Pantheon Report

Generated at 2019-07-13 01:45:47 (UTC).

Data path: GCE Iowa on `ens4` (*remote*) →GCE London 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.
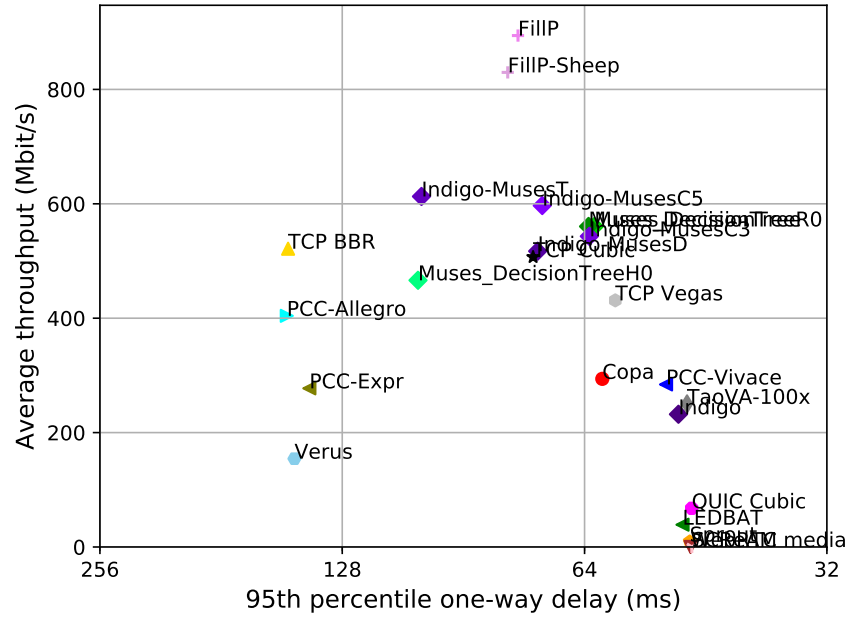
```
System info:
Linux 4.15.0-1034-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ 2076e1149a241f3edb4365d686df32342bf9561f
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 @ 8bb93ffff2b107204a92d8b72449fc0c55e15f00
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
```
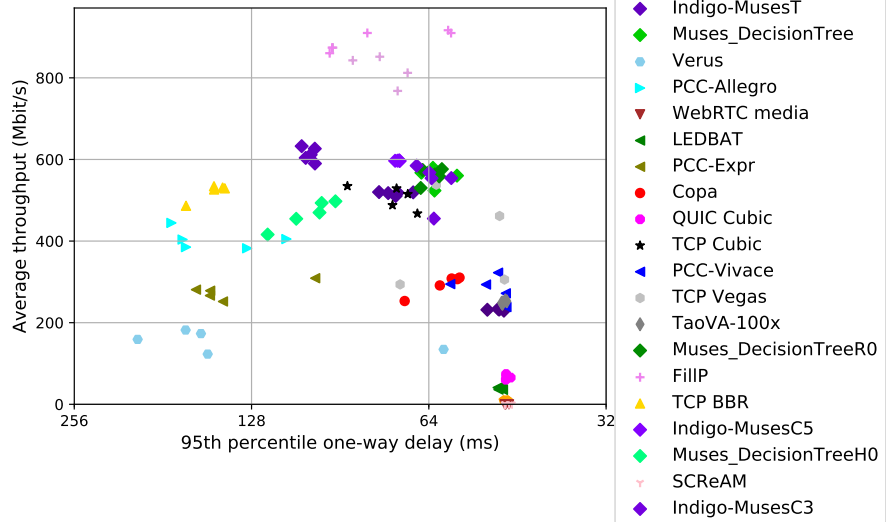
```
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from GCE Iowa to GCE London, 5 runs of 30s each per scheme
(mean of all runs by scheme)

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

3

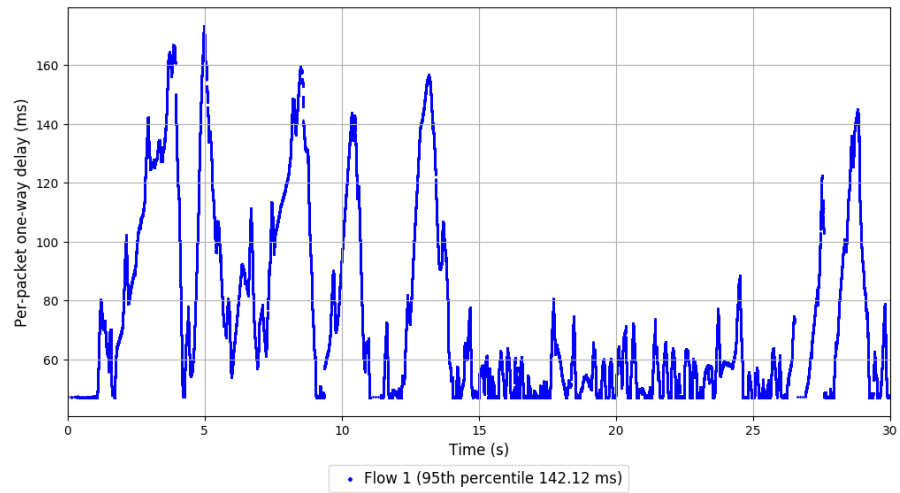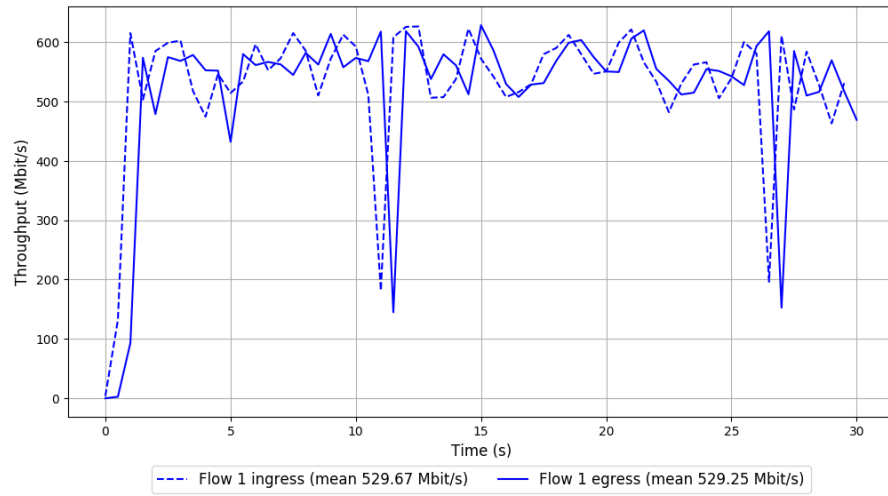| scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	521.50	149.45	0.54
Copa	5	293.97	60.83	0.34
TCP Cubic	5	506.85	74.15	0.36
FillP	5	894.14	77.42	0.43
FillP-Sheep	5	829.75	79.73	0.42
Indigo	5	232.06	48.93	0.33
Indigo-MusesC3	5	543.24	63.14	0.31
Indigo-MusesC5	4	596.94	72.23	0.38
Indigo-MusesD	5	517.20	73.19	0.40
Indigo-MusesT	5	612.87	102.04	0.46
LEDBAT	5	38.99	48.37	0.40
Muses_DecisionTree	5	560.34	62.24	0.40
Muses_DecisionTreeH0	5	466.28	103.06	0.50
Muses_DecisionTreeR0	5	560.46	63.28	0.36
PCC-Allegro	5	404.14	149.99	2.71
PCC-Expr	5	277.36	140.63	1.70
QUIC Cubic	4	67.62	47.11	0.49
SCReAM	5	0.22	47.10	0.34
Sprout	5	9.58	47.39	0.33
TaoVA-100x	5	250.23	47.74	0.33
TCP Vegas	5	431.17	58.61	0.32
Verus	5	154.39	146.75	0.70
PCC-Vivace	5	284.18	50.70	0.37
WebRTC media	4	0.05	47.27	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-07-12 20:48:07
End at: 2019-07-12 20:48:37
Local clock offset: 0.002 ms
Remote clock offset: -0.182 ms


# Below is generated by plot.py at 2019-07-12 23:54:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 529.25 Mbit/s
95th percentile per-packet one-way delay: 142.120 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 529.25 Mbit/s
95th percentile per-packet one-way delay: 142.120 ms
Loss rate: 0.40%
```
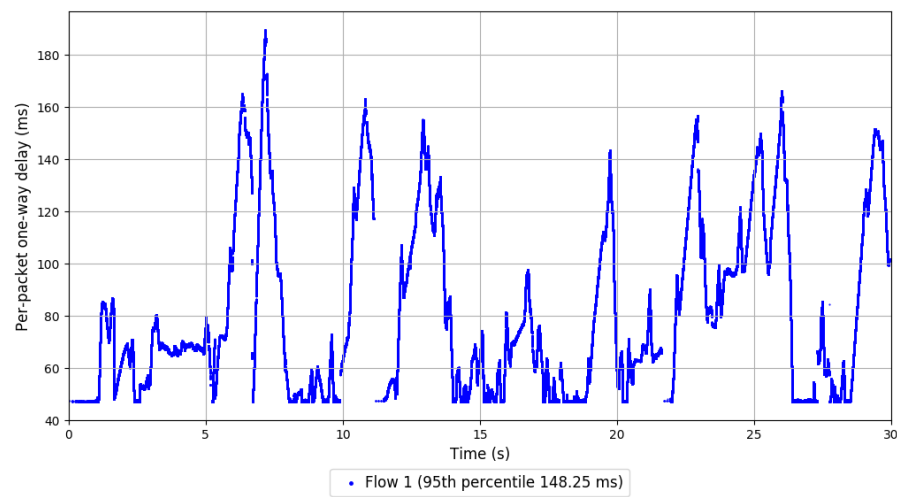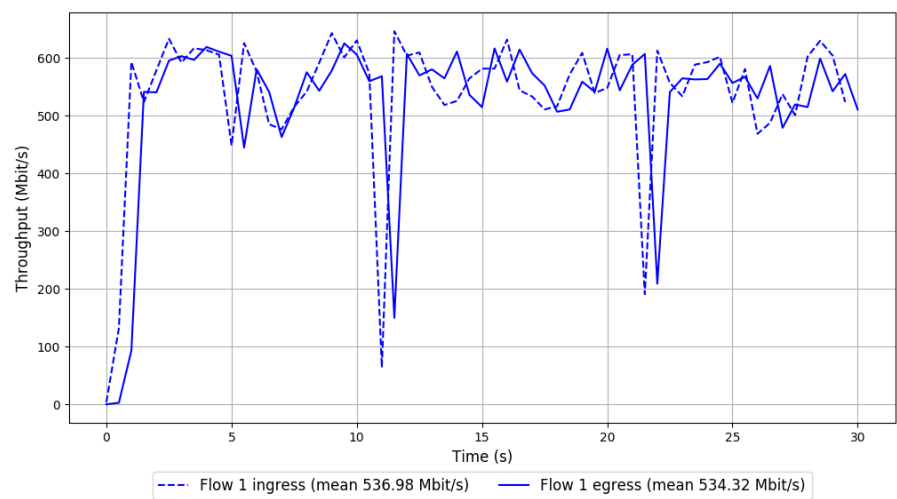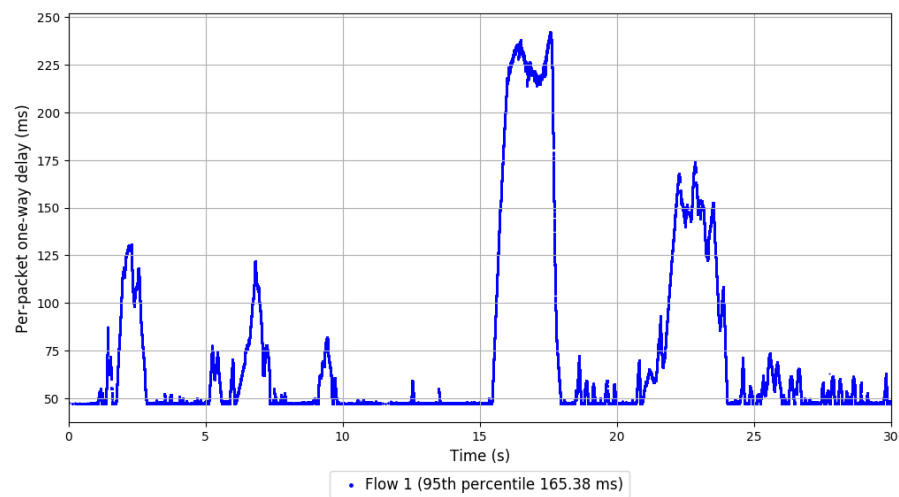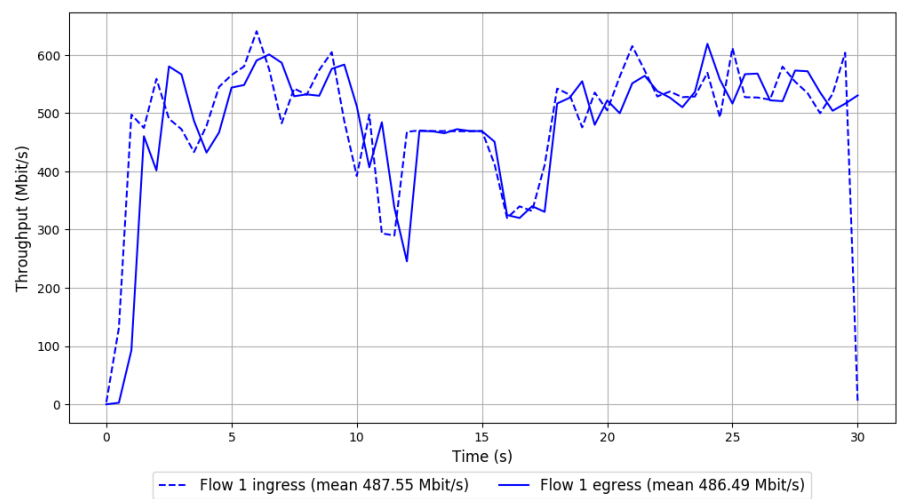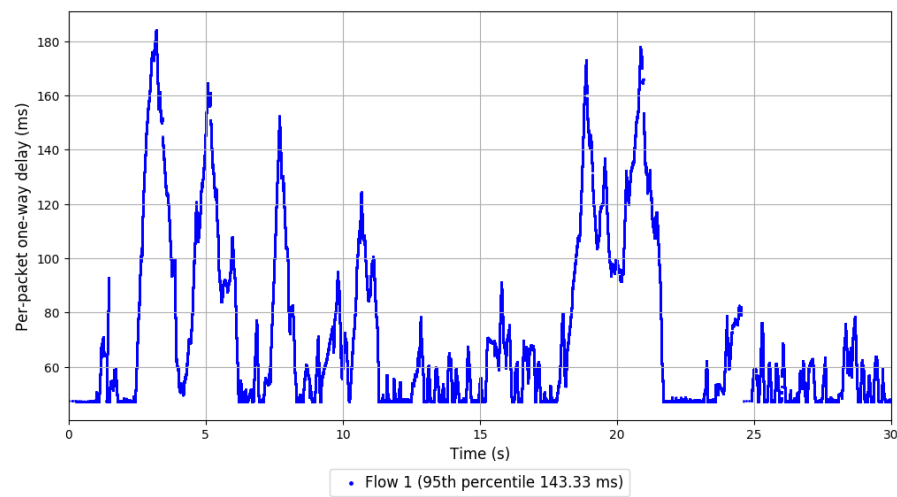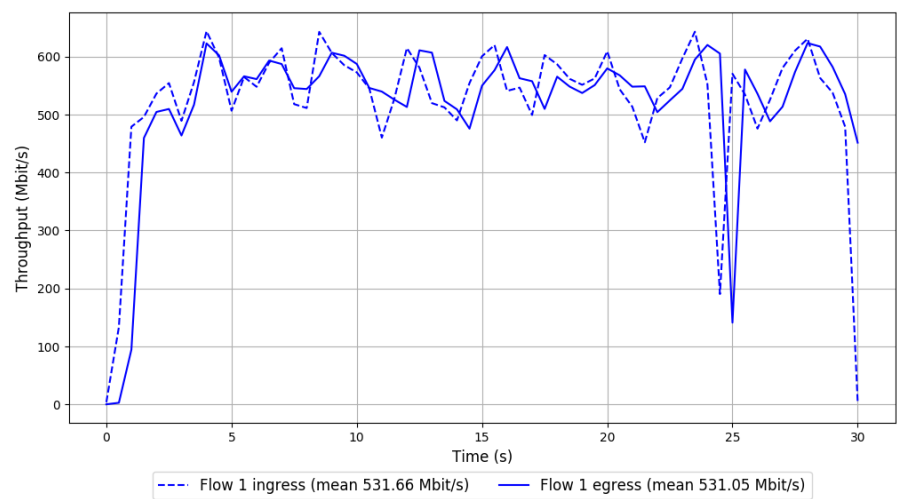
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-07-12 21:23:05
End at: 2019-07-12 21:23:35
Local clock offset: 0.001 ms
Remote clock offset: -0.225 ms


# Below is generated by plot.py at 2019-07-12 23:54:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 534.32 Mbit/s
95th percentile per-packet one-way delay: 148.245 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 534.32 Mbit/s
95th percentile per-packet one-way delay: 148.245 ms
Loss rate: 0.81%
```

Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-07-12 21:58:01
End at: 2019-07-12 21:58:31
Local clock offset: 0.026 ms
Remote clock offset: -0.275 ms


# Below is generated by plot.py at 2019-07-12 23:54:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 486.49 Mbit/s
95th percentile per-packet one-way delay: 165.381 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 486.49 Mbit/s
95th percentile per-packet one-way delay: 165.381 ms
Loss rate: 0.53%
```
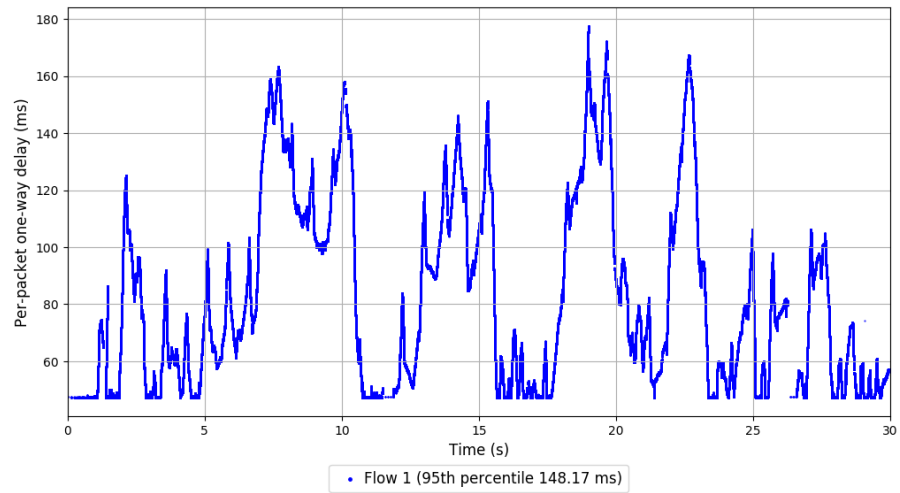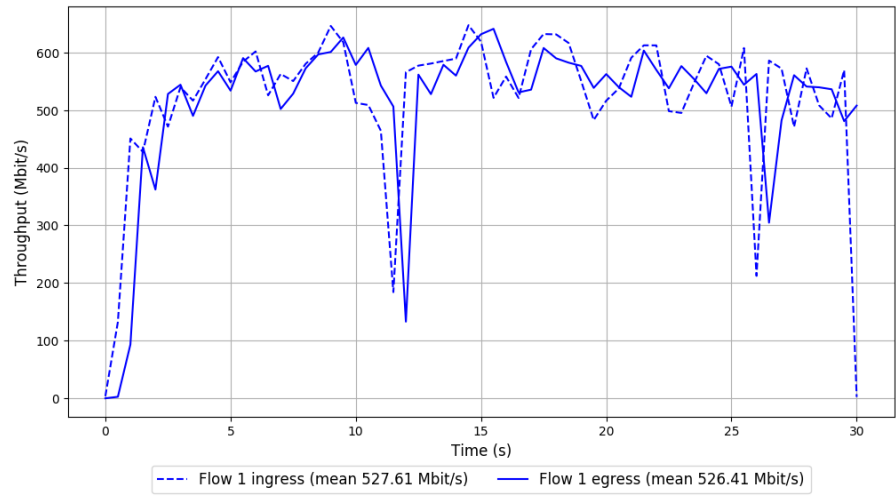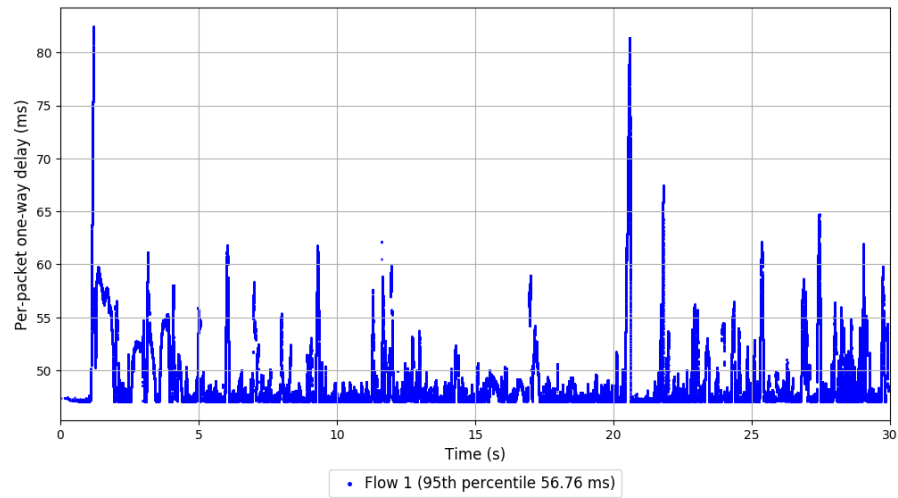
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 487.55 Mbit/s)   Flow 1 egress (mean 486.49 Mbit/s)

· Flow 1 (95th percentile 165.38 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-07-12 22:32:49
End at: 2019-07-12 22:33:19
Local clock offset: 0.013 ms
Remote clock offset: -0.344 ms


# Below is generated by plot.py at 2019-07-12 23:54:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 531.05 Mbit/s
95th percentile per-packet one-way delay: 143.328 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 531.05 Mbit/s
95th percentile per-packet one-way delay: 143.328 ms
Loss rate: 0.43%
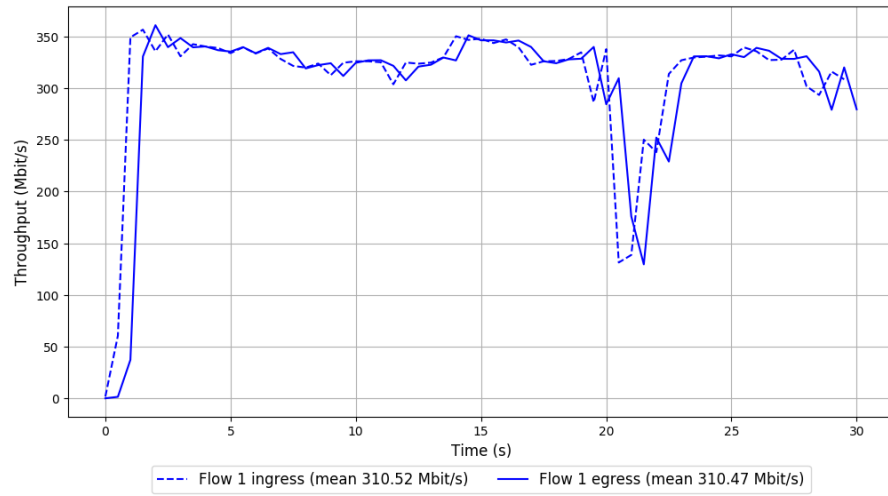```

Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2019-07-12 23:07:34
End at: 2019-07-12 23:08:04
Local clock offset: 0.035 ms
Remote clock offset: -0.207 ms

Below is generated by plot.py at 2019-07-12 23:54:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 526.41 Mbit/s
95th percentile per-packet one-way delay: 148.173 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 526.41 Mbit/s
95th percentile per-packet one-way delay: 148.173 ms
Loss rate: 0.54%
```
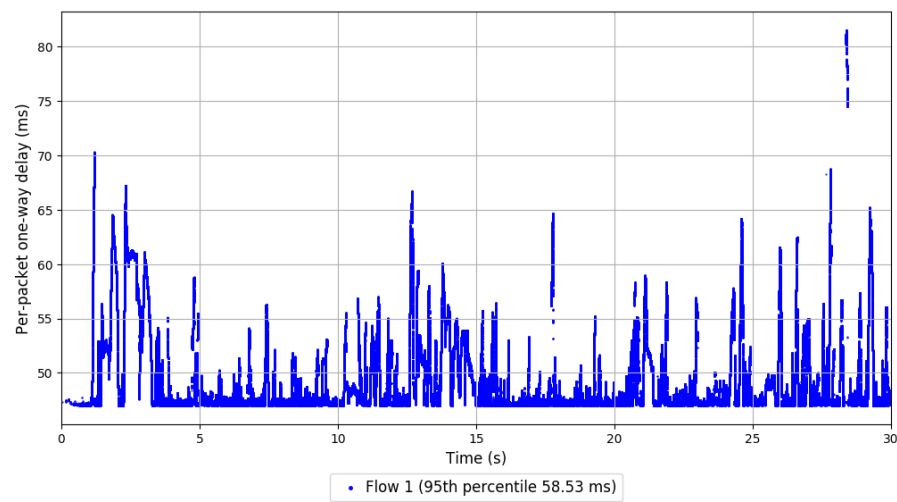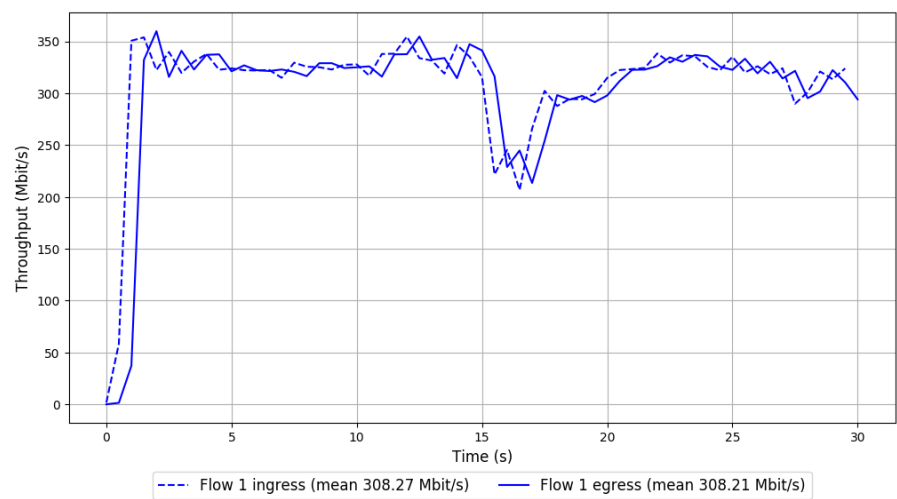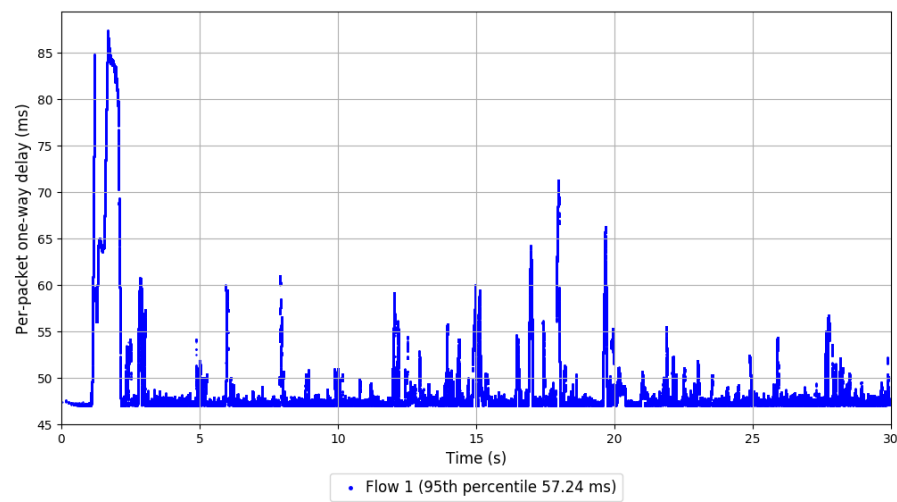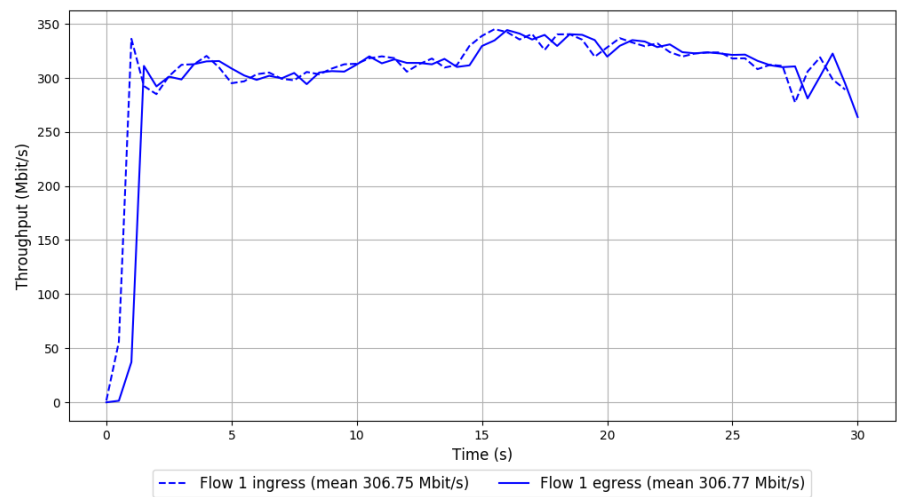
Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2019-07-12 21:05:16
End at: 2019-07-12 21:05:46
Local clock offset: -0.01 ms
Remote clock offset: -0.222 ms


# Below is generated by plot.py at 2019-07-12 23:55:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 310.47 Mbit/s
95th percentile per-packet one-way delay: 56.760 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 310.47 Mbit/s
95th percentile per-packet one-way delay: 56.760 ms
Loss rate: 0.33%
```

Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-07-12 21:40:12
End at: 2019-07-12 21:40:42
Local clock offset: -0.028 ms
Remote clock offset: -0.265 ms


# Below is generated by plot.py at 2019-07-12 23:55:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 308.21 Mbit/s
95th percentile per-packet one-way delay: 58.530 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 308.21 Mbit/s
95th percentile per-packet one-way delay: 58.530 ms
Loss rate: 0.33%
```
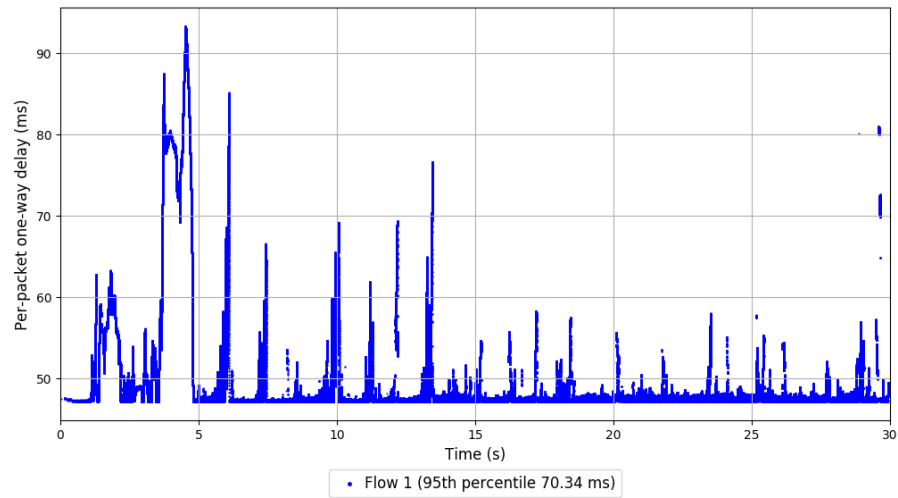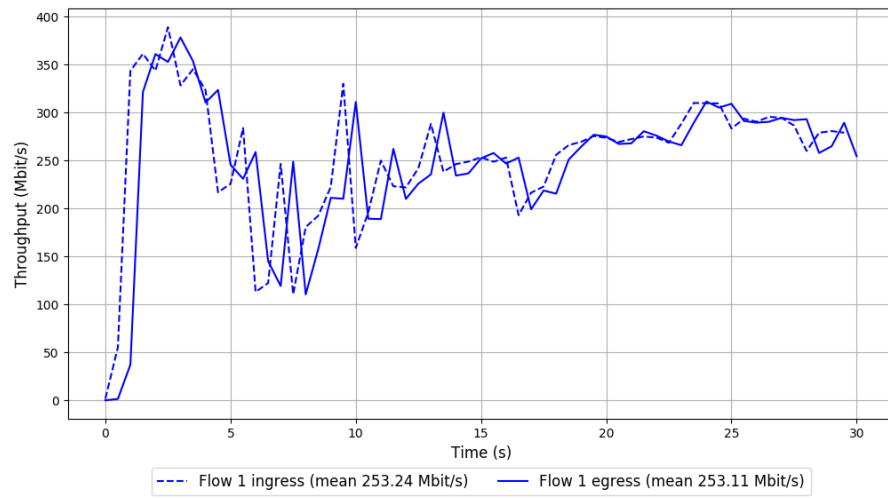
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 308.27 Mbit/s)　　　Flow 1 egress (mean 308.21 Mbit/s)

• Flow 1 (95th percentile 58.53 ms)

```
Run 3: Statistics of Copa

Start at: 2019-07-12 22:15:10
End at: 2019-07-12 22:15:40
Local clock offset: 0.025 ms
Remote clock offset: -0.326 ms


# Below is generated by plot.py at 2019-07-12 23:55:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 306.77 Mbit/s
95th percentile per-packet one-way delay: 57.238 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 306.77 Mbit/s
95th percentile per-packet one-way delay: 57.238 ms
Loss rate: 0.31%
```
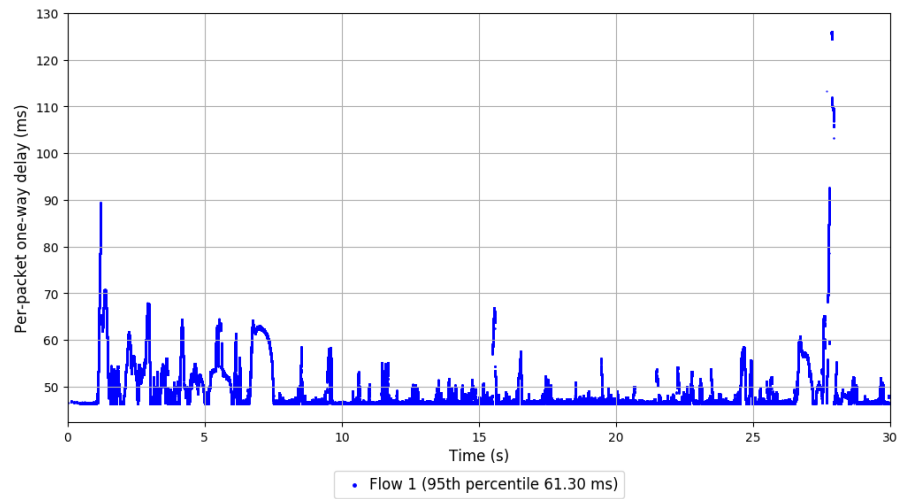
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-07-12 22:49:58
End at: 2019-07-12 22:50:28
Local clock offset: 0.027 ms
Remote clock offset: -0.36 ms


# Below is generated by plot.py at 2019-07-13 00:02:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 253.11 Mbit/s
95th percentile per-packet one-way delay: 70.341 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 253.11 Mbit/s
95th percentile per-packet one-way delay: 70.341 ms
Loss rate: 0.37%
```
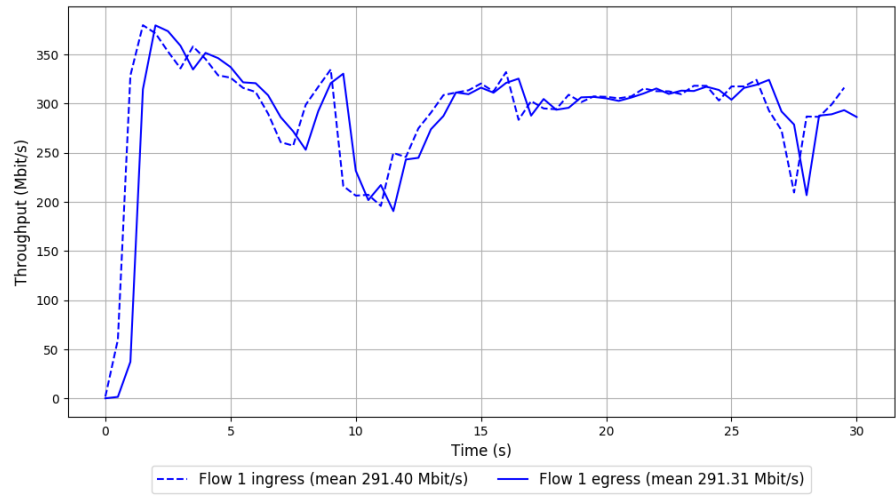
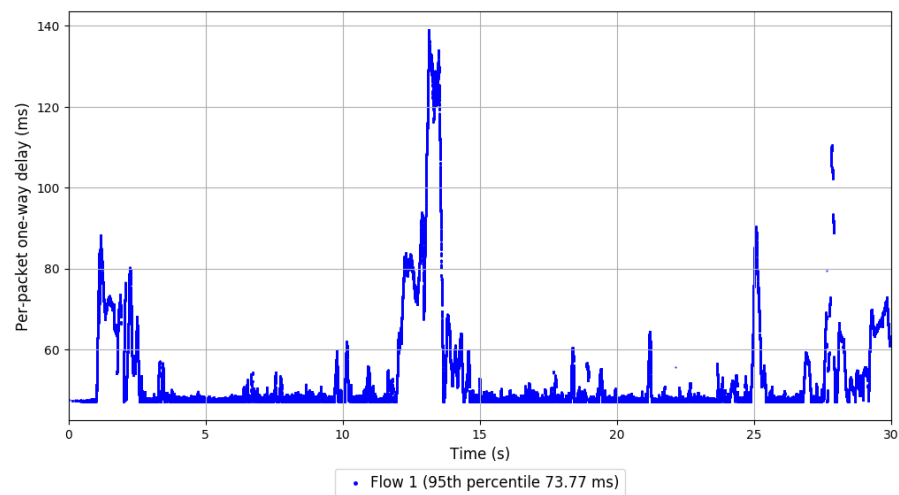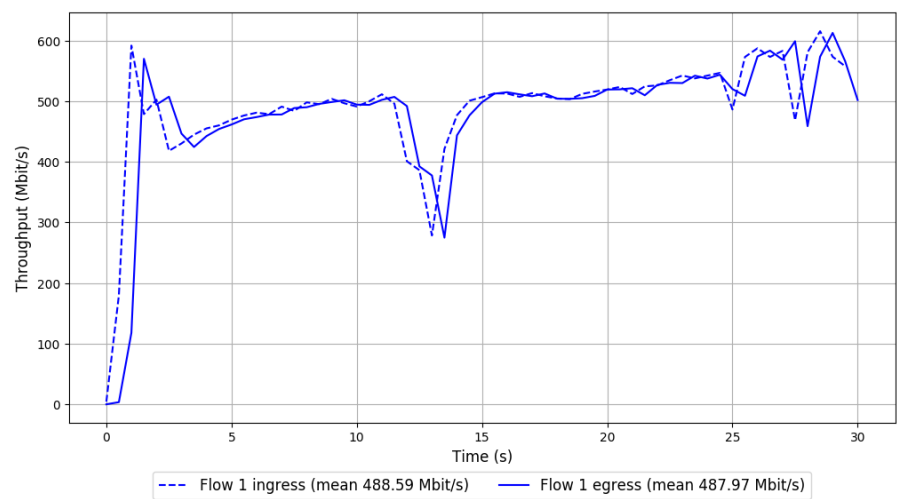Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2019-07-12 23:24:56
End at: 2019-07-12 23:25:26
Local clock offset: -0.02 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2019-07-13 00:03:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 291.31 Mbit/s
95th percentile per-packet one-way delay: 61.303 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 291.31 Mbit/s
95th percentile per-packet one-way delay: 61.303 ms
Loss rate: 0.34%
```
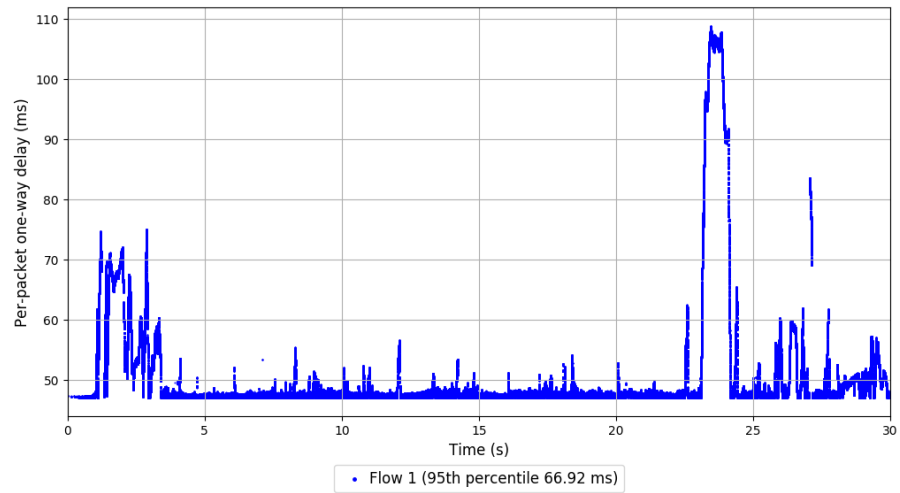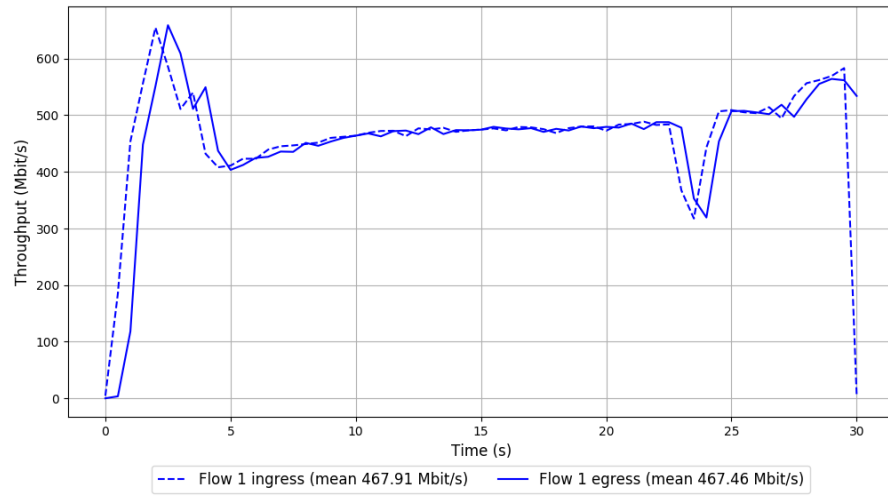
Run 5: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2019-07-12 21:06:51
End at: 2019-07-12 21:07:21
Local clock offset: 0.027 ms
Remote clock offset: -0.233 ms


# Below is generated by plot.py at 2019-07-13 00:03:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 487.97 Mbit/s
95th percentile per-packet one-way delay: 73.772 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 487.97 Mbit/s
95th percentile per-packet one-way delay: 73.772 ms
Loss rate: 0.44%
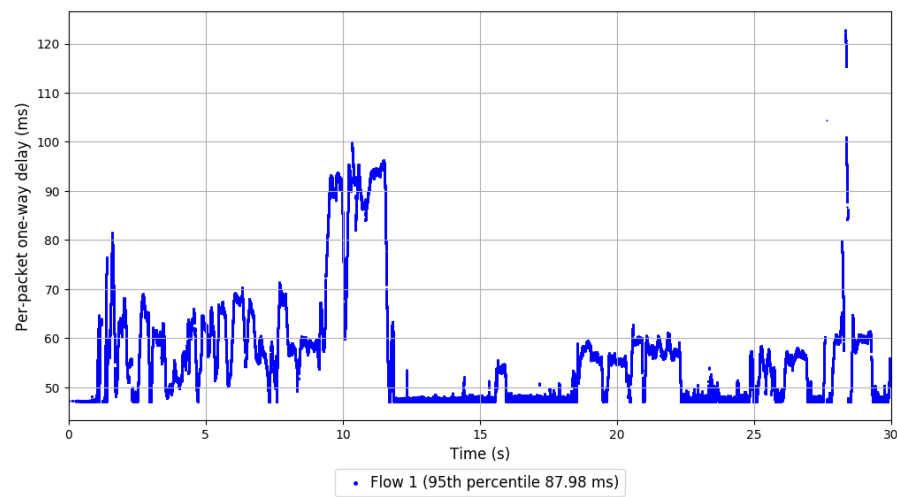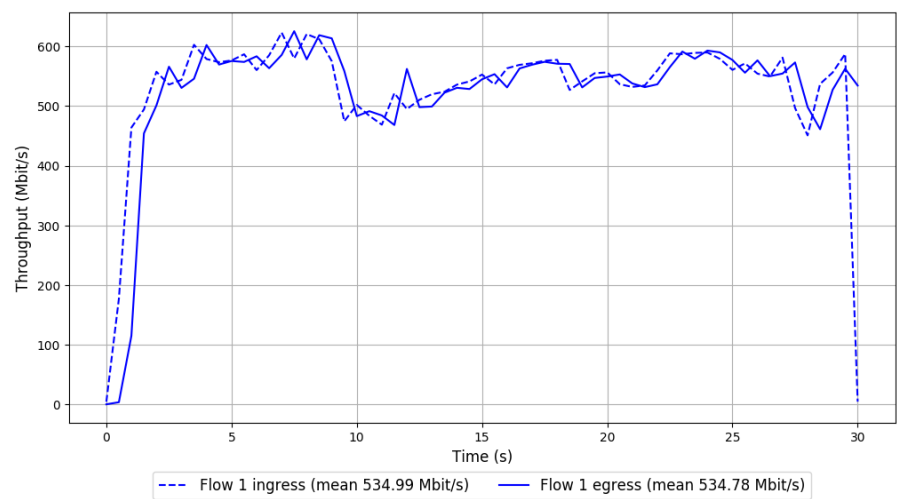```

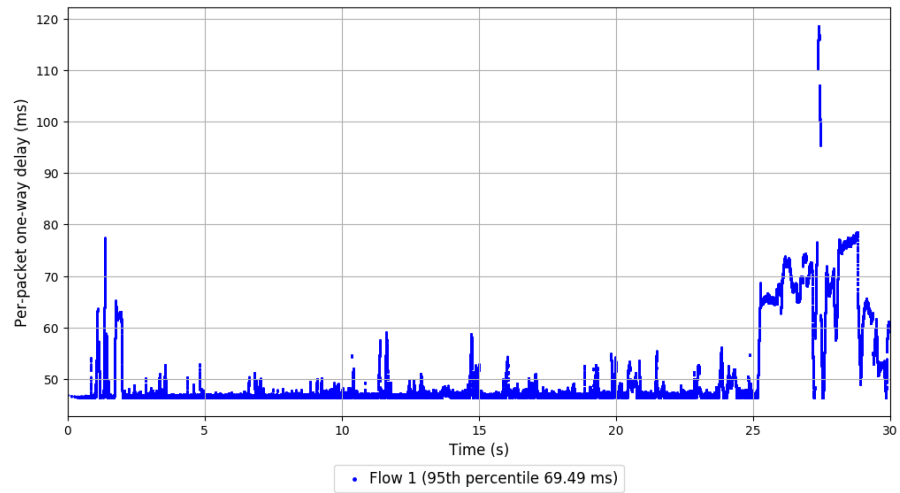Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-07-12 21:41:47
End at: 2019-07-12 21:42:17
Local clock offset: -0.008 ms
Remote clock offset: -0.274 ms


# Below is generated by plot.py at 2019-07-13 00:03:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 467.46 Mbit/s
95th percentile per-packet one-way delay: 66.923 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 467.46 Mbit/s
95th percentile per-packet one-way delay: 66.923 ms
Loss rate: 0.41%
```

Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 467.91 Mbit/s)   Flow 1 egress (mean 467.46 Mbit/s)
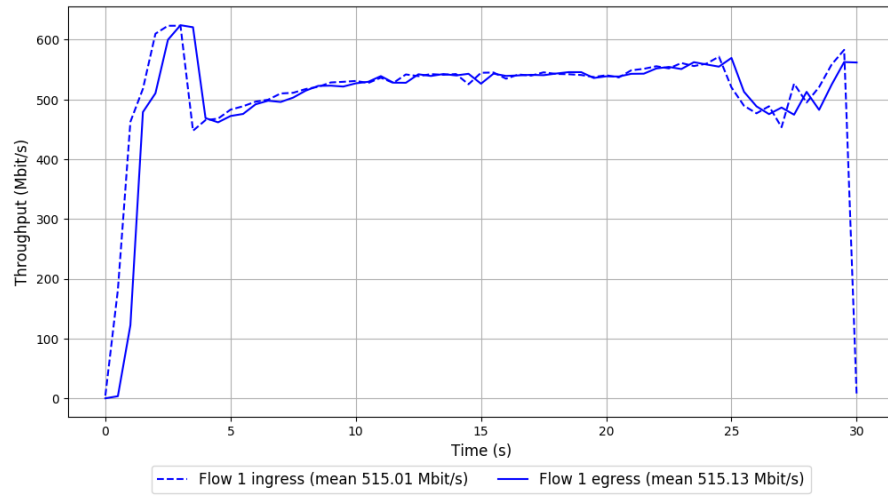

Flow 1 (95th percentile 66.92 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2019-07-12 22:16:44
End at: 2019-07-12 22:17:14
Local clock offset: 0.012 ms
Remote clock offset: -0.311 ms


# Below is generated by plot.py at 2019-07-13 00:03:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 534.78 Mbit/s
95th percentile per-packet one-way delay: 87.982 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 534.78 Mbit/s
95th percentile per-packet one-way delay: 87.982 ms
Loss rate: 0.35%
```
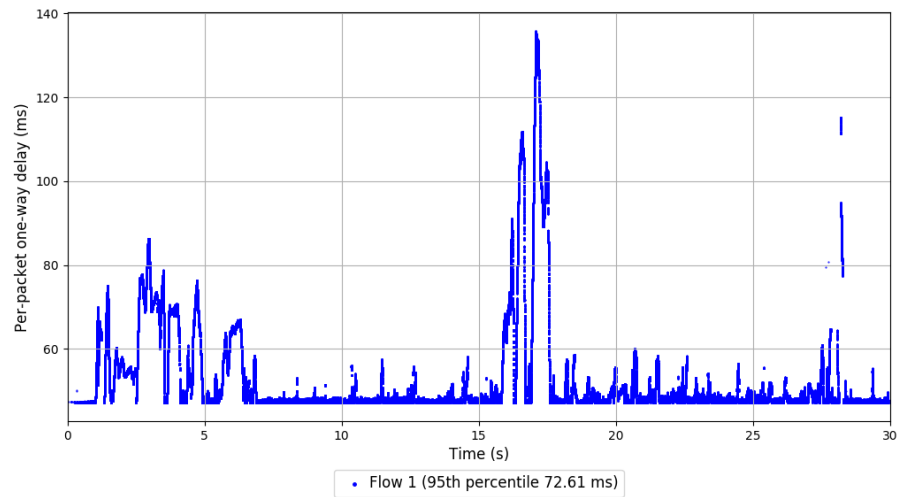
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 534.99 Mbit/s)   Flow 1 egress (mean 534.78 Mbit/s)

Flow 1 (95th percentile 87.98 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-07-12 22:51:28
End at: 2019-07-12 22:51:58
Local clock offset: 0.03 ms
Remote clock offset: -0.384 ms


# Below is generated by plot.py at 2019-07-13 00:03:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 515.13 Mbit/s
95th percentile per-packet one-way delay: 69.487 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 515.13 Mbit/s
95th percentile per-packet one-way delay: 69.487 ms
Loss rate: 0.29%
```
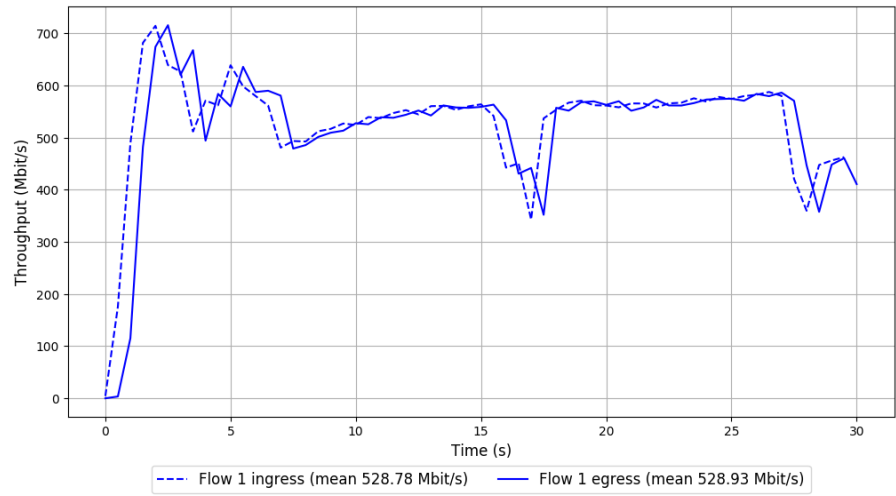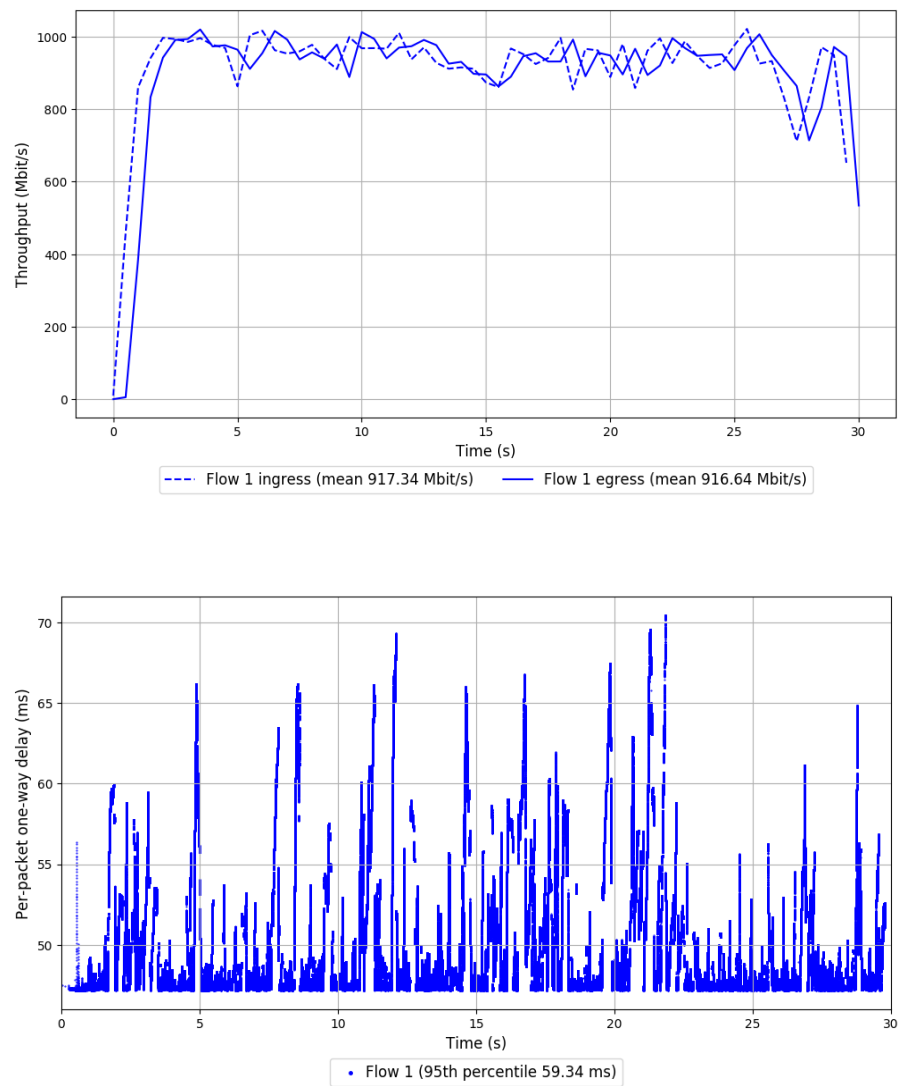
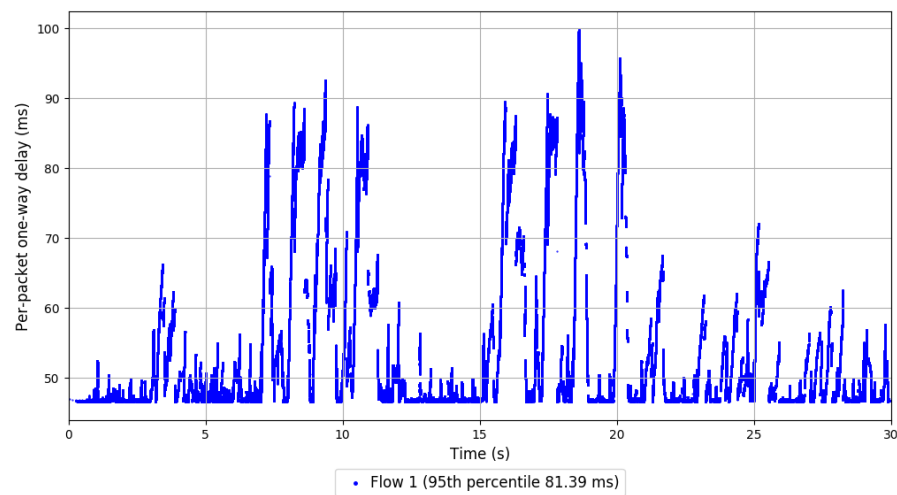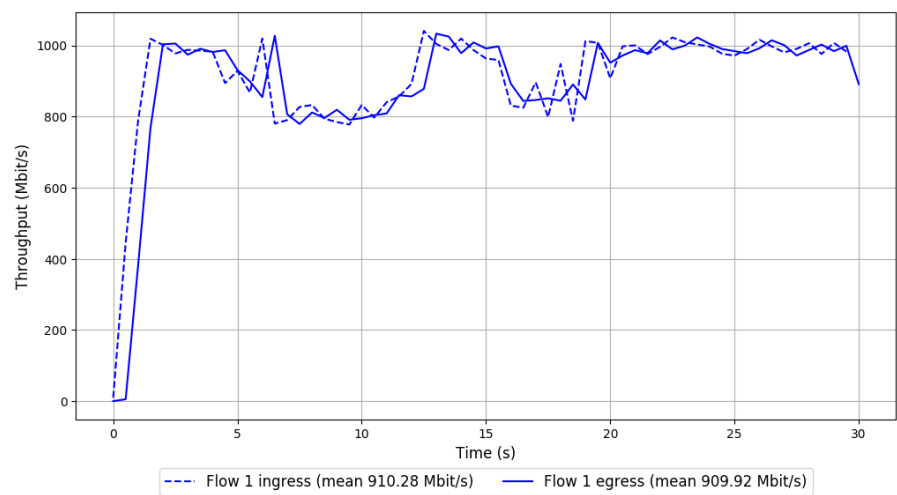Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2019-07-12 23:26:29
End at: 2019-07-12 23:26:59
Local clock offset: -0.058 ms
Remote clock offset: 0.03 ms


# Below is generated by plot.py at 2019-07-13 00:04:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 528.93 Mbit/s
95th percentile per-packet one-way delay: 72.607 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 528.93 Mbit/s
95th percentile per-packet one-way delay: 72.607 ms
Loss rate: 0.29%
```

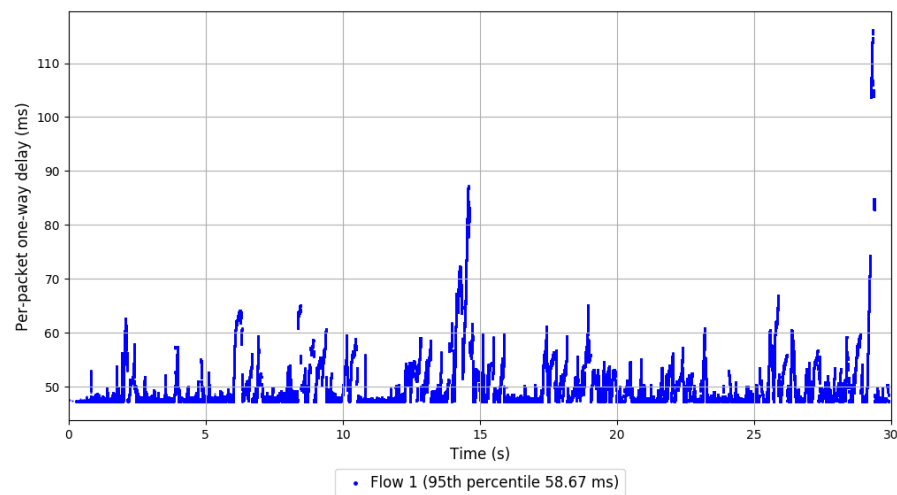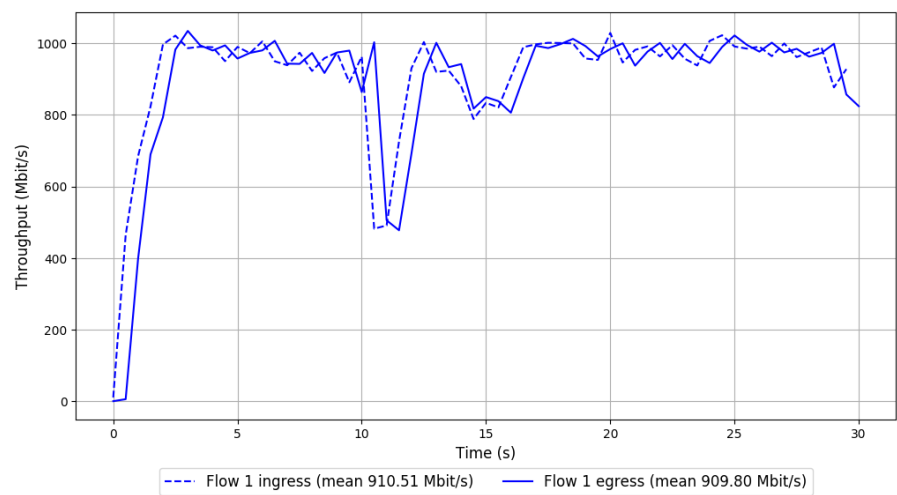Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2019-07-12 20:46:23
End at: 2019-07-12 20:46:53
Local clock offset: -0.009 ms
Remote clock offset: -0.152 ms


# Below is generated by plot.py at 2019-07-13 00:12:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 916.64 Mbit/s
95th percentile per-packet one-way delay: 59.343 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 916.64 Mbit/s
95th percentile per-packet one-way delay: 59.343 ms
Loss rate: 0.40%
```

Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 917.34 Mbit/s) ---- Flow 1 egress (mean 916.64 Mbit/s)

· Flow 1 (95th percentile 59.34 ms)

```
Run 2: Statistics of FillP

Start at: 2019-07-12 21:21:20
End at: 2019-07-12 21:21:50
Local clock offset: -0.381 ms
Remote clock offset: -0.201 ms


# Below is generated by plot.py at 2019-07-13 00:21:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 909.92 Mbit/s
95th percentile per-packet one-way delay: 81.392 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 909.92 Mbit/s
95th percentile per-packet one-way delay: 81.392 ms
Loss rate: 0.36%
```
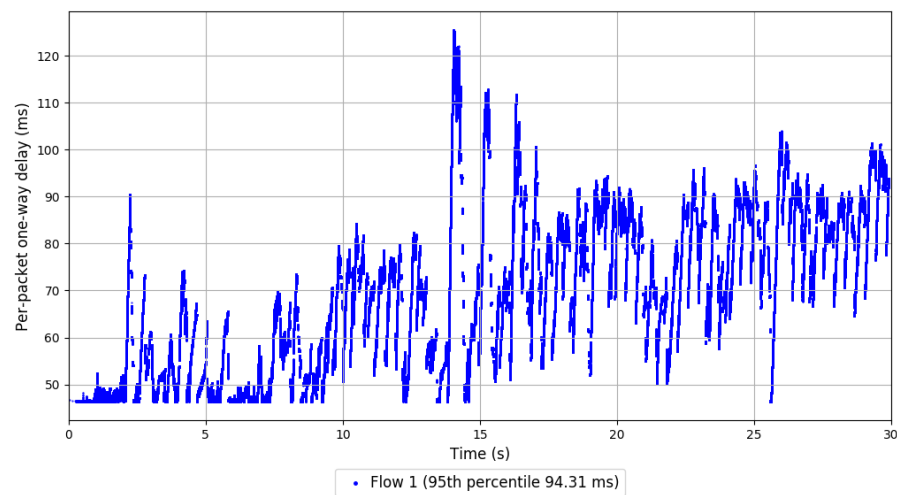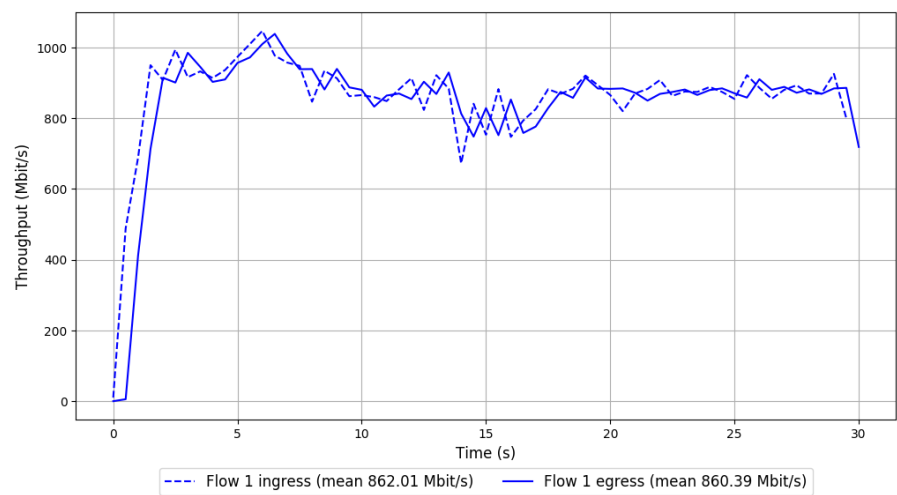
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 910.28 Mbit/s) --- Flow 1 egress (mean 909.92 Mbit/s)
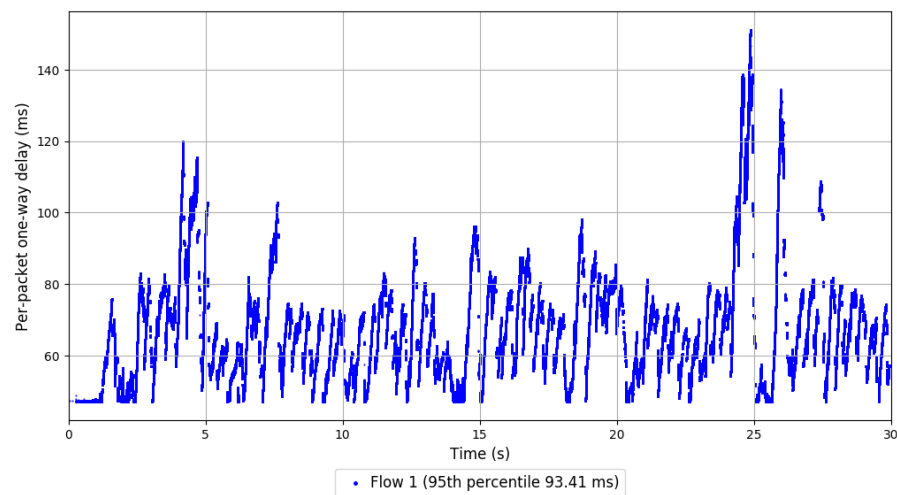
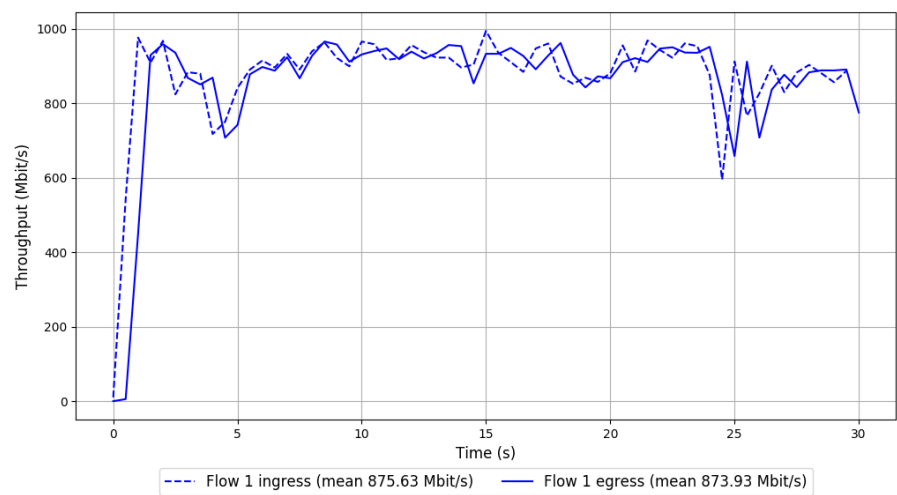

• Flow 1 (95th percentile 81.39 ms)

```
Run 3: Statistics of FillP

Start at: 2019-07-12 21:56:19
End at: 2019-07-12 21:56:49
Local clock offset: -0.051 ms
Remote clock offset: -0.329 ms


# Below is generated by plot.py at 2019-07-13 00:21:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 909.80 Mbit/s
95th percentile per-packet one-way delay: 58.673 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 909.80 Mbit/s
95th percentile per-packet one-way delay: 58.673 ms
Loss rate: 0.39%
```
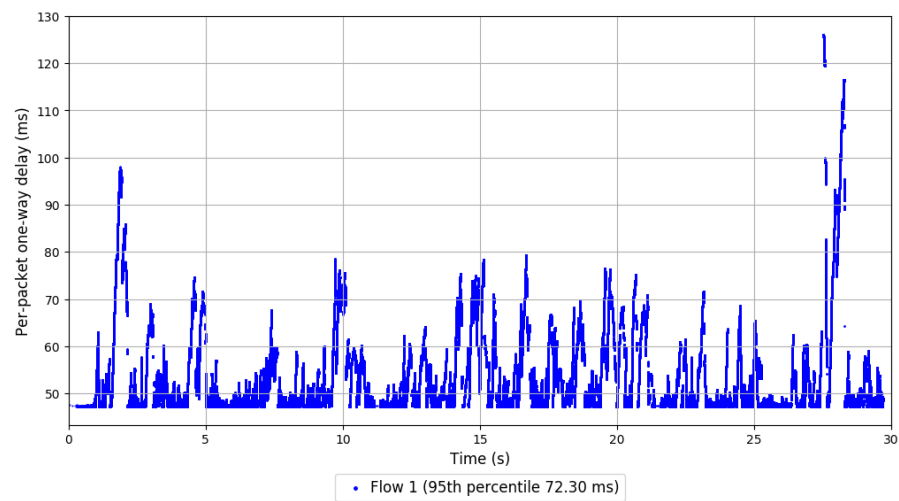
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-07-12 22:31:08
End at: 2019-07-12 22:31:38
Local clock offset: 0.007 ms
Remote clock offset: -0.353 ms


# Below is generated by plot.py at 2019-07-13 00:21:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 860.39 Mbit/s
95th percentile per-packet one-way delay: 94.306 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 860.39 Mbit/s
95th percentile per-packet one-way delay: 94.306 ms
Loss rate: 0.50%
```

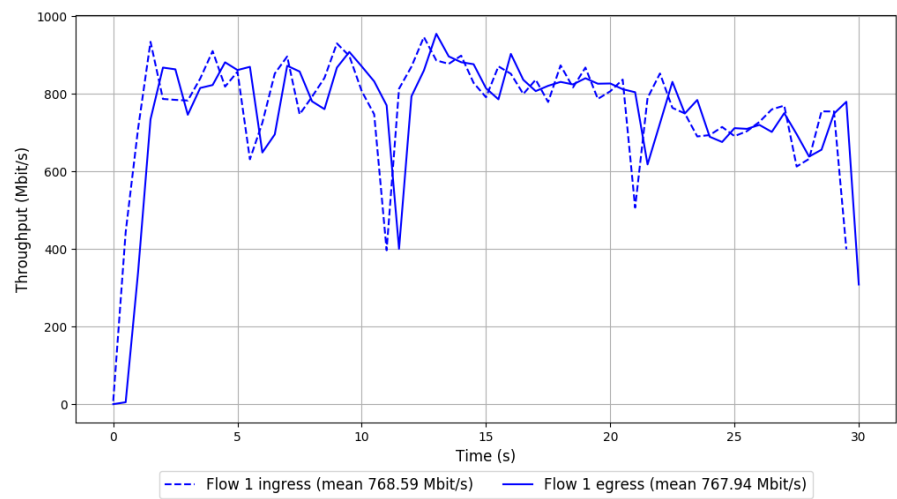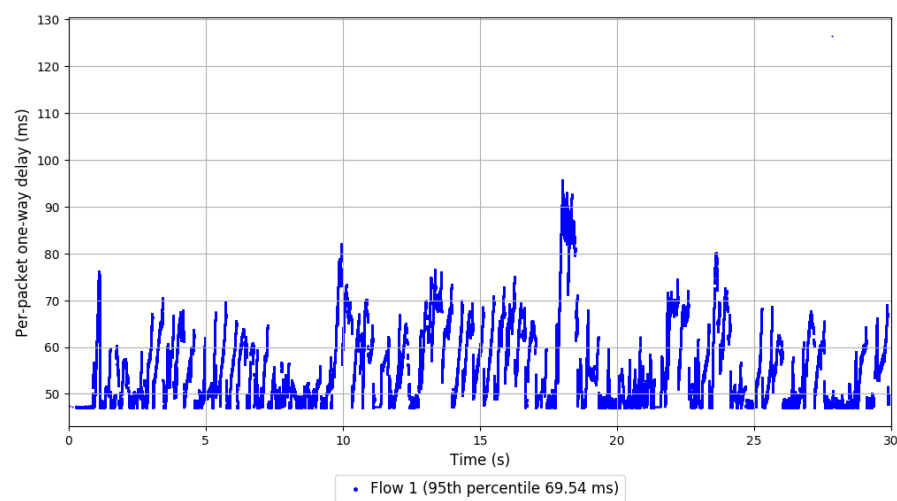Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 862.01 Mbit/s)   Flow 1 egress (mean 860.39 Mbit/s)
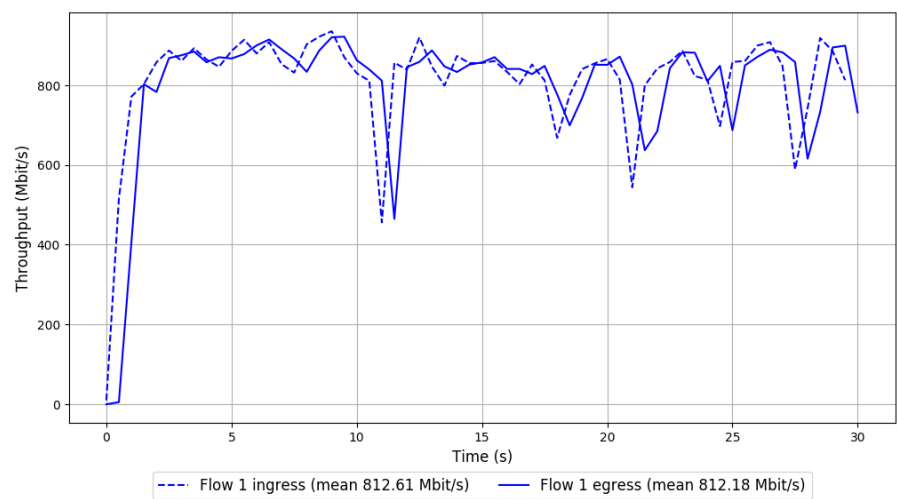

Flow 1 (95th percentile 94.31 ms)

```
Run 5: Statistics of FillP

Start at: 2019-07-12 23:05:53
End at: 2019-07-12 23:06:24
Local clock offset: -0.001 ms
Remote clock offset: -0.228 ms


# Below is generated by plot.py at 2019-07-13 00:21:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 873.93 Mbit/s
95th percentile per-packet one-way delay: 93.407 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 873.93 Mbit/s
95th percentile per-packet one-way delay: 93.407 ms
Loss rate: 0.51%
```

Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 875.63 Mbit/s) --- Flow 1 egress (mean 873.93 Mbit/s)

Flow 1 (95th percentile 93.41 ms)

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-07-12 20:38:17
End at: 2019-07-12 20:38:47
Local clock offset: 0.017 ms
Remote clock offset: -0.142 ms


# Below is generated by plot.py at 2019-07-13 00:21:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 767.94 Mbit/s
95th percentile per-packet one-way delay: 72.298 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 767.94 Mbit/s
95th percentile per-packet one-way delay: 72.298 ms
Loss rate: 0.40%
```
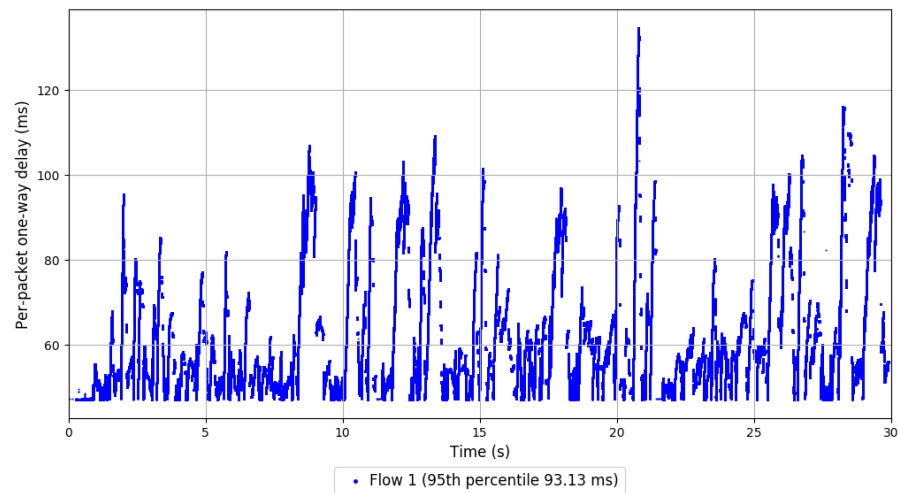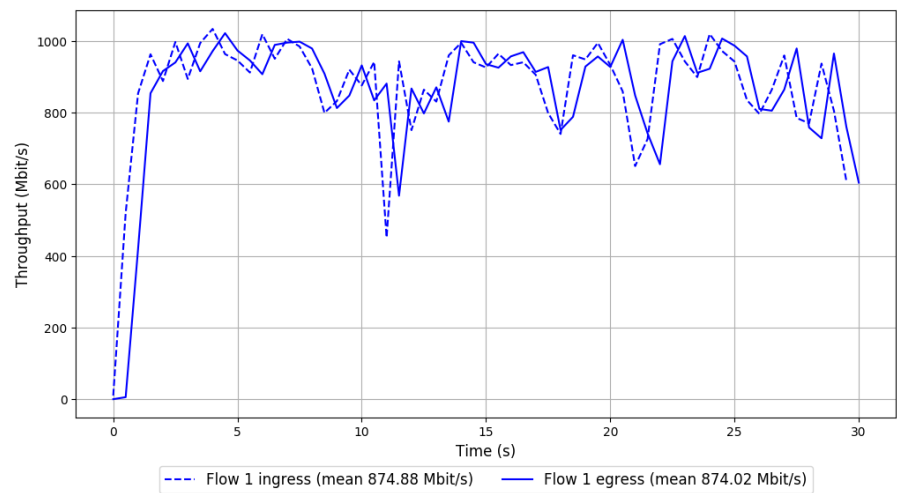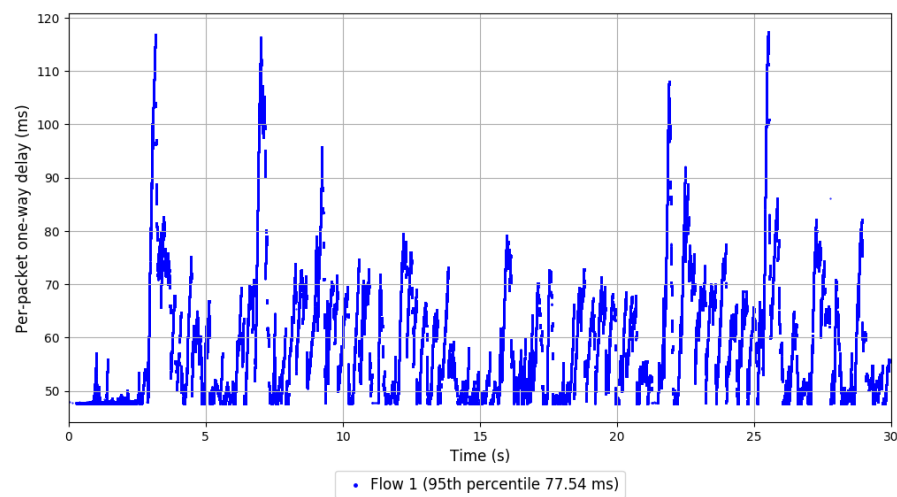
Run 1: Report of FillP-Sheep — Data Link

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```
Run 2: Statistics of FillP-Sheep

Start at: 2019-07-12 21:12:41
End at: 2019-07-12 21:13:11
Local clock offset: -0.005 ms
Remote clock offset: -0.224 ms


# Below is generated by plot.py at 2019-07-13 00:21:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 812.18 Mbit/s
95th percentile per-packet one-way delay: 69.536 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 812.18 Mbit/s
95th percentile per-packet one-way delay: 69.536 ms
Loss rate: 0.37%
```
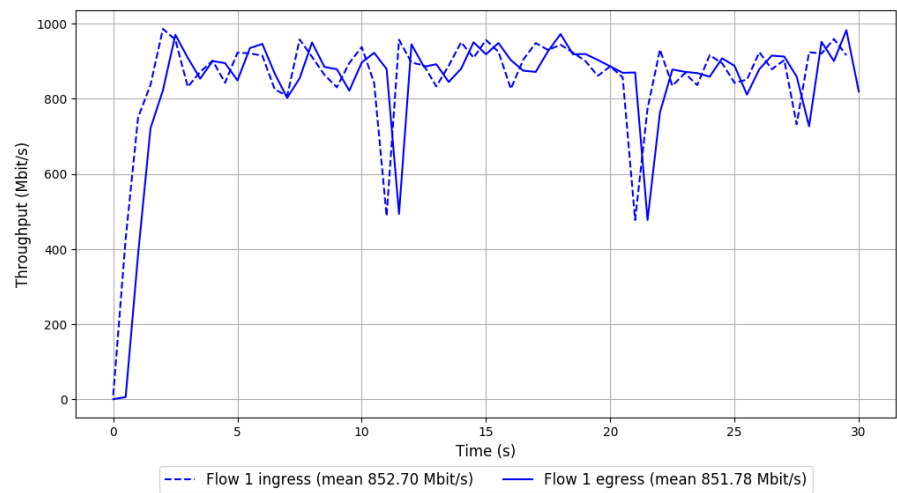
Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 812.61 Mbit/s)   Flow 1 egress (mean 812.18 Mbit/s)

Flow 1 (95th percentile 69.54 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-07-12 21:47:37
End at: 2019-07-12 21:48:07
Local clock offset: 0.016 ms
Remote clock offset: -0.251 ms


# Below is generated by plot.py at 2019-07-13 00:22:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 874.02 Mbit/s
95th percentile per-packet one-way delay: 93.134 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 874.02 Mbit/s
95th percentile per-packet one-way delay: 93.134 ms
Loss rate: 0.41%
```
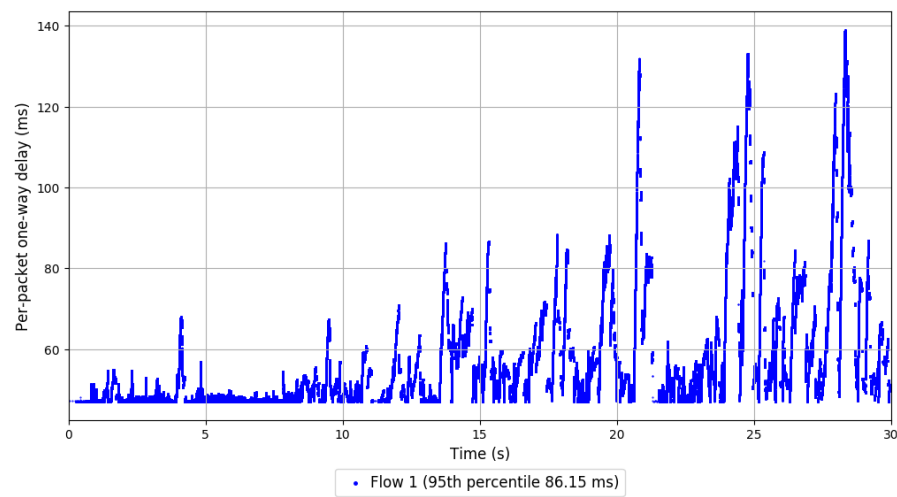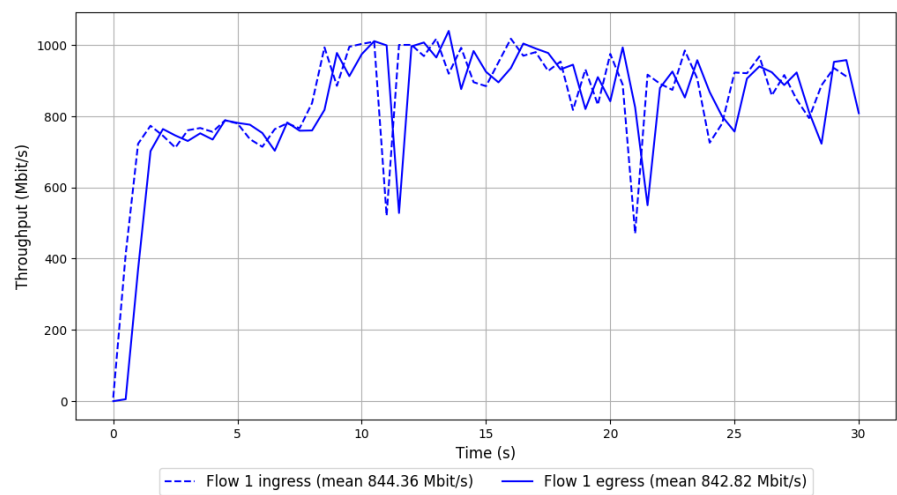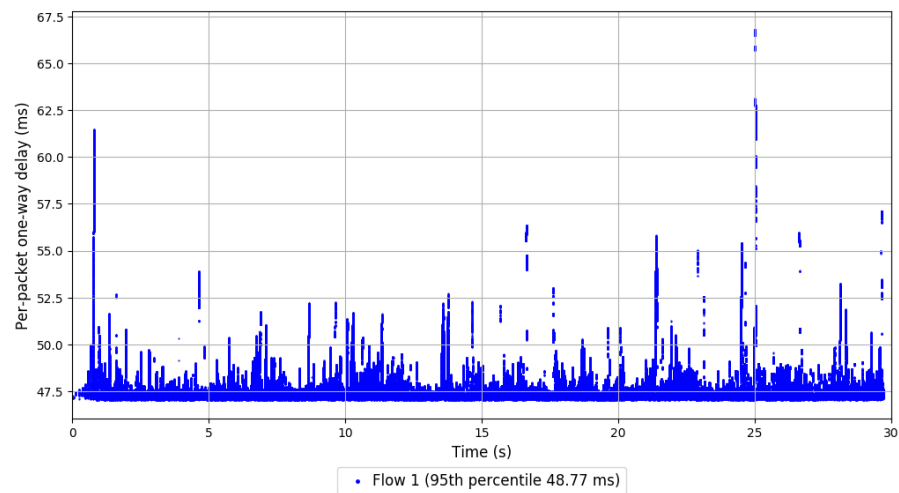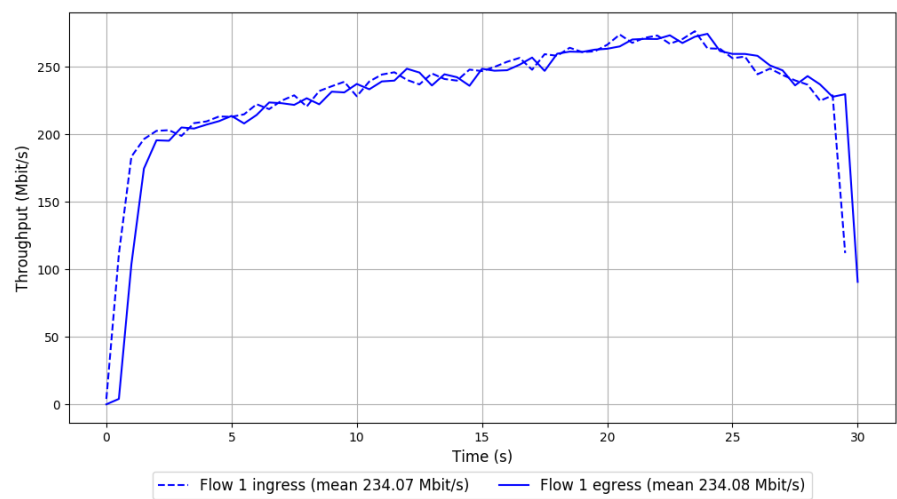
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 874.88 Mbit/s)   Flow 1 egress (mean 874.02 Mbit/s)

Flow 1 (95th percentile 93.13 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-07-12 22:22:39
End at: 2019-07-12 22:23:09
Local clock offset: 0.394 ms
Remote clock offset: -0.366 ms


# Below is generated by plot.py at 2019-07-13 00:33:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 851.78 Mbit/s
95th percentile per-packet one-way delay: 77.538 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 851.78 Mbit/s
95th percentile per-packet one-way delay: 77.538 ms
Loss rate: 0.40%
```

Run 4: Report of FillP-Sheep — Data Link

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-07-12 22:57:17
End at: 2019-07-12 22:57:47
Local clock offset: 0.007 ms
Remote clock offset: -0.372 ms


# Below is generated by plot.py at 2019-07-13 00:37:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 842.82 Mbit/s
95th percentile per-packet one-way delay: 86.152 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 842.82 Mbit/s
95th percentile per-packet one-way delay: 86.152 ms
Loss rate: 0.50%
```

Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 844.36 Mbit/s)   Flow 1 egress (mean 842.82 Mbit/s)
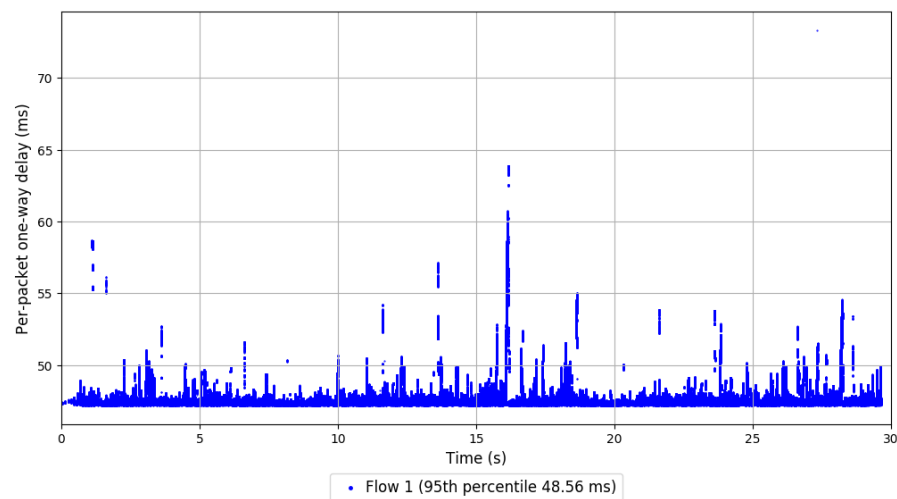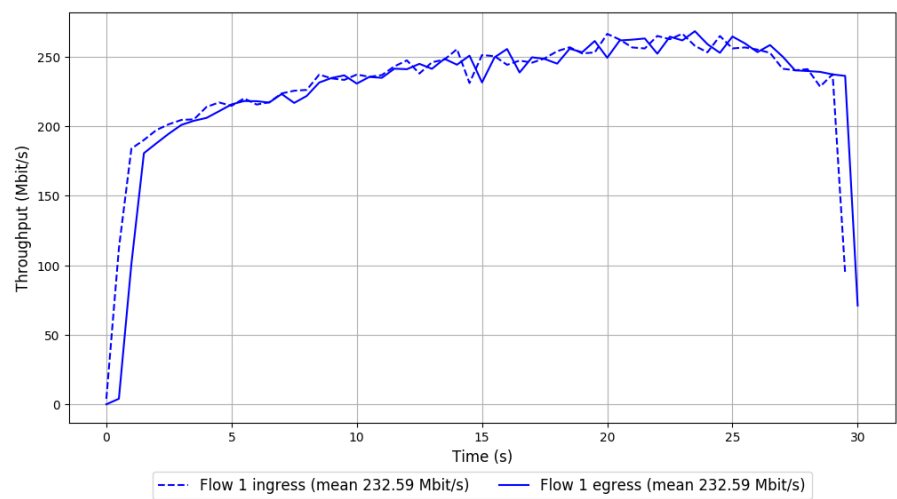

Flow 1 (95th percentile 86.15 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-07-12 21:11:13
End at: 2019-07-12 21:11:43
Local clock offset: -0.024 ms
Remote clock offset: -0.224 ms

# Below is generated by plot.py at 2019-07-13 00:37:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 234.08 Mbit/s
95th percentile per-packet one-way delay: 48.766 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 234.08 Mbit/s
95th percentile per-packet one-way delay: 48.766 ms
Loss rate: 0.32%
```
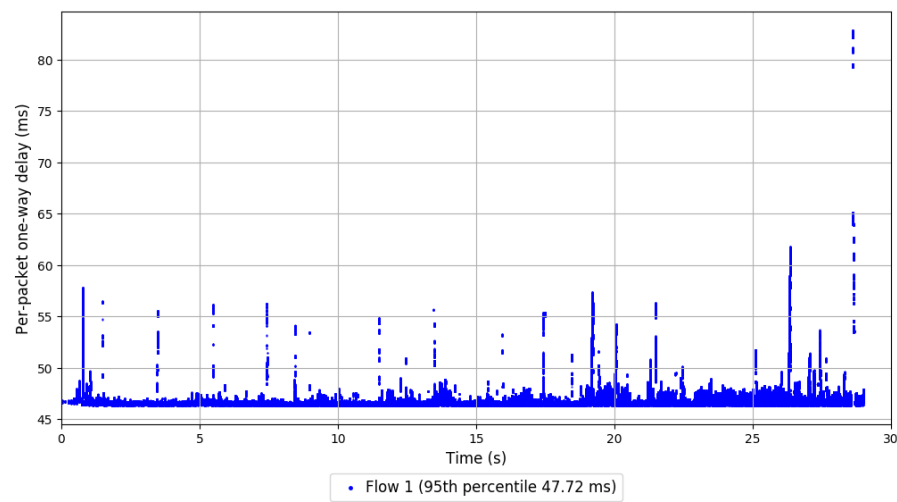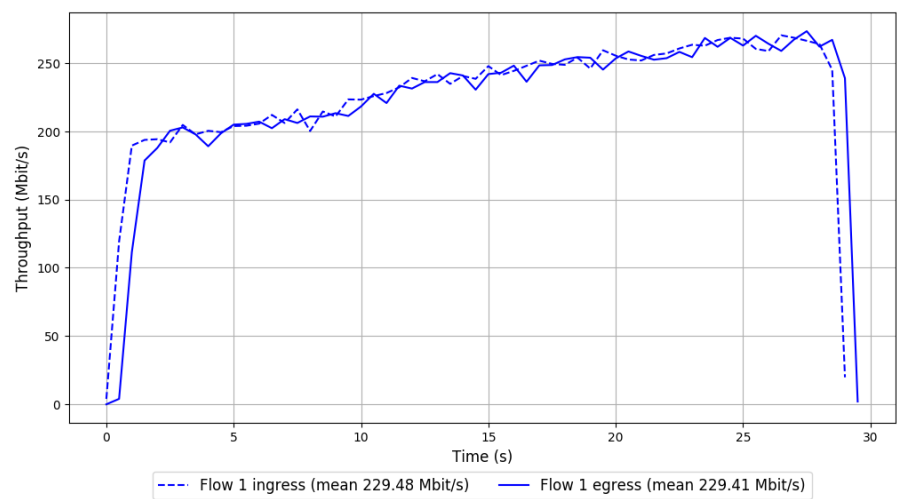
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-07-12 21:46:09
End at: 2019-07-12 21:46:39
Local clock offset: 0.004 ms
Remote clock offset: -0.264 ms


# Below is generated by plot.py at 2019-07-13 00:37:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 231.69 Mbit/s
95th percentile per-packet one-way delay: 50.909 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 231.69 Mbit/s
95th percentile per-packet one-way delay: 50.909 ms
Loss rate: 0.32%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-07-12 22:21:11
End at: 2019-07-12 22:21:41
Local clock offset: 0.032 ms
Remote clock offset: -0.343 ms

# Below is generated by plot.py at 2019-07-13 00:37:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 232.59 Mbit/s
95th percentile per-packet one-way delay: 48.562 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 232.59 Mbit/s
95th percentile per-packet one-way delay: 48.562 ms
Loss rate: 0.32%
```
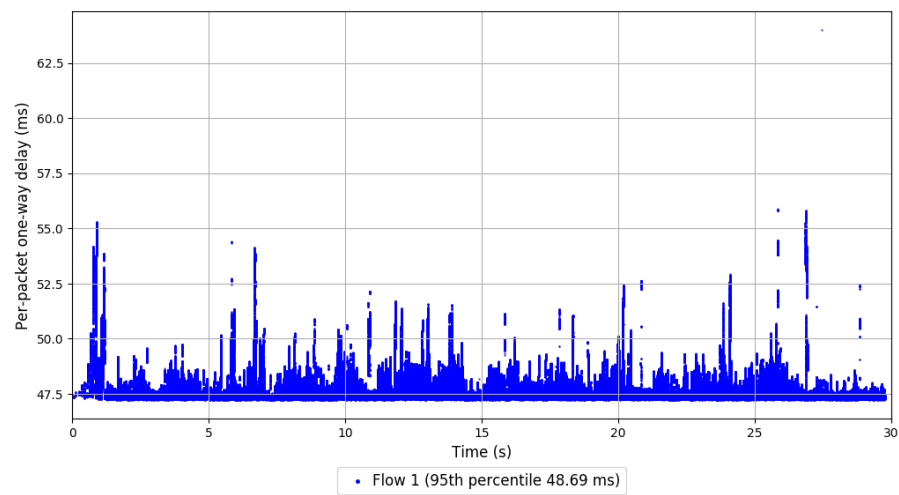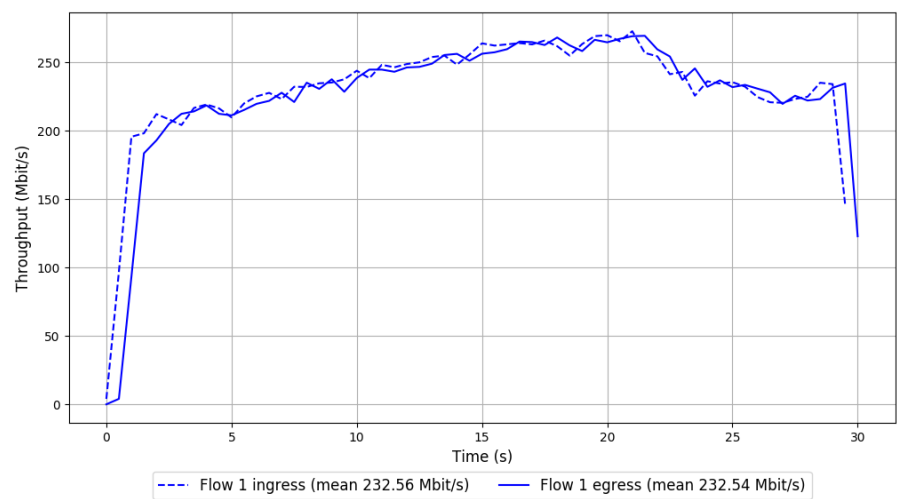
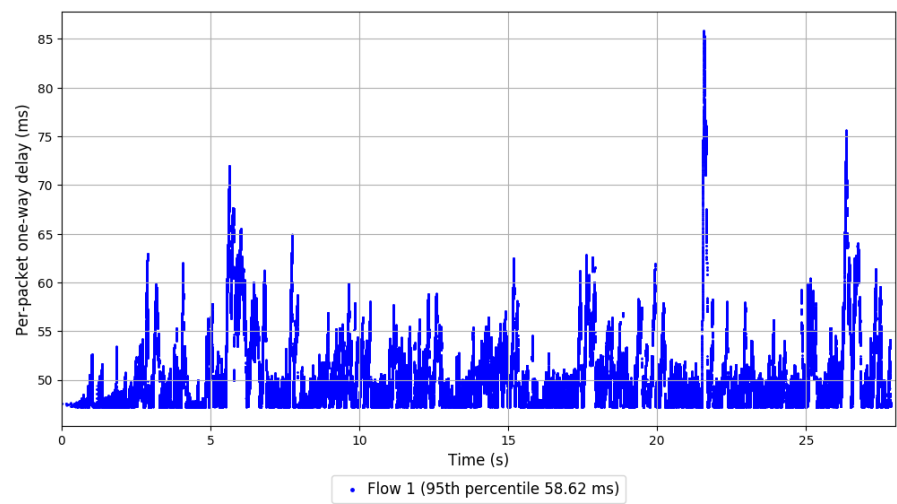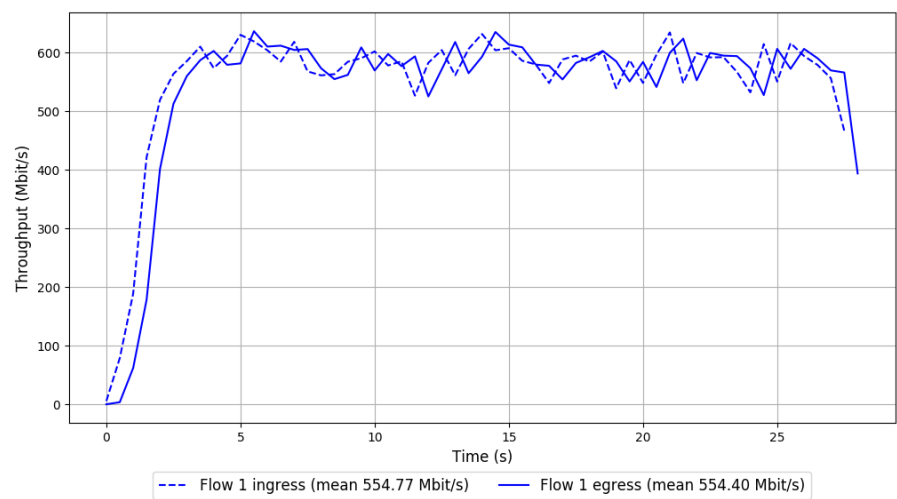Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-07-12 22:55:49
End at: 2019-07-12 22:56:19
Local clock offset: 0.027 ms
Remote clock offset: -0.387 ms


# Below is generated by plot.py at 2019-07-13 00:37:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.41 Mbit/s
95th percentile per-packet one-way delay: 47.721 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 229.41 Mbit/s
95th percentile per-packet one-way delay: 47.721 ms
Loss rate: 0.35%
```

Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-07-12 23:30:49
End at: 2019-07-12 23:31:19
Local clock offset: -0.042 ms
Remote clock offset: 0.057 ms


# Below is generated by plot.py at 2019-07-13 00:37:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 232.54 Mbit/s
95th percentile per-packet one-way delay: 48.689 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 232.54 Mbit/s
95th percentile per-packet one-way delay: 48.689 ms
Loss rate: 0.32%
```
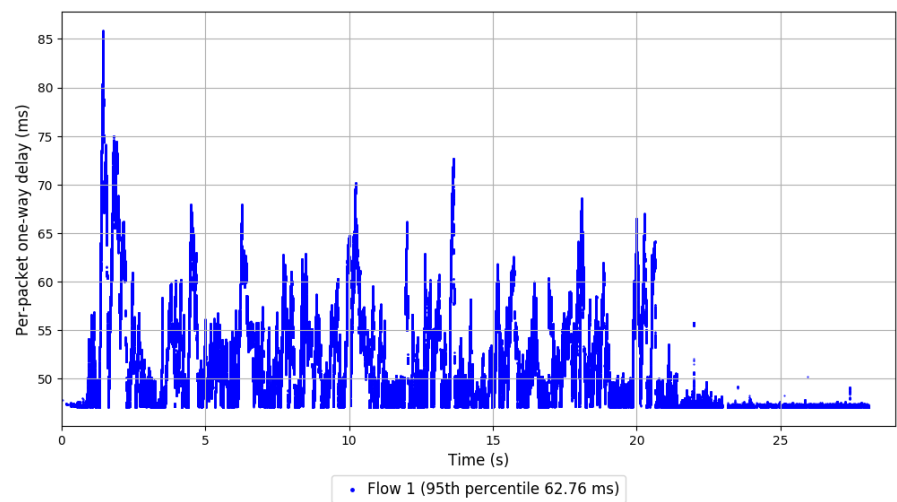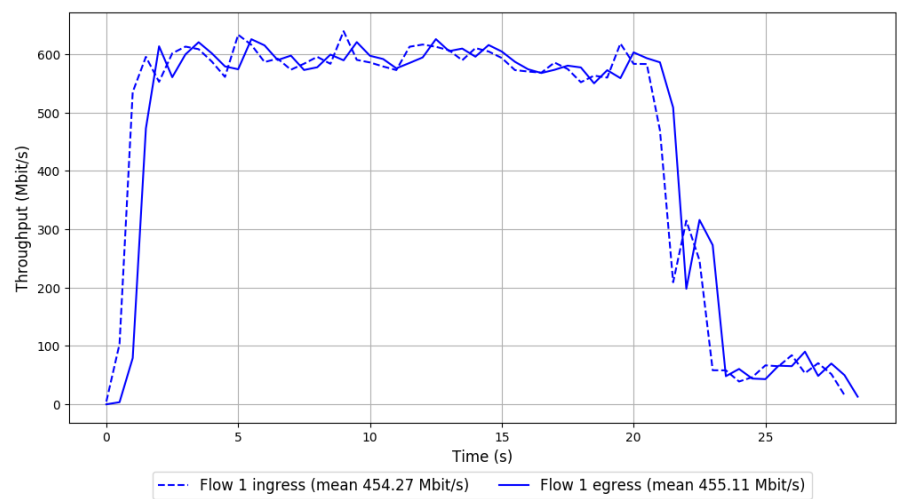
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-07-12 20:49:42
End at: 2019-07-12 20:50:12
Local clock offset: -0.035 ms
Remote clock offset: -0.197 ms


# Below is generated by plot.py at 2019-07-13 00:37:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 554.40 Mbit/s
95th percentile per-packet one-way delay: 58.618 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 554.40 Mbit/s
95th percentile per-packet one-way delay: 58.618 ms
Loss rate: 0.41%
```
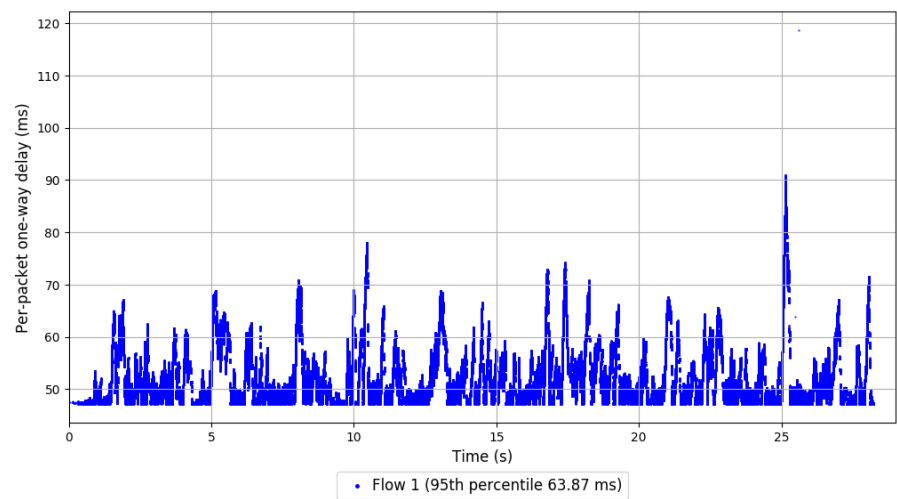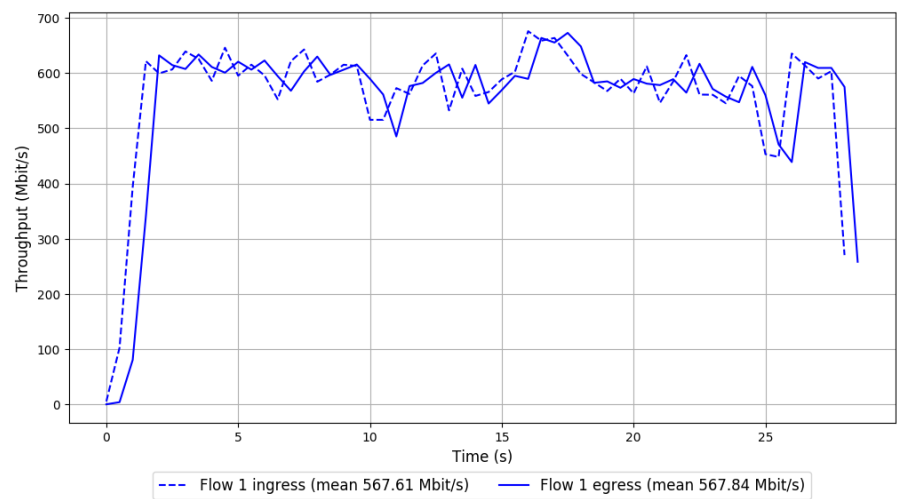
Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-07-12 21:24:39
End at: 2019-07-12 21:25:09
Local clock offset: 0.002 ms
Remote clock offset: -0.238 ms


# Below is generated by plot.py at 2019-07-13 00:37:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 455.11 Mbit/s
95th percentile per-packet one-way delay: 62.756 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 455.11 Mbit/s
95th percentile per-packet one-way delay: 62.756 ms
Loss rate: 0.04%
```
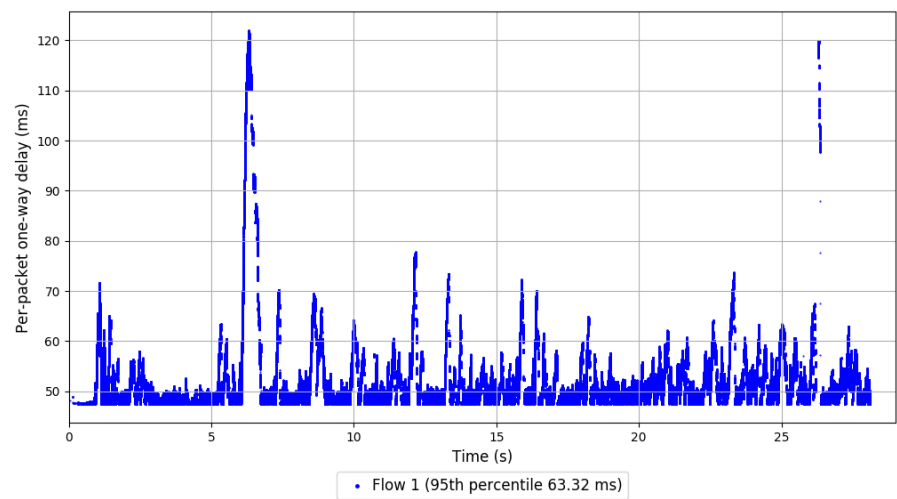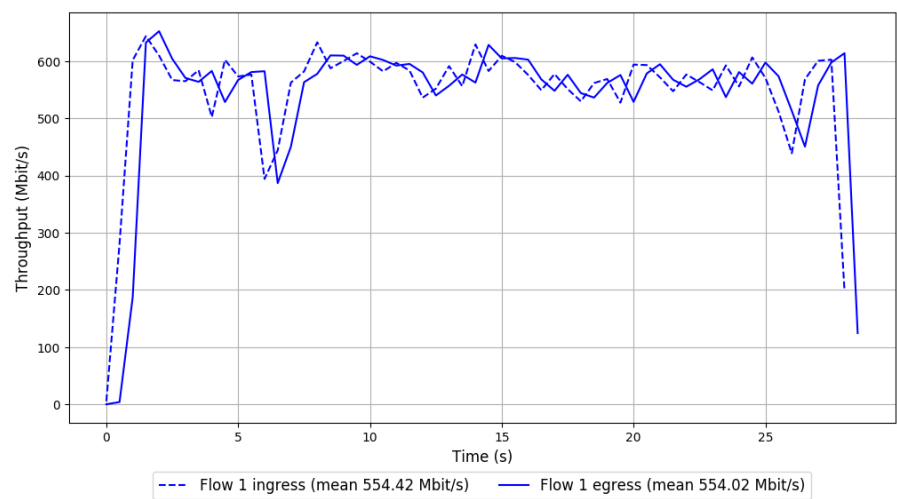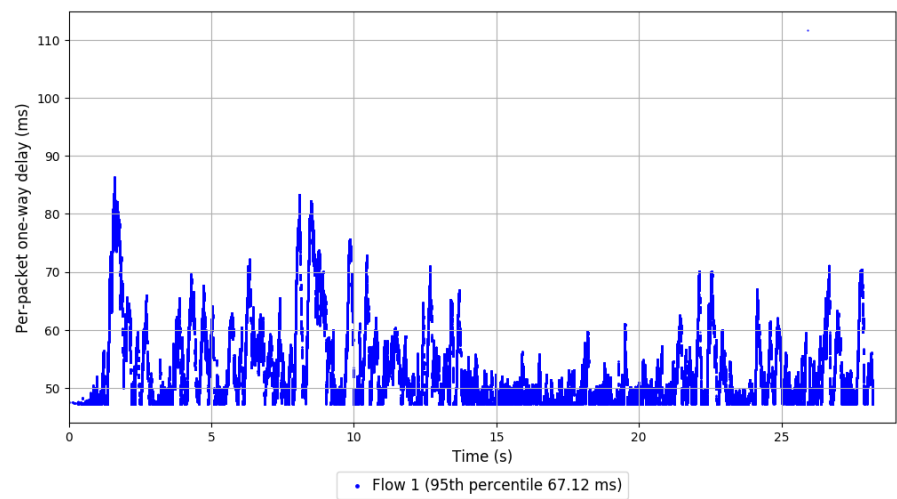
Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-07-12 21:59:34
End at: 2019-07-12 22:00:04
Local clock offset: -0.0 ms
Remote clock offset: -0.28 ms


# Below is generated by plot.py at 2019-07-13 00:38:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 567.84 Mbit/s
95th percentile per-packet one-way delay: 63.867 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 567.84 Mbit/s
95th percentile per-packet one-way delay: 63.867 ms
Loss rate: 0.29%
```
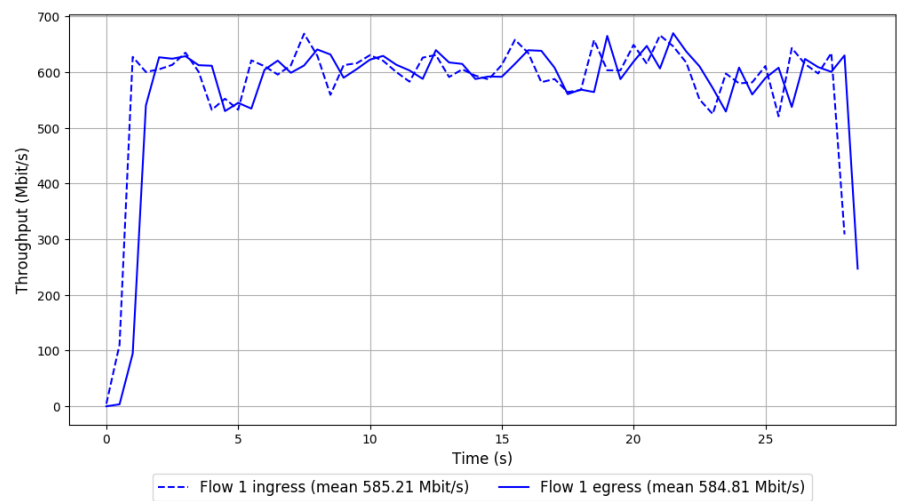
Run 3: Report of Indigo-MusesC3 — Data Link
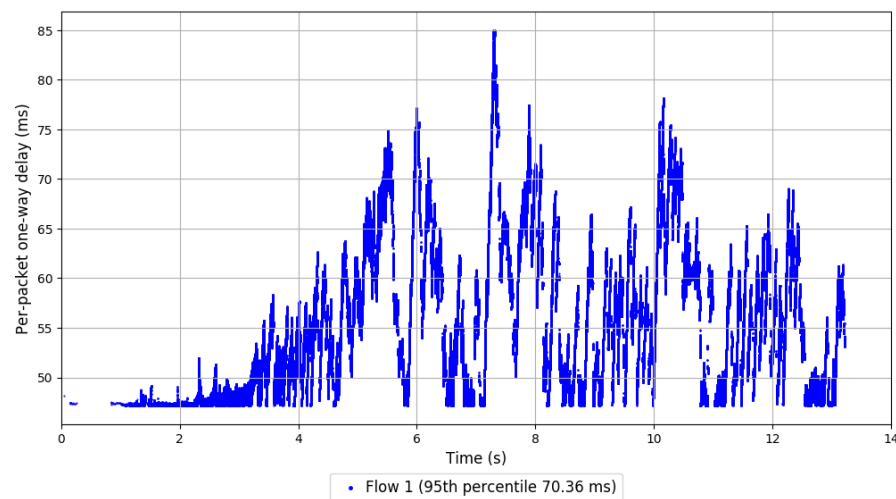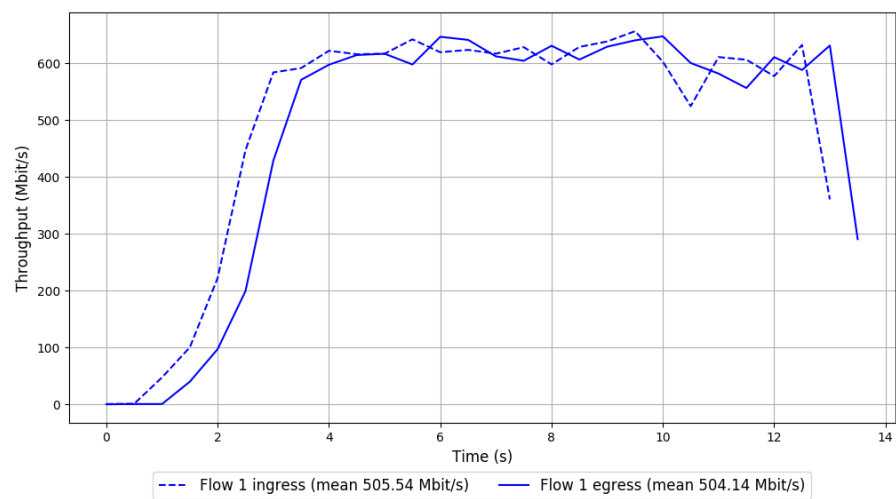
```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-07-12 22:34:24
End at: 2019-07-12 22:34:54
Local clock offset: 0.4 ms
Remote clock offset: -0.341 ms


# Below is generated by plot.py at 2019-07-13 00:38:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 554.02 Mbit/s
95th percentile per-packet one-way delay: 63.317 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 554.02 Mbit/s
95th percentile per-packet one-way delay: 63.317 ms
Loss rate: 0.41%
```

Run 4: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 554.42 Mbit/s)   Flow 1 egress (mean 554.02 Mbit/s)
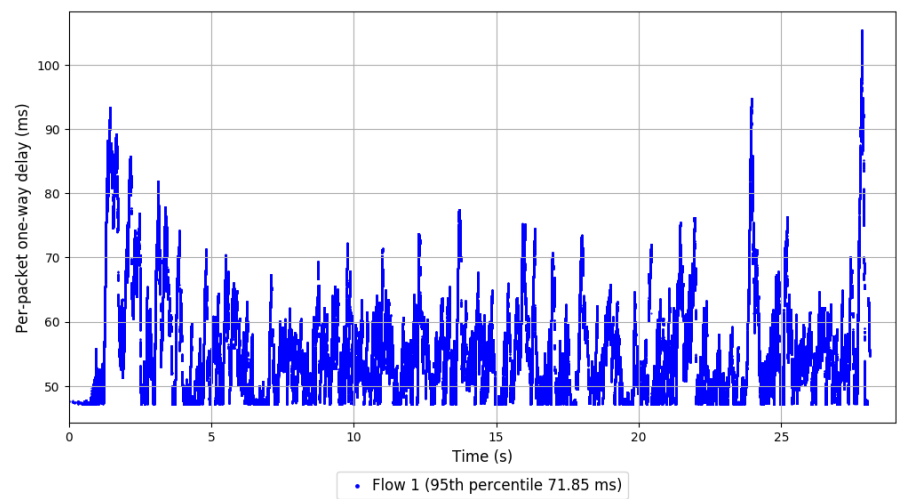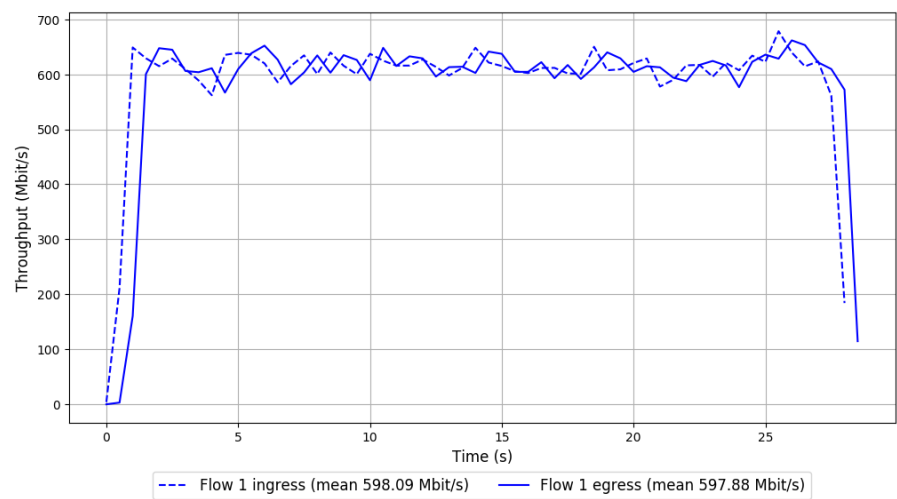

Flow 1 (95th percentile 63.32 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-07-12 23:09:08
End at: 2019-07-12 23:09:38
Local clock offset: -0.011 ms
Remote clock offset: -0.192 ms


# Below is generated by plot.py at 2019-07-13 00:38:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 584.81 Mbit/s
95th percentile per-packet one-way delay: 67.119 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 584.81 Mbit/s
95th percentile per-packet one-way delay: 67.119 ms
Loss rate: 0.40%
```

Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 585.21 Mbit/s) --- Flow 1 egress (mean 584.81 Mbit/s)
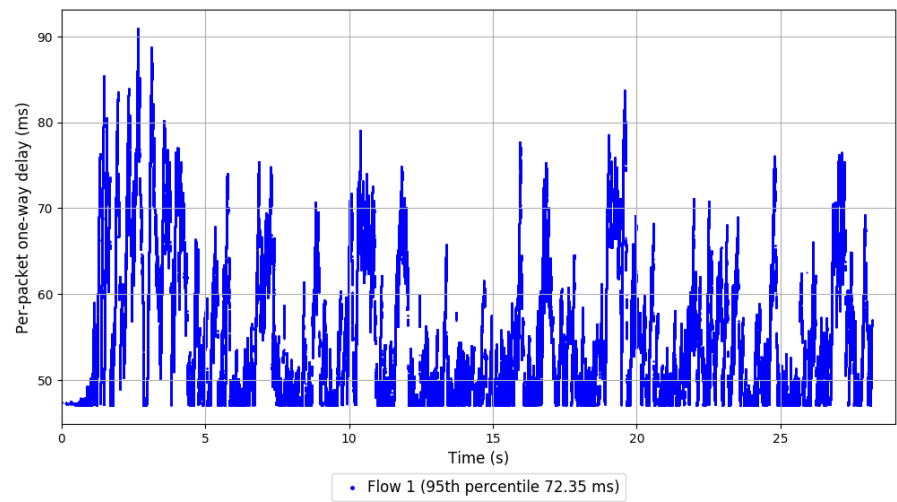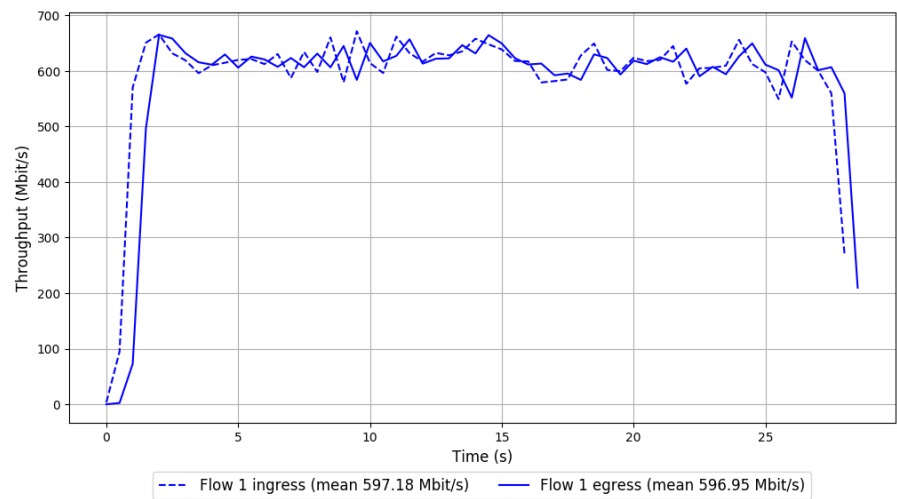

Flow 1 (95th percentile 67.12 ms)

Run 1: Statistics of Indigo-MusesC5

Start at: 2019-07-12 20:42:36
End at: 2019-07-12 20:43:06
Local clock offset: -0.037 ms
Remote clock offset: -0.155 ms

Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-07-12 21:17:05
End at: 2019-07-12 21:17:35
Local clock offset: -0.014 ms
Remote clock offset: -0.208 ms


# Below is generated by plot.py at 2019-07-13 00:42:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 597.88 Mbit/s
95th percentile per-packet one-way delay: 71.847 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 597.88 Mbit/s
95th percentile per-packet one-way delay: 71.847 ms
Loss rate: 0.37%
```
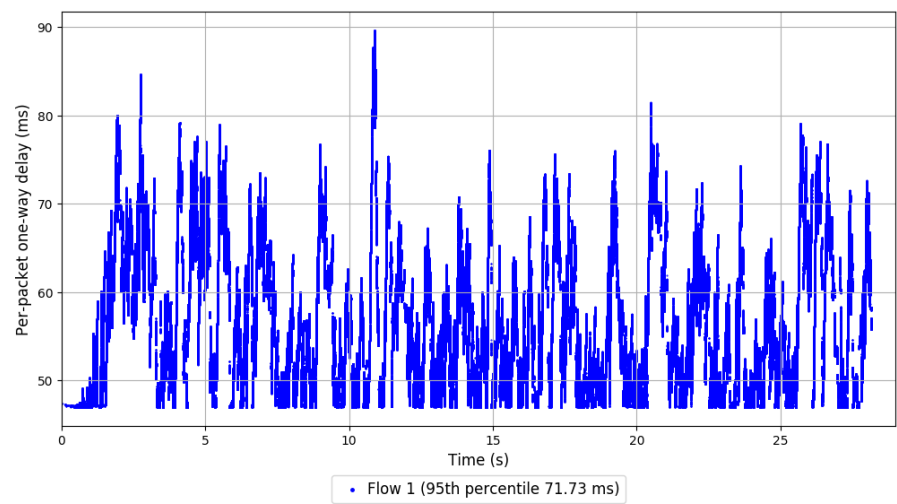
Run 2: Report of Indigo-MusesC5 — Data Link

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-07-12 21:52:03
End at: 2019-07-12 21:52:33
Local clock offset: -0.025 ms
Remote clock offset: -0.289 ms


# Below is generated by plot.py at 2019-07-13 00:43:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 596.95 Mbit/s
95th percentile per-packet one-way delay: 72.348 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 596.95 Mbit/s
95th percentile per-packet one-way delay: 72.348 ms
Loss rate: 0.37%
```
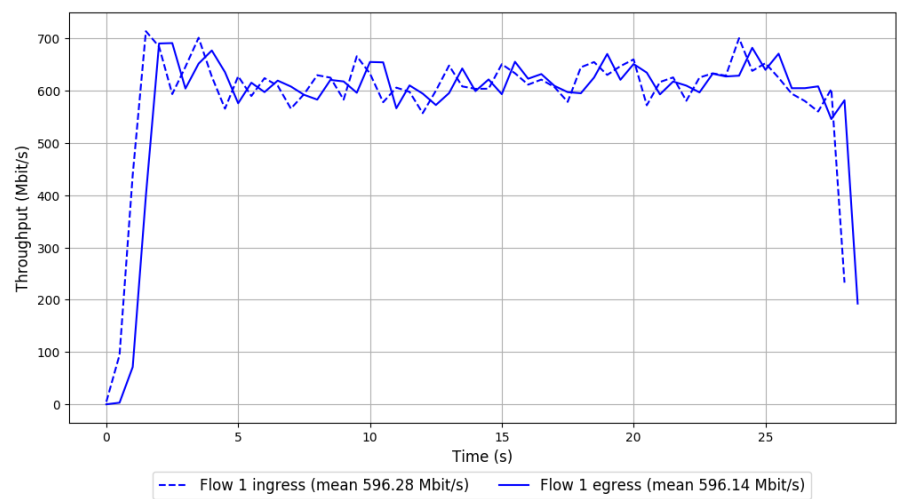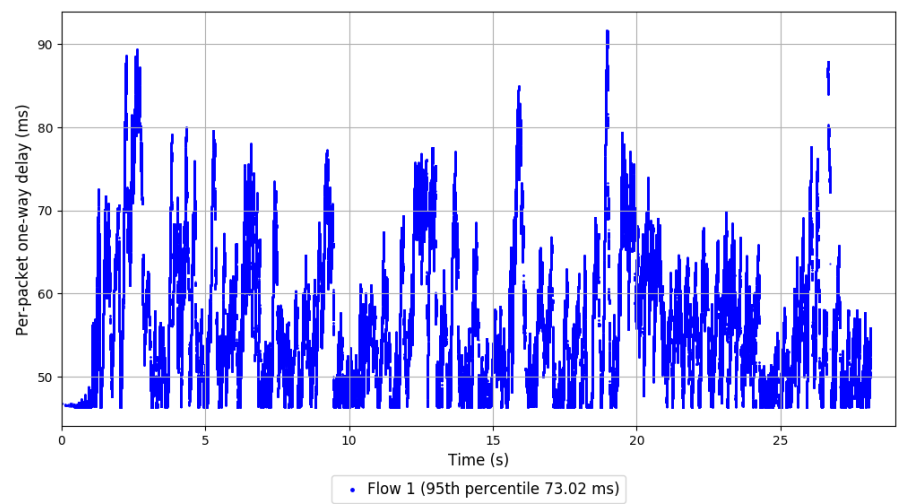
Run 3: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 597.18 Mbit/s) --- Flow 1 egress (mean 596.95 Mbit/s)
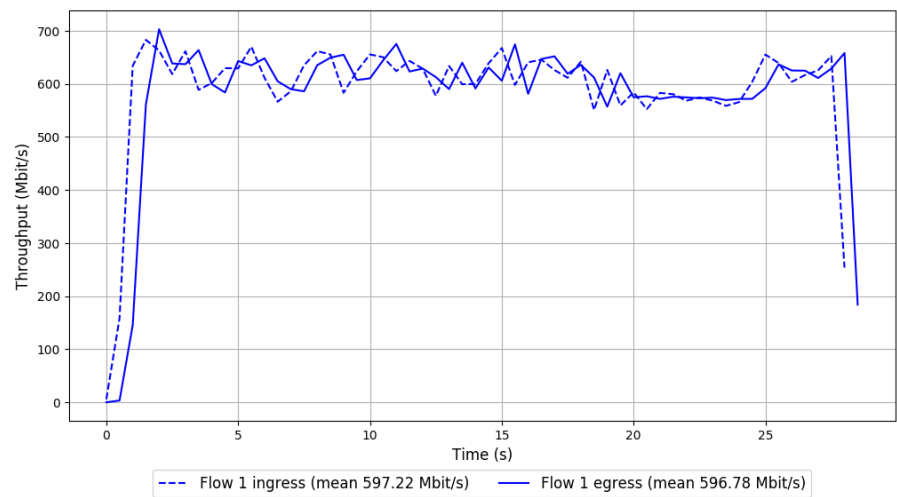

Flow 1 (95th percentile 72.35 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-07-12 22:27:04
End at: 2019-07-12 22:27:34
Local clock offset: 0.004 ms
Remote clock offset: -0.317 ms


# Below is generated by plot.py at 2019-07-13 00:43:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 596.14 Mbit/s
95th percentile per-packet one-way delay: 71.728 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 596.14 Mbit/s
95th percentile per-packet one-way delay: 71.728 ms
Loss rate: 0.36%
```
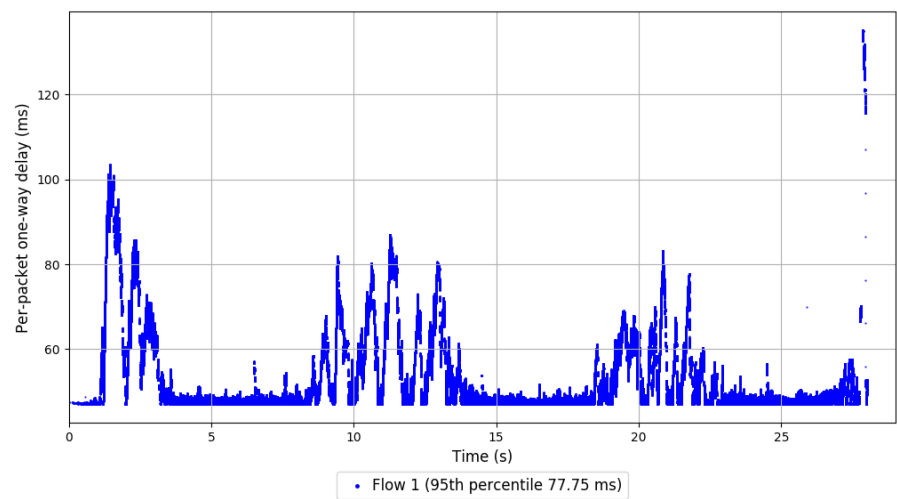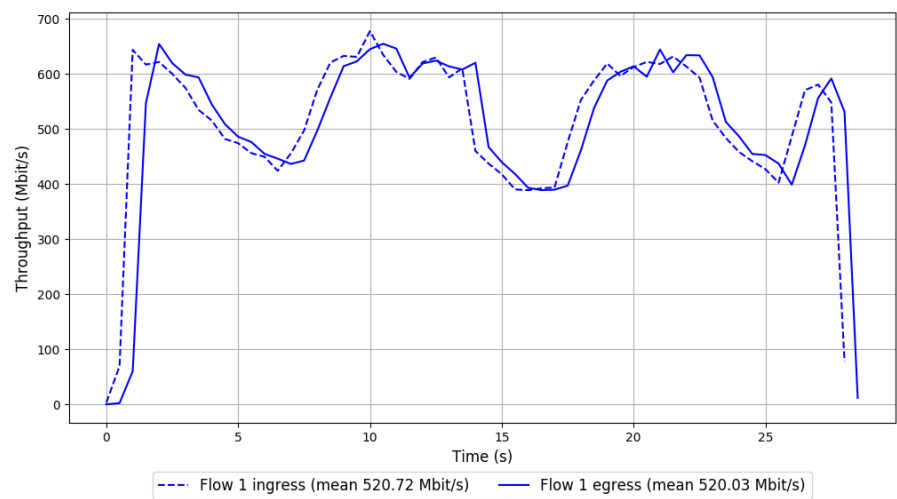
Run 4: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 596.28 Mbit/s)   Flow 1 egress (mean 596.14 Mbit/s)
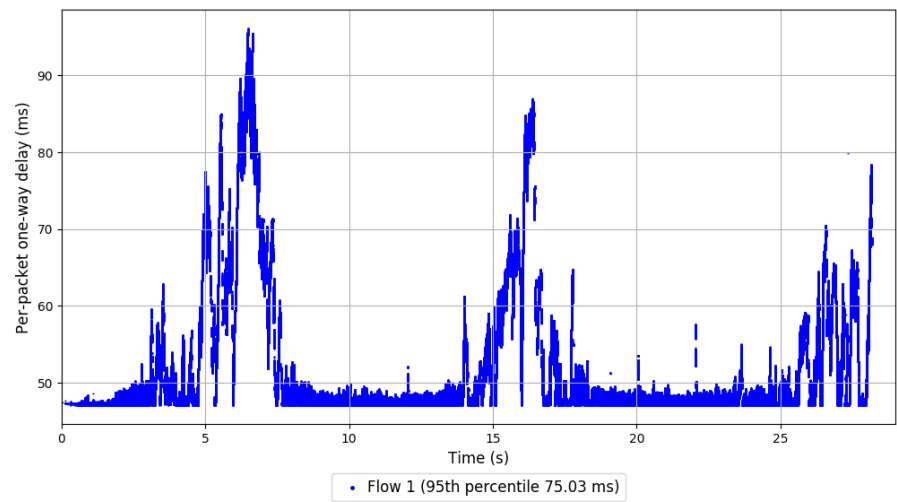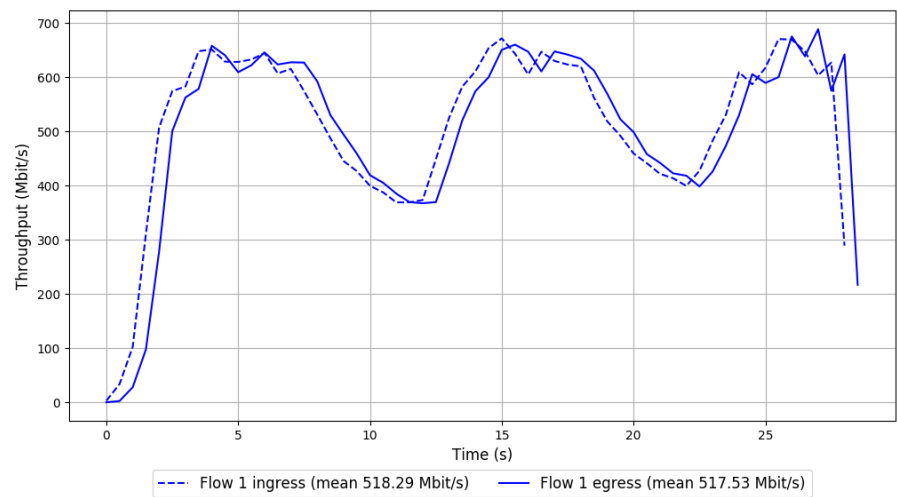

• Flow 1 (95th percentile 71.73 ms)

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-07-12 23:01:43
End at: 2019-07-12 23:02:13
Local clock offset: 0.034 ms
Remote clock offset: -0.373 ms


# Below is generated by plot.py at 2019-07-13 00:46:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 596.78 Mbit/s
95th percentile per-packet one-way delay: 73.016 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 596.78 Mbit/s
95th percentile per-packet one-way delay: 73.016 ms
Loss rate: 0.40%
```

Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 597.22 Mbit/s)   Flow 1 egress (mean 596.78 Mbit/s)

• Flow 1 (95th percentile 73.02 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-07-12 21:01:03
End at: 2019-07-12 21:01:33
Local clock offset: 0.009 ms
Remote clock offset: -0.179 ms


# Below is generated by plot.py at 2019-07-13 00:46:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 520.03 Mbit/s
95th percentile per-packet one-way delay: 77.747 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 520.03 Mbit/s
95th percentile per-packet one-way delay: 77.747 ms
Loss rate: 0.47%
```
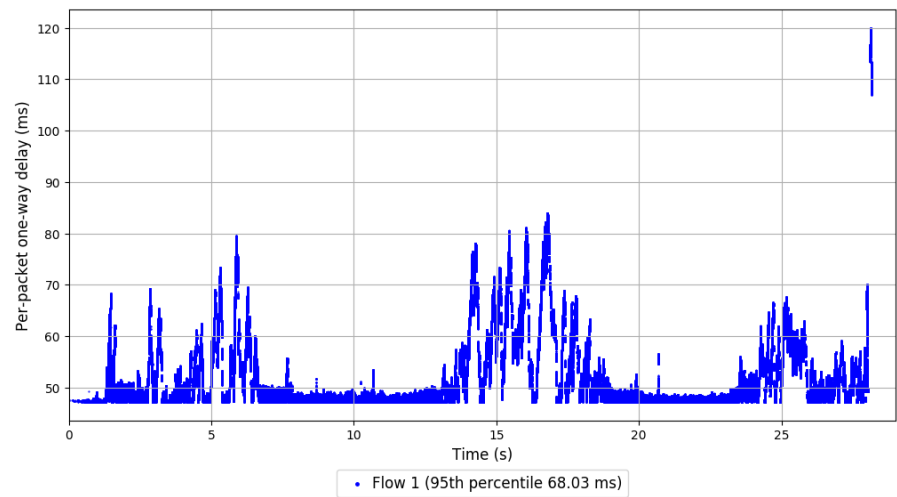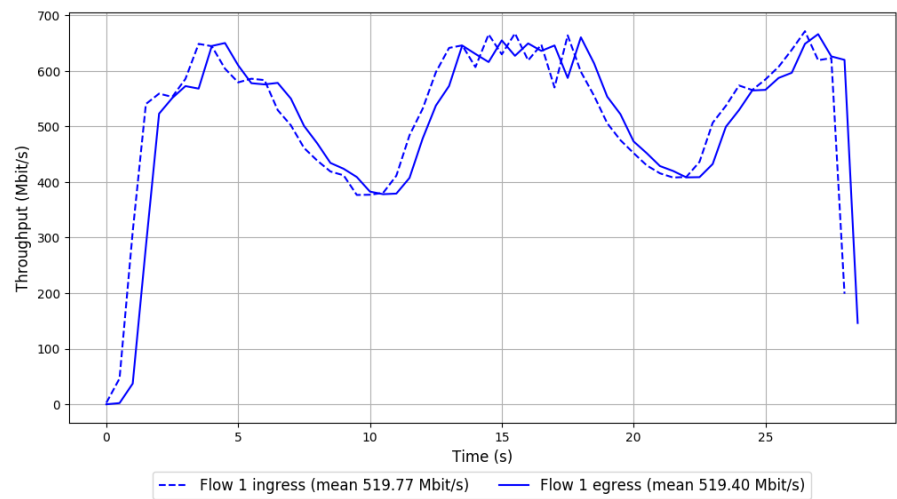
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-07-12 21:36:01
End at: 2019-07-12 21:36:31
Local clock offset: 0.029 ms
Remote clock offset: -0.251 ms


# Below is generated by plot.py at 2019-07-13 00:47:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 517.53 Mbit/s
95th percentile per-packet one-way delay: 75.027 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 517.53 Mbit/s
95th percentile per-packet one-way delay: 75.027 ms
Loss rate: 0.48%
```
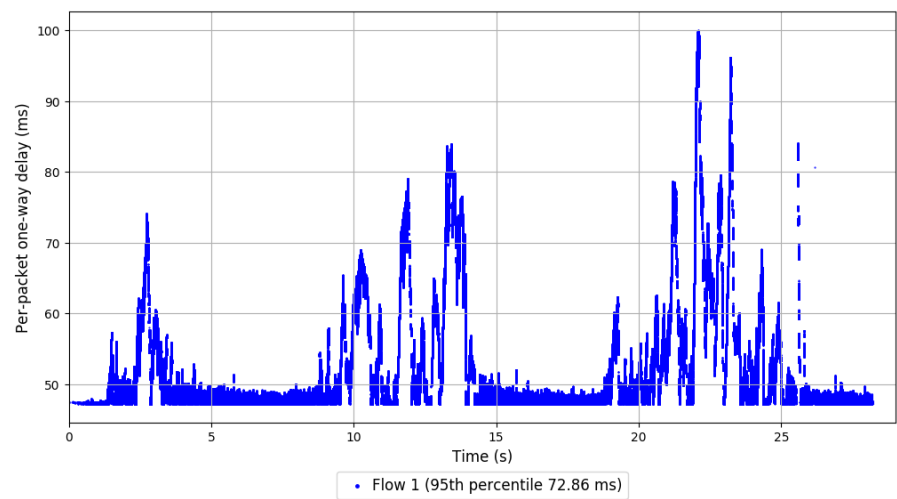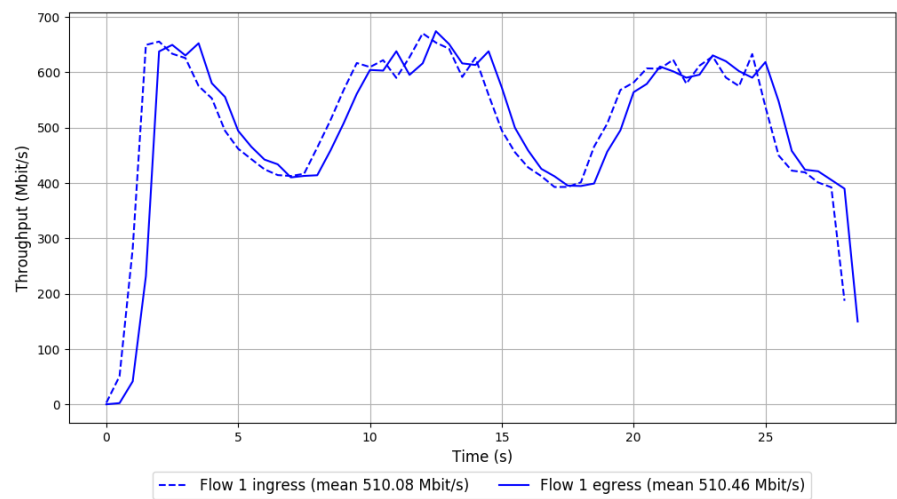
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-07-12 22:10:57
End at: 2019-07-12 22:11:27
Local clock offset: 0.022 ms
Remote clock offset: -0.275 ms


# Below is generated by plot.py at 2019-07-13 00:47:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 519.40 Mbit/s
95th percentile per-packet one-way delay: 68.032 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 519.40 Mbit/s
95th percentile per-packet one-way delay: 68.032 ms
Loss rate: 0.41%
```
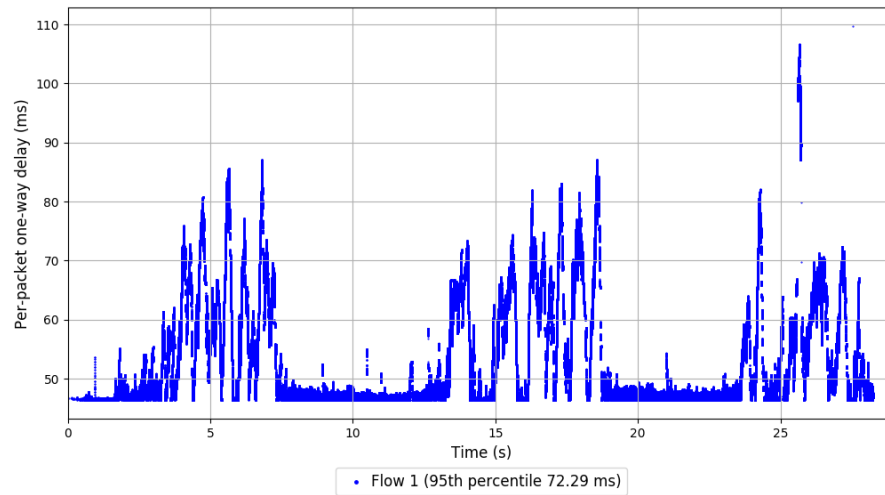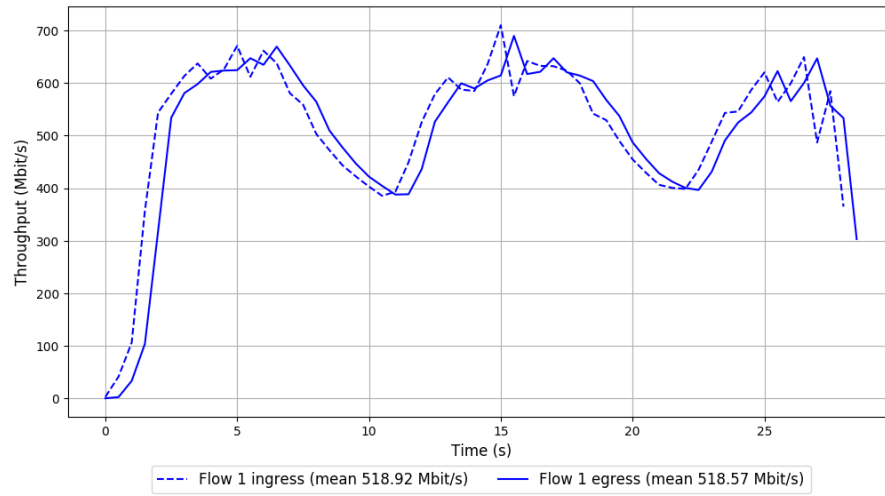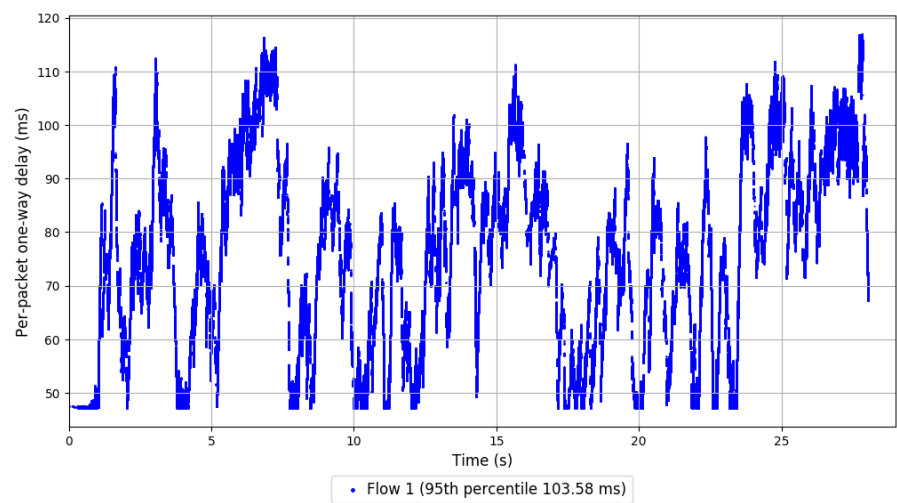
Run 3: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 519.77 Mbit/s)   Flow 1 egress (mean 519.40 Mbit/s)

• Flow 1 (95th percentile 68.03 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-07-12 22:45:47
End at: 2019-07-12 22:46:17
Local clock offset: 0.027 ms
Remote clock offset: -0.367 ms


# Below is generated by plot.py at 2019-07-13 00:47:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 510.46 Mbit/s
95th percentile per-packet one-way delay: 72.855 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 510.46 Mbit/s
95th percentile per-packet one-way delay: 72.855 ms
Loss rate: 0.26%
```
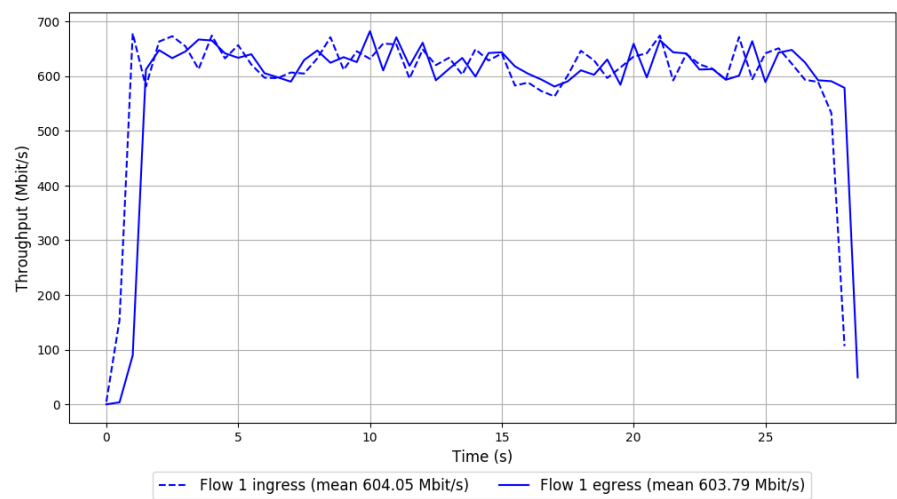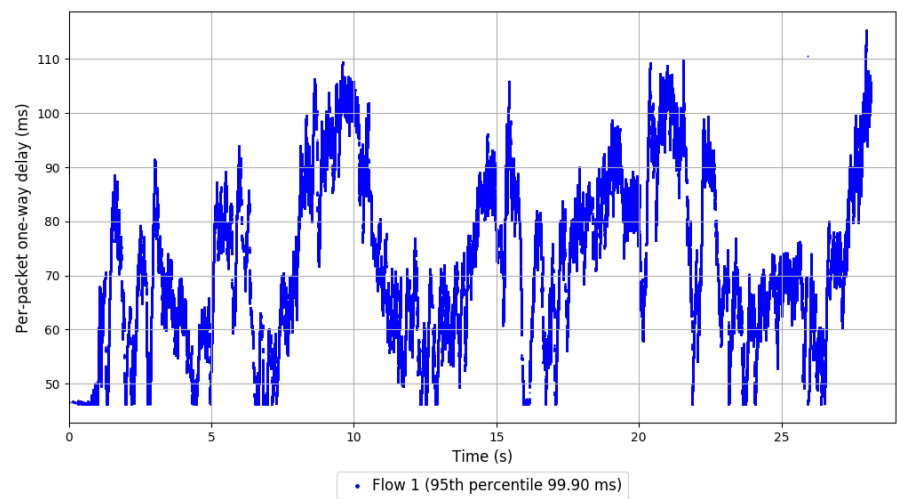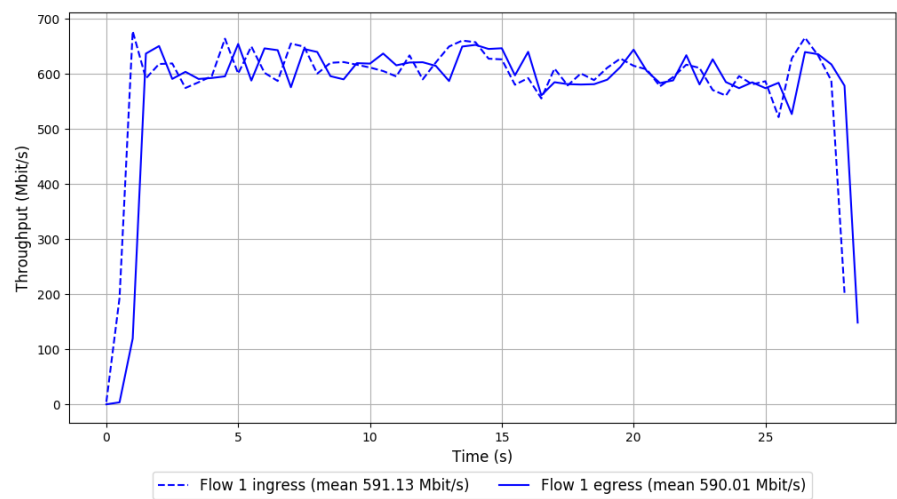
Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-07-12 23:20:44
End at: 2019-07-12 23:21:14
Local clock offset: -0.017 ms
Remote clock offset: -0.035 ms


# Below is generated by plot.py at 2019-07-13 00:51:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 518.57 Mbit/s
95th percentile per-packet one-way delay: 72.288 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 518.57 Mbit/s
95th percentile per-packet one-way delay: 72.288 ms
Loss rate: 0.40%
```

Run 5: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 518.92 Mbit/s)   Flow 1 egress (mean 518.57 Mbit/s)
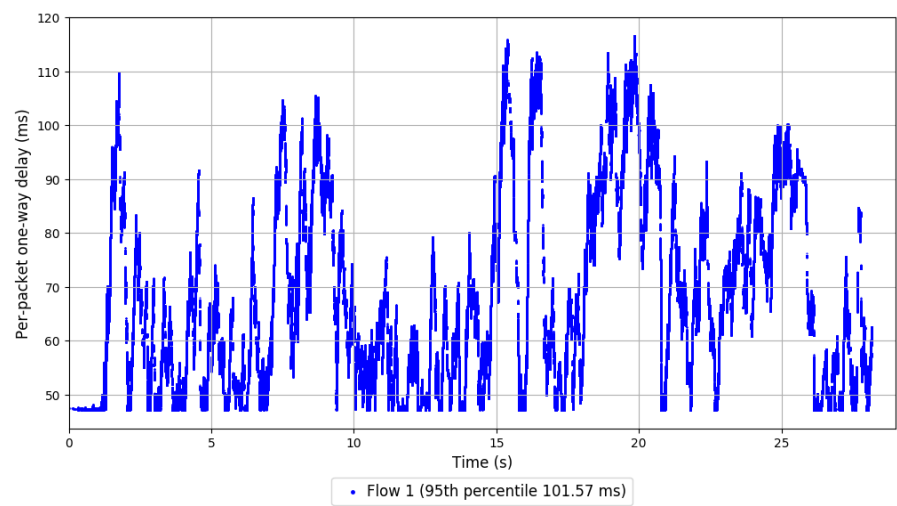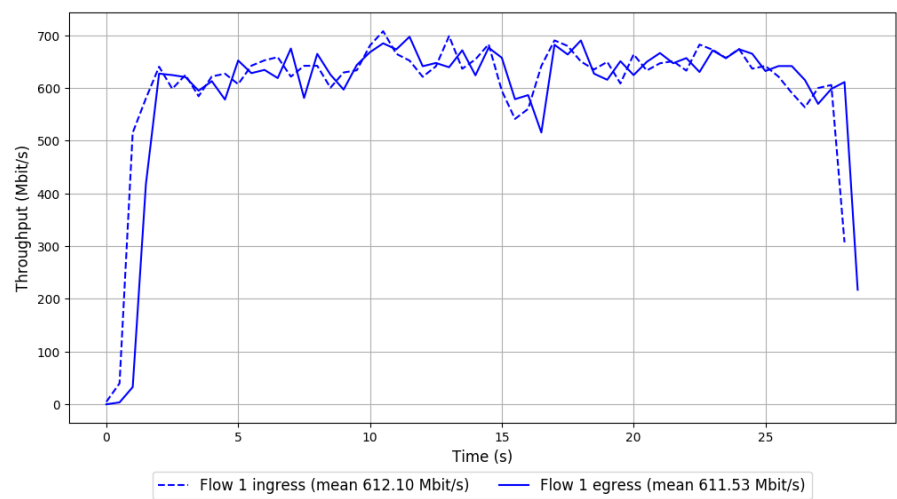

Flow 1 (95th percentile 72.29 ms)

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-07-12 20:55:23
End at: 2019-07-12 20:55:53
Local clock offset: -0.009 ms
Remote clock offset: -0.192 ms

# Below is generated by plot.py at 2019-07-13 00:54:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 603.79 Mbit/s
95th percentile per-packet one-way delay: 103.577 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 603.79 Mbit/s
95th percentile per-packet one-way delay: 103.577 ms
Loss rate: 0.38%
```

Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-07-12 21:30:17
End at: 2019-07-12 21:30:47
Local clock offset: -0.03 ms
Remote clock offset: -0.227 ms


# Below is generated by plot.py at 2019-07-13 00:54:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 590.01 Mbit/s
95th percentile per-packet one-way delay: 99.899 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 590.01 Mbit/s
95th percentile per-packet one-way delay: 99.899 ms
Loss rate: 0.53%
```
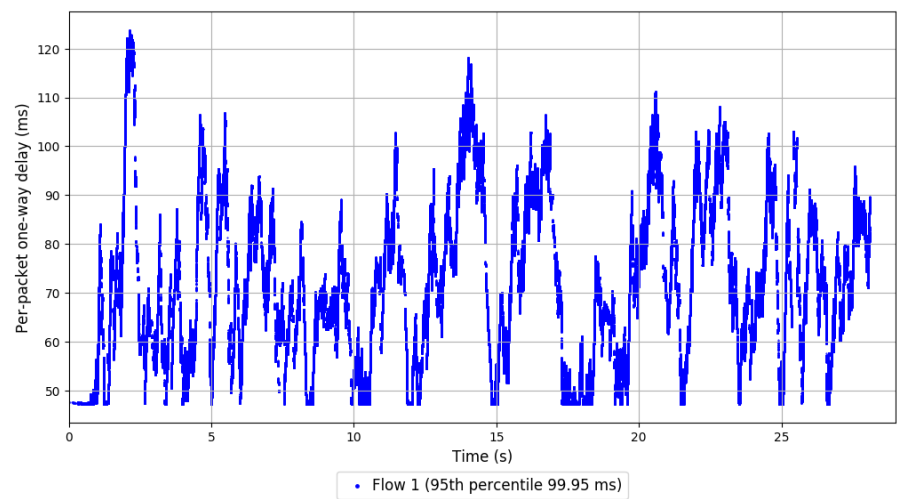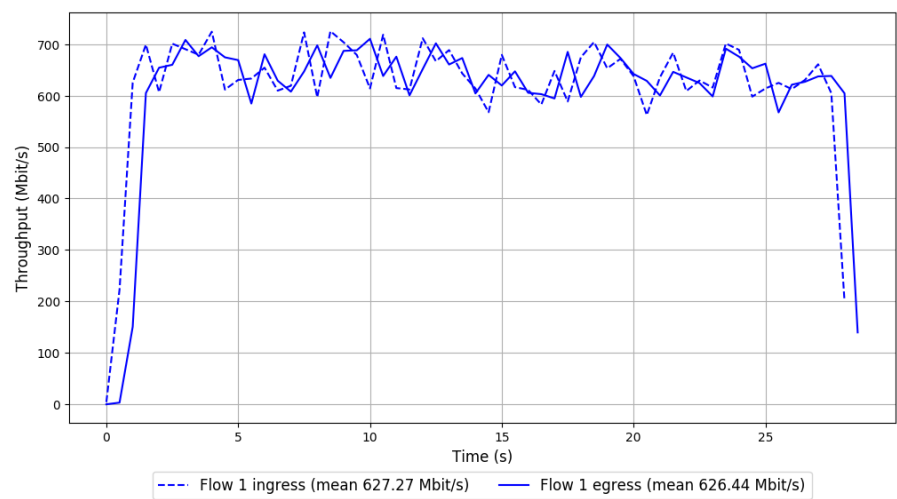
Run 2: Report of Indigo-MusesT — Data Link

- - - Flow 1 ingress (mean 591.13 Mbit/s) —— Flow 1 egress (mean 590.01 Mbit/s)

• Flow 1 (95th percentile 99.90 ms)

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-07-12 22:05:17
End at: 2019-07-12 22:05:47
Local clock offset: -0.024 ms
Remote clock offset: -0.292 ms


# Below is generated by plot.py at 2019-07-13 00:57:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 611.53 Mbit/s
95th percentile per-packet one-way delay: 101.572 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 611.53 Mbit/s
95th percentile per-packet one-way delay: 101.572 ms
Loss rate: 0.43%
```
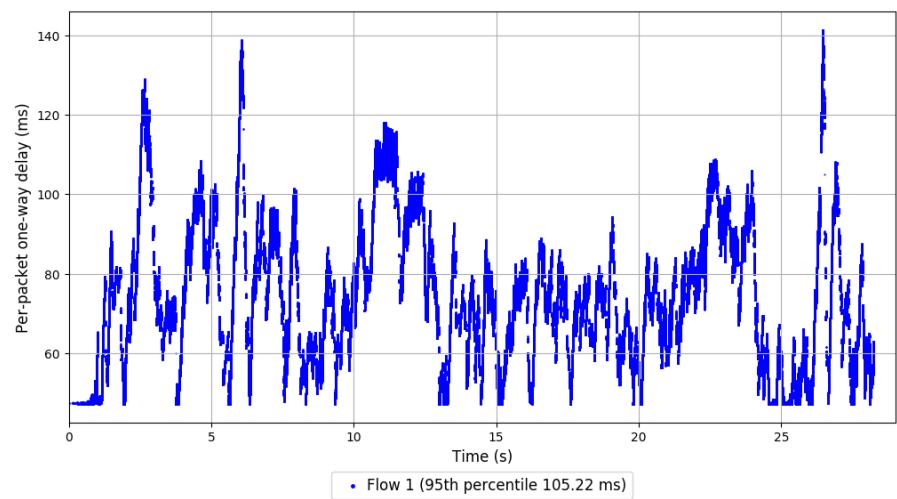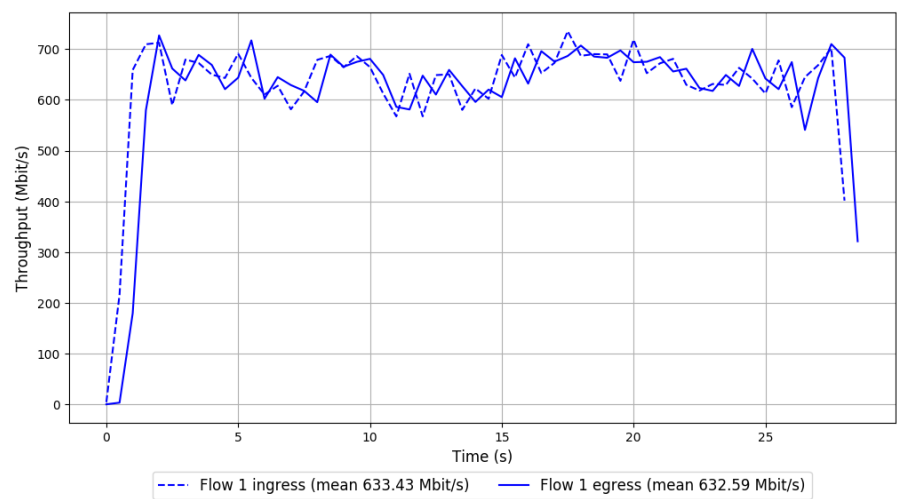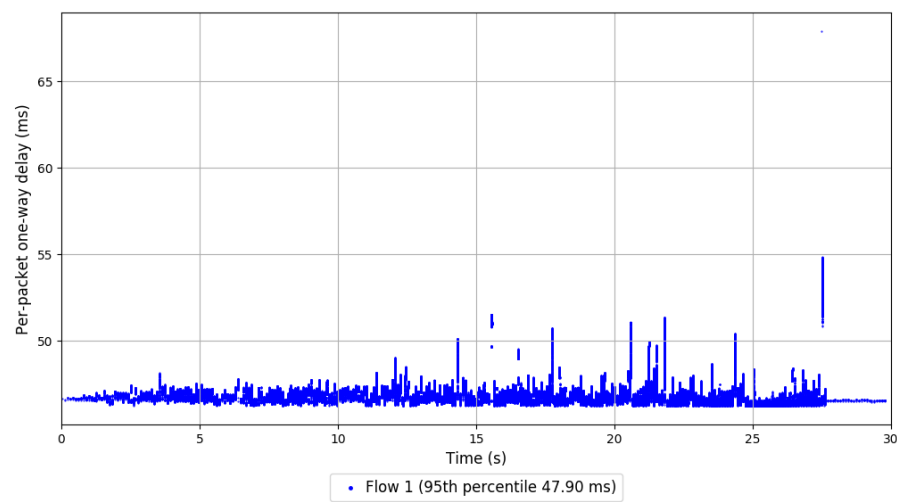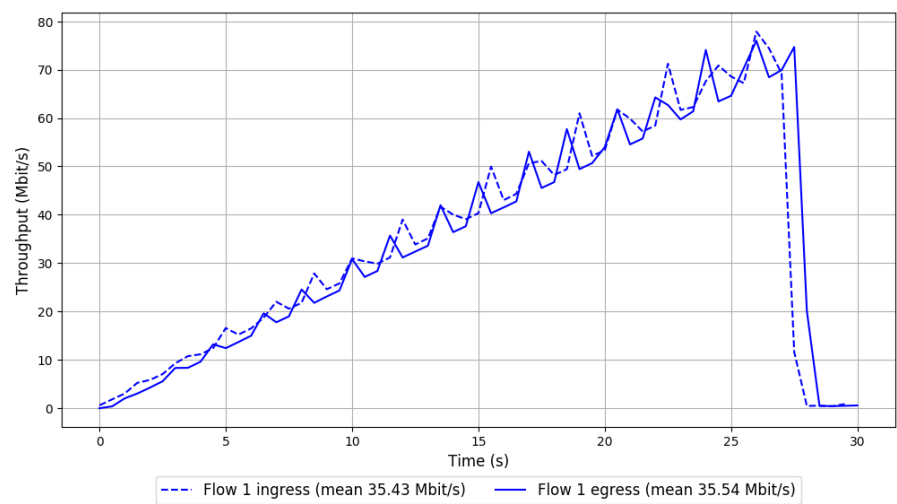
Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 612.10 Mbit/s) — — — Flow 1 egress (mean 611.53 Mbit/s)

• Flow 1 (95th percentile 101.57 ms)

100

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-07-12 22:40:07
End at: 2019-07-12 22:40:37
Local clock offset: 0.025 ms
Remote clock offset: -0.357 ms


# Below is generated by plot.py at 2019-07-13 00:57:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 626.44 Mbit/s
95th percentile per-packet one-way delay: 99.952 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 626.44 Mbit/s
95th percentile per-packet one-way delay: 99.952 ms
Loss rate: 0.47%
```

Run 4: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 627.27 Mbit/s)   Flow 1 egress (mean 626.44 Mbit/s)

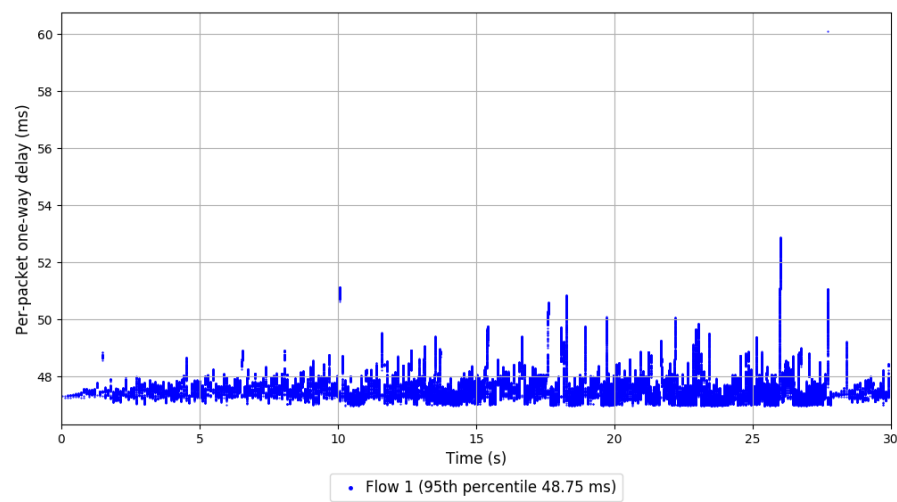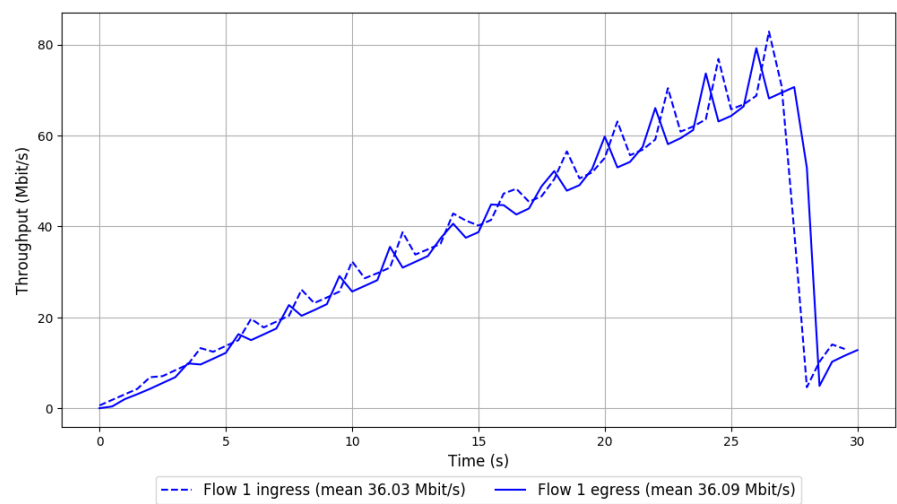• Flow 1 (95th percentile 99.95 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-07-12 23:14:56
End at: 2019-07-12 23:15:26
Local clock offset: 0.023 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2019-07-13 00:57:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 632.59 Mbit/s
95th percentile per-packet one-way delay: 105.220 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 632.59 Mbit/s
95th percentile per-packet one-way delay: 105.220 ms
Loss rate: 0.47%
```

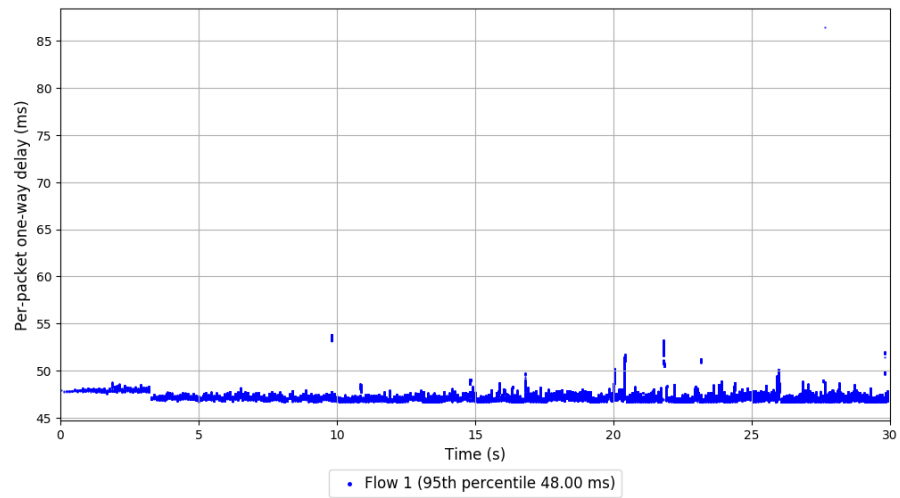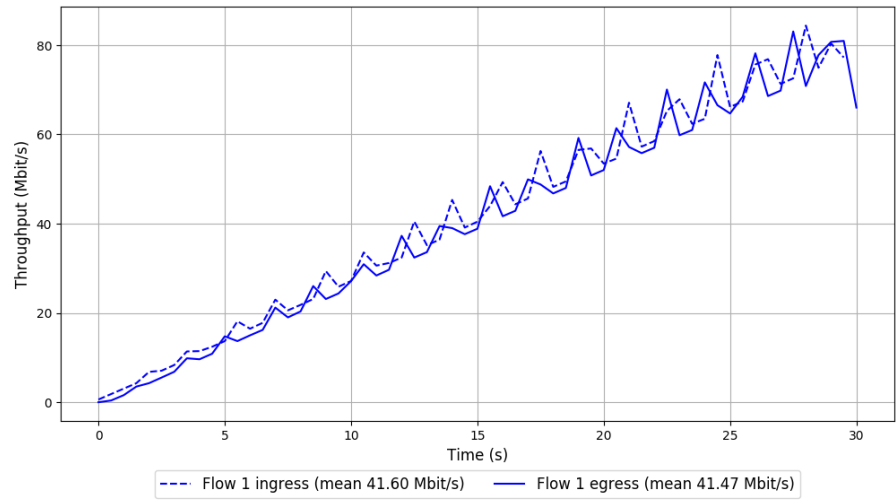# Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-07-12 20:39:56
End at: 2019-07-12 20:40:26
Local clock offset: -0.029 ms
Remote clock offset: -0.153 ms


# Below is generated by plot.py at 2019-07-13 00:57:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.54 Mbit/s
95th percentile per-packet one-way delay: 47.900 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 35.54 Mbit/s
95th percentile per-packet one-way delay: 47.900 ms
Loss rate: 0.01%
```

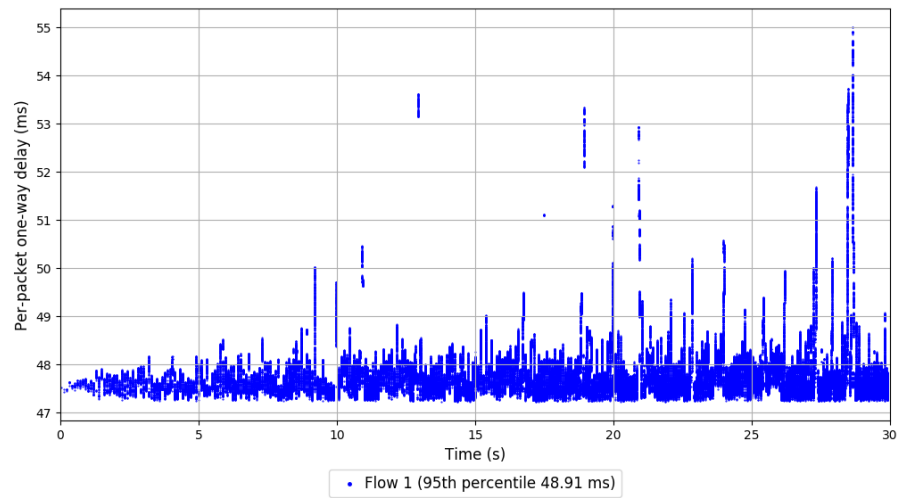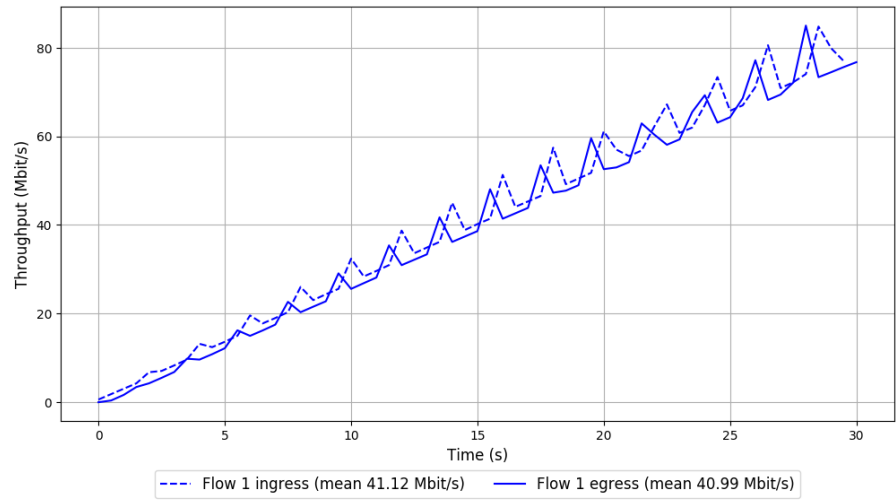Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-07-12 21:14:20
End at: 2019-07-12 21:14:50
Local clock offset: -0.059 ms
Remote clock offset: -0.205 ms


# Below is generated by plot.py at 2019-07-13 00:57:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.09 Mbit/s
95th percentile per-packet one-way delay: 48.750 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 36.09 Mbit/s
95th percentile per-packet one-way delay: 48.750 ms
Loss rate: 0.13%
```

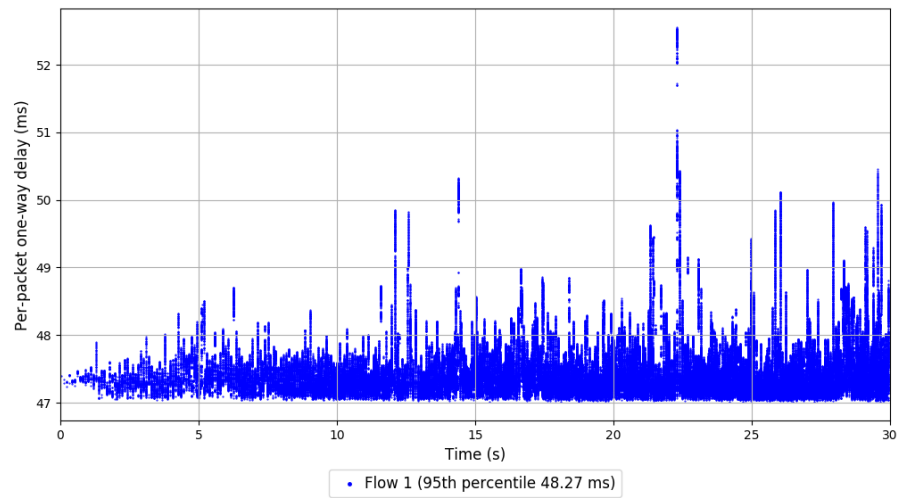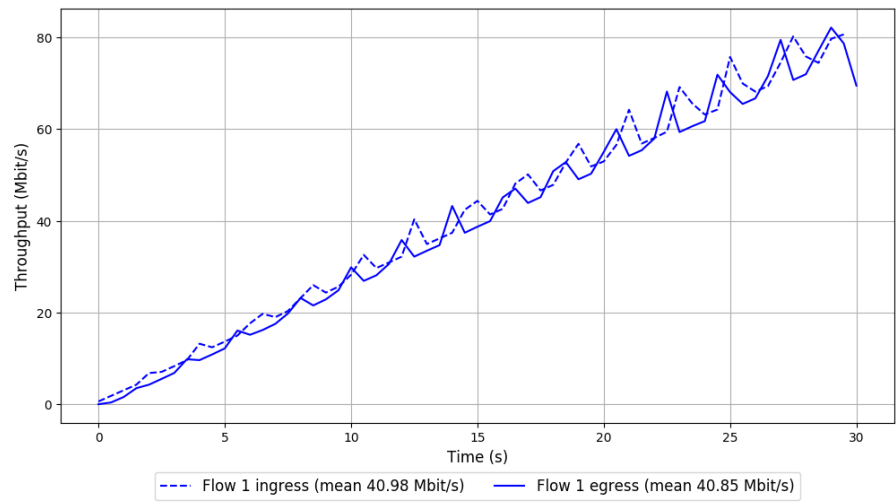## Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-07-12 21:49:18
End at: 2019-07-12 21:49:48
Local clock offset: 0.341 ms
Remote clock offset: -0.278 ms


# Below is generated by plot.py at 2019-07-13 00:57:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 41.47 Mbit/s
95th percentile per-packet one-way delay: 48.004 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 41.47 Mbit/s
95th percentile per-packet one-way delay: 48.004 ms
Loss rate: 0.62%
```

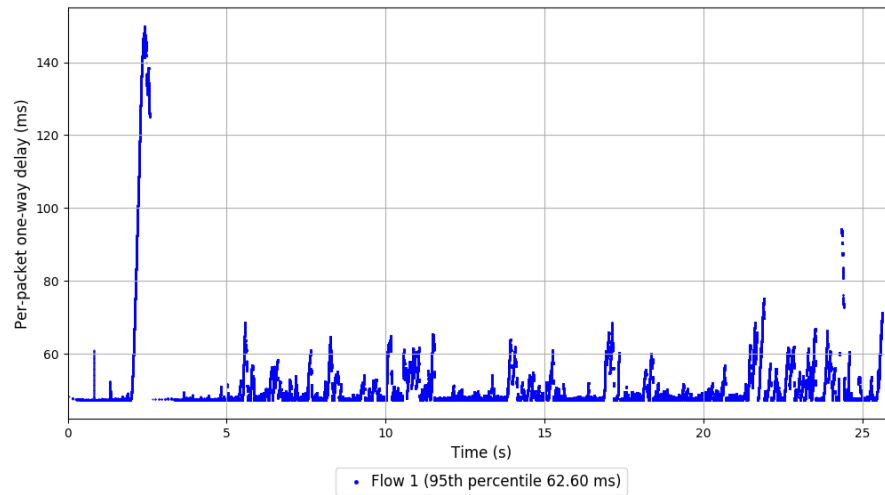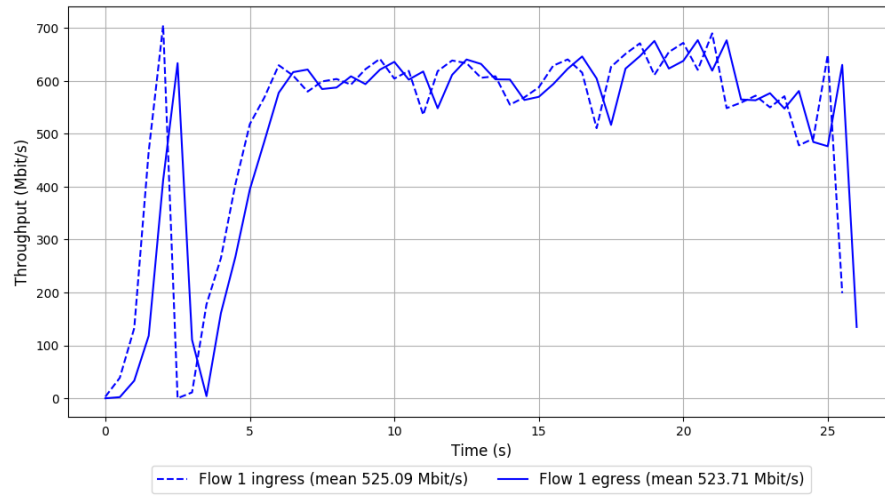Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-07-12 22:24:19
End at: 2019-07-12 22:24:49
Local clock offset: 0.038 ms
Remote clock offset: -0.375 ms


# Below is generated by plot.py at 2019-07-13 00:57:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 40.99 Mbit/s
95th percentile per-packet one-way delay: 48.907 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 40.99 Mbit/s
95th percentile per-packet one-way delay: 48.907 ms
Loss rate: 0.63%
```

Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 41.12 Mbit/s) ——— Flow 1 egress (mean 40.99 Mbit/s)
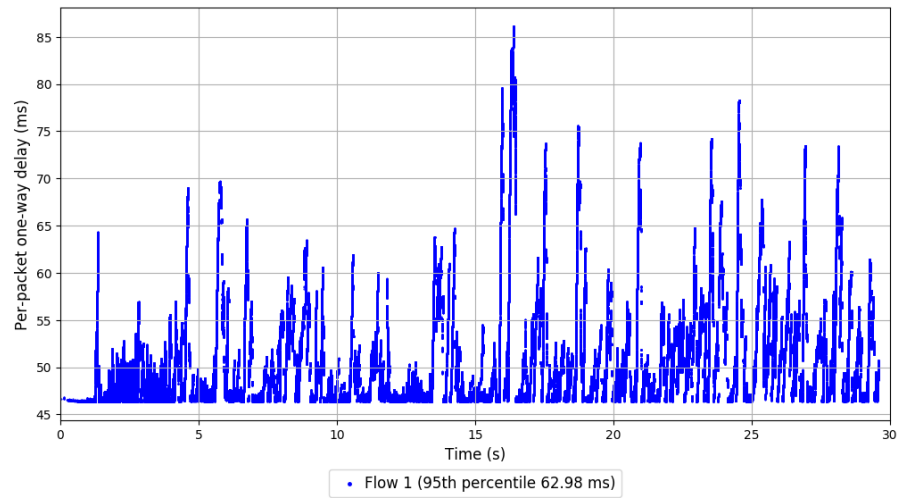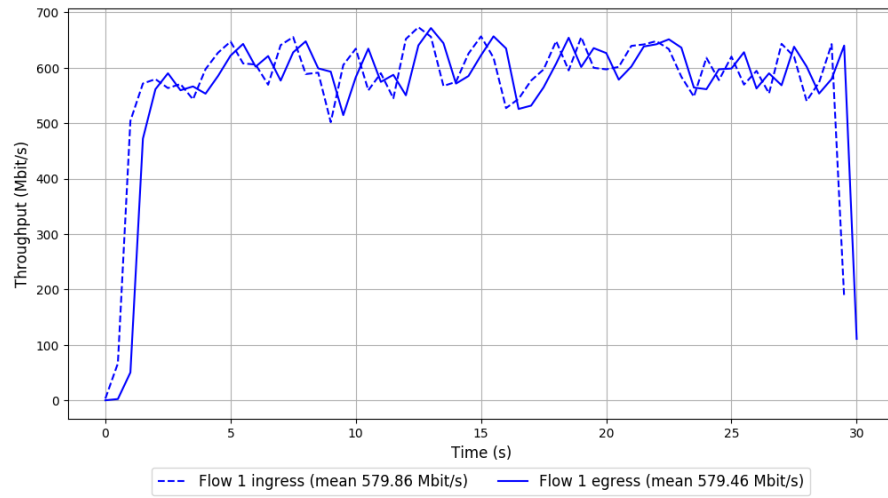

• Flow 1 (95th percentile 48.91 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-07-12 22:58:57
End at: 2019-07-12 22:59:27
Local clock offset: 0.009 ms
Remote clock offset: -0.374 ms


# Below is generated by plot.py at 2019-07-13 00:57:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 40.85 Mbit/s
95th percentile per-packet one-way delay: 48.265 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 40.85 Mbit/s
95th percentile per-packet one-way delay: 48.265 ms
Loss rate: 0.62%
```
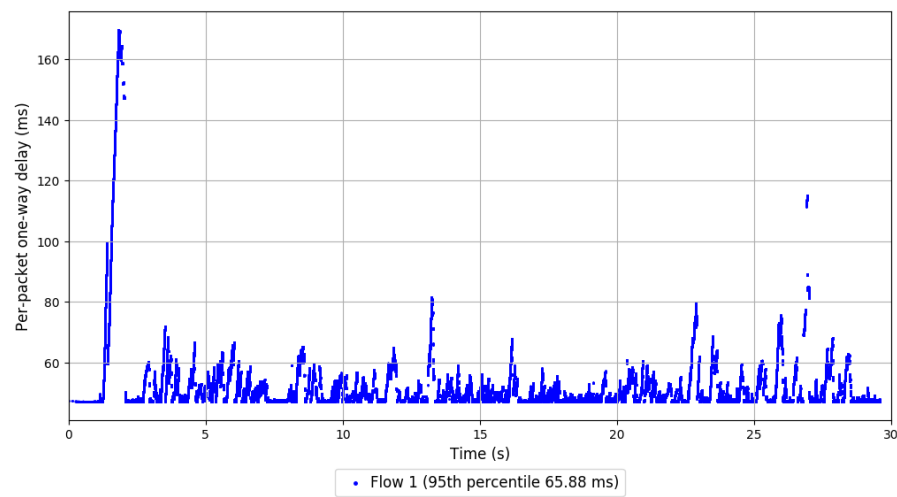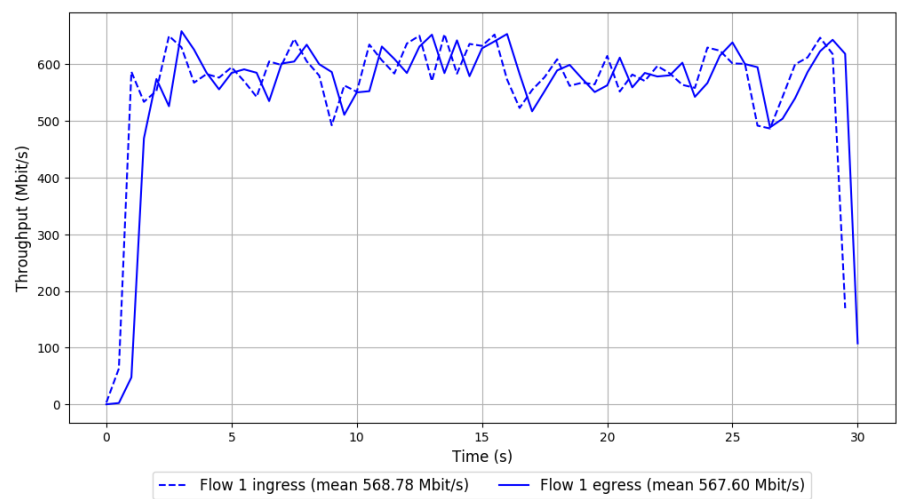
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 20:41:07
End at: 2019-07-12 20:41:37
Local clock offset: -0.005 ms
Remote clock offset: -0.199 ms


# Below is generated by plot.py at 2019-07-13 00:59:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 523.71 Mbit/s
95th percentile per-packet one-way delay: 62.602 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 523.71 Mbit/s
95th percentile per-packet one-way delay: 62.602 ms
Loss rate: 0.64%
```
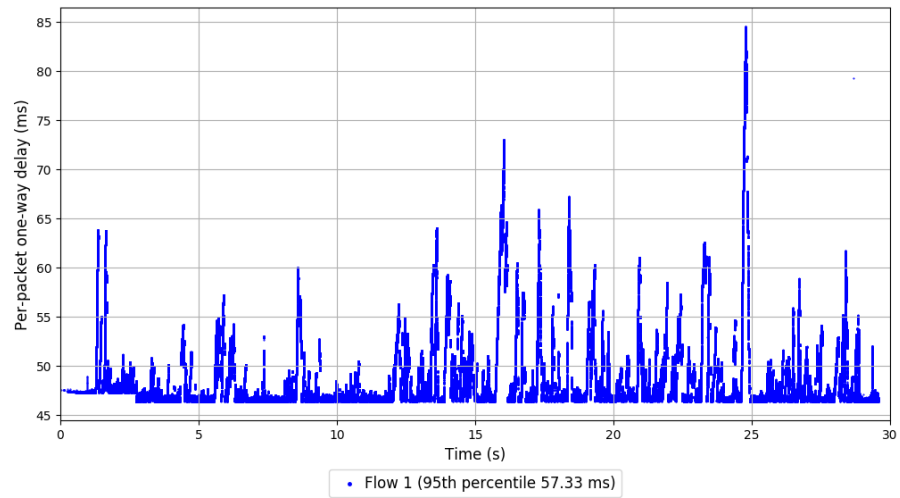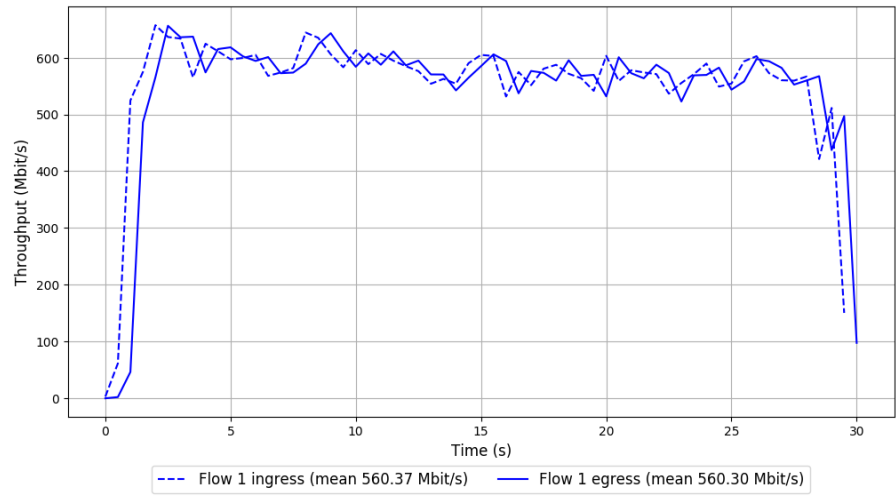
Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 21:15:31
End at: 2019-07-12 21:16:01
Local clock offset: 0.039 ms
Remote clock offset: -0.225 ms


# Below is generated by plot.py at 2019-07-13 01:02:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 579.46 Mbit/s
95th percentile per-packet one-way delay: 62.979 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 579.46 Mbit/s
95th percentile per-packet one-way delay: 62.979 ms
Loss rate: 0.39%
```

Run 2: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 579.86 Mbit/s)   Flow 1 egress (mean 579.46 Mbit/s)
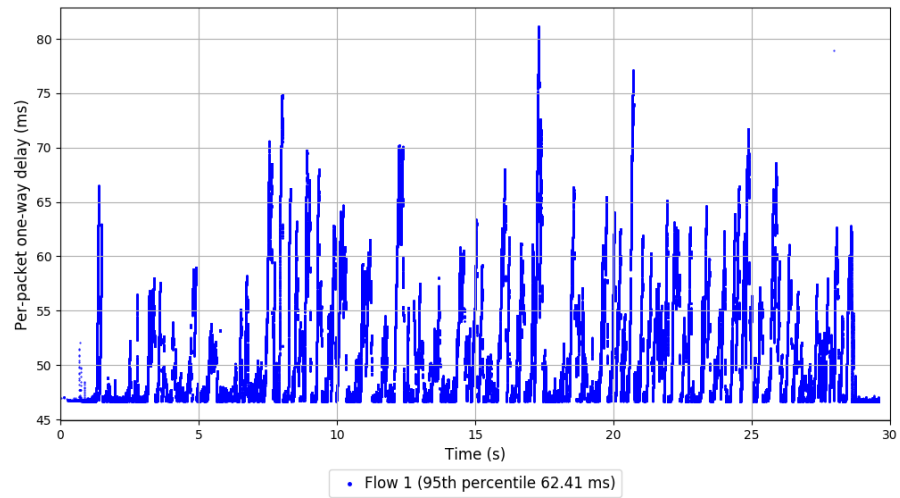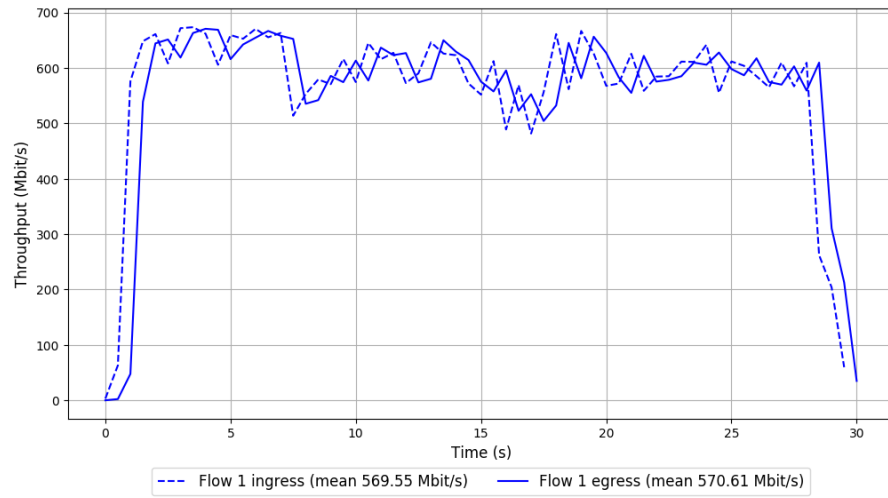

• Flow 1 (95th percentile 62.98 ms)

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 21:50:29
End at: 2019-07-12 21:50:59
Local clock offset: -0.022 ms
Remote clock offset: -0.301 ms


# Below is generated by plot.py at 2019-07-13 01:02:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 567.60 Mbit/s
95th percentile per-packet one-way delay: 65.884 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 567.60 Mbit/s
95th percentile per-packet one-way delay: 65.884 ms
Loss rate: 0.52%
```

Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 22:25:30
End at: 2019-07-12 22:26:00
Local clock offset: 0.027 ms
Remote clock offset: -0.337 ms


# Below is generated by plot.py at 2019-07-13 01:04:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 560.30 Mbit/s
95th percentile per-packet one-way delay: 57.326 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 560.30 Mbit/s
95th percentile per-packet one-way delay: 57.326 ms
Loss rate: 0.33%
```
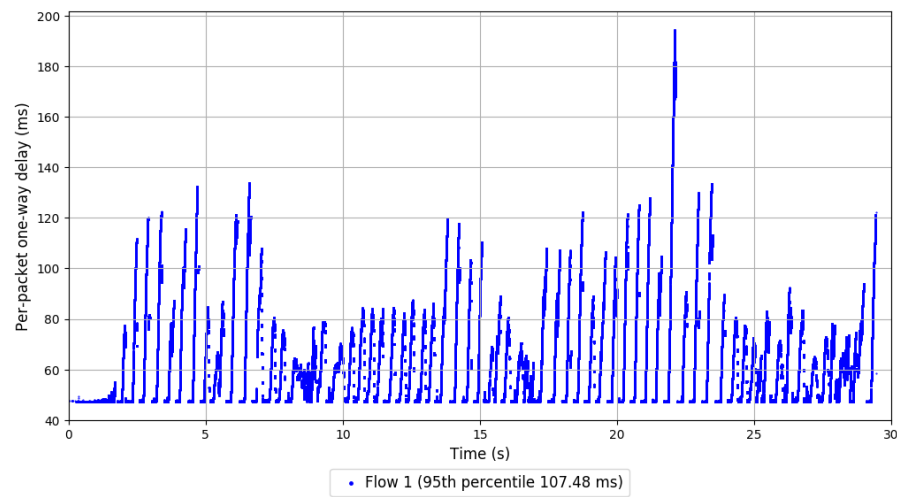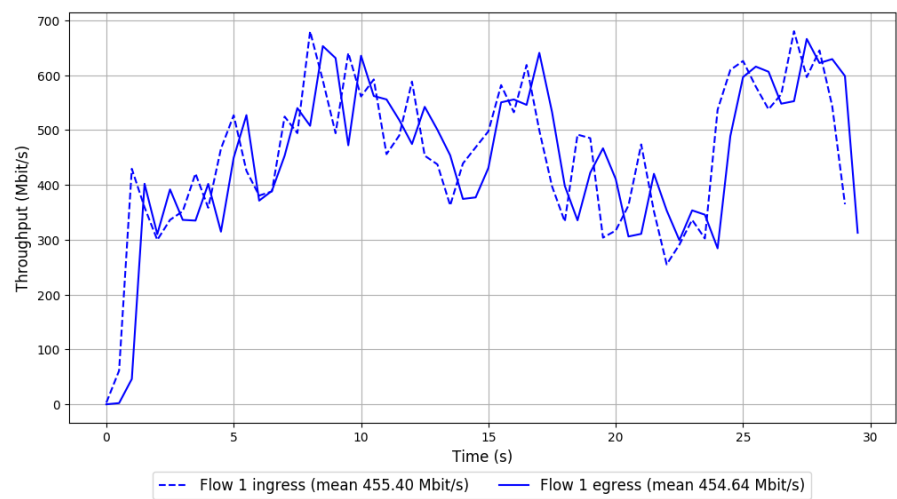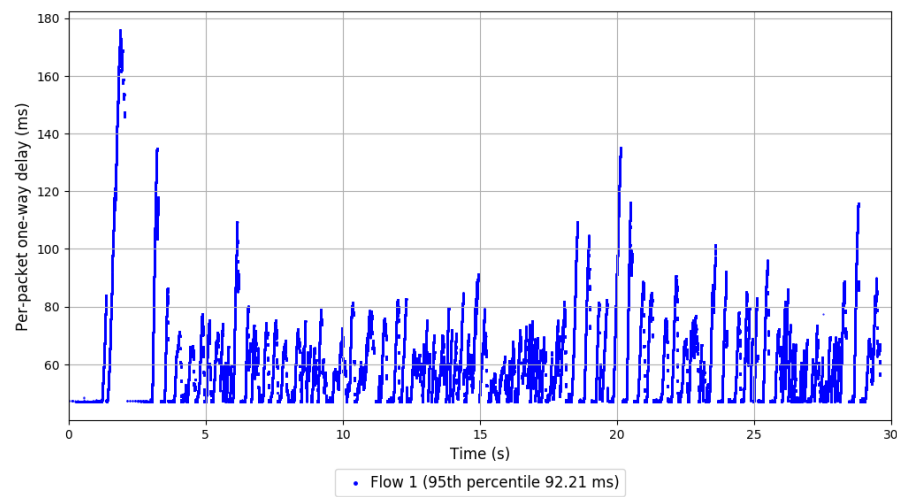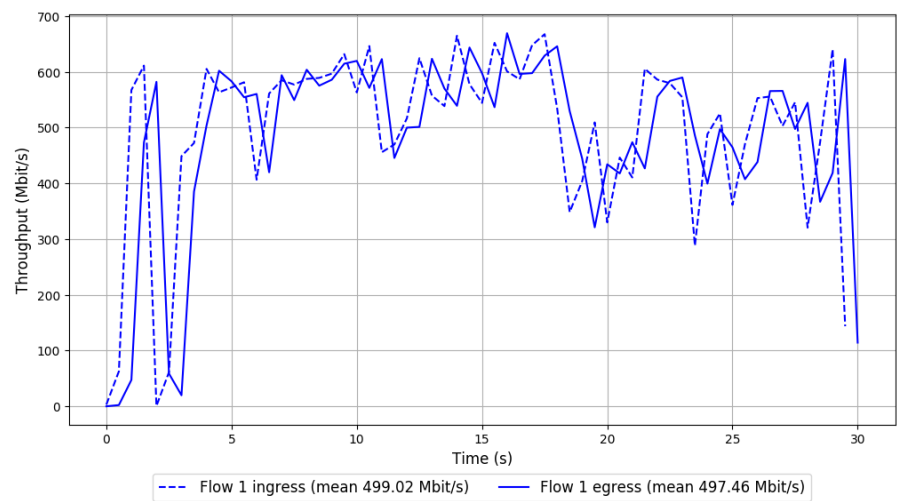
Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 23:00:09
End at: 2019-07-12 23:00:39
Local clock offset: -0.344 ms
Remote clock offset: -0.401 ms


# Below is generated by plot.py at 2019-07-13 01:05:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 570.61 Mbit/s
95th percentile per-packet one-way delay: 62.415 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 570.61 Mbit/s
95th percentile per-packet one-way delay: 62.415 ms
Loss rate: 0.11%
```
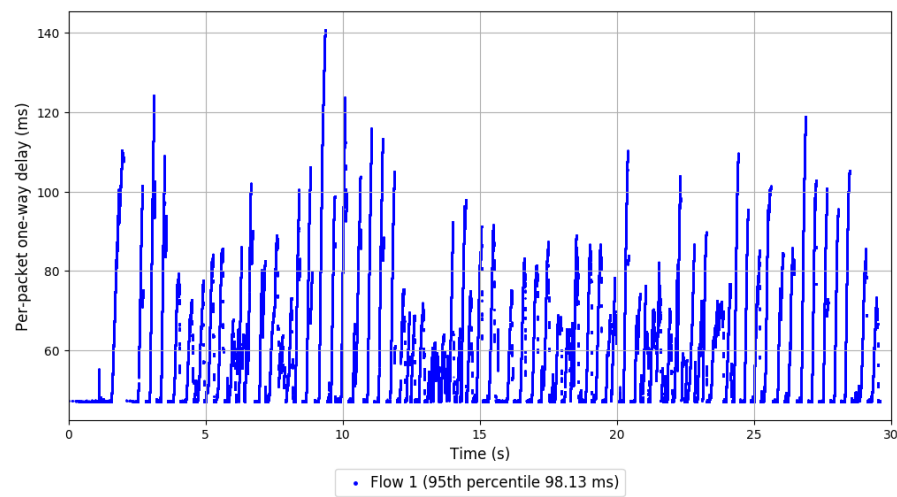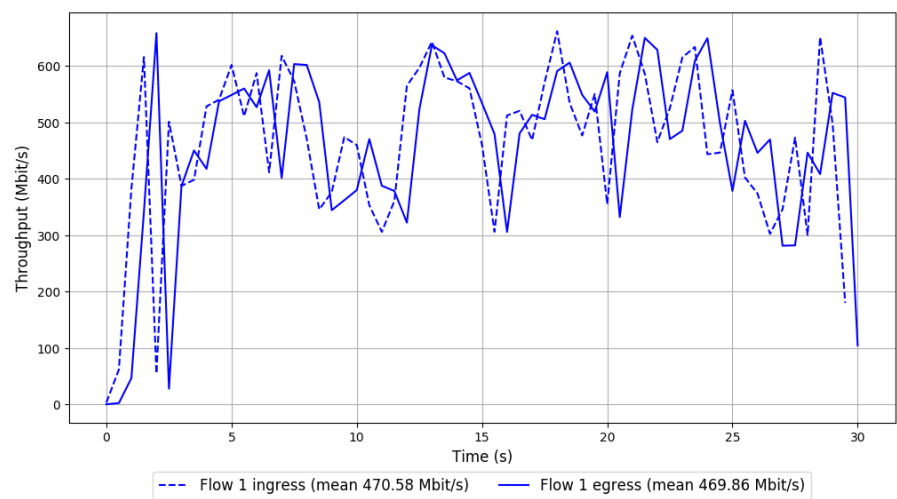
Run 5: Report of Muses_DecisionTree — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 21:09:44
End at: 2019-07-12 21:10:14
Local clock offset: 0.051 ms
Remote clock offset: -0.19 ms


# Below is generated by plot.py at 2019-07-13 01:05:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 454.64 Mbit/s
95th percentile per-packet one-way delay: 107.477 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 454.64 Mbit/s
95th percentile per-packet one-way delay: 107.477 ms
Loss rate: 0.25%
```

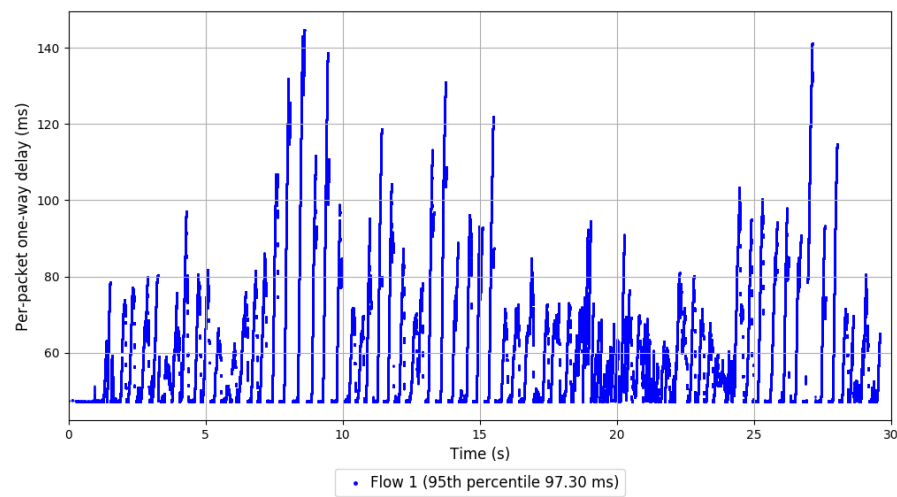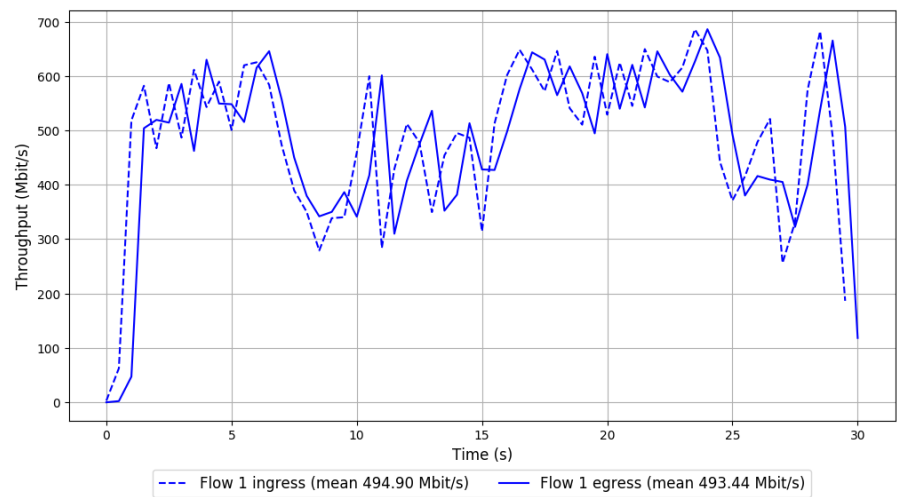Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 21:44:39
End at: 2019-07-12 21:45:09
Local clock offset: -0.058 ms
Remote clock offset: -0.259 ms


# Below is generated by plot.py at 2019-07-13 01:06:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 497.46 Mbit/s
95th percentile per-packet one-way delay: 92.207 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 497.46 Mbit/s
95th percentile per-packet one-way delay: 92.207 ms
Loss rate: 0.63%
```

Run 2: Report of Muses_DecisionTreeH0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 22:19:41
End at: 2019-07-12 22:20:11
Local clock offset: 0.024 ms
Remote clock offset: -0.293 ms


# Below is generated by plot.py at 2019-07-13 01:06:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 469.86 Mbit/s
95th percentile per-packet one-way delay: 98.128 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 469.86 Mbit/s
95th percentile per-packet one-way delay: 98.128 ms
Loss rate: 0.47%
```
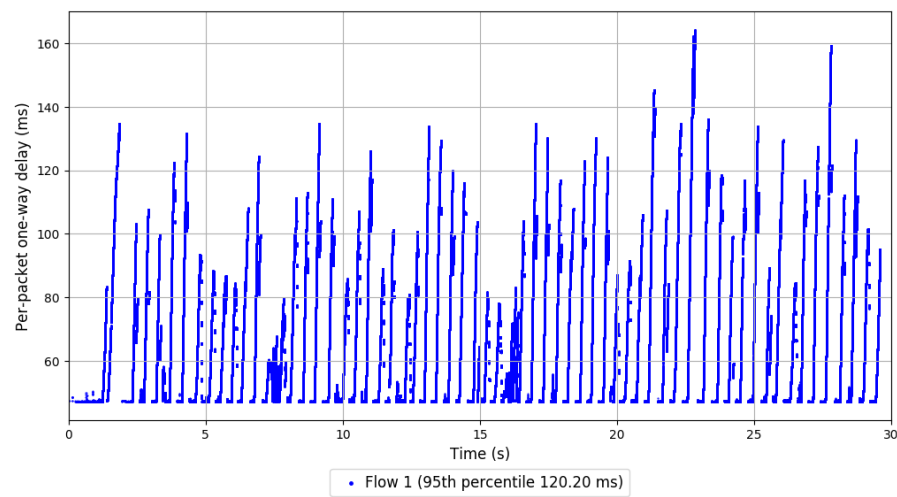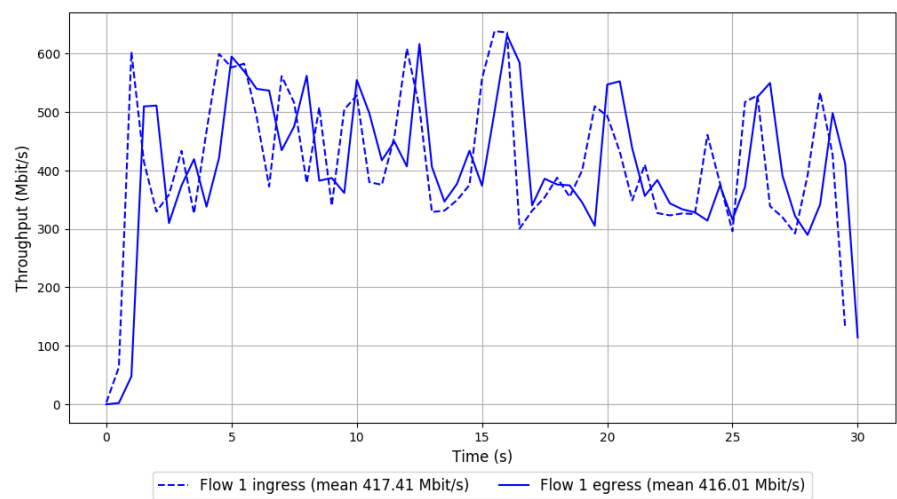
Run 3: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 470.58 Mbit/s) ----- Flow 1 egress (mean 469.86 Mbit/s) —

Flow 1 (95th percentile 98.13 ms)

Run 4: Statistics of Muses_DecisionTreeH0

Start at: 2019-07-12 22:54:18
End at: 2019-07-12 22:54:48
Local clock offset: 0.062 ms
Remote clock offset: -0.365 ms

Below is generated by plot.py at 2019-07-13 01:08:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 493.44 Mbit/s
95th percentile per-packet one-way delay: 97.300 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 493.44 Mbit/s
95th percentile per-packet one-way delay: 97.300 ms
Loss rate: 0.60%
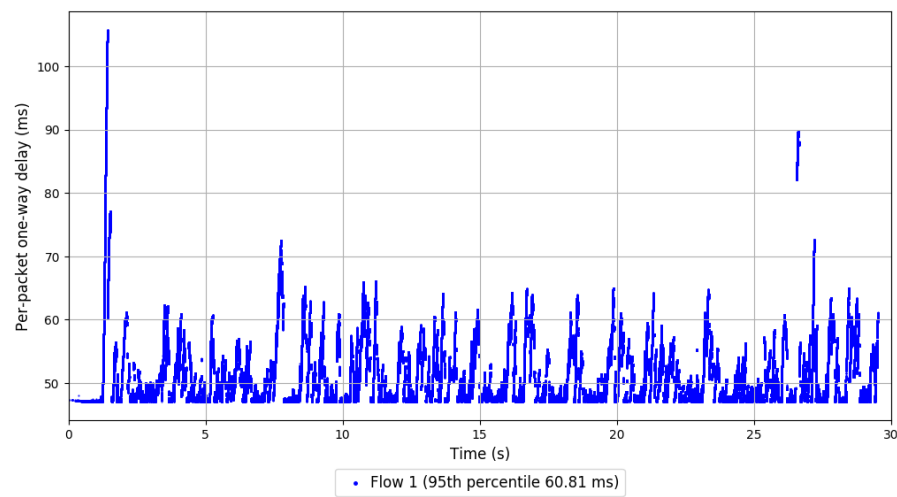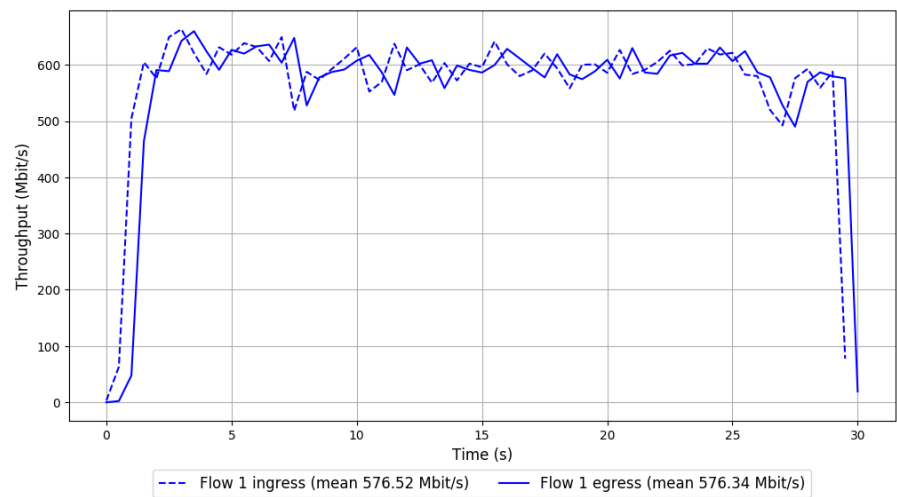
Run 4: Report of Muses_DecisionTreeH0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 23:29:22
End at: 2019-07-12 23:29:52
Local clock offset: -0.047 ms
Remote clock offset: 0.082 ms


# Below is generated by plot.py at 2019-07-13 01:09:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 416.01 Mbit/s
95th percentile per-packet one-way delay: 120.196 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 416.01 Mbit/s
95th percentile per-packet one-way delay: 120.196 ms
Loss rate: 0.55%
```

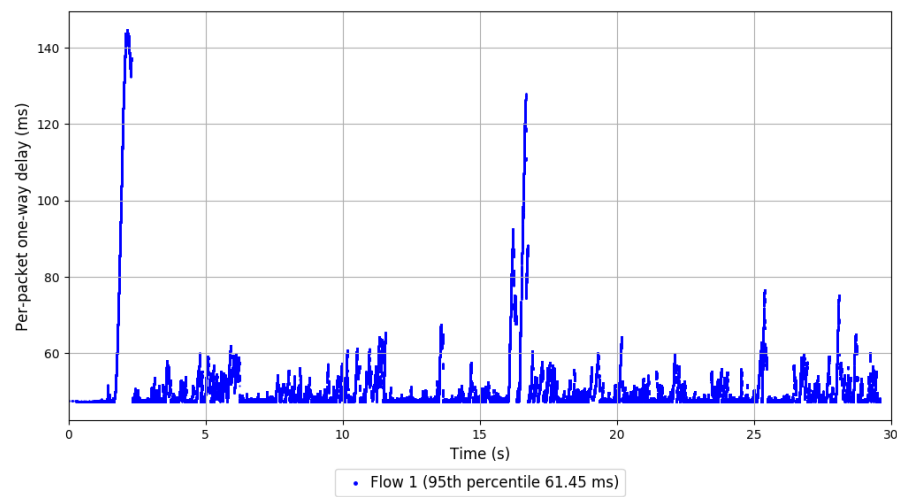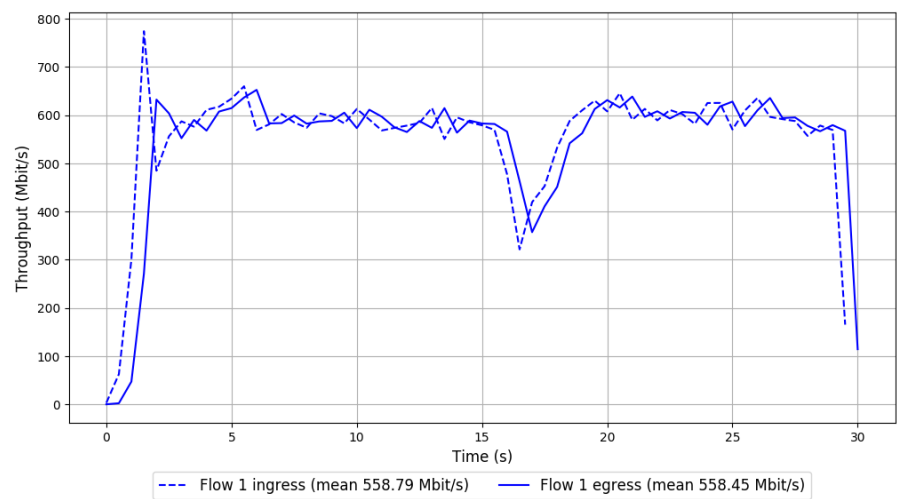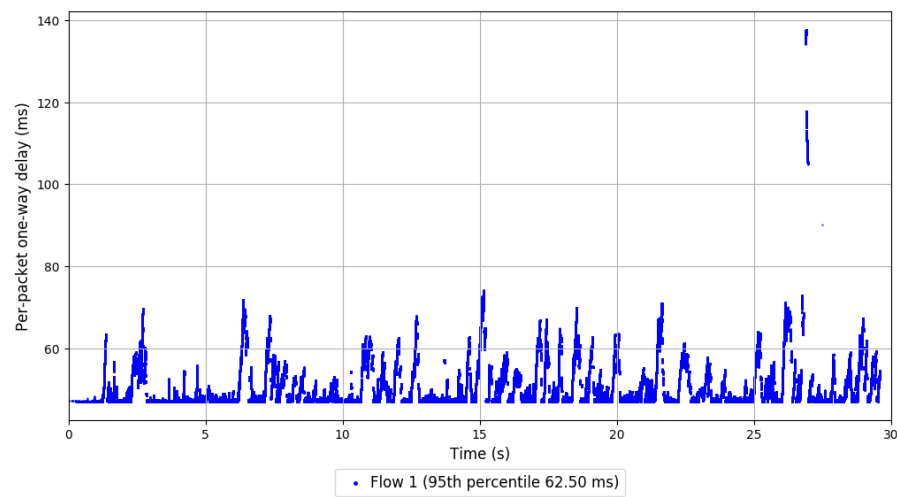# Run 5: Report of Muses_DecisionTreeH0 — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 21:02:34
End at: 2019-07-12 21:03:04
Local clock offset: -0.004 ms
Remote clock offset: -0.232 ms


# Below is generated by plot.py at 2019-07-13 01:12:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 576.34 Mbit/s
95th percentile per-packet one-way delay: 60.812 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 576.34 Mbit/s
95th percentile per-packet one-way delay: 60.812 ms
Loss rate: 0.35%
```

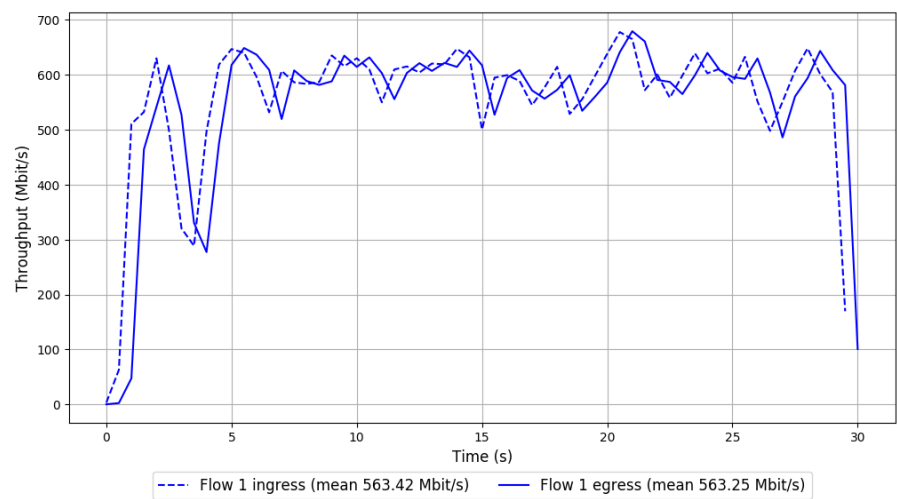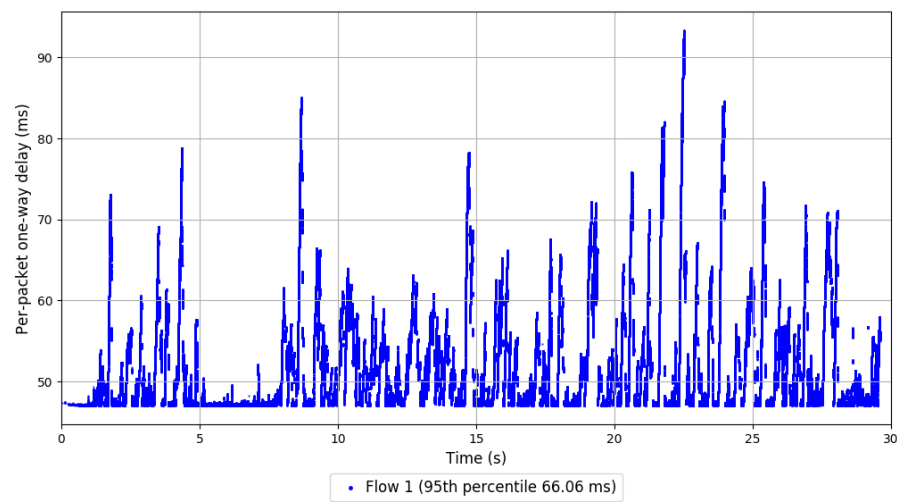Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 21:37:31
End at: 2019-07-12 21:38:01
Local clock offset: 0.012 ms
Remote clock offset: -0.258 ms


# Below is generated by plot.py at 2019-07-13 01:14:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 558.45 Mbit/s
95th percentile per-packet one-way delay: 61.448 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 558.45 Mbit/s
95th percentile per-packet one-way delay: 61.448 ms
Loss rate: 0.38%
```

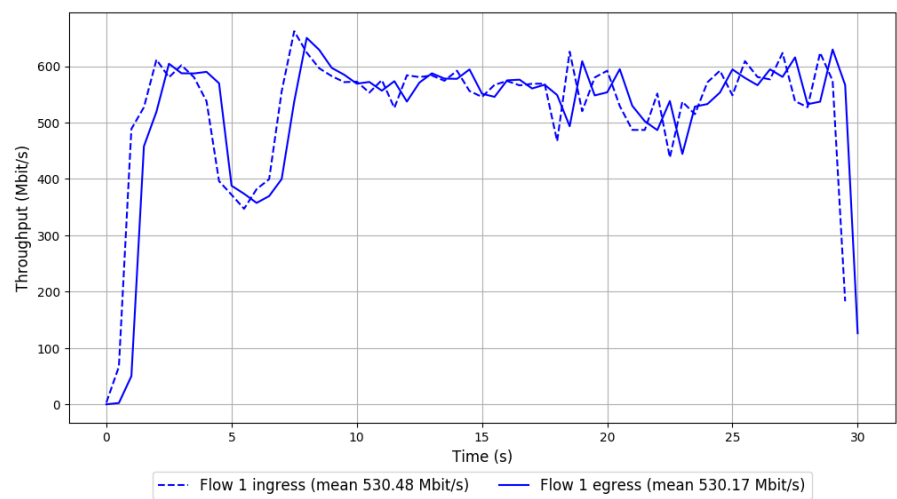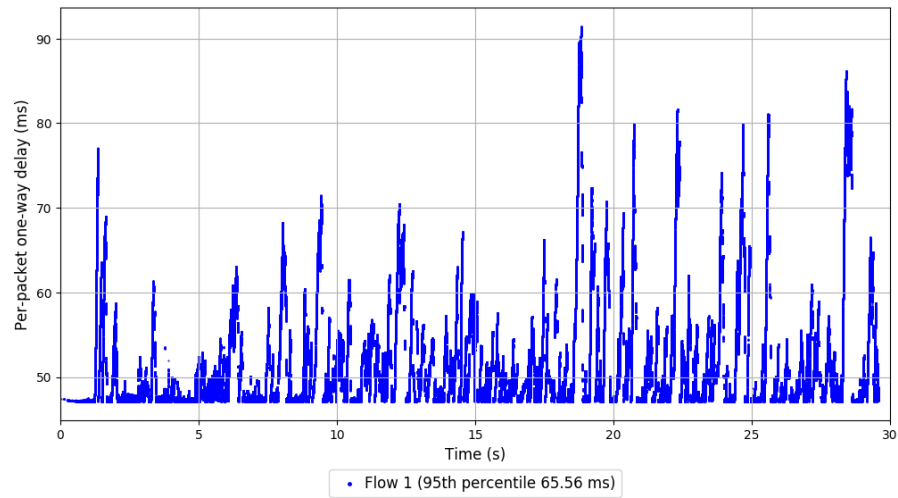Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 22:12:28
End at: 2019-07-12 22:12:58
Local clock offset: -0.024 ms
Remote clock offset: -0.301 ms


# Below is generated by plot.py at 2019-07-13 01:14:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 563.25 Mbit/s
95th percentile per-packet one-way delay: 62.500 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 563.25 Mbit/s
95th percentile per-packet one-way delay: 62.500 ms
Loss rate: 0.35%
```
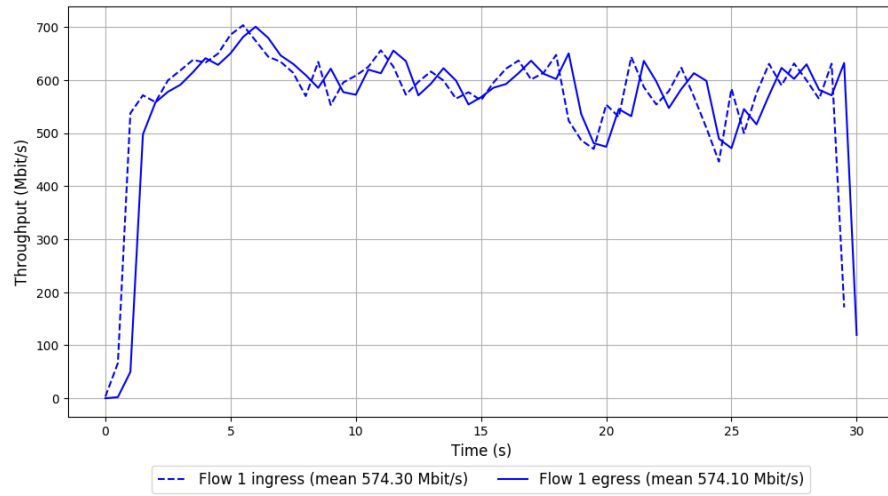
Run 3: Report of Muses_DecisionTreeR0 — Data Link

Run 4: Statistics of Muses_DecisionTreeR0

Start at: 2019-07-12 22:47:17
End at: 2019-07-12 22:47:47
Local clock offset: 0.019 ms
Remote clock offset: -0.346 ms

Below is generated by plot.py at 2019-07-13 01:14:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 530.17 Mbit/s
95th percentile per-packet one-way delay: 66.061 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 530.17 Mbit/s
95th percentile per-packet one-way delay: 66.061 ms
Loss rate: 0.38%

Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 23:22:15
End at: 2019-07-12 23:22:45
Local clock offset: -0.012 ms
Remote clock offset: -0.007 ms


# Below is generated by plot.py at 2019-07-13 01:16:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 574.10 Mbit/s
95th percentile per-packet one-way delay: 65.563 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 574.10 Mbit/s
95th percentile per-packet one-way delay: 65.563 ms
Loss rate: 0.35%
```
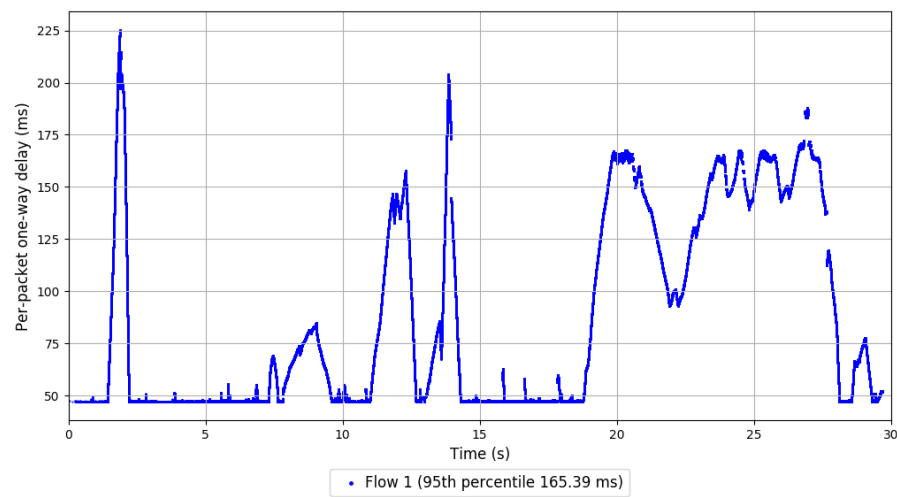
Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-07-12 20:53:52
End at: 2019-07-12 20:54:22
Local clock offset: -0.0 ms
Remote clock offset: -0.155 ms

# Below is generated by plot.py at 2019-07-13 01:19:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 385.22 Mbit/s
95th percentile per-packet one-way delay: 165.394 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 385.22 Mbit/s
95th percentile per-packet one-way delay: 165.394 ms
Loss rate: 1.64%
```
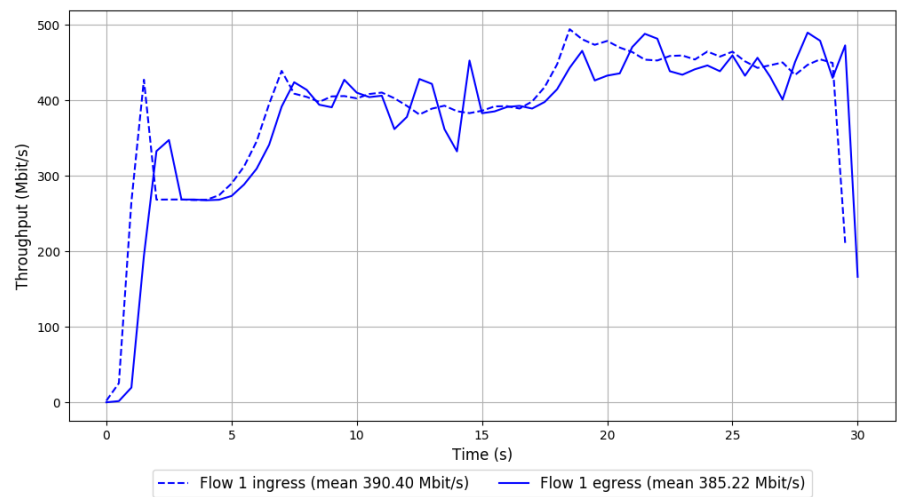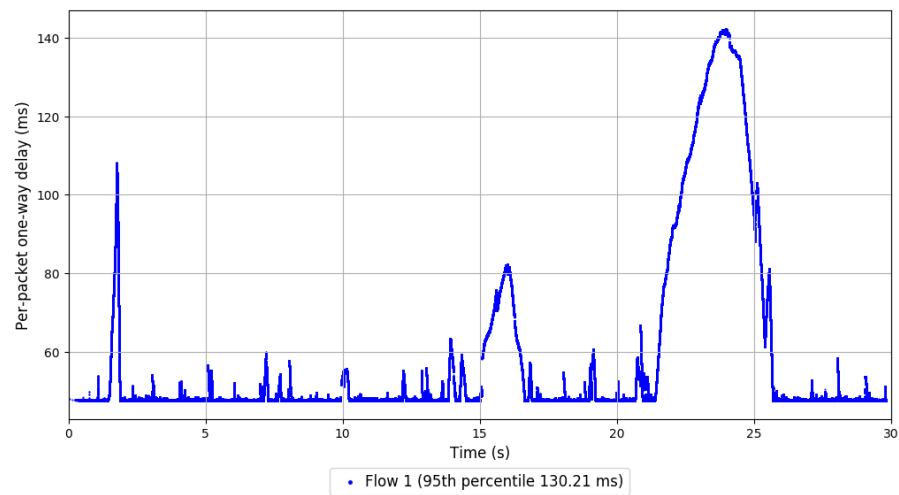
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-07-12 21:28:45
End at: 2019-07-12 21:29:15
Local clock offset: 0.365 ms
Remote clock offset: -0.255 ms


# Below is generated by plot.py at 2019-07-13 01:21:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 382.35 Mbit/s
95th percentile per-packet one-way delay: 130.207 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 382.35 Mbit/s
95th percentile per-packet one-way delay: 130.207 ms
Loss rate: 0.33%
```
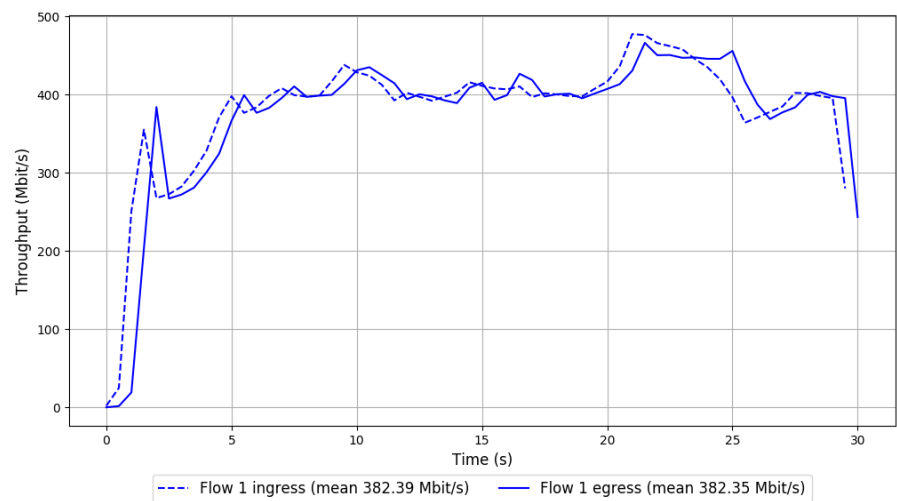
Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-07-12 22:03:45
End at: 2019-07-12 22:04:15
Local clock offset: 0.023 ms
Remote clock offset: -0.323 ms


# Below is generated by plot.py at 2019-07-13 01:23:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 404.89 Mbit/s
95th percentile per-packet one-way delay: 111.682 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 404.89 Mbit/s
95th percentile per-packet one-way delay: 111.682 ms
Loss rate: 0.41%
```
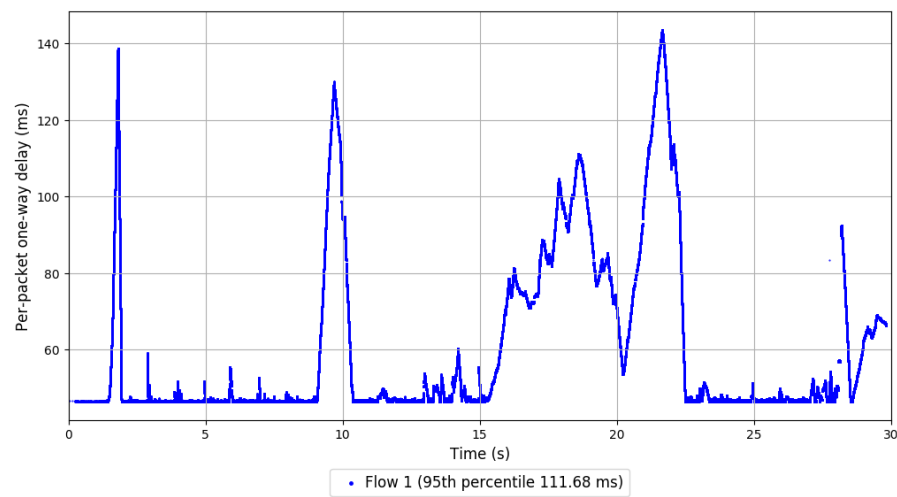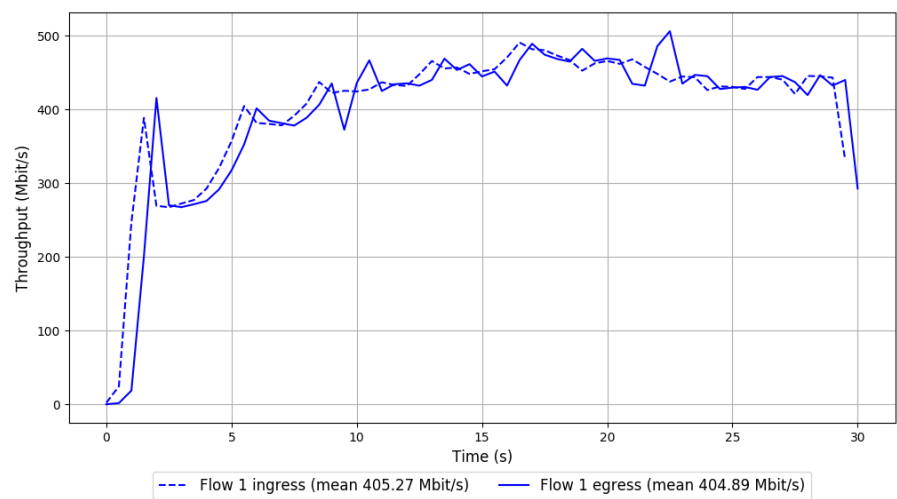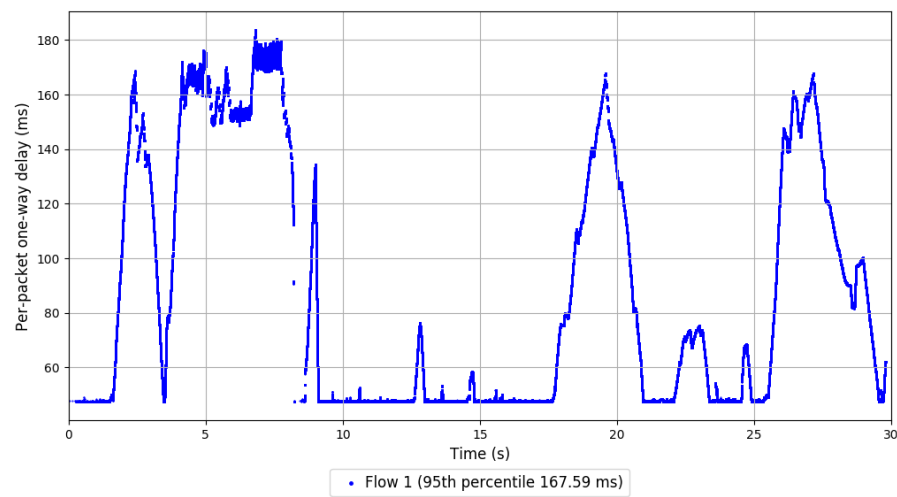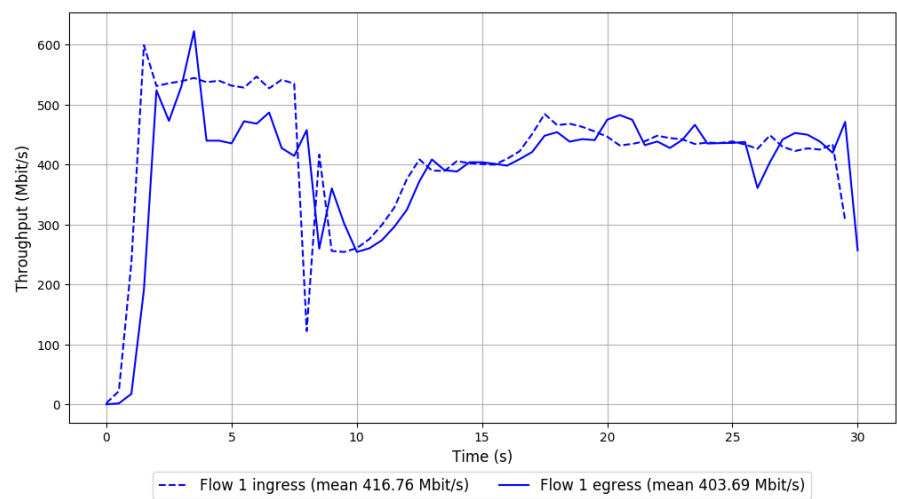
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 405.27 Mbit/s)   Flow 1 egress (mean 404.89 Mbit/s)

Flow 1 (95th percentile 111.68 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-07-12 22:38:34
End at: 2019-07-12 22:39:04
Local clock offset: 0.396 ms
Remote clock offset: -0.343 ms


# Below is generated by plot.py at 2019-07-13 01:27:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 403.69 Mbit/s
95th percentile per-packet one-way delay: 167.594 ms
Loss rate: 3.44%
-- Flow 1:
Average throughput: 403.69 Mbit/s
95th percentile per-packet one-way delay: 167.594 ms
Loss rate: 3.44%
```
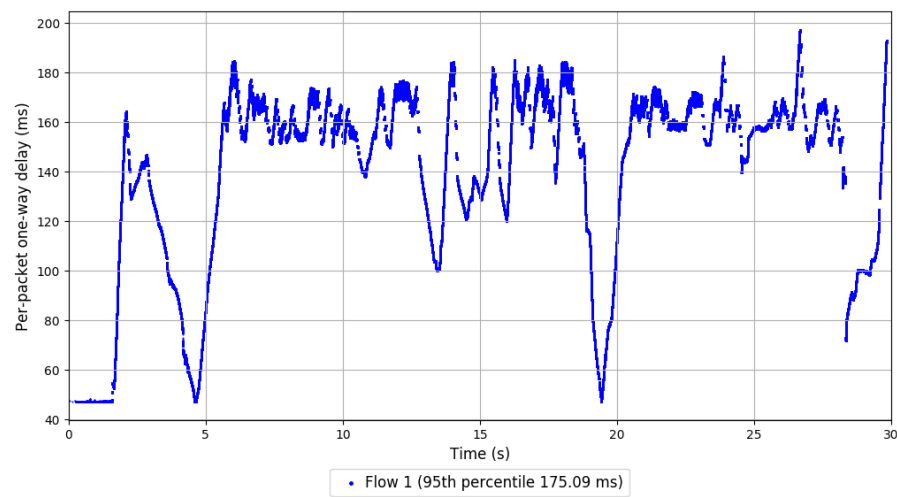
Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-07-12 23:13:20
End at: 2019-07-12 23:13:50
Local clock offset: -0.03 ms
Remote clock offset: -0.079 ms


# Below is generated by plot.py at 2019-07-13 01:30:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 444.54 Mbit/s
95th percentile per-packet one-way delay: 175.086 ms
Loss rate: 7.75%
-- Flow 1:
Average throughput: 444.54 Mbit/s
95th percentile per-packet one-way delay: 175.086 ms
Loss rate: 7.75%
```
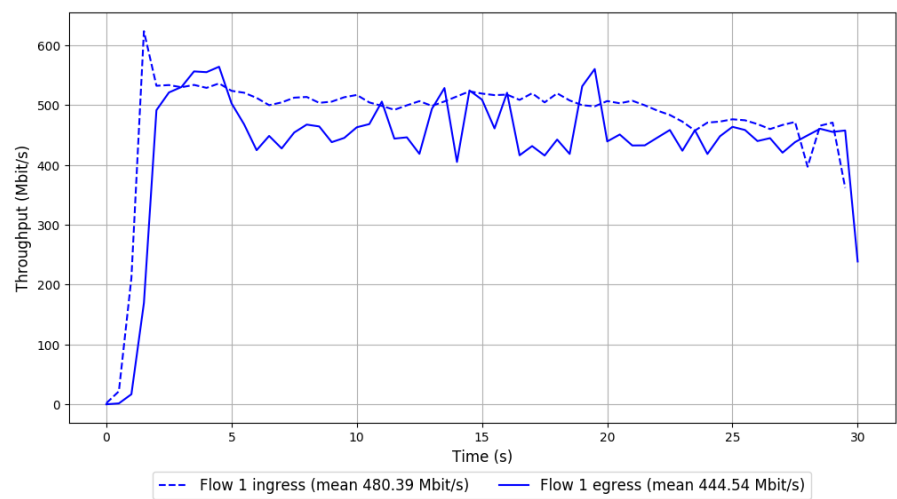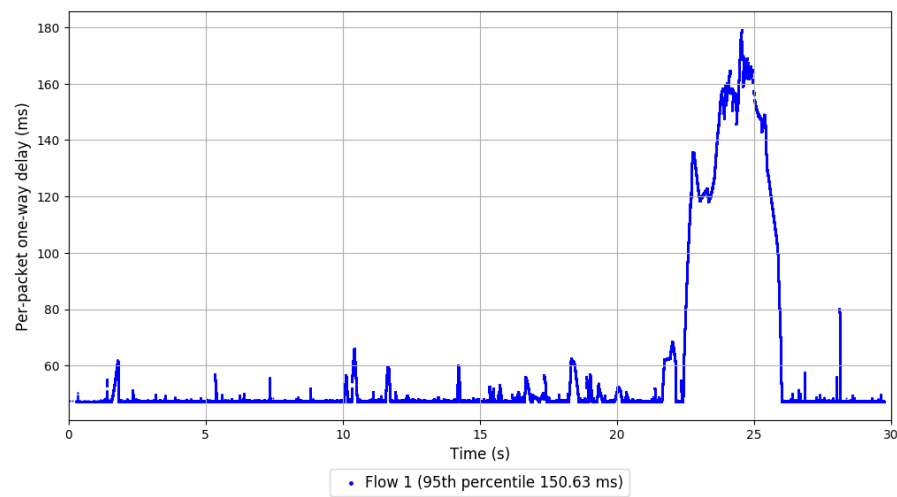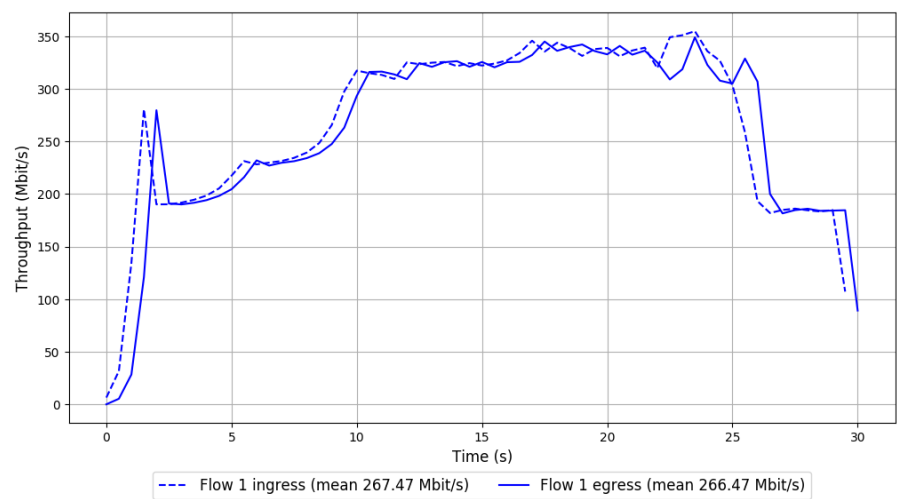
Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 480.39 Mbit/s) ------ Flow 1 egress (mean 444.54 Mbit/s)

• Flow 1 (95th percentile 175.09 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-07-12 20:56:57
End at: 2019-07-12 20:57:27
Local clock offset: -0.031 ms
Remote clock offset: -0.188 ms


# Below is generated by plot.py at 2019-07-13 01:30:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 266.47 Mbit/s
95th percentile per-packet one-way delay: 150.635 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 266.47 Mbit/s
95th percentile per-packet one-way delay: 150.635 ms
Loss rate: 0.69%
```
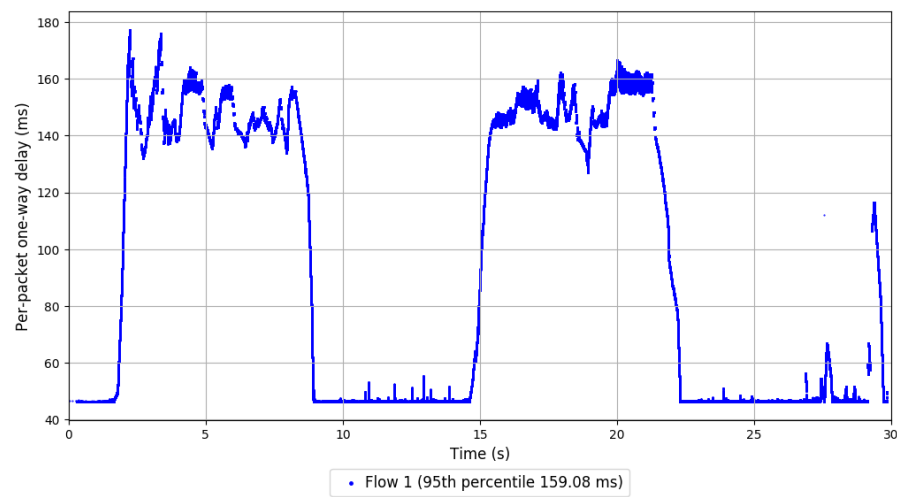
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-07-12 21:31:51
End at: 2019-07-12 21:32:21
Local clock offset: -0.002 ms
Remote clock offset: -0.24 ms


# Below is generated by plot.py at 2019-07-13 01:30:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 280.96 Mbit/s
95th percentile per-packet one-way delay: 159.081 ms
Loss rate: 5.46%
-- Flow 1:
Average throughput: 280.96 Mbit/s
95th percentile per-packet one-way delay: 159.081 ms
Loss rate: 5.46%
```
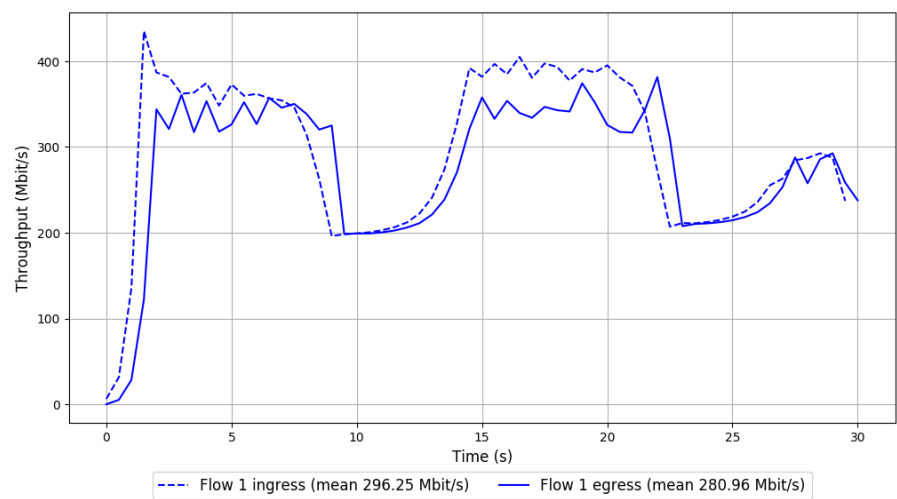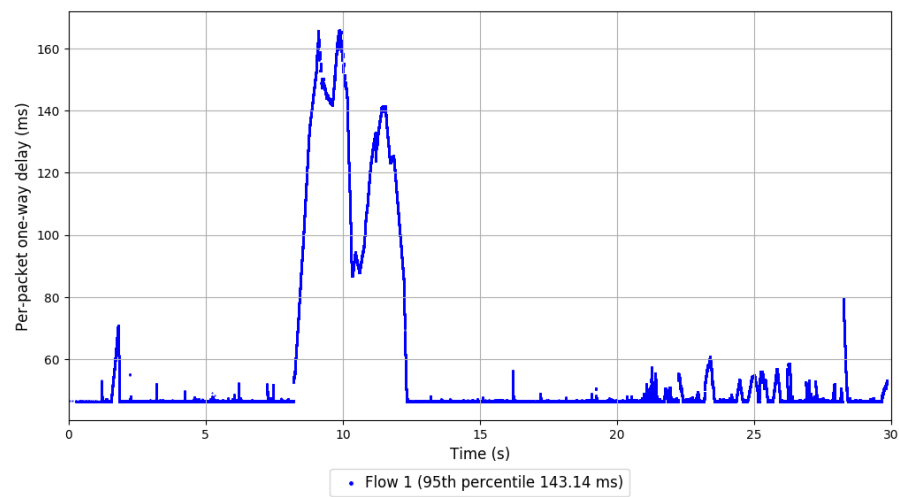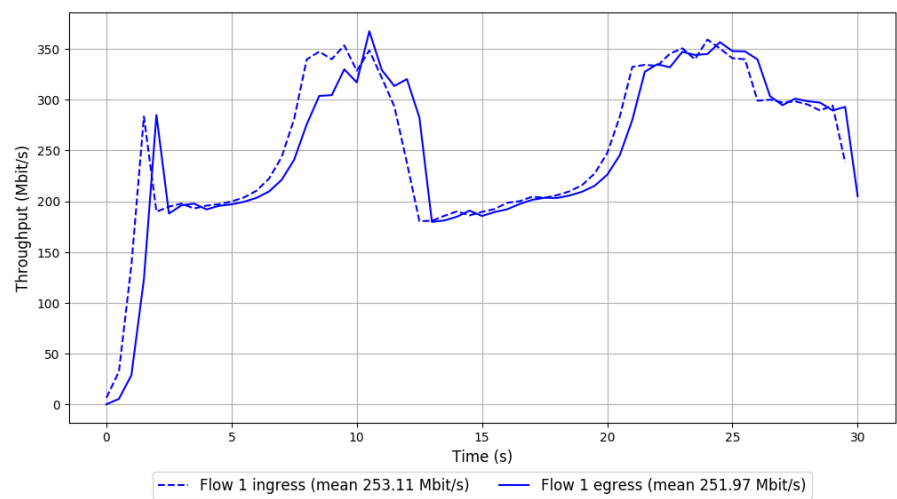
Run 2: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 296.25 Mbit/s)   Flow 1 egress (mean 280.96 Mbit/s)
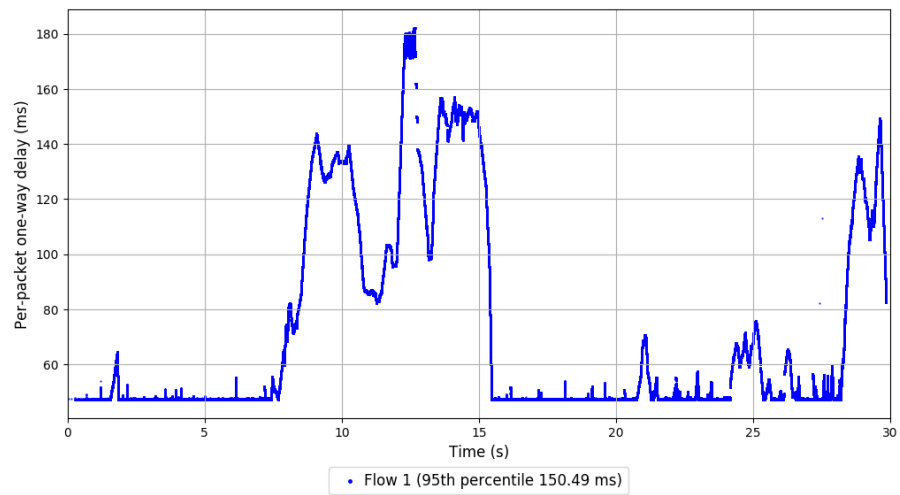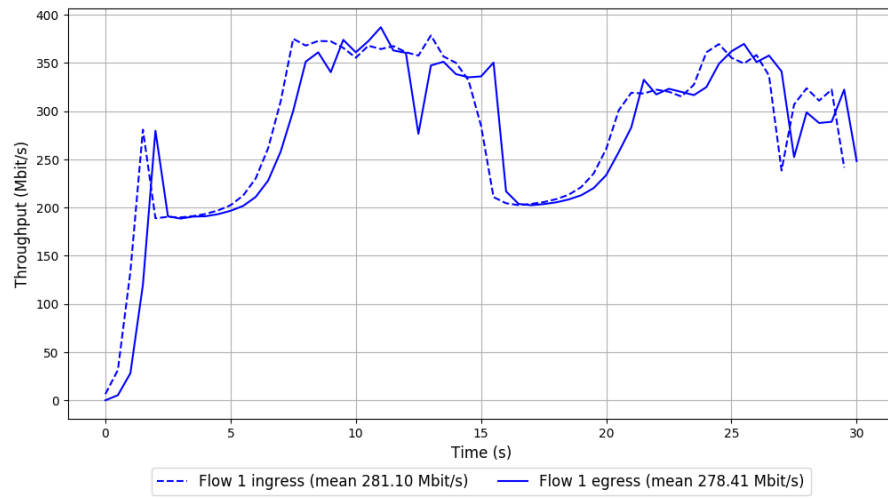

Flow 1 (95th percentile 159.08 ms)

```
Run 3: Statistics of PCC-Expr

Start at: 2019-07-12 22:06:51
End at: 2019-07-12 22:07:21
Local clock offset: 0.04 ms
Remote clock offset: -0.293 ms


# Below is generated by plot.py at 2019-07-13 01:30:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 251.97 Mbit/s
95th percentile per-packet one-way delay: 143.141 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 251.97 Mbit/s
95th percentile per-packet one-way delay: 143.141 ms
Loss rate: 0.76%
```

Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2019-07-12 22:41:42
End at: 2019-07-12 22:42:12
Local clock offset: 0.018 ms
Remote clock offset: -0.359 ms

# Below is generated by plot.py at 2019-07-13 01:30:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 278.41 Mbit/s
95th percentile per-packet one-way delay: 150.486 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 278.41 Mbit/s
95th percentile per-packet one-way delay: 150.486 ms
Loss rate: 1.27%
```
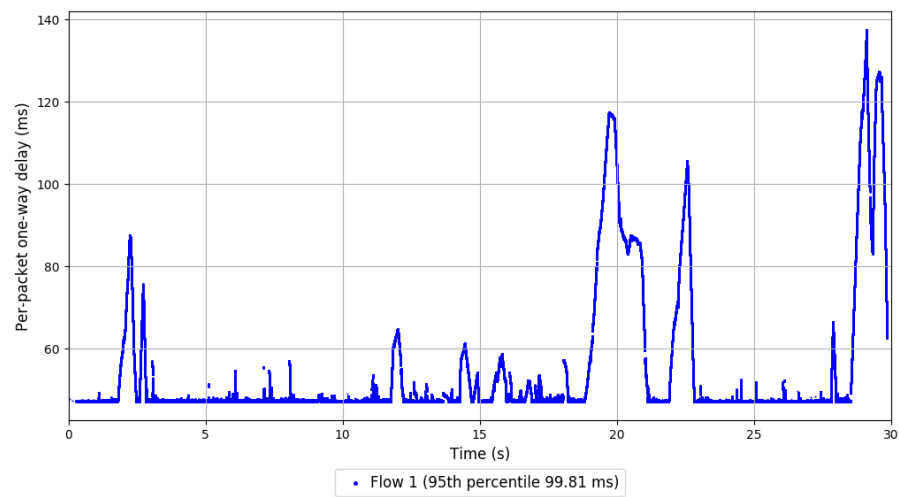
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-07-12 23:16:32
End at: 2019-07-12 23:17:02
Local clock offset: -0.027 ms
Remote clock offset: -0.04 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 308.99 Mbit/s
95th percentile per-packet one-way delay: 99.810 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 308.99 Mbit/s
95th percentile per-packet one-way delay: 99.810 ms
Loss rate: 0.32%
```
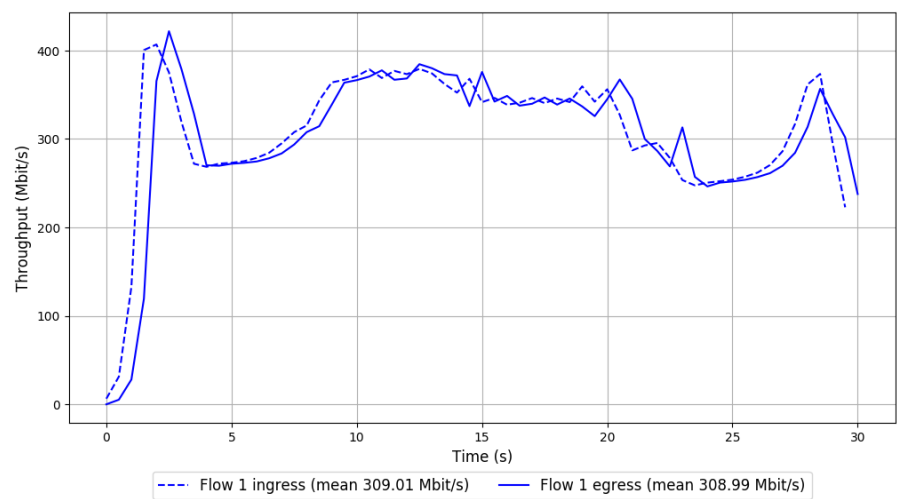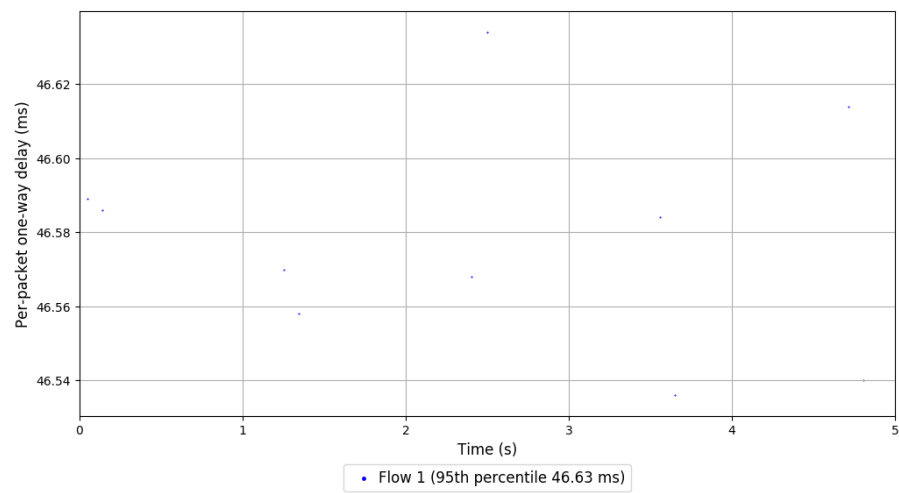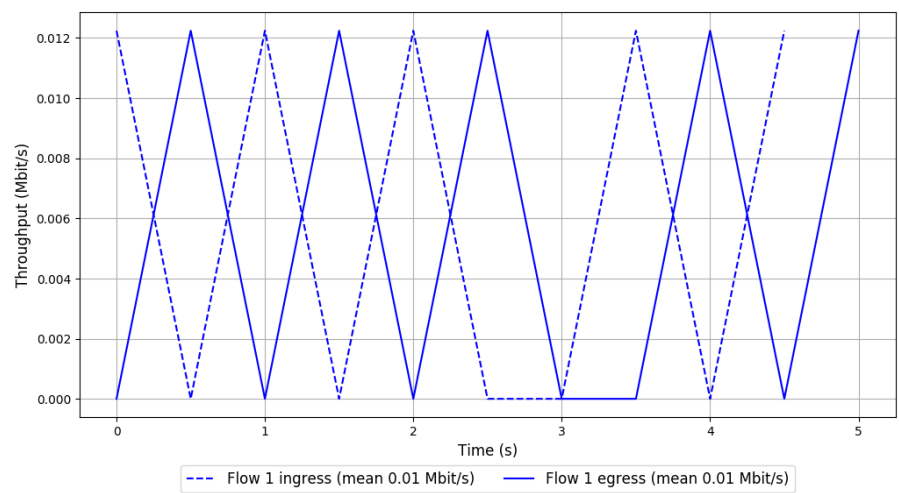
Run 5: Report of PCC-Expr — Data Link

Run 1: Statistics of QUIC Cubic

Start at: 2019-07-12 20:59:56
End at: 2019-07-12 21:00:26
Local clock offset: -0.003 ms
Remote clock offset: -0.214 ms

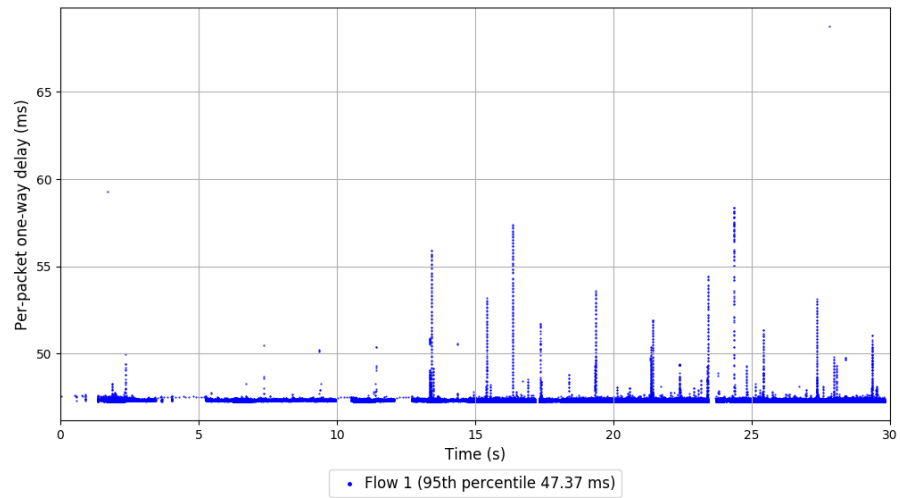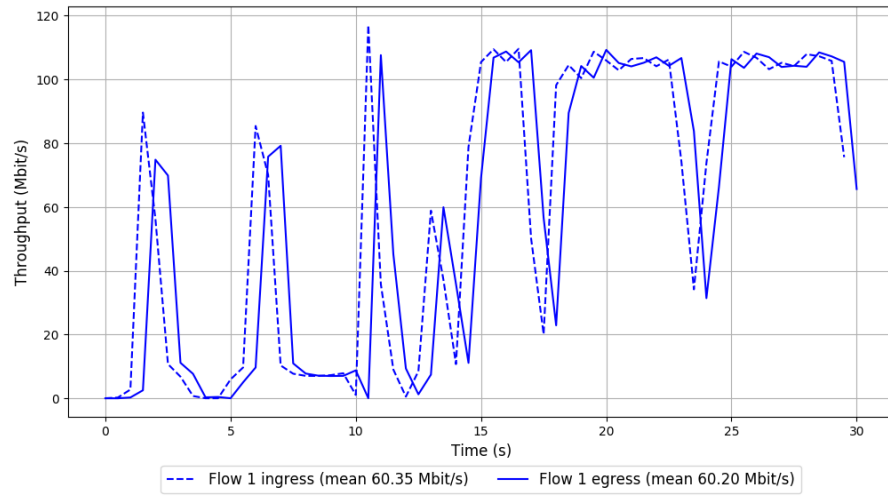# Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-07-12 21:34:50
End at: 2019-07-12 21:35:20
Local clock offset: 0.027 ms
Remote clock offset: -0.296 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.20 Mbit/s
95th percentile per-packet one-way delay: 47.371 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 60.20 Mbit/s
95th percentile per-packet one-way delay: 47.371 ms
Loss rate: 0.57%
```

Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-07-12 22:09:46
End at: 2019-07-12 22:10:16
Local clock offset: 0.022 ms
Remote clock offset: -0.321 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.53 Mbit/s
95th percentile per-packet one-way delay: 46.470 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 65.53 Mbit/s
95th percentile per-packet one-way delay: 46.470 ms
Loss rate: 0.50%
```
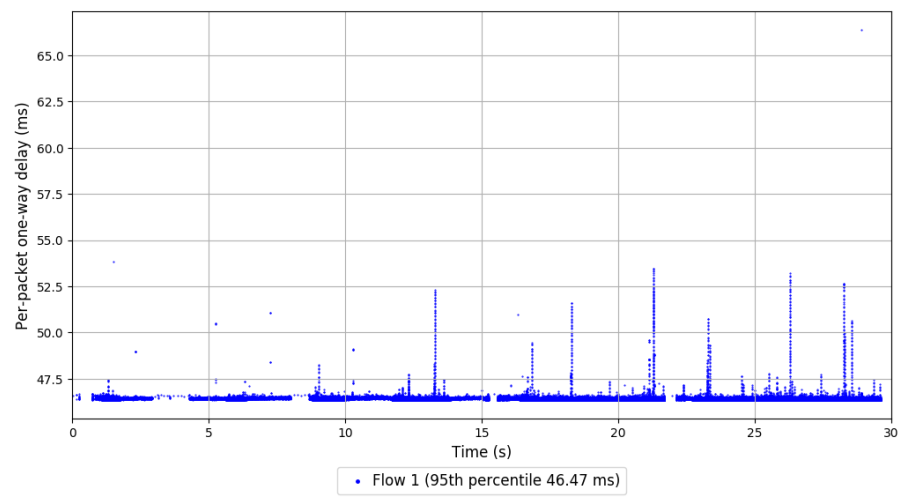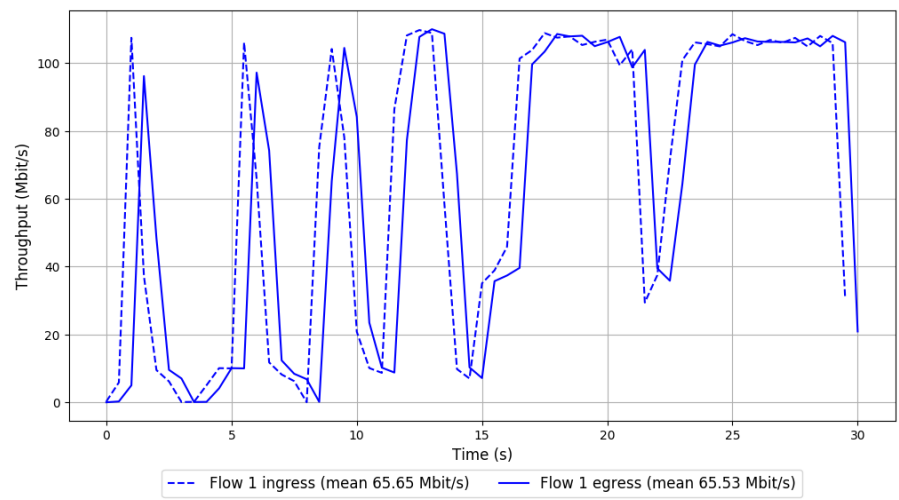
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-07-12 22:44:36
End at: 2019-07-12 22:45:06
Local clock offset: 0.06 ms
Remote clock offset: -0.346 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.22 Mbit/s
95th percentile per-packet one-way delay: 47.306 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 74.22 Mbit/s
95th percentile per-packet one-way delay: 47.306 ms
Loss rate: 0.45%
```
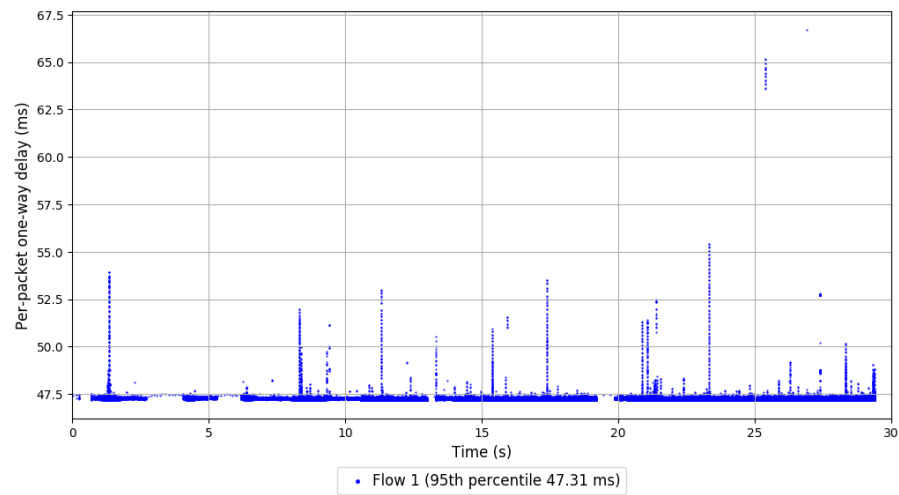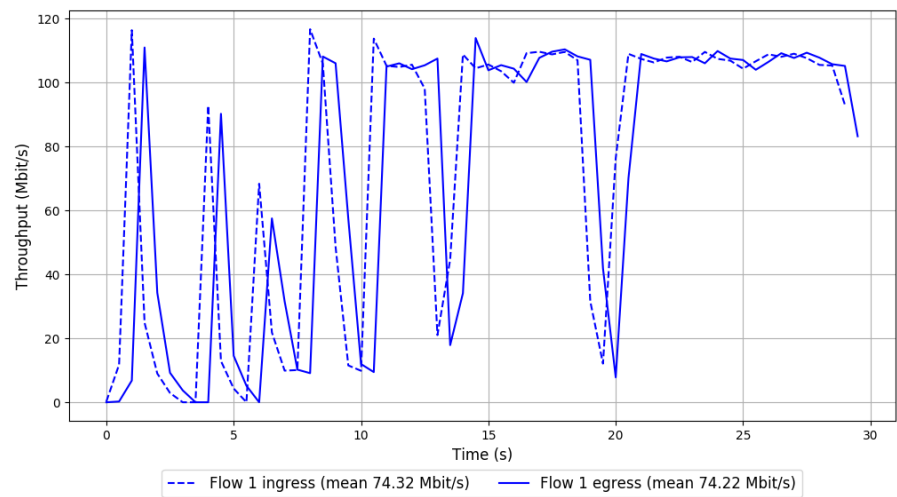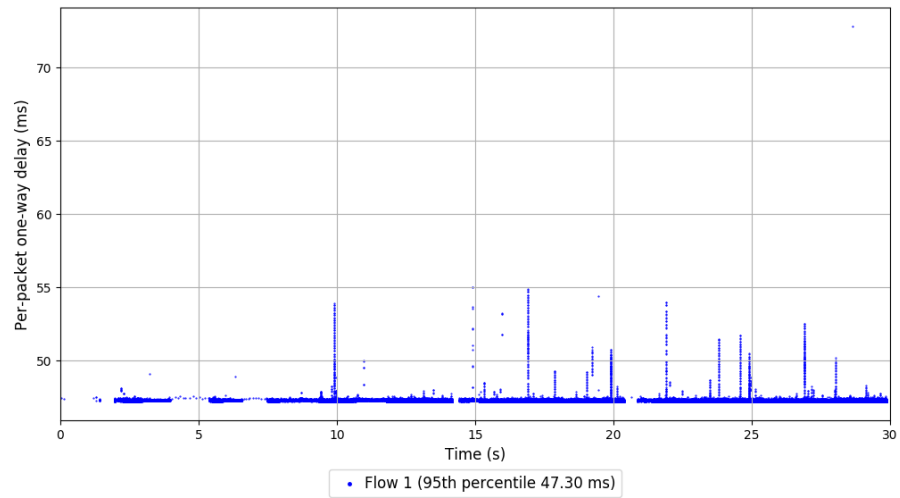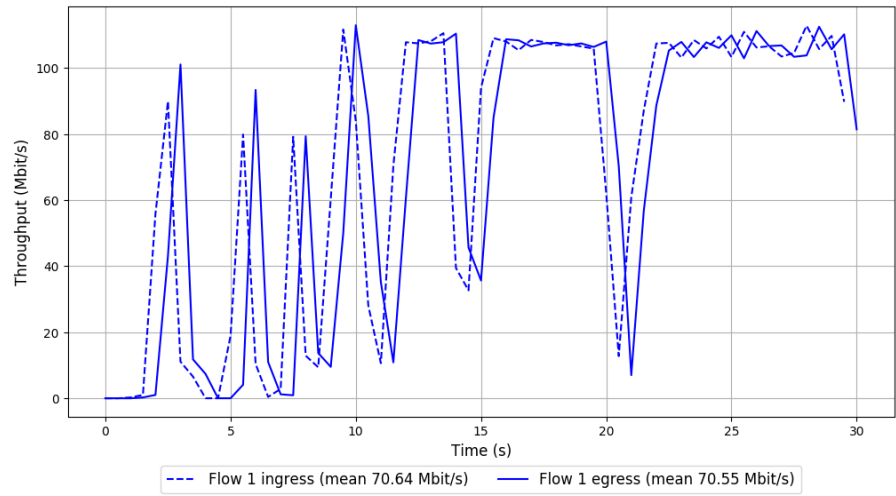
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-07-12 23:19:33
End at: 2019-07-12 23:20:03
Local clock offset: -0.071 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.55 Mbit/s
95th percentile per-packet one-way delay: 47.298 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 70.55 Mbit/s
95th percentile per-packet one-way delay: 47.298 ms
Loss rate: 0.44%
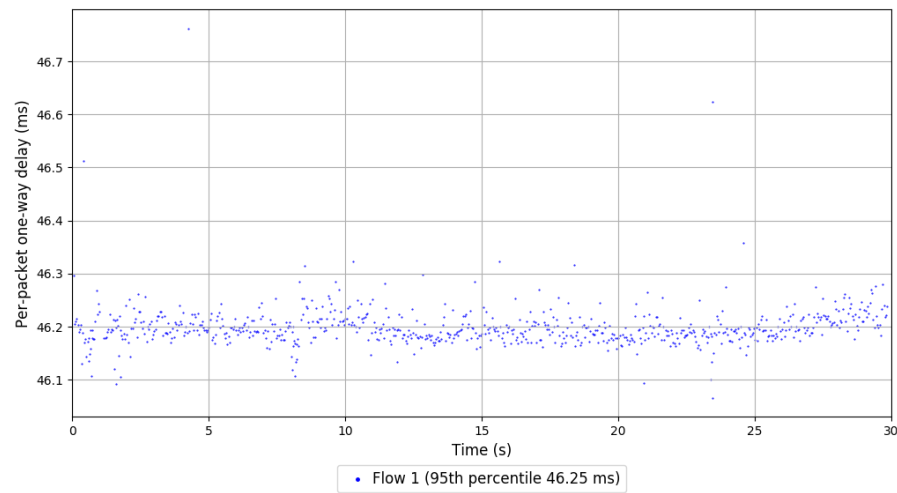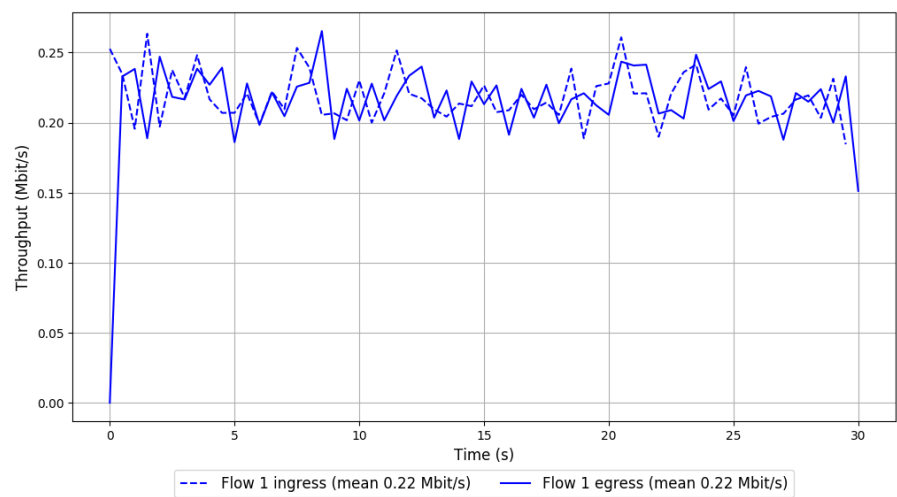```

Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-07-12 20:45:15
End at: 2019-07-12 20:45:45
Local clock offset: -0.389 ms
Remote clock offset: -0.129 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.251 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.251 ms
Loss rate: 0.38%
```

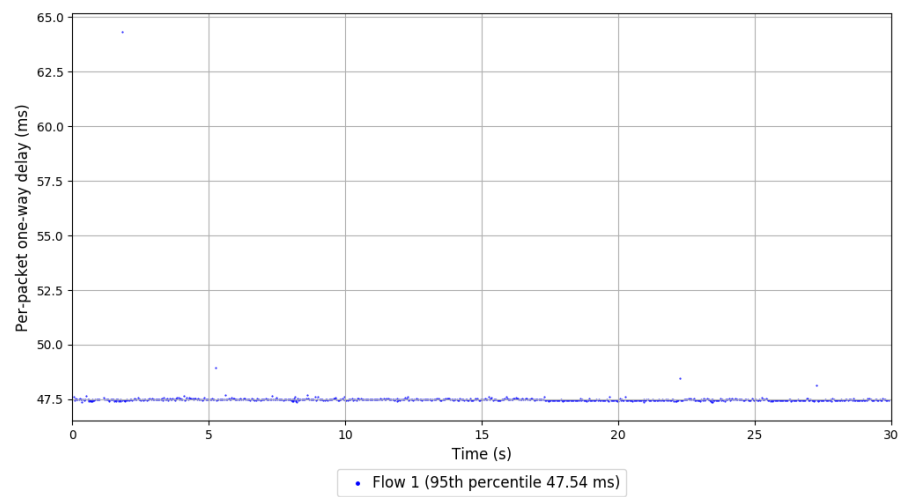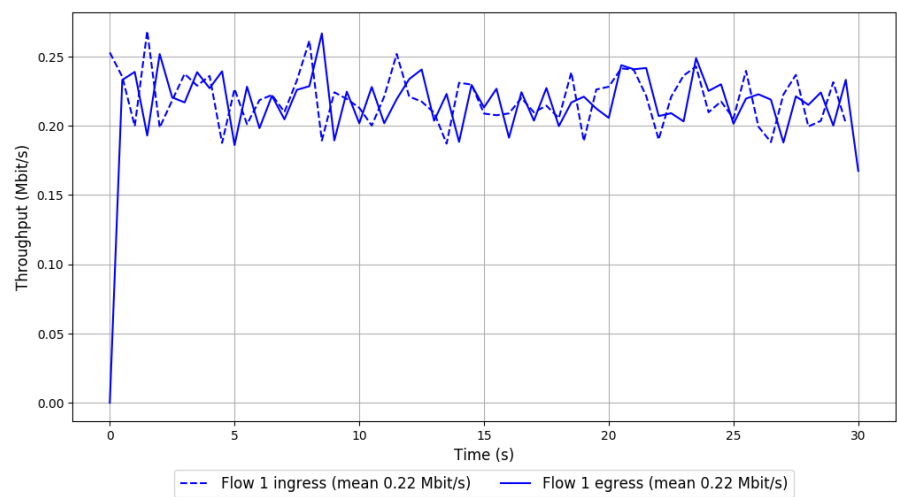Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-07-12 21:20:12
End at: 2019-07-12 21:20:42
Local clock offset: -0.001 ms
Remote clock offset: -0.222 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.539 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.539 ms
Loss rate: 0.39%
```

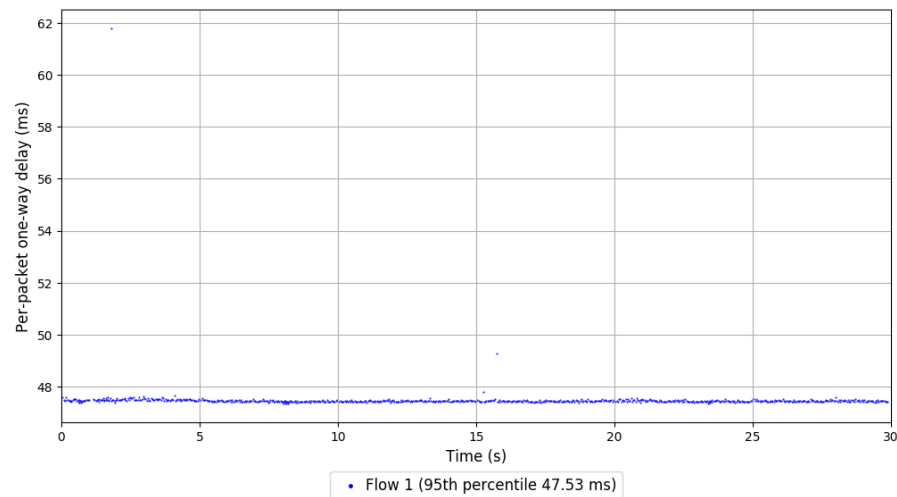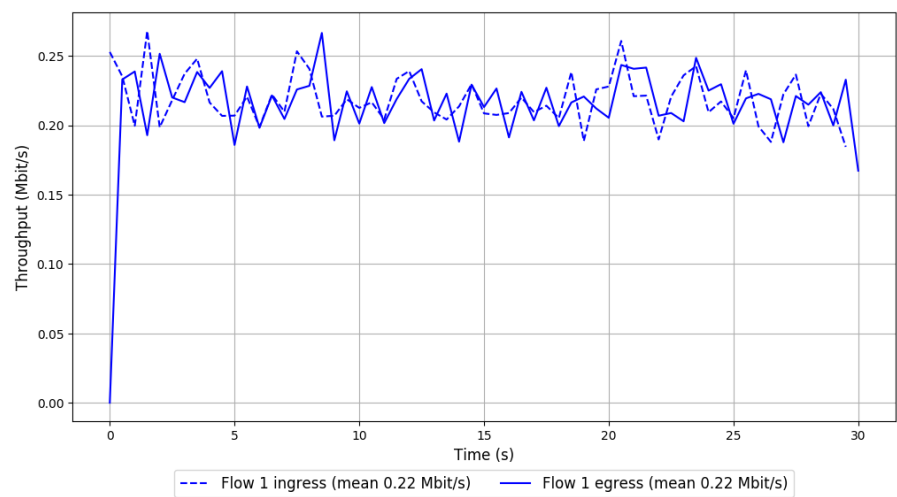# Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-07-12 21:55:12
End at: 2019-07-12 21:55:42
Local clock offset: 0.012 ms
Remote clock offset: -0.275 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.530 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.530 ms
Loss rate: 0.26%
```

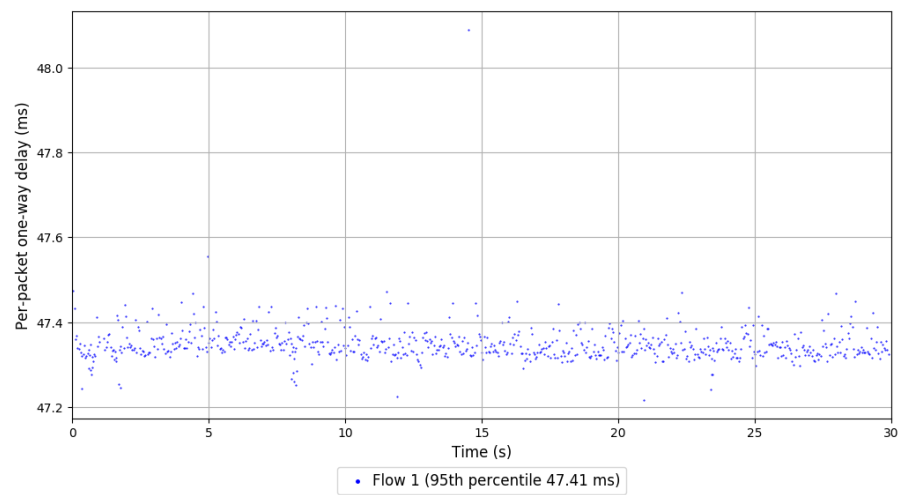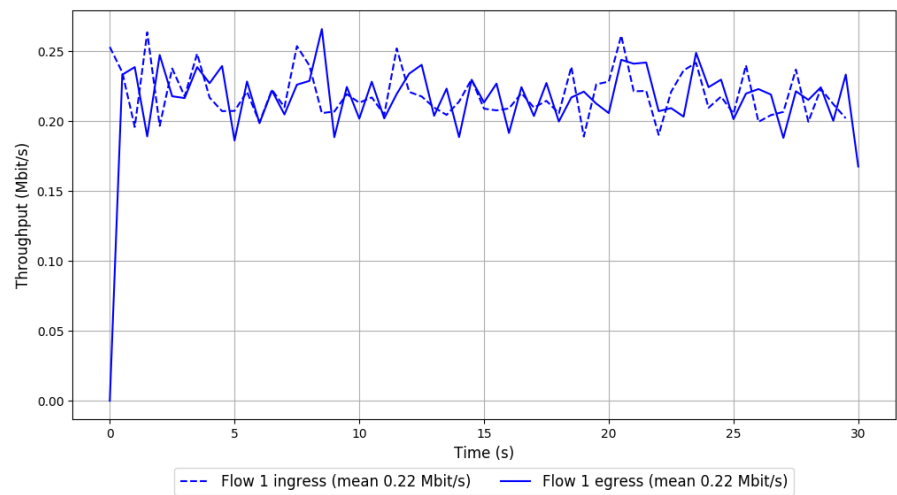# Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-07-12 22:30:00
End at: 2019-07-12 22:30:30
Local clock offset: 0.014 ms
Remote clock offset: -0.287 ms

# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.413 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.413 ms
Loss rate: 0.39%
```

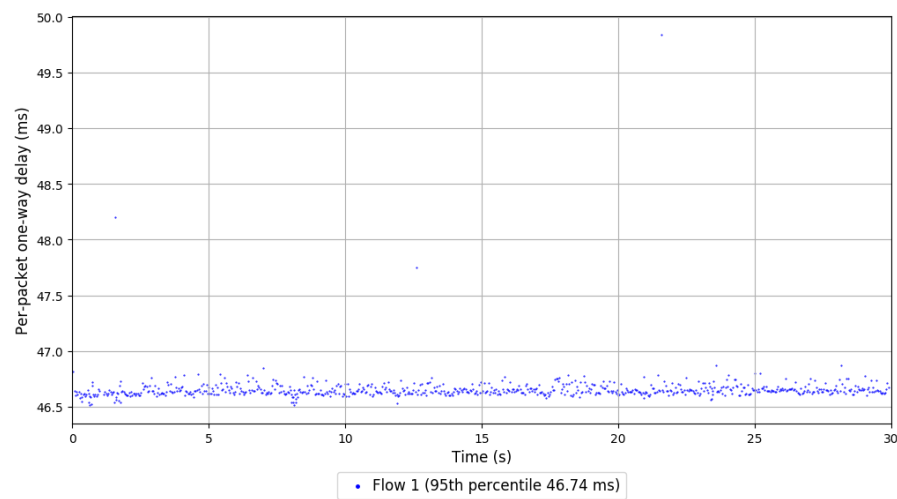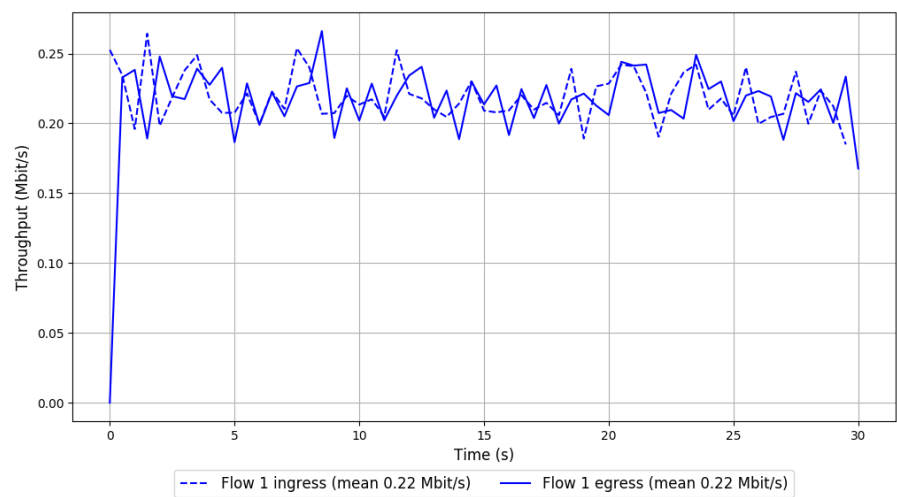# Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-07-12 23:04:46
End at: 2019-07-12 23:05:16
Local clock offset: 0.022 ms
Remote clock offset: -0.304 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.745 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.745 ms
Loss rate: 0.26%
```

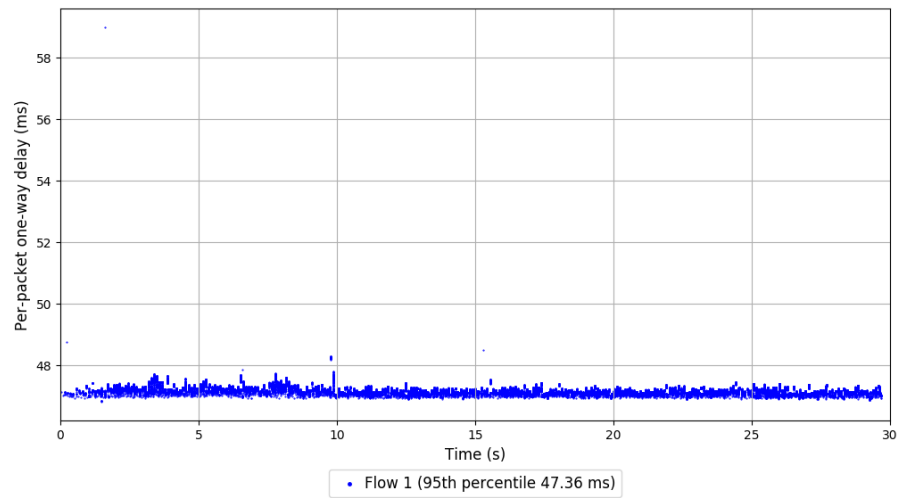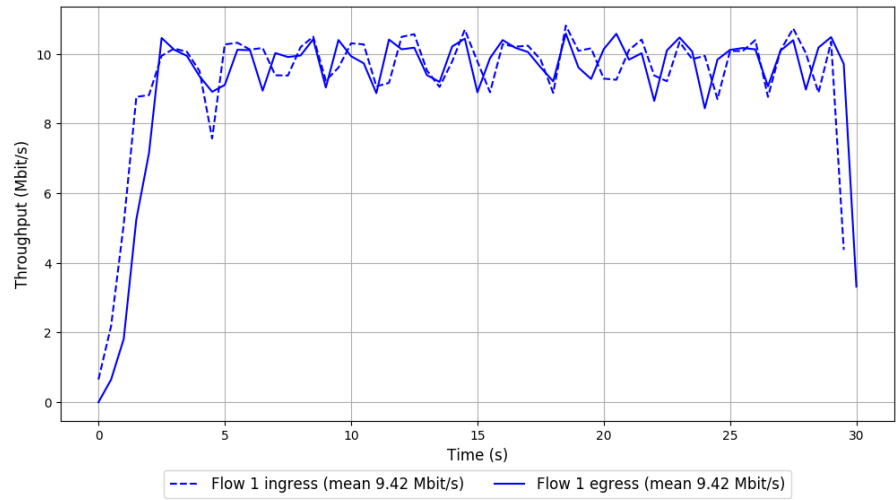Run 5: Report of SCReAM — Data Link

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```
Run 1: Statistics of Sprout

Start at: 2019-07-12 20:52:43
End at: 2019-07-12 20:53:13
Local clock offset: -0.385 ms
Remote clock offset: -0.189 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.42 Mbit/s
95th percentile per-packet one-way delay: 47.361 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 9.42 Mbit/s
95th percentile per-packet one-way delay: 47.361 ms
Loss rate: 0.30%
```

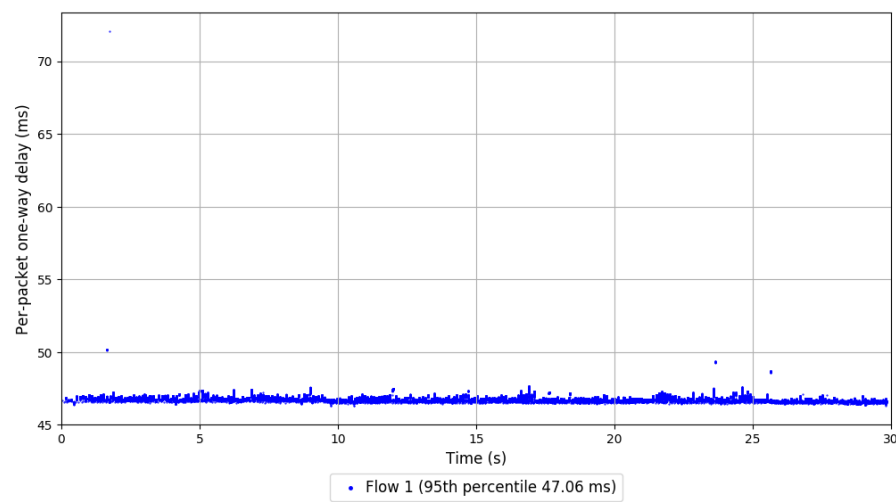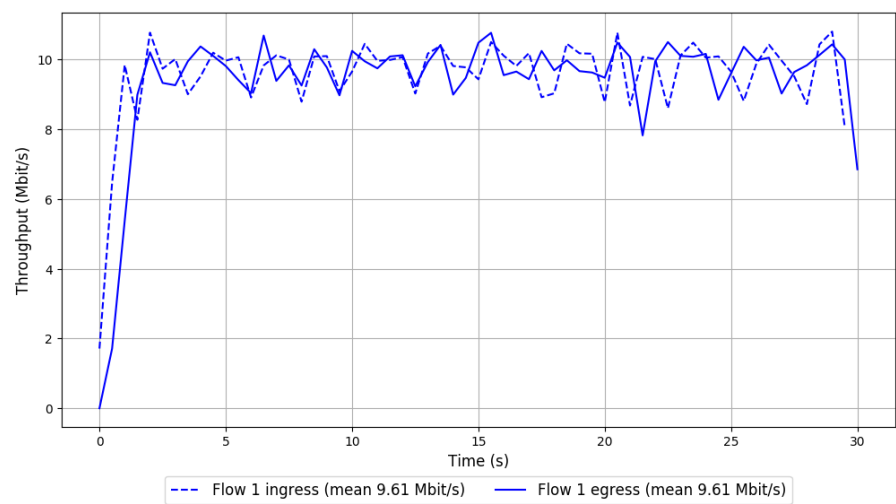Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-07-12 21:27:36
End at: 2019-07-12 21:28:06
Local clock offset: -0.023 ms
Remote clock offset: -0.242 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.61 Mbit/s
95th percentile per-packet one-way delay: 47.057 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 9.61 Mbit/s
95th percentile per-packet one-way delay: 47.057 ms
Loss rate: 0.35%
```

Run 2: Report of Sprout — Data Link

Flow 1 ingress (mean 9.61 Mbit/s)   Flow 1 egress (mean 9.61 Mbit/s)

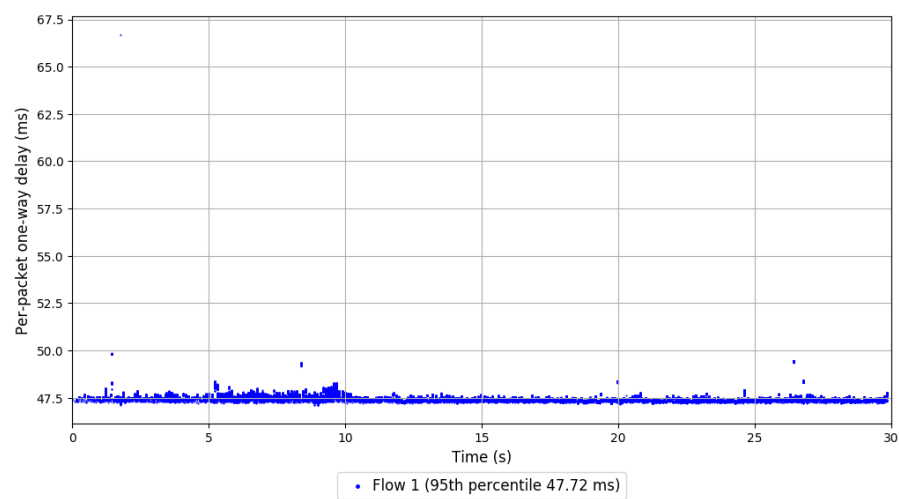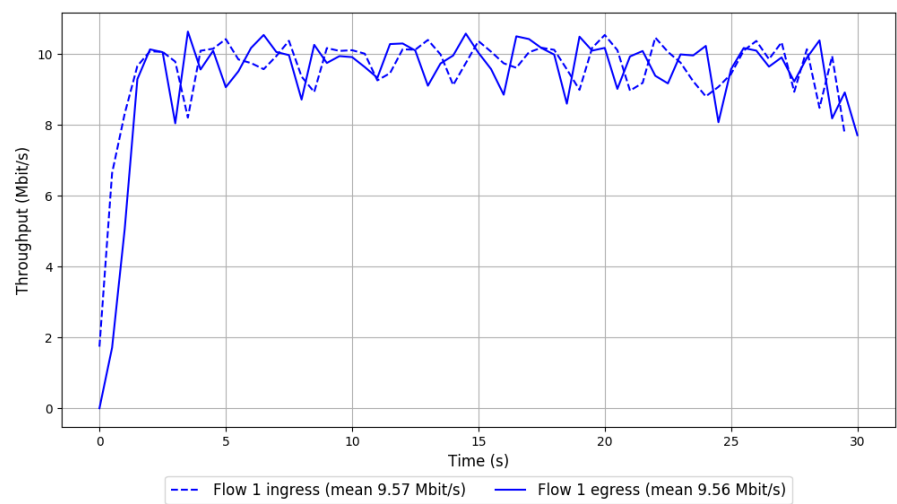· Flow 1 (95th percentile 47.06 ms)

```
Run 3: Statistics of Sprout

Start at: 2019-07-12 22:02:36
End at: 2019-07-12 22:03:06
Local clock offset: 0.012 ms
Remote clock offset: -0.305 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 47.723 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 47.723 ms
Loss rate: 0.34%
```

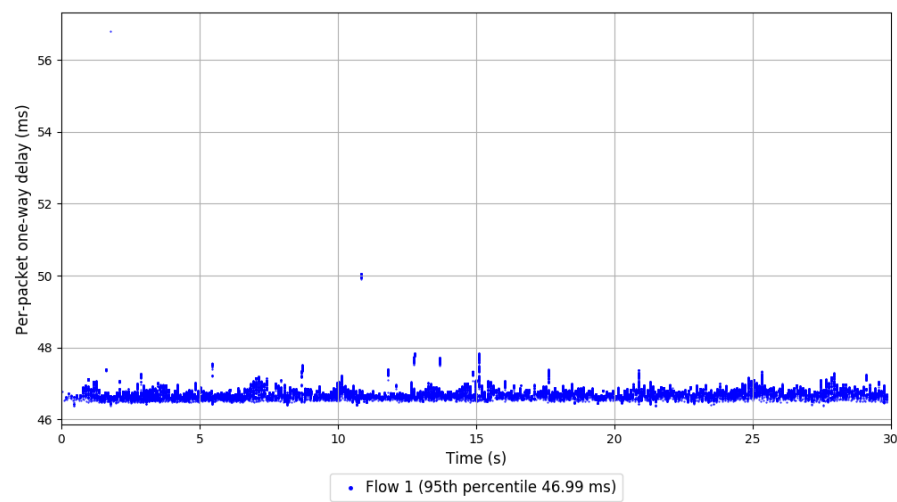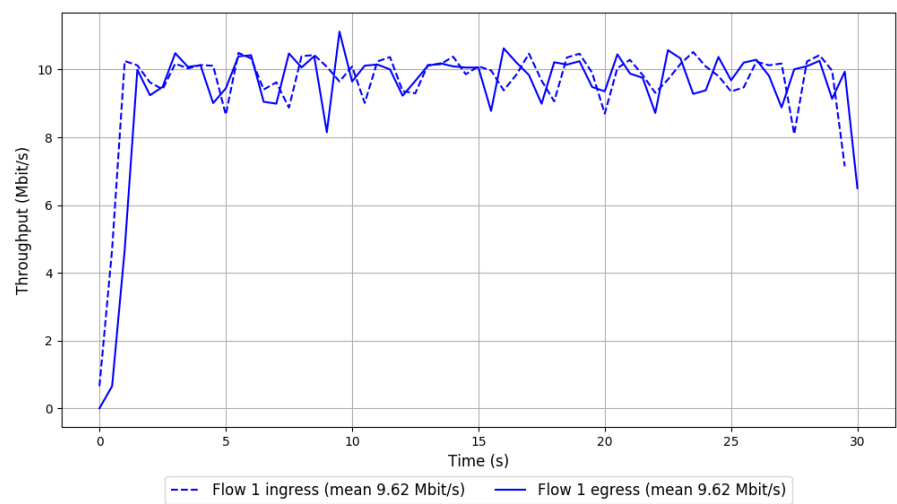## Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-07-12 22:37:26
End at: 2019-07-12 22:37:56
Local clock offset: 0.035 ms
Remote clock offset: -0.362 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 46.990 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 46.990 ms
Loss rate: 0.34%
```

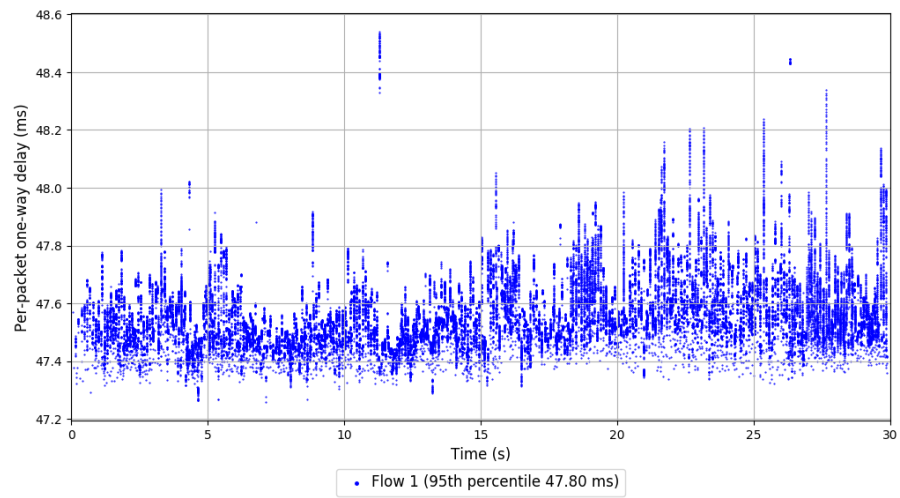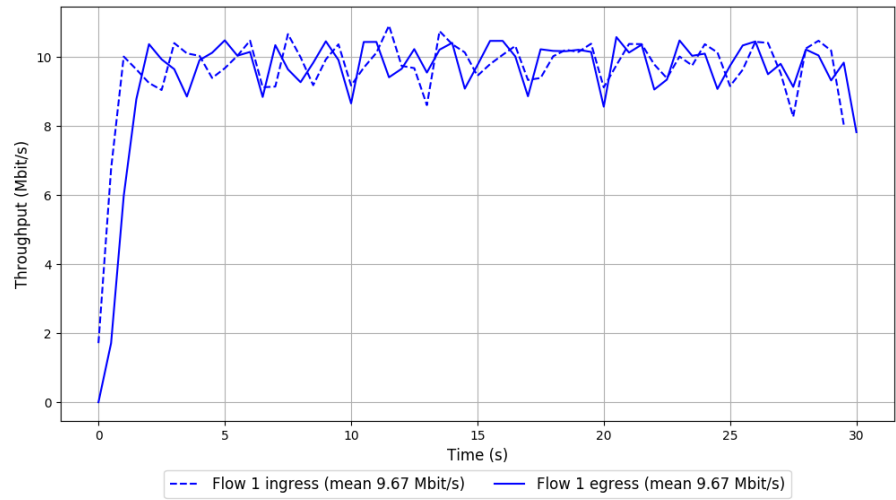## Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-07-12 23:12:12
End at: 2019-07-12 23:12:42
Local clock offset: -0.005 ms
Remote clock offset: -0.096 ms


# Below is generated by plot.py at 2019-07-13 01:31:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.67 Mbit/s
95th percentile per-packet one-way delay: 47.796 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 9.67 Mbit/s
95th percentile per-packet one-way delay: 47.796 ms
Loss rate: 0.33%
```
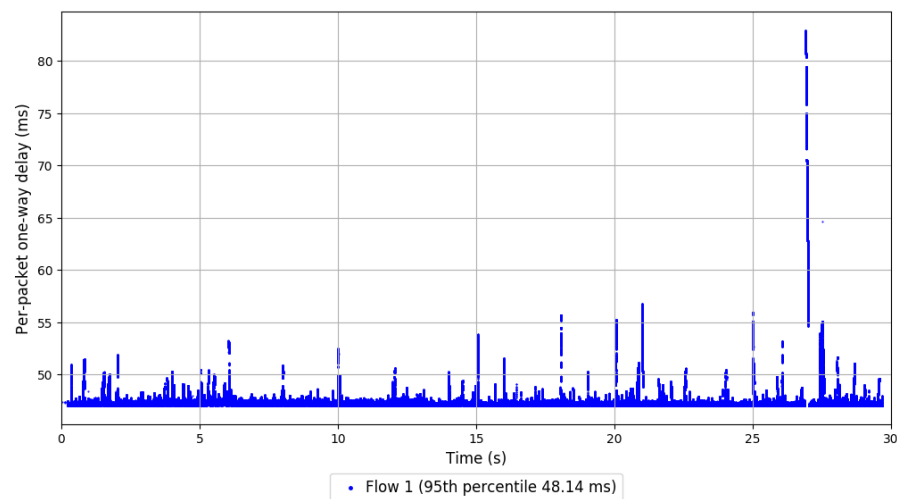
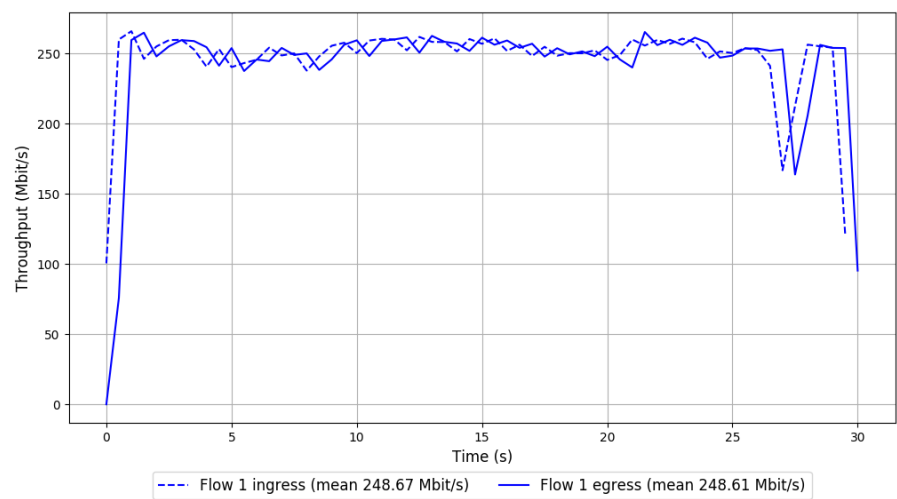# Run 5: Report of Sprout — Data Link

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

Start at: 2019-07-12 20:51:14
End at: 2019-07-12 20:51:44
Local clock offset: 0.007 ms
Remote clock offset: -0.184 ms


# Below is generated by plot.py at 2019-07-13 01:34:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 248.61 Mbit/s
95th percentile per-packet one-way delay: 48.144 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 248.61 Mbit/s
95th percentile per-packet one-way delay: 48.144 ms
Loss rate: 0.34%
```

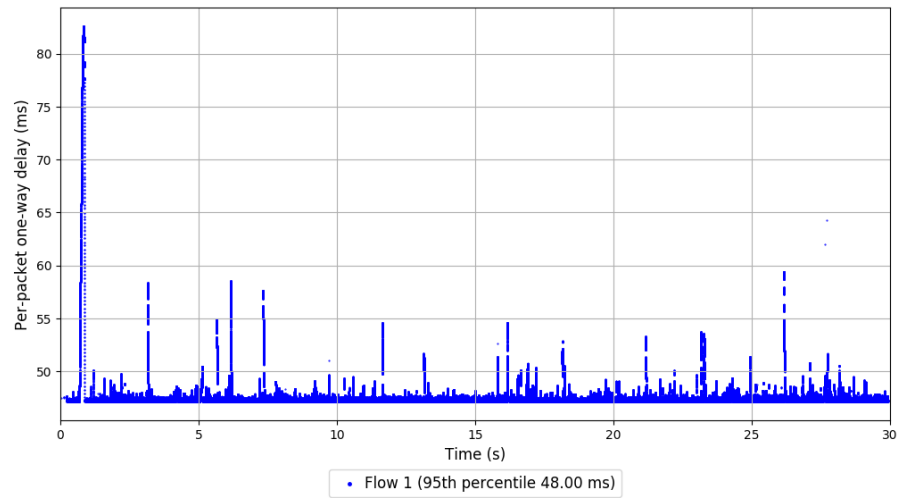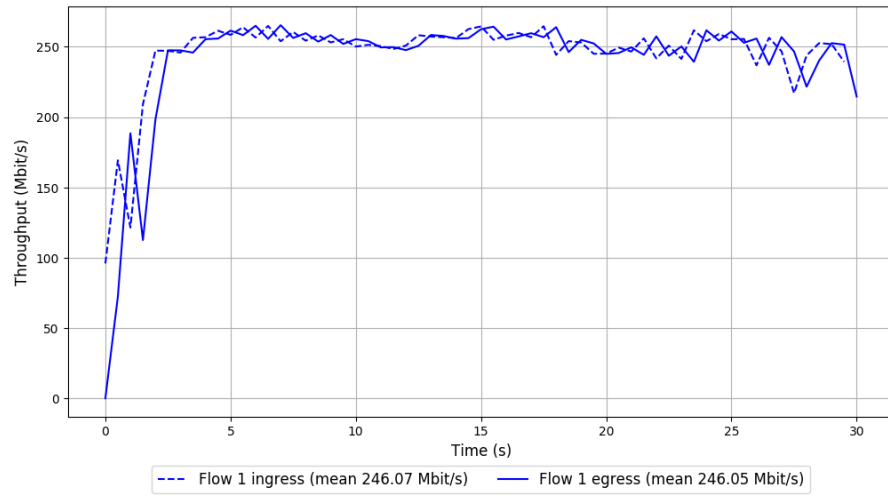Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-07-12 21:26:07
End at: 2019-07-12 21:26:37
Local clock offset: -0.029 ms
Remote clock offset: -0.251 ms


# Below is generated by plot.py at 2019-07-13 01:35:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 246.05 Mbit/s
95th percentile per-packet one-way delay: 47.998 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 246.05 Mbit/s
95th percentile per-packet one-way delay: 47.998 ms
Loss rate: 0.33%
```

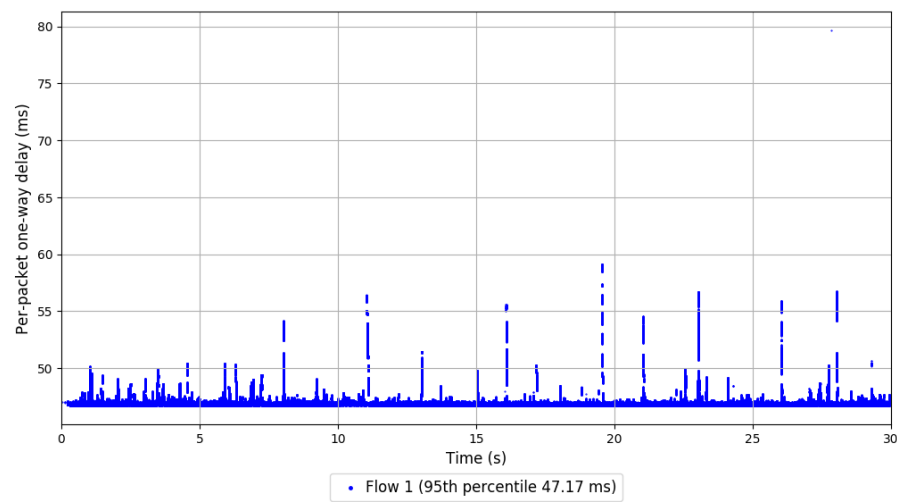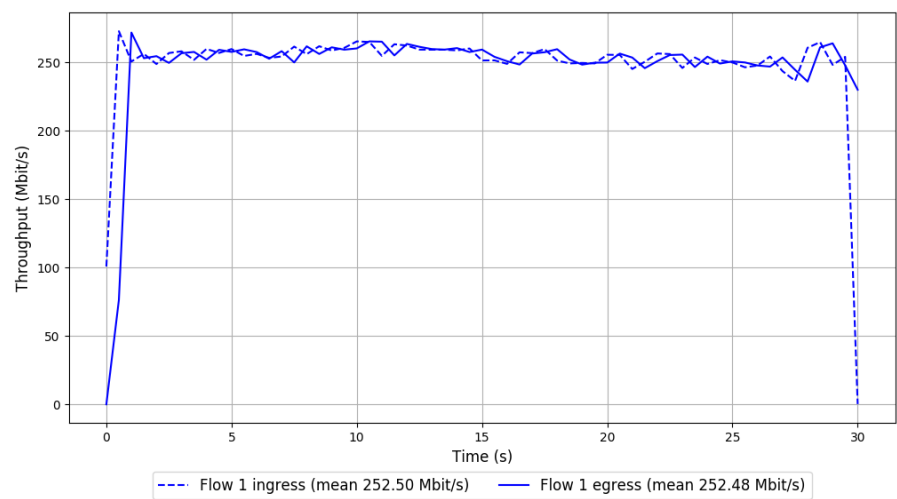Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2019-07-12 22:01:07
End at: 2019-07-12 22:01:37
Local clock offset: -0.318 ms
Remote clock offset: -0.289 ms


# Below is generated by plot.py at 2019-07-13 01:35:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 252.48 Mbit/s
95th percentile per-packet one-way delay: 47.175 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 252.48 Mbit/s
95th percentile per-packet one-way delay: 47.175 ms
Loss rate: 0.32%
```

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

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

Start at: 2019-07-12 22:35:56
End at: 2019-07-12 22:36:26
Local clock offset: 0.045 ms
Remote clock offset: -0.34 ms


# Below is generated by plot.py at 2019-07-13 01:35:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 249.46 Mbit/s
95th percentile per-packet one-way delay: 47.930 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 249.46 Mbit/s
95th percentile per-packet one-way delay: 47.930 ms
Loss rate: 0.33%
```
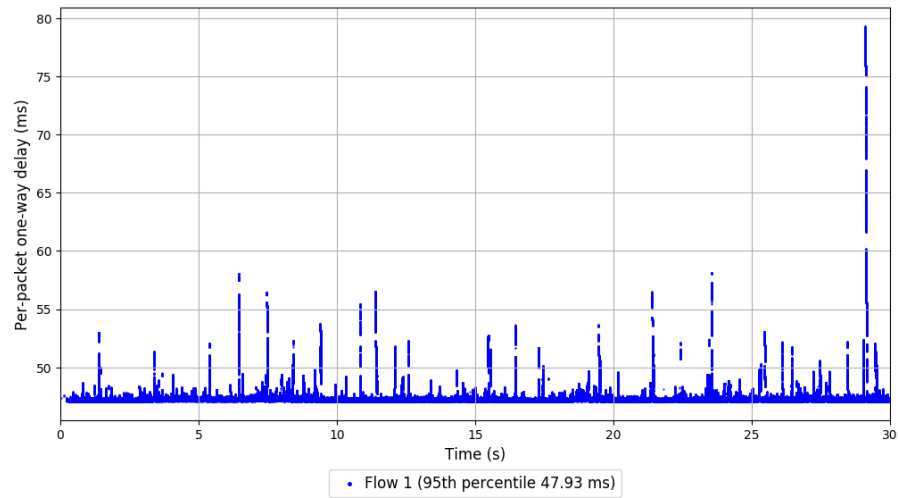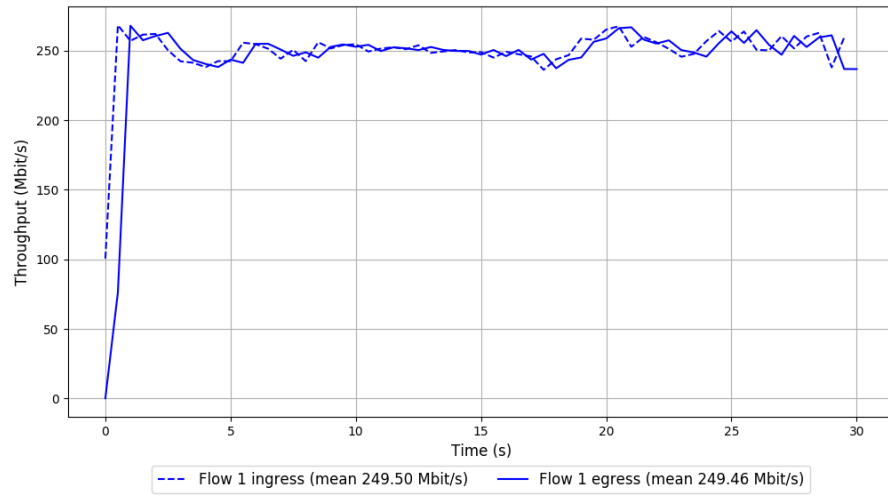
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 249.50 Mbit/s) — — — Flow 1 egress (mean 249.46 Mbit/s)

• Flow 1 (95th percentile 47.93 ms)

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

Start at: 2019-07-12 23:10:42
End at: 2019-07-12 23:11:12
Local clock offset: 0.005 ms
Remote clock offset: -0.153 ms

# Below is generated by plot.py at 2019-07-13 01:35:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 254.54 Mbit/s
95th percentile per-packet one-way delay: 47.459 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 254.54 Mbit/s
95th percentile per-packet one-way delay: 47.459 ms
Loss rate: 0.33%
```
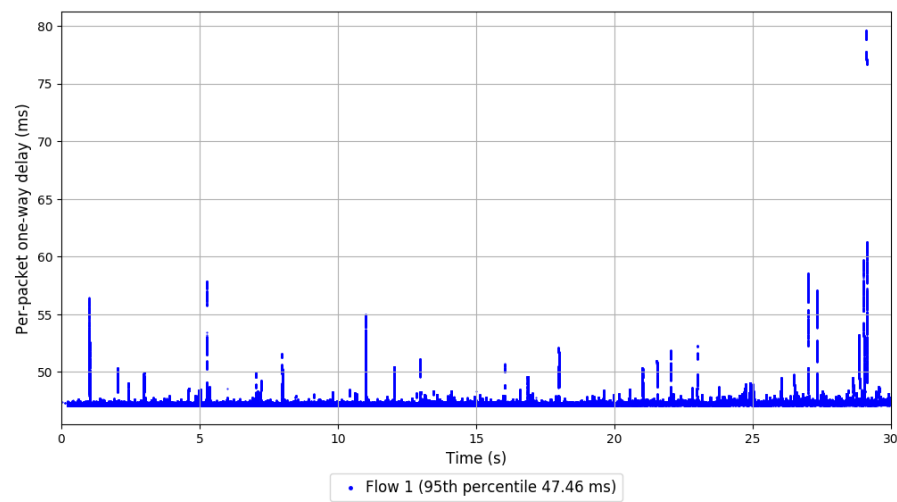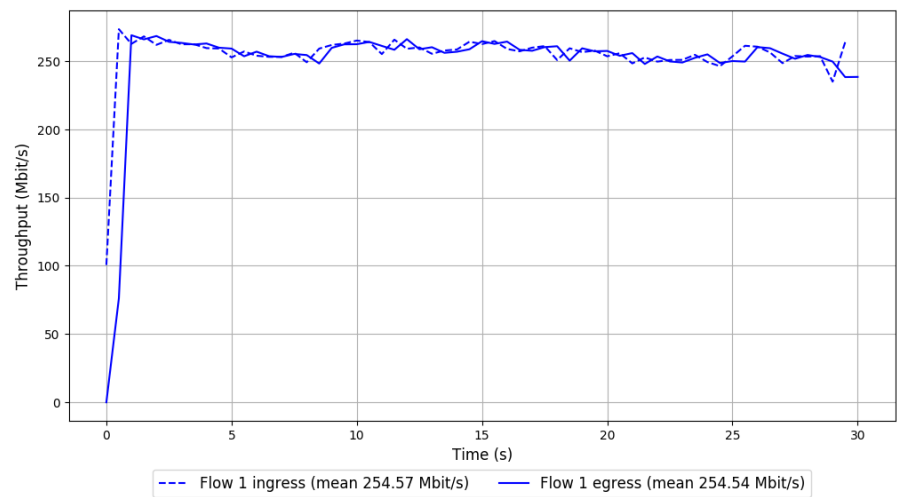
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 254.57 Mbit/s)   Flow 1 egress (mean 254.54 Mbit/s)
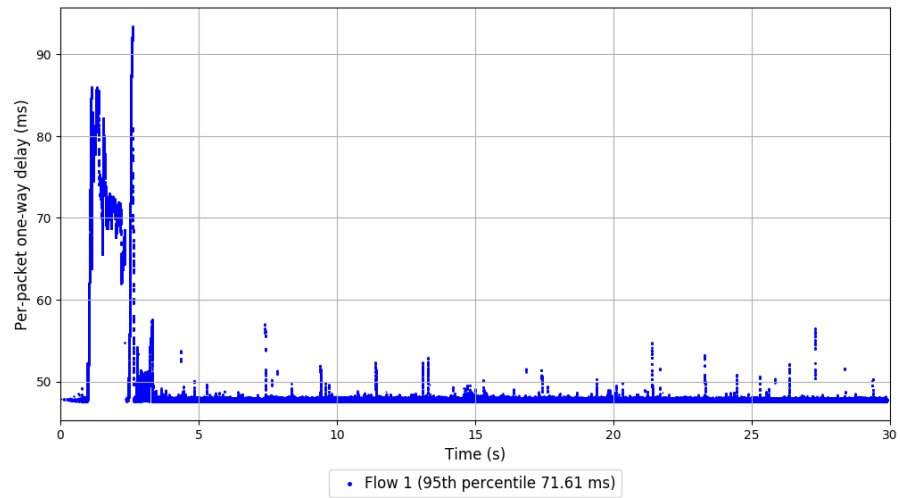
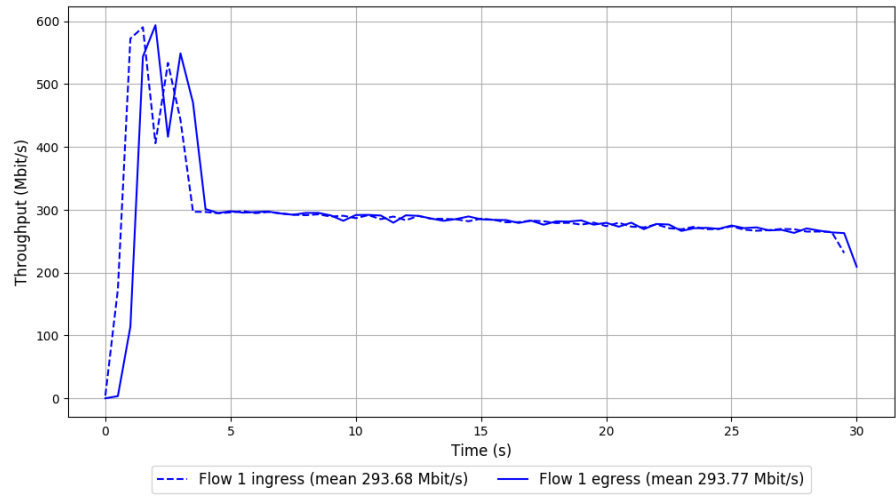

• Flow 1 (95th percentile 47.46 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2019-07-12 20:43:54
End at: 2019-07-12 20:44:24
Local clock offset: 0.371 ms
Remote clock offset: -0.179 ms


# Below is generated by plot.py at 2019-07-13 01:35:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 293.77 Mbit/s
95th percentile per-packet one-way delay: 71.606 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 293.77 Mbit/s
95th percentile per-packet one-way delay: 71.606 ms
Loss rate: 0.29%
```

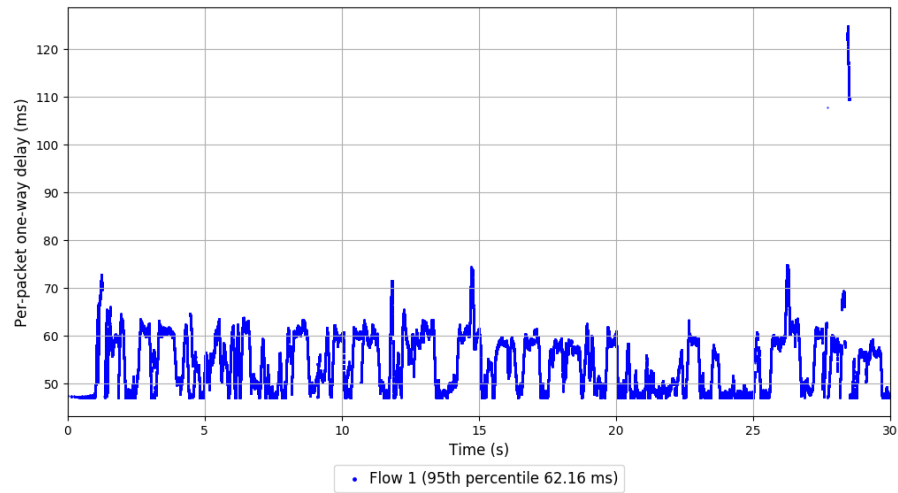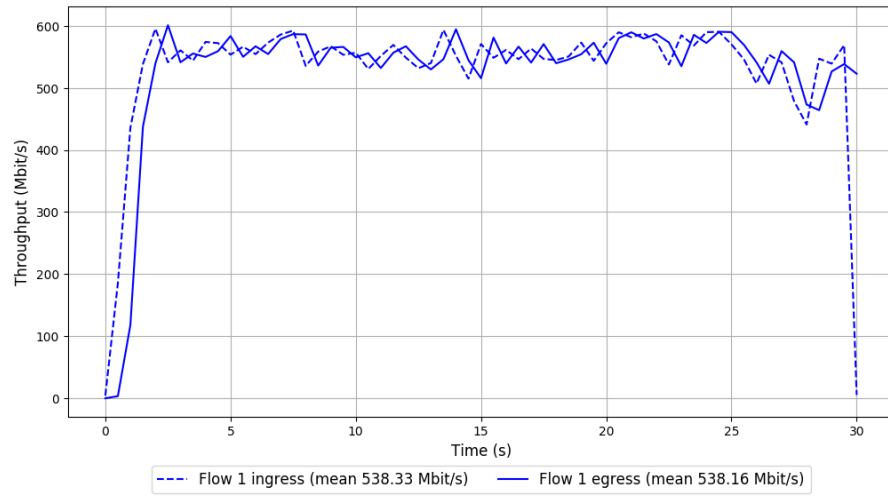Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-07-12 21:18:40
End at: 2019-07-12 21:19:10
Local clock offset: -0.038 ms
Remote clock offset: -0.186 ms


# Below is generated by plot.py at 2019-07-13 01:41:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 538.16 Mbit/s
95th percentile per-packet one-way delay: 62.156 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 538.16 Mbit/s
95th percentile per-packet one-way delay: 62.156 ms
Loss rate: 0.35%
```

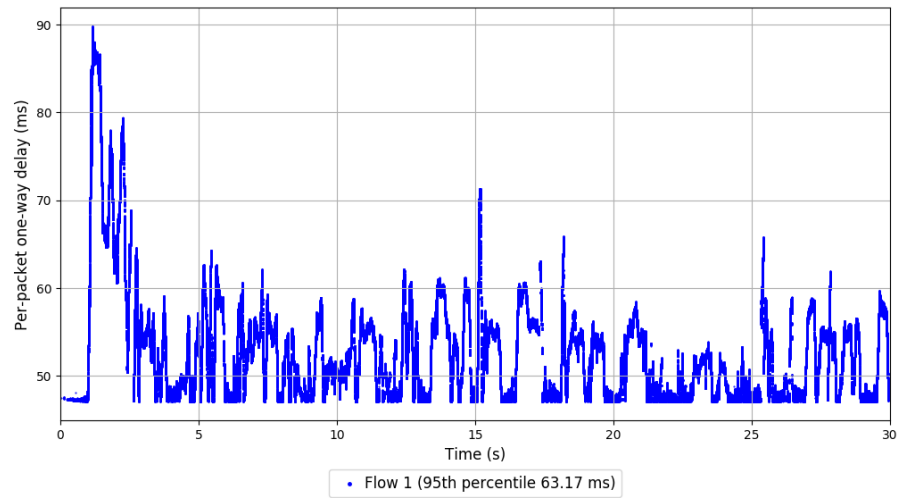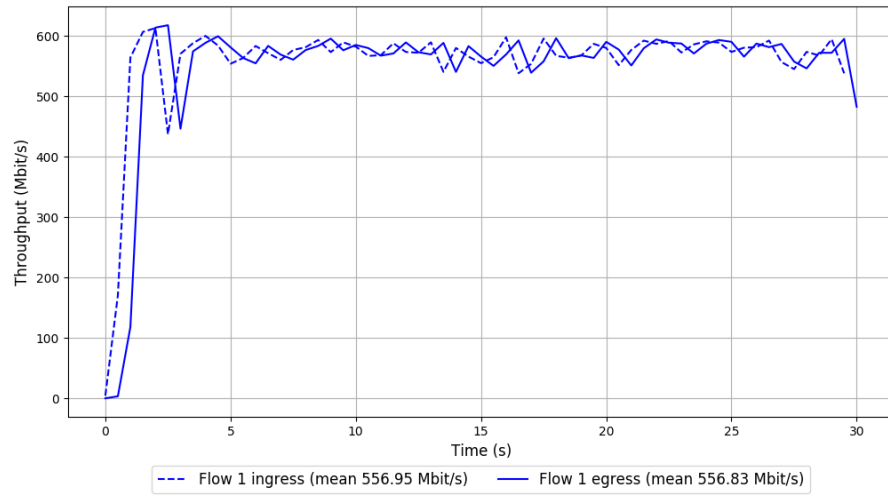Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-07-12 21:53:37
End at: 2019-07-12 21:54:07
Local clock offset: -0.009 ms
Remote clock offset: -0.273 ms


# Below is generated by plot.py at 2019-07-13 01:42:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 556.83 Mbit/s
95th percentile per-packet one-way delay: 63.168 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 556.83 Mbit/s
95th percentile per-packet one-way delay: 63.168 ms
Loss rate: 0.34%
```

Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 556.95 Mbit/s)   Flow 1 egress (mean 556.83 Mbit/s)
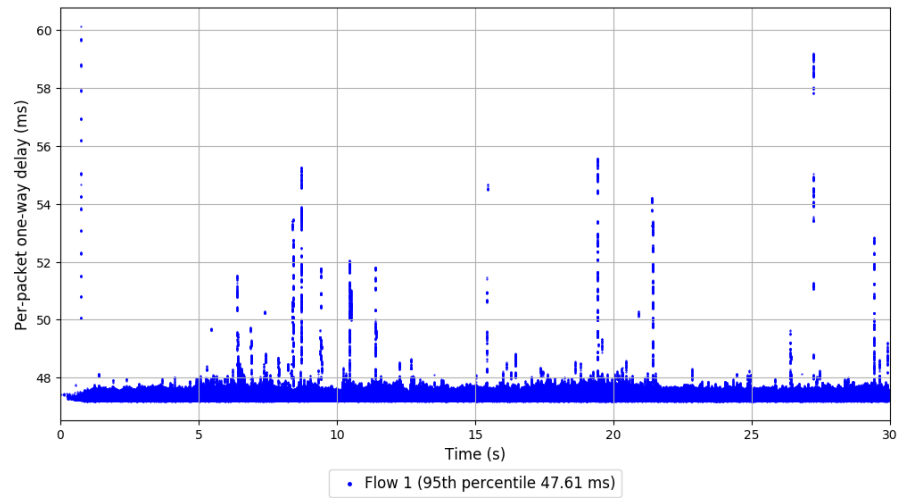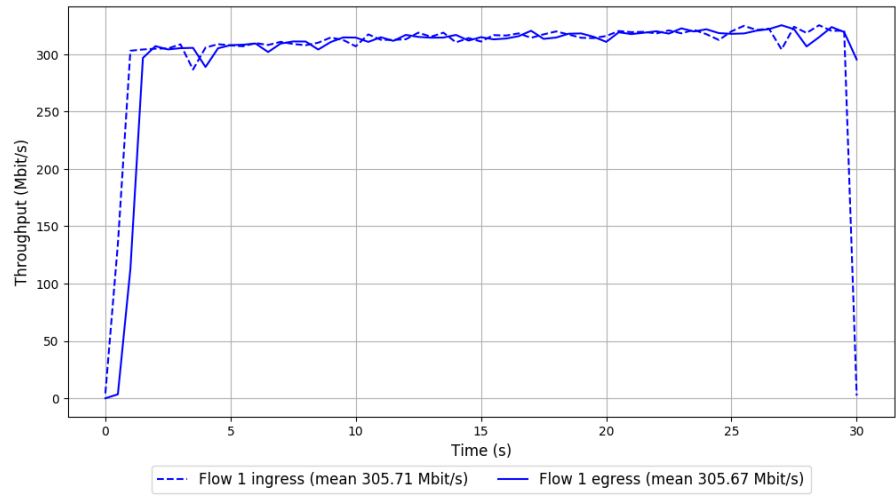

Flow 1 (95th percentile 63.17 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-07-12 22:28:38
End at: 2019-07-12 22:29:08
Local clock offset: 0.033 ms
Remote clock offset: -0.332 ms


# Below is generated by plot.py at 2019-07-13 01:42:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 305.67 Mbit/s
95th percentile per-packet one-way delay: 47.607 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 305.67 Mbit/s
95th percentile per-packet one-way delay: 47.607 ms
Loss rate: 0.33%
```

Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 305.71 Mbit/s)   Flow 1 egress (mean 305.67 Mbit/s)
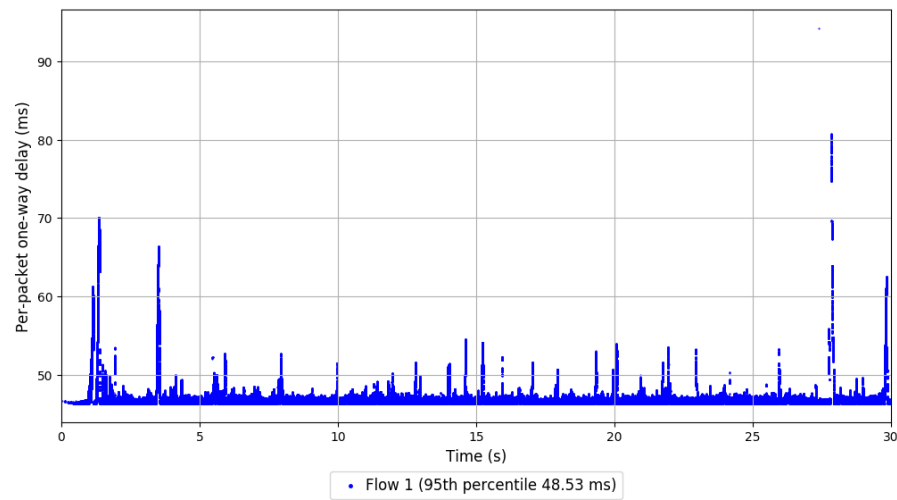
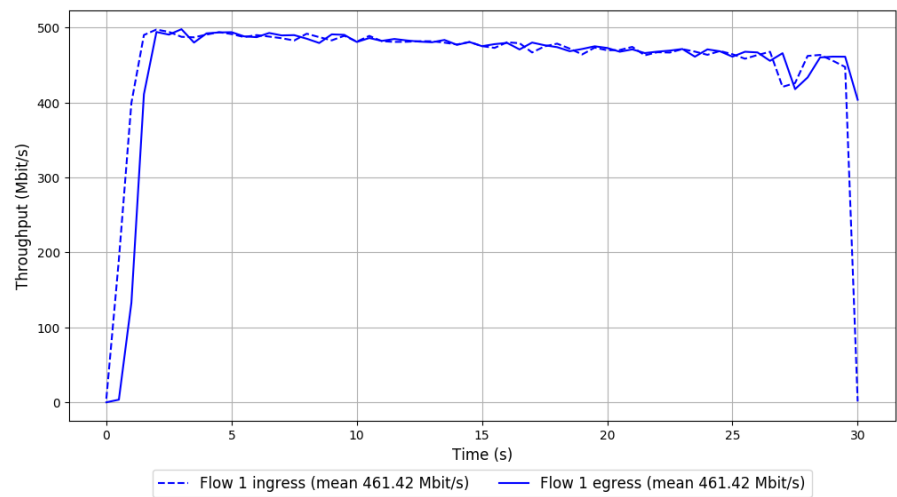

• Flow 1 (95th percentile 47.61 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2019-07-12 23:03:17
End at: 2019-07-12 23:03:47
Local clock offset: 0.026 ms
Remote clock offset: -0.345 ms


# Below is generated by plot.py at 2019-07-13 01:43:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 461.42 Mbit/s
95th percentile per-packet one-way delay: 48.533 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 461.42 Mbit/s
95th percentile per-packet one-way delay: 48.533 ms
Loss rate: 0.31%
```

Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 461.42 Mbit/s)   Flow 1 egress (mean 461.42 Mbit/s)
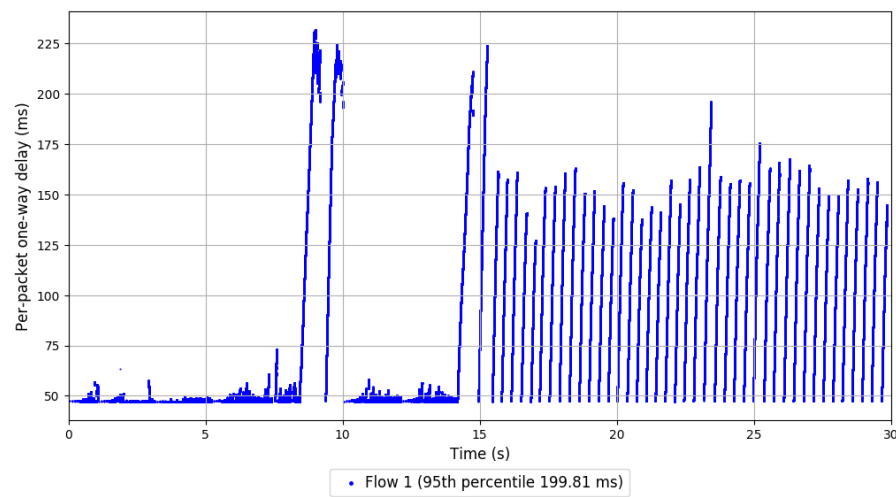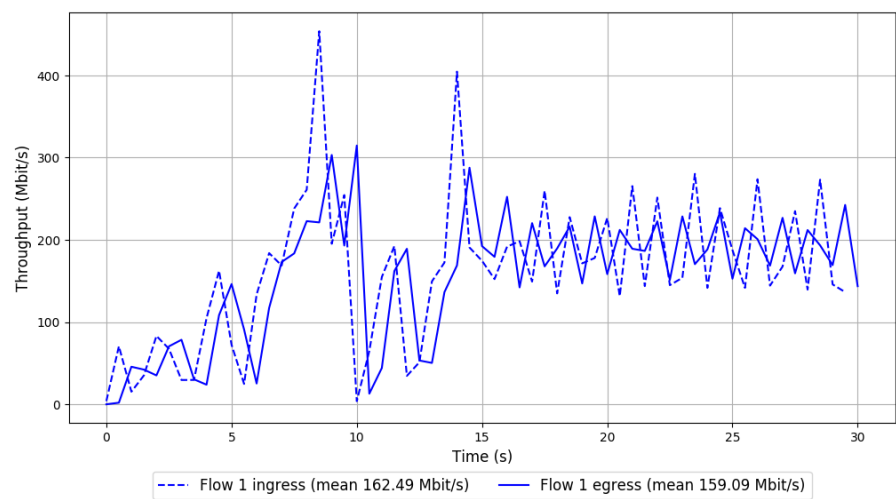

Flow 1 (95th percentile 48.53 ms)

```
Run 1: Statistics of Verus

Start at: 2019-07-12 21:08:22
End at: 2019-07-12 21:08:52
Local clock offset: 0.021 ms
Remote clock offset: -0.219 ms


# Below is generated by plot.py at 2019-07-13 01:43:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.09 Mbit/s
95th percentile per-packet one-way delay: 199.806 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 159.09 Mbit/s
95th percentile per-packet one-way delay: 199.806 ms
Loss rate: 1.80%
```
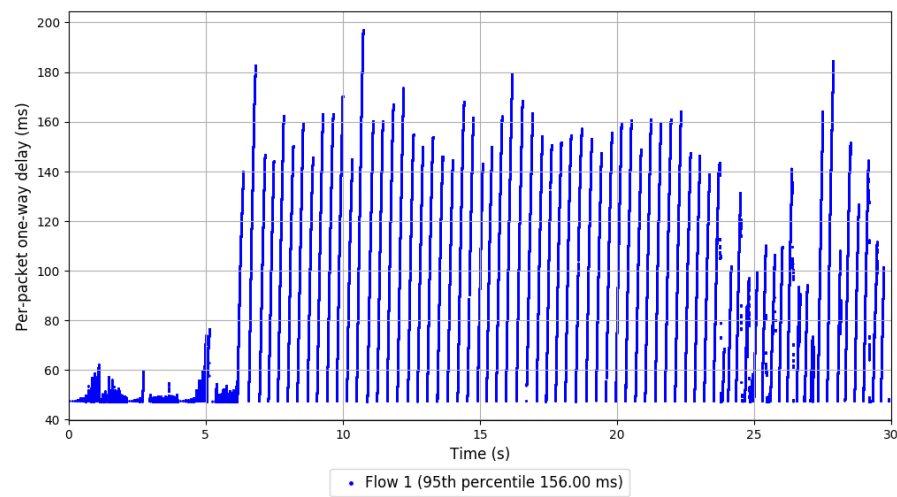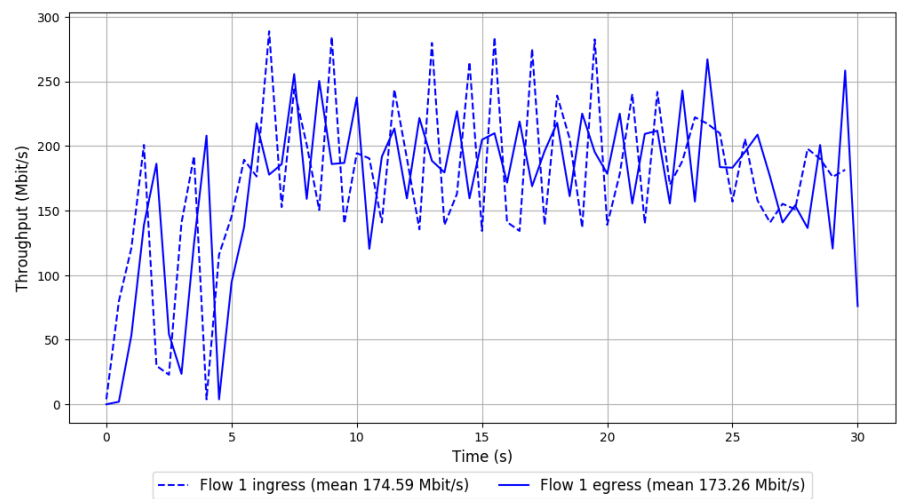
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-07-12 21:43:16
End at: 2019-07-12 21:43:46
Local clock offset: 0.006 ms
Remote clock offset: -0.234 ms


# Below is generated by plot.py at 2019-07-13 01:43:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.26 Mbit/s
95th percentile per-packet one-way delay: 155.995 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 173.26 Mbit/s
95th percentile per-packet one-way delay: 155.995 ms
Loss rate: 1.01%
```
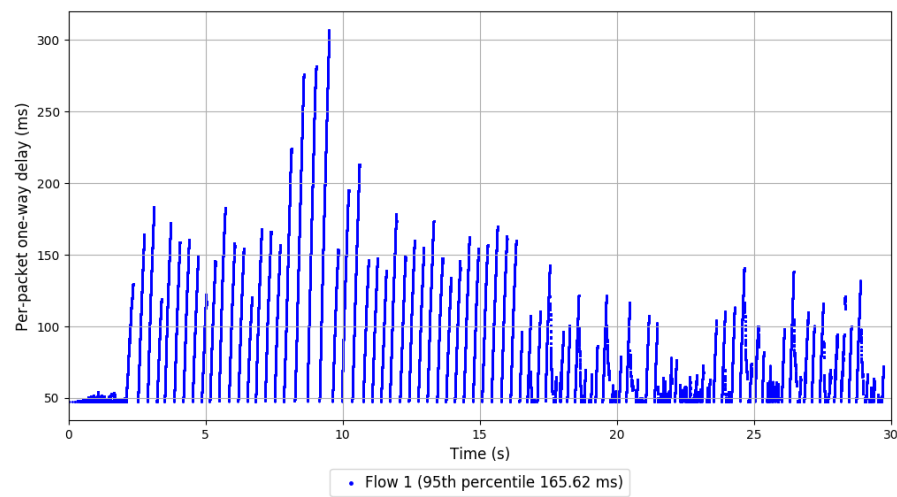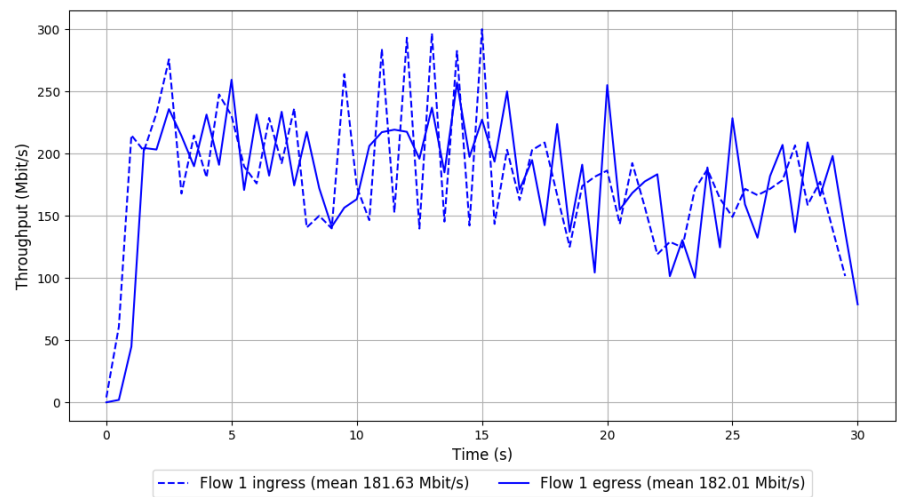
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-07-12 22:18:17
End at: 2019-07-12 22:18:47
Local clock offset: 0.038 ms
Remote clock offset: -0.305 ms


# Below is generated by plot.py at 2019-07-13 01:43:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 182.01 Mbit/s
95th percentile per-packet one-way delay: 165.619 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 182.01 Mbit/s
95th percentile per-packet one-way delay: 165.619 ms
Loss rate: 0.57%
```
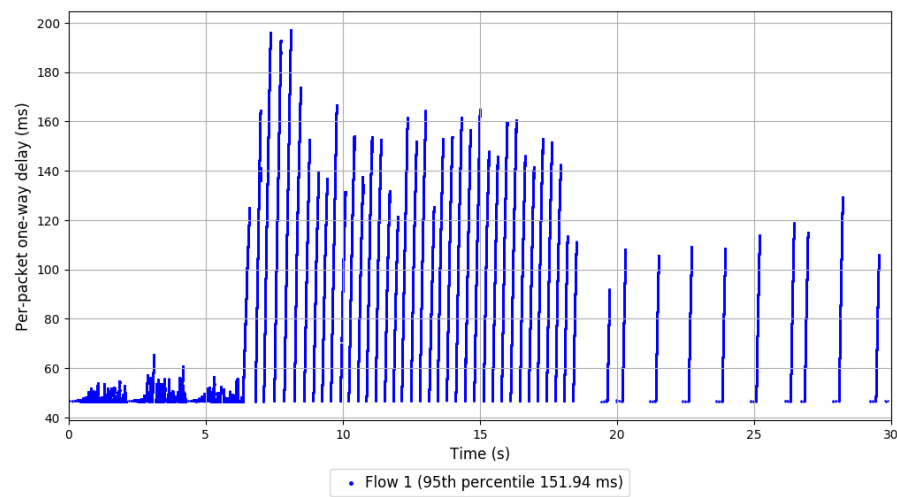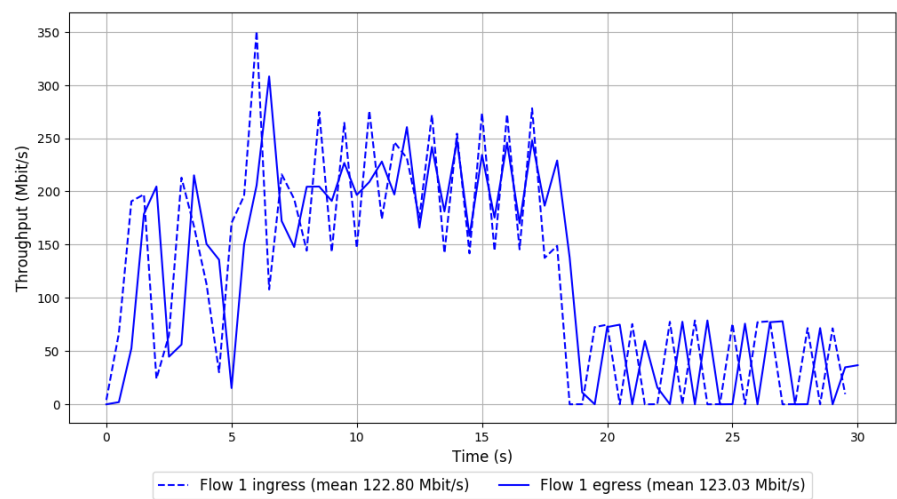
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-07-12 22:53:00
End at: 2019-07-12 22:53:30
Local clock offset: 0.026 ms
Remote clock offset: -0.379 ms


# Below is generated by plot.py at 2019-07-13 01:43:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 123.03 Mbit/s
95th percentile per-packet one-way delay: 151.938 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 123.03 Mbit/s
95th percentile per-packet one-way delay: 151.938 ms
Loss rate: 0.13%
```

Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 122.80 Mbit/s)   Flow 1 egress (mean 123.03 Mbit/s)

Flow 1 (95th percentile 151.94 ms)

```
Run 5: Statistics of Verus

Start at: 2019-07-12 23:28:02
End at: 2019-07-12 23:28:32
Local clock offset: -0.093 ms
Remote clock offset: 0.024 ms


# Below is generated by plot.py at 2019-07-13 01:45:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 134.57 Mbit/s
95th percentile per-packet one-way delay: 60.404 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 134.57 Mbit/s
95th percentile per-packet one-way delay: 60.404 ms
Loss rate: 0.00%
```
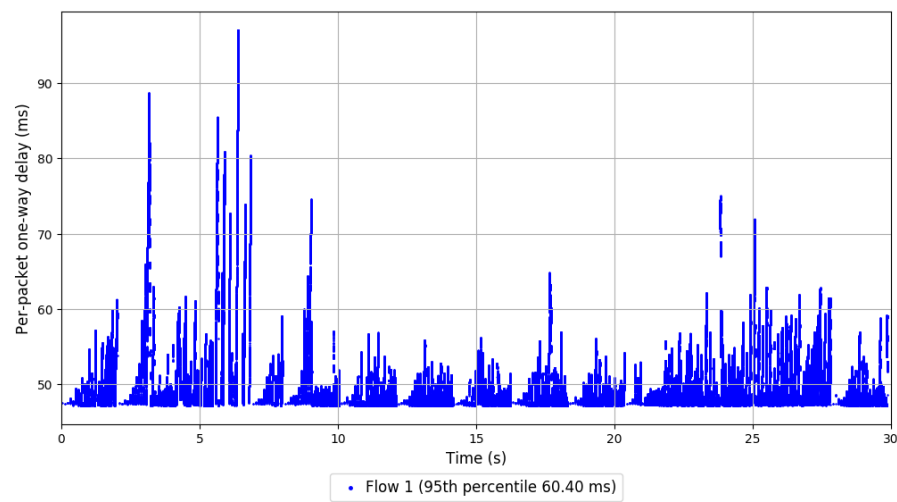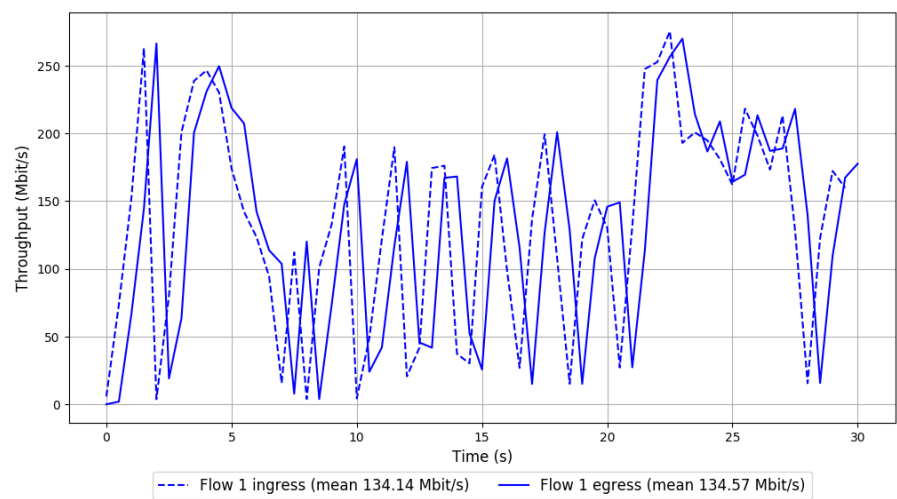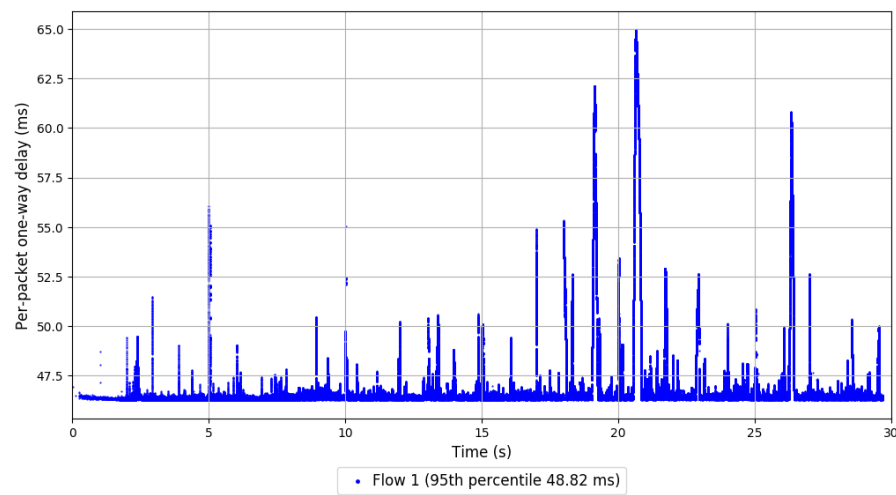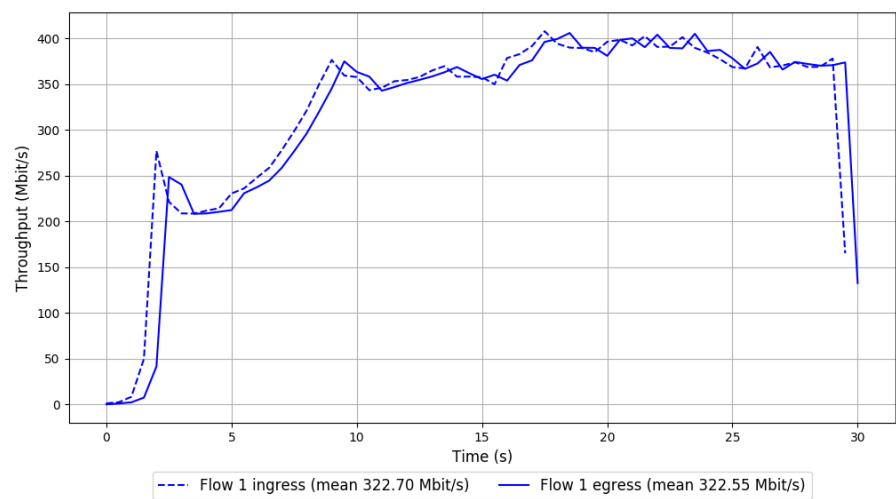
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-07-12 20:58:27
End at: 2019-07-12 20:58:57
Local clock offset: -0.017 ms
Remote clock offset: -0.181 ms


# Below is generated by plot.py at 2019-07-13 01:45:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 322.55 Mbit/s
95th percentile per-packet one-way delay: 48.823 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 322.55 Mbit/s
95th percentile per-packet one-way delay: 48.823 ms
Loss rate: 0.36%
```

Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-07-12 21:33:23
End at: 2019-07-12 21:33:53
Local clock offset: 0.023 ms
Remote clock offset: -0.229 ms


# Below is generated by plot.py at 2019-07-13 01:45:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 293.49 Mbit/s
95th percentile per-packet one-way delay: 51.184 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 293.49 Mbit/s
95th percentile per-packet one-way delay: 51.184 ms
Loss rate: 0.32%
```
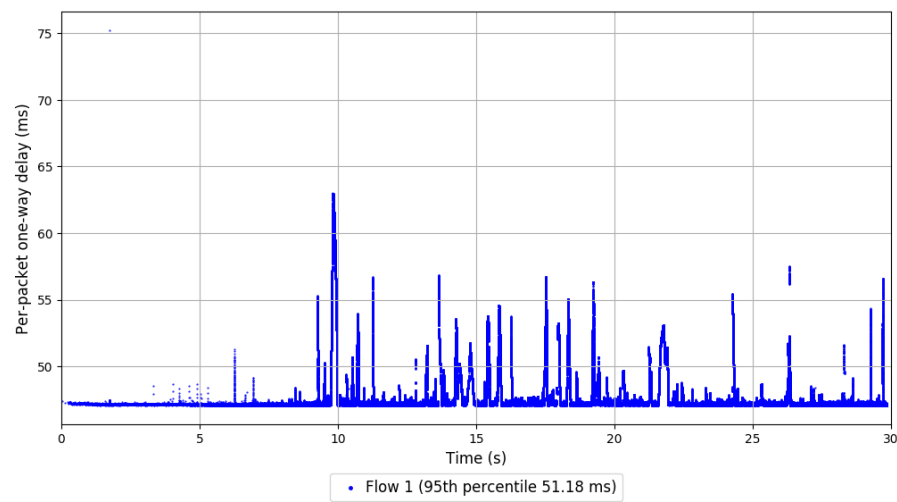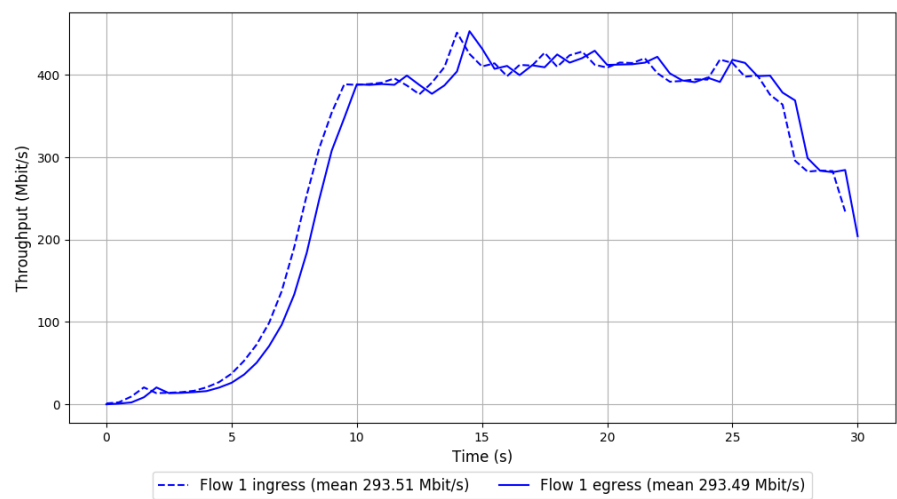
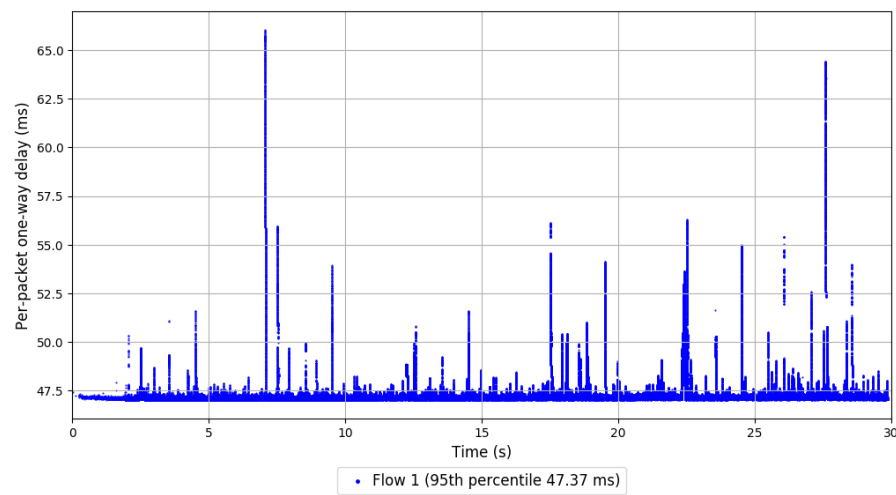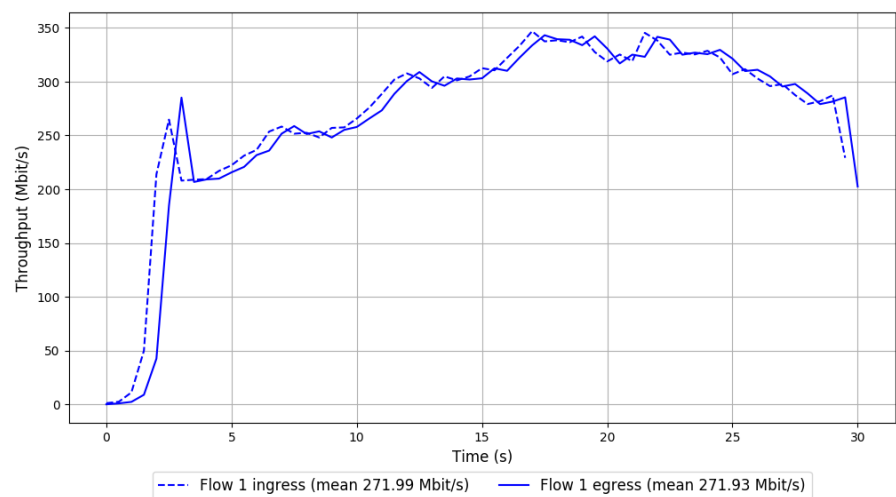## Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-07-12 22:08:20
End at: 2019-07-12 22:08:50
Local clock offset: -0.008 ms
Remote clock offset: -0.302 ms

# Below is generated by plot.py at 2019-07-13 01:45:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 271.93 Mbit/s
95th percentile per-packet one-way delay: 47.367 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 271.93 Mbit/s
95th percentile per-packet one-way delay: 47.367 ms
Loss rate: 0.34%
```

Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 271.99 Mbit/s)   Flow 1 egress (mean 271.93 Mbit/s)
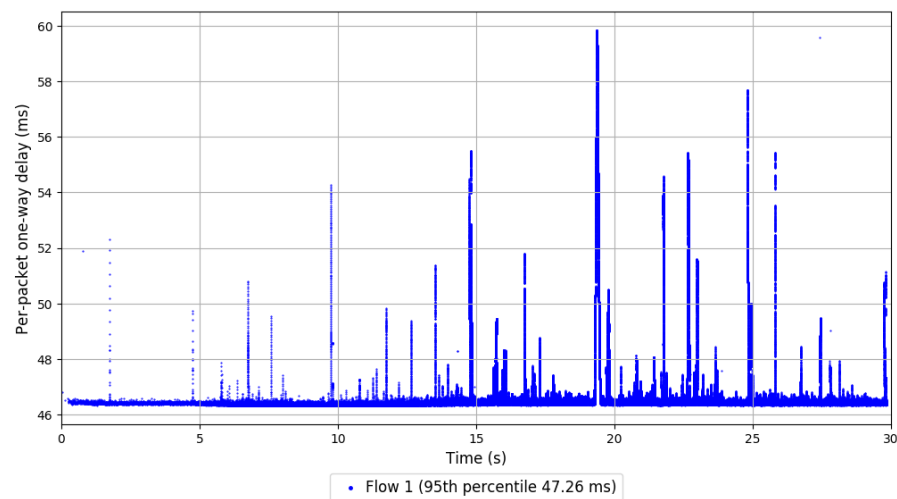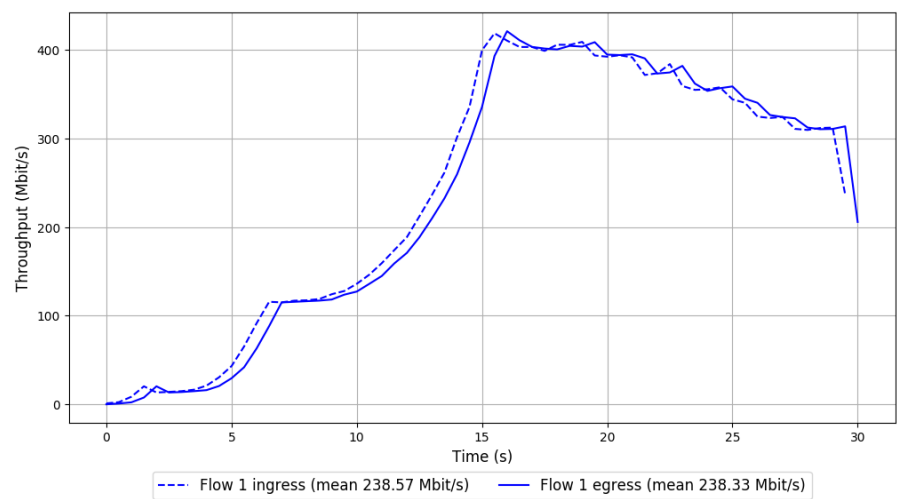

Flow 1 (95th percentile 47.37 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-07-12 22:43:13
End at: 2019-07-12 22:43:43
Local clock offset: 0.049 ms
Remote clock offset: -0.318 ms


# Below is generated by plot.py at 2019-07-13 01:45:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 238.33 Mbit/s
95th percentile per-packet one-way delay: 47.258 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 238.33 Mbit/s
95th percentile per-packet one-way delay: 47.258 ms
Loss rate: 0.41%
```

Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 238.57 Mbit/s)   Flow 1 egress (mean 238.33 Mbit/s)
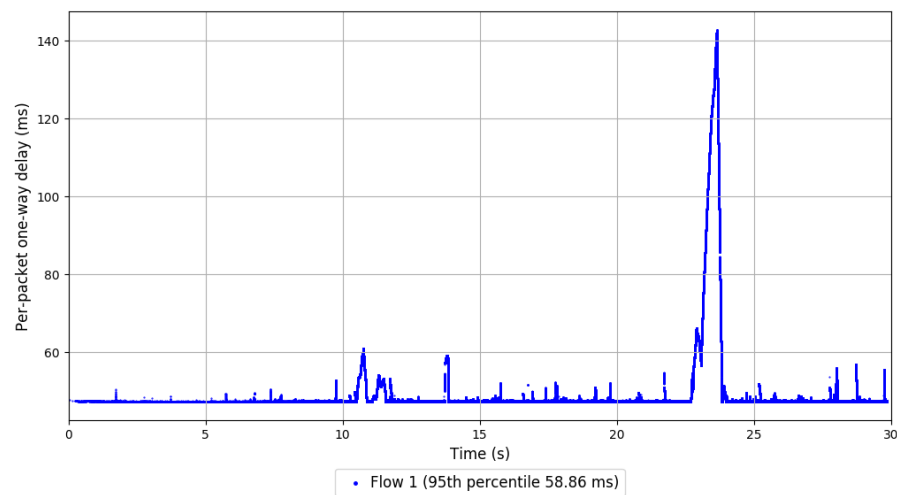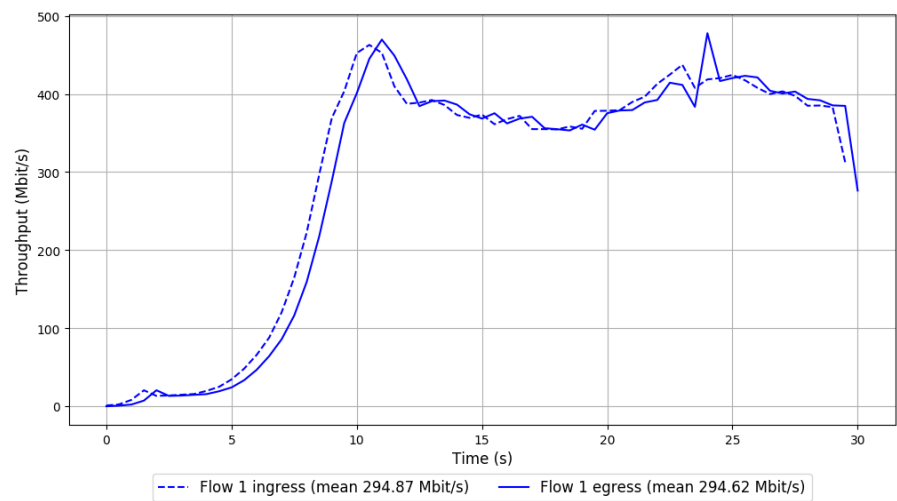

Flow 1 (95th percentile 47.26 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-07-12 23:18:06
End at: 2019-07-12 23:18:36
Local clock offset: -0.026 ms
Remote clock offset: -0.044 ms


# Below is generated by plot.py at 2019-07-13 01:45:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 294.62 Mbit/s
95th percentile per-packet one-way delay: 58.859 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 294.62 Mbit/s
95th percentile per-packet one-way delay: 58.859 ms
Loss rate: 0.40%
```

Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 294.87 Mbit/s)   Flow 1 egress (mean 294.62 Mbit/s)

Flow 1 (95th percentile 58.86 ms)
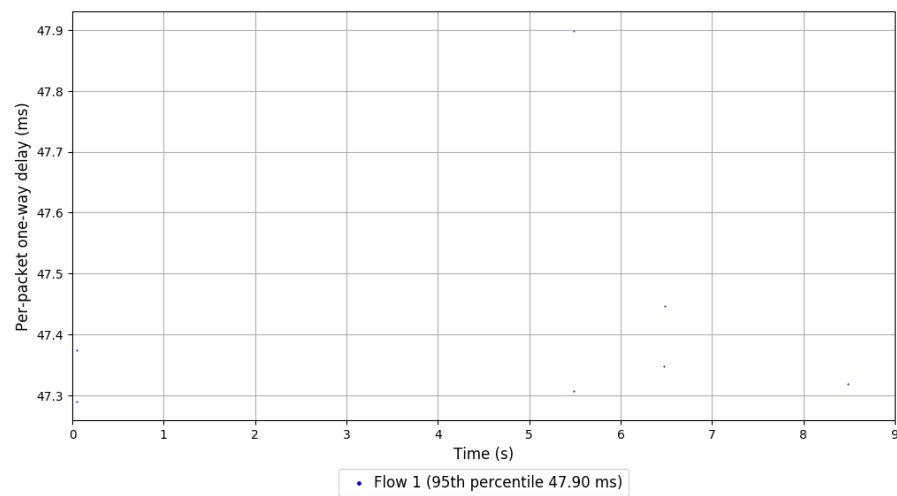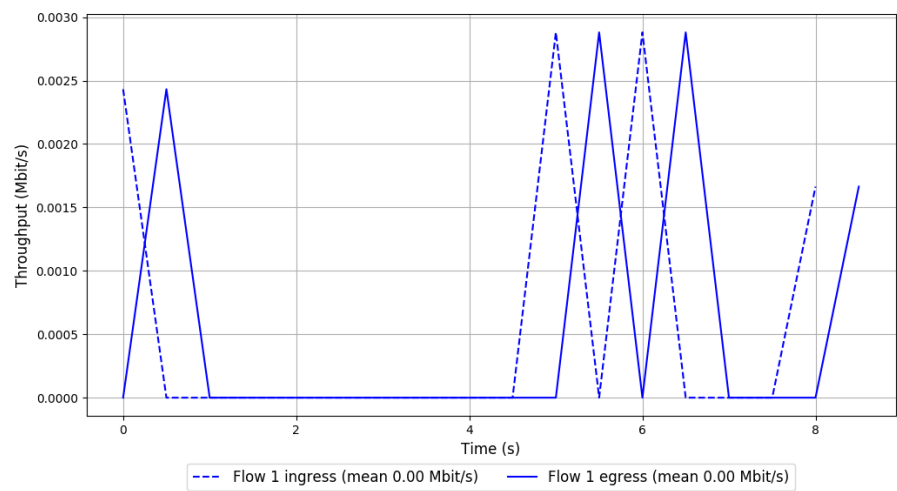
Run 1: Statistics of WebRTC media

Start at: 2019-07-12 21:04:09
End at: 2019-07-12 21:04:39
Local clock offset: 0.044 ms
Remote clock offset: -0.197 ms

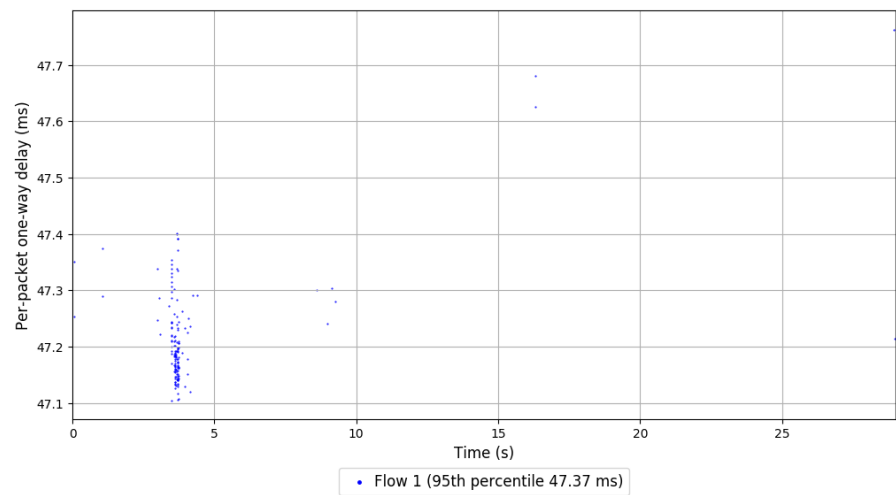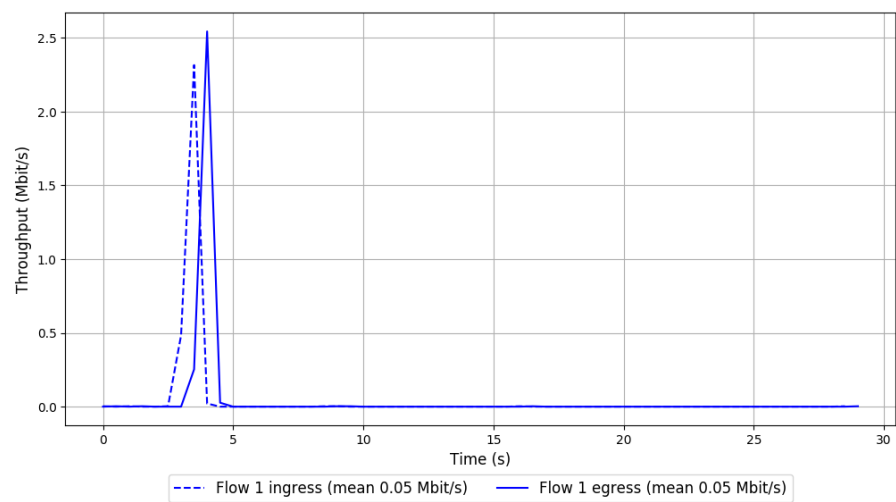Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-07-12 21:39:05
End at: 2019-07-12 21:39:35
Local clock offset: -0.031 ms
Remote clock offset: -0.281 ms


# Below is generated by plot.py at 2019-07-13 01:45:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.372 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.372 ms
Loss rate: 0.00%
```

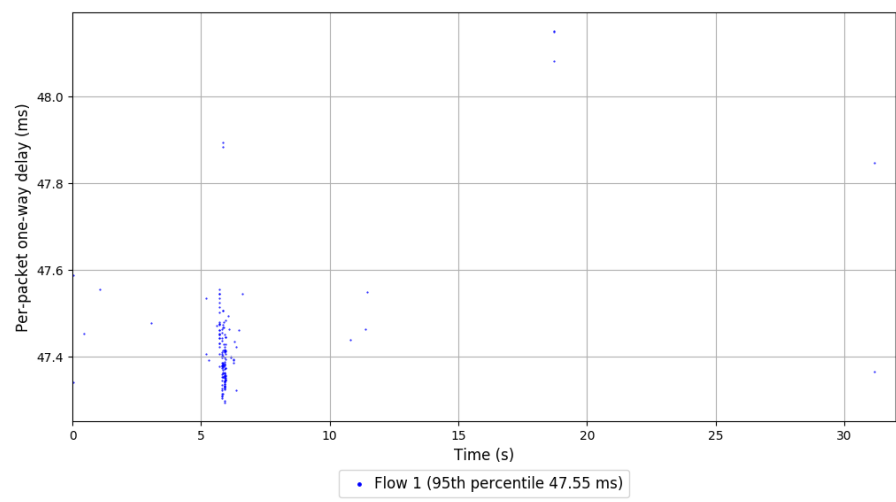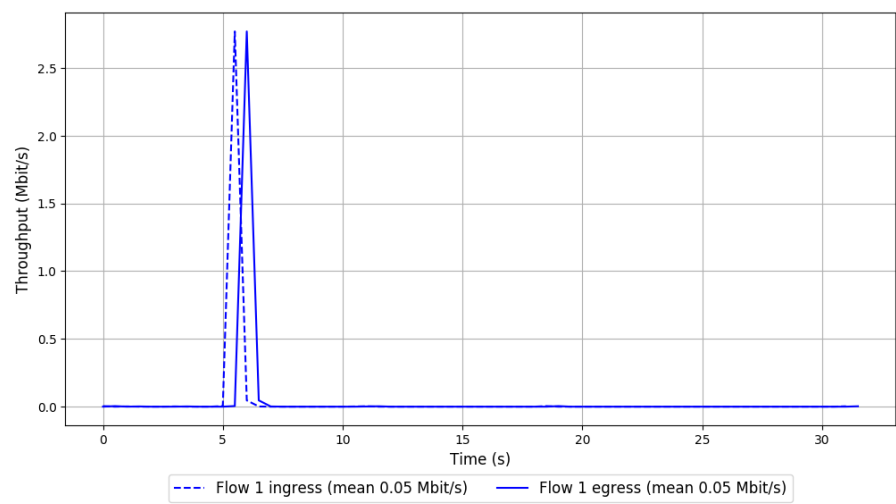Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-07-12 22:14:02
End at: 2019-07-12 22:14:33
Local clock offset: 0.039 ms
Remote clock offset: -0.312 ms


# Below is generated by plot.py at 2019-07-13 01:45:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.555 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.555 ms
Loss rate: 0.00%
```

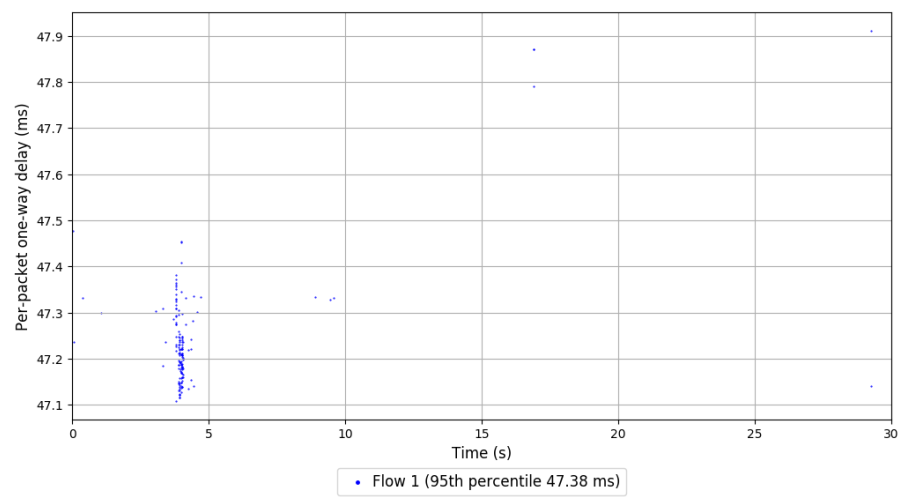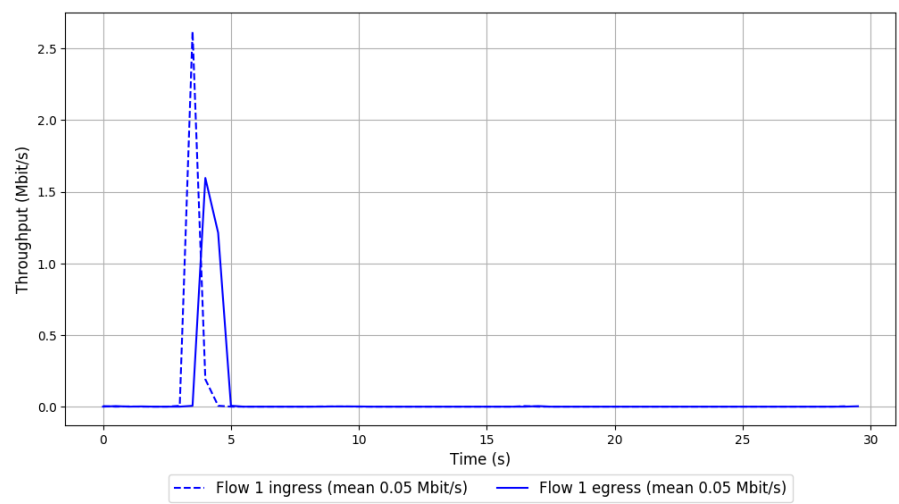Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-07-12 22:48:50
End at: 2019-07-12 22:49:20
Local clock offset: 0.062 ms
Remote clock offset: -0.369 ms


# Below is generated by plot.py at 2019-07-13 01:45:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.381 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.381 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-07-12 23:23:49
End at: 2019-07-12 23:24:19
Local clock offset: -0.054 ms
Remote clock offset: -0.008 ms


# Below is generated by plot.py at 2019-07-13 01:45:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 46.777 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 46.777 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link