Pantheon Report

Generated at 2021-03-07 23:28:43 (UTC).

Data path: $(local) \rightarrow (remote)$.

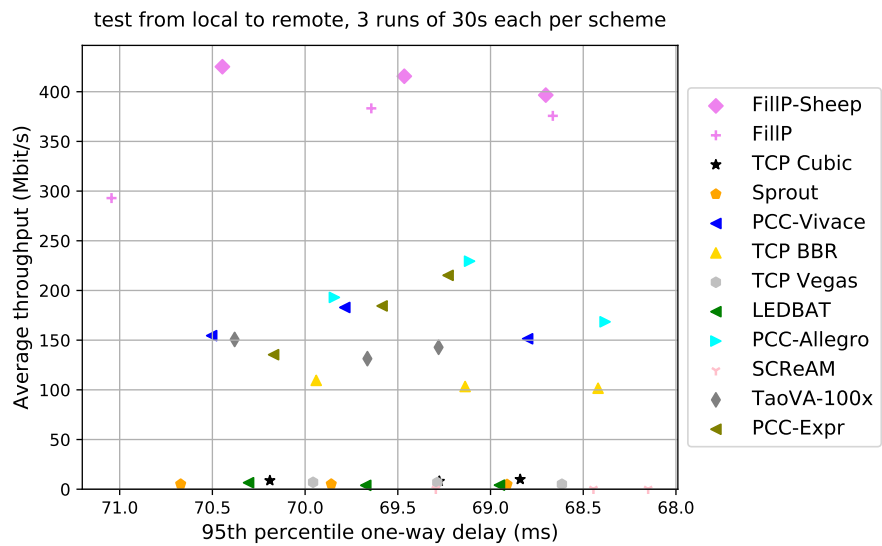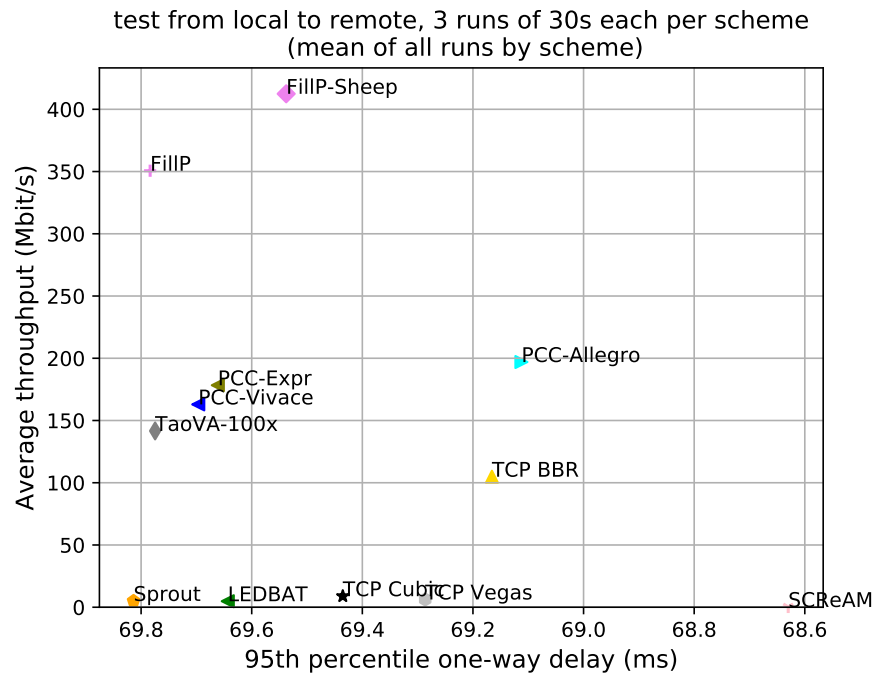Repeated the test of 12 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

```
System info:
Linux 5.4.0-1038-aws
net.core.default_qdisc = fq_codel
net.core.rmem_default = 212992
net.core.rmem_max = 212992
net.core.wmem_default = 212992
net.core.wmem_max = 212992
net.ipv4.tcp_rmem = 4096 131072 6291456
net.ipv4.tcp_wmem = 4096 16384 4194304

Git summary:
branch: master @ cd0906347fa7c70e0967cf97ea74e99cadeaddd4
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 463d89b09699a57bfdfbae351646df6a60040b90
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
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
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from local to remote, 3 runs of 30s each per scheme
(mean of all runs by scheme)

test from local to remote, 3 runs of 30s each per scheme

scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	104.85	69.17	1.36
TCP Cubic	3	8.88	69.44	0.55
FillP	3	350.65	69.78	7.60
FillP-Sheep	3	412.45	69.54	4.04
LEDBAT	3	4.83	69.64	0.64
PCC-Allegro	3	196.98	69.11	3.88
PCC-Expr	3	178.33	69.66	3.65
SCReAM	3	0.22	68.63	0.00
Sprout	3	5.06	69.81	4.05
TaoVA-100x	3	141.63	69.77	5.37
TCP Vegas	3	6.25	69.29	0.87
PCC-Vivace	3	162.93	69.70	2.39

```
Run 1: Statistics of TCP BBR

Start at: 2021-03-07 22:53:23
End at: 2021-03-07 22:53:53

# Below is generated by plot.py at 2021-03-07 23:18:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 109.55 Mbit/s
95th percentile per-packet one-way delay: 69.940 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 109.55 Mbit/s
95th percentile per-packet one-way delay: 69.940 ms
Loss rate: 1.19%
```
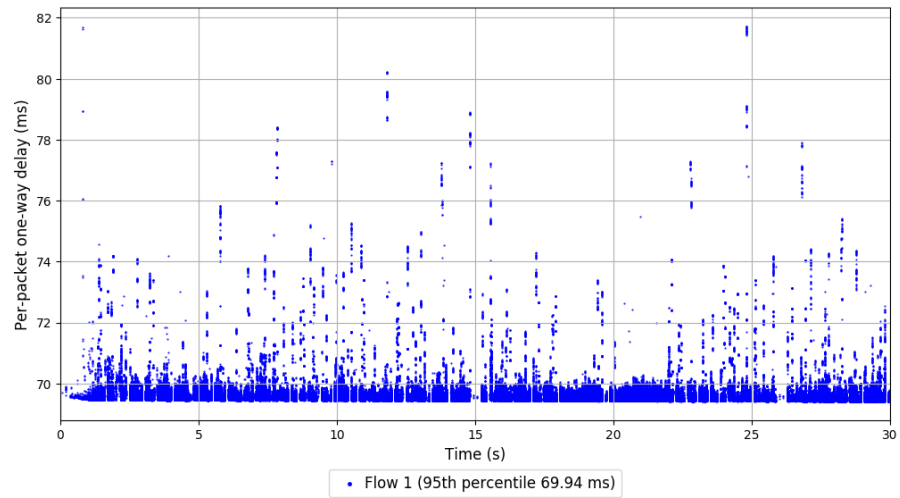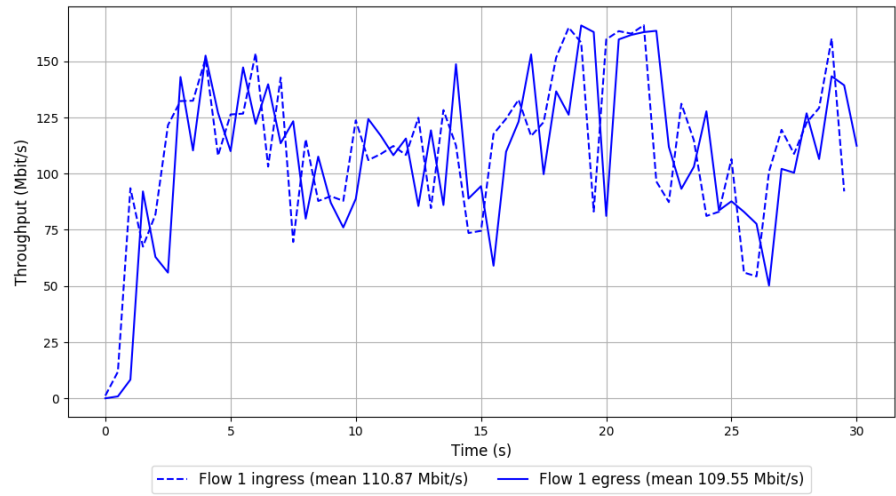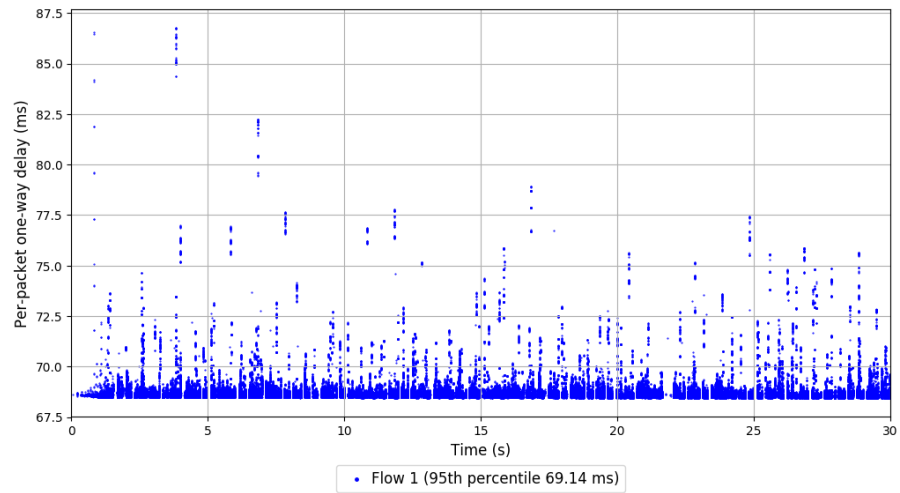
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2021-03-07 23:03:11
End at: 2021-03-07 23:03:41

# Below is generated by plot.py at 2021-03-07 23:18:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 103.36 Mbit/s
95th percentile per-packet one-way delay: 69.137 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 103.36 Mbit/s
95th percentile per-packet one-way delay: 69.137 ms
Loss rate: 1.47%
```
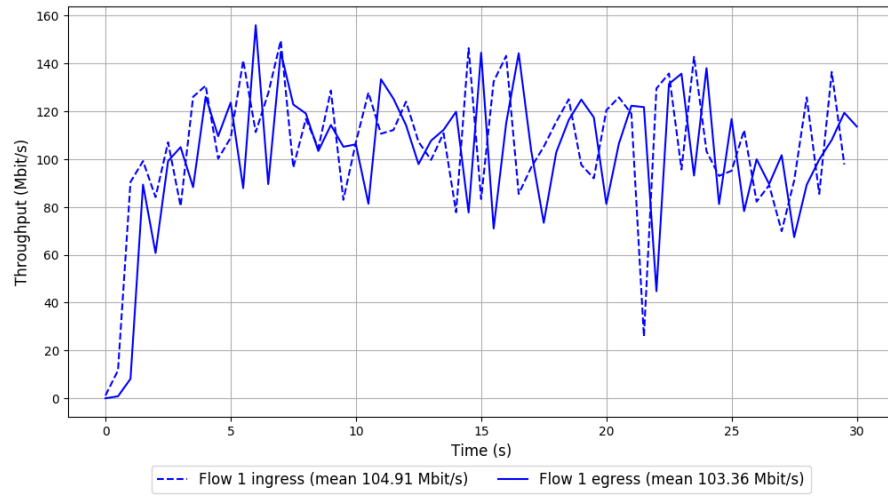
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2021-03-07 23:12:59
End at: 2021-03-07 23:13:29

# Below is generated by plot.py at 2021-03-07 23:19:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 101.64 Mbit/s
95th percentile per-packet one-way delay: 68.420 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 101.64 Mbit/s
95th percentile per-packet one-way delay: 68.420 ms
Loss rate: 1.42%
```
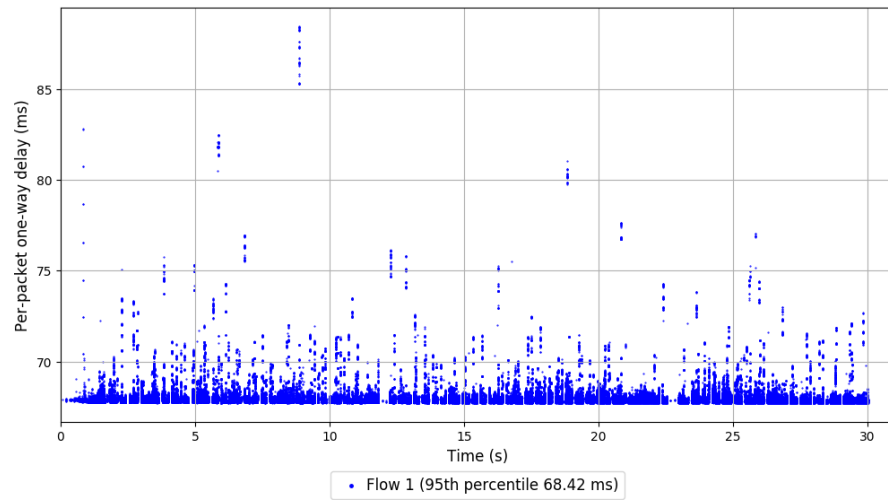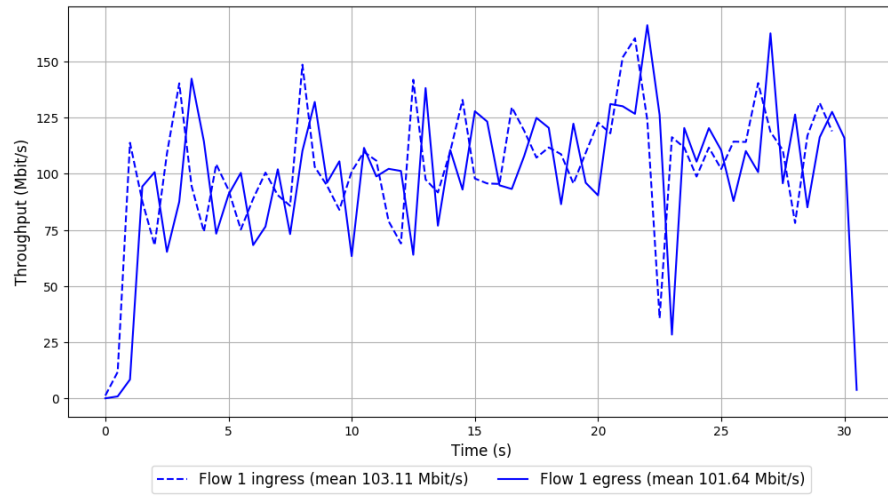
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 103.11 Mbit/s)   Flow 1 egress (mean 101.64 Mbit/s)

Flow 1 (95th percentile 68.42 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2021-03-07 22:51:06
End at: 2021-03-07 22:51:36

# Below is generated by plot.py at 2021-03-07 23:19:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.70 Mbit/s
95th percentile per-packet one-way delay: 70.190 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 8.70 Mbit/s
95th percentile per-packet one-way delay: 70.190 ms
Loss rate: 0.48%
```
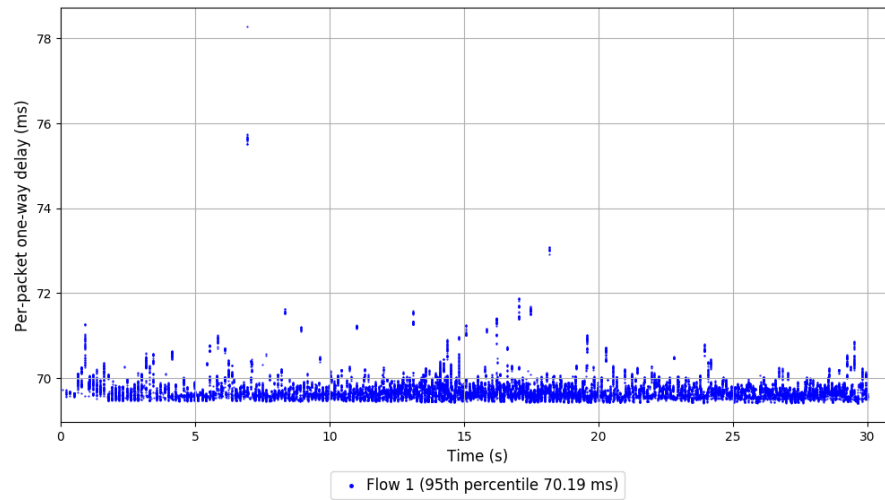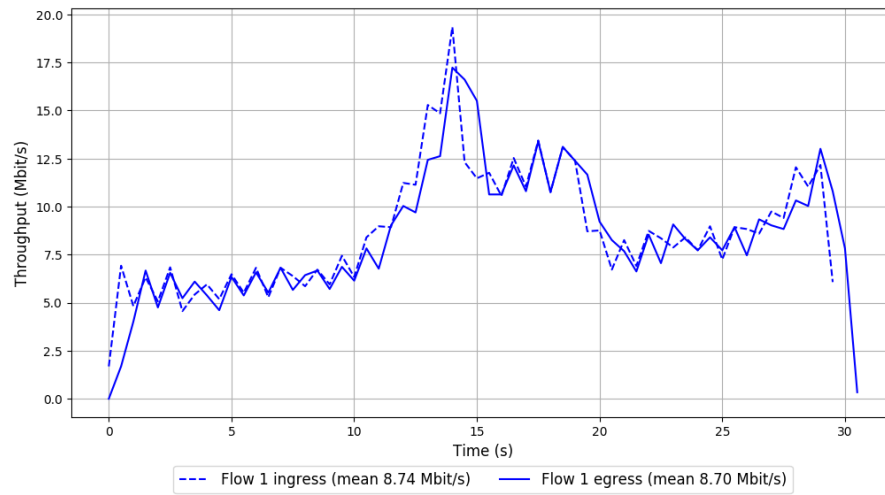
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2021-03-07 23:00:50
End at: 2021-03-07 23:01:20

# Below is generated by plot.py at 2021-03-07 23:19:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 69.276 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 69.276 ms
Loss rate: 0.74%
```
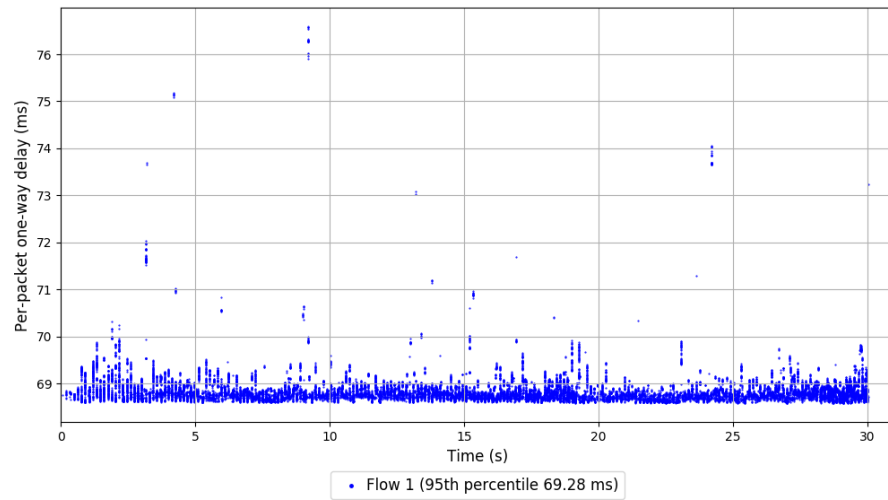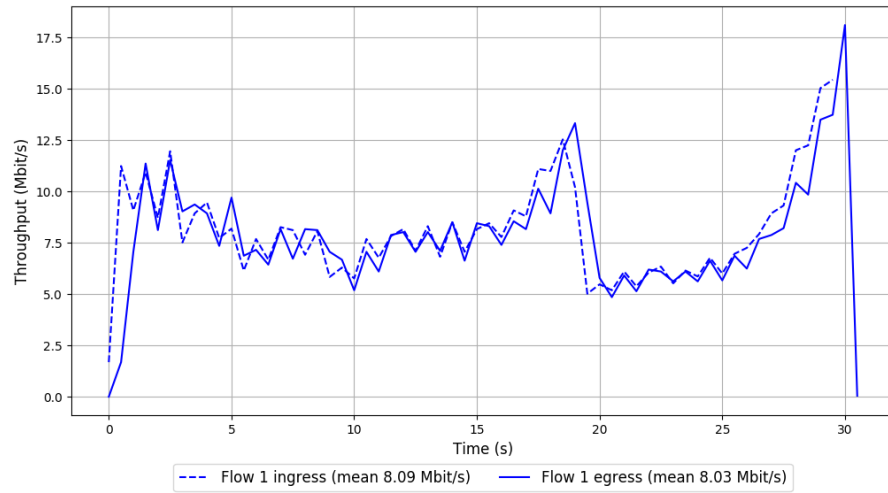
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2021-03-07 23:10:42
End at: 2021-03-07 23:11:12


# Below is generated by plot.py at 2021-03-07 23:19:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.90 Mbit/s
95th percentile per-packet one-way delay: 68.840 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 9.90 Mbit/s
95th percentile per-packet one-way delay: 68.840 ms
Loss rate: 0.42%
```
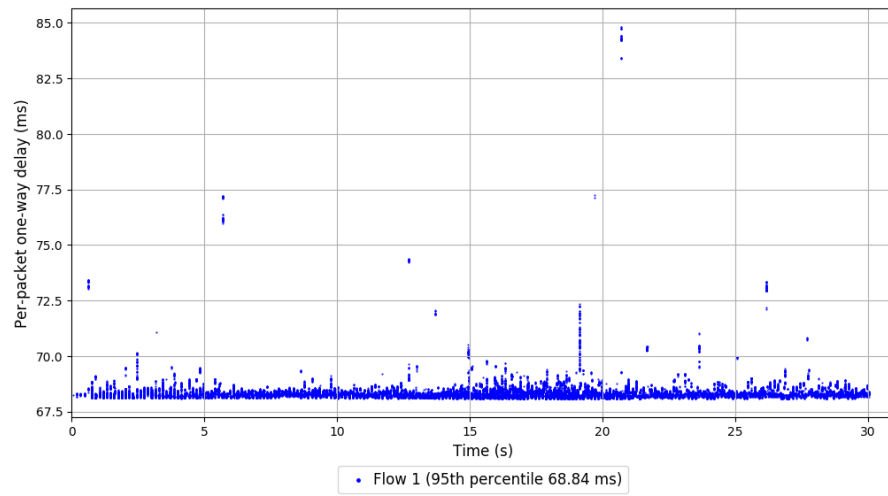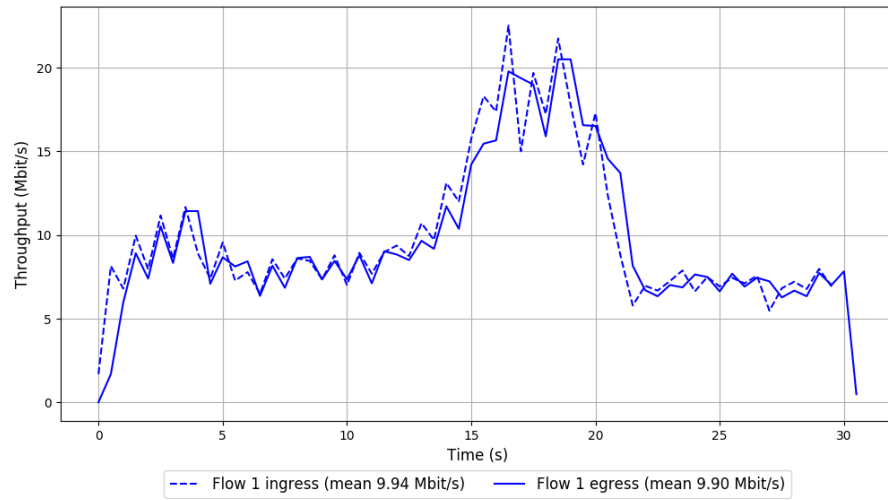
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 9.94 Mbit/s)   Flow 1 egress (mean 9.90 Mbit/s)

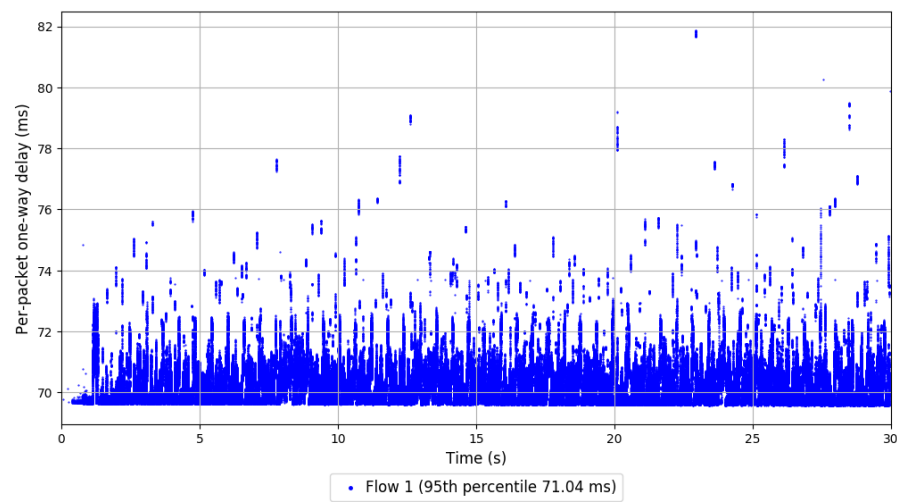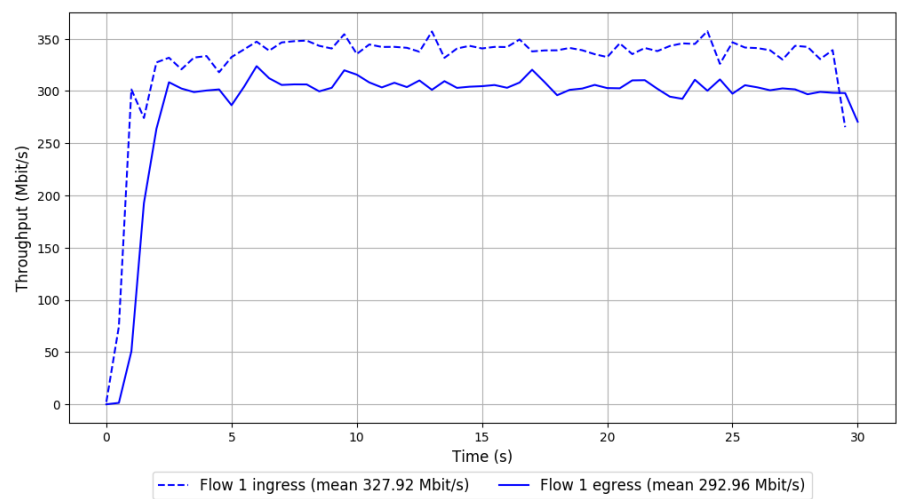Flow 1 (95th percentile 68.84 ms)

```
Run 1: Statistics of FillP

Start at: 2021-03-07 22:50:11
End at: 2021-03-07 22:50:41

# Below is generated by plot.py at 2021-03-07 23:19:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 292.96 Mbit/s
95th percentile per-packet one-way delay: 71.044 ms
Loss rate: 10.63%
-- Flow 1:
Average throughput: 292.96 Mbit/s
95th percentile per-packet one-way delay: 71.044 ms
Loss rate: 10.63%
```

Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 327.92 Mbit/s) ---- Flow 1 egress (mean 292.96 Mbit/s) ——

• Flow 1 (95th percentile 71.04 ms)

```
Run 2: Statistics of FillP

Start at: 2021-03-07 22:59:54
End at: 2021-03-07 23:00:24


# Below is generated by plot.py at 2021-03-07 23:20:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 383.26 Mbit/s
95th percentile per-packet one-way delay: 69.643 ms
Loss rate: 6.41%
-- Flow 1:
Average throughput: 383.26 Mbit/s
95th percentile per-packet one-way delay: 69.643 ms
Loss rate: 6.41%
```
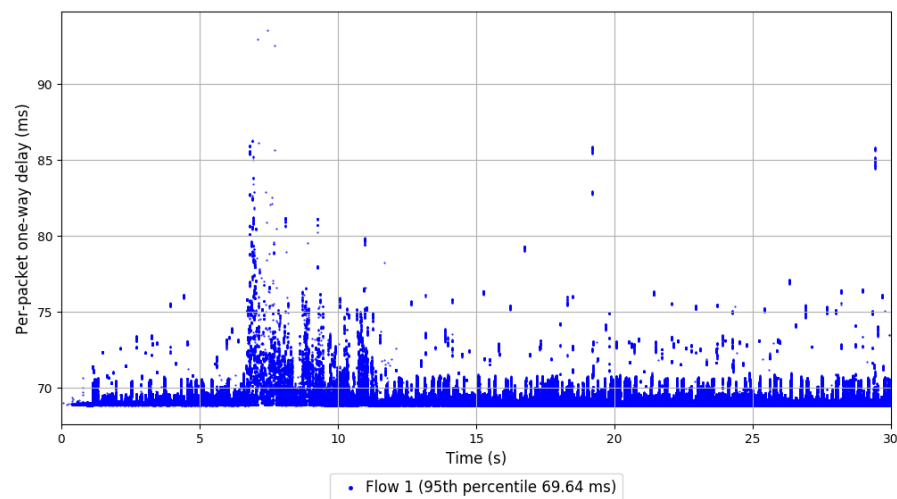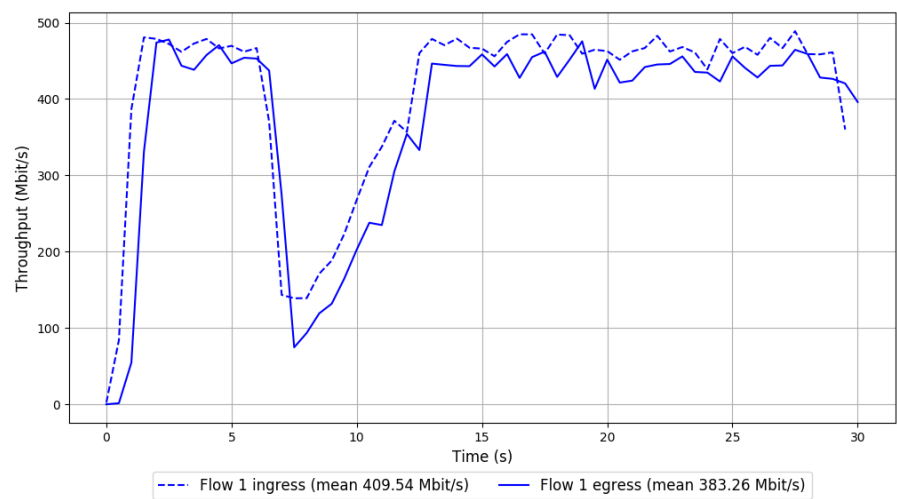
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2021-03-07 23:09:45
End at: 2021-03-07 23:10:15

# Below is generated by plot.py at 2021-03-07 23:21:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 375.72 Mbit/s
95th percentile per-packet one-way delay: 68.664 ms
Loss rate: 5.76%
-- Flow 1:
Average throughput: 375.72 Mbit/s
95th percentile per-packet one-way delay: 68.664 ms
Loss rate: 5.76%
```
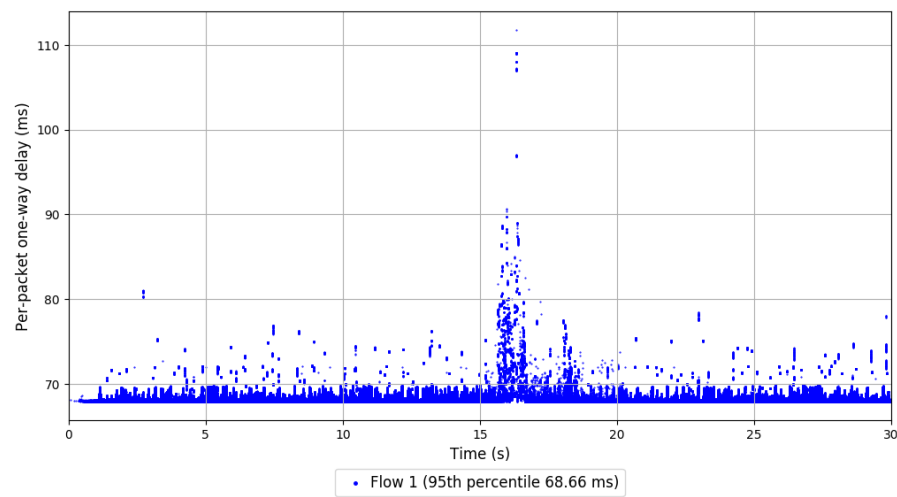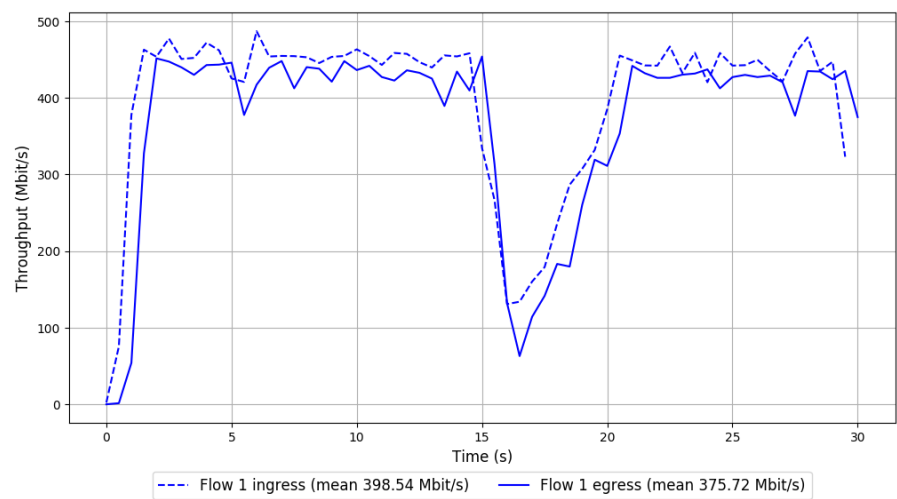
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 398.54 Mbit/s)   Flow 1 egress (mean 375.72 Mbit/s)

Flow 1 (95th percentile 68.66 ms)

```
Run 1: Statistics of FillP-Sheep

Start at: 2021-03-07 22:49:12
End at: 2021-03-07 22:49:42

# Below is generated by plot.py at 2021-03-07 23:22:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 425.17 Mbit/s
95th percentile per-packet one-way delay: 70.446 ms
Loss rate: 4.53%
-- Flow 1:
Average throughput: 425.17 Mbit/s
95th percentile per-packet one-way delay: 70.446 ms
Loss rate: 4.53%
```
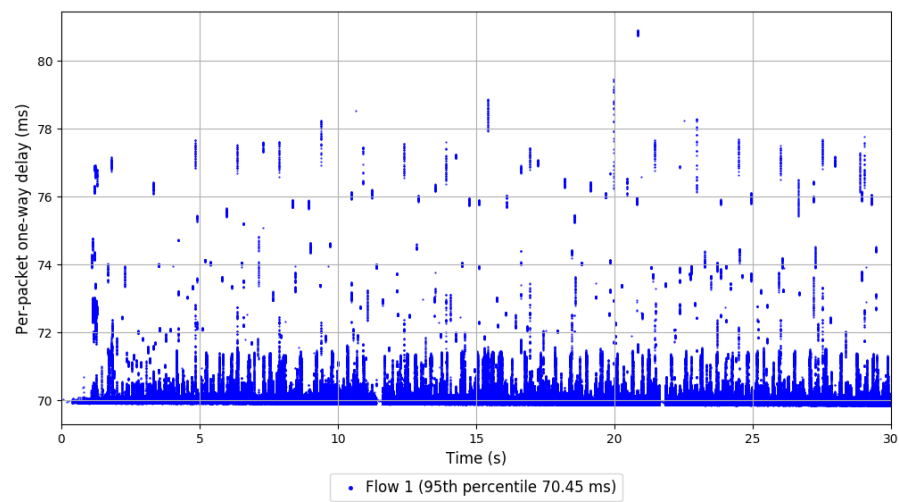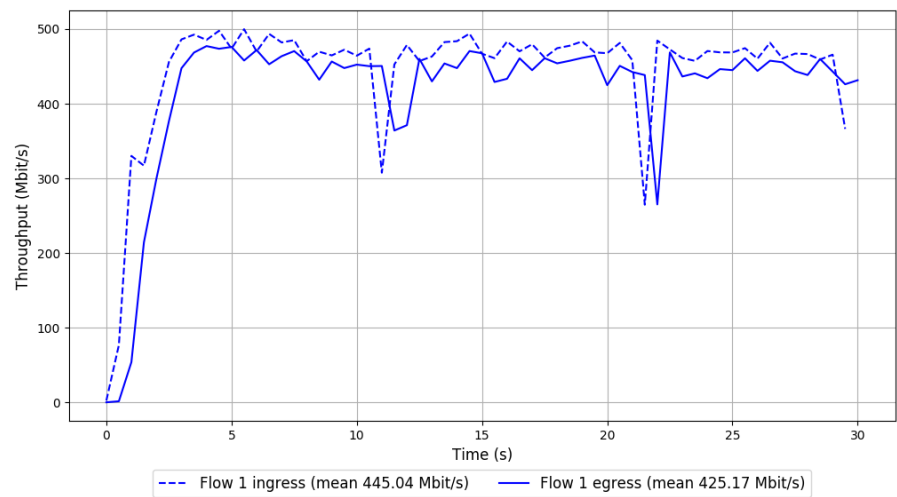
Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2021-03-07 22:58:56
End at: 2021-03-07 22:59:26

# Below is generated by plot.py at 2021-03-07 23:23:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 415.57 Mbit/s
95th percentile per-packet one-way delay: 69.465 ms
Loss rate: 3.58%
-- Flow 1:
Average throughput: 415.57 Mbit/s
95th percentile per-packet one-way delay: 69.465 ms
Loss rate: 3.58%
```
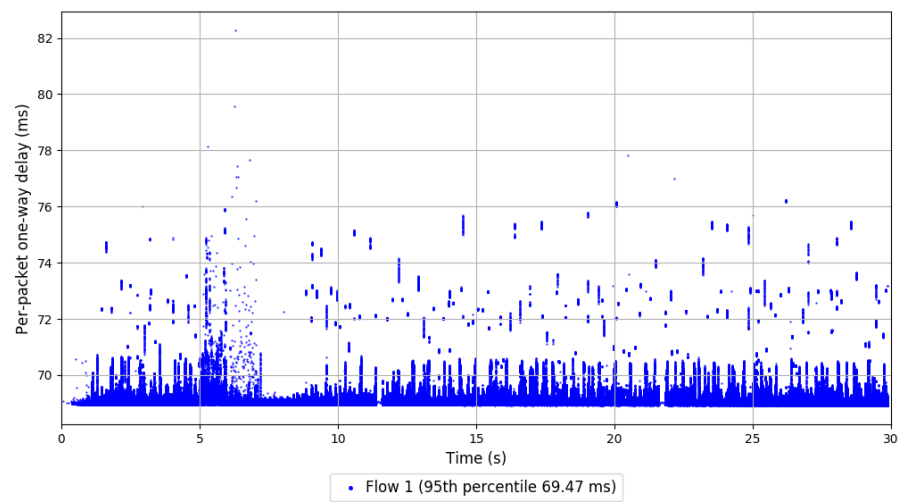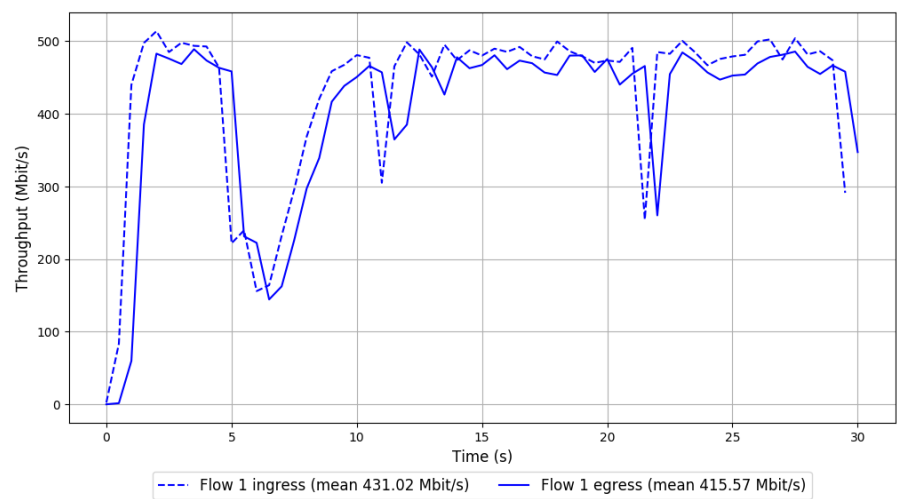
Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 431.02 Mbit/s)   Flow 1 egress (mean 415.57 Mbit/s)

• Flow 1 (95th percentile 69.47 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2021-03-07 23:08:48
End at: 2021-03-07 23:09:18

# Below is generated by plot.py at 2021-03-07 23:24:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 396.60 Mbit/s
95th percentile per-packet one-way delay: 68.702 ms
Loss rate: 4.02%
-- Flow 1:
Average throughput: 396.60 Mbit/s
95th percentile per-packet one-way delay: 68.702 ms
Loss rate: 4.02%
```
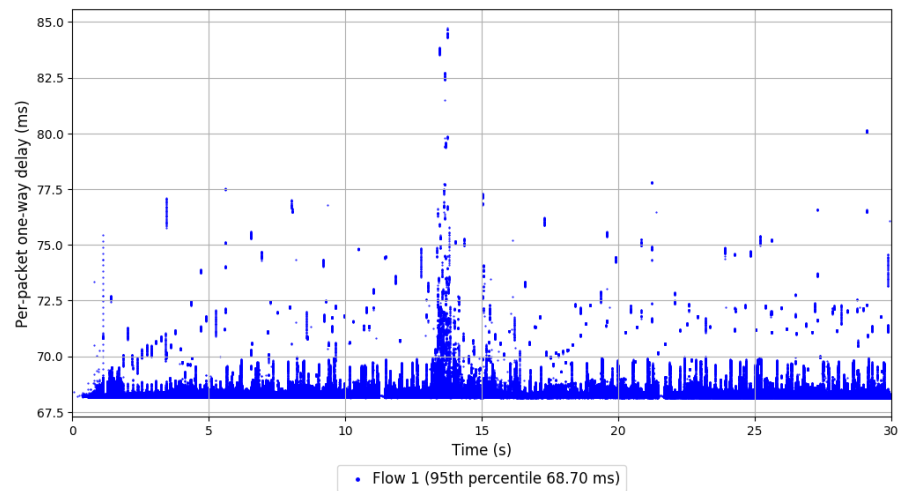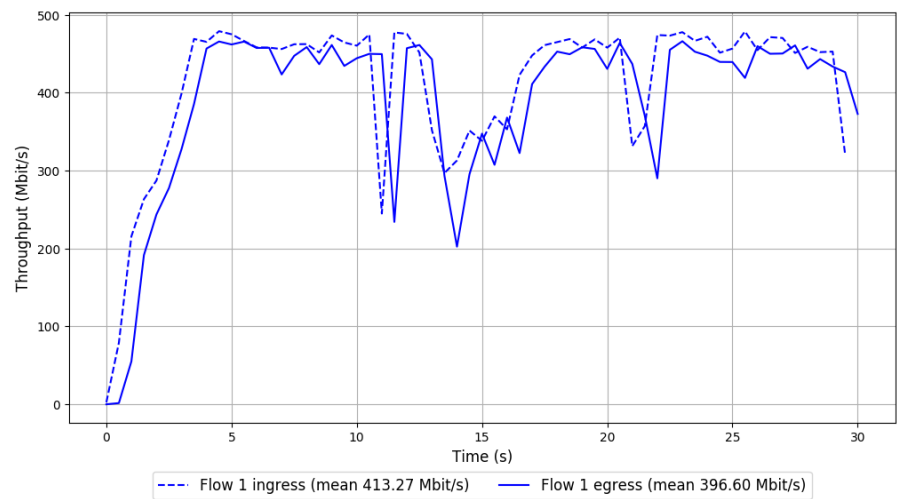
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 413.27 Mbit/s)   Flow 1 egress (mean 396.60 Mbit/s)

Flow 1 (95th percentile 68.70 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2021-03-07 22:54:54
End at: 2021-03-07 22:55:24

# Below is generated by plot.py at 2021-03-07 23:24:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 70.305 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 70.305 ms
Loss rate: 0.30%
```
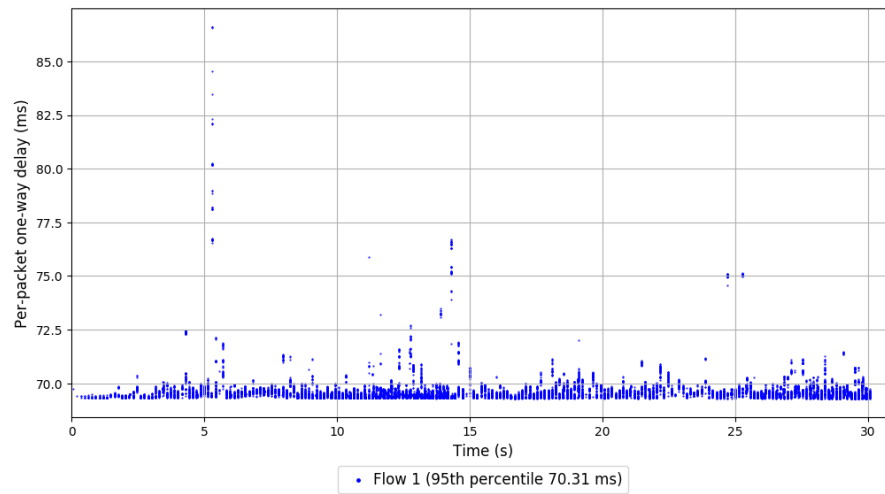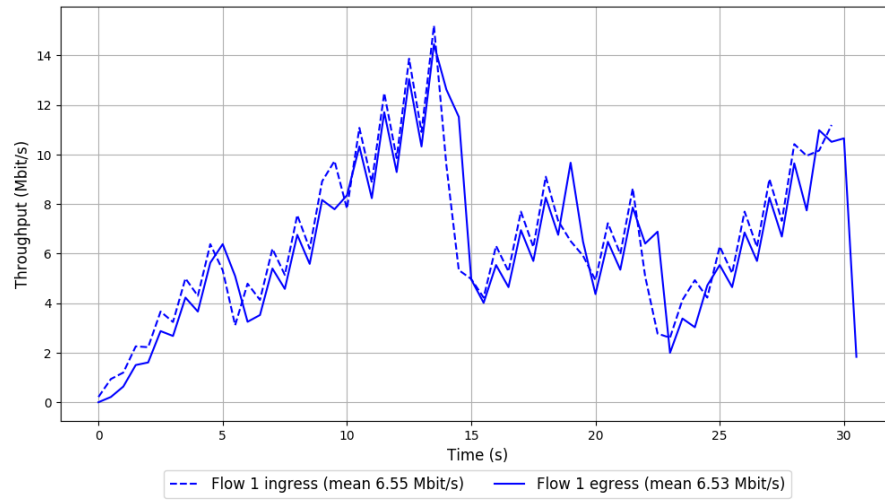
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 6.55 Mbit/s) --- Flow 1 egress (mean 6.53 Mbit/s)

• Flow 1 (95th percentile 70.31 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2021-03-07 23:04:39
End at: 2021-03-07 23:05:09

# Below is generated by plot.py at 2021-03-07 23:24:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 69.673 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 69.673 ms
Loss rate: 0.54%
```
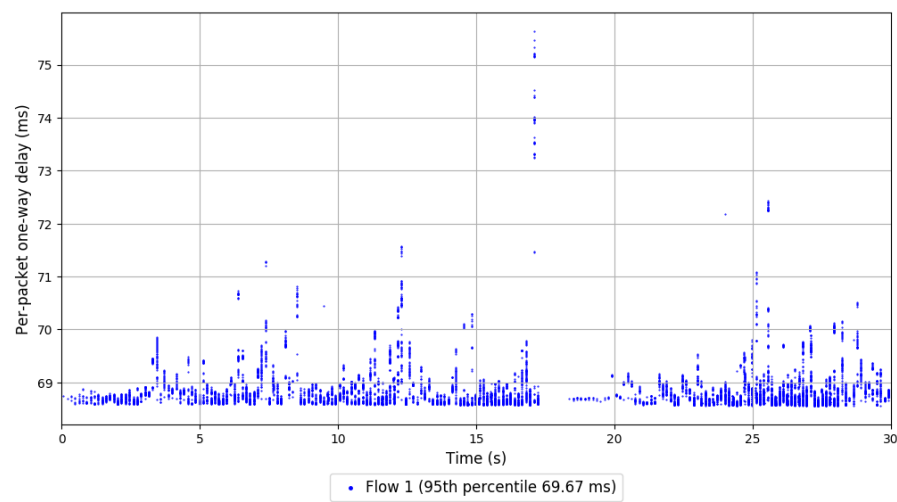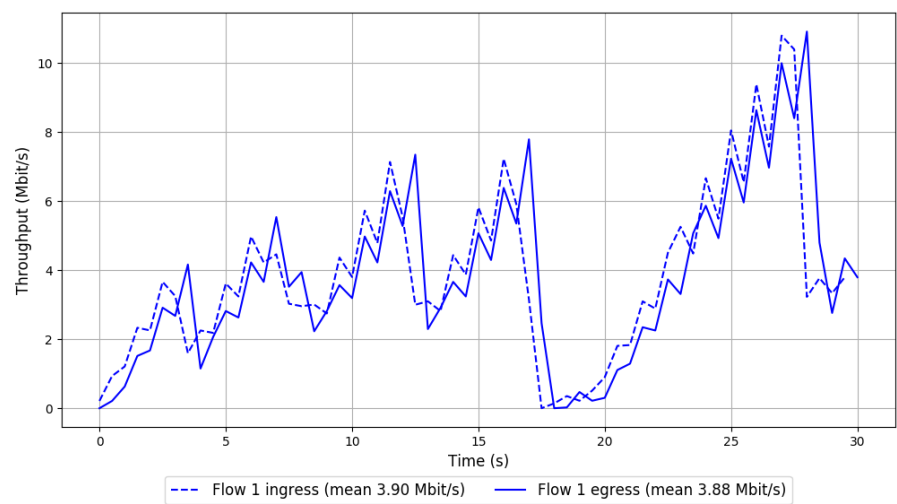
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 3.90 Mbit/s)   Flow 1 egress (mean 3.88 Mbit/s)

Flow 1 (95th percentile 69.67 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2021-03-07 23:14:27
End at: 2021-03-07 23:14:57

# Below is generated by plot.py at 2021-03-07 23:24:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 68.952 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 68.952 ms
Loss rate: 1.09%
```
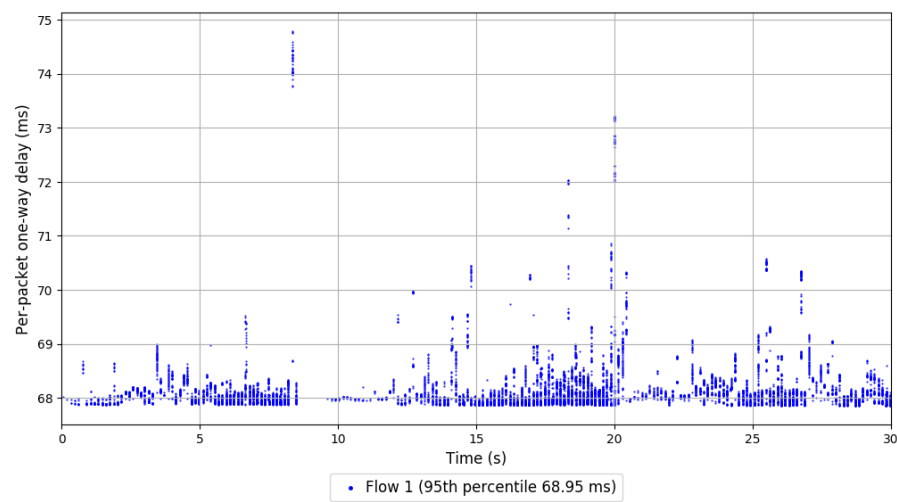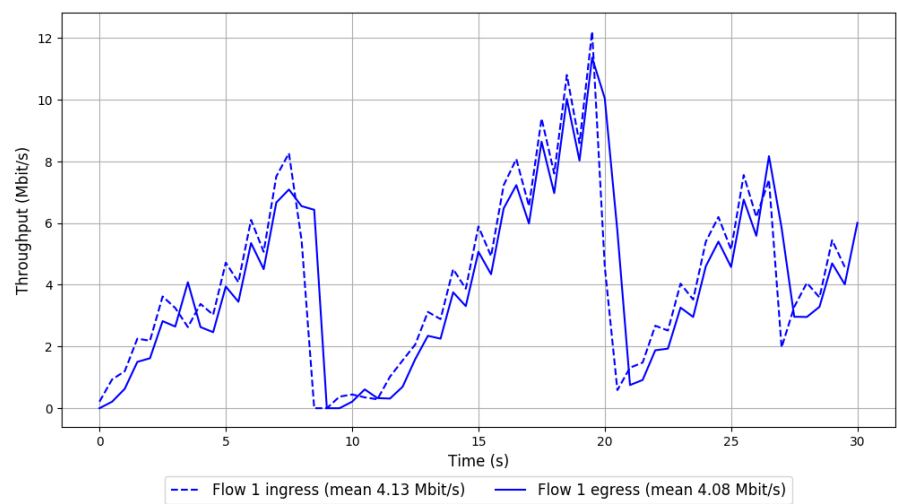
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 4.13 Mbit/s)   Flow 1 egress (mean 4.08 Mbit/s)
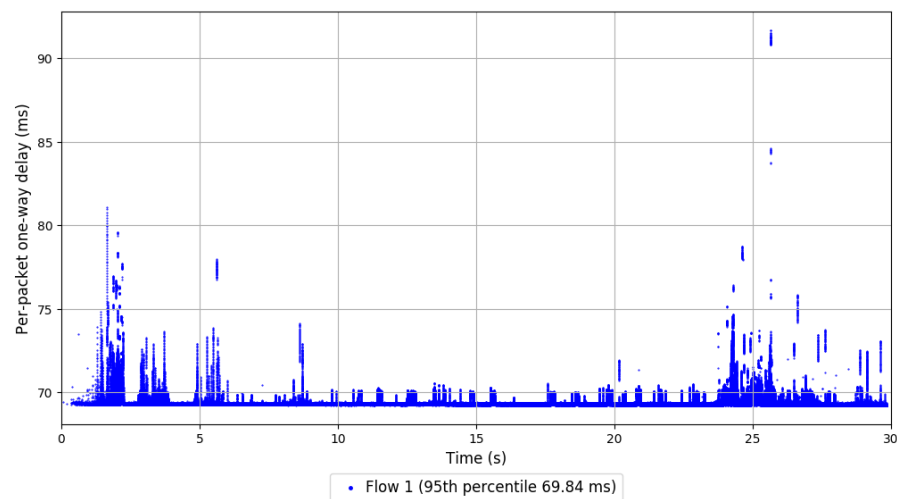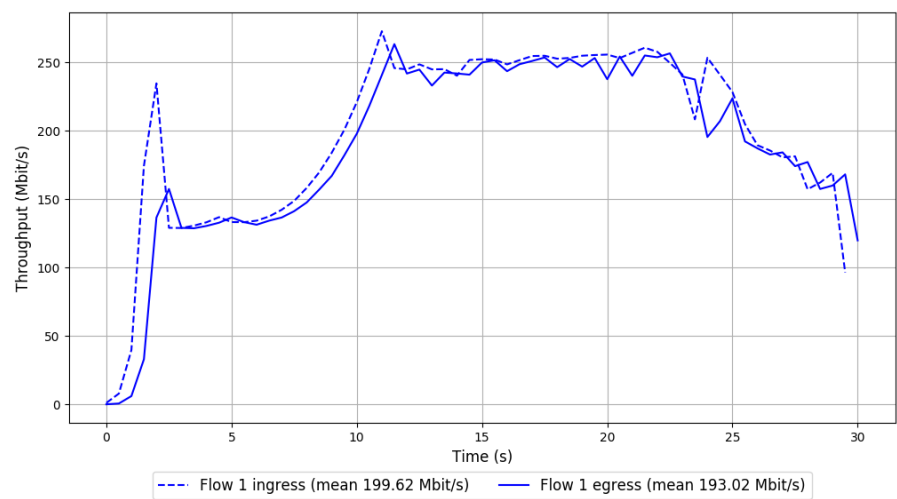

Flow 1 (95th percentile 68.95 ms)

```
Run 1: Statistics of PCC-Allegro

Start at: 2021-03-07 22:55:37
End at: 2021-03-07 22:56:07

# Below is generated by plot.py at 2021-03-07 23:24:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 193.02 Mbit/s
95th percentile per-packet one-way delay: 69.842 ms
Loss rate: 3.31%
-- Flow 1:
Average throughput: 193.02 Mbit/s
95th percentile per-packet one-way delay: 69.842 ms
Loss rate: 3.31%
```
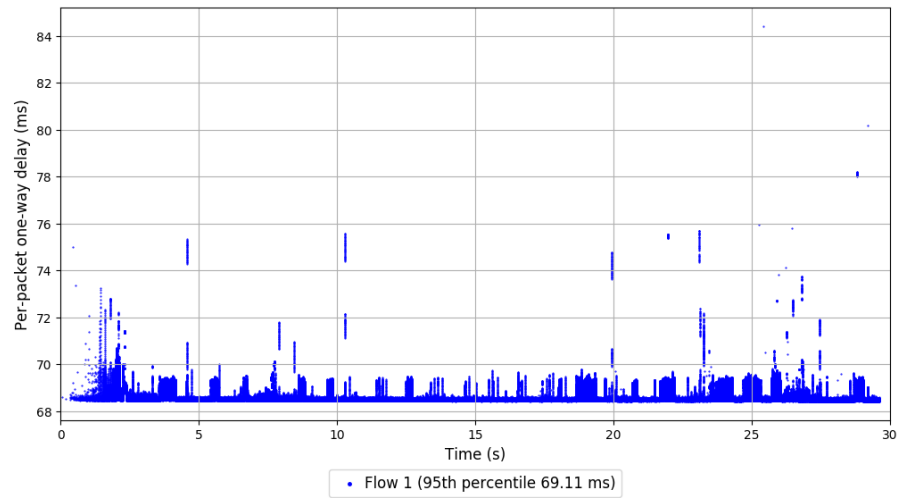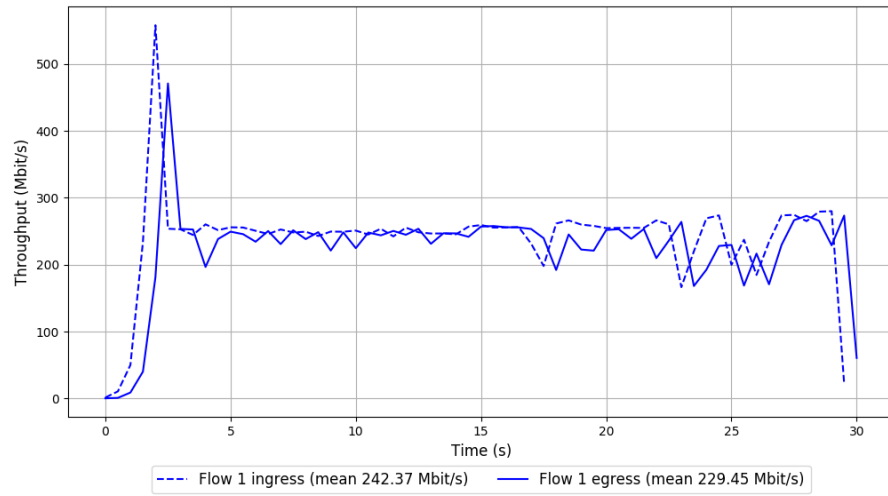
Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 199.62 Mbit/s)   Flow 1 egress (mean 193.02 Mbit/s)

• Flow 1 (95th percentile 69.84 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2021-03-07 23:05:22
End at: 2021-03-07 23:05:52

# Below is generated by plot.py at 2021-03-07 23:24:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.45 Mbit/s
95th percentile per-packet one-way delay: 69.113 ms
Loss rate: 5.33%
-- Flow 1:
Average throughput: 229.45 Mbit/s
95th percentile per-packet one-way delay: 69.113 ms
Loss rate: 5.33%
```

Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 242.37 Mbit/s)   Flow 1 egress (mean 229.45 Mbit/s)

Flow 1 (95th percentile 69.11 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2021-03-07 23:15:10
End at: 2021-03-07 23:15:40

# Below is generated by plot.py at 2021-03-07 23:24:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 168.48 Mbit/s
95th percentile per-packet one-way delay: 68.382 ms
Loss rate: 2.99%
-- Flow 1:
Average throughput: 168.48 Mbit/s
95th percentile per-packet one-way delay: 68.382 ms
Loss rate: 2.99%
```
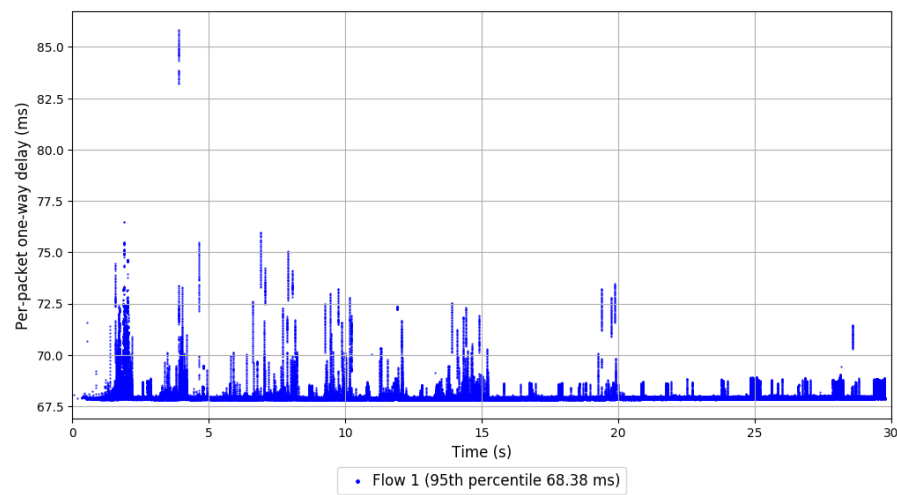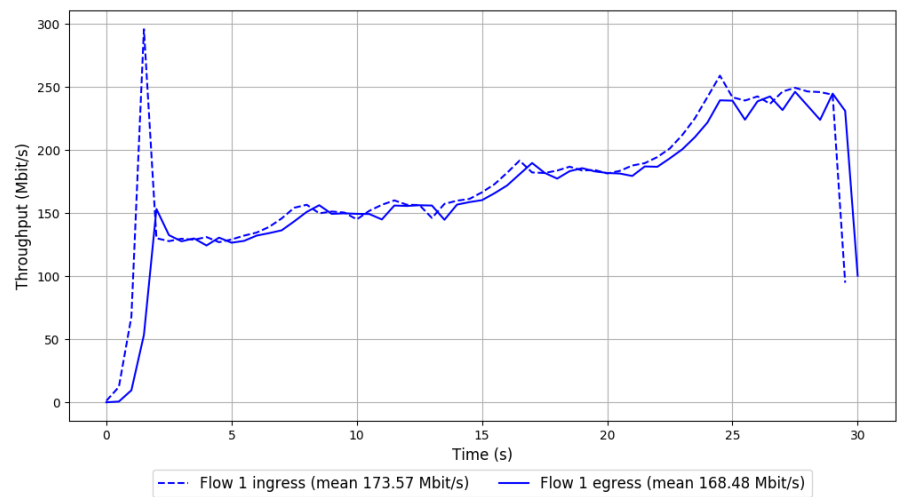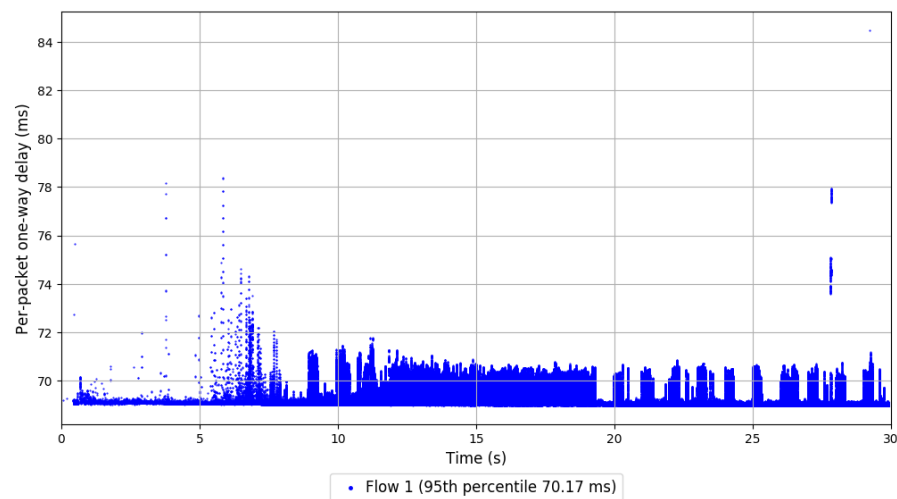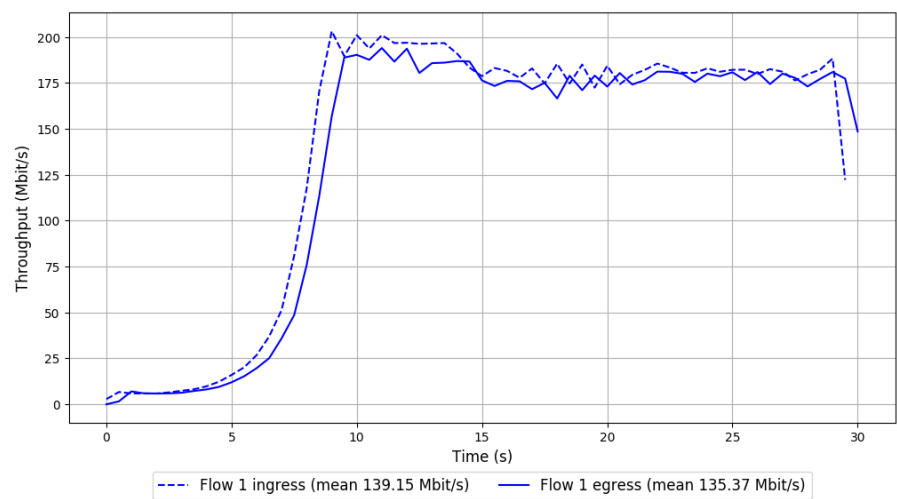
Run 3: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2021-03-07 22:58:03
End at: 2021-03-07 22:58:33

# Below is generated by plot.py at 2021-03-07 23:25:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 135.37 Mbit/s
95th percentile per-packet one-way delay: 70.170 ms
Loss rate: 2.72%
-- Flow 1:
Average throughput: 135.37 Mbit/s
95th percentile per-packet one-way delay: 70.170 ms
Loss rate: 2.72%
```
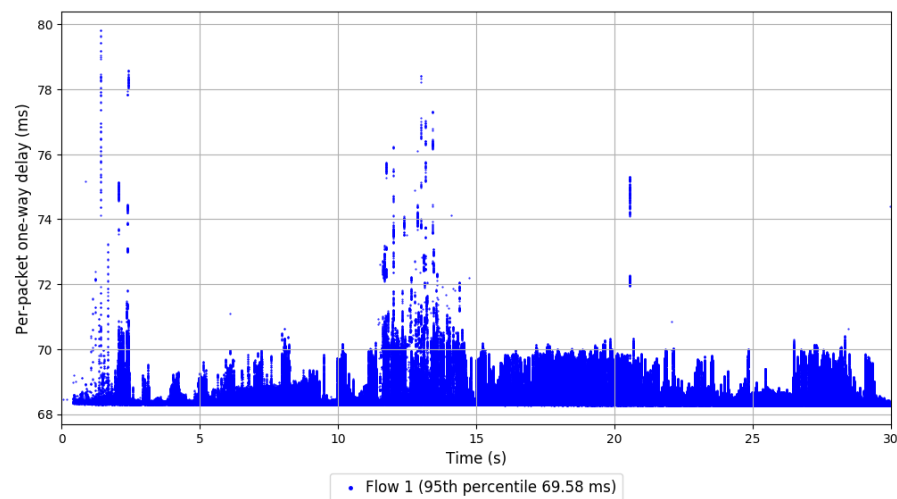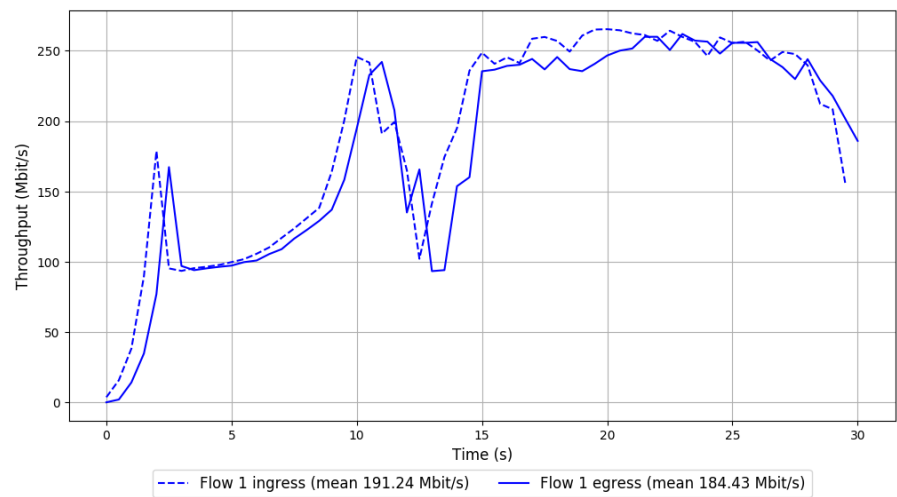
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2021-03-07 23:07:50
End at: 2021-03-07 23:08:20


# Below is generated by plot.py at 2021-03-07 23:25:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 184.43 Mbit/s
95th percentile per-packet one-way delay: 69.585 ms
Loss rate: 3.54%
-- Flow 1:
Average throughput: 184.43 Mbit/s
95th percentile per-packet one-way delay: 69.585 ms
Loss rate: 3.54%
```

Run 2: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 191.24 Mbit/s) — Flow 1 egress (mean 184.43 Mbit/s)

Flow 1 (95th percentile 69.58 ms)

43

```
Run 3: Statistics of PCC-Expr

Start at: 2021-03-07 23:17:33
End at: 2021-03-07 23:18:03

# Below is generated by plot.py at 2021-03-07 23:26:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 215.20 Mbit/s
95th percentile per-packet one-way delay: 69.229 ms
Loss rate: 4.70%
-- Flow 1:
Average throughput: 215.20 Mbit/s
95th percentile per-packet one-way delay: 69.229 ms
Loss rate: 4.70%
```
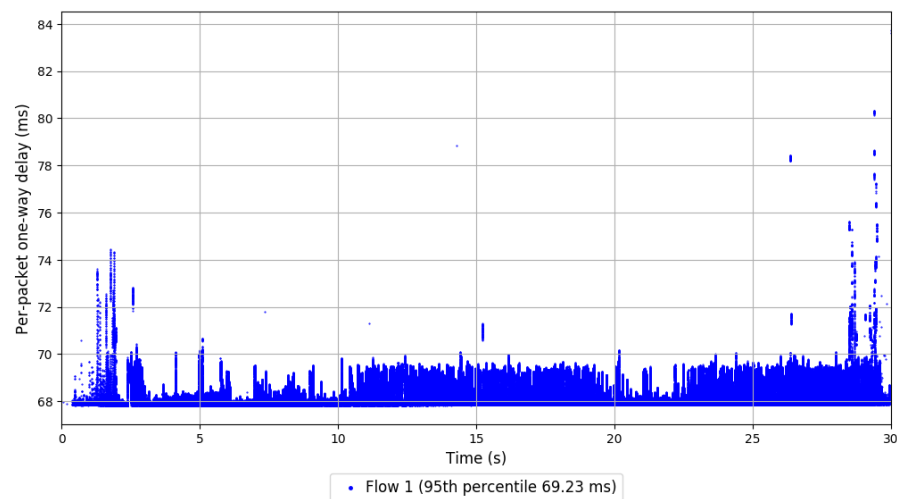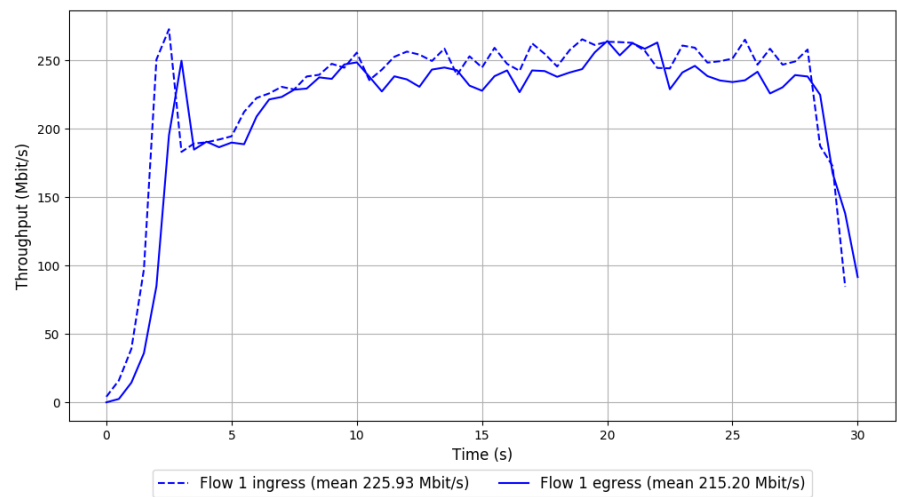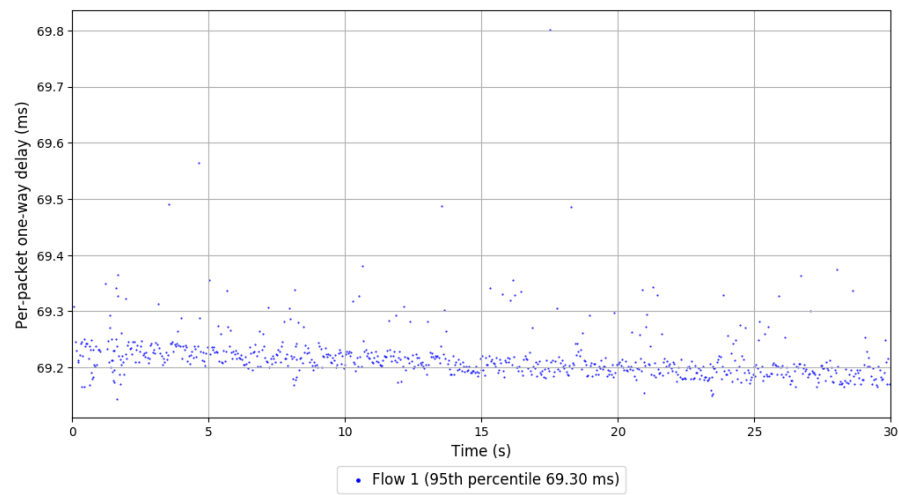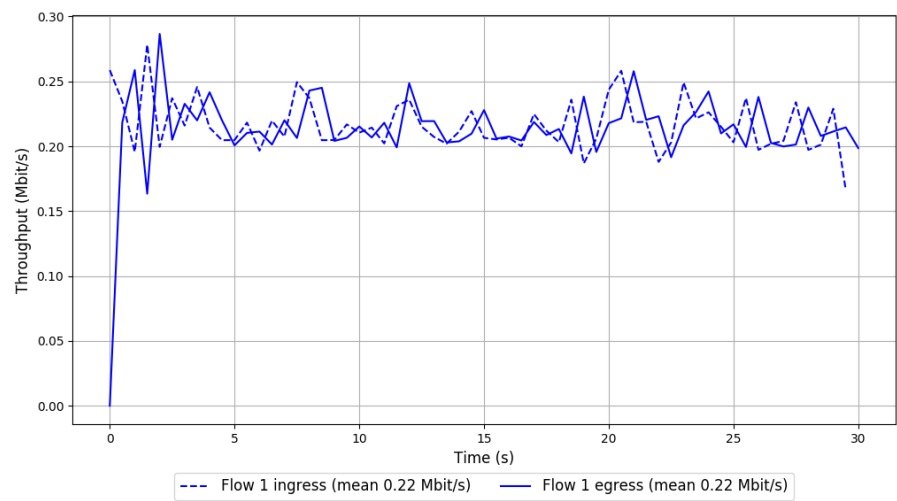
Run 3: Report of PCC-Expr — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2021-03-07 22:56:26
End at: 2021-03-07 22:56:56

# Below is generated by plot.py at 2021-03-07 23:26:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 69.295 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 69.295 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

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

• Flow 1 (95th percentile 69.30 ms)

```
Run 2: Statistics of SCReAM

Start at: 2021-03-07 23:06:15
End at: 2021-03-07 23:06:45


# Below is generated by plot.py at 2021-03-07 23:26:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 68.445 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 68.445 ms
Loss rate: 0.00%
```
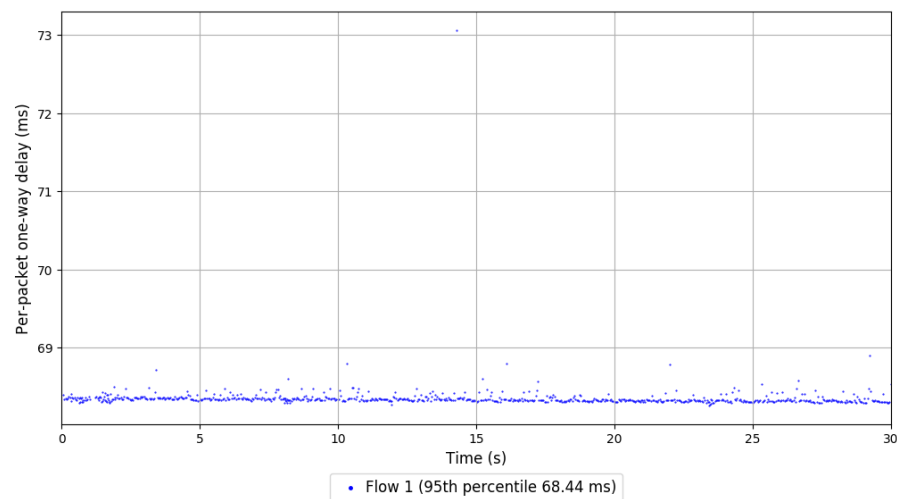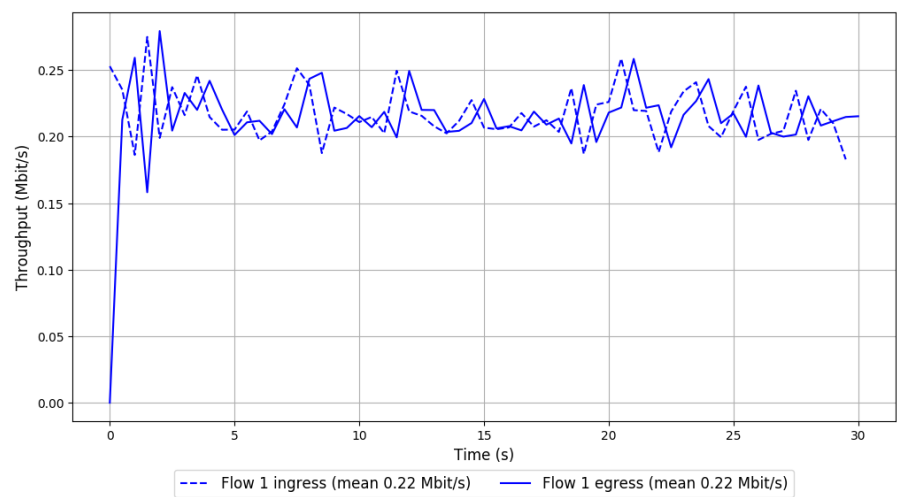
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2021-03-07 23:15:58
End at: 2021-03-07 23:16:28

# Below is generated by plot.py at 2021-03-07 23:26:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 68.150 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 68.150 ms
Loss rate: 0.00%
```
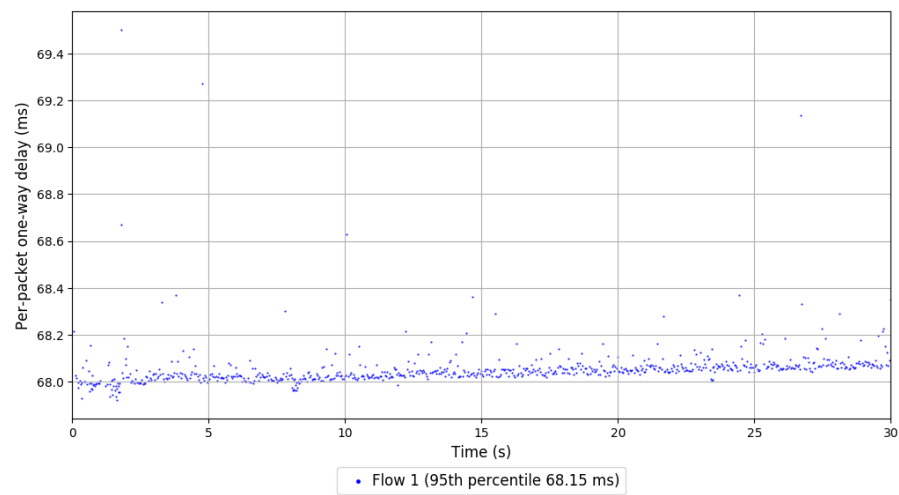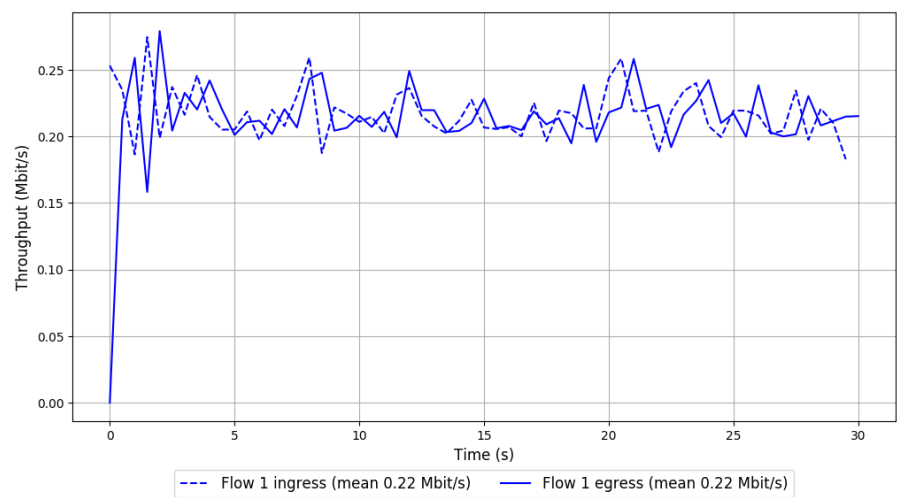
Run 3: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 68.15 ms)

```
Run 1: Statistics of Sprout

Start at: 2021-03-07 22:51:48
End at: 2021-03-07 22:52:18

# Below is generated by plot.py at 2021-03-07 23:26:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 70.671 ms
Loss rate: 4.29%
-- Flow 1:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 70.671 ms
Loss rate: 4.29%
```
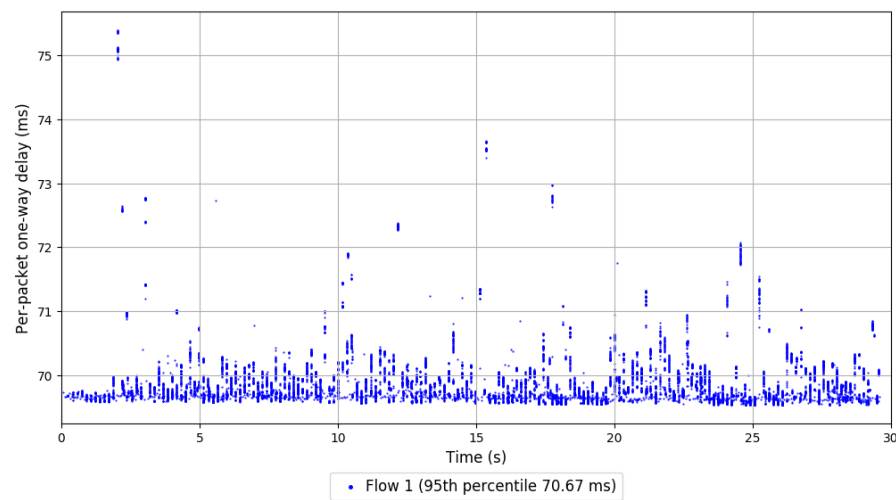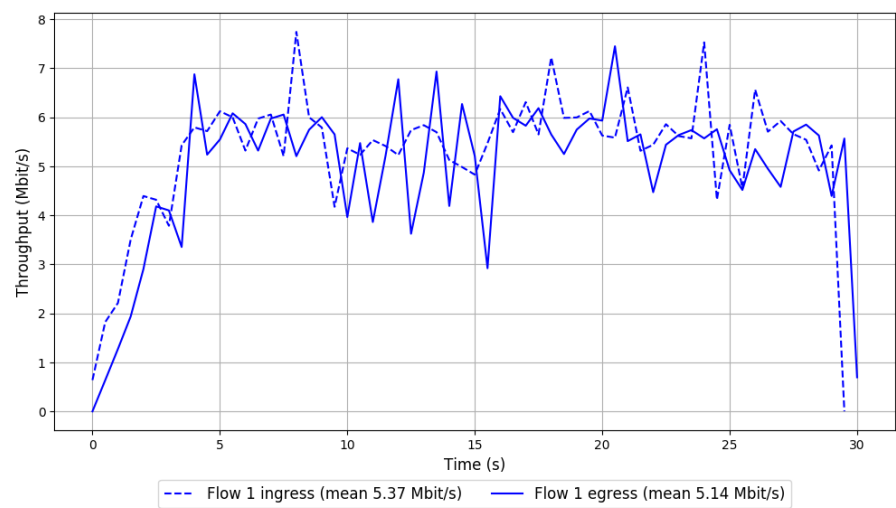
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2021-03-07 23:01:33
End at: 2021-03-07 23:02:03

# Below is generated by plot.py at 2021-03-07 23:26:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.20 Mbit/s
95th percentile per-packet one-way delay: 69.859 ms
Loss rate: 3.18%
-- Flow 1:
Average throughput: 5.20 Mbit/s
95th percentile per-packet one-way delay: 69.859 ms
Loss rate: 3.18%
```
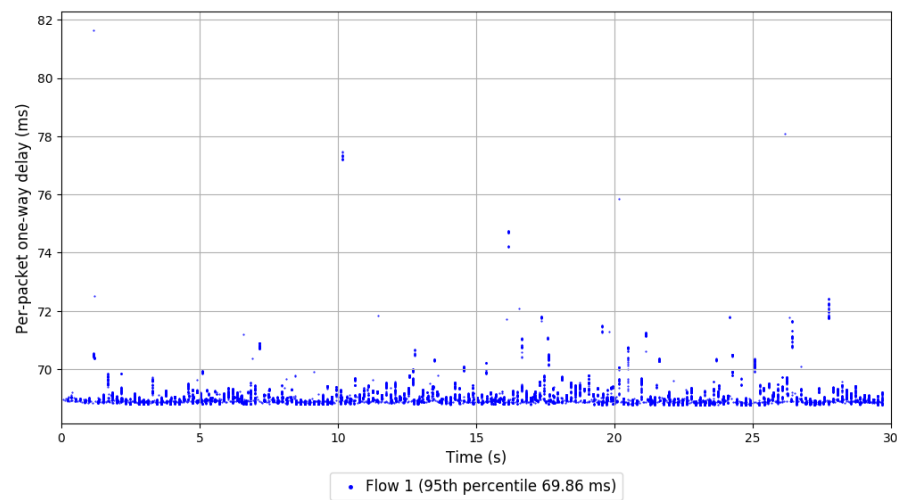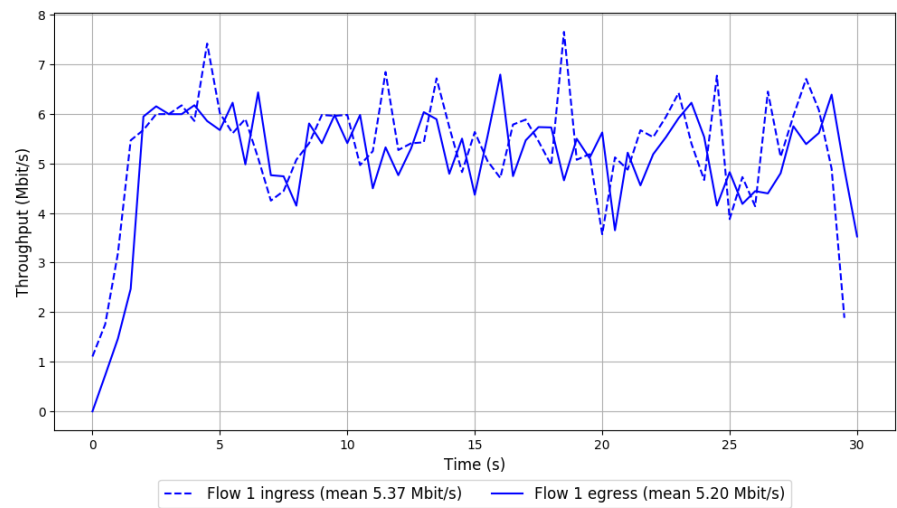
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2021-03-07 23:11:24
End at: 2021-03-07 23:11:54


# Below is generated by plot.py at 2021-03-07 23:26:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 68.911 ms
Loss rate: 4.67%
-- Flow 1:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 68.911 ms
Loss rate: 4.67%
```
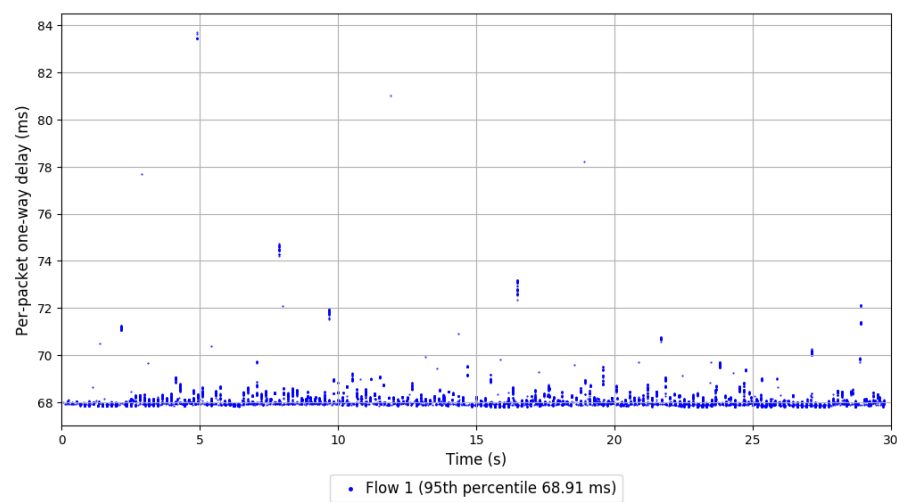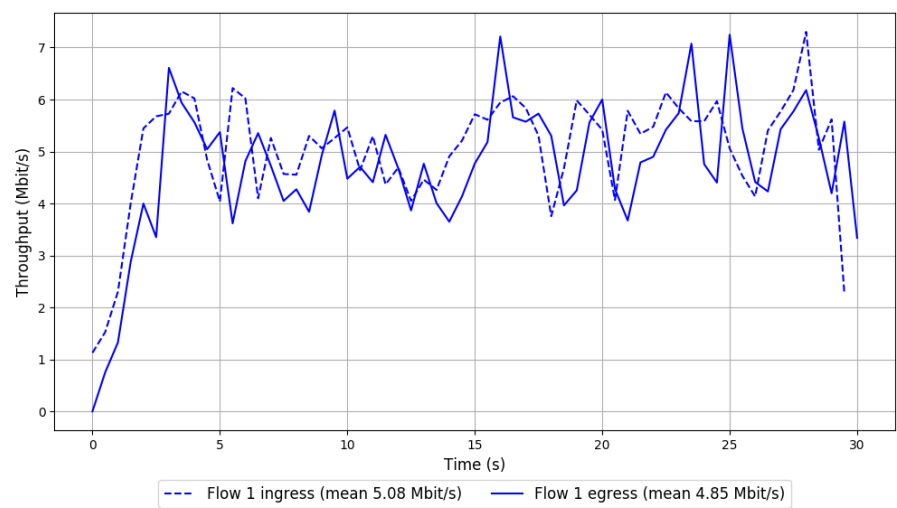
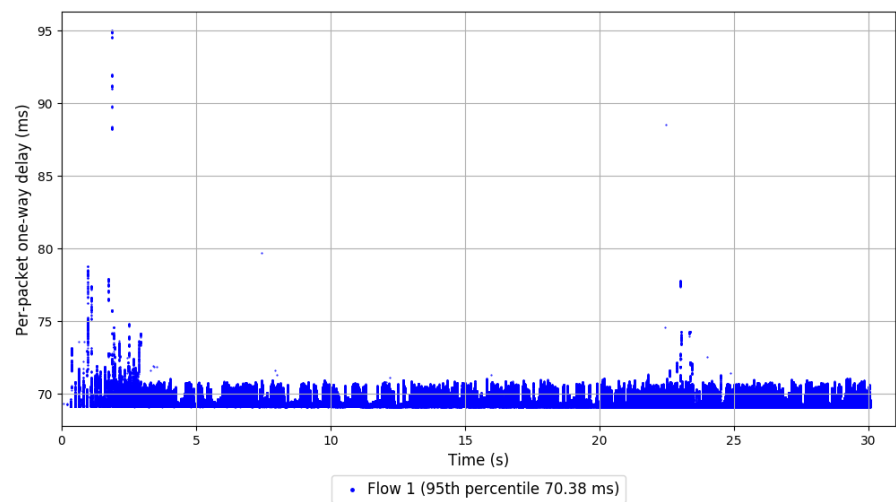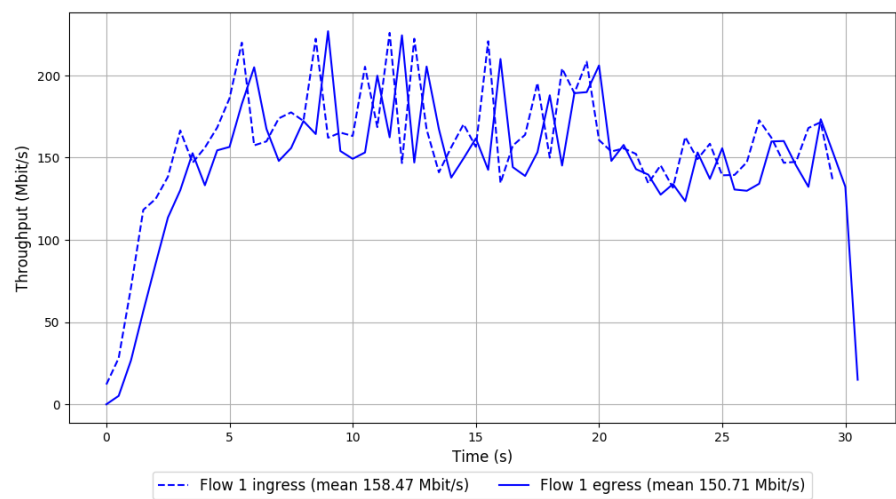Run 3: Report of Sprout — Data Link

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

Start at: 2021-03-07 22:57:08
End at: 2021-03-07 22:57:38

# Below is generated by plot.py at 2021-03-07 23:27:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 150.71 Mbit/s
95th percentile per-packet one-way delay: 70.380 ms
Loss rate: 4.92%
-- Flow 1:
Average throughput: 150.71 Mbit/s
95th percentile per-packet one-way delay: 70.380 ms
Loss rate: 4.92%
```

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

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

Start at: 2021-03-07 23:06:57
End at: 2021-03-07 23:07:27

# Below is generated by plot.py at 2021-03-07 23:27:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 131.37 Mbit/s
95th percentile per-packet one-way delay: 69.664 ms
Loss rate: 6.05%
-- Flow 1:
Average throughput: 131.37 Mbit/s
95th percentile per-packet one-way delay: 69.664 ms
Loss rate: 6.05%
```
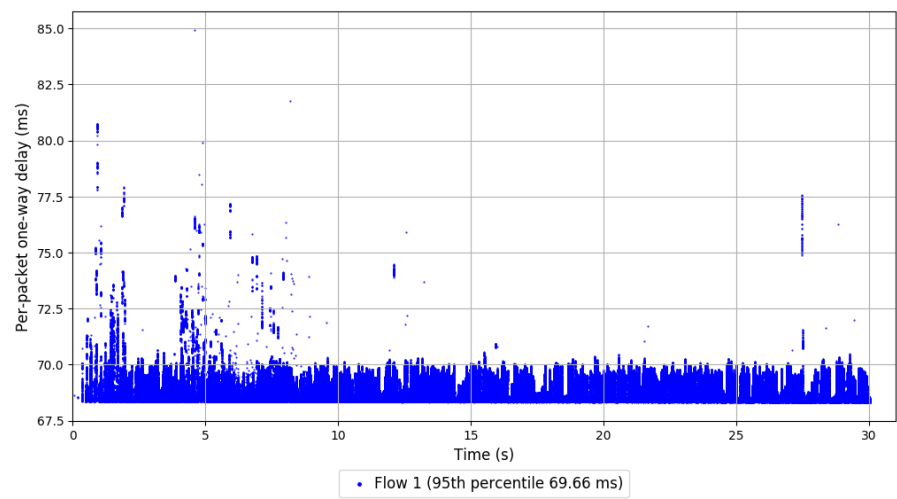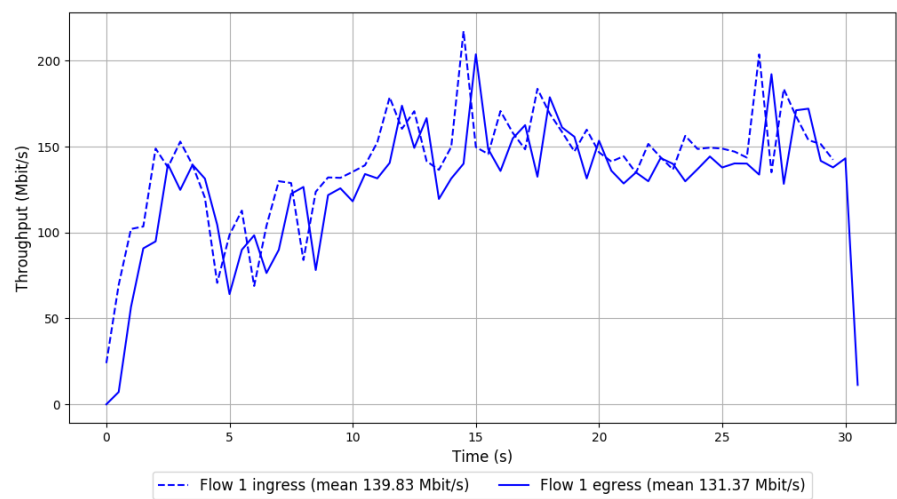
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 139.83 Mbit/s)   Flow 1 egress (mean 131.37 Mbit/s)

Flow 1 (95th percentile 69.66 ms)

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

Start at: 2021-03-07 23:16:39
End at: 2021-03-07 23:17:09

# Below is generated by plot.py at 2021-03-07 23:27:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 142.80 Mbit/s
95th percentile per-packet one-way delay: 69.280 ms
Loss rate: 5.14%
-- Flow 1:
Average throughput: 142.80 Mbit/s
95th percentile per-packet one-way delay: 69.280 ms
Loss rate: 5.14%
```
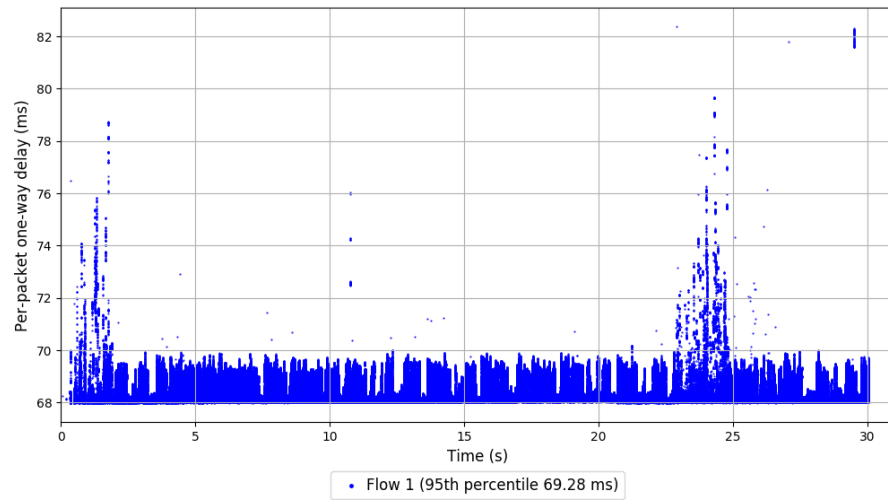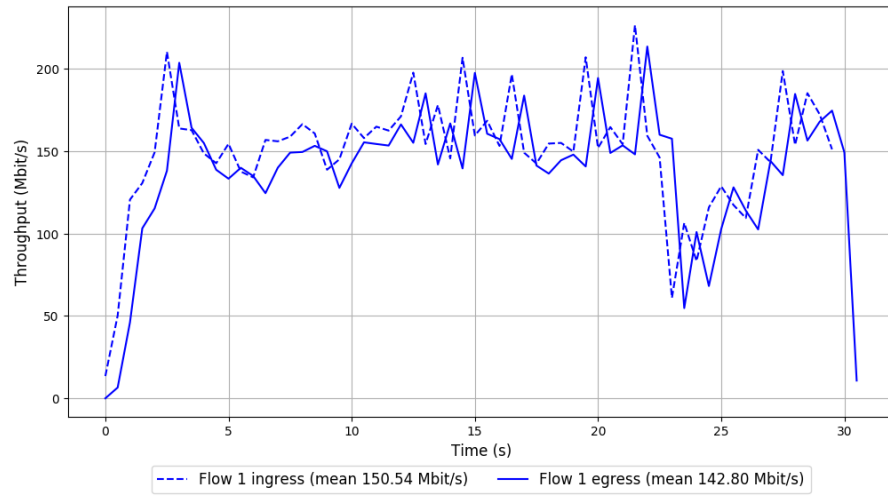
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 150.54 Mbit/s)   Flow 1 egress (mean 142.80 Mbit/s)

Flow 1 (95th percentile 69.28 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2021-03-07 22:54:12
End at: 2021-03-07 22:54:42

# Below is generated by plot.py at 2021-03-07 23:27:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 69.957 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 69.957 ms
Loss rate: 0.39%
```
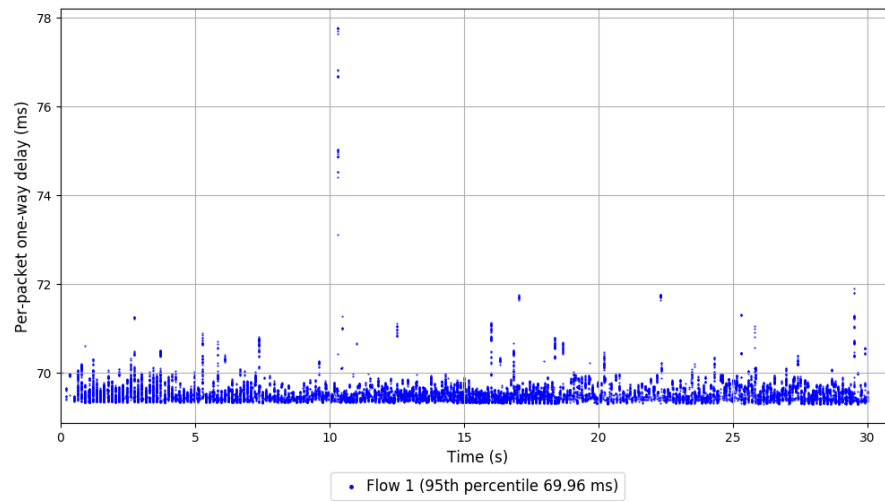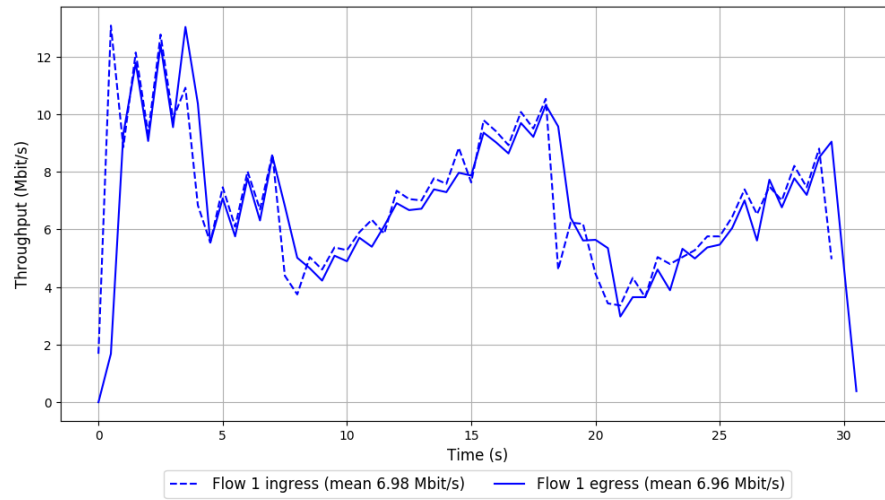
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2021-03-07 23:03:57
End at: 2021-03-07 23:04:27


# Below is generated by plot.py at 2021-03-07 23:27:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 69.287 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 69.287 ms
Loss rate: 1.30%
```
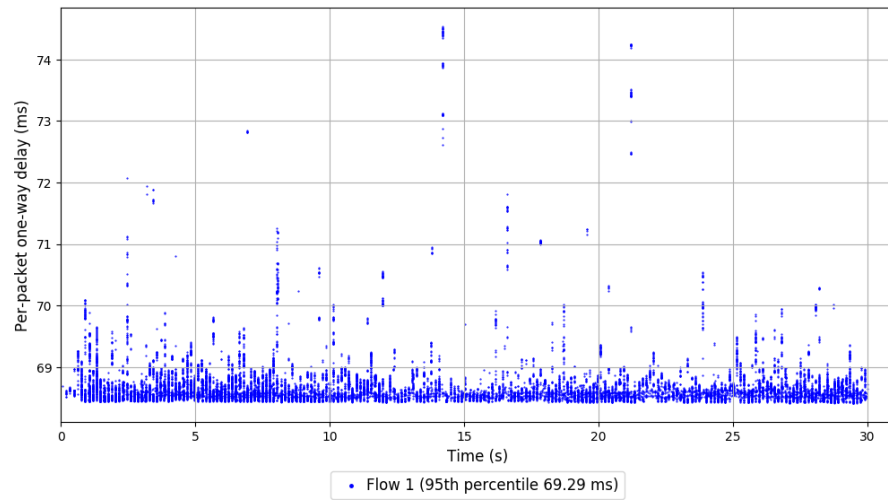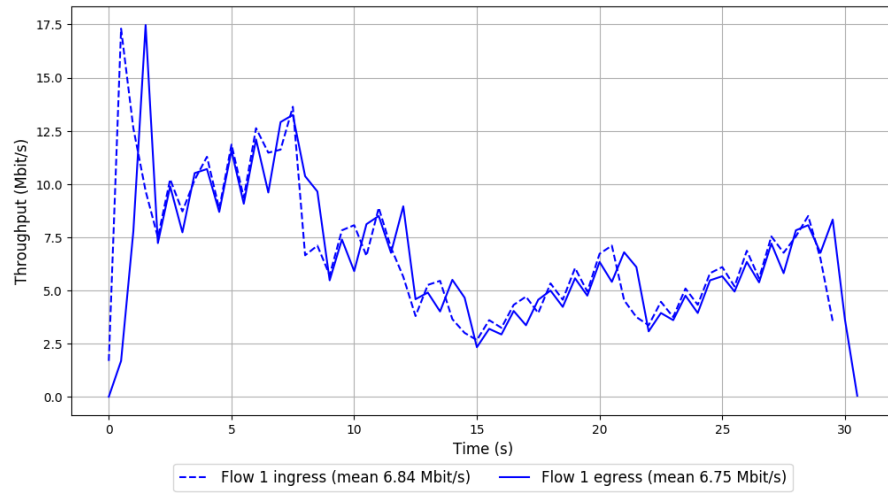
Run 2: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 6.84 Mbit/s) — Flow 1 egress (mean 6.75 Mbit/s)

Flow 1 (95th percentile 69.29 ms)

```
Run 3: Statistics of TCP Vegas

Start at: 2021-03-07 23:13:45
End at: 2021-03-07 23:14:15

# Below is generated by plot.py at 2021-03-07 23:27:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 68.615 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 68.615 ms
Loss rate: 0.92%
```
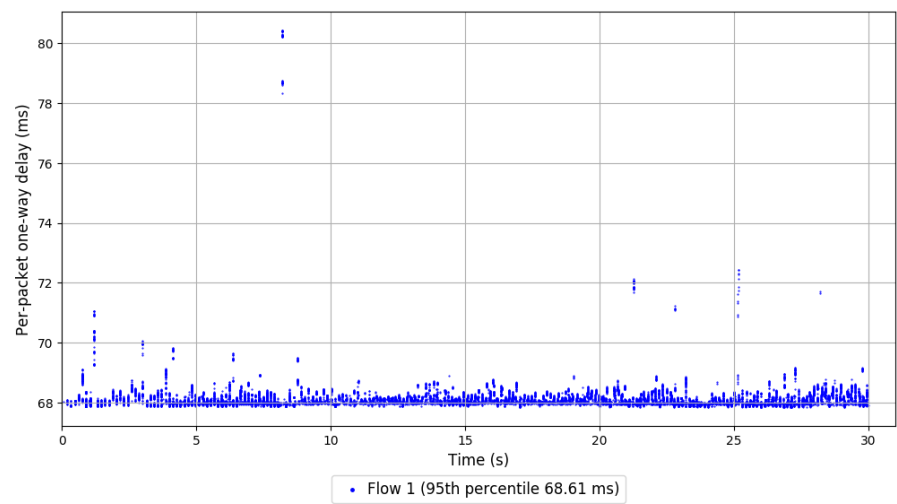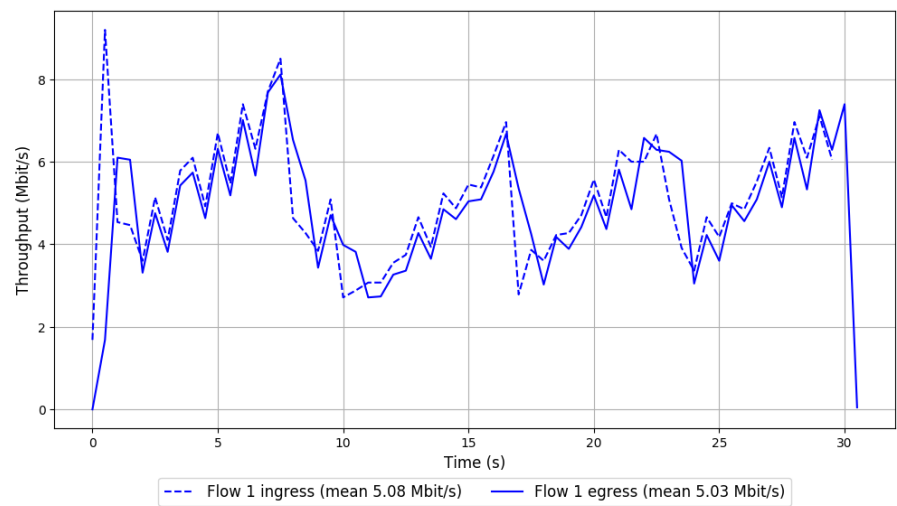
Run 3: Report of TCP Vegas — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2021-03-07 22:52:30
End at: 2021-03-07 22:53:00

# Below is generated by plot.py at 2021-03-07 23:28:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 154.52 Mbit/s
95th percentile per-packet one-way delay: 70.504 ms
Loss rate: 2.87%
-- Flow 1:
Average throughput: 154.52 Mbit/s
95th percentile per-packet one-way delay: 70.504 ms
Loss rate: 2.87%
```
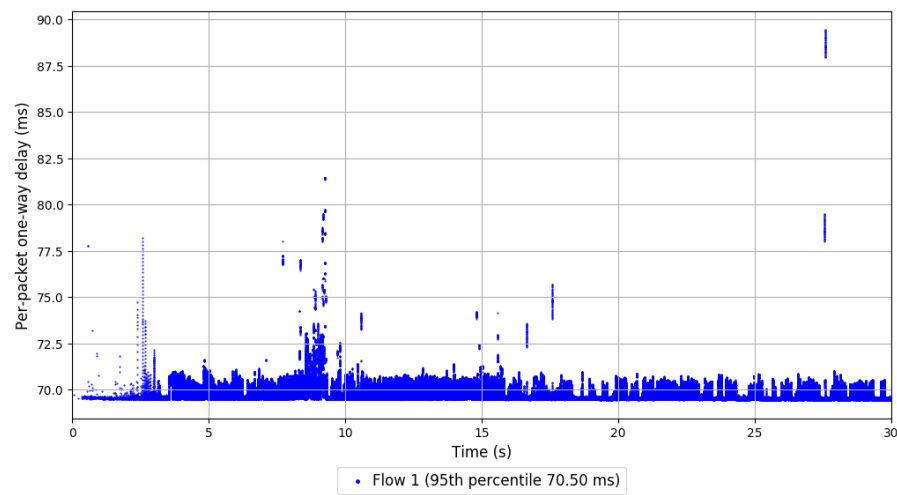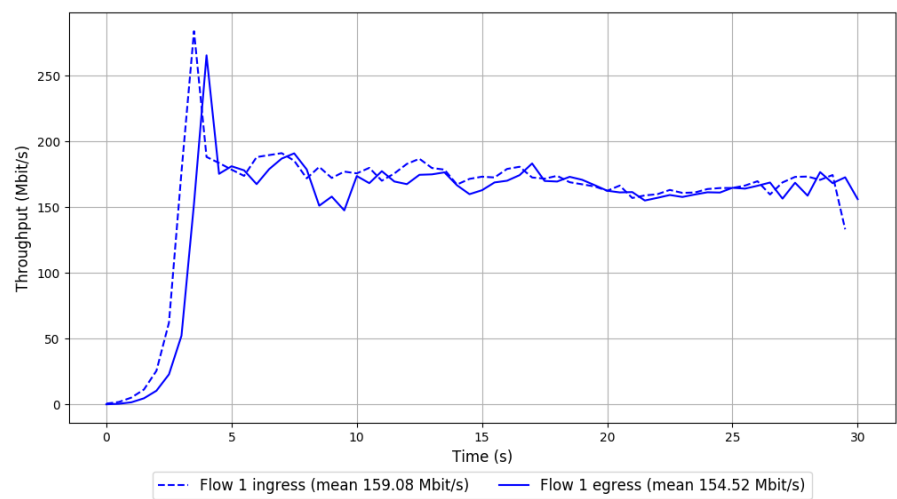
Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2021-03-07 23:02:15
End at: 2021-03-07 23:02:45

# Below is generated by plot.py at 2021-03-07 23:28:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 182.90 Mbit/s
95th percentile per-packet one-way delay: 69.786 ms
Loss rate: 3.18%
-- Flow 1:
Average throughput: 182.90 Mbit/s
95th percentile per-packet one-way delay: 69.786 ms
Loss rate: 3.18%
```
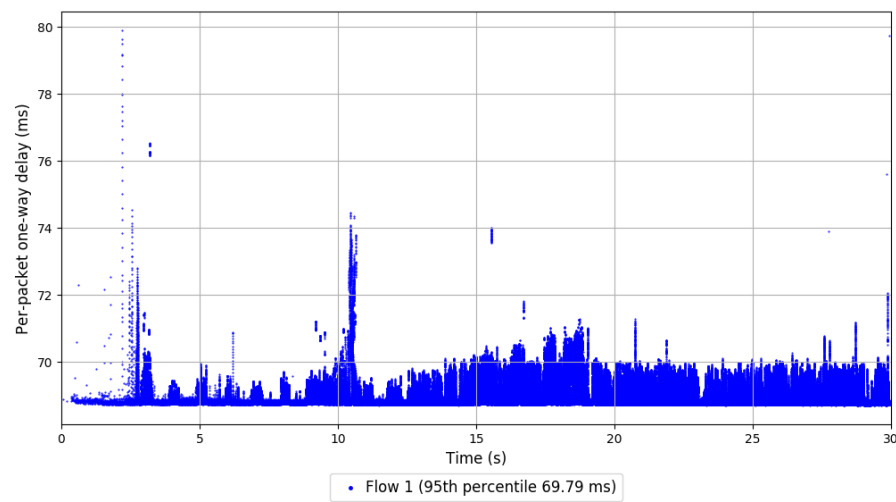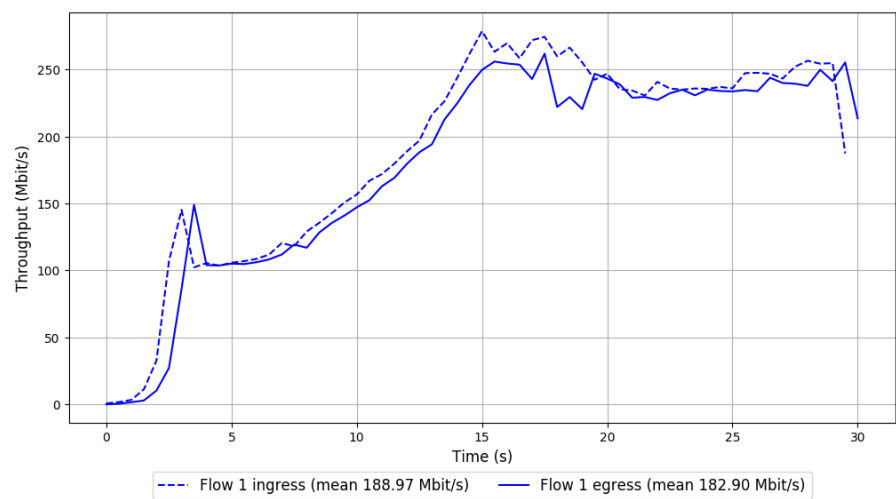
Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2021-03-07 23:12:07
End at: 2021-03-07 23:12:37


# Below is generated by plot.py at 2021-03-07 23:28:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 151.38 Mbit/s
95th percentile per-packet one-way delay: 68.800 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 151.38 Mbit/s
95th percentile per-packet one-way delay: 68.800 ms
Loss rate: 1.12%
```

Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 153.10 Mbit/s) — Flow 1 egress (mean 151.38 Mbit/s)

Flow 1 (95th percentile 68.80 ms)