Pantheon Report

Generated at 2019-07-18 20:51:30 (UTC).

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

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.
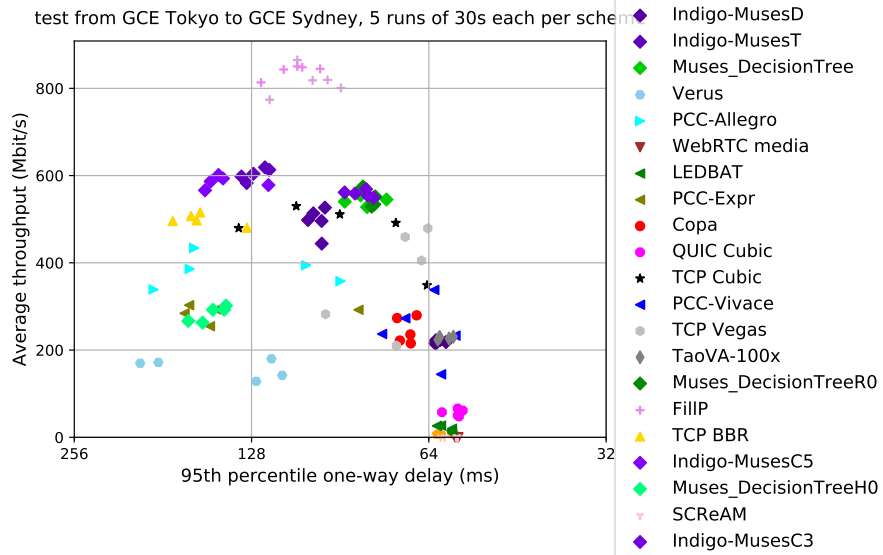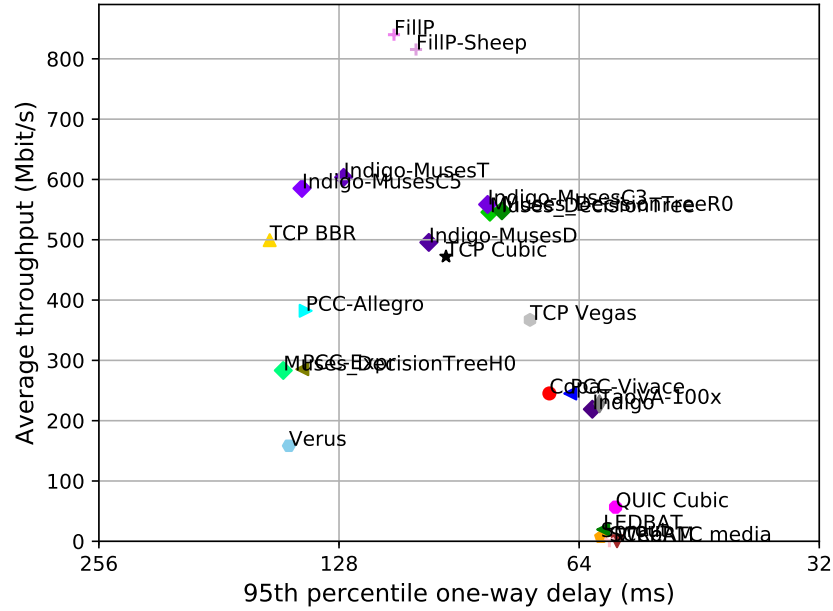
```
System info:
Linux 4.15.0-1036-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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 Sydney, 5 runs of 30s each per scheme
(mean of all runs by scheme)

Average throughput (Mbit/s)

FillP
FillP-Sheep
Indigo-MusesT
Indigo-MusesC5
Indigo-MusesC3
Muses_DecisionTreeR0
Muses_DecisionTree
TCP BBR
Indigo-MusesD
TCP Cubic
PCC-Allegro
TCP Vegas
PCC-Expr
Muses_DecisionTreeH0
Copa
PCC-Vivace
TaoVA-100x
Indigo
Verus
QUIC Cubic
LEDBAT
SCReAM
WebRTC media

800
700
600
500
400
300
200
100
0

256   128   64   32

95th percentile one-way delay (ms)

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

Average throughput (Mbit/s)

800
600
400
200
0

256   128   64   32

95th percentile one-way delay (ms)

Legend:
+ FillP-Sheep
◆ Indigo
● Sprout
◆ Indigo-MusesD
◆ Indigo-MusesT
◆ Muses_DecisionTree
● Verus
▶ PCC-Allegro
▼ WebRTC media
◀ LEDBAT
◀ PCC-Expr
● Copa
● QUIC Cubic
★ TCP Cubic
◀ PCC-Vivace
● TCP Vegas
◆ TaoVA-100x
◆ Muses_DecisionTreeR0
+ FillP
▲ TCP BBR
◆ Indigo-MusesC5
◆ Muses_DecisionTreeH0
SCReAM
◆ Indigo-MusesC3

3

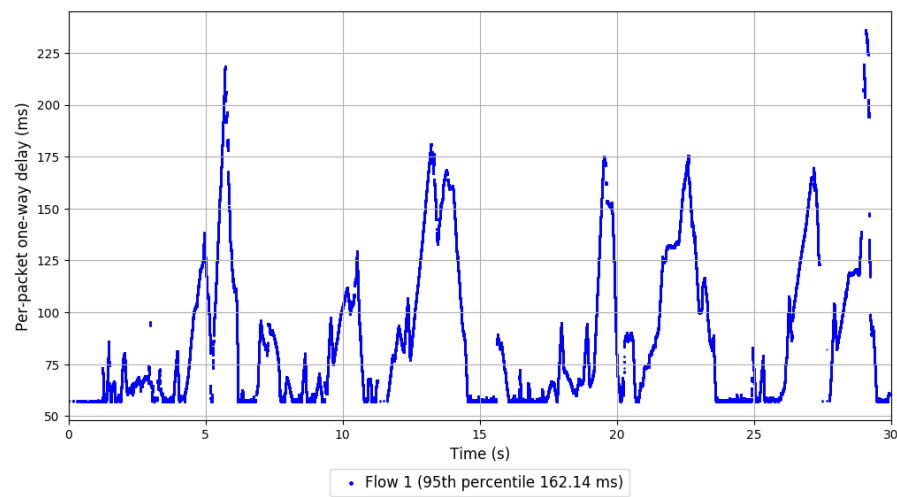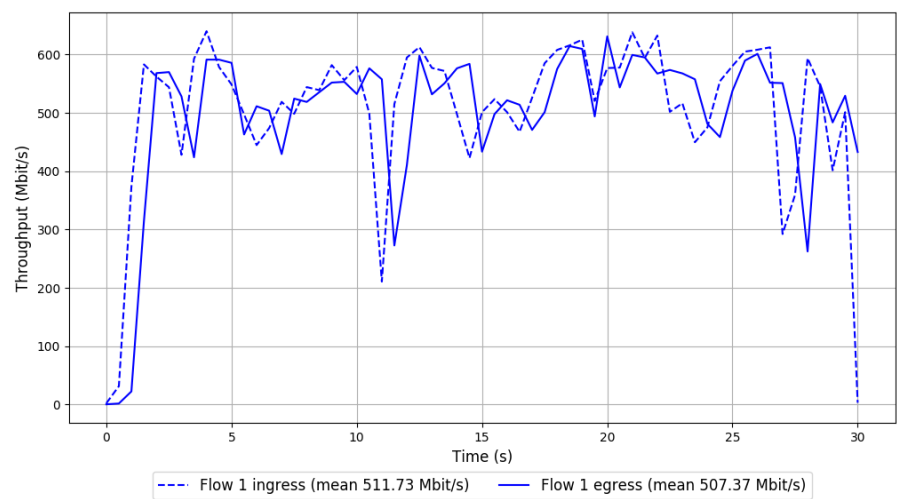| scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	499.37	156.36	1.34
Copa	5	245.19	69.74	0.57
TCP Cubic	5	472.13	93.99	0.64
FillP	5	840.02	109.22	1.18
FillP-Sheep	5	815.46	102.49	0.87
Indigo	5	219.00	61.61	0.75
Indigo-MusesC3	5	558.51	83.36	0.93
Indigo-MusesC5	5	585.15	142.46	1.04
Indigo-MusesD	5	495.60	98.77	0.67
Indigo-MusesT	5	603.44	126.32	0.76
LEDBAT	5	19.59	59.71	0.78
Muses_DecisionTree	5	545.70	82.80	0.84
Muses_DecisionTreeH0	5	283.31	150.34	2.16
Muses_DecisionTreeR0	5	548.03	79.99	0.66
PCC-Allegro	5	382.23	140.94	3.07
PCC-Expr	5	285.39	142.31	1.62
QUIC Cubic	5	56.60	57.61	0.67
SCReAM	5	0.22	58.65	0.36
Sprout	5	7.11	60.11	0.45
TaoVA-100x	5	227.99	60.35	0.56
TCP Vegas	5	367.17	73.76	0.46
Verus	5	158.40	147.95	1.51
PCC-Vivace	5	245.04	65.66	0.74
WebRTC media	4	0.05	57.37	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-07-18 15:49:41
End at: 2019-07-18 15:50:11
Local clock offset: -0.26 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-07-18 18:57:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 515.54 Mbit/s
95th percentile per-packet one-way delay: 156.466 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 515.54 Mbit/s
95th percentile per-packet one-way delay: 156.466 ms
Loss rate: 1.64%
```
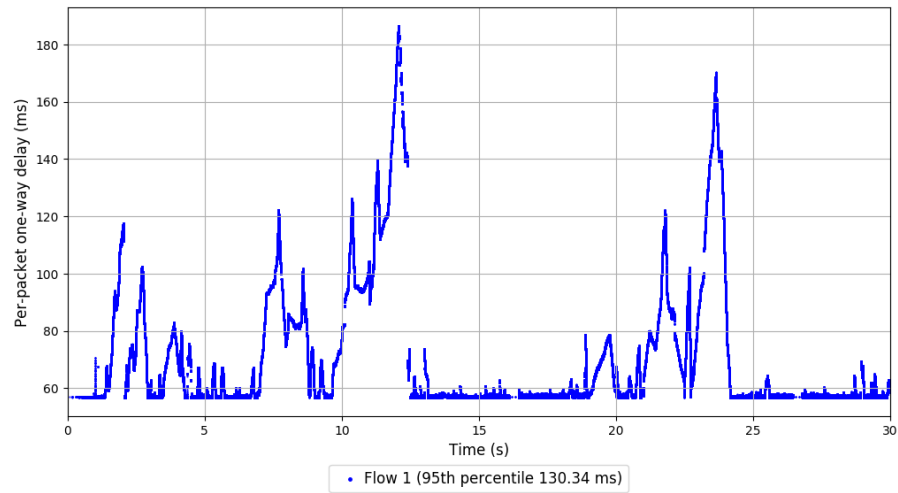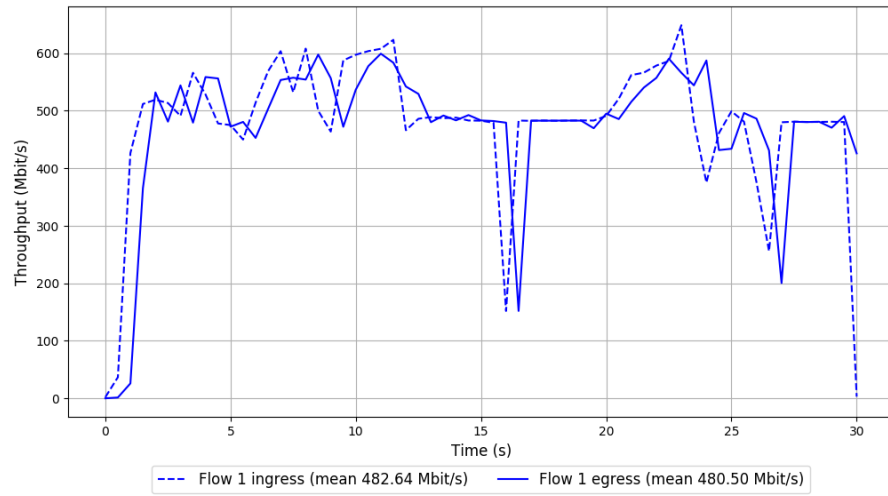
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-07-18 16:24:45
End at: 2019-07-18 16:25:15
Local clock offset: -0.079 ms
Remote clock offset: -0.076 ms


# Below is generated by plot.py at 2019-07-18 18:57:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 497.46 Mbit/s
95th percentile per-packet one-way delay: 158.628 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 497.46 Mbit/s
95th percentile per-packet one-way delay: 158.628 ms
Loss rate: 0.93%
```
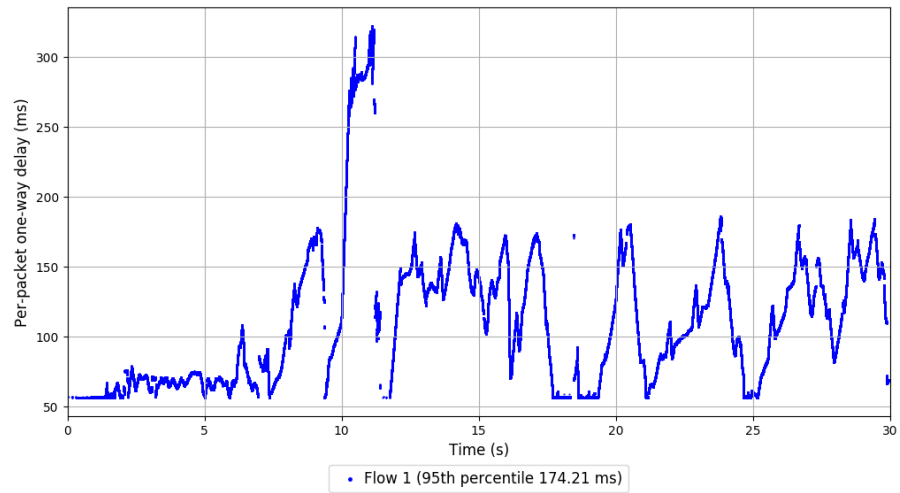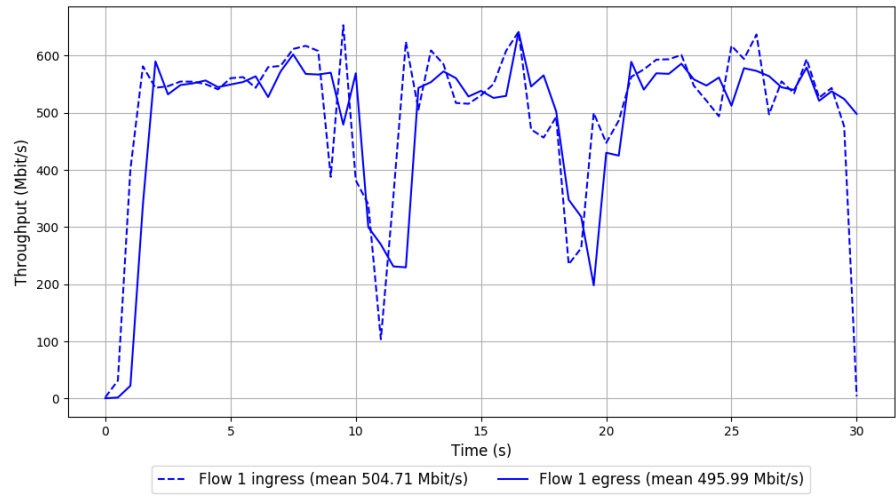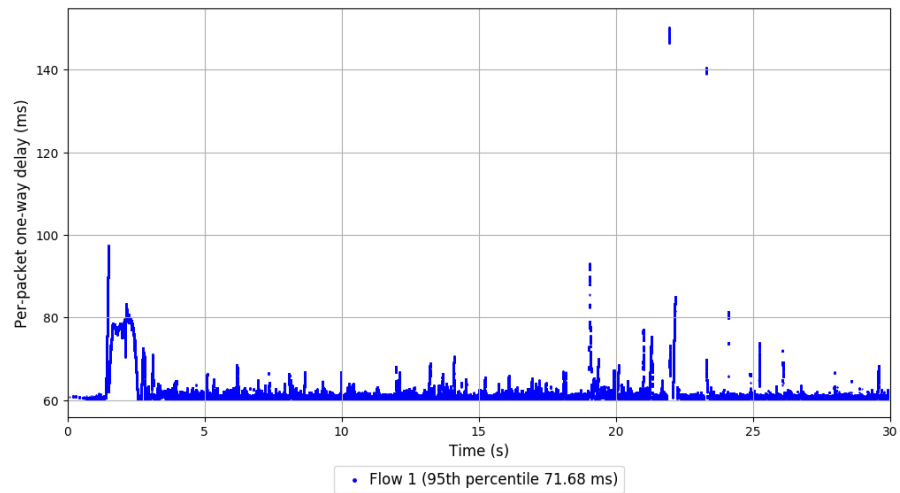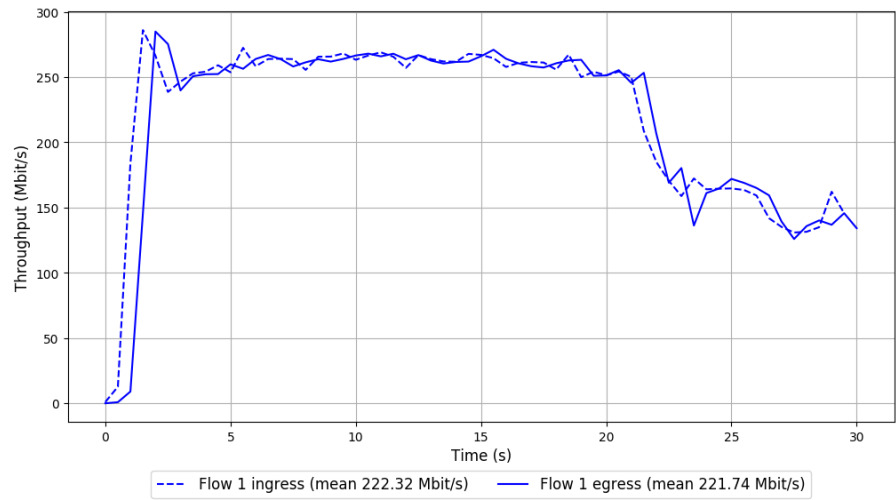
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-07-18 16:59:25
End at: 2019-07-18 16:59:55
Local clock offset: -0.285 ms
Remote clock offset: -0.334 ms


# Below is generated by plot.py at 2019-07-18 18:57:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 507.37 Mbit/s
95th percentile per-packet one-way delay: 162.140 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 507.37 Mbit/s
95th percentile per-packet one-way delay: 162.140 ms
Loss rate: 1.23%
```

Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 511.73 Mbit/s)   Flow 1 egress (mean 507.37 Mbit/s)
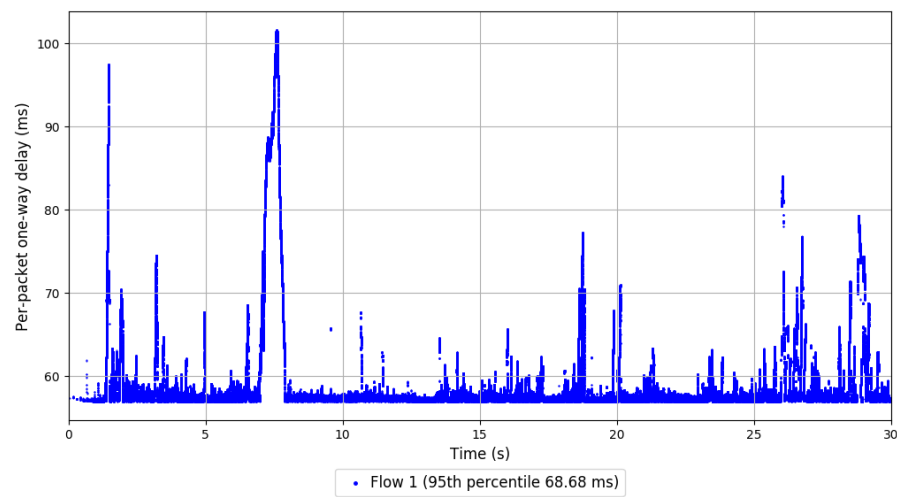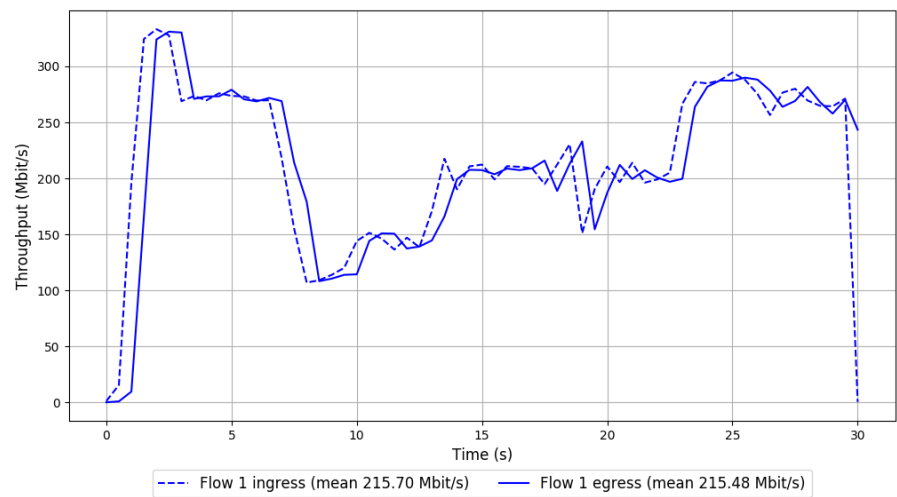

Flow 1 (95th percentile 162.14 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-07-18 17:34:16
End at: 2019-07-18 17:34:46
Local clock offset: 0.124 ms
Remote clock offset: 0.21 ms


# Below is generated by plot.py at 2019-07-18 18:57:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 480.50 Mbit/s
95th percentile per-packet one-way delay: 130.337 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 480.50 Mbit/s
95th percentile per-packet one-way delay: 130.337 ms
Loss rate: 0.82%
```
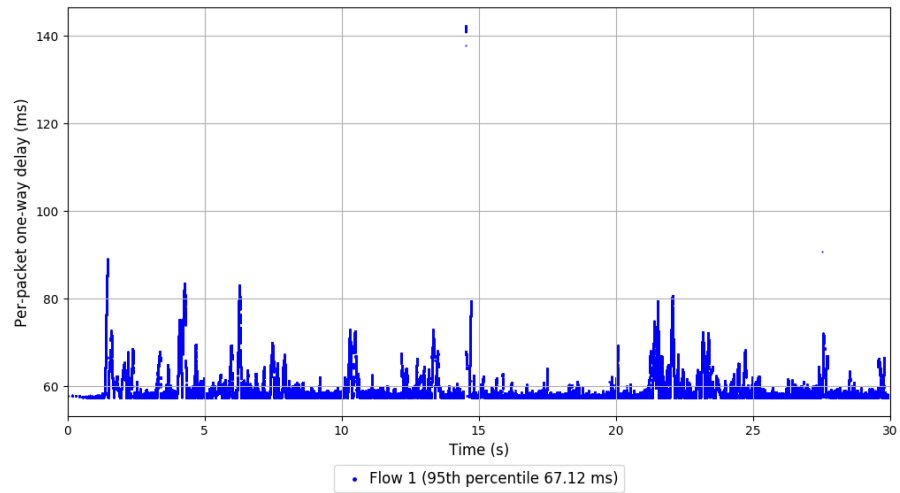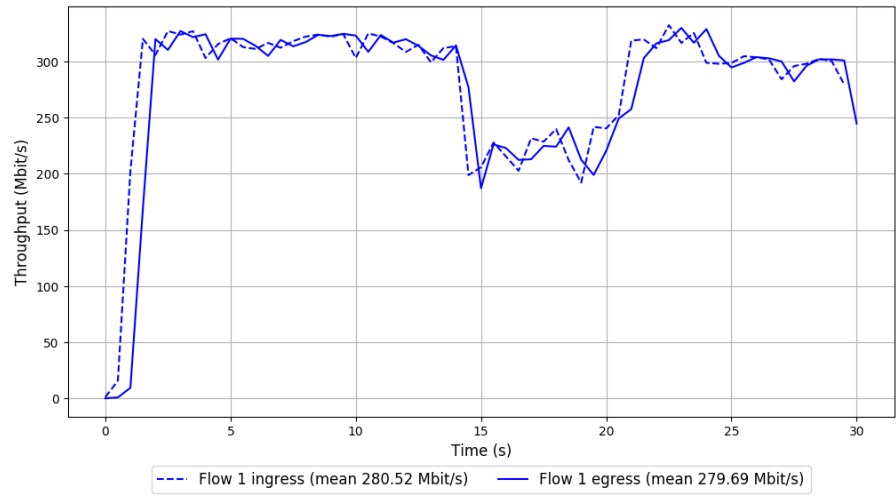
Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2019-07-18 18:09:09
End at: 2019-07-18 18:09:39
Local clock offset: -0.354 ms
Remote clock offset: 0.148 ms


# Below is generated by plot.py at 2019-07-18 18:57:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 495.99 Mbit/s
95th percentile per-packet one-way delay: 174.213 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 495.99 Mbit/s
95th percentile per-packet one-way delay: 174.213 ms
Loss rate: 2.10%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 504.71 Mbit/s)   Flow 1 egress (mean 495.99 Mbit/s)

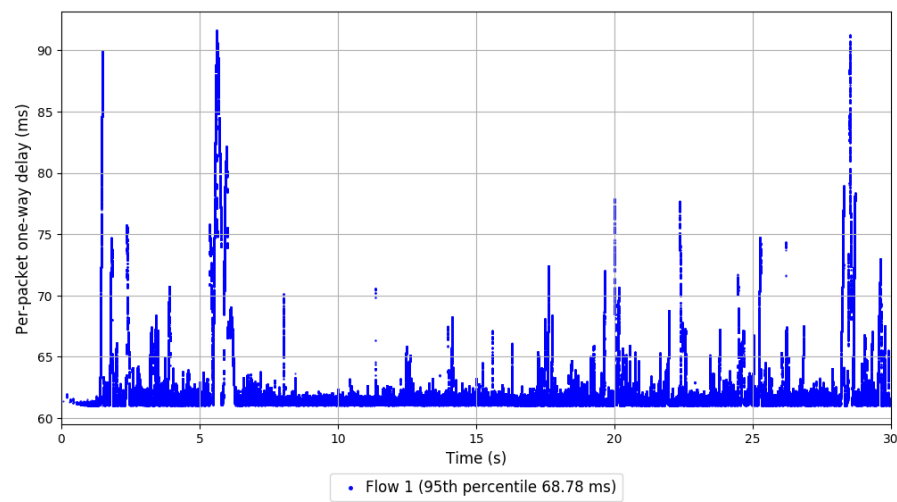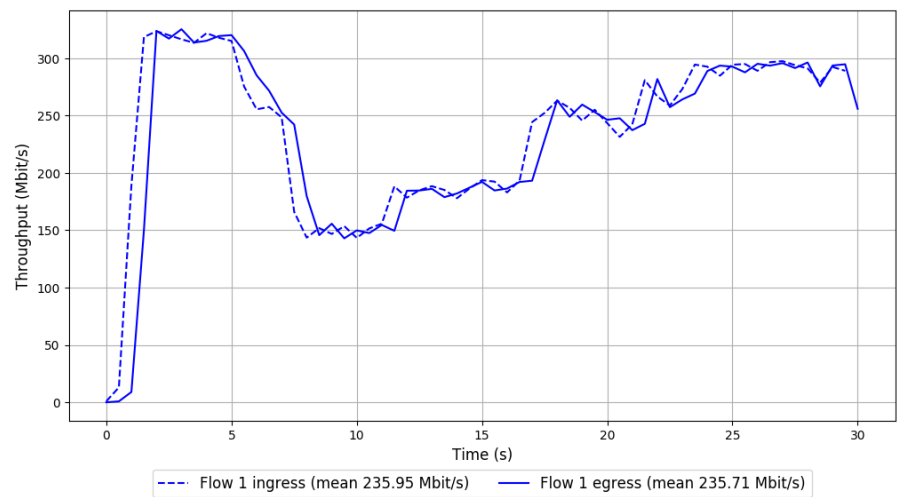
• Flow 1 (95th percentile 174.21 ms)

```
Run 1: Statistics of Copa

Start at: 2019-07-18 16:05:35
End at: 2019-07-18 16:06:05
Local clock offset: -0.055 ms
Remote clock offset: -0.103 ms

# Below is generated by plot.py at 2019-07-18 18:57:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.74 Mbit/s
95th percentile per-packet one-way delay: 71.676 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 221.74 Mbit/s
95th percentile per-packet one-way delay: 71.676 ms
Loss rate: 0.66%
```

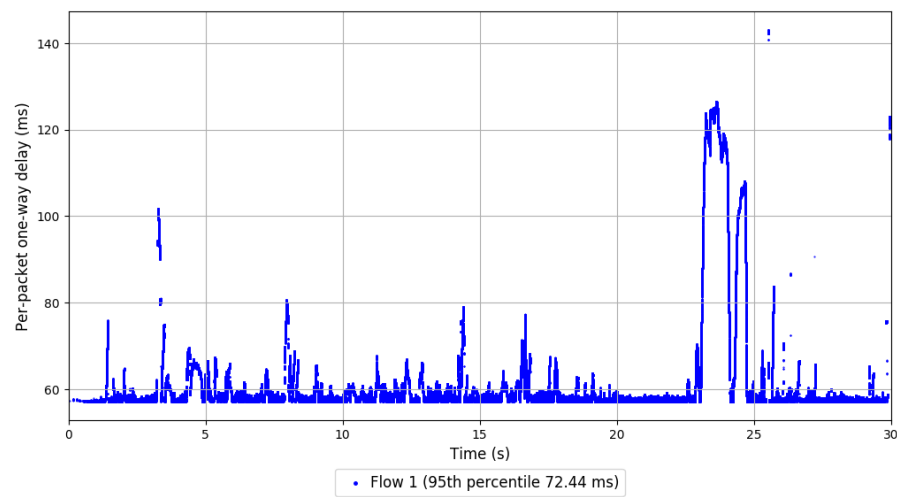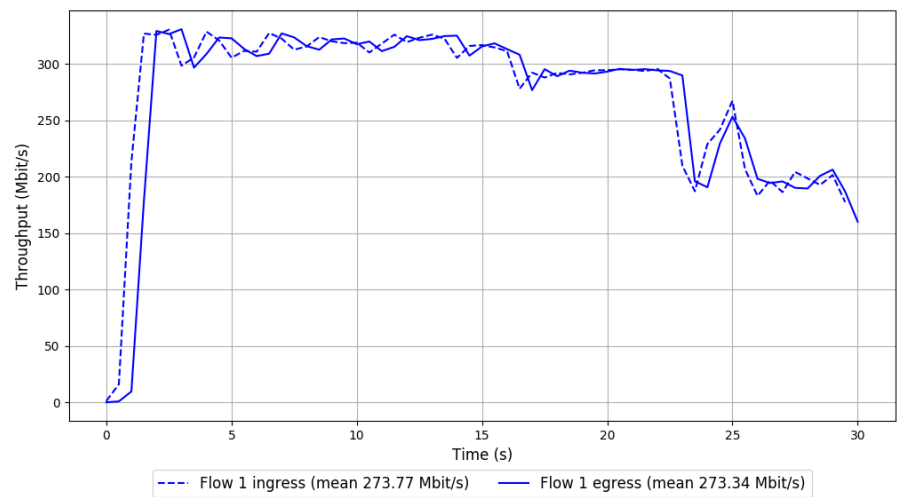Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-07-18 16:40:40
End at: 2019-07-18 16:41:10
Local clock offset: -0.097 ms
Remote clock offset: -0.179 ms


# Below is generated by plot.py at 2019-07-18 18:57:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 215.48 Mbit/s
95th percentile per-packet one-way delay: 68.680 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 215.48 Mbit/s
95th percentile per-packet one-way delay: 68.680 ms
Loss rate: 0.49%
```

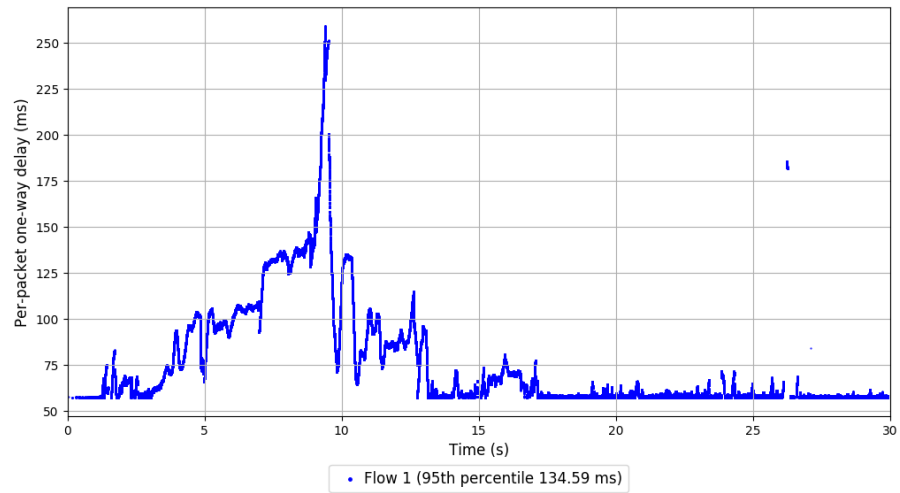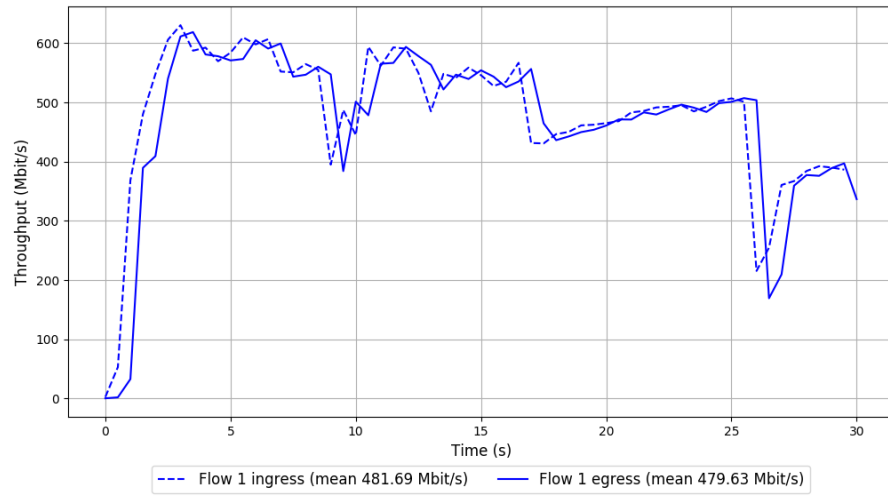# Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-07-18 17:15:13
End at: 2019-07-18 17:15:43
Local clock offset: -0.038 ms
Remote clock offset: -0.099 ms


# Below is generated by plot.py at 2019-07-18 18:57:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 279.69 Mbit/s
95th percentile per-packet one-way delay: 67.124 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 279.69 Mbit/s
95th percentile per-packet one-way delay: 67.124 ms
Loss rate: 0.68%
```
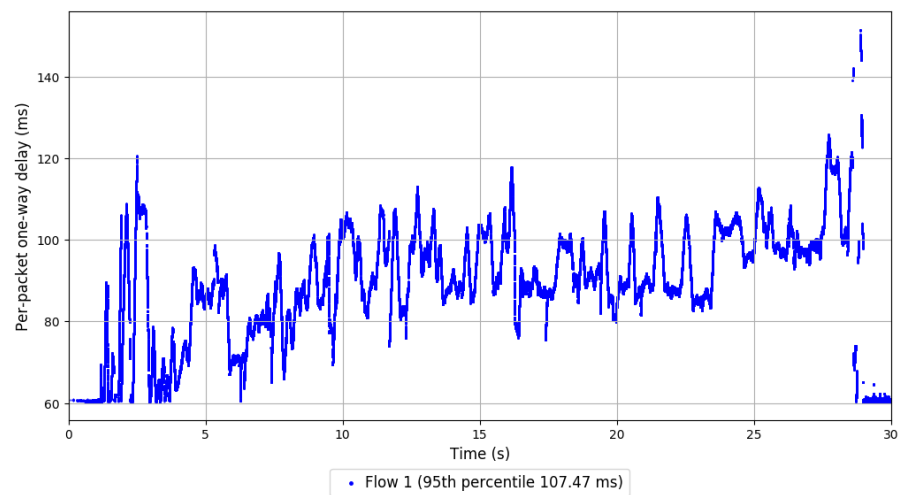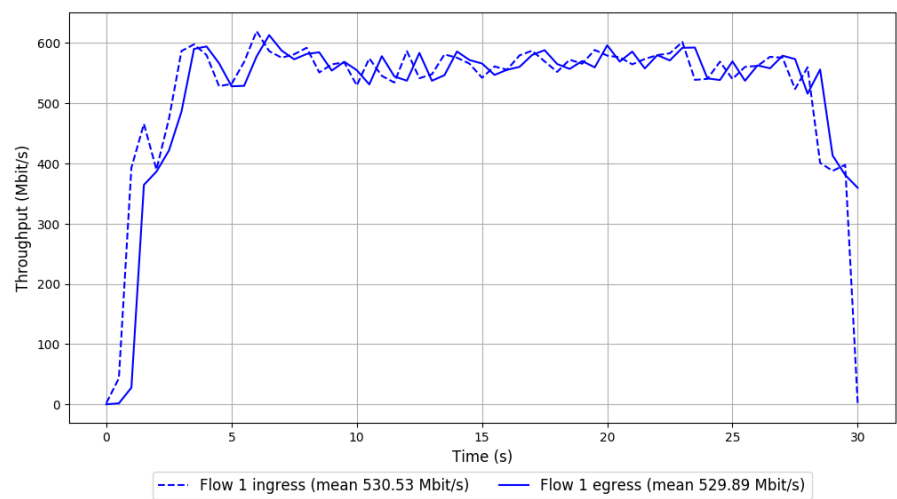
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 280.52 Mbit/s)   Flow 1 egress (mean 279.69 Mbit/s)

• Flow 1 (95th percentile 67.12 ms)

```
Run 4: Statistics of Copa

Start at: 2019-07-18 17:50:04
End at: 2019-07-18 17:50:34
Local clock offset: 0.138 ms
Remote clock offset: -0.803 ms


# Below is generated by plot.py at 2019-07-18 19:03:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 235.71 Mbit/s
95th percentile per-packet one-way delay: 68.785 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 235.71 Mbit/s
95th percentile per-packet one-way delay: 68.785 ms
Loss rate: 0.49%
```

Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 235.95 Mbit/s)   Flow 1 egress (mean 235.71 Mbit/s)
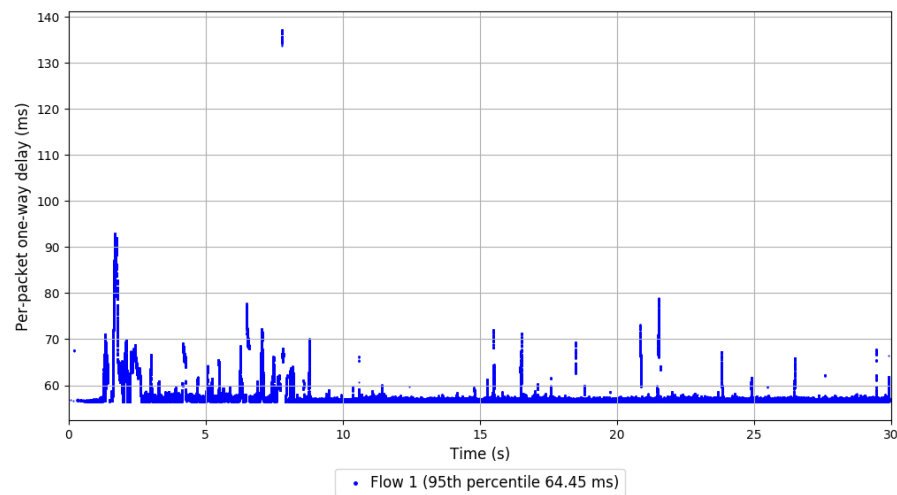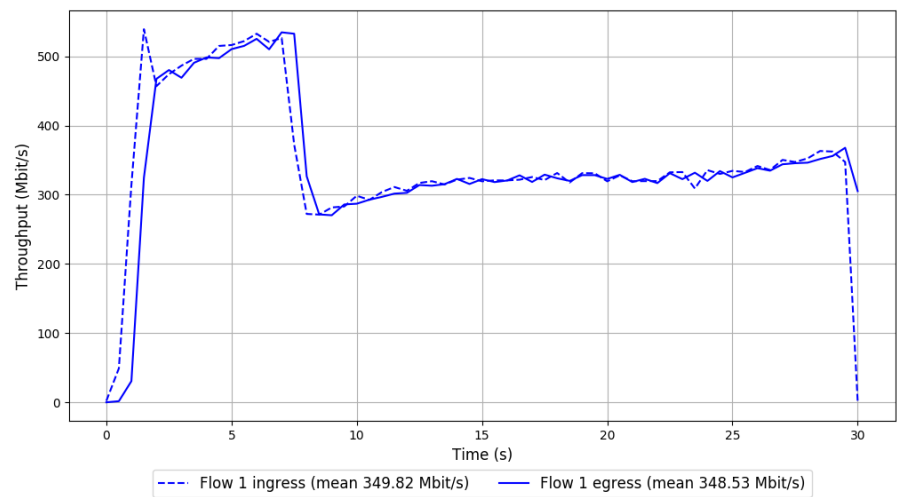

• Flow 1 (95th percentile 68.78 ms)

```
Run 5: Statistics of Copa

Start at: 2019-07-18 18:25:02
End at: 2019-07-18 18:25:32
Local clock offset: -0.041 ms
Remote clock offset: -0.098 ms


# Below is generated by plot.py at 2019-07-18 19:05:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 273.34 Mbit/s
95th percentile per-packet one-way delay: 72.444 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 273.34 Mbit/s
95th percentile per-packet one-way delay: 72.444 ms
Loss rate: 0.54%
```

Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 273.77 Mbit/s) --- Flow 1 egress (mean 273.34 Mbit/s)

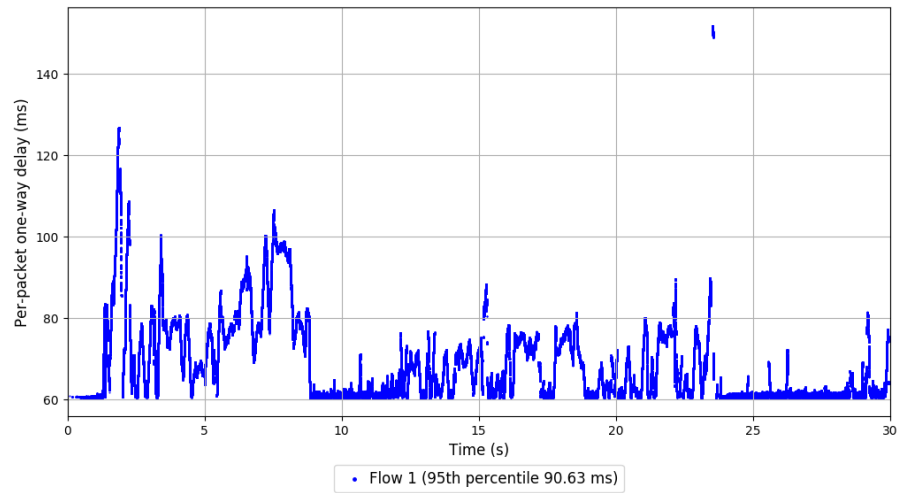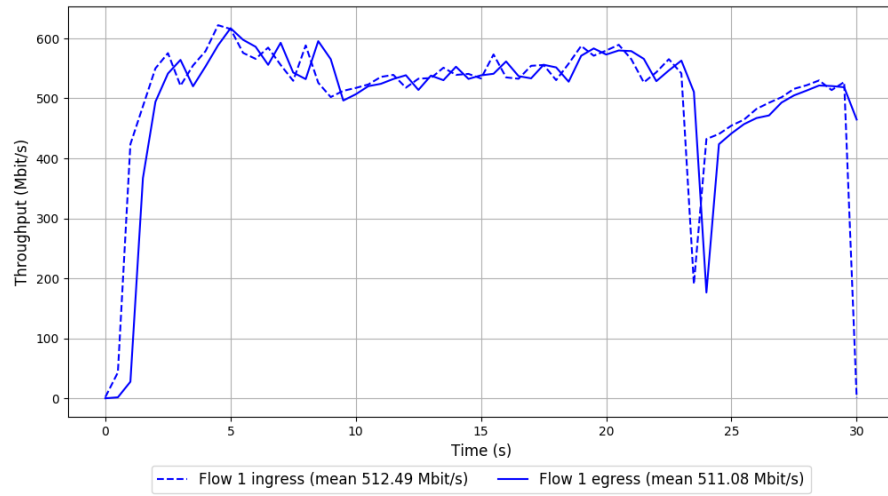Flow 1 (95th percentile 72.44 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-07-18 15:45:02
End at: 2019-07-18 15:45:32
Local clock offset: -0.314 ms
Remote clock offset: -0.084 ms


# Below is generated by plot.py at 2019-07-18 19:06:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 479.63 Mbit/s
95th percentile per-packet one-way delay: 134.593 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 479.63 Mbit/s
95th percentile per-packet one-way delay: 134.593 ms
Loss rate: 0.81%
```
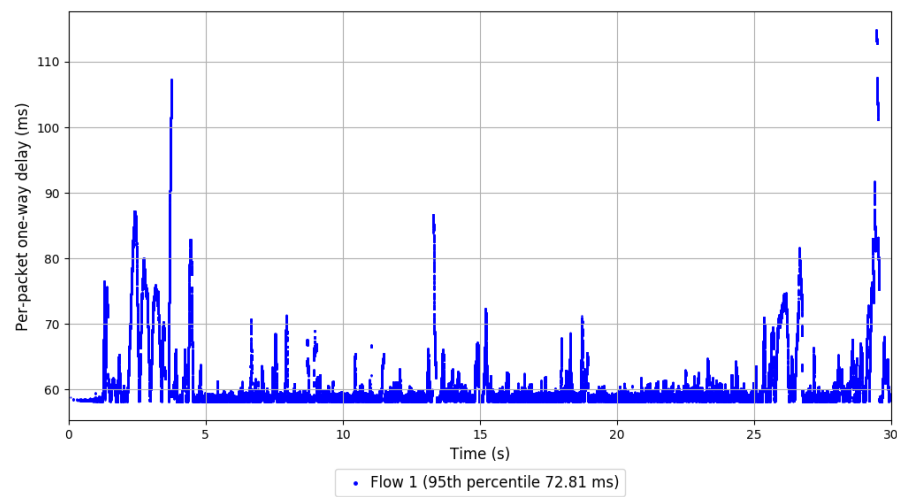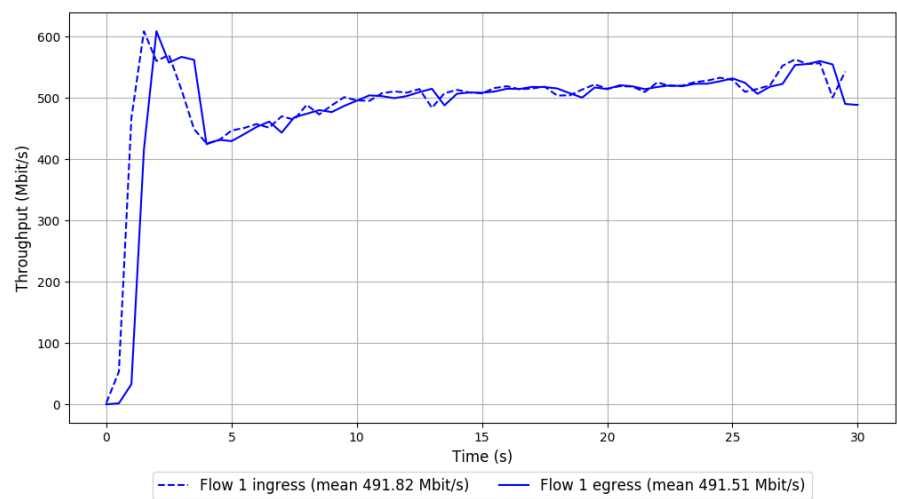
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-07-18 16:19:59
End at: 2019-07-18 16:20:29
Local clock offset: 0.237 ms
Remote clock offset: -0.144 ms


# Below is generated by plot.py at 2019-07-18 19:07:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 529.89 Mbit/s
95th percentile per-packet one-way delay: 107.475 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 529.89 Mbit/s
95th percentile per-packet one-way delay: 107.475 ms
Loss rate: 0.51%
```
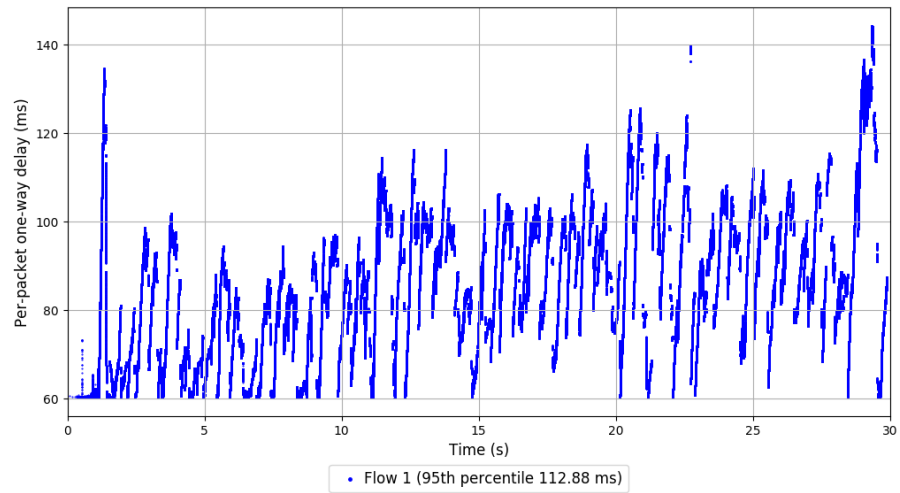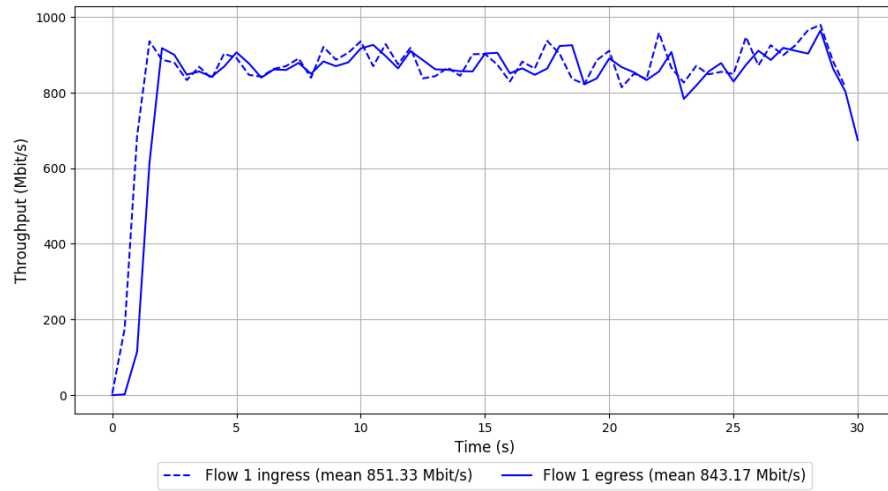
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-07-18 16:54:50
End at: 2019-07-18 16:55:20
Local clock offset: -0.511 ms
Remote clock offset: -0.231 ms


# Below is generated by plot.py at 2019-07-18 19:07:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 348.53 Mbit/s
95th percentile per-packet one-way delay: 64.450 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 348.53 Mbit/s
95th percentile per-packet one-way delay: 64.450 ms
Loss rate: 0.74%
```

Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2019-07-18 17:29:34
End at: 2019-07-18 17:30:04
Local clock offset: 0.191 ms
Remote clock offset: -0.037 ms


# Below is generated by plot.py at 2019-07-18 19:07:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 511.08 Mbit/s
95th percentile per-packet one-way delay: 90.630 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 511.08 Mbit/s
95th percentile per-packet one-way delay: 90.630 ms
Loss rate: 0.67%
```
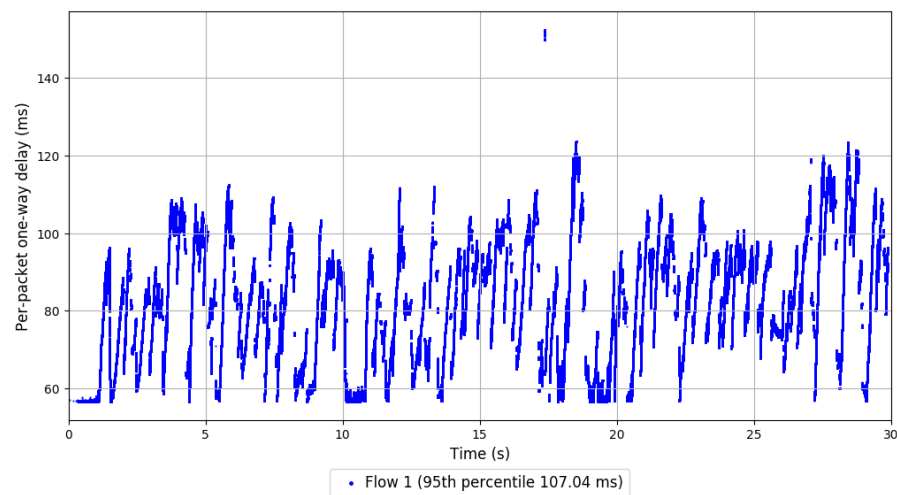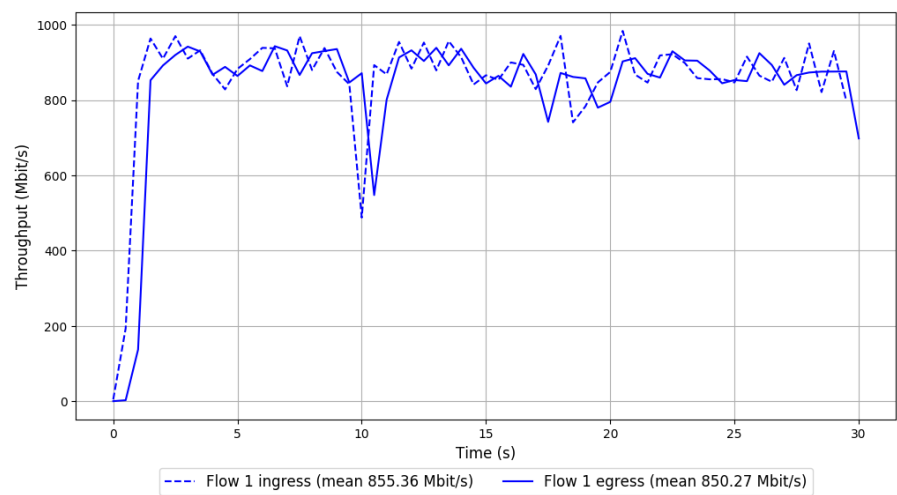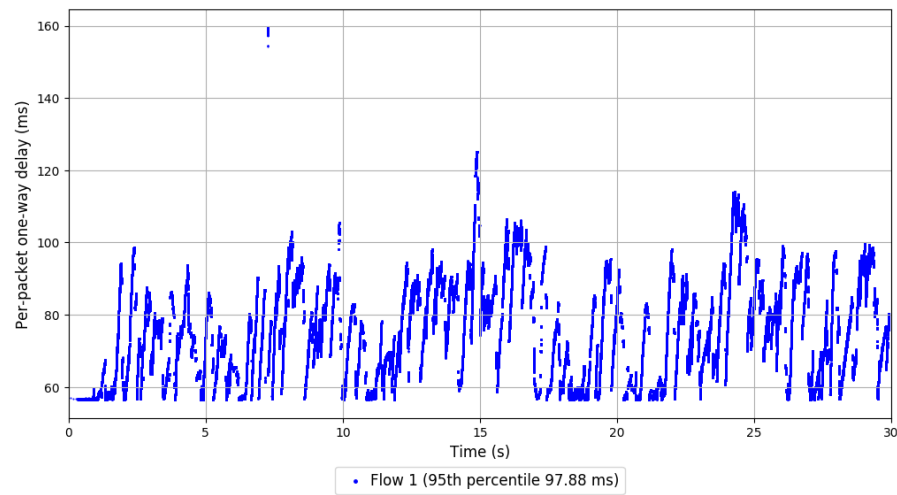
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2019-07-18 18:04:28
End at: 2019-07-18 18:04:58
Local clock offset: 0.328 ms
Remote clock offset: -0.698 ms


# Below is generated by plot.py at 2019-07-18 19:07:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 491.51 Mbit/s
95th percentile per-packet one-way delay: 72.806 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 491.51 Mbit/s
95th percentile per-packet one-way delay: 72.806 ms
Loss rate: 0.45%
```

Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 491.82 Mbit/s) --- Flow 1 egress (mean 491.51 Mbit/s)
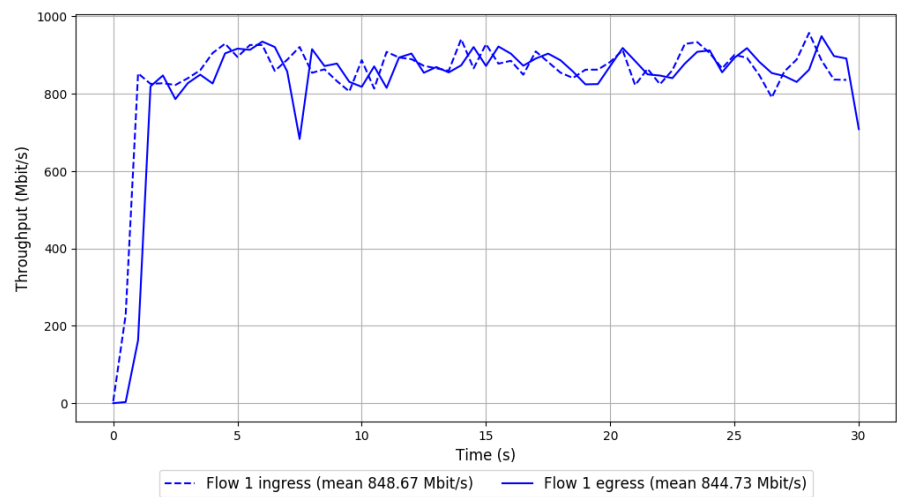

Flow 1 (95th percentile 72.81 ms)

34

```
Run 1: Statistics of FillP

Start at: 2019-07-18 15:58:35
End at: 2019-07-18 15:59:05
Local clock offset: -0.457 ms
Remote clock offset: -0.107 ms


# Below is generated by plot.py at 2019-07-18 19:15:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 843.17 Mbit/s
95th percentile per-packet one-way delay: 112.879 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 843.17 Mbit/s
95th percentile per-packet one-way delay: 112.879 ms
Loss rate: 1.35%
```
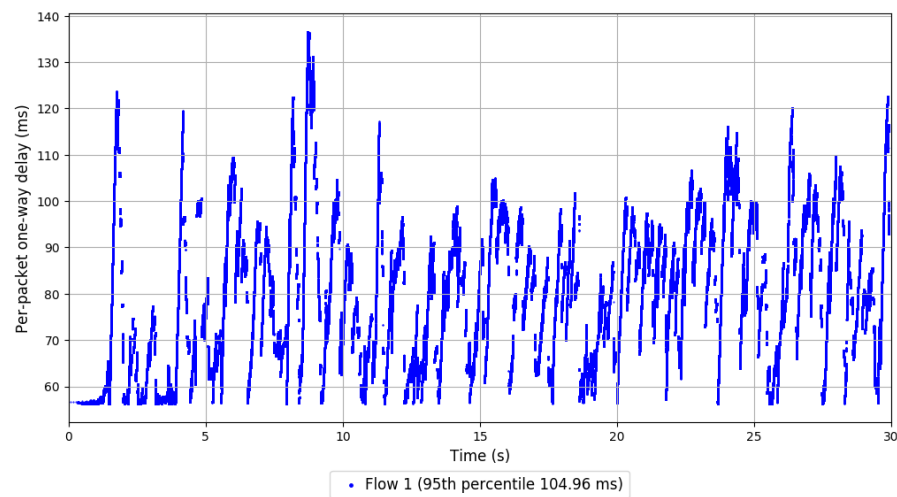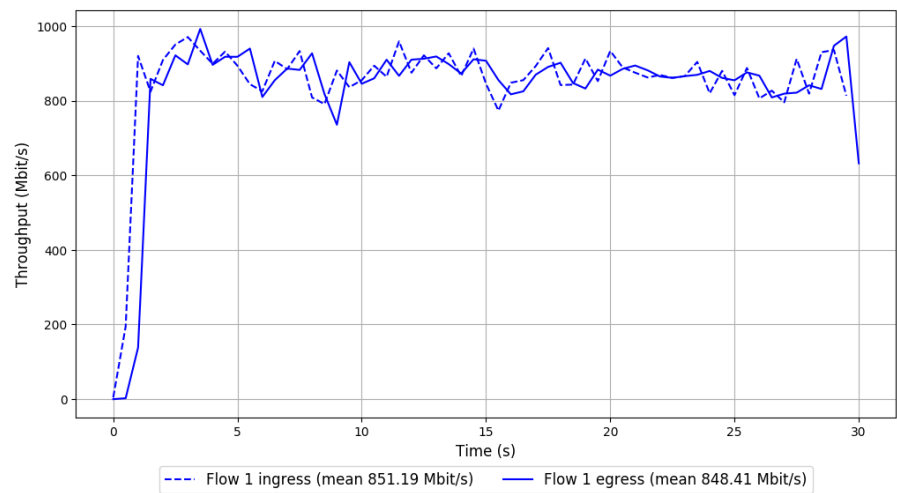
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 851.33 Mbit/s)   Flow 1 egress (mean 843.17 Mbit/s)
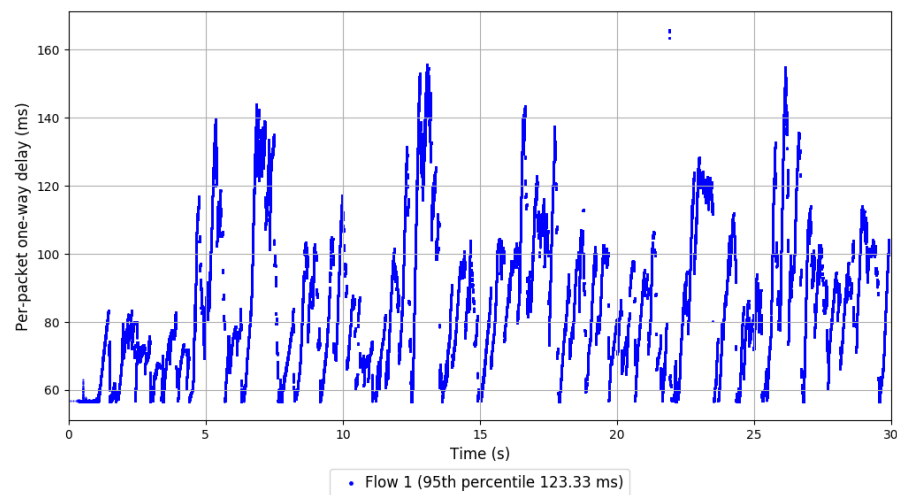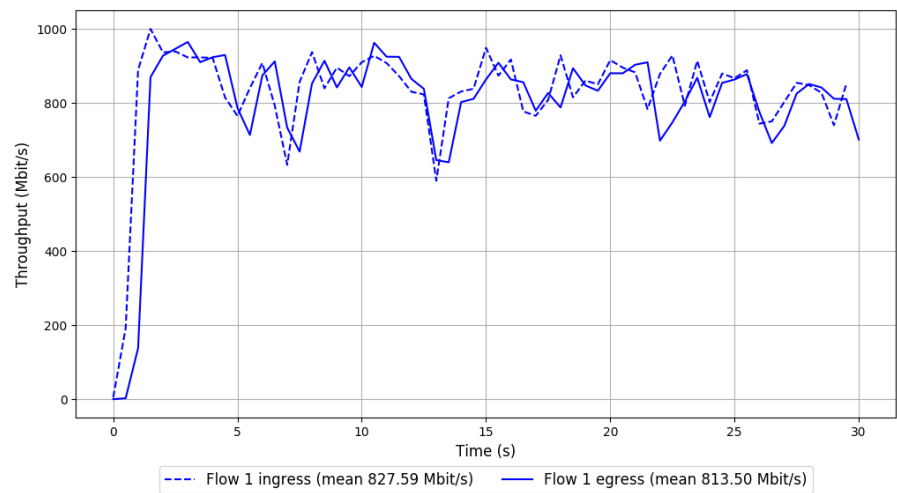

• Flow 1 (95th percentile 112.88 ms)

```
Run 2: Statistics of FillP

Start at: 2019-07-18 16:33:40
End at: 2019-07-18 16:34:10
Local clock offset: -0.086 ms
Remote clock offset: 0.025 ms


# Below is generated by plot.py at 2019-07-18 19:24:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 850.27 Mbit/s
95th percentile per-packet one-way delay: 107.040 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 850.27 Mbit/s
95th percentile per-packet one-way delay: 107.040 ms
Loss rate: 0.98%
```
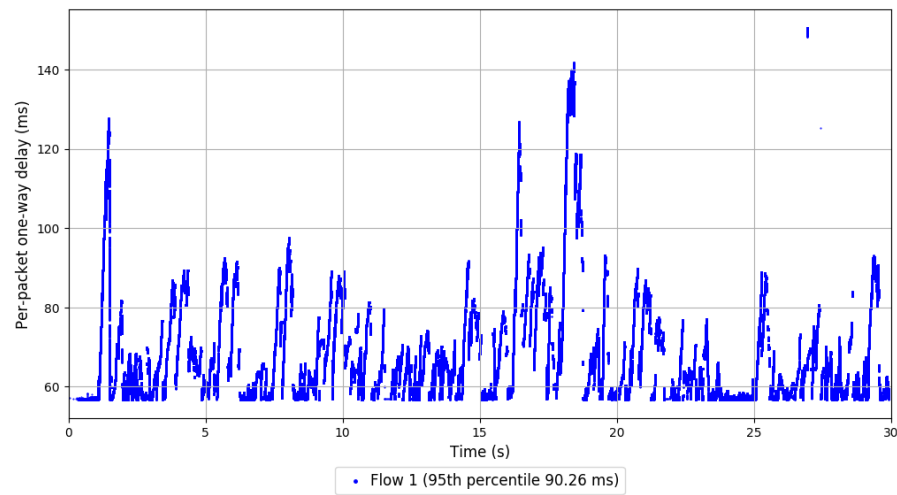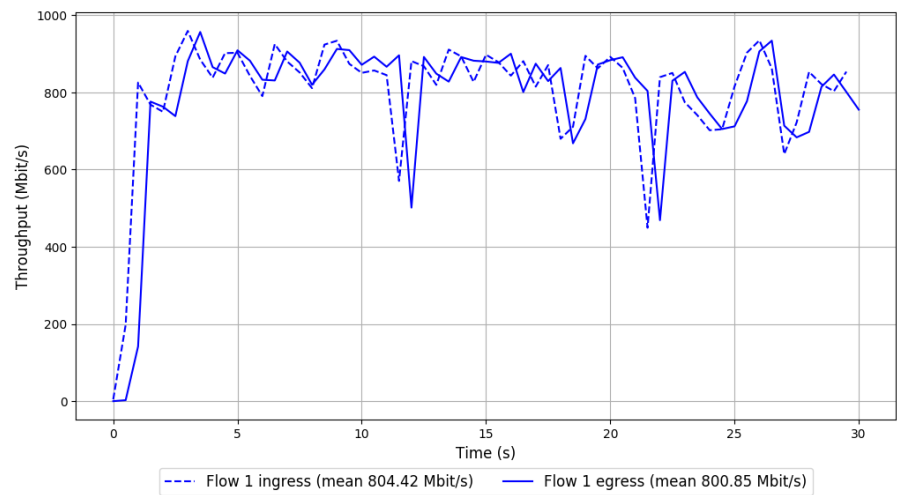
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-07-18 17:08:21
End at: 2019-07-18 17:08:51
Local clock offset: -0.315 ms
Remote clock offset: -0.022 ms


# Below is generated by plot.py at 2019-07-18 19:24:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 844.73 Mbit/s
95th percentile per-packet one-way delay: 97.882 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 844.73 Mbit/s
95th percentile per-packet one-way delay: 97.882 ms
Loss rate: 0.85%
```

Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-07-18 17:43:09
End at: 2019-07-18 17:43:39
Local clock offset: 0.103 ms
Remote clock offset: 0.736 ms


# Below is generated by plot.py at 2019-07-18 19:24:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 848.41 Mbit/s
95th percentile per-packet one-way delay: 104.962 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 848.41 Mbit/s
95th percentile per-packet one-way delay: 104.962 ms
Loss rate: 0.71%
```
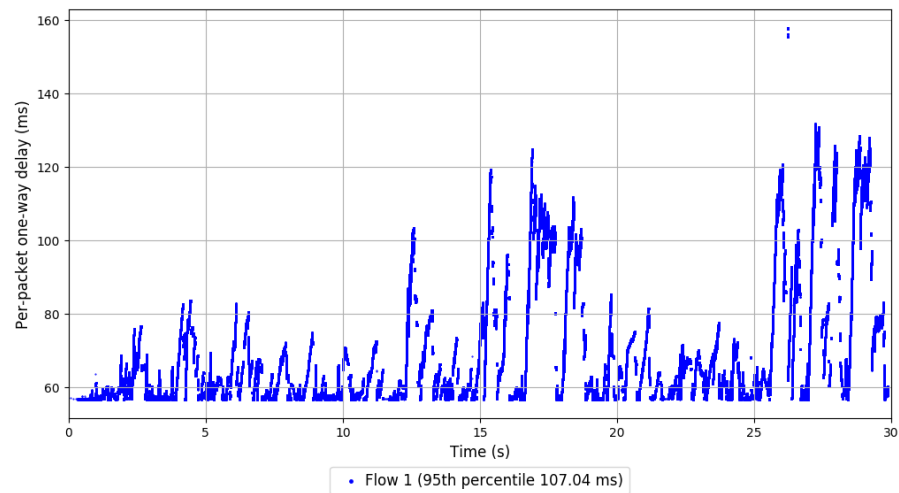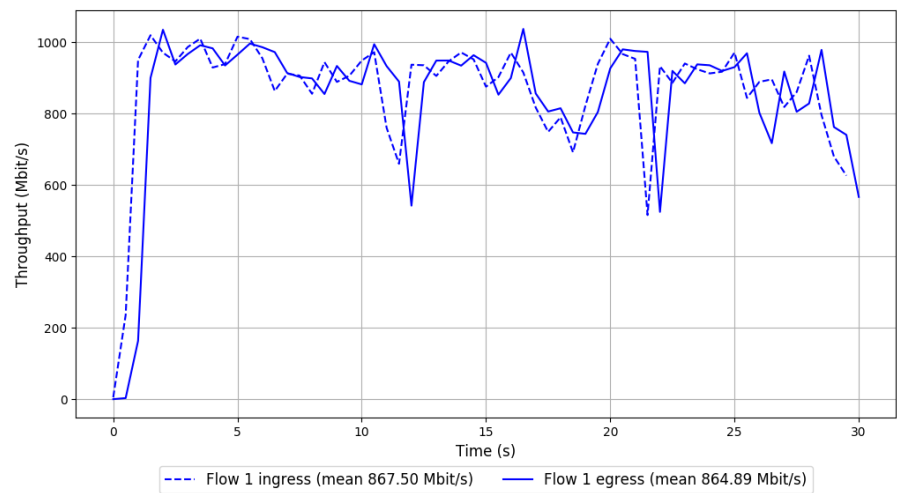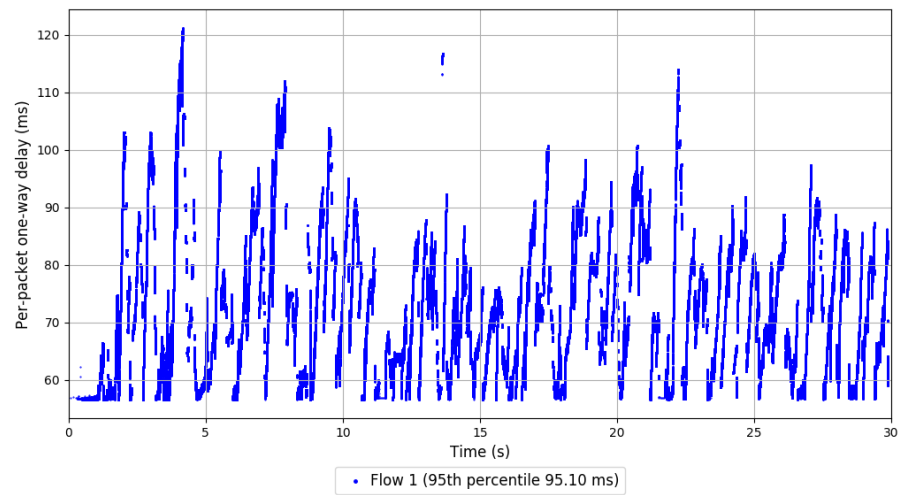
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2019-07-18 18:18:06
End at: 2019-07-18 18:18:36
Local clock offset: -0.464 ms
Remote clock offset: -0.149 ms


# Below is generated by plot.py at 2019-07-18 19:25:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 813.50 Mbit/s
95th percentile per-packet one-way delay: 123.330 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 813.50 Mbit/s
95th percentile per-packet one-way delay: 123.330 ms
Loss rate: 2.02%
```
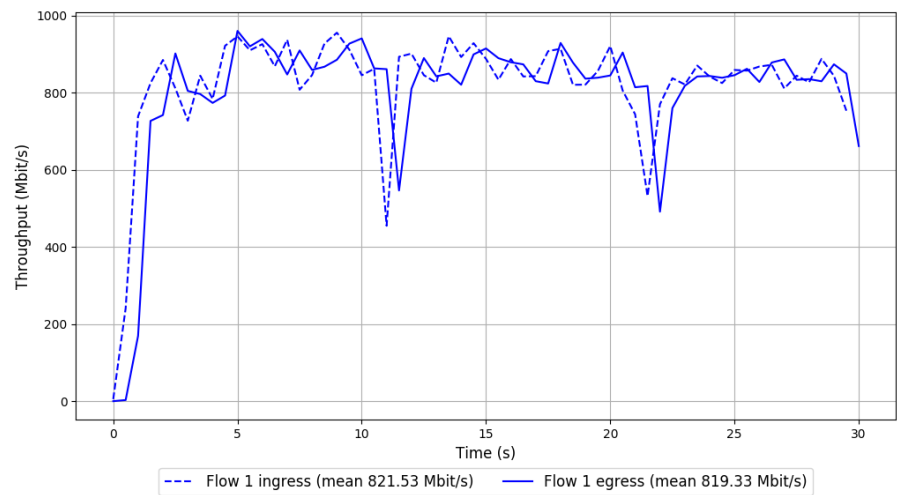
Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-07-18 15:48:01
End at: 2019-07-18 15:48:31
Local clock offset: -0.071 ms
Remote clock offset: -0.033 ms


# Below is generated by plot.py at 2019-07-18 19:25:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 800.85 Mbit/s
95th percentile per-packet one-way delay: 90.259 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 800.85 Mbit/s
95th percentile per-packet one-way delay: 90.259 ms
Loss rate: 0.83%
```
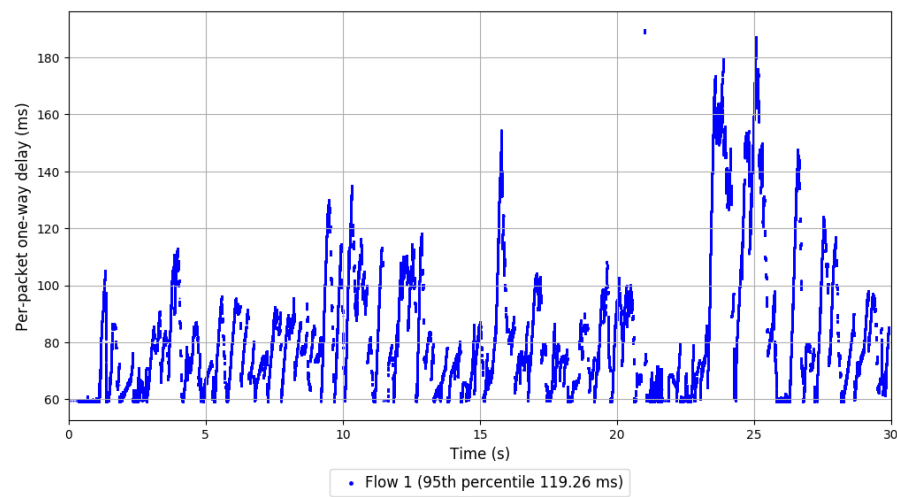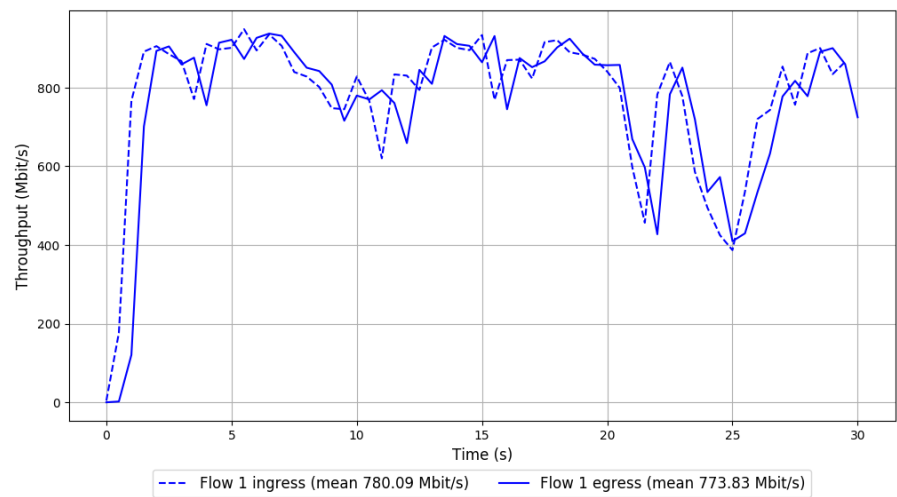
Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-07-18 16:23:02
End at: 2019-07-18 16:23:32
Local clock offset: 0.402 ms
Remote clock offset: 0.819 ms


# Below is generated by plot.py at 2019-07-18 19:26:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 864.89 Mbit/s
95th percentile per-packet one-way delay: 107.036 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 864.89 Mbit/s
95th percentile per-packet one-way delay: 107.036 ms
Loss rate: 0.68%
```
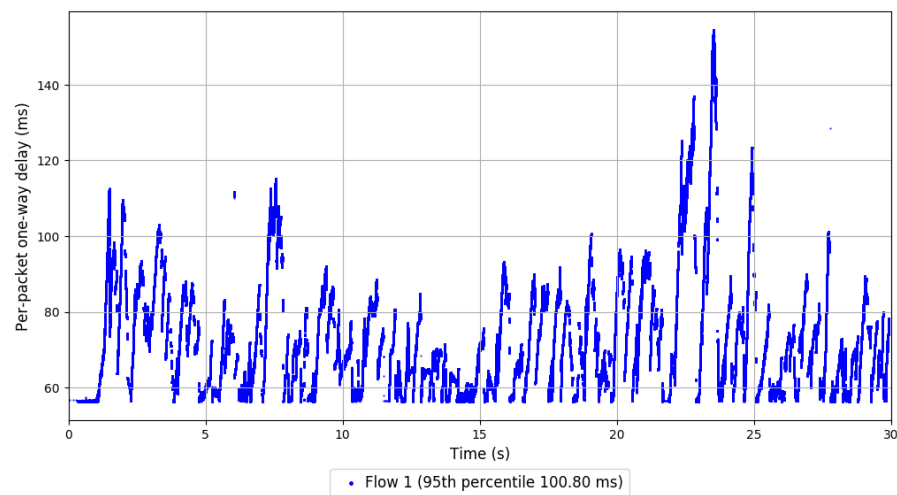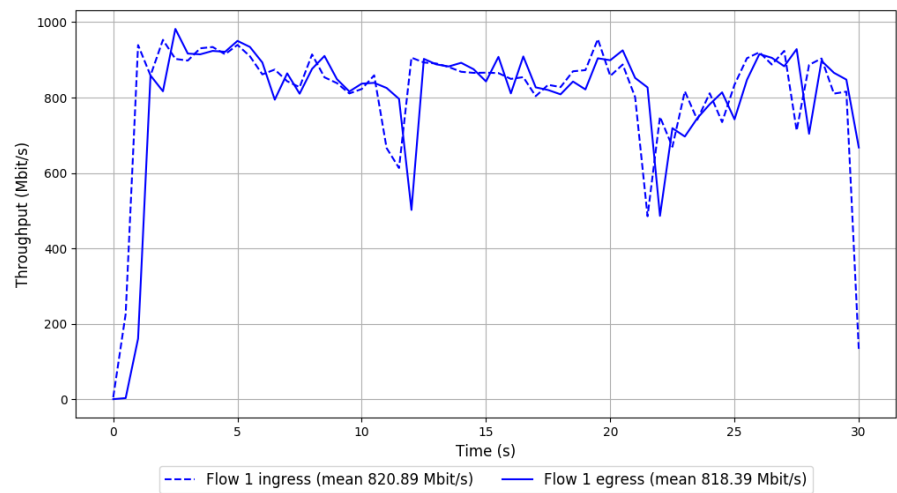
Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 867.50 Mbit/s)   Flow 1 egress (mean 864.89 Mbit/s)

• Flow 1 (95th percentile 107.04 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-07-18 16:57:44
End at: 2019-07-18 16:58:14
Local clock offset: -0.27 ms
Remote clock offset: -0.099 ms


# Below is generated by plot.py at 2019-07-18 19:26:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 819.33 Mbit/s
95th percentile per-packet one-way delay: 95.099 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 819.33 Mbit/s
95th percentile per-packet one-way delay: 95.099 ms
Loss rate: 0.64%
```
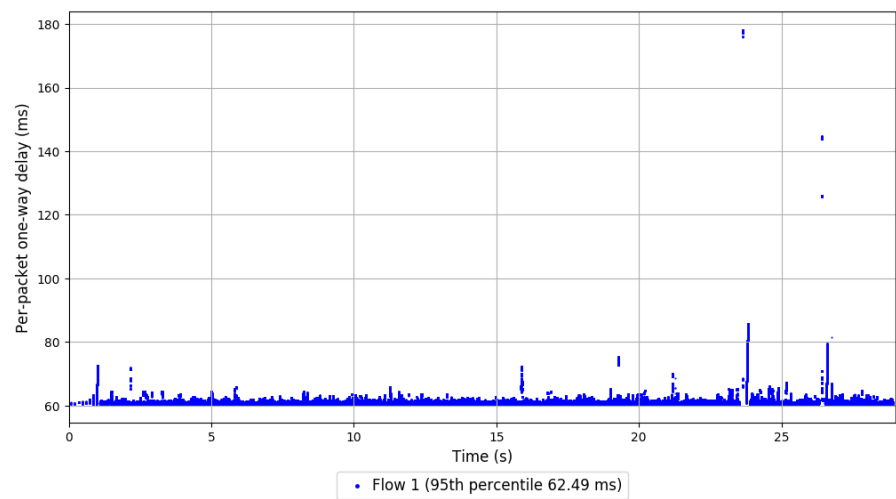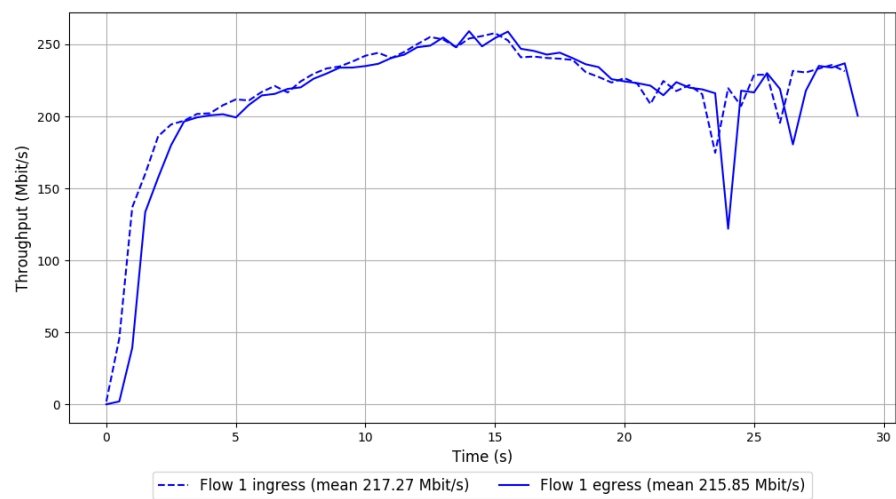
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 821.53 Mbit/s)   Flow 1 egress (mean 819.33 Mbit/s)

Flow 1 (95th percentile 95.10 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-07-18 17:32:37
End at: 2019-07-18 17:33:07
Local clock offset: -0.024 ms
Remote clock offset: 0.774 ms


# Below is generated by plot.py at 2019-07-18 19:35:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 773.83 Mbit/s
95th percentile per-packet one-way delay: 119.257 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 773.83 Mbit/s
95th percentile per-packet one-way delay: 119.257 ms
Loss rate: 1.19%
```
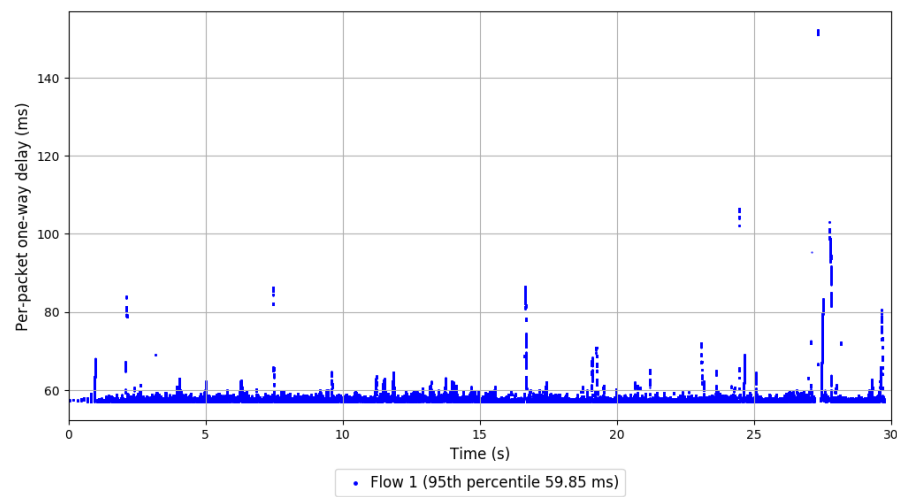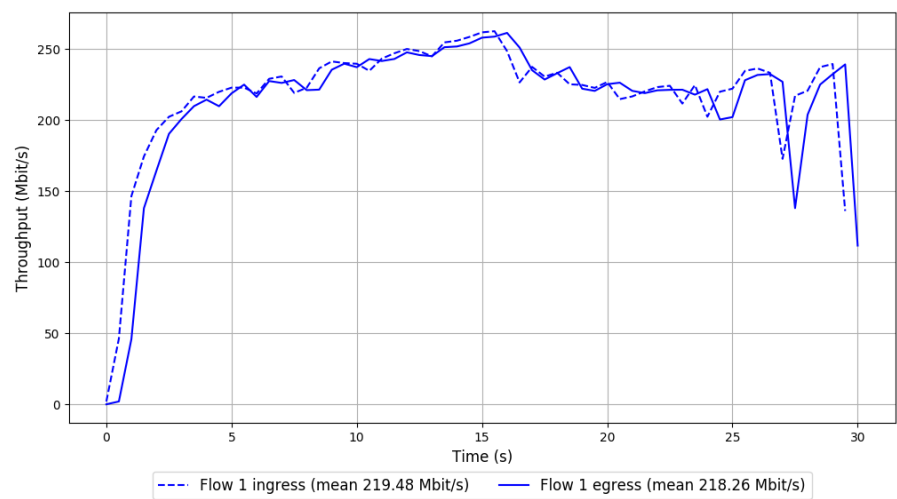
Run 4: Report of FillP-Sheep — Data Link

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-07-18 18:07:28
End at: 2019-07-18 18:07:58
Local clock offset: -0.501 ms
Remote clock offset: 0.033 ms


# Below is generated by plot.py at 2019-07-18 19:42:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 818.39 Mbit/s
95th percentile per-packet one-way delay: 100.804 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 818.39 Mbit/s
95th percentile per-packet one-way delay: 100.804 ms
Loss rate: 1.02%
```
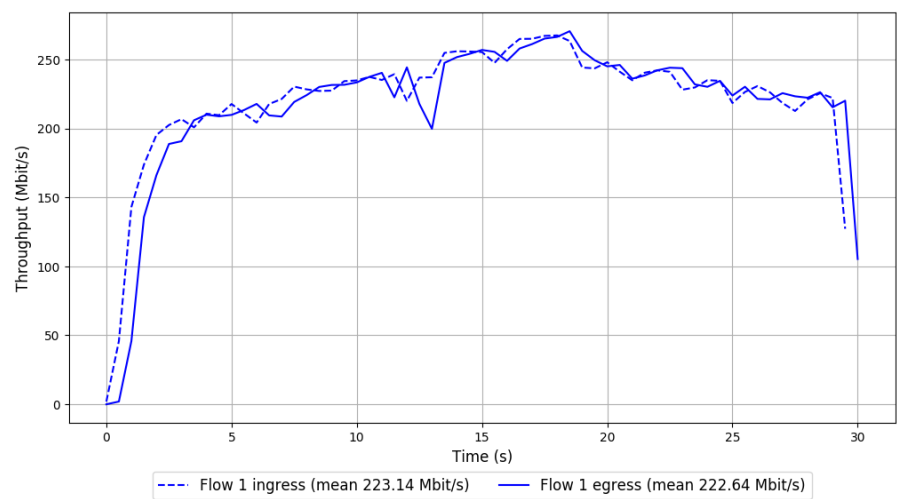
Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2019-07-18 15:46:33
End at: 2019-07-18 15:47:03
Local clock offset: 0.334 ms
Remote clock offset: 0.075 ms


# Below is generated by plot.py at 2019-07-18 19:42:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 215.85 Mbit/s
95th percentile per-packet one-way delay: 62.487 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 215.85 Mbit/s
95th percentile per-packet one-way delay: 62.487 ms
Loss rate: 1.06%
```
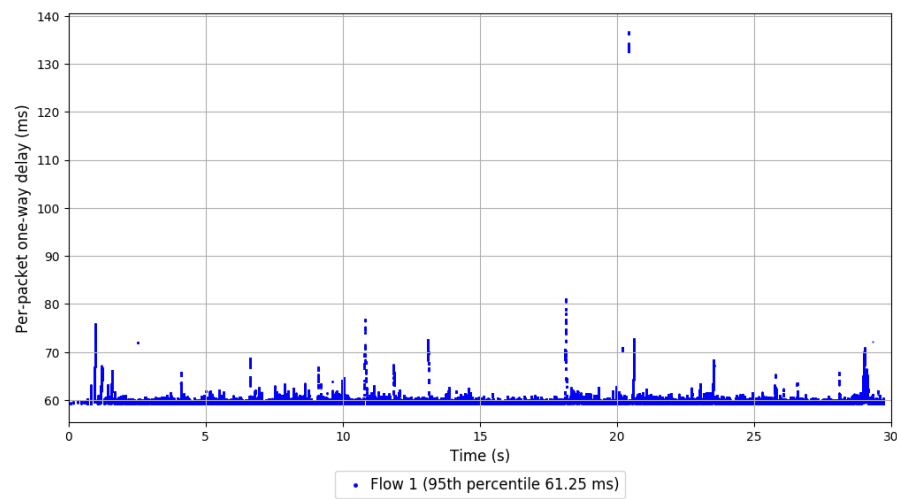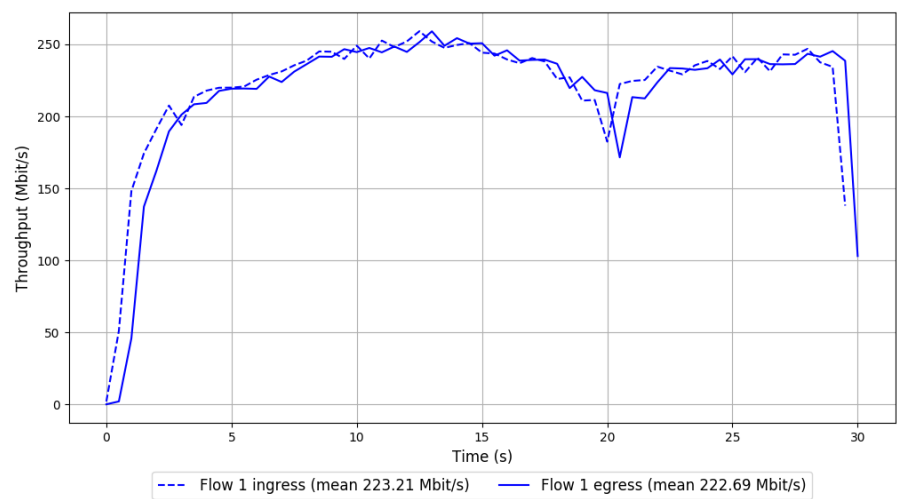
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-07-18 16:21:33
End at: 2019-07-18 16:22:03
Local clock offset: 0.089 ms
Remote clock offset: 0.148 ms


# Below is generated by plot.py at 2019-07-18 19:42:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.26 Mbit/s
95th percentile per-packet one-way delay: 59.851 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 218.26 Mbit/s
95th percentile per-packet one-way delay: 59.851 ms
Loss rate: 0.95%
```

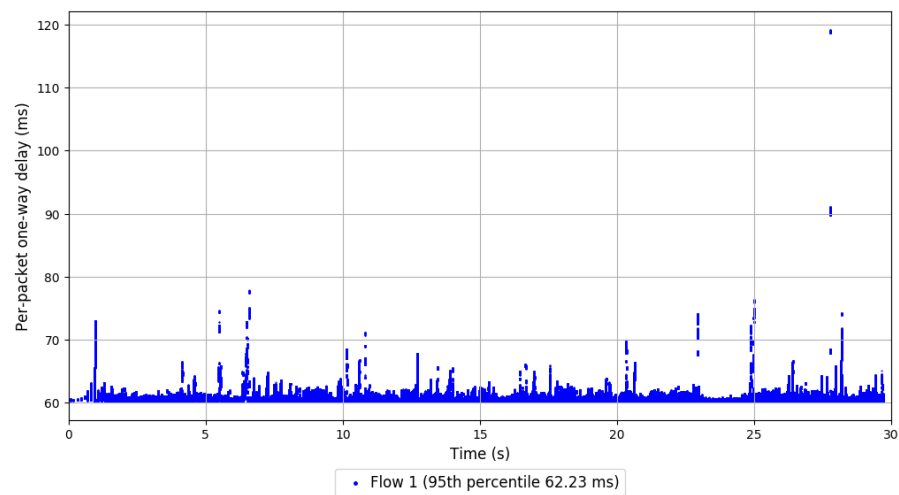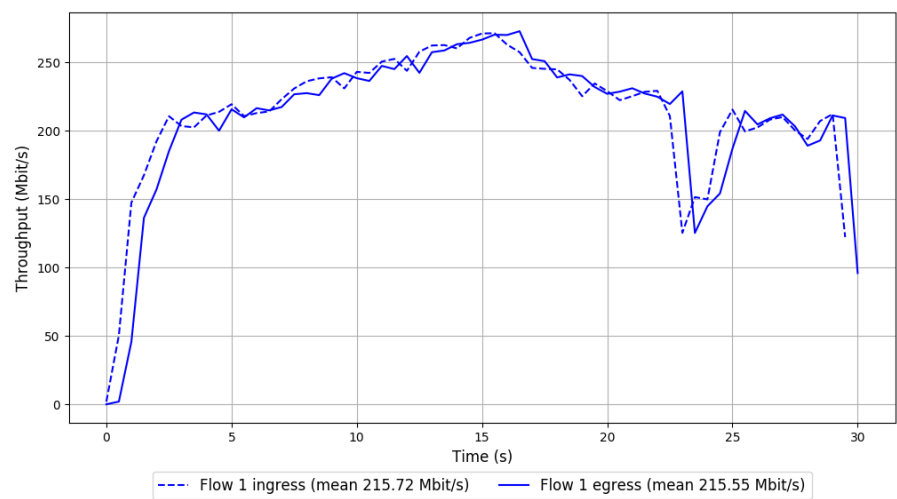Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-07-18 16:56:15
End at: 2019-07-18 16:56:45
Local clock offset: -0.485 ms
Remote clock offset: -0.586 ms


# Below is generated by plot.py at 2019-07-18 19:42:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.64 Mbit/s
95th percentile per-packet one-way delay: 62.223 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 222.64 Mbit/s
95th percentile per-packet one-way delay: 62.223 ms
Loss rate: 0.63%
```
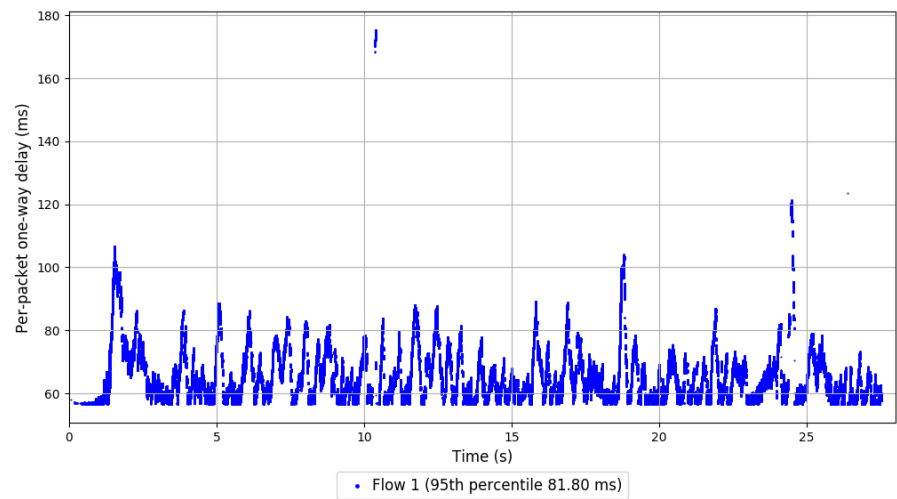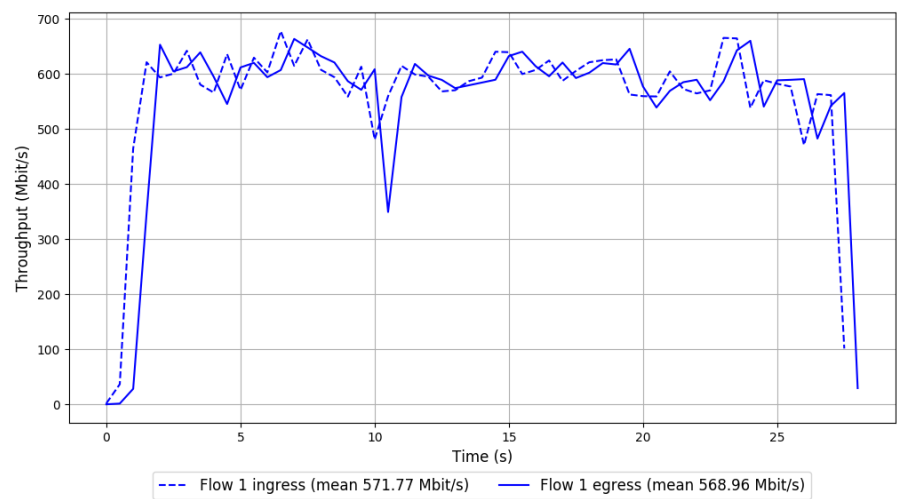
Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 223.14 Mbit/s)   Flow 1 egress (mean 222.64 Mbit/s)

Flow 1 (95th percentile 62.22 ms)

```
Run 4: Statistics of Indigo

Start at: 2019-07-18 17:31:07
End at: 2019-07-18 17:31:37
Local clock offset: -0.052 ms
Remote clock offset: 0.62 ms


# Below is generated by plot.py at 2019-07-18 19:42:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.69 Mbit/s
95th percentile per-packet one-way delay: 61.250 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 222.69 Mbit/s
95th percentile per-packet one-way delay: 61.250 ms
Loss rate: 0.63%
```
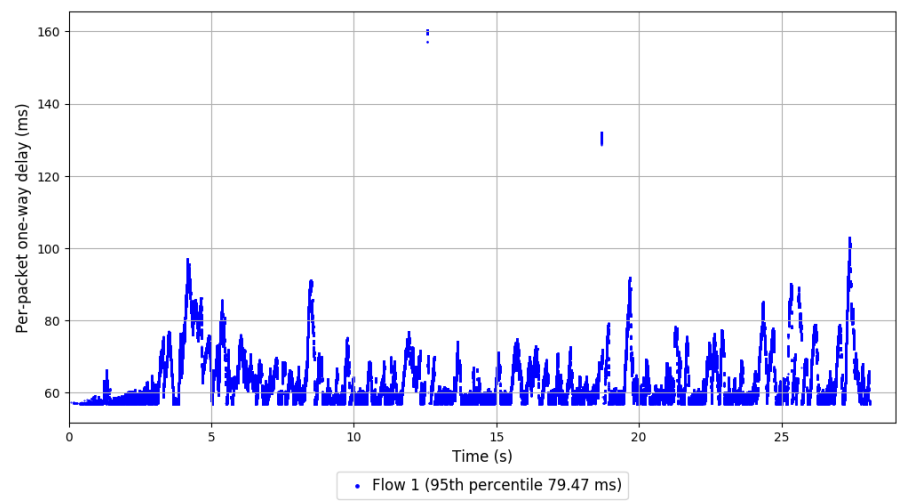
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-07-18 18:06:00
End at: 2019-07-18 18:06:30
Local clock offset: 0.015 ms
Remote clock offset: -0.113 ms


# Below is generated by plot.py at 2019-07-18 19:42:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 215.55 Mbit/s
95th percentile per-packet one-way delay: 62.232 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 215.55 Mbit/s
95th percentile per-packet one-way delay: 62.232 ms
Loss rate: 0.47%
```
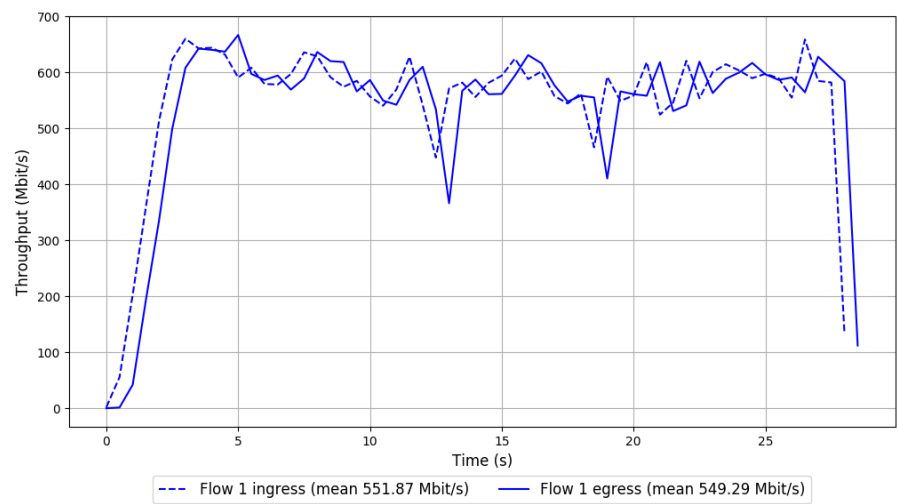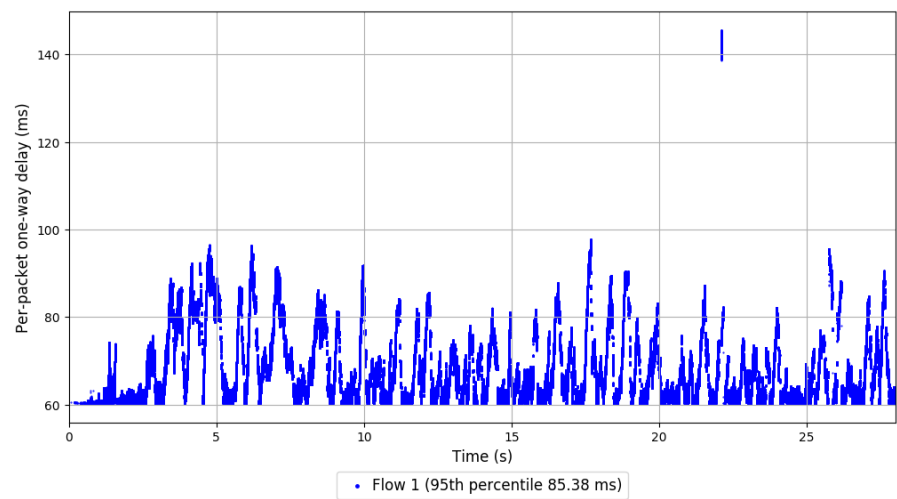
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-07-18 15:42:15
End at: 2019-07-18 15:42:45
Local clock offset: -0.123 ms
Remote clock offset: -0.051 ms


# Below is generated by plot.py at 2019-07-18 19:42:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 568.96 Mbit/s
95th percentile per-packet one-way delay: 81.804 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 568.96 Mbit/s
95th percentile per-packet one-way delay: 81.804 ms
Loss rate: 0.91%
```
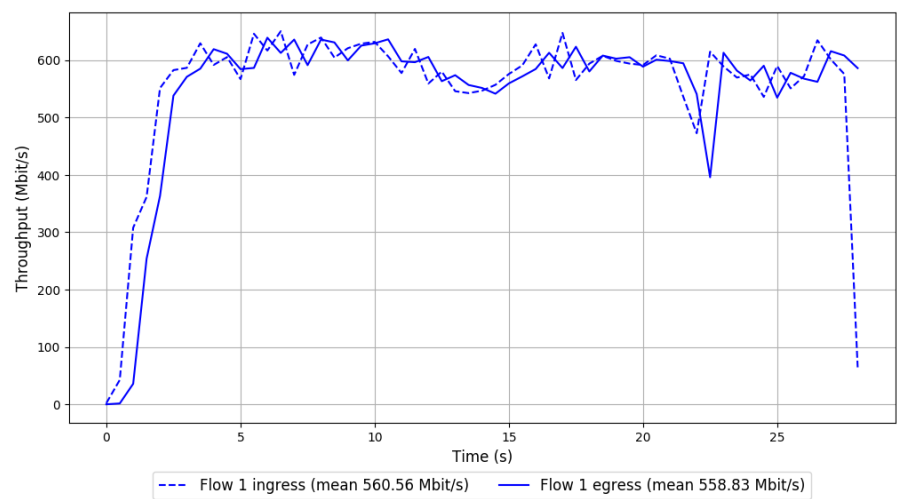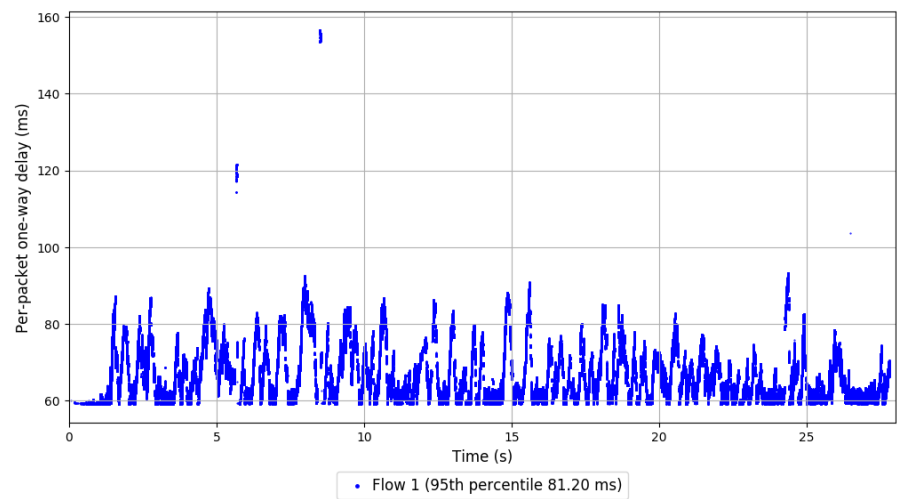
Run 1: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 571.77 Mbit/s)   Flow 1 egress (mean 568.96 Mbit/s)

Flow 1 (95th percentile 81.80 ms)

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-07-18 16:17:13
End at: 2019-07-18 16:17:43
Local clock offset: -0.022 ms
Remote clock offset: -0.01 ms


# Below is generated by plot.py at 2019-07-18 19:42:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 549.29 Mbit/s
95th percentile per-packet one-way delay: 79.468 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 549.29 Mbit/s
95th percentile per-packet one-way delay: 79.468 ms
Loss rate: 0.88%
```
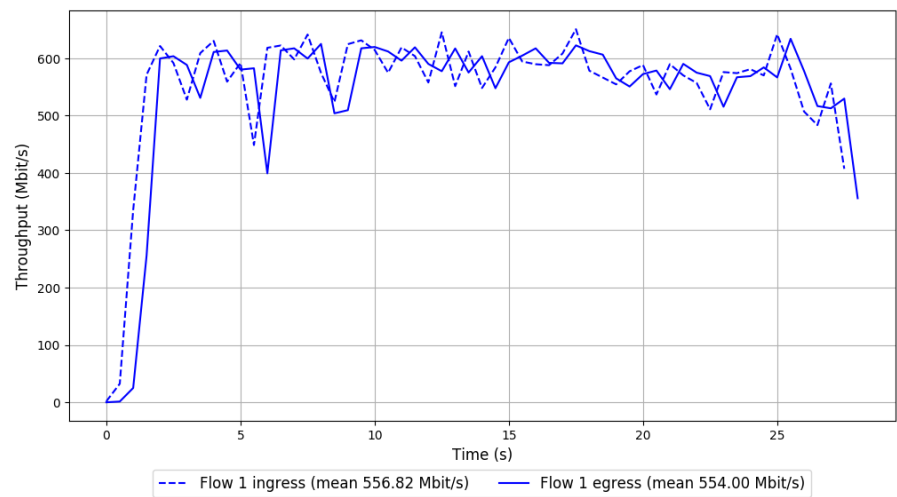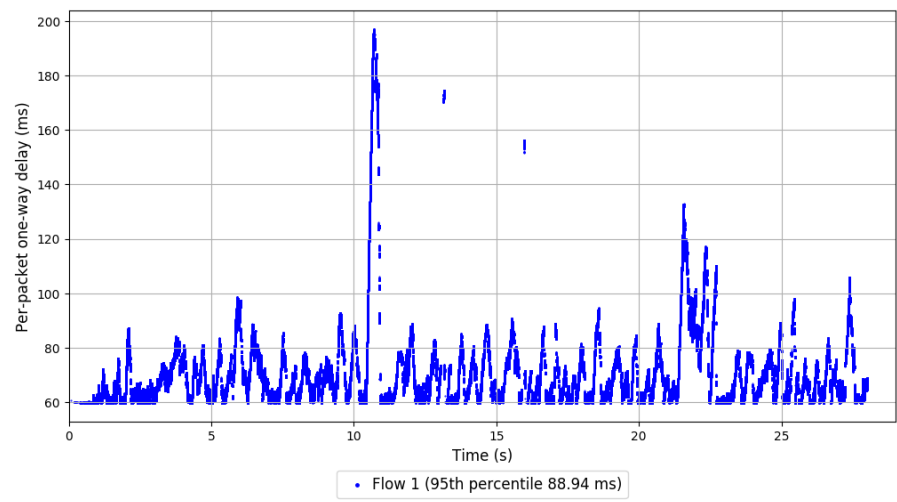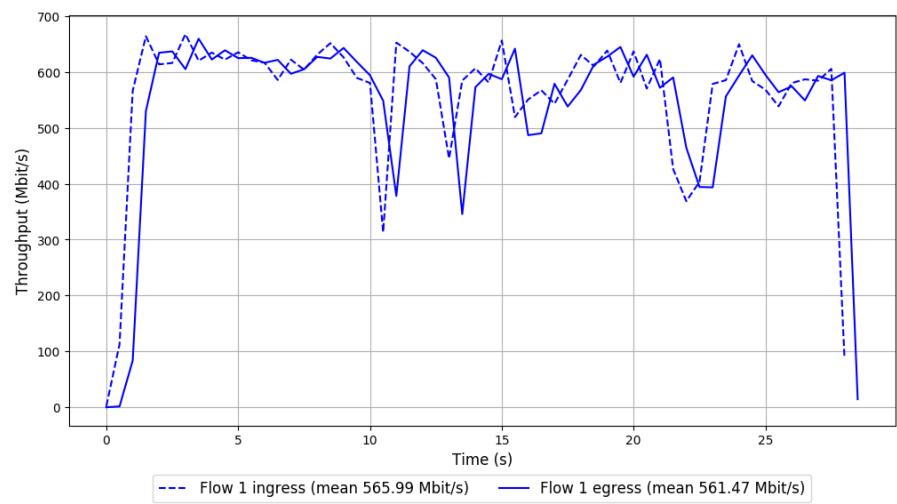
Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-07-18 16:52:04
End at: 2019-07-18 16:52:34
Local clock offset: -0.367 ms
Remote clock offset: -0.07 ms


# Below is generated by plot.py at 2019-07-18 19:43:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 558.83 Mbit/s
95th percentile per-packet one-way delay: 85.384 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 558.83 Mbit/s
95th percentile per-packet one-way delay: 85.384 ms
Loss rate: 0.73%
```
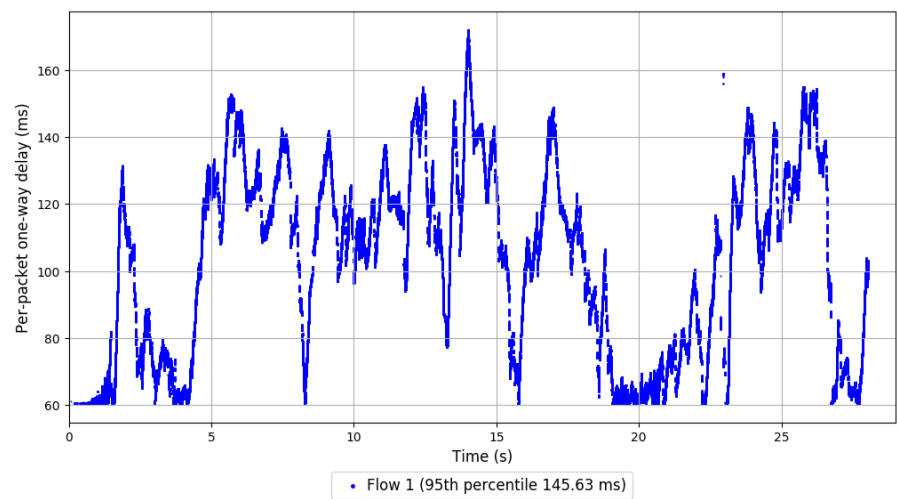
Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 560.56 Mbit/s) --- Flow 1 egress (mean 558.83 Mbit/s)

· Flow 1 (95th percentile 85.38 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-07-18 17:26:50
End at: 2019-07-18 17:27:20
Local clock offset: -0.494 ms
Remote clock offset: 0.58 ms


# Below is generated by plot.py at 2019-07-18 19:43:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 554.00 Mbit/s
95th percentile per-packet one-way delay: 81.205 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 554.00 Mbit/s
95th percentile per-packet one-way delay: 81.205 ms
Loss rate: 0.93%
```
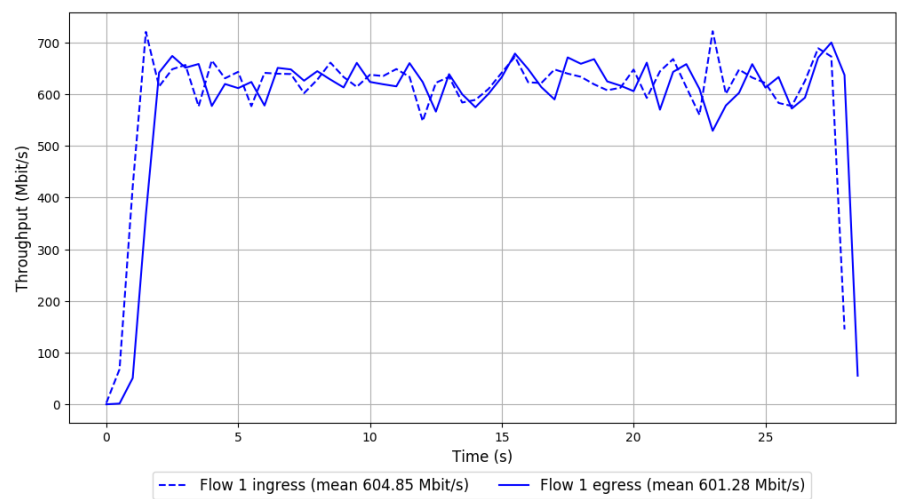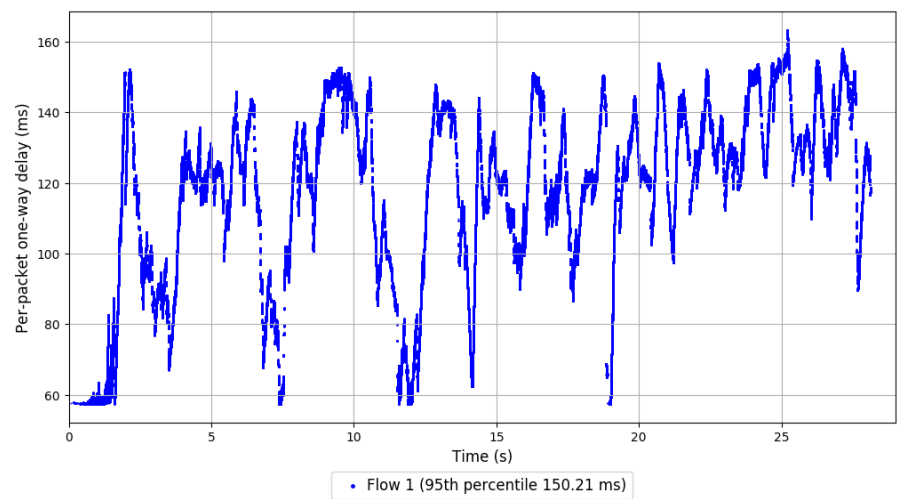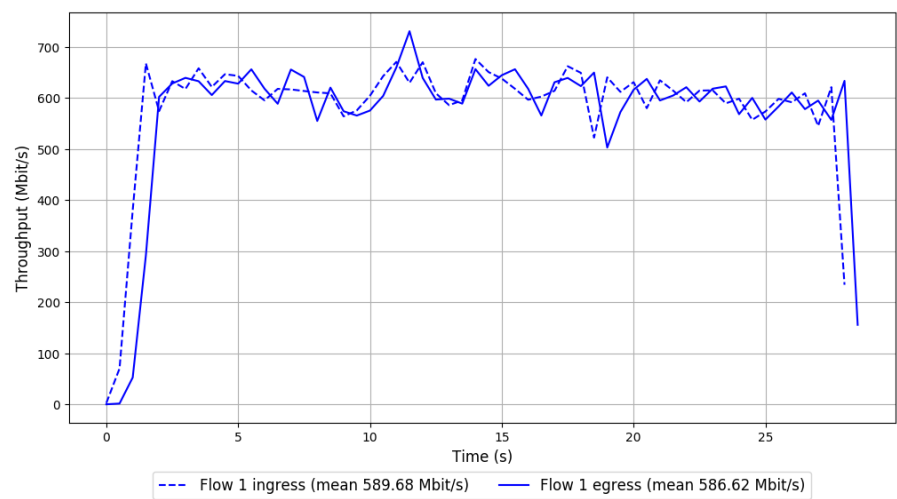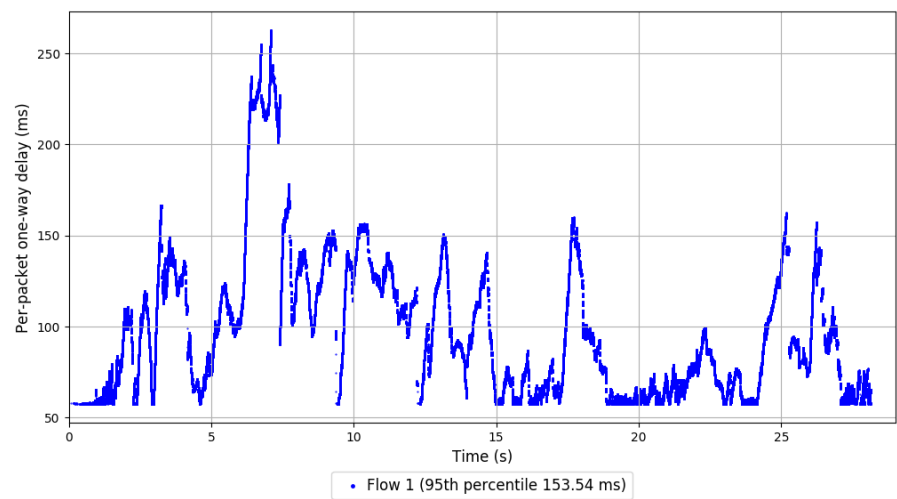
Run 4: Report of Indigo-MusesC3 — Data Link

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-07-18 18:01:43
End at: 2019-07-18 18:02:13
Local clock offset: -0.374 ms
Remote clock offset: -0.033 ms


# Below is generated by plot.py at 2019-07-18 19:43:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 561.47 Mbit/s
95th percentile per-packet one-way delay: 88.936 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 561.47 Mbit/s
95th percentile per-packet one-way delay: 88.936 ms
Loss rate: 1.22%
```
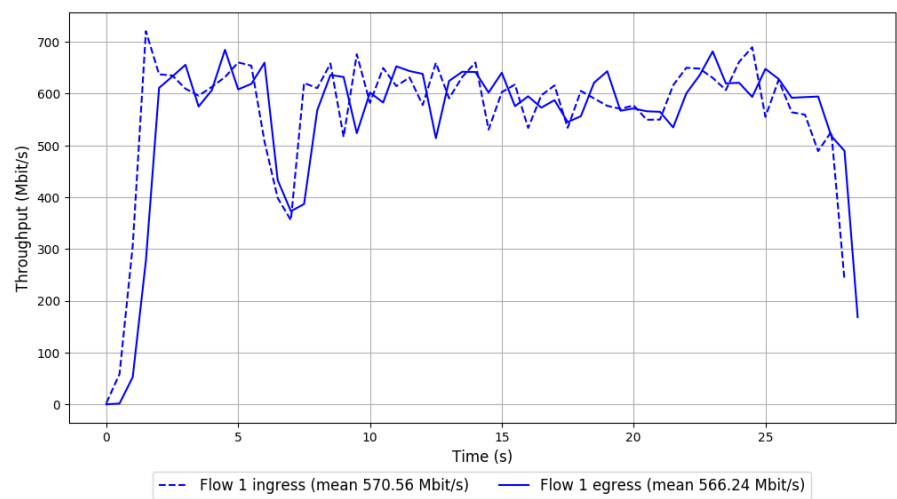
Run 5: Report of Indigo-MusesC3 — Data Link

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```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-07-18 16:07:03
End at: 2019-07-18 16:07:33
Local clock offset: -0.048 ms
Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2019-07-18 19:45:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 601.28 Mbit/s
95th percentile per-packet one-way delay: 145.635 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 601.28 Mbit/s
95th percentile per-packet one-way delay: 145.635 ms
Loss rate: 1.01%
```
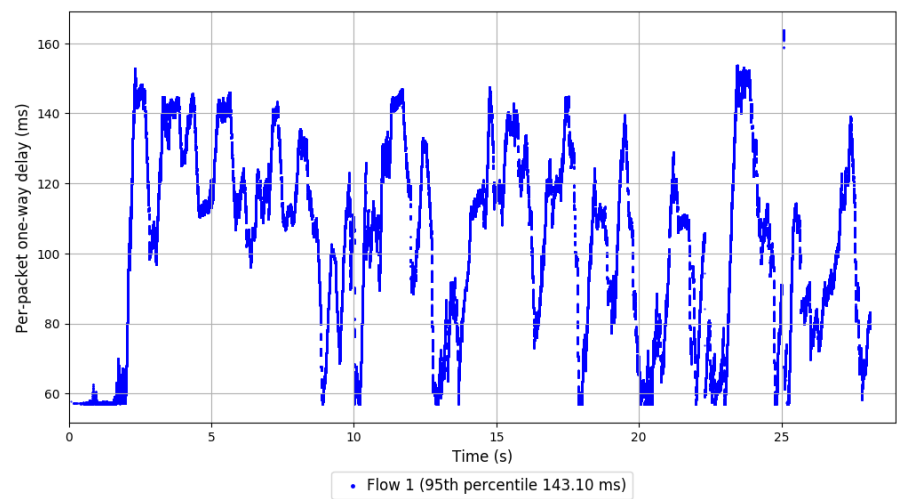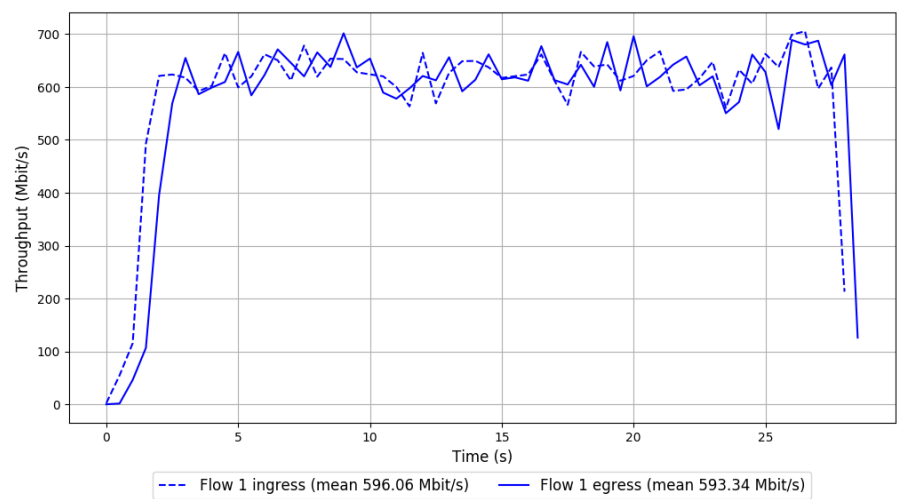
Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-07-18 16:42:07
End at: 2019-07-18 16:42:37
Local clock offset: 0.33 ms
Remote clock offset: 0.005 ms


# Below is generated by plot.py at 2019-07-18 19:46:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 586.62 Mbit/s
95th percentile per-packet one-way delay: 150.207 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 586.62 Mbit/s
95th percentile per-packet one-way delay: 150.207 ms
Loss rate: 0.93%
```

Run 2: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 589.68 Mbit/s) —— Flow 1 egress (mean 586.62 Mbit/s)

• Flow 1 (95th percentile 150.21 ms)

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-07-18 17:16:47
End at: 2019-07-18 17:17:17
Local clock offset: 0.334 ms
Remote clock offset: -0.104 ms


# Below is generated by plot.py at 2019-07-18 19:47:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 566.24 Mbit/s
95th percentile per-packet one-way delay: 153.545 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 566.24 Mbit/s
95th percentile per-packet one-way delay: 153.545 ms
Loss rate: 1.16%
```
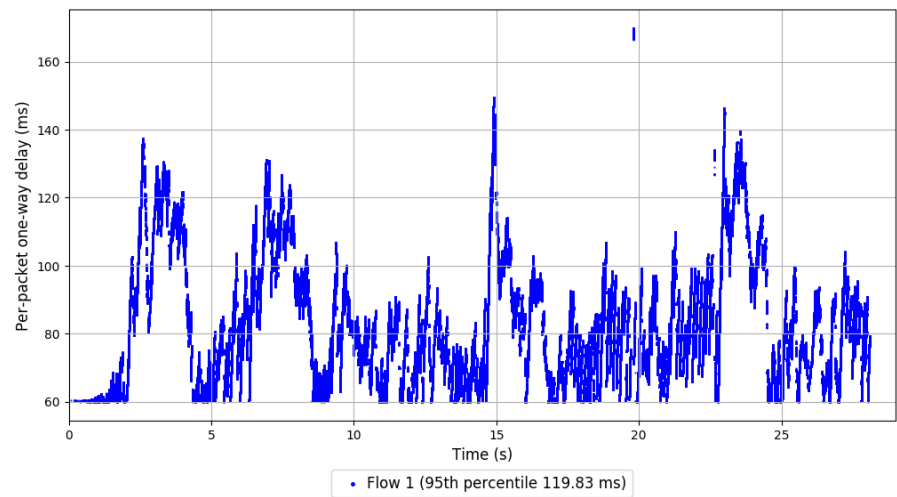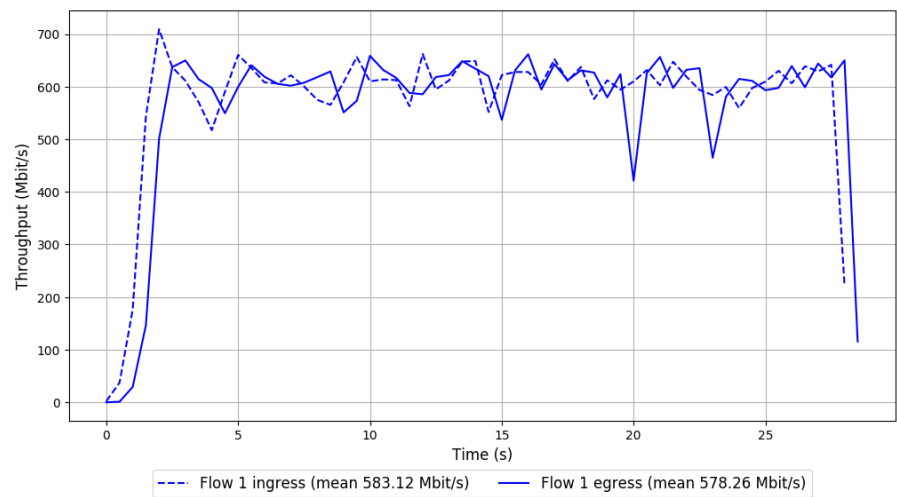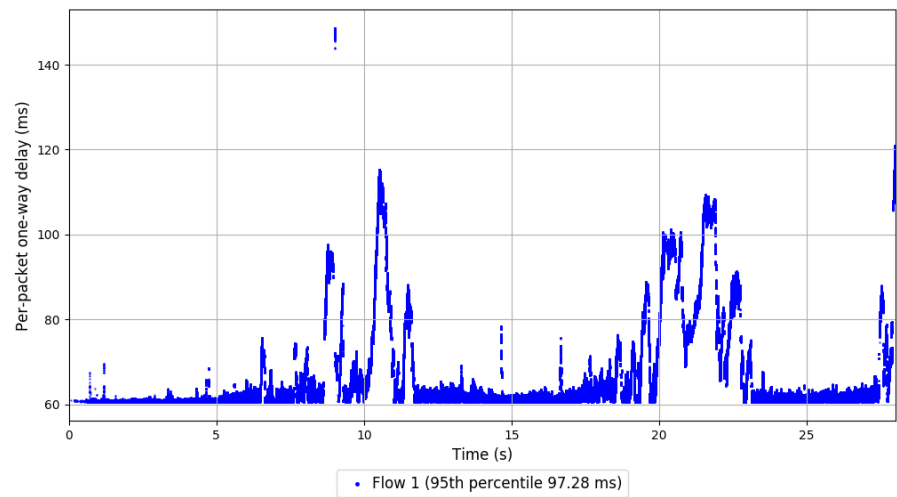
Run 3: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 570.56 Mbit/s) --- Flow 1 egress (mean 566.24 Mbit/s)

• Flow 1 (95th percentile 153.54 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-07-18 17:51:34
End at: 2019-07-18 17:52:04
Local clock offset: -0.124 ms
Remote clock offset: -0.098 ms


# Below is generated by plot.py at 2019-07-18 19:52:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 593.34 Mbit/s
95th percentile per-packet one-way delay: 143.096 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 593.34 Mbit/s
95th percentile per-packet one-way delay: 143.096 ms
Loss rate: 0.86%
```
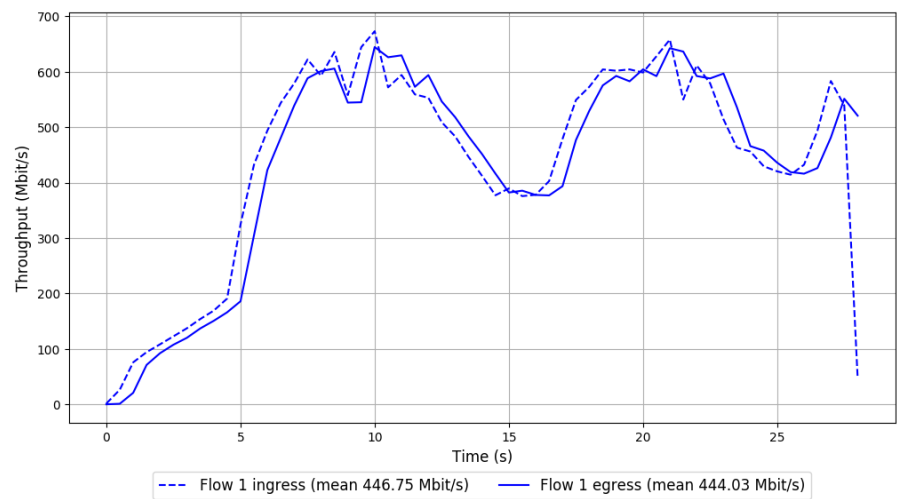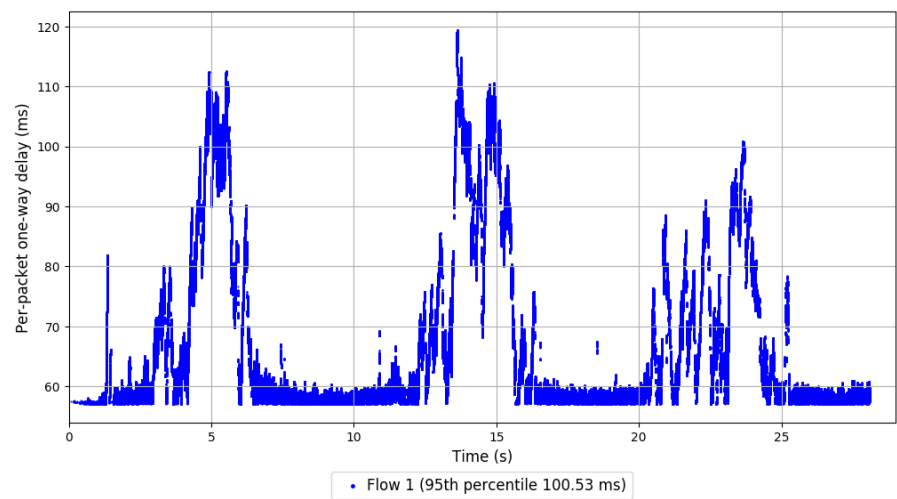
Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-07-18 18:26:36
End at: 2019-07-18 18:27:06
Local clock offset: -0.035 ms
Remote clock offset: 0.073 ms


# Below is generated by plot.py at 2019-07-18 19:53:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 578.26 Mbit/s
95th percentile per-packet one-way delay: 119.828 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 578.26 Mbit/s
95th percentile per-packet one-way delay: 119.828 ms
Loss rate: 1.24%
```
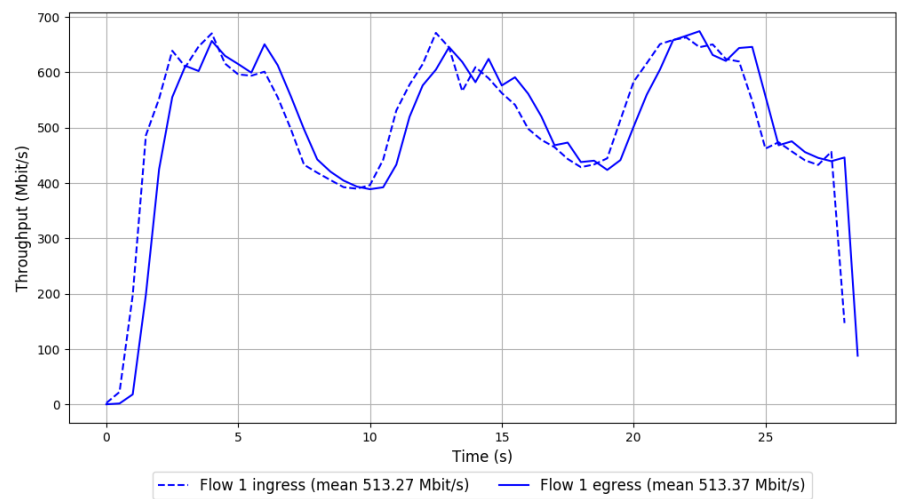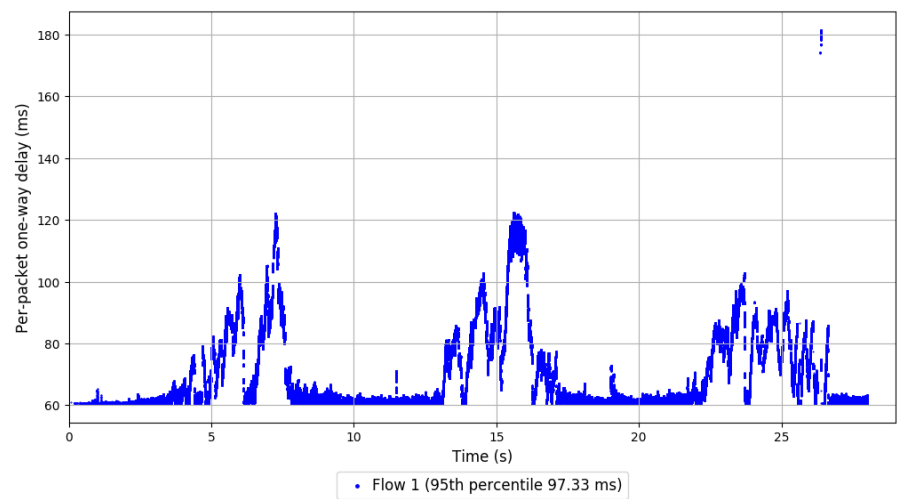
Run 5: Report of Indigo-MusesC5 — Data Link

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-07-18 15:52:47
End at: 2019-07-18 15:53:17
Local clock offset: 0.074 ms
Remote clock offset: -0.047 ms


# Below is generated by plot.py at 2019-07-18 19:53:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 444.03 Mbit/s
95th percentile per-packet one-way delay: 97.275 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 444.03 Mbit/s
95th percentile per-packet one-way delay: 97.275 ms
Loss rate: 1.03%
```
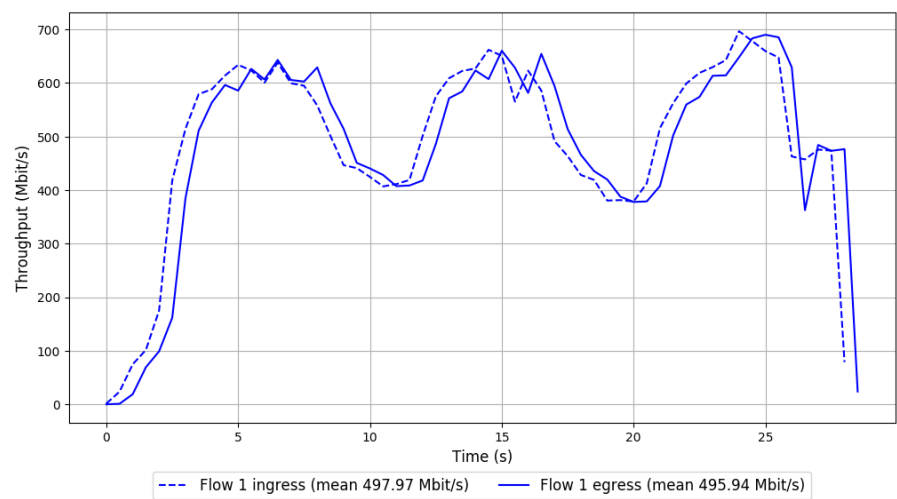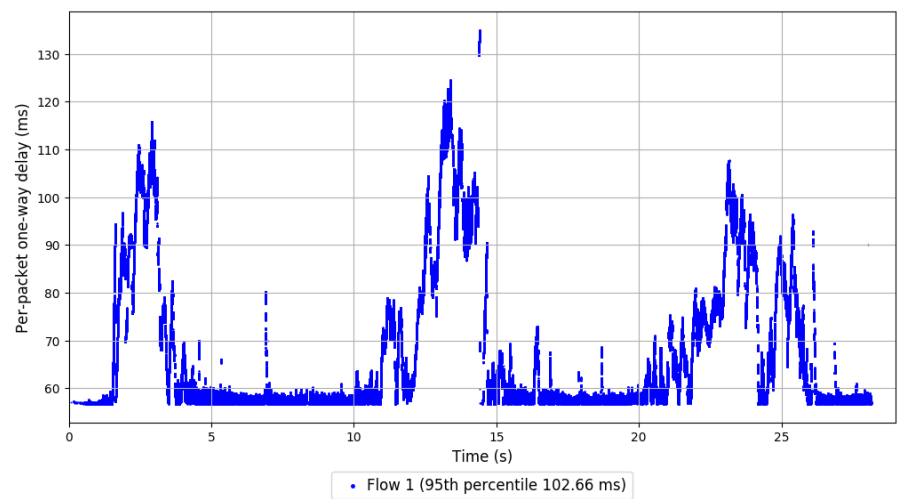
Run 1: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 446.75 Mbit/s)   Flow 1 egress (mean 444.03 Mbit/s)
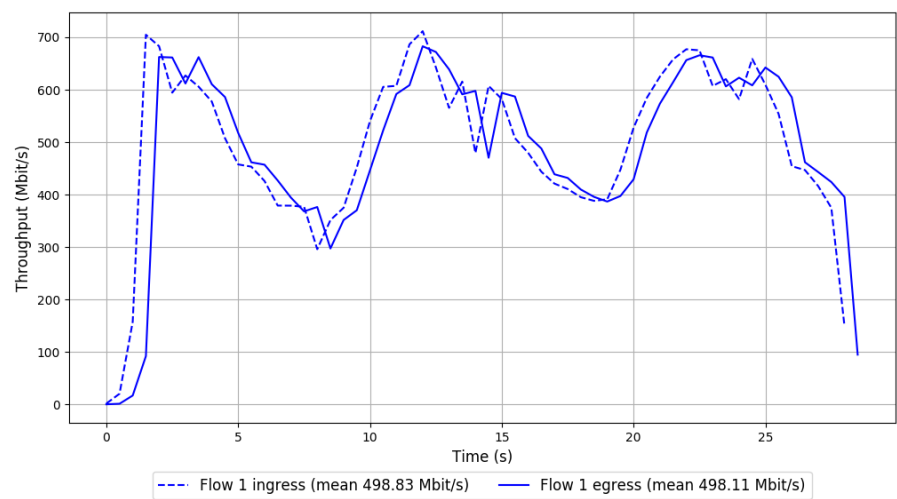

• Flow 1 (95th percentile 97.28 ms)

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-07-18 16:27:48
End at: 2019-07-18 16:28:18
Local clock offset: -0.03 ms
Remote clock offset: -0.043 ms


# Below is generated by plot.py at 2019-07-18 19:53:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 513.37 Mbit/s
95th percentile per-packet one-way delay: 100.531 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 513.37 Mbit/s
95th percentile per-packet one-way delay: 100.531 ms
Loss rate: 0.39%
```
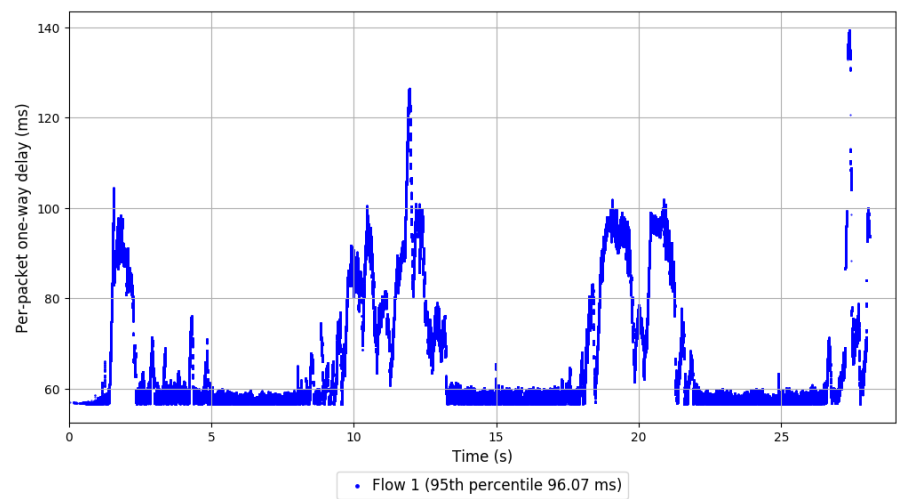
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-07-18 17:02:30
End at: 2019-07-18 17:03:00
Local clock offset: -0.276 ms
Remote clock offset: -0.252 ms


# Below is generated by plot.py at 2019-07-18 19:53:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 495.94 Mbit/s
95th percentile per-packet one-way delay: 97.327 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 495.94 Mbit/s
95th percentile per-packet one-way delay: 97.327 ms
Loss rate: 0.83%
```
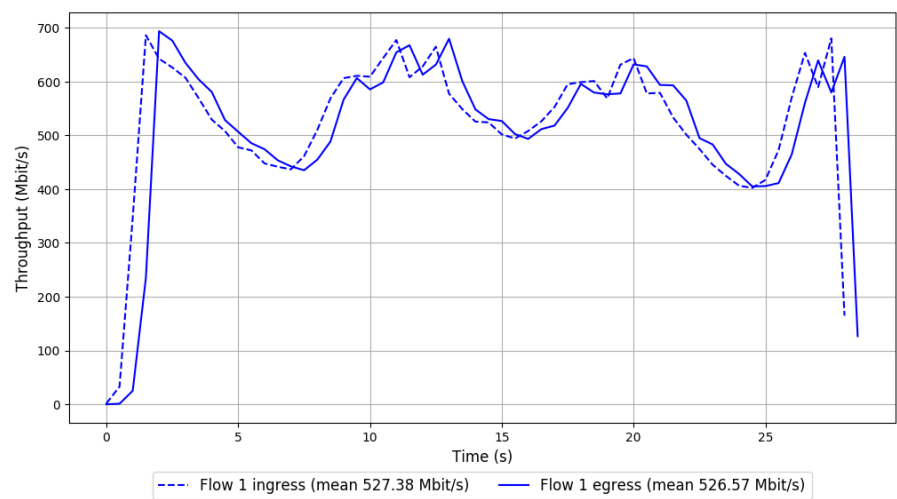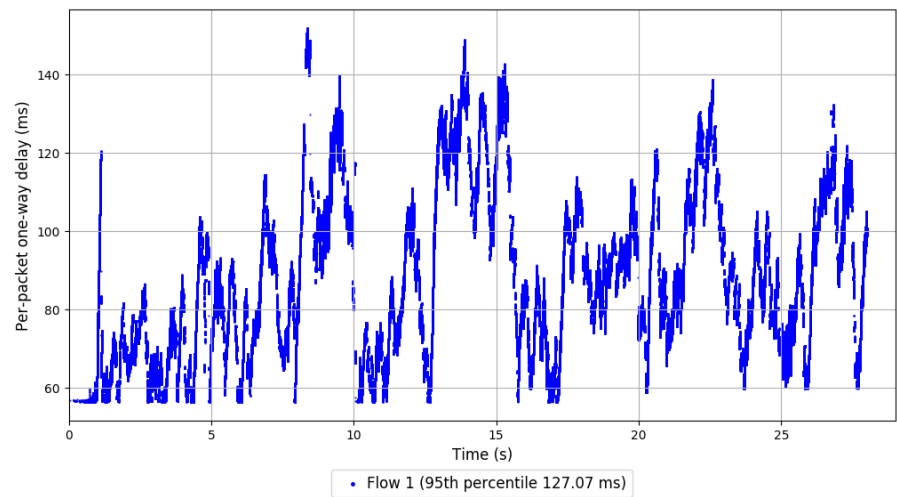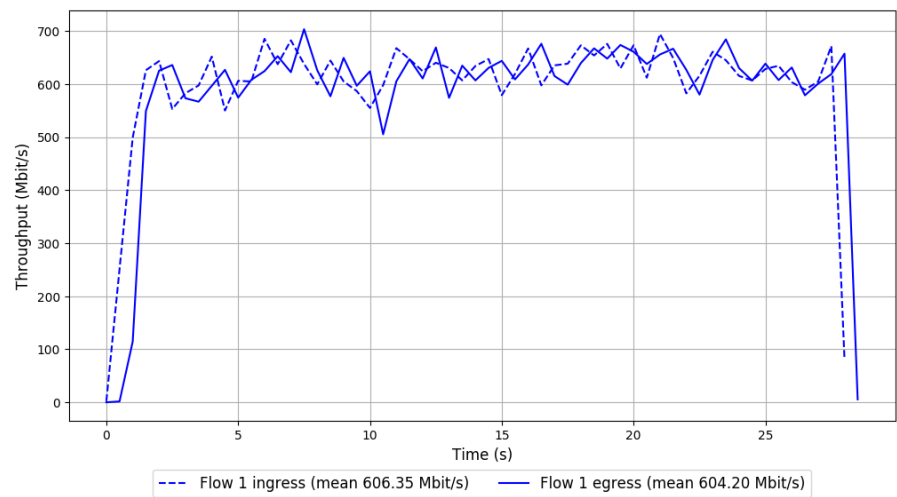
Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-07-18 17:37:18
End at: 2019-07-18 17:37:48
Local clock offset: -0.435 ms
Remote clock offset: -0.088 ms


# Below is generated by plot.py at 2019-07-18 19:54:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 498.11 Mbit/s
95th percentile per-packet one-way delay: 102.663 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 498.11 Mbit/s
95th percentile per-packet one-way delay: 102.663 ms
Loss rate: 0.55%
```
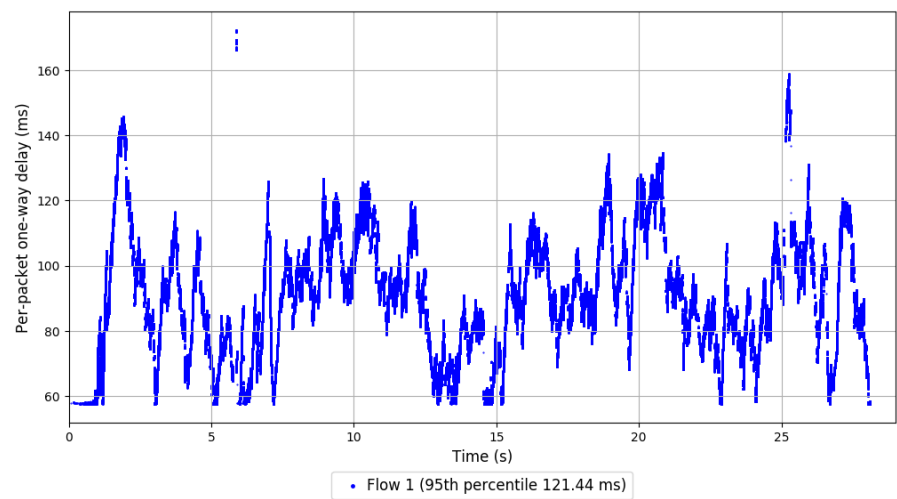
Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 498.83 Mbit/s) --- Flow 1 egress (mean 498.11 Mbit/s)

• Flow 1 (95th percentile 102.66 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-07-18 18:12:14
End at: 2019-07-18 18:12:44
Local clock offset: -0.528 ms
Remote clock offset: -0.039 ms


# Below is generated by plot.py at 2019-07-18 19:57:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 526.57 Mbit/s
95th percentile per-packet one-way delay: 96.069 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 526.57 Mbit/s
95th percentile per-packet one-way delay: 96.069 ms
Loss rate: 0.56%
```
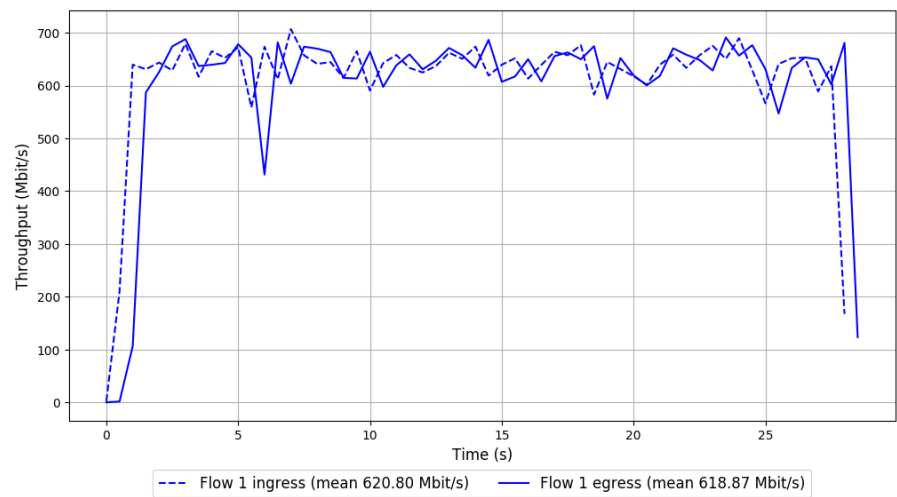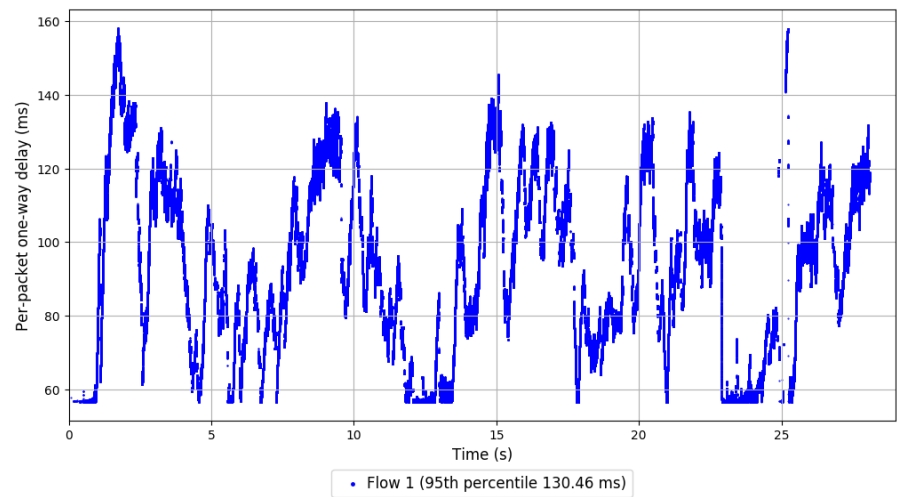
Run 5: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 527.38 Mbit/s) ----- Flow 1 egress (mean 526.57 Mbit/s)

Flow 1 (95th percentile 96.07 ms)

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-07-18 15:54:16
End at: 2019-07-18 15:54:46
Local clock offset: -0.475 ms
Remote clock offset: -0.006 ms


# Below is generated by plot.py at 2019-07-18 19:59:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 604.20 Mbit/s
95th percentile per-packet one-way delay: 127.070 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 604.20 Mbit/s
95th percentile per-packet one-way delay: 127.070 ms
Loss rate: 0.77%
```
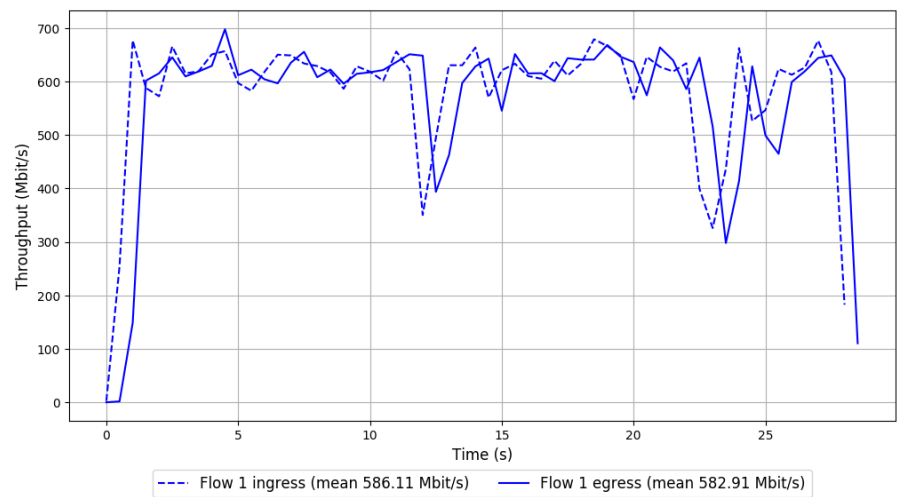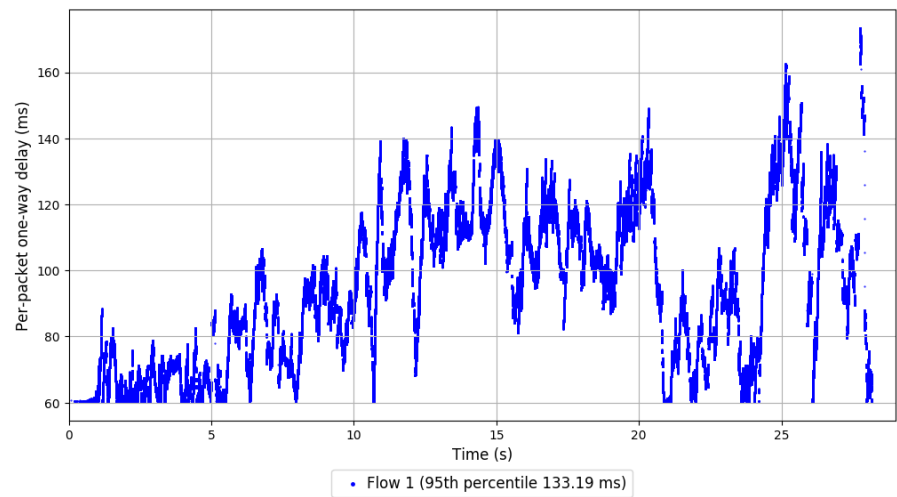
Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-07-18 16:29:20
End at: 2019-07-18 16:29:50
Local clock offset: 0.34 ms
Remote clock offset: -0.089 ms


# Below is generated by plot.py at 2019-07-18 20:02:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 618.87 Mbit/s
95th percentile per-packet one-way delay: 121.443 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 618.87 Mbit/s
95th percentile per-packet one-way delay: 121.443 ms
Loss rate: 0.72%
```
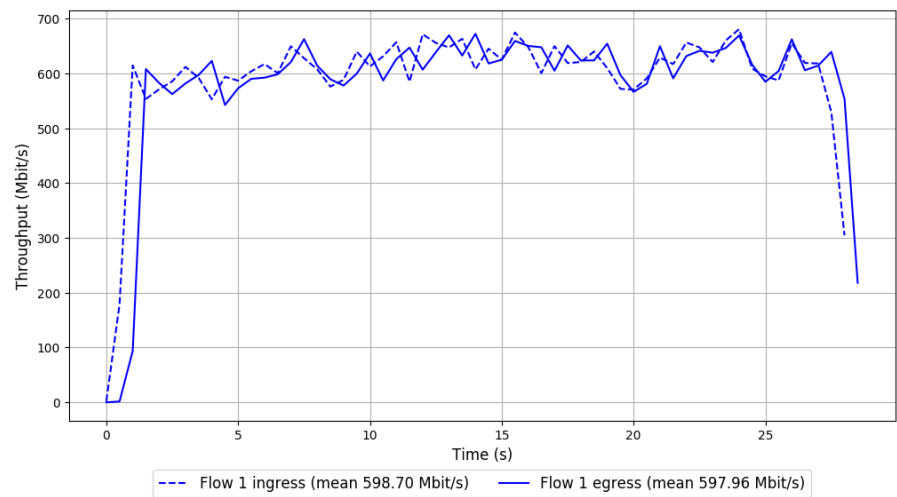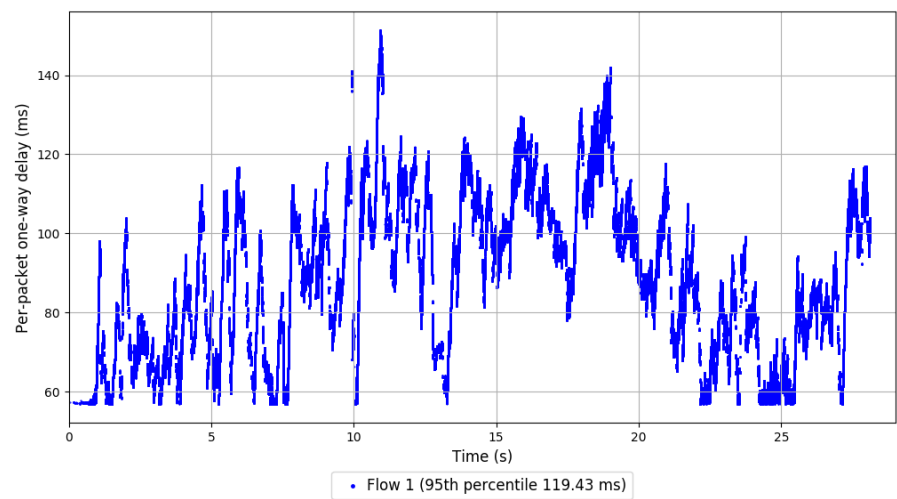
Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-07-18 17:04:01
End at: 2019-07-18 17:04:31
Local clock offset: -0.399 ms
Remote clock offset: 0.0 ms


# Below is generated by plot.py at 2019-07-18 20:03:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 582.91 Mbit/s
95th percentile per-packet one-way delay: 130.455 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 582.91 Mbit/s
95th percentile per-packet one-way delay: 130.455 ms
Loss rate: 0.95%
```
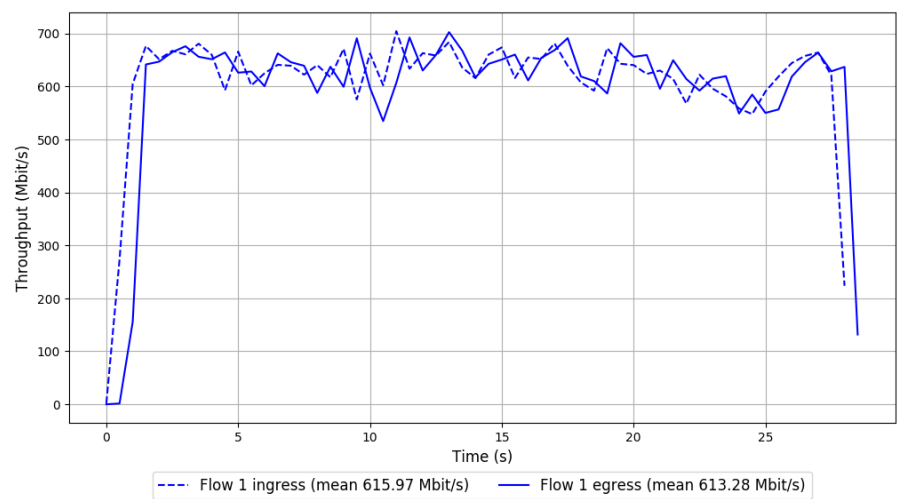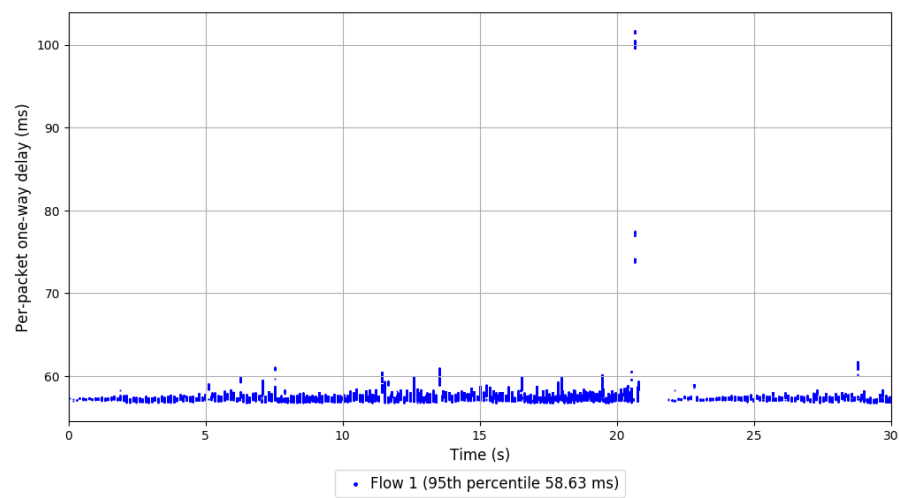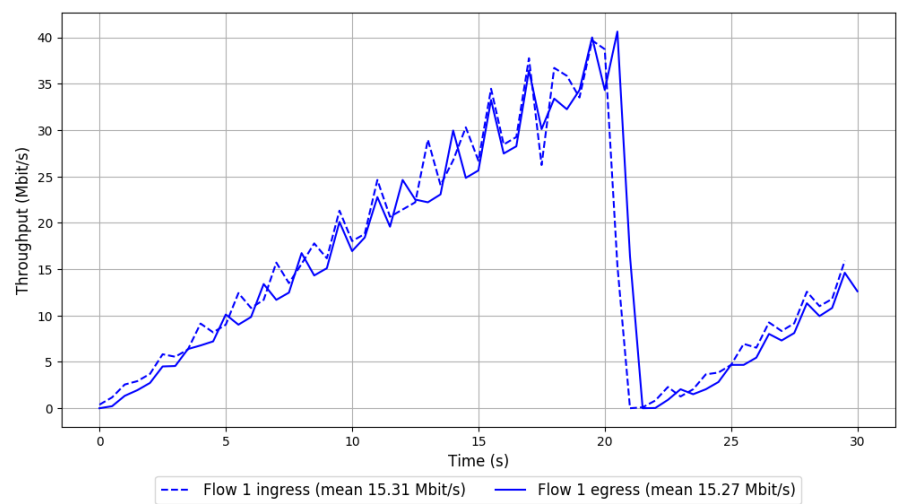
Run 3: Report of Indigo-MusesT — Data Link

100

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-07-18 17:38:50
End at: 2019-07-18 17:39:20
Local clock offset: 0.207 ms
Remote clock offset: 0.011 ms


# Below is generated by plot.py at 2019-07-18 20:03:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 597.96 Mbit/s
95th percentile per-packet one-way delay: 133.189 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 597.96 Mbit/s
95th percentile per-packet one-way delay: 133.189 ms
Loss rate: 0.54%
```

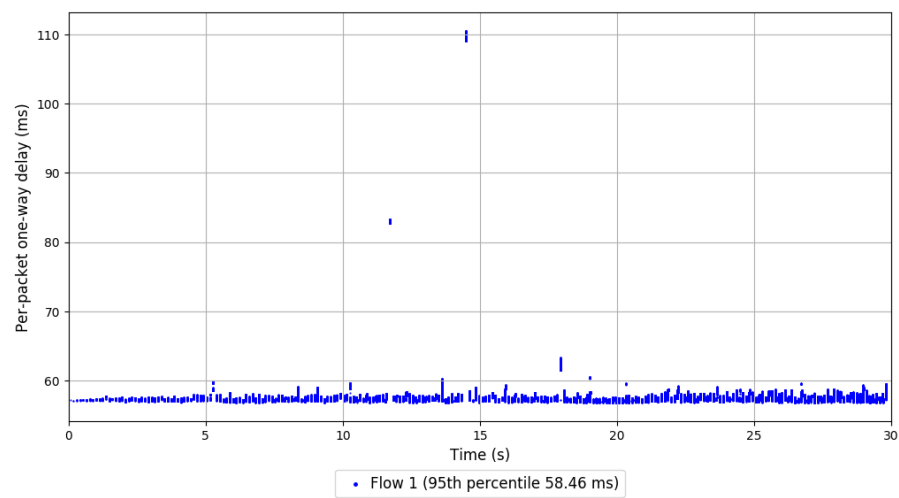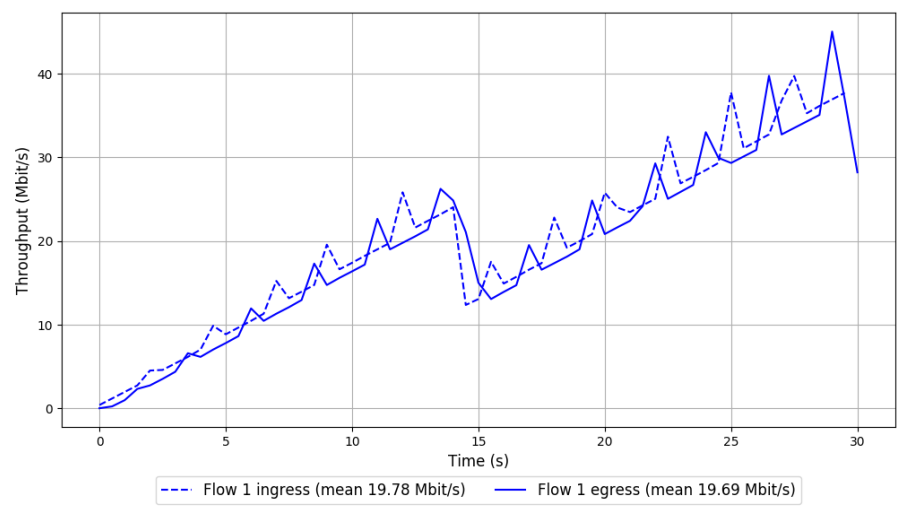Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-07-18 18:13:46
End at: 2019-07-18 18:14:16
Local clock offset: -0.093 ms
Remote clock offset: -0.164 ms


# Below is generated by plot.py at 2019-07-18 20:04:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 613.28 Mbit/s
95th percentile per-packet one-way delay: 119.433 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 613.28 Mbit/s
95th percentile per-packet one-way delay: 119.433 ms
Loss rate: 0.84%
```

Run 5: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 615.97 Mbit/s)   Flow 1 egress (mean 613.28 Mbit/s)

Flow 1 (95th percentile 119.43 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2019-07-18 16:01:40
End at: 2019-07-18 16:02:10
Local clock offset: -0.112 ms
Remote clock offset: -0.111 ms


# Below is generated by plot.py at 2019-07-18 20:04:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.27 Mbit/s
95th percentile per-packet one-way delay: 58.627 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 15.27 Mbit/s
95th percentile per-packet one-way delay: 58.627 ms
Loss rate: 0.63%
```
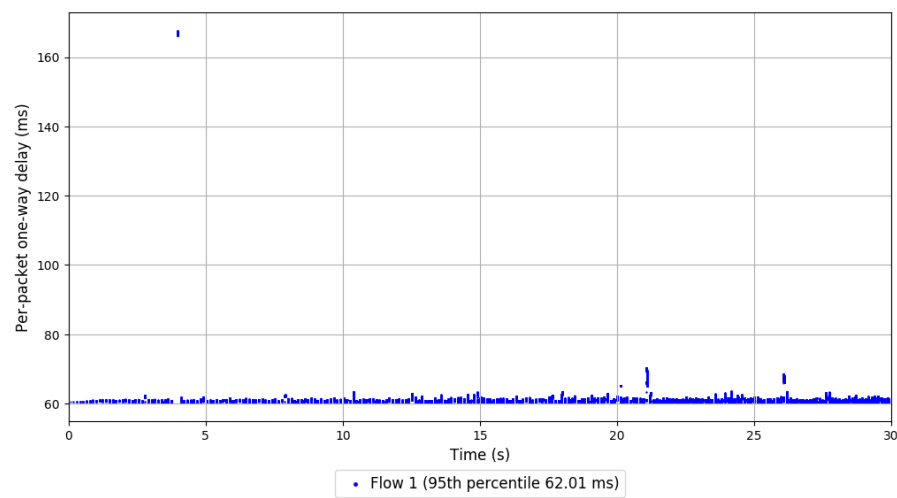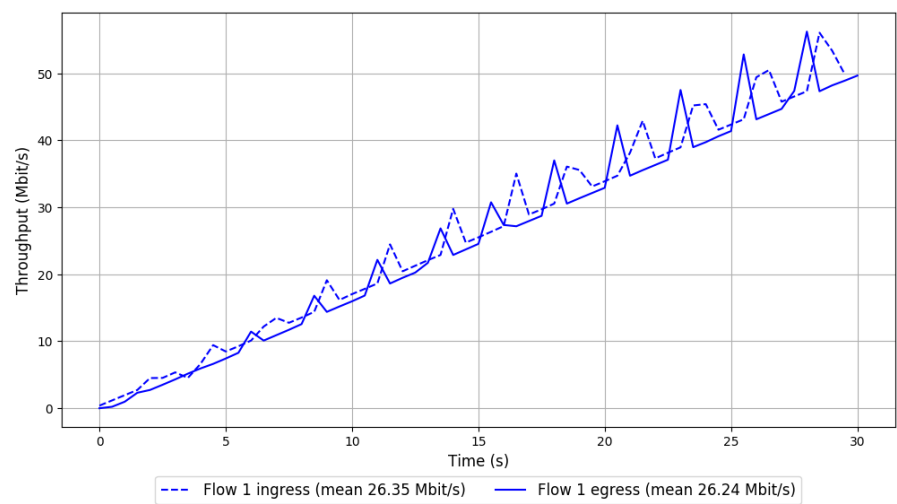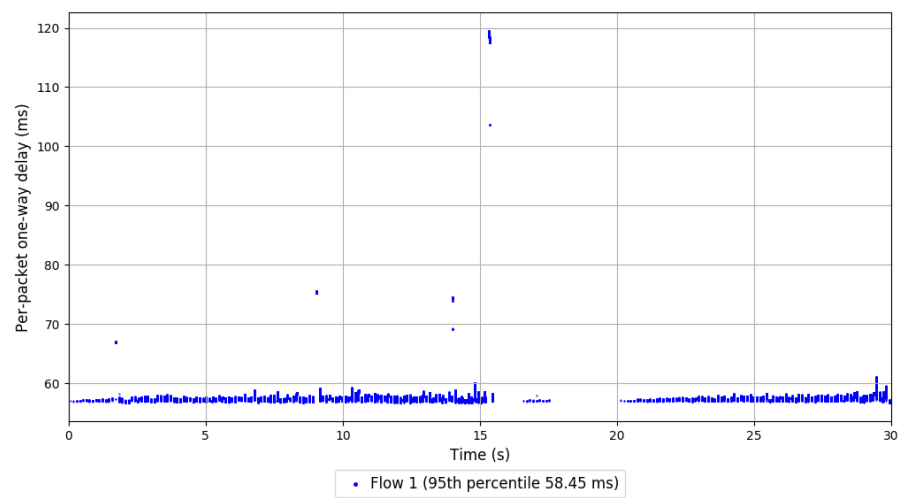
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 15.31 Mbit/s) --- Flow 1 egress (mean 15.27 Mbit/s)

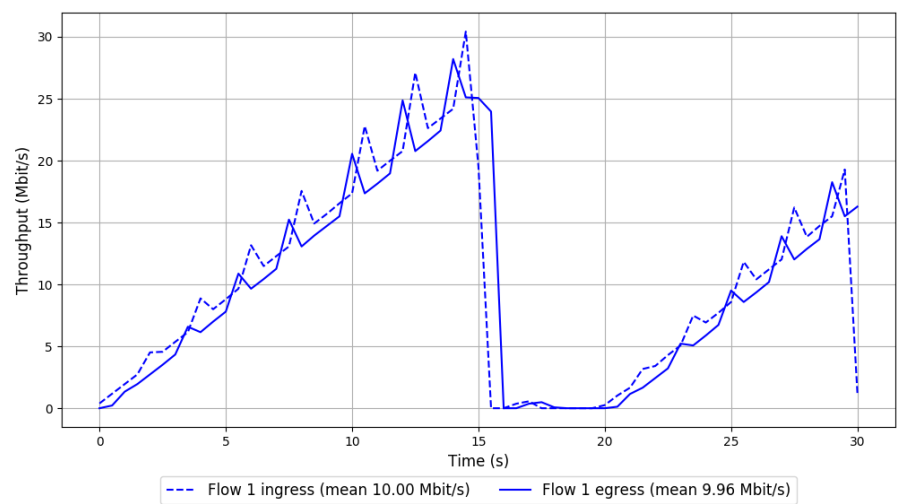• Flow 1 (95th percentile 58.63 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2019-07-18 16:36:46
End at: 2019-07-18 16:37:16
Local clock offset: -0.474 ms
Remote clock offset: -0.165 ms

# Below is generated by plot.py at 2019-07-18 20:04:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 19.69 Mbit/s
95th percentile per-packet one-way delay: 58.464 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 19.69 Mbit/s
95th percentile per-packet one-way delay: 58.464 ms
Loss rate: 0.83%
```
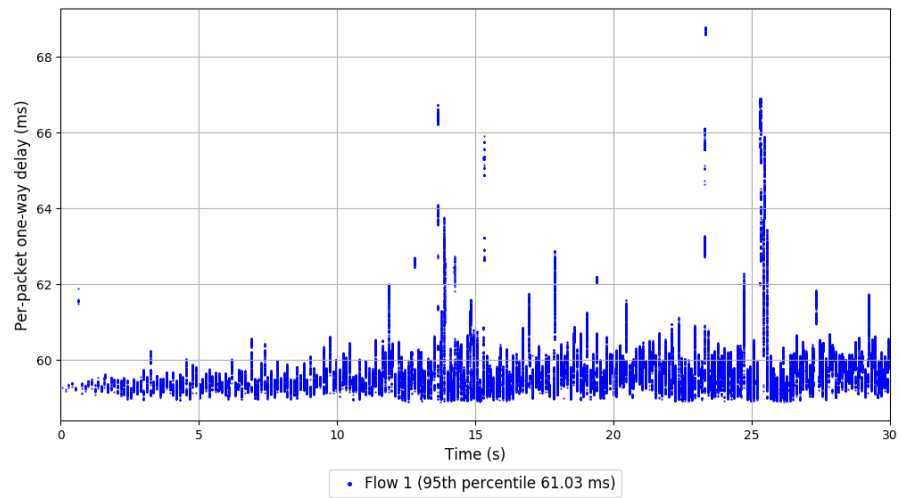
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-07-18 17:11:24
End at: 2019-07-18 17:11:54
Local clock offset: -0.117 ms
Remote clock offset: 0.005 ms


# Below is generated by plot.py at 2019-07-18 20:04:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.24 Mbit/s
95th percentile per-packet one-way delay: 62.007 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 26.24 Mbit/s
95th percentile per-packet one-way delay: 62.007 ms
Loss rate: 0.79%
```
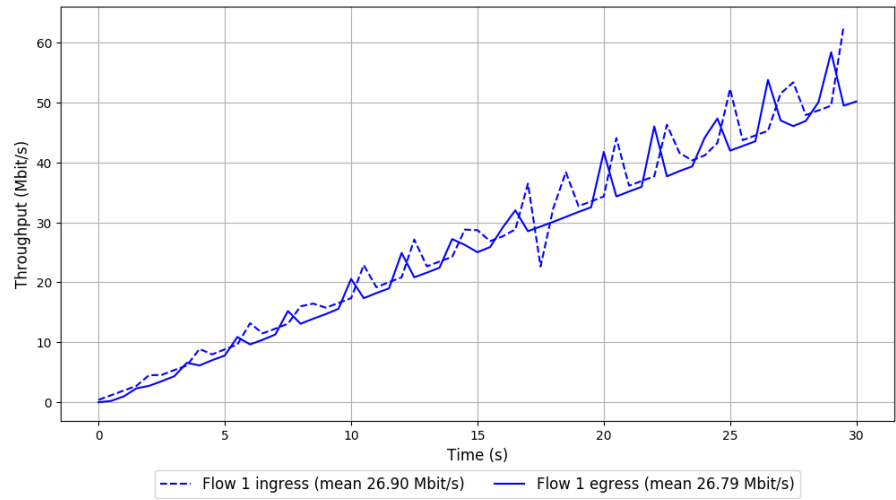
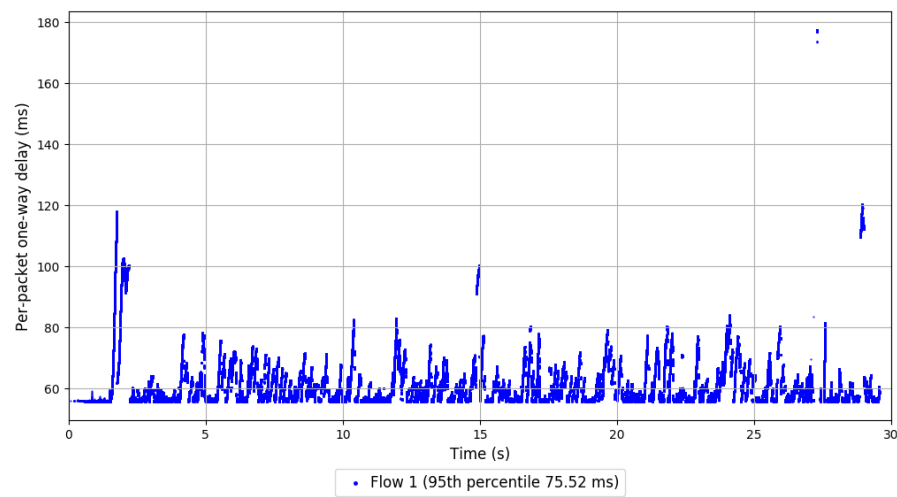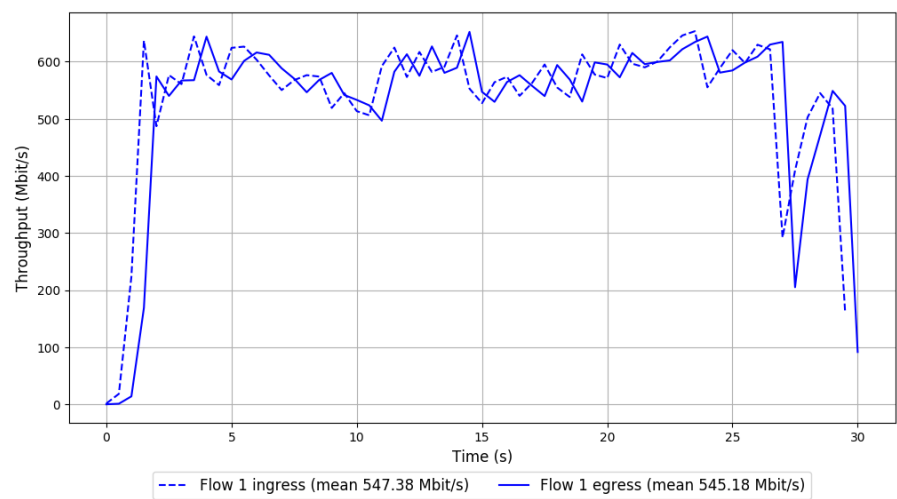Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-07-18 17:46:13
End at: 2019-07-18 17:46:43
Local clock offset: -0.043 ms
Remote clock offset: -0.011 ms


# Below is generated by plot.py at 2019-07-18 20:04:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.96 Mbit/s
95th percentile per-packet one-way delay: 58.446 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 9.96 Mbit/s
95th percentile per-packet one-way delay: 58.446 ms
Loss rate: 0.86%
```

Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 10.00 Mbit/s) --- Flow 1 egress (mean 9.96 Mbit/s)

Flow 1 (95th percentile 58.45 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-07-18 18:21:10
End at: 2019-07-18 18:21:40
Local clock offset: -0.339 ms
Remote clock offset: 0.672 ms

# Below is generated by plot.py at 2019-07-18 20:04:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.79 Mbit/s
95th percentile per-packet one-way delay: 61.027 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 26.79 Mbit/s
95th percentile per-packet one-way delay: 61.027 ms
Loss rate: 0.78%
```
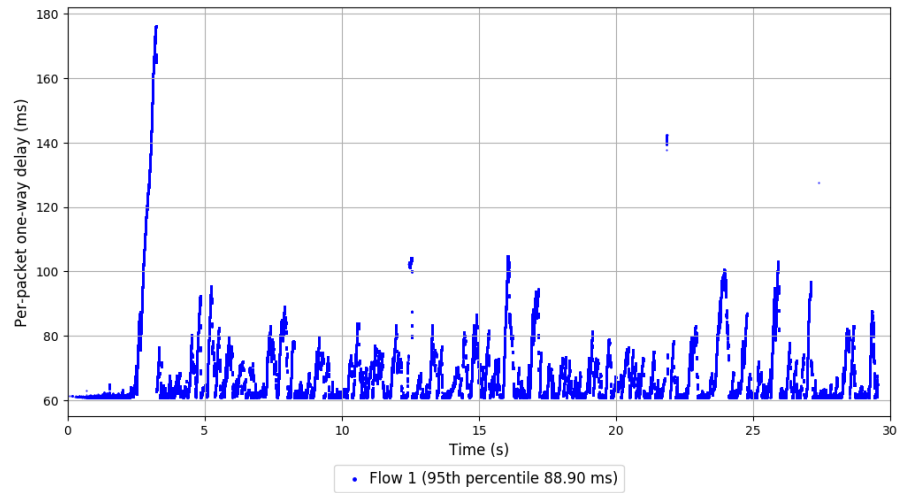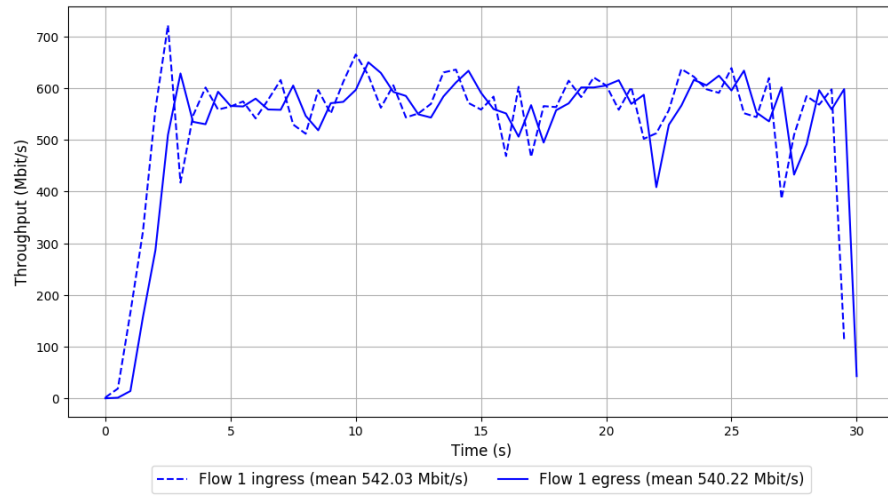
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 26.90 Mbit/s) ----   Flow 1 egress (mean 26.79 Mbit/s) ——
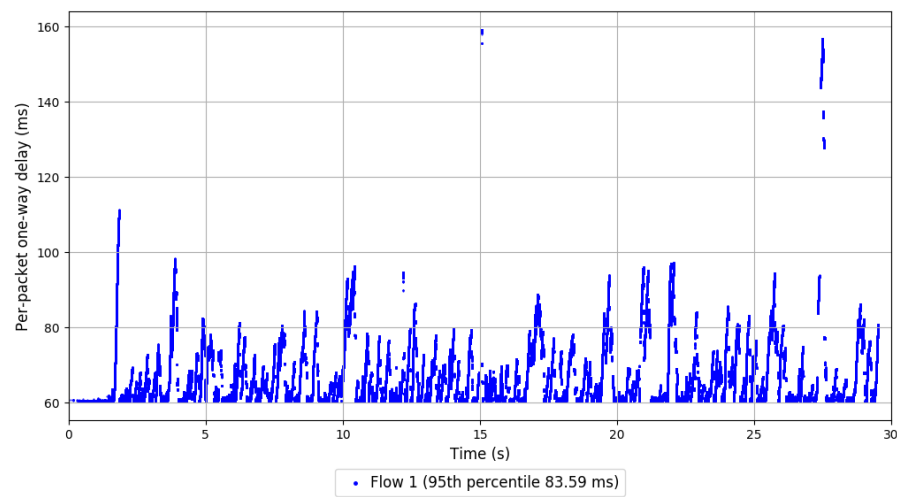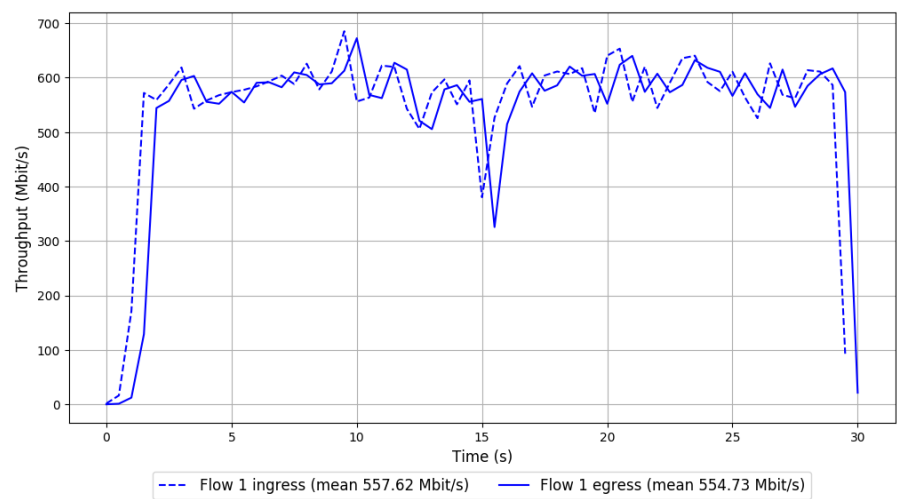

• Flow 1 (95th percentile 61.03 ms)

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-07-18 15:57:00
End at: 2019-07-18 15:57:30
Local clock offset: -0.487 ms
Remote clock offset: 0.532 ms


# Below is generated by plot.py at 2019-07-18 20:06:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 545.18 Mbit/s
95th percentile per-packet one-way delay: 75.521 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 545.18 Mbit/s
95th percentile per-packet one-way delay: 75.521 ms
Loss rate: 0.80%
```
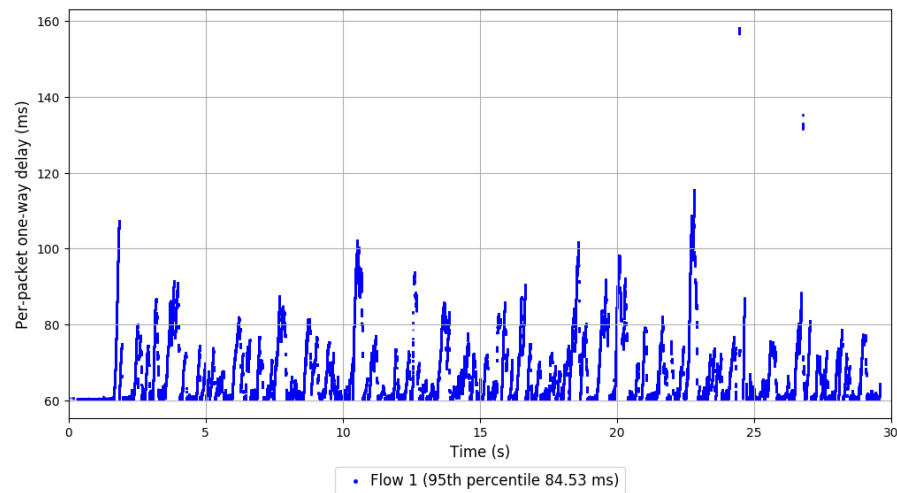
Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-07-18 16:32:06
End at: 2019-07-18 16:32:36
Local clock offset: 0.342 ms
Remote clock offset: 0.012 ms


# Below is generated by plot.py at 2019-07-18 20:06:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 540.22 Mbit/s
95th percentile per-packet one-way delay: 88.899 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 540.22 Mbit/s
95th percentile per-packet one-way delay: 88.899 ms
Loss rate: 0.73%
```
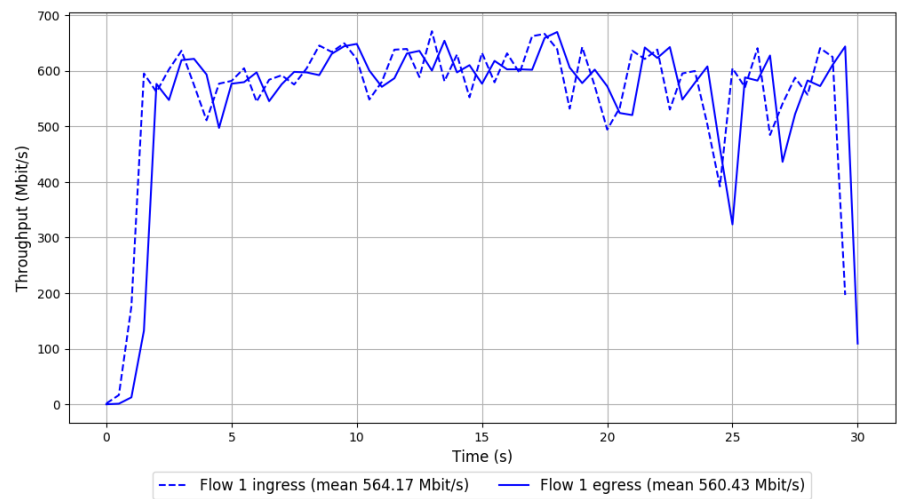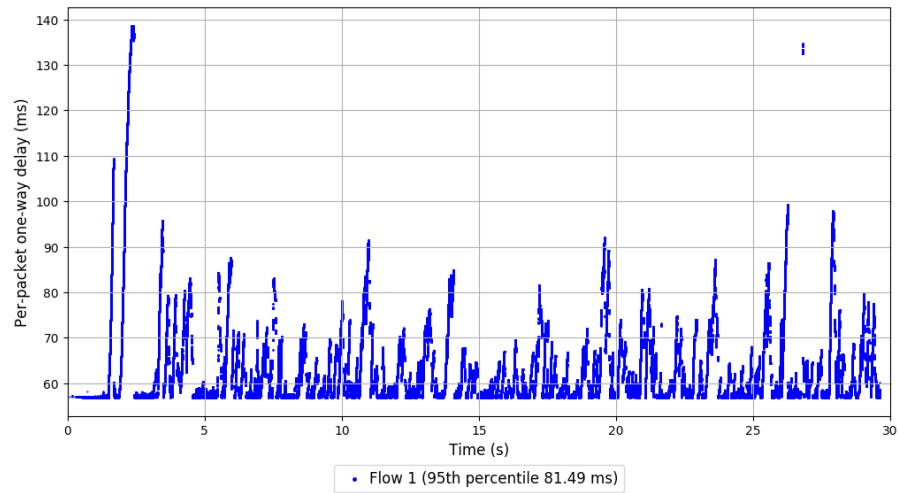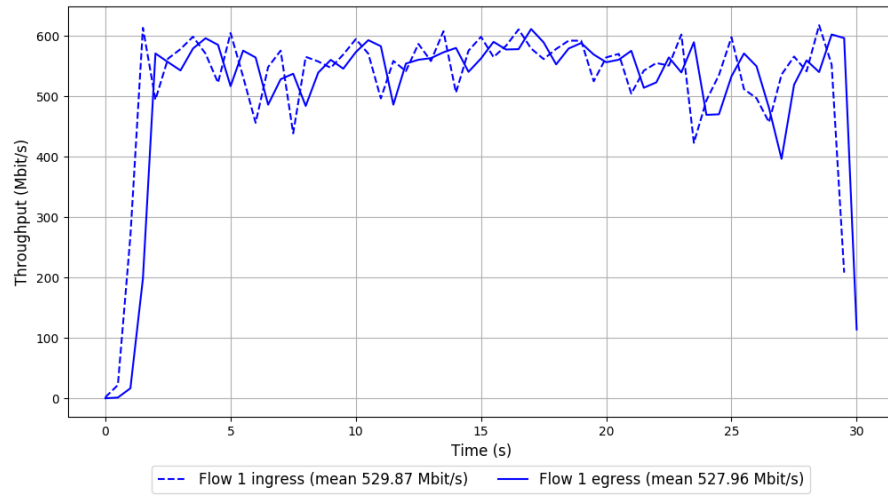
Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-07-18 17:06:45
End at: 2019-07-18 17:07:15
Local clock offset: -0.066 ms
Remote clock offset: -0.001 ms


# Below is generated by plot.py at 2019-07-18 20:08:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 554.73 Mbit/s
95th percentile per-packet one-way delay: 83.586 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 554.73 Mbit/s
95th percentile per-packet one-way delay: 83.586 ms
Loss rate: 0.92%
```
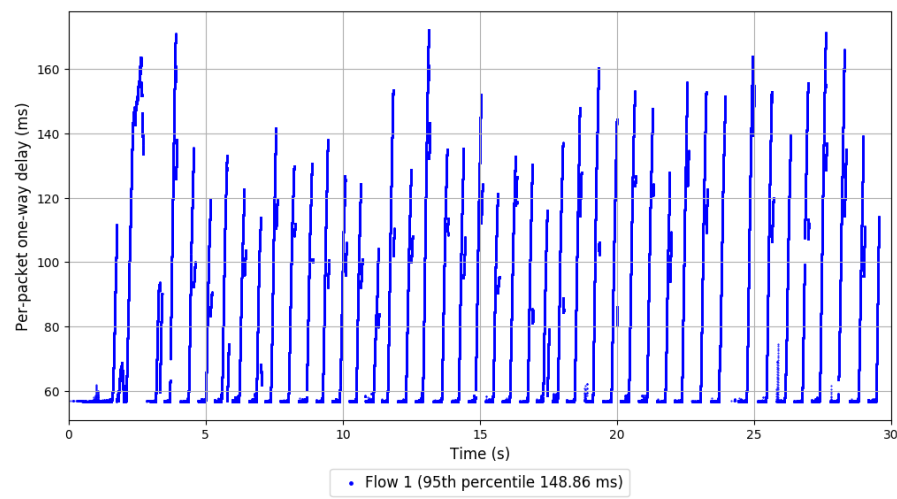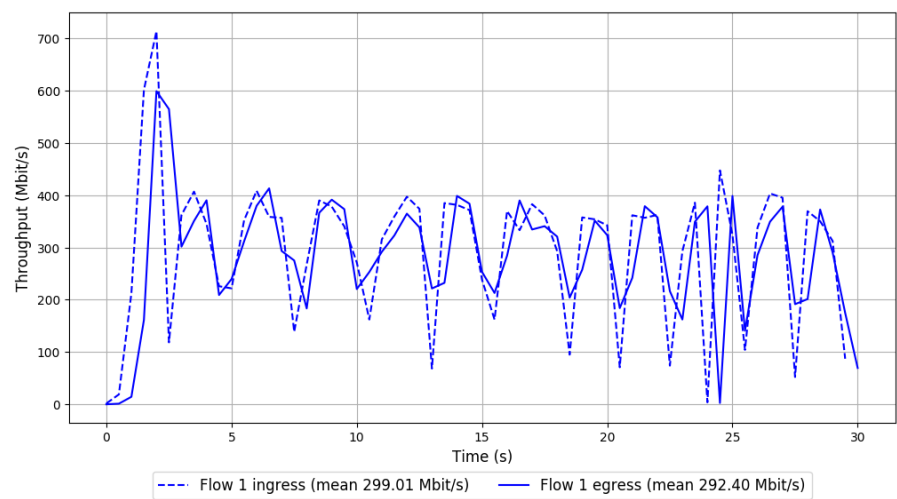
Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-07-18 17:41:34
End at: 2019-07-18 17:42:04
Local clock offset: 0.106 ms
Remote clock offset: 0.03 ms


# Below is generated by plot.py at 2019-07-18 20:11:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 560.43 Mbit/s
95th percentile per-packet one-way delay: 84.526 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 560.43 Mbit/s
95th percentile per-packet one-way delay: 84.526 ms
Loss rate: 1.06%
```
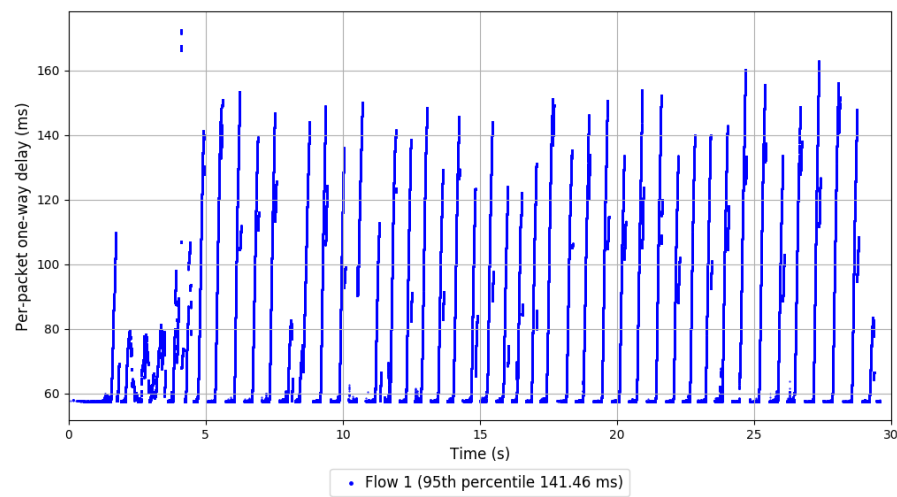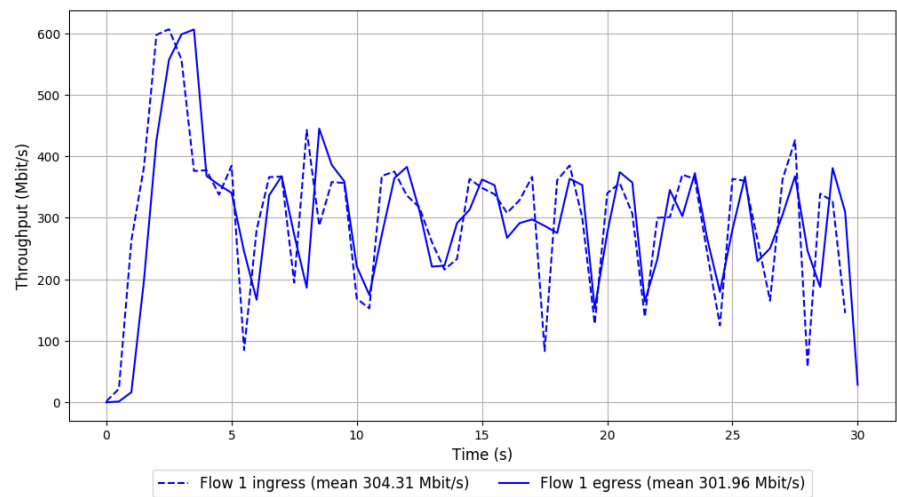
Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-07-18 18:16:31
End at: 2019-07-18 18:17:01
Local clock offset: -0.052 ms
Remote clock offset: -0.105 ms


# Below is generated by plot.py at 2019-07-18 20:13:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 527.96 Mbit/s
95th percentile per-packet one-way delay: 81.491 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 527.96 Mbit/s
95th percentile per-packet one-way delay: 81.491 ms
Loss rate: 0.71%
```
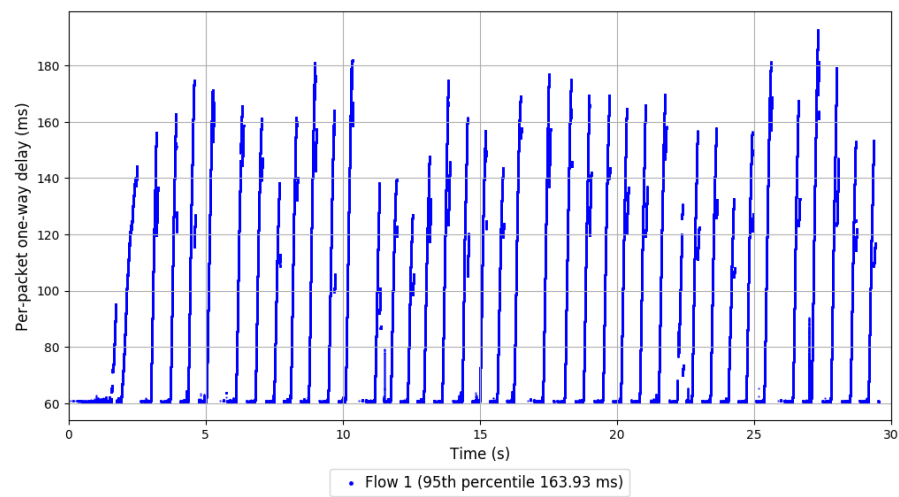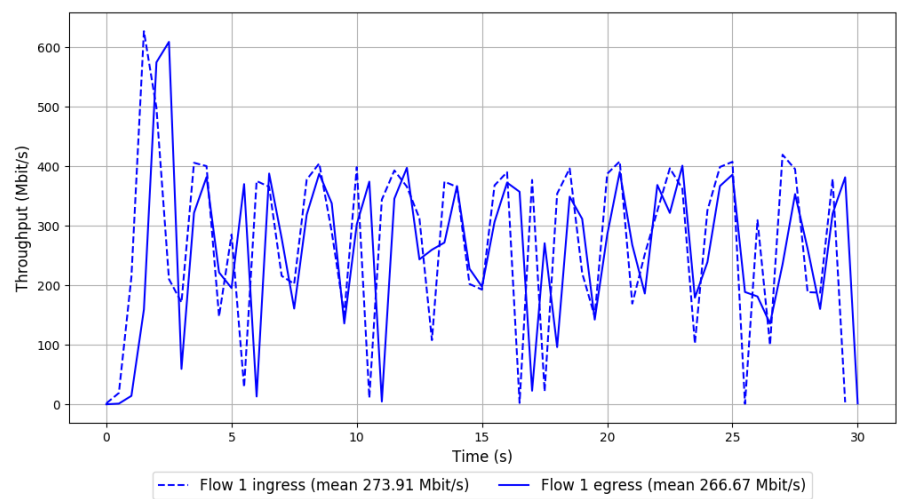
Run 5: Report of Muses_DecisionTree — Data Link

Run 1: Statistics of Muses_DecisionTreeH0

Start at: 2019-07-18 16:00:17
End at: 2019-07-18 16:00:47
Local clock offset: -0.486 ms
Remote clock offset: -0.099 ms

Below is generated by plot.py at 2019-07-18 20:13:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 292.40 Mbit/s
95th percentile per-packet one-way delay: 148.859 ms
Loss rate: 2.49%
-- Flow 1:
Average throughput: 292.40 Mbit/s
95th percentile per-packet one-way delay: 148.859 ms
Loss rate: 2.49%

Run 1: Report of Muses_DecisionTreeH0 — Data Link
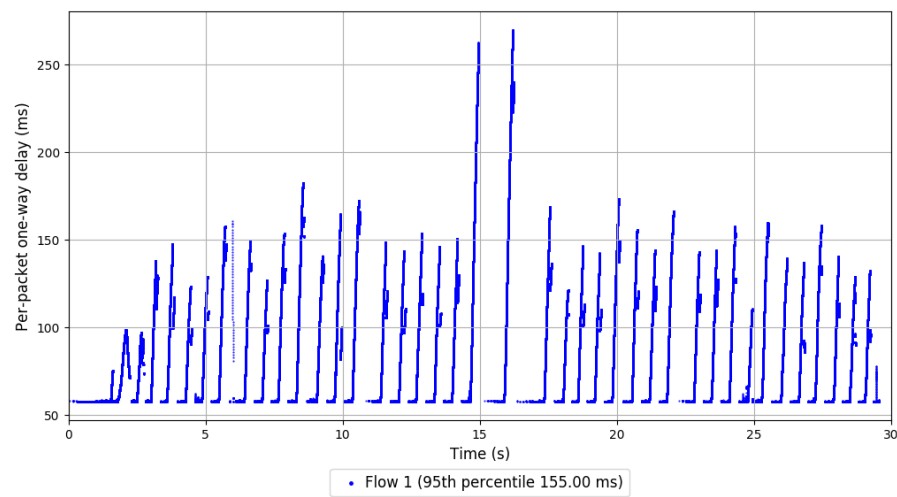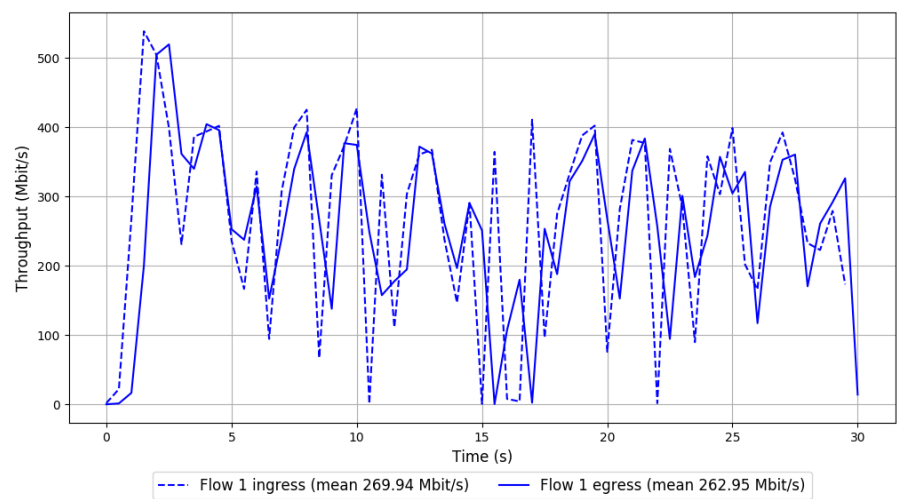
Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-18 16:35:23
End at: 2019-07-18 16:35:54
Local clock offset: 0.135 ms
Remote clock offset: -0.008 ms


# Below is generated by plot.py at 2019-07-18 20:13:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 301.96 Mbit/s
95th percentile per-packet one-way delay: 141.461 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 301.96 Mbit/s
95th percentile per-packet one-way delay: 141.461 ms
Loss rate: 1.16%
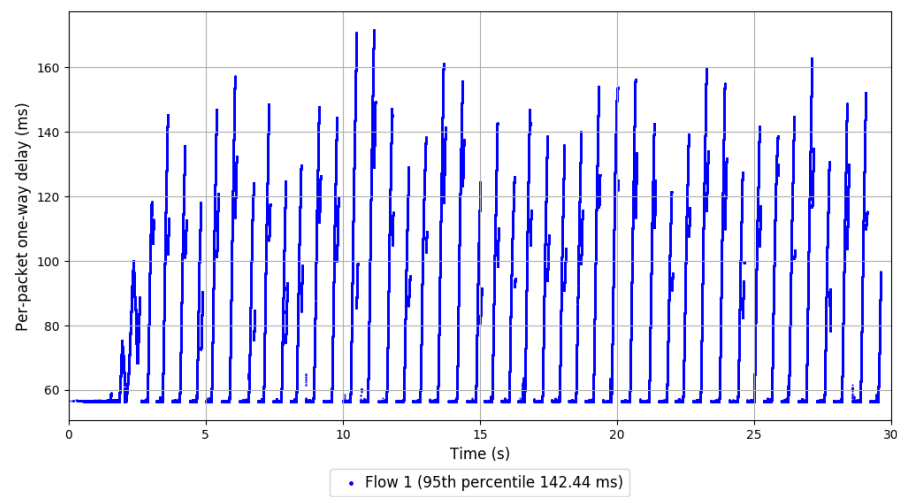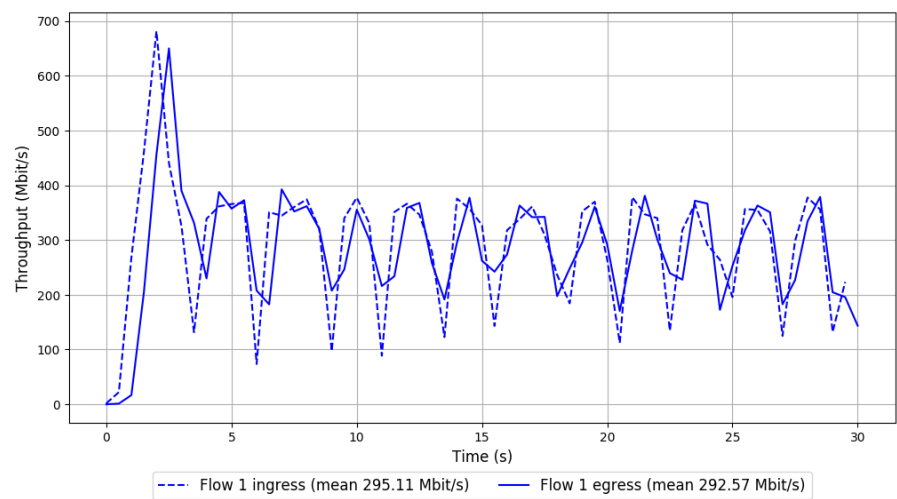```

Run 2: Report of Muses_DecisionTreeH0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-18 17:10:03
End at: 2019-07-18 17:10:33
Local clock offset: -0.455 ms
Remote clock offset: -0.666 ms


# Below is generated by plot.py at 2019-07-18 20:13:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 266.67 Mbit/s
95th percentile per-packet one-way delay: 163.928 ms
Loss rate: 3.03%
-- Flow 1:
Average throughput: 266.67 Mbit/s
95th percentile per-packet one-way delay: 163.928 ms
Loss rate: 3.03%
```

Run 3: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 273.91 Mbit/s)   Flow 1 egress (mean 266.67 Mbit/s)

Flow 1 (95th percentile 163.93 ms)

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-18 17:44:52
End at: 2019-07-18 17:45:22
Local clock offset: -0.34 ms
Remote clock offset: -0.737 ms


# Below is generated by plot.py at 2019-07-18 20:13:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 262.95 Mbit/s
95th percentile per-packet one-way delay: 154.995 ms
Loss rate: 2.96%
-- Flow 1:
Average throughput: 262.95 Mbit/s
95th percentile per-packet one-way delay: 154.995 ms
Loss rate: 2.96%
```
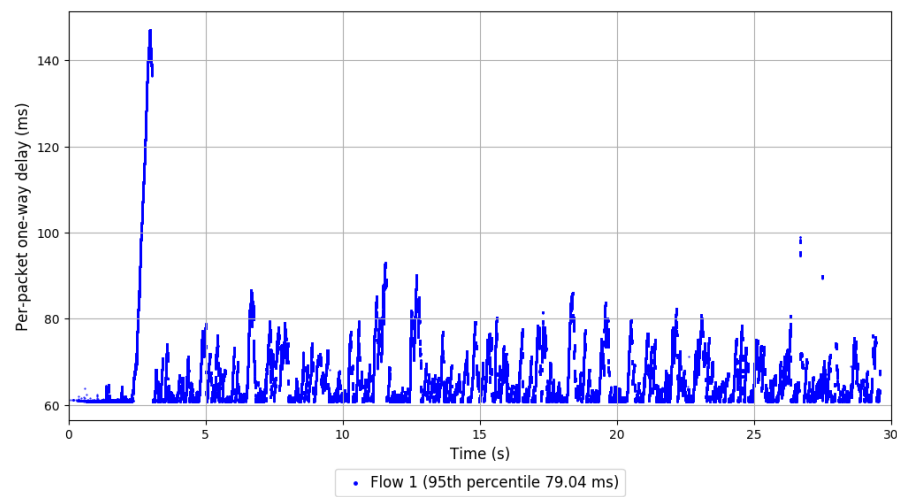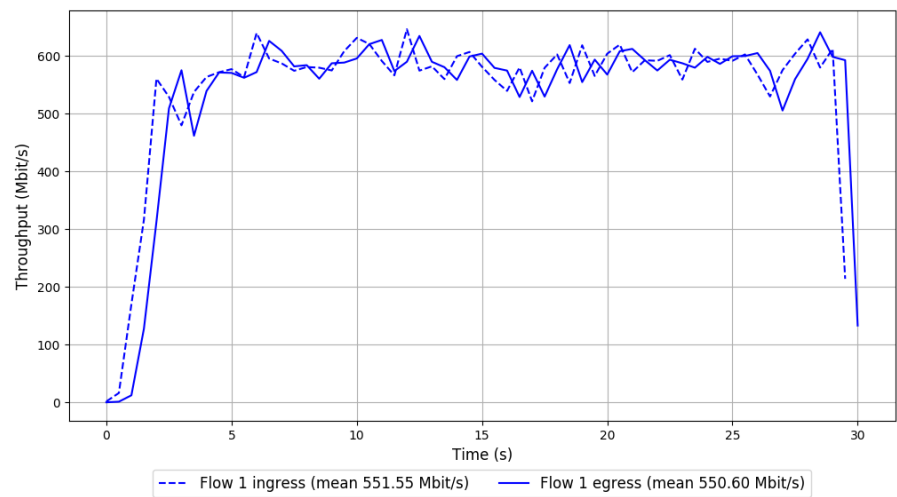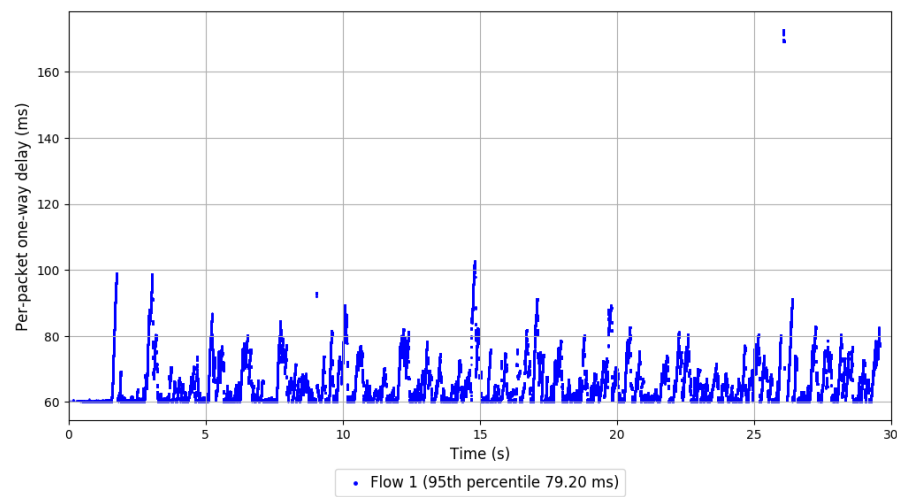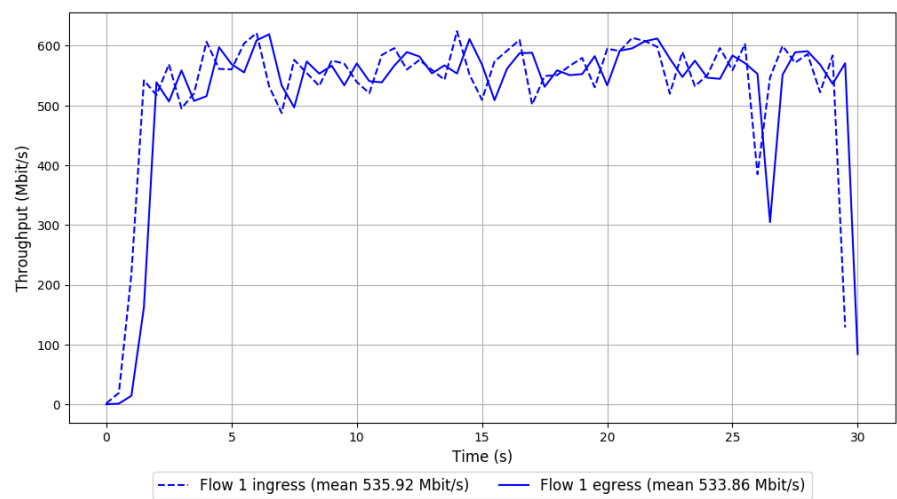
Run 4: Report of Muses_DecisionTreeH0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-18 18:19:48
End at: 2019-07-18 18:20:18
Local clock offset: -0.447 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-07-18 20:13:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 292.57 Mbit/s
95th percentile per-packet one-way delay: 142.440 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 292.57 Mbit/s
95th percentile per-packet one-way delay: 142.440 ms
Loss rate: 1.18%
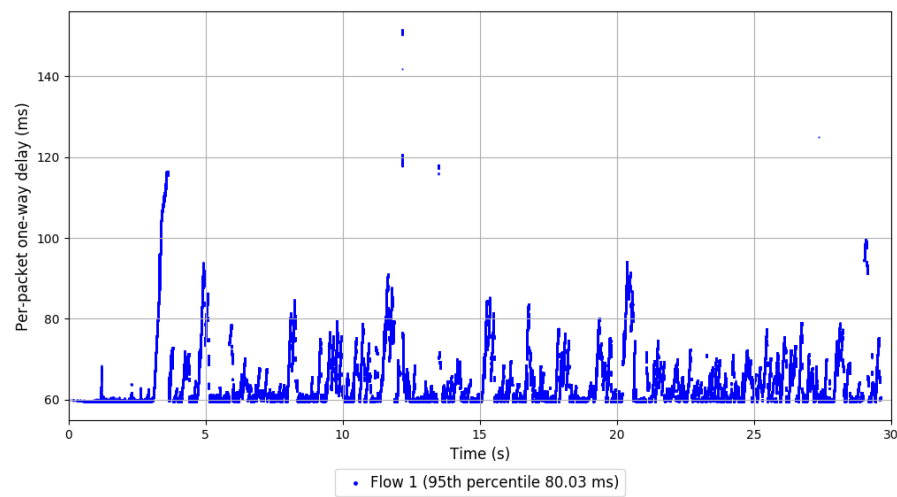```

Run 5: Report of Muses_DecisionTreeH0 — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-18 16:13:01
End at: 2019-07-18 16:13:31
Local clock offset: -0.077 ms
Remote clock offset: -0.69 ms


# Below is generated by plot.py at 2019-07-18 20:18:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 550.60 Mbit/s
95th percentile per-packet one-way delay: 79.041 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 550.60 Mbit/s
95th percentile per-packet one-way delay: 79.041 ms
Loss rate: 0.57%
```

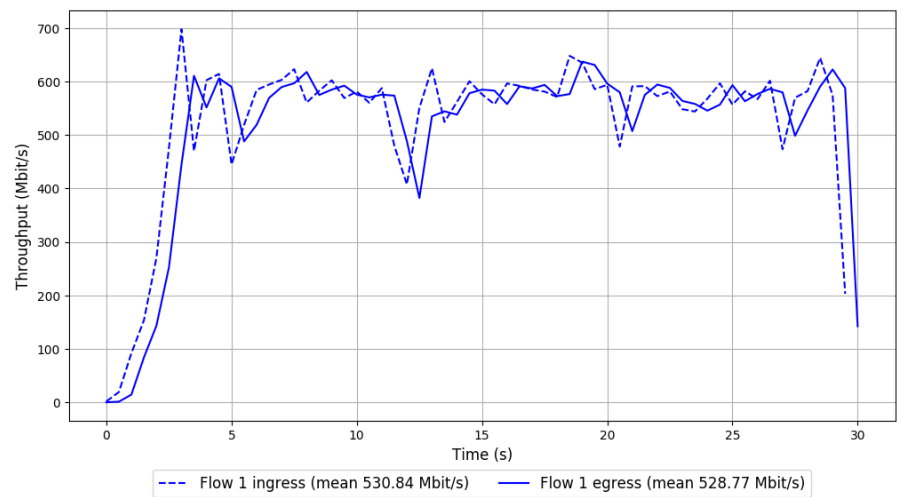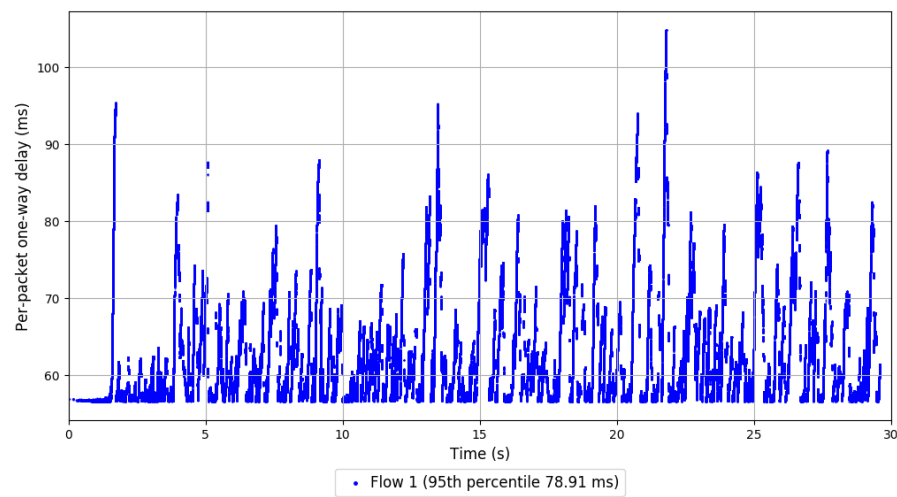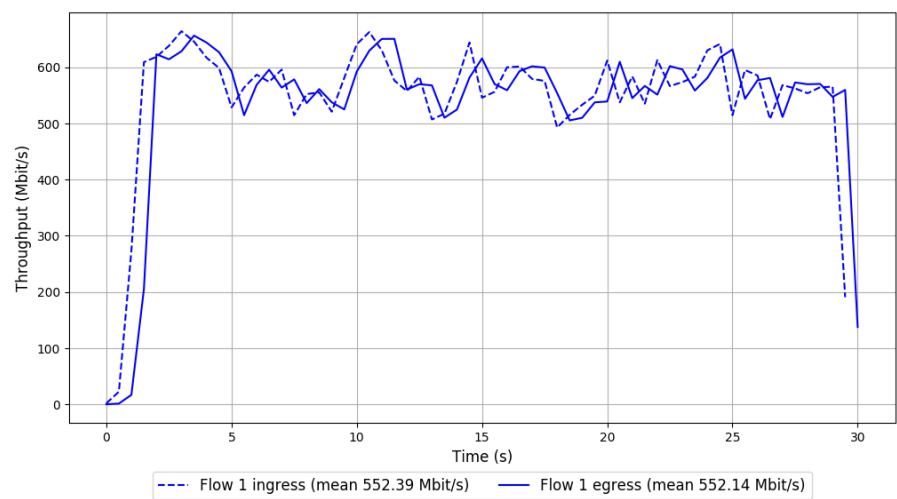Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-18 16:48:01
End at: 2019-07-18 16:48:32
Local clock offset: -0.092 ms
Remote clock offset: -0.179 ms


# Below is generated by plot.py at 2019-07-18 20:19:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 533.86 Mbit/s
95th percentile per-packet one-way delay: 79.203 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 533.86 Mbit/s
95th percentile per-packet one-way delay: 79.203 ms
Loss rate: 0.78%
```

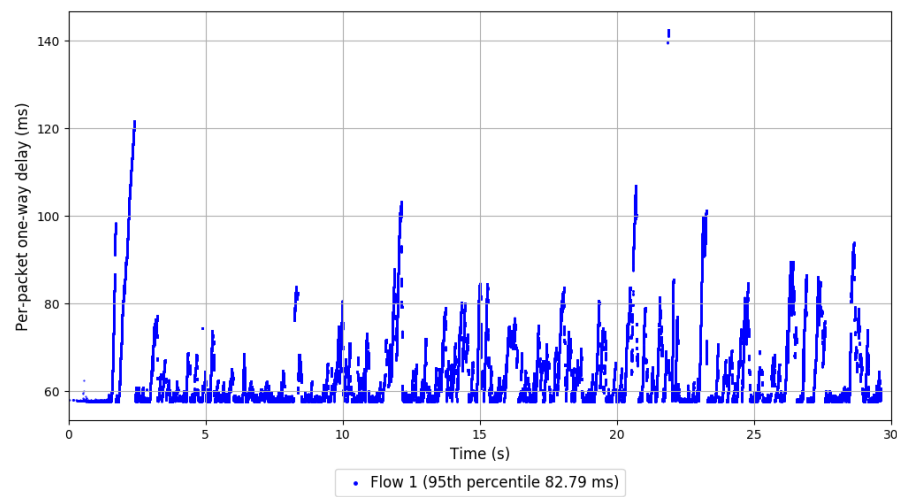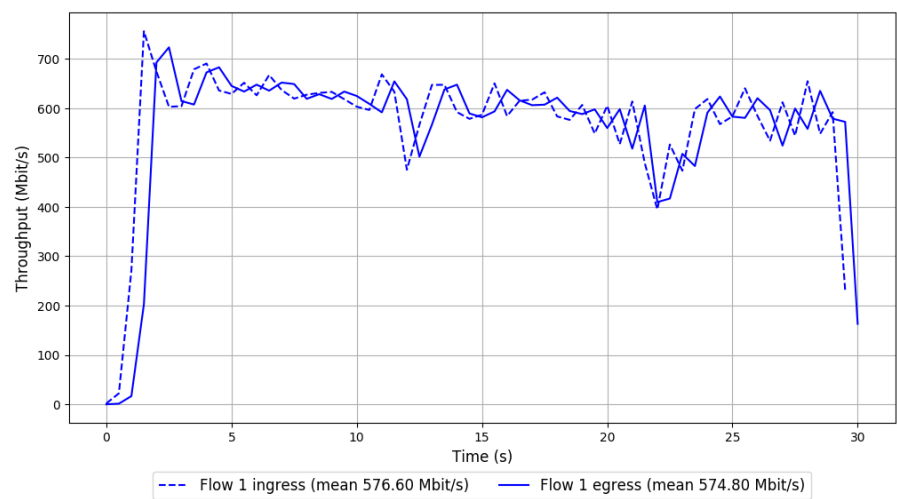Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-18 17:22:44
End at: 2019-07-18 17:23:14
Local clock offset: -0.518 ms
Remote clock offset: -0.026 ms


# Below is generated by plot.py at 2019-07-18 20:19:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 528.77 Mbit/s
95th percentile per-packet one-way delay: 80.028 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 528.77 Mbit/s
95th percentile per-packet one-way delay: 80.028 ms
Loss rate: 0.79%
```

Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-18 17:57:29
End at: 2019-07-18 17:57:59
Local clock offset: -0.342 ms
Remote clock offset: -0.131 ms


# Below is generated by plot.py at 2019-07-18 20:20:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 552.14 Mbit/s
95th percentile per-packet one-way delay: 78.908 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 552.14 Mbit/s
95th percentile per-packet one-way delay: 78.908 ms
Loss rate: 0.44%
```
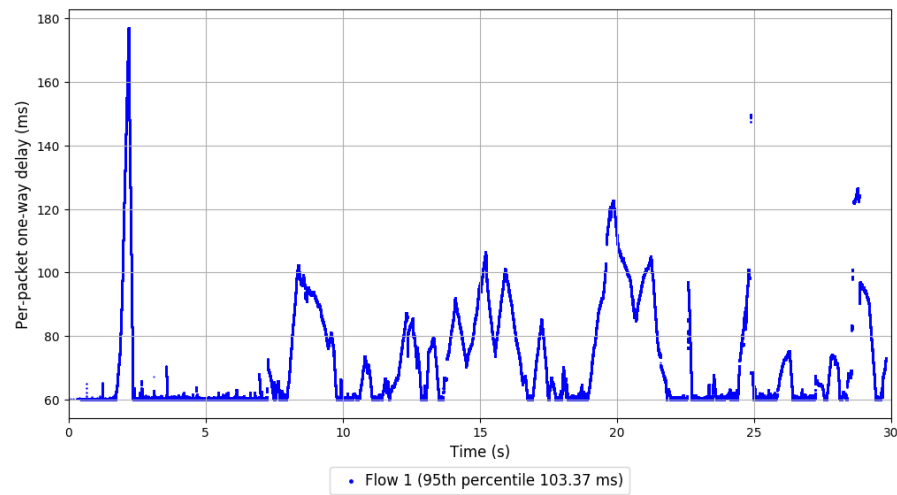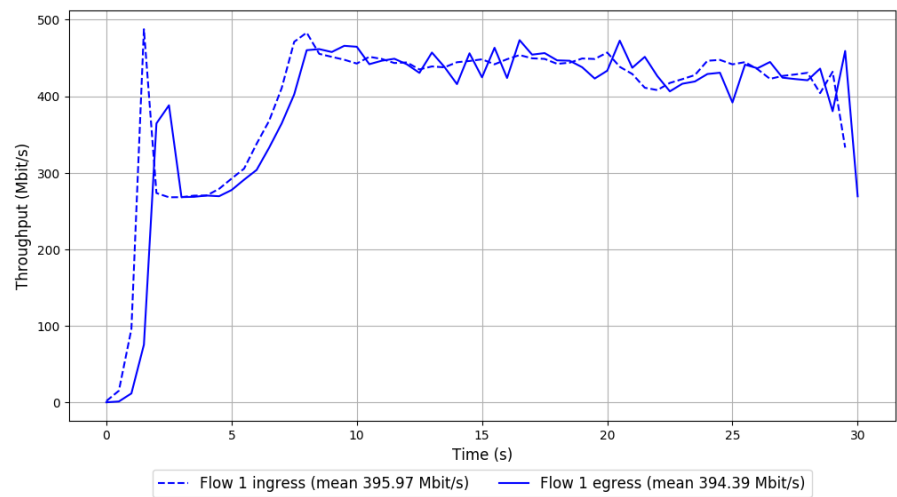
Run 4: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 552.39 Mbit/s)   Flow 1 egress (mean 552.14 Mbit/s)

Flow 1 (95th percentile 78.91 ms)

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-18 18:32:36
End at: 2019-07-18 18:33:06
Local clock offset: 0.175 ms
Remote clock offset: -0.823 ms


# Below is generated by plot.py at 2019-07-18 20:23:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 574.80 Mbit/s
95th percentile per-packet one-way delay: 82.793 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 574.80 Mbit/s
95th percentile per-packet one-way delay: 82.793 ms
Loss rate: 0.70%
```
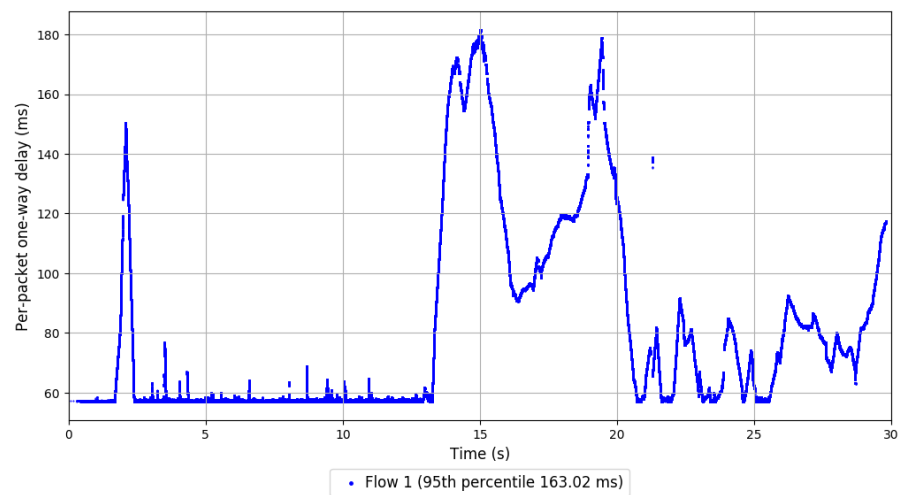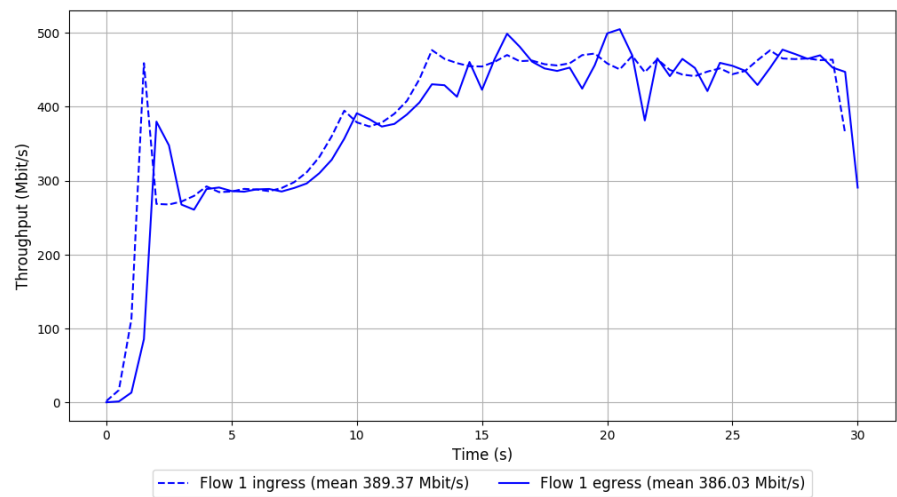
Run 5: Report of Muses_DecisionTreeR0 — Data Link

144

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-07-18 16:10:03
End at: 2019-07-18 16:10:33
Local clock offset: -0.401 ms
Remote clock offset: -0.013 ms


# Below is generated by plot.py at 2019-07-18 20:25:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 394.39 Mbit/s
95th percentile per-packet one-way delay: 103.369 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 394.39 Mbit/s
95th percentile per-packet one-way delay: 103.369 ms
Loss rate: 0.79%
```
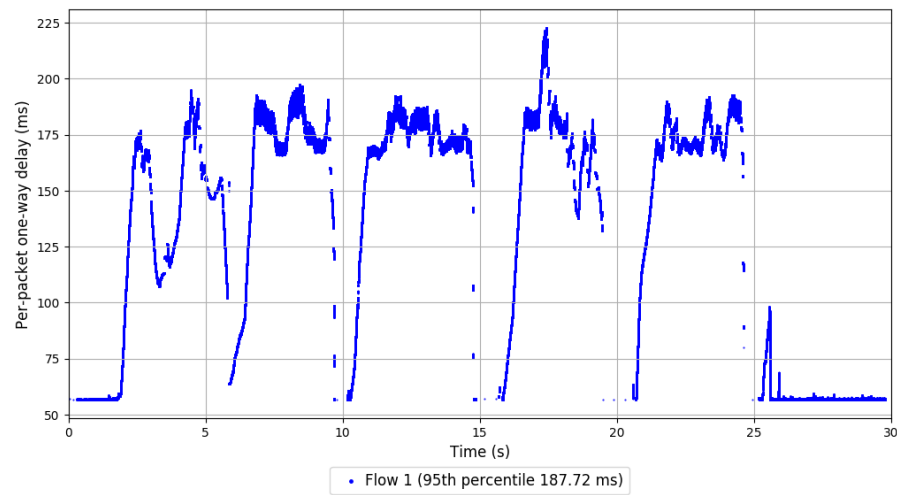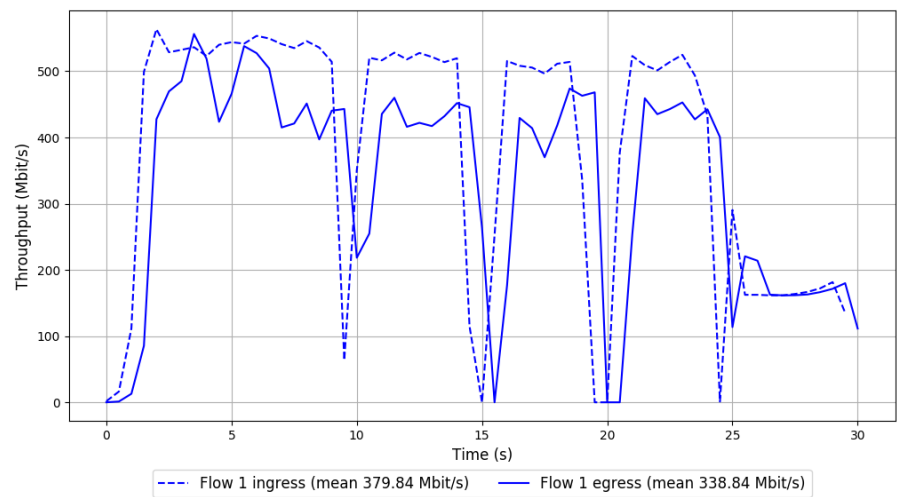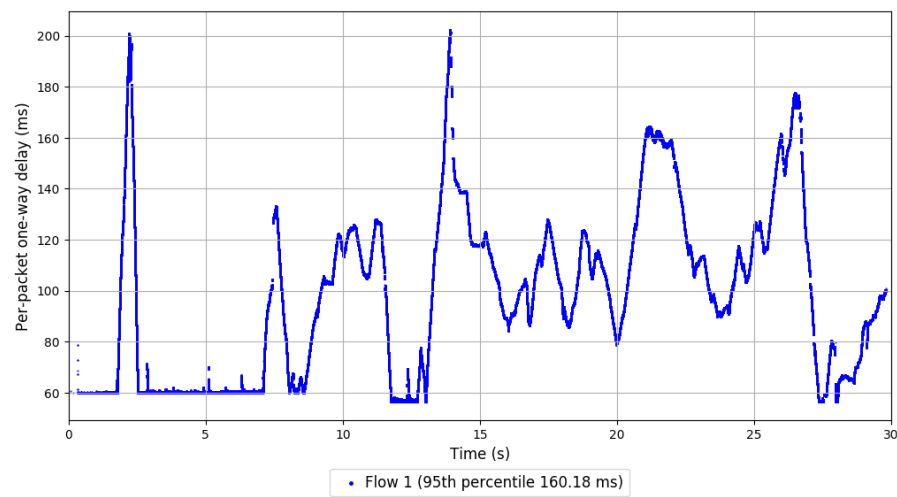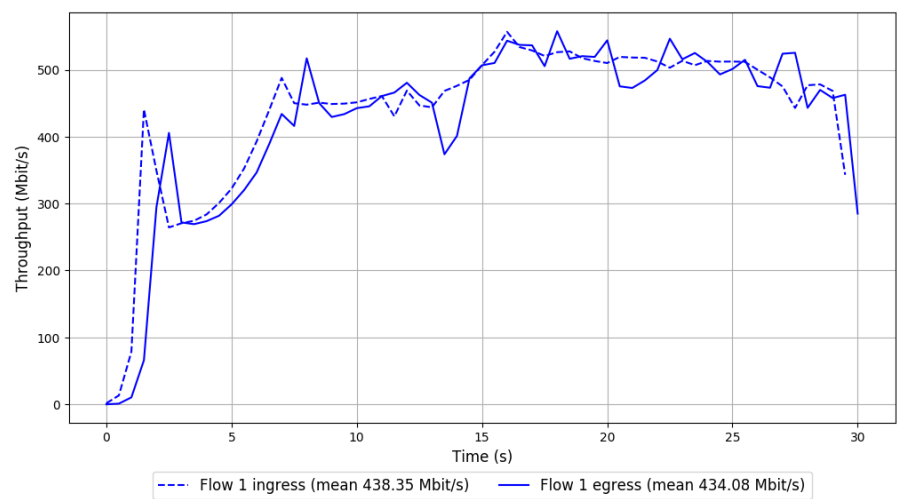
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-07-18 16:45:06
End at: 2019-07-18 16:45:36
Local clock offset: 0.045 ms
Remote clock offset: -0.072 ms


# Below is generated by plot.py at 2019-07-18 20:26:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 386.03 Mbit/s
95th percentile per-packet one-way delay: 163.019 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 386.03 Mbit/s
95th percentile per-packet one-way delay: 163.019 ms
Loss rate: 1.24%
```
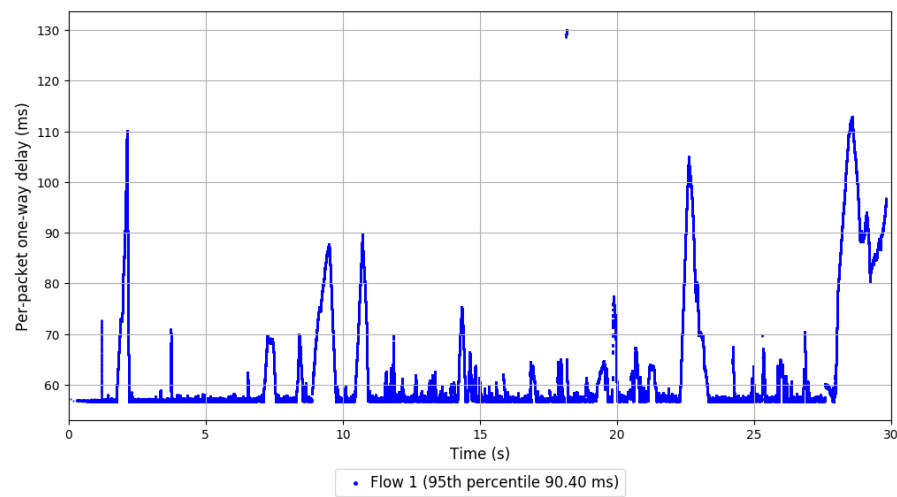
Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 389.37 Mbit/s)   Flow 1 egress (mean 386.03 Mbit/s)
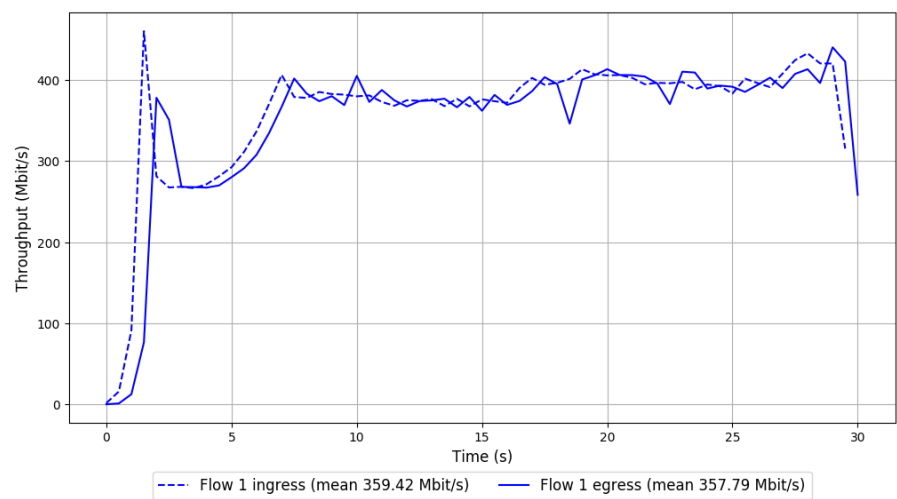

Flow 1 (95th percentile 163.02 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-07-18 17:19:52
End at: 2019-07-18 17:20:22
Local clock offset: -0.304 ms
Remote clock offset: 0.126 ms


# Below is generated by plot.py at 2019-07-18 20:26:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 338.84 Mbit/s
95th percentile per-packet one-way delay: 187.717 ms
Loss rate: 11.14%
-- Flow 1:
Average throughput: 338.84 Mbit/s
95th percentile per-packet one-way delay: 187.717 ms
Loss rate: 11.14%
```
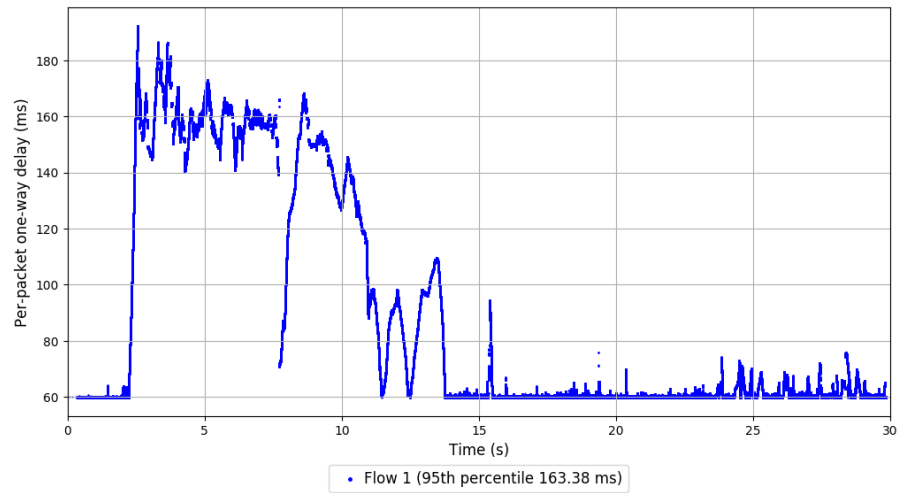
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 379.84 Mbit/s)   Flow 1 egress (mean 338.84 Mbit/s)

Flow 1 (95th percentile 187.72 ms)

150

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-07-18 17:54:27
End at: 2019-07-18 17:54:57
Local clock offset: -0.531 ms
Remote clock offset: -0.076 ms


# Below is generated by plot.py at 2019-07-18 20:35:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 434.08 Mbit/s
95th percentile per-packet one-way delay: 160.182 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 434.08 Mbit/s
95th percentile per-packet one-way delay: 160.182 ms
Loss rate: 1.36%
```
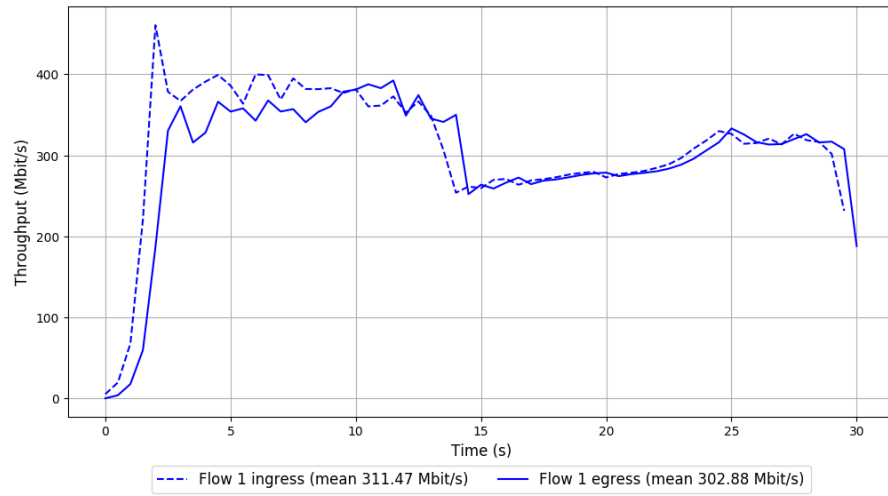
Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-07-18 18:29:40
End at: 2019-07-18 18:30:10
Local clock offset: -0.082 ms
Remote clock offset: -0.178 ms


# Below is generated by plot.py at 2019-07-18 20:35:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 357.79 Mbit/s
95th percentile per-packet one-way delay: 90.403 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 357.79 Mbit/s
95th percentile per-packet one-way delay: 90.403 ms
Loss rate: 0.84%
```
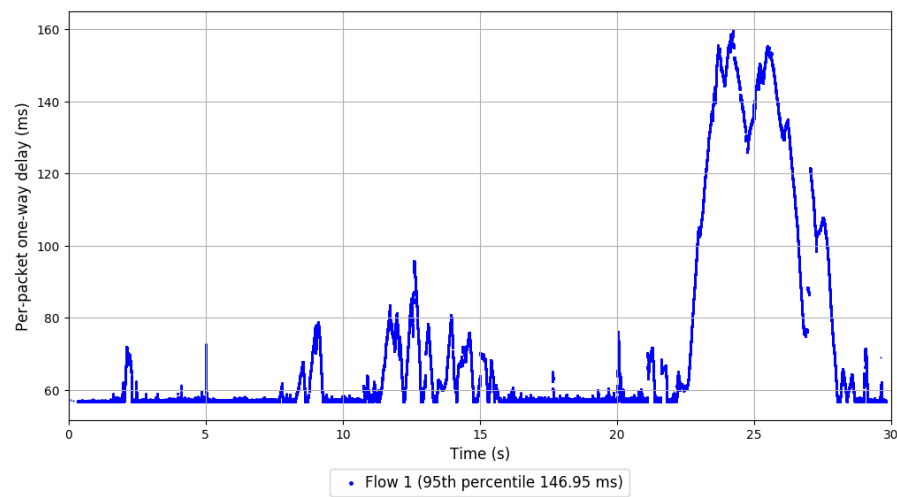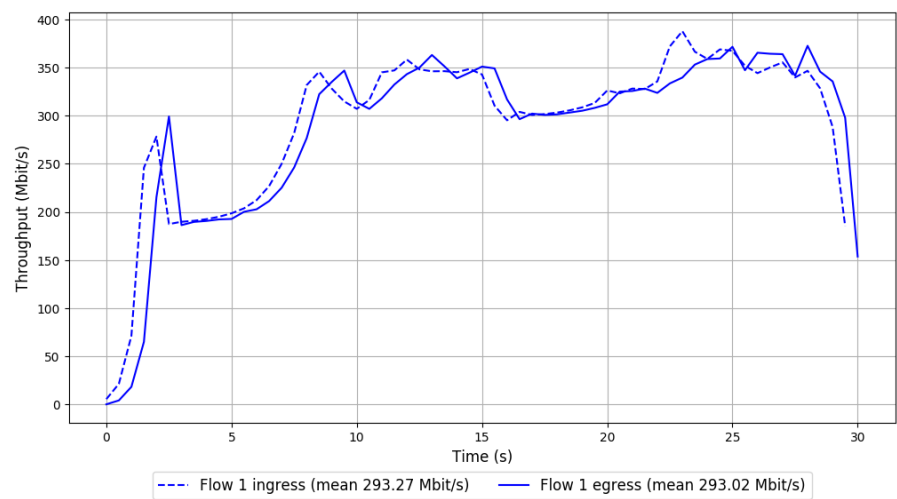
Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 359.42 Mbit/s)   Flow 1 egress (mean 357.79 Mbit/s)

Flow 1 (95th percentile 90.40 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-07-18 16:02:50
End at: 2019-07-18 16:03:20
Local clock offset: -0.286 ms
Remote clock offset: 0.238 ms


# Below is generated by plot.py at 2019-07-18 20:35:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 302.88 Mbit/s
95th percentile per-packet one-way delay: 163.380 ms
Loss rate: 3.14%
-- Flow 1:
Average throughput: 302.88 Mbit/s
95th percentile per-packet one-way delay: 163.380 ms
Loss rate: 3.14%
```
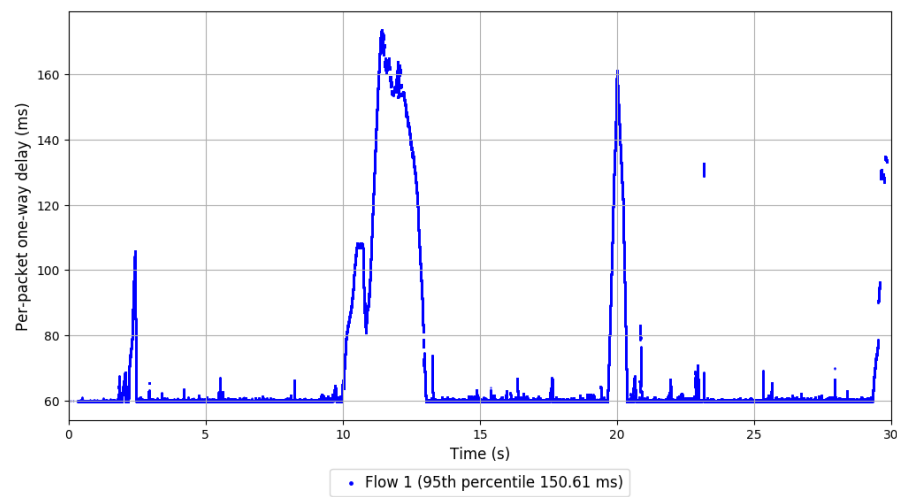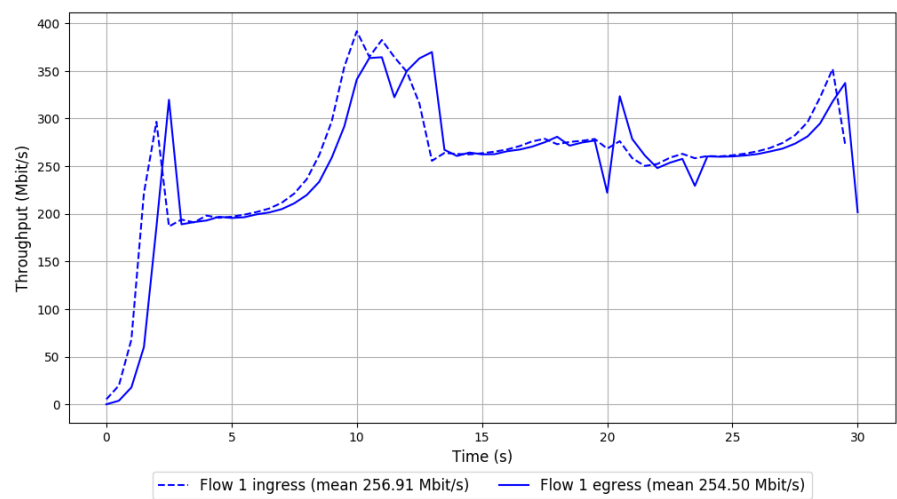
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-07-18 16:37:56
End at: 2019-07-18 16:38:26
Local clock offset: -0.37 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2019-07-18 20:35:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 293.02 Mbit/s
95th percentile per-packet one-way delay: 146.954 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 293.02 Mbit/s
95th percentile per-packet one-way delay: 146.954 ms
Loss rate: 0.47%
```
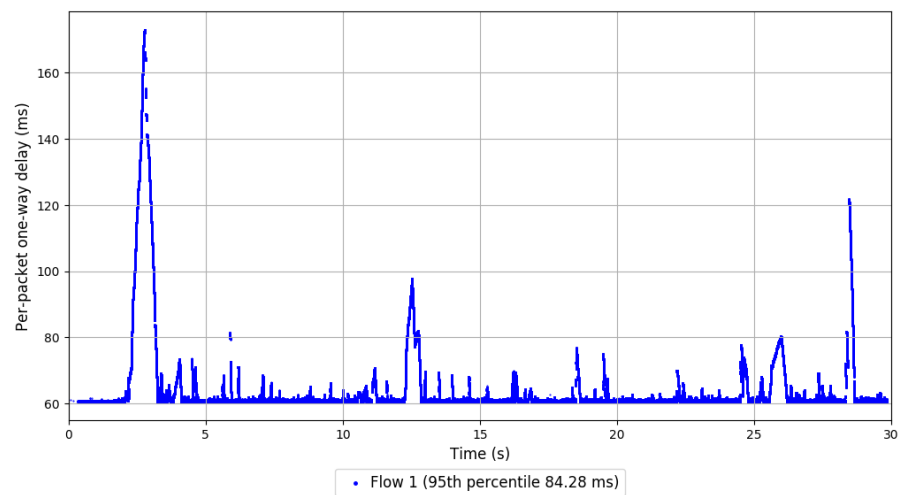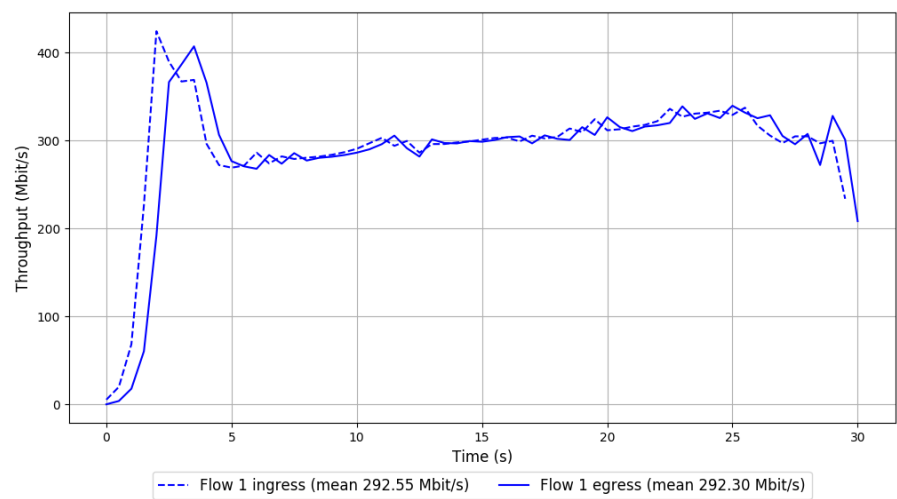
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-07-18 17:12:35
End at: 2019-07-18 17:13:05
Local clock offset: -0.242 ms
Remote clock offset: 0.01 ms


# Below is generated by plot.py at 2019-07-18 20:35:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 254.50 Mbit/s
95th percentile per-packet one-way delay: 150.609 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 254.50 Mbit/s
95th percentile per-packet one-way delay: 150.609 ms
Loss rate: 1.33%
```
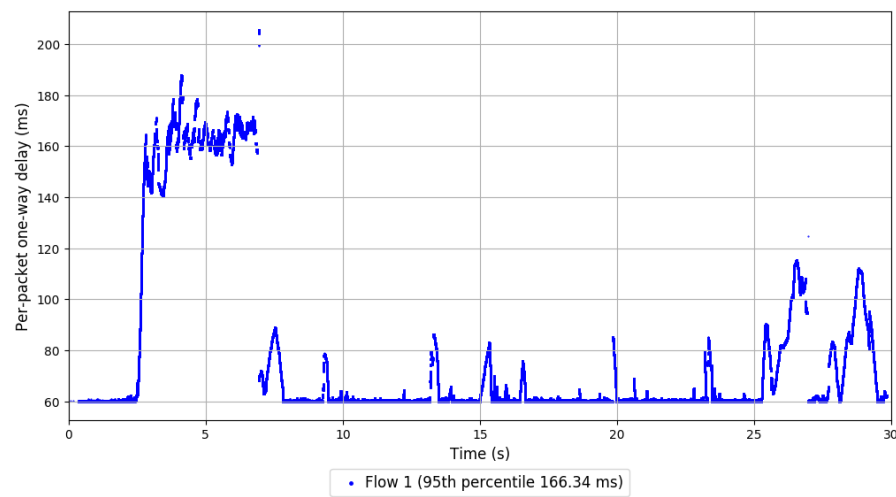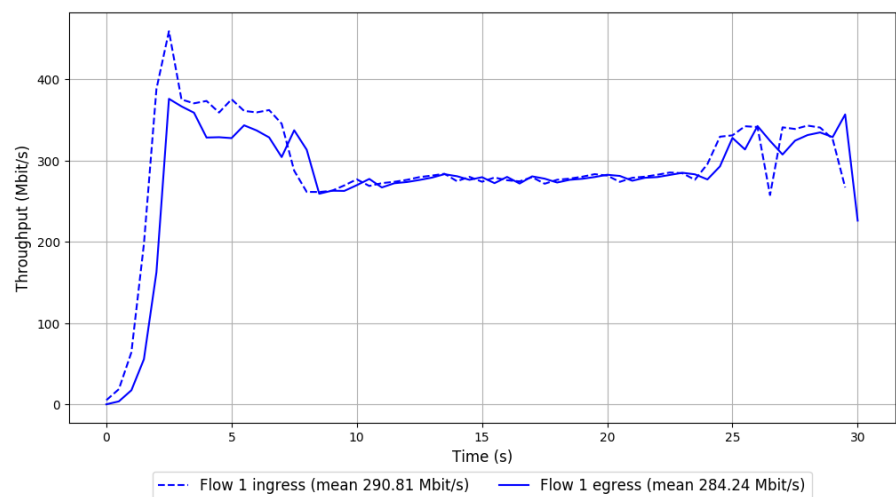
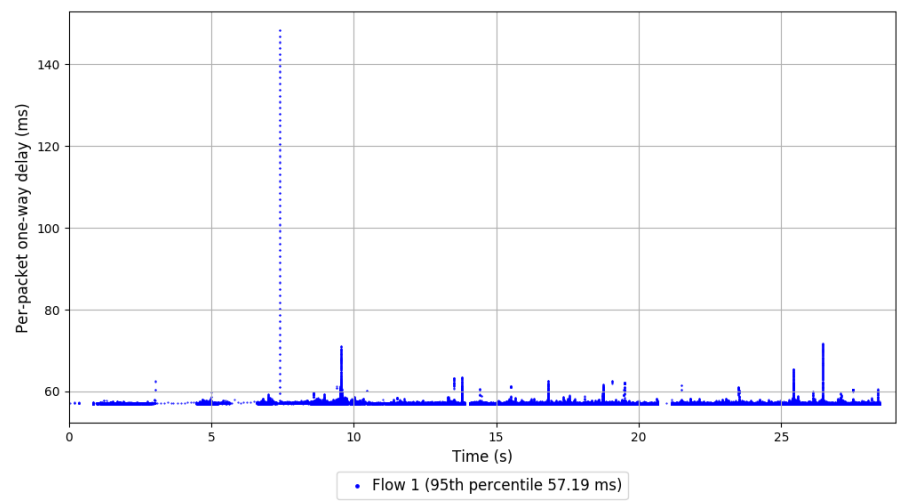## Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2019-07-18 17:47:22
End at: 2019-07-18 17:47:52
Local clock offset: 0.356 ms
Remote clock offset: 0.133 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 292.30 Mbit/s
95th percentile per-packet one-way delay: 84.279 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 292.30 Mbit/s
95th percentile per-packet one-way delay: 84.279 ms
Loss rate: 0.50%
```
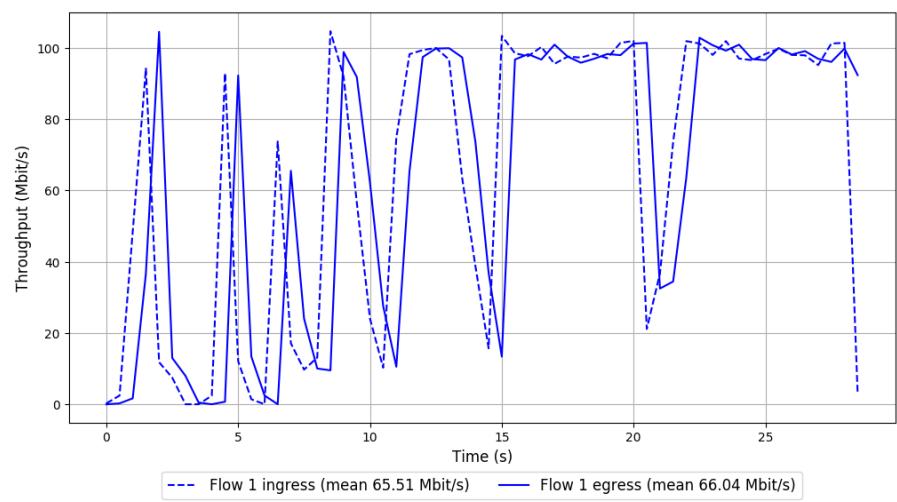
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-07-18 18:22:21
End at: 2019-07-18 18:22:51
Local clock offset: -0.029 ms
Remote clock offset: 0.369 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 284.24 Mbit/s
95th percentile per-packet one-way delay: 166.337 ms
Loss rate: 2.65%
-- Flow 1:
Average throughput: 284.24 Mbit/s
95th percentile per-packet one-way delay: 166.337 ms
Loss rate: 2.65%
```
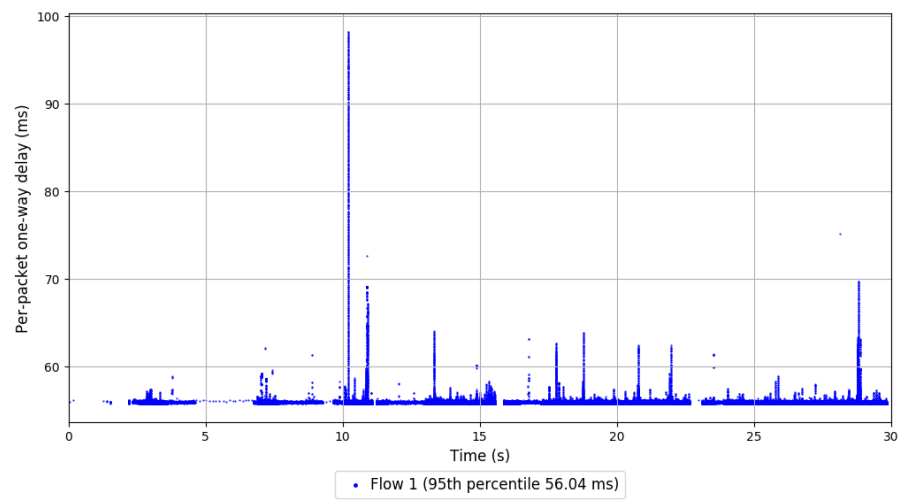
Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-07-18 15:43:50
End at: 2019-07-18 15:44:20
Local clock offset: -0.094 ms
Remote clock offset: -0.134 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.04 Mbit/s
95th percentile per-packet one-way delay: 57.187 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 66.04 Mbit/s
95th percentile per-packet one-way delay: 57.187 ms
Loss rate: 0.63%
```
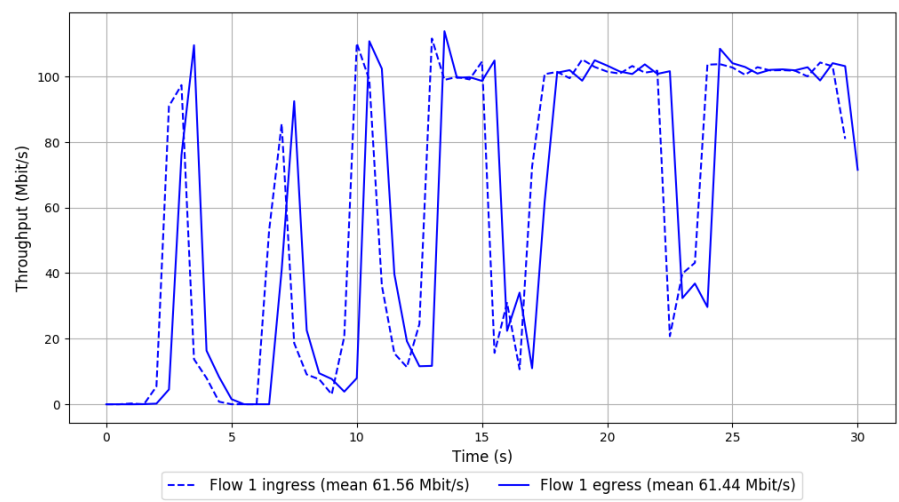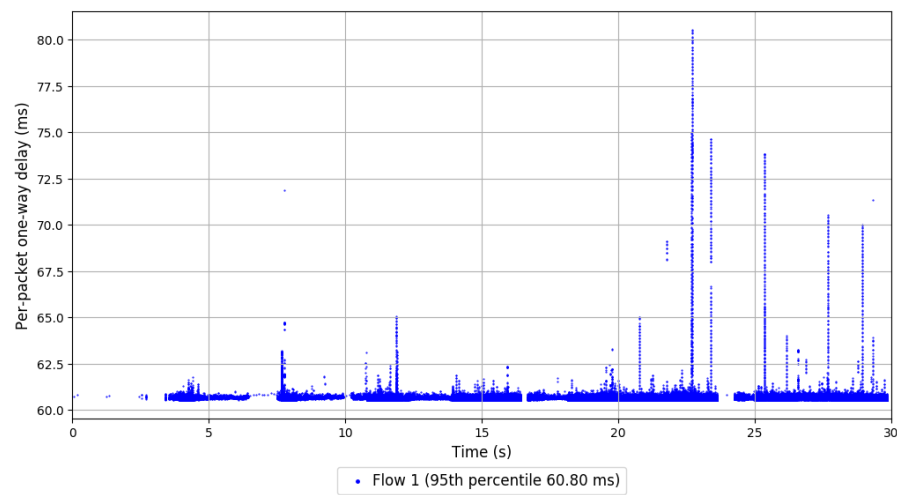
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-07-18 16:18:48
End at: 2019-07-18 16:19:18
Local clock offset: 0.237 ms
Remote clock offset: 1.213 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.44 Mbit/s
95th percentile per-packet one-way delay: 56.039 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 61.44 Mbit/s
95th percentile per-packet one-way delay: 56.039 ms
Loss rate: 0.57%
```
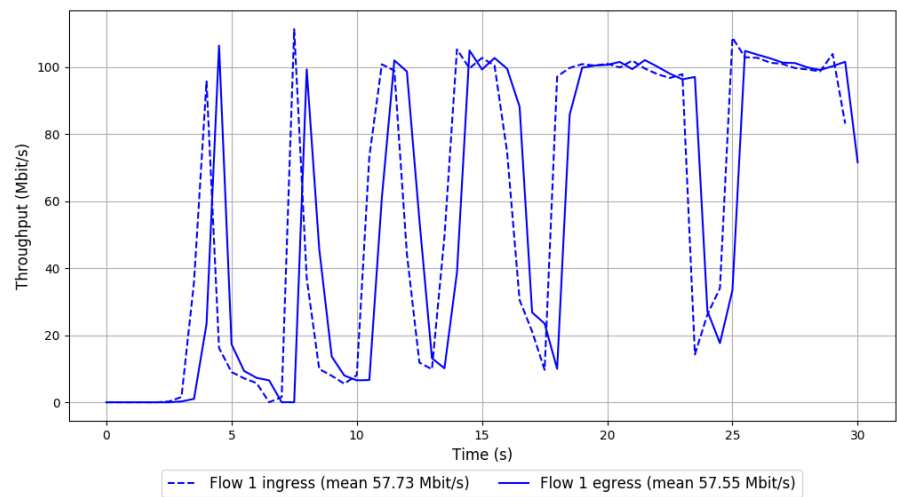
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-07-18 16:53:39
End at: 2019-07-18 16:54:09
Local clock offset: 0.054 ms
Remote clock offset: -0.135 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 57.55 Mbit/s
95th percentile per-packet one-way delay: 60.796 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 57.55 Mbit/s
95th percentile per-packet one-way delay: 60.796 ms
Loss rate: 0.71%
```
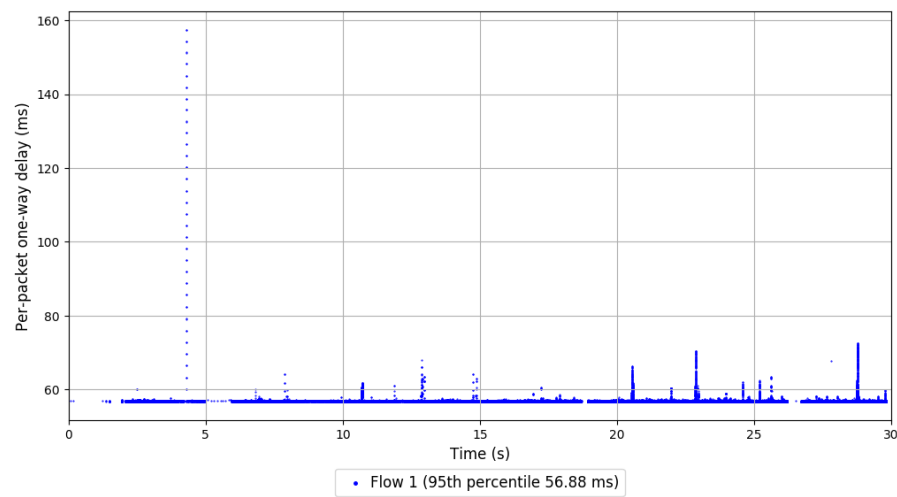
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-07-18 17:28:24
End at: 2019-07-18 17:28:54
Local clock offset: -0.469 ms
Remote clock offset: -0.116 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.85 Mbit/s
95th percentile per-packet one-way delay: 56.880 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 47.85 Mbit/s
95th percentile per-packet one-way delay: 56.880 ms
Loss rate: 0.66%
```
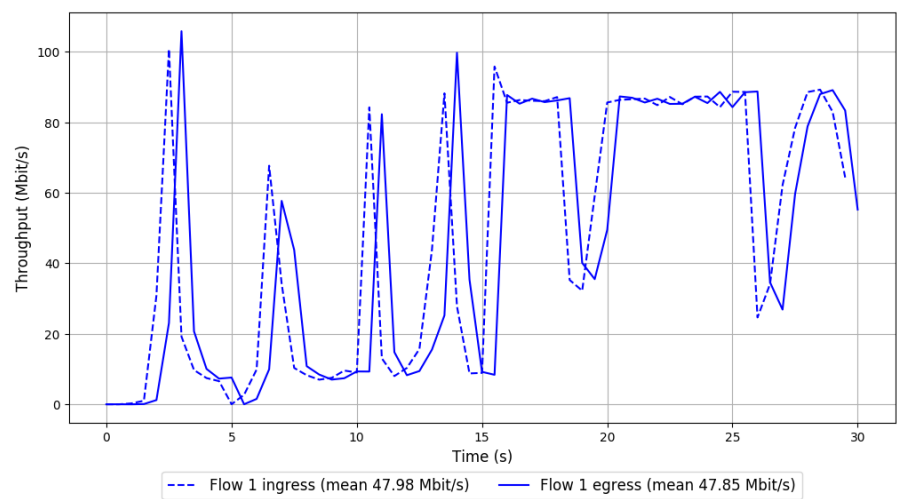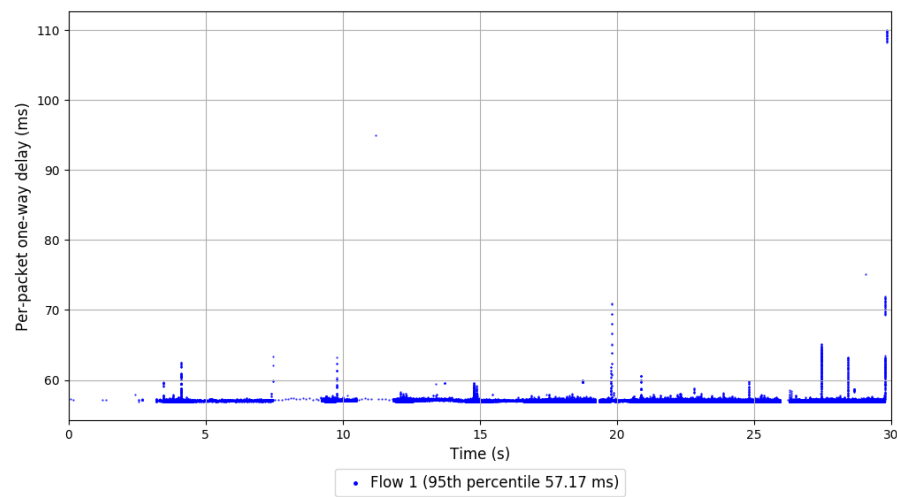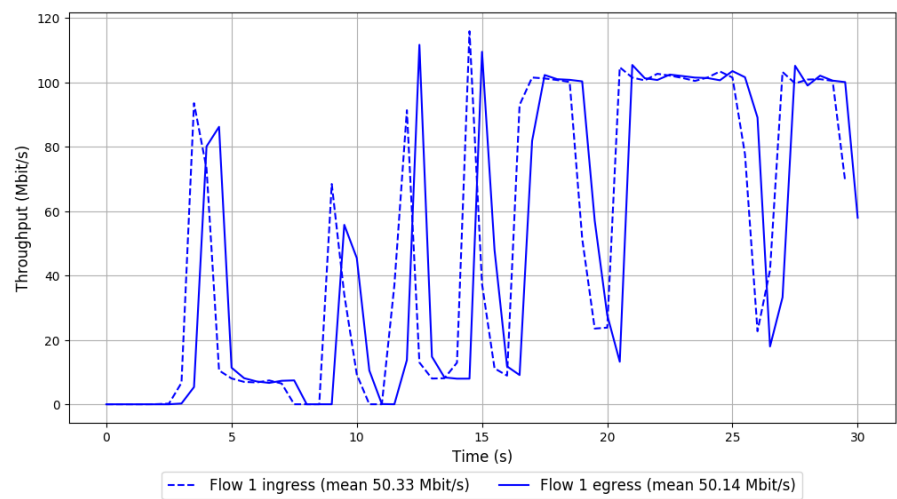
Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 47.98 Mbit/s)   Flow 1 egress (mean 47.85 Mbit/s)

Flow 1 (95th percentile 56.88 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-07-18 18:03:17
End at: 2019-07-18 18:03:47
Local clock offset: -0.036 ms
Remote clock offset: -0.045 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.14 Mbit/s
95th percentile per-packet one-way delay: 57.172 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 50.14 Mbit/s
95th percentile per-packet one-way delay: 57.172 ms
Loss rate: 0.76%
```
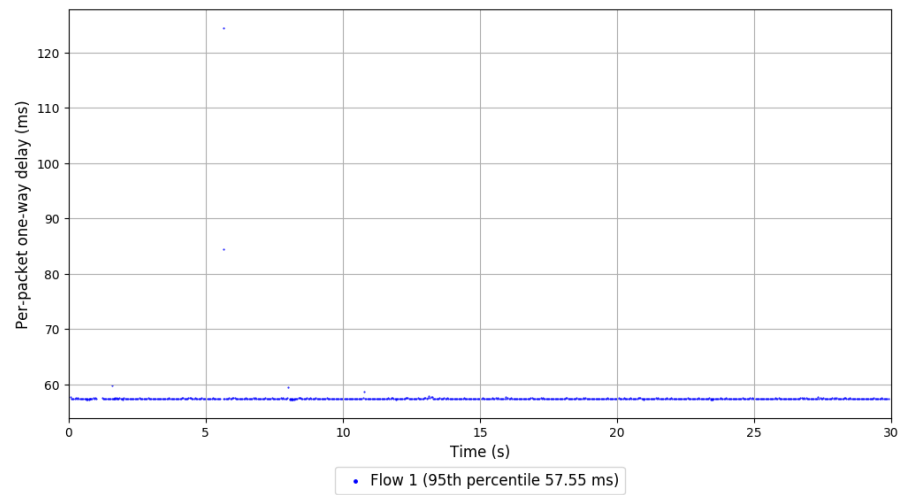
Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-07-18 15:55:52
End at: 2019-07-18 15:56:22
Local clock offset: -0.073 ms
Remote clock offset: -0.09 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.550 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.550 ms
Loss rate: 0.39%
```
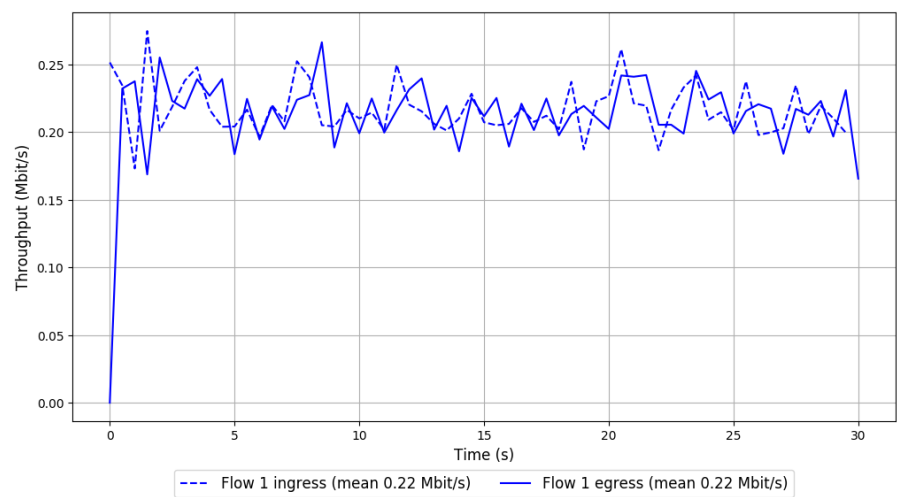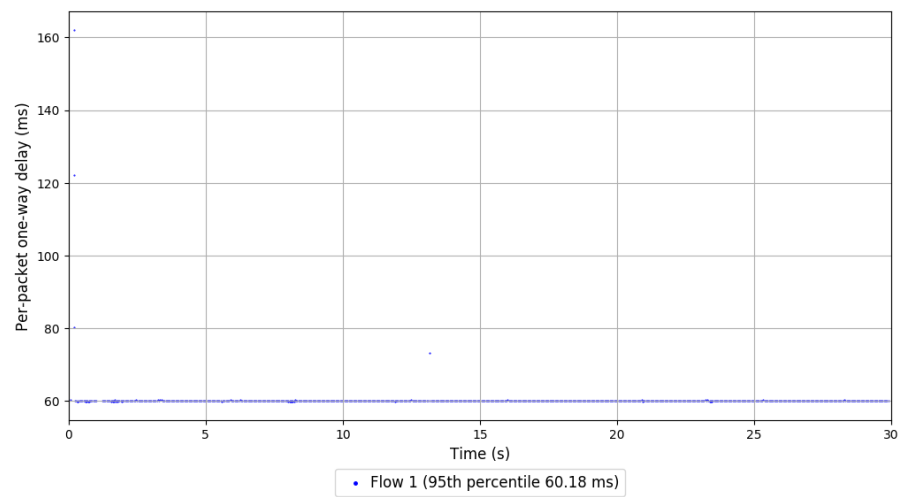
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-07-18 16:30:58
End at: 2019-07-18 16:31:28
Local clock offset: 0.314 ms
Remote clock offset: 0.732 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.178 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.178 ms
Loss rate: 0.26%
```
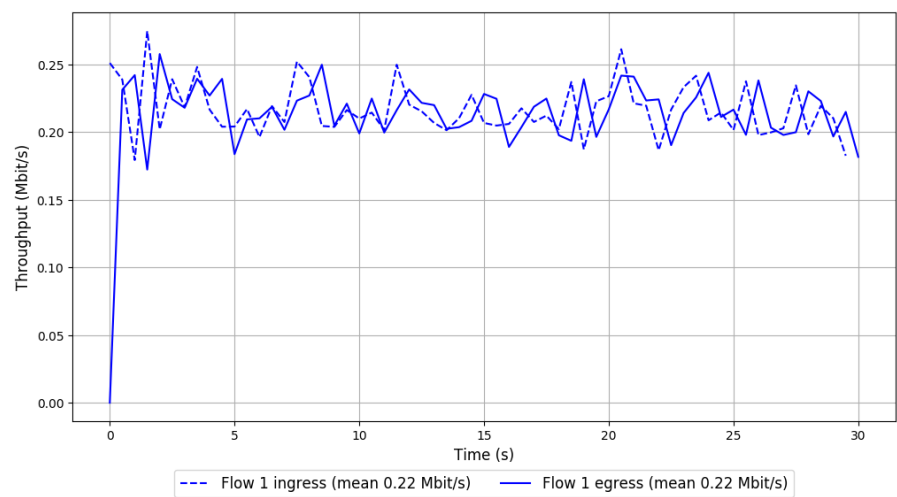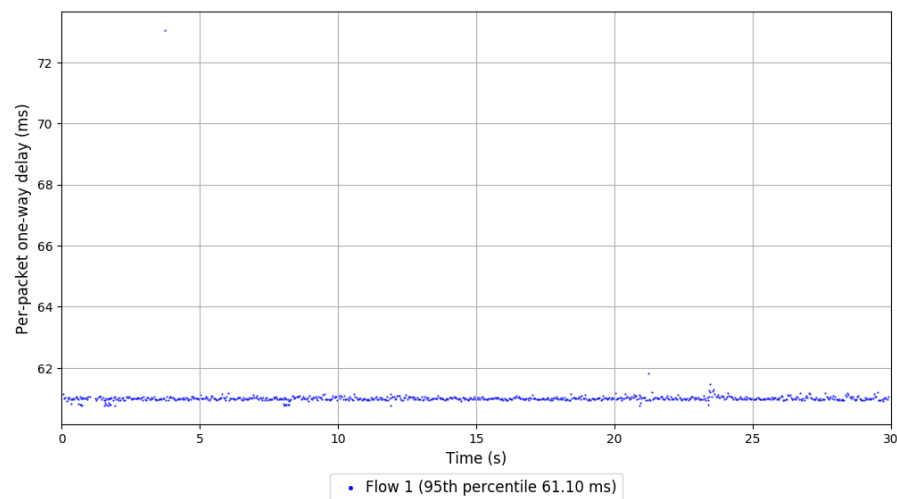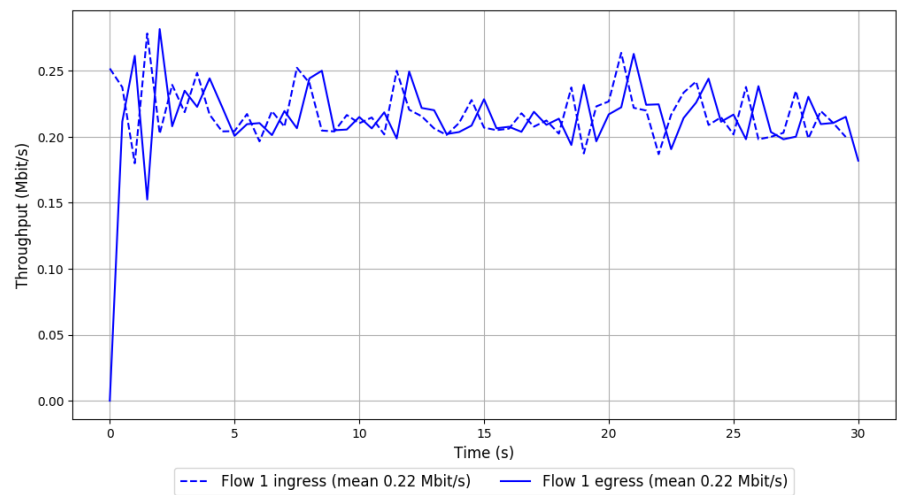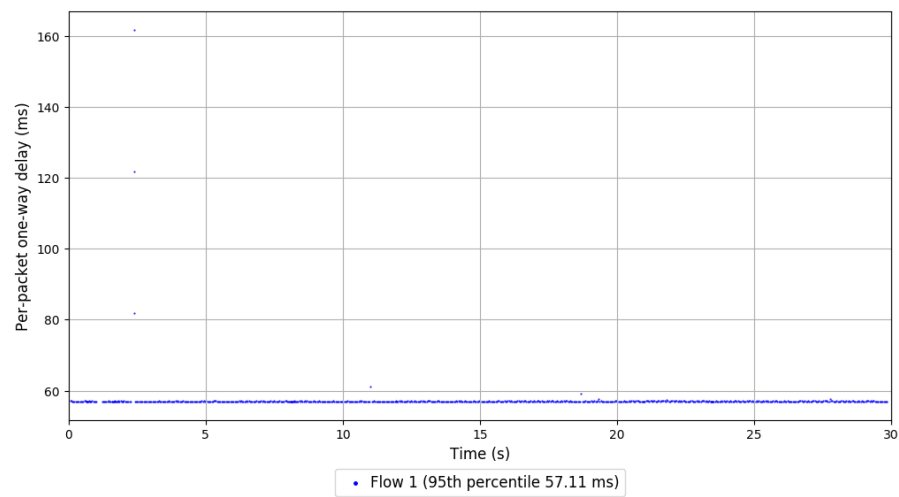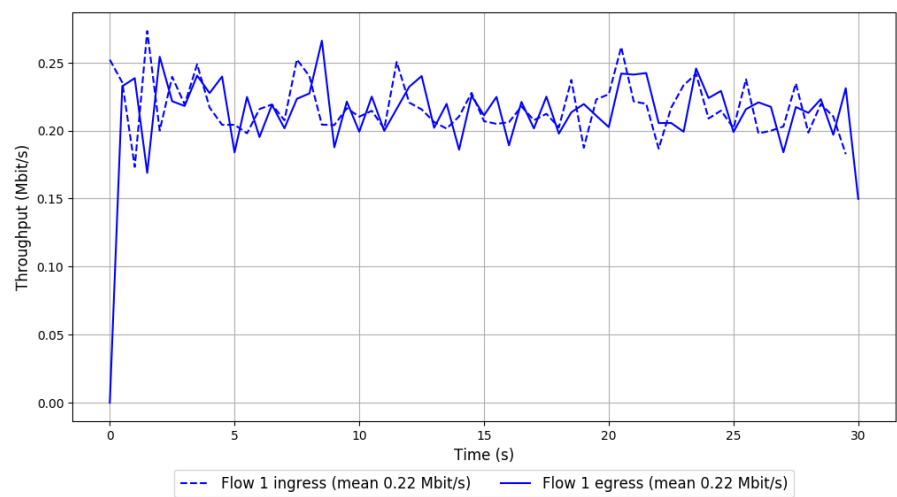
Run 2: Report of SCReAM — Data Link

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```
Run 3: Statistics of SCReAM

Start at: 2019-07-18 17:05:37
End at: 2019-07-18 17:06:07
Local clock offset: 0.29 ms
Remote clock offset: 0.019 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.103 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.103 ms
Loss rate: 0.39%
```

Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-07-18 17:40:25
End at: 2019-07-18 17:40:55
Local clock offset: -0.297 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.111 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.111 ms
Loss rate: 0.38%
```
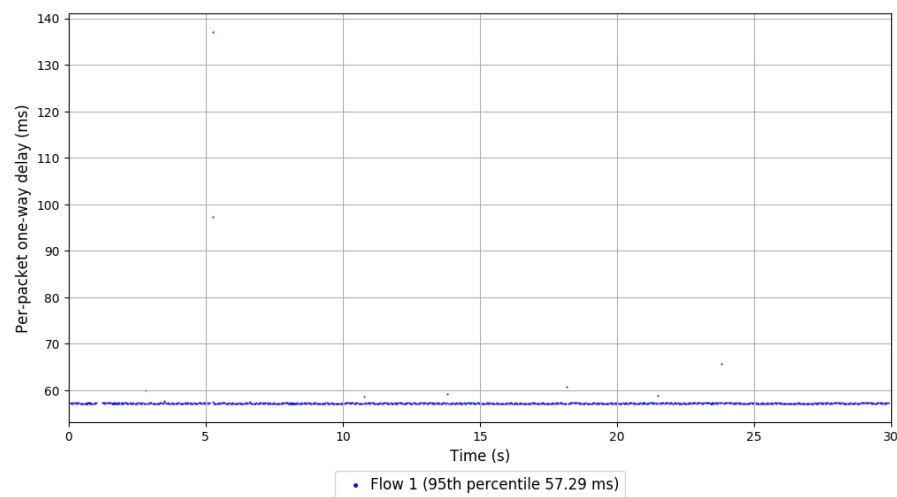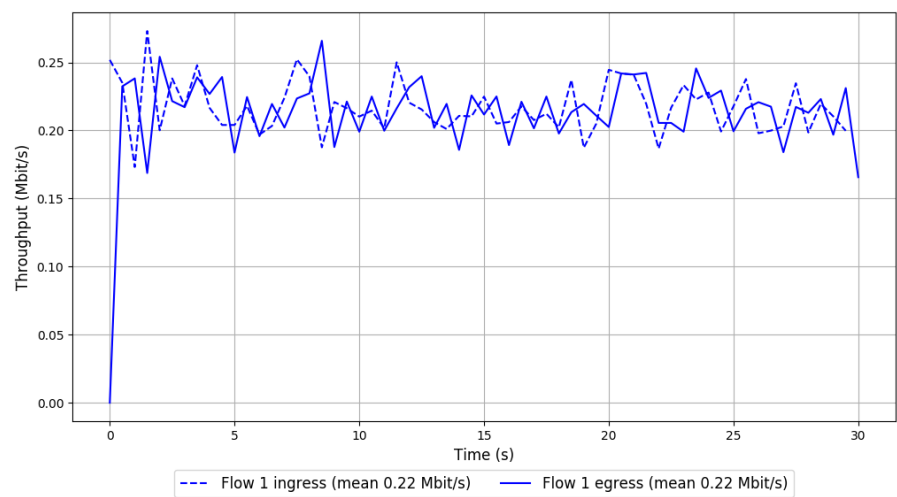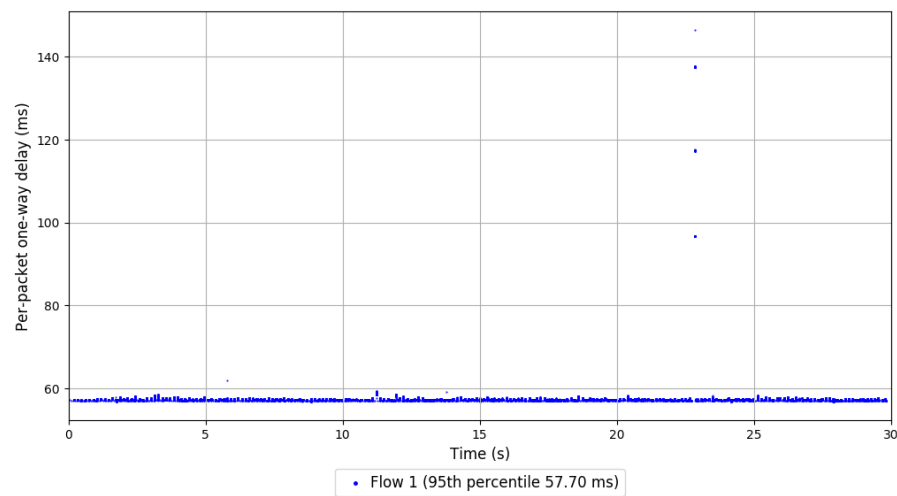
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-07-18 18:15:23
End at: 2019-07-18 18:15:53
Local clock offset: -0.125 ms
Remote clock offset: 0.002 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.293 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.293 ms
Loss rate: 0.39%
```

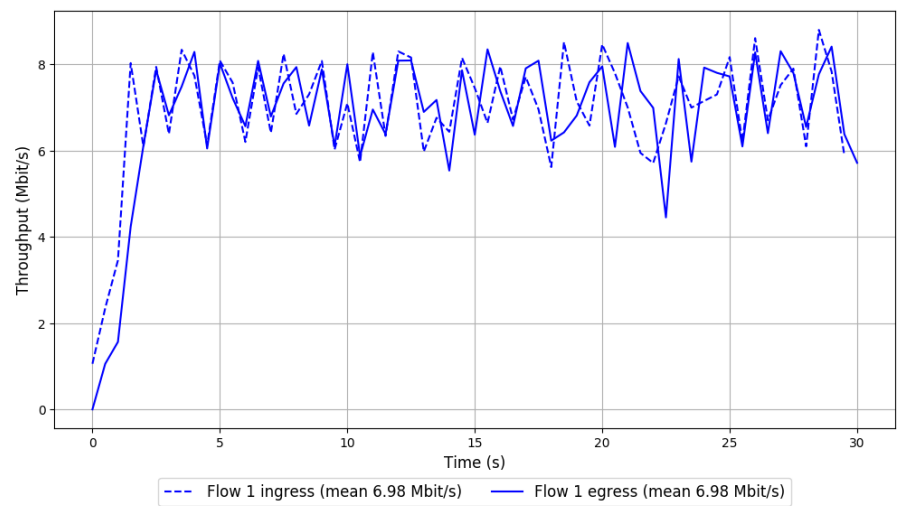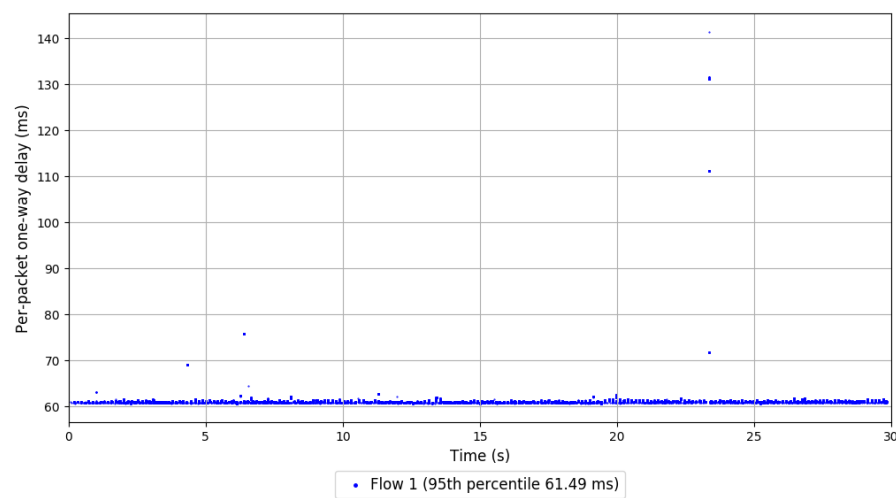Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-07-18 15:41:05
End at: 2019-07-18 15:41:35
Local clock offset: -0.05 ms
Remote clock offset: -0.043 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.98 Mbit/s
95th percentile per-packet one-way delay: 57.697 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 6.98 Mbit/s
95th percentile per-packet one-way delay: 57.697 ms
Loss rate: 0.48%
```

Run 1: Report of Sprout — Data Link

Flow 1 ingress (mean 6.98 Mbit/s) --- Flow 1 egress (mean 6.98 Mbit/s)

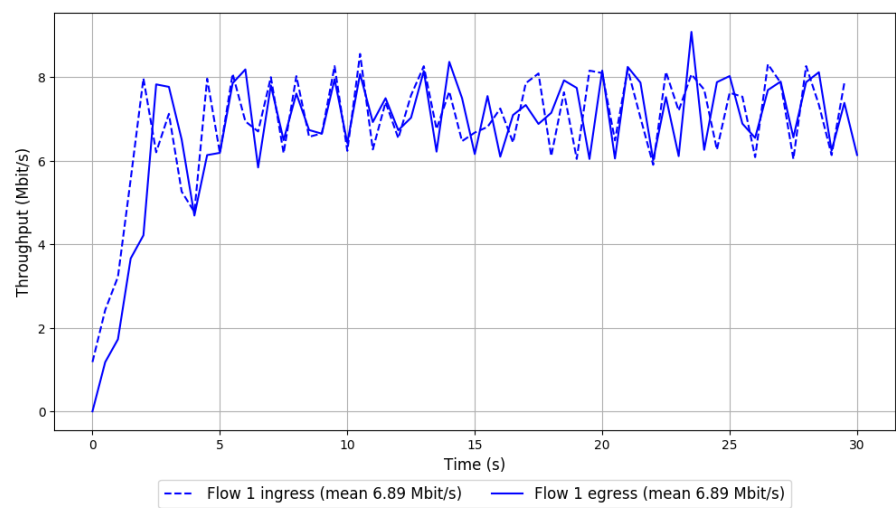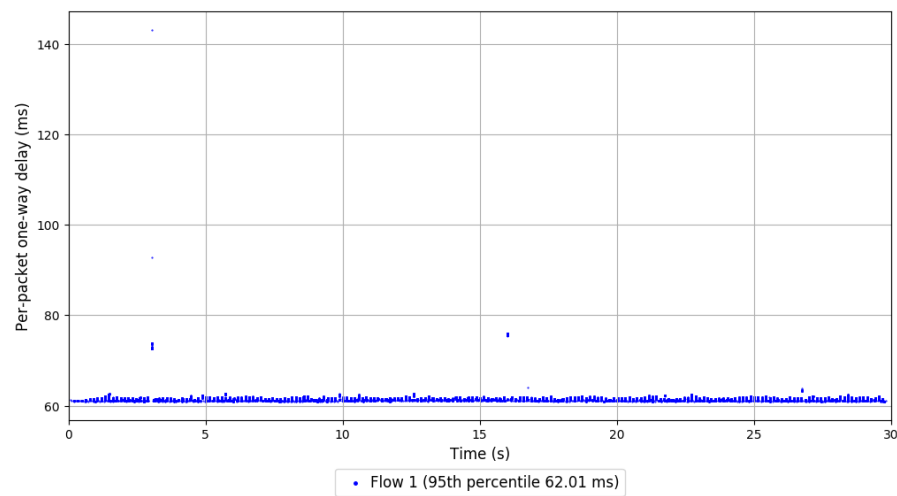Flow 1 (95th percentile 57.70 ms)

```
Run 2: Statistics of Sprout

Start at: 2019-07-18 16:16:04
End at: 2019-07-18 16:16:34
Local clock offset: 0.366 ms
Remote clock offset: -0.096 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 61.492 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 61.492 ms
Loss rate: 0.42%
```

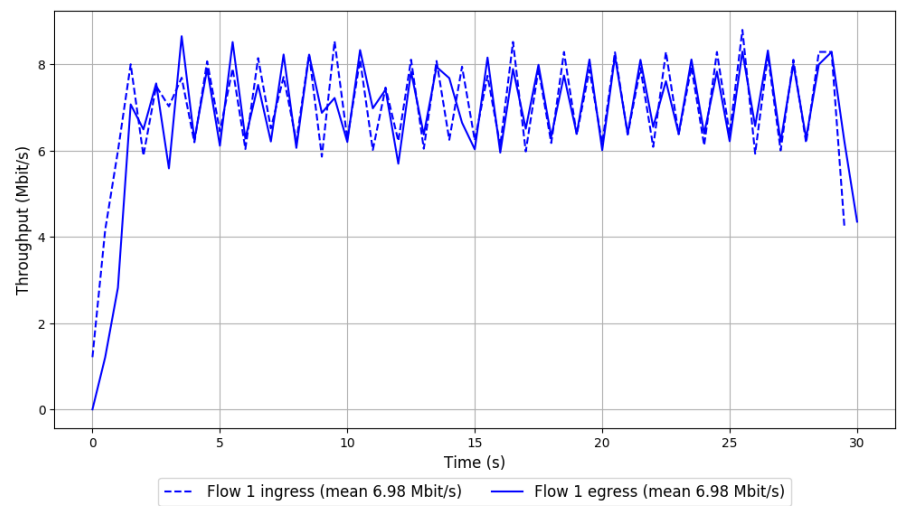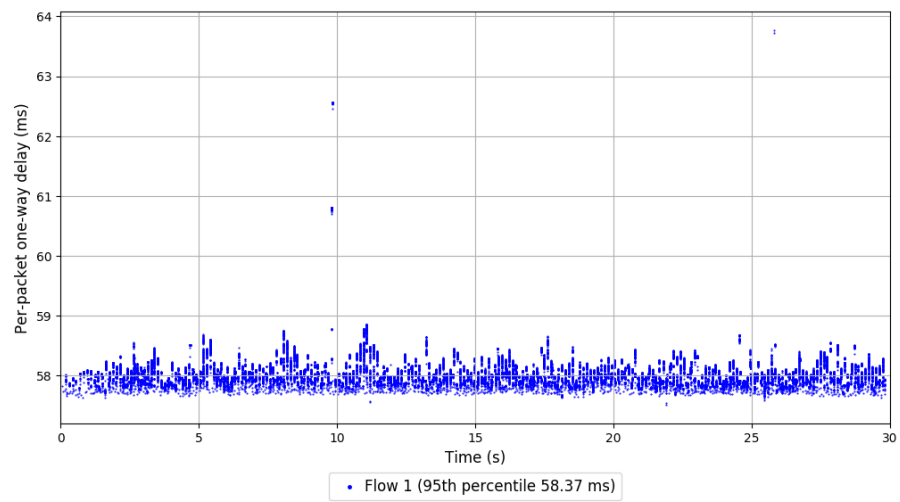Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-07-18 16:50:55
End at: 2019-07-18 16:51:25
Local clock offset: -0.099 ms
Remote clock offset: -0.791 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.98 Mbit/s
95th percentile per-packet one-way delay: 62.010 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 6.98 Mbit/s
95th percentile per-packet one-way delay: 62.010 ms
Loss rate: 0.47%
```

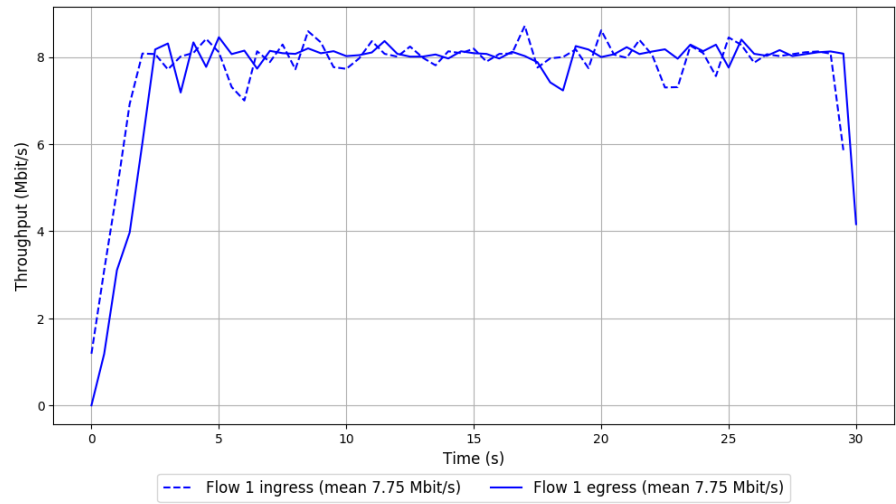## Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-07-18 17:25:41
End at: 2019-07-18 17:26:11
Local clock offset: 0.375 ms
Remote clock offset: -0.098 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 58.369 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 58.369 ms
Loss rate: 0.37%
```

Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-07-18 18:00:34
End at: 2019-07-18 18:01:04
Local clock offset: -0.157 ms
Remote clock offset: -0.14 ms


# Below is generated by plot.py at 2019-07-18 20:36:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.94 Mbit/s
95th percentile per-packet one-way delay: 60.995 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 6.94 Mbit/s
95th percentile per-packet one-way delay: 60.995 ms
Loss rate: 0.51%
```
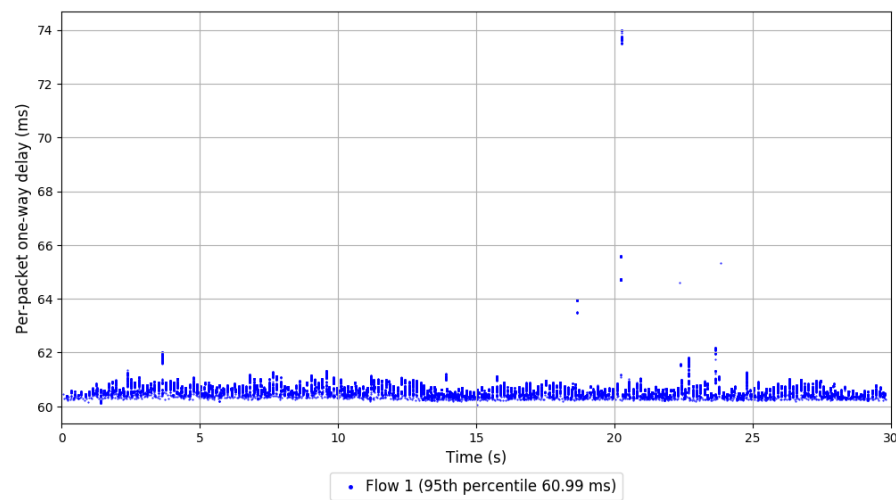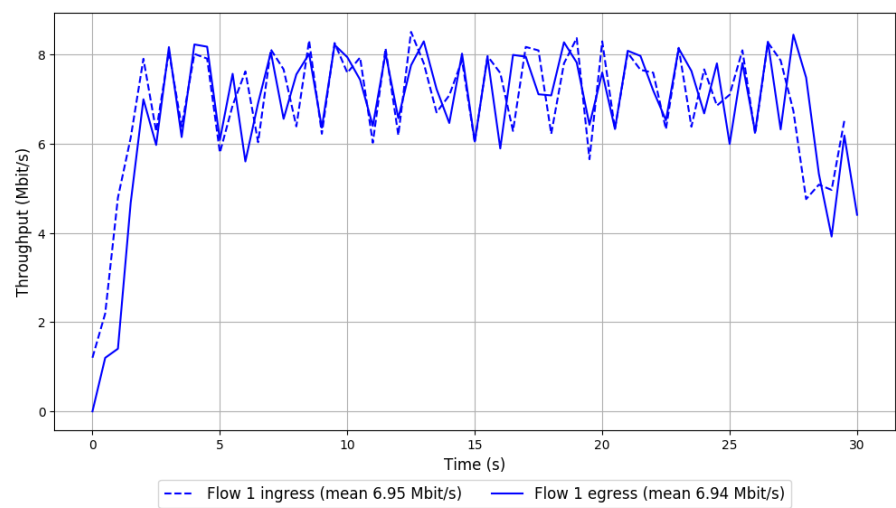
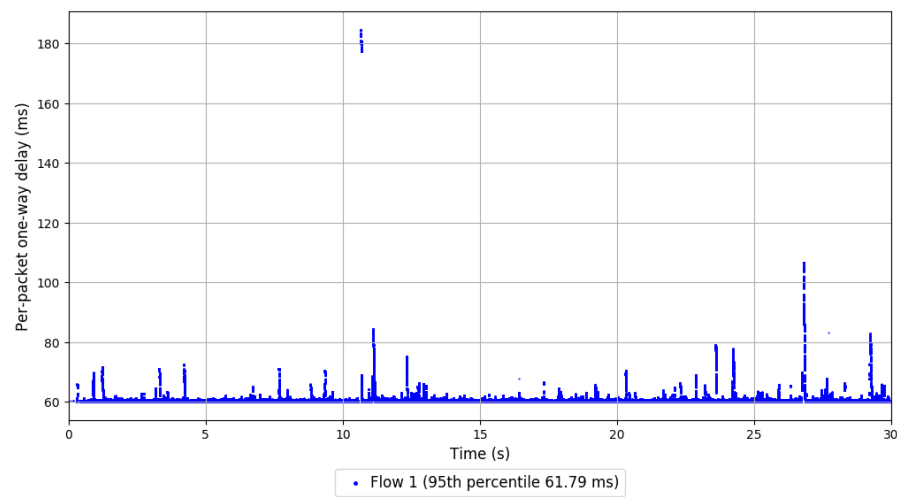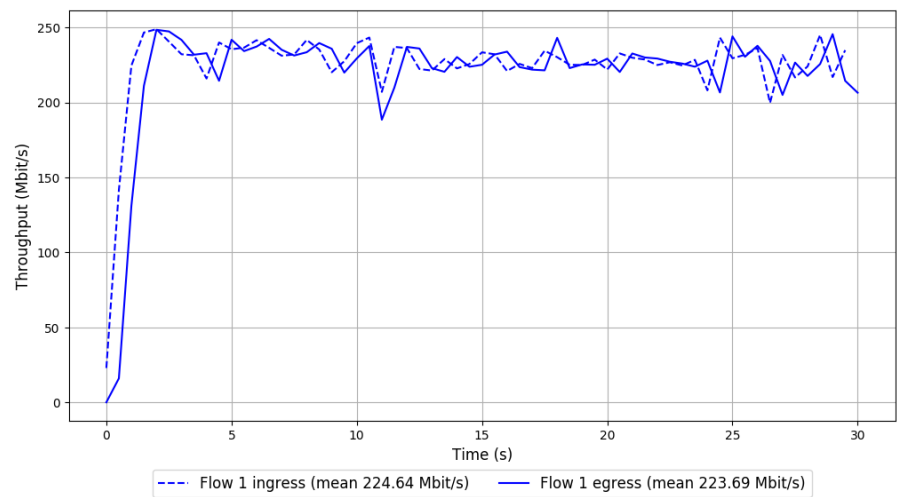Run 5: Report of Sprout — Data Link

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

Start at: 2019-07-18 15:51:17
End at: 2019-07-18 15:51:47
Local clock offset: -0.248 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-07-18 20:41:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 223.69 Mbit/s
95th percentile per-packet one-way delay: 61.788 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 223.69 Mbit/s
95th percentile per-packet one-way delay: 61.788 ms
Loss rate: 0.82%
```

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

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

Start at: 2019-07-18 16:26:19
End at: 2019-07-18 16:26:49
Local clock offset: 0.272 ms
Remote clock offset: -0.099 ms


# Below is generated by plot.py at 2019-07-18 20:41:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.55 Mbit/s
95th percentile per-packet one-way delay: 61.384 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 229.55 Mbit/s
95th percentile per-packet one-way delay: 61.384 ms
Loss rate: 0.41%
```
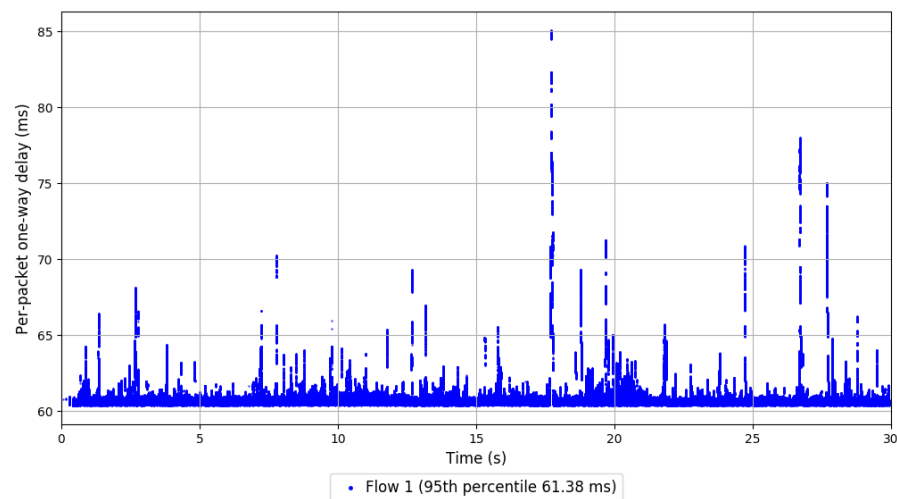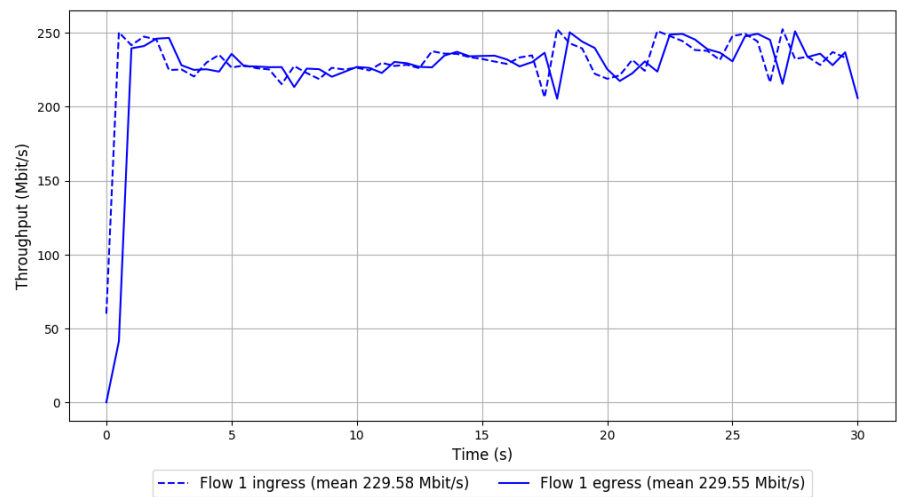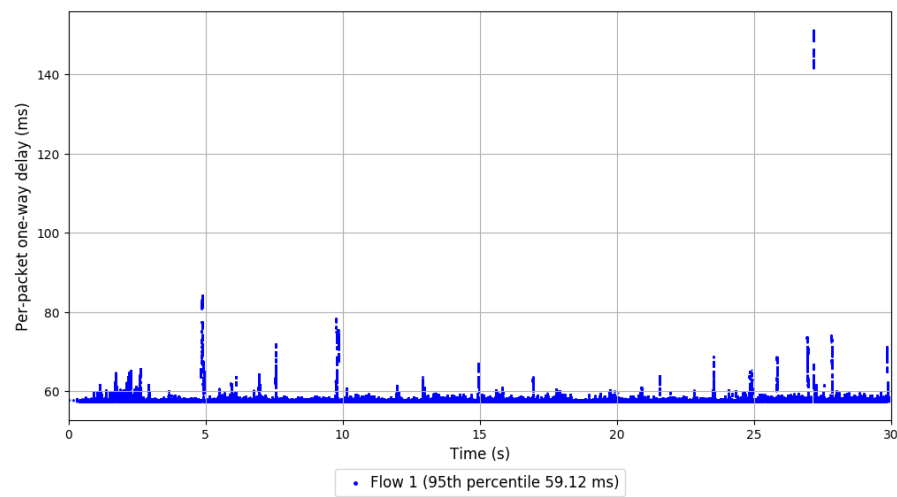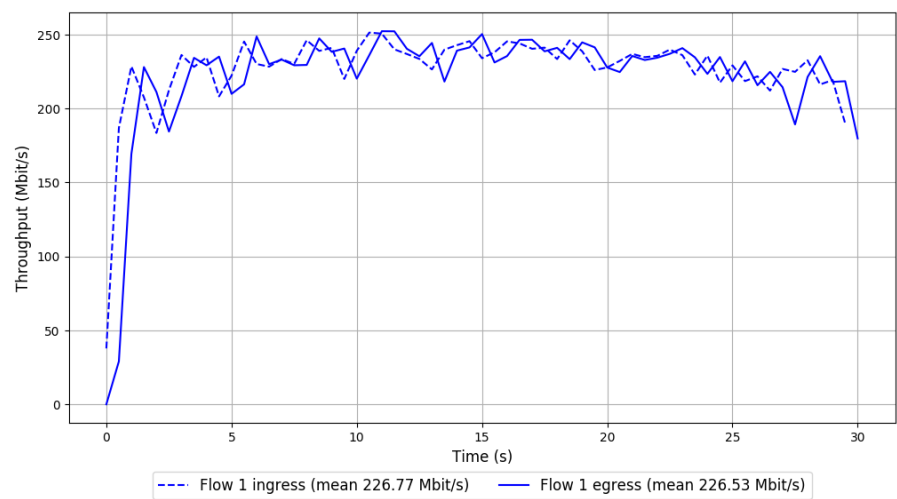
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2019-07-18 17:01:01
End at: 2019-07-18 17:01:31
Local clock offset: 0.29 ms
Remote clock offset: -0.055 ms


# Below is generated by plot.py at 2019-07-18 20:41:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.53 Mbit/s
95th percentile per-packet one-way delay: 59.122 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 226.53 Mbit/s
95th percentile per-packet one-way delay: 59.122 ms
Loss rate: 0.51%
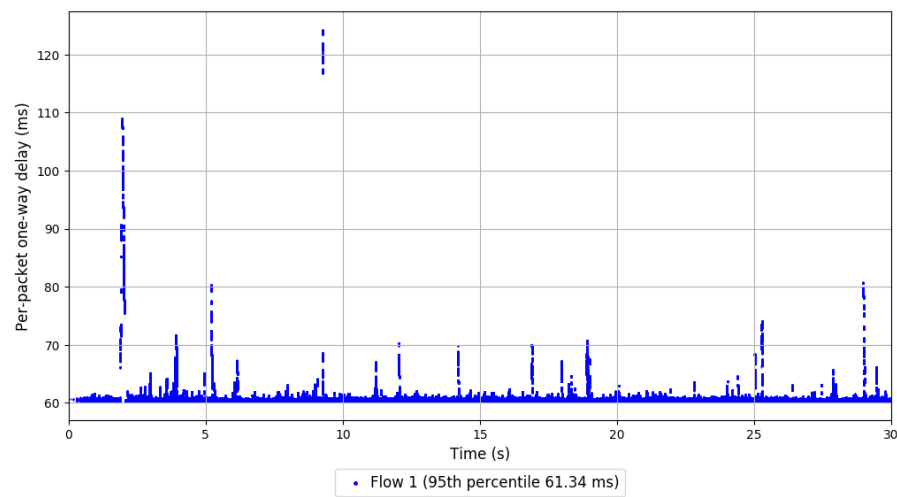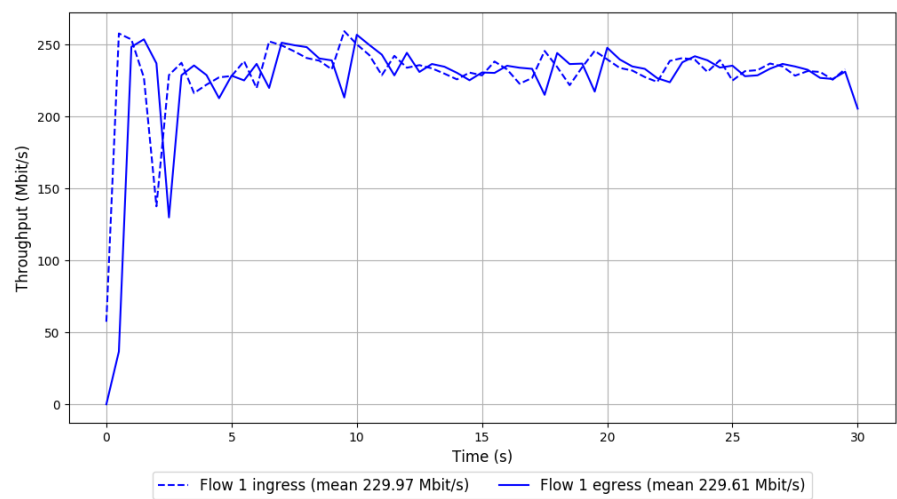```

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

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

Start at: 2019-07-18 17:35:49
End at: 2019-07-18 17:36:19
Local clock offset: -0.072 ms
Remote clock offset: -0.179 ms

Below is generated by plot.py at 2019-07-18 20:41:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 229.61 Mbit/s
95th percentile per-packet one-way delay: 61.339 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 229.61 Mbit/s
95th percentile per-packet one-way delay: 61.339 ms
Loss rate: 0.55%
```
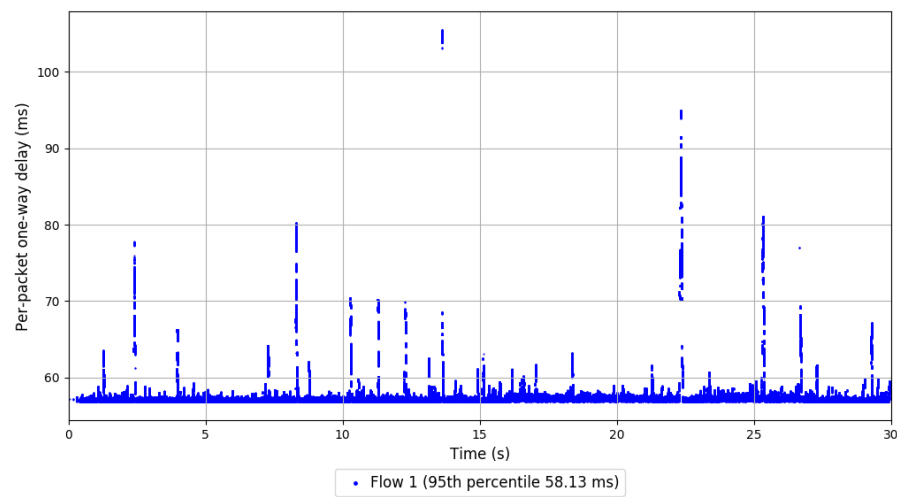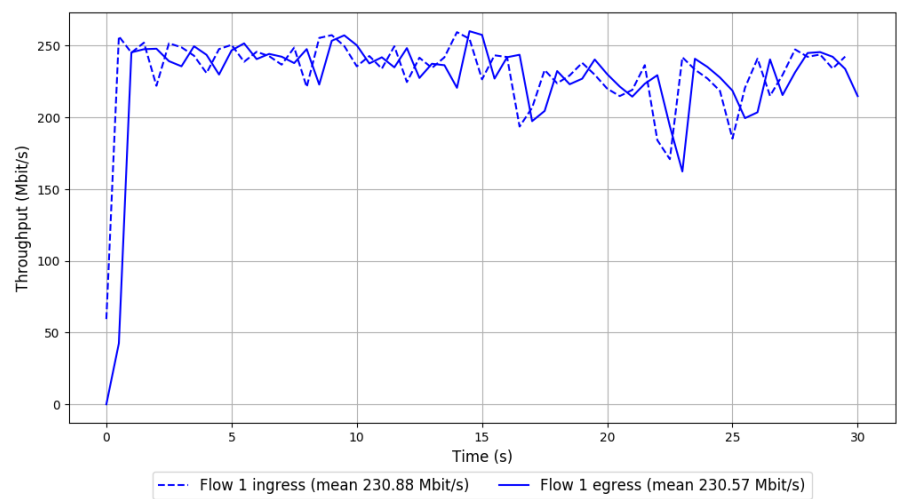
Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2019-07-18 18:10:44
End at: 2019-07-18 18:11:14
Local clock offset: -0.177 ms
Remote clock offset: -0.142 ms

Below is generated by plot.py at 2019-07-18 20:42:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 230.57 Mbit/s
95th percentile per-packet one-way delay: 58.131 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 230.57 Mbit/s
95th percentile per-packet one-way delay: 58.131 ms
Loss rate: 0.52%
```
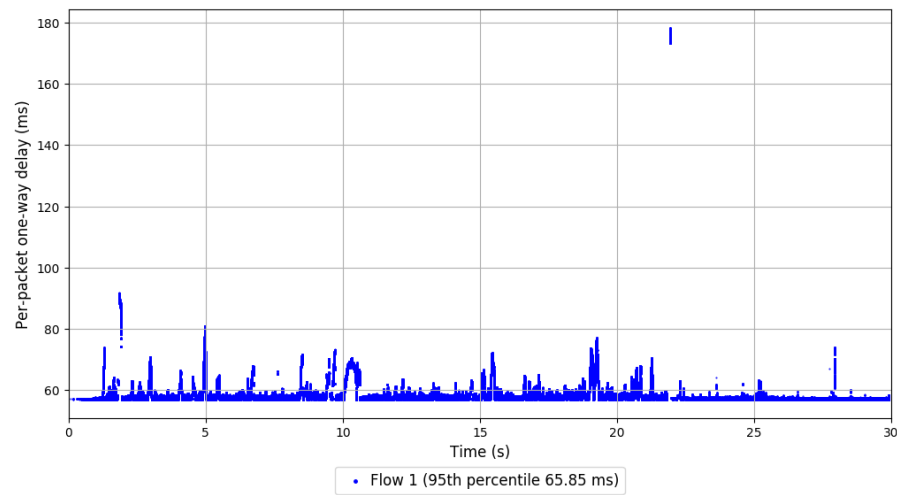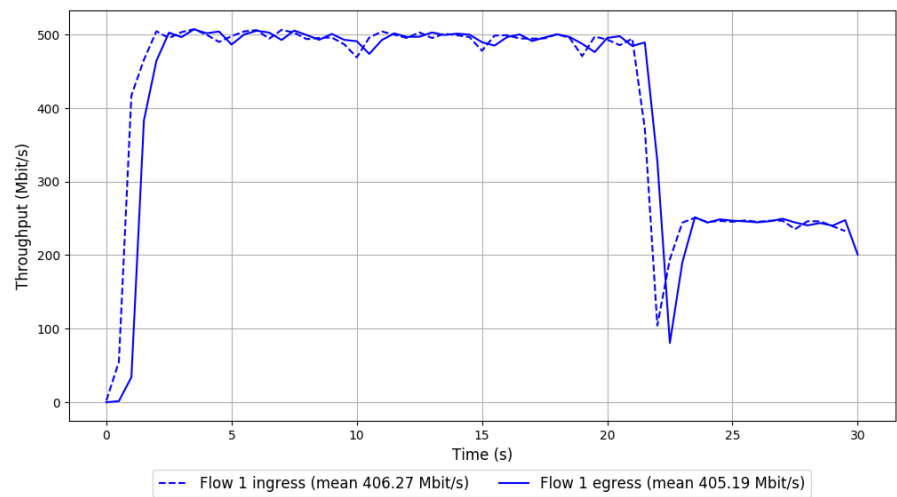
Run 5: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2019-07-18 16:14:36
End at: 2019-07-18 16:15:06
Local clock offset: 0.106 ms
Remote clock offset: -0.069 ms


# Below is generated by plot.py at 2019-07-18 20:44:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 405.19 Mbit/s
95th percentile per-packet one-way delay: 65.850 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 405.19 Mbit/s
95th percentile per-packet one-way delay: 65.850 ms
Loss rate: 0.65%
```

Run 1: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 406.27 Mbit/s)   Flow 1 egress (mean 405.19 Mbit/s)

Flow 1 (95th percentile 65.85 ms)

```
Run 2: Statistics of TCP Vegas

Start at: 2019-07-18 16:49:36
End at: 2019-07-18 16:50:06
Local clock offset: -0.532 ms
Remote clock offset: 0.547 ms


# Below is generated by plot.py at 2019-07-18 20:44:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 210.05 Mbit/s
95th percentile per-packet one-way delay: 72.652 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 210.05 Mbit/s
95th percentile per-packet one-way delay: 72.652 ms
Loss rate: 0.45%
```
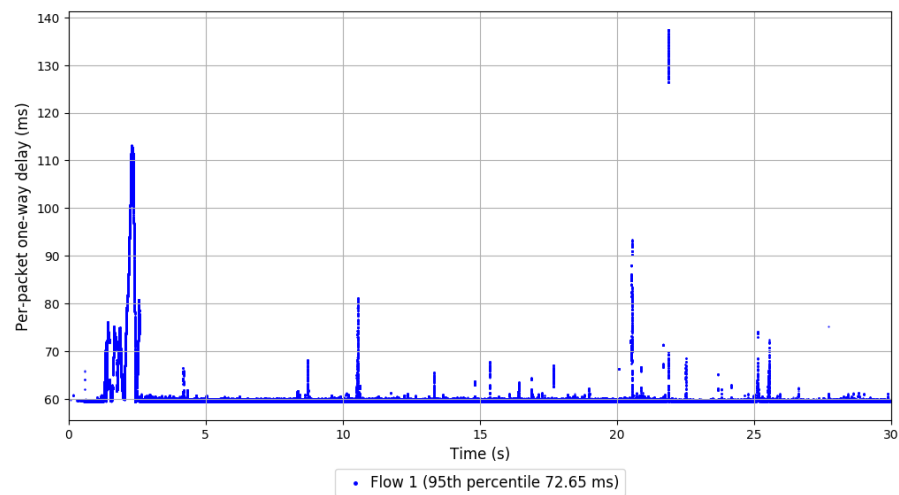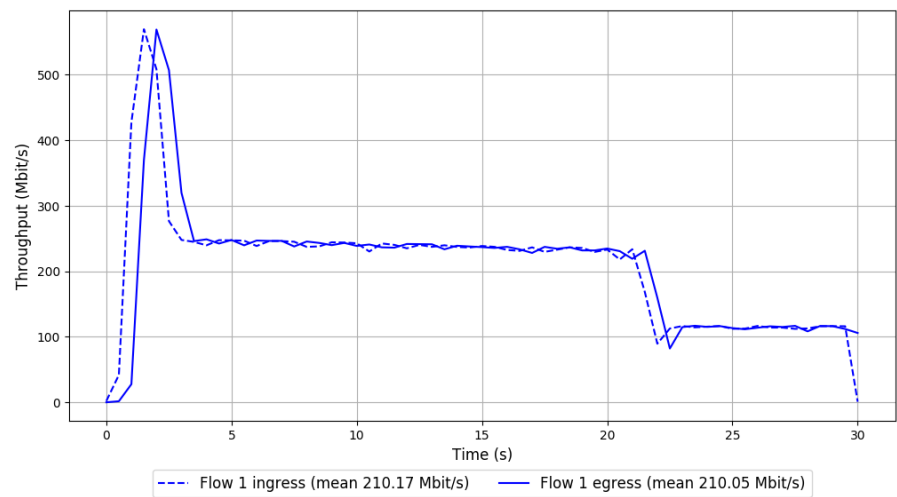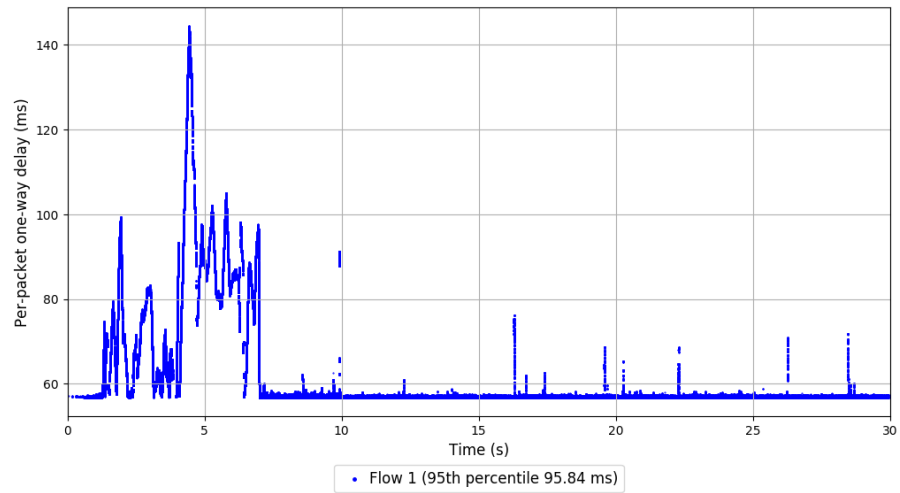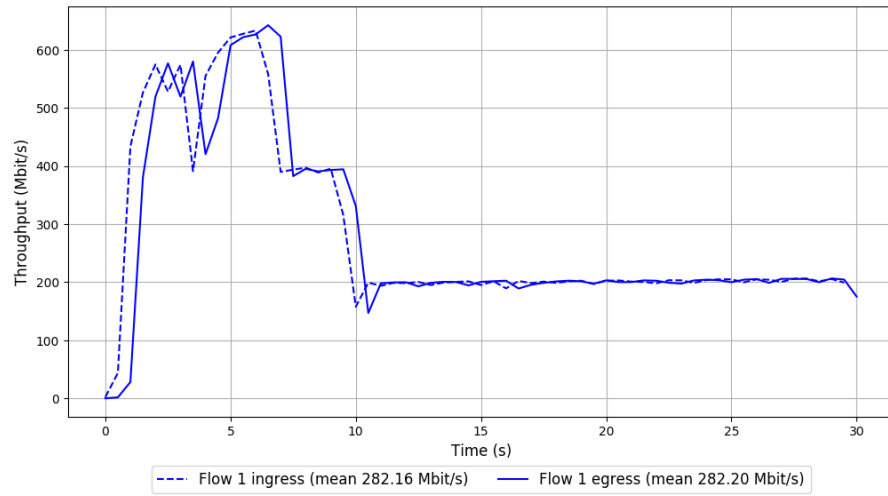
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-07-18 17:24:18
End at: 2019-07-18 17:24:48
Local clock offset: -0.037 ms
Remote clock offset: -0.013 ms


# Below is generated by plot.py at 2019-07-18 20:44:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 282.20 Mbit/s
95th percentile per-packet one-way delay: 95.838 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 282.20 Mbit/s
95th percentile per-packet one-way delay: 95.838 ms
Loss rate: 0.37%
```
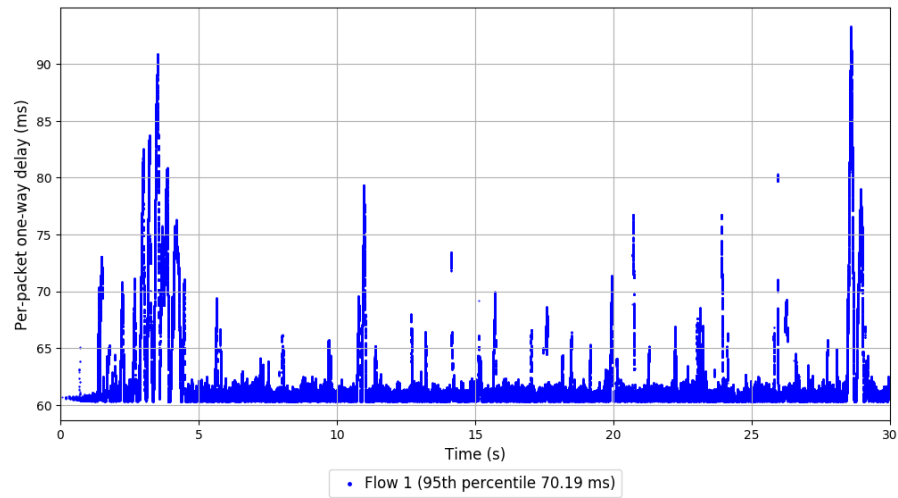
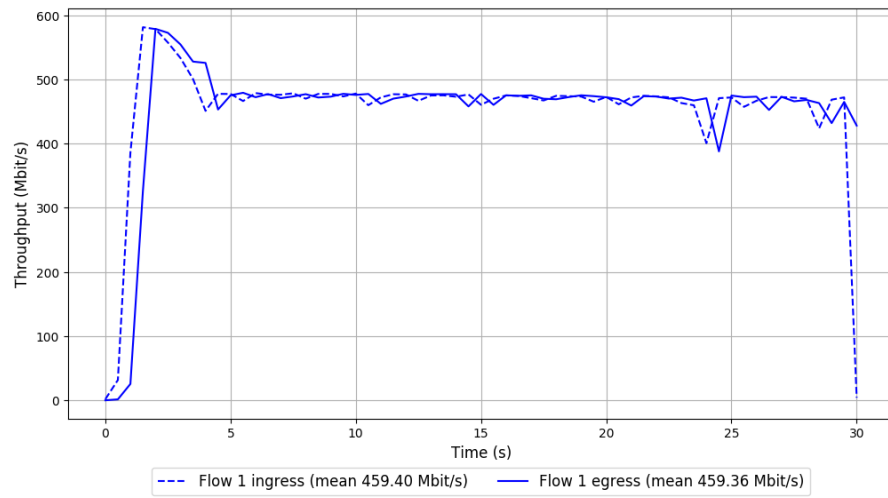## Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-07-18 17:59:03
End at: 2019-07-18 17:59:34
Local clock offset: -0.345 ms
Remote clock offset: -0.061 ms


# Below is generated by plot.py at 2019-07-18 20:50:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 459.36 Mbit/s
95th percentile per-packet one-way delay: 70.192 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 459.36 Mbit/s
95th percentile per-packet one-way delay: 70.192 ms
Loss rate: 0.41%
```
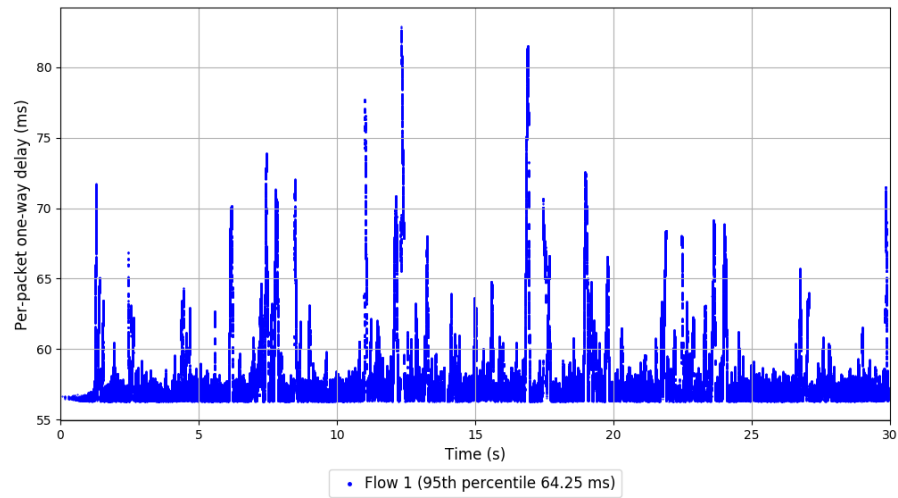
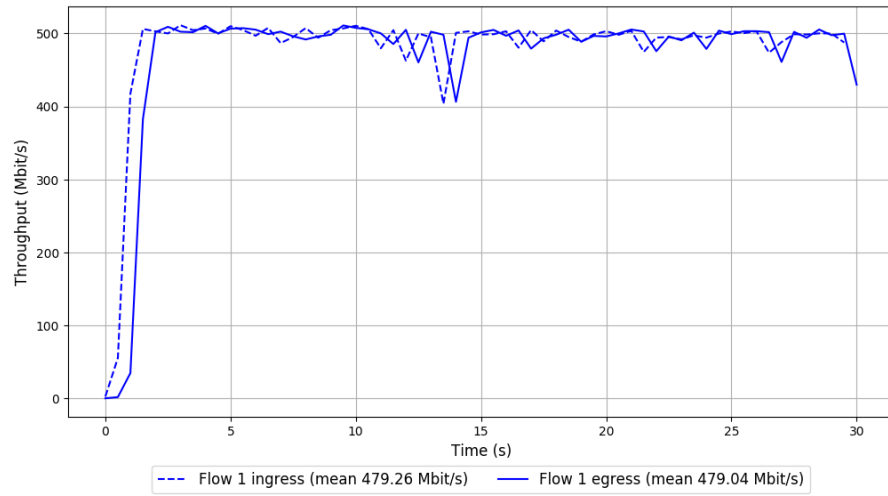Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-07-18 18:34:14
End at: 2019-07-18 18:34:44
Local clock offset: -0.432 ms
Remote clock offset: -0.081 ms


# Below is generated by plot.py at 2019-07-18 20:50:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 479.04 Mbit/s
95th percentile per-packet one-way delay: 64.251 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 479.04 Mbit/s
95th percentile per-packet one-way delay: 64.251 ms
Loss rate: 0.40%
```

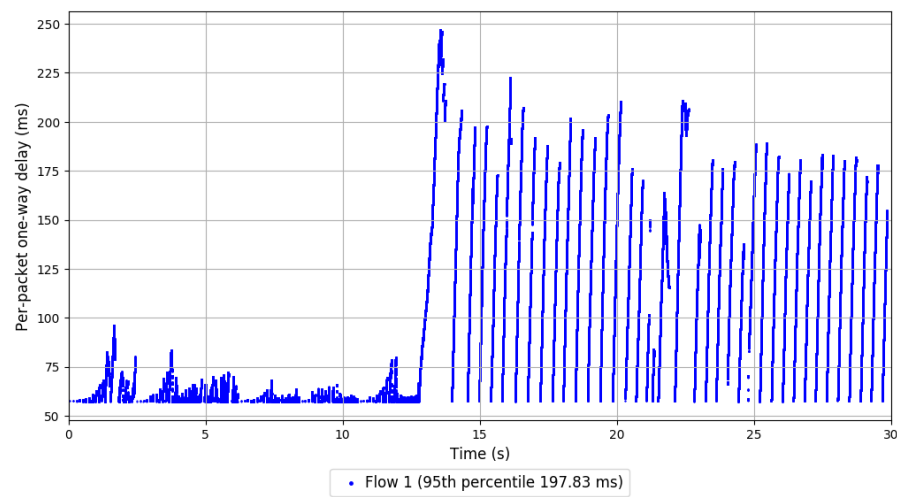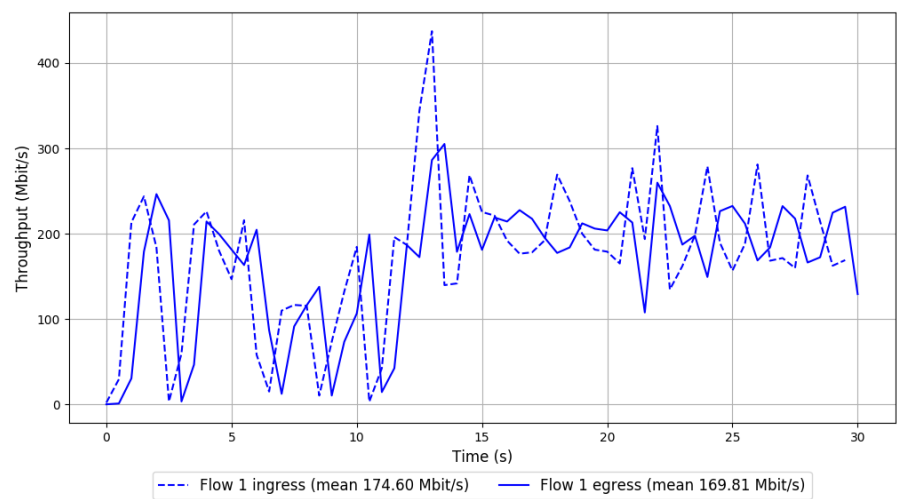Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-07-18 16:11:37
End at: 2019-07-18 16:12:07
Local clock offset: -0.061 ms
Remote clock offset: -0.173 ms


# Below is generated by plot.py at 2019-07-18 20:50:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 169.81 Mbit/s
95th percentile per-packet one-way delay: 197.833 ms
Loss rate: 2.61%
-- Flow 1:
Average throughput: 169.81 Mbit/s
95th percentile per-packet one-way delay: 197.833 ms
Loss rate: 2.61%
```
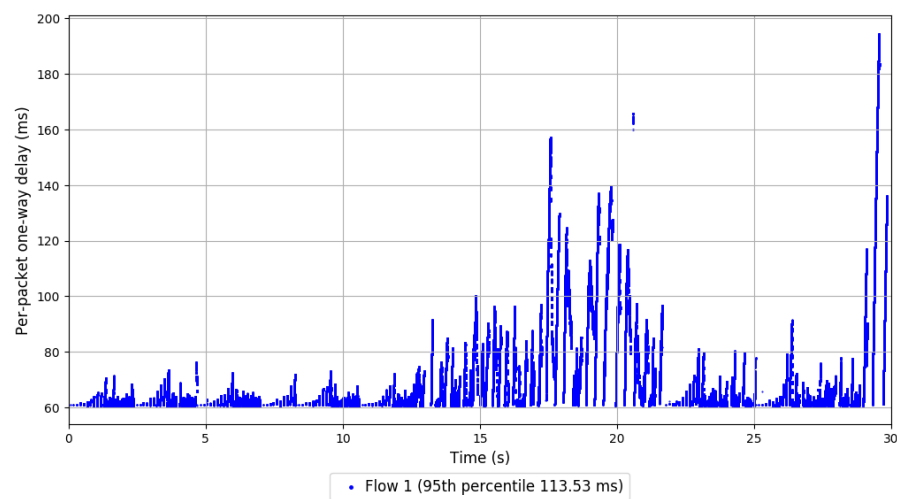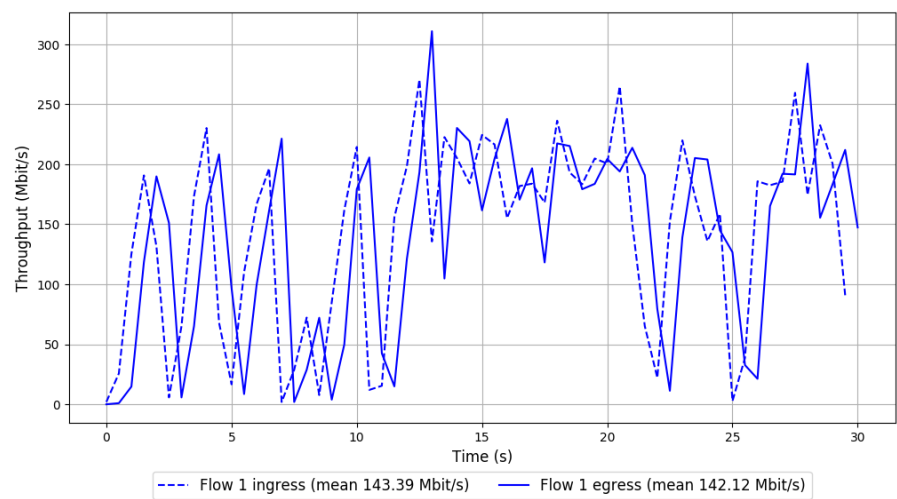
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-07-18 16:46:40
End at: 2019-07-18 16:47:10
Local clock offset: 0.085 ms
Remote clock offset: -0.082 ms


# Below is generated by plot.py at 2019-07-18 20:50:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 142.12 Mbit/s
95th percentile per-packet one-way delay: 113.535 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 142.12 Mbit/s
95th percentile per-packet one-way delay: 113.535 ms
Loss rate: 0.63%
```

Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-07-18 17:21:23
End at: 2019-07-18 17:21:53
Local clock offset: 0.352 ms
Remote clock offset: -0.05 ms


# Below is generated by plot.py at 2019-07-18 20:50:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 128.34 Mbit/s
95th percentile per-packet one-way delay: 125.679 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 128.34 Mbit/s
95th percentile per-packet one-way delay: 125.679 ms
Loss rate: 1.38%
```
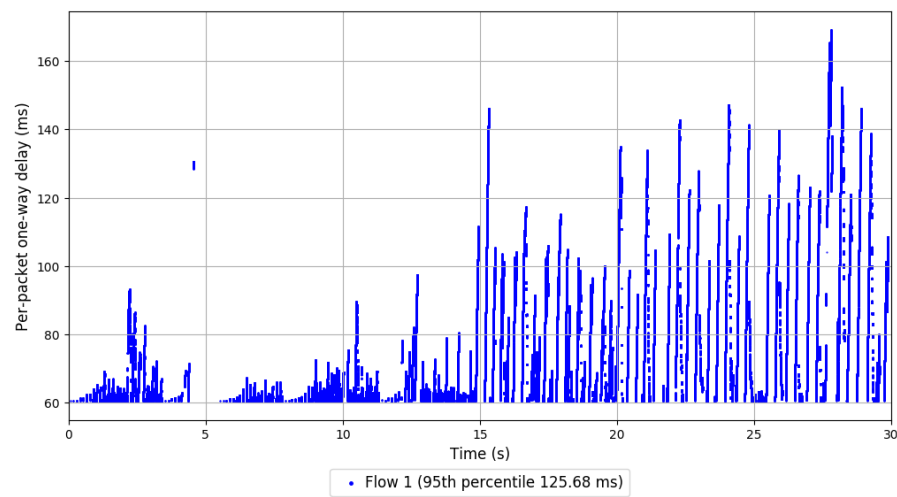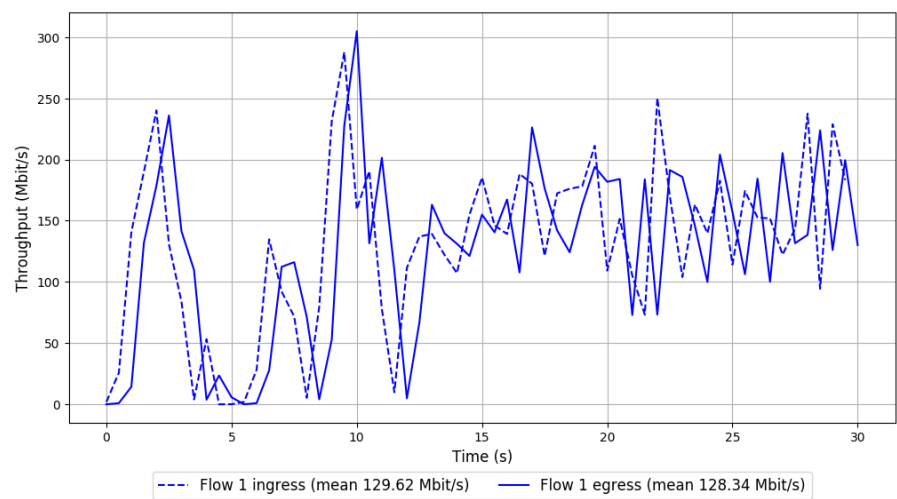
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-07-18 17:56:04
End at: 2019-07-18 17:56:34
Local clock offset: -0.472 ms
Remote clock offset: 0.019 ms


# Below is generated by plot.py at 2019-07-18 20:50:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.98 Mbit/s
95th percentile per-packet one-way delay: 118.419 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 179.98 Mbit/s
95th percentile per-packet one-way delay: 118.419 ms
Loss rate: 0.94%
```
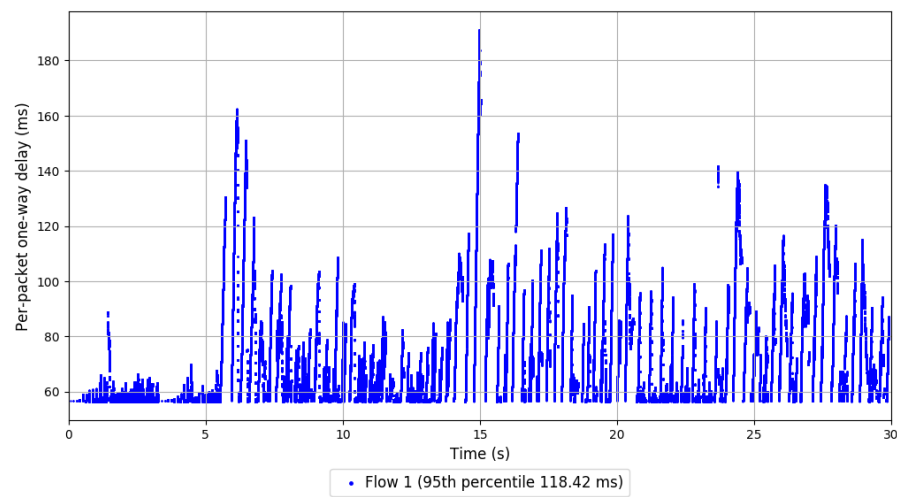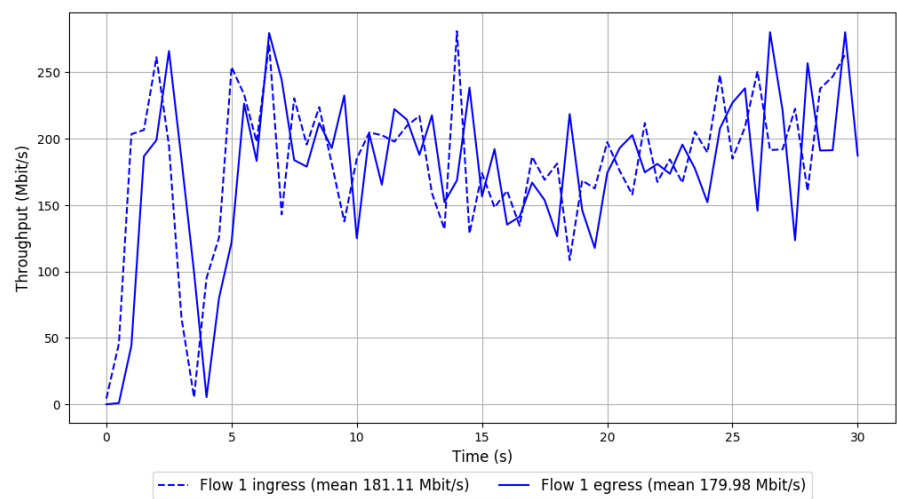
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-07-18 18:31:11
End at: 2019-07-18 18:31:41
Local clock offset: 0.253 ms
Remote clock offset: 0.238 ms


# Below is generated by plot.py at 2019-07-18 20:50:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 171.75 Mbit/s
95th percentile per-packet one-way delay: 184.272 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 171.75 Mbit/s
95th percentile per-packet one-way delay: 184.272 ms
Loss rate: 1.99%
```
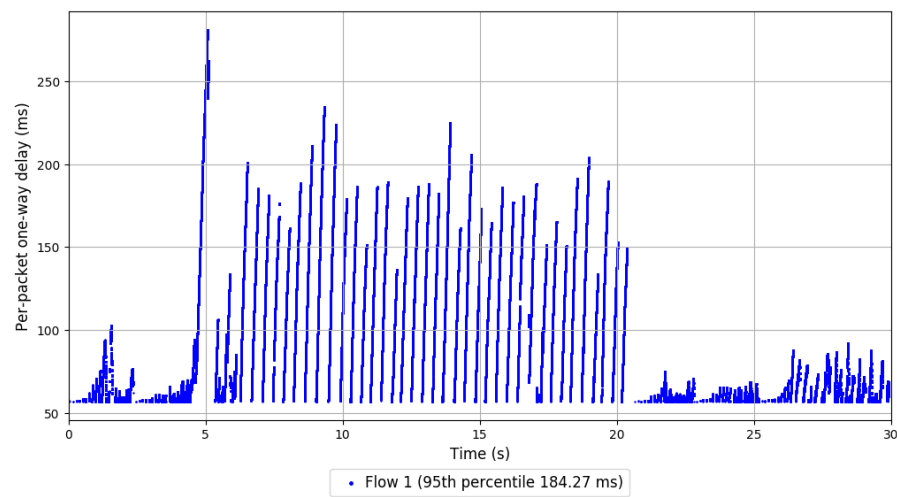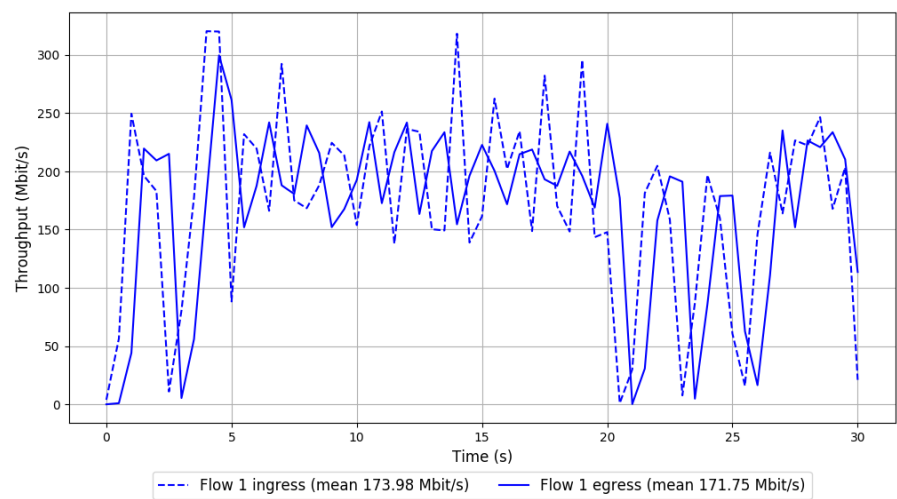
Run 5: Report of Verus — Data Link

Flow 1 ingress (mean 173.98 Mbit/s)   Flow 1 egress (mean 171.75 Mbit/s)

Flow 1 (95th percentile 184.27 ms)

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-07-18 16:08:39
End at: 2019-07-18 16:09:09
Local clock offset: 0.125 ms
Remote clock offset: -0.146 ms


# Below is generated by plot.py at 2019-07-18 20:50:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 233.14 Mbit/s
95th percentile per-packet one-way delay: 57.666 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 233.14 Mbit/s
95th percentile per-packet one-way delay: 57.666 ms
Loss rate: 0.69%
```
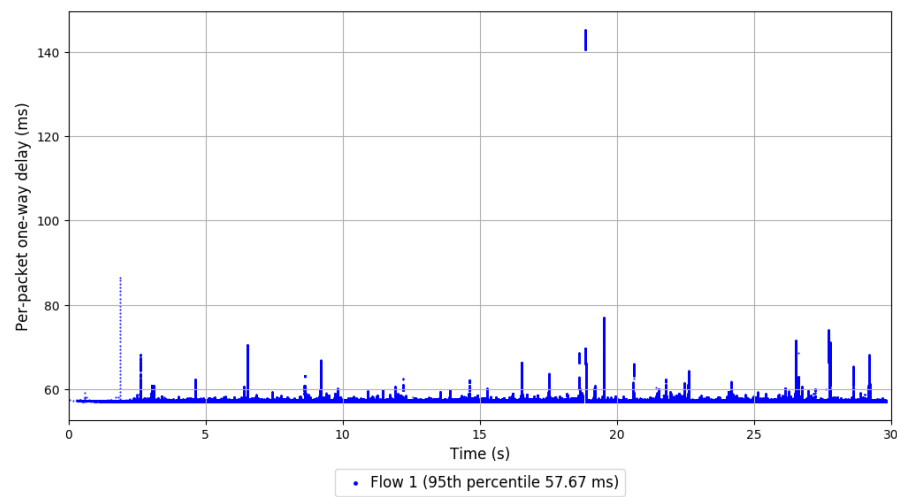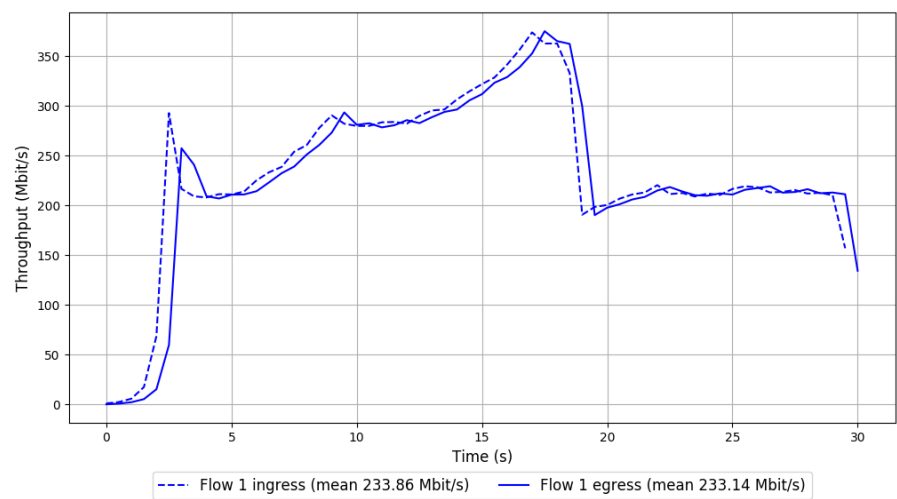
Run 1: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 233.86 Mbit/s)   Flow 1 egress (mean 233.14 Mbit/s)

Flow 1 (95th percentile 57.67 ms)

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-07-18 16:43:42
End at: 2019-07-18 16:44:12
Local clock offset: -0.105 ms
Remote clock offset: 0.839 ms


# Below is generated by plot.py at 2019-07-18 20:50:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 236.89 Mbit/s
95th percentile per-packet one-way delay: 76.837 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 236.89 Mbit/s
95th percentile per-packet one-way delay: 76.837 ms
Loss rate: 0.78%
```
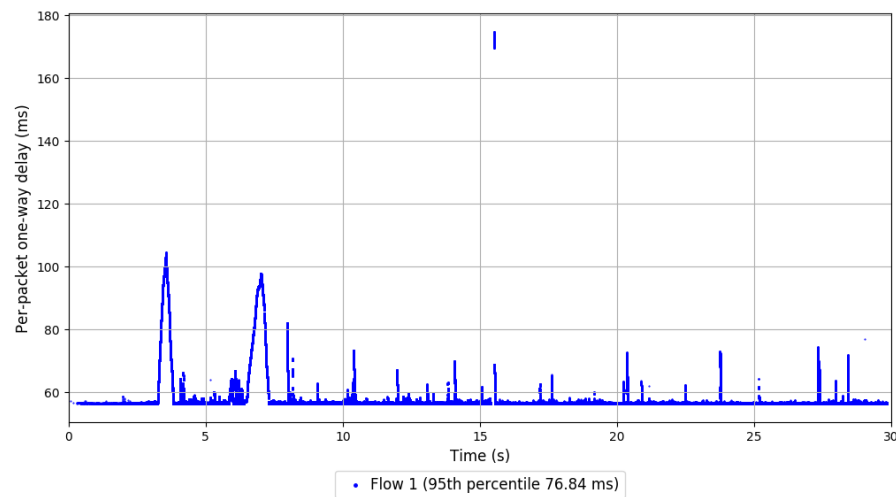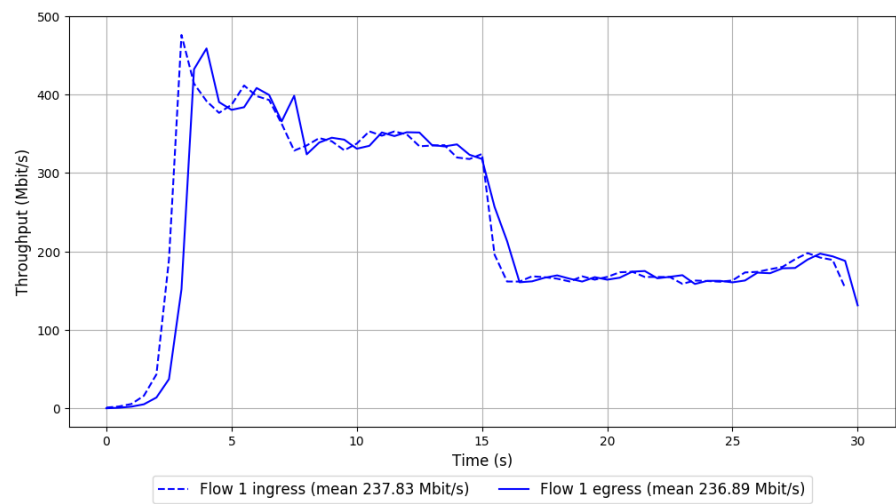
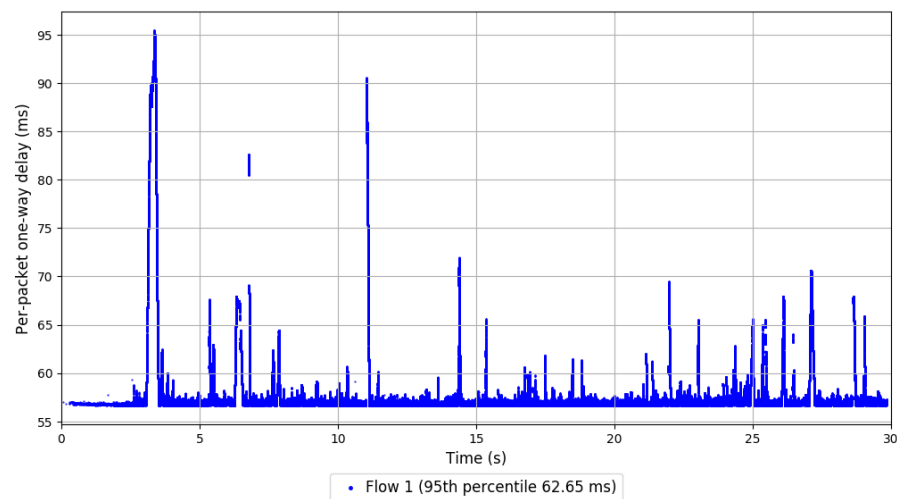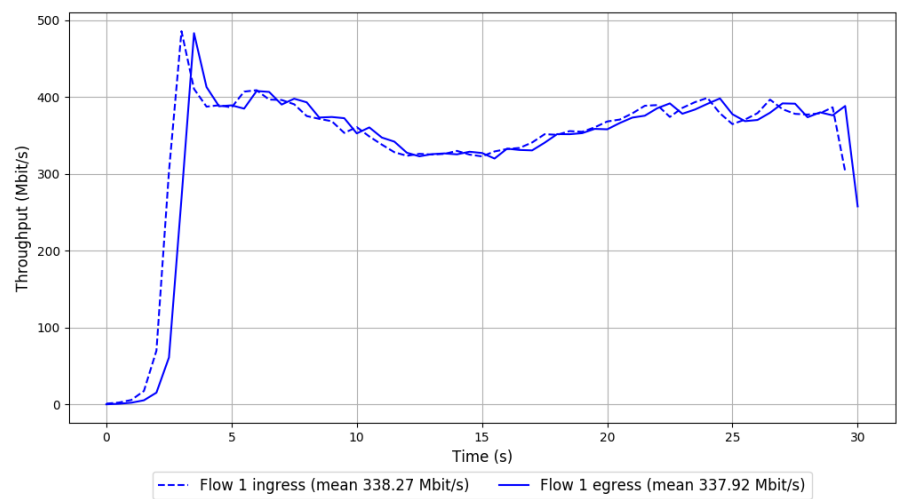Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-07-18 17:18:21
End at: 2019-07-18 17:18:51
Local clock offset: -0.029 ms
Remote clock offset: -0.002 ms

# Below is generated by plot.py at 2019-07-18 20:51:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 337.92 Mbit/s
95th percentile per-packet one-way delay: 62.651 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 337.92 Mbit/s
95th percentile per-packet one-way delay: 62.651 ms
Loss rate: 0.49%
```

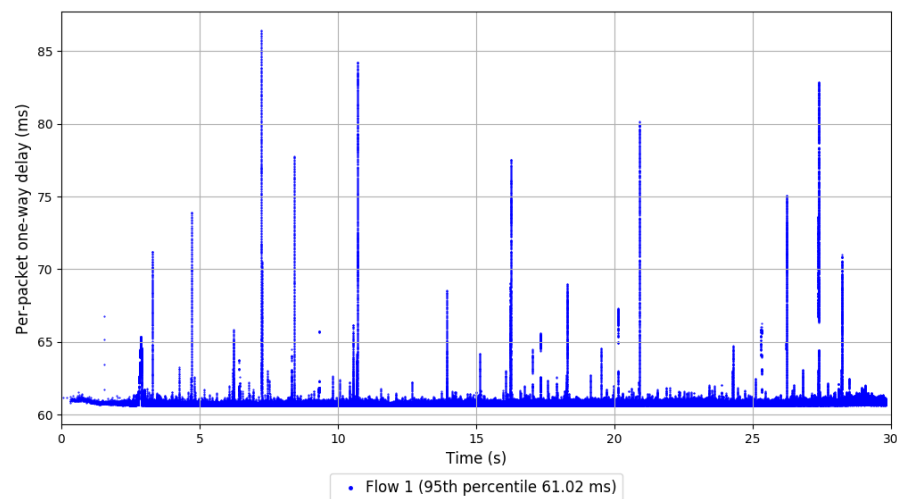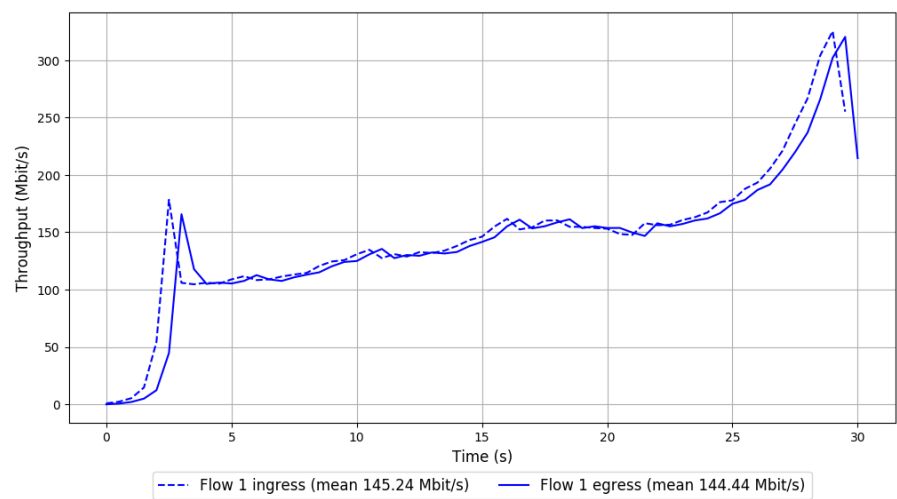## Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-07-18 17:53:09
End at: 2019-07-18 17:53:39
Local clock offset: 0.113 ms
Remote clock offset: -0.275 ms


# Below is generated by plot.py at 2019-07-18 20:51:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 144.44 Mbit/s
95th percentile per-packet one-way delay: 61.015 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 144.44 Mbit/s
95th percentile per-packet one-way delay: 61.015 ms
Loss rate: 0.95%
```

Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 145.24 Mbit/s)   Flow 1 egress (mean 144.44 Mbit/s)

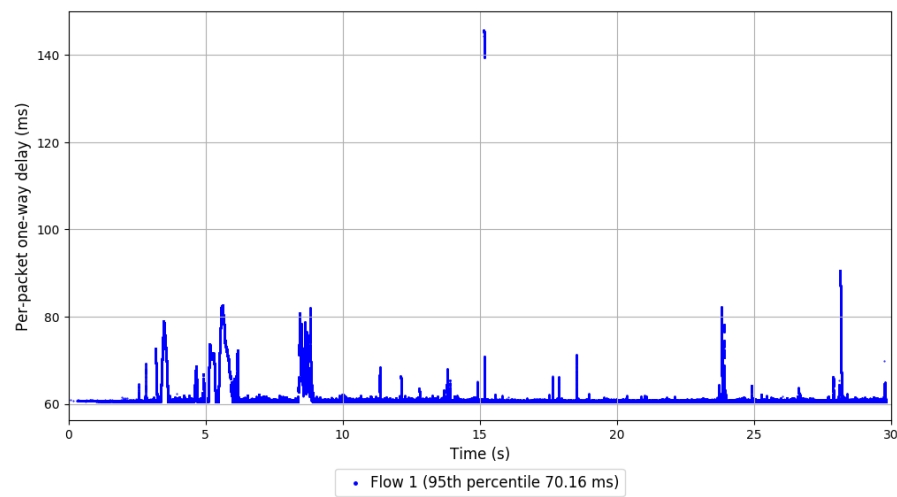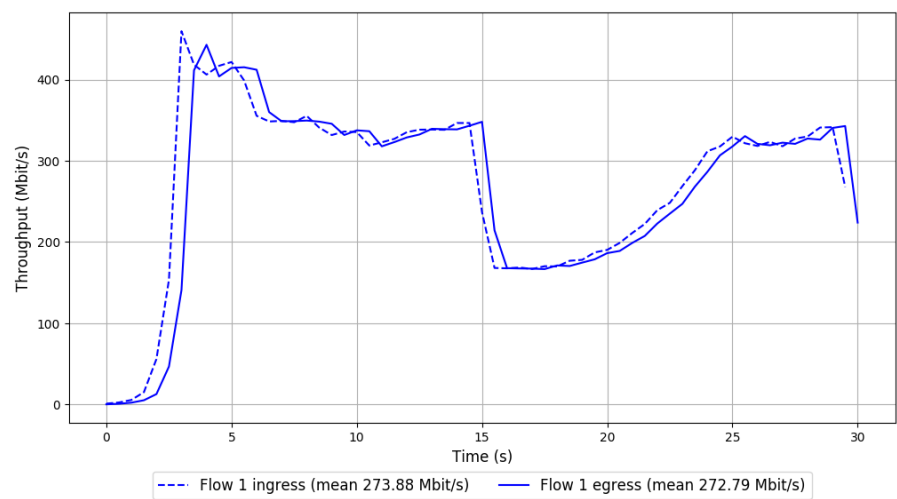

• Flow 1 (95th percentile 61.02 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-07-18 18:28:13
End at: 2019-07-18 18:28:43
Local clock offset: -0.018 ms
Remote clock offset: -0.667 ms


# Below is generated by plot.py at 2019-07-18 20:51:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 272.79 Mbit/s
95th percentile per-packet one-way delay: 70.155 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 272.79 Mbit/s
95th percentile per-packet one-way delay: 70.155 ms
Loss rate: 0.79%
```

Run 5: Report of PCC-Vivace — Data Link
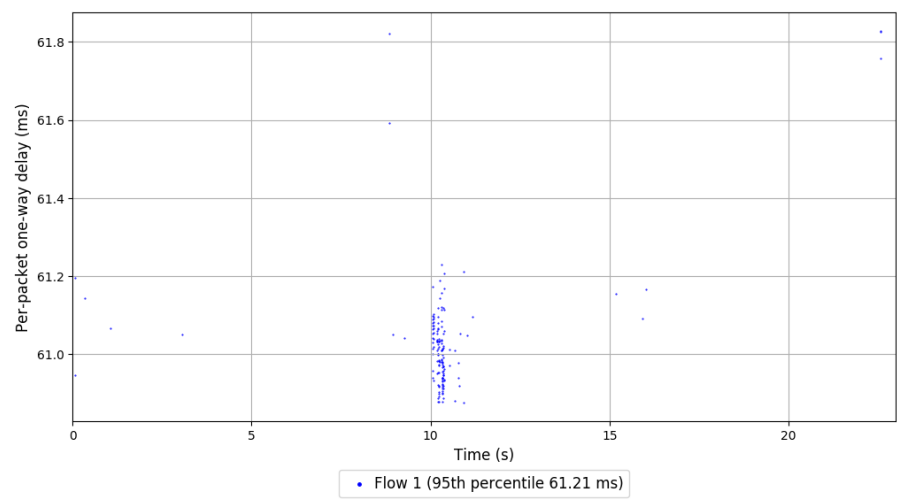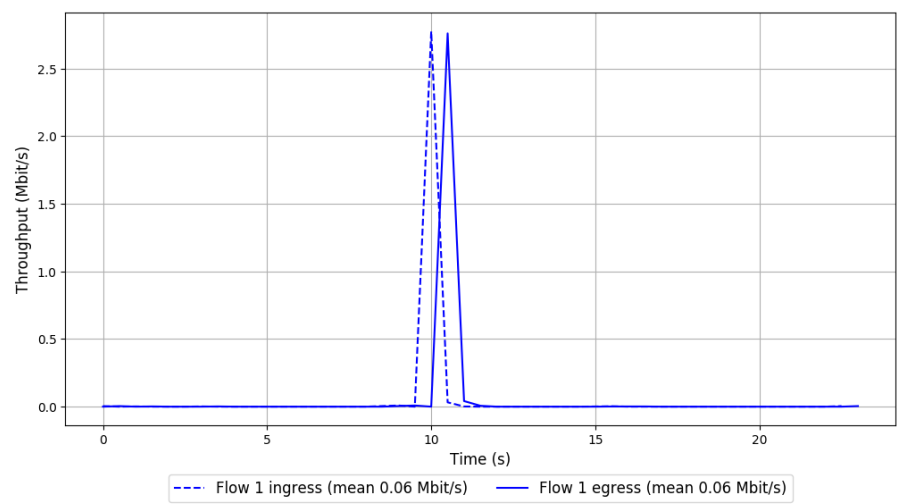
```
Run 1: Statistics of WebRTC media

Start at: 2019-07-18 16:04:26
End at: 2019-07-18 16:04:56
Local clock offset: 0.1 ms
Remote clock offset: -0.162 ms
```

Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-07-18 16:39:31
End at: 2019-07-18 16:40:01
Local clock offset: 0.314 ms
Remote clock offset: 0.013 ms


# Below is generated by plot.py at 2019-07-18 20:51:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.752 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.752 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-07-18 17:14:05
End at: 2019-07-18 17:14:35
Local clock offset: -0.026 ms
Remote clock offset: 0.005 ms


# Below is generated by plot.py at 2019-07-18 20:51:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.530 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.530 ms
Loss rate: 0.00%
```
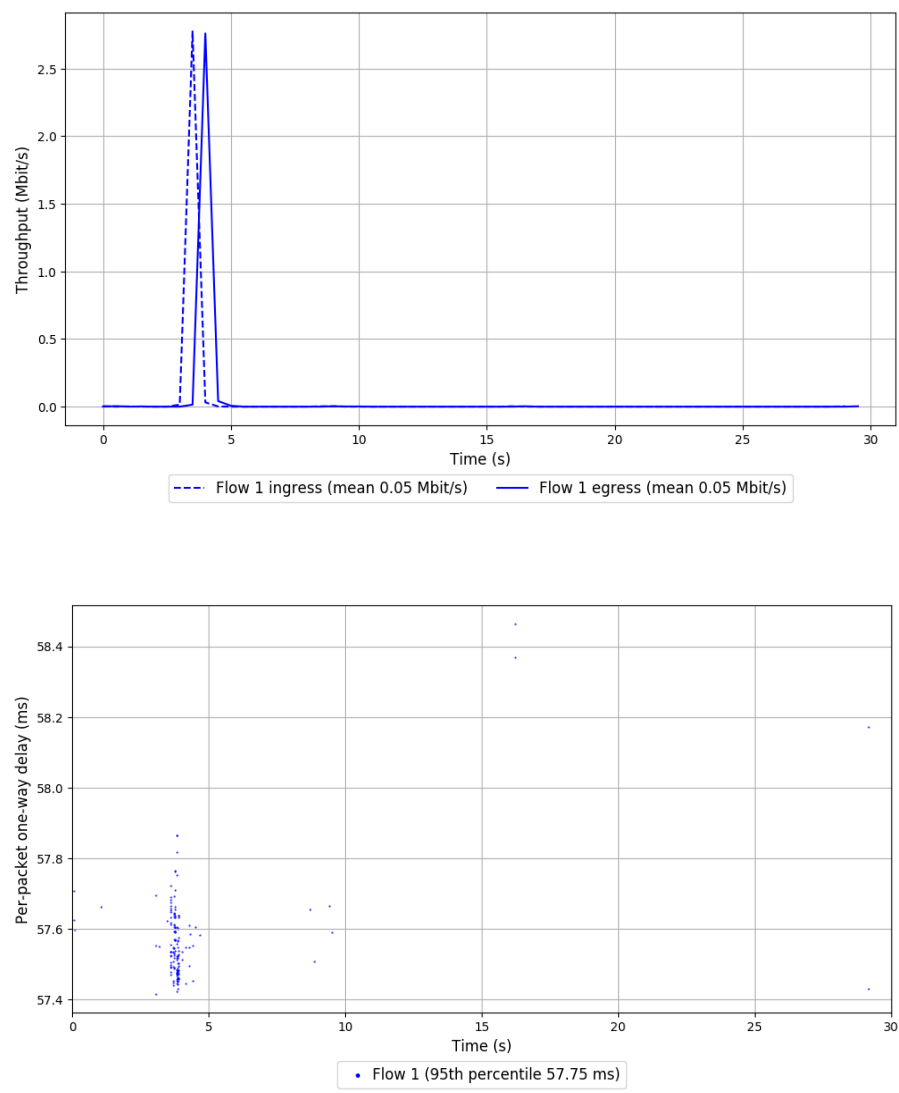
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-07-18 17:48:56
End at: 2019-07-18 17:49:26
Local clock offset: 0.359 ms
Remote clock offset: 0.501 ms


# Below is generated by plot.py at 2019-07-18 20:51:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.191 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.191 ms
Loss rate: 0.00%
```
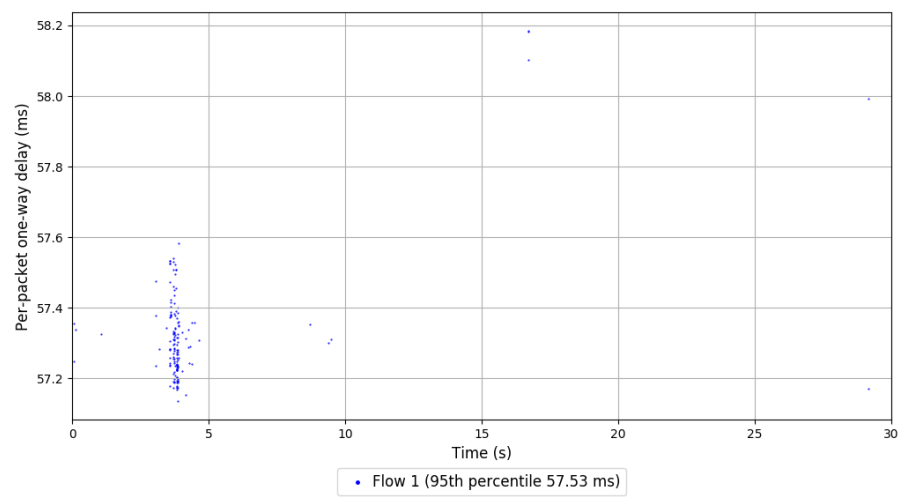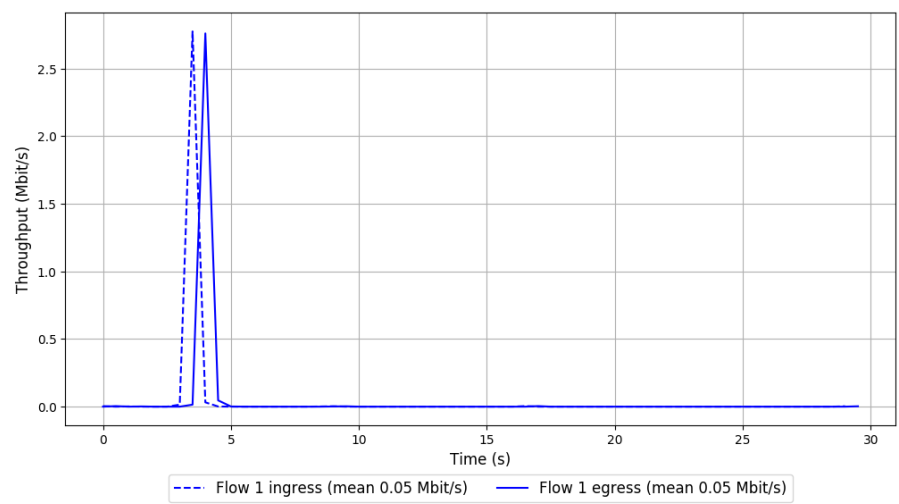
Run 4: Report of WebRTC media — Data Link

Flow 1 ingress (mean 0.05 Mbit/s) --- Flow 1 egress (mean 0.05 Mbit/s)

Flow 1 (95th percentile 57.19 ms)

```
Run 5: Statistics of WebRTC media

Start at: 2019-07-18 18:23:54
End at: 2019-07-18 18:24:24
Local clock offset: -0.43 ms
Remote clock offset: -0.106 ms


# Below is generated by plot.py at 2019-07-18 20:51:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.010 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.010 ms
Loss rate: 0.00%
```
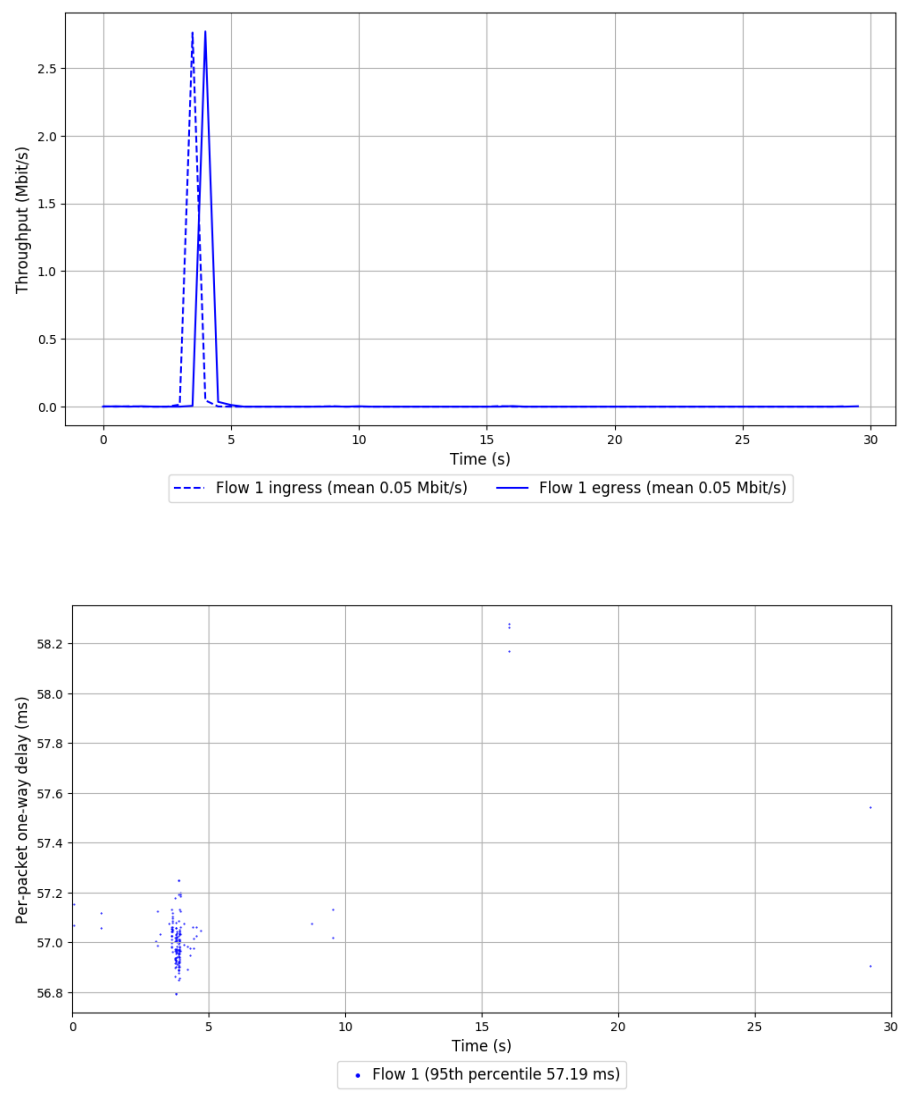
Run 5: Report of WebRTC media — Data Link