

## Pantheon Report

Generated at 2018-10-26 09:34:59 (UTC).

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

Repeated the test of 18 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:

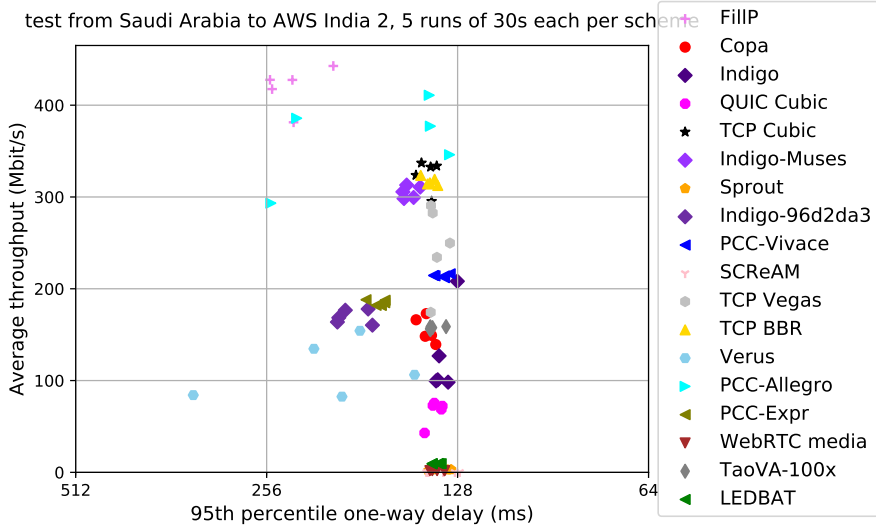
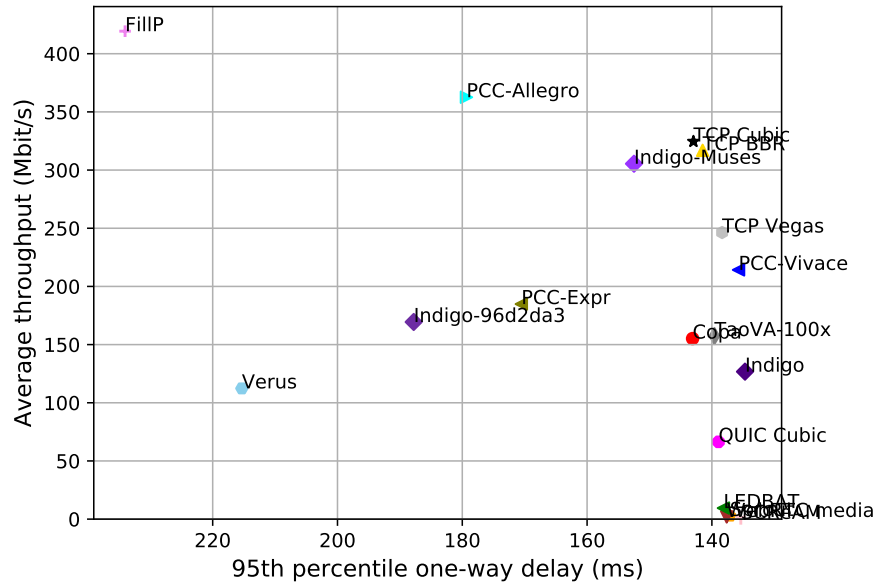
```
Linux 4.15.0-1023-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

```
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ 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)



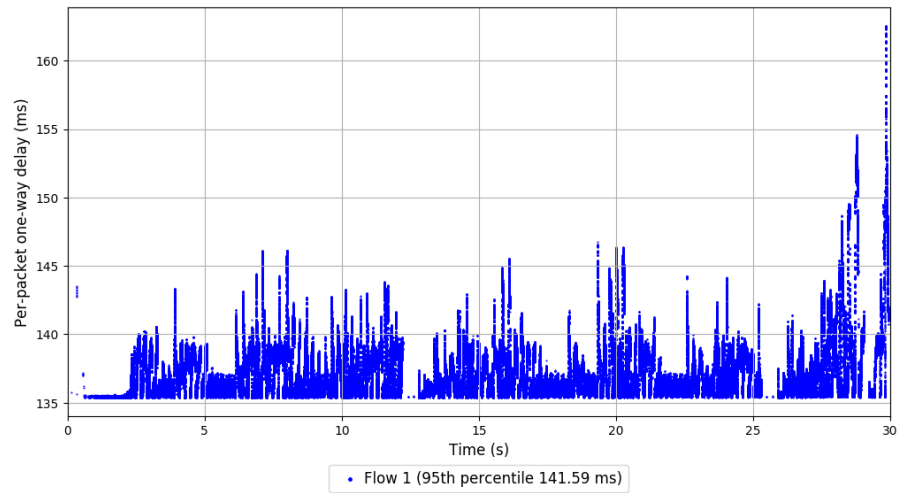
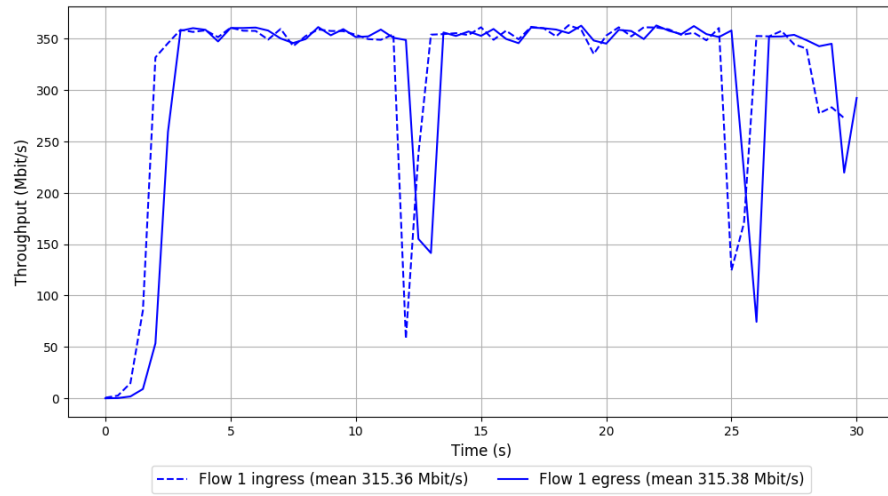
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	316.97	141.48	0.52
Copa	5	155.18	143.09	0.64
TCP Cubic	5	324.55	142.96	0.68
FillP	5	419.36	234.04	1.29
Indigo	5	126.75	134.69	0.63
Indigo-96d2da3	5	169.44	187.79	0.47
LEDBAT	5	9.50	138.15	1.30
Indigo-Muses	5	305.44	152.49	0.91
PCC-Allegro	5	362.61	179.33	0.98
PCC-Expr	5	184.84	170.54	0.68
QUIC Cubic	5	66.43	138.94	0.85
SCReAM	5	0.22	135.37	0.61
Sprout	5	2.75	137.13	0.85
TaoVA-100x	5	157.37	139.60	0.68
TCP Vegas	5	246.33	138.36	0.55
Verus	5	112.35	215.33	1.11
PCC-Vivace	5	214.20	135.73	0.76
WebRTC media	5	1.88	137.63	0.73

Run 1: Statistics of TCP BBR

Start at: 2018-10-26 06:13:59  
End at: 2018-10-26 06:14:29  
Local clock offset: 0.173 ms  
Remote clock offset: -39.443 ms

# Below is generated by plot.py at 2018-10-26 09:11:23  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 315.38 Mbit/s  
95th percentile per-packet one-way delay: 141.589 ms  
Loss rate: 0.37%  
-- Flow 1:  
Average throughput: 315.38 Mbit/s  
95th percentile per-packet one-way delay: 141.589 ms  
Loss rate: 0.37%

### Run 1: Report of TCP BBR — Data Link

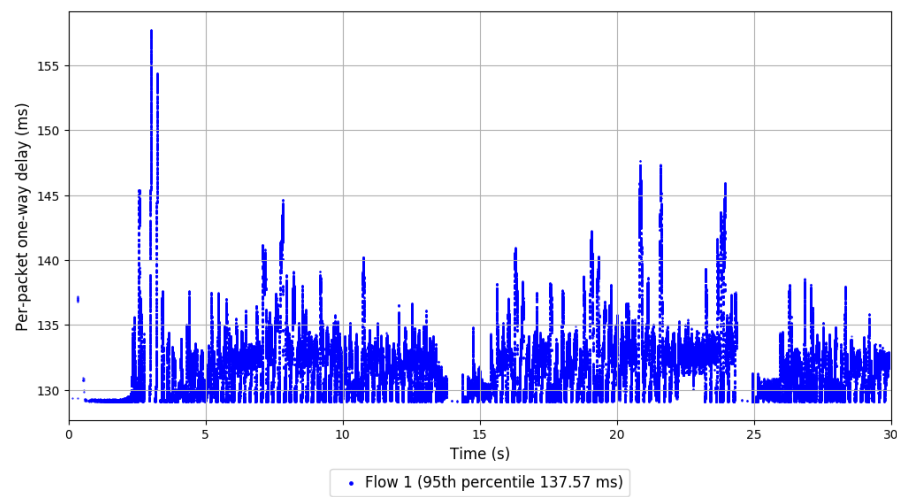
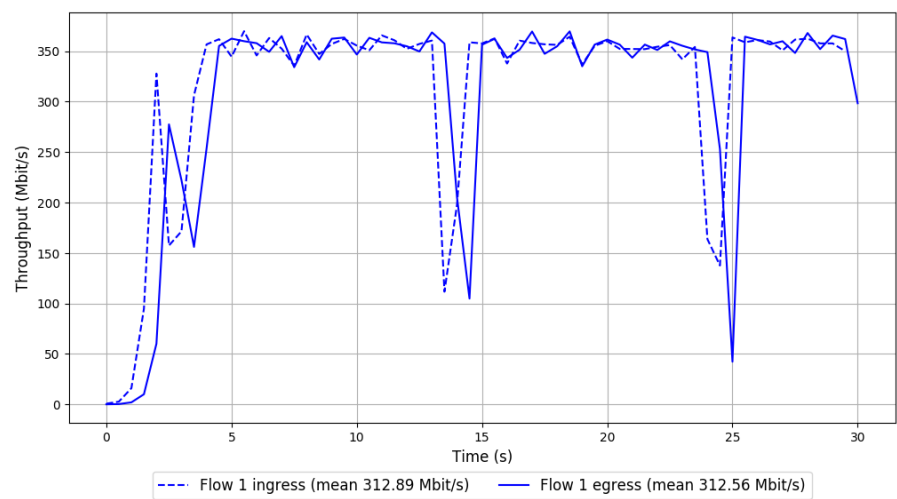


Run 2: Statistics of TCP BBR

Start at: 2018-10-26 06:46:27  
End at: 2018-10-26 06:46:57  
Local clock offset: 1.503 ms  
Remote clock offset: -33.089 ms

# Below is generated by plot.py at 2018-10-26 09:11:23  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 312.56 Mbit/s  
95th percentile per-packet one-way delay: 137.572 ms  
Loss rate: 0.76%  
-- Flow 1:  
Average throughput: 312.56 Mbit/s  
95th percentile per-packet one-way delay: 137.572 ms  
Loss rate: 0.76%

Run 2: Report of TCP BBR — Data Link





Run 3: Statistics of TCP BBR

Start at: 2018-10-26 07:19:50

End at: 2018-10-26 07:20:20

Local clock offset: 2.067 ms

Remote clock offset: -39.03 ms

# Below is generated by plot.py at 2018-10-26 09:11:23

# Datalink statistics

-- Total of 1 flow:

Average throughput: 314.21 Mbit/s

95th percentile per-packet one-way delay: 142.755 ms

Loss rate: 0.75%

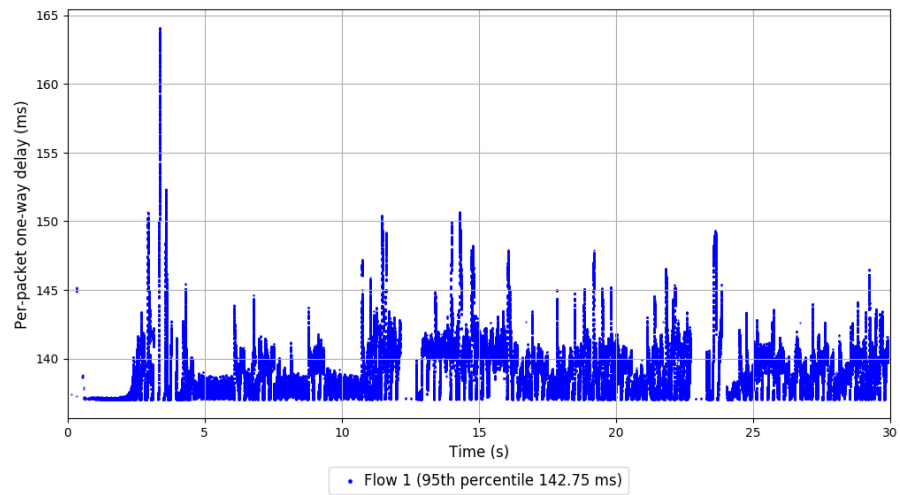
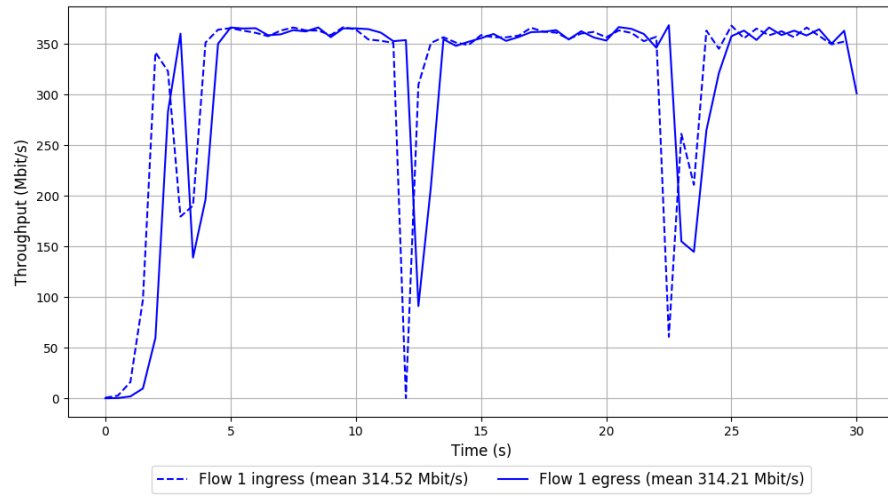
-- Flow 1:

Average throughput: 314.21 Mbit/s

95th percentile per-packet one-way delay: 142.755 ms

Loss rate: 0.75%

### Run 3: Report of TCP BBR — Data Link

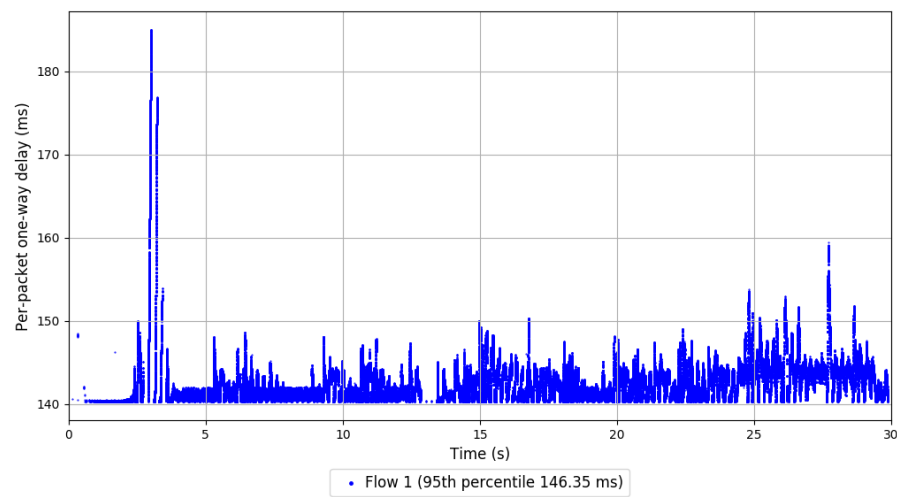
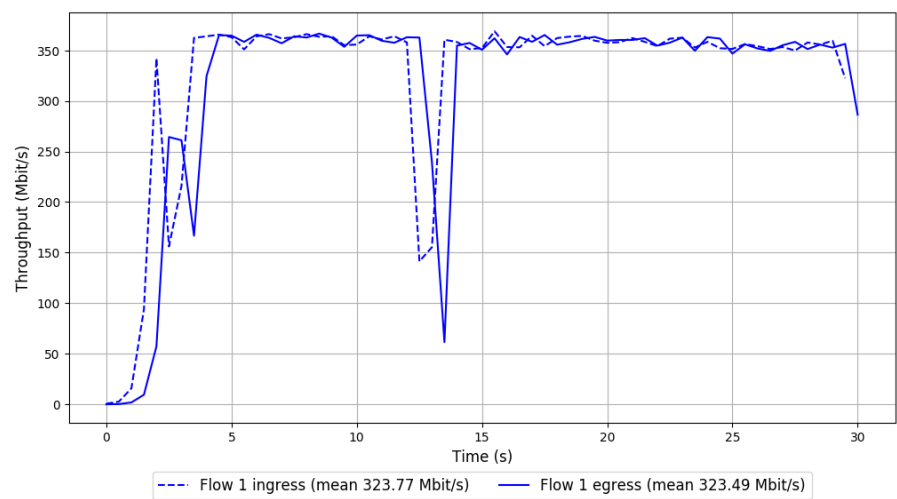


Run 4: Statistics of TCP BBR

Start at: 2018-10-26 07:58:30  
End at: 2018-10-26 07:59:00  
Local clock offset: -0.948 ms  
Remote clock offset: -44.376 ms

# Below is generated by plot.py at 2018-10-26 09:11:29  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 323.49 Mbit/s  
95th percentile per-packet one-way delay: 146.351 ms  
Loss rate: 0.73%  
-- Flow 1:  
Average throughput: 323.49 Mbit/s  
95th percentile per-packet one-way delay: 146.351 ms  
Loss rate: 0.73%

Run 4: Report of TCP BBR — Data Link

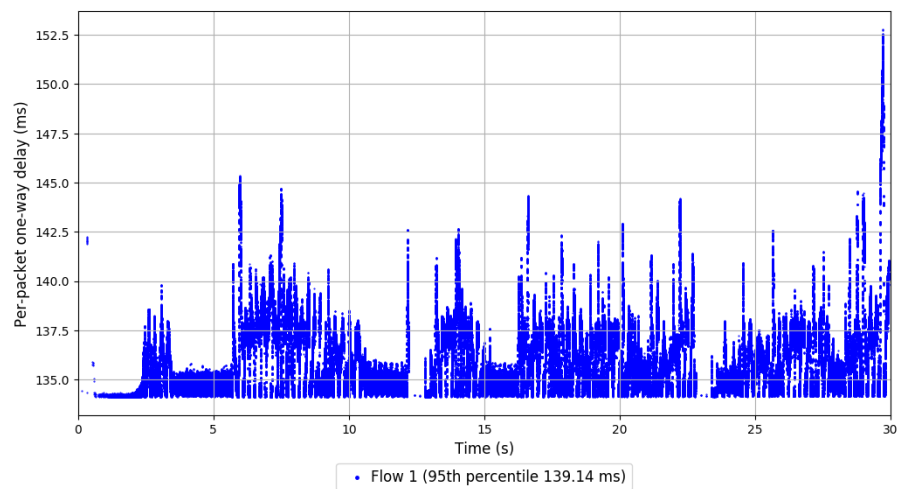
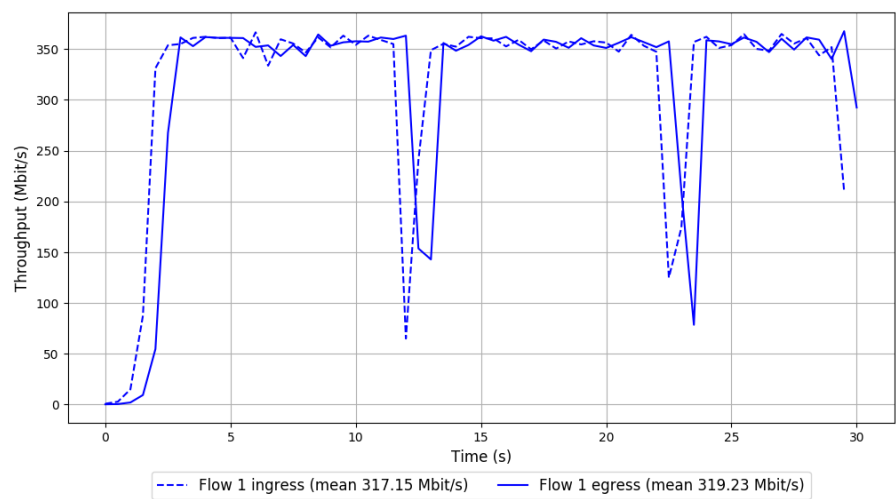


Run 5: Statistics of TCP BBR

Start at: 2018-10-26 08:36:41  
End at: 2018-10-26 08:37:11  
Local clock offset: 0.955 ms  
Remote clock offset: -38.897 ms

# Below is generated by plot.py at 2018-10-26 09:11:29  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 319.23 Mbit/s  
95th percentile per-packet one-way delay: 139.138 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 319.23 Mbit/s  
95th percentile per-packet one-way delay: 139.138 ms  
Loss rate: 0.01%

### Run 5: Report of TCP BBR — Data Link

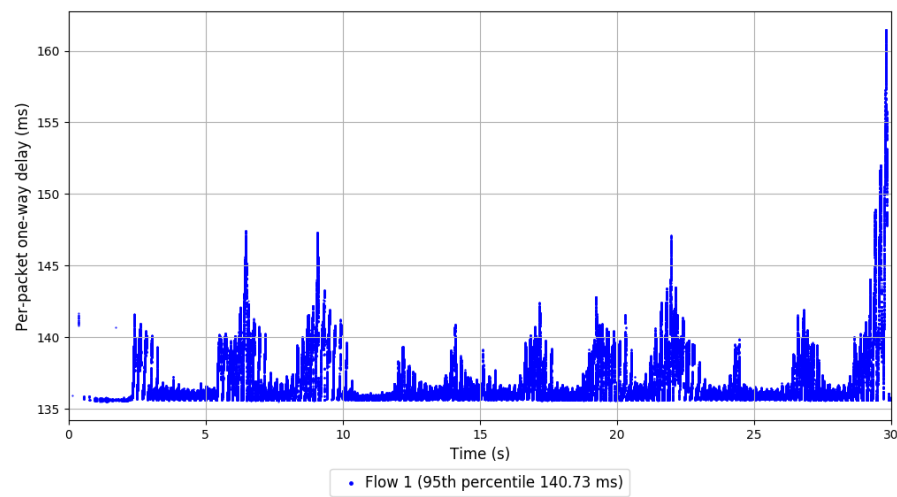
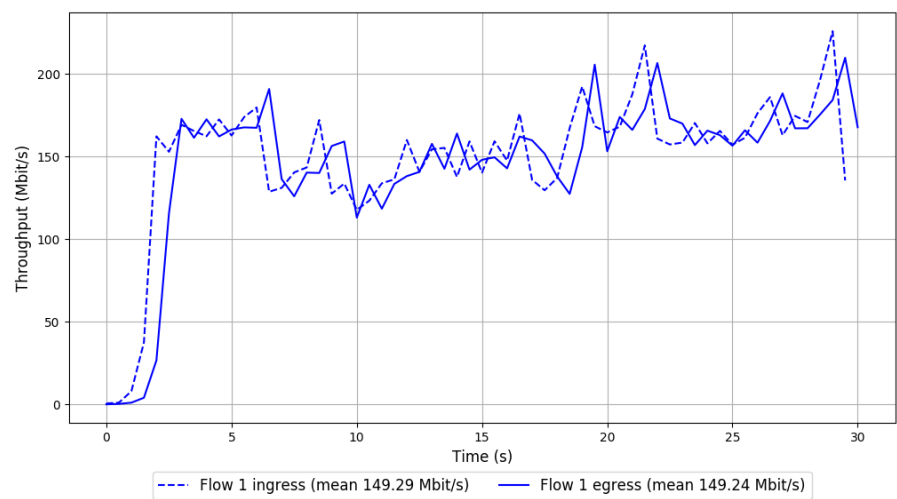


Run 1: Statistics of Copa

Start at: 2018-10-26 06:30:46  
End at: 2018-10-26 06:31:16  
Local clock offset: -1.004 ms  
Remote clock offset: -41.056 ms

# Below is generated by plot.py at 2018-10-26 09:11:29  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 149.24 Mbit/s  
95th percentile per-packet one-way delay: 140.733 ms  
Loss rate: 0.46%  
-- Flow 1:  
Average throughput: 149.24 Mbit/s  
95th percentile per-packet one-way delay: 140.733 ms  
Loss rate: 0.46%

Run 1: Report of Copa — Data Link



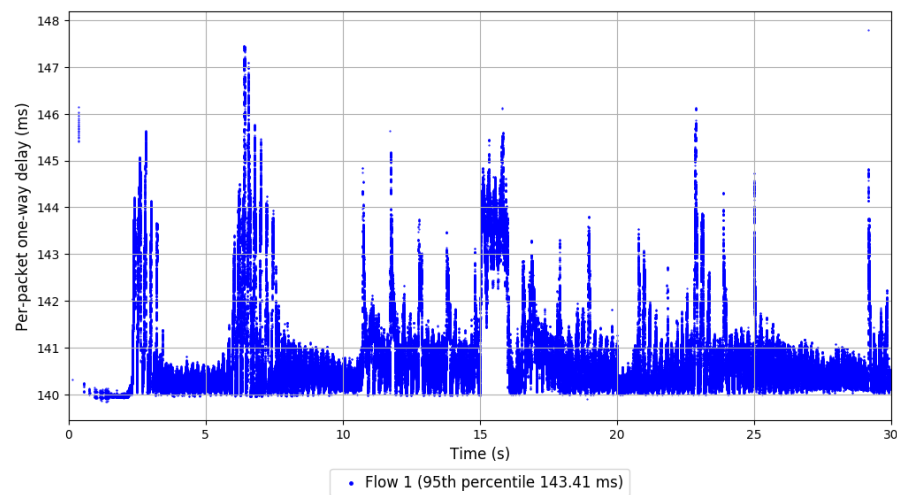
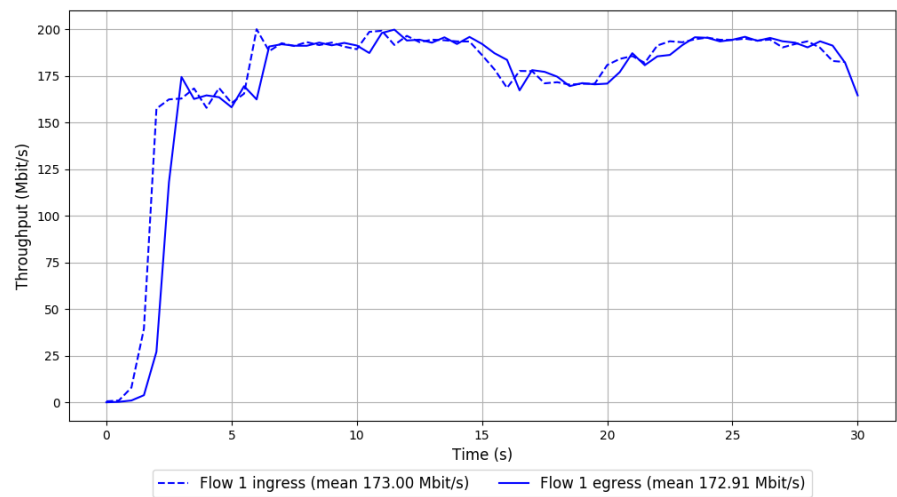


Run 2: Statistics of Copa

Start at: 2018-10-26 07:03:46  
End at: 2018-10-26 07:04:16  
Local clock offset: 2.679 ms  
Remote clock offset: -43.957 ms

# Below is generated by plot.py at 2018-10-26 09:11:36  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 172.91 Mbit/s  
95th percentile per-packet one-way delay: 143.410 ms  
Loss rate: 0.69%  
-- Flow 1:  
Average throughput: 172.91 Mbit/s  
95th percentile per-packet one-way delay: 143.410 ms  
Loss rate: 0.69%

Run 2: Report of Copa — Data Link

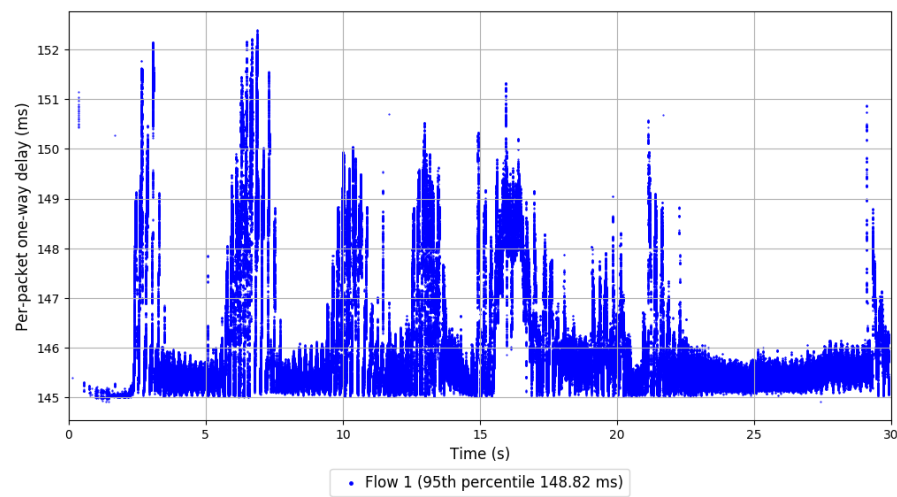
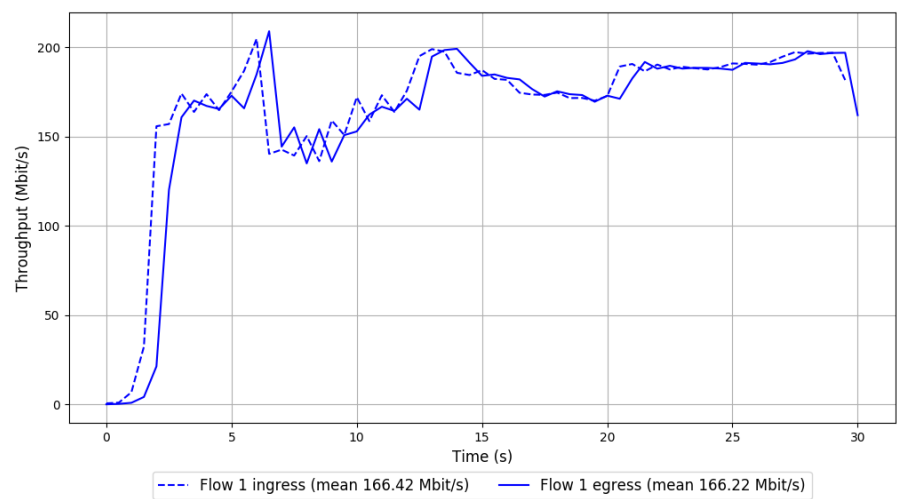


Run 3: Statistics of Copa

Start at: 2018-10-26 07:36:40  
End at: 2018-10-26 07:37:10  
Local clock offset: 1.624 ms  
Remote clock offset: -46.73 ms

# Below is generated by plot.py at 2018-10-26 09:11:36  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 166.22 Mbit/s  
95th percentile per-packet one-way delay: 148.818 ms  
Loss rate: 0.77%  
-- Flow 1:  
Average throughput: 166.22 Mbit/s  
95th percentile per-packet one-way delay: 148.818 ms  
Loss rate: 0.77%

Run 3: Report of Copa — Data Link

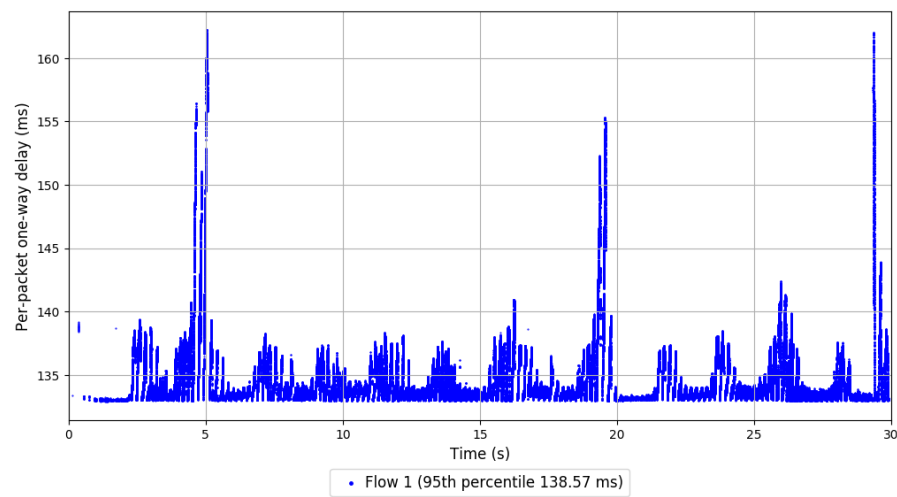
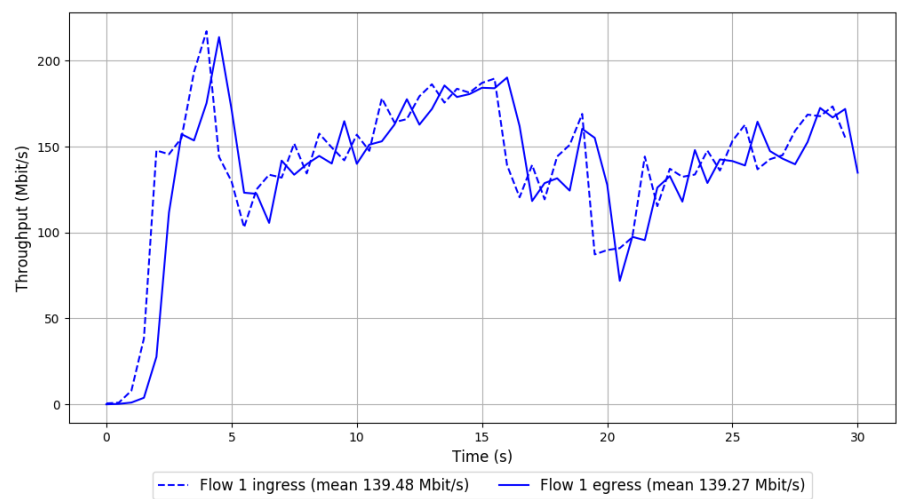


Run 4: Statistics of Copa

Start at: 2018-10-26 08:15:44  
End at: 2018-10-26 08:16:14  
Local clock offset: 0.1 ms  
Remote clock offset: -39.309 ms

# Below is generated by plot.py at 2018-10-26 09:14:20  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 139.27 Mbit/s  
95th percentile per-packet one-way delay: 138.566 ms  
Loss rate: 0.79%  
-- Flow 1:  
Average throughput: 139.27 Mbit/s  
95th percentile per-packet one-way delay: 138.566 ms  
Loss rate: 0.79%

Run 4: Report of Copa — Data Link

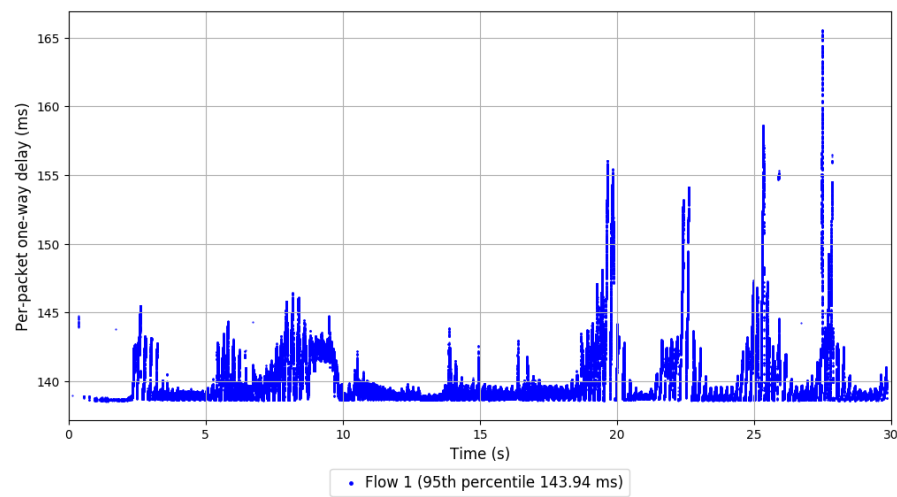
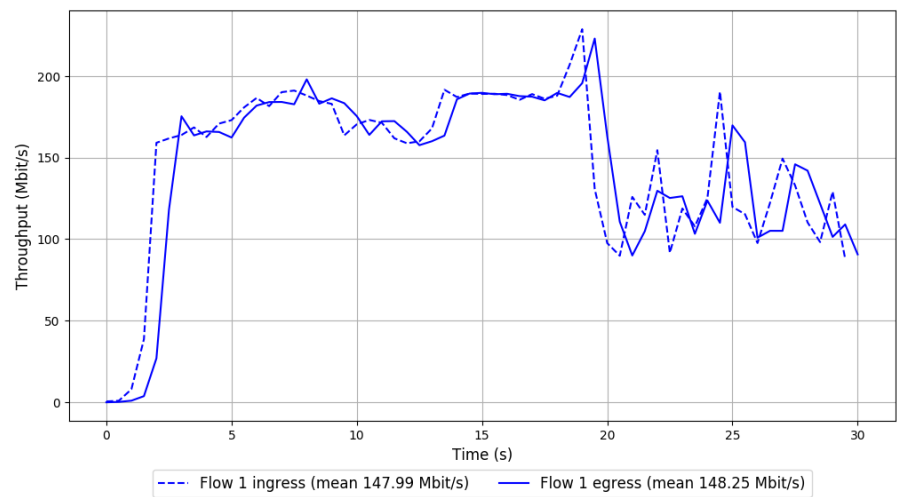


Run 5: Statistics of Copa

Start at: 2018-10-26 08:53:56  
End at: 2018-10-26 08:54:26  
Local clock offset: 2.805 ms  
Remote clock offset: -43.084 ms

# Below is generated by plot.py at 2018-10-26 09:14:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 148.25 Mbit/s  
95th percentile per-packet one-way delay: 143.941 ms  
Loss rate: 0.47%  
-- Flow 1:  
Average throughput: 148.25 Mbit/s  
95th percentile per-packet one-way delay: 143.941 ms  
Loss rate: 0.47%

Run 5: Report of Copa — Data Link



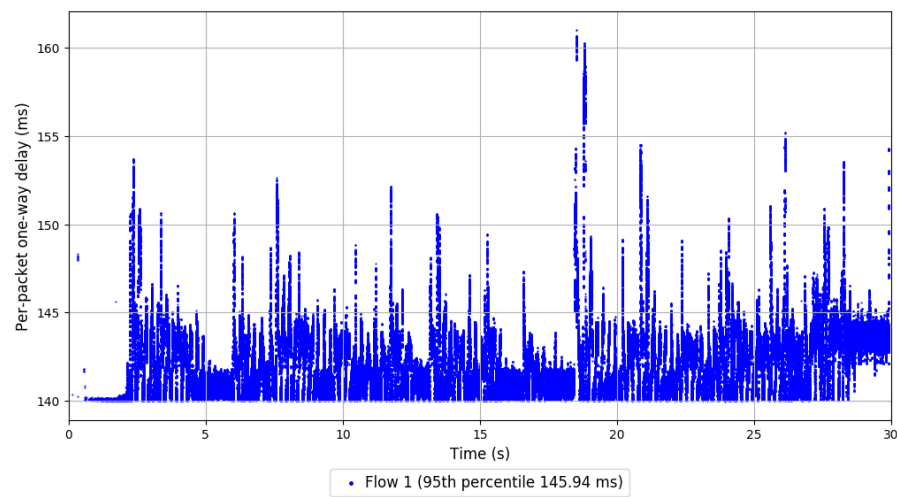
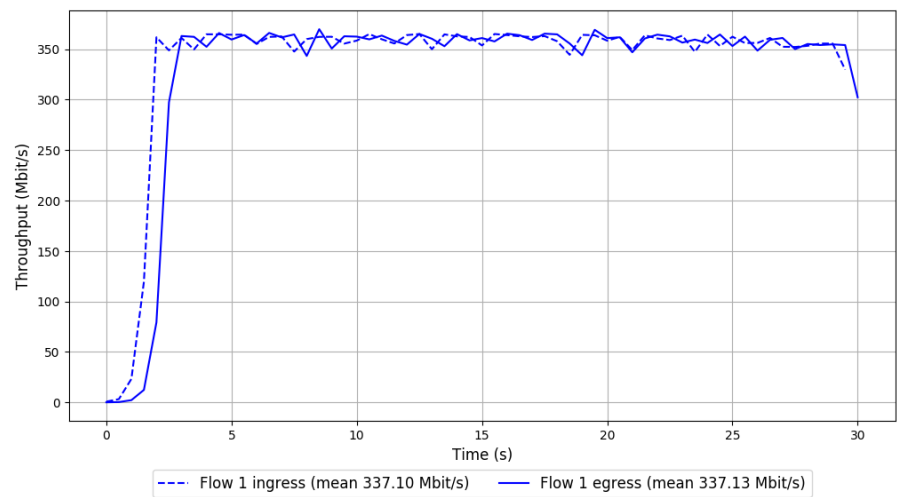


Run 1: Statistics of TCP Cubic

Start at: 2018-10-26 06:16:10  
End at: 2018-10-26 06:16:40  
Local clock offset: 1.668 ms  
Remote clock offset: -42.564 ms

# Below is generated by plot.py at 2018-10-26 09:14:59  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 337.13 Mbit/s  
95th percentile per-packet one-way delay: 145.942 ms  
Loss rate: 0.64%  
-- Flow 1:  
Average throughput: 337.13 Mbit/s  
95th percentile per-packet one-way delay: 145.942 ms  
Loss rate: 0.64%

Run 1: Report of TCP Cubic — Data Link

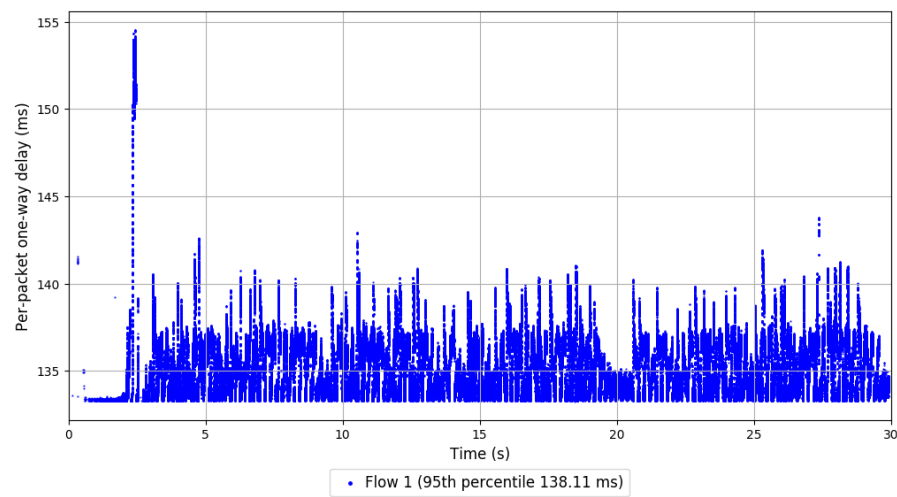
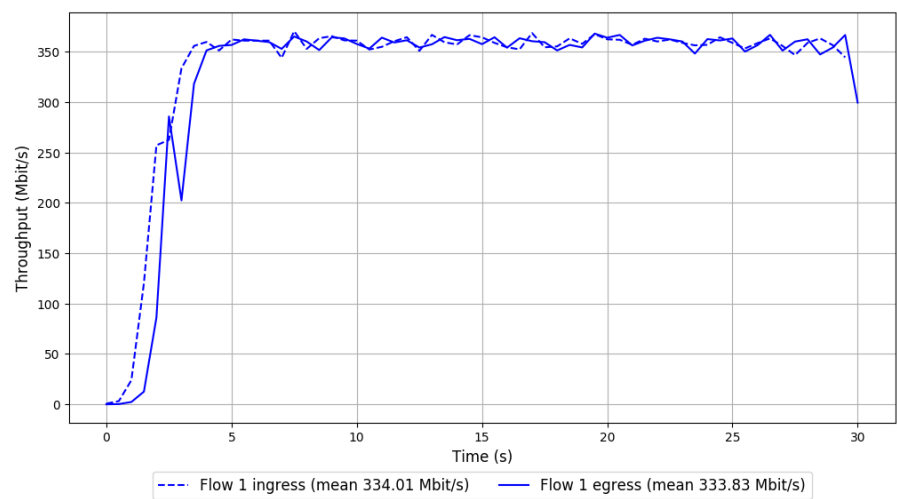


Run 2: Statistics of TCP Cubic

Start at: 2018-10-26 06:48:37  
End at: 2018-10-26 06:49:07  
Local clock offset: 2.641 ms  
Remote clock offset: -35.741 ms

# Below is generated by plot.py at 2018-10-26 09:15:00  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 333.83 Mbit/s  
95th percentile per-packet one-way delay: 138.109 ms  
Loss rate: 0.71%  
-- Flow 1:  
Average throughput: 333.83 Mbit/s  
95th percentile per-packet one-way delay: 138.109 ms  
Loss rate: 0.71%

Run 2: Report of TCP Cubic — Data Link

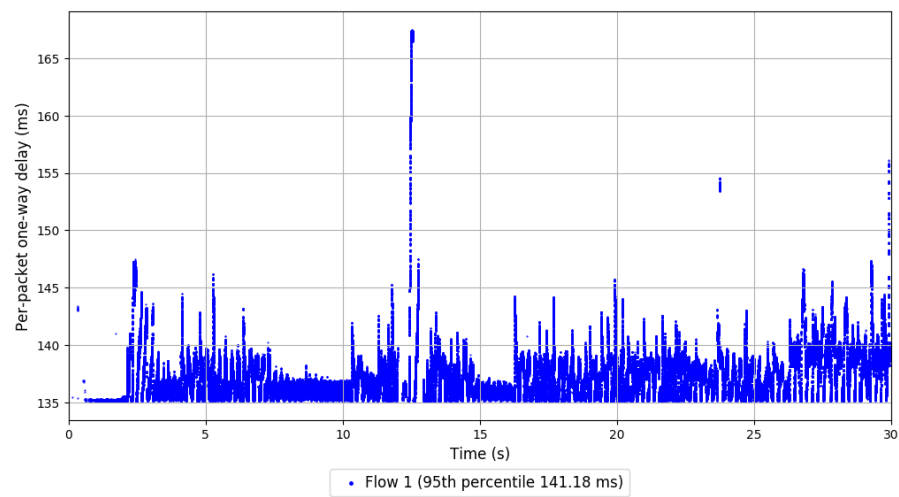
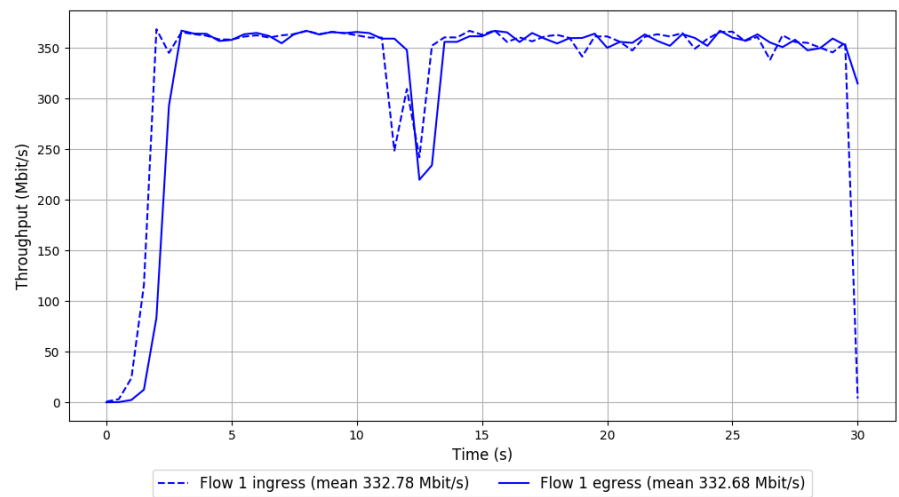


Run 3: Statistics of TCP Cubic

Start at: 2018-10-26 07:22:02  
End at: 2018-10-26 07:22:32  
Local clock offset: -0.351 ms  
Remote clock offset: -39.512 ms

# Below is generated by plot.py at 2018-10-26 09:15:02  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 332.68 Mbit/s  
95th percentile per-packet one-way delay: 141.178 ms  
Loss rate: 0.68%  
-- Flow 1:  
Average throughput: 332.68 Mbit/s  
95th percentile per-packet one-way delay: 141.178 ms  
Loss rate: 0.68%

Run 3: Report of TCP Cubic — Data Link

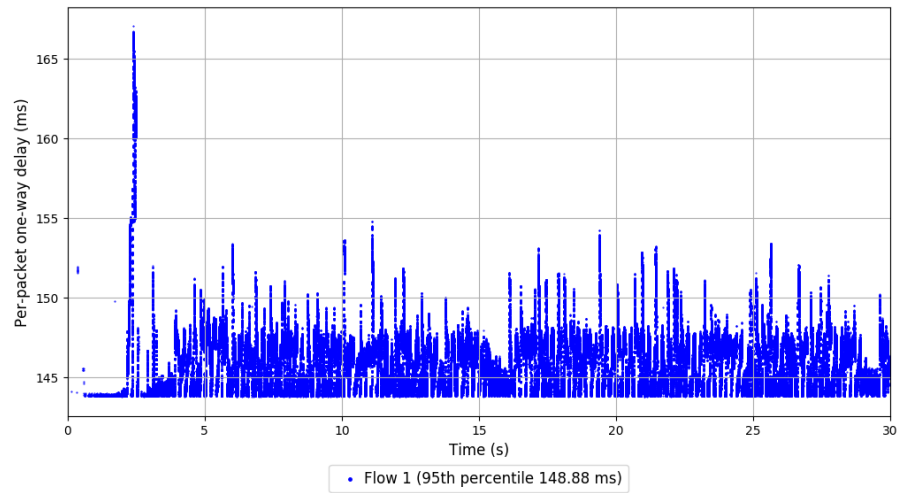
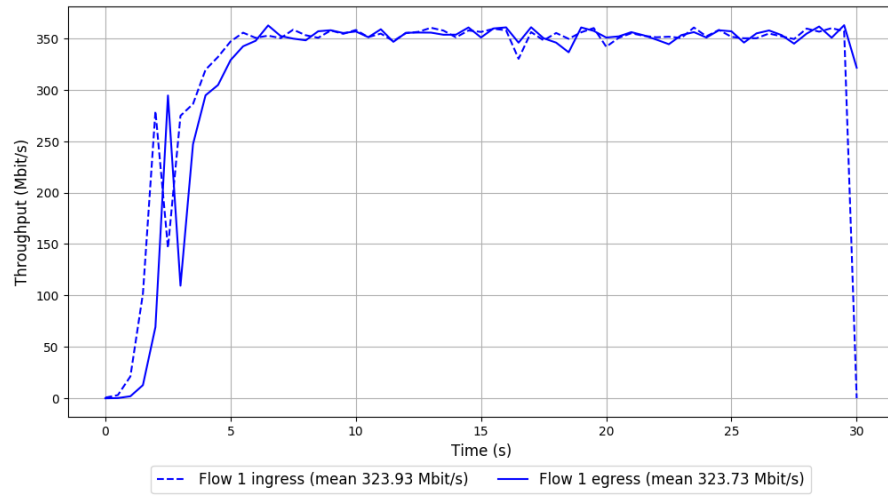


Run 4: Statistics of TCP Cubic

Start at: 2018-10-26 08:00:43  
End at: 2018-10-26 08:01:13  
Local clock offset: 0.454 ms  
Remote clock offset: -46.863 ms

# Below is generated by plot.py at 2018-10-26 09:15:02  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 323.73 Mbit/s  
95th percentile per-packet one-way delay: 148.885 ms  
Loss rate: 0.71%  
-- Flow 1:  
Average throughput: 323.73 Mbit/s  
95th percentile per-packet one-way delay: 148.885 ms  
Loss rate: 0.71%

#### Run 4: Report of TCP Cubic — Data Link



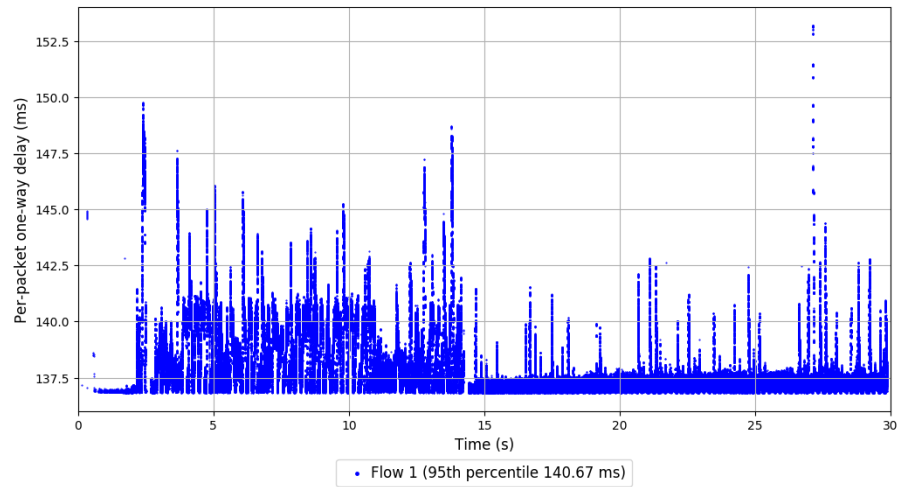
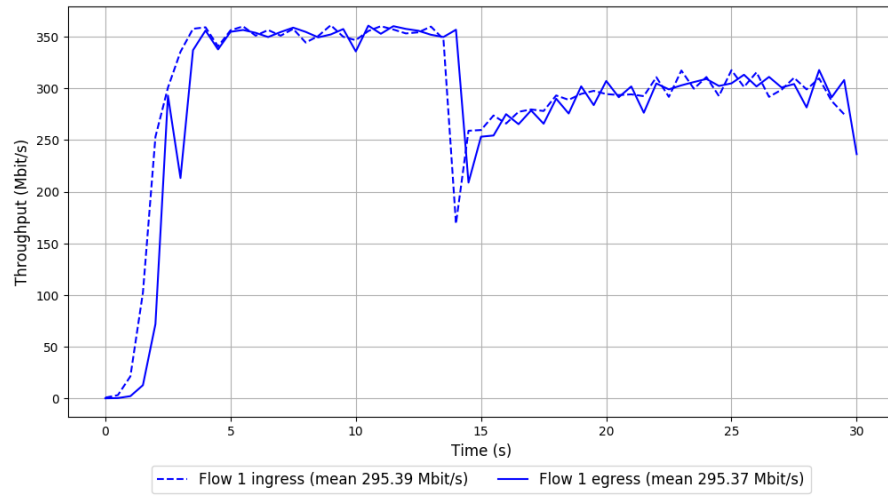


Run 5: Statistics of TCP Cubic

Start at: 2018-10-26 08:38:53  
End at: 2018-10-26 08:39:23  
Local clock offset: 1.251 ms  
Remote clock offset: -40.765 ms

# Below is generated by plot.py at 2018-10-26 09:15:02  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 295.37 Mbit/s  
95th percentile per-packet one-way delay: 140.673 ms  
Loss rate: 0.66%  
-- Flow 1:  
Average throughput: 295.37 Mbit/s  
95th percentile per-packet one-way delay: 140.673 ms  
Loss rate: 0.66%

### Run 5: Report of TCP Cubic — Data Link

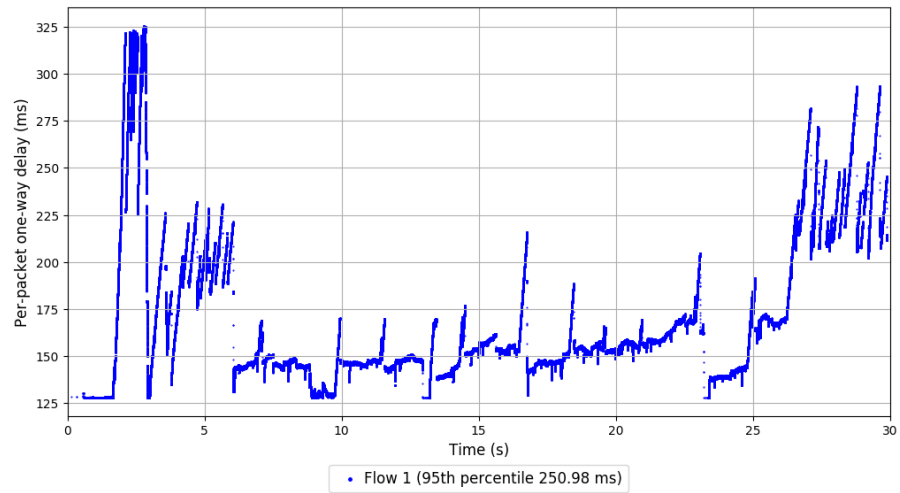
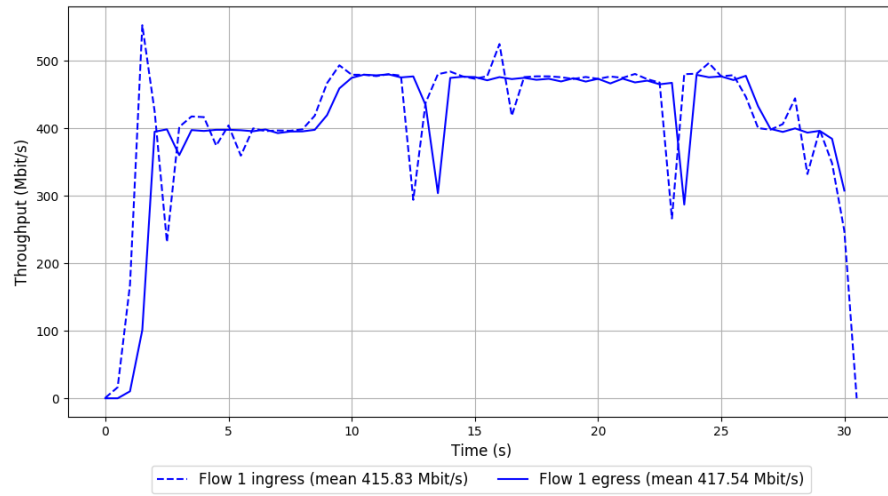


Run 1: Statistics of FillP

Start at: 2018-10-26 06:37:08  
End at: 2018-10-26 06:37:38  
Local clock offset: 0.766 ms  
Remote clock offset: -32.484 ms

# Below is generated by plot.py at 2018-10-26 09:17:15  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 417.54 Mbit/s  
95th percentile per-packet one-way delay: 250.982 ms  
Loss rate: 2.16%  
-- Flow 1:  
Average throughput: 417.54 Mbit/s  
95th percentile per-packet one-way delay: 250.982 ms  
Loss rate: 2.16%

## Run 1: Report of FillP — Data Link

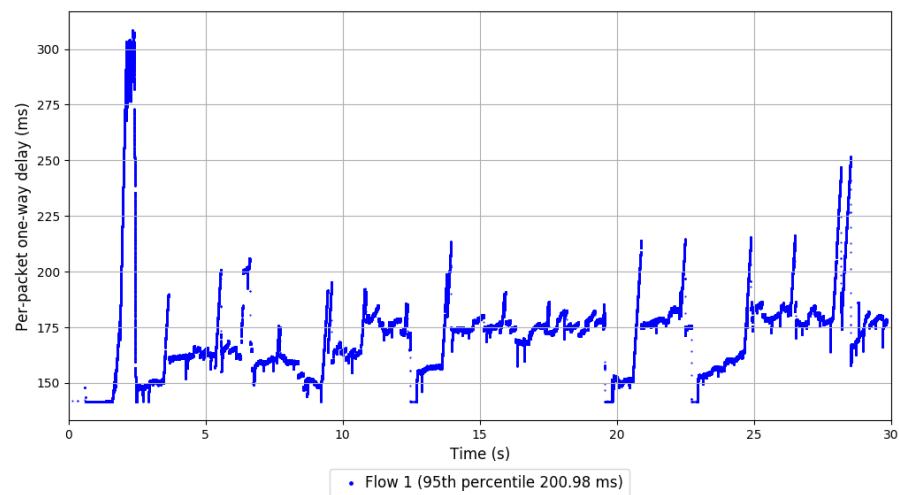
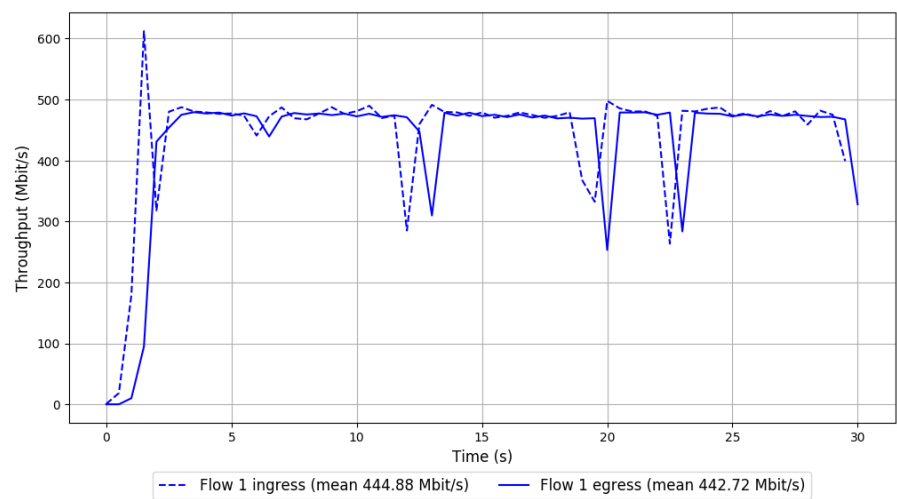


Run 2: Statistics of FillP

Start at: 2018-10-26 07:10:20  
End at: 2018-10-26 07:10:50  
Local clock offset: -0.33 ms  
Remote clock offset: -46.122 ms

# Below is generated by plot.py at 2018-10-26 09:20:27  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 442.72 Mbit/s  
95th percentile per-packet one-way delay: 200.978 ms  
Loss rate: 1.23%  
-- Flow 1:  
Average throughput: 442.72 Mbit/s  
95th percentile per-packet one-way delay: 200.978 ms  
Loss rate: 1.23%

Run 2: Report of FillP — Data Link

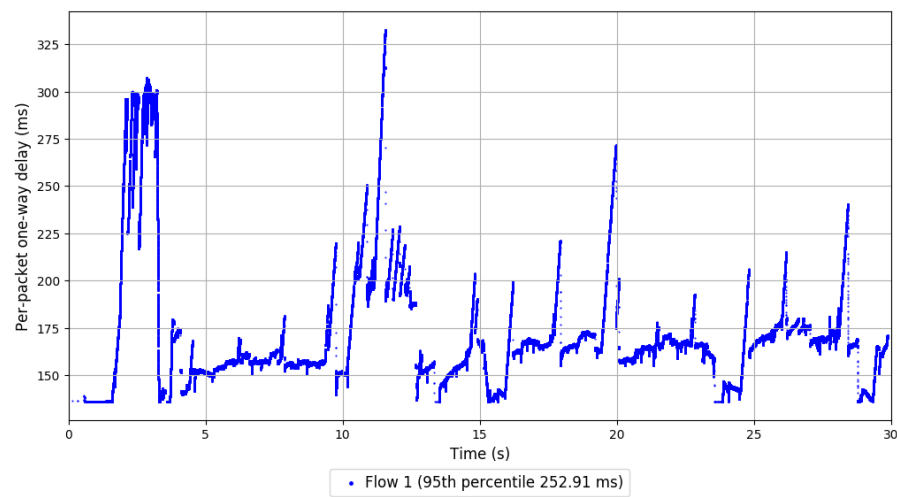
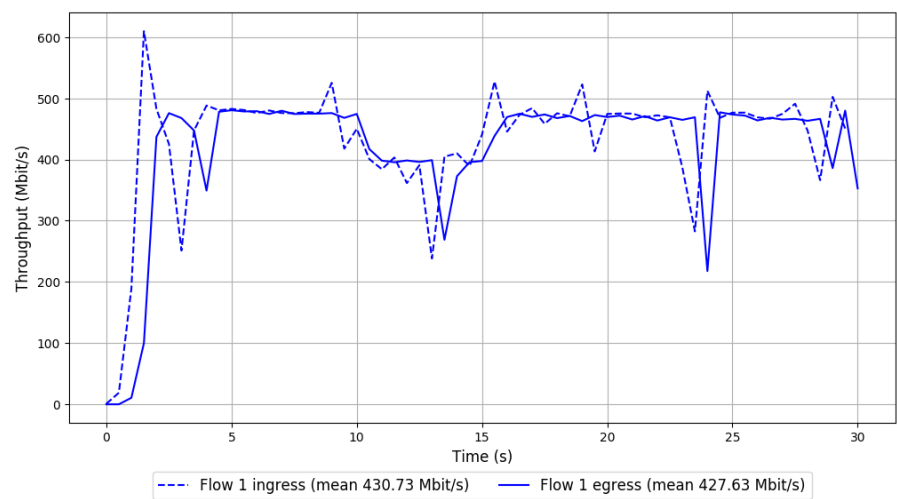


Run 3: Statistics of FillP

Start at: 2018-10-26 07:49:05  
End at: 2018-10-26 07:49:35  
Local clock offset: -0.586 ms  
Remote clock offset: -41.587 ms

# Below is generated by plot.py at 2018-10-26 09:20:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 427.63 Mbit/s  
95th percentile per-packet one-way delay: 252.909 ms  
Loss rate: 1.46%  
-- Flow 1:  
Average throughput: 427.63 Mbit/s  
95th percentile per-packet one-way delay: 252.909 ms  
Loss rate: 1.46%

Run 3: Report of FillP — Data Link



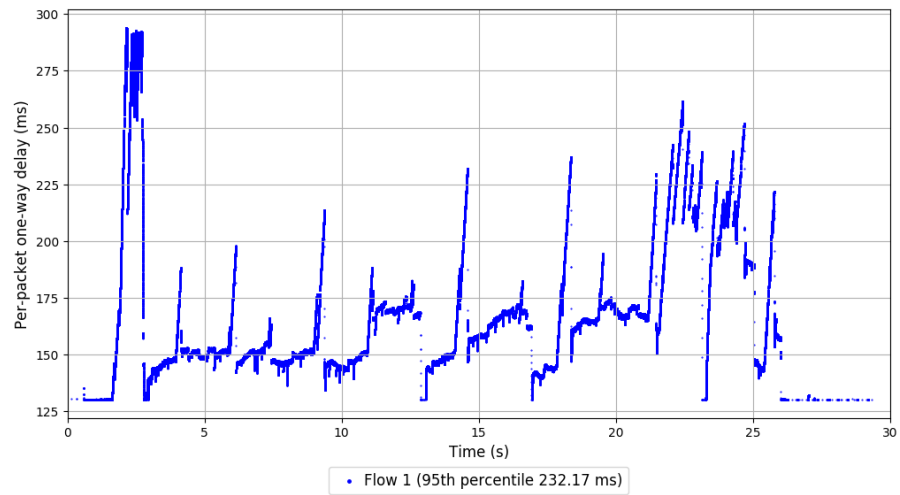
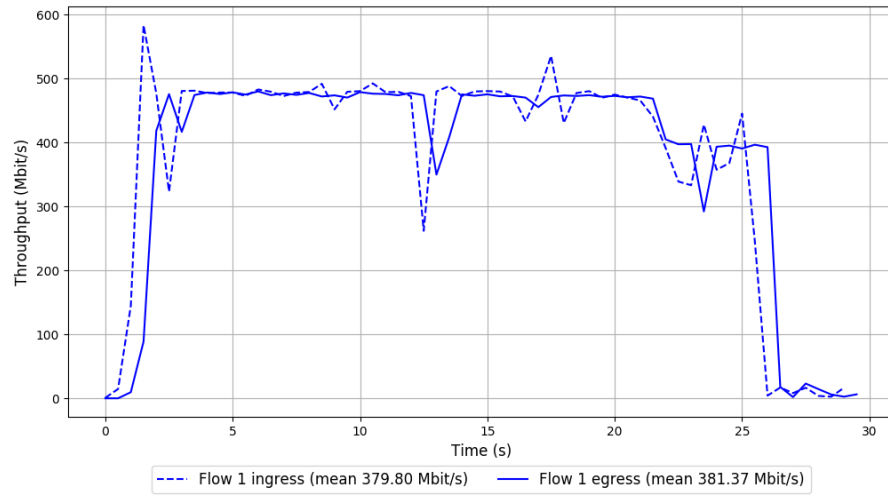


Run 4: Statistics of FillP

Start at: 2018-10-26 08:27:36  
End at: 2018-10-26 08:28:06  
Local clock offset: 0.974 ms  
Remote clock offset: -34.44 ms

# Below is generated by plot.py at 2018-10-26 09:20:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 381.37 Mbit/s  
95th percentile per-packet one-way delay: 232.174 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 381.37 Mbit/s  
95th percentile per-packet one-way delay: 232.174 ms  
Loss rate: 0.43%

#### Run 4: Report of FillP — Data Link

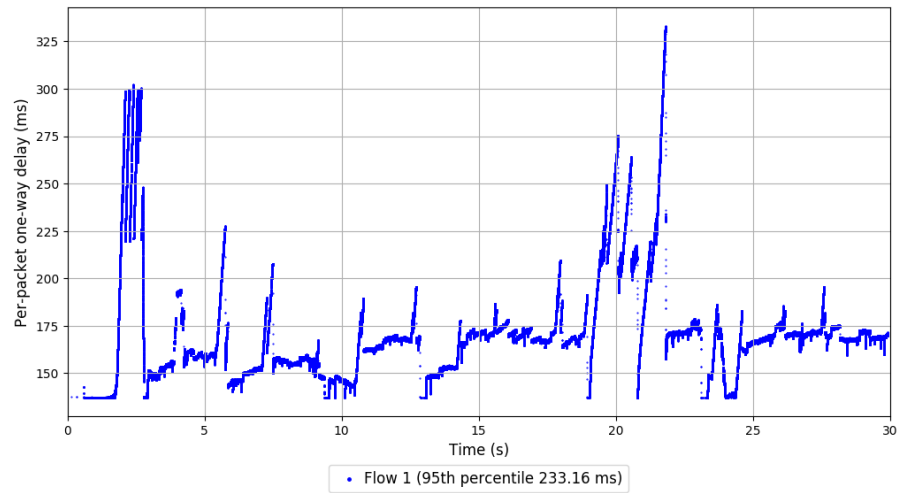
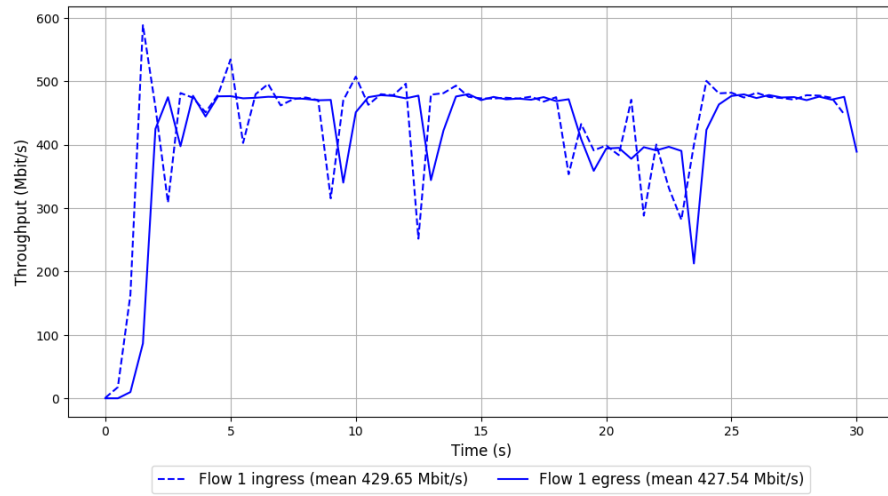


Run 5: Statistics of FillP

Start at: 2018-10-26 09:00:17  
End at: 2018-10-26 09:00:47  
Local clock offset: -0.494 ms  
Remote clock offset: -43.657 ms

# Below is generated by plot.py at 2018-10-26 09:21:02  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 427.54 Mbit/s  
95th percentile per-packet one-way delay: 233.159 ms  
Loss rate: 1.15%  
-- Flow 1:  
Average throughput: 427.54 Mbit/s  
95th percentile per-packet one-way delay: 233.159 ms  
Loss rate: 1.15%

### Run 5: Report of FillP — Data Link

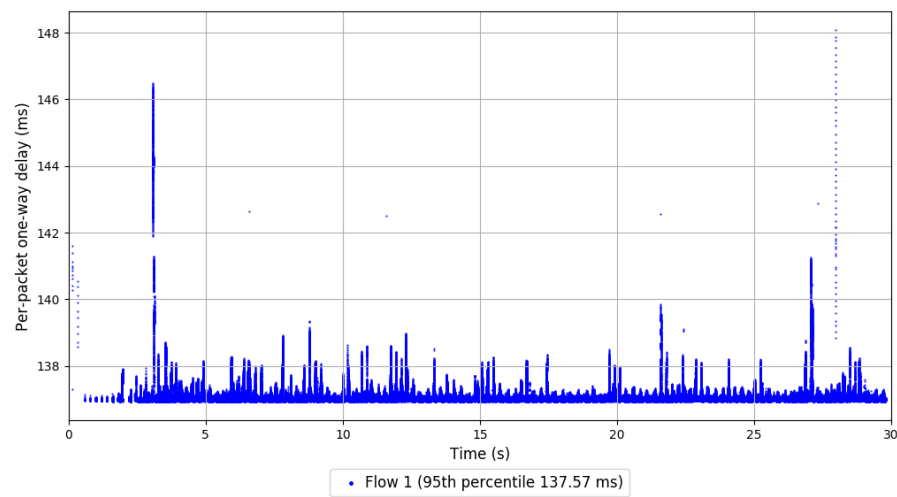
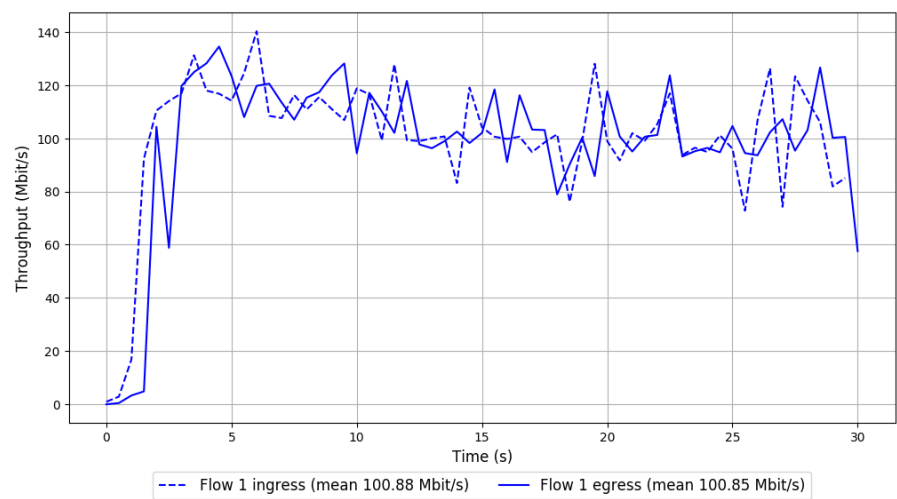


```
Run 1: Statistics of Indigo

Start at: 2018-10-26 06:18:25
End at: 2018-10-26 06:18:55
Local clock offset: -1.303 ms
Remote clock offset: -44.124 ms

# Below is generated by plot.py at 2018-10-26 09:21:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 100.85 Mbit/s
95th percentile per-packet one-way delay: 137.571 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 100.85 Mbit/s
95th percentile per-packet one-way delay: 137.571 ms
Loss rate: 0.69%
```

Run 1: Report of Indigo — Data Link

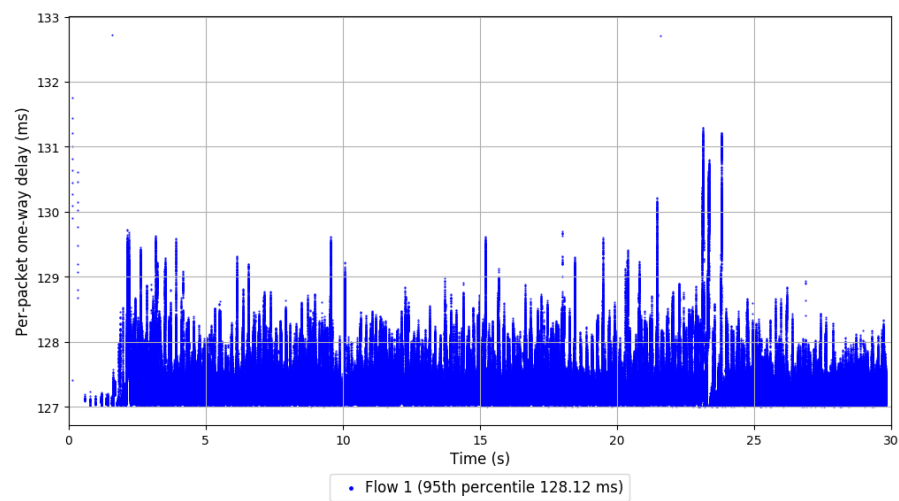
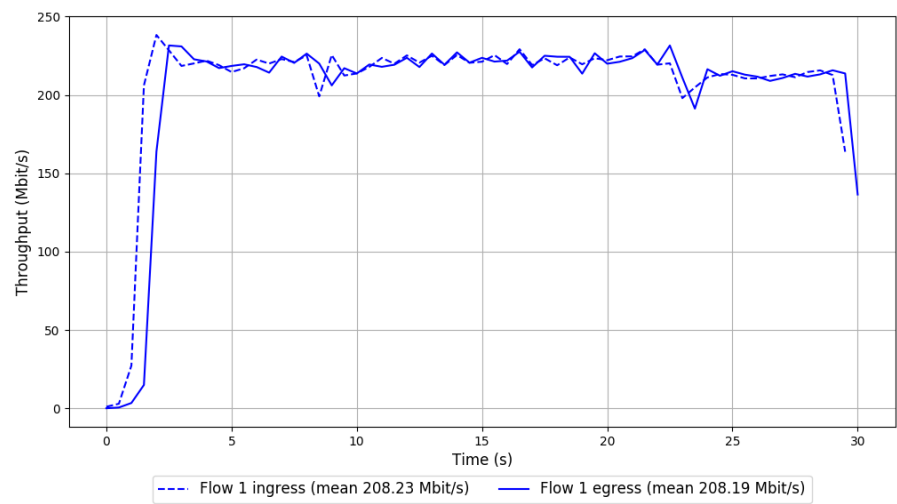


Run 2: Statistics of Indigo

Start at: 2018-10-26 06:50:52  
End at: 2018-10-26 06:51:22  
Local clock offset: 1.613 ms  
Remote clock offset: -32.223 ms

# Below is generated by plot.py at 2018-10-26 09:21:02  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 208.19 Mbit/s  
95th percentile per-packet one-way delay: 128.119 ms  
Loss rate: 0.66%  
-- Flow 1:  
Average throughput: 208.19 Mbit/s  
95th percentile per-packet one-way delay: 128.119 ms  
Loss rate: 0.66%

Run 2: Report of Indigo — Data Link



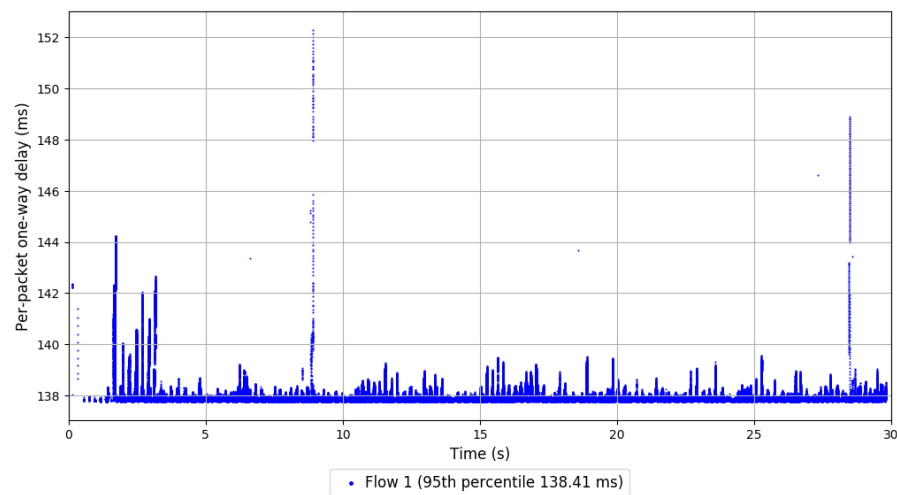
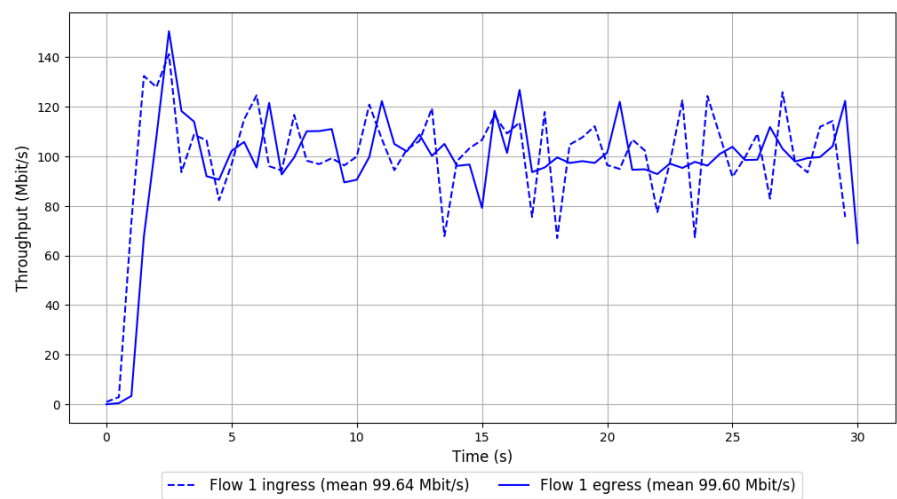


Run 3: Statistics of Indigo

Start at: 2018-10-26 07:24:17  
End at: 2018-10-26 07:24:47  
Local clock offset: 2.547 ms  
Remote clock offset: -40.677 ms

# Below is generated by plot.py at 2018-10-26 09:21:02  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 99.60 Mbit/s  
95th percentile per-packet one-way delay: 138.407 ms  
Loss rate: 0.68%  
-- Flow 1:  
Average throughput: 99.60 Mbit/s  
95th percentile per-packet one-way delay: 138.407 ms  
Loss rate: 0.68%

Run 3: Report of Indigo — Data Link

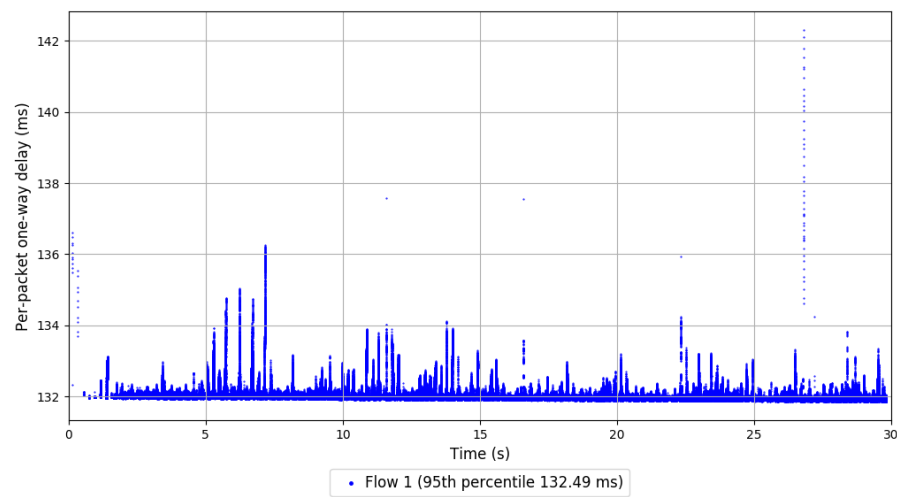
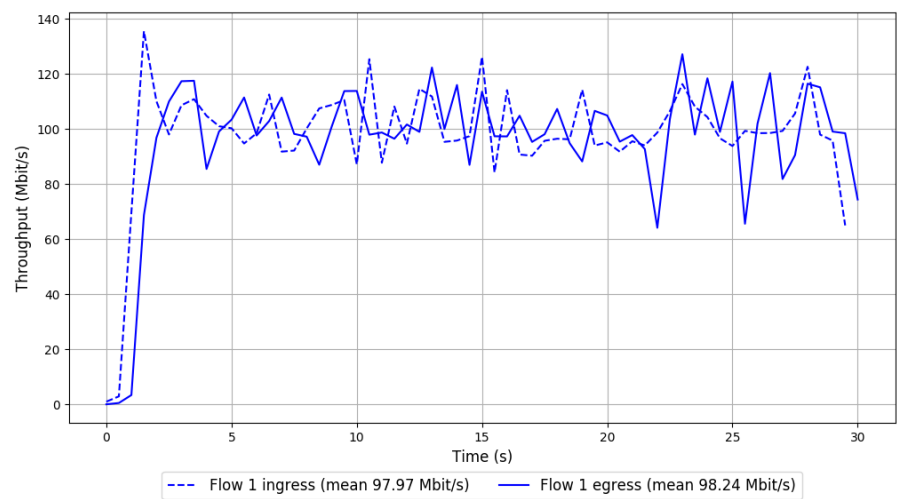


Run 4: Statistics of Indigo

Start at: 2018-10-26 08:02:57  
End at: 2018-10-26 08:03:27  
Local clock offset: -1.893 ms  
Remote clock offset: -37.751 ms

# Below is generated by plot.py at 2018-10-26 09:21:02  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 98.24 Mbit/s  
95th percentile per-packet one-way delay: 132.488 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 98.24 Mbit/s  
95th percentile per-packet one-way delay: 132.488 ms  
Loss rate: 0.38%

Run 4: Report of Indigo — Data Link

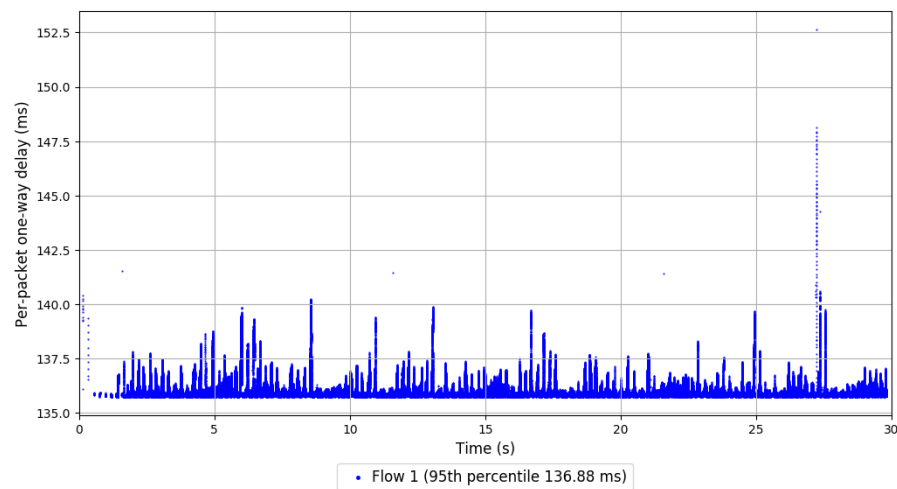
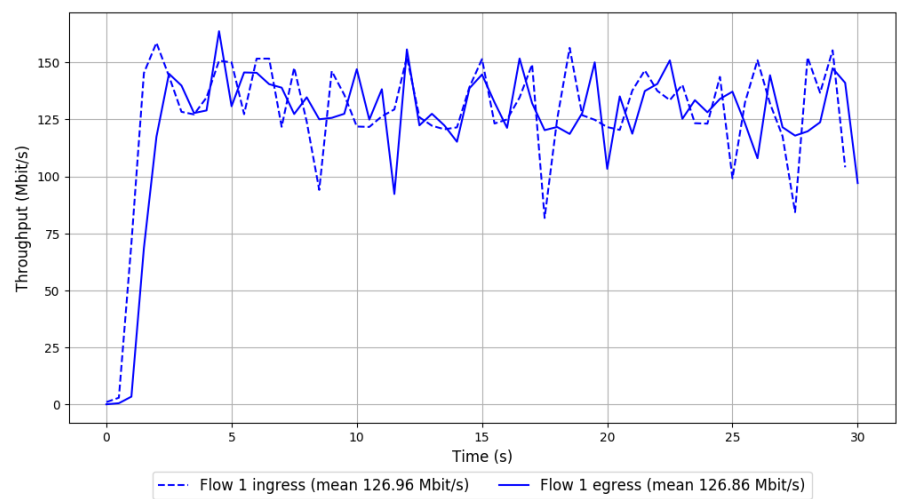


Run 5: Statistics of Indigo

Start at: 2018-10-26 08:41:01  
End at: 2018-10-26 08:41:31  
Local clock offset: 2.558 ms  
Remote clock offset: -38.79 ms

# Below is generated by plot.py at 2018-10-26 09:21:02  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 126.86 Mbit/s  
95th percentile per-packet one-way delay: 136.884 ms  
Loss rate: 0.73%  
-- Flow 1:  
Average throughput: 126.86 Mbit/s  
95th percentile per-packet one-way delay: 136.884 ms  
Loss rate: 0.73%

Run 5: Report of Indigo — Data Link

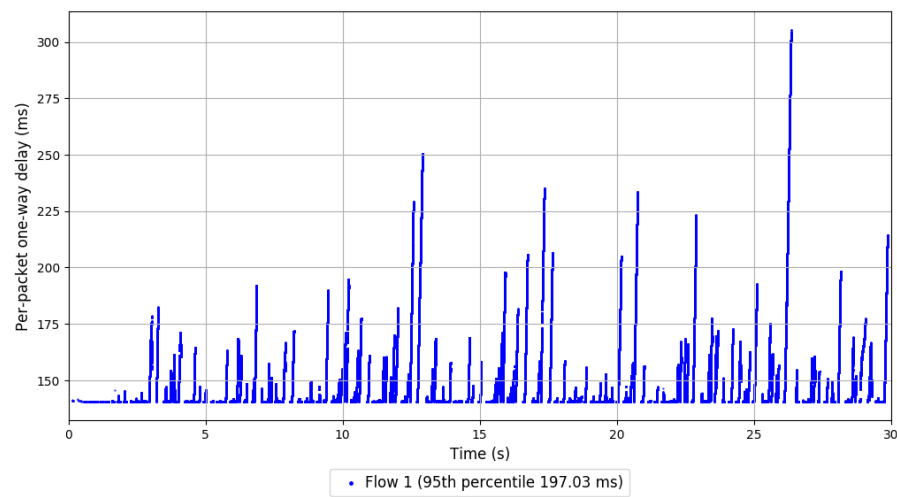
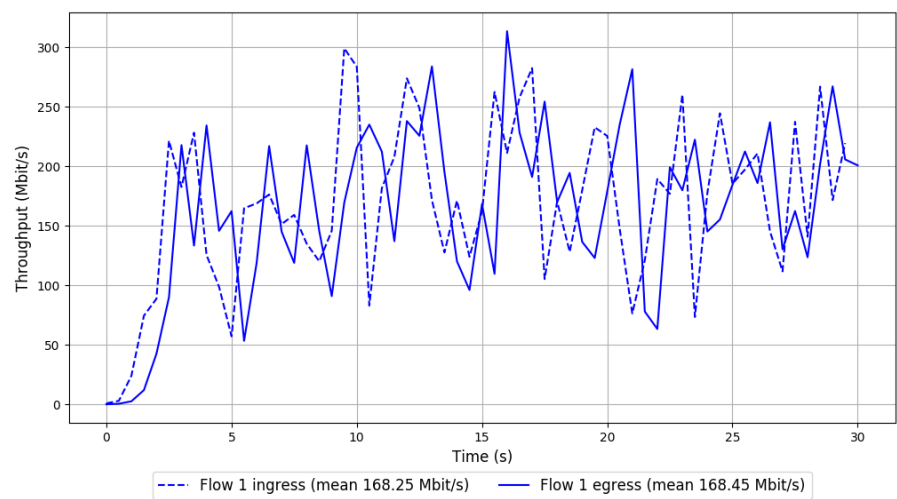


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-10-26 06:26:52  
End at: 2018-10-26 06:27:22  
Local clock offset: 0.328 ms  
Remote clock offset: -44.224 ms

# Below is generated by plot.py at 2018-10-26 09:21:02  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 168.45 Mbit/s  
95th percentile per-packet one-way delay: 197.028 ms  
Loss rate: 0.53%  
-- Flow 1:  
Average throughput: 168.45 Mbit/s  
95th percentile per-packet one-way delay: 197.028 ms  
Loss rate: 0.53%

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





Run 2: Statistics of Indigo-96d2da3

Start at: 2018-10-26 06:59:54

End at: 2018-10-26 07:00:24

Local clock offset: 5.098 ms

Remote clock offset: -40.2 ms

# Below is generated by plot.py at 2018-10-26 09:21:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 176.64 Mbit/s

95th percentile per-packet one-way delay: 192.404 ms

Loss rate: 0.27%

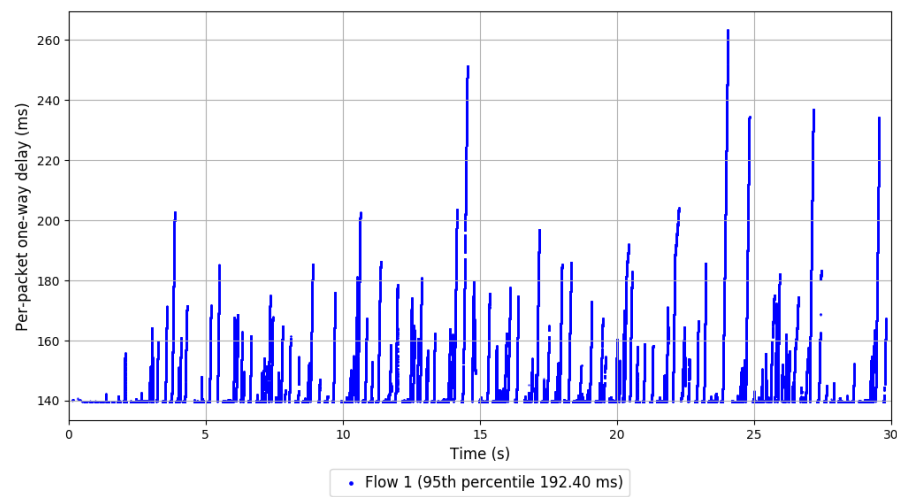
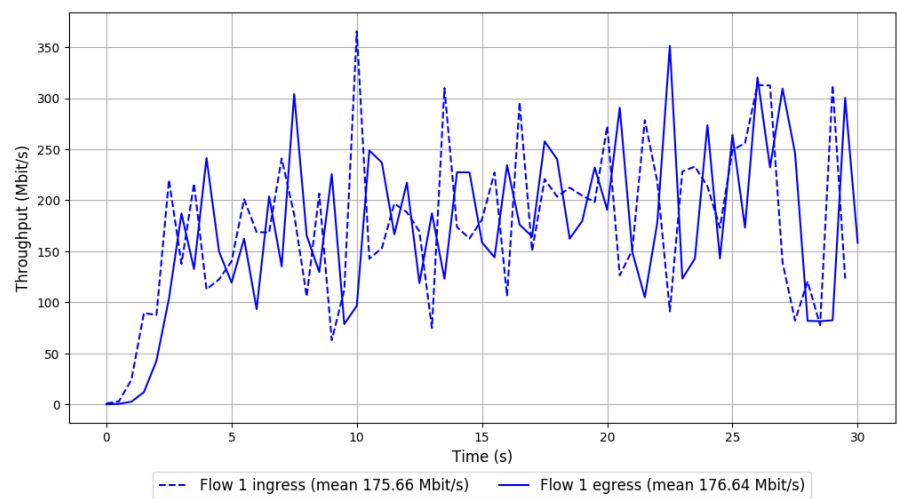
-- Flow 1:

Average throughput: 176.64 Mbit/s

95th percentile per-packet one-way delay: 192.404 ms

Loss rate: 0.27%

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



Run 3: Statistics of Indigo-96d2da3

Start at: 2018-10-26 07:32:45

End at: 2018-10-26 07:33:15

Local clock offset: 1.7 ms

Remote clock offset: -33.127 ms

# Below is generated by plot.py at 2018-10-26 09:21:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 177.95 Mbit/s

95th percentile per-packet one-way delay: 177.102 ms

Loss rate: 0.12%

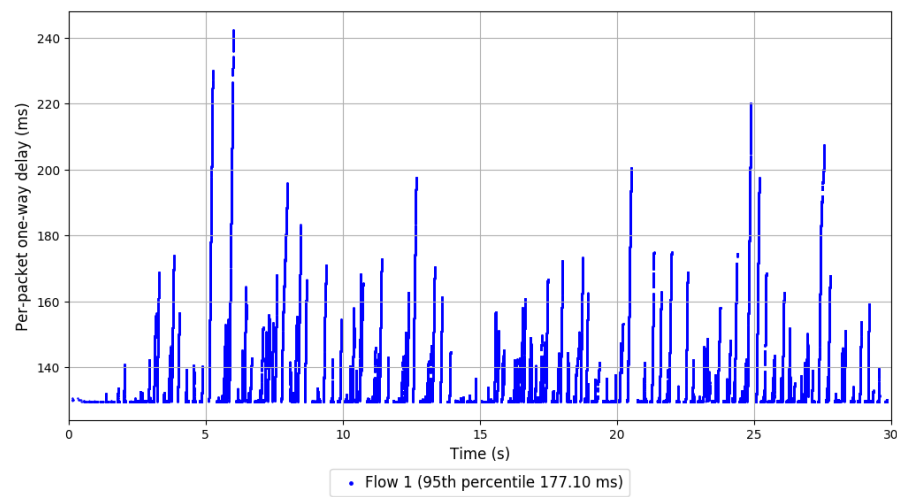
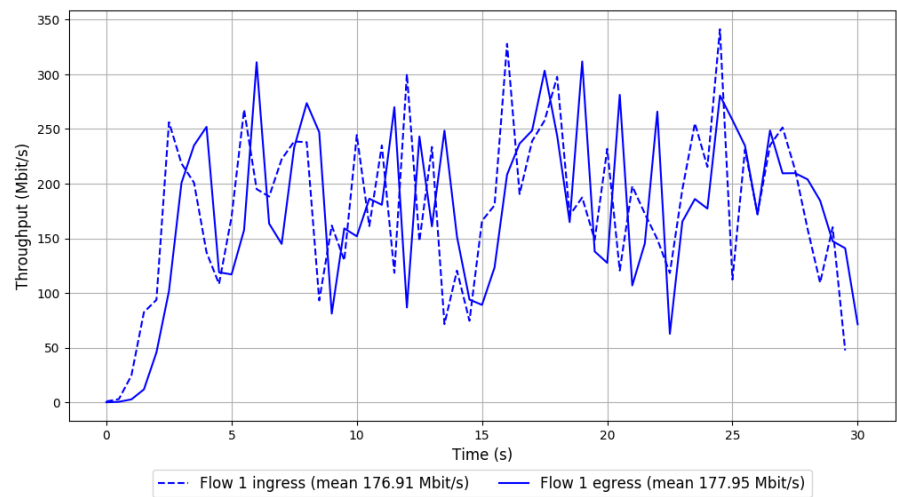
-- Flow 1:

Average throughput: 177.95 Mbit/s

95th percentile per-packet one-way delay: 177.102 ms

Loss rate: 0.12%

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

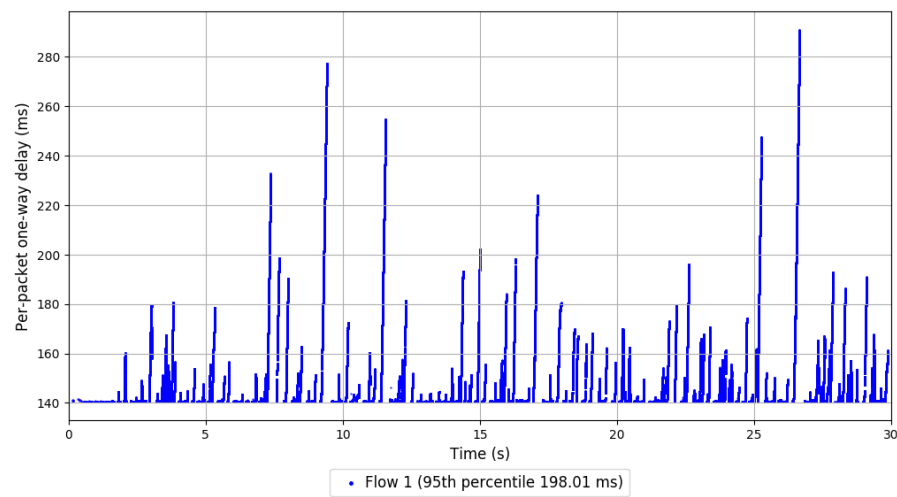
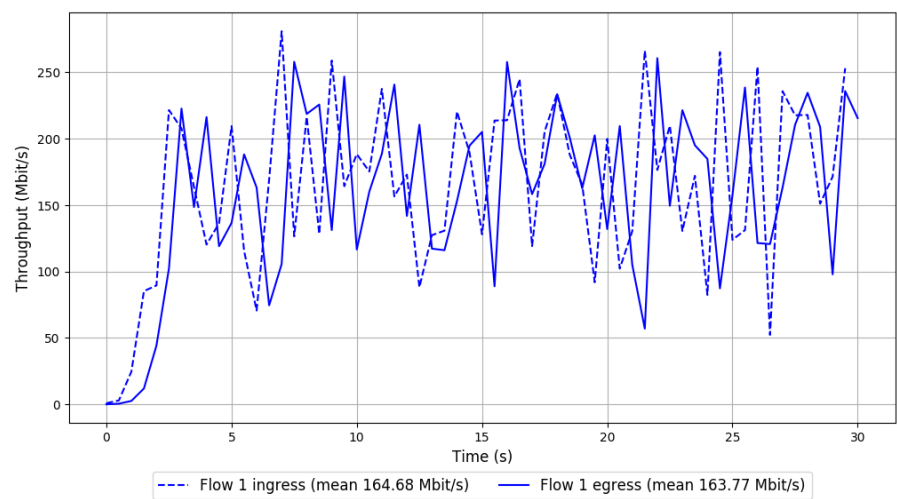


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-10-26 08:11:54  
End at: 2018-10-26 08:12:24  
Local clock offset: 2.507 ms  
Remote clock offset: -44.208 ms

# Below is generated by plot.py at 2018-10-26 09:21:02  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 163.77 Mbit/s  
95th percentile per-packet one-way delay: 198.015 ms  
Loss rate: 0.83%  
-- Flow 1:  
Average throughput: 163.77 Mbit/s  
95th percentile per-packet one-way delay: 198.015 ms  
Loss rate: 0.83%

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

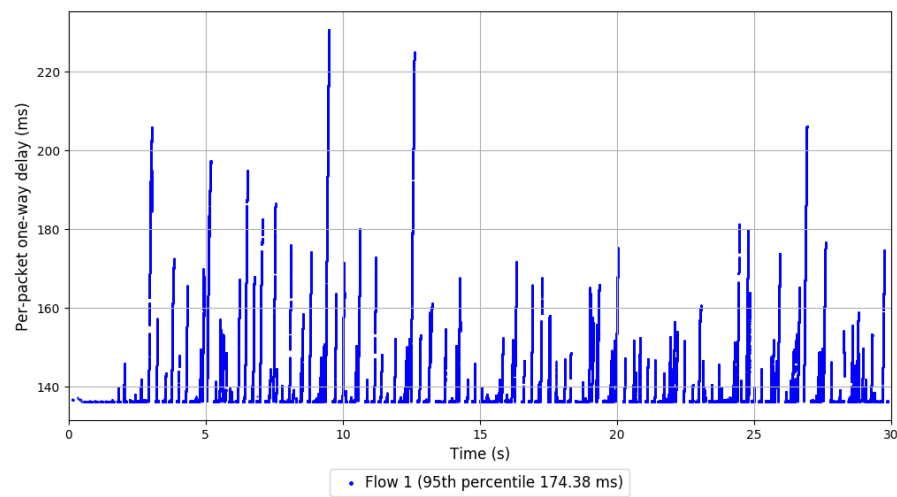
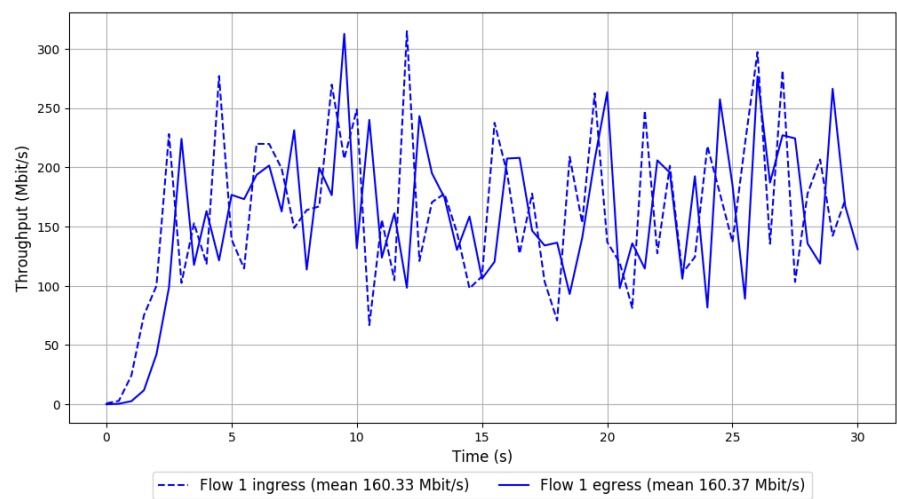


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-10-26 08:50:04  
End at: 2018-10-26 08:50:34  
Local clock offset: -1.467 ms  
Remote clock offset: -44.803 ms

# Below is generated by plot.py at 2018-10-26 09:21:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 160.37 Mbit/s  
95th percentile per-packet one-way delay: 174.382 ms  
Loss rate: 0.62%  
-- Flow 1:  
Average throughput: 160.37 Mbit/s  
95th percentile per-packet one-way delay: 174.382 ms  
Loss rate: 0.62%

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



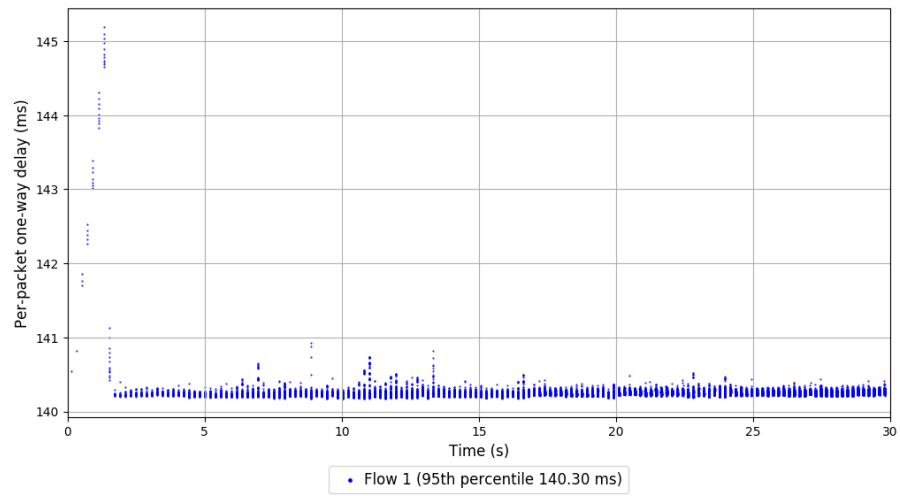
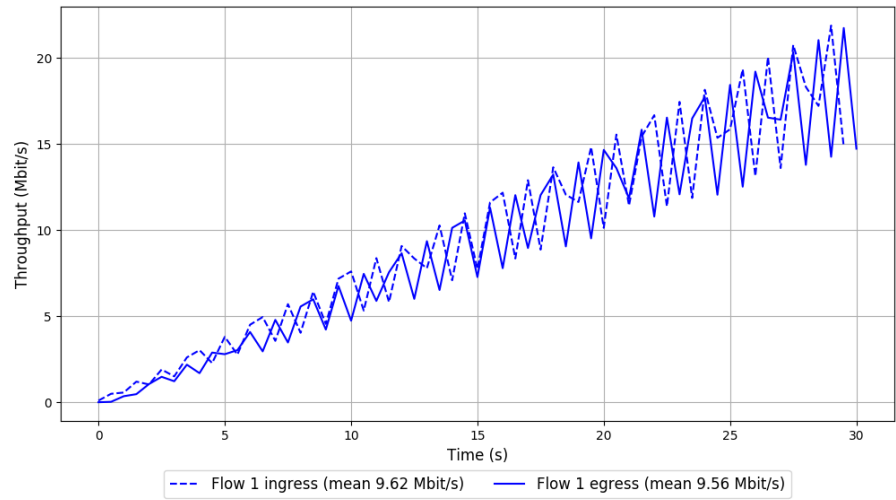


```
Run 1: Statistics of LEDBAT

Start at: 2018-10-26 06:09:00
End at: 2018-10-26 06:09:30
Local clock offset: -1.181 ms
Remote clock offset: -46.28 ms

# Below is generated by plot.py at 2018-10-26 09:21:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 140.299 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 140.299 ms
Loss rate: 1.29%
```

# Run 1: Report of LEDBAT — Data Link

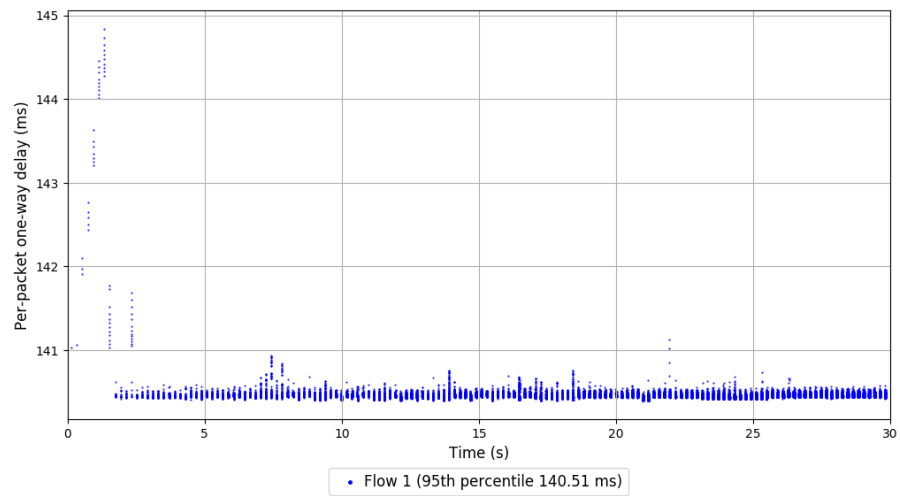
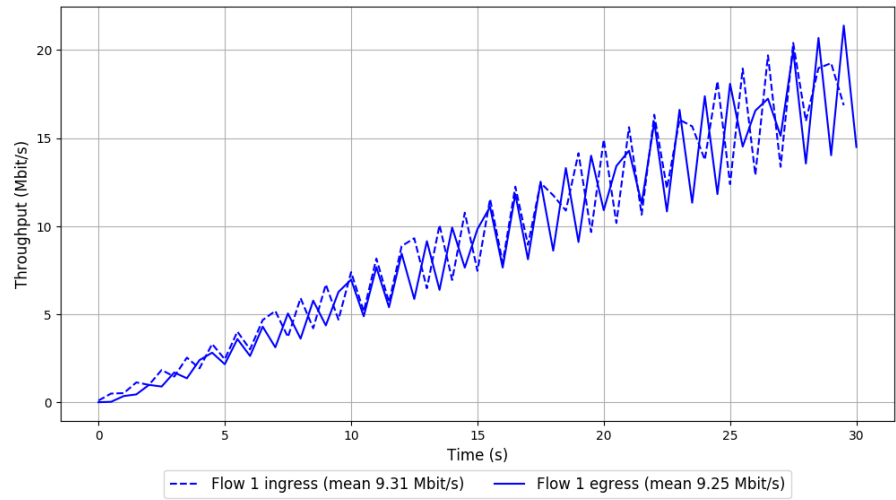


Run 2: Statistics of LEDBAT

Start at: 2018-10-26 06:41:31  
End at: 2018-10-26 06:42:01  
Local clock offset: 1.123 ms  
Remote clock offset: -44.606 ms

# Below is generated by plot.py at 2018-10-26 09:21:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 9.25 Mbit/s  
95th percentile per-packet one-way delay: 140.513 ms  
Loss rate: 1.31%  
-- Flow 1:  
Average throughput: 9.25 Mbit/s  
95th percentile per-packet one-way delay: 140.513 ms  
Loss rate: 1.31%

## Run 2: Report of LEDBAT — Data Link

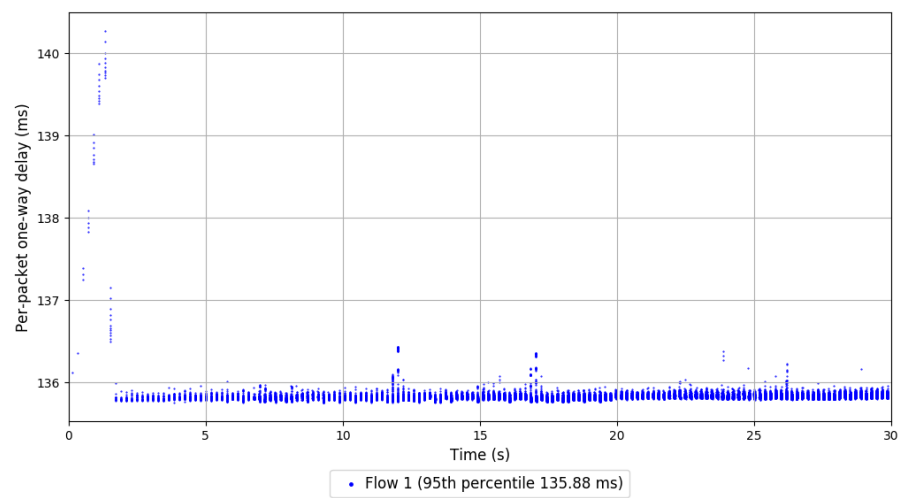
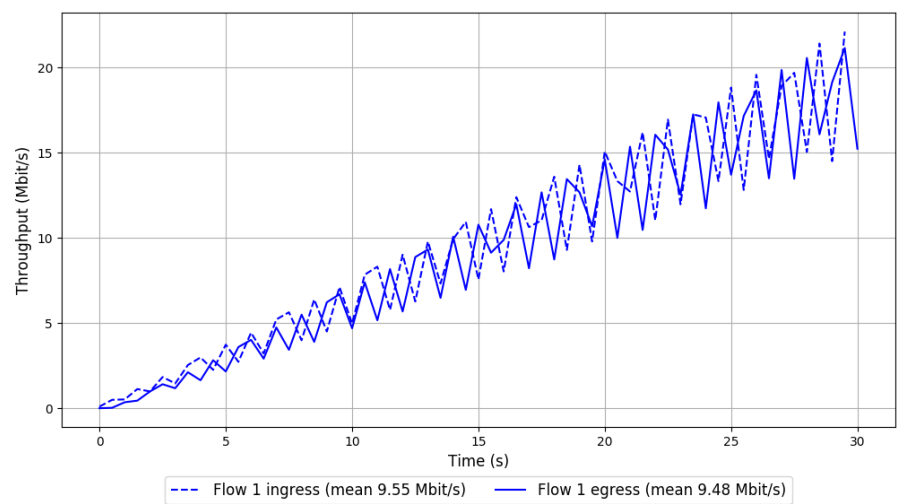


Run 3: Statistics of LEDBAT

Start at: 2018-10-26 07:14:52  
End at: 2018-10-26 07:15:22  
Local clock offset: -0.295 ms  
Remote clock offset: -40.396 ms

# Below is generated by plot.py at 2018-10-26 09:21:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 9.48 Mbit/s  
95th percentile per-packet one-way delay: 135.879 ms  
Loss rate: 1.30%  
-- Flow 1:  
Average throughput: 9.48 Mbit/s  
95th percentile per-packet one-way delay: 135.879 ms  
Loss rate: 1.30%

Run 3: Report of LEDBAT — Data Link

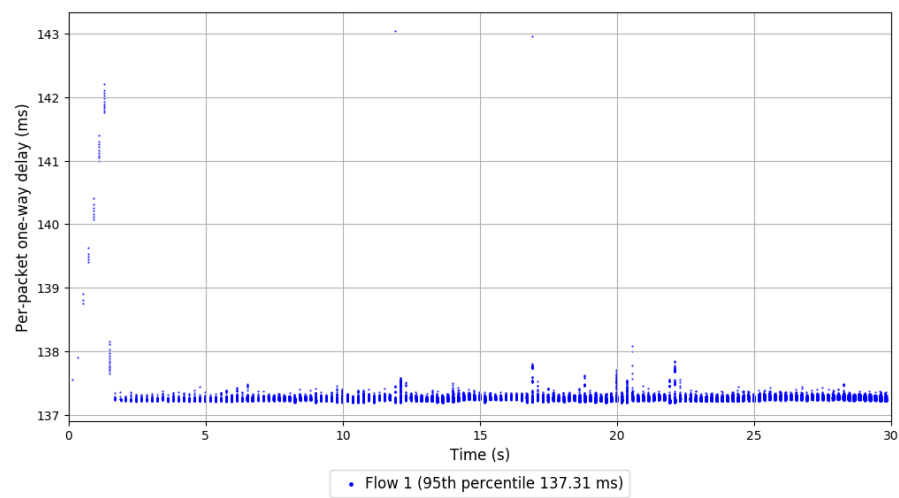
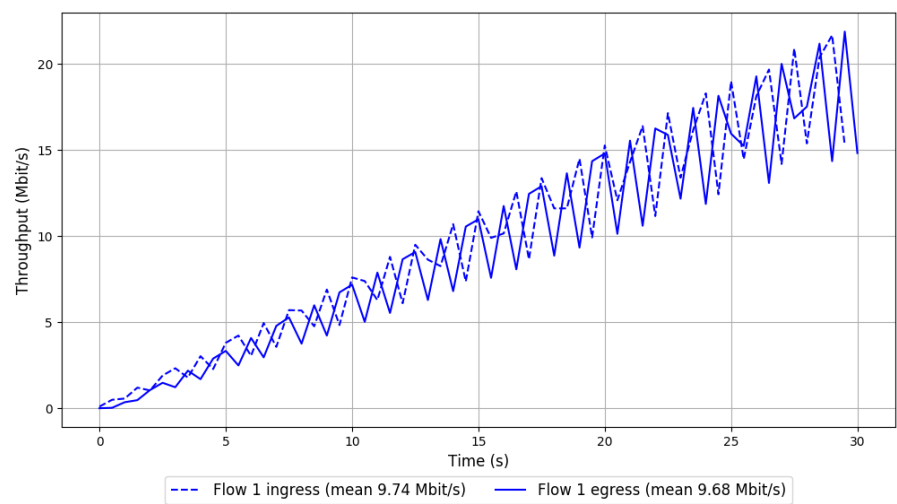


Run 4: Statistics of LEDBAT

Start at: 2018-10-26 07:53:39  
End at: 2018-10-26 07:54:09  
Local clock offset: -1.078 ms  
Remote clock offset: -43.25 ms

# Below is generated by plot.py at 2018-10-26 09:21:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 9.68 Mbit/s  
95th percentile per-packet one-way delay: 137.311 ms  
Loss rate: 1.29%  
-- Flow 1:  
Average throughput: 9.68 Mbit/s  
95th percentile per-packet one-way delay: 137.311 ms  
Loss rate: 1.29%

Run 4: Report of LEDBAT — Data Link



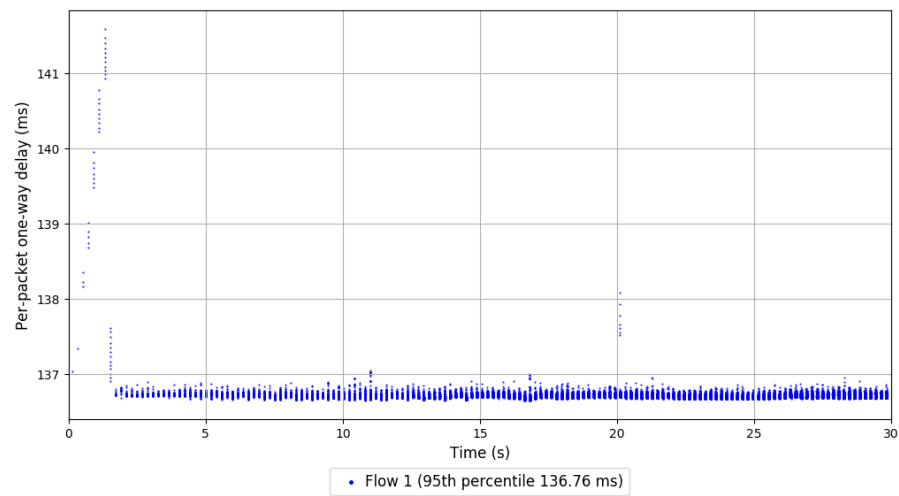
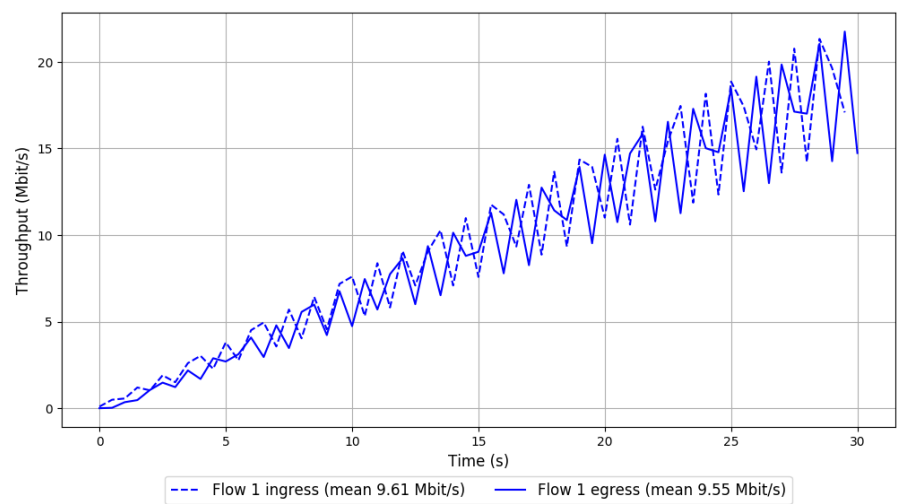


Run 5: Statistics of LEDBAT

Start at: 2018-10-26 08:31:42  
End at: 2018-10-26 08:32:12  
Local clock offset: 1.062 ms  
Remote clock offset: -41.03 ms

# Below is generated by plot.py at 2018-10-26 09:21:09  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 9.55 Mbit/s  
95th percentile per-packet one-way delay: 136.762 ms  
Loss rate: 1.29%  
-- Flow 1:  
Average throughput: 9.55 Mbit/s  
95th percentile per-packet one-way delay: 136.762 ms  
Loss rate: 1.29%

Run 5: Report of LEDBAT — Data Link

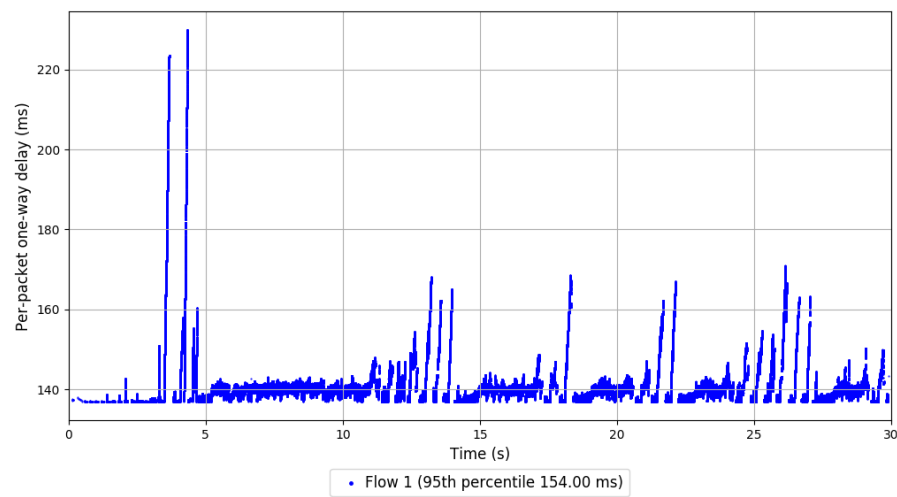
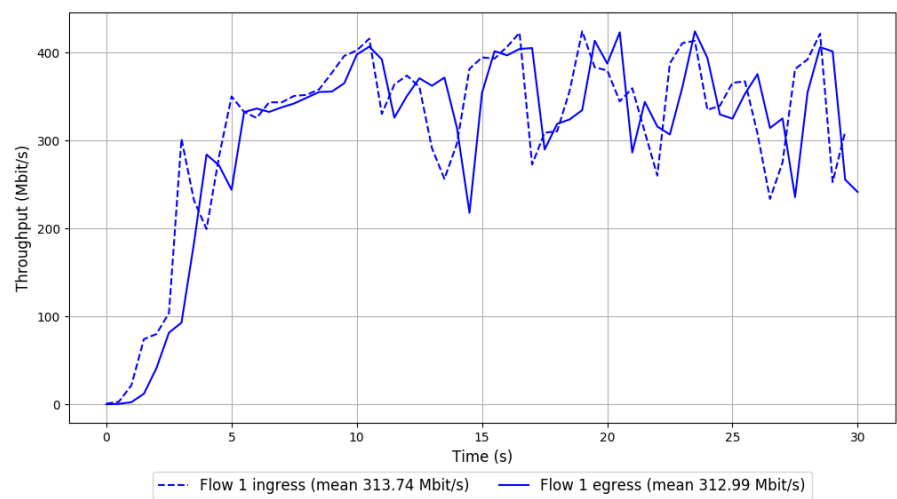


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-10-26 06:28:35
End at: 2018-10-26 06:29:05
Local clock offset: -1.028 ms
Remote clock offset: -41.979 ms

# Below is generated by plot.py at 2018-10-26 09:23:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 312.99 Mbit/s
95th percentile per-packet one-way delay: 154.003 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 312.99 Mbit/s
95th percentile per-packet one-way delay: 154.003 ms
Loss rate: 1.00%
```

Run 1: Report of Indigo-Muses — Data Link

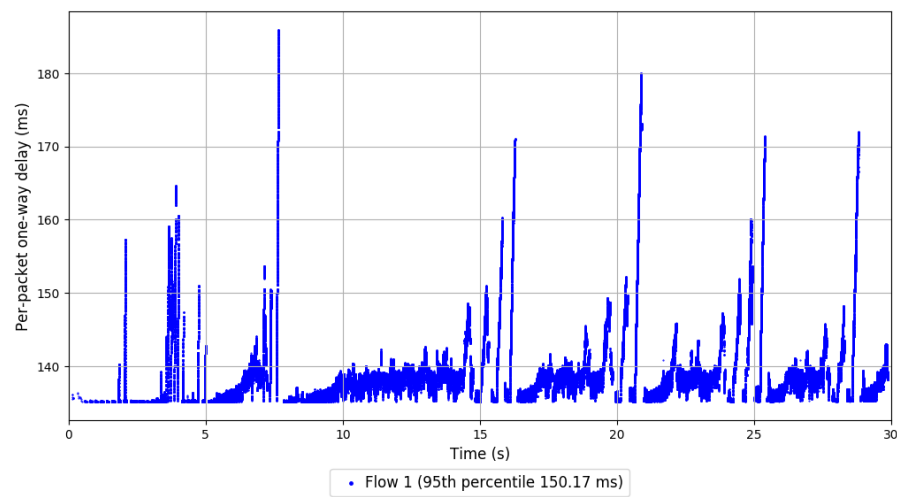
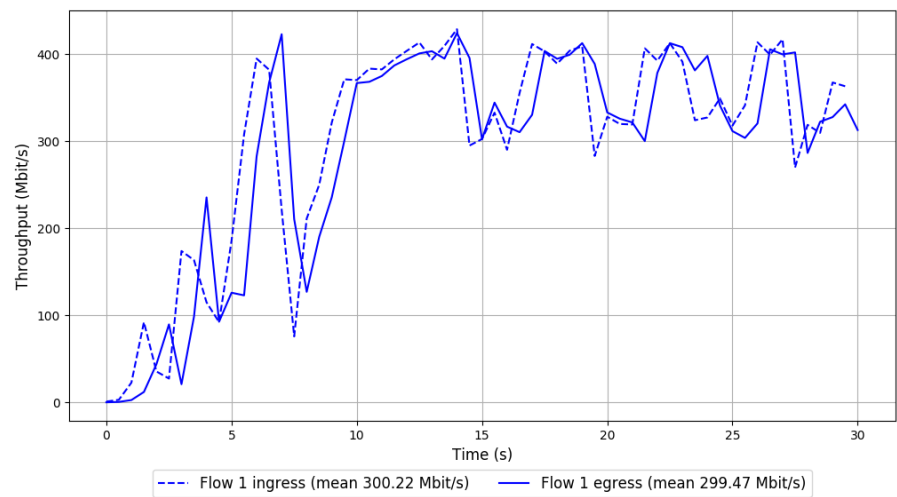


Run 2: Statistics of Indigo-Muses

Start at: 2018-10-26 07:01:38  
End at: 2018-10-26 07:02:08  
Local clock offset: 1.628 ms  
Remote clock offset: -40.486 ms

# Below is generated by plot.py at 2018-10-26 09:23:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 299.47 Mbit/s  
95th percentile per-packet one-way delay: 150.171 ms  
Loss rate: 0.90%  
-- Flow 1:  
Average throughput: 299.47 Mbit/s  
95th percentile per-packet one-way delay: 150.171 ms  
Loss rate: 0.90%

Run 2: Report of Indigo-Muses — Data Link

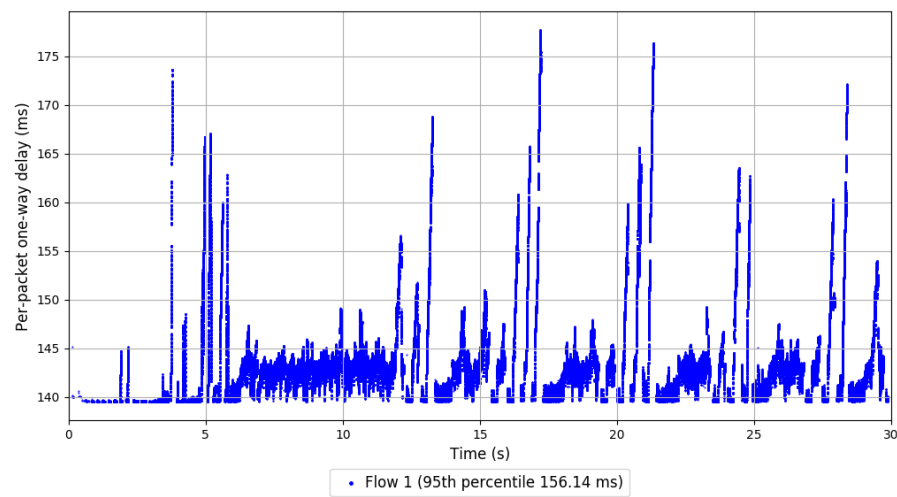
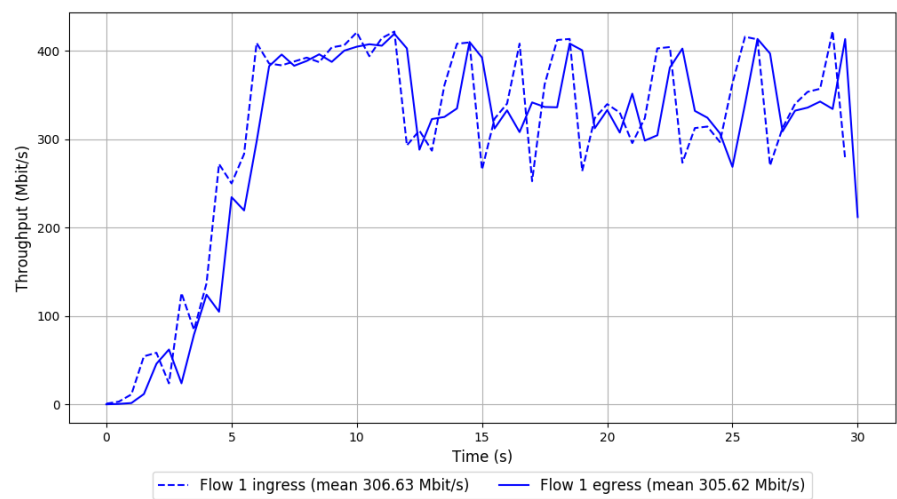


Run 3: Statistics of Indigo-Muses

Start at: 2018-10-26 07:34:31  
End at: 2018-10-26 07:35:01  
Local clock offset: 1.199 ms  
Remote clock offset: -41.73 ms

# Below is generated by plot.py at 2018-10-26 09:23:21  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 305.62 Mbit/s  
95th percentile per-packet one-way delay: 156.140 ms  
Loss rate: 1.00%  
-- Flow 1:  
Average throughput: 305.62 Mbit/s  
95th percentile per-packet one-way delay: 156.140 ms  
Loss rate: 1.00%

Run 3: Report of Indigo-Muses — Data Link



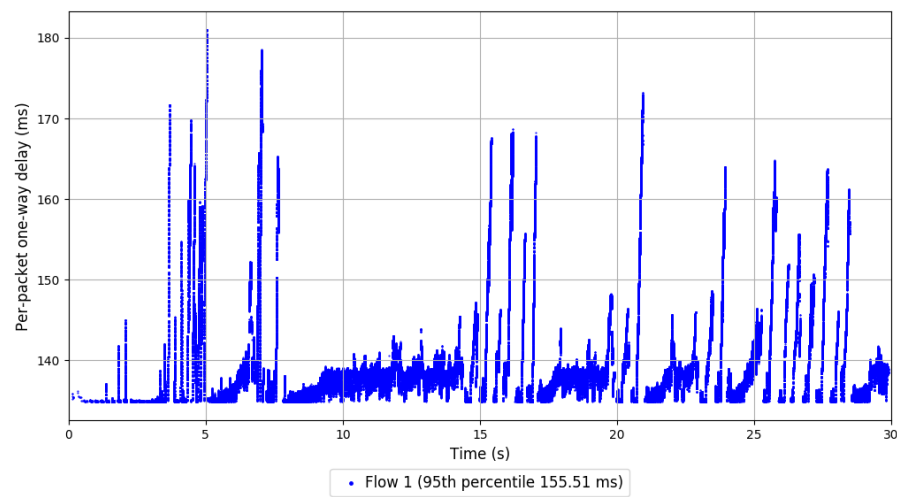
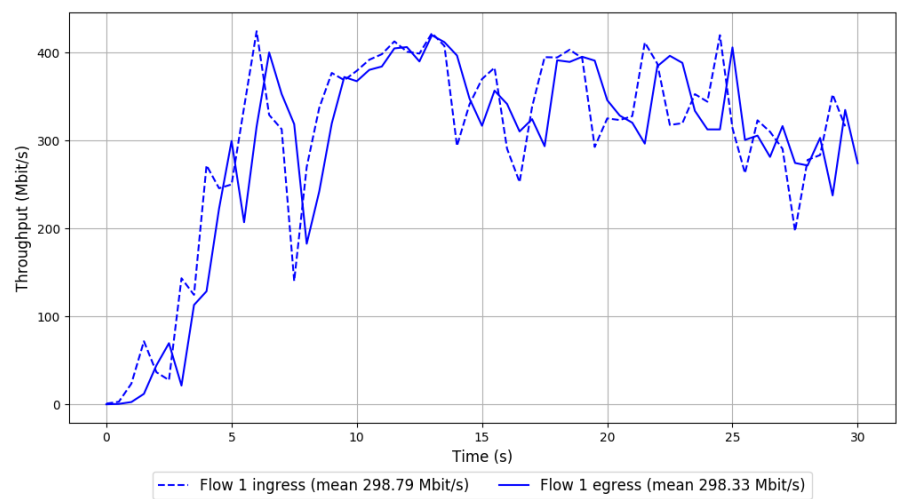


Run 4: Statistics of Indigo-Muses

Start at: 2018-10-26 08:13:36  
End at: 2018-10-26 08:14:06  
Local clock offset: 1.72 ms  
Remote clock offset: -39.567 ms

# Below is generated by plot.py at 2018-10-26 09:23:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 298.33 Mbit/s  
95th percentile per-packet one-way delay: 155.507 ms  
Loss rate: 0.80%  
-- Flow 1:  
Average throughput: 298.33 Mbit/s  
95th percentile per-packet one-way delay: 155.507 ms  
Loss rate: 0.80%

Run 4: Report of Indigo-Muses — Data Link

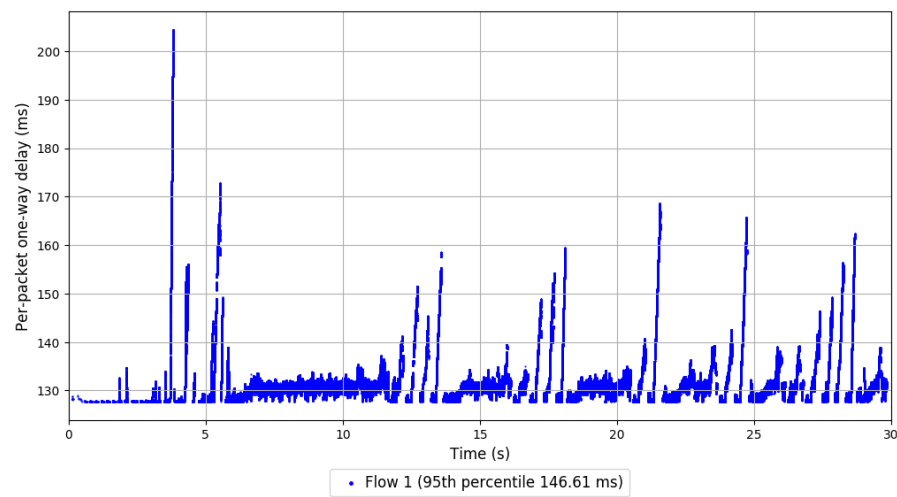
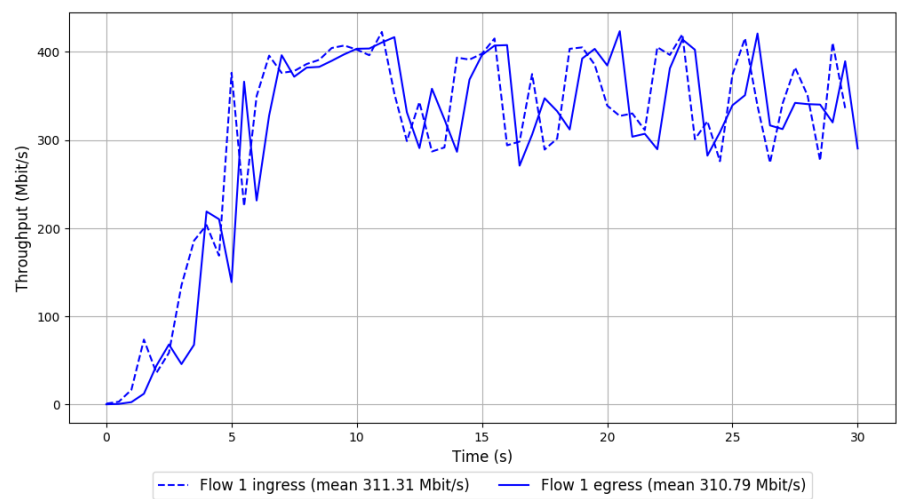


Run 5: Statistics of Indigo-Muses

Start at: 2018-10-26 08:51:46  
End at: 2018-10-26 08:52:16  
Local clock offset: 0.884 ms  
Remote clock offset: -32.282 ms

# Below is generated by plot.py at 2018-10-26 09:23:59  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 310.79 Mbit/s  
95th percentile per-packet one-way delay: 146.607 ms  
Loss rate: 0.85%  
-- Flow 1:  
Average throughput: 310.79 Mbit/s  
95th percentile per-packet one-way delay: 146.607 ms  
Loss rate: 0.85%

Run 5: Report of Indigo-Muses — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2018-10-26 06:39:29

End at: 2018-10-26 06:39:59

Local clock offset: 0.6 ms

Remote clock offset: -32.36 ms

# Below is generated by plot.py at 2018-10-26 09:24:33

# Datalink statistics

-- Total of 1 flow:

Average throughput: 346.03 Mbit/s

95th percentile per-packet one-way delay: 131.790 ms

Loss rate: 0.93%

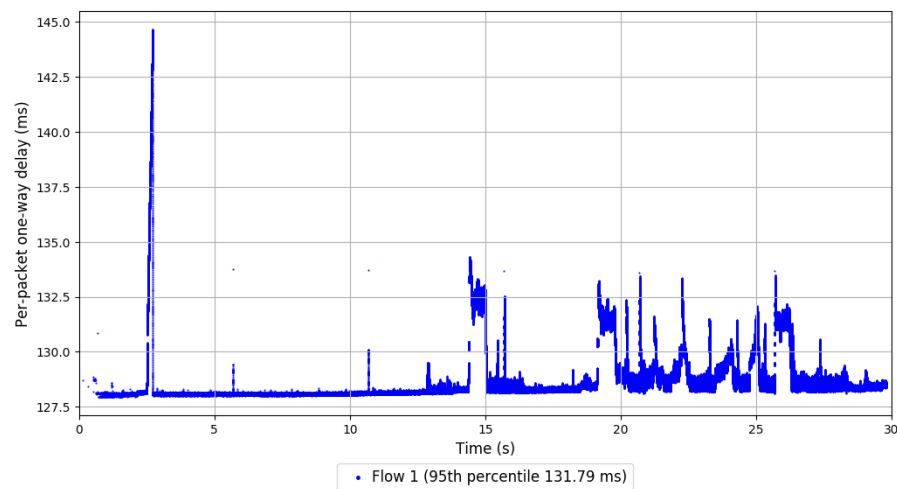
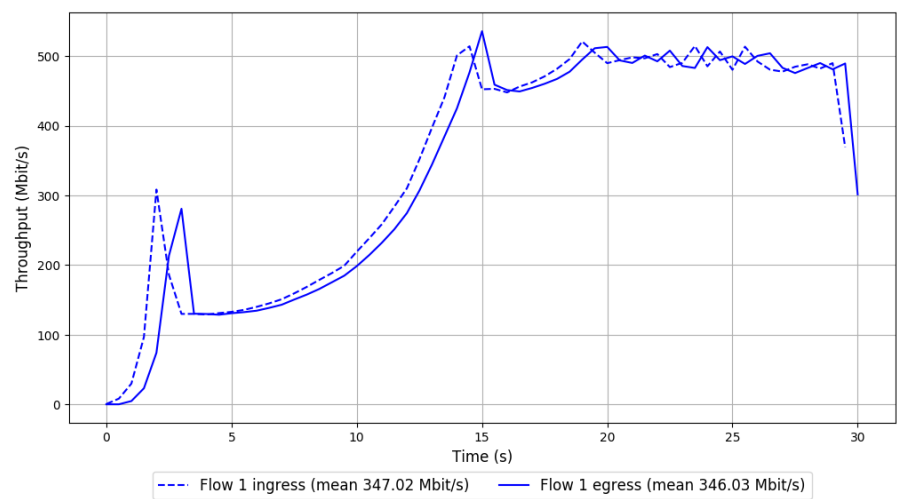
-- Flow 1:

Average throughput: 346.03 Mbit/s

95th percentile per-packet one-way delay: 131.790 ms

Loss rate: 0.93%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-10-26 07:12:46

End at: 2018-10-26 07:13:16

Local clock offset: -2.213 ms

Remote clock offset: -41.427 ms

# Below is generated by plot.py at 2018-10-26 09:25:25

# Datalink statistics

-- Total of 1 flow:

Average throughput: 385.77 Mbit/s

95th percentile per-packet one-way delay: 229.561 ms

Loss rate: 0.93%

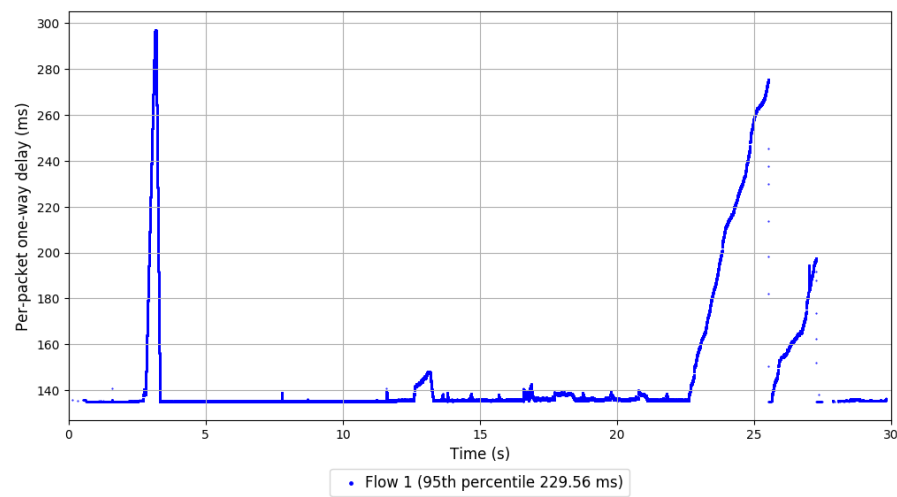
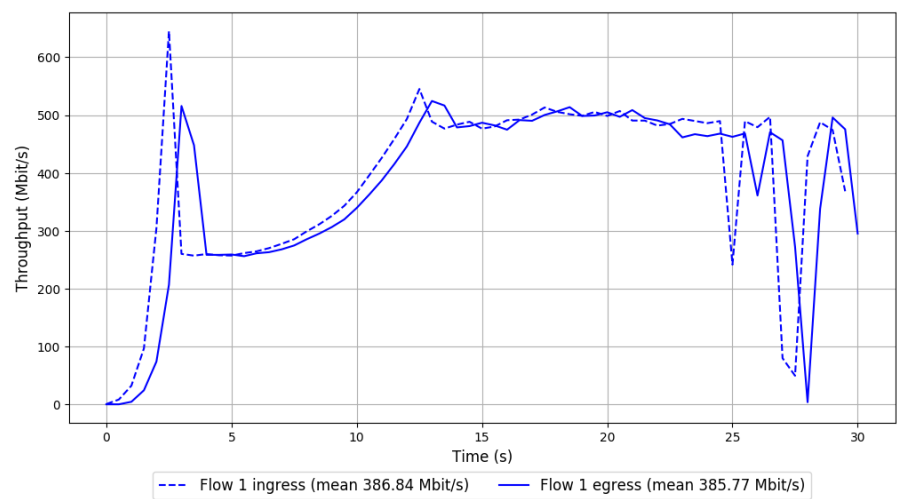
-- Flow 1:

Average throughput: 385.77 Mbit/s

95th percentile per-packet one-way delay: 229.561 ms

Loss rate: 0.93%

Run 2: Report of PCC-Allegro — Data Link



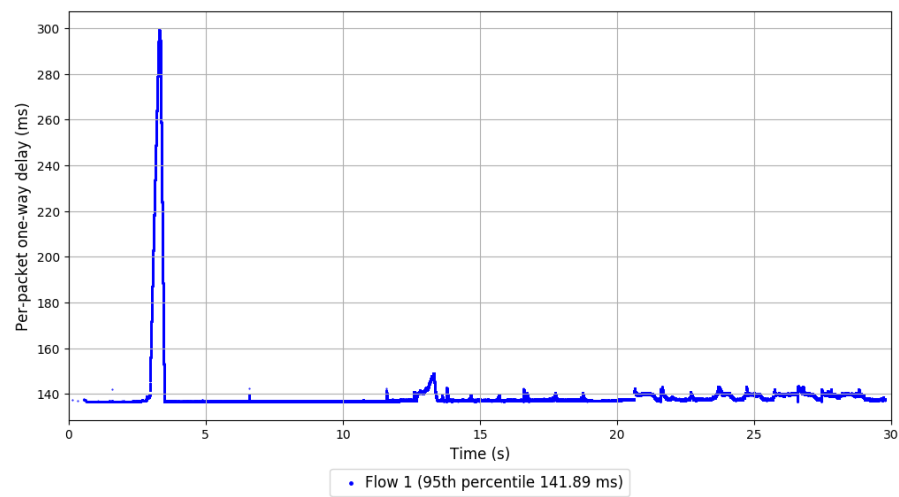
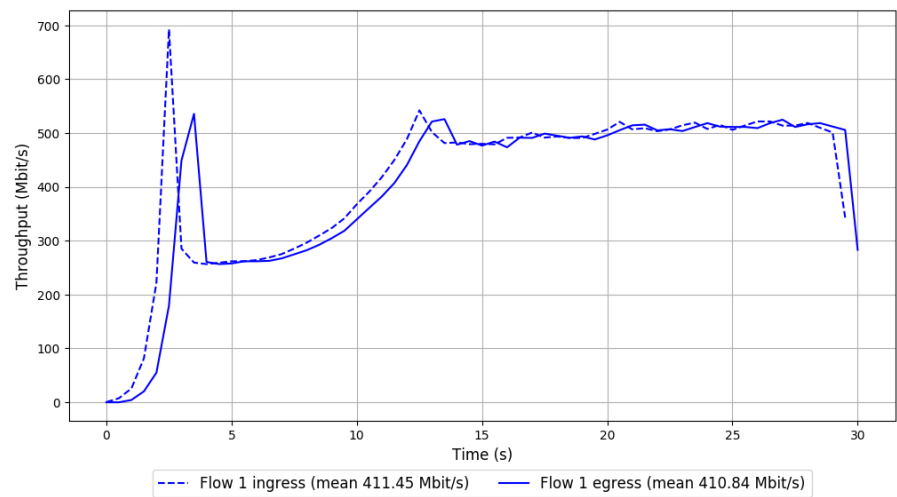


Run 3: Statistics of PCC-Allegro

Start at: 2018-10-26 07:51:28  
End at: 2018-10-26 07:51:58  
Local clock offset: -0.596 ms  
Remote clock offset: -40.971 ms

# Below is generated by plot.py at 2018-10-26 09:25:52  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 410.84 Mbit/s  
95th percentile per-packet one-way delay: 141.890 ms  
Loss rate: 0.80%  
-- Flow 1:  
Average throughput: 410.84 Mbit/s  
95th percentile per-packet one-way delay: 141.890 ms  
Loss rate: 0.80%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-10-26 08:29:49

End at: 2018-10-26 08:30:19

Local clock offset: 2.548 ms

Remote clock offset: -34.206 ms

# Below is generated by plot.py at 2018-10-26 09:26:46

# Datalink statistics

-- Total of 1 flow:

Average throughput: 293.26 Mbit/s

95th percentile per-packet one-way delay: 252.122 ms

Loss rate: 1.47%

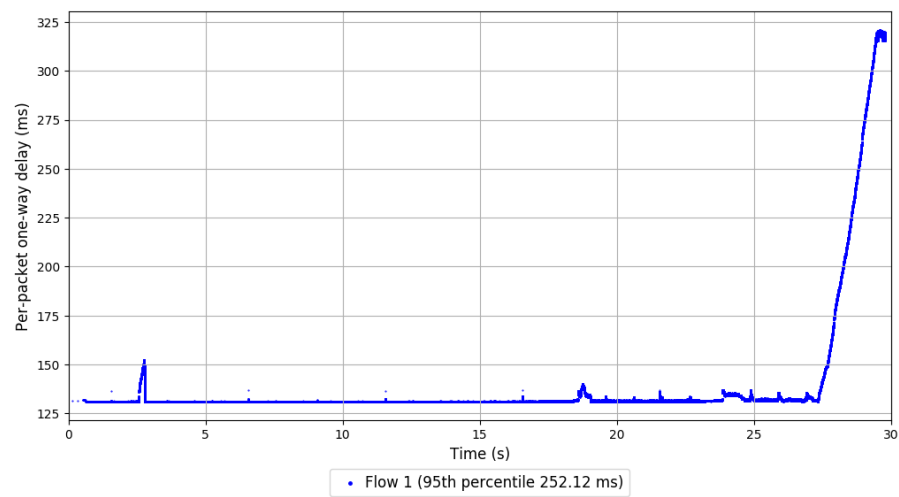
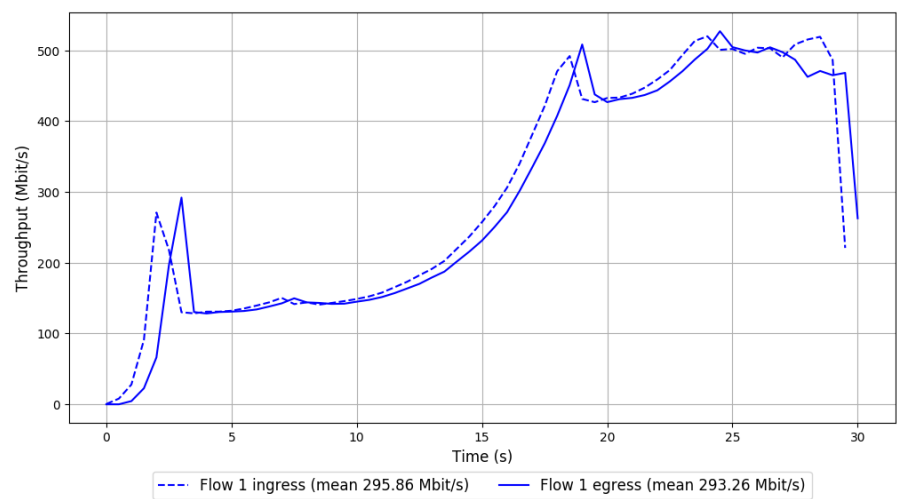
-- Flow 1:

Average throughput: 293.26 Mbit/s

95th percentile per-packet one-way delay: 252.122 ms

Loss rate: 1.47%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-10-26 09:02:40

End at: 2018-10-26 09:03:10

Local clock offset: 0.89 ms

Remote clock offset: -38.834 ms

# Below is generated by plot.py at 2018-10-26 09:28:02

# Datalink statistics

-- Total of 1 flow:

Average throughput: 377.13 Mbit/s

95th percentile per-packet one-way delay: 141.302 ms

Loss rate: 0.78%

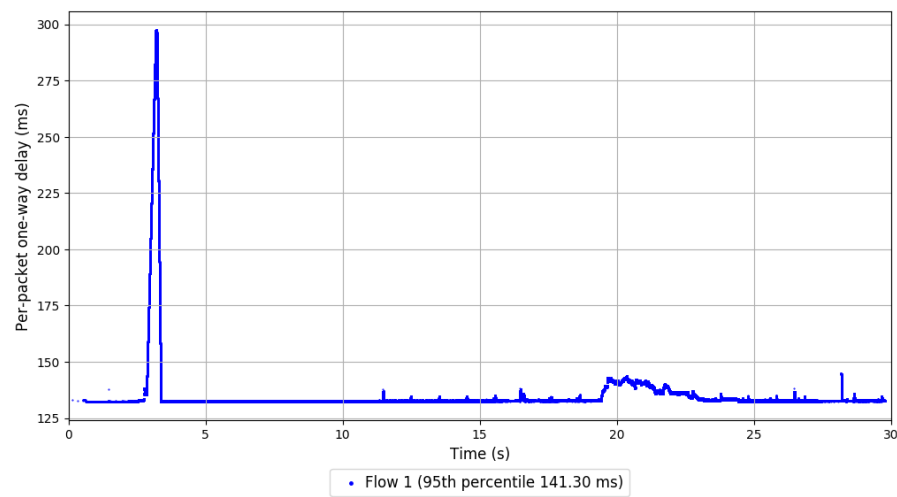
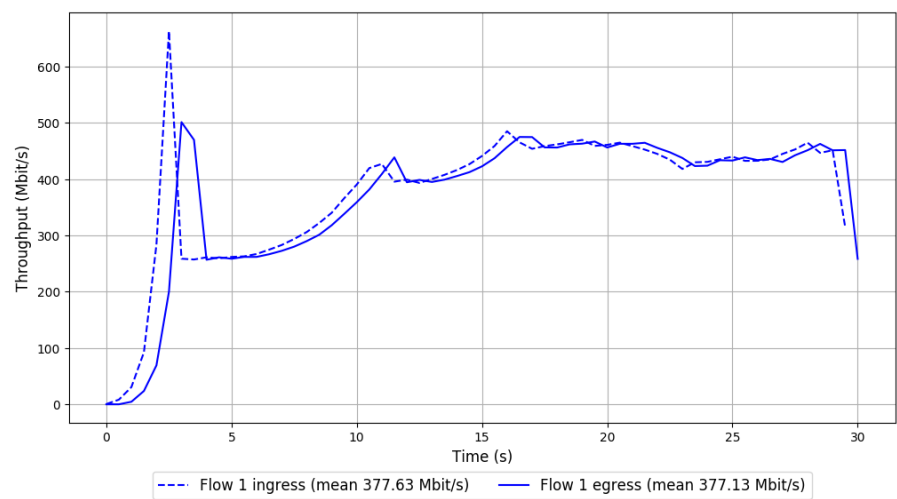
-- Flow 1:

Average throughput: 377.13 Mbit/s

95th percentile per-packet one-way delay: 141.302 ms

Loss rate: 0.78%

Run 5: Report of PCC-Allegro — Data Link

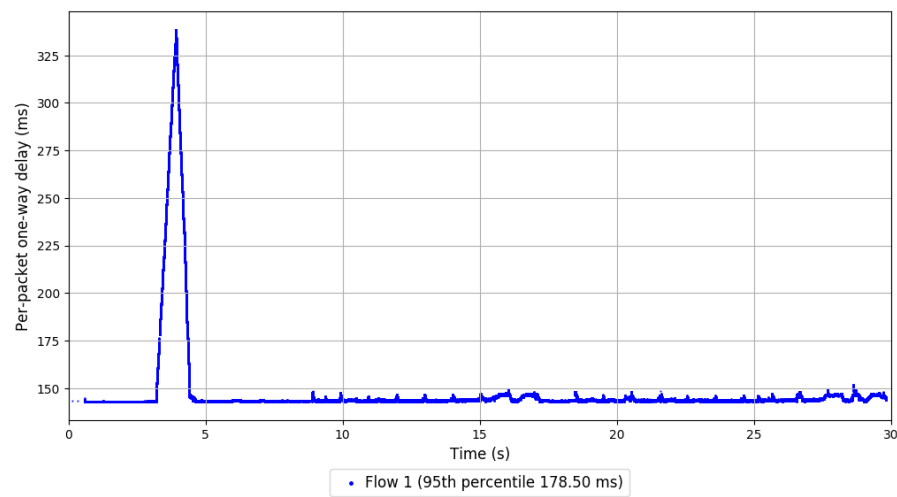
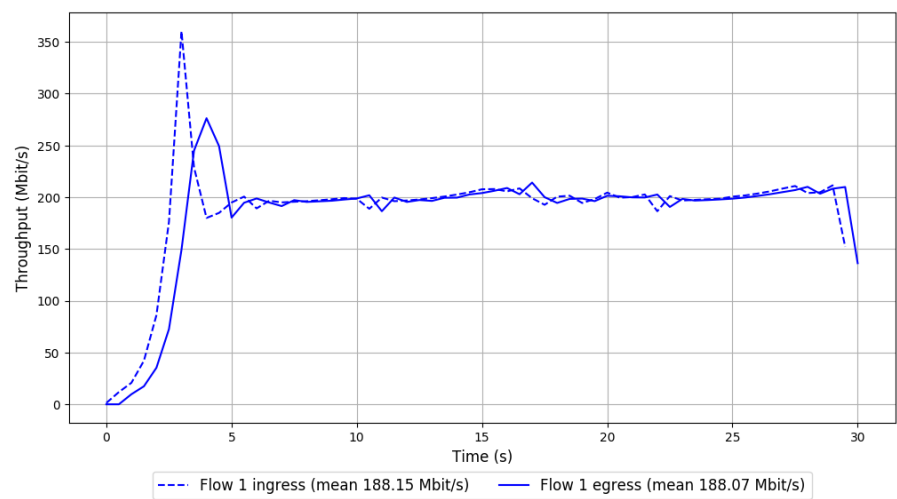


```
Run 1: Statistics of PCC-Expr

Start at: 2018-10-26 06:21:39
End at: 2018-10-26 06:22:09
Local clock offset: 1.466 ms
Remote clock offset: -47.166 ms

# Below is generated by plot.py at 2018-10-26 09:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.07 Mbit/s
95th percentile per-packet one-way delay: 178.504 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 188.07 Mbit/s
95th percentile per-packet one-way delay: 178.504 ms
Loss rate: 0.68%
```

Run 1: Report of PCC-Expr — Data Link



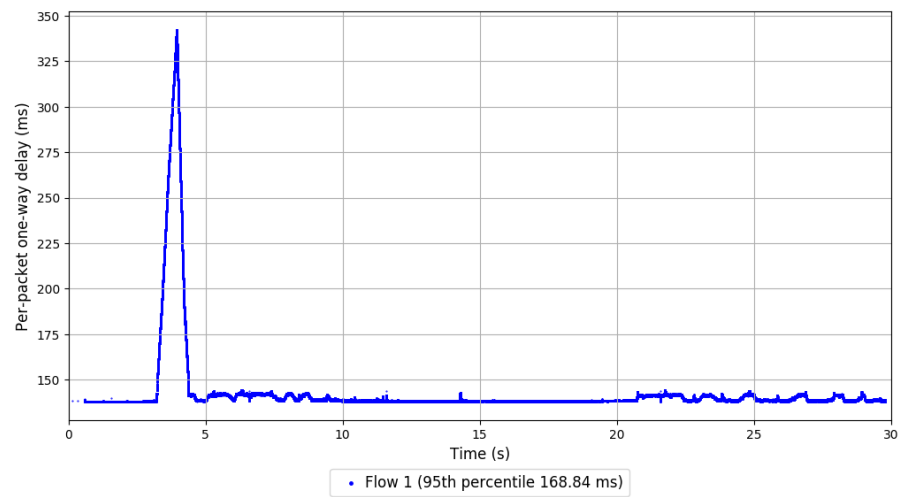
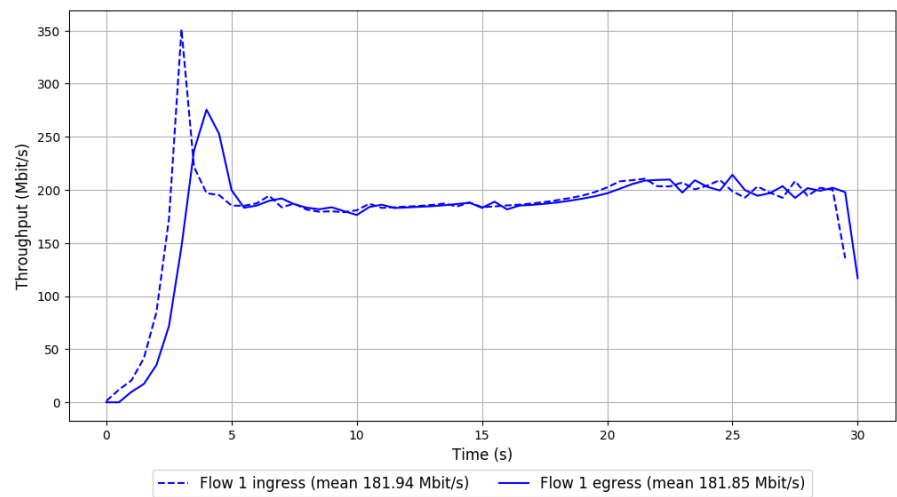


Run 2: Statistics of PCC-Expr

Start at: 2018-10-26 06:54:28  
End at: 2018-10-26 06:54:58  
Local clock offset: 2.105 ms  
Remote clock offset: -41.112 ms

# Below is generated by plot.py at 2018-10-26 09:28:02  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 181.85 Mbit/s  
95th percentile per-packet one-way delay: 168.841 ms  
Loss rate: 0.70%  
-- Flow 1:  
Average throughput: 181.85 Mbit/s  
95th percentile per-packet one-way delay: 168.841 ms  
Loss rate: 0.70%

Run 2: Report of PCC-Expr — Data Link

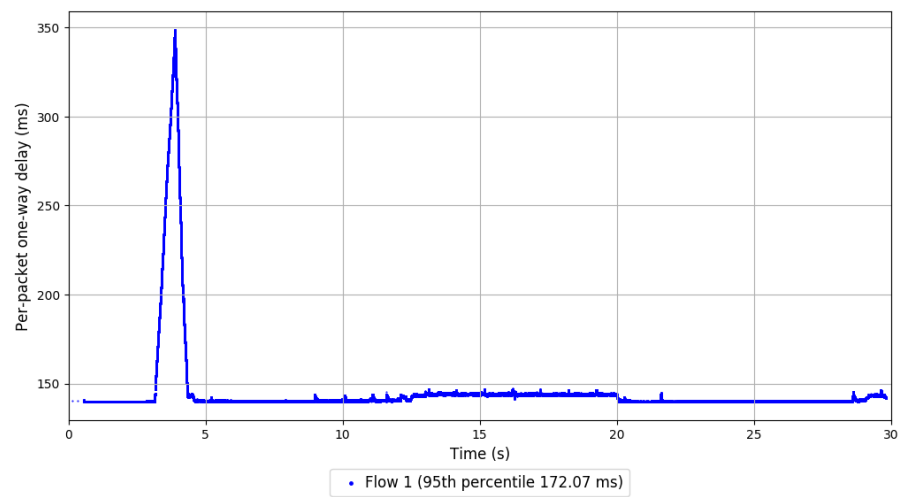
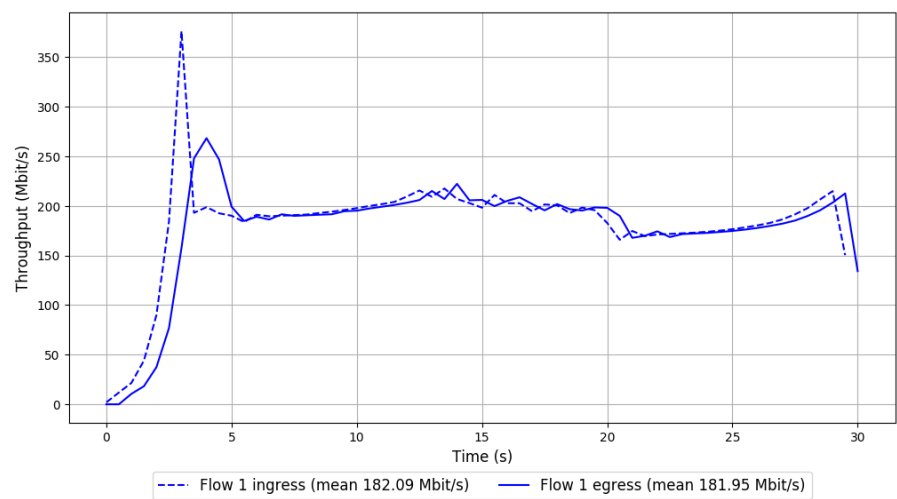


Run 3: Statistics of PCC-Expr

Start at: 2018-10-26 07:27:24  
End at: 2018-10-26 07:27:54  
Local clock offset: 0.481 ms  
Remote clock offset: -44.586 ms

# Below is generated by plot.py at 2018-10-26 09:28:12  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 181.95 Mbit/s  
95th percentile per-packet one-way delay: 172.072 ms  
Loss rate: 0.72%  
-- Flow 1:  
Average throughput: 181.95 Mbit/s  
95th percentile per-packet one-way delay: 172.072 ms  
Loss rate: 0.72%

Run 3: Report of PCC-Expr — Data Link

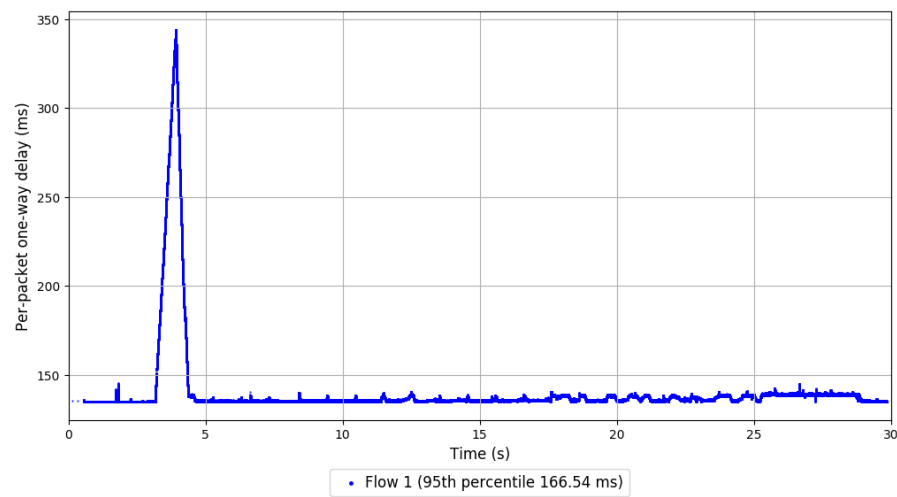
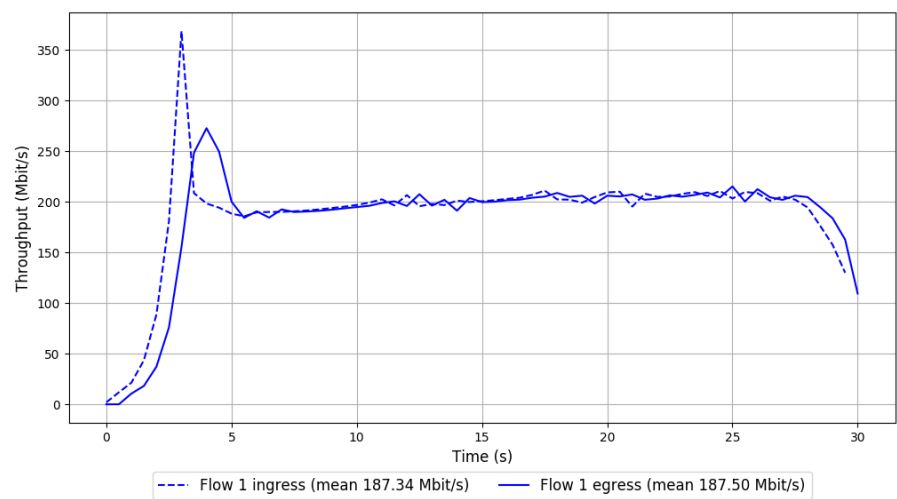


Run 4: Statistics of PCC-Expr

Start at: 2018-10-26 08:06:22  
End at: 2018-10-26 08:06:52  
Local clock offset: -0.286 ms  
Remote clock offset: -39.851 ms

# Below is generated by plot.py at 2018-10-26 09:28:55  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 187.50 Mbit/s  
95th percentile per-packet one-way delay: 166.540 ms  
Loss rate: 0.56%  
-- Flow 1:  
Average throughput: 187.50 Mbit/s  
95th percentile per-packet one-way delay: 166.540 ms  
Loss rate: 0.56%

Run 4: Report of PCC-Expr — Data Link

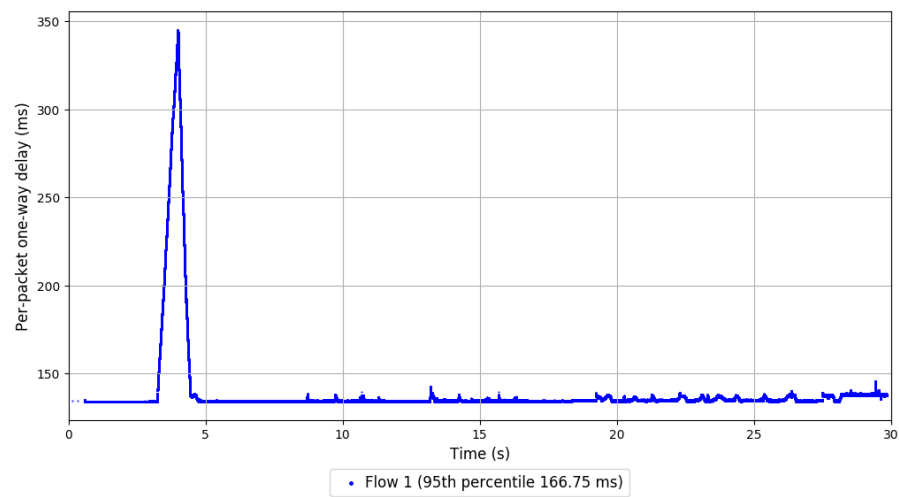
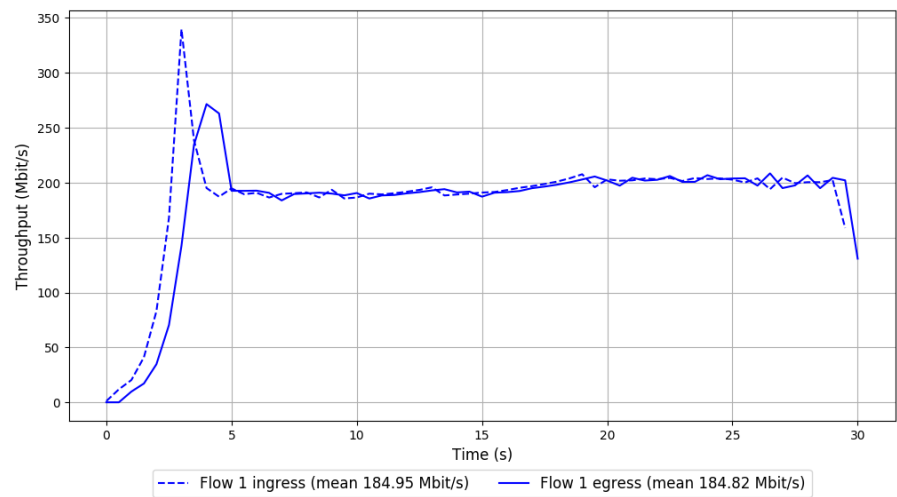


Run 5: Statistics of PCC-Expr

Start at: 2018-10-26 08:44:30  
End at: 2018-10-26 08:45:00  
Local clock offset: 2.015 ms  
Remote clock offset: -37.301 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 184.82 Mbit/s  
95th percentile per-packet one-way delay: 166.746 ms  
Loss rate: 0.73%  
-- Flow 1:  
Average throughput: 184.82 Mbit/s  
95th percentile per-packet one-way delay: 166.746 ms  
Loss rate: 0.73%

Run 5: Report of PCC-Expr — Data Link



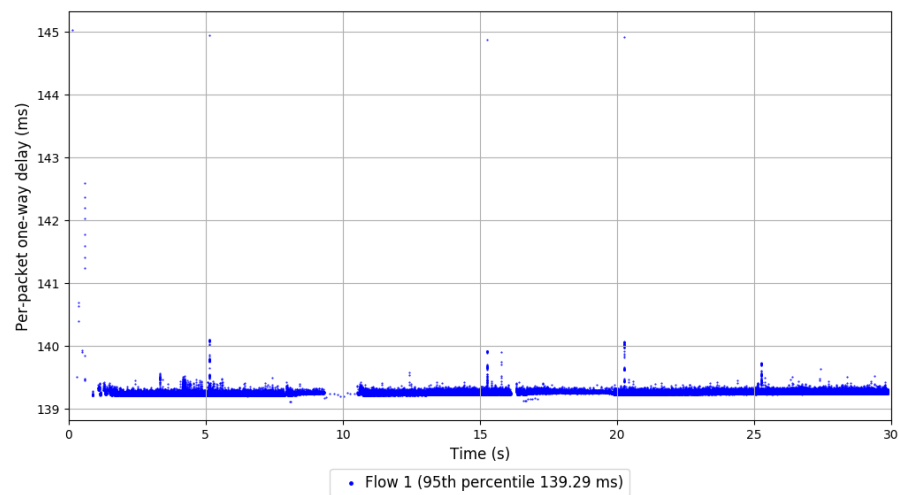
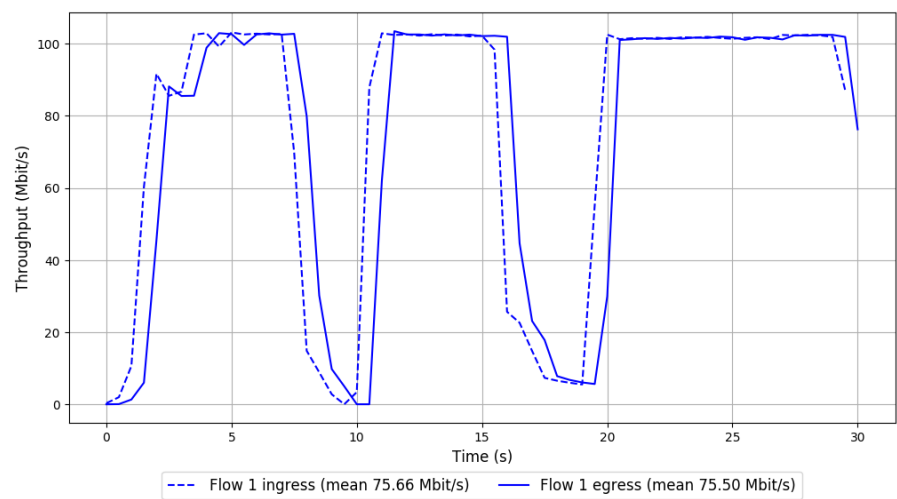


Run 1: Statistics of QUIC Cubic

Start at: 2018-10-26 06:12:33  
End at: 2018-10-26 06:13:03  
Local clock offset: -0.171 ms  
Remote clock offset: -44.147 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 75.50 Mbit/s  
95th percentile per-packet one-way delay: 139.287 ms  
Loss rate: 0.87%  
-- Flow 1:  
Average throughput: 75.50 Mbit/s  
95th percentile per-packet one-way delay: 139.287 ms  
Loss rate: 0.87%

Run 1: Report of QUIC Cubic — Data Link

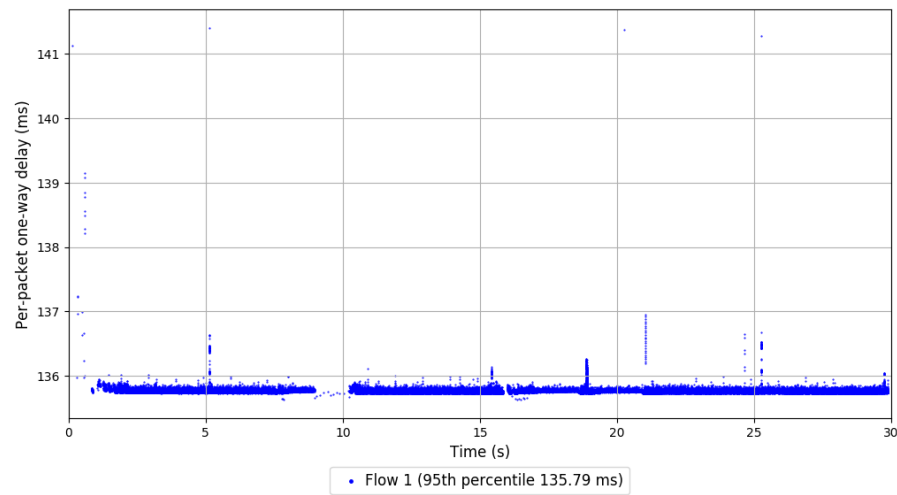
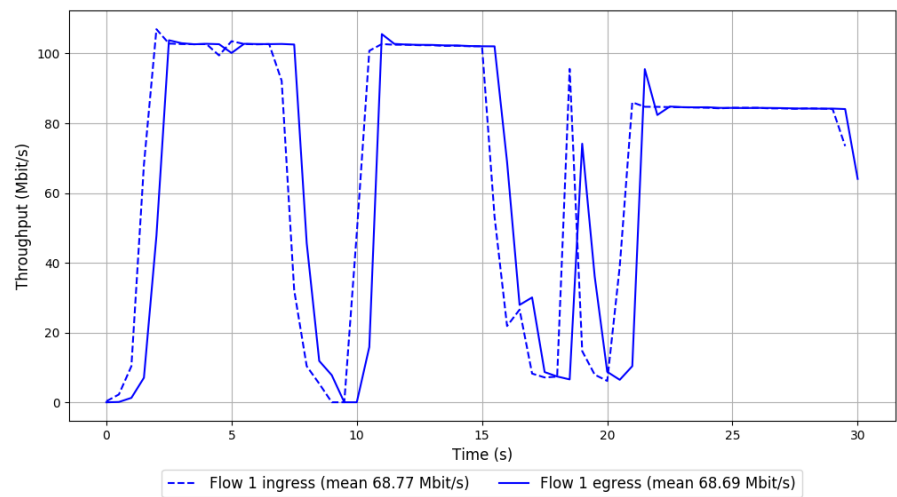


Run 2: Statistics of QUIC Cubic

Start at: 2018-10-26 06:45:03  
End at: 2018-10-26 06:45:33  
Local clock offset: 0.797 ms  
Remote clock offset: -41.686 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 68.69 Mbit/s  
95th percentile per-packet one-way delay: 135.792 ms  
Loss rate: 0.79%  
-- Flow 1:  
Average throughput: 68.69 Mbit/s  
95th percentile per-packet one-way delay: 135.792 ms  
Loss rate: 0.79%

Run 2: Report of QUIC Cubic — Data Link

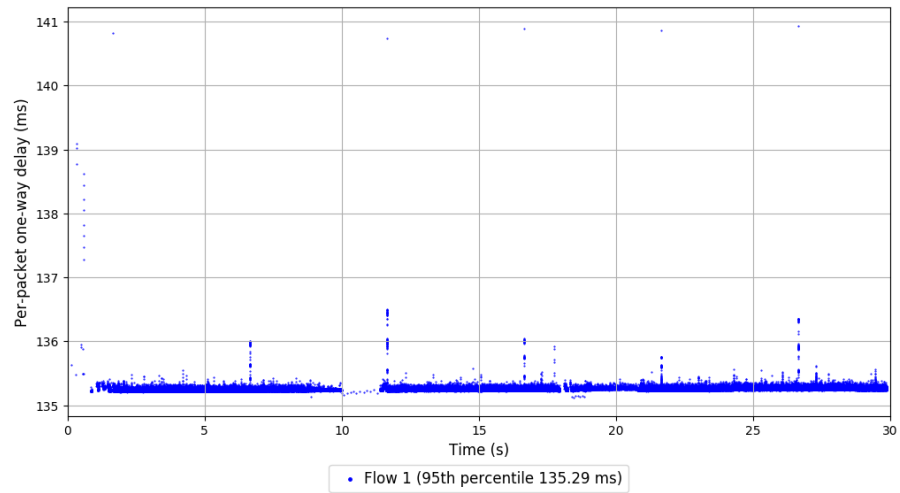
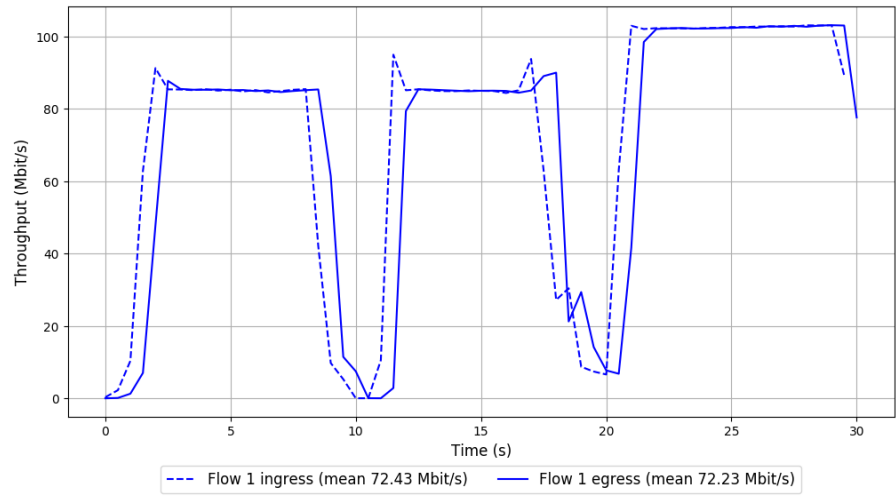


Run 3: Statistics of QUIC Cubic

Start at: 2018-10-26 07:18:25  
End at: 2018-10-26 07:18:55  
Local clock offset: 0.358 ms  
Remote clock offset: -40.319 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 72.23 Mbit/s  
95th percentile per-packet one-way delay: 135.293 ms  
Loss rate: 0.91%  
-- Flow 1:  
Average throughput: 72.23 Mbit/s  
95th percentile per-packet one-way delay: 135.293 ms  
Loss rate: 0.91%

### Run 3: Report of QUIC Cubic — Data Link

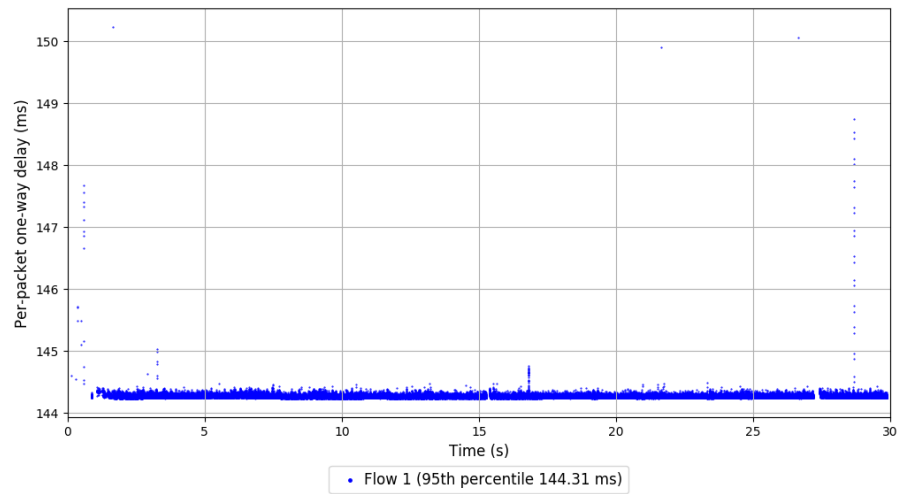
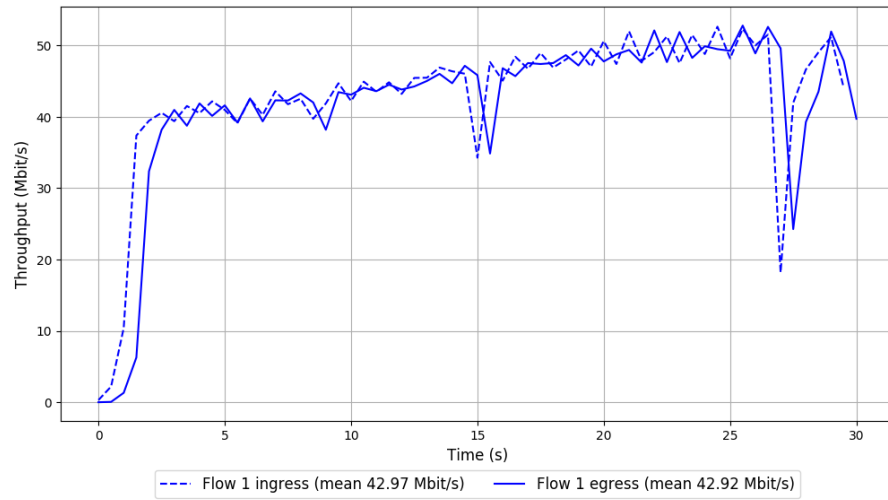


Run 4: Statistics of QUIC Cubic

Start at: 2018-10-26 07:57:11  
End at: 2018-10-26 07:57:41  
Local clock offset: 0.216 ms  
Remote clock offset: -47.303 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 42.92 Mbit/s  
95th percentile per-packet one-way delay: 144.306 ms  
Loss rate: 0.78%  
-- Flow 1:  
Average throughput: 42.92 Mbit/s  
95th percentile per-packet one-way delay: 144.306 ms  
Loss rate: 0.78%

#### Run 4: Report of QUIC Cubic — Data Link





Run 5: Statistics of QUIC Cubic

Start at: 2018-10-26 08:35:16

End at: 2018-10-26 08:35:46

Local clock offset: 1.397 ms

Remote clock offset: -43.9 ms

# Below is generated by plot.py at 2018-10-26 09:29:34

# Datalink statistics

-- Total of 1 flow:

Average throughput: 72.80 Mbit/s

95th percentile per-packet one-way delay: 140.024 ms

Loss rate: 0.91%

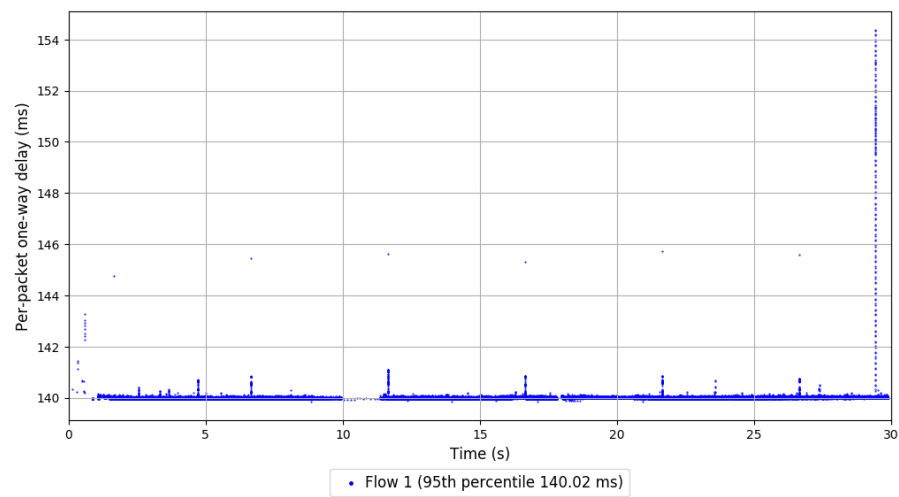
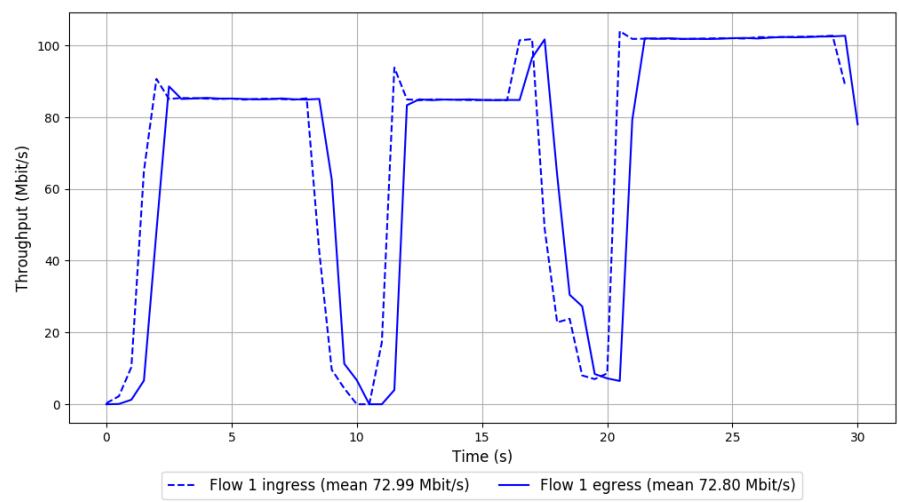
-- Flow 1:

Average throughput: 72.80 Mbit/s

95th percentile per-packet one-way delay: 140.024 ms

Loss rate: 0.91%

Run 5: Report of QUIC Cubic — Data Link

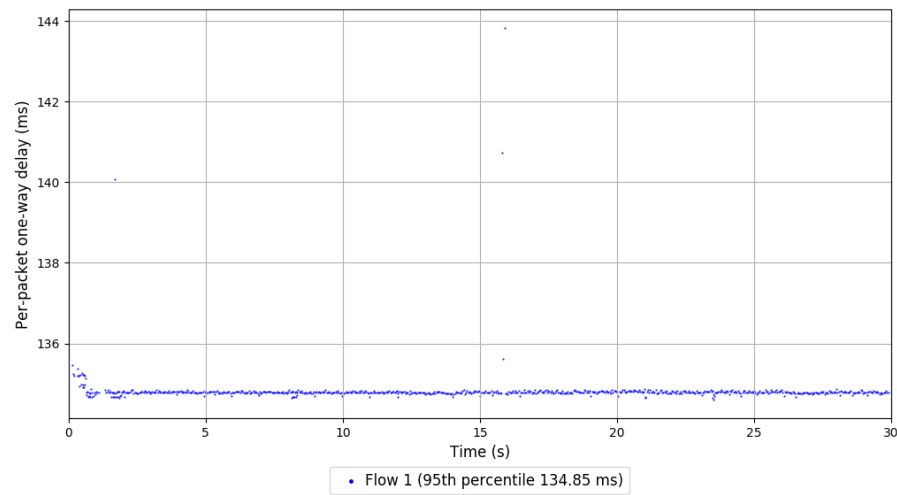
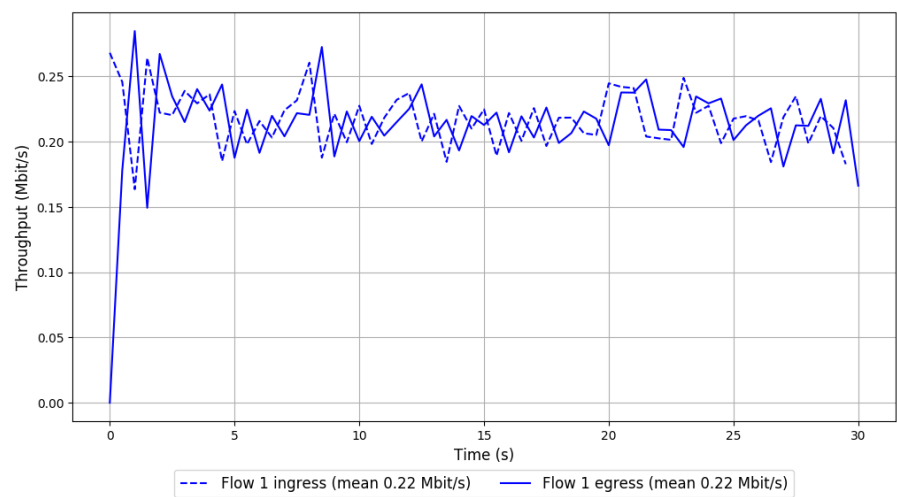


Run 1: Statistics of SCReAM

Start at: 2018-10-26 06:10:13  
End at: 2018-10-26 06:10:43  
Local clock offset: 0.21 ms  
Remote clock offset: -40.654 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 134.848 ms  
Loss rate: 0.51%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 134.848 ms  
Loss rate: 0.51%

Run 1: Report of SReAM — Data Link

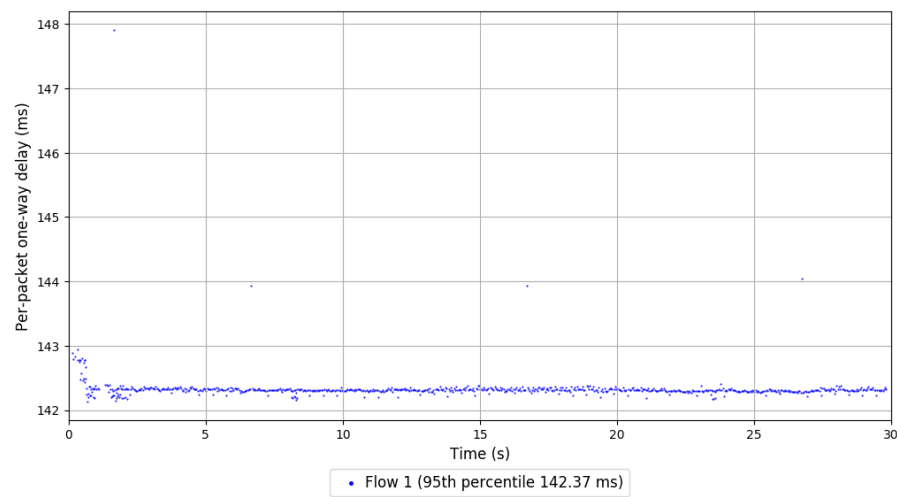
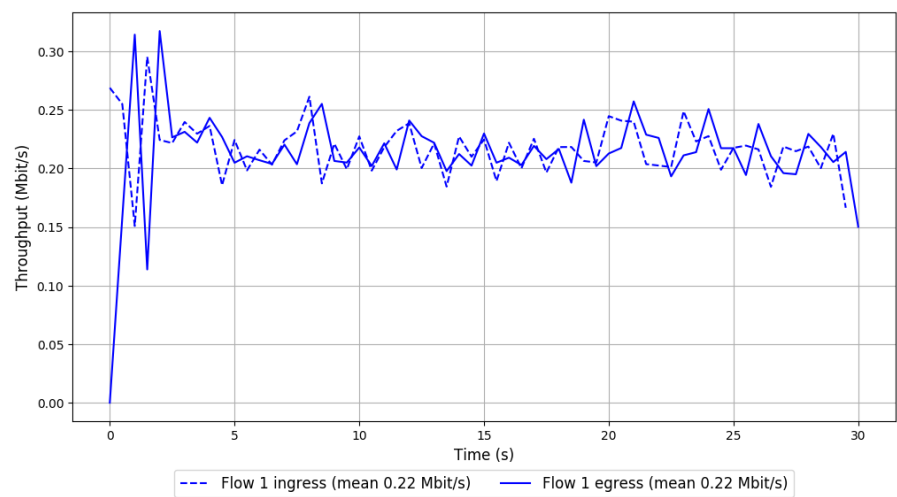


Run 2: Statistics of SCReAM

Start at: 2018-10-26 06:42:43  
End at: 2018-10-26 06:43:13  
Local clock offset: 0.959 ms  
Remote clock offset: -46.616 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 142.371 ms  
Loss rate: 0.64%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 142.371 ms  
Loss rate: 0.64%

Run 2: Report of SReAM — Data Link

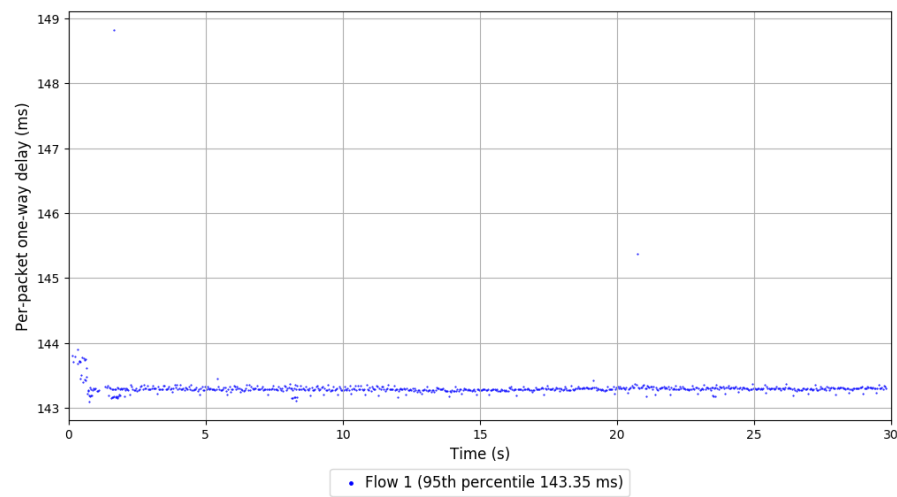
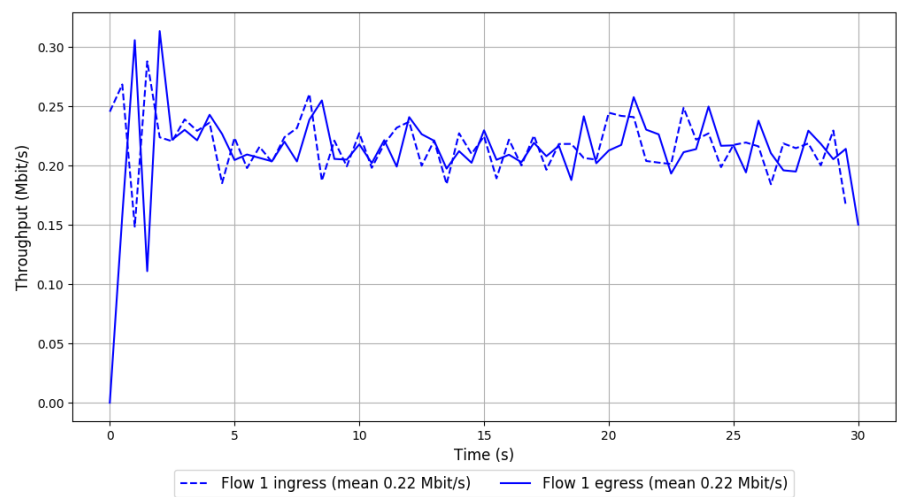


Run 3: Statistics of SCReAM

Start at: 2018-10-26 07:16:05  
End at: 2018-10-26 07:16:35  
Local clock offset: 0.336 ms  
Remote clock offset: -46.741 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 143.352 ms  
Loss rate: 0.64%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 143.352 ms  
Loss rate: 0.64%

Run 3: Report of SReAM — Data Link



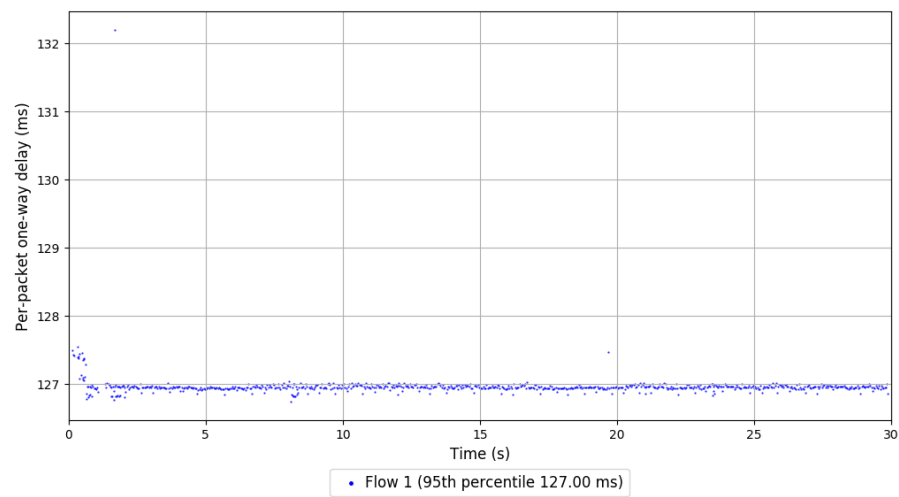
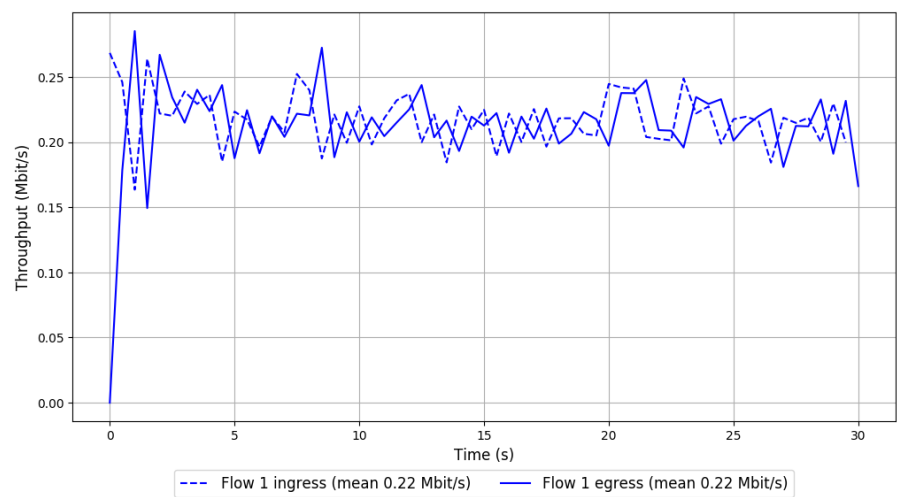


Run 4: Statistics of SCReAM

Start at: 2018-10-26 07:54:51  
End at: 2018-10-26 07:55:21  
Local clock offset: -1.072 ms  
Remote clock offset: -31.509 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 127.004 ms  
Loss rate: 0.64%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 127.004 ms  
Loss rate: 0.64%

Run 4: Report of SReAM — Data Link

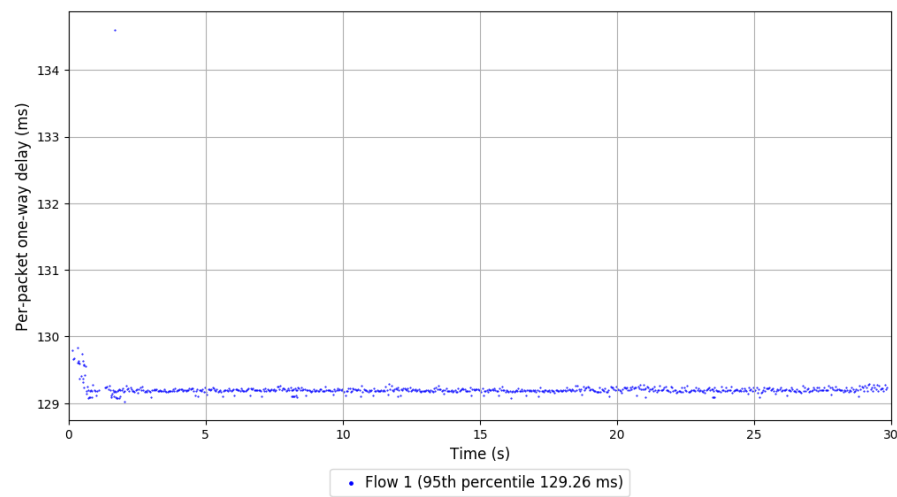
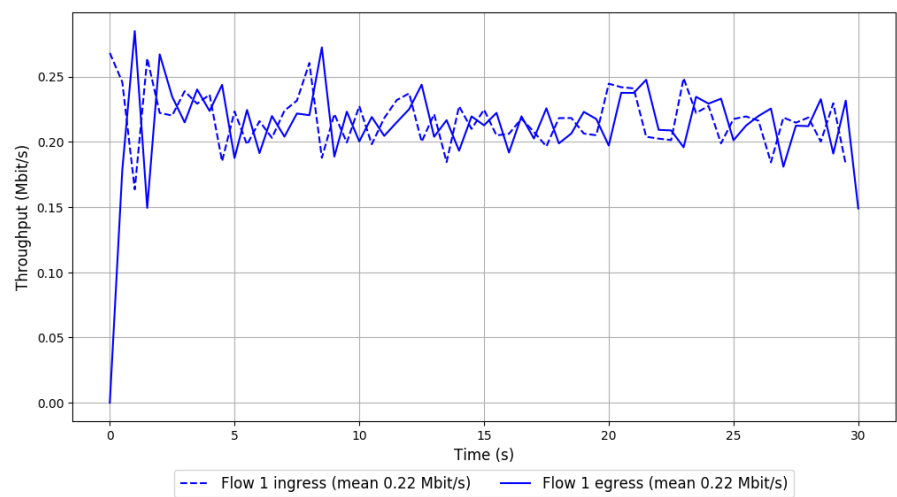


Run 5: Statistics of SCReAM

Start at: 2018-10-26 08:32:55  
End at: 2018-10-26 08:33:25  
Local clock offset: 2.933 ms  
Remote clock offset: -33.222 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 129.259 ms  
Loss rate: 0.64%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 129.259 ms  
Loss rate: 0.64%

Run 5: Report of SReAM — Data Link

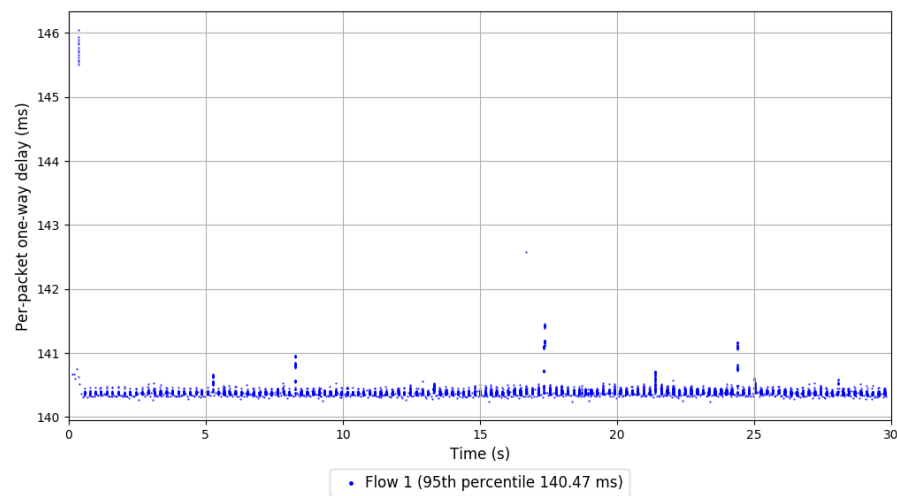
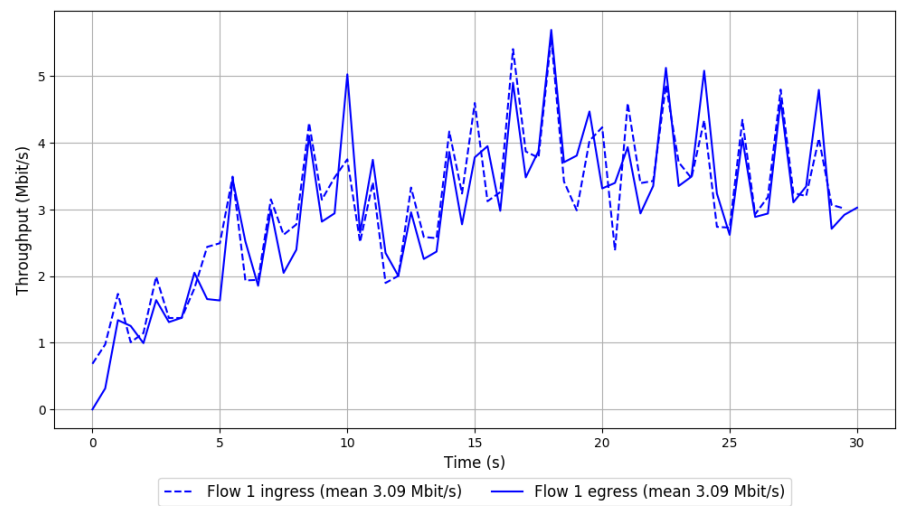


Run 1: Statistics of Sprout

Start at: 2018-10-26 06:23:57  
End at: 2018-10-26 06:24:27  
Local clock offset: 0.761 ms  
Remote clock offset: -45.319 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 3.09 Mbit/s  
95th percentile per-packet one-way delay: 140.472 ms  
Loss rate: 0.81%  
-- Flow 1:  
Average throughput: 3.09 Mbit/s  
95th percentile per-packet one-way delay: 140.472 ms  
Loss rate: 0.81%

Run 1: Report of Sprout — Data Link

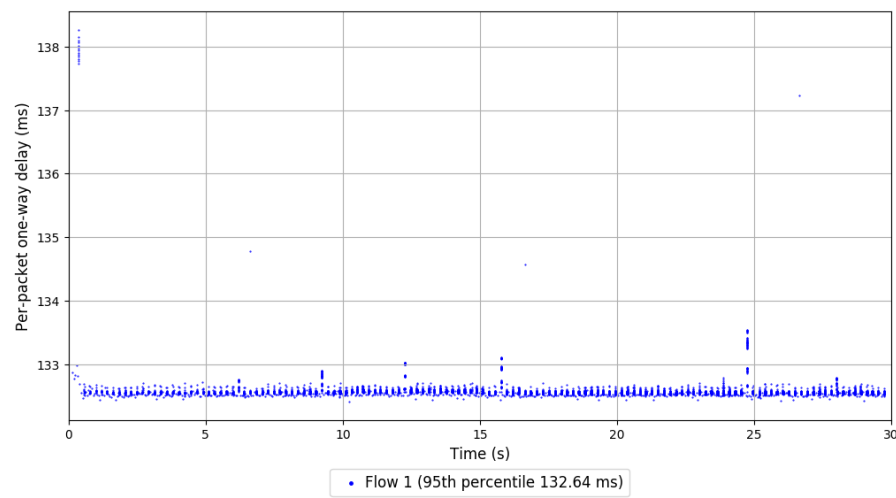
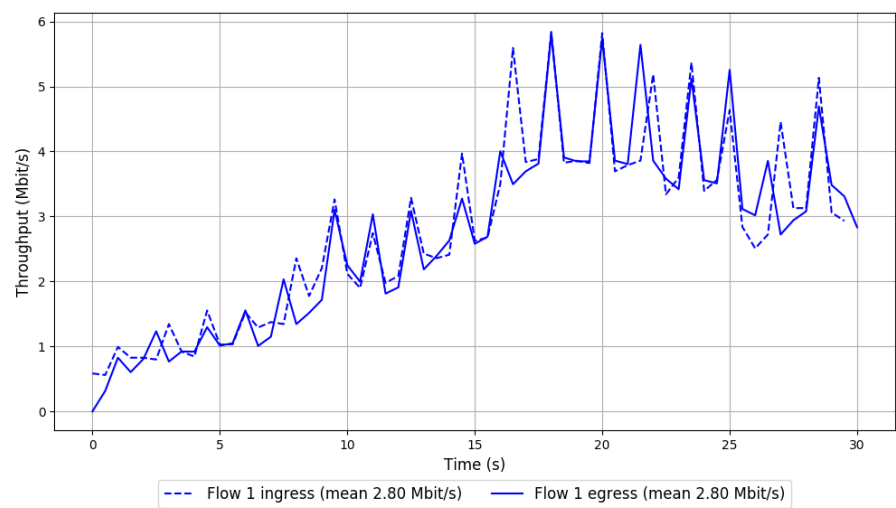


Run 2: Statistics of Sprout

Start at: 2018-10-26 06:56:44  
End at: 2018-10-26 06:57:14  
Local clock offset: 3.011 ms  
Remote clock offset: -34.82 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 2.80 Mbit/s  
95th percentile per-packet one-way delay: 132.643 ms  
Loss rate: 0.90%  
-- Flow 1:  
Average throughput: 2.80 Mbit/s  
95th percentile per-packet one-way delay: 132.643 ms  
Loss rate: 0.90%

Run 2: Report of Sprout — Data Link



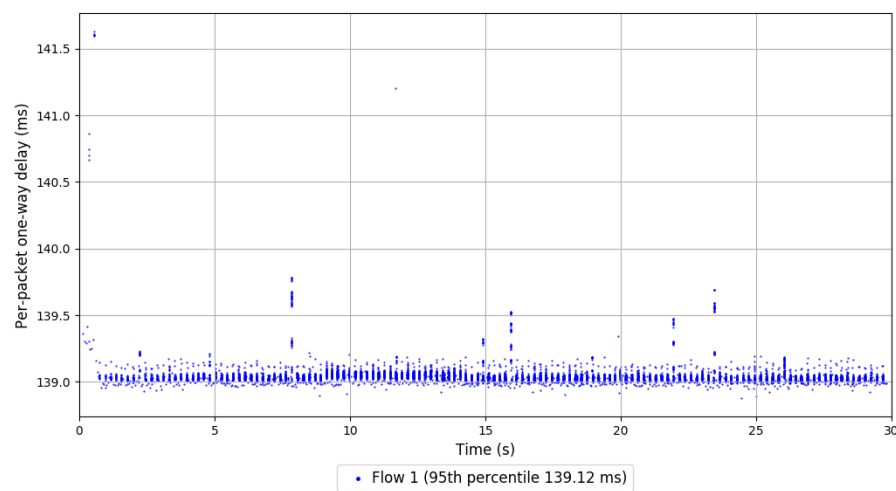
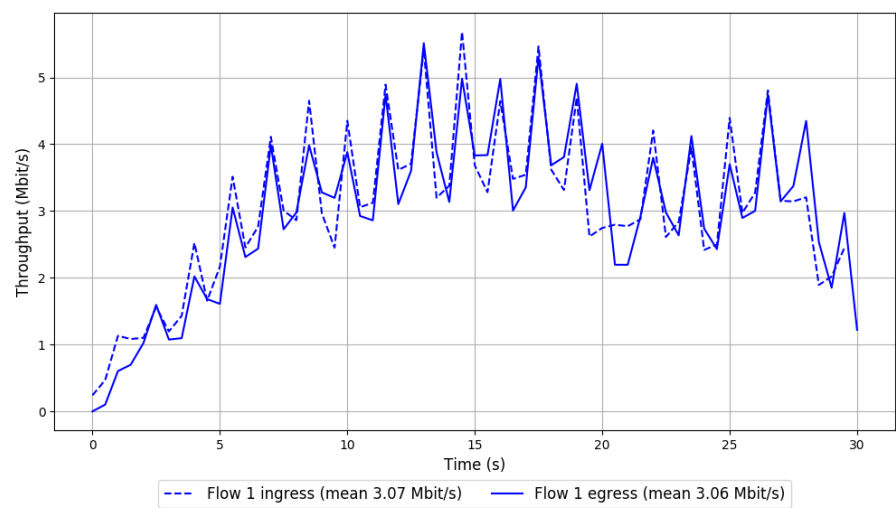


Run 3: Statistics of Sprout

Start at: 2018-10-26 07:29:38  
End at: 2018-10-26 07:30:08  
Local clock offset: 0.27 ms  
Remote clock offset: -43.946 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 3.06 Mbit/s  
95th percentile per-packet one-way delay: 139.120 ms  
Loss rate: 0.67%  
-- Flow 1:  
Average throughput: 3.06 Mbit/s  
95th percentile per-packet one-way delay: 139.120 ms  
Loss rate: 0.67%

Run 3: Report of Sprout — Data Link

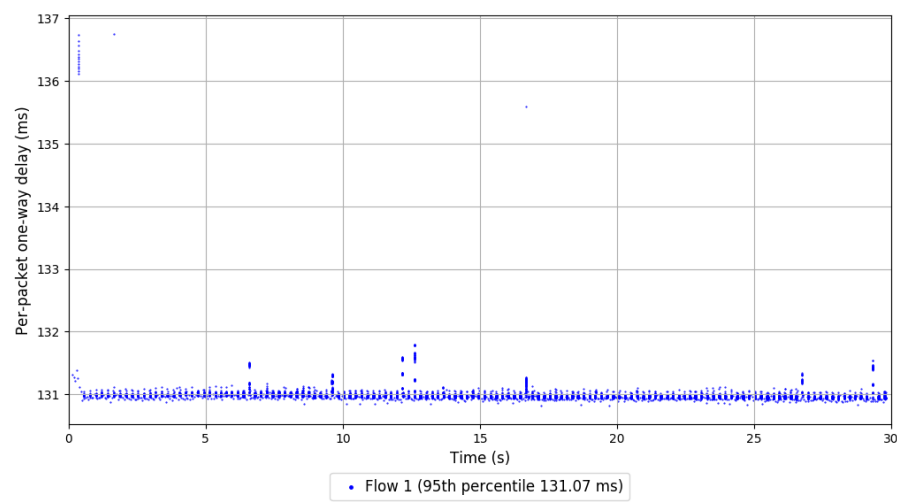
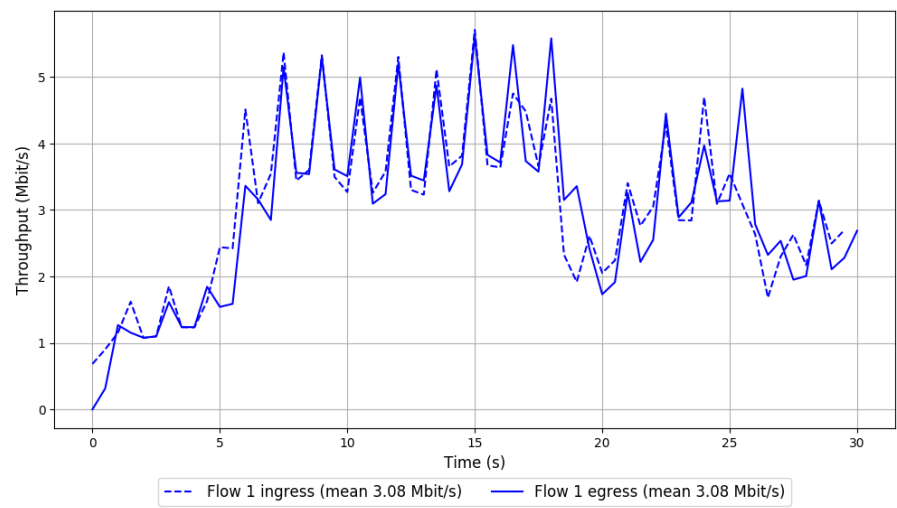


Run 4: Statistics of Sprout

Start at: 2018-10-26 08:08:38  
End at: 2018-10-26 08:09:08  
Local clock offset: -0.789 ms  
Remote clock offset: -37.691 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 3.08 Mbit/s  
95th percentile per-packet one-way delay: 131.072 ms  
Loss rate: 0.68%  
-- Flow 1:  
Average throughput: 3.08 Mbit/s  
95th percentile per-packet one-way delay: 131.072 ms  
Loss rate: 0.68%

Run 4: Report of Sprout — Data Link

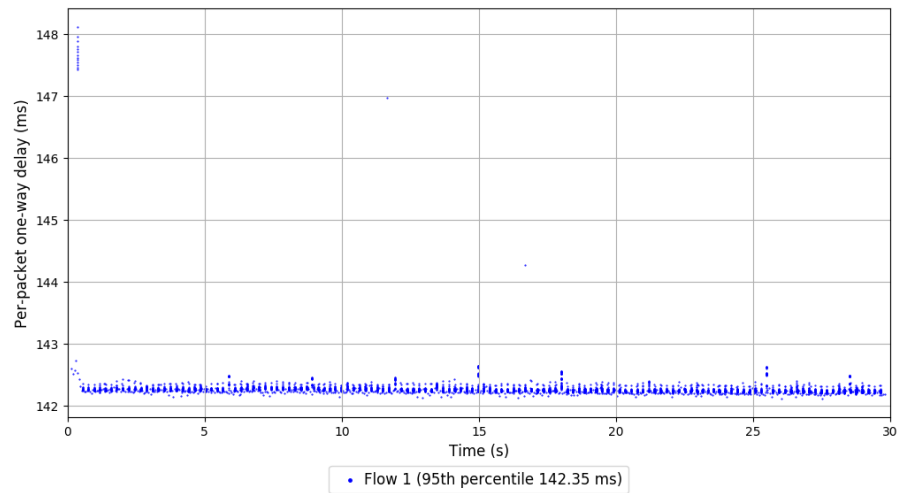
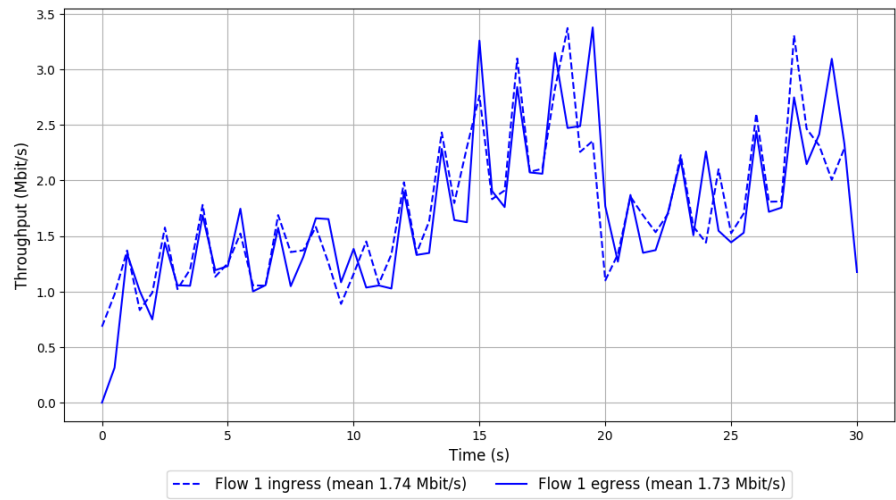


Run 5: Statistics of Sprout

Start at: 2018-10-26 08:46:46  
End at: 2018-10-26 08:47:16  
Local clock offset: 3.489 ms  
Remote clock offset: -44.411 ms

# Below is generated by plot.py at 2018-10-26 09:29:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 1.73 Mbit/s  
95th percentile per-packet one-way delay: 142.352 ms  
Loss rate: 1.17%  
-- Flow 1:  
Average throughput: 1.73 Mbit/s  
95th percentile per-packet one-way delay: 142.352 ms  
Loss rate: 1.17%

## Run 5: Report of Sprout — Data Link

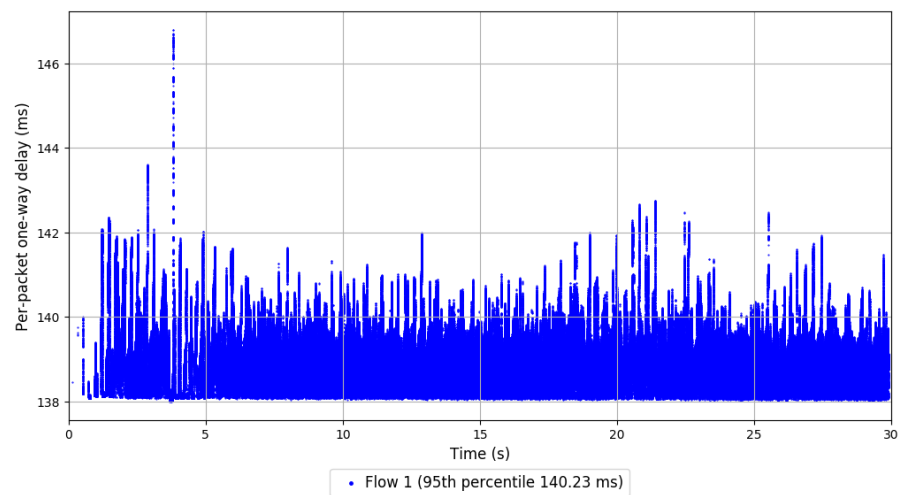
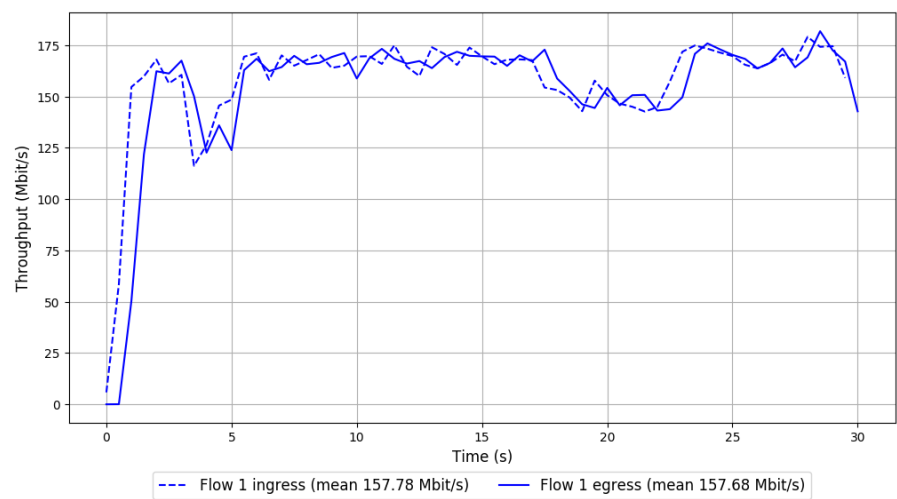


Run 1: Statistics of TaoVA-100x

Start at: 2018-10-26 06:34:59  
End at: 2018-10-26 06:35:29  
Local clock offset: 0.643 ms  
Remote clock offset: -42.064 ms

# Below is generated by plot.py at 2018-10-26 09:31:27  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 157.68 Mbit/s  
95th percentile per-packet one-way delay: 140.230 ms  
Loss rate: 0.72%  
-- Flow 1:  
Average throughput: 157.68 Mbit/s  
95th percentile per-packet one-way delay: 140.230 ms  
Loss rate: 0.72%

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



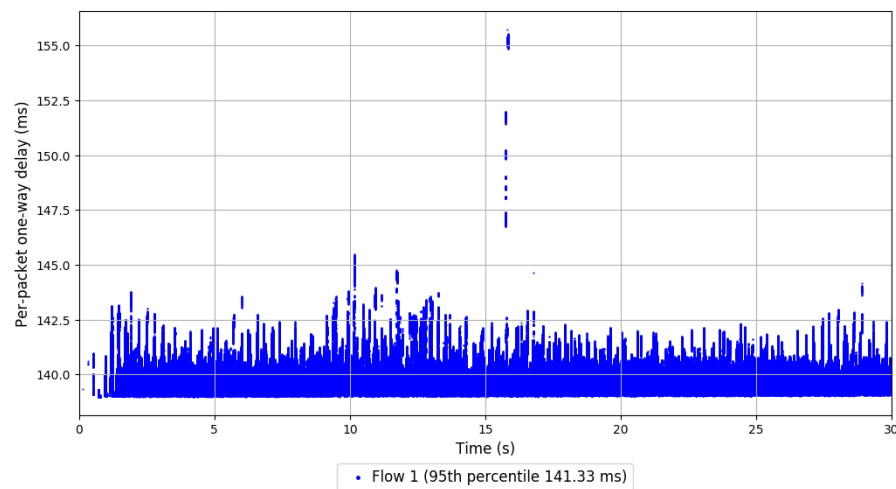
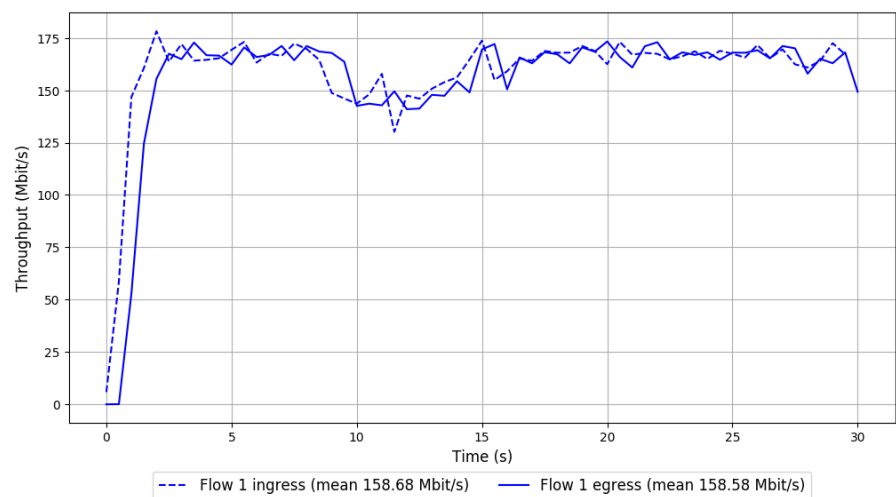


Run 2: Statistics of TaoVA-100x

Start at: 2018-10-26 07:08:10  
End at: 2018-10-26 07:08:40  
Local clock offset: 0.486 ms  
Remote clock offset: -44.684 ms

# Below is generated by plot.py at 2018-10-26 09:31:30  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 158.58 Mbit/s  
95th percentile per-packet one-way delay: 141.329 ms  
Loss rate: 0.70%  
-- Flow 1:  
Average throughput: 158.58 Mbit/s  
95th percentile per-packet one-way delay: 141.329 ms  
Loss rate: 0.70%

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

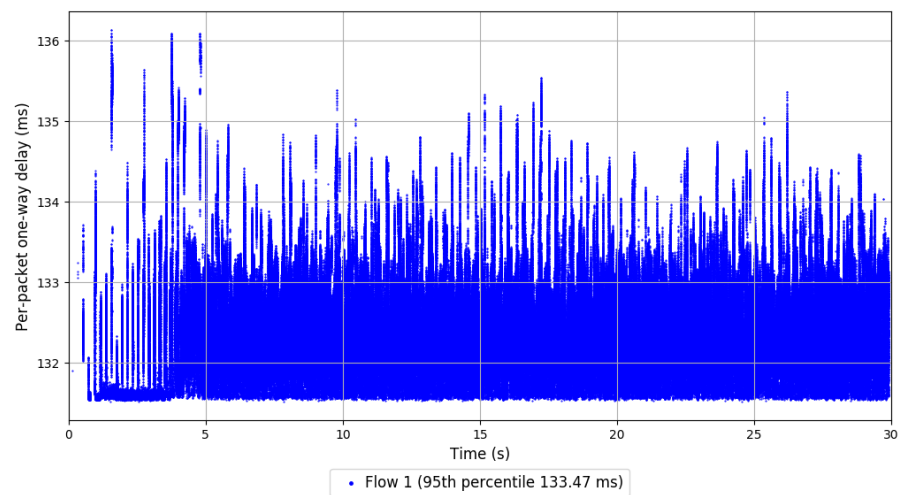
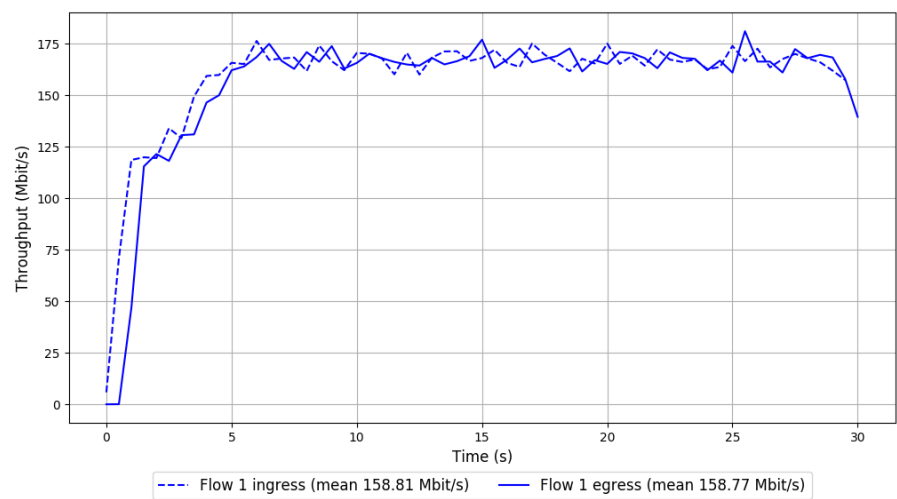


Run 3: Statistics of TaoVA-100x

Start at: 2018-10-26 07:46:56  
End at: 2018-10-26 07:47:26  
Local clock offset: -0.354 ms  
Remote clock offset: -35.13 ms

# Below is generated by plot.py at 2018-10-26 09:31:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 158.77 Mbit/s  
95th percentile per-packet one-way delay: 133.471 ms  
Loss rate: 0.67%  
-- Flow 1:  
Average throughput: 158.77 Mbit/s  
95th percentile per-packet one-way delay: 133.471 ms  
Loss rate: 0.67%

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

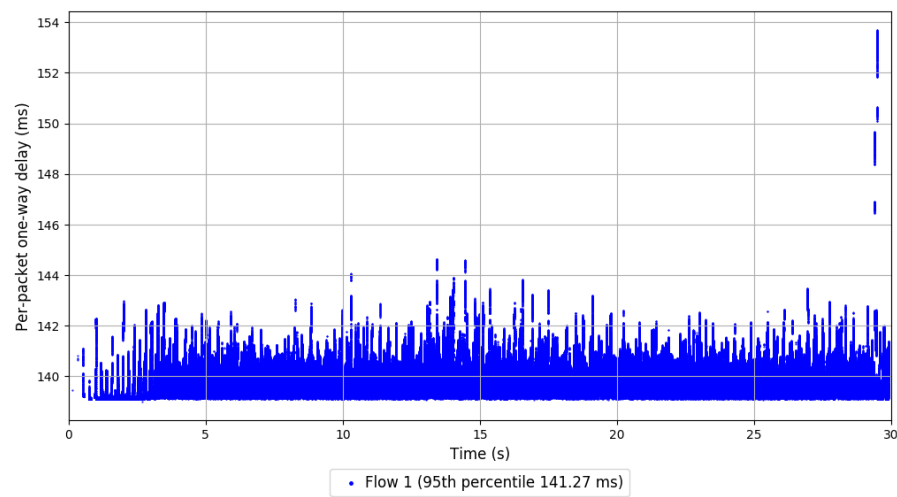
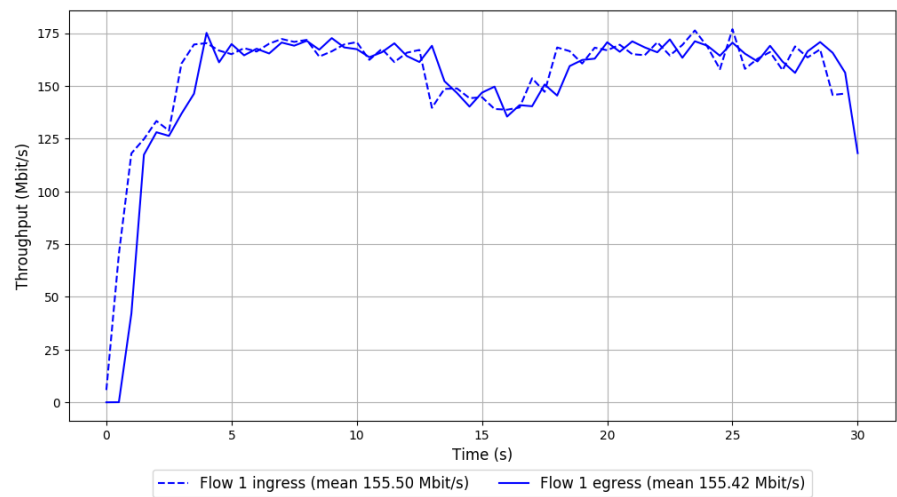


Run 4: Statistics of TaoVA-100x

Start at: 2018-10-26 08:19:54  
End at: 2018-10-26 08:20:24  
Local clock offset: 2.767 ms  
Remote clock offset: -41.112 ms

# Below is generated by plot.py at 2018-10-26 09:31:34  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 155.42 Mbit/s  
95th percentile per-packet one-way delay: 141.268 ms  
Loss rate: 0.68%  
-- Flow 1:  
Average throughput: 155.42 Mbit/s  
95th percentile per-packet one-way delay: 141.268 ms  
Loss rate: 0.68%

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

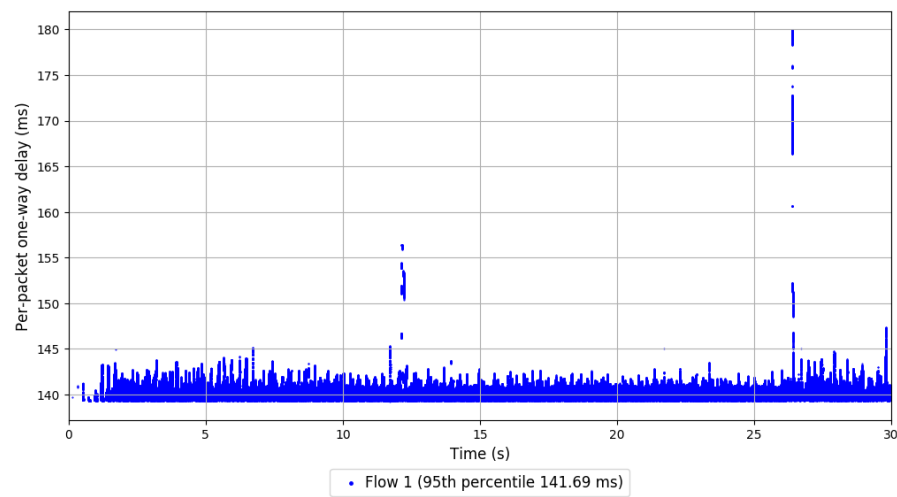
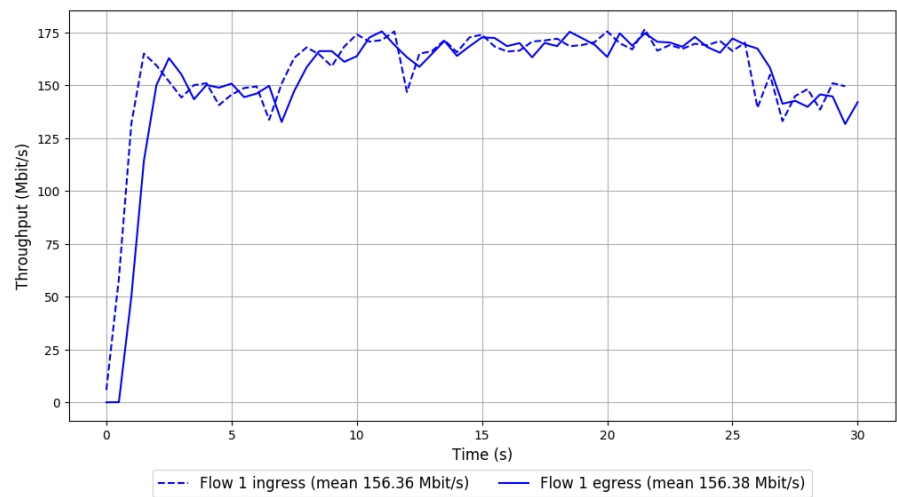


Run 5: Statistics of TaoVA-100x

Start at: 2018-10-26 08:58:09  
End at: 2018-10-26 08:58:39  
Local clock offset: 1.407 ms  
Remote clock offset: -43.889 ms

# Below is generated by plot.py at 2018-10-26 09:31:37  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 156.38 Mbit/s  
95th percentile per-packet one-way delay: 141.685 ms  
Loss rate: 0.63%  
-- Flow 1:  
Average throughput: 156.38 Mbit/s  
95th percentile per-packet one-way delay: 141.685 ms  
Loss rate: 0.63%

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



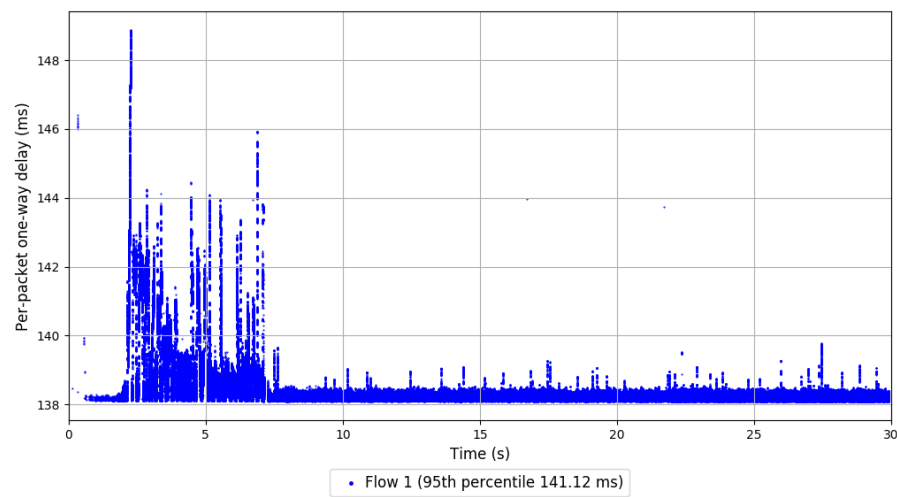
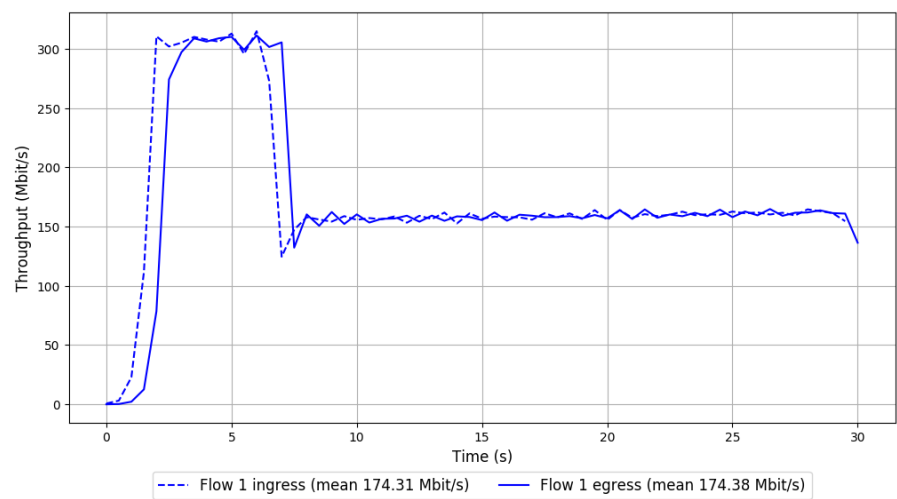


Run 1: Statistics of TCP Vegas

Start at: 2018-10-26 06:25:08  
End at: 2018-10-26 06:25:38  
Local clock offset: 2.463 ms  
Remote clock offset: -41.379 ms

# Below is generated by plot.py at 2018-10-26 09:31:37  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 174.38 Mbit/s  
95th percentile per-packet one-way delay: 141.125 ms  
Loss rate: 0.60%  
-- Flow 1:  
Average throughput: 174.38 Mbit/s  
95th percentile per-packet one-way delay: 141.125 ms  
Loss rate: 0.60%

Run 1: Report of TCP Vegas — Data Link

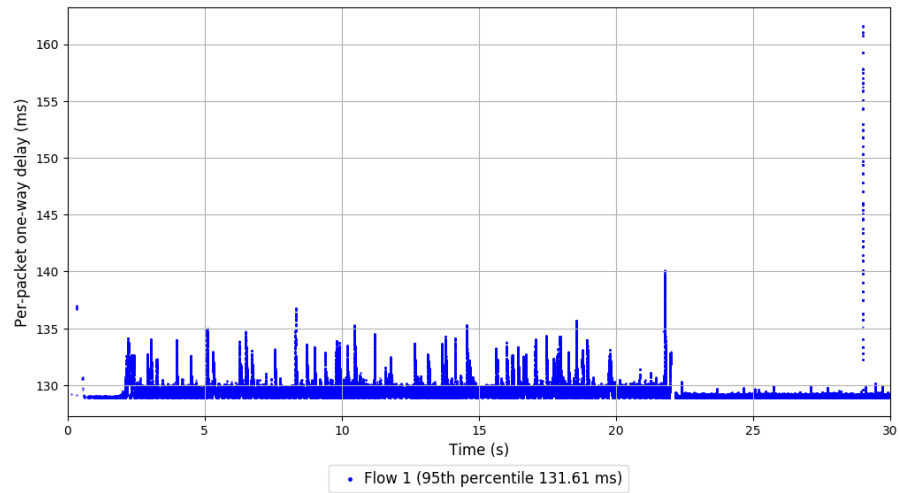
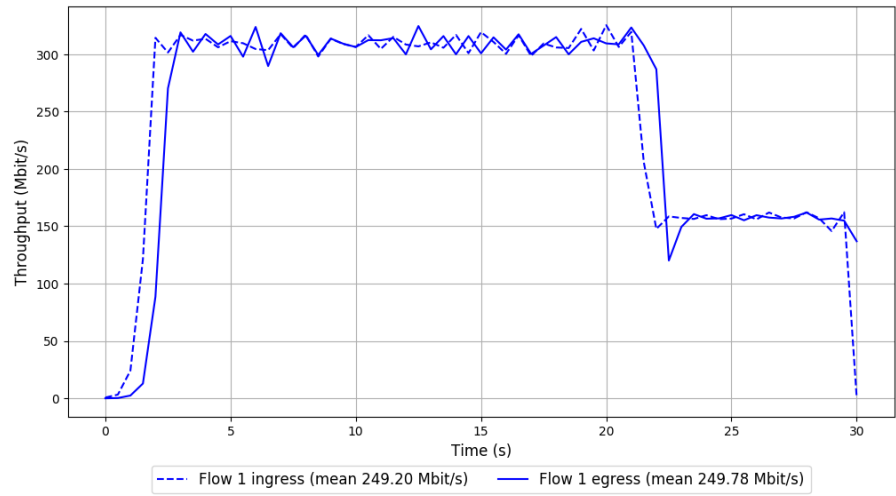


Run 2: Statistics of TCP Vegas

Start at: 2018-10-26 06:57:54  
End at: 2018-10-26 06:58:24  
Local clock offset: 0.61 ms  
Remote clock offset: -34.113 ms

# Below is generated by plot.py at 2018-10-26 09:31:45  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 249.78 Mbit/s  
95th percentile per-packet one-way delay: 131.609 ms  
Loss rate: 0.41%  
-- Flow 1:  
Average throughput: 249.78 Mbit/s  
95th percentile per-packet one-way delay: 131.609 ms  
Loss rate: 0.41%

## Run 2: Report of TCP Vegas — Data Link

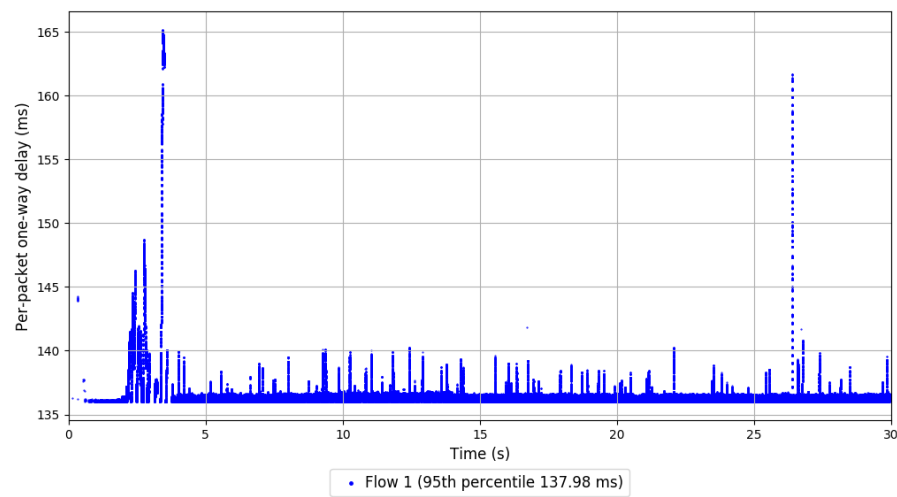
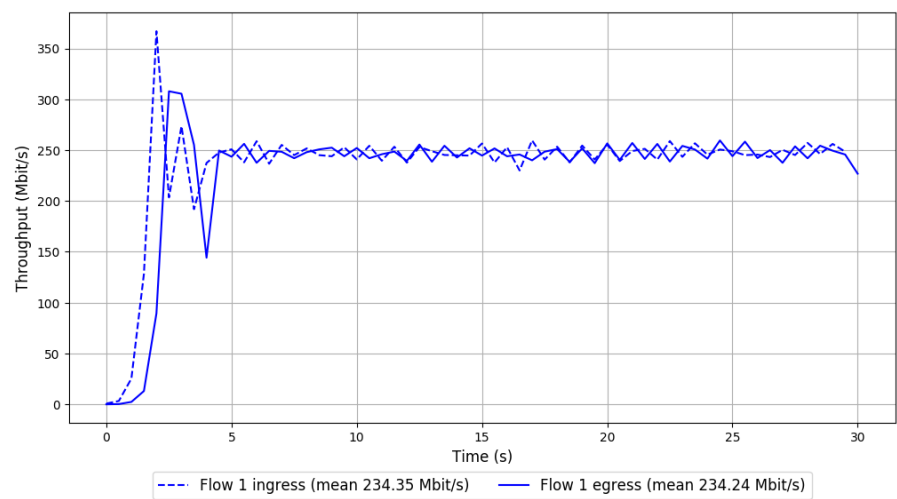


Run 3: Statistics of TCP Vegas

Start at: 2018-10-26 07:30:49  
End at: 2018-10-26 07:31:19  
Local clock offset: 2.381 ms  
Remote clock offset: -38.88 ms

# Below is generated by plot.py at 2018-10-26 09:32:35  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 234.24 Mbit/s  
95th percentile per-packet one-way delay: 137.980 ms  
Loss rate: 0.69%  
-- Flow 1:  
Average throughput: 234.24 Mbit/s  
95th percentile per-packet one-way delay: 137.980 ms  
Loss rate: 0.69%

Run 3: Report of TCP Vegas — Data Link

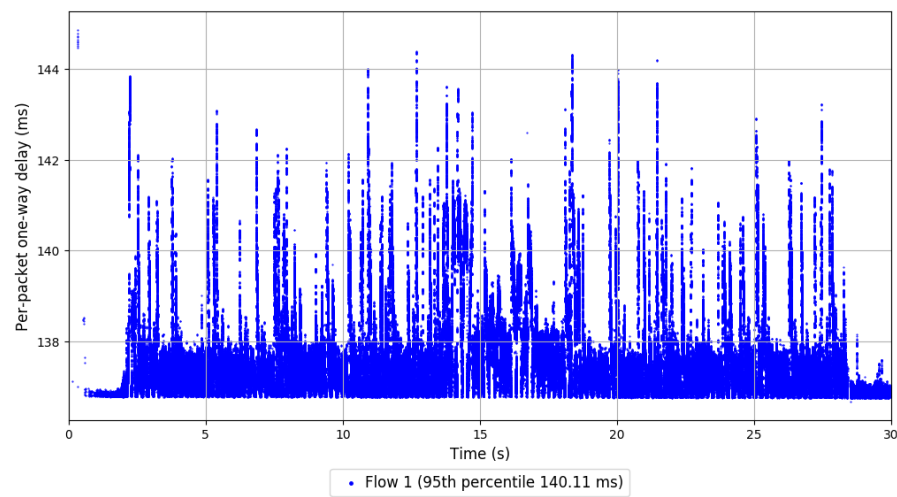
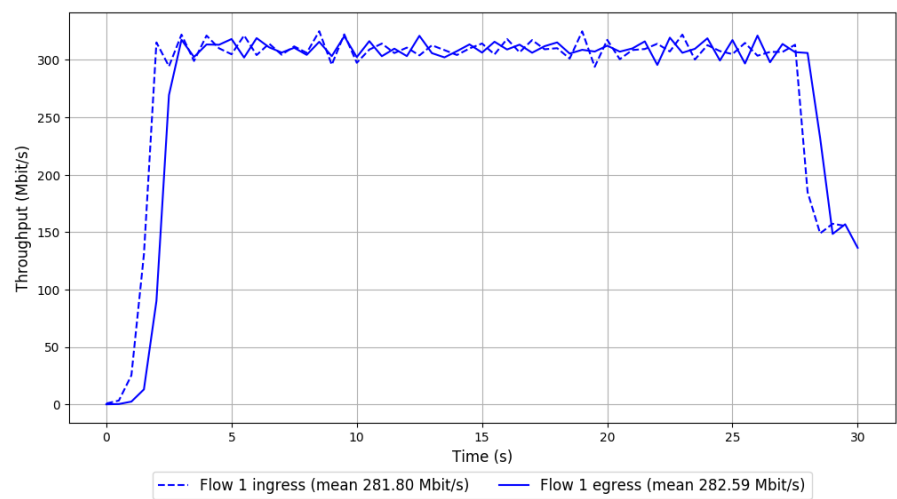


Run 4: Statistics of TCP Vegas

Start at: 2018-10-26 08:09:48  
End at: 2018-10-26 08:10:19  
Local clock offset: -0.387 ms  
Remote clock offset: -43.232 ms

# Below is generated by plot.py at 2018-10-26 09:33:53  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 282.59 Mbit/s  
95th percentile per-packet one-way delay: 140.110 ms  
Loss rate: 0.36%  
-- Flow 1:  
Average throughput: 282.59 Mbit/s  
95th percentile per-packet one-way delay: 140.110 ms  
Loss rate: 0.36%

Run 4: Report of TCP Vegas — Data Link



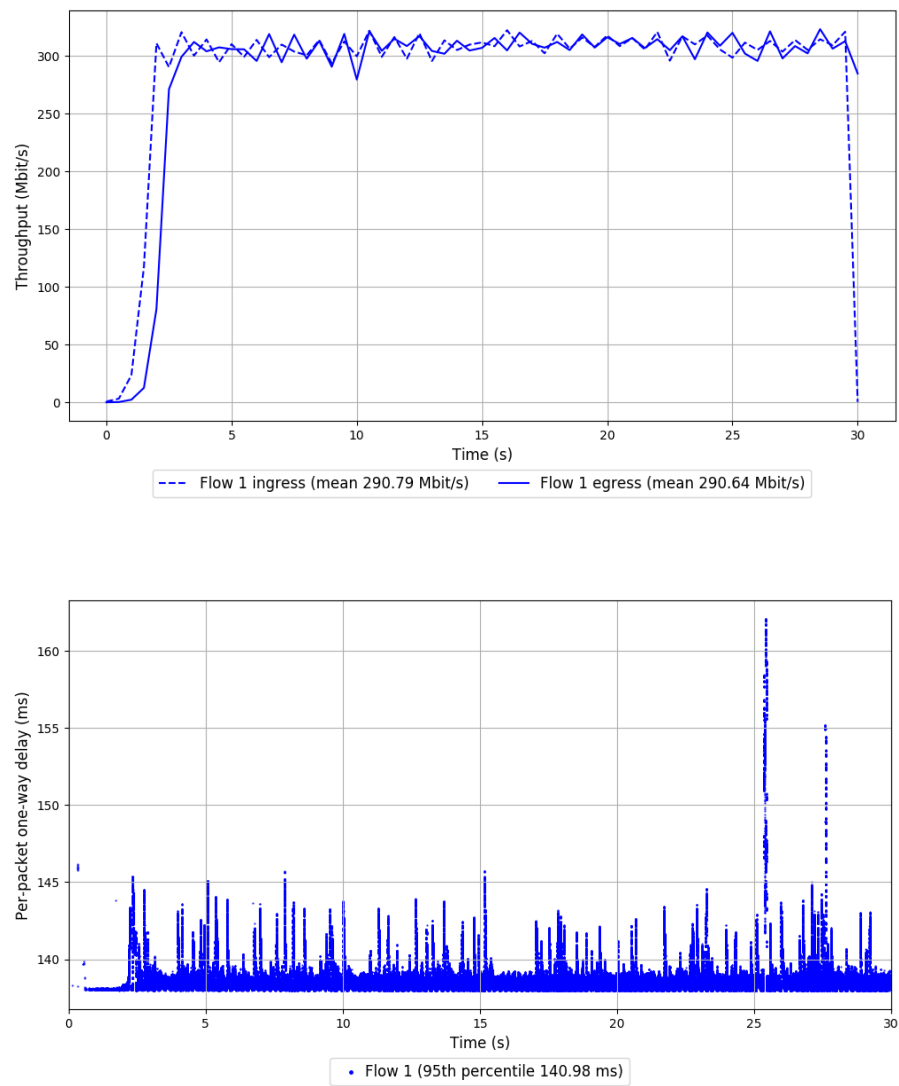


Run 5: Statistics of TCP Vegas

Start at: 2018-10-26 08:47:56  
End at: 2018-10-26 08:48:27  
Local clock offset: -1.622 ms  
Remote clock offset: -44.969 ms

# Below is generated by plot.py at 2018-10-26 09:34:42  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 290.64 Mbit/s  
95th percentile per-packet one-way delay: 140.981 ms  
Loss rate: 0.70%  
-- Flow 1:  
Average throughput: 290.64 Mbit/s  
95th percentile per-packet one-way delay: 140.981 ms  
Loss rate: 0.70%

Run 5: Report of TCP Vegas — Data Link

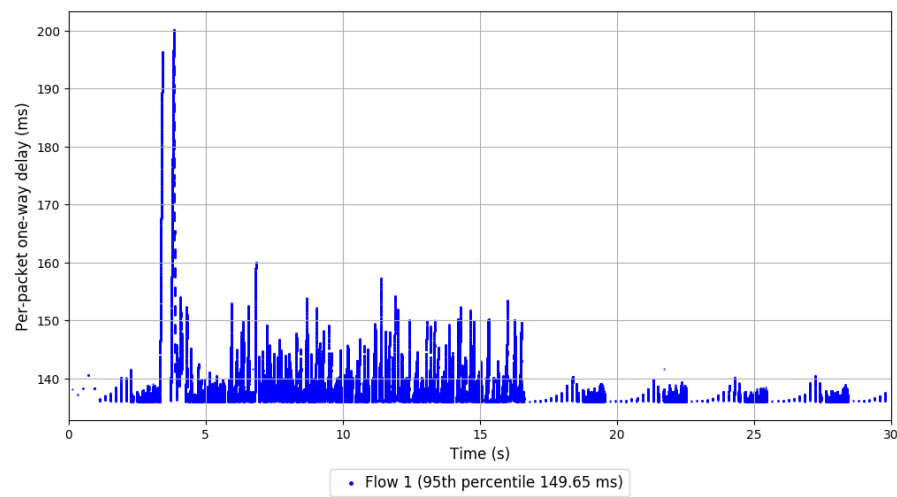
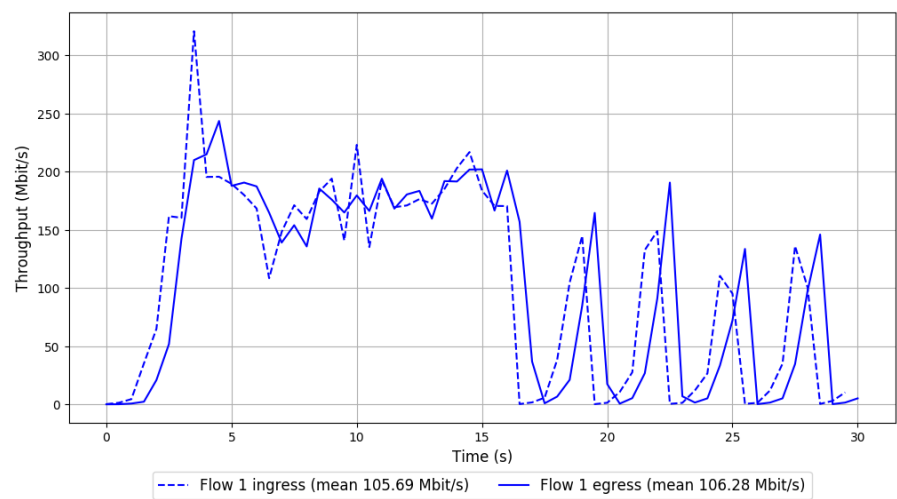


Run 1: Statistics of Verus

Start at: 2018-10-26 06:20:02  
End at: 2018-10-26 06:20:32  
Local clock offset: 1.346 ms  
Remote clock offset: -40.592 ms

# Below is generated by plot.py at 2018-10-26 09:34:42  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 106.28 Mbit/s  
95th percentile per-packet one-way delay: 149.654 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 106.28 Mbit/s  
95th percentile per-packet one-way delay: 149.654 ms  
Loss rate: 0.11%

Run 1: Report of Verus — Data Link

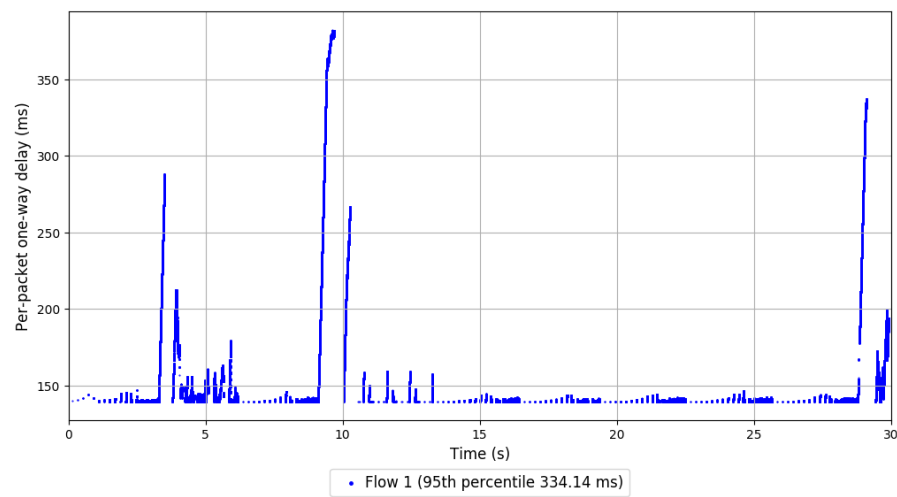
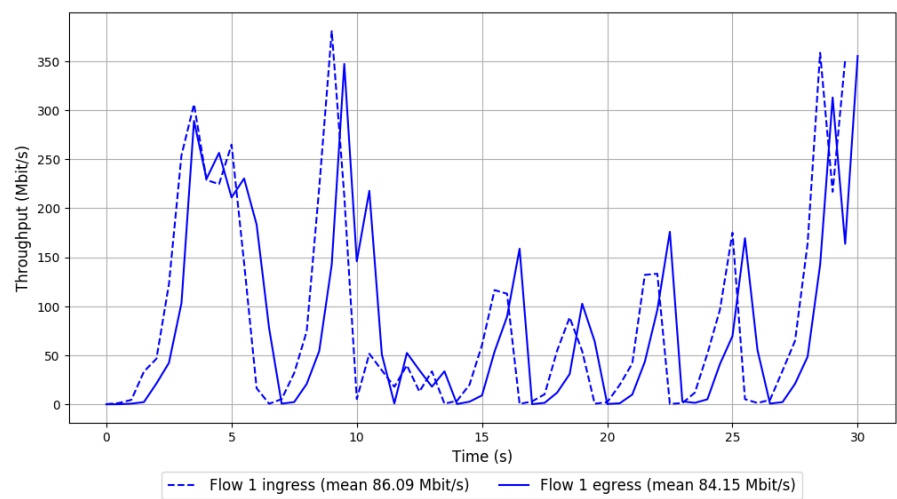


Run 2: Statistics of Verus

Start at: 2018-10-26 06:52:57  
End at: 2018-10-26 06:53:27  
Local clock offset: 3.264 ms  
Remote clock offset: -41.651 ms

# Below is generated by plot.py at 2018-10-26 09:34:42  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 84.15 Mbit/s  
95th percentile per-packet one-way delay: 334.139 ms  
Loss rate: 2.90%  
-- Flow 1:  
Average throughput: 84.15 Mbit/s  
95th percentile per-packet one-way delay: 334.139 ms  
Loss rate: 2.90%

Run 2: Report of Verus — Data Link

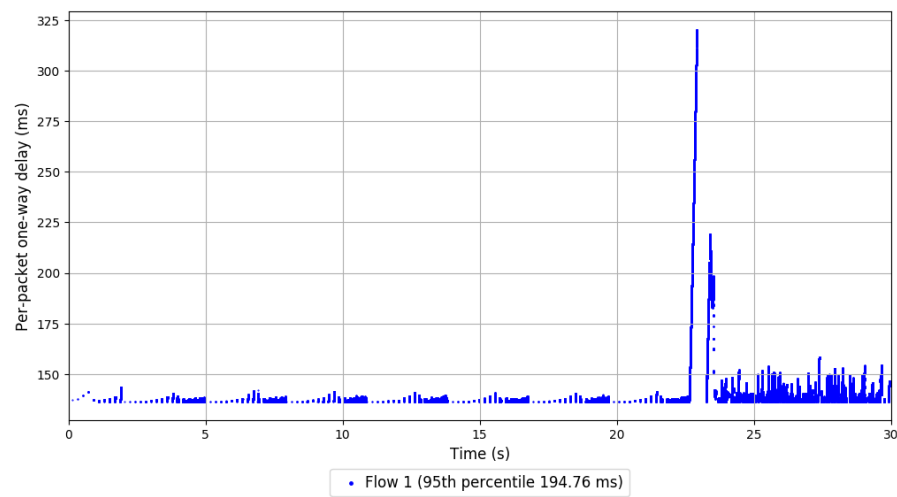
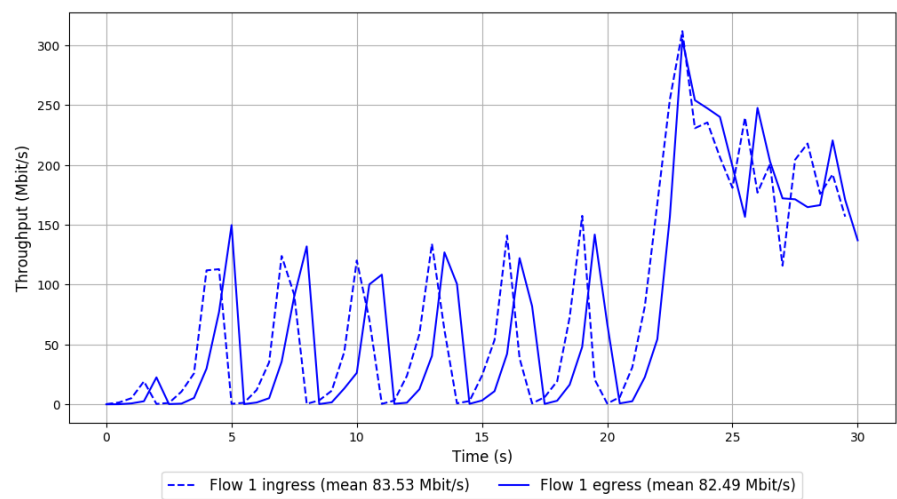


Run 3: Statistics of Verus

Start at: 2018-10-26 07:25:53  
End at: 2018-10-26 07:26:23  
Local clock offset: 1.106 ms  
Remote clock offset: -39.256 ms

# Below is generated by plot.py at 2018-10-26 09:34:42  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 82.49 Mbit/s  
95th percentile per-packet one-way delay: 194.757 ms  
Loss rate: 1.89%  
-- Flow 1:  
Average throughput: 82.49 Mbit/s  
95th percentile per-packet one-way delay: 194.757 ms  
Loss rate: 1.89%

Run 3: Report of Verus — Data Link



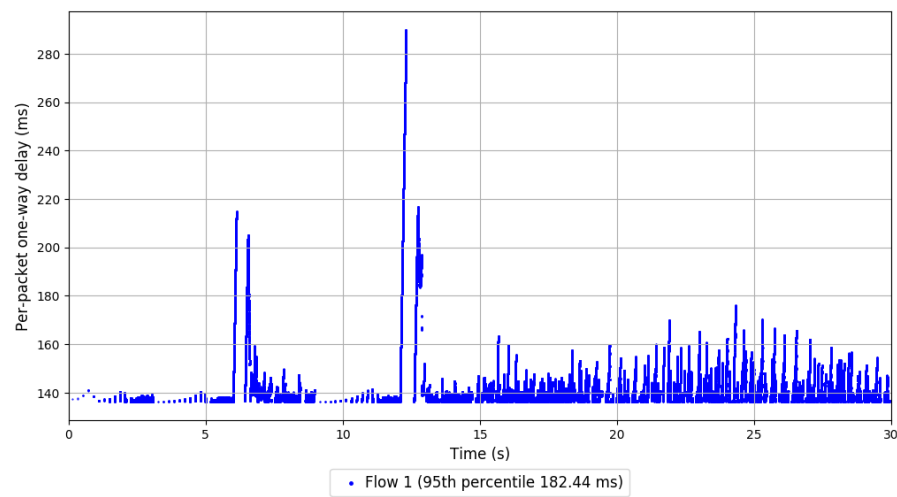
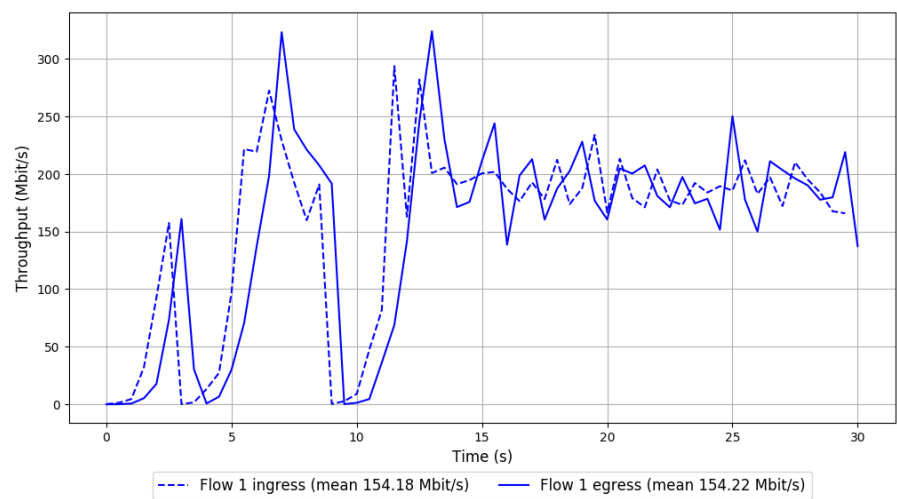


Run 4: Statistics of Verus

Start at: 2018-10-26 08:04:33  
End at: 2018-10-26 08:05:03  
Local clock offset: -0.015 ms  
Remote clock offset: -41.769 ms

# Below is generated by plot.py at 2018-10-26 09:34:42  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 154.22 Mbit/s  
95th percentile per-packet one-way delay: 182.445 ms  
Loss rate: 0.64%  
-- Flow 1:  
Average throughput: 154.22 Mbit/s  
95th percentile per-packet one-way delay: 182.445 ms  
Loss rate: 0.64%

Run 4: Report of Verus — Data Link

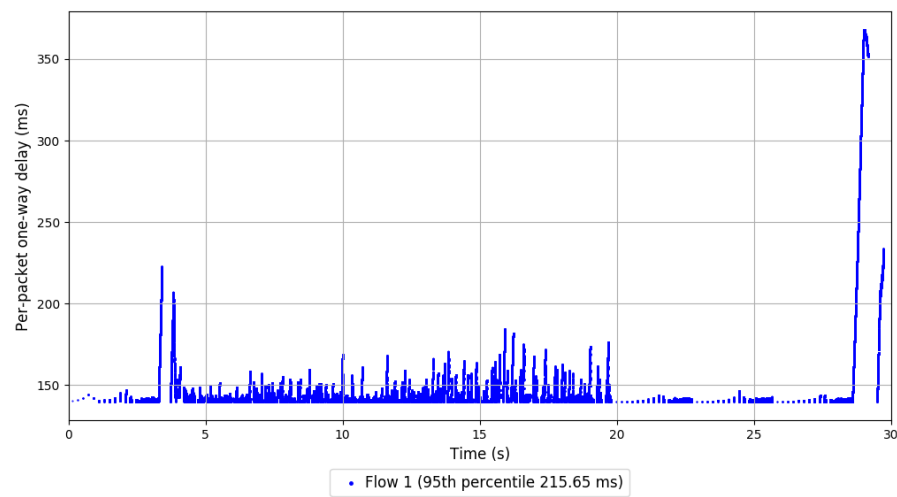
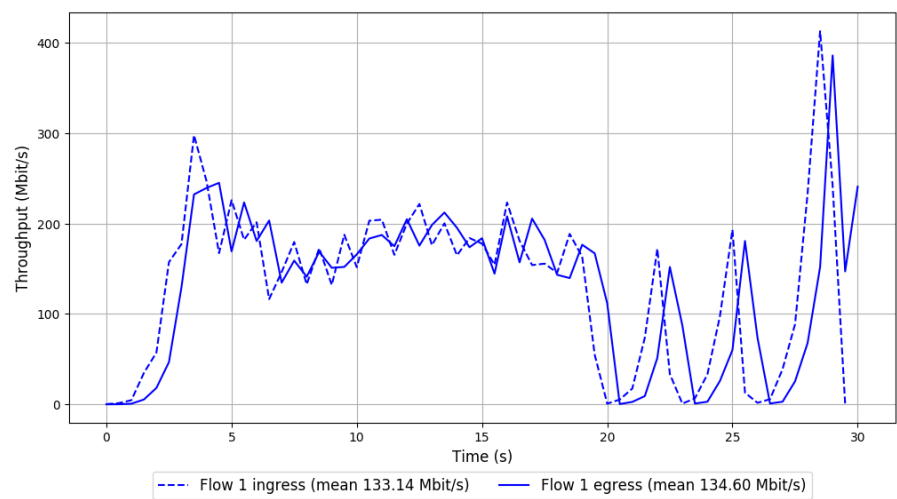


Run 5: Statistics of Verus

Start at: 2018-10-26 08:42:45  
End at: 2018-10-26 08:43:15  
Local clock offset: 2.496 ms  
Remote clock offset: -43.931 ms

# Below is generated by plot.py at 2018-10-26 09:34:42  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 134.60 Mbit/s  
95th percentile per-packet one-way delay: 215.650 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 134.60 Mbit/s  
95th percentile per-packet one-way delay: 215.650 ms  
Loss rate: 0.01%

Run 5: Report of Verus — Data Link

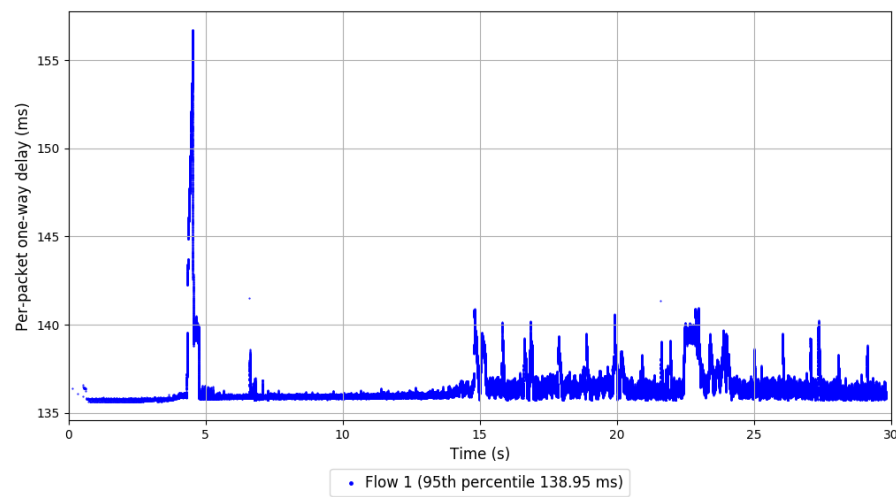
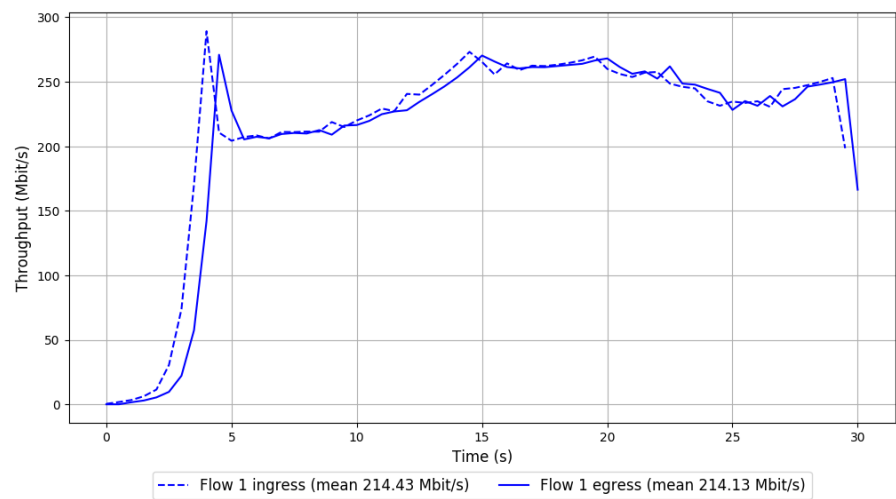


Run 1: Statistics of PCC-Vivace

Start at: 2018-10-26 06:32:50  
End at: 2018-10-26 06:33:20  
Local clock offset: 1.602 ms  
Remote clock offset: -38.426 ms

# Below is generated by plot.py at 2018-10-26 09:34:48  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 214.13 Mbit/s  
95th percentile per-packet one-way delay: 138.948 ms  
Loss rate: 0.79%  
-- Flow 1:  
Average throughput: 214.13 Mbit/s  
95th percentile per-packet one-way delay: 138.948 ms  
Loss rate: 0.79%

Run 1: Report of PCC-Vivace — Data Link

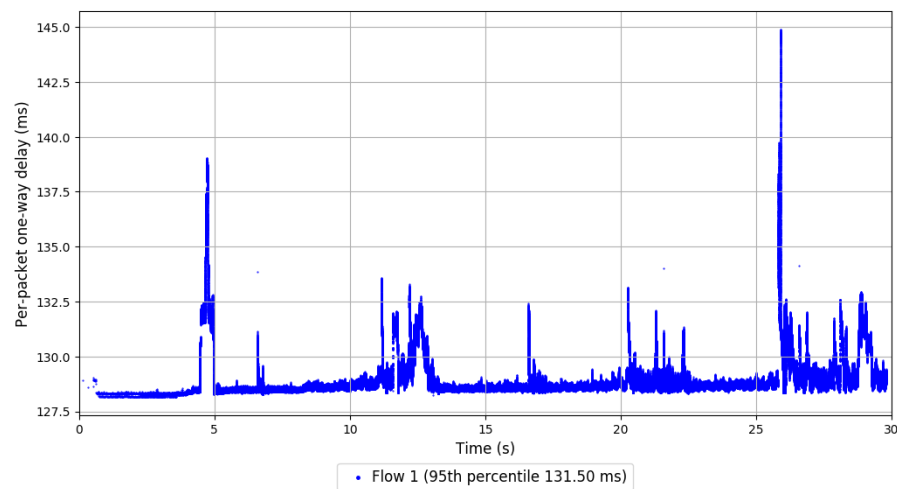
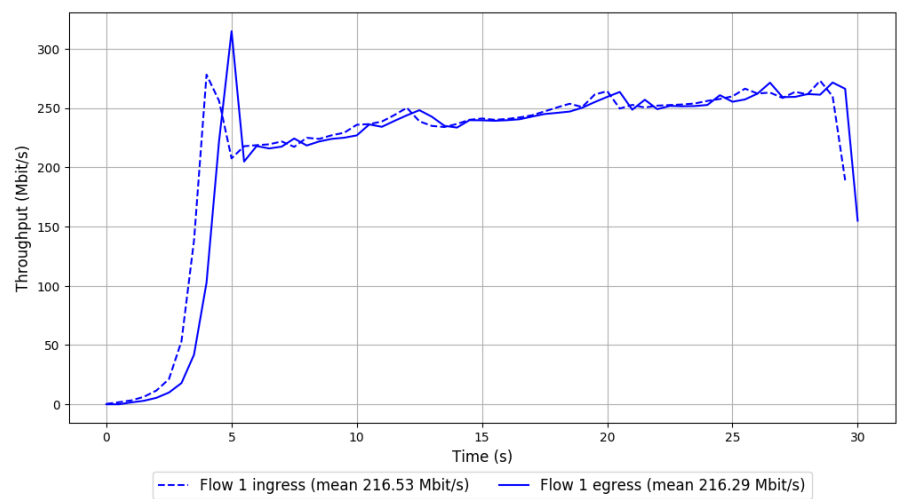


Run 2: Statistics of PCC-Vivace

Start at: 2018-10-26 07:06:00  
End at: 2018-10-26 07:06:30  
Local clock offset: 1.723 ms  
Remote clock offset: -33.045 ms

# Below is generated by plot.py at 2018-10-26 09:34:50  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 216.29 Mbit/s  
95th percentile per-packet one-way delay: 131.503 ms  
Loss rate: 0.76%  
-- Flow 1:  
Average throughput: 216.29 Mbit/s  
95th percentile per-packet one-way delay: 131.503 ms  
Loss rate: 0.76%

Run 2: Report of PCC-Vivace — Data Link



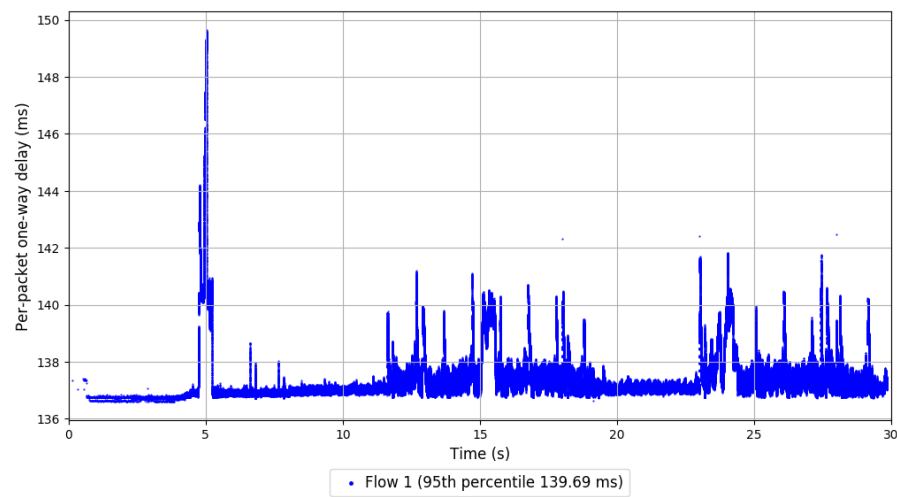
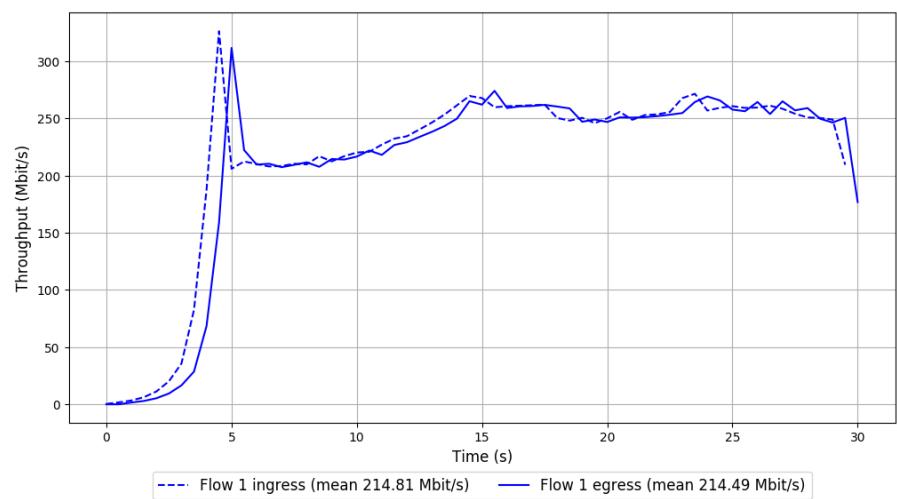


Run 3: Statistics of PCC-Vivace

Start at: 2018-10-26 07:39:12  
End at: 2018-10-26 07:39:42  
Local clock offset: -0.622 ms  
Remote clock offset: -41.075 ms

# Below is generated by plot.py at 2018-10-26 09:34:52  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 214.49 Mbit/s  
95th percentile per-packet one-way delay: 139.694 ms  
Loss rate: 0.80%  
-- Flow 1:  
Average throughput: 214.49 Mbit/s  
95th percentile per-packet one-way delay: 139.694 ms  
Loss rate: 0.80%

Run 3: Report of PCC-Vivace — Data Link

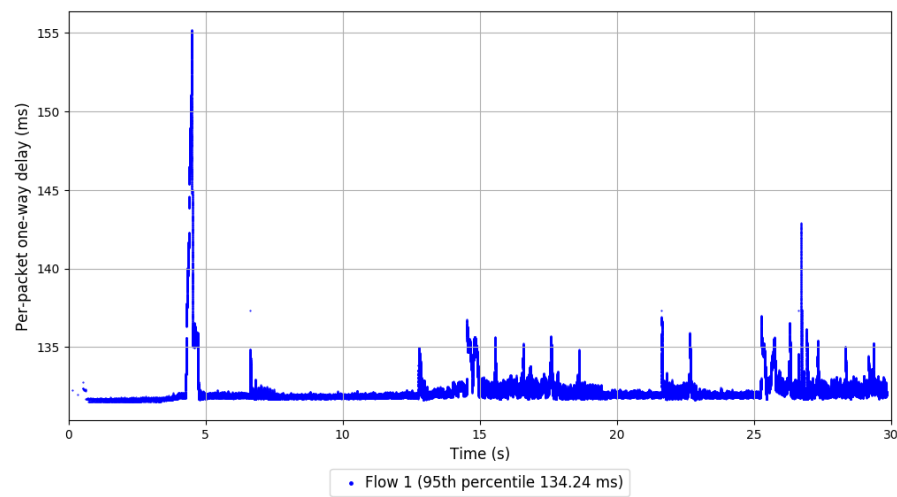
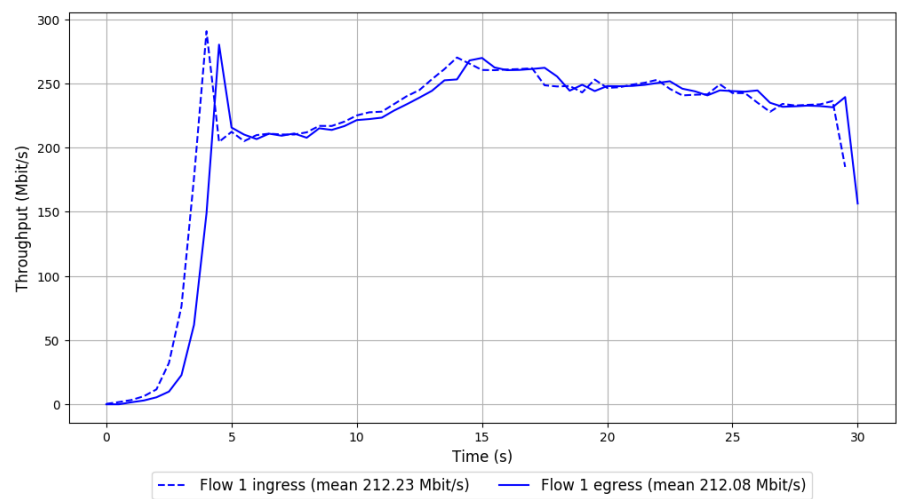


Run 4: Statistics of PCC-Vivace

Start at: 2018-10-26 08:17:44  
End at: 2018-10-26 08:18:14  
Local clock offset: 0.405 ms  
Remote clock offset: -37.737 ms

# Below is generated by plot.py at 2018-10-26 09:34:52  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 212.08 Mbit/s  
95th percentile per-packet one-way delay: 134.241 ms  
Loss rate: 0.71%  
-- Flow 1:  
Average throughput: 212.08 Mbit/s  
95th percentile per-packet one-way delay: 134.241 ms  
Loss rate: 0.71%

Run 4: Report of PCC-Vivace — Data Link

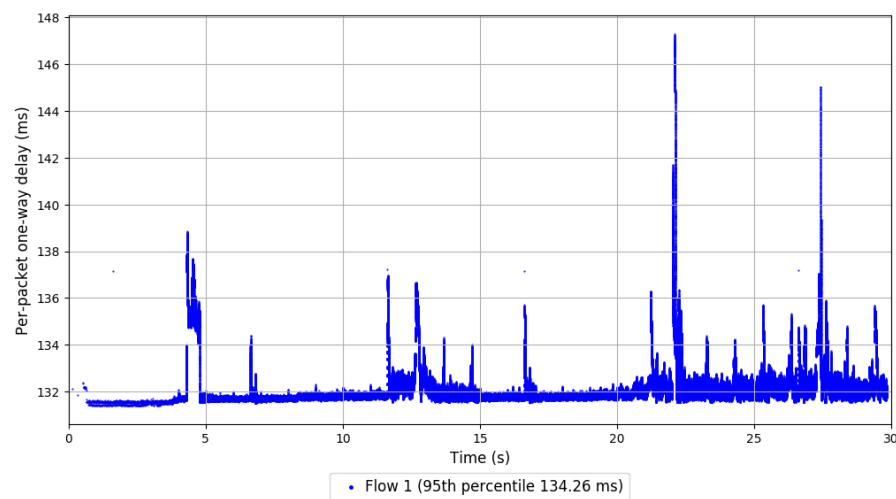
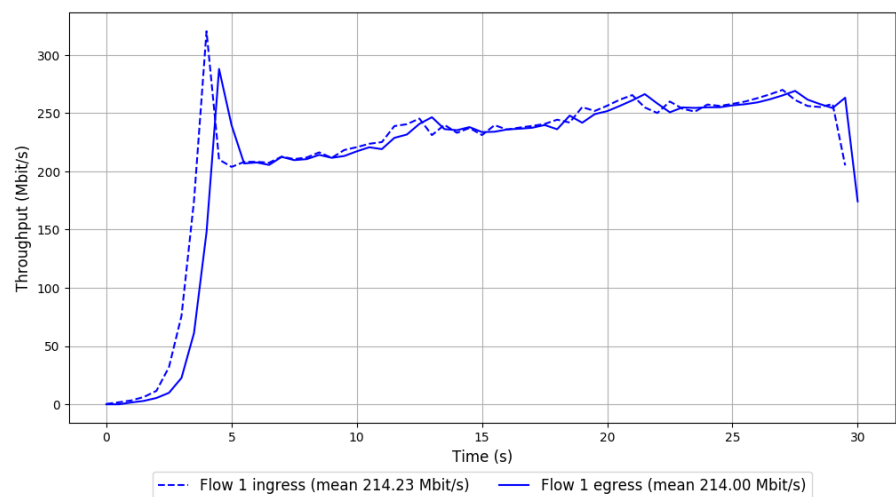


Run 5: Statistics of PCC-Vivace

Start at: 2018-10-26 08:55:59  
End at: 2018-10-26 08:56:29  
Local clock offset: -1.034 ms  
Remote clock offset: -39.848 ms

# Below is generated by plot.py at 2018-10-26 09:34:58  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 214.00 Mbit/s  
95th percentile per-packet one-way delay: 134.264 ms  
Loss rate: 0.75%  
-- Flow 1:  
Average throughput: 214.00 Mbit/s  
95th percentile per-packet one-way delay: 134.264 ms  
Loss rate: 0.75%

Run 5: Report of PCC-Vivace — Data Link

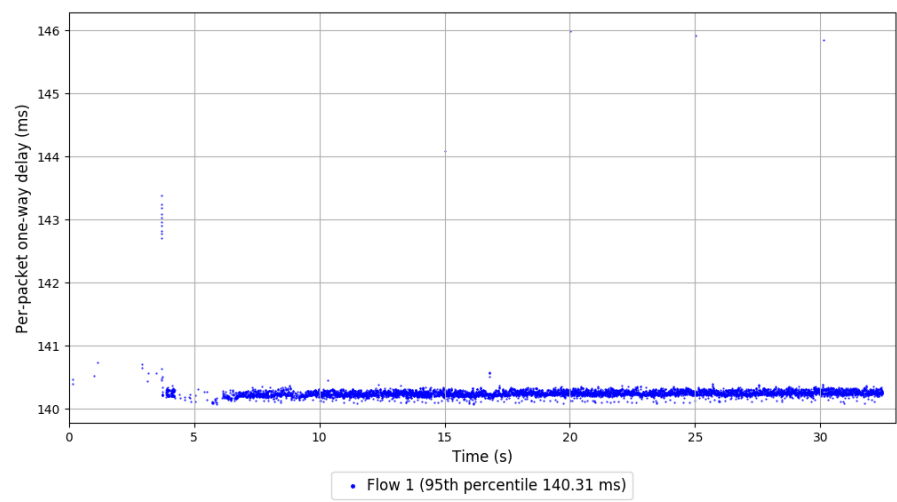
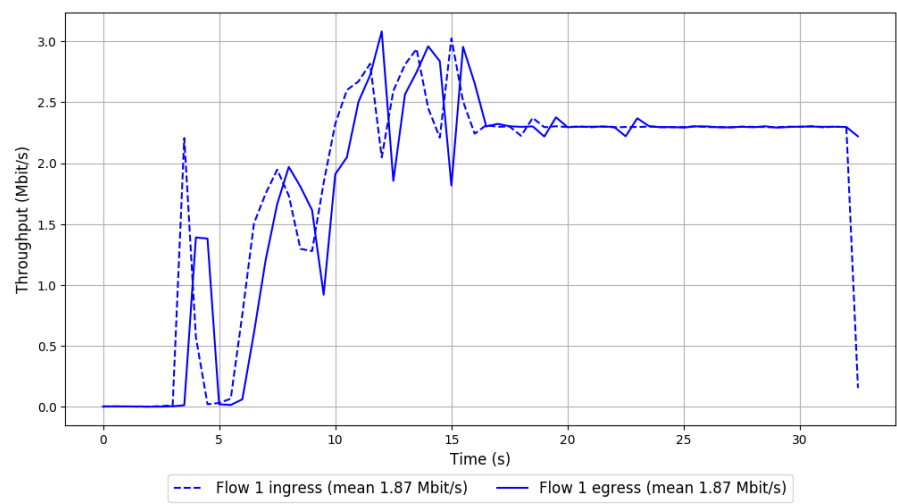


Run 1: Statistics of WebRTC media

Start at: 2018-10-26 06:11:23  
End at: 2018-10-26 06:11:53  
Local clock offset: -1.062 ms  
Remote clock offset: -45.617 ms

# Below is generated by plot.py at 2018-10-26 09:34:58  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 140.310 ms  
Loss rate: 0.69%  
-- Flow 1:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 140.310 ms  
Loss rate: 0.69%

Run 1: Report of WebRTC media — Data Link



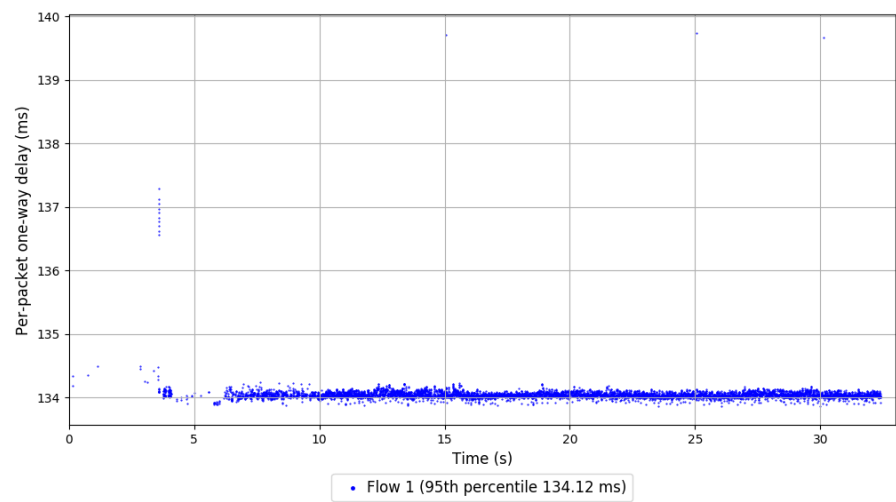
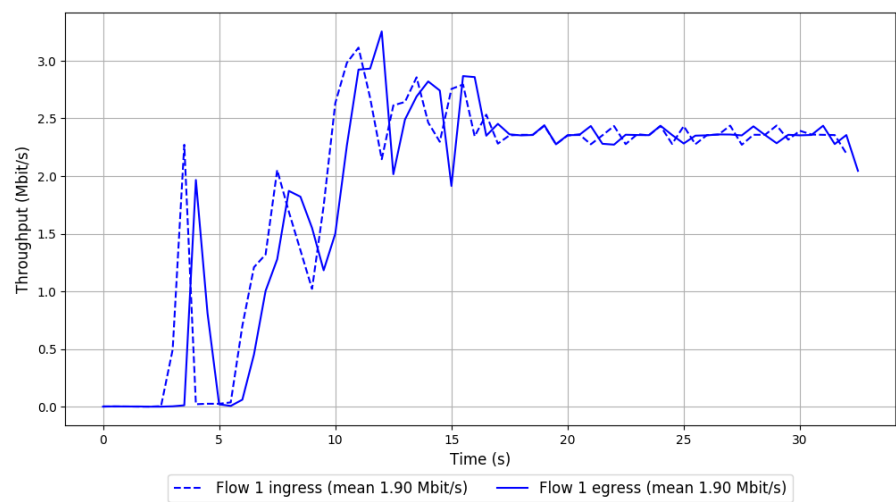


Run 2: Statistics of WebRTC media

Start at: 2018-10-26 06:43:53  
End at: 2018-10-26 06:44:23  
Local clock offset: 1.163 ms  
Remote clock offset: -38.317 ms

# Below is generated by plot.py at 2018-10-26 09:34:58  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 1.90 Mbit/s  
95th percentile per-packet one-way delay: 134.117 ms  
Loss rate: 0.70%  
-- Flow 1:  
Average throughput: 1.90 Mbit/s  
95th percentile per-packet one-way delay: 134.117 ms  
Loss rate: 0.70%

Run 2: Report of WebRTC media — Data Link

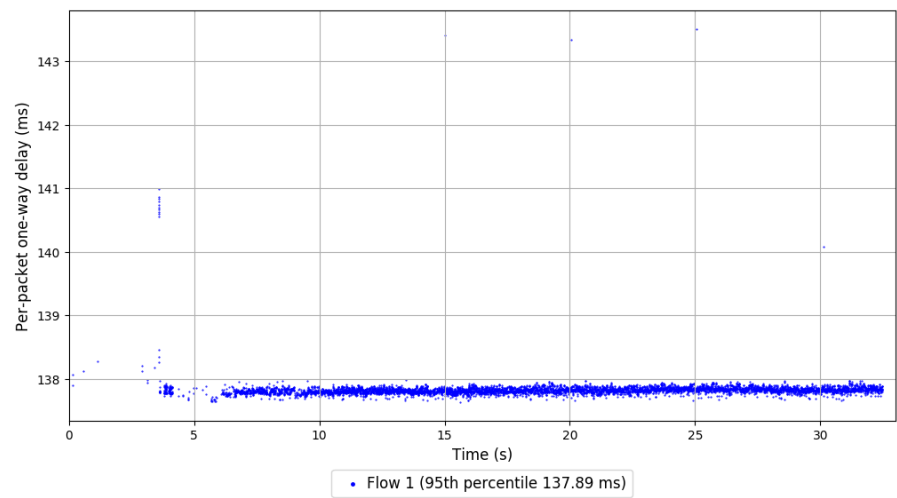
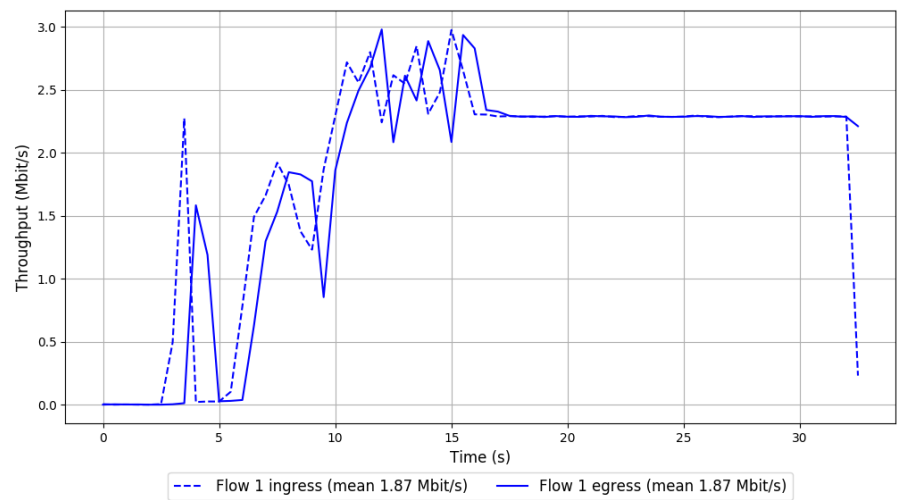


Run 3: Statistics of WebRTC media

Start at: 2018-10-26 07:17:15  
End at: 2018-10-26 07:17:45  
Local clock offset: 2.921 ms  
Remote clock offset: -40.341 ms

# Below is generated by plot.py at 2018-10-26 09:34:58  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 137.894 ms  
Loss rate: 0.75%  
-- Flow 1:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 137.894 ms  
Loss rate: 0.75%

Run 3: Report of WebRTC media — Data Link

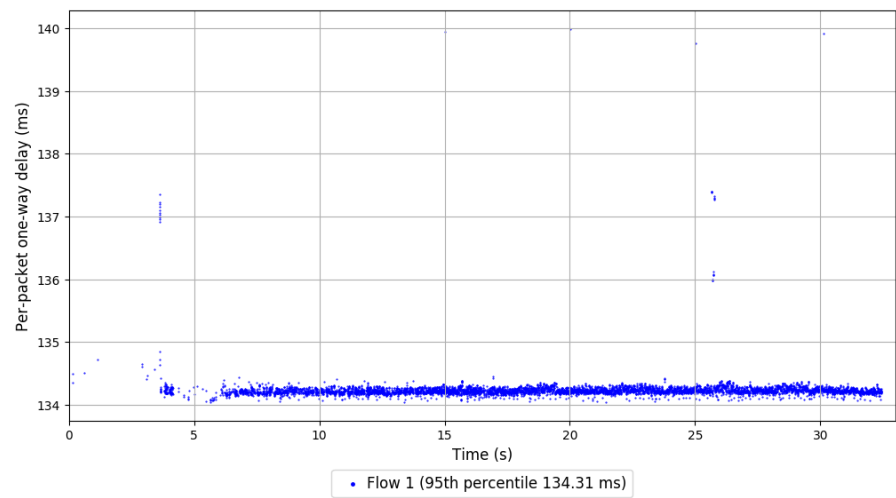
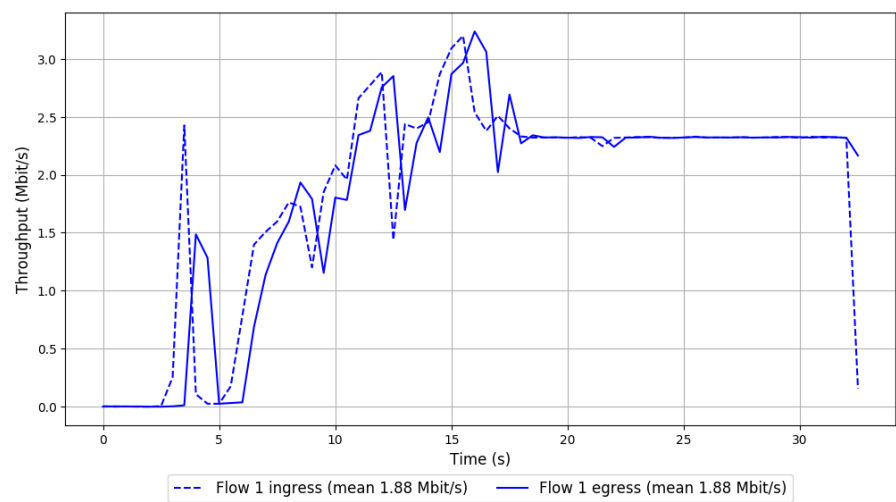


Run 4: Statistics of WebRTC media

Start at: 2018-10-26 07:56:01  
End at: 2018-10-26 07:56:31  
Local clock offset: -0.269 ms  
Remote clock offset: -38.058 ms

# Below is generated by plot.py at 2018-10-26 09:34:58  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 1.88 Mbit/s  
95th percentile per-packet one-way delay: 134.307 ms  
Loss rate: 0.76%  
-- Flow 1:  
Average throughput: 1.88 Mbit/s  
95th percentile per-packet one-way delay: 134.307 ms  
Loss rate: 0.76%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-10-26 08:34:05  
End at: 2018-10-26 08:34:35  
Local clock offset: 2.501 ms  
Remote clock offset: -44.641 ms

# Below is generated by plot.py at 2018-10-26 09:34:58  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 141.525 ms  
Loss rate: 0.76%  
-- Flow 1:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 141.525 ms  
Loss rate: 0.76%

## Run 5: Report of WebRTC media — Data Link

