Pantheon Report

Generated at 2019-07-12 12:41:22 (UTC).

Data path: Colombia on `p4p1` (*remote*) →AWS Brazil 2 on `ens5` (*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 `gps.ntp.br` and have been applied to correct the timestamps in logs.
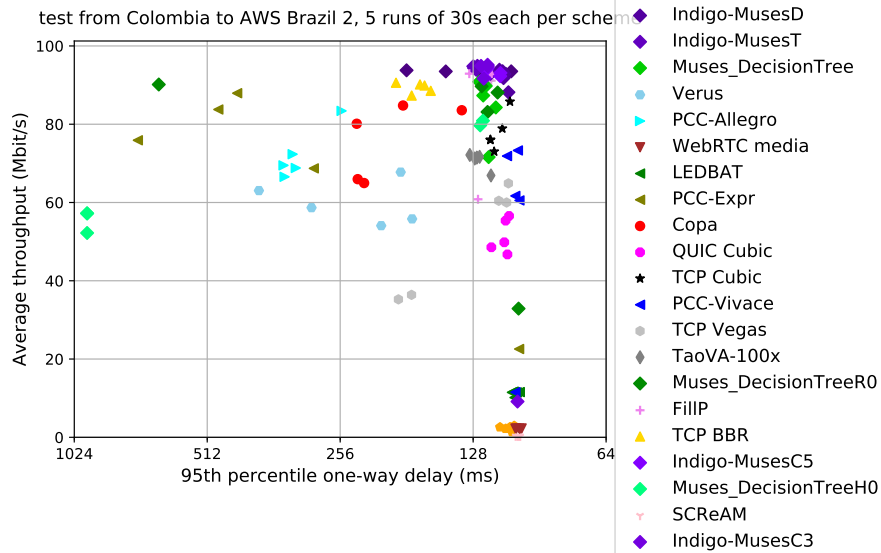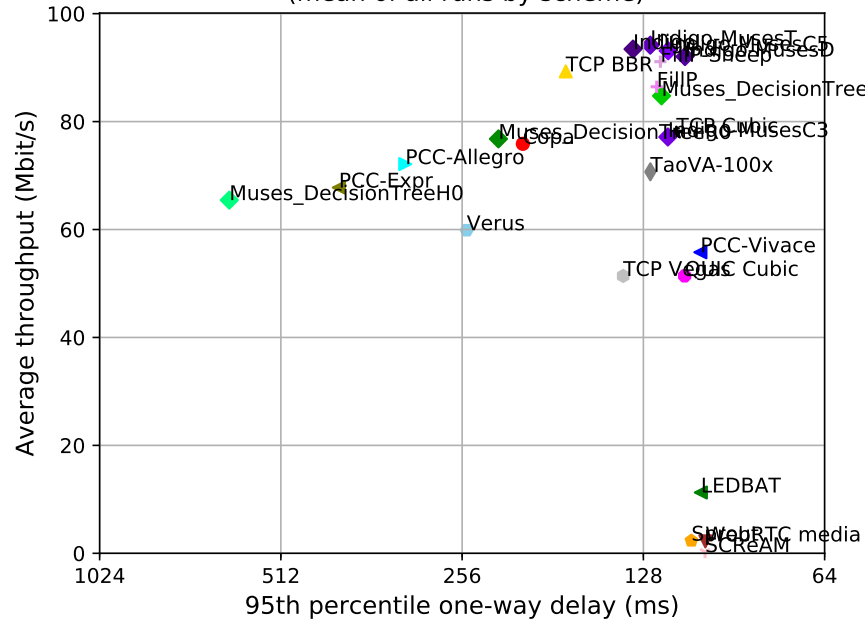
```
System info:
Linux 4.15.0-1041-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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 Colombia to AWS Brazil 2, 5 runs of 30s each per scheme
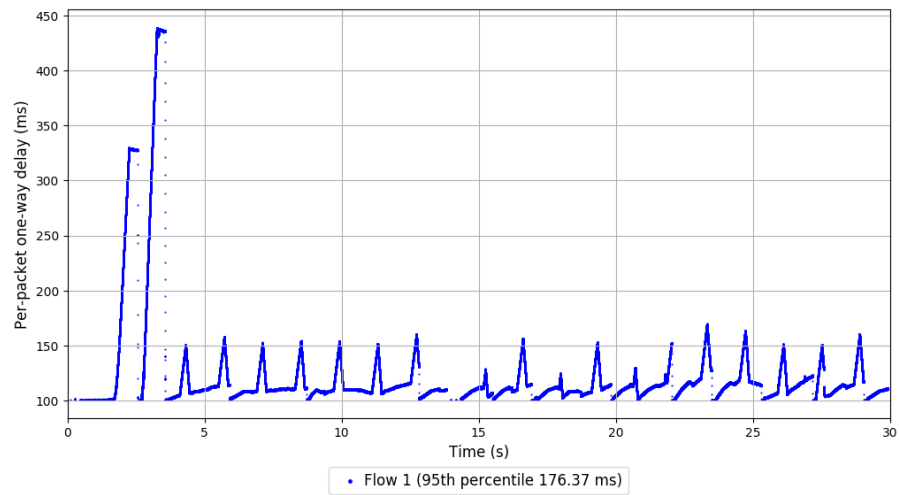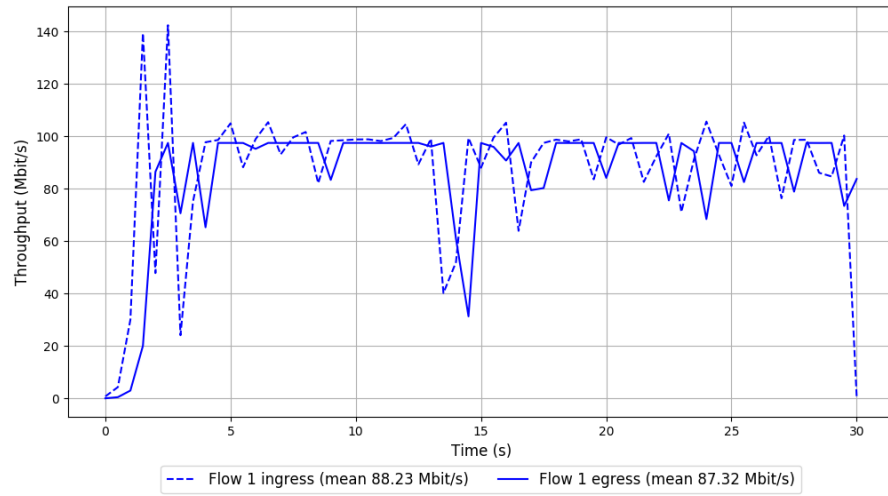(mean of all runs by scheme)

test from Colombia to AWS Brazil 2, 5 runs of 30s each per scheme

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scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	89.31	172.23	1.72
Copa	5	75.88	202.95	0.71
TCP Cubic	5	77.94	112.85	0.61
FillP	5	86.45	121.63	0.99
FillP-Sheep	5	91.10	119.95	0.66
Indigo	5	93.43	133.16	0.73
Indigo-MusesC3	5	77.15	116.56	2.84
Indigo-MusesC5	5	93.12	116.42	2.95
Indigo-MusesD	5	92.05	109.18	0.74
Indigo-MusesT	5	94.17	124.66	6.78
LEDBAT	5	11.27	102.75	1.19
Muses_DecisionTree	5	84.77	119.41	0.81
Muses_DecisionTreeH0	5	65.45	623.59	2.29
Muses_DecisionTreeR0	5	76.79	222.81	0.97
PCC-Allegro	5	72.13	318.12	0.74
PCC-Expr	5	67.77	410.21	2.84
QUIC Cubic	5	51.41	109.30	0.63
SCReAM	5	0.22	101.10	0.61
Sprout	5	2.35	106.53	0.91
TaoVA-100x	5	70.69	124.63	0.66
TCP Vegas	5	51.40	138.29	0.70
Verus	5	59.87	251.53	1.03
PCC-Vivace	5	55.78	102.93	0.93
WebRTC media	5	2.20	100.99	0.39

4

```
Run 1: Statistics of TCP BBR

Start at: 2019-07-12 10:21:11
End at: 2019-07-12 10:21:41
Local clock offset: -6.785 ms
Remote clock offset: -6.353 ms


# Below is generated by plot.py at 2019-07-12 12:29:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.32 Mbit/s
95th percentile per-packet one-way delay: 176.373 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 87.32 Mbit/s
95th percentile per-packet one-way delay: 176.373 ms
Loss rate: 1.60%
```
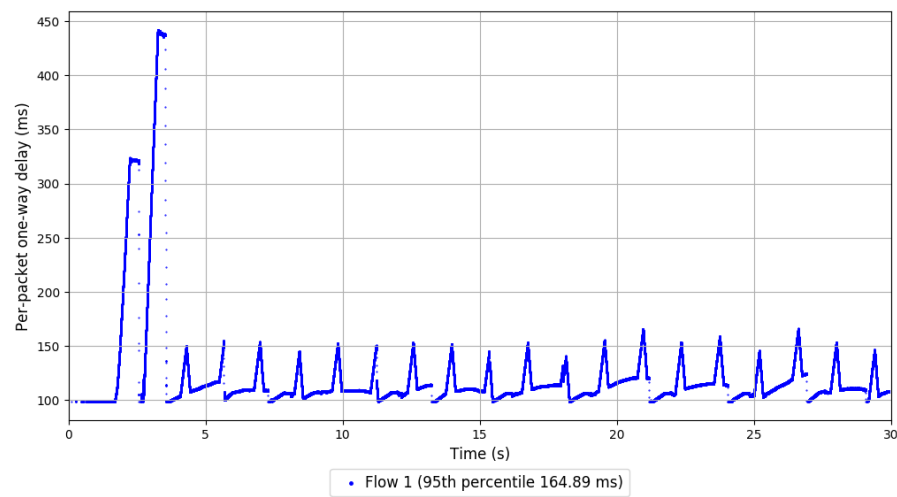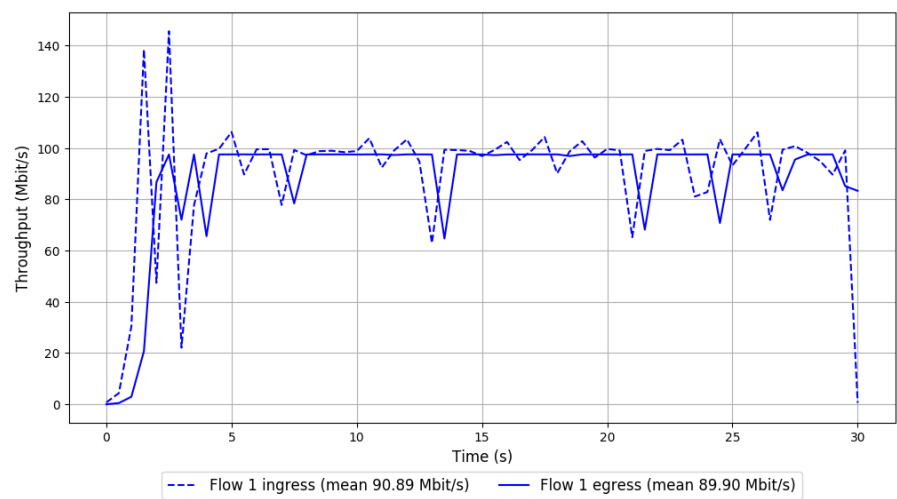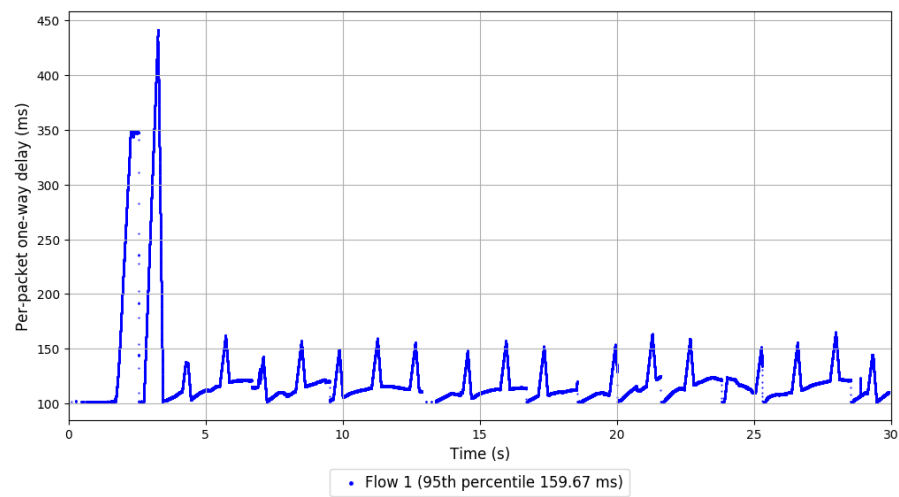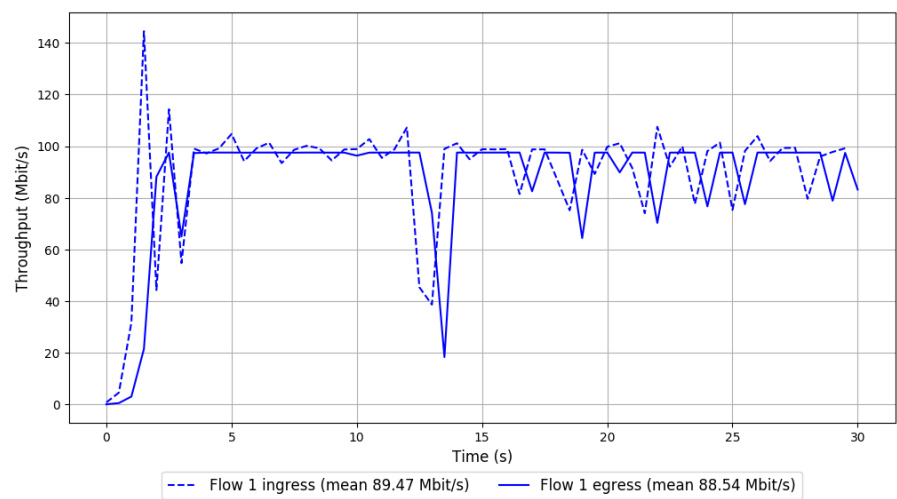
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-07-12 10:49:49
End at: 2019-07-12 10:50:19
Local clock offset: -6.564 ms
Remote clock offset: -6.09 ms


# Below is generated by plot.py at 2019-07-12 12:29:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.90 Mbit/s
95th percentile per-packet one-way delay: 164.891 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 89.90 Mbit/s
95th percentile per-packet one-way delay: 164.891 ms
Loss rate: 1.66%
```

Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-07-12 11:18:37
End at: 2019-07-12 11:19:07
Local clock offset: -5.644 ms
Remote clock offset: -10.219 ms


# Below is generated by plot.py at 2019-07-12 12:29:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.54 Mbit/s
95th percentile per-packet one-way delay: 159.673 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 88.54 Mbit/s
95th percentile per-packet one-way delay: 159.673 ms
Loss rate: 1.62%
```
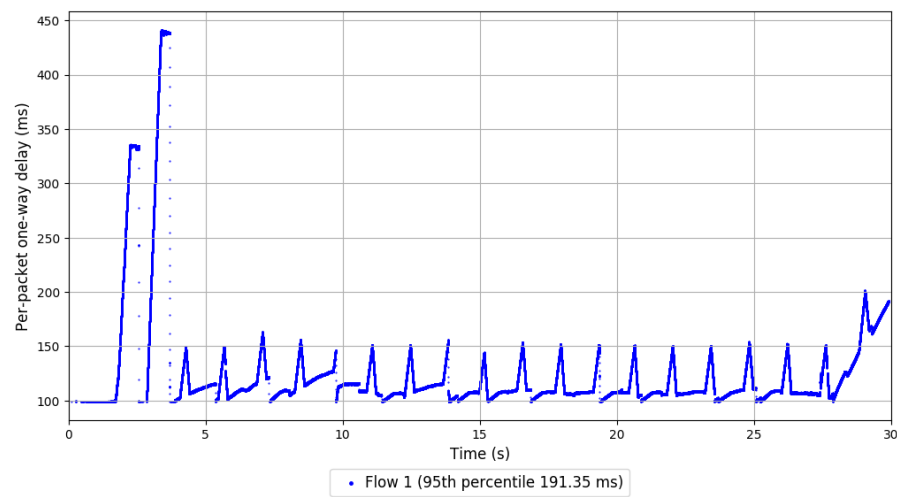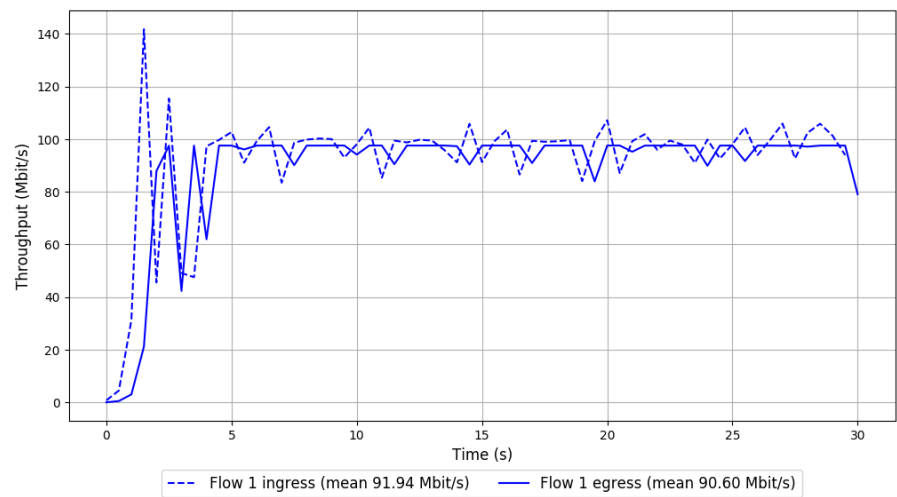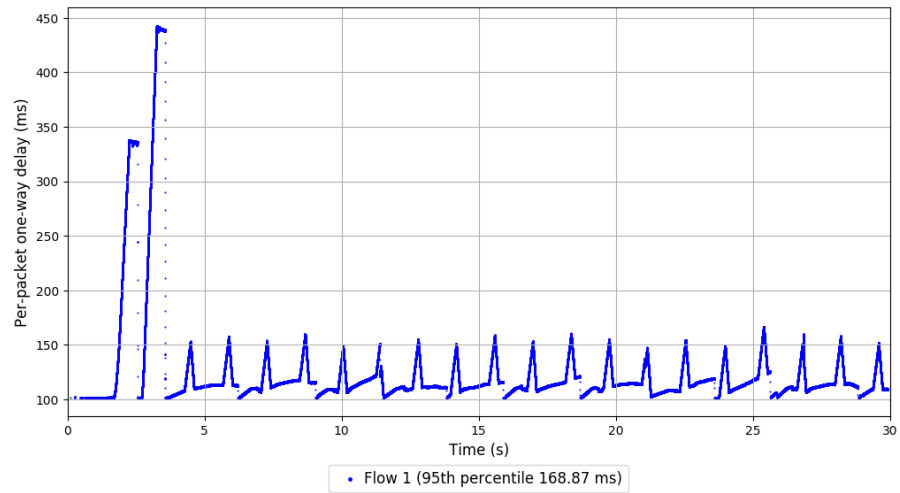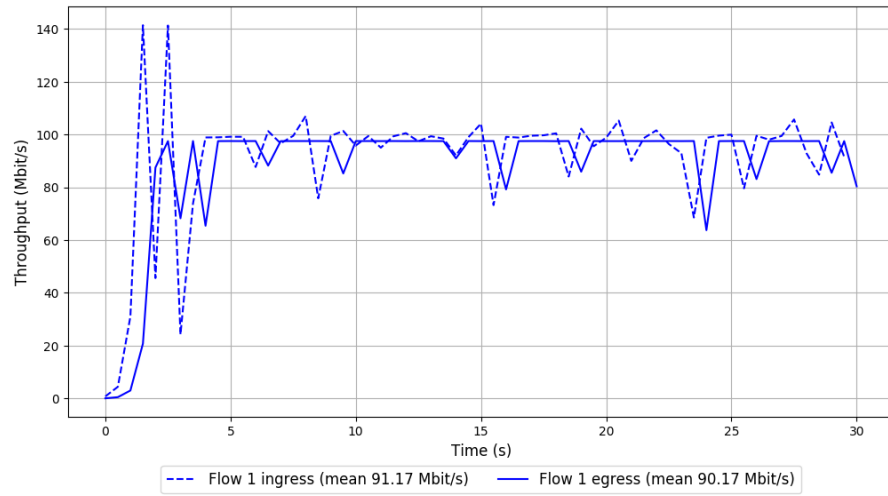
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 89.47 Mbit/s)   Flow 1 egress (mean 88.54 Mbit/s)

Flow 1 (95th percentile 159.67 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-07-12 11:47:24
End at: 2019-07-12 11:47:54
Local clock offset: -7.58 ms
Remote clock offset: -7.93 ms


# Below is generated by plot.py at 2019-07-12 12:29:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 191.346 ms
Loss rate: 2.03%
-- Flow 1:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 191.346 ms
Loss rate: 2.03%
```

Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2019-07-12 12:16:22
End at: 2019-07-12 12:16:52
Local clock offset: -6.778 ms
Remote clock offset: -10.421 ms


# Below is generated by plot.py at 2019-07-12 12:29:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.17 Mbit/s
95th percentile per-packet one-way delay: 168.873 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 90.17 Mbit/s
95th percentile per-packet one-way delay: 168.873 ms
Loss rate: 1.68%
```
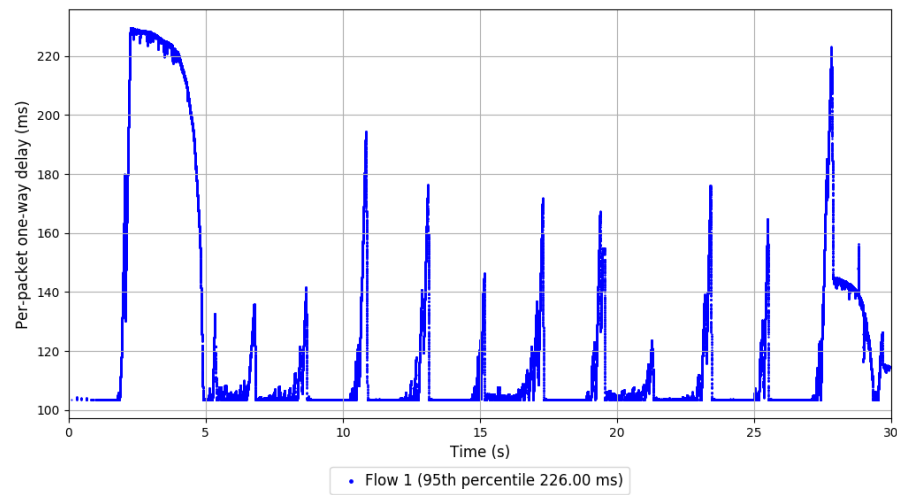
Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2019-07-12 10:17:35
End at: 2019-07-12 10:18:05
Local clock offset: -7.216 ms
Remote clock offset: -8.72 ms


# Below is generated by plot.py at 2019-07-12 12:29:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.97 Mbit/s
95th percentile per-packet one-way delay: 225.998 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 64.97 Mbit/s
95th percentile per-packet one-way delay: 225.998 ms
Loss rate: 1.01%
```
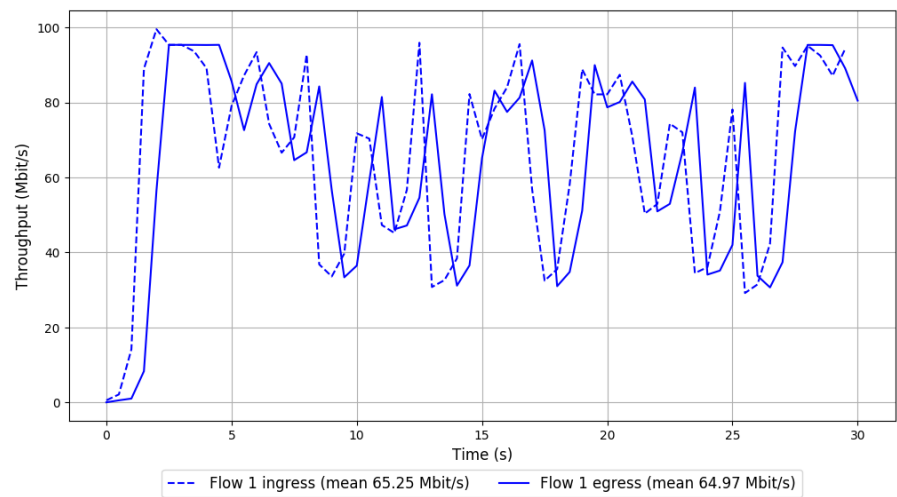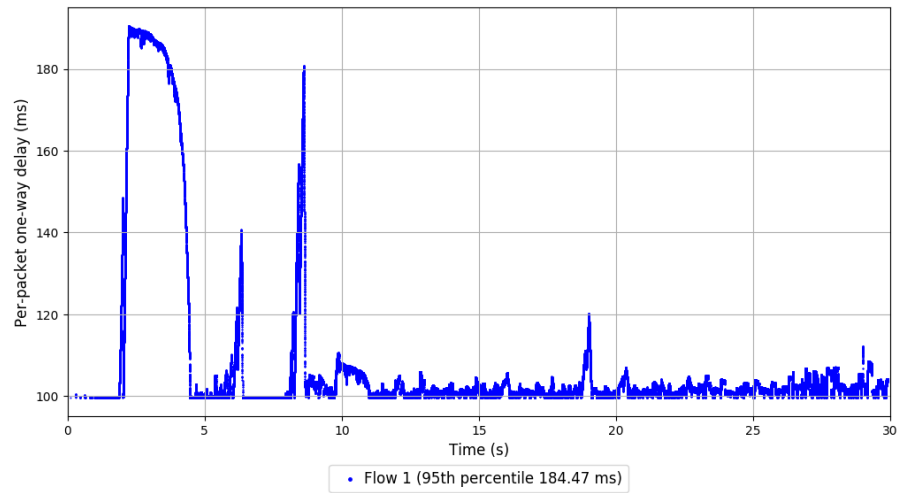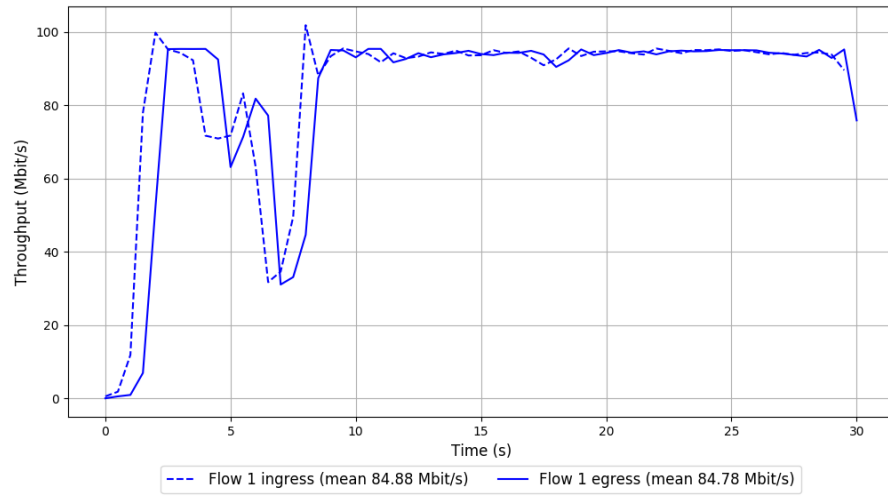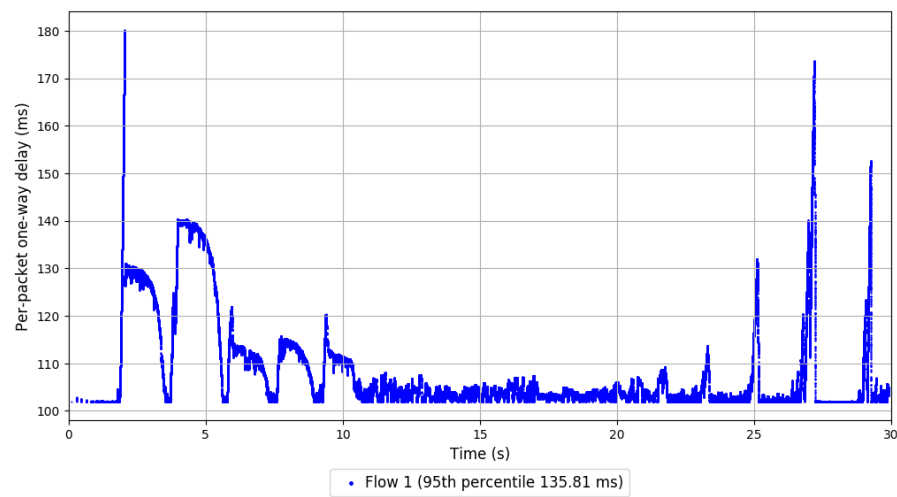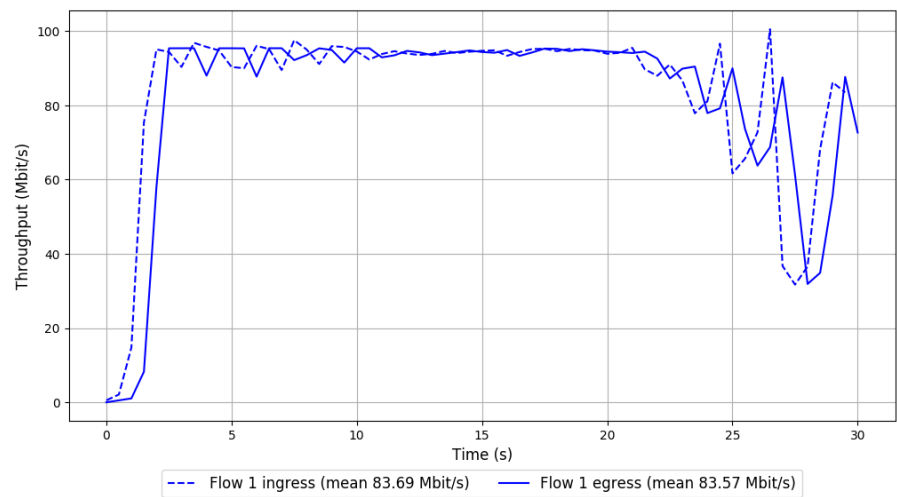
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 65.25 Mbit/s) —— Flow 1 egress (mean 64.97 Mbit/s)

• Flow 1 (95th percentile 226.00 ms)

```
Run 2: Statistics of Copa

Start at: 2019-07-12 10:46:11
End at: 2019-07-12 10:46:41
Local clock offset: -6.407 ms
Remote clock offset: -7.068 ms


# Below is generated by plot.py at 2019-07-12 12:30:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.78 Mbit/s
95th percentile per-packet one-way delay: 184.471 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 84.78 Mbit/s
95th percentile per-packet one-way delay: 184.471 ms
Loss rate: 0.69%
```

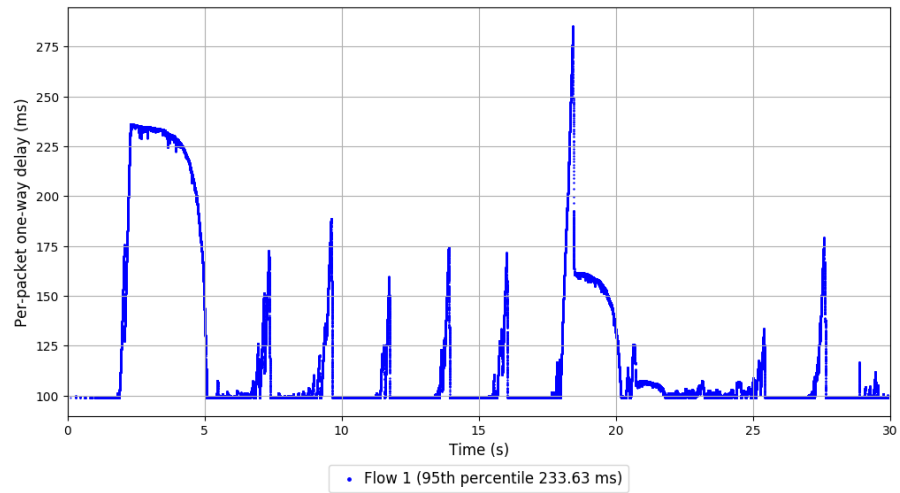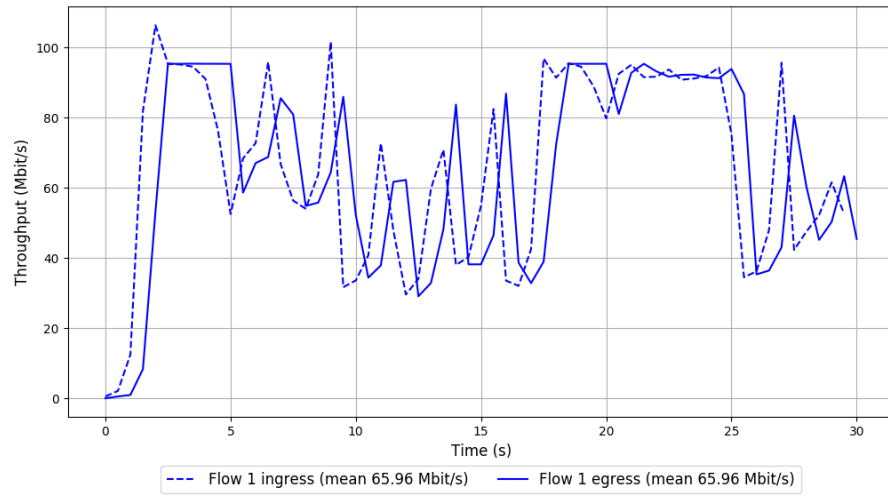Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-07-12 11:14:54
End at: 2019-07-12 11:15:24
Local clock offset: -5.569 ms
Remote clock offset: -10.024 ms


# Below is generated by plot.py at 2019-07-12 12:30:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.57 Mbit/s
95th percentile per-packet one-way delay: 135.813 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 83.57 Mbit/s
95th percentile per-packet one-way delay: 135.813 ms
Loss rate: 0.72%
```
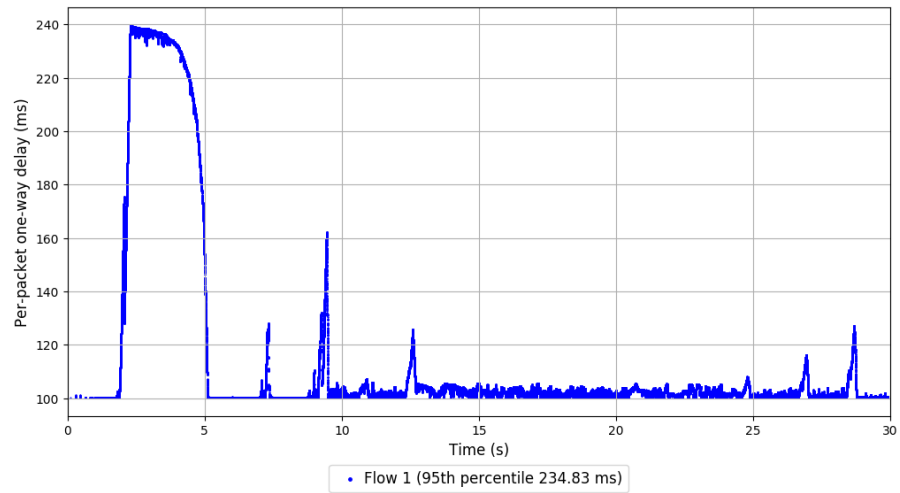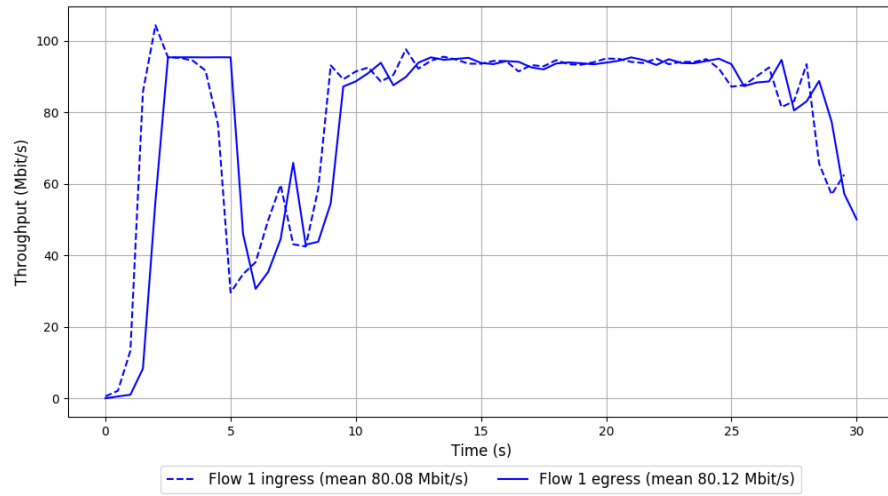
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-07-12 11:43:43
End at: 2019-07-12 11:44:13
Local clock offset: -7.649 ms
Remote clock offset: -8.517 ms


# Below is generated by plot.py at 2019-07-12 12:30:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.96 Mbit/s
95th percentile per-packet one-way delay: 233.635 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 65.96 Mbit/s
95th percentile per-packet one-way delay: 233.635 ms
Loss rate: 0.58%
```

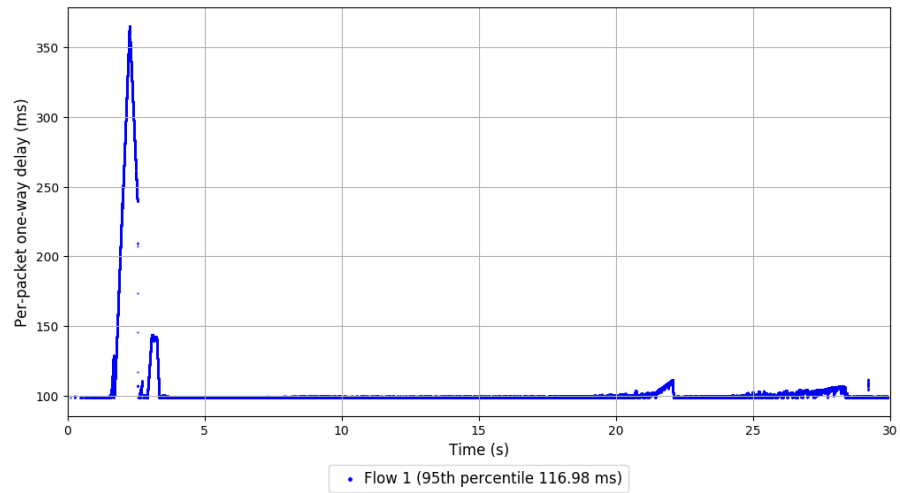Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2019-07-12 12:12:43
End at: 2019-07-12 12:13:13
Local clock offset: -7.347 ms
Remote clock offset: -10.309 ms


# Below is generated by plot.py at 2019-07-12 12:31:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.12 Mbit/s
95th percentile per-packet one-way delay: 234.834 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 80.12 Mbit/s
95th percentile per-packet one-way delay: 234.834 ms
Loss rate: 0.53%
```

Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 80.08 Mbit/s) Flow 1 egress (mean 80.12 Mbit/s)

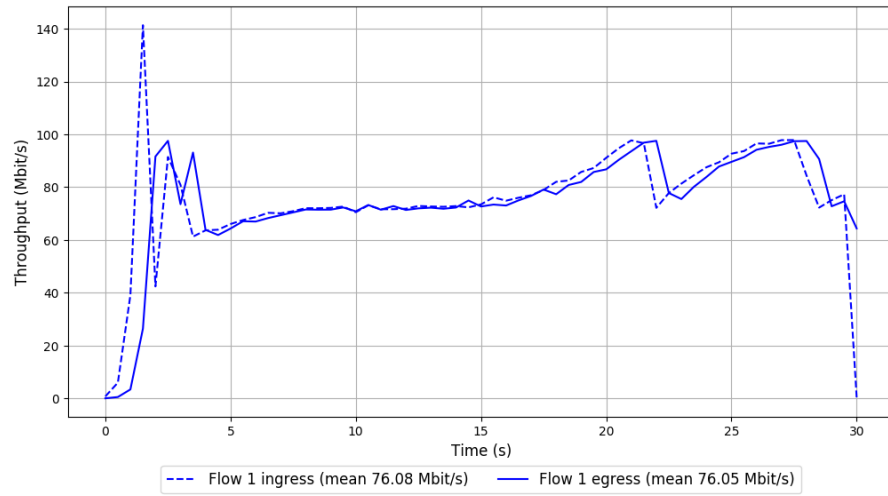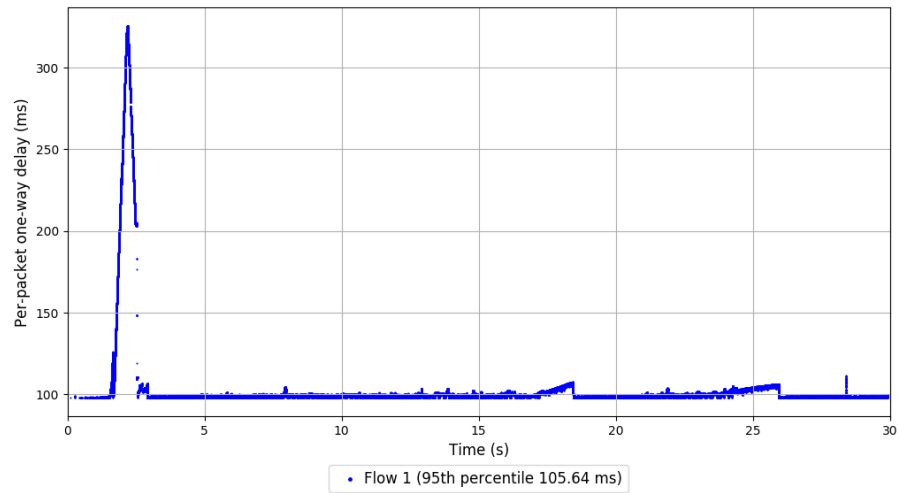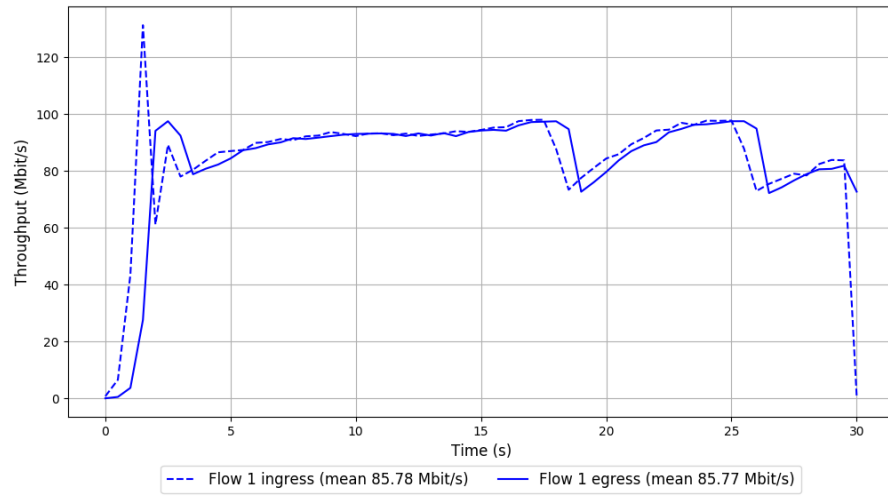Flow 1 (95th percentile 234.83 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-07-12 10:09:08
End at: 2019-07-12 10:09:38
Local clock offset: -7.305 ms
Remote clock offset: -4.542 ms

# Below is generated by plot.py at 2019-07-12 12:31:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.05 Mbit/s
95th percentile per-packet one-way delay: 116.979 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 76.05 Mbit/s
95th percentile per-packet one-way delay: 116.979 ms
Loss rate: 0.62%
```

Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 76.08 Mbit/s) ----- Flow 1 egress (mean 76.05 Mbit/s) ———
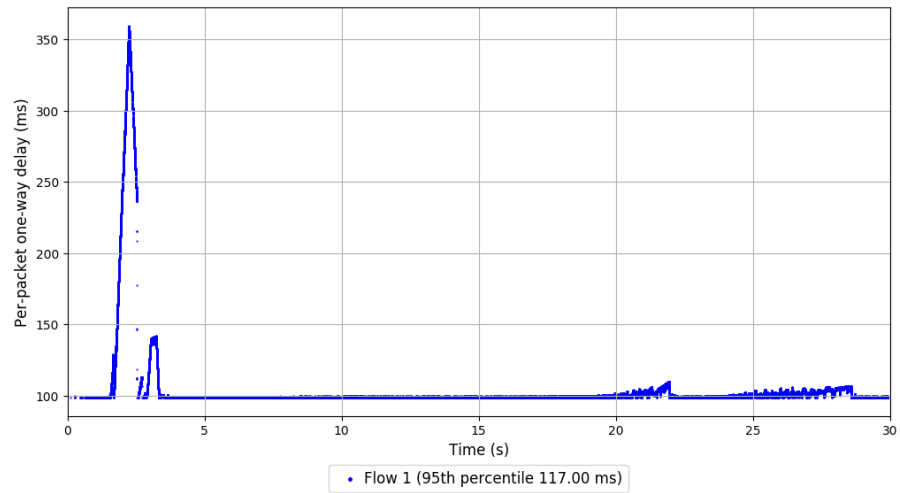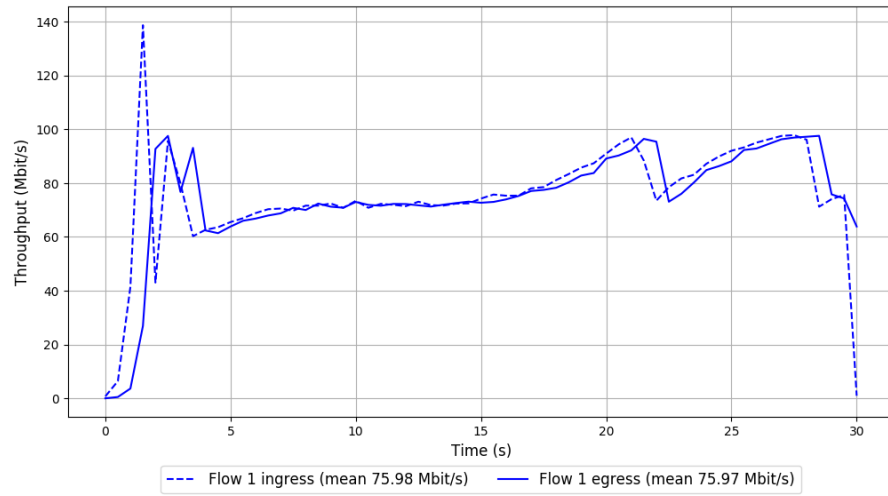

Flow 1 (95th percentile 116.98 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2019-07-12 10:37:48
End at: 2019-07-12 10:38:19
Local clock offset: -6.908 ms
Remote clock offset: -3.968 ms


# Below is generated by plot.py at 2019-07-12 12:31:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.77 Mbit/s
95th percentile per-packet one-way delay: 105.636 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 85.77 Mbit/s
95th percentile per-packet one-way delay: 105.636 ms
Loss rate: 0.58%
```
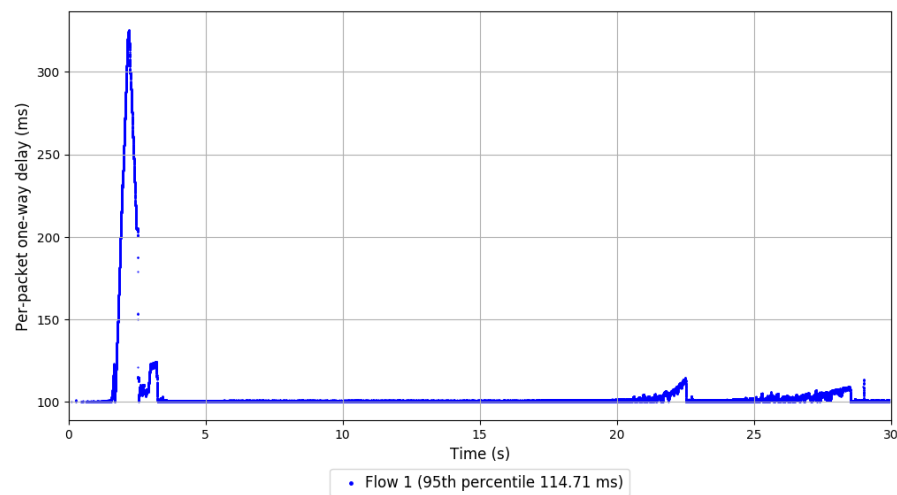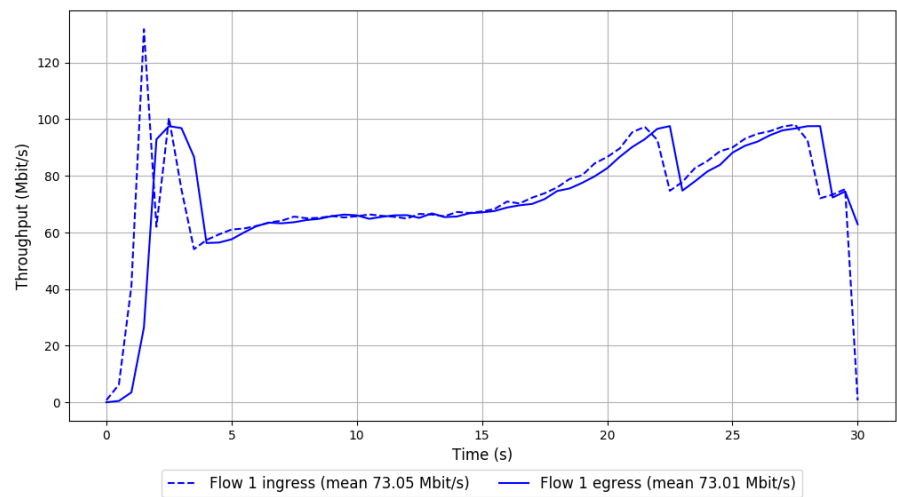
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-07-12 11:06:32
End at: 2019-07-12 11:07:02
Local clock offset: -6.521 ms
Remote clock offset: -6.979 ms


# Below is generated by plot.py at 2019-07-12 12:31:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.97 Mbit/s
95th percentile per-packet one-way delay: 116.999 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 75.97 Mbit/s
95th percentile per-packet one-way delay: 116.999 ms
Loss rate: 0.61%
```
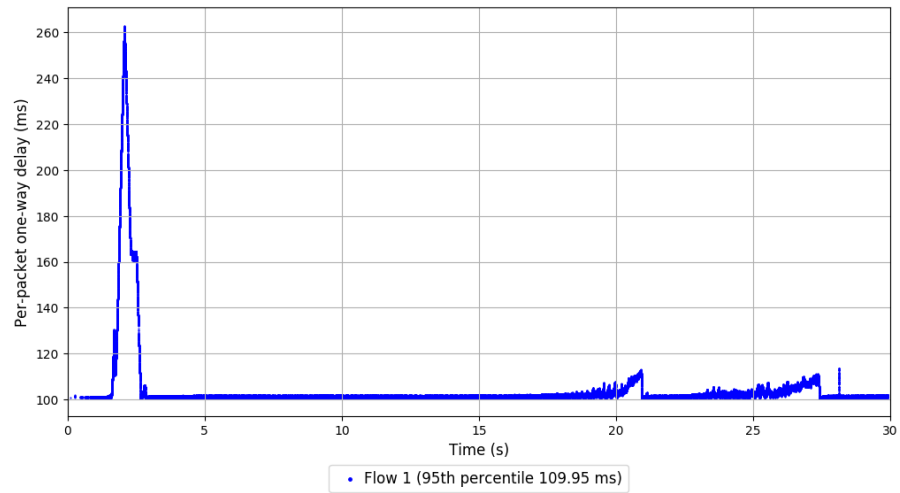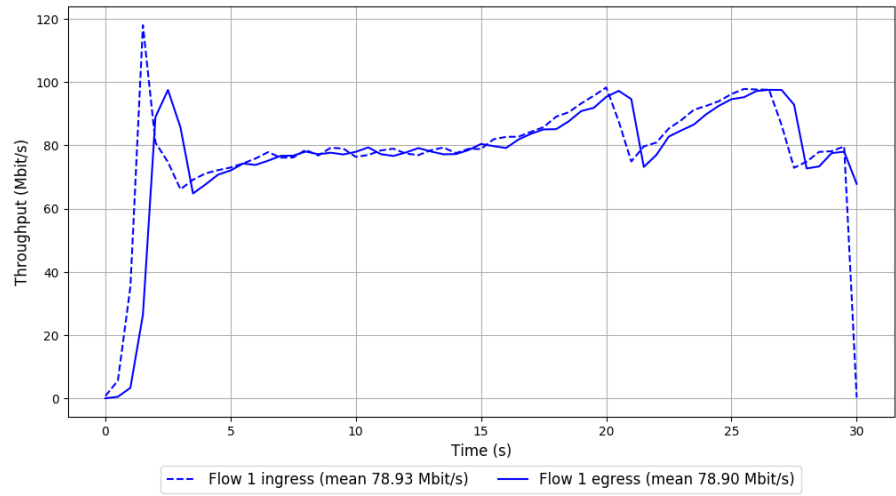
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 75.98 Mbit/s)   Flow 1 egress (mean 75.97 Mbit/s)

Flow 1 (95th percentile 117.00 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-07-12 11:35:16
End at: 2019-07-12 11:35:46
Local clock offset: -6.984 ms
Remote clock offset: -9.506 ms


# Below is generated by plot.py at 2019-07-12 12:31:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.01 Mbit/s
95th percentile per-packet one-way delay: 114.709 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 73.01 Mbit/s
95th percentile per-packet one-way delay: 114.709 ms
Loss rate: 0.64%
```
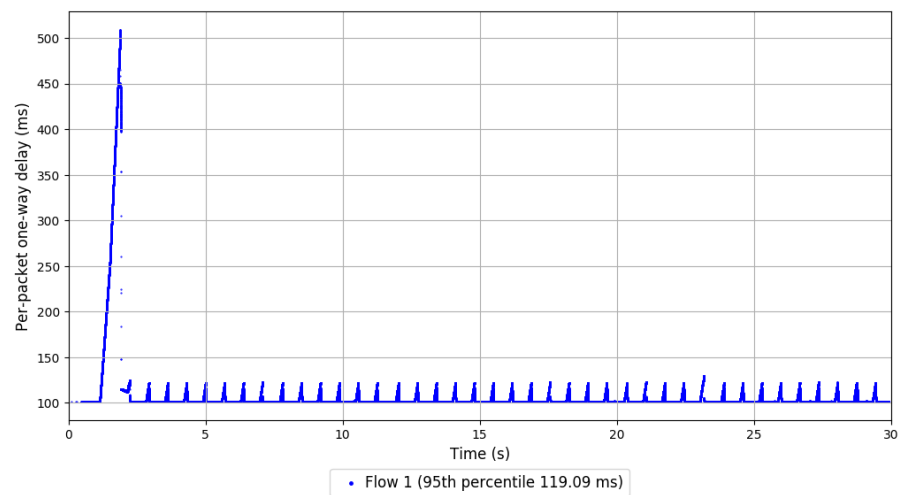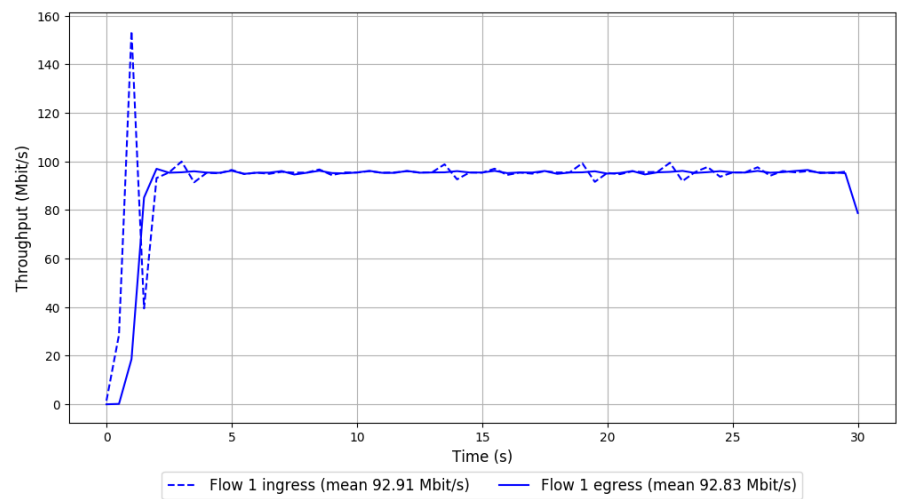
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 73.05 Mbit/s) --- Flow 1 egress (mean 73.01 Mbit/s)

• Flow 1 (95th percentile 114.71 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-07-12 12:04:18
End at: 2019-07-12 12:04:48
Local clock offset: -7.752 ms
Remote clock offset: -10.409 ms


# Below is generated by plot.py at 2019-07-12 12:31:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.90 Mbit/s
95th percentile per-packet one-way delay: 109.948 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 78.90 Mbit/s
95th percentile per-packet one-way delay: 109.948 ms
Loss rate: 0.62%
```

Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 78.93 Mbit/s)   Flow 1 egress (mean 78.90 Mbit/s)
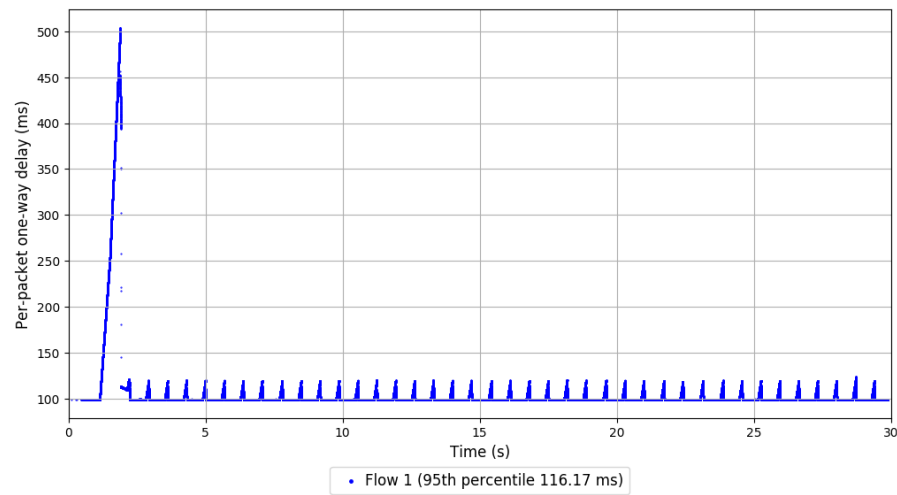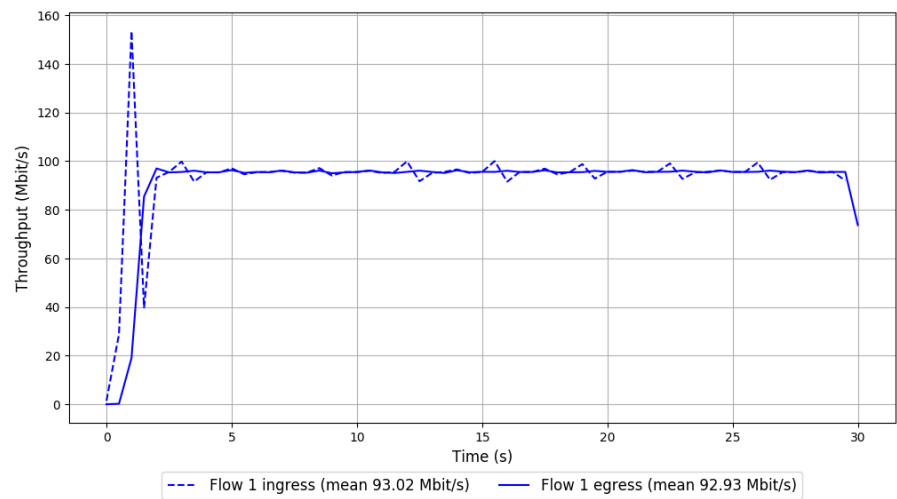

Flow 1 (95th percentile 109.95 ms)

```
Run 1: Statistics of FillP

Start at: 2019-07-12 10:16:23
End at: 2019-07-12 10:16:53
Local clock offset: -6.633 ms
Remote clock offset: -6.259 ms


# Below is generated by plot.py at 2019-07-12 12:31:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.83 Mbit/s
95th percentile per-packet one-way delay: 119.090 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 92.83 Mbit/s
95th percentile per-packet one-way delay: 119.090 ms
Loss rate: 0.67%
```
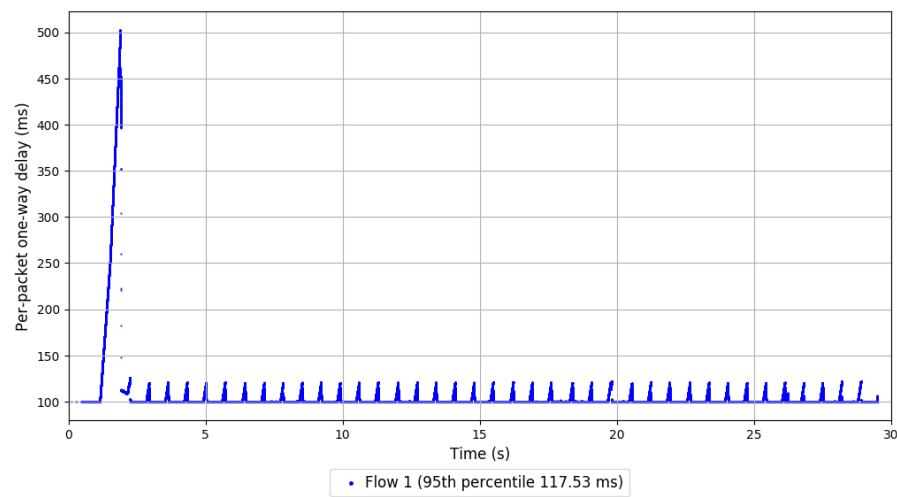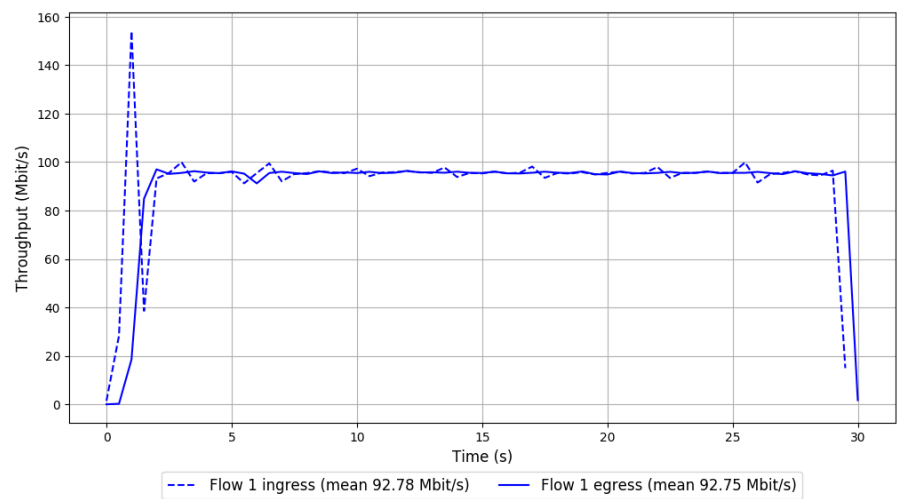
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2019-07-12 10:44:59
End at: 2019-07-12 10:45:29
Local clock offset: -5.645 ms
Remote clock offset: -5.683 ms


# Below is generated by plot.py at 2019-07-12 12:31:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.93 Mbit/s
95th percentile per-packet one-way delay: 116.166 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 92.93 Mbit/s
95th percentile per-packet one-way delay: 116.166 ms
Loss rate: 0.68%
```
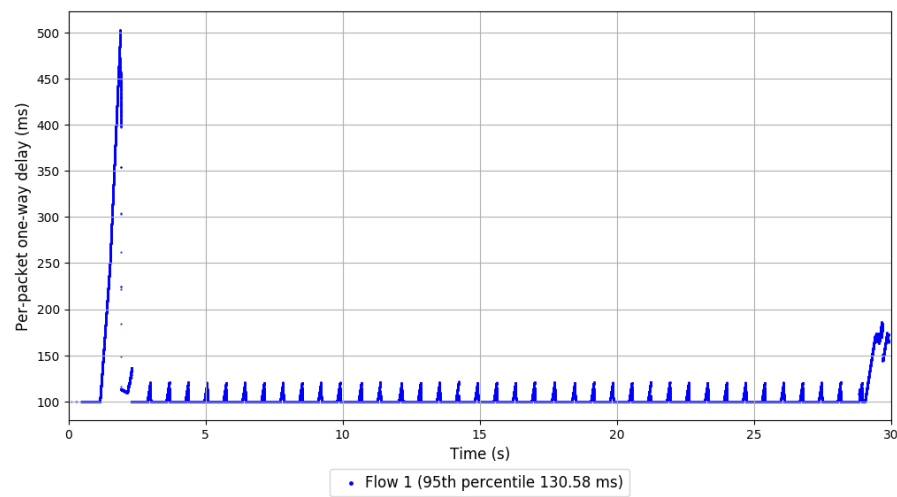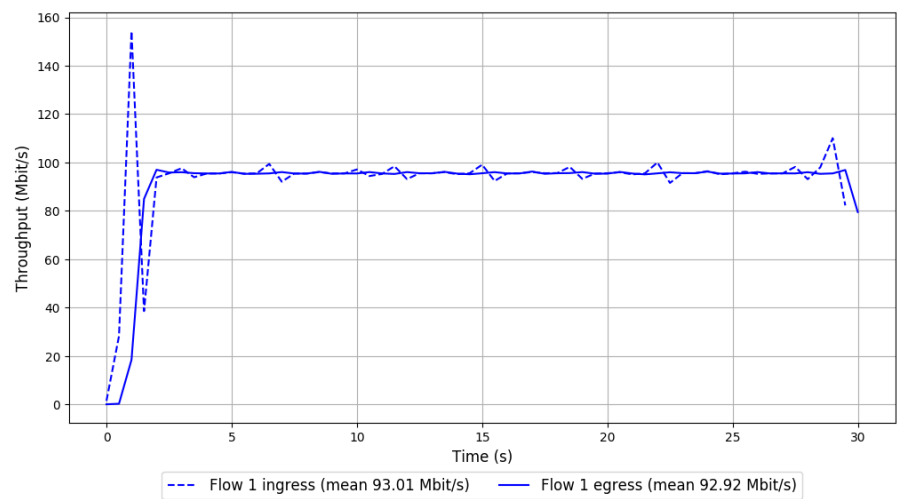
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 93.02 Mbit/s)   Flow 1 egress (mean 92.93 Mbit/s)

Flow 1 (95th percentile 116.17 ms)

```
Run 3: Statistics of FillP

Start at: 2019-07-12 11:13:42
End at: 2019-07-12 11:14:12
Local clock offset: -5.847 ms
Remote clock offset: -7.552 ms

# Below is generated by plot.py at 2019-07-12 12:31:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.75 Mbit/s
95th percentile per-packet one-way delay: 117.529 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 92.75 Mbit/s
95th percentile per-packet one-way delay: 117.529 ms
Loss rate: 0.61%
```

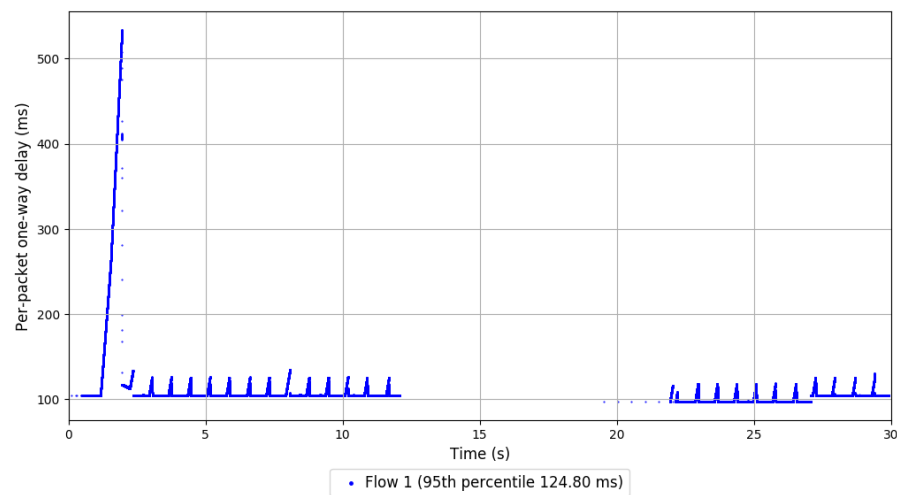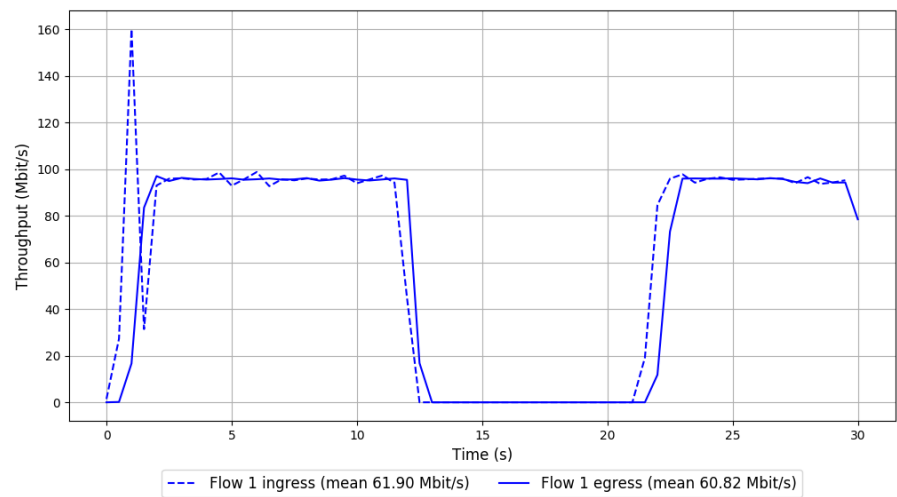## Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 92.78 Mbit/s)   Flow 1 egress (mean 92.75 Mbit/s)

Flow 1 (95th percentile 117.53 ms)

```
Run 4: Statistics of FillP

Start at: 2019-07-12 11:42:31
End at: 2019-07-12 11:43:01
Local clock offset: -6.691 ms
Remote clock offset: -7.866 ms


# Below is generated by plot.py at 2019-07-12 12:31:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.92 Mbit/s
95th percentile per-packet one-way delay: 130.581 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 92.92 Mbit/s
95th percentile per-packet one-way delay: 130.581 ms
Loss rate: 0.69%
```
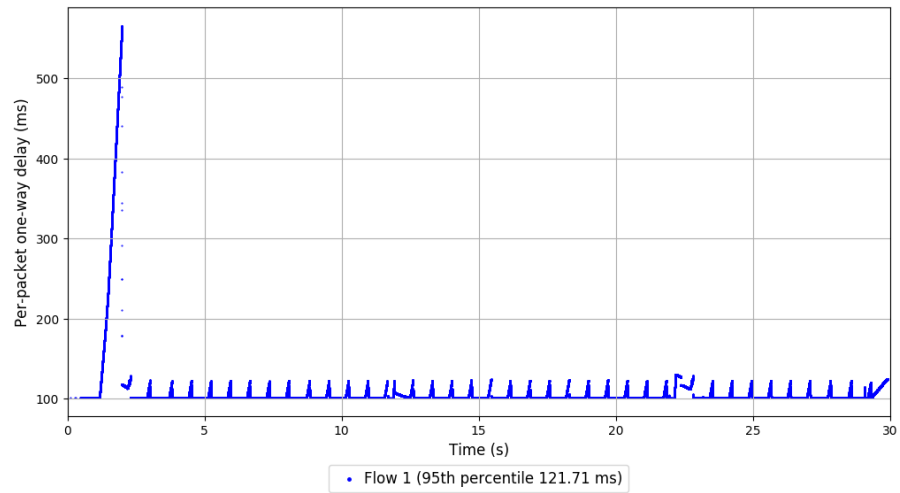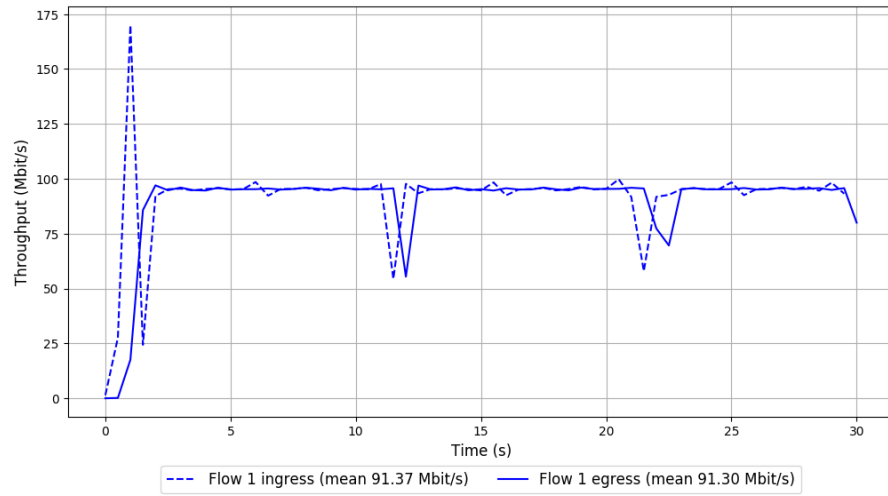
Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 93.01 Mbit/s) --- Flow 1 egress (mean 92.92 Mbit/s)
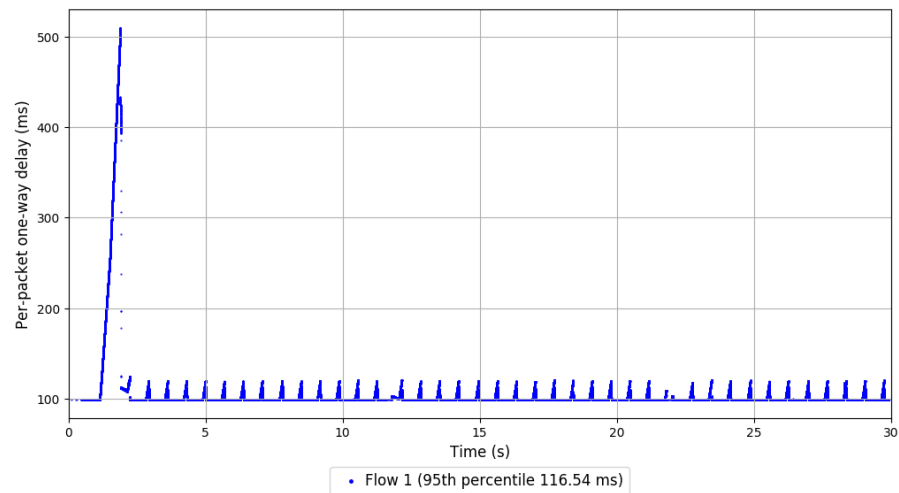

Flow 1 (95th percentile 130.58 ms)

```
Run 5: Statistics of FillP

Start at: 2019-07-12 12:11:32
End at: 2019-07-12 12:12:02
Local clock offset: -6.835 ms
Remote clock offset: -14.661 ms


# Below is generated by plot.py at 2019-07-12 12:31:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.82 Mbit/s
95th percentile per-packet one-way delay: 124.800 ms
Loss rate: 2.31%
-- Flow 1:
Average throughput: 60.82 Mbit/s
95th percentile per-packet one-way delay: 124.800 ms
Loss rate: 2.31%
```

Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 61.90 Mbit/s) ---- Flow 1 egress (mean 60.82 Mbit/s) ——
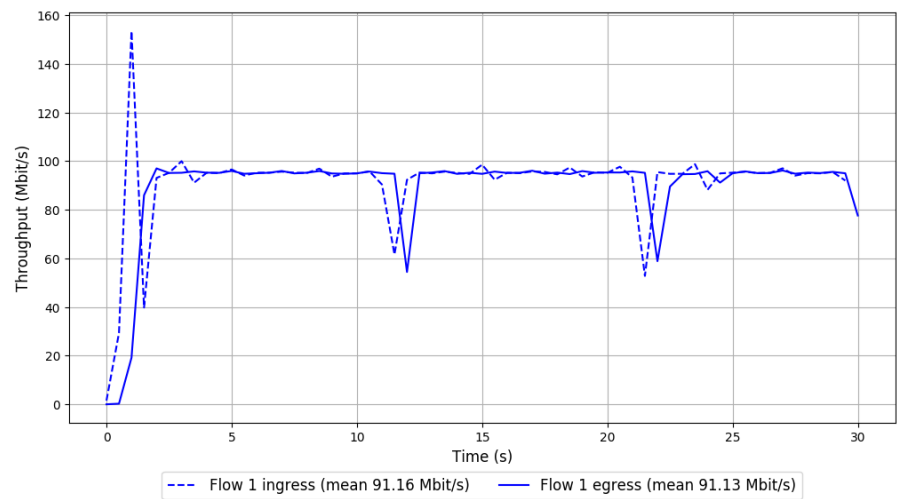

• Flow 1 (95th percentile 124.80 ms)

44

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-07-12 10:07:56
End at: 2019-07-12 10:08:26
Local clock offset: -6.262 ms
Remote clock offset: -6.443 ms


# Below is generated by plot.py at 2019-07-12 12:32:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.30 Mbit/s
95th percentile per-packet one-way delay: 121.711 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 91.30 Mbit/s
95th percentile per-packet one-way delay: 121.711 ms
Loss rate: 0.66%
```

Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-07-12 10:36:37
End at: 2019-07-12 10:37:07
Local clock offset: -6.155 ms
Remote clock offset: -3.966 ms


# Below is generated by plot.py at 2019-07-12 12:32:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.13 Mbit/s
95th percentile per-packet one-way delay: 116.536 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 91.13 Mbit/s
95th percentile per-packet one-way delay: 116.536 ms
Loss rate: 0.62%
```
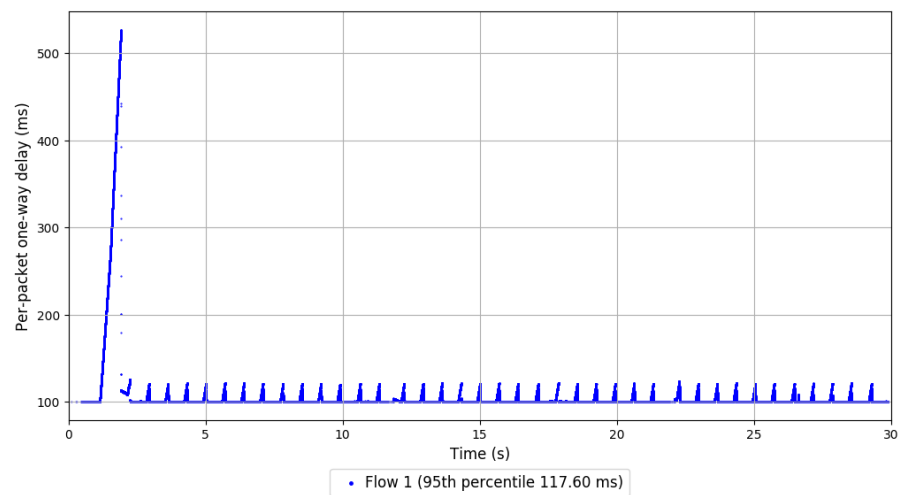
Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-07-12 11:05:20
End at: 2019-07-12 11:05:50
Local clock offset: -5.517 ms
Remote clock offset: -7.9 ms


# Below is generated by plot.py at 2019-07-12 12:32:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.24 Mbit/s
95th percentile per-packet one-way delay: 117.598 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 91.24 Mbit/s
95th percentile per-packet one-way delay: 117.598 ms
Loss rate: 0.61%
```
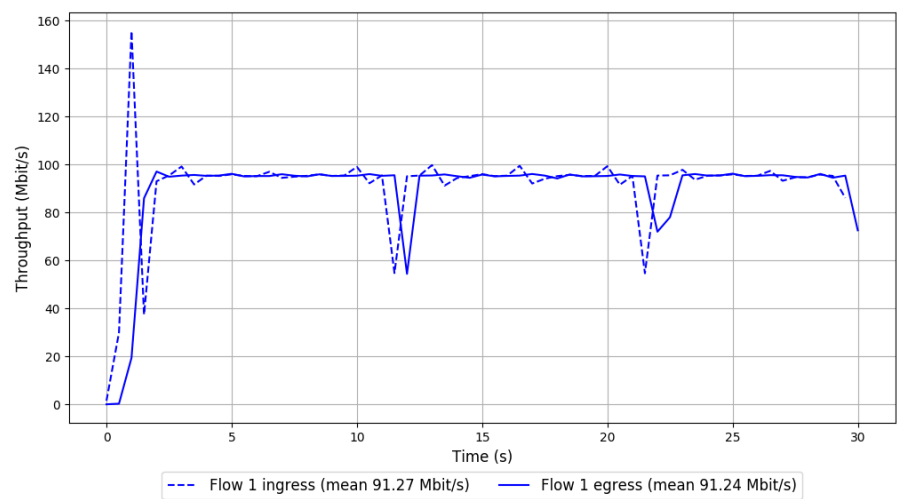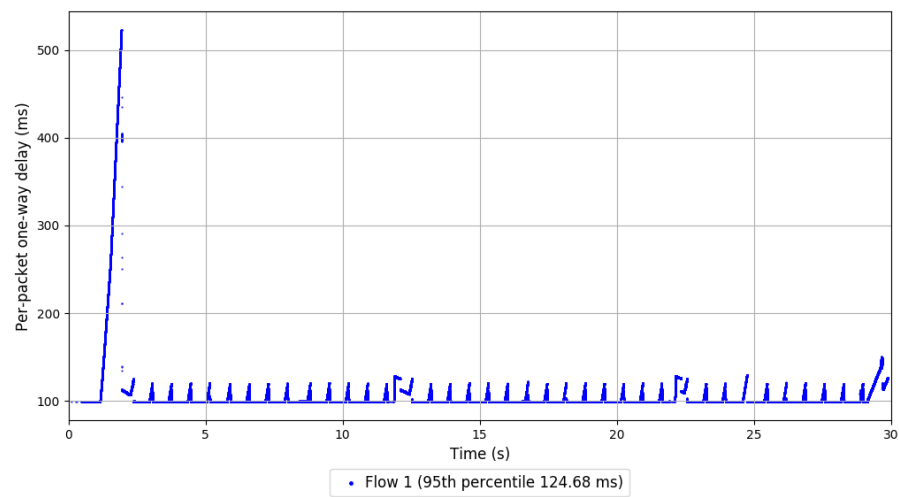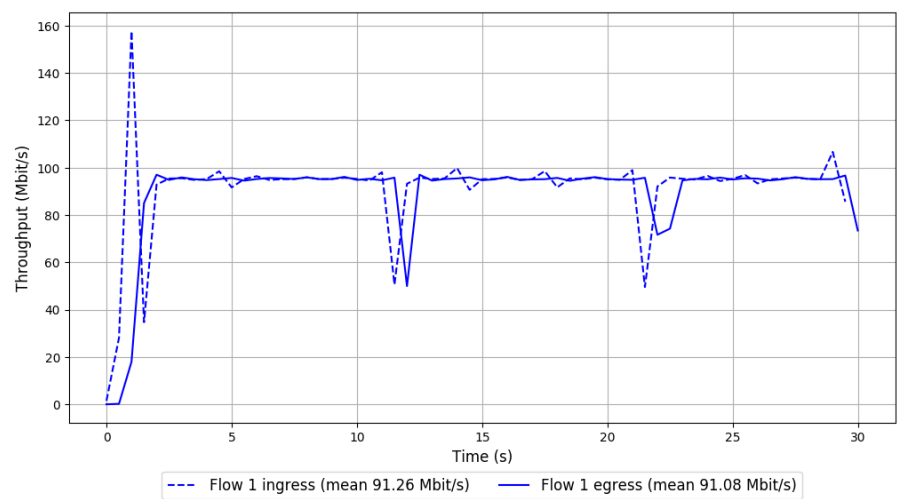
Run 3: Report of FillP-Sheep — Data Link

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-07-12 11:34:04
End at: 2019-07-12 11:34:34
Local clock offset: -6.887 ms
Remote clock offset: -8.121 ms


# Below is generated by plot.py at 2019-07-12 12:32:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.08 Mbit/s
95th percentile per-packet one-way delay: 124.681 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 91.08 Mbit/s
95th percentile per-packet one-way delay: 124.681 ms
Loss rate: 0.77%
```
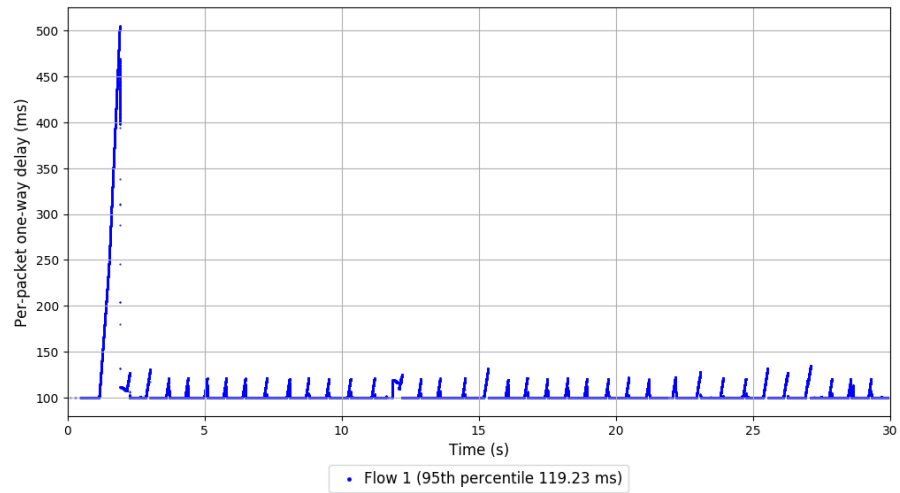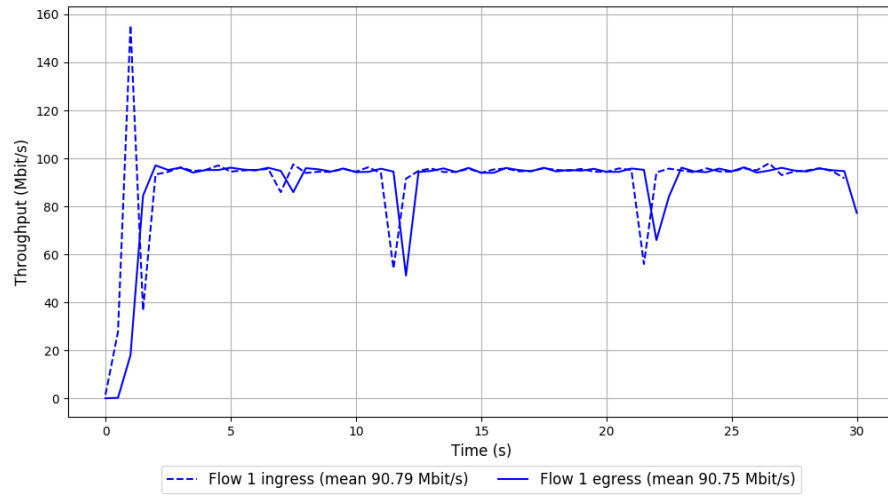
Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 91.26 Mbit/s) — Flow 1 egress (mean 91.08 Mbit/s)

· Flow 1 (95th percentile 124.68 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-07-12 12:03:05
End at: 2019-07-12 12:03:35
Local clock offset: -7.646 ms
Remote clock offset: -10.078 ms


# Below is generated by plot.py at 2019-07-12 12:32:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.75 Mbit/s
95th percentile per-packet one-way delay: 119.227 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 90.75 Mbit/s
95th percentile per-packet one-way delay: 119.227 ms
Loss rate: 0.63%
```
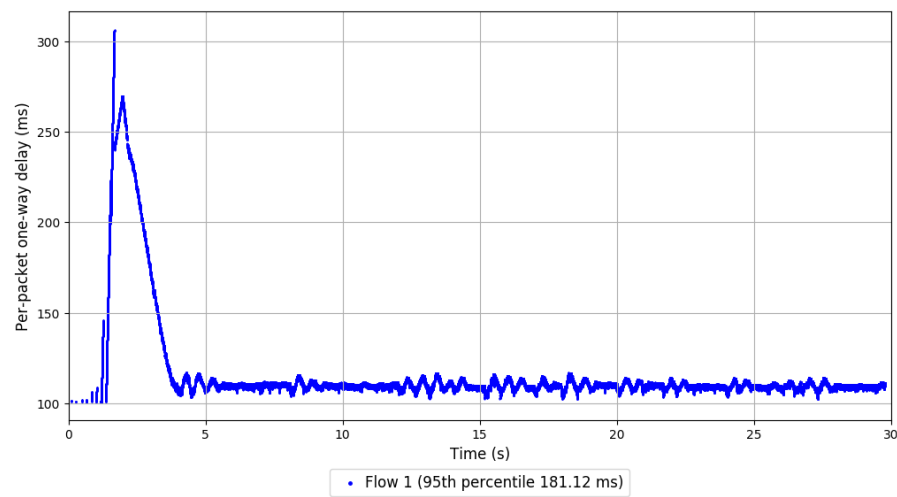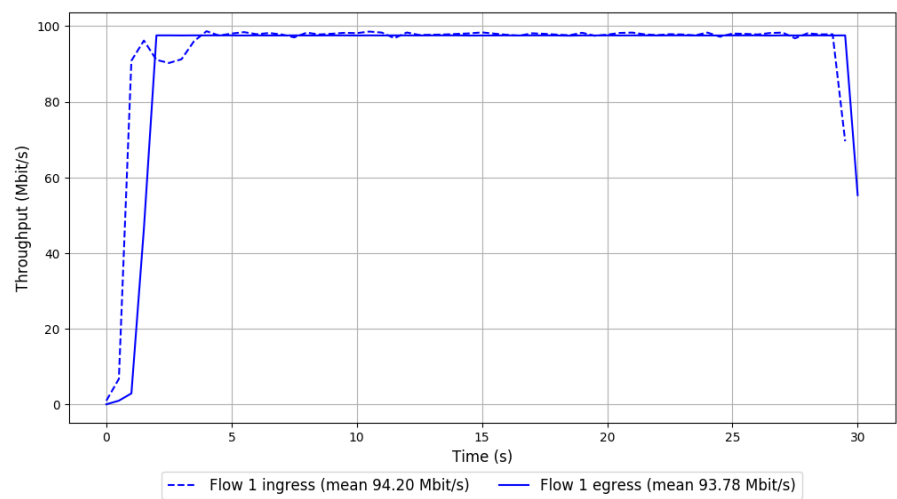
Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 90.79 Mbit/s) ----- Flow 1 egress (mean 90.75 Mbit/s)
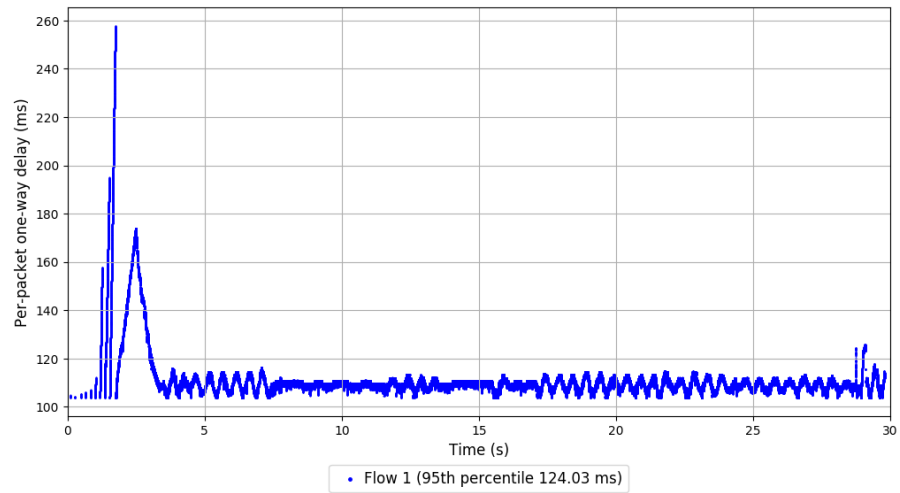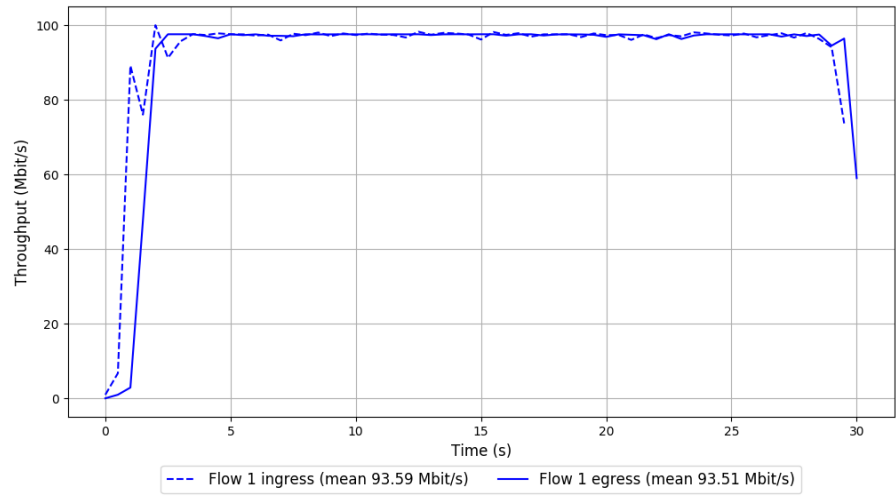

• Flow 1 (95th percentile 119.23 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-07-12 10:22:24
End at: 2019-07-12 10:22:54
Local clock offset: -6.517 ms
Remote clock offset: -6.141 ms


# Below is generated by plot.py at 2019-07-12 12:32:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.78 Mbit/s
95th percentile per-packet one-way delay: 181.120 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 93.78 Mbit/s
95th percentile per-packet one-way delay: 181.120 ms
Loss rate: 1.03%
```
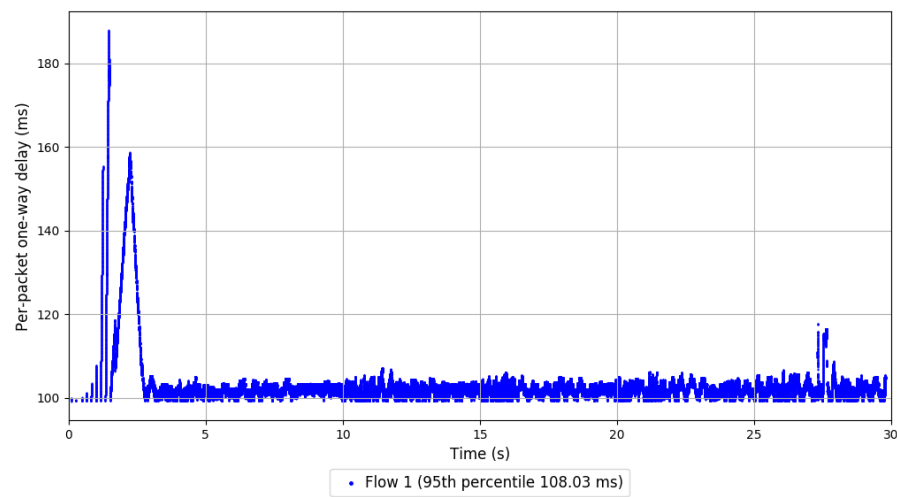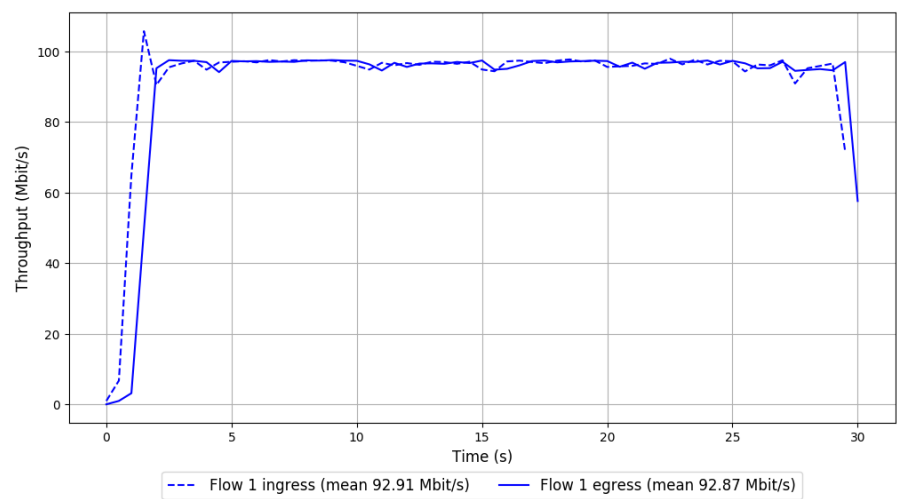
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-07-12 10:51:03
End at: 2019-07-12 10:51:33
Local clock offset: -6.376 ms
Remote clock offset: -11.617 ms


# Below is generated by plot.py at 2019-07-12 12:32:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.51 Mbit/s
95th percentile per-packet one-way delay: 124.026 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 93.51 Mbit/s
95th percentile per-packet one-way delay: 124.026 ms
Loss rate: 0.67%
```
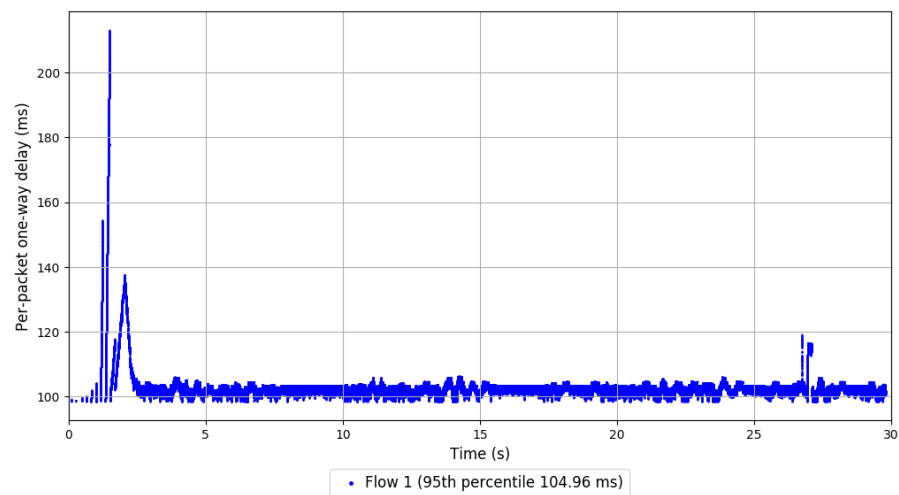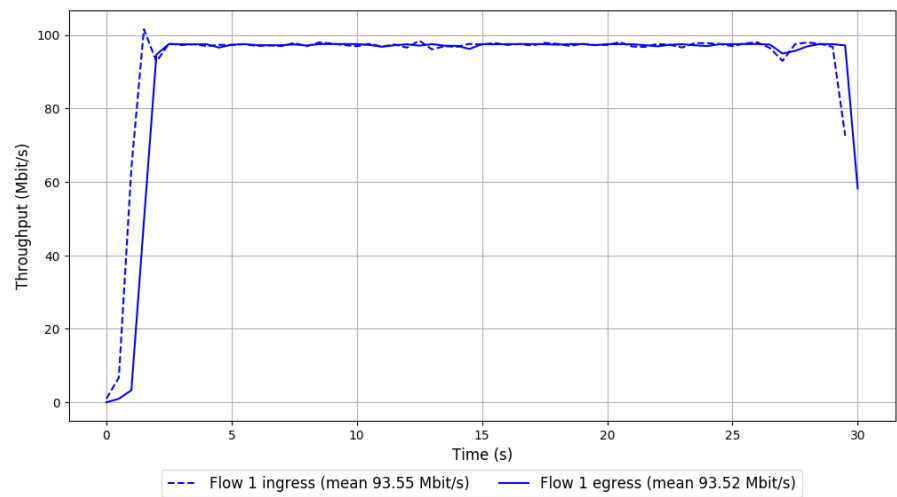
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-07-12 11:19:50
End at: 2019-07-12 11:20:20
Local clock offset: -6.574 ms
Remote clock offset: -8.308 ms


# Below is generated by plot.py at 2019-07-12 12:32:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.87 Mbit/s
95th percentile per-packet one-way delay: 108.027 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 92.87 Mbit/s
95th percentile per-packet one-way delay: 108.027 ms
Loss rate: 0.62%
```
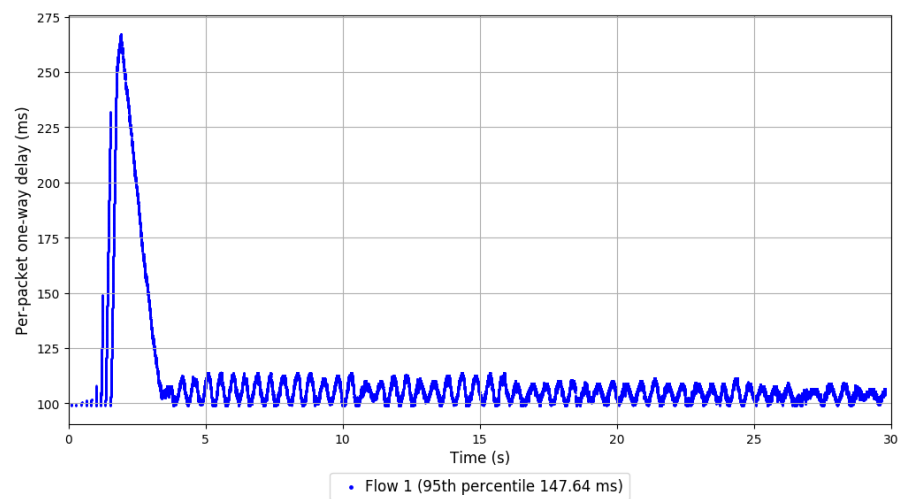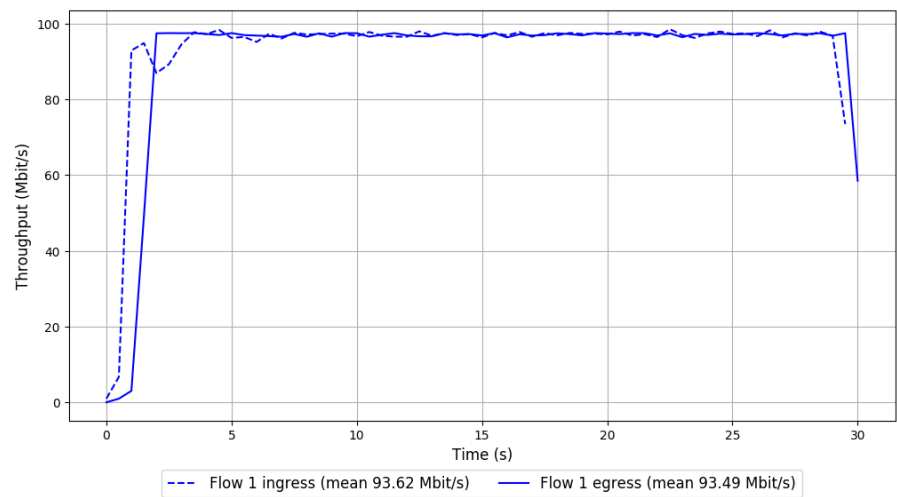
Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 92.91 Mbit/s)   Flow 1 egress (mean 92.87 Mbit/s)

Flow 1 (95th percentile 108.03 ms)

```
Run 4: Statistics of Indigo

Start at: 2019-07-12 11:48:42
End at: 2019-07-12 11:49:12
Local clock offset: -7.619 ms
Remote clock offset: -8.397 ms


# Below is generated by plot.py at 2019-07-12 12:33:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.52 Mbit/s
95th percentile per-packet one-way delay: 104.962 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 93.52 Mbit/s
95th percentile per-packet one-way delay: 104.962 ms
Loss rate: 0.62%
```
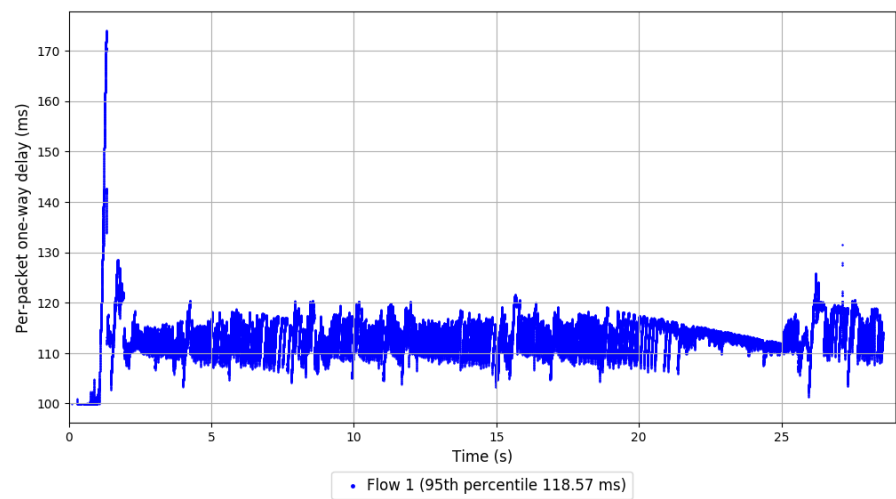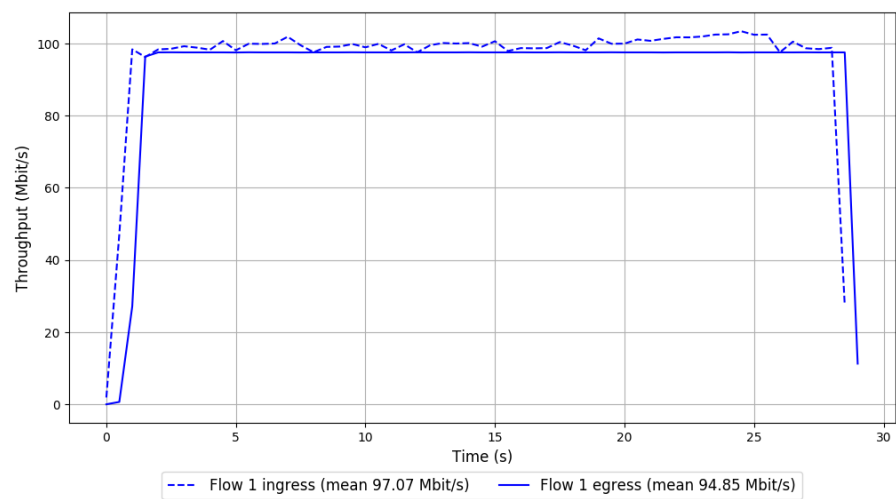
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-07-12 12:17:36
End at: 2019-07-12 12:18:06
Local clock offset: -6.58 ms
Remote clock offset: -8.652 ms


# Below is generated by plot.py at 2019-07-12 12:33:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.49 Mbit/s
95th percentile per-packet one-way delay: 147.641 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 93.49 Mbit/s
95th percentile per-packet one-way delay: 147.641 ms
Loss rate: 0.71%
```
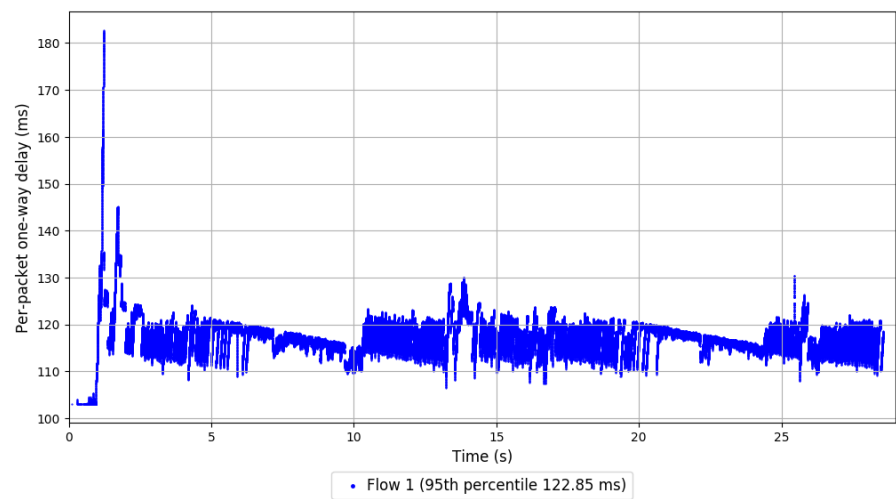
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-07-12 10:30:38
End at: 2019-07-12 10:31:08
Local clock offset: -7.37 ms
Remote clock offset: -5.853 ms


# Below is generated by plot.py at 2019-07-12 12:33:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.85 Mbit/s
95th percentile per-packet one-way delay: 118.574 ms
Loss rate: 2.88%
-- Flow 1:
Average throughput: 94.85 Mbit/s
95th percentile per-packet one-way delay: 118.574 ms
Loss rate: 2.88%
```
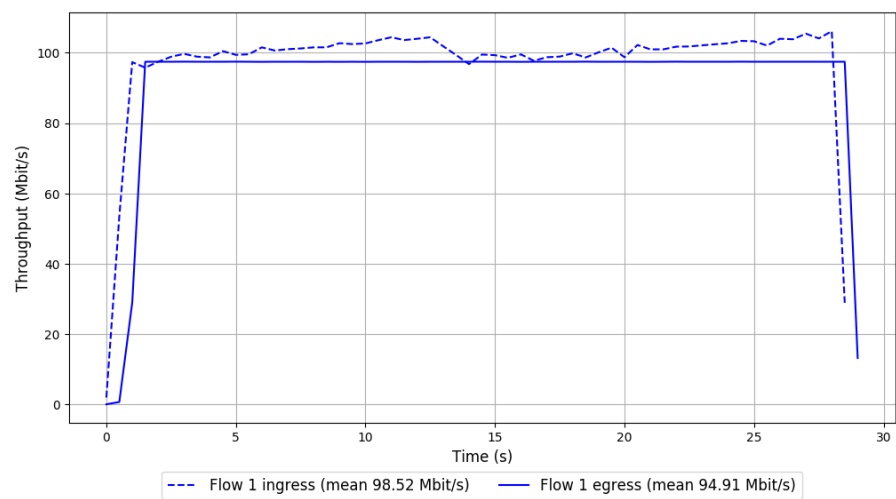
Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-07-12 10:59:17
End at: 2019-07-12 10:59:47
Local clock offset: -5.438 ms
Remote clock offset: -9.933 ms


# Below is generated by plot.py at 2019-07-12 12:33:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.91 Mbit/s
95th percentile per-packet one-way delay: 122.847 ms
Loss rate: 4.25%
-- Flow 1:
Average throughput: 94.91 Mbit/s
95th percentile per-packet one-way delay: 122.847 ms
Loss rate: 4.25%
```

Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-07-12 11:28:10
End at: 2019-07-12 11:28:40
Local clock offset: -5.607 ms
Remote clock offset: -7.78 ms


# Below is generated by plot.py at 2019-07-12 12:33:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.19 Mbit/s
95th percentile per-packet one-way delay: 118.717 ms
Loss rate: 4.27%
-- Flow 1:
Average throughput: 95.19 Mbit/s
95th percentile per-packet one-way delay: 118.717 ms
Loss rate: 4.27%
```
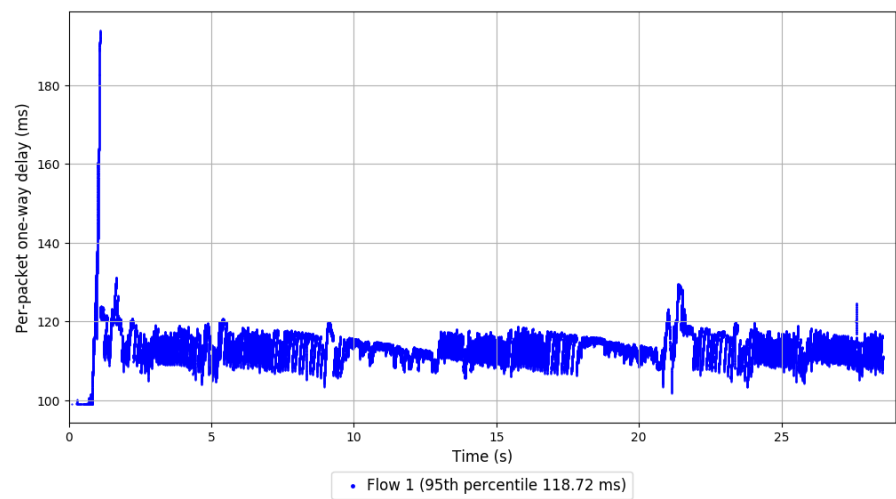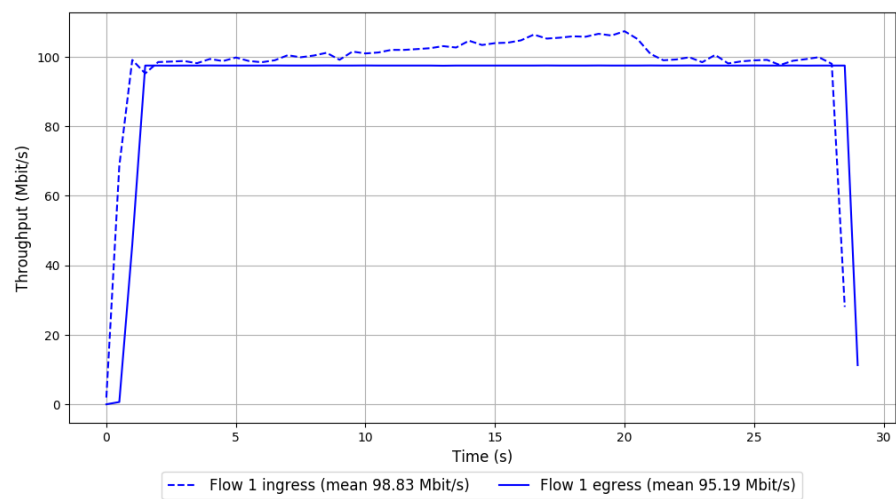
Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 98.83 Mbit/s)   Flow 1 egress (mean 95.19 Mbit/s)
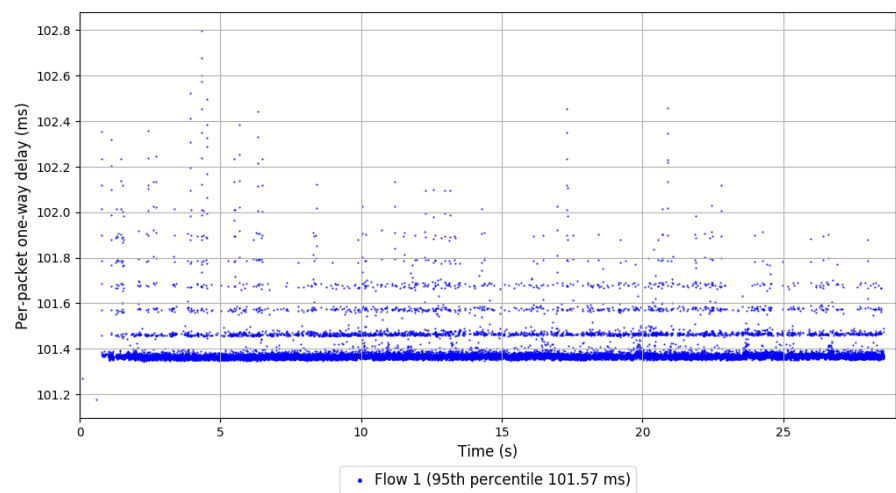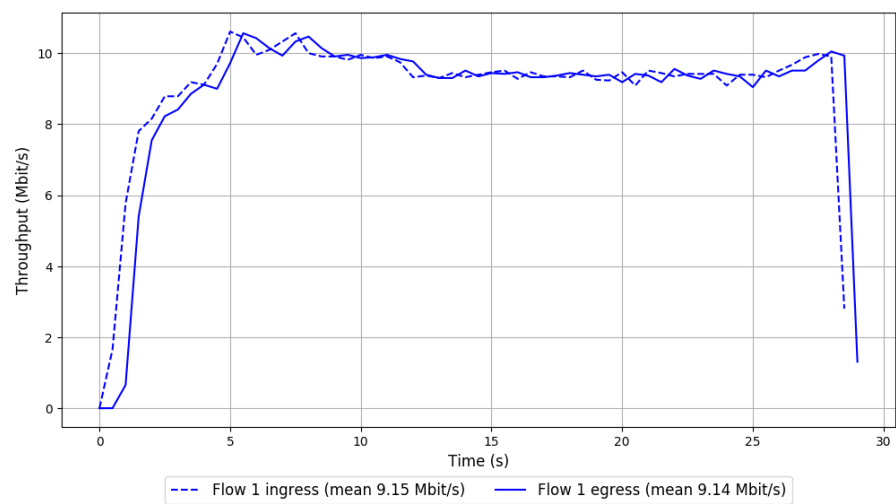

Flow 1 (95th percentile 118.72 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-07-12 11:57:12
End at: 2019-07-12 11:57:42
Local clock offset: -6.984 ms
Remote clock offset: -10.529 ms


# Below is generated by plot.py at 2019-07-12 12:33:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.14 Mbit/s
95th percentile per-packet one-way delay: 101.567 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 9.14 Mbit/s
95th percentile per-packet one-way delay: 101.567 ms
Loss rate: 0.67%
```

Run 4: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 9.15 Mbit/s) --- Flow 1 egress (mean 9.14 Mbit/s)
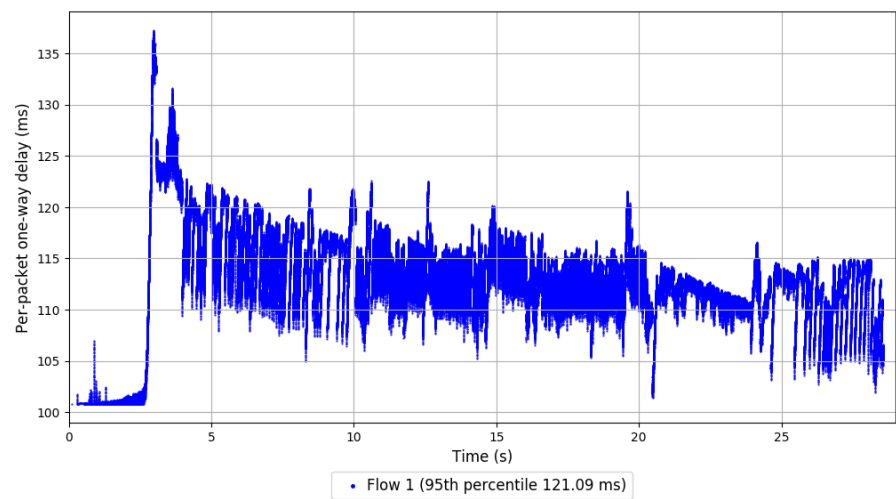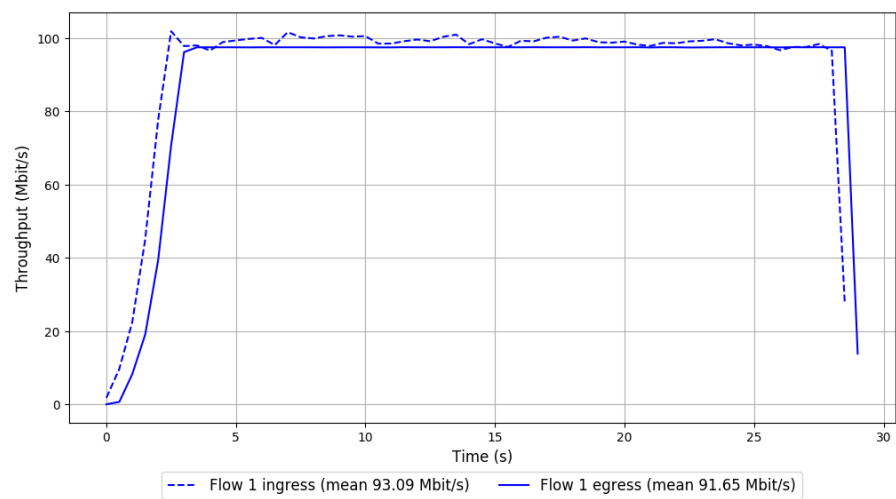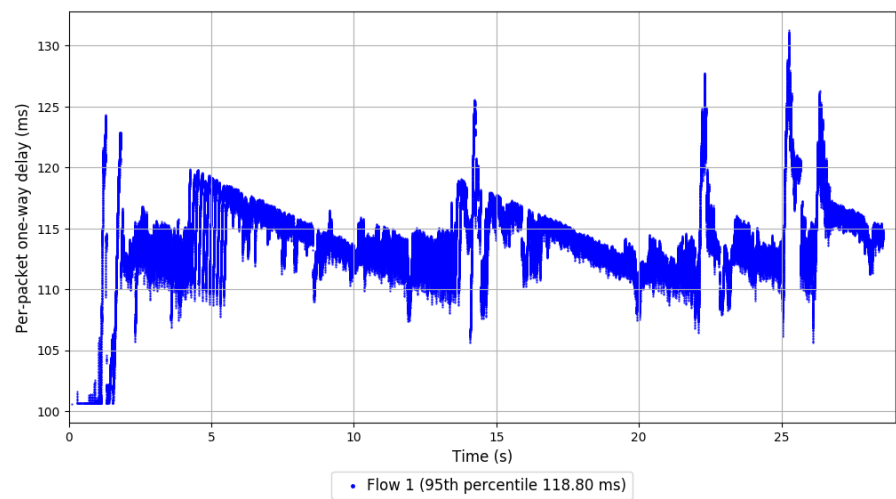

• Flow 1 (95th percentile 101.57 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-07-12 12:25:57
End at: 2019-07-12 12:26:27
Local clock offset: -7.549 ms
Remote clock offset: -10.791 ms


# Below is generated by plot.py at 2019-07-12 12:33:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.65 Mbit/s
95th percentile per-packet one-way delay: 121.095 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 91.65 Mbit/s
95th percentile per-packet one-way delay: 121.095 ms
Loss rate: 2.15%
```

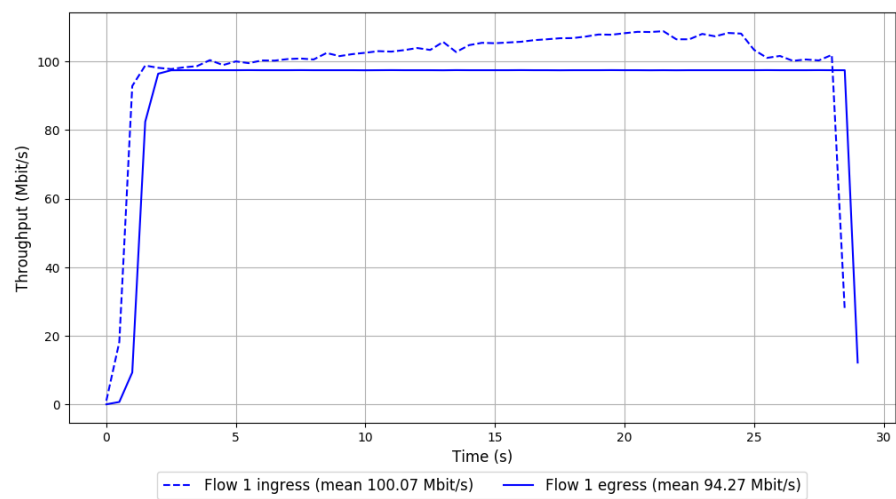Run 5: Report of Indigo-MusesC3 — Data Link

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-07-12 10:25:55
End at: 2019-07-12 10:26:25
Local clock offset: -6.633 ms
Remote clock offset: -5.963 ms


# Below is generated by plot.py at 2019-07-12 12:33:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.27 Mbit/s
95th percentile per-packet one-way delay: 118.797 ms
Loss rate: 6.36%
-- Flow 1:
Average throughput: 94.27 Mbit/s
95th percentile per-packet one-way delay: 118.797 ms
Loss rate: 6.36%
```

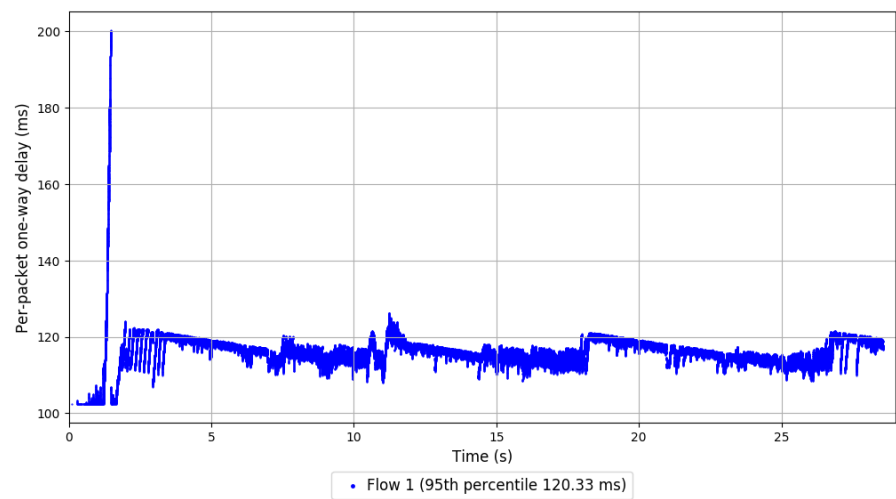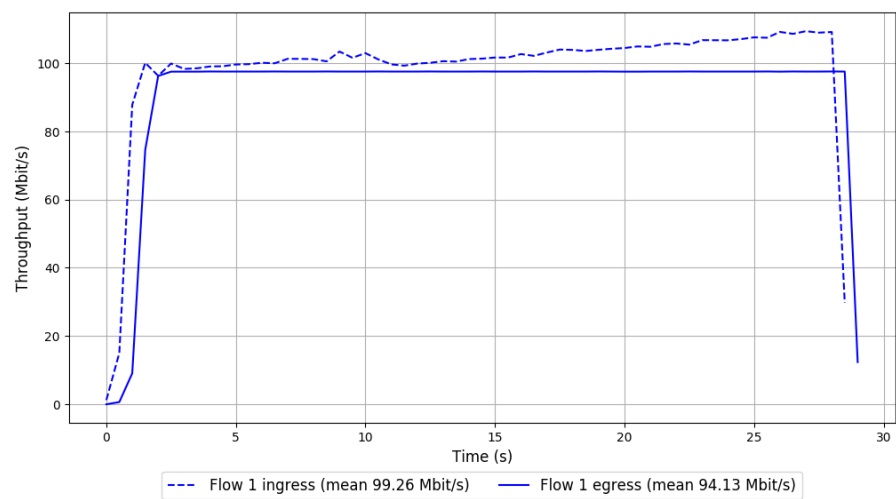Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-07-12 10:54:34
End at: 2019-07-12 10:55:04
Local clock offset: -5.458 ms
Remote clock offset: -9.186 ms


# Below is generated by plot.py at 2019-07-12 12:33:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 120.335 ms
Loss rate: 5.74%
-- Flow 1:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 120.335 ms
Loss rate: 5.74%
```
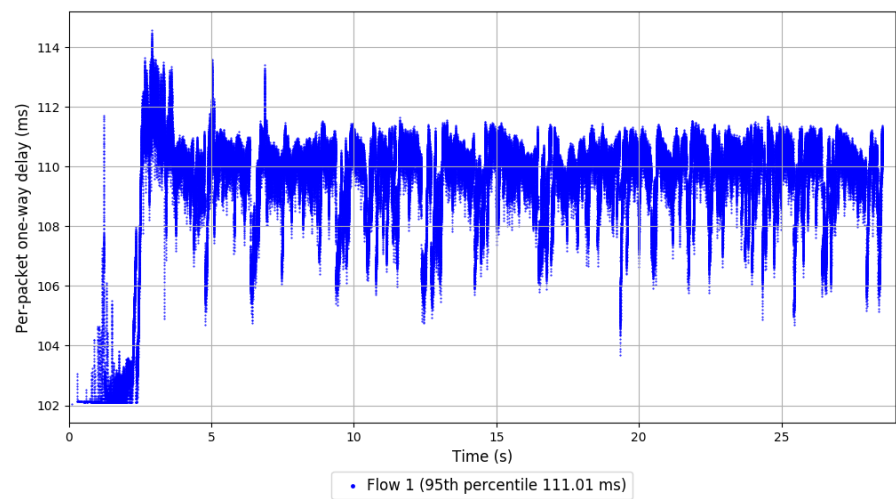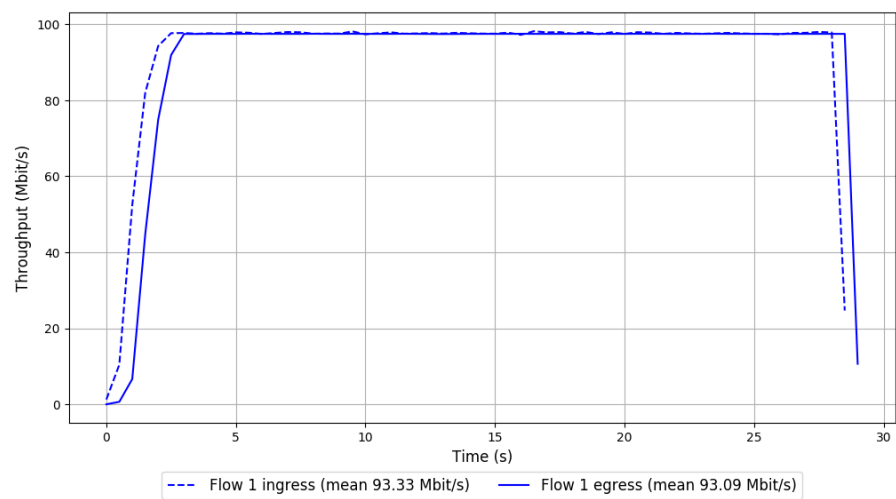
Run 2: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 99.26 Mbit/s) ---- Flow 1 egress (mean 94.13 Mbit/s) ——

Flow 1 (95th percentile 120.33 ms)

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-07-12 11:23:22
End at: 2019-07-12 11:23:53
Local clock offset: -5.776 ms
Remote clock offset: -9.899 ms


# Below is generated by plot.py at 2019-07-12 12:34:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 111.013 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 111.013 ms
Loss rate: 0.86%
```

Run 3: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 93.33 Mbit/s) ——— Flow 1 egress (mean 93.09 Mbit/s)
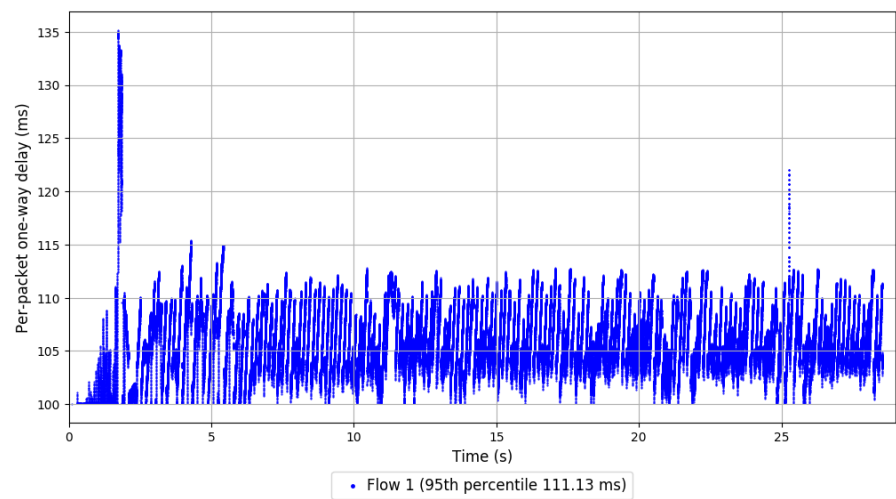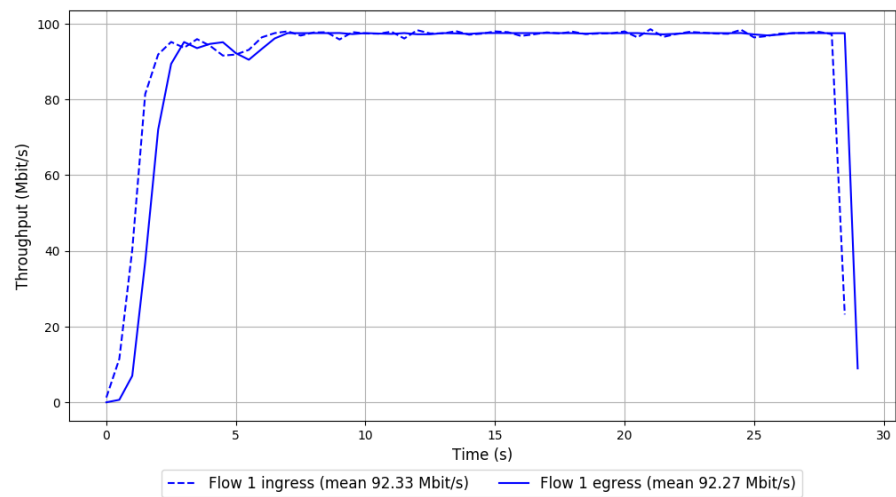

• Flow 1 (95th percentile 111.01 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-07-12 11:52:22
End at: 2019-07-12 11:52:52
Local clock offset: -7.68 ms
Remote clock offset: -8.967 ms


# Below is generated by plot.py at 2019-07-12 12:34:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.27 Mbit/s
95th percentile per-packet one-way delay: 111.134 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 92.27 Mbit/s
95th percentile per-packet one-way delay: 111.134 ms
Loss rate: 0.66%
```
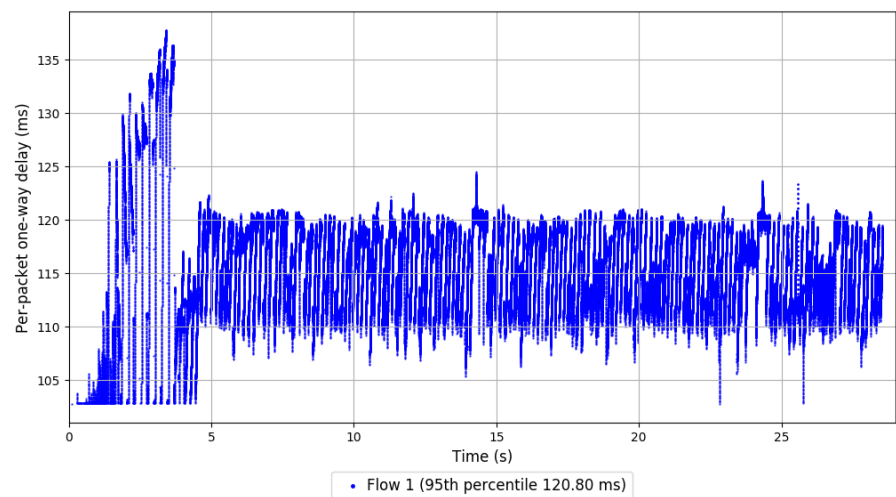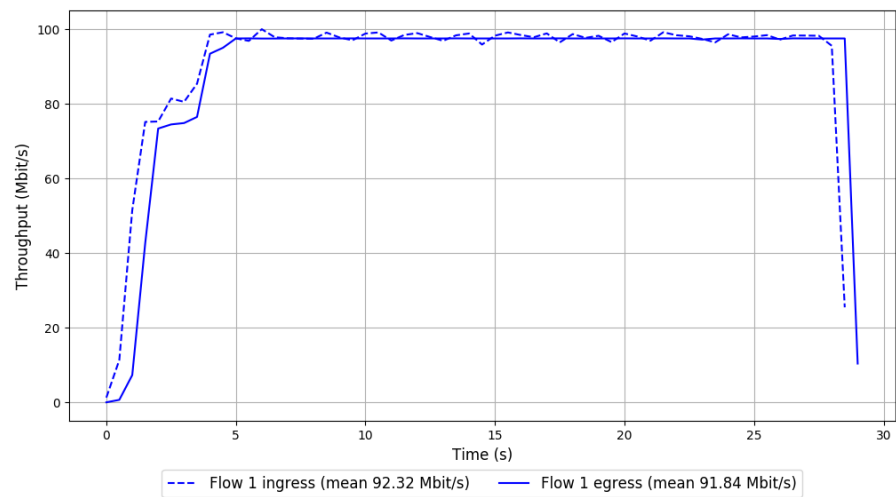
Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-07-12 12:21:13
End at: 2019-07-12 12:21:43
Local clock offset: -6.553 ms
Remote clock offset: -11.611 ms


# Below is generated by plot.py at 2019-07-12 12:34:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.84 Mbit/s
95th percentile per-packet one-way delay: 120.801 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 91.84 Mbit/s
95th percentile per-packet one-way delay: 120.801 ms
Loss rate: 1.11%
```

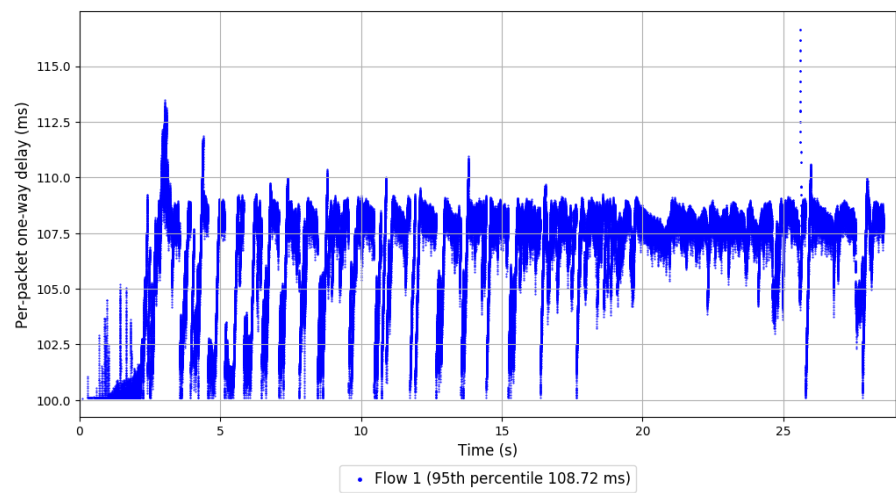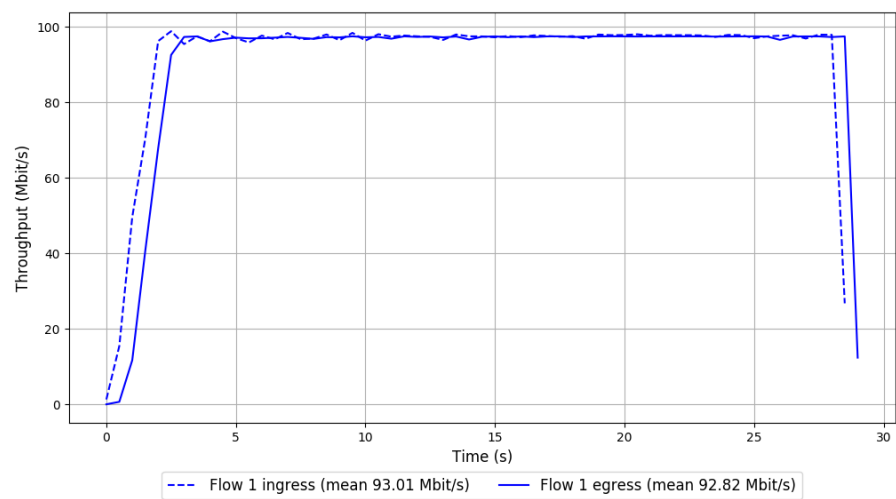Run 5: Report of Indigo-MusesC5 — Data Link

84

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-07-12 10:19:59
End at: 2019-07-12 10:20:29
Local clock offset: -7.579 ms
Remote clock offset: -6.241 ms


# Below is generated by plot.py at 2019-07-12 12:34:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.82 Mbit/s
95th percentile per-packet one-way delay: 108.716 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 92.82 Mbit/s
95th percentile per-packet one-way delay: 108.716 ms
Loss rate: 0.81%
```

Run 1: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 93.01 Mbit/s) --- Flow 1 egress (mean 92.82 Mbit/s)
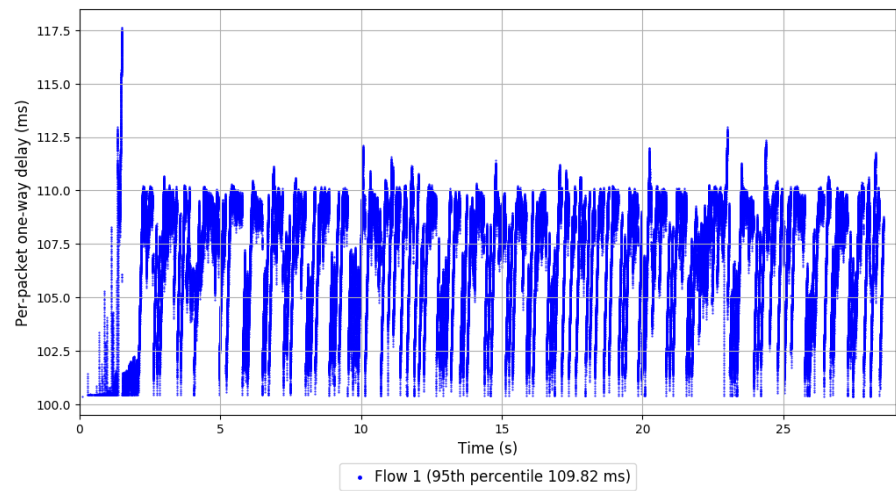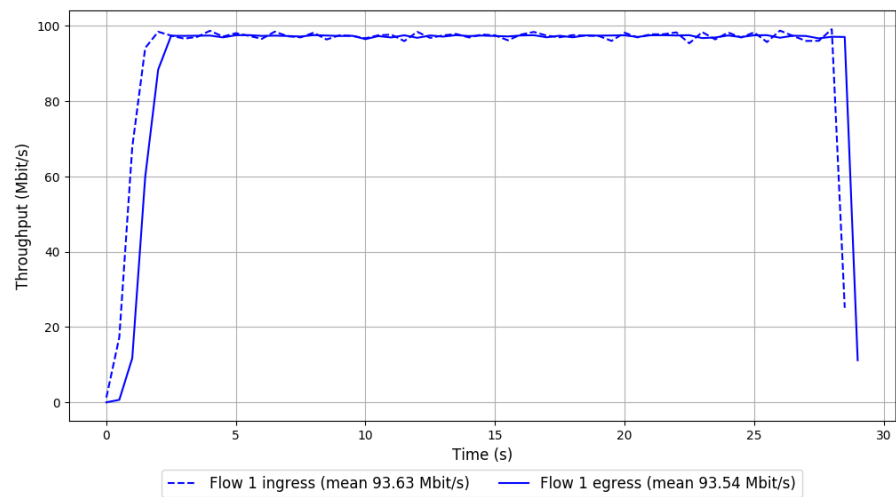

Flow 1 (95th percentile 108.72 ms)

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-07-12 10:48:37
End at: 2019-07-12 10:49:07
Local clock offset: -5.795 ms
Remote clock offset: -6.849 ms


# Below is generated by plot.py at 2019-07-12 12:34:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.54 Mbit/s
95th percentile per-packet one-way delay: 109.820 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 93.54 Mbit/s
95th percentile per-packet one-way delay: 109.820 ms
Loss rate: 0.71%
```
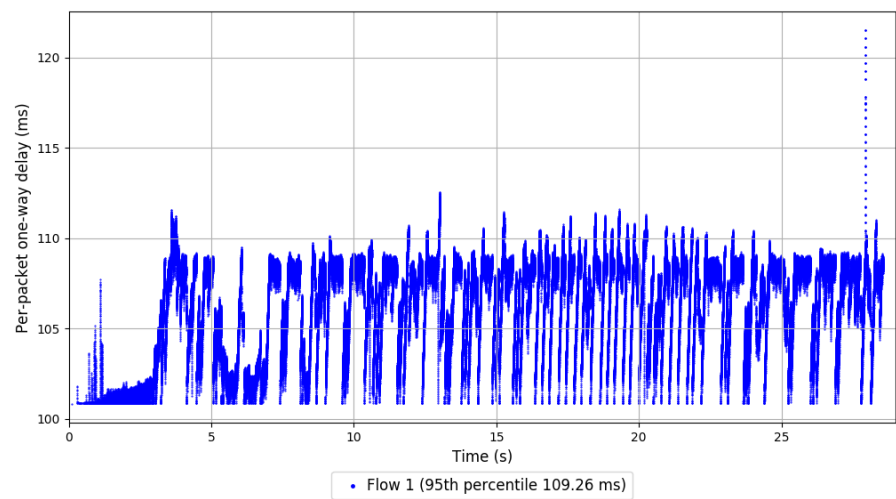
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-07-12 11:17:25
End at: 2019-07-12 11:17:55
Local clock offset: -5.765 ms
Remote clock offset: -9.174 ms


# Below is generated by plot.py at 2019-07-12 12:34:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.78 Mbit/s
95th percentile per-packet one-way delay: 109.256 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 91.78 Mbit/s
95th percentile per-packet one-way delay: 109.256 ms
Loss rate: 0.70%
```
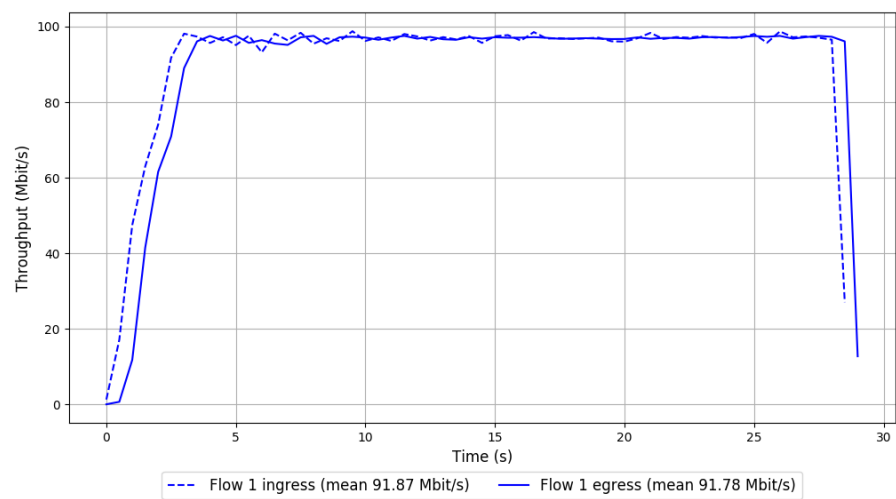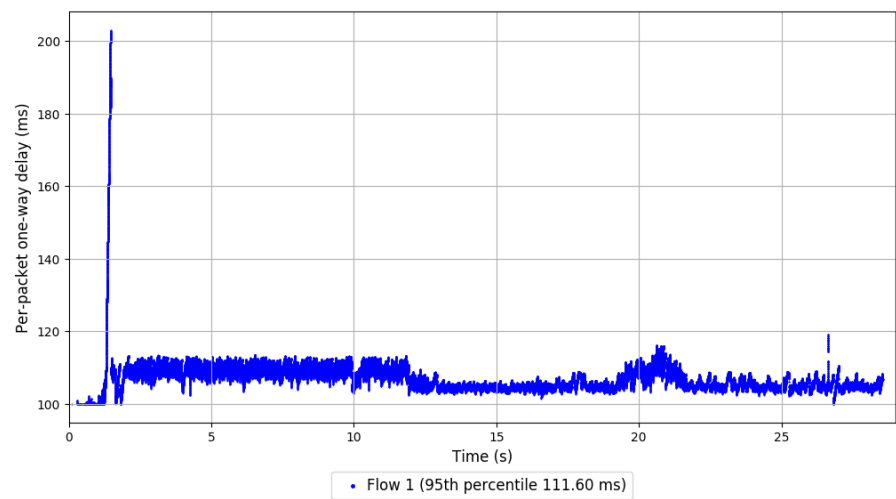
Run 3: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 91.87 Mbit/s)   Flow 1 egress (mean 91.78 Mbit/s)

Flow 1 (95th percentile 109.26 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-07-12 11:46:07
End at: 2019-07-12 11:46:37
Local clock offset: -7.518 ms
Remote clock offset: -9.759 ms


# Below is generated by plot.py at 2019-07-12 12:34:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.92 Mbit/s
95th percentile per-packet one-way delay: 111.601 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 93.92 Mbit/s
95th percentile per-packet one-way delay: 111.601 ms
Loss rate: 0.76%
```
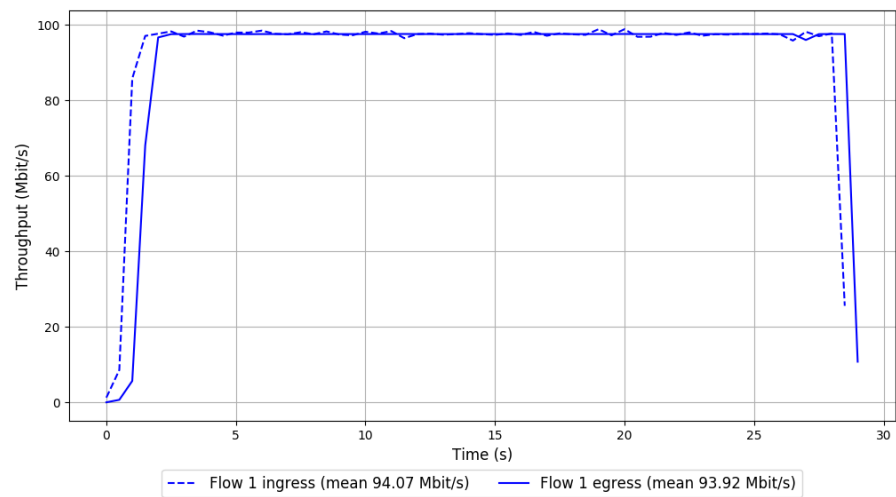
Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 94.07 Mbit/s) — — — — Flow 1 egress (mean 93.92 Mbit/s)
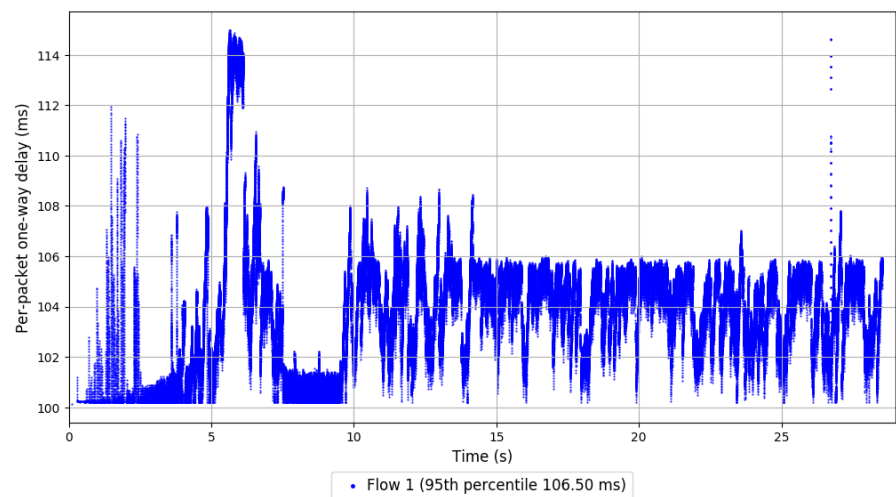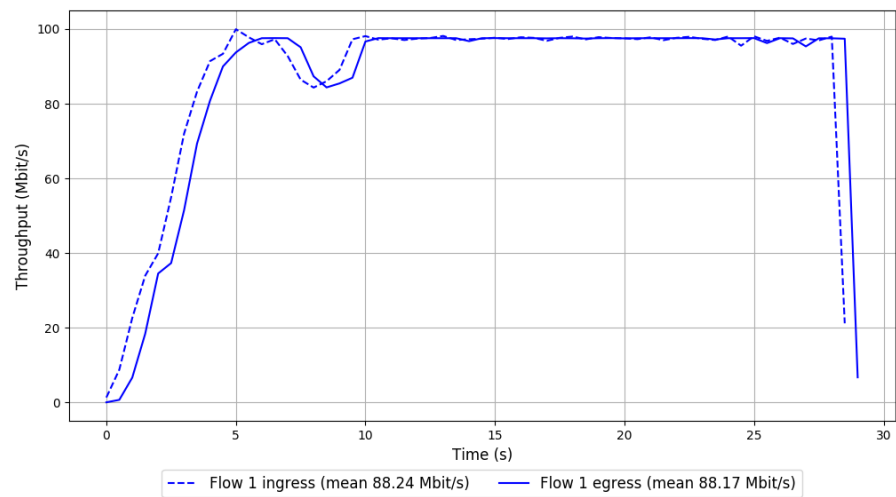

Flow 1 (95th percentile 111.60 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-07-12 12:15:09
End at: 2019-07-12 12:15:39
Local clock offset: -7.581 ms
Remote clock offset: -9.904 ms


# Below is generated by plot.py at 2019-07-12 12:34:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.17 Mbit/s
95th percentile per-packet one-way delay: 106.498 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 88.17 Mbit/s
95th percentile per-packet one-way delay: 106.498 ms
Loss rate: 0.70%
```

Run 5: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 88.24 Mbit/s) — Flow 1 egress (mean 88.17 Mbit/s)
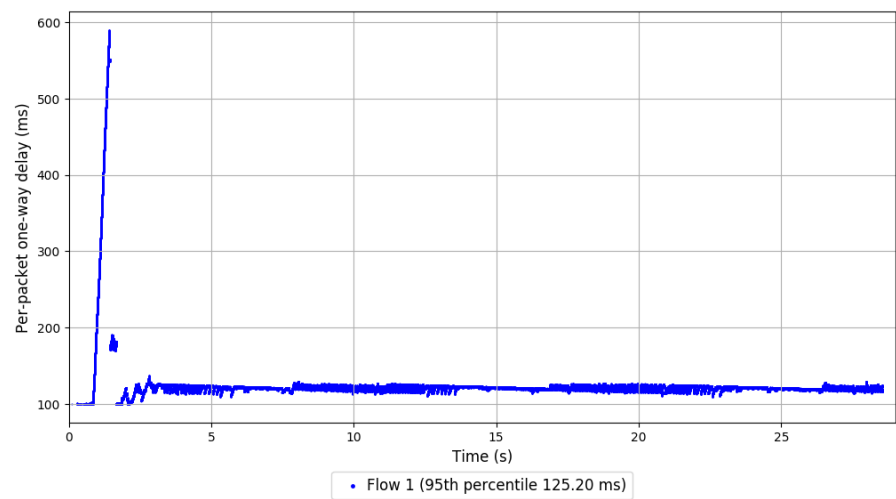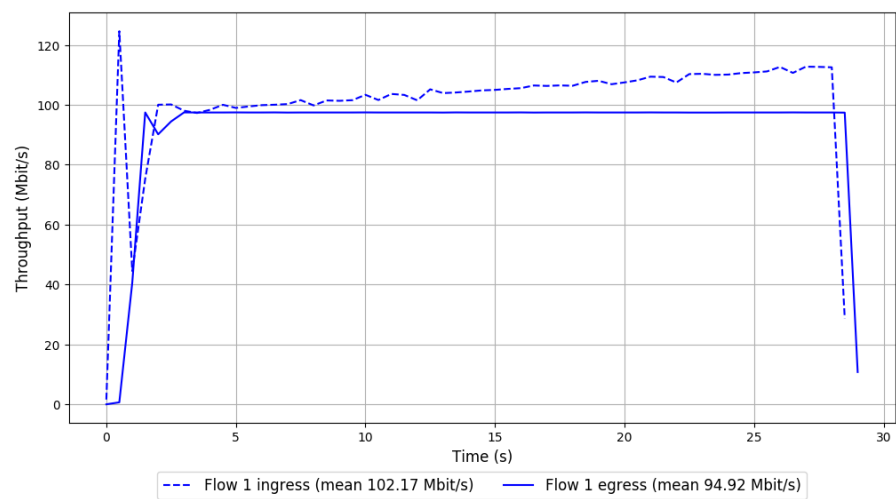

Flow 1 (95th percentile 106.50 ms)

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-07-12 10:12:47
End at: 2019-07-12 10:13:17
Local clock offset: -6.62 ms
Remote clock offset: -4.52 ms


# Below is generated by plot.py at 2019-07-12 12:35:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.92 Mbit/s
95th percentile per-packet one-way delay: 125.196 ms
Loss rate: 7.66%
-- Flow 1:
Average throughput: 94.92 Mbit/s
95th percentile per-packet one-way delay: 125.196 ms
Loss rate: 7.66%
```
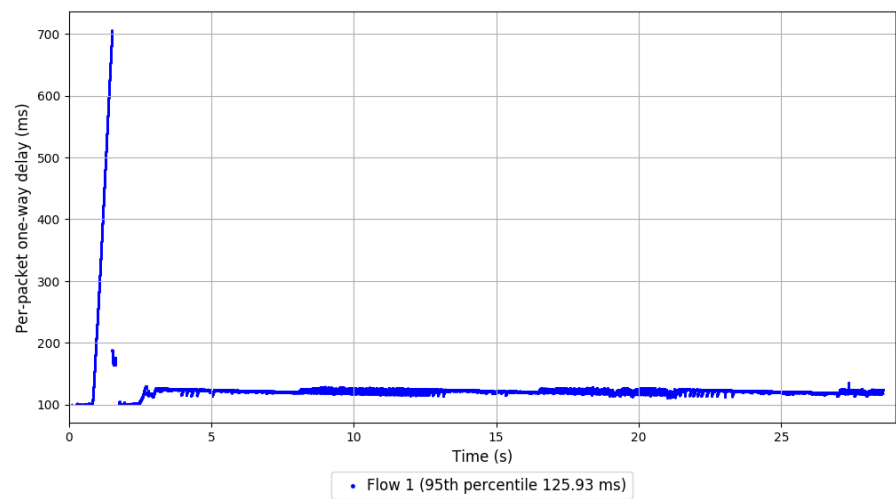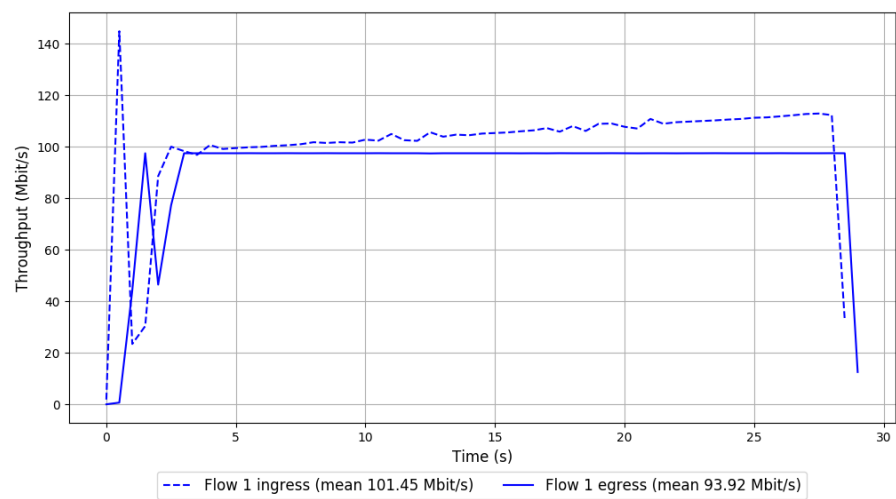
Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-07-12 10:41:24
End at: 2019-07-12 10:41:54
Local clock offset: -6.524 ms
Remote clock offset: -7.194 ms


# Below is generated by plot.py at 2019-07-12 12:35:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.92 Mbit/s
95th percentile per-packet one-way delay: 125.933 ms
Loss rate: 7.99%
-- Flow 1:
Average throughput: 93.92 Mbit/s
95th percentile per-packet one-way delay: 125.933 ms
Loss rate: 7.99%
```

Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-07-12 11:10:06
End at: 2019-07-12 11:10:37
Local clock offset: -6.553 ms
Remote clock offset: -8.27 ms


# Below is generated by plot.py at 2019-07-12 12:35:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.33 Mbit/s
95th percentile per-packet one-way delay: 127.330 ms
Loss rate: 7.74%
-- Flow 1:
Average throughput: 94.33 Mbit/s
95th percentile per-packet one-way delay: 127.330 ms
Loss rate: 7.74%
```
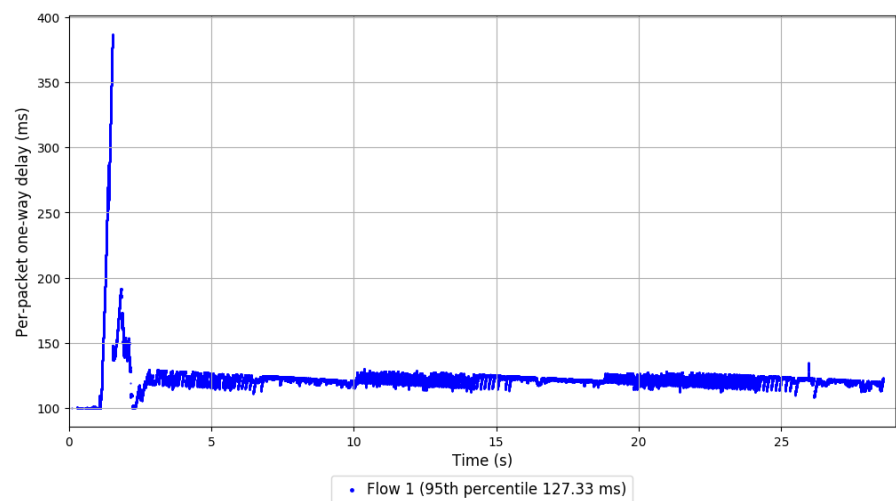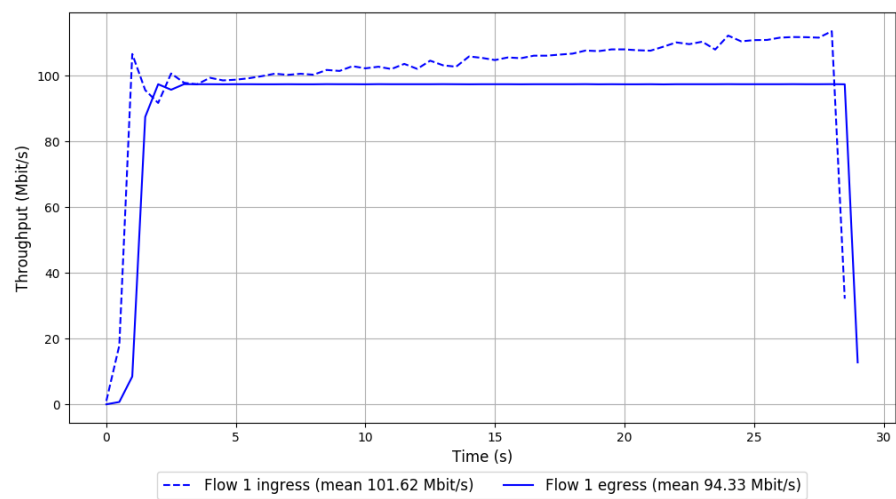
Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 101.62 Mbit/s) --- Flow 1 egress (mean 94.33 Mbit/s)
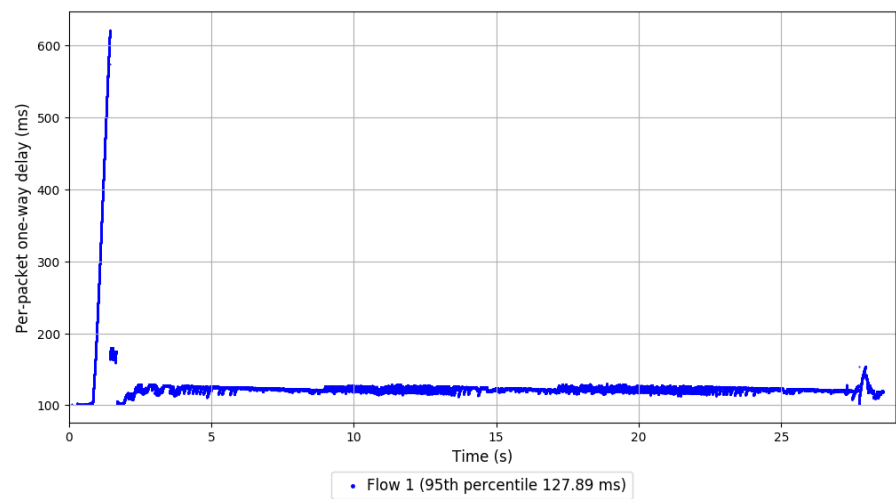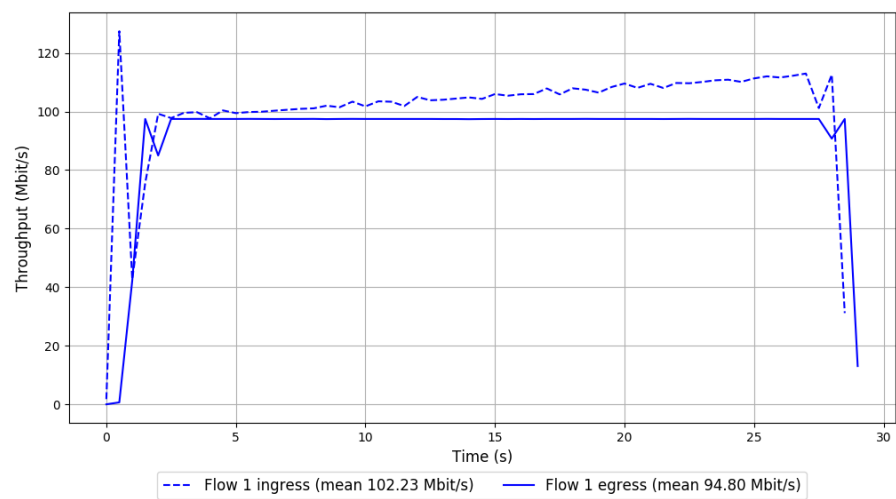

Flow 1 (95th percentile 127.33 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-07-12 11:38:56
End at: 2019-07-12 11:39:26
Local clock offset: -6.444 ms
Remote clock offset: -9.549 ms


# Below is generated by plot.py at 2019-07-12 12:35:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.80 Mbit/s
95th percentile per-packet one-way delay: 127.891 ms
Loss rate: 7.84%
-- Flow 1:
Average throughput: 94.80 Mbit/s
95th percentile per-packet one-way delay: 127.891 ms
Loss rate: 7.84%
```
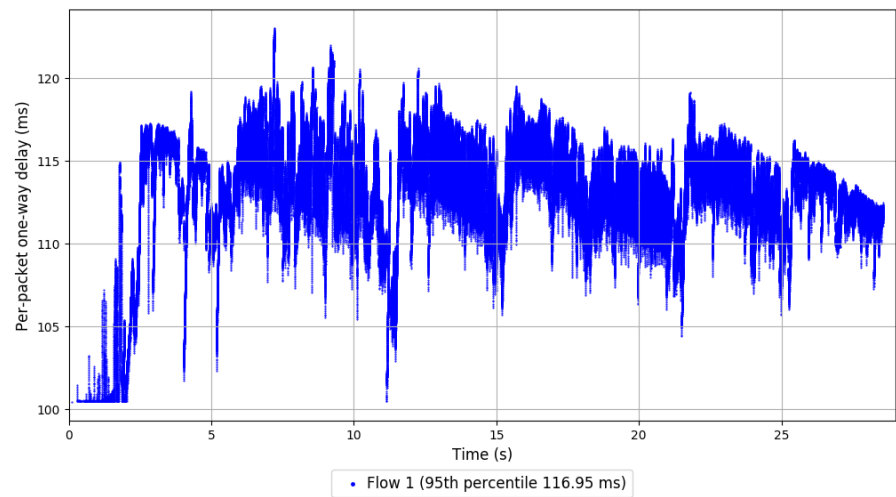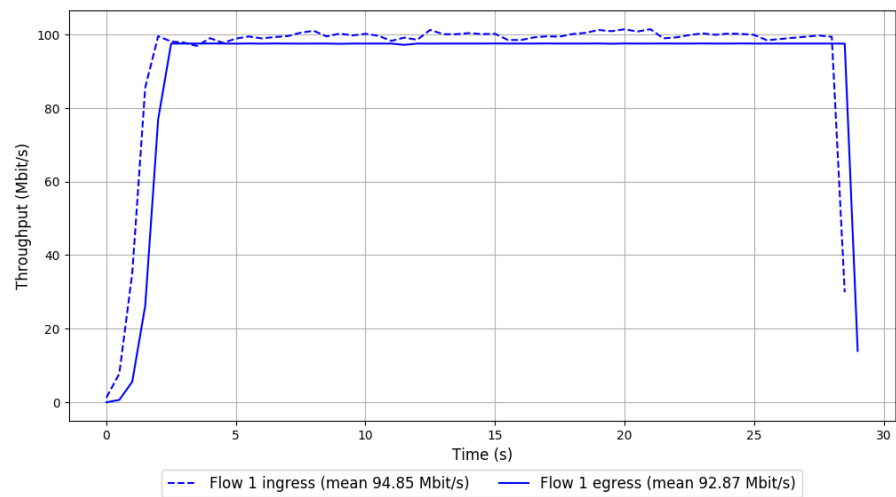
Run 4: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 102.23 Mbit/s)   Flow 1 egress (mean 94.80 Mbit/s)

Flow 1 (95th percentile 127.89 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-07-12 12:07:56
End at: 2019-07-12 12:08:26
Local clock offset: -7.74 ms
Remote clock offset: -10.138 ms


# Below is generated by plot.py at 2019-07-12 12:35:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.87 Mbit/s
95th percentile per-packet one-way delay: 116.946 ms
Loss rate: 2.69%
-- Flow 1:
Average throughput: 92.87 Mbit/s
95th percentile per-packet one-way delay: 116.946 ms
Loss rate: 2.69%
```

Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-07-12 10:10:19
End at: 2019-07-12 10:10:49
Local clock offset: -6.285 ms
Remote clock offset: -6.313 ms


# Below is generated by plot.py at 2019-07-12 12:35:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.16 Mbit/s
95th percentile per-packet one-way delay: 103.196 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 10.16 Mbit/s
95th percentile per-packet one-way delay: 103.196 ms
Loss rate: 1.25%
```
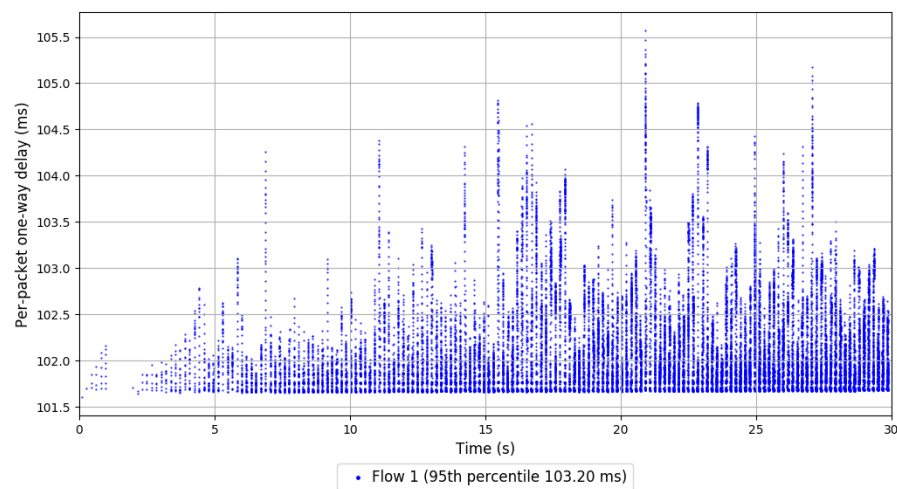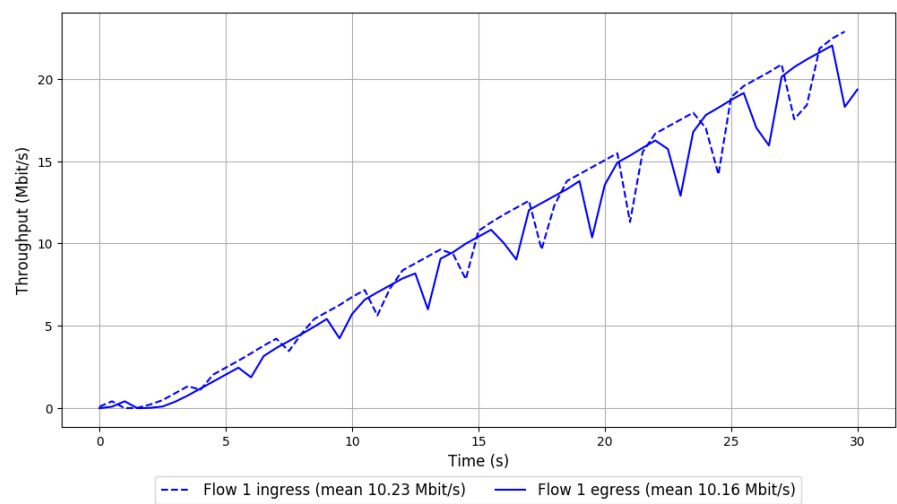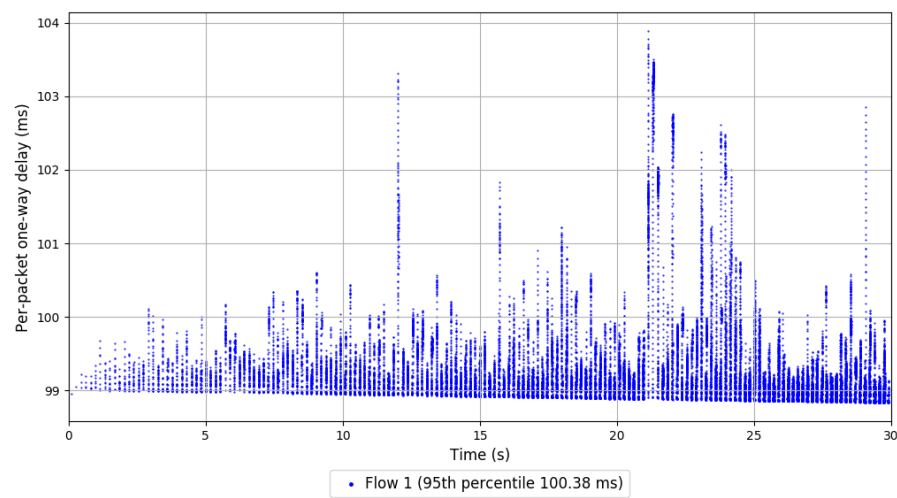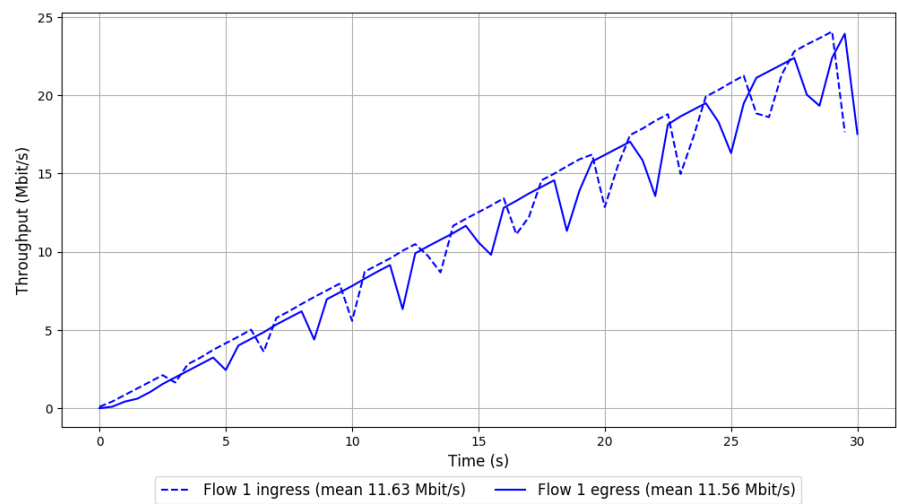
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-07-12 10:39:00
End at: 2019-07-12 10:39:30
Local clock offset: -6.643 ms
Remote clock offset: -4.329 ms


# Below is generated by plot.py at 2019-07-12 12:35:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.56 Mbit/s
95th percentile per-packet one-way delay: 100.379 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 11.56 Mbit/s
95th percentile per-packet one-way delay: 100.379 ms
Loss rate: 1.17%
```
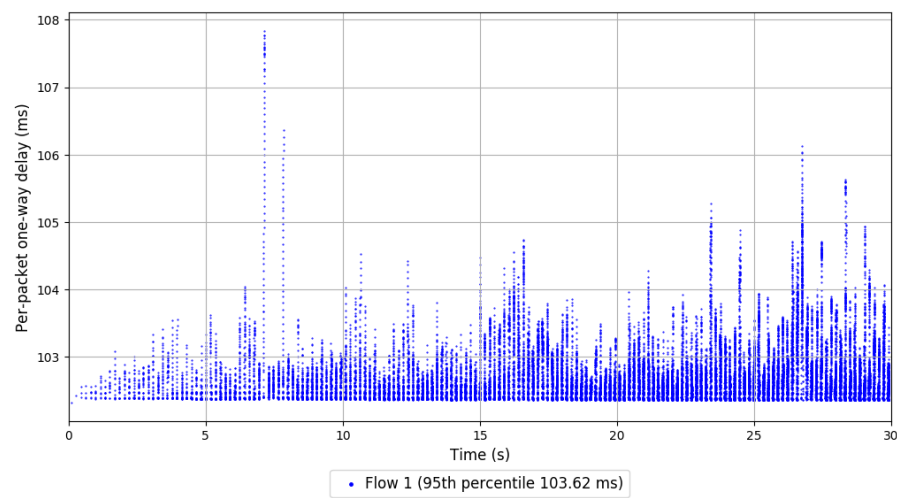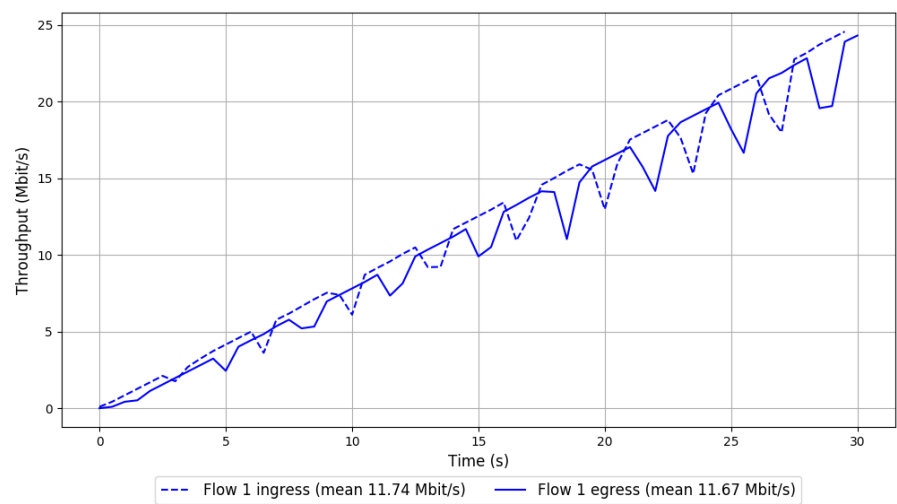
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-07-12 11:07:44
End at: 2019-07-12 11:08:14
Local clock offset: -5.738 ms
Remote clock offset: -9.763 ms


# Below is generated by plot.py at 2019-07-12 12:35:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 103.623 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 103.623 ms
Loss rate: 1.17%
```
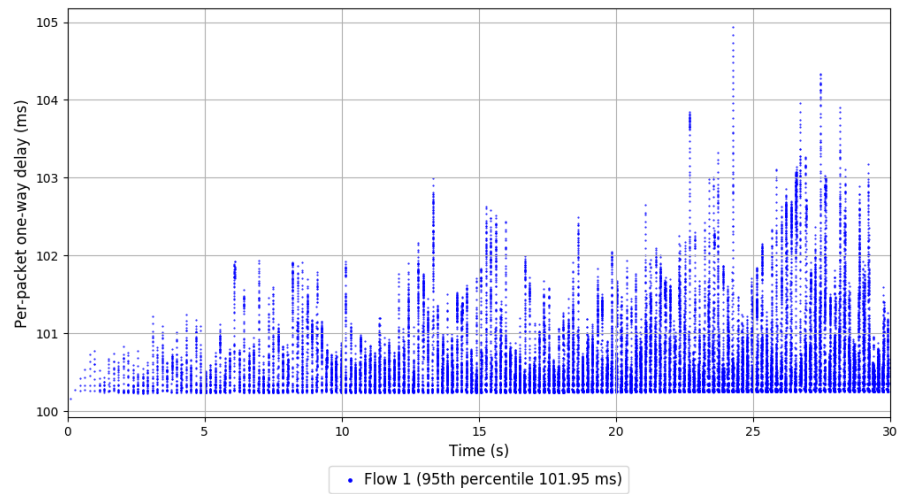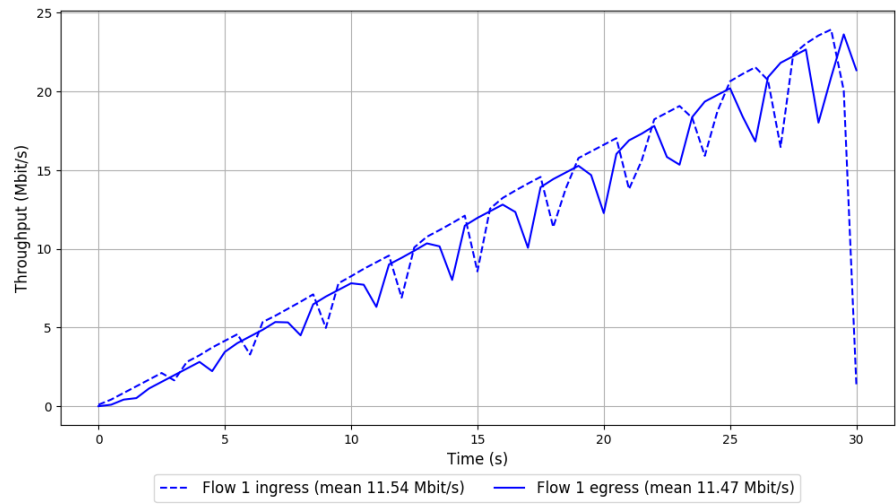
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-07-12 11:36:27
End at: 2019-07-12 11:36:57
Local clock offset: -6.273 ms
Remote clock offset: -7.972 ms


# Below is generated by plot.py at 2019-07-12 12:35:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.47 Mbit/s
95th percentile per-packet one-way delay: 101.952 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 11.47 Mbit/s
95th percentile per-packet one-way delay: 101.952 ms
Loss rate: 1.16%
```

Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 11.54 Mbit/s) ----   Flow 1 egress (mean 11.47 Mbit/s) ——
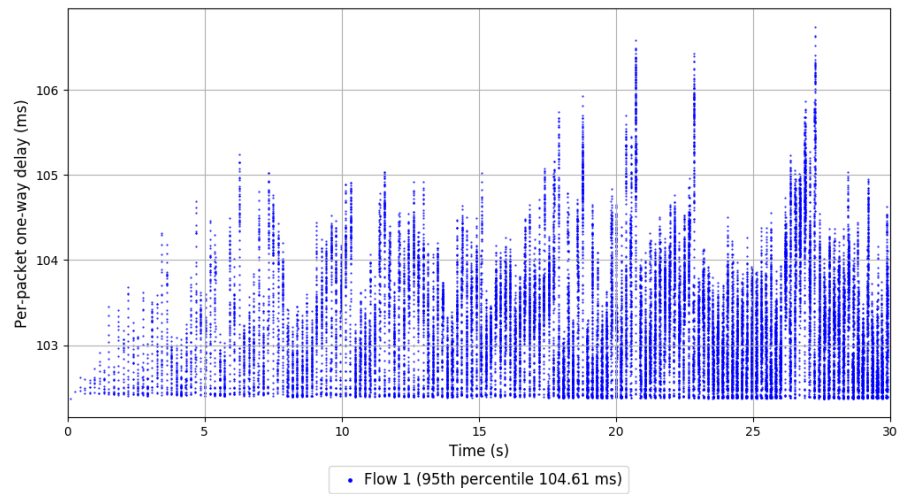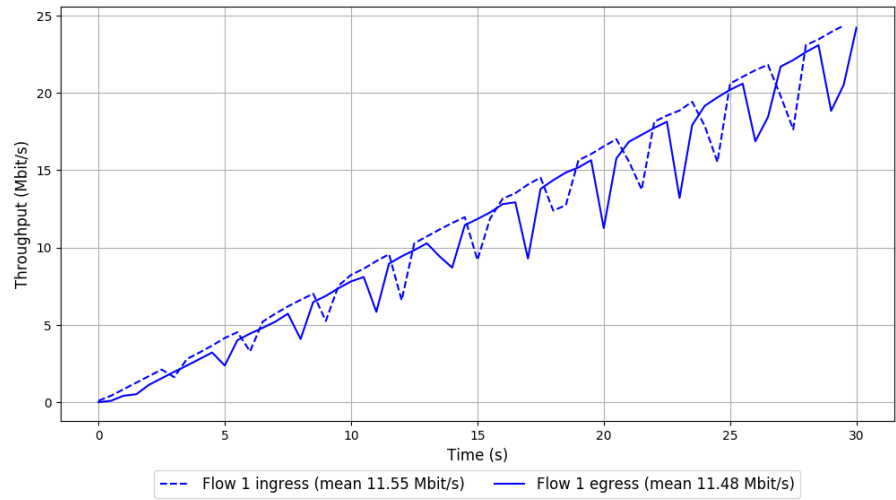

Flow 1 (95th percentile 101.95 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-07-12 12:05:36
End at: 2019-07-12 12:06:06
Local clock offset: -7.735 ms
Remote clock offset: -11.896 ms


# Below is generated by plot.py at 2019-07-12 12:35:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.48 Mbit/s
95th percentile per-packet one-way delay: 104.609 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 11.48 Mbit/s
95th percentile per-packet one-way delay: 104.609 ms
Loss rate: 1.18%
```

Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 11.55 Mbit/s) --- Flow 1 egress (mean 11.48 Mbit/s)

Flow 1 (95th percentile 104.61 ms)

Run 1: Statistics of Muses_DecisionTree

Start at: 2019-07-12 10:15:11
End at: 2019-07-12 10:15:41
Local clock offset: -7.393 ms
Remote clock offset: -7.8 ms

Below is generated by plot.py at 2019-07-12 12:36:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.85 Mbit/s
95th percentile per-packet one-way delay: 123.962 ms
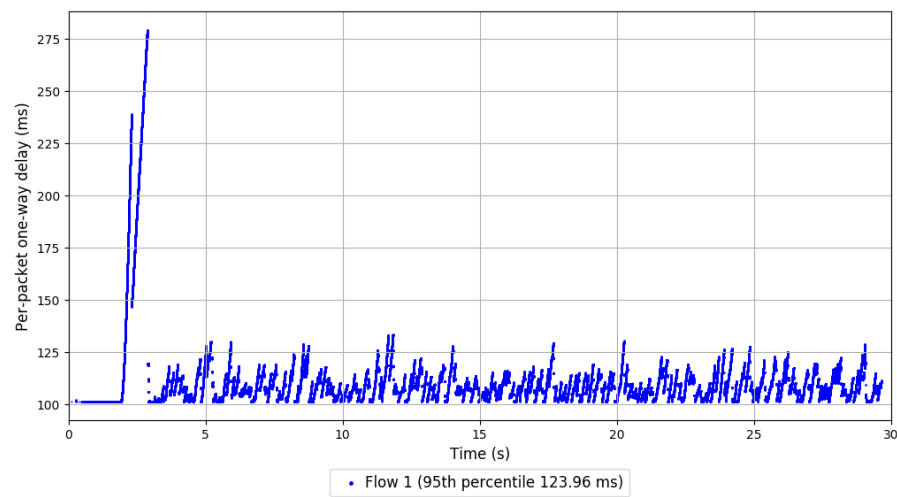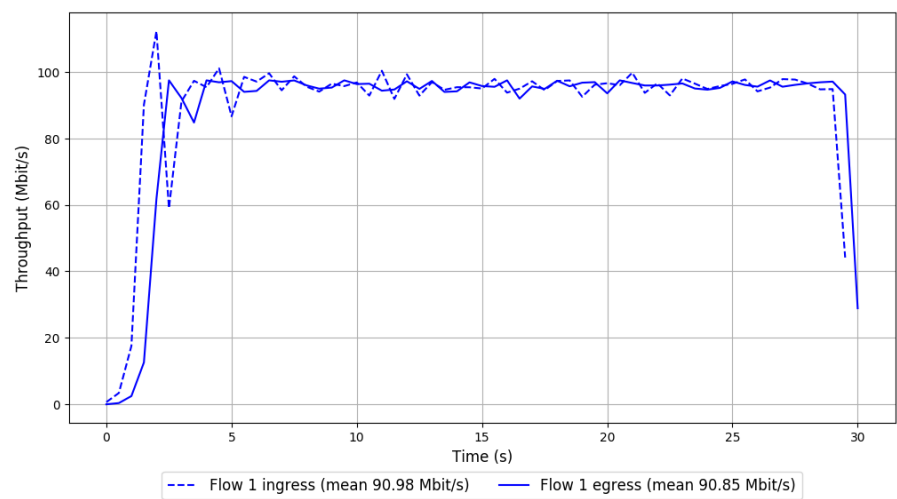Loss rate: 0.72%
-- Flow 1:
Average throughput: 90.85 Mbit/s
95th percentile per-packet one-way delay: 123.962 ms
Loss rate: 0.72%
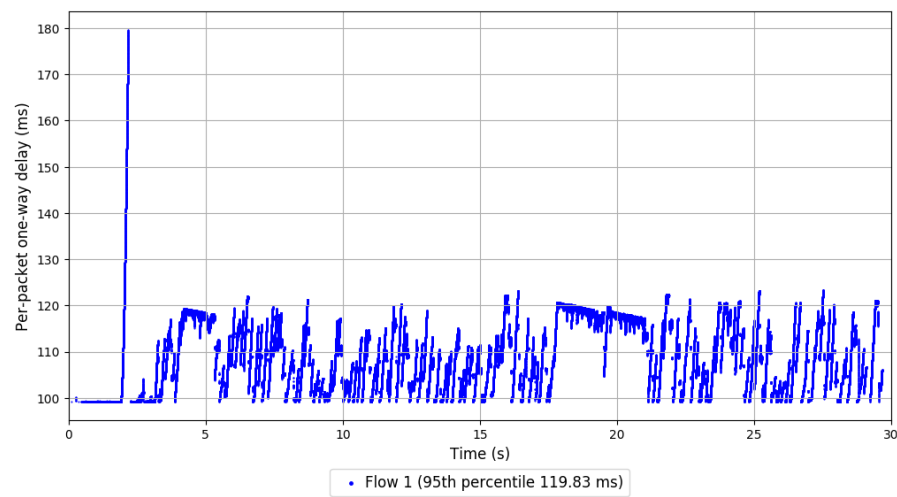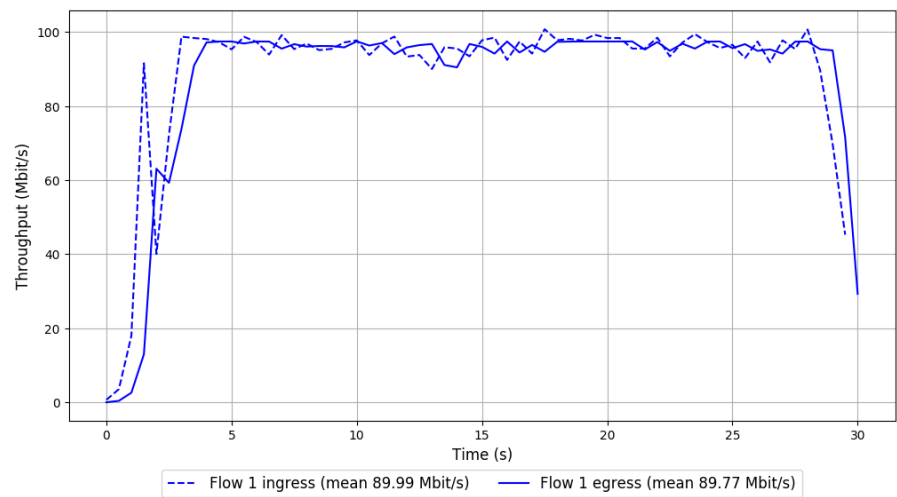
Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 10:43:47
End at: 2019-07-12 10:44:17
Local clock offset: -6.463 ms
Remote clock offset: -6.317 ms


# Below is generated by plot.py at 2019-07-12 12:36:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.77 Mbit/s
95th percentile per-packet one-way delay: 119.835 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 89.77 Mbit/s
95th percentile per-packet one-way delay: 119.835 ms
Loss rate: 0.83%
```

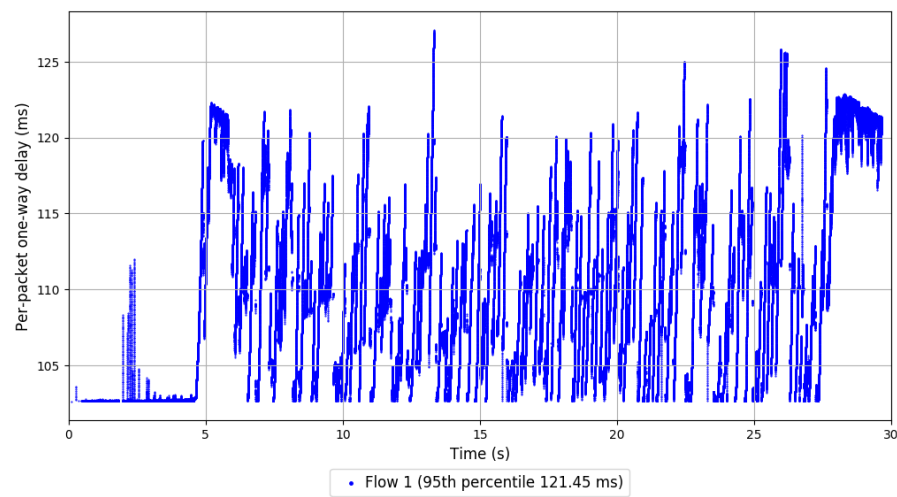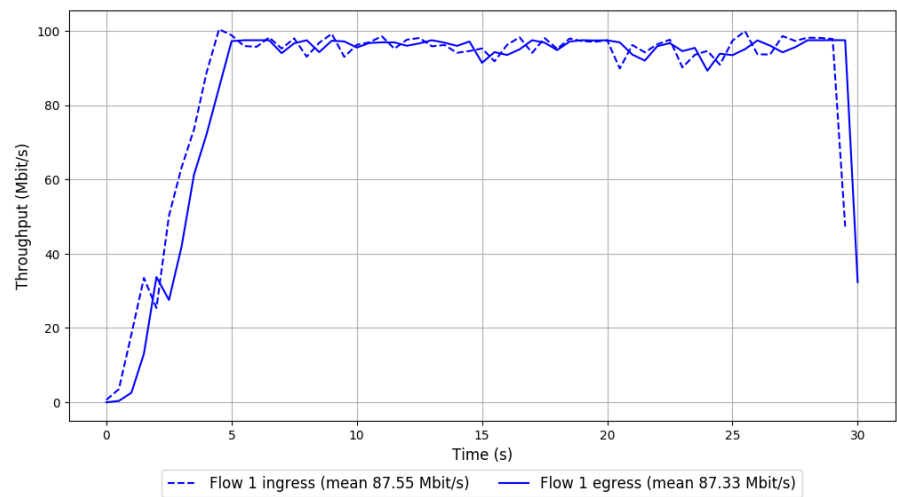Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 11:12:30
End at: 2019-07-12 11:13:00
Local clock offset: -6.351 ms
Remote clock offset: -11.751 ms


# Below is generated by plot.py at 2019-07-12 12:36:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.33 Mbit/s
95th percentile per-packet one-way delay: 121.447 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 87.33 Mbit/s
95th percentile per-packet one-way delay: 121.447 ms
Loss rate: 0.84%
```

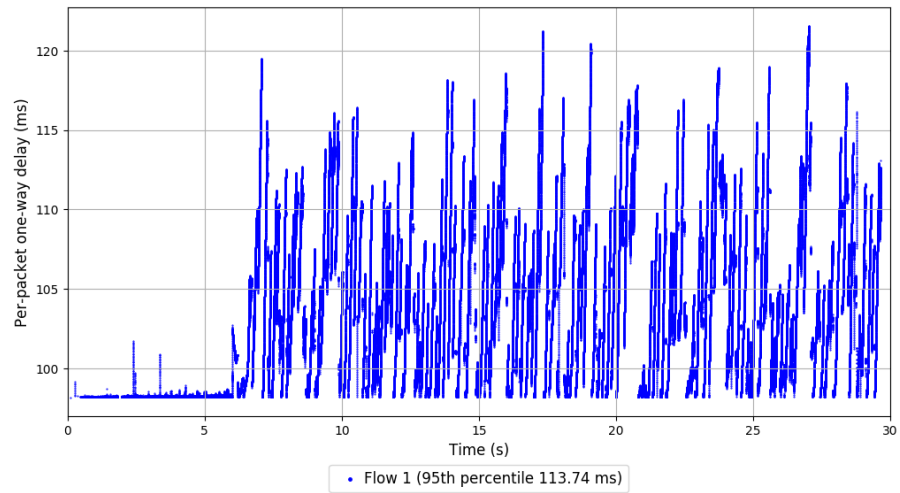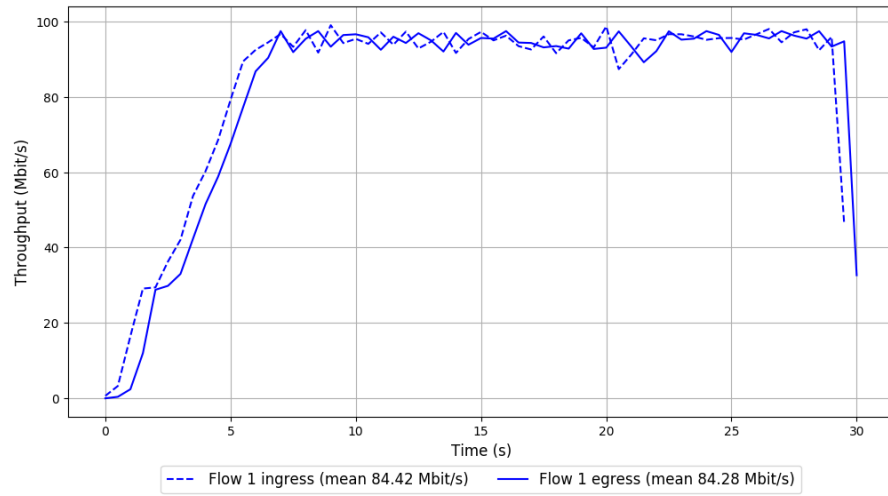Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 11:41:19
End at: 2019-07-12 11:41:49
Local clock offset: -7.582 ms
Remote clock offset: -8.109 ms


# Below is generated by plot.py at 2019-07-12 12:36:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.28 Mbit/s
95th percentile per-packet one-way delay: 113.743 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 84.28 Mbit/s
95th percentile per-packet one-way delay: 113.743 ms
Loss rate: 0.73%
```

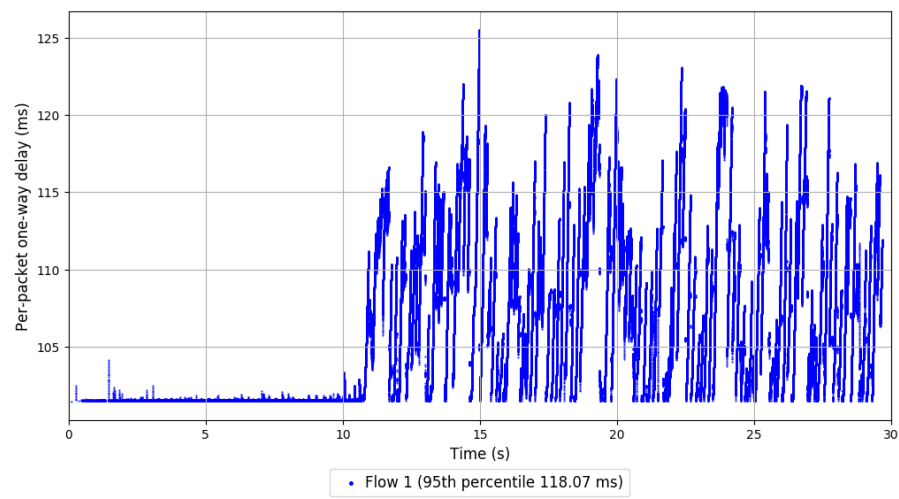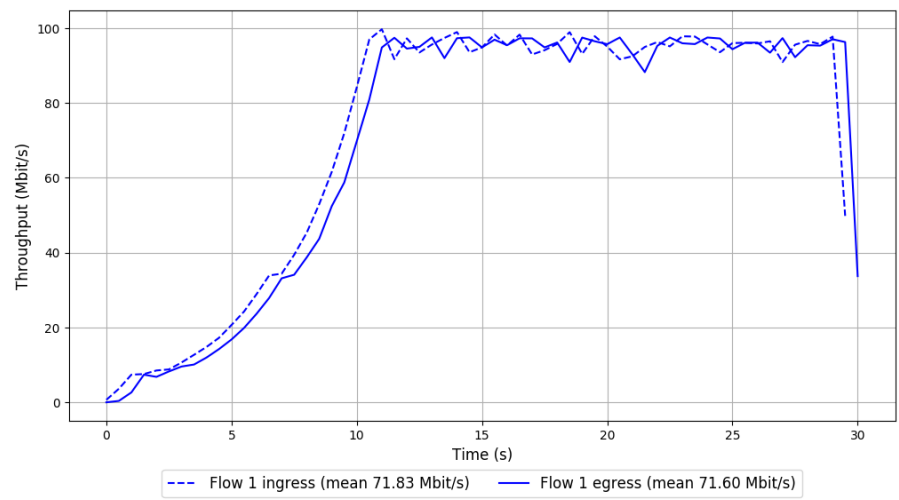Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 12:10:21
End at: 2019-07-12 12:10:51
Local clock offset: -6.611 ms
Remote clock offset: -10.149 ms


# Below is generated by plot.py at 2019-07-12 12:36:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.60 Mbit/s
95th percentile per-packet one-way delay: 118.068 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 71.60 Mbit/s
95th percentile per-packet one-way delay: 118.068 ms
Loss rate: 0.91%
```

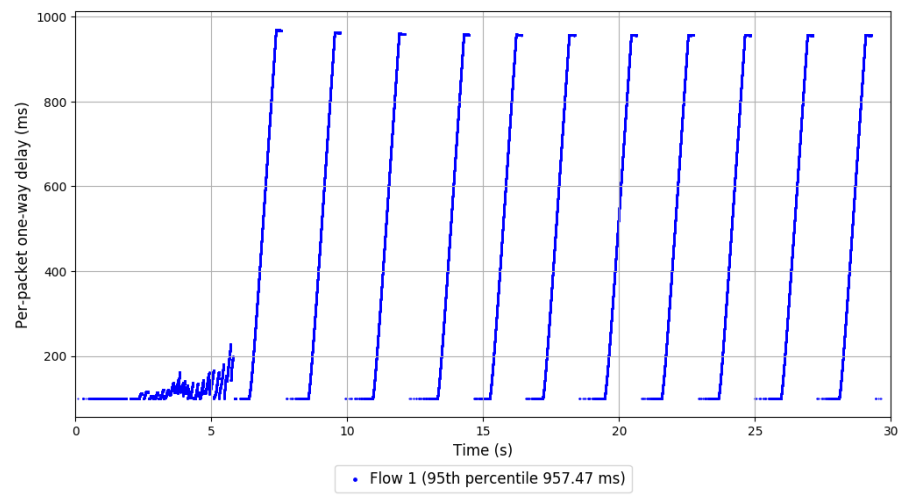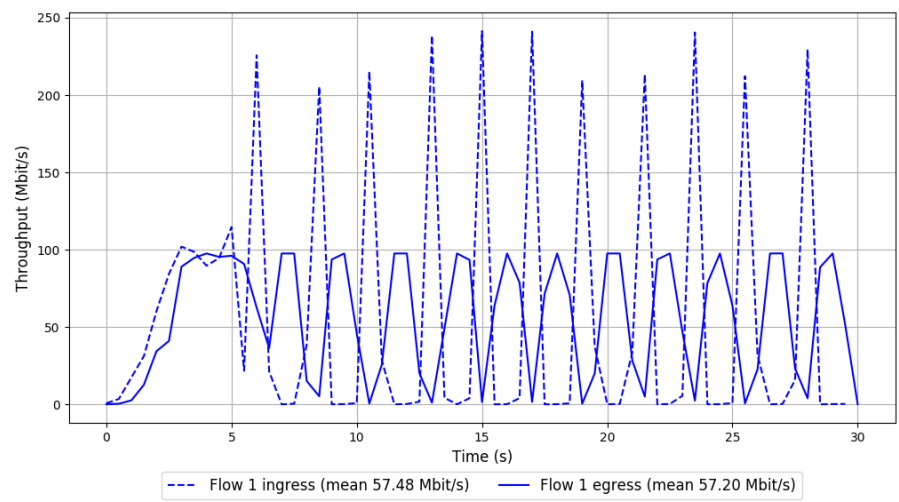# Run 5: Report of Muses_DecisionTree — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 10:14:00
End at: 2019-07-12 10:14:30
Local clock offset: -7.144 ms
Remote clock offset: -4.824 ms


# Below is generated by plot.py at 2019-07-12 12:36:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 57.20 Mbit/s
95th percentile per-packet one-way delay: 957.471 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 57.20 Mbit/s
95th percentile per-packet one-way delay: 957.471 ms
Loss rate: 1.12%
```

Run 1: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 57.48 Mbit/s)   Flow 1 egress (mean 57.20 Mbit/s)
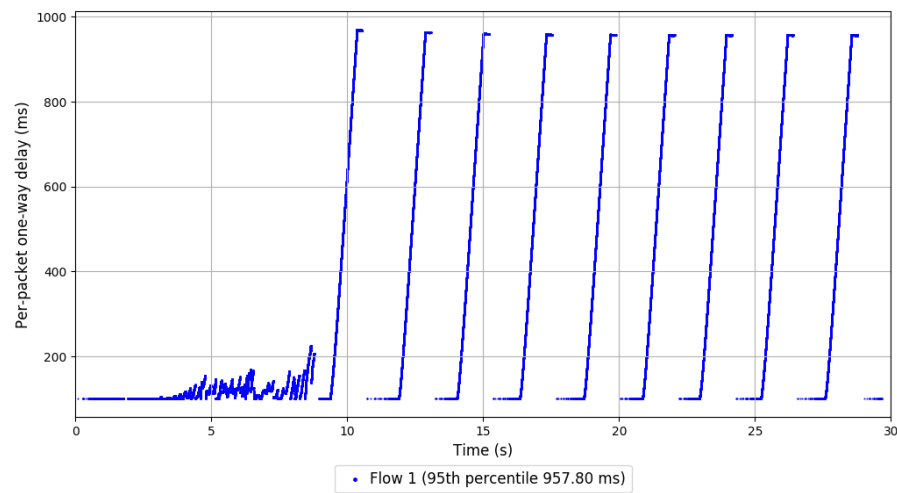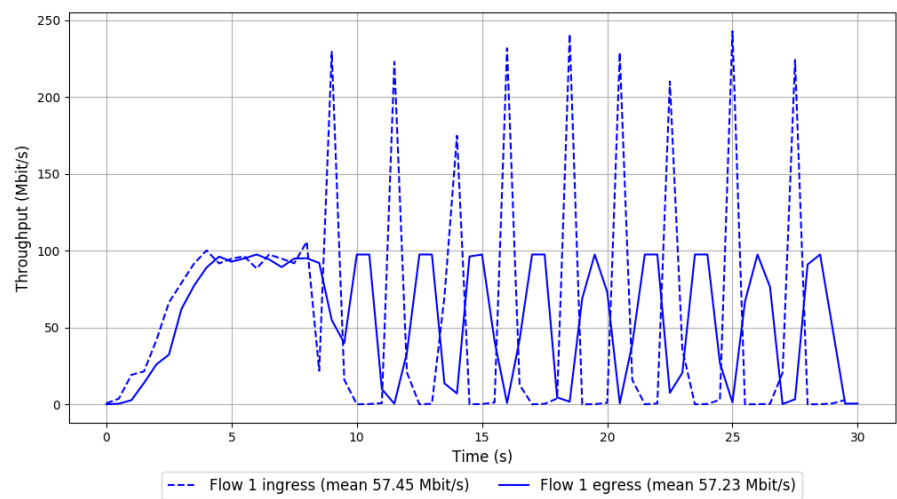

Flow 1 (95th percentile 957.47 ms)

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 10:42:36
End at: 2019-07-12 10:43:06
Local clock offset: -6.568 ms
Remote clock offset: -7.076 ms


# Below is generated by plot.py at 2019-07-12 12:36:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 57.23 Mbit/s
95th percentile per-packet one-way delay: 957.800 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 57.23 Mbit/s
95th percentile per-packet one-way delay: 957.800 ms
Loss rate: 0.96%
```

Run 2: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 57.45 Mbit/s) --- Flow 1 egress (mean 57.23 Mbit/s)

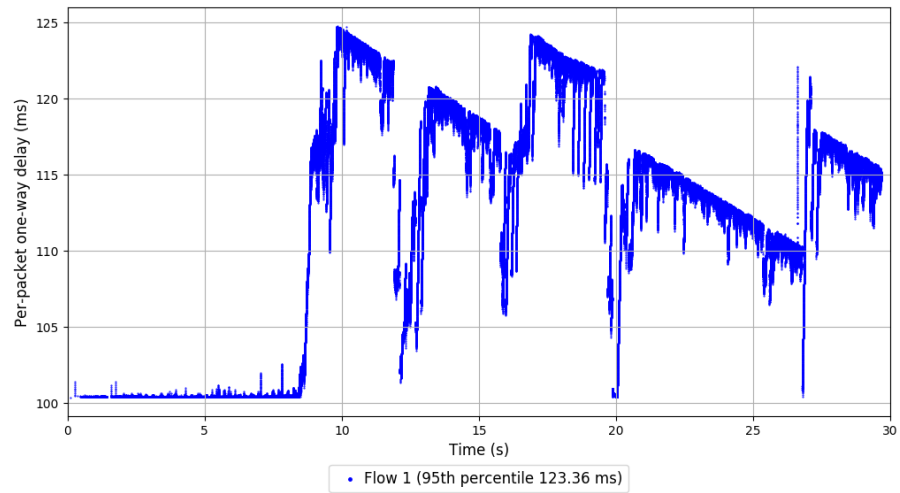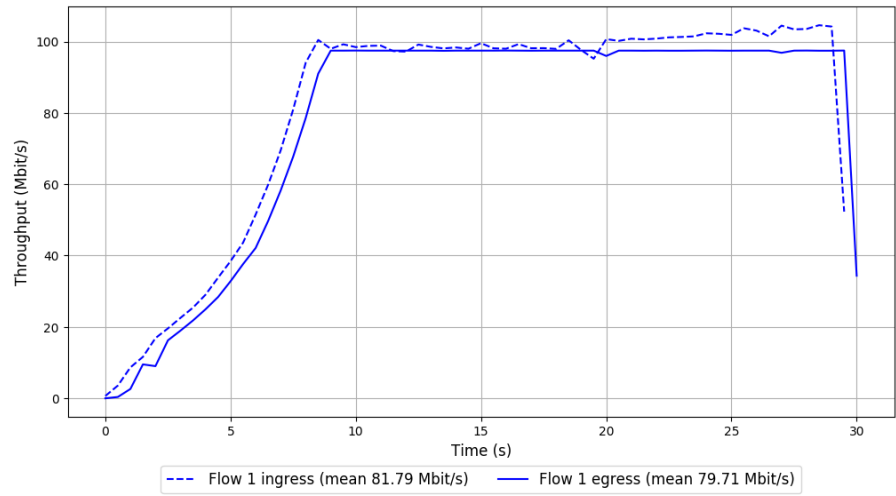Flow 1 (95th percentile 957.80 ms)

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 11:11:19
End at: 2019-07-12 11:11:49
Local clock offset: -5.781 ms
Remote clock offset: -8.925 ms


# Below is generated by plot.py at 2019-07-12 12:36:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.71 Mbit/s
95th percentile per-packet one-way delay: 123.365 ms
Loss rate: 3.11%
-- Flow 1:
Average throughput: 79.71 Mbit/s
95th percentile per-packet one-way delay: 123.365 ms
Loss rate: 3.11%
```

Run 3: Report of Muses_DecisionTreeH0 — Data Link

Throughput (Mbit/s) vs Time (s)

Flow 1 ingress (mean 81.79 Mbit/s)   Flow 1 egress (mean 79.71 Mbit/s)

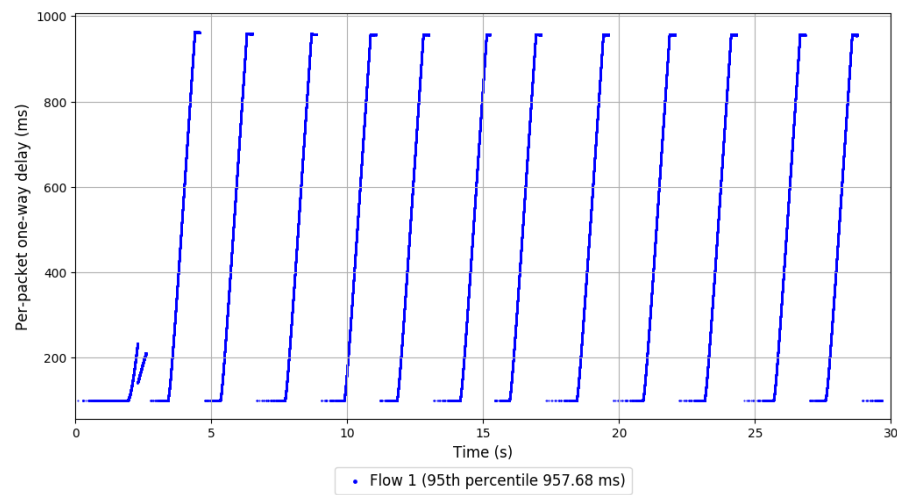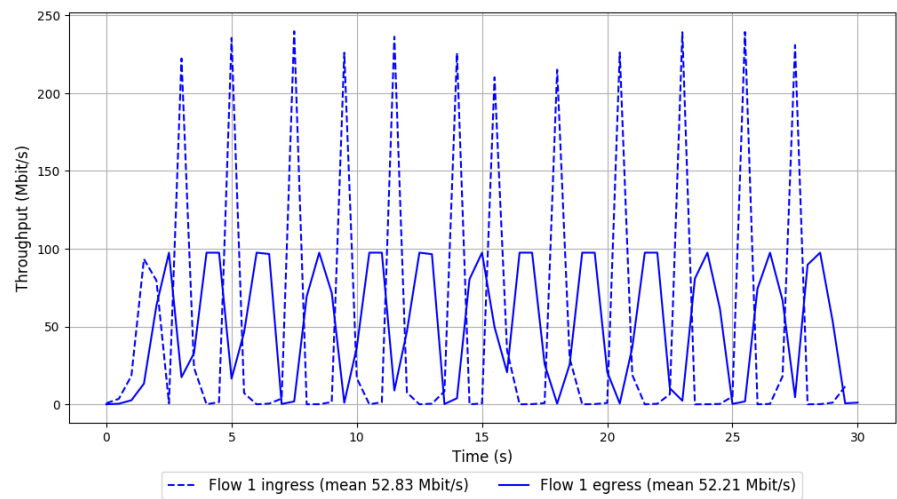Flow 1 (95th percentile 123.36 ms)

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 11:40:08
End at: 2019-07-12 11:40:38
Local clock offset: -6.508 ms
Remote clock offset: -8.258 ms


# Below is generated by plot.py at 2019-07-12 12:36:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 52.21 Mbit/s
95th percentile per-packet one-way delay: 957.677 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 52.21 Mbit/s
95th percentile per-packet one-way delay: 957.677 ms
Loss rate: 1.75%
```

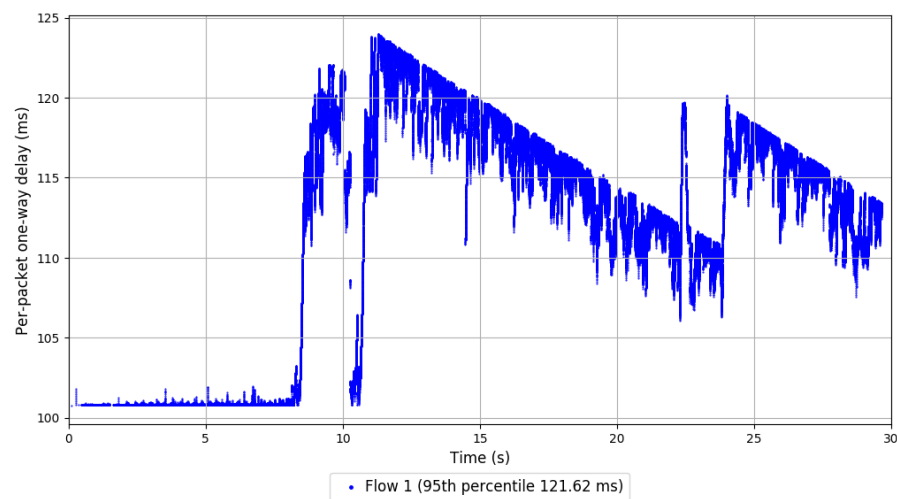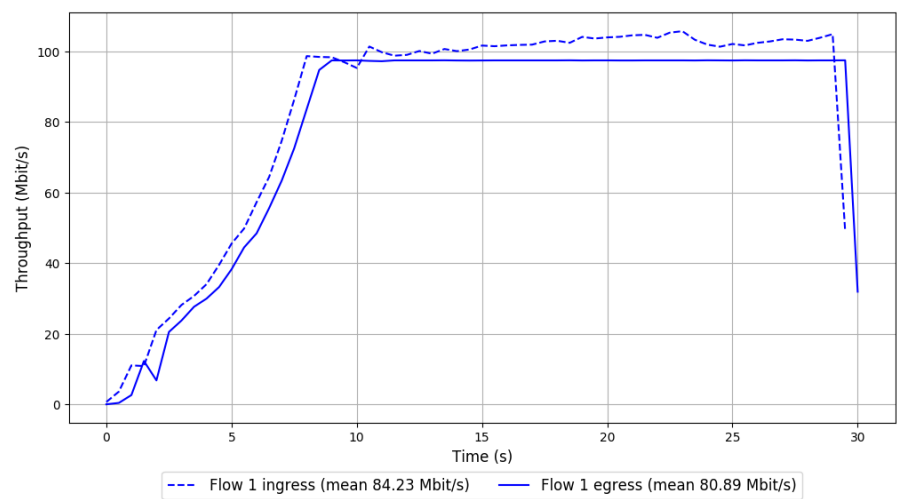Run 4: Report of Muses_DecisionTreeH0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 12:09:08
End at: 2019-07-12 12:09:38
Local clock offset: -6.631 ms
Remote clock offset: -10.323 ms


# Below is generated by plot.py at 2019-07-12 12:37:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.89 Mbit/s
95th percentile per-packet one-way delay: 121.621 ms
Loss rate: 4.52%
-- Flow 1:
Average throughput: 80.89 Mbit/s
95th percentile per-packet one-way delay: 121.621 ms
Loss rate: 4.52%
```

Run 5: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 84.23 Mbit/s)   Flow 1 egress (mean 80.89 Mbit/s)

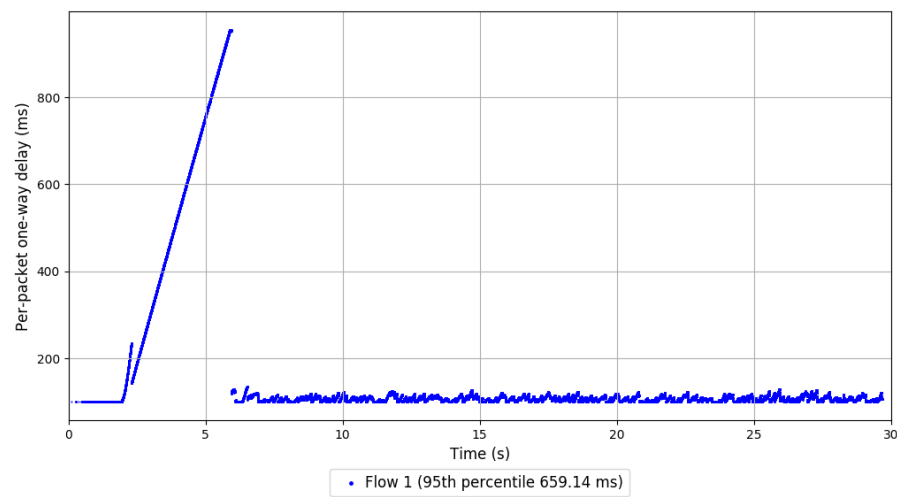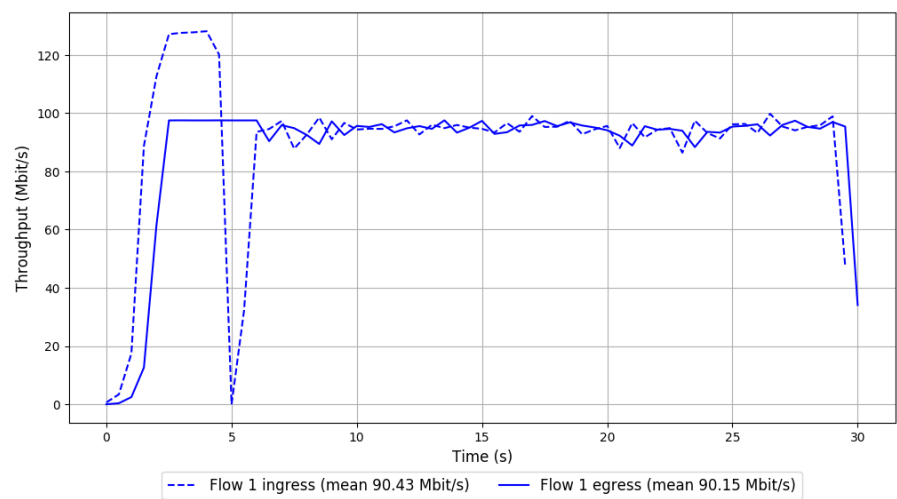Flow 1 (95th percentile 121.62 ms)

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 10:28:15
End at: 2019-07-12 10:28:45
Local clock offset: -6.809 ms
Remote clock offset: -4.142 ms


# Below is generated by plot.py at 2019-07-12 12:37:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.15 Mbit/s
95th percentile per-packet one-way delay: 659.141 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 90.15 Mbit/s
95th percentile per-packet one-way delay: 659.141 ms
Loss rate: 0.90%
```

Run 1: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 90.43 Mbit/s) --- Flow 1 egress (mean 90.15 Mbit/s)

• Flow 1 (95th percentile 659.14 ms)

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 10:56:54
End at: 2019-07-12 10:57:24
Local clock offset: -6.286 ms
Remote clock offset: -9.4 ms


# Below is generated by plot.py at 2019-07-12 12:37:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.14 Mbit/s
95th percentile per-packet one-way delay: 118.750 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 83.14 Mbit/s
95th percentile per-packet one-way delay: 118.750 ms
Loss rate: 0.83%
```
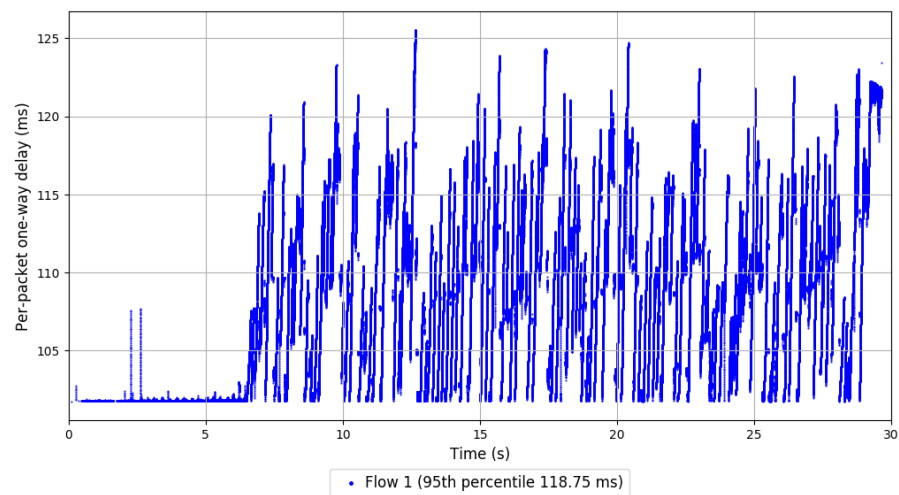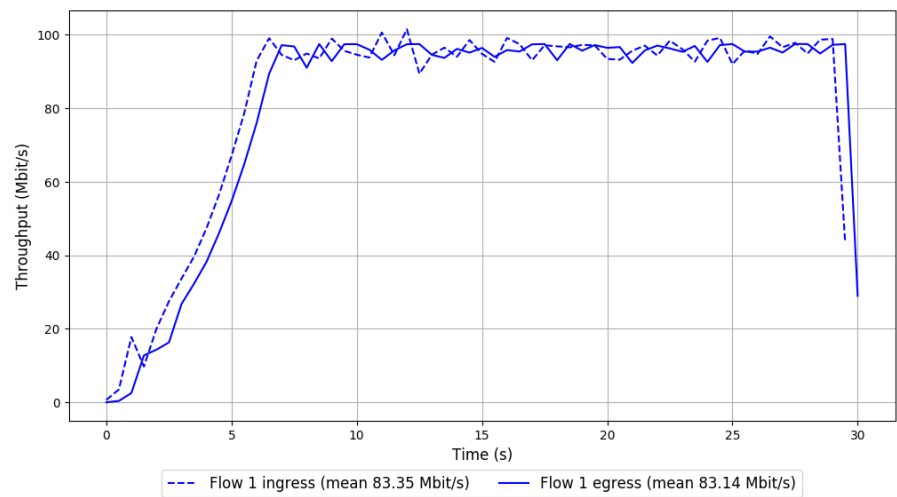
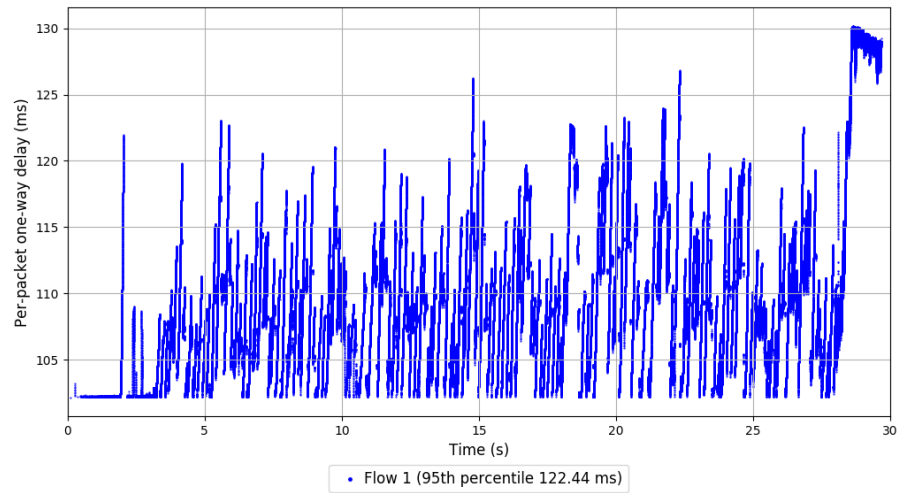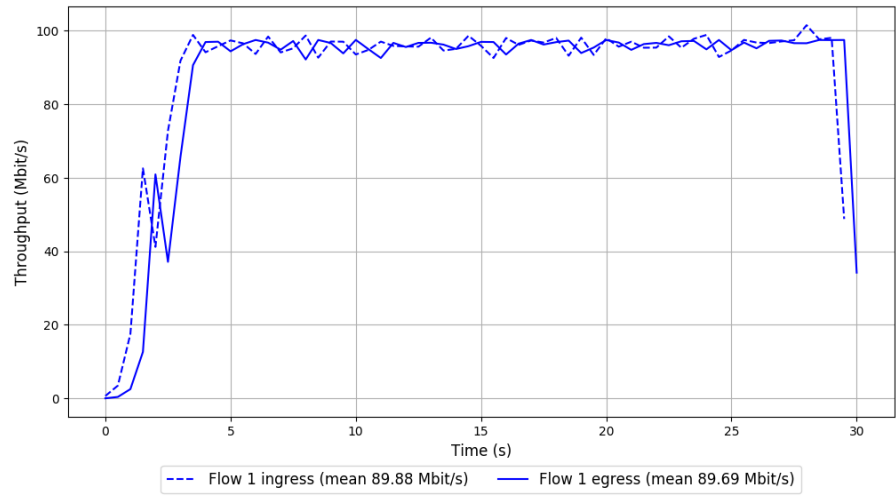Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 11:25:48
End at: 2019-07-12 11:26:18
Local clock offset: -5.529 ms
Remote clock offset: -9.804 ms


# Below is generated by plot.py at 2019-07-12 12:37:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.69 Mbit/s
95th percentile per-packet one-way delay: 122.445 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 89.69 Mbit/s
95th percentile per-packet one-way delay: 122.445 ms
Loss rate: 0.80%
```

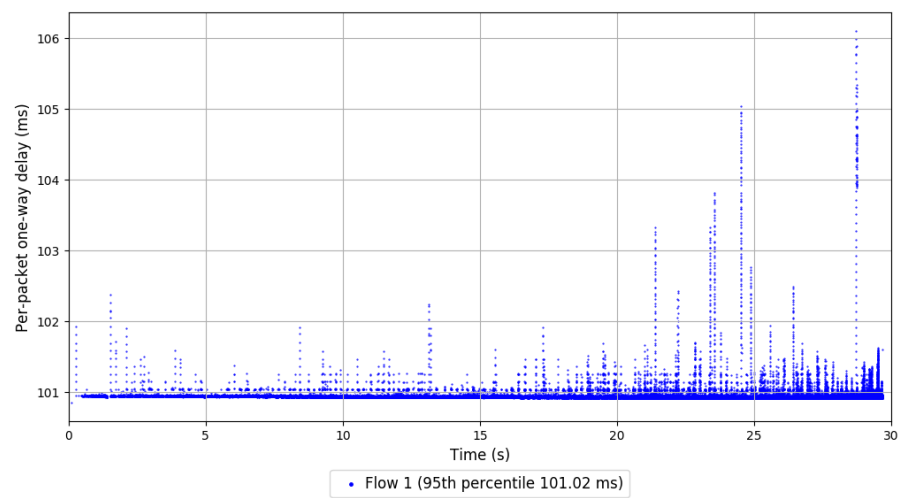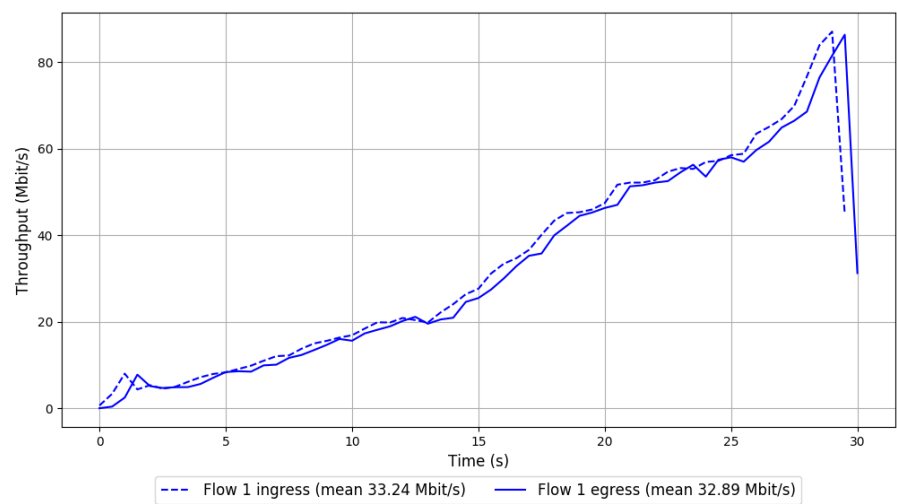Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 11:54:50
End at: 2019-07-12 11:55:20
Local clock offset: -7.801 ms
Remote clock offset: -10.569 ms


# Below is generated by plot.py at 2019-07-12 12:37:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.89 Mbit/s
95th percentile per-packet one-way delay: 101.016 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 32.89 Mbit/s
95th percentile per-packet one-way delay: 101.016 ms
Loss rate: 1.62%
```

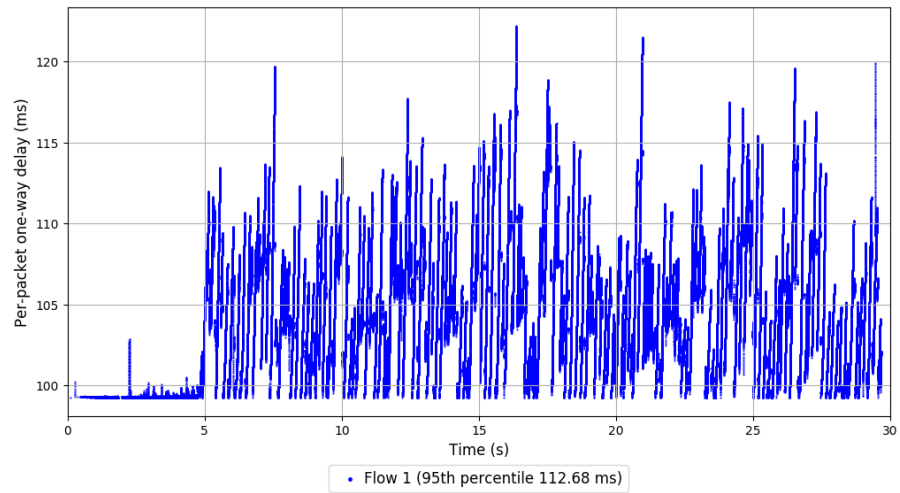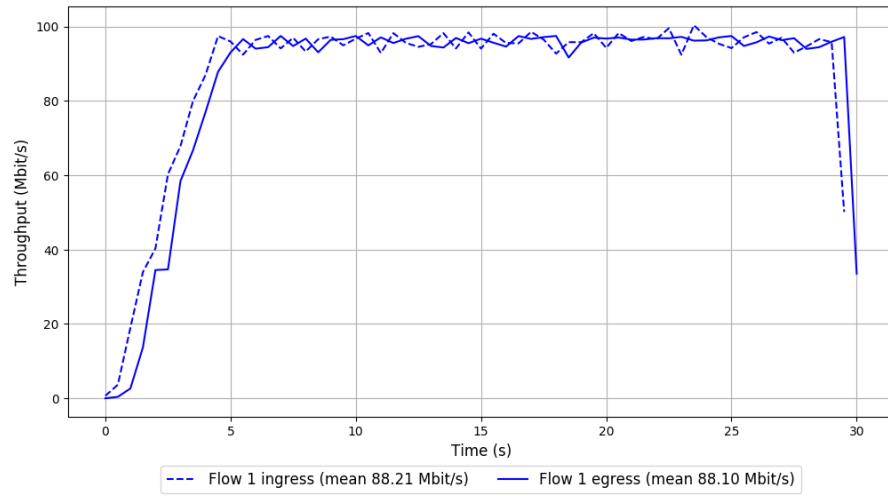Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 12:23:34
End at: 2019-07-12 12:24:04
Local clock offset: -6.595 ms
Remote clock offset: -8.785 ms


# Below is generated by plot.py at 2019-07-12 12:37:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.10 Mbit/s
95th percentile per-packet one-way delay: 112.676 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 88.10 Mbit/s
95th percentile per-packet one-way delay: 112.676 ms
Loss rate: 0.71%
```

Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-07-12 10:29:27
End at: 2019-07-12 10:29:57
Local clock offset: -7.313 ms
Remote clock offset: -5.967 ms


# Below is generated by plot.py at 2019-07-12 12:37:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.41 Mbit/s
95th percentile per-packet one-way delay: 254.096 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 83.41 Mbit/s
95th percentile per-packet one-way delay: 254.096 ms
Loss rate: 0.80%
```
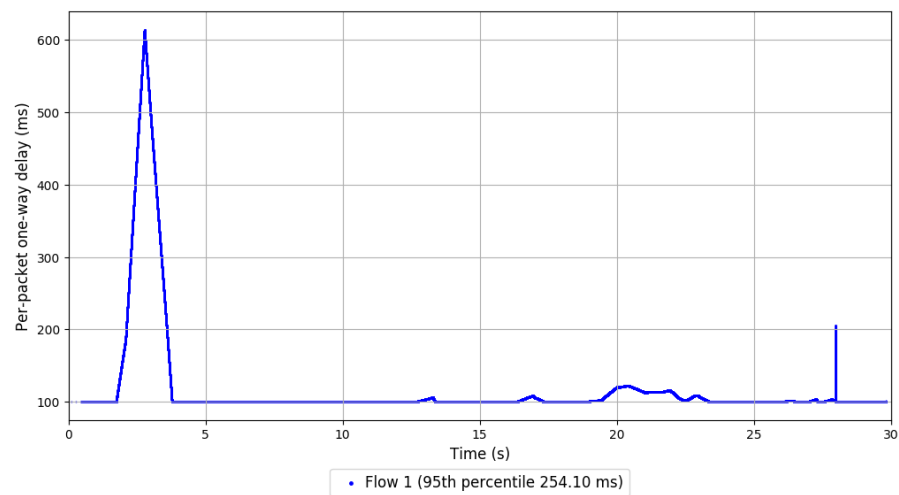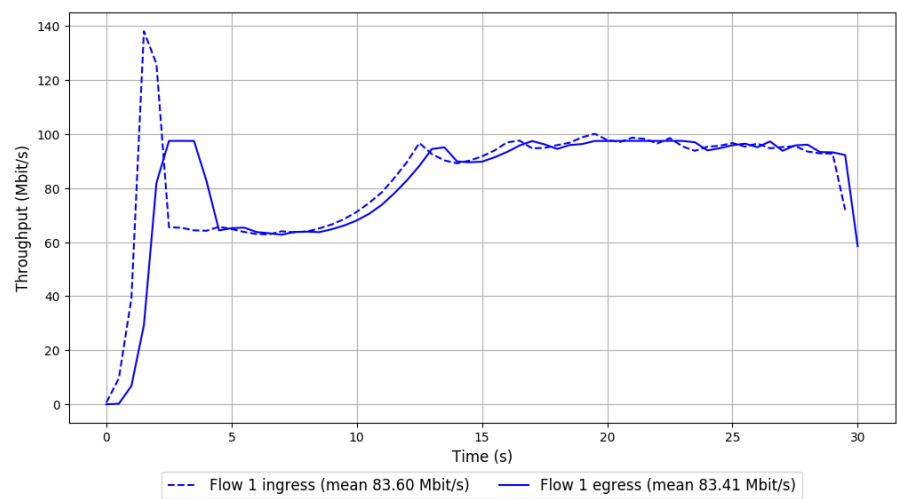
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-07-12 10:58:06
End at: 2019-07-12 10:58:36
Local clock offset: -5.668 ms
Remote clock offset: -7.182 ms


# Below is generated by plot.py at 2019-07-12 12:37:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.34 Mbit/s
95th percentile per-packet one-way delay: 327.946 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 72.34 Mbit/s
95th percentile per-packet one-way delay: 327.946 ms
Loss rate: 0.76%
```
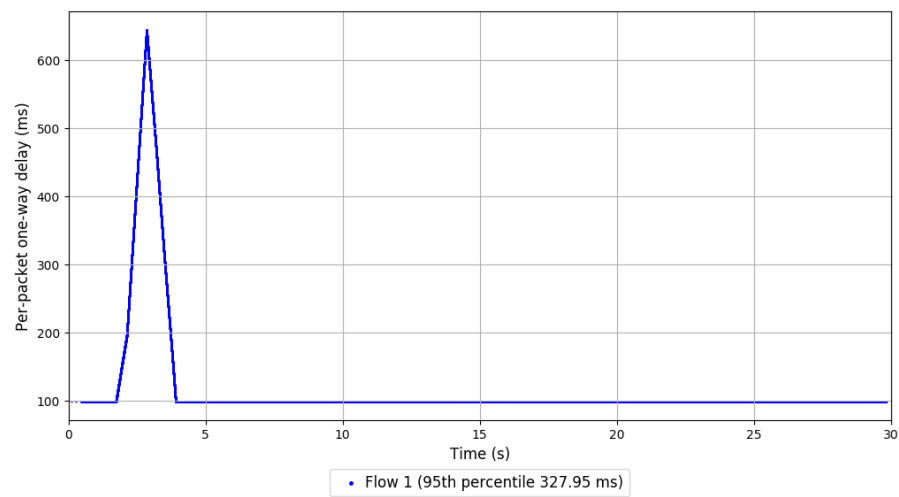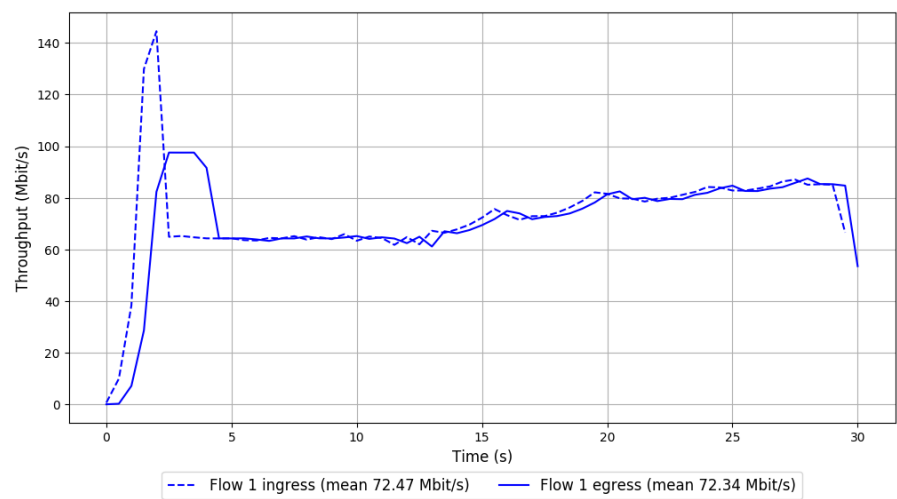
Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 72.47 Mbit/s)   Flow 1 egress (mean 72.34 Mbit/s)
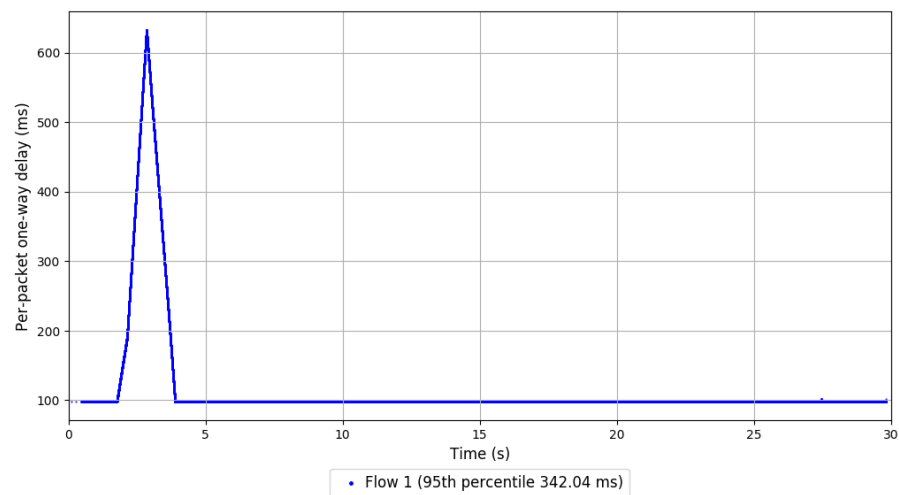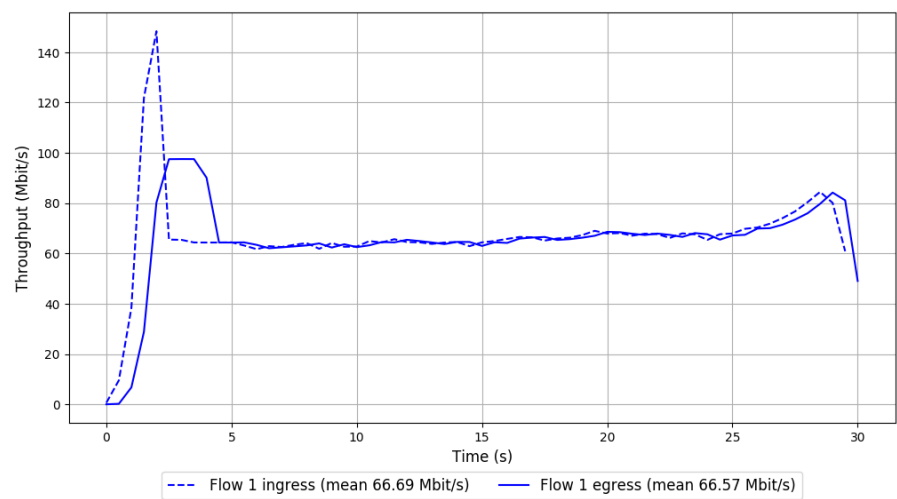

Flow 1 (95th percentile 327.95 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-07-12 11:27:00
End at: 2019-07-12 11:27:30
Local clock offset: -6.542 ms
Remote clock offset: -7.533 ms


# Below is generated by plot.py at 2019-07-12 12:37:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.57 Mbit/s
95th percentile per-packet one-way delay: 342.043 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 66.57 Mbit/s
95th percentile per-packet one-way delay: 342.043 ms
Loss rate: 0.75%
```

Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 66.69 Mbit/s) --- Flow 1 egress (mean 66.57 Mbit/s)
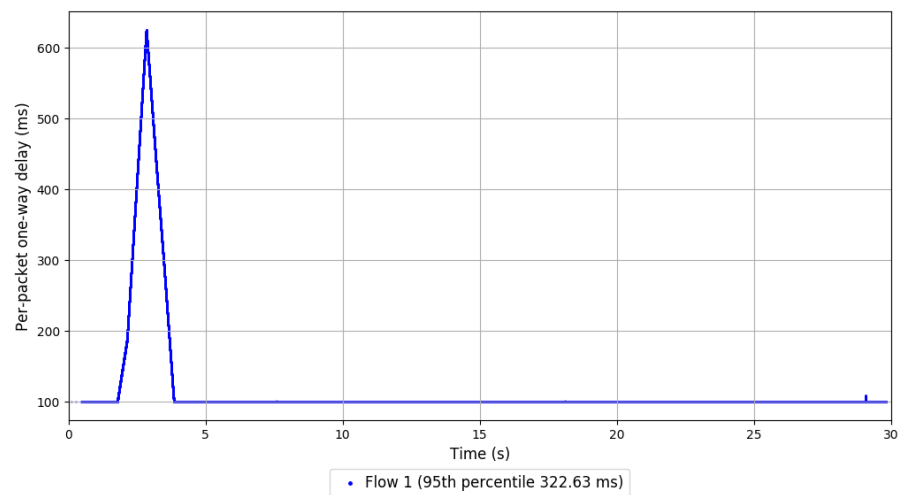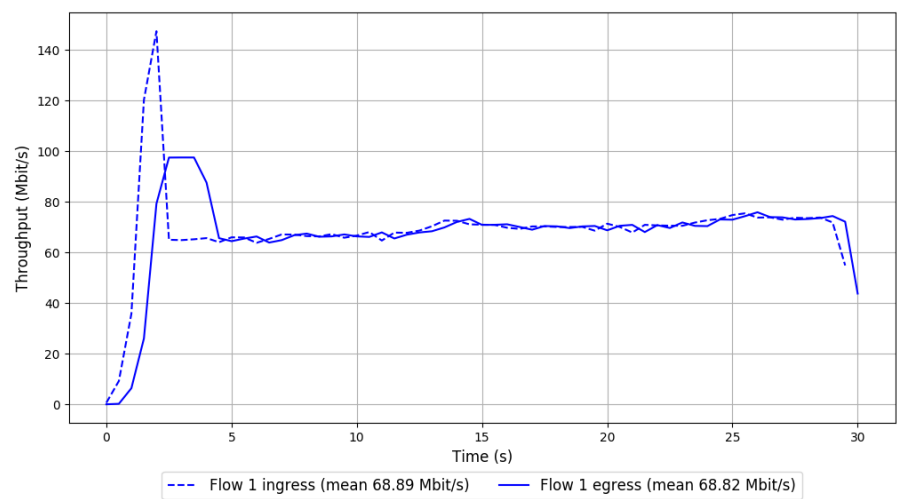

Flow 1 (95th percentile 342.04 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-07-12 11:56:00
End at: 2019-07-12 11:56:30
Local clock offset: -7.972 ms
Remote clock offset: -9.173 ms


# Below is generated by plot.py at 2019-07-12 12:37:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.82 Mbit/s
95th percentile per-packet one-way delay: 322.627 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 68.82 Mbit/s
95th percentile per-packet one-way delay: 322.627 ms
Loss rate: 0.69%
```

Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 68.89 Mbit/s)   Flow 1 egress (mean 68.82 Mbit/s)

Flow 1 (95th percentile 322.63 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-07-12 12:24:46
End at: 2019-07-12 12:25:16
Local clock offset: -6.824 ms
Remote clock offset: -12.251 ms


# Below is generated by plot.py at 2019-07-12 12:37:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 69.49 Mbit/s
95th percentile per-packet one-way delay: 343.907 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 69.49 Mbit/s
95th percentile per-packet one-way delay: 343.907 ms
Loss rate: 0.69%
```
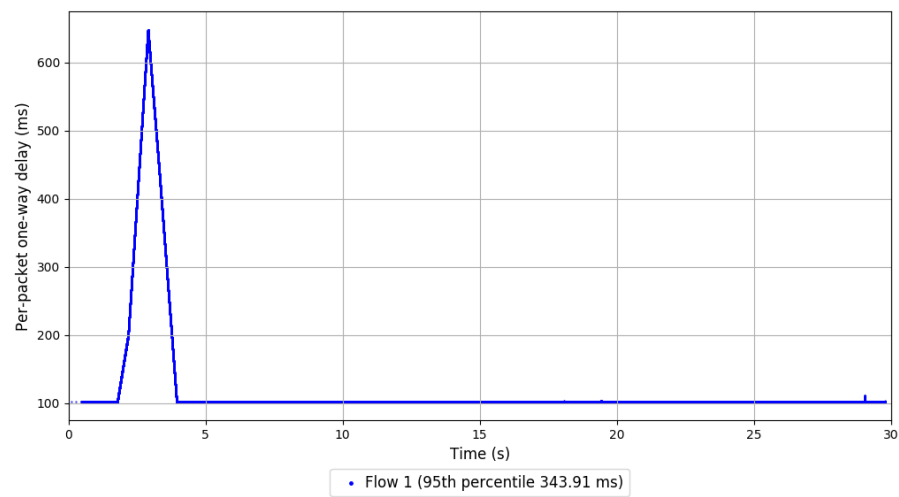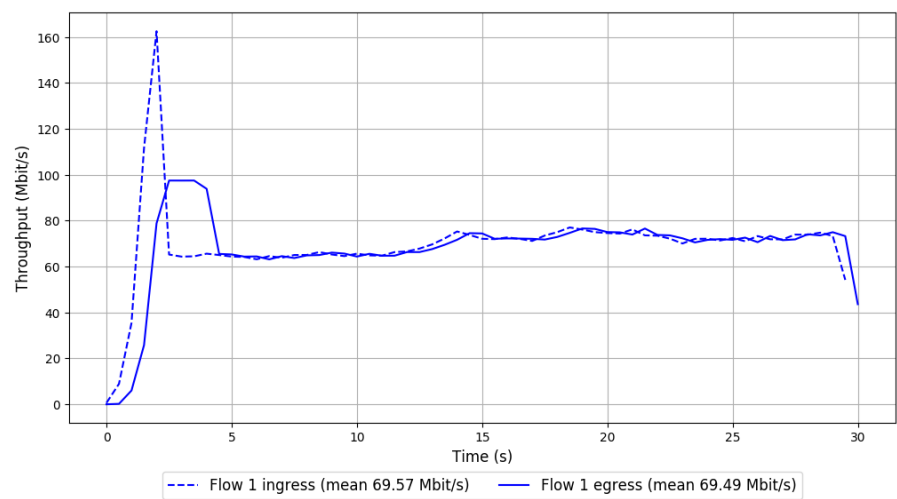
Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 69.57 Mbit/s) — Flow 1 egress (mean 69.49 Mbit/s)
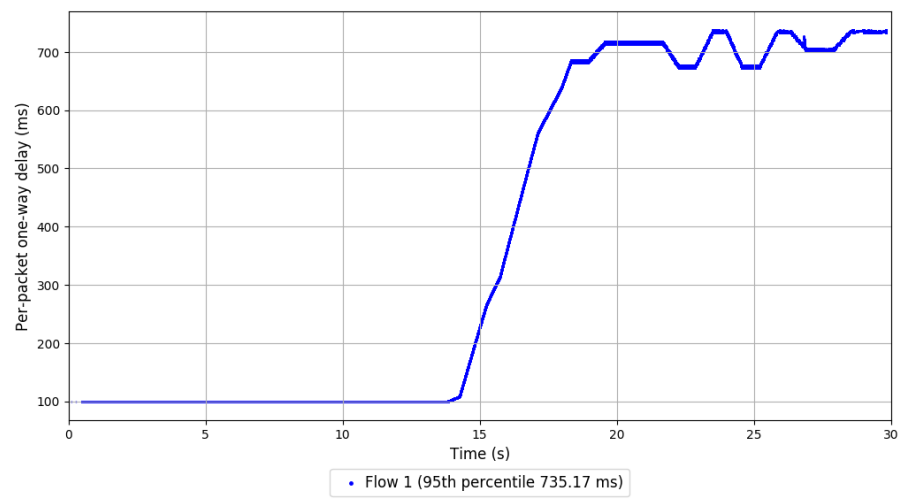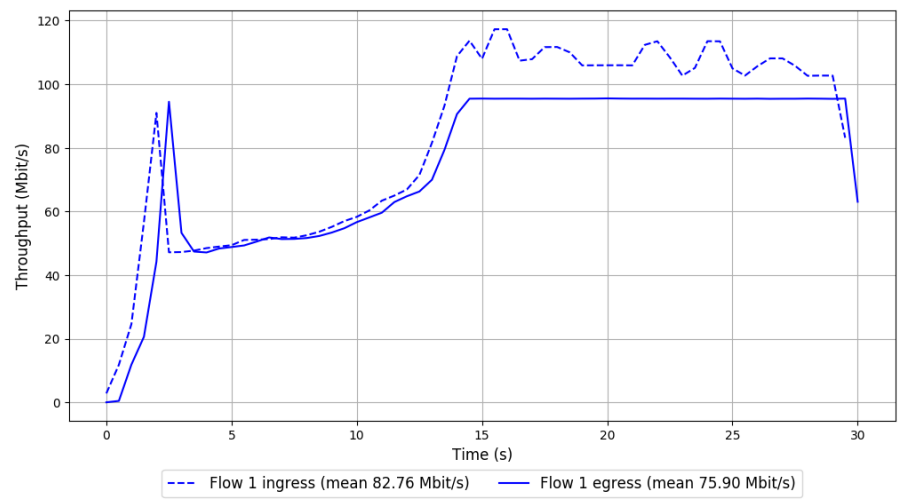

Flow 1 (95th percentile 343.91 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-07-12 10:11:33
End at: 2019-07-12 10:12:03
Local clock offset: -7.1 ms
Remote clock offset: -5.382 ms


# Below is generated by plot.py at 2019-07-12 12:38:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.90 Mbit/s
95th percentile per-packet one-way delay: 735.173 ms
Loss rate: 8.83%
-- Flow 1:
Average throughput: 75.90 Mbit/s
95th percentile per-packet one-way delay: 735.173 ms
Loss rate: 8.83%
```

Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-07-12 10:40:09
End at: 2019-07-12 10:40:39
Local clock offset: -6.557 ms
Remote clock offset: -5.44 ms


# Below is generated by plot.py at 2019-07-12 12:39:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.76 Mbit/s
95th percentile per-packet one-way delay: 483.283 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 83.76 Mbit/s
95th percentile per-packet one-way delay: 483.283 ms
Loss rate: 1.40%
```
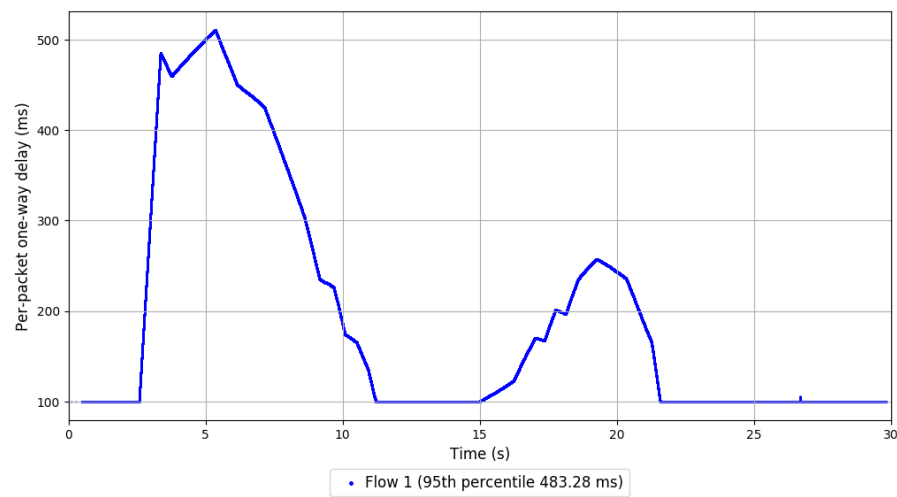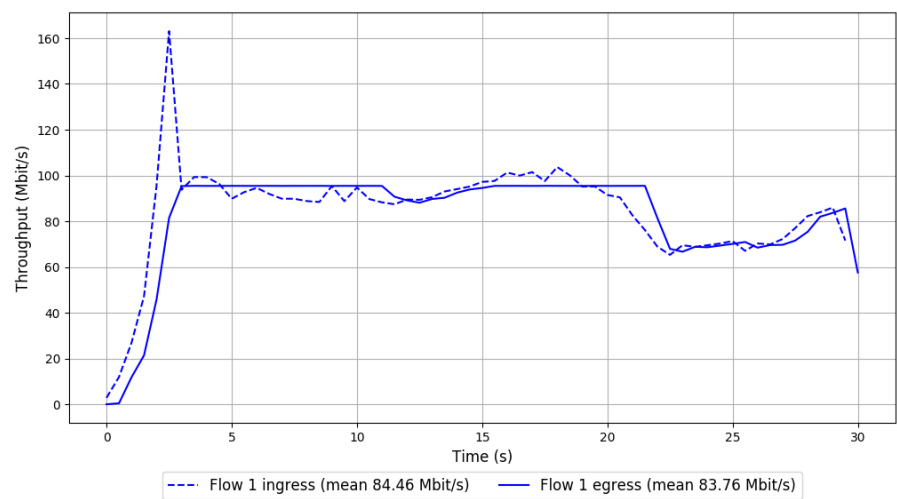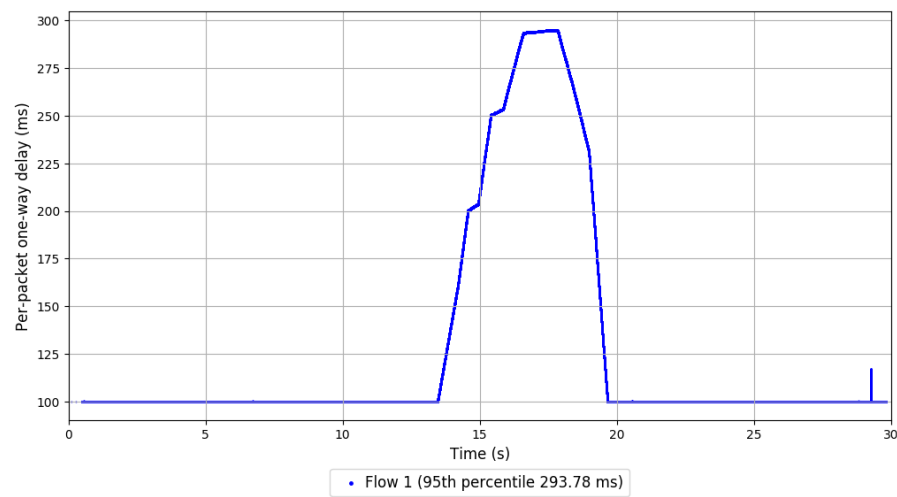
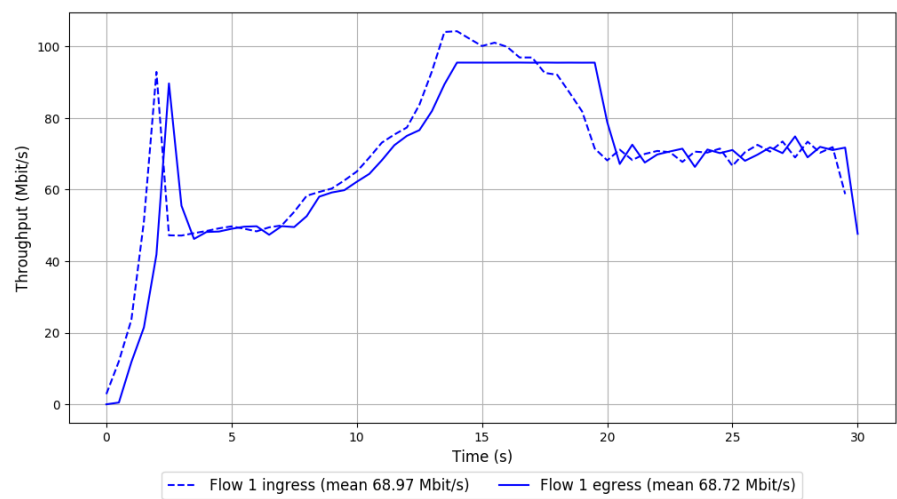Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-07-12 11:08:53
End at: 2019-07-12 11:09:23
Local clock offset: -6.566 ms
Remote clock offset: -8.986 ms


# Below is generated by plot.py at 2019-07-12 12:39:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.72 Mbit/s
95th percentile per-packet one-way delay: 293.779 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 68.72 Mbit/s
95th percentile per-packet one-way delay: 293.779 ms
Loss rate: 0.95%
```

Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 68.97 Mbit/s) --- Flow 1 egress (mean 68.72 Mbit/s)
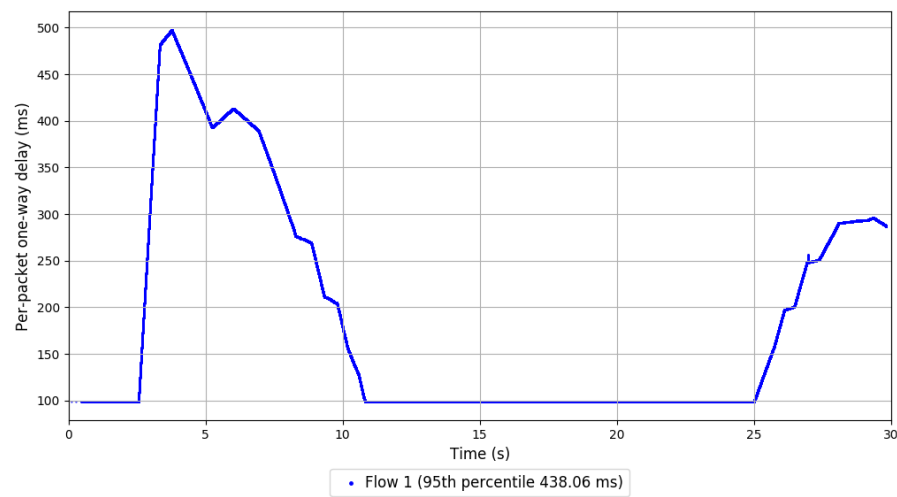

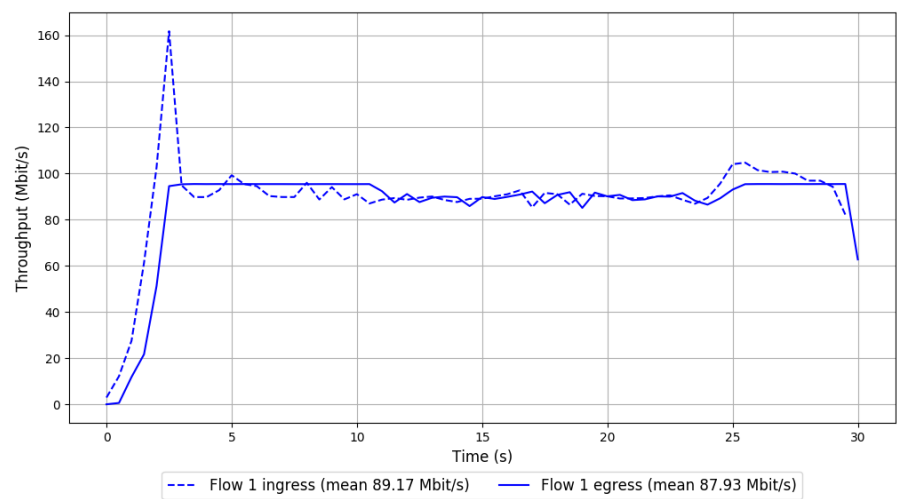
• Flow 1 (95th percentile 293.78 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-07-12 11:37:36
End at: 2019-07-12 11:38:06
Local clock offset: -6.655 ms
Remote clock offset: -7.697 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.93 Mbit/s
95th percentile per-packet one-way delay: 438.060 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 87.93 Mbit/s
95th percentile per-packet one-way delay: 438.060 ms
Loss rate: 1.97%
```

Run 4: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 89.17 Mbit/s)   Flow 1 egress (mean 87.93 Mbit/s)

Flow 1 (95th percentile 438.06 ms)

```
Run 5: Statistics of PCC-Expr

Start at: 2019-07-12 12:06:46
End at: 2019-07-12 12:07:16
Local clock offset: -6.889 ms
Remote clock offset: -9.42 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.56 Mbit/s
95th percentile per-packet one-way delay: 100.732 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 22.56 Mbit/s
95th percentile per-packet one-way delay: 100.732 ms
Loss rate: 1.03%
```
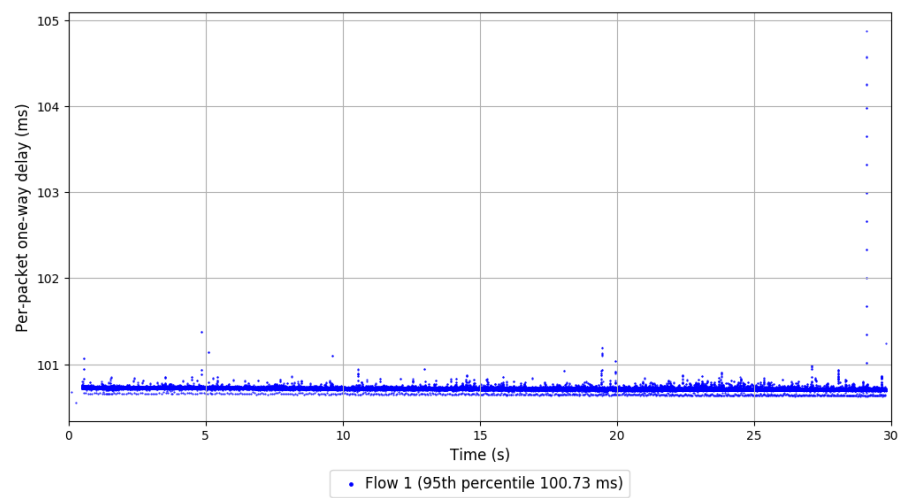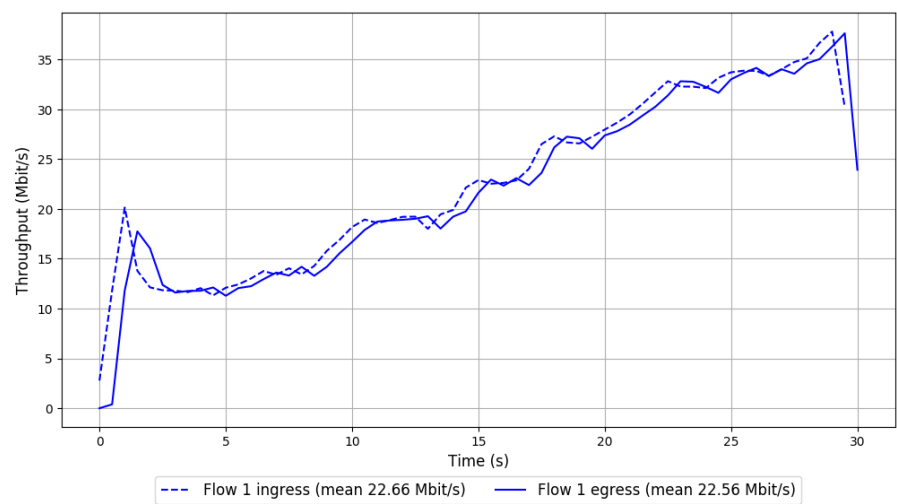
Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 22.66 Mbit/s)   Flow 1 egress (mean 22.56 Mbit/s)

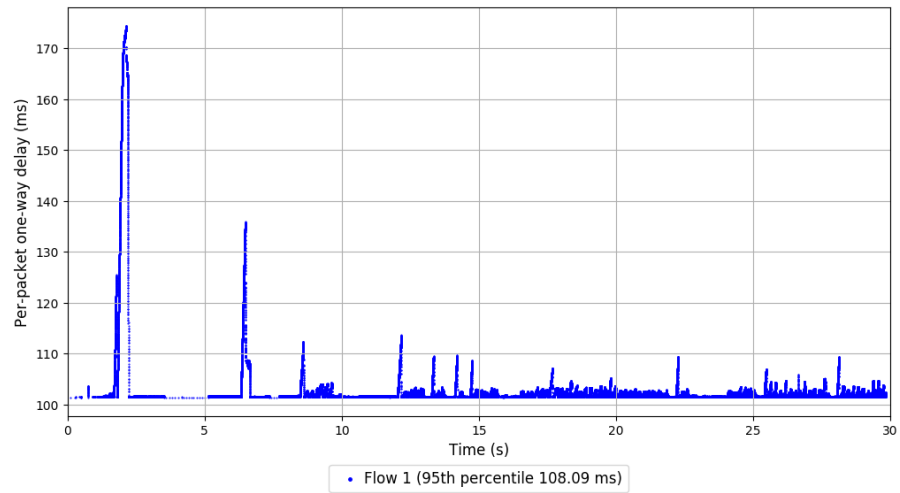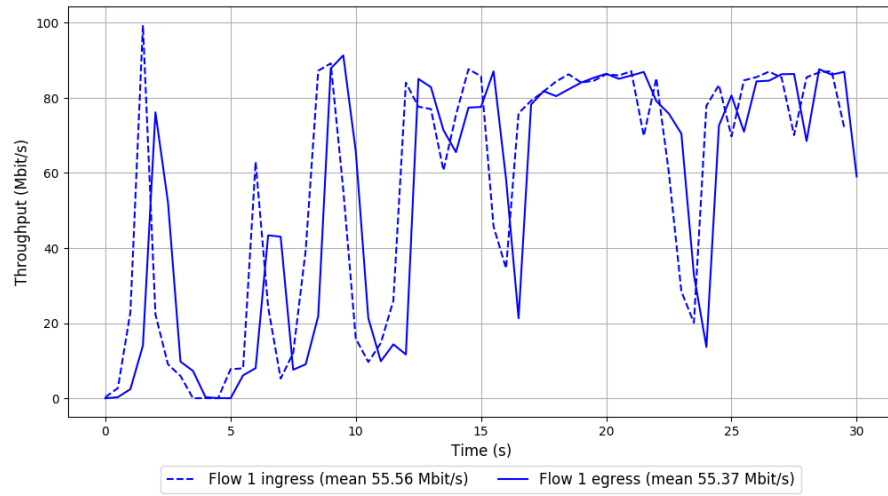
· Flow 1 (95th percentile 100.73 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-07-12 10:18:49
End at: 2019-07-12 10:19:19
Local clock offset: -7.489 ms
Remote clock offset: -7.033 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.37 Mbit/s
95th percentile per-packet one-way delay: 108.089 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 55.37 Mbit/s
95th percentile per-packet one-way delay: 108.089 ms
Loss rate: 0.92%
```

Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-07-12 10:47:26
End at: 2019-07-12 10:47:56
Local clock offset: -5.576 ms
Remote clock offset: -7.764 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 56.56 Mbit/s
95th percentile per-packet one-way delay: 106.138 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 56.56 Mbit/s
95th percentile per-packet one-way delay: 106.138 ms
Loss rate: 0.17%
```
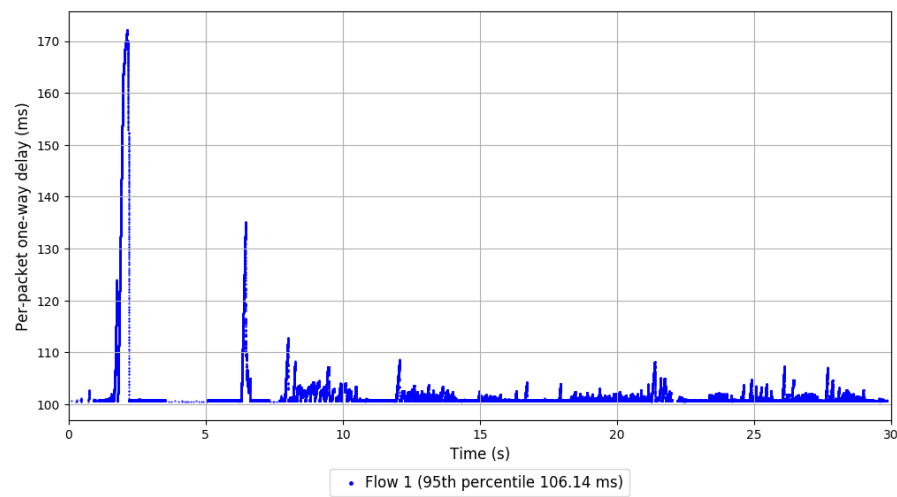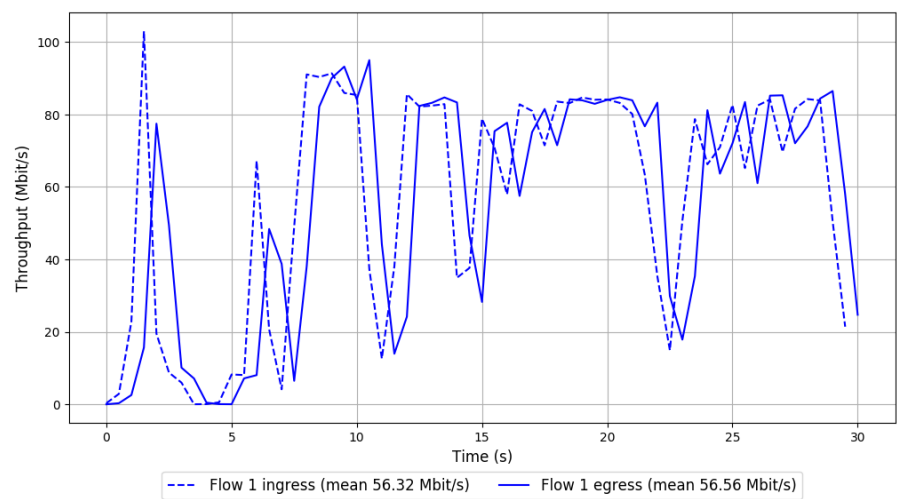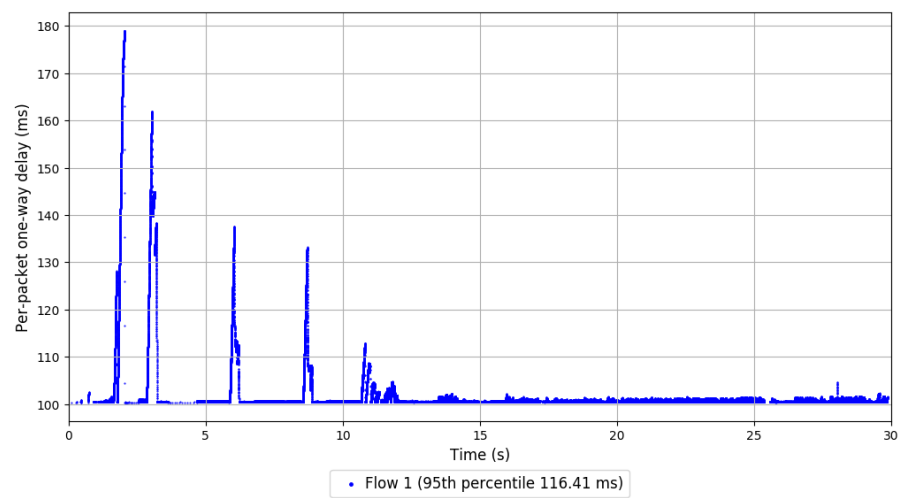
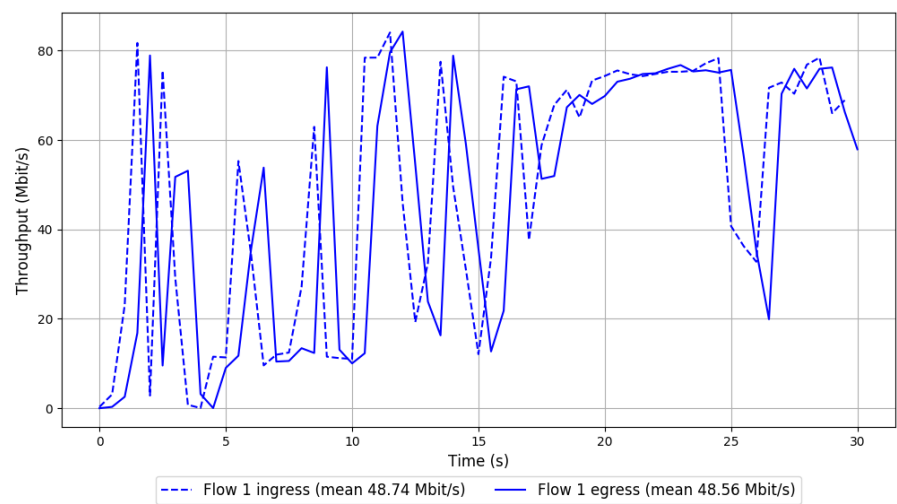Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-07-12 11:16:14
End at: 2019-07-12 11:16:44
Local clock offset: -5.774 ms
Remote clock offset: -8.815 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 48.56 Mbit/s
95th percentile per-packet one-way delay: 116.408 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 48.56 Mbit/s
95th percentile per-packet one-way delay: 116.408 ms
Loss rate: 0.94%
```

Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-07-12 11:44:56
End at: 2019-07-12 11:45:26
Local clock offset: -7.567 ms
Remote clock offset: -9.75 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.83 Mbit/s
95th percentile per-packet one-way delay: 108.814 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 49.83 Mbit/s
95th percentile per-packet one-way delay: 108.814 ms
Loss rate: 0.22%
```
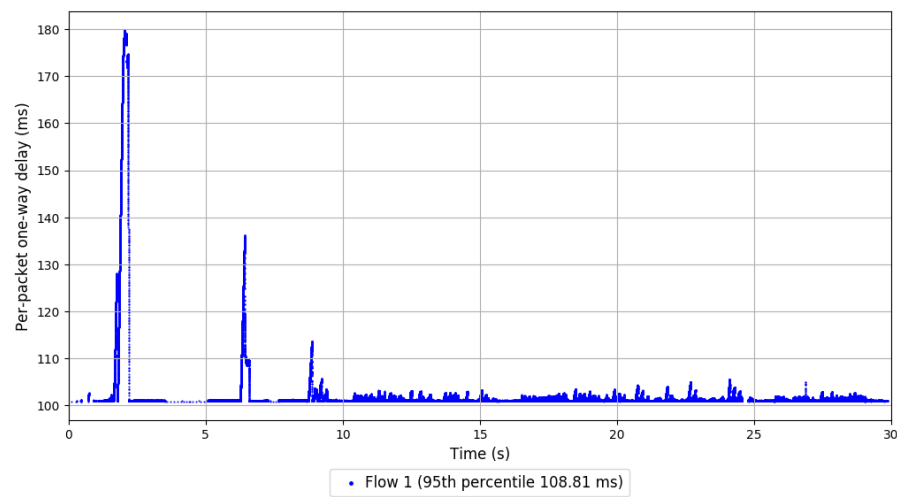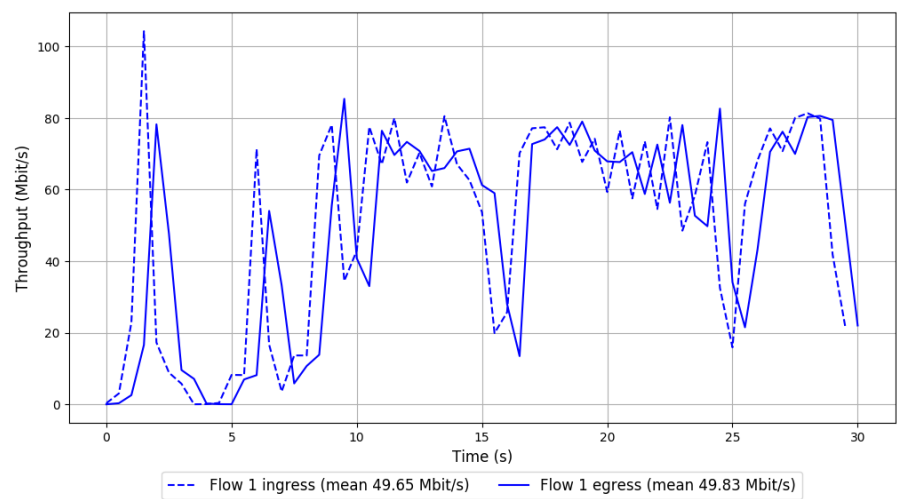
Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 49.65 Mbit/s)   Flow 1 egress (mean 49.83 Mbit/s)

• Flow 1 (95th percentile 108.81 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-07-12 12:13:58
End at: 2019-07-12 12:14:28
Local clock offset: -7.345 ms
Remote clock offset: -8.557 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 46.74 Mbit/s
95th percentile per-packet one-way delay: 107.051 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 46.74 Mbit/s
95th percentile per-packet one-way delay: 107.051 ms
Loss rate: 0.89%
```
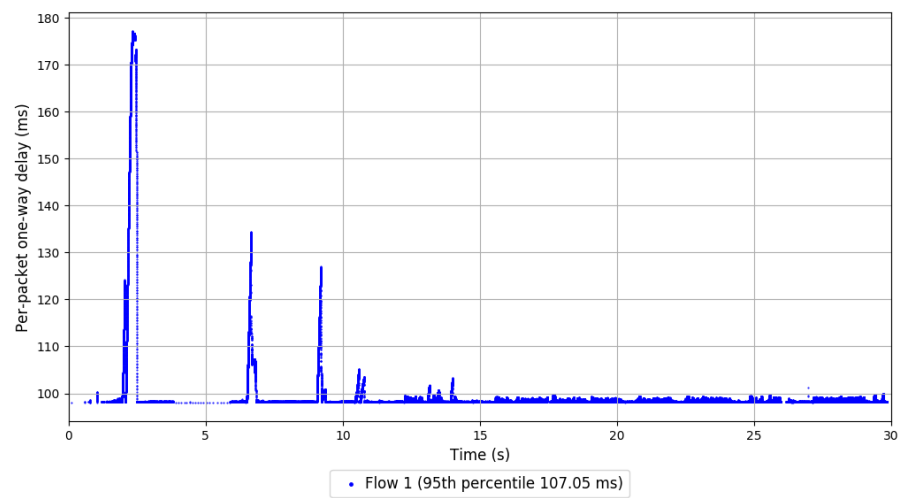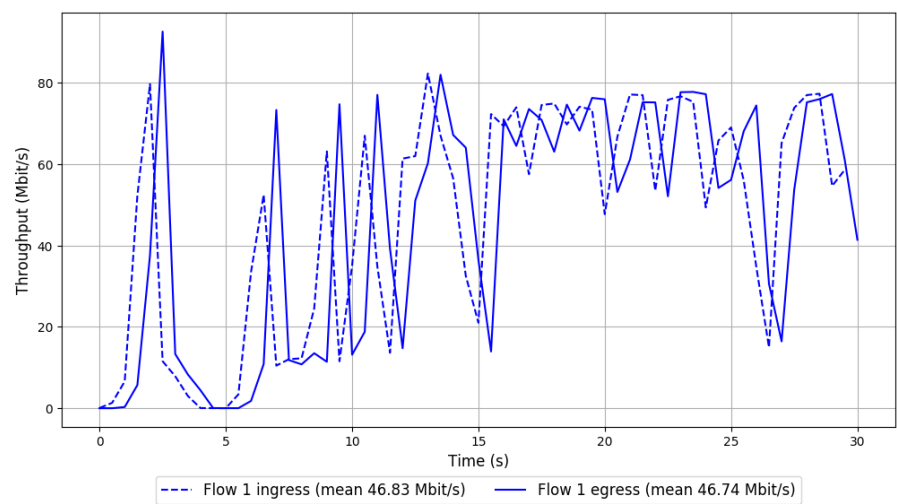
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 46.83 Mbit/s) ----- Flow 1 egress (mean 46.74 Mbit/s)
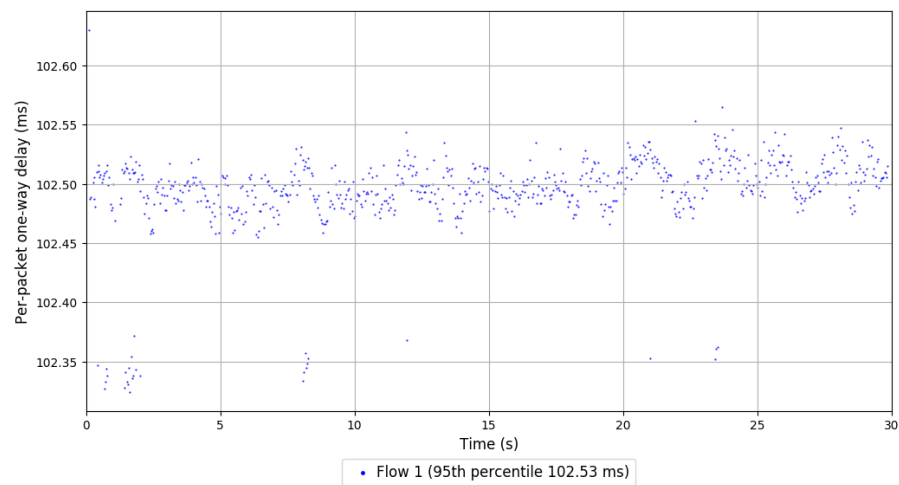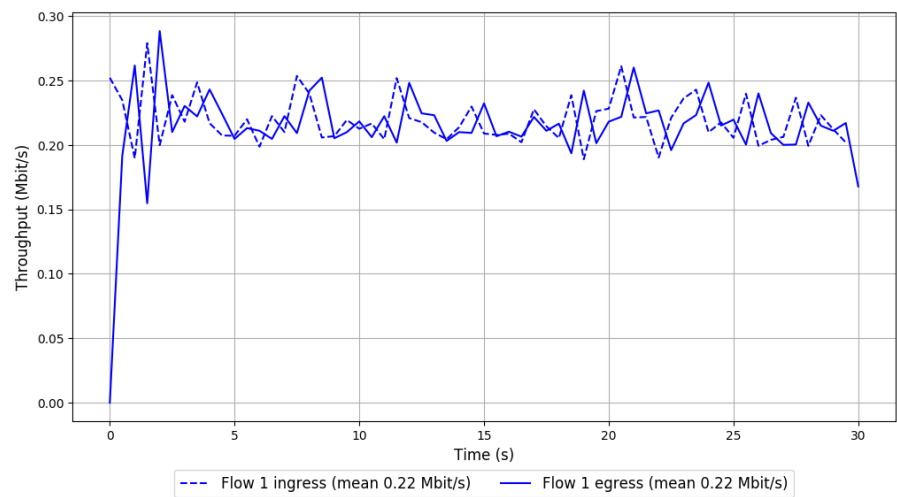

Flow 1 (95th percentile 107.05 ms)

```
Run 1: Statistics of SCReAM

Start at: 2019-07-12 10:06:49
End at: 2019-07-12 10:07:19
Local clock offset: -6.149 ms
Remote clock offset: -7.238 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 102.528 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 102.528 ms
Loss rate: 0.64%
```
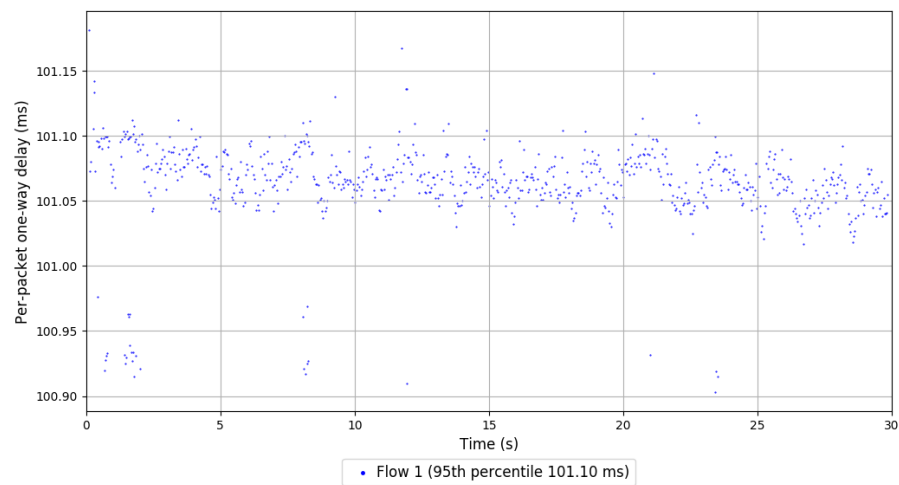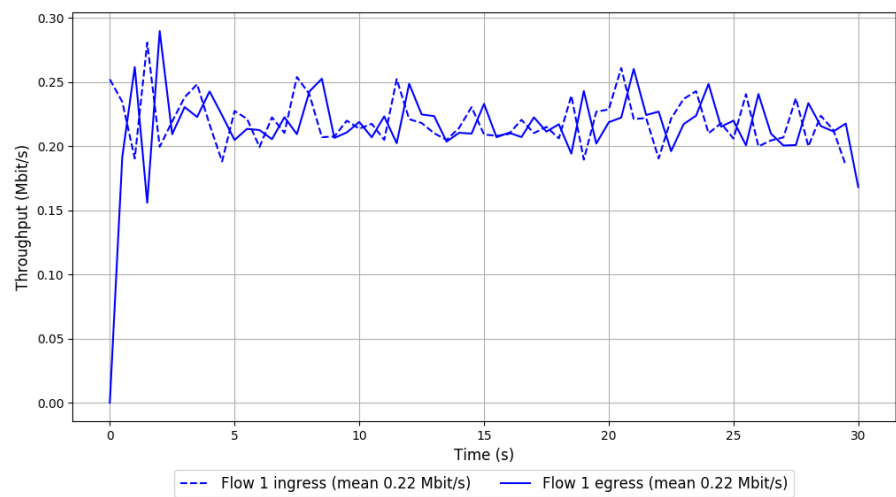
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-07-12 10:35:29
End at: 2019-07-12 10:35:59
Local clock offset: -6.232 ms
Remote clock offset: -5.991 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 101.099 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 101.099 ms
Loss rate: 0.51%
```

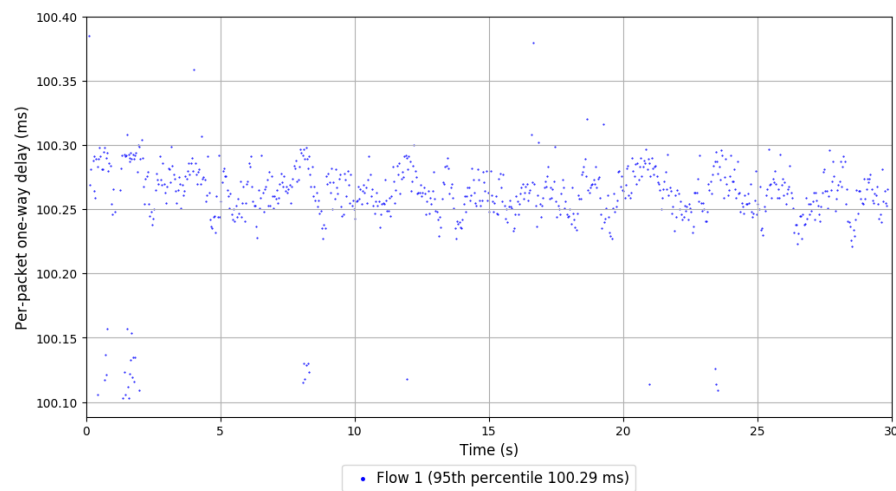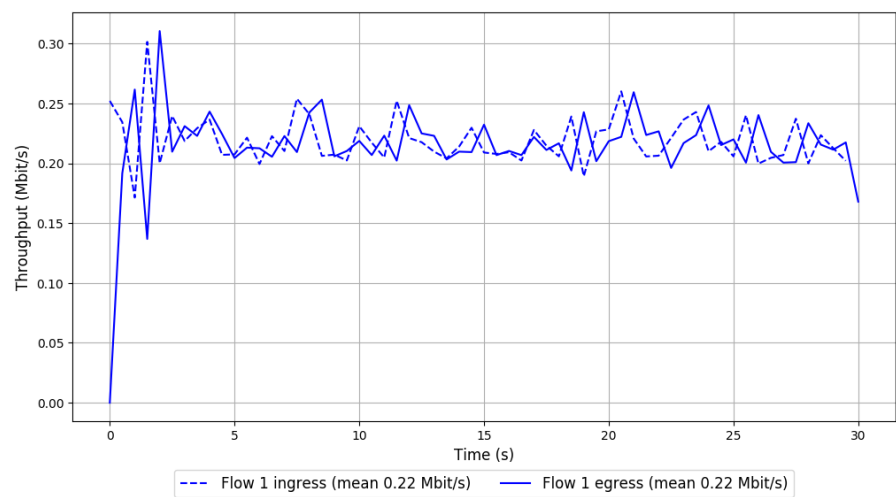# Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-07-12 11:04:13
End at: 2019-07-12 11:04:43
Local clock offset: -6.29 ms
Remote clock offset: -8.779 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 100.292 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 100.292 ms
Loss rate: 0.64%
```

Run 3: Report of SCReAM — Data Link

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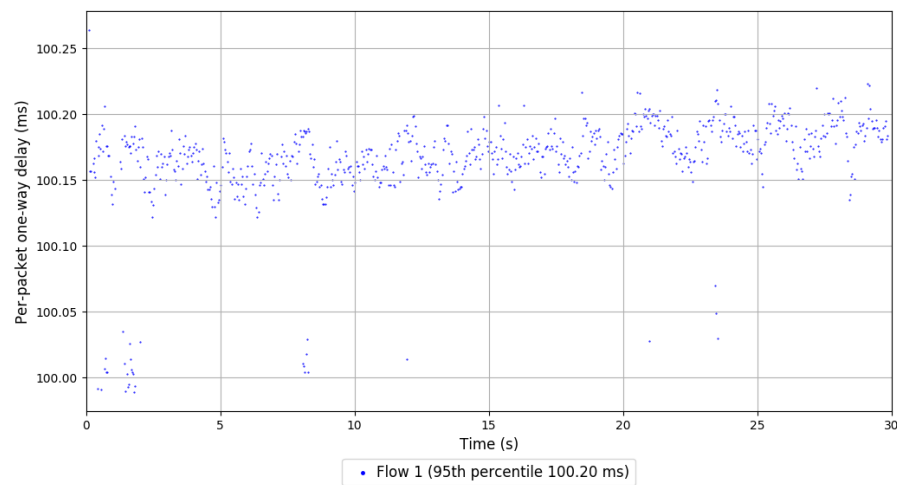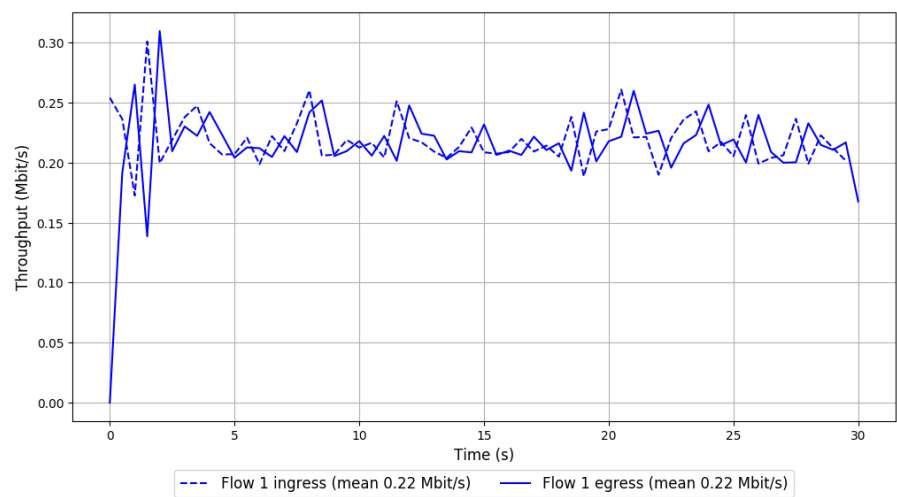

Flow 1 (95th percentile 100.29 ms)

```
Run 4: Statistics of SCReAM

Start at: 2019-07-12 11:32:57
End at: 2019-07-12 11:33:27
Local clock offset: -6.007 ms
Remote clock offset: -7.848 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 100.200 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 100.200 ms
Loss rate: 0.64%
```
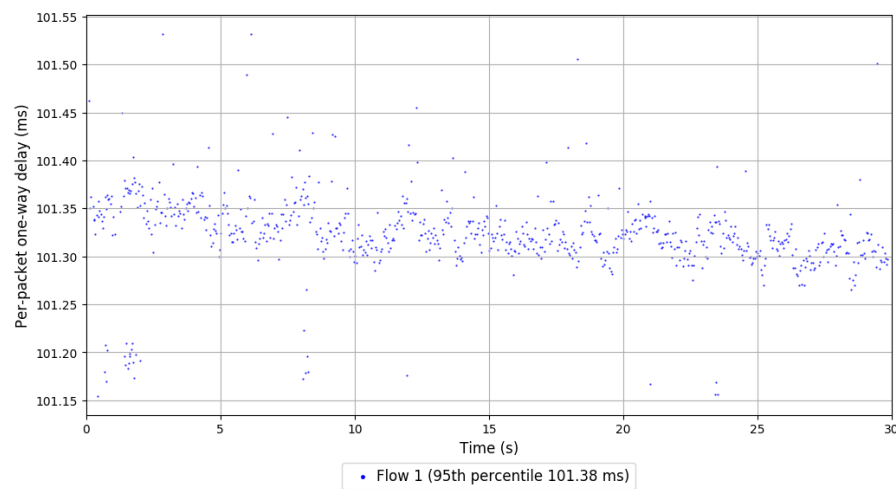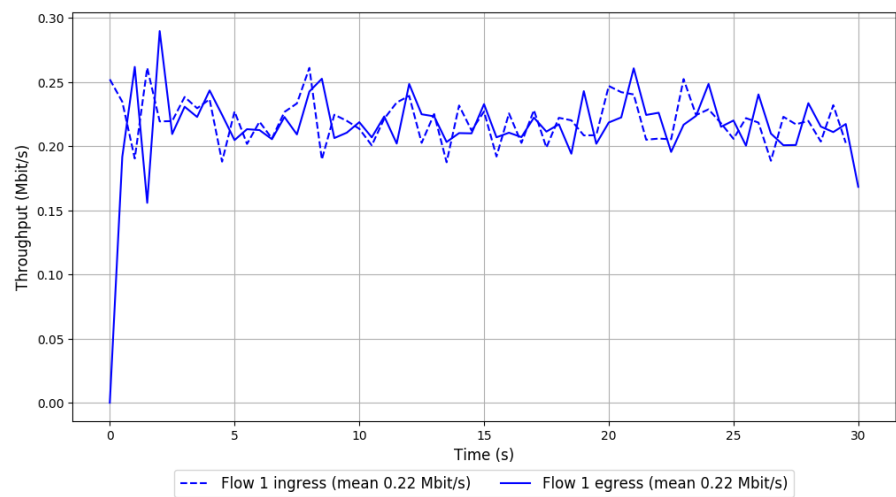
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-07-12 12:01:58
End at: 2019-07-12 12:02:28
Local clock offset: -7.854 ms
Remote clock offset: -11.401 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 101.377 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 101.377 ms
Loss rate: 0.64%
```

Run 5: Report of SCReAM — Data Link

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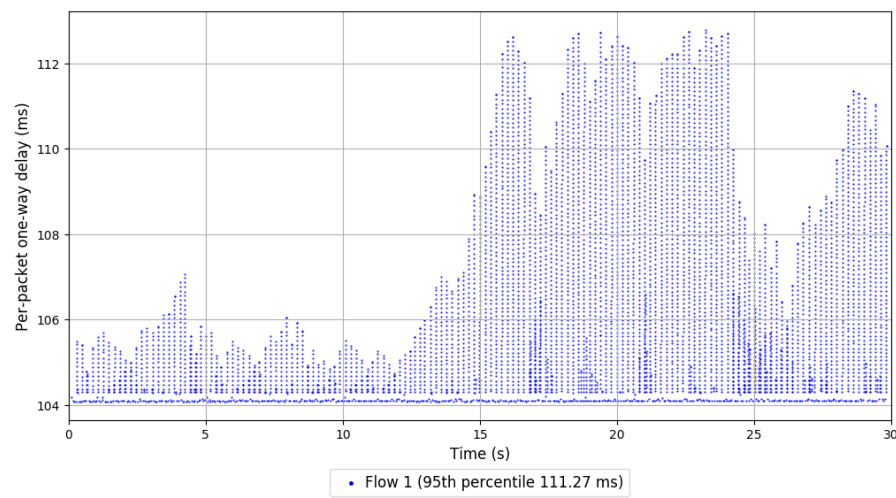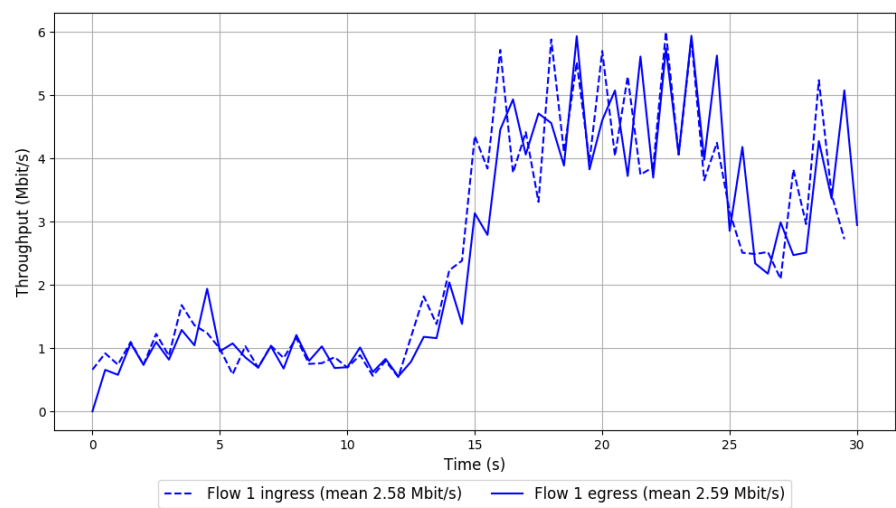

Flow 1 (95th percentile 101.38 ms)

```
Run 1: Statistics of Sprout

Start at: 2019-07-12 10:24:47
End at: 2019-07-12 10:25:17
Local clock offset: -6.55 ms
Remote clock offset: -9.489 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.59 Mbit/s
95th percentile per-packet one-way delay: 111.270 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.59 Mbit/s
95th percentile per-packet one-way delay: 111.270 ms
Loss rate: 0.00%
```
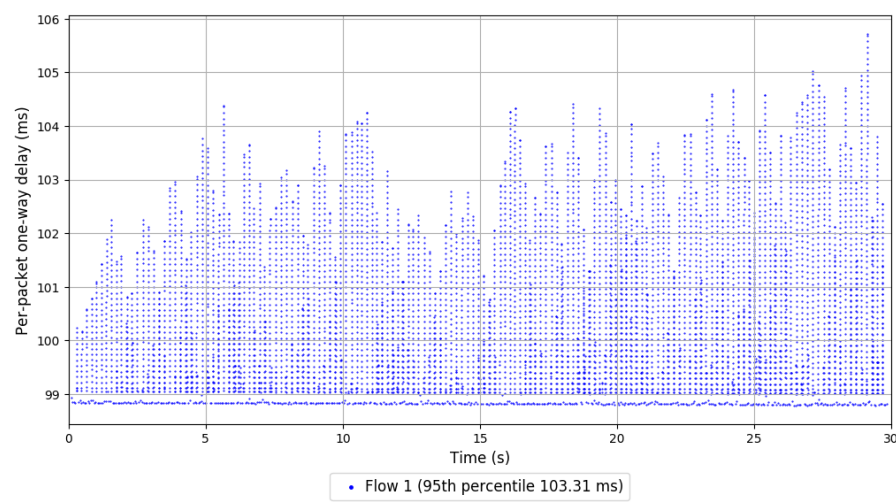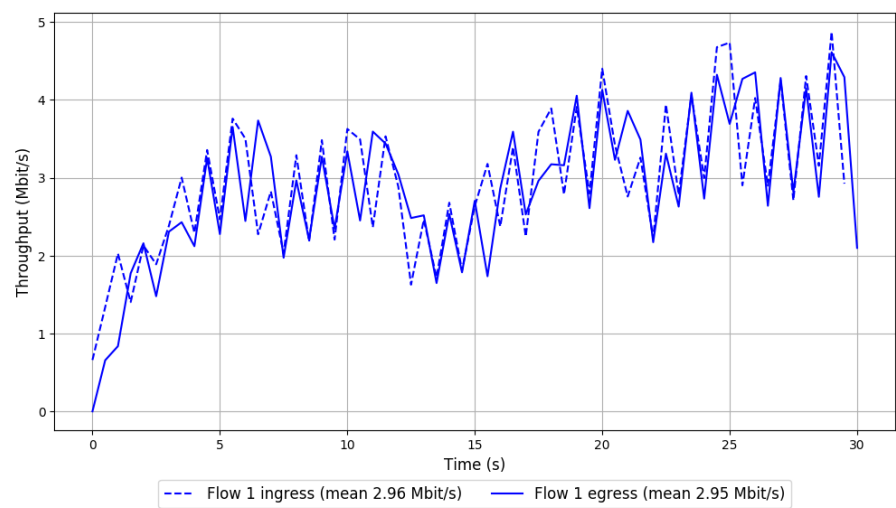
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-07-12 10:53:26
End at: 2019-07-12 10:53:56
Local clock offset: -6.267 ms
Remote clock offset: -7.363 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.95 Mbit/s
95th percentile per-packet one-way delay: 103.308 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 2.95 Mbit/s
95th percentile per-packet one-way delay: 103.308 ms
Loss rate: 0.85%
```
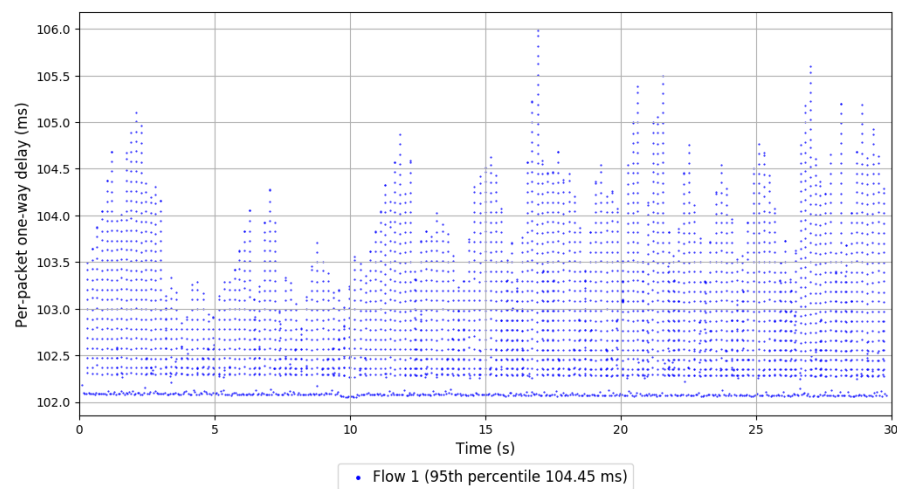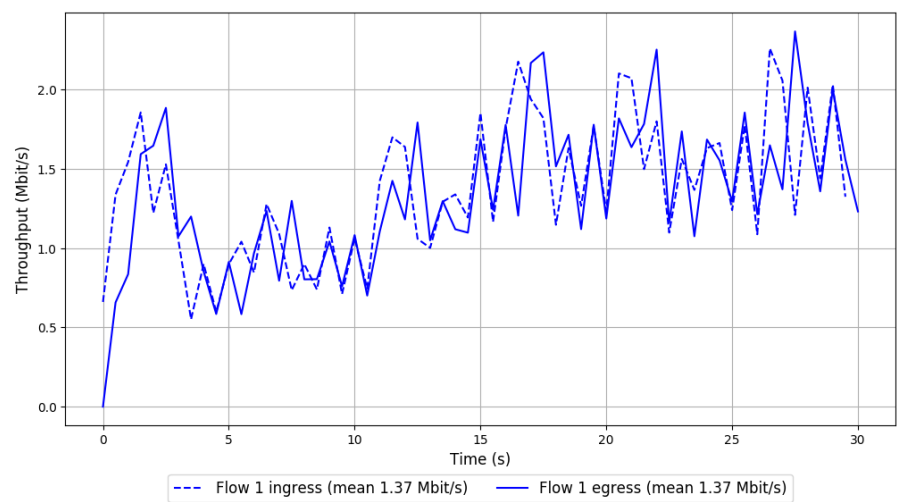
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-07-12 11:22:15
End at: 2019-07-12 11:22:45
Local clock offset: -6.635 ms
Remote clock offset: -10.871 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 104.449 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 104.449 ms
Loss rate: 0.80%
```

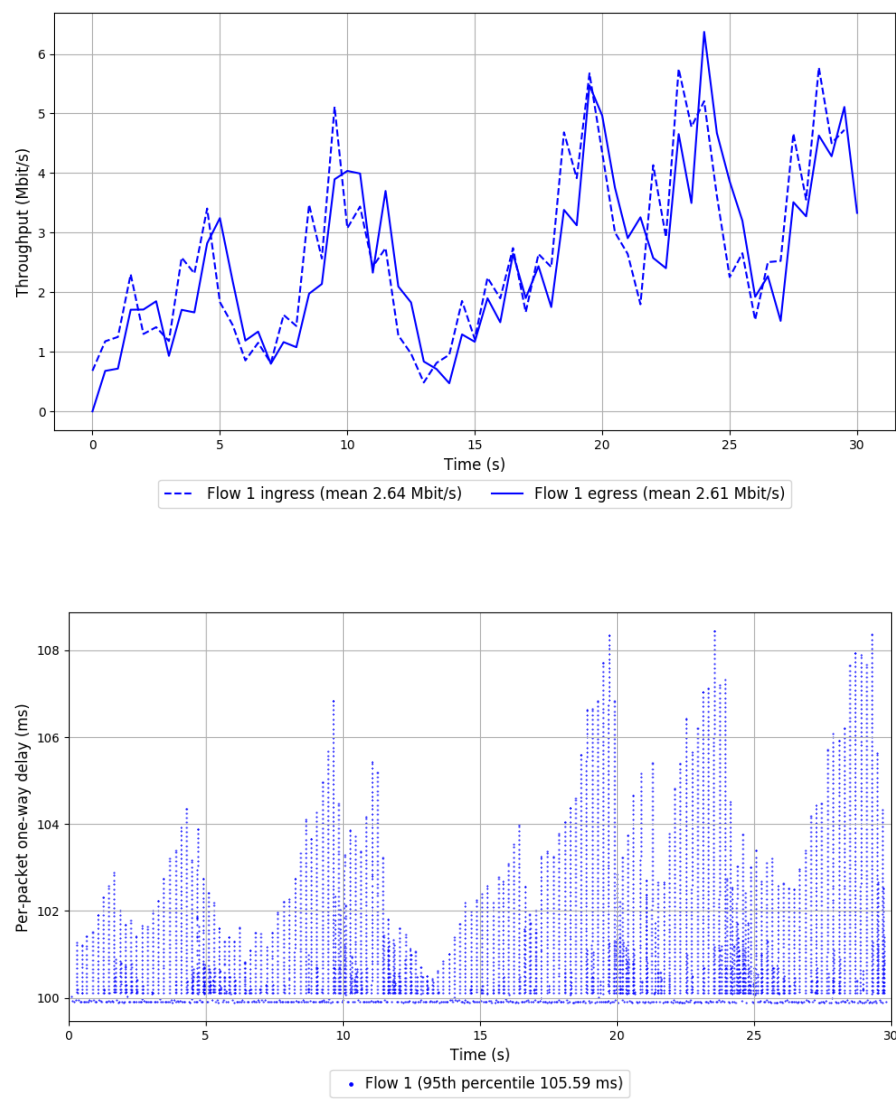## Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-07-12 11:51:14
End at: 2019-07-12 11:51:44
Local clock offset: -6.879 ms
Remote clock offset: -8.174 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.61 Mbit/s
95th percentile per-packet one-way delay: 105.595 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 2.61 Mbit/s
95th percentile per-packet one-way delay: 105.595 ms
Loss rate: 1.64%
```
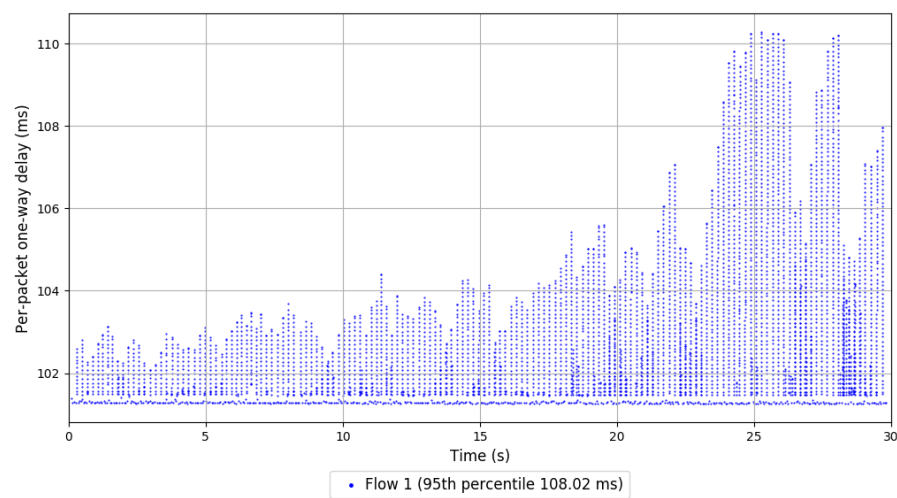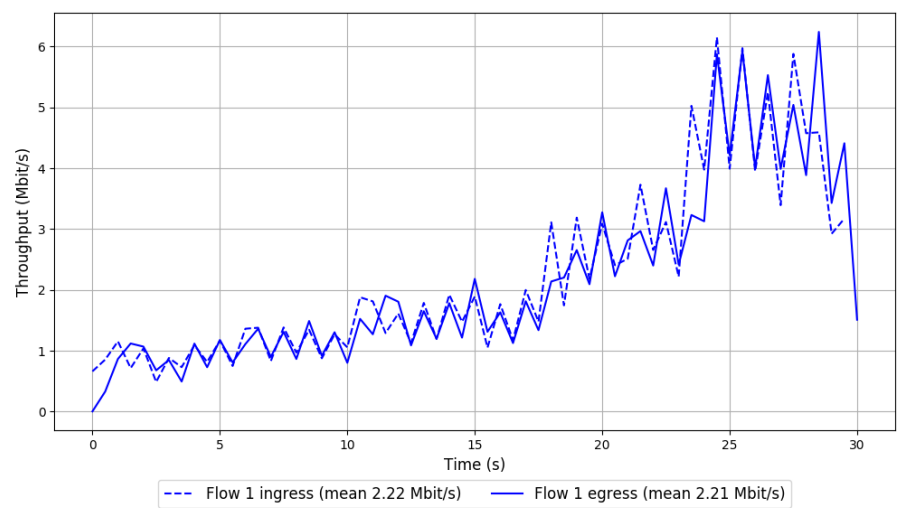
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-07-12 12:20:00
End at: 2019-07-12 12:20:30
Local clock offset: -6.775 ms
Remote clock offset: -10.489 ms


# Below is generated by plot.py at 2019-07-12 12:39:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 108.021 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 108.021 ms
Loss rate: 1.25%
```
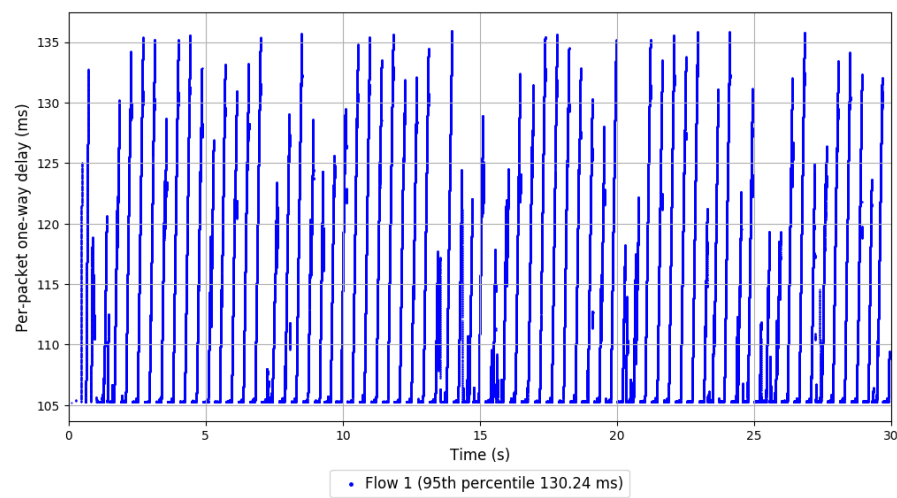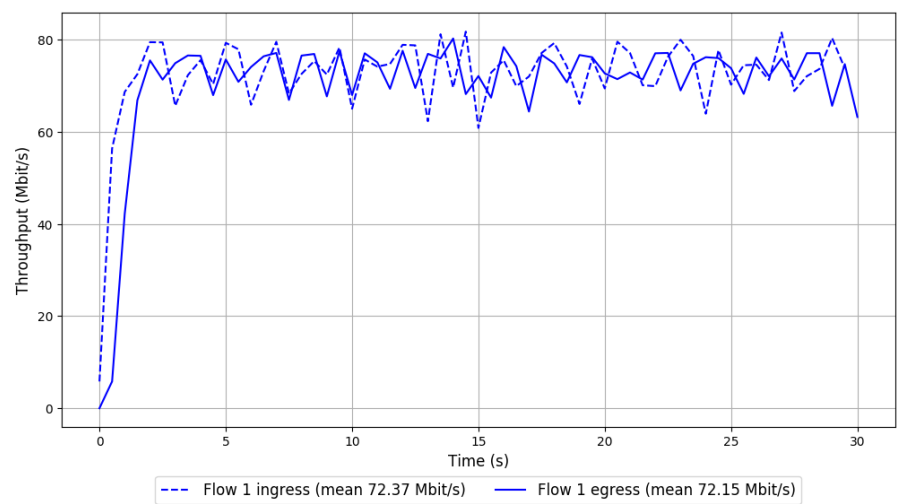
Run 5: Report of Sprout — Data Link

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

Start at: 2019-07-12 10:03:11
End at: 2019-07-12 10:03:41
Local clock offset: -5.975 ms
Remote clock offset: -10.98 ms


# Below is generated by plot.py at 2019-07-12 12:40:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.15 Mbit/s
95th percentile per-packet one-way delay: 130.240 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 72.15 Mbit/s
95th percentile per-packet one-way delay: 130.240 ms
Loss rate: 0.81%
```

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

Flow 1 ingress (mean 72.37 Mbit/s) --- Flow 1 egress (mean 72.15 Mbit/s)

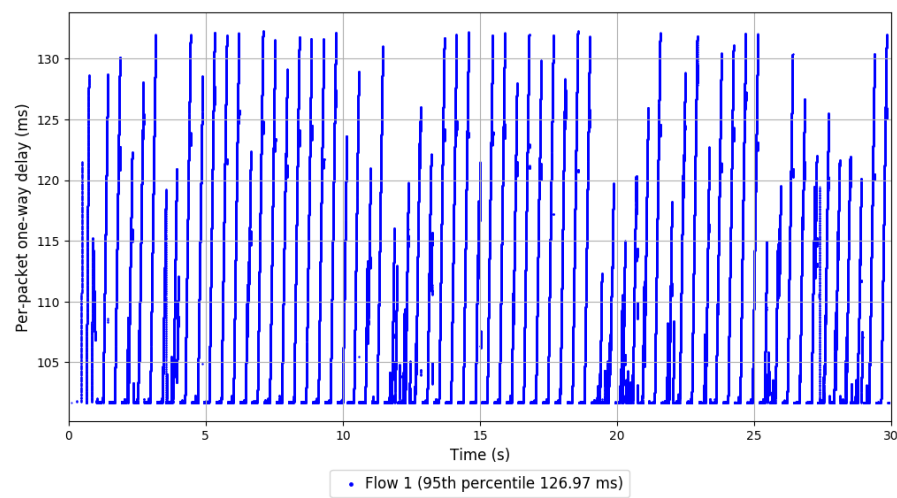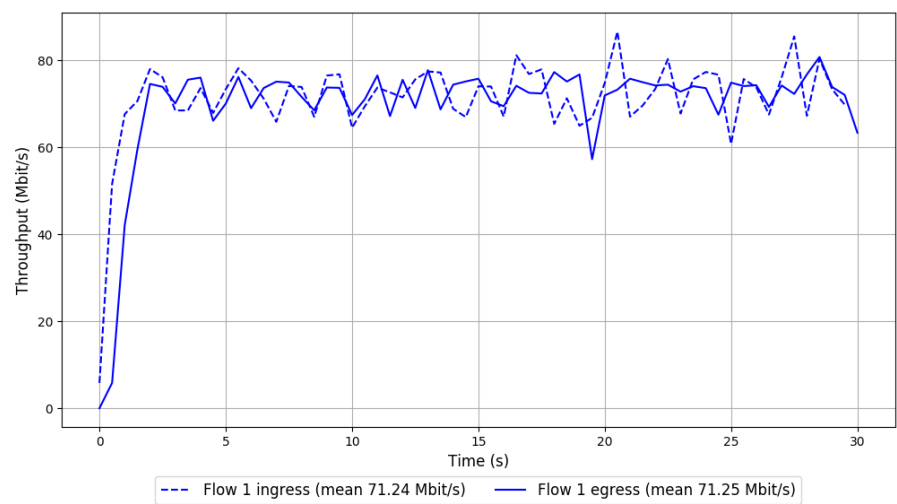
• Flow 1 (95th percentile 130.24 ms)

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

Start at: 2019-07-12 10:31:51
End at: 2019-07-12 10:32:21
Local clock offset: -6.26 ms
Remote clock offset: -5.799 ms


# Below is generated by plot.py at 2019-07-12 12:40:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.25 Mbit/s
95th percentile per-packet one-way delay: 126.966 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 71.25 Mbit/s
95th percentile per-packet one-way delay: 126.966 ms
Loss rate: 0.58%
```

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

Flow 1 ingress (mean 71.24 Mbit/s)   Flow 1 egress (mean 71.25 Mbit/s)

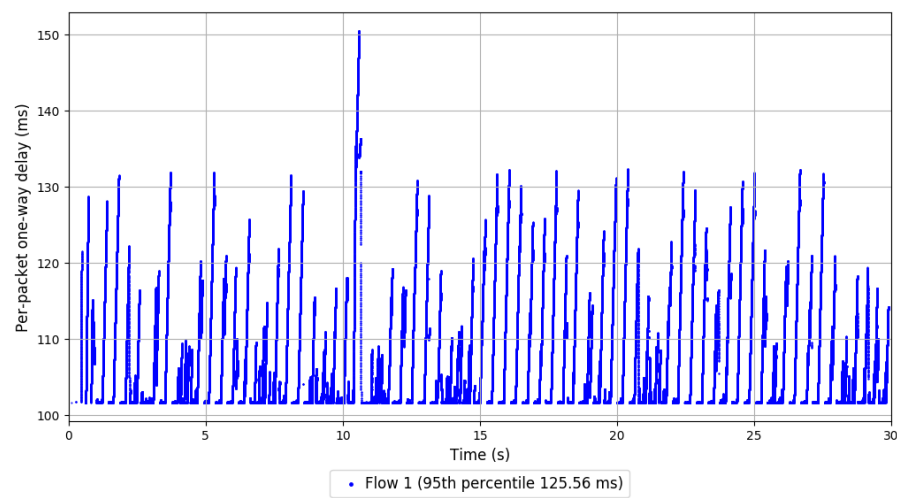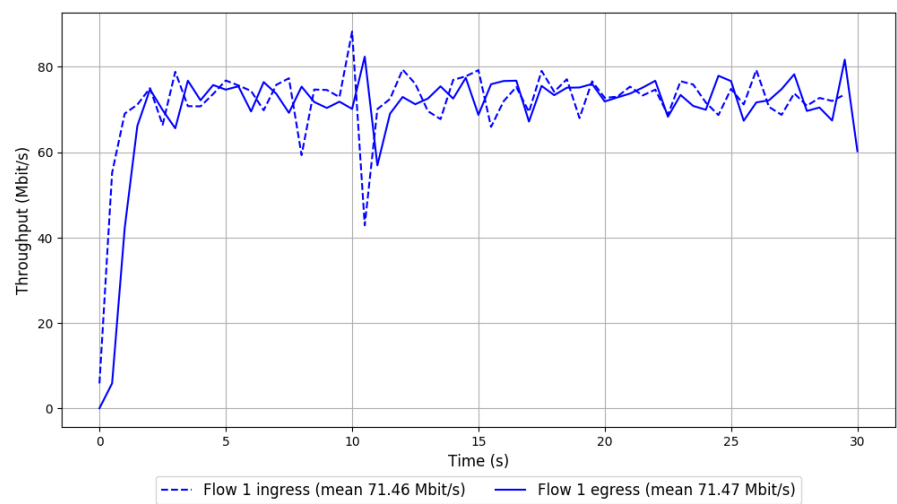• Flow 1 (95th percentile 126.97 ms)

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

Start at: 2019-07-12 11:00:29
End at: 2019-07-12 11:00:59
Local clock offset: -5.447 ms
Remote clock offset: -8.655 ms


# Below is generated by plot.py at 2019-07-12 12:40:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.47 Mbit/s
95th percentile per-packet one-way delay: 125.559 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 71.47 Mbit/s
95th percentile per-packet one-way delay: 125.559 ms
Loss rate: 0.57%
```

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

Flow 1 ingress (mean 71.46 Mbit/s) ---- Flow 1 egress (mean 71.47 Mbit/s)

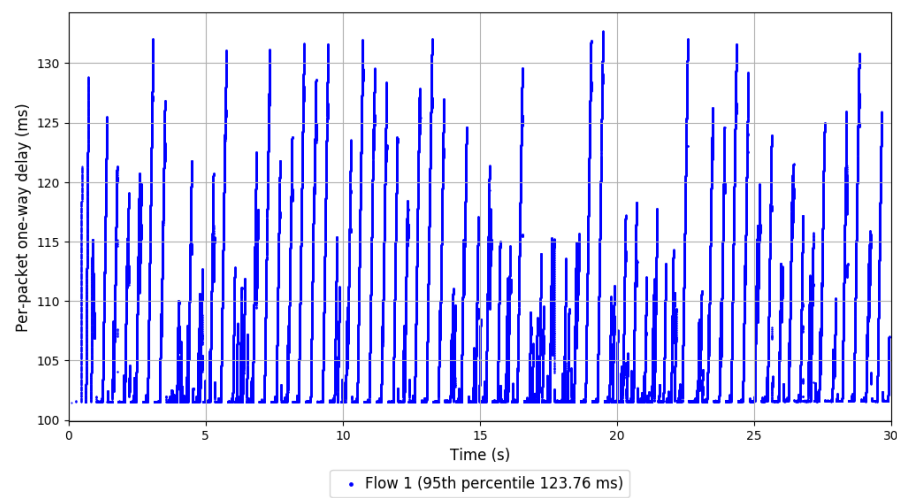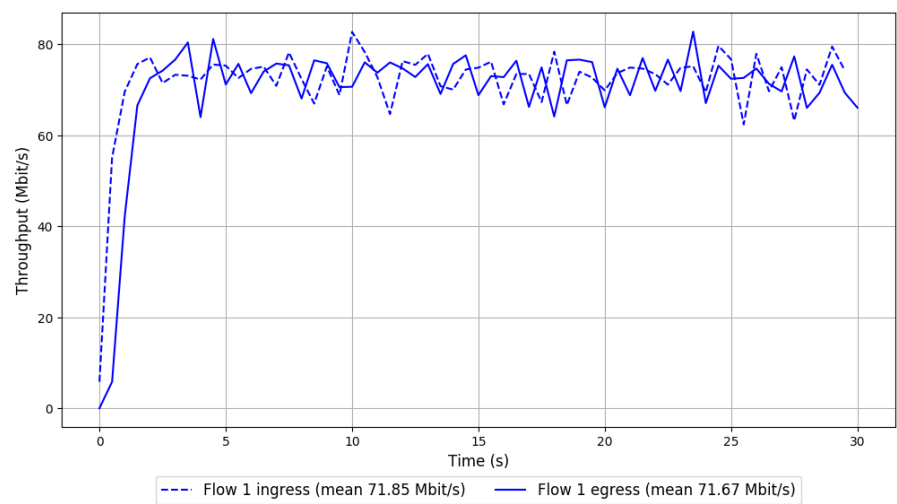
• Flow 1 (95th percentile 125.56 ms)

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

Start at: 2019-07-12 11:29:22
End at: 2019-07-12 11:29:53
Local clock offset: -6.611 ms
Remote clock offset: -10.175 ms

# Below is generated by plot.py at 2019-07-12 12:40:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.67 Mbit/s
95th percentile per-packet one-way delay: 123.764 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 71.67 Mbit/s
95th percentile per-packet one-way delay: 123.764 ms
Loss rate: 0.74%
```

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

Flow 1 ingress (mean 71.85 Mbit/s) — — — Flow 1 egress (mean 71.67 Mbit/s)

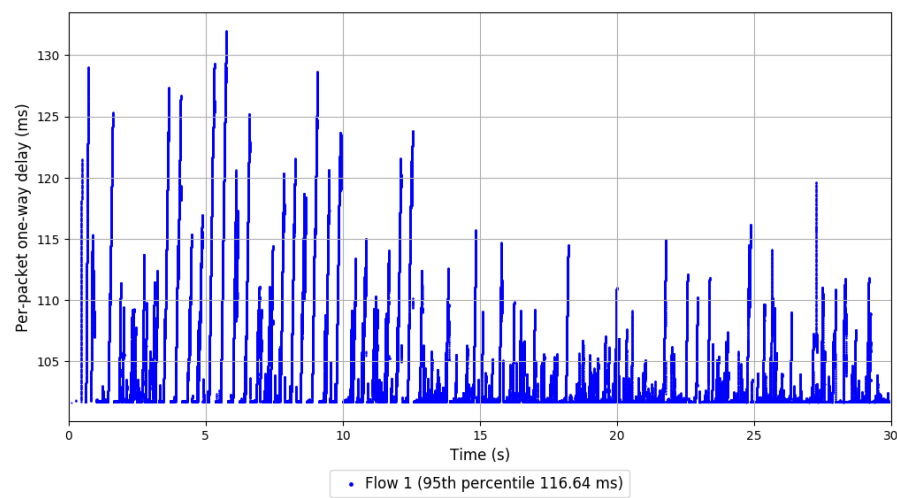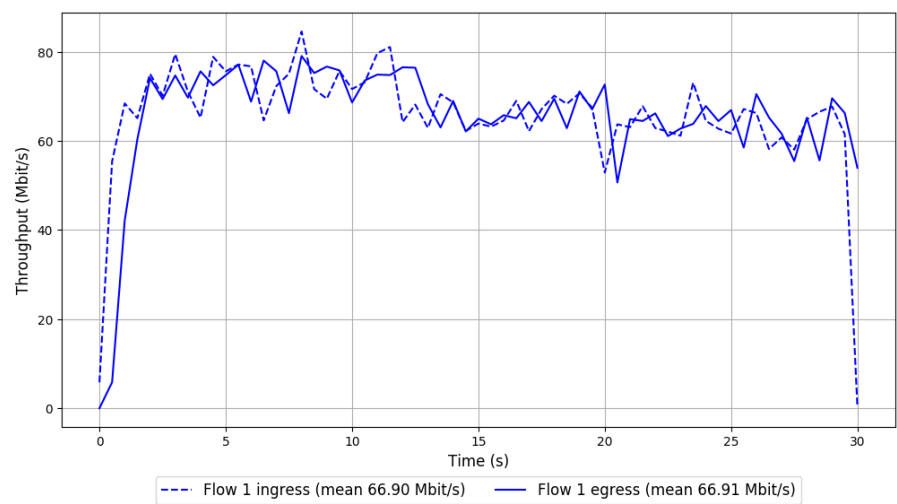
• Flow 1 (95th percentile 123.76 ms)

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

Start at: 2019-07-12 11:58:20
End at: 2019-07-12 11:58:50
Local clock offset: -8.04 ms
Remote clock offset: -10.963 ms


# Below is generated by plot.py at 2019-07-12 12:40:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.91 Mbit/s
95th percentile per-packet one-way delay: 116.639 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 66.91 Mbit/s
95th percentile per-packet one-way delay: 116.639 ms
Loss rate: 0.58%
```

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

Flow 1 ingress (mean 66.90 Mbit/s)   Flow 1 egress (mean 66.91 Mbit/s)
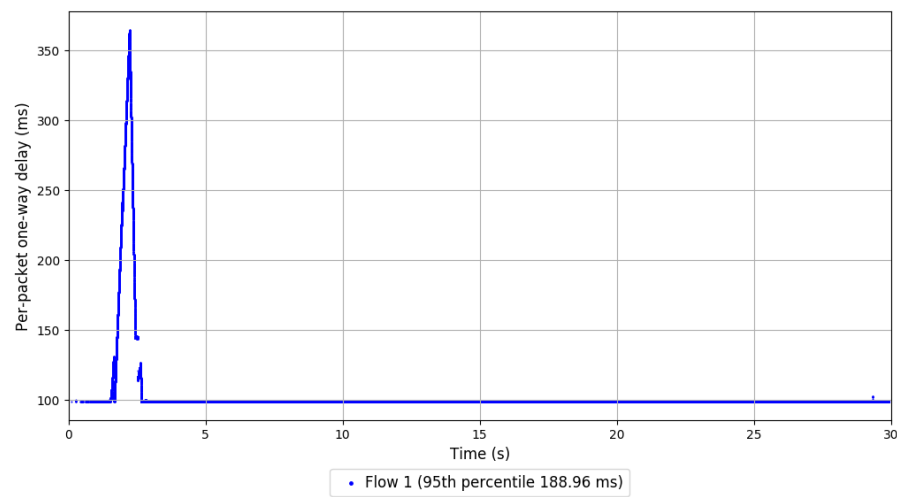

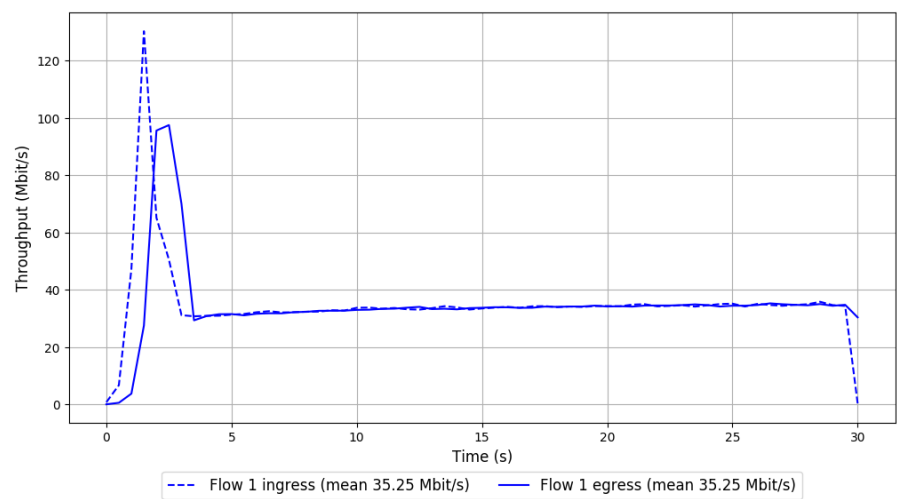• Flow 1 (95th percentile 116.64 ms)

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```
Run 1: Statistics of TCP Vegas

Start at: 2019-07-12 10:23:37
End at: 2019-07-12 10:24:07
Local clock offset: -7.303 ms
Remote clock offset: -4.407 ms


# Below is generated by plot.py at 2019-07-12 12:40:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.25 Mbit/s
95th percentile per-packet one-way delay: 188.960 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 35.25 Mbit/s
95th percentile per-packet one-way delay: 188.960 ms
Loss rate: 0.60%
```

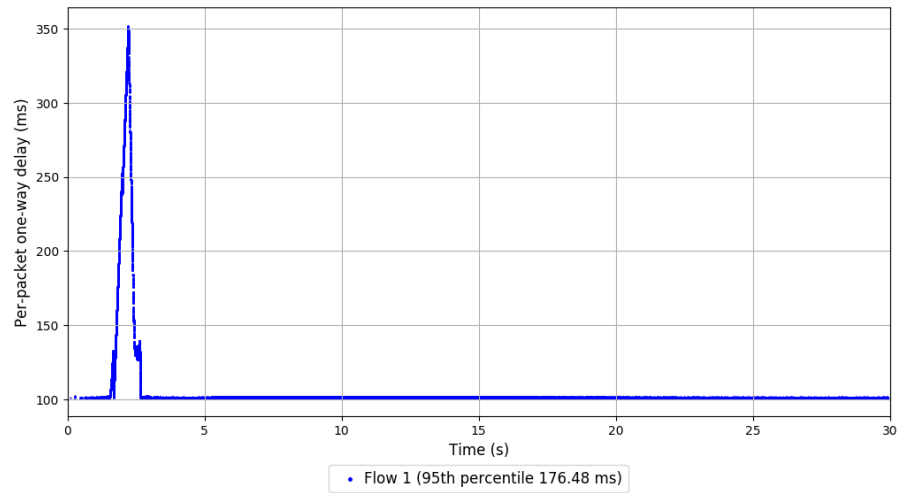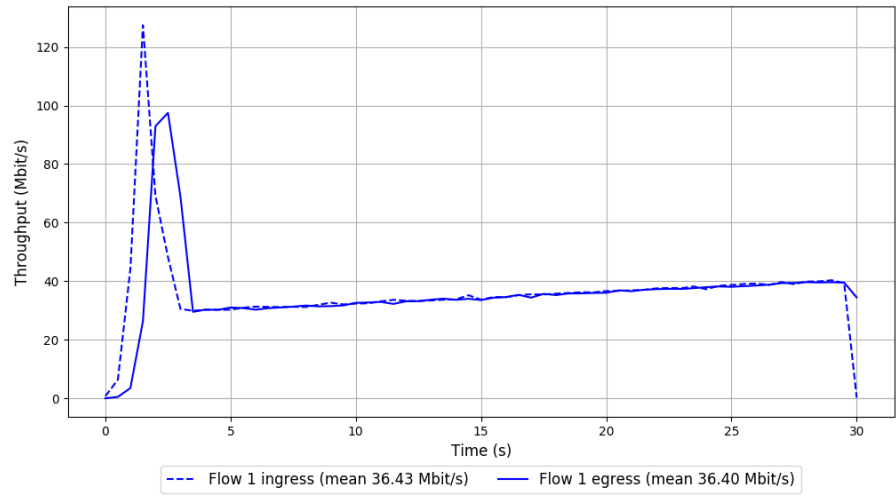Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-07-12 10:52:16
End at: 2019-07-12 10:52:46
Local clock offset: -6.308 ms
Remote clock offset: -8.468 ms

# Below is generated by plot.py at 2019-07-12 12:40:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.40 Mbit/s
95th percentile per-packet one-way delay: 176.479 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 36.40 Mbit/s
95th percentile per-packet one-way delay: 176.479 ms
Loss rate: 0.67%
```

Run 2: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 36.43 Mbit/s) ----- Flow 1 egress (mean 36.40 Mbit/s)
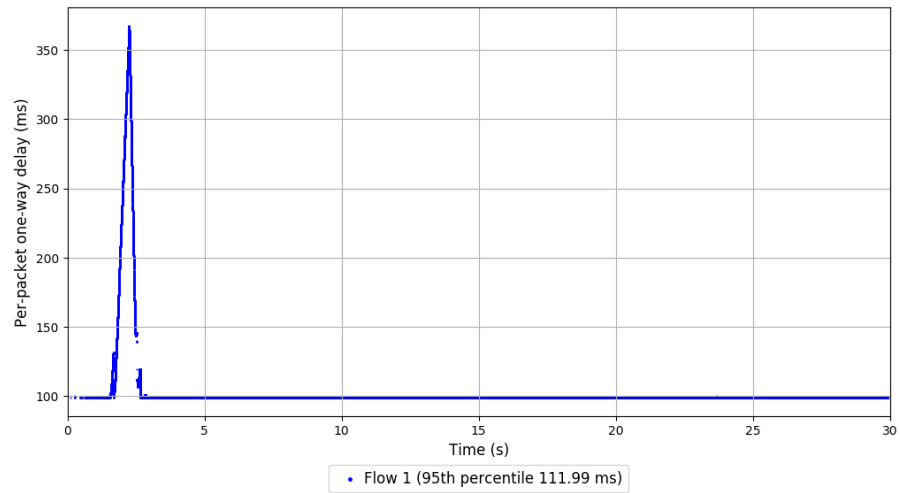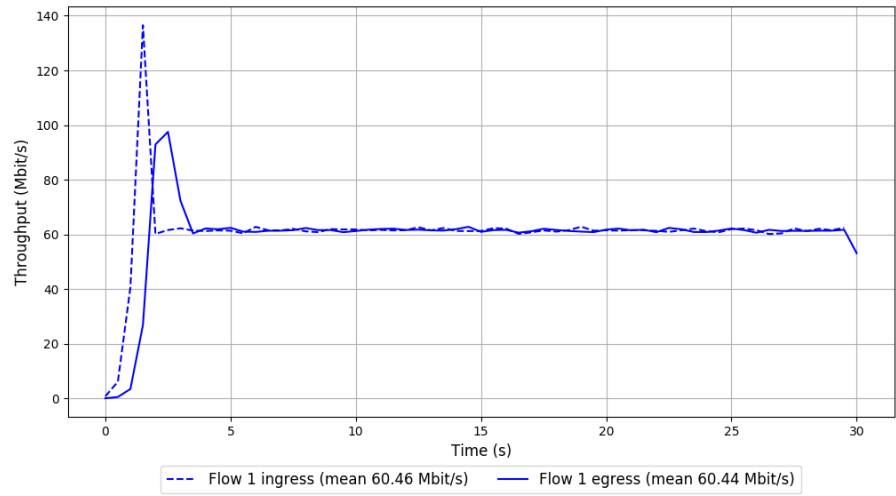

Flow 1 (95th percentile 176.48 ms)

```
Run 3: Statistics of TCP Vegas

Start at: 2019-07-12 11:21:03
End at: 2019-07-12 11:21:34
Local clock offset: -5.789 ms
Remote clock offset: -7.438 ms

# Below is generated by plot.py at 2019-07-12 12:40:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.44 Mbit/s
95th percentile per-packet one-way delay: 111.994 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 60.44 Mbit/s
95th percentile per-packet one-way delay: 111.994 ms
Loss rate: 0.61%
```

Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 60.46 Mbit/s) --- Flow 1 egress (mean 60.44 Mbit/s)
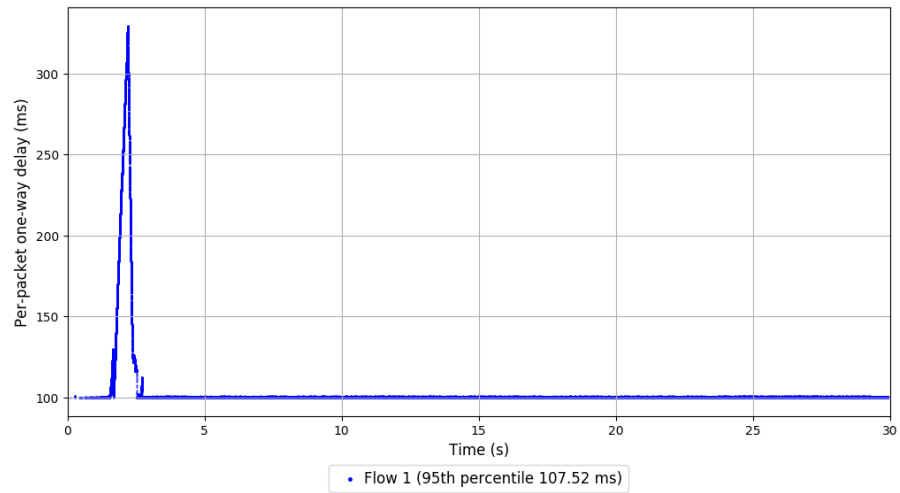

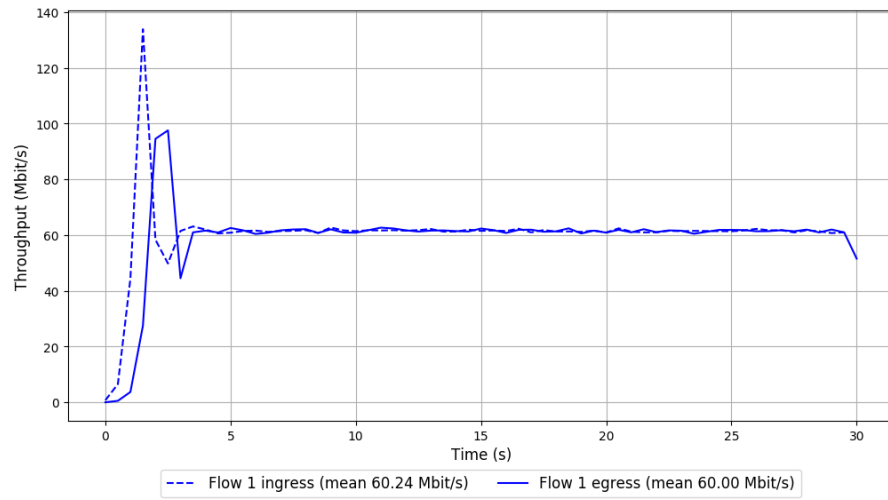• Flow 1 (95th percentile 111.99 ms)

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```
Run 4: Statistics of TCP Vegas

Start at: 2019-07-12 11:49:56
End at: 2019-07-12 11:50:26
Local clock offset: -6.918 ms
Remote clock offset: -8.245 ms


# Below is generated by plot.py at 2019-07-12 12:40:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.00 Mbit/s
95th percentile per-packet one-way delay: 107.524 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 60.00 Mbit/s
95th percentile per-packet one-way delay: 107.524 ms
Loss rate: 0.98%
```
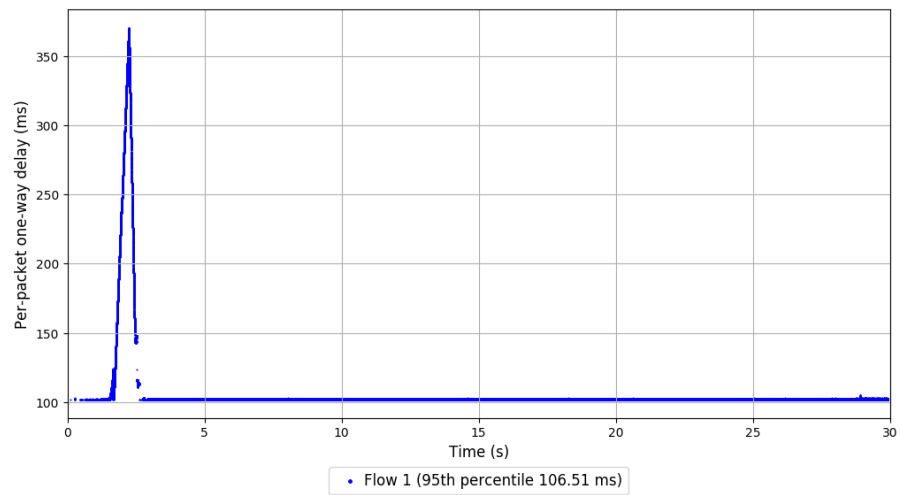
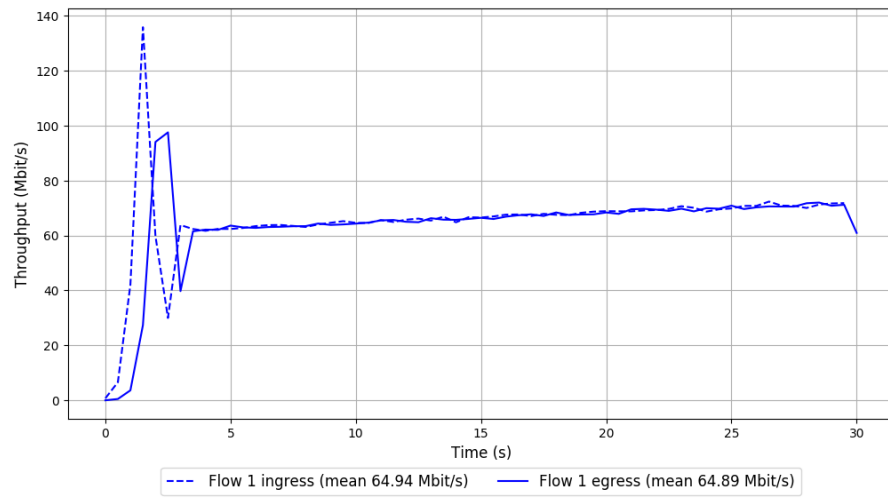Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-07-12 12:18:49
End at: 2019-07-12 12:19:19
Local clock offset: -6.544 ms
Remote clock offset: -10.675 ms


# Below is generated by plot.py at 2019-07-12 12:40:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.89 Mbit/s
95th percentile per-packet one-way delay: 106.509 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 64.89 Mbit/s
95th percentile per-packet one-way delay: 106.509 ms
Loss rate: 0.66%
```

Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 64.94 Mbit/s)   Flow 1 egress (mean 64.89 Mbit/s)
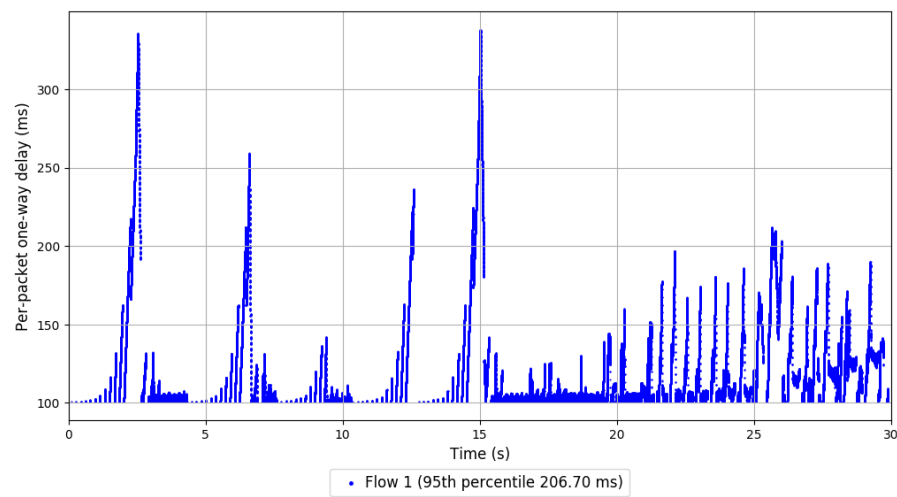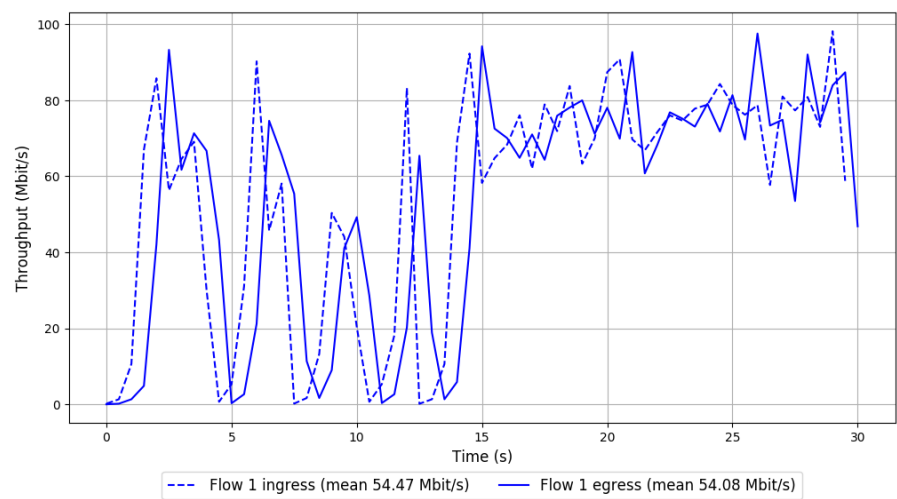

Flow 1 (95th percentile 106.51 ms)

```
Run 1: Statistics of Verus

Start at: 2019-07-12 10:04:25
End at: 2019-07-12 10:04:55
Local clock offset: -7.063 ms
Remote clock offset: -6.436 ms


# Below is generated by plot.py at 2019-07-12 12:40:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 54.08 Mbit/s
95th percentile per-packet one-way delay: 206.697 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 54.08 Mbit/s
95th percentile per-packet one-way delay: 206.697 ms
Loss rate: 1.19%
```

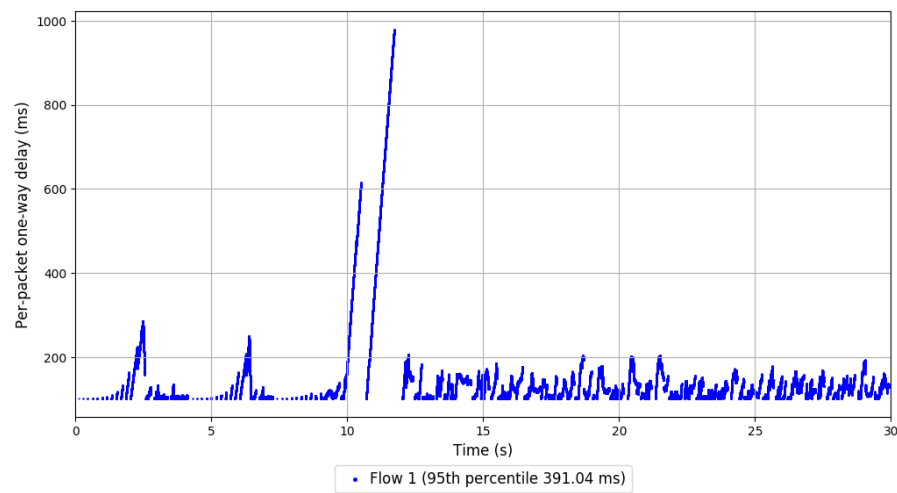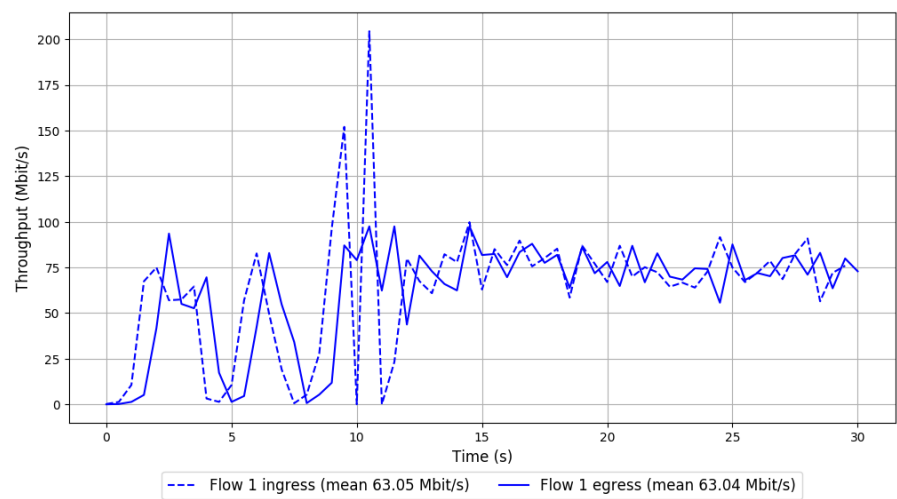## Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-07-12 10:33:05
End at: 2019-07-12 10:33:35
Local clock offset: -6.187 ms
Remote clock offset: -6.708 ms


# Below is generated by plot.py at 2019-07-12 12:40:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.04 Mbit/s
95th percentile per-packet one-way delay: 391.039 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 63.04 Mbit/s
95th percentile per-packet one-way delay: 391.039 ms
Loss rate: 0.58%
```

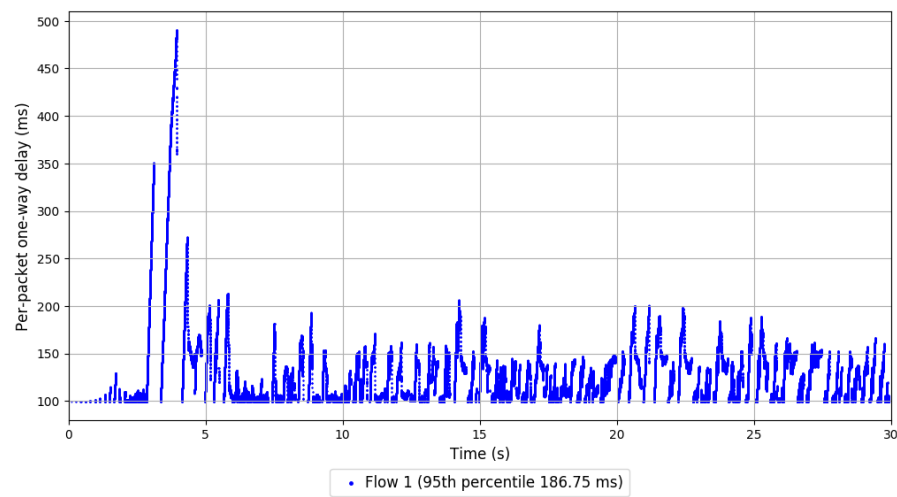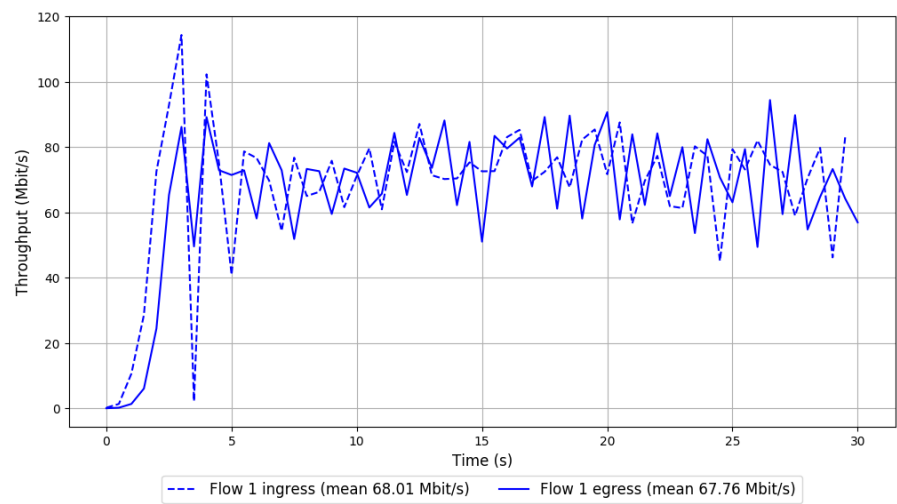## Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-07-12 11:01:43
End at: 2019-07-12 11:02:14
Local clock offset: -5.469 ms
Remote clock offset: -6.882 ms


# Below is generated by plot.py at 2019-07-12 12:41:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.76 Mbit/s
95th percentile per-packet one-way delay: 186.746 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 67.76 Mbit/s
95th percentile per-packet one-way delay: 186.746 ms
Loss rate: 0.94%
```
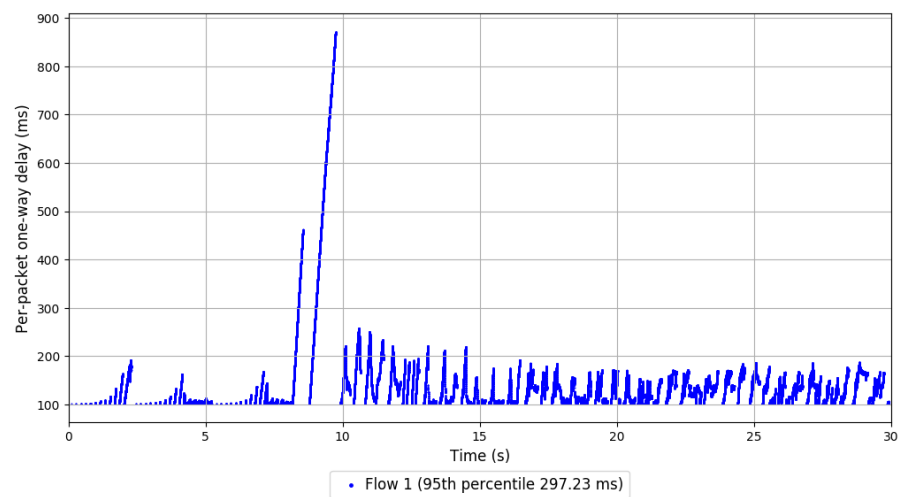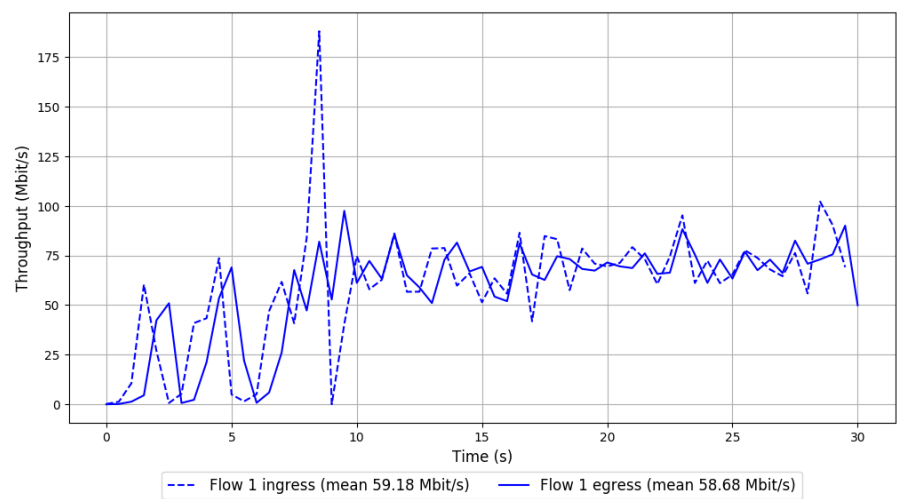
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-07-12 11:30:36
End at: 2019-07-12 11:31:06
Local clock offset: -5.757 ms
Remote clock offset: -9.438 ms


# Below is generated by plot.py at 2019-07-12 12:41:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.68 Mbit/s
95th percentile per-packet one-way delay: 297.228 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 58.68 Mbit/s
95th percentile per-packet one-way delay: 297.228 ms
Loss rate: 1.42%
```
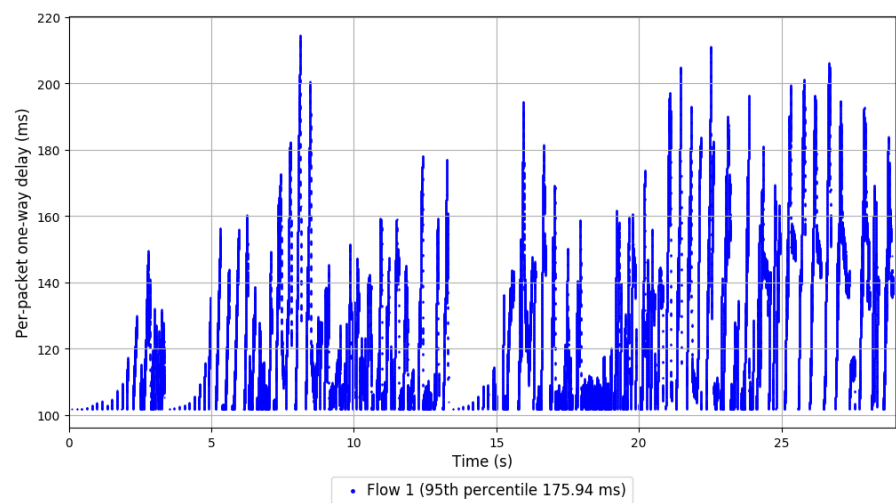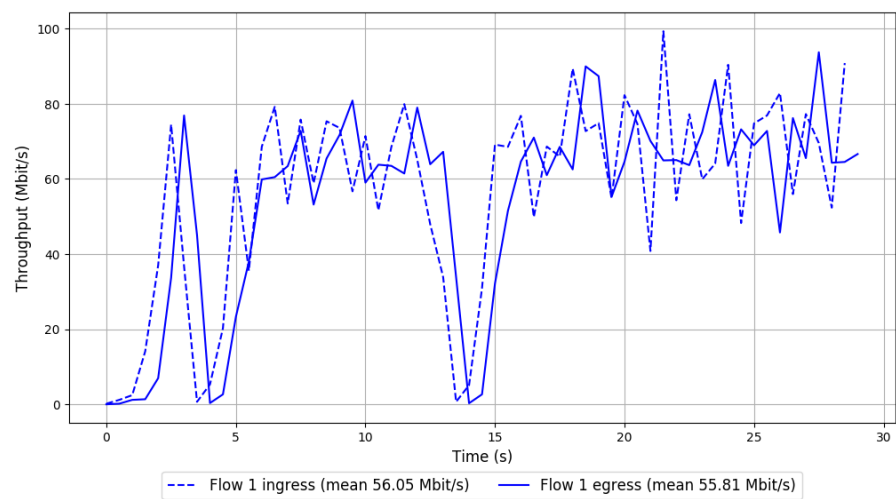
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-07-12 11:59:34
End at: 2019-07-12 12:00:04
Local clock offset: -6.973 ms
Remote clock offset: -10.184 ms


# Below is generated by plot.py at 2019-07-12 12:41:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.81 Mbit/s
95th percentile per-packet one-way delay: 175.943 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 55.81 Mbit/s
95th percentile per-packet one-way delay: 175.943 ms
Loss rate: 1.02%
```
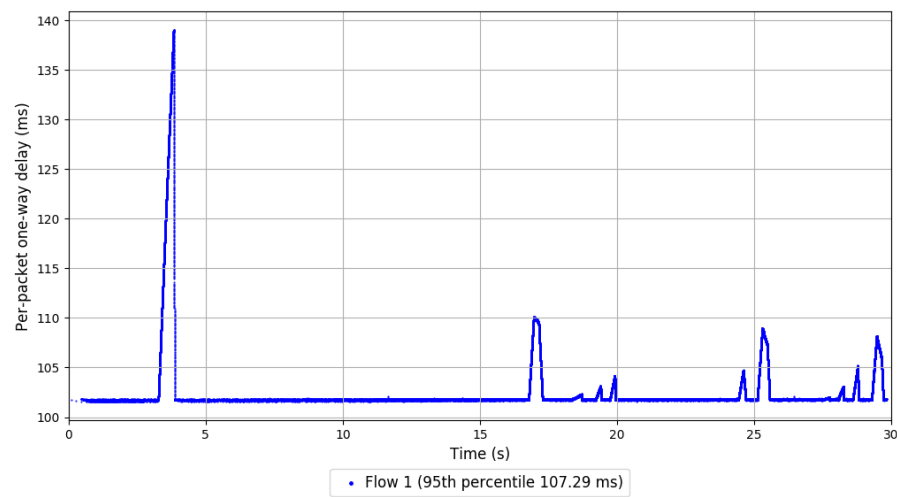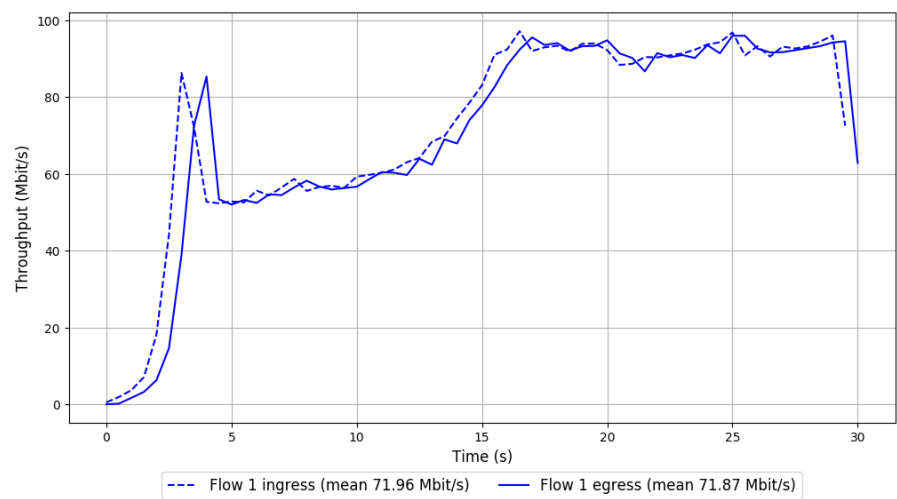
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-07-12 10:05:36
End at: 2019-07-12 10:06:06
Local clock offset: -6.325 ms
Remote clock offset: -6.723 ms


# Below is generated by plot.py at 2019-07-12 12:41:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.87 Mbit/s
95th percentile per-packet one-way delay: 107.289 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 71.87 Mbit/s
95th percentile per-packet one-way delay: 107.289 ms
Loss rate: 0.71%
```

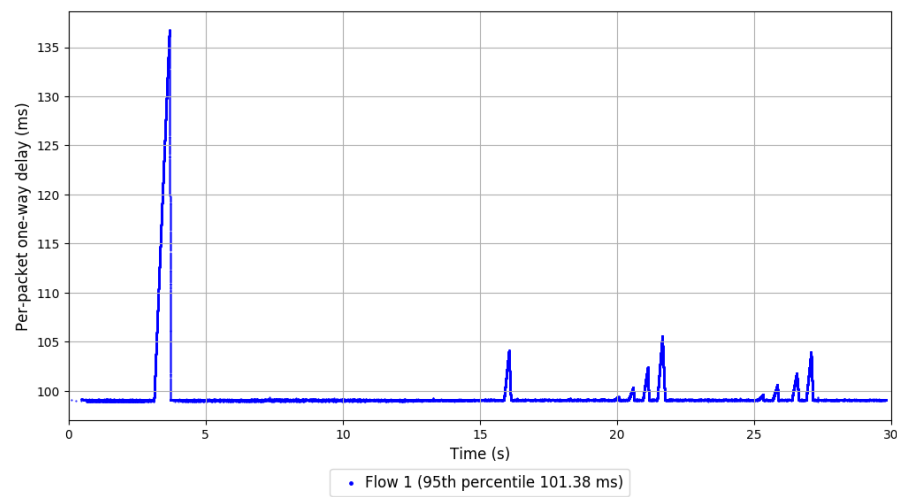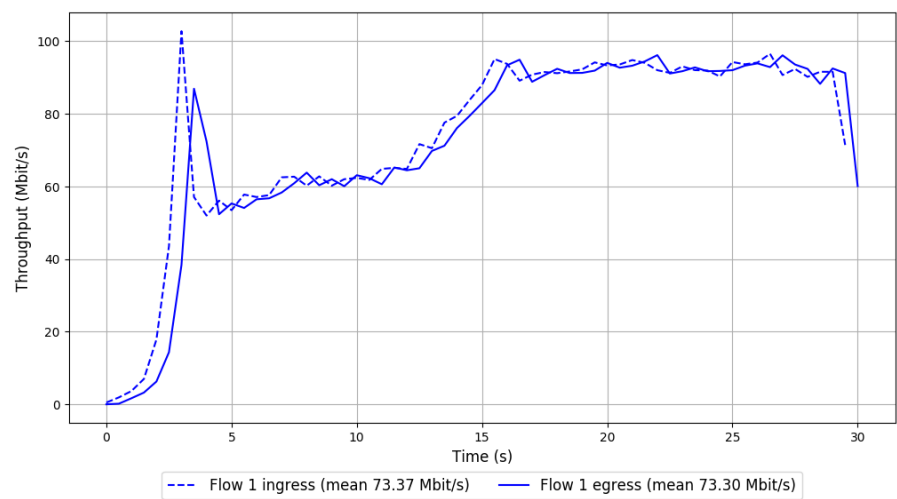## Run 1: Report of PCC-Vivace — Data Link

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```
Run 2: Statistics of PCC-Vivace

Start at: 2019-07-12 10:34:17
End at: 2019-07-12 10:34:47
Local clock offset: -6.898 ms
Remote clock offset: -3.982 ms


# Below is generated by plot.py at 2019-07-12 12:41:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.30 Mbit/s
95th percentile per-packet one-way delay: 101.382 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 73.30 Mbit/s
95th percentile per-packet one-way delay: 101.382 ms
Loss rate: 0.68%
```

Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-07-12 11:02:55
End at: 2019-07-12 11:03:25
Local clock offset: -6.491 ms
Remote clock offset: -8.7 ms


# Below is generated by plot.py at 2019-07-12 12:41:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.68 Mbit/s
95th percentile per-packet one-way delay: 102.746 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 61.68 Mbit/s
95th percentile per-packet one-way delay: 102.746 ms
Loss rate: 0.88%
```
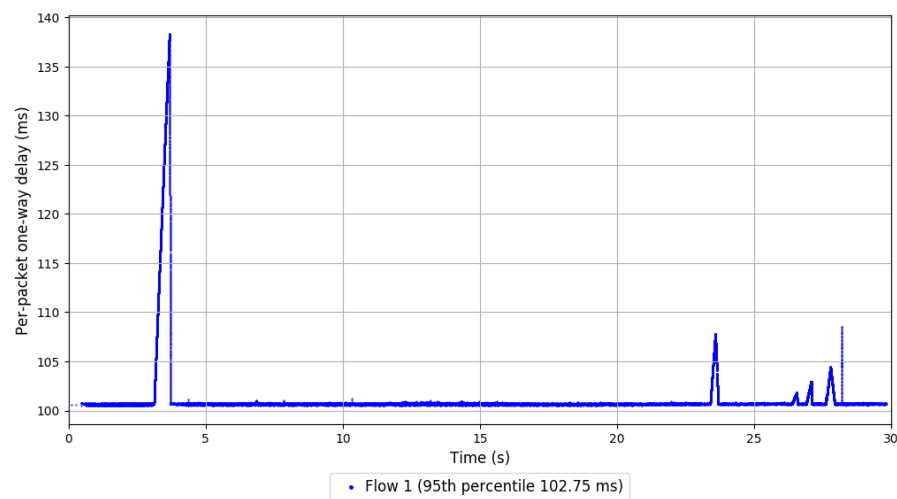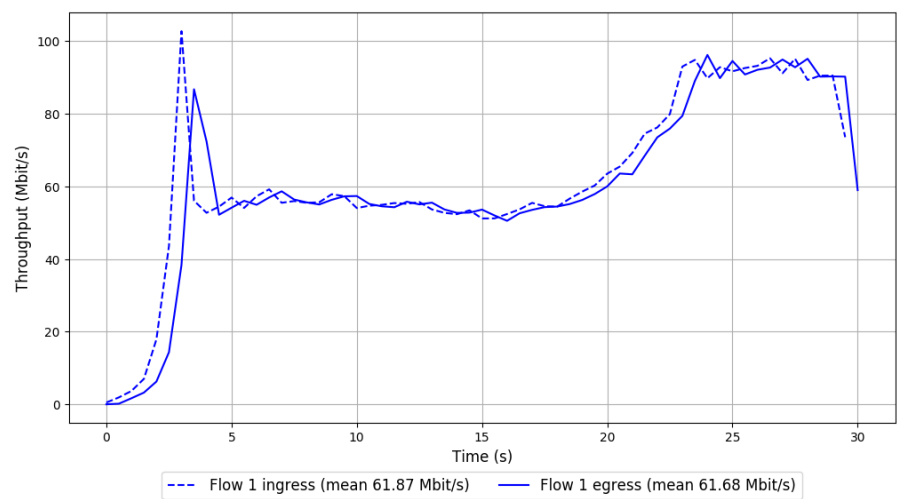
Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 61.87 Mbit/s)   Flow 1 egress (mean 61.68 Mbit/s)
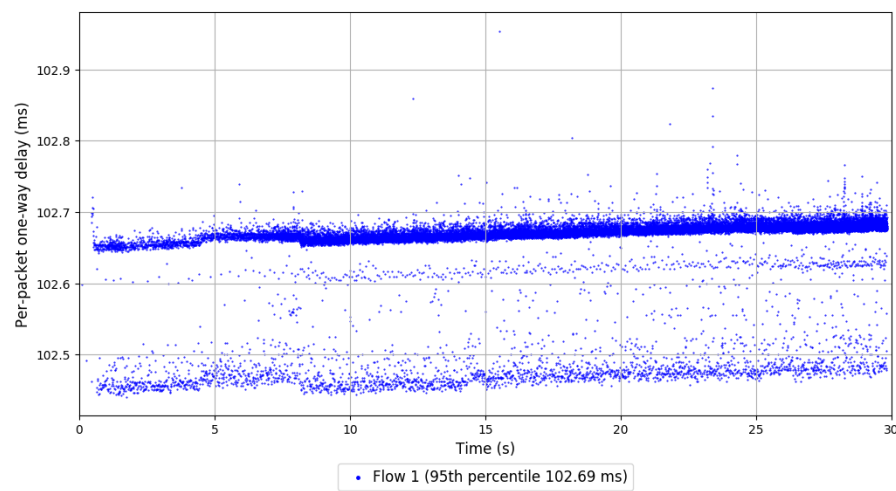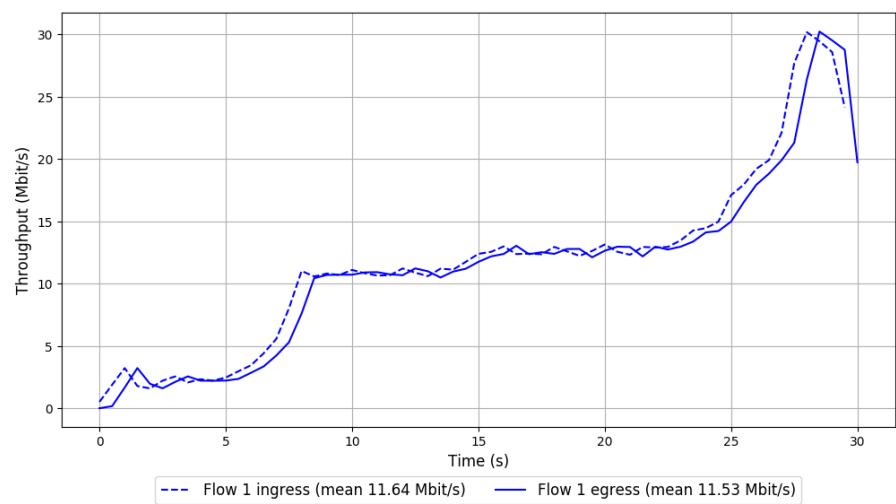

Flow 1 (95th percentile 102.75 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-07-12 11:31:48
End at: 2019-07-12 11:32:18
Local clock offset: -6.661 ms
Remote clock offset: -11.138 ms


# Below is generated by plot.py at 2019-07-12 12:41:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.53 Mbit/s
95th percentile per-packet one-way delay: 102.687 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 11.53 Mbit/s
95th percentile per-packet one-way delay: 102.687 ms
Loss rate: 1.48%
```

Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 11.64 Mbit/s) ---- Flow 1 egress (mean 11.53 Mbit/s) ——
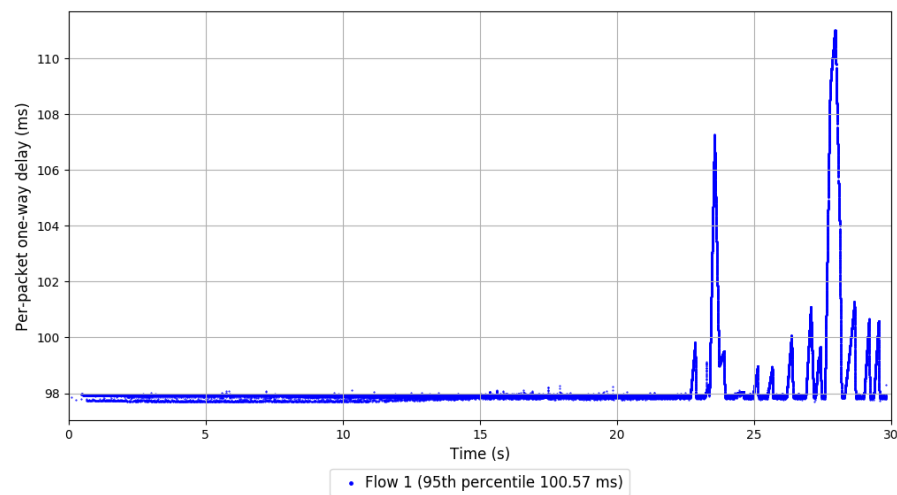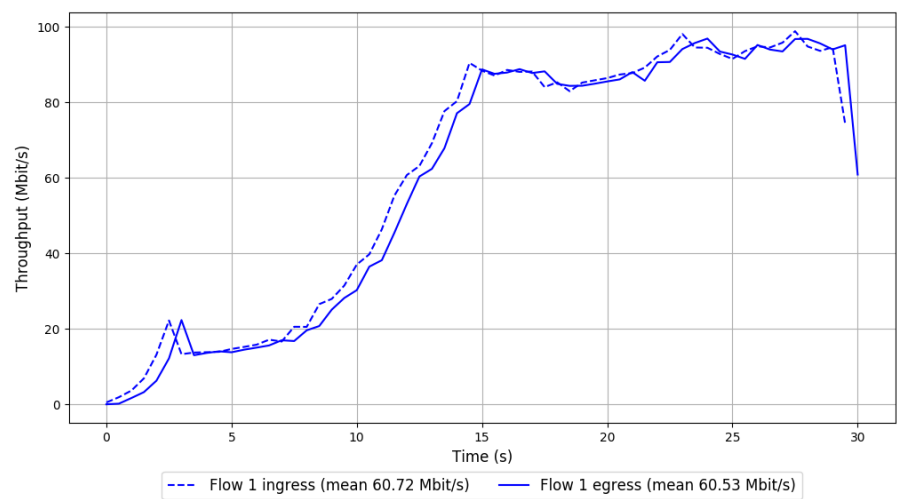

Flow 1 (95th percentile 102.69 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-07-12 12:00:46
End at: 2019-07-12 12:01:16
Local clock offset: -7.998 ms
Remote clock offset: -8.255 ms


# Below is generated by plot.py at 2019-07-12 12:41:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.53 Mbit/s
95th percentile per-packet one-way delay: 100.570 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 60.53 Mbit/s
95th percentile per-packet one-way delay: 100.570 ms
Loss rate: 0.89%
```

Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 60.72 Mbit/s) --- Flow 1 egress (mean 60.53 Mbit/s)

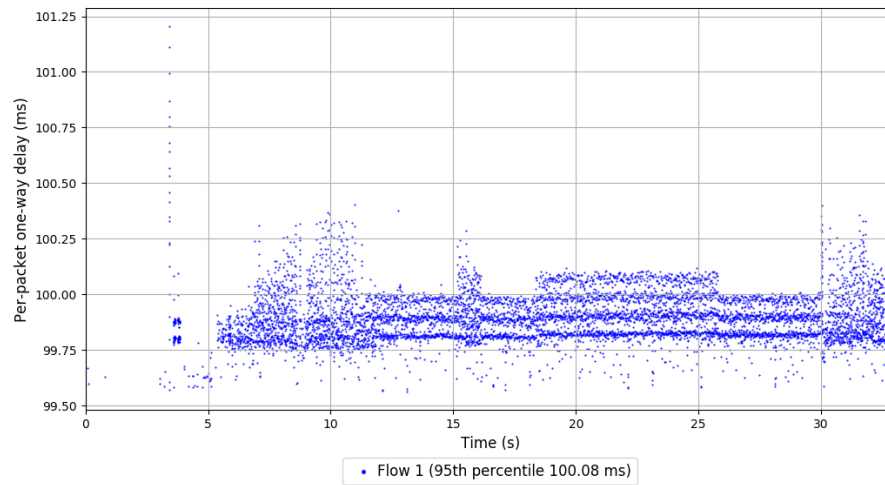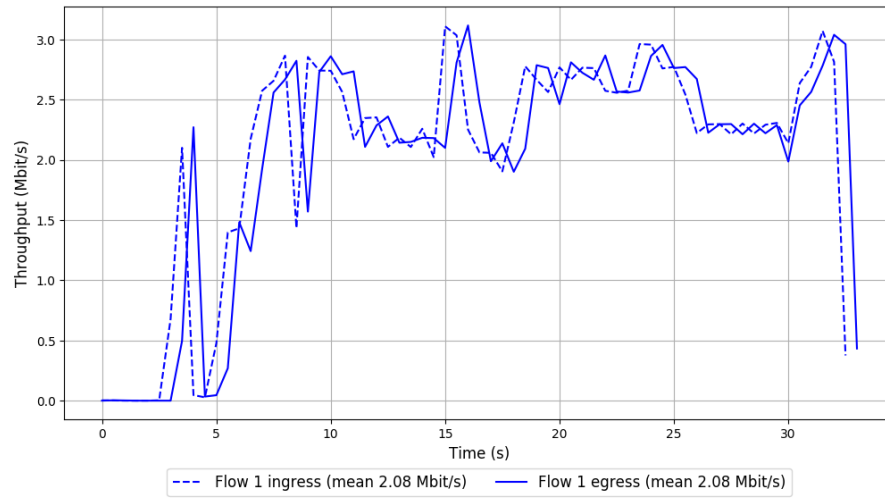
• Flow 1 (95th percentile 100.57 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2019-07-12 10:27:07
End at: 2019-07-12 10:27:37
Local clock offset: -6.557 ms
Remote clock offset: -4.689 ms


# Below is generated by plot.py at 2019-07-12 12:41:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 100.083 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 100.083 ms
Loss rate: 0.26%
```

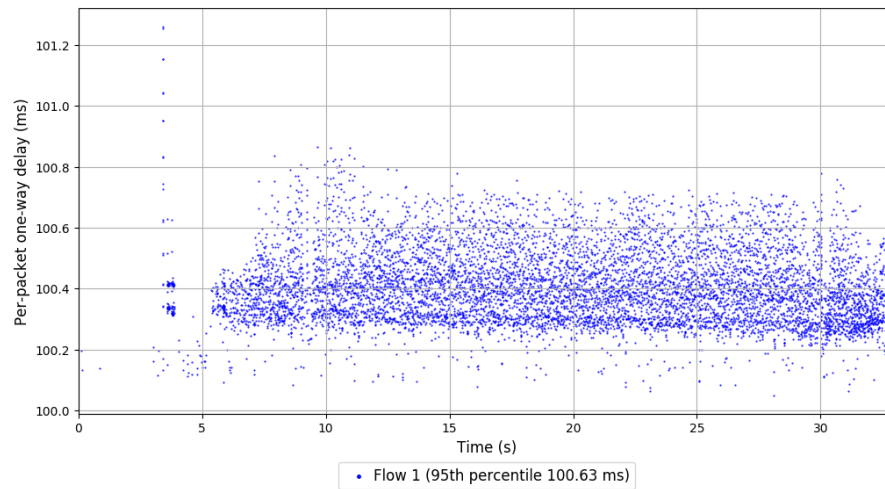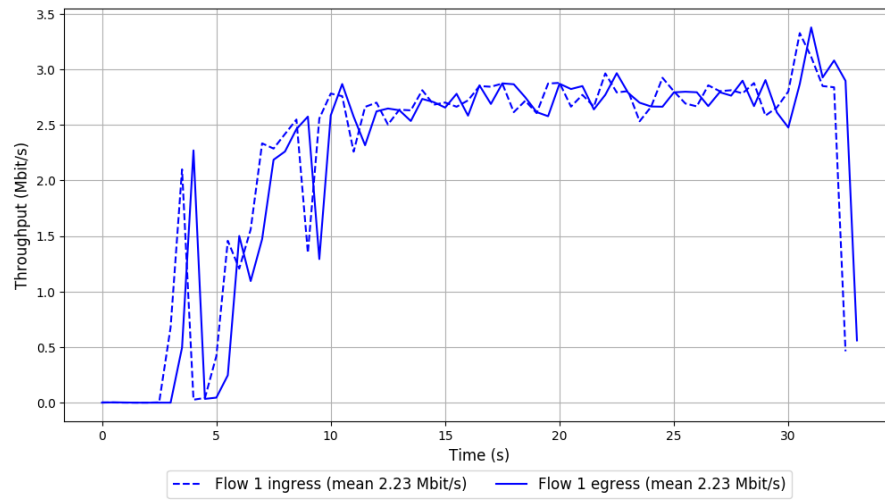Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-07-12 10:55:47
End at: 2019-07-12 10:56:17
Local clock offset: -6.255 ms
Remote clock offset: -8.458 ms

# Below is generated by plot.py at 2019-07-12 12:41:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 100.633 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 100.633 ms
Loss rate: 0.30%
```

Run 2: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.23 Mbit/s)   Flow 1 egress (mean 2.23 Mbit/s)
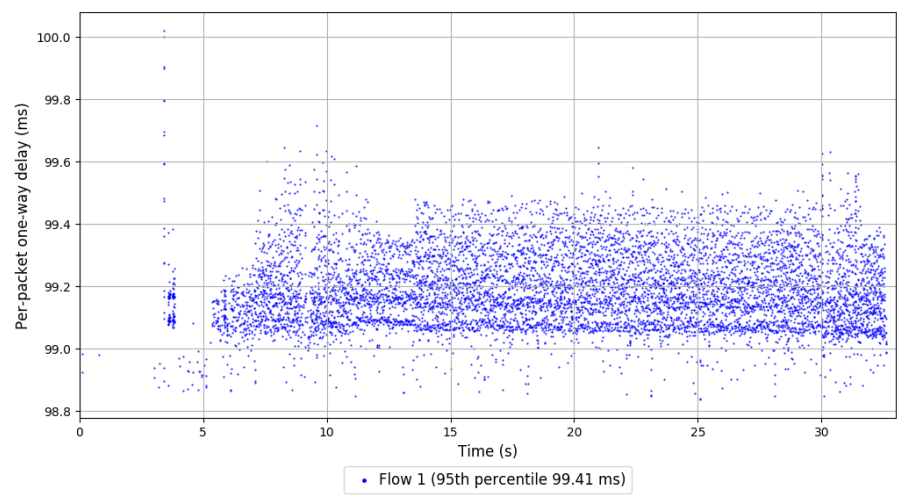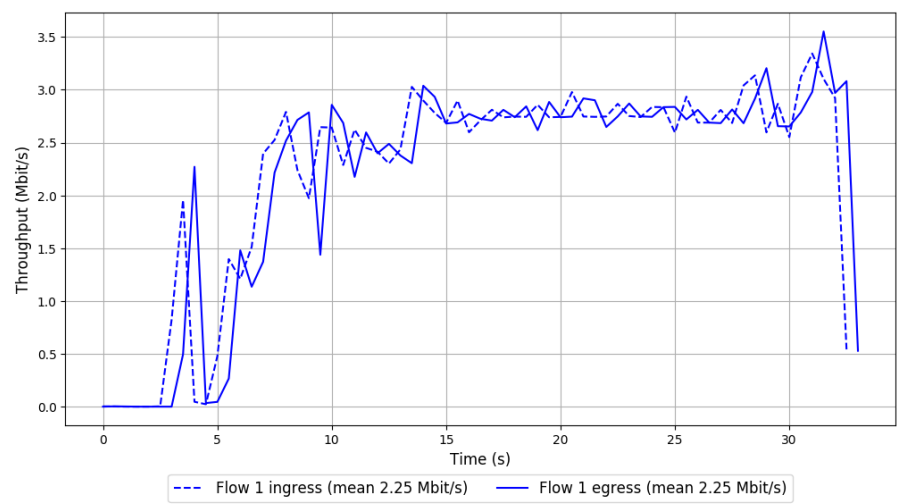

Flow 1 (95th percentile 100.63 ms)

```
Run 3: Statistics of WebRTC media

Start at: 2019-07-12 11:24:35
End at: 2019-07-12 11:25:05
Local clock offset: -6.331 ms
Remote clock offset: -7.446 ms


# Below is generated by plot.py at 2019-07-12 12:41:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 99.414 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 99.414 ms
Loss rate: 0.32%
```

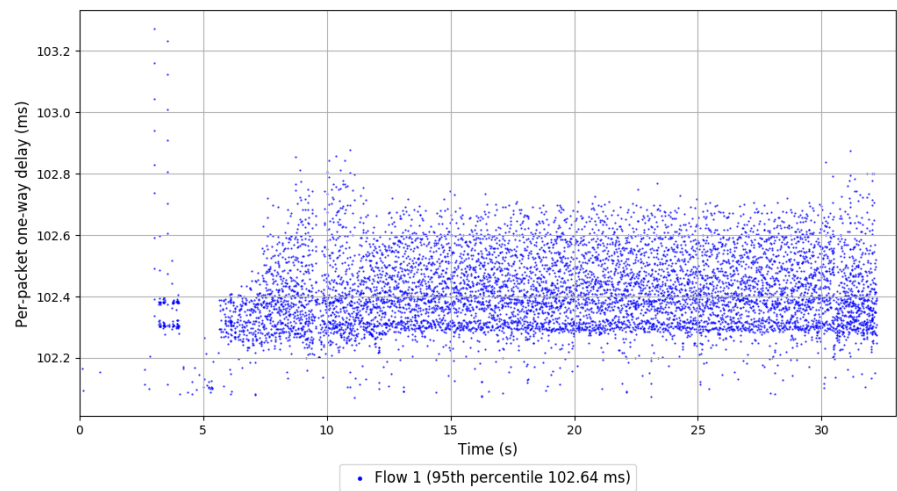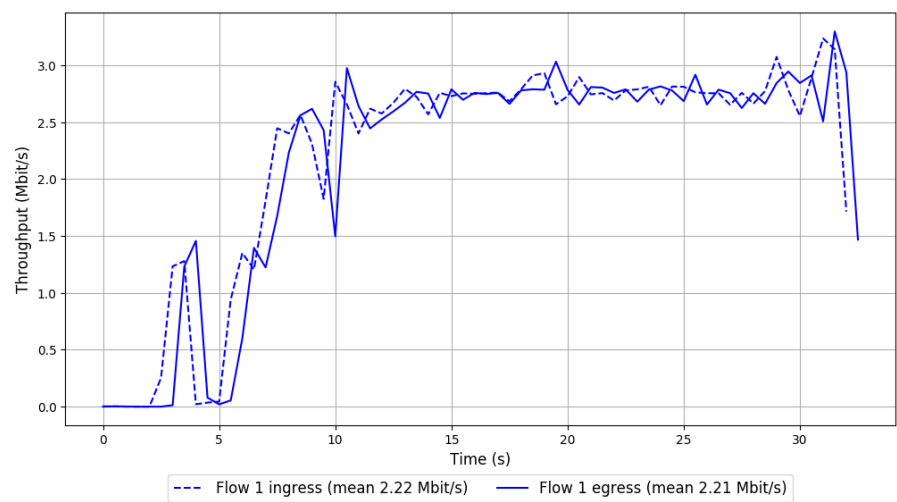Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-07-12 11:53:35
End at: 2019-07-12 11:54:05
Local clock offset: -6.908 ms
Remote clock offset: -10.461 ms


# Below is generated by plot.py at 2019-07-12 12:41:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 102.643 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 102.643 ms
Loss rate: 0.69%
```

Run 4: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.22 Mbit/s)   Flow 1 egress (mean 2.21 Mbit/s)

Flow 1 (95th percentile 102.64 ms)

```
Run 5: Statistics of WebRTC media

Start at: 2019-07-12 12:22:26
End at: 2019-07-12 12:22:56
Local clock offset: -7.331 ms
Remote clock offset: -11.492 ms


# Below is generated by plot.py at 2019-07-12 12:41:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 102.181 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 102.181 ms
Loss rate: 0.38%
```

Run 5: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.23 Mbit/s) — Flow 1 egress (mean 2.24 Mbit/s)

Flow 1 (95th percentile 102.18 ms)