

Pantheon Report

Generated at 2017-09-19 05:05:32 (UTC).

Data path: India Ethernet (*remote*) → AWS India 1 Ethernet (*local*).

Repeated the test of 10 congestion control schemes 10 times.

Each test lasted for 30 seconds running 1 flow.

Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

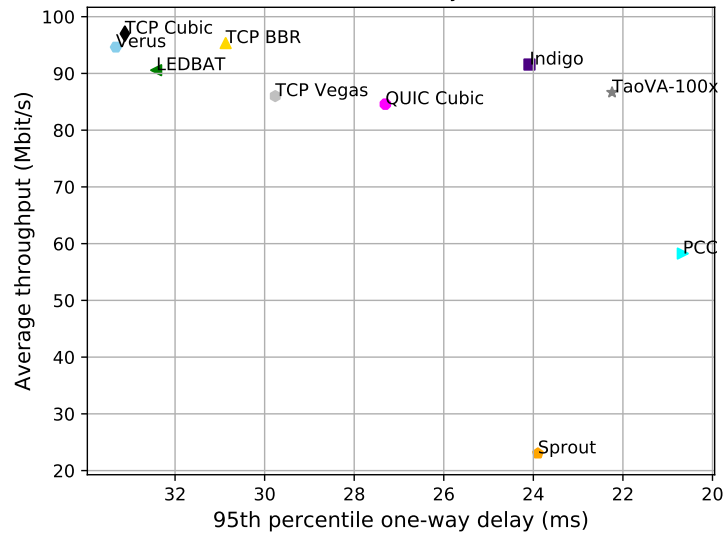
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo_fast**).

NTP offsets were measured against **nets.org.sg** and have been applied to correct the timestamps in logs.

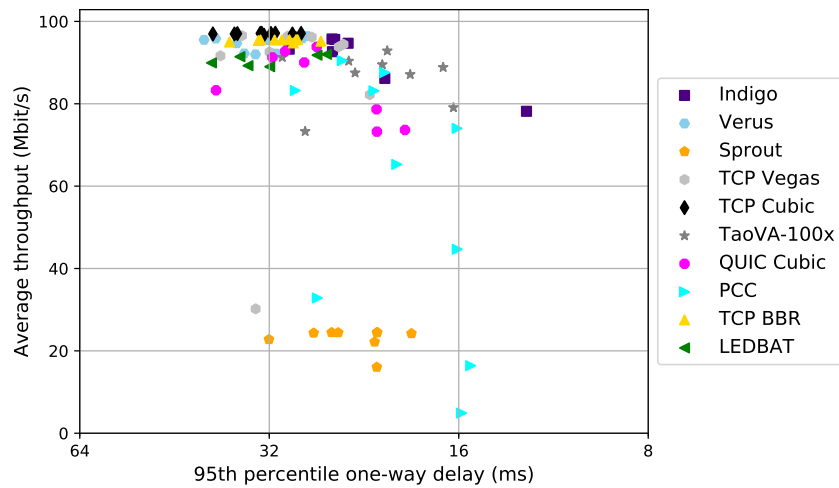
Git summary:

```
branch: master @ 57453dc11f8da93a2e03eea75289fea01b816298
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/genericCC @ f7ca42f251bf49b432bb71de6d13fa903515c366
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
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/proto-quirk @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  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/webRTC @ a488197ddd041ace68a42849b2540ad834825f42
```

test from India Ethernet to AWS India 1 Ethernet, 10 runs of 30s each per scheme
(mean of all runs by scheme)



test from India Ethernet to AWS India 1 Ethernet, 10 runs of 30s each per scheme



scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	10	95.35	30.87	0.14
TCP Cubic	10	97.01	33.12	0.14
Indigo	8	91.57	24.09	0.11
LEDBAT	6	90.57	32.42	0.17
PCC	10	58.25	20.66	0.11
QUIC Cubic	8	84.58	27.30	0.12
Sprout	9	23.04	23.90	0.10
TaoVA-100x	9	86.65	22.24	0.12
TCP Vegas	9	86.00	29.76	0.15
Verus	10	94.64	33.32	0.21

Run 1: Statistics of TCP BBR

Start at: 2017-09-19 02:09:59

End at: 2017-09-19 02:10:29

Local clock offset: 2.189 ms

Remote clock offset: -2.694 ms

Below is generated by plot.py at 2017-09-19 04:52:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.99 Mbit/s

95th percentile per-packet one-way delay: 37.013 ms

Loss rate: 0.15%

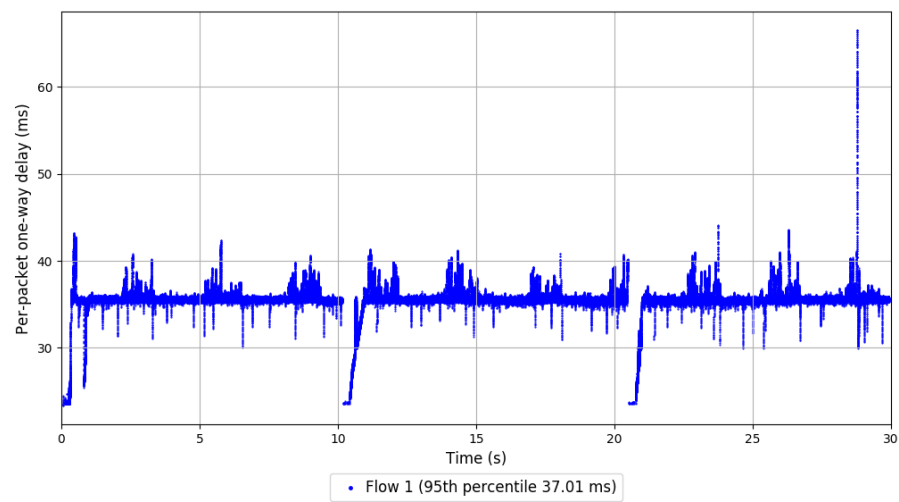
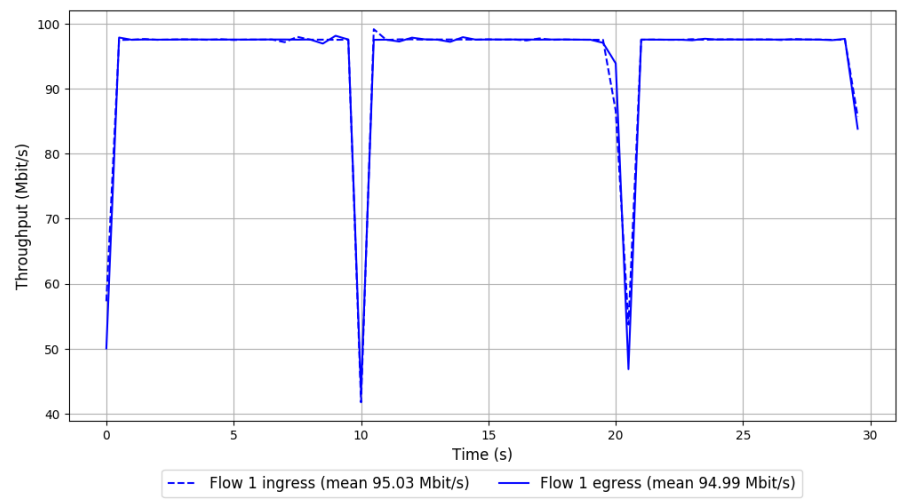
-- Flow 1:

Average throughput: 94.99 Mbit/s

95th percentile per-packet one-way delay: 37.013 ms

Loss rate: 0.15%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-09-19 02:24:10

End at: 2017-09-19 02:24:40

Local clock offset: 3.136 ms

Remote clock offset: -3.616 ms

Below is generated by plot.py at 2017-09-19 04:52:07

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.37 Mbit/s

95th percentile per-packet one-way delay: 33.296 ms

Loss rate: 0.14%

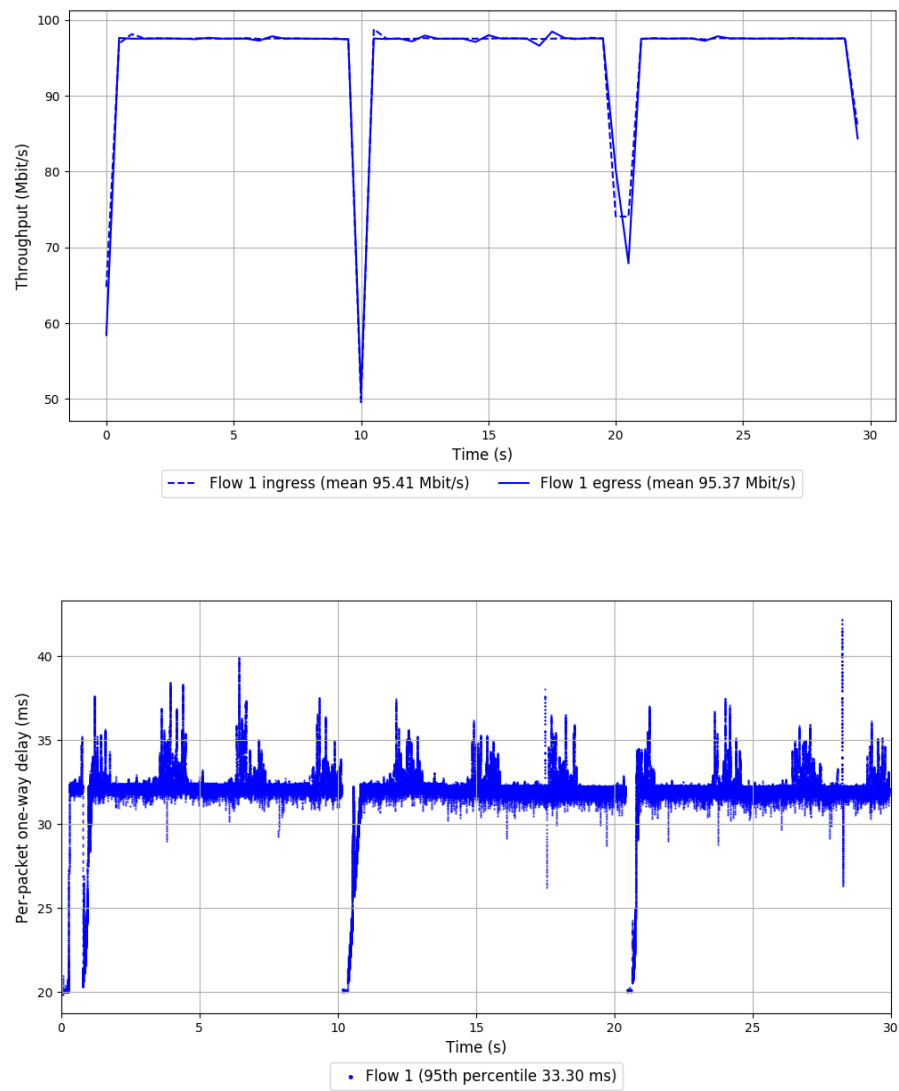
-- Flow 1:

Average throughput: 95.37 Mbit/s

95th percentile per-packet one-way delay: 33.296 ms

Loss rate: 0.14%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-09-19 02:37:42

End at: 2017-09-19 02:38:12

Local clock offset: 1.002 ms

Remote clock offset: -3.442 ms

Below is generated by plot.py at 2017-09-19 04:52:08

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.50 Mbit/s

95th percentile per-packet one-way delay: 31.385 ms

Loss rate: 0.14%

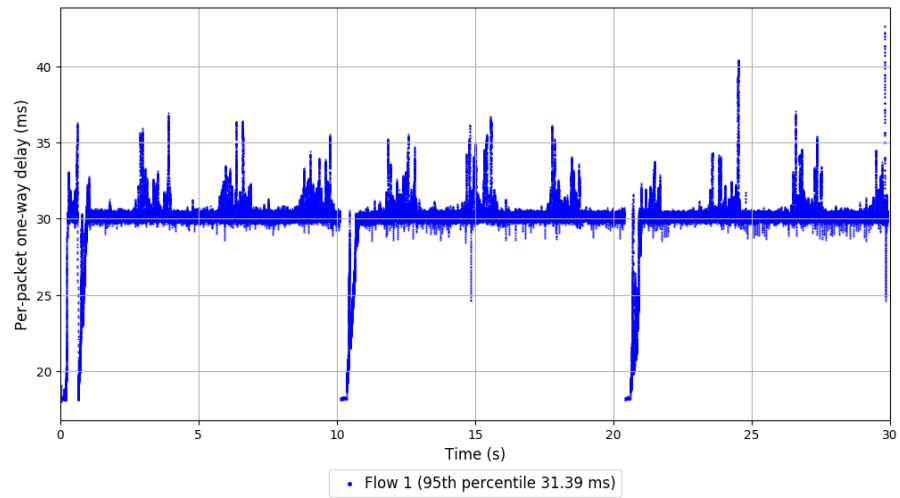
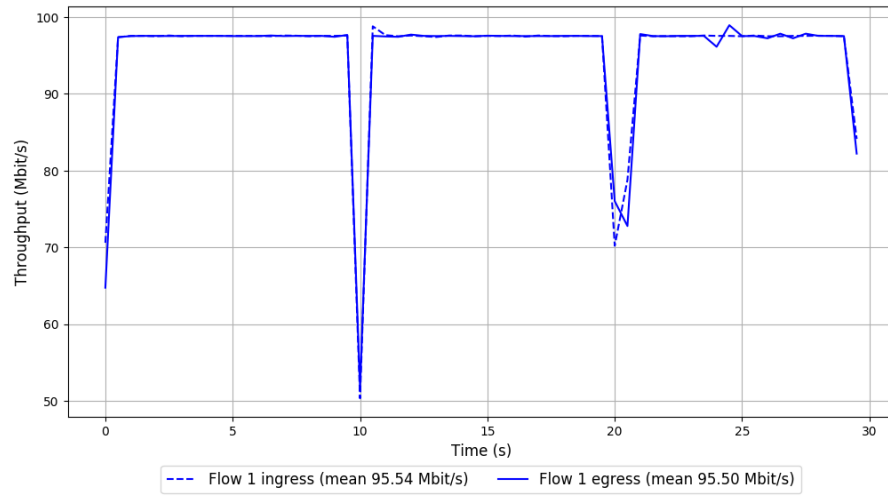
-- Flow 1:

Average throughput: 95.50 Mbit/s

95th percentile per-packet one-way delay: 31.385 ms

Loss rate: 0.14%

Run 3: Report of TCP BBR — Data Link

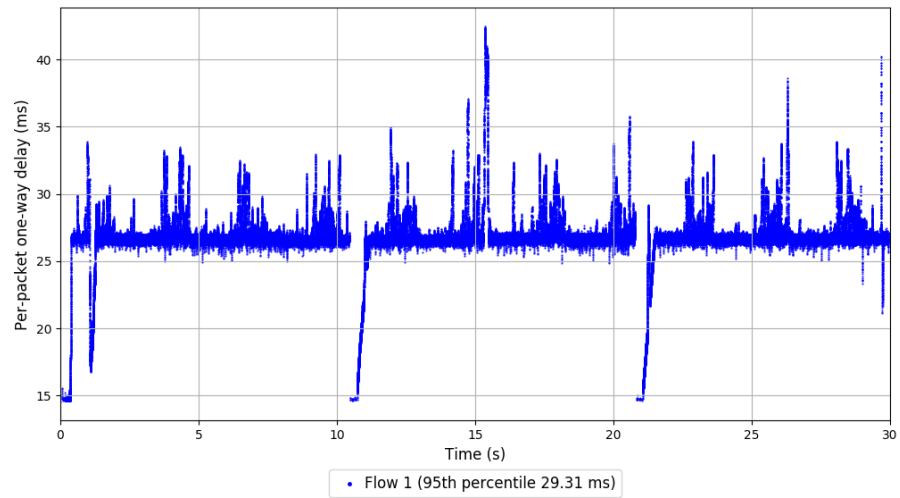
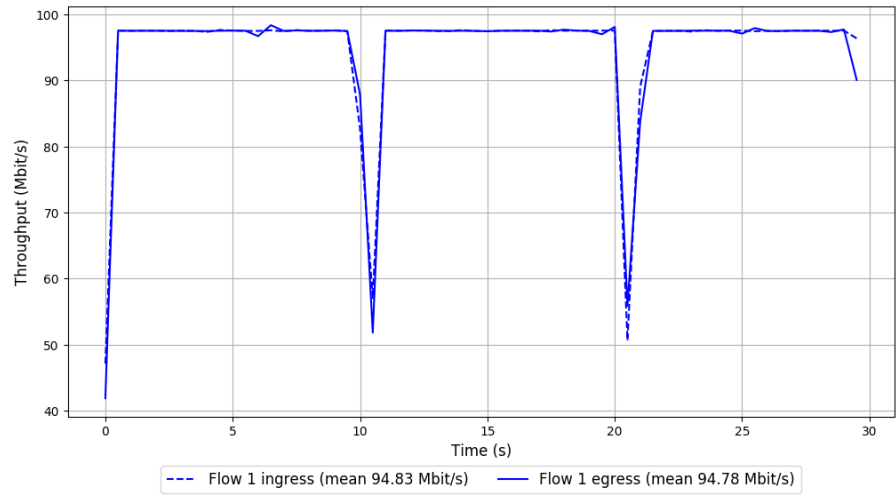


Run 4: Statistics of TCP BBR

Start at: 2017-09-19 03:17:17
End at: 2017-09-19 03:17:47
Local clock offset: -2.366 ms
Remote clock offset: -3.599 ms

Below is generated by plot.py at 2017-09-19 04:52:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.78 Mbit/s
95th percentile per-packet one-way delay: 29.309 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 94.78 Mbit/s
95th percentile per-packet one-way delay: 29.309 ms
Loss rate: 0.20%

Run 4: Report of TCP BBR — Data Link

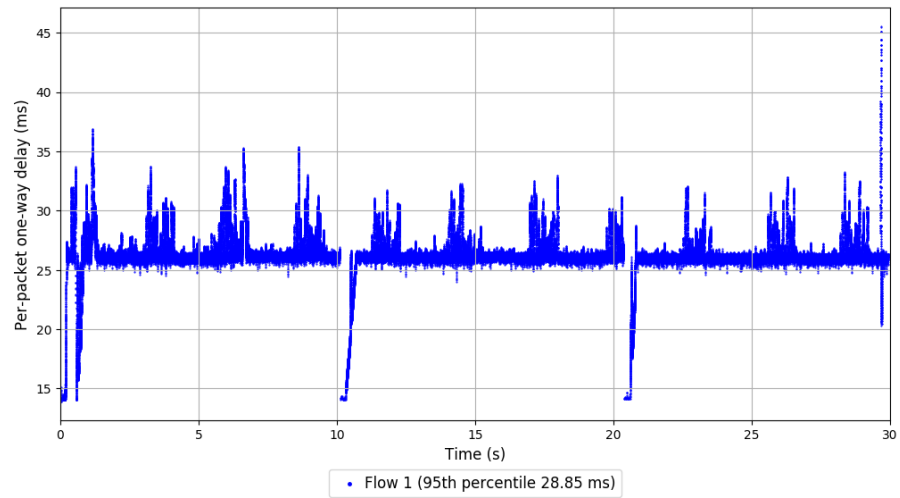
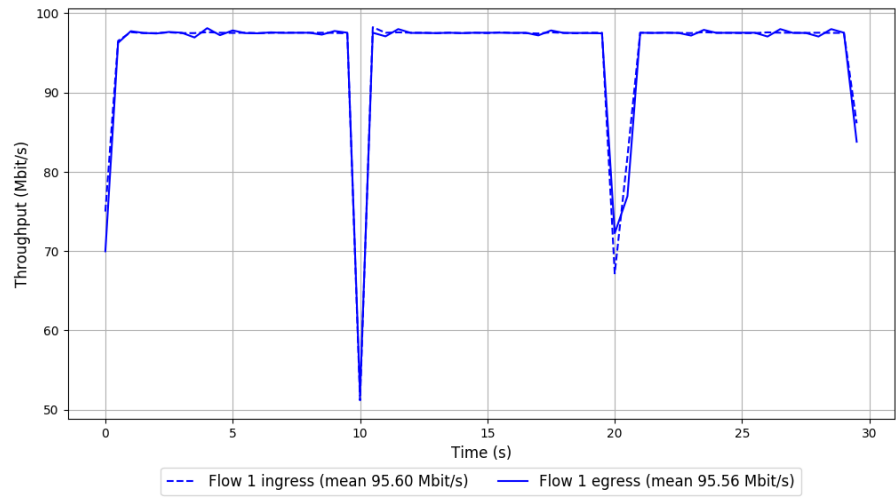


Run 5: Statistics of TCP BBR

Start at: 2017-09-19 03:32:14
End at: 2017-09-19 03:32:44
Local clock offset: -2.336 ms
Remote clock offset: -2.242 ms

Below is generated by plot.py at 2017-09-19 04:52:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.56 Mbit/s
95th percentile per-packet one-way delay: 28.851 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 95.56 Mbit/s
95th percentile per-packet one-way delay: 28.851 ms
Loss rate: 0.13%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-09-19 03:47:25

End at: 2017-09-19 03:47:55

Local clock offset: 0.301 ms

Remote clock offset: -2.451 ms

Below is generated by plot.py at 2017-09-19 04:52:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.50 Mbit/s

95th percentile per-packet one-way delay: 33.043 ms

Loss rate: 0.14%

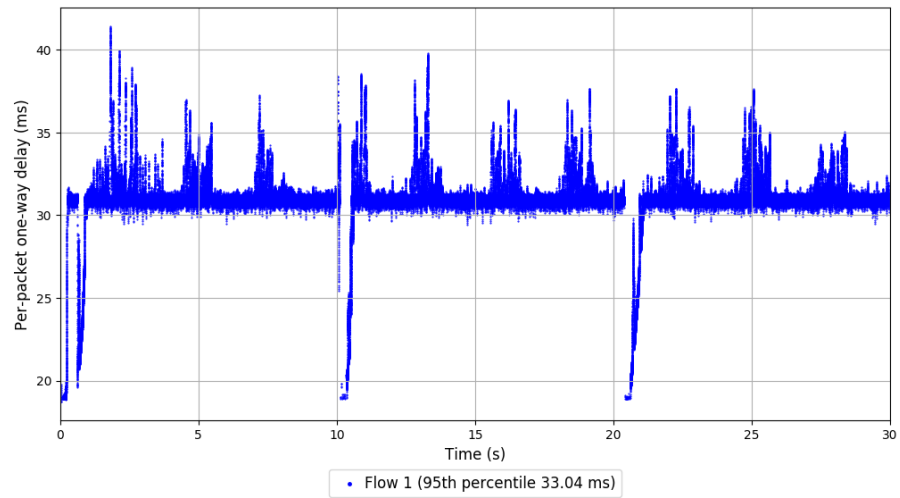
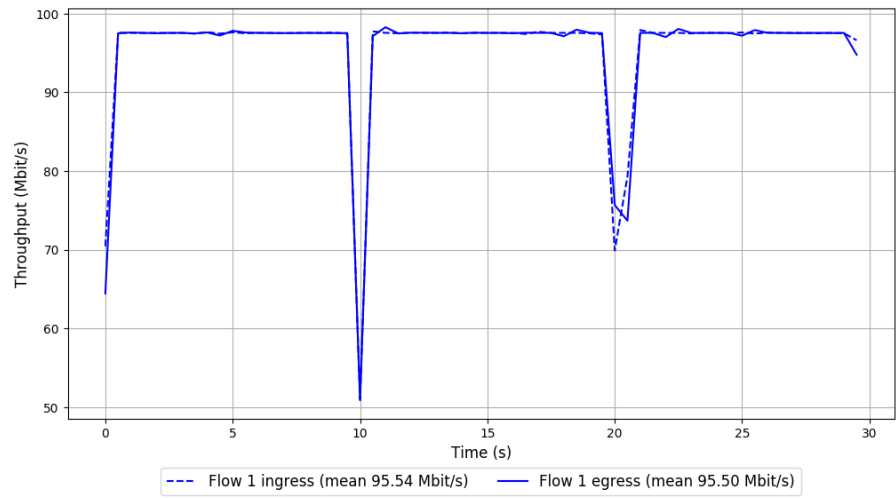
-- Flow 1:

Average throughput: 95.50 Mbit/s

95th percentile per-packet one-way delay: 33.043 ms

Loss rate: 0.14%

Run 6: Report of TCP BBR — Data Link

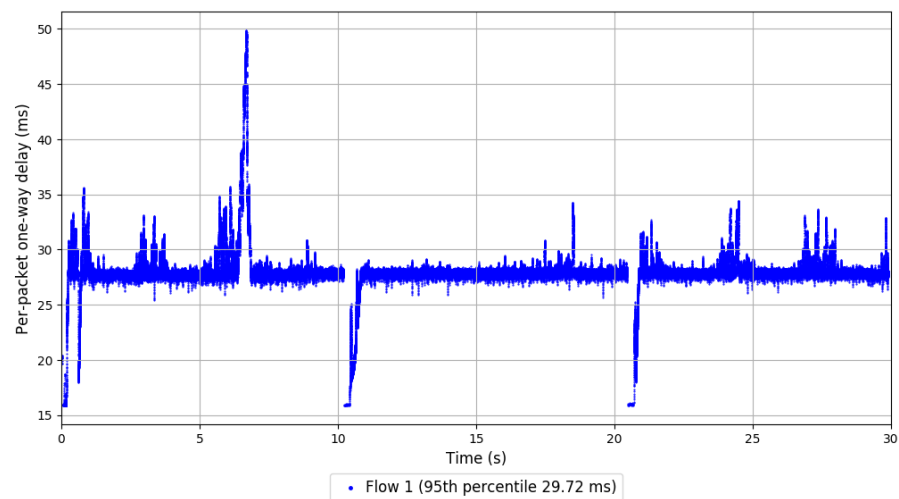
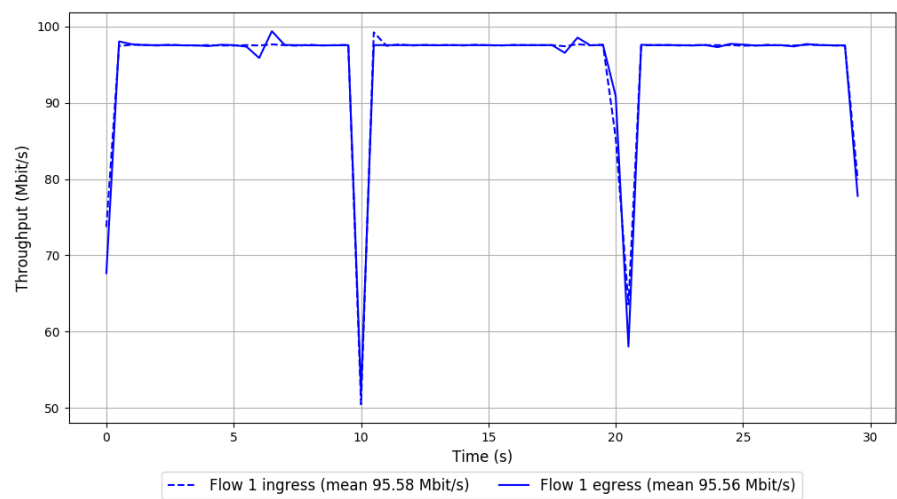


Run 7: Statistics of TCP BBR

Start at: 2017-09-19 04:02:10
End at: 2017-09-19 04:02:40
Local clock offset: -2.977 ms
Remote clock offset: -3.303 ms

Below is generated by plot.py at 2017-09-19 04:52:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.56 Mbit/s
95th percentile per-packet one-way delay: 29.724 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 95.56 Mbit/s
95th percentile per-packet one-way delay: 29.724 ms
Loss rate: 0.13%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-09-19 04:17:04

End at: 2017-09-19 04:17:34

Local clock offset: -1.076 ms

Remote clock offset: -1.76 ms

Below is generated by plot.py at 2017-09-19 04:52:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.50 Mbit/s

95th percentile per-packet one-way delay: 30.562 ms

Loss rate: 0.13%

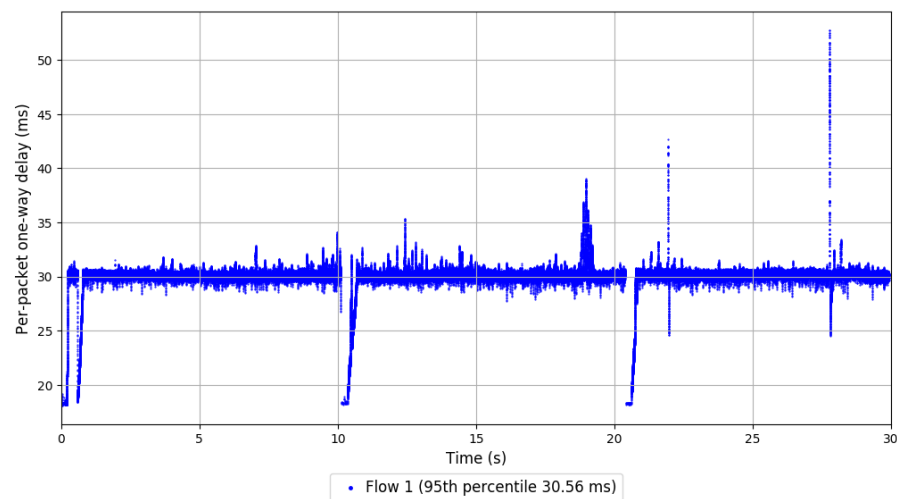
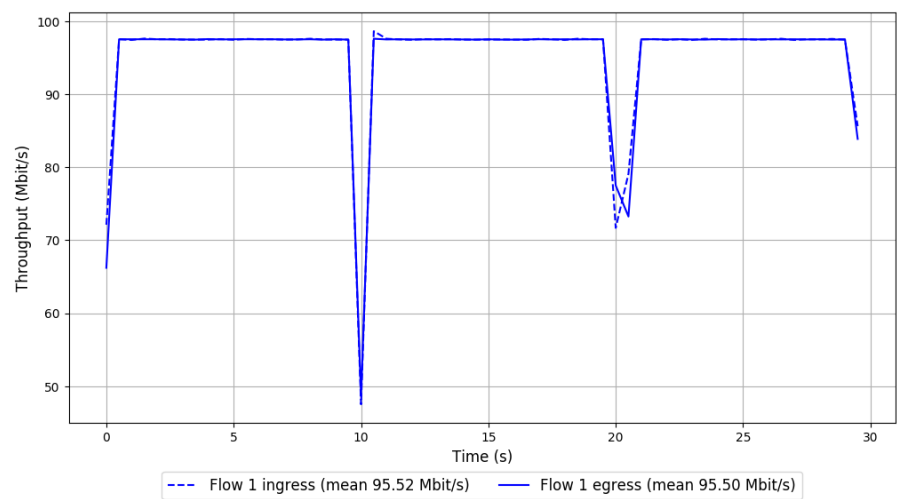
-- Flow 1:

Average throughput: 95.50 Mbit/s

95th percentile per-packet one-way delay: 30.562 ms

Loss rate: 0.13%

Run 8: Report of TCP BBR — Data Link

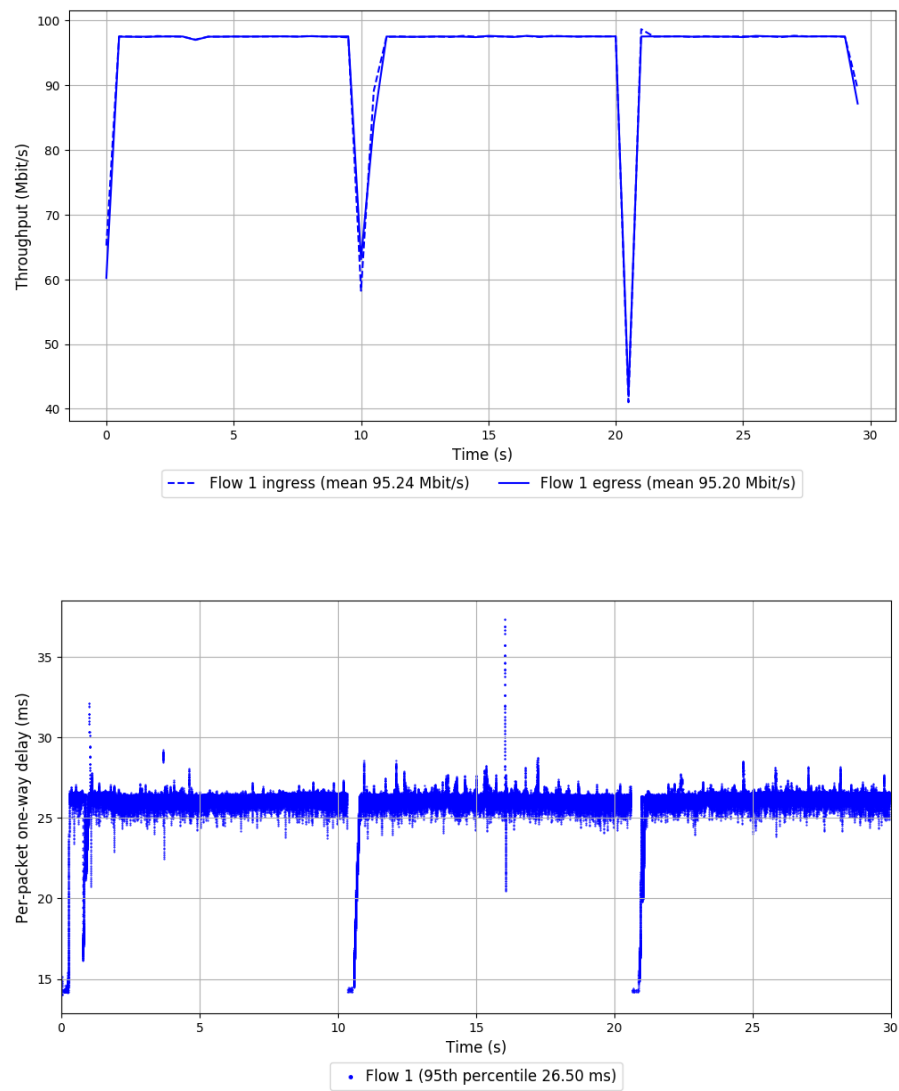


Run 9: Statistics of TCP BBR

Start at: 2017-09-19 04:29:25
End at: 2017-09-19 04:29:55
Local clock offset: -5.387 ms
Remote clock offset: -2.975 ms

Below is generated by plot.py at 2017-09-19 04:53:31
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.20 Mbit/s
95th percentile per-packet one-way delay: 26.497 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 95.20 Mbit/s
95th percentile per-packet one-way delay: 26.497 ms
Loss rate: 0.13%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-09-19 04:42:06

End at: 2017-09-19 04:42:36

Local clock offset: -3.208 ms

Remote clock offset: -2.971 ms

Below is generated by plot.py at 2017-09-19 04:53:31

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.55 Mbit/s

95th percentile per-packet one-way delay: 29.017 ms

Loss rate: 0.13%

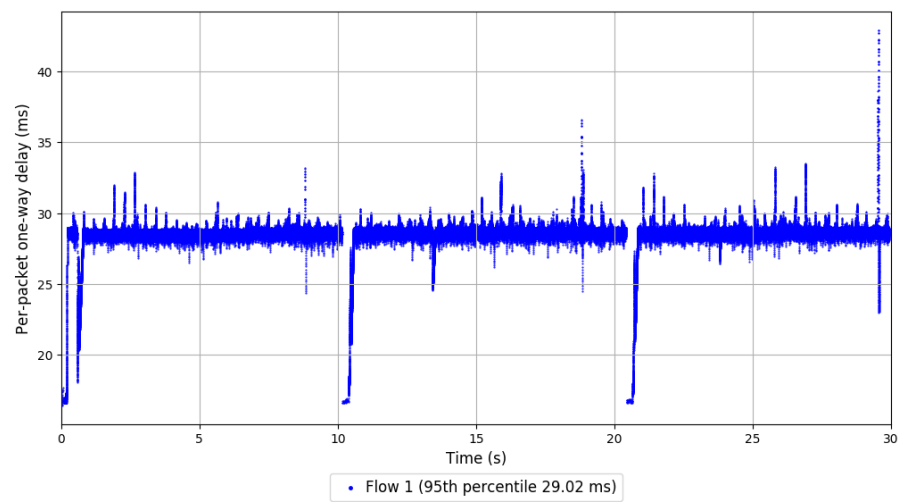
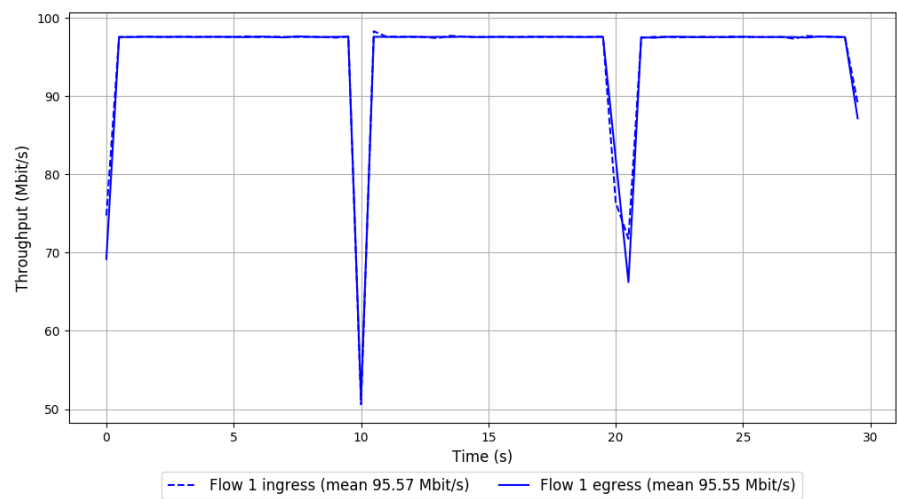
-- Flow 1:

Average throughput: 95.55 Mbit/s

95th percentile per-packet one-way delay: 29.017 ms

Loss rate: 0.13%

Run 10: Report of TCP BBR — Data Link

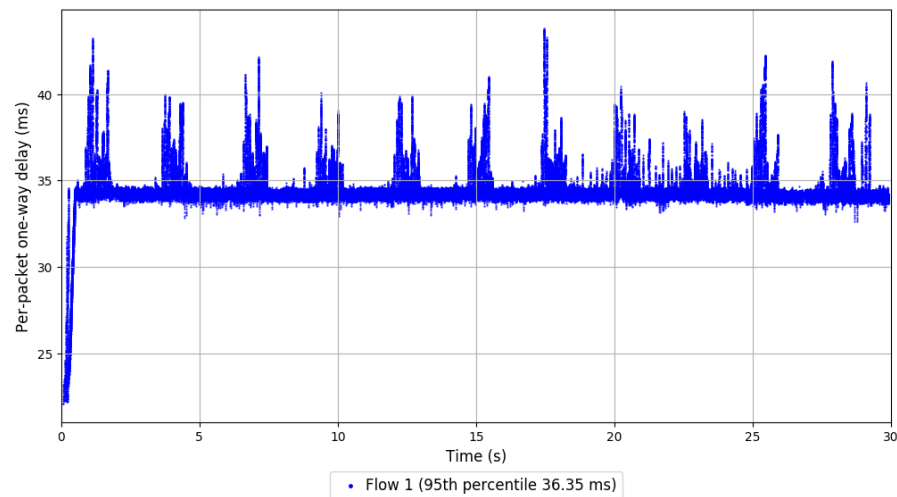
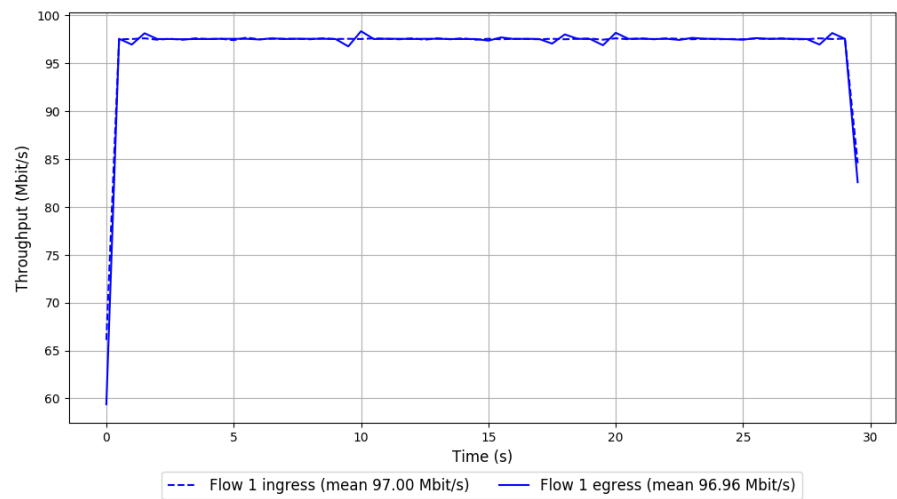


Run 1: Statistics of TCP Cubic

Start at: 2017-09-19 02:02:16
End at: 2017-09-19 02:02:46
Local clock offset: 0.459 ms
Remote clock offset: -2.998 ms

Below is generated by plot.py at 2017-09-19 04:53:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.96 Mbit/s
95th percentile per-packet one-way delay: 36.347 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 96.96 Mbit/s
95th percentile per-packet one-way delay: 36.347 ms
Loss rate: 0.15%

Run 1: Report of TCP Cubic — Data Link

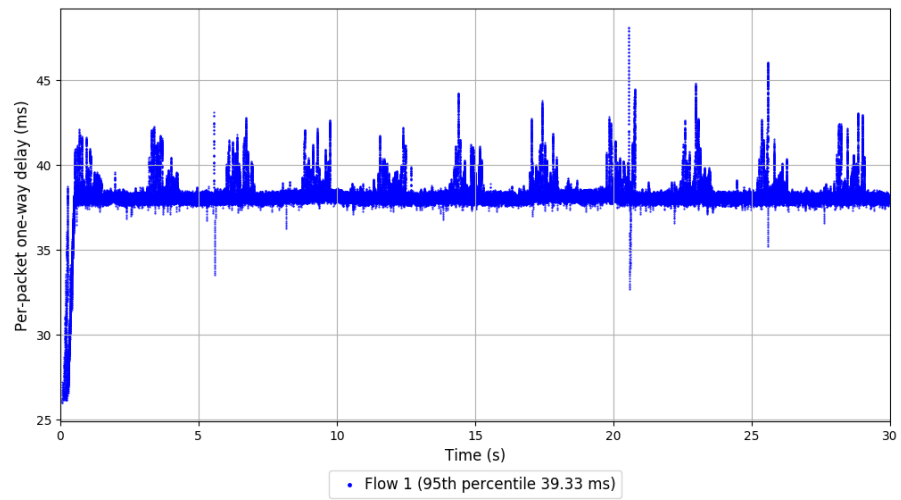
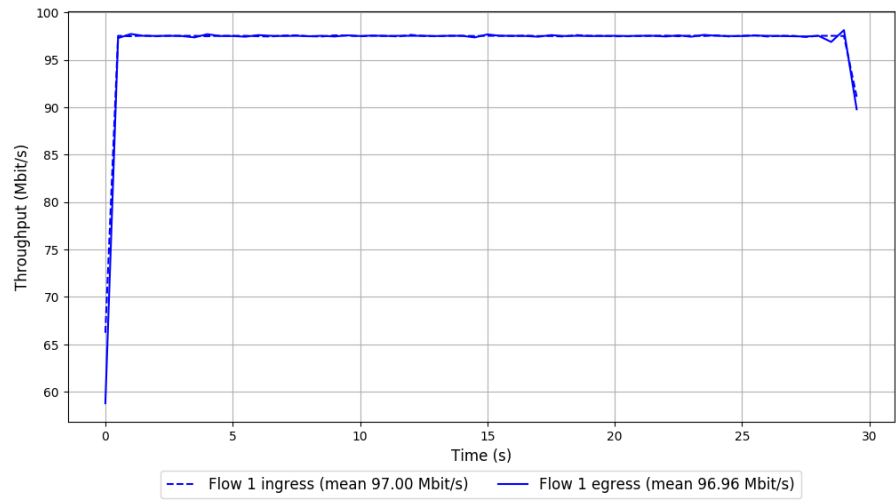


Run 2: Statistics of TCP Cubic

Start at: 2017-09-19 02:17:17
End at: 2017-09-19 02:17:47
Local clock offset: 4.269 ms
Remote clock offset: -3.338 ms

Below is generated by plot.py at 2017-09-19 04:53:34
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.96 Mbit/s
95th percentile per-packet one-way delay: 39.328 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 96.96 Mbit/s
95th percentile per-packet one-way delay: 39.328 ms
Loss rate: 0.15%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-09-19 02:30:52

End at: 2017-09-19 02:31:22

Local clock offset: 1.108 ms

Remote clock offset: -3.25 ms

Below is generated by plot.py at 2017-09-19 04:53:34

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.08 Mbit/s

95th percentile per-packet one-way delay: 31.805 ms

Loss rate: 0.13%

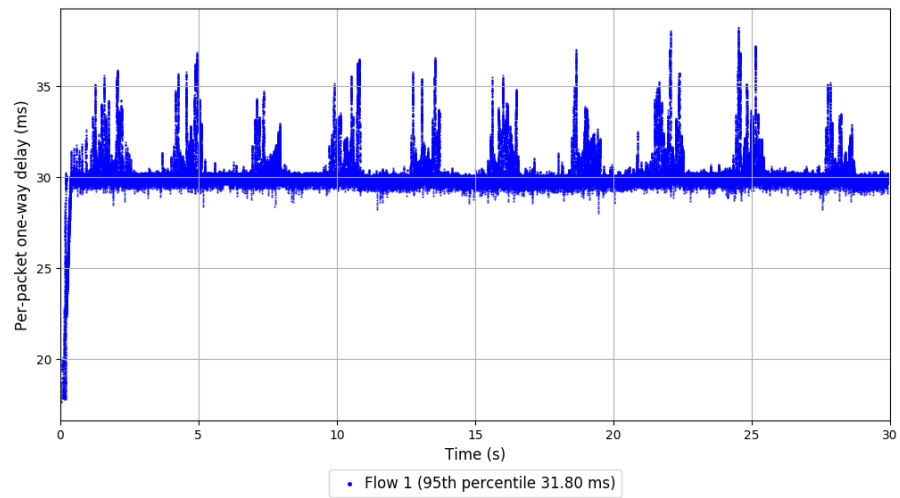
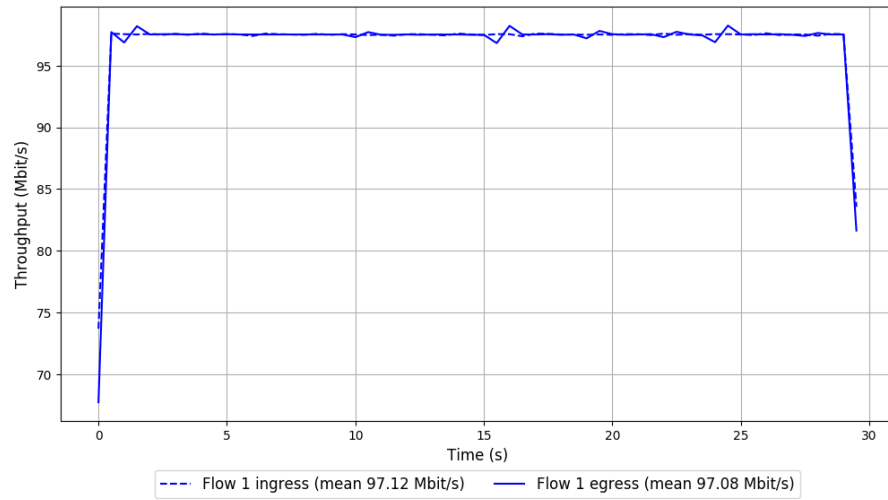
-- Flow 1:

Average throughput: 97.08 Mbit/s

95th percentile per-packet one-way delay: 31.805 ms

Loss rate: 0.13%

Run 3: Report of TCP Cubic — Data Link

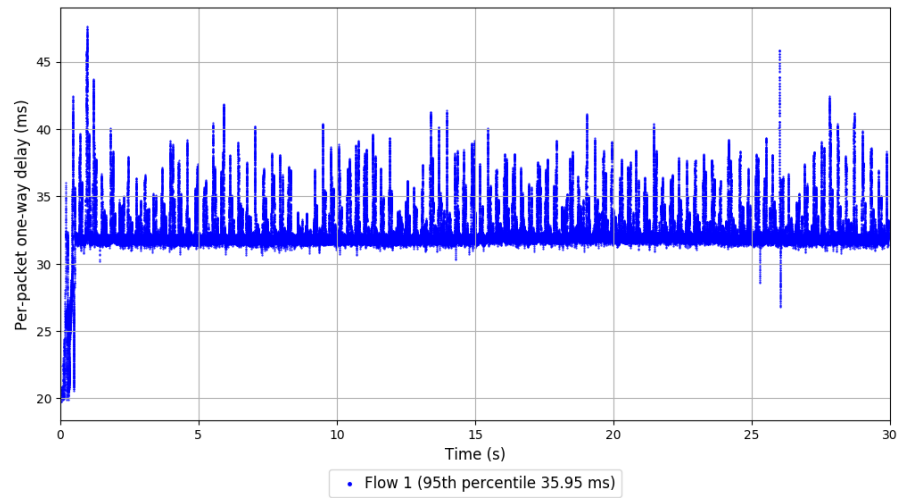
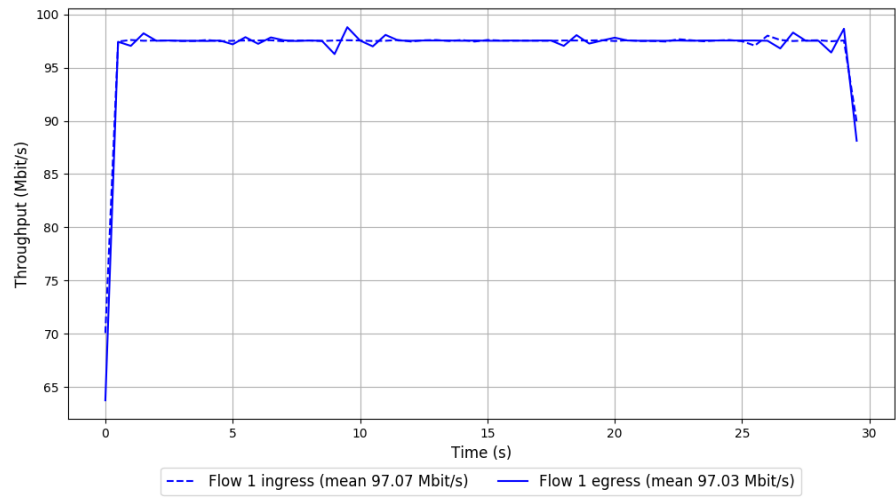


Run 4: Statistics of TCP Cubic

Start at: 2017-09-19 02:50:14
End at: 2017-09-19 02:50:45
Local clock offset: 2.61 ms
Remote clock offset: -3.252 ms

Below is generated by plot.py at 2017-09-19 04:53:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.03 Mbit/s
95th percentile per-packet one-way delay: 35.954 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 97.03 Mbit/s
95th percentile per-packet one-way delay: 35.954 ms
Loss rate: 0.14%

Run 4: Report of TCP Cubic — Data Link

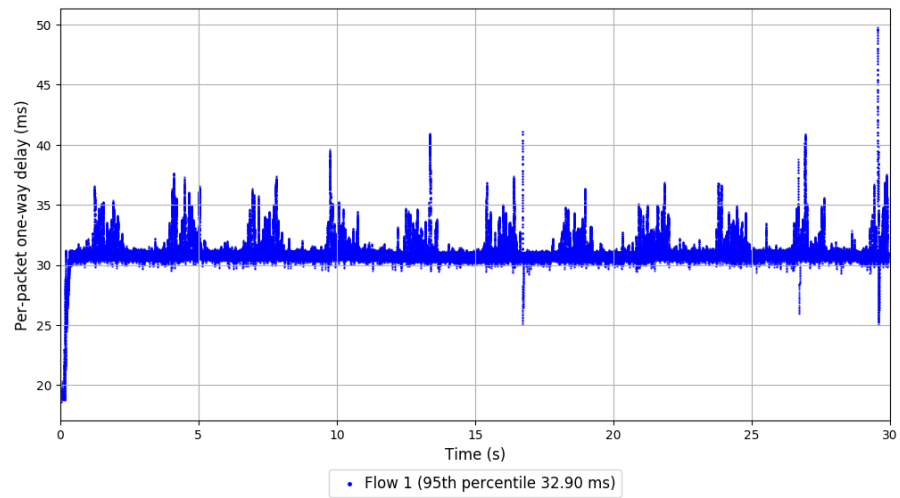
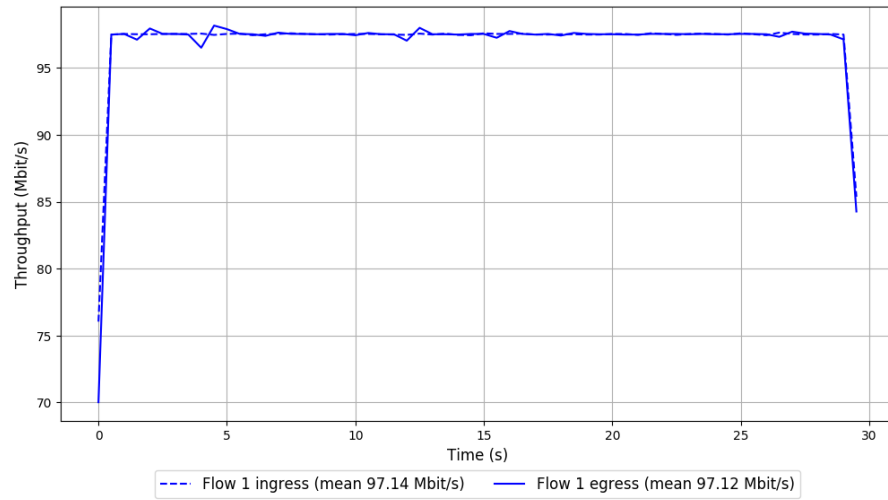


Run 5: Statistics of TCP Cubic

Start at: 2017-09-19 03:25:09
End at: 2017-09-19 03:25:39
Local clock offset: 1.497 ms
Remote clock offset: -3.512 ms

Below is generated by plot.py at 2017-09-19 04:53:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.12 Mbit/s
95th percentile per-packet one-way delay: 32.904 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 97.12 Mbit/s
95th percentile per-packet one-way delay: 32.904 ms
Loss rate: 0.13%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-09-19 03:39:25

End at: 2017-09-19 03:39:55

Local clock offset: 0.233 ms

Remote clock offset: -2.83 ms

Below is generated by plot.py at 2017-09-19 04:53:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 97.10 Mbit/s

95th percentile per-packet one-way delay: 33.067 ms

Loss rate: 0.13%

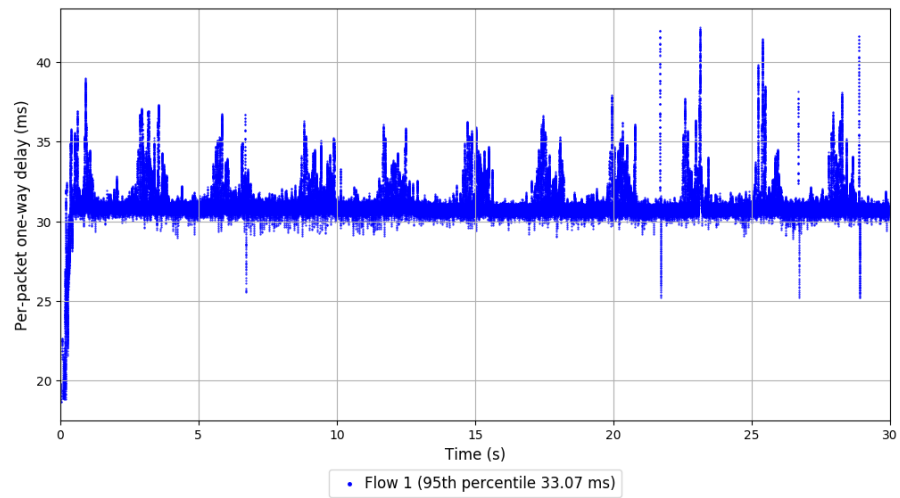
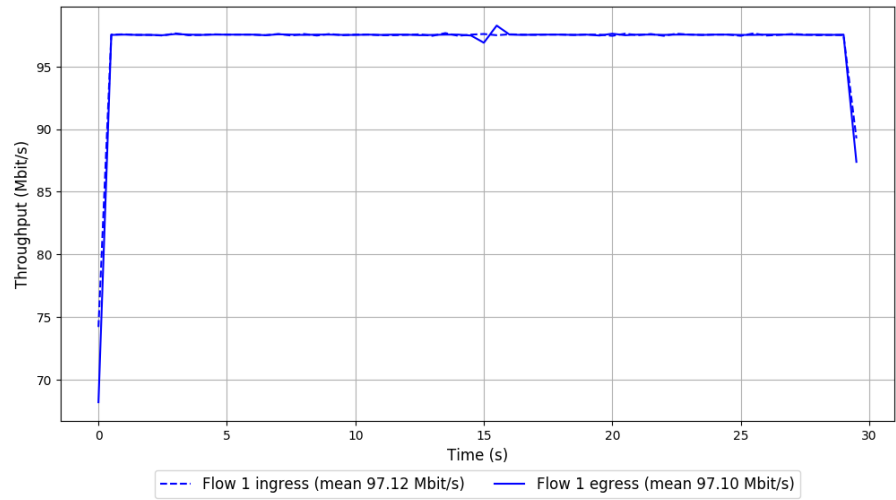
-- Flow 1:

Average throughput: 97.10 Mbit/s

95th percentile per-packet one-way delay: 33.067 ms

Loss rate: 0.13%

Run 6: Report of TCP Cubic — Data Link

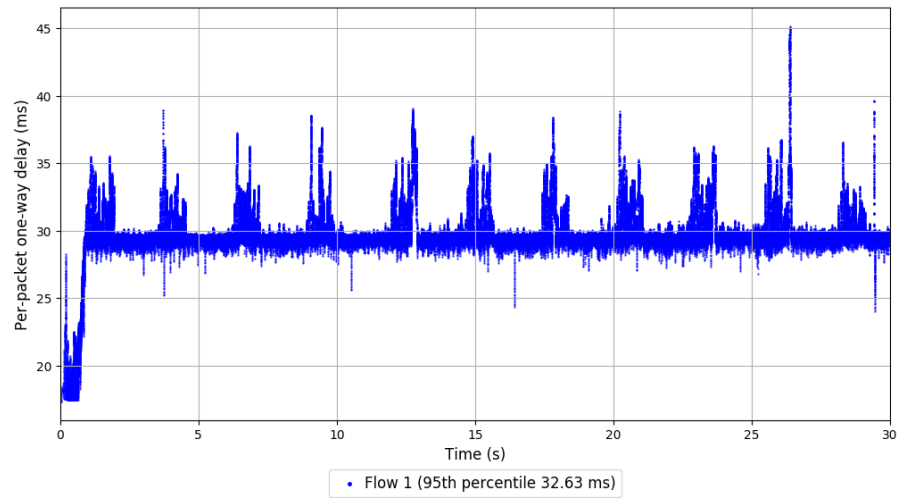
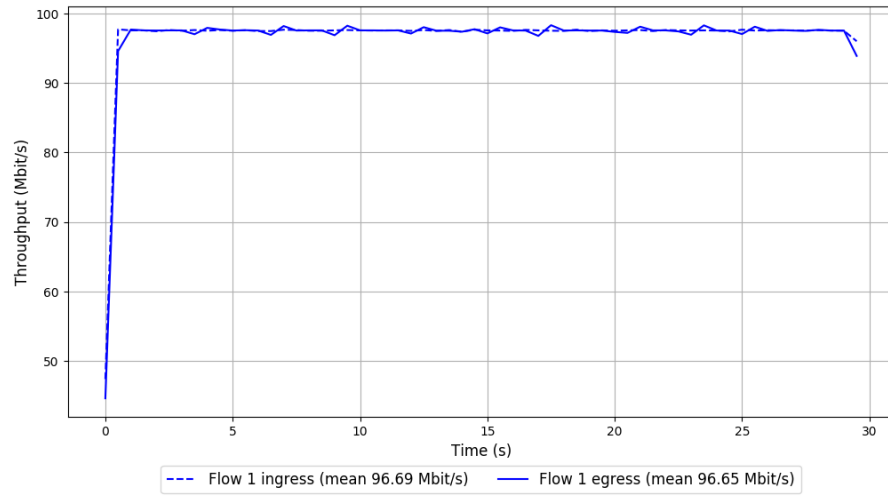


Run 7: Statistics of TCP Cubic

Start at: 2017-09-19 03:55:02
End at: 2017-09-19 03:55:32
Local clock offset: -2.398 ms
Remote clock offset: -3.399 ms

Below is generated by plot.py at 2017-09-19 04:54:56
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.65 Mbit/s
95th percentile per-packet one-way delay: 32.628 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 96.65 Mbit/s
95th percentile per-packet one-way delay: 32.628 ms
Loss rate: 0.14%

Run 7: Report of TCP Cubic — Data Link

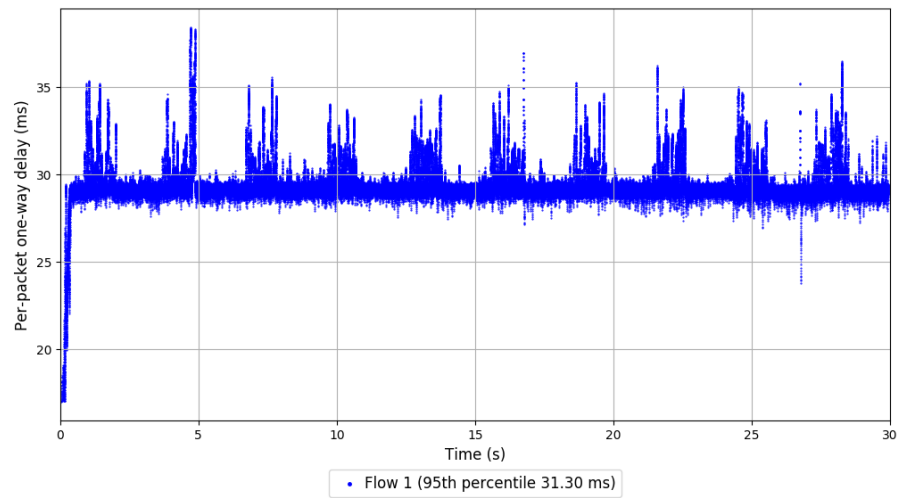
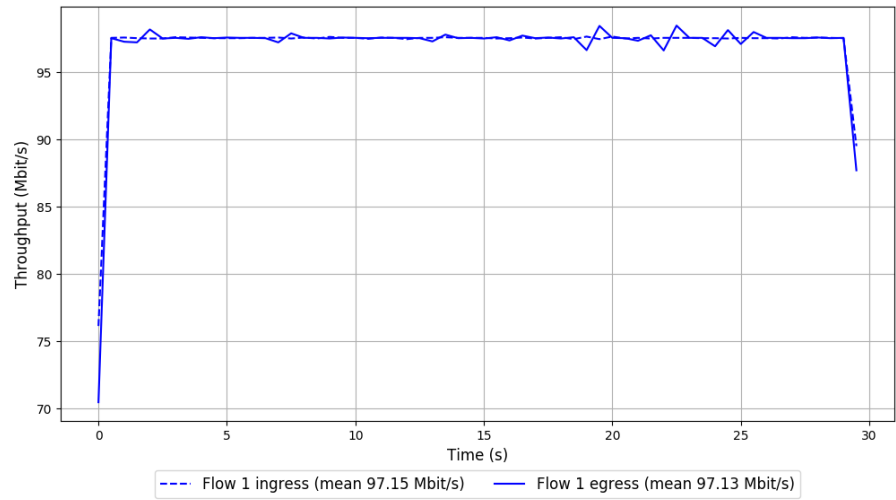


Run 8: Statistics of TCP Cubic

Start at: 2017-09-19 04:09:31
End at: 2017-09-19 04:10:01
Local clock offset: -1.531 ms
Remote clock offset: -2.703 ms

Below is generated by plot.py at 2017-09-19 04:54:57
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.13 Mbit/s
95th percentile per-packet one-way delay: 31.297 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 97.13 Mbit/s
95th percentile per-packet one-way delay: 31.297 ms
Loss rate: 0.13%

Run 8: Report of TCP Cubic — Data Link

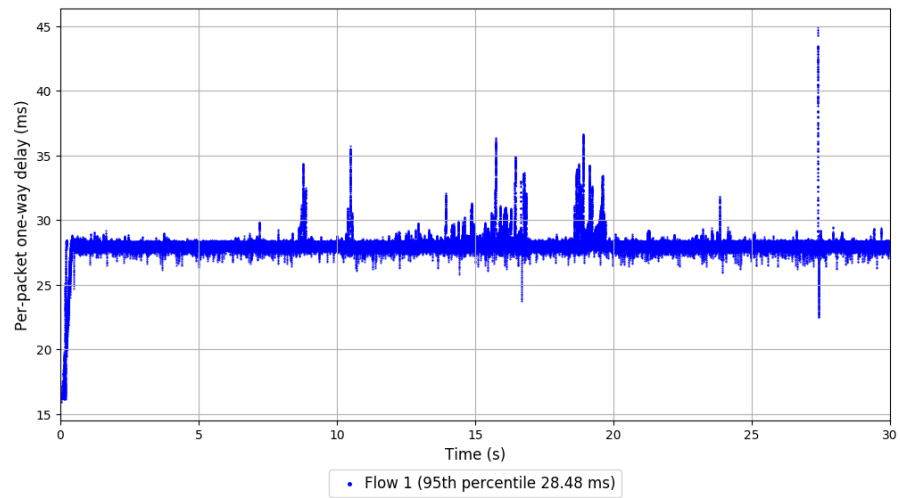
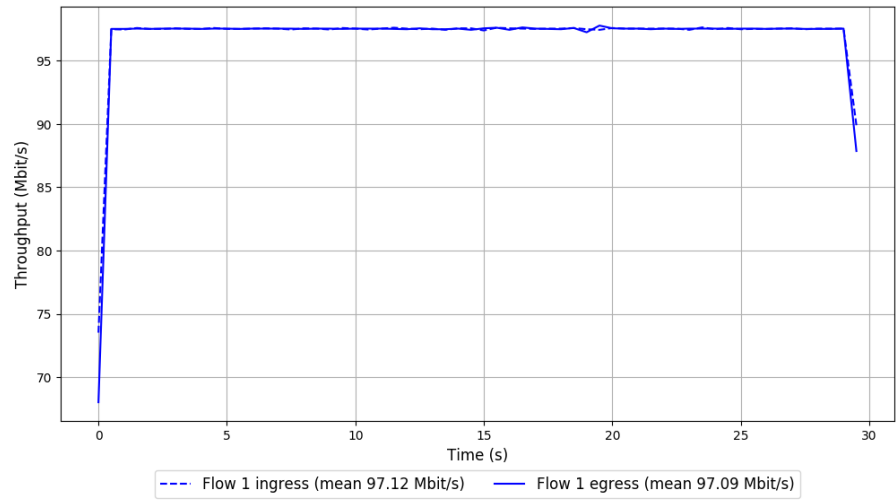


Run 9: Statistics of TCP Cubic

Start at: 2017-09-19 04:23:19
End at: 2017-09-19 04:23:49
Local clock offset: -3.295 ms
Remote clock offset: -2.993 ms

Below is generated by plot.py at 2017-09-19 04:54:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 97.09 Mbit/s
95th percentile per-packet one-way delay: 28.479 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 97.09 Mbit/s
95th percentile per-packet one-way delay: 28.479 ms
Loss rate: 0.13%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-09-19 04:35:29

End at: 2017-09-19 04:35:59

Local clock offset: -2.768 ms

Remote clock offset: -3.166 ms

Below is generated by plot.py at 2017-09-19 04:55:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.95 Mbit/s

95th percentile per-packet one-way delay: 29.399 ms

Loss rate: 0.14%

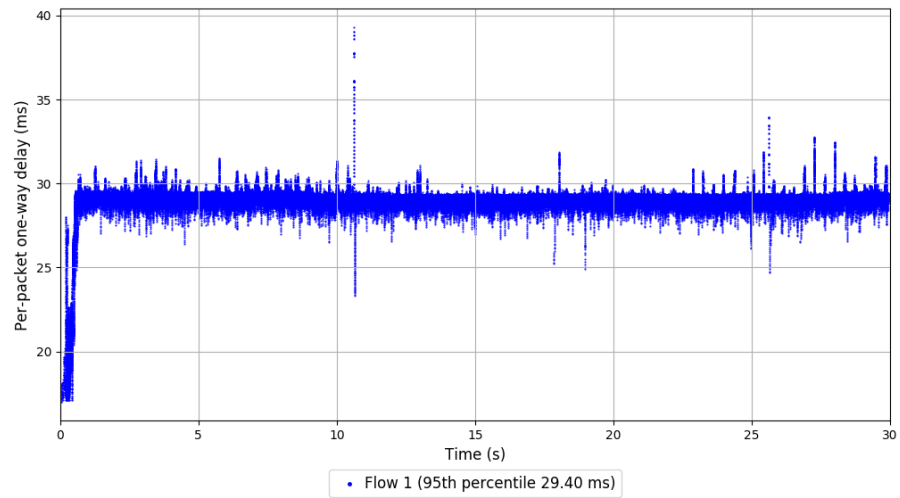
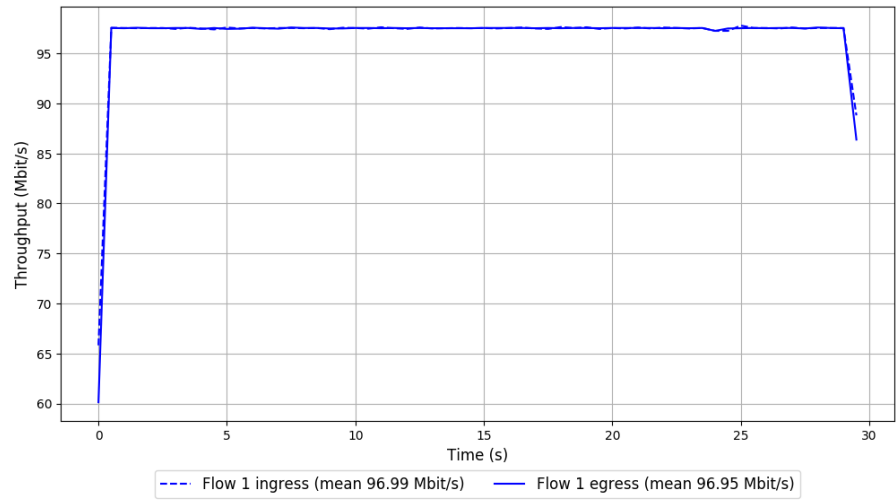
-- Flow 1:

Average throughput: 96.95 Mbit/s

95th percentile per-packet one-way delay: 29.399 ms

Loss rate: 0.14%

Run 10: Report of TCP Cubic — Data Link

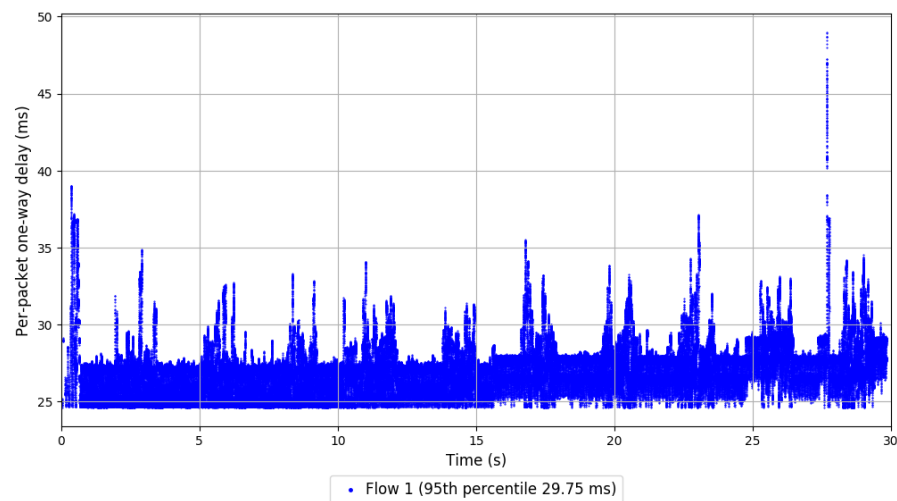
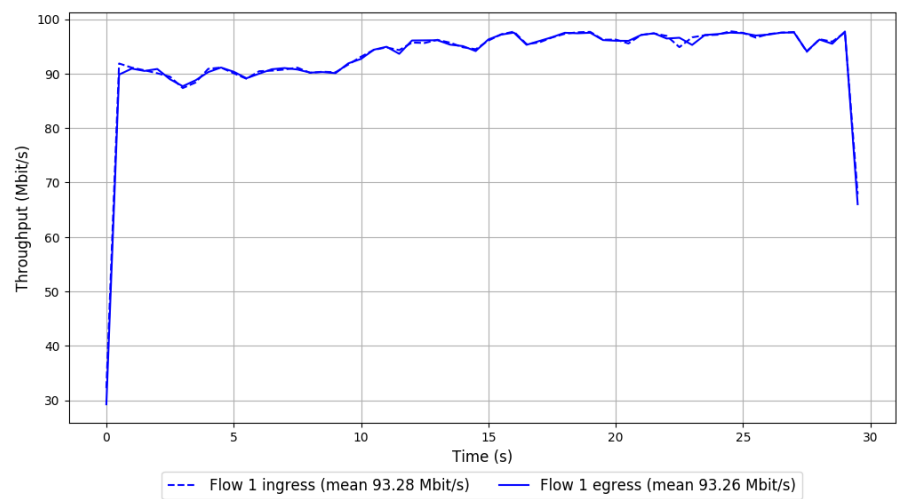


```
Run 1: Statistics of Indigo

Start at: 2017-09-19 02:06:46
End at: 2017-09-19 02:07:16
Local clock offset: 2.864 ms
Remote clock offset: -3.027 ms

# Below is generated by plot.py at 2017-09-19 04:55:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.26 Mbit/s
95th percentile per-packet one-way delay: 29.749 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 93.26 Mbit/s
95th percentile per-packet one-way delay: 29.749 ms
Loss rate: 0.13%
```


Run 1: Report of Indigo — Data Link

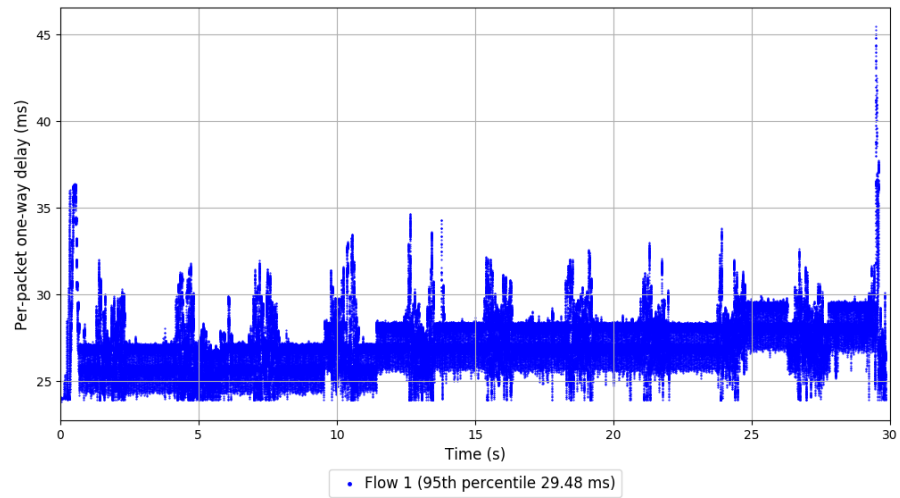
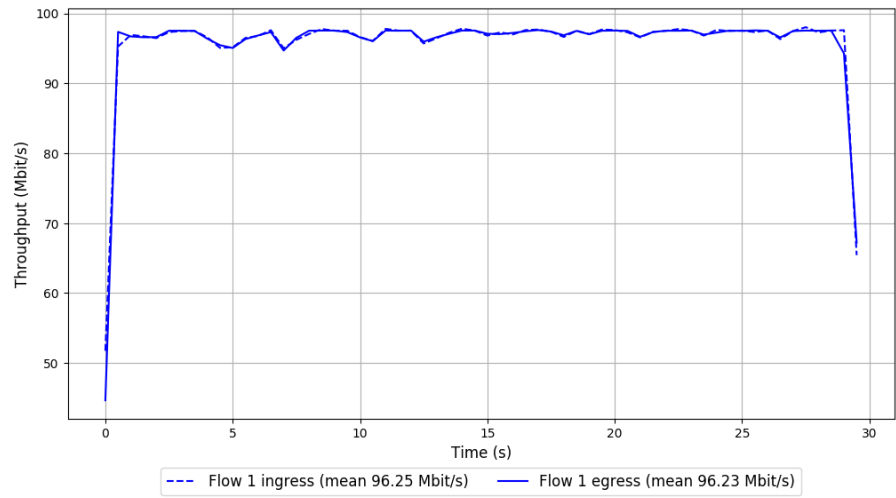


Run 2: Statistics of Indigo

Start at: 2017-09-19 02:21:20
End at: 2017-09-19 02:21:50
Local clock offset: 2.746 ms
Remote clock offset: -2.632 ms

Below is generated by plot.py at 2017-09-19 04:55:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.23 Mbit/s
95th percentile per-packet one-way delay: 29.485 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 96.23 Mbit/s
95th percentile per-packet one-way delay: 29.485 ms
Loss rate: 0.12%

Run 2: Report of Indigo — Data Link

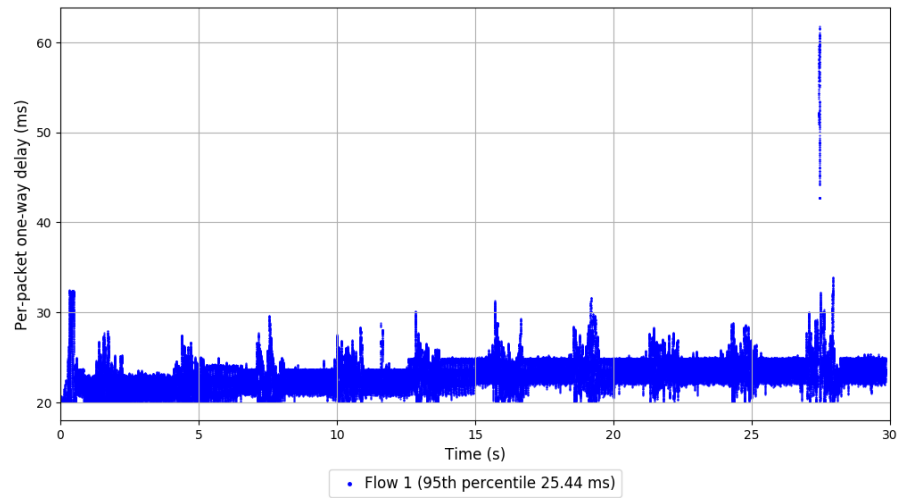
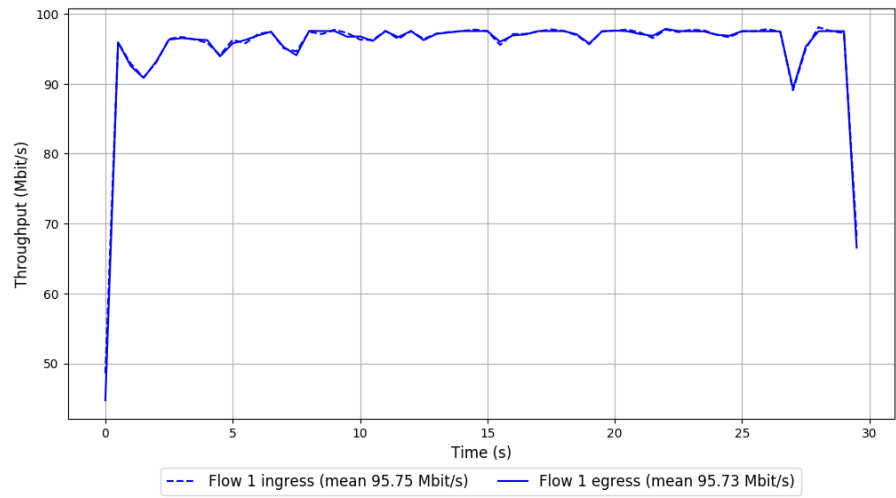


Run 3: Statistics of Indigo

Start at: 2017-09-19 02:34:51
End at: 2017-09-19 02:35:21
Local clock offset: 2.454 ms
Remote clock offset: -4.028 ms

Below is generated by plot.py at 2017-09-19 04:55:00
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.73 Mbit/s
95th percentile per-packet one-way delay: 25.437 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 95.73 Mbit/s
95th percentile per-packet one-way delay: 25.437 ms
Loss rate: 0.11%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2017-09-19 03:14:20

End at: 2017-09-19 03:14:50

Local clock offset: 0.134 ms

Remote clock offset: -3.3 ms

Below is generated by plot.py at 2017-09-19 04:55:00

Datalink statistics

-- Total of 1 flow:

Average throughput: 94.70 Mbit/s

95th percentile per-packet one-way delay: 23.981 ms

Loss rate: 0.12%

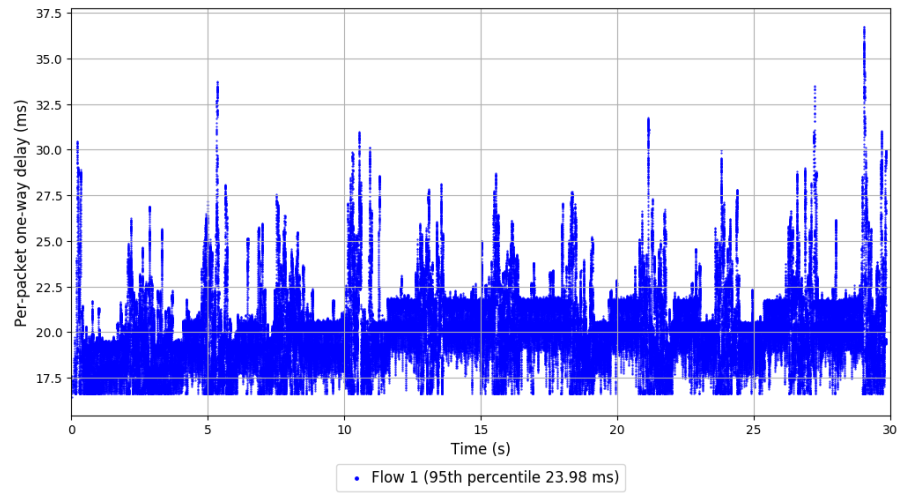
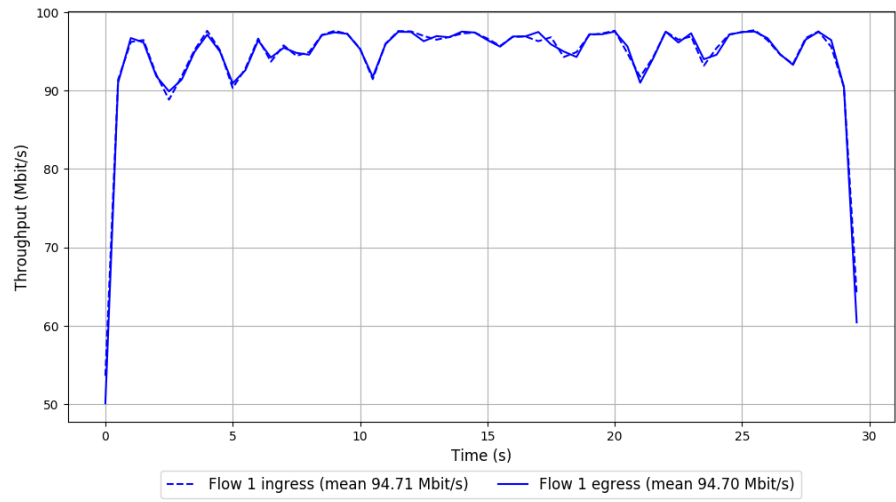
-- Flow 1:

Average throughput: 94.70 Mbit/s

95th percentile per-packet one-way delay: 23.981 ms

Loss rate: 0.12%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2017-09-19 03:29:17

End at: 2017-09-19 03:29:47

Local clock offset: 1.136 ms

Remote clock offset: -2.958 ms

Below is generated by plot.py at 2017-09-19 04:56:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 95.63 Mbit/s

95th percentile per-packet one-way delay: 25.186 ms

Loss rate: 0.11%

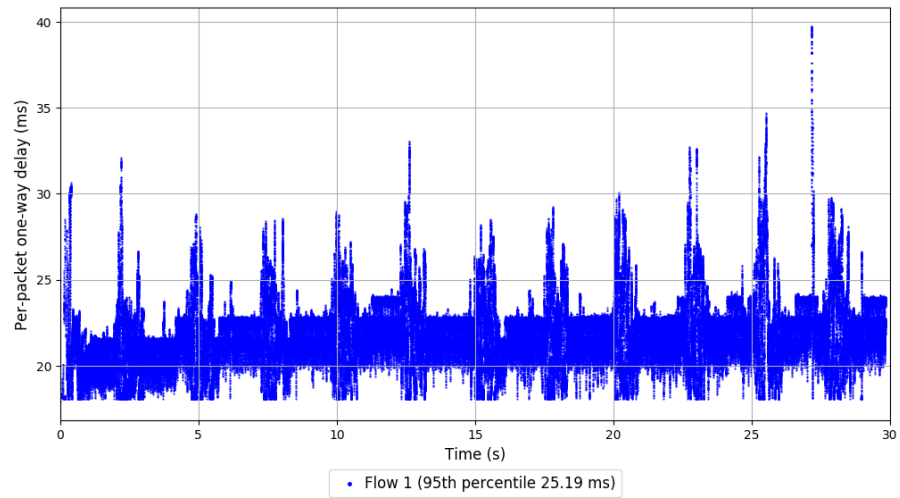
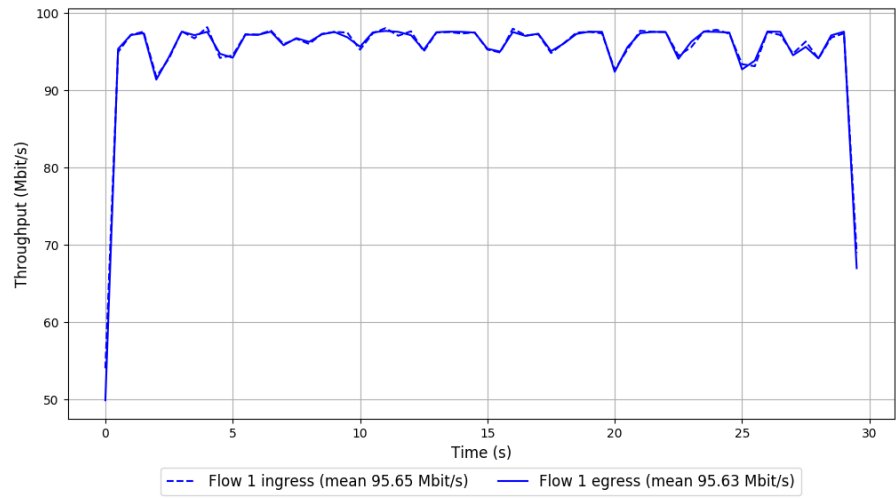
-- Flow 1:

Average throughput: 95.63 Mbit/s

95th percentile per-packet one-way delay: 25.186 ms

Loss rate: 0.11%

Run 5: Report of Indigo — Data Link

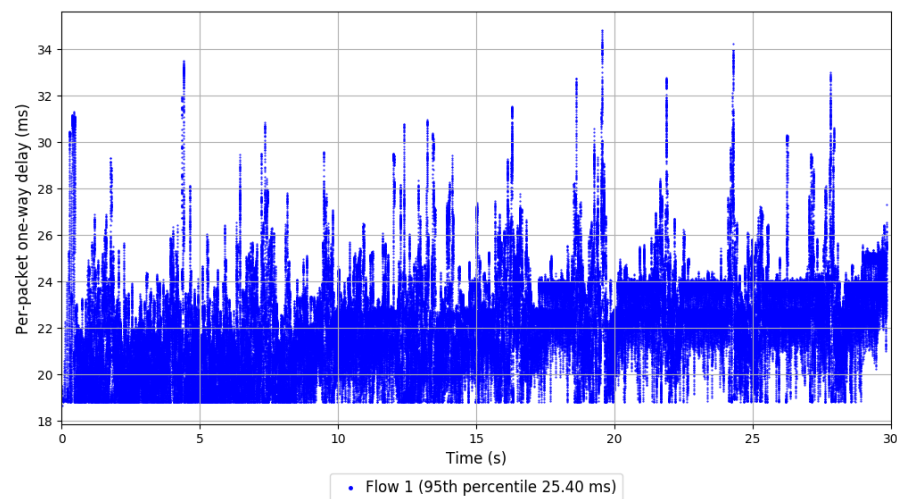
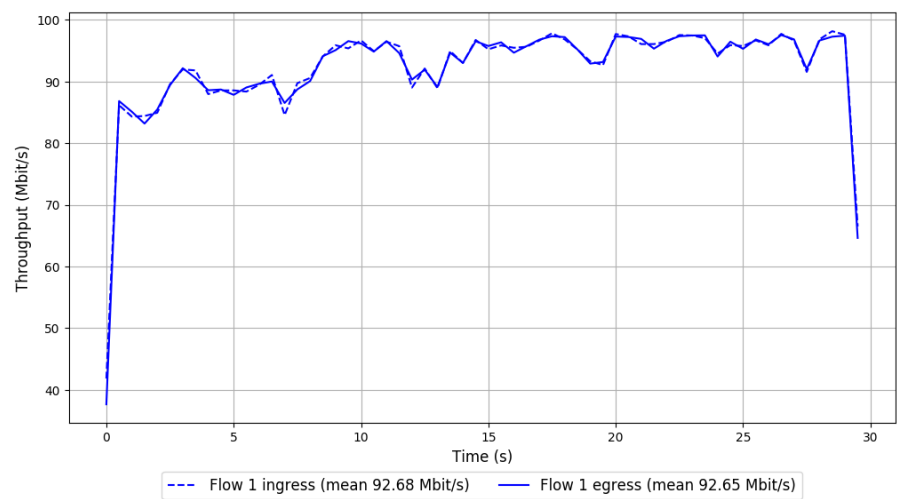


Run 6: Statistics of Indigo

Start at: 2017-09-19 03:44:00
End at: 2017-09-19 03:44:30
Local clock offset: -0.227 ms
Remote clock offset: -3.072 ms

Below is generated by plot.py at 2017-09-19 04:56:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.65 Mbit/s
95th percentile per-packet one-way delay: 25.397 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 92.65 Mbit/s
95th percentile per-packet one-way delay: 25.397 ms
Loss rate: 0.12%

Run 6: Report of Indigo — Data Link



Run 7: Statistics of Indigo

Start at: 2017-09-19 03:59:43

End at: 2017-09-19 04:00:13

Local clock offset: -1.763 ms

Remote clock offset: -2.577 ms

Run 7: Report of Indigo — Data Link

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Figure is missing

Run 8: Statistics of Indigo

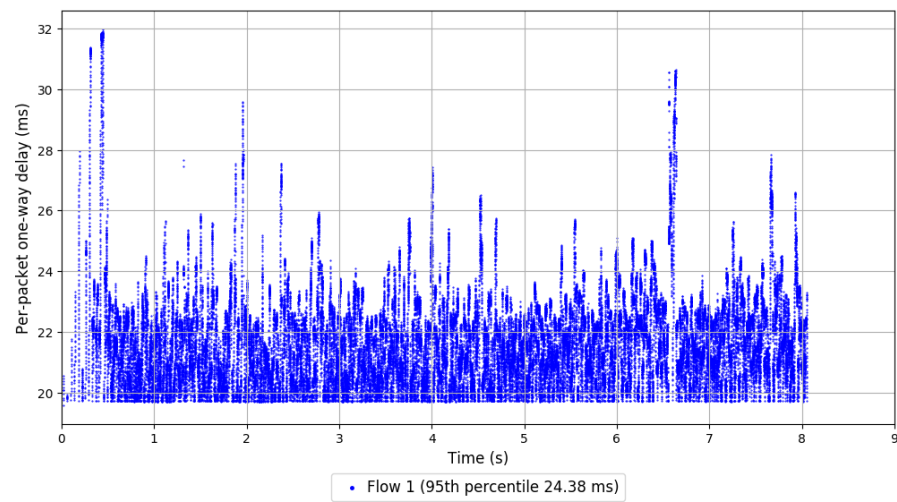
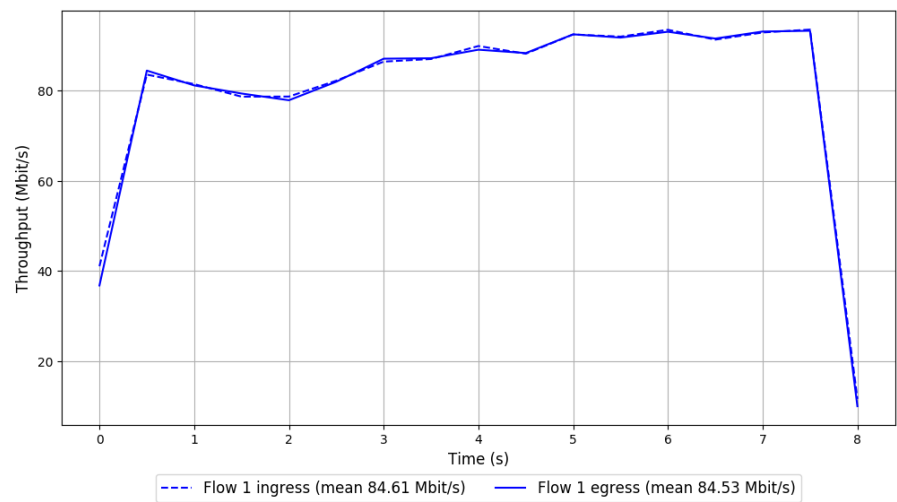
Start at: 2017-09-19 04:14:30

End at: 2017-09-19 04:15:00

Local clock offset: -0.146 ms

Remote clock offset: -2.458 ms

Run 8: Report of Indigo — Data Link

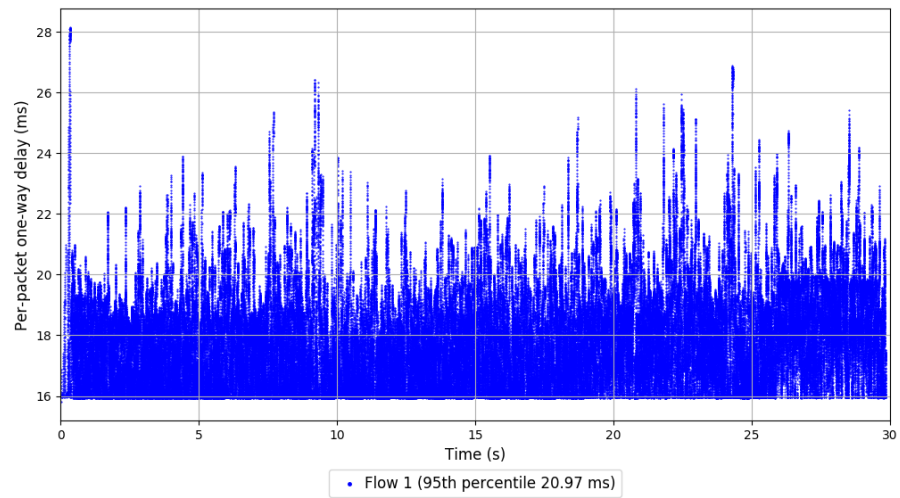
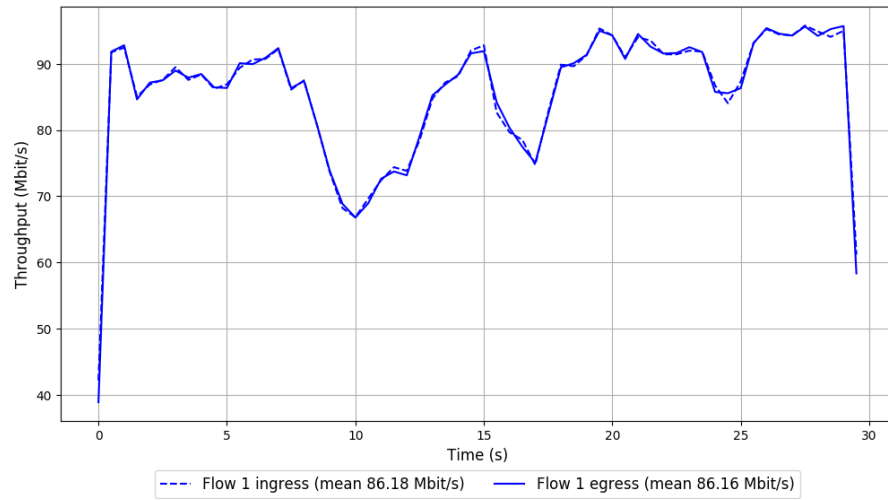


Run 9: Statistics of Indigo

Start at: 2017-09-19 04:27:06
End at: 2017-09-19 04:27:36
Local clock offset: -2.375 ms
Remote clock offset: -1.799 ms

Below is generated by plot.py at 2017-09-19 04:56:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.16 Mbit/s
95th percentile per-packet one-way delay: 20.969 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 86.16 Mbit/s
95th percentile per-packet one-way delay: 20.969 ms
Loss rate: 0.11%

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2017-09-19 04:39:19

End at: 2017-09-19 04:39:49

Local clock offset: -4.58 ms

Remote clock offset: 4.082 ms

Below is generated by plot.py at 2017-09-19 04:56:18

Datalink statistics

-- Total of 1 flow:

Average throughput: 78.17 Mbit/s

95th percentile per-packet one-way delay: 12.488 ms

Loss rate: 0.08%

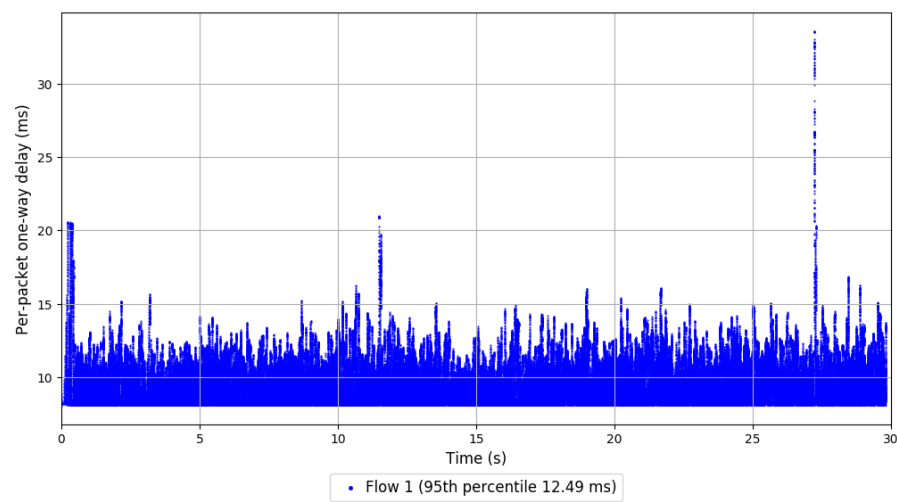
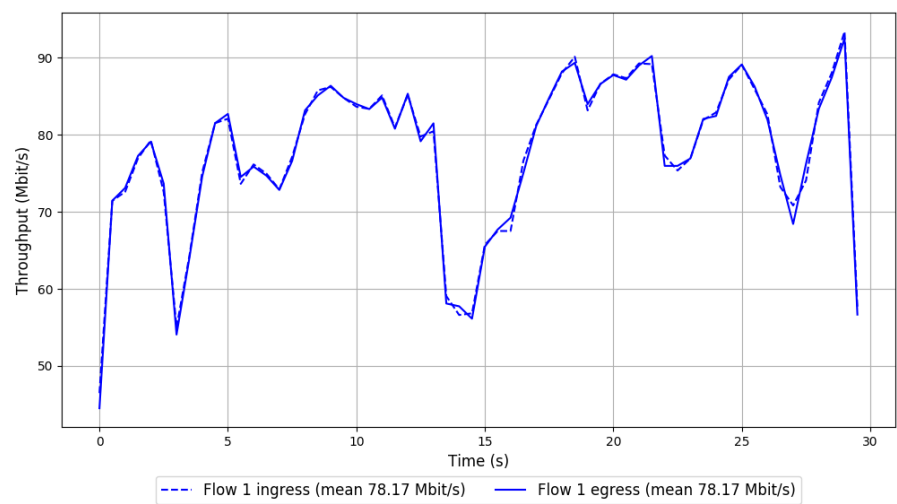
-- Flow 1:

Average throughput: 78.17 Mbit/s

95th percentile per-packet one-way delay: 12.488 ms

Loss rate: 0.08%

Run 10: Report of Indigo — Data Link

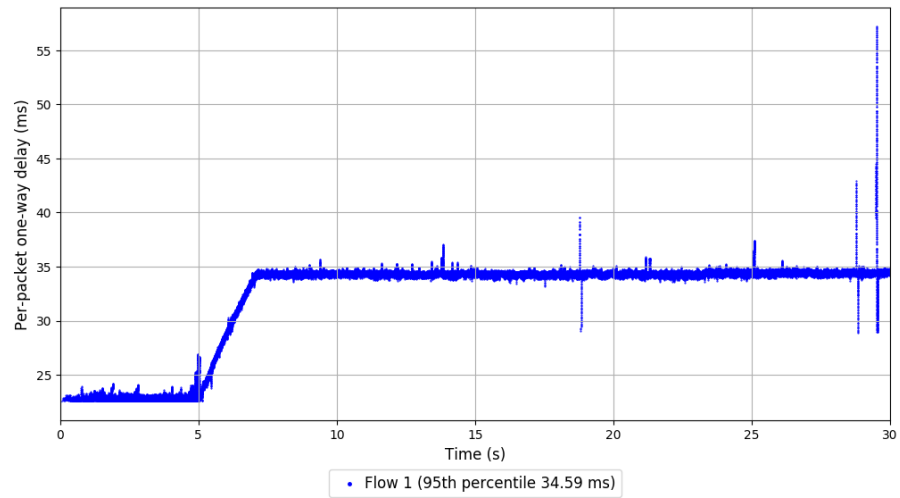
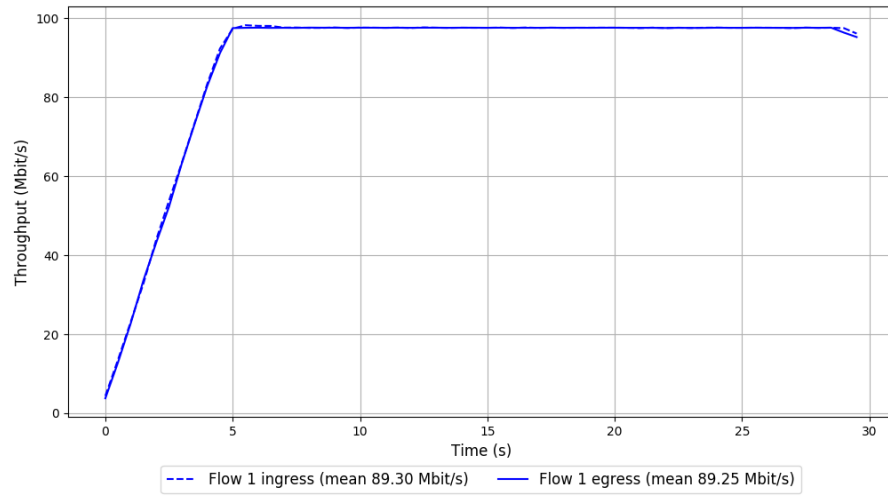


```
Run 1: Statistics of LEDBAT

Start at: 2017-09-19 02:05:22
End at: 2017-09-19 02:05:52
Local clock offset: 0.551 ms
Remote clock offset: -3.32 ms

# Below is generated by plot.py at 2017-09-19 04:56:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.25 Mbit/s
95th percentile per-packet one-way delay: 34.593 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 89.25 Mbit/s
95th percentile per-packet one-way delay: 34.593 ms
Loss rate: 0.16%
```

Run 1: Report of LEDBAT — Data Link

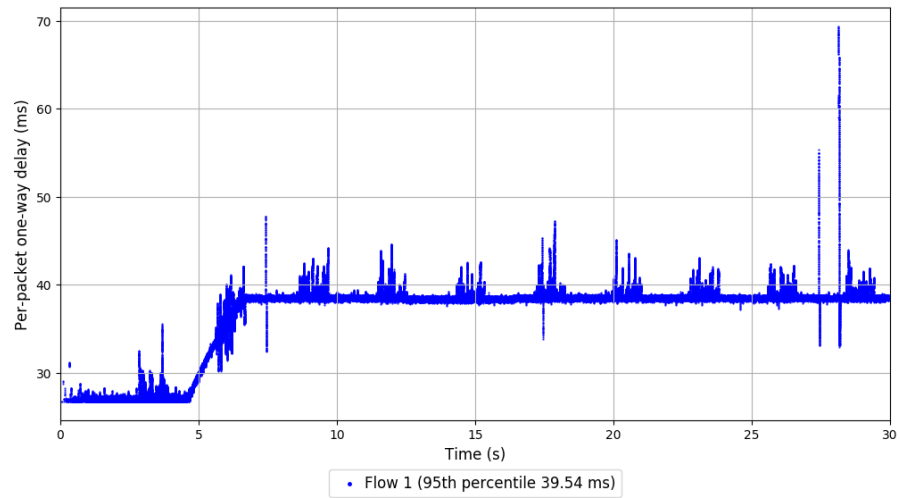
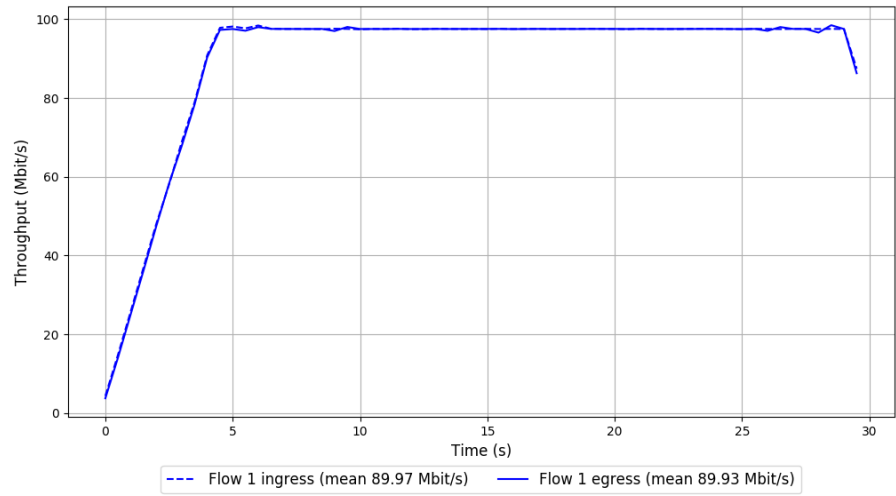


Run 2: Statistics of LEDBAT

Start at: 2017-09-19 02:20:04
End at: 2017-09-19 02:20:34
Local clock offset: 4.525 ms
Remote clock offset: -3.656 ms

Below is generated by plot.py at 2017-09-19 04:56:19
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.93 Mbit/s
95th percentile per-packet one-way delay: 39.539 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 89.93 Mbit/s
95th percentile per-packet one-way delay: 39.539 ms
Loss rate: 0.16%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

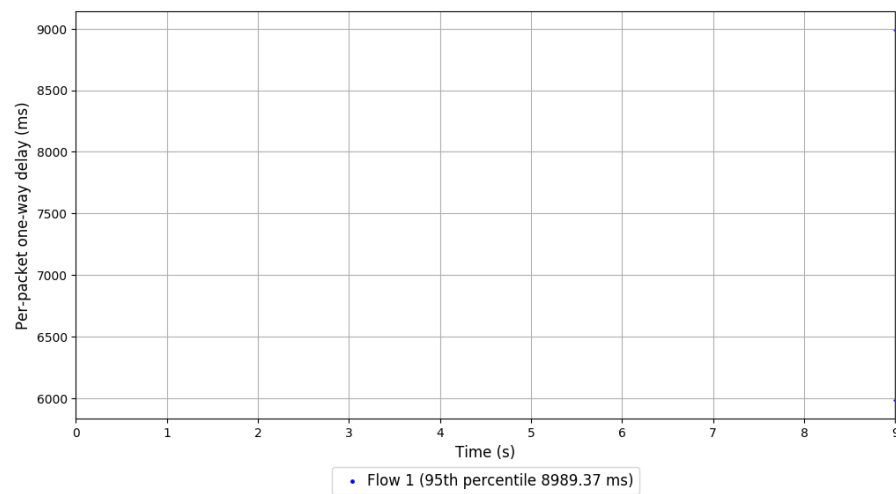
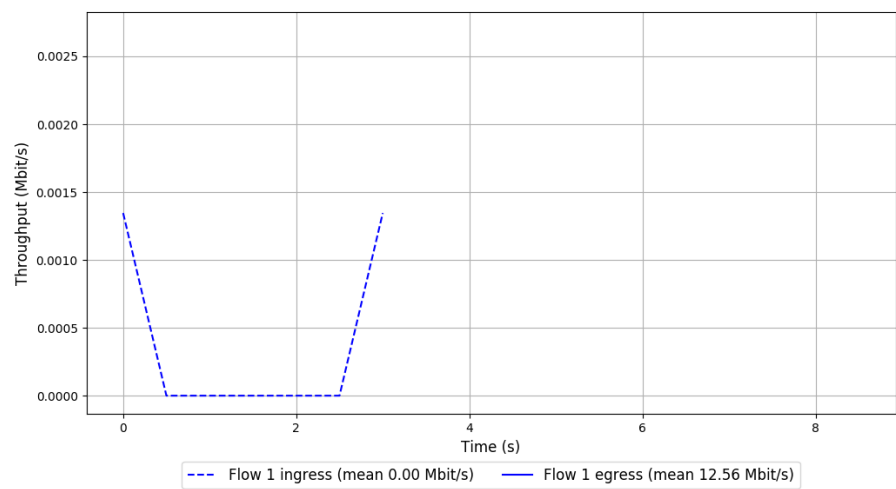
Start at: 2017-09-19 02:33:45

End at: 2017-09-19 02:34:15

Local clock offset: 1.294 ms

Remote clock offset: -3.052 ms

Run 3: Report of LEDBAT — Data Link

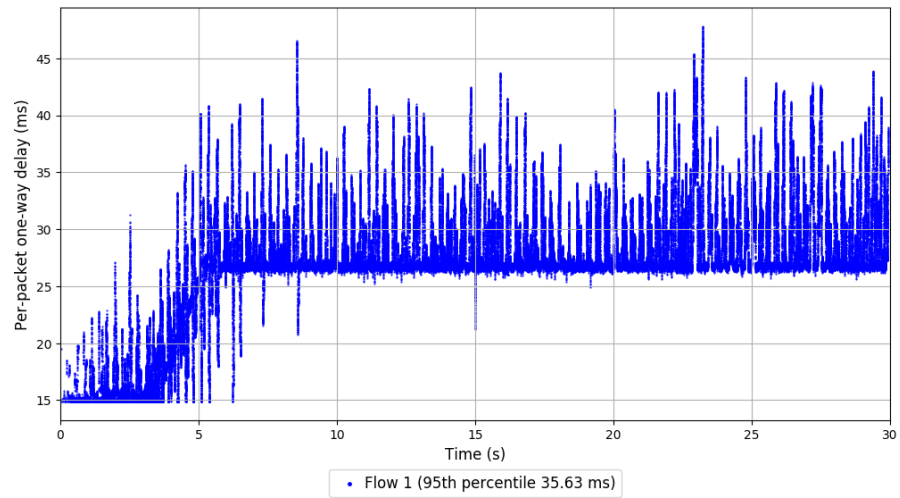
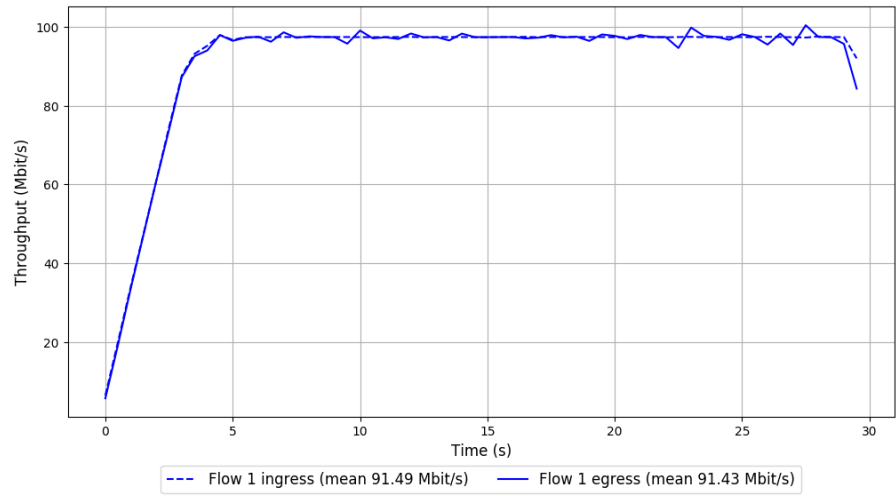


Run 4: Statistics of LEDBAT

Start at: 2017-09-19 03:08:23
End at: 2017-09-19 03:08:53
Local clock offset: -1.879 ms
Remote clock offset: -3.835 ms

Below is generated by plot.py at 2017-09-19 04:56:24
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.43 Mbit/s
95th percentile per-packet one-way delay: 35.630 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 91.43 Mbit/s
95th percentile per-packet one-way delay: 35.630 ms
Loss rate: 0.27%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-09-19 03:28:01

End at: 2017-09-19 03:28:31

Local clock offset: -2.281 ms

Remote clock offset: -2.14 ms

Below is generated by plot.py at 2017-09-19 04:56:39

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.00 Mbit/s

95th percentile per-packet one-way delay: 25.952 ms

Loss rate: 0.14%

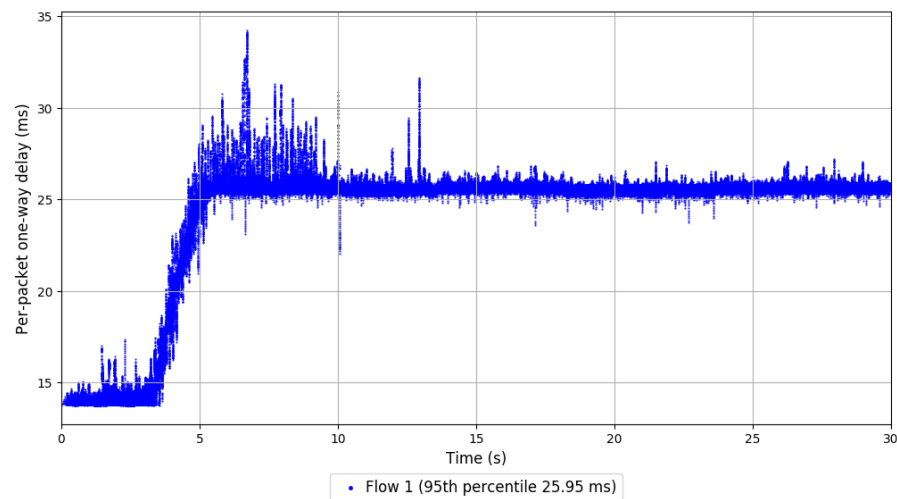
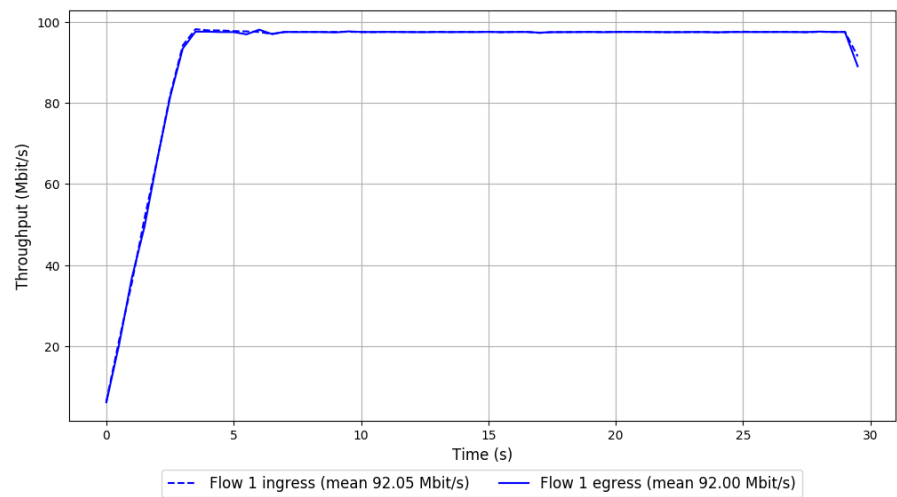
-- Flow 1:

Average throughput: 92.00 Mbit/s

95th percentile per-packet one-way delay: 25.952 ms

Loss rate: 0.14%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

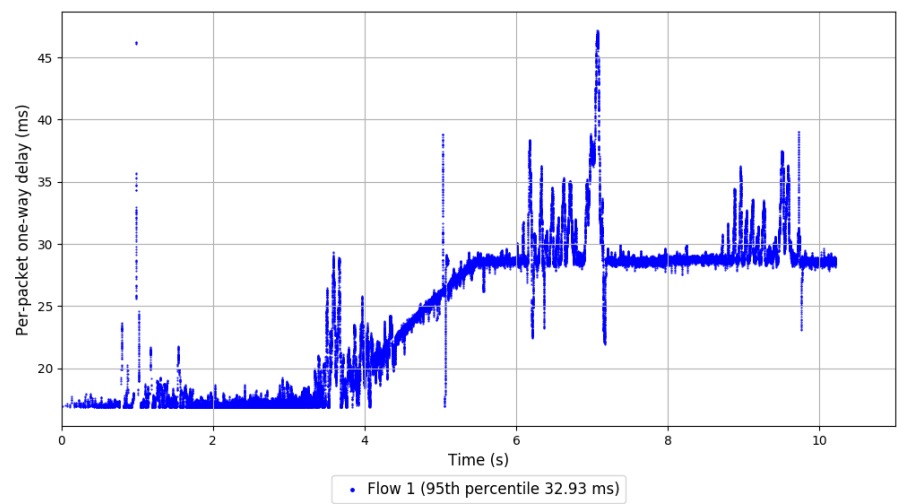
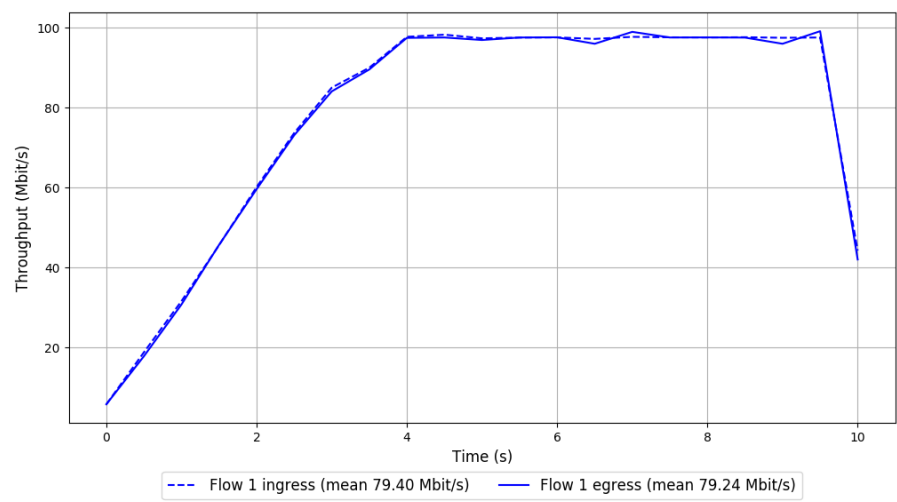
Start at: 2017-09-19 03:42:49

End at: 2017-09-19 03:43:19

Local clock offset: -2.075 ms

Remote clock offset: -3.059 ms

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

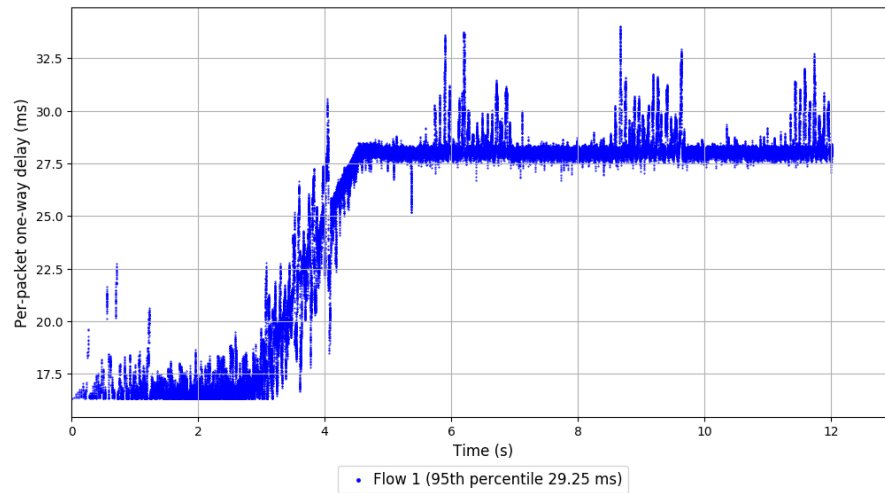
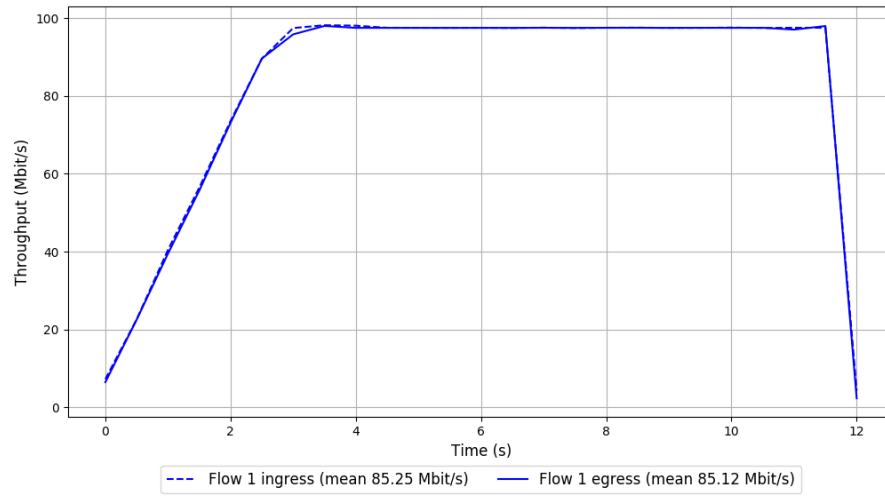
Start at: 2017-09-19 03:58:29

End at: 2017-09-19 03:58:59

Local clock offset: -1.398 ms

Remote clock offset: -2.425 ms

Run 7: Report of LEDBAT — Data Link

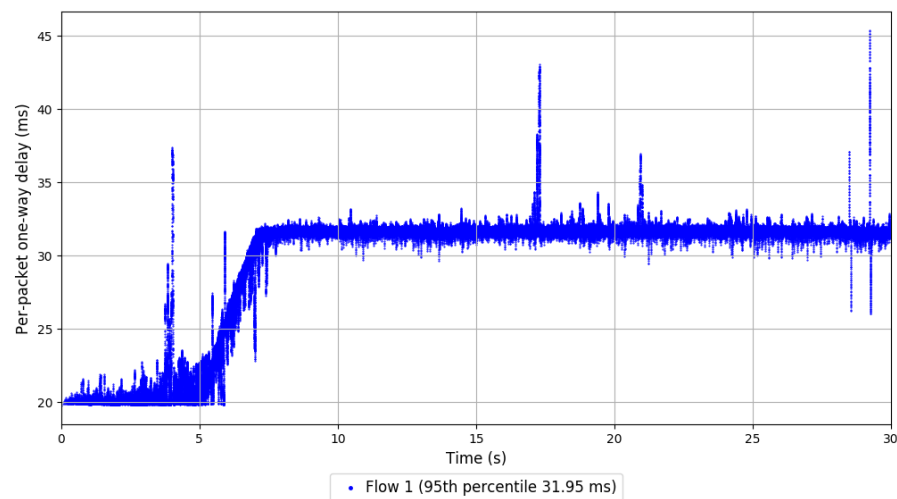
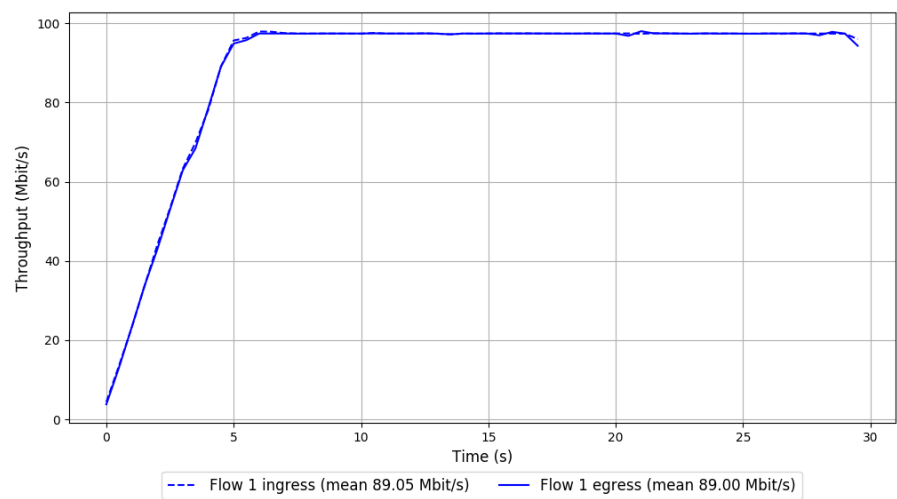


Run 8: Statistics of LEDBAT

Start at: 2017-09-19 04:12:57
End at: 2017-09-19 04:13:27
Local clock offset: -0.236 ms
Remote clock offset: -2.781 ms

Below is generated by plot.py at 2017-09-19 04:57:39
Datalink statistics
-- Total of 1 flow:
Average throughput: 89.00 Mbit/s
95th percentile per-packet one-way delay: 31.948 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 89.00 Mbit/s
95th percentile per-packet one-way delay: 31.948 ms
Loss rate: 0.15%

Run 8: Report of LEDBAT — Data Link

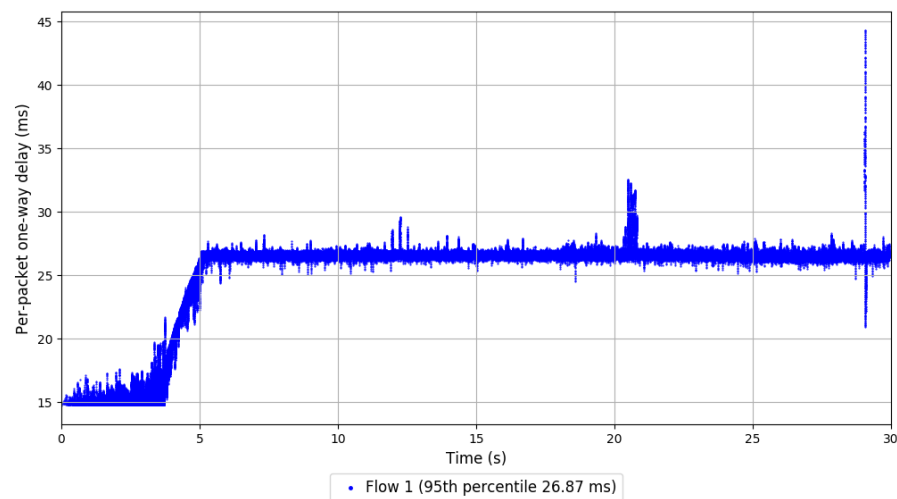
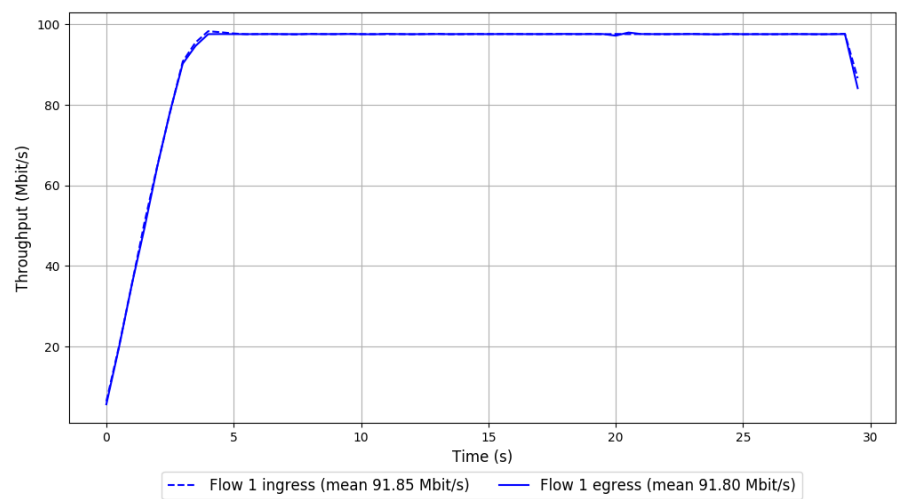


Run 9: Statistics of LEDBAT

Start at: 2017-09-19 04:25:50
End at: 2017-09-19 04:26:20
Local clock offset: -4.889 ms
Remote clock offset: -3.212 ms

Below is generated by plot.py at 2017-09-19 04:57:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.80 Mbit/s
95th percentile per-packet one-way delay: 26.873 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 91.80 Mbit/s
95th percentile per-packet one-way delay: 26.873 ms
Loss rate: 0.14%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

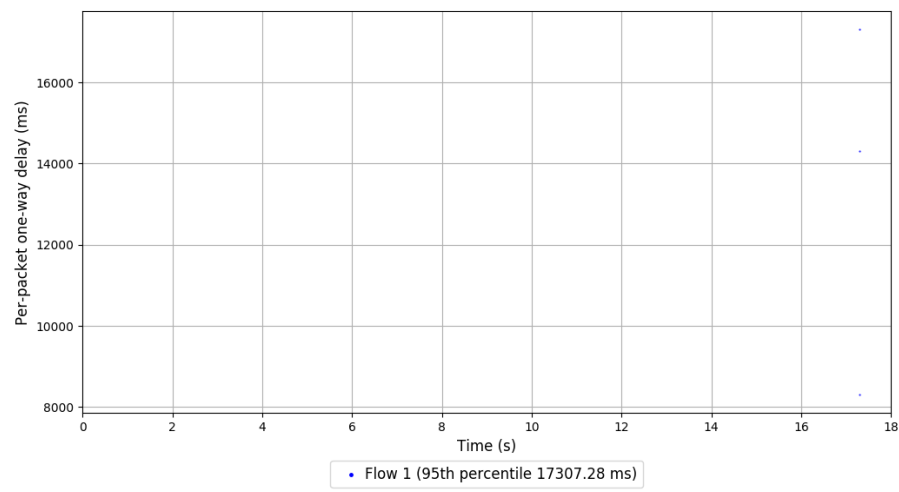
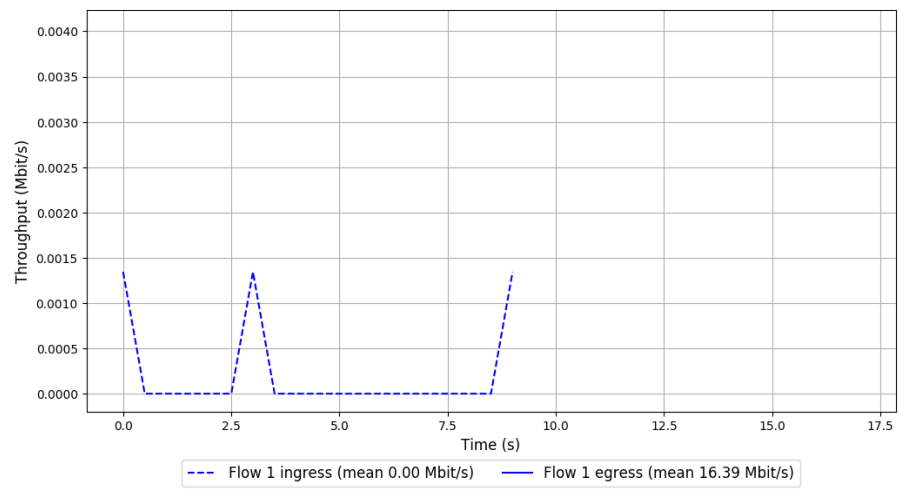
Start at: 2017-09-19 04:38:14

End at: 2017-09-19 04:38:44

Local clock offset: -1.621 ms

Remote clock offset: -3.243 ms

Run 10: Report of LEDBAT — Data Link

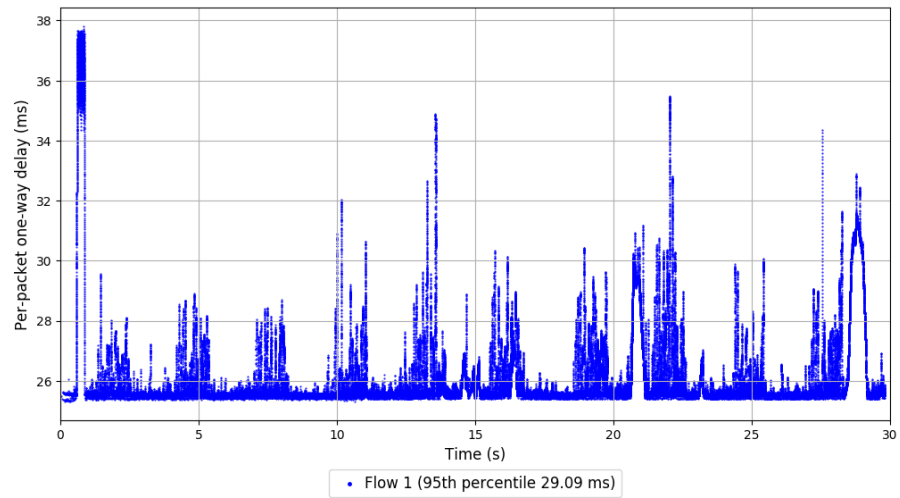
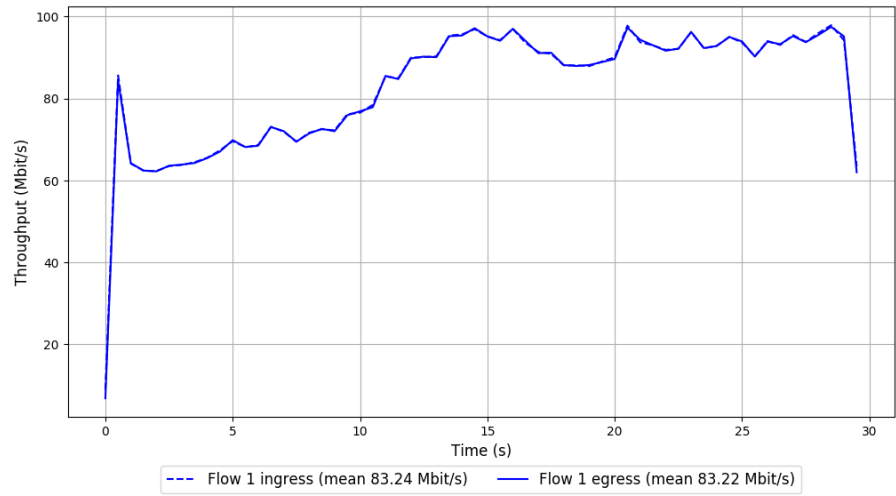


Run 1: Statistics of PCC

Start at: 2017-09-19 02:15:54
End at: 2017-09-19 02:16:24
Local clock offset: 3.081 ms
Remote clock offset: -3.842 ms

Below is generated by plot.py at 2017-09-19 04:57:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.22 Mbit/s
95th percentile per-packet one-way delay: 29.093 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 83.22 Mbit/s
95th percentile per-packet one-way delay: 29.093 ms
Loss rate: 0.13%

Run 1: Report of PCC — Data Link

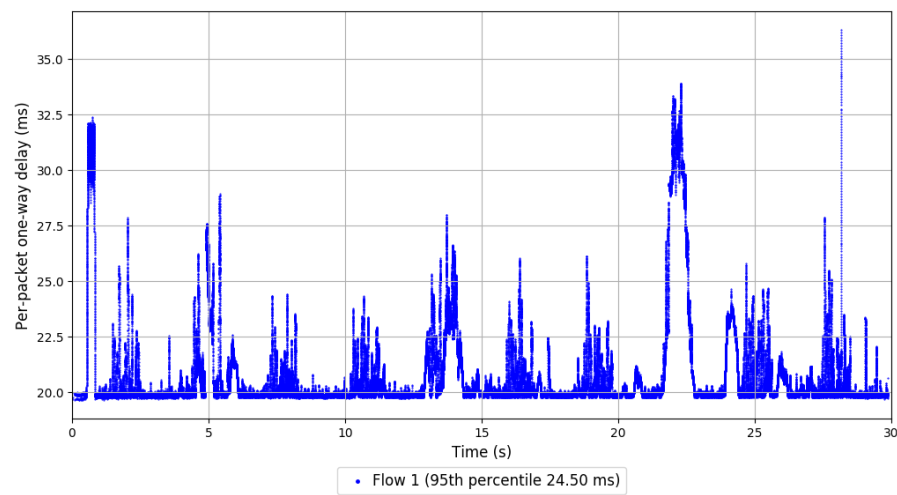
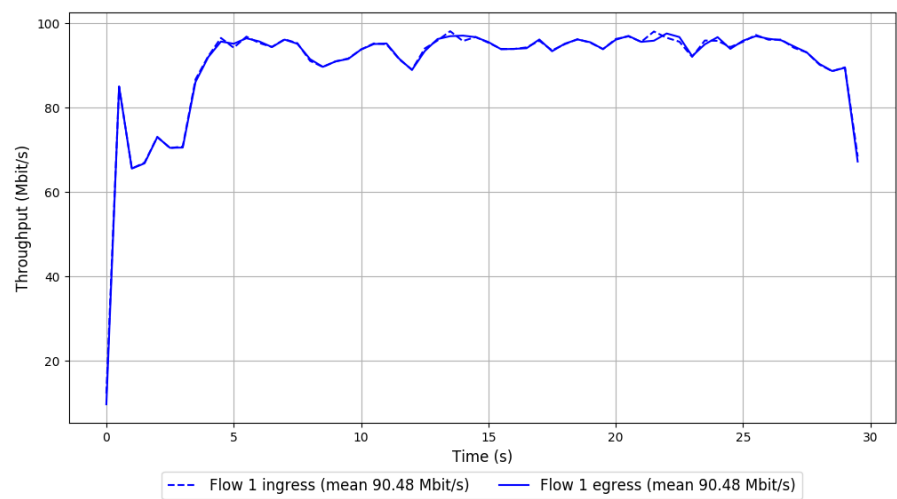


Run 2: Statistics of PCC

Start at: 2017-09-19 02:29:27
End at: 2017-09-19 02:29:57
Local clock offset: 3.068 ms
Remote clock offset: -3.378 ms

Below is generated by plot.py at 2017-09-19 04:57:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.48 Mbit/s
95th percentile per-packet one-way delay: 24.498 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 90.48 Mbit/s
95th percentile per-packet one-way delay: 24.498 ms
Loss rate: 0.09%

Run 2: Report of PCC — Data Link

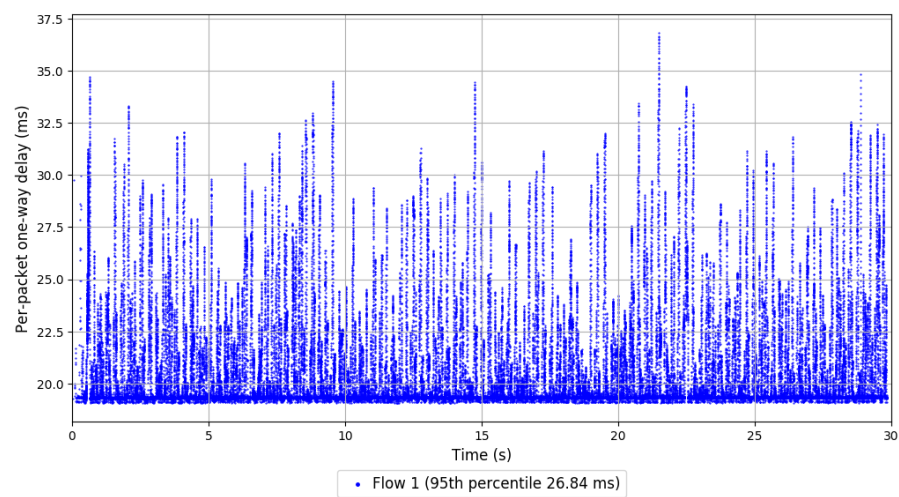
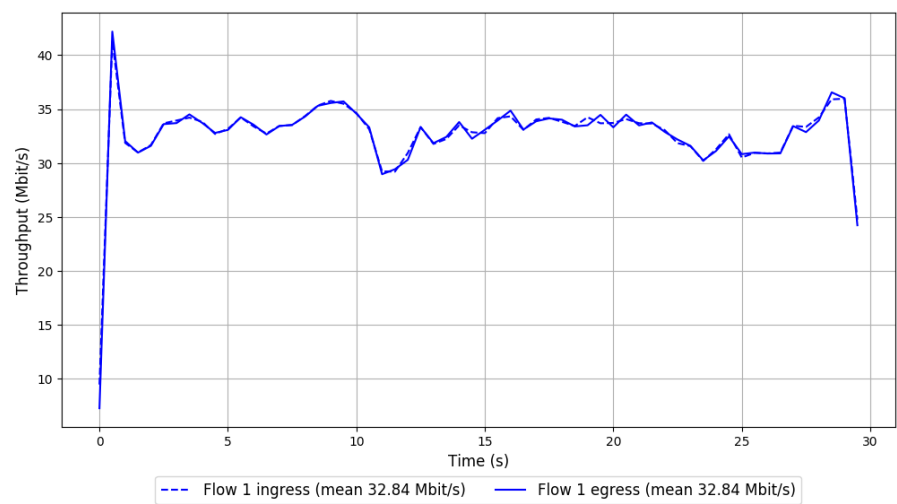


Run 3: Statistics of PCC

Start at: 2017-09-19 02:45:44
End at: 2017-09-19 02:46:14
Local clock offset: 1.652 ms
Remote clock offset: -3.741 ms

Below is generated by plot.py at 2017-09-19 04:57:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 32.84 Mbit/s
95th percentile per-packet one-way delay: 26.839 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 32.84 Mbit/s
95th percentile per-packet one-way delay: 26.839 ms
Loss rate: 0.10%

Run 3: Report of PCC — Data Link

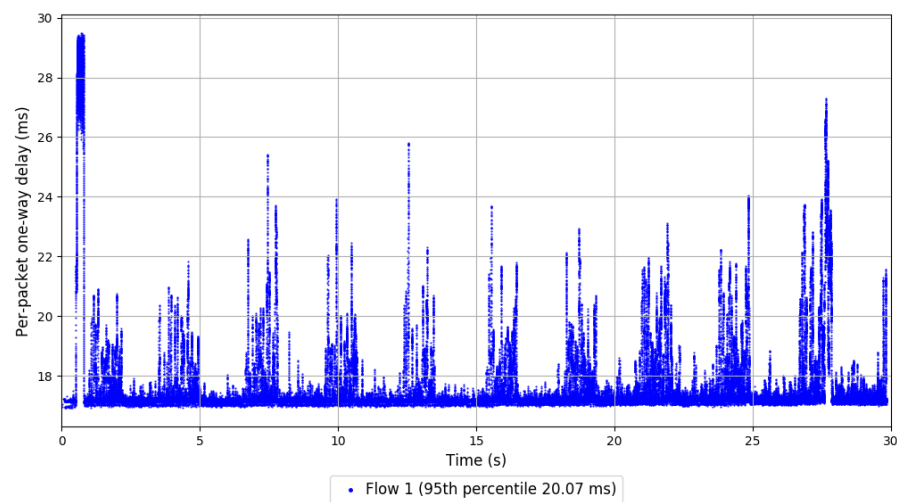
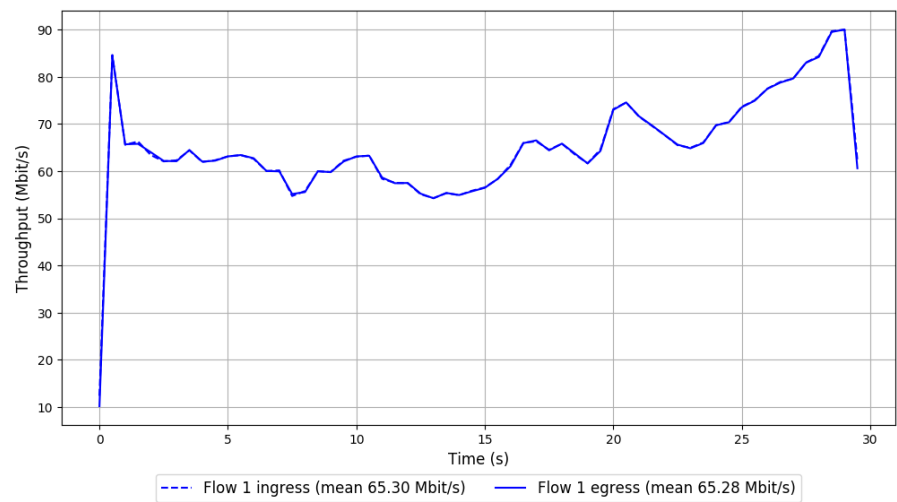


Run 4: Statistics of PCC

Start at: 2017-09-19 03:23:46
End at: 2017-09-19 03:24:16
Local clock offset: 1.171 ms
Remote clock offset: -2.262 ms

Below is generated by plot.py at 2017-09-19 04:57:44
Datalink statistics
-- Total of 1 flow:
Average throughput: 65.28 Mbit/s
95th percentile per-packet one-way delay: 20.070 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 65.28 Mbit/s
95th percentile per-packet one-way delay: 20.070 ms
Loss rate: 0.12%

Run 4: Report of PCC — Data Link

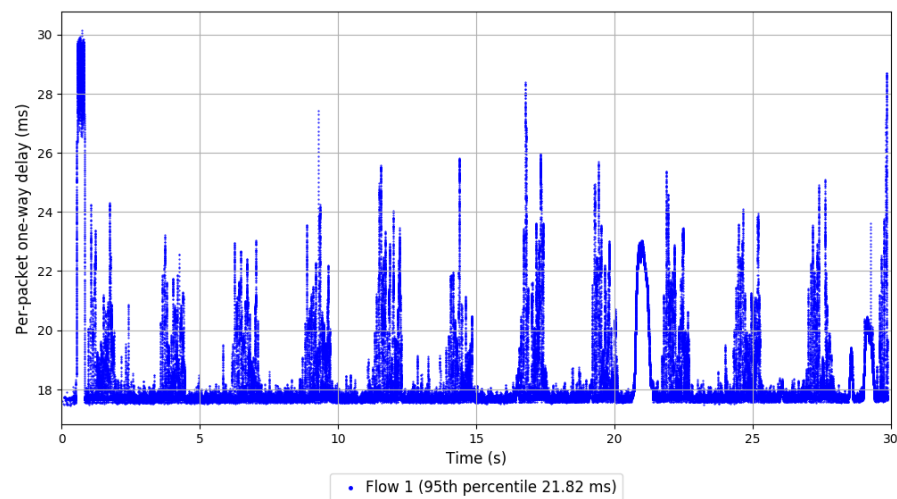
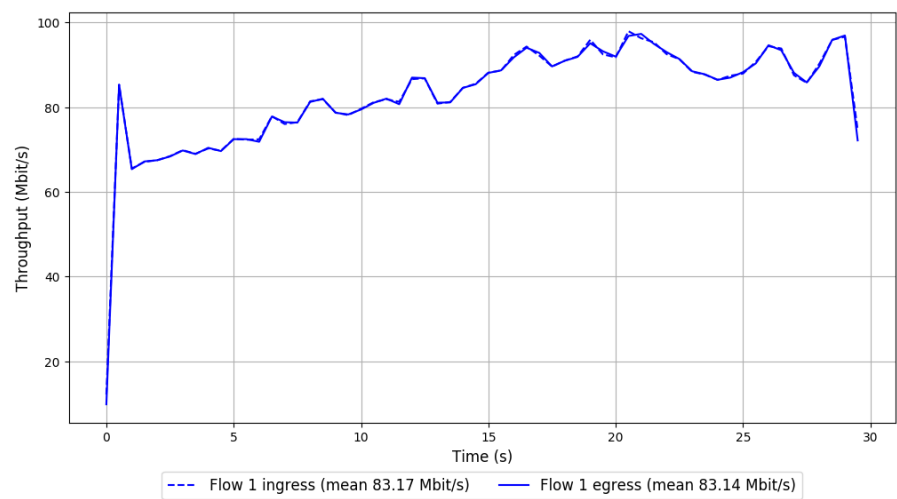


Run 5: Statistics of PCC

Start at: 2017-09-19 03:37:57
End at: 2017-09-19 03:38:27
Local clock offset: -0.778 ms
Remote clock offset: -2.745 ms

Below is generated by plot.py at 2017-09-19 04:57:58
Datalink statistics
-- Total of 1 flow:
Average throughput: 83.14 Mbit/s
95th percentile per-packet one-way delay: 21.822 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 83.14 Mbit/s
95th percentile per-packet one-way delay: 21.822 ms
Loss rate: 0.12%

Run 5: Report of PCC — Data Link

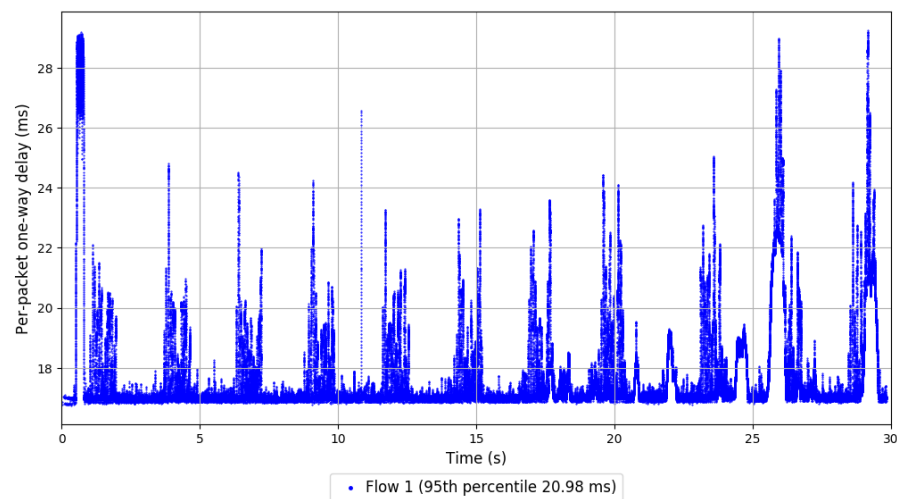
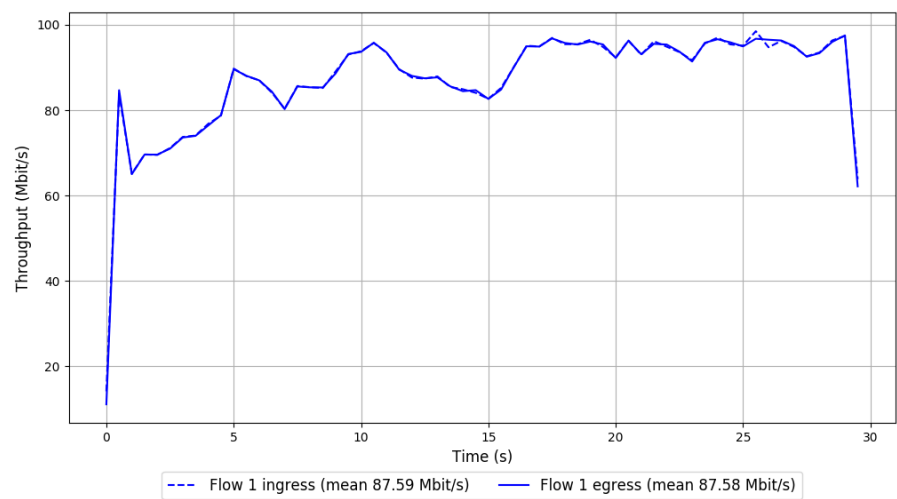


Run 6: Statistics of PCC

Start at: 2017-09-19 03:53:37
End at: 2017-09-19 03:54:07
Local clock offset: -2.704 ms
Remote clock offset: -3.256 ms

Below is generated by plot.py at 2017-09-19 04:58:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.58 Mbit/s
95th percentile per-packet one-way delay: 20.978 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 87.58 Mbit/s
95th percentile per-packet one-way delay: 20.978 ms
Loss rate: 0.10%

Run 6: Report of PCC — Data Link

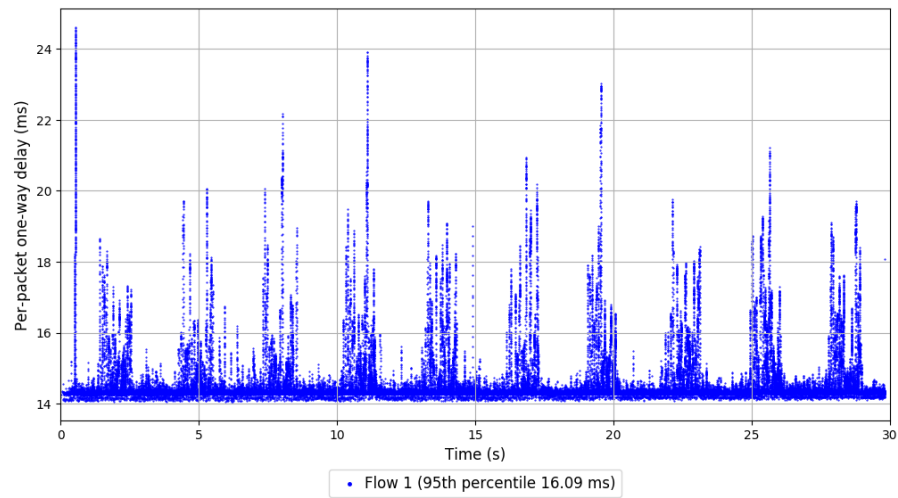
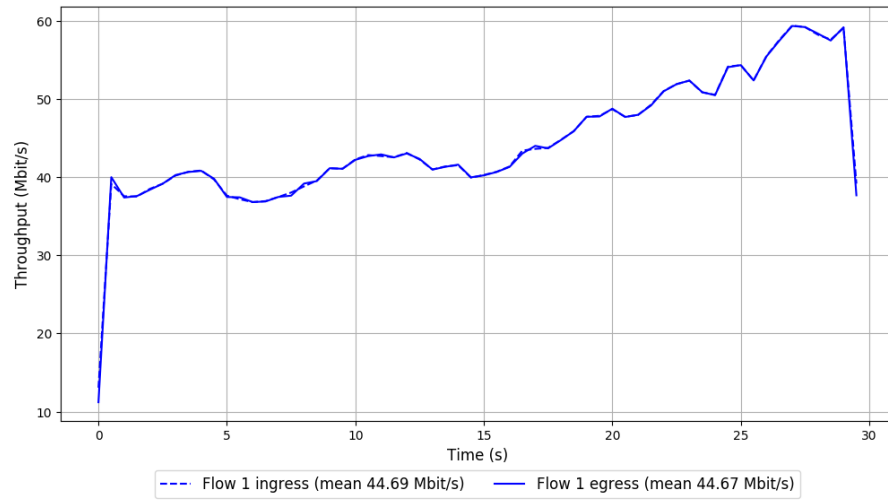


Run 7: Statistics of PCC

Start at: 2017-09-19 04:08:14
End at: 2017-09-19 04:08:44
Local clock offset: -3.885 ms
Remote clock offset: -2.342 ms

Below is generated by plot.py at 2017-09-19 04:58:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 44.67 Mbit/s
95th percentile per-packet one-way delay: 16.086 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 44.67 Mbit/s
95th percentile per-packet one-way delay: 16.086 ms
Loss rate: 0.12%

Run 7: Report of PCC — Data Link

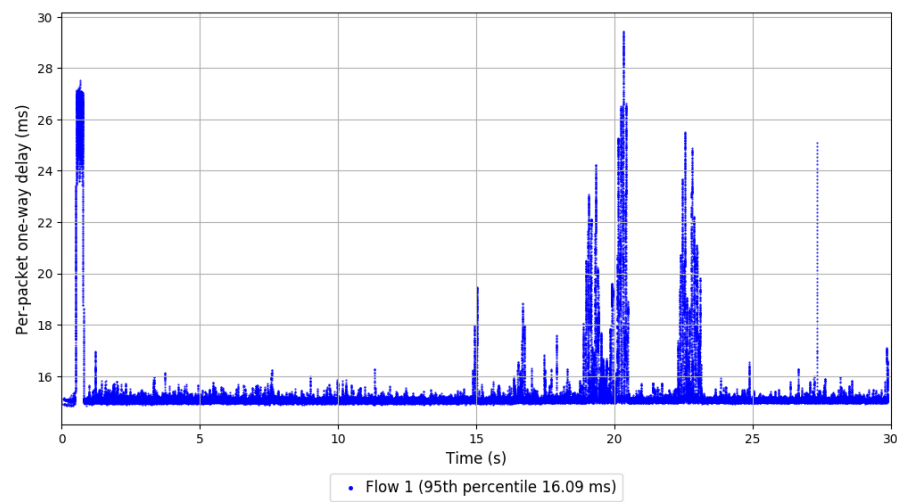
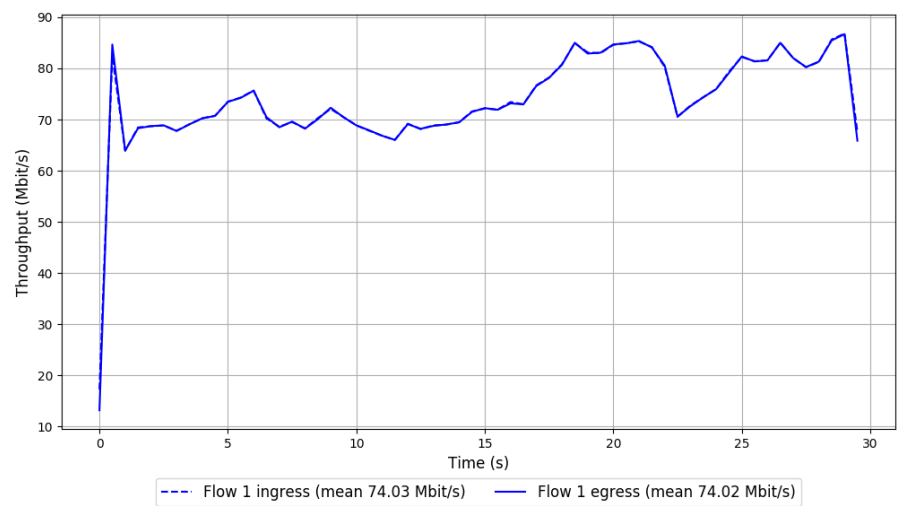


Run 8: Statistics of PCC

Start at: 2017-09-19 04:22:07
End at: 2017-09-19 04:22:37
Local clock offset: -4.356 ms
Remote clock offset: -3.029 ms

Below is generated by plot.py at 2017-09-19 04:58:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 74.02 Mbit/s
95th percentile per-packet one-way delay: 16.093 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 74.02 Mbit/s
95th percentile per-packet one-way delay: 16.093 ms
Loss rate: 0.10%

Run 8: Report of PCC — Data Link

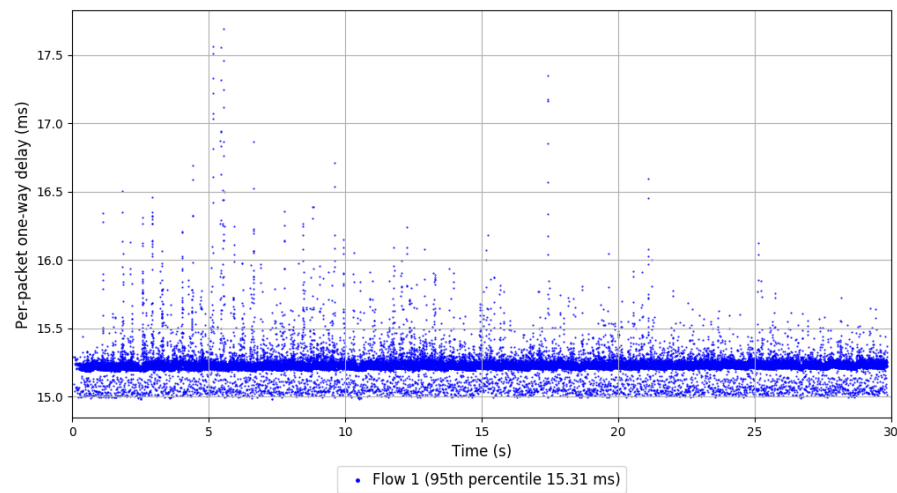
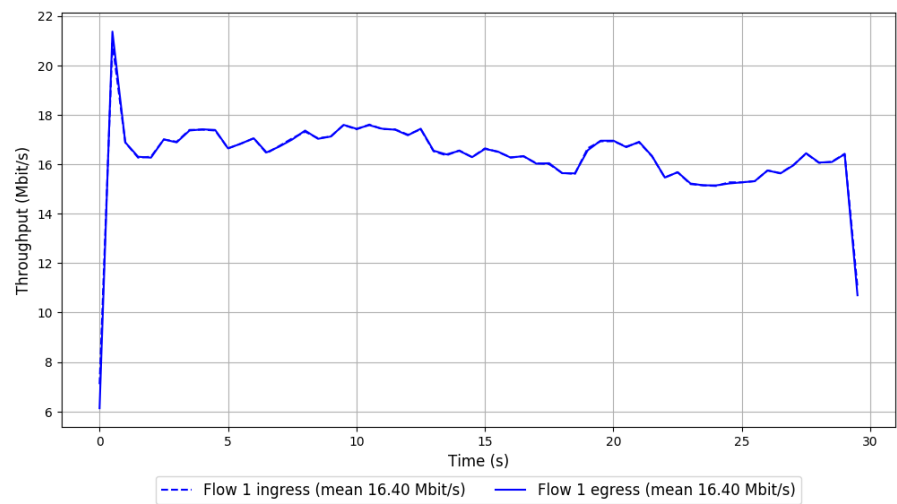


Run 9: Statistics of PCC

Start at: 2017-09-19 04:34:22
End at: 2017-09-19 04:34:53
Local clock offset: -4.202 ms
Remote clock offset: -2.723 ms

Below is generated by plot.py at 2017-09-19 04:58:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 16.40 Mbit/s
95th percentile per-packet one-way delay: 15.315 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 16.40 Mbit/s
95th percentile per-packet one-way delay: 15.315 ms
Loss rate: 0.08%

Run 9: Report of PCC — Data Link

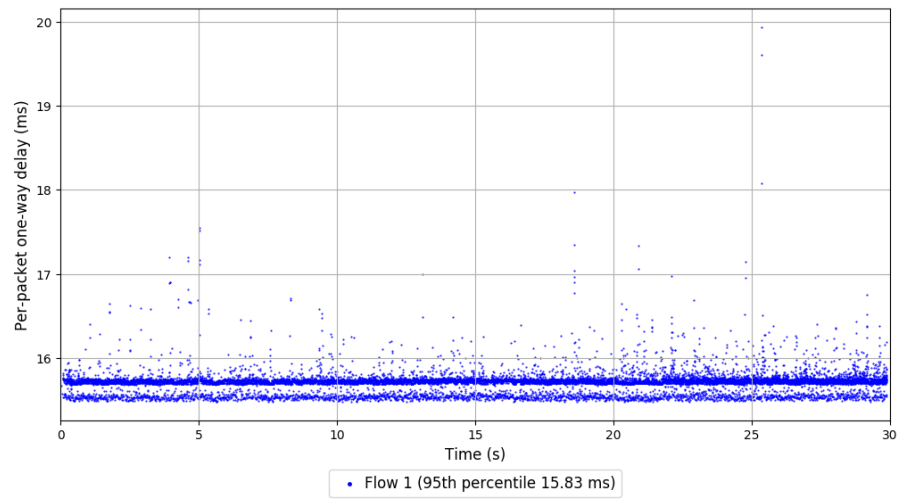
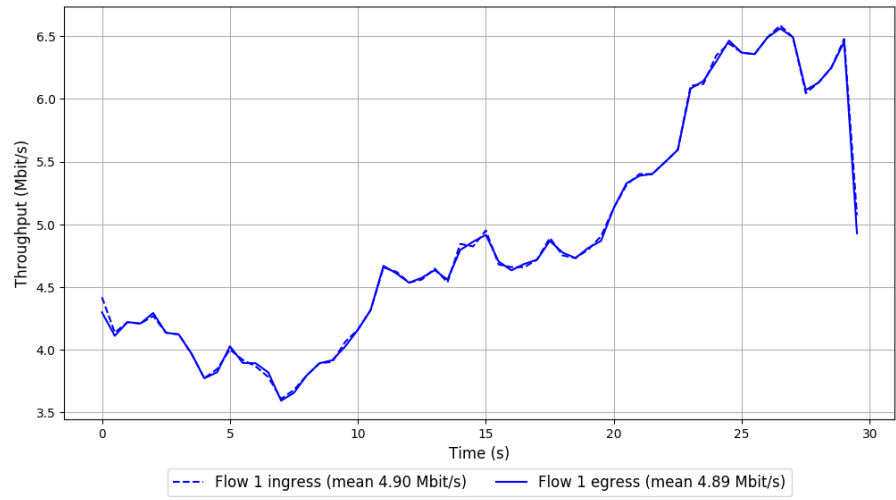


Run 10: Statistics of PCC

Start at: 2017-09-19 04:47:02
End at: 2017-09-19 04:47:32
Local clock offset: -3.285 ms
Remote clock offset: -1.976 ms

Below is generated by plot.py at 2017-09-19 04:58:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 15.833 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 15.833 ms
Loss rate: 0.12%

Run 10: Report of PCC — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2017-09-19 02:12:44

End at: 2017-09-19 02:13:14

Local clock offset: 3.454 ms

Remote clock offset: -3.359 ms

Below is generated by plot.py at 2017-09-19 04:58:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 83.27 Mbit/s

95th percentile per-packet one-way delay: 38.877 ms

Loss rate: 0.17%

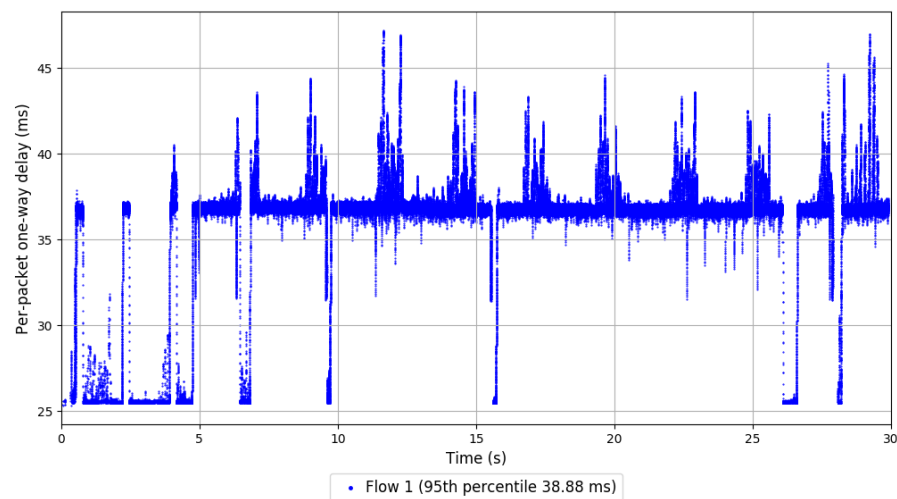
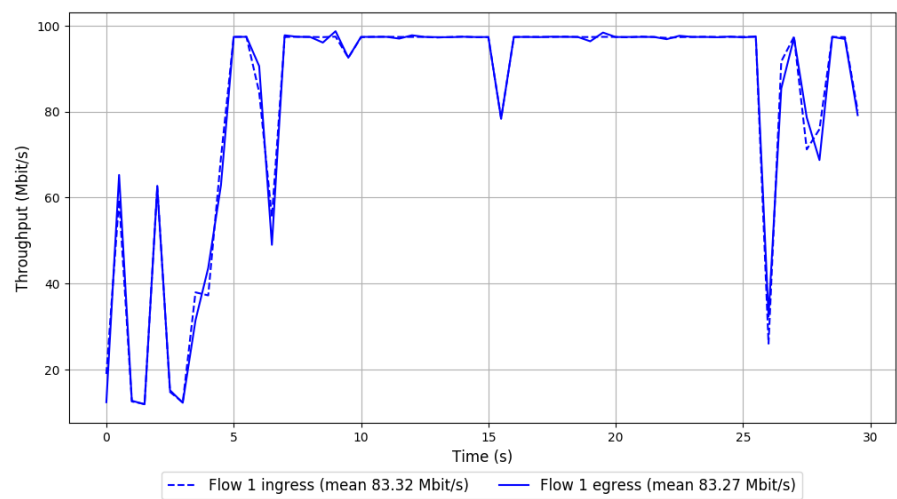
-- Flow 1:

Average throughput: 83.27 Mbit/s

95th percentile per-packet one-way delay: 38.877 ms

Loss rate: 0.17%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-09-19 02:26:40

End at: 2017-09-19 02:27:10

Local clock offset: 0.658 ms

Remote clock offset: -3.662 ms

Below is generated by plot.py at 2017-09-19 04:58:56

Datalink statistics

-- Total of 1 flow:

Average throughput: 73.64 Mbit/s

95th percentile per-packet one-way delay: 19.477 ms

Loss rate: 0.10%

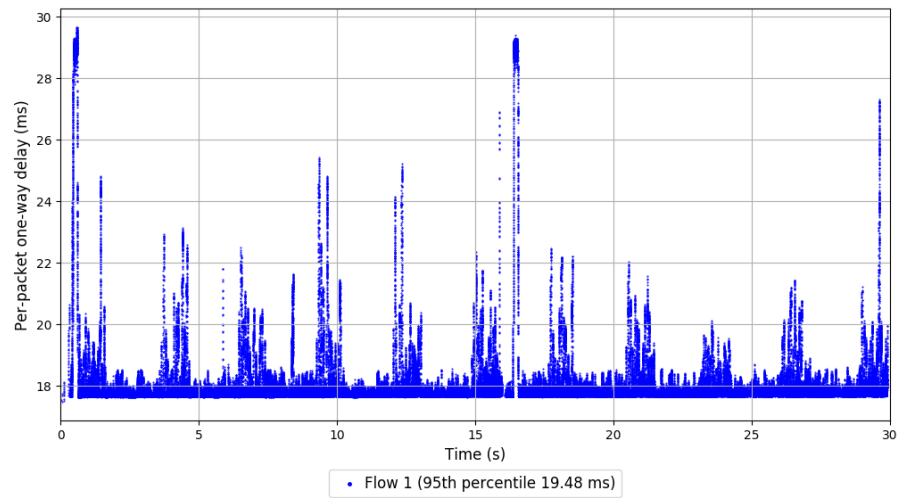
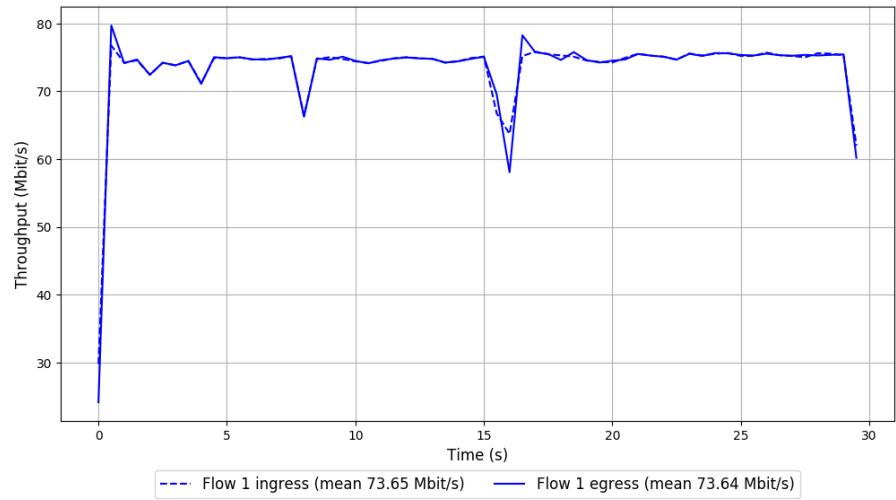
-- Flow 1:

Average throughput: 73.64 Mbit/s

95th percentile per-packet one-way delay: 19.477 ms

Loss rate: 0.10%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-09-19 02:40:12

End at: 2017-09-19 02:40:43

Local clock offset: 2.986 ms

Remote clock offset: -3.431 ms

Below is generated by plot.py at 2017-09-19 04:59:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.26 Mbit/s

95th percentile per-packet one-way delay: 31.633 ms

Loss rate: 0.10%

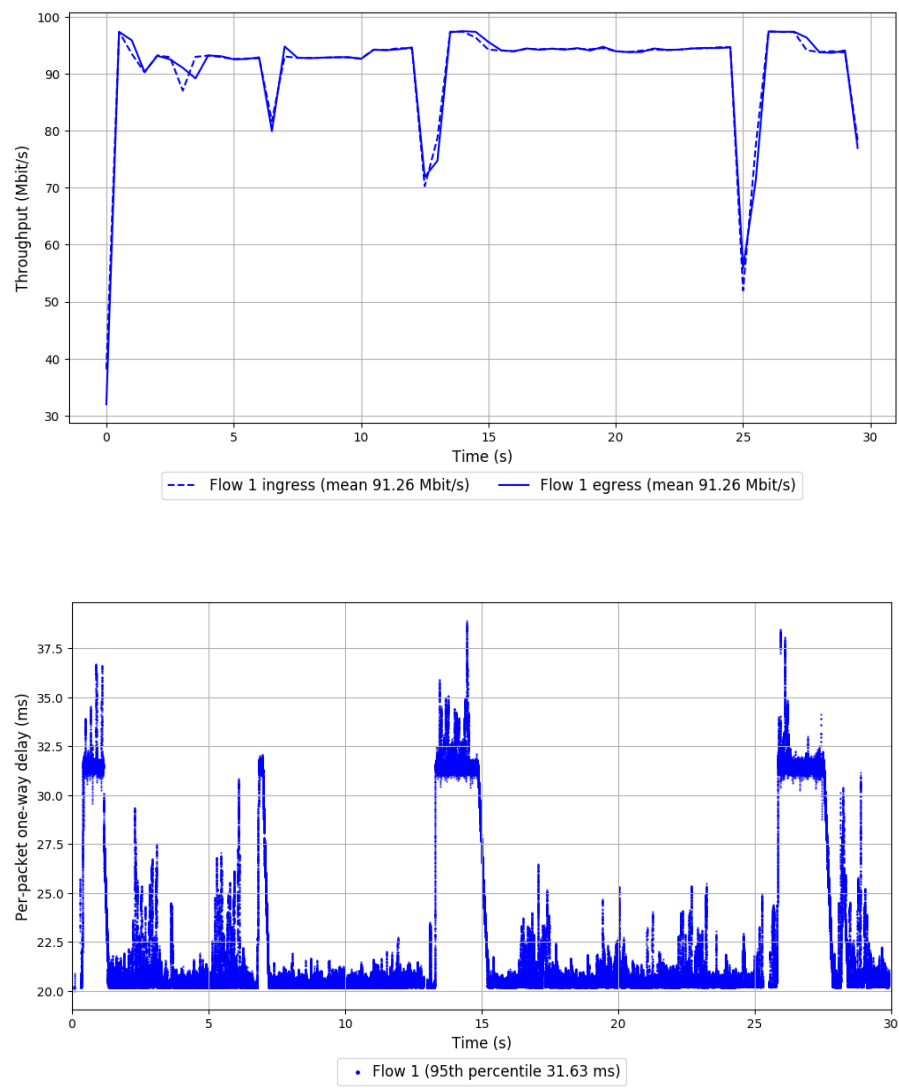
-- Flow 1:

Average throughput: 91.26 Mbit/s

95th percentile per-packet one-way delay: 31.633 ms

Loss rate: 0.10%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

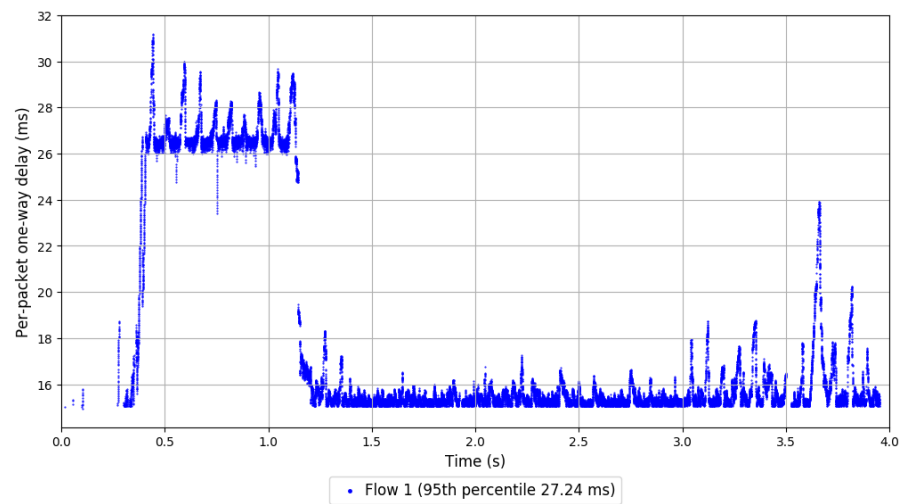
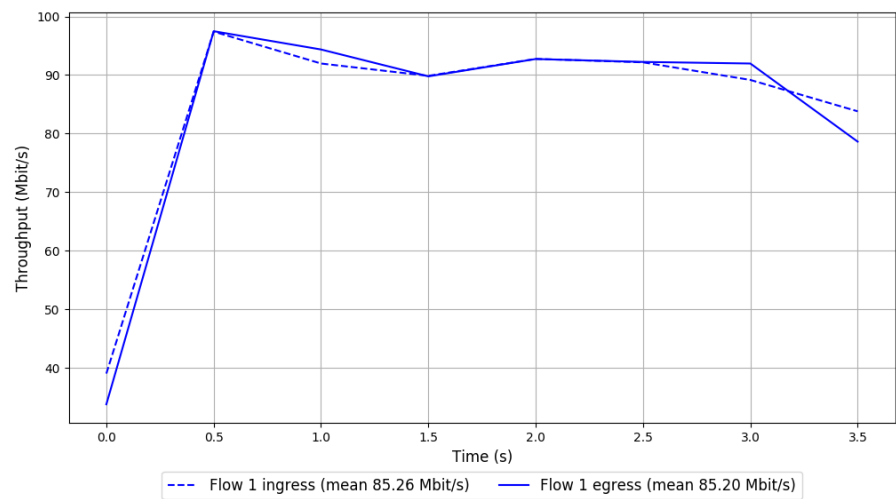
Start at: 2017-09-19 03:20:32

End at: 2017-09-19 03:21:02

Local clock offset: -1.696 ms

Remote clock offset: -3.23 ms

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-09-19 03:34:46

End at: 2017-09-19 03:35:16

Local clock offset: 0.797 ms

Remote clock offset: -2.582 ms

Below is generated by plot.py at 2017-09-19 04:59:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 78.66 Mbit/s

95th percentile per-packet one-way delay: 21.613 ms

Loss rate: 0.13%

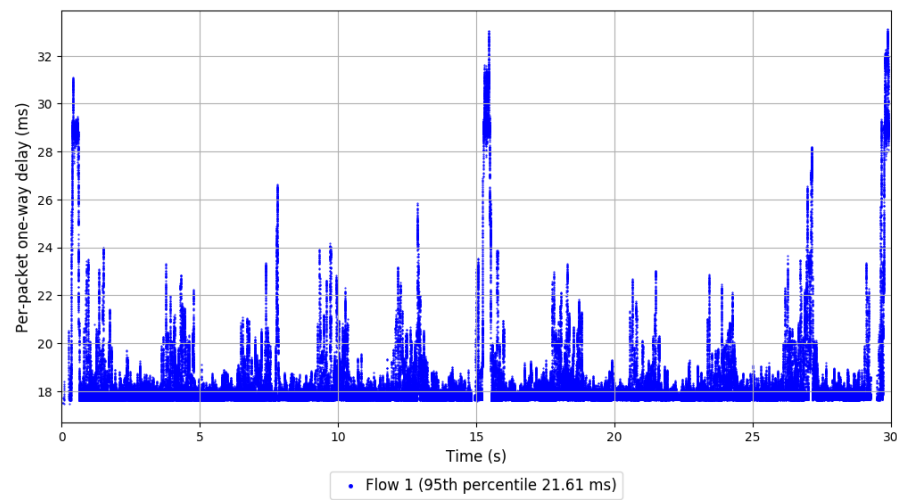
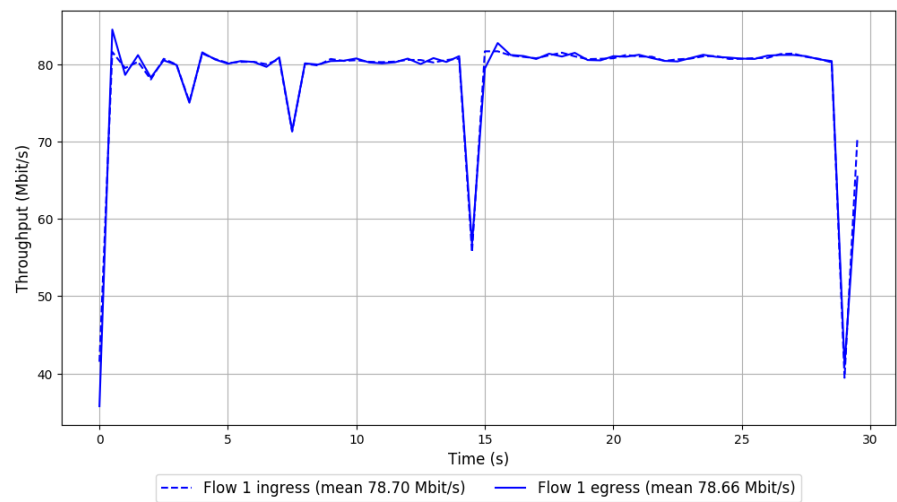
-- Flow 1:

Average throughput: 78.66 Mbit/s

95th percentile per-packet one-way delay: 21.613 ms

Loss rate: 0.13%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-09-19 03:50:12

End at: 2017-09-19 03:50:42

Local clock offset: -0.254 ms

Remote clock offset: -1.985 ms

Below is generated by plot.py at 2017-09-19 04:59:09

Datalink statistics

-- Total of 1 flow:

Average throughput: 73.23 Mbit/s

95th percentile per-packet one-way delay: 21.584 ms

Loss rate: 0.09%

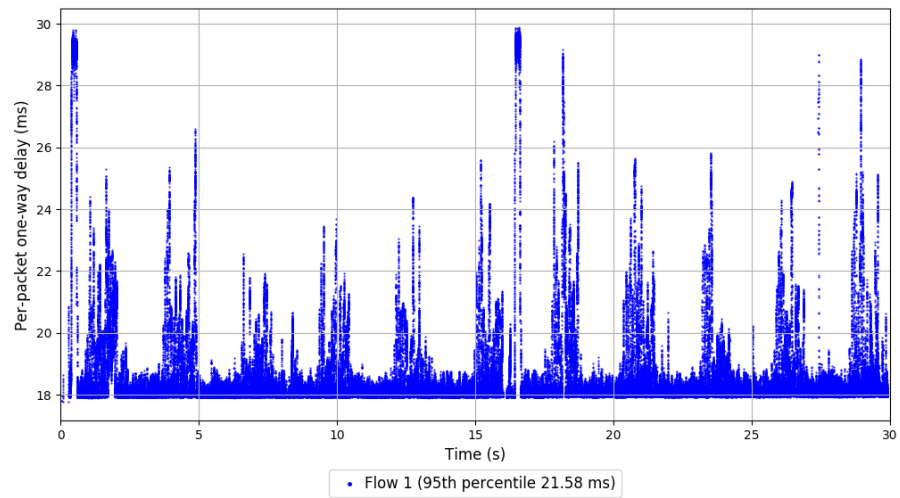
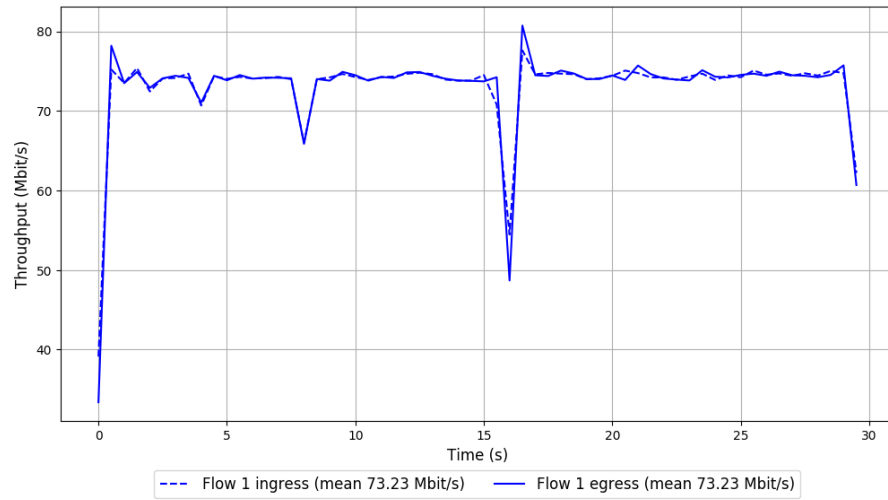
-- Flow 1:

Average throughput: 73.23 Mbit/s

95th percentile per-packet one-way delay: 21.584 ms

Loss rate: 0.09%

Run 6: Report of QUIC Cubic — Data Link

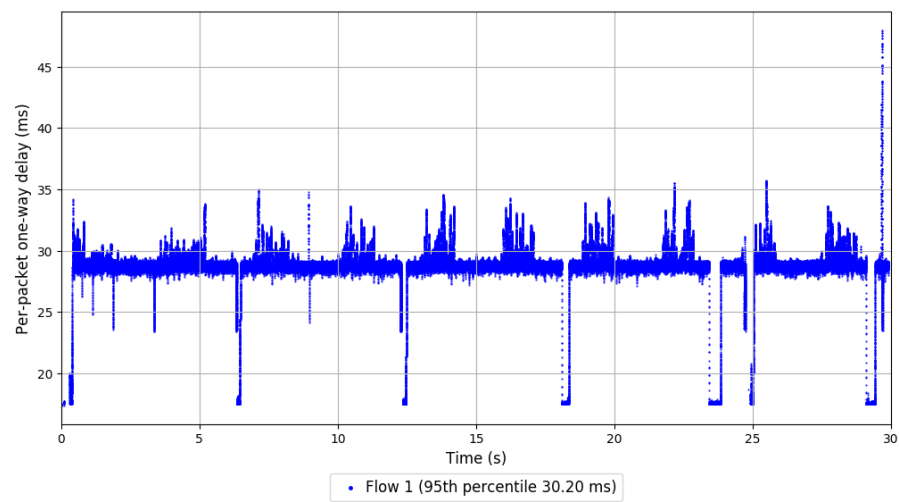
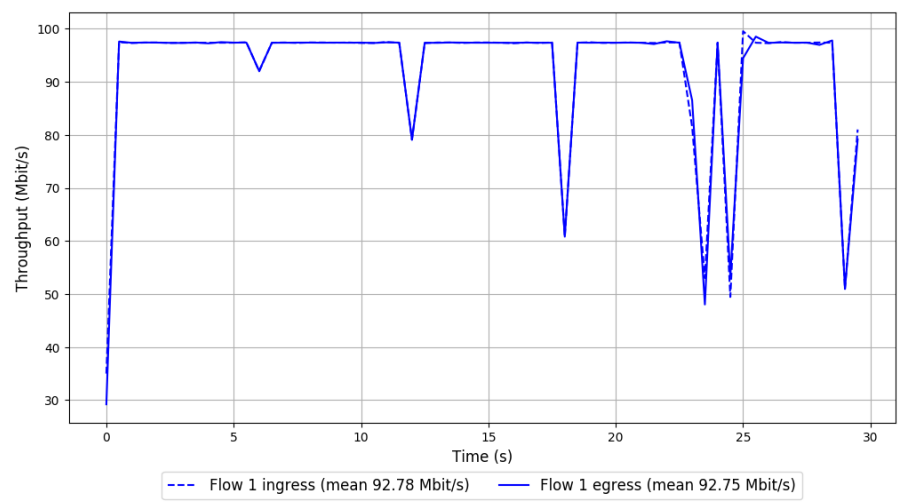


Run 7: Statistics of QUIC Cubic

Start at: 2017-09-19 04:04:45
End at: 2017-09-19 04:05:15
Local clock offset: -1.421 ms
Remote clock offset: -3.323 ms

Below is generated by plot.py at 2017-09-19 04:59:27
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.75 Mbit/s
95th percentile per-packet one-way delay: 30.198 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 92.75 Mbit/s
95th percentile per-packet one-way delay: 30.198 ms
Loss rate: 0.13%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-09-19 04:19:29

End at: 2017-09-19 04:19:59

Local clock offset: -3.713 ms

Remote clock offset: -2.802 ms

Below is generated by plot.py at 2017-09-19 04:59:36

Datalink statistics

-- Total of 1 flow:

Average throughput: 93.83 Mbit/s

95th percentile per-packet one-way delay: 26.900 ms

Loss rate: 0.13%

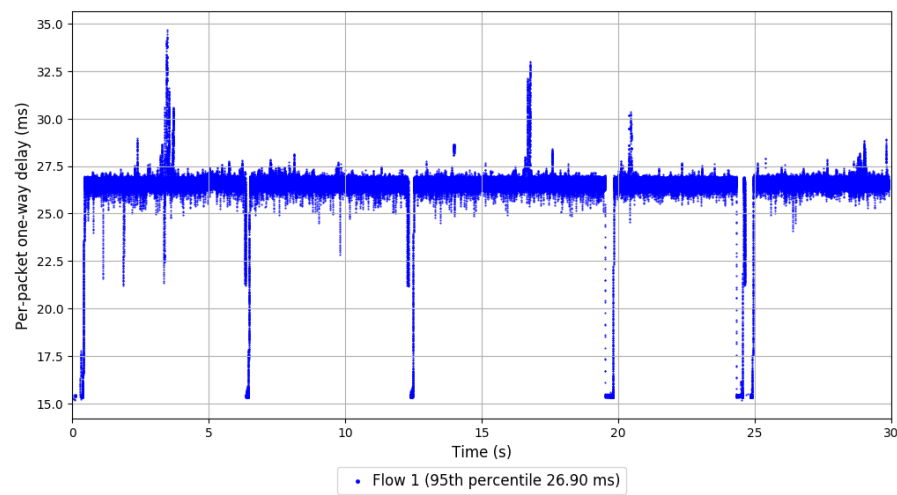
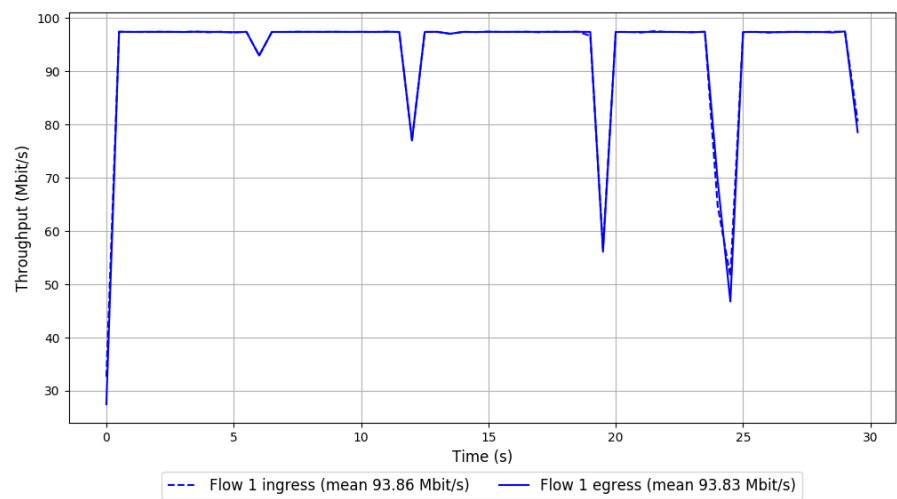
-- Flow 1:

Average throughput: 93.83 Mbit/s

95th percentile per-packet one-way delay: 26.900 ms

Loss rate: 0.13%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-09-19 04:31:44

End at: 2017-09-19 04:32:14

Local clock offset: -2.522 ms

Remote clock offset: -2.605 ms

Below is generated by plot.py at 2017-09-19 05:00:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 90.03 Mbit/s

95th percentile per-packet one-way delay: 28.154 ms

Loss rate: 0.09%

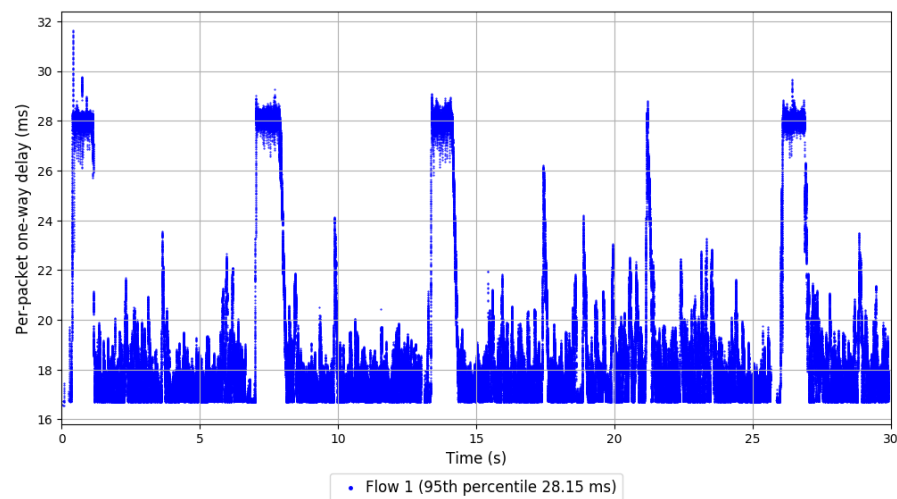
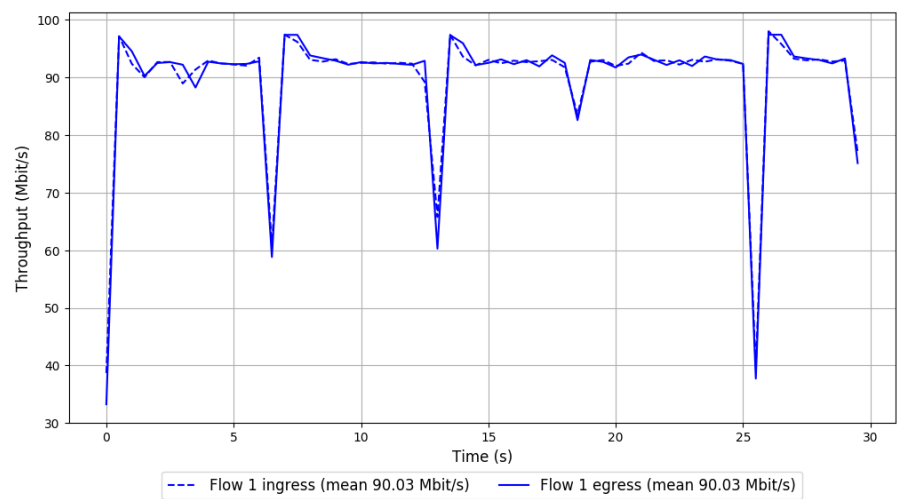
-- Flow 1:

Average throughput: 90.03 Mbit/s

95th percentile per-packet one-way delay: 28.154 ms

Loss rate: 0.09%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

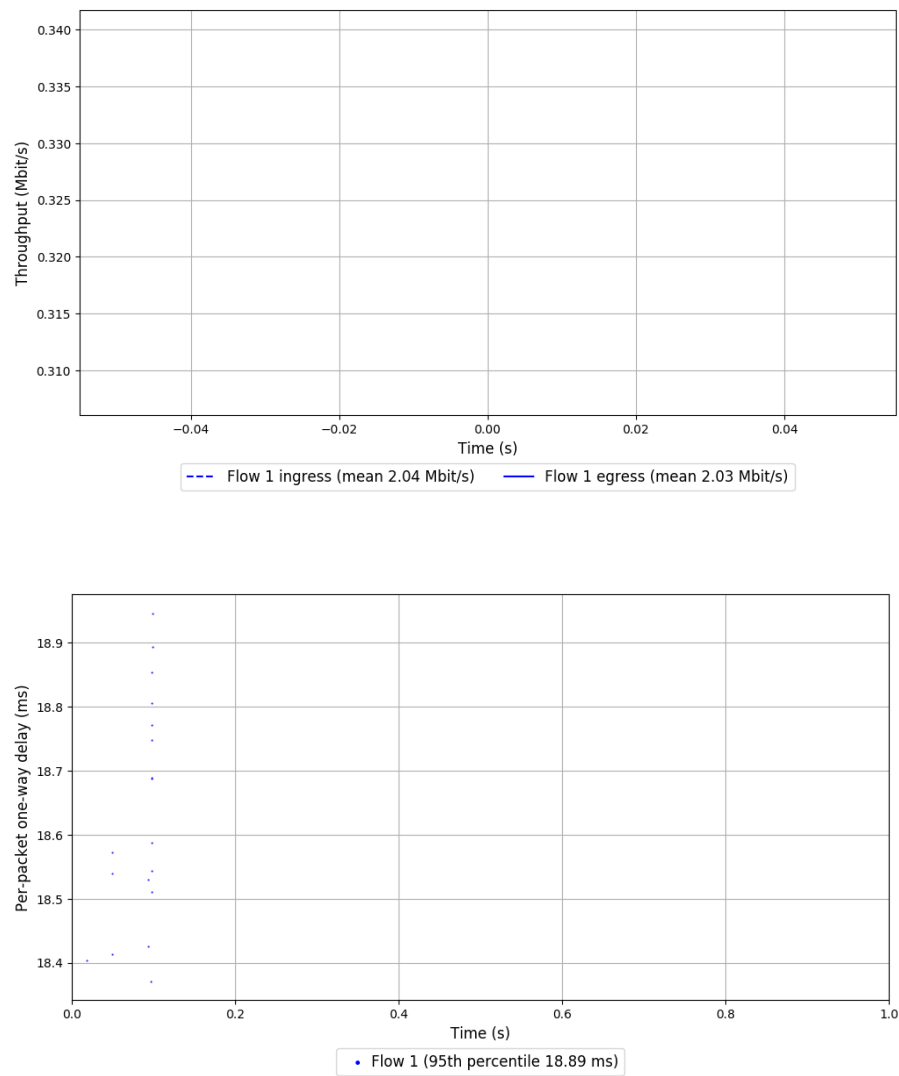
Start at: 2017-09-19 04:44:39

End at: 2017-09-19 04:45:09

Local clock offset: -1.364 ms

Remote clock offset: -2.899 ms

Run 10: Report of QUIC Cubic — Data Link



Run 1: Statistics of Sprout

Start at: 2017-09-19 02:11:28

End at: 2017-09-19 02:11:58

Local clock offset: 4.575 ms

Remote clock offset: -3.81 ms

Below is generated by plot.py at 2017-09-19 05:00:05

Datalink statistics

-- Total of 1 flow:

Average throughput: 22.78 Mbit/s

95th percentile per-packet one-way delay: 32.033 ms

Loss rate: 0.14%

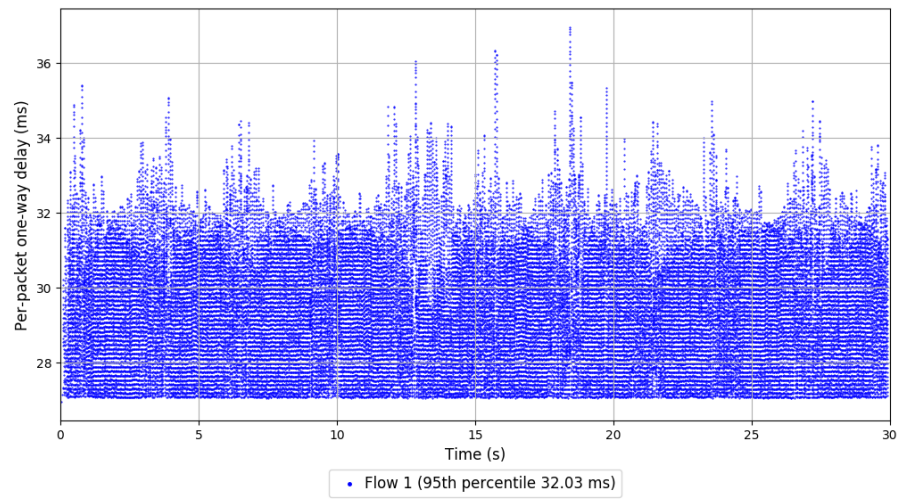
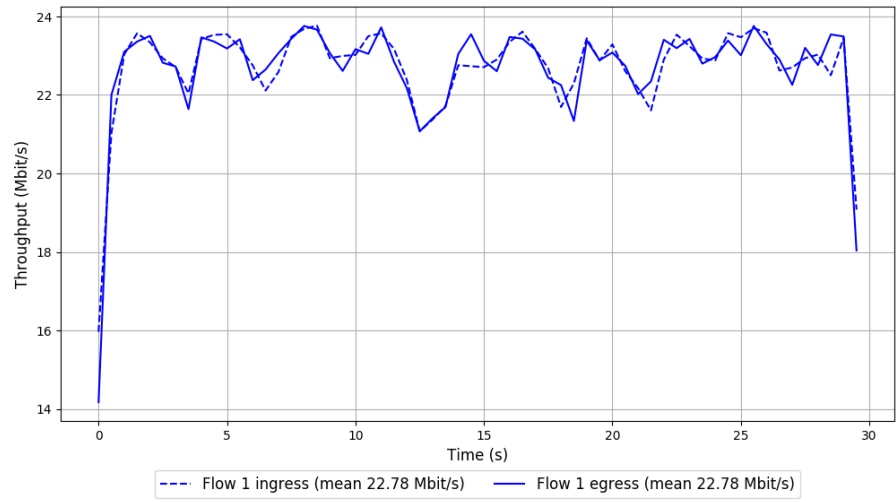
-- Flow 1:

Average throughput: 22.78 Mbit/s

95th percentile per-packet one-way delay: 32.033 ms

Loss rate: 0.14%

Run 1: Report of Sprout — Data Link

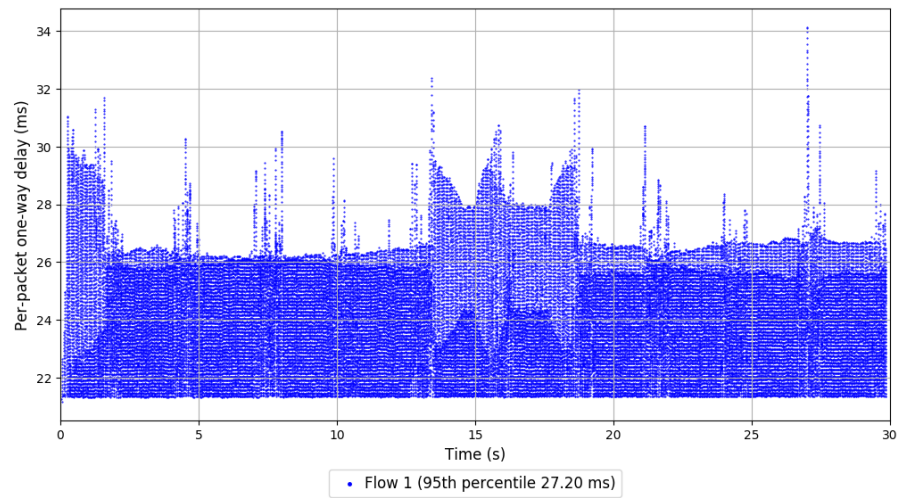
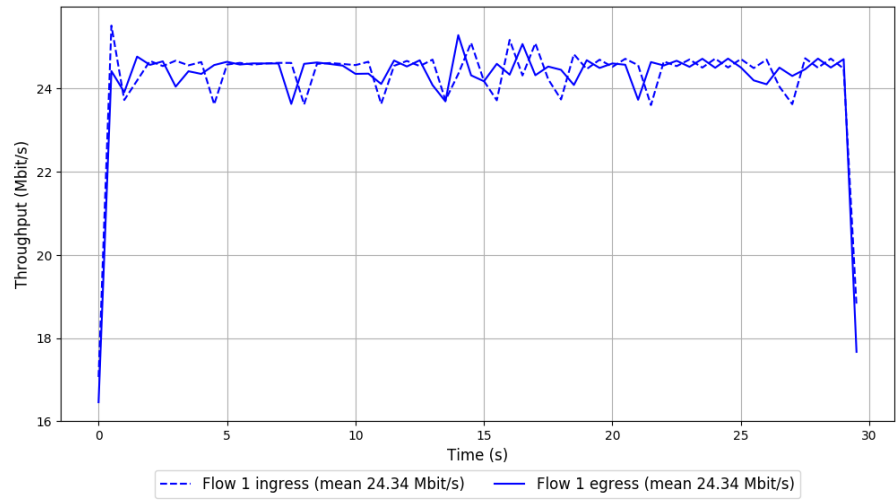


Run 2: Statistics of Sprout

Start at: 2017-09-19 02:25:31
End at: 2017-09-19 02:26:01
Local clock offset: 4.834 ms
Remote clock offset: -3.206 ms

Below is generated by plot.py at 2017-09-19 05:00:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.34 Mbit/s
95th percentile per-packet one-way delay: 27.200 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.34 Mbit/s
95th percentile per-packet one-way delay: 27.200 ms
Loss rate: 0.14%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

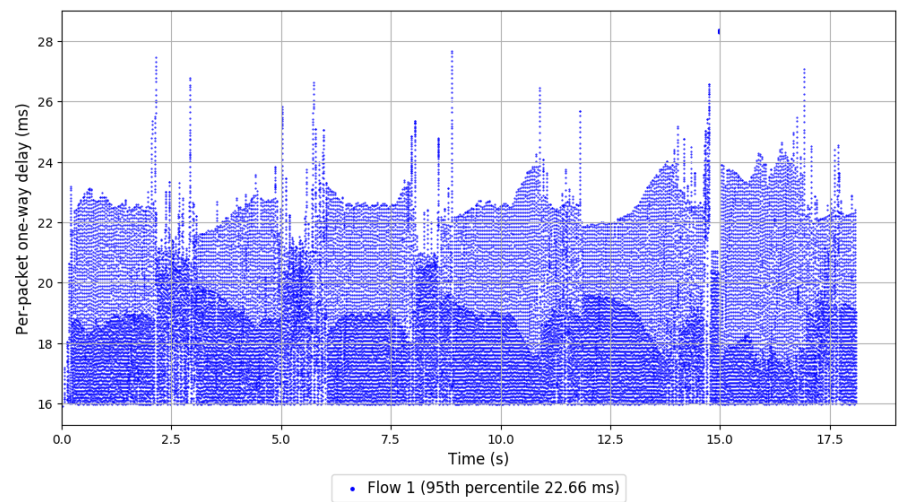
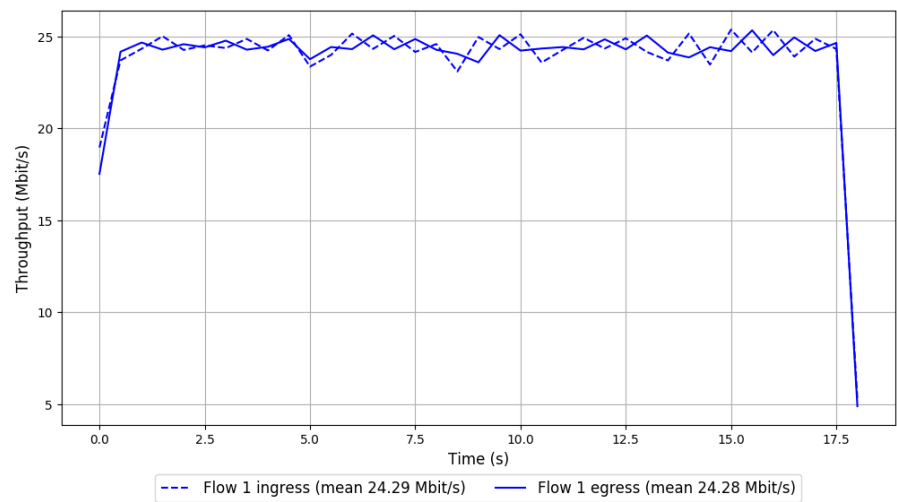
Start at: 2017-09-19 02:39:05

End at: 2017-09-19 02:39:35

Local clock offset: -1.144 ms

Remote clock offset: -3.366 ms

Run 3: Report of Sprout — Data Link

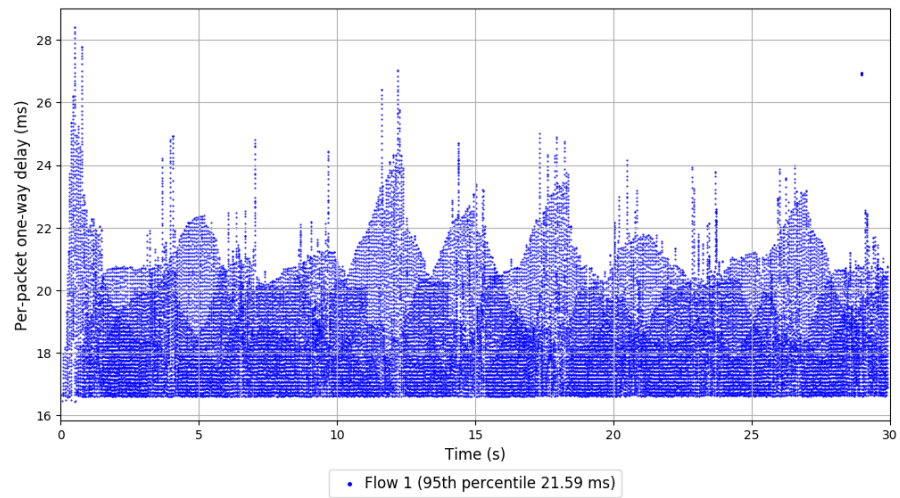
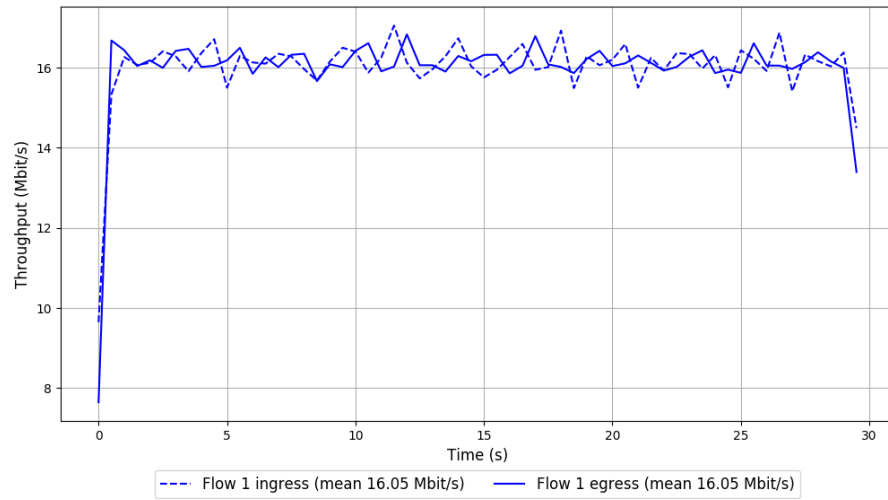


Run 4: Statistics of Sprout

Start at: 2017-09-19 03:19:20
End at: 2017-09-19 03:19:50
Local clock offset: 0.178 ms
Remote clock offset: -2.935 ms

Below is generated by plot.py at 2017-09-19 05:00:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 16.05 Mbit/s
95th percentile per-packet one-way delay: 21.592 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 16.05 Mbit/s
95th percentile per-packet one-way delay: 21.592 ms
Loss rate: 0.20%

Run 4: Report of Sprout — Data Link

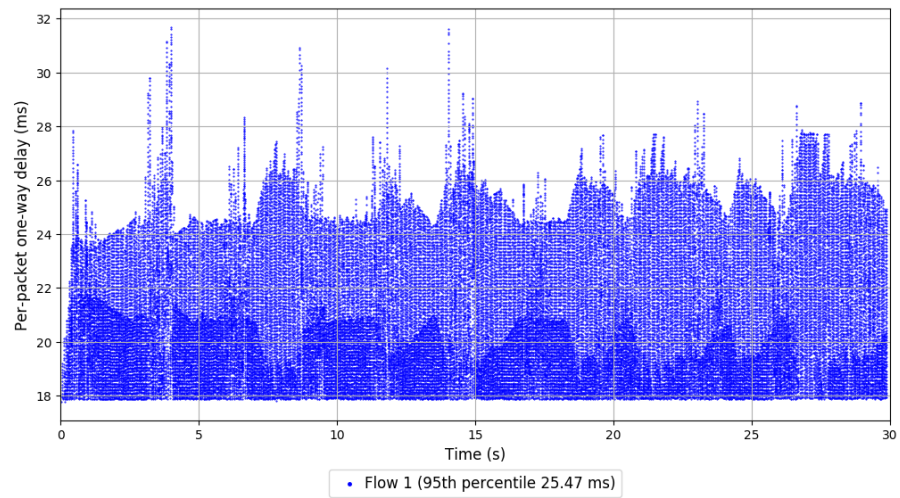
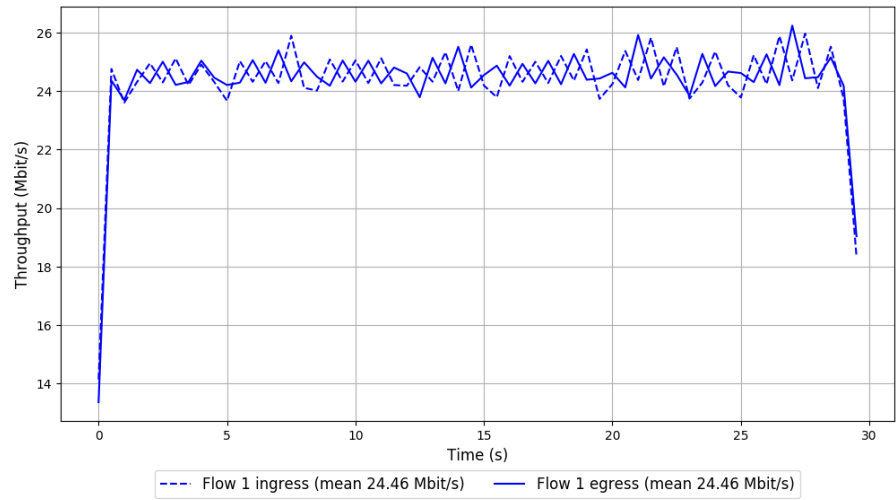


Run 5: Statistics of Sprout

Start at: 2017-09-19 03:33:36
End at: 2017-09-19 03:34:06
Local clock offset: 0.731 ms
Remote clock offset: -2.905 ms

Below is generated by plot.py at 2017-09-19 05:00:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.46 Mbit/s
95th percentile per-packet one-way delay: 25.474 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 24.46 Mbit/s
95th percentile per-packet one-way delay: 25.474 ms
Loss rate: 0.04%

Run 5: Report of Sprout — Data Link

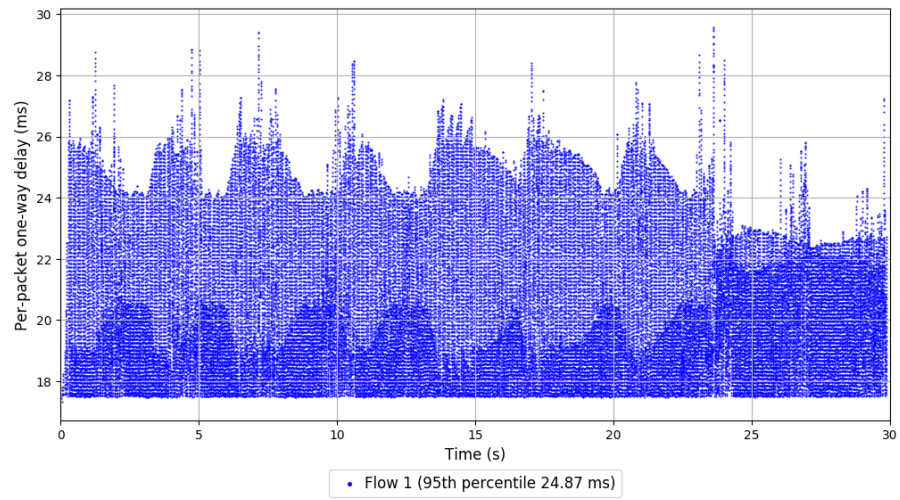
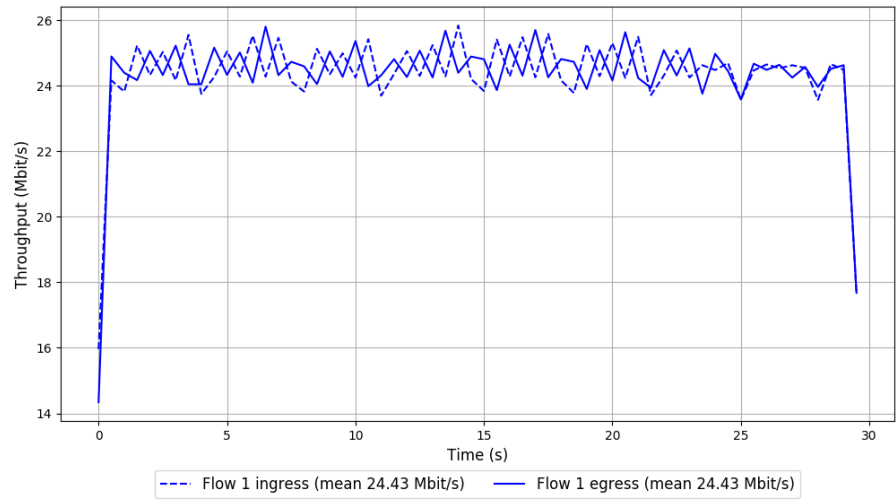


Run 6: Statistics of Sprout

Start at: 2017-09-19 03:49:03
End at: 2017-09-19 03:49:33
Local clock offset: -0.573 ms
Remote clock offset: -1.884 ms

Below is generated by plot.py at 2017-09-19 05:00:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.43 Mbit/s
95th percentile per-packet one-way delay: 24.869 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 24.43 Mbit/s
95th percentile per-packet one-way delay: 24.869 ms
Loss rate: 0.06%

Run 6: Report of Sprout — Data Link

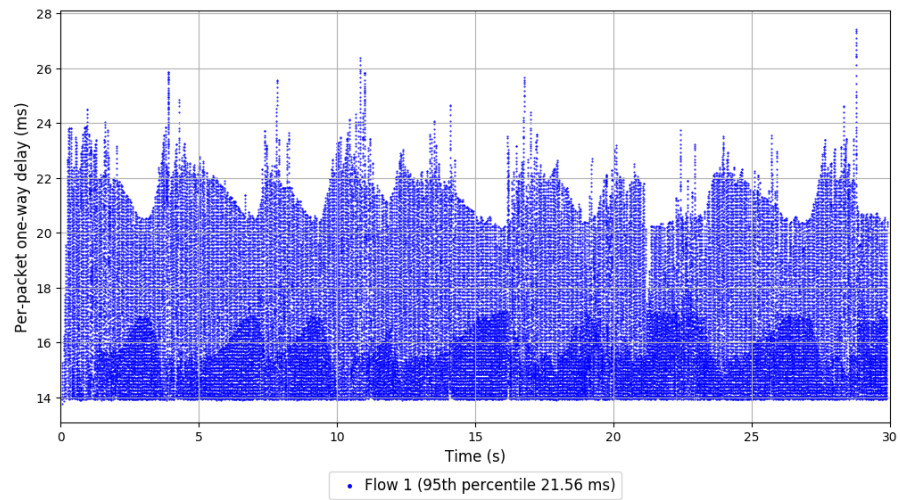
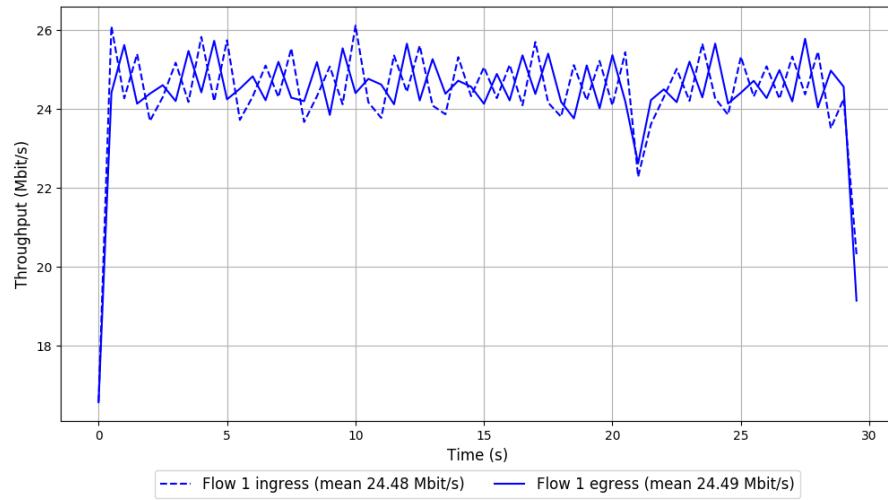


Run 7: Statistics of Sprout

Start at: 2017-09-19 04:03:37
End at: 2017-09-19 04:04:07
Local clock offset: -4.229 ms
Remote clock offset: -2.563 ms

Below is generated by plot.py at 2017-09-19 05:00:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.49 Mbit/s
95th percentile per-packet one-way delay: 21.564 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 24.49 Mbit/s
95th percentile per-packet one-way delay: 21.564 ms
Loss rate: 0.08%

Run 7: Report of Sprout — Data Link

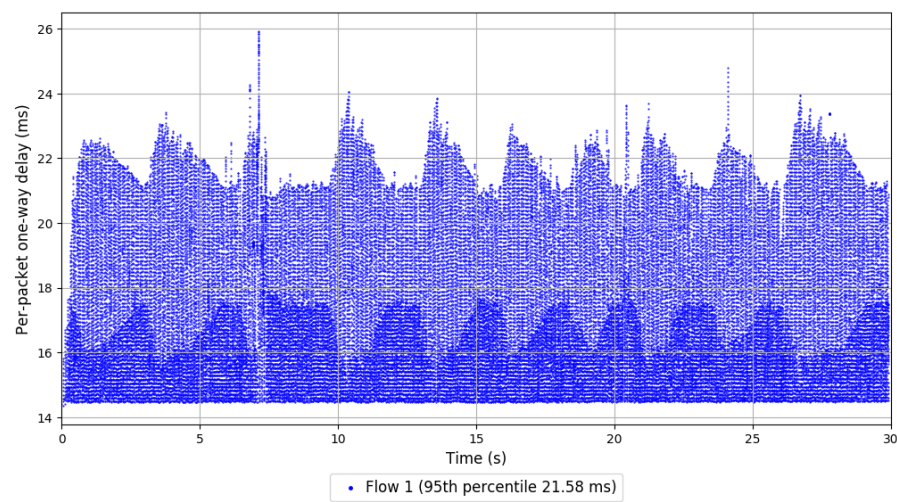
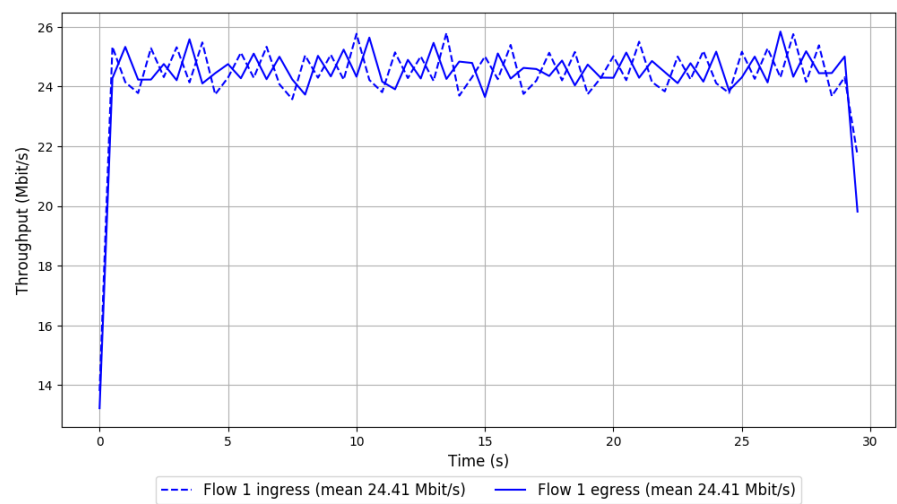


Run 8: Statistics of Sprout

Start at: 2017-09-19 04:18:21
End at: 2017-09-19 04:18:51
Local clock offset: -4.568 ms
Remote clock offset: -2.817 ms

Below is generated by plot.py at 2017-09-19 05:00:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.41 Mbit/s
95th percentile per-packet one-way delay: 21.576 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.41 Mbit/s
95th percentile per-packet one-way delay: 21.576 ms
Loss rate: 0.13%

Run 8: Report of Sprout — Data Link

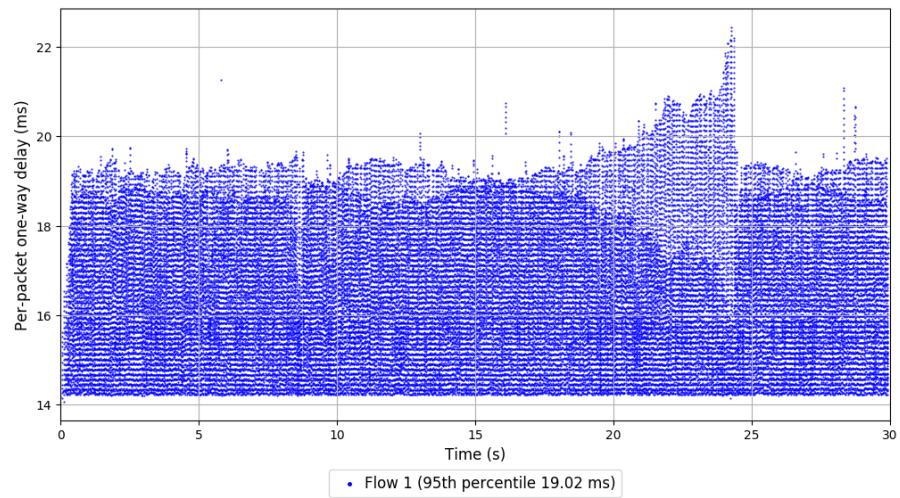
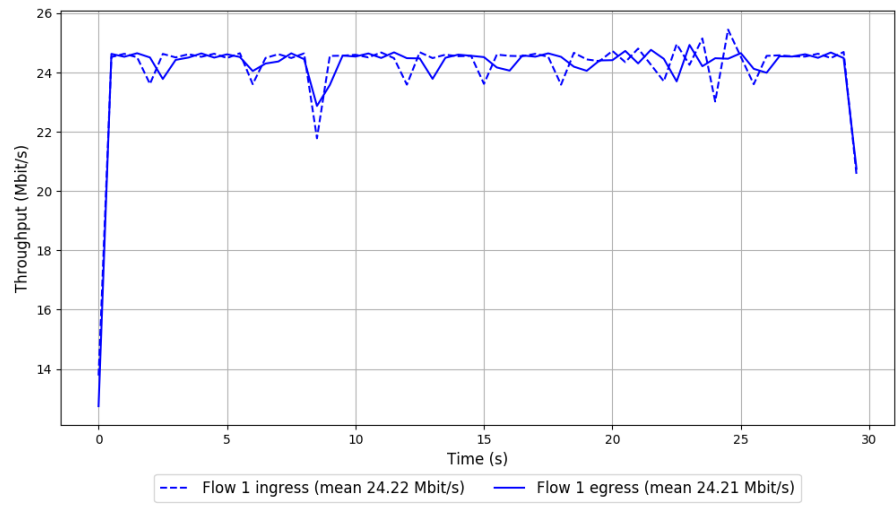


Run 9: Statistics of Sprout

Start at: 2017-09-19 04:30:37
End at: 2017-09-19 04:31:07
Local clock offset: -4.543 ms
Remote clock offset: -2.128 ms

Below is generated by plot.py at 2017-09-19 05:00:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 24.21 Mbit/s
95th percentile per-packet one-way delay: 19.020 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 24.21 Mbit/s
95th percentile per-packet one-way delay: 19.020 ms
Loss rate: 0.06%

Run 9: Report of Sprout — Data Link

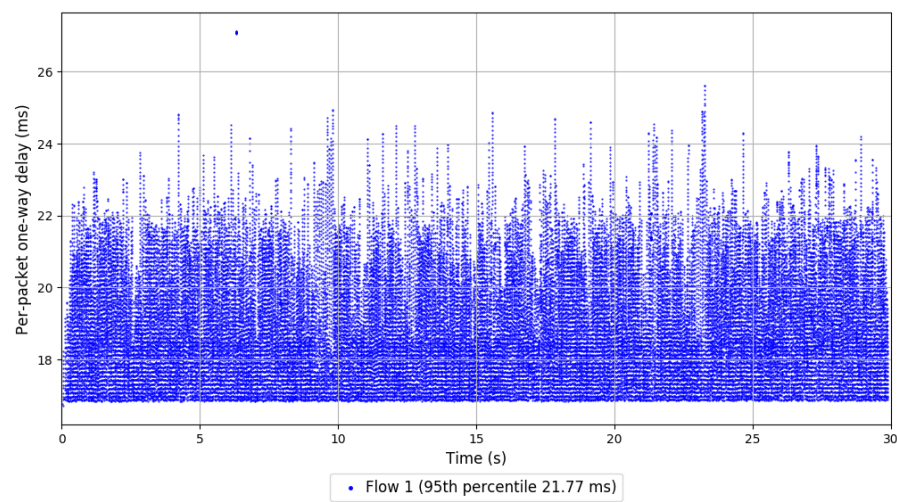
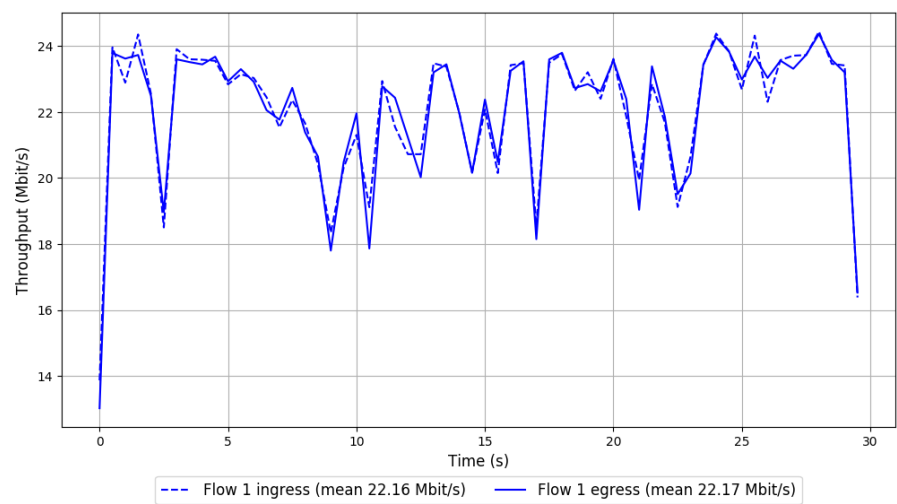


Run 10: Statistics of Sprout

Start at: 2017-09-19 04:43:30
End at: 2017-09-19 04:44:00
Local clock offset: -3.257 ms
Remote clock offset: -3.174 ms

Below is generated by plot.py at 2017-09-19 05:00:05
Datalink statistics
-- Total of 1 flow:
Average throughput: 22.17 Mbit/s
95th percentile per-packet one-way delay: 21.765 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 22.17 Mbit/s
95th percentile per-packet one-way delay: 21.765 ms
Loss rate: 0.08%

Run 10: Report of Sprout — Data Link

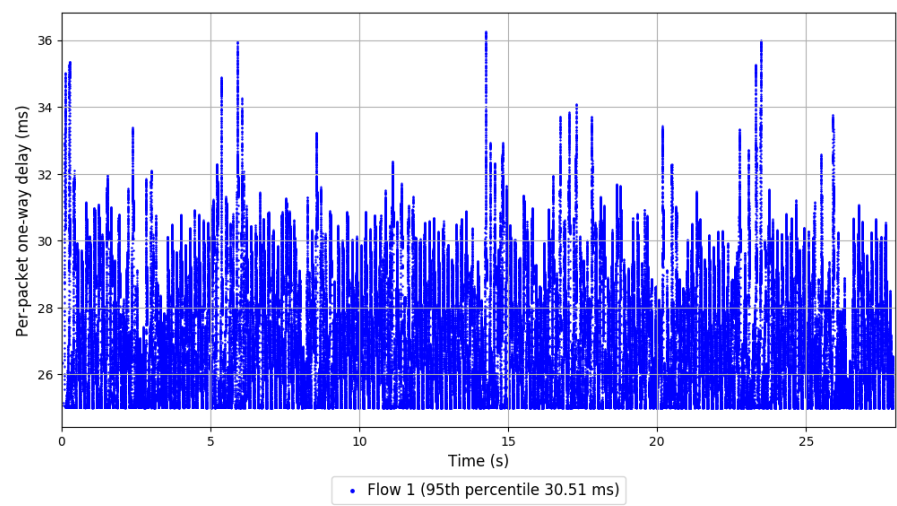
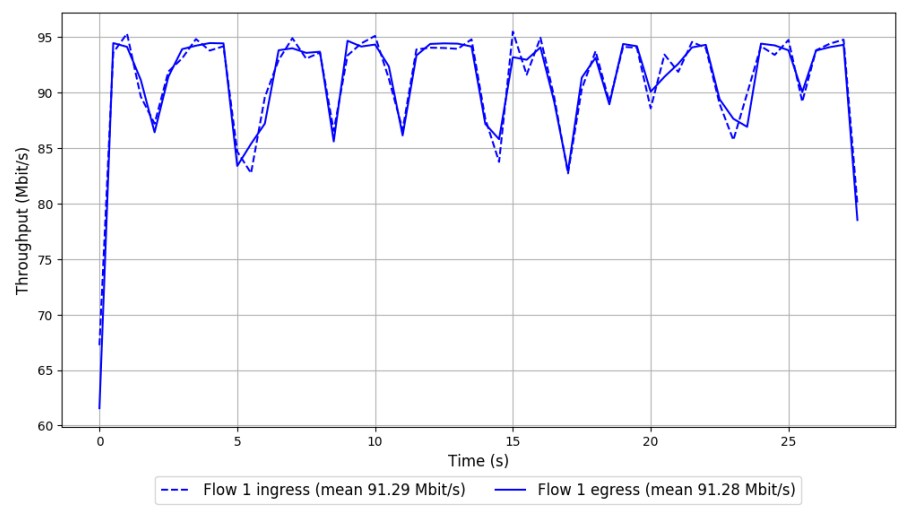


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-09-19 02:14:02
End at: 2017-09-19 02:14:32
Local clock offset: 3.274 ms
Remote clock offset: -3.084 ms

# Below is generated by plot.py at 2017-09-19 05:01:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.28 Mbit/s
95th percentile per-packet one-way delay: 30.513 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 91.28 Mbit/s
95th percentile per-packet one-way delay: 30.513 ms
Loss rate: 0.14%
```

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

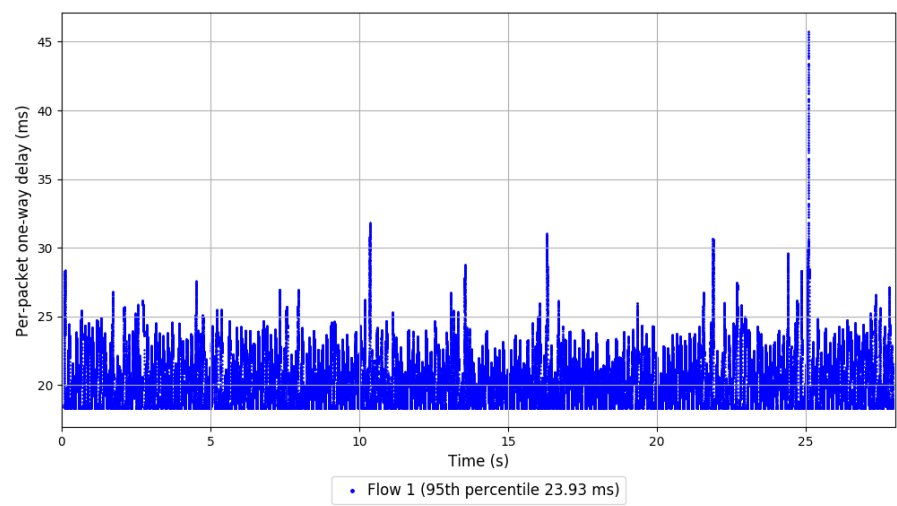
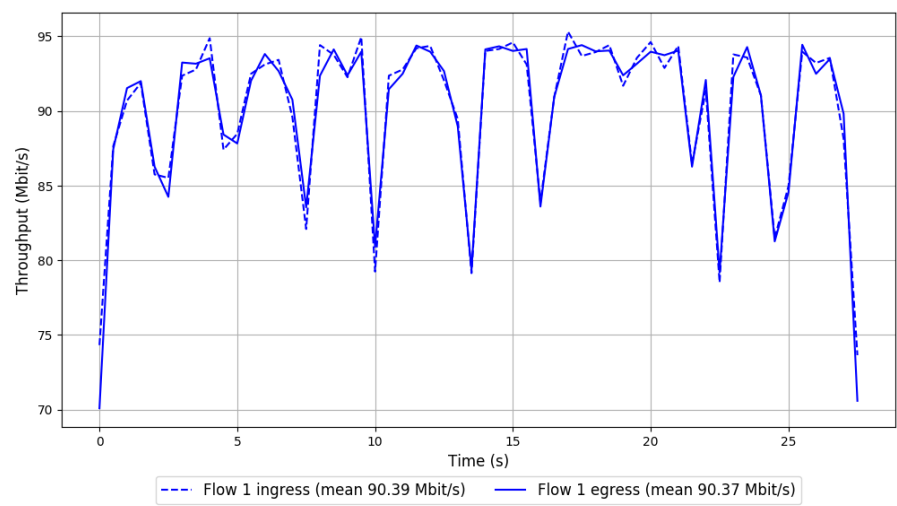


Run 2: Statistics of TaoVA-100x

Start at: 2017-09-19 02:28:01
End at: 2017-09-19 02:28:31
Local clock offset: 0.919 ms
Remote clock offset: -4.004 ms

Below is generated by plot.py at 2017-09-19 05:01:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 90.37 Mbit/s
95th percentile per-packet one-way delay: 23.928 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 90.37 Mbit/s
95th percentile per-packet one-way delay: 23.928 ms
Loss rate: 0.11%

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



Run 3: Statistics of TaoVA-100x

Start at: 2017-09-19 02:41:42

End at: 2017-09-19 02:42:12

Local clock offset: 0.513 ms

Remote clock offset: -3.174 ms

Below is generated by plot.py at 2017-09-19 05:01:55

Datalink statistics

-- Total of 1 flow:

Average throughput: 73.30 Mbit/s

95th percentile per-packet one-way delay: 28.061 ms

Loss rate: 0.13%

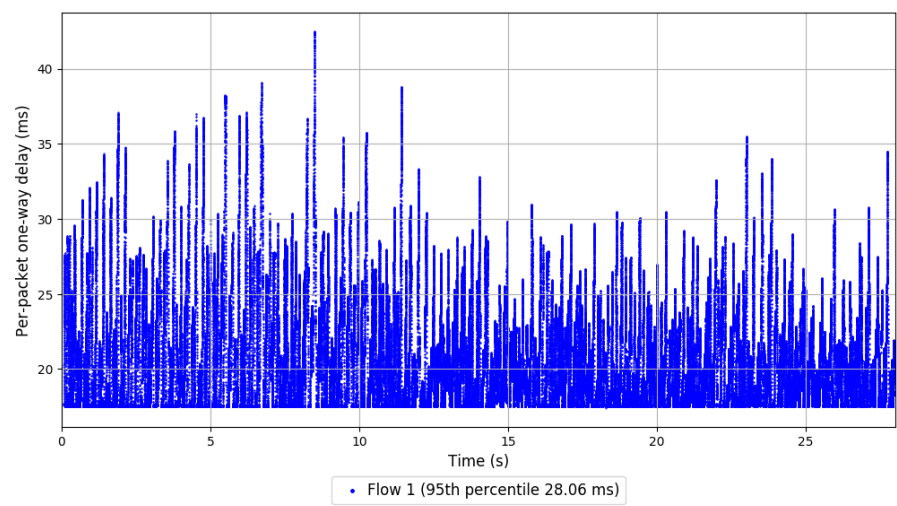
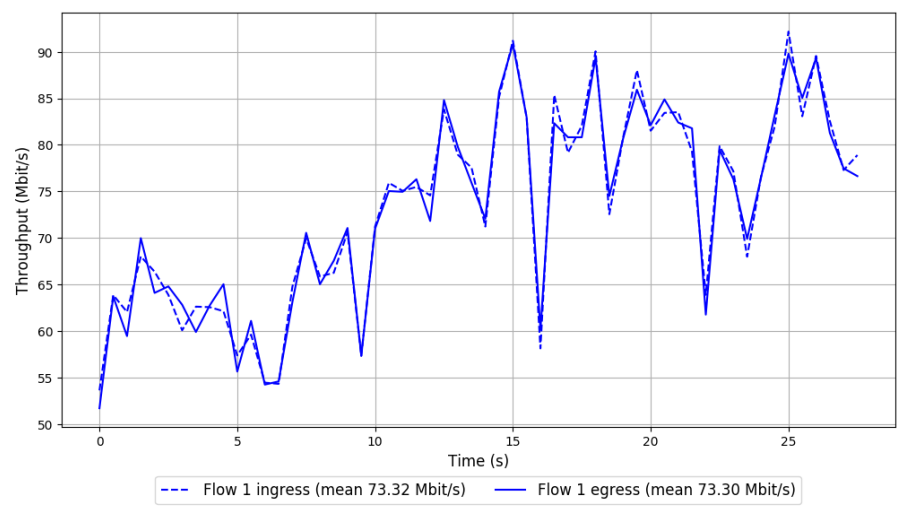
-- Flow 1:

Average throughput: 73.30 Mbit/s

95th percentile per-packet one-way delay: 28.061 ms

Loss rate: 0.13%

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



Run 4: Statistics of TaoVA-100x

Start at: 2017-09-19 03:21:46

End at: 2017-09-19 03:22:16

Local clock offset: -1.42 ms

Remote clock offset: -2.626 ms

Below is generated by plot.py at 2017-09-19 05:02:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 92.86 Mbit/s

95th percentile per-packet one-way delay: 20.781 ms

Loss rate: 0.18%

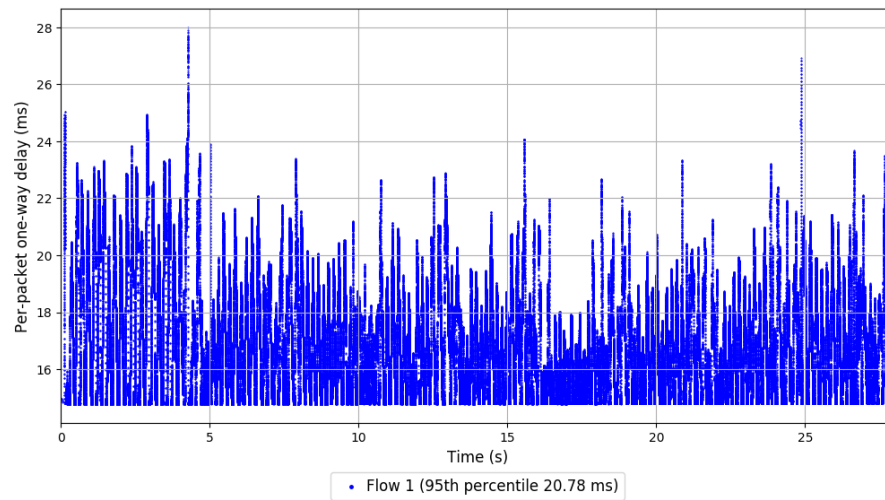
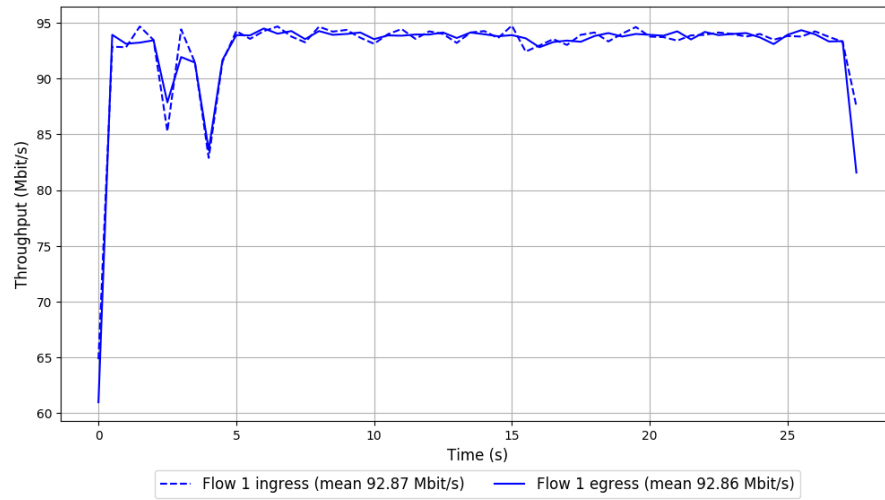
-- Flow 1:

Average throughput: 92.86 Mbit/s

95th percentile per-packet one-way delay: 20.781 ms

Loss rate: 0.18%

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



Run 5: Statistics of TaoVA-100x

Start at: 2017-09-19 03:36:16

End at: 2017-09-19 03:36:46

Local clock offset: -0.686 ms

Remote clock offset: -3.17 ms

Below is generated by plot.py at 2017-09-19 05:02:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 89.51 Mbit/s

95th percentile per-packet one-way delay: 21.164 ms

Loss rate: 0.10%

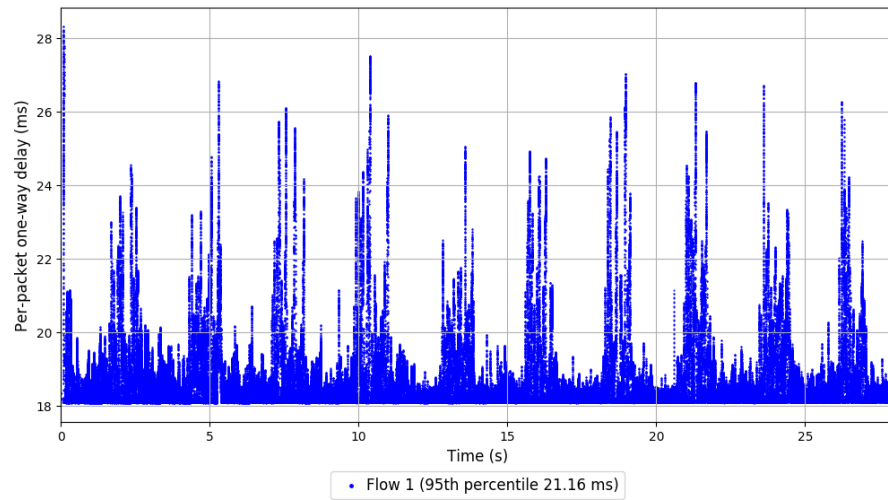
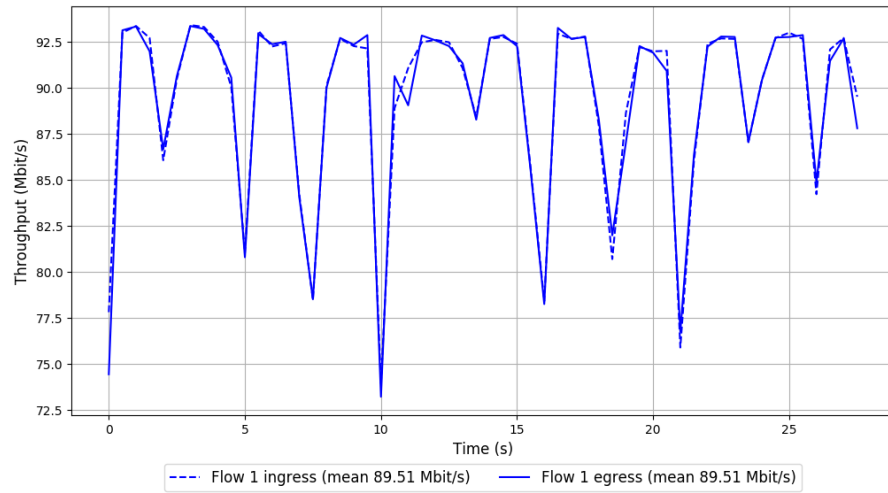
-- Flow 1:

Average throughput: 89.51 Mbit/s

95th percentile per-packet one-way delay: 21.164 ms

Loss rate: 0.10%

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

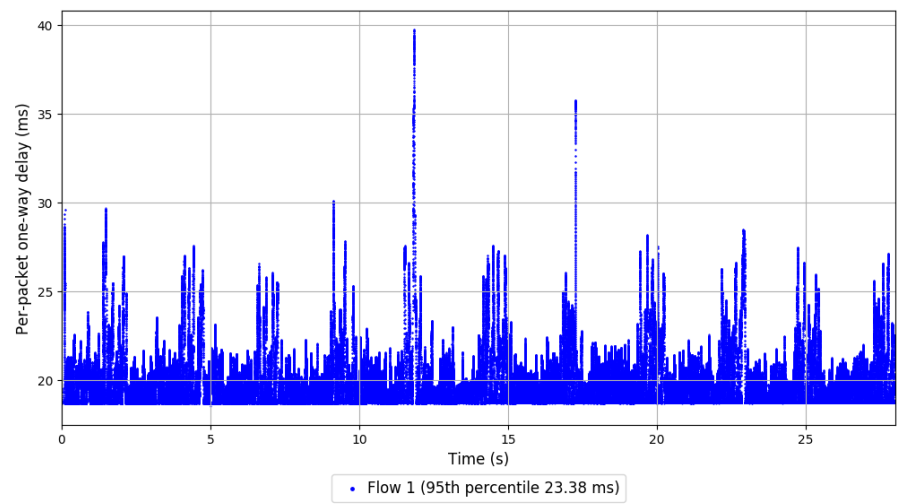
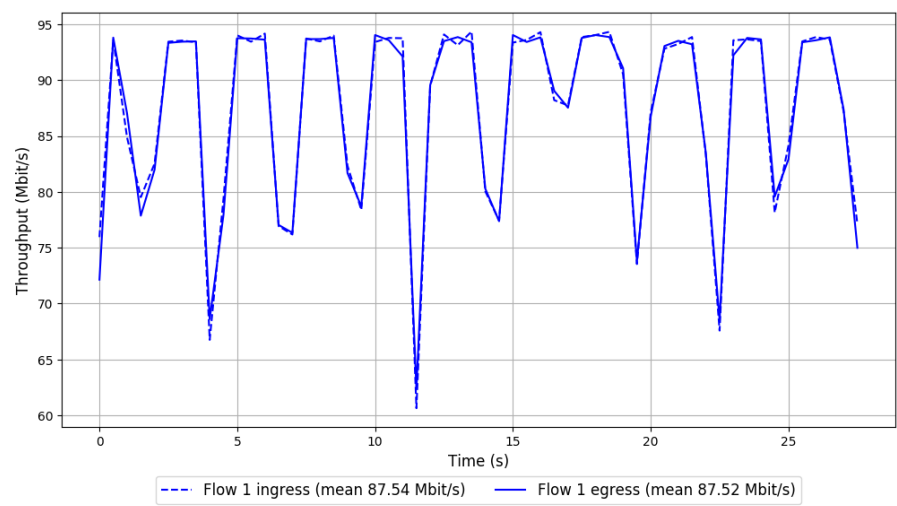


Run 6: Statistics of TaoVA-100x

Start at: 2017-09-19 03:51:46
End at: 2017-09-19 03:52:16
Local clock offset: -0.288 ms
Remote clock offset: -2.703 ms

Below is generated by plot.py at 2017-09-19 05:02:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.52 Mbit/s
95th percentile per-packet one-way delay: 23.376 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 87.52 Mbit/s
95th percentile per-packet one-way delay: 23.376 ms
Loss rate: 0.11%

Run 6: Report of TaoVA-100x — Data Link

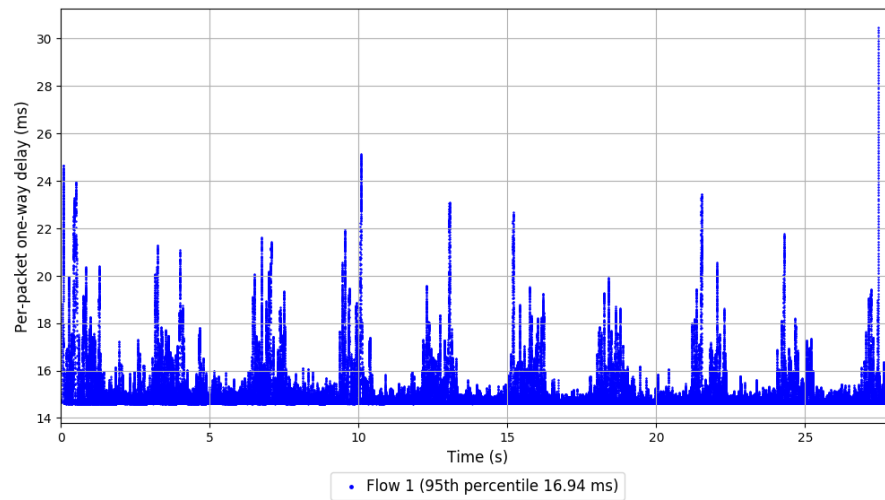
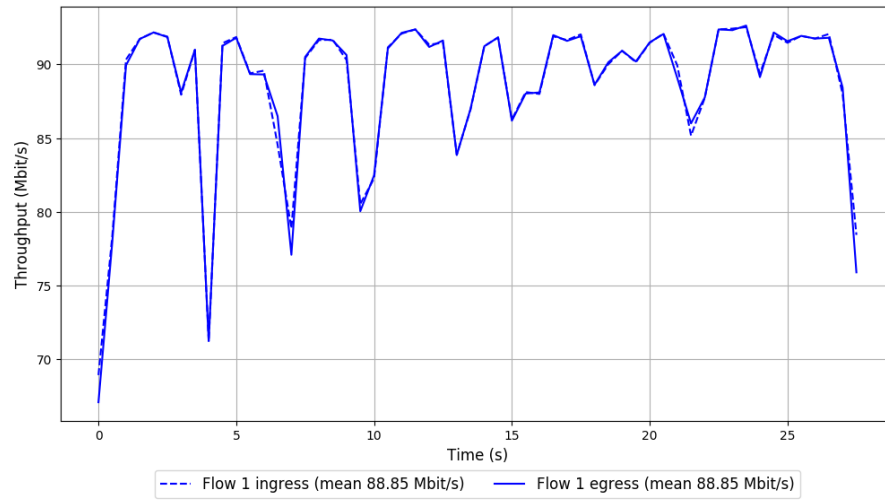


Run 7: Statistics of TaoVA-100x

Start at: 2017-09-19 04:06:17
End at: 2017-09-19 04:06:47
Local clock offset: -4.414 ms
Remote clock offset: -3.317 ms

Below is generated by plot.py at 2017-09-19 05:02:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 88.85 Mbit/s
95th percentile per-packet one-way delay: 16.939 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 88.85 Mbit/s
95th percentile per-packet one-way delay: 16.939 ms
Loss rate: 0.10%

Run 7: Report of TaoVA-100x — Data Link



Run 8: Statistics of TaoVA-100x

Start at: 2017-09-19 04:20:46

End at: 2017-09-19 04:21:16

Local clock offset: -2.101 ms

Remote clock offset: -1.699 ms

Below is generated by plot.py at 2017-09-19 05:02:14

Datalink statistics

-- Total of 1 flow:

Average throughput: 87.12 Mbit/s

95th percentile per-packet one-way delay: 19.109 ms

Loss rate: 0.10%

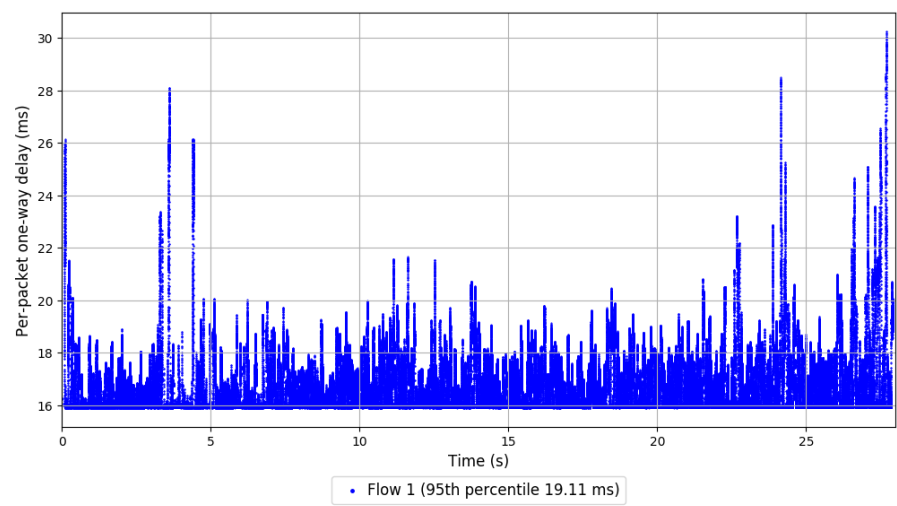
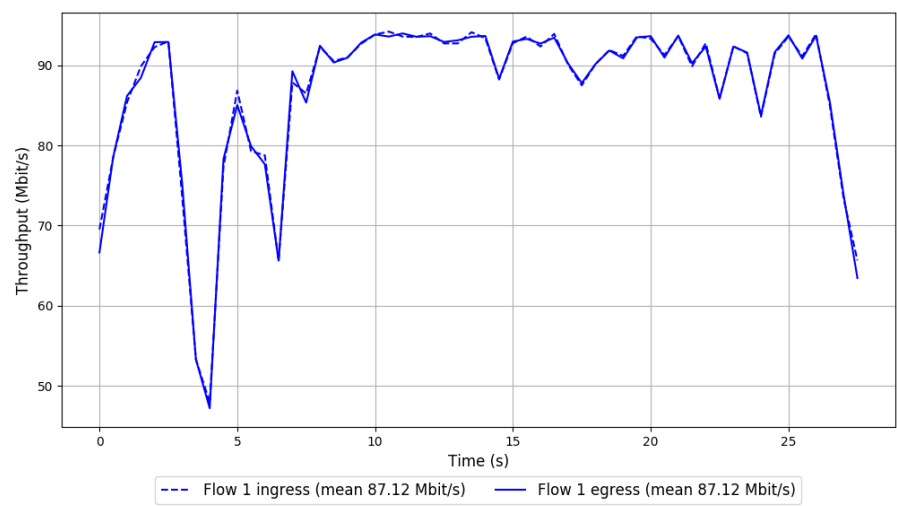
-- Flow 1:

Average throughput: 87.12 Mbit/s

95th percentile per-packet one-way delay: 19.109 ms

Loss rate: 0.10%

Run 8: Report of TaoVA-100x — Data Link



Run 9: Statistics of TaoVA-100x

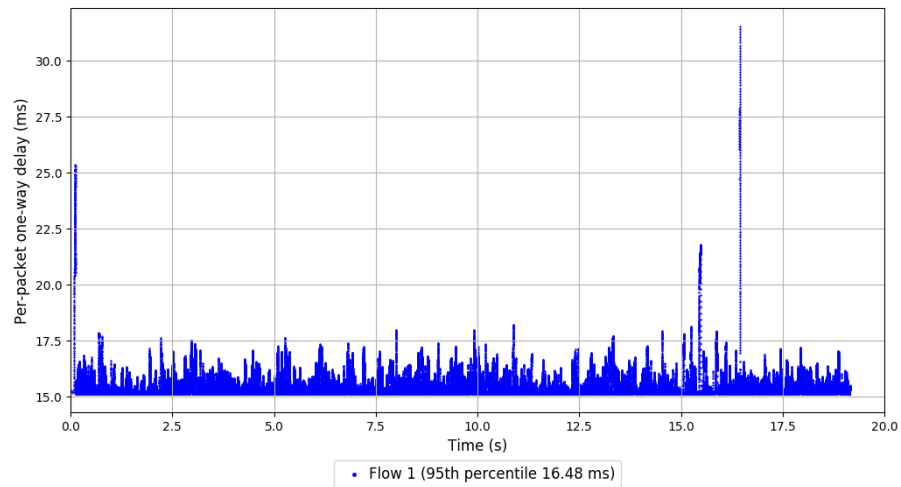
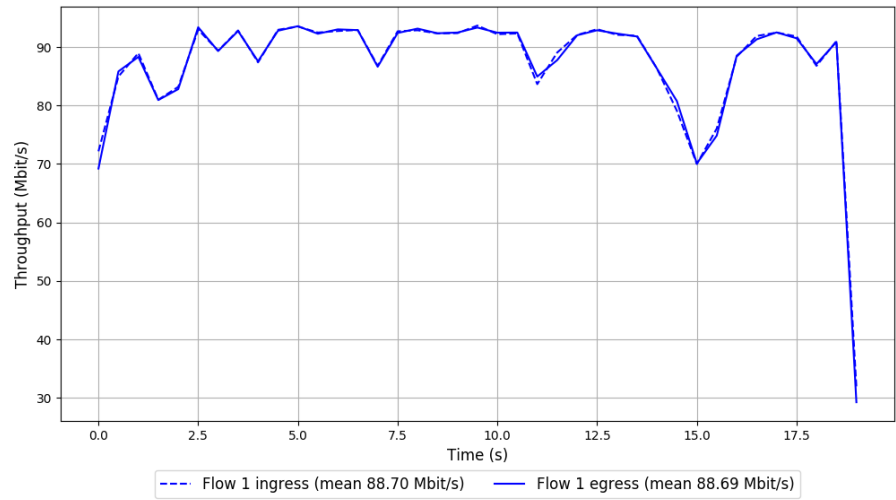
Start at: 2017-09-19 04:33:00

End at: 2017-09-19 04:33:30

Local clock offset: -4.861 ms

Remote clock offset: -3.347 ms

Run 9: Report of TaoVA-100x — Data Link



Run 10: Statistics of TaoVA-100x

Start at: 2017-09-19 04:45:43

End at: 2017-09-19 04:46:13

Local clock offset: -5.133 ms

Remote clock offset: -2.058 ms

Below is generated by plot.py at 2017-09-19 05:03:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 79.08 Mbit/s

95th percentile per-packet one-way delay: 16.314 ms

Loss rate: 0.11%

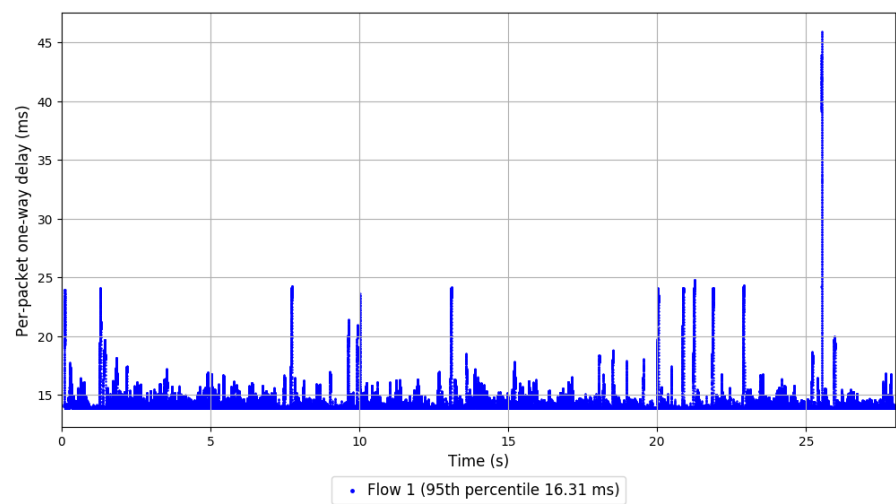
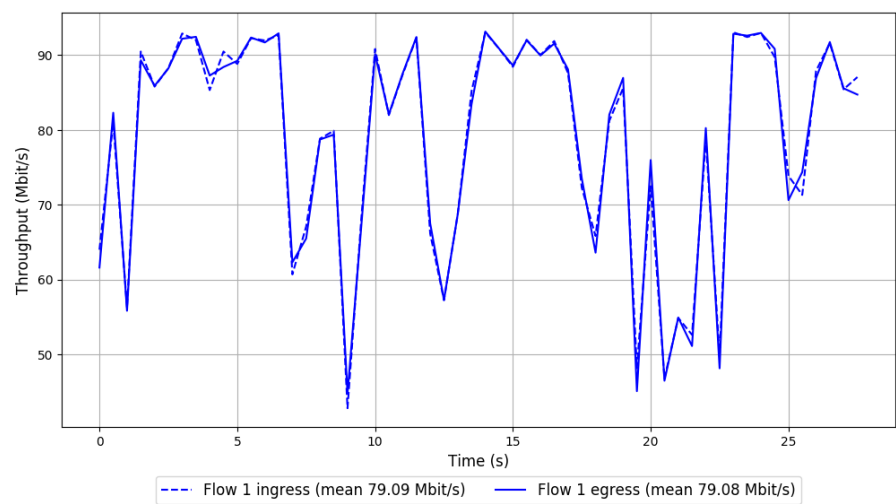
-- Flow 1:

Average throughput: 79.08 Mbit/s

95th percentile per-packet one-way delay: 16.314 ms

Loss rate: 0.11%

Run 10: Report of TaoVA-100x — Data Link



Run 1: Statistics of TCP Vegas

Start at: 2017-09-19 02:08:22

End at: 2017-09-19 02:08:52

Local clock offset: 1.21 ms

Remote clock offset: -3.144 ms

Below is generated by plot.py at 2017-09-19 05:03:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.54 Mbit/s

95th percentile per-packet one-way delay: 35.356 ms

Loss rate: 0.11%

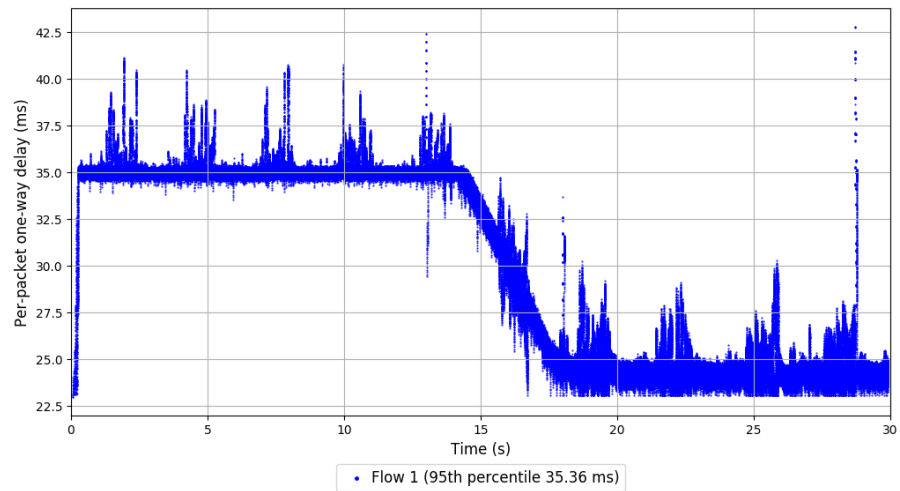
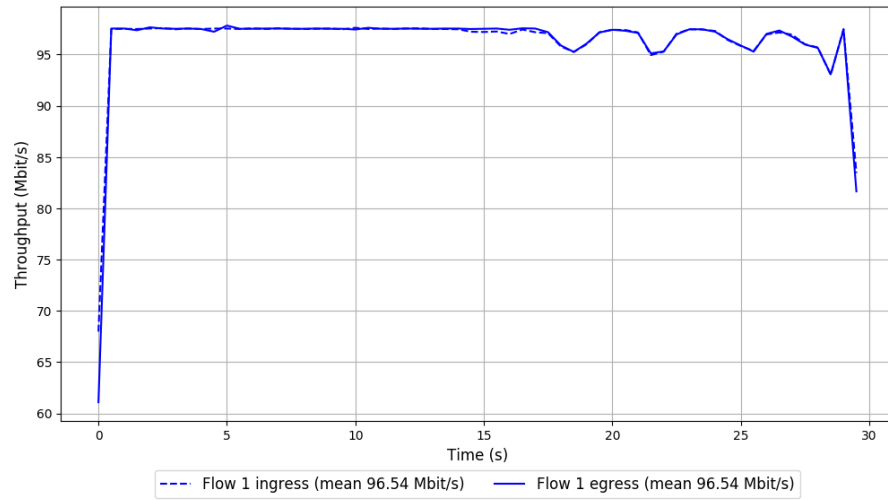
-- Flow 1:

Average throughput: 96.54 Mbit/s

95th percentile per-packet one-way delay: 35.356 ms

Loss rate: 0.11%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-09-19 02:22:48

End at: 2017-09-19 02:23:18

Local clock offset: 4.0 ms

Remote clock offset: -3.41 ms

Below is generated by plot.py at 2017-09-19 05:03:49

Datalink statistics

-- Total of 1 flow:

Average throughput: 91.64 Mbit/s

95th percentile per-packet one-way delay: 38.257 ms

Loss rate: 0.22%

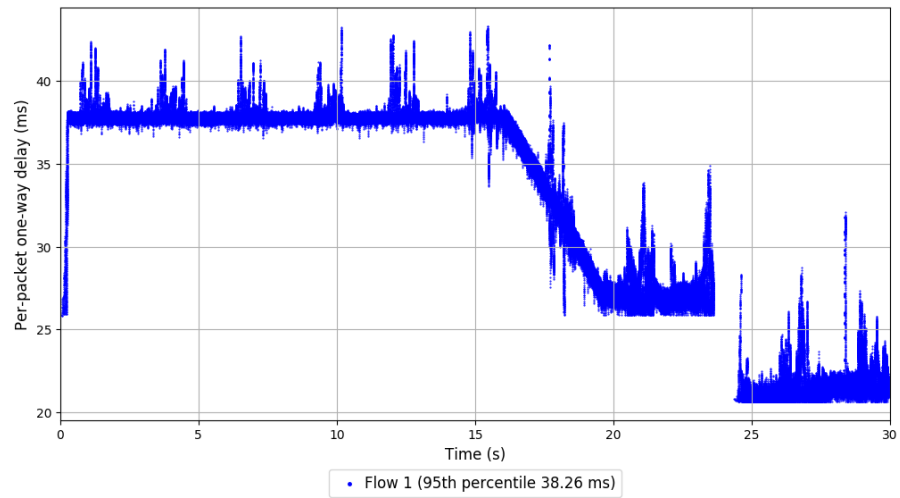
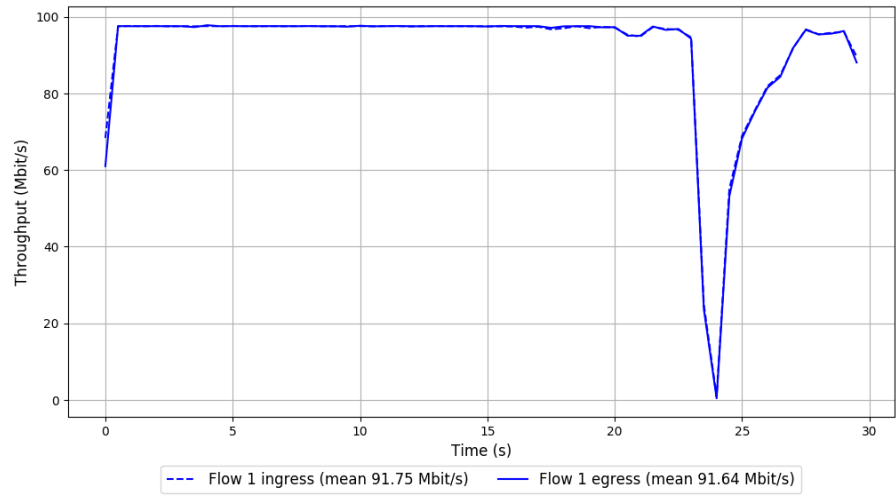
-- Flow 1:

Average throughput: 91.64 Mbit/s

95th percentile per-packet one-way delay: 38.257 ms

Loss rate: 0.22%

Run 2: Report of TCP Vegas — Data Link

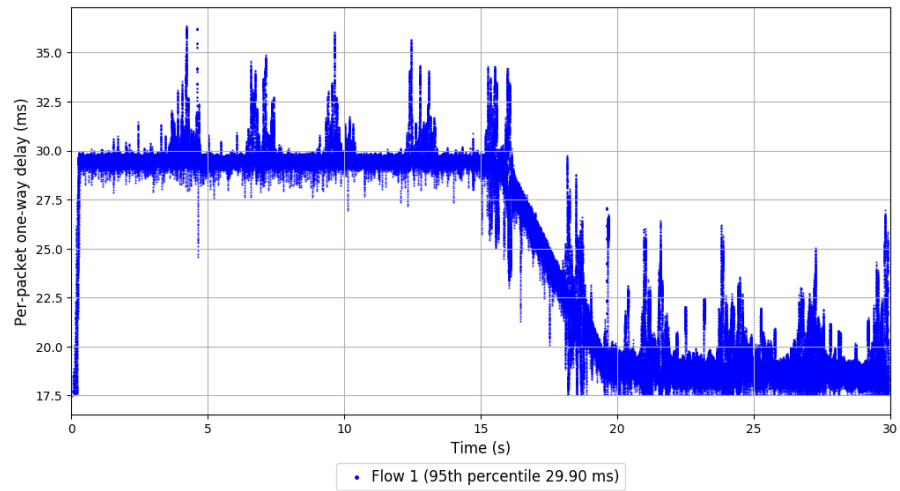
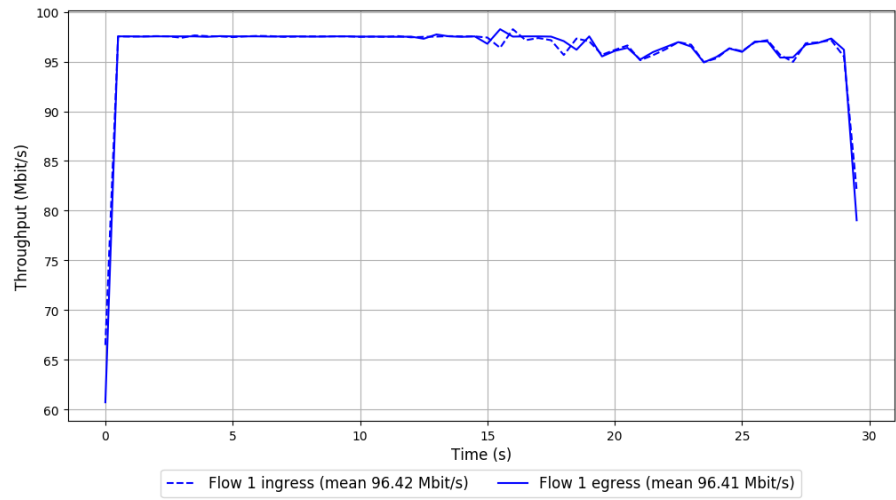


Run 3: Statistics of TCP Vegas

Start at: 2017-09-19 02:36:25
End at: 2017-09-19 02:36:55
Local clock offset: 0.434 ms
Remote clock offset: -3.458 ms

Below is generated by plot.py at 2017-09-19 05:03:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.41 Mbit/s
95th percentile per-packet one-way delay: 29.901 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 96.41 Mbit/s
95th percentile per-packet one-way delay: 29.901 ms
Loss rate: 0.10%

Run 3: Report of TCP Vegas — Data Link

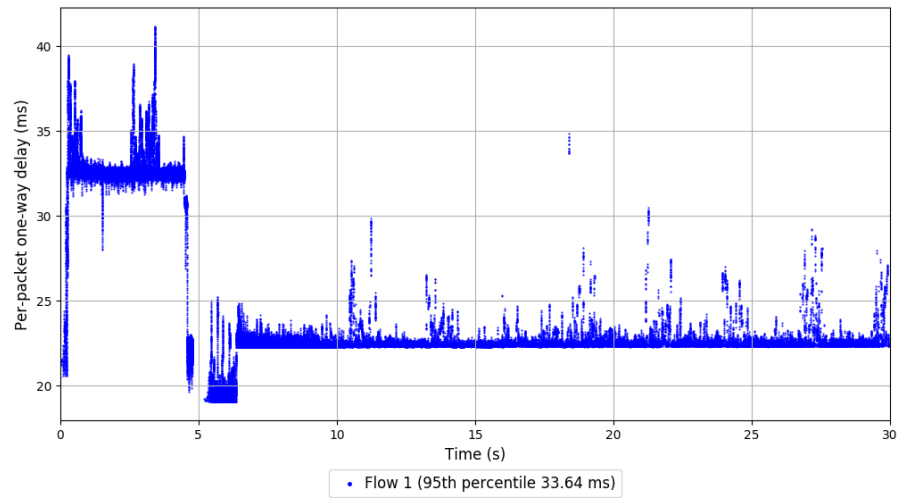
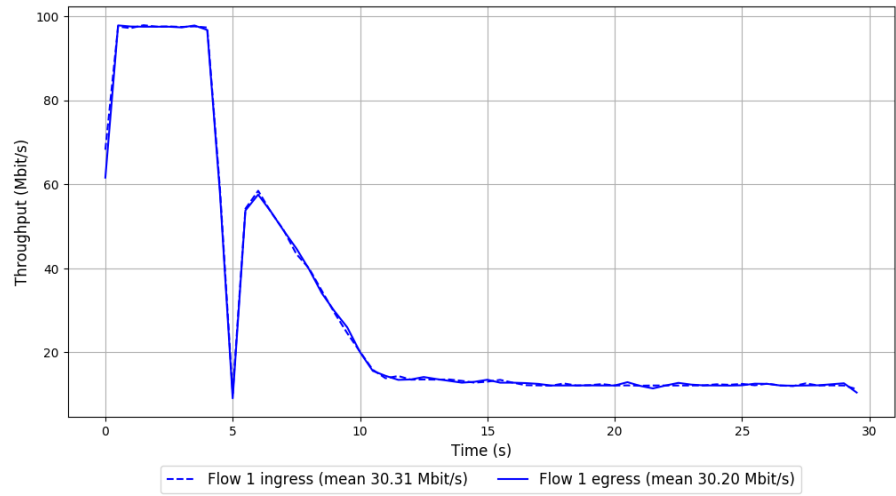


Run 4: Statistics of TCP Vegas

Start at: 2017-09-19 03:15:45
End at: 2017-09-19 03:16:15
Local clock offset: 1.754 ms
Remote clock offset: -5.576 ms

Below is generated by plot.py at 2017-09-19 05:03:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 30.20 Mbit/s
95th percentile per-packet one-way delay: 33.636 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 30.20 Mbit/s
95th percentile per-packet one-way delay: 33.636 ms
Loss rate: 0.49%

Run 4: Report of TCP Vegas — Data Link

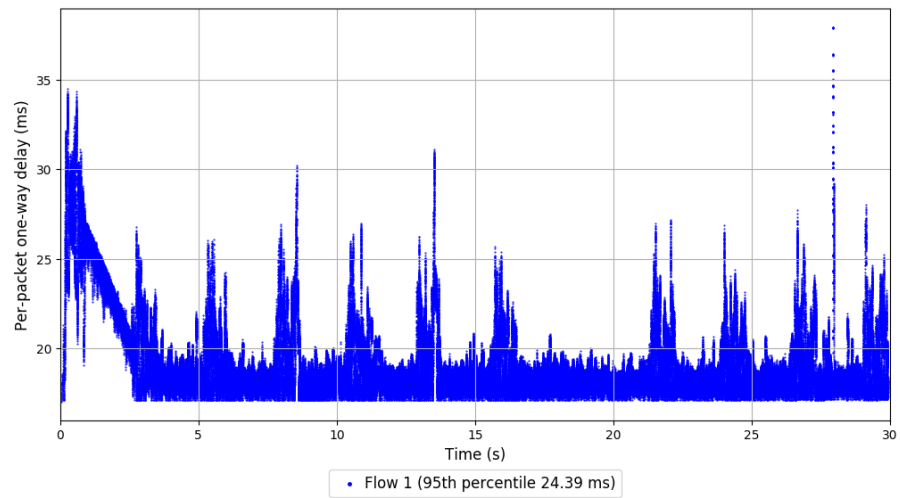
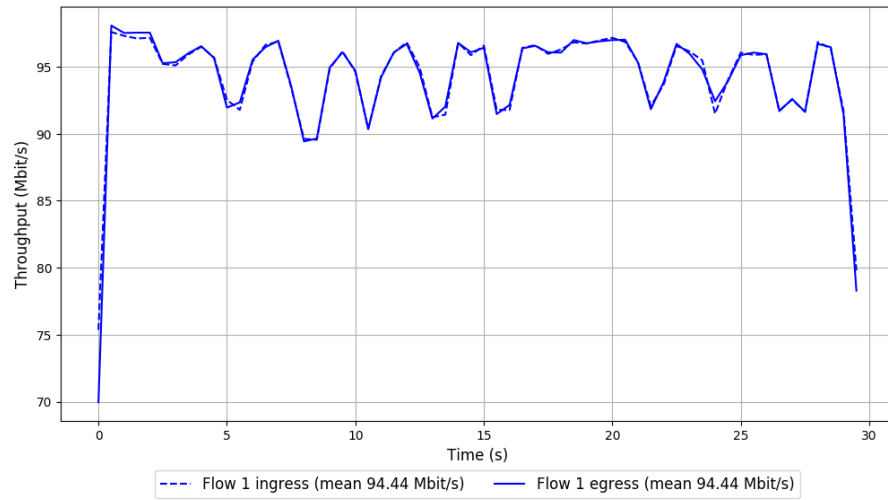


Run 5: Statistics of TCP Vegas

Start at: 2017-09-19 03:30:48
End at: 2017-09-19 03:31:18
Local clock offset: -0.124 ms
Remote clock offset: -3.181 ms

Below is generated by plot.py at 2017-09-19 05:03:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.44 Mbit/s
95th percentile per-packet one-way delay: 24.386 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.44 Mbit/s
95th percentile per-packet one-way delay: 24.386 ms
Loss rate: 0.09%

Run 5: Report of TCP Vegas — Data Link

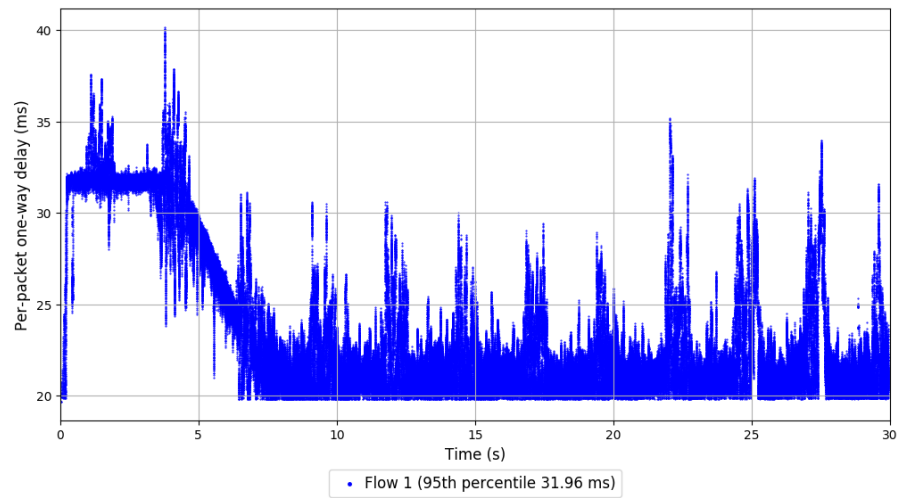
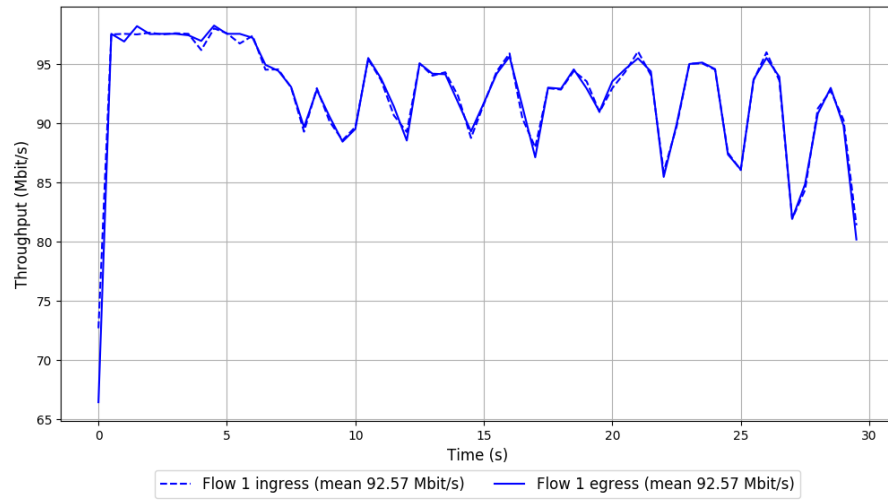


Run 6: Statistics of TCP Vegas

Start at: 2017-09-19 03:45:43
End at: 2017-09-19 03:46:13
Local clock offset: -0.411 ms
Remote clock offset: -4.202 ms

Below is generated by plot.py at 2017-09-19 05:03:49
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.57 Mbit/s
95th percentile per-packet one-way delay: 31.963 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 92.57 Mbit/s
95th percentile per-packet one-way delay: 31.963 ms
Loss rate: 0.10%

Run 6: Report of TCP Vegas — Data Link

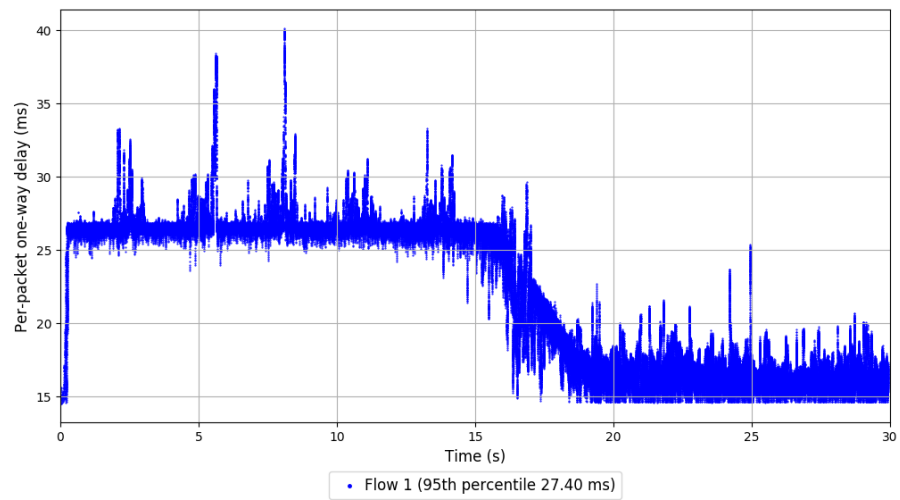
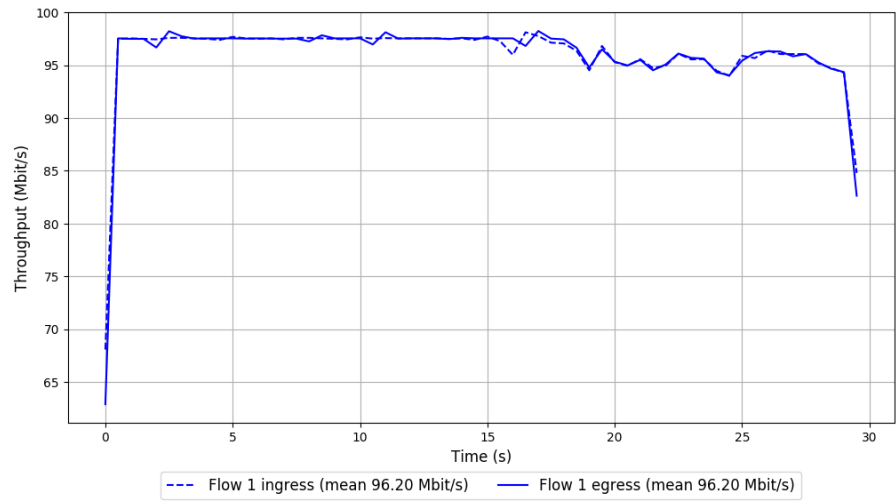


Run 7: Statistics of TCP Vegas

Start at: 2017-09-19 04:00:48
End at: 2017-09-19 04:01:18
Local clock offset: -3.133 ms
Remote clock offset: -2.26 ms

Below is generated by plot.py at 2017-09-19 05:03:50
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.20 Mbit/s
95th percentile per-packet one-way delay: 27.397 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.20 Mbit/s
95th percentile per-packet one-way delay: 27.397 ms
Loss rate: 0.09%

Run 7: Report of TCP Vegas — Data Link

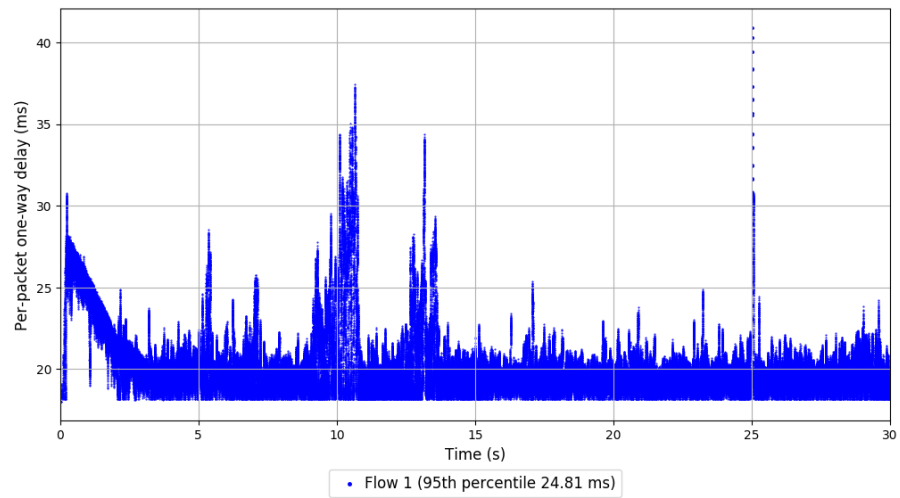
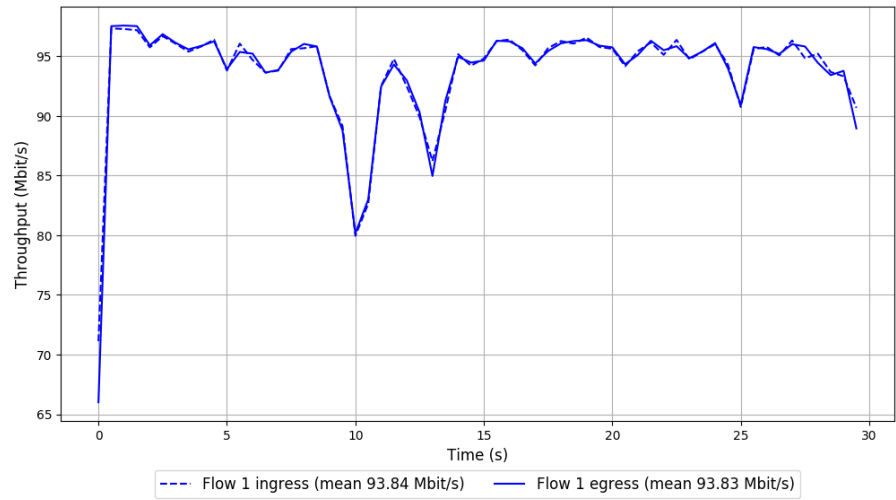


Run 8: Statistics of TCP Vegas

Start at: 2017-09-19 04:15:40
End at: 2017-09-19 04:16:10
Local clock offset: -2.129 ms
Remote clock offset: -2.828 ms

Below is generated by plot.py at 2017-09-19 05:04:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 93.83 Mbit/s
95th percentile per-packet one-way delay: 24.813 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 93.83 Mbit/s
95th percentile per-packet one-way delay: 24.813 ms
Loss rate: 0.09%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

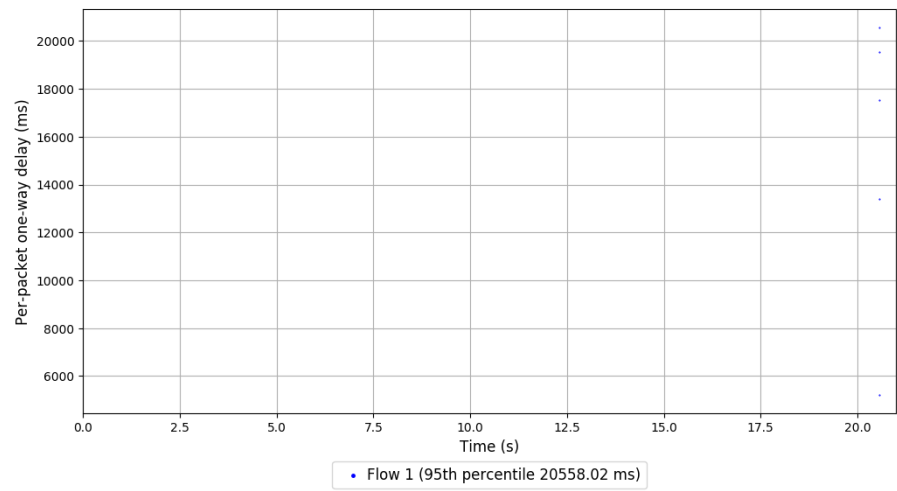
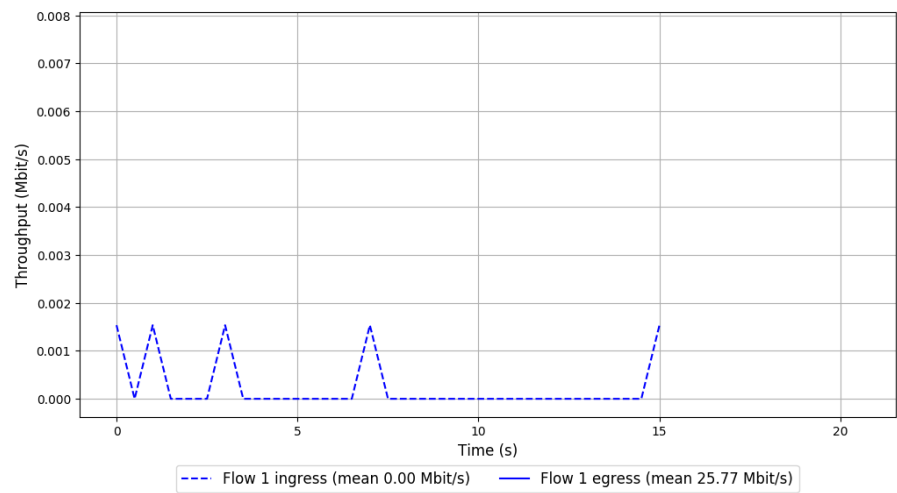
Start at: 2017-09-19 04:28:21

End at: 2017-09-19 04:28:51

Local clock offset: -2.292 ms

Remote clock offset: -2.97 ms

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-09-19 04:40:44

End at: 2017-09-19 04:41:14

Local clock offset: -3.349 ms

Remote clock offset: -2.422 ms

Below is generated by plot.py at 2017-09-19 05:04:32

Datalink statistics

-- Total of 1 flow:

Average throughput: 82.20 Mbit/s

95th percentile per-packet one-way delay: 22.155 ms

Loss rate: 0.10%

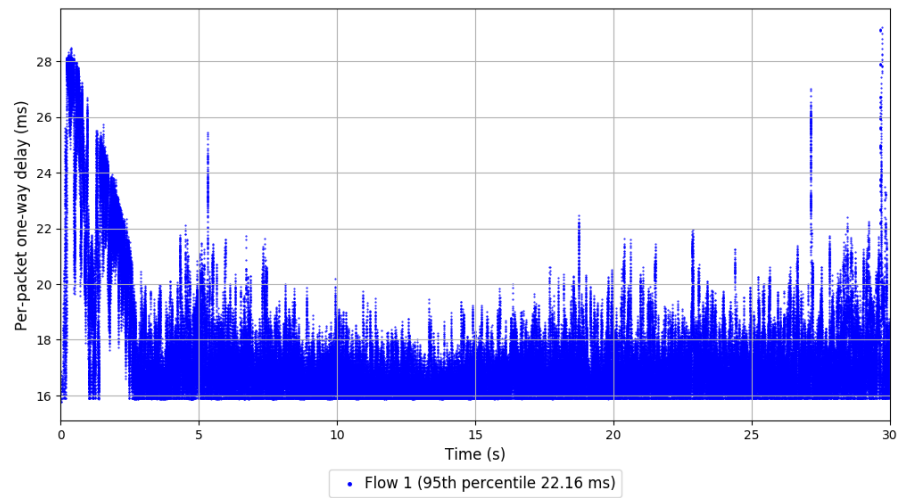
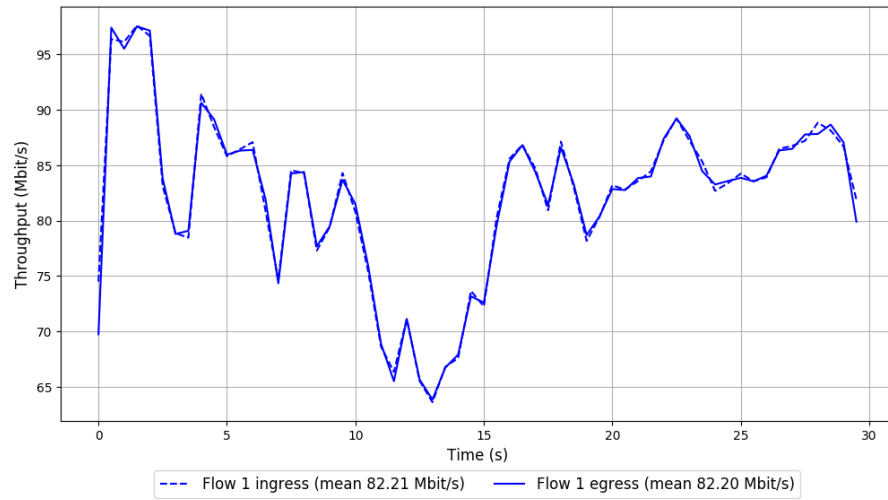
-- Flow 1:

Average throughput: 82.20 Mbit/s

95th percentile per-packet one-way delay: 22.155 ms

Loss rate: 0.10%

Run 10: Report of TCP Vegas — Data Link

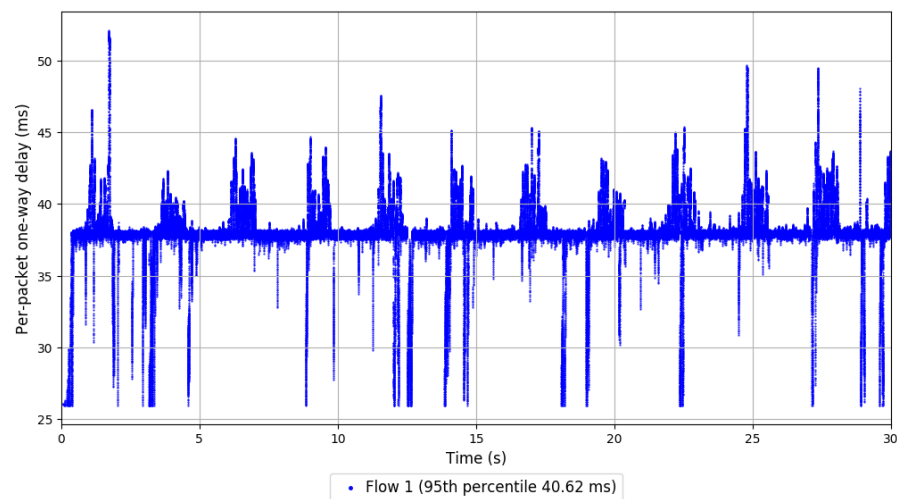
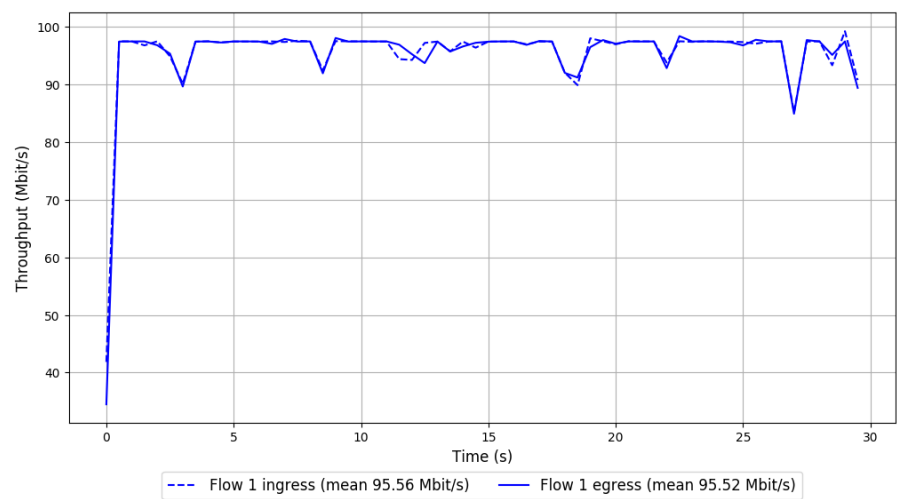


Run 1: Statistics of Verus

Start at: 2017-09-19 02:03:51
End at: 2017-09-19 02:04:21
Local clock offset: 3.761 ms
Remote clock offset: -3.436 ms

Below is generated by plot.py at 2017-09-19 05:04:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 40.620 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 40.620 ms
Loss rate: 0.15%

Run 1: Report of Verus — Data Link

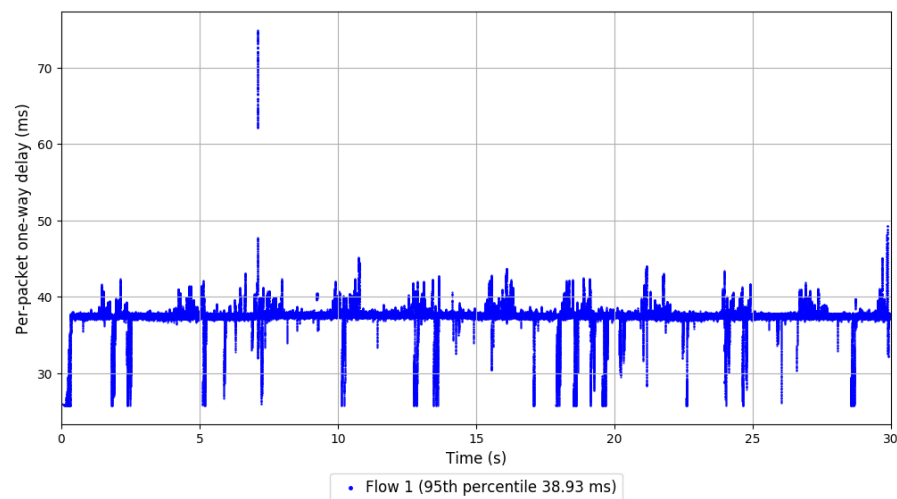
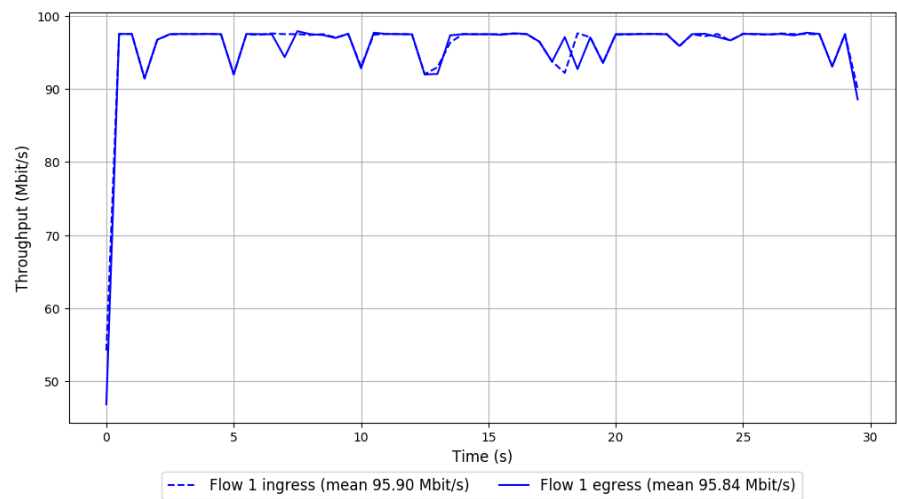


Run 2: Statistics of Verus

Start at: 2017-09-19 02:18:35
End at: 2017-09-19 02:19:06
Local clock offset: 3.086 ms
Remote clock offset: -4.118 ms

Below is generated by plot.py at 2017-09-19 05:04:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.84 Mbit/s
95th percentile per-packet one-way delay: 38.929 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 95.84 Mbit/s
95th percentile per-packet one-way delay: 38.929 ms
Loss rate: 0.20%

Run 2: Report of Verus — Data Link

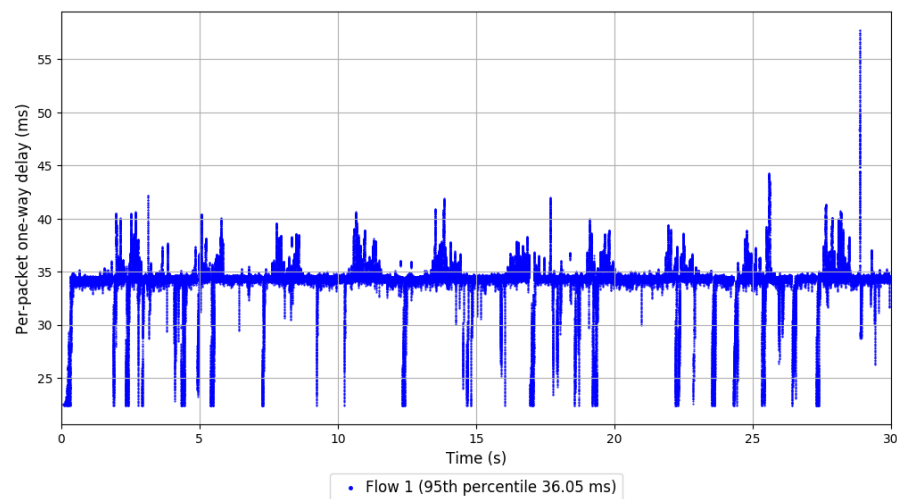
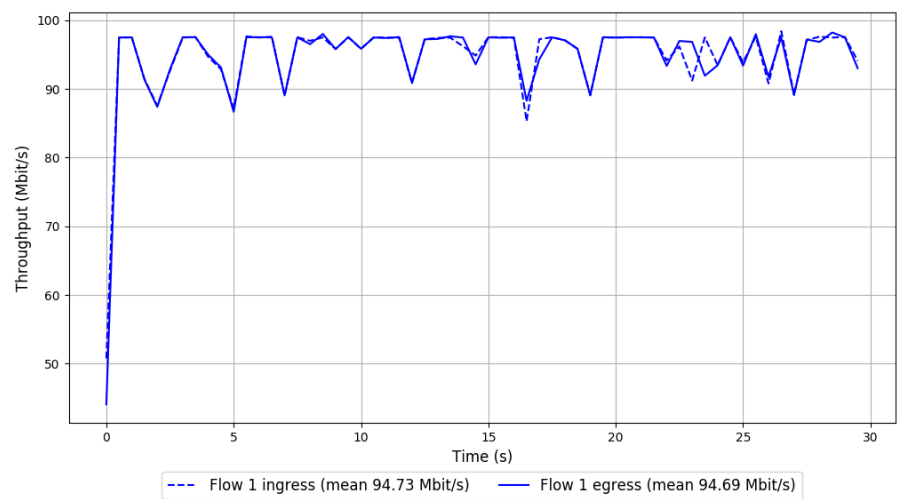


Run 3: Statistics of Verus

Start at: 2017-09-19 02:32:16
End at: 2017-09-19 02:32:46
Local clock offset: -0.613 ms
Remote clock offset: -9.498 ms

Below is generated by plot.py at 2017-09-19 05:04:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.69 Mbit/s
95th percentile per-packet one-way delay: 36.048 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 94.69 Mbit/s
95th percentile per-packet one-way delay: 36.048 ms
Loss rate: 0.14%

Run 3: Report of Verus — Data Link

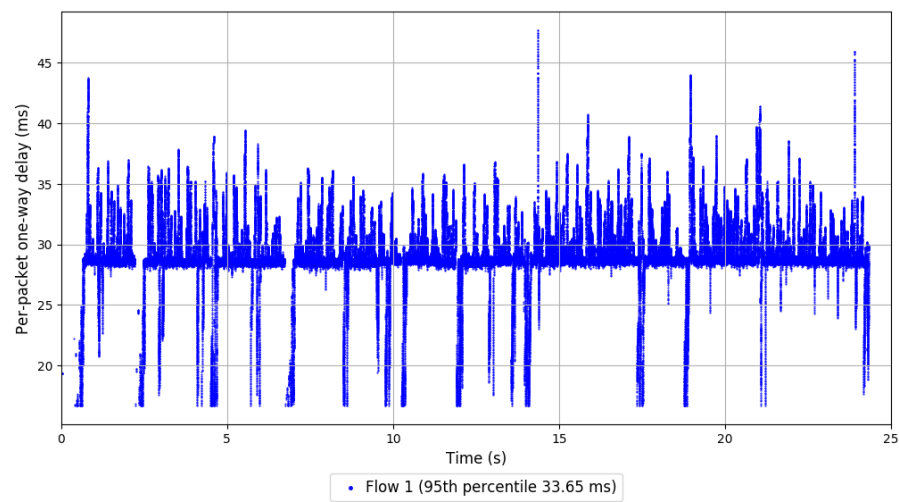
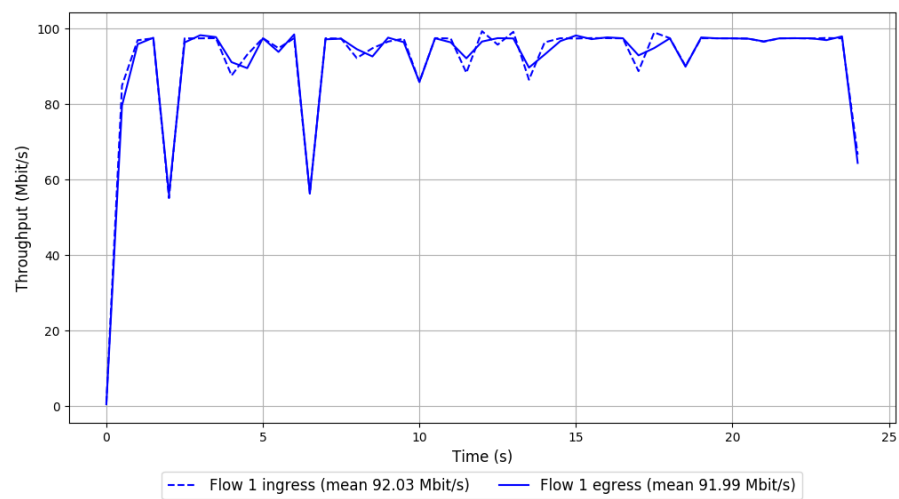


Run 4: Statistics of Verus

Start at: 2017-09-19 02:53:51
End at: 2017-09-19 02:54:21
Local clock offset: -0.941 ms
Remote clock offset: -3.555 ms

Below is generated by plot.py at 2017-09-19 05:04:48
Datalink statistics
-- Total of 1 flow:
Average throughput: 91.99 Mbit/s
95th percentile per-packet one-way delay: 33.648 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 91.99 Mbit/s
95th percentile per-packet one-way delay: 33.648 ms
Loss rate: 0.17%

Run 4: Report of Verus — Data Link

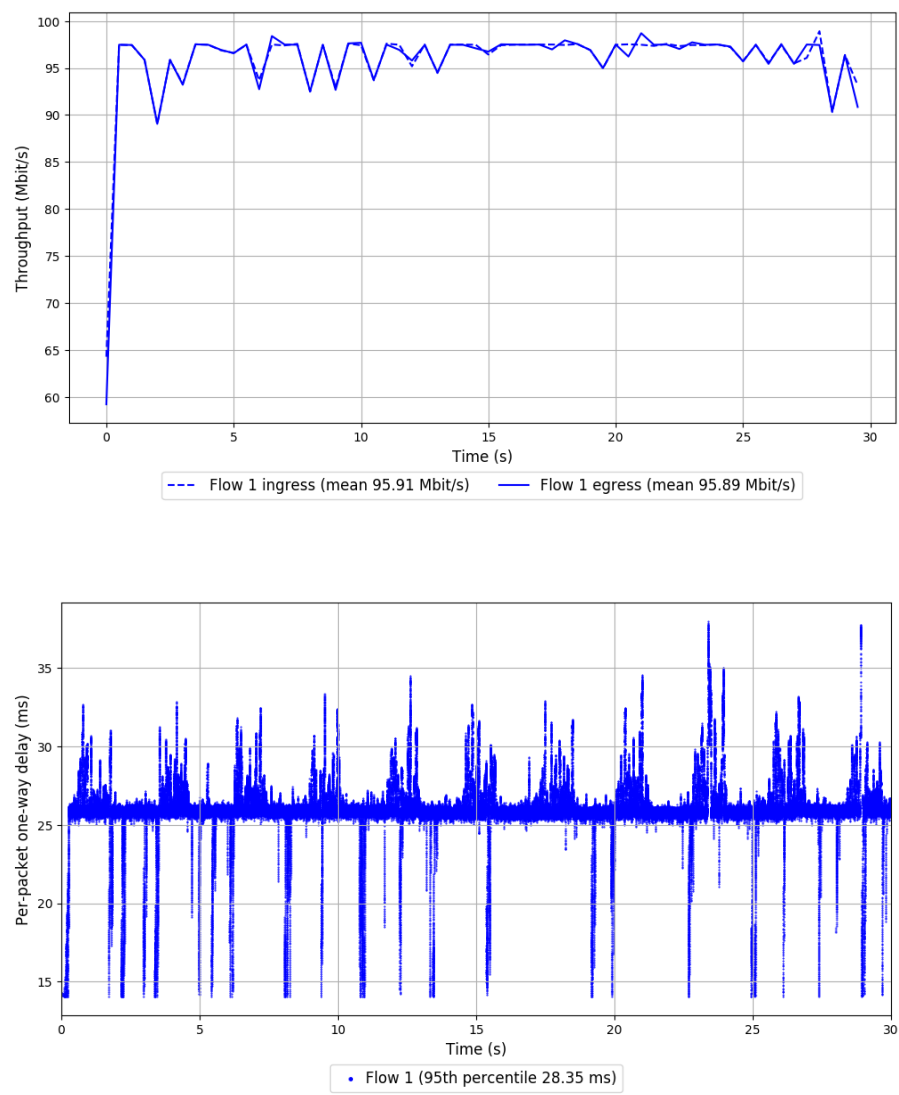


Run 5: Statistics of Verus

Start at: 2017-09-19 03:26:33
End at: 2017-09-19 03:27:03
Local clock offset: -2.463 ms
Remote clock offset: -2.658 ms

Below is generated by plot.py at 2017-09-19 05:05:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.89 Mbit/s
95th percentile per-packet one-way delay: 28.351 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 95.89 Mbit/s
95th percentile per-packet one-way delay: 28.351 ms
Loss rate: 0.13%

Run 5: Report of Verus — Data Link

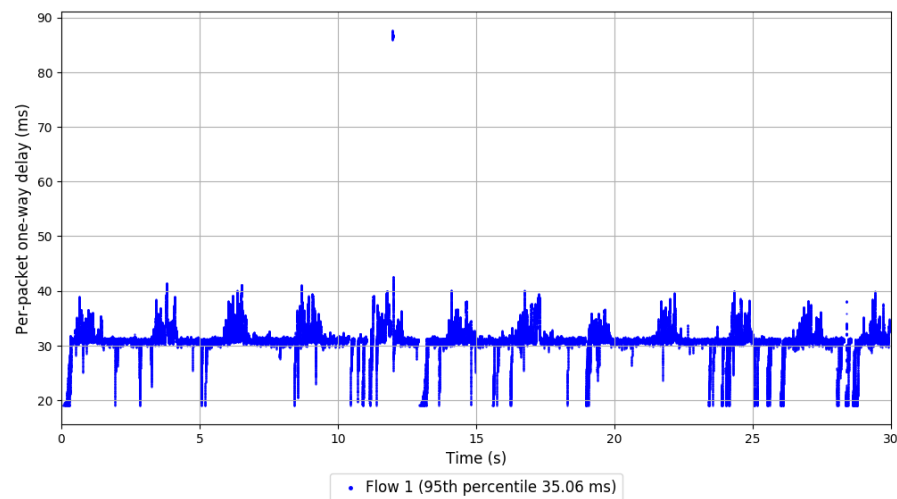
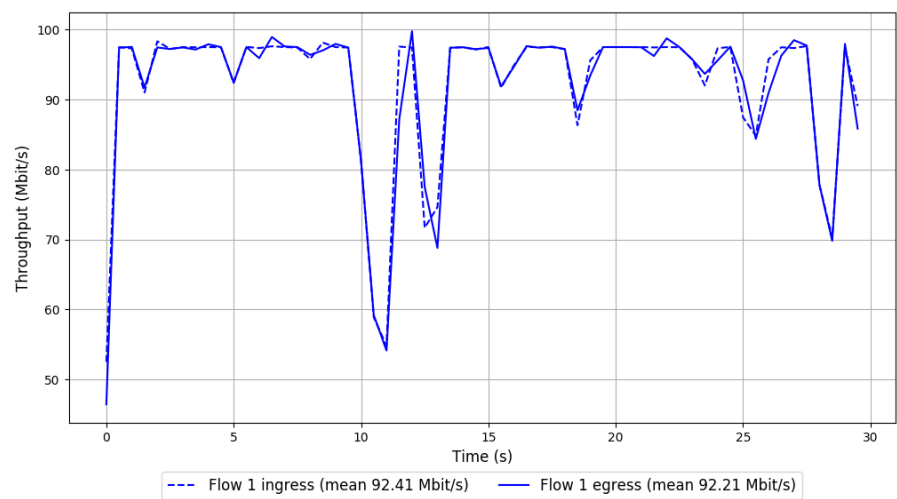


Run 6: Statistics of Verus

Start at: 2017-09-19 03:41:08
End at: 2017-09-19 03:41:38
Local clock offset: -0.098 ms
Remote clock offset: -3.274 ms

Below is generated by plot.py at 2017-09-19 05:05:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.21 Mbit/s
95th percentile per-packet one-way delay: 35.063 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 92.21 Mbit/s
95th percentile per-packet one-way delay: 35.063 ms
Loss rate: 0.32%

Run 6: Report of Verus — Data Link

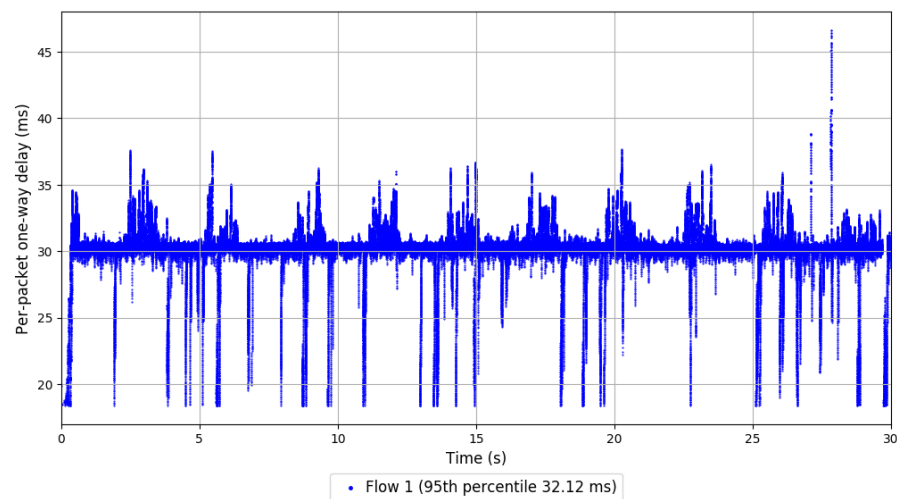
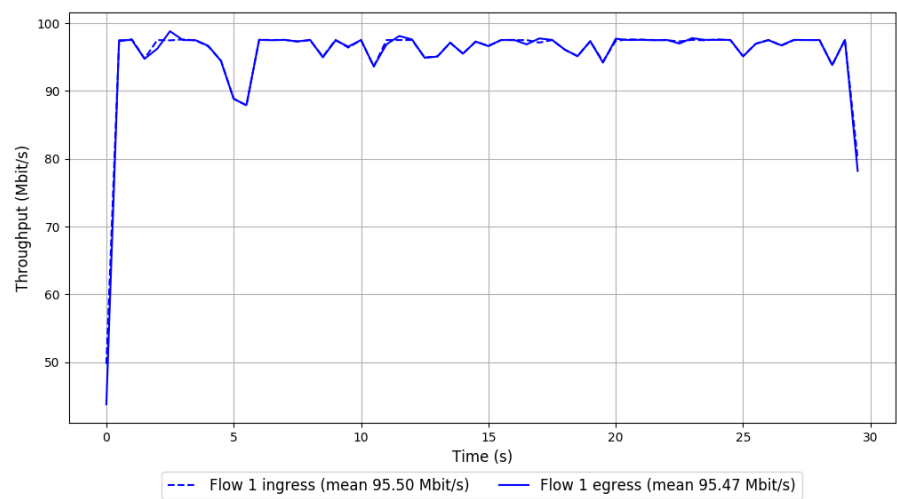


Run 7: Statistics of Verus

Start at: 2017-09-19 03:56:40
End at: 2017-09-19 03:57:10
Local clock offset: -0.757 ms
Remote clock offset: -2.602 ms

Below is generated by plot.py at 2017-09-19 05:05:28
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.47 Mbit/s
95th percentile per-packet one-way delay: 32.118 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 95.47 Mbit/s
95th percentile per-packet one-way delay: 32.118 ms
Loss rate: 0.13%

Run 7: Report of Verus — Data Link

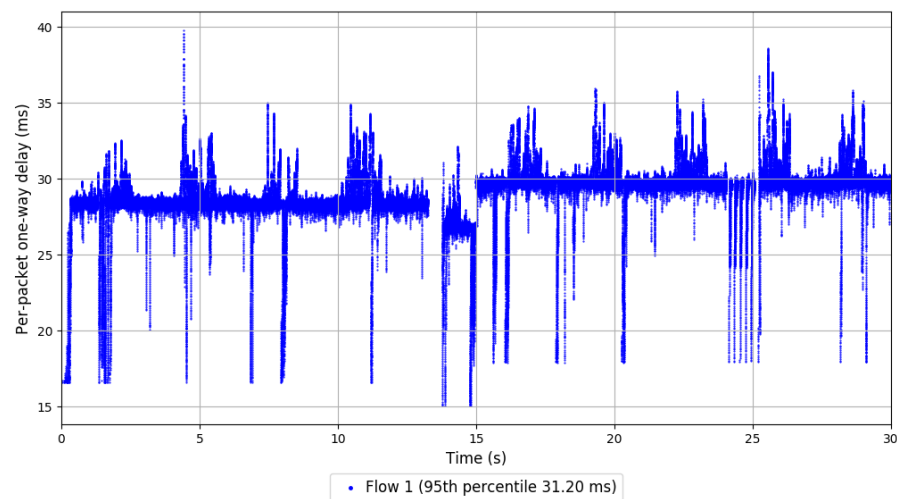
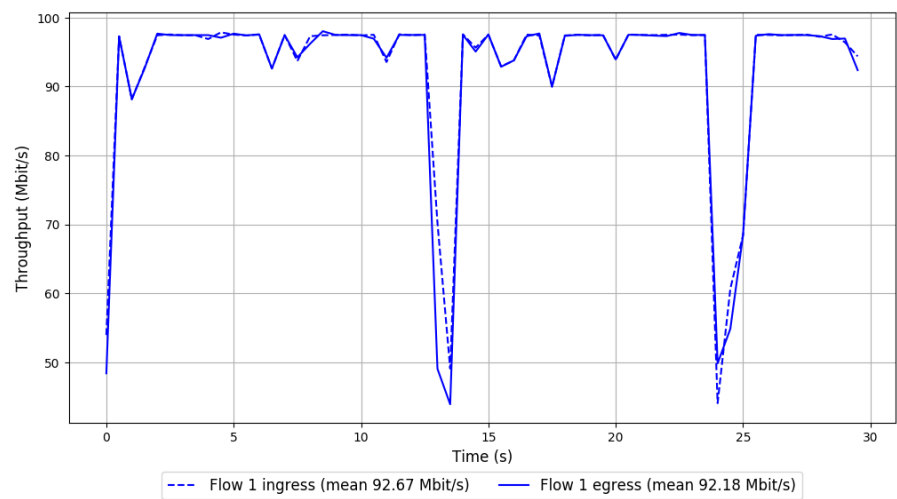


Run 8: Statistics of Verus

Start at: 2017-09-19 04:11:09
End at: 2017-09-19 04:11:39
Local clock offset: -1.372 ms
Remote clock offset: -2.036 ms

Below is generated by plot.py at 2017-09-19 05:05:29
Datalink statistics
-- Total of 1 flow:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 31.196 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 31.196 ms
Loss rate: 0.62%

Run 8: Report of Verus — Data Link

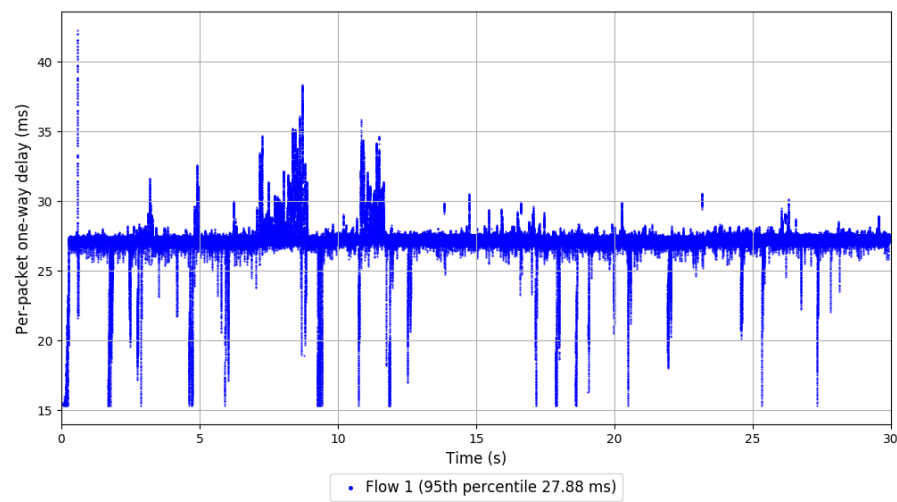
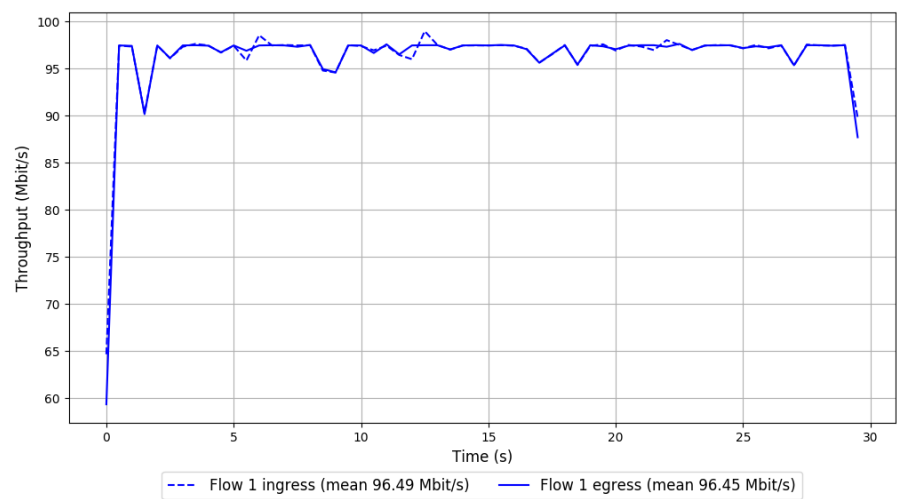


Run 9: Statistics of Verus

Start at: 2017-09-19 04:24:31
End at: 2017-09-19 04:25:01
Local clock offset: -4.355 ms
Remote clock offset: -3.208 ms

Below is generated by plot.py at 2017-09-19 05:05:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 96.45 Mbit/s
95th percentile per-packet one-way delay: 27.880 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 96.45 Mbit/s
95th percentile per-packet one-way delay: 27.880 ms
Loss rate: 0.13%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-09-19 04:36:55

End at: 2017-09-19 04:37:25

Local clock offset: -1.942 ms

Remote clock offset: -2.41 ms

Below is generated by plot.py at 2017-09-19 05:05:30

Datalink statistics

-- Total of 1 flow:

Average throughput: 96.13 Mbit/s

95th percentile per-packet one-way delay: 29.365 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 96.13 Mbit/s

95th percentile per-packet one-way delay: 29.365 ms

Loss rate: 0.13%

Run 10: Report of Verus — Data Link

