

Pantheon Report

Generated at 2018-12-20 00:36:46 (UTC).
Data path: AWS Brazil 2 on `ens5` (*local*) → Colombia on `p4p1` (*remote*).
Repeated the test of 19 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:

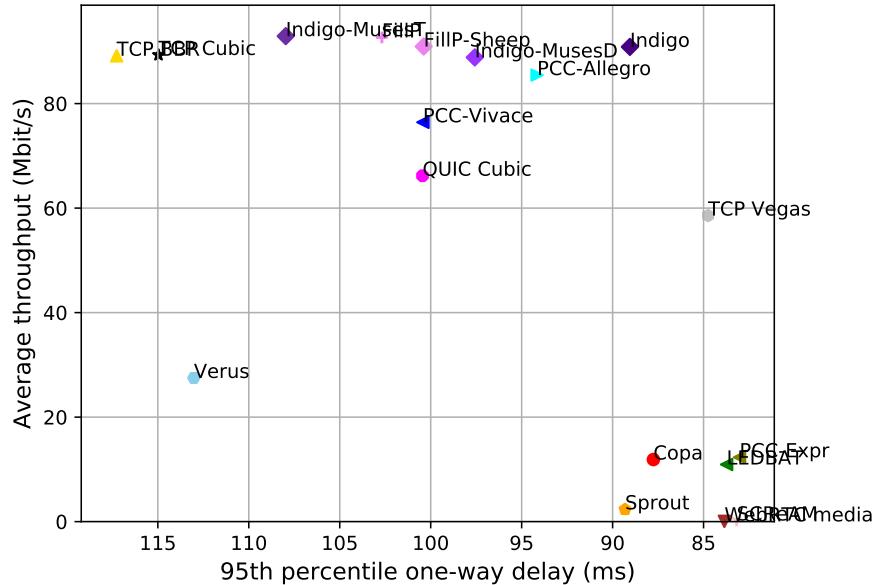
```
Linux 4.15.0-1029-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

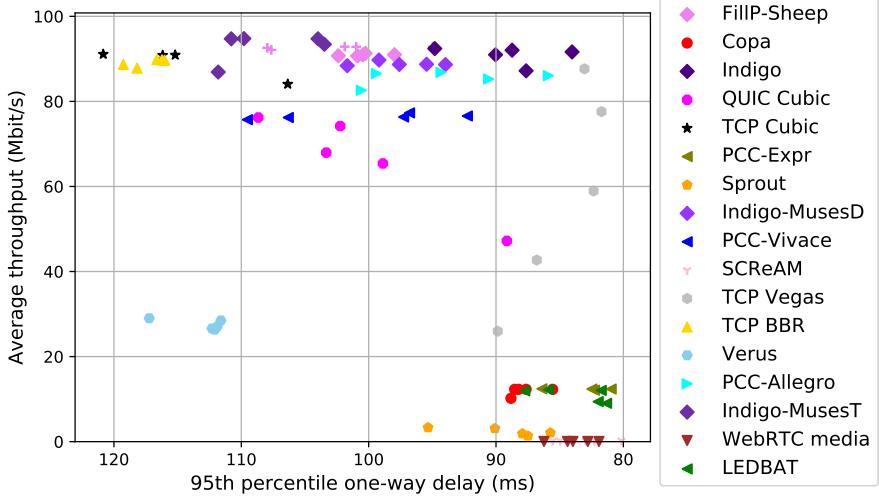
```
branch: muses @ c654af0b7d59d4ef4b914cfac404e1fc2e96dc68
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fc45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbfed0c6349ae986009b4fa8643c40a
third_party/muses-refactored @ 31f8f0ba8ef8b1da76c2bc0cd0a7850c33ff64fb
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
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 AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
(mean of all runs by scheme)



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



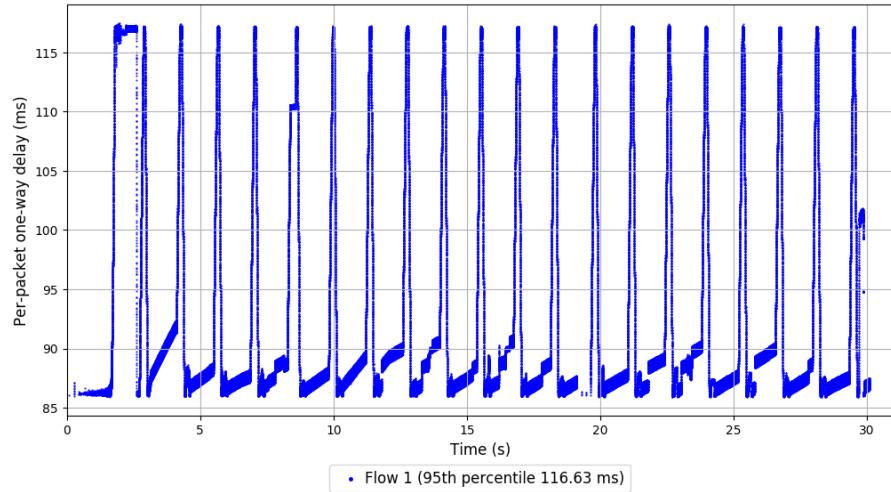
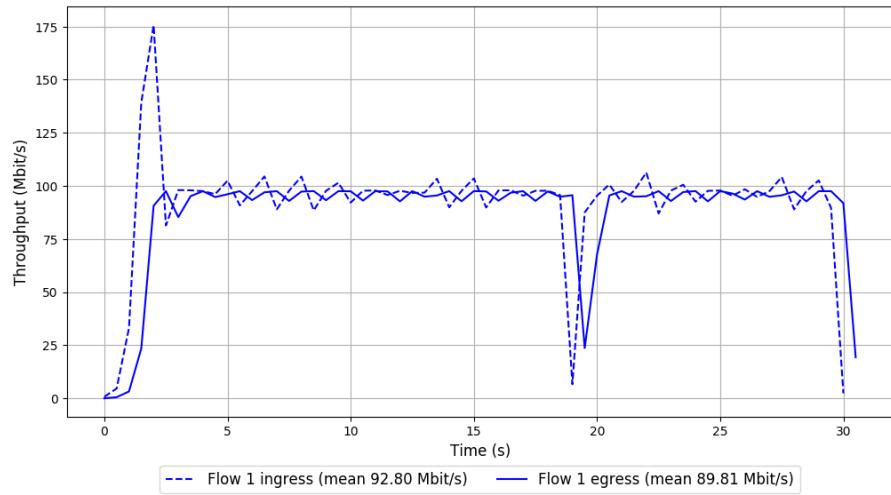
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	89.15	117.26	3.16
Copa	5	11.88	87.76	71.12
TCP Cubic	5	89.31	114.96	0.55
FillP	5	92.66	102.68	1.13
FillP-Sheep	5	90.93	100.38	1.25
Indigo	5	90.85	89.05	1.01
Indigo-MusesD	5	88.84	97.58	2.53
Indigo-MusesT	5	92.91	107.97	0.79
LEDBAT	5	10.93	83.73	0.00
PCC-Allegro	5	85.46	94.15	1.52
PCC-Expr	4	12.31	83.03	44.76
QUIC Cubic	5	66.20	100.45	0.42
SCReAM	5	0.22	83.18	0.00
Sprout	5	2.35	89.32	0.06
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	5	58.57	84.75	0.73
Verus	5	27.50	113.02	11.34
PCC-Vivace	5	76.42	100.43	0.08
WebRTC media	5	0.05	83.86	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2018-12-19 22:58:19
End at: 2018-12-19 22:58:49
Local clock offset: -6.915 ms
Remote clock offset: 15.486 ms

# Below is generated by plot.py at 2018-12-20 00:29:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.81 Mbit/s
95th percentile per-packet one-way delay: 116.633 ms
Loss rate: 3.22%
-- Flow 1:
Average throughput: 89.81 Mbit/s
95th percentile per-packet one-way delay: 116.633 ms
Loss rate: 3.22%
```

Run 1: Report of TCP BBR — Data Link

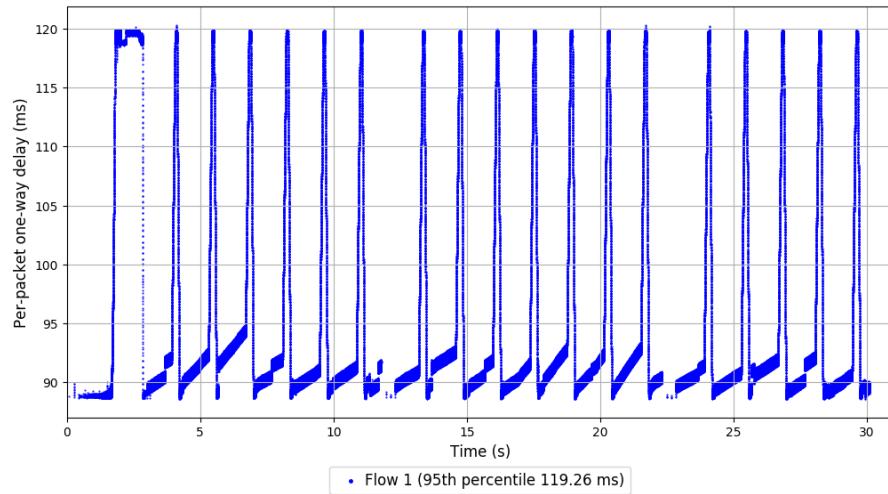
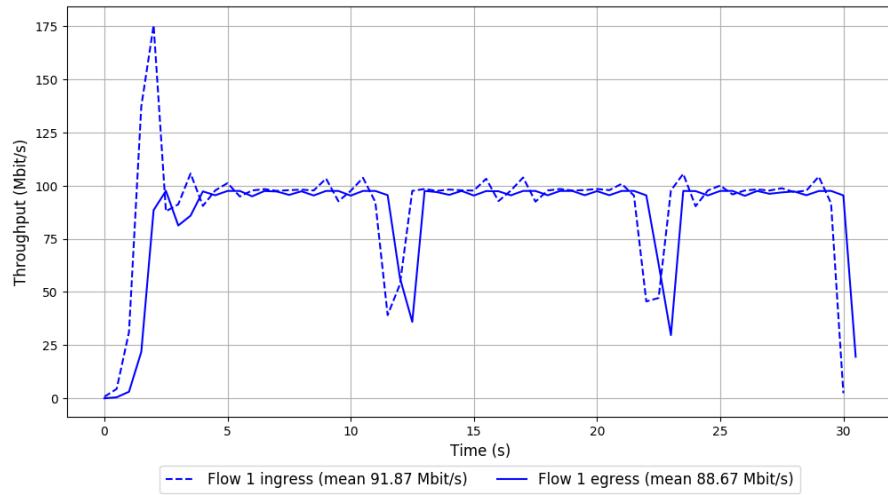


Run 2: Statistics of TCP BBR

```
Start at: 2018-12-19 23:20:36
End at: 2018-12-19 23:21:06
Local clock offset: -8.104 ms
Remote clock offset: 16.389 ms

# Below is generated by plot.py at 2018-12-20 00:29:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.67 Mbit/s
95th percentile per-packet one-way delay: 119.260 ms
Loss rate: 3.49%
-- Flow 1:
Average throughput: 88.67 Mbit/s
95th percentile per-packet one-way delay: 119.260 ms
Loss rate: 3.49%
```

Run 2: Report of TCP BBR — Data Link

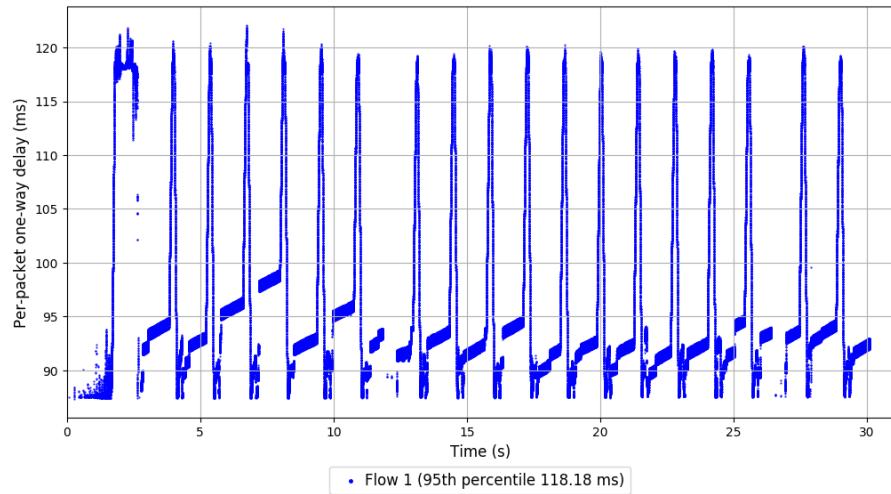
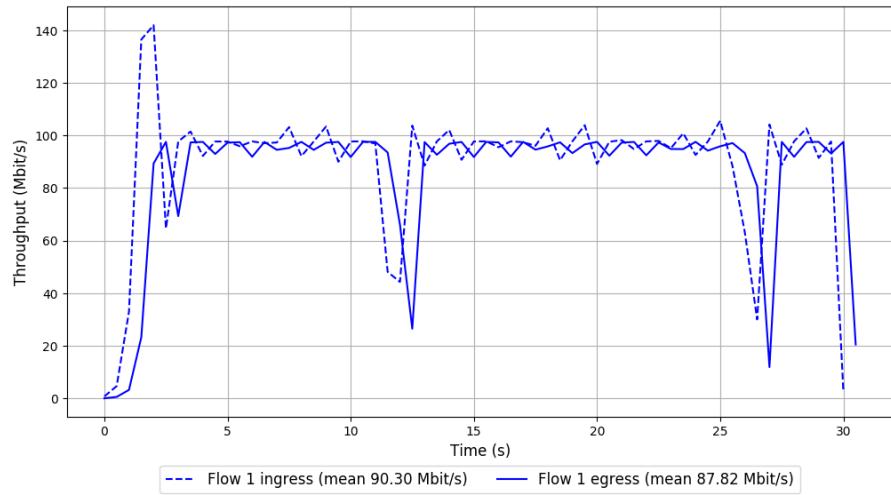


Run 3: Statistics of TCP BBR

```
Start at: 2018-12-19 23:42:50
End at: 2018-12-19 23:43:20
Local clock offset: -3.549 ms
Remote clock offset: 18.386 ms

# Below is generated by plot.py at 2018-12-20 00:29:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.82 Mbit/s
95th percentile per-packet one-way delay: 118.180 ms
Loss rate: 2.73%
-- Flow 1:
Average throughput: 87.82 Mbit/s
95th percentile per-packet one-way delay: 118.180 ms
Loss rate: 2.73%
```

Run 3: Report of TCP BBR — Data Link

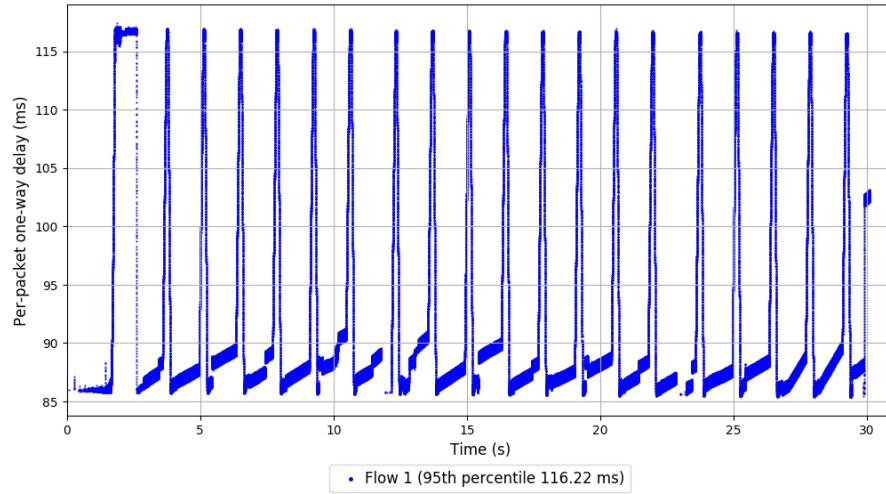
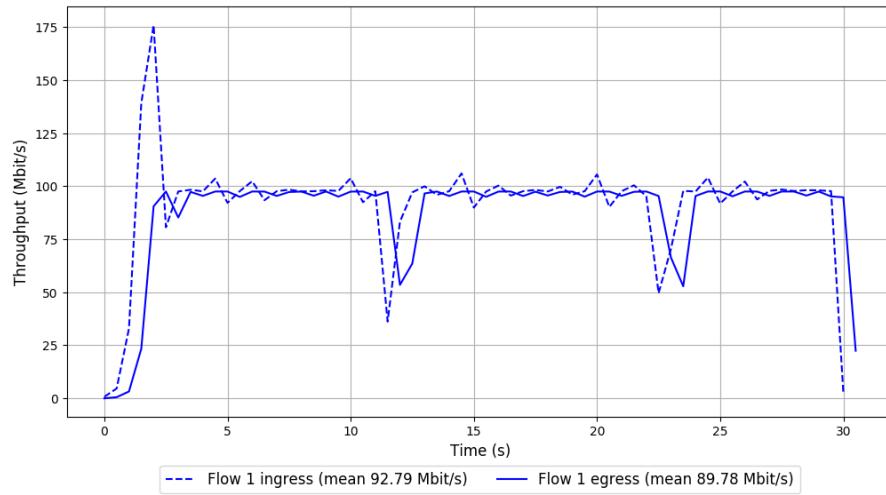


Run 4: Statistics of TCP BBR

```
Start at: 2018-12-20 00:05:02
End at: 2018-12-20 00:05:32
Local clock offset: 0.479 ms
Remote clock offset: 18.036 ms

# Below is generated by plot.py at 2018-12-20 00:30:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.78 Mbit/s
95th percentile per-packet one-way delay: 116.224 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 89.78 Mbit/s
95th percentile per-packet one-way delay: 116.224 ms
Loss rate: 3.19%
```

Run 4: Report of TCP BBR — Data Link

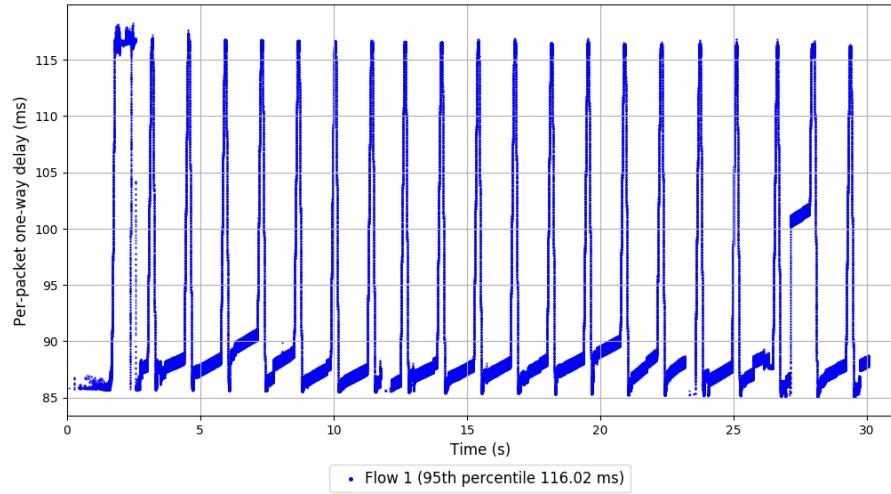
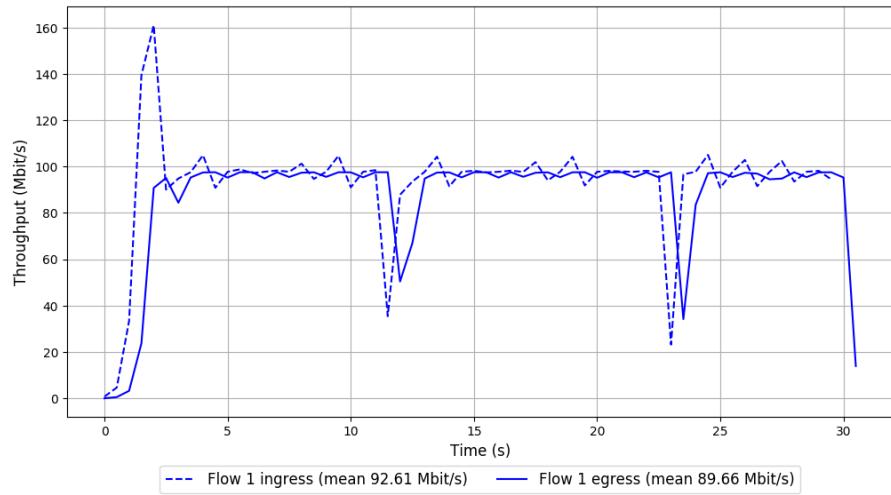


Run 5: Statistics of TCP BBR

```
Start at: 2018-12-20 00:27:16
End at: 2018-12-20 00:27:46
Local clock offset: -6.437 ms
Remote clock offset: 18.769 ms

# Below is generated by plot.py at 2018-12-20 00:30:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.66 Mbit/s
95th percentile per-packet one-way delay: 116.024 ms
Loss rate: 3.18%
-- Flow 1:
Average throughput: 89.66 Mbit/s
95th percentile per-packet one-way delay: 116.024 ms
Loss rate: 3.18%
```

Run 5: Report of TCP BBR — Data Link

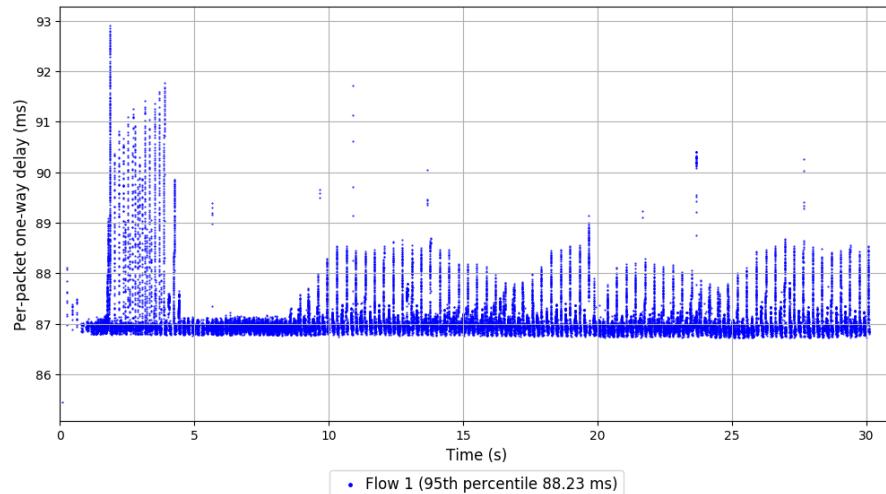
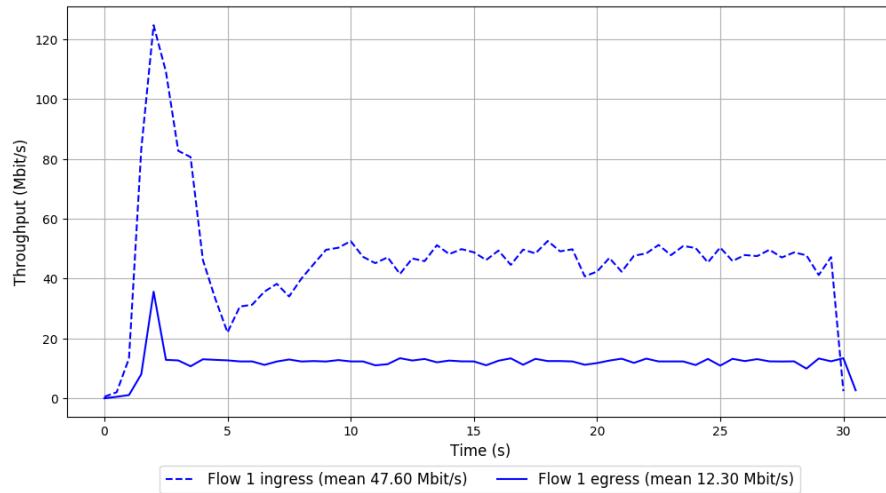


Run 1: Statistics of Copa

```
Start at: 2018-12-19 22:54:48
End at: 2018-12-19 22:55:18
Local clock offset: -6.469 ms
Remote clock offset: 16.21 ms

# Below is generated by plot.py at 2018-12-20 00:30:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 88.229 ms
Loss rate: 74.15%
-- Flow 1:
Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 88.229 ms
Loss rate: 74.15%
```

Run 1: Report of Copa — Data Link

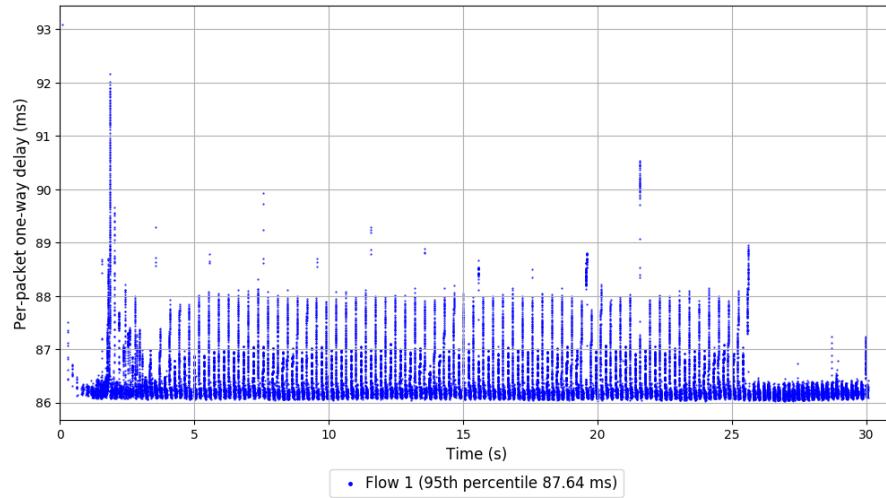
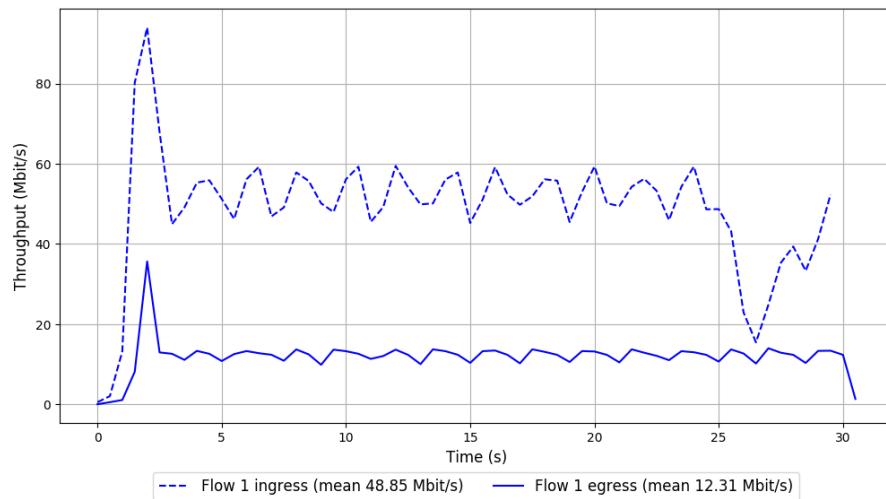


Run 2: Statistics of Copa

```
Start at: 2018-12-19 23:17:04
End at: 2018-12-19 23:17:34
Local clock offset: -8.007 ms
Remote clock offset: 17.332 ms

# Below is generated by plot.py at 2018-12-20 00:30:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.31 Mbit/s
95th percentile per-packet one-way delay: 87.638 ms
Loss rate: 74.81%
-- Flow 1:
Average throughput: 12.31 Mbit/s
95th percentile per-packet one-way delay: 87.638 ms
Loss rate: 74.81%
```

Run 2: Report of Copa — Data Link

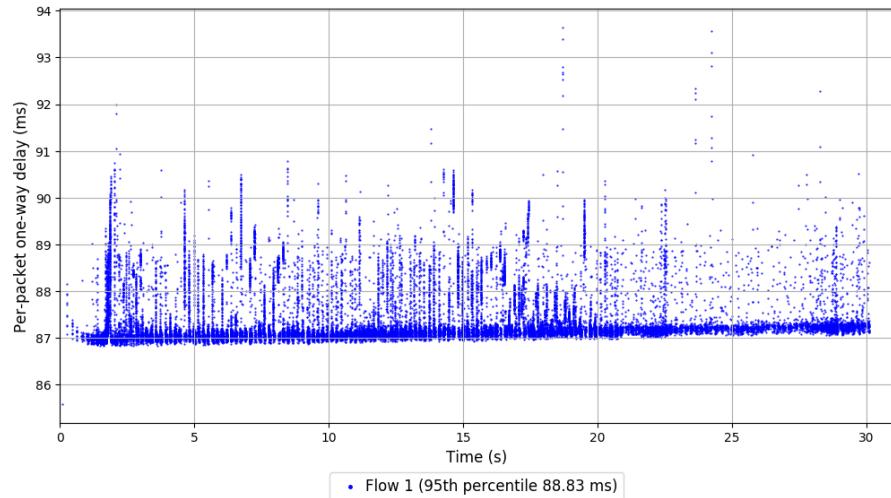
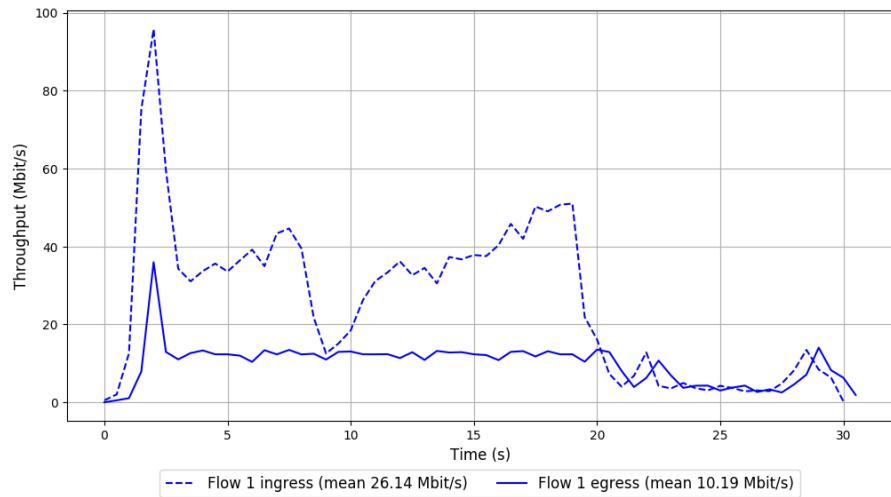


Run 3: Statistics of Copa

```
Start at: 2018-12-19 23:39:19
End at: 2018-12-19 23:39:49
Local clock offset: -5.852 ms
Remote clock offset: 17.007 ms

# Below is generated by plot.py at 2018-12-20 00:30:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.19 Mbit/s
95th percentile per-packet one-way delay: 88.829 ms
Loss rate: 61.02%
-- Flow 1:
Average throughput: 10.19 Mbit/s
95th percentile per-packet one-way delay: 88.829 ms
Loss rate: 61.02%
```

Run 3: Report of Copa — Data Link

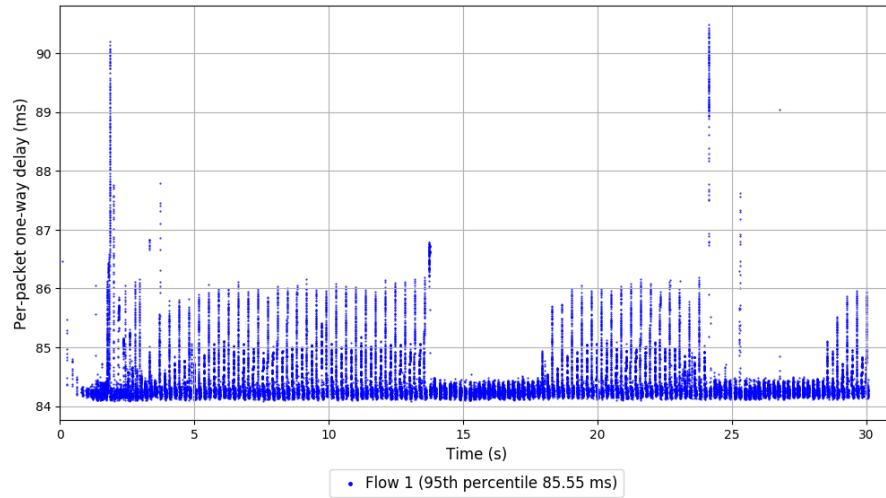
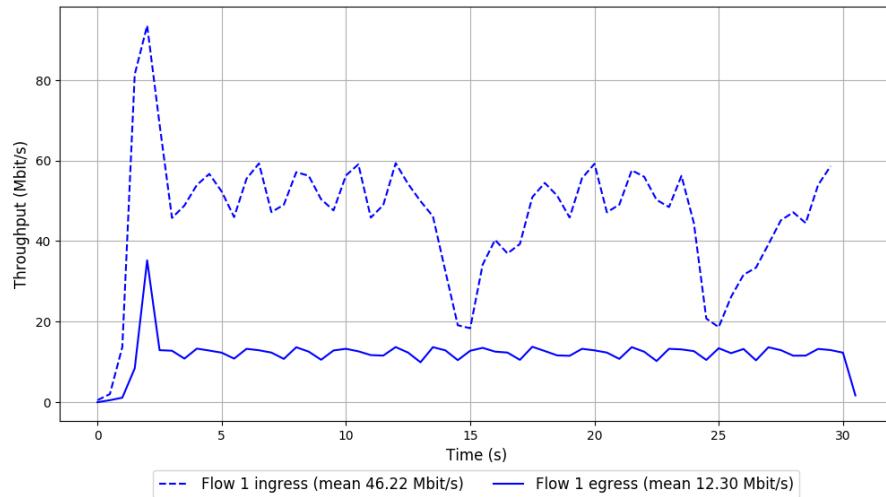


Run 4: Statistics of Copa

```
Start at: 2018-12-20 00:01:30
End at: 2018-12-20 00:02:00
Local clock offset: 0.149 ms
Remote clock offset: 17.804 ms

# Below is generated by plot.py at 2018-12-20 00:30:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 85.554 ms
Loss rate: 73.39%
-- Flow 1:
Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 85.554 ms
Loss rate: 73.39%
```

Run 4: Report of Copa — Data Link

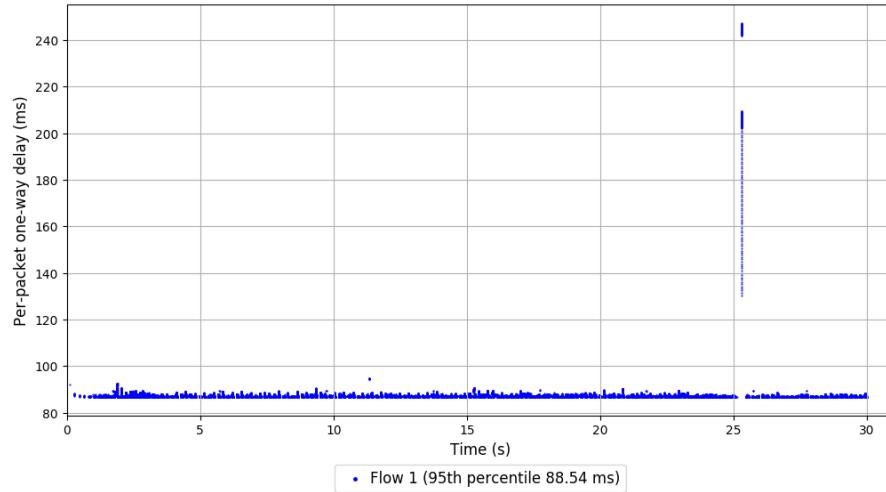
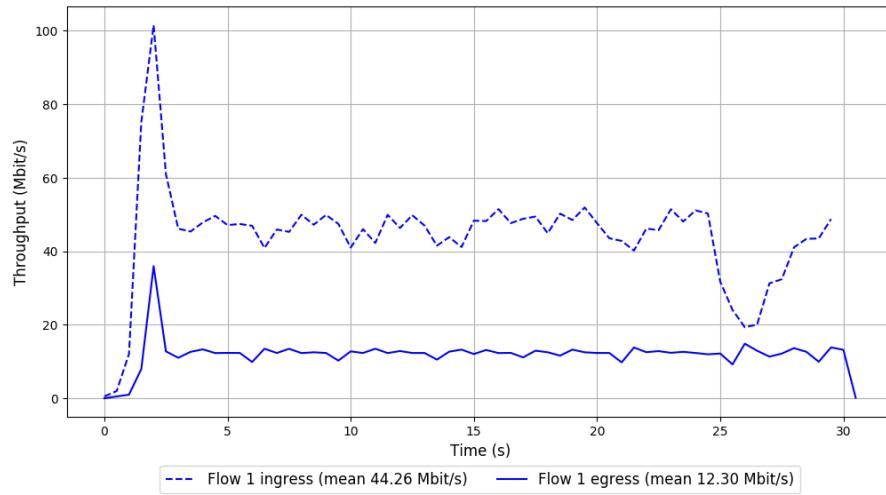


Run 5: Statistics of Copa

```
Start at: 2018-12-20 00:23:44
End at: 2018-12-20 00:24:14
Local clock offset: -6.025 ms
Remote clock offset: 19.767 ms

# Below is generated by plot.py at 2018-12-20 00:30:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 88.538 ms
Loss rate: 72.21%
-- Flow 1:
Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 88.538 ms
Loss rate: 72.21%
```

Run 5: Report of Copa — Data Link

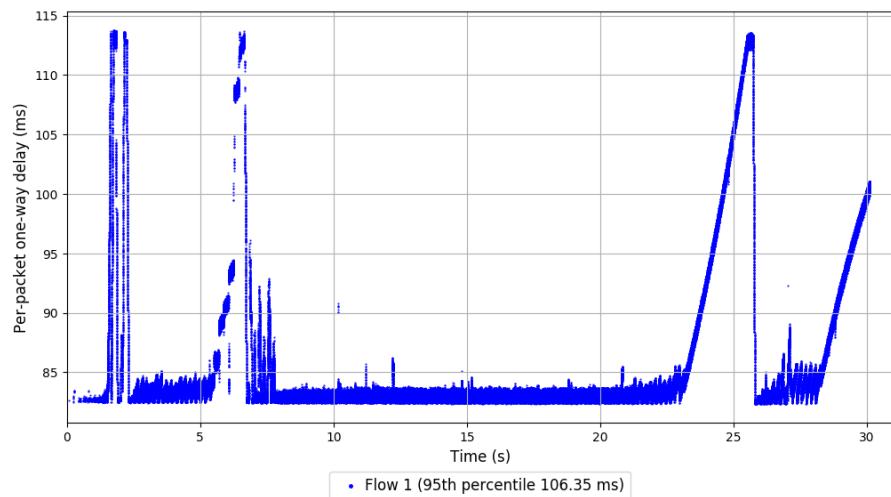
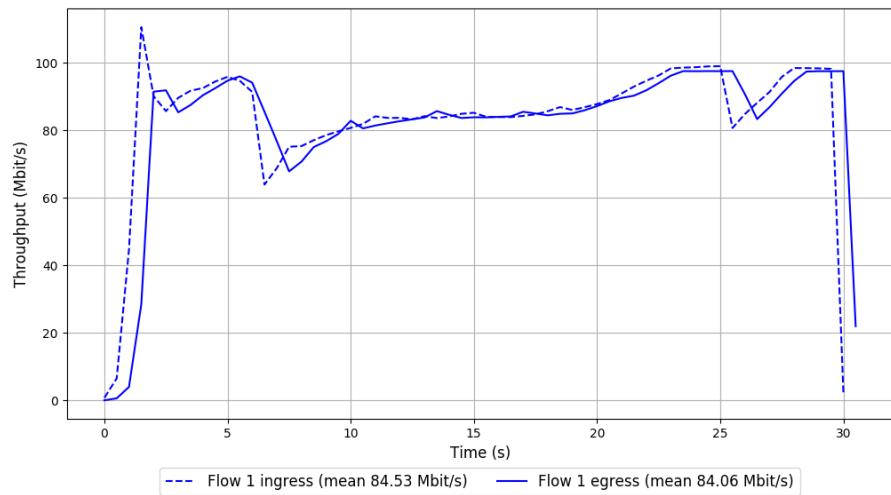


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-12-19 22:45:26
End at: 2018-12-19 22:45:56
Local clock offset: -5.492 ms
Remote clock offset: 10.784 ms

# Below is generated by plot.py at 2018-12-20 00:30:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.06 Mbit/s
95th percentile per-packet one-way delay: 106.353 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 84.06 Mbit/s
95th percentile per-packet one-way delay: 106.353 ms
Loss rate: 0.49%
```

Run 1: Report of TCP Cubic — Data Link

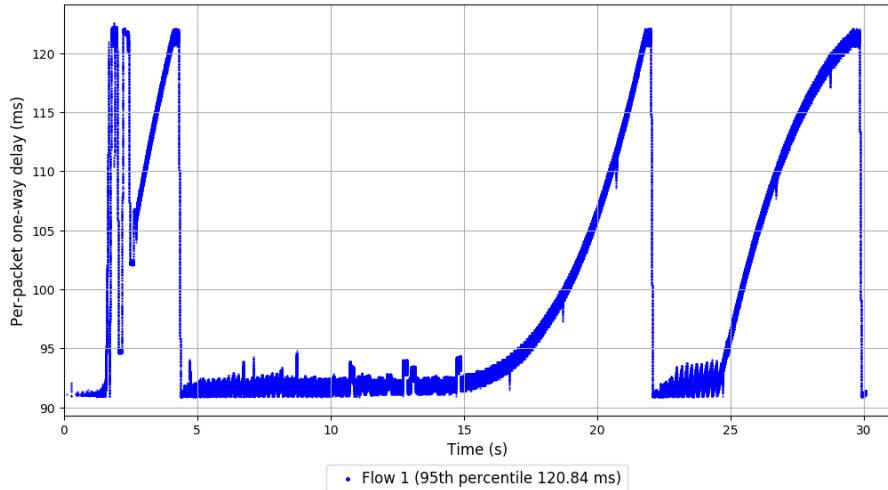
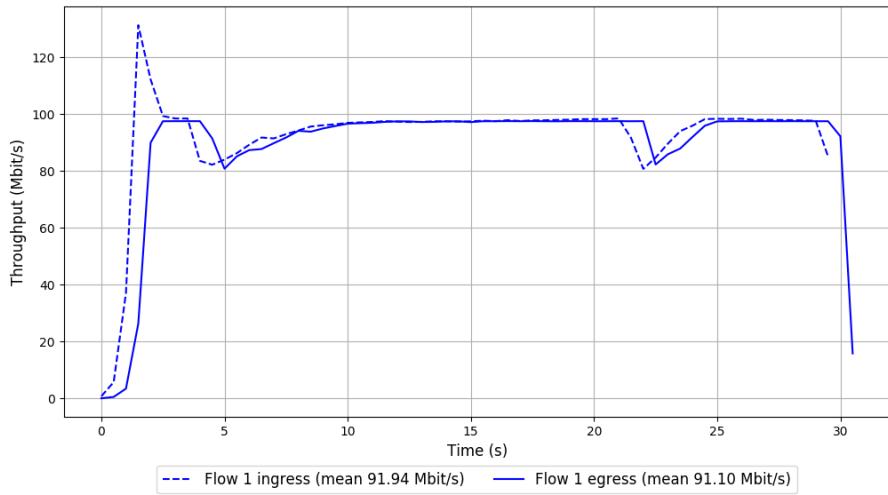


Run 2: Statistics of TCP Cubic

```
Start at: 2018-12-19 23:07:43
End at: 2018-12-19 23:08:13
Local clock offset: -7.419 ms
Remote clock offset: 16.814 ms

# Below is generated by plot.py at 2018-12-20 00:30:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.10 Mbit/s
95th percentile per-packet one-way delay: 120.838 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 91.10 Mbit/s
95th percentile per-packet one-way delay: 120.838 ms
Loss rate: 0.92%
```

Run 2: Report of TCP Cubic — Data Link

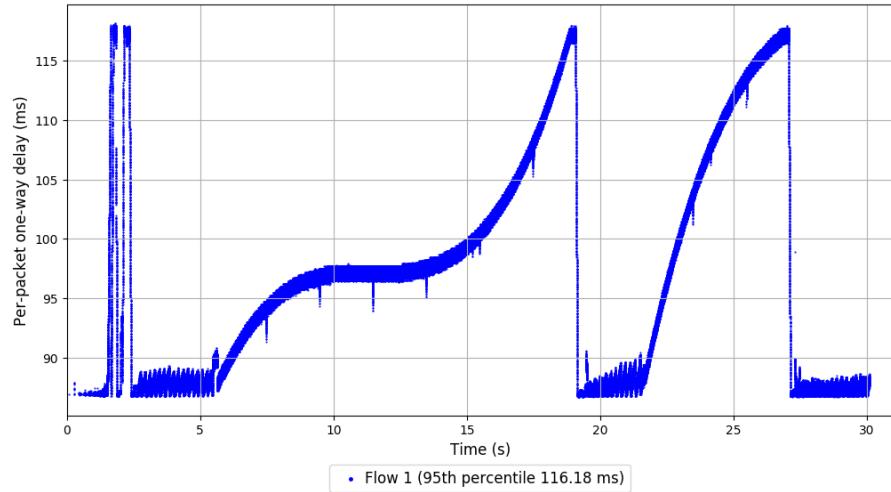
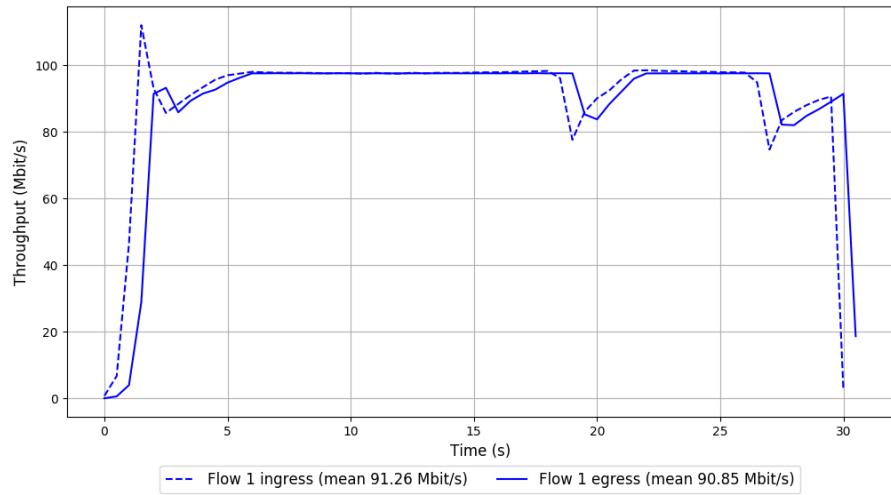


Run 3: Statistics of TCP Cubic

```
Start at: 2018-12-19 23:29:58
End at: 2018-12-19 23:30:28
Local clock offset: -8.382 ms
Remote clock offset: 16.597 ms

# Below is generated by plot.py at 2018-12-20 00:30:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.85 Mbit/s
95th percentile per-packet one-way delay: 116.177 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 90.85 Mbit/s
95th percentile per-packet one-way delay: 116.177 ms
Loss rate: 0.44%
```

Run 3: Report of TCP Cubic — Data Link

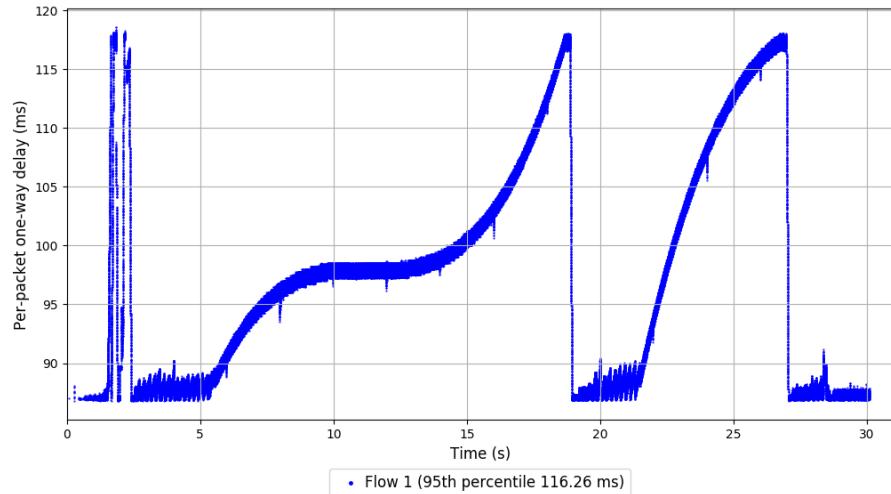
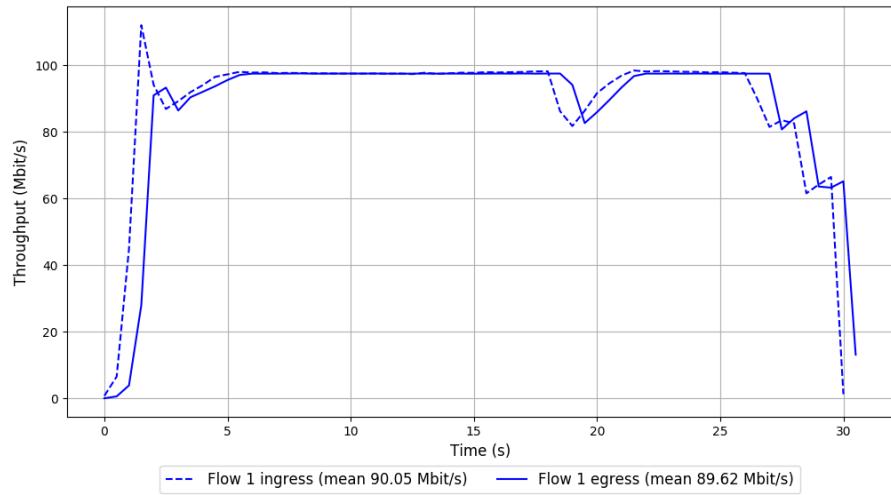


Run 4: Statistics of TCP Cubic

```
Start at: 2018-12-19 23:52:09
End at: 2018-12-19 23:52:39
Local clock offset: -1.073 ms
Remote clock offset: 17.582 ms

# Below is generated by plot.py at 2018-12-20 00:30:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.62 Mbit/s
95th percentile per-packet one-way delay: 116.257 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 89.62 Mbit/s
95th percentile per-packet one-way delay: 116.257 ms
Loss rate: 0.47%
```

Run 4: Report of TCP Cubic — Data Link

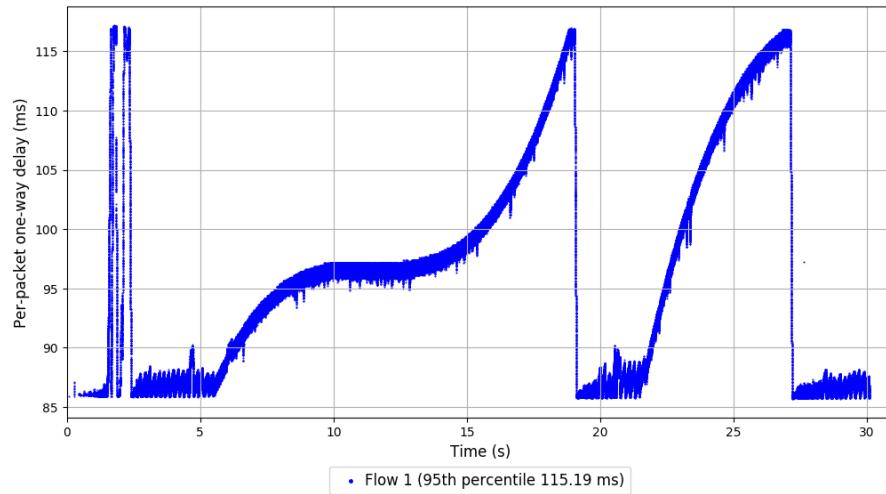
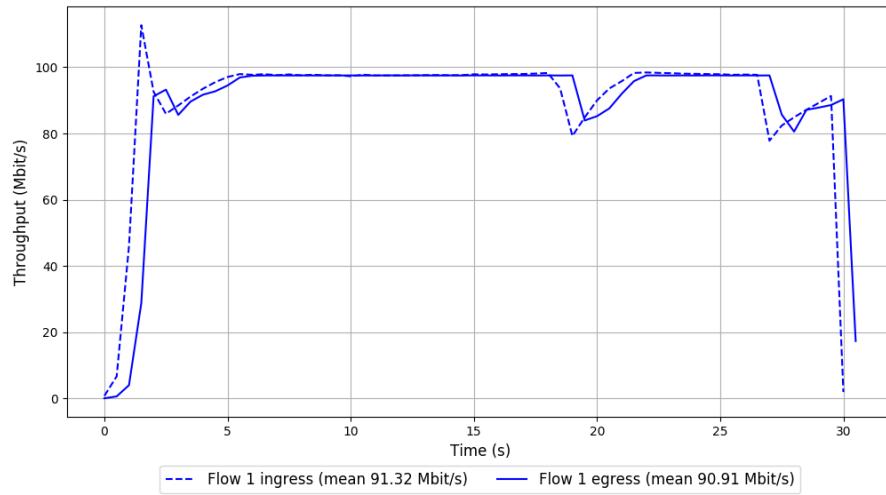


Run 5: Statistics of TCP Cubic

```
Start at: 2018-12-20 00:14:23
End at: 2018-12-20 00:14:53
Local clock offset: -4.899 ms
Remote clock offset: 18.438 ms

# Below is generated by plot.py at 2018-12-20 00:30:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.91 Mbit/s
95th percentile per-packet one-way delay: 115.190 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 90.91 Mbit/s
95th percentile per-packet one-way delay: 115.190 ms
Loss rate: 0.45%
```

Run 5: Report of TCP Cubic — Data Link

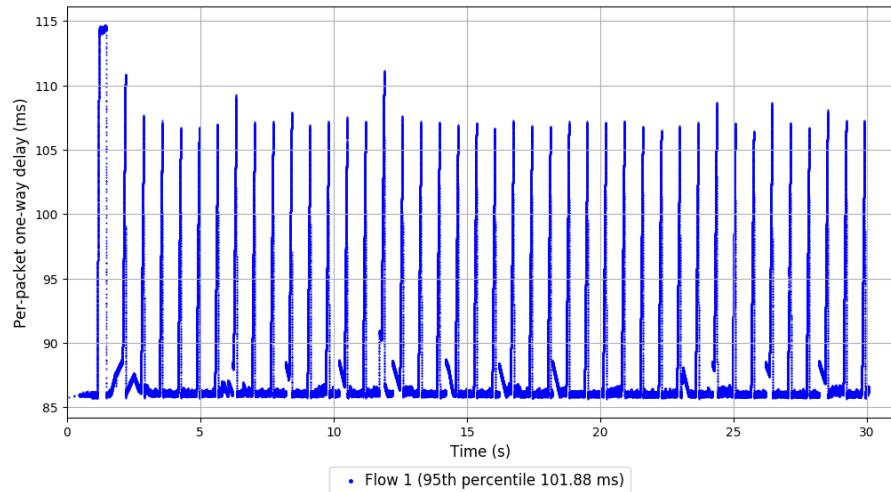
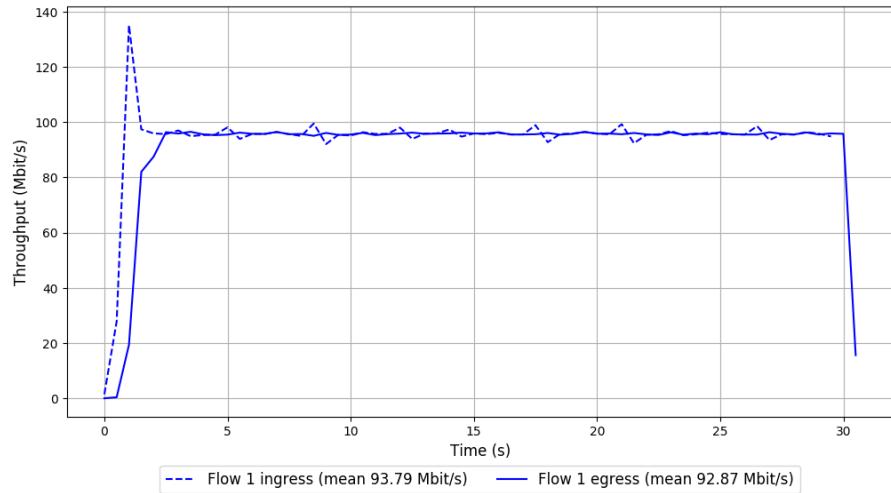


```
Run 1: Statistics of FillP
```

```
Start at: 2018-12-19 22:52:29
End at: 2018-12-19 22:52:59
Local clock offset: -6.165 ms
Remote clock offset: 15.208 ms

# Below is generated by plot.py at 2018-12-20 00:31:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.87 Mbit/s
95th percentile per-packet one-way delay: 101.879 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 92.87 Mbit/s
95th percentile per-packet one-way delay: 101.879 ms
Loss rate: 0.98%
```

Run 1: Report of FillP — Data Link

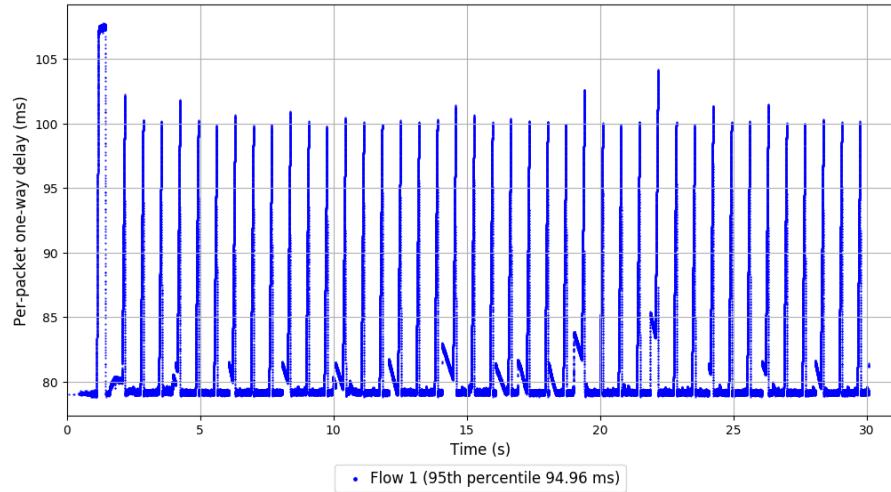
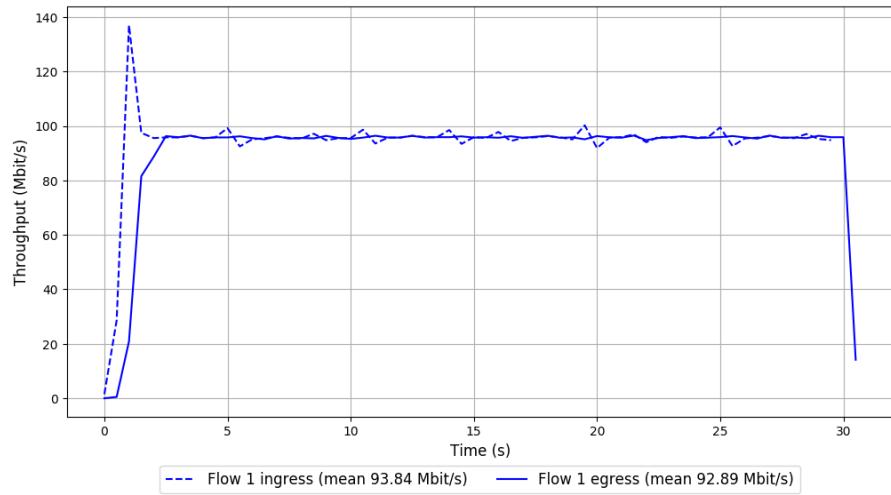


Run 2: Statistics of FillP

```
Start at: 2018-12-19 23:14:45
End at: 2018-12-19 23:15:15
Local clock offset: -7.278 ms
Remote clock offset: 10.876 ms

# Below is generated by plot.py at 2018-12-20 00:31:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.89 Mbit/s
95th percentile per-packet one-way delay: 94.962 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 92.89 Mbit/s
95th percentile per-packet one-way delay: 94.962 ms
Loss rate: 1.01%
```

Run 2: Report of FillP — Data Link

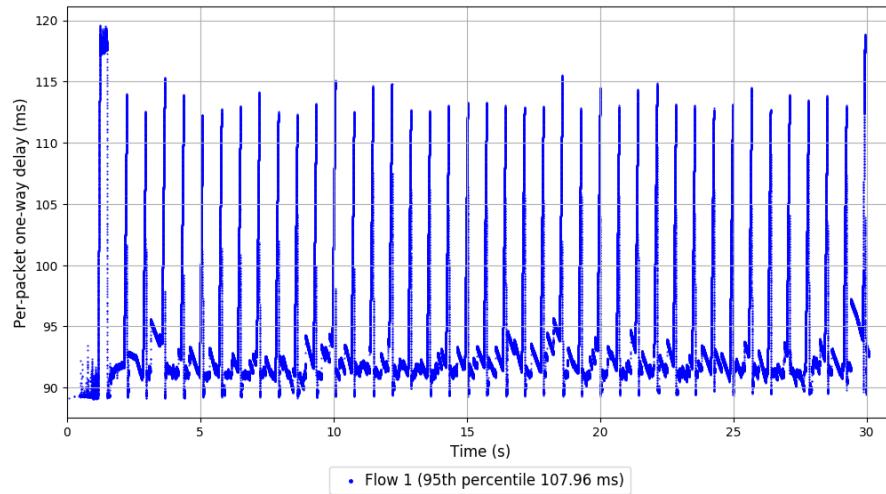
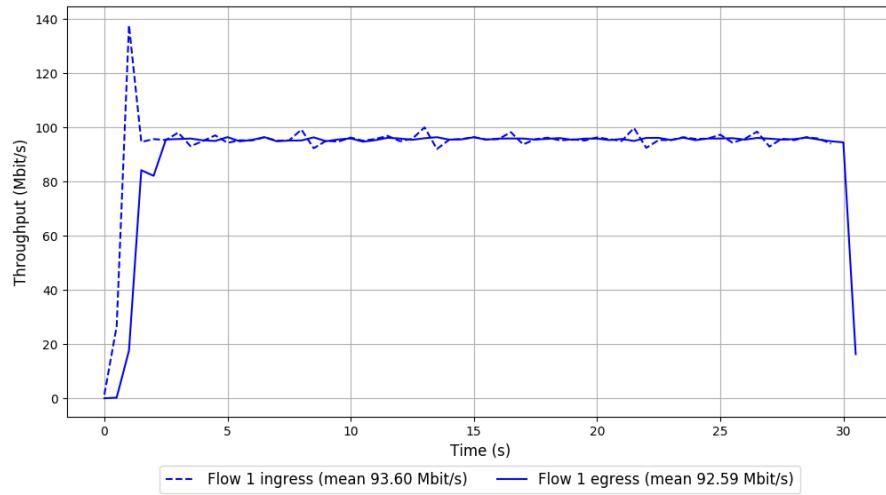


Run 3: Statistics of FillP

```
Start at: 2018-12-19 23:37:00
End at: 2018-12-19 23:37:30
Local clock offset: -7.397 ms
Remote clock offset: 15.505 ms

# Below is generated by plot.py at 2018-12-20 00:31:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.59 Mbit/s
95th percentile per-packet one-way delay: 107.964 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 92.59 Mbit/s
95th percentile per-packet one-way delay: 107.964 ms
Loss rate: 1.07%
```

Run 3: Report of FillP — Data Link

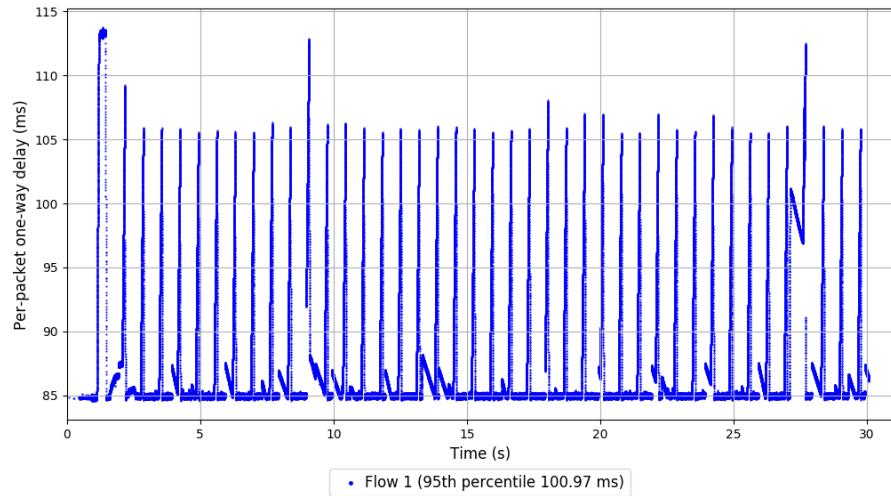
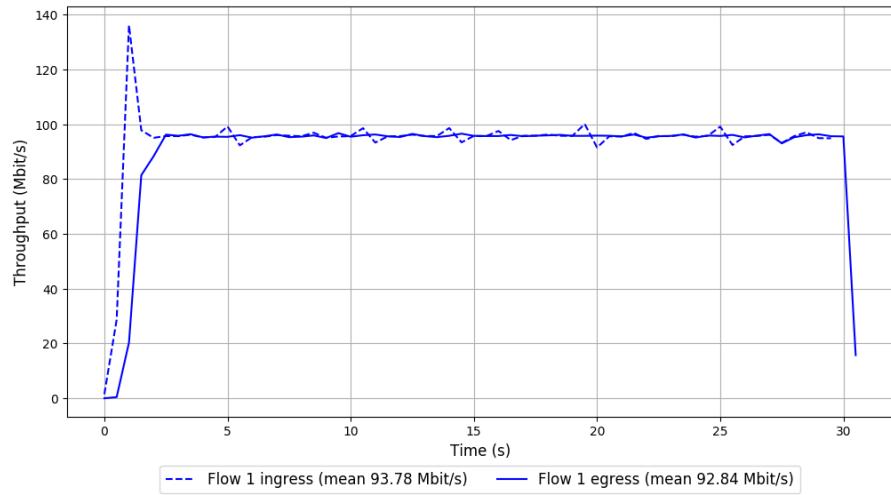


Run 4: Statistics of FillP

```
Start at: 2018-12-19 23:59:11
End at: 2018-12-19 23:59:41
Local clock offset: -0.789 ms
Remote clock offset: 17.681 ms

# Below is generated by plot.py at 2018-12-20 00:31:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.84 Mbit/s
95th percentile per-packet one-way delay: 100.973 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 92.84 Mbit/s
95th percentile per-packet one-way delay: 100.973 ms
Loss rate: 1.00%
```

Run 4: Report of FillP — Data Link

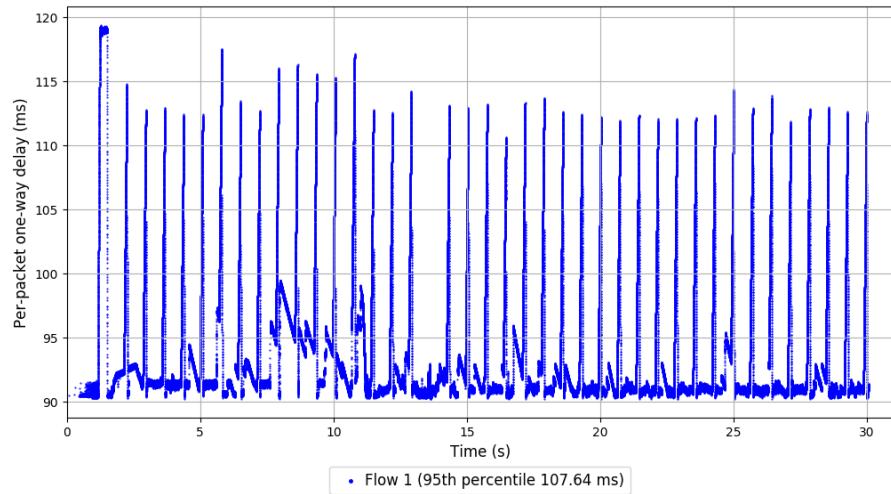
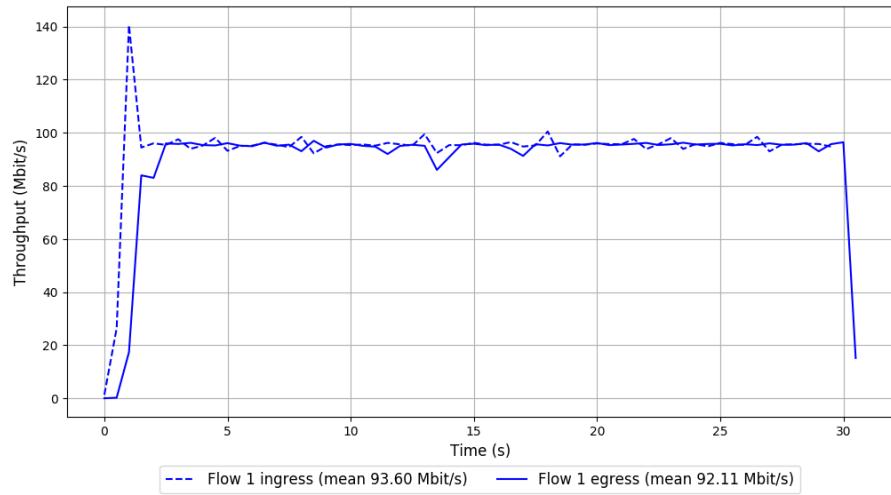


Run 5: Statistics of FillP

```
Start at: 2018-12-20 00:21:25
End at: 2018-12-20 00:21:55
Local clock offset: -6.489 ms
Remote clock offset: 18.937 ms

# Below is generated by plot.py at 2018-12-20 00:31:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.11 Mbit/s
95th percentile per-packet one-way delay: 107.637 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 92.11 Mbit/s
95th percentile per-packet one-way delay: 107.637 ms
Loss rate: 1.60%
```

Run 5: Report of FillP — Data Link

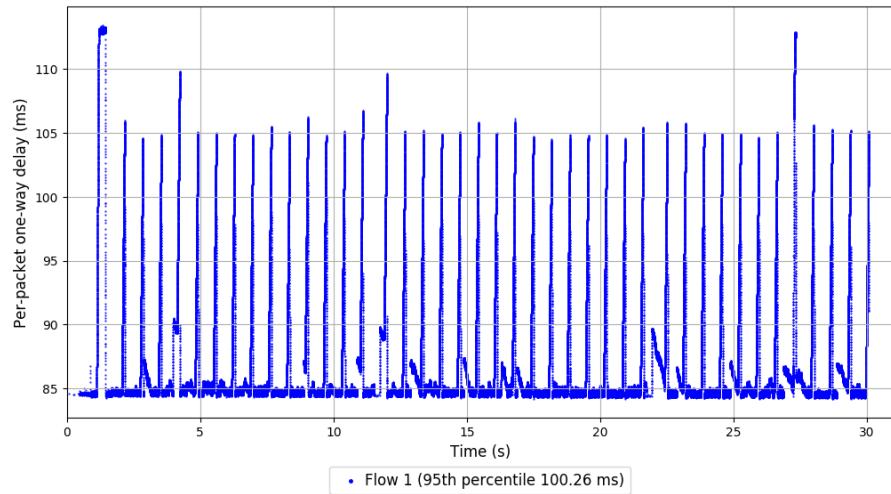
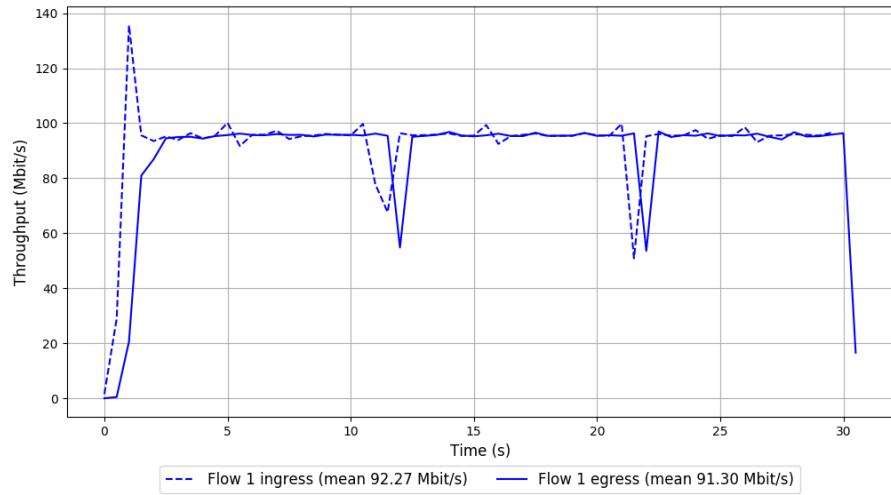


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2018-12-19 22:43:02
End at: 2018-12-19 22:43:32
Local clock offset: -4.824 ms
Remote clock offset: 14.396 ms

# Below is generated by plot.py at 2018-12-20 00:31:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.30 Mbit/s
95th percentile per-packet one-way delay: 100.264 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 91.30 Mbit/s
95th percentile per-packet one-way delay: 100.264 ms
Loss rate: 1.03%
```

Run 1: Report of FillP-Sheep — Data Link

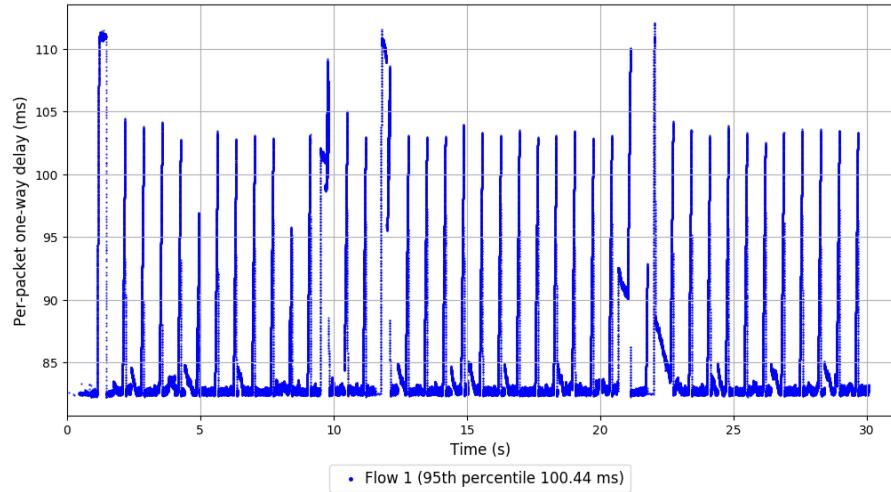
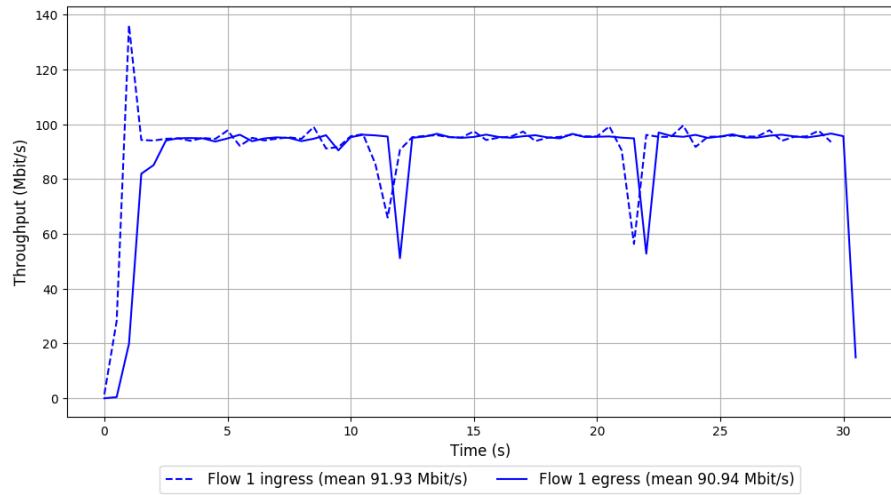


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-12-19 23:05:19
End at: 2018-12-19 23:05:49
Local clock offset: -8.235 ms
Remote clock offset: 11.417 ms

# Below is generated by plot.py at 2018-12-20 00:32:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.94 Mbit/s
95th percentile per-packet one-way delay: 100.443 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 90.94 Mbit/s
95th percentile per-packet one-way delay: 100.443 ms
Loss rate: 1.07%
```

Run 2: Report of FillP-Sheep — Data Link

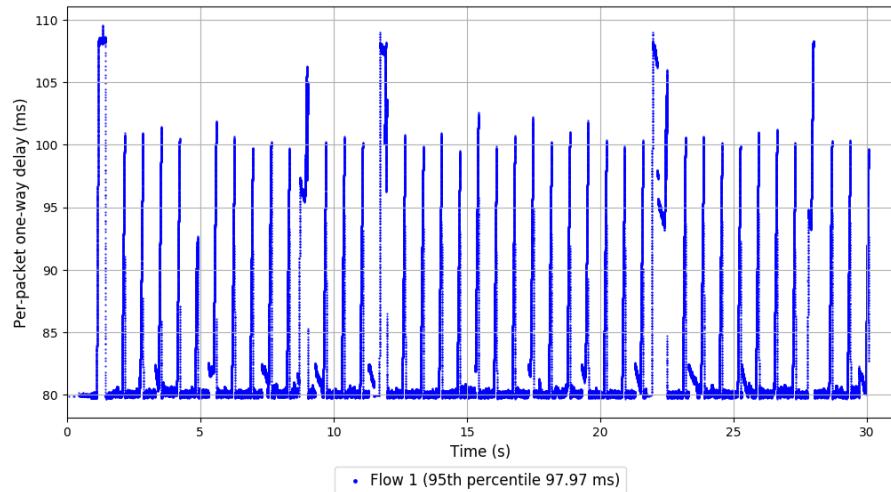
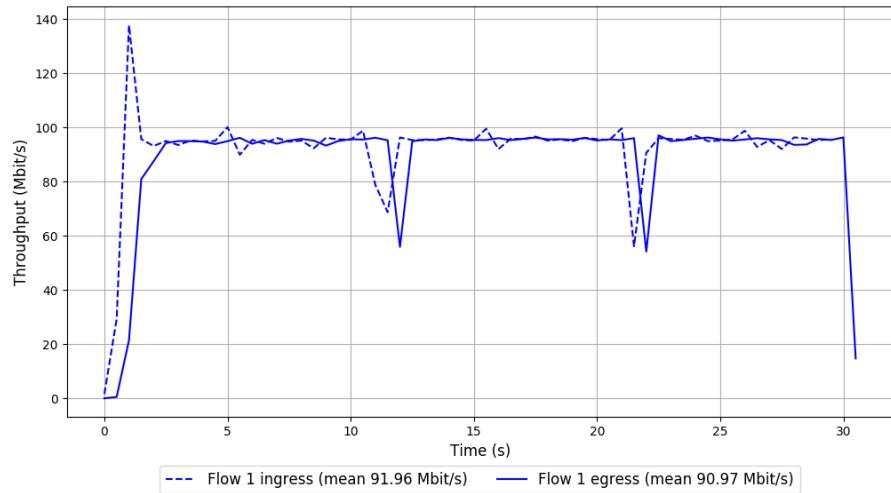


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-12-19 23:27:34
End at: 2018-12-19 23:28:04
Local clock offset: -8.312 ms
Remote clock offset: 11.287 ms

# Below is generated by plot.py at 2018-12-20 00:32:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.97 Mbit/s
95th percentile per-packet one-way delay: 97.970 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 90.97 Mbit/s
95th percentile per-packet one-way delay: 97.970 ms
Loss rate: 1.07%
```

Run 3: Report of FillP-Sheep — Data Link

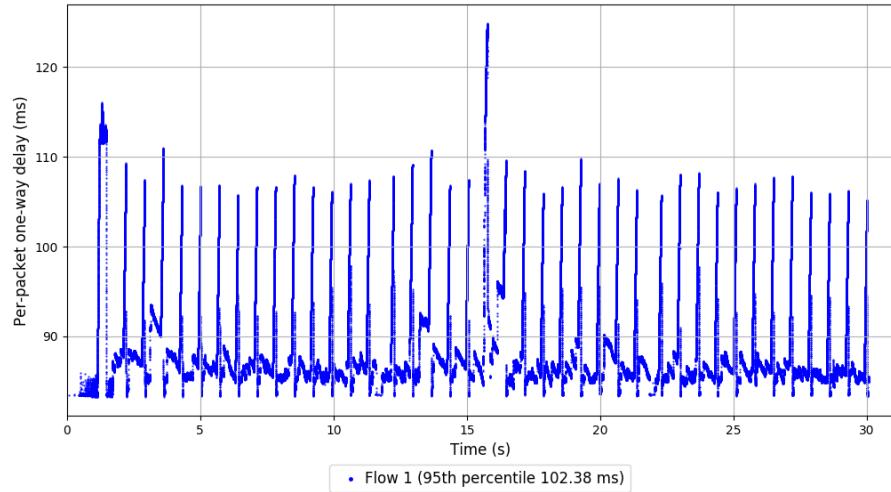
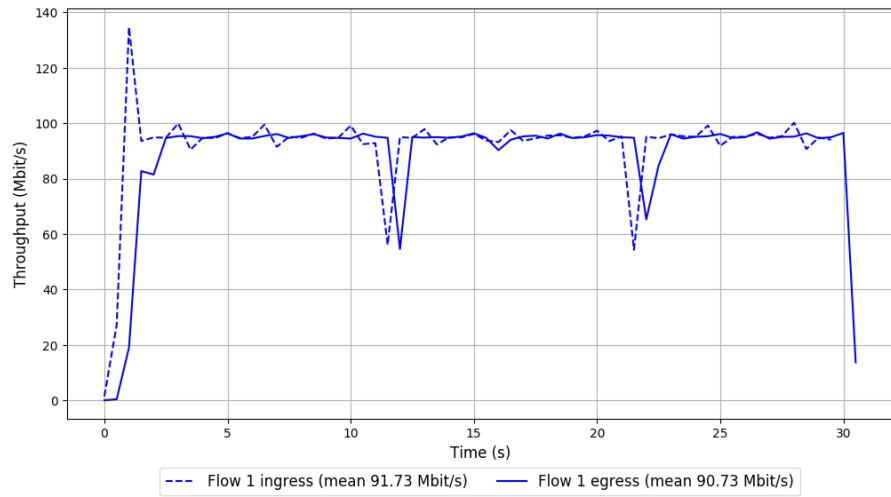


Run 4: Statistics of FillP-Sheep

```
Start at: 2018-12-19 23:49:45
End at: 2018-12-19 23:50:15
Local clock offset: -2.169 ms
Remote clock offset: 12.274 ms

# Below is generated by plot.py at 2018-12-20 00:32:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.73 Mbit/s
95th percentile per-packet one-way delay: 102.377 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 90.73 Mbit/s
95th percentile per-packet one-way delay: 102.377 ms
Loss rate: 1.09%
```

Run 4: Report of FillP-Sheep — Data Link

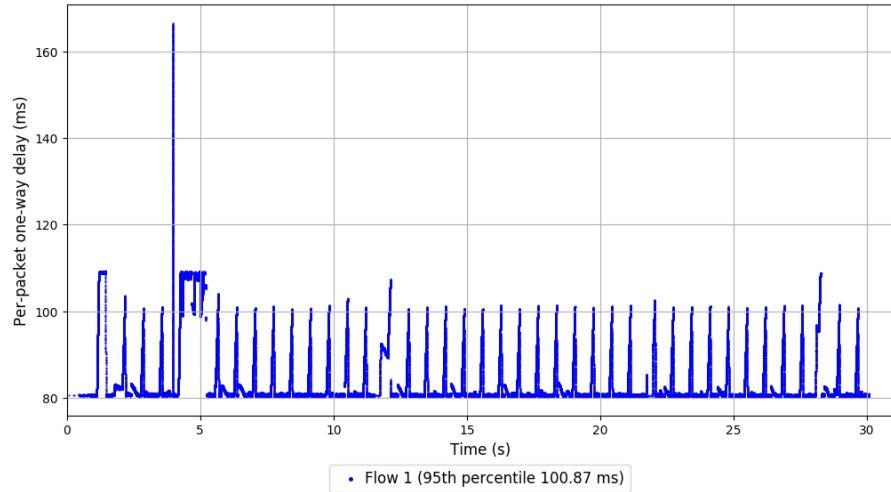
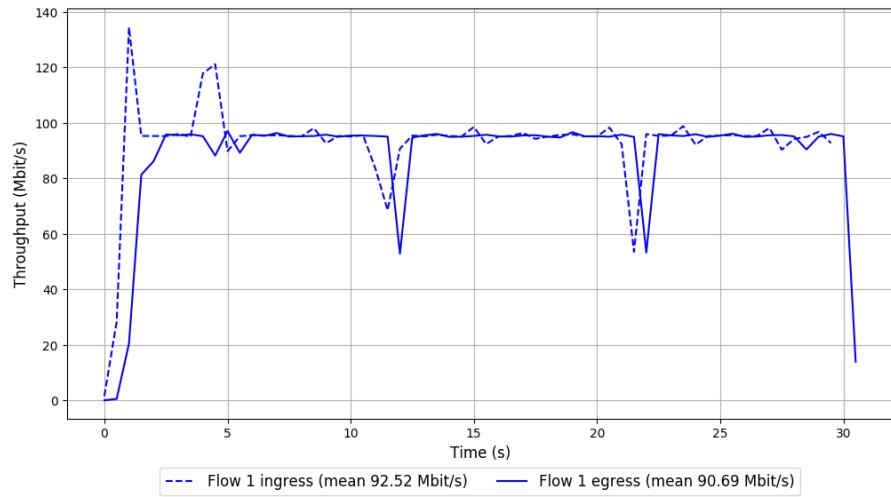


Run 5: Statistics of FillP-Sheep

```
Start at: 2018-12-20 00:11:59
End at: 2018-12-20 00:12:29
Local clock offset: -3.347 ms
Remote clock offset: 14.03 ms

# Below is generated by plot.py at 2018-12-20 00:32:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.69 Mbit/s
95th percentile per-packet one-way delay: 100.869 ms
Loss rate: 1.98%
-- Flow 1:
Average throughput: 90.69 Mbit/s
95th percentile per-packet one-way delay: 100.869 ms
Loss rate: 1.98%
```

Run 5: Report of FillP-Sheep — Data Link

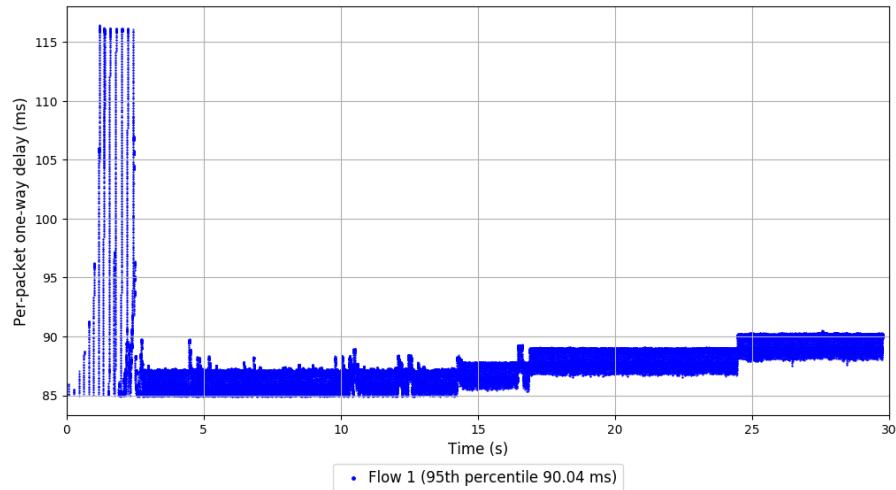
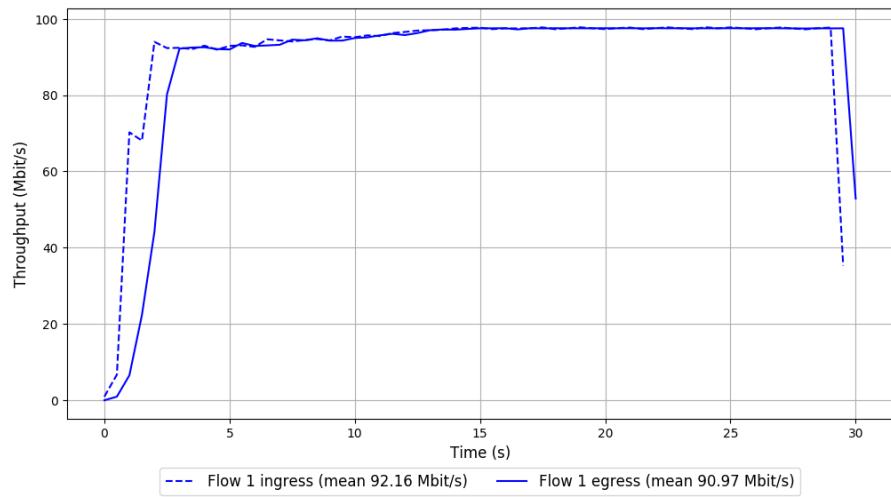


Run 1: Statistics of Indigo

```
Start at: 2018-12-19 22:57:06
End at: 2018-12-19 22:57:36
Local clock offset: -6.735 ms
Remote clock offset: 14.193 ms

# Below is generated by plot.py at 2018-12-20 00:32:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.97 Mbit/s
95th percentile per-packet one-way delay: 90.037 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 90.97 Mbit/s
95th percentile per-packet one-way delay: 90.037 ms
Loss rate: 1.28%
```

Run 1: Report of Indigo — Data Link

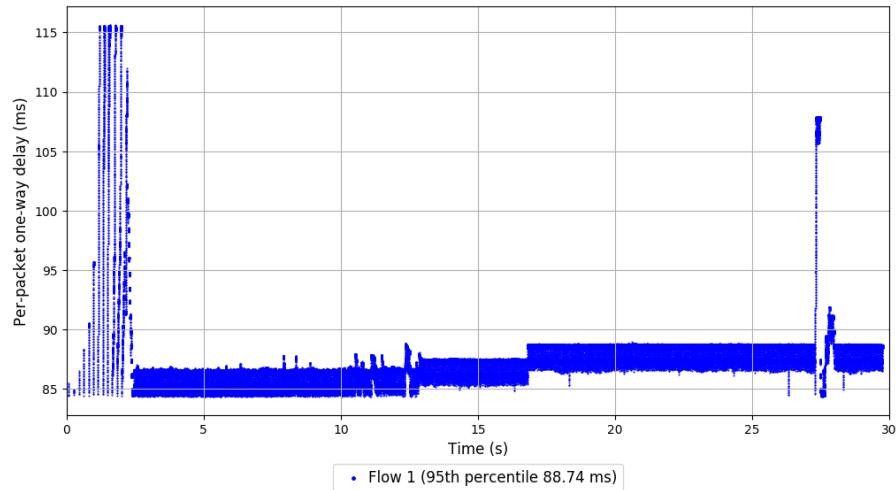
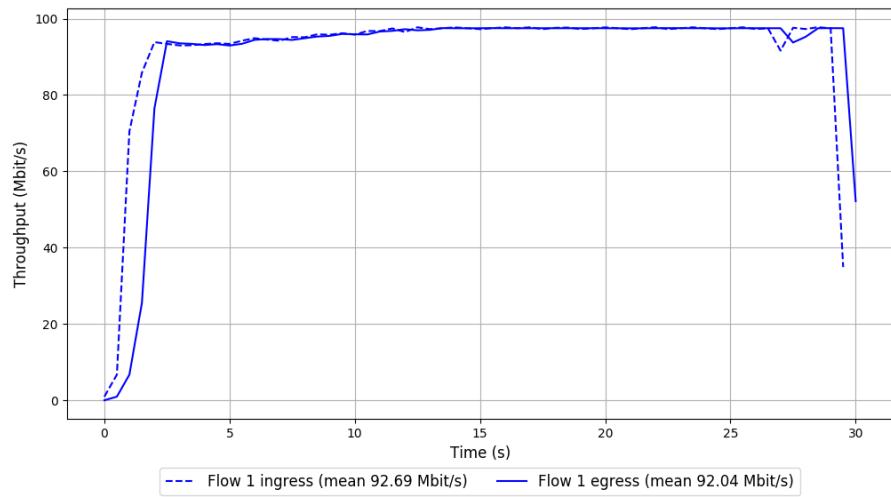


Run 2: Statistics of Indigo

```
Start at: 2018-12-19 23:19:23
End at: 2018-12-19 23:19:53
Local clock offset: -7.332 ms
Remote clock offset: 16.211 ms

# Below is generated by plot.py at 2018-12-20 00:32:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.04 Mbit/s
95th percentile per-packet one-way delay: 88.737 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 92.04 Mbit/s
95th percentile per-packet one-way delay: 88.737 ms
Loss rate: 0.68%
```

Run 2: Report of Indigo — Data Link

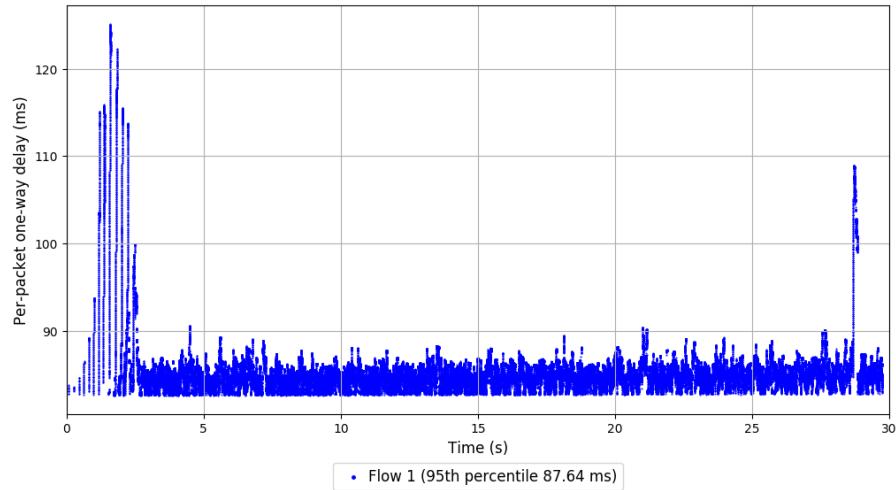
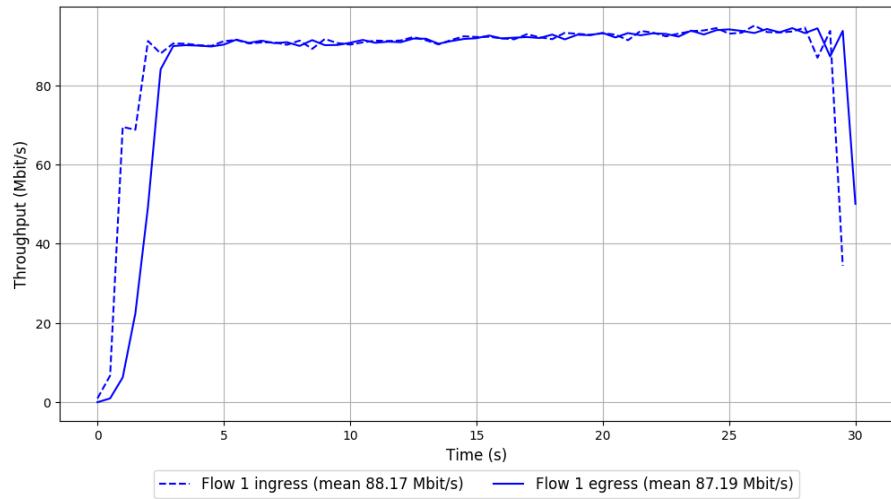


Run 3: Statistics of Indigo

```
Start at: 2018-12-19 23:41:37
End at: 2018-12-19 23:42:07
Local clock offset: -4.67 ms
Remote clock offset: 12.896 ms

# Below is generated by plot.py at 2018-12-20 00:32:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.19 Mbit/s
95th percentile per-packet one-way delay: 87.636 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 87.19 Mbit/s
95th percentile per-packet one-way delay: 87.636 ms
Loss rate: 1.11%
```

Run 3: Report of Indigo — Data Link

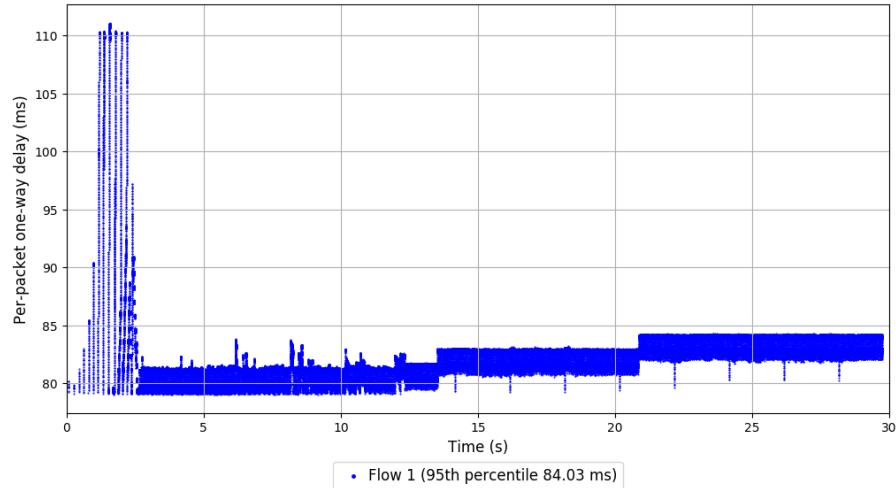
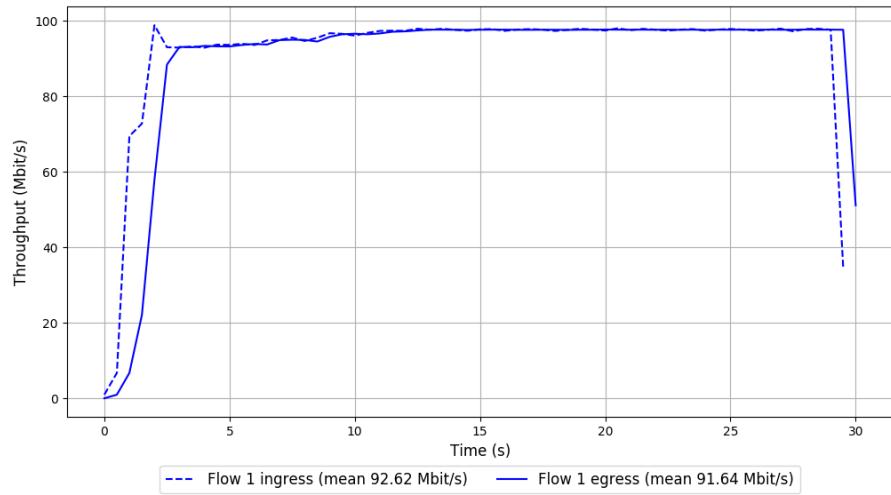


Run 4: Statistics of Indigo

```
Start at: 2018-12-20 00:03:49
End at: 2018-12-20 00:04:19
Local clock offset: 0.364 ms
Remote clock offset: 12.878 ms

# Below is generated by plot.py at 2018-12-20 00:32:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.64 Mbit/s
95th percentile per-packet one-way delay: 84.028 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 91.64 Mbit/s
95th percentile per-packet one-way delay: 84.028 ms
Loss rate: 1.05%
```

Run 4: Report of Indigo — Data Link

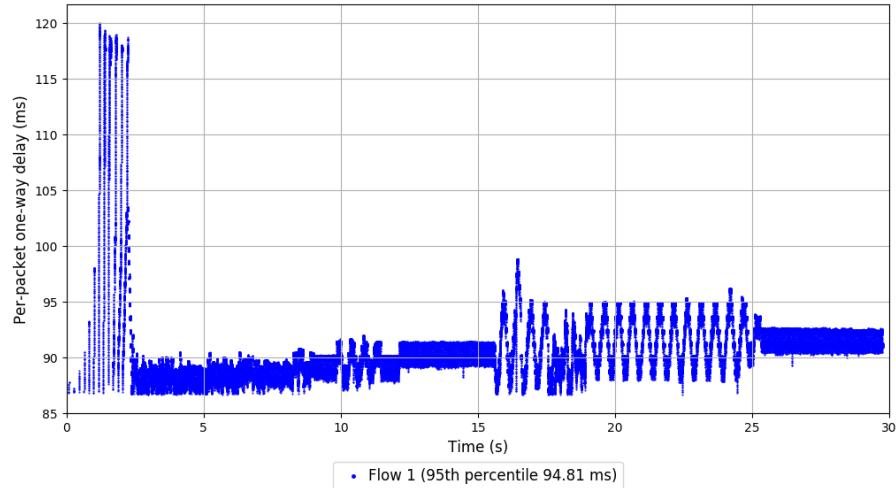
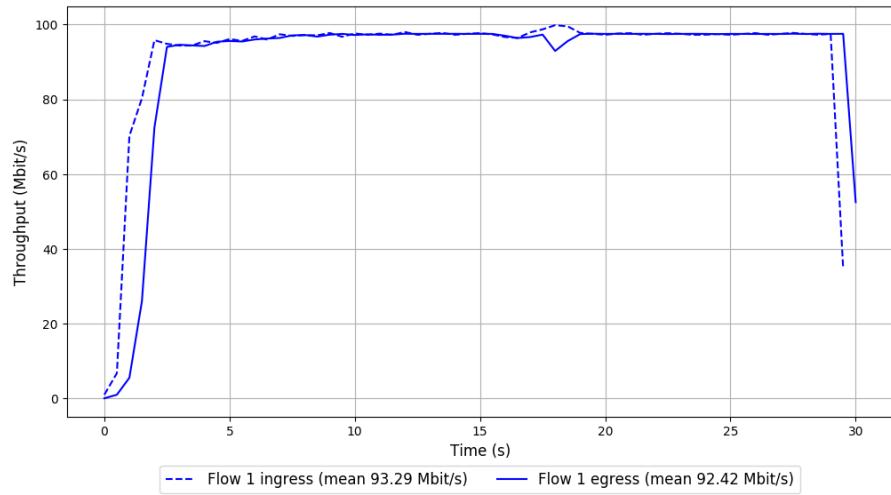


Run 5: Statistics of Indigo

```
Start at: 2018-12-20 00:26:02
End at: 2018-12-20 00:26:32
Local clock offset: -7.123 ms
Remote clock offset: 18.912 ms

# Below is generated by plot.py at 2018-12-20 00:33:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.42 Mbit/s
95th percentile per-packet one-way delay: 94.810 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 92.42 Mbit/s
95th percentile per-packet one-way delay: 94.810 ms
Loss rate: 0.92%
```

Run 5: Report of Indigo — Data Link

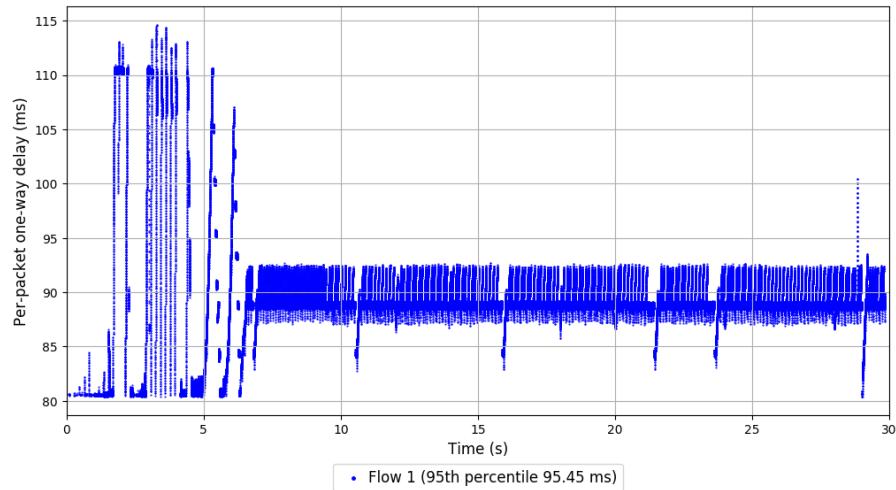
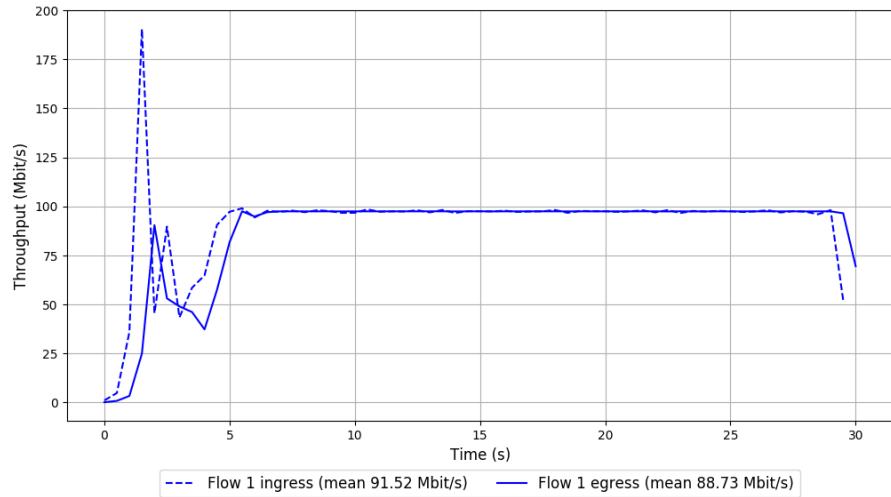


Run 1: Statistics of Indigo-MusesD

```
Start at: 2018-12-19 22:47:47
End at: 2018-12-19 22:48:17
Local clock offset: -5.339 ms
Remote clock offset: 9.543 ms

# Below is generated by plot.py at 2018-12-20 00:33:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.73 Mbit/s
95th percentile per-packet one-way delay: 95.455 ms
Loss rate: 3.02%
-- Flow 1:
Average throughput: 88.73 Mbit/s
95th percentile per-packet one-way delay: 95.455 ms
Loss rate: 3.02%
```

Run 1: Report of Indigo-MusesD — Data Link

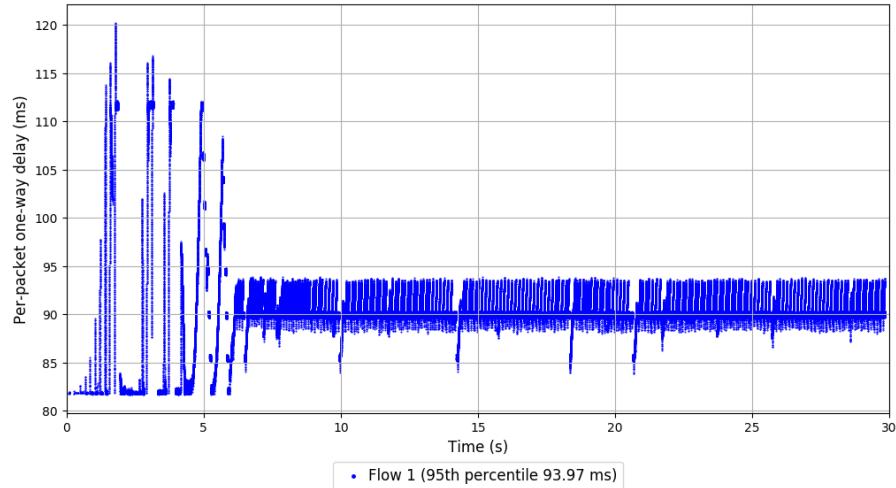
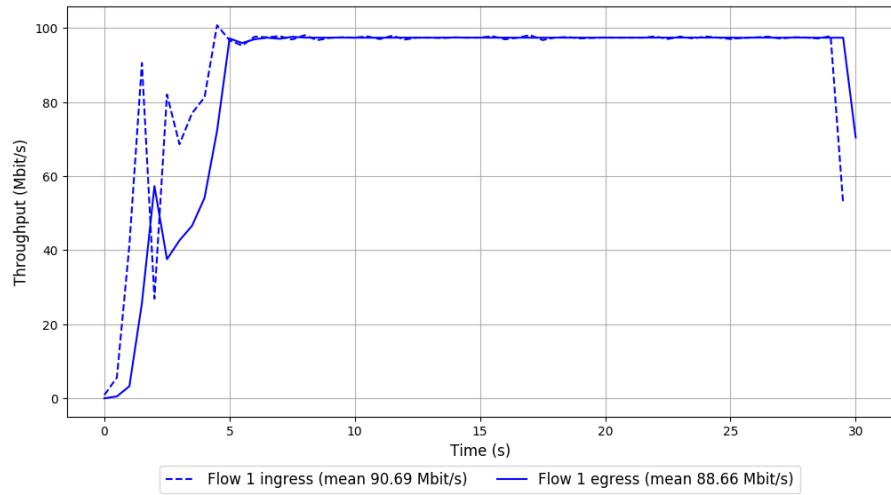


Run 2: Statistics of Indigo-MusesD

```
Start at: 2018-12-19 23:10:03
End at: 2018-12-19 23:10:33
Local clock offset: -7.285 ms
Remote clock offset: 11.697 ms

# Below is generated by plot.py at 2018-12-20 00:33:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.66 Mbit/s
95th percentile per-packet one-way delay: 93.971 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 88.66 Mbit/s
95th percentile per-packet one-way delay: 93.971 ms
Loss rate: 2.22%
```

Run 2: Report of Indigo-MusesD — Data Link

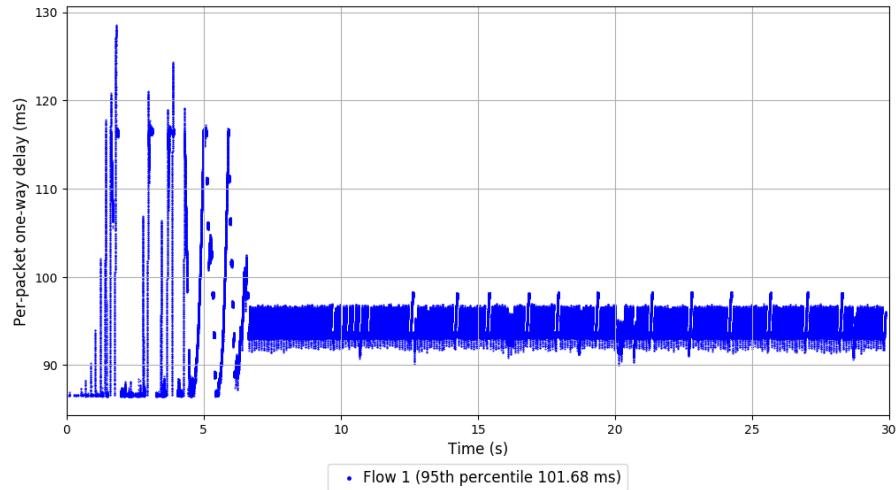
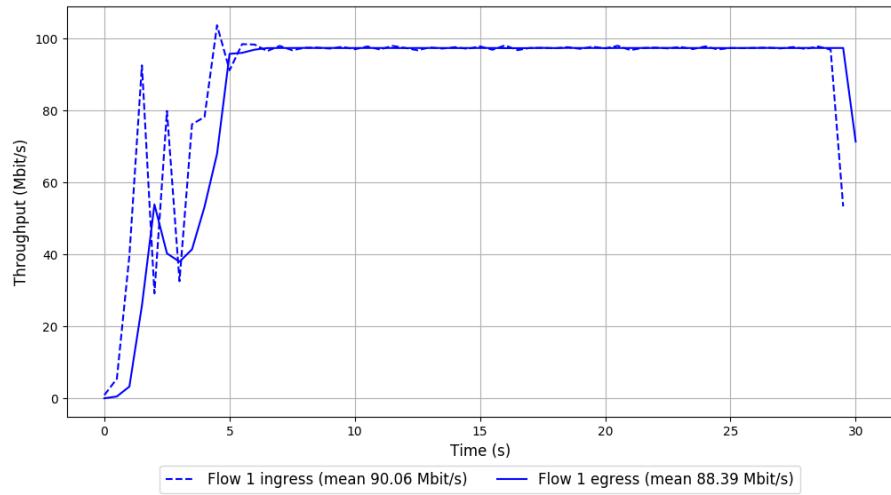


Run 3: Statistics of Indigo-MusesD

```
Start at: 2018-12-19 23:32:18
End at: 2018-12-19 23:32:48
Local clock offset: -7.783 ms
Remote clock offset: 16.678 ms

# Below is generated by plot.py at 2018-12-20 00:33:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.39 Mbit/s
95th percentile per-packet one-way delay: 101.680 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 88.39 Mbit/s
95th percentile per-packet one-way delay: 101.680 ms
Loss rate: 1.82%
```

Run 3: Report of Indigo-MusesD — Data Link

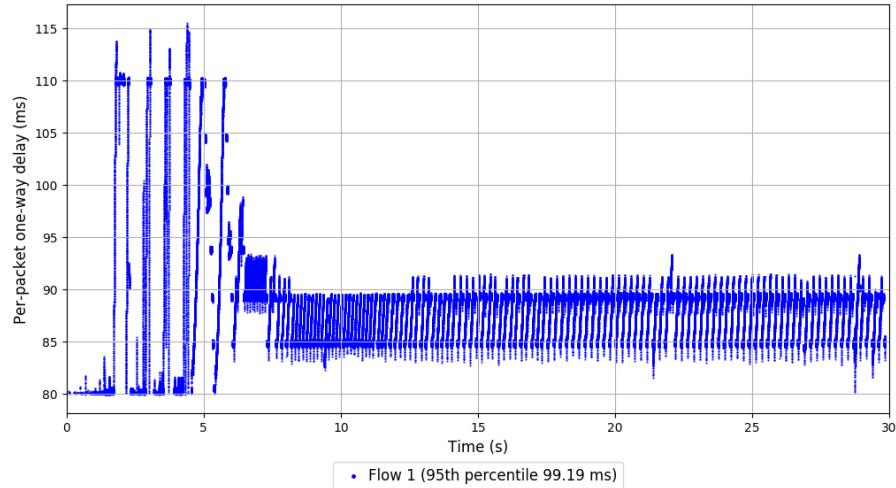
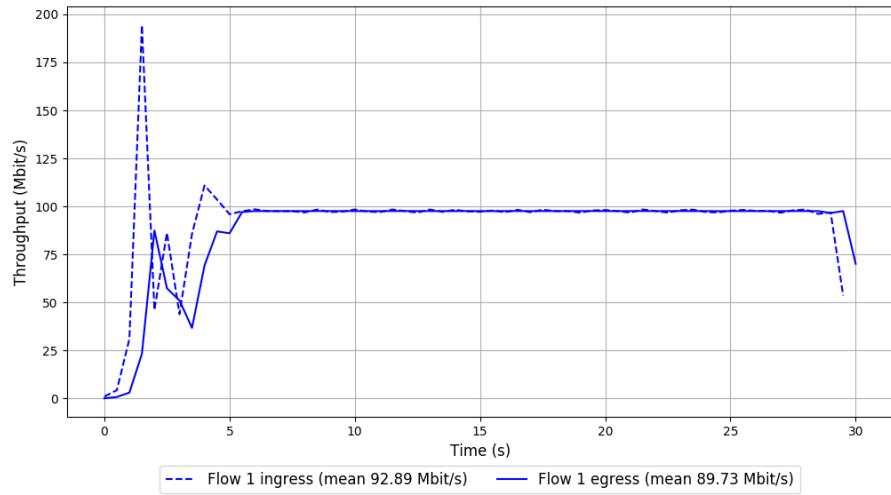


Run 4: Statistics of Indigo-MusesD

```
Start at: 2018-12-19 23:54:30
End at: 2018-12-19 23:55:00
Local clock offset: -1.389 ms
Remote clock offset: 12.629 ms

# Below is generated by plot.py at 2018-12-20 00:33:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.73 Mbit/s
95th percentile per-packet one-way delay: 99.191 ms
Loss rate: 3.39%
-- Flow 1:
Average throughput: 89.73 Mbit/s
95th percentile per-packet one-way delay: 99.191 ms
Loss rate: 3.39%
```

Run 4: Report of Indigo-MusesD — Data Link

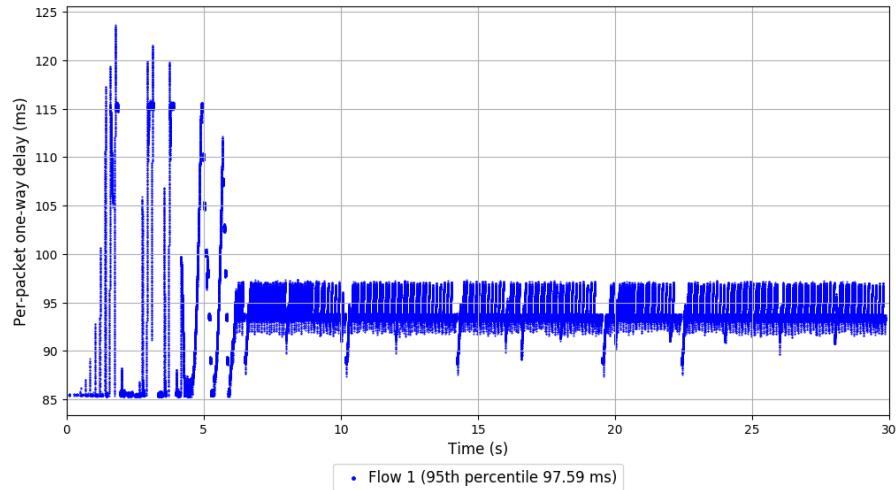
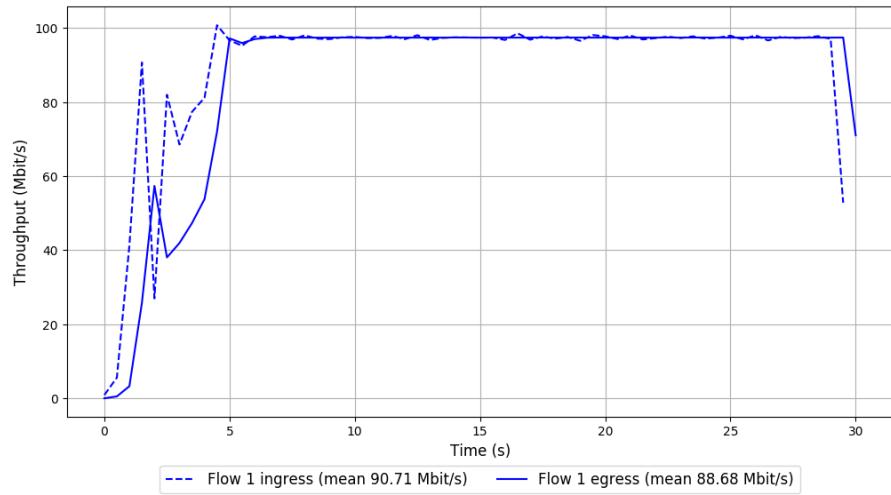


Run 5: Statistics of Indigo-MusesD

```
Start at: 2018-12-20 00:16:43
End at: 2018-12-20 00:17:13
Local clock offset: -5.544 ms
Remote clock offset: 17.325 ms

# Below is generated by plot.py at 2018-12-20 00:33:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.68 Mbit/s
95th percentile per-packet one-way delay: 97.591 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 88.68 Mbit/s
95th percentile per-packet one-way delay: 97.591 ms
Loss rate: 2.21%
```

Run 5: Report of Indigo-MusesD — Data Link

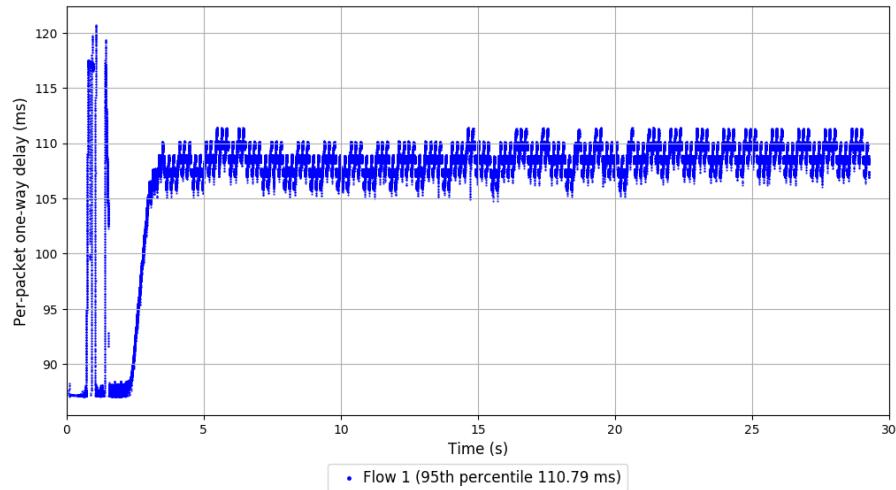
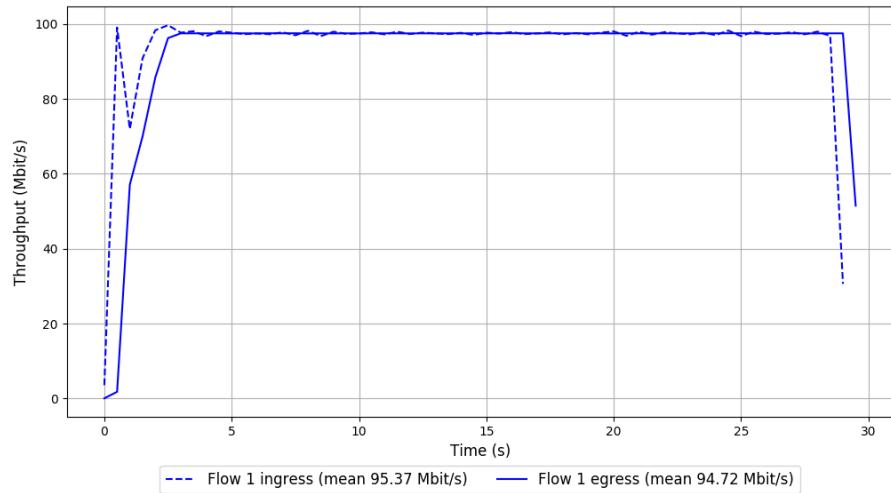


Run 1: Statistics of Indigo-MusesT

```
Start at: 2018-12-19 22:51:17
End at: 2018-12-19 22:51:47
Local clock offset: -6.674 ms
Remote clock offset: 15.161 ms

# Below is generated by plot.py at 2018-12-20 00:33:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.72 Mbit/s
95th percentile per-packet one-way delay: 110.788 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 94.72 Mbit/s
95th percentile per-packet one-way delay: 110.788 ms
Loss rate: 0.62%
```

Run 1: Report of Indigo-MusesT — Data Link

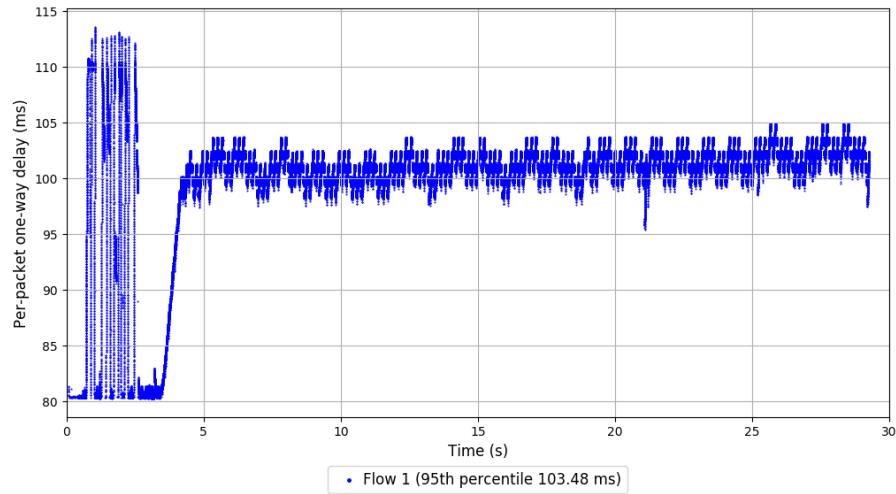
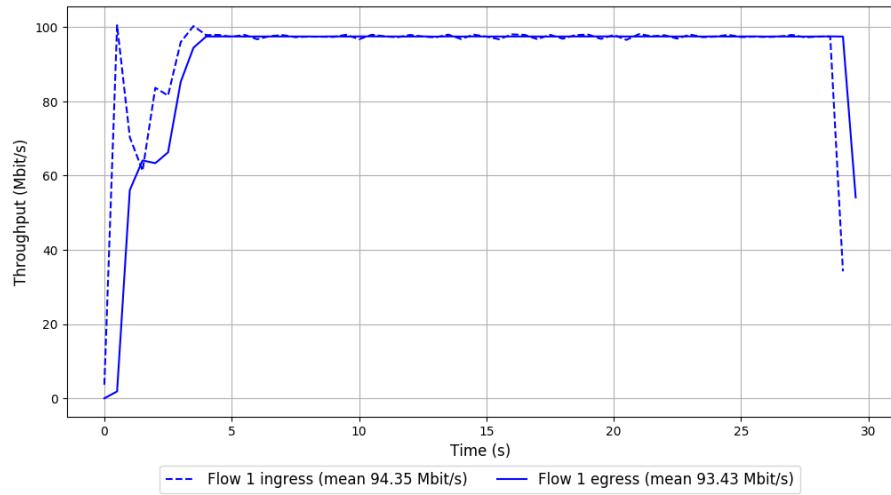


Run 2: Statistics of Indigo-MusesT

```
Start at: 2018-12-19 23:13:33
End at: 2018-12-19 23:14:03
Local clock offset: -7.994 ms
Remote clock offset: 10.753 ms

# Below is generated by plot.py at 2018-12-20 00:33:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.43 Mbit/s
95th percentile per-packet one-way delay: 103.479 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 93.43 Mbit/s
95th percentile per-packet one-way delay: 103.479 ms
Loss rate: 0.90%
```

Run 2: Report of Indigo-MusesT — Data Link

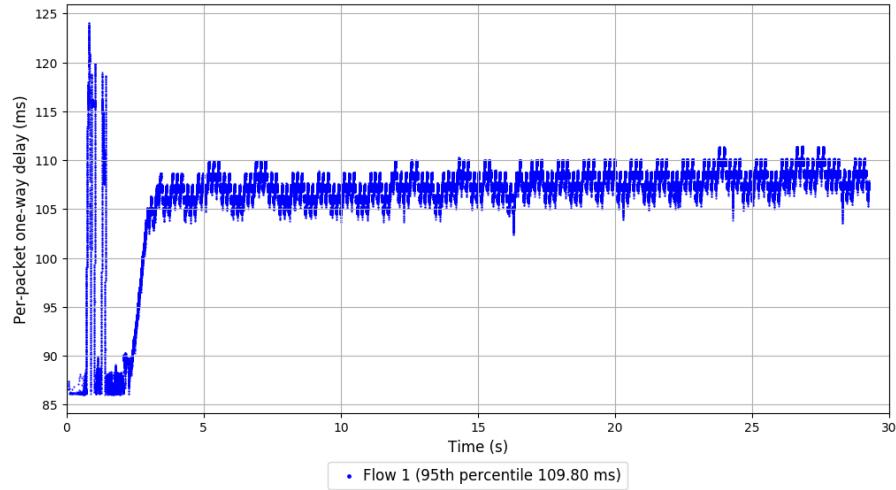
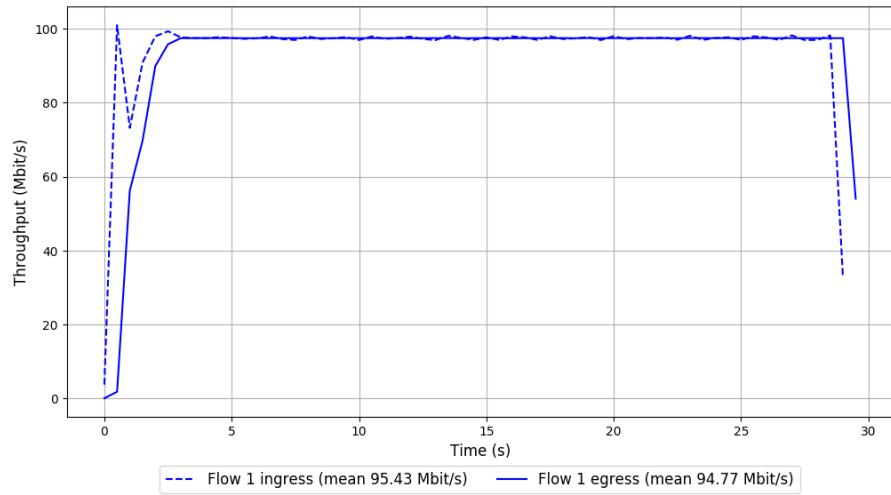


Run 3: Statistics of Indigo-MusesT

```
Start at: 2018-12-19 23:35:48
End at: 2018-12-19 23:36:18
Local clock offset: -7.587 ms
Remote clock offset: 18.03 ms

# Below is generated by plot.py at 2018-12-20 00:34:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.77 Mbit/s
95th percentile per-packet one-way delay: 109.797 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 94.77 Mbit/s
95th percentile per-packet one-way delay: 109.797 ms
Loss rate: 0.62%
```

Run 3: Report of Indigo-MusesT — Data Link

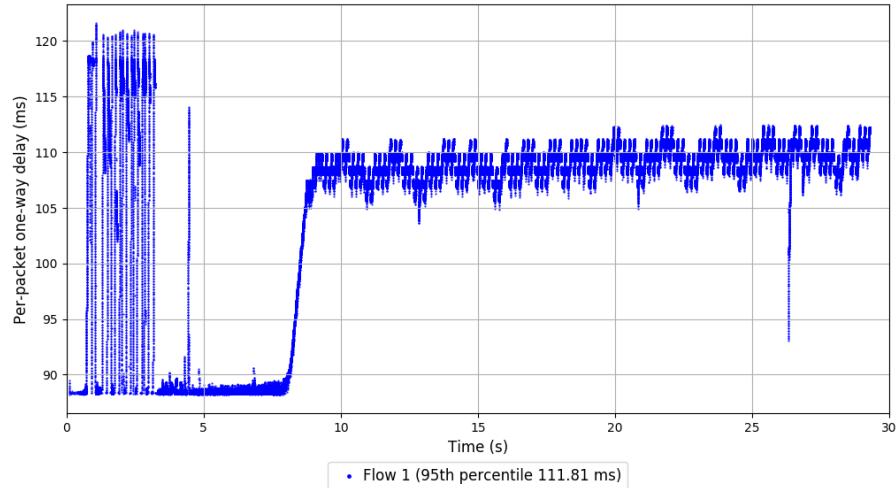
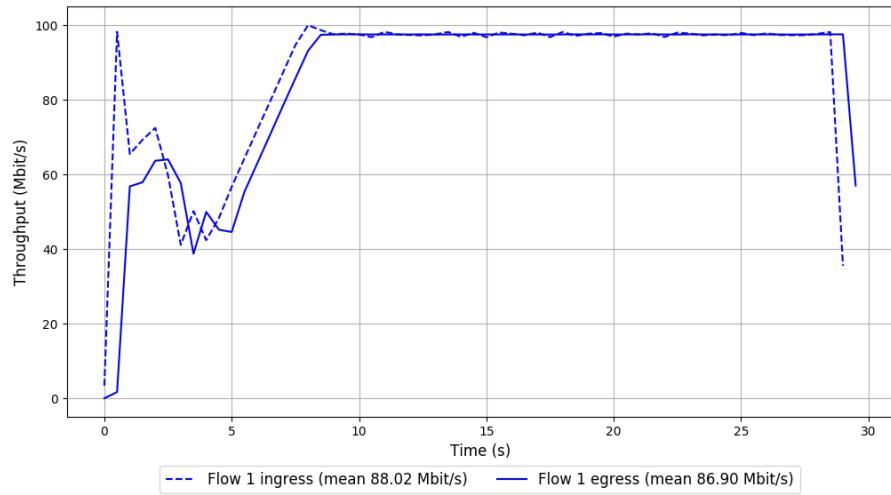


Run 4: Statistics of Indigo-MusesT

```
Start at: 2018-12-19 23:58:00
End at: 2018-12-19 23:58:30
Local clock offset: -0.919 ms
Remote clock offset: 17.489 ms

# Below is generated by plot.py at 2018-12-20 00:34:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.90 Mbit/s
95th percentile per-packet one-way delay: 111.809 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 86.90 Mbit/s
95th percentile per-packet one-way delay: 111.809 ms
Loss rate: 1.20%
```

Run 4: Report of Indigo-MusesT — Data Link

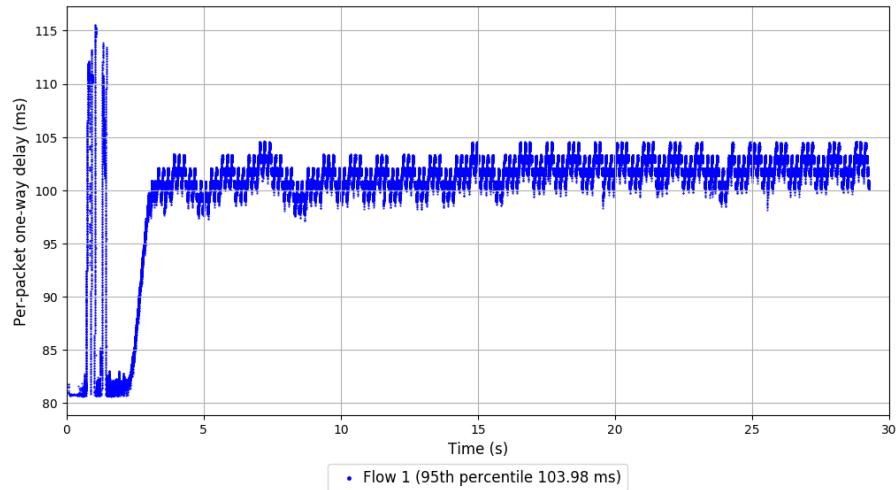
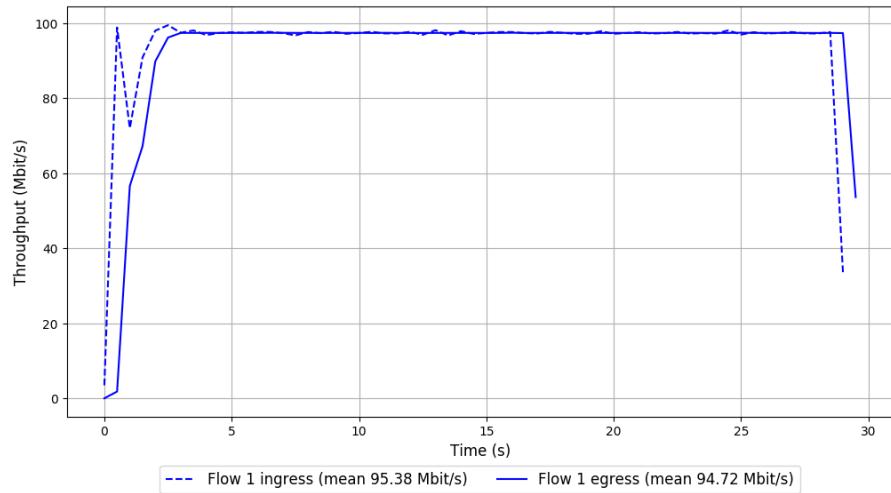


Run 5: Statistics of Indigo-MusesT

```
Start at: 2018-12-20 00:20:13
End at: 2018-12-20 00:20:43
Local clock offset: -5.503 ms
Remote clock offset: 13.516 ms

# Below is generated by plot.py at 2018-12-20 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.72 Mbit/s
95th percentile per-packet one-way delay: 103.977 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 94.72 Mbit/s
95th percentile per-packet one-way delay: 103.977 ms
Loss rate: 0.62%
```

Run 5: Report of Indigo-MusesT — Data Link

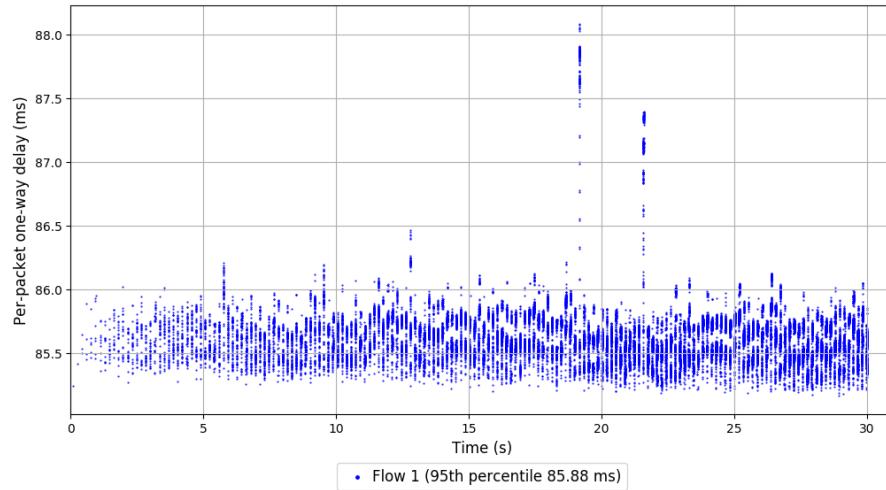
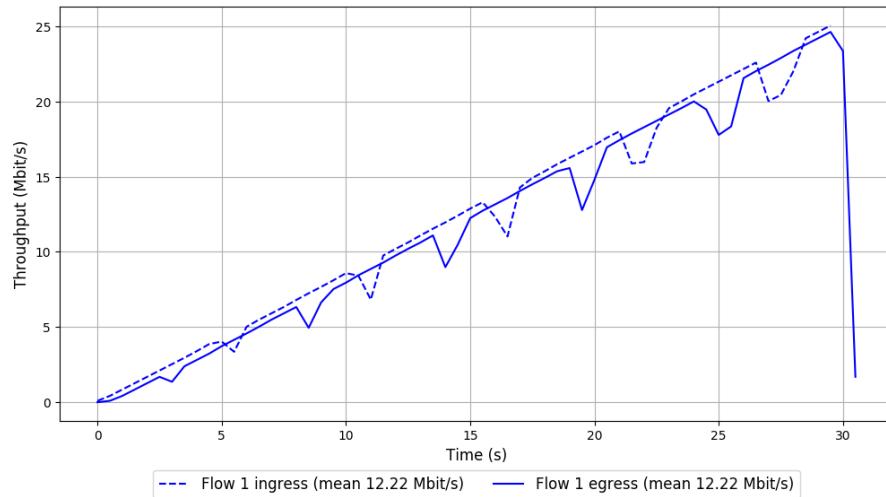


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-12-19 22:46:38
End at: 2018-12-19 22:47:08
Local clock offset: -5.846 ms
Remote clock offset: 15.115 ms

# Below is generated by plot.py at 2018-12-20 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 85.878 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 85.878 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

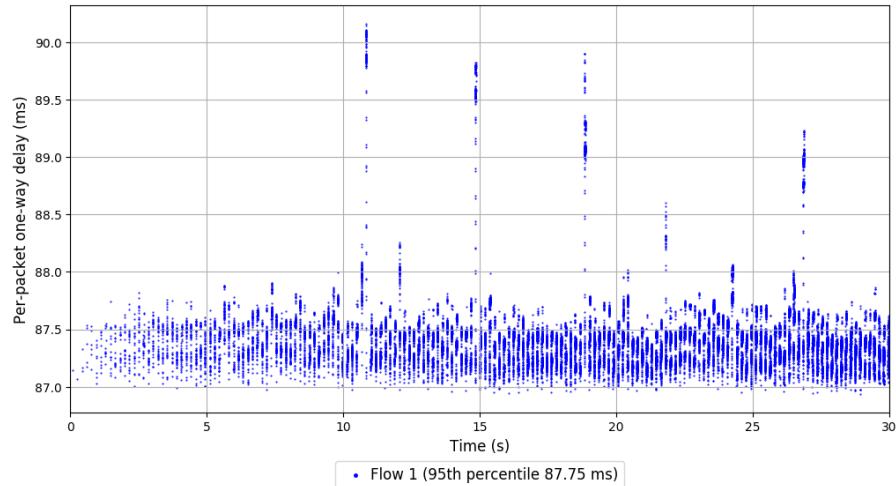
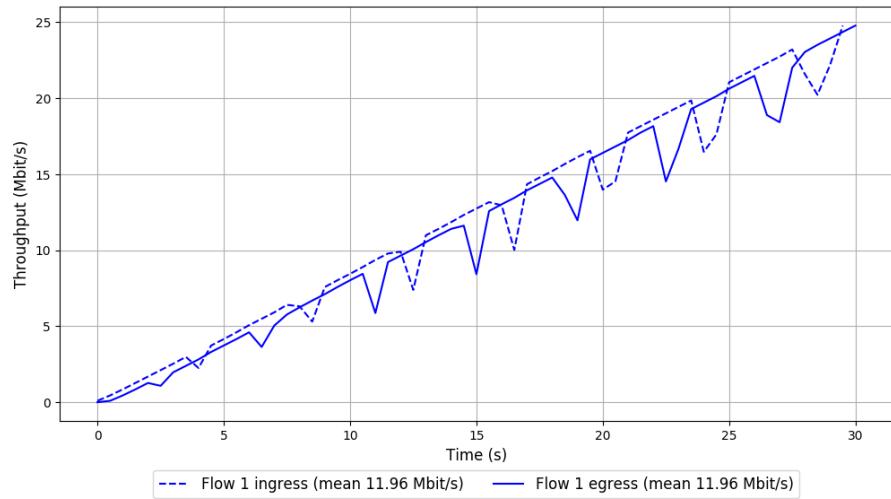


Run 2: Statistics of LEDBAT

```
Start at: 2018-12-19 23:08:54
End at: 2018-12-19 23:09:24
Local clock offset: -7.325 ms
Remote clock offset: 16.885 ms

# Below is generated by plot.py at 2018-12-20 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.96 Mbit/s
95th percentile per-packet one-way delay: 87.745 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.96 Mbit/s
95th percentile per-packet one-way delay: 87.745 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link

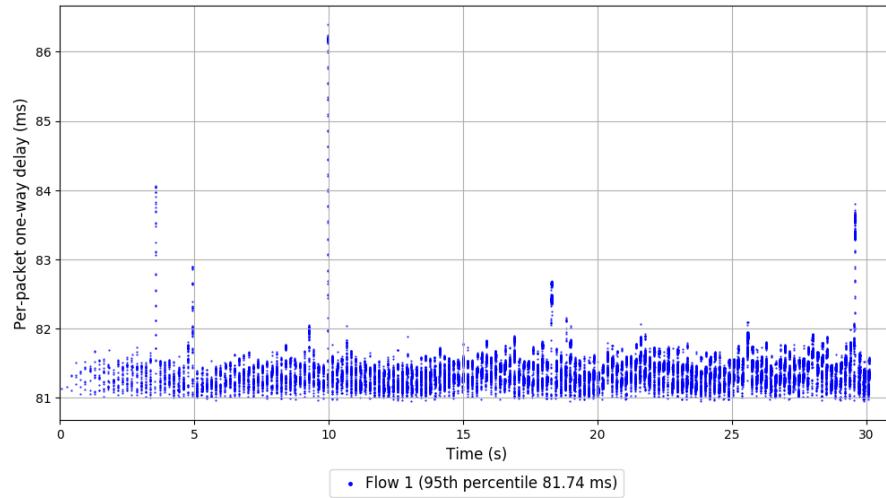
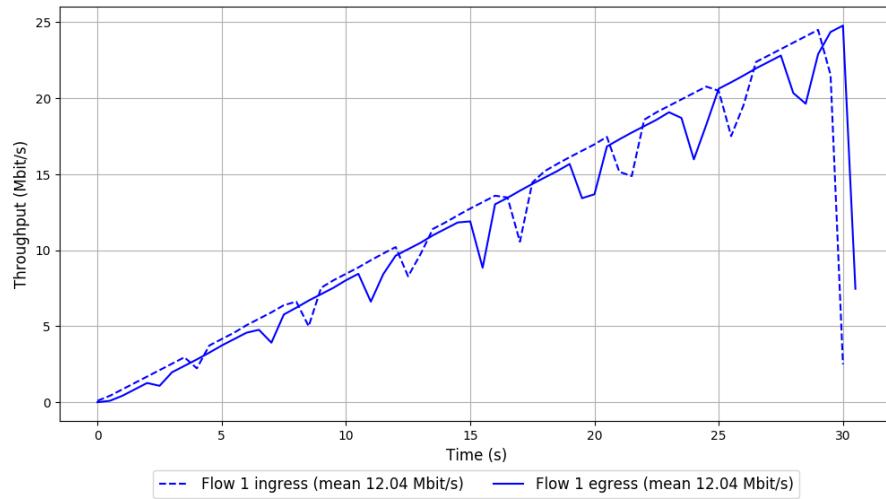


Run 3: Statistics of LEDBAT

```
Start at: 2018-12-19 23:31:10
End at: 2018-12-19 23:31:40
Local clock offset: -7.758 ms
Remote clock offset: 12.694 ms

# Below is generated by plot.py at 2018-12-20 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.04 Mbit/s
95th percentile per-packet one-way delay: 81.742 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.04 Mbit/s
95th percentile per-packet one-way delay: 81.742 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link

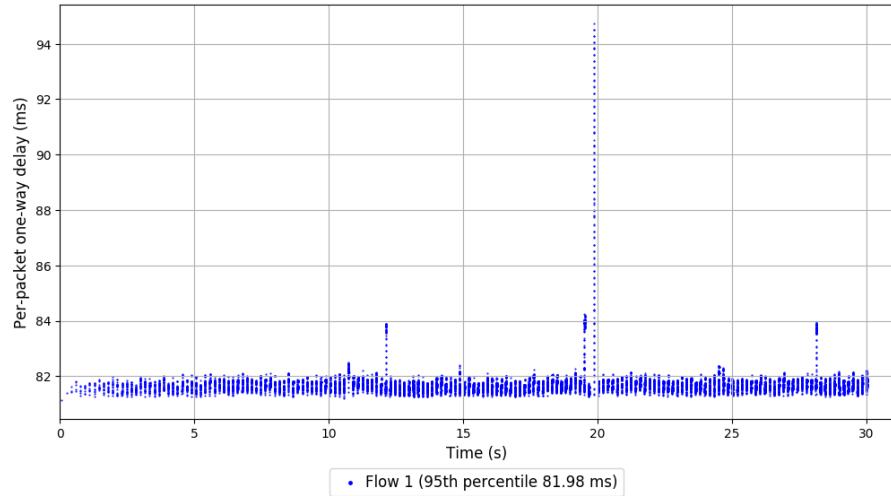
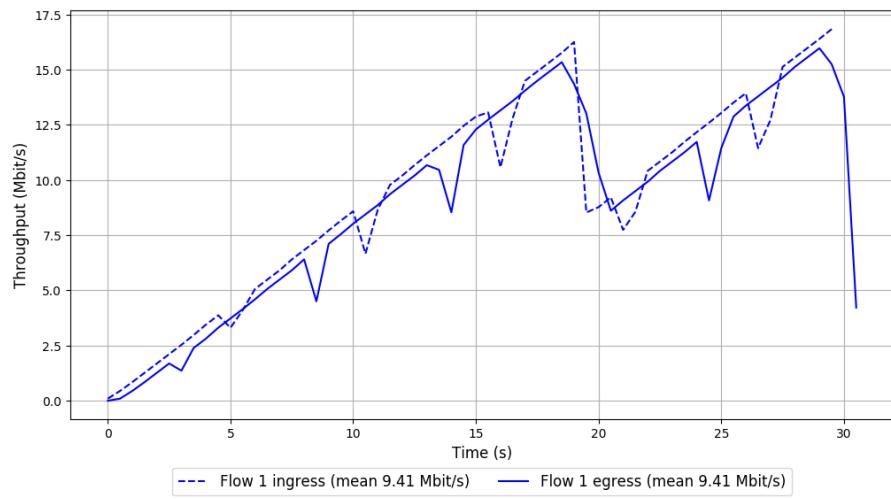


Run 4: Statistics of LEDBAT

```
Start at: 2018-12-19 23:53:21
End at: 2018-12-19 23:53:51
Local clock offset: -1.629 ms
Remote clock offset: 13.579 ms

# Below is generated by plot.py at 2018-12-20 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 81.981 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 81.981 ms
Loss rate: 0.00%
```

Run 4: Report of LEDBAT — Data Link

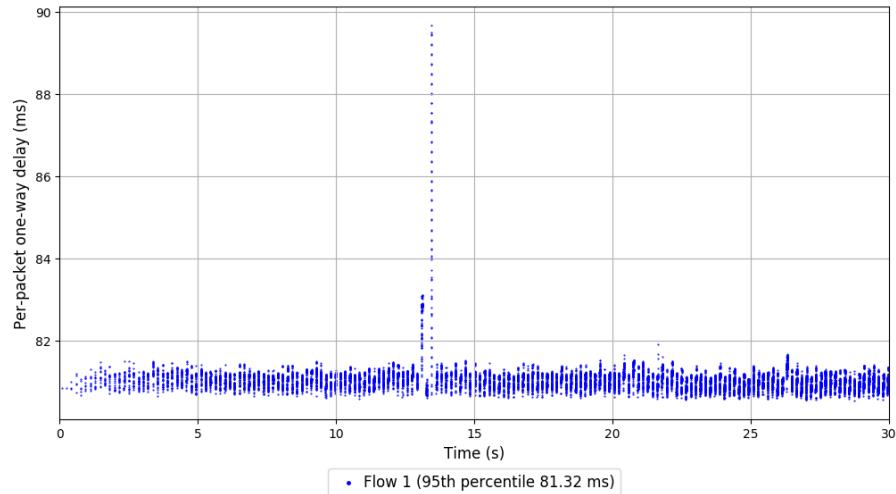
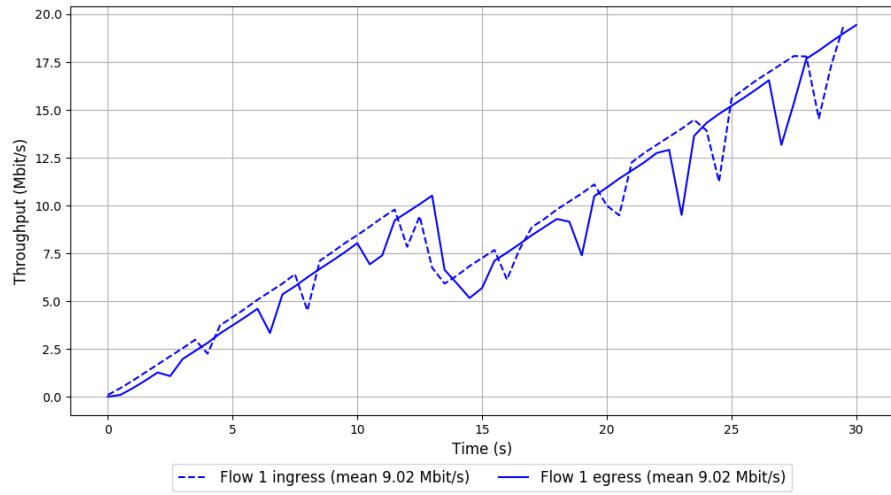


Run 5: Statistics of LEDBAT

```
Start at: 2018-12-20 00:15:35
End at: 2018-12-20 00:16:05
Local clock offset: -4.469 ms
Remote clock offset: 13.43 ms

# Below is generated by plot.py at 2018-12-20 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.02 Mbit/s
95th percentile per-packet one-way delay: 81.320 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 9.02 Mbit/s
95th percentile per-packet one-way delay: 81.320 ms
Loss rate: 0.02%
```

Run 5: Report of LEDBAT — Data Link

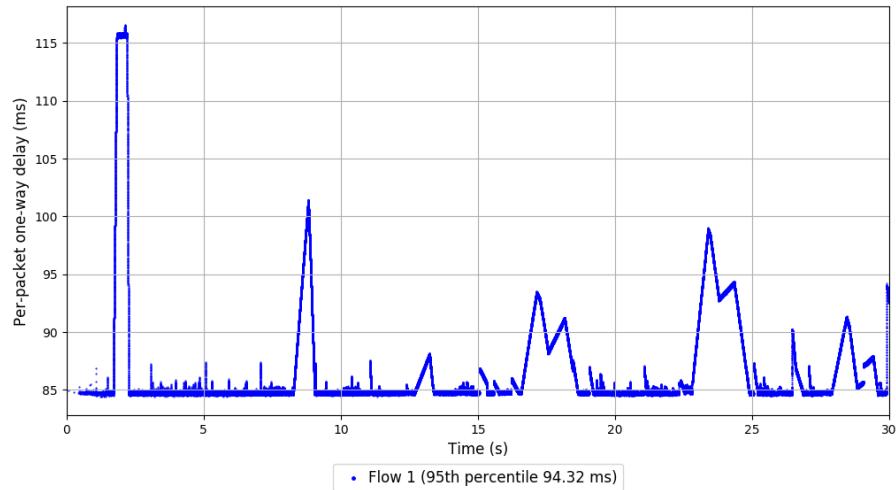
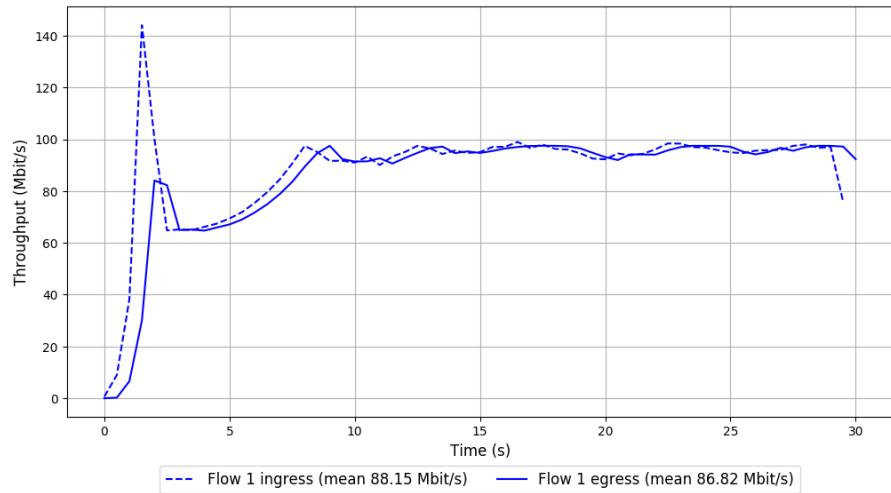


Run 1: Statistics of PCC-Allegro

```
Start at: 2018-12-19 22:50:06
End at: 2018-12-19 22:50:36
Local clock offset: -5.789 ms
Remote clock offset: 13.797 ms

# Below is generated by plot.py at 2018-12-20 00:34:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.82 Mbit/s
95th percentile per-packet one-way delay: 94.318 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 86.82 Mbit/s
95th percentile per-packet one-way delay: 94.318 ms
Loss rate: 1.48%
```

Run 1: Report of PCC-Allegro — Data Link

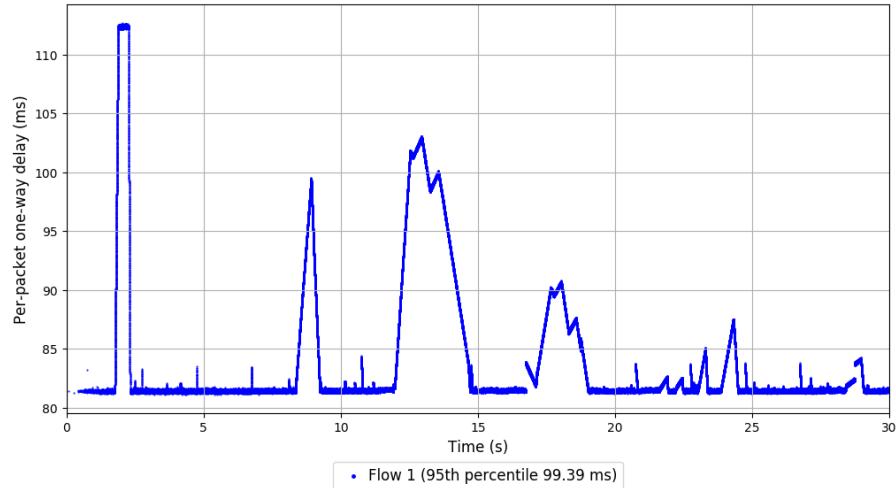
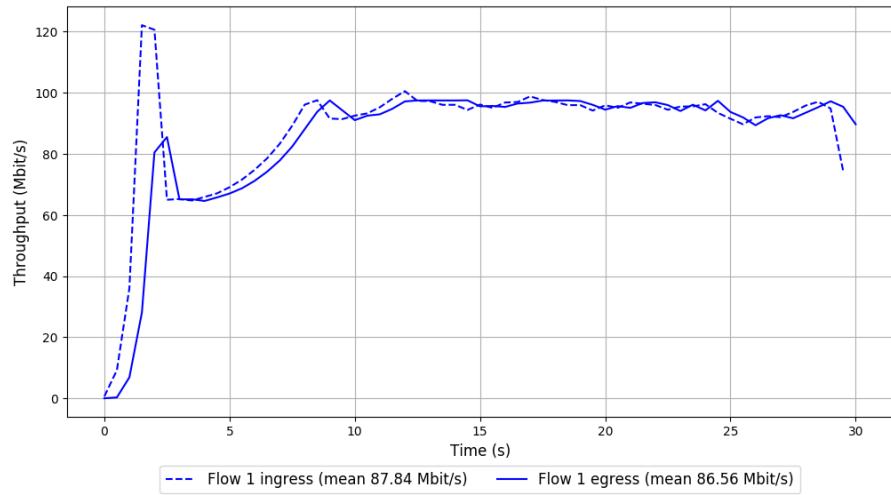


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-12-19 23:12:22
End at: 2018-12-19 23:12:52
Local clock offset: -8.076 ms
Remote clock offset: 12.032 ms

# Below is generated by plot.py at 2018-12-20 00:34:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.56 Mbit/s
95th percentile per-packet one-way delay: 99.391 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 86.56 Mbit/s
95th percentile per-packet one-way delay: 99.391 ms
Loss rate: 1.46%
```

Run 2: Report of PCC-Allegro — Data Link

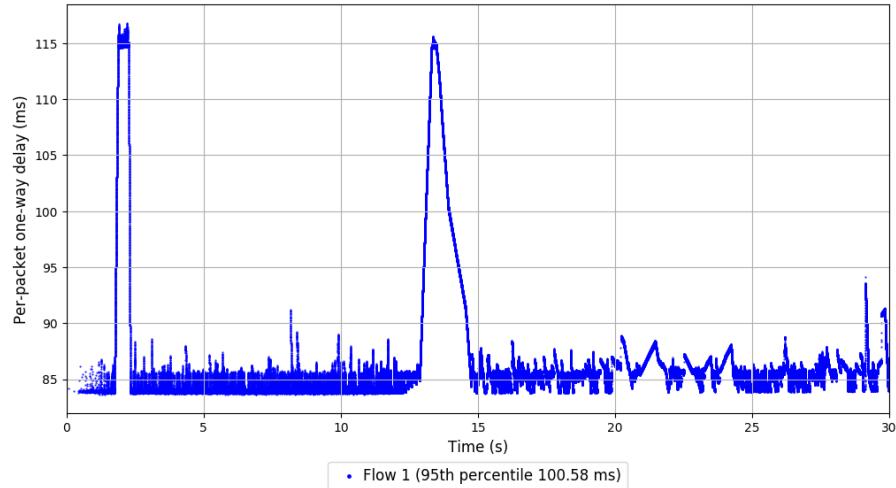
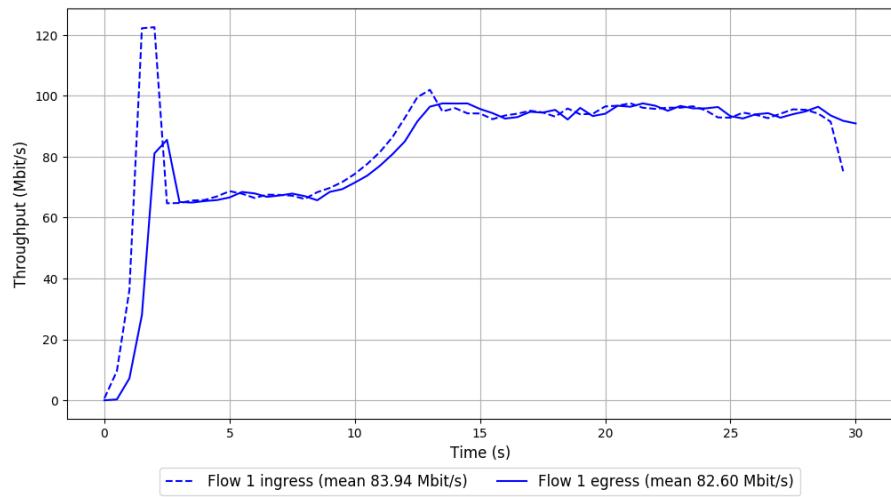


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-12-19 23:34:37
End at: 2018-12-19 23:35:07
Local clock offset: -7.864 ms
Remote clock offset: 15.787 ms

# Below is generated by plot.py at 2018-12-20 00:34:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.60 Mbit/s
95th percentile per-packet one-way delay: 100.577 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 82.60 Mbit/s
95th percentile per-packet one-way delay: 100.577 ms
Loss rate: 1.60%
```

Run 3: Report of PCC-Allegro — Data Link

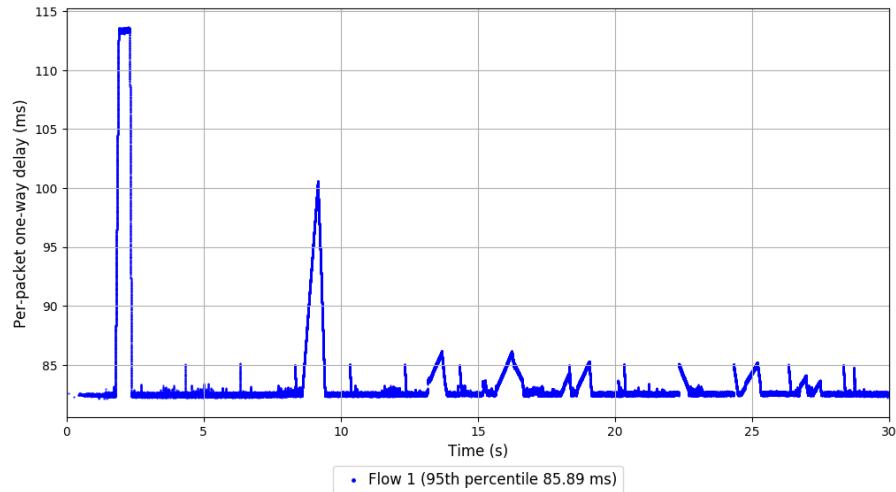
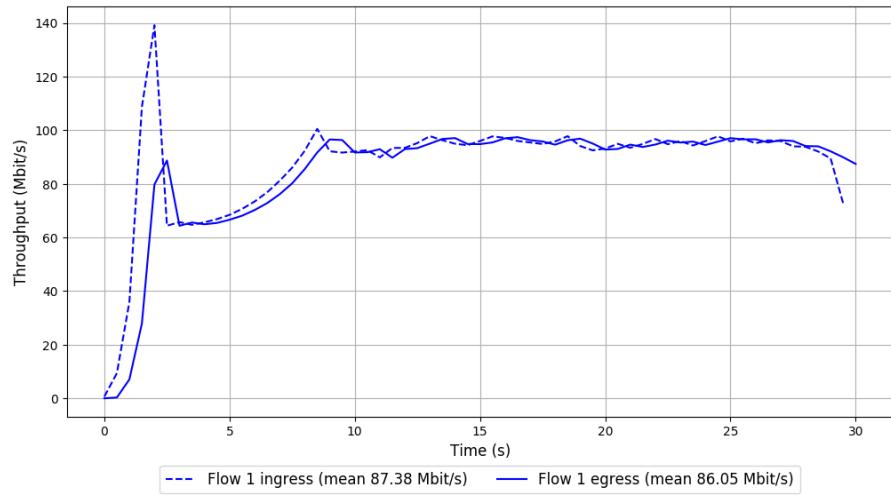


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-12-19 23:56:49
End at: 2018-12-19 23:57:19
Local clock offset: -1.076 ms
Remote clock offset: 13.451 ms

# Below is generated by plot.py at 2018-12-20 00:34:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.05 Mbit/s
95th percentile per-packet one-way delay: 85.889 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 86.05 Mbit/s
95th percentile per-packet one-way delay: 85.889 ms
Loss rate: 1.53%
```

Run 4: Report of PCC-Allegro — Data Link

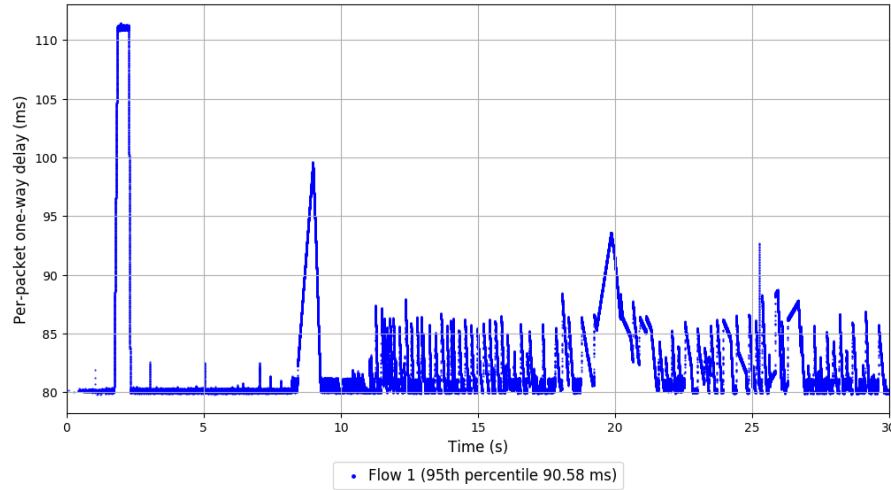
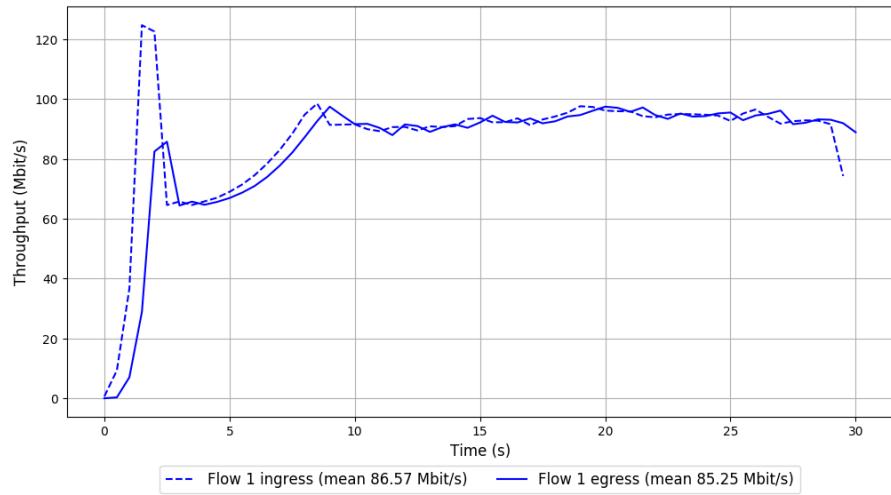


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-12-20 00:19:02
End at: 2018-12-20 00:19:32
Local clock offset: -6.016 ms
Remote clock offset: 13.561 ms

# Below is generated by plot.py at 2018-12-20 00:34:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.25 Mbit/s
95th percentile per-packet one-way delay: 90.577 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 85.25 Mbit/s
95th percentile per-packet one-way delay: 90.577 ms
Loss rate: 1.53%
```

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

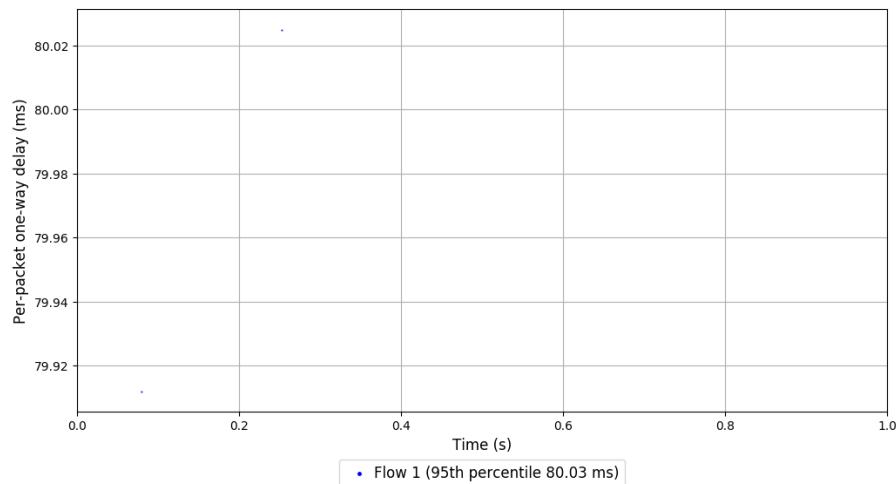
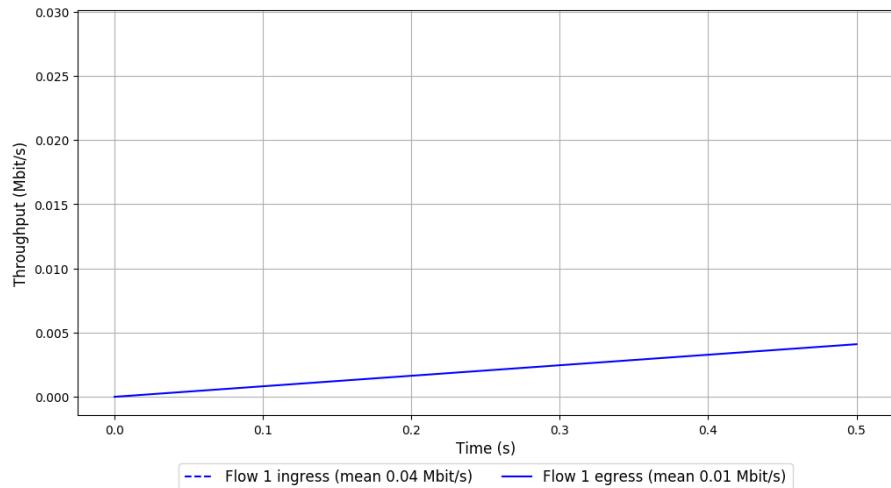
Start at: 2018-12-19 22:37:18

End at: 2018-12-19 22:37:48

Local clock offset: -1.384 ms

Remote clock offset: 10.414 ms

Run 1: Report of PCC-Expr — Data Link

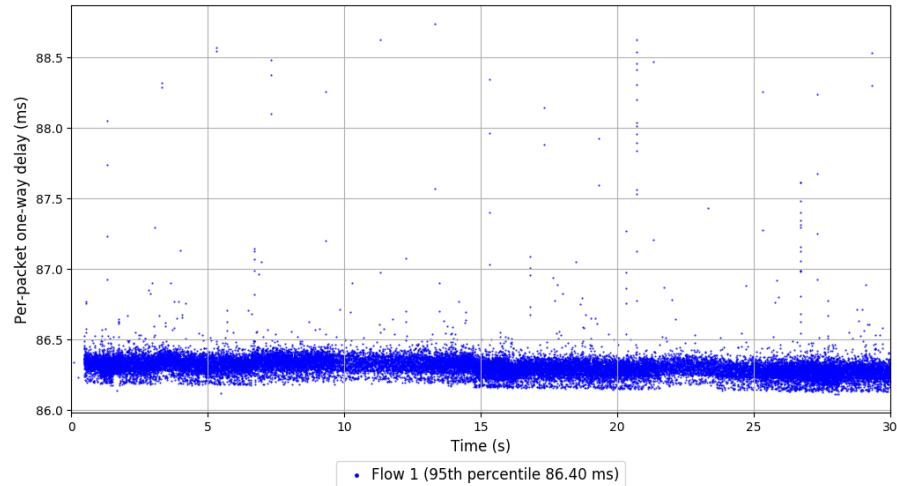
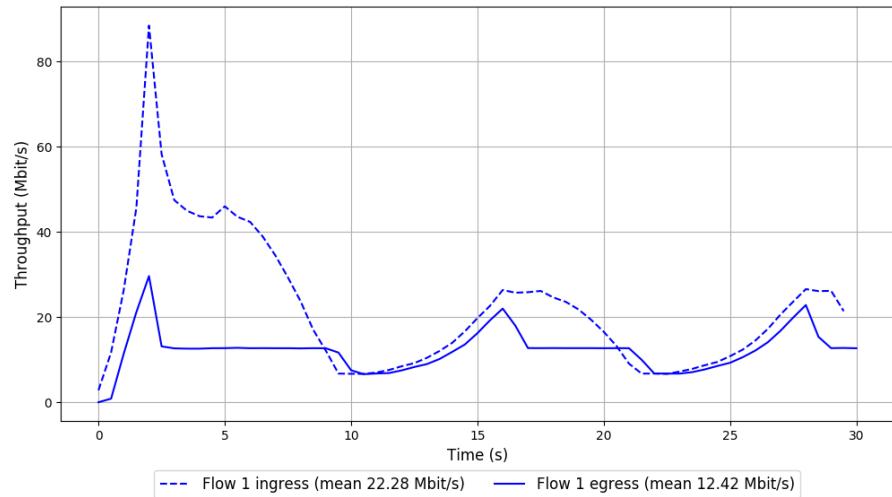


Run 2: Statistics of PCC-Expr

```
Start at: 2018-12-19 22:59:32
End at: 2018-12-19 23:00:02
Local clock offset: -7.718 ms
Remote clock offset: 15.041 ms

# Below is generated by plot.py at 2018-12-20 00:34:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.42 Mbit/s
95th percentile per-packet one-way delay: 86.399 ms
Loss rate: 44.27%
-- Flow 1:
Average throughput: 12.42 Mbit/s
95th percentile per-packet one-way delay: 86.399 ms
Loss rate: 44.27%
```

Run 2: Report of PCC-Expr — Data Link

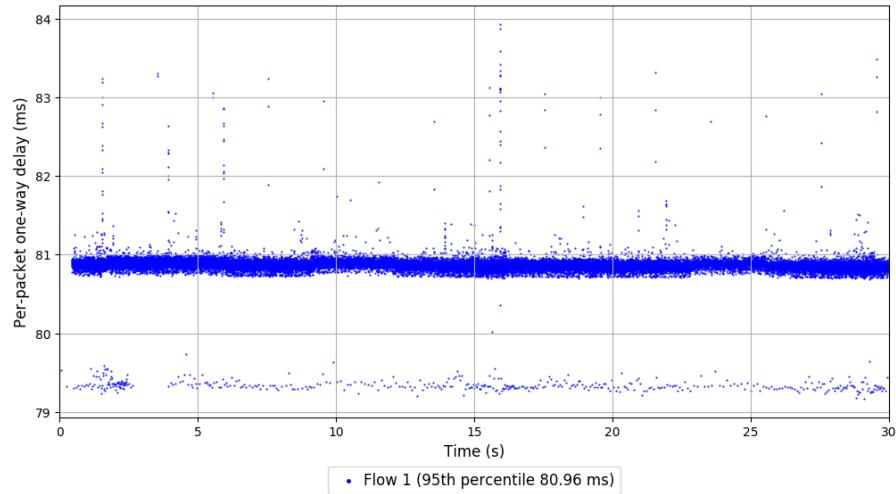
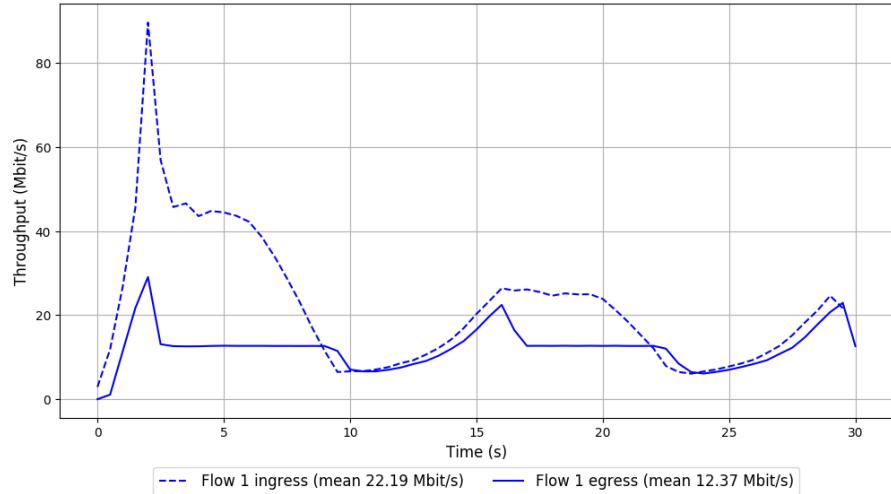


Run 3: Statistics of PCC-Expr

```
Start at: 2018-12-19 23:21:48
End at: 2018-12-19 23:22:18
Local clock offset: -7.453 ms
Remote clock offset: 11.142 ms

# Below is generated by plot.py at 2018-12-20 00:34:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.37 Mbit/s
95th percentile per-packet one-way delay: 80.960 ms
Loss rate: 44.25%
-- Flow 1:
Average throughput: 12.37 Mbit/s
95th percentile per-packet one-way delay: 80.960 ms
Loss rate: 44.25%
```

Run 3: Report of PCC-Expr — Data Link

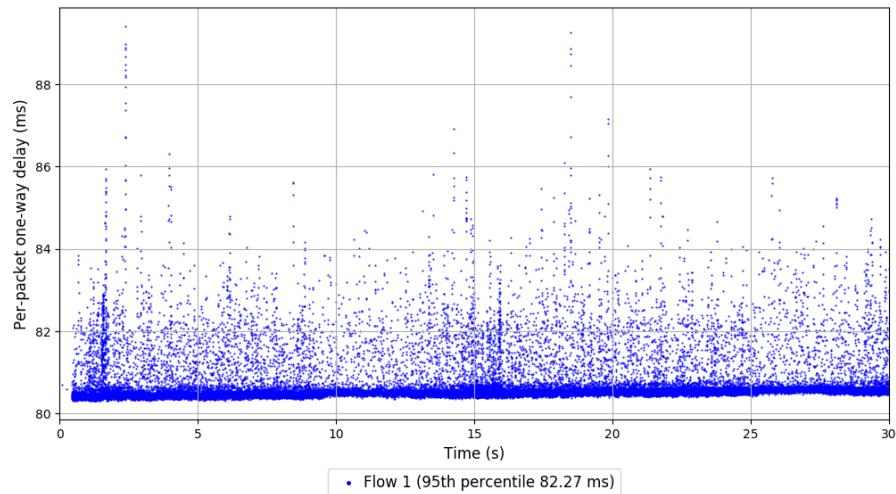
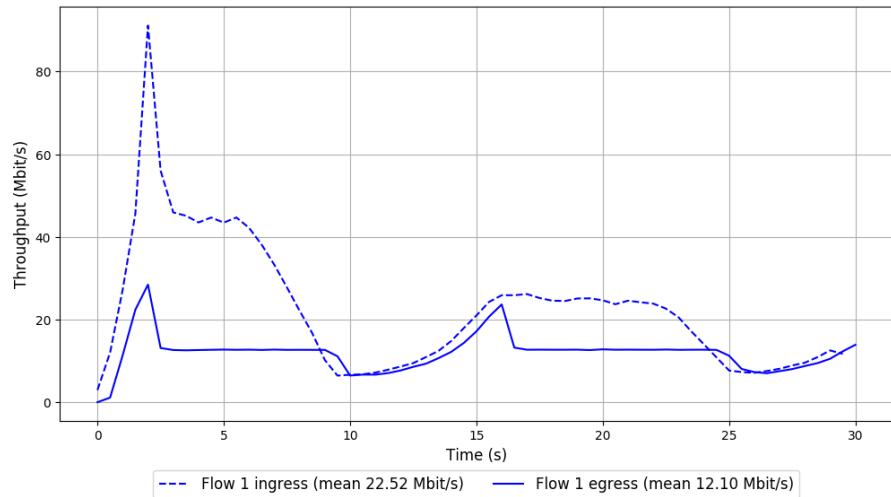


Run 4: Statistics of PCC-Expr

```
Start at: 2018-12-19 23:44:02
End at: 2018-12-19 23:44:32
Local clock offset: -3.008 ms
Remote clock offset: 13.197 ms

# Below is generated by plot.py at 2018-12-20 00:34:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.10 Mbit/s
95th percentile per-packet one-way delay: 82.269 ms
Loss rate: 46.26%
-- Flow 1:
Average throughput: 12.10 Mbit/s
95th percentile per-packet one-way delay: 82.269 ms
Loss rate: 46.26%
```

Run 4: Report of PCC-Expr — Data Link

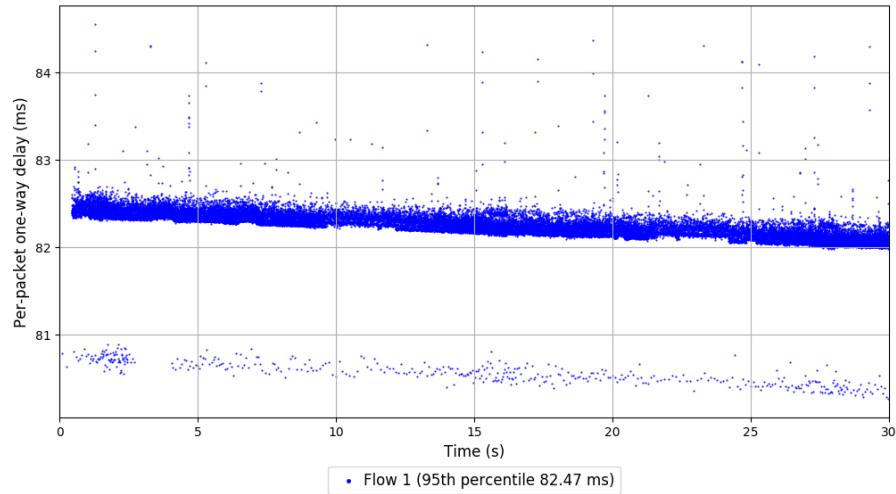
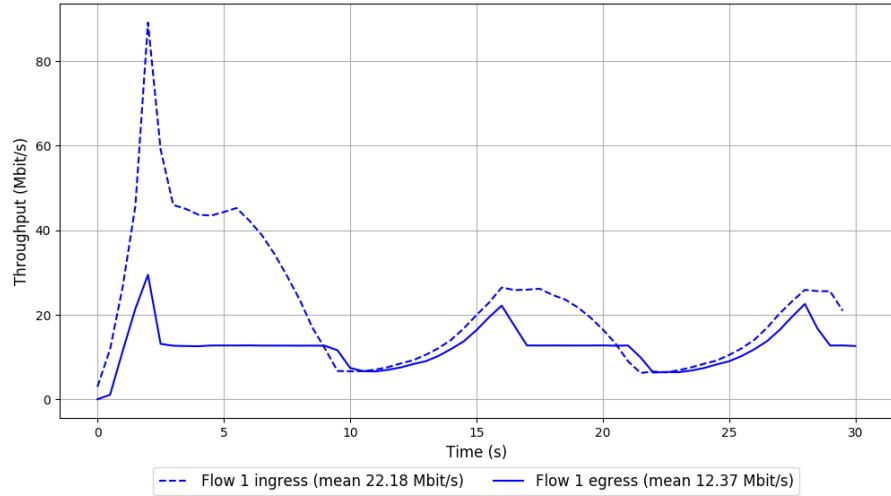


Run 5: Statistics of PCC-Expr

```
Start at: 2018-12-20 00:06:14
End at: 2018-12-20 00:06:44
Local clock offset: -0.998 ms
Remote clock offset: 14.098 ms

# Below is generated by plot.py at 2018-12-20 00:34:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.37 Mbit/s
95th percentile per-packet one-way delay: 82.474 ms
Loss rate: 44.24%
-- Flow 1:
Average throughput: 12.37 Mbit/s
95th percentile per-packet one-way delay: 82.474 ms
Loss rate: 44.24%
```

Run 5: Report of PCC-Expr — Data Link

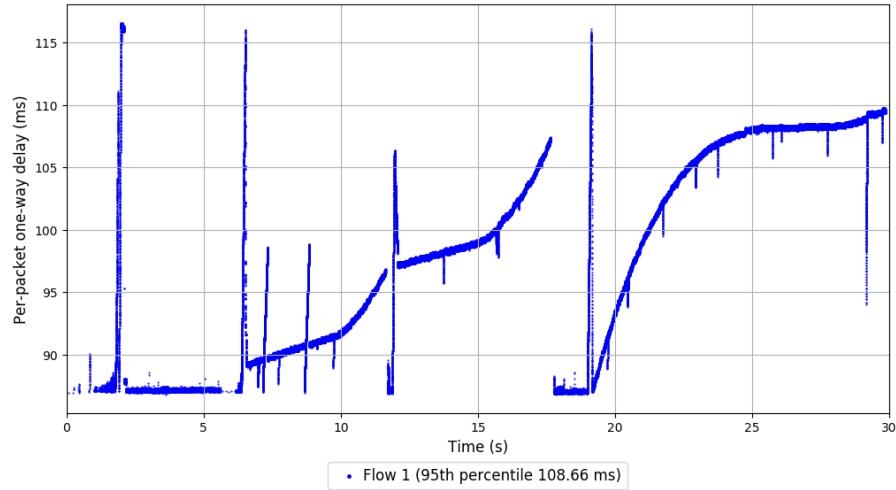
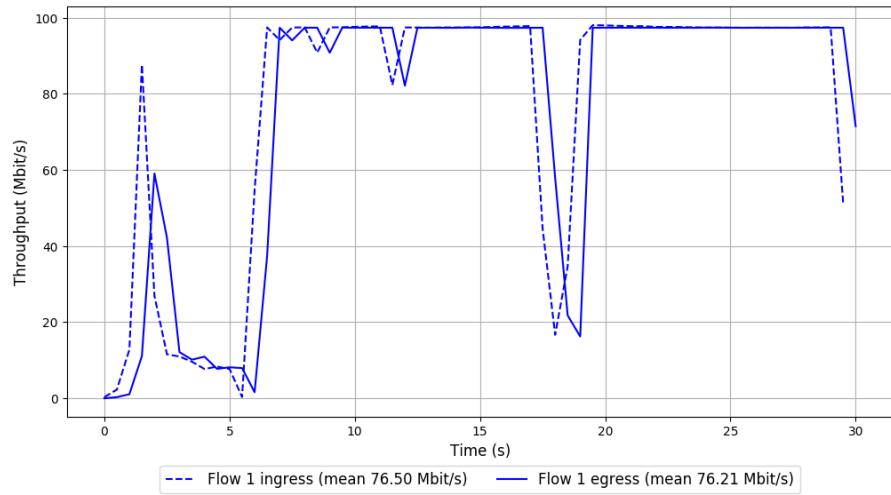


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-12-19 22:38:25
End at: 2018-12-19 22:38:55
Local clock offset: -2.09 ms
Remote clock offset: 10.574 ms

# Below is generated by plot.py at 2018-12-20 00:35:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.21 Mbit/s
95th percentile per-packet one-way delay: 108.663 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 76.21 Mbit/s
95th percentile per-packet one-way delay: 108.663 ms
Loss rate: 0.33%
```

Run 1: Report of QUIC Cubic — Data Link

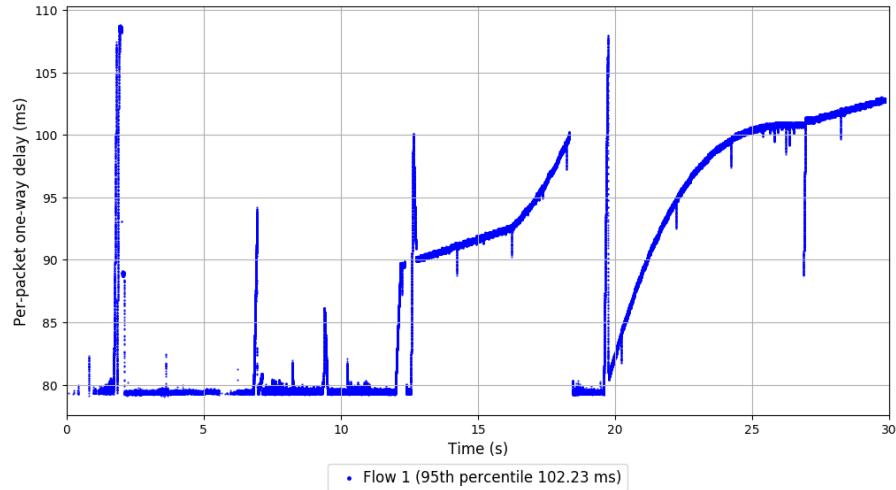
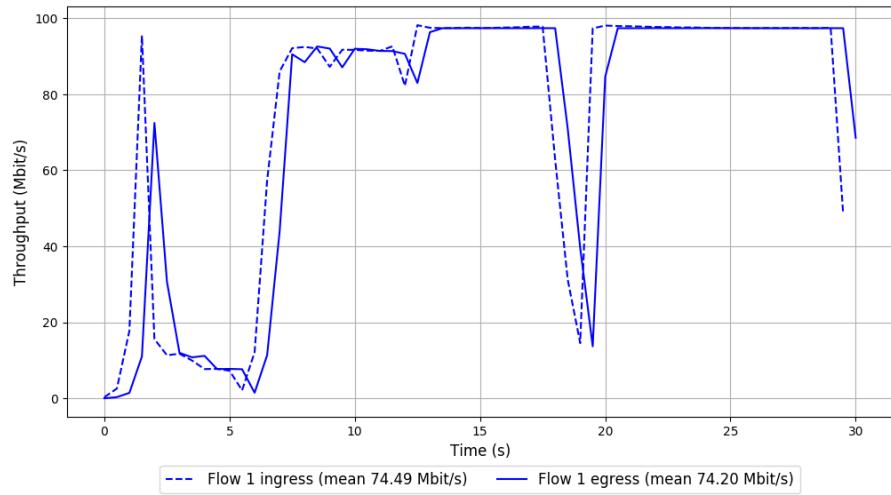


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-12-19 23:00:41
End at: 2018-12-19 23:01:11
Local clock offset: -7.084 ms
Remote clock offset: 10.376 ms

# Below is generated by plot.py at 2018-12-20 00:35:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.20 Mbit/s
95th percentile per-packet one-way delay: 102.230 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 74.20 Mbit/s
95th percentile per-packet one-way delay: 102.230 ms
Loss rate: 0.31%
```

Run 2: Report of QUIC Cubic — Data Link

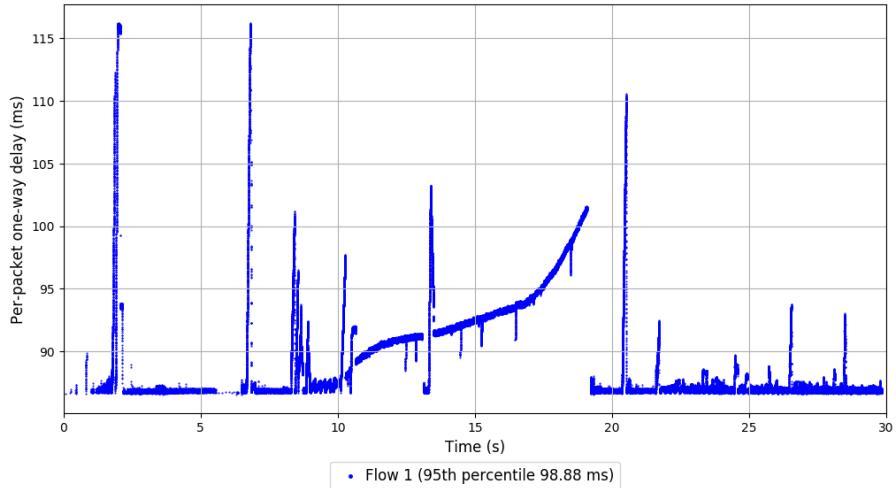
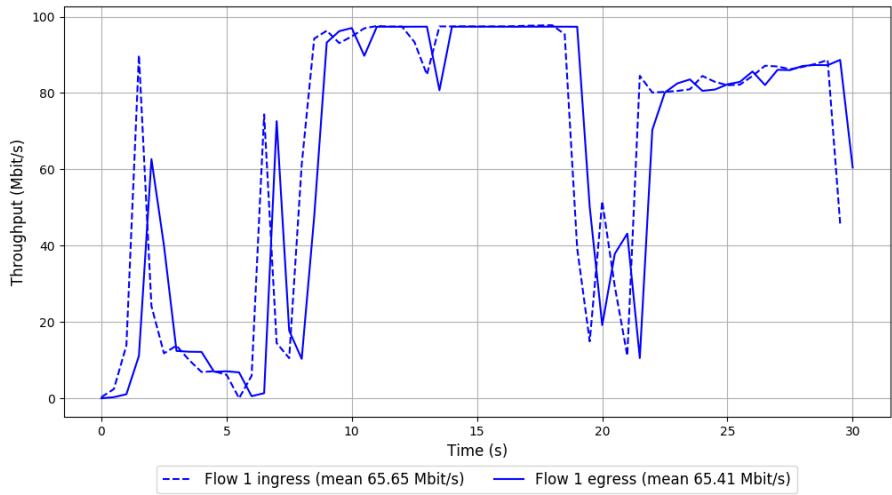


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-12-19 23:22:57
End at: 2018-12-19 23:23:27
Local clock offset: -8.235 ms
Remote clock offset: 12.497 ms

# Below is generated by plot.py at 2018-12-20 00:35:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.41 Mbit/s
95th percentile per-packet one-way delay: 98.880 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 65.41 Mbit/s
95th percentile per-packet one-way delay: 98.880 ms
Loss rate: 0.38%
```

Run 3: Report of QUIC Cubic — Data Link

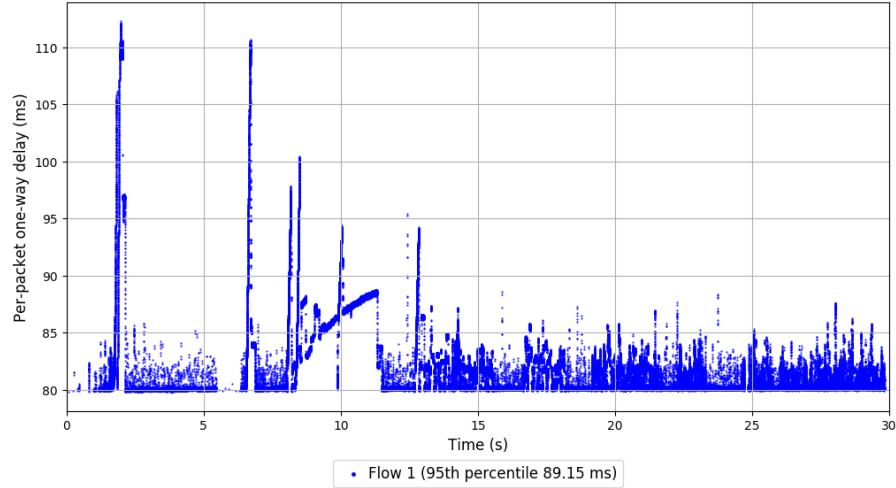
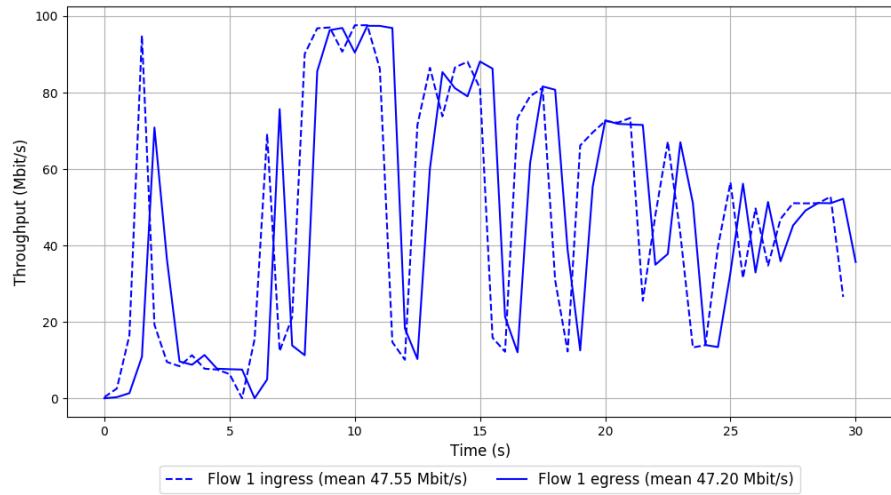


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-12-19 23:45:11
End at: 2018-12-19 23:45:41
Local clock offset: -3.324 ms
Remote clock offset: 12.165 ms

# Below is generated by plot.py at 2018-12-20 00:35:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.20 Mbit/s
95th percentile per-packet one-way delay: 89.148 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 47.20 Mbit/s
95th percentile per-packet one-way delay: 89.148 ms
Loss rate: 0.73%
```

Run 4: Report of QUIC Cubic — Data Link

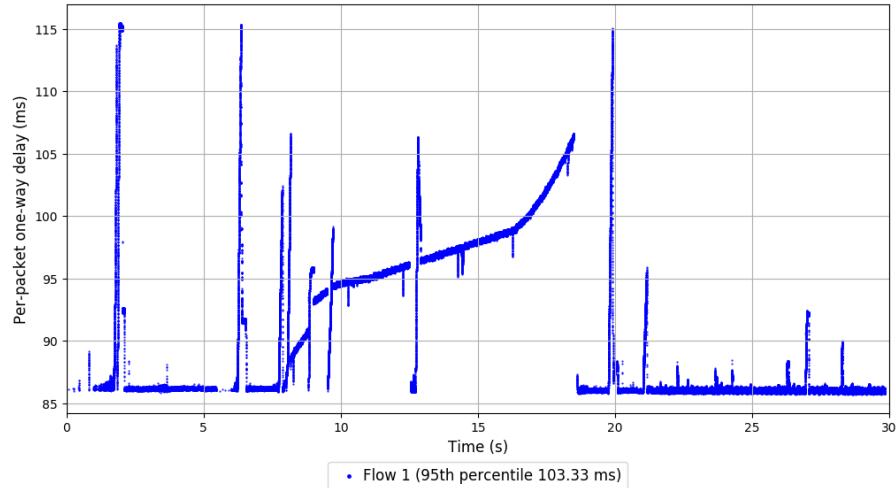
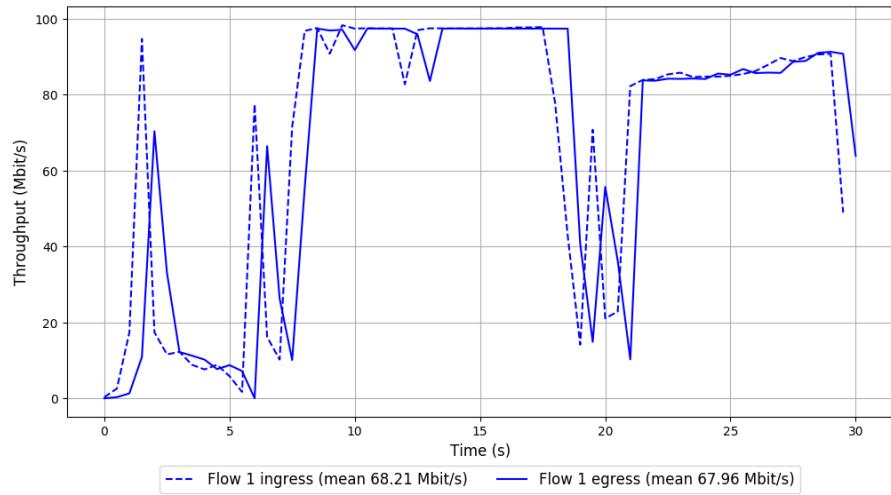


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-12-20 00:07:23
End at: 2018-12-20 00:07:53
Local clock offset: -1.829 ms
Remote clock offset: 19.198 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.96 Mbit/s
95th percentile per-packet one-way delay: 103.328 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 67.96 Mbit/s
95th percentile per-packet one-way delay: 103.328 ms
Loss rate: 0.36%
```

Run 5: Report of QUIC Cubic — Data Link

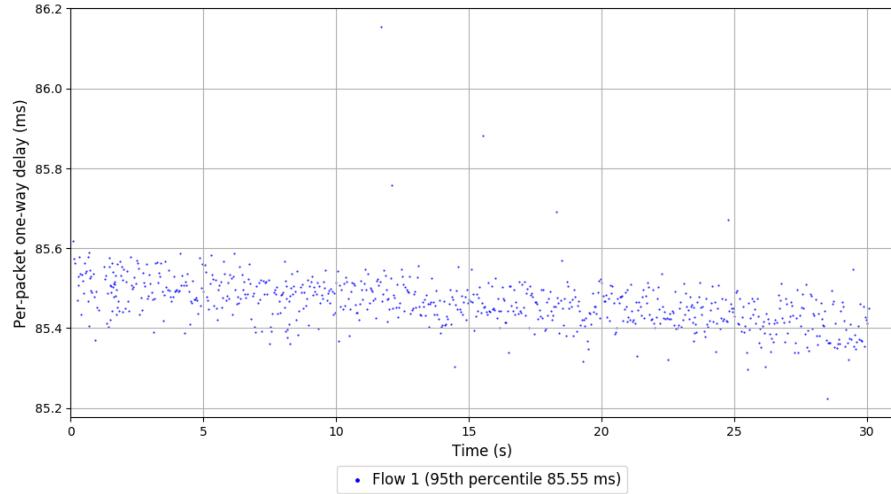
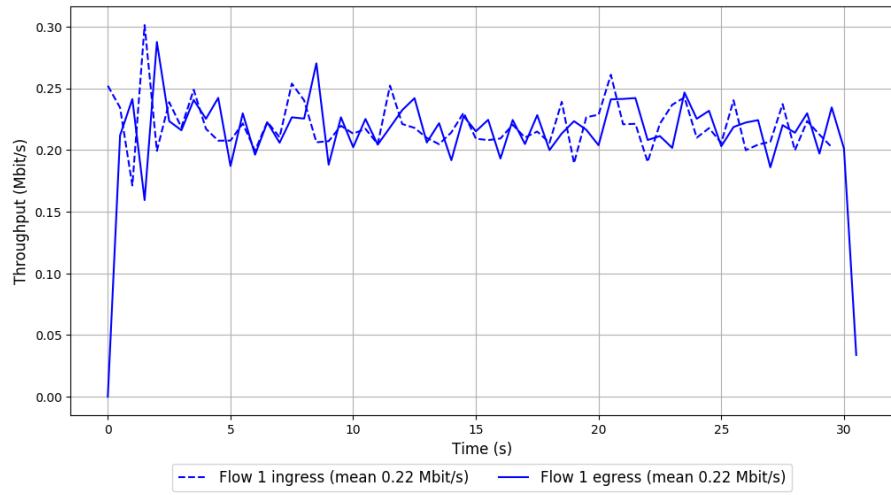


```
Run 1: Statistics of SCReAM

Start at: 2018-12-19 22:48:59
End at: 2018-12-19 22:49:29
Local clock offset: -5.6 ms
Remote clock offset: 16.001 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.553 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.553 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

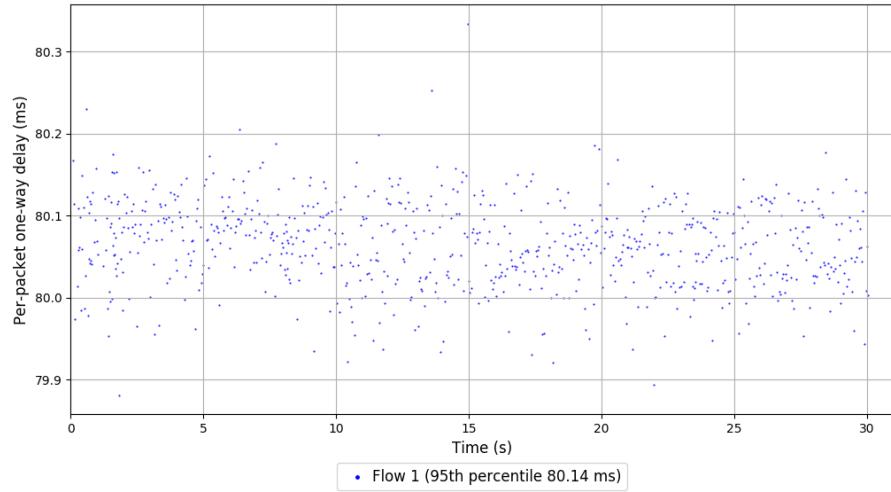
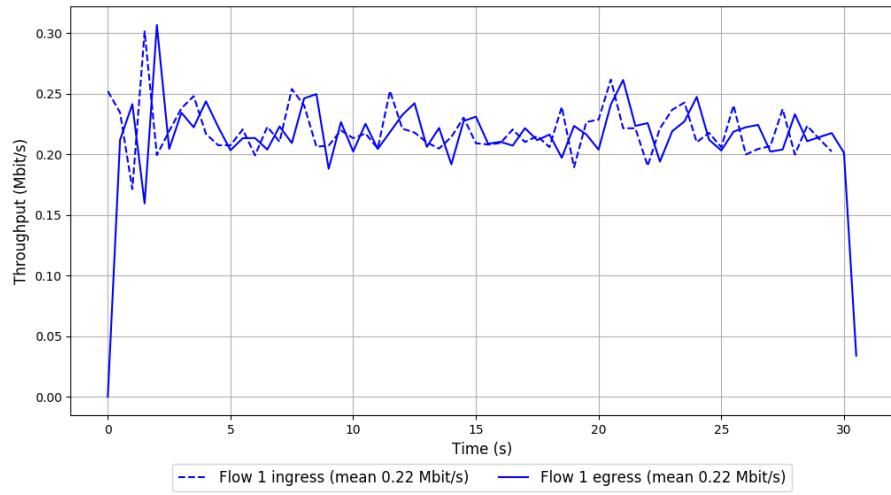


Run 2: Statistics of SCReAM

```
Start at: 2018-12-19 23:11:15
End at: 2018-12-19 23:11:45
Local clock offset: -8.013 ms
Remote clock offset: 10.68 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.144 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.144 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

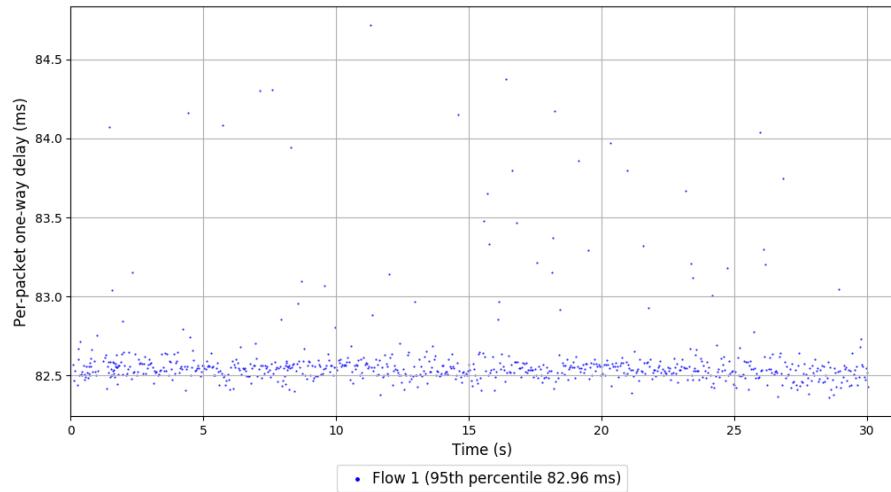
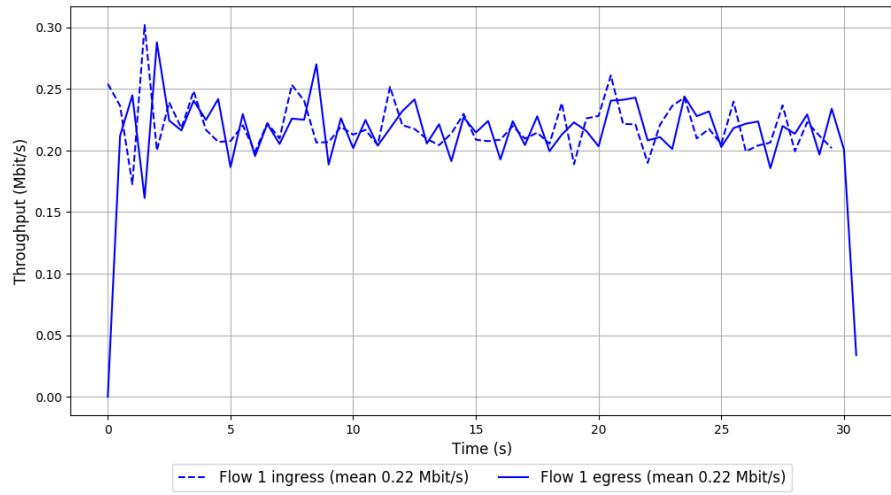


Run 3: Statistics of SCReAM

```
Start at: 2018-12-19 23:33:30
End at: 2018-12-19 23:34:00
Local clock offset: -7.823 ms
Remote clock offset: 12.689 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.964 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.964 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

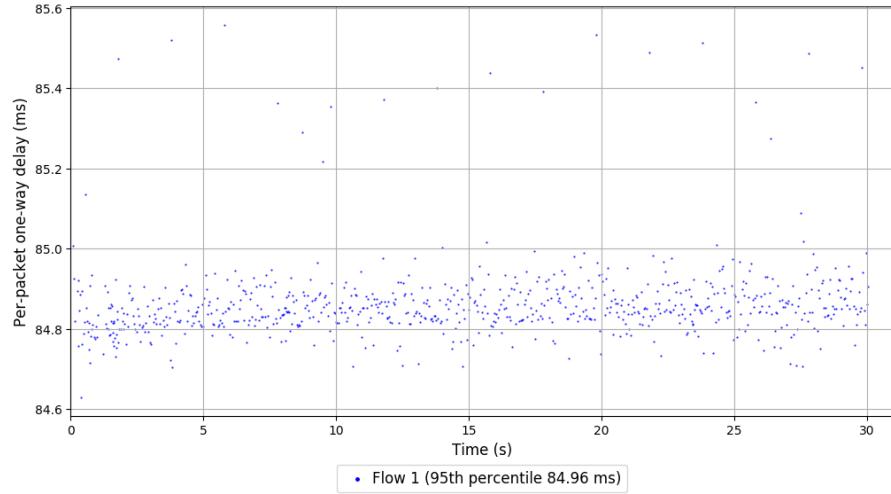
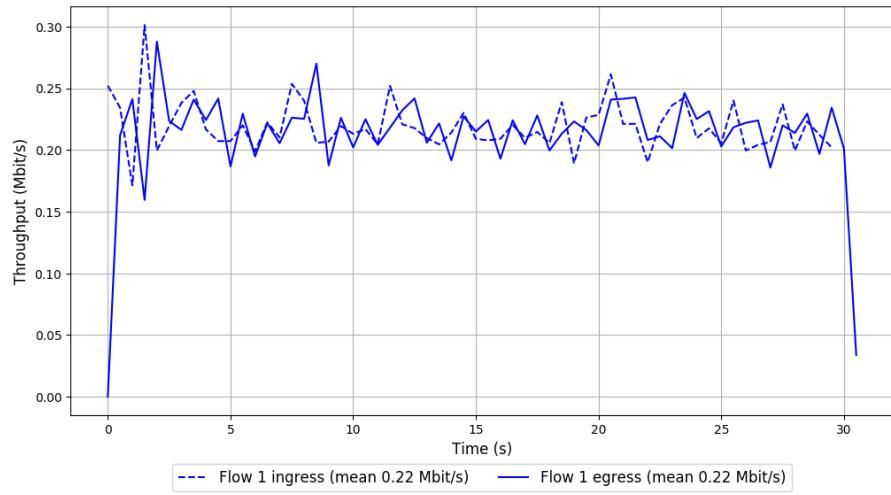


Run 4: Statistics of SCReAM

```
Start at: 2018-12-19 23:55:41
End at: 2018-12-19 23:56:11
Local clock offset: -0.512 ms
Remote clock offset: 16.486 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.963 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.963 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

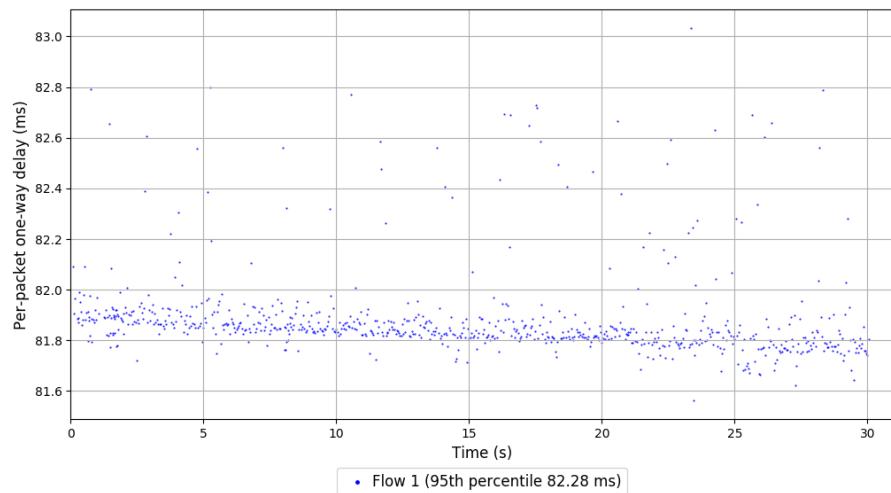
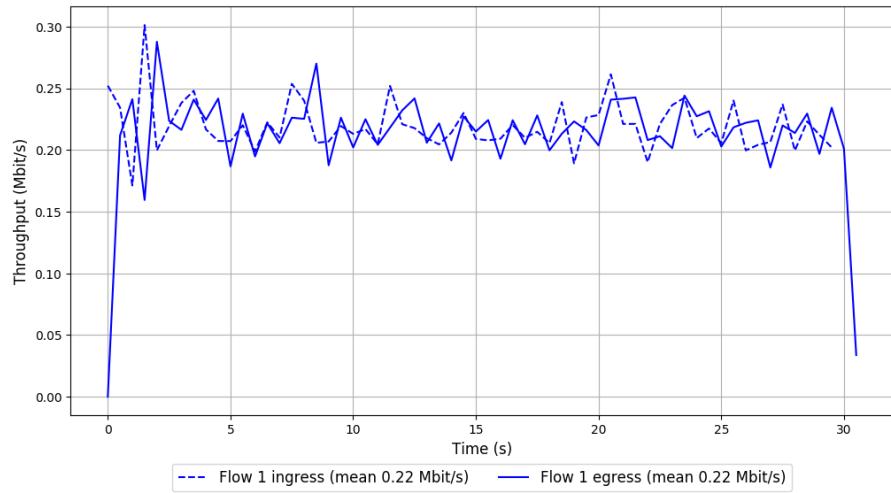


Run 5: Statistics of SCReAM

```
Start at: 2018-12-20 00:17:55
End at: 2018-12-20 00:18:25
Local clock offset: -5.03 ms
Remote clock offset: 14.613 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.280 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.280 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

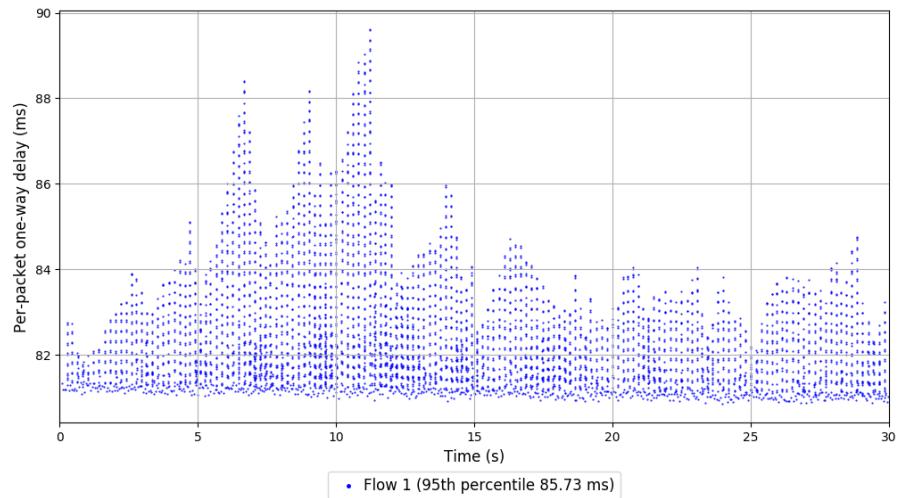
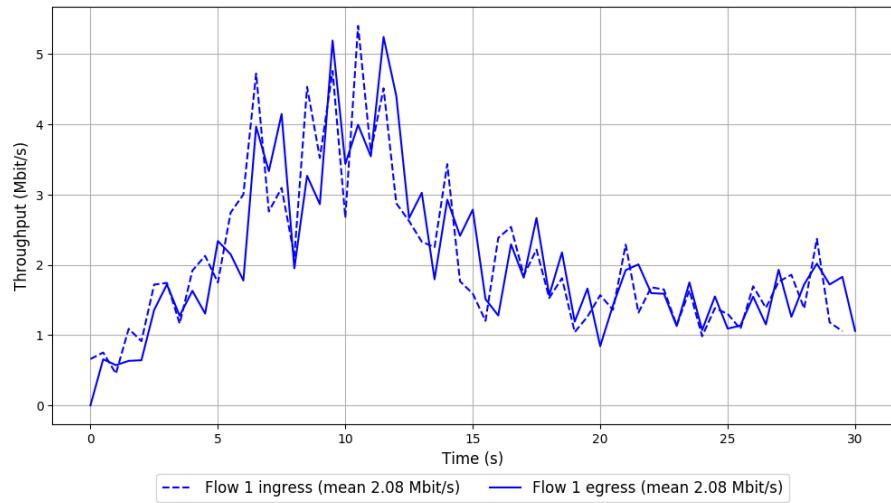


Run 1: Statistics of Sprout

```
Start at: 2018-12-19 22:39:37
End at: 2018-12-19 22:40:07
Local clock offset: -3.422 ms
Remote clock offset: 9.349 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 85.733 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 85.733 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

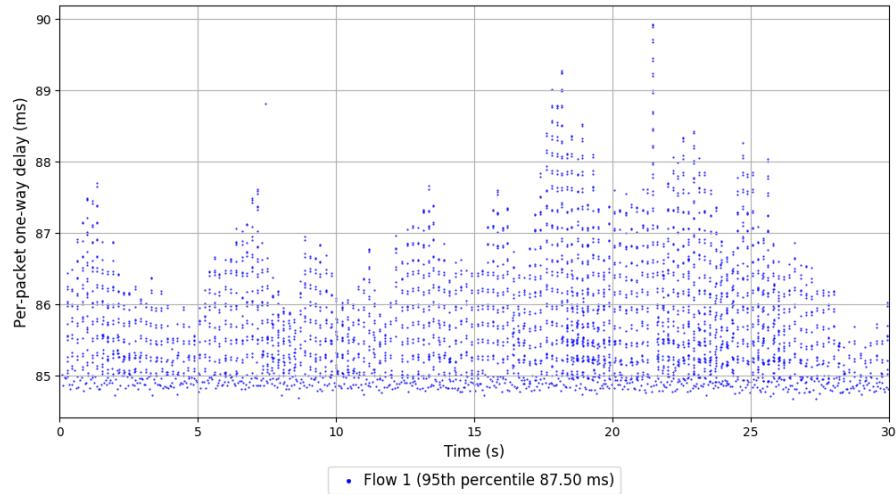
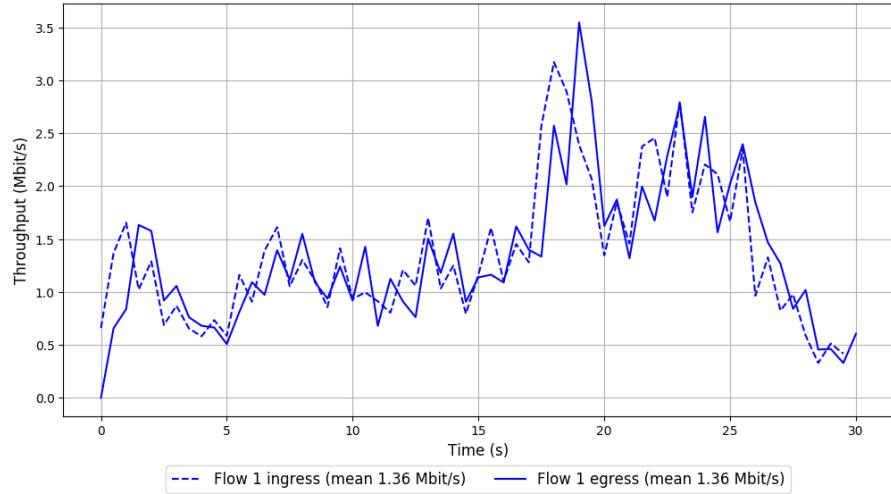


Run 2: Statistics of Sprout

```
Start at: 2018-12-19 23:01:52
End at: 2018-12-19 23:02:22
Local clock offset: -7.243 ms
Remote clock offset: 14.501 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 87.499 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 87.499 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

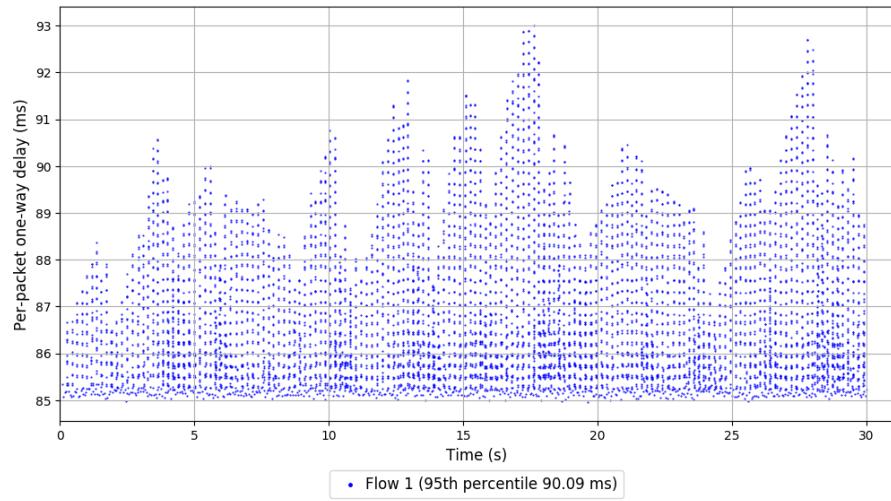
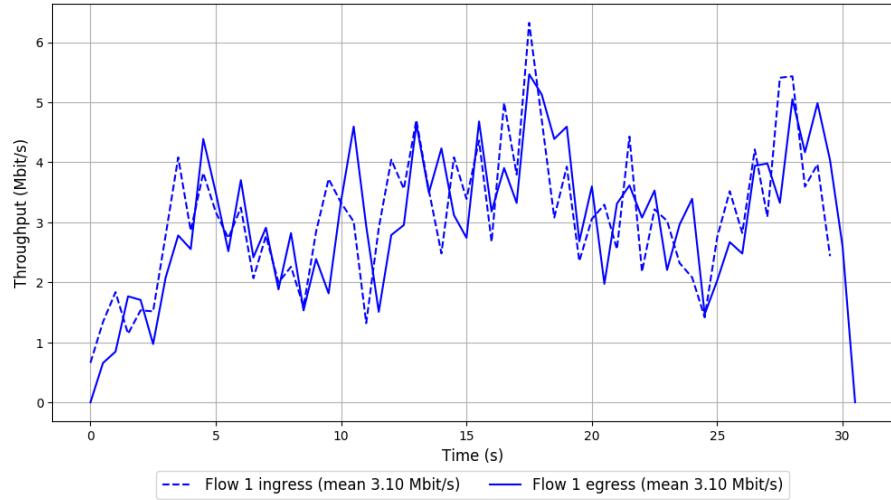


Run 3: Statistics of Sprout

```
Start at: 2018-12-19 23:24:08
End at: 2018-12-19 23:24:38
Local clock offset: -8.192 ms
Remote clock offset: 16.471 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 90.090 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 90.090 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

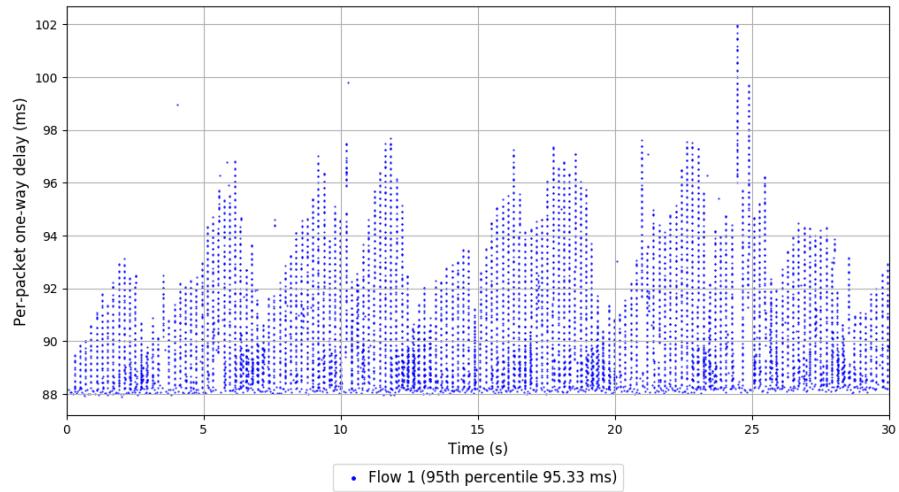
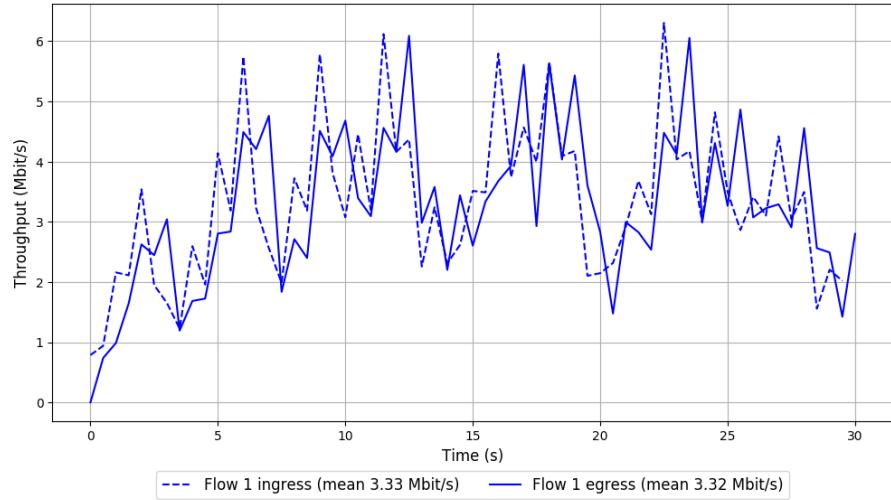


Run 4: Statistics of Sprout

```
Start at: 2018-12-19 23:46:21
End at: 2018-12-19 23:46:51
Local clock offset: -3.007 ms
Remote clock offset: 13.318 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.32 Mbit/s
95th percentile per-packet one-way delay: 95.334 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 3.32 Mbit/s
95th percentile per-packet one-way delay: 95.334 ms
Loss rate: 0.28%
```

Run 4: Report of Sprout — Data Link

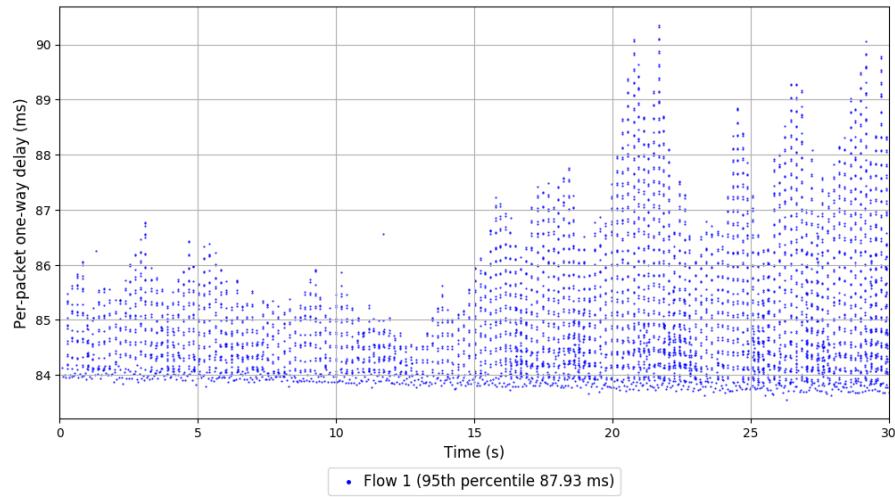
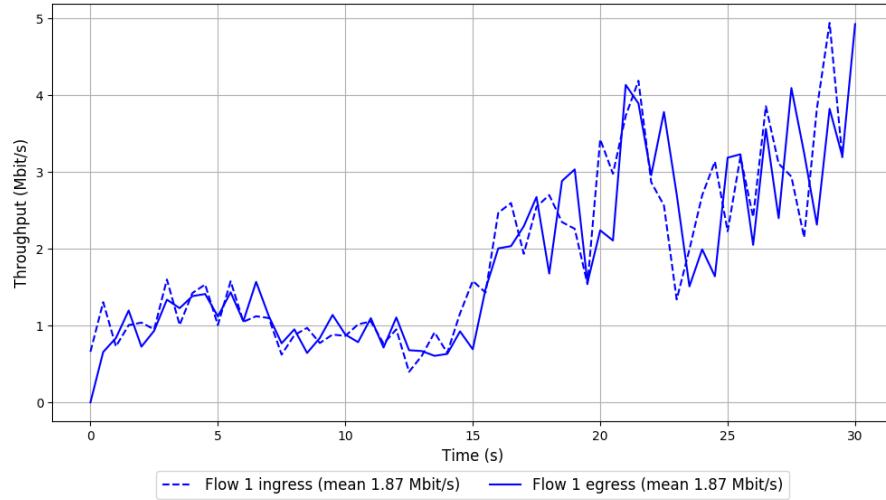


Run 5: Statistics of Sprout

```
Start at: 2018-12-20 00:08:34
End at: 2018-12-20 00:09:04
Local clock offset: -1.639 ms
Remote clock offset: 18.102 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 87.926 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 87.926 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

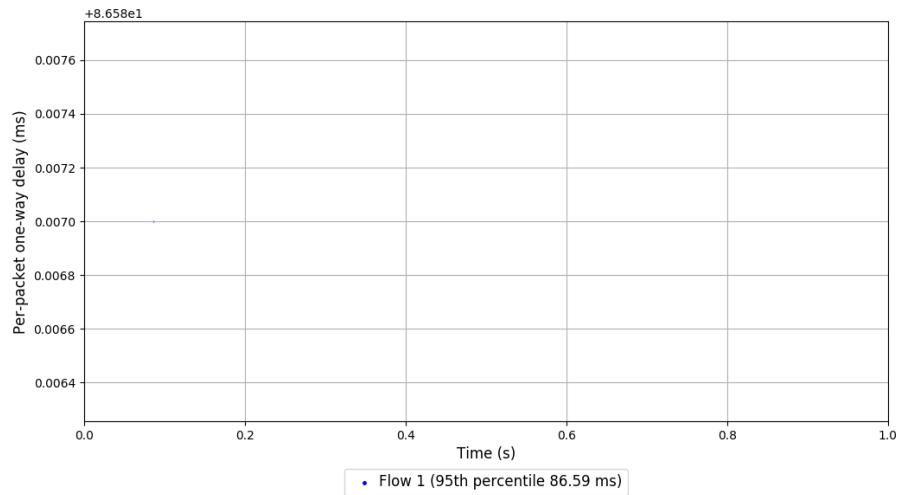
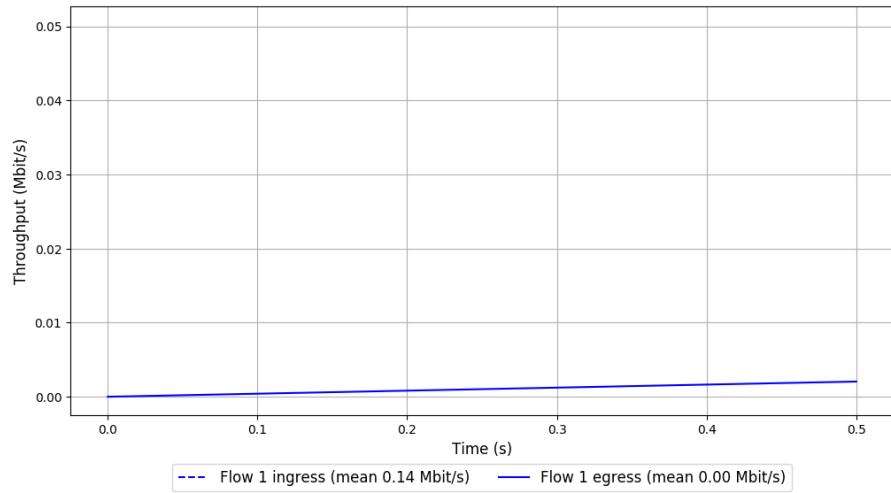
Start at: 2018-12-19 22:53:40

End at: 2018-12-19 22:54:10

Local clock offset: -7.076 ms

Remote clock offset: 15.045 ms

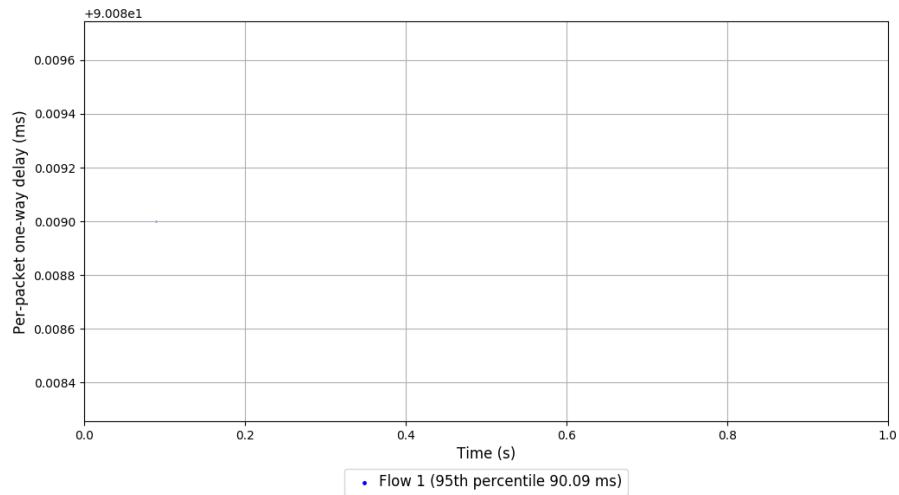
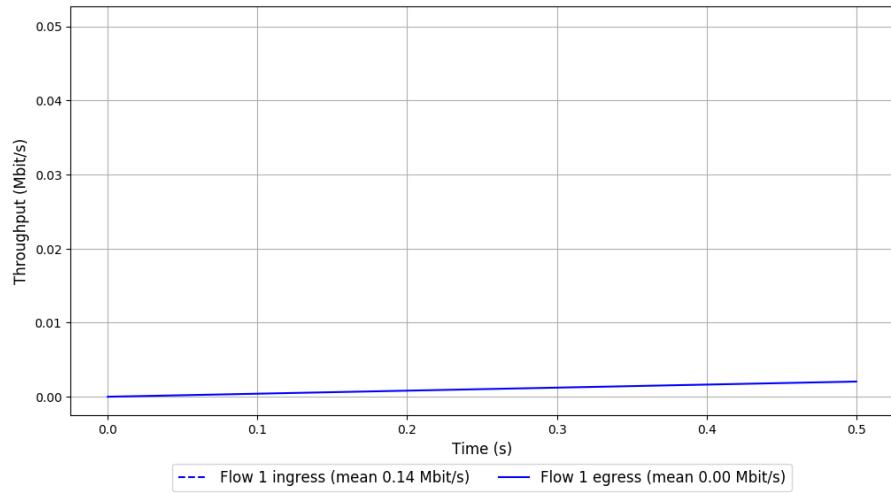
Run 1: Report of TaoVA-100x — Data Link



Run 2: Statistics of TaoVA-100x

Start at: 2018-12-19 23:15:56
End at: 2018-12-19 23:16:26
Local clock offset: -7.283 ms
Remote clock offset: 14.929 ms

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



Run 3: Statistics of TaoVA-100x

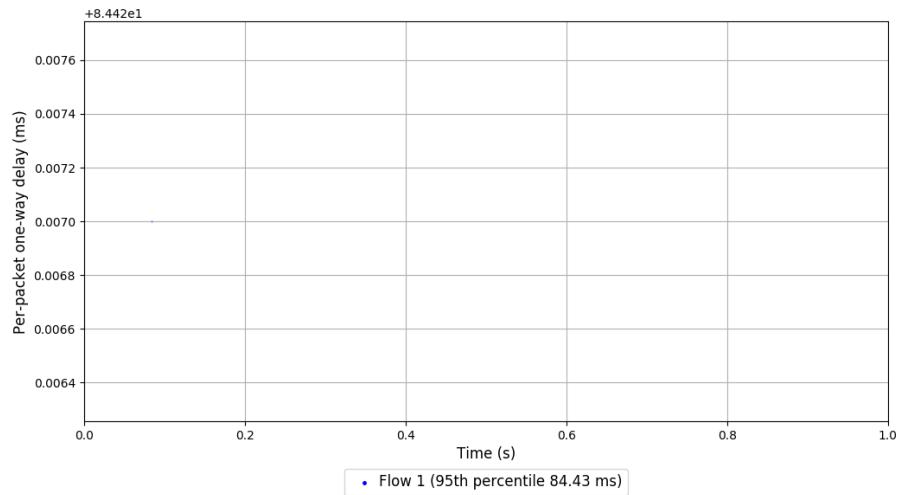
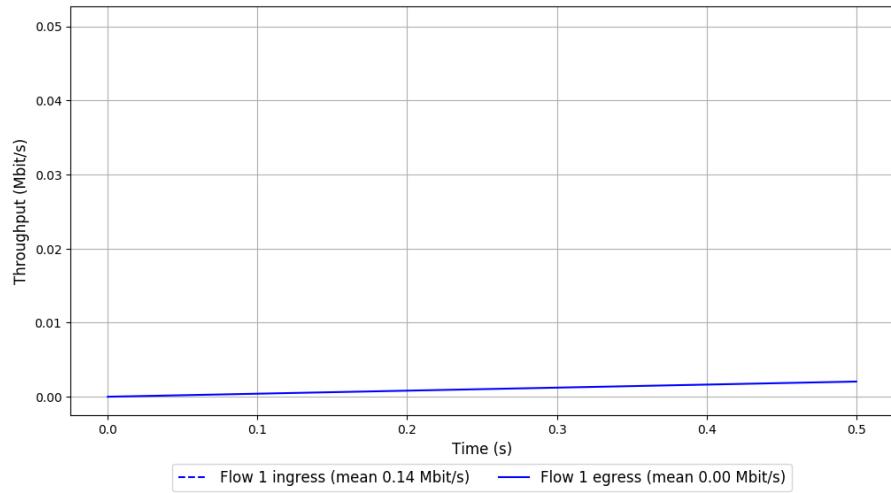
Start at: 2018-12-19 23:38:12

End at: 2018-12-19 23:38:42

Local clock offset: -5.798 ms

Remote clock offset: 15.721 ms

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



Run 4: Statistics of TaoVA-100x

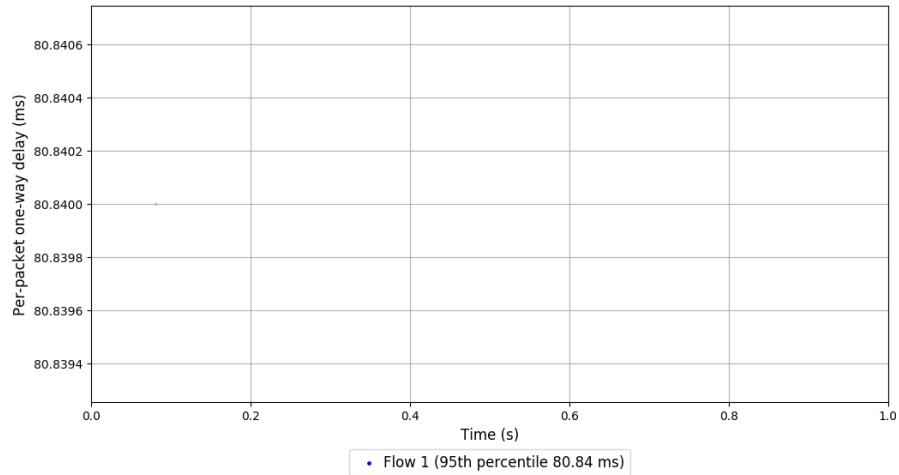
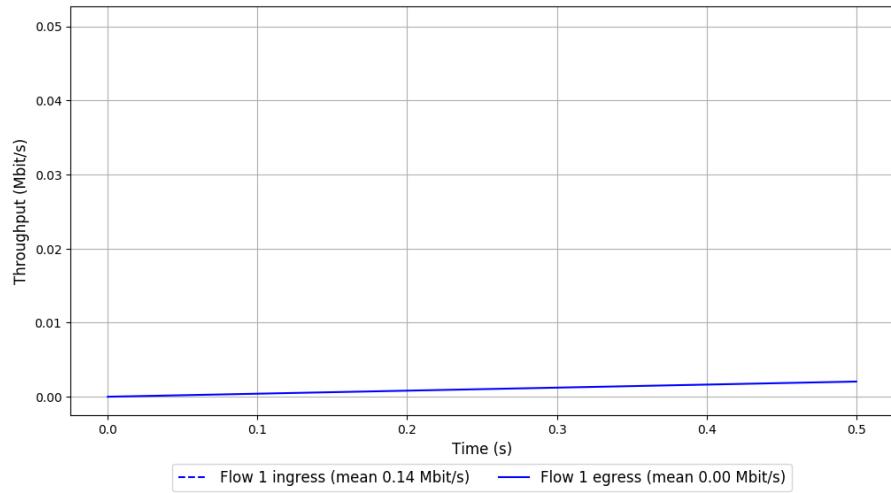
Start at: 2018-12-20 00:00:23

End at: 2018-12-20 00:00:53

Local clock offset: 0.05 ms

Remote clock offset: 12.728 ms

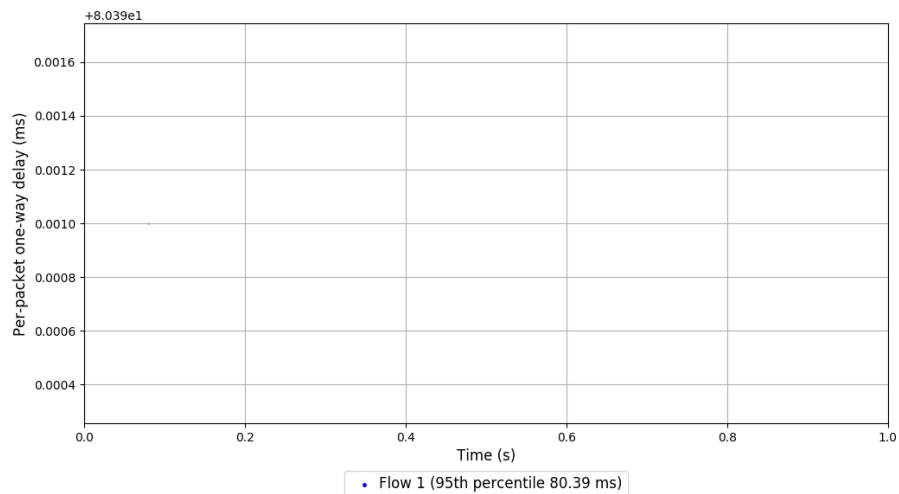
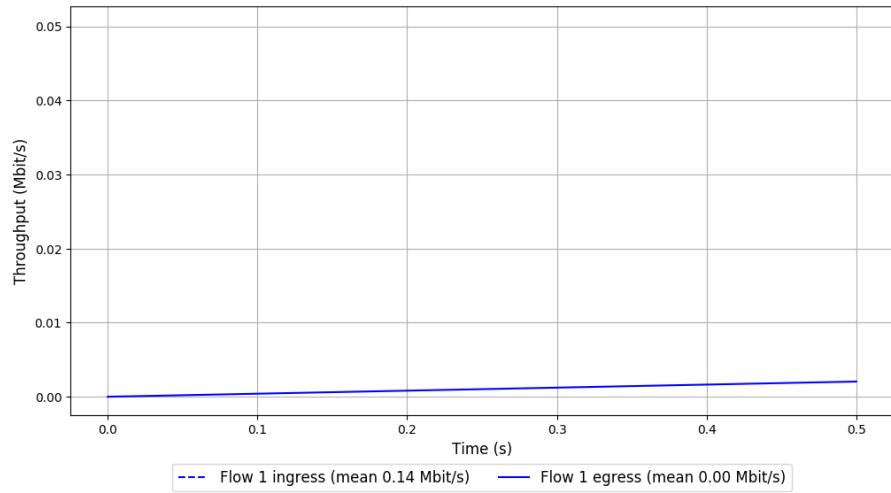
Run 4: Report of TaoVA-100x — Data Link



Run 5: Statistics of TaoVA-100x

Start at: 2018-12-20 00:22:36
End at: 2018-12-20 00:23:06
Local clock offset: -5.584 ms
Remote clock offset: 13.368 ms

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

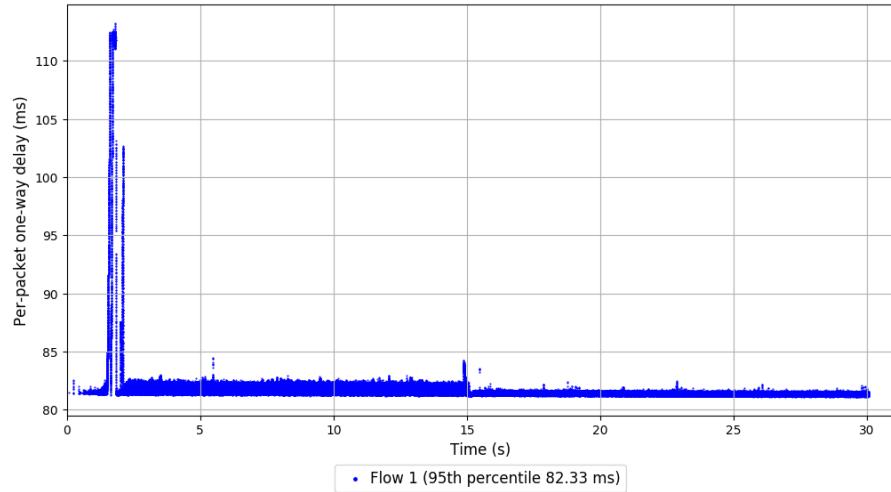
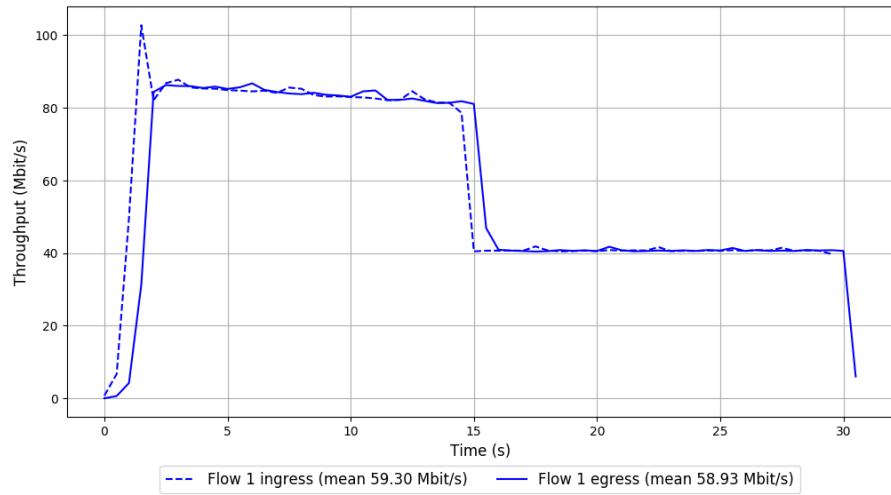


Run 1: Statistics of TCP Vegas

```
Start at: 2018-12-19 22:41:52
End at: 2018-12-19 22:42:22
Local clock offset: -4.375 ms
Remote clock offset: 10.565 ms

# Below is generated by plot.py at 2018-12-20 00:35:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.93 Mbit/s
95th percentile per-packet one-way delay: 82.335 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 58.93 Mbit/s
95th percentile per-packet one-way delay: 82.335 ms
Loss rate: 0.63%
```

Run 1: Report of TCP Vegas — Data Link

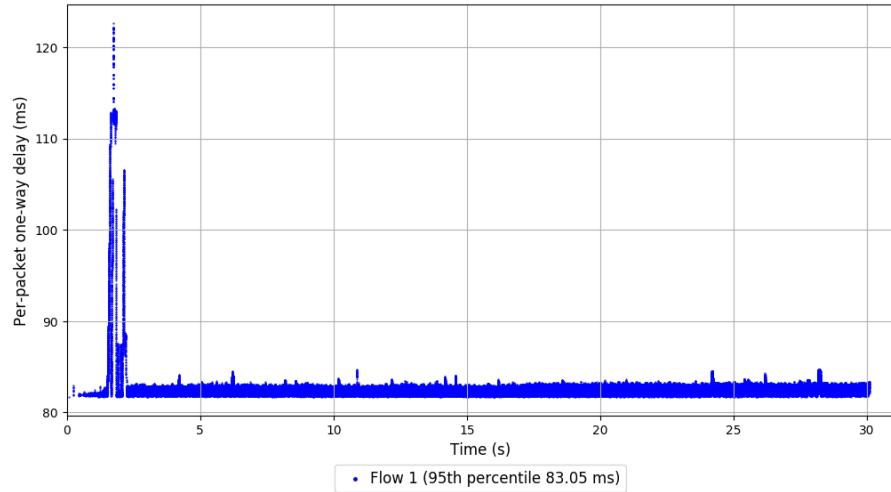
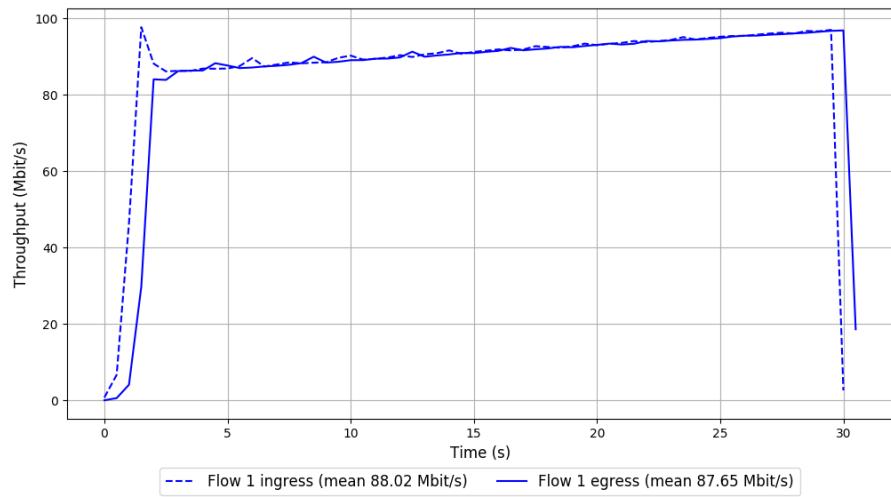


Run 2: Statistics of TCP Vegas

```
Start at: 2018-12-19 23:04:07
End at: 2018-12-19 23:04:37
Local clock offset: -7.42 ms
Remote clock offset: 11.44 ms

# Below is generated by plot.py at 2018-12-20 00:36:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.65 Mbit/s
95th percentile per-packet one-way delay: 83.054 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 87.65 Mbit/s
95th percentile per-packet one-way delay: 83.054 ms
Loss rate: 0.41%
```

Run 2: Report of TCP Vegas — Data Link

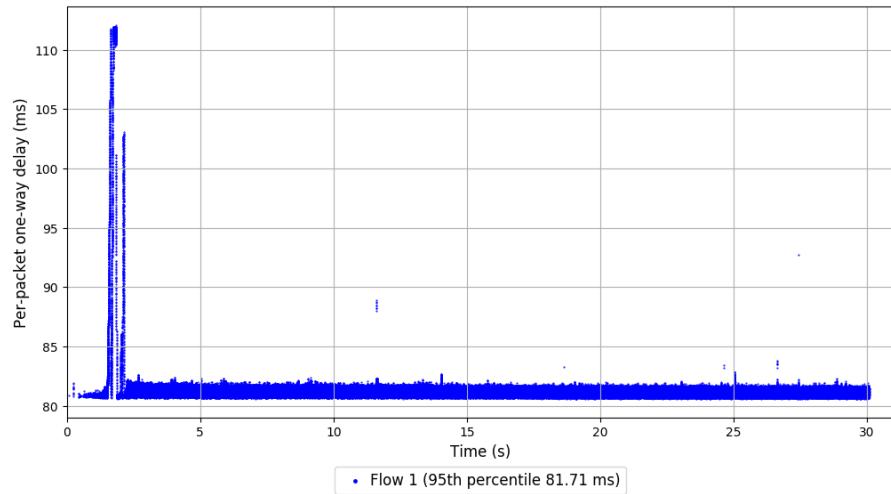
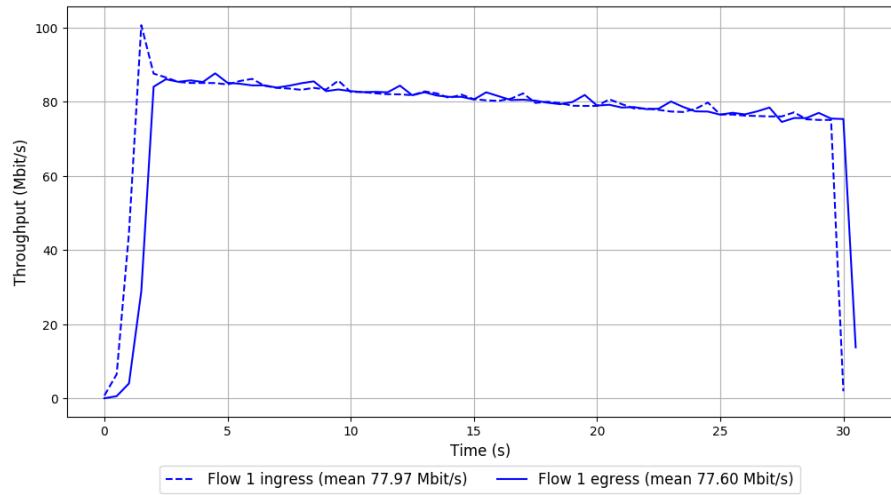


Run 3: Statistics of TCP Vegas

```
Start at: 2018-12-19 23:26:23
End at: 2018-12-19 23:26:53
Local clock offset: -7.536 ms
Remote clock offset: 11.291 ms

# Below is generated by plot.py at 2018-12-20 00:36:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.60 Mbit/s
95th percentile per-packet one-way delay: 81.714 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 77.60 Mbit/s
95th percentile per-packet one-way delay: 81.714 ms
Loss rate: 0.47%
```

Run 3: Report of TCP Vegas — Data Link

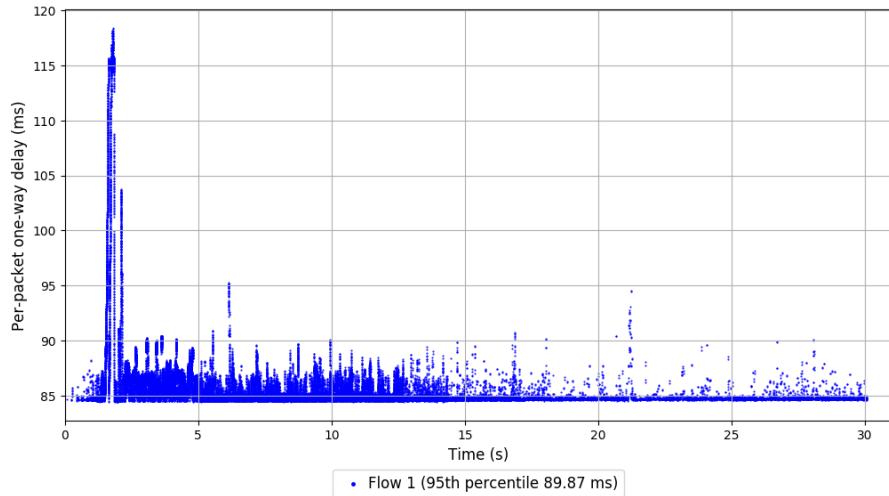
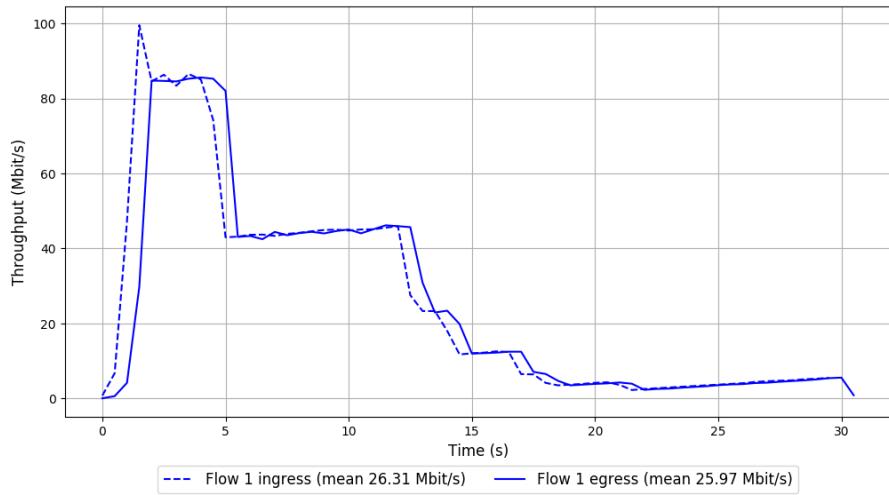


Run 4: Statistics of TCP Vegas

```
Start at: 2018-12-19 23:48:36
End at: 2018-12-19 23:49:06
Local clock offset: -1.719 ms
Remote clock offset: 17.584 ms

# Below is generated by plot.py at 2018-12-20 00:36:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 25.97 Mbit/s
95th percentile per-packet one-way delay: 89.866 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 25.97 Mbit/s
95th percentile per-packet one-way delay: 89.866 ms
Loss rate: 1.30%
```

Run 4: Report of TCP Vegas — Data Link

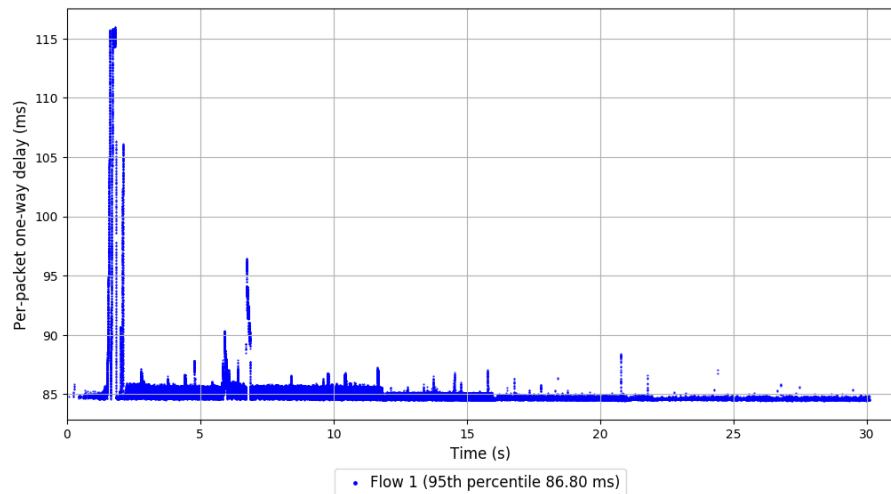
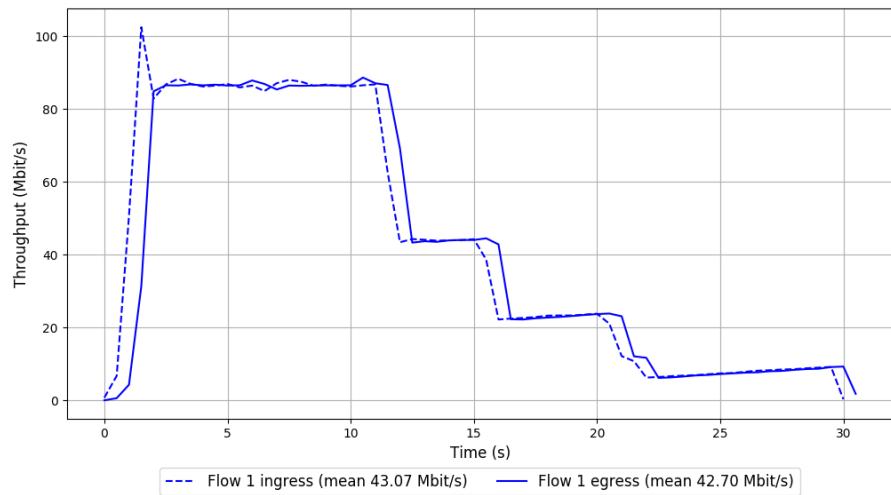


Run 5: Statistics of TCP Vegas

```
Start at: 2018-12-20 00:10:49
End at: 2018-12-20 00:11:19
Local clock offset: -3.539 ms
Remote clock offset: 17.928 ms

# Below is generated by plot.py at 2018-12-20 00:36:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 42.70 Mbit/s
95th percentile per-packet one-way delay: 86.795 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 42.70 Mbit/s
95th percentile per-packet one-way delay: 86.795 ms
Loss rate: 0.86%
```

Run 5: Report of TCP Vegas — Data Link

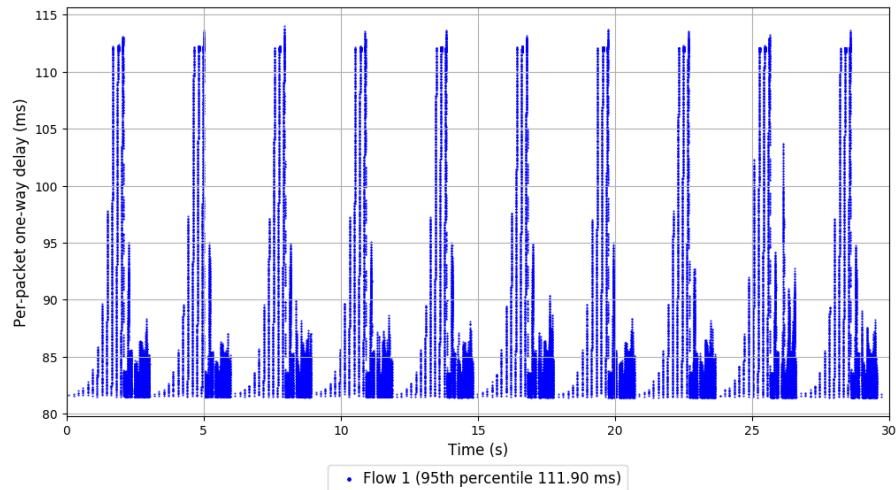
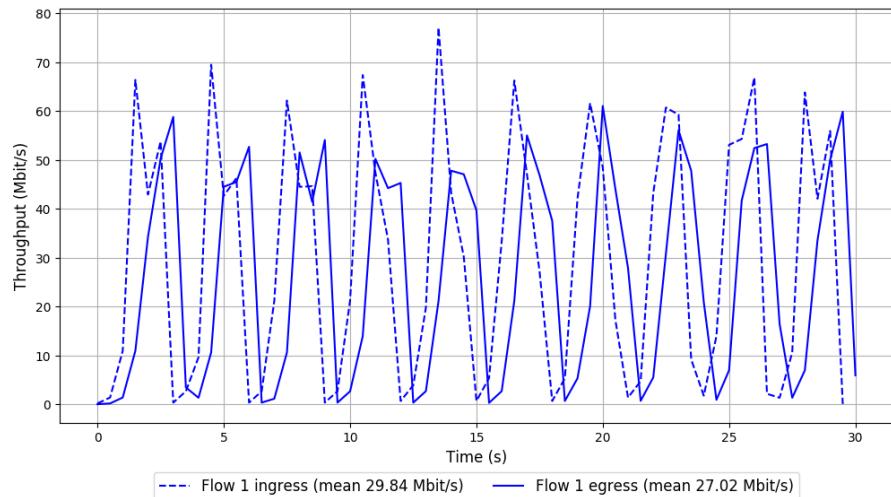


Run 1: Statistics of Verus

```
Start at: 2018-12-19 22:55:57
End at: 2018-12-19 22:56:27
Local clock offset: -7.343 ms
Remote clock offset: 11.131 ms

# Below is generated by plot.py at 2018-12-20 00:36:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 27.02 Mbit/s
95th percentile per-packet one-way delay: 111.896 ms
Loss rate: 9.46%
-- Flow 1:
Average throughput: 27.02 Mbit/s
95th percentile per-packet one-way delay: 111.896 ms
Loss rate: 9.46%
```

Run 1: Report of Verus — Data Link

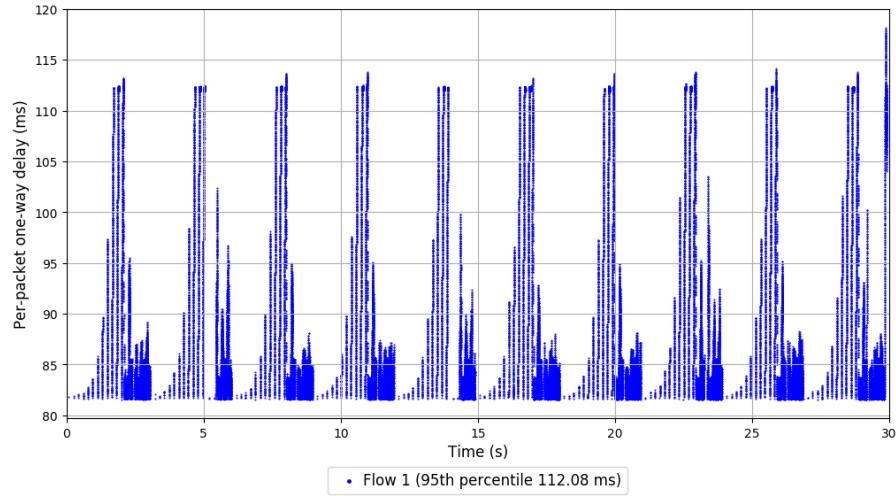
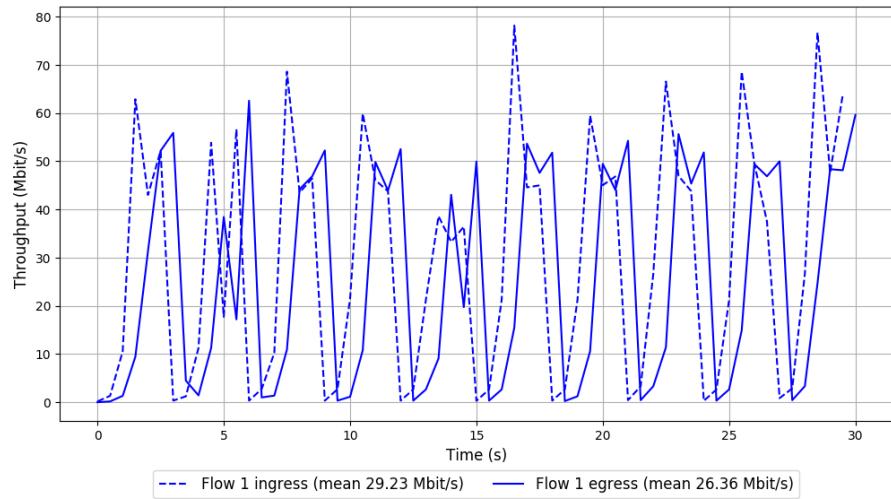


Run 2: Statistics of Verus

```
Start at: 2018-12-19 23:18:13
End at: 2018-12-19 23:18:43
Local clock offset: -7.31 ms
Remote clock offset: 11.948 ms

# Below is generated by plot.py at 2018-12-20 00:36:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.36 Mbit/s
95th percentile per-packet one-way delay: 112.084 ms
Loss rate: 9.73%
-- Flow 1:
Average throughput: 26.36 Mbit/s
95th percentile per-packet one-way delay: 112.084 ms
Loss rate: 9.73%
```

Run 2: Report of Verus — Data Link

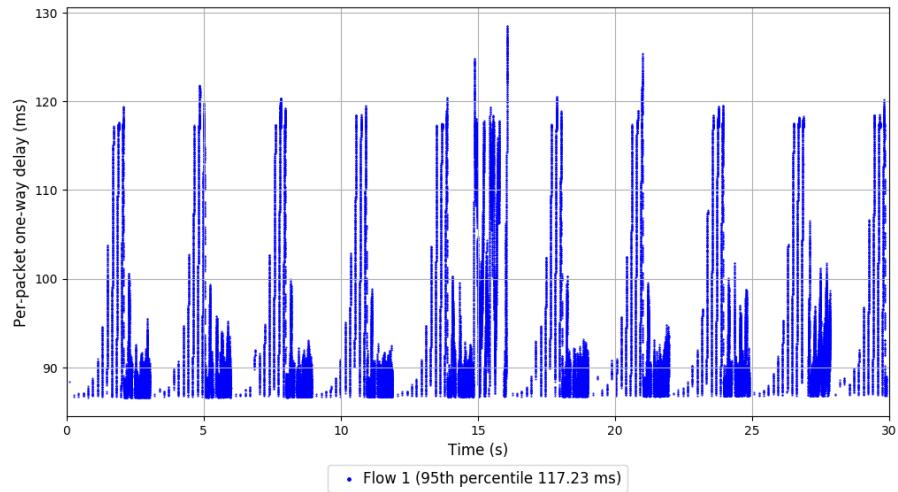
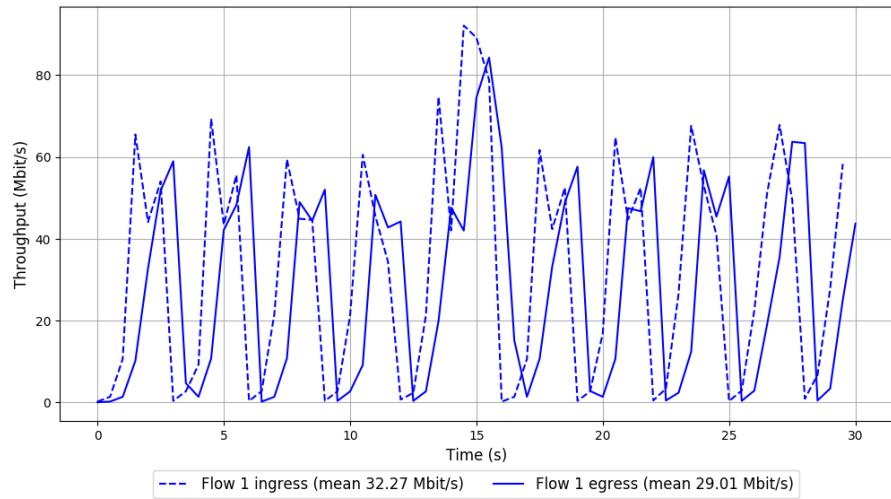


Run 3: Statistics of Verus

```
Start at: 2018-12-19 23:40:28
End at: 2018-12-19 23:40:58
Local clock offset: -5.226 ms
Remote clock offset: 18.296 ms

# Below is generated by plot.py at 2018-12-20 00:36:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 29.01 Mbit/s
95th percentile per-packet one-way delay: 117.228 ms
Loss rate: 10.09%
-- Flow 1:
Average throughput: 29.01 Mbit/s
95th percentile per-packet one-way delay: 117.228 ms
Loss rate: 10.09%
```

Run 3: Report of Verus — Data Link

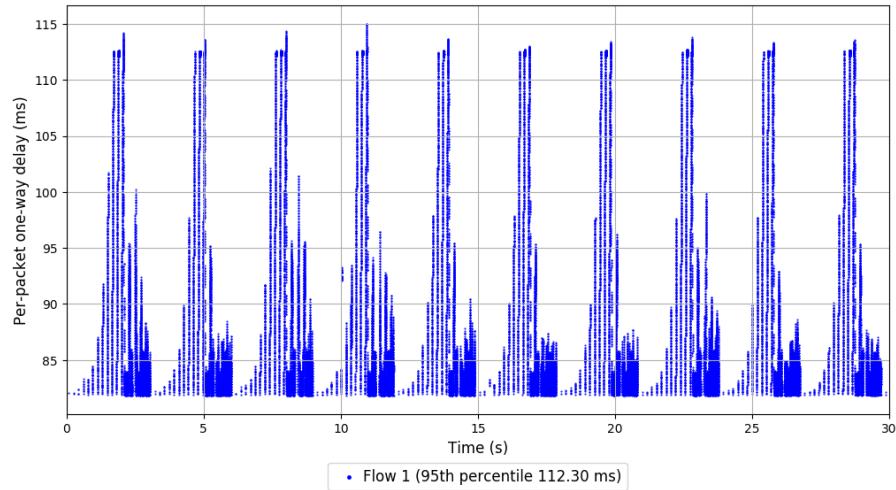
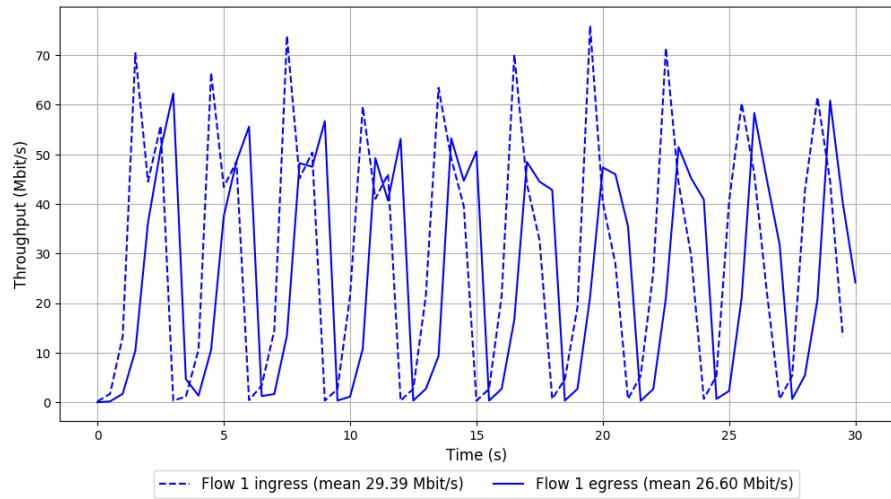


Run 4: Statistics of Verus

```
Start at: 2018-12-20 00:02:39
End at: 2018-12-20 00:03:09
Local clock offset: 0.273 ms
Remote clock offset: 13.923 ms

# Below is generated by plot.py at 2018-12-20 00:36:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.60 Mbit/s
95th percentile per-packet one-way delay: 112.301 ms
Loss rate: 9.47%
-- Flow 1:
Average throughput: 26.60 Mbit/s
95th percentile per-packet one-way delay: 112.301 ms
Loss rate: 9.47%
```

Run 4: Report of Verus — Data Link

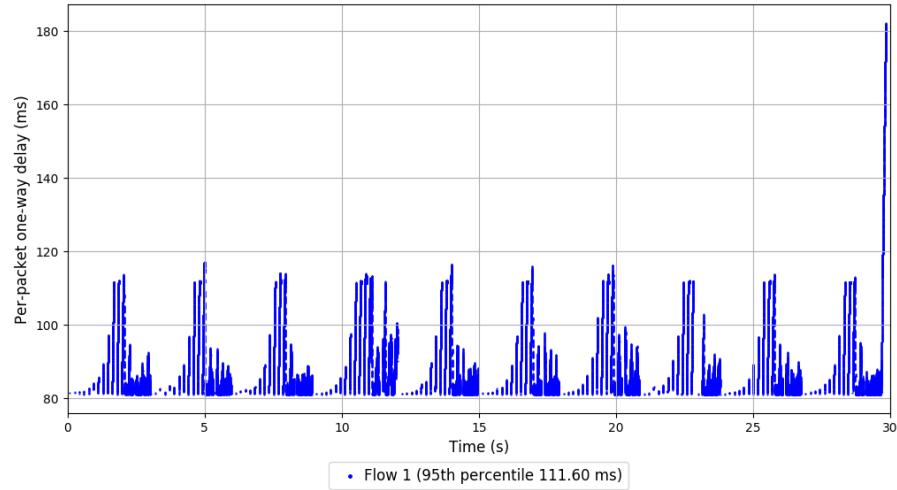
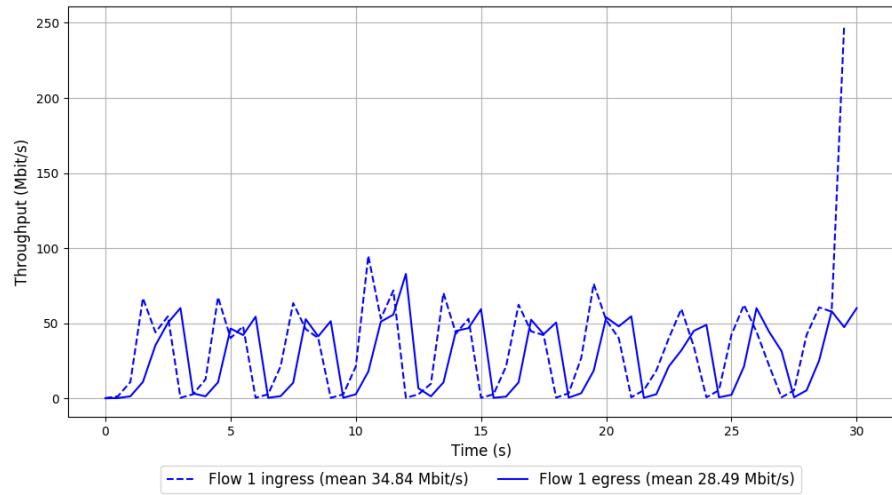


Run 5: Statistics of Verus

```
Start at: 2018-12-20 00:24:53
End at: 2018-12-20 00:25:23
Local clock offset: -6.964 ms
Remote clock offset: 14.87 ms

# Below is generated by plot.py at 2018-12-20 00:36:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.49 Mbit/s
95th percentile per-packet one-way delay: 111.597 ms
Loss rate: 17.95%
-- Flow 1:
Average throughput: 28.49 Mbit/s
95th percentile per-packet one-way delay: 111.597 ms
Loss rate: 17.95%
```

Run 5: Report of Verus — Data Link

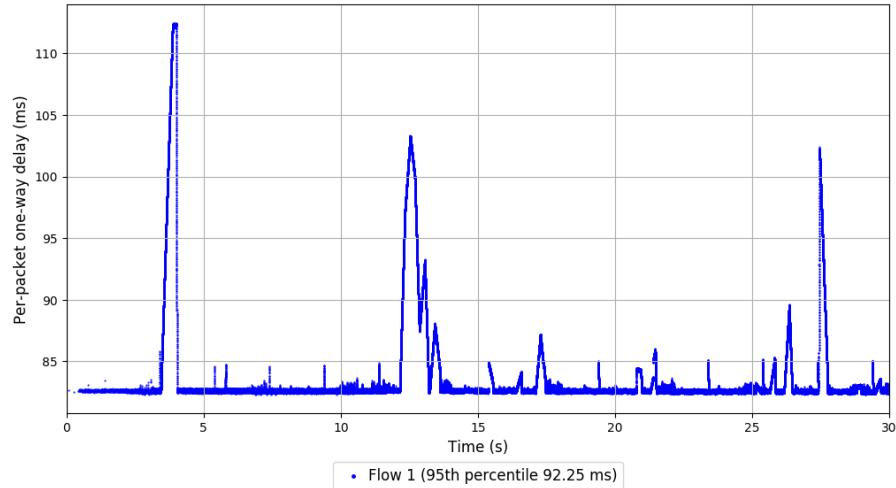
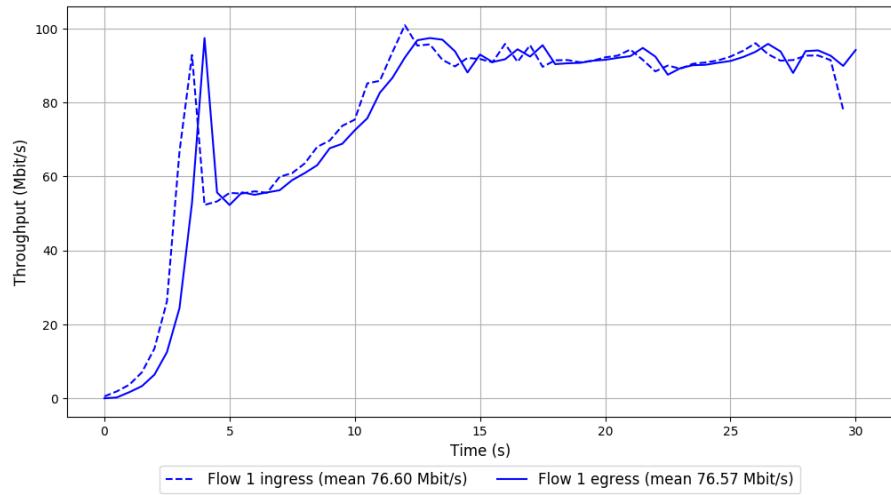


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-12-19 22:44:14
End at: 2018-12-19 22:44:44
Local clock offset: -5.224 ms
Remote clock offset: 10.742 ms

# Below is generated by plot.py at 2018-12-20 00:36:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.57 Mbit/s
95th percentile per-packet one-way delay: 92.252 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 76.57 Mbit/s
95th percentile per-packet one-way delay: 92.252 ms
Loss rate: 0.04%
```

Run 1: Report of PCC-Vivace — Data Link

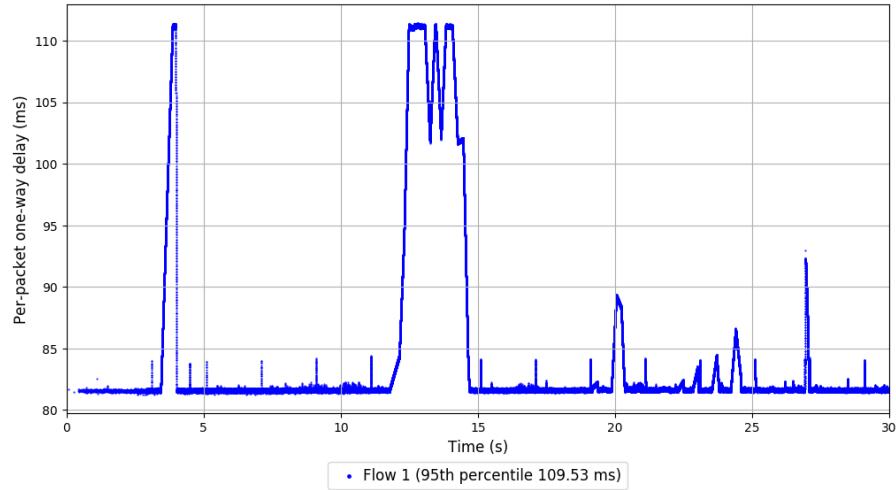
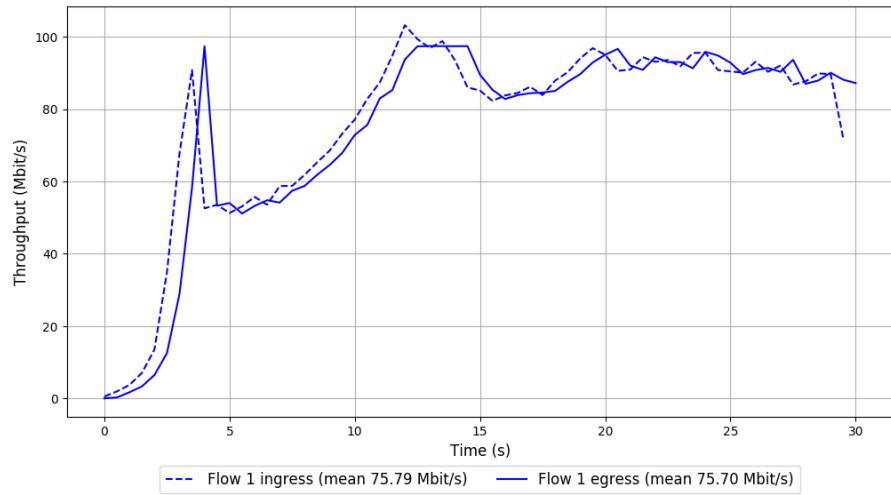


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-12-19 23:06:30
End at: 2018-12-19 23:07:00
Local clock offset: -8.113 ms
Remote clock offset: 10.54 ms

# Below is generated by plot.py at 2018-12-20 00:36:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.70 Mbit/s
95th percentile per-packet one-way delay: 109.525 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 75.70 Mbit/s
95th percentile per-packet one-way delay: 109.525 ms
Loss rate: 0.12%
```

Run 2: Report of PCC-Vivace — Data Link

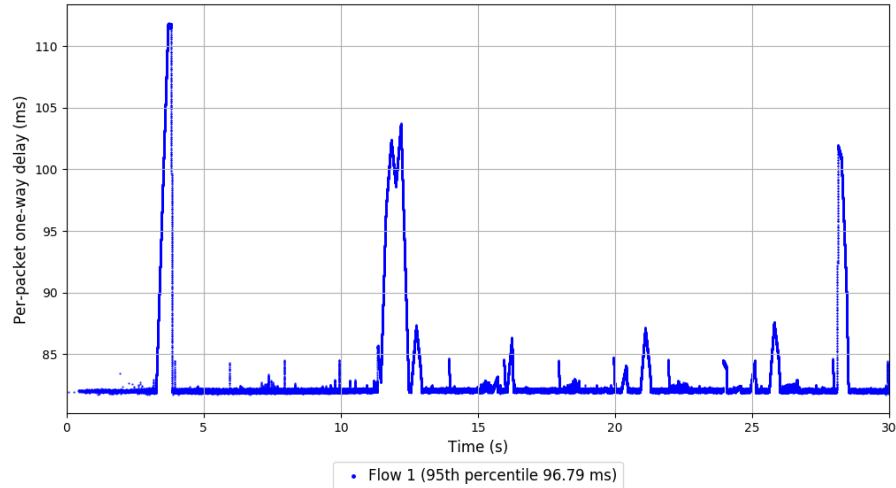
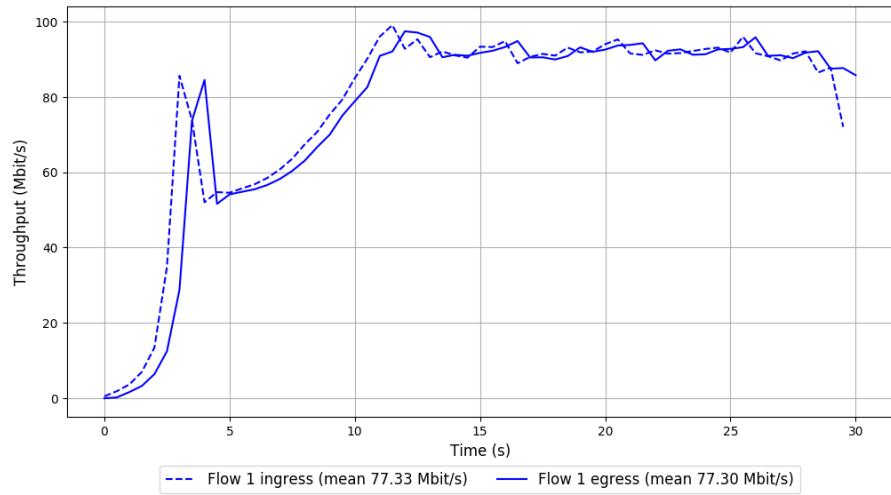


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-12-19 23:28:45
End at: 2018-12-19 23:29:15
Local clock offset: -7.606 ms
Remote clock offset: 12.629 ms

# Below is generated by plot.py at 2018-12-20 00:36:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.30 Mbit/s
95th percentile per-packet one-way delay: 96.792 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 77.30 Mbit/s
95th percentile per-packet one-way delay: 96.792 ms
Loss rate: 0.04%
```

Run 3: Report of PCC-Vivace — Data Link

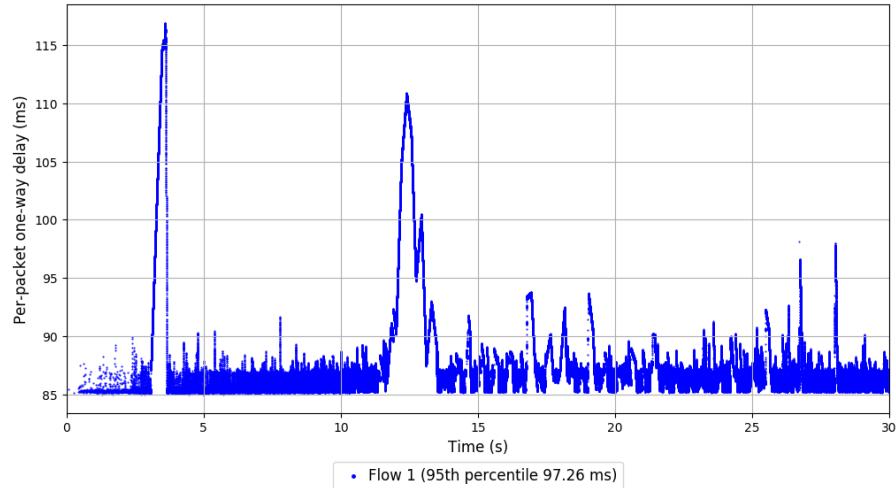
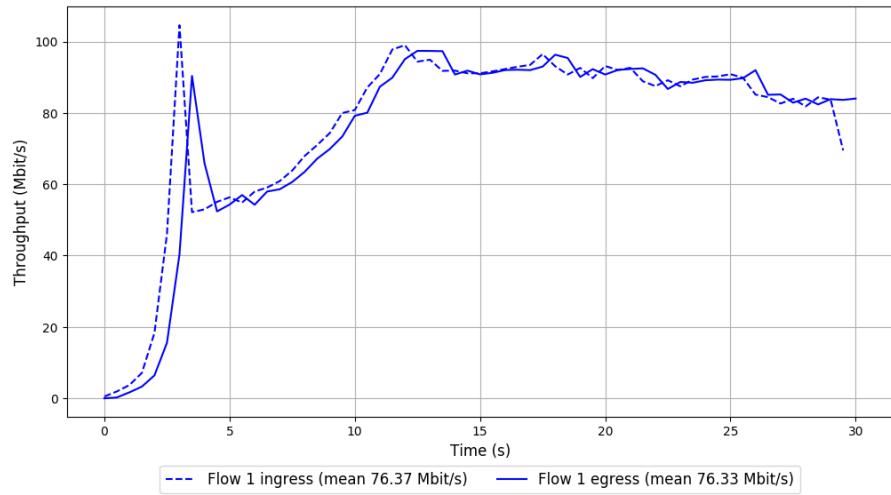


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-12-19 23:50:57
End at: 2018-12-19 23:51:27
Local clock offset: -1.973 ms
Remote clock offset: 17.469 ms

# Below is generated by plot.py at 2018-12-20 00:36:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.33 Mbit/s
95th percentile per-packet one-way delay: 97.258 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 76.33 Mbit/s
95th percentile per-packet one-way delay: 97.258 ms
Loss rate: 0.05%
```

Run 4: Report of PCC-Vivace — Data Link

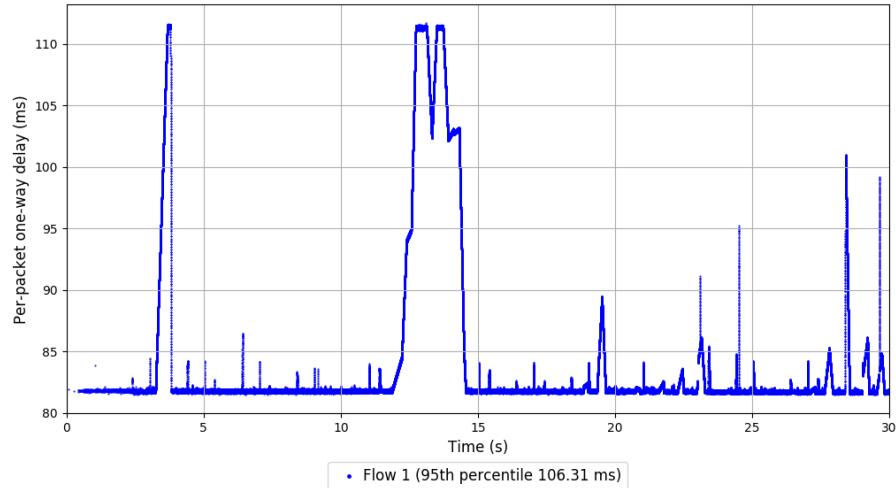
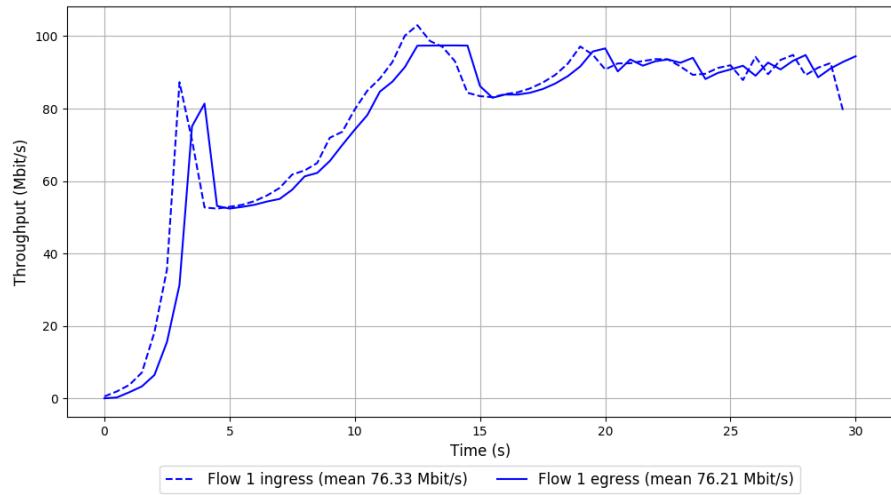


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-12-20 00:13:10
End at: 2018-12-20 00:13:40
Local clock offset: -4.481 ms
Remote clock offset: 14.438 ms

# Below is generated by plot.py at 2018-12-20 00:36:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.21 Mbit/s
95th percentile per-packet one-way delay: 106.314 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 76.21 Mbit/s
95th percentile per-packet one-way delay: 106.314 ms
Loss rate: 0.16%
```

Run 5: Report of PCC-Vivace — Data Link

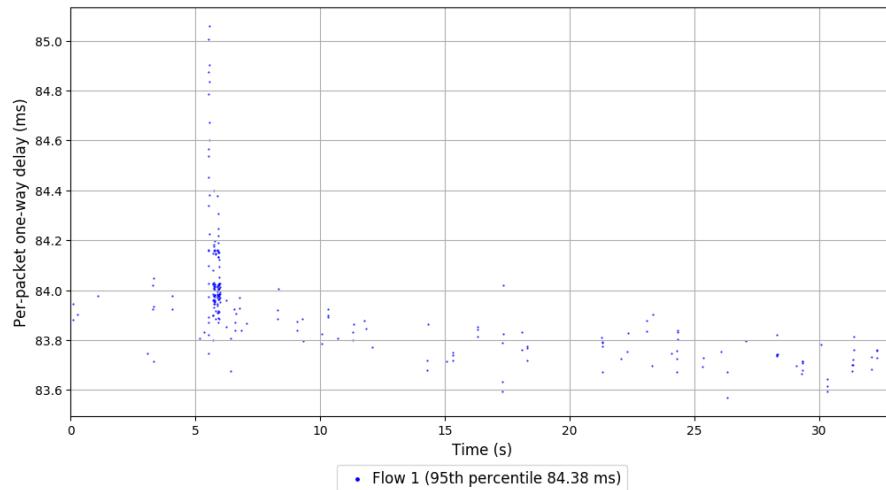
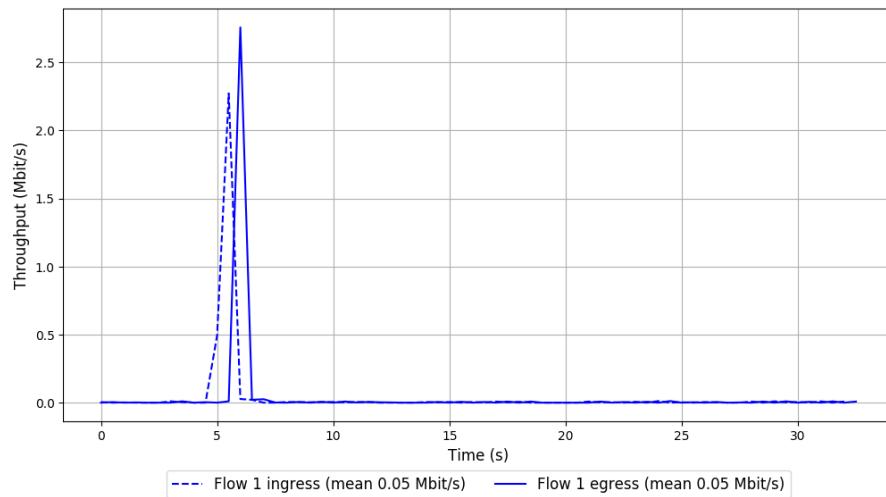


```
Run 1: Statistics of WebRTC media

Start at: 2018-12-19 22:40:45
End at: 2018-12-19 22:41:15
Local clock offset: -3.168 ms
Remote clock offset: 14.51 ms

# Below is generated by plot.py at 2018-12-20 00:36:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 84.383 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 84.383 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

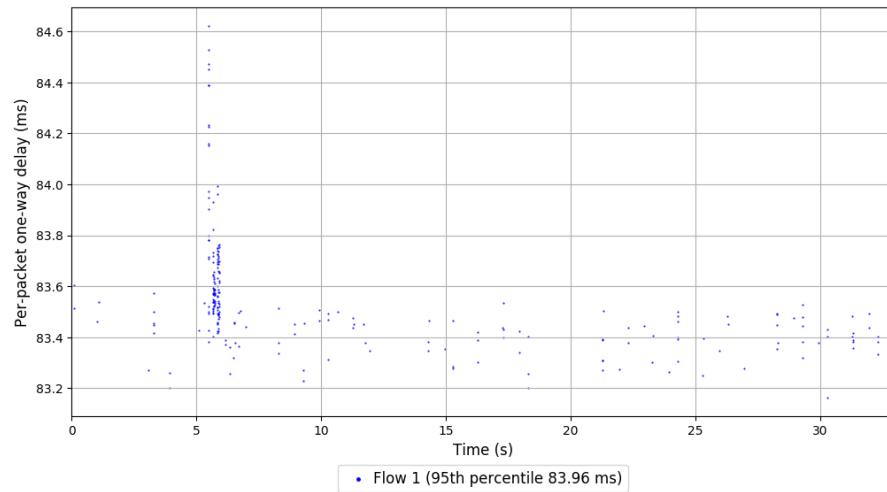
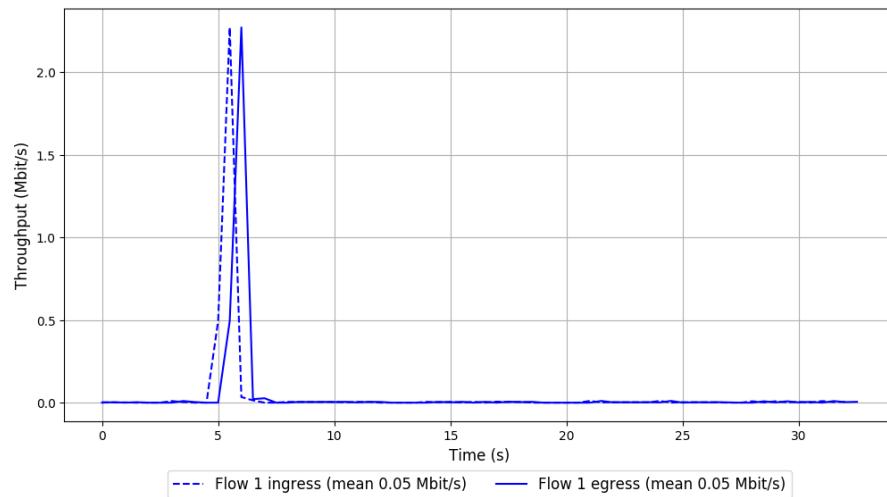


Run 2: Statistics of WebRTC media

```
Start at: 2018-12-19 23:03:00
End at: 2018-12-19 23:03:30
Local clock offset: -7.326 ms
Remote clock offset: 14.487 ms

# Below is generated by plot.py at 2018-12-20 00:36:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 83.962 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 83.962 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

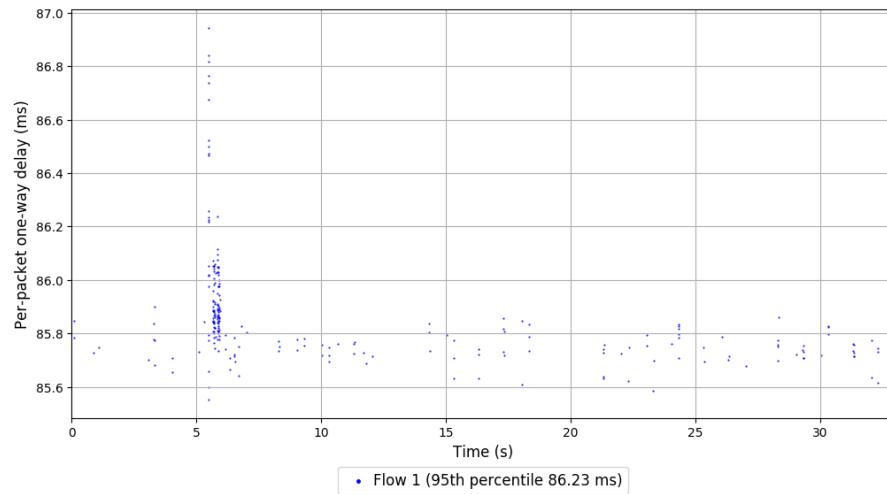
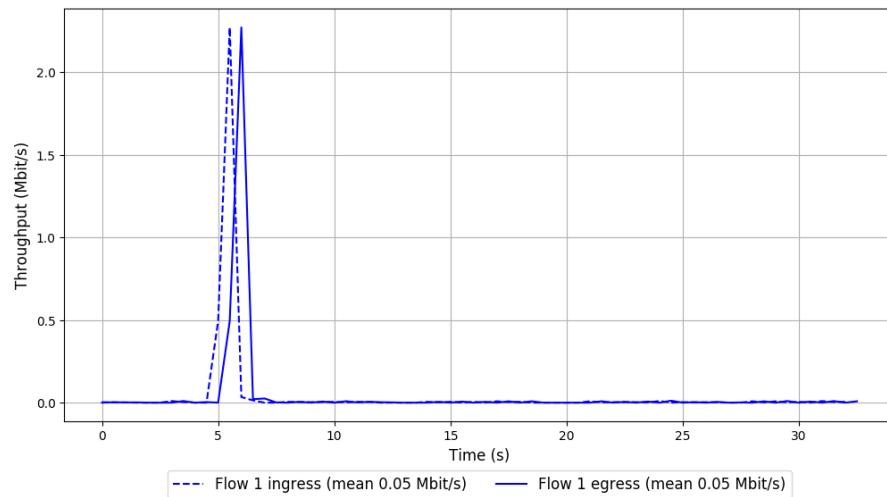


Run 3: Statistics of WebRTC media

```
Start at: 2018-12-19 23:25:15
End at: 2018-12-19 23:25:45
Local clock offset: -8.288 ms
Remote clock offset: 17.22 ms

# Below is generated by plot.py at 2018-12-20 00:36:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.234 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.234 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

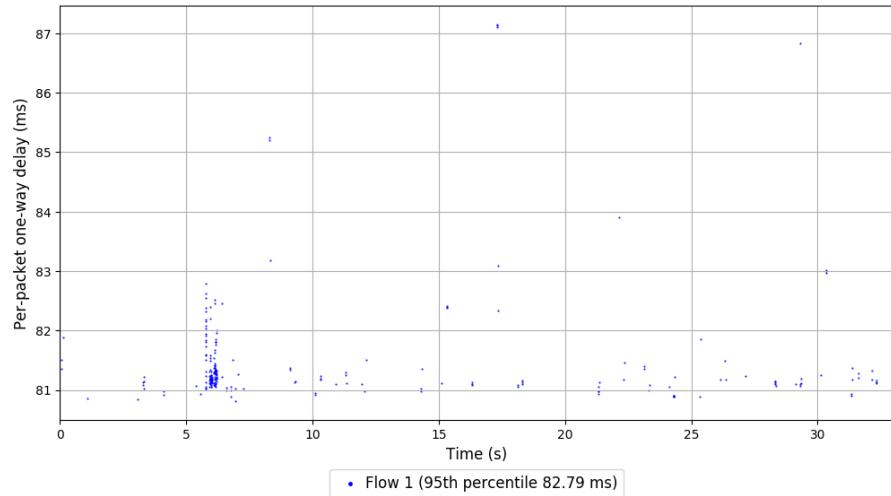
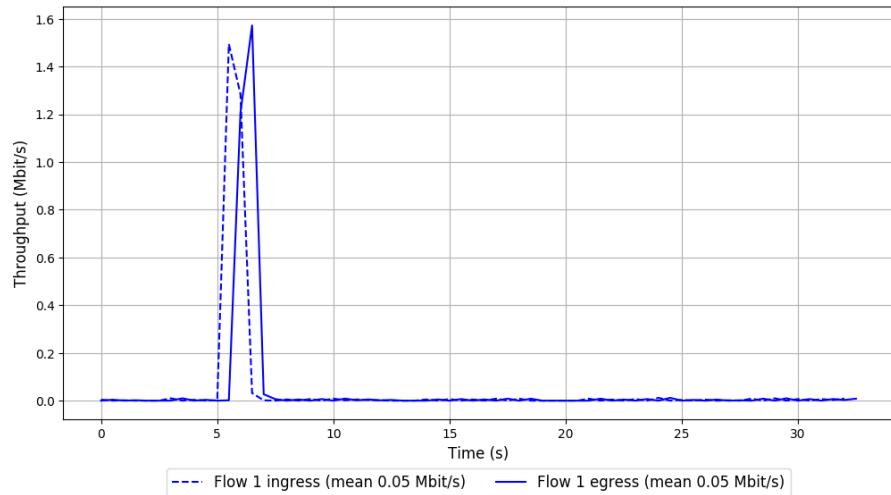


Run 4: Statistics of WebRTC media

```
Start at: 2018-12-19 23:47:29
End at: 2018-12-19 23:47:59
Local clock offset: -2.761 ms
Remote clock offset: 13.293 ms

# Below is generated by plot.py at 2018-12-20 00:36:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 82.789 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 82.789 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-12-20 00:09:42
End at: 2018-12-20 00:10:12
Local clock offset: -2.282 ms
Remote clock offset: 13.982 ms

# Below is generated by plot.py at 2018-12-20 00:36:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 81.915 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 81.915 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

