

Pantheon Report

Generated at 2018-09-25 06:44:17 (UTC).

Data path: AWS Korea on `ens5` (*local*) → China on `eno1` (*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 `ntp.nict.jp` and have been applied to correct the timestamps in logs.

System info:

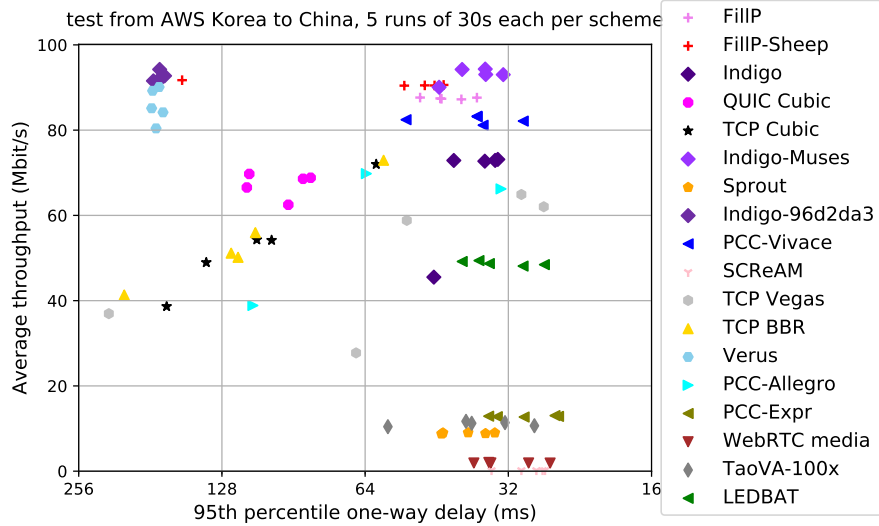
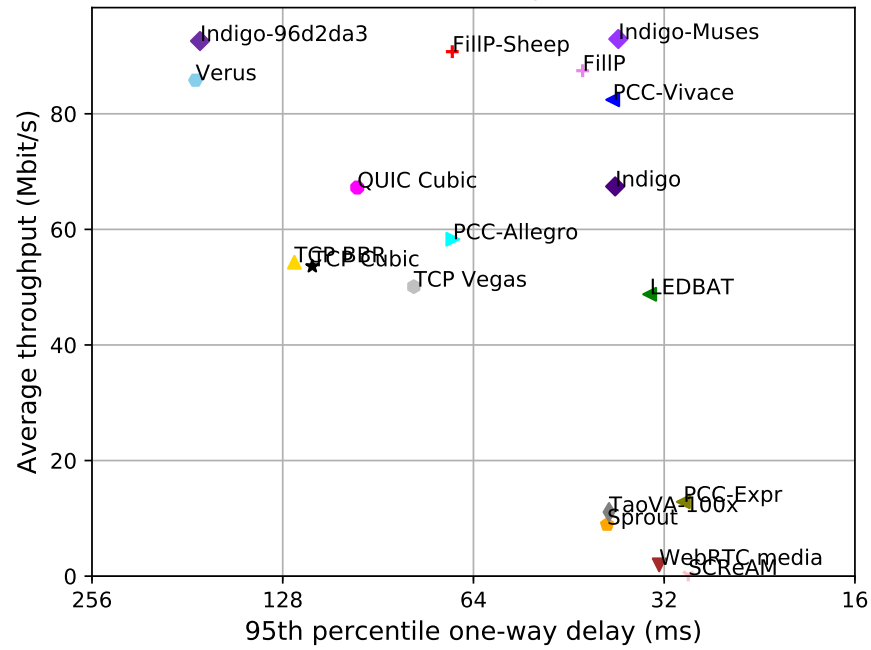
```
Linux 4.15.0-1021-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 184101 245469 368202
```

Git summary:

```
branch: muses @ 90192f6b64ce1a1191dcca0e9ff9ee24950674d7
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ cbfce6db5ff5740dafe1771f813cd646339e1952
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-quick @ 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 Korea to China, 5 runs of 30s each per scheme
(mean of all runs by scheme)



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	54.31	122.70	9.76
Copa	0	N/A	N/A	N/A
TCP Cubic	5	53.61	114.95	0.95
FillP	5	87.46	43.04	7.02
FillP-Sheep	5	90.75	69.12	1.06
Indigo	5	67.43	38.24	5.58
Indigo-96d2da3	5	92.59	172.88	25.63
LEDBAT	5	48.77	33.74	0.00
Indigo-Muses	5	92.94	37.81	0.00
PCC-Allegro	3	58.30	68.98	18.64
PCC-Expr	5	12.86	29.85	46.55
QUIC Cubic	5	67.24	97.63	0.10
SCReAM	5	0.22	29.32	0.00
Sprout	5	8.93	39.38	0.00
TaoVA-100x	5	11.08	39.11	16.22
TCP Vegas	5	50.09	79.49	0.53
Verus	5	85.81	175.72	12.64
PCC-Vivace	5	82.43	38.58	0.00
WebRTC media	5	1.95	32.59	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-09-25 04:42:35

End at: 2018-09-25 04:43:05

Local clock offset: 2.475 ms

Remote clock offset: 5.896 ms

Below is generated by plot.py at 2018-09-25 06:36:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 55.96 Mbit/s

95th percentile per-packet one-way delay: 108.863 ms

Loss rate: 7.33%

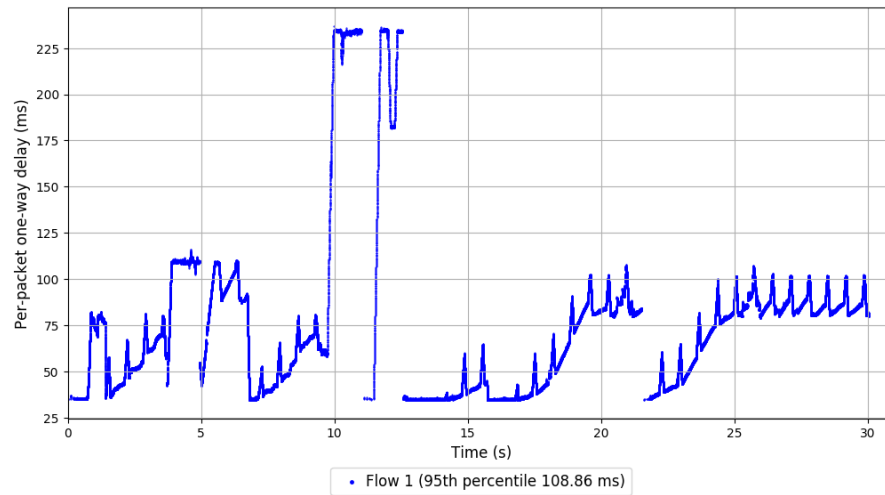
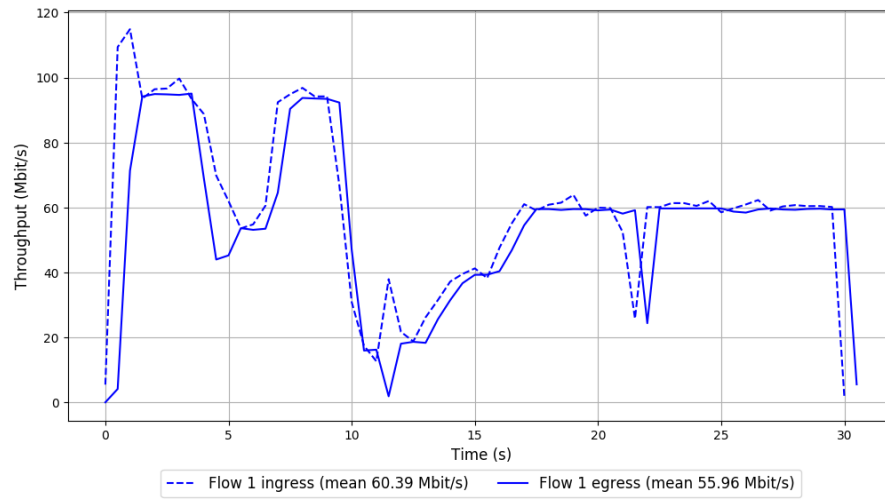
-- Flow 1:

Average throughput: 55.96 Mbit/s

95th percentile per-packet one-way delay: 108.863 ms

Loss rate: 7.33%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-09-25 05:05:22

End at: 2018-09-25 05:05:52

Local clock offset: -1.752 ms

Remote clock offset: 4.978 ms

Below is generated by plot.py at 2018-09-25 06:36:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 41.34 Mbit/s

95th percentile per-packet one-way delay: 205.342 ms

Loss rate: 13.52%

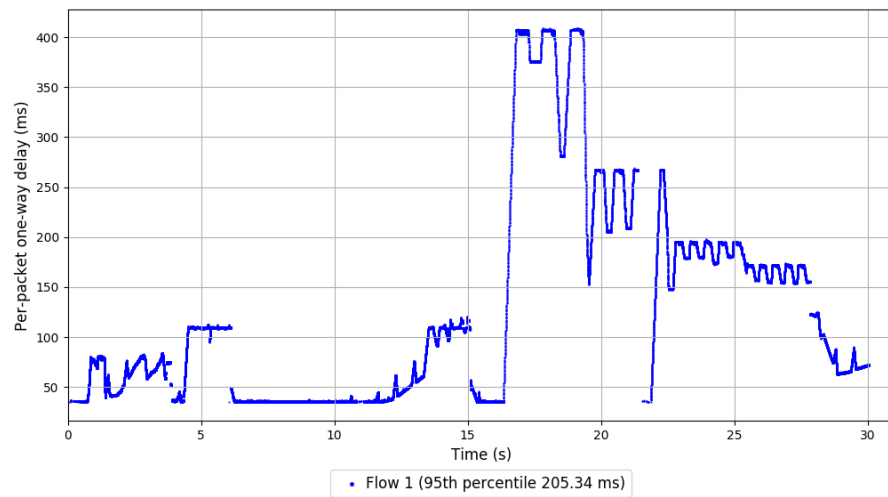
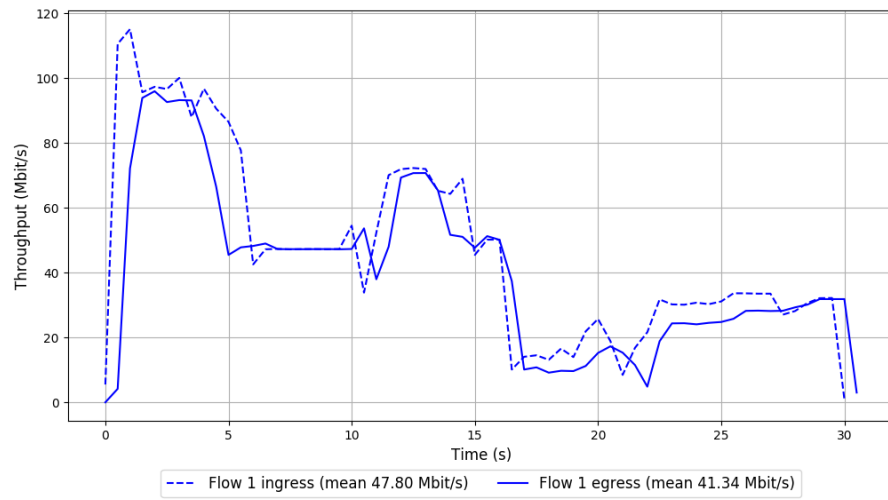
-- Flow 1:

Average throughput: 41.34 Mbit/s

95th percentile per-packet one-way delay: 205.342 ms

Loss rate: 13.52%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-09-25 05:28:07

End at: 2018-09-25 05:28:37

Local clock offset: -4.602 ms

Remote clock offset: 2.429 ms

Below is generated by plot.py at 2018-09-25 06:36:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 51.14 Mbit/s

95th percentile per-packet one-way delay: 122.393 ms

Loss rate: 6.24%

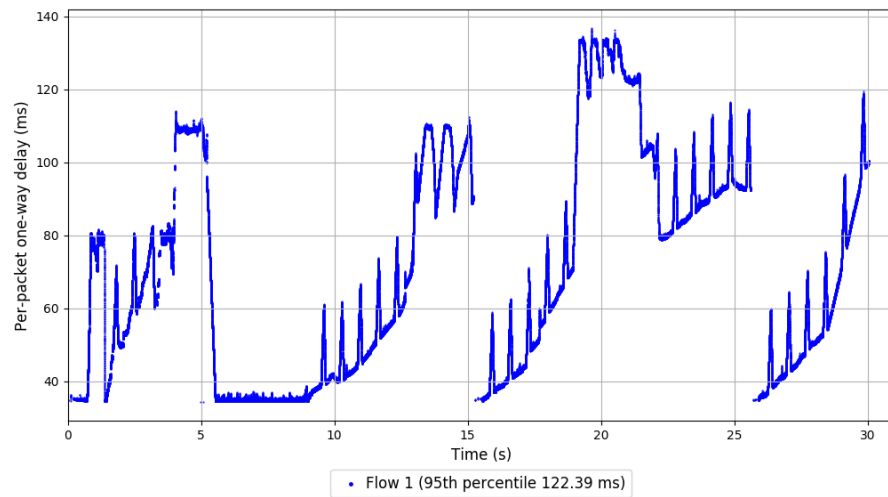
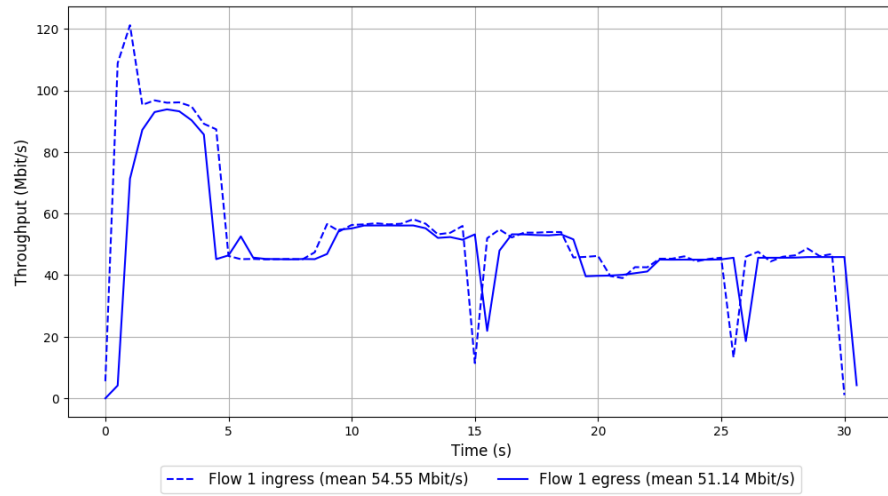
-- Flow 1:

Average throughput: 51.14 Mbit/s

95th percentile per-packet one-way delay: 122.393 ms

Loss rate: 6.24%

Run 3: Report of TCP BBR — Data Link

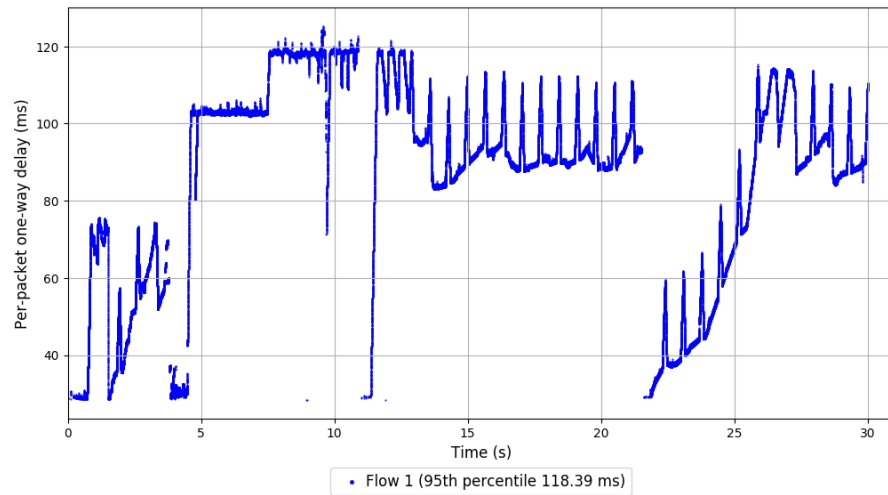
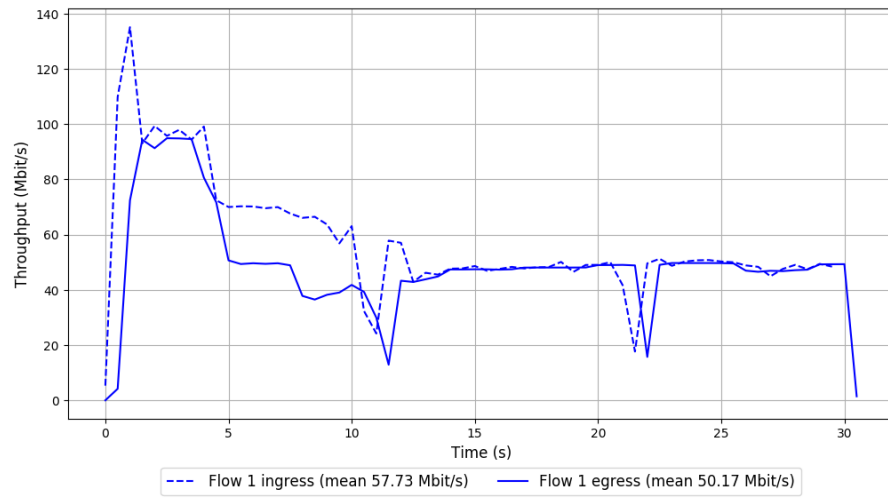


Run 4: Statistics of TCP BBR

Start at: 2018-09-25 05:50:55
End at: 2018-09-25 05:51:25
Local clock offset: -2.621 ms
Remote clock offset: -6.343 ms

Below is generated by plot.py at 2018-09-25 06:36:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 50.17 Mbit/s
95th percentile per-packet one-way delay: 118.386 ms
Loss rate: 13.09%
-- Flow 1:
Average throughput: 50.17 Mbit/s
95th percentile per-packet one-way delay: 118.386 ms
Loss rate: 13.09%

Run 4: Report of TCP BBR — Data Link

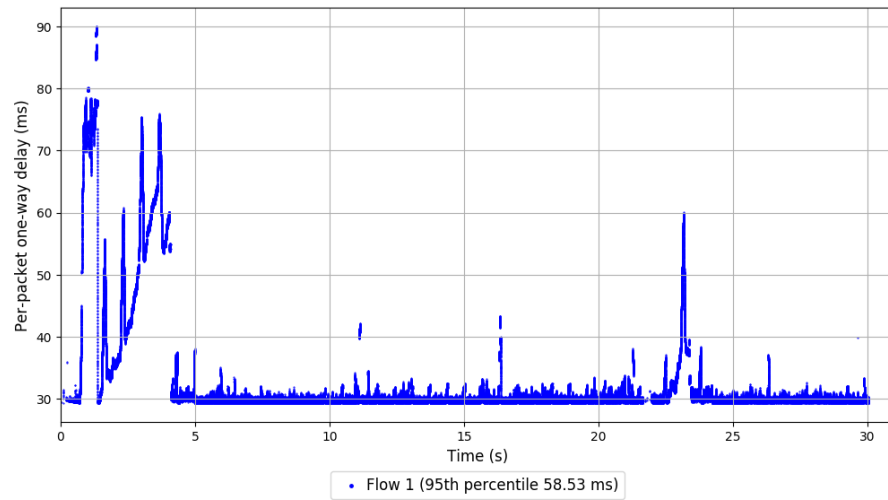
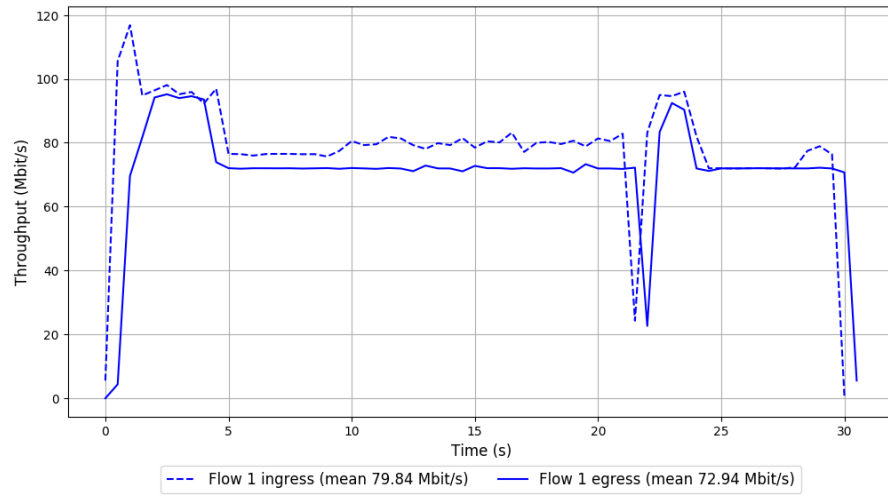


Run 5: Statistics of TCP BBR

Start at: 2018-09-25 06:13:48
End at: 2018-09-25 06:14:18
Local clock offset: 0.46 ms
Remote clock offset: -7.965 ms

Below is generated by plot.py at 2018-09-25 06:37:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.94 Mbit/s
95th percentile per-packet one-way delay: 58.529 ms
Loss rate: 8.64%
-- Flow 1:
Average throughput: 72.94 Mbit/s
95th percentile per-packet one-way delay: 58.529 ms
Loss rate: 8.64%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

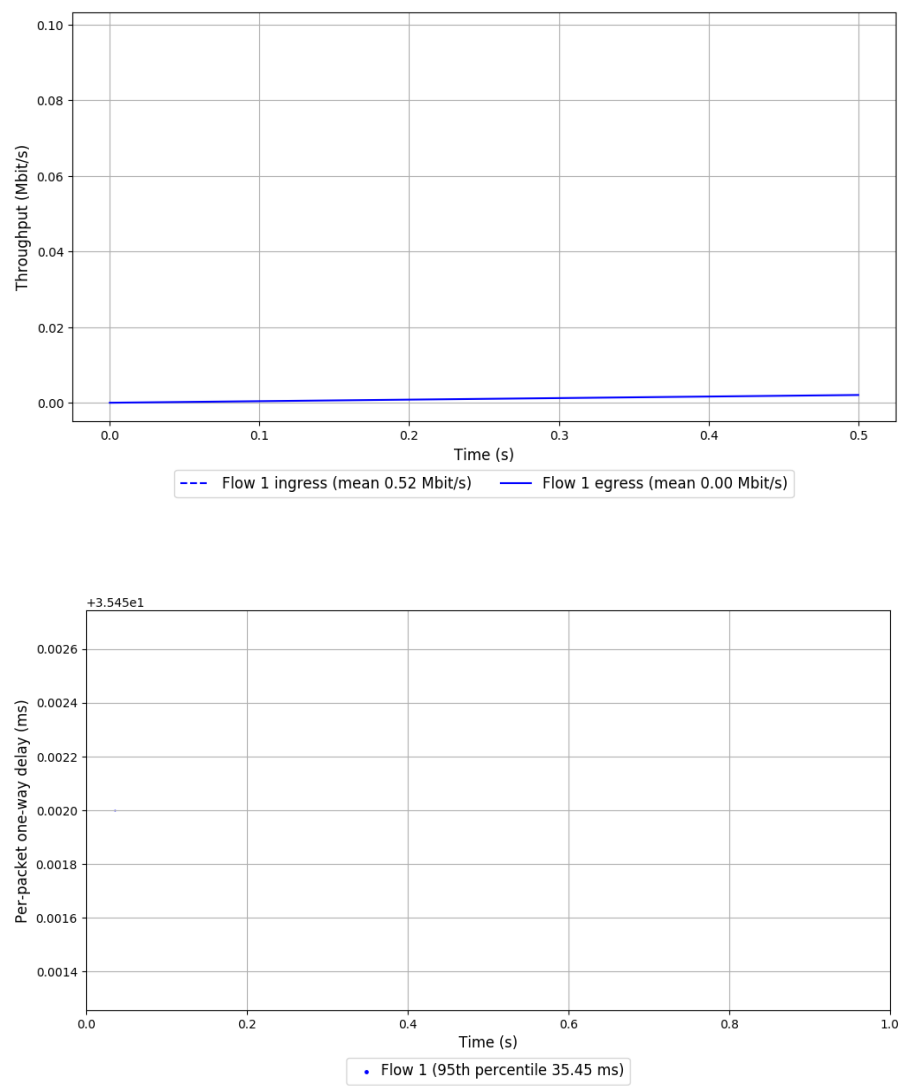
Start at: 2018-09-25 04:51:04

End at: 2018-09-25 04:51:34

Local clock offset: -0.623 ms

Remote clock offset: 7.318 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

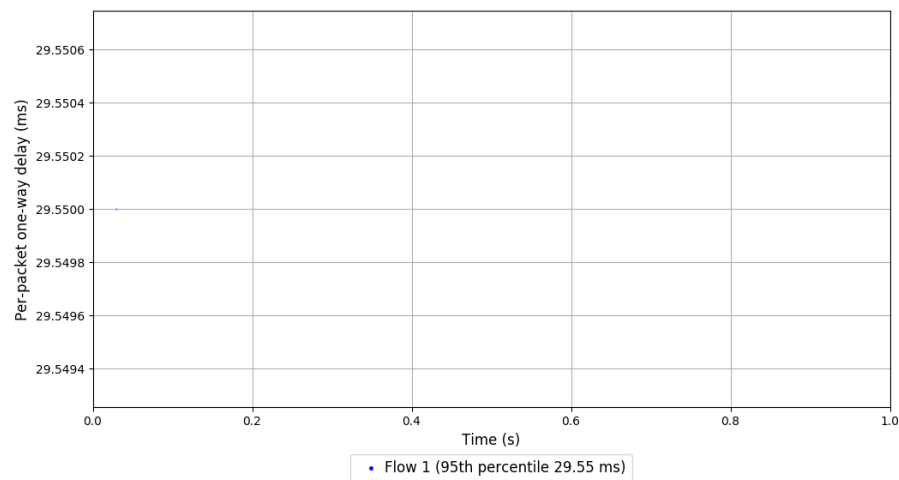
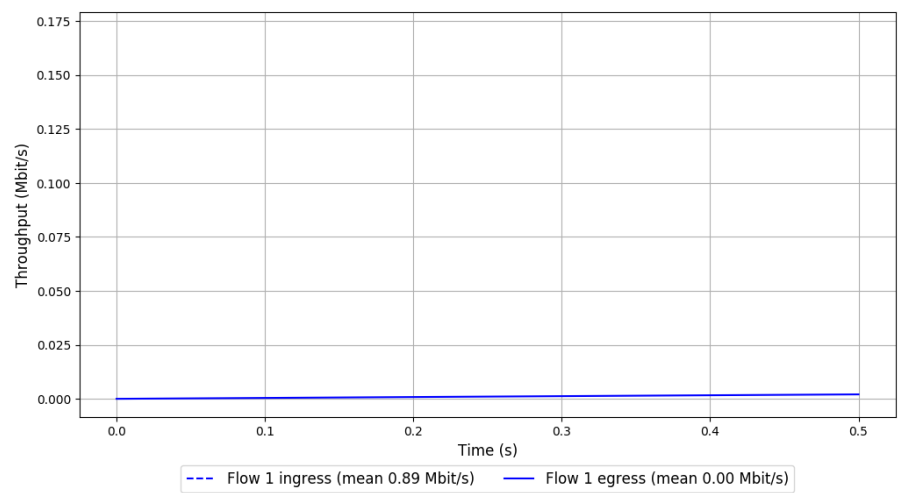
Start at: 2018-09-25 05:13:45

End at: 2018-09-25 05:14:15

Local clock offset: -2.164 ms

Remote clock offset: -0.376 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

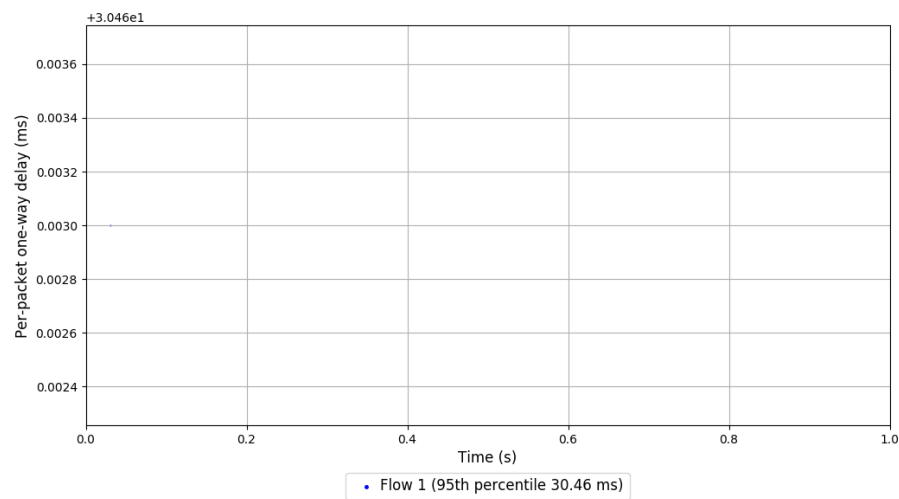
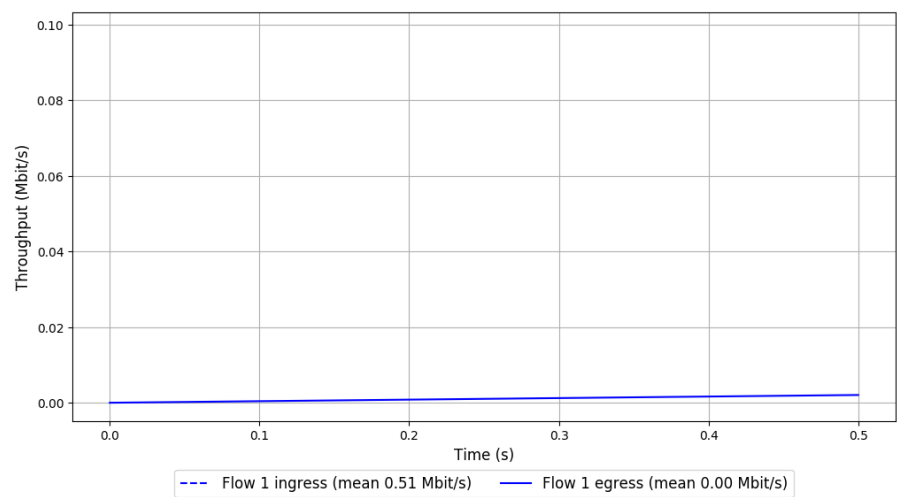
Start at: 2018-09-25 05:36:32

End at: 2018-09-25 05:37:02

Local clock offset: -7.05 ms

Remote clock offset: -4.557 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

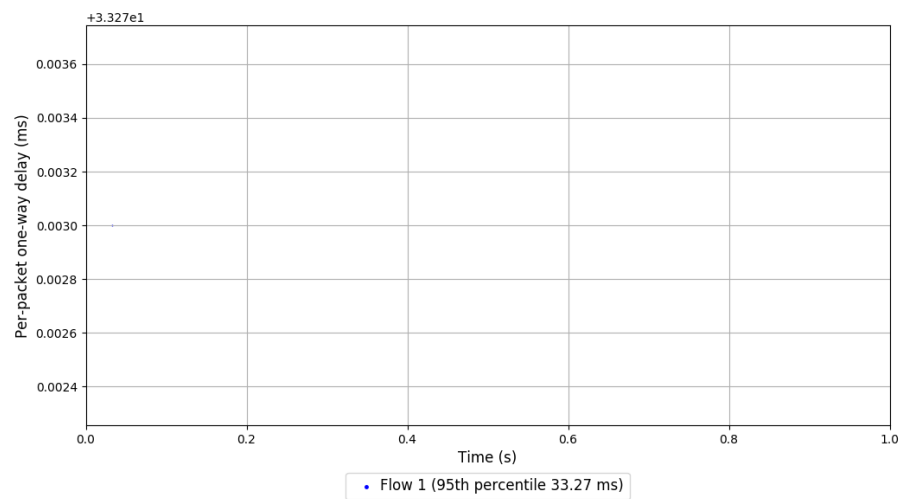
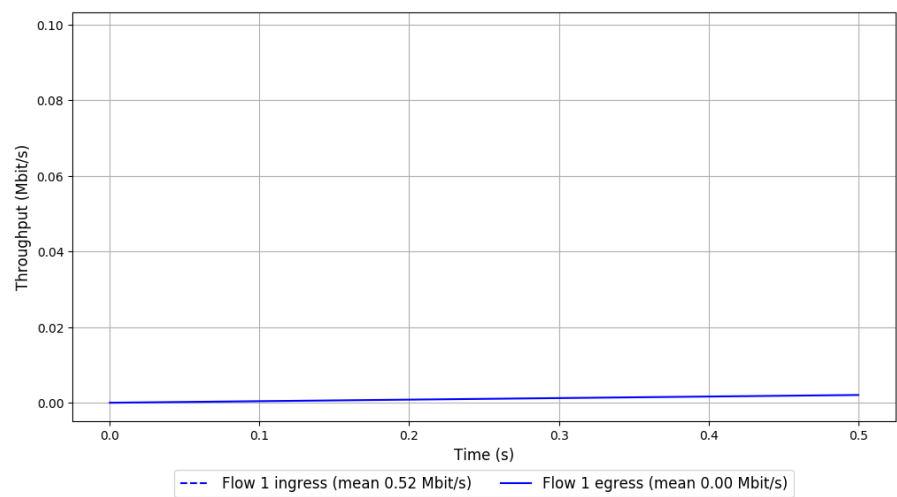
Start at: 2018-09-25 05:59:24

End at: 2018-09-25 05:59:54

Local clock offset: -2.478 ms

Remote clock offset: -3.267 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

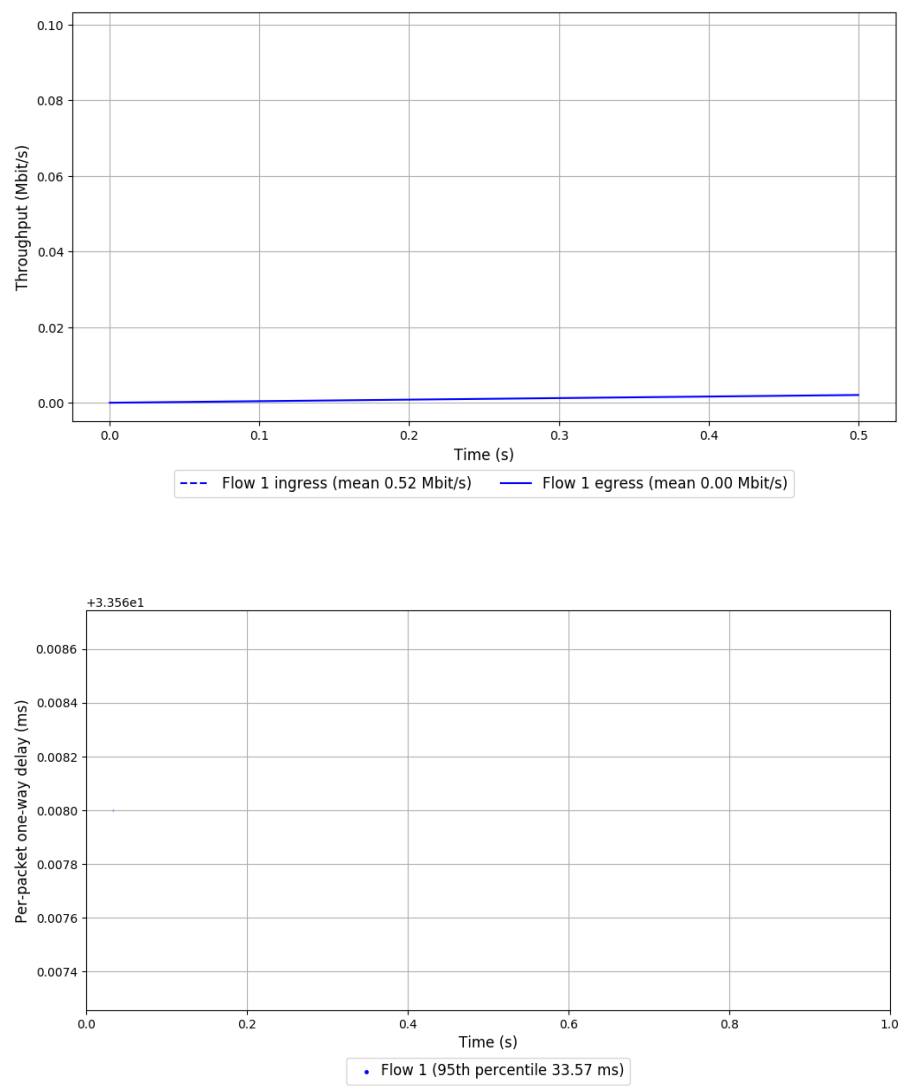
Start at: 2018-09-25 06:22:19

End at: 2018-09-25 06:22:49

Local clock offset: 3.89 ms

Remote clock offset: -1.018 ms

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-09-25 04:41:22

End at: 2018-09-25 04:41:52

Local clock offset: 2.724 ms

Remote clock offset: 5.25 ms

Below is generated by plot.py at 2018-09-25 06:37:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 71.99 Mbit/s

95th percentile per-packet one-way delay: 60.651 ms

Loss rate: 0.74%

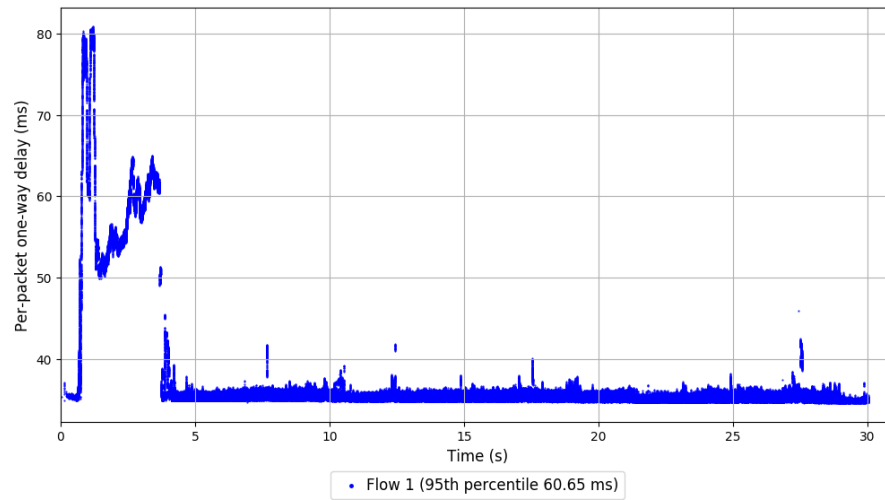
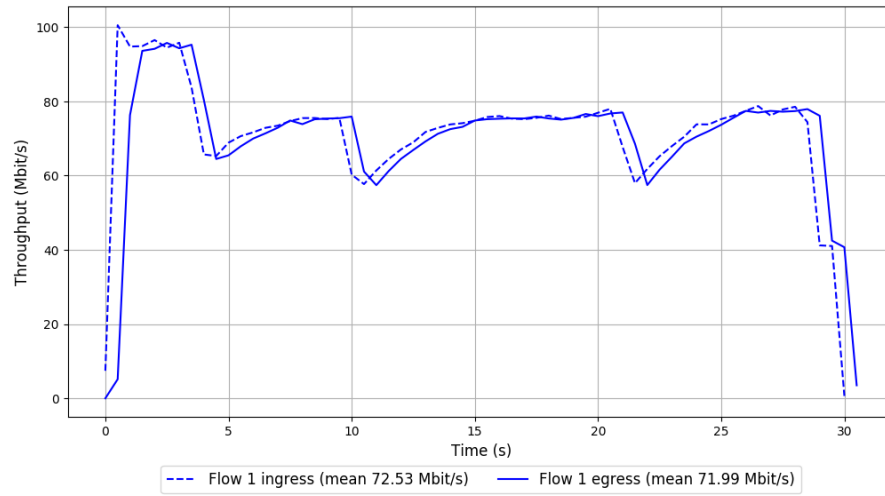
-- Flow 1:

Average throughput: 71.99 Mbit/s

95th percentile per-packet one-way delay: 60.651 ms

Loss rate: 0.74%

Run 1: Report of TCP Cubic — Data Link

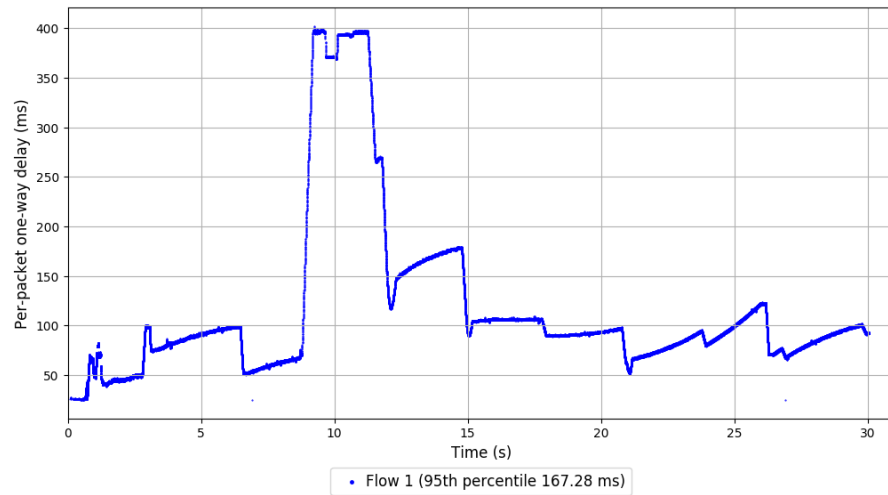
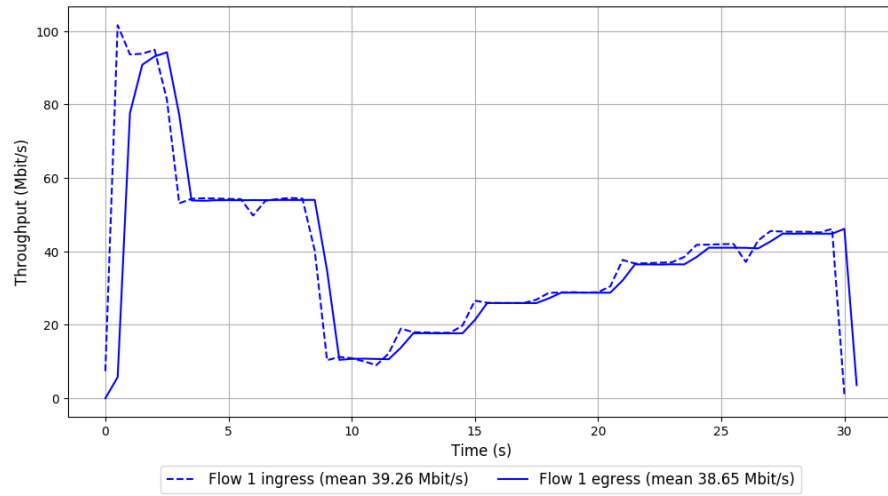


Run 2: Statistics of TCP Cubic

Start at: 2018-09-25 05:04:12
End at: 2018-09-25 05:04:42
Local clock offset: -1.473 ms
Remote clock offset: -4.731 ms

Below is generated by plot.py at 2018-09-25 06:37:06
Datalink statistics
-- Total of 1 flow:
Average throughput: 38.65 Mbit/s
95th percentile per-packet one-way delay: 167.276 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 38.65 Mbit/s
95th percentile per-packet one-way delay: 167.276 ms
Loss rate: 1.57%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-09-25 05:26:56

End at: 2018-09-25 05:27:26

Local clock offset: -4.305 ms

Remote clock offset: 3.373 ms

Below is generated by plot.py at 2018-09-25 06:37:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 48.95 Mbit/s

95th percentile per-packet one-way delay: 138.056 ms

Loss rate: 0.98%

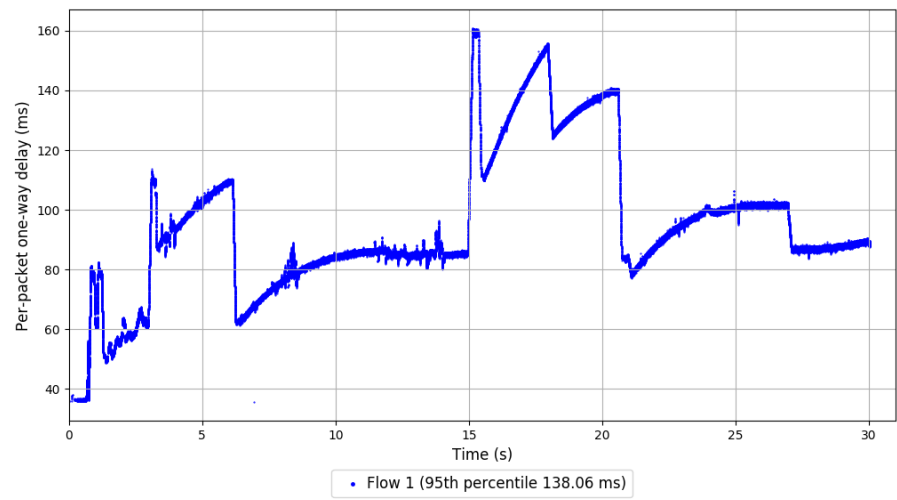
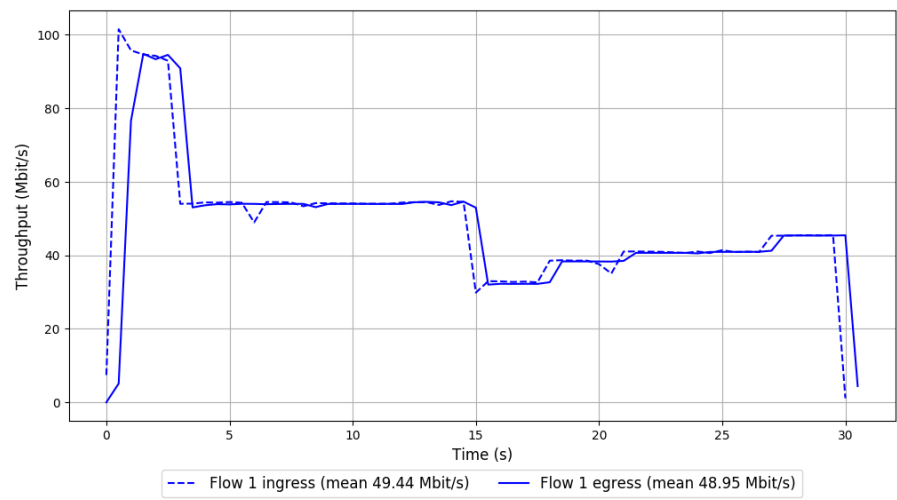
-- Flow 1:

Average throughput: 48.95 Mbit/s

95th percentile per-packet one-way delay: 138.056 ms

Loss rate: 0.98%

Run 3: Report of TCP Cubic — Data Link

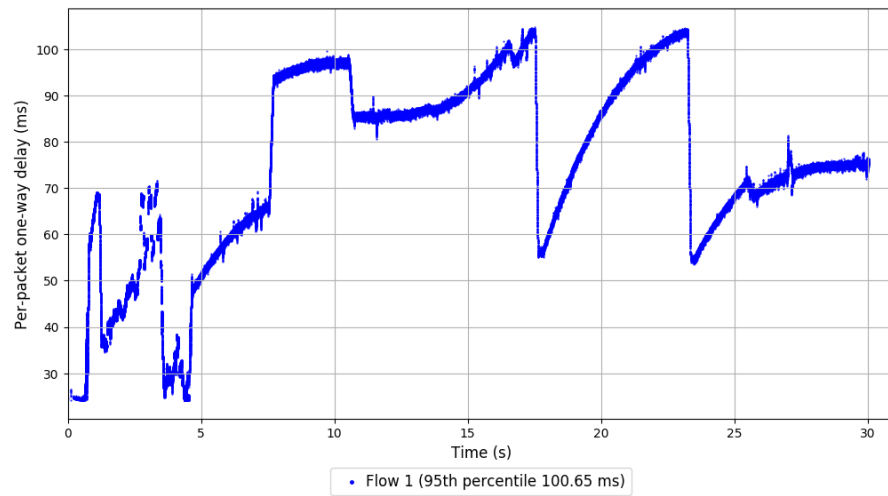
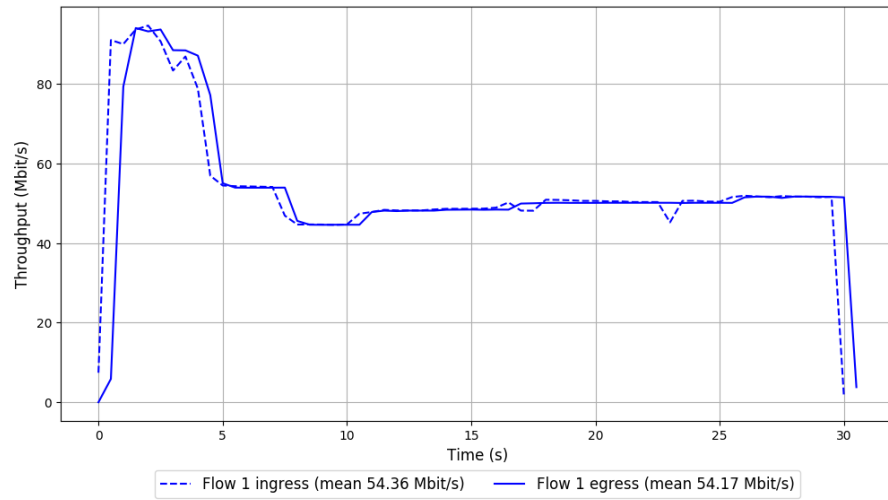


Run 4: Statistics of TCP Cubic

Start at: 2018-09-25 05:49:43
End at: 2018-09-25 05:50:13
Local clock offset: -2.774 ms
Remote clock offset: -10.647 ms

Below is generated by plot.py at 2018-09-25 06:37:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 54.17 Mbit/s
95th percentile per-packet one-way delay: 100.649 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 54.17 Mbit/s
95th percentile per-packet one-way delay: 100.649 ms
Loss rate: 0.35%

Run 4: Report of TCP Cubic — Data Link

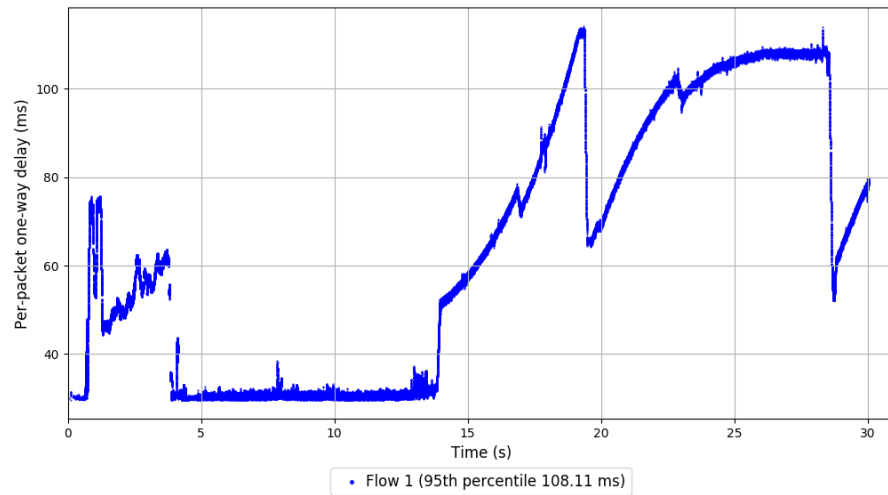
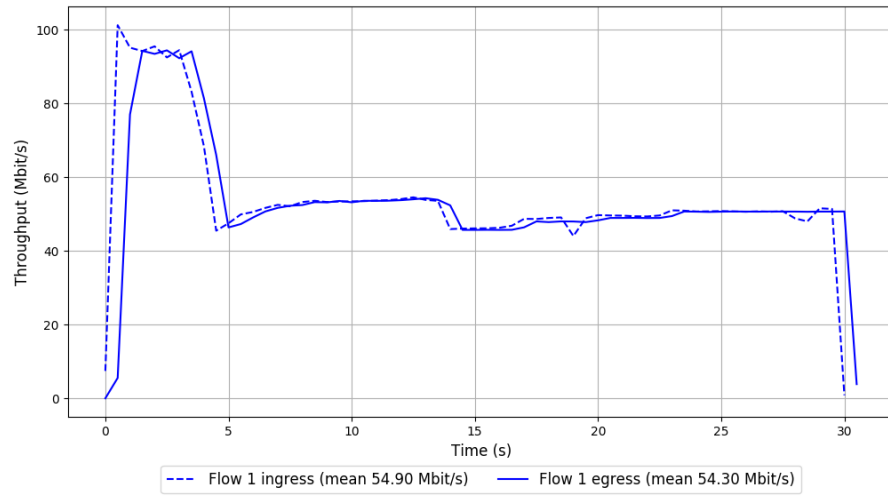


Run 5: Statistics of TCP Cubic

Start at: 2018-09-25 06:12:36
End at: 2018-09-25 06:13:06
Local clock offset: -0.349 ms
Remote clock offset: -8.213 ms

Below is generated by plot.py at 2018-09-25 06:37:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 54.30 Mbit/s
95th percentile per-packet one-way delay: 108.110 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 54.30 Mbit/s
95th percentile per-packet one-way delay: 108.110 ms
Loss rate: 1.09%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2018-09-25 05:02:57

End at: 2018-09-25 05:03:27

Local clock offset: -1.343 ms

Remote clock offset: 4.347 ms

Below is generated by plot.py at 2018-09-25 06:38:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.44 Mbit/s

95th percentile per-packet one-way delay: 44.505 ms

Loss rate: 7.36%

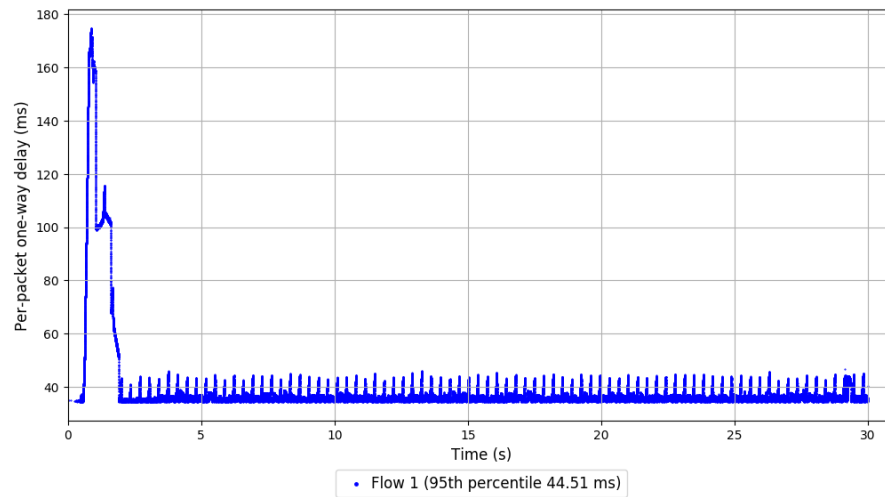
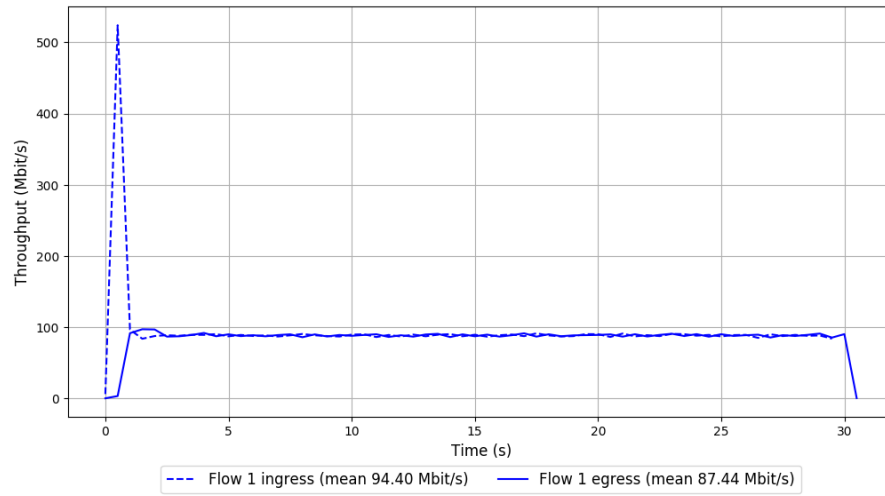
-- Flow 1:

Average throughput: 87.44 Mbit/s

95th percentile per-packet one-way delay: 44.505 ms

Loss rate: 7.36%

Run 1: Report of FillP — Data Link

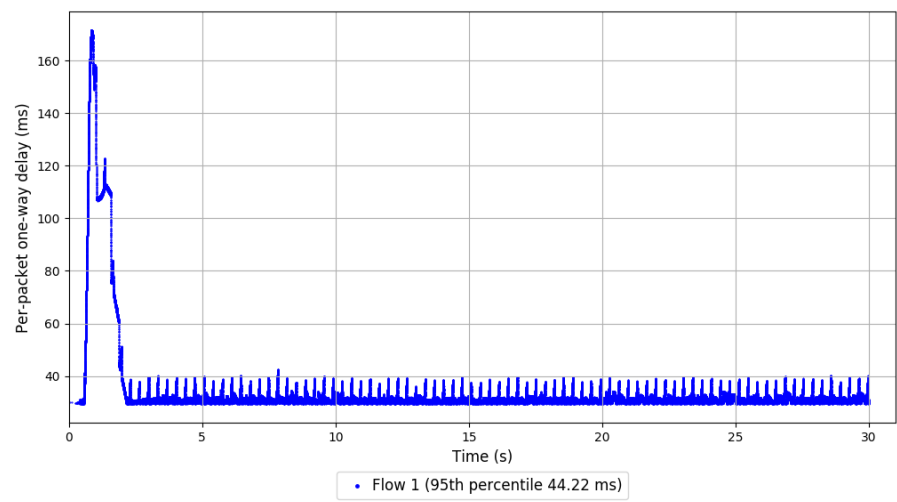
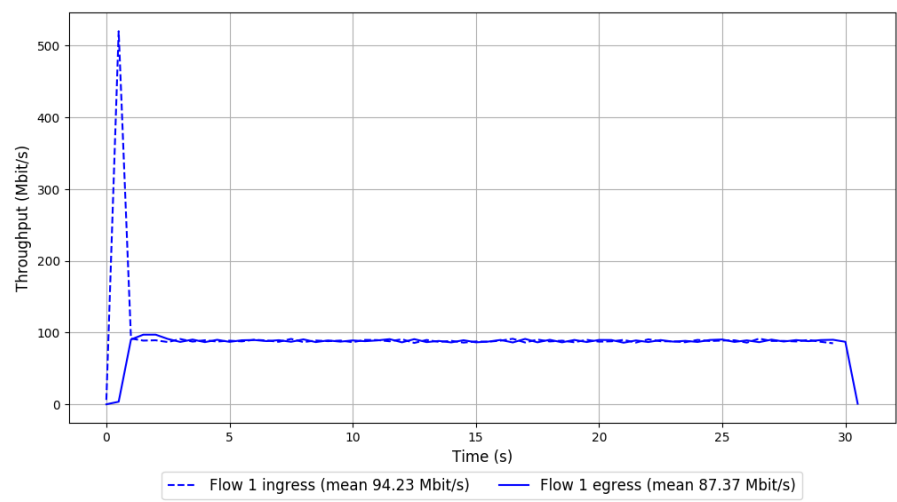


Run 2: Statistics of FillP

Start at: 2018-09-25 05:25:42
End at: 2018-09-25 05:26:12
Local clock offset: -4.034 ms
Remote clock offset: -1.909 ms

Below is generated by plot.py at 2018-09-25 06:38:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.37 Mbit/s
95th percentile per-packet one-way delay: 44.224 ms
Loss rate: 7.28%
-- Flow 1:
Average throughput: 87.37 Mbit/s
95th percentile per-packet one-way delay: 44.224 ms
Loss rate: 7.28%

Run 2: Report of FillP — Data Link

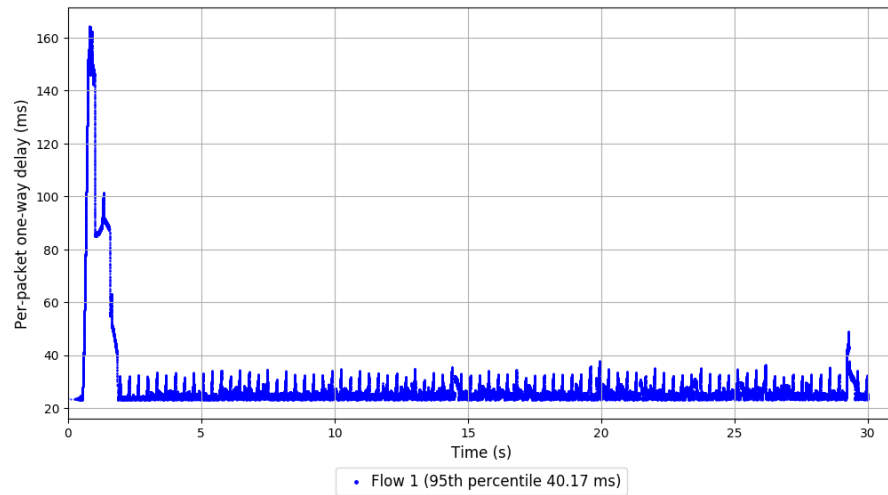
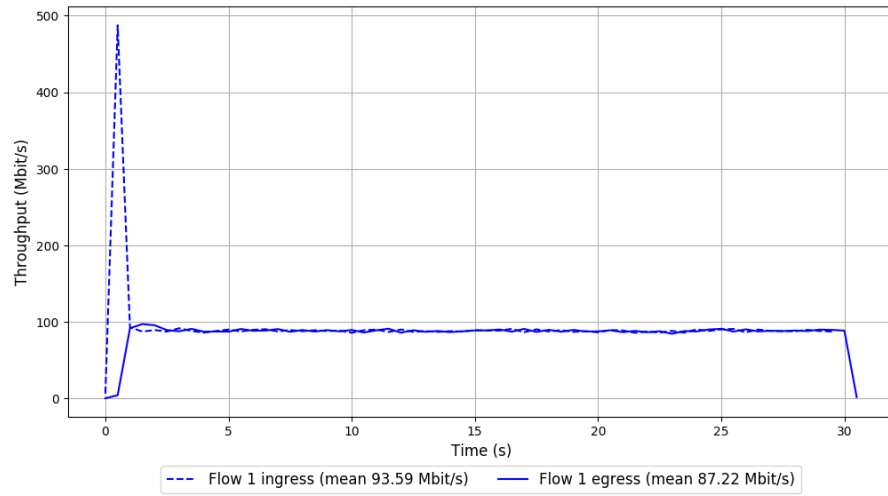


Run 3: Statistics of FillP

Start at: 2018-09-25 05:48:27
End at: 2018-09-25 05:48:57
Local clock offset: -2.955 ms
Remote clock offset: -10.987 ms

Below is generated by plot.py at 2018-09-25 06:38:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.22 Mbit/s
95th percentile per-packet one-way delay: 40.167 ms
Loss rate: 6.80%
-- Flow 1:
Average throughput: 87.22 Mbit/s
95th percentile per-packet one-way delay: 40.167 ms
Loss rate: 6.80%

Run 3: Report of FillP — Data Link

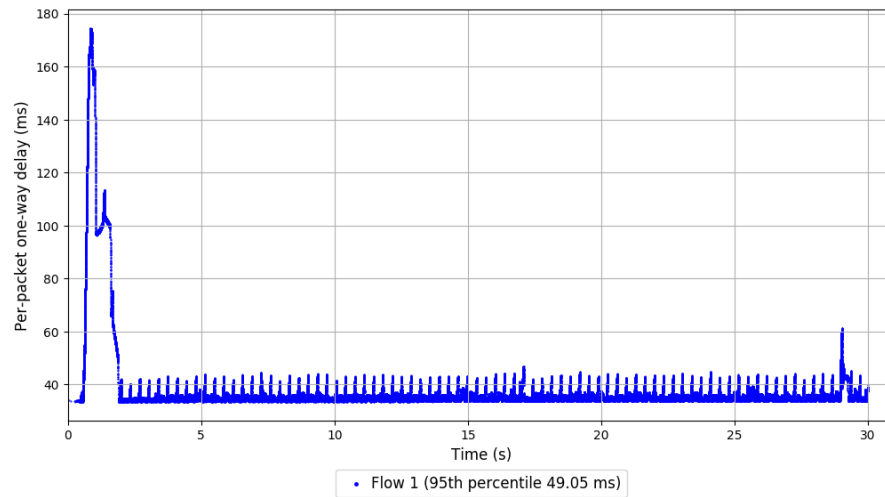
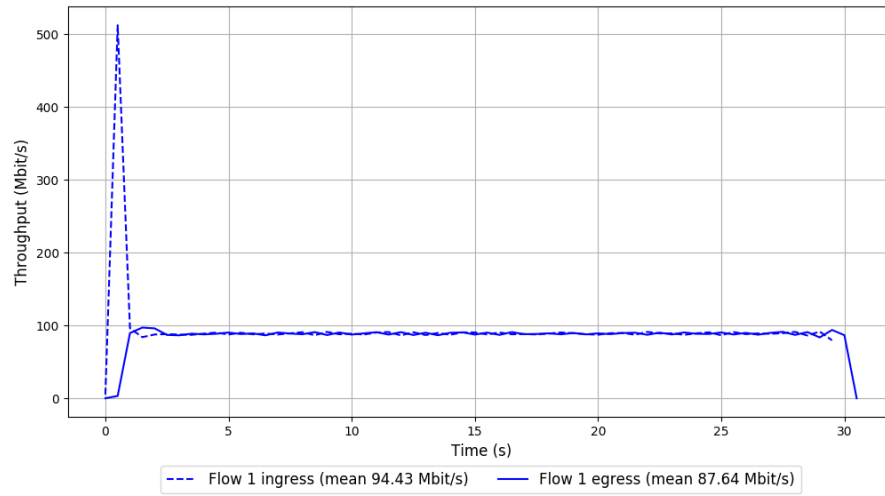


Run 4: Statistics of FillP

Start at: 2018-09-25 06:11:21
End at: 2018-09-25 06:11:51
Local clock offset: -1.553 ms
Remote clock offset: -4.883 ms

Below is generated by plot.py at 2018-09-25 06:38:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.64 Mbit/s
95th percentile per-packet one-way delay: 49.049 ms
Loss rate: 7.17%
-- Flow 1:
Average throughput: 87.64 Mbit/s
95th percentile per-packet one-way delay: 49.049 ms
Loss rate: 7.17%

Run 4: Report of FillP — Data Link

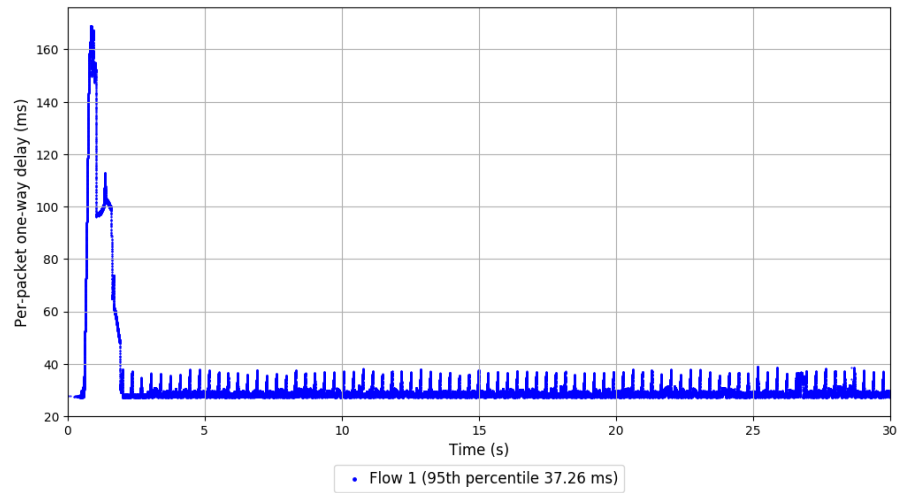
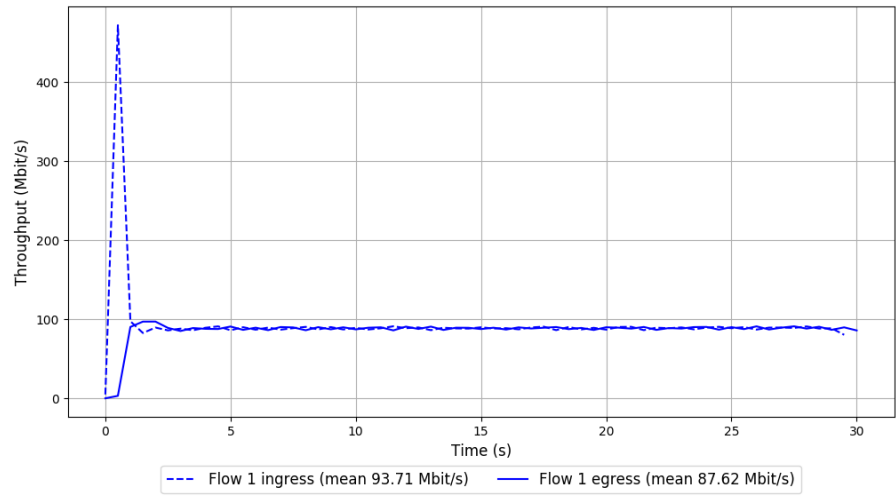


Run 5: Statistics of FillP

Start at: 2018-09-25 06:34:17
End at: 2018-09-25 06:34:47
Local clock offset: 4.954 ms
Remote clock offset: -6.057 ms

Below is generated by plot.py at 2018-09-25 06:38:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.62 Mbit/s
95th percentile per-packet one-way delay: 37.257 ms
Loss rate: 6.50%
-- Flow 1:
Average throughput: 87.62 Mbit/s
95th percentile per-packet one-way delay: 37.257 ms
Loss rate: 6.50%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-25 04:43:47

End at: 2018-09-25 04:44:17

Local clock offset: 1.608 ms

Remote clock offset: 10.694 ms

Below is generated by plot.py at 2018-09-25 06:38:28

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.44 Mbit/s

95th percentile per-packet one-way delay: 52.945 ms

Loss rate: 1.03%

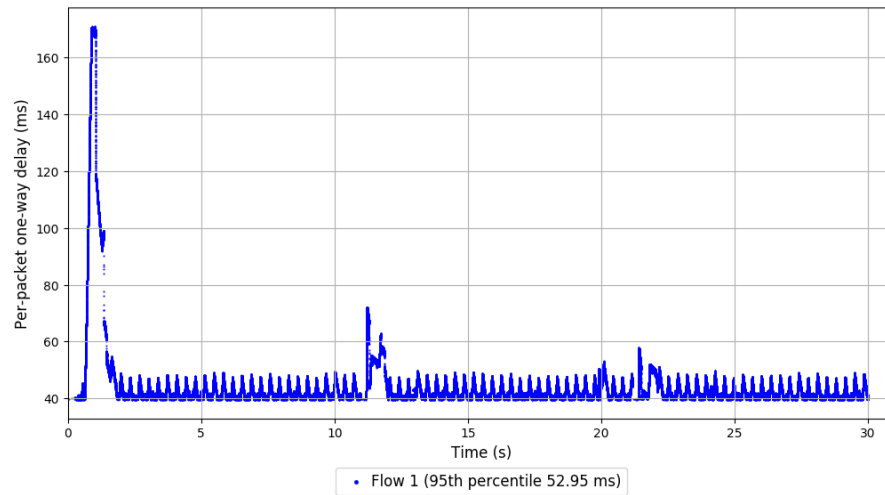
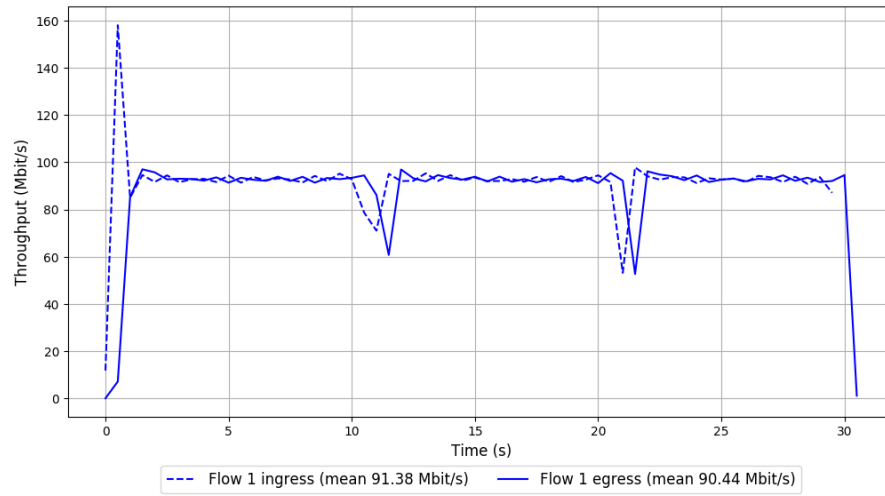
-- Flow 1:

Average throughput: 90.44 Mbit/s

95th percentile per-packet one-way delay: 52.945 ms

Loss rate: 1.03%

Run 1: Report of FillP-Sheep — Data Link

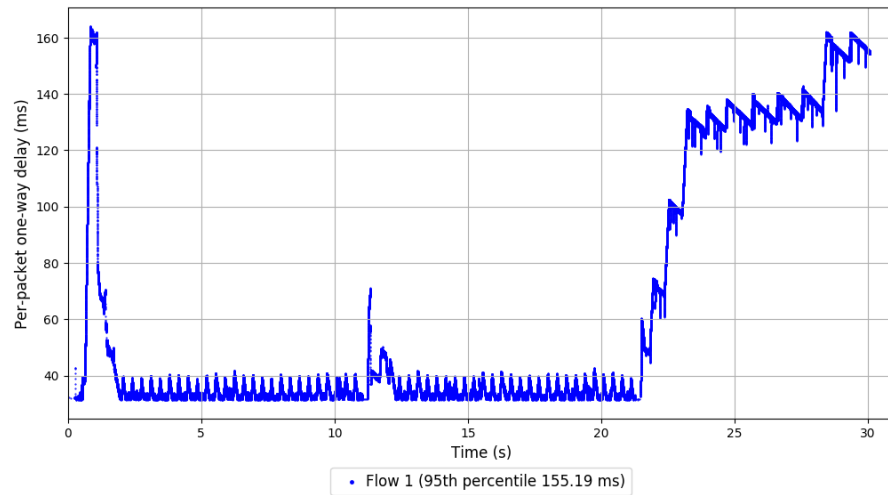
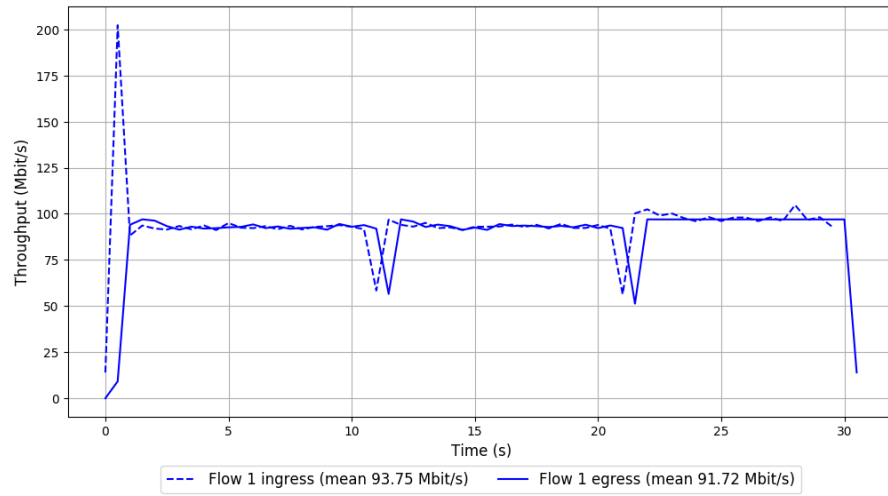


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-25 05:06:33
End at: 2018-09-25 05:07:03
Local clock offset: -1.817 ms
Remote clock offset: 2.331 ms

Below is generated by plot.py at 2018-09-25 06:38:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.72 Mbit/s
95th percentile per-packet one-way delay: 155.192 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 91.72 Mbit/s
95th percentile per-packet one-way delay: 155.192 ms
Loss rate: 1.99%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-09-25 05:29:19

End at: 2018-09-25 05:29:49

Local clock offset: -4.76 ms

Remote clock offset: 2.559 ms

Below is generated by plot.py at 2018-09-25 06:38:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.50 Mbit/s

95th percentile per-packet one-way delay: 47.951 ms

Loss rate: 0.86%

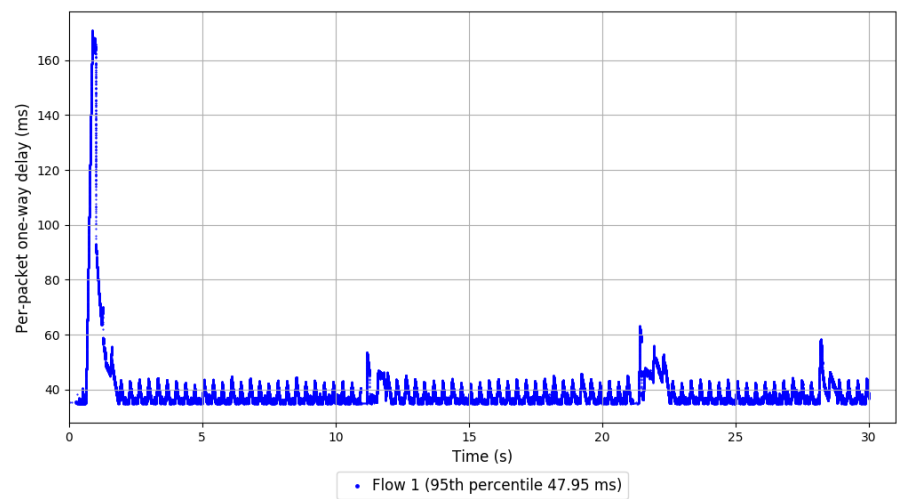
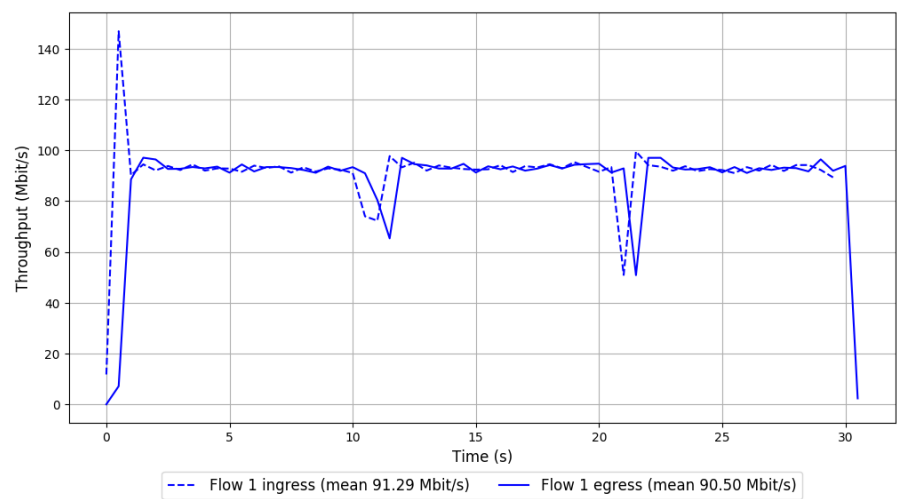
-- Flow 1:

Average throughput: 90.50 Mbit/s

95th percentile per-packet one-way delay: 47.951 ms

Loss rate: 0.86%

Run 3: Report of FillP-Sheep — Data Link

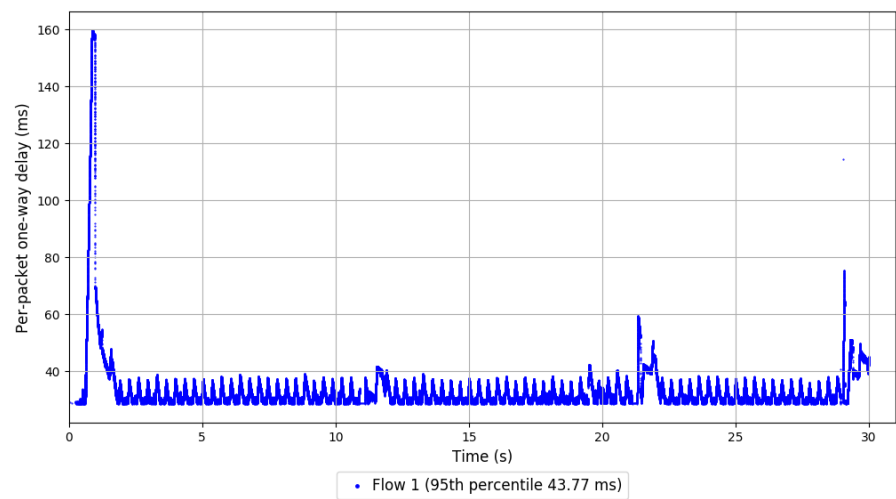
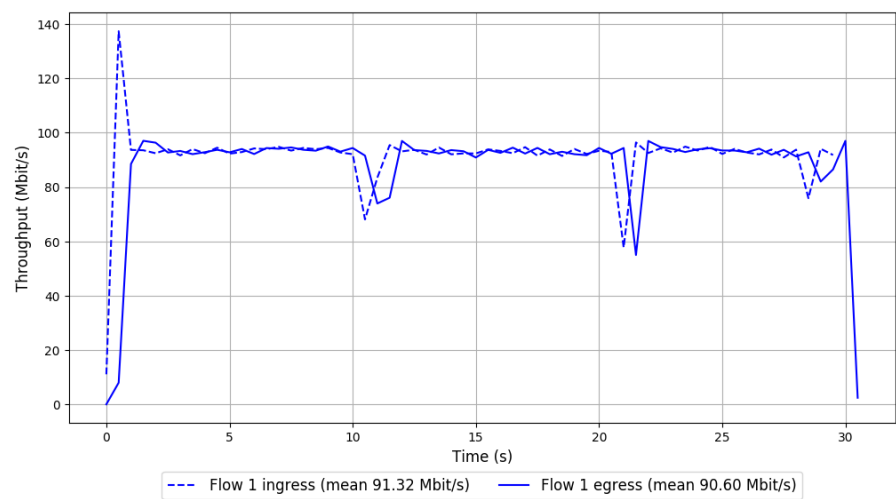


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-25 05:52:07
End at: 2018-09-25 05:52:37
Local clock offset: -2.343 ms
Remote clock offset: -5.725 ms

Below is generated by plot.py at 2018-09-25 06:39:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 43.769 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 43.769 ms
Loss rate: 0.74%

Run 4: Report of FillP-Sheep — Data Link

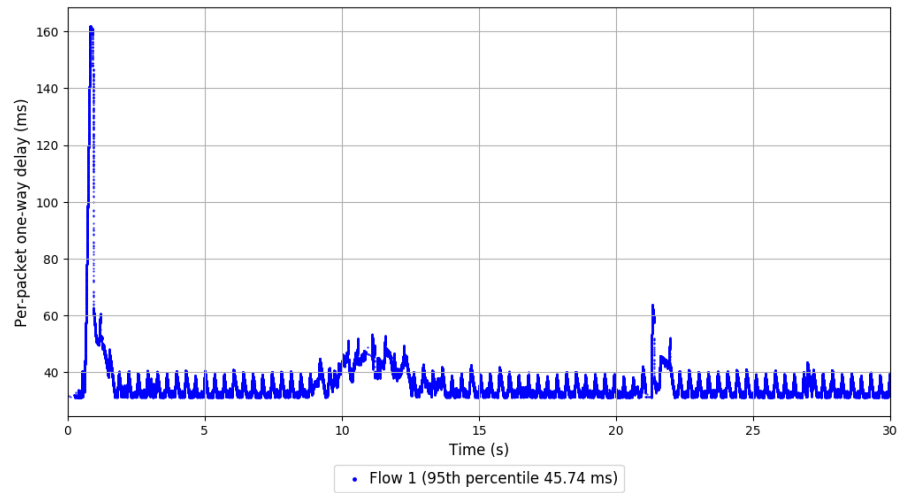
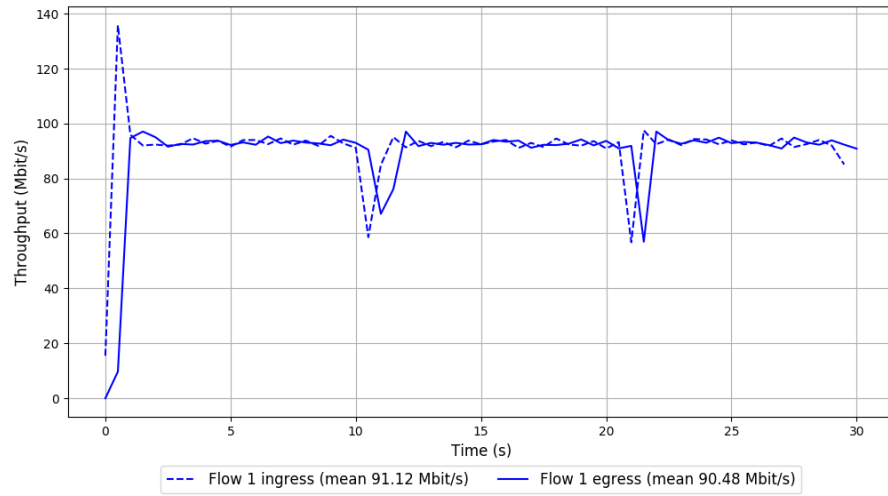


Run 5: Statistics of FillP-Sheep

Start at: 2018-09-25 06:15:03
End at: 2018-09-25 06:15:33
Local clock offset: 1.134 ms
Remote clock offset: -4.958 ms

Below is generated by plot.py at 2018-09-25 06:39:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.48 Mbit/s
95th percentile per-packet one-way delay: 45.737 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 90.48 Mbit/s
95th percentile per-packet one-way delay: 45.737 ms
Loss rate: 0.68%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2018-09-25 05:01:45

End at: 2018-09-25 05:02:15

Local clock offset: -1.314 ms

Remote clock offset: -4.34 ms

Below is generated by plot.py at 2018-09-25 06:39:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 45.52 Mbit/s

95th percentile per-packet one-way delay: 45.893 ms

Loss rate: 0.26%

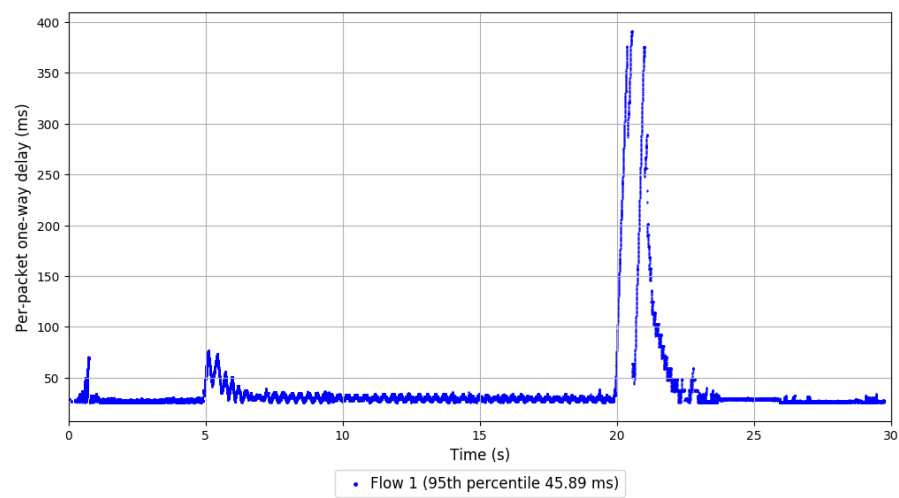
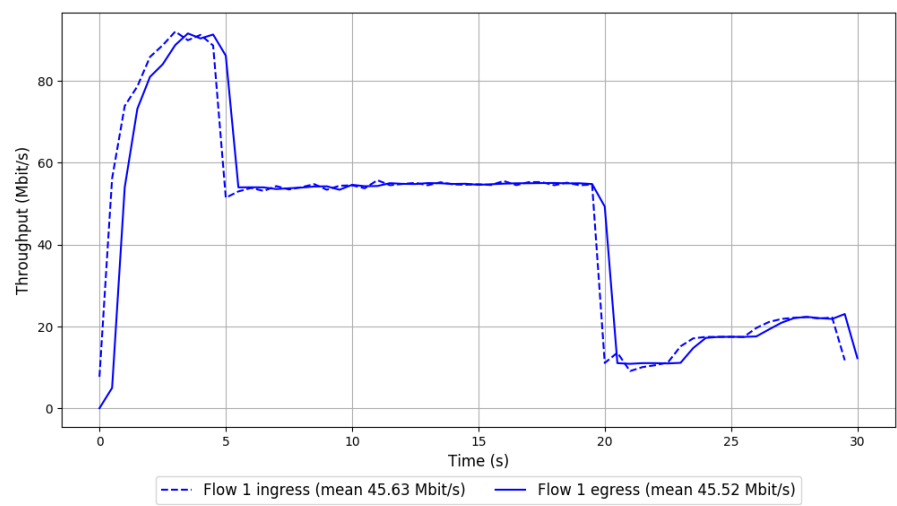
-- Flow 1:

Average throughput: 45.52 Mbit/s

95th percentile per-packet one-way delay: 45.893 ms

Loss rate: 0.26%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-09-25 05:24:28

End at: 2018-09-25 05:24:58

Local clock offset: -3.596 ms

Remote clock offset: 3.276 ms

Below is generated by plot.py at 2018-09-25 06:39:25

Datalink statistics

-- Total of 1 flow:

Average throughput: 72.89 Mbit/s

95th percentile per-packet one-way delay: 41.666 ms

Loss rate: 6.83%

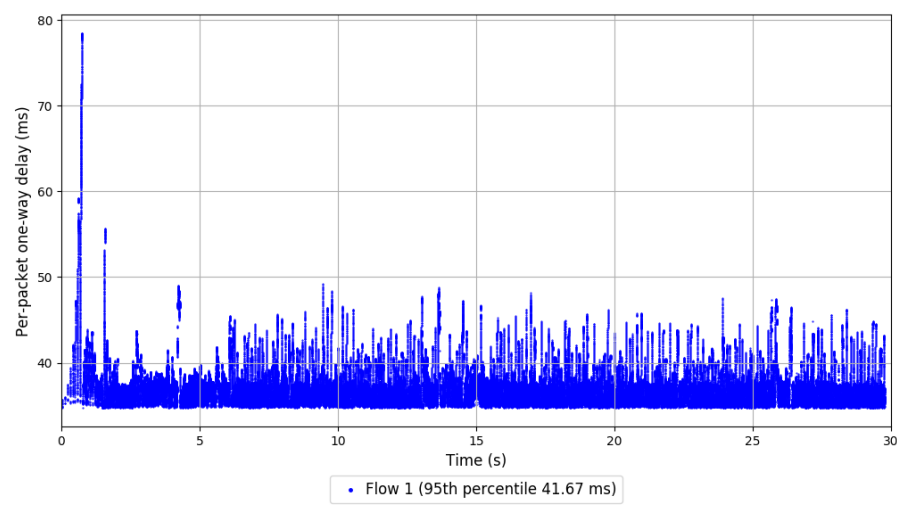
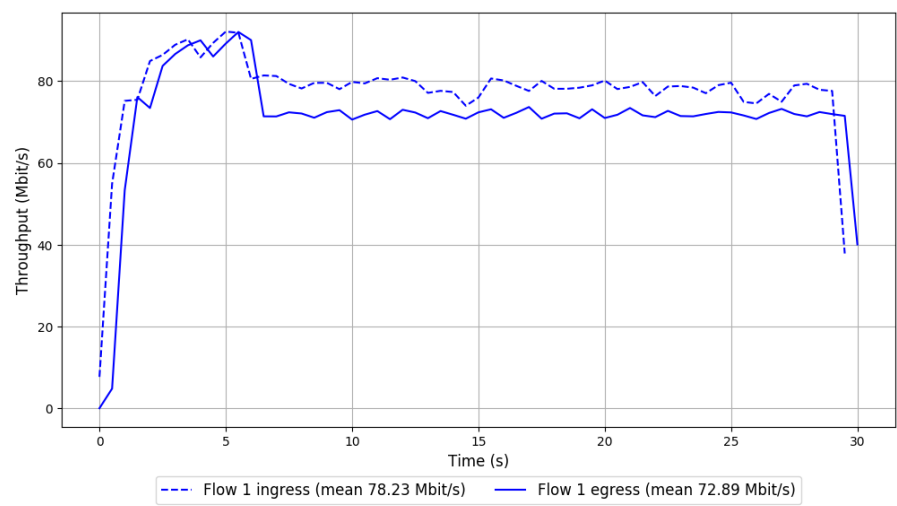
-- Flow 1:

Average throughput: 72.89 Mbit/s

95th percentile per-packet one-way delay: 41.666 ms

Loss rate: 6.83%

Run 2: Report of Indigo — Data Link

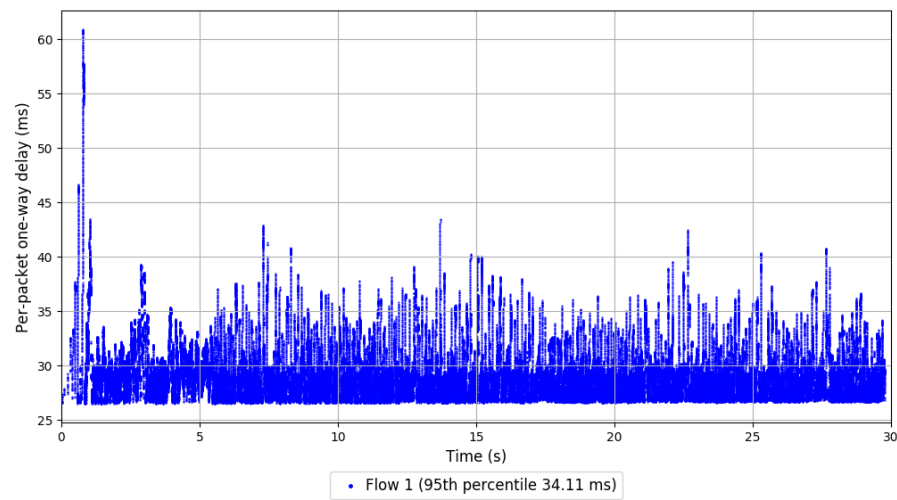
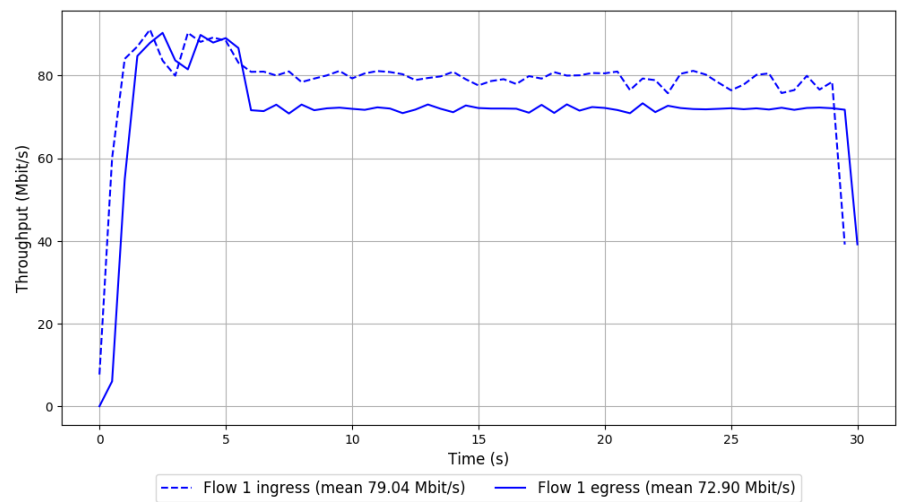


Run 3: Statistics of Indigo

Start at: 2018-09-25 05:47:11
End at: 2018-09-25 05:47:41
Local clock offset: -3.157 ms
Remote clock offset: -7.627 ms

Below is generated by plot.py at 2018-09-25 06:39:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.90 Mbit/s
95th percentile per-packet one-way delay: 34.113 ms
Loss rate: 7.77%
-- Flow 1:
Average throughput: 72.90 Mbit/s
95th percentile per-packet one-way delay: 34.113 ms
Loss rate: 7.77%

Run 3: Report of Indigo — Data Link

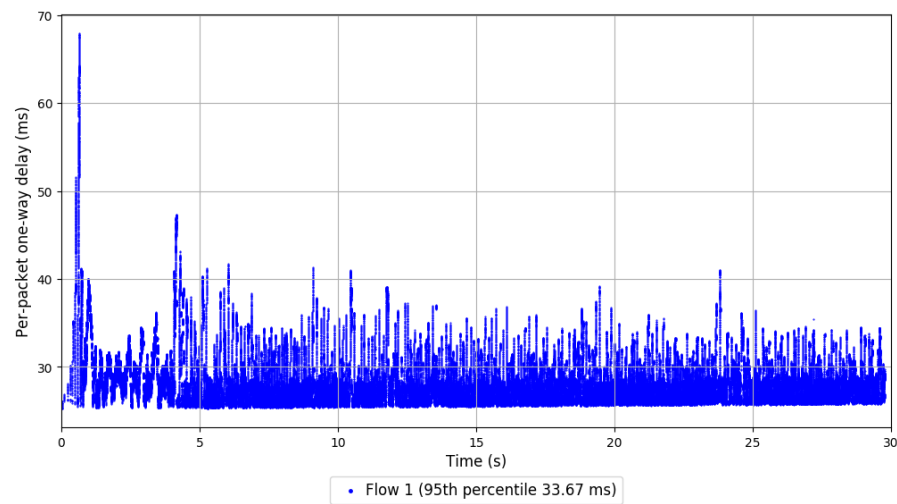
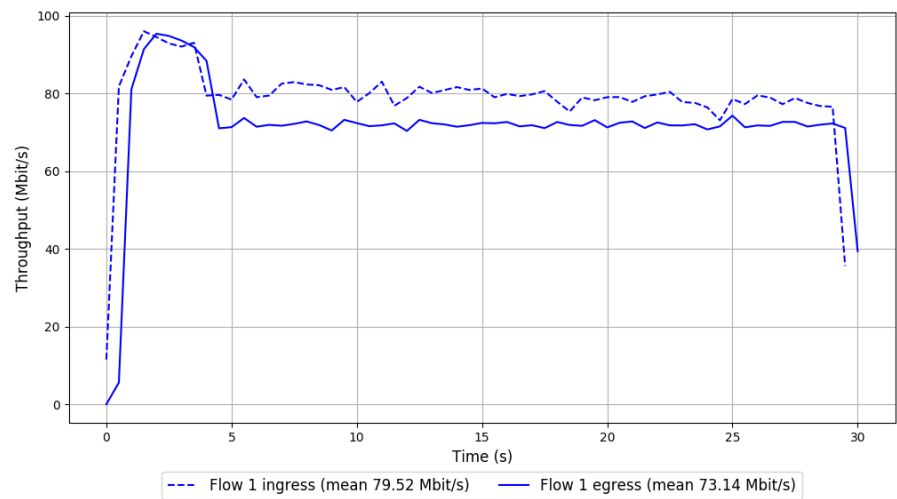


Run 4: Statistics of Indigo

Start at: 2018-09-25 06:10:05
End at: 2018-09-25 06:10:35
Local clock offset: -2.505 ms
Remote clock offset: -13.058 ms

Below is generated by plot.py at 2018-09-25 06:39:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 73.14 Mbit/s
95th percentile per-packet one-way delay: 33.672 ms
Loss rate: 8.02%
-- Flow 1:
Average throughput: 73.14 Mbit/s
95th percentile per-packet one-way delay: 33.672 ms
Loss rate: 8.02%

Run 4: Report of Indigo — Data Link

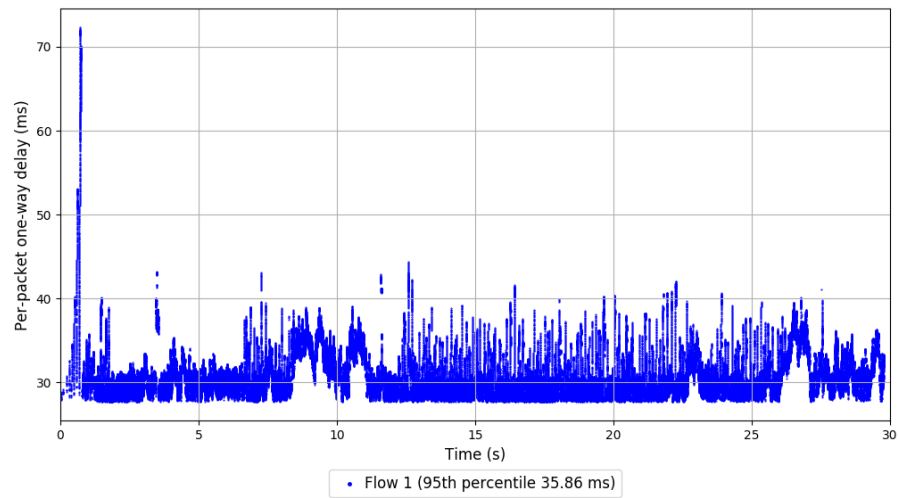
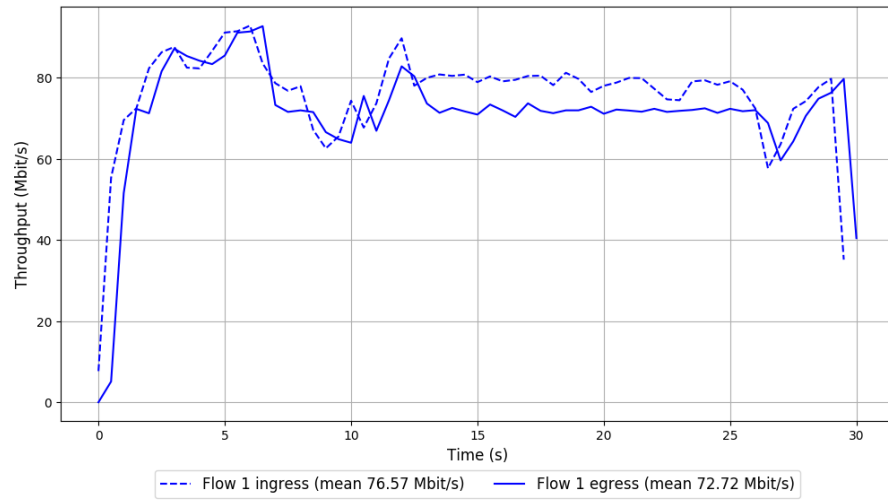


Run 5: Statistics of Indigo

Start at: 2018-09-25 06:33:01
End at: 2018-09-25 06:33:31
Local clock offset: 4.993 ms
Remote clock offset: -5.859 ms

Below is generated by plot.py at 2018-09-25 06:39:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.72 Mbit/s
95th percentile per-packet one-way delay: 35.859 ms
Loss rate: 5.02%
-- Flow 1:
Average throughput: 72.72 Mbit/s
95th percentile per-packet one-way delay: 35.859 ms
Loss rate: 5.02%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-96d2da3

Start at: 2018-09-25 04:49:48

End at: 2018-09-25 04:50:18

Local clock offset: 0.197 ms

Remote clock offset: 7.307 ms

Below is generated by plot.py at 2018-09-25 06:39:54

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.56 Mbit/s

95th percentile per-packet one-way delay: 178.332 ms

Loss rate: 26.77%

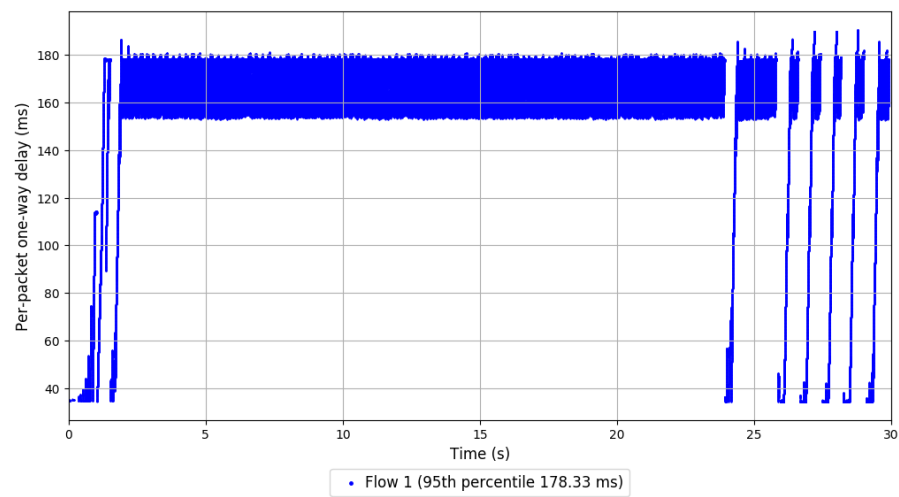
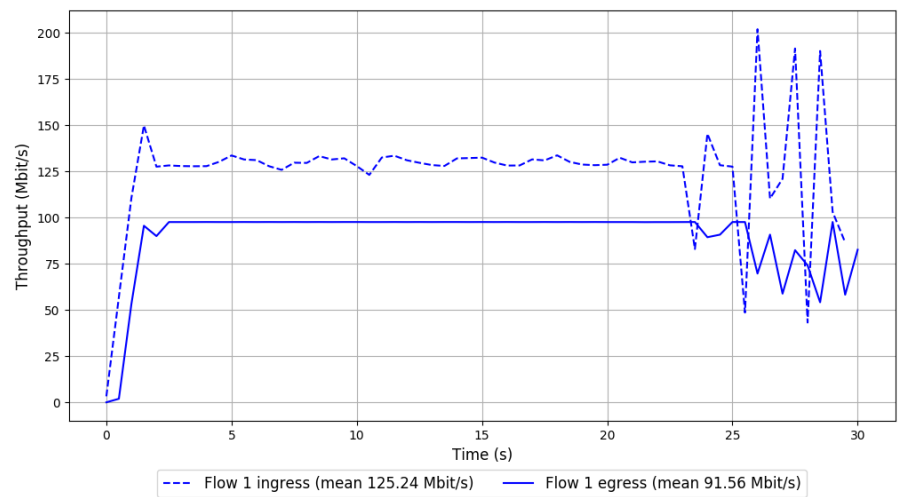
-- Flow 1:

Average throughput: 91.56 Mbit/s

95th percentile per-packet one-way delay: 178.332 ms

Loss rate: 26.77%

Run 1: Report of Indigo-96d2da3 — Data Link



Run 2: Statistics of Indigo-96d2da3

Start at: 2018-09-25 05:12:31

End at: 2018-09-25 05:13:01

Local clock offset: -2.534 ms

Remote clock offset: -1.0 ms

Below is generated by plot.py at 2018-09-25 06:39:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.24 Mbit/s

95th percentile per-packet one-way delay: 173.024 ms

Loss rate: 25.02%

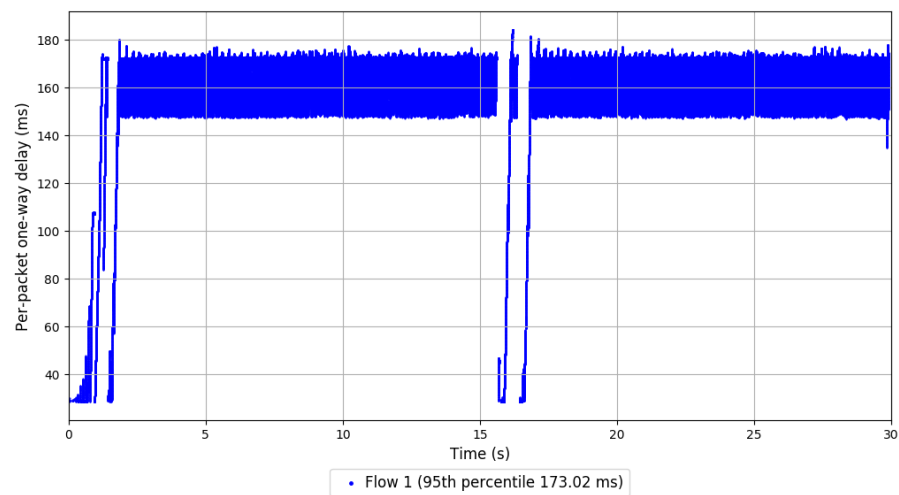
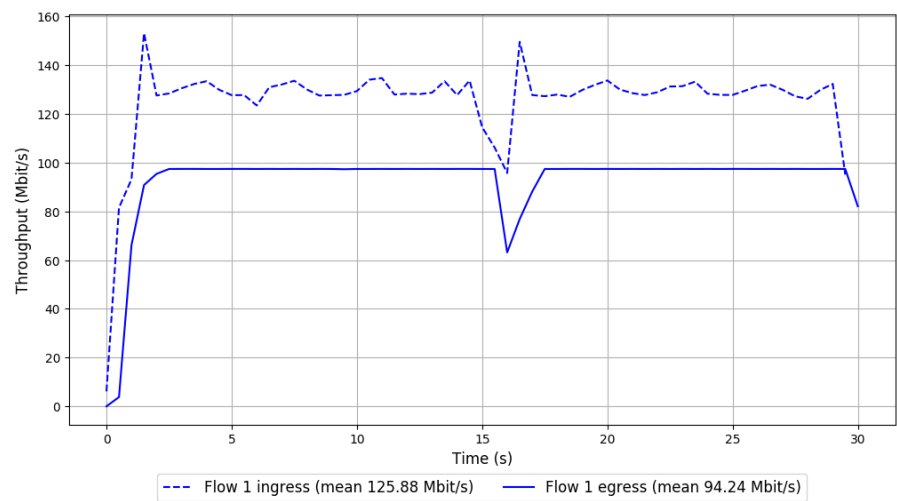
-- Flow 1:

Average throughput: 94.24 Mbit/s

95th percentile per-packet one-way delay: 173.024 ms

Loss rate: 25.02%

Run 2: Report of Indigo-96d2da3 — Data Link



Run 3: Statistics of Indigo-96d2da3

Start at: 2018-09-25 05:35:18

End at: 2018-09-25 05:35:48

Local clock offset: -6.389 ms

Remote clock offset: -8.416 ms

Below is generated by plot.py at 2018-09-25 06:40:21

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.73 Mbit/s

95th percentile per-packet one-way delay: 168.956 ms

Loss rate: 25.61%

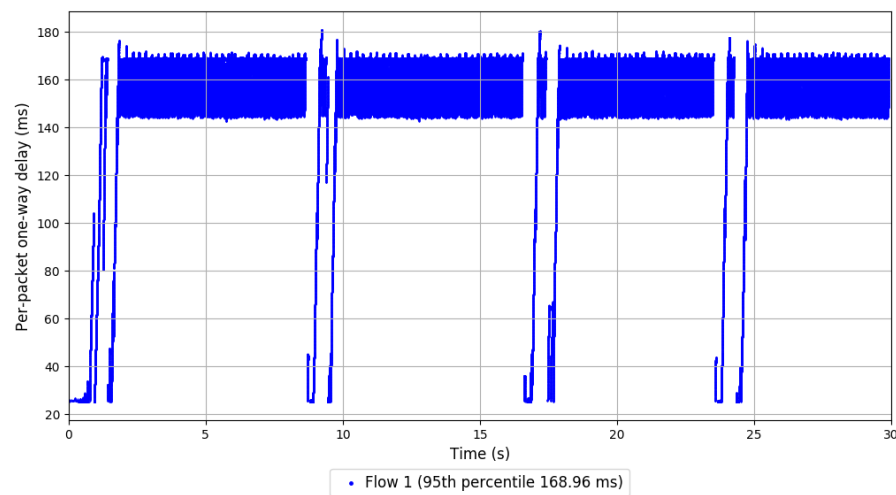
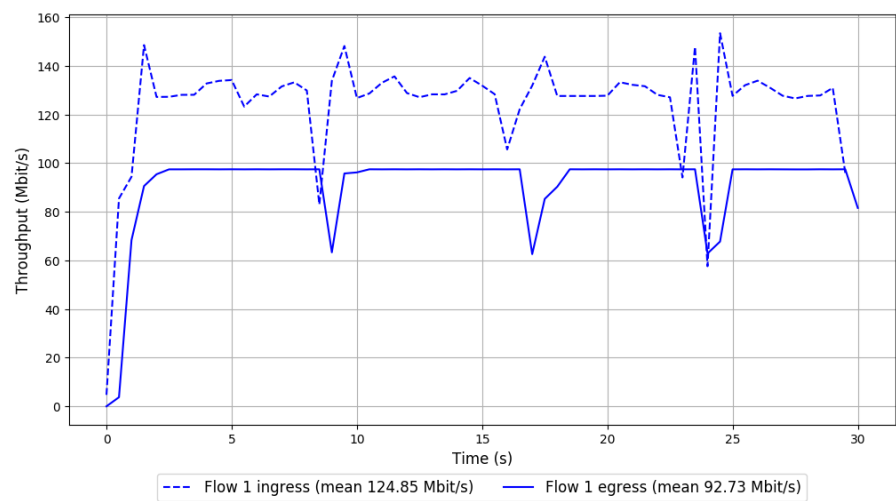
-- Flow 1:

Average throughput: 92.73 Mbit/s

95th percentile per-packet one-way delay: 168.956 ms

Loss rate: 25.61%

Run 3: Report of Indigo-96d2da3 — Data Link

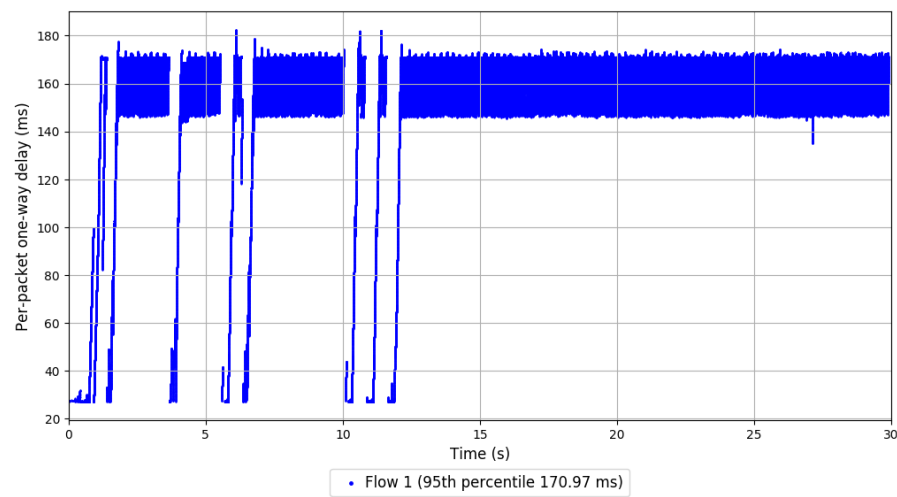
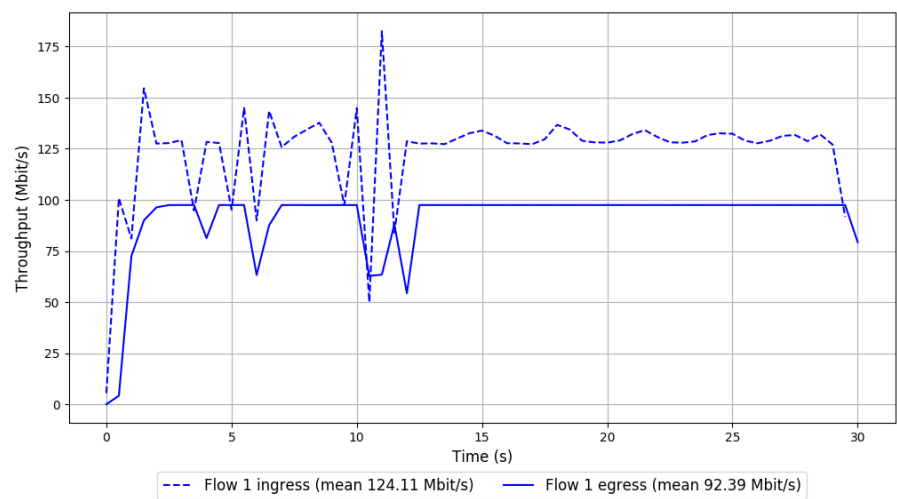


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-09-25 05:58:09
End at: 2018-09-25 05:58:39
Local clock offset: -2.427 ms
Remote clock offset: -8.517 ms

Below is generated by plot.py at 2018-09-25 06:40:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.39 Mbit/s
95th percentile per-packet one-way delay: 170.973 ms
Loss rate: 25.48%
-- Flow 1:
Average throughput: 92.39 Mbit/s
95th percentile per-packet one-way delay: 170.973 ms
Loss rate: 25.48%

Run 4: Report of Indigo-96d2da3 — Data Link

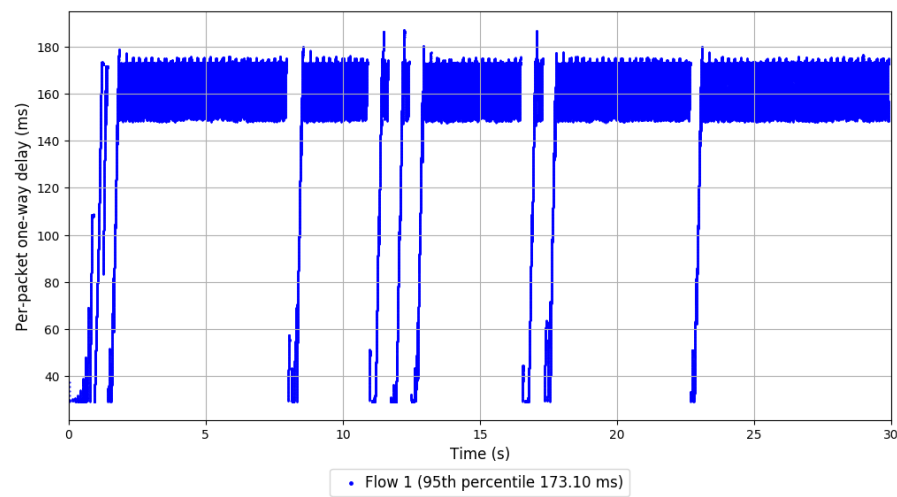
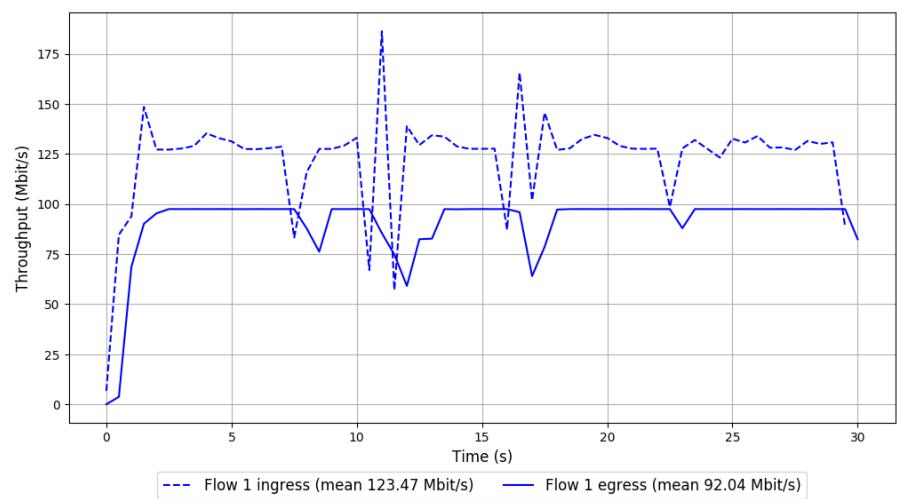


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-09-25 06:21:04
End at: 2018-09-25 06:21:34
Local clock offset: 3.559 ms
Remote clock offset: -5.181 ms

Below is generated by plot.py at 2018-09-25 06:40:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.04 Mbit/s
95th percentile per-packet one-way delay: 173.105 ms
Loss rate: 25.29%
-- Flow 1:
Average throughput: 92.04 Mbit/s
95th percentile per-packet one-way delay: 173.105 ms
Loss rate: 25.29%

Run 5: Report of Indigo-96d2da3 — Data Link

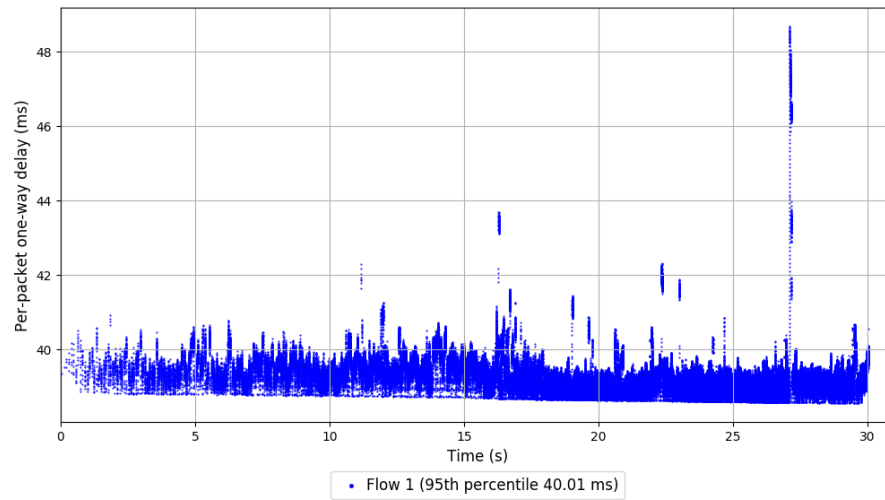
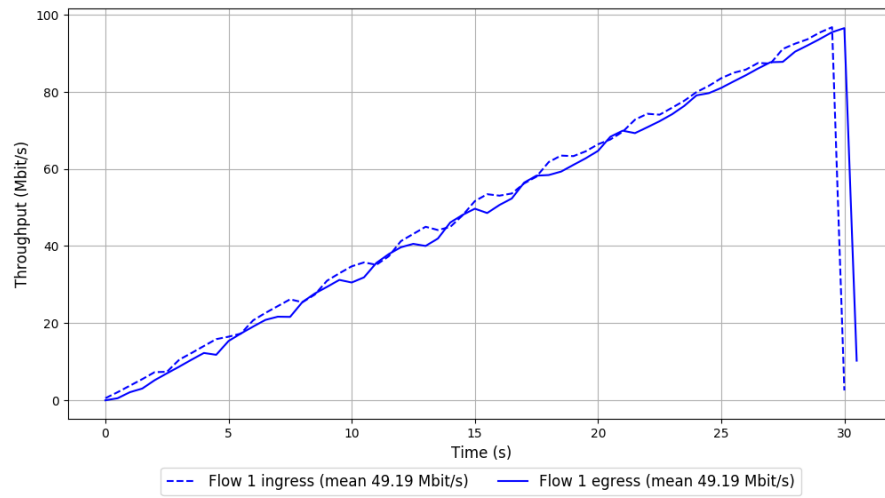


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-25 04:45:02
End at: 2018-09-25 04:45:32
Local clock offset: 2.205 ms
Remote clock offset: 10.692 ms

# Below is generated by plot.py at 2018-09-25 06:40:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.19 Mbit/s
95th percentile per-packet one-way delay: 40.014 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.19 Mbit/s
95th percentile per-packet one-way delay: 40.014 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-09-25 05:07:49

End at: 2018-09-25 05:08:19

Local clock offset: -2.255 ms

Remote clock offset: 3.876 ms

Below is generated by plot.py at 2018-09-25 06:40:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 48.70 Mbit/s

95th percentile per-packet one-way delay: 35.085 ms

Loss rate: 0.00%

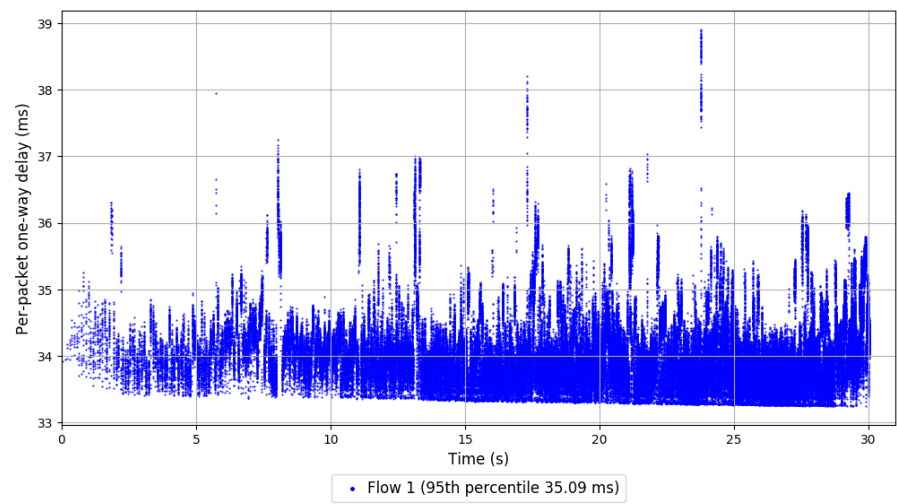
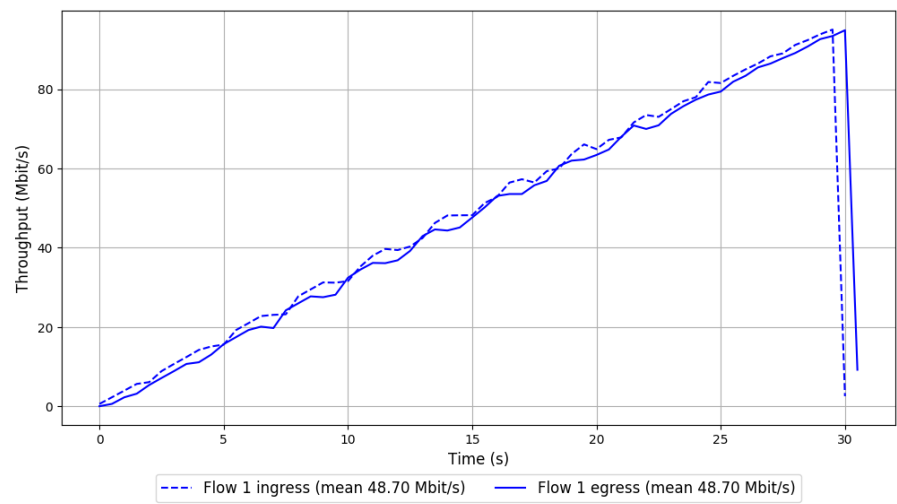
-- Flow 1:

Average throughput: 48.70 Mbit/s

95th percentile per-packet one-way delay: 35.085 ms

Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-09-25 05:30:35

End at: 2018-09-25 05:31:05

Local clock offset: -5.48 ms

Remote clock offset: 1.969 ms

Below is generated by plot.py at 2018-09-25 06:40:35

Datalink statistics

-- Total of 1 flow:

Average throughput: 49.40 Mbit/s

95th percentile per-packet one-way delay: 36.895 ms

Loss rate: 0.00%

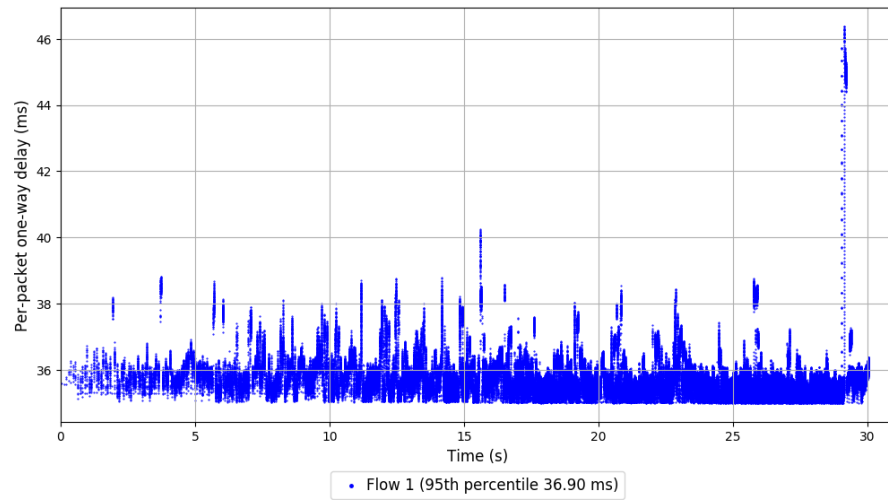
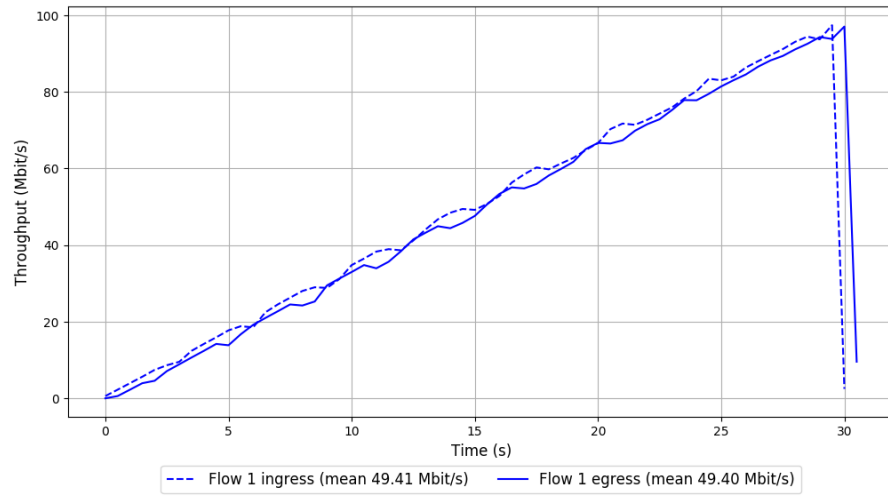
-- Flow 1:

Average throughput: 49.40 Mbit/s

95th percentile per-packet one-way delay: 36.895 ms

Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

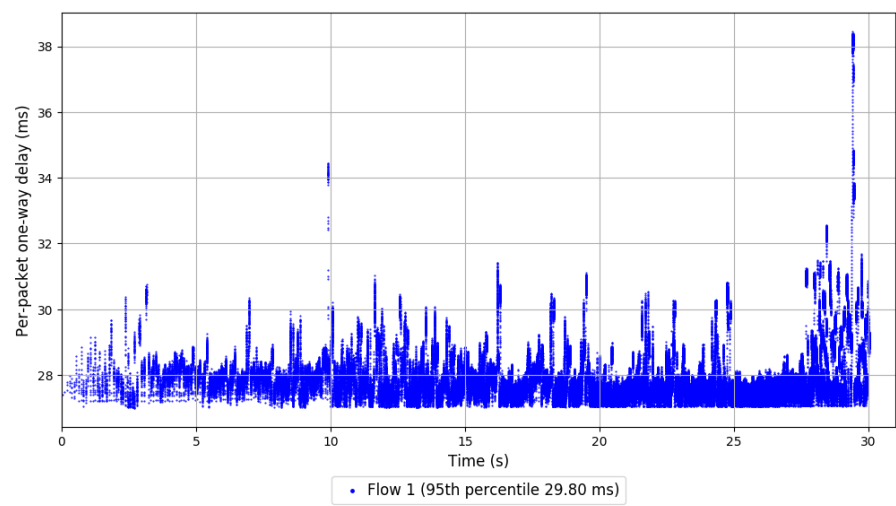
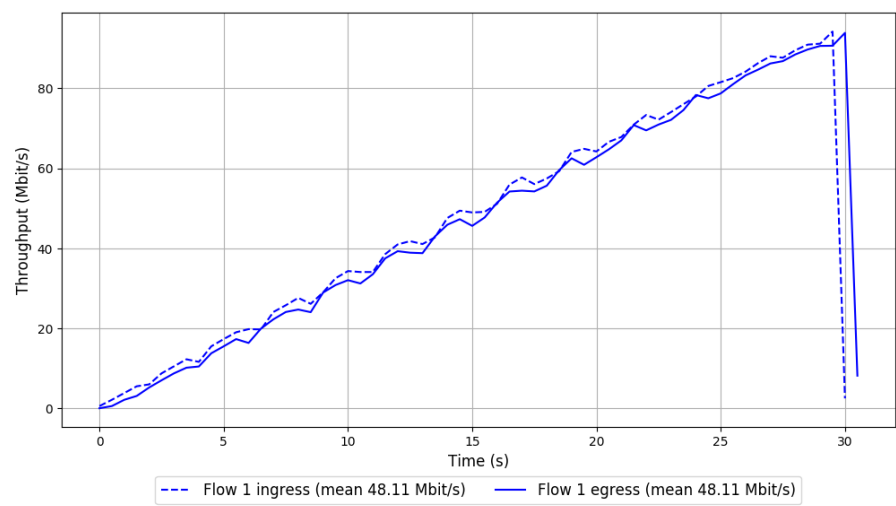


Run 4: Statistics of LEDBAT

Start at: 2018-09-25 05:53:24
End at: 2018-09-25 05:53:54
Local clock offset: -2.232 ms
Remote clock offset: -8.113 ms

Below is generated by plot.py at 2018-09-25 06:40:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 48.11 Mbit/s
95th percentile per-packet one-way delay: 29.802 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.11 Mbit/s
95th percentile per-packet one-way delay: 29.802 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

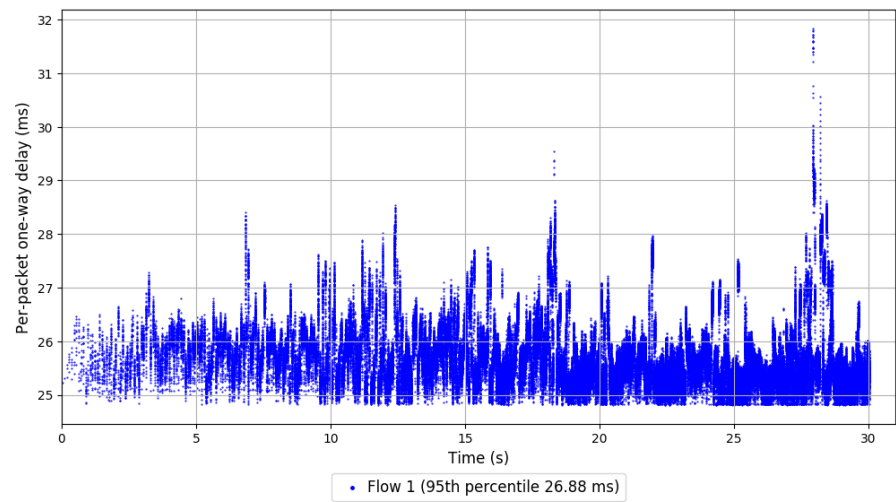
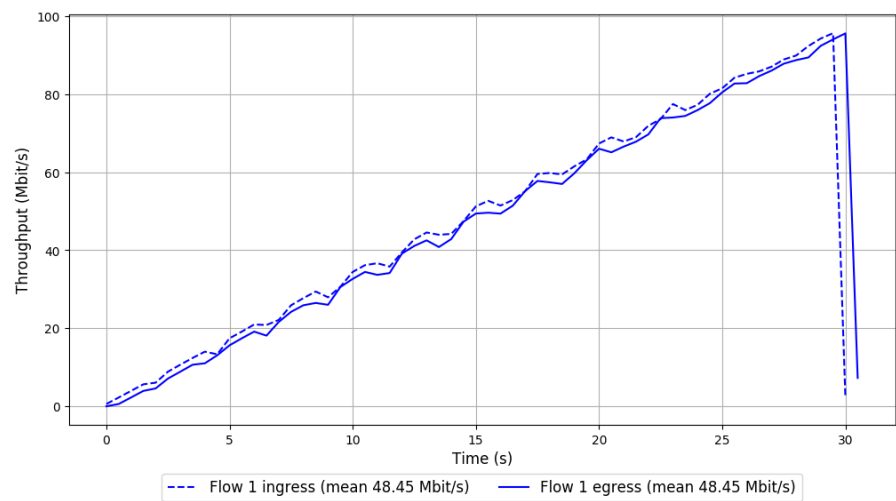


Run 5: Statistics of LEDBAT

Start at: 2018-09-25 06:16:19
End at: 2018-09-25 06:16:49
Local clock offset: 1.922 ms
Remote clock offset: -11.19 ms

Below is generated by plot.py at 2018-09-25 06:40:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 48.45 Mbit/s
95th percentile per-packet one-way delay: 26.881 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.45 Mbit/s
95th percentile per-packet one-way delay: 26.881 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of Indigo-Muses

Start at: 2018-09-25 04:59:19

End at: 2018-09-25 04:59:49

Local clock offset: -1.954 ms

Remote clock offset: 1.486 ms

Below is generated by plot.py at 2018-09-25 06:41:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.33 Mbit/s

95th percentile per-packet one-way delay: 35.785 ms

Loss rate: 0.00%

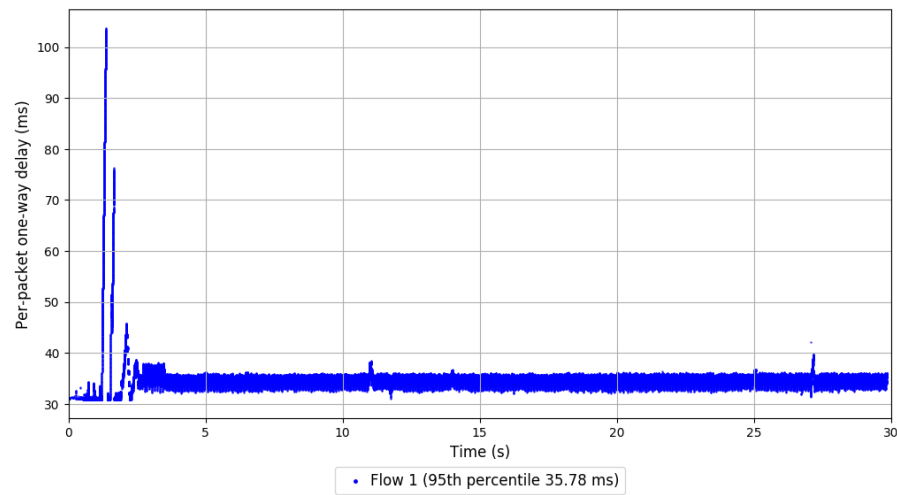
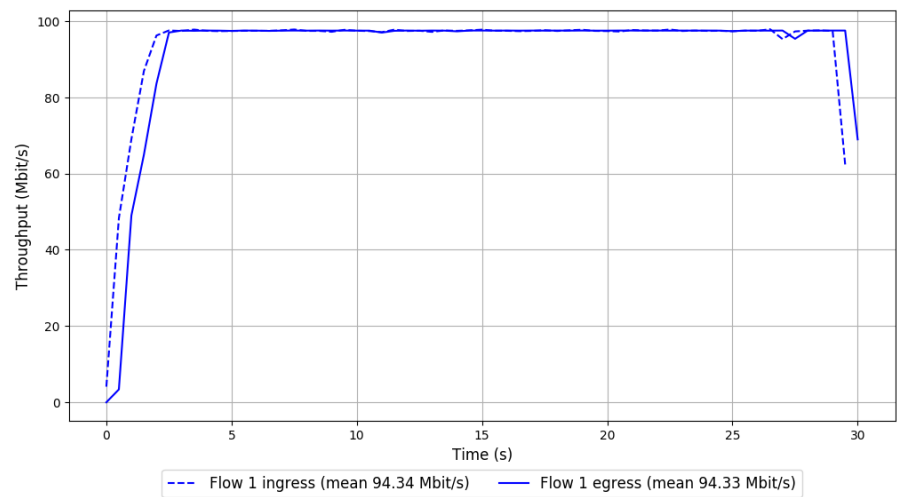
-- Flow 1:

Average throughput: 94.33 Mbit/s

95th percentile per-packet one-way delay: 35.785 ms

Loss rate: 0.00%

Run 1: Report of Indigo-Muses — Data Link



Run 2: Statistics of Indigo-Muses

Start at: 2018-09-25 05:22:00

End at: 2018-09-25 05:22:30

Local clock offset: -3.149 ms

Remote clock offset: 3.936 ms

Below is generated by plot.py at 2018-09-25 06:41:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.24 Mbit/s

95th percentile per-packet one-way delay: 40.023 ms

Loss rate: 0.00%

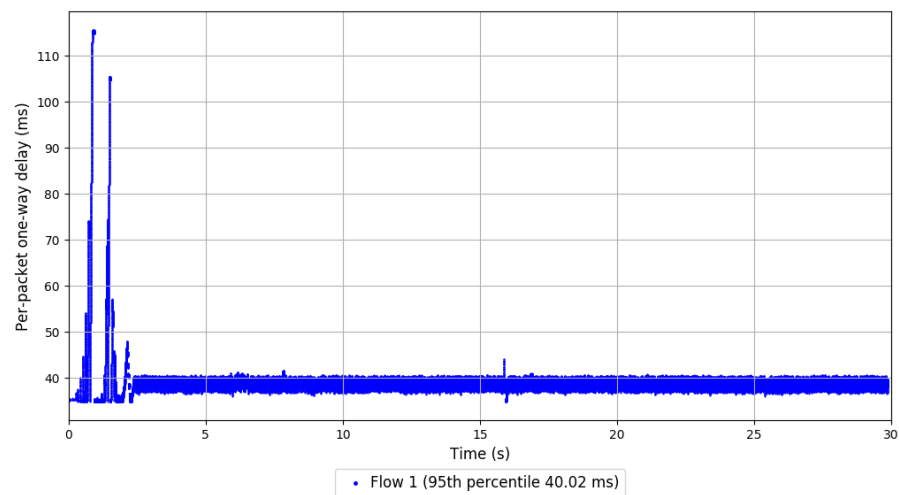
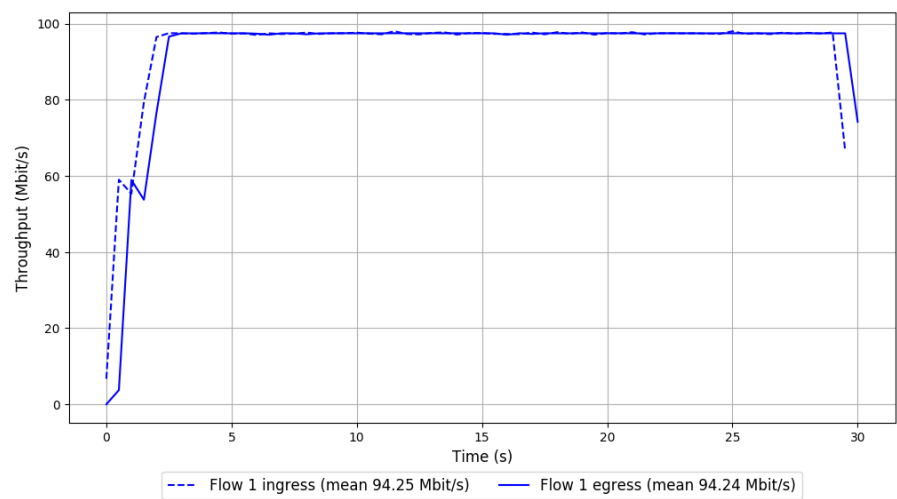
-- Flow 1:

Average throughput: 94.24 Mbit/s

95th percentile per-packet one-way delay: 40.023 ms

Loss rate: 0.00%

Run 2: Report of Indigo-Muses — Data Link

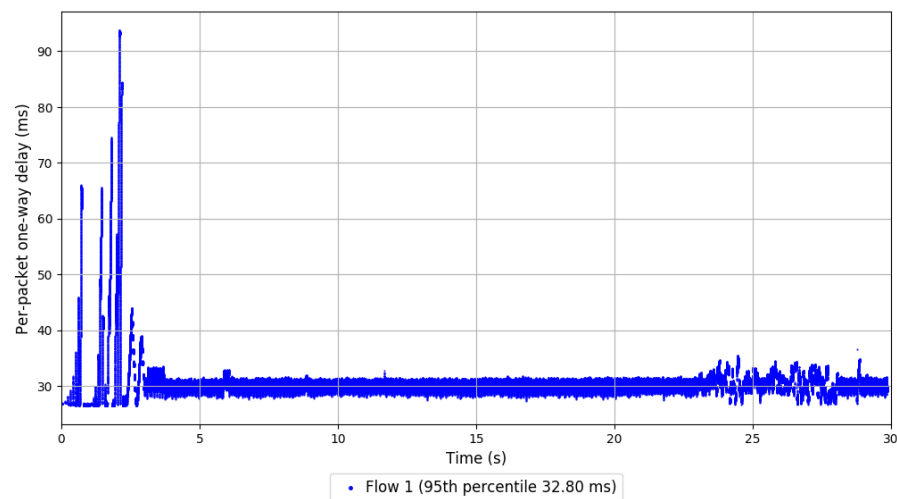
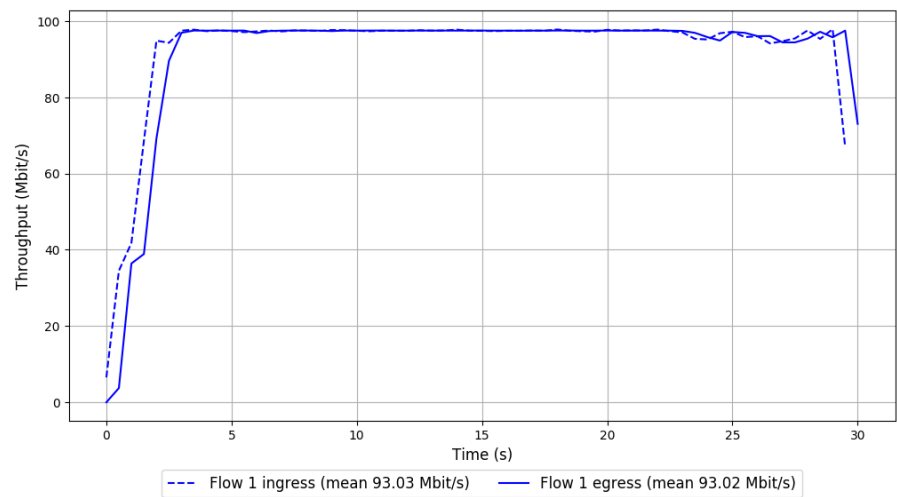


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-25 05:44:47
End at: 2018-09-25 05:45:17
Local clock offset: -4.248 ms
Remote clock offset: -7.939 ms

Below is generated by plot.py at 2018-09-25 06:41:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.02 Mbit/s
95th percentile per-packet one-way delay: 32.797 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 93.02 Mbit/s
95th percentile per-packet one-way delay: 32.797 ms
Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link

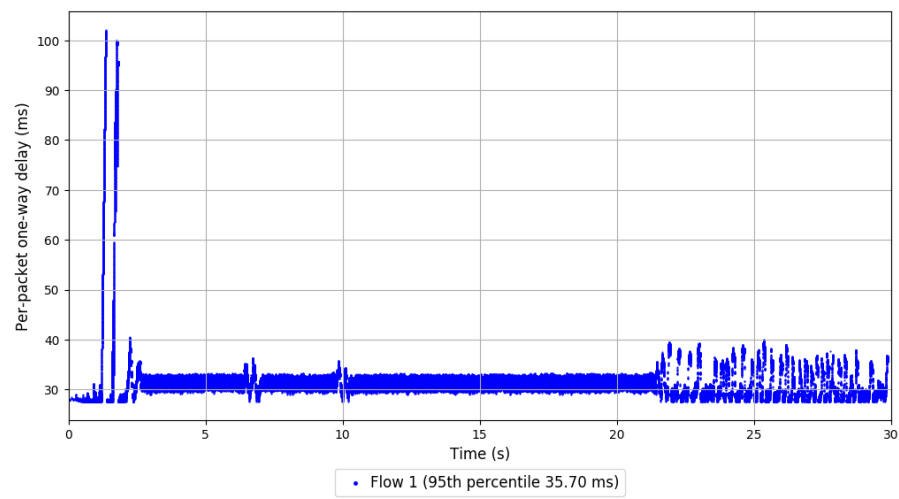
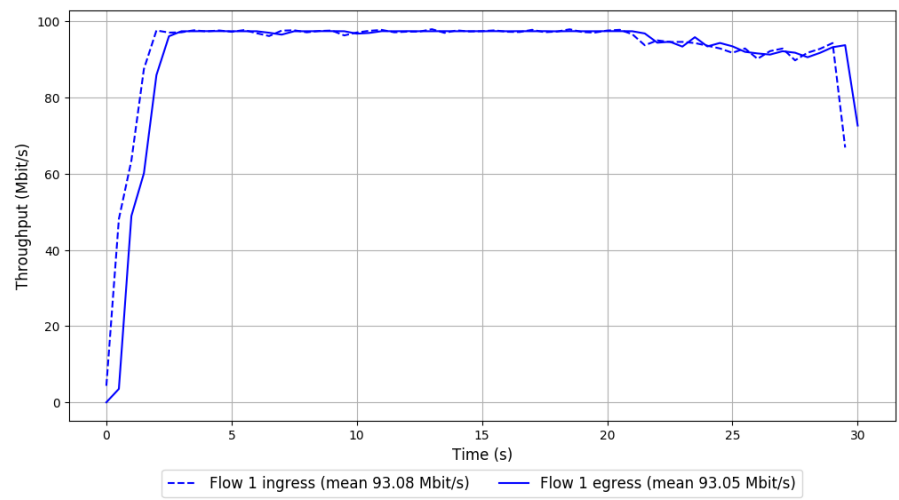


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-25 06:07:41
End at: 2018-09-25 06:08:11
Local clock offset: -3.237 ms
Remote clock offset: -9.908 ms

Below is generated by plot.py at 2018-09-25 06:41:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.05 Mbit/s
95th percentile per-packet one-way delay: 35.700 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 93.05 Mbit/s
95th percentile per-packet one-way delay: 35.700 ms
Loss rate: 0.00%

Run 4: Report of Indigo-Muses — Data Link

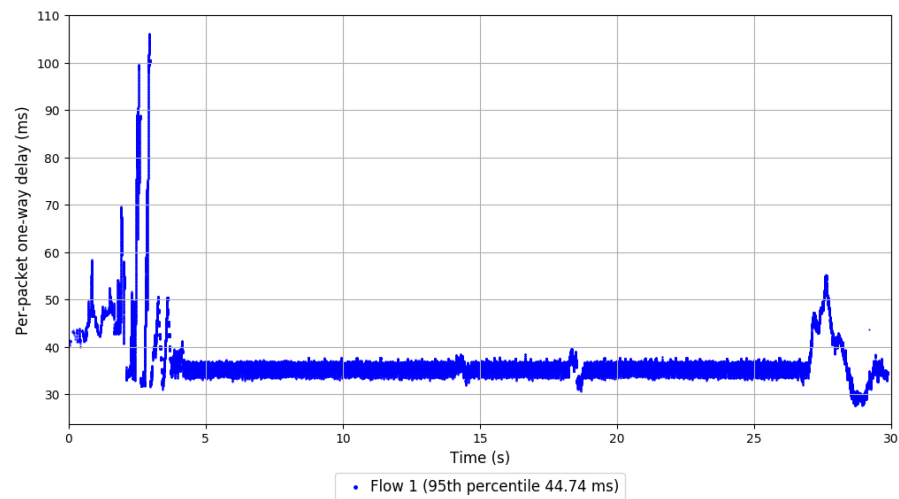
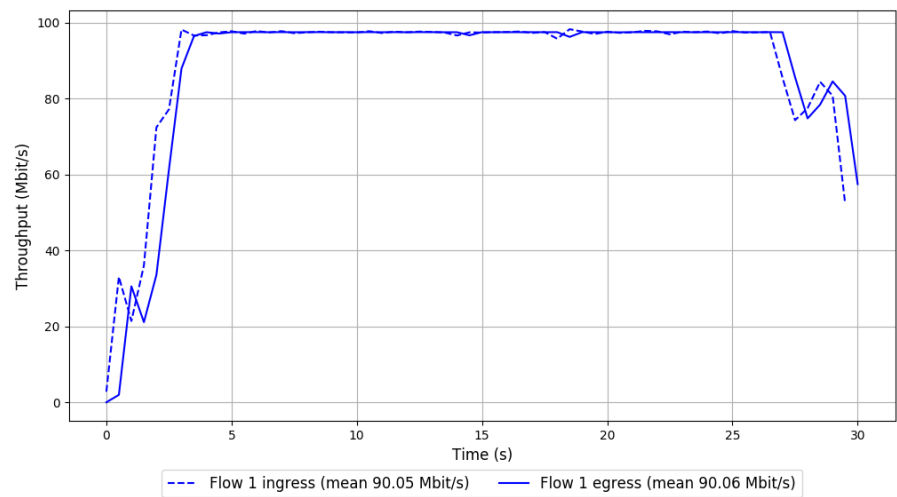


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-25 06:30:35
End at: 2018-09-25 06:31:05
Local clock offset: 5.065 ms
Remote clock offset: -8.746 ms

Below is generated by plot.py at 2018-09-25 06:41:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.06 Mbit/s
95th percentile per-packet one-way delay: 44.739 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 90.06 Mbit/s
95th percentile per-packet one-way delay: 44.739 ms
Loss rate: 0.00%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

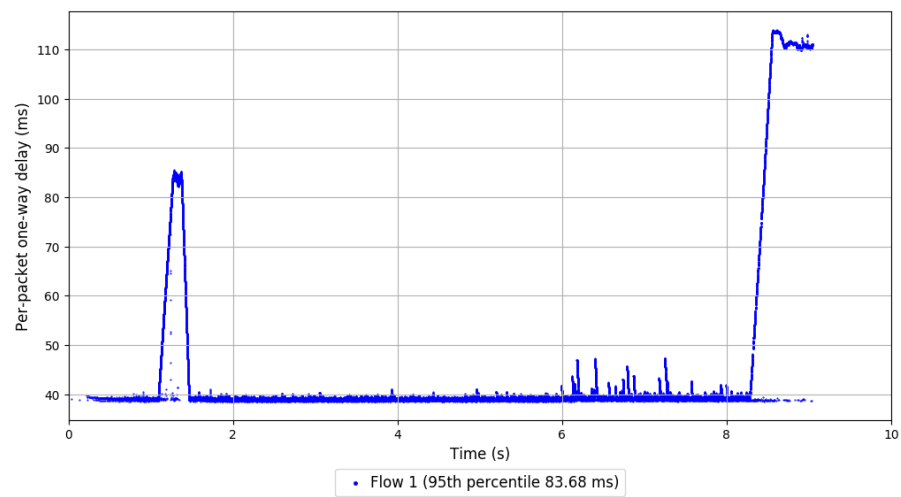
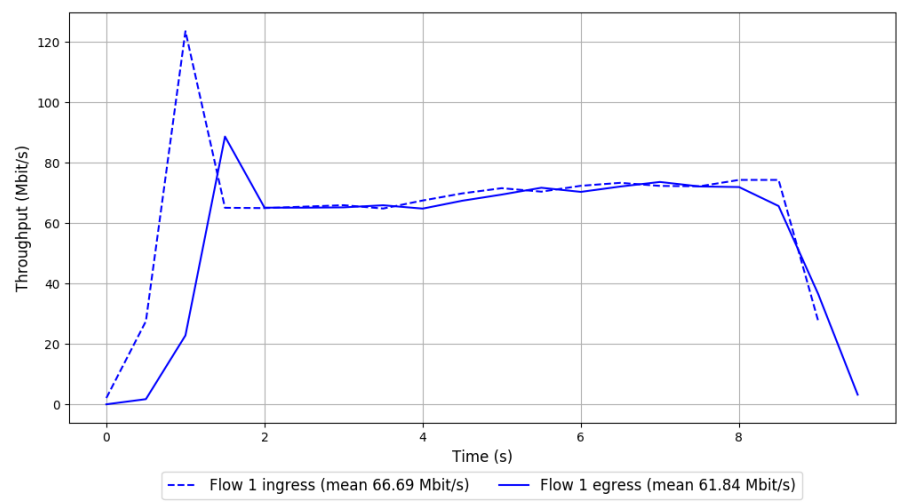
Start at: 2018-09-25 04:58:09

End at: 2018-09-25 04:58:39

Local clock offset: -2.421 ms

Remote clock offset: 9.58 ms

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

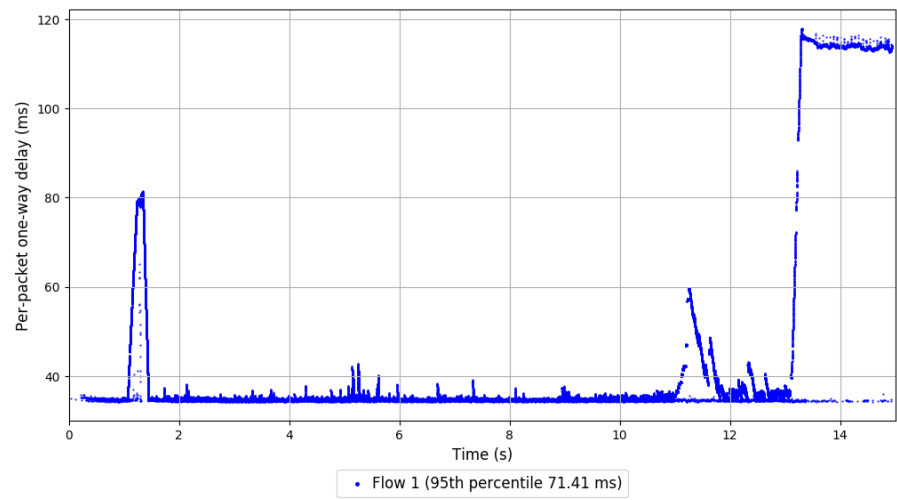
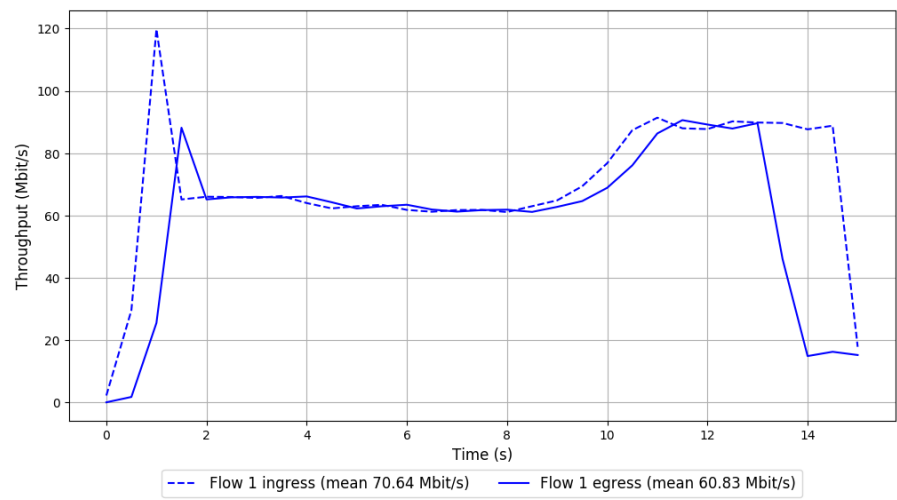
Start at: 2018-09-25 05:20:49

End at: 2018-09-25 05:21:19

Local clock offset: -3.188 ms

Remote clock offset: 3.639 ms

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-25 05:43:37

End at: 2018-09-25 05:44:07

Local clock offset: -4.787 ms

Remote clock offset: -6.07 ms

Below is generated by plot.py at 2018-09-25 06:41:42

Datalink statistics

-- Total of 1 flow:

Average throughput: 38.87 Mbit/s

95th percentile per-packet one-way delay: 110.163 ms

Loss rate: 31.57%

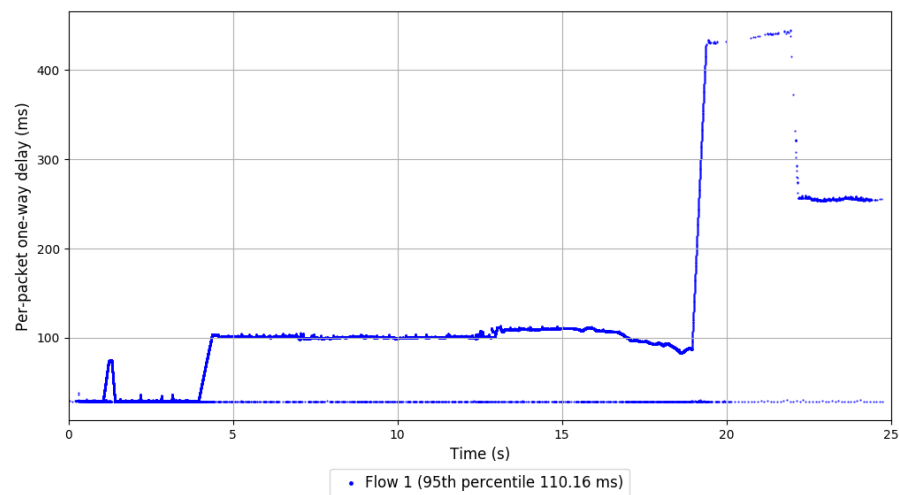
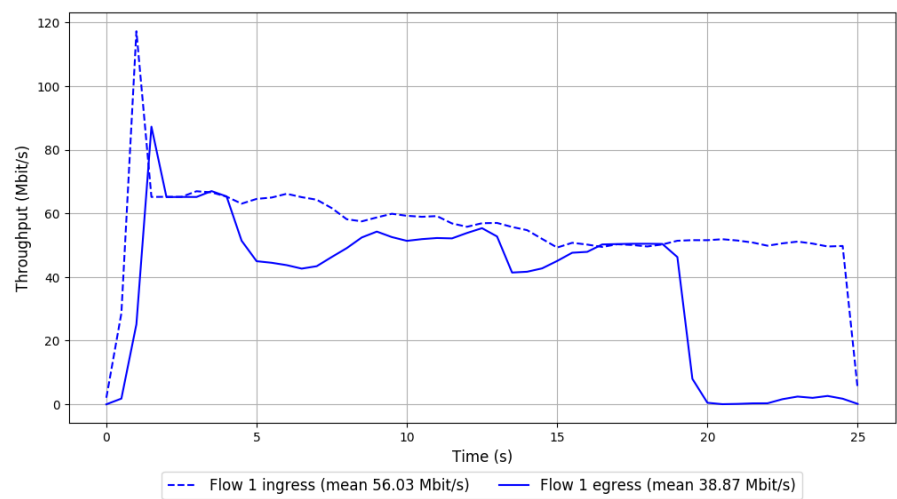
-- Flow 1:

Average throughput: 38.87 Mbit/s

95th percentile per-packet one-way delay: 110.163 ms

Loss rate: 31.57%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-25 06:06:30

End at: 2018-09-25 06:07:00

Local clock offset: -3.137 ms

Remote clock offset: -12.763 ms

Below is generated by plot.py at 2018-09-25 06:41:45

Datalink statistics

-- Total of 1 flow:

Average throughput: 66.22 Mbit/s

95th percentile per-packet one-way delay: 33.151 ms

Loss rate: 15.01%

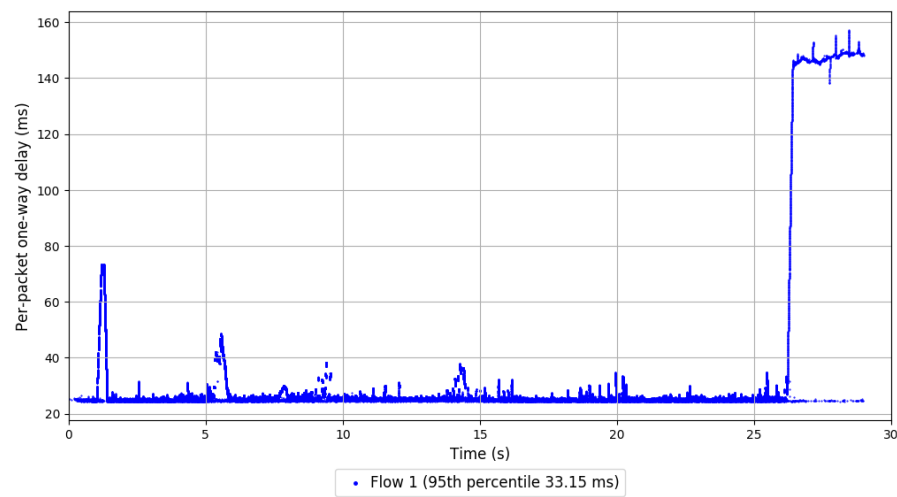
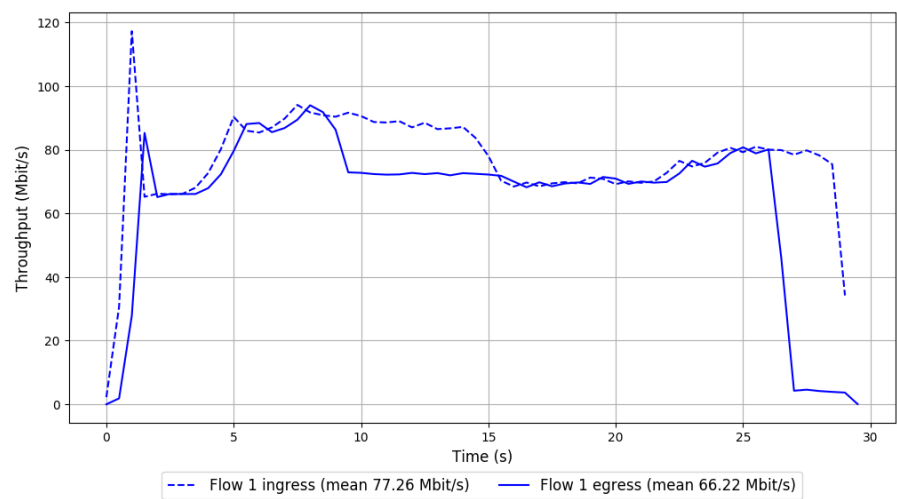
-- Flow 1:

Average throughput: 66.22 Mbit/s

95th percentile per-packet one-way delay: 33.151 ms

Loss rate: 15.01%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-25 06:29:23

End at: 2018-09-25 06:29:53

Local clock offset: 4.851 ms

Remote clock offset: -8.322 ms

Below is generated by plot.py at 2018-09-25 06:41:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 69.80 Mbit/s

95th percentile per-packet one-way delay: 63.624 ms

Loss rate: 9.33%

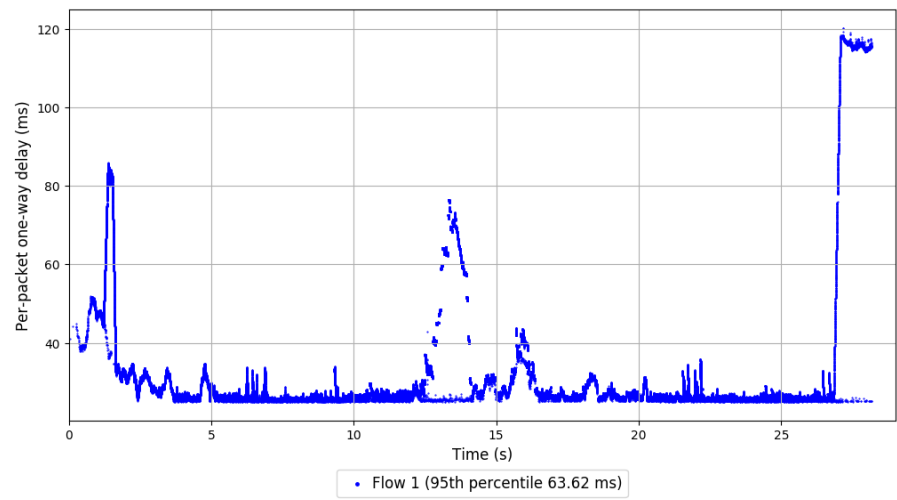
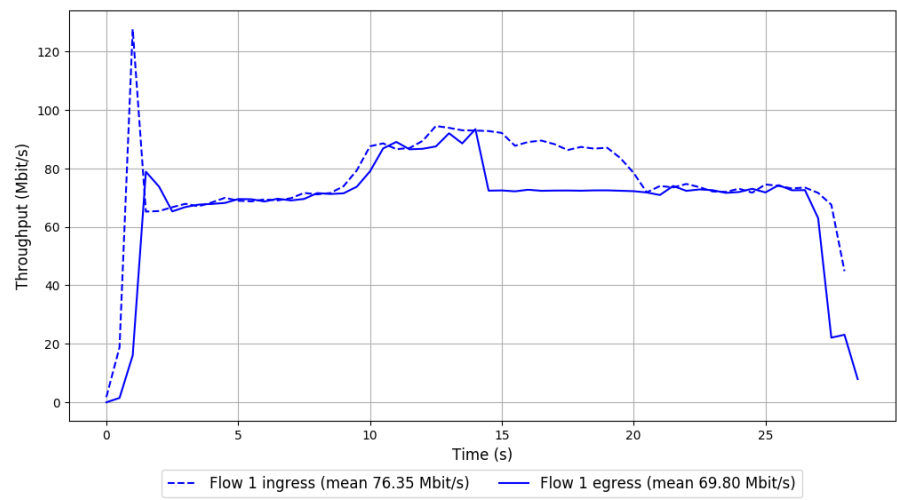
-- Flow 1:

Average throughput: 69.80 Mbit/s

95th percentile per-packet one-way delay: 63.624 ms

Loss rate: 9.33%

Run 5: Report of PCC-Allegro — Data Link

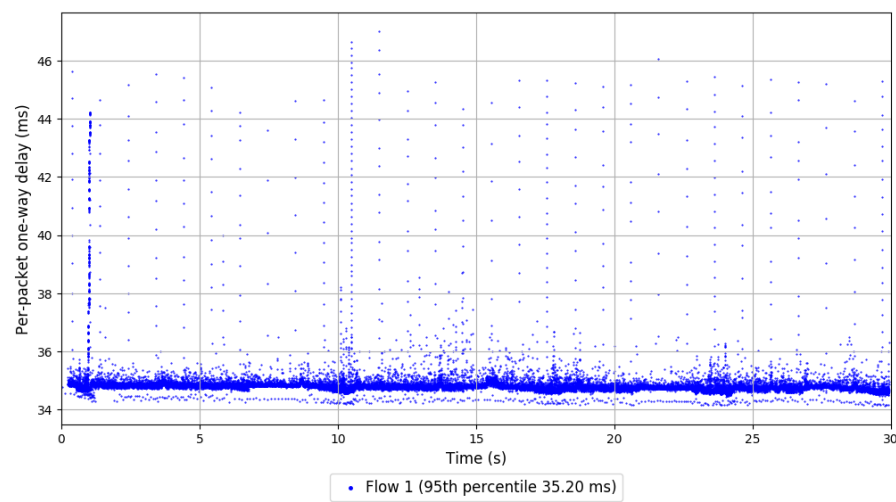
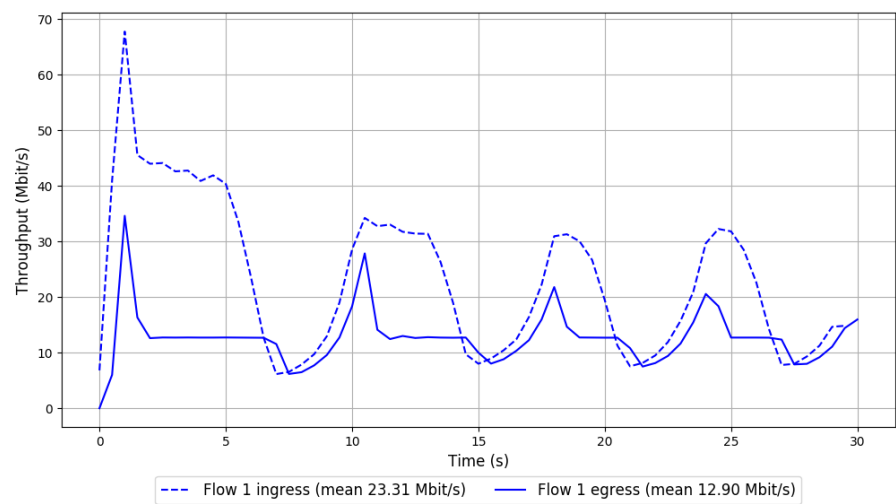


```
Run 1: Statistics of PCC-Expr

Start at: 2018-09-25 04:54:35
End at: 2018-09-25 04:55:05
Local clock offset: -2.5 ms
Remote clock offset: 6.749 ms

# Below is generated by plot.py at 2018-09-25 06:41:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 35.201 ms
Loss rate: 44.67%
-- Flow 1:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 35.201 ms
Loss rate: 44.67%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-09-25 05:17:15

End at: 2018-09-25 05:17:45

Local clock offset: -2.341 ms

Remote clock offset: 3.057 ms

Below is generated by plot.py at 2018-09-25 06:41:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 12.79 Mbit/s

95th percentile per-packet one-way delay: 33.761 ms

Loss rate: 47.74%

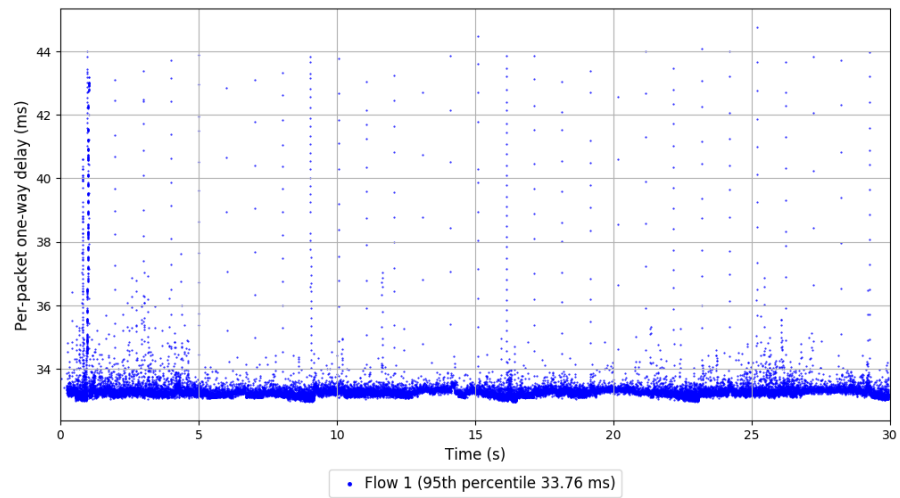
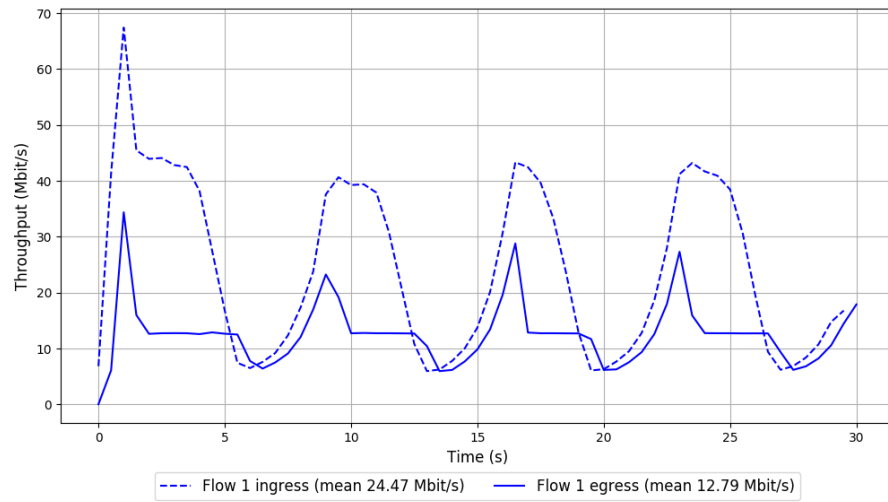
-- Flow 1:

Average throughput: 12.79 Mbit/s

95th percentile per-packet one-way delay: 33.761 ms

Loss rate: 47.74%

Run 2: Report of PCC-Expr — Data Link

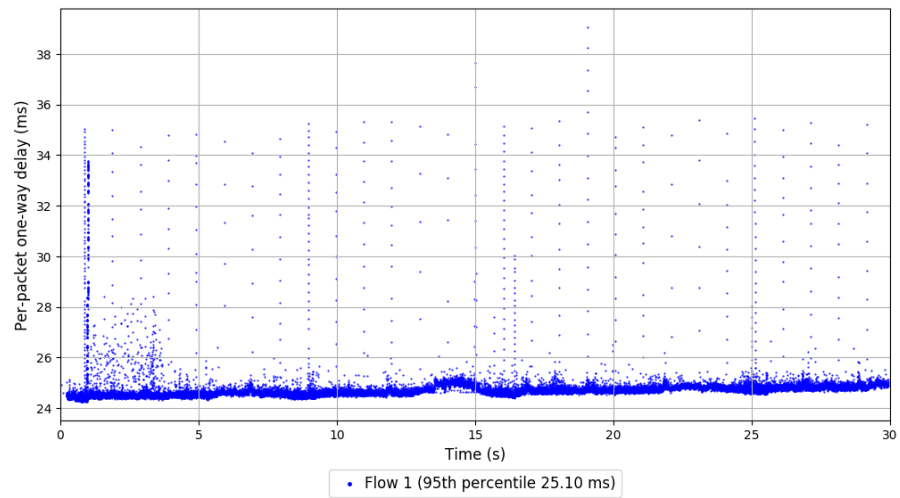
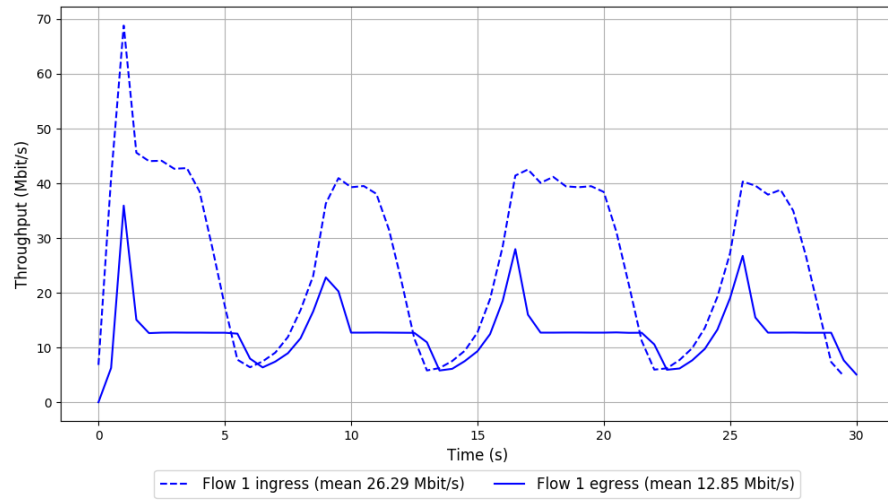


Run 3: Statistics of PCC-Expr

Start at: 2018-09-25 05:40:02
End at: 2018-09-25 05:40:32
Local clock offset: -7.248 ms
Remote clock offset: -10.345 ms

Below is generated by plot.py at 2018-09-25 06:41:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.85 Mbit/s
95th percentile per-packet one-way delay: 25.100 ms
Loss rate: 51.11%
-- Flow 1:
Average throughput: 12.85 Mbit/s
95th percentile per-packet one-way delay: 25.100 ms
Loss rate: 51.11%

Run 3: Report of PCC-Expr — Data Link

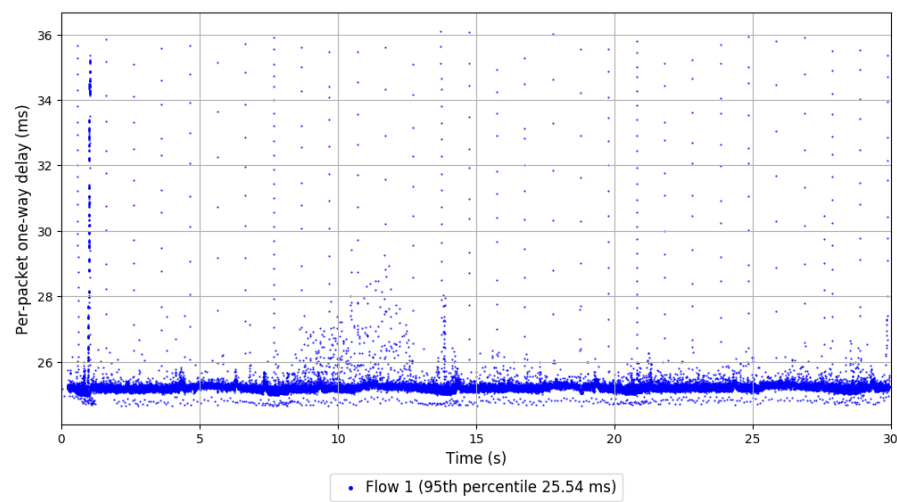
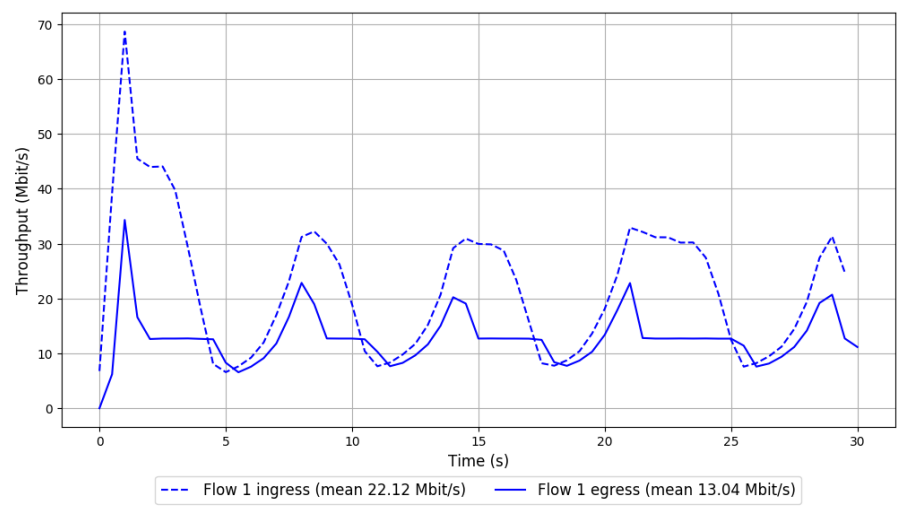


```
Run 4: Statistics of PCC-Expr

Start at: 2018-09-25 06:02:55
End at: 2018-09-25 06:03:25
Local clock offset: -2.662 ms
Remote clock offset: -11.859 ms

# Below is generated by plot.py at 2018-09-25 06:41:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.04 Mbit/s
95th percentile per-packet one-way delay: 25.536 ms
Loss rate: 41.04%
-- Flow 1:
Average throughput: 13.04 Mbit/s
95th percentile per-packet one-way delay: 25.536 ms
Loss rate: 41.04%
```

Run 4: Report of PCC-Expr — Data Link

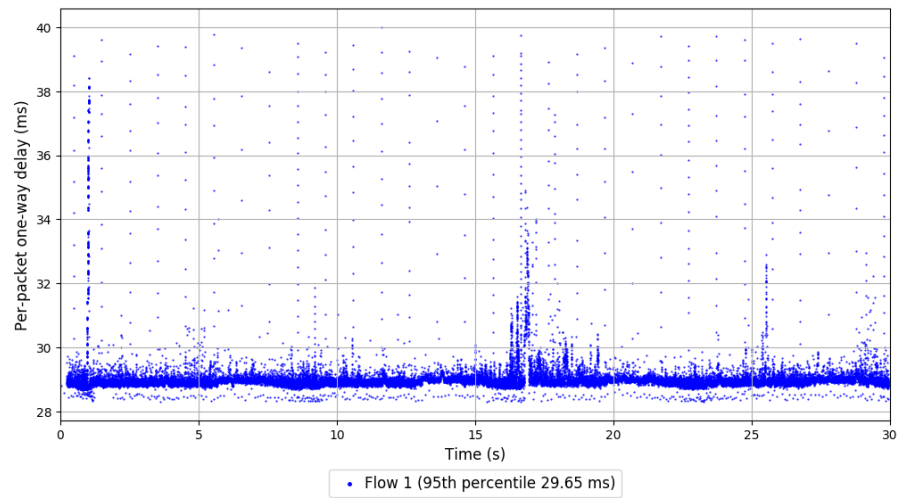
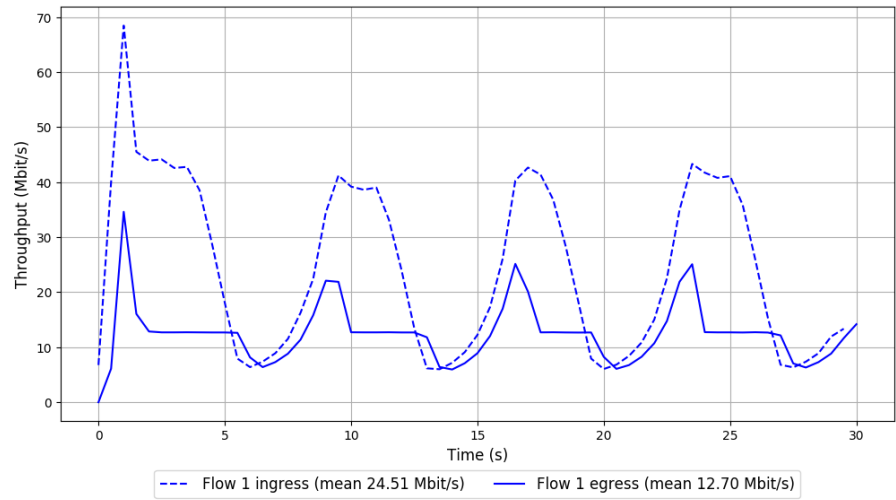


Run 5: Statistics of PCC-Expr

Start at: 2018-09-25 06:25:50
End at: 2018-09-25 06:26:20
Local clock offset: 4.681 ms
Remote clock offset: -5.211 ms

Below is generated by plot.py at 2018-09-25 06:41:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 12.70 Mbit/s
95th percentile per-packet one-way delay: 29.651 ms
Loss rate: 48.18%
-- Flow 1:
Average throughput: 12.70 Mbit/s
95th percentile per-packet one-way delay: 29.651 ms
Loss rate: 48.18%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-09-25 04:56:56

End at: 2018-09-25 04:57:26

Local clock offset: -3.291 ms

Remote clock offset: 5.683 ms

Below is generated by plot.py at 2018-09-25 06:42:26

Datalink statistics

-- Total of 1 flow:

Average throughput: 62.50 Mbit/s

95th percentile per-packet one-way delay: 92.820 ms

Loss rate: 0.03%

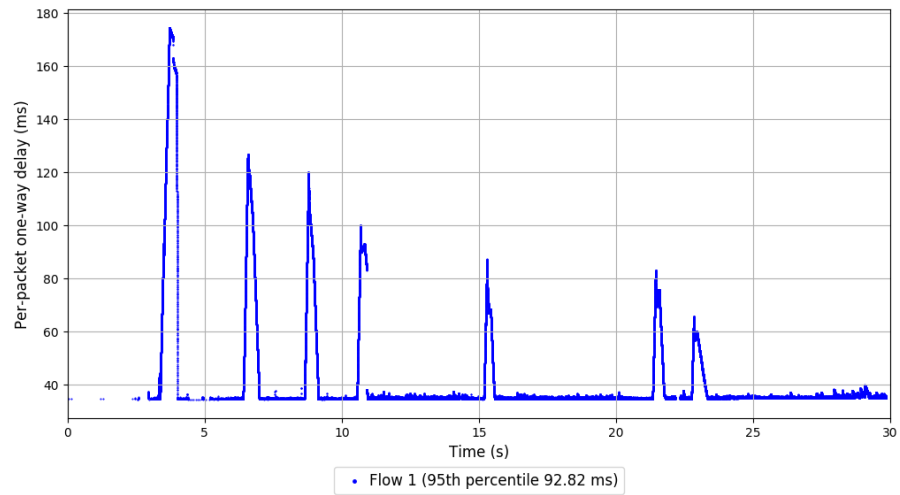
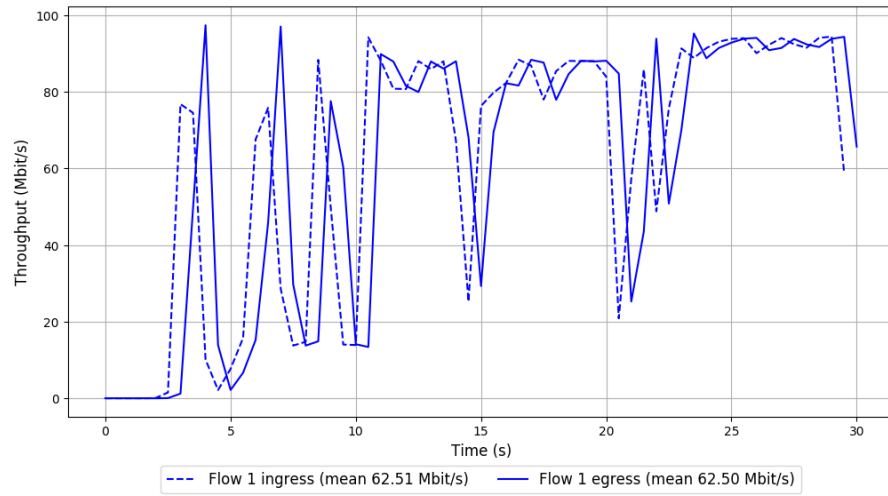
-- Flow 1:

Average throughput: 62.50 Mbit/s

95th percentile per-packet one-way delay: 92.820 ms

Loss rate: 0.03%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-09-25 05:19:36

End at: 2018-09-25 05:20:06

Local clock offset: -2.943 ms

Remote clock offset: 3.846 ms

Below is generated by plot.py at 2018-09-25 06:42:29

Datalink statistics

-- Total of 1 flow:

Average throughput: 66.55 Mbit/s

95th percentile per-packet one-way delay: 113.466 ms

Loss rate: 0.13%

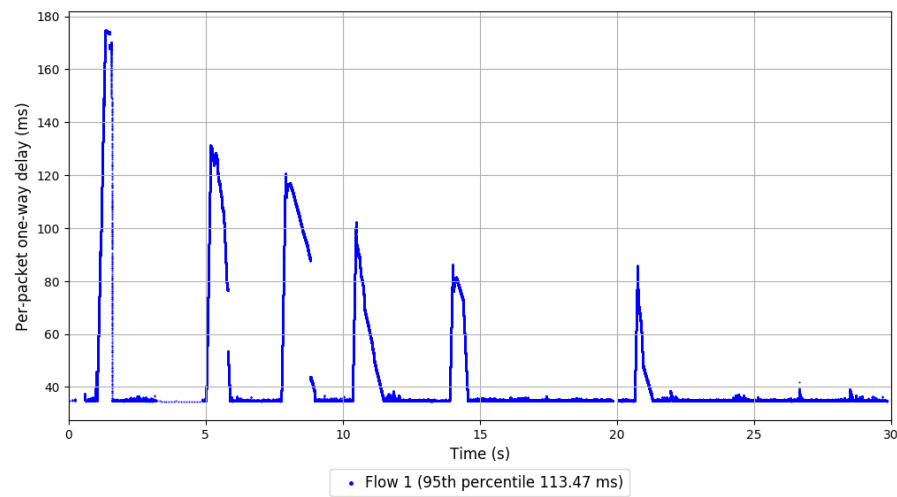
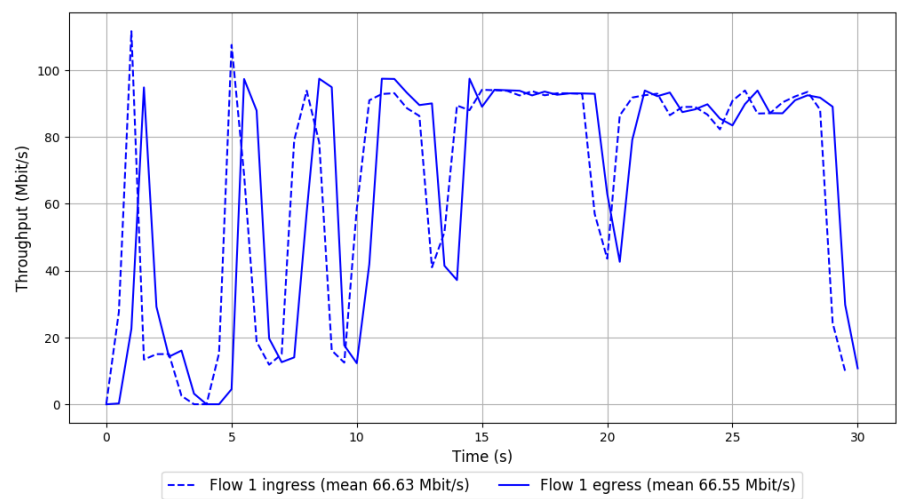
-- Flow 1:

Average throughput: 66.55 Mbit/s

95th percentile per-packet one-way delay: 113.466 ms

Loss rate: 0.13%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-09-25 05:42:24

End at: 2018-09-25 05:42:54

Local clock offset: -5.578 ms

Remote clock offset: 0.944 ms

Below is generated by plot.py at 2018-09-25 06:42:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 69.73 Mbit/s

95th percentile per-packet one-way delay: 112.129 ms

Loss rate: 0.13%

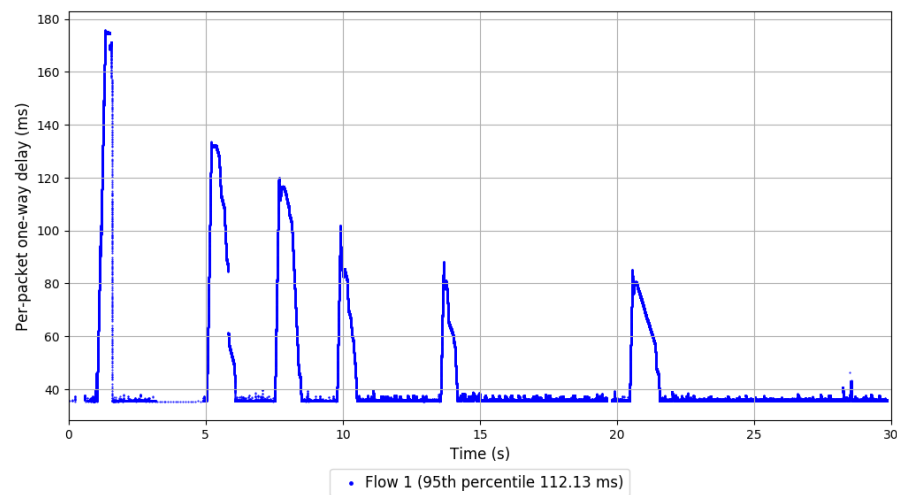
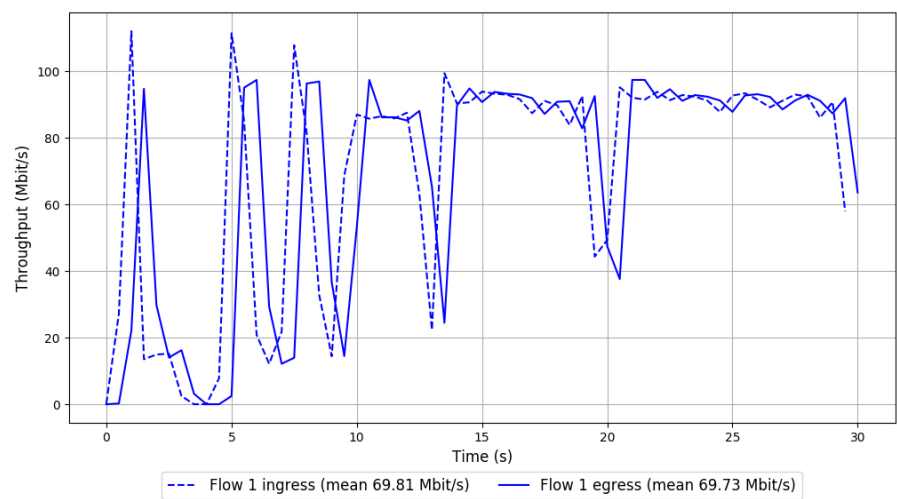
-- Flow 1:

Average throughput: 69.73 Mbit/s

95th percentile per-packet one-way delay: 112.129 ms

Loss rate: 0.13%

Run 3: Report of QUIC Cubic — Data Link

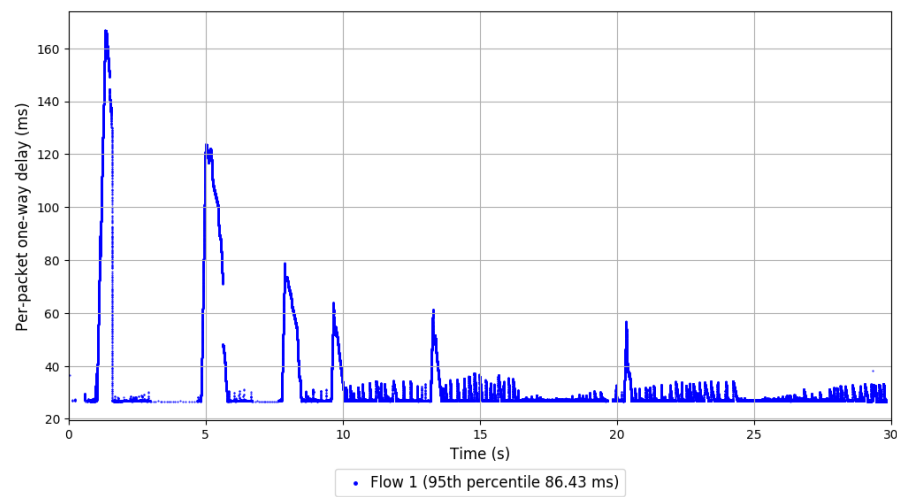
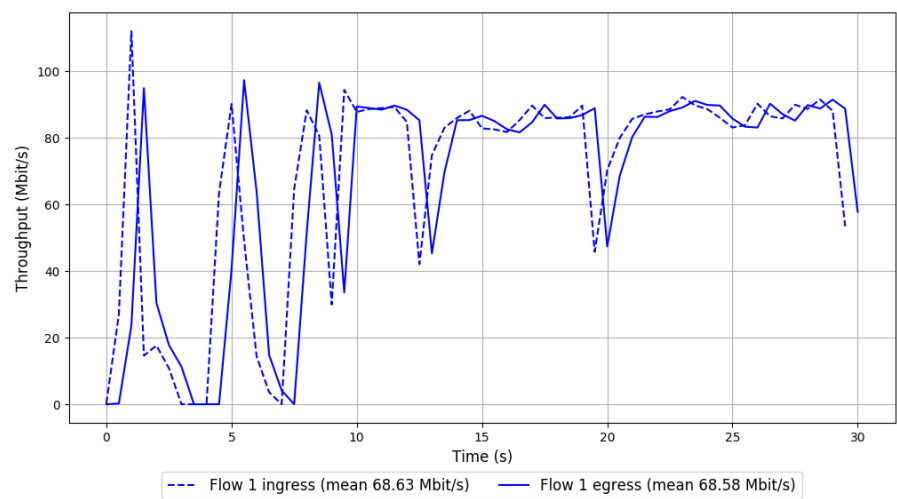


Run 4: Statistics of QUIC Cubic

Start at: 2018-09-25 06:05:17
End at: 2018-09-25 06:05:47
Local clock offset: -2.803 ms
Remote clock offset: -10.416 ms

Below is generated by plot.py at 2018-09-25 06:42:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 68.58 Mbit/s
95th percentile per-packet one-way delay: 86.429 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 68.58 Mbit/s
95th percentile per-packet one-way delay: 86.429 ms
Loss rate: 0.10%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-25 06:28:09

End at: 2018-09-25 06:28:39

Local clock offset: 4.654 ms

Remote clock offset: -7.961 ms

Below is generated by plot.py at 2018-09-25 06:42:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 68.83 Mbit/s

95th percentile per-packet one-way delay: 83.308 ms

Loss rate: 0.11%

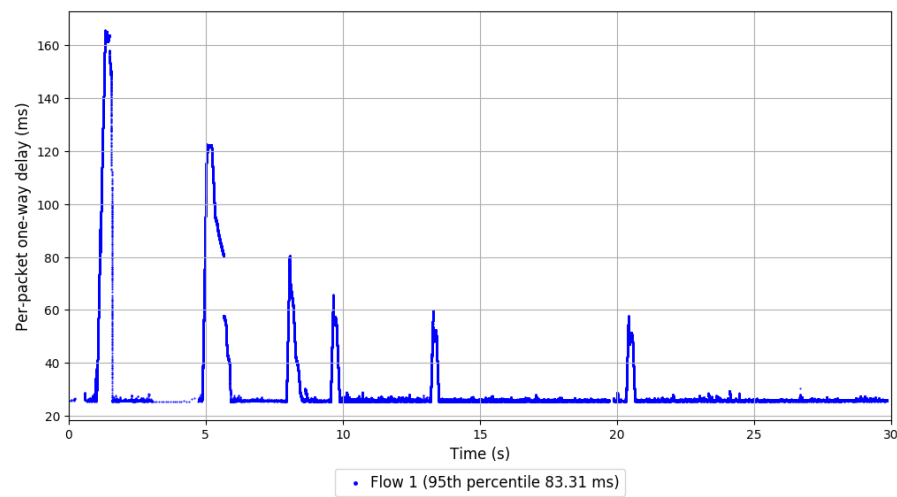
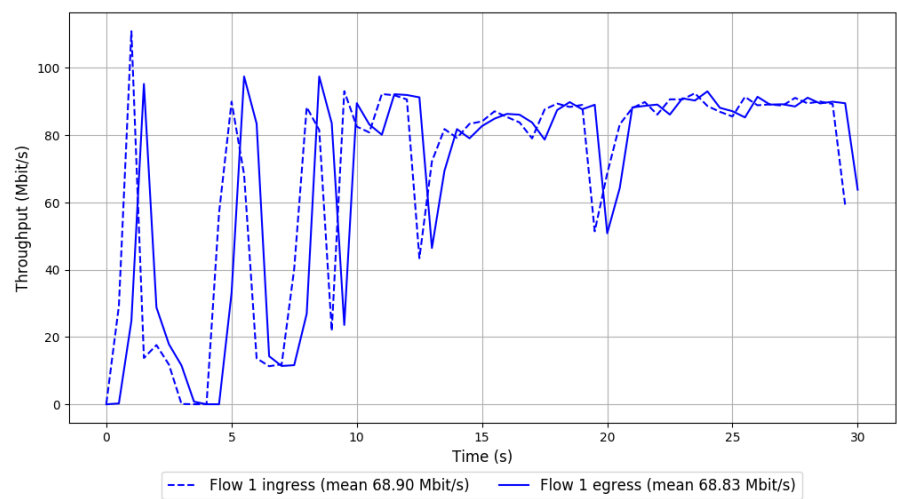
-- Flow 1:

Average throughput: 68.83 Mbit/s

95th percentile per-packet one-way delay: 83.308 ms

Loss rate: 0.11%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2018-09-25 04:53:28

End at: 2018-09-25 04:53:58

Local clock offset: -1.593 ms

Remote clock offset: 6.96 ms

Below is generated by plot.py at 2018-09-25 06:42:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 34.712 ms

Loss rate: 0.00%

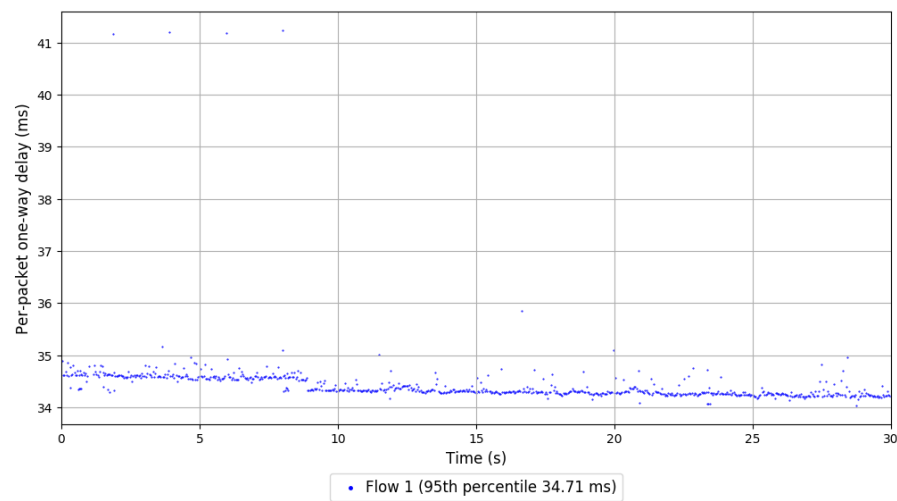
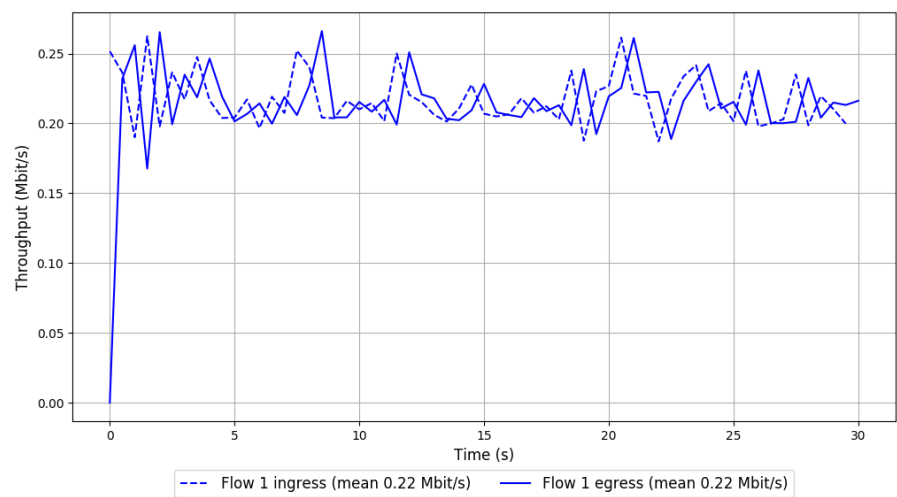
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 34.712 ms

Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

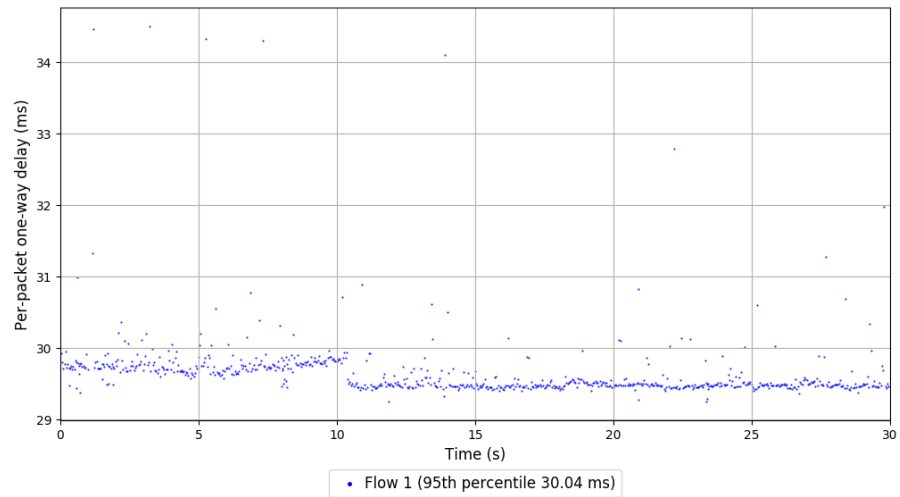
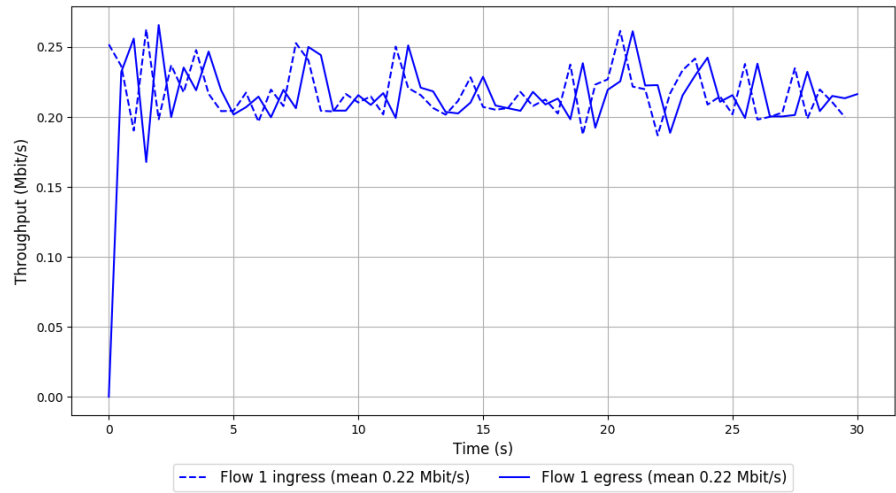


Run 2: Statistics of SReAM

Start at: 2018-09-25 05:16:07
End at: 2018-09-25 05:16:37
Local clock offset: -2.453 ms
Remote clock offset: -0.406 ms

Below is generated by plot.py at 2018-09-25 06:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.043 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.043 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

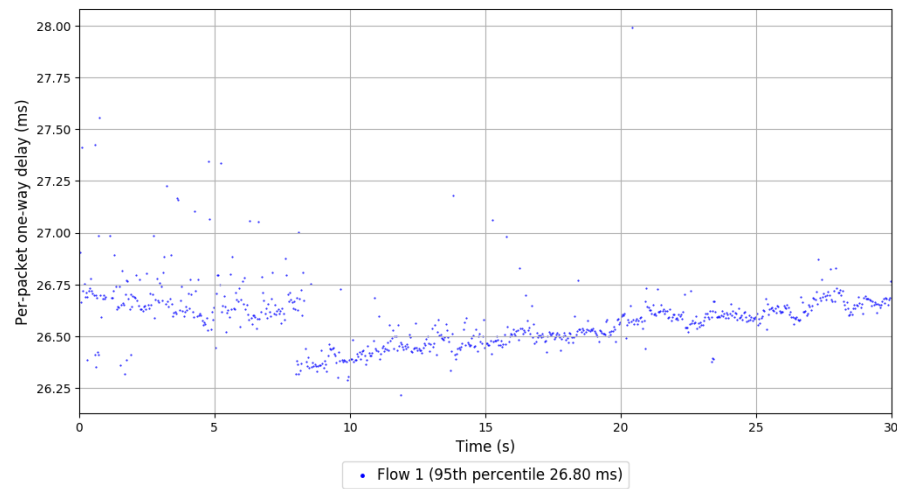
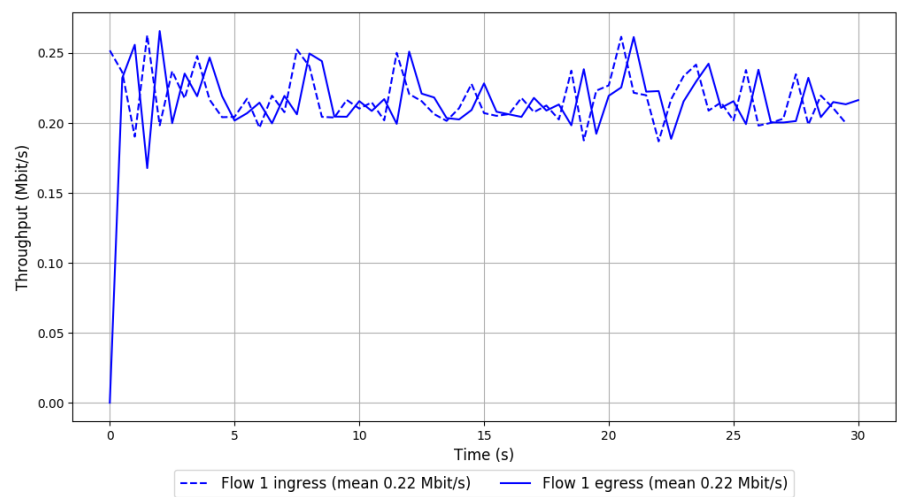


Run 3: Statistics of SCReAM

Start at: 2018-09-25 05:38:54
End at: 2018-09-25 05:39:24
Local clock offset: -7.514 ms
Remote clock offset: -7.564 ms

Below is generated by plot.py at 2018-09-25 06:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 26.795 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 26.795 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

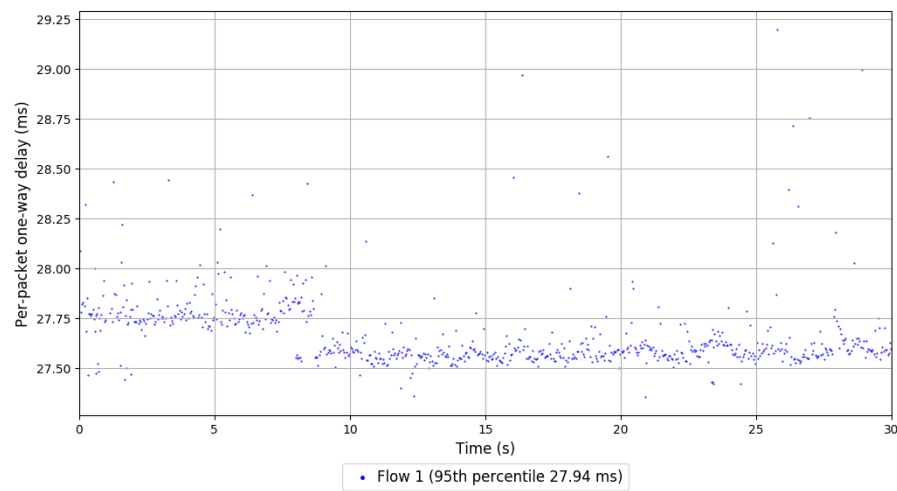
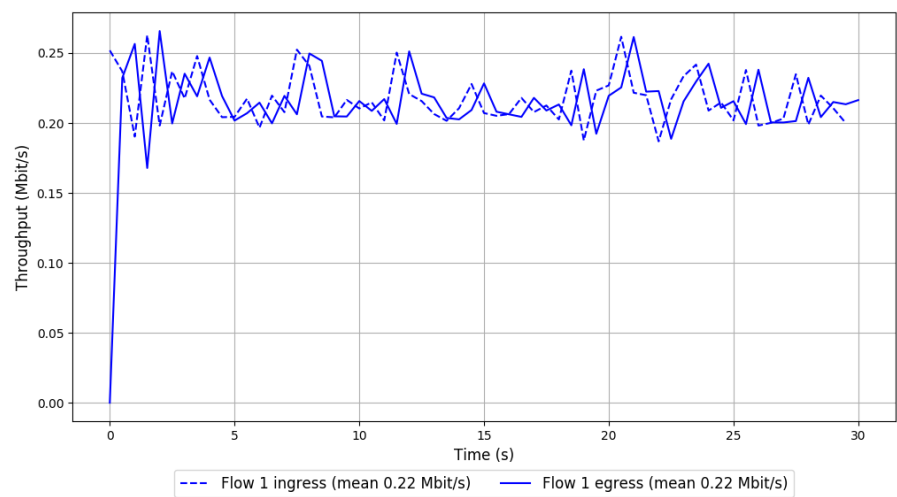


Run 4: Statistics of SCReAM

Start at: 2018-09-25 06:01:47
End at: 2018-09-25 06:02:17
Local clock offset: -2.404 ms
Remote clock offset: -9.006 ms

Below is generated by plot.py at 2018-09-25 06:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.940 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.940 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

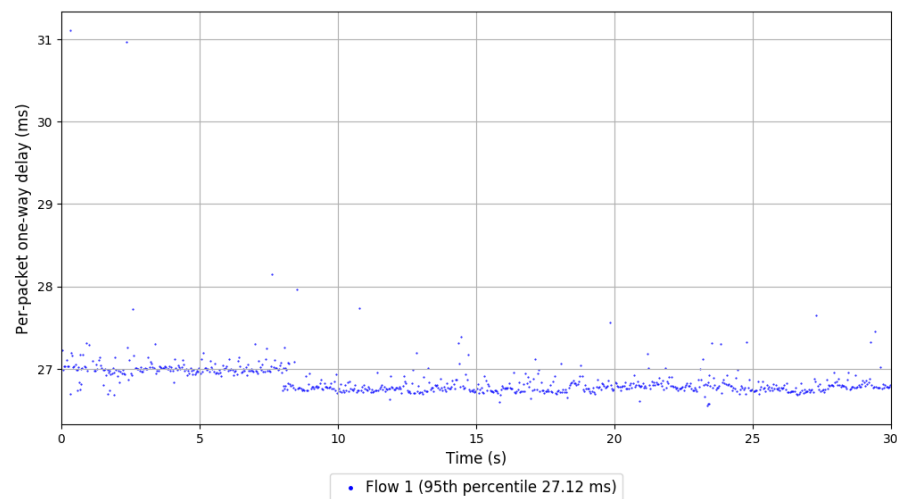
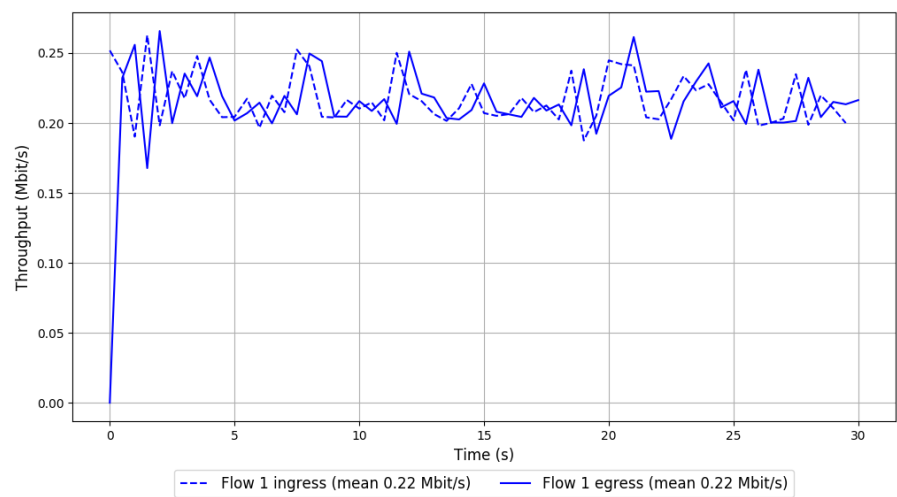


Run 5: Statistics of SCReAM

Start at: 2018-09-25 06:24:42
End at: 2018-09-25 06:25:13
Local clock offset: 4.302 ms
Remote clock offset: -7.123 ms

Below is generated by plot.py at 2018-09-25 06:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.116 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.116 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

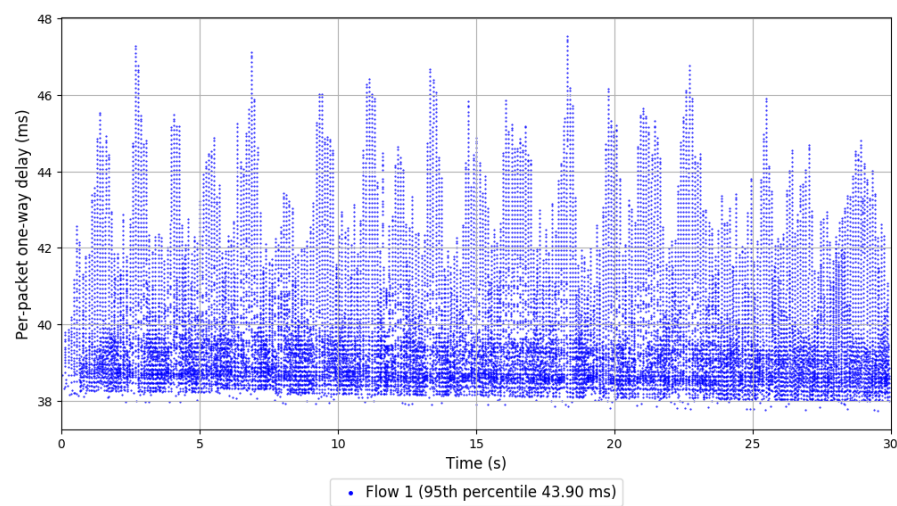
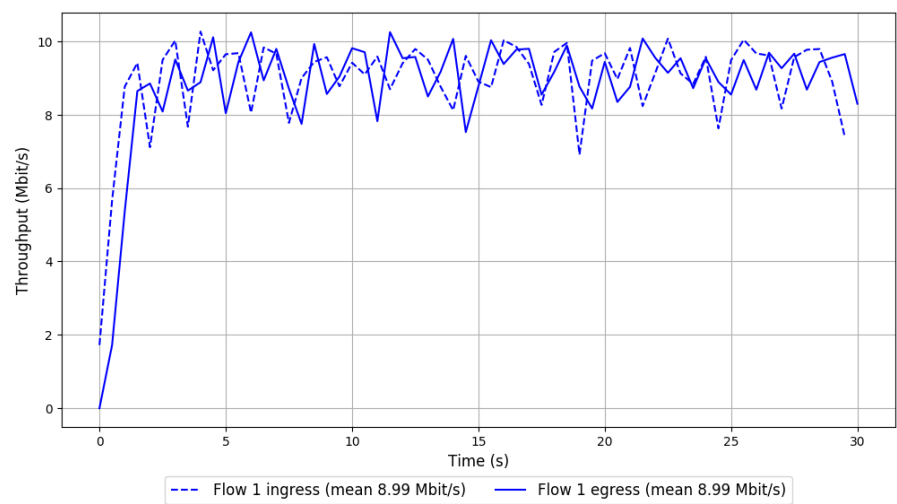


Run 1: Statistics of Sprout

Start at: 2018-09-25 04:48:40
End at: 2018-09-25 04:49:10
Local clock offset: 0.563 ms
Remote clock offset: 10.845 ms

Below is generated by plot.py at 2018-09-25 06:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.99 Mbit/s
95th percentile per-packet one-way delay: 43.904 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.99 Mbit/s
95th percentile per-packet one-way delay: 43.904 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

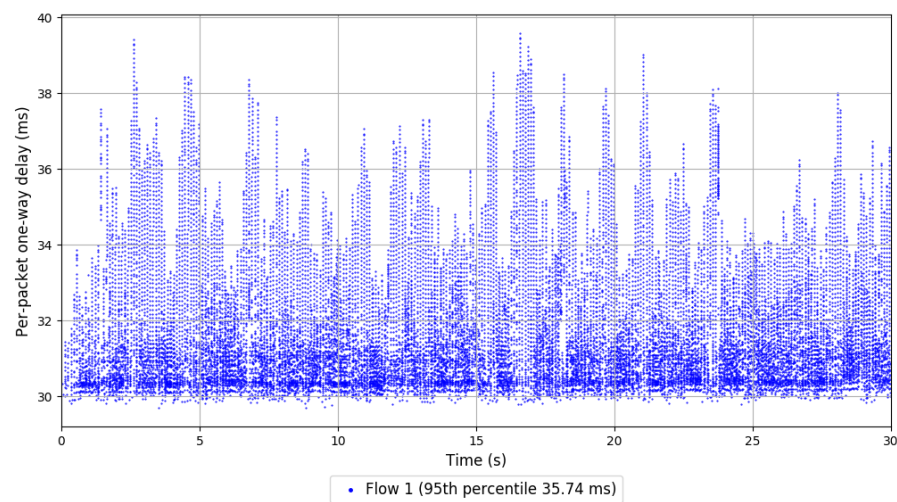
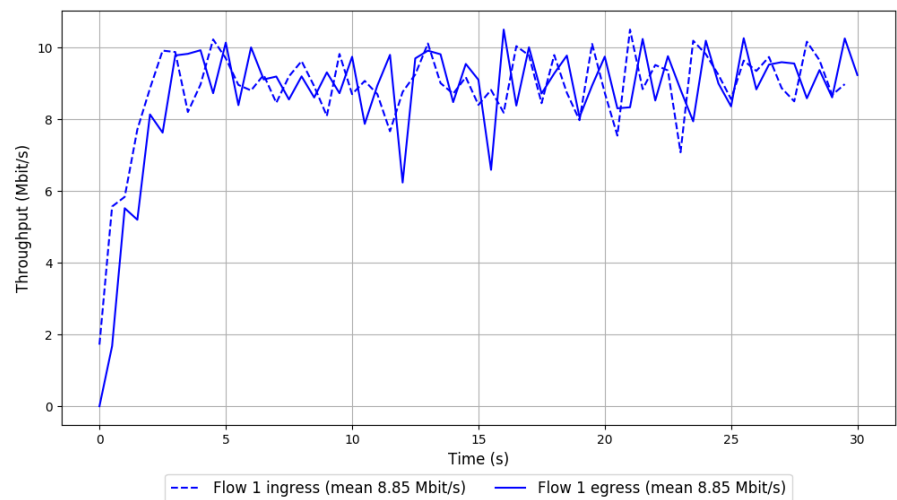


Run 2: Statistics of Sprout

Start at: 2018-09-25 05:11:23
End at: 2018-09-25 05:11:53
Local clock offset: -2.632 ms
Remote clock offset: -0.051 ms

Below is generated by plot.py at 2018-09-25 06:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.85 Mbit/s
95th percentile per-packet one-way delay: 35.738 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.85 Mbit/s
95th percentile per-packet one-way delay: 35.738 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

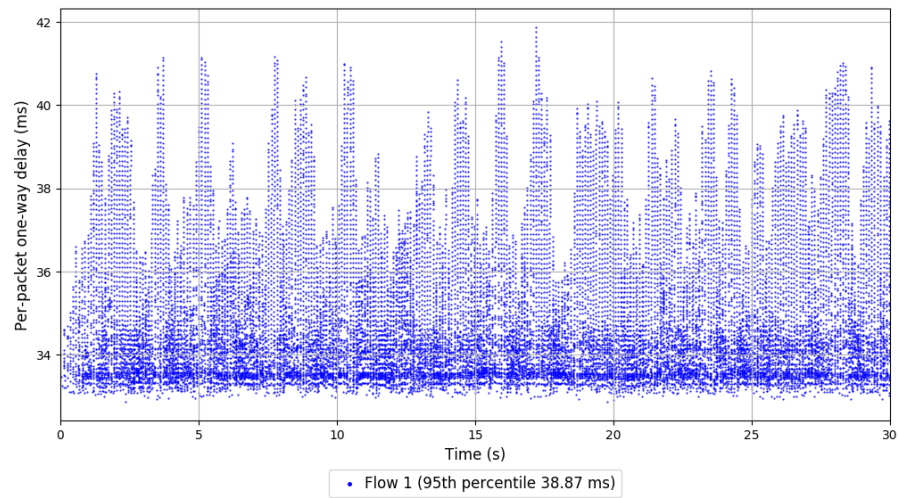
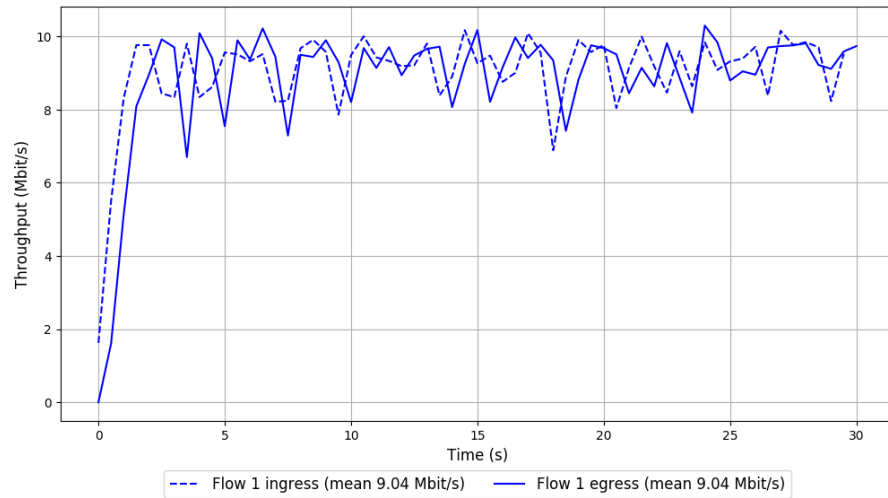


Run 3: Statistics of Sprout

Start at: 2018-09-25 05:34:10
End at: 2018-09-25 05:34:40
Local clock offset: -6.32 ms
Remote clock offset: -0.595 ms

Below is generated by plot.py at 2018-09-25 06:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.04 Mbit/s
95th percentile per-packet one-way delay: 38.874 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.04 Mbit/s
95th percentile per-packet one-way delay: 38.874 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

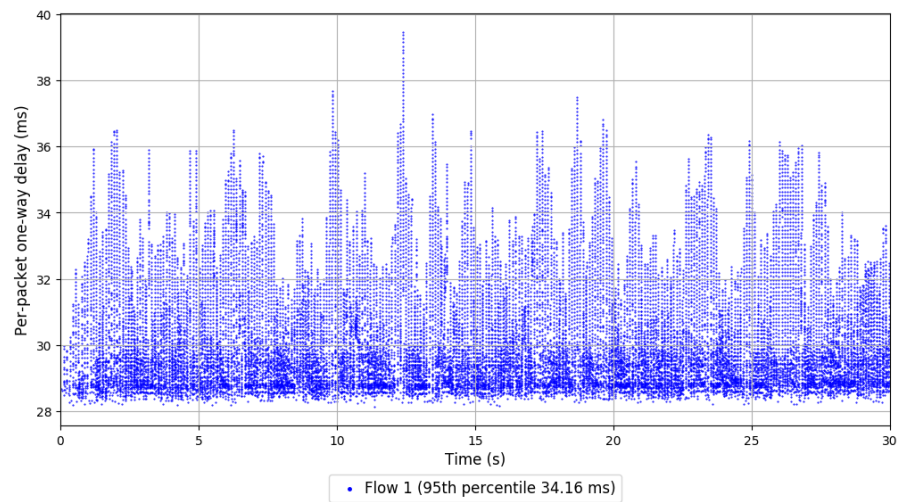
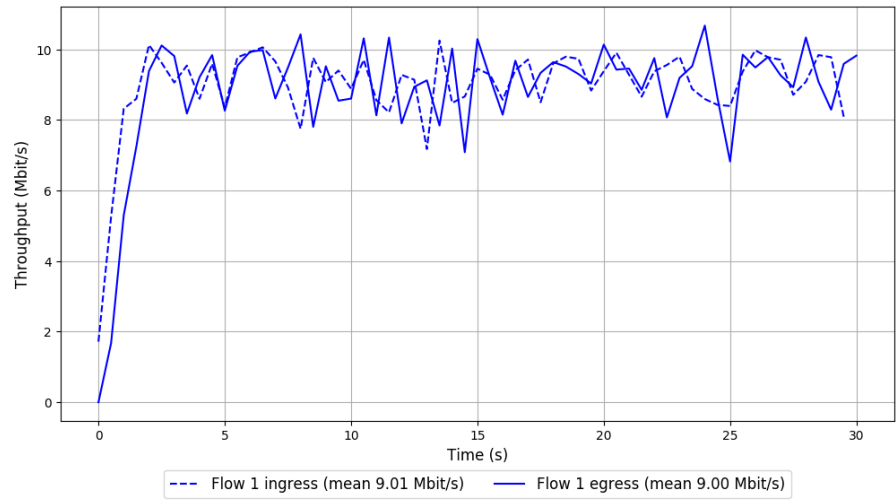


Run 4: Statistics of Sprout

Start at: 2018-09-25 05:57:01
End at: 2018-09-25 05:57:31
Local clock offset: -2.155 ms
Remote clock offset: -6.834 ms

Below is generated by plot.py at 2018-09-25 06:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 34.164 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 34.164 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

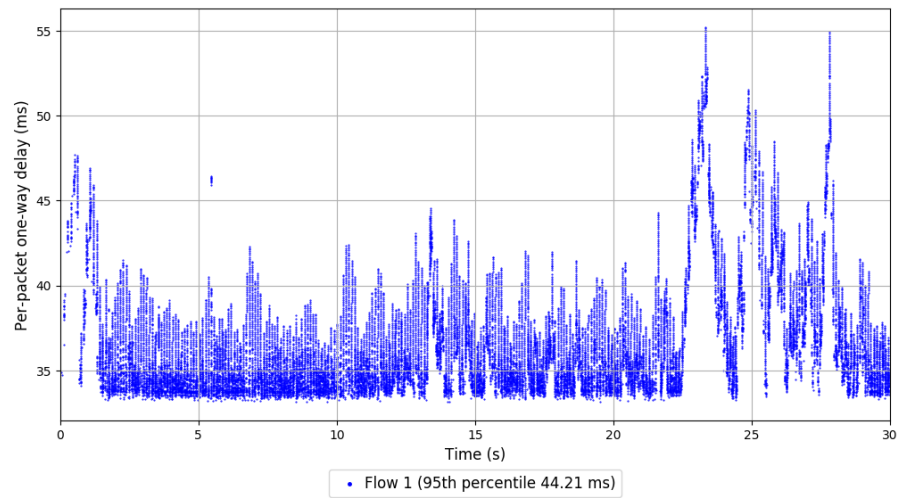
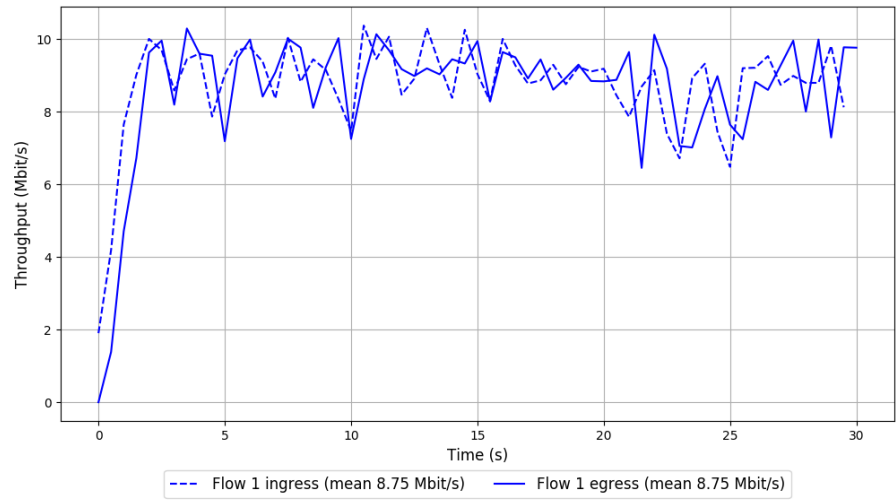


Run 5: Statistics of Sprout

Start at: 2018-09-25 06:19:56
End at: 2018-09-25 06:20:26
Local clock offset: 3.391 ms
Remote clock offset: -1.351 ms

Below is generated by plot.py at 2018-09-25 06:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.75 Mbit/s
95th percentile per-packet one-way delay: 44.213 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.75 Mbit/s
95th percentile per-packet one-way delay: 44.213 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link

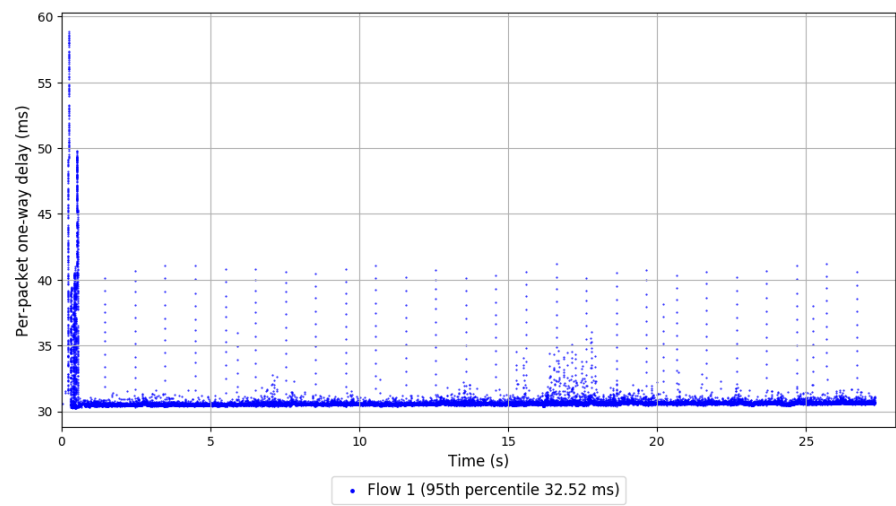
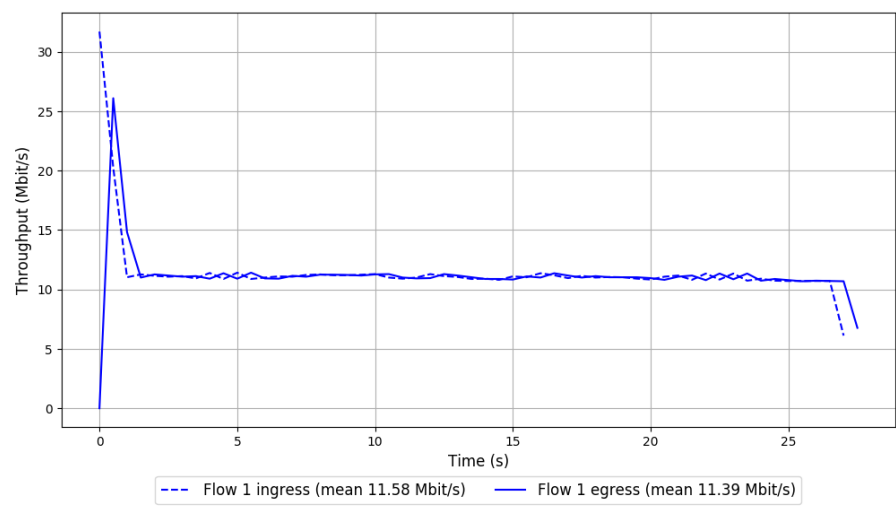


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-09-25 05:00:36
End at: 2018-09-25 05:01:06
Local clock offset: -1.32 ms
Remote clock offset: 0.913 ms

# Below is generated by plot.py at 2018-09-25 06:42:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.39 Mbit/s
95th percentile per-packet one-way delay: 32.520 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 11.39 Mbit/s
95th percentile per-packet one-way delay: 32.520 ms
Loss rate: 1.65%
```

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-09-25 05:23:19

End at: 2018-09-25 05:23:49

Local clock offset: -3.413 ms

Remote clock offset: 3.507 ms

Below is generated by plot.py at 2018-09-25 06:42:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 11.69 Mbit/s

95th percentile per-packet one-way delay: 39.275 ms

Loss rate: 5.85%

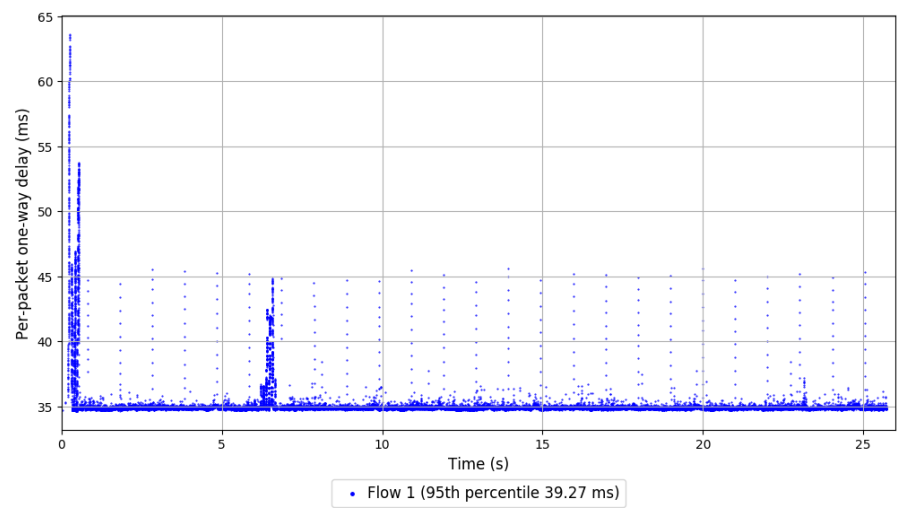
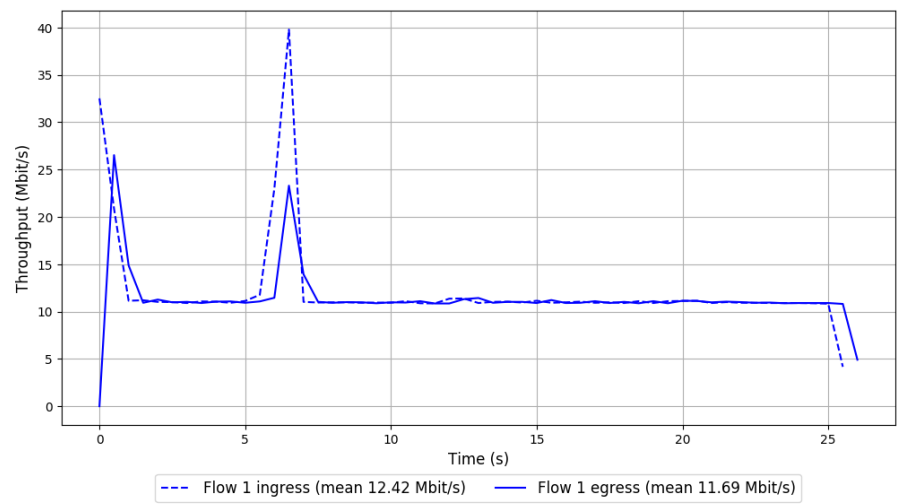
-- Flow 1:

Average throughput: 11.69 Mbit/s

95th percentile per-packet one-way delay: 39.275 ms

Loss rate: 5.85%

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

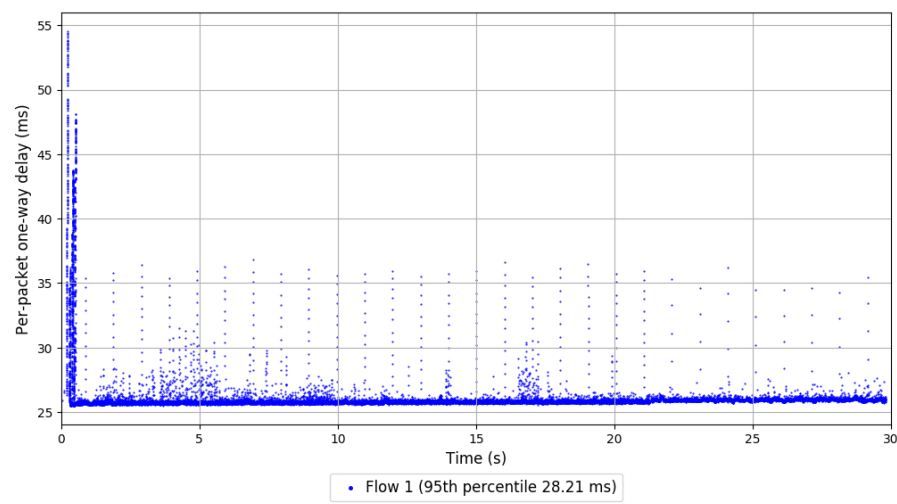
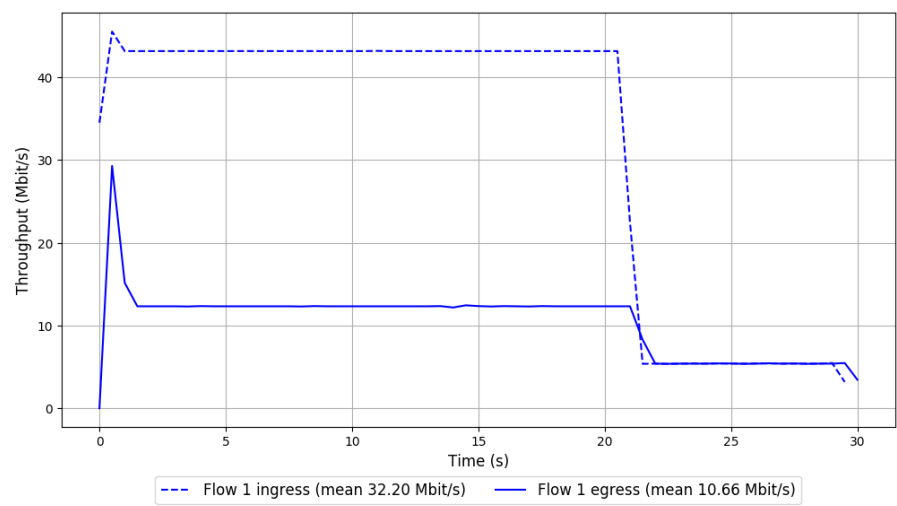


Run 3: Statistics of TaoVA-100x

Start at: 2018-09-25 05:46:02
End at: 2018-09-25 05:46:32
Local clock offset: -3.533 ms
Remote clock offset: -8.736 ms

Below is generated by plot.py at 2018-09-25 06:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 10.66 Mbit/s
95th percentile per-packet one-way delay: 28.206 ms
Loss rate: 66.89%
-- Flow 1:
Average throughput: 10.66 Mbit/s
95th percentile per-packet one-way delay: 28.206 ms
Loss rate: 66.89%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-09-25 06:08:56

End at: 2018-09-25 06:09:27

Local clock offset: -3.23 ms

Remote clock offset: -2.175 ms

Below is generated by plot.py at 2018-09-25 06:42:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 11.24 Mbit/s

95th percentile per-packet one-way delay: 38.210 ms

Loss rate: 2.30%

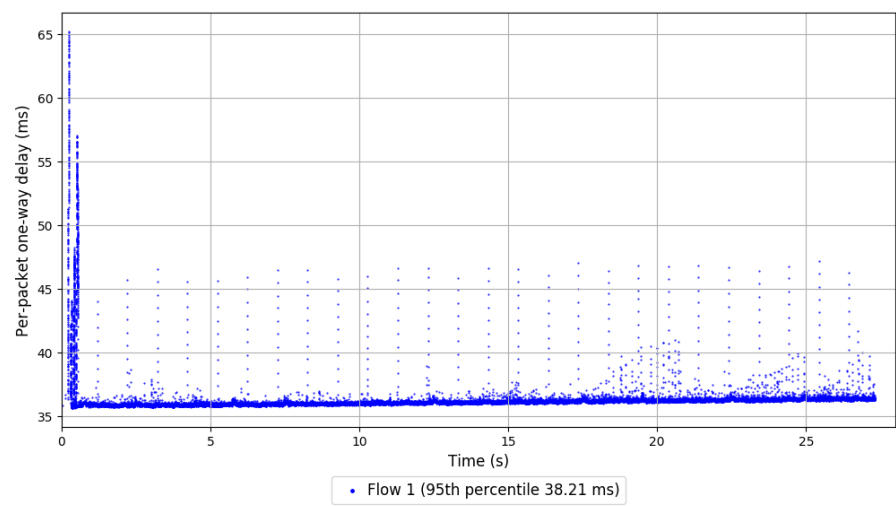
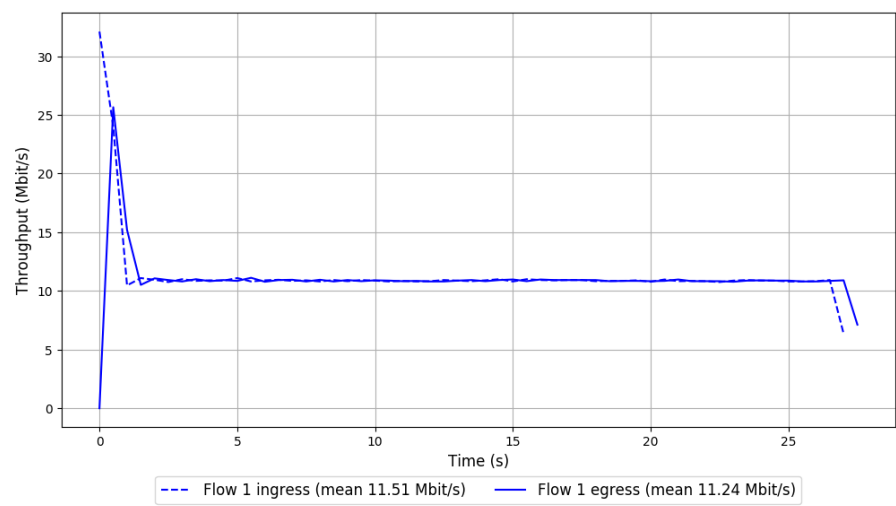
-- Flow 1:

Average throughput: 11.24 Mbit/s

95th percentile per-packet one-way delay: 38.210 ms

Loss rate: 2.30%

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

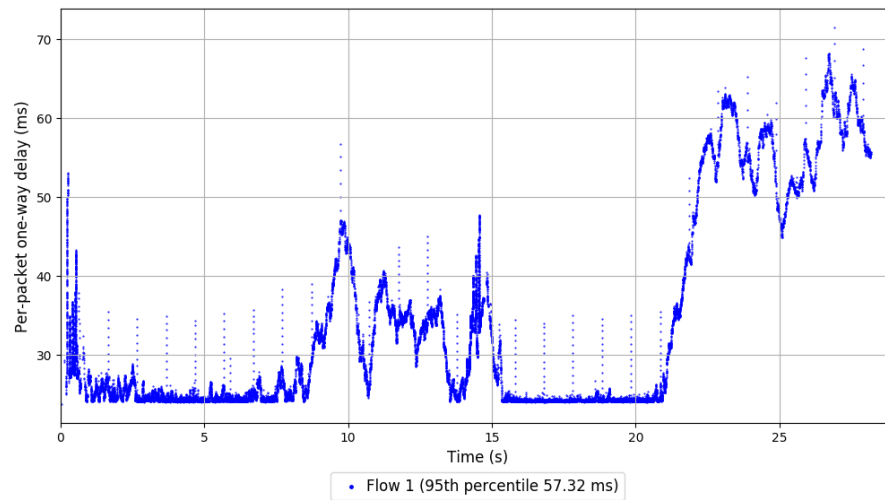
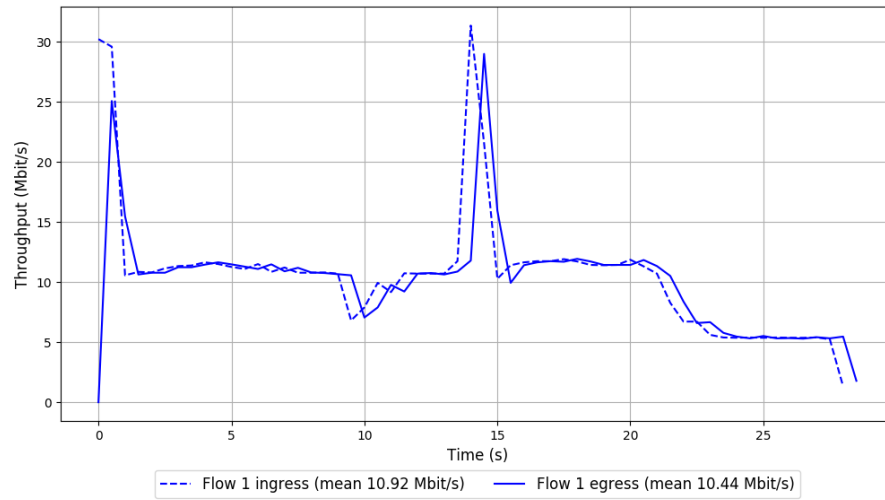


Run 5: Statistics of TaoVA-100x

Start at: 2018-09-25 06:31:51
End at: 2018-09-25 06:32:21
Local clock offset: 5.062 ms
Remote clock offset: -9.784 ms

Below is generated by plot.py at 2018-09-25 06:42:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 10.44 Mbit/s
95th percentile per-packet one-way delay: 57.320 ms
Loss rate: 4.39%
-- Flow 1:
Average throughput: 10.44 Mbit/s
95th percentile per-packet one-way delay: 57.320 ms
Loss rate: 4.39%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-09-25 04:55:45

End at: 2018-09-25 04:56:15

Local clock offset: -3.142 ms

Remote clock offset: 5.534 ms

Below is generated by plot.py at 2018-09-25 06:42:46

Datalink statistics

-- Total of 1 flow:

Average throughput: 36.95 Mbit/s

95th percentile per-packet one-way delay: 221.272 ms

Loss rate: 0.97%

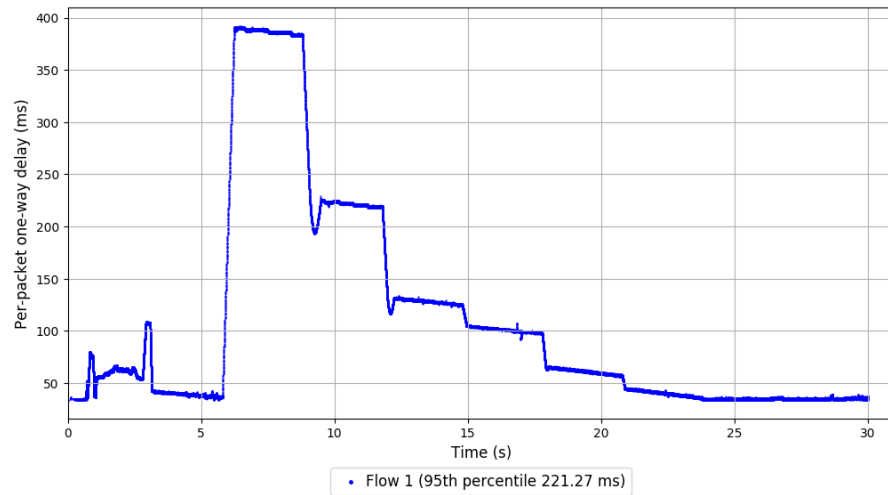
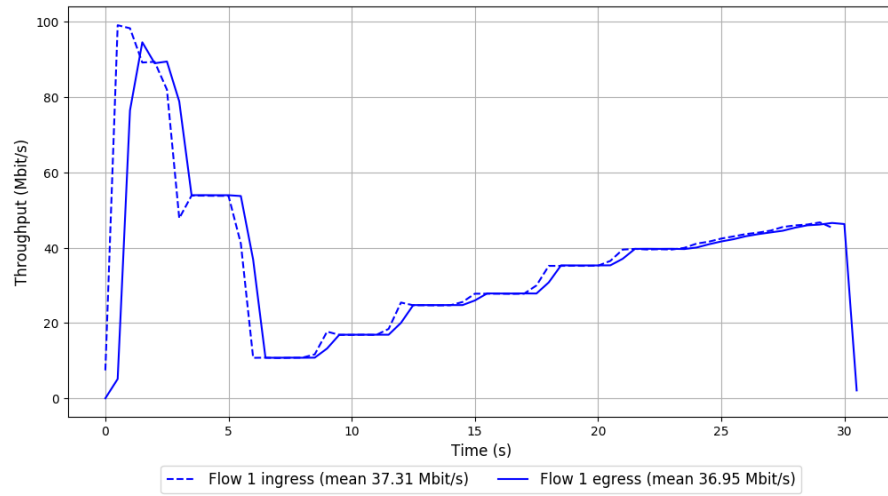
-- Flow 1:

Average throughput: 36.95 Mbit/s

95th percentile per-packet one-way delay: 221.272 ms

Loss rate: 0.97%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-09-25 05:18:24

End at: 2018-09-25 05:18:54

Local clock offset: -2.681 ms

Remote clock offset: 3.077 ms

Below is generated by plot.py at 2018-09-25 06:43:02

Datalink statistics

-- Total of 1 flow:

Average throughput: 58.83 Mbit/s

95th percentile per-packet one-way delay: 52.312 ms

Loss rate: 0.64%

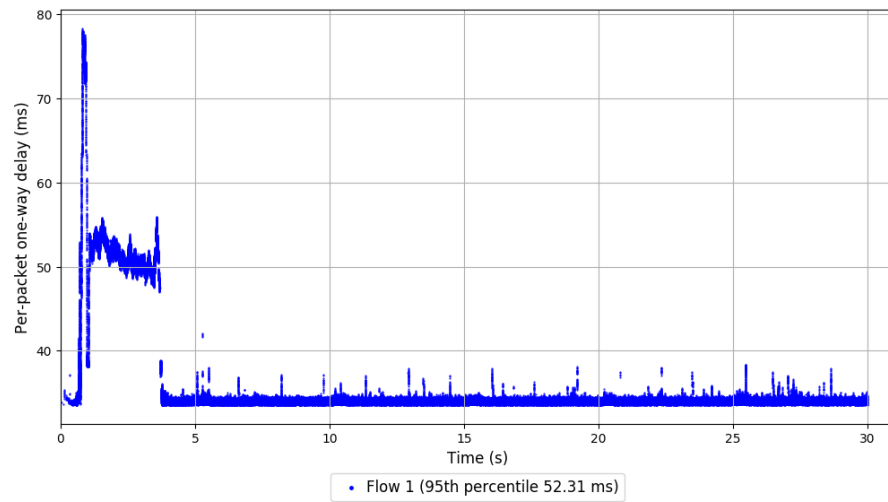
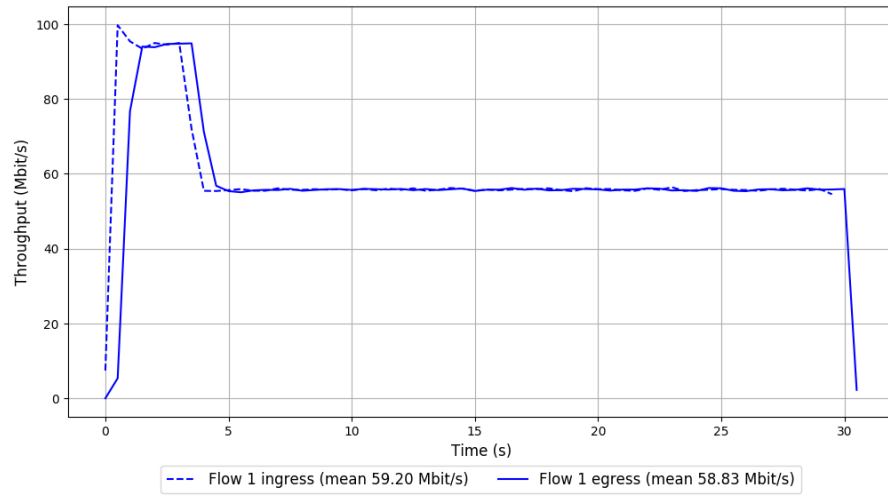
-- Flow 1:

Average throughput: 58.83 Mbit/s

95th percentile per-packet one-way delay: 52.312 ms

Loss rate: 0.64%

Run 2: Report of TCP Vegas — Data Link

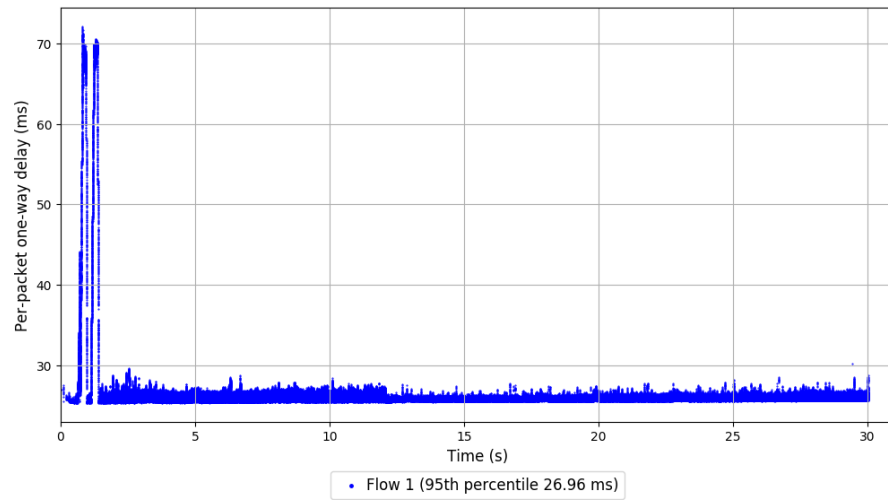
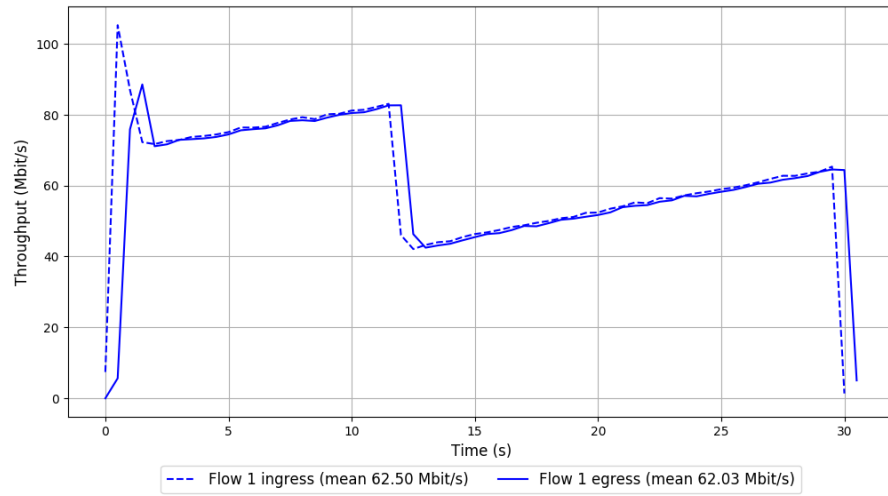


Run 3: Statistics of TCP Vegas

Start at: 2018-09-25 05:41:11
End at: 2018-09-25 05:41:41
Local clock offset: -6.524 ms
Remote clock offset: -9.255 ms

Below is generated by plot.py at 2018-09-25 06:43:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 62.03 Mbit/s
95th percentile per-packet one-way delay: 26.957 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 62.03 Mbit/s
95th percentile per-packet one-way delay: 26.957 ms
Loss rate: 0.76%

Run 3: Report of TCP Vegas — Data Link

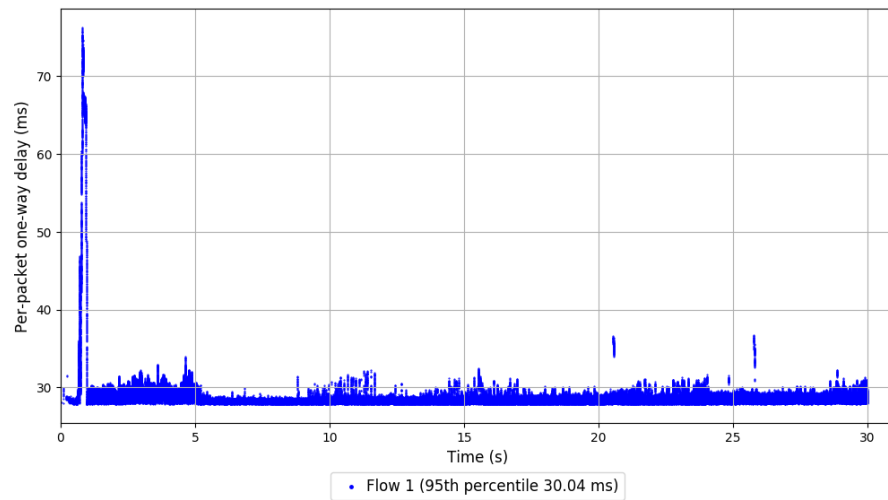
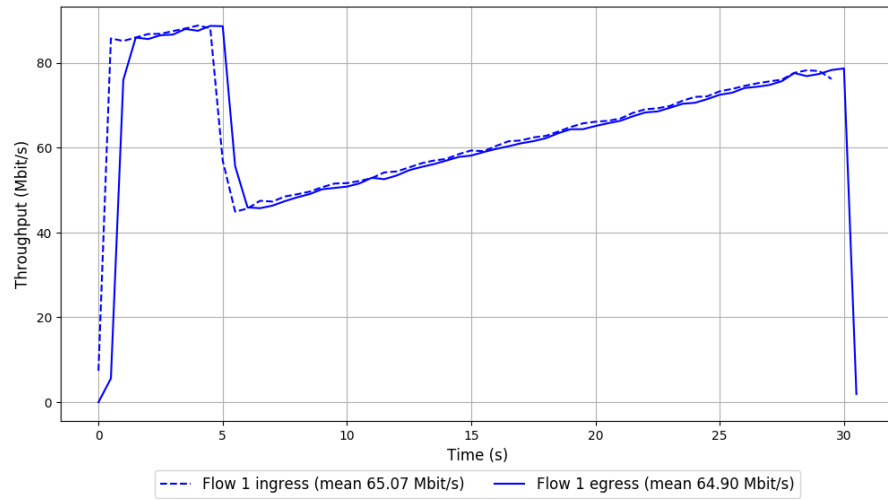


Run 4: Statistics of TCP Vegas

Start at: 2018-09-25 06:04:04
End at: 2018-09-25 06:04:34
Local clock offset: -2.851 ms
Remote clock offset: -9.349 ms

Below is generated by plot.py at 2018-09-25 06:43:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.90 Mbit/s
95th percentile per-packet one-way delay: 30.044 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 64.90 Mbit/s
95th percentile per-packet one-way delay: 30.044 ms
Loss rate: 0.26%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-09-25 06:26:59

End at: 2018-09-25 06:27:29

Local clock offset: 4.707 ms

Remote clock offset: -5.81 ms

Below is generated by plot.py at 2018-09-25 06:43:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 27.74 Mbit/s

95th percentile per-packet one-way delay: 66.868 ms

Loss rate: 0.00%

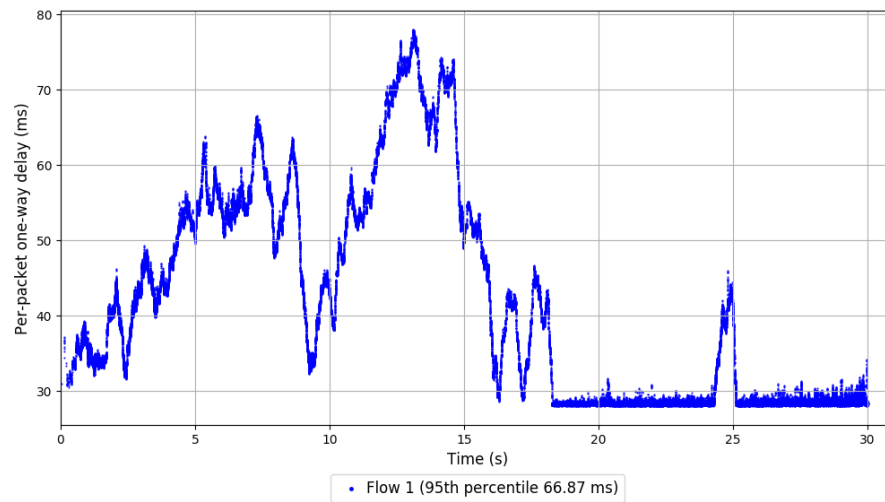
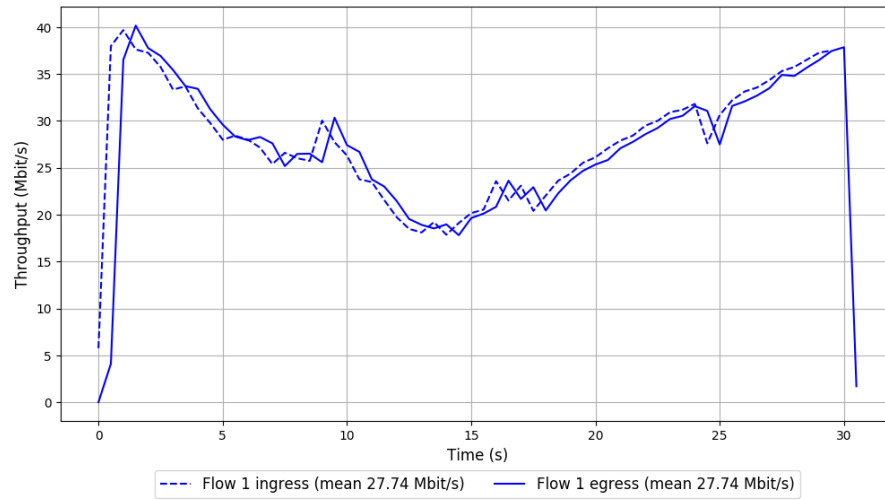
-- Flow 1:

Average throughput: 27.74 Mbit/s

95th percentile per-packet one-way delay: 66.868 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-09-25 04:47:23

End at: 2018-09-25 04:47:53

Local clock offset: 1.572 ms

Remote clock offset: 7.289 ms

Below is generated by plot.py at 2018-09-25 06:43:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.23 Mbit/s

95th percentile per-packet one-way delay: 179.006 ms

Loss rate: 10.47%

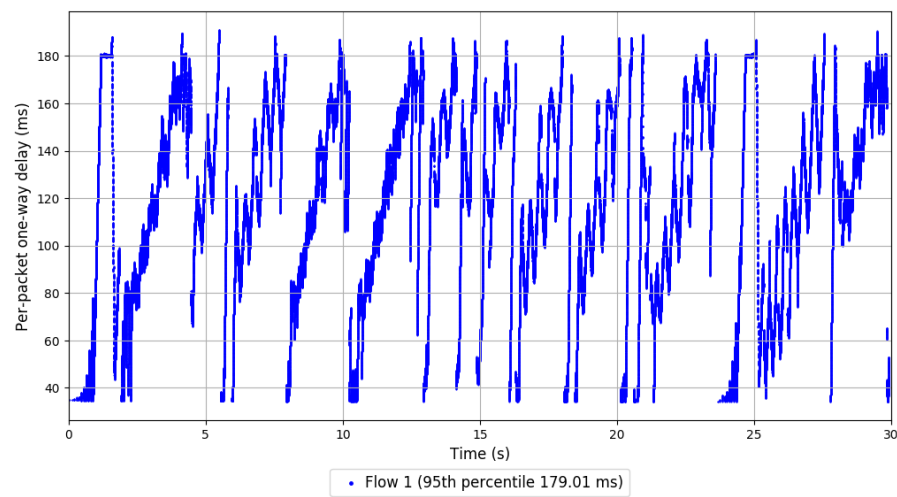
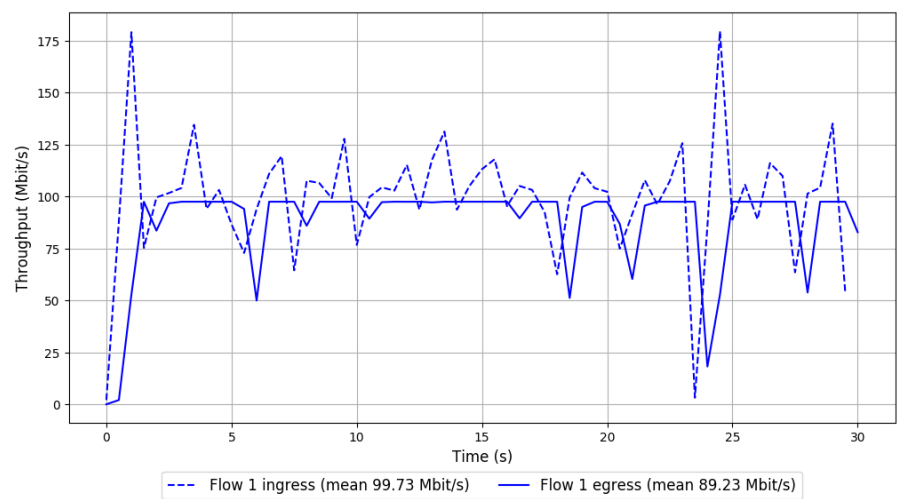
-- Flow 1:

Average throughput: 89.23 Mbit/s

95th percentile per-packet one-way delay: 179.006 ms

Loss rate: 10.47%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-09-25 05:10:08

End at: 2018-09-25 05:10:38

Local clock offset: -2.595 ms

Remote clock offset: 0.607 ms

Below is generated by plot.py at 2018-09-25 06:43:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 80.41 Mbit/s

95th percentile per-packet one-way delay: 176.057 ms

Loss rate: 16.97%

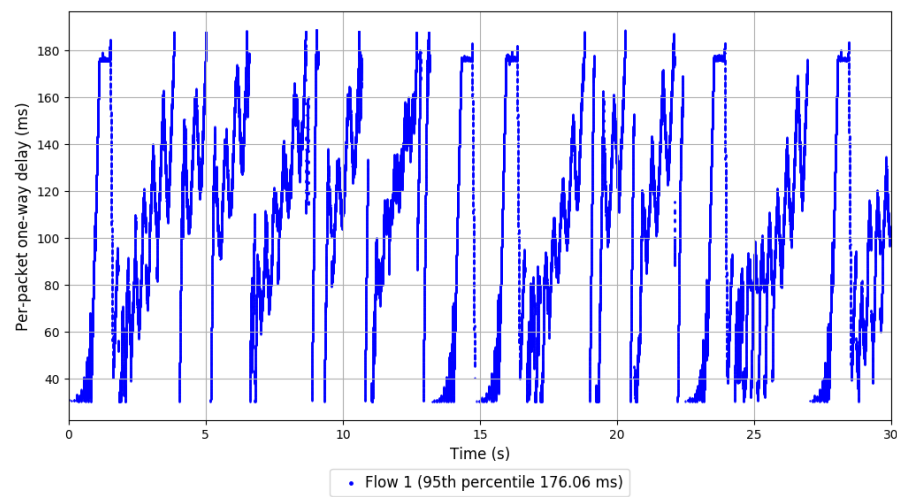
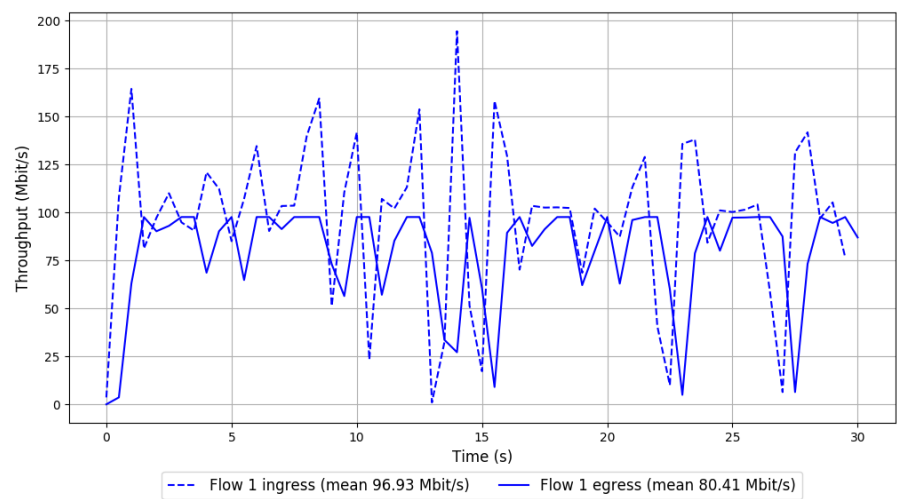
-- Flow 1:

Average throughput: 80.41 Mbit/s

95th percentile per-packet one-way delay: 176.057 ms

Loss rate: 16.97%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-09-25 05:32:55

End at: 2018-09-25 05:33:25

Local clock offset: -5.916 ms

Remote clock offset: 0.549 ms

Below is generated by plot.py at 2018-09-25 06:43:41

Datalink statistics

-- Total of 1 flow:

Average throughput: 85.13 Mbit/s

95th percentile per-packet one-way delay: 179.858 ms

Loss rate: 10.96%

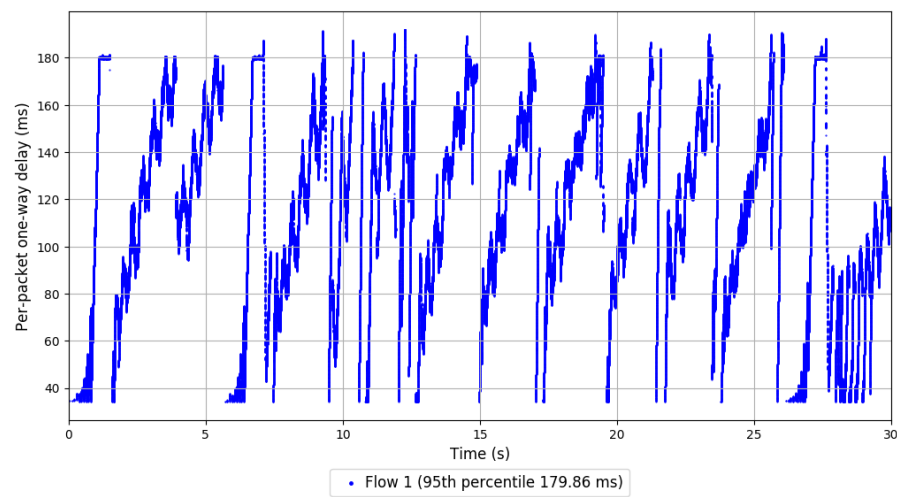
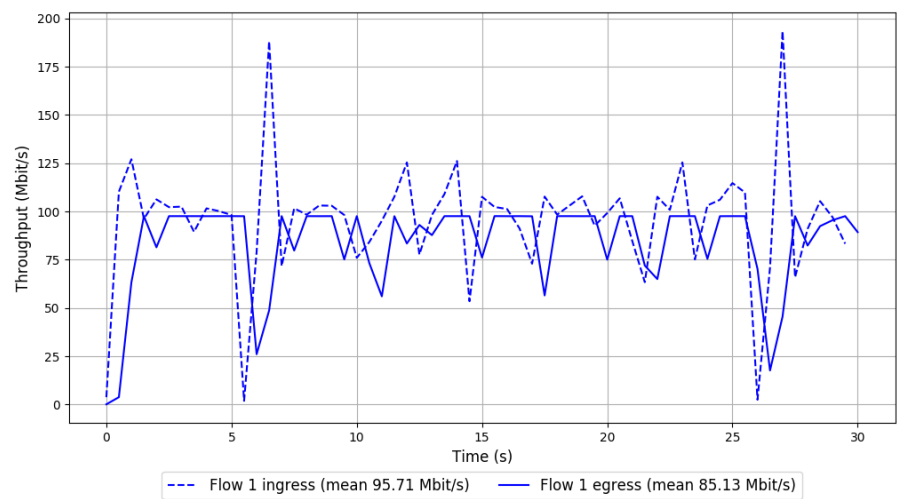
-- Flow 1:

Average throughput: 85.13 Mbit/s

95th percentile per-packet one-way delay: 179.858 ms

Loss rate: 10.96%

Run 3: Report of Verus — Data Link

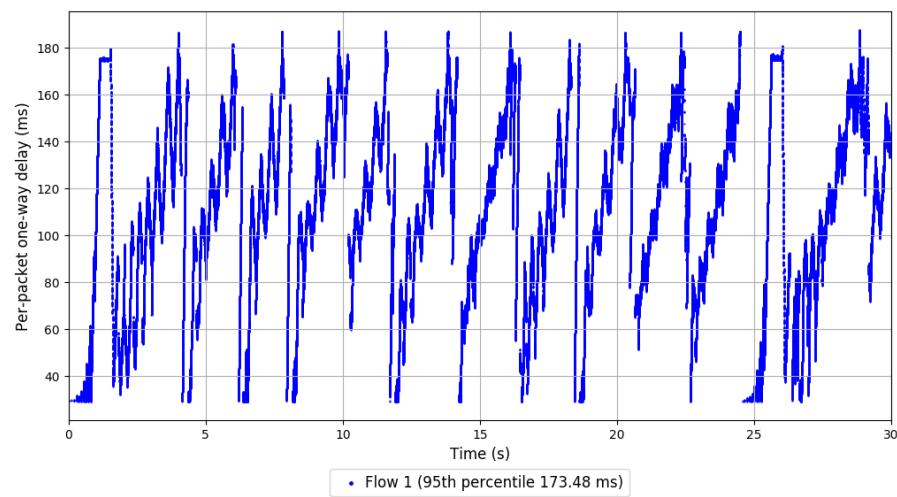
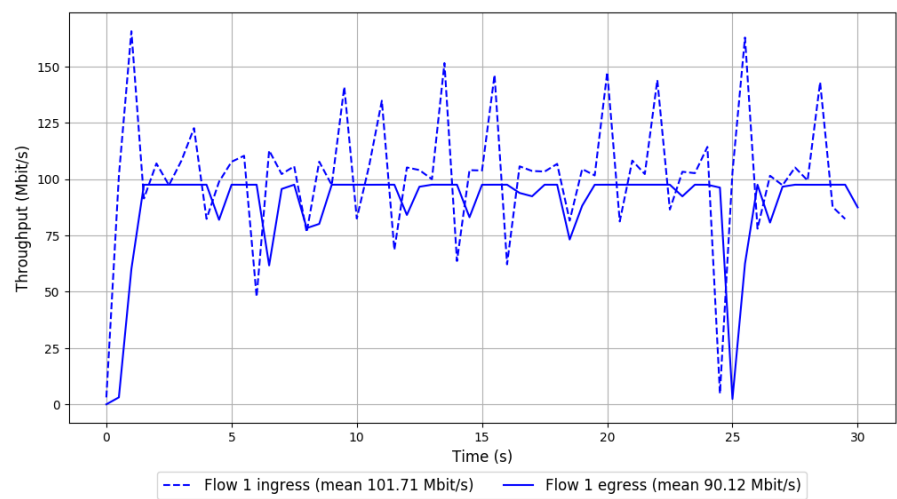


Run 4: Statistics of Verus

Start at: 2018-09-25 05:55:44
End at: 2018-09-25 05:56:14
Local clock offset: -2.183 ms
Remote clock offset: -6.219 ms

Below is generated by plot.py at 2018-09-25 06:44:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.12 Mbit/s
95th percentile per-packet one-way delay: 173.479 ms
Loss rate: 11.32%
-- Flow 1:
Average throughput: 90.12 Mbit/s
95th percentile per-packet one-way delay: 173.479 ms
Loss rate: 11.32%

Run 4: Report of Verus — Data Link

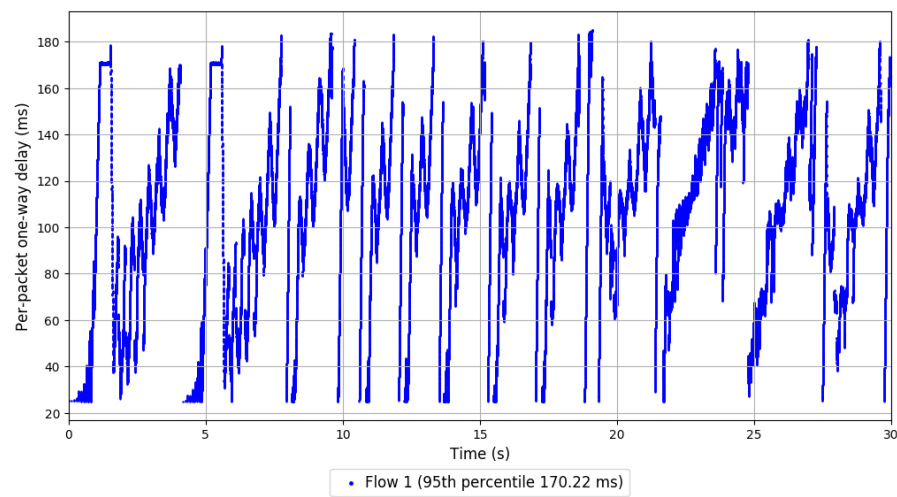
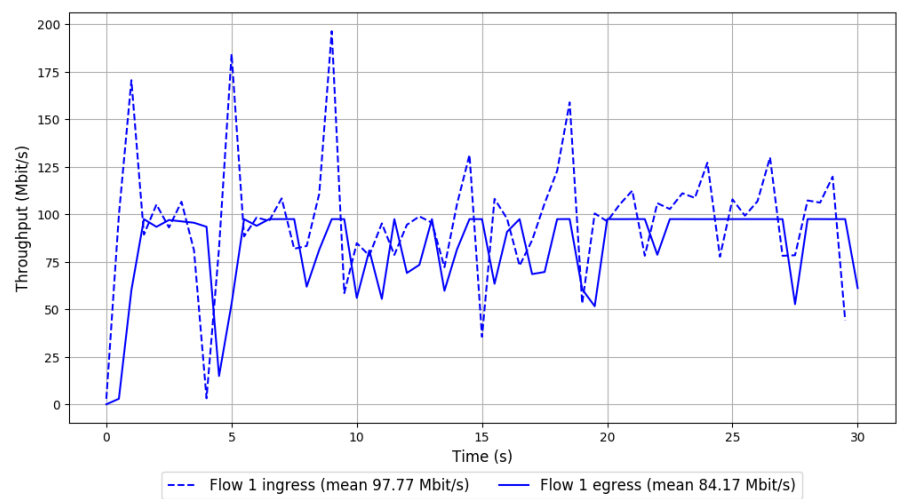


Run 5: Statistics of Verus

Start at: 2018-09-25 06:18:39
End at: 2018-09-25 06:19:09
Local clock offset: 2.97 ms
Remote clock offset: -9.877 ms

Below is generated by plot.py at 2018-09-25 06:44:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 84.17 Mbit/s
95th percentile per-packet one-way delay: 170.218 ms
Loss rate: 13.48%
-- Flow 1:
Average throughput: 84.17 Mbit/s
95th percentile per-packet one-way delay: 170.218 ms
Loss rate: 13.48%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-09-25 04:52:11

End at: 2018-09-25 04:52:41

Local clock offset: -1.222 ms

Remote clock offset: 6.972 ms

Below is generated by plot.py at 2018-09-25 06:44:06

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.26 Mbit/s

95th percentile per-packet one-way delay: 37.256 ms

Loss rate: 0.00%

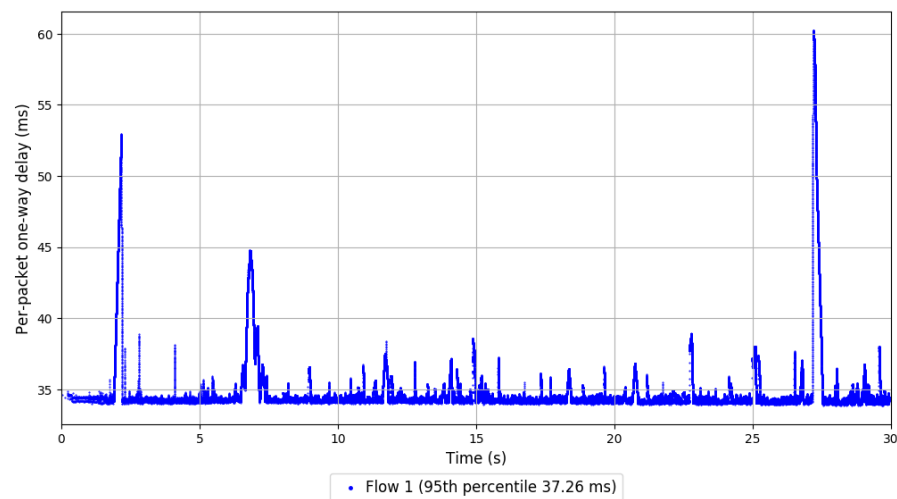
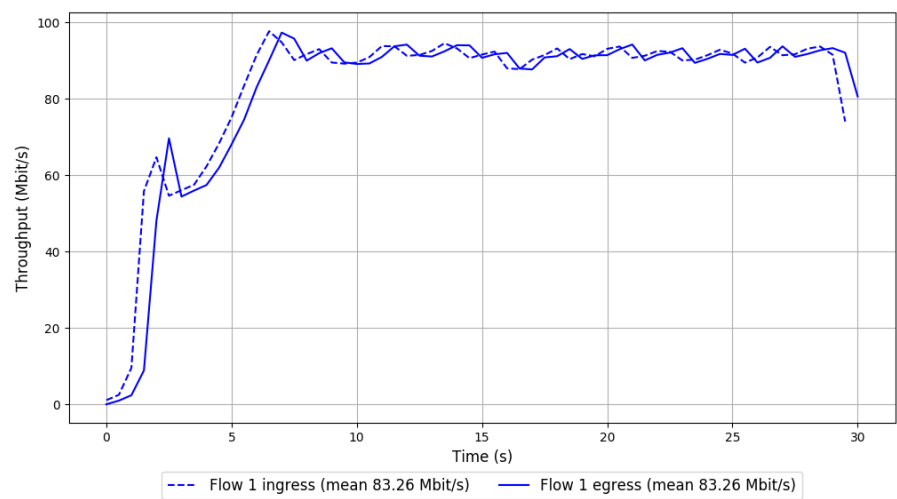
-- Flow 1:

Average throughput: 83.26 Mbit/s

95th percentile per-packet one-way delay: 37.256 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link

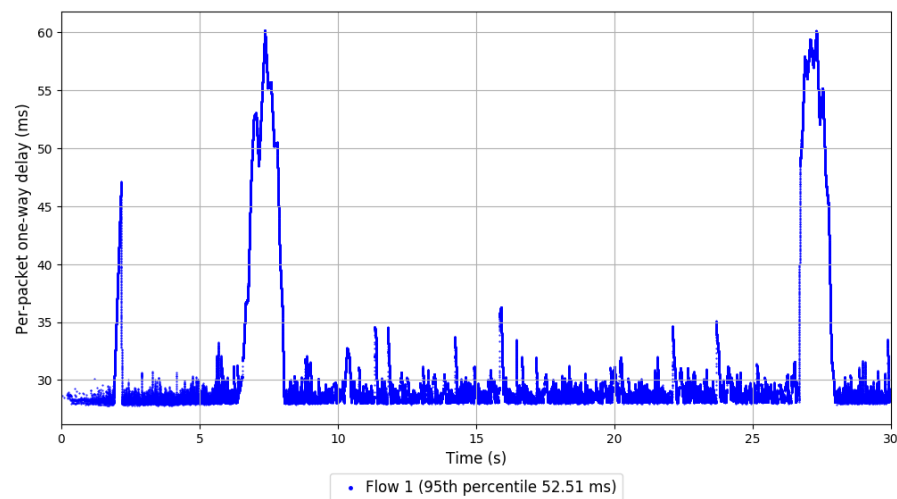
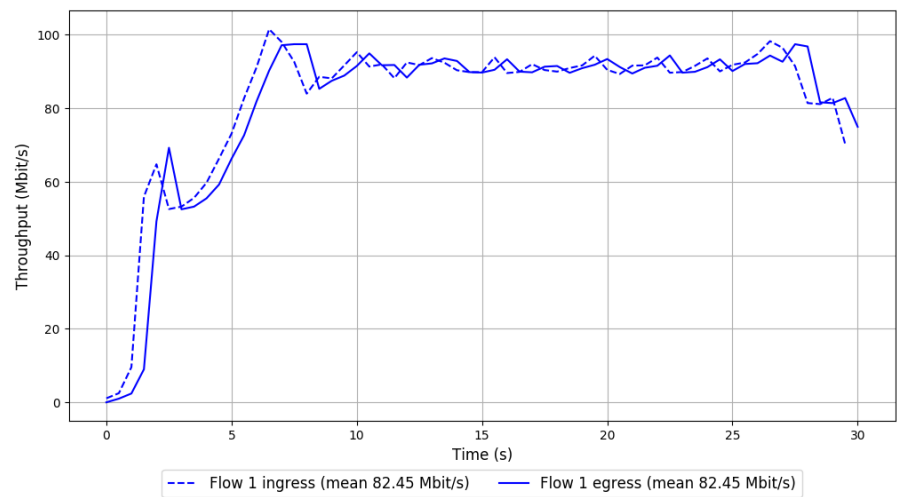


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-25 05:14:52
End at: 2018-09-25 05:15:22
Local clock offset: -2.313 ms
Remote clock offset: -1.627 ms

Below is generated by plot.py at 2018-09-25 06:44:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.45 Mbit/s
95th percentile per-packet one-way delay: 52.509 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 82.45 Mbit/s
95th percentile per-packet one-way delay: 52.509 ms
Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link

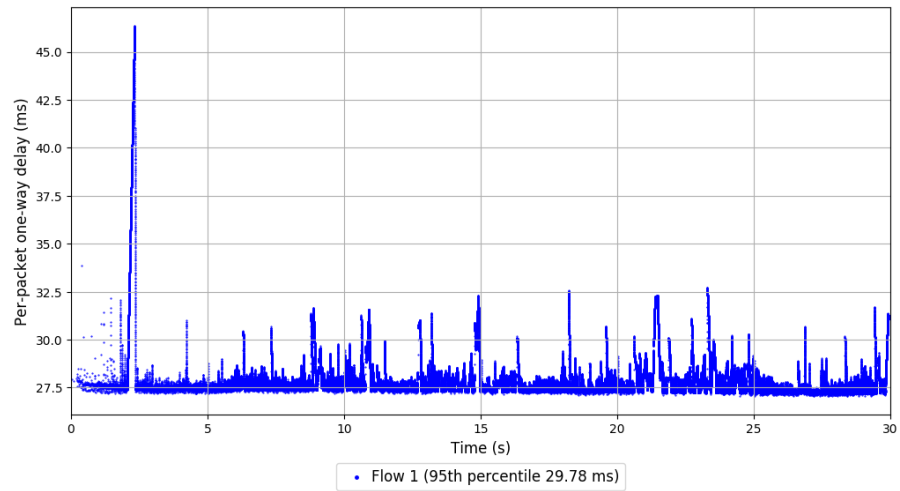
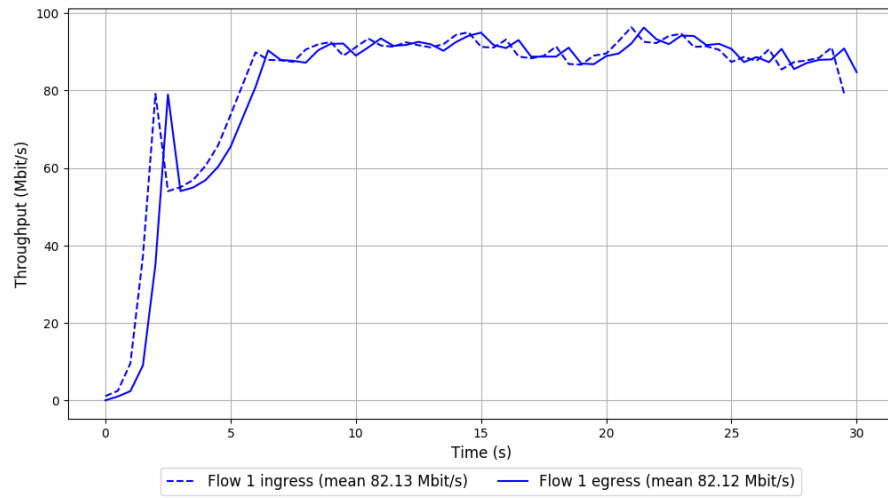


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-25 05:37:39
End at: 2018-09-25 05:38:09
Local clock offset: -7.169 ms
Remote clock offset: -6.867 ms

Below is generated by plot.py at 2018-09-25 06:44:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.12 Mbit/s
95th percentile per-packet one-way delay: 29.777 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 82.12 Mbit/s
95th percentile per-packet one-way delay: 29.777 ms
Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link

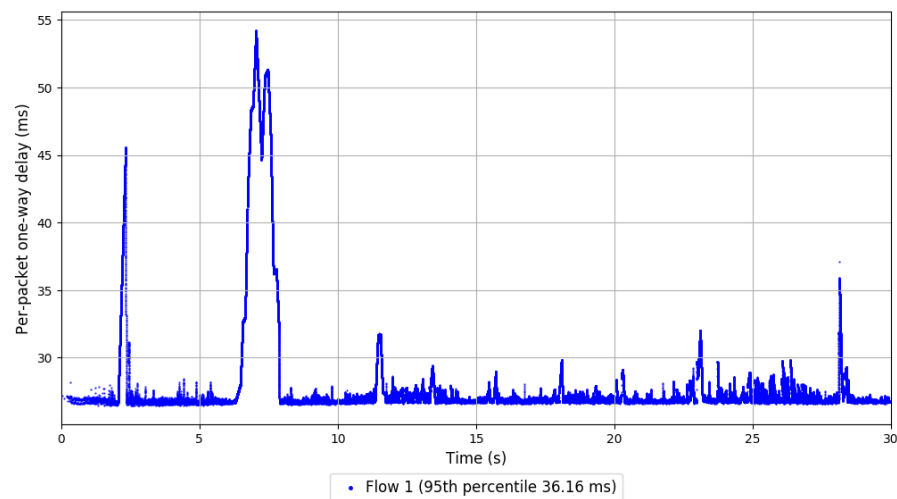
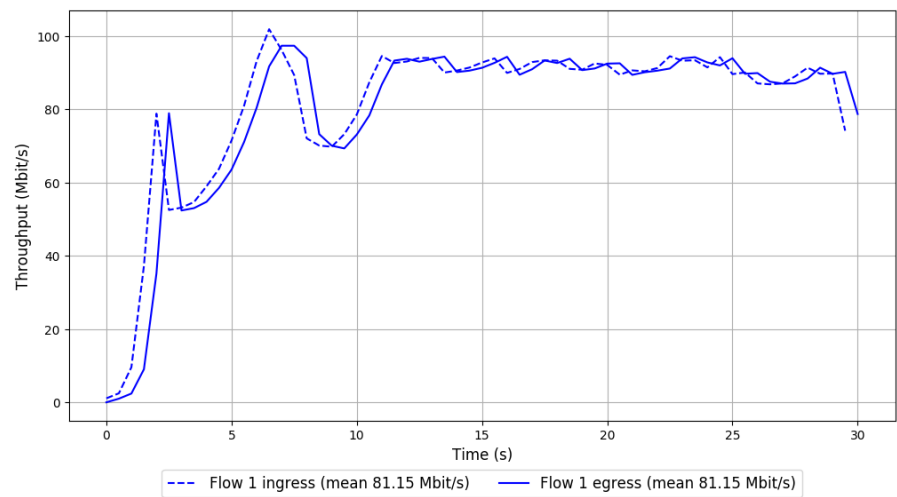


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-25 06:00:31
End at: 2018-09-25 06:01:01
Local clock offset: -2.442 ms
Remote clock offset: -9.459 ms

Below is generated by plot.py at 2018-09-25 06:44:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 81.15 Mbit/s
95th percentile per-packet one-way delay: 36.164 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 81.15 Mbit/s
95th percentile per-packet one-way delay: 36.164 ms
Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-09-25 06:23:26

End at: 2018-09-25 06:23:56

Local clock offset: 4.202 ms

Remote clock offset: -5.591 ms

Below is generated by plot.py at 2018-09-25 06:44:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.15 Mbit/s

95th percentile per-packet one-way delay: 37.217 ms

Loss rate: 0.00%

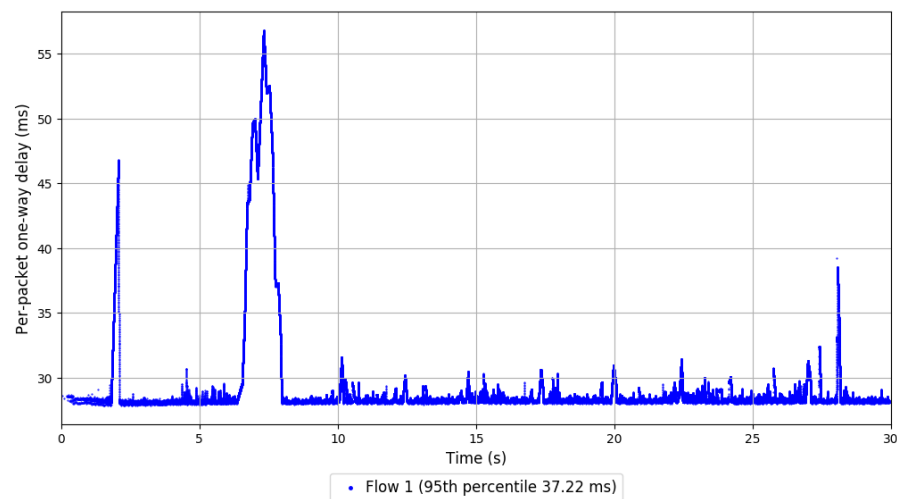
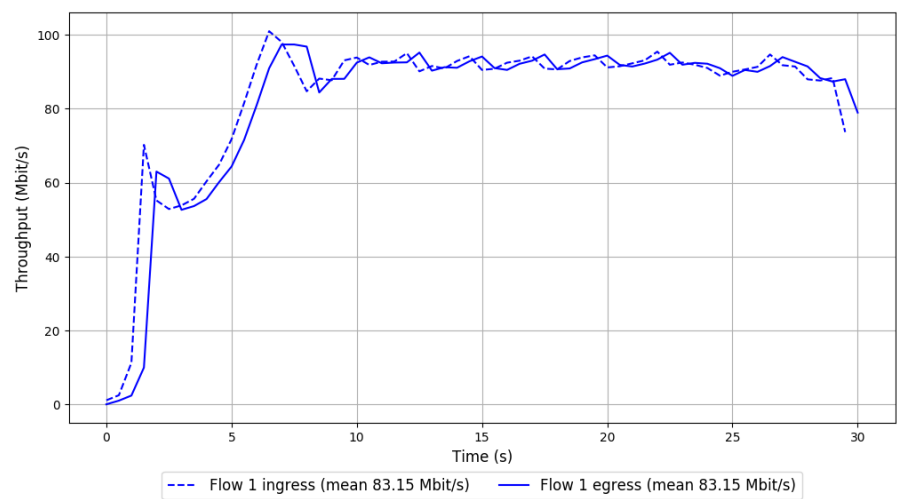
-- Flow 1:

Average throughput: 83.15 Mbit/s

95th percentile per-packet one-way delay: 37.217 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-09-25 04:46:15

End at: 2018-09-25 04:46:45

Local clock offset: 1.765 ms

Remote clock offset: 7.005 ms

Below is generated by plot.py at 2018-09-25 06:44:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 35.167 ms

Loss rate: 0.00%

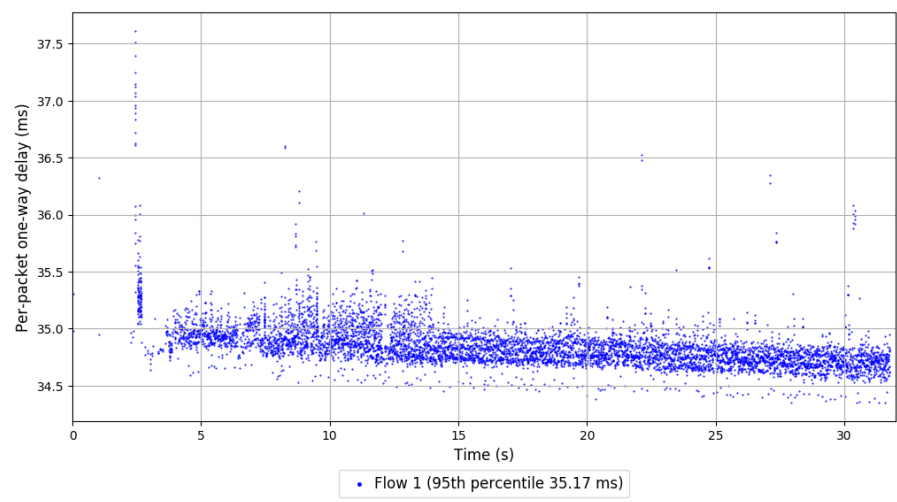
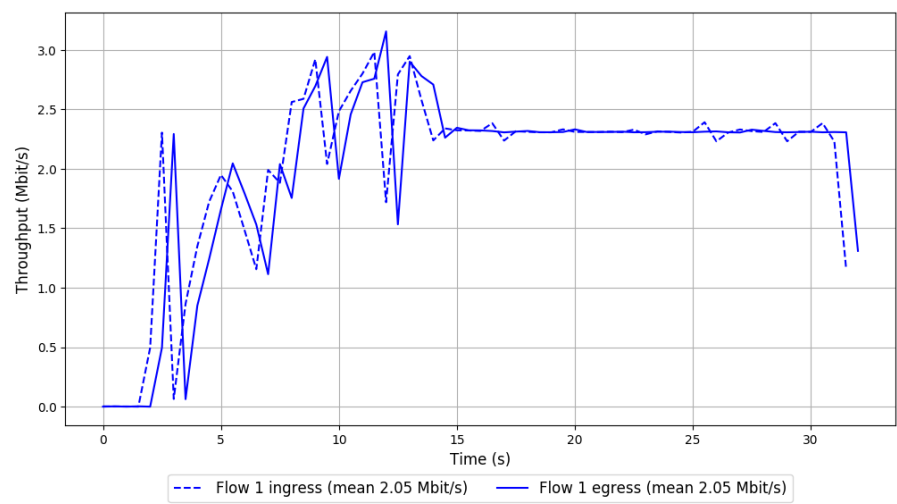
-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 35.167 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-09-25 05:09:00

End at: 2018-09-25 05:09:30

Local clock offset: -2.712 ms

Remote clock offset: 7.342 ms

Below is generated by plot.py at 2018-09-25 06:44:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 37.811 ms

Loss rate: 0.00%

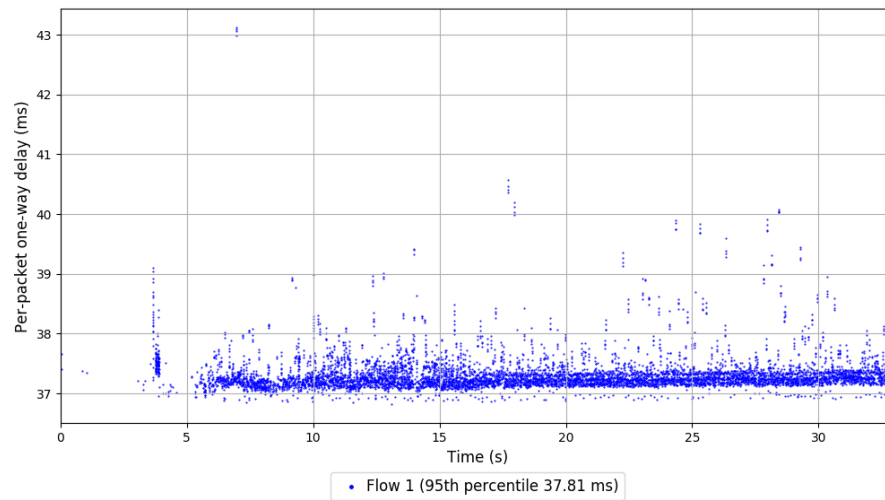
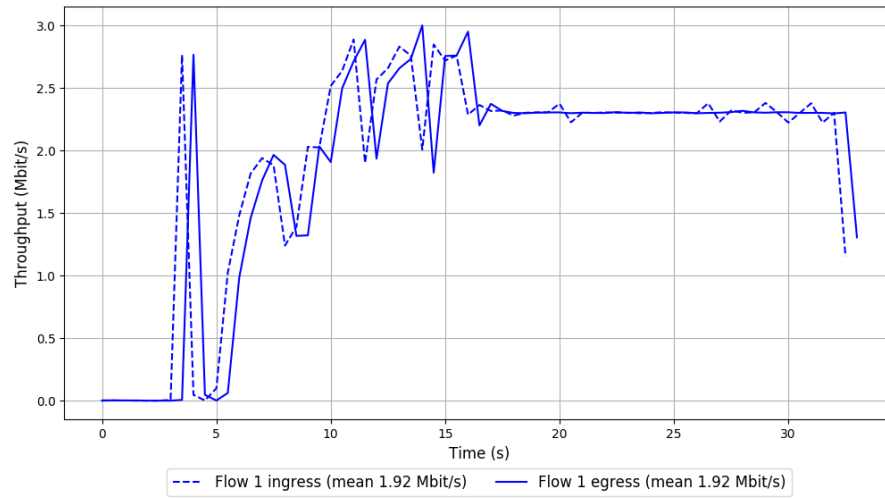
-- Flow 1:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 37.811 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-09-25 05:31:47

End at: 2018-09-25 05:32:17

Local clock offset: -5.423 ms

Remote clock offset: 1.721 ms

Below is generated by plot.py at 2018-09-25 06:44:15

Datalink statistics

-- Total of 1 flow:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 34.826 ms

Loss rate: 0.00%

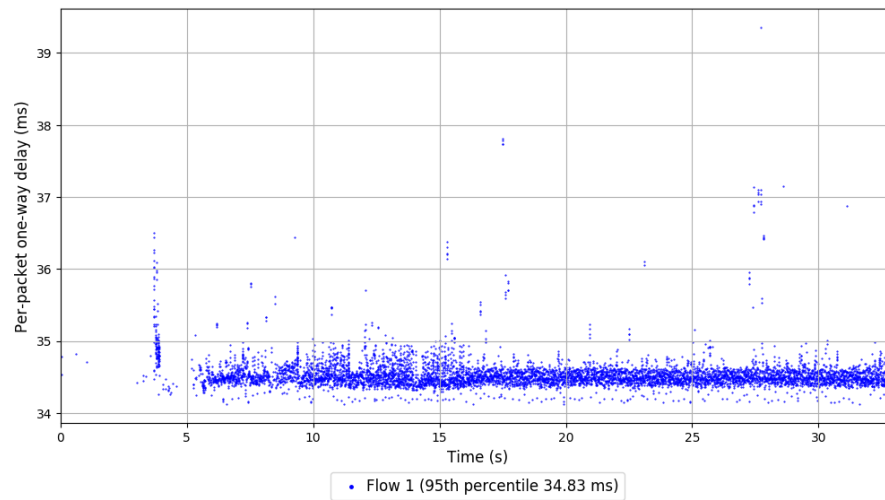
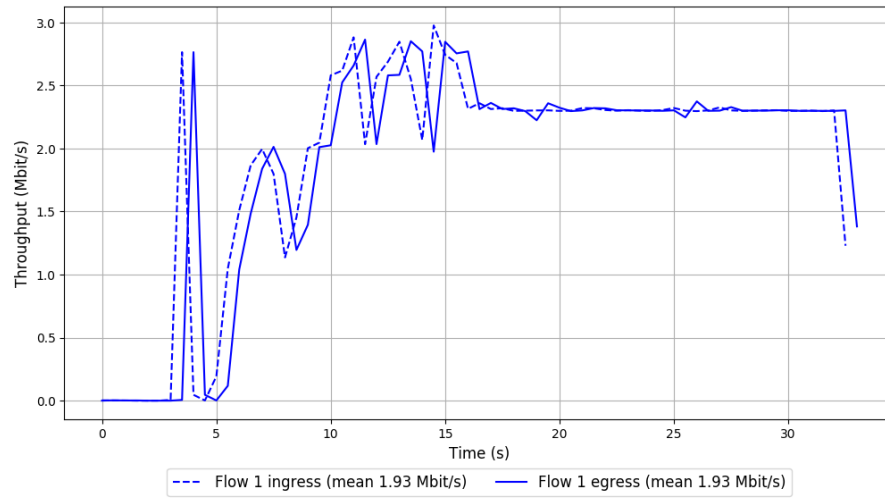
-- Flow 1:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 34.826 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

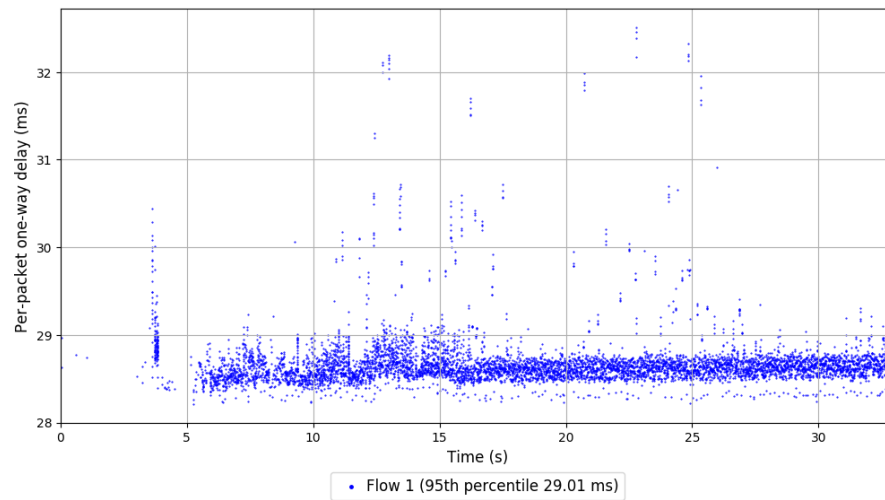
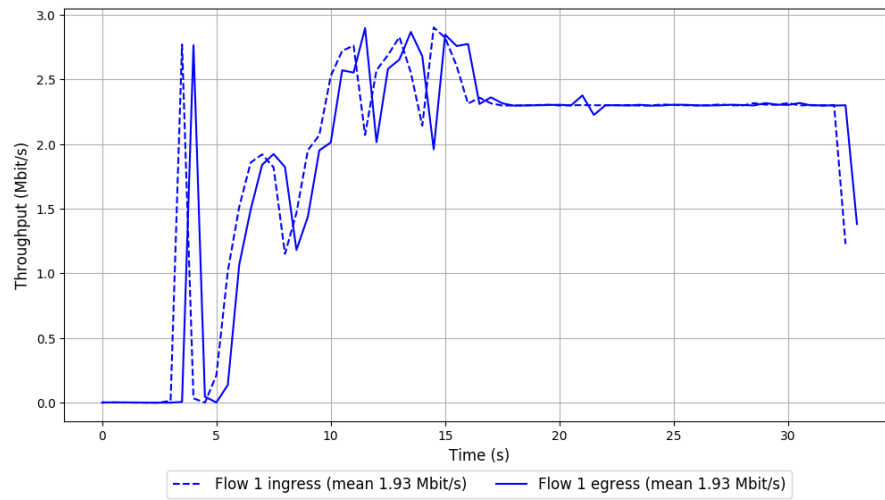


Run 4: Statistics of WebRTC media

Start at: 2018-09-25 05:54:36
End at: 2018-09-25 05:55:06
Local clock offset: -2.181 ms
Remote clock offset: -6.628 ms

Below is generated by plot.py at 2018-09-25 06:44:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 29.009 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 29.009 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-25 06:17:31
End at: 2018-09-25 06:18:01
Local clock offset: 2.455 ms
Remote clock offset: -9.395 ms

Below is generated by plot.py at 2018-09-25 06:44:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 26.141 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 26.141 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

