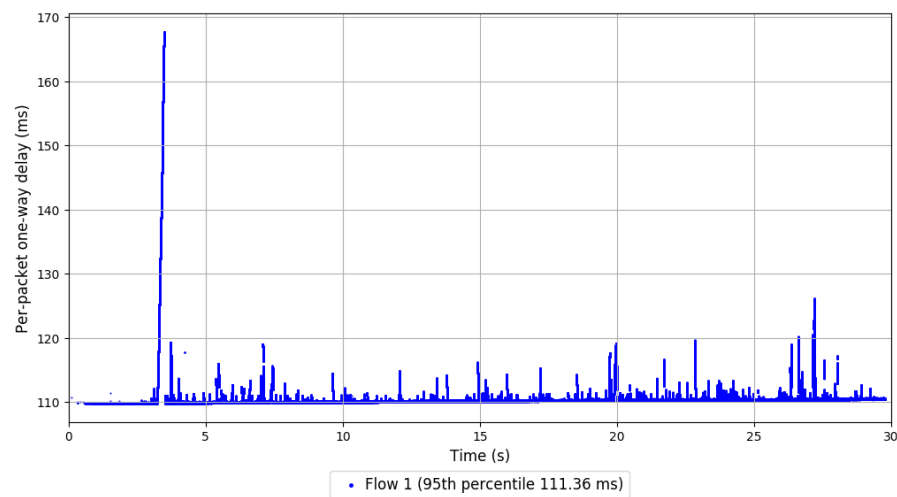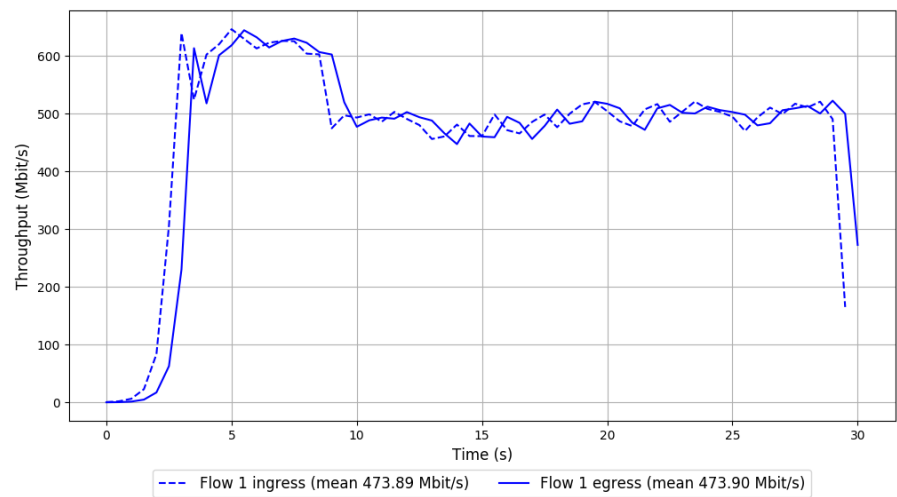
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 03:04:18
End at: 2019-12-11 03:04:48
Local clock offset: 16.527 ms
Remote clock offset: 35.316 ms


# Below is generated by plot.py at 2019-12-11 07:05:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 644.71 Mbit/s
95th percentile per-packet one-way delay: 123.250 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 644.71 Mbit/s
95th percentile per-packet one-way delay: 123.250 ms
Loss rate: 0.03%
```
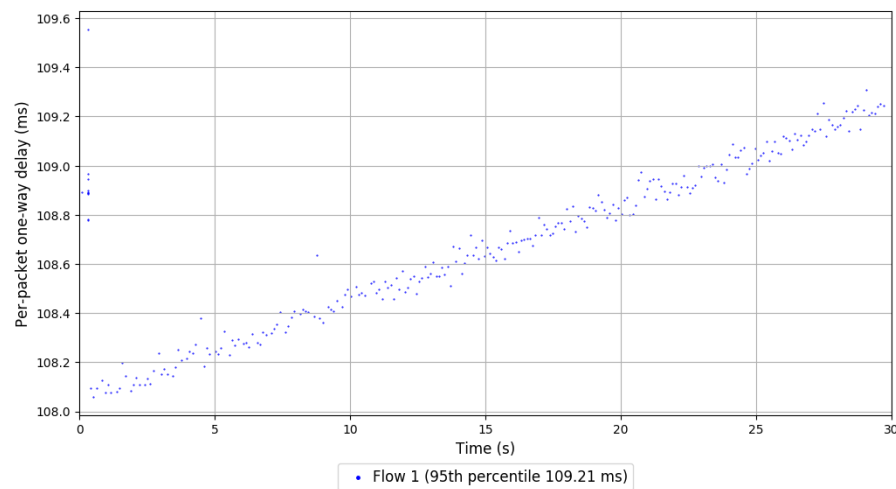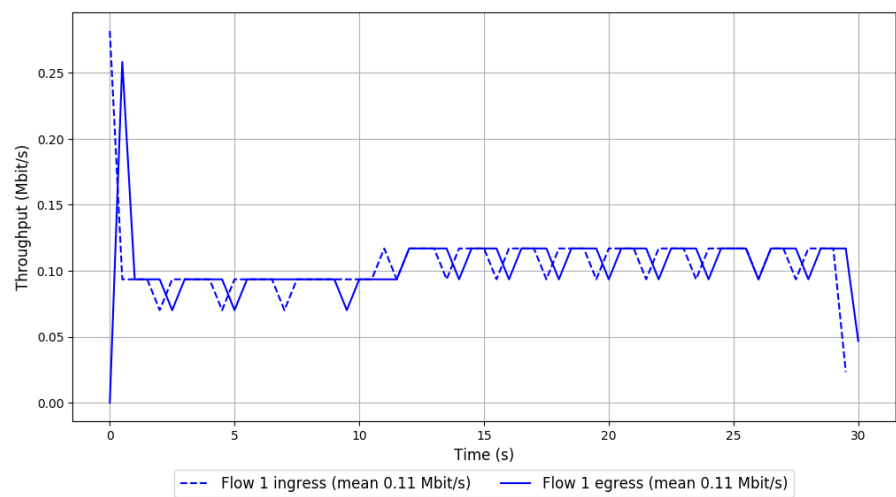
Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 03:40:06
End at: 2019-12-11 03:40:36
Local clock offset: 34.133 ms
Remote clock offset: 26.094 ms


# Below is generated by plot.py at 2019-12-11 07:05:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 473.90 Mbit/s
95th percentile per-packet one-way delay: 111.365 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 473.90 Mbit/s
95th percentile per-packet one-way delay: 111.365 ms
Loss rate: 0.00%
```

Run 2: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 473.89 Mbit/s)   Flow 1 egress (mean 473.90 Mbit/s)

Flow 1 (95th percentile 111.36 ms)

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 04:15:35
End at: 2019-12-11 04:16:05
Local clock offset: 18.341 ms
Remote clock offset: 23.575 ms


# Below is generated by plot.py at 2019-12-11 07:05:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 109.207 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 109.207 ms
Loss rate: 0.00%
```
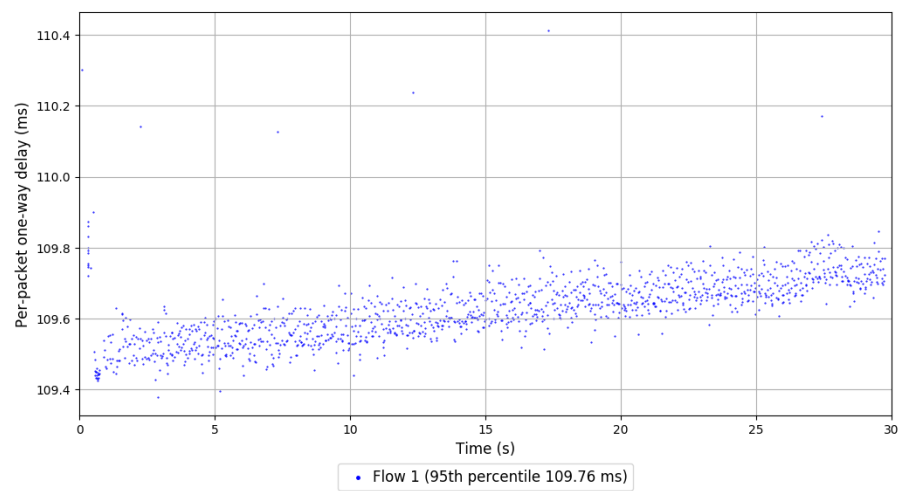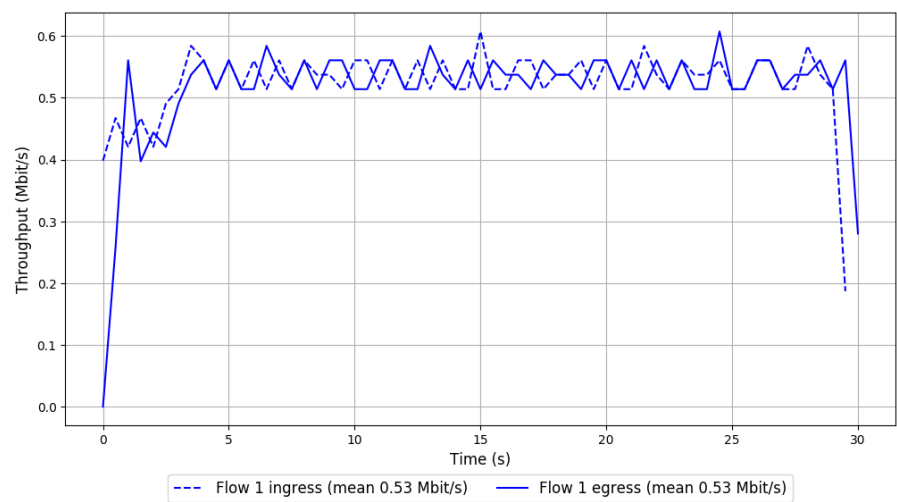
Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 04:51:01
End at: 2019-12-11 04:51:31
Local clock offset: 9.106 ms
Remote clock offset: 5.889 ms


# Below is generated by plot.py at 2019-12-11 07:05:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 109.759 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 109.759 ms
Loss rate: 0.00%
```
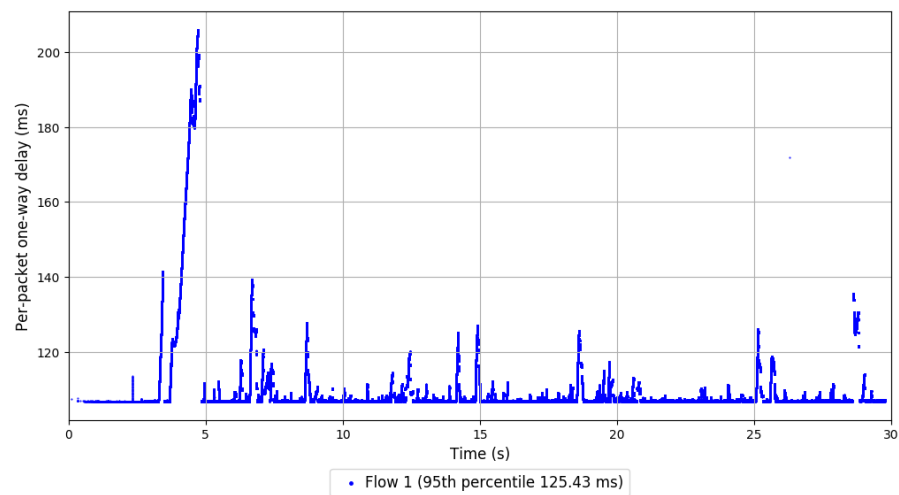
Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 05:26:47
End at: 2019-12-11 05:27:17
Local clock offset: 4.515 ms
Remote clock offset: 2.447 ms


# Below is generated by plot.py at 2019-12-11 07:07:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 668.85 Mbit/s
95th percentile per-packet one-way delay: 125.431 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 668.85 Mbit/s
95th percentile per-packet one-way delay: 125.431 ms
Loss rate: 0.22%
```
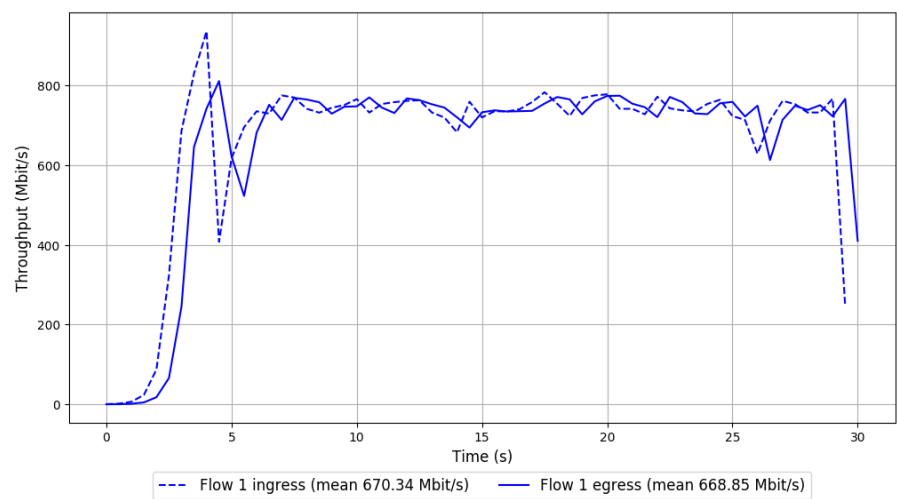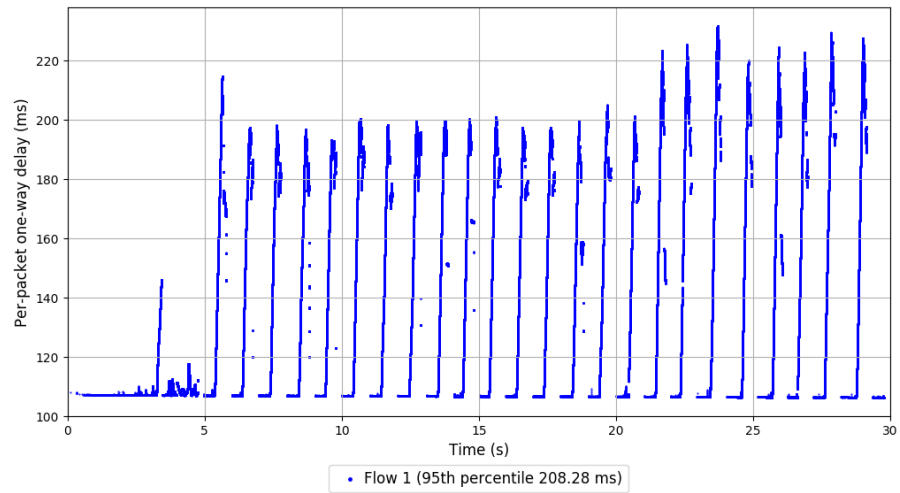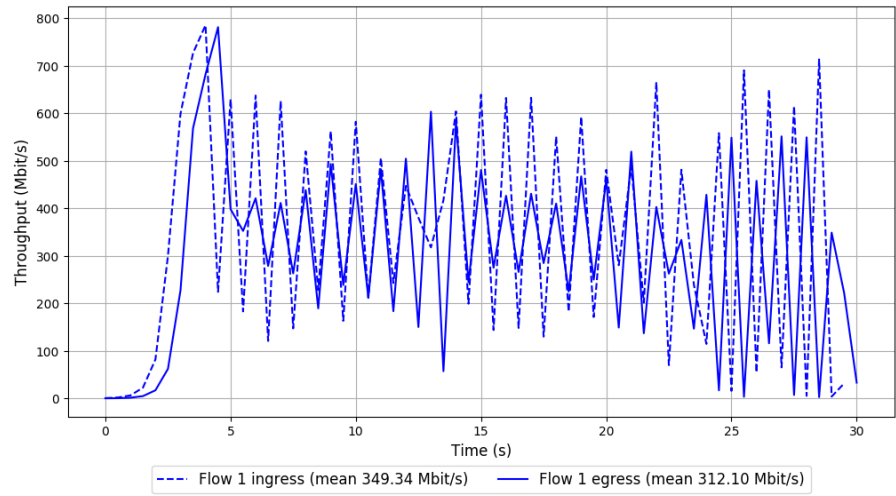
Run 5: Report of Muses_DecisionTree — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 03:09:58
End at: 2019-12-11 03:10:28
Local clock offset: 23.895 ms
Remote clock offset: 47.443 ms


# Below is generated by plot.py at 2019-12-11 07:07:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 312.10 Mbit/s
95th percentile per-packet one-way delay: 208.277 ms
Loss rate: 10.67%
-- Flow 1:
Average throughput: 312.10 Mbit/s
95th percentile per-packet one-way delay: 208.277 ms
Loss rate: 10.67%
```

Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 03:45:32
End at: 2019-12-11 03:46:02
Local clock offset: 39.926 ms
Remote clock offset: 26.74 ms


# Below is generated by plot.py at 2019-12-11 07:08:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 411.96 Mbit/s
95th percentile per-packet one-way delay: 209.235 ms
Loss rate: 7.02%
-- Flow 1:
Average throughput: 411.96 Mbit/s
95th percentile per-packet one-way delay: 209.235 ms
Loss rate: 7.02%
```
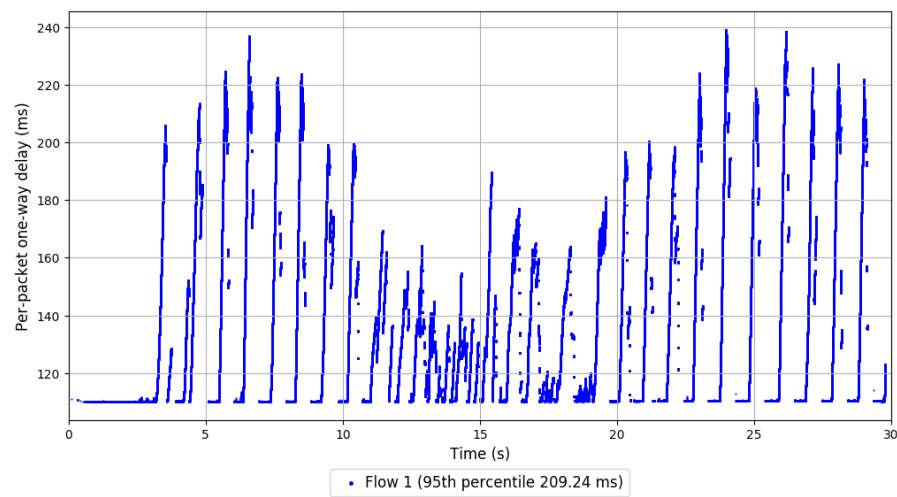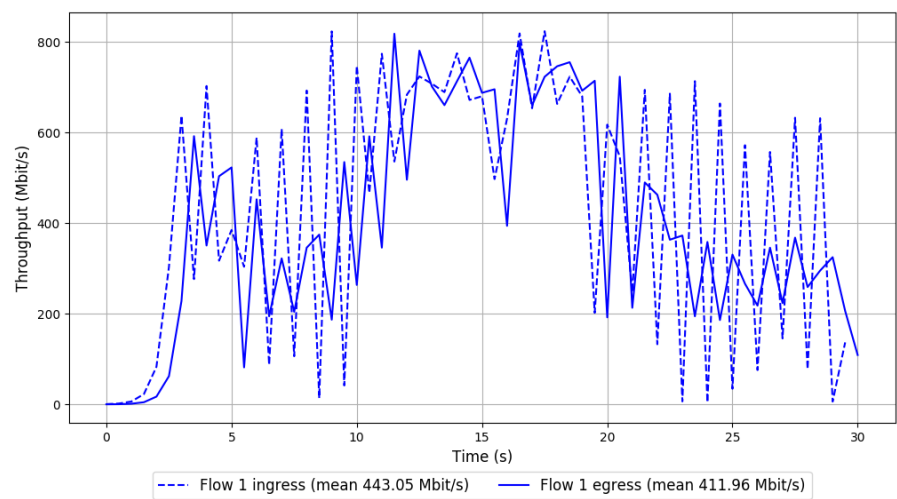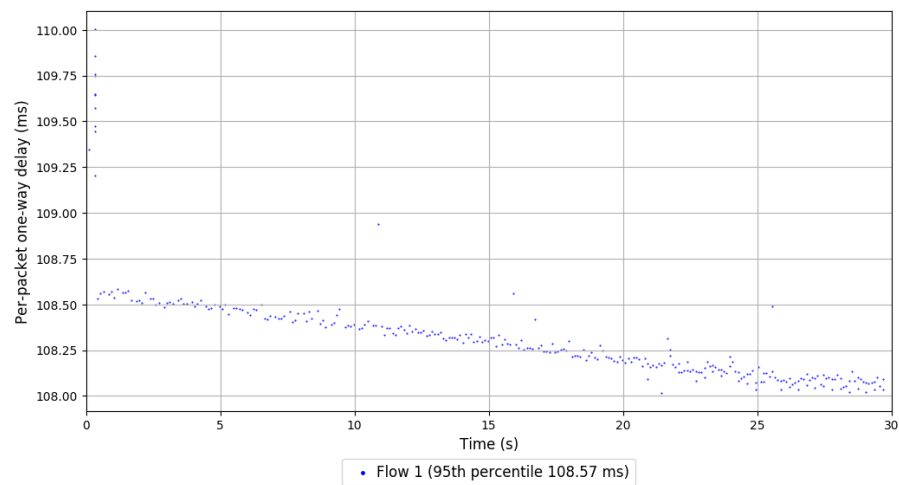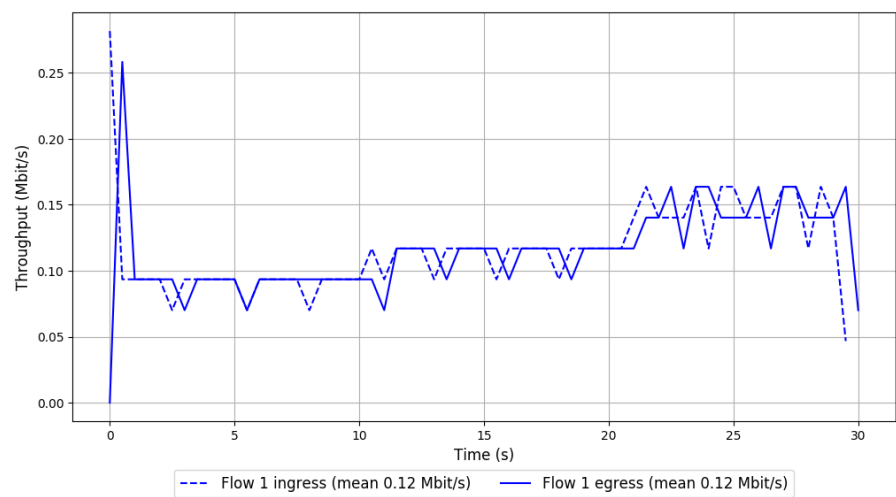
Run 2: Report of Muses_DecisionTreeH0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 04:20:37
End at: 2019-12-11 04:21:08
Local clock offset: 20.728 ms
Remote clock offset: 16.063 ms


# Below is generated by plot.py at 2019-12-11 07:08:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 108.568 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 108.568 ms
Loss rate: 0.00%
```

Run 3: Report of Muses_DecisionTreeH0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 04:56:05
End at: 2019-12-11 04:56:36
Local clock offset: 8.668 ms
Remote clock offset: 4.823 ms


# Below is generated by plot.py at 2019-12-11 07:08:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 354.04 Mbit/s
95th percentile per-packet one-way delay: 206.518 ms
Loss rate: 8.73%
-- Flow 1:
Average throughput: 354.04 Mbit/s
95th percentile per-packet one-way delay: 206.518 ms
Loss rate: 8.73%
```
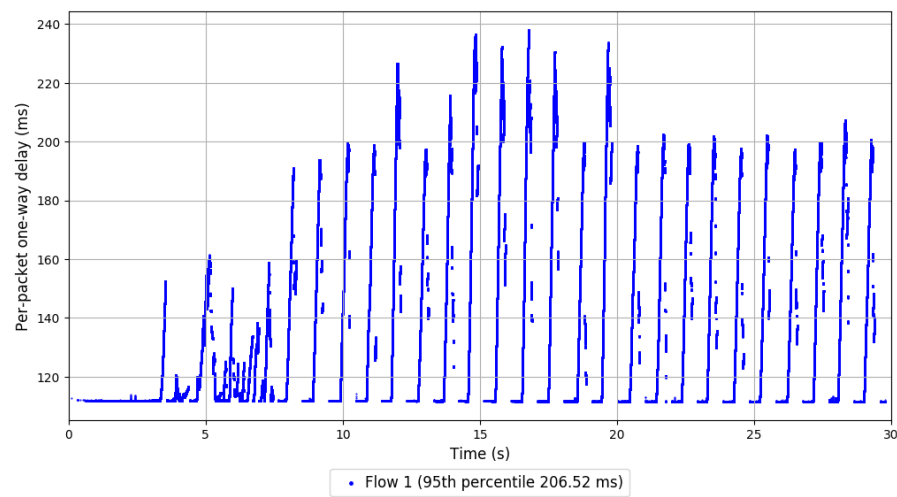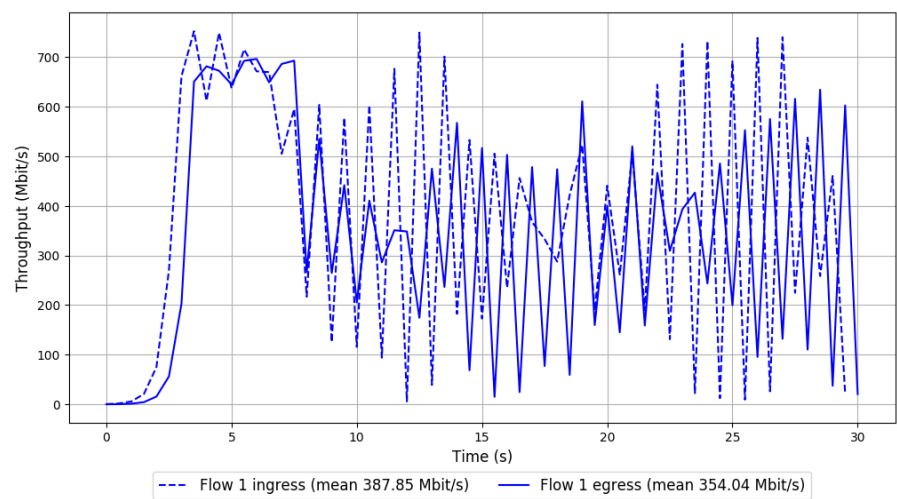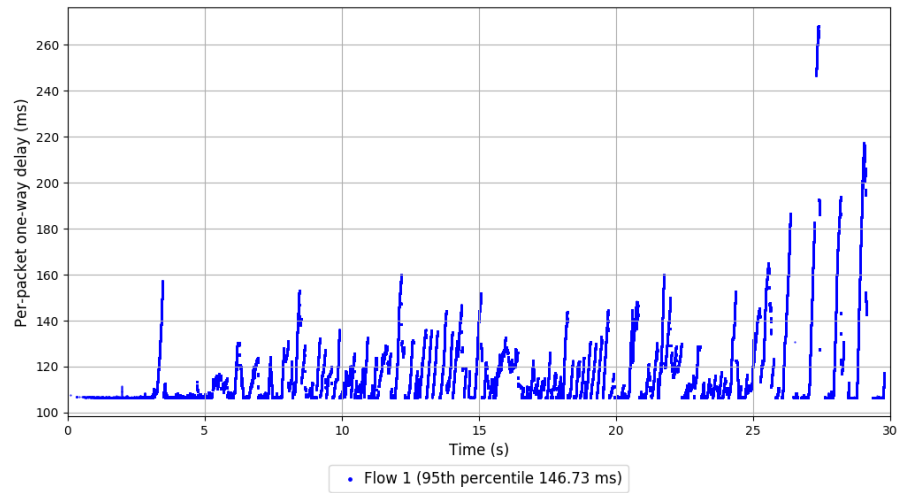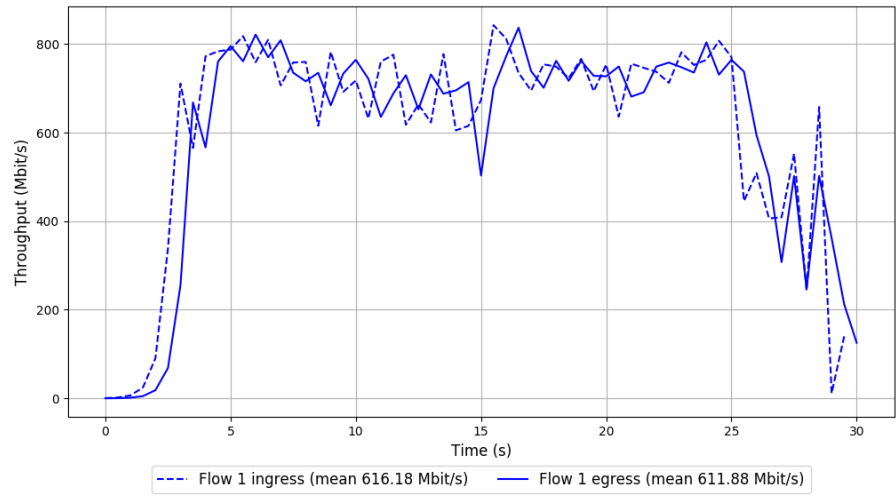
Run 4: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 387.85 Mbit/s) --- Flow 1 egress (mean 354.04 Mbit/s)
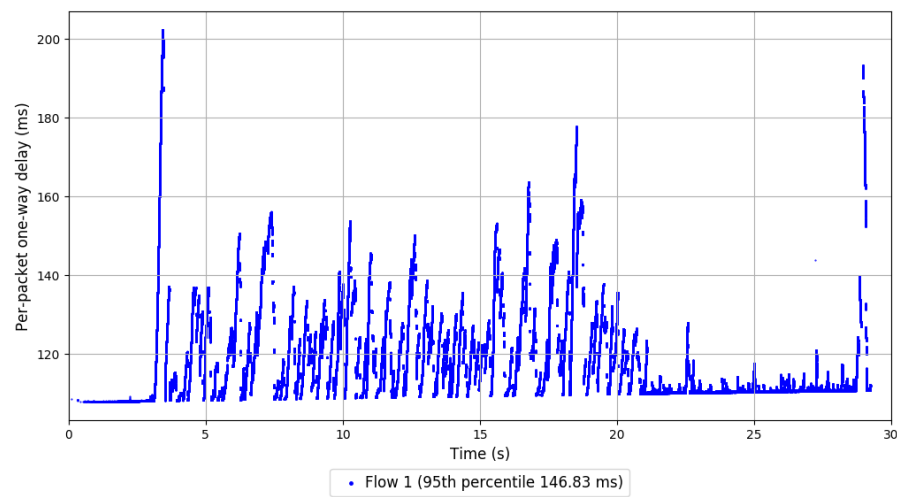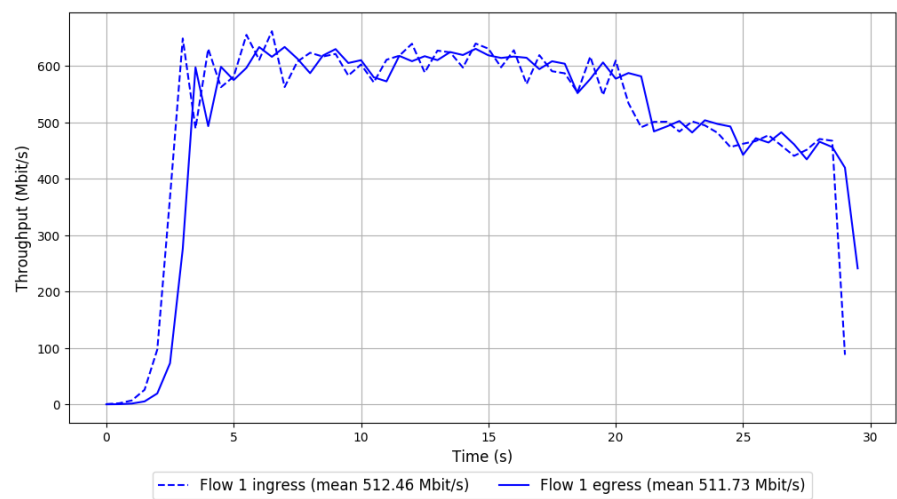

Flow 1 (95th percentile 206.52 ms)

Run 5: Statistics of Muses_DecisionTreeH0

Start at: 2019-12-11 05:32:27
End at: 2019-12-11 05:32:57
Local clock offset: 3.287 ms
Remote clock offset: 2.109 ms

Below is generated by plot.py at 2019-12-11 07:12:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 611.88 Mbit/s
95th percentile per-packet one-way delay: 146.727 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 611.88 Mbit/s
95th percentile per-packet one-way delay: 146.727 ms
Loss rate: 0.69%
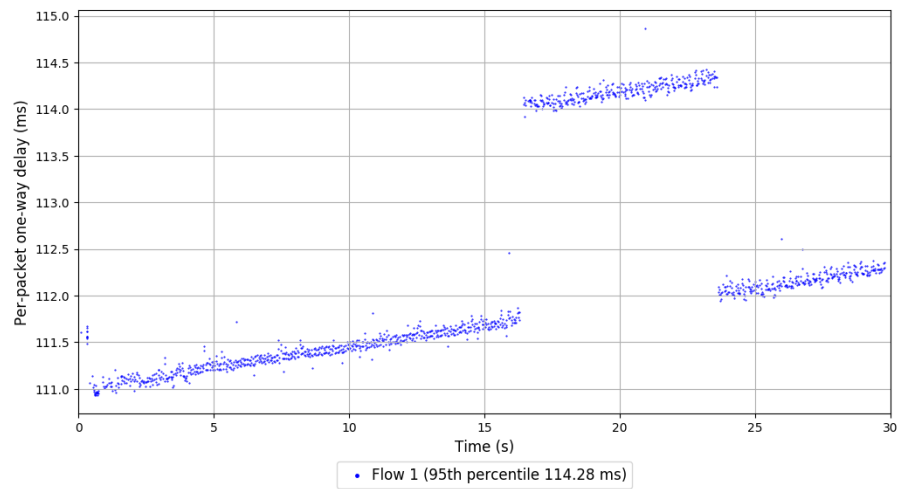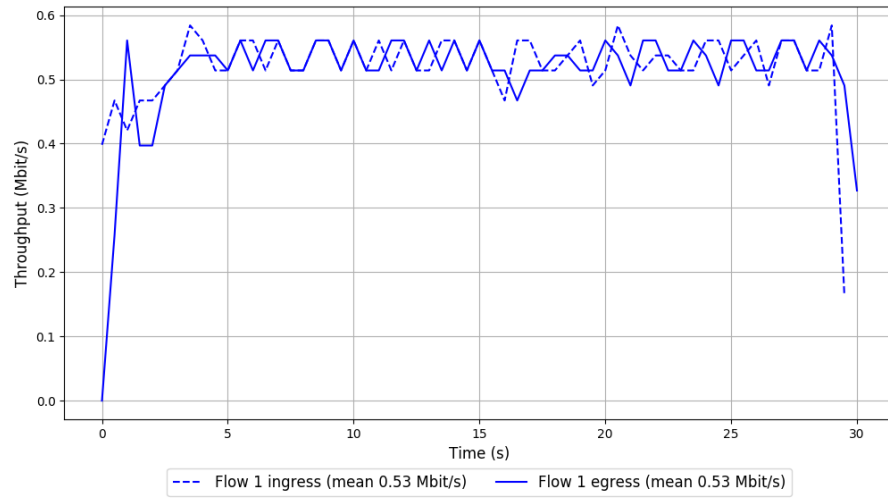
Run 5: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 616.18 Mbit/s)   Flow 1 egress (mean 611.88 Mbit/s)

• Flow 1 (95th percentile 146.73 ms)

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 02:59:28
End at: 2019-12-11 02:59:58
Local clock offset: 13.638 ms
Remote clock offset: 46.802 ms


# Below is generated by plot.py at 2019-12-11 07:12:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 511.73 Mbit/s
95th percentile per-packet one-way delay: 146.826 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 511.73 Mbit/s
95th percentile per-packet one-way delay: 146.826 ms
Loss rate: 0.13%
```

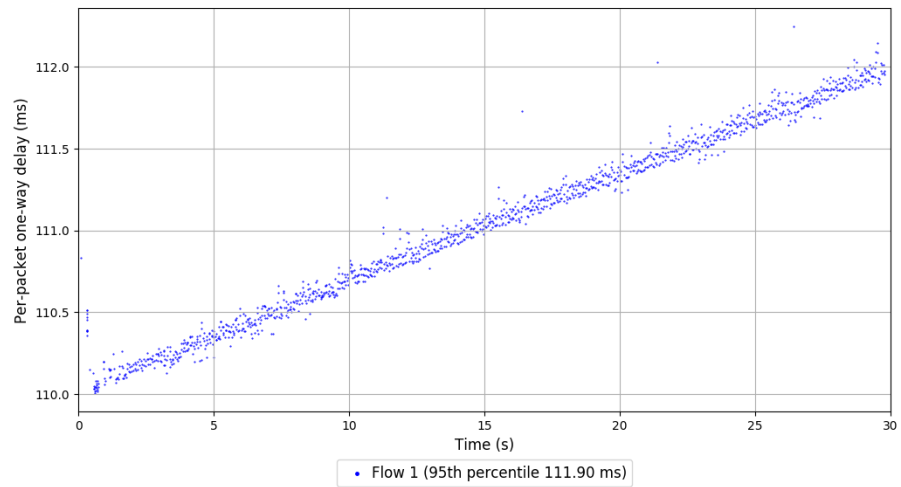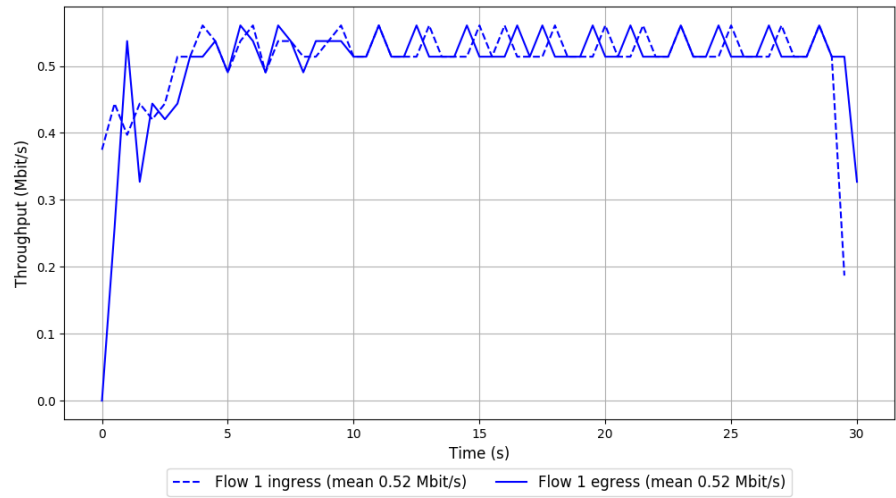Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 03:35:37
End at: 2019-12-11 03:36:07
Local clock offset: 29.504 ms
Remote clock offset: 31.192 ms


# Below is generated by plot.py at 2019-12-11 07:12:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 114.276 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 114.276 ms
Loss rate: 0.30%
```

Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 04:11:00
End at: 2019-12-11 04:11:30
Local clock offset: 16.652 ms
Remote clock offset: 35.964 ms


# Below is generated by plot.py at 2019-12-11 07:12:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 111.899 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 111.899 ms
Loss rate: 0.00%
```

Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 04:46:01
End at: 2019-12-11 04:46:31
Local clock offset: 8.153 ms
Remote clock offset: 8.714 ms


# Below is generated by plot.py at 2019-12-11 07:12:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 562.88 Mbit/s
95th percentile per-packet one-way delay: 113.438 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 562.88 Mbit/s
95th percentile per-packet one-way delay: 113.438 ms
Loss rate: 0.00%
```
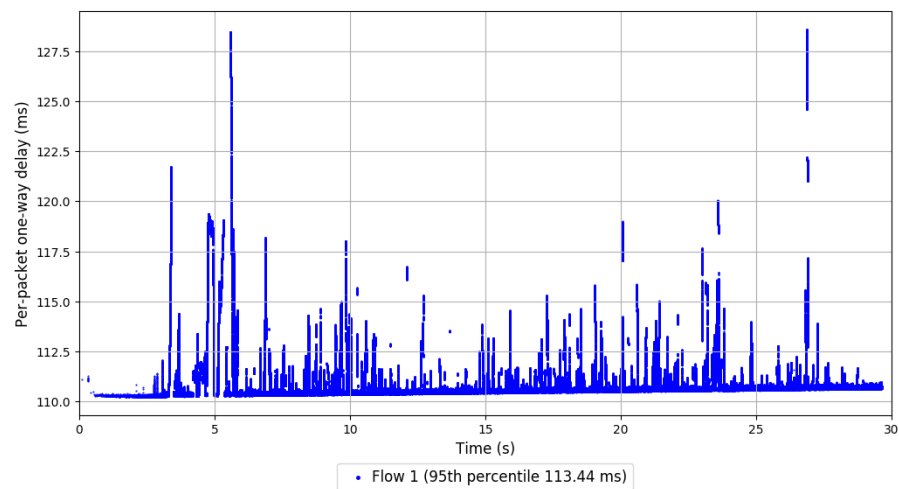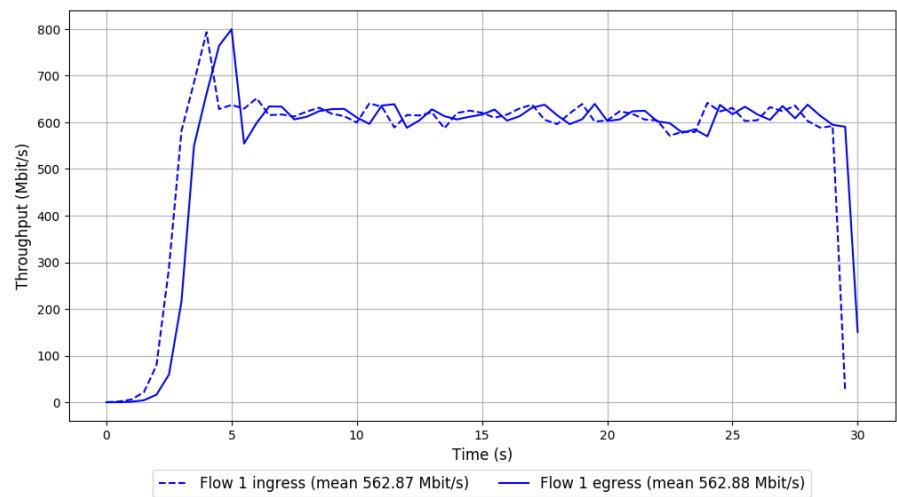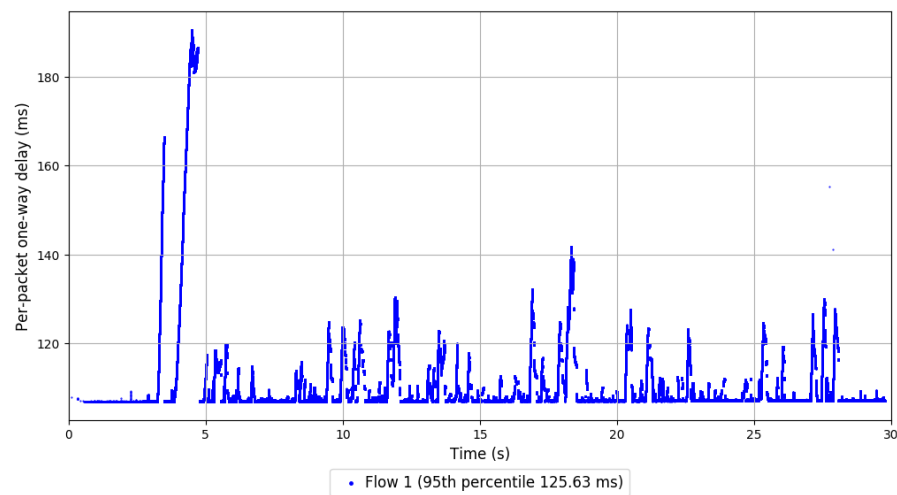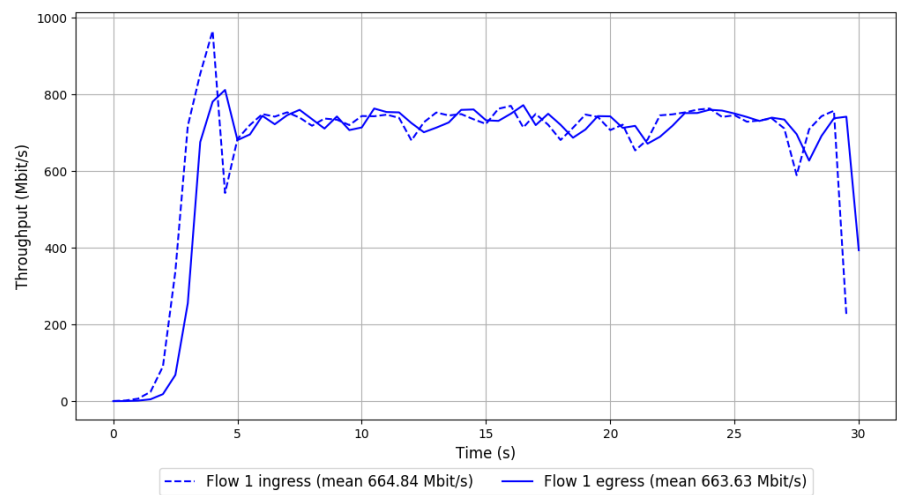
Run 4: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 562.87 Mbit/s)   Flow 1 egress (mean 562.88 Mbit/s)

Flow 1 (95th percentile 113.44 ms)

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 05:21:39
End at: 2019-12-11 05:22:09
Local clock offset: 3.982 ms
Remote clock offset: 3.493 ms


# Below is generated by plot.py at 2019-12-11 07:14:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 663.63 Mbit/s
95th percentile per-packet one-way delay: 125.632 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 663.63 Mbit/s
95th percentile per-packet one-way delay: 125.632 ms
Loss rate: 0.19%
```

Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-12-11 03:01:04
End at: 2019-12-11 03:01:34
Local clock offset: 13.821 ms
Remote clock offset: 38.661 ms


# Below is generated by plot.py at 2019-12-11 07:18:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 378.47 Mbit/s
95th percentile per-packet one-way delay: 223.027 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 378.47 Mbit/s
95th percentile per-packet one-way delay: 223.027 ms
Loss rate: 1.62%
```
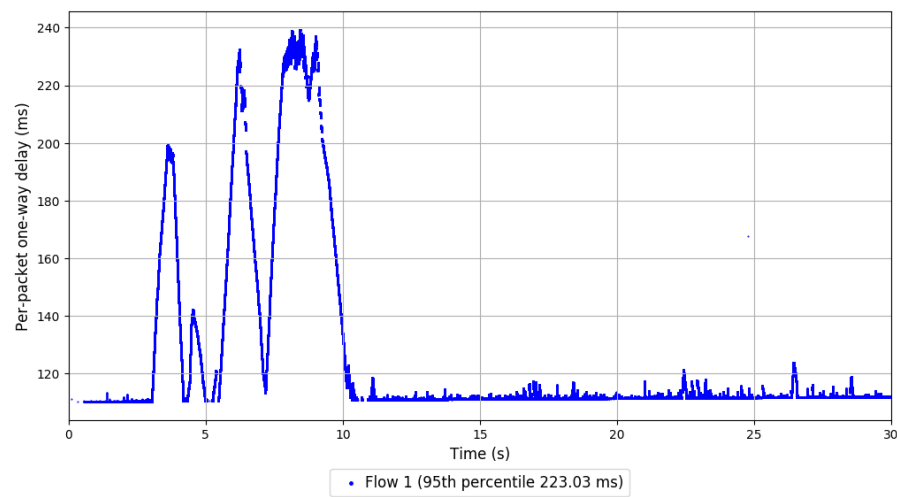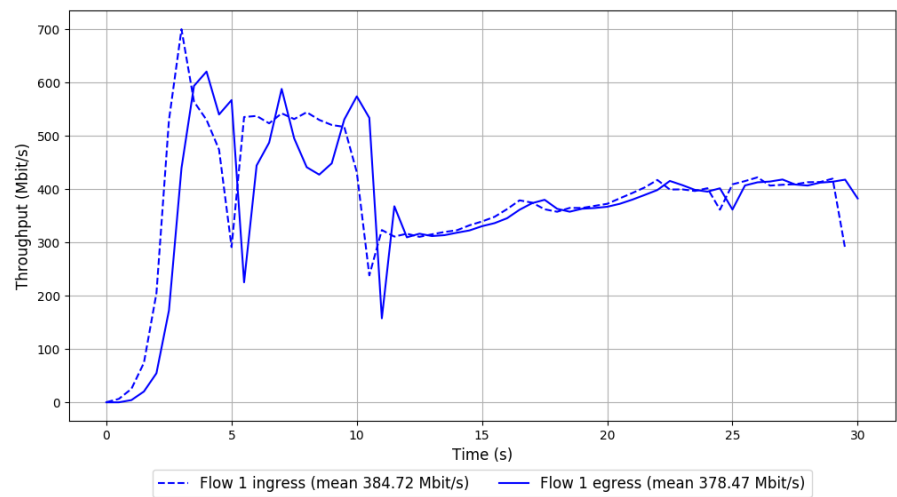
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-12-11 03:36:46
End at: 2019-12-11 03:37:16
Local clock offset: 30.783 ms
Remote clock offset: 29.035 ms


# Below is generated by plot.py at 2019-12-11 07:22:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 414.83 Mbit/s
95th percentile per-packet one-way delay: 229.421 ms
Loss rate: 4.75%
-- Flow 1:
Average throughput: 414.83 Mbit/s
95th percentile per-packet one-way delay: 229.421 ms
Loss rate: 4.75%
```
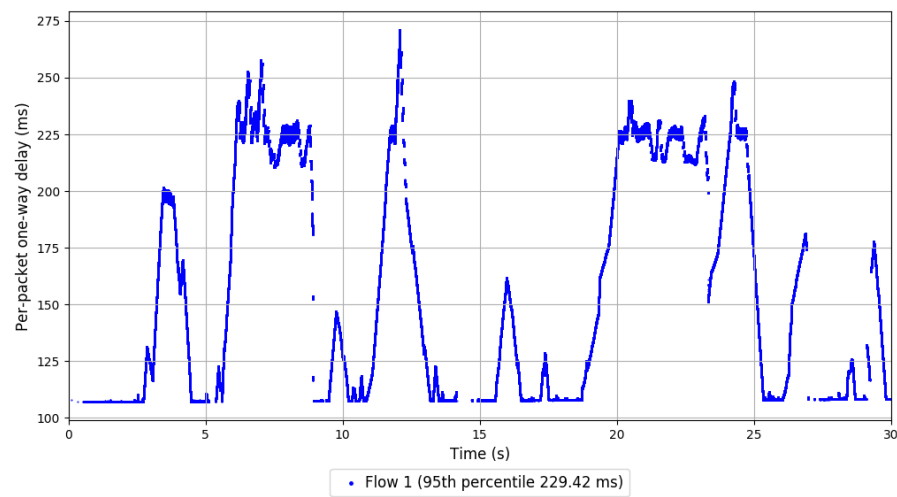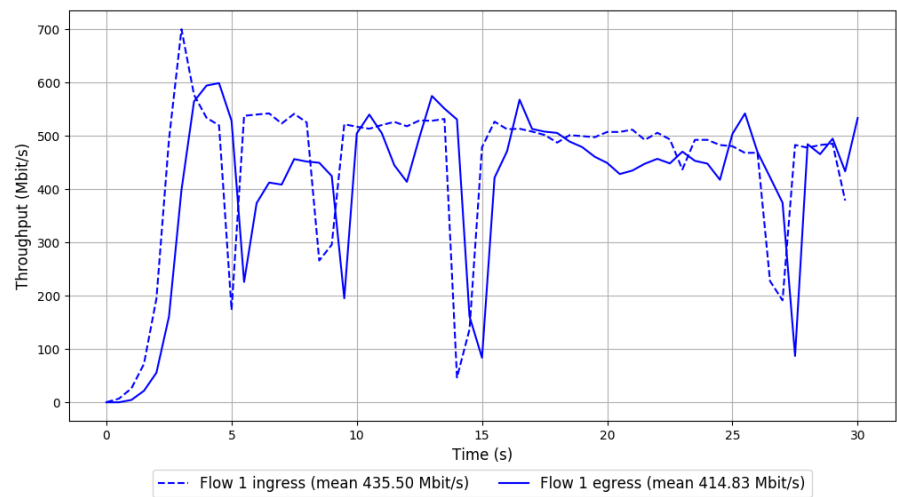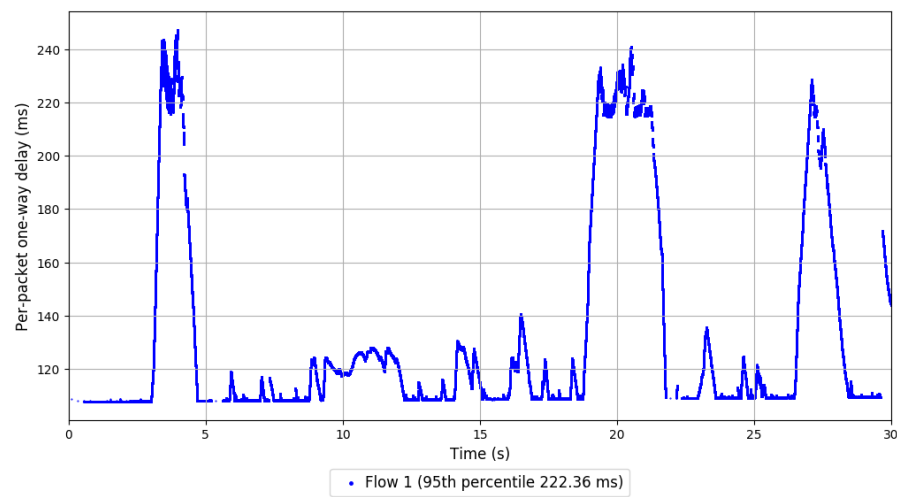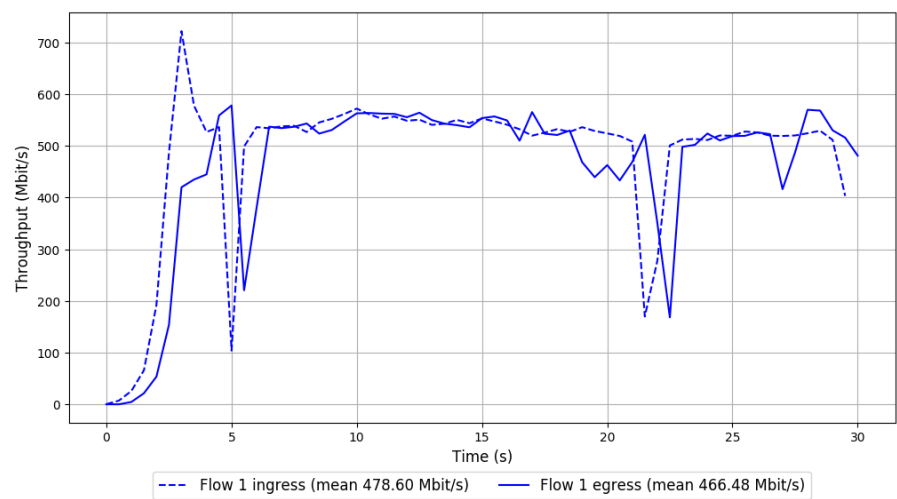
Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-12-11 04:12:09
End at: 2019-12-11 04:12:39
Local clock offset: 17.143 ms
Remote clock offset: 32.262 ms


# Below is generated by plot.py at 2019-12-11 07:25:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 466.48 Mbit/s
95th percentile per-packet one-way delay: 222.356 ms
Loss rate: 2.52%
-- Flow 1:
Average throughput: 466.48 Mbit/s
95th percentile per-packet one-way delay: 222.356 ms
Loss rate: 2.52%
```
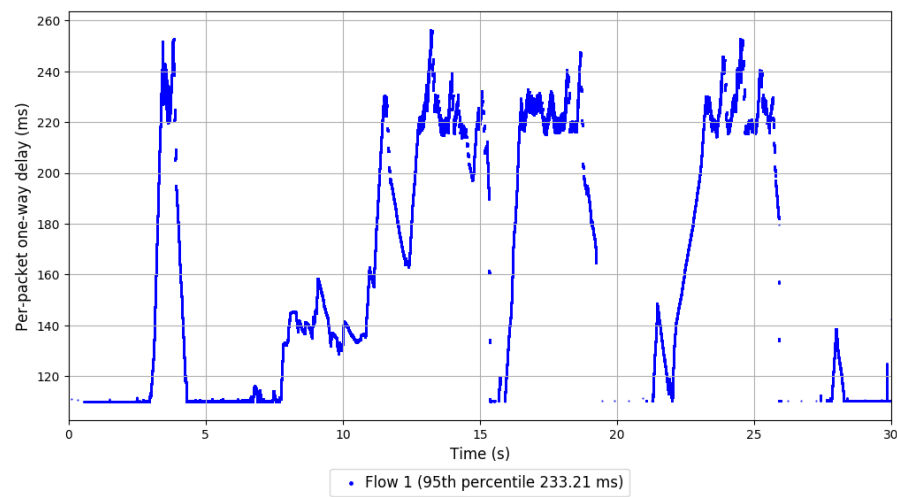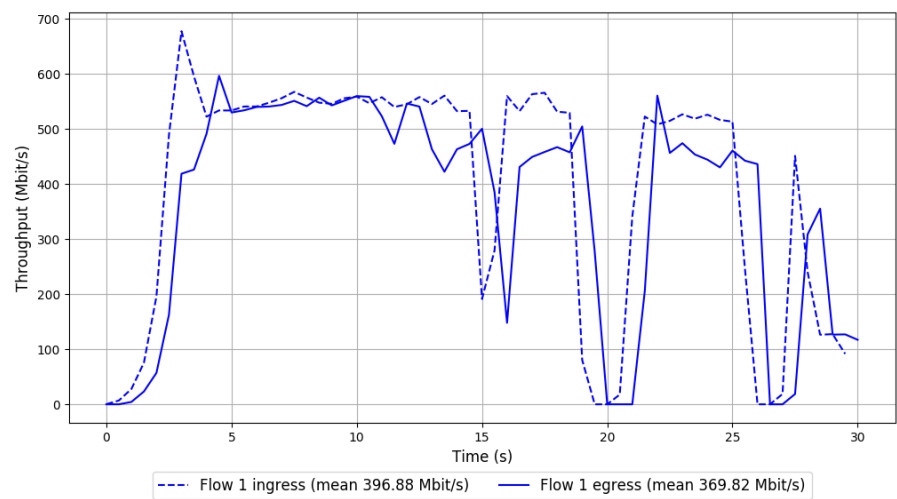
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 478.60 Mbit/s)   Flow 1 egress (mean 466.48 Mbit/s)

• Flow 1 (95th percentile 222.36 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-12-11 04:47:41
End at: 2019-12-11 04:48:11
Local clock offset: 8.504 ms
Remote clock offset: 7.433 ms


# Below is generated by plot.py at 2019-12-11 07:25:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 369.82 Mbit/s
95th percentile per-packet one-way delay: 233.207 ms
Loss rate: 6.75%
-- Flow 1:
Average throughput: 369.82 Mbit/s
95th percentile per-packet one-way delay: 233.207 ms
Loss rate: 6.75%
```

Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-12-11 05:23:25
End at: 2019-12-11 05:23:55
Local clock offset: 4.104 ms
Remote clock offset: 3.002 ms


# Below is generated by plot.py at 2019-12-11 07:27:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 446.06 Mbit/s
95th percentile per-packet one-way delay: 219.475 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 446.06 Mbit/s
95th percentile per-packet one-way delay: 219.475 ms
Loss rate: 1.59%
```
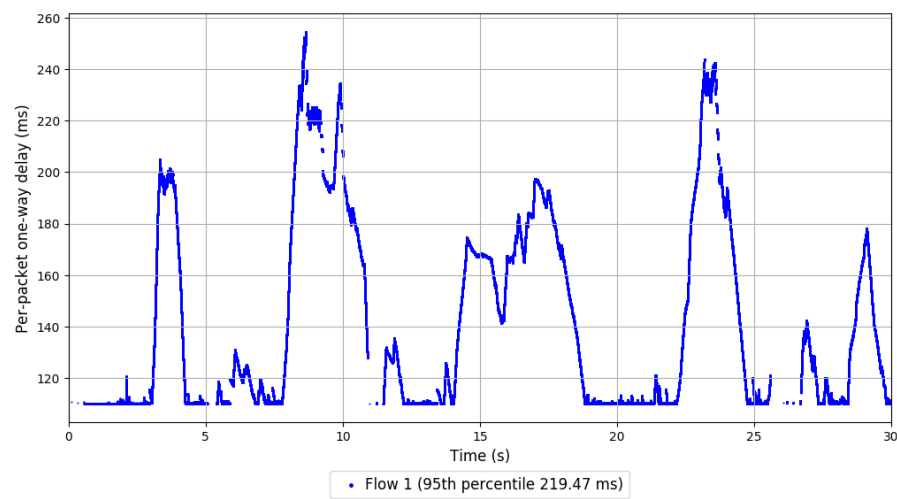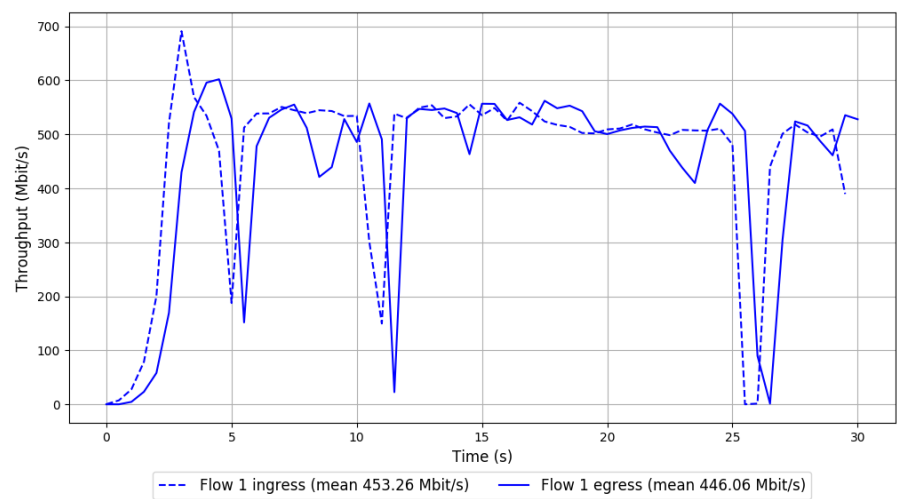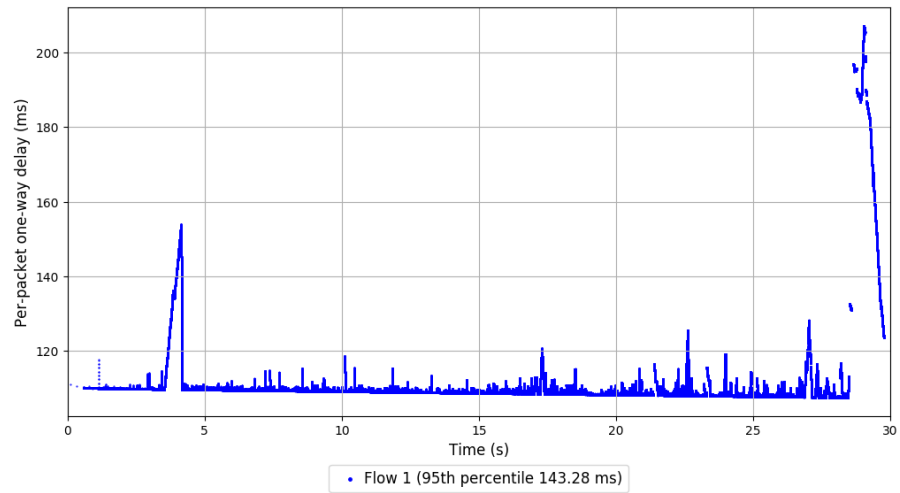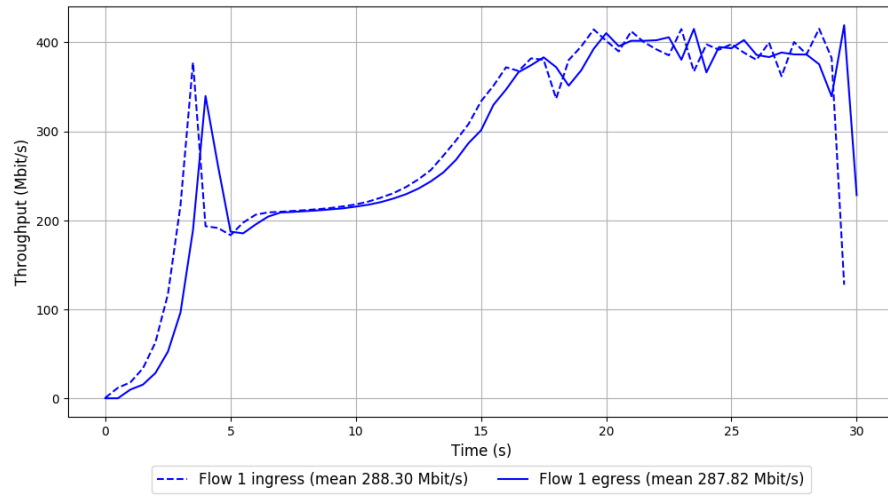
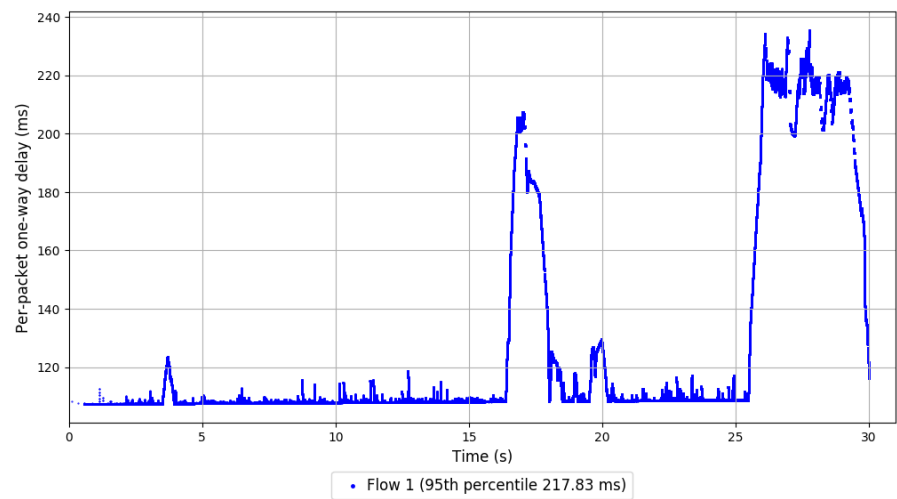## Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2019-12-11 02:57:51
End at: 2019-12-11 02:58:21
Local clock offset: 14.038 ms
Remote clock offset: 38.677 ms


# Below is generated by plot.py at 2019-12-11 07:27:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 287.82 Mbit/s
95th percentile per-packet one-way delay: 143.278 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 287.82 Mbit/s
95th percentile per-packet one-way delay: 143.278 ms
Loss rate: 0.18%
```
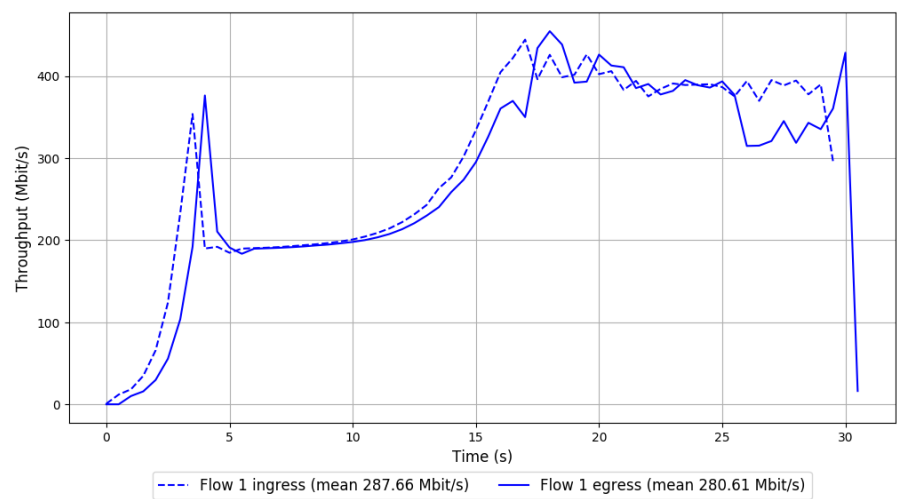
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-12-11 03:33:59
End at: 2019-12-11 03:34:29
Local clock offset: 27.944 ms
Remote clock offset: 34.501 ms


# Below is generated by plot.py at 2019-12-11 07:27:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 280.61 Mbit/s
95th percentile per-packet one-way delay: 217.833 ms
Loss rate: 2.44%
-- Flow 1:
Average throughput: 280.61 Mbit/s
95th percentile per-packet one-way delay: 217.833 ms
Loss rate: 2.44%
```
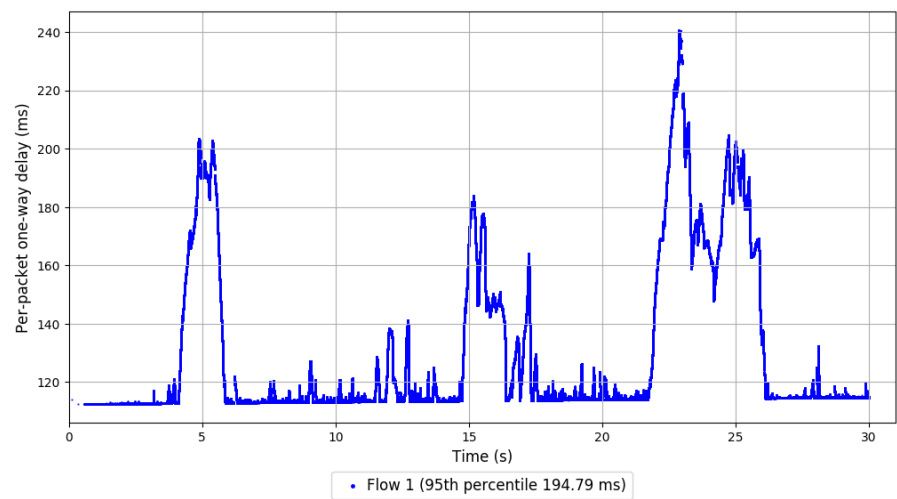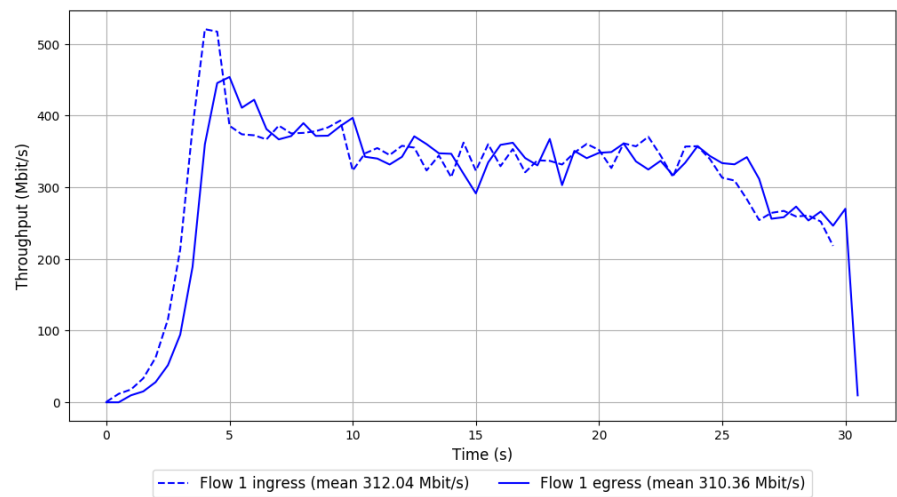
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-12-11 04:09:20
End at: 2019-12-11 04:09:50
Local clock offset: 16.532 ms
Remote clock offset: 42.959 ms


# Below is generated by plot.py at 2019-12-11 07:27:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 310.36 Mbit/s
95th percentile per-packet one-way delay: 194.791 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 310.36 Mbit/s
95th percentile per-packet one-way delay: 194.791 ms
Loss rate: 0.54%
```
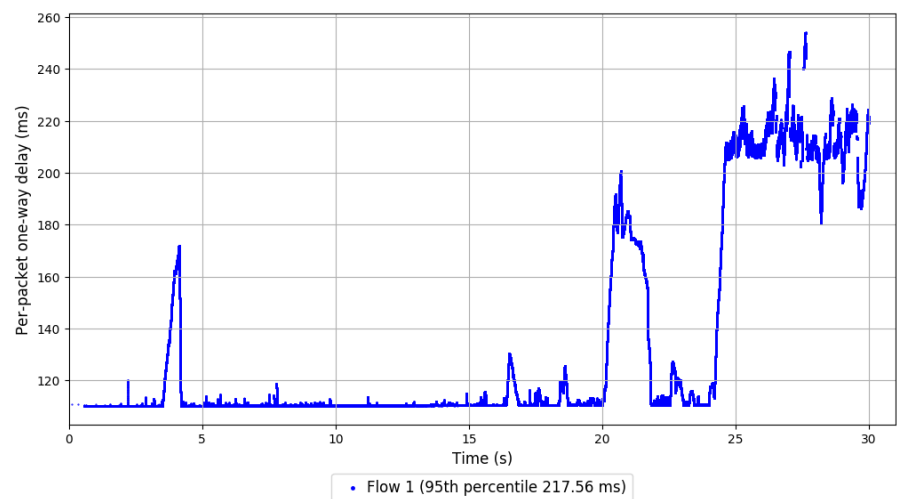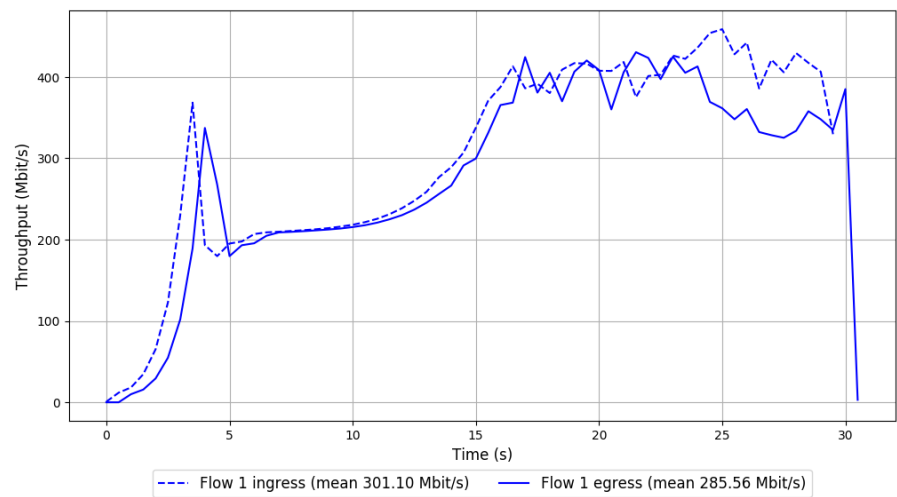
Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2019-12-11 04:44:23
End at: 2019-12-11 04:44:53
Local clock offset: 8.028 ms
Remote clock offset: 10.068 ms


# Below is generated by plot.py at 2019-12-11 07:28:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 285.56 Mbit/s
95th percentile per-packet one-way delay: 217.565 ms
Loss rate: 5.16%
-- Flow 1:
Average throughput: 285.56 Mbit/s
95th percentile per-packet one-way delay: 217.565 ms
Loss rate: 5.16%
```

Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-12-11 05:20:03
End at: 2019-12-11 05:20:33
Local clock offset: 3.798 ms
Remote clock offset: 3.916 ms


# Below is generated by plot.py at 2019-12-11 07:31:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 270.65 Mbit/s
95th percentile per-packet one-way delay: 206.166 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 270.65 Mbit/s
95th percentile per-packet one-way delay: 206.166 ms
Loss rate: 1.62%
```
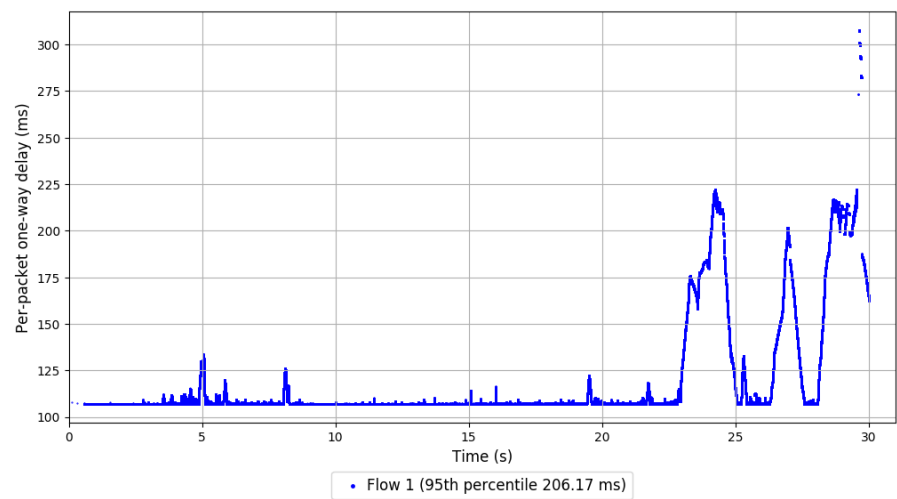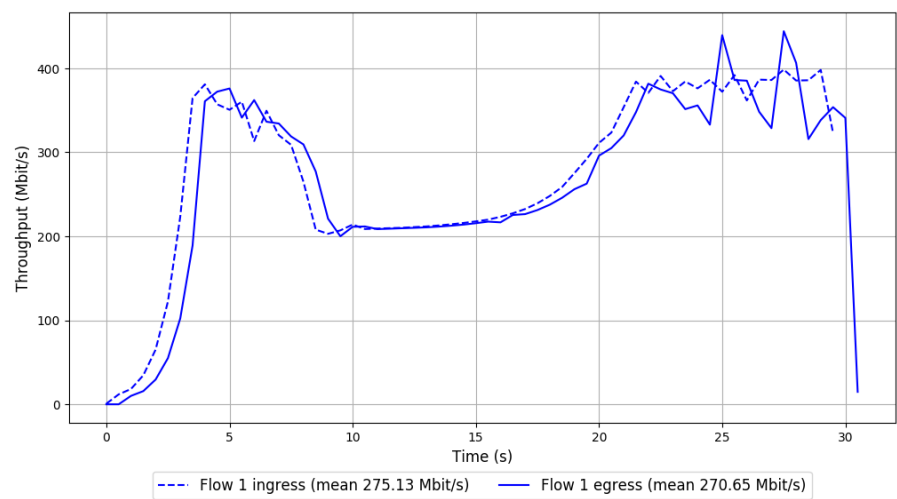
Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 275.13 Mbit/s) --- Flow 1 egress (mean 270.65 Mbit/s)

Flow 1 (95th percentile 206.17 ms)
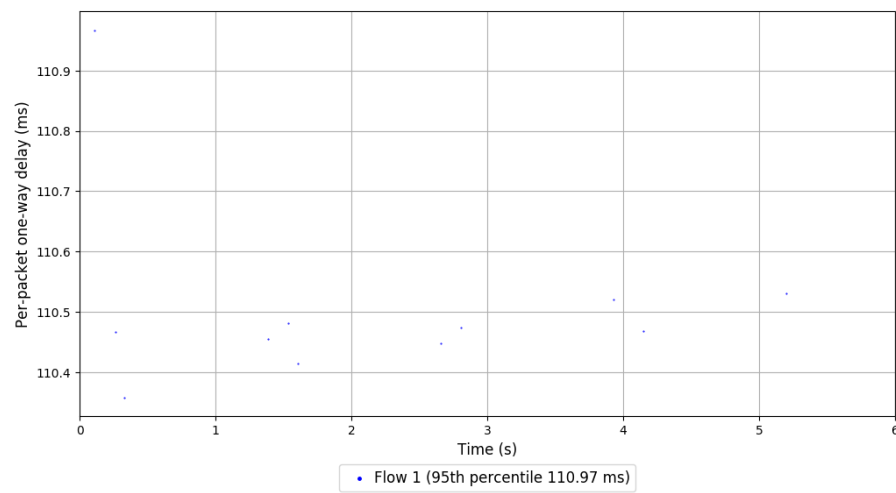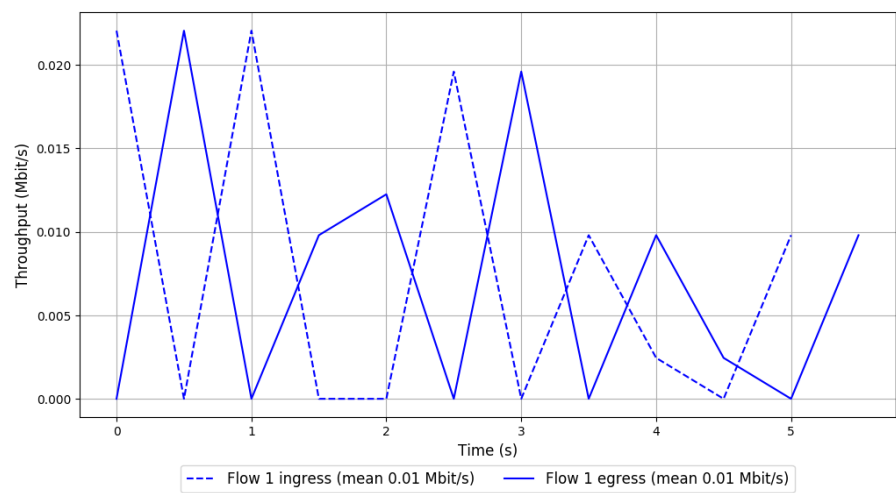
```
Run 1: Statistics of QUIC Cubic

Start at: 2019-12-11 02:48:25
End at: 2019-12-11 02:48:55
Local clock offset: 9.004 ms
Remote clock offset: 25.154 ms
```

Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-12-11 03:24:16
End at: 2019-12-11 03:24:46
Local clock offset: 20.977 ms
Remote clock offset: 26.857 ms


# Below is generated by plot.py at 2019-12-11 07:31:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.42 Mbit/s
95th percentile per-packet one-way delay: 109.413 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.42 Mbit/s
95th percentile per-packet one-way delay: 109.413 ms
Loss rate: 0.00%
```
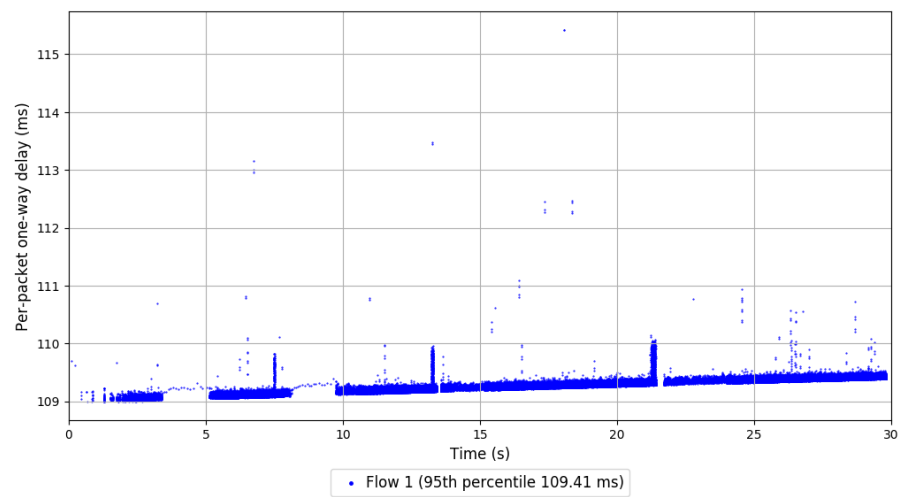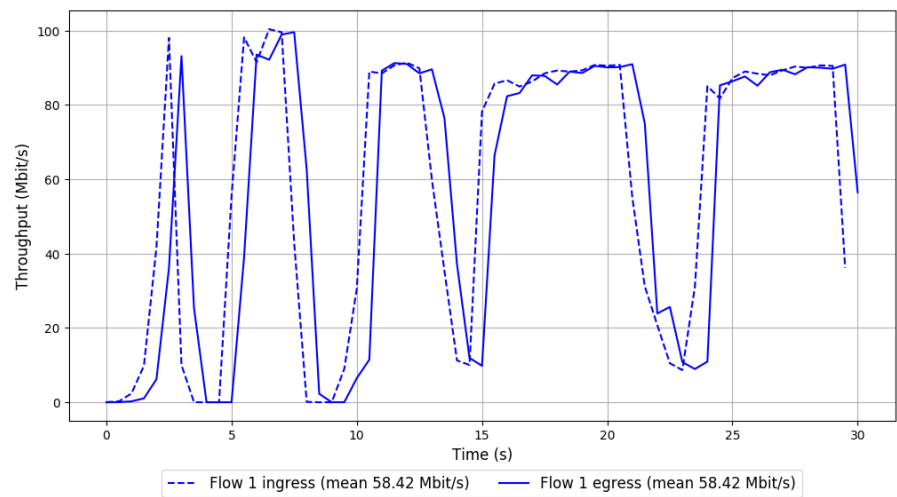
Run 2: Report of QUIC Cubic — Data Link
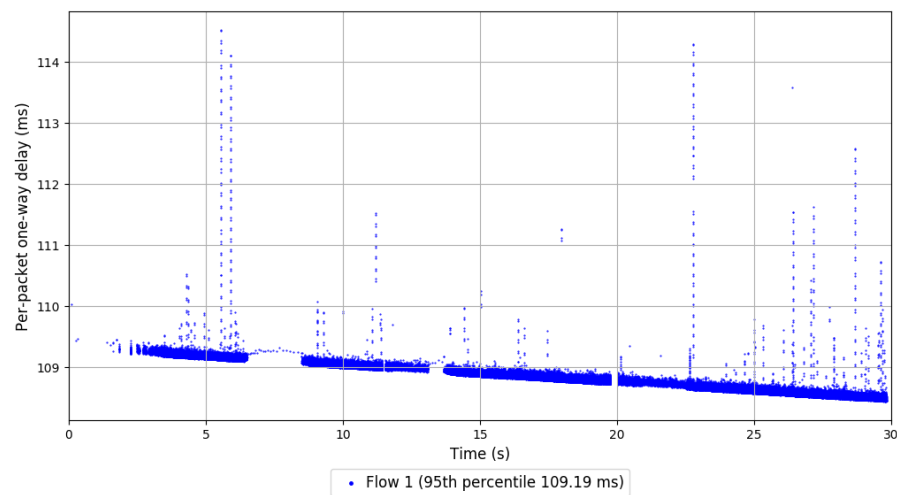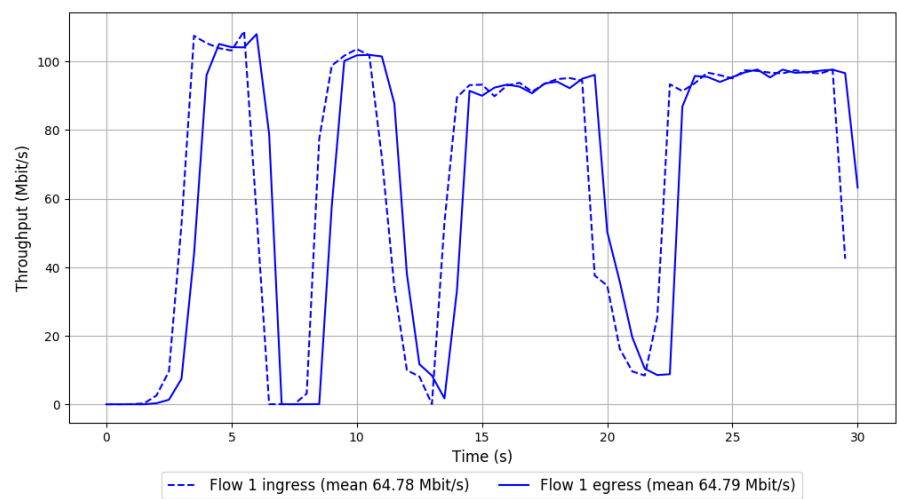

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```
Run 3: Statistics of QUIC Cubic

Start at: 2019-12-11 03:59:30
End at: 2019-12-11 04:00:01
Local clock offset: 16.747 ms
Remote clock offset: 40.602 ms


# Below is generated by plot.py at 2019-12-11 07:31:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.79 Mbit/s
95th percentile per-packet one-way delay: 109.194 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.79 Mbit/s
95th percentile per-packet one-way delay: 109.194 ms
Loss rate: 0.00%
```

Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-12-11 04:34:38
End at: 2019-12-11 04:35:08
Local clock offset: 7.774 ms
Remote clock offset: 11.618 ms


# Below is generated by plot.py at 2019-12-11 07:31:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.53 Mbit/s
95th percentile per-packet one-way delay: 106.123 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.53 Mbit/s
95th percentile per-packet one-way delay: 106.123 ms
Loss rate: 0.00%
```
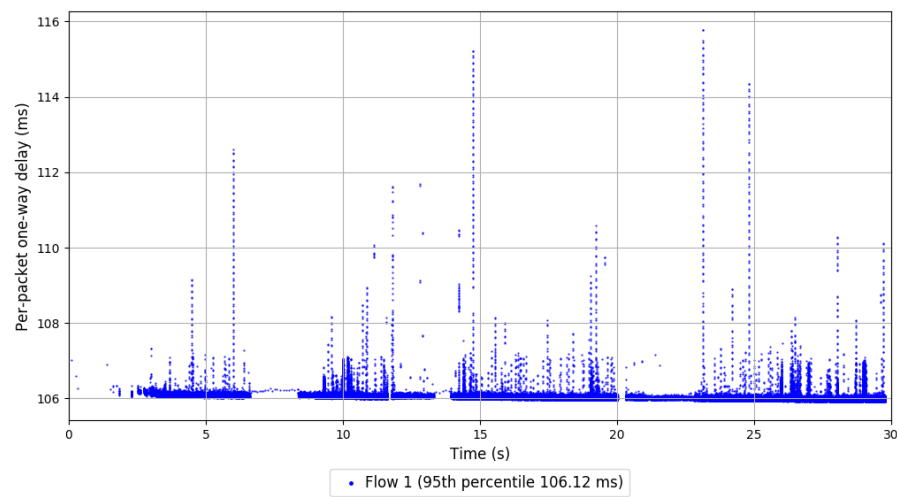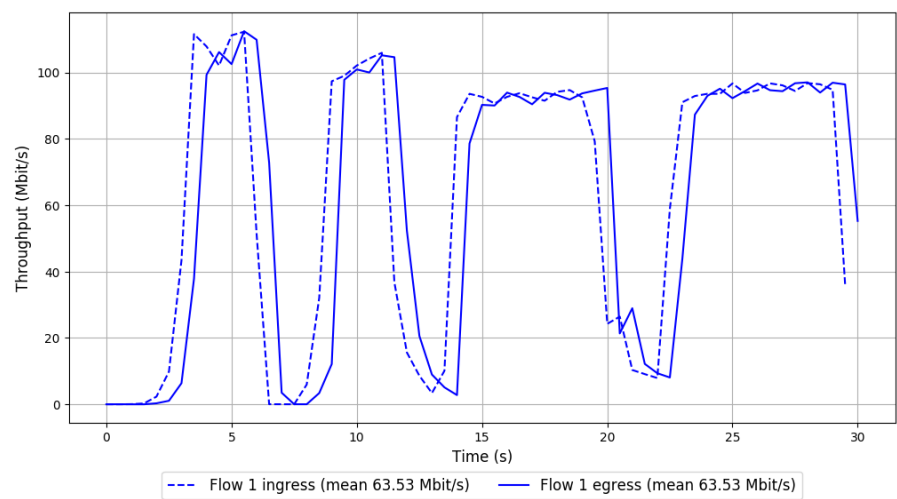
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-12-11 05:10:15
End at: 2019-12-11 05:10:45
Local clock offset: 3.635 ms
Remote clock offset: 5.14 ms


# Below is generated by plot.py at 2019-12-11 07:31:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.63 Mbit/s
95th percentile per-packet one-way delay: 106.658 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.63 Mbit/s
95th percentile per-packet one-way delay: 106.658 ms
Loss rate: 0.00%
```
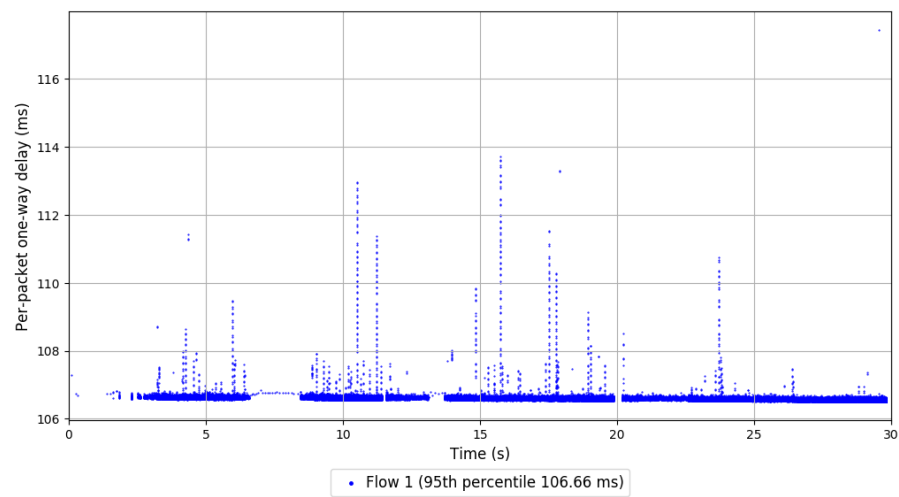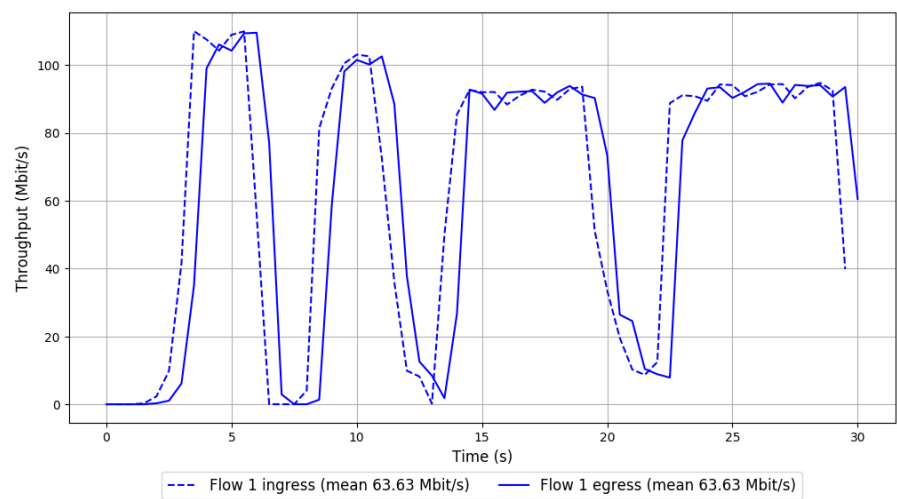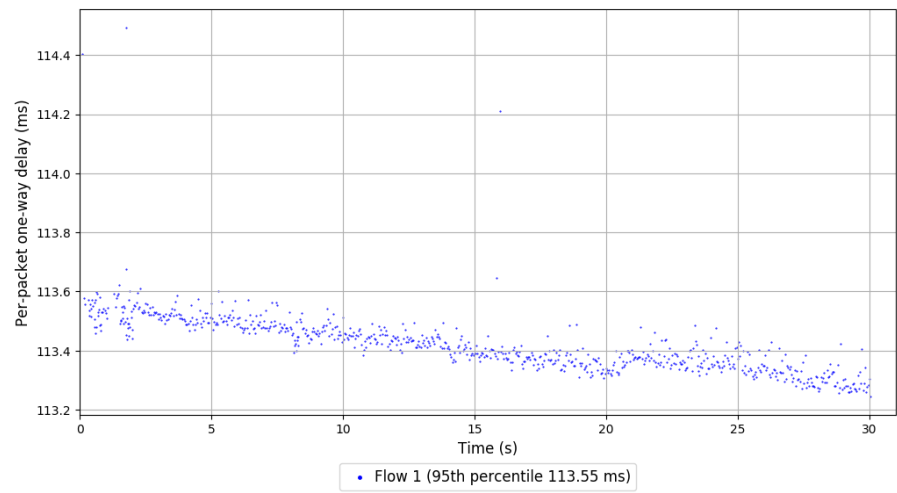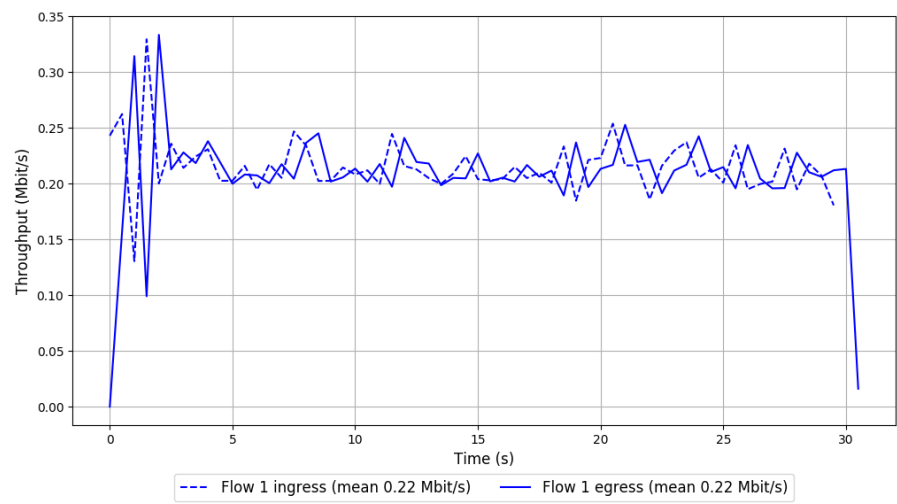
Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-12-11 03:06:02
End at: 2019-12-11 03:06:32
Local clock offset: 18.501 ms
Remote clock offset: 37.104 ms


# Below is generated by plot.py at 2019-12-11 07:31:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.553 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.553 ms
Loss rate: 0.00%
```

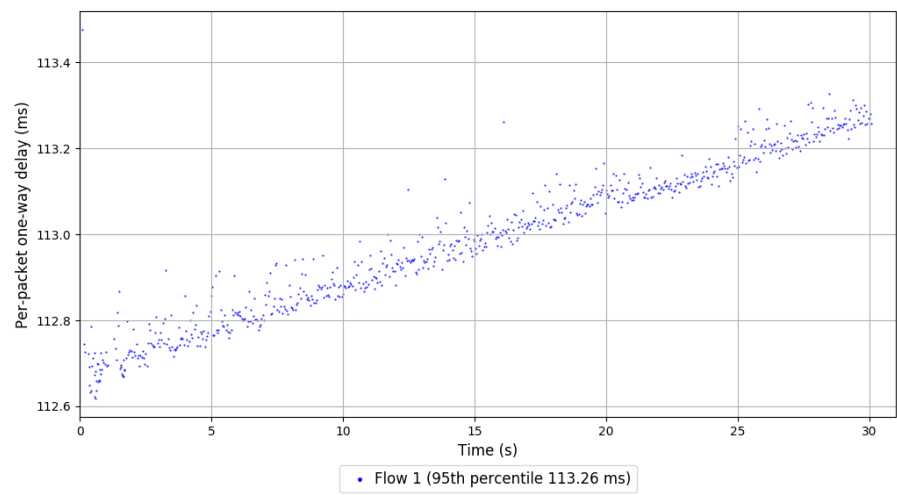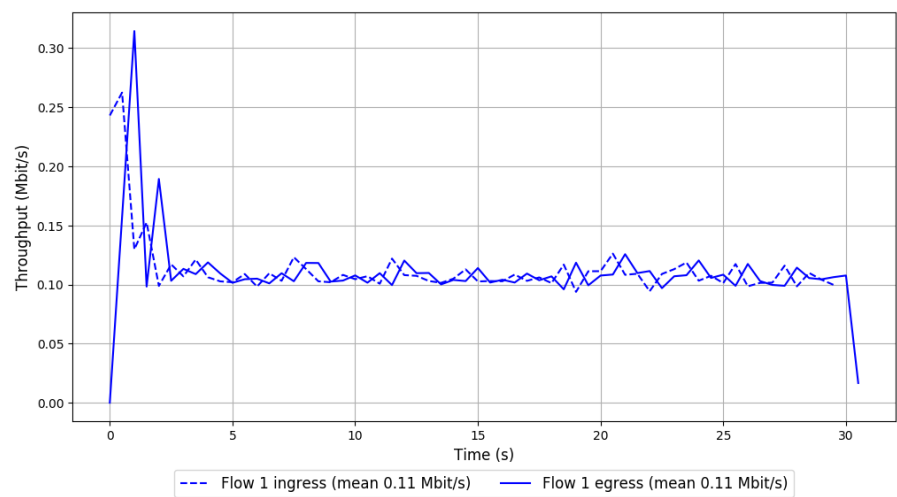# Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-12-11 03:41:41
End at: 2019-12-11 03:42:11
Local clock offset: 35.812 ms
Remote clock offset: 25.984 ms


# Below is generated by plot.py at 2019-12-11 07:31:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 113.257 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 113.257 ms
Loss rate: 0.00%
```
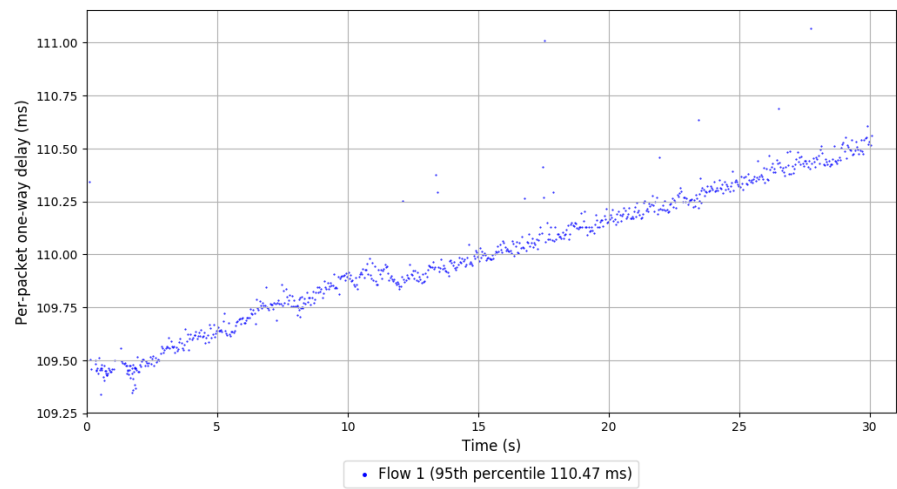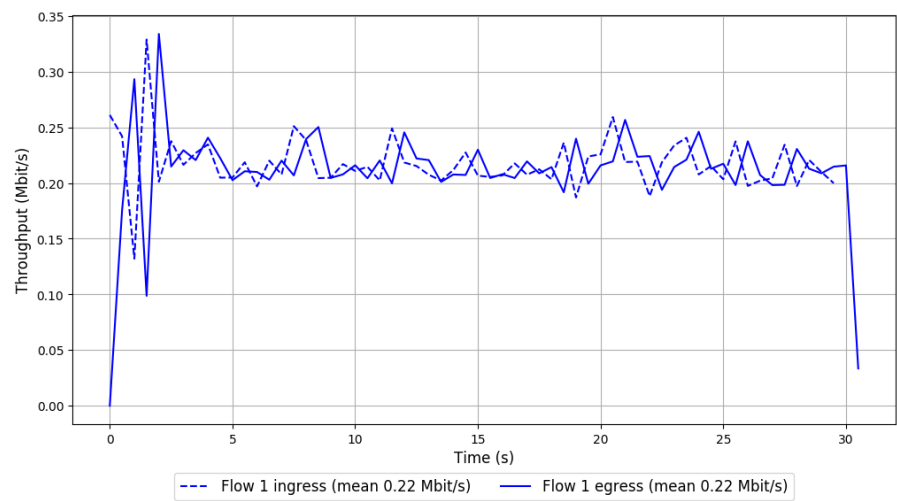
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-12-11 04:16:44
End at: 2019-12-11 04:17:14
Local clock offset: 19.103 ms
Remote clock offset: 20.865 ms


# Below is generated by plot.py at 2019-12-11 07:31:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.469 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.469 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.22 Mbit/s)   Flow 1 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 110.47 ms)

```
Run 4: Statistics of SCReAM

Start at: 2019-12-11 04:52:10
End at: 2019-12-11 04:52:40
Local clock offset: 9.416 ms
Remote clock offset: 5.505 ms


# Below is generated by plot.py at 2019-12-11 07:31:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.452 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.452 ms
Loss rate: 0.00%
```
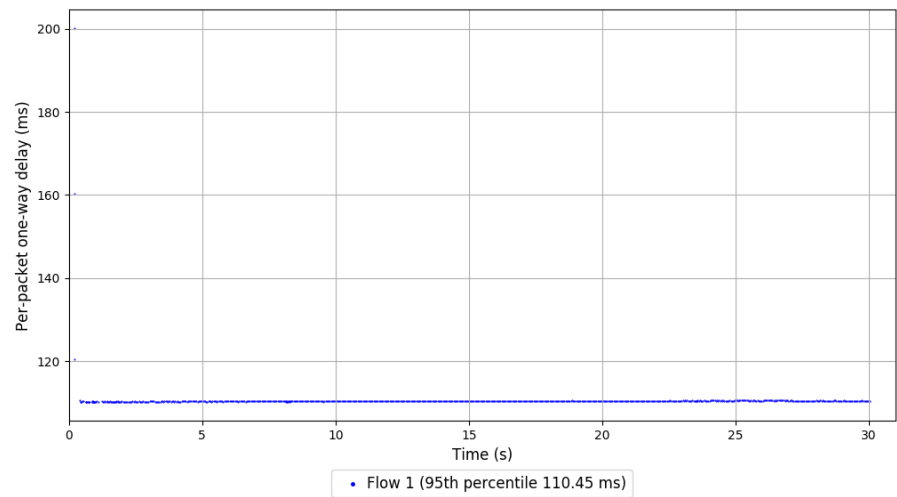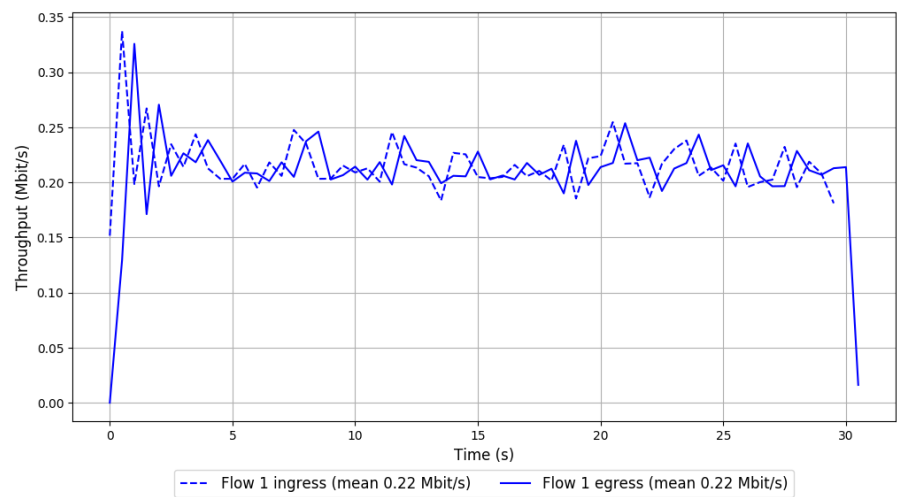
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-12-11 05:28:32
End at: 2019-12-11 05:29:02
Local clock offset: 4.735 ms
Remote clock offset: 2.283 ms


# Below is generated by plot.py at 2019-12-11 07:31:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 106.956 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 106.956 ms
Loss rate: 0.00%
```
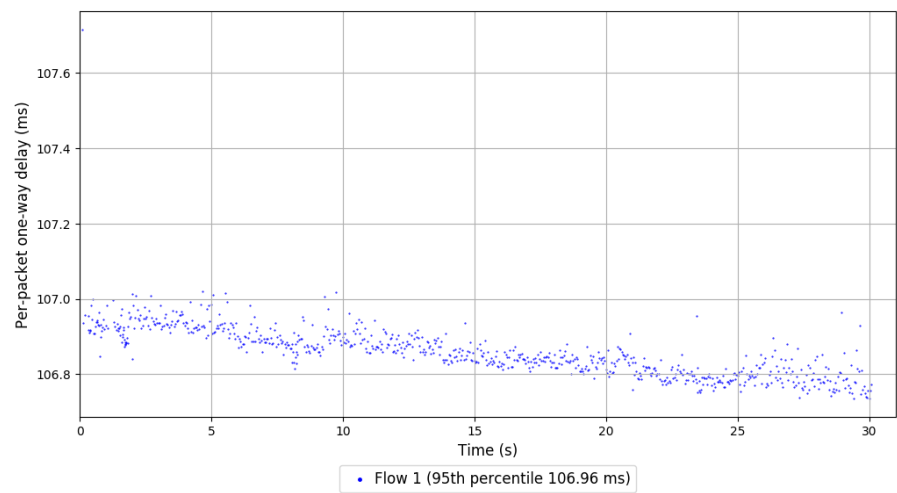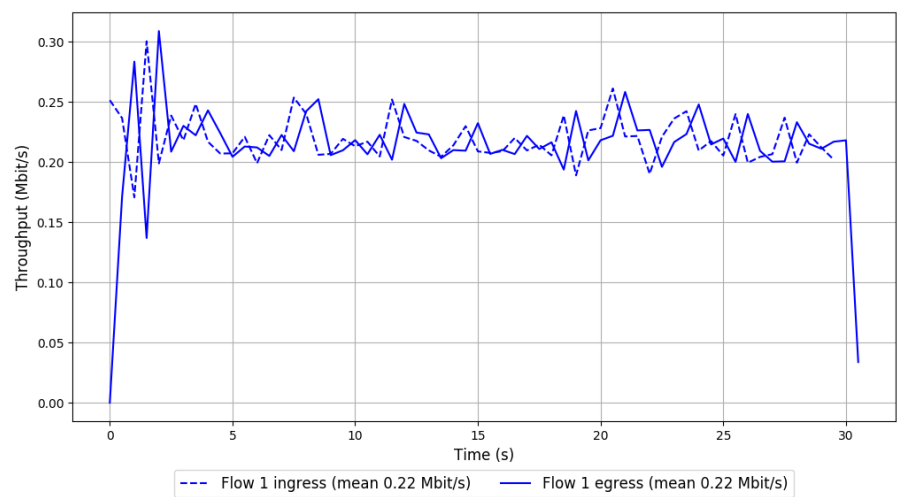
Run 5: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.22 Mbit/s)   Flow 1 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 106.96 ms)

```
Run 1: Statistics of Sprout

Start at: 2019-12-11 03:07:11
End at: 2019-12-11 03:07:41
Local clock offset: 20.178 ms
Remote clock offset: 39.29 ms


# Below is generated by plot.py at 2019-12-11 07:31:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 111.255 ms
Loss rate: 3.60%
-- Flow 1:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 111.255 ms
Loss rate: 3.60%
```
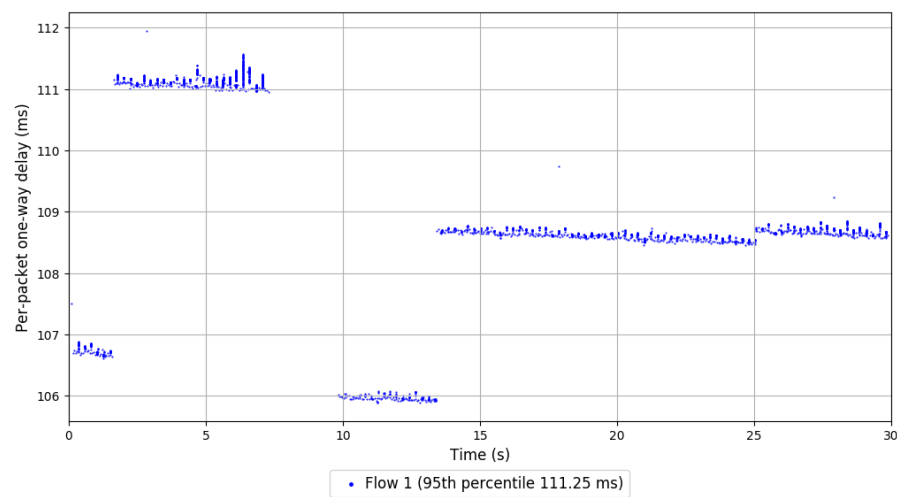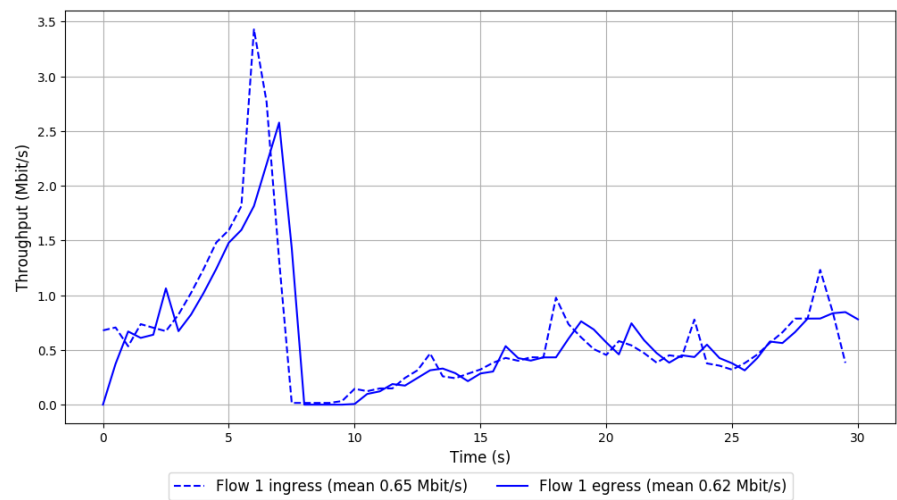
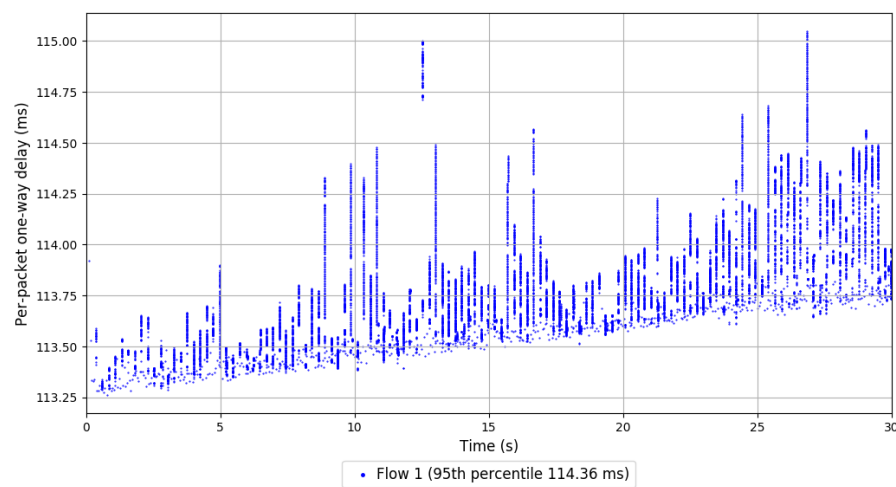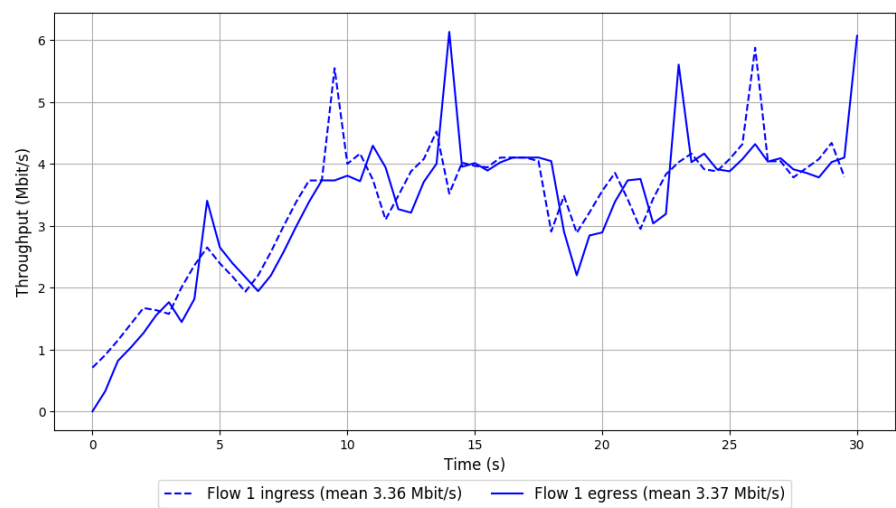Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-12-11 03:42:51
End at: 2019-12-11 03:43:21
Local clock offset: 36.964 ms
Remote clock offset: 26.296 ms


# Below is generated by plot.py at 2019-12-11 07:31:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 114.365 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 114.365 ms
Loss rate: 0.00%
```
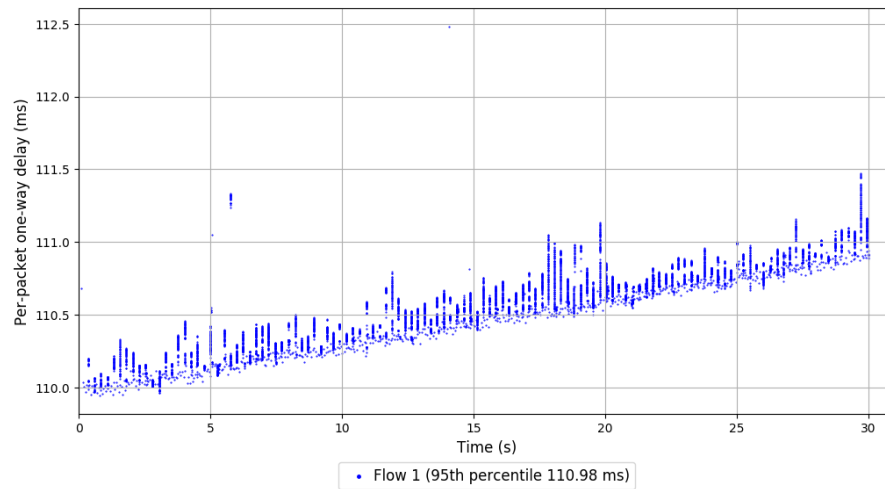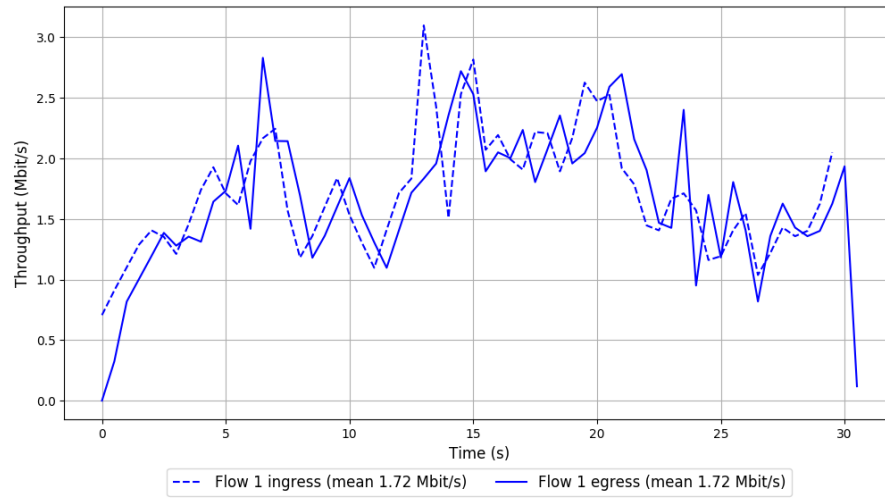
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-12-11 04:17:53
End at: 2019-12-11 04:18:23
Local clock offset: 19.557 ms
Remote clock offset: 19.363 ms


# Below is generated by plot.py at 2019-12-11 07:31:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 110.985 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 110.985 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-12-11 04:53:20
End at: 2019-12-11 04:53:50
Local clock offset: 9.706 ms
Remote clock offset: 5.245 ms


# Below is generated by plot.py at 2019-12-11 07:31:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 108.909 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 108.909 ms
Loss rate: 0.00%
```
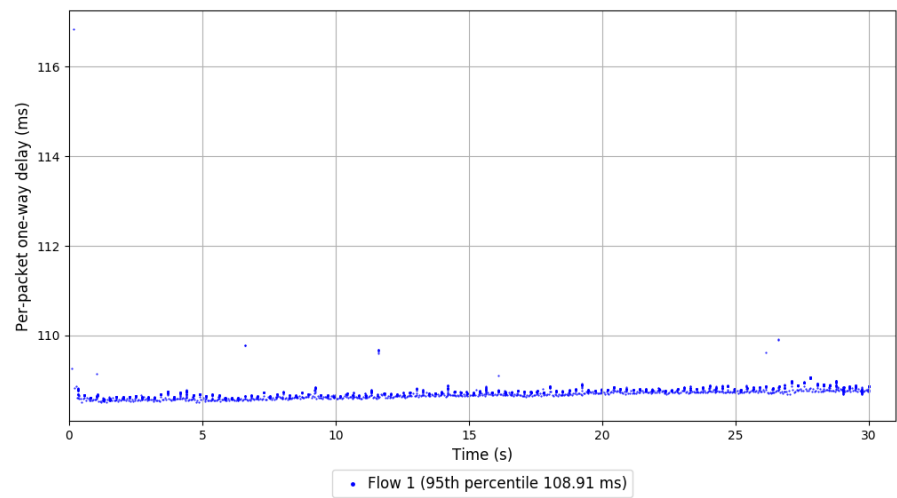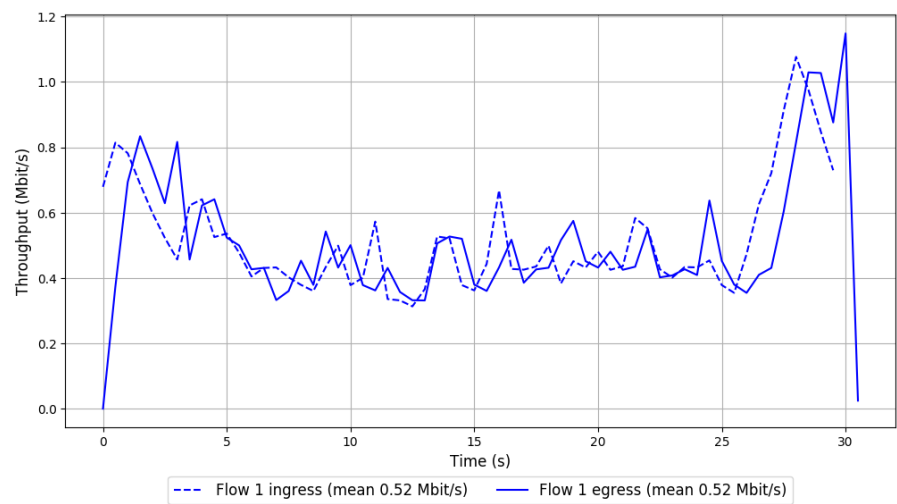
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-12-11 05:29:42
End at: 2019-12-11 05:30:12
Local clock offset: 4.425 ms
Remote clock offset: 2.222 ms


# Below is generated by plot.py at 2019-12-11 07:31:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 110.189 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 110.189 ms
Loss rate: 0.00%
```
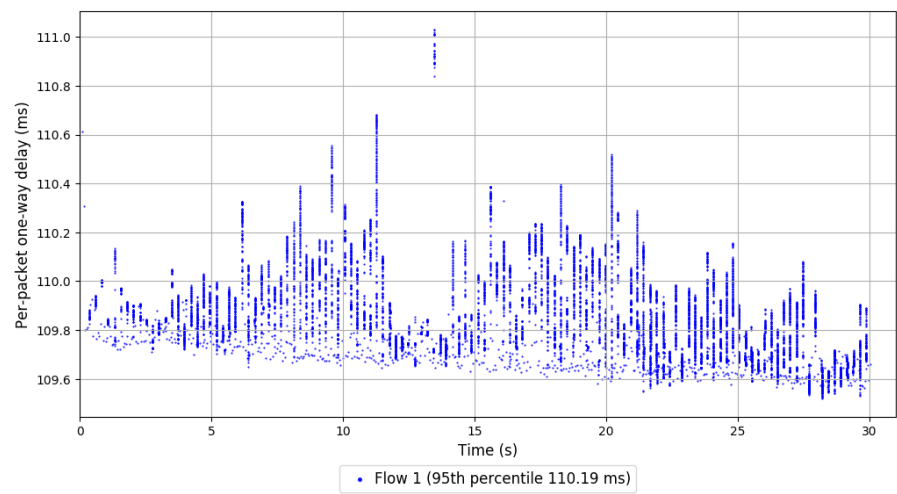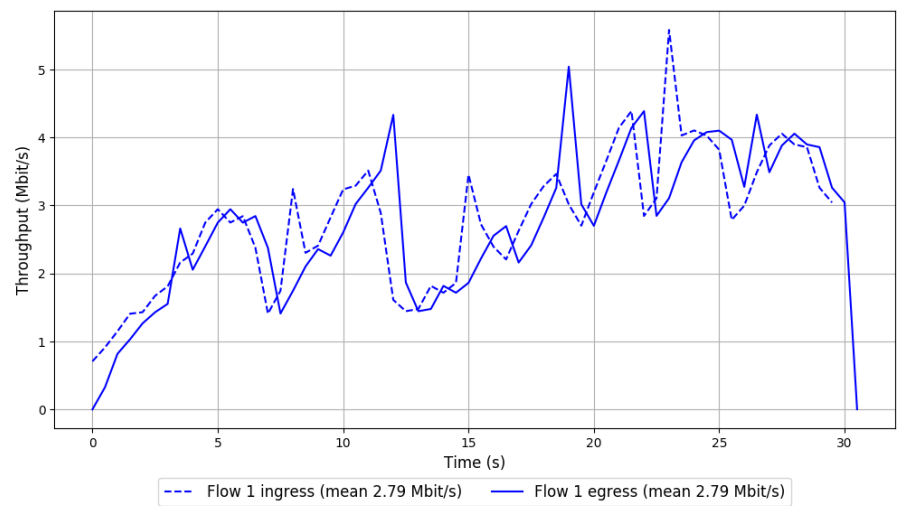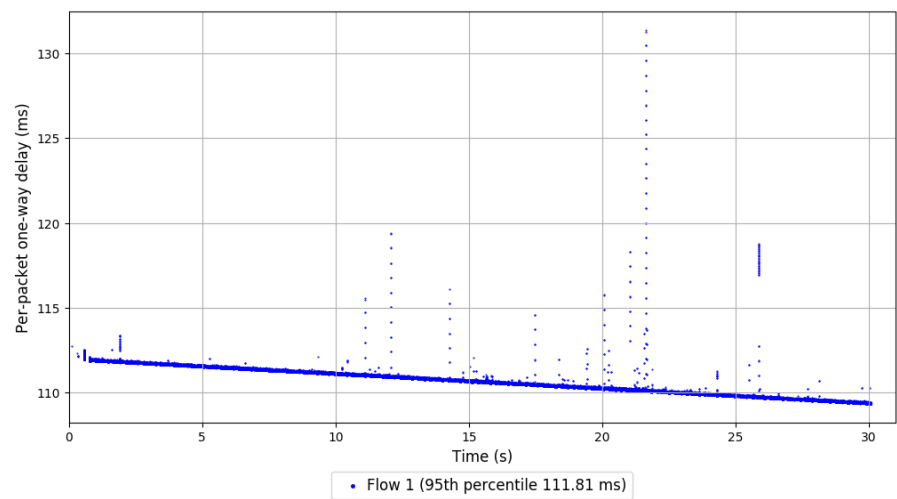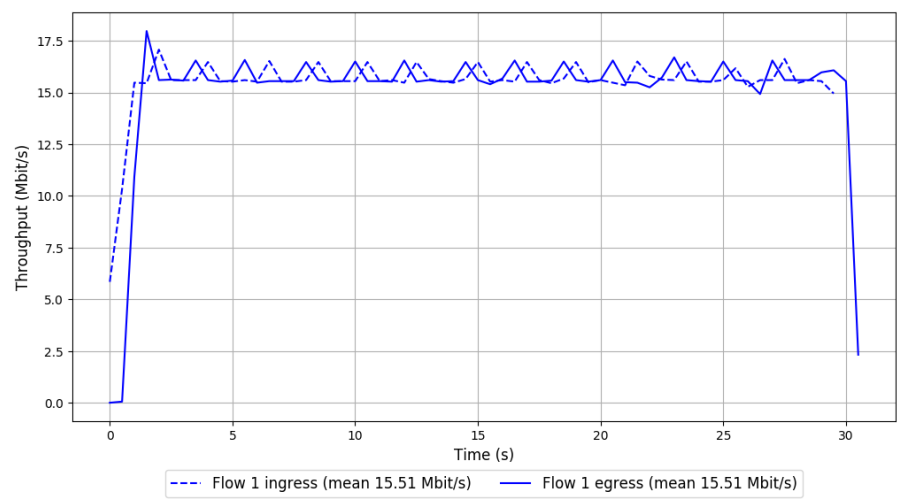
Run 5: Report of Sprout — Data Link

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

Start at: 2019-12-11 03:13:07
End at: 2019-12-11 03:13:37
Local clock offset: 25.976 ms
Remote clock offset: 58.298 ms


# Below is generated by plot.py at 2019-12-11 07:31:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.51 Mbit/s
95th percentile per-packet one-way delay: 111.807 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 15.51 Mbit/s
95th percentile per-packet one-way delay: 111.807 ms
Loss rate: 0.01%
```

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

Flow 1 ingress (mean 15.51 Mbit/s) — — —   Flow 1 egress (mean 15.51 Mbit/s) ———

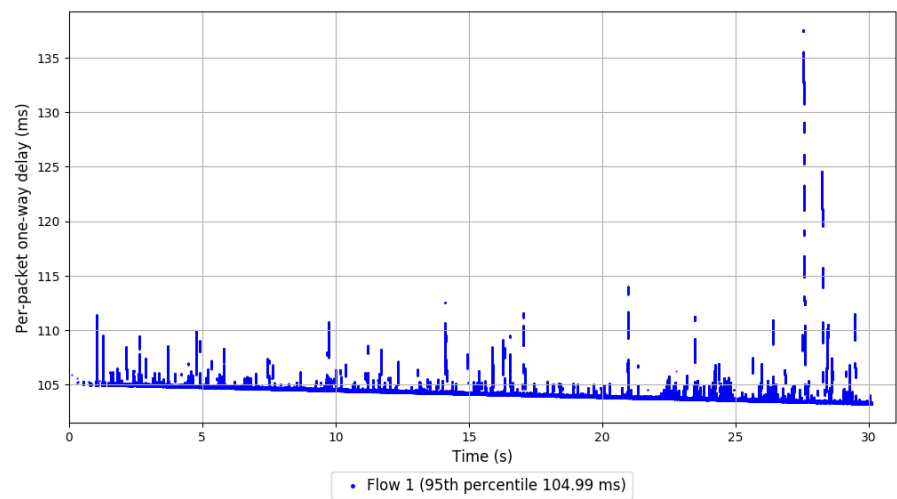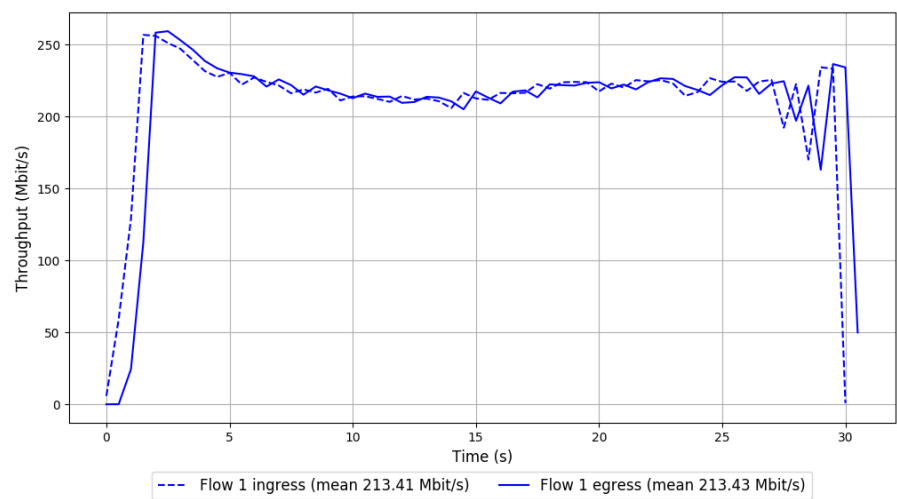• Flow 1 (95th percentile 111.81 ms)

196

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

Start at: 2019-12-11 03:48:46
End at: 2019-12-11 03:49:16
Local clock offset: 33.075 ms
Remote clock offset: 28.678 ms


# Below is generated by plot.py at 2019-12-11 07:32:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 213.43 Mbit/s
95th percentile per-packet one-way delay: 104.994 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 213.43 Mbit/s
95th percentile per-packet one-way delay: 104.994 ms
Loss rate: 0.00%
```

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

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

Start at: 2019-12-11 04:23:28
End at: 2019-12-11 04:23:58
Local clock offset: 15.395 ms
Remote clock offset: 13.684 ms


# Below is generated by plot.py at 2019-12-11 07:32:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.55 Mbit/s
95th percentile per-packet one-way delay: 105.915 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 204.55 Mbit/s
95th percentile per-packet one-way delay: 105.915 ms
Loss rate: 0.00%
```
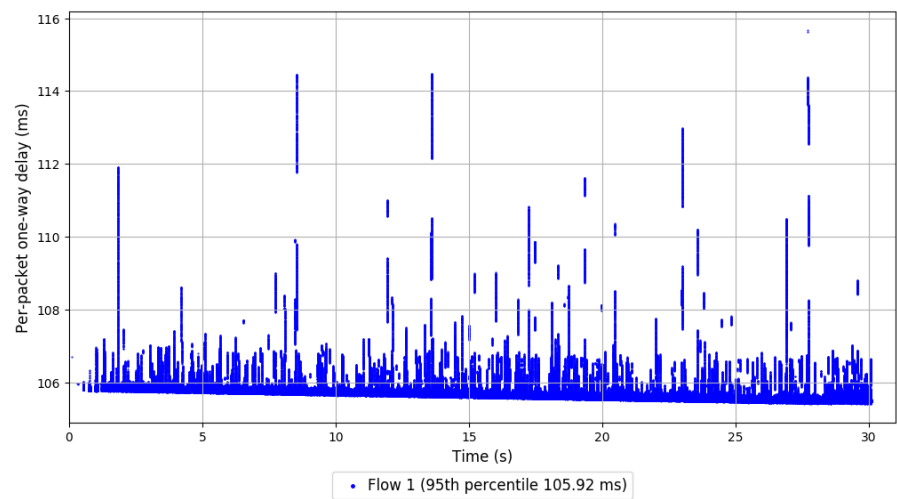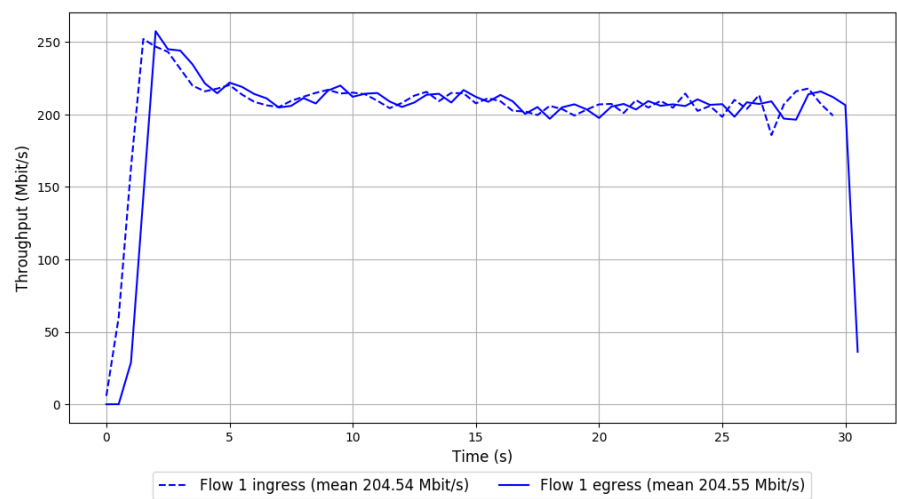
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 204.54 Mbit/s)   Flow 1 egress (mean 204.55 Mbit/s)

Flow 1 (95th percentile 105.92 ms)

200

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

Start at: 2019-12-11 04:59:16
End at: 2019-12-11 04:59:46
Local clock offset: 6.439 ms
Remote clock offset: 4.544 ms


# Below is generated by plot.py at 2019-12-11 07:32:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.74 Mbit/s
95th percentile per-packet one-way delay: 108.822 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 15.74 Mbit/s
95th percentile per-packet one-way delay: 108.822 ms
Loss rate: 0.00%
```
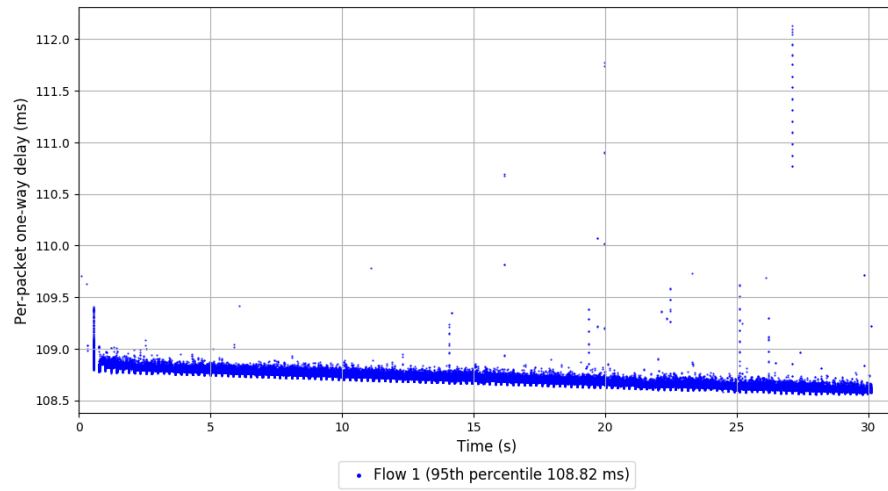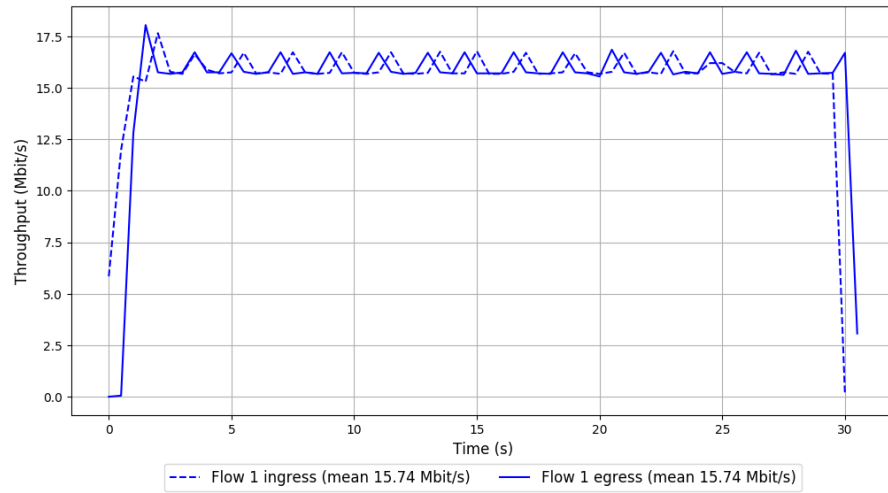
Run 4: Report of TaoVA-100x — Data Link

202

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

Start at: 2019-12-11 05:35:52
End at: 2019-12-11 05:36:22
Local clock offset: 2.41 ms
Remote clock offset: 2.1 ms


# Below is generated by plot.py at 2019-12-11 07:32:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 16.03 Mbit/s
95th percentile per-packet one-way delay: 109.115 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 16.03 Mbit/s
95th percentile per-packet one-way delay: 109.115 ms
Loss rate: 0.00%
```
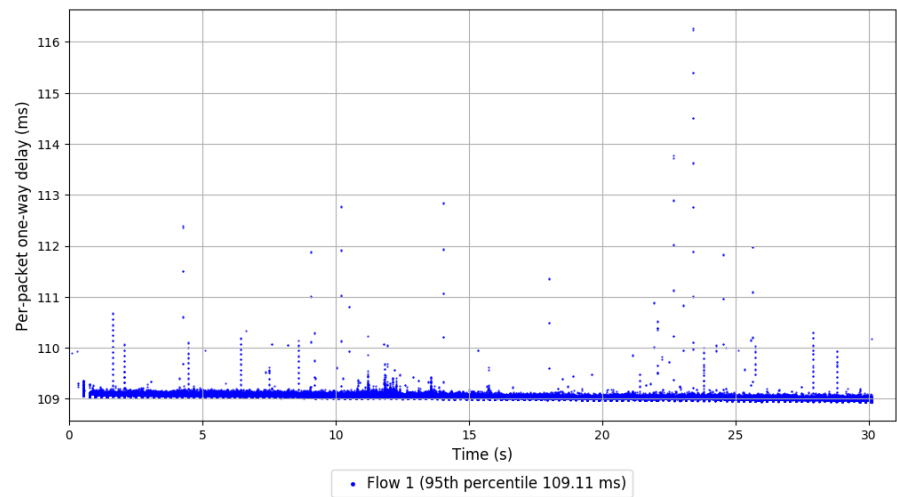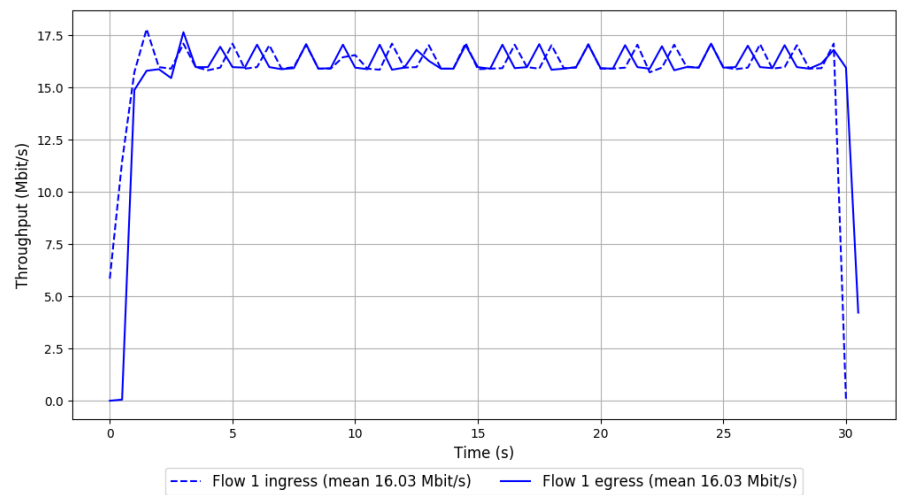
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 16.03 Mbit/s)   Flow 1 egress (mean 16.03 Mbit/s)
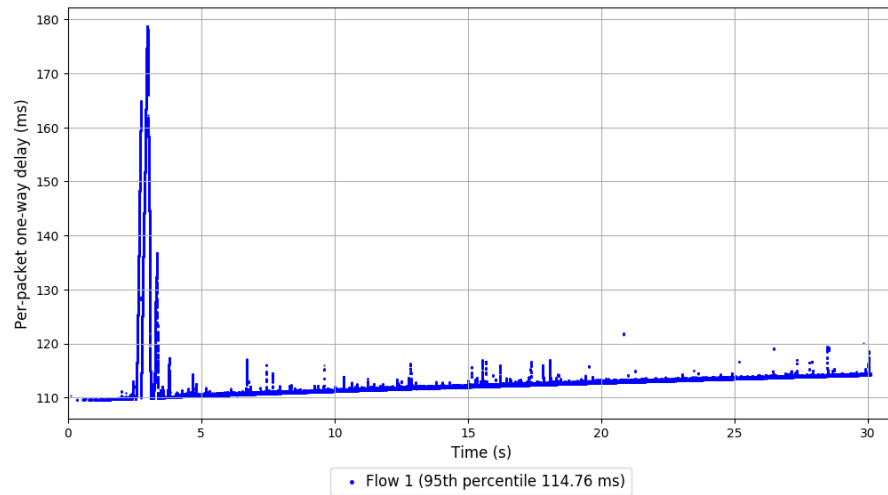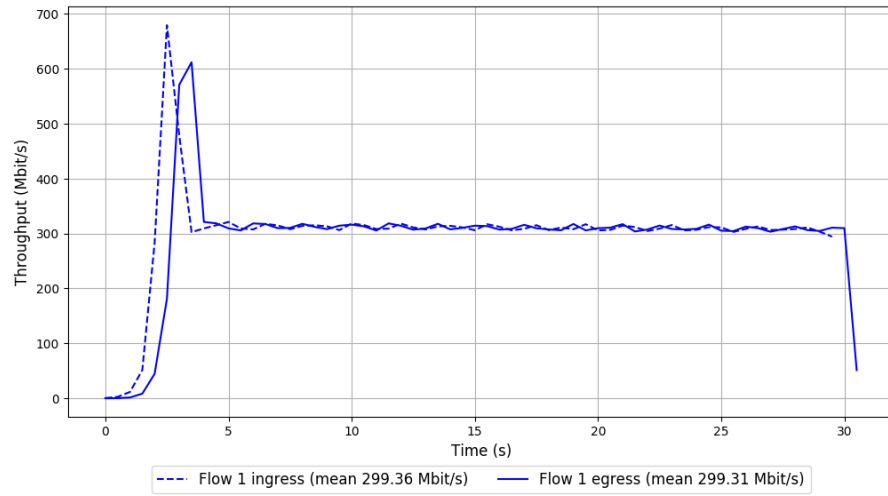

Flow 1 (95th percentile 109.11 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2019-12-11 02:50:46
End at: 2019-12-11 02:51:16
Local clock offset: 10.383 ms
Remote clock offset: 32.158 ms


# Below is generated by plot.py at 2019-12-11 07:32:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 299.31 Mbit/s
95th percentile per-packet one-way delay: 114.762 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 299.31 Mbit/s
95th percentile per-packet one-way delay: 114.762 ms
Loss rate: 0.01%
```

Run 1: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 299.36 Mbit/s) --- Flow 1 egress (mean 299.31 Mbit/s)
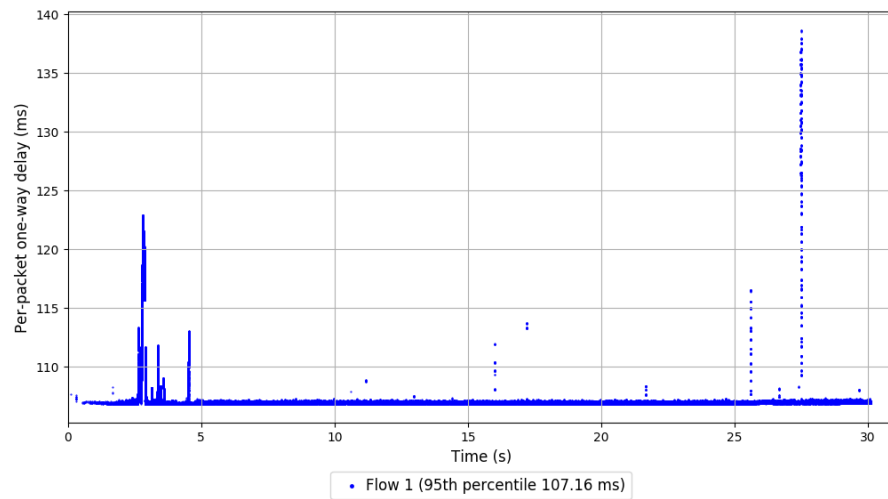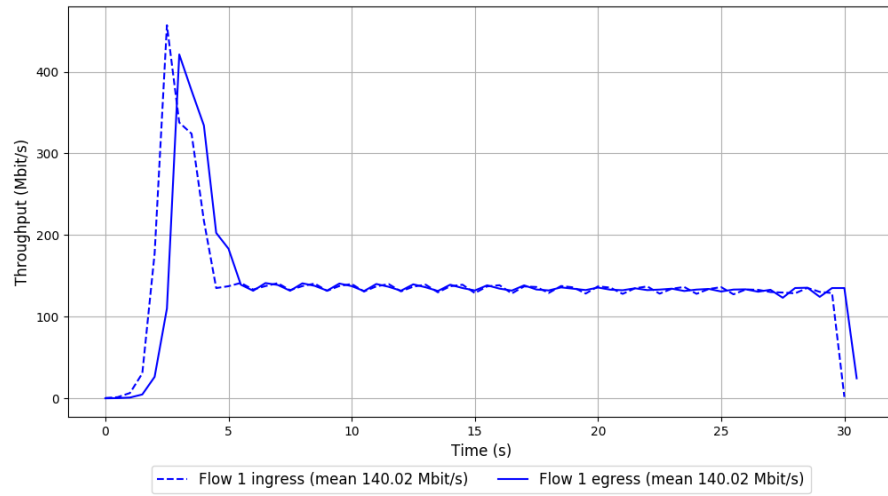

Flow 1 (95th percentile 114.76 ms)

```
Run 2: Statistics of TCP Vegas

Start at: 2019-12-11 03:26:41
End at: 2019-12-11 03:27:11
Local clock offset: 22.215 ms
Remote clock offset: 27.026 ms


# Below is generated by plot.py at 2019-12-11 07:32:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 140.02 Mbit/s
95th percentile per-packet one-way delay: 107.162 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 140.02 Mbit/s
95th percentile per-packet one-way delay: 107.162 ms
Loss rate: 0.00%
```

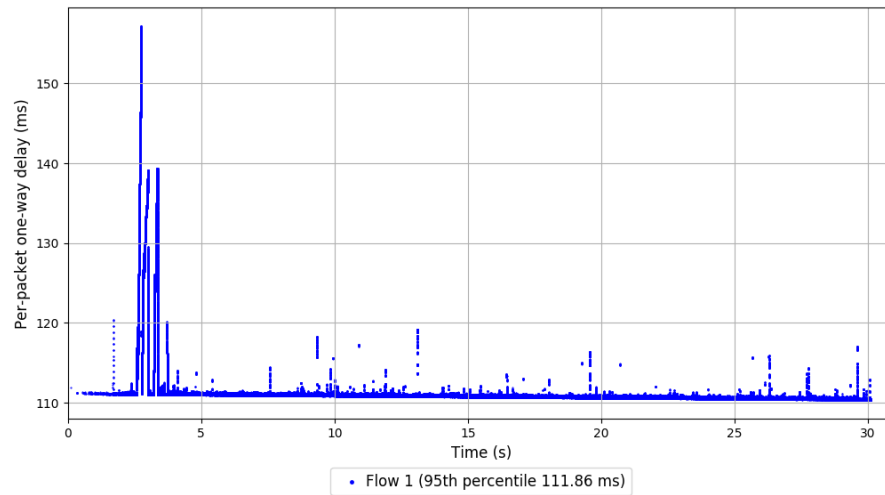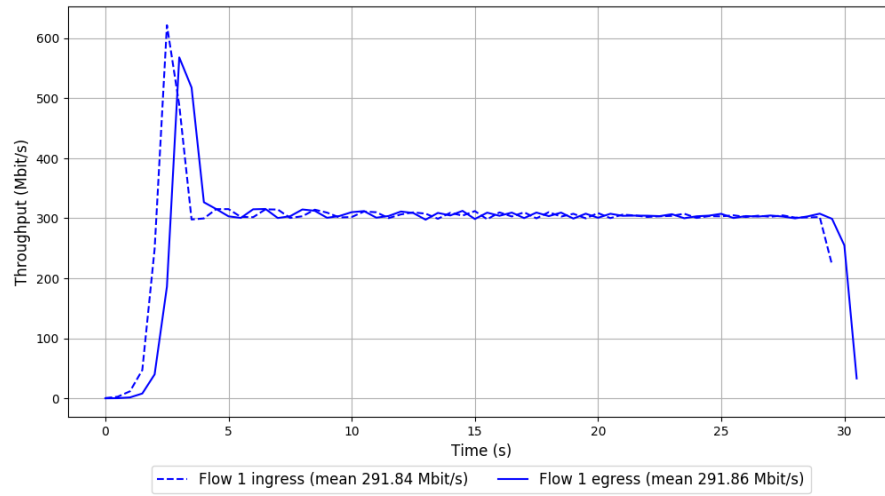# Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-12-11 04:01:56
End at: 2019-12-11 04:02:26
Local clock offset: 15.852 ms
Remote clock offset: 43.824 ms


# Below is generated by plot.py at 2019-12-11 07:32:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 291.86 Mbit/s
95th percentile per-packet one-way delay: 111.855 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 291.86 Mbit/s
95th percentile per-packet one-way delay: 111.855 ms
Loss rate: 0.00%
```

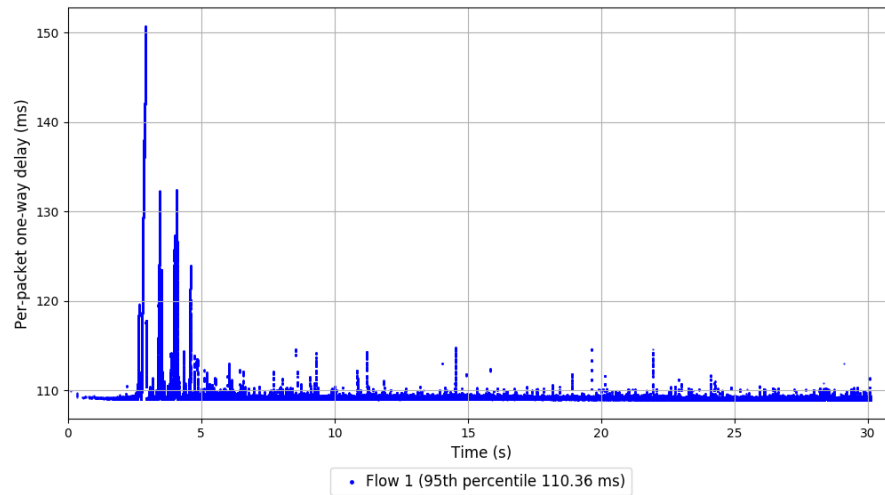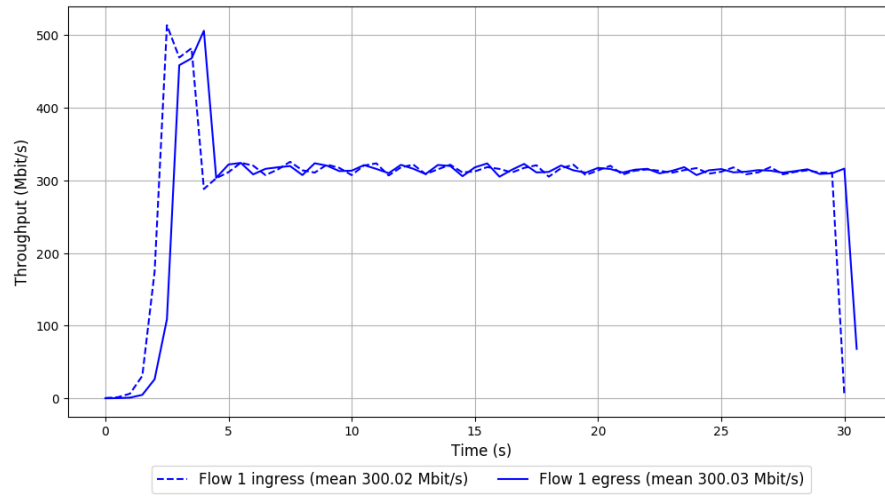Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-12-11 04:37:03
End at: 2019-12-11 04:37:33
Local clock offset: 7.546 ms
Remote clock offset: 11.89 ms


# Below is generated by plot.py at 2019-12-11 07:33:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 300.03 Mbit/s
95th percentile per-packet one-way delay: 110.364 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 300.03 Mbit/s
95th percentile per-packet one-way delay: 110.364 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 300.02 Mbit/s) — — — Flow 1 egress (mean 300.03 Mbit/s)

• Flow 1 (95th percentile 110.36 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2019-12-11 05:12:40
End at: 2019-12-11 05:13:10
Local clock offset: 3.512 ms
Remote clock offset: 5.428 ms


# Below is generated by plot.py at 2019-12-11 07:33:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 194.42 Mbit/s
95th percentile per-packet one-way delay: 112.351 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 194.42 Mbit/s
95th percentile per-packet one-way delay: 112.351 ms
Loss rate: 0.00%
```
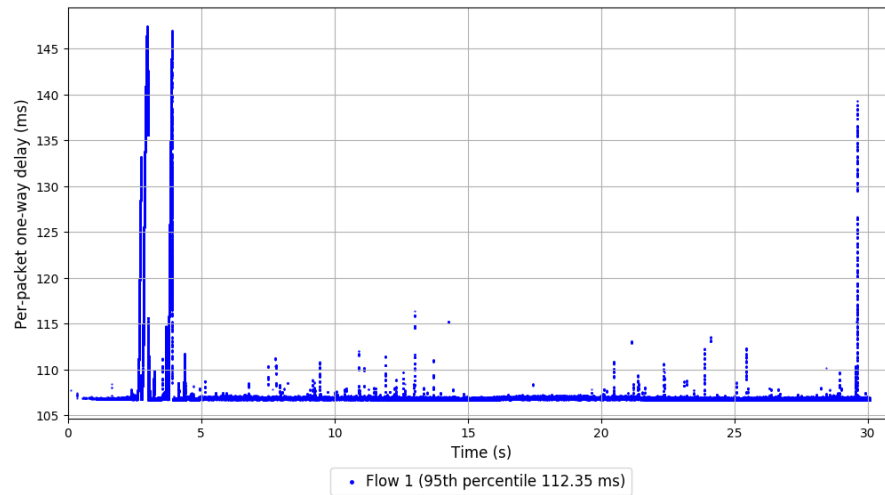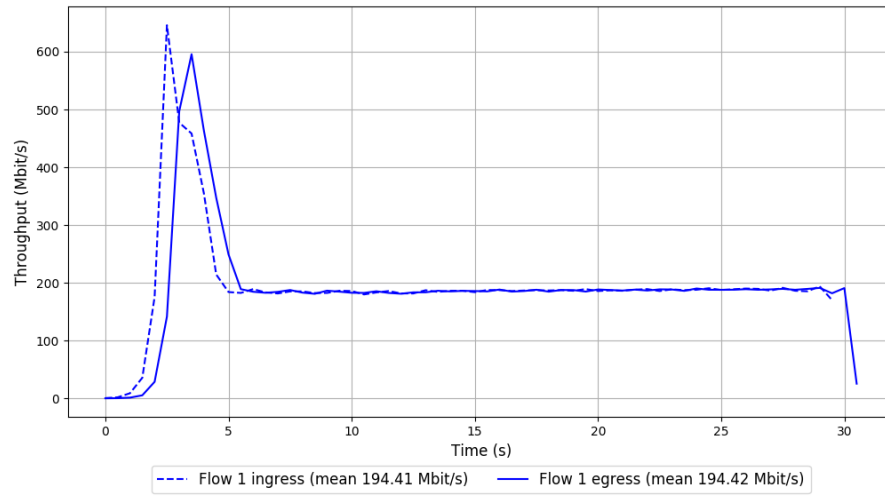
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 194.41 Mbit/s) ----- Flow 1 egress (mean 194.42 Mbit/s)
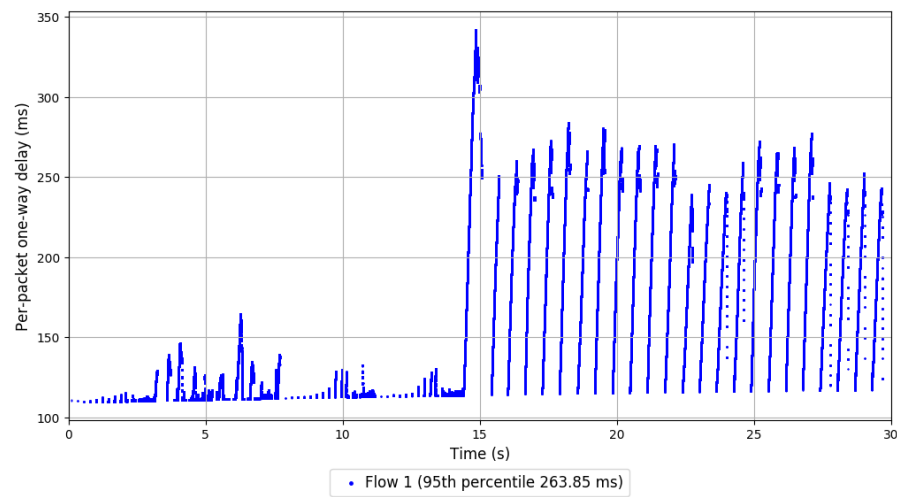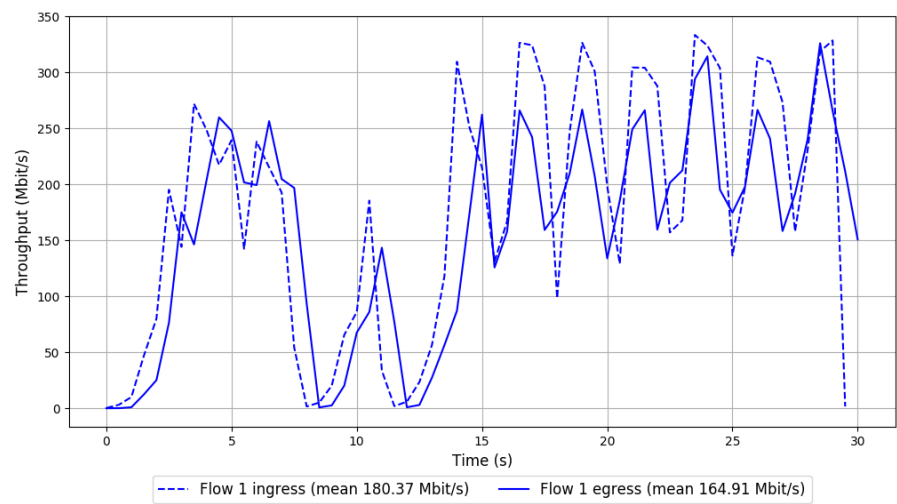

Flow 1 (95th percentile 112.35 ms)

```
Run 1: Statistics of Verus

Start at: 2019-12-11 02:42:09
End at: 2019-12-11 02:42:39
Local clock offset: 6.745 ms
Remote clock offset: 40.196 ms


# Below is generated by plot.py at 2019-12-11 07:34:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 164.91 Mbit/s
95th percentile per-packet one-way delay: 263.846 ms
Loss rate: 8.53%
-- Flow 1:
Average throughput: 164.91 Mbit/s
95th percentile per-packet one-way delay: 263.846 ms
Loss rate: 8.53%
```
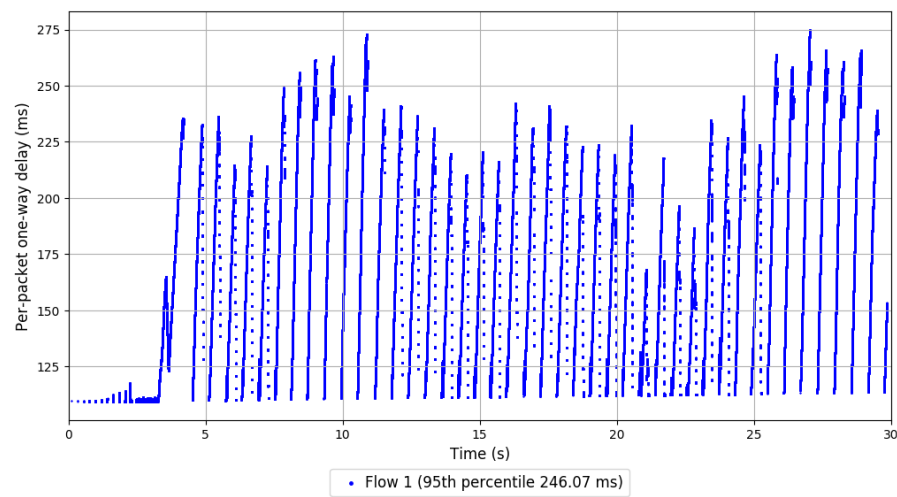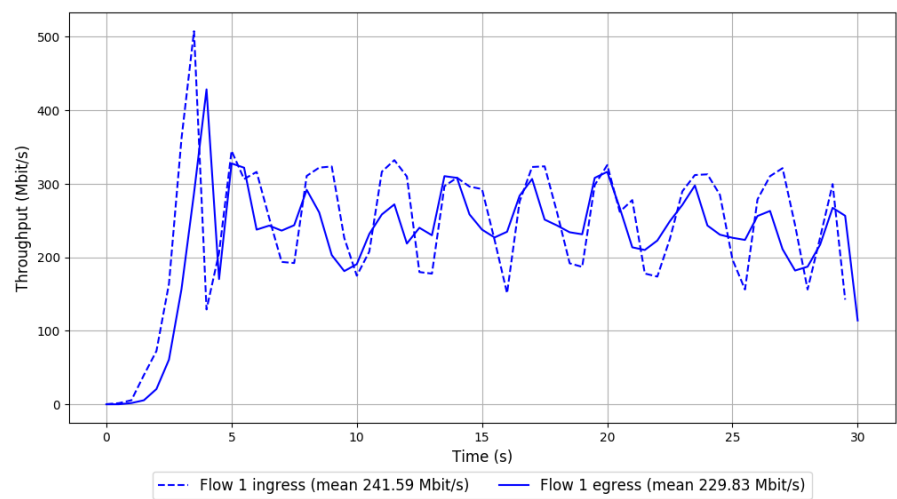
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-12-11 03:17:46
End at: 2019-12-11 03:18:16
Local clock offset: 21.362 ms
Remote clock offset: 54.023 ms


# Below is generated by plot.py at 2019-12-11 07:38:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.83 Mbit/s
95th percentile per-packet one-way delay: 246.075 ms
Loss rate: 4.85%
-- Flow 1:
Average throughput: 229.83 Mbit/s
95th percentile per-packet one-way delay: 246.075 ms
Loss rate: 4.85%
```

Run 2: Report of Verus — Data Link

- - - - Flow 1 ingress (mean 241.59 Mbit/s) ——— Flow 1 egress (mean 229.83 Mbit/s)
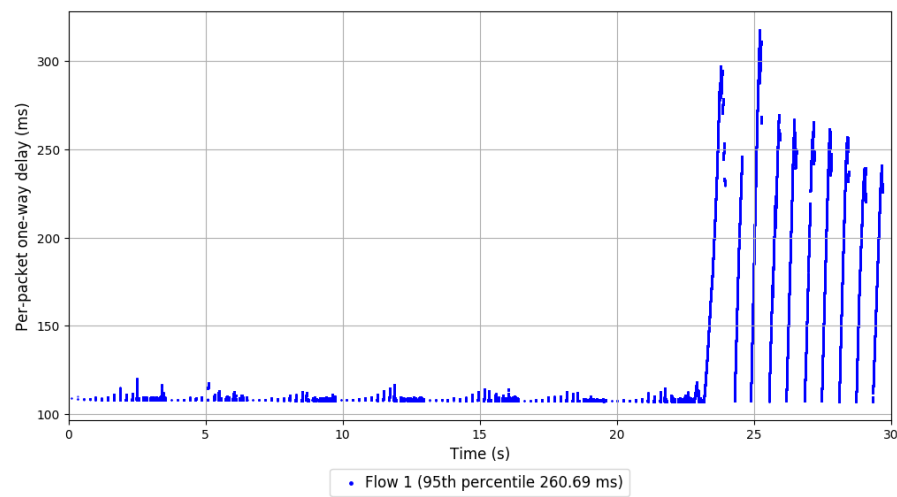

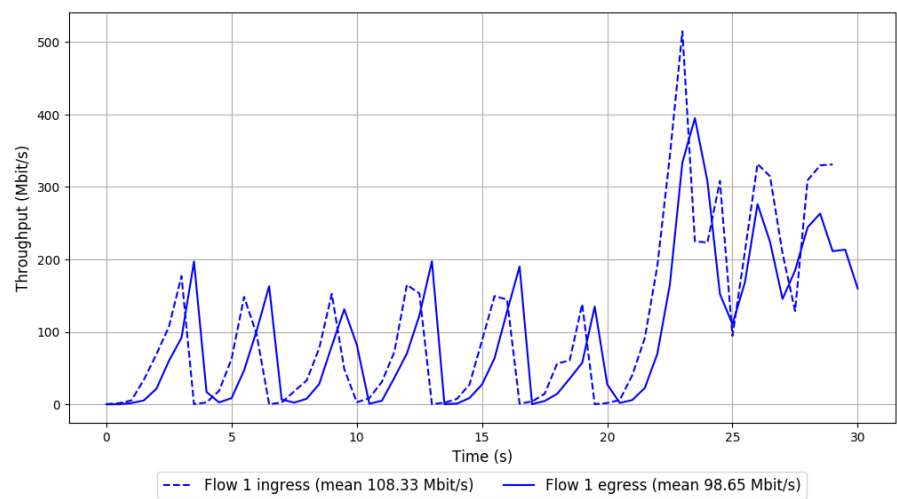
• Flow 1 (95th percentile 246.07 ms)

```
Run 3: Statistics of Verus

Start at: 2019-12-11 03:53:14
End at: 2019-12-11 03:53:44
Local clock offset: 22.593 ms
Remote clock offset: 32.848 ms


# Below is generated by plot.py at 2019-12-11 07:38:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 98.65 Mbit/s
95th percentile per-packet one-way delay: 260.687 ms
Loss rate: 8.58%
-- Flow 1:
Average throughput: 98.65 Mbit/s
95th percentile per-packet one-way delay: 260.687 ms
Loss rate: 8.58%
```
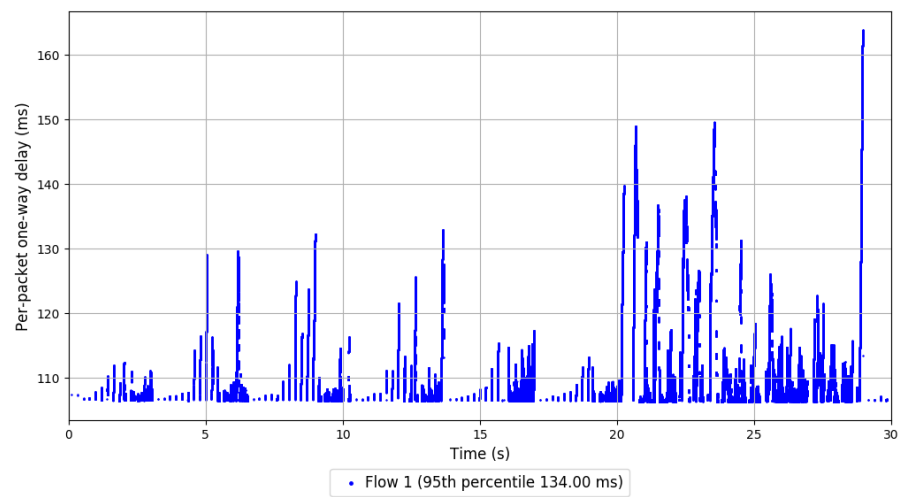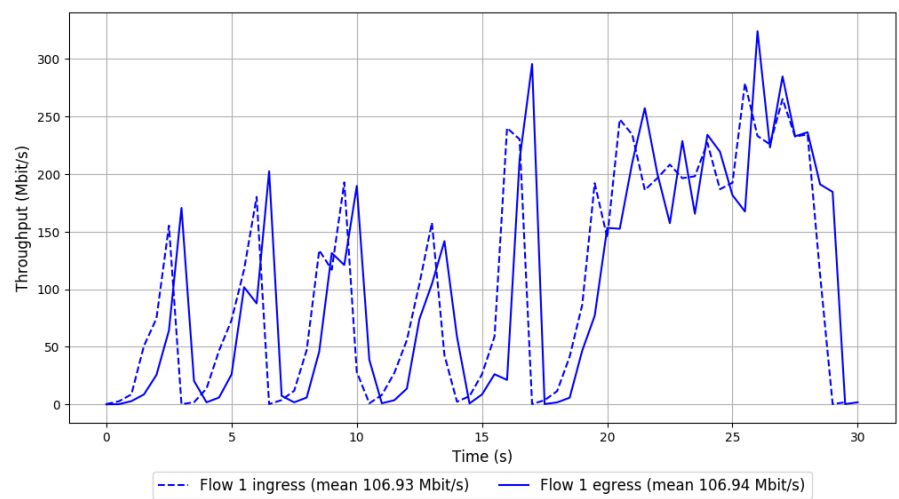
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-12-11 04:28:27
End at: 2019-12-11 04:28:57
Local clock offset: 10.516 ms
Remote clock offset: 11.751 ms


# Below is generated by plot.py at 2019-12-11 07:38:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 106.94 Mbit/s
95th percentile per-packet one-way delay: 134.000 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 106.94 Mbit/s
95th percentile per-packet one-way delay: 134.000 ms
Loss rate: 0.00%
```

Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 106.93 Mbit/s)   Flow 1 egress (mean 106.94 Mbit/s)

Flow 1 (95th percentile 134.00 ms)

```
Run 5: Statistics of Verus

Start at: 2019-12-11 05:03:39
End at: 2019-12-11 05:04:09
Local clock offset: 4.862 ms
Remote clock offset: 4.584 ms


# Below is generated by plot.py at 2019-12-11 07:38:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 200.93 Mbit/s
95th percentile per-packet one-way delay: 264.367 ms
Loss rate: 12.02%
-- Flow 1:
Average throughput: 200.93 Mbit/s
95th percentile per-packet one-way delay: 264.367 ms
Loss rate: 12.02%
```
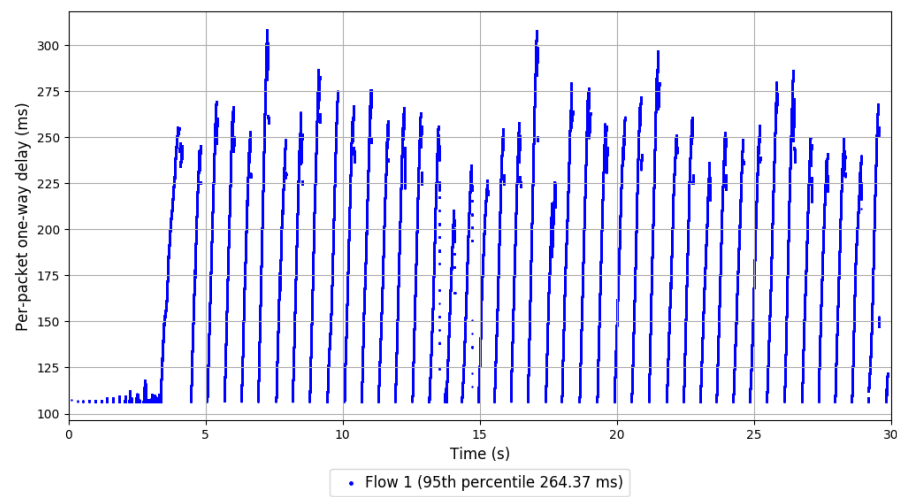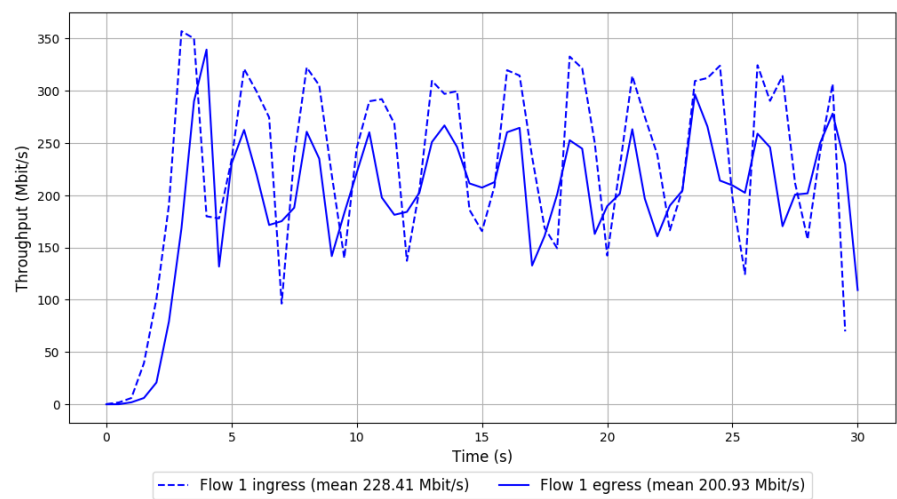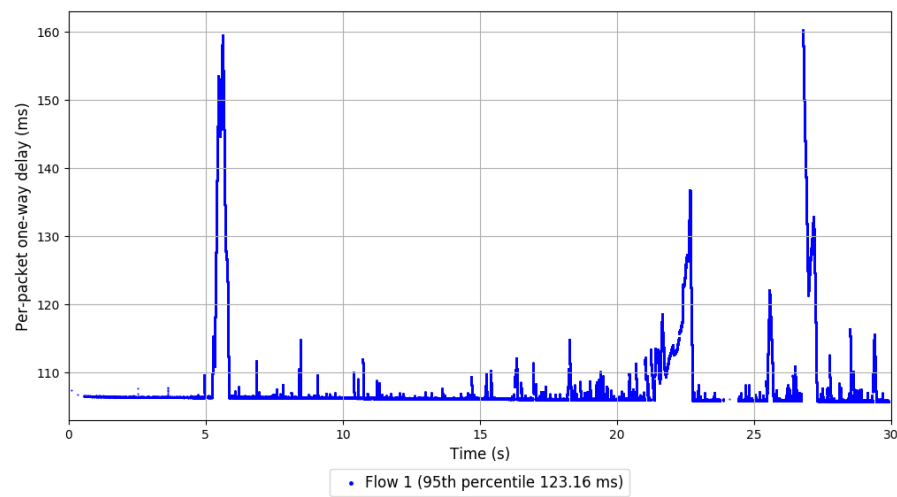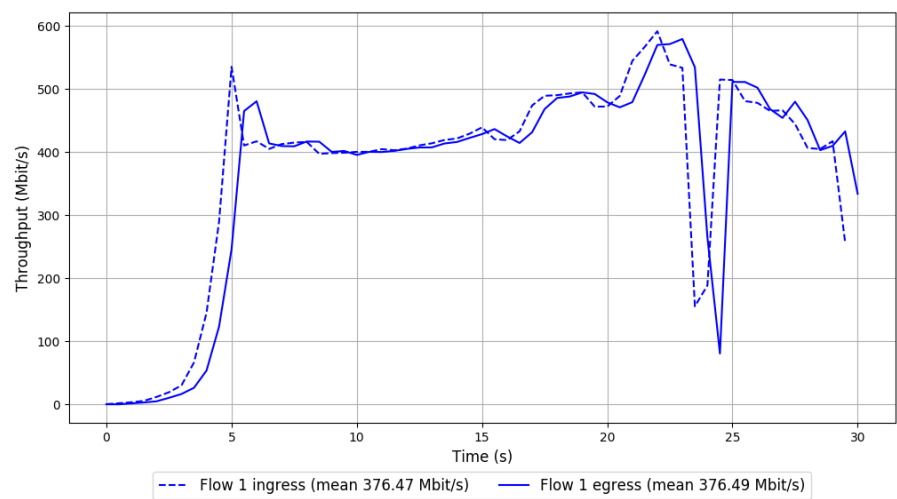
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-12-11 03:08:21
End at: 2019-12-11 03:08:51
Local clock offset: 21.847 ms
Remote clock offset: 42.176 ms


# Below is generated by plot.py at 2019-12-11 07:38:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 376.49 Mbit/s
95th percentile per-packet one-way delay: 123.160 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 376.49 Mbit/s
95th percentile per-packet one-way delay: 123.160 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 376.47 Mbit/s) — Flow 1 egress (mean 376.49 Mbit/s)
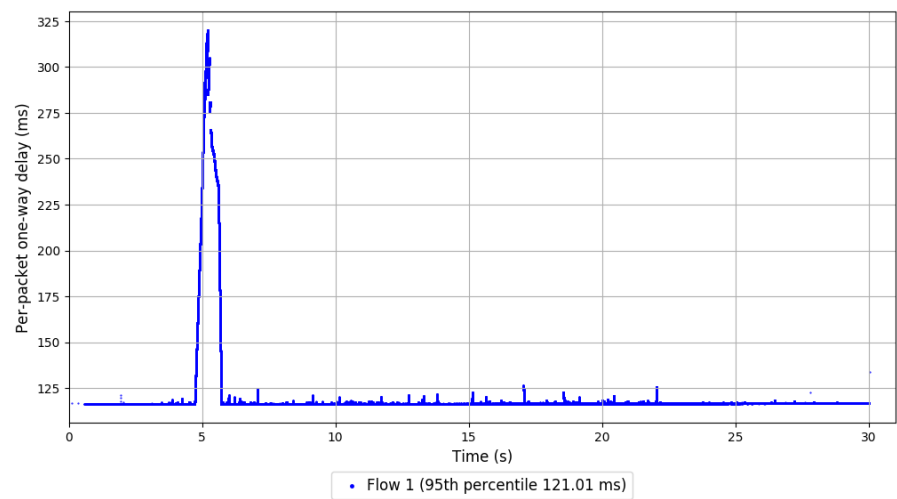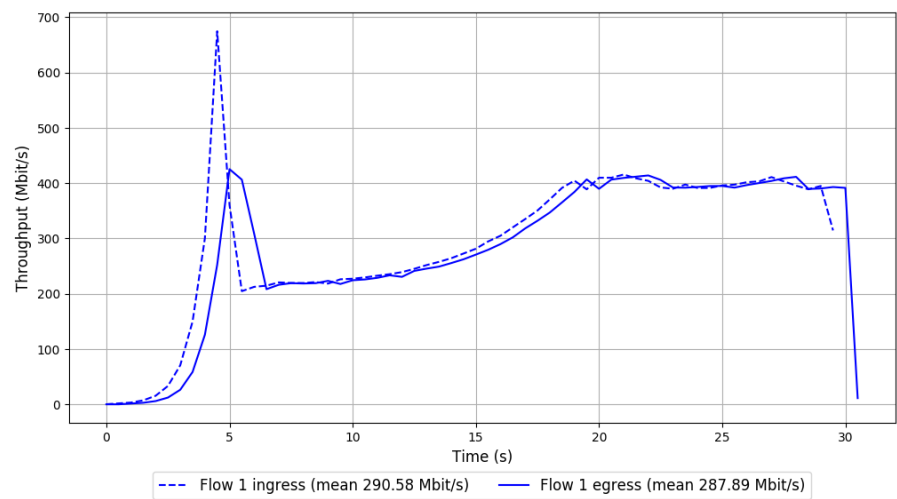

• Flow 1 (95th percentile 123.16 ms)

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-12-11 03:44:01
End at: 2019-12-11 03:44:31
Local clock offset: 38.319 ms
Remote clock offset: 26.558 ms


# Below is generated by plot.py at 2019-12-11 07:38:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 287.89 Mbit/s
95th percentile per-packet one-way delay: 121.008 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 287.89 Mbit/s
95th percentile per-packet one-way delay: 121.008 ms
Loss rate: 0.89%
```
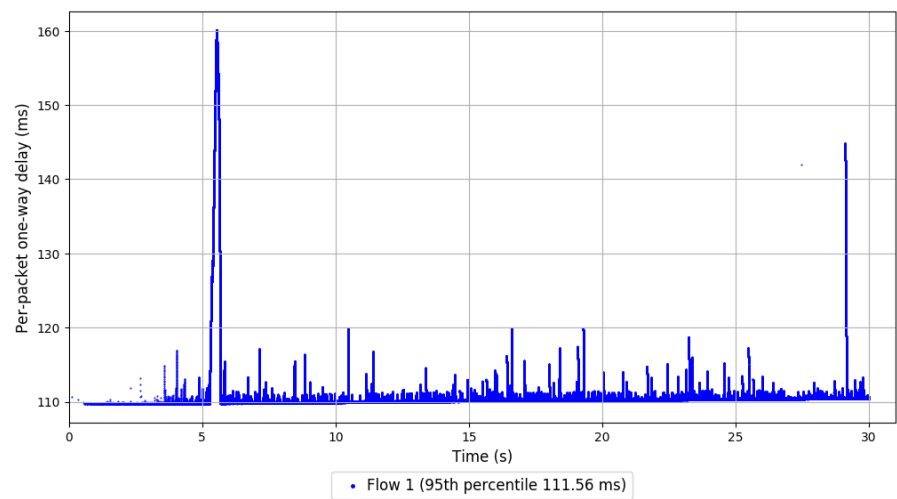
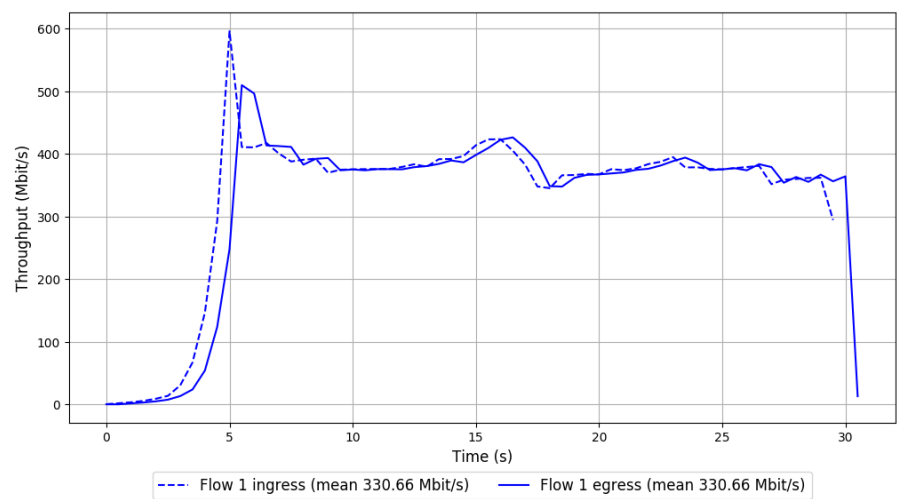Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-12-11 04:19:03
End at: 2019-12-11 04:19:34
Local clock offset: 20.217 ms
Remote clock offset: 17.657 ms


# Below is generated by plot.py at 2019-12-11 07:38:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 330.66 Mbit/s
95th percentile per-packet one-way delay: 111.557 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 330.66 Mbit/s
95th percentile per-packet one-way delay: 111.557 ms
Loss rate: 0.00%
```

Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-12-11 04:54:30
End at: 2019-12-11 04:55:00
Local clock offset: 9.87 ms
Remote clock offset: 4.997 ms


# Below is generated by plot.py at 2019-12-11 07:38:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 353.22 Mbit/s
95th percentile per-packet one-way delay: 123.673 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 353.22 Mbit/s
95th percentile per-packet one-way delay: 123.673 ms
Loss rate: 0.06%
```
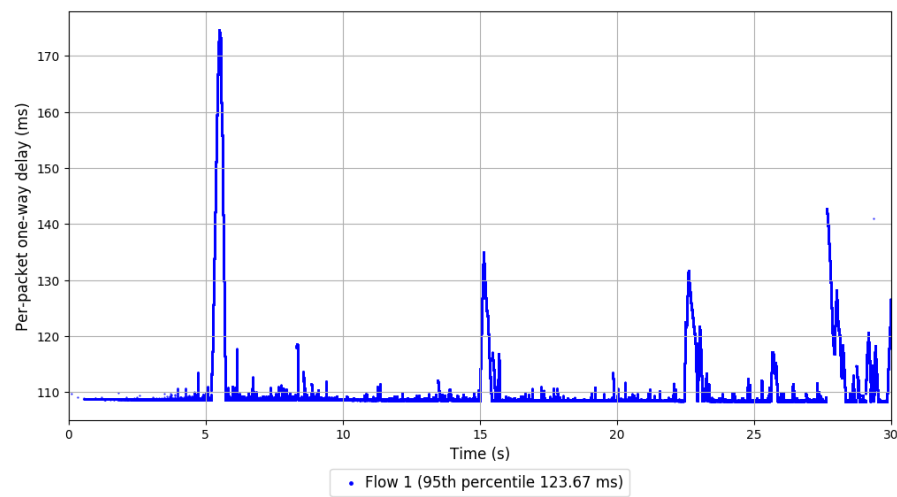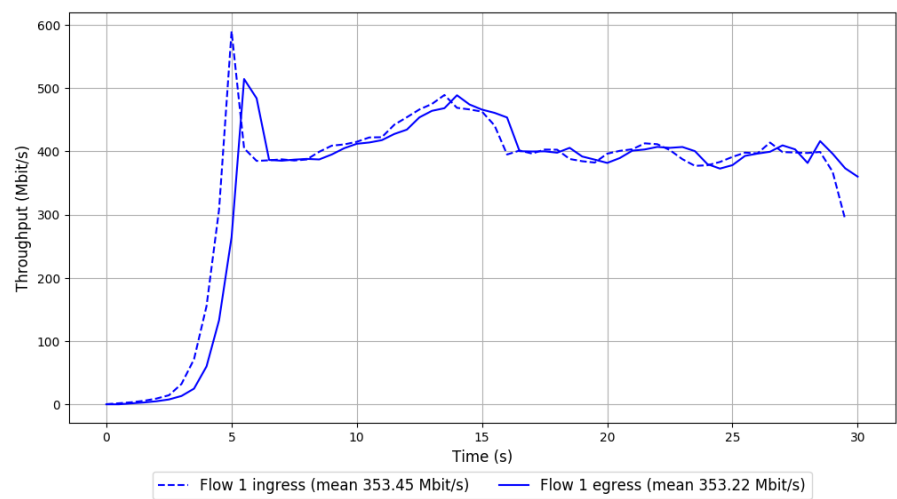
Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-12-11 05:30:52
End at: 2019-12-11 05:31:22
Local clock offset: 3.85 ms
Remote clock offset: 1.803 ms


# Below is generated by plot.py at 2019-12-11 07:38:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 348.35 Mbit/s
95th percentile per-packet one-way delay: 131.748 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 348.35 Mbit/s
95th percentile per-packet one-way delay: 131.748 ms
Loss rate: 0.00%
```
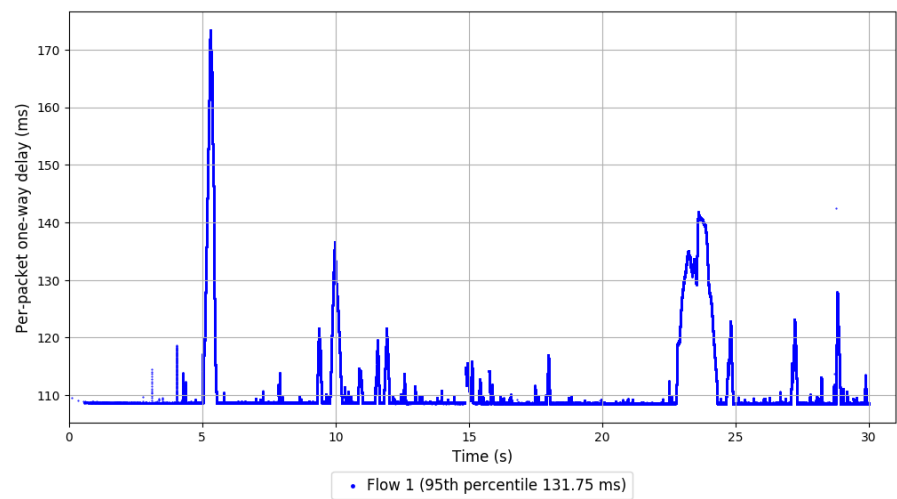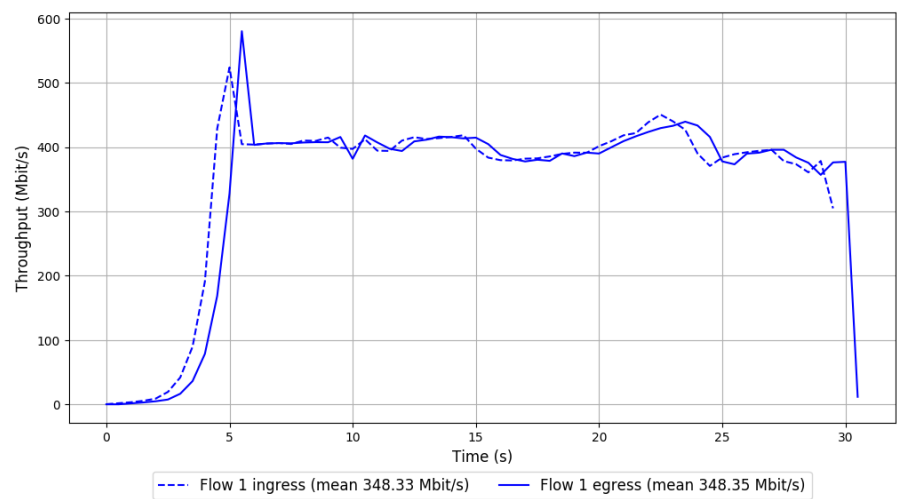
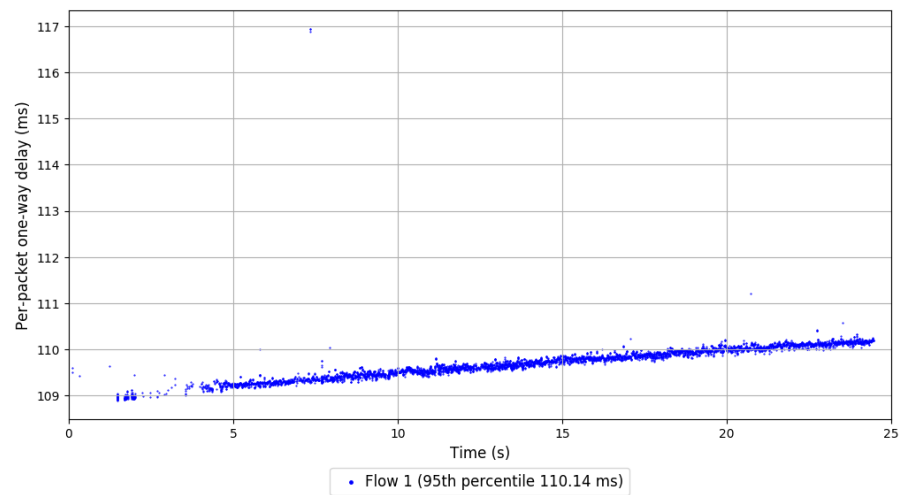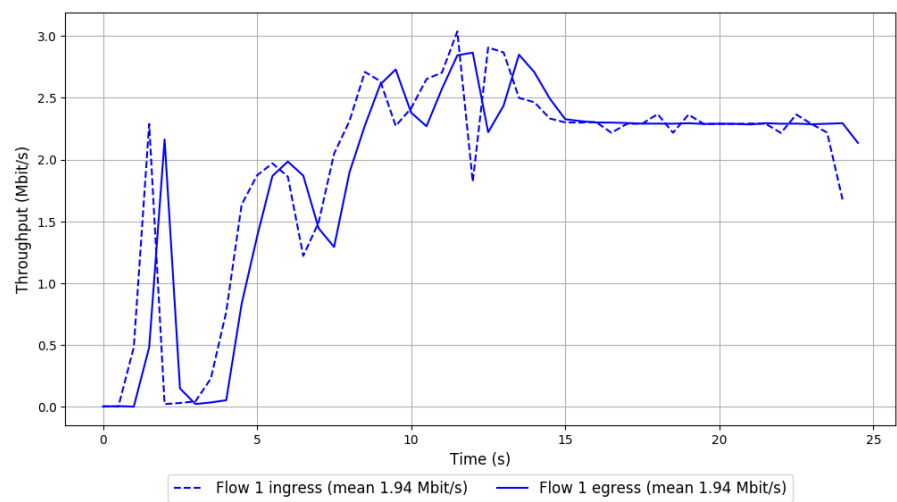Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-12-11 02:52:11
End at: 2019-12-11 02:52:41
Local clock offset: 12.455 ms
Remote clock offset: 25.481 ms


# Below is generated by plot.py at 2019-12-11 07:38:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 110.144 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 110.144 ms
Loss rate: 0.00%
```

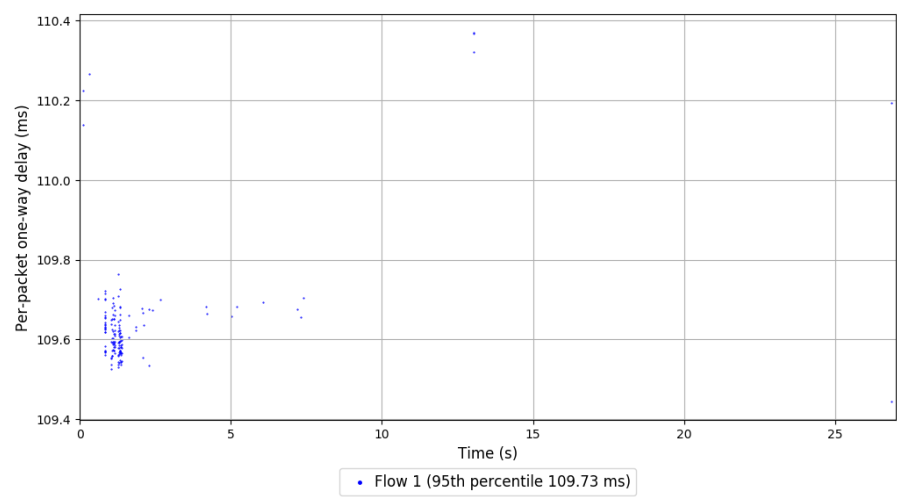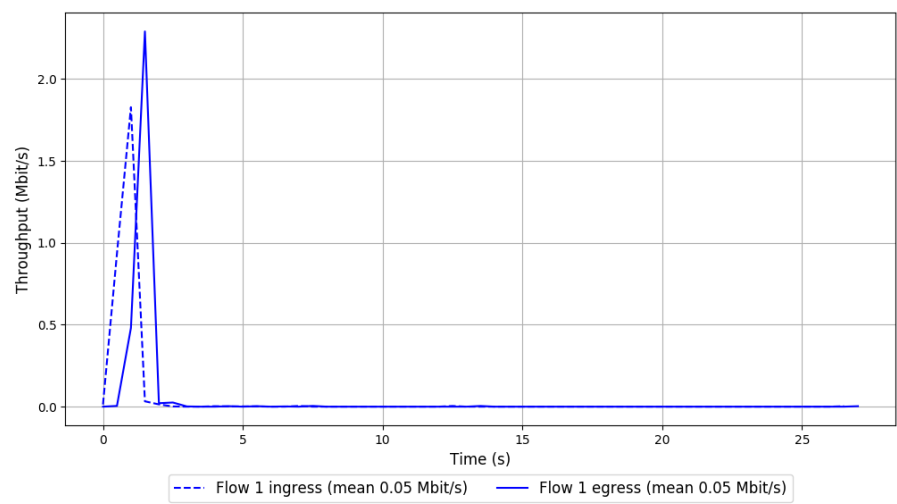Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-12-11 03:27:59
End at: 2019-12-11 03:28:29
Local clock offset: 22.997 ms
Remote clock offset: 27.637 ms


# Below is generated by plot.py at 2019-12-11 07:38:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.727 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.727 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-12-11 04:03:21
End at: 2019-12-11 04:03:51
Local clock offset: 15.683 ms
Remote clock offset: 45.89 ms


# Below is generated by plot.py at 2019-12-11 07:38:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 111.251 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 111.251 ms
Loss rate: 0.00%
```
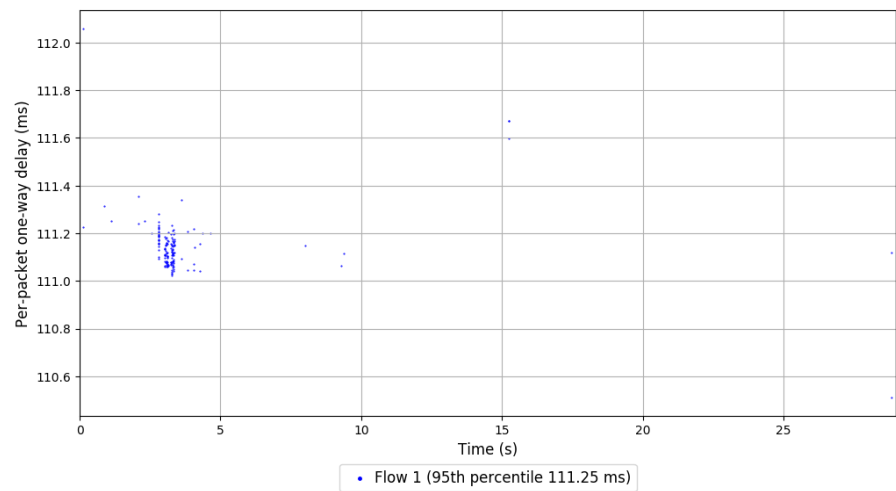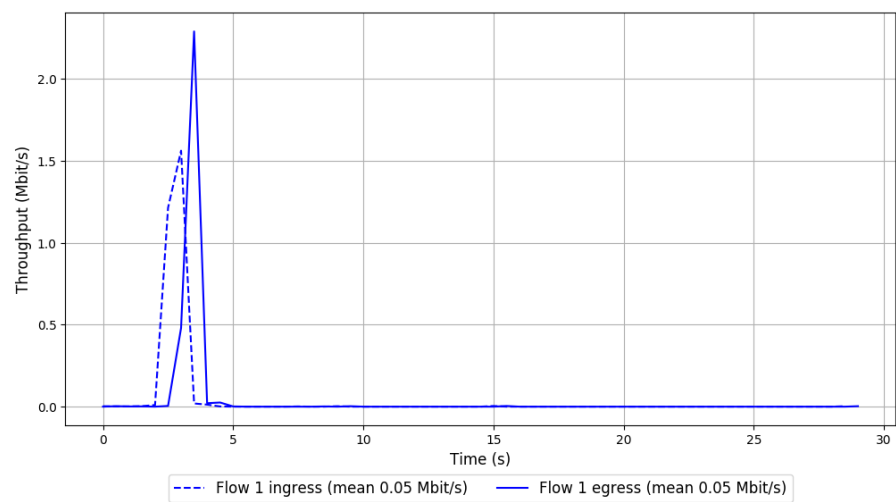
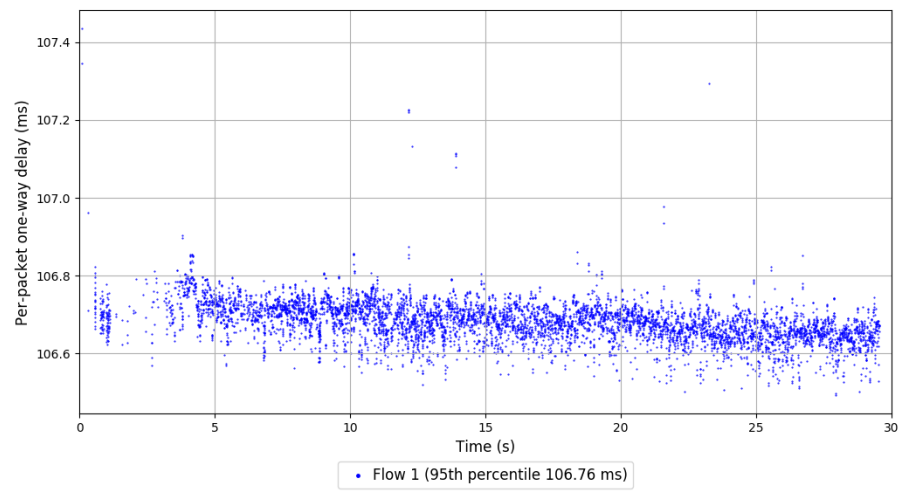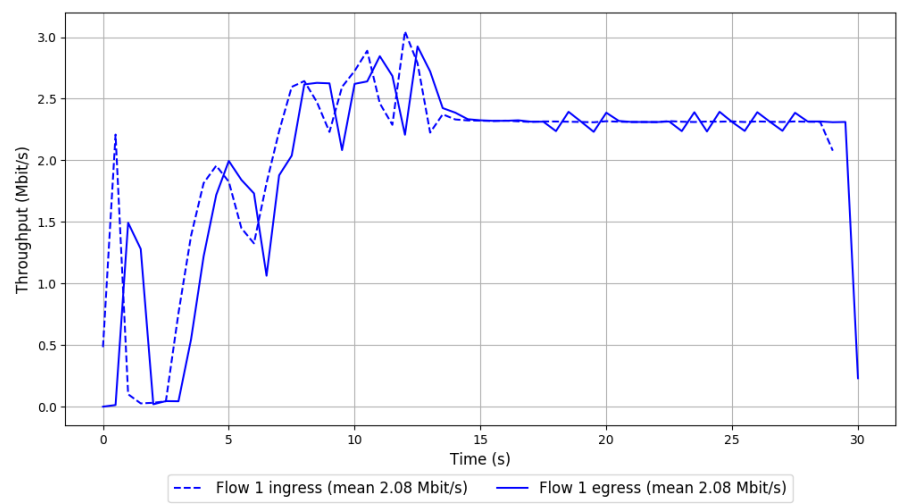Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-12-11 04:38:29
End at: 2019-12-11 04:38:59
Local clock offset: 7.59 ms
Remote clock offset: 12.194 ms


# Below is generated by plot.py at 2019-12-11 07:38:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 106.757 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 106.757 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.08 Mbit/s) --- Flow 1 egress (mean 2.08 Mbit/s)

• Flow 1 (95th percentile 106.76 ms)

```
Run 5: Statistics of WebRTC media

Start at: 2019-12-11 05:14:01
End at: 2019-12-11 05:14:31
Local clock offset: 3.692 ms
Remote clock offset: 5.627 ms


# Below is generated by plot.py at 2019-12-11 07:38:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 112.034 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 112.034 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link