

Pantheon Report

Generated at 2018-11-30 15:18:13 (UTC).

Data path: Saudi Arabia on `enp2s0` (*remote*) → AWS India 2 on `ens5` (*local*).

Repeated the test of 19 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

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

System info:

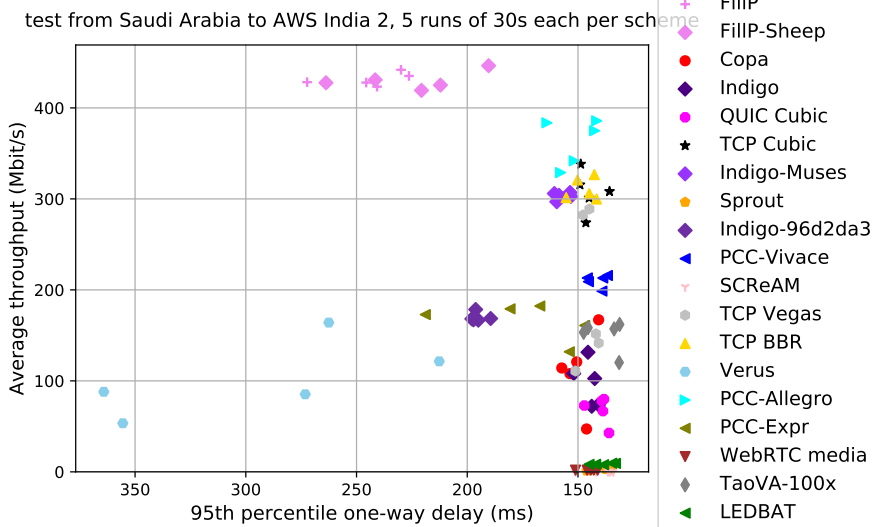
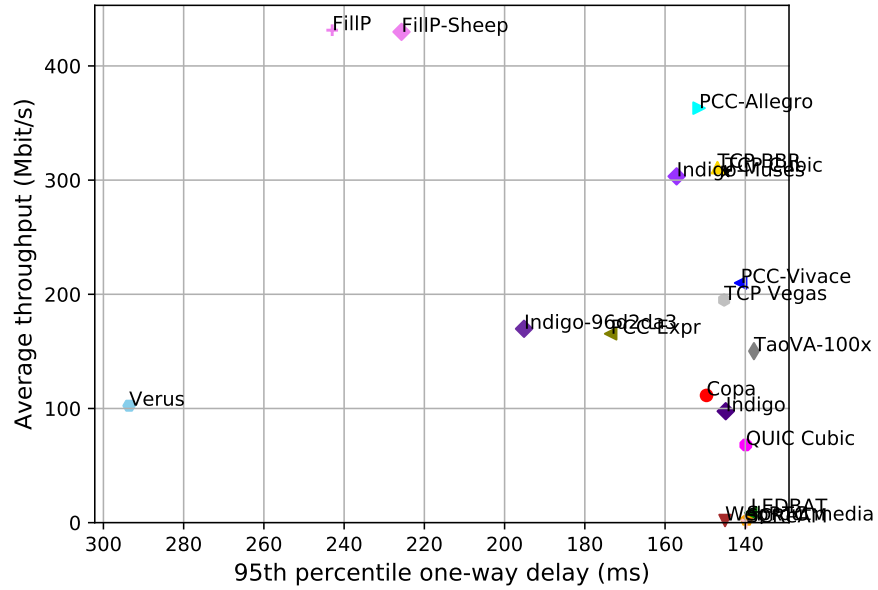
```
Linux 4.15.0-1023-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ 7b6dad87cde3ab65f7c4052140eb54098aa58e9d
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from Saudi Arabia to AWS India 2, 5 runs of 30s each per scheme
(mean of all runs by scheme)



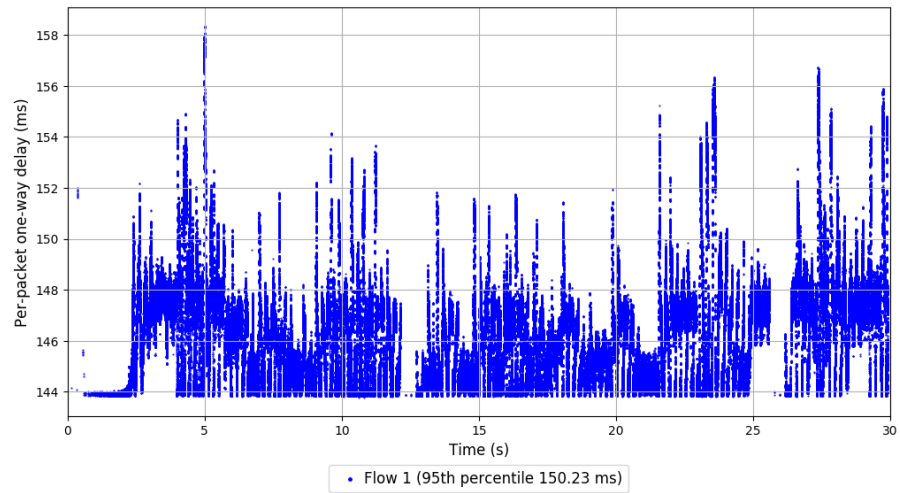
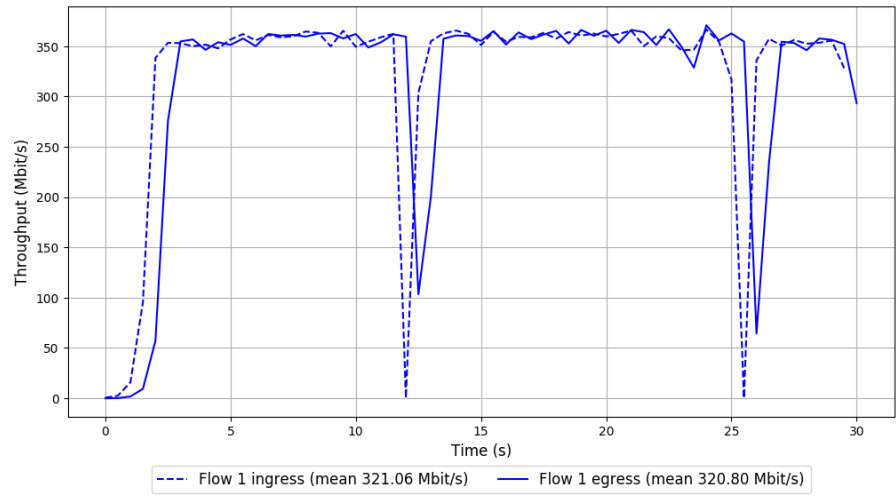
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	310.91	146.94	0.75
Copa	5	111.45	149.66	0.67
TCP Cubic	5	307.39	145.01	0.77
FillP	5	431.31	242.97	0.87
FillP-Sheep	5	429.84	225.70	0.88
Indigo	5	97.59	144.88	0.76
Indigo-96d2da3	5	169.80	195.15	0.76
LEDBAT	5	8.64	138.65	1.35
Indigo-Muses	5	303.29	157.13	0.80
PCC-Allegro	5	363.03	151.52	1.00
PCC-Expr	5	165.43	173.56	0.71
QUIC Cubic	5	68.06	139.87	0.70
SCReAM	5	0.22	139.81	0.67
Sprout	5	2.33	139.68	0.62
TaoVA-100x	5	150.21	137.85	0.66
TCP Vegas	5	195.02	145.27	0.60
Verus	5	102.43	293.60	1.09
PCC-Vivace	5	209.94	141.17	0.75
WebRTC media	5	1.88	145.05	0.78

Run 1: Statistics of TCP BBR

Start at: 2018-11-30 11:13:59
End at: 2018-11-30 11:14:29
Local clock offset: 1.104 ms
Remote clock offset: -47.198 ms

Below is generated by plot.py at 2018-11-30 14:52:47
Datalink statistics
-- Total of 1 flow:
Average throughput: 320.80 Mbit/s
95th percentile per-packet one-way delay: 150.230 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 320.80 Mbit/s
95th percentile per-packet one-way delay: 150.230 ms
Loss rate: 0.74%

Run 1: Report of TCP BBR — Data Link

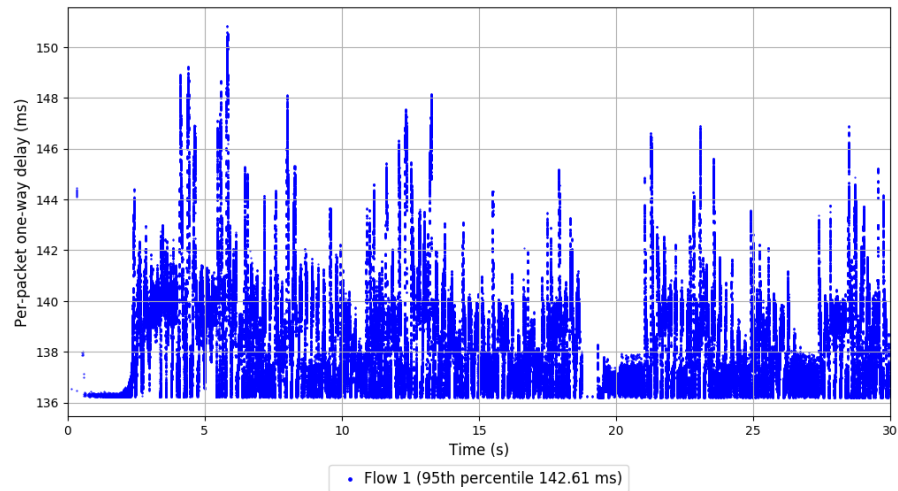
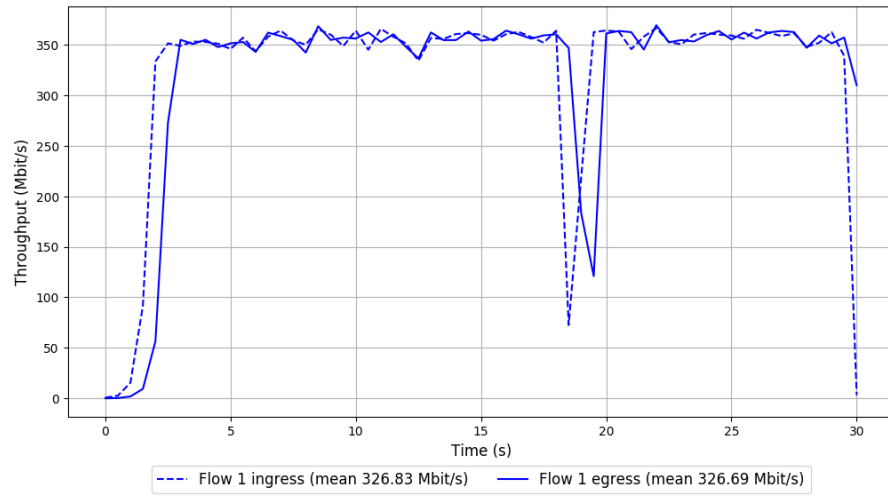


Run 2: Statistics of TCP BBR

Start at: 2018-11-30 11:59:49
End at: 2018-11-30 12:00:19
Local clock offset: 1.535 ms
Remote clock offset: -41.151 ms

Below is generated by plot.py at 2018-11-30 14:52:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 326.69 Mbit/s
95th percentile per-packet one-way delay: 142.612 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 326.69 Mbit/s
95th percentile per-packet one-way delay: 142.612 ms
Loss rate: 0.70%

Run 2: Report of TCP BBR — Data Link

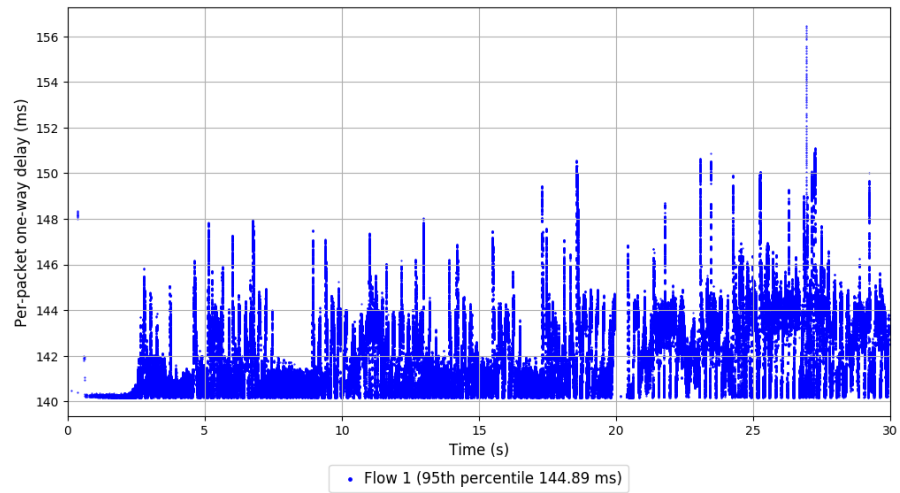
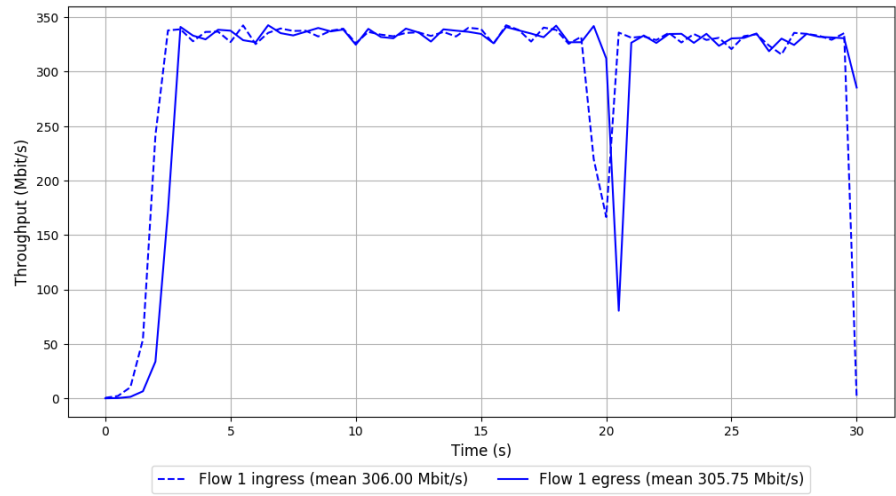


Run 3: Statistics of TCP BBR

Start at: 2018-11-30 12:46:24
End at: 2018-11-30 12:46:54
Local clock offset: 1.585 ms
Remote clock offset: -39.534 ms

Below is generated by plot.py at 2018-11-30 14:52:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 305.75 Mbit/s
95th percentile per-packet one-way delay: 144.886 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 305.75 Mbit/s
95th percentile per-packet one-way delay: 144.886 ms
Loss rate: 0.78%

Run 3: Report of TCP BBR — Data Link

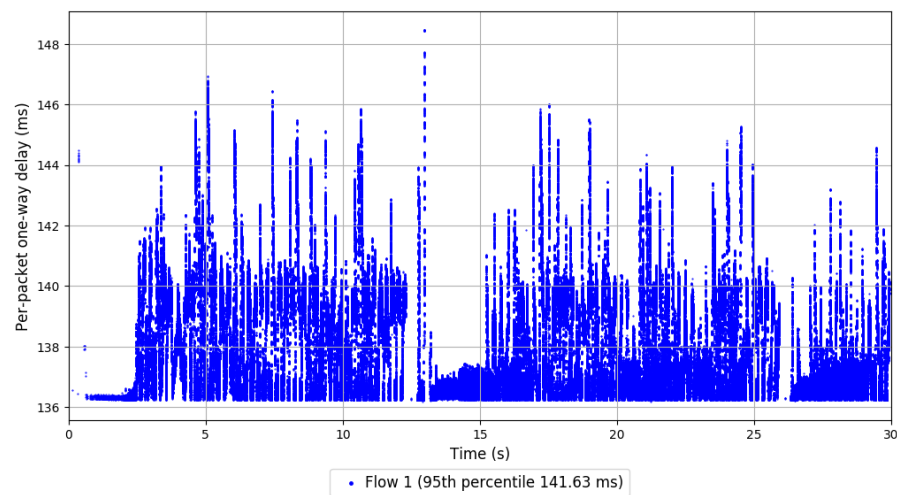
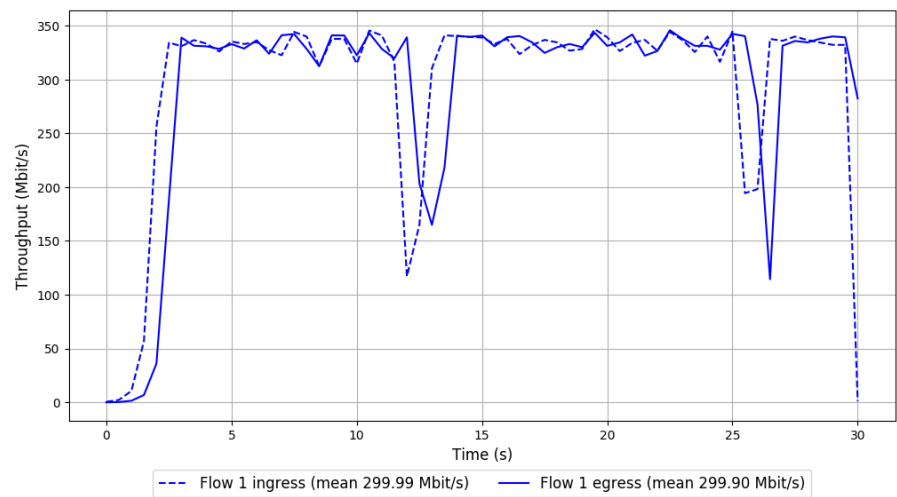


Run 4: Statistics of TCP BBR

Start at: 2018-11-30 13:44:07
End at: 2018-11-30 13:44:37
Local clock offset: -0.41 ms
Remote clock offset: -33.865 ms

Below is generated by plot.py at 2018-11-30 14:52:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 299.90 Mbit/s
95th percentile per-packet one-way delay: 141.632 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 299.90 Mbit/s
95th percentile per-packet one-way delay: 141.632 ms
Loss rate: 0.74%

Run 4: Report of TCP BBR — Data Link

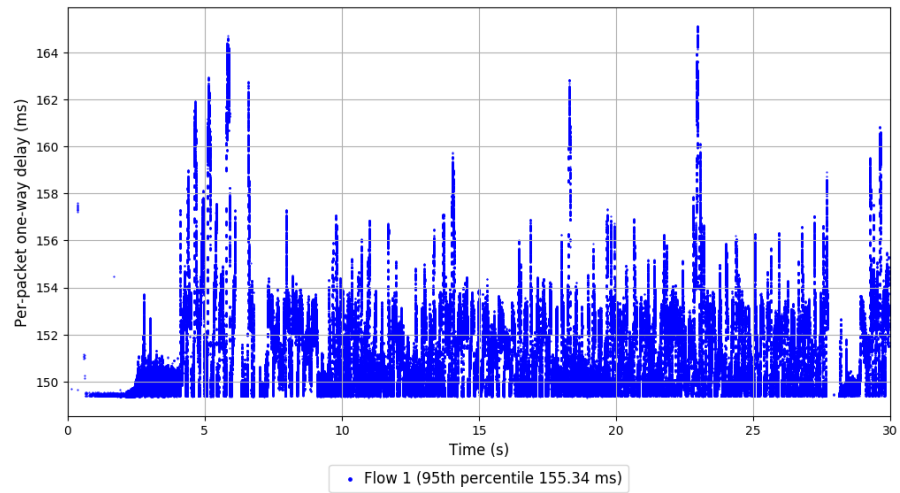
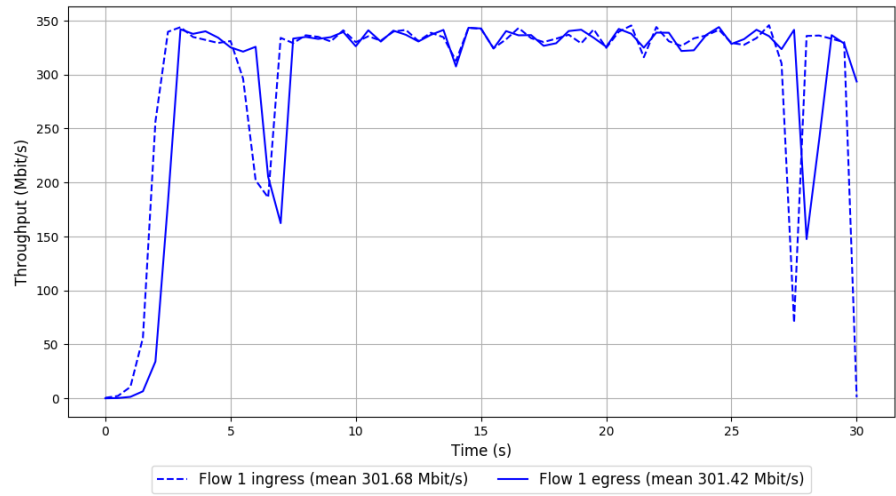


Run 5: Statistics of TCP BBR

Start at: 2018-11-30 14:24:27
End at: 2018-11-30 14:24:57
Local clock offset: 1.675 ms
Remote clock offset: -44.705 ms

Below is generated by plot.py at 2018-11-30 14:52:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 301.42 Mbit/s
95th percentile per-packet one-way delay: 155.340 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 301.42 Mbit/s
95th percentile per-packet one-way delay: 155.340 ms
Loss rate: 0.79%

Run 5: Report of TCP BBR — Data Link

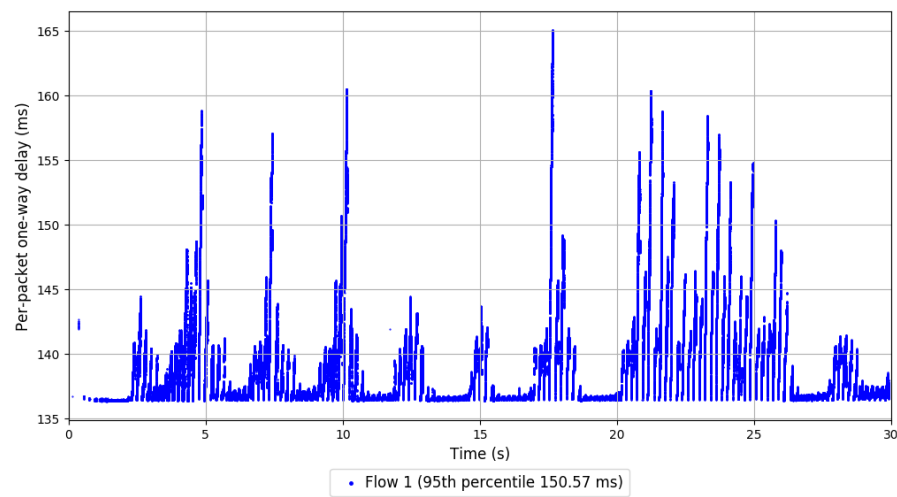
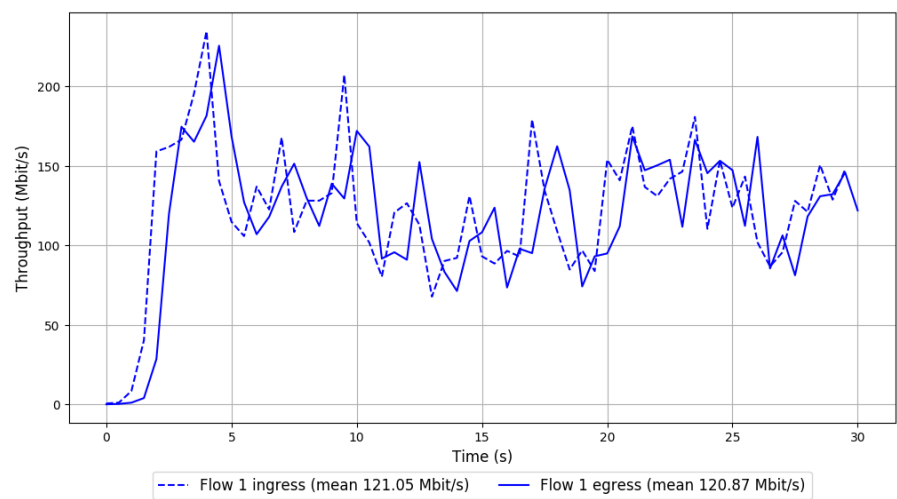


Run 1: Statistics of Copa

Start at: 2018-11-30 11:27:42
End at: 2018-11-30 11:28:12
Local clock offset: 0.831 ms
Remote clock offset: -41.496 ms

Below is generated by plot.py at 2018-11-30 14:52:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 120.87 Mbit/s
95th percentile per-packet one-way delay: 150.570 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 120.87 Mbit/s
95th percentile per-packet one-way delay: 150.570 ms
Loss rate: 0.79%

Run 1: Report of Copa — Data Link

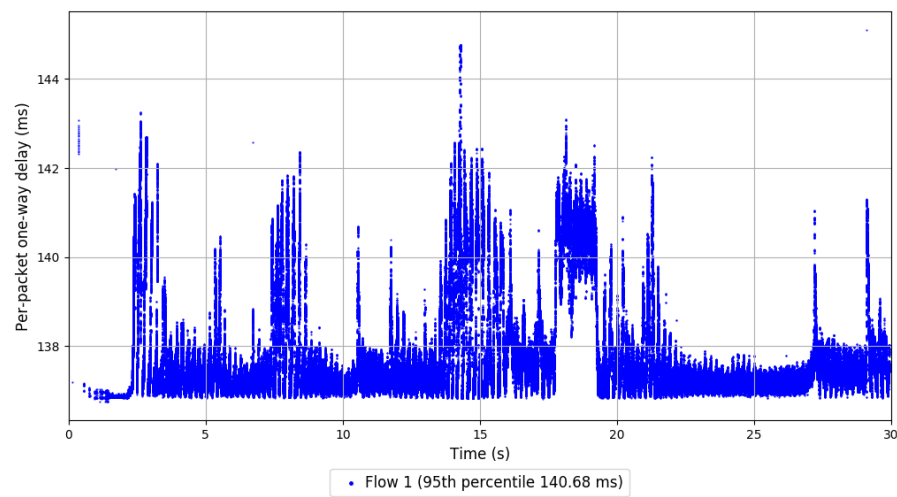
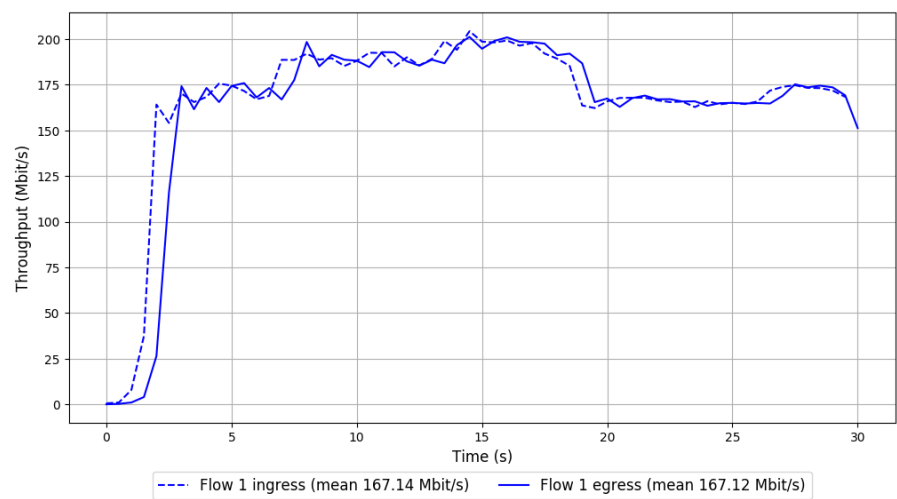


Run 2: Statistics of Copa

Start at: 2018-11-30 12:13:33
End at: 2018-11-30 12:14:03
Local clock offset: 1.315 ms
Remote clock offset: -41.307 ms

Below is generated by plot.py at 2018-11-30 14:52:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 167.12 Mbit/s
95th percentile per-packet one-way delay: 140.677 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 167.12 Mbit/s
95th percentile per-packet one-way delay: 140.677 ms
Loss rate: 0.66%

Run 2: Report of Copa — Data Link

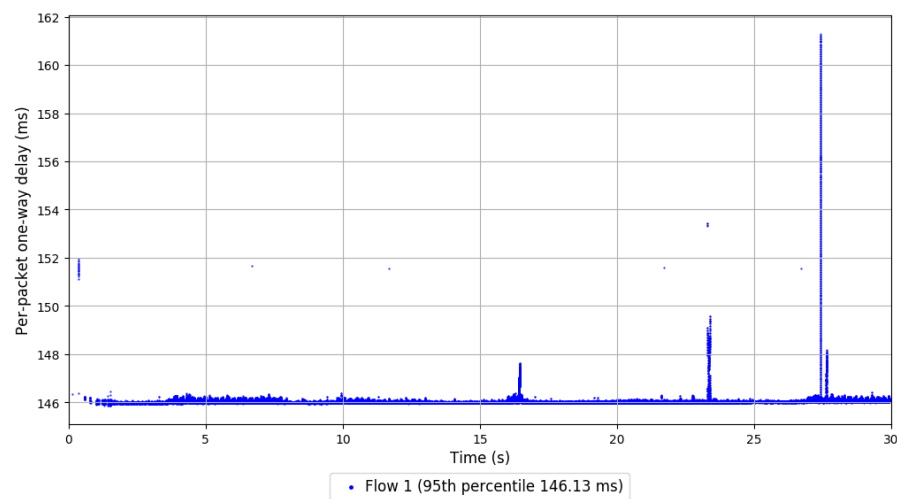
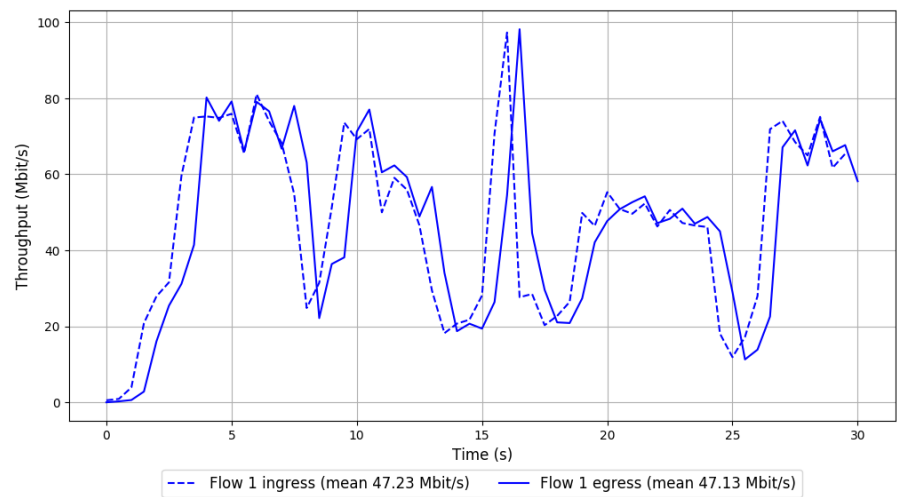


Run 3: Statistics of Copa

Start at: 2018-11-30 13:00:30
End at: 2018-11-30 13:01:00
Local clock offset: 1.905 ms
Remote clock offset: -41.0 ms

Below is generated by plot.py at 2018-11-30 14:52:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 47.13 Mbit/s
95th percentile per-packet one-way delay: 146.135 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 47.13 Mbit/s
95th percentile per-packet one-way delay: 146.135 ms
Loss rate: 0.91%

Run 3: Report of Copa — Data Link

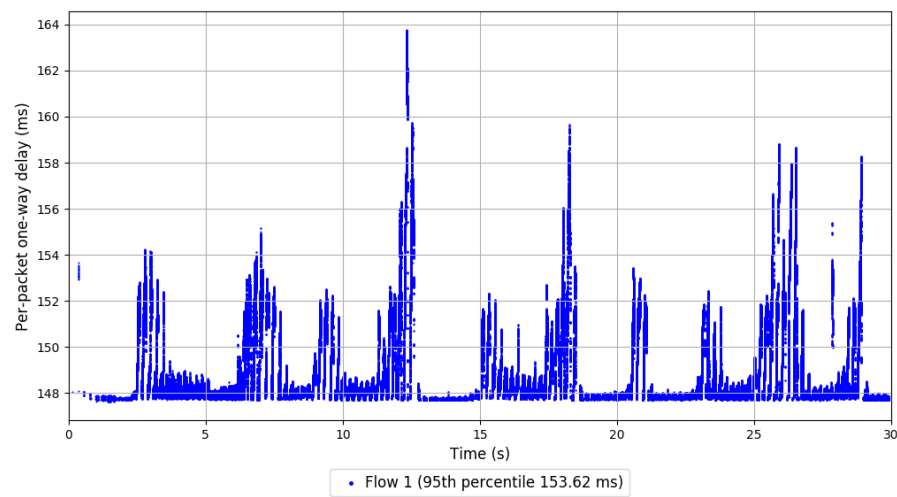
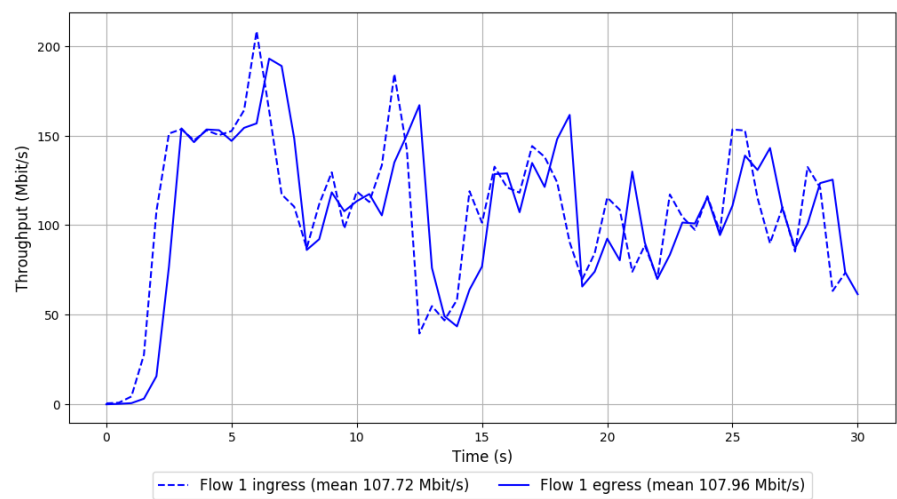


Run 4: Statistics of Copa

Start at: 2018-11-30 13:52:23
End at: 2018-11-30 13:52:53
Local clock offset: 2.728 ms
Remote clock offset: -42.647 ms

Below is generated by plot.py at 2018-11-30 14:52:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 107.96 Mbit/s
95th percentile per-packet one-way delay: 153.621 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 107.96 Mbit/s
95th percentile per-packet one-way delay: 153.621 ms
Loss rate: 0.48%

Run 4: Report of Copa — Data Link

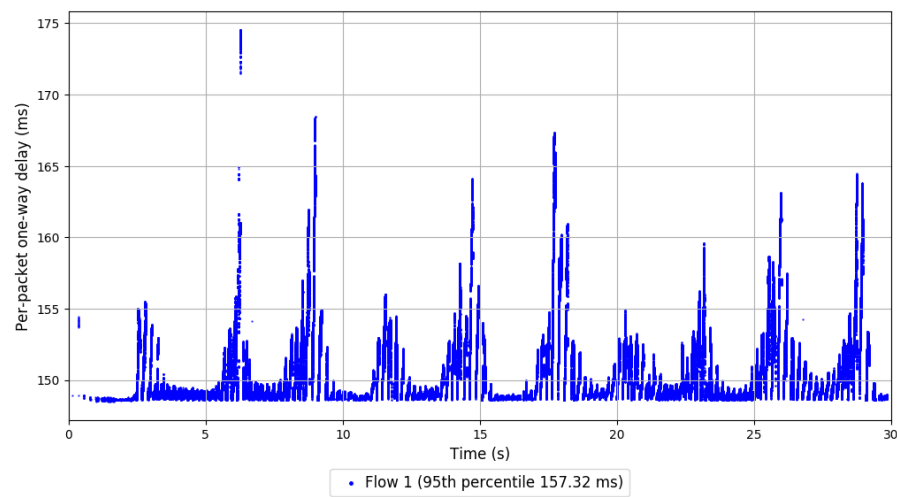
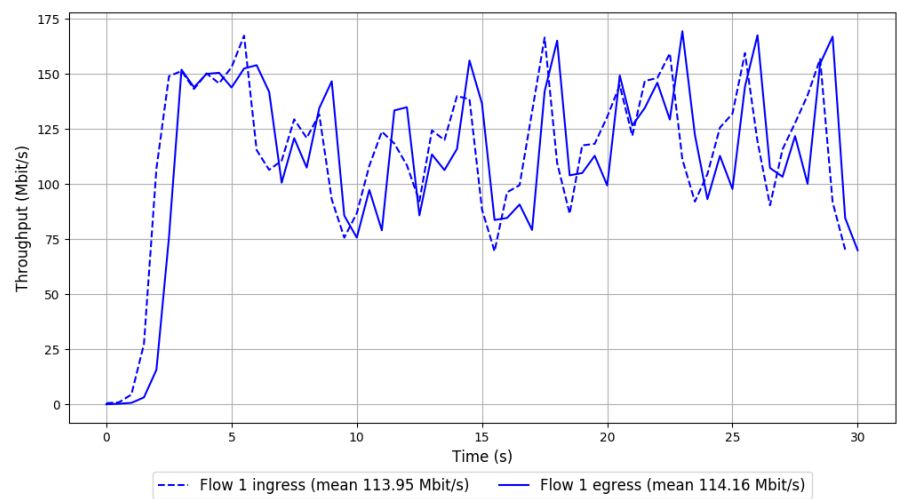


Run 5: Statistics of Copa

Start at: 2018-11-30 14:32:43
End at: 2018-11-30 14:33:13
Local clock offset: 0.858 ms
Remote clock offset: -44.28 ms

Below is generated by plot.py at 2018-11-30 14:54:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 114.16 Mbit/s
95th percentile per-packet one-way delay: 157.321 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 114.16 Mbit/s
95th percentile per-packet one-way delay: 157.321 ms
Loss rate: 0.52%

Run 5: Report of Copa — Data Link

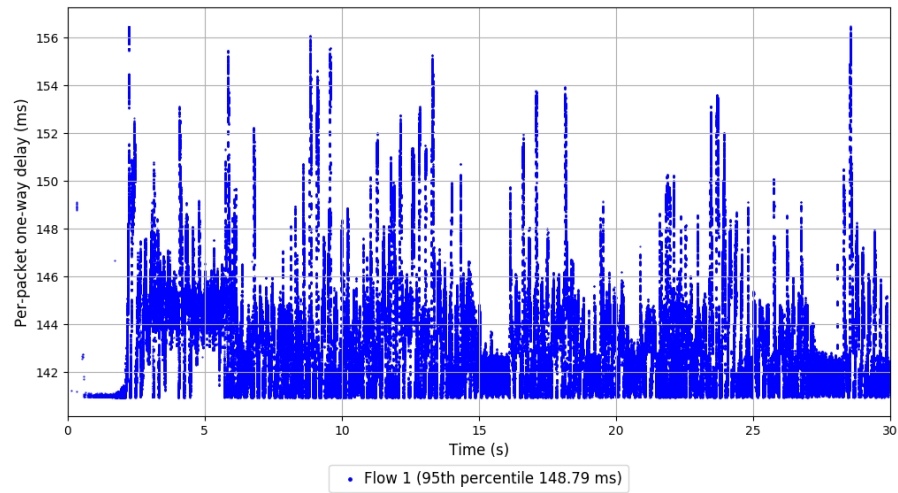
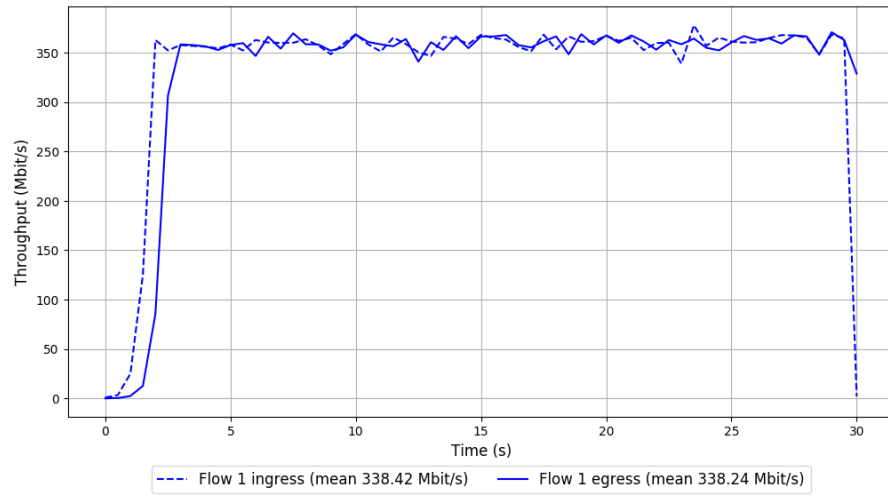


Run 1: Statistics of TCP Cubic

Start at: 2018-11-30 11:44:08
End at: 2018-11-30 11:44:38
Local clock offset: -0.26 ms
Remote clock offset: -46.708 ms

Below is generated by plot.py at 2018-11-30 14:56:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 338.24 Mbit/s
95th percentile per-packet one-way delay: 148.791 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 338.24 Mbit/s
95th percentile per-packet one-way delay: 148.791 ms
Loss rate: 0.70%

Run 1: Report of TCP Cubic — Data Link

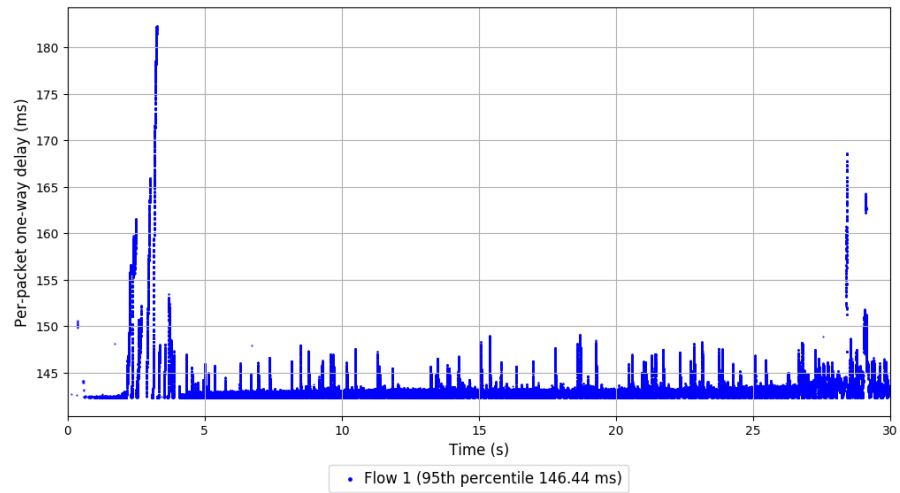
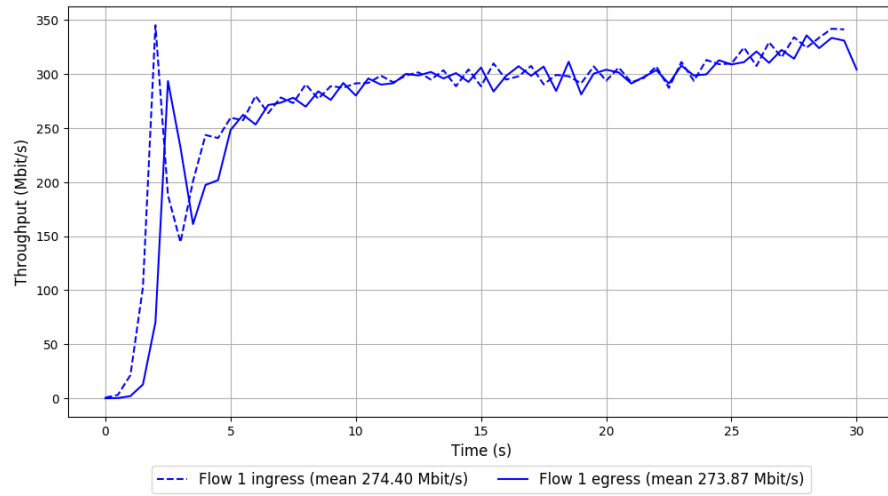


Run 2: Statistics of TCP Cubic

Start at: 2018-11-30 12:24:26
End at: 2018-11-30 12:24:56
Local clock offset: 1.666 ms
Remote clock offset: -46.861 ms

Below is generated by plot.py at 2018-11-30 14:56:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 273.87 Mbit/s
95th percentile per-packet one-way delay: 146.435 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 273.87 Mbit/s
95th percentile per-packet one-way delay: 146.435 ms
Loss rate: 0.85%

Run 2: Report of TCP Cubic — Data Link

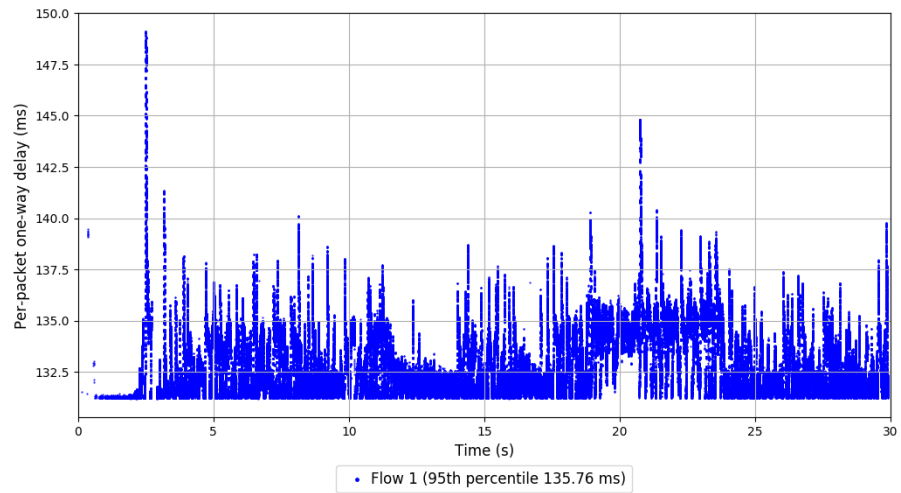
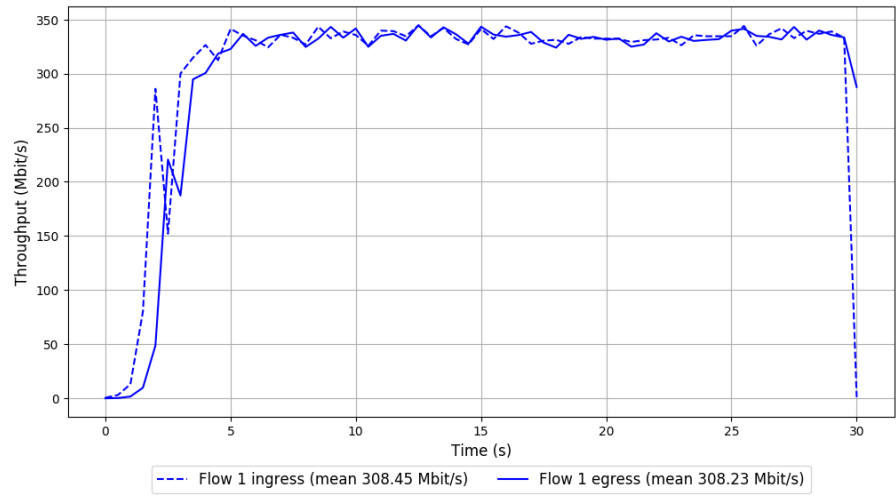


Run 3: Statistics of TCP Cubic

Start at: 2018-11-30 13:11:08
End at: 2018-11-30 13:11:38
Local clock offset: -1.676 ms
Remote clock offset: -28.895 ms

Below is generated by plot.py at 2018-11-30 14:56:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 308.23 Mbit/s
95th percentile per-packet one-way delay: 135.759 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 308.23 Mbit/s
95th percentile per-packet one-way delay: 135.759 ms
Loss rate: 0.77%

Run 3: Report of TCP Cubic — Data Link

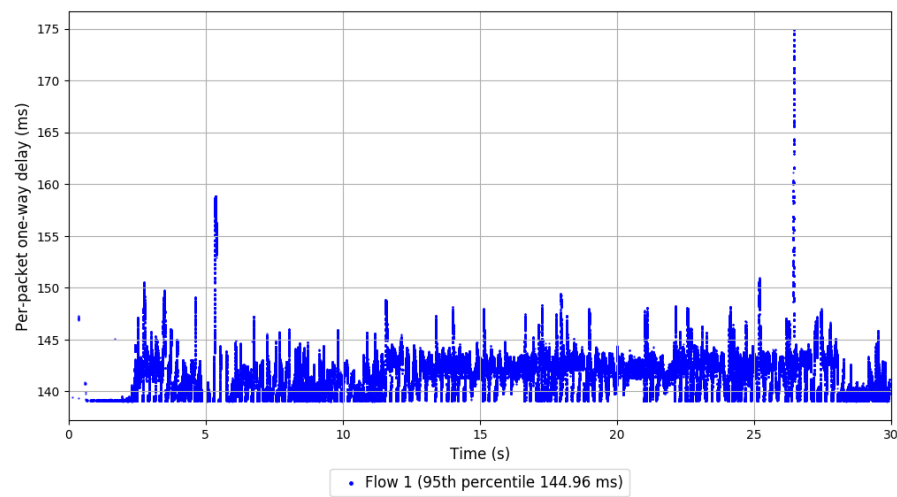
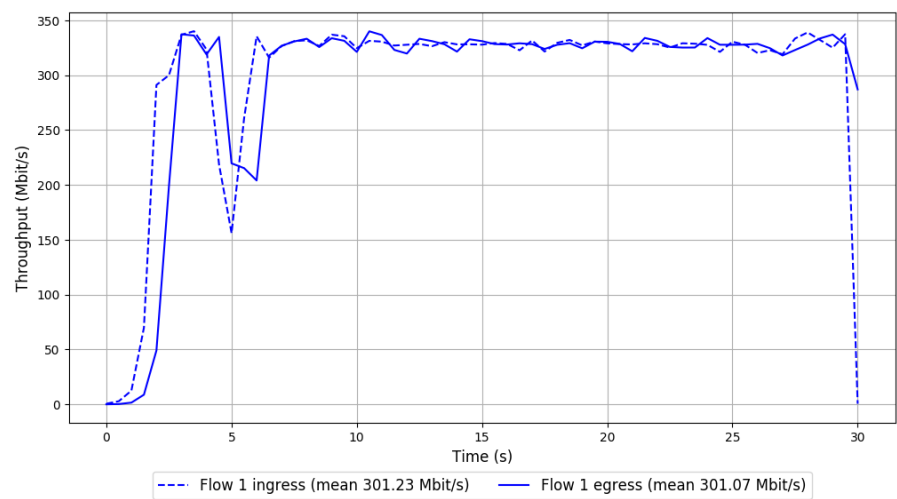


Run 4: Statistics of TCP Cubic

Start at: 2018-11-30 14:09:00
End at: 2018-11-30 14:09:30
Local clock offset: 3.417 ms
Remote clock offset: -33.277 ms

Below is generated by plot.py at 2018-11-30 14:56:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 301.07 Mbit/s
95th percentile per-packet one-way delay: 144.956 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 301.07 Mbit/s
95th percentile per-packet one-way delay: 144.956 ms
Loss rate: 0.77%

Run 4: Report of TCP Cubic — Data Link

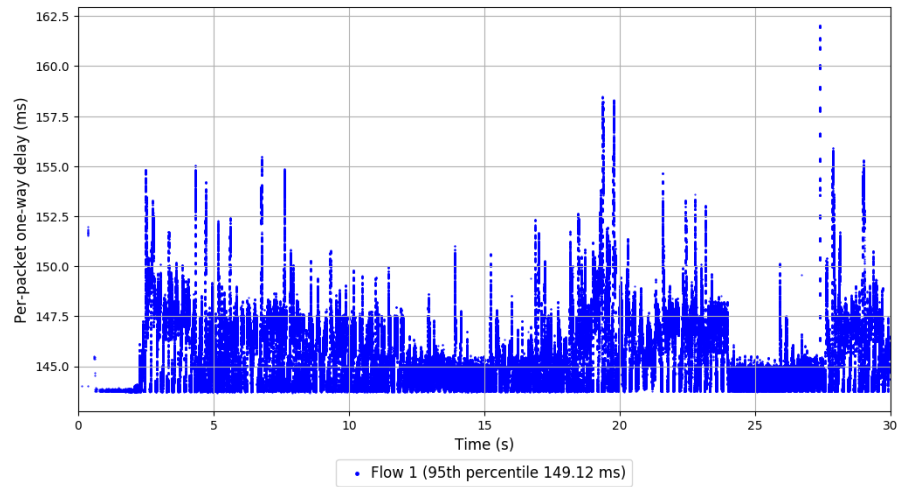
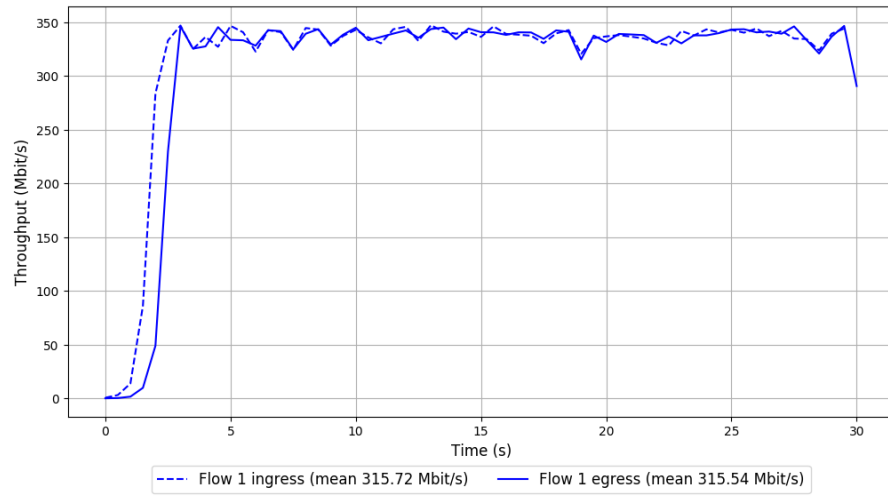


Run 5: Statistics of TCP Cubic

Start at: 2018-11-30 14:43:55
End at: 2018-11-30 14:44:25
Local clock offset: 1.169 ms
Remote clock offset: -40.097 ms

Below is generated by plot.py at 2018-11-30 14:56:02
Datalink statistics
-- Total of 1 flow:
Average throughput: 315.54 Mbit/s
95th percentile per-packet one-way delay: 149.124 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 315.54 Mbit/s
95th percentile per-packet one-way delay: 149.124 ms
Loss rate: 0.75%

Run 5: Report of TCP Cubic — Data Link

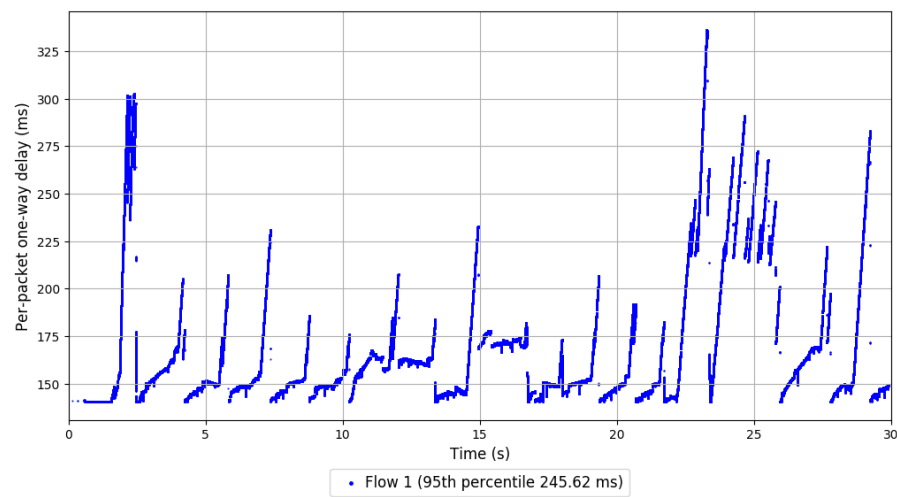
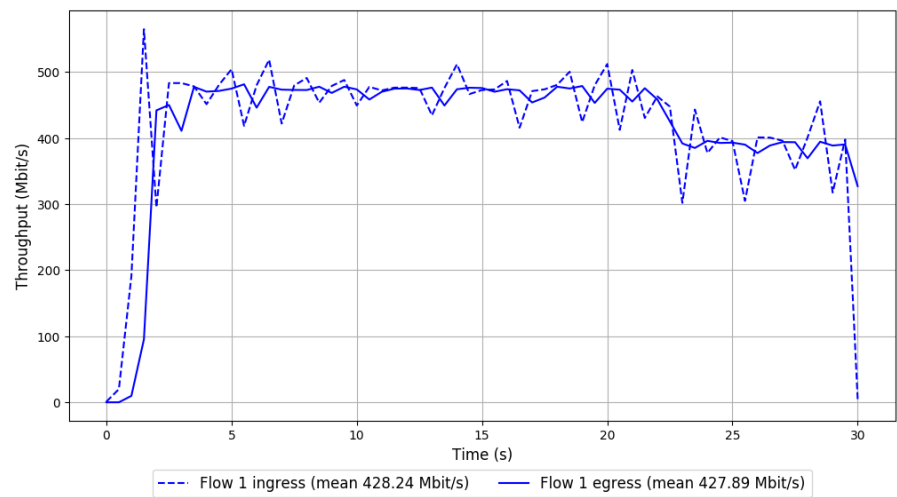


Run 1: Statistics of FillP

Start at: 2018-11-30 11:22:57
End at: 2018-11-30 11:23:27
Local clock offset: 2.389 ms
Remote clock offset: -44.243 ms

Below is generated by plot.py at 2018-11-30 14:58:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 427.89 Mbit/s
95th percentile per-packet one-way delay: 245.624 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 427.89 Mbit/s
95th percentile per-packet one-way delay: 245.624 ms
Loss rate: 0.85%

Run 1: Report of FillP — Data Link

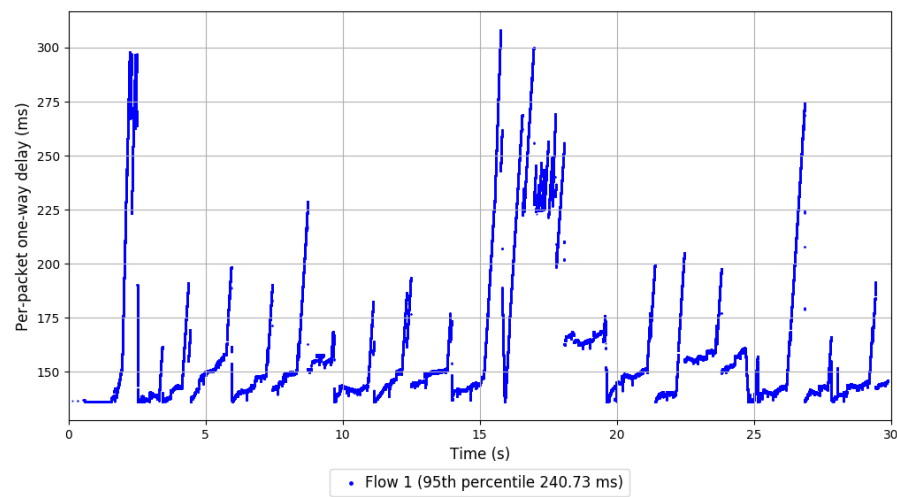
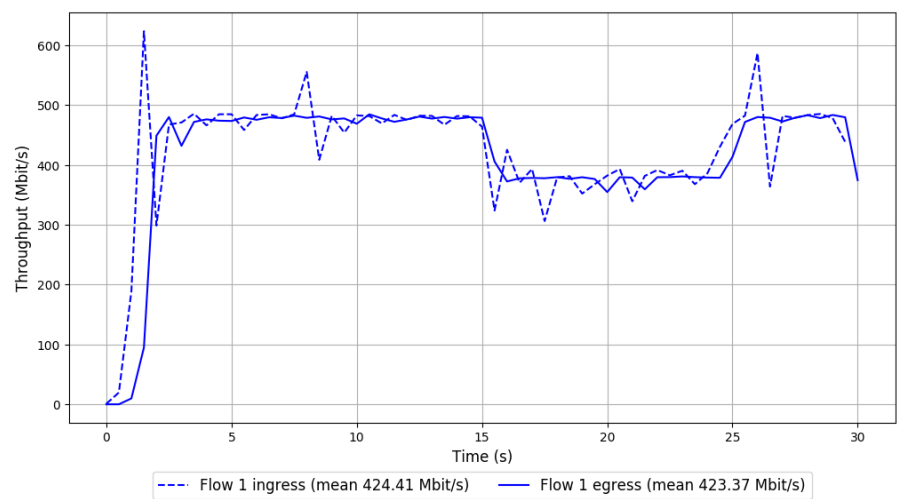


Run 2: Statistics of FillP

Start at: 2018-11-30 12:03:16
End at: 2018-11-30 12:03:46
Local clock offset: 0.607 ms
Remote clock offset: -40.542 ms

Below is generated by plot.py at 2018-11-30 14:58:13
Datalink statistics
-- Total of 1 flow:
Average throughput: 423.37 Mbit/s
95th percentile per-packet one-way delay: 240.728 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 423.37 Mbit/s
95th percentile per-packet one-way delay: 240.728 ms
Loss rate: 0.91%

Run 2: Report of FillP — Data Link

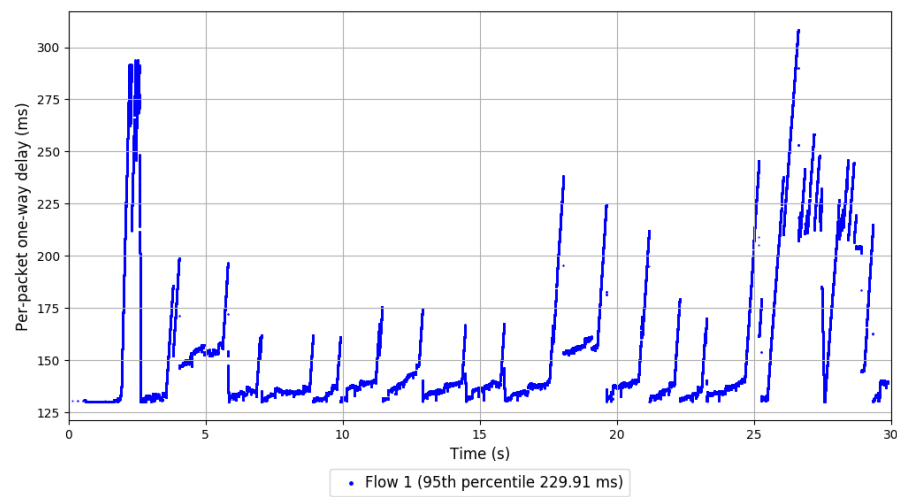
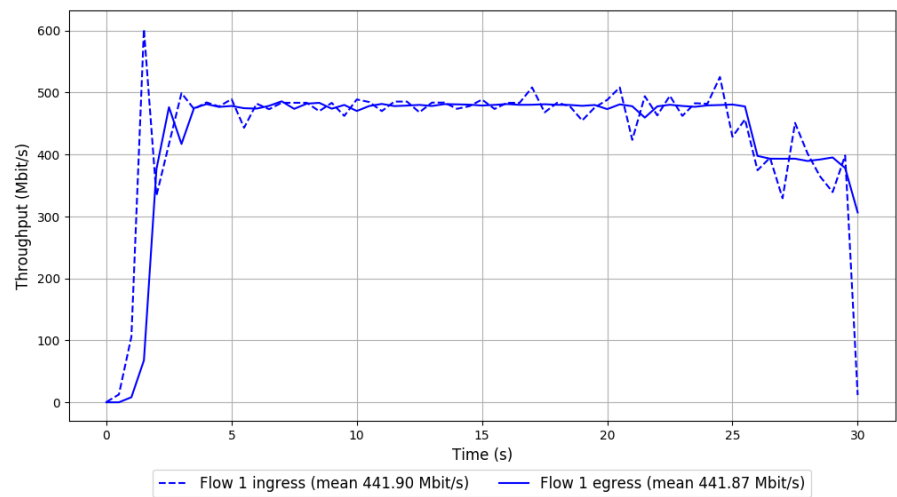


Run 3: Statistics of FillP

Start at: 2018-11-30 12:49:52
End at: 2018-11-30 12:50:22
Local clock offset: 0.917 ms
Remote clock offset: -27.87 ms

Below is generated by plot.py at 2018-11-30 15:00:33
Datalink statistics
-- Total of 1 flow:
Average throughput: 441.87 Mbit/s
95th percentile per-packet one-way delay: 229.908 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 441.87 Mbit/s
95th percentile per-packet one-way delay: 229.908 ms
Loss rate: 0.83%

Run 3: Report of FillP — Data Link

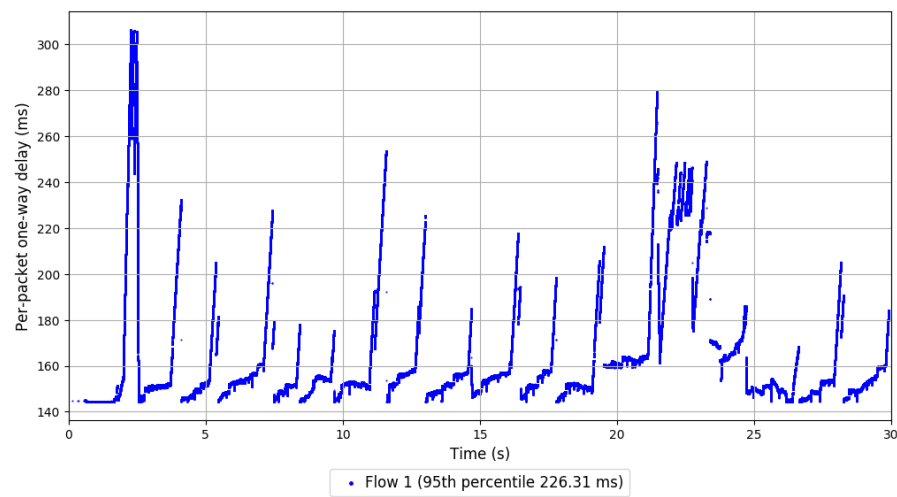
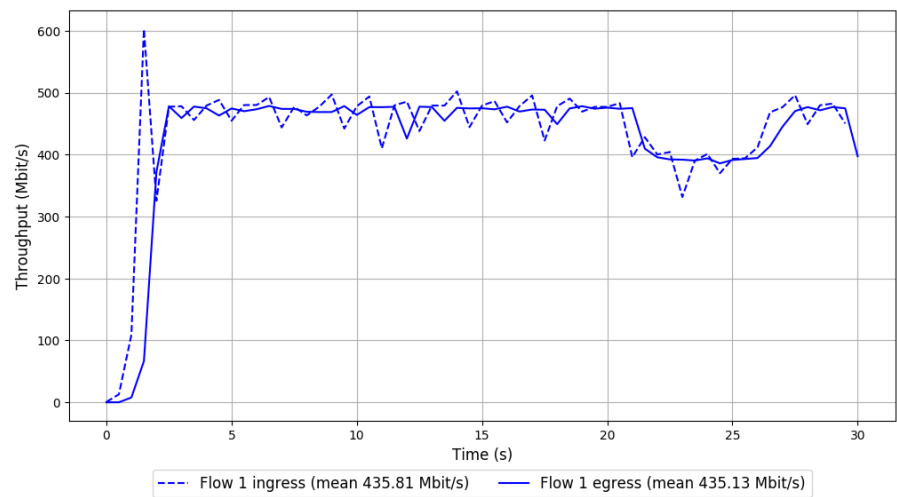


Run 4: Statistics of FillP

Start at: 2018-11-30 13:47:33
End at: 2018-11-30 13:48:03
Local clock offset: 1.902 ms
Remote clock offset: -40.13 ms

Below is generated by plot.py at 2018-11-30 15:01:25
Datalink statistics
-- Total of 1 flow:
Average throughput: 435.13 Mbit/s
95th percentile per-packet one-way delay: 226.305 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 435.13 Mbit/s
95th percentile per-packet one-way delay: 226.305 ms
Loss rate: 0.87%

Run 4: Report of FillP — Data Link

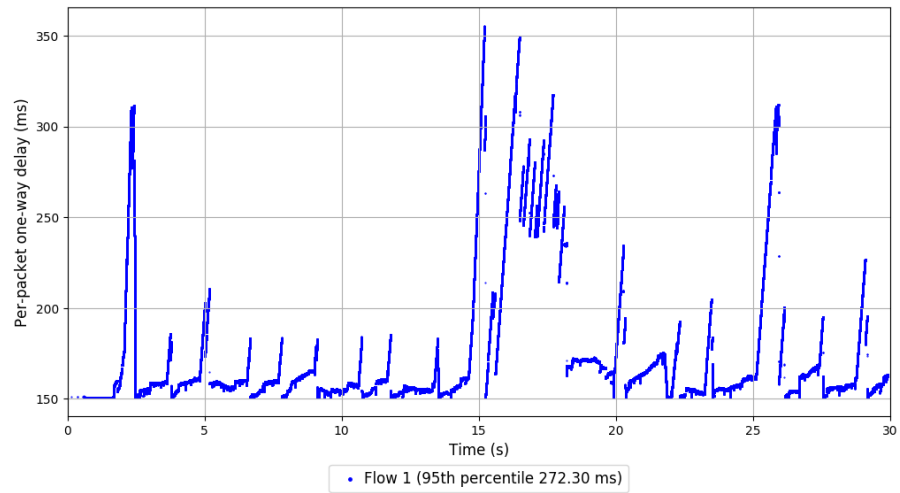
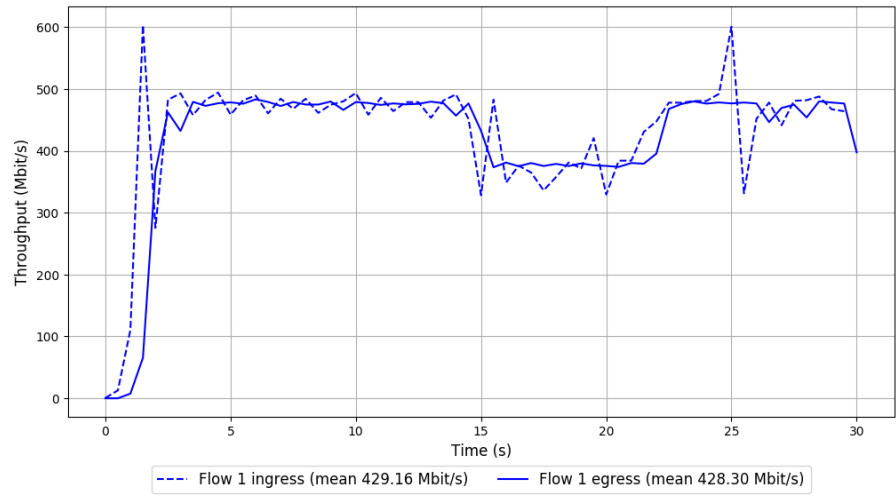


Run 5: Statistics of FillP

Start at: 2018-11-30 14:27:53
End at: 2018-11-30 14:28:23
Local clock offset: 0.689 ms
Remote clock offset: -47.156 ms

Below is generated by plot.py at 2018-11-30 15:01:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 428.30 Mbit/s
95th percentile per-packet one-way delay: 272.302 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 428.30 Mbit/s
95th percentile per-packet one-way delay: 272.302 ms
Loss rate: 0.91%

Run 5: Report of FillP — Data Link

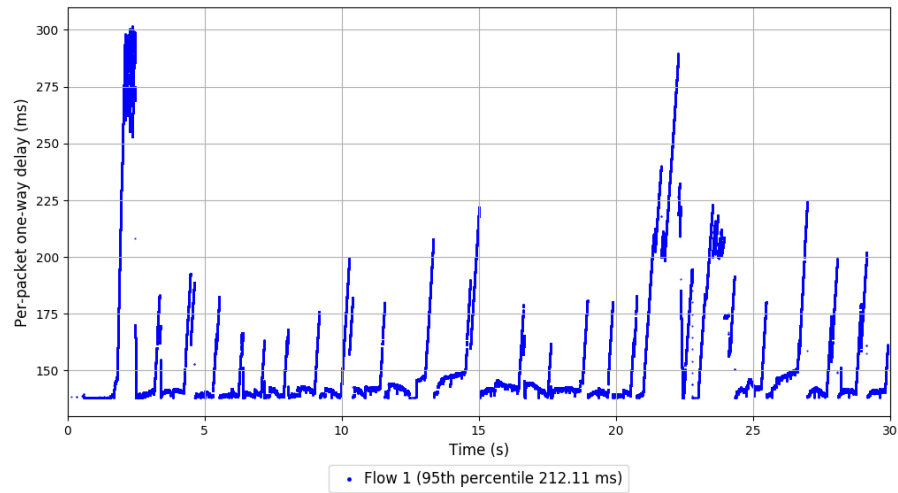
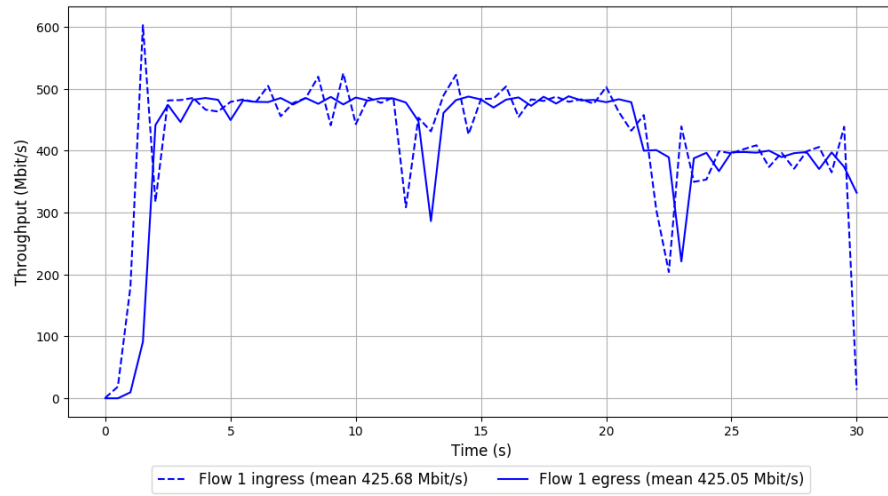


Run 1: Statistics of FillP-Sheep

Start at: 2018-11-30 11:29:34
End at: 2018-11-30 11:30:04
Local clock offset: 0.745 ms
Remote clock offset: -41.434 ms

Below is generated by plot.py at 2018-11-30 15:01:36
Datalink statistics
-- Total of 1 flow:
Average throughput: 425.05 Mbit/s
95th percentile per-packet one-way delay: 212.106 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 425.05 Mbit/s
95th percentile per-packet one-way delay: 212.106 ms
Loss rate: 0.93%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-11-30 12:15:46

End at: 2018-11-30 12:16:16

Local clock offset: 2.196 ms

Remote clock offset: -48.291 ms

Below is generated by plot.py at 2018-11-30 15:01:48

Datalink statistics

-- Total of 1 flow:

Average throughput: 419.27 Mbit/s

95th percentile per-packet one-way delay: 220.670 ms

Loss rate: 0.75%

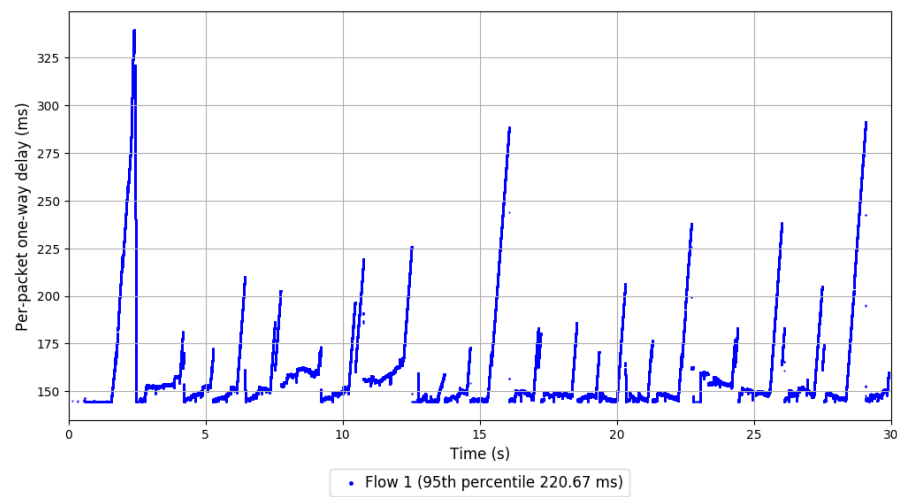
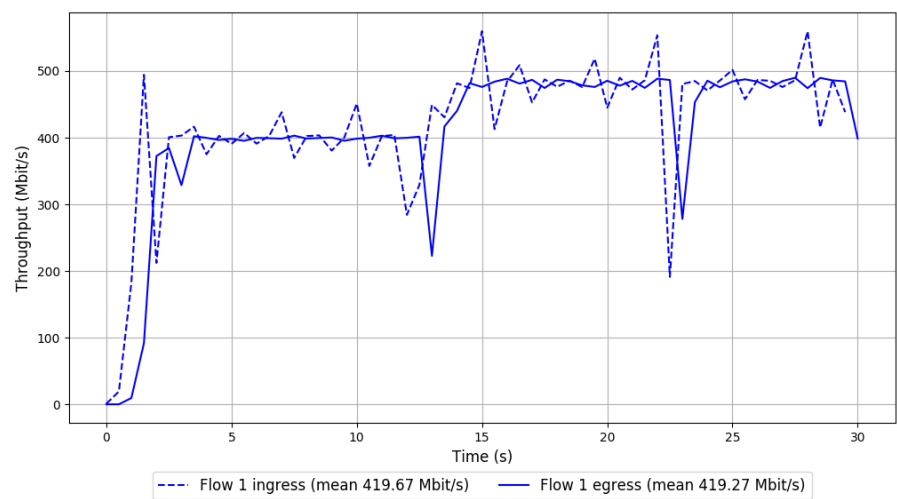
-- Flow 1:

Average throughput: 419.27 Mbit/s

95th percentile per-packet one-way delay: 220.670 ms

Loss rate: 0.75%

Run 2: Report of FillP-Sheep — Data Link

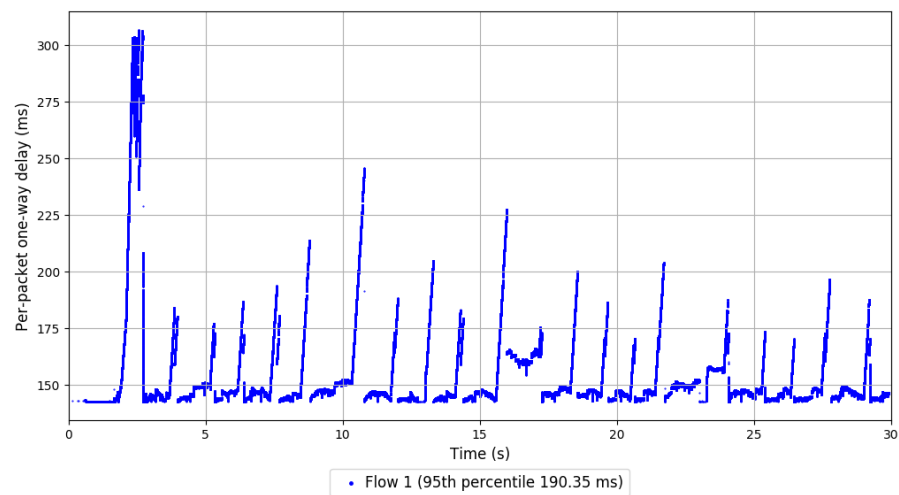
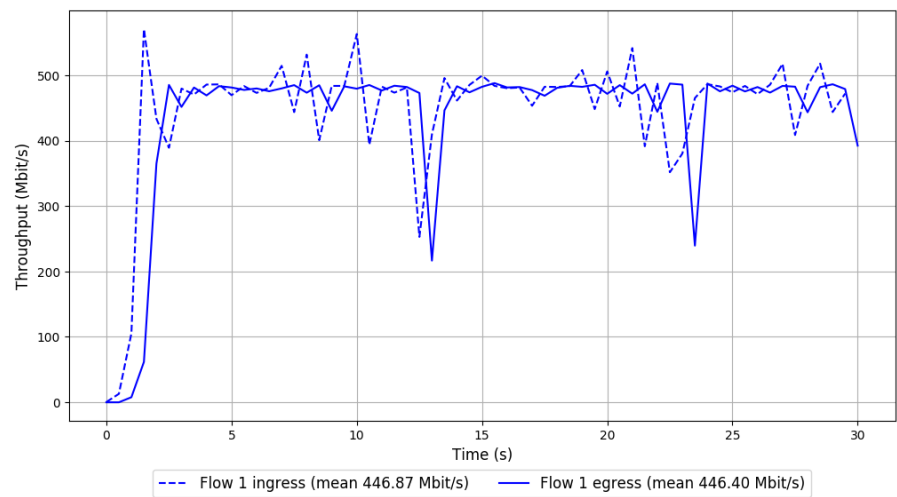


Run 3: Statistics of FillP-Sheep

Start at: 2018-11-30 13:01:59
End at: 2018-11-30 13:02:29
Local clock offset: -1.388 ms
Remote clock offset: -40.888 ms

Below is generated by plot.py at 2018-11-30 15:02:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 446.40 Mbit/s
95th percentile per-packet one-way delay: 190.348 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 446.40 Mbit/s
95th percentile per-packet one-way delay: 190.348 ms
Loss rate: 0.83%

Run 3: Report of FillP-Sheep — Data Link

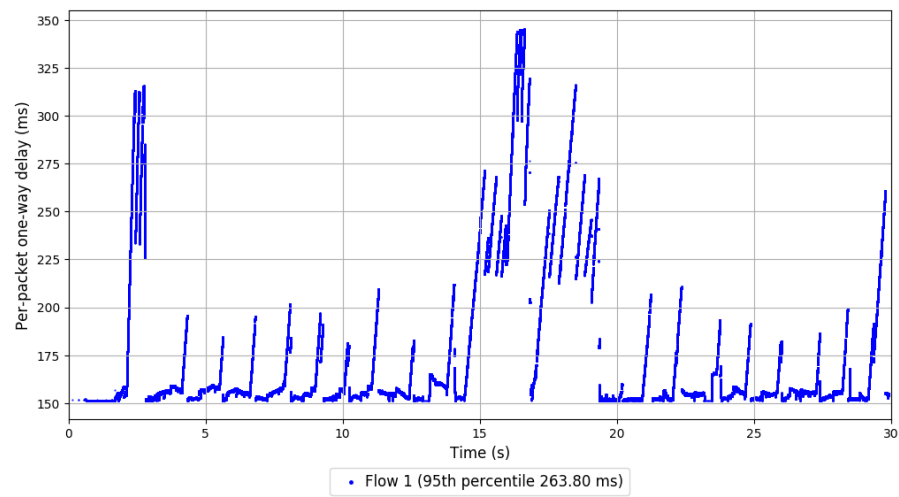
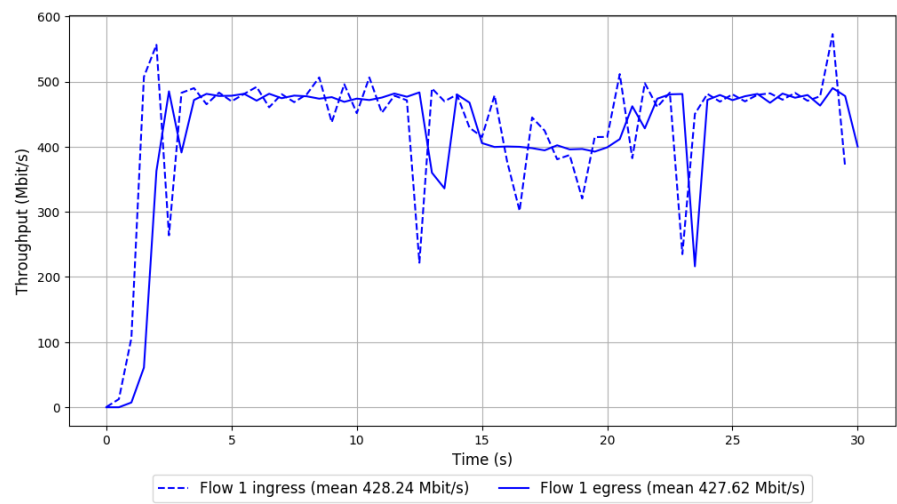


Run 4: Statistics of FillP-Sheep

Start at: 2018-11-30 13:54:15
End at: 2018-11-30 13:54:45
Local clock offset: 2.696 ms
Remote clock offset: -46.169 ms

Below is generated by plot.py at 2018-11-30 15:04:42
Datalink statistics
-- Total of 1 flow:
Average throughput: 427.62 Mbit/s
95th percentile per-packet one-way delay: 263.796 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 427.62 Mbit/s
95th percentile per-packet one-way delay: 263.796 ms
Loss rate: 0.86%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2018-11-30 14:34:39

End at: 2018-11-30 14:35:09

Local clock offset: 0.156 ms

Remote clock offset: -44.545 ms

Below is generated by plot.py at 2018-11-30 15:04:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 430.84 Mbit/s

95th percentile per-packet one-way delay: 241.570 ms

Loss rate: 1.01%

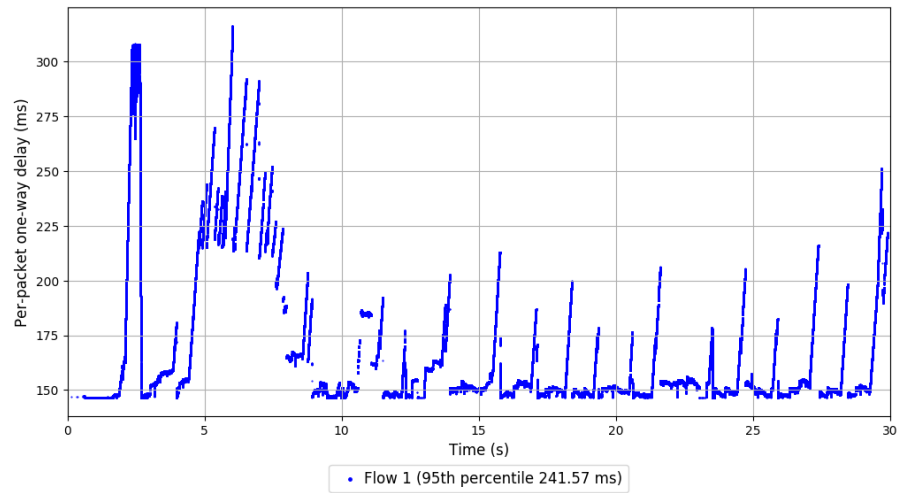
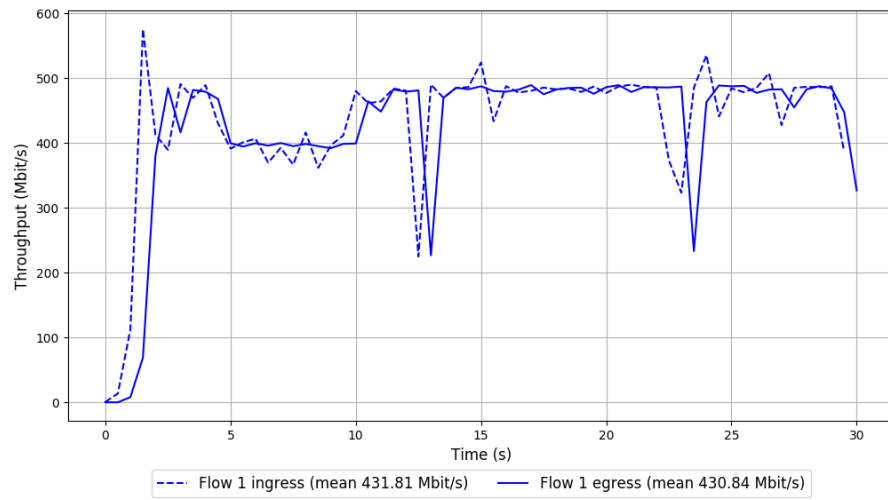
-- Flow 1:

Average throughput: 430.84 Mbit/s

95th percentile per-packet one-way delay: 241.570 ms

Loss rate: 1.01%

Run 5: Report of FillP-Sheep — Data Link

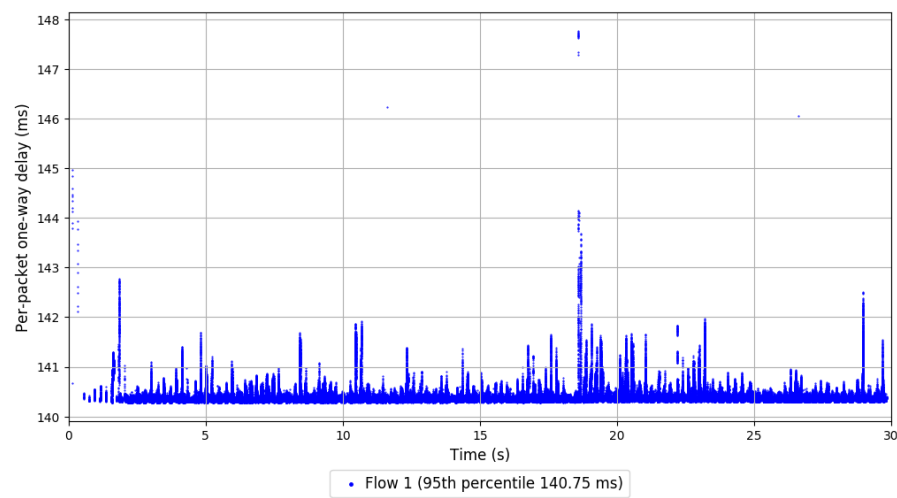
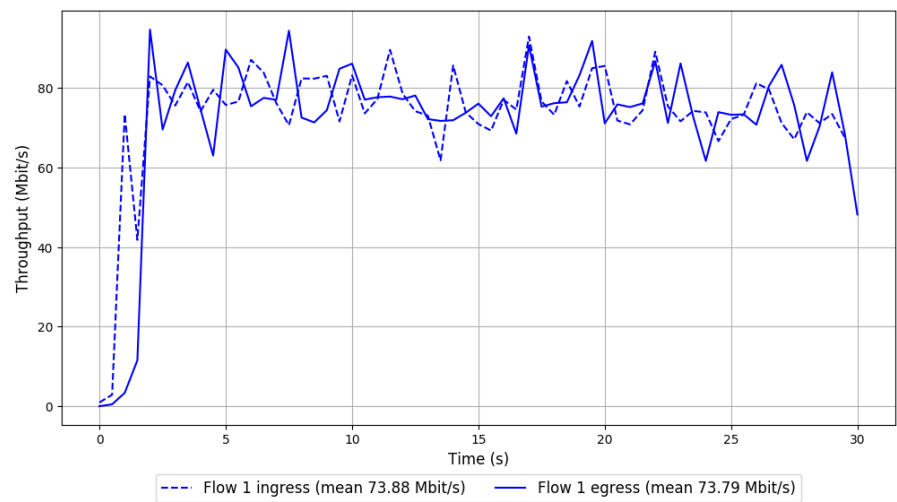


Run 1: Statistics of Indigo

Start at: 2018-11-30 11:42:38
End at: 2018-11-30 11:43:08
Local clock offset: 1.221 ms
Remote clock offset: -44.691 ms

Below is generated by plot.py at 2018-11-30 15:04:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 73.79 Mbit/s
95th percentile per-packet one-way delay: 140.750 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 73.79 Mbit/s
95th percentile per-packet one-way delay: 140.750 ms
Loss rate: 0.77%

Run 1: Report of Indigo — Data Link

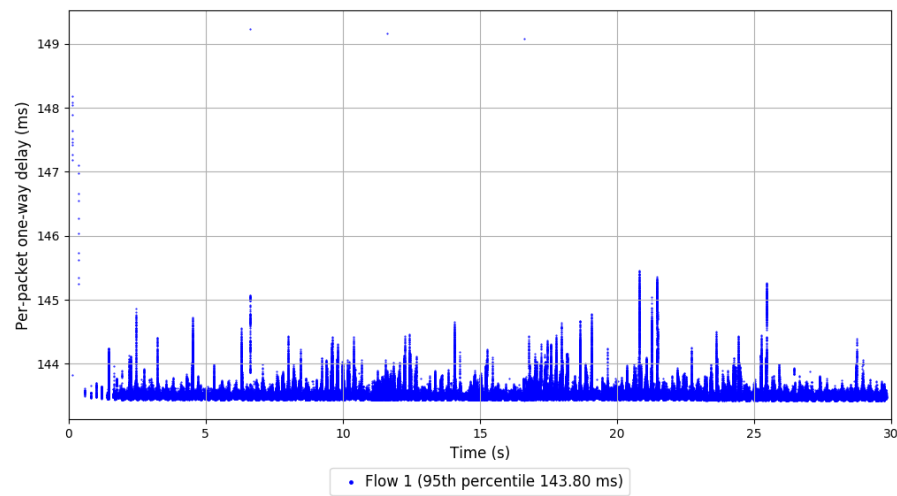
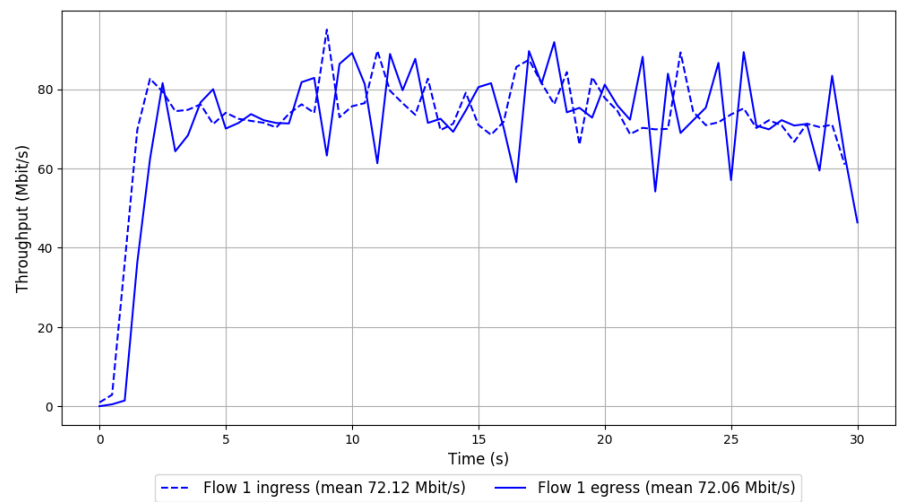


Run 2: Statistics of Indigo

Start at: 2018-11-30 12:22:57
End at: 2018-11-30 12:23:27
Local clock offset: 2.263 ms
Remote clock offset: -47.139 ms

Below is generated by plot.py at 2018-11-30 15:04:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.06 Mbit/s
95th percentile per-packet one-way delay: 143.798 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 72.06 Mbit/s
95th percentile per-packet one-way delay: 143.798 ms
Loss rate: 0.74%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-11-30 13:09:28

End at: 2018-11-30 13:09:58

Local clock offset: -1.77 ms

Remote clock offset: -39.628 ms

Below is generated by plot.py at 2018-11-30 15:04:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 102.56 Mbit/s

95th percentile per-packet one-way delay: 142.444 ms

Loss rate: 0.82%

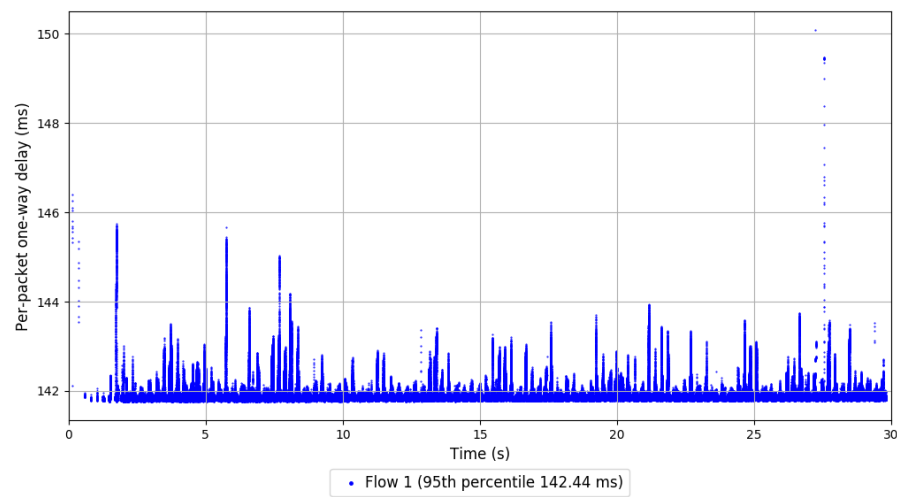
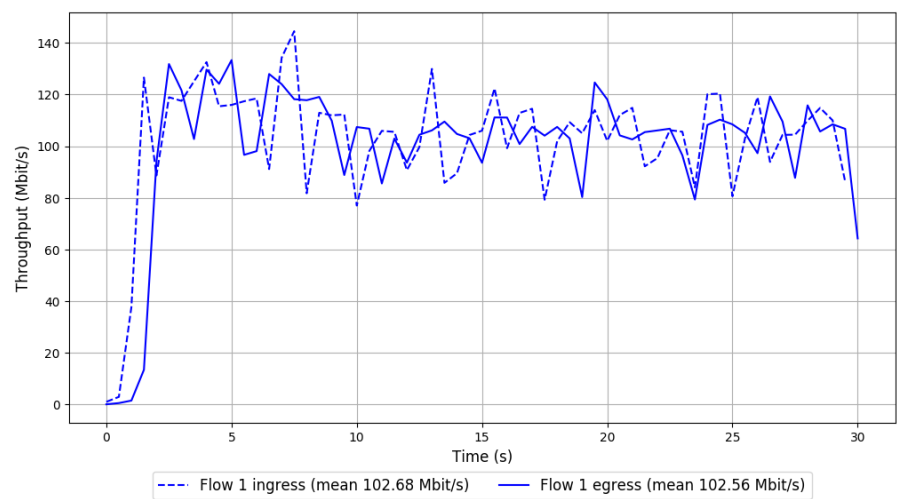
-- Flow 1:

Average throughput: 102.56 Mbit/s

95th percentile per-packet one-way delay: 142.444 ms

Loss rate: 0.82%

Run 3: Report of Indigo — Data Link

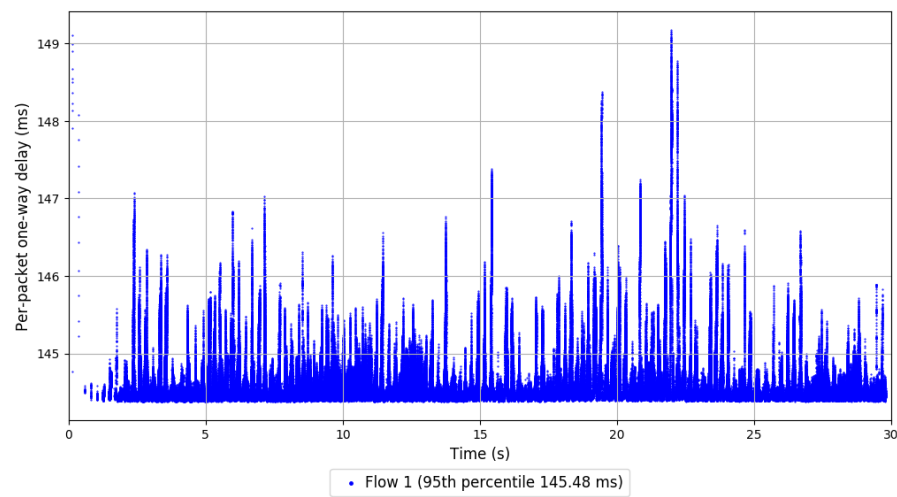
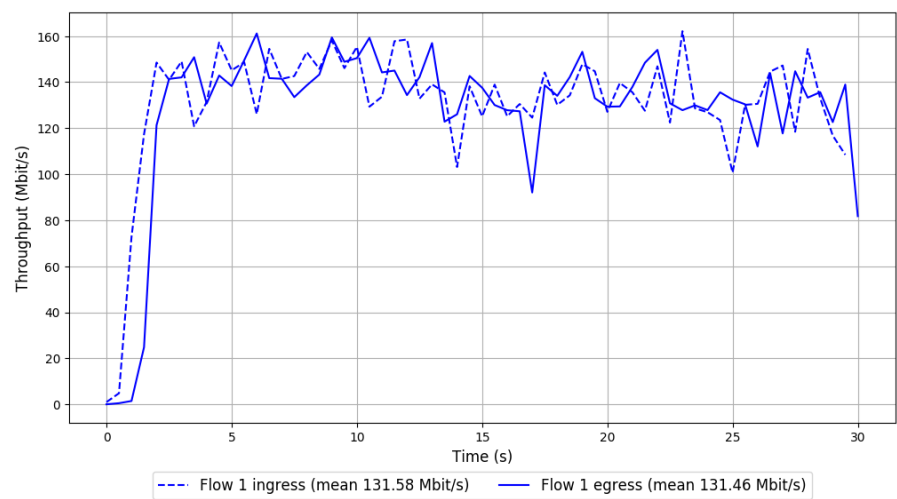


Run 4: Statistics of Indigo

Start at: 2018-11-30 14:07:12
End at: 2018-11-30 14:07:42
Local clock offset: 1.7 ms
Remote clock offset: -41.732 ms

Below is generated by plot.py at 2018-11-30 15:04:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 131.46 Mbit/s
95th percentile per-packet one-way delay: 145.484 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 131.46 Mbit/s
95th percentile per-packet one-way delay: 145.484 ms
Loss rate: 0.80%

Run 4: Report of Indigo — Data Link

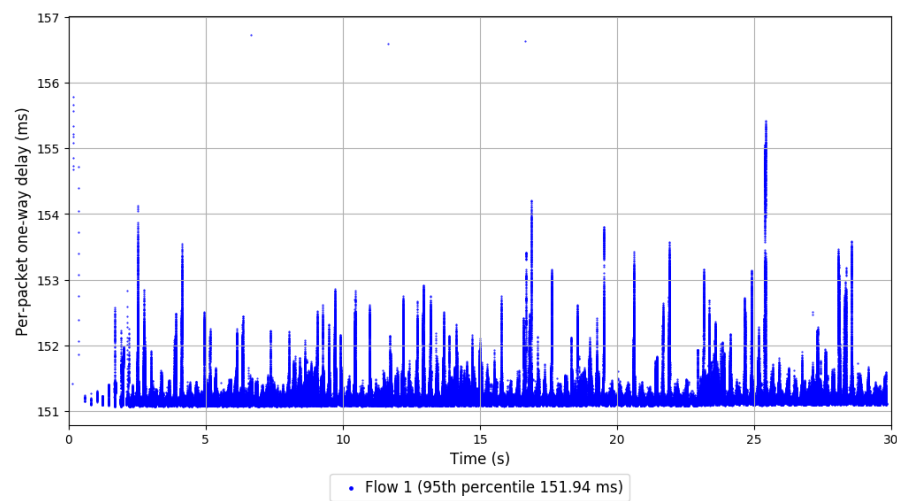
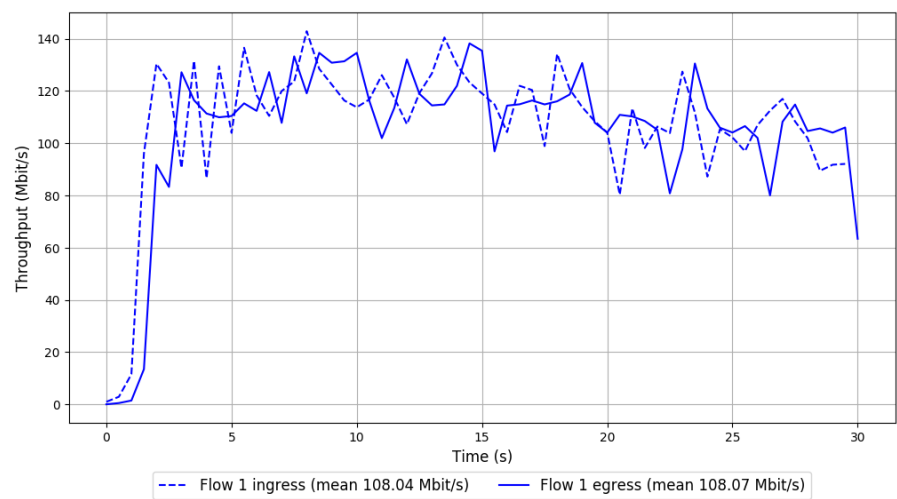


Run 5: Statistics of Indigo

Start at: 2018-11-30 14:42:14
End at: 2018-11-30 14:42:44
Local clock offset: 3.305 ms
Remote clock offset: -43.837 ms

Below is generated by plot.py at 2018-11-30 15:04:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 108.07 Mbit/s
95th percentile per-packet one-way delay: 151.935 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 108.07 Mbit/s
95th percentile per-packet one-way delay: 151.935 ms
Loss rate: 0.68%

Run 5: Report of Indigo — Data Link

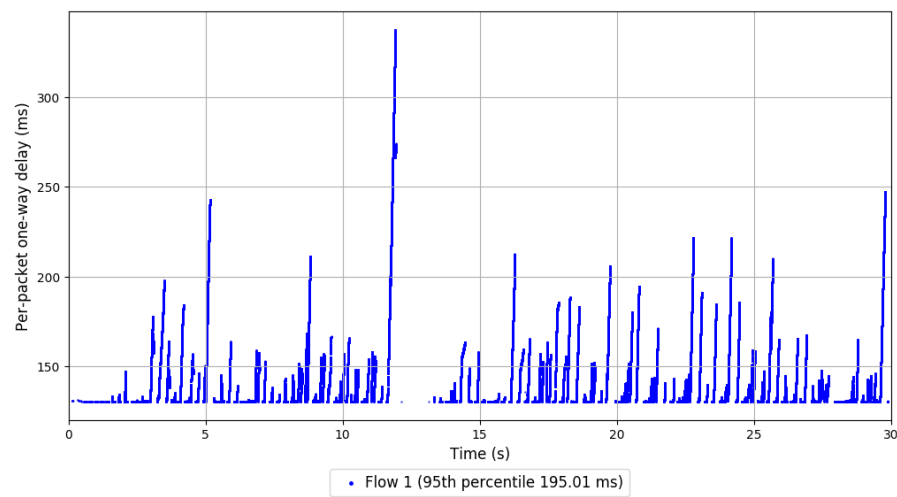
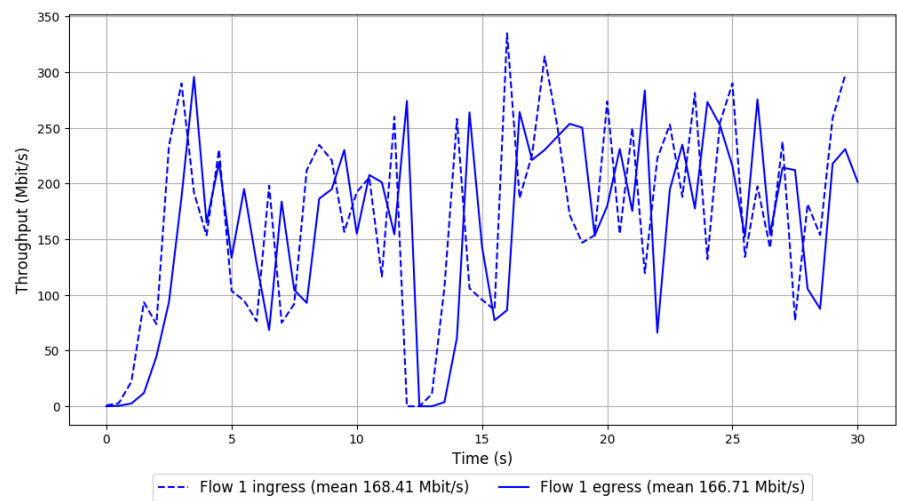


```
Run 1: Statistics of Indigo-96d2da3

Start at: 2018-11-30 11:12:15
End at: 2018-11-30 11:12:45
Local clock offset: -1.106 ms
Remote clock offset: -36.216 ms

# Below is generated by plot.py at 2018-11-30 15:04:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 166.71 Mbit/s
95th percentile per-packet one-way delay: 195.009 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 166.71 Mbit/s
95th percentile per-packet one-way delay: 195.009 ms
Loss rate: 1.62%
```

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

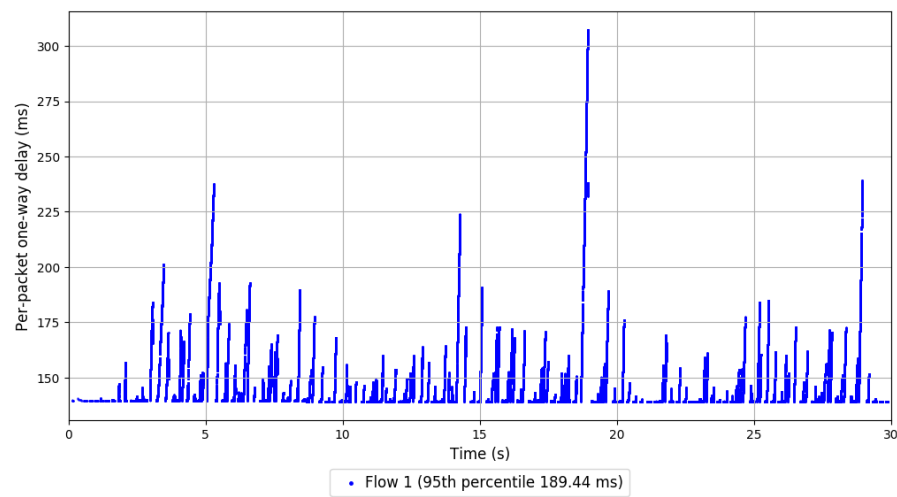
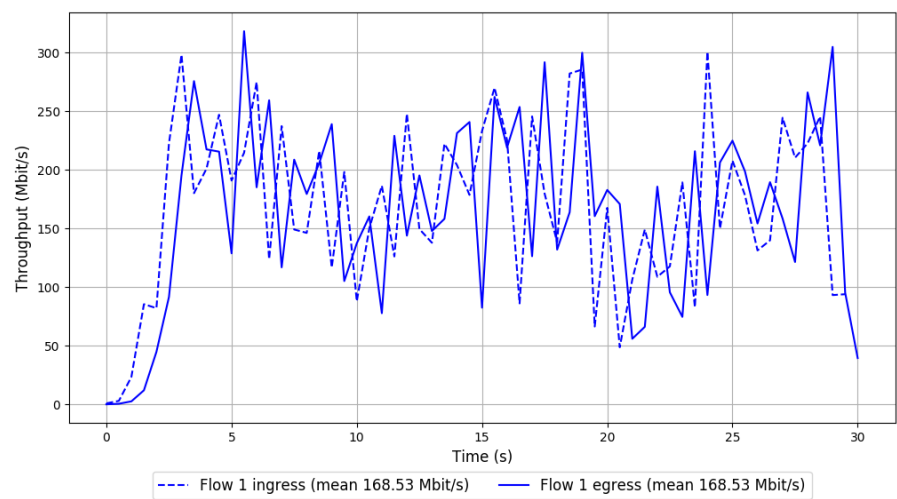


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-11-30 11:58:05
End at: 2018-11-30 11:58:35
Local clock offset: 0.101 ms
Remote clock offset: -44.223 ms

Below is generated by plot.py at 2018-11-30 15:04:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 168.53 Mbit/s
95th percentile per-packet one-way delay: 189.437 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 168.53 Mbit/s
95th percentile per-packet one-way delay: 189.437 ms
Loss rate: 0.66%

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

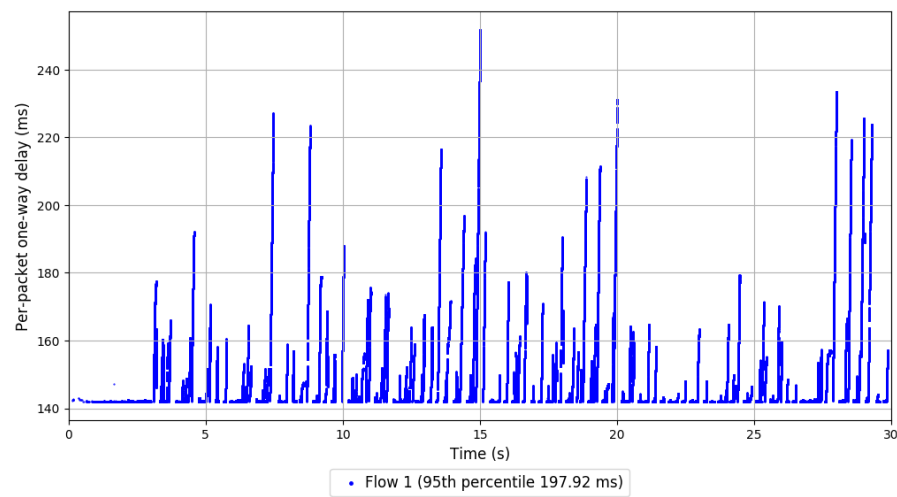
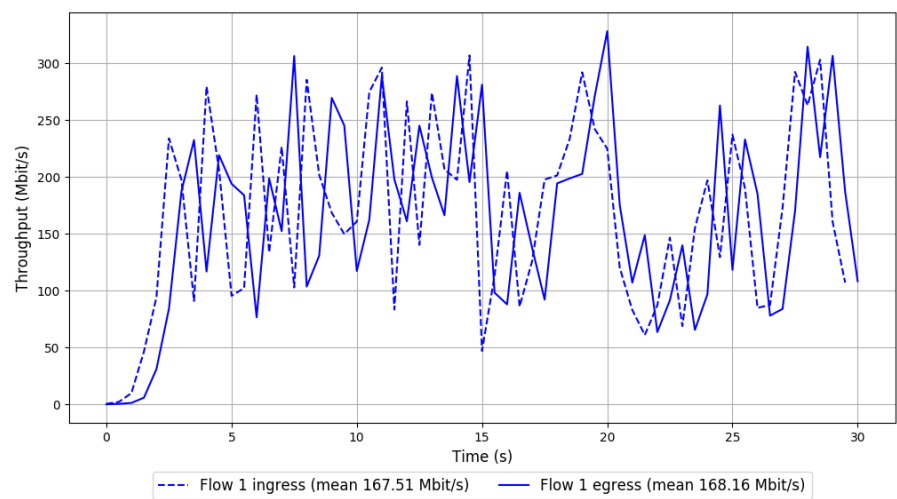


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-11-30 12:44:38
End at: 2018-11-30 12:45:08
Local clock offset: 1.663 ms
Remote clock offset: -39.666 ms

Below is generated by plot.py at 2018-11-30 15:04:51
Datalink statistics
-- Total of 1 flow:
Average throughput: 168.16 Mbit/s
95th percentile per-packet one-way delay: 197.923 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 168.16 Mbit/s
95th percentile per-packet one-way delay: 197.923 ms
Loss rate: 0.28%

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



Run 4: Statistics of Indigo-96d2da3

Start at: 2018-11-30 13:42:22

End at: 2018-11-30 13:42:52

Local clock offset: 1.996 ms

Remote clock offset: -35.6 ms

Below is generated by plot.py at 2018-11-30 15:04:51

Datalink statistics

-- Total of 1 flow:

Average throughput: 167.13 Mbit/s

95th percentile per-packet one-way delay: 197.198 ms

Loss rate: 0.93%

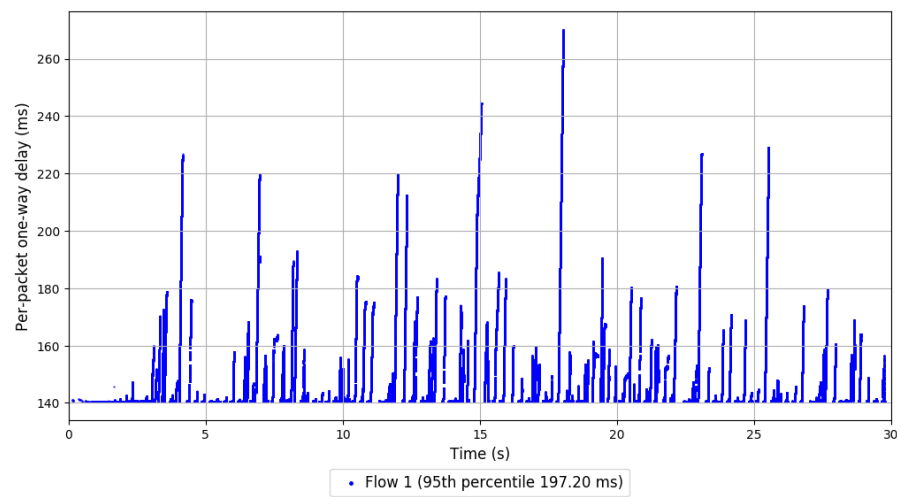
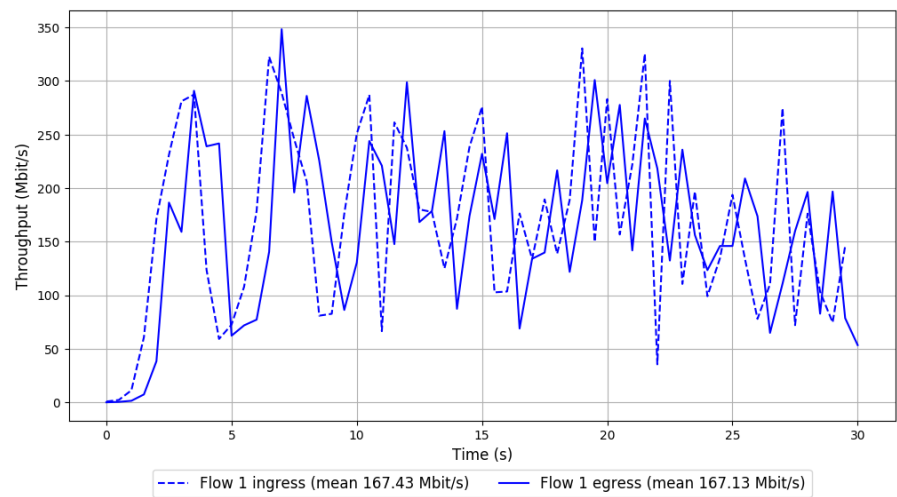
-- Flow 1:

Average throughput: 167.13 Mbit/s

95th percentile per-packet one-way delay: 197.198 ms

Loss rate: 0.93%

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



Run 5: Statistics of Indigo-96d2da3

Start at: 2018-11-30 14:22:39

End at: 2018-11-30 14:23:09

Local clock offset: 0.8 ms

Remote clock offset: -41.295 ms

Below is generated by plot.py at 2018-11-30 15:05:04

Datalink statistics

-- Total of 1 flow:

Average throughput: 178.45 Mbit/s

95th percentile per-packet one-way delay: 196.205 ms

Loss rate: 0.32%

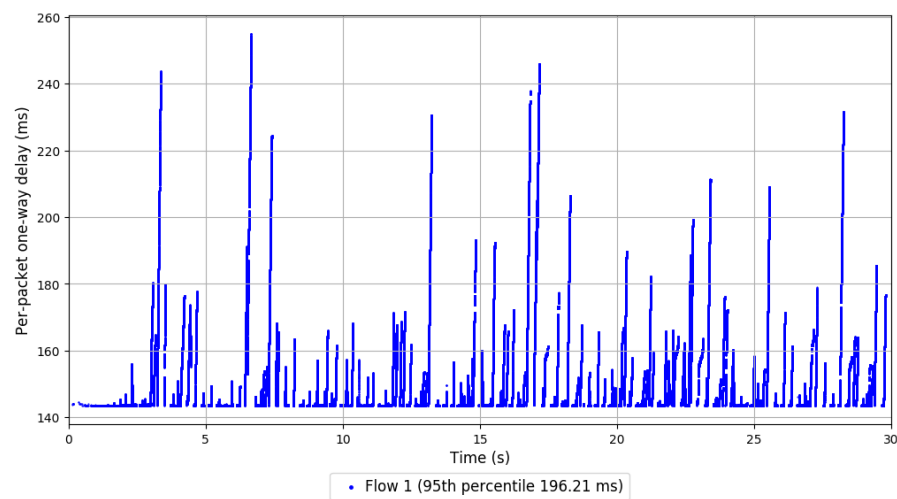
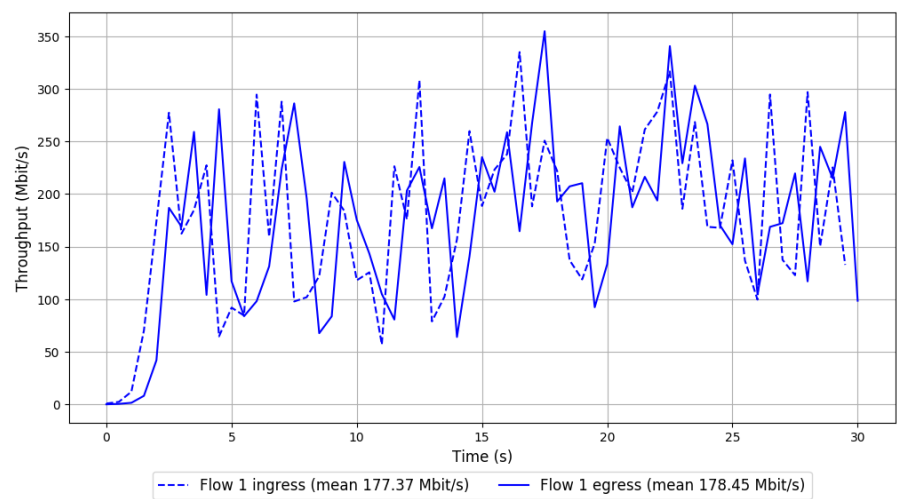
-- Flow 1:

Average throughput: 178.45 Mbit/s

95th percentile per-packet one-way delay: 196.205 ms

Loss rate: 0.32%

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

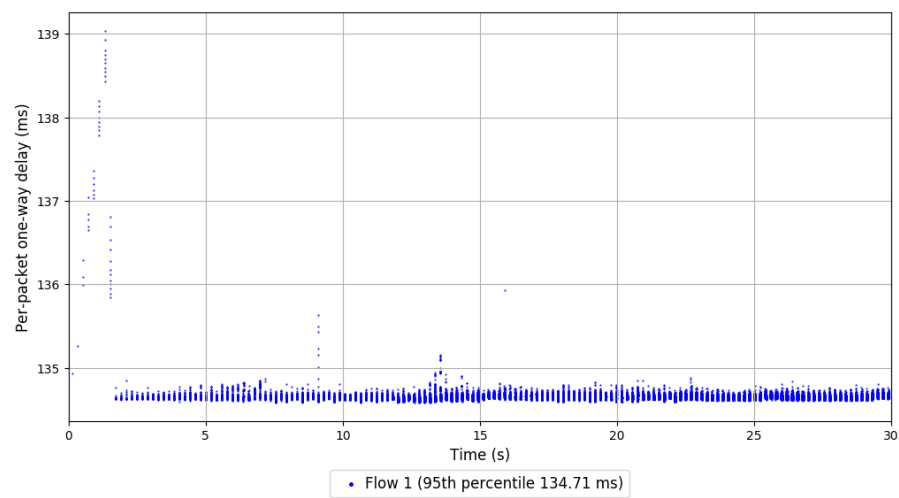
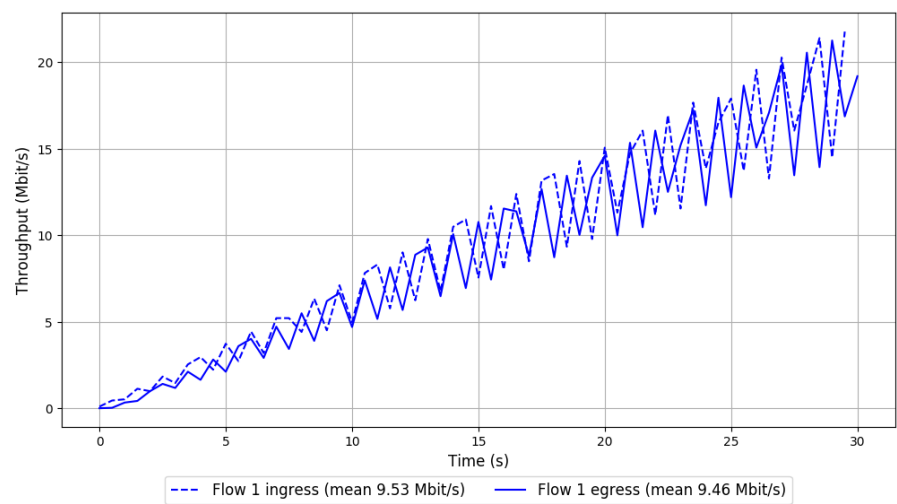


```
Run 1: Statistics of LEDBAT

Start at: 2018-11-30 11:21:45
End at: 2018-11-30 11:22:15
Local clock offset: -0.402 ms
Remote clock offset: -39.456 ms

# Below is generated by plot.py at 2018-11-30 15:05:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.46 Mbit/s
95th percentile per-packet one-way delay: 134.708 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 9.46 Mbit/s
95th percentile per-packet one-way delay: 134.708 ms
Loss rate: 1.29%
```

Run 1: Report of LEDBAT — Data Link

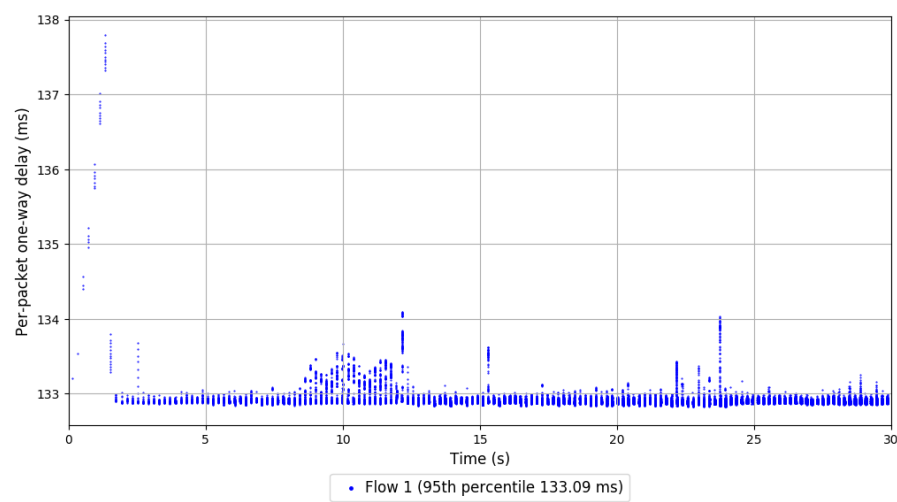
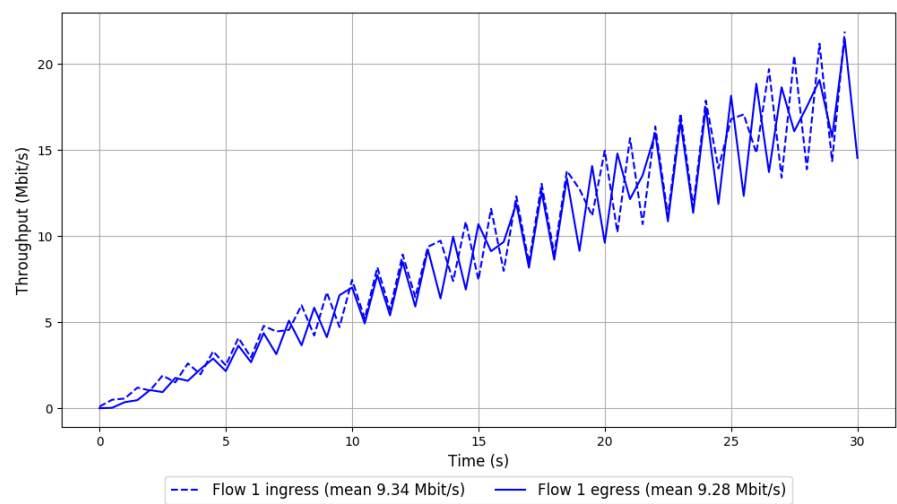


Run 2: Statistics of LEDBAT

Start at: 2018-11-30 12:02:03
End at: 2018-11-30 12:02:33
Local clock offset: 2.87 ms
Remote clock offset: -35.043 ms

Below is generated by plot.py at 2018-11-30 15:05:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.28 Mbit/s
95th percentile per-packet one-way delay: 133.092 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 9.28 Mbit/s
95th percentile per-packet one-way delay: 133.092 ms
Loss rate: 1.31%

Run 2: Report of LEDBAT — Data Link

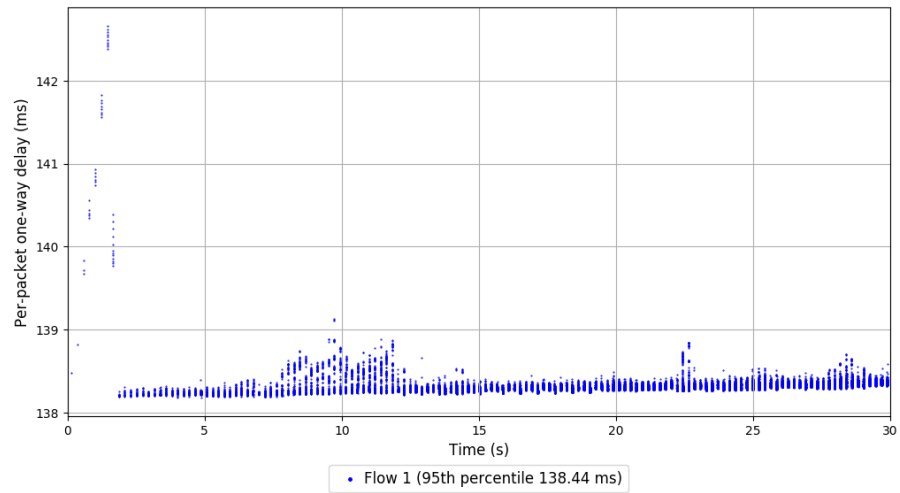
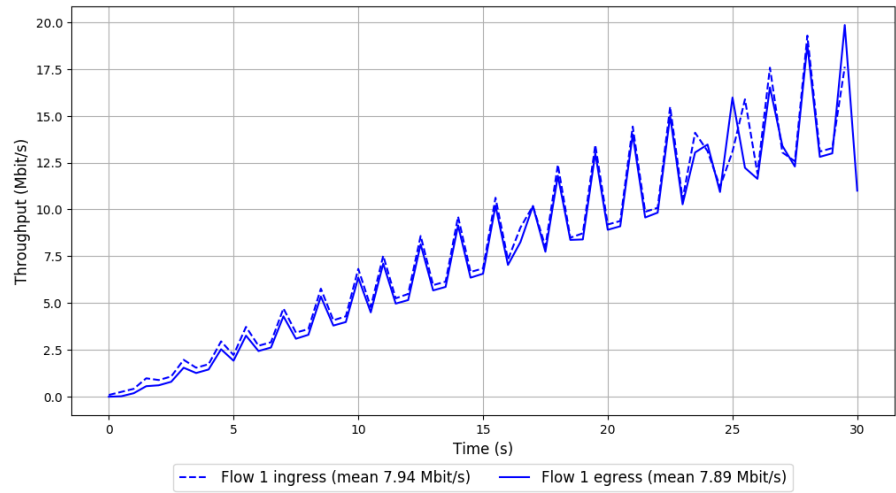


Run 3: Statistics of LEDBAT

Start at: 2018-11-30 12:48:39
End at: 2018-11-30 12:49:09
Local clock offset: 4.686 ms
Remote clock offset: -32.233 ms

Below is generated by plot.py at 2018-11-30 15:05:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 138.442 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 138.442 ms
Loss rate: 1.39%

Run 3: Report of LEDBAT — Data Link

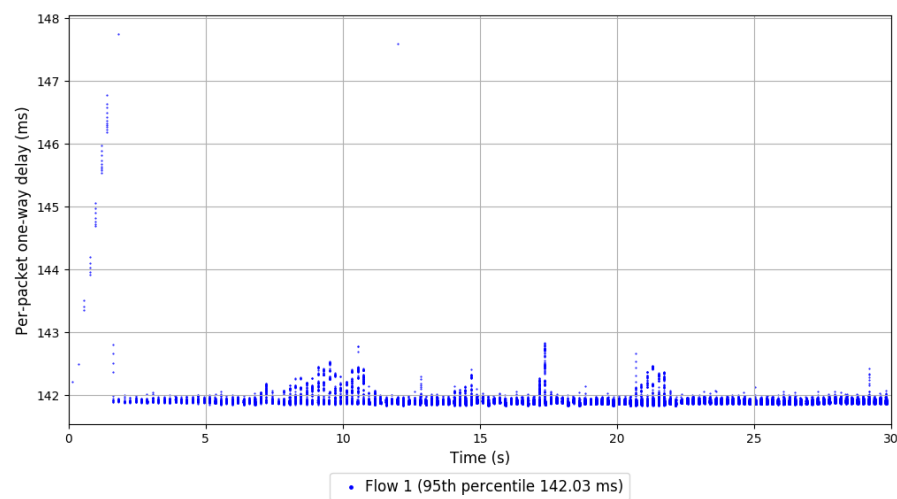
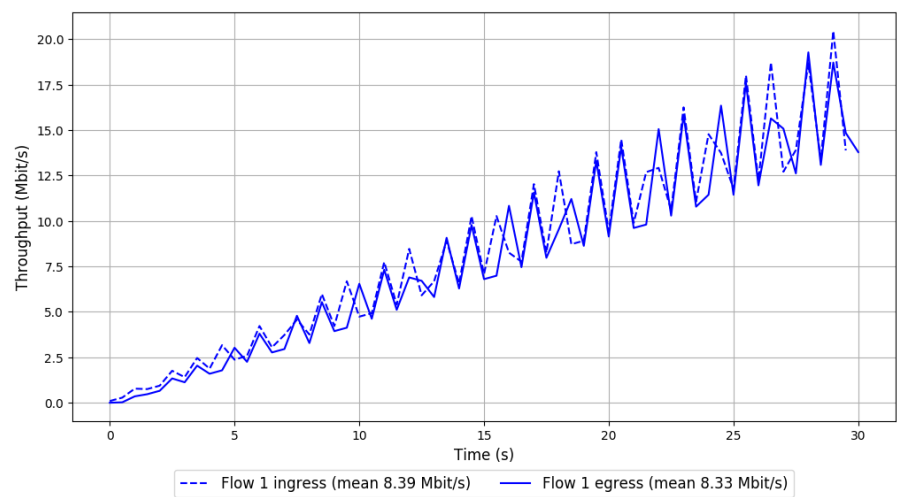


Run 4: Statistics of LEDBAT

Start at: 2018-11-30 13:46:20
End at: 2018-11-30 13:46:50
Local clock offset: 1.416 ms
Remote clock offset: -39.266 ms

Below is generated by plot.py at 2018-11-30 15:05:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.33 Mbit/s
95th percentile per-packet one-way delay: 142.028 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 8.33 Mbit/s
95th percentile per-packet one-way delay: 142.028 ms
Loss rate: 1.39%

Run 4: Report of LEDBAT — Data Link

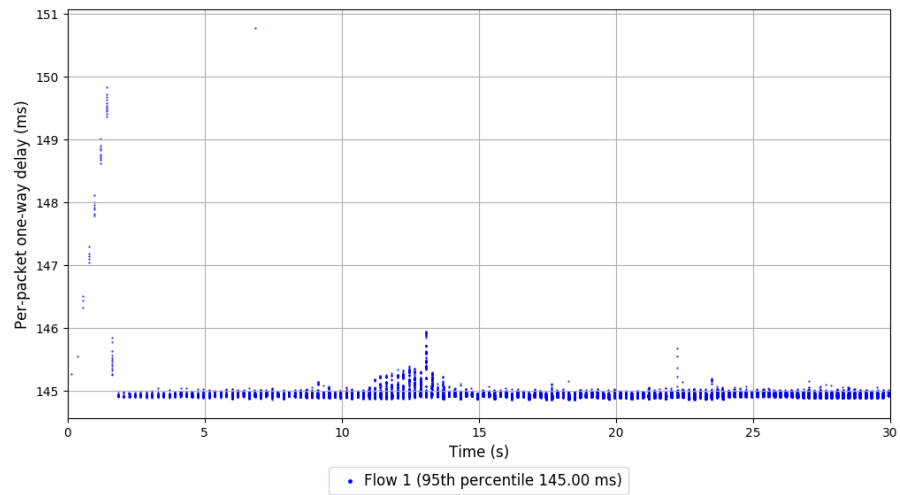
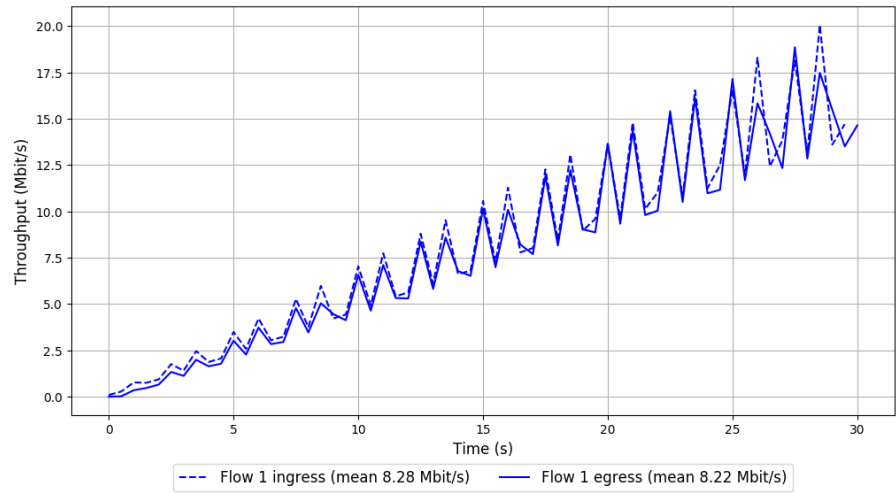


Run 5: Statistics of LEDBAT

Start at: 2018-11-30 14:26:40
End at: 2018-11-30 14:27:10
Local clock offset: 0.197 ms
Remote clock offset: -41.89 ms

Below is generated by plot.py at 2018-11-30 15:05:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 8.22 Mbit/s
95th percentile per-packet one-way delay: 145.001 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 8.22 Mbit/s
95th percentile per-packet one-way delay: 145.001 ms
Loss rate: 1.39%

Run 5: Report of LEDBAT — Data Link

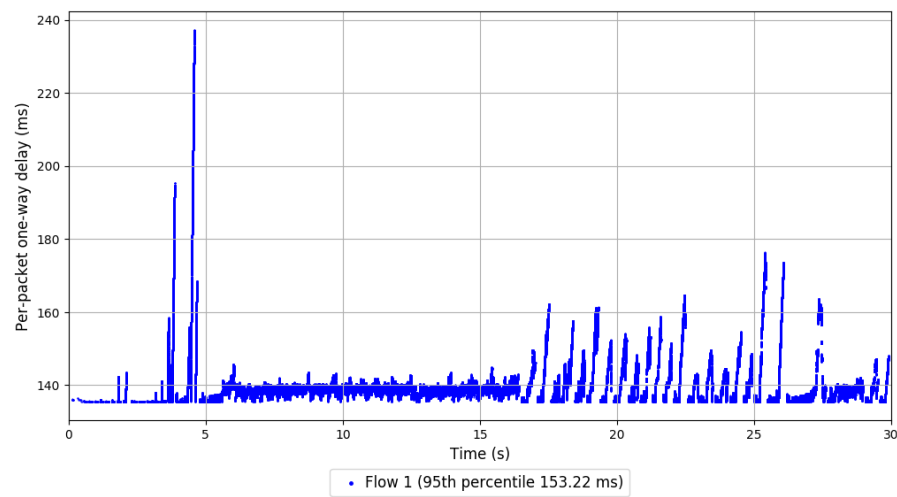
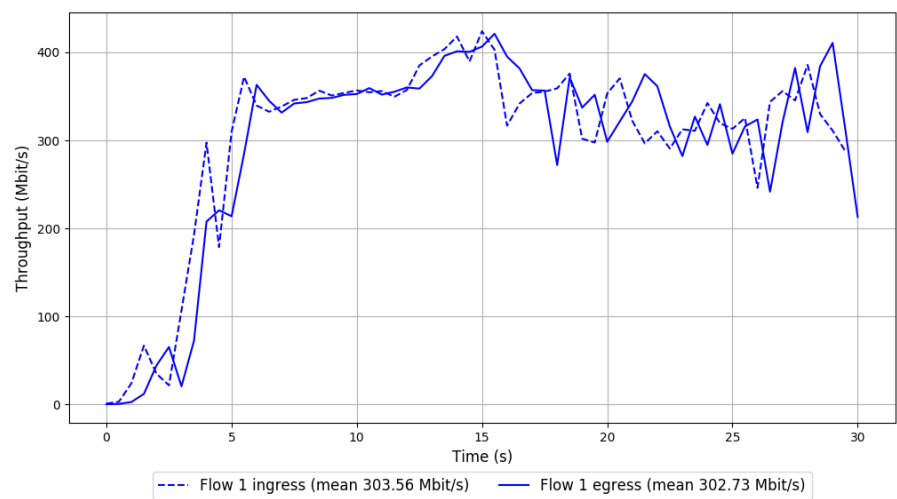


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-11-30 11:40:29
End at: 2018-11-30 11:40:59
Local clock offset: 0.13 ms
Remote clock offset: -41.024 ms

# Below is generated by plot.py at 2018-11-30 15:07:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 302.73 Mbit/s
95th percentile per-packet one-way delay: 153.224 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 302.73 Mbit/s
95th percentile per-packet one-way delay: 153.224 ms
Loss rate: 0.58%
```

Run 1: Report of Indigo-Muses — Data Link

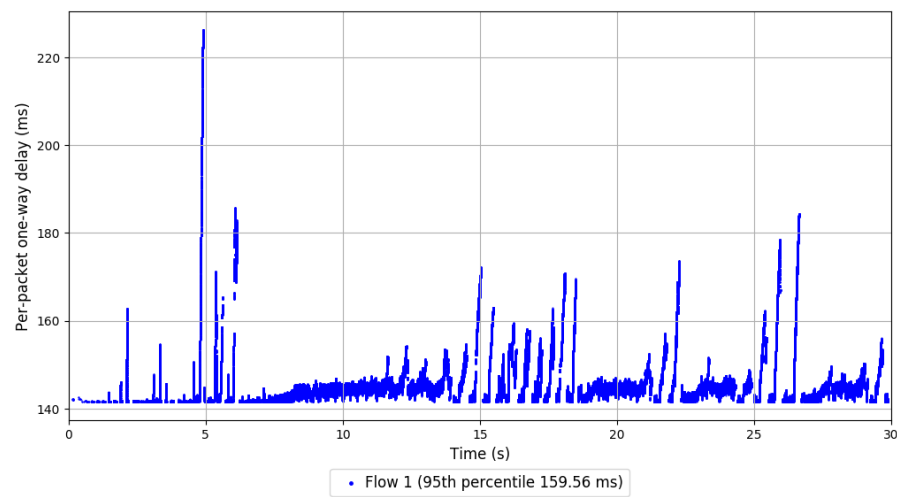
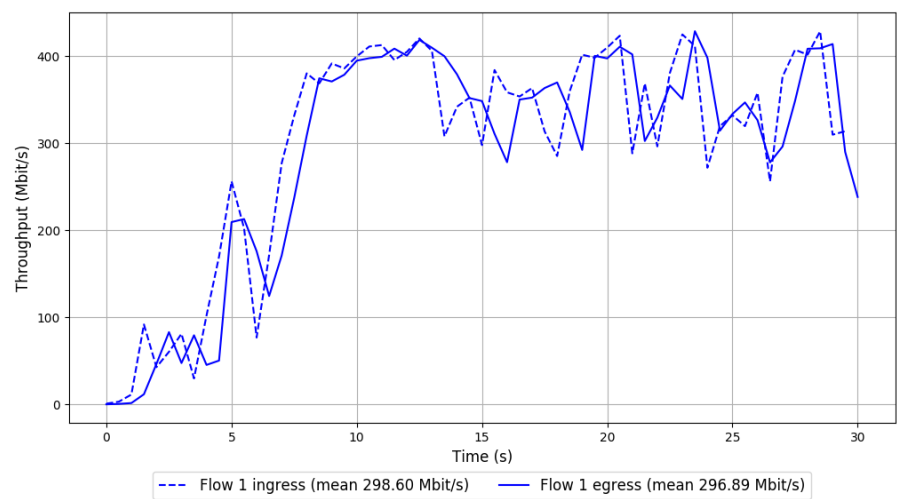


Run 2: Statistics of Indigo-Muses

Start at: 2018-11-30 12:20:49
End at: 2018-11-30 12:21:19
Local clock offset: 3.895 ms
Remote clock offset: -43.557 ms

Below is generated by plot.py at 2018-11-30 15:07:22
Datalink statistics
-- Total of 1 flow:
Average throughput: 296.89 Mbit/s
95th percentile per-packet one-way delay: 159.565 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 296.89 Mbit/s
95th percentile per-packet one-way delay: 159.565 ms
Loss rate: 1.23%

Run 2: Report of Indigo-Muses — Data Link

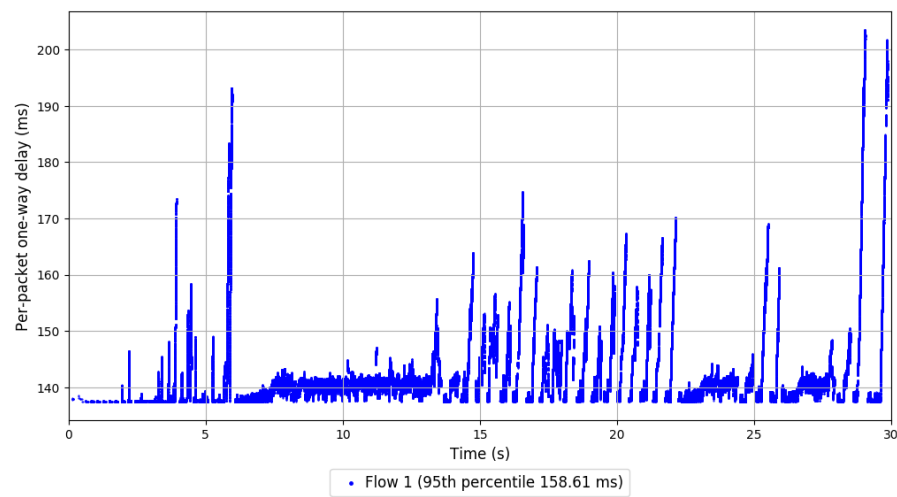
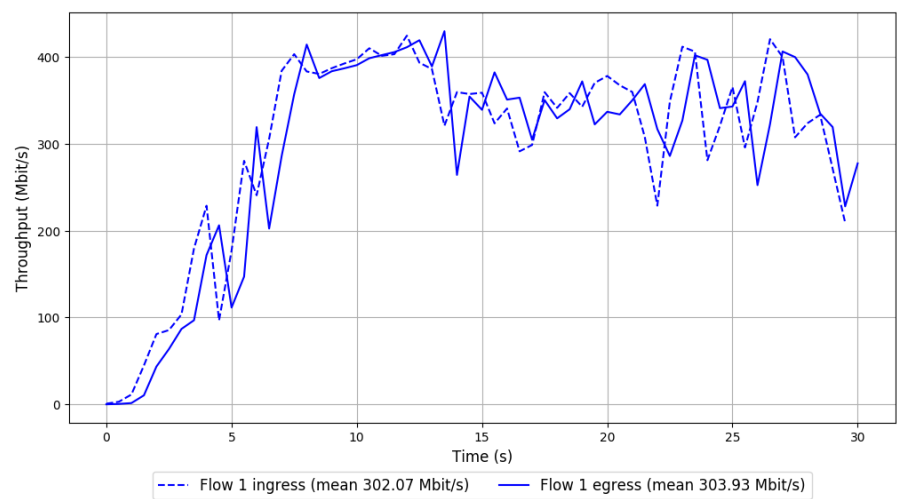


Run 3: Statistics of Indigo-Muses

Start at: 2018-11-30 13:07:14
End at: 2018-11-30 13:07:44
Local clock offset: -1.348 ms
Remote clock offset: -35.15 ms

Below is generated by plot.py at 2018-11-30 15:07:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 303.93 Mbit/s
95th percentile per-packet one-way delay: 158.607 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 303.93 Mbit/s
95th percentile per-packet one-way delay: 158.607 ms
Loss rate: 0.14%

Run 3: Report of Indigo-Muses — Data Link

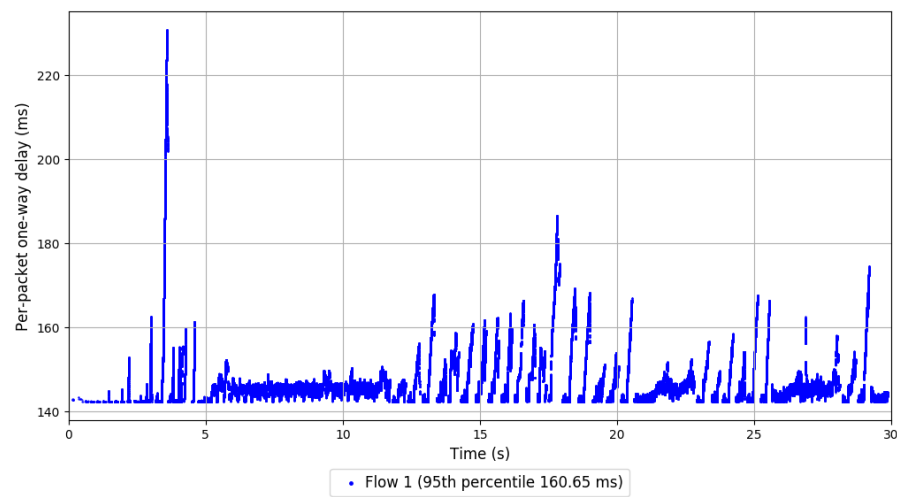
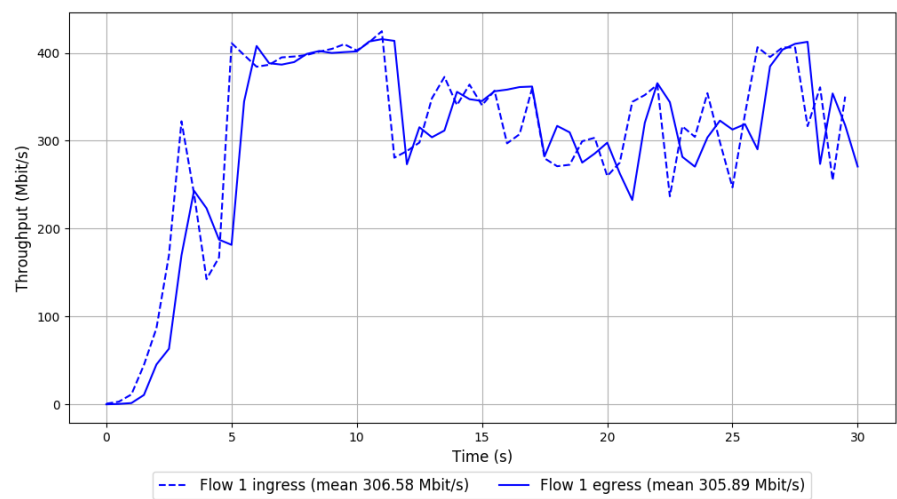


Run 4: Statistics of Indigo-Muses

Start at: 2018-11-30 14:04:58
End at: 2018-11-30 14:05:28
Local clock offset: 2.503 ms
Remote clock offset: -38.802 ms

Below is generated by plot.py at 2018-11-30 15:07:55
Datalink statistics
-- Total of 1 flow:
Average throughput: 305.89 Mbit/s
95th percentile per-packet one-way delay: 160.652 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 305.89 Mbit/s
95th percentile per-packet one-way delay: 160.652 ms
Loss rate: 0.94%

Run 4: Report of Indigo-Muses — Data Link

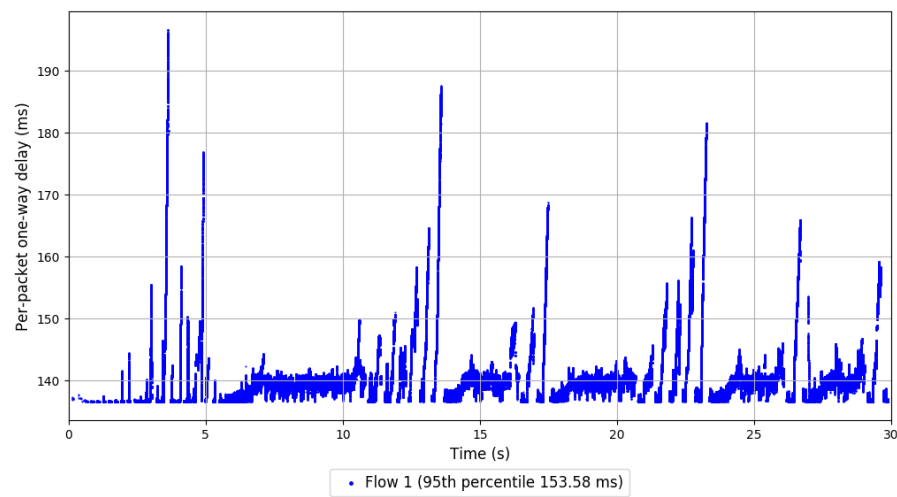
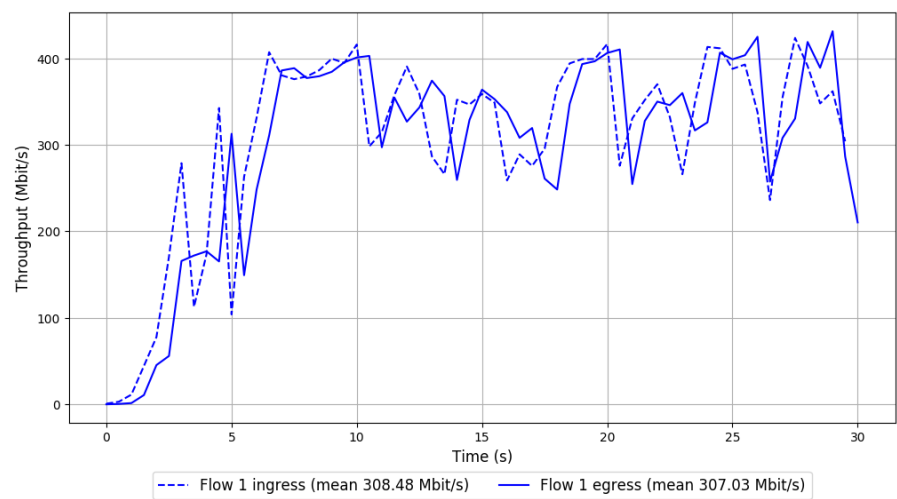


Run 5: Statistics of Indigo-Muses

Start at: 2018-11-30 14:40:00
End at: 2018-11-30 14:40:30
Local clock offset: 1.602 ms
Remote clock offset: -32.767 ms

Below is generated by plot.py at 2018-11-30 15:08:23
Datalink statistics
-- Total of 1 flow:
Average throughput: 307.03 Mbit/s
95th percentile per-packet one-way delay: 153.582 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 307.03 Mbit/s
95th percentile per-packet one-way delay: 153.582 ms
Loss rate: 1.09%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-11-30 11:02:27

End at: 2018-11-30 11:02:57

Local clock offset: 0.301 ms

Remote clock offset: -43.219 ms

Below is generated by plot.py at 2018-11-30 15:08:57

Datalink statistics

-- Total of 1 flow:

Average throughput: 374.90 Mbit/s

95th percentile per-packet one-way delay: 142.479 ms

Loss rate: 0.86%

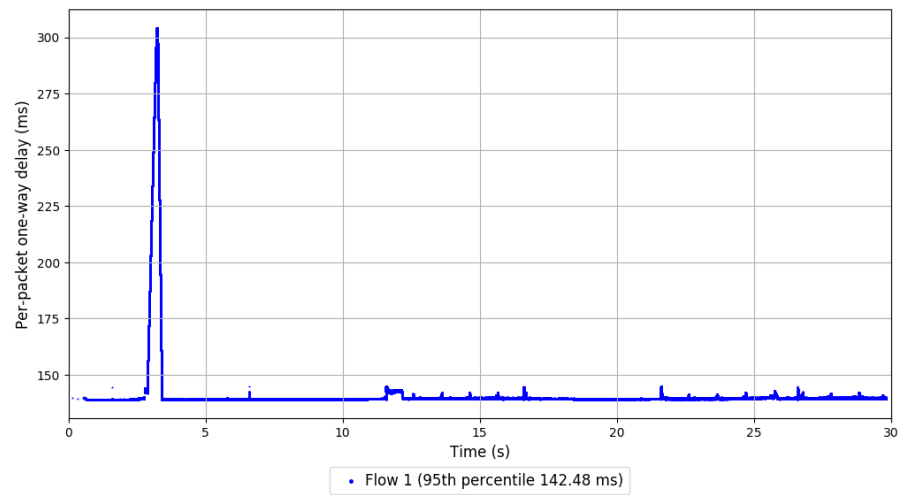
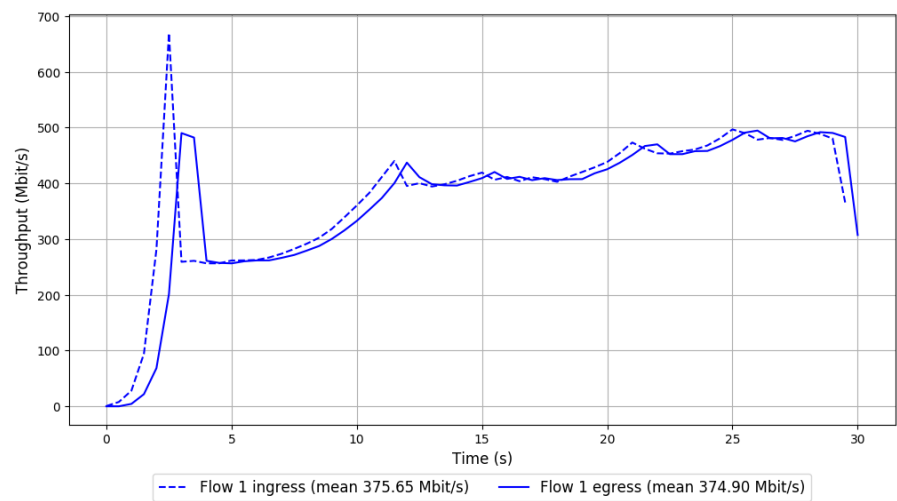
-- Flow 1:

Average throughput: 374.90 Mbit/s

95th percentile per-packet one-way delay: 142.479 ms

Loss rate: 0.86%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-11-30 11:53:48

End at: 2018-11-30 11:54:18

Local clock offset: 2.719 ms

Remote clock offset: -39.634 ms

Below is generated by plot.py at 2018-11-30 15:09:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 385.81 Mbit/s

95th percentile per-packet one-way delay: 141.550 ms

Loss rate: 0.86%

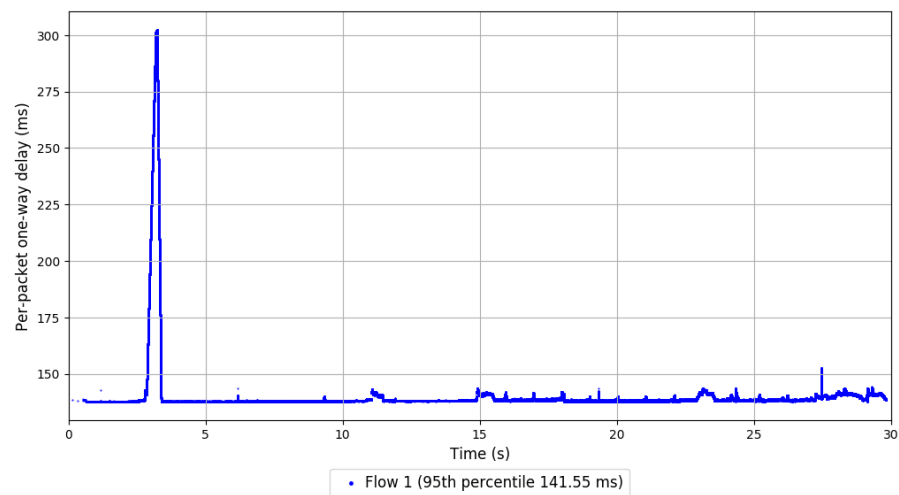
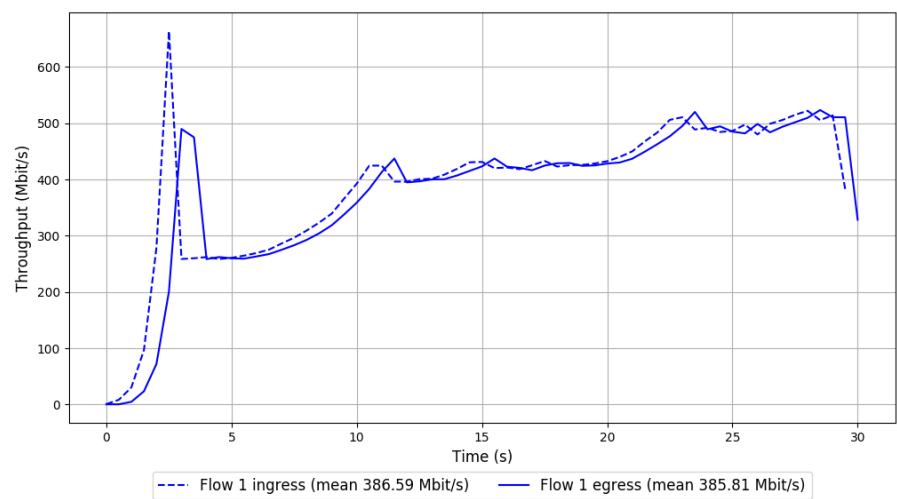
-- Flow 1:

Average throughput: 385.81 Mbit/s

95th percentile per-packet one-way delay: 141.550 ms

Loss rate: 0.86%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-11-30 12:39:57

End at: 2018-11-30 12:40:27

Local clock offset: 4.83 ms

Remote clock offset: -41.97 ms

Below is generated by plot.py at 2018-11-30 15:09:11

Datalink statistics

-- Total of 1 flow:

Average throughput: 341.91 Mbit/s

95th percentile per-packet one-way delay: 151.698 ms

Loss rate: 1.33%

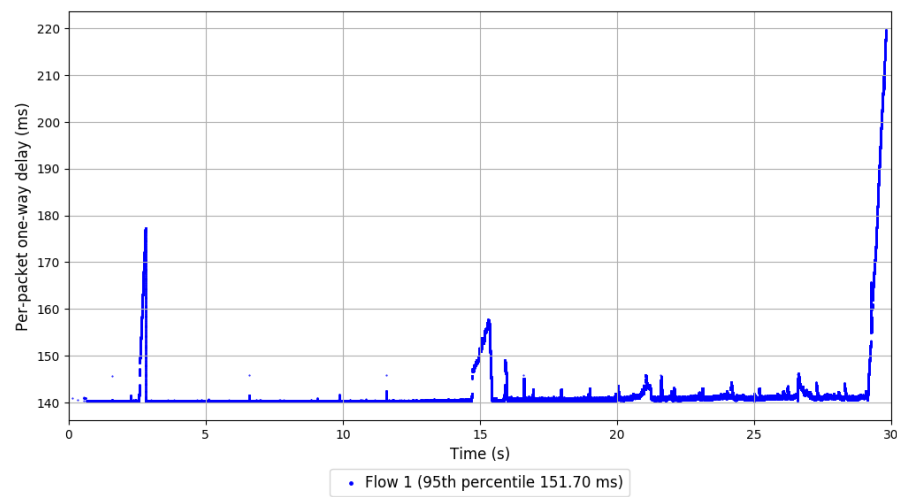
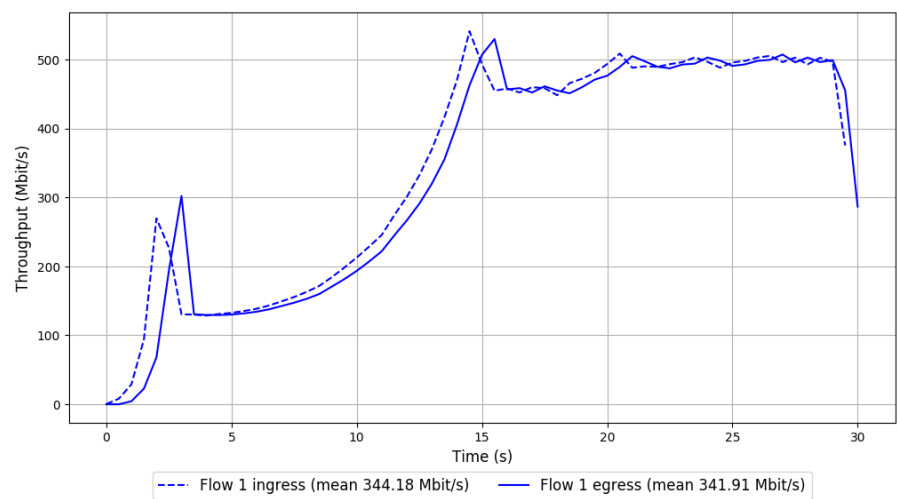
-- Flow 1:

Average throughput: 341.91 Mbit/s

95th percentile per-packet one-way delay: 151.698 ms

Loss rate: 1.33%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-11-30 13:32:28

End at: 2018-11-30 13:32:58

Local clock offset: 1.47 ms

Remote clock offset: -41.355 ms

Below is generated by plot.py at 2018-11-30 15:11:13

Datalink statistics

-- Total of 1 flow:

Average throughput: 328.92 Mbit/s

95th percentile per-packet one-way delay: 157.863 ms

Loss rate: 1.02%

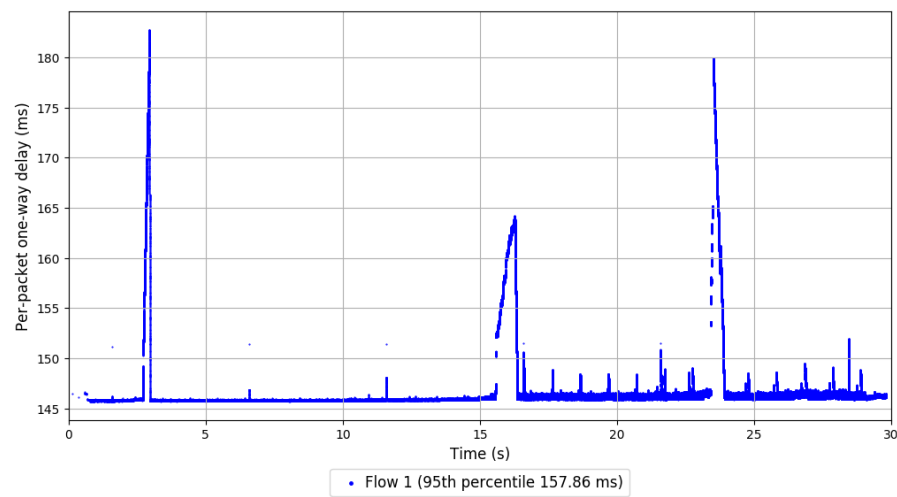
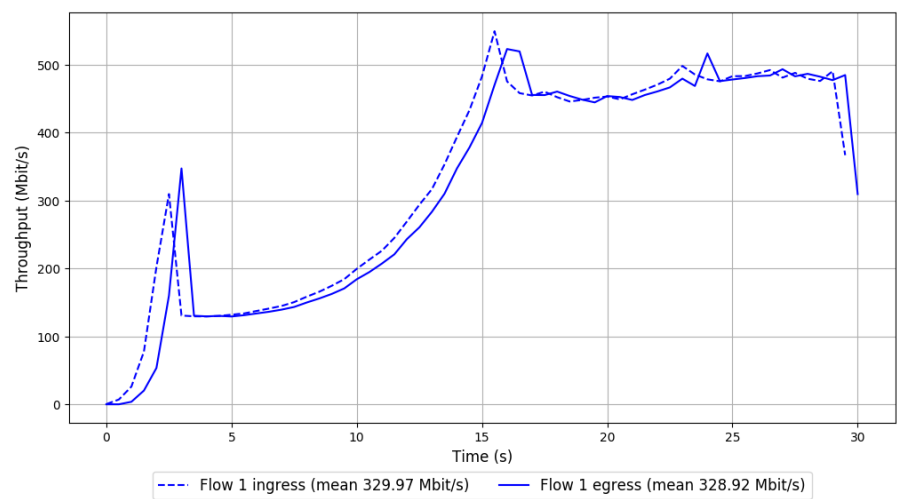
-- Flow 1:

Average throughput: 328.92 Mbit/s

95th percentile per-packet one-way delay: 157.863 ms

Loss rate: 1.02%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-11-30 14:18:15

End at: 2018-11-30 14:18:45

Local clock offset: 3.103 ms

Remote clock offset: -39.002 ms

Below is generated by plot.py at 2018-11-30 15:12:10

Datalink statistics

-- Total of 1 flow:

Average throughput: 383.61 Mbit/s

95th percentile per-packet one-way delay: 164.034 ms

Loss rate: 0.95%

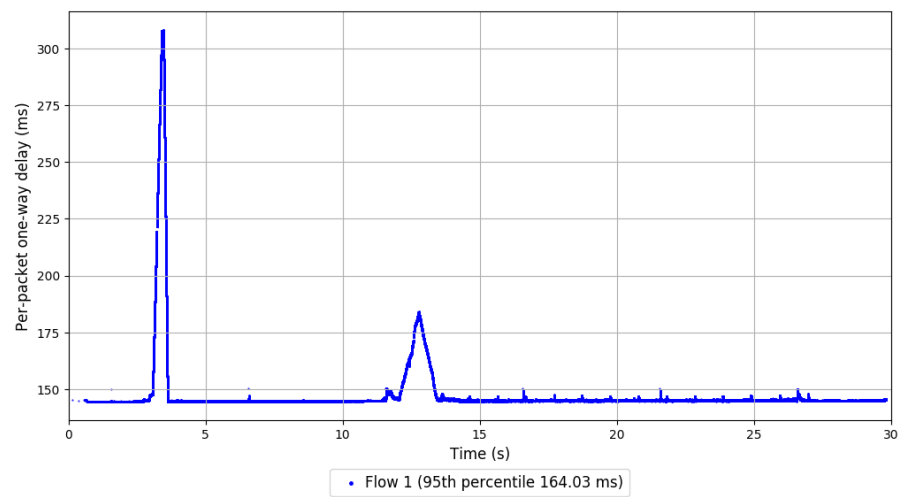
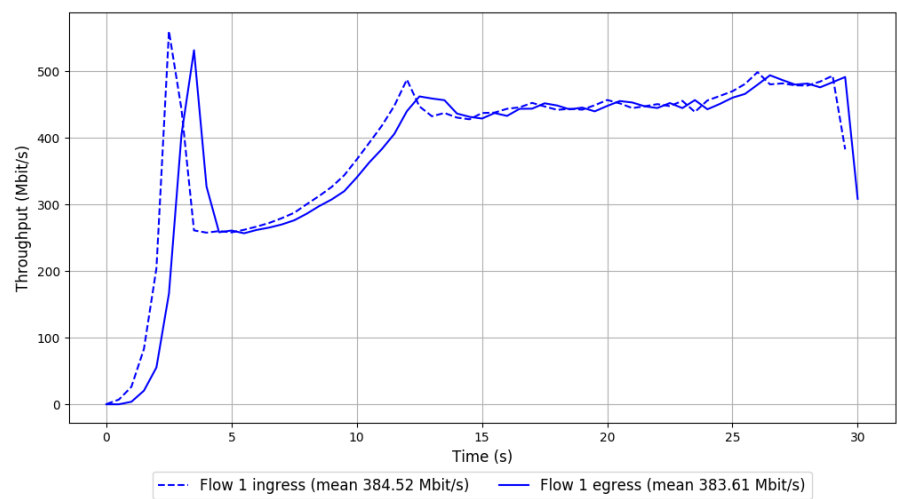
-- Flow 1:

Average throughput: 383.61 Mbit/s

95th percentile per-packet one-way delay: 164.034 ms

Loss rate: 0.95%

Run 5: Report of PCC-Allegro — Data Link

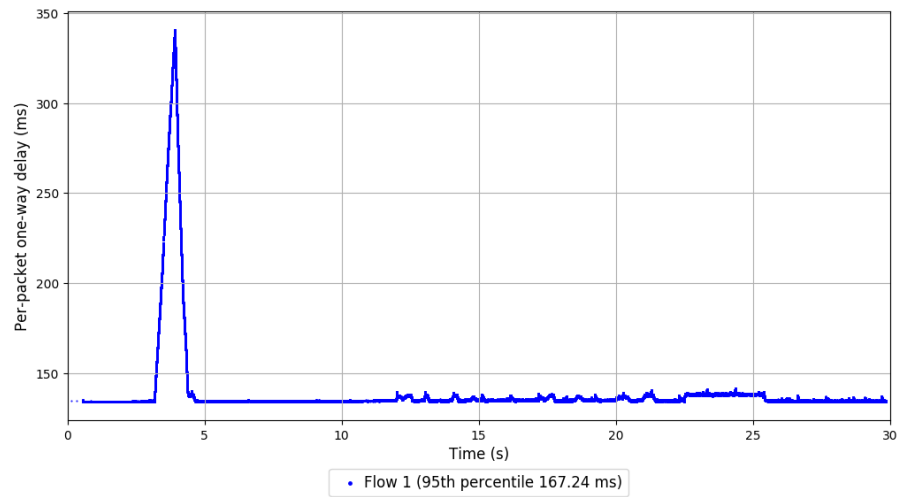
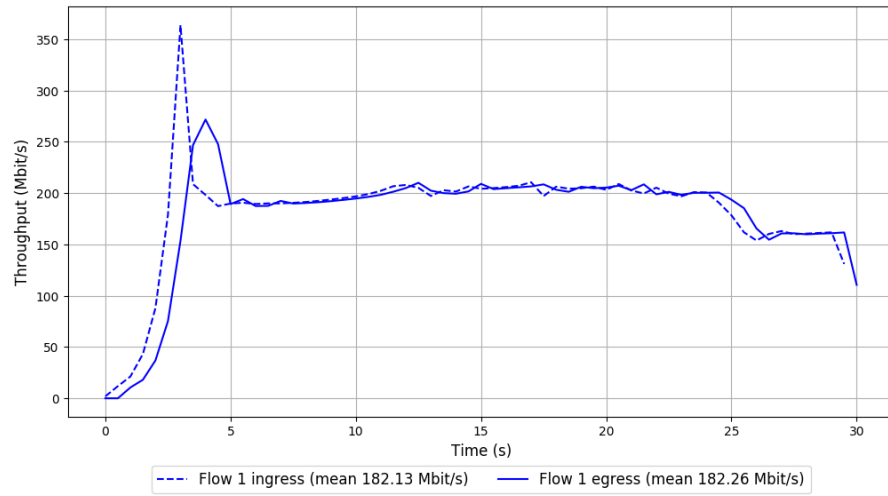


```
Run 1: Statistics of PCC-Expr

Start at: 2018-11-30 10:58:05
End at: 2018-11-30 10:58:35
Local clock offset: 2.311 ms
Remote clock offset: -36.41 ms

# Below is generated by plot.py at 2018-11-30 15:12:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 182.26 Mbit/s
95th percentile per-packet one-way delay: 167.240 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 182.26 Mbit/s
95th percentile per-packet one-way delay: 167.240 ms
Loss rate: 0.59%
```

Run 1: Report of PCC-Expr — Data Link

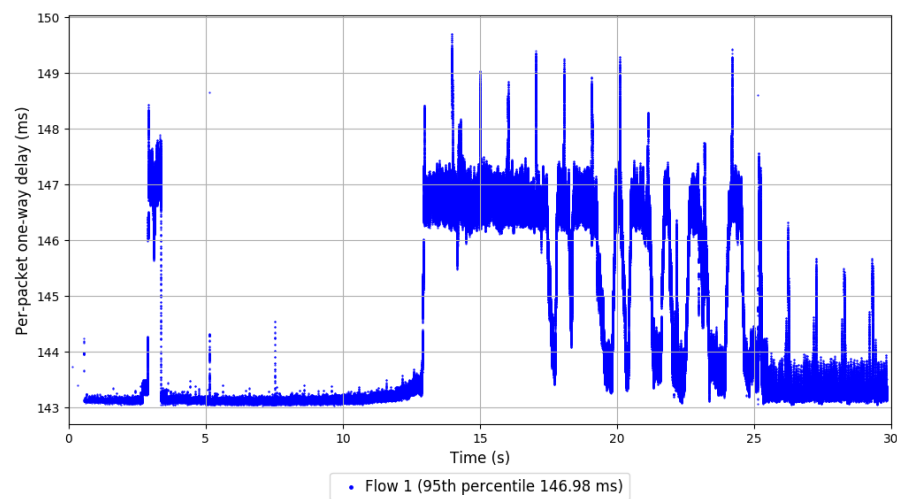
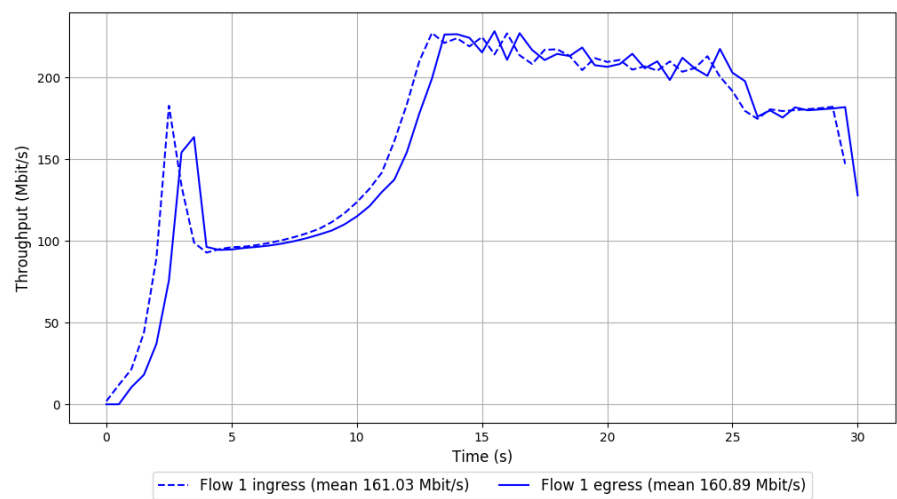


Run 2: Statistics of PCC-Expr

Start at: 2018-11-30 11:49:59
End at: 2018-11-30 11:50:29
Local clock offset: 2.07 ms
Remote clock offset: -46.875 ms

Below is generated by plot.py at 2018-11-30 15:12:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 160.89 Mbit/s
95th percentile per-packet one-way delay: 146.981 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 160.89 Mbit/s
95th percentile per-packet one-way delay: 146.981 ms
Loss rate: 0.74%

Run 2: Report of PCC-Expr — Data Link

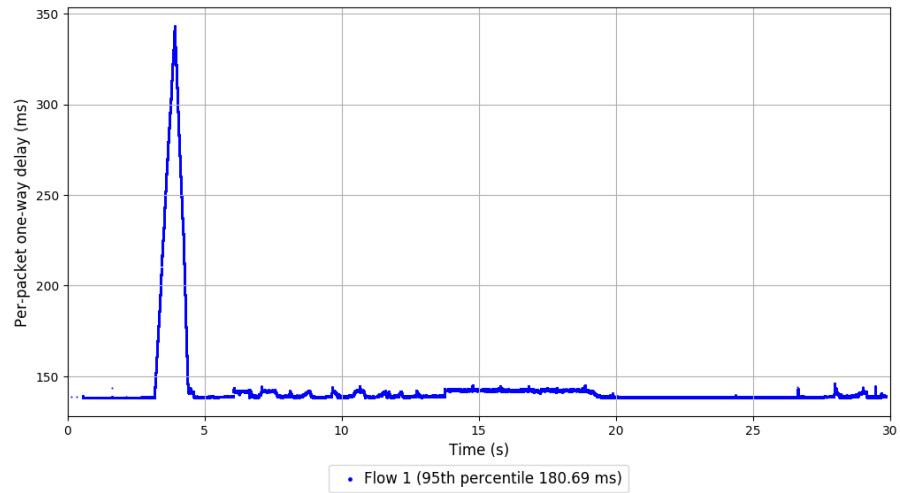
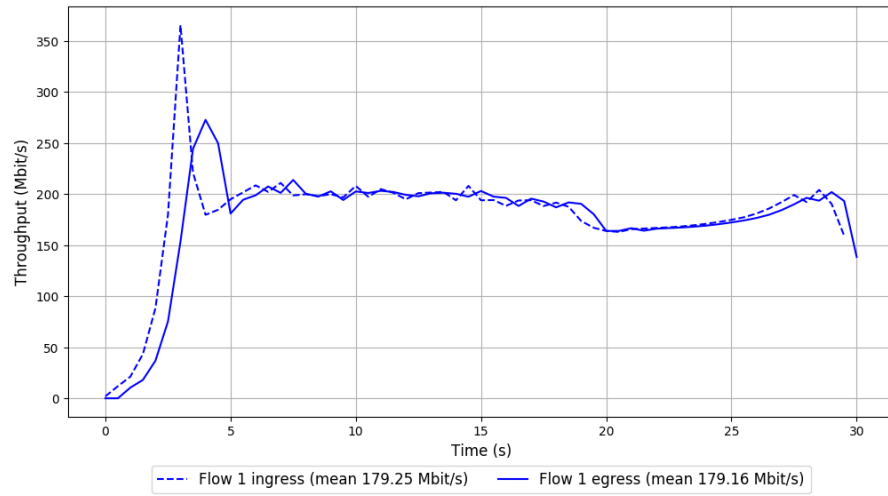


Run 3: Statistics of PCC-Expr

Start at: 2018-11-30 12:35:35
End at: 2018-11-30 12:36:05
Local clock offset: 2.543 ms
Remote clock offset: -42.046 ms

Below is generated by plot.py at 2018-11-30 15:12:15
Datalink statistics
-- Total of 1 flow:
Average throughput: 179.16 Mbit/s
95th percentile per-packet one-way delay: 180.687 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 179.16 Mbit/s
95th percentile per-packet one-way delay: 180.687 ms
Loss rate: 0.71%

Run 3: Report of PCC-Expr — Data Link

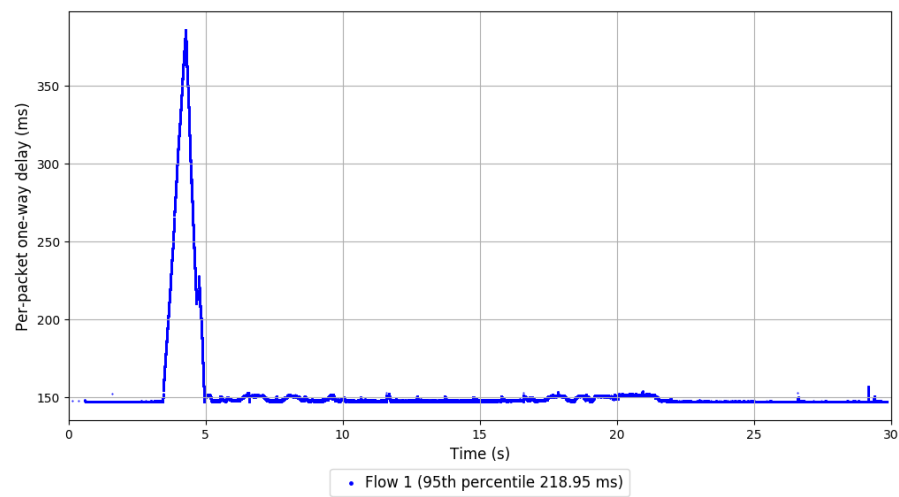
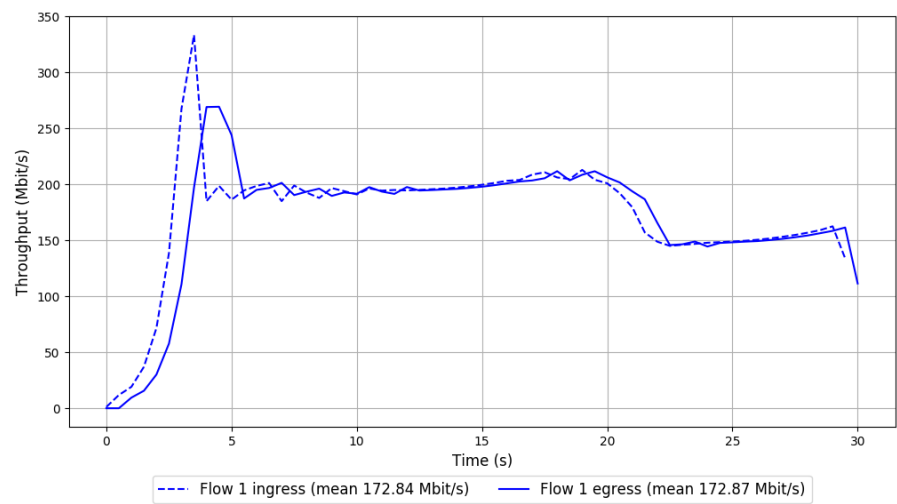


Run 4: Statistics of PCC-Expr

Start at: 2018-11-30 13:22:47
End at: 2018-11-30 13:23:18
Local clock offset: 1.397 ms
Remote clock offset: -42.554 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 172.87 Mbit/s
95th percentile per-packet one-way delay: 218.952 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 172.87 Mbit/s
95th percentile per-packet one-way delay: 218.952 ms
Loss rate: 0.69%

Run 4: Report of PCC-Expr — Data Link

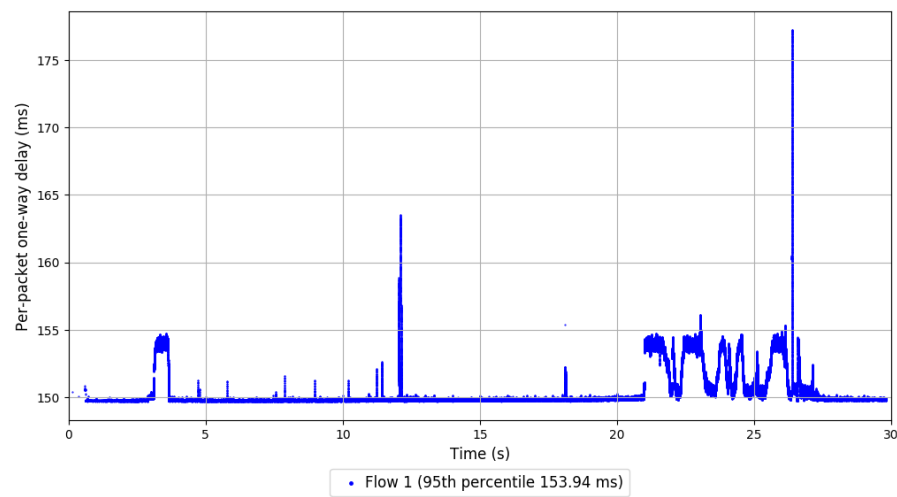
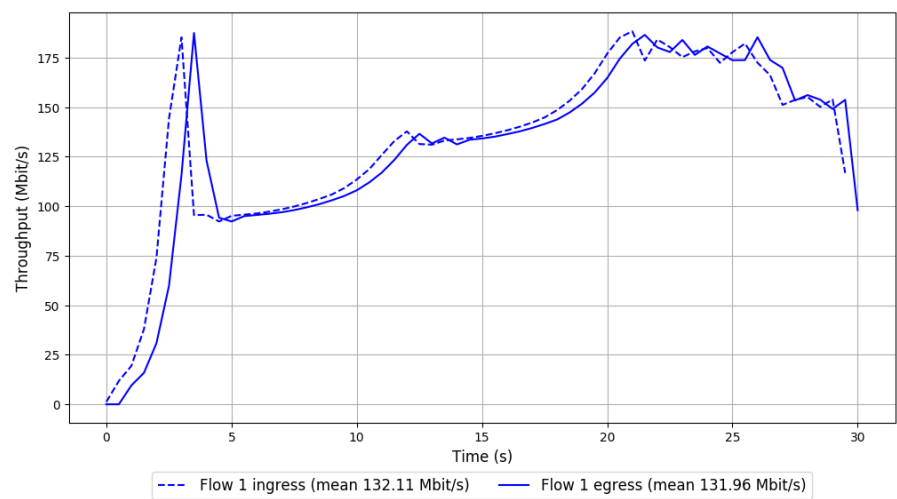


Run 5: Statistics of PCC-Expr

Start at: 2018-11-30 14:14:38
End at: 2018-11-30 14:15:08
Local clock offset: 2.658 ms
Remote clock offset: -44.662 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 131.96 Mbit/s
95th percentile per-packet one-way delay: 153.935 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 131.96 Mbit/s
95th percentile per-packet one-way delay: 153.935 ms
Loss rate: 0.82%

Run 5: Report of PCC-Expr — Data Link

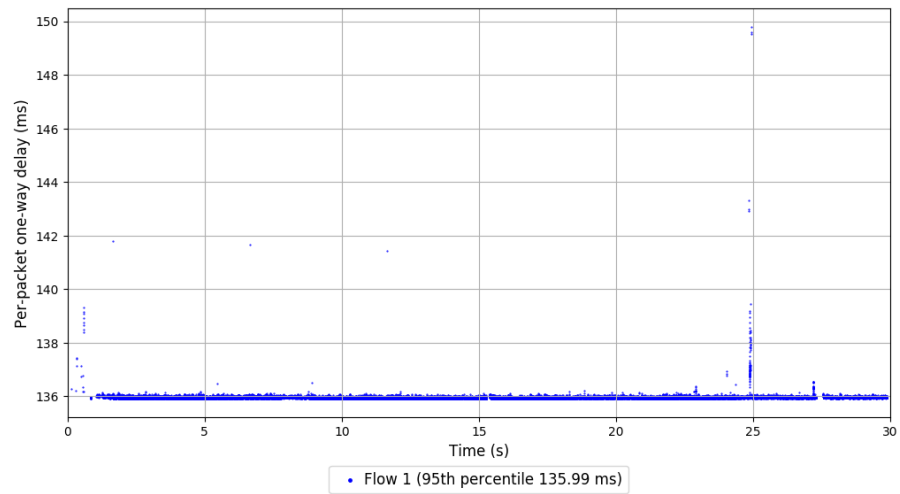
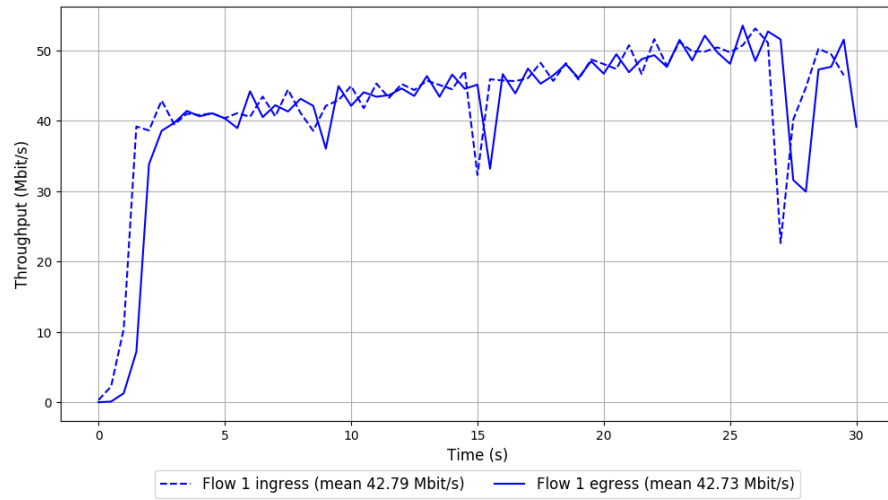


Run 1: Statistics of QUIC Cubic

Start at: 2018-11-30 10:54:34
End at: 2018-11-30 10:55:04
Local clock offset: 4.008 ms
Remote clock offset: -38.094 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 42.73 Mbit/s
95th percentile per-packet one-way delay: 135.993 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 42.73 Mbit/s
95th percentile per-packet one-way delay: 135.993 ms
Loss rate: 0.78%

Run 1: Report of QUIC Cubic — Data Link

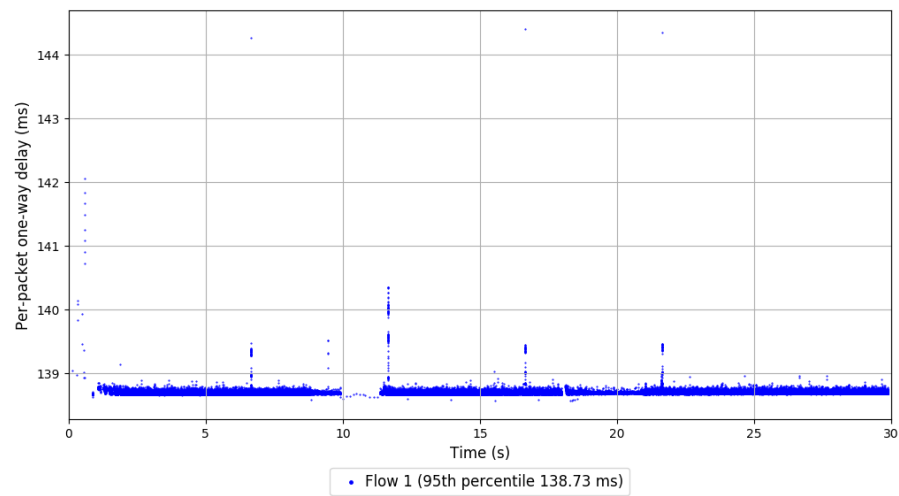
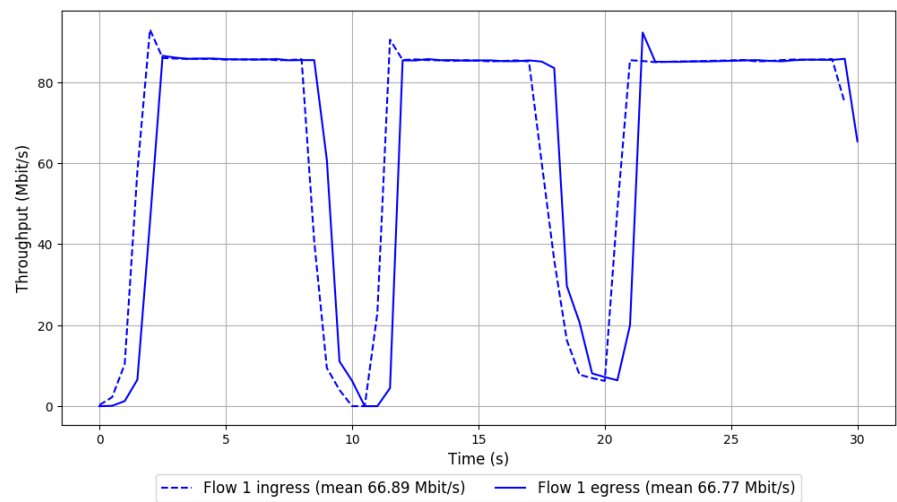


Run 2: Statistics of QUIC Cubic

Start at: 2018-11-30 11:46:24
End at: 2018-11-30 11:46:54
Local clock offset: 1.368 ms
Remote clock offset: -42.798 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 66.77 Mbit/s
95th percentile per-packet one-way delay: 138.727 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 66.77 Mbit/s
95th percentile per-packet one-way delay: 138.727 ms
Loss rate: 0.83%

Run 2: Report of QUIC Cubic — Data Link

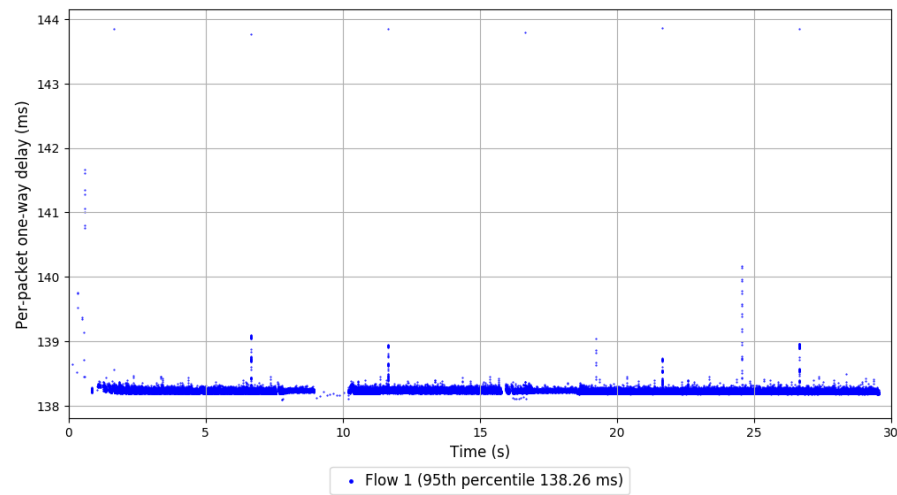
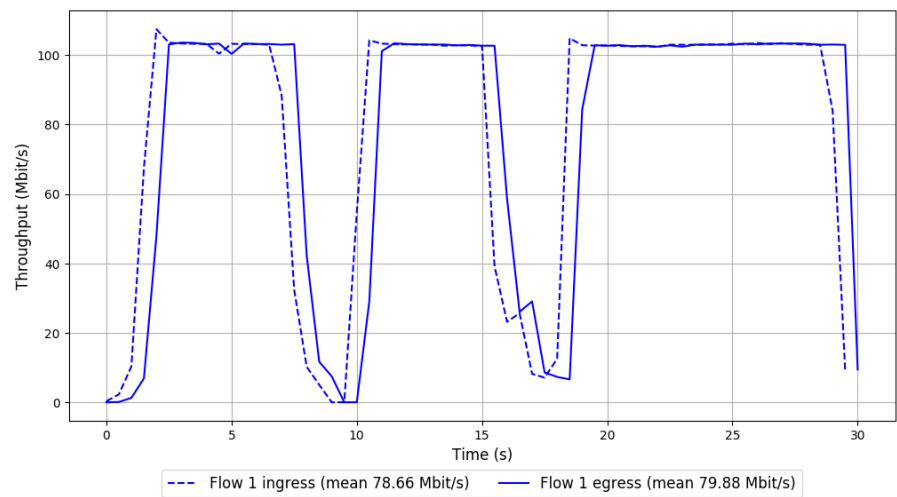


Run 3: Statistics of QUIC Cubic

Start at: 2018-11-30 12:31:59
End at: 2018-11-30 12:32:29
Local clock offset: 2.411 ms
Remote clock offset: -42.108 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 79.88 Mbit/s
95th percentile per-packet one-way delay: 138.257 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 79.88 Mbit/s
95th percentile per-packet one-way delay: 138.257 ms
Loss rate: 0.19%

Run 3: Report of QUIC Cubic — Data Link

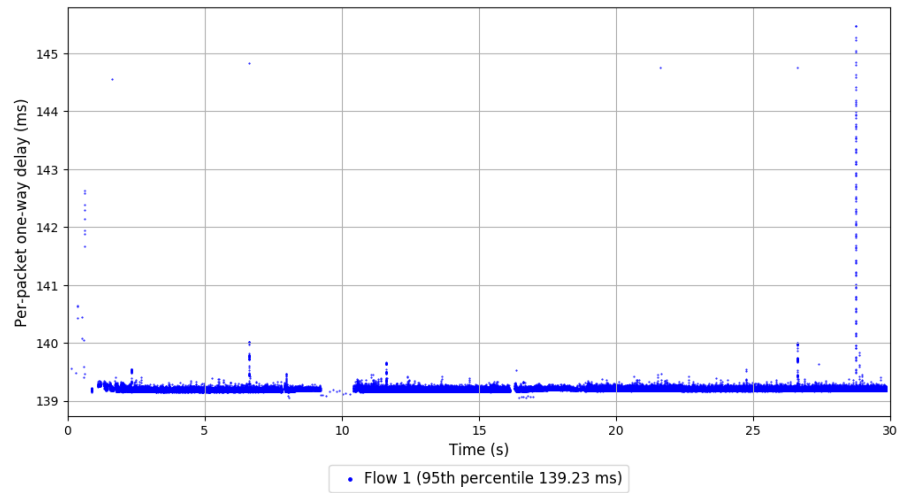
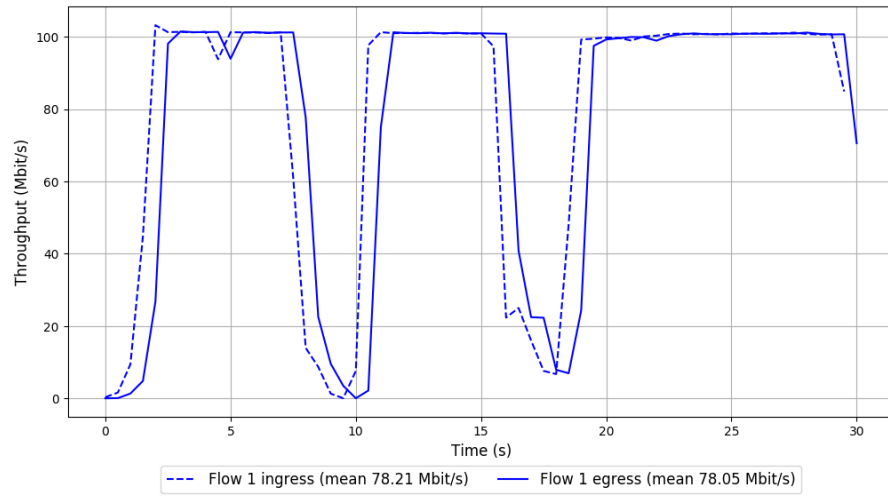


Run 4: Statistics of QUIC Cubic

Start at: 2018-11-30 13:13:23
End at: 2018-11-30 13:13:53
Local clock offset: 0.435 ms
Remote clock offset: -34.849 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 78.05 Mbit/s
95th percentile per-packet one-way delay: 139.227 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 78.05 Mbit/s
95th percentile per-packet one-way delay: 139.227 ms
Loss rate: 0.90%

Run 4: Report of QUIC Cubic — Data Link

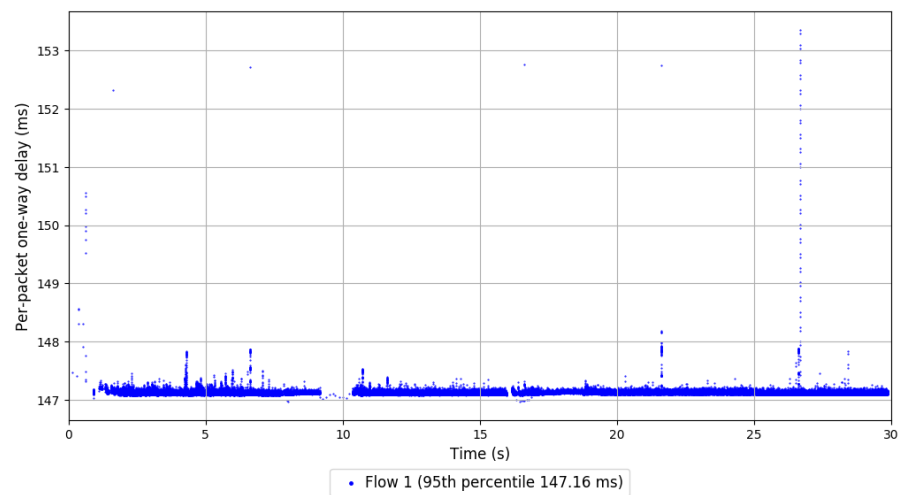
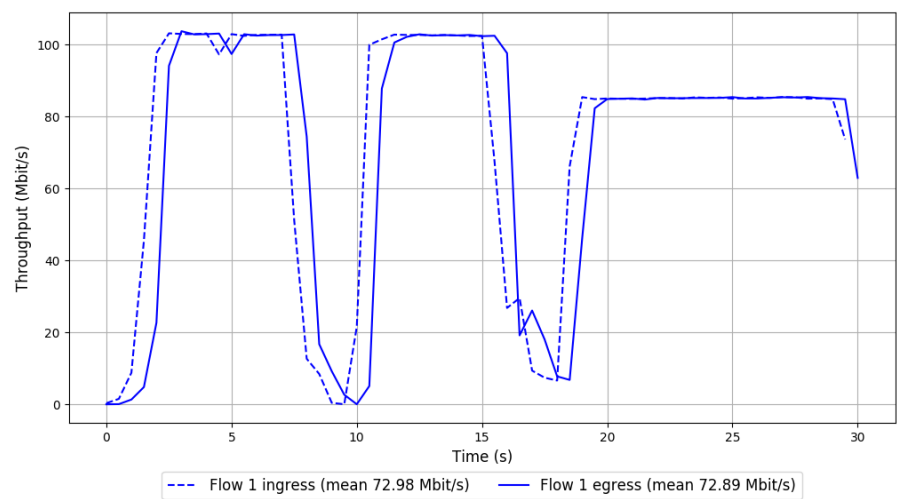


Run 5: Statistics of QUIC Cubic

Start at: 2018-11-30 14:11:13
End at: 2018-11-30 14:11:43
Local clock offset: 2.571 ms
Remote clock offset: -42.181 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 72.89 Mbit/s
95th percentile per-packet one-way delay: 147.155 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 72.89 Mbit/s
95th percentile per-packet one-way delay: 147.155 ms
Loss rate: 0.82%

Run 5: Report of QUIC Cubic — Data Link

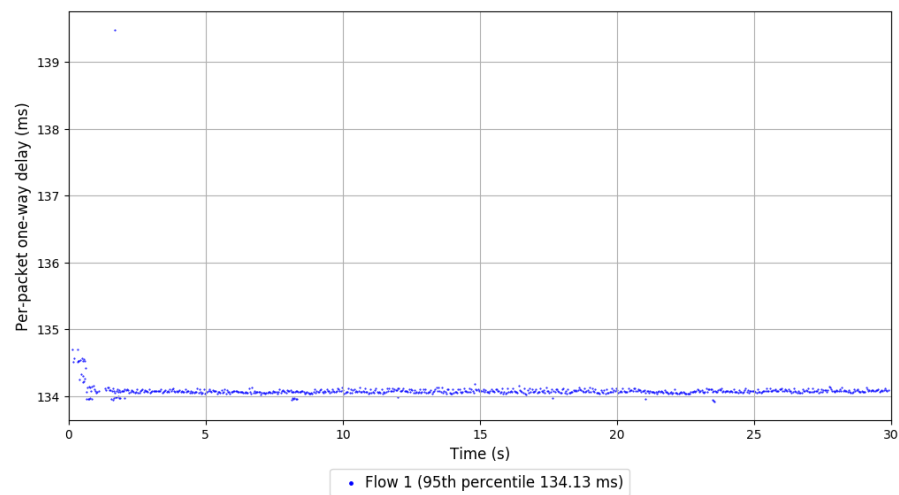
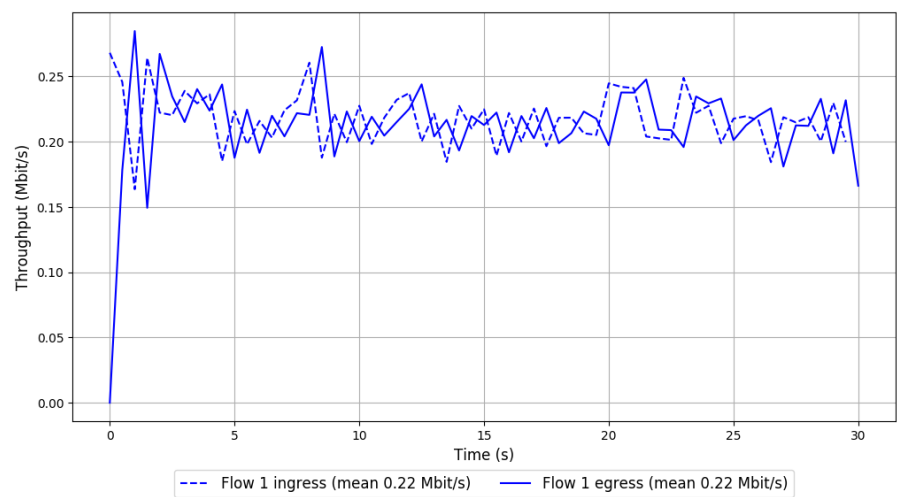


Run 1: Statistics of SCReAM

Start at: 2018-11-30 11:37:28
End at: 2018-11-30 11:37:58
Local clock offset: 1.263 ms
Remote clock offset: -38.528 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 134.127 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 134.127 ms
Loss rate: 0.64%

Run 1: Report of SReAM — Data Link

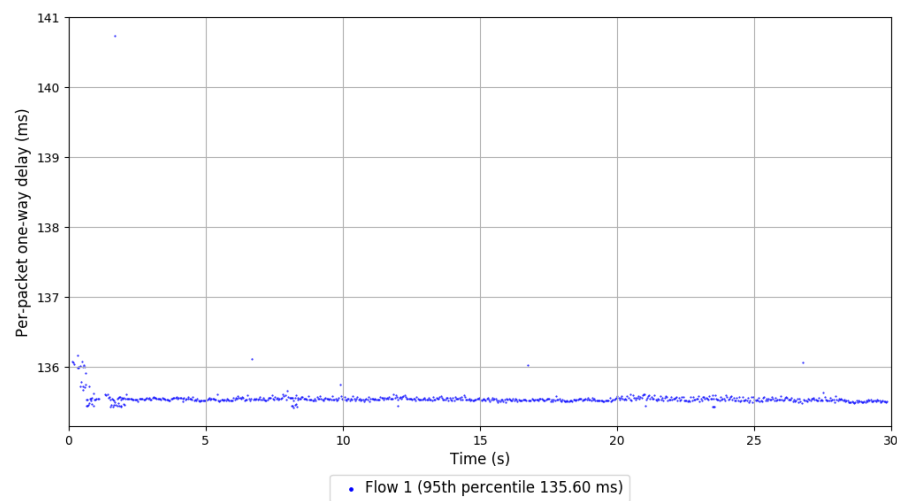
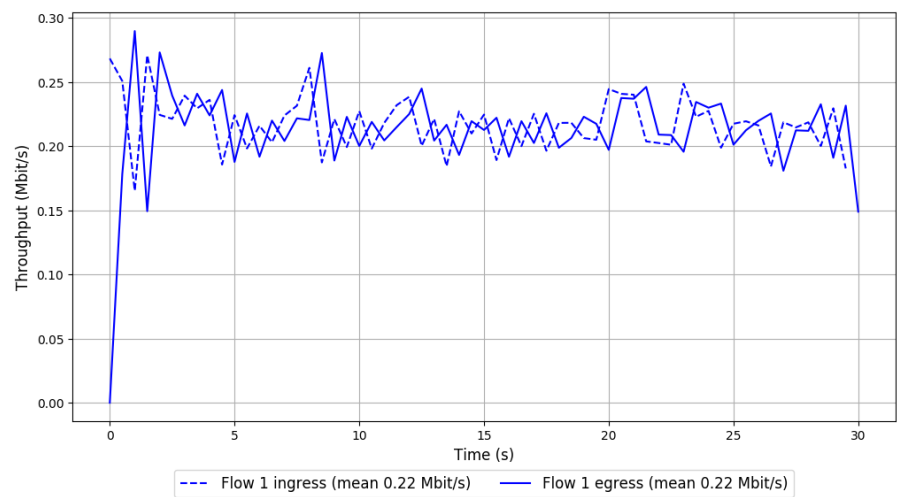


Run 2: Statistics of SCReAM

Start at: 2018-11-30 12:18:06
End at: 2018-11-30 12:18:36
Local clock offset: 4.675 ms
Remote clock offset: -38.105 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.599 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.599 ms
Loss rate: 0.64%

Run 2: Report of SReAM — Data Link

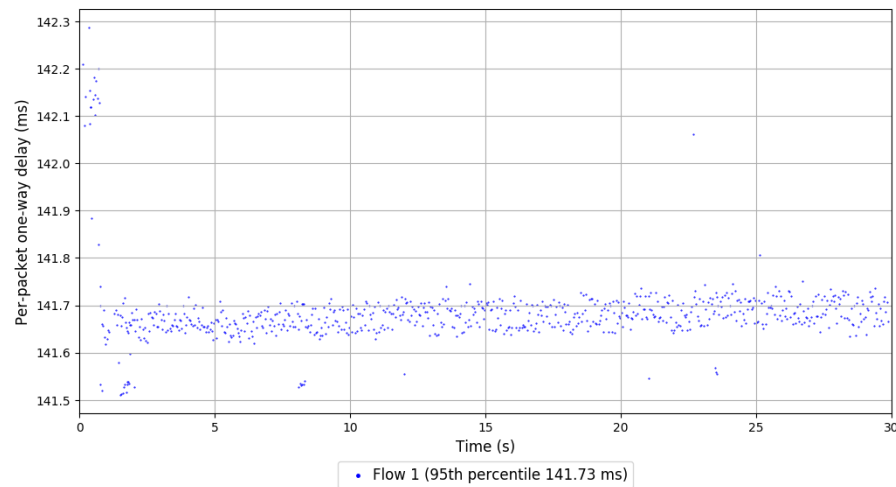
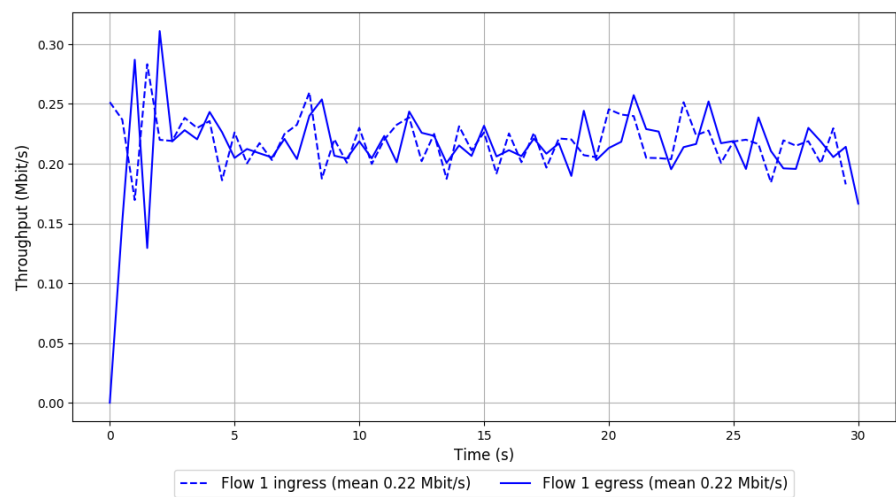


Run 3: Statistics of SCReAM

Start at: 2018-11-30 13:04:30
End at: 2018-11-30 13:05:00
Local clock offset: -0.042 ms
Remote clock offset: -39.531 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 141.727 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 141.727 ms
Loss rate: 0.64%

Run 3: Report of SReAM — Data Link

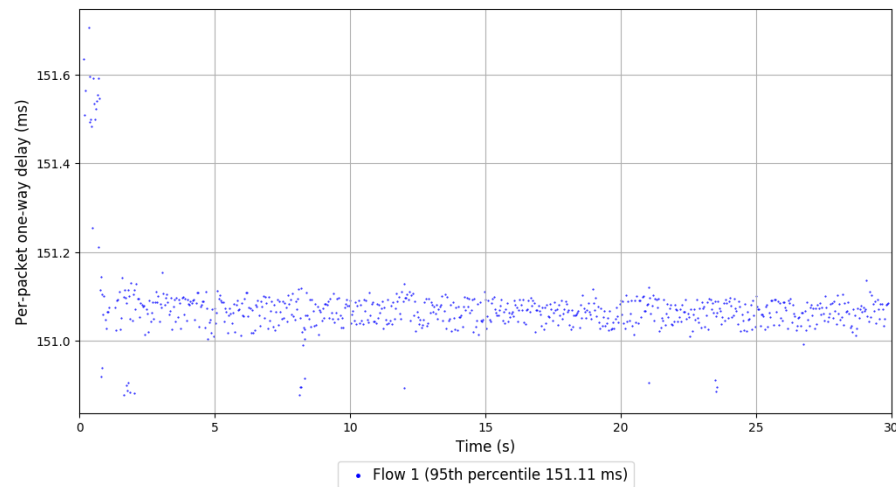
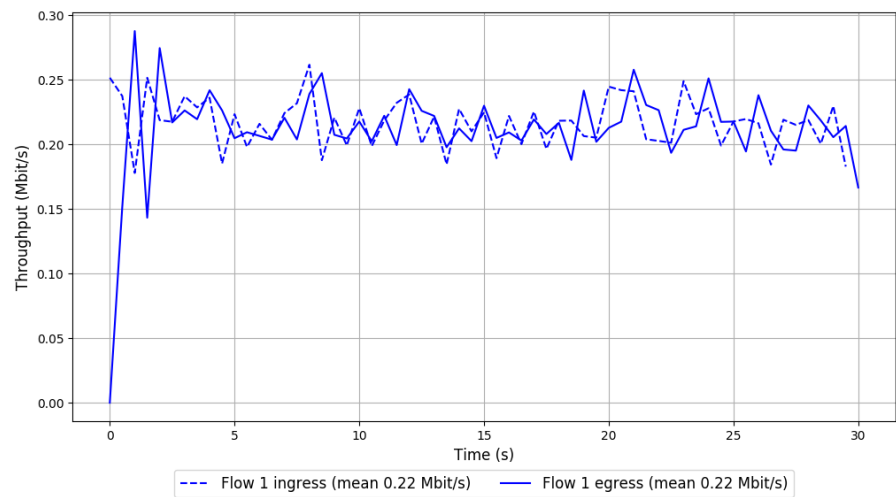


Run 4: Statistics of SCReAM

Start at: 2018-11-30 14:02:23
End at: 2018-11-30 14:02:53
Local clock offset: 0.14 ms
Remote clock offset: -48.462 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 151.111 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 151.111 ms
Loss rate: 0.64%

Run 4: Report of SReAM — Data Link

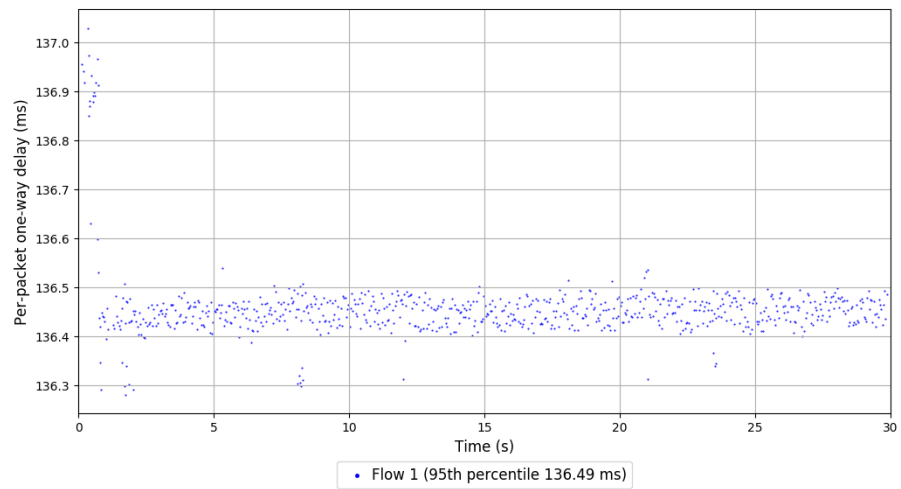
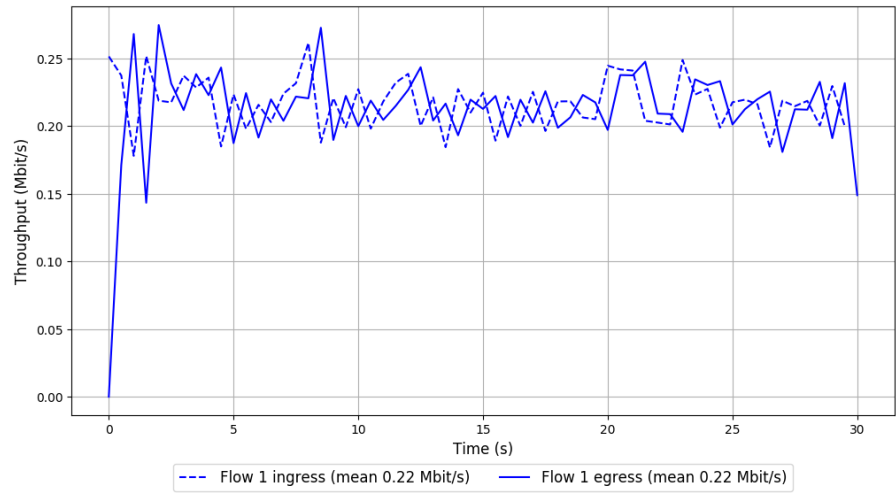


Run 5: Statistics of SCReAM

Start at: 2018-11-30 14:37:07
End at: 2018-11-30 14:37:37
Local clock offset: -0.449 ms
Remote clock offset: -33.312 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.494 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.494 ms
Loss rate: 0.77%

Run 5: Report of SReAM — Data Link

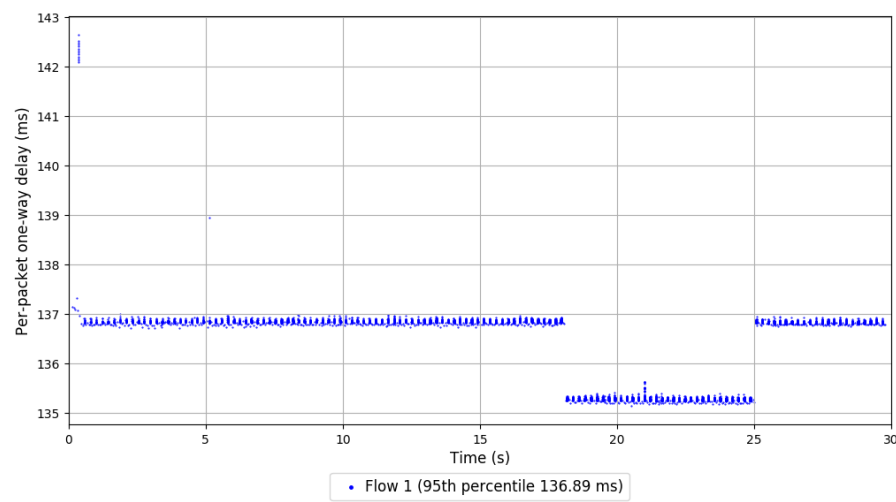
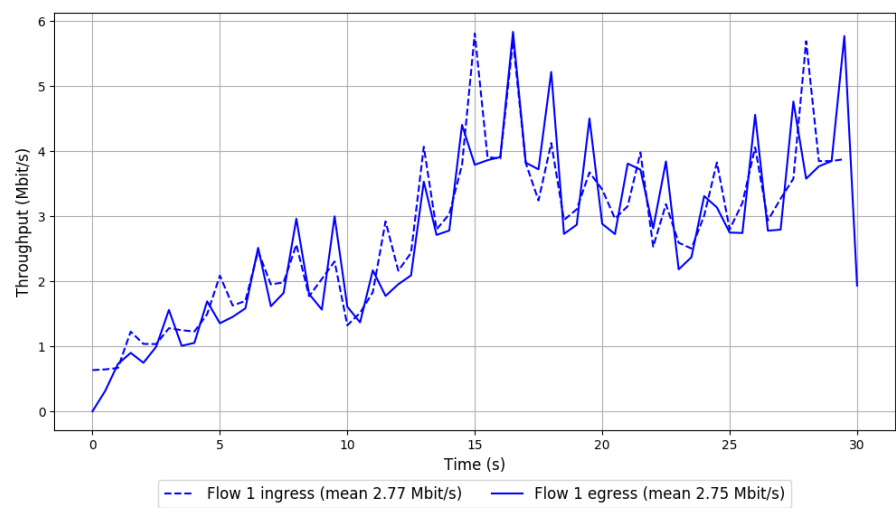


Run 1: Statistics of Sprout

Start at: 2018-11-30 11:26:31
End at: 2018-11-30 11:27:01
Local clock offset: 1.015 ms
Remote clock offset: -40.116 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.75 Mbit/s
95th percentile per-packet one-way delay: 136.888 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 2.75 Mbit/s
95th percentile per-packet one-way delay: 136.888 ms
Loss rate: 1.18%

Run 1: Report of Sprout — Data Link

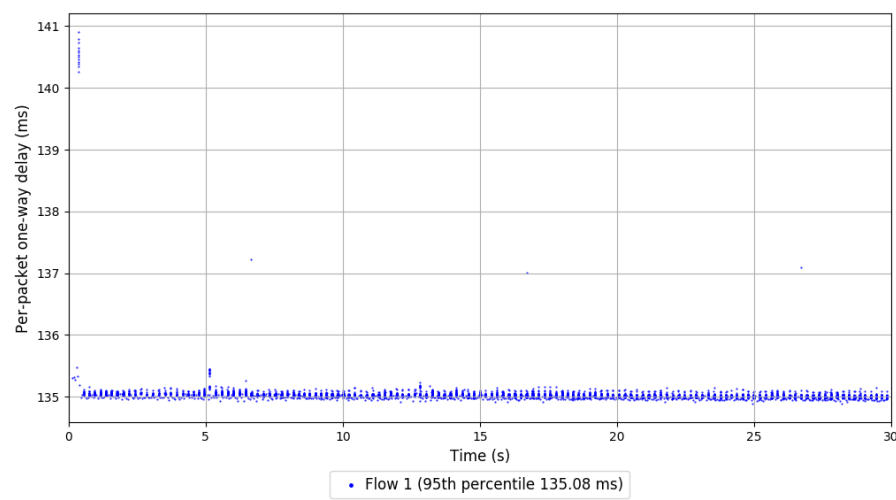
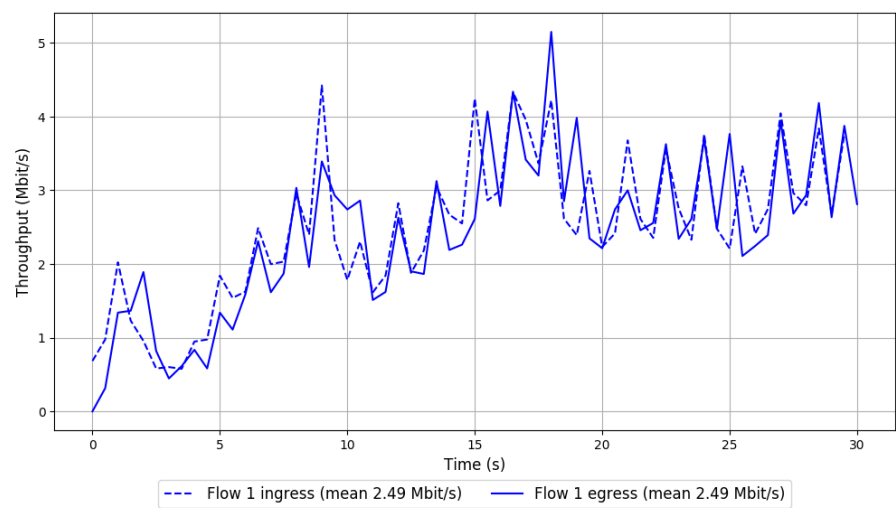


Run 2: Statistics of Sprout

Start at: 2018-11-30 12:12:22
End at: 2018-11-30 12:12:52
Local clock offset: 2.057 ms
Remote clock offset: -39.935 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 135.083 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 135.083 ms
Loss rate: 0.64%

Run 2: Report of Sprout — Data Link

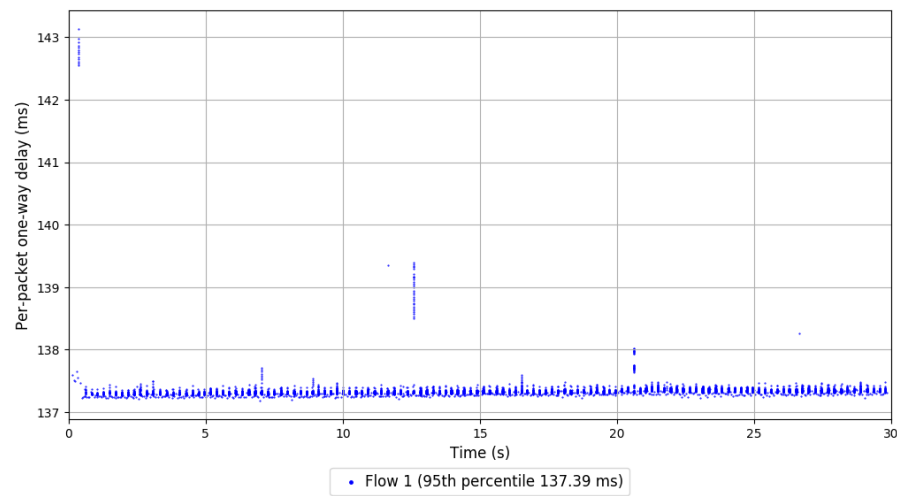
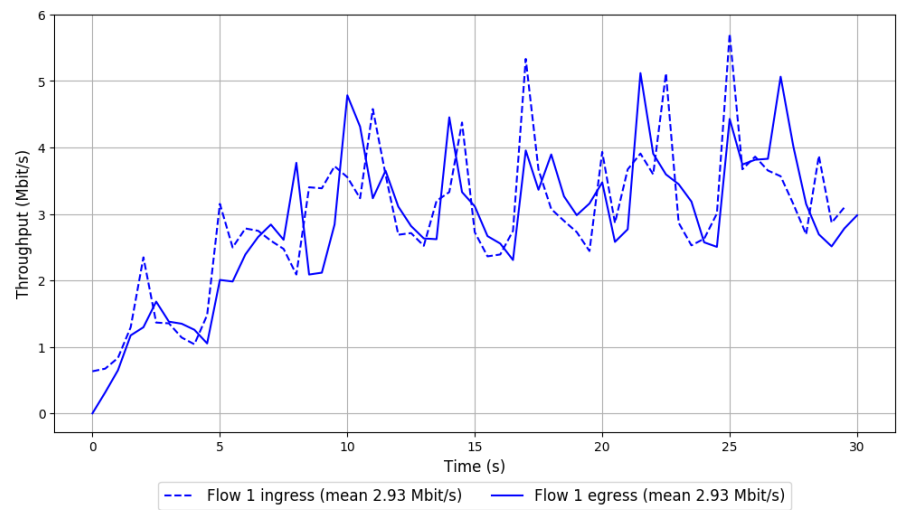


Run 3: Statistics of Sprout

Start at: 2018-11-30 12:59:19
End at: 2018-11-30 12:59:49
Local clock offset: 0.942 ms
Remote clock offset: -34.721 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 137.392 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 137.392 ms
Loss rate: 0.90%

Run 3: Report of Sprout — Data Link

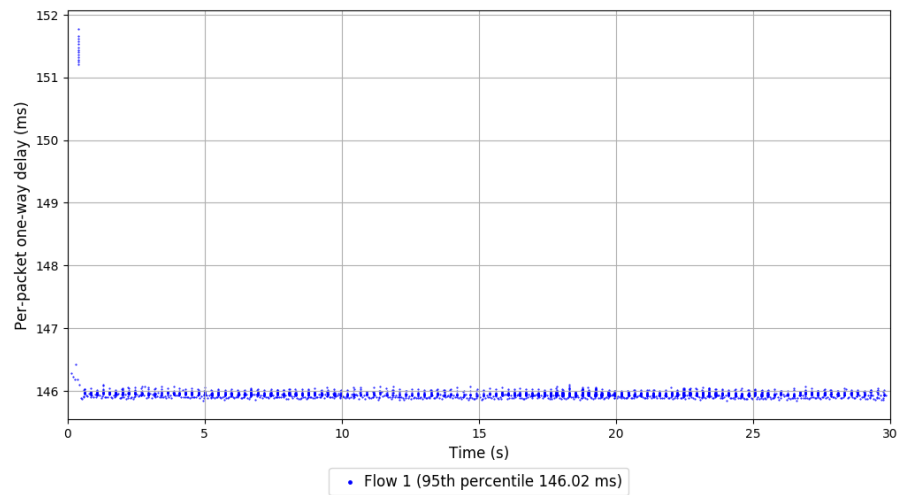
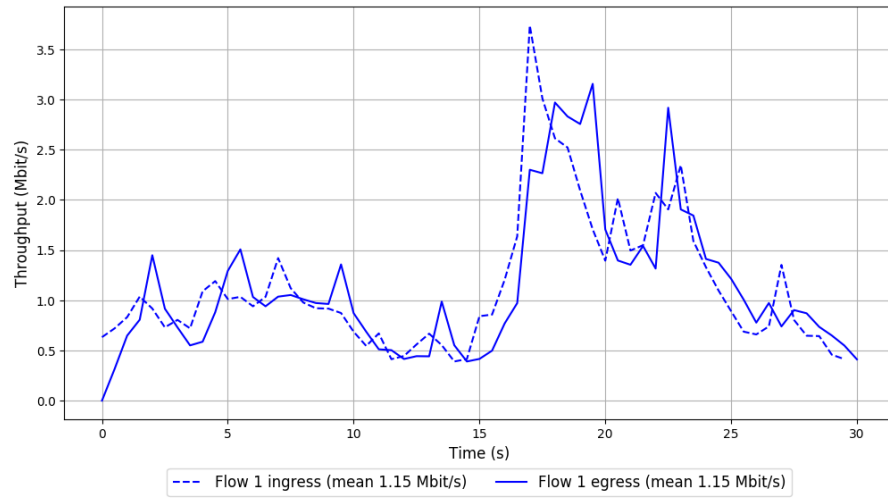


Run 4: Statistics of Sprout

Start at: 2018-11-30 13:51:12
End at: 2018-11-30 13:51:42
Local clock offset: 1.868 ms
Remote clock offset: -41.689 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 146.020 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 146.020 ms
Loss rate: 0.30%

Run 4: Report of Sprout — Data Link

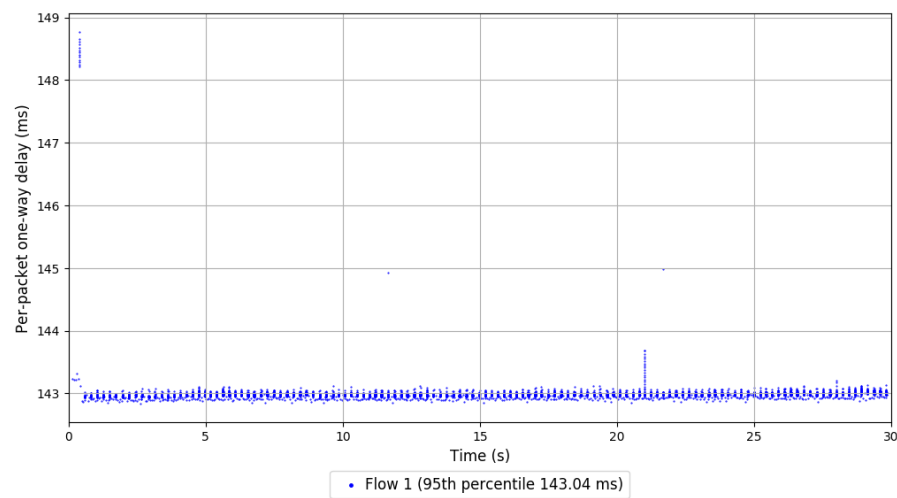
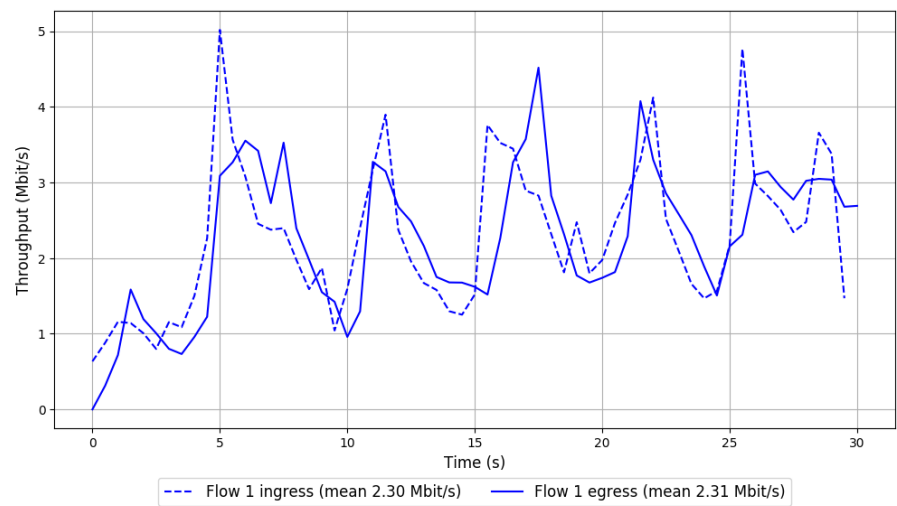


Run 5: Statistics of Sprout

Start at: 2018-11-30 14:31:32
End at: 2018-11-30 14:32:02
Local clock offset: 1.721 ms
Remote clock offset: -39.409 ms

Below is generated by plot.py at 2018-11-30 15:12:52
Datalink statistics
-- Total of 1 flow:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 143.040 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 143.040 ms
Loss rate: 0.08%

Run 5: Report of Sprout — Data Link

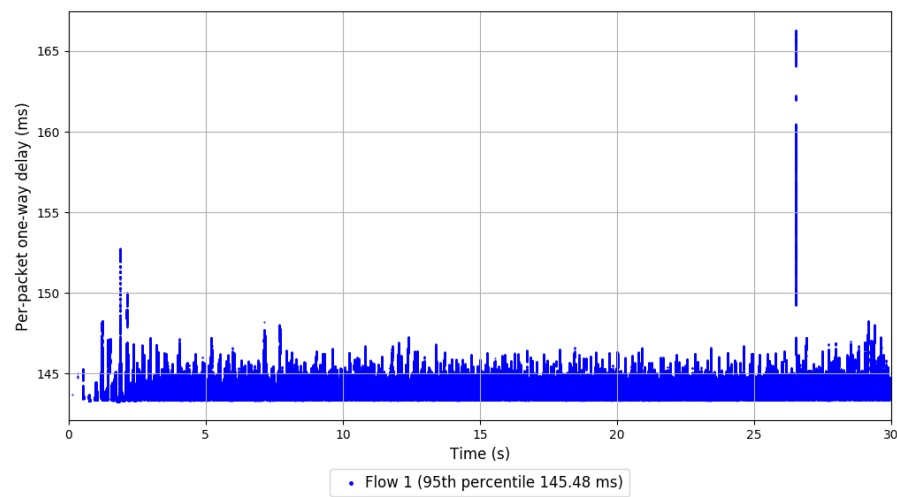
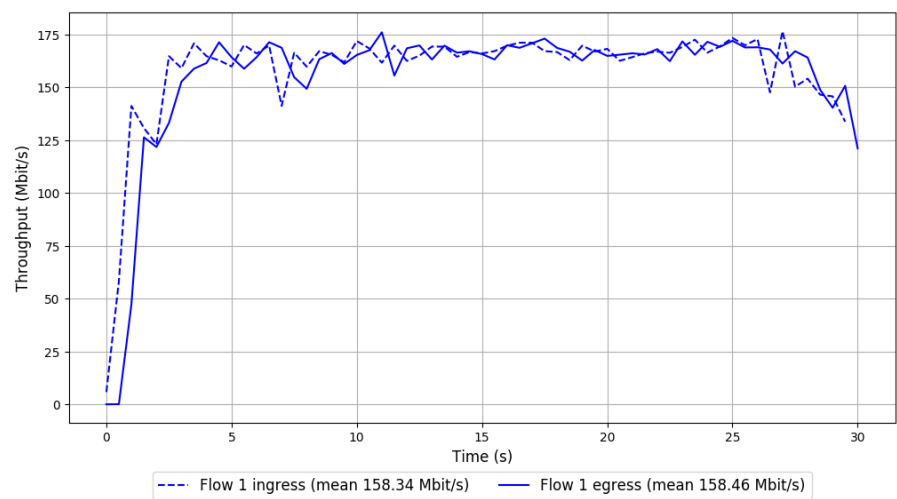


Run 1: Statistics of TaoVA-100x

Start at: 2018-11-30 10:55:56
End at: 2018-11-30 10:56:26
Local clock offset: 2.664 ms
Remote clock offset: -45.249 ms

Below is generated by plot.py at 2018-11-30 15:15:18
Datalink statistics
-- Total of 1 flow:
Average throughput: 158.46 Mbit/s
95th percentile per-packet one-way delay: 145.484 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 158.46 Mbit/s
95th percentile per-packet one-way delay: 145.484 ms
Loss rate: 0.59%

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

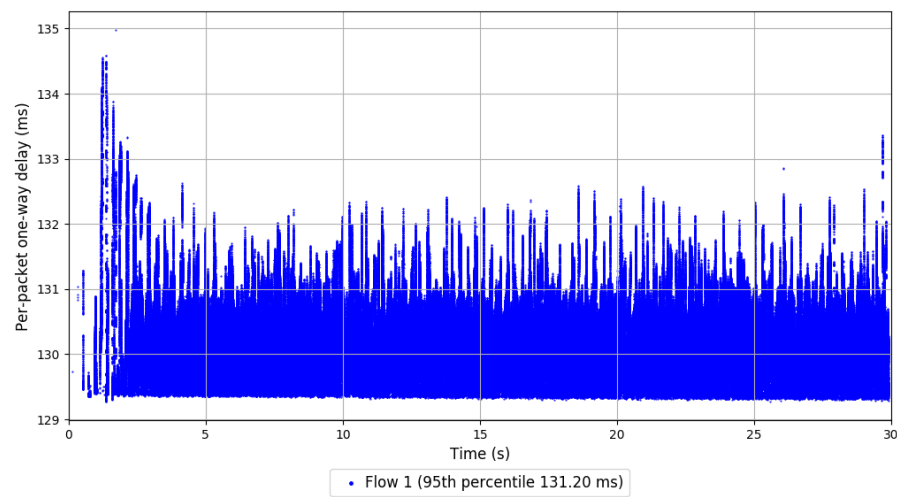
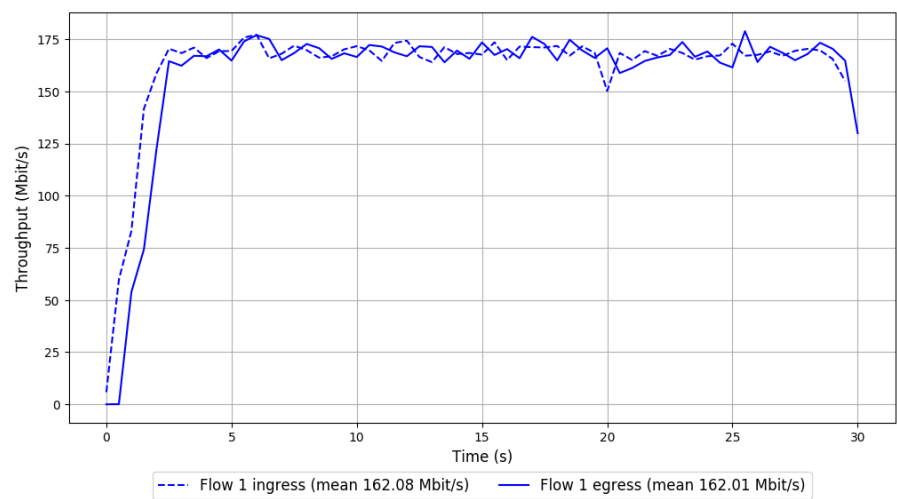


Run 2: Statistics of TaoVA-100x

Start at: 2018-11-30 11:47:48
End at: 2018-11-30 11:48:18
Local clock offset: 1.064 ms
Remote clock offset: -32.319 ms

Below is generated by plot.py at 2018-11-30 15:15:30
Datalink statistics
-- Total of 1 flow:
Average throughput: 162.01 Mbit/s
95th percentile per-packet one-way delay: 131.199 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 162.01 Mbit/s
95th percentile per-packet one-way delay: 131.199 ms
Loss rate: 0.70%

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

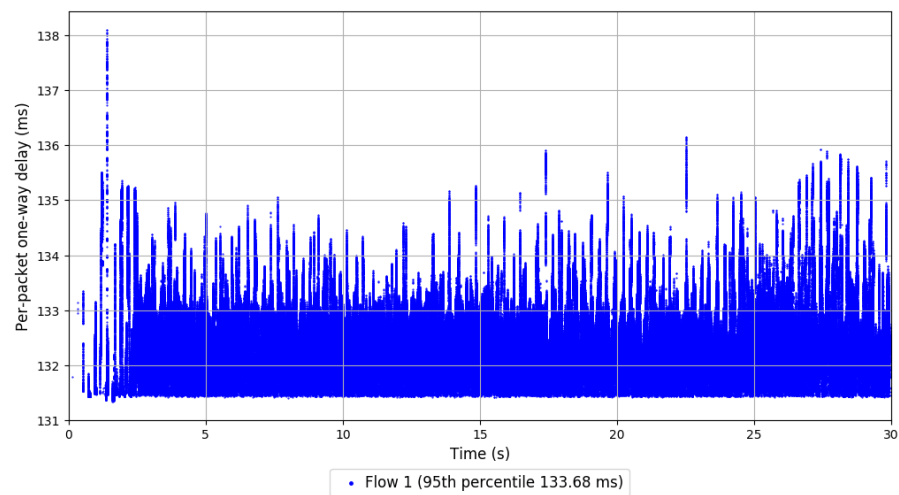
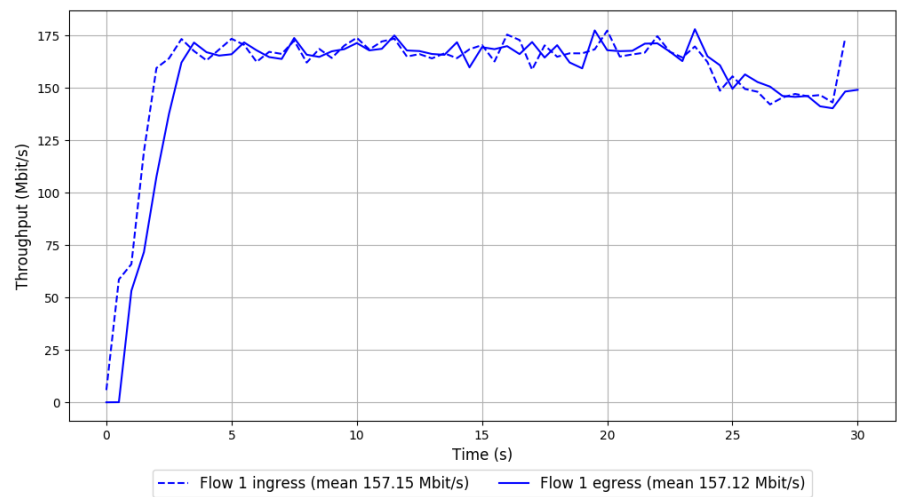


Run 3: Statistics of TaoVA-100x

Start at: 2018-11-30 12:33:26
End at: 2018-11-30 12:33:56
Local clock offset: 1.312 ms
Remote clock offset: -36.697 ms

Below is generated by plot.py at 2018-11-30 15:15:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 157.12 Mbit/s
95th percentile per-packet one-way delay: 133.682 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 157.12 Mbit/s
95th percentile per-packet one-way delay: 133.682 ms
Loss rate: 0.67%

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

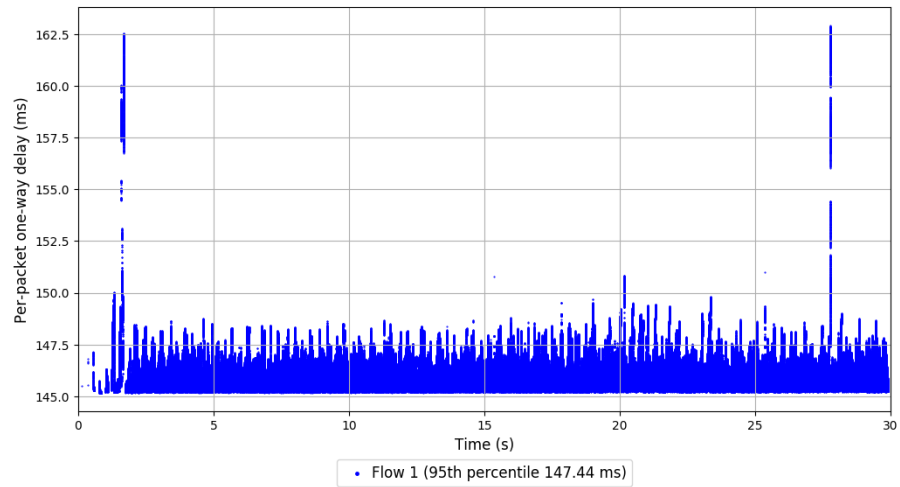
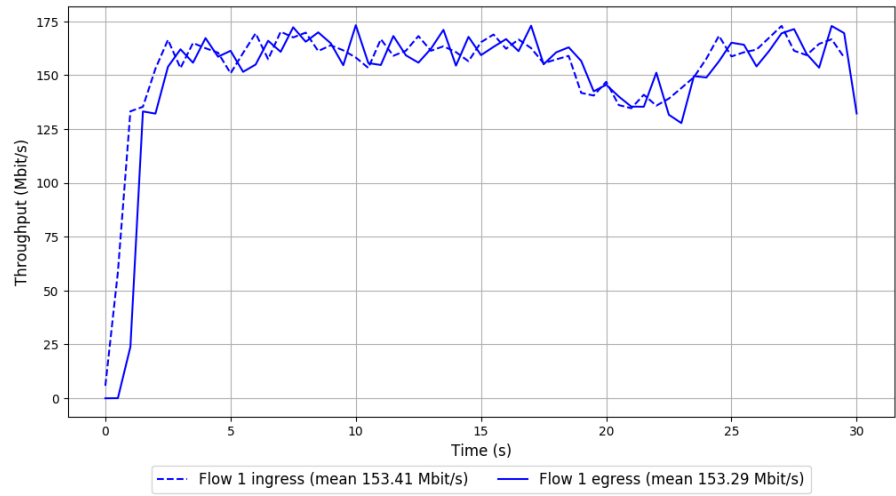


Run 4: Statistics of TaoVA-100x

Start at: 2018-11-30 13:14:51
End at: 2018-11-30 13:15:21
Local clock offset: 0.608 ms
Remote clock offset: -40.676 ms

Below is generated by plot.py at 2018-11-30 15:15:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 153.29 Mbit/s
95th percentile per-packet one-way delay: 147.442 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 153.29 Mbit/s
95th percentile per-packet one-way delay: 147.442 ms
Loss rate: 0.78%

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

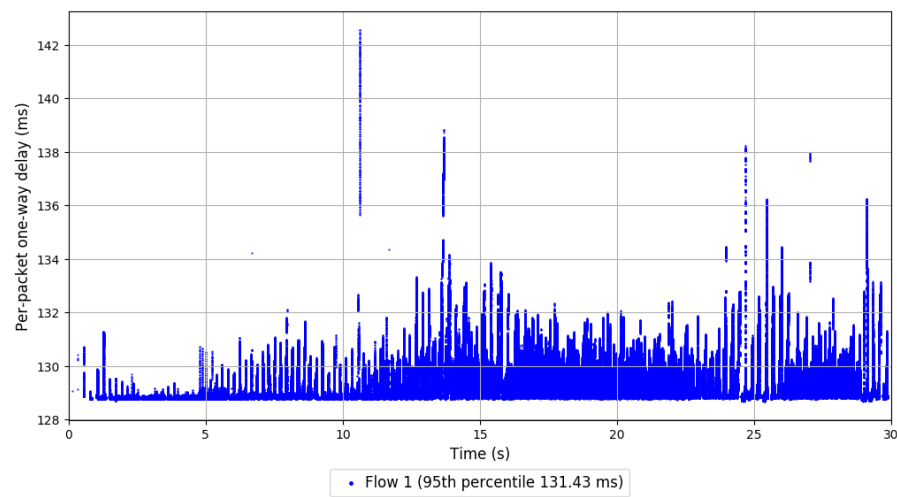
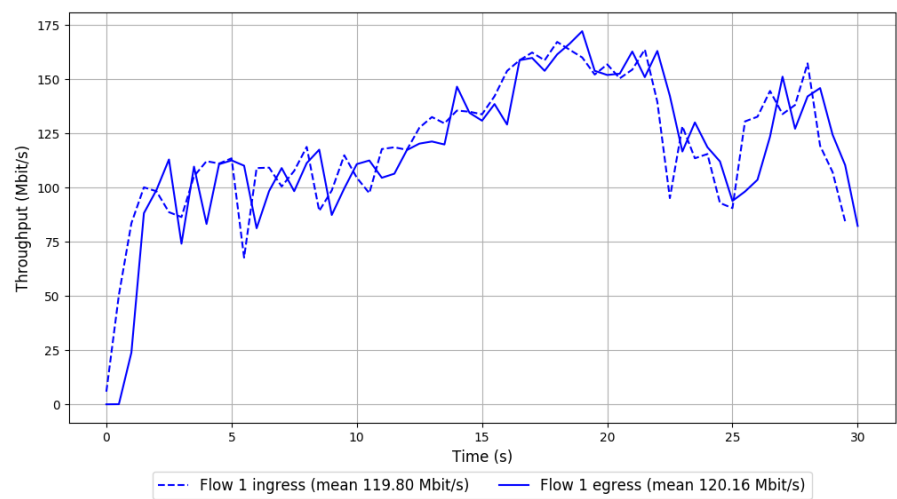


Run 5: Statistics of TaoVA-100x

Start at: 2018-11-30 14:12:40
End at: 2018-11-30 14:13:10
Local clock offset: 3.422 ms
Remote clock offset: -23.014 ms

Below is generated by plot.py at 2018-11-30 15:15:35
Datalink statistics
-- Total of 1 flow:
Average throughput: 120.16 Mbit/s
95th percentile per-packet one-way delay: 131.430 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 120.16 Mbit/s
95th percentile per-packet one-way delay: 131.430 ms
Loss rate: 0.54%

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

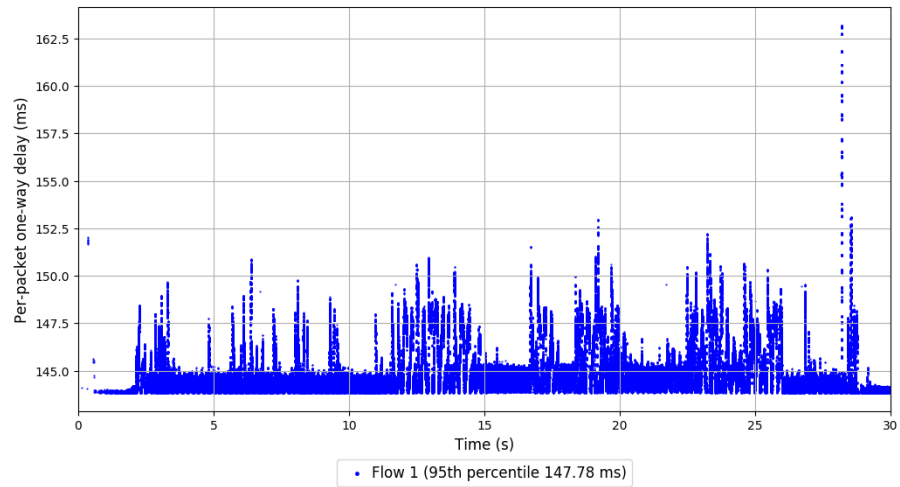
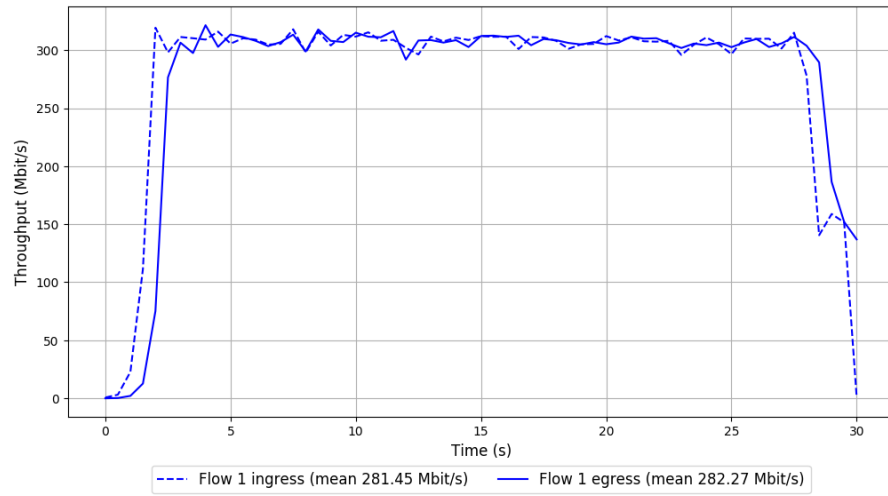


Run 1: Statistics of TCP Vegas

Start at: 2018-11-30 11:00:21
End at: 2018-11-30 11:00:51
Local clock offset: 3.68 ms
Remote clock offset: -46.232 ms

Below is generated by plot.py at 2018-11-30 15:15:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 282.27 Mbit/s
95th percentile per-packet one-way delay: 147.780 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 282.27 Mbit/s
95th percentile per-packet one-way delay: 147.780 ms
Loss rate: 0.36%

Run 1: Report of TCP Vegas — Data Link

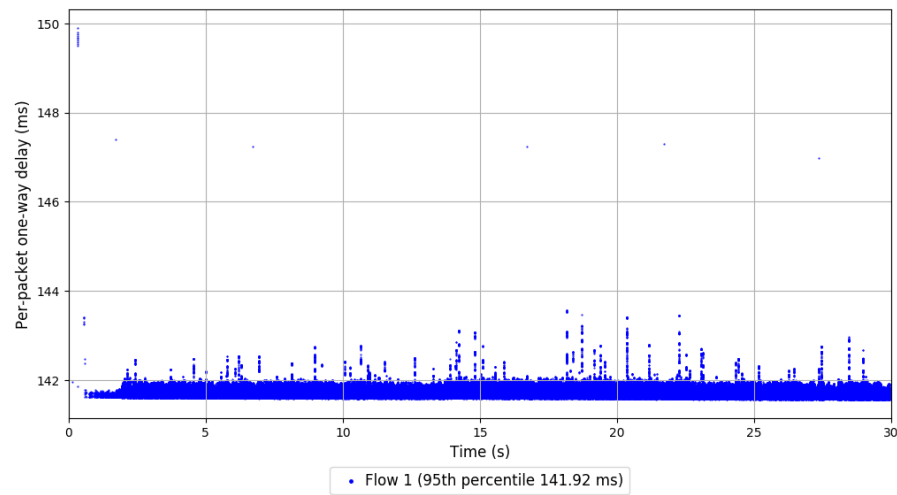
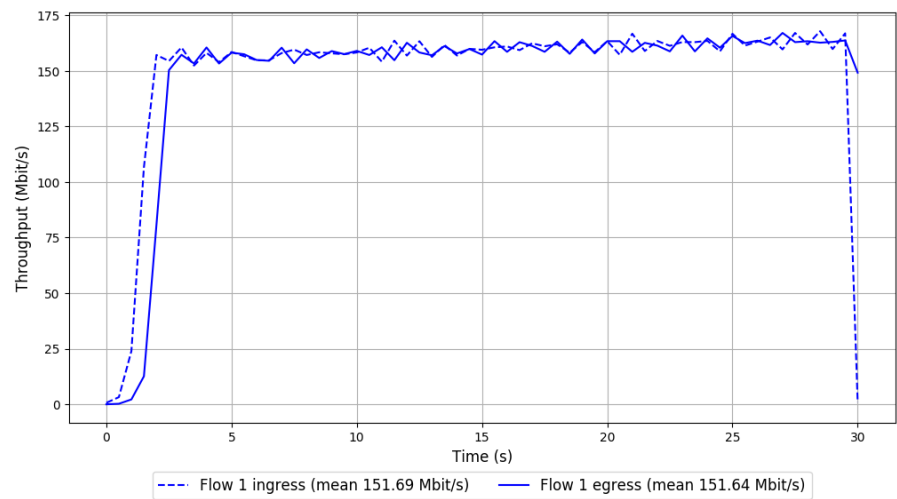


Run 2: Statistics of TCP Vegas

Start at: 2018-11-30 11:52:07
End at: 2018-11-30 11:52:37
Local clock offset: 2.92 ms
Remote clock offset: -43.574 ms

Below is generated by plot.py at 2018-11-30 15:15:37
Datalink statistics
-- Total of 1 flow:
Average throughput: 151.64 Mbit/s
95th percentile per-packet one-way delay: 141.921 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 151.64 Mbit/s
95th percentile per-packet one-way delay: 141.921 ms
Loss rate: 0.69%

Run 2: Report of TCP Vegas — Data Link

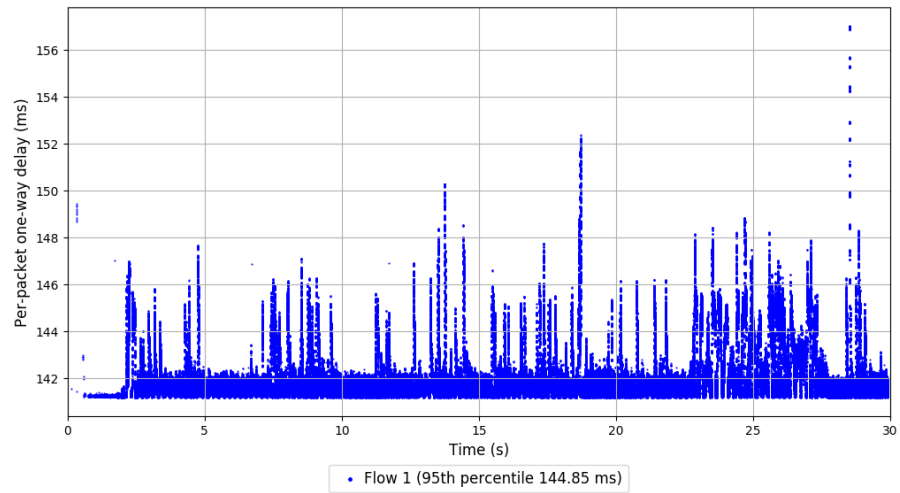
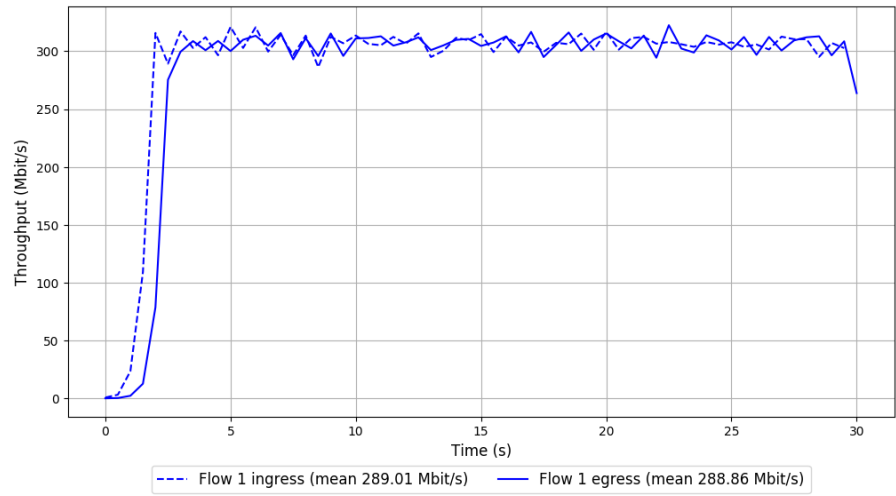


Run 3: Statistics of TCP Vegas

Start at: 2018-11-30 12:37:50
End at: 2018-11-30 12:38:20
Local clock offset: 3.446 ms
Remote clock offset: -44.119 ms

Below is generated by plot.py at 2018-11-30 15:16:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 288.86 Mbit/s
95th percentile per-packet one-way delay: 144.855 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 288.86 Mbit/s
95th percentile per-packet one-way delay: 144.855 ms
Loss rate: 0.70%

Run 3: Report of TCP Vegas — Data Link

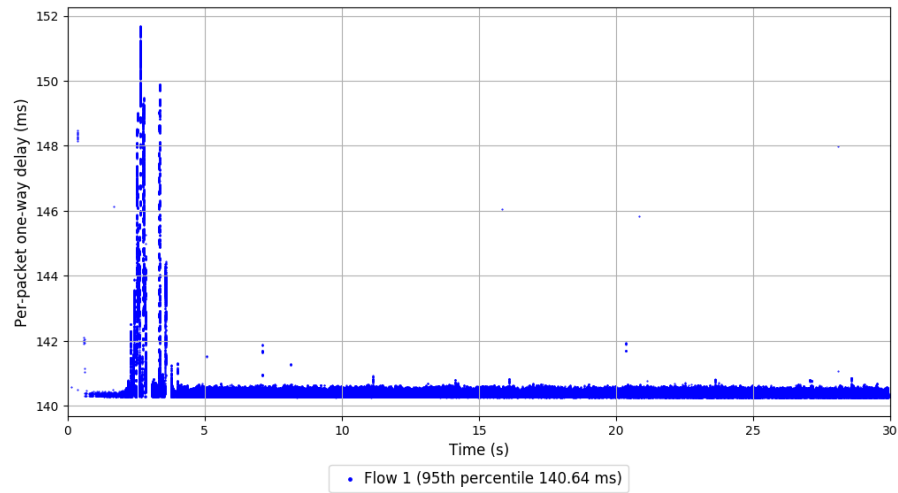
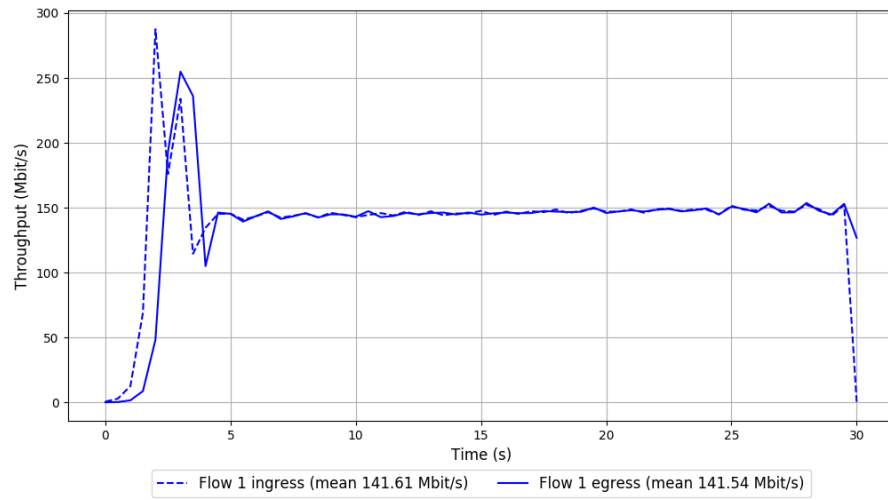


Run 4: Statistics of TCP Vegas

Start at: 2018-11-30 13:25:04
End at: 2018-11-30 13:25:34
Local clock offset: -0.881 ms
Remote clock offset: -38.068 ms

Below is generated by plot.py at 2018-11-30 15:16:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 141.54 Mbit/s
95th percentile per-packet one-way delay: 140.644 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 141.54 Mbit/s
95th percentile per-packet one-way delay: 140.644 ms
Loss rate: 0.75%

Run 4: Report of TCP Vegas — Data Link

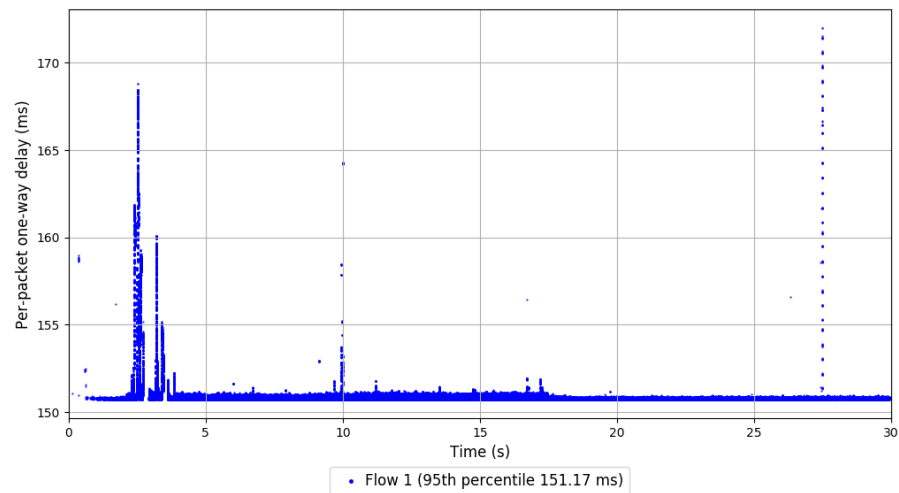
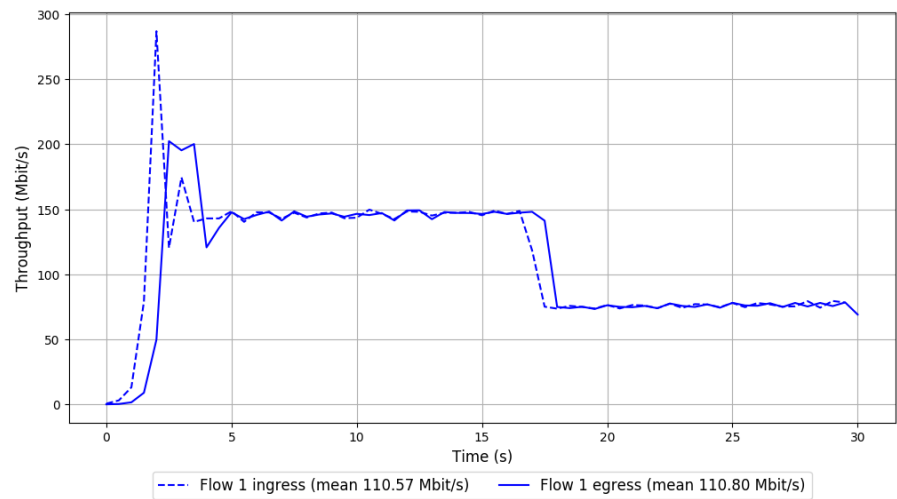


Run 5: Statistics of TCP Vegas

Start at: 2018-11-30 14:16:40
End at: 2018-11-30 14:17:10
Local clock offset: 2.104 ms
Remote clock offset: -46.196 ms

Below is generated by plot.py at 2018-11-30 15:16:20
Datalink statistics
-- Total of 1 flow:
Average throughput: 110.80 Mbit/s
95th percentile per-packet one-way delay: 151.174 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 110.80 Mbit/s
95th percentile per-packet one-way delay: 151.174 ms
Loss rate: 0.49%

Run 5: Report of TCP Vegas — Data Link

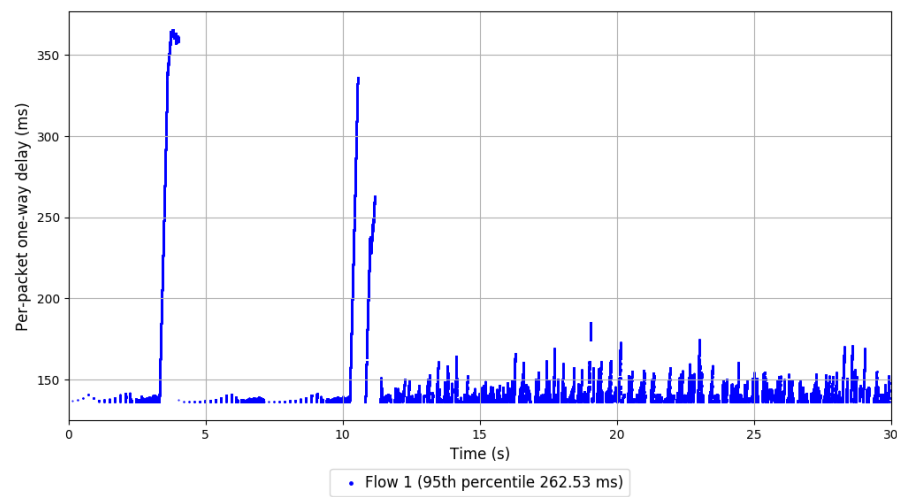
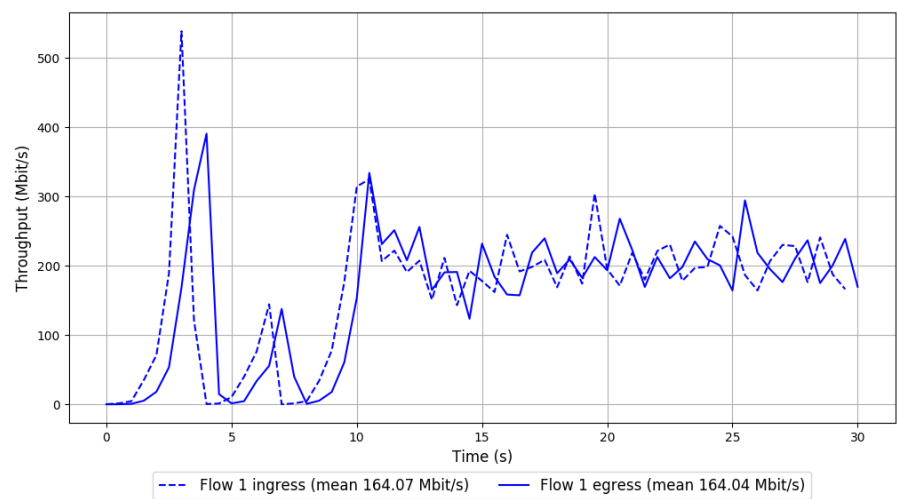


Run 1: Statistics of Verus

Start at: 2018-11-30 11:38:38
End at: 2018-11-30 11:39:08
Local clock offset: 2.168 ms
Remote clock offset: -40.112 ms

Below is generated by plot.py at 2018-11-30 15:17:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 164.04 Mbit/s
95th percentile per-packet one-way delay: 262.526 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 164.04 Mbit/s
95th percentile per-packet one-way delay: 262.526 ms
Loss rate: 0.39%

Run 1: Report of Verus — Data Link

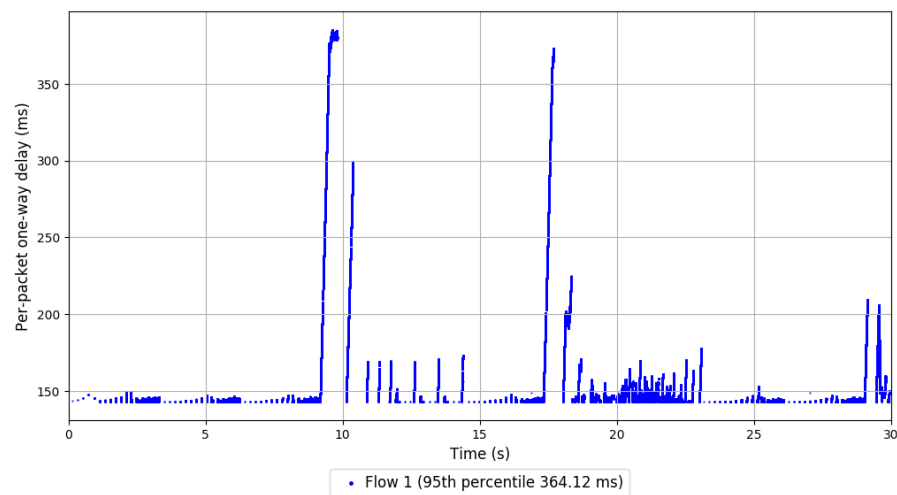
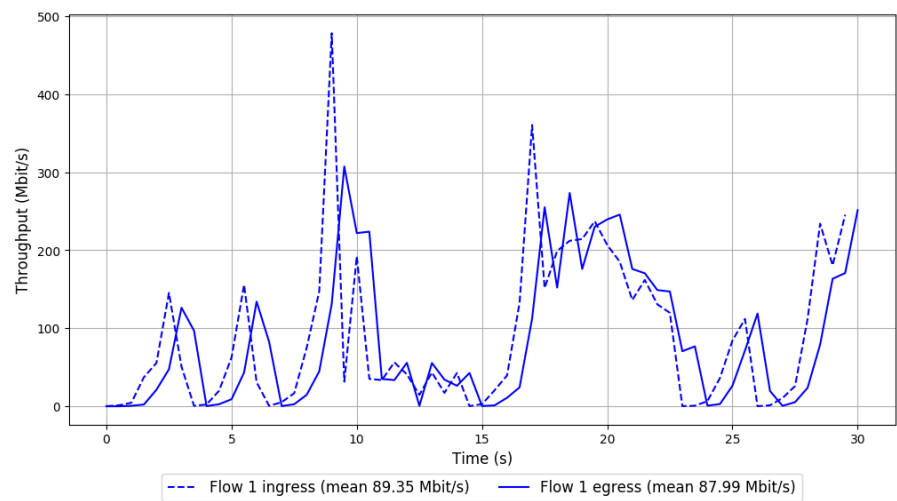


Run 2: Statistics of Verus

Start at: 2018-11-30 12:19:16
End at: 2018-11-30 12:19:46
Local clock offset: 1.392 ms
Remote clock offset: -47.598 ms

Below is generated by plot.py at 2018-11-30 15:17:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 87.99 Mbit/s
95th percentile per-packet one-way delay: 364.124 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 87.99 Mbit/s
95th percentile per-packet one-way delay: 364.124 ms
Loss rate: 2.17%

Run 2: Report of Verus — Data Link

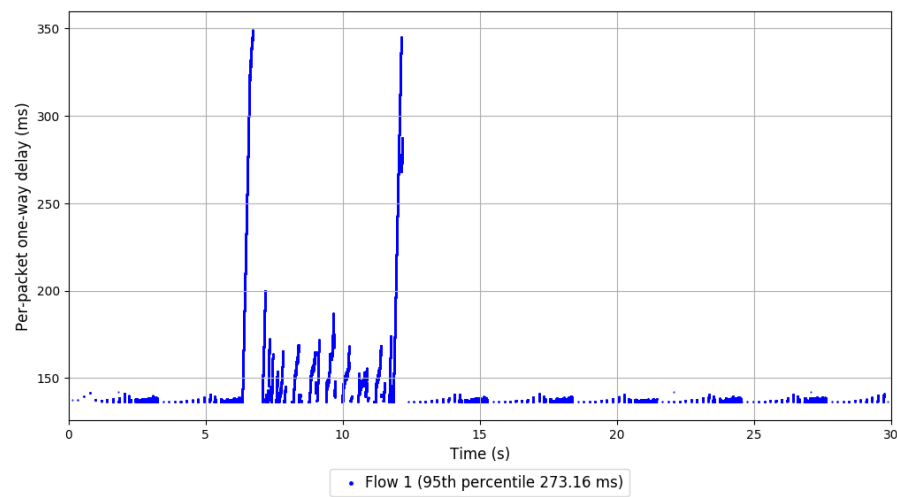
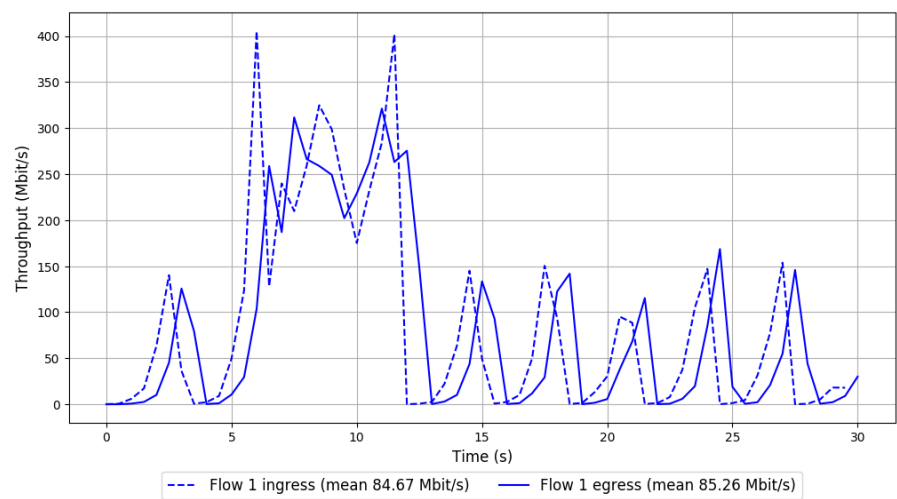


Run 3: Statistics of Verus

Start at: 2018-11-30 13:05:41
End at: 2018-11-30 13:06:11
Local clock offset: -0.744 ms
Remote clock offset: -35.033 ms

Below is generated by plot.py at 2018-11-30 15:17:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 85.26 Mbit/s
95th percentile per-packet one-way delay: 273.160 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 85.26 Mbit/s
95th percentile per-packet one-way delay: 273.160 ms
Loss rate: 0.01%

Run 3: Report of Verus — Data Link

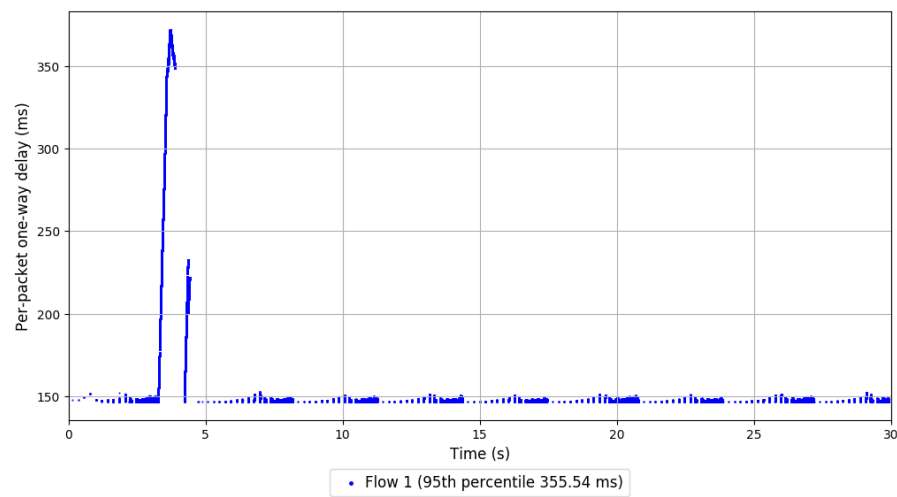
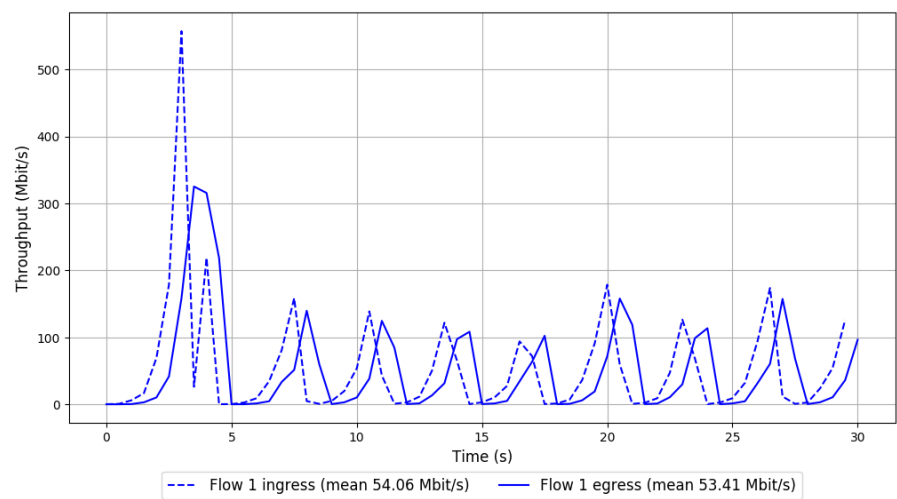


Run 4: Statistics of Verus

Start at: 2018-11-30 14:03:33
End at: 2018-11-30 14:04:03
Local clock offset: 2.942 ms
Remote clock offset: -41.462 ms

Below is generated by plot.py at 2018-11-30 15:17:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 53.41 Mbit/s
95th percentile per-packet one-way delay: 355.536 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 53.41 Mbit/s
95th percentile per-packet one-way delay: 355.536 ms
Loss rate: 1.90%

Run 4: Report of Verus — Data Link

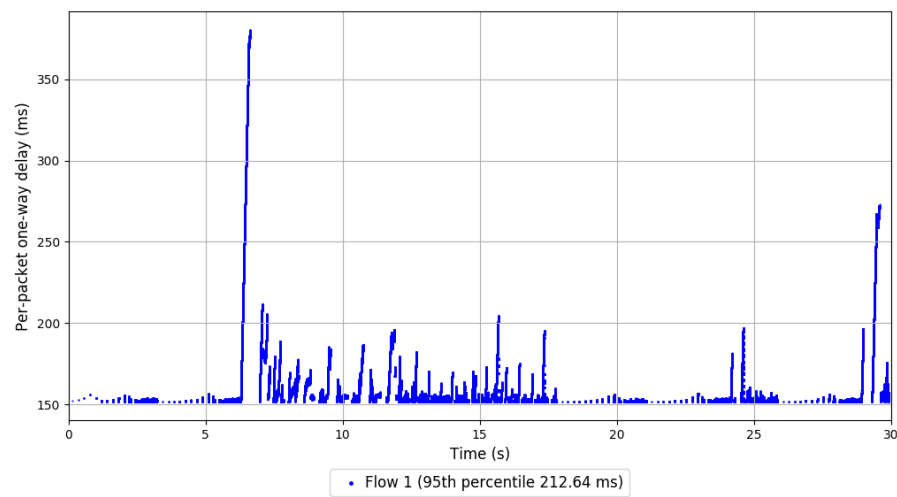
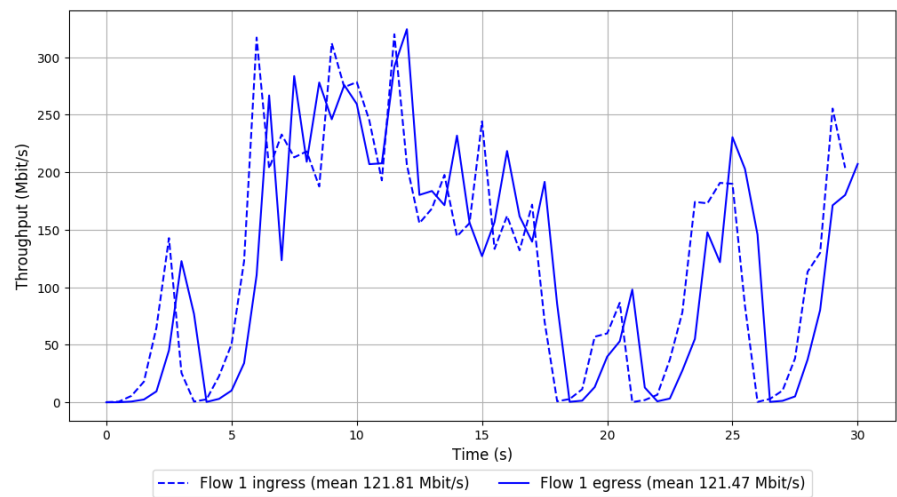


Run 5: Statistics of Verus

Start at: 2018-11-30 14:38:17
End at: 2018-11-30 14:38:47
Local clock offset: 1.166 ms
Remote clock offset: -46.981 ms

Below is generated by plot.py at 2018-11-30 15:17:07
Datalink statistics
-- Total of 1 flow:
Average throughput: 121.47 Mbit/s
95th percentile per-packet one-way delay: 212.640 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 121.47 Mbit/s
95th percentile per-packet one-way delay: 212.640 ms
Loss rate: 0.99%

Run 5: Report of Verus — Data Link

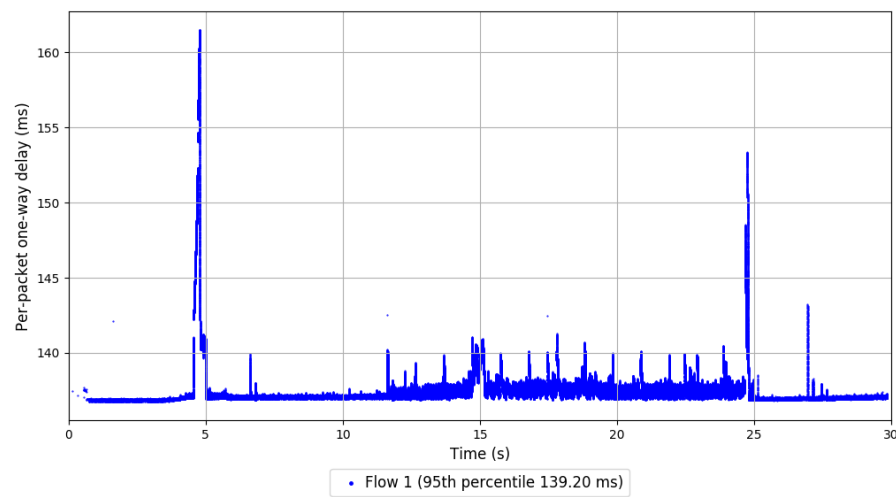
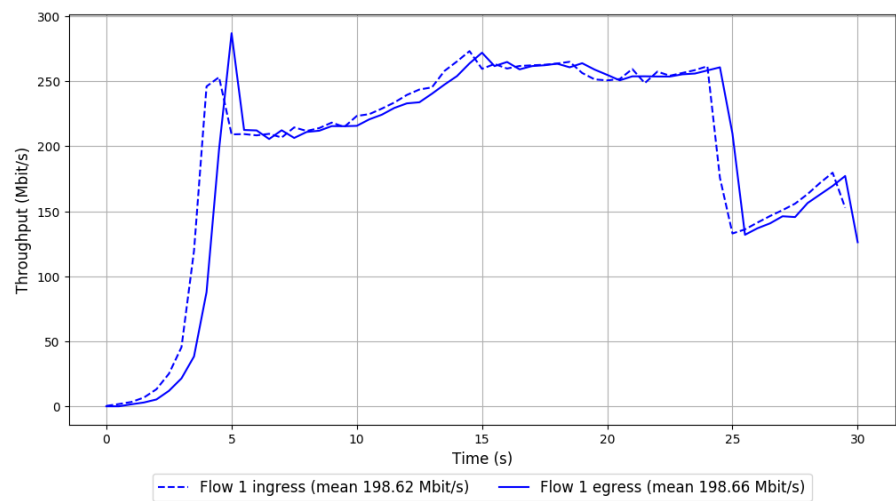


Run 1: Statistics of PCC-Vivace

Start at: 2018-11-30 11:04:34
End at: 2018-11-30 11:05:04
Local clock offset: 3.845 ms
Remote clock offset: -37.471 ms

Below is generated by plot.py at 2018-11-30 15:18:01
Datalink statistics
-- Total of 1 flow:
Average throughput: 198.66 Mbit/s
95th percentile per-packet one-way delay: 139.198 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 198.66 Mbit/s
95th percentile per-packet one-way delay: 139.198 ms
Loss rate: 0.64%

Run 1: Report of PCC-Vivace — Data Link

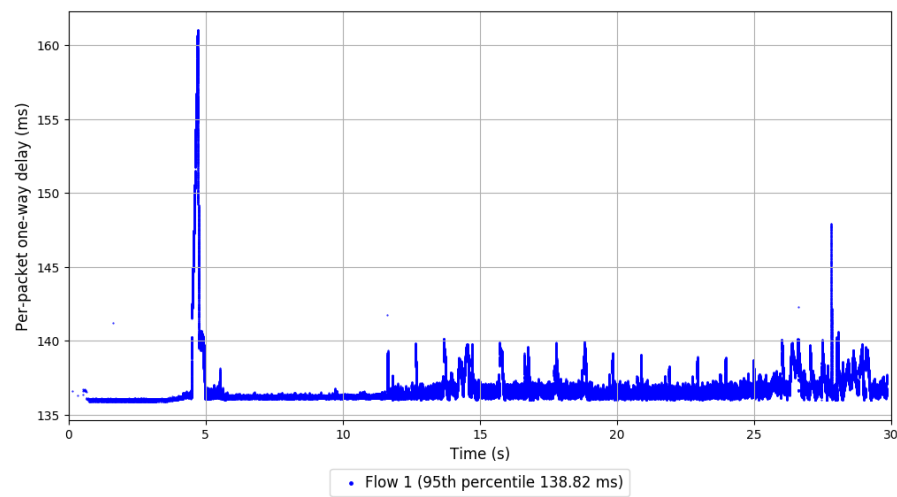
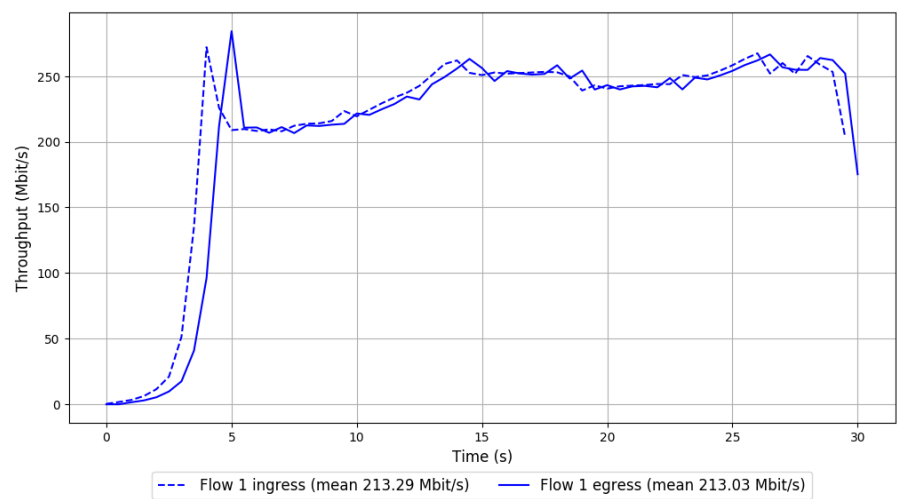


Run 2: Statistics of PCC-Vivace

Start at: 2018-11-30 11:55:55
End at: 2018-11-30 11:56:25
Local clock offset: 2.368 ms
Remote clock offset: -39.978 ms

Below is generated by plot.py at 2018-11-30 15:18:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 213.03 Mbit/s
95th percentile per-packet one-way delay: 138.821 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 213.03 Mbit/s
95th percentile per-packet one-way delay: 138.821 ms
Loss rate: 0.77%

Run 2: Report of PCC-Vivace — Data Link

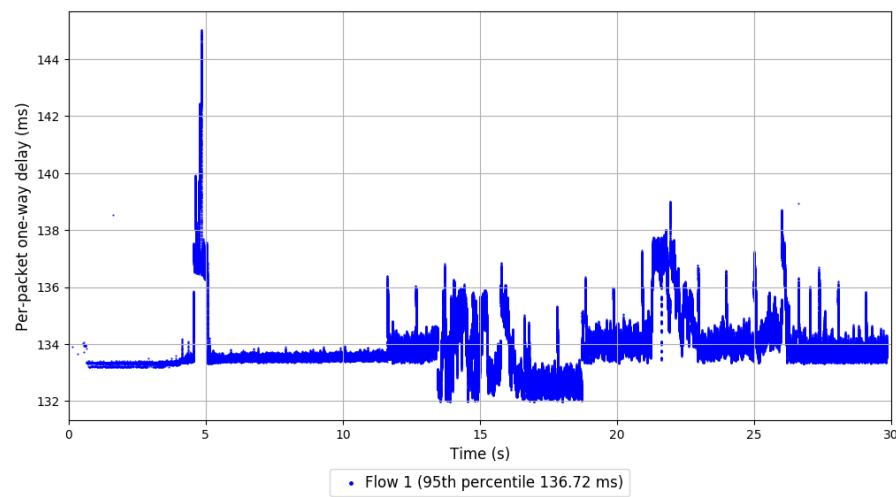
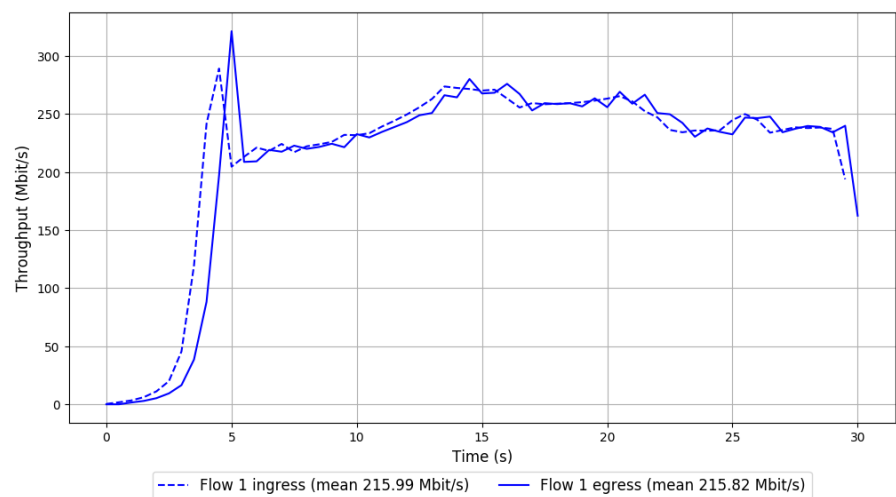


Run 3: Statistics of PCC-Vivace

Start at: 2018-11-30 12:42:19
End at: 2018-11-30 12:42:49
Local clock offset: 4.922 ms
Remote clock offset: -35.19 ms

Below is generated by plot.py at 2018-11-30 15:18:10
Datalink statistics
-- Total of 1 flow:
Average throughput: 215.82 Mbit/s
95th percentile per-packet one-way delay: 136.724 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 215.82 Mbit/s
95th percentile per-packet one-way delay: 136.724 ms
Loss rate: 0.74%

Run 3: Report of PCC-Vivace — Data Link

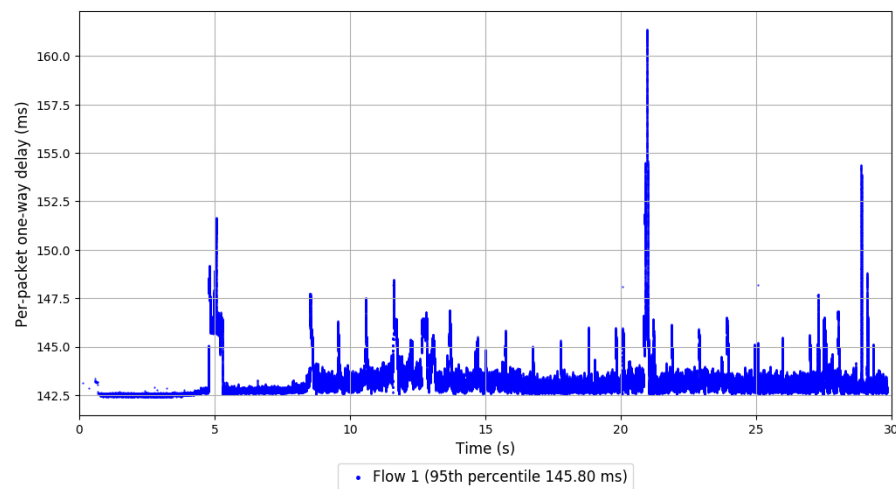
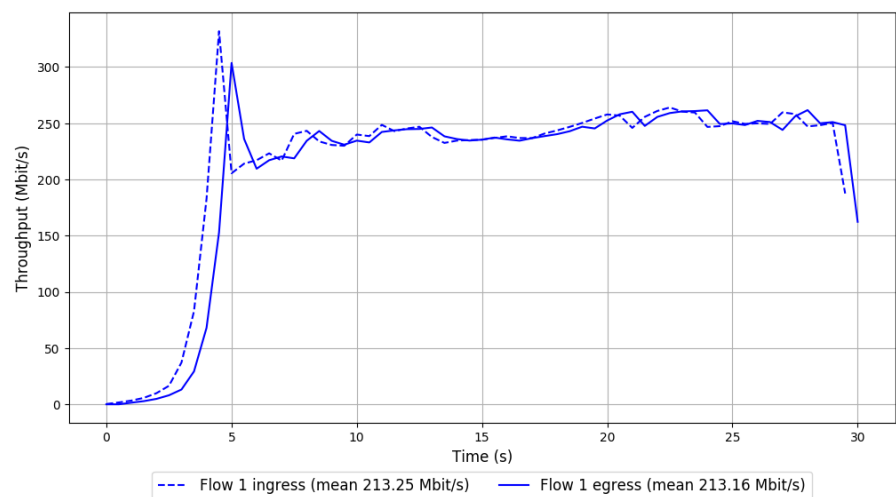


Run 4: Statistics of PCC-Vivace

Start at: 2018-11-30 13:34:31
End at: 2018-11-30 13:35:01
Local clock offset: -0.55 ms
Remote clock offset: -40.128 ms

Below is generated by plot.py at 2018-11-30 15:18:11
Datalink statistics
-- Total of 1 flow:
Average throughput: 213.16 Mbit/s
95th percentile per-packet one-way delay: 145.804 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 213.16 Mbit/s
95th percentile per-packet one-way delay: 145.804 ms
Loss rate: 0.75%

Run 4: Report of PCC-Vivace — Data Link

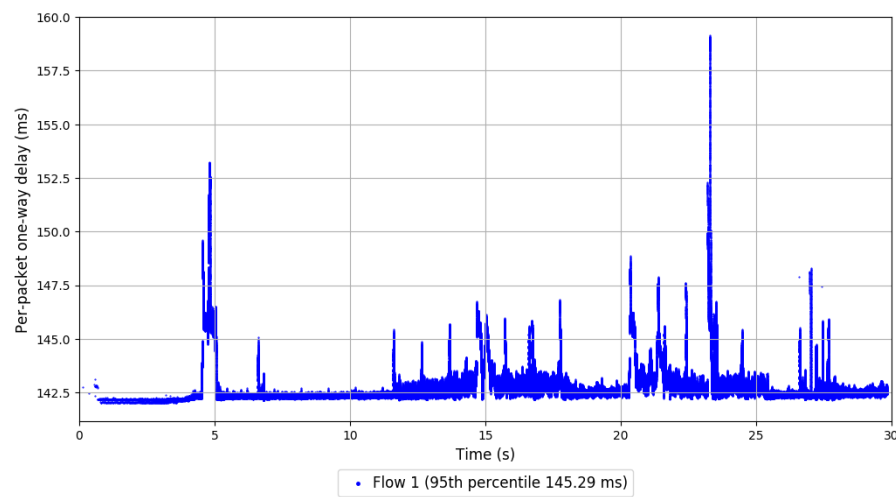
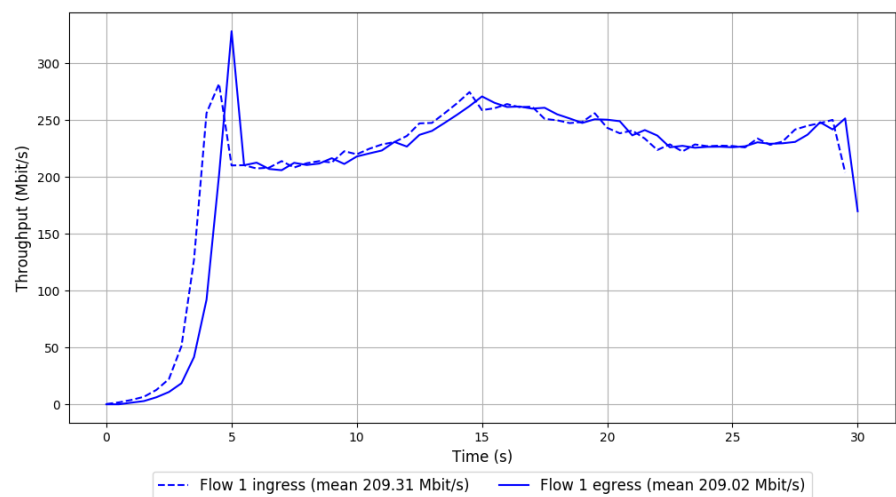


Run 5: Statistics of PCC-Vivace

Start at: 2018-11-30 14:20:26
End at: 2018-11-30 14:20:56
Local clock offset: 0.179 ms
Remote clock offset: -40.783 ms

Below is generated by plot.py at 2018-11-30 15:18:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 209.02 Mbit/s
95th percentile per-packet one-way delay: 145.290 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 209.02 Mbit/s
95th percentile per-packet one-way delay: 145.290 ms
Loss rate: 0.84%

Run 5: Report of PCC-Vivace — Data Link

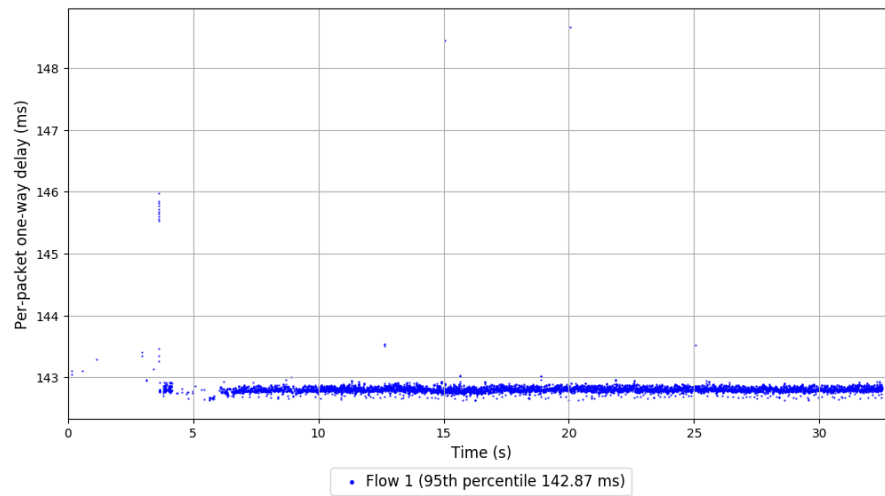
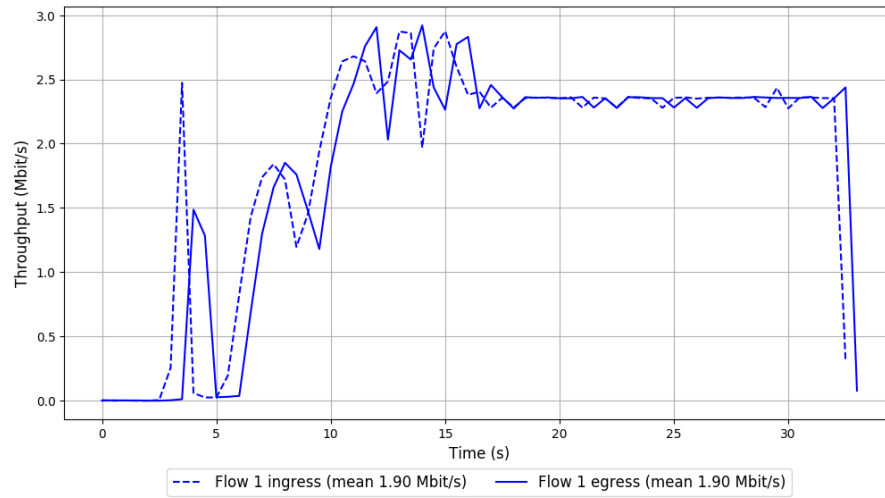


```
Run 1: Statistics of WebRTC media

Start at: 2018-11-30 11:25:21
End at: 2018-11-30 11:25:51
Local clock offset: 2.044 ms
Remote clock offset: -45.11 ms

# Below is generated by plot.py at 2018-11-30 15:18:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 142.874 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 142.874 ms
Loss rate: 0.70%
```

Run 1: Report of WebRTC media — Data Link

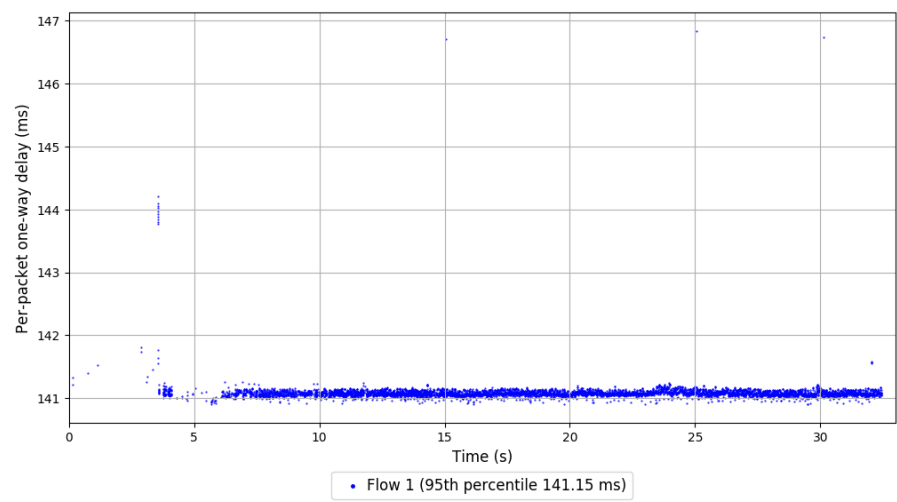
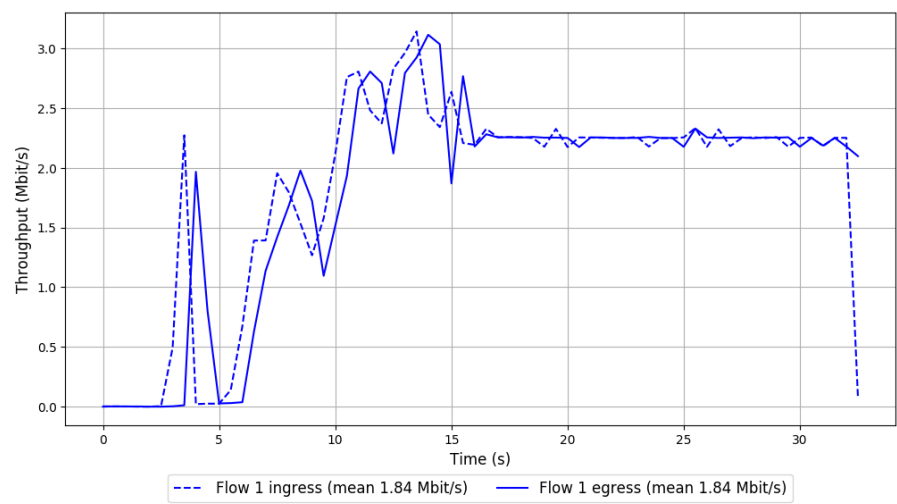


Run 2: Statistics of WebRTC media

Start at: 2018-11-30 12:11:10
End at: 2018-11-30 12:11:40
Local clock offset: 3.256 ms
Remote clock offset: -43.381 ms

Below is generated by plot.py at 2018-11-30 15:18:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 141.148 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 141.148 ms
Loss rate: 0.75%

Run 2: Report of WebRTC media — Data Link

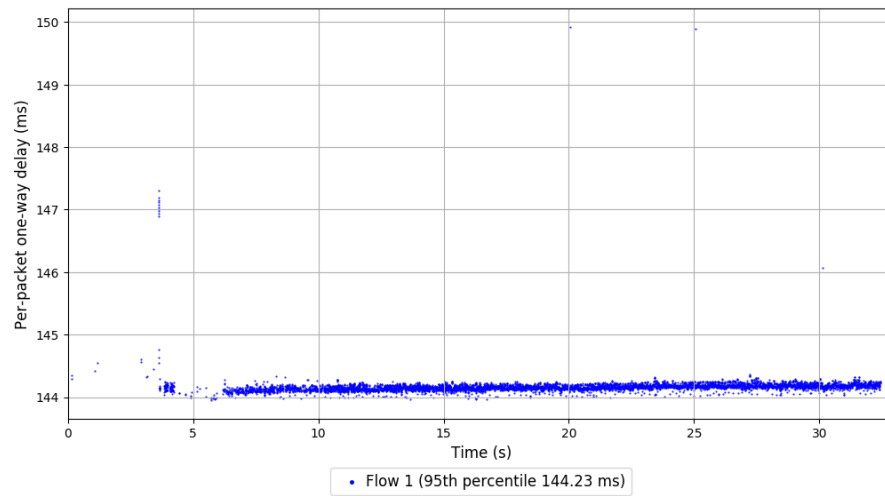
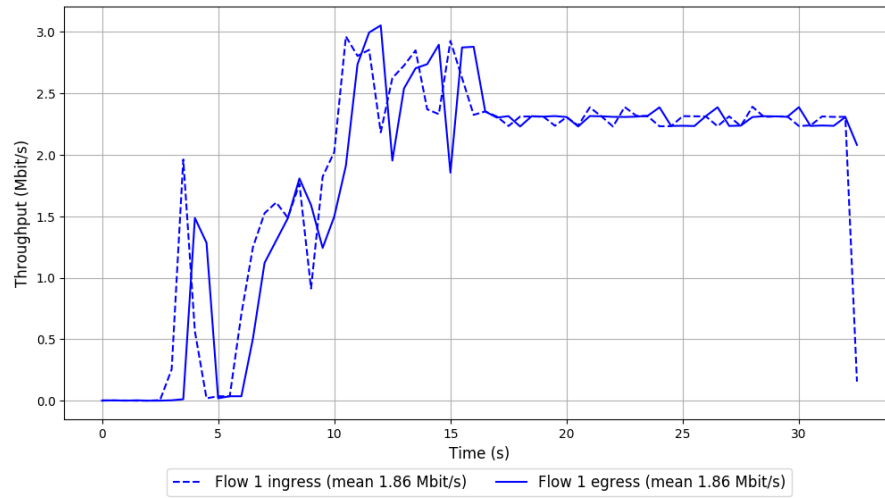


Run 3: Statistics of WebRTC media

Start at: 2018-11-30 12:58:08
End at: 2018-11-30 12:58:38
Local clock offset: 1.513 ms
Remote clock offset: -39.762 ms

Below is generated by plot.py at 2018-11-30 15:18:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 144.234 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 144.234 ms
Loss rate: 0.89%

Run 3: Report of WebRTC media — Data Link

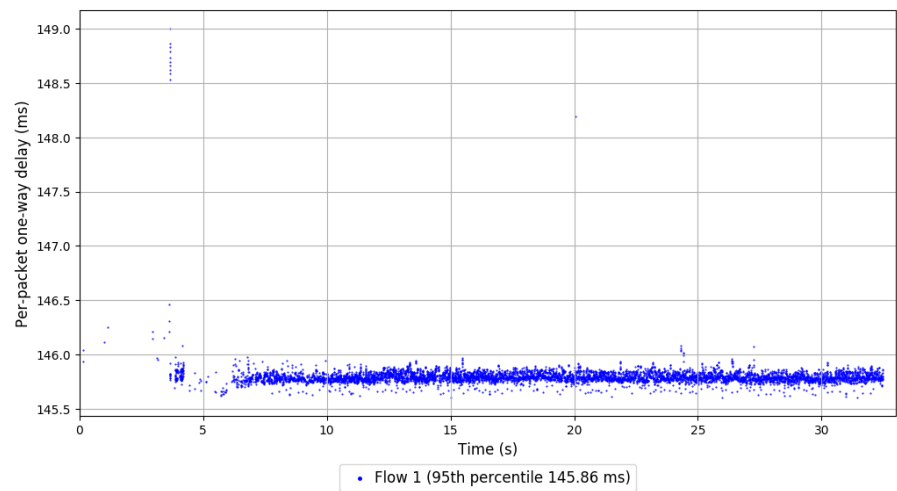
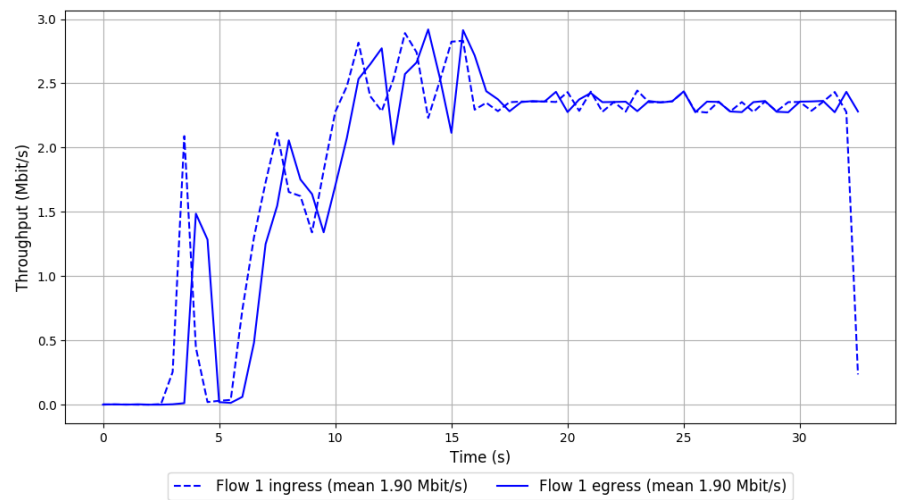


Run 4: Statistics of WebRTC media

Start at: 2018-11-30 13:50:02
End at: 2018-11-30 13:50:32
Local clock offset: -0.047 ms
Remote clock offset: -43.38 ms

Below is generated by plot.py at 2018-11-30 15:18:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 145.864 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 145.864 ms
Loss rate: 0.76%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-11-30 14:30:21
End at: 2018-11-30 14:30:51
Local clock offset: 2.51 ms
Remote clock offset: -45.462 ms

Below is generated by plot.py at 2018-11-30 15:18:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 151.109 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 151.109 ms
Loss rate: 0.82%

Run 5: Report of WebRTC media — Data Link

