Pantheon Report

Generated at 2017-09-18 13:16:26 (UTC).

Data path: GCE Tokyo Ethernet (*remote*) →GCE Iowa Ethernet (*local*).

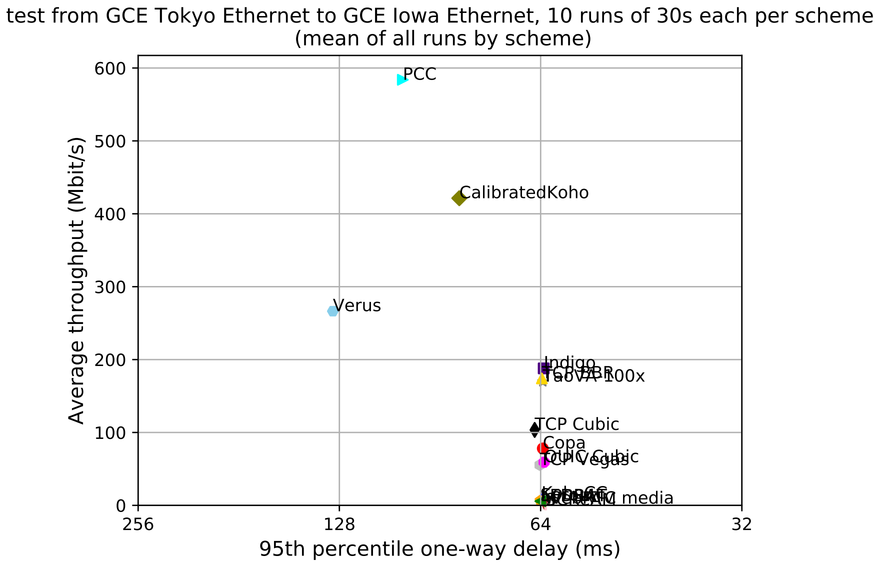
Repeated the test of 15 congestion control schemes 10 times.

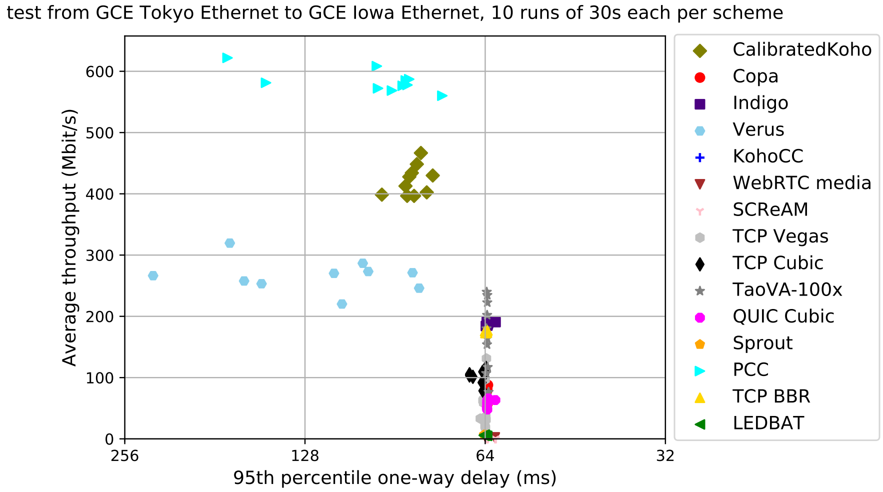
Each test lasted for 30 seconds running 1 flow.

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

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

```
Git summary:
branch: master @ 57453dc11f8da93a2e03eea75289fea01b816298
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ f7ca42f251bf49b432bb71de6d13fa903515c366
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```


test from GCE Tokyo Ethernet to GCE Iowa Ethernet, 10 runs of 30s each per scheme
(mean of all runs by scheme)
Average throughput (Mbit/s)
600
500
400
300
200
100
0
256
128
64
32
95th percentile one-way delay (ms)
PCC
CalibratedKoho
Verus
Indigo
TCP BBR
TaoVA-100x
TCP Cubic
Copa
QUIC Cubic
TCP Vegas
KohoCC
WebRTC media
SCReAM


test from GCE Tokyo Ethernet to GCE Iowa Ethernet, 10 runs of 30s each per scheme
Average throughput (Mbit/s)
600
500
400
300
200
100
0
256
128
64
32
95th percentile one-way delay (ms)
CalibratedKoho
Copa
Indigo
Verus
KohoCC
WebRTC media
SCReAM
TCP Vegas
TCP Cubic
TaoVA-100x
QUIC Cubic
Sprout
PCC
TCP BBR
LEDBAT

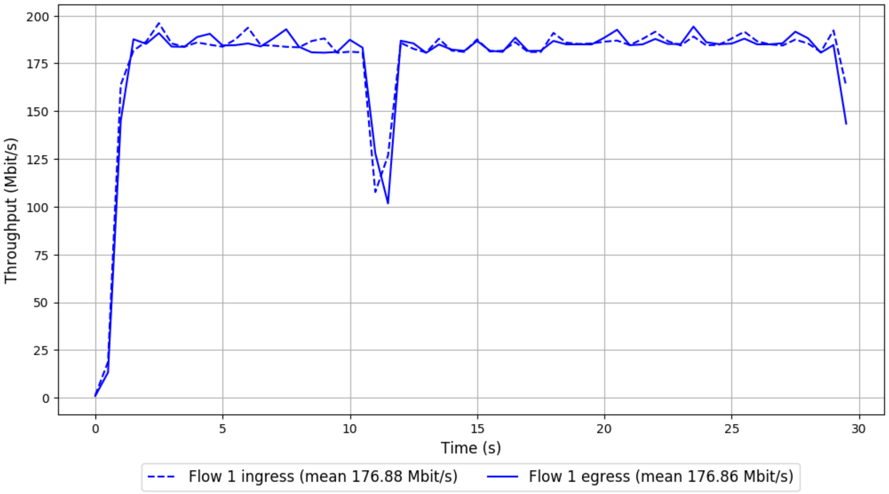
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	10	174.19	63.73	0.48
CalibratedKoho	10	421.38	84.69	0.59
Copa	10	78.09	63.52	0.52
TCP Cubic	10	103.49	65.33	0.44
Indigo	10	187.93	63.33	0.47
KohoCC	10	9.32	63.82	0.48
LEDBAT	10	5.69	64.07	0.57
PCC	10	583.86	102.87	0.95
QUIC Cubic	10	59.24	63.24	0.50
SCReAM	10	0.22	62.94	0.39
Sprout	10	6.59	64.09	0.53
TaoVA-100x	10	169.75	63.52	0.51
TCP Vegas	10	55.33	64.19	0.37
Verus	10	266.41	130.90	0.82
WebRTC media	9	2.33	63.18	0.50

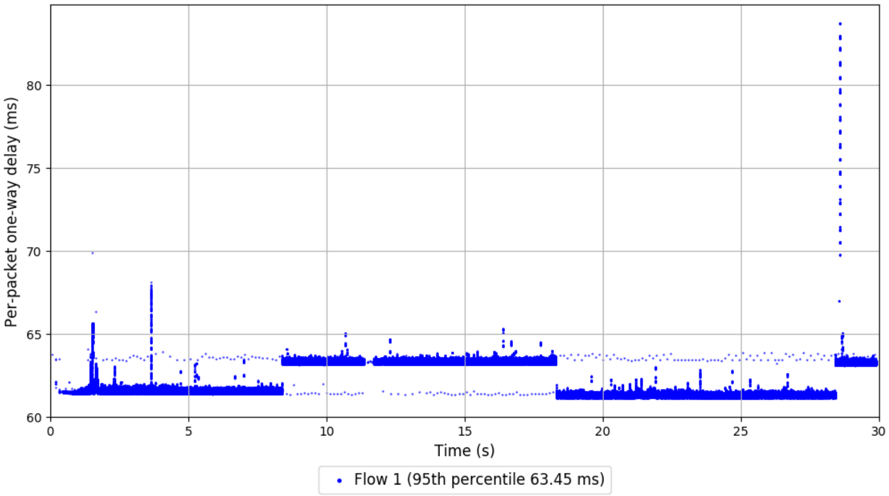
```
Run 1: Statistics of TCP BBR

Start at: 2017-09-18 08:31:10
End at: 2017-09-18 08:31:40

# Below is generated by plot.py at 2017-09-18 12:30:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.86 Mbit/s
95th percentile per-packet one-way delay: 63.446 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 176.86 Mbit/s
95th percentile per-packet one-way delay: 63.446 ms
Loss rate: 0.44%
```

Run 1: Report of TCP BBR — Data Link



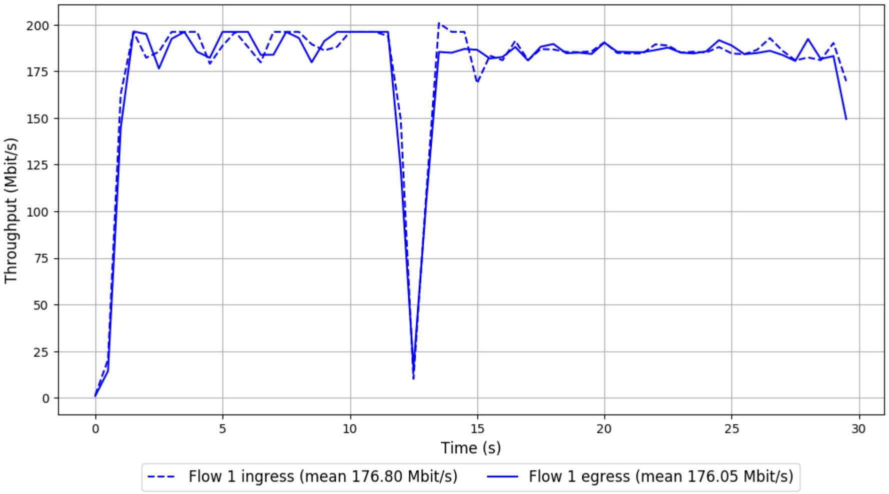


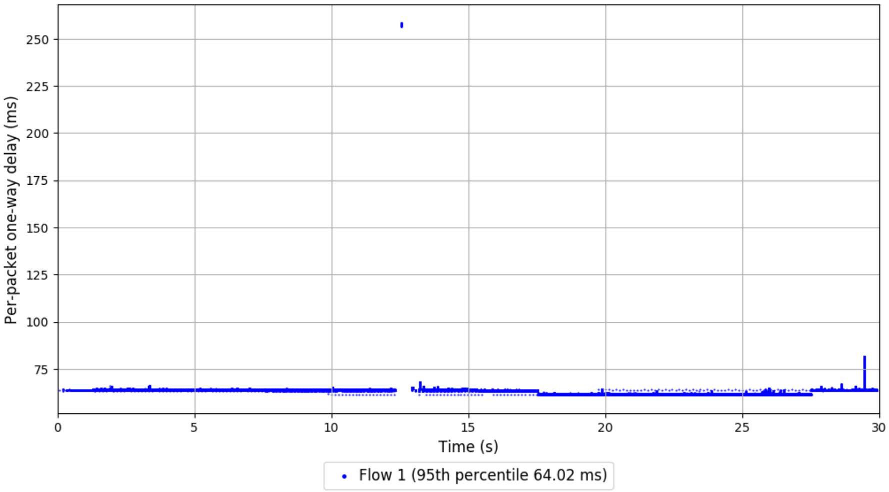
```
Run 2: Statistics of TCP BBR

Start at: 2017-09-18 08:42:41
End at: 2017-09-18 08:43:11

# Below is generated by plot.py at 2017-09-18 12:30:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.05 Mbit/s
95th percentile per-packet one-way delay: 64.017 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 176.05 Mbit/s
95th percentile per-packet one-way delay: 64.017 ms
Loss rate: 0.84%
```

Run 2: Report of TCP BBR — Data Link



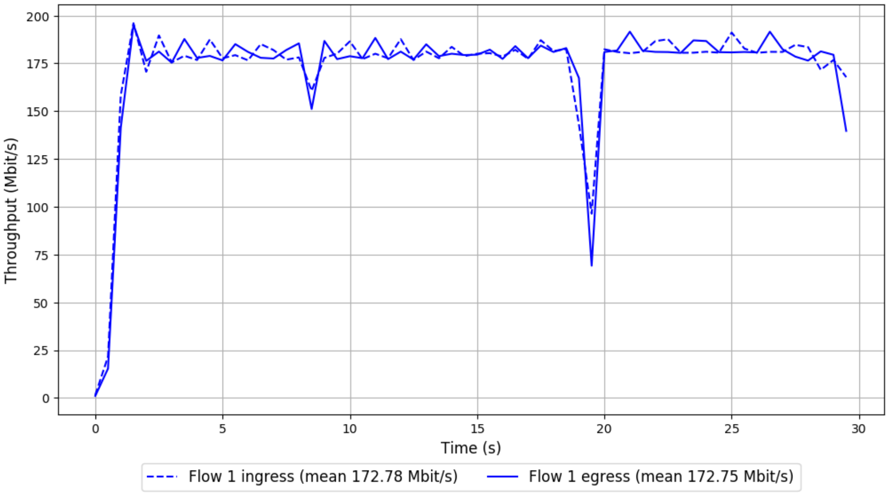


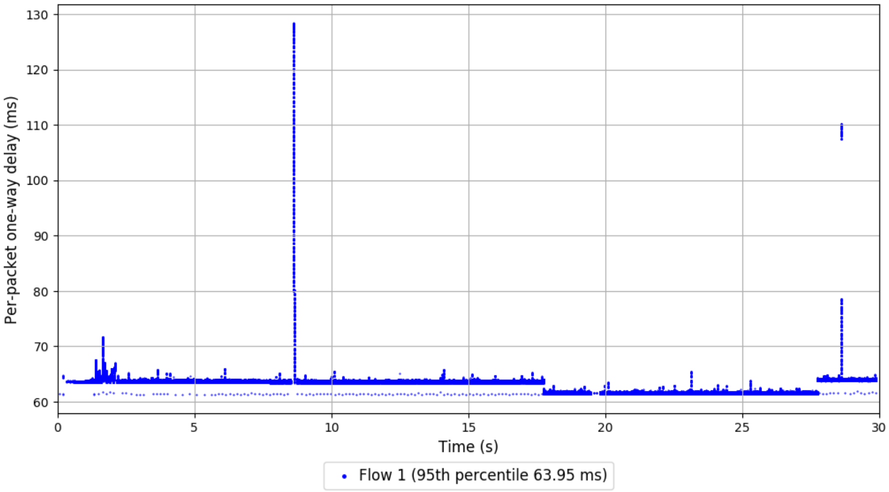
```
Run 3: Statistics of TCP BBR

Start at: 2017-09-18 08:54:11
End at: 2017-09-18 08:54:41

# Below is generated by plot.py at 2017-09-18 12:30:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 172.75 Mbit/s
95th percentile per-packet one-way delay: 63.954 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 172.75 Mbit/s
95th percentile per-packet one-way delay: 63.954 ms
Loss rate: 0.44%
```

Run 3: Report of TCP BBR — Data Link



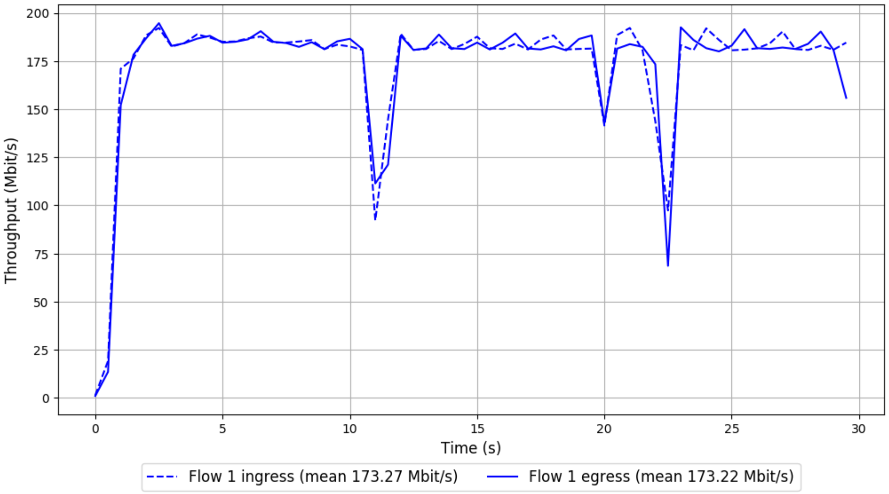


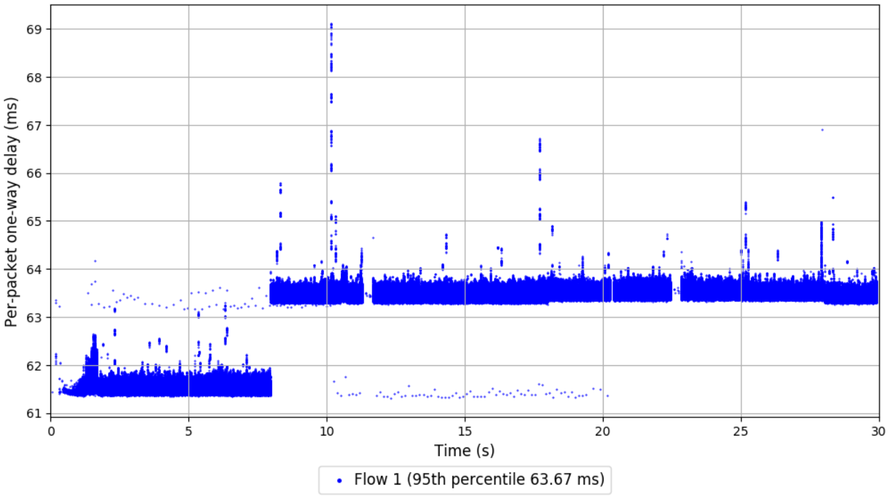
```
Run 4: Statistics of TCP BBR

Start at: 2017-09-18 09:05:30
End at: 2017-09-18 09:06:00

# Below is generated by plot.py at 2017-09-18 12:30:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.22 Mbit/s
95th percentile per-packet one-way delay: 63.669 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 173.22 Mbit/s
95th percentile per-packet one-way delay: 63.669 ms
Loss rate: 0.45%
```

Run 4: Report of TCP BBR — Data Link



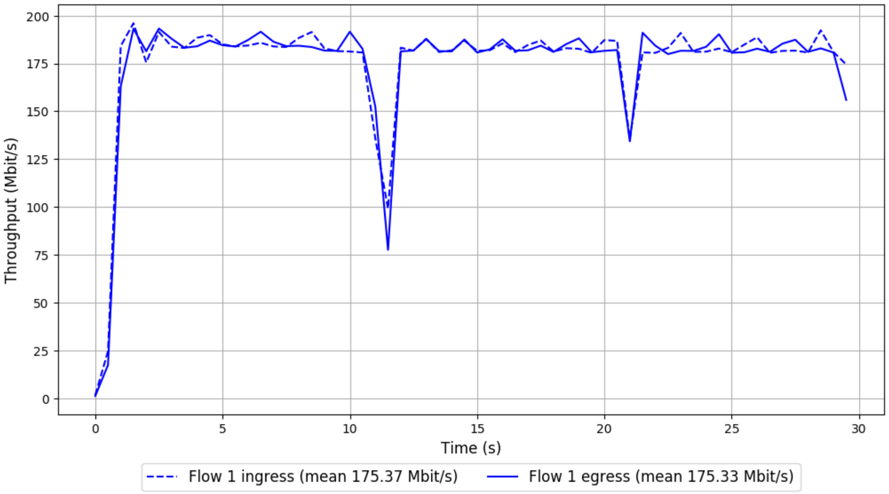


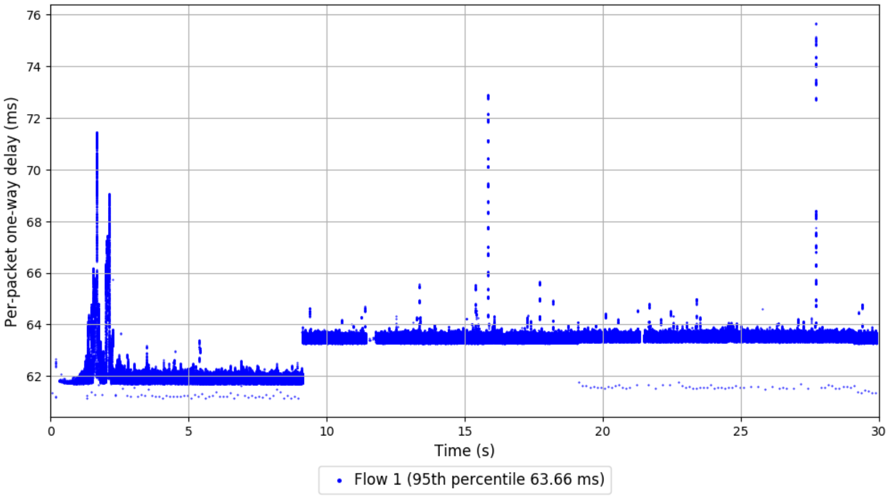
```
Run 5: Statistics of TCP BBR

Start at: 2017-09-18 09:16:59
End at: 2017-09-18 09:17:29

# Below is generated by plot.py at 2017-09-18 12:30:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.33 Mbit/s
95th percentile per-packet one-way delay: 63.664 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 175.33 Mbit/s
95th percentile per-packet one-way delay: 63.664 ms
Loss rate: 0.44%
```

Run 5: Report of TCP BBR — Data Link



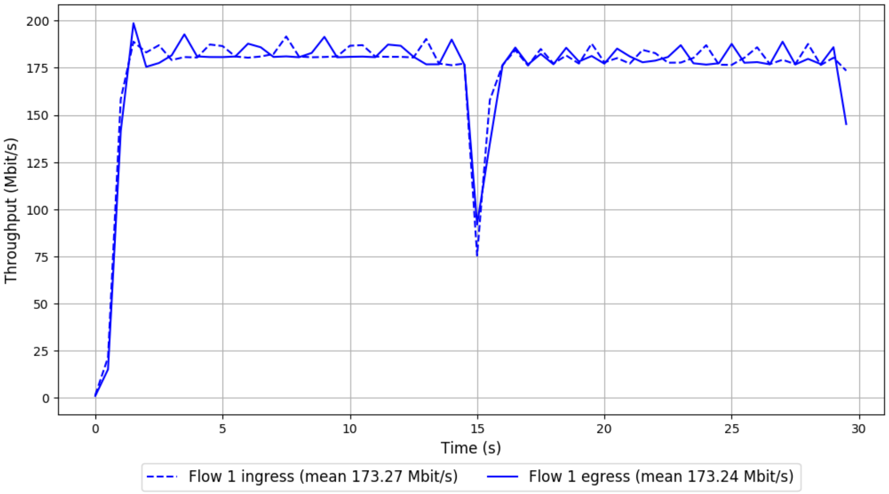


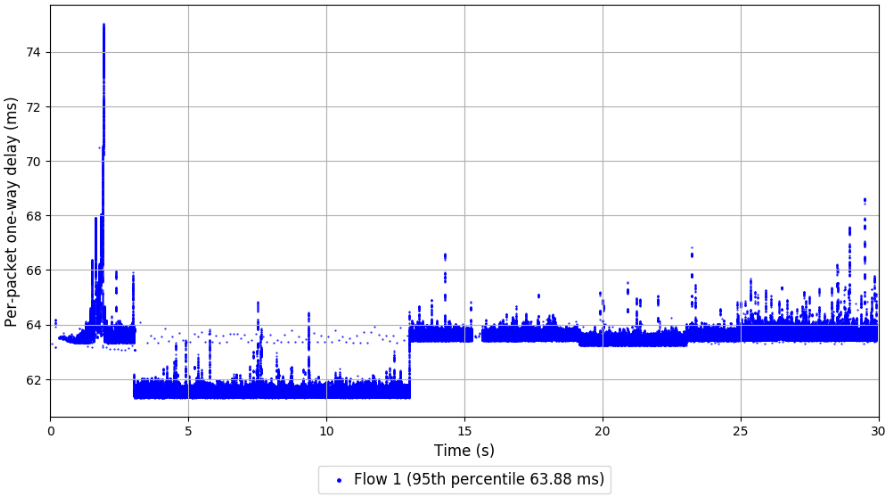
```
Run 6: Statistics of TCP BBR

Start at: 2017-09-18 09:28:35
End at: 2017-09-18 09:29:05

# Below is generated by plot.py at 2017-09-18 12:30:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.24 Mbit/s
95th percentile per-packet one-way delay: 63.877 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 173.24 Mbit/s
95th percentile per-packet one-way delay: 63.877 ms
Loss rate: 0.47%
```

Run 6: Report of TCP BBR — Data Link



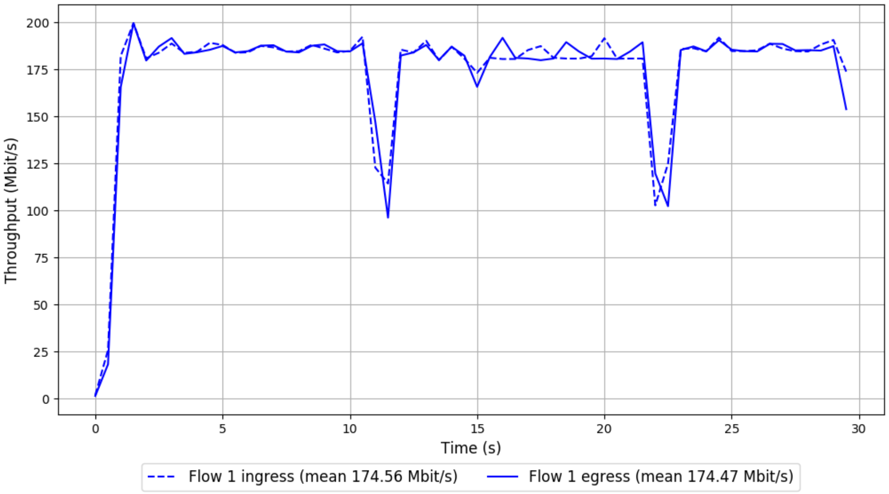


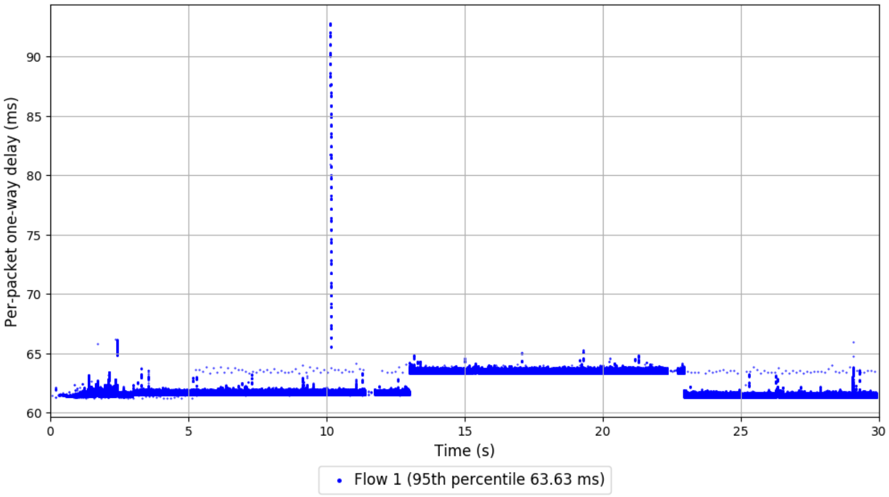
```
Run 7: Statistics of TCP BBR

Start at: 2017-09-18 09:40:05
End at: 2017-09-18 09:40:35

# Below is generated by plot.py at 2017-09-18 12:30:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 174.47 Mbit/s
95th percentile per-packet one-way delay: 63.629 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 174.47 Mbit/s
95th percentile per-packet one-way delay: 63.629 ms
Loss rate: 0.44%
```

Run 7: Report of TCP BBR — Data Link



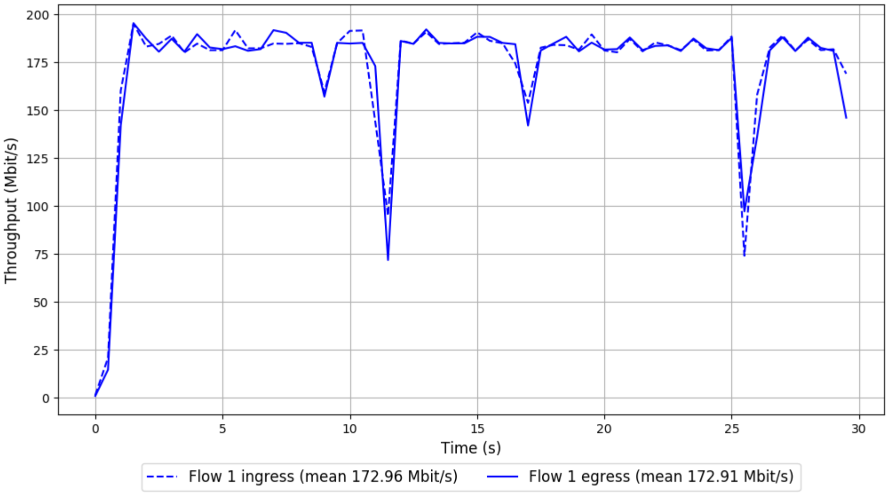


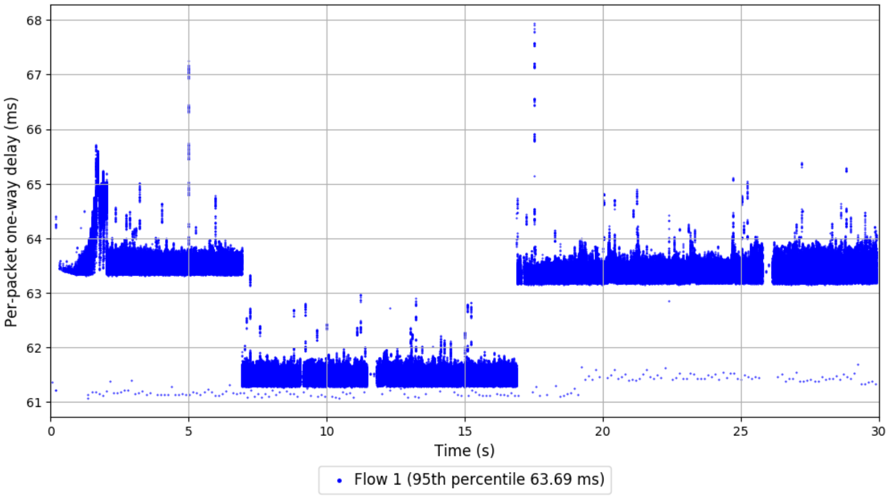
```
Run 8: Statistics of TCP BBR

Start at: 2017-09-18 09:51:42
End at: 2017-09-18 09:52:12

# Below is generated by plot.py at 2017-09-18 12:30:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 172.91 Mbit/s
95th percentile per-packet one-way delay: 63.694 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 172.91 Mbit/s
95th percentile per-packet one-way delay: 63.694 ms
Loss rate: 0.45%
```

Run 8: Report of TCP BBR — Data Link



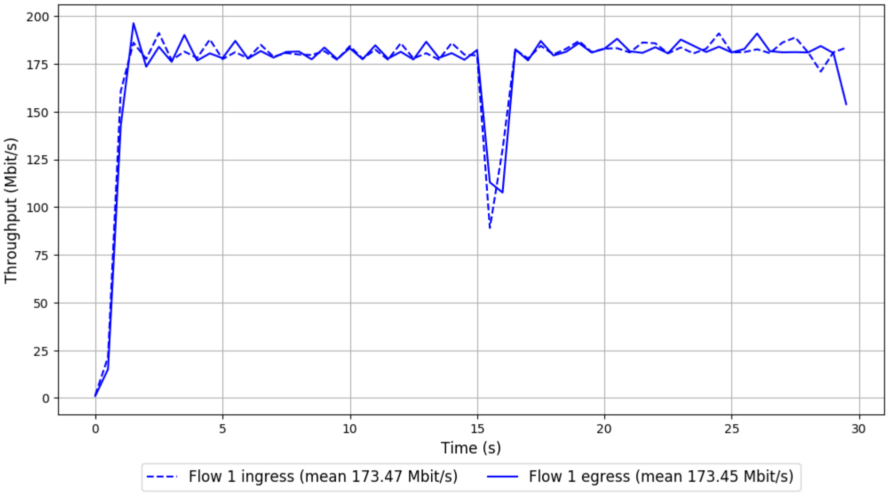


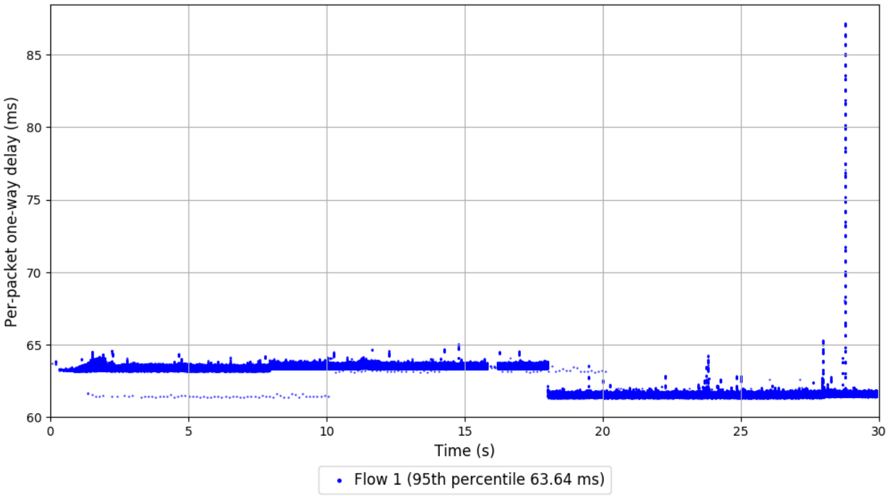
```
Run 9: Statistics of TCP BBR

Start at: 2017-09-18 10:03:20
End at: 2017-09-18 10:03:51

# Below is generated by plot.py at 2017-09-18 12:32:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.45 Mbit/s
95th percentile per-packet one-way delay: 63.644 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 173.45 Mbit/s
95th percentile per-packet one-way delay: 63.644 ms
Loss rate: 0.44%
```

Run 9: Report of TCP BBR — Data Link



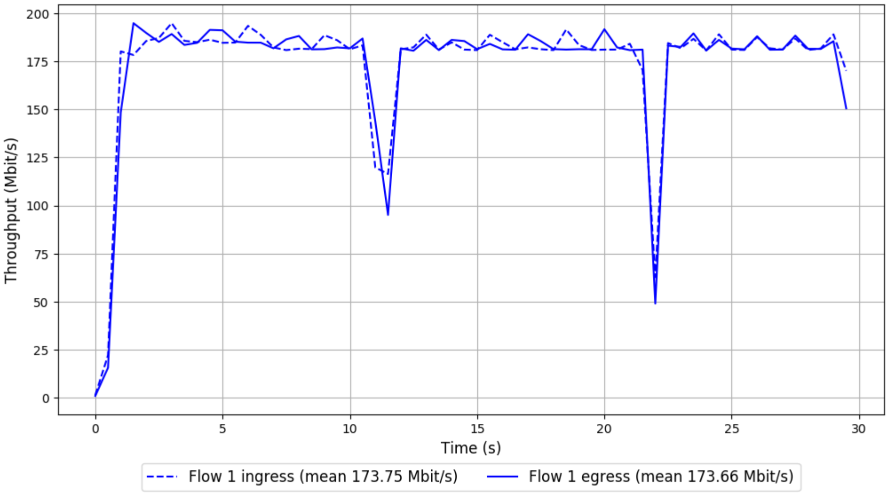


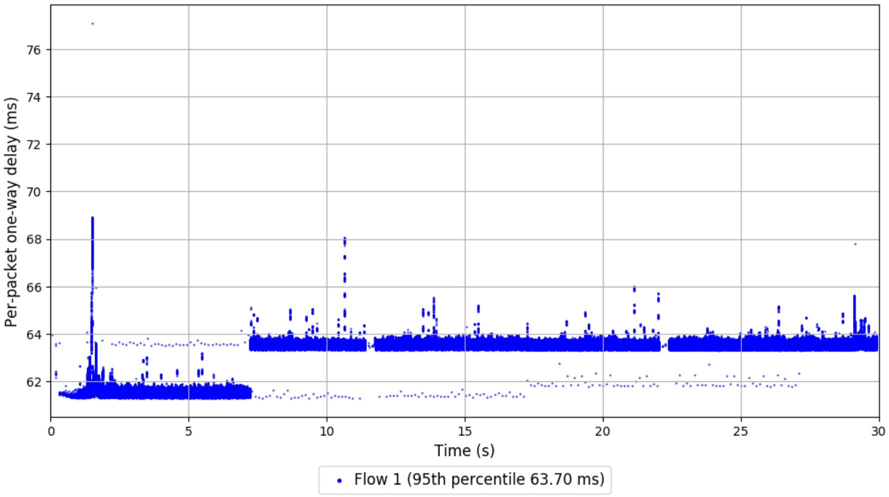
```
Run 10: Statistics of TCP BBR

Start at: 2017-09-18 10:15:01
End at: 2017-09-18 10:15:31

# Below is generated by plot.py at 2017-09-18 12:32:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.66 Mbit/s
95th percentile per-packet one-way delay: 63.701 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 173.66 Mbit/s
95th percentile per-packet one-way delay: 63.701 ms
Loss rate: 0.43%
```

Run 10: Report of TCP BBR — Data Link



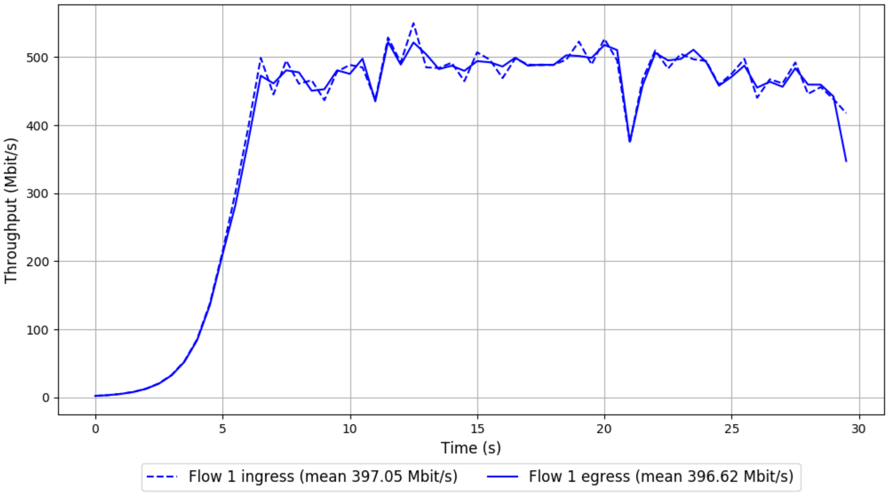


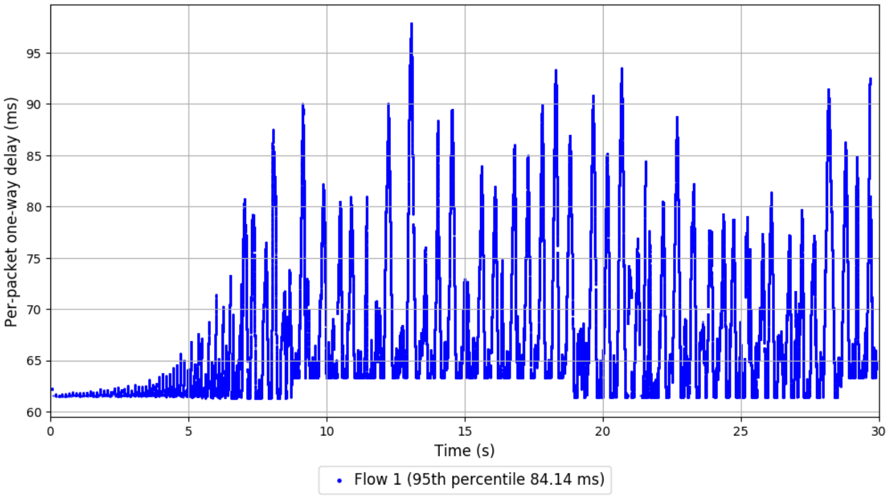
```
Run 1: Statistics of CalibratedKoho

Start at: 2017-09-18 08:20:30
End at: 2017-09-18 08:21:00

# Below is generated by plot.py at 2017-09-18 12:36:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 396.62 Mbit/s
95th percentile per-packet one-way delay: 84.138 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 396.62 Mbit/s
95th percentile per-packet one-way delay: 84.138 ms
Loss rate: 0.53%
```

Run 1: Report of CalibratedKoho — Data Link



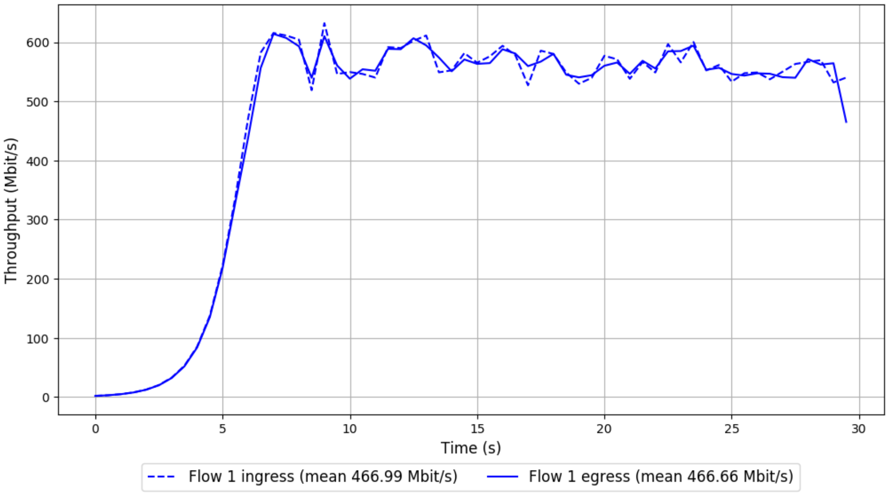


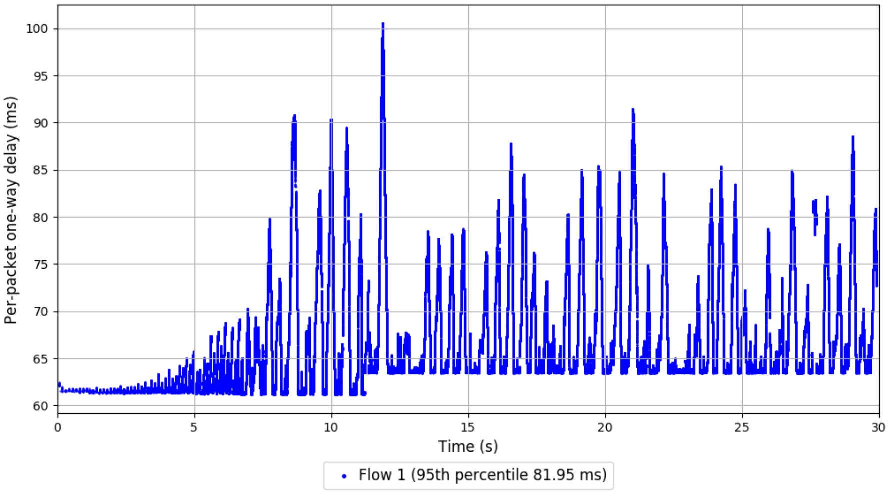
```
Run 2: Statistics of CalibratedKoho

Start at: 2017-09-18 08:31:57
End at: 2017-09-18 08:32:27

# Below is generated by plot.py at 2017-09-18 12:38:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 466.66 Mbit/s
95th percentile per-packet one-way delay: 81.954 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 466.66 Mbit/s
95th percentile per-packet one-way delay: 81.954 ms
Loss rate: 0.49%
```

Run 2: Report of CalibratedKoho — Data Link



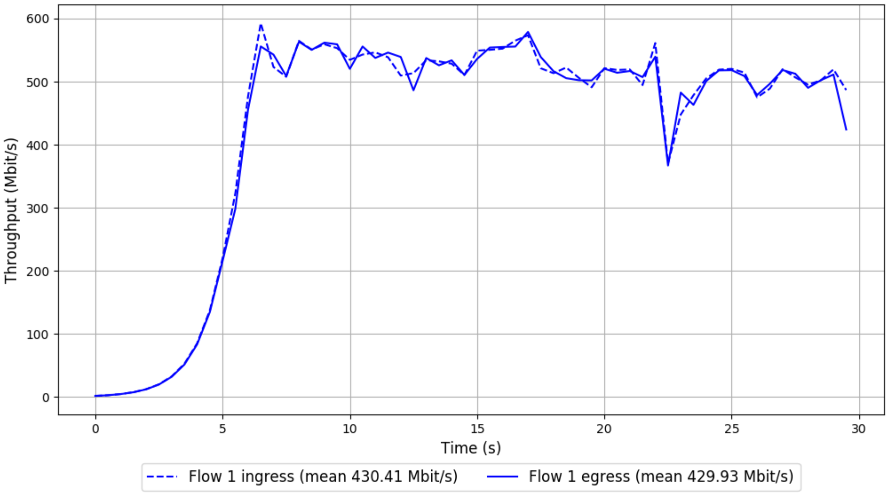


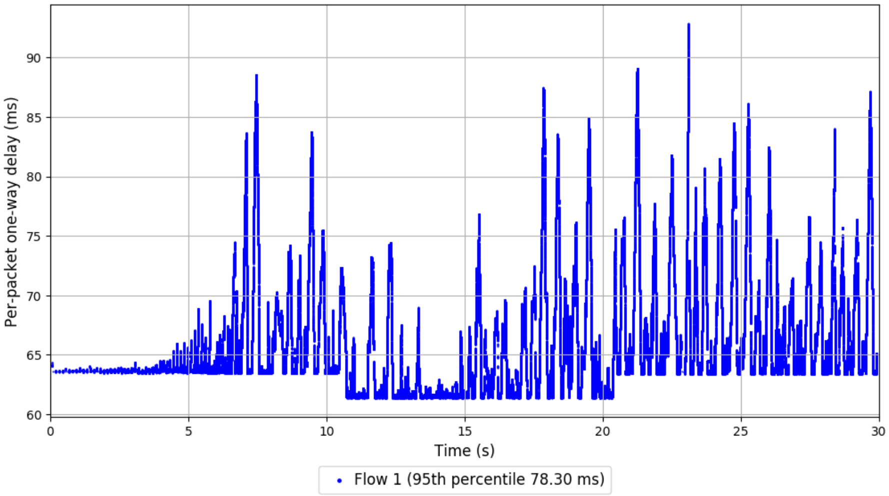
```
Run 3: Statistics of CalibratedKoho

Start at: 2017-09-18 08:43:28
End at: 2017-09-18 08:43:58

# Below is generated by plot.py at 2017-09-18 12:38:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 429.93 Mbit/s
95th percentile per-packet one-way delay: 78.303 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 429.93 Mbit/s
95th percentile per-packet one-way delay: 78.303 ms
Loss rate: 0.53%
```

Run 3: Report of CalibratedKoho — Data Link



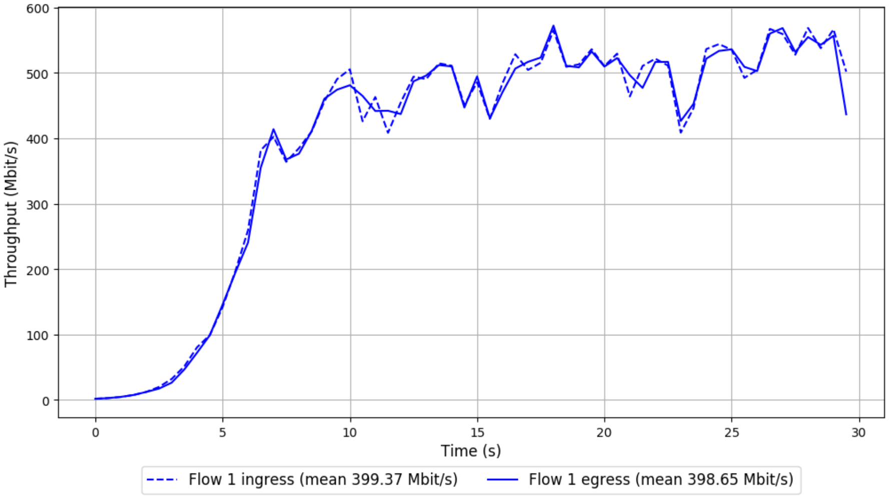


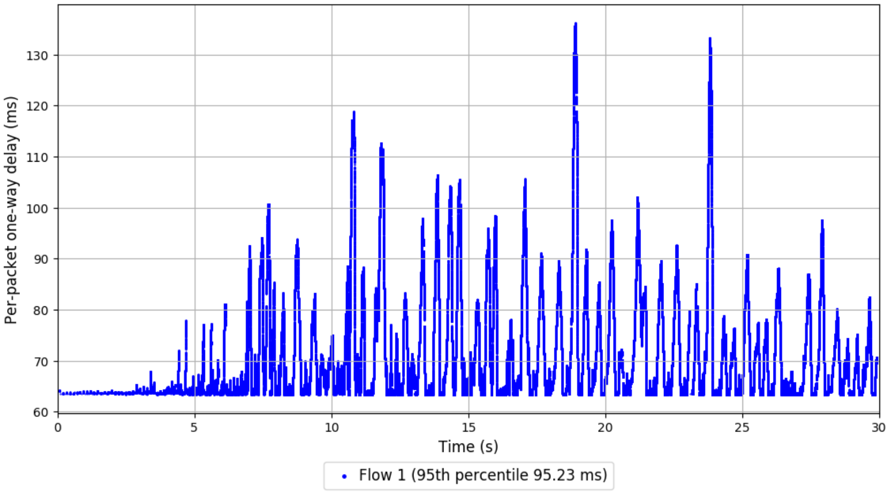
```
Run 4: Statistics of CalibratedKoho

Start at: 2017-09-18 08:54:58
End at: 2017-09-18 08:55:28

# Below is generated by plot.py at 2017-09-18 12:38:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 398.65 Mbit/s
95th percentile per-packet one-way delay: 95.229 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 398.65 Mbit/s
95th percentile per-packet one-way delay: 95.229 ms
Loss rate: 0.61%
```

Run 4: Report of CalibratedKoho — Data Link



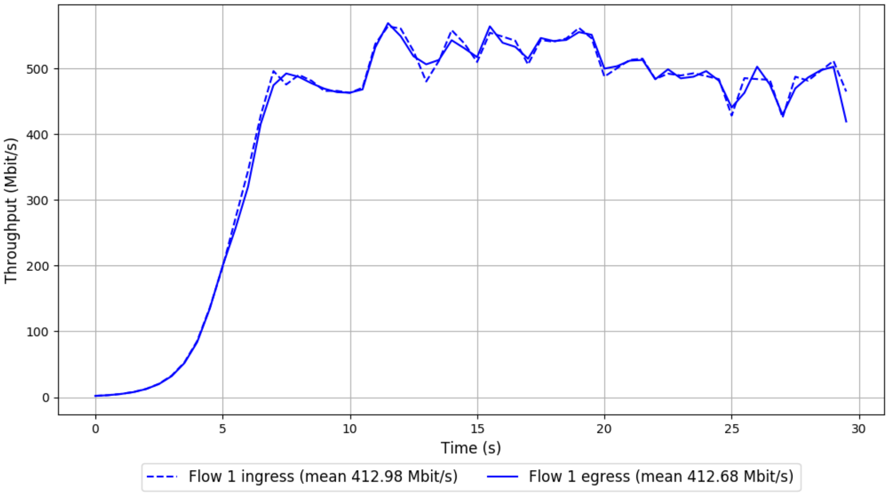


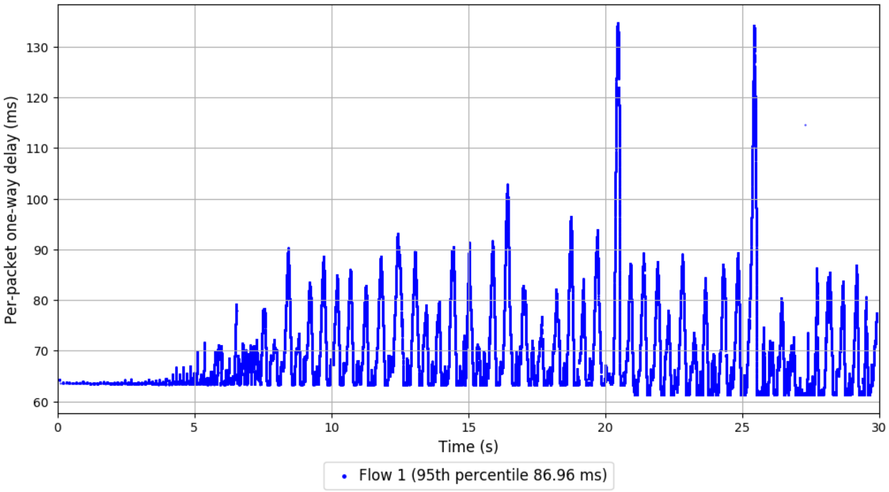
```
Run 5: Statistics of CalibratedKoho

Start at: 2017-09-18 09:06:17
End at: 2017-09-18 09:06:47

# Below is generated by plot.py at 2017-09-18 12:38:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 412.68 Mbit/s
95th percentile per-packet one-way delay: 86.962 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 412.68 Mbit/s
95th percentile per-packet one-way delay: 86.962 ms
Loss rate: 0.49%
```

Run 5: Report of CalibratedKoho — Data Link



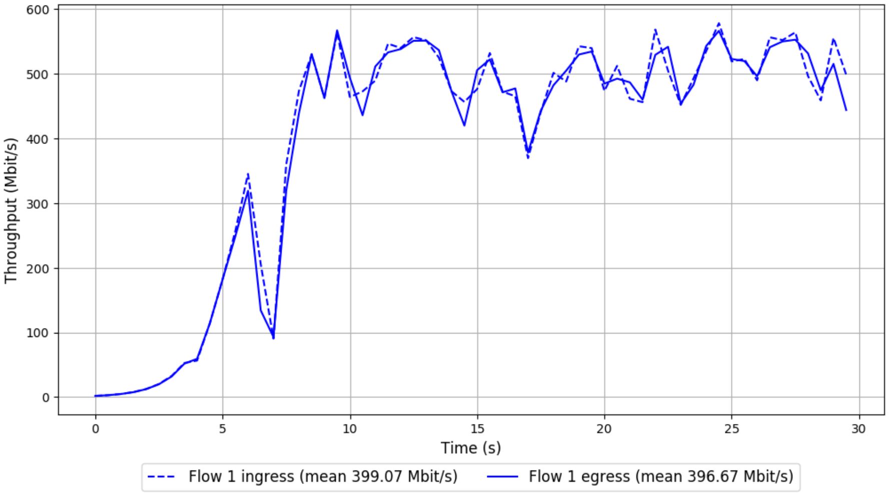


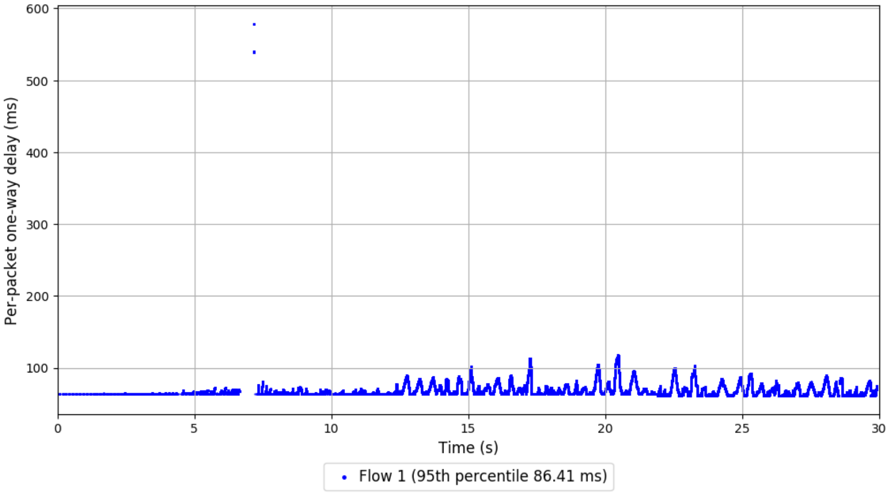
```
Run 6: Statistics of CalibratedKoho

Start at: 2017-09-18 09:17:46
End at: 2017-09-18 09:18:17

# Below is generated by plot.py at 2017-09-18 12:38:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 396.67 Mbit/s
95th percentile per-packet one-way delay: 86.405 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 396.67 Mbit/s
95th percentile per-packet one-way delay: 86.405 ms
Loss rate: 1.02%
```

Run 6: Report of CalibratedKoho — Data Link



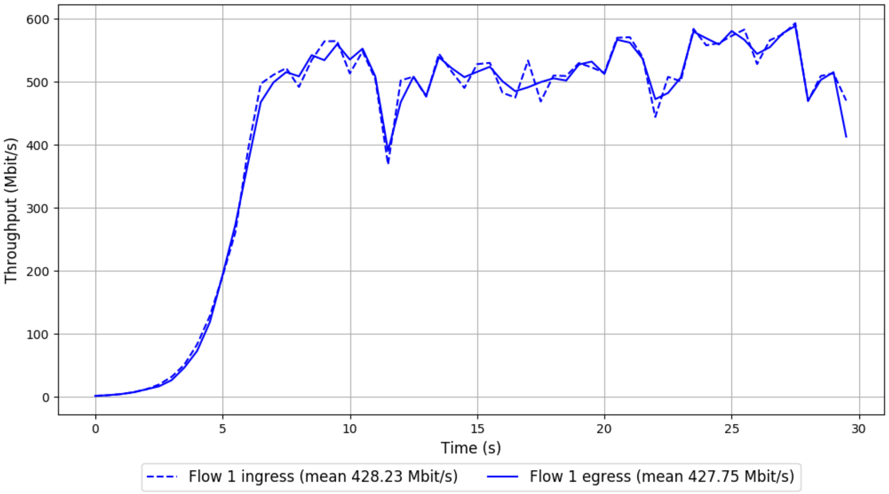


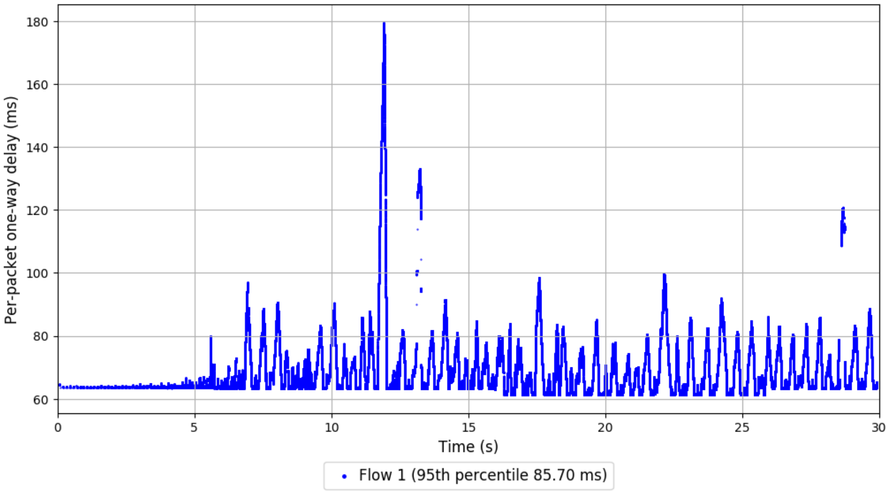
```
Run 7: Statistics of CalibratedKoho

Start at: 2017-09-18 09:29:22
End at: 2017-09-18 09:29:52

# Below is generated by plot.py at 2017-09-18 12:40:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 427.75 Mbit/s
95th percentile per-packet one-way delay: 85.699 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 427.75 Mbit/s
95th percentile per-packet one-way delay: 85.699 ms
Loss rate: 0.54%
```

Run 7: Report of CalibratedKoho — Data Link



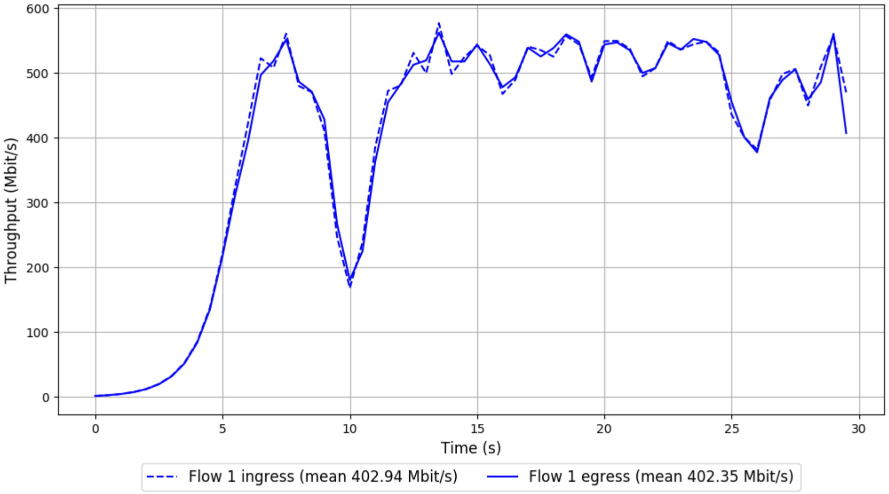


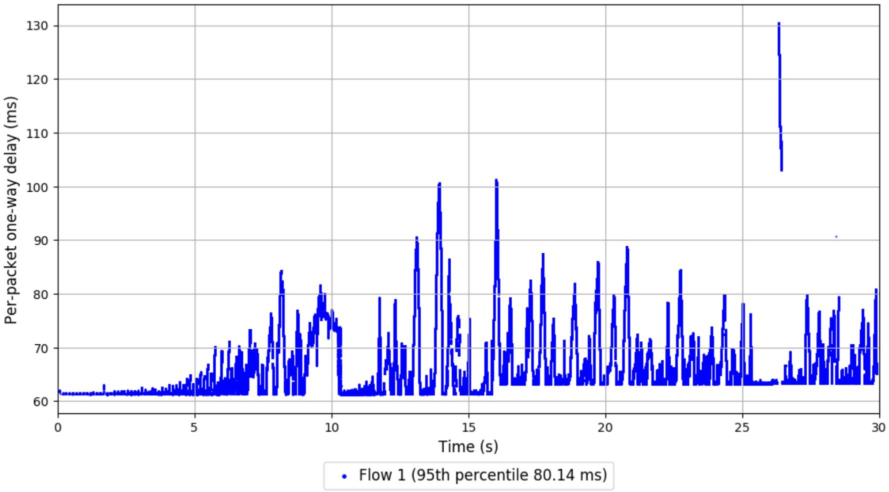
```
Run 8: Statistics of CalibratedKoho

Start at: 2017-09-18 09:40:52
End at: 2017-09-18 09:41:22

# Below is generated by plot.py at 2017-09-18 12:40:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 402.35 Mbit/s
95th percentile per-packet one-way delay: 80.136 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 402.35 Mbit/s
95th percentile per-packet one-way delay: 80.136 ms
Loss rate: 0.56%
```

Run 8: Report of CalibratedKoho — Data Link



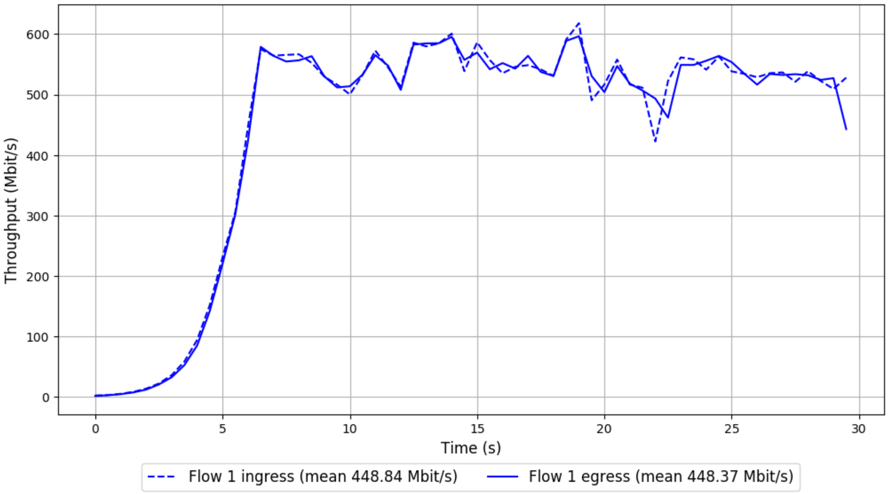


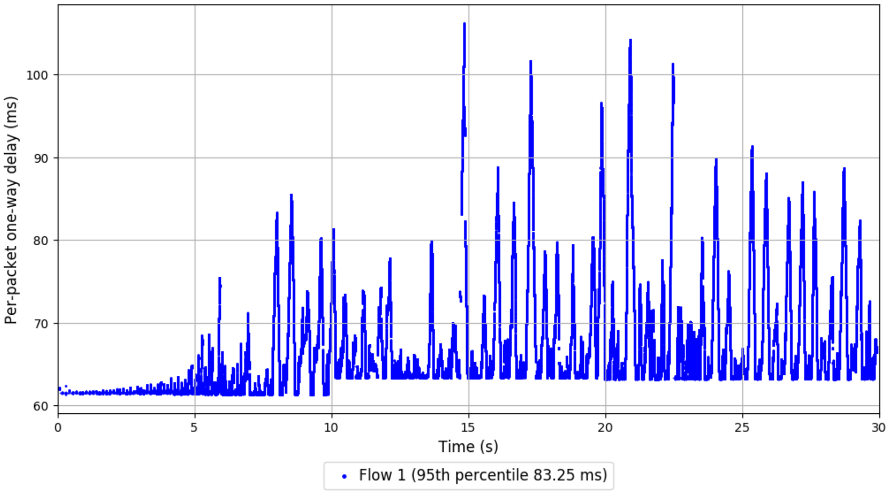
```
Run 9: Statistics of CalibratedKoho

Start at: 2017-09-18 09:52:28
End at: 2017-09-18 09:52:58

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 448.37 Mbit/s
95th percentile per-packet one-way delay: 83.248 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 448.37 Mbit/s
95th percentile per-packet one-way delay: 83.248 ms
Loss rate: 0.52%
```

Run 9: Report of CalibratedKoho — Data Link



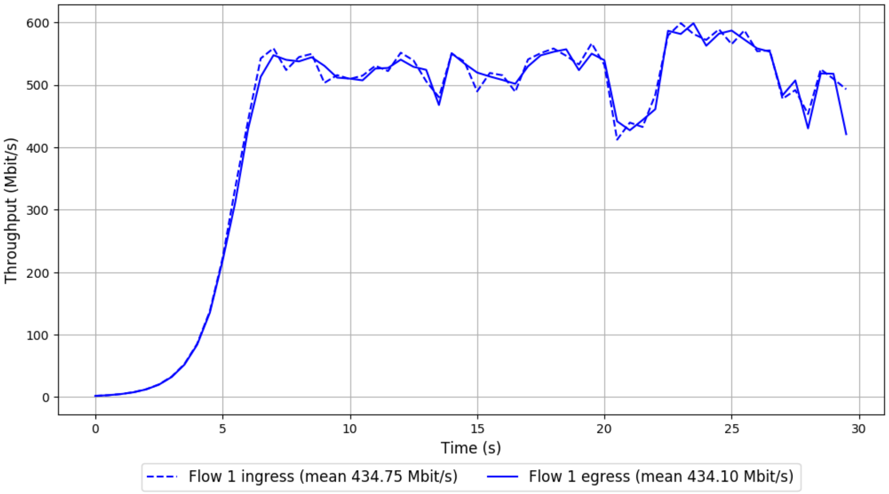


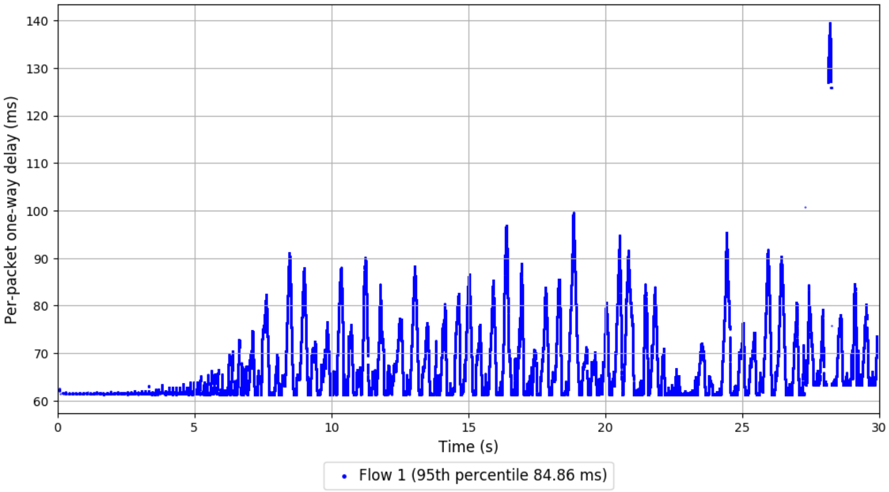
```
Run 10: Statistics of CalibratedKoho

Start at: 2017-09-18 10:04:07
End at: 2017-09-18 10:04:37

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 434.10 Mbit/s
95th percentile per-packet one-way delay: 84.862 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 434.10 Mbit/s
95th percentile per-packet one-way delay: 84.862 ms
Loss rate: 0.57%
```

Run 10: Report of CalibratedKoho — Data Link



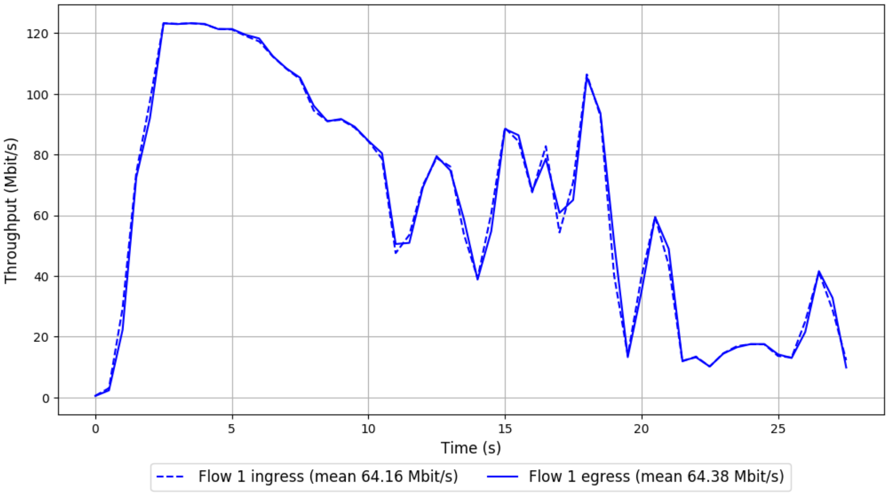


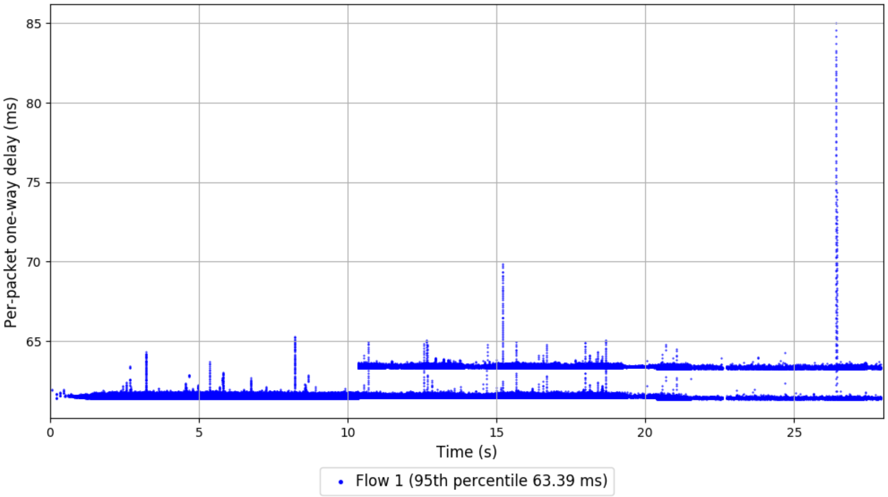
```
Run 1: Statistics of Copa

Start at: 2017-09-18 08:25:56
End at: 2017-09-18 08:26:26

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.38 Mbit/s
95th percentile per-packet one-way delay: 63.393 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 64.38 Mbit/s
95th percentile per-packet one-way delay: 63.393 ms
Loss rate: 0.09%
```

Run 1: Report of Copa — Data Link



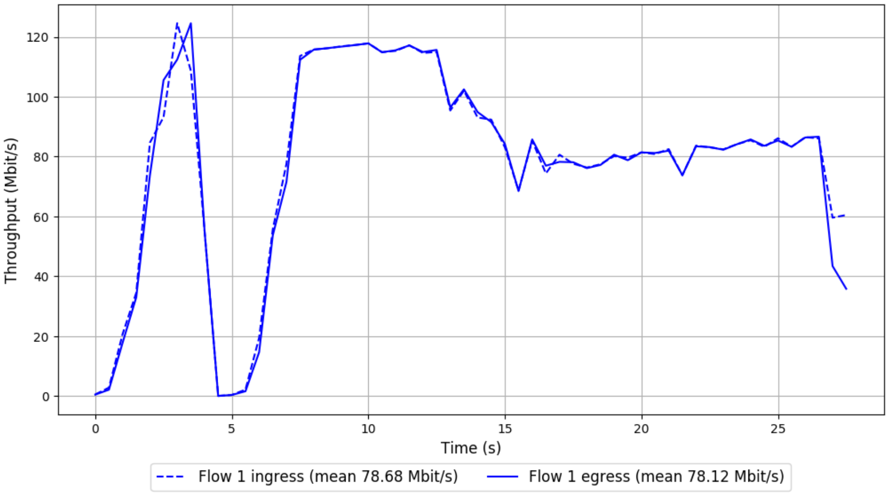


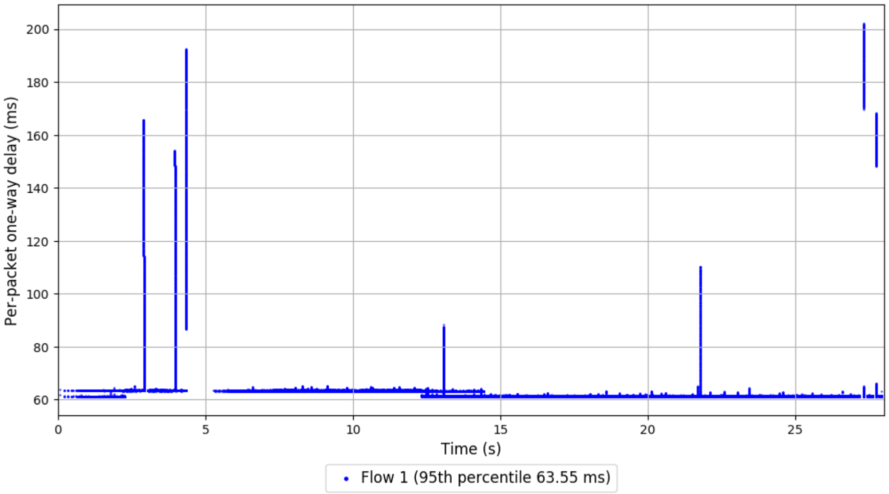
```
Run 2: Statistics of Copa

Start at: 2017-09-18 08:37:24
End at: 2017-09-18 08:37:54

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.12 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 78.12 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 1.16%
```

Run 2: Report of Copa — Data Link



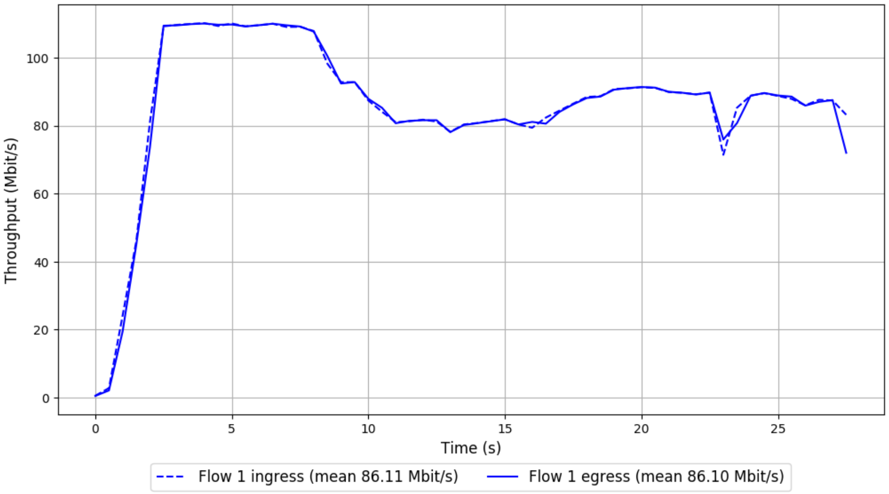


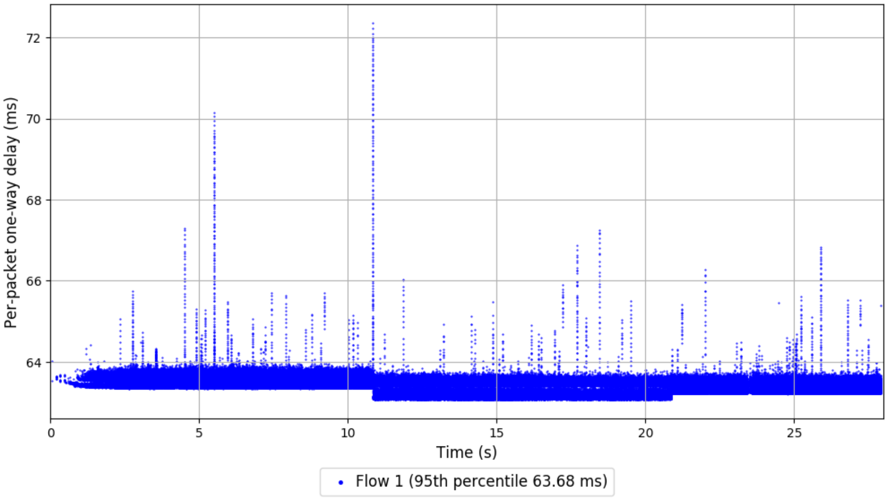
```
Run 3: Statistics of Copa

Start at: 2017-09-18 08:48:56
End at: 2017-09-18 08:49:26

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.10 Mbit/s
95th percentile per-packet one-way delay: 63.681 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 86.10 Mbit/s
95th percentile per-packet one-way delay: 63.681 ms
Loss rate: 0.46%
```

Run 3: Report of Copa — Data Link



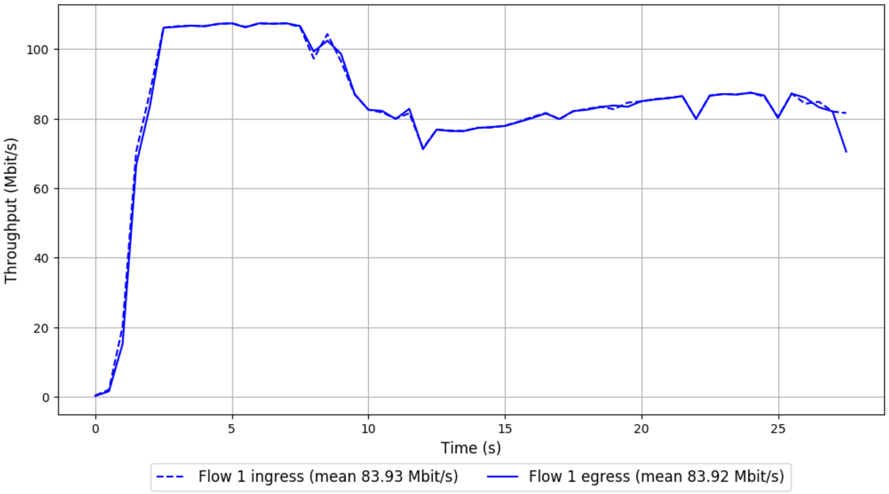


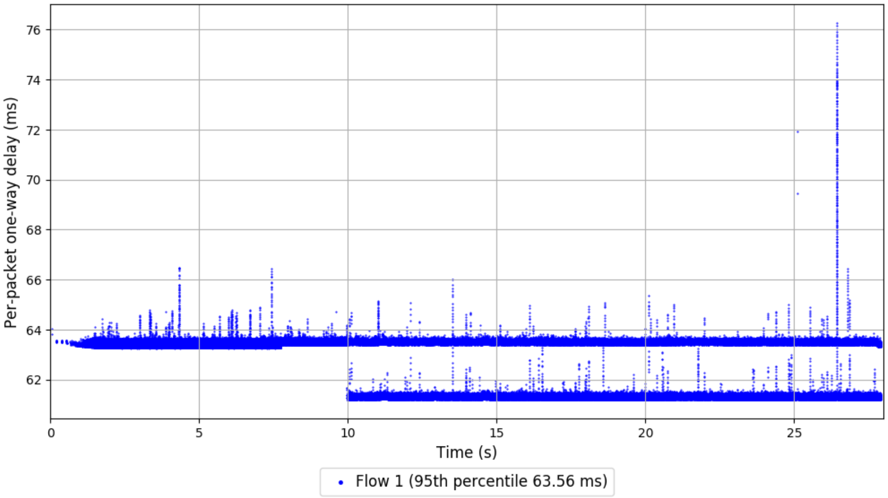
```
Run 4: Statistics of Copa

Start at: 2017-09-18 09:00:19
End at: 2017-09-18 09:00:49

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.92 Mbit/s
95th percentile per-packet one-way delay: 63.556 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 83.92 Mbit/s
95th percentile per-packet one-way delay: 63.556 ms
Loss rate: 0.47%
```

Run 4: Report of Copa — Data Link



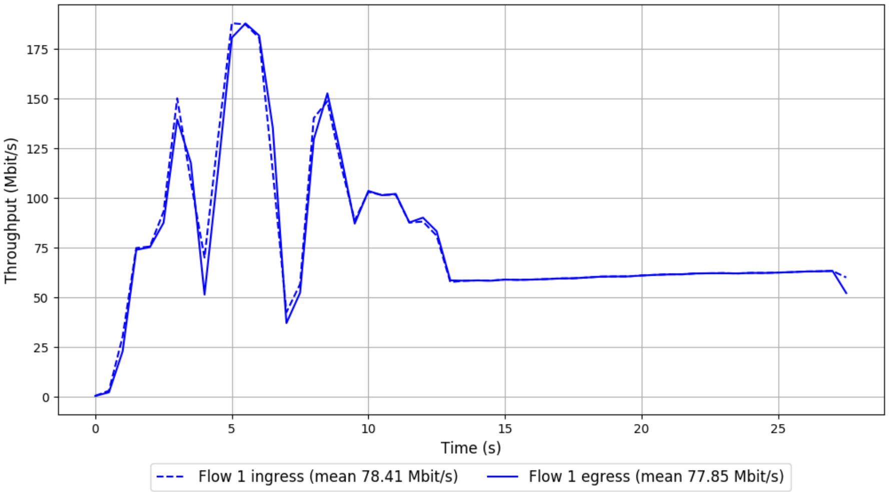


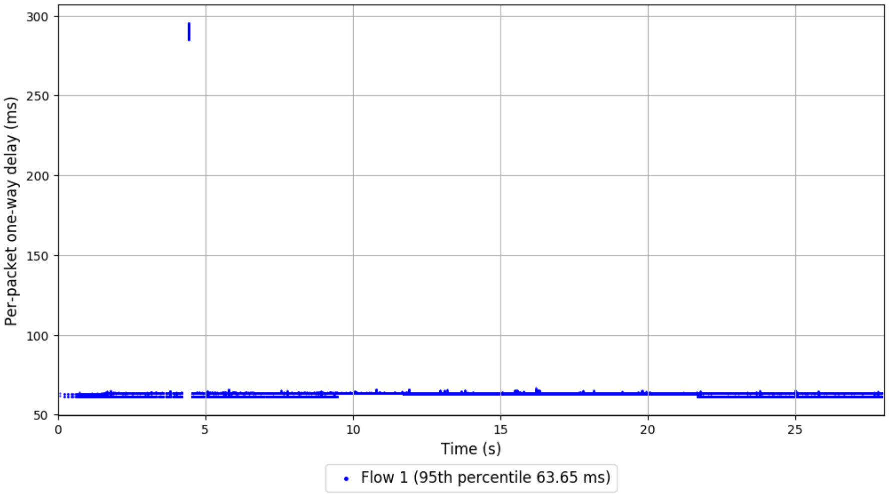
```
Run 5: Statistics of Copa

Start at: 2017-09-18 09:11:47
End at: 2017-09-18 09:12:17

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.85 Mbit/s
95th percentile per-packet one-way delay: 63.647 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 77.85 Mbit/s
95th percentile per-packet one-way delay: 63.647 ms
Loss rate: 1.15%
```

Run 5: Report of Copa — Data Link



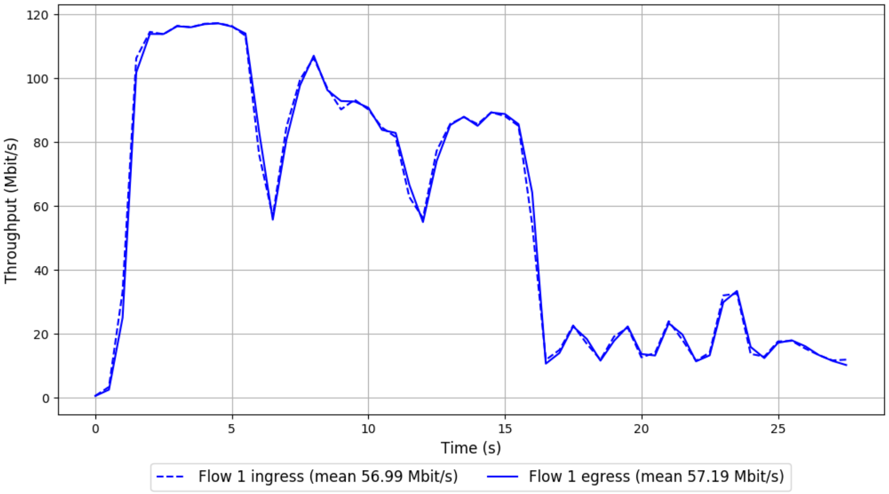


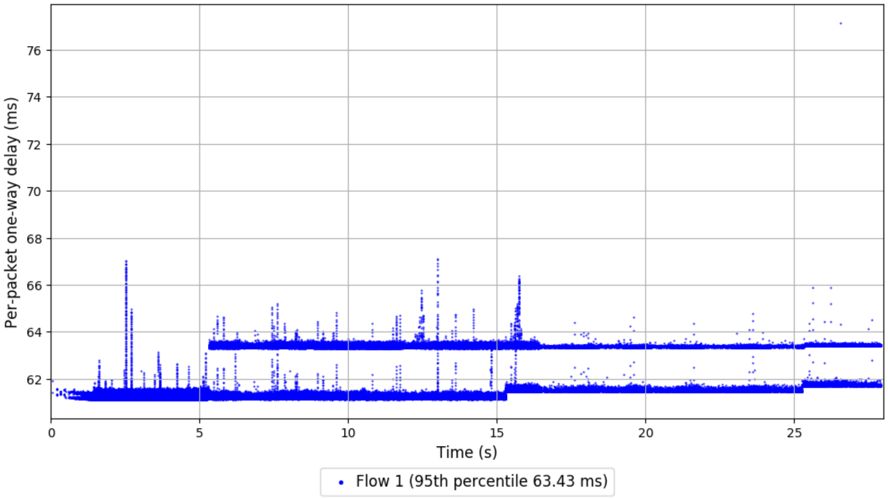
```
Run 6: Statistics of Copa

Start at: 2017-09-18 09:23:21
End at: 2017-09-18 09:23:51

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 57.19 Mbit/s
95th percentile per-packet one-way delay: 63.433 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 57.19 Mbit/s
95th percentile per-packet one-way delay: 63.433 ms
Loss rate: 0.10%
```

Run 6: Report of Copa — Data Link



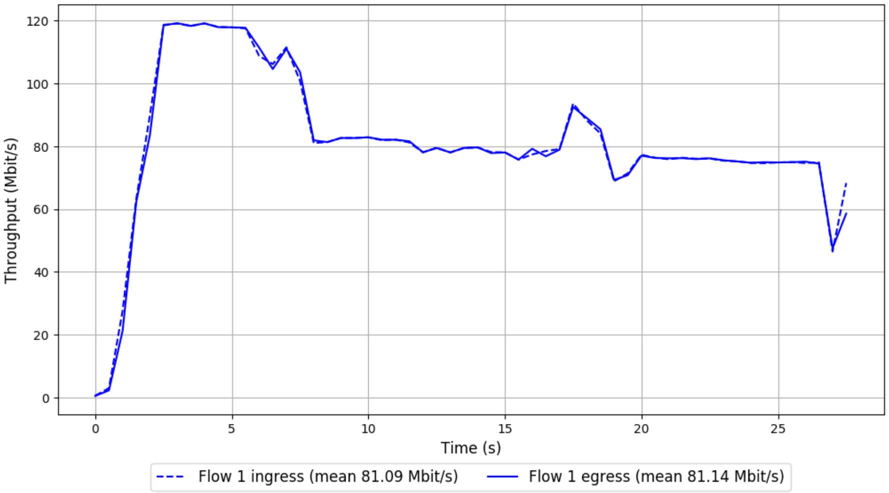


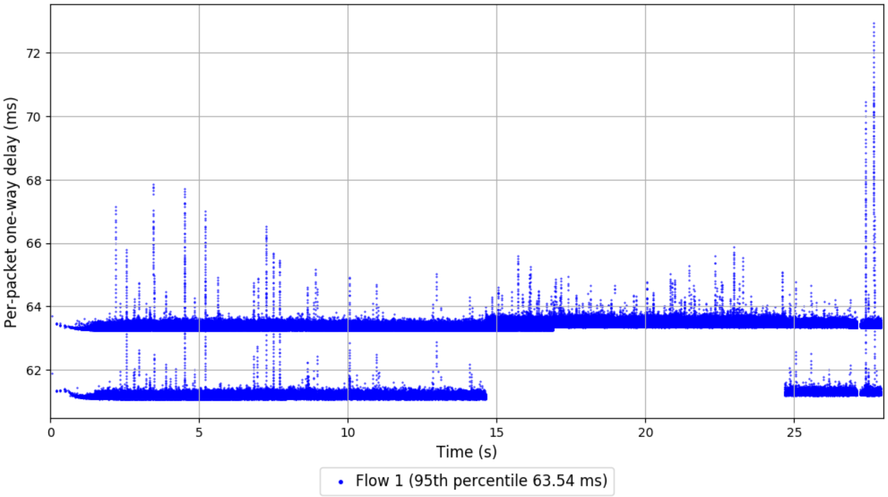
```
Run 7: Statistics of Copa

Start at: 2017-09-18 09:34:52
End at: 2017-09-18 09:35:22

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.14 Mbit/s
95th percentile per-packet one-way delay: 63.543 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 81.14 Mbit/s
95th percentile per-packet one-way delay: 63.543 ms
Loss rate: 0.39%
```

Run 7: Report of Copa — Data Link



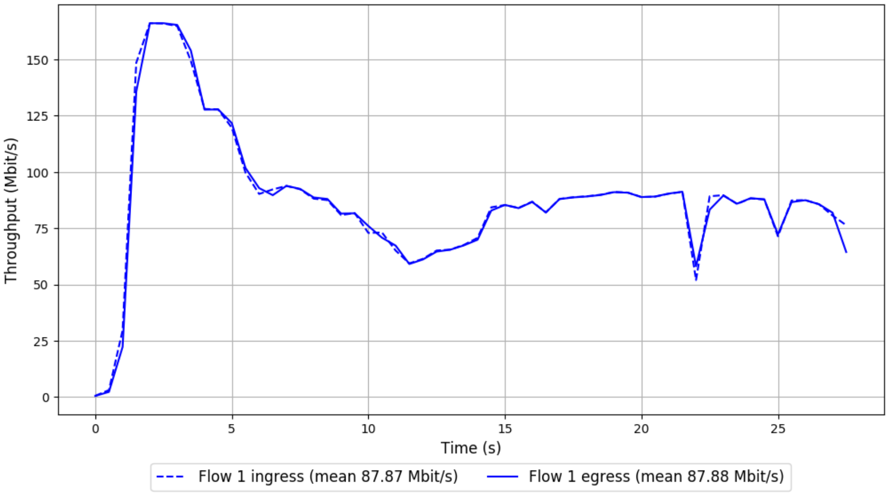


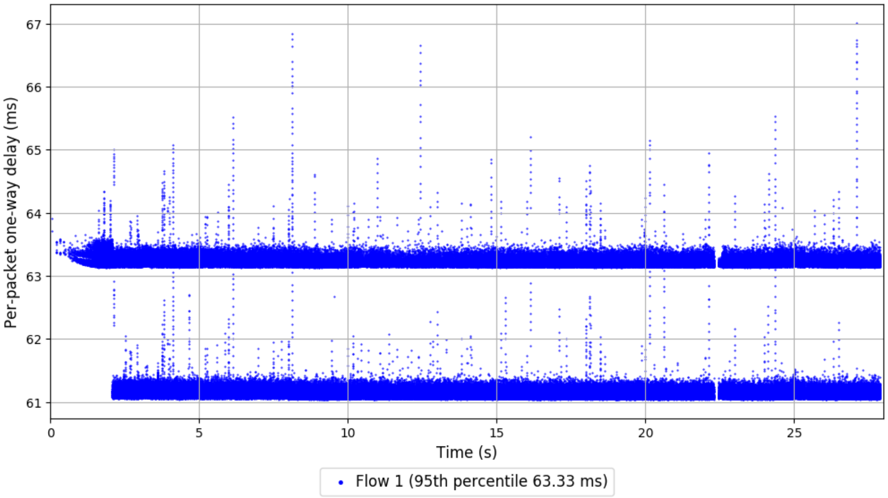
```
Run 8: Statistics of Copa

Start at: 2017-09-18 09:46:27
End at: 2017-09-18 09:46:57

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.88 Mbit/s
95th percentile per-packet one-way delay: 63.333 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 87.88 Mbit/s
95th percentile per-packet one-way delay: 63.333 ms
Loss rate: 0.44%
```

Run 8: Report of Copa — Data Link



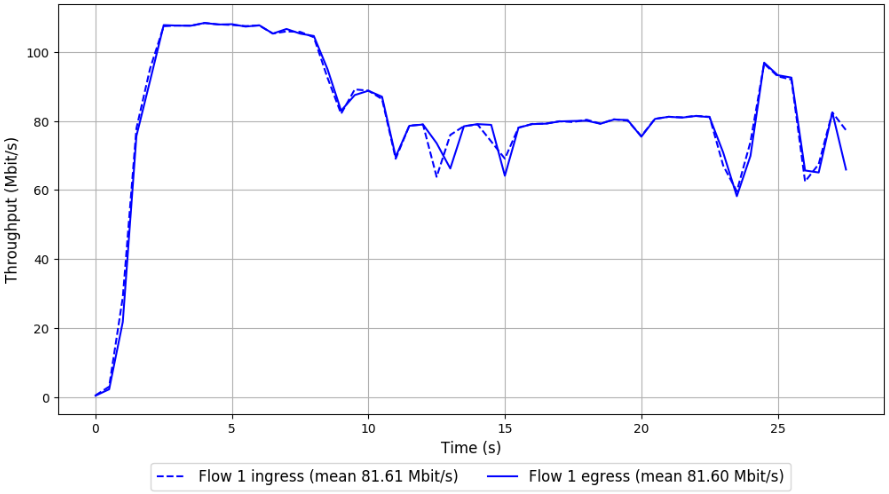


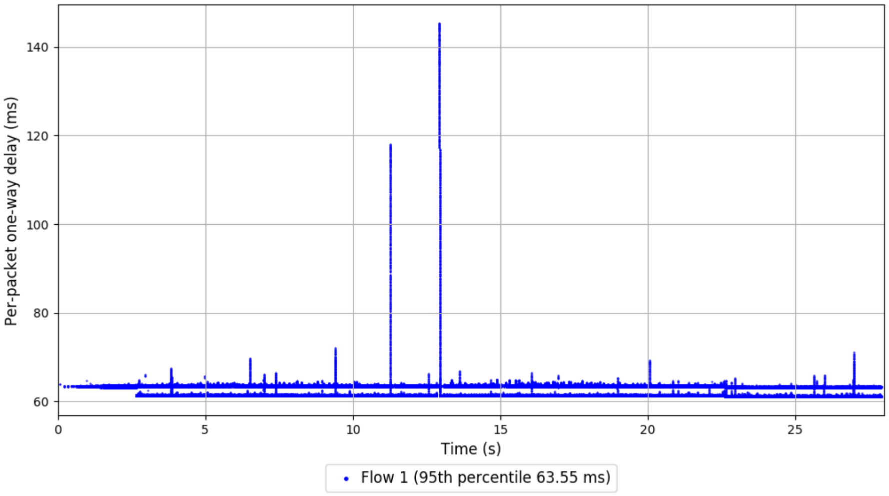
```
Run 9: Statistics of Copa

Start at: 2017-09-18 09:58:04
End at: 2017-09-18 09:58:34

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.60 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 81.60 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 0.47%
```

Run 9: Report of Copa — Data Link



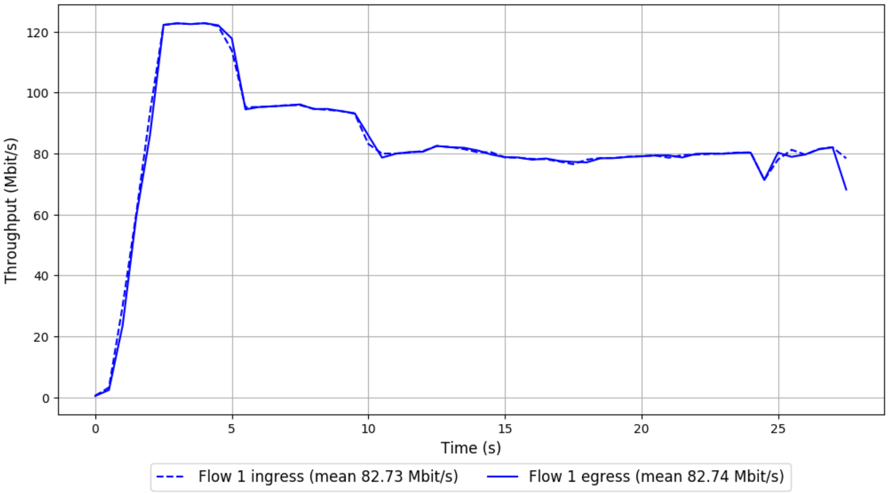


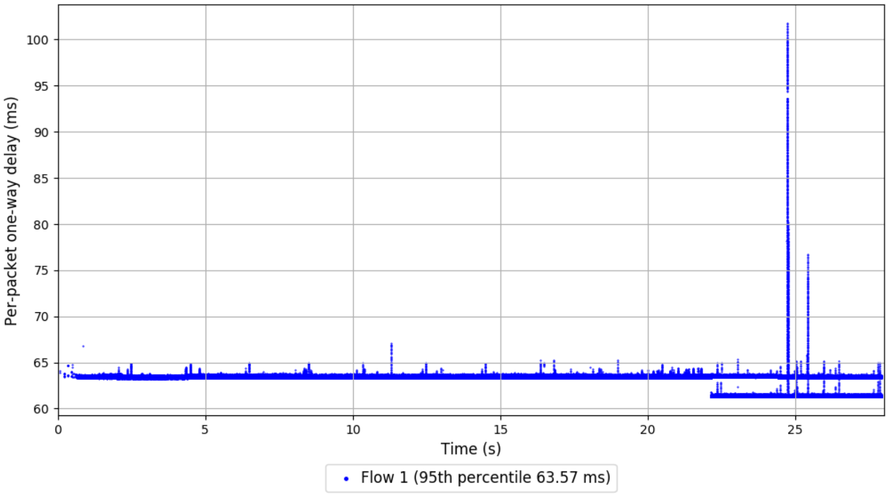
```
Run 10: Statistics of Copa

Start at: 2017-09-18 10:09:44
End at: 2017-09-18 10:10:14

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.74 Mbit/s
95th percentile per-packet one-way delay: 63.566 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 82.74 Mbit/s
95th percentile per-packet one-way delay: 63.566 ms
Loss rate: 0.44%
```

Run 10: Report of Copa — Data Link



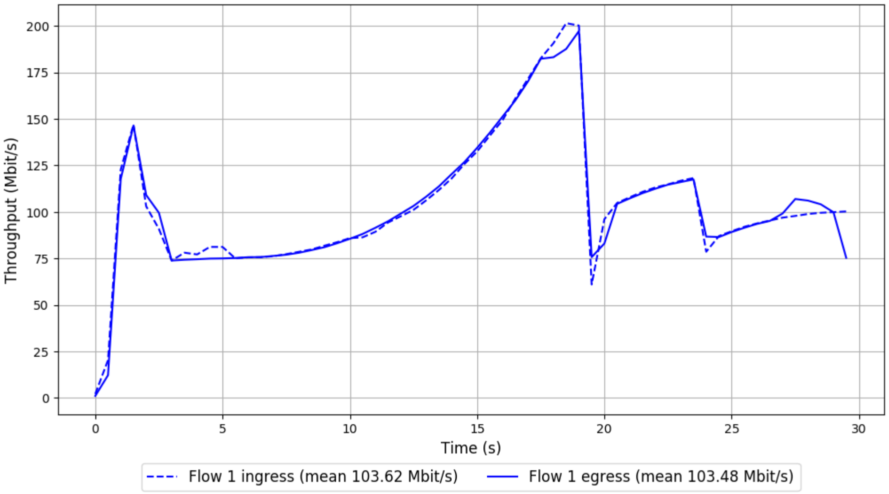


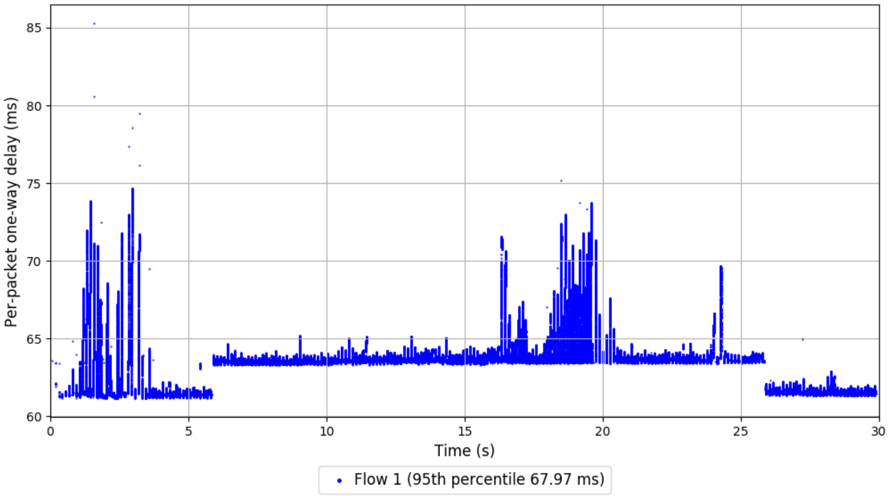
```
Run 1: Statistics of TCP Cubic

Start at: 2017-09-18 08:24:22
End at: 2017-09-18 08:24:53

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 103.48 Mbit/s
95th percentile per-packet one-way delay: 67.973 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 103.48 Mbit/s
95th percentile per-packet one-way delay: 67.973 ms
Loss rate: 0.41%
```

Run 1: Report of TCP Cubic — Data Link



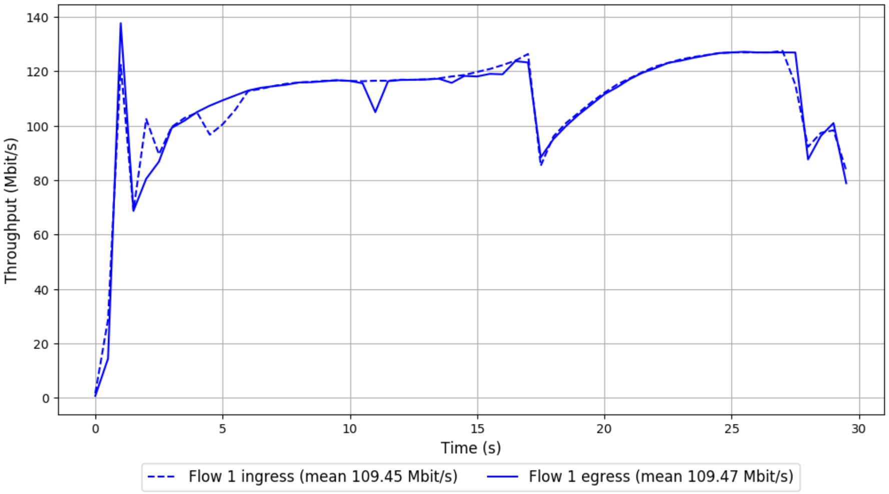


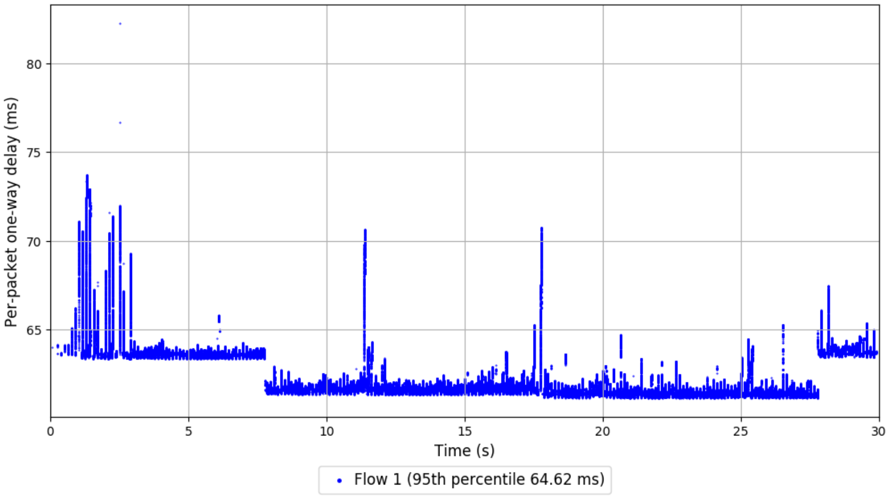
```
Run 2: Statistics of TCP Cubic

Start at: 2017-09-18 08:35:51
End at: 2017-09-18 08:36:21

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 109.47 Mbit/s
95th percentile per-packet one-way delay: 64.617 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 109.47 Mbit/s
95th percentile per-packet one-way delay: 64.617 ms
Loss rate: 0.41%
```

Run 2: Report of TCP Cubic — Data Link



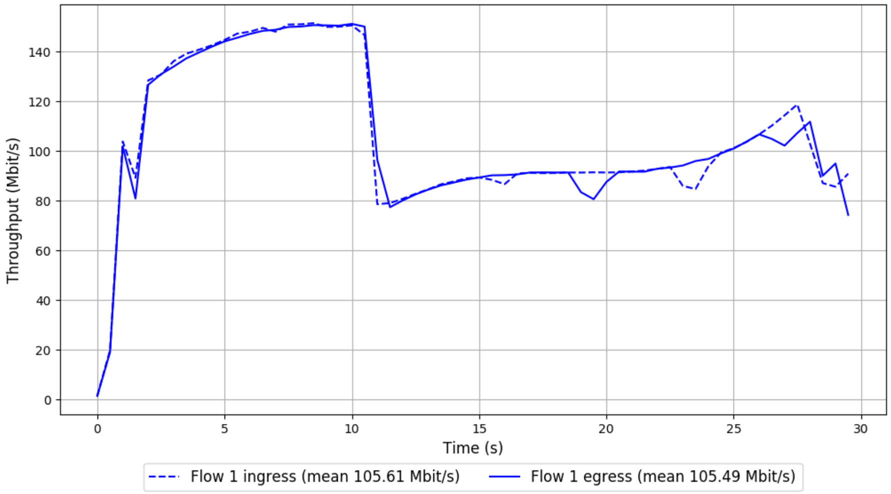


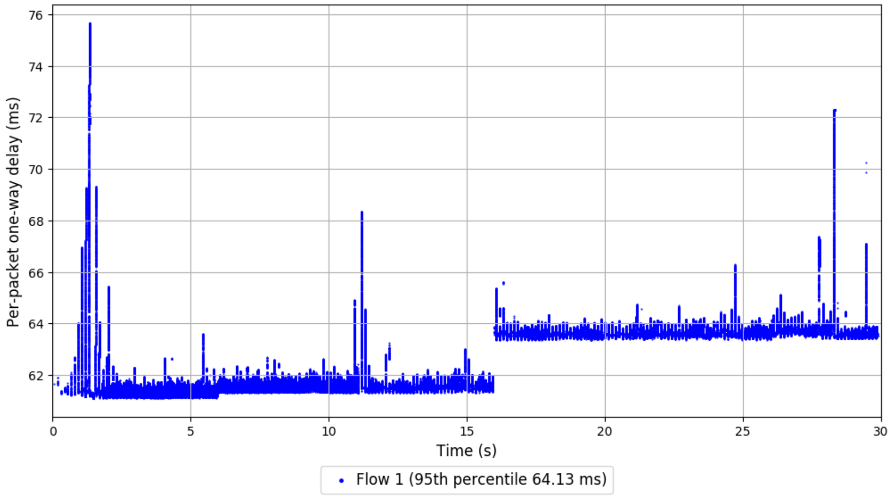
```
Run 3: Statistics of TCP Cubic

Start at: 2017-09-18 08:47:22
End at: 2017-09-18 08:47:52

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 105.49 Mbit/s
95th percentile per-packet one-way delay: 64.134 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 105.49 Mbit/s
95th percentile per-packet one-way delay: 64.134 ms
Loss rate: 0.40%
```

Run 3: Report of TCP Cubic — Data Link



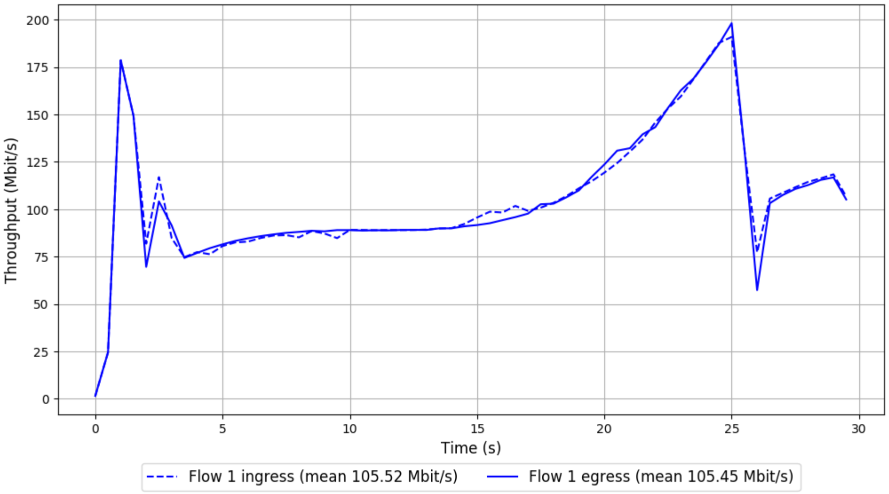


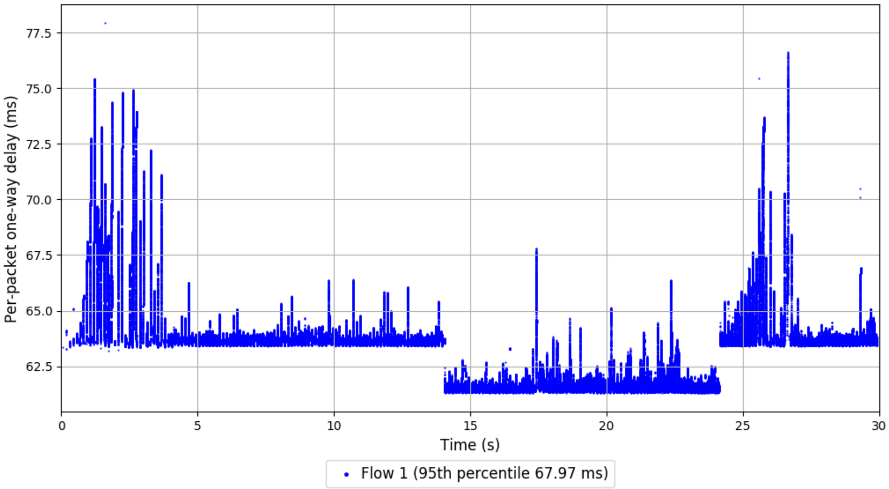
```
Run 4: Statistics of TCP Cubic

Start at: 2017-09-18 08:58:44
End at: 2017-09-18 08:59:14

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 105.45 Mbit/s
95th percentile per-packet one-way delay: 67.972 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 105.45 Mbit/s
95th percentile per-packet one-way delay: 67.972 ms
Loss rate: 0.48%
```

Run 4: Report of TCP Cubic — Data Link



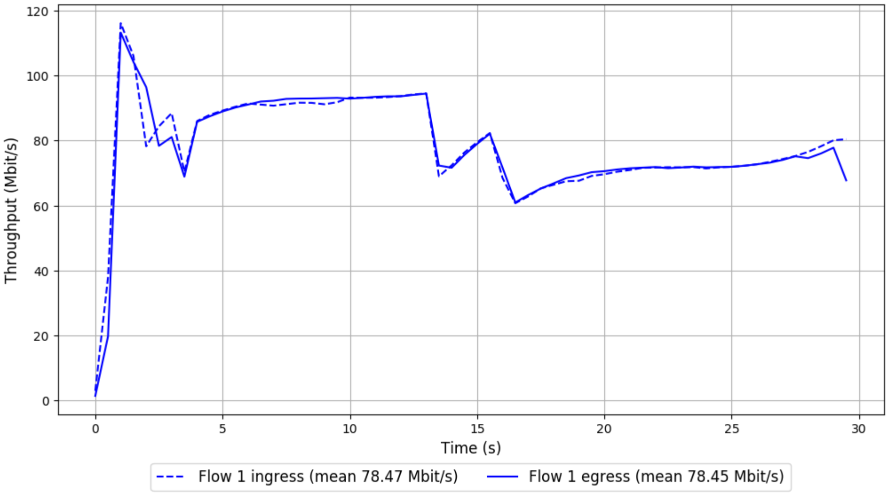


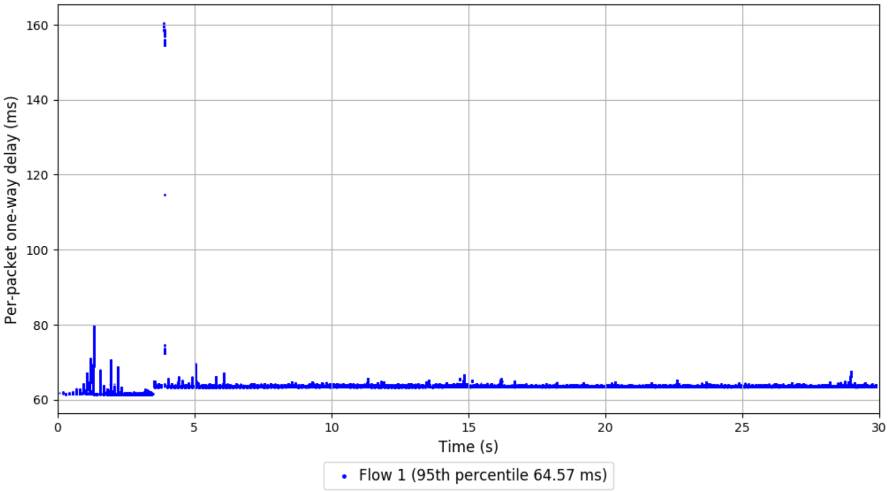
```
Run 5: Statistics of TCP Cubic

Start at: 2017-09-18 09:10:15
End at: 2017-09-18 09:10:45

# Below is generated by plot.py at 2017-09-18 12:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.45 Mbit/s
95th percentile per-packet one-way delay: 64.568 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 78.45 Mbit/s
95th percentile per-packet one-way delay: 64.568 ms
Loss rate: 0.44%
```

Run 5: Report of TCP Cubic — Data Link



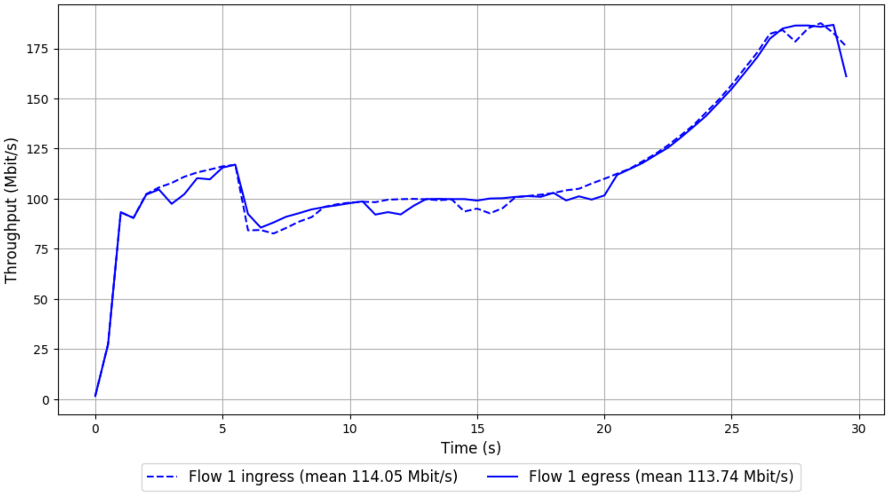


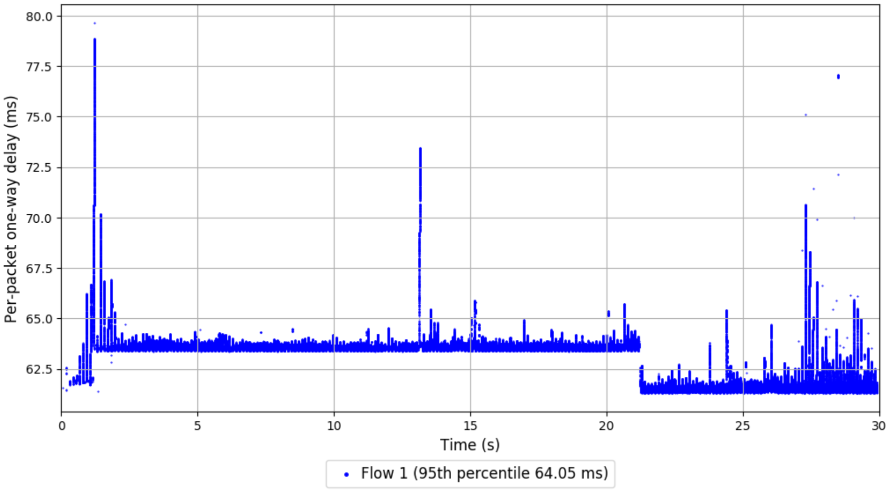
```
Run 6: Statistics of TCP Cubic

Start at: 2017-09-18 09:21:47
End at: 2017-09-18 09:22:17

# Below is generated by plot.py at 2017-09-18 12:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 113.74 Mbit/s
95th percentile per-packet one-way delay: 64.047 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 113.74 Mbit/s
95th percentile per-packet one-way delay: 64.047 ms
Loss rate: 0.68%
```

Run 6: Report of TCP Cubic — Data Link



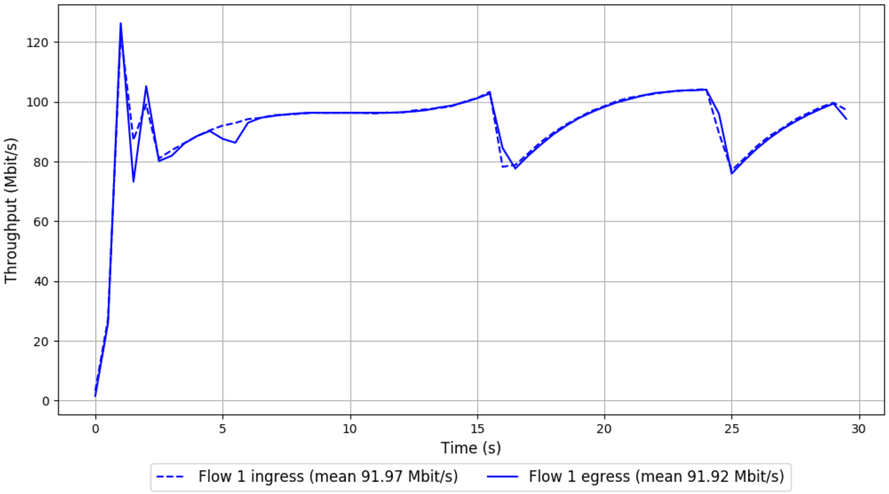


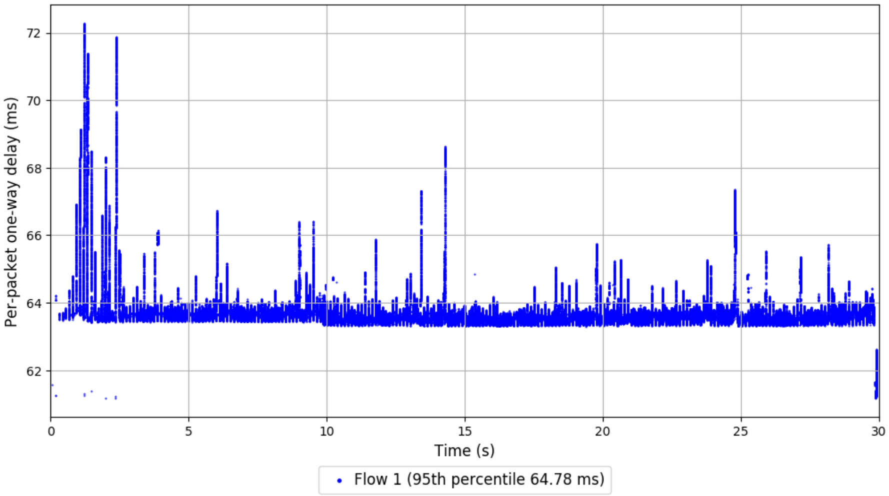
```
Run 7: Statistics of TCP Cubic

Start at: 2017-09-18 09:33:19
End at: 2017-09-18 09:33:49

# Below is generated by plot.py at 2017-09-18 12:44:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.92 Mbit/s
95th percentile per-packet one-way delay: 64.776 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 91.92 Mbit/s
95th percentile per-packet one-way delay: 64.776 ms
Loss rate: 0.46%
```

Run 7: Report of TCP Cubic — Data Link



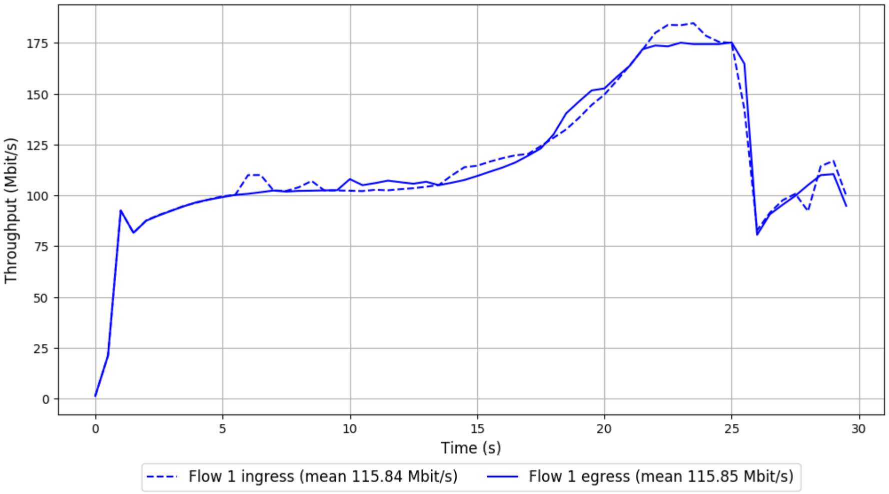


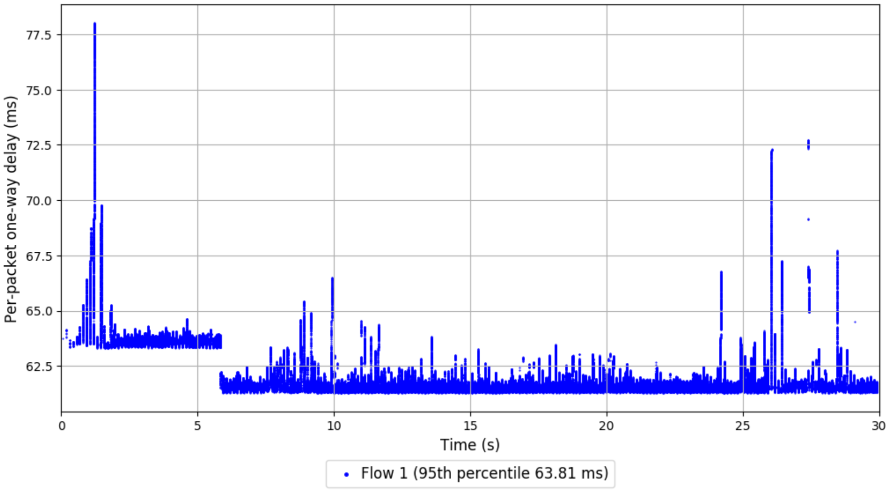
```
Run 8: Statistics of TCP Cubic

Start at: 2017-09-18 09:44:53
End at: 2017-09-18 09:45:23

# Below is generated by plot.py at 2017-09-18 12:45:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 115.85 Mbit/s
95th percentile per-packet one-way delay: 63.813 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 115.85 Mbit/s
95th percentile per-packet one-way delay: 63.813 ms
Loss rate: 0.41%
```

Run 8: Report of TCP Cubic — Data Link



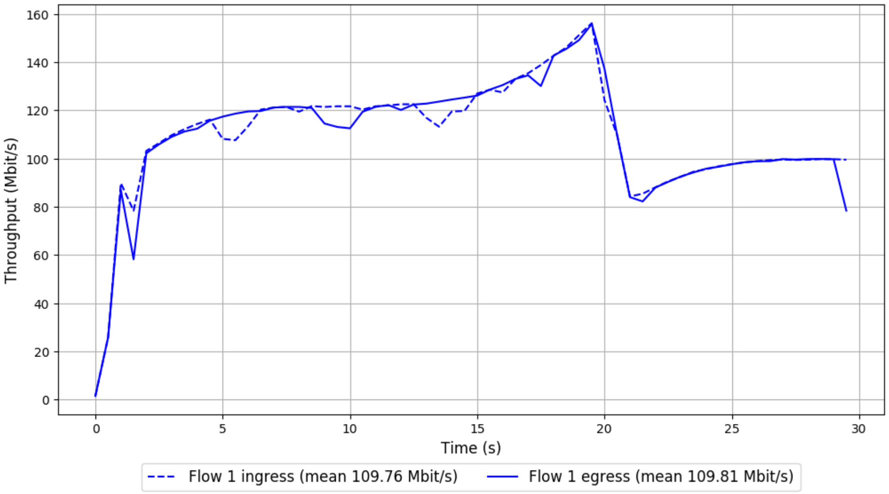


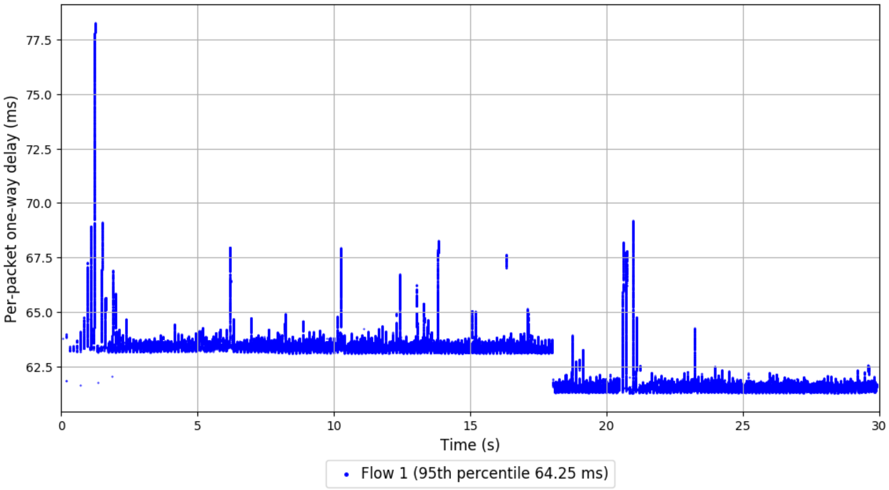
```
Run 9: Statistics of TCP Cubic

Start at: 2017-09-18 09:56:30
End at: 2017-09-18 09:57:01

# Below is generated by plot.py at 2017-09-18 12:45:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 109.81 Mbit/s
95th percentile per-packet one-way delay: 64.245 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 109.81 Mbit/s
95th percentile per-packet one-way delay: 64.245 ms
Loss rate: 0.38%
```

Run 9: Report of TCP Cubic — Data Link



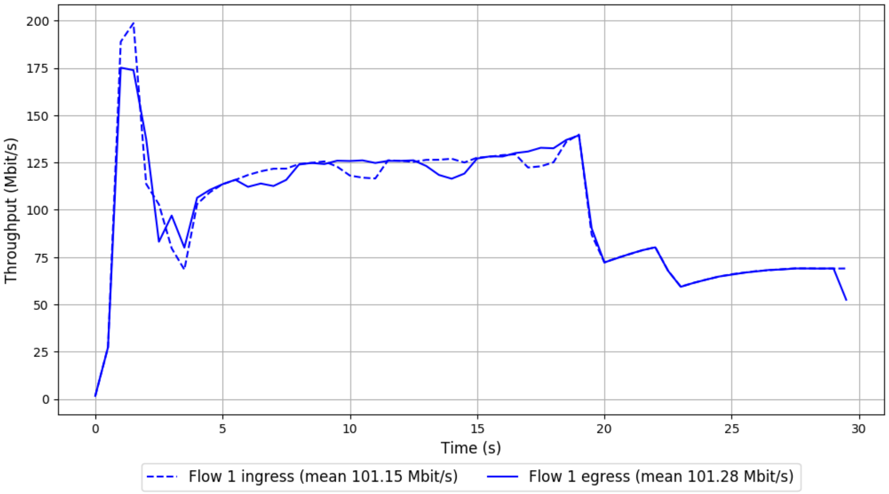


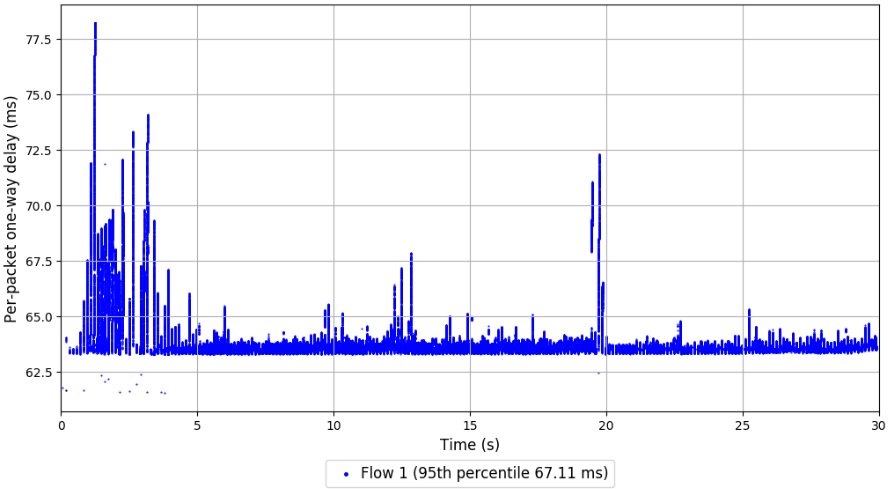
```
Run 10: Statistics of TCP Cubic

Start at: 2017-09-18 10:07:59
End at: 2017-09-18 10:08:29

# Below is generated by plot.py at 2017-09-18 12:45:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 101.28 Mbit/s
95th percentile per-packet one-way delay: 67.107 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 101.28 Mbit/s
95th percentile per-packet one-way delay: 67.107 ms
Loss rate: 0.29%
```

Run 10: Report of TCP Cubic — Data Link



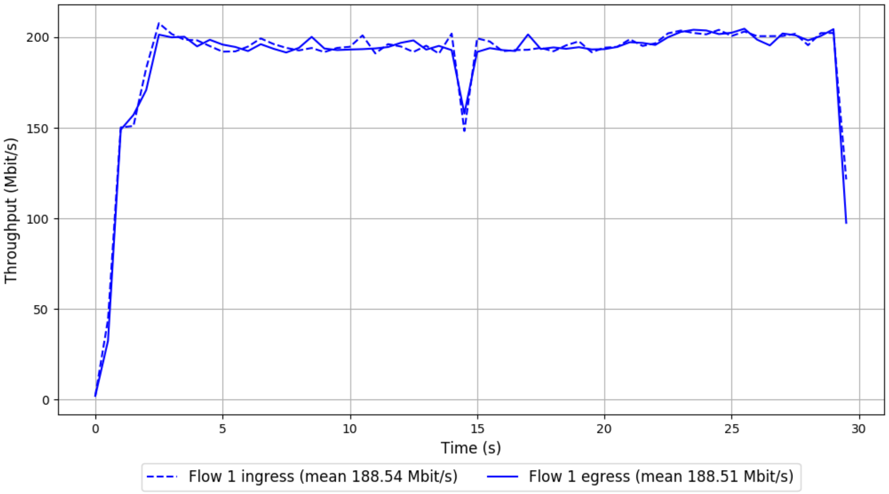


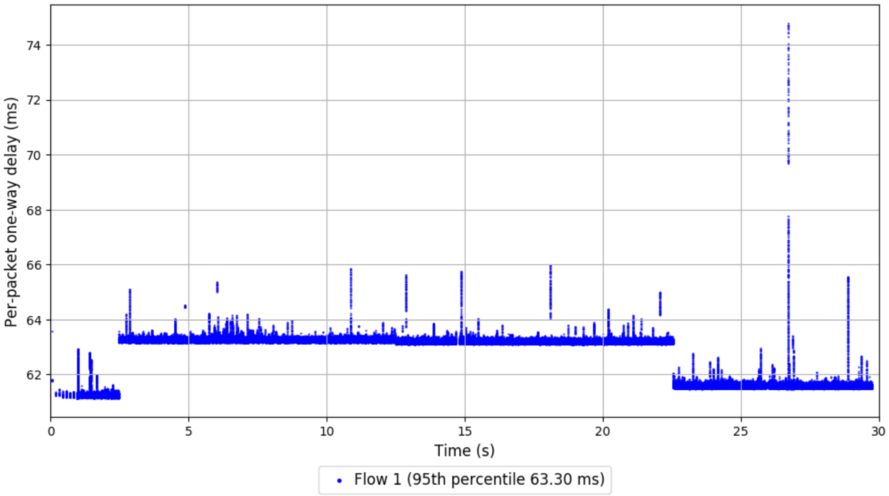
```
Run 1: Statistics of Indigo

Start at: 2017-09-18 08:25:06
End at: 2017-09-18 08:25:36

# Below is generated by plot.py at 2017-09-18 12:47:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.51 Mbit/s
95th percentile per-packet one-way delay: 63.295 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 188.51 Mbit/s
95th percentile per-packet one-way delay: 63.295 ms
Loss rate: 0.45%
```

Run 1: Report of Indigo — Data Link



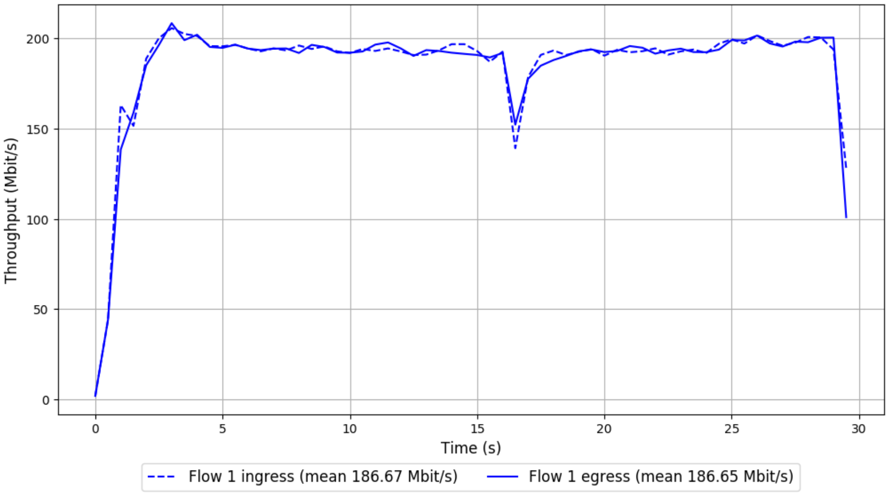


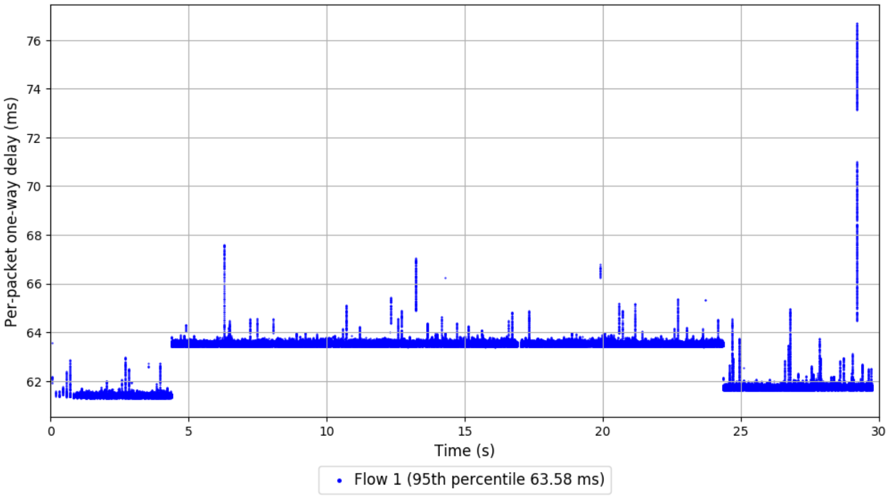
```
Run 2: Statistics of Indigo

Start at: 2017-09-18 08:36:34
End at: 2017-09-18 08:37:04

# Below is generated by plot.py at 2017-09-18 12:47:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.65 Mbit/s
95th percentile per-packet one-way delay: 63.582 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 186.65 Mbit/s
95th percentile per-packet one-way delay: 63.582 ms
Loss rate: 0.44%
```

Run 2: Report of Indigo — Data Link



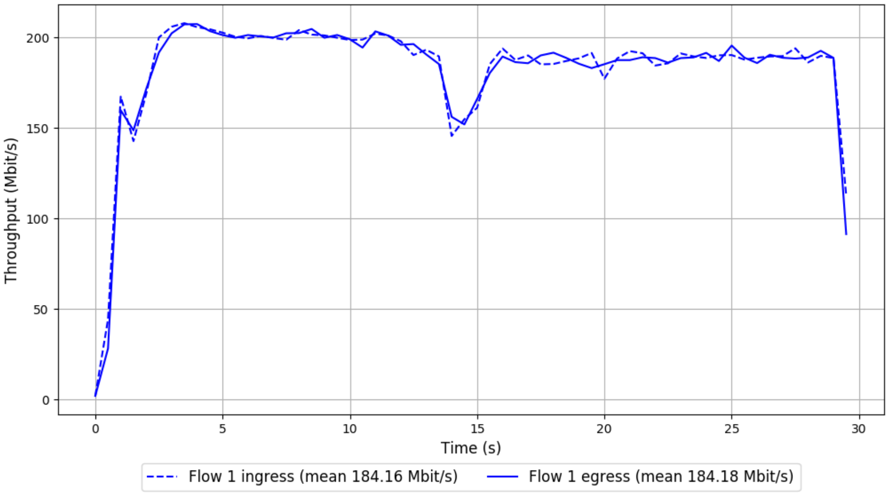


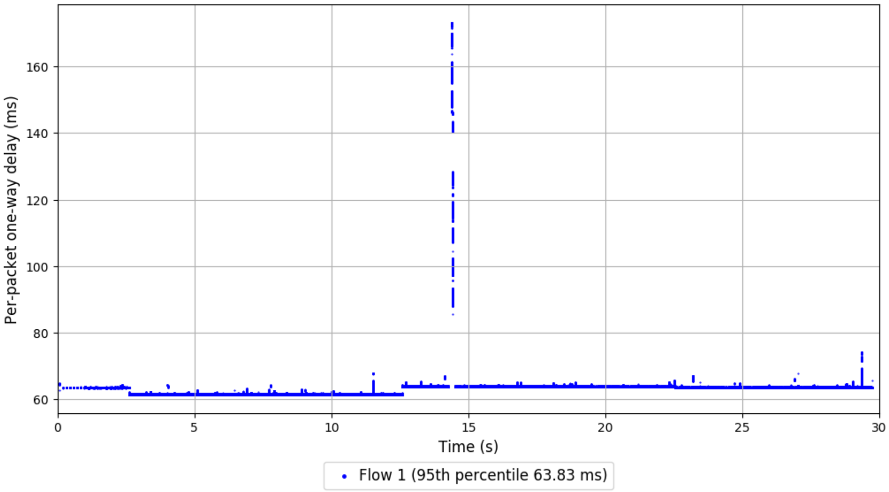
```
Run 3: Statistics of Indigo

Start at: 2017-09-18 08:48:06
End at: 2017-09-18 08:48:36

# Below is generated by plot.py at 2017-09-18 12:47:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 184.18 Mbit/s
95th percentile per-packet one-way delay: 63.833 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 184.18 Mbit/s
95th percentile per-packet one-way delay: 63.833 ms
Loss rate: 0.41%
```

Run 3: Report of Indigo — Data Link



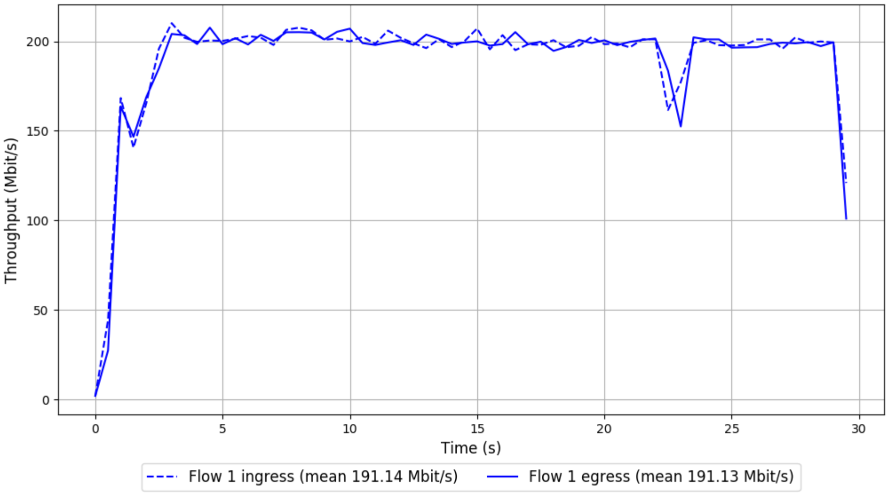


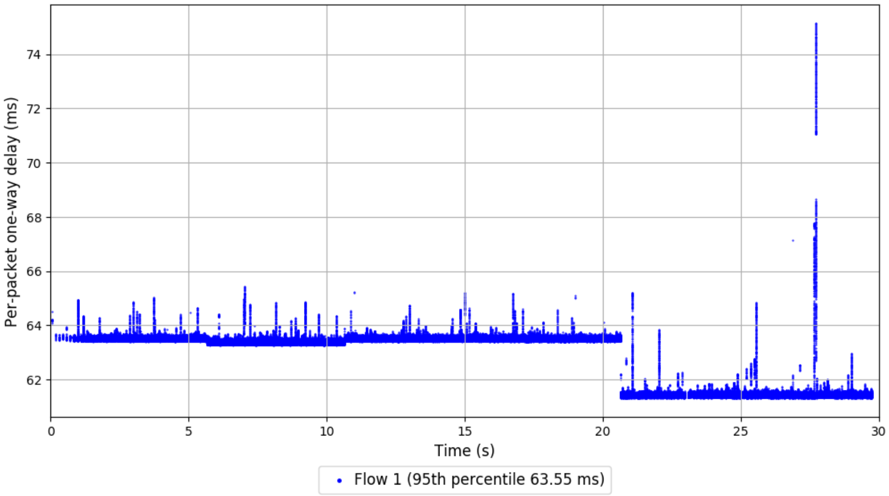
```
Run 4: Statistics of Indigo

Start at: 2017-09-18 08:59:28
End at: 2017-09-18 08:59:58

# Below is generated by plot.py at 2017-09-18 12:47:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 191.13 Mbit/s
95th percentile per-packet one-way delay: 63.552 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 191.13 Mbit/s
95th percentile per-packet one-way delay: 63.552 ms
Loss rate: 0.43%
```

Run 4: Report of Indigo — Data Link



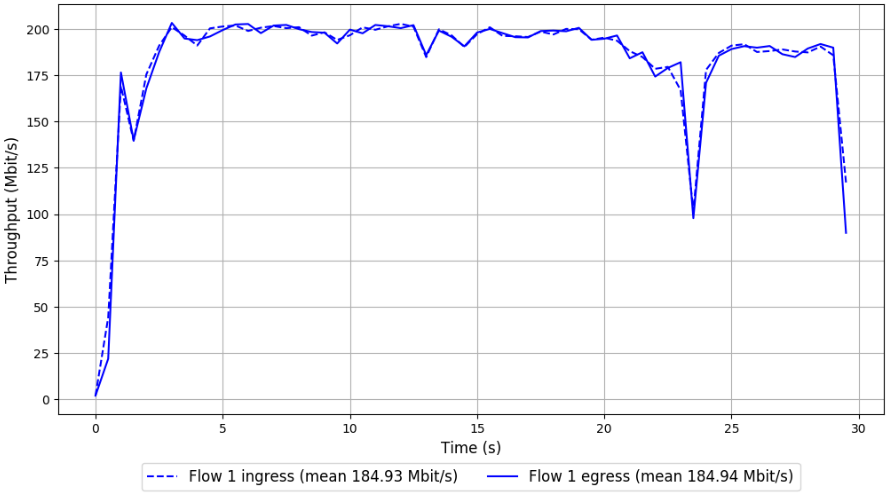


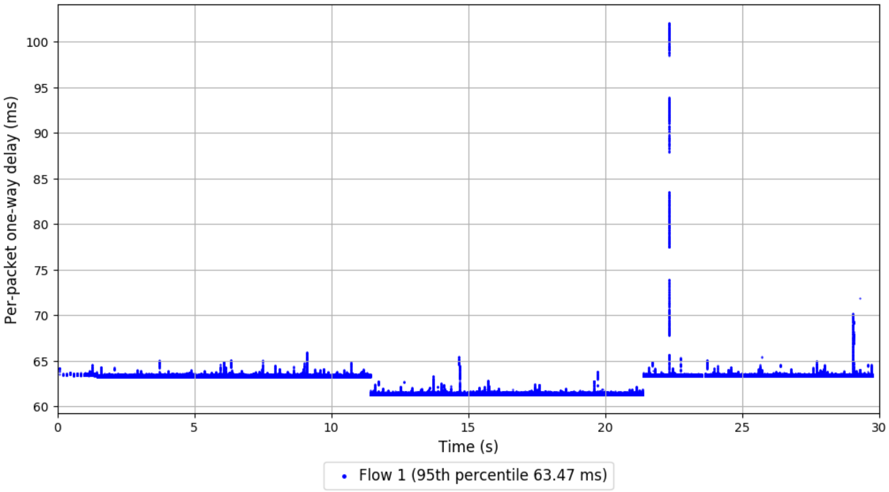
```
Run 5: Statistics of Indigo

Start at: 2017-09-18 09:10:57
End at: 2017-09-18 09:11:27

# Below is generated by plot.py at 2017-09-18 12:48:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 184.94 Mbit/s
95th percentile per-packet one-way delay: 63.465 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 184.94 Mbit/s
95th percentile per-packet one-way delay: 63.465 ms
Loss rate: 0.42%
```

Run 5: Report of Indigo — Data Link



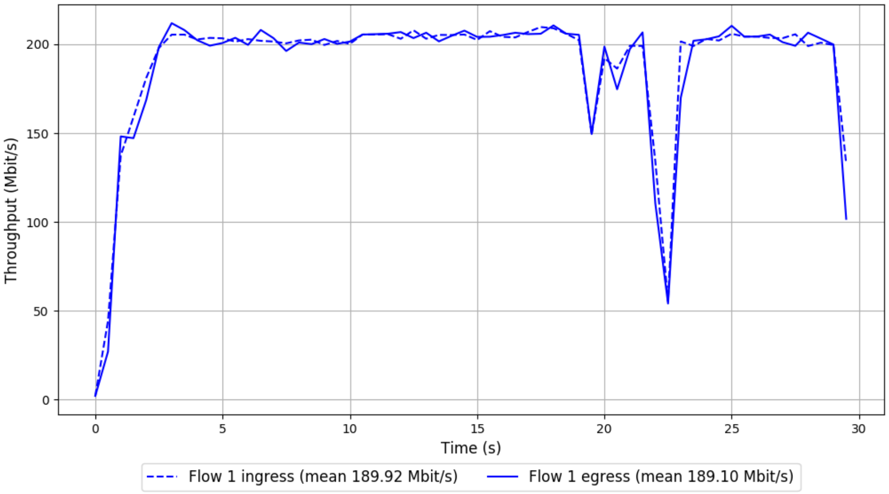


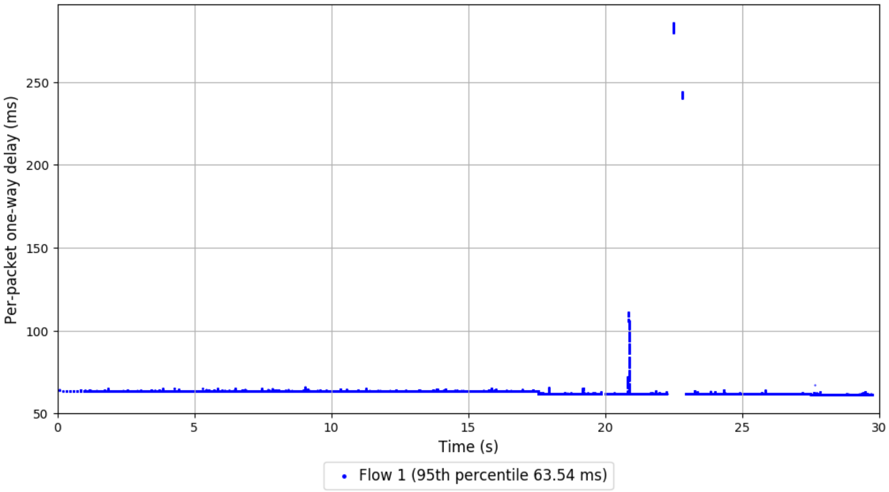
```
Run 6: Statistics of Indigo

Start at: 2017-09-18 09:22:31
End at: 2017-09-18 09:23:01

# Below is generated by plot.py at 2017-09-18 12:48:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.10 Mbit/s
95th percentile per-packet one-way delay: 63.540 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 189.10 Mbit/s
95th percentile per-packet one-way delay: 63.540 ms
Loss rate: 0.86%
```

Run 6: Report of Indigo — Data Link



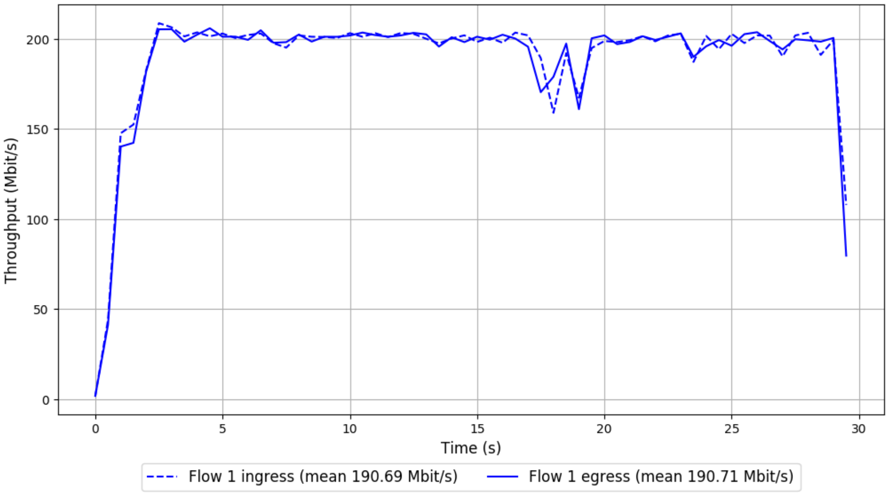


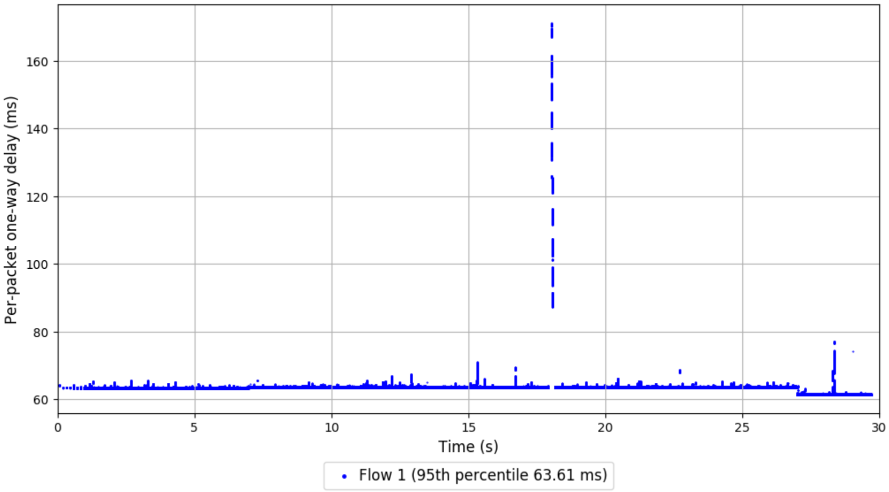
```
Run 7: Statistics of Indigo

Start at: 2017-09-18 09:34:01
End at: 2017-09-18 09:34:31

# Below is generated by plot.py at 2017-09-18 12:49:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.71 Mbit/s
95th percentile per-packet one-way delay: 63.607 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 190.71 Mbit/s
95th percentile per-packet one-way delay: 63.607 ms
Loss rate: 0.42%
```

Run 7: Report of Indigo — Data Link



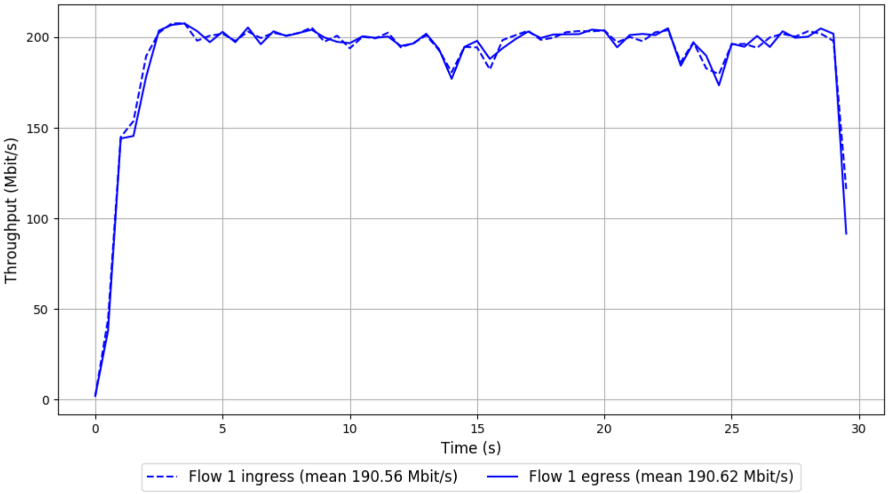


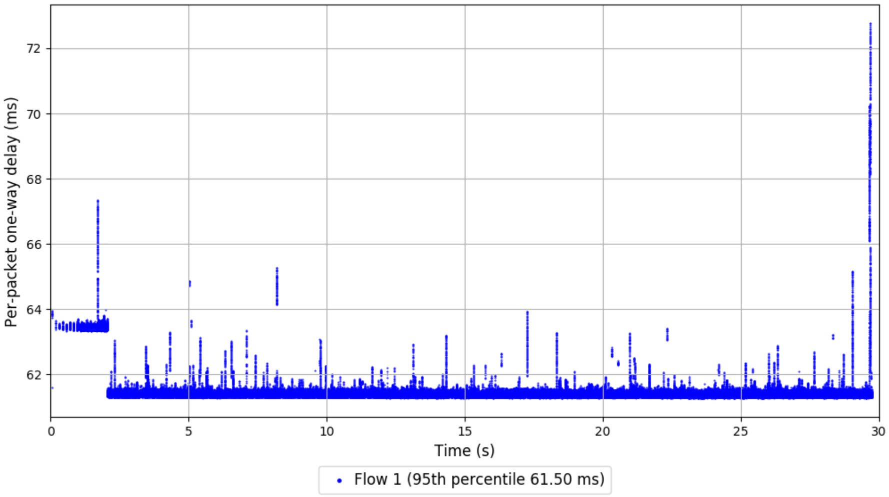
```
Run 8: Statistics of Indigo

Start at: 2017-09-18 09:45:36
End at: 2017-09-18 09:46:06

# Below is generated by plot.py at 2017-09-18 12:49:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.62 Mbit/s
95th percentile per-packet one-way delay: 61.500 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 190.62 Mbit/s
95th percentile per-packet one-way delay: 61.500 ms
Loss rate: 0.39%
```

Run 8: Report of Indigo — Data Link



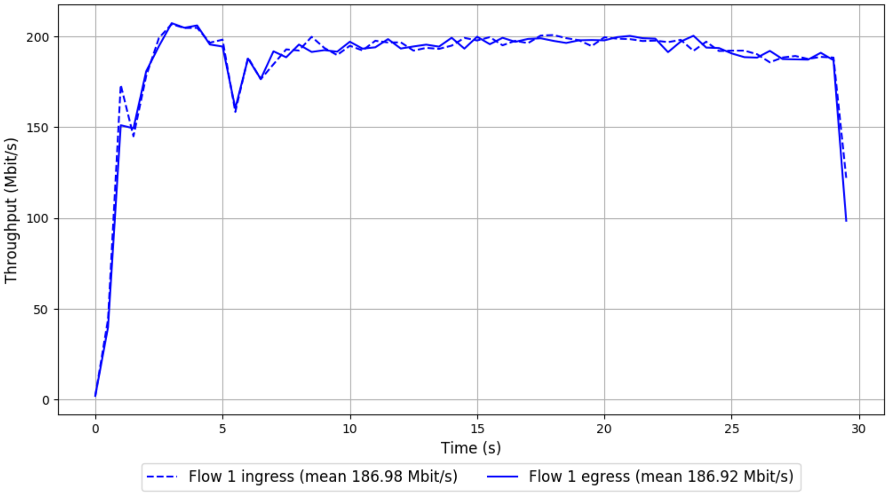


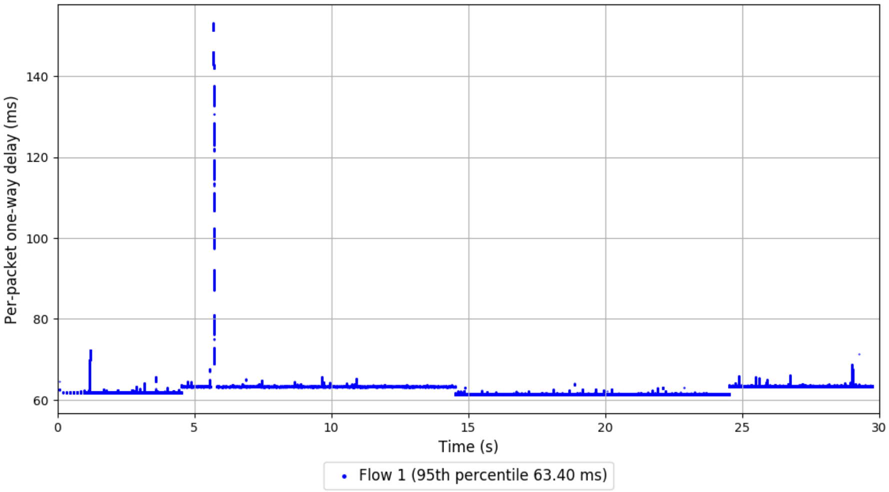
```
Run 9: Statistics of Indigo

Start at: 2017-09-18 09:57:14
End at: 2017-09-18 09:57:44

# Below is generated by plot.py at 2017-09-18 12:50:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.92 Mbit/s
95th percentile per-packet one-way delay: 63.404 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 186.92 Mbit/s
95th percentile per-packet one-way delay: 63.404 ms
Loss rate: 0.43%
```

Run 9: Report of Indigo — Data Link



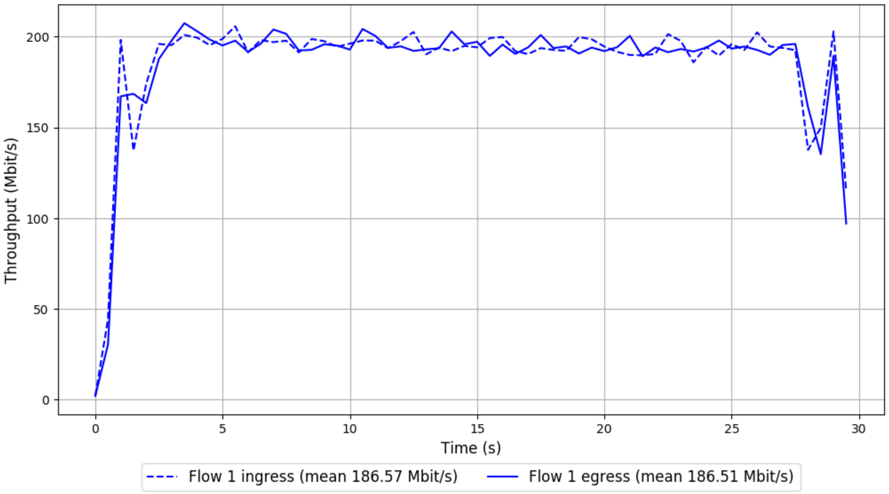


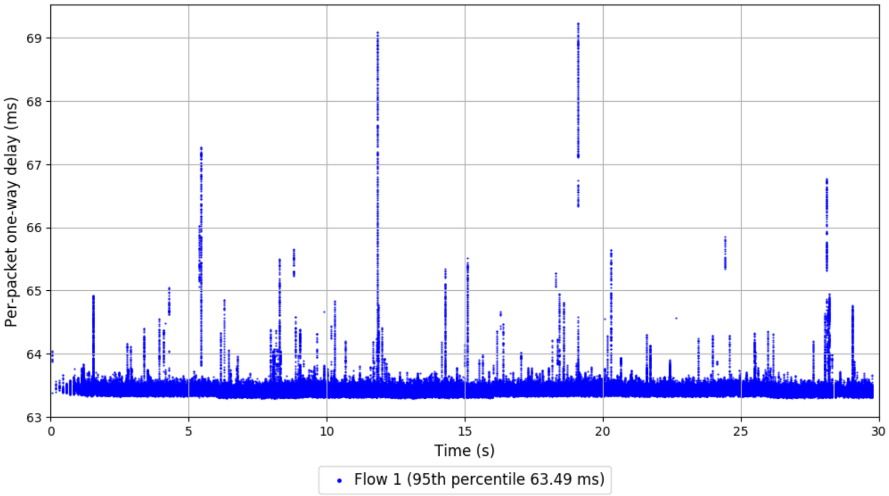
```
Run 10: Statistics of Indigo

Start at: 2017-09-18 10:08:52
End at: 2017-09-18 10:09:22

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.51 Mbit/s
95th percentile per-packet one-way delay: 63.491 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 186.51 Mbit/s
95th percentile per-packet one-way delay: 63.491 ms
Loss rate: 0.45%
```

Run 10: Report of Indigo — Data Link



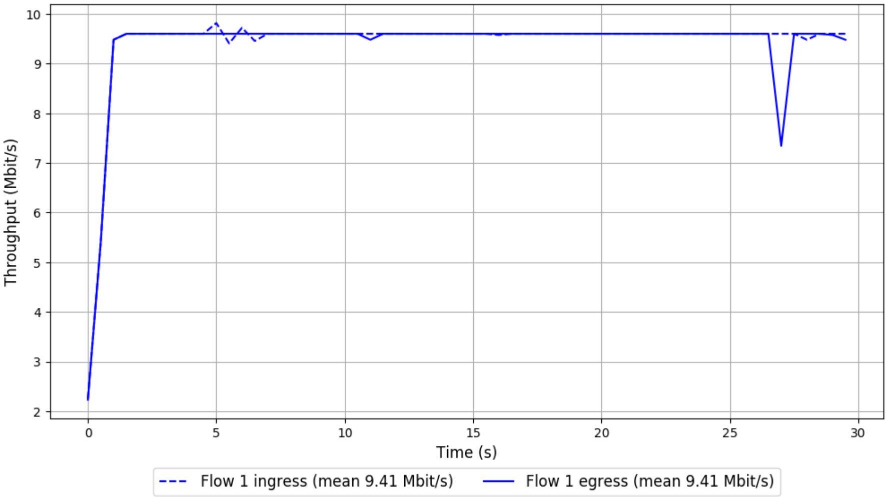


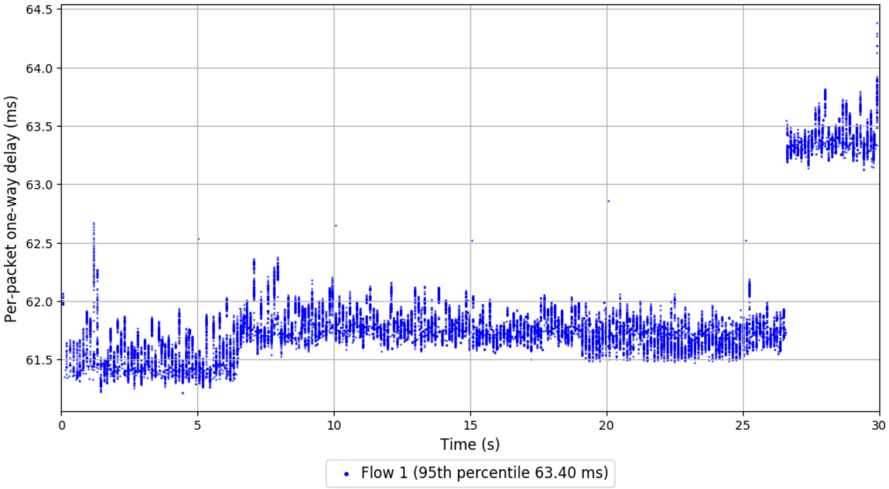
```
Run 1: Statistics of KohoCC

Start at: 2017-09-18 08:22:12
End at: 2017-09-18 08:22:42

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 63.398 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 63.398 ms
Loss rate: 0.43%
```

Run 1: Report of KohoCC — Data Link



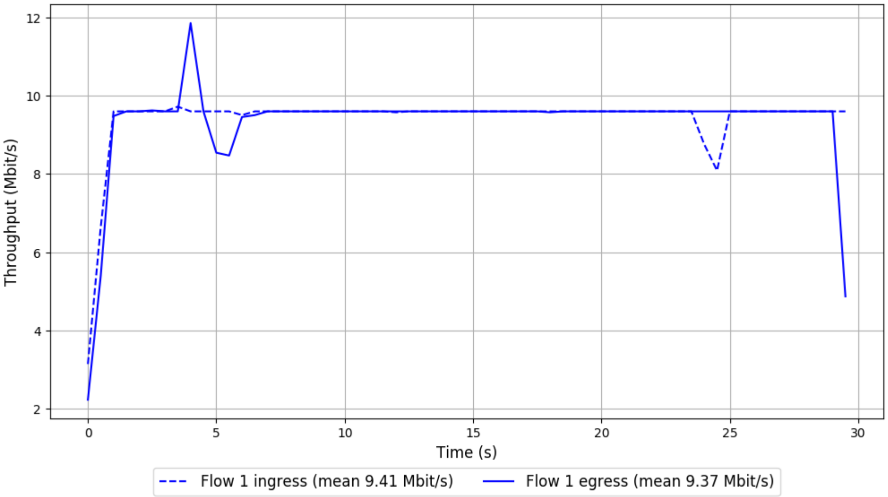


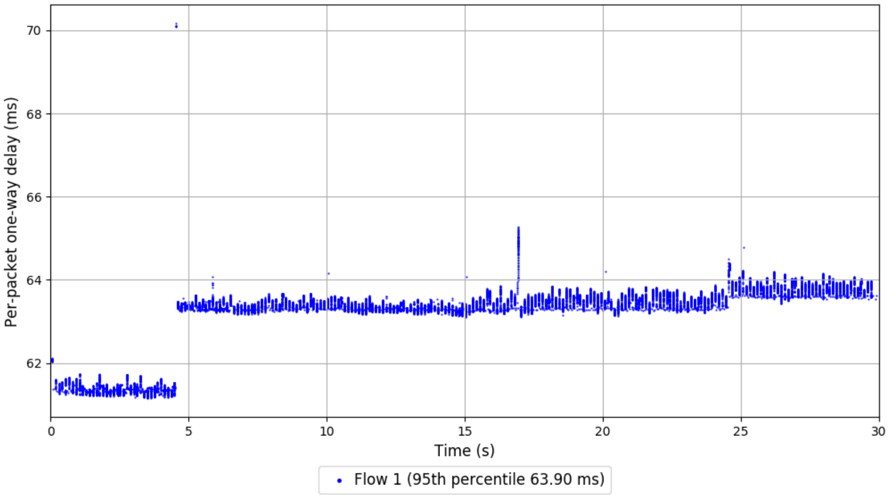
```
Run 2: Statistics of KohoCC

Start at: 2017-09-18 08:33:44
End at: 2017-09-18 08:34:14

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.37 Mbit/s
95th percentile per-packet one-way delay: 63.900 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 9.37 Mbit/s
95th percentile per-packet one-way delay: 63.900 ms
Loss rate: 0.85%
```

Run 2: Report of KohoCC — Data Link



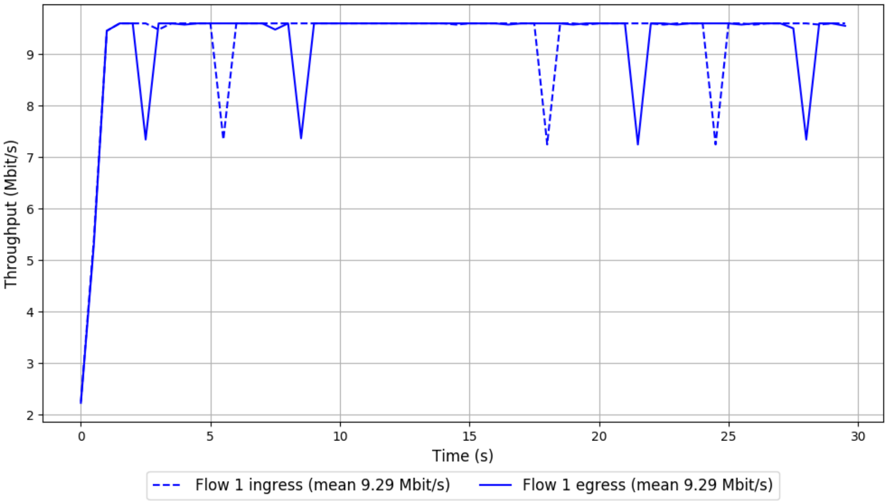


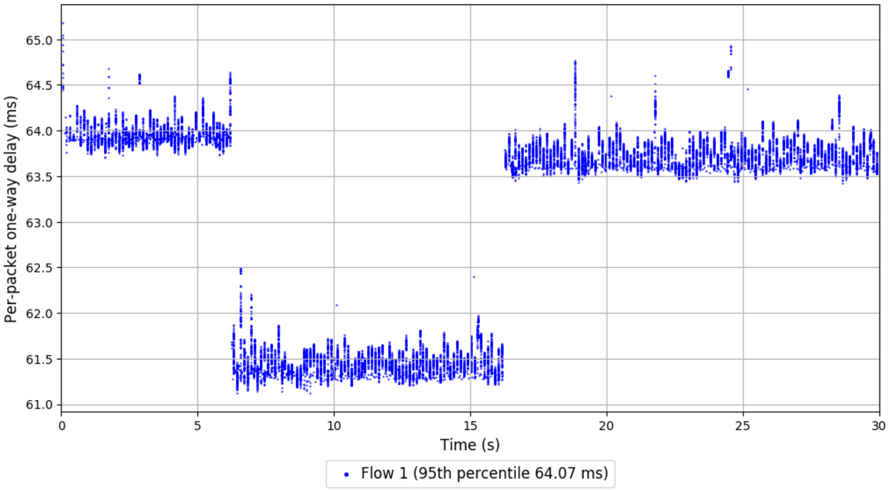
```
Run 3: Statistics of KohoCC

Start at: 2017-09-18 08:45:12
End at: 2017-09-18 08:45:42

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.29 Mbit/s
95th percentile per-packet one-way delay: 64.074 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 9.29 Mbit/s
95th percentile per-packet one-way delay: 64.074 ms
Loss rate: 0.43%
```

Run 3: Report of KohoCC — Data Link



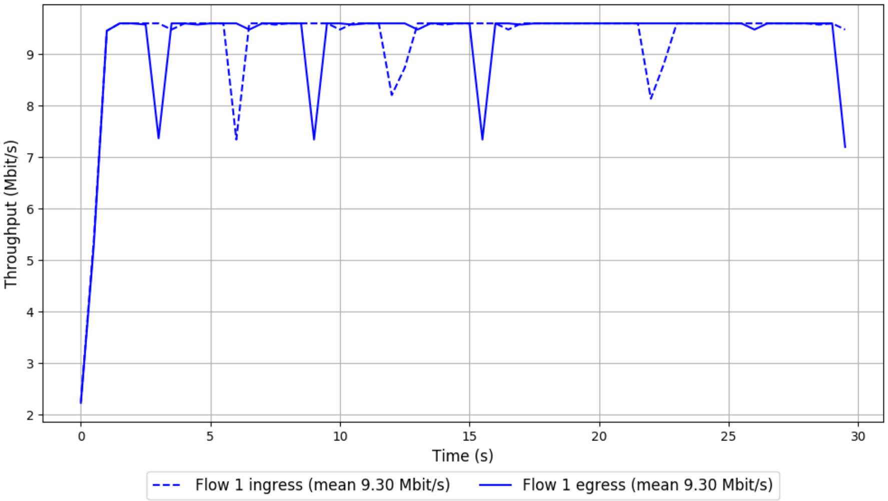


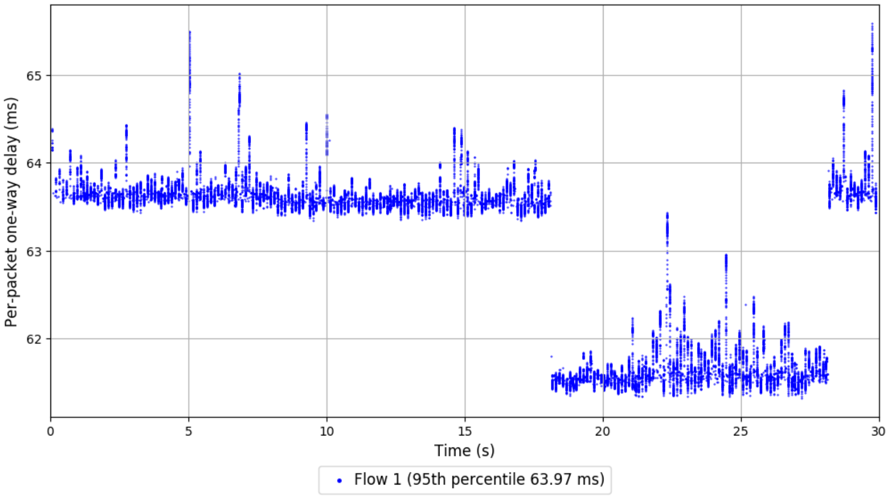
```
Run 4: Statistics of KohoCC

Start at: 2017-09-18 08:56:40
End at: 2017-09-18 08:57:10

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 63.966 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 63.966 ms
Loss rate: 0.43%
```

Run 4: Report of KohoCC — Data Link



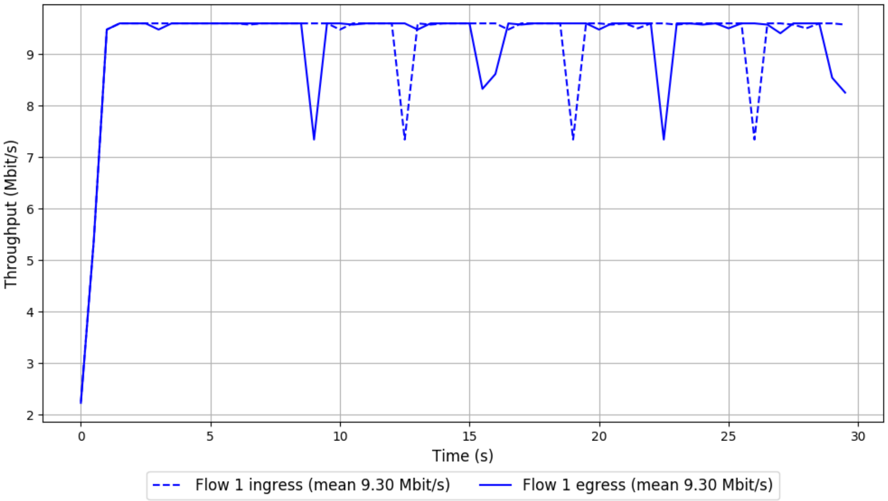


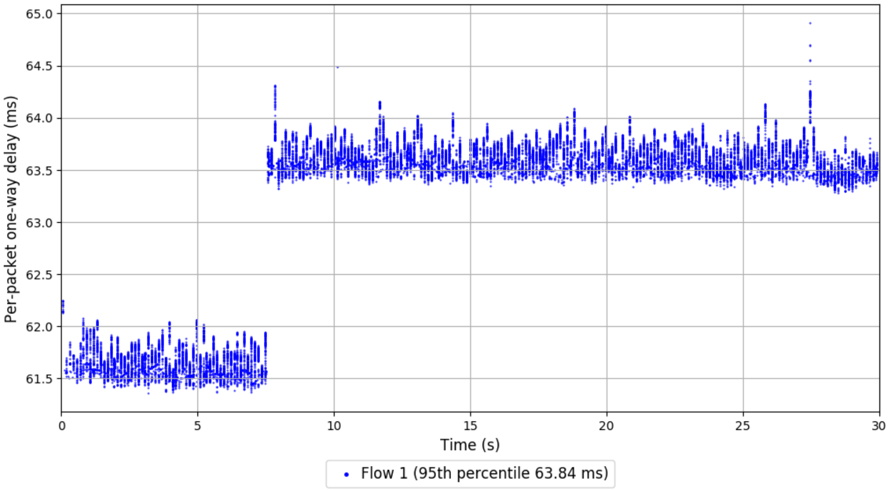
```
Run 5: Statistics of KohoCC

Start at: 2017-09-18 09:08:01
End at: 2017-09-18 09:08:31

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 63.839 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 63.839 ms
Loss rate: 0.47%
```

Run 5: Report of KohoCC — Data Link



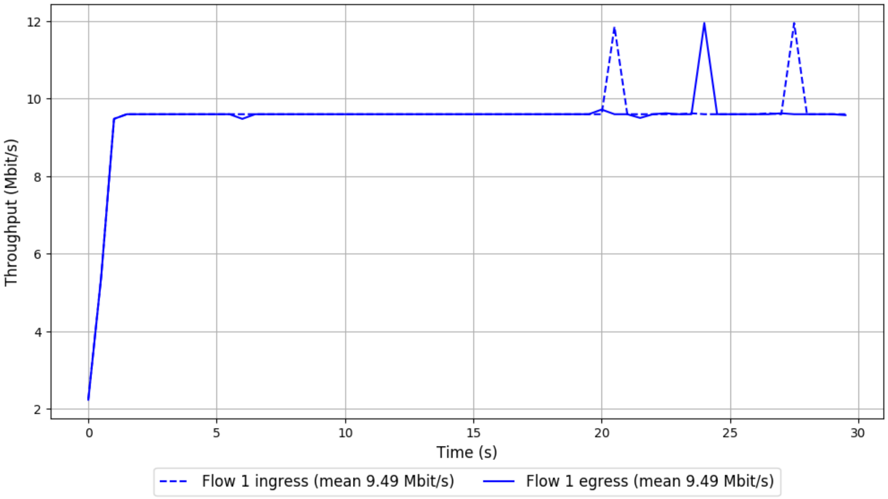


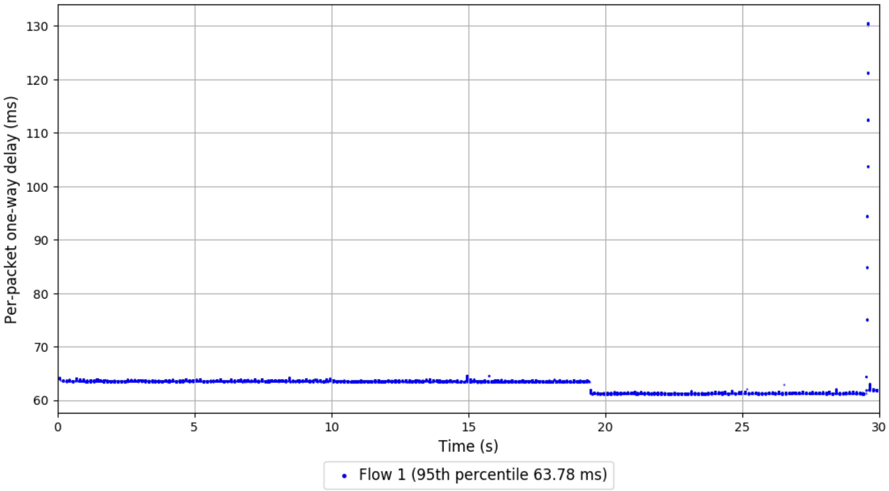
```
Run 6: Statistics of KohoCC

Start at: 2017-09-18 09:19:29
End at: 2017-09-18 09:19:59

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.49 Mbit/s
95th percentile per-packet one-way delay: 63.782 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 9.49 Mbit/s
95th percentile per-packet one-way delay: 63.782 ms
Loss rate: 0.42%
```

Run 6: Report of KohoCC — Data Link



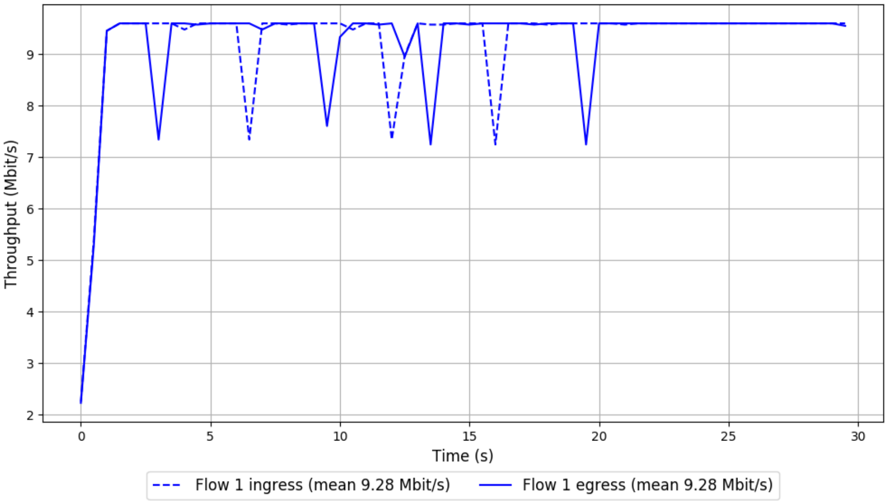


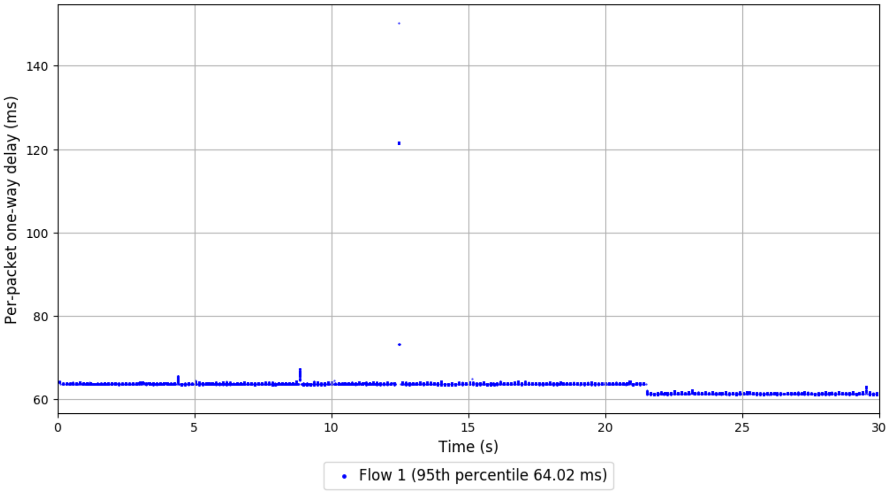
```
Run 7: Statistics of KohoCC

Start at: 2017-09-18 09:31:07
End at: 2017-09-18 09:31:37

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.28 Mbit/s
95th percentile per-packet one-way delay: 64.015 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 9.28 Mbit/s
95th percentile per-packet one-way delay: 64.015 ms
Loss rate: 0.43%
```

Run 7: Report of KohoCC — Data Link



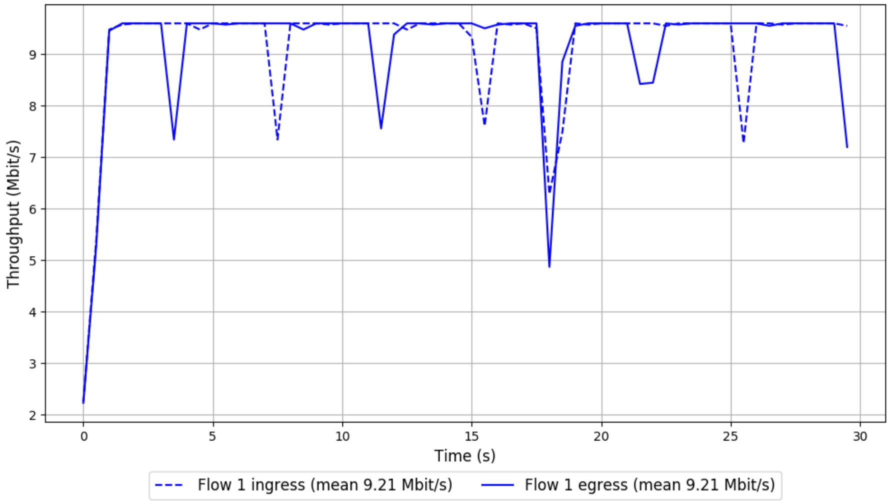


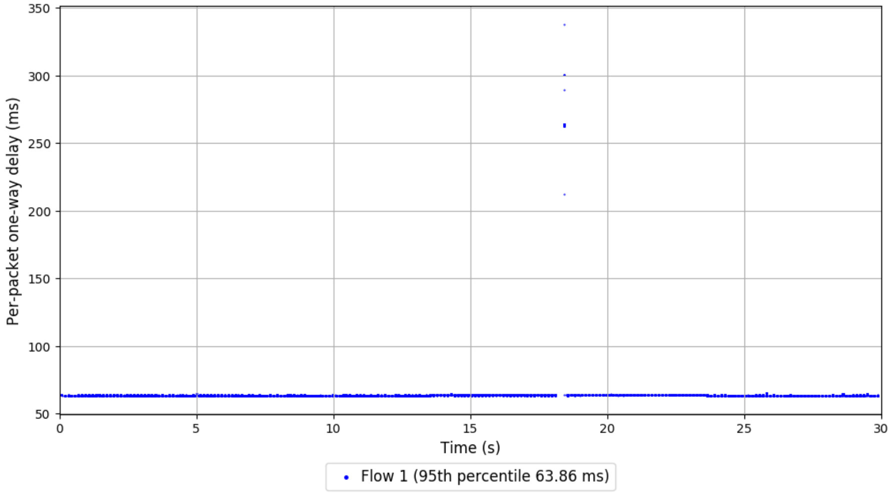
```
Run 8: Statistics of KohoCC

Start at: 2017-09-18 09:42:35
End at: 2017-09-18 09:43:05

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.21 Mbit/s
95th percentile per-packet one-way delay: 63.863 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 9.21 Mbit/s
95th percentile per-packet one-way delay: 63.863 ms
Loss rate: 0.44%
```

Run 8: Report of KohoCC — Data Link



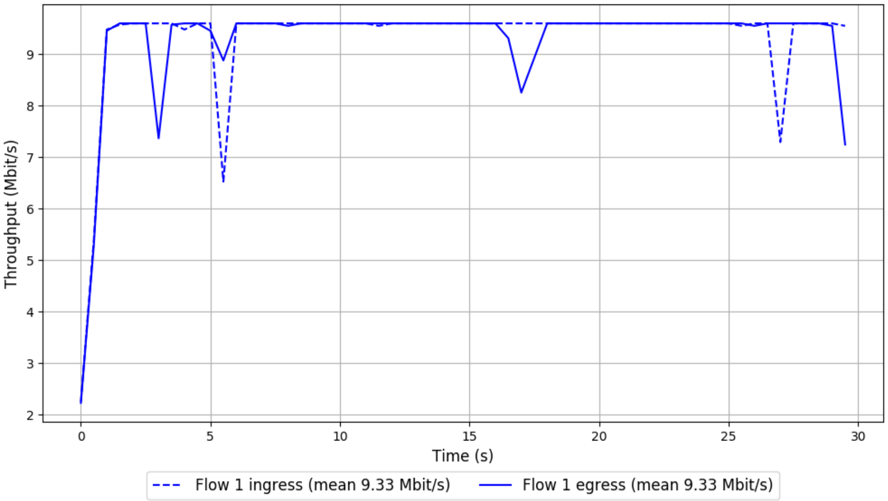


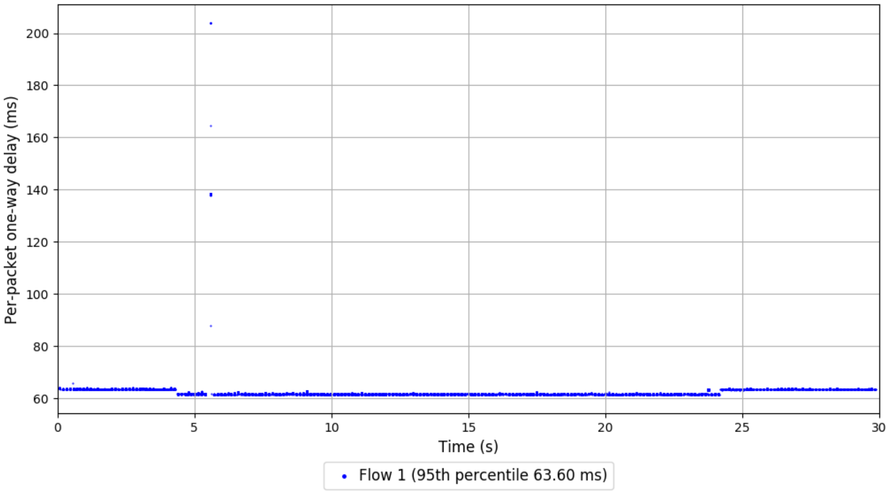
```
Run 9: Statistics of KohoCC

Start at: 2017-09-18 09:54:14
End at: 2017-09-18 09:54:44

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 63.599 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 63.599 ms
Loss rate: 0.43%
```

Run 9: Report of KohoCC — Data Link



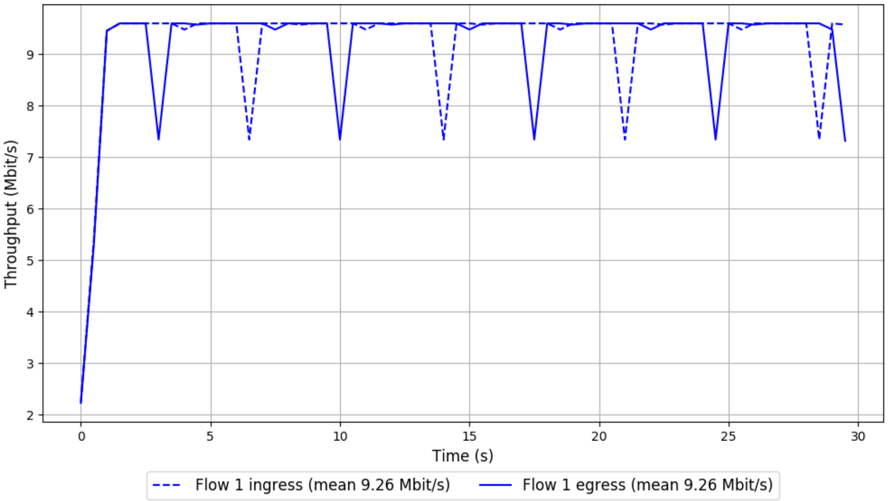


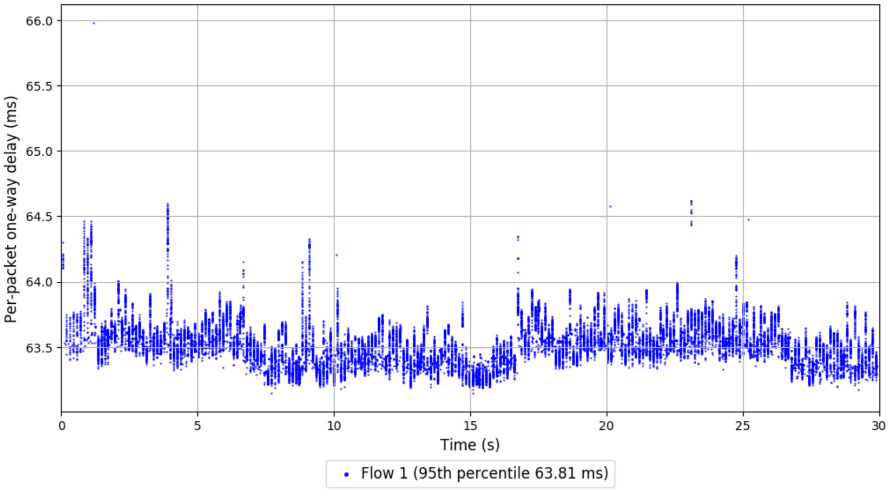
```
Run 10: Statistics of KohoCC

Start at: 2017-09-18 10:05:52
End at: 2017-09-18 10:06:22

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.26 Mbit/s
95th percentile per-packet one-way delay: 63.813 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 9.26 Mbit/s
95th percentile per-packet one-way delay: 63.813 ms
Loss rate: 0.43%
```

Run 10: Report of KohoCC — Data Link



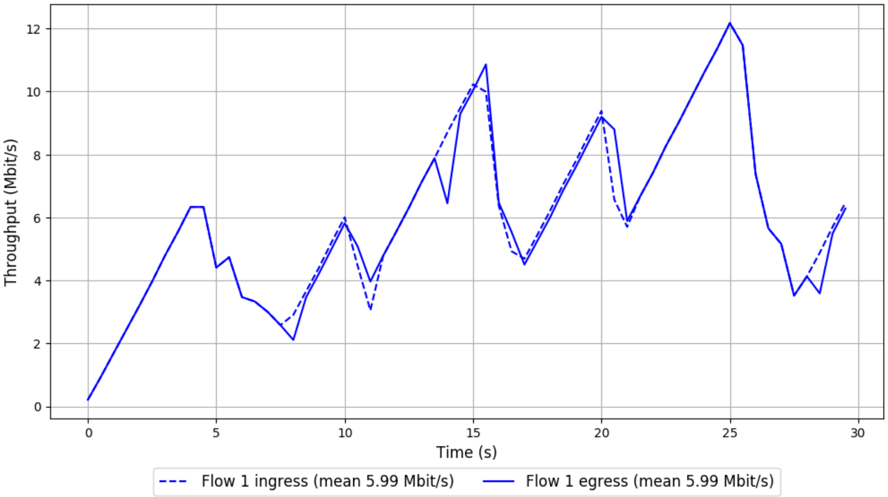


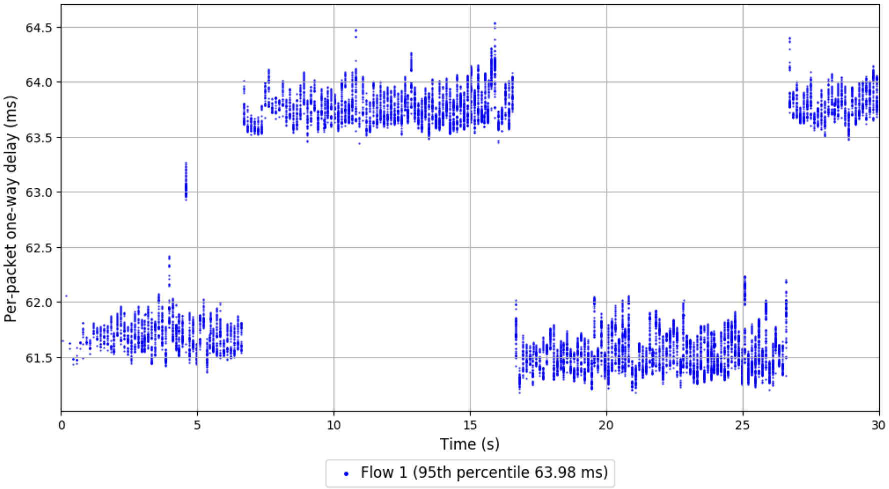
```
Run 1: Statistics of LEDBAT

Start at: 2017-09-18 08:30:32
End at: 2017-09-18 08:31:02

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.99 Mbit/s
95th percentile per-packet one-way delay: 63.977 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 5.99 Mbit/s
95th percentile per-packet one-way delay: 63.977 ms
Loss rate: 0.48%
```

Run 1: Report of LEDBAT — Data Link



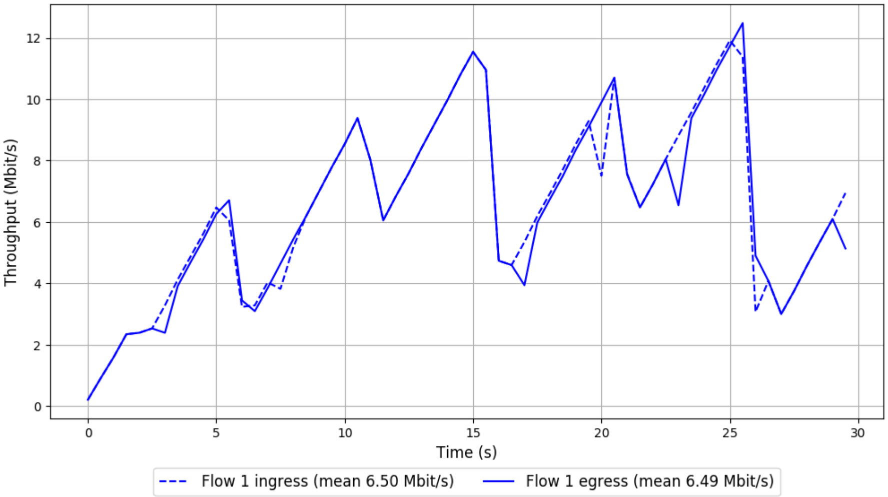


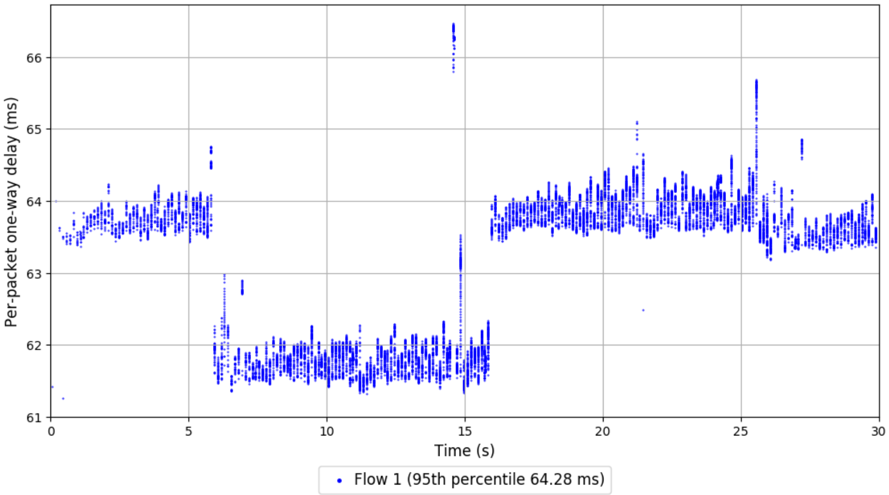
```
Run 2: Statistics of LEDBAT

Start at: 2017-09-18 08:42:02
End at: 2017-09-18 08:42:33

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 64.276 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 64.276 ms
Loss rate: 0.53%
```

Run 2: Report of LEDBAT — Data Link



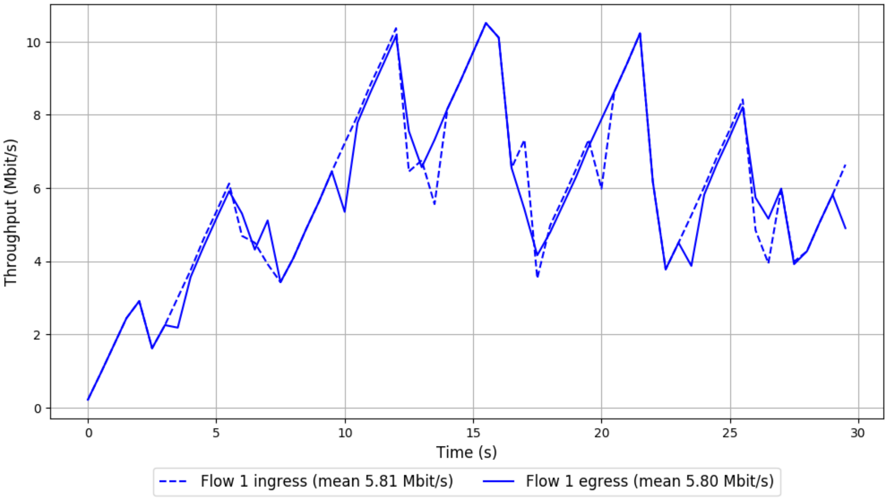


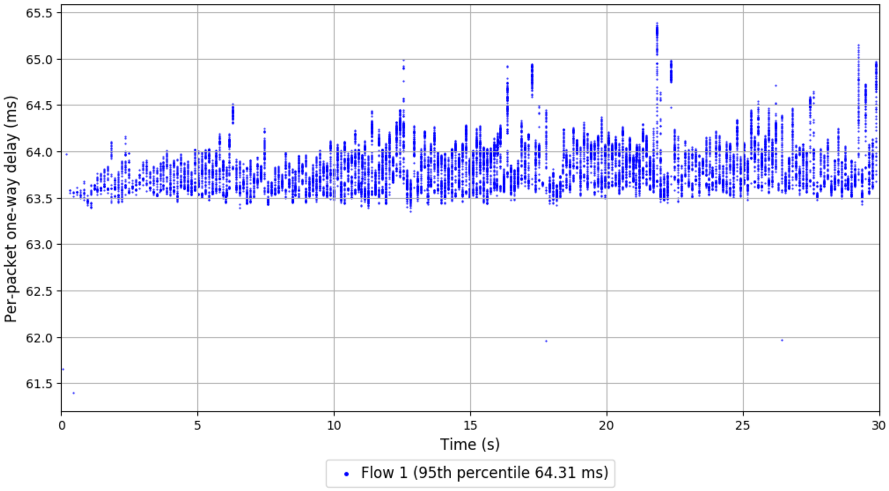
```
Run 3: Statistics of LEDBAT

Start at: 2017-09-18 08:53:32
End at: 2017-09-18 08:54:02

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.80 Mbit/s
95th percentile per-packet one-way delay: 64.308 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 5.80 Mbit/s
95th percentile per-packet one-way delay: 64.308 ms
Loss rate: 0.58%
```

Run 3: Report of LEDBAT — Data Link



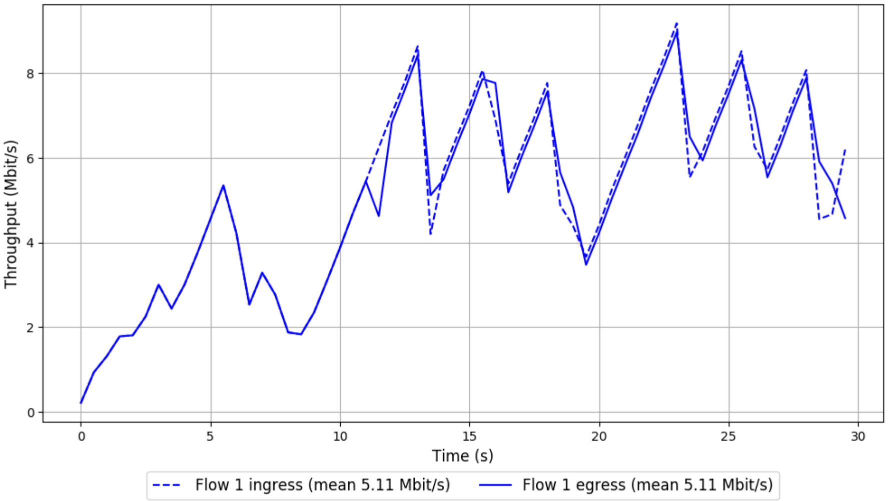


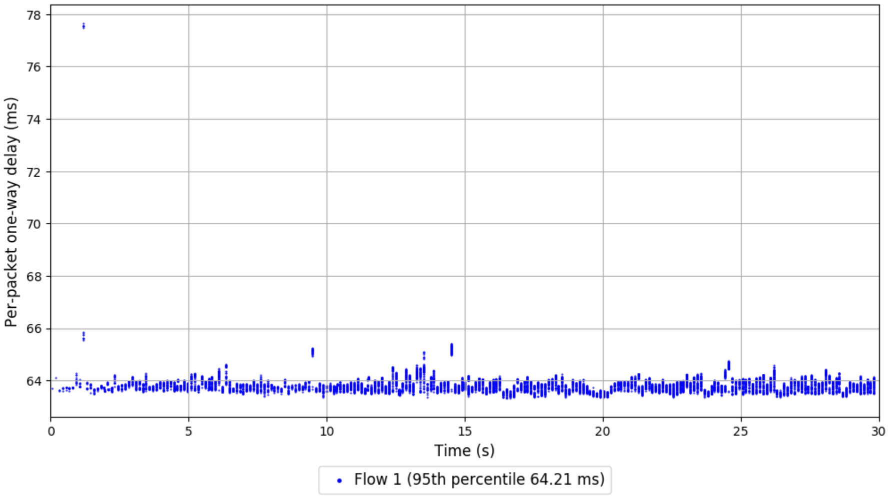
```
Run 4: Statistics of LEDBAT

Start at: 2017-09-18 09:04:52
End at: 2017-09-18 09:05:22

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.11 Mbit/s
95th percentile per-packet one-way delay: 64.214 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 5.11 Mbit/s
95th percentile per-packet one-way delay: 64.214 ms
Loss rate: 0.54%
```

Run 4: Report of LEDBAT — Data Link



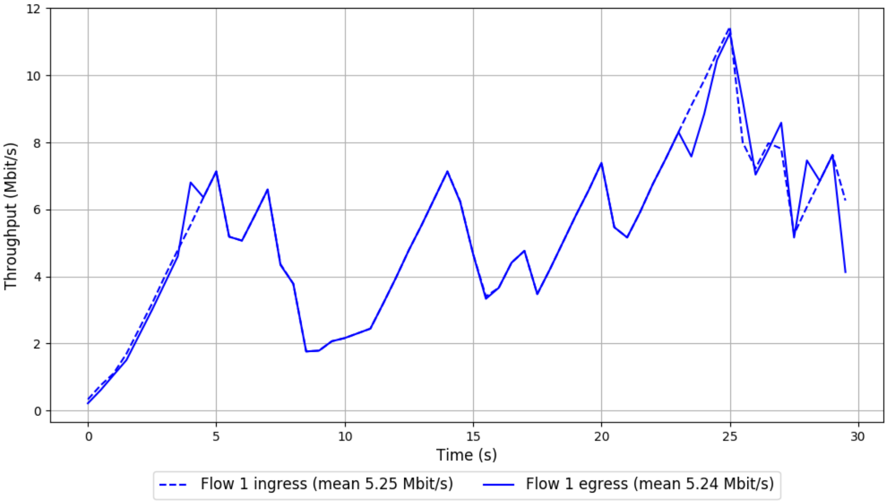


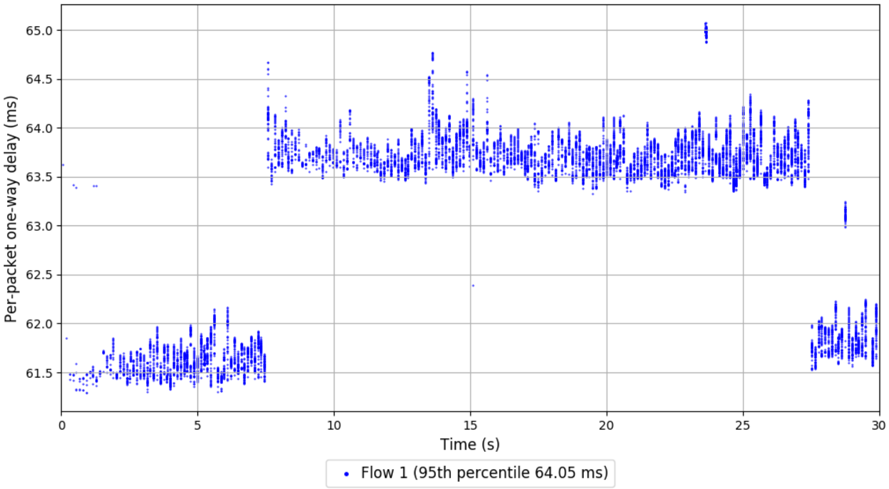
```
Run 5: Statistics of LEDBAT

Start at: 2017-09-18 09:16:21
End at: 2017-09-18 09:16:51

# Below is generated by plot.py at 2017-09-18 12:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 64.053 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 64.053 ms
Loss rate: 0.72%
```

Run 5: Report of LEDBAT — Data Link



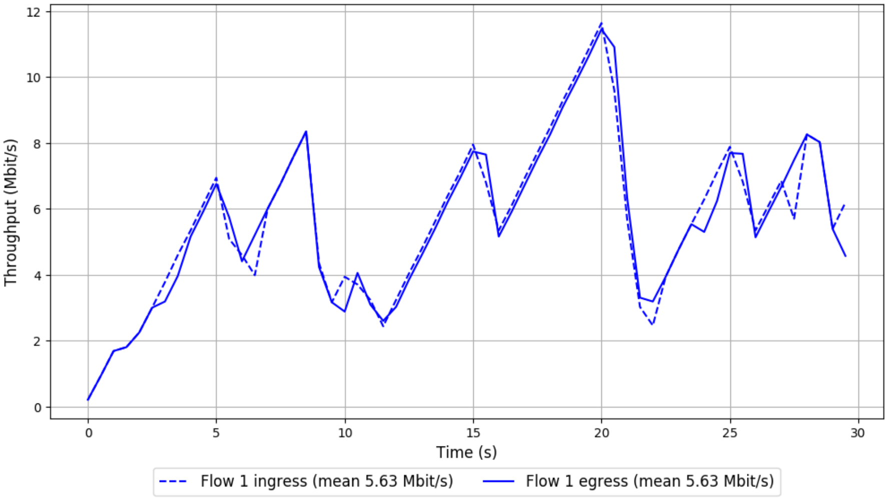


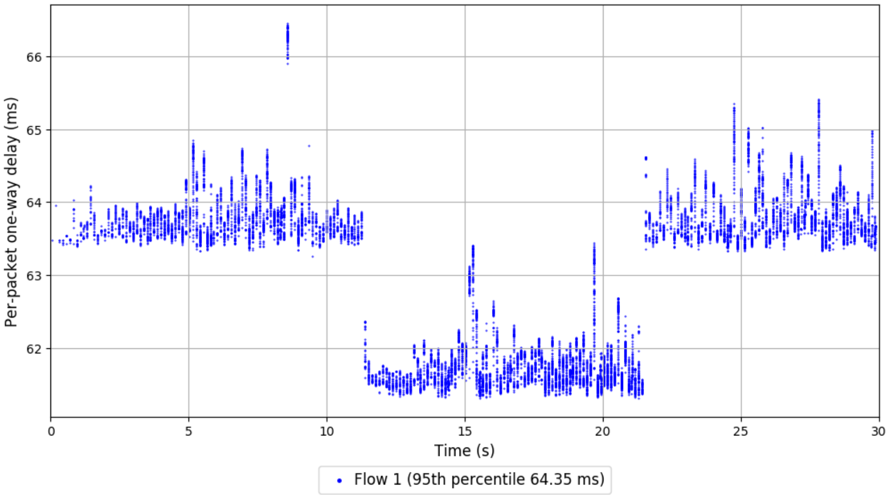
```
Run 6: Statistics of LEDBAT

Start at: 2017-09-18 09:27:57
End at: 2017-09-18 09:28:27

# Below is generated by plot.py at 2017-09-18 12:50:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.63 Mbit/s
95th percentile per-packet one-way delay: 64.352 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 5.63 Mbit/s
95th percentile per-packet one-way delay: 64.352 ms
Loss rate: 0.55%
```

Run 6: Report of LEDBAT — Data Link



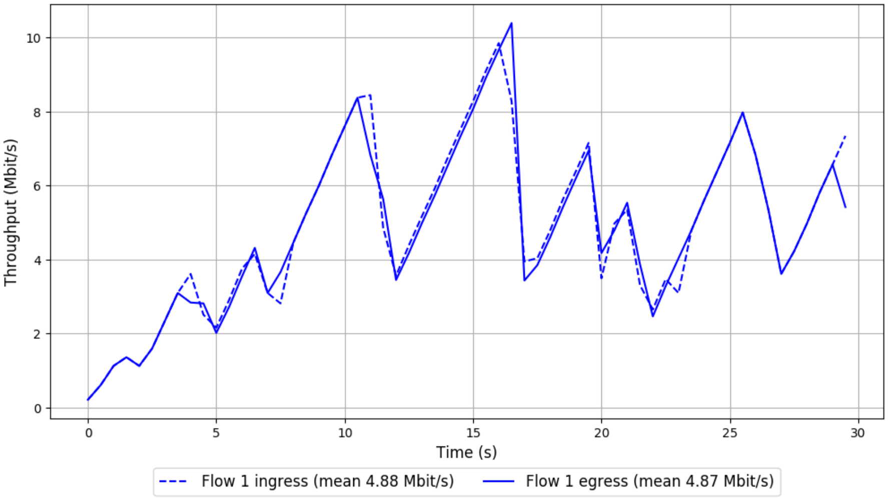


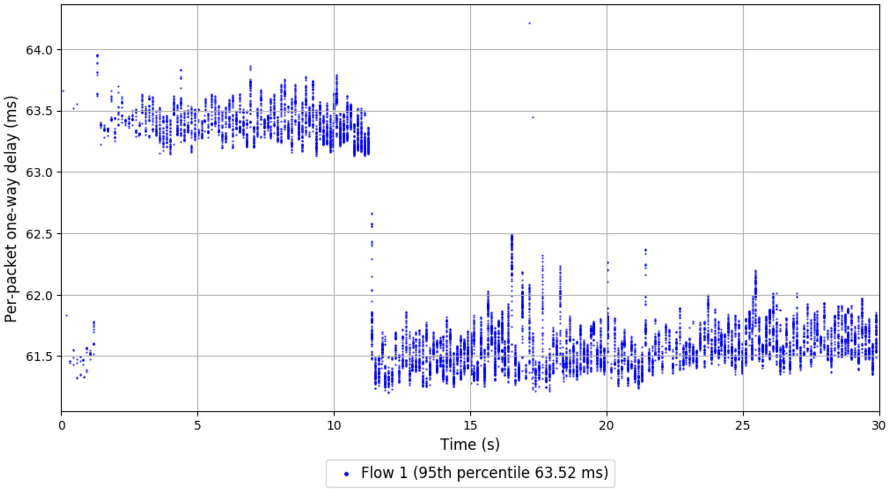
```
Run 7: Statistics of LEDBAT

Start at: 2017-09-18 09:39:27
End at: 2017-09-18 09:39:57

# Below is generated by plot.py at 2017-09-18 12:50:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 63.519 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 63.519 ms
Loss rate: 0.70%
```

Run 7: Report of LEDBAT — Data Link



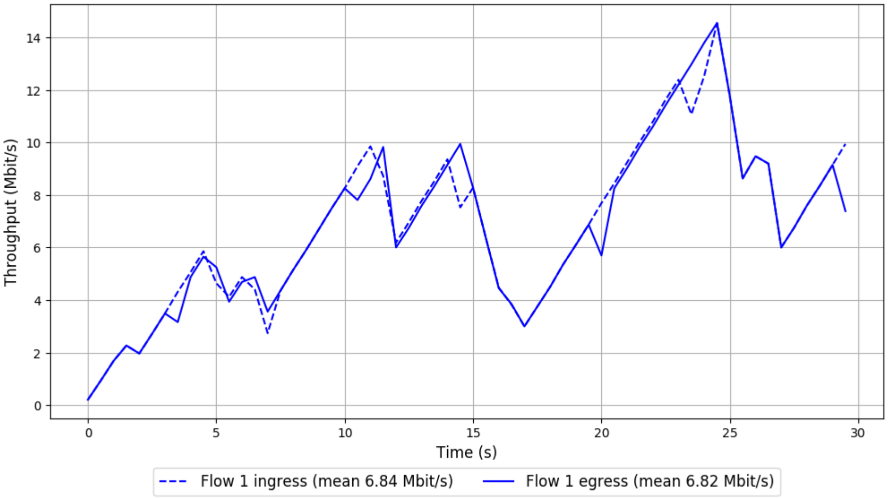


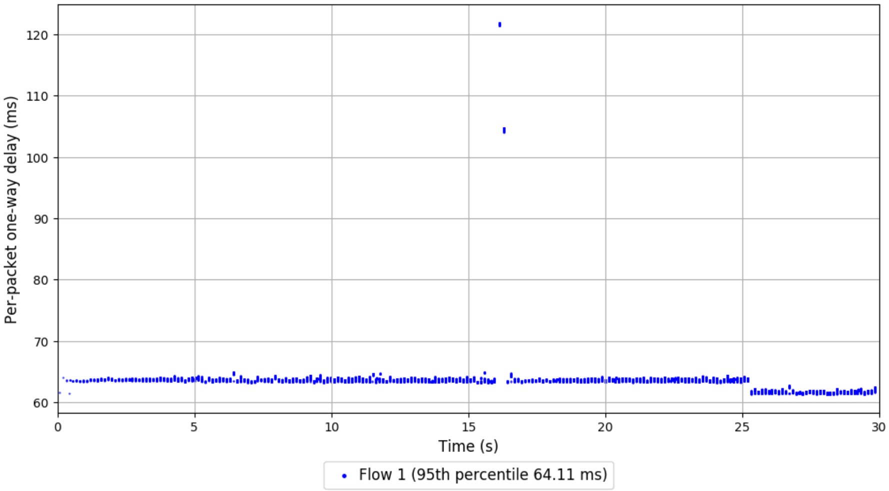
```
Run 8: Statistics of LEDBAT

Start at: 2017-09-18 09:51:03
End at: 2017-09-18 09:51:33

# Below is generated by plot.py at 2017-09-18 12:50:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.82 Mbit/s
95th percentile per-packet one-way delay: 64.105 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 6.82 Mbit/s
95th percentile per-packet one-way delay: 64.105 ms
Loss rate: 0.63%
```

Run 8: Report of LEDBAT — Data Link



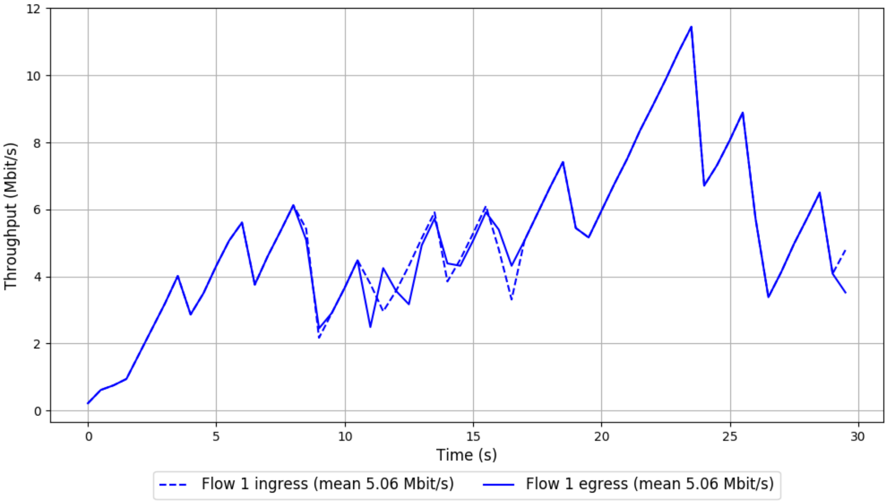


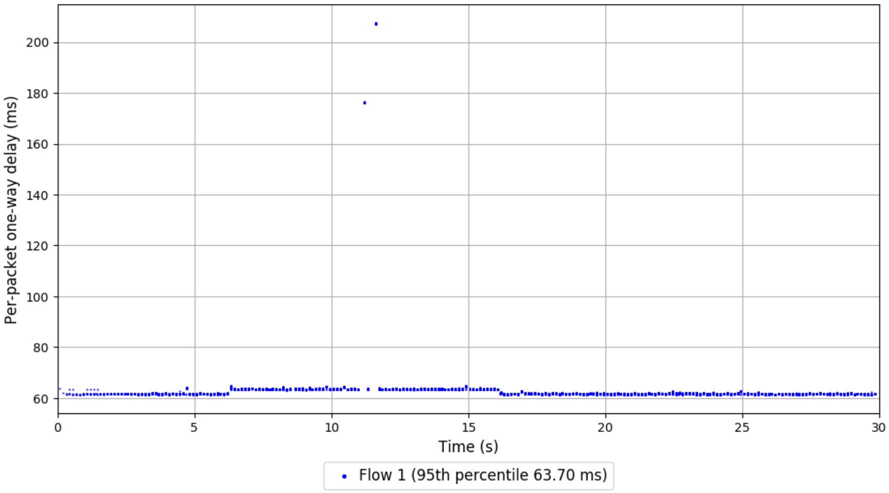
```
Run 9: Statistics of LEDBAT

Start at: 2017-09-18 10:02:42
End at: 2017-09-18 10:03:12

# Below is generated by plot.py at 2017-09-18 12:50:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 63.703 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 63.703 ms
Loss rate: 0.43%
```

Run 9: Report of LEDBAT — Data Link



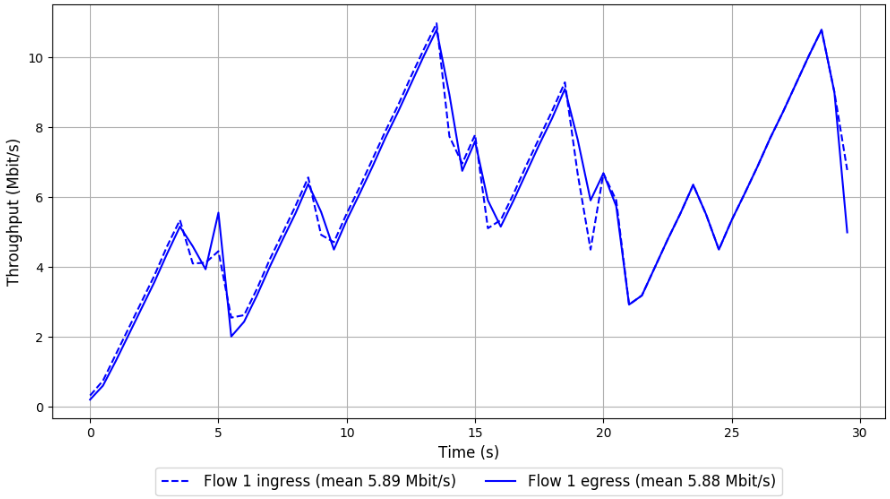


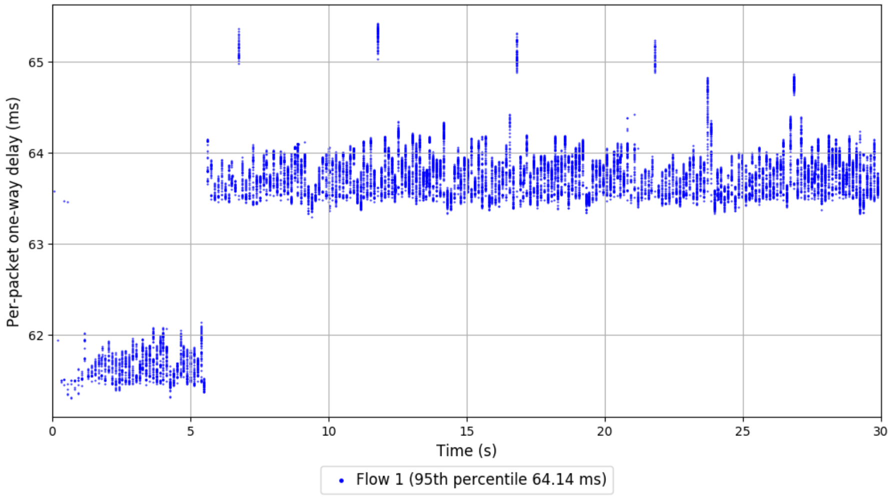
```
Run 10: Statistics of LEDBAT

Start at: 2017-09-18 10:14:23
End at: 2017-09-18 10:14:53

# Below is generated by plot.py at 2017-09-18 12:50:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.88 Mbit/s
95th percentile per-packet one-way delay: 64.145 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 5.88 Mbit/s
95th percentile per-packet one-way delay: 64.145 ms
Loss rate: 0.55%
```

Run 10: Report of LEDBAT — Data Link



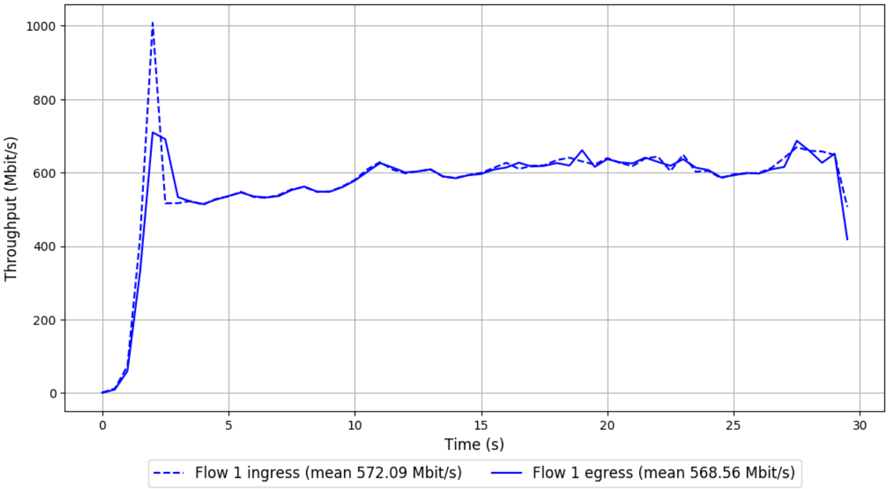


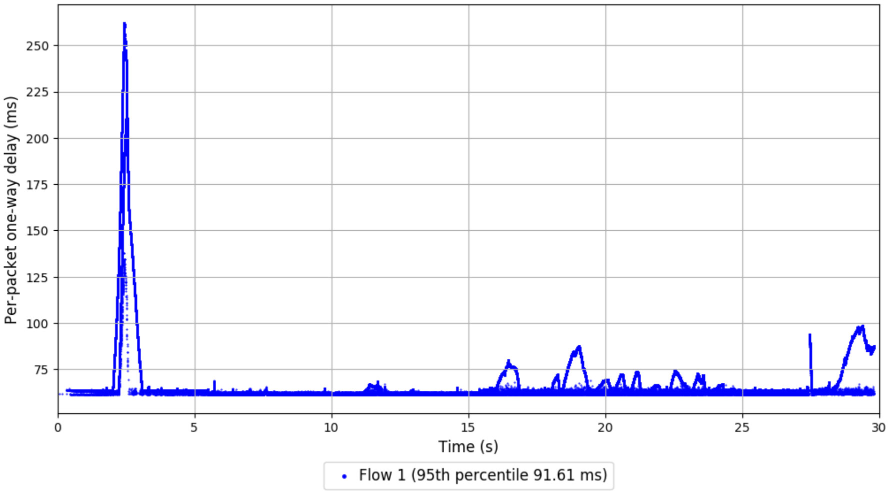
```
Run 1: Statistics of PCC

Start at: 2017-09-18 08:29:33
End at: 2017-09-18 08:30:03

# Below is generated by plot.py at 2017-09-18 12:58:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 568.56 Mbit/s
95th percentile per-packet one-way delay: 91.605 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 568.56 Mbit/s
95th percentile per-packet one-way delay: 91.605 ms
Loss rate: 1.04%
```

Run 1: Report of PCC — Data Link



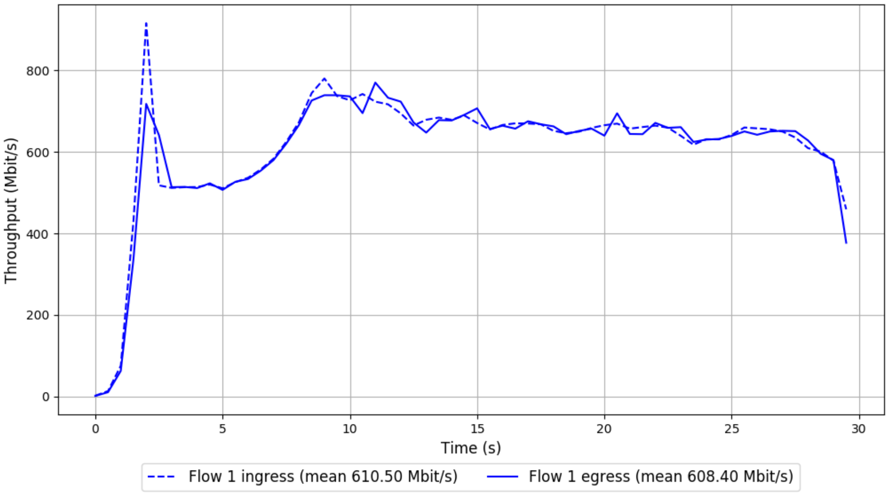


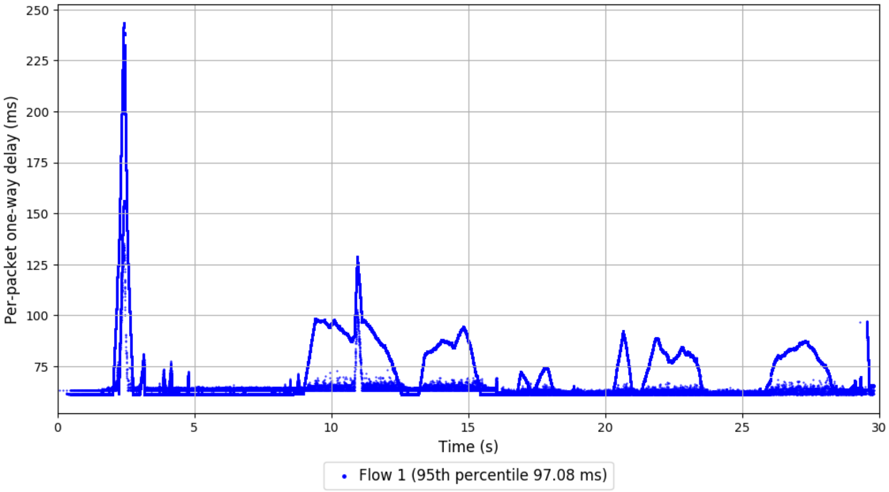
```
Run 2: Statistics of PCC

Start at: 2017-09-18 08:41:02
End at: 2017-09-18 08:41:32

# Below is generated by plot.py at 2017-09-18 12:59:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 608.40 Mbit/s
95th percentile per-packet one-way delay: 97.084 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 608.40 Mbit/s
95th percentile per-packet one-way delay: 97.084 ms
Loss rate: 0.77%
```

Run 2: Report of PCC — Data Link



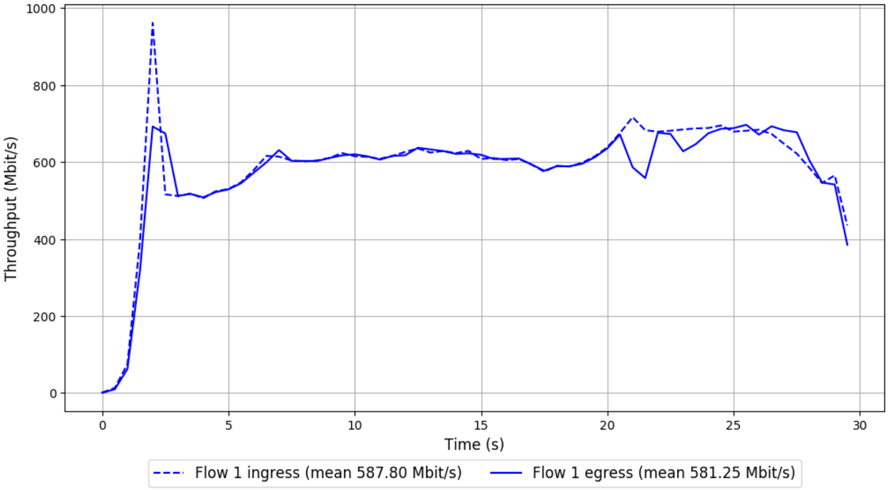


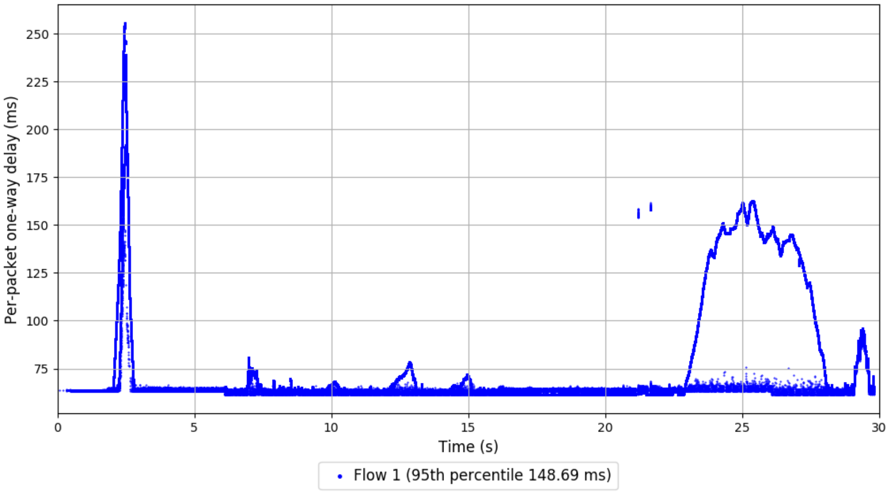
```
Run 3: Statistics of PCC

Start at: 2017-09-18 08:52:32
End at: 2017-09-18 08:53:02

# Below is generated by plot.py at 2017-09-18 12:59:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 581.25 Mbit/s
95th percentile per-packet one-way delay: 148.689 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 581.25 Mbit/s
95th percentile per-packet one-way delay: 148.689 ms
Loss rate: 1.54%
```

Run 3: Report of PCC — Data Link



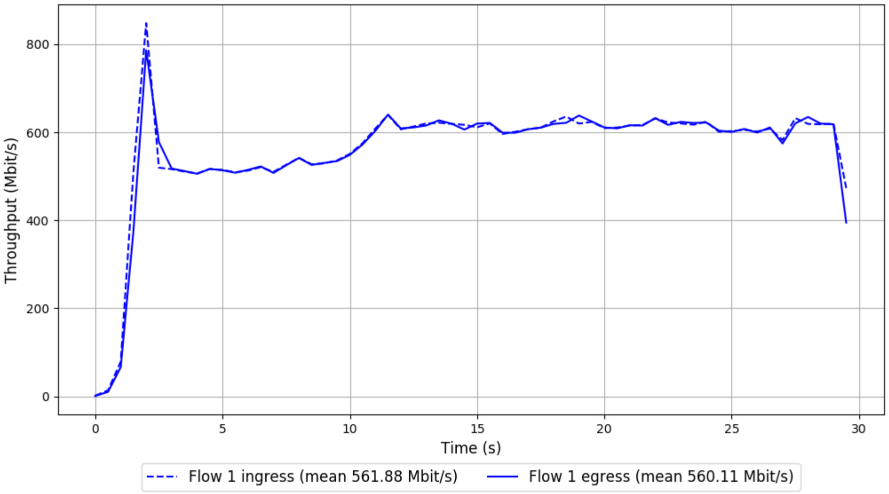


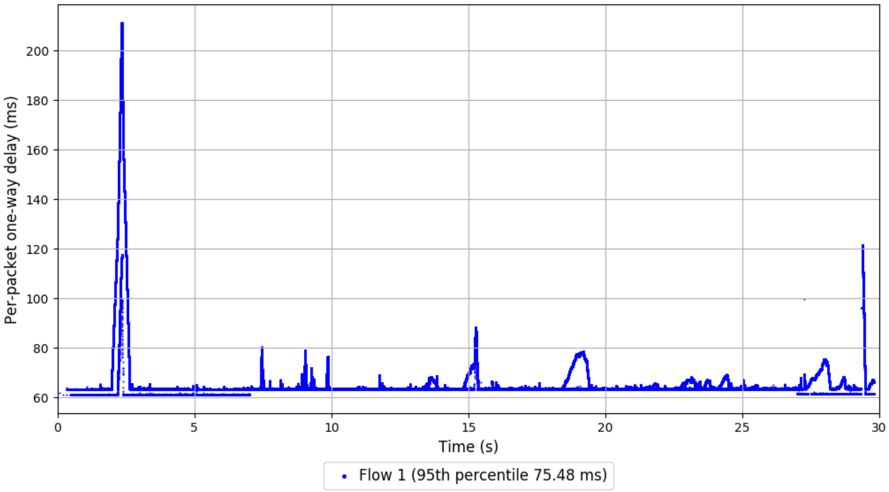
```
Run 4: Statistics of PCC

Start at: 2017-09-18 09:03:54
End at: 2017-09-18 09:04:24

# Below is generated by plot.py at 2017-09-18 12:59:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 560.11 Mbit/s
95th percentile per-packet one-way delay: 75.476 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 560.11 Mbit/s
95th percentile per-packet one-way delay: 75.476 ms
Loss rate: 0.73%
```

Run 4: Report of PCC — Data Link



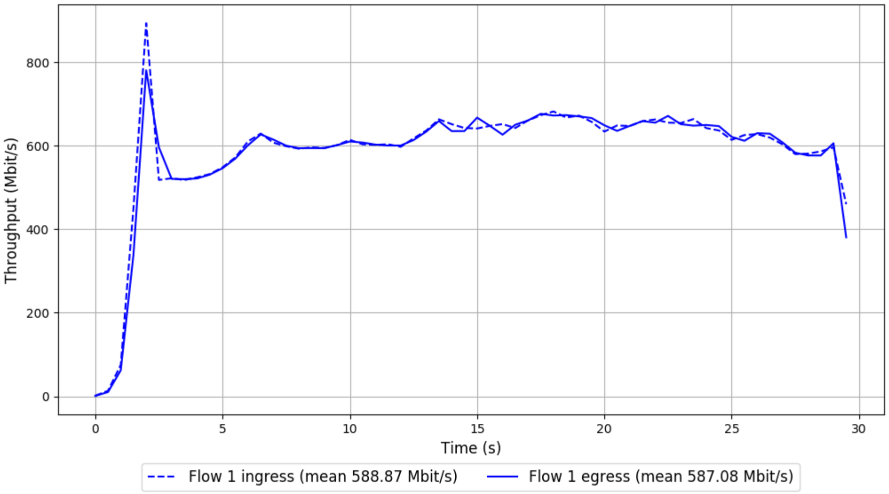


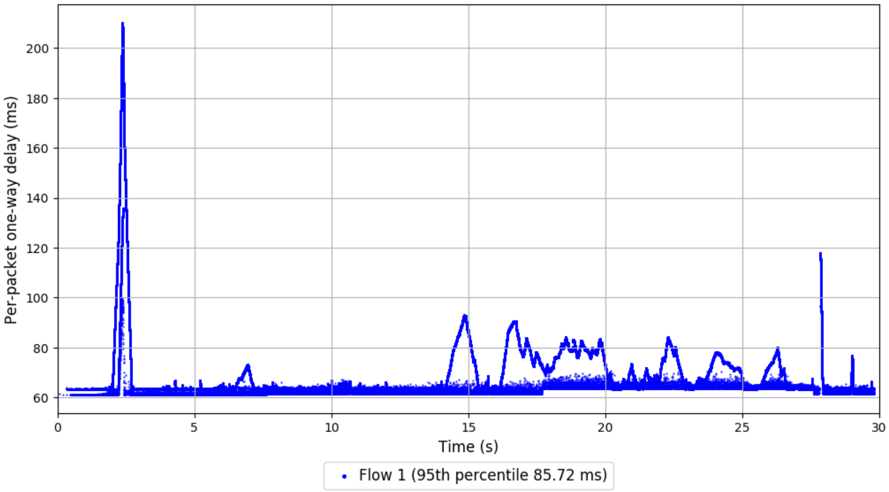
```
Run 5: Statistics of PCC

Start at: 2017-09-18 09:15:21
End at: 2017-09-18 09:15:51

# Below is generated by plot.py at 2017-09-18 12:59:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 587.08 Mbit/s
95th percentile per-packet one-way delay: 85.723 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 587.08 Mbit/s
95th percentile per-packet one-way delay: 85.723 ms
Loss rate: 0.72%
```

Run 5: Report of PCC — Data Link



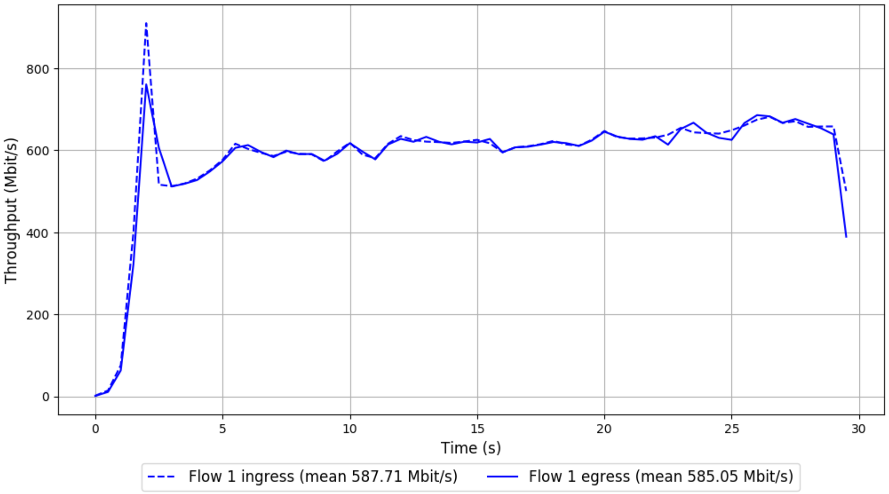


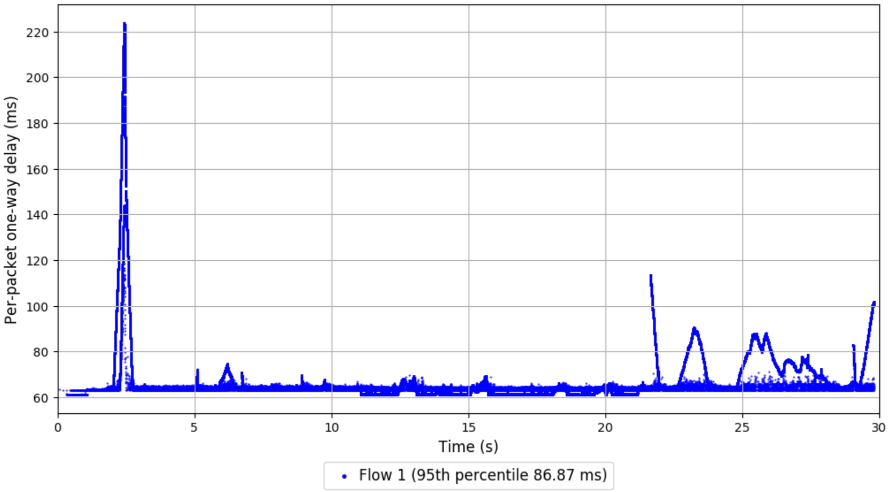
```
Run 6: Statistics of PCC

Start at: 2017-09-18 09:26:57
End at: 2017-09-18 09:27:27

# Below is generated by plot.py at 2017-09-18 12:59:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 585.05 Mbit/s
95th percentile per-packet one-way delay: 86.869 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 585.05 Mbit/s
95th percentile per-packet one-way delay: 86.869 ms
Loss rate: 0.88%
```

Run 6: Report of PCC — Data Link



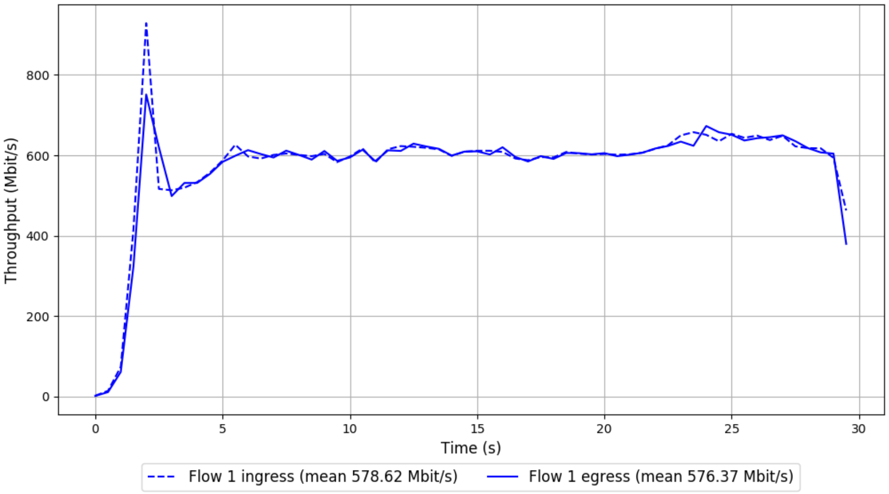


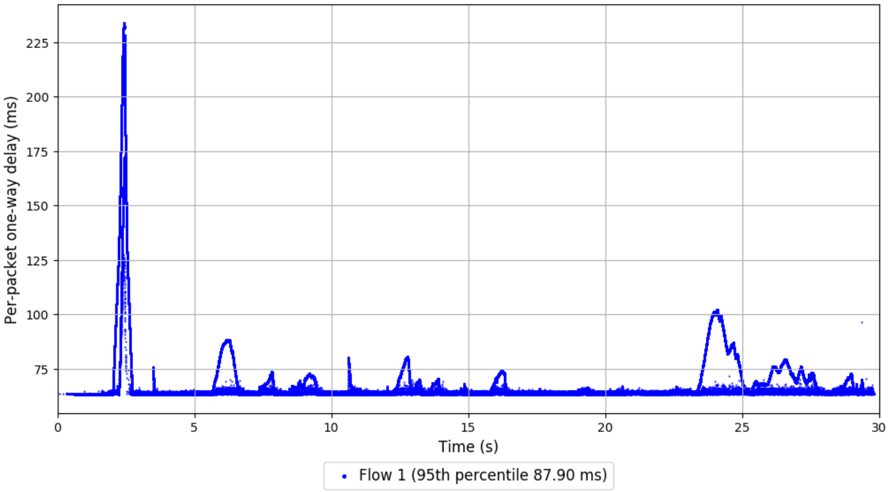
```
Run 7: Statistics of PCC

Start at: 2017-09-18 09:38:28
End at: 2017-09-18 09:38:58

# Below is generated by plot.py at 2017-09-18 13:00:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 576.37 Mbit/s
95th percentile per-packet one-way delay: 87.903 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 576.37 Mbit/s
95th percentile per-packet one-way delay: 87.903 ms
Loss rate: 0.81%
```

Run 7: Report of PCC — Data Link



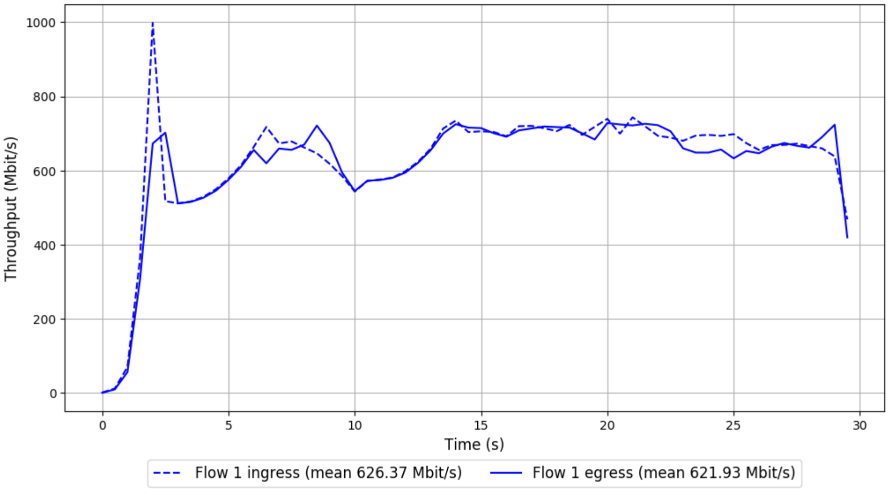


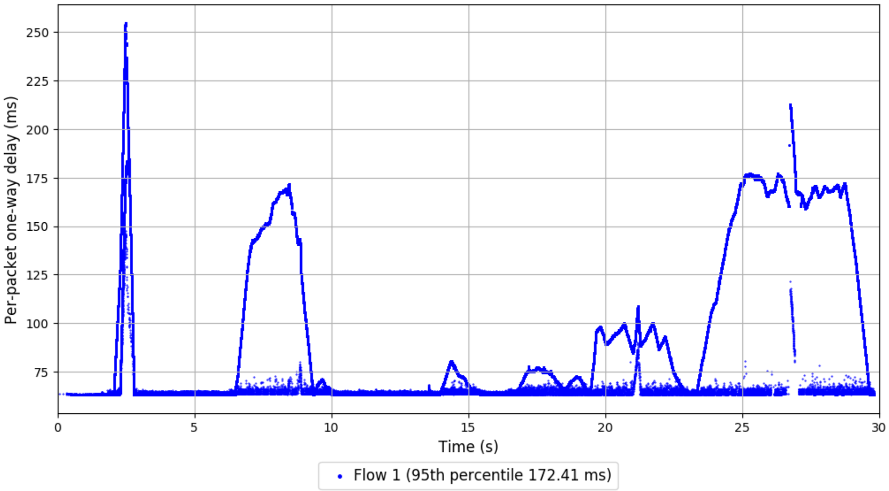
```
Run 8: Statistics of PCC

Start at: 2017-09-18 09:50:02
End at: 2017-09-18 09:50:32

# Below is generated by plot.py at 2017-09-18 13:01:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 621.93 Mbit/s
95th percentile per-packet one-way delay: 172.408 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 621.93 Mbit/s
95th percentile per-packet one-way delay: 172.408 ms
Loss rate: 1.13%
```

Run 8: Report of PCC — Data Link



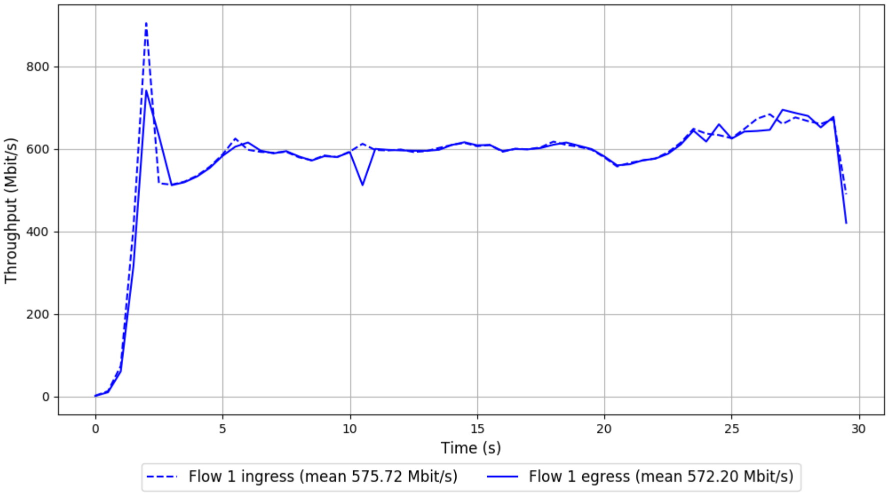


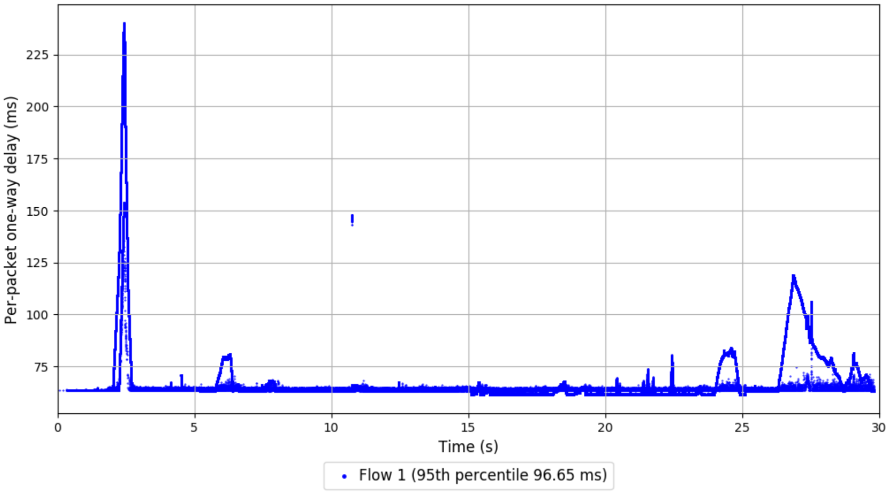
```
Run 9: Statistics of PCC

Start at: 2017-09-18 10:01:43
End at: 2017-09-18 10:02:13

# Below is generated by plot.py at 2017-09-18 13:08:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 572.20 Mbit/s
95th percentile per-packet one-way delay: 96.650 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 572.20 Mbit/s
95th percentile per-packet one-way delay: 96.650 ms
Loss rate: 1.04%
```

Run 9: Report of PCC — Data Link



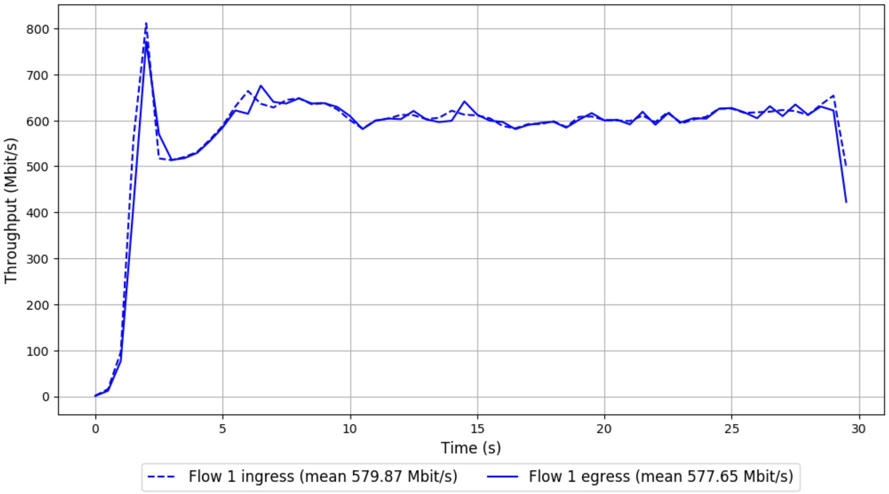


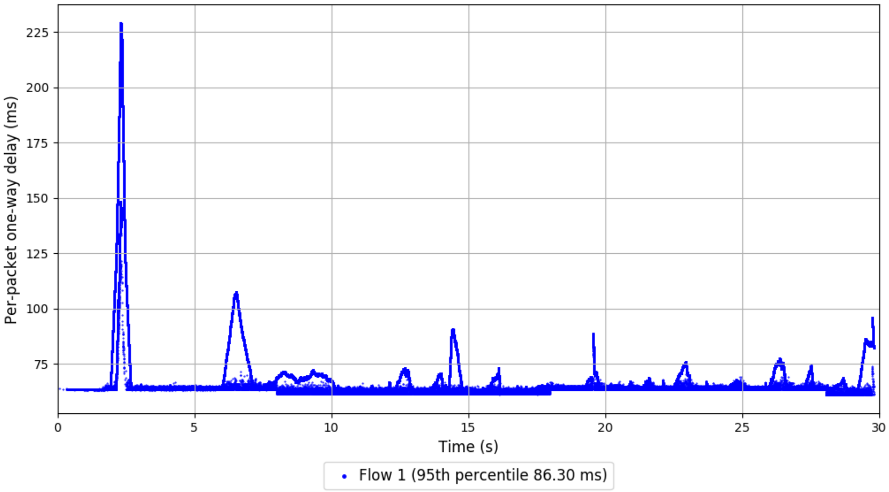
```
Run 10: Statistics of PCC

Start at: 2017-09-18 10:13:23
End at: 2017-09-18 10:13:53

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 577.65 Mbit/s
95th percentile per-packet one-way delay: 86.297 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 577.65 Mbit/s
95th percentile per-packet one-way delay: 86.297 ms
Loss rate: 0.81%
```

Run 10: Report of PCC — Data Link



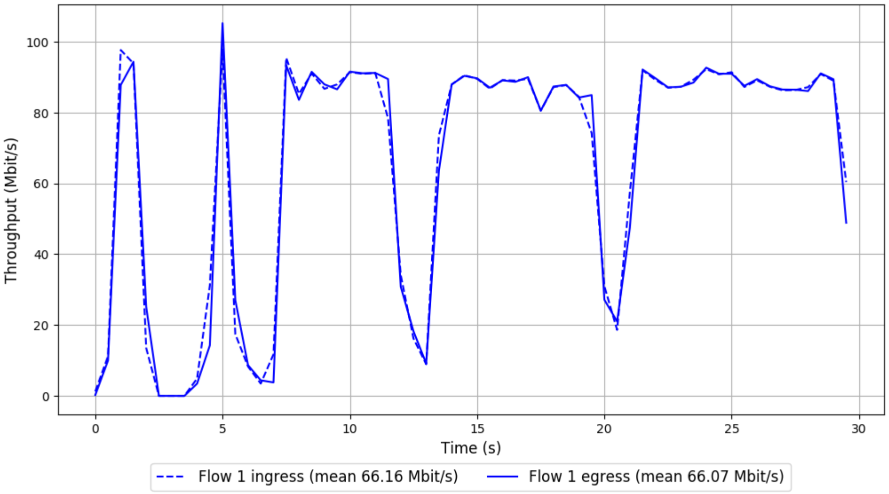


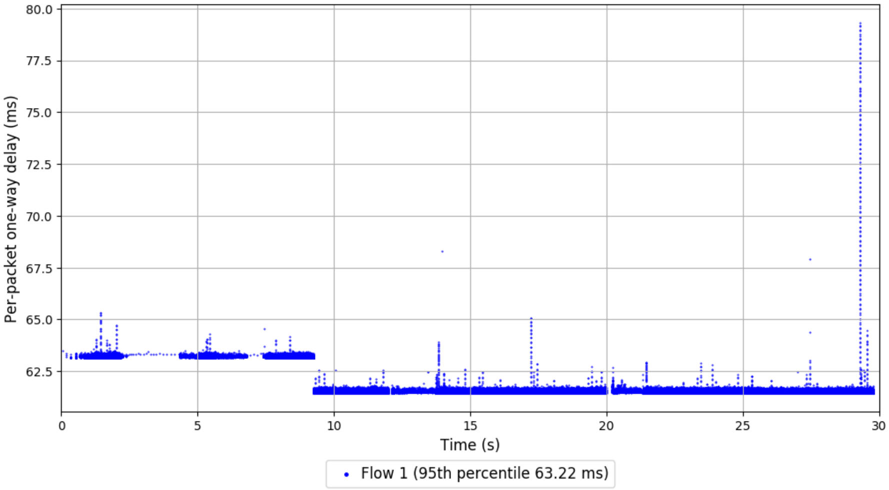
```
Run 1: Statistics of QUIC Cubic

Start at: 2017-09-18 08:23:41
End at: 2017-09-18 08:24:11

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.07 Mbit/s
95th percentile per-packet one-way delay: 63.215 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 66.07 Mbit/s
95th percentile per-packet one-way delay: 63.215 ms
Loss rate: 0.56%
```

Run 1: Report of QUIC Cubic — Data Link



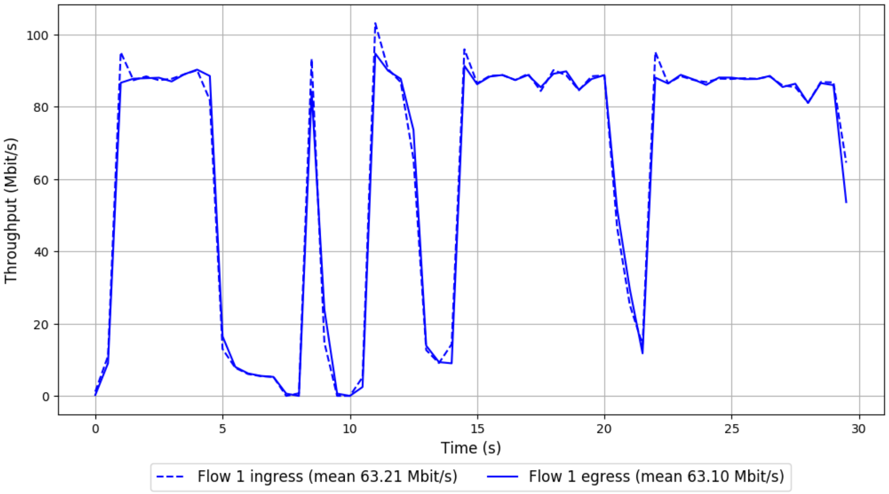


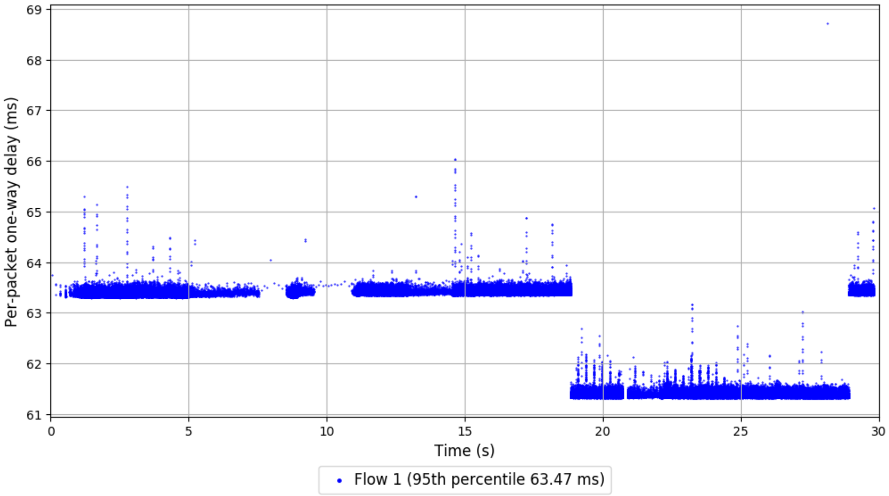
```
Run 2: Statistics of QUIC Cubic

Start at: 2017-09-18 08:35:09
End at: 2017-09-18 08:35:39

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.10 Mbit/s
95th percentile per-packet one-way delay: 63.473 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 63.10 Mbit/s
95th percentile per-packet one-way delay: 63.473 ms
Loss rate: 0.59%
```

Run 2: Report of QUIC Cubic — Data Link



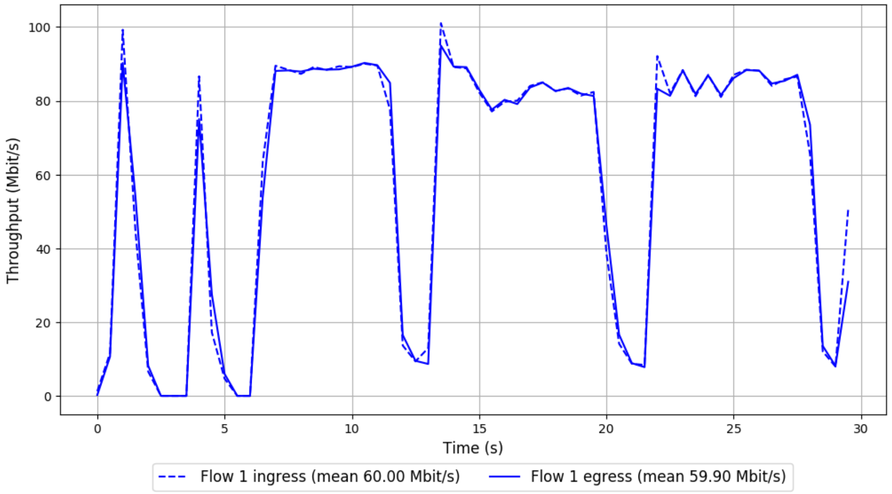


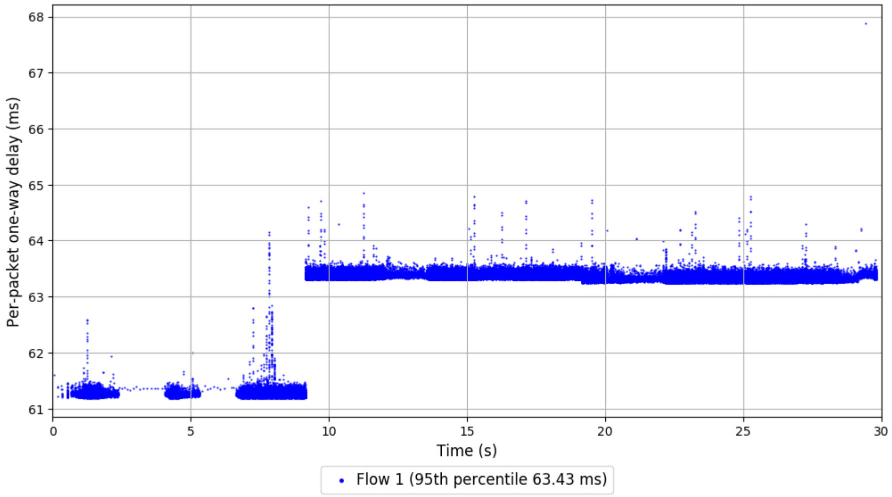
```
Run 3: Statistics of QUIC Cubic

Start at: 2017-09-18 08:46:41
End at: 2017-09-18 08:47:11

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.90 Mbit/s
95th percentile per-packet one-way delay: 63.431 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 59.90 Mbit/s
95th percentile per-packet one-way delay: 63.431 ms
Loss rate: 0.58%
```

Run 3: Report of QUIC Cubic — Data Link



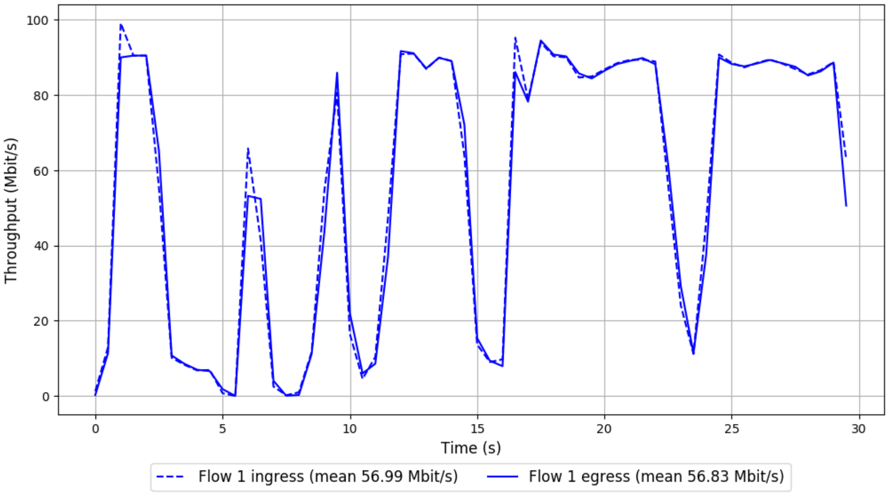


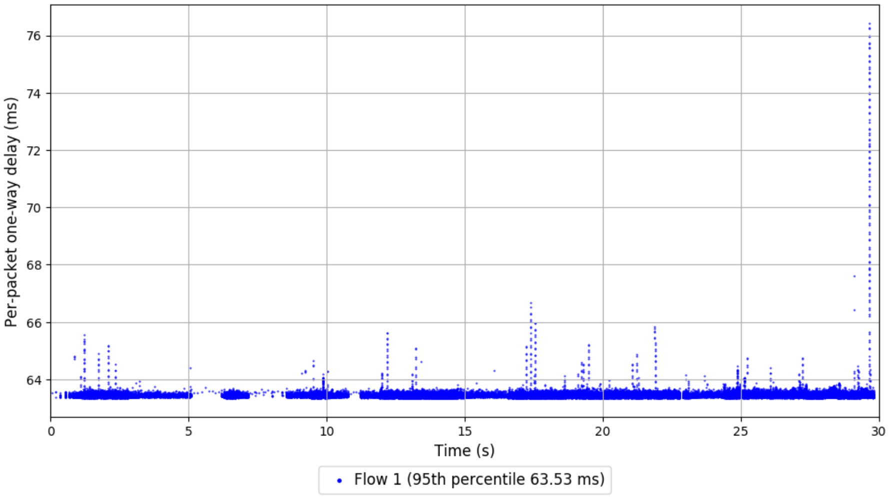
```
Run 4: Statistics of QUIC Cubic

Start at: 2017-09-18 08:58:03
End at: 2017-09-18 08:58:33

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 56.83 Mbit/s
95th percentile per-packet one-way delay: 63.529 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 56.83 Mbit/s
95th percentile per-packet one-way delay: 63.529 ms
Loss rate: 0.69%
```

Run 4: Report of QUIC Cubic — Data Link



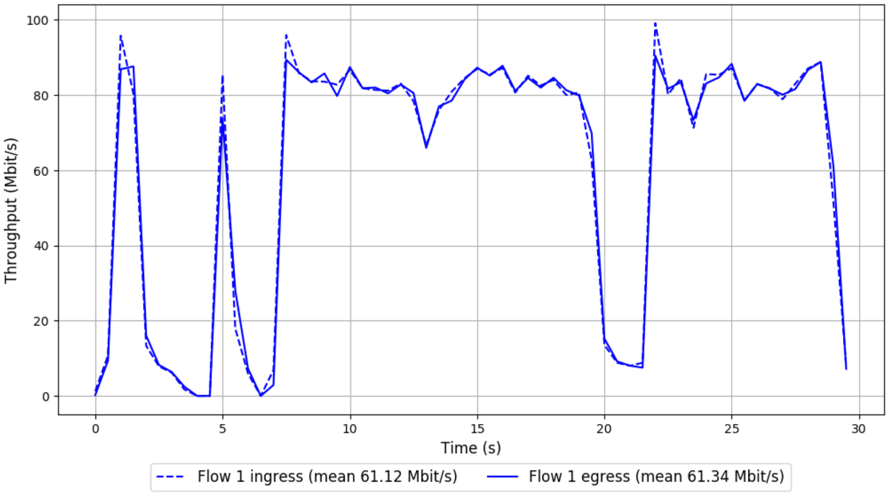


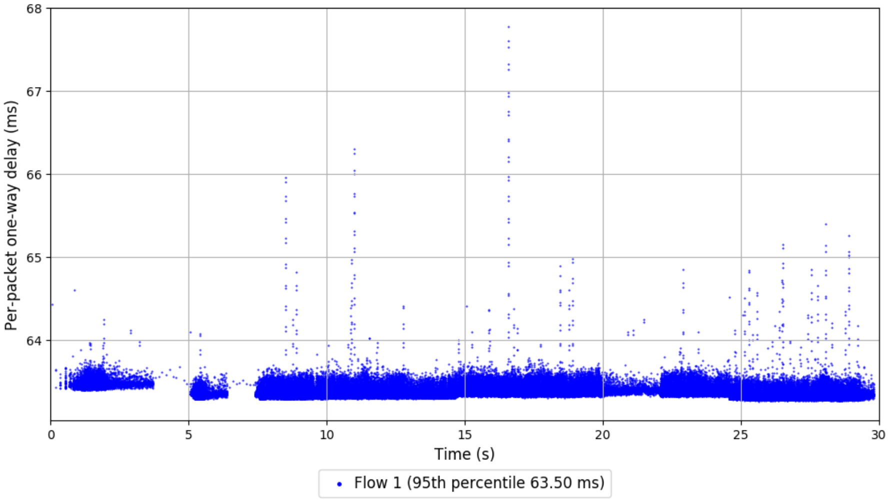
```
Run 5: Statistics of QUIC Cubic

Start at: 2017-09-18 09:09:34
End at: 2017-09-18 09:10:04

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.34 Mbit/s
95th percentile per-packet one-way delay: 63.504 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 61.34 Mbit/s
95th percentile per-packet one-way delay: 63.504 ms
Loss rate: 0.06%
```

Run 5: Report of QUIC Cubic — Data Link



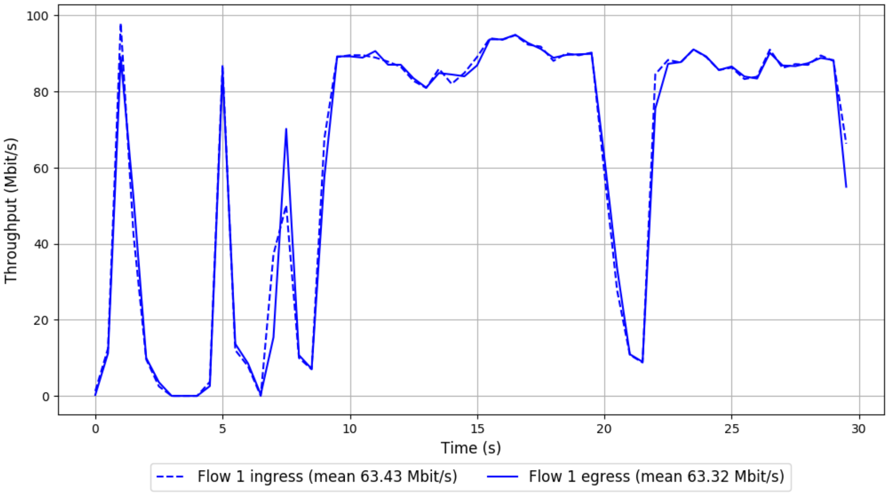


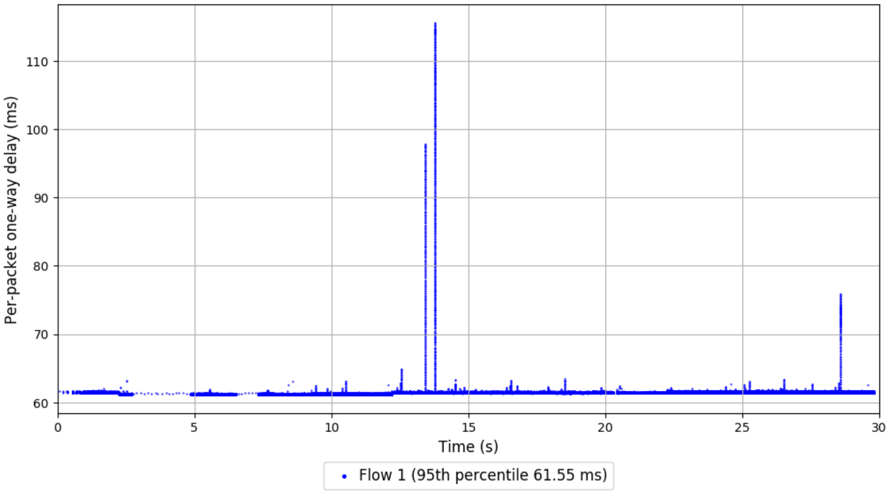
```
Run 6: Statistics of QUIC Cubic

Start at: 2017-09-18 09:21:06
End at: 2017-09-18 09:21:36

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.32 Mbit/s
95th percentile per-packet one-way delay: 61.547 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 63.32 Mbit/s
95th percentile per-packet one-way delay: 61.547 ms
Loss rate: 0.59%
```

Run 6: Report of QUIC Cubic — Data Link



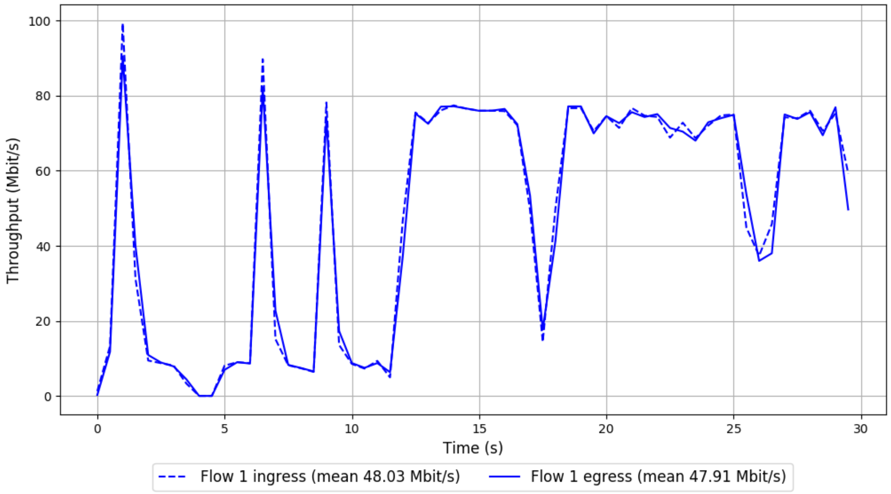


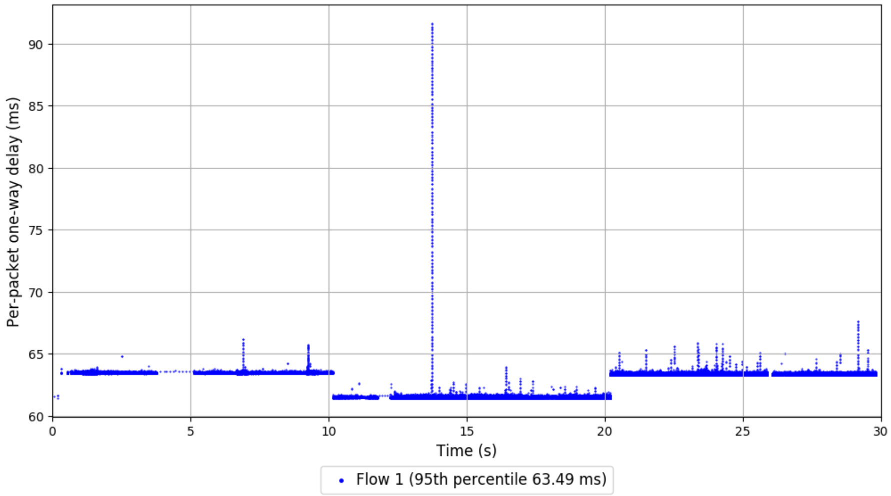
```
Run 7: Statistics of QUIC Cubic

Start at: 2017-09-18 09:32:38
End at: 2017-09-18 09:33:08

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.91 Mbit/s
95th percentile per-packet one-way delay: 63.487 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 47.91 Mbit/s
95th percentile per-packet one-way delay: 63.487 ms
Loss rate: 0.66%
```

Run 7: Report of QUIC Cubic — Data Link



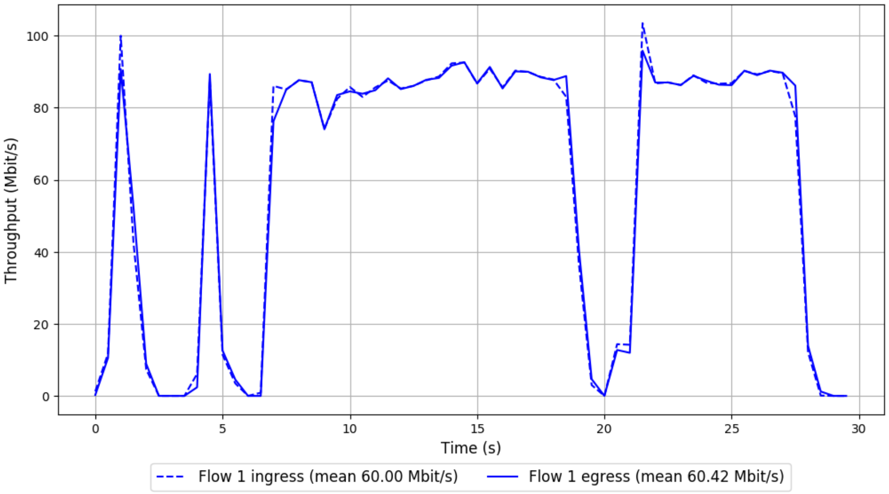


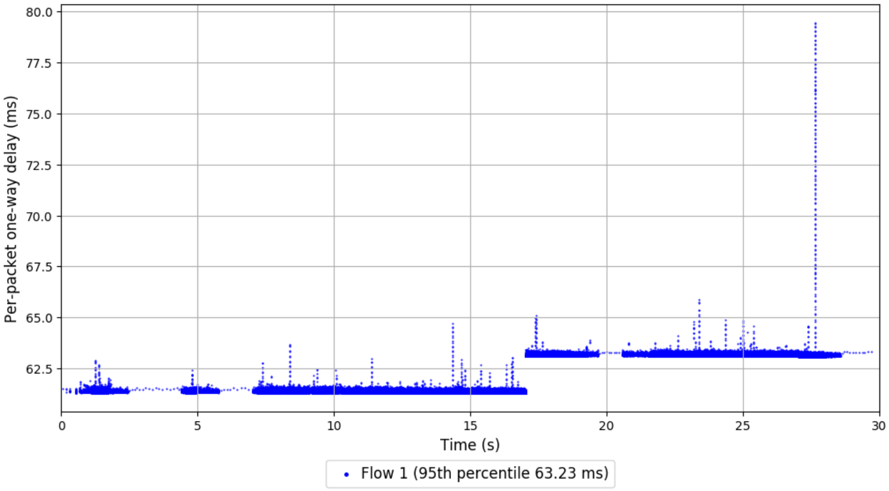
```
Run 8: Statistics of QUIC Cubic

Start at: 2017-09-18 09:44:11
End at: 2017-09-18 09:44:41

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.42 Mbit/s
95th percentile per-packet one-way delay: 63.229 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.42 Mbit/s
95th percentile per-packet one-way delay: 63.229 ms
Loss rate: 0.00%
```

Run 8: Report of QUIC Cubic — Data Link



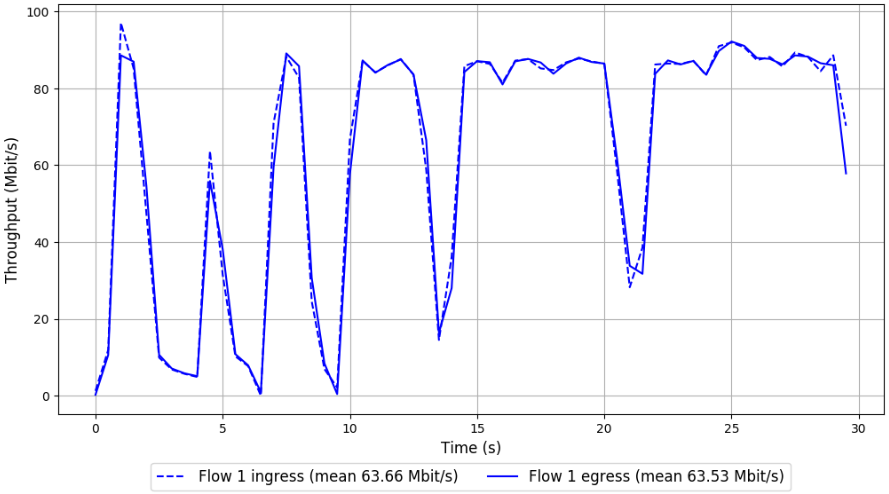


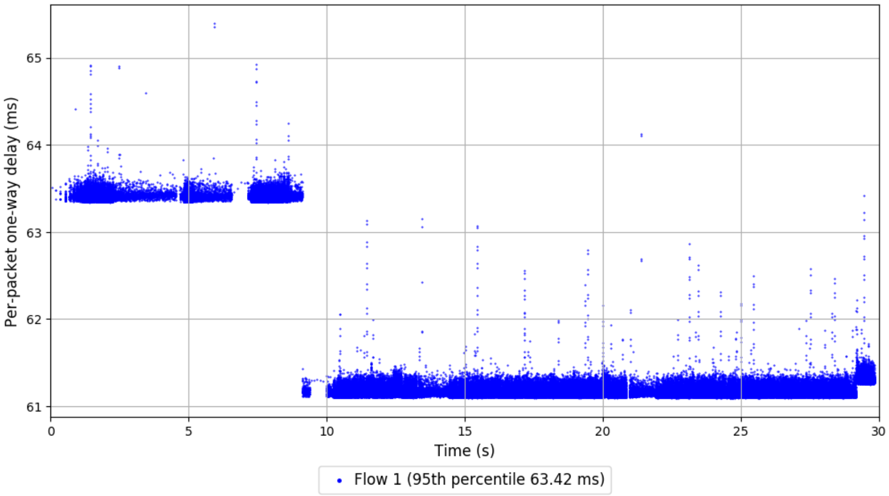
```
Run 9: Statistics of QUIC Cubic

Start at: 2017-09-18 09:55:49
End at: 2017-09-18 09:56:19

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.53 Mbit/s
95th percentile per-packet one-way delay: 63.423 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 63.53 Mbit/s
95th percentile per-packet one-way delay: 63.423 ms
Loss rate: 0.63%
```

Run 9: Report of QUIC Cubic — Data Link



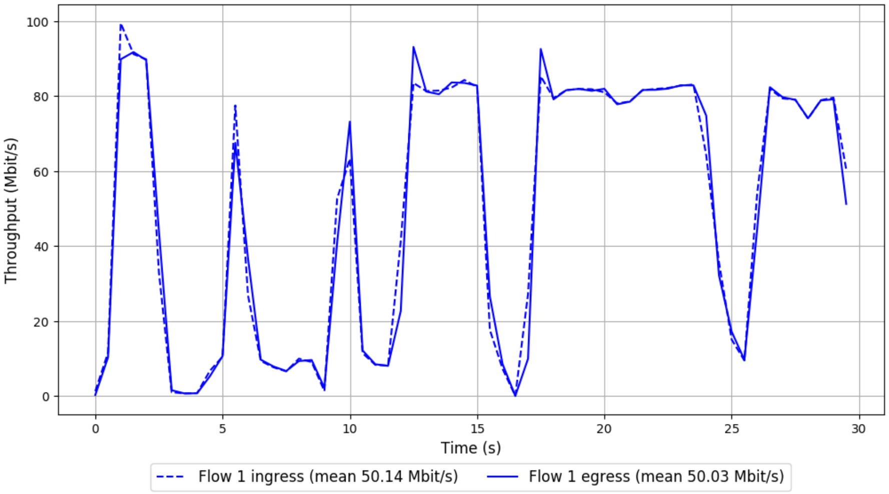


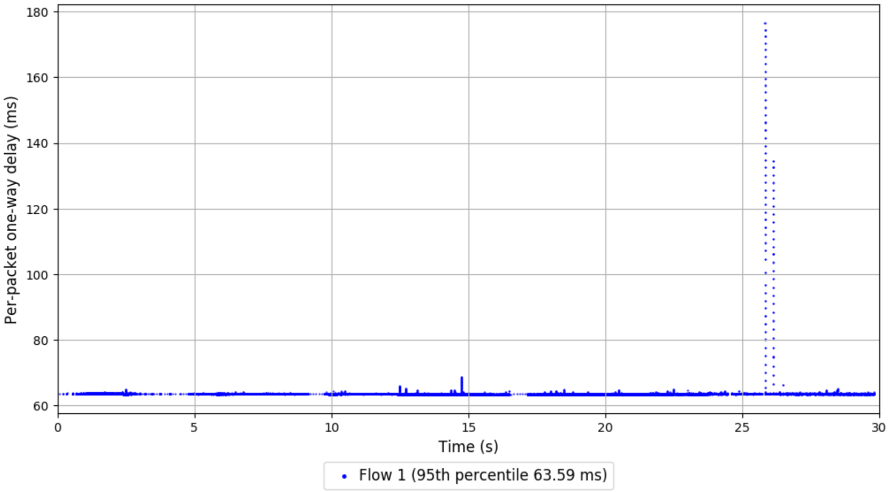
```
Run 10: Statistics of QUIC Cubic

Start at: 2017-09-18 10:07:18
End at: 2017-09-18 10:07:48

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.03 Mbit/s
95th percentile per-packet one-way delay: 63.585 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 50.03 Mbit/s
95th percentile per-packet one-way delay: 63.585 ms
Loss rate: 0.65%
```

Run 10: Report of QUIC Cubic — Data Link



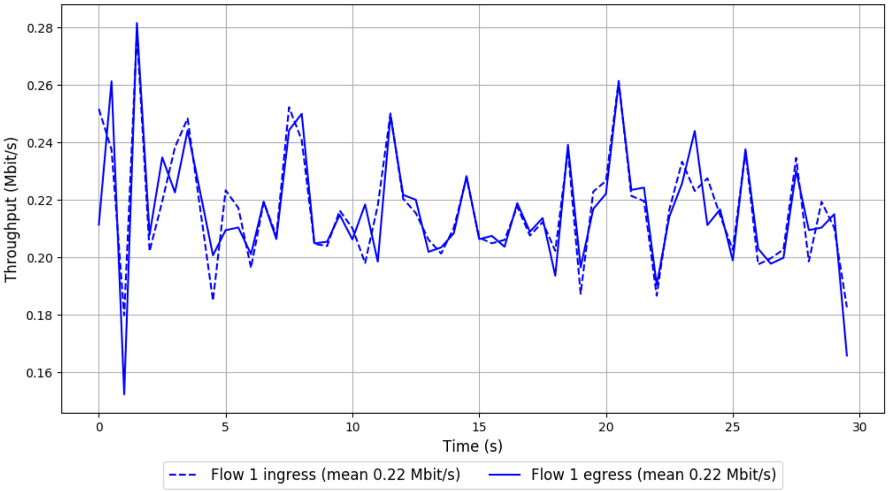


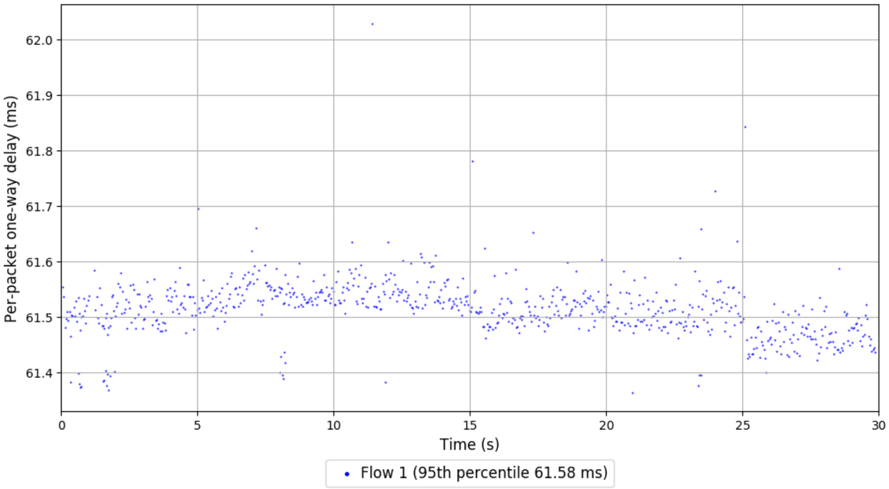
```
Run 1: Statistics of SCReAM

Start at: 2017-09-18 08:28:56
End at: 2017-09-18 08:29:26

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.583 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.583 ms
Loss rate: 0.38%
```

Run 1: Report of SCReAM — Data Link



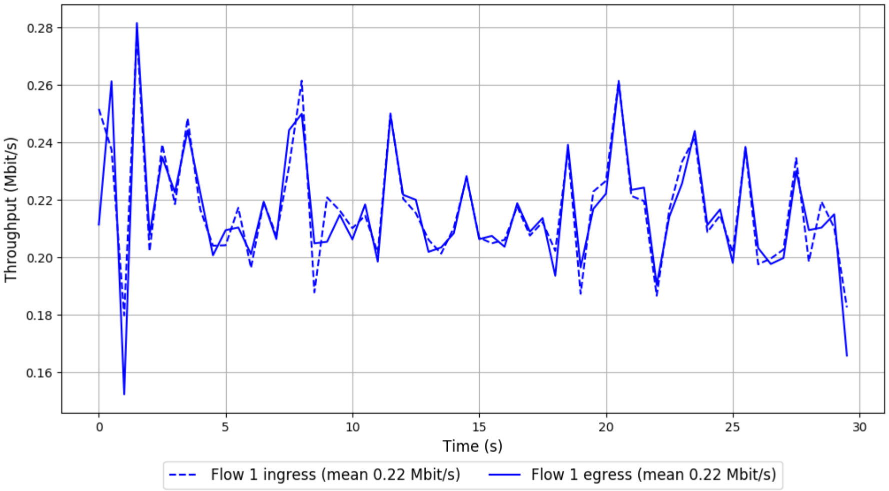


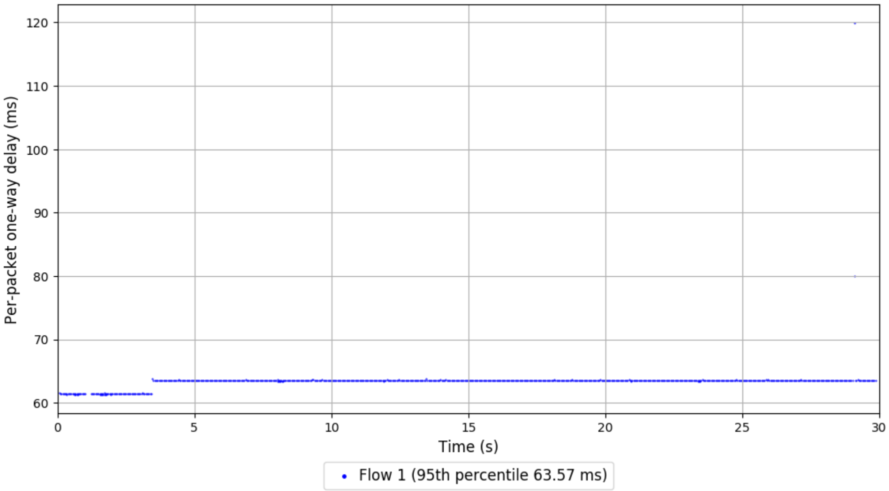
```
Run 2: Statistics of SCReAM

Start at: 2017-09-18 08:40:25
End at: 2017-09-18 08:40:55

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.574 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.574 ms
Loss rate: 0.38%
```

Run 2: Report of SCReAM — Data Link



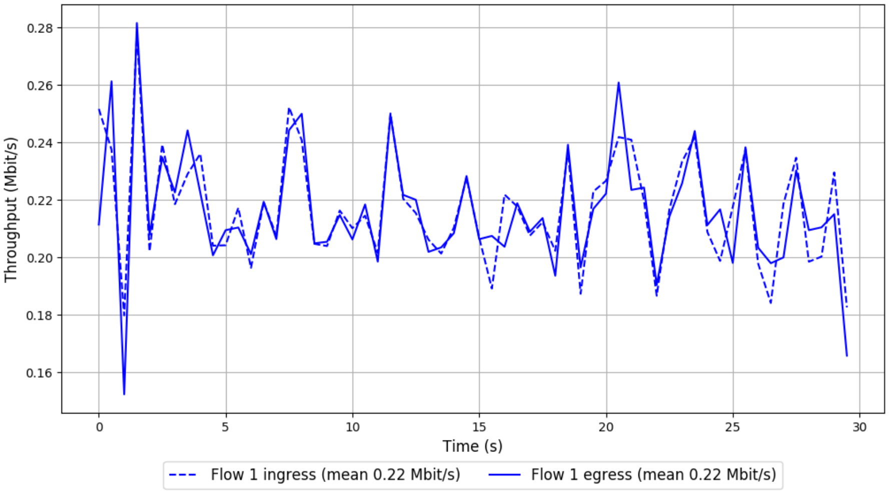


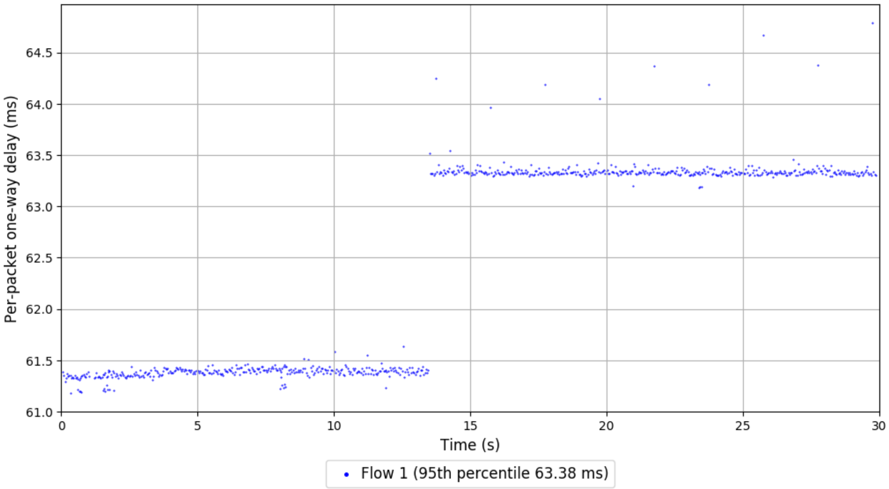
```
Run 3: Statistics of SCReAM

Start at: 2017-09-18 08:51:55
End at: 2017-09-18 08:52:25

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.379 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.379 ms
Loss rate: 0.38%
```

Run 3: Report of SCReAM — Data Link



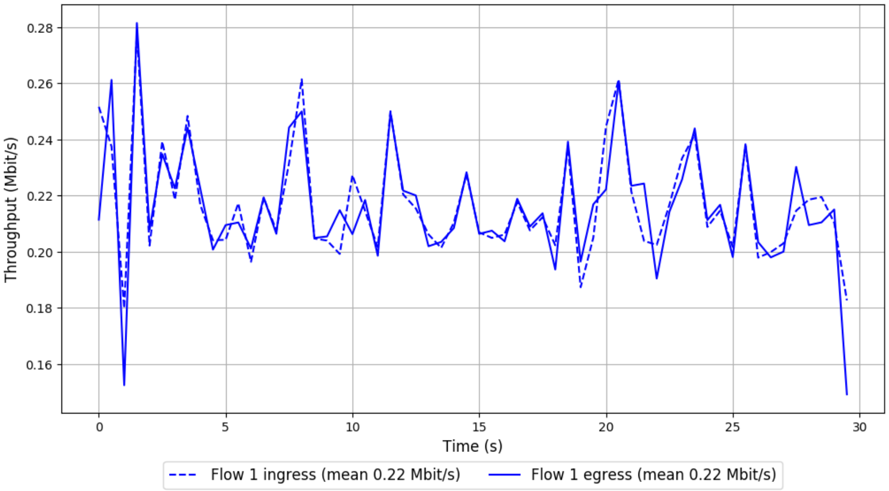


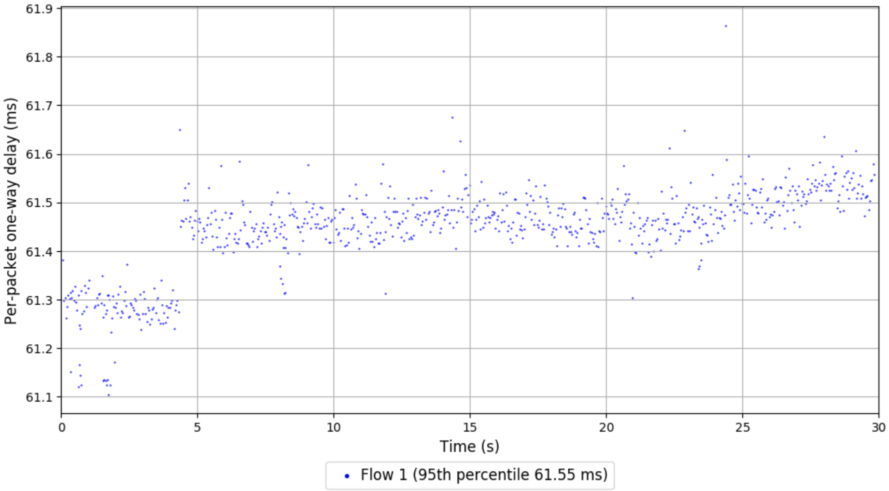
```
Run 4: Statistics of SCReAM

Start at: 2017-09-18 09:03:16
End at: 2017-09-18 09:03:46

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.547 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.547 ms
Loss rate: 0.51%
```

Run 4: Report of SCReAM — Data Link



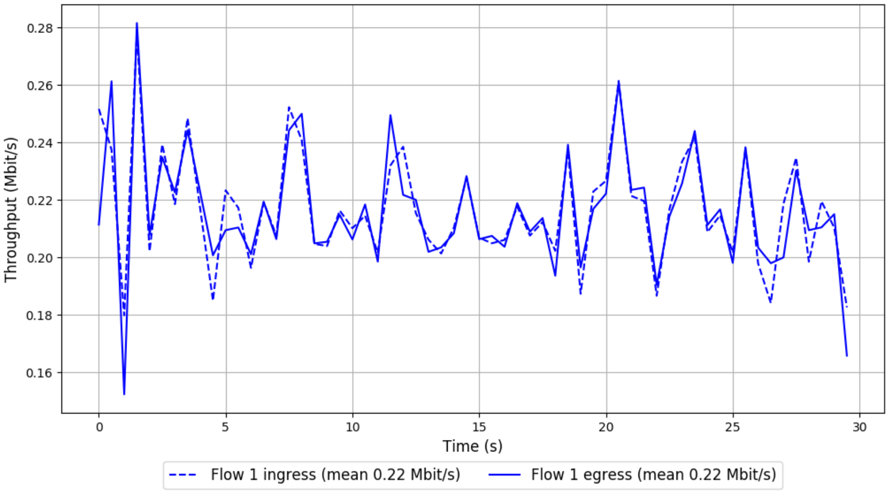


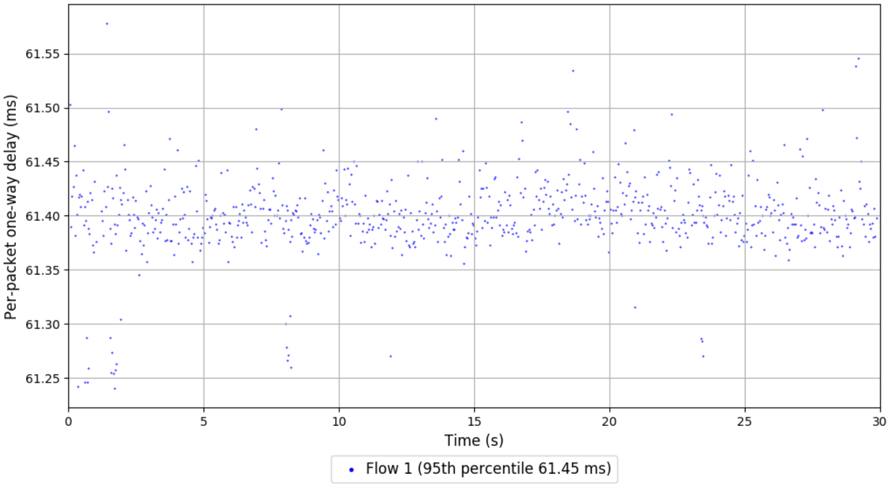
```
Run 5: Statistics of SCReAM

Start at: 2017-09-18 09:14:43
End at: 2017-09-18 09:15:13

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.450 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.450 ms
Loss rate: 0.38%
```

Run 5: Report of SCReAM — Data Link



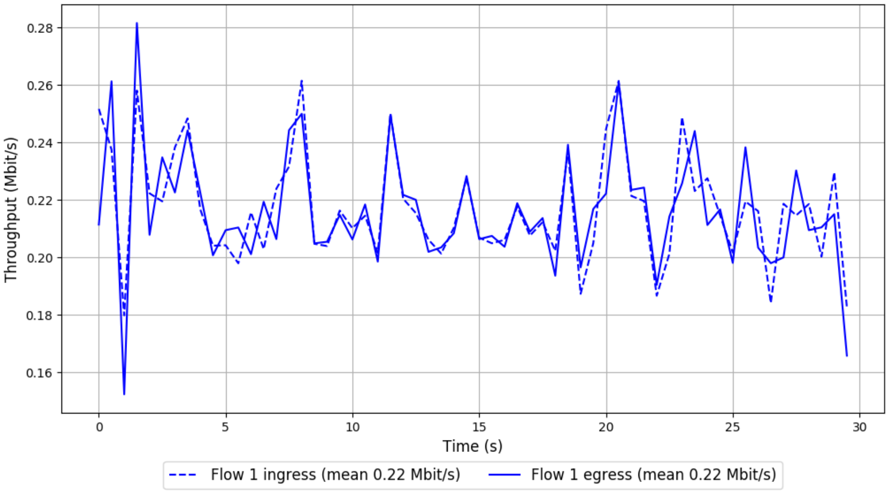


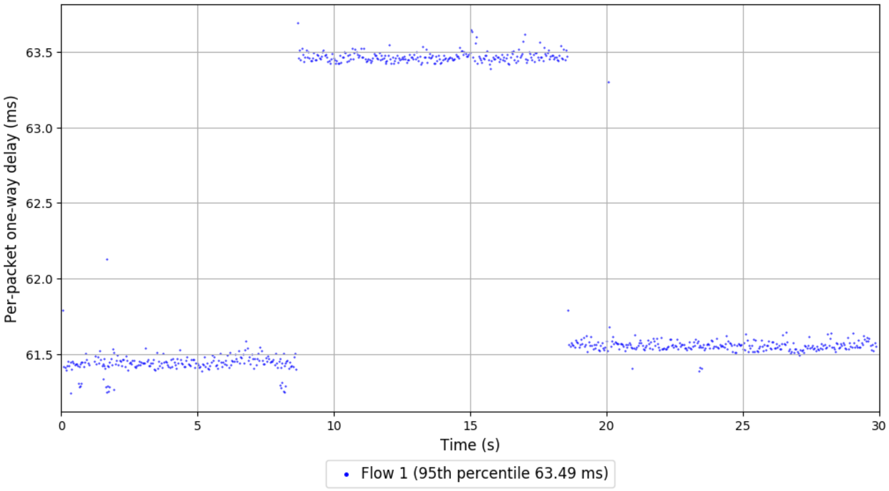
```
Run 6: Statistics of SCReAM

Start at: 2017-09-18 09:26:20
End at: 2017-09-18 09:26:50

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.494 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.494 ms
Loss rate: 0.38%
```

Run 6: Report of SCReAM — Data Link



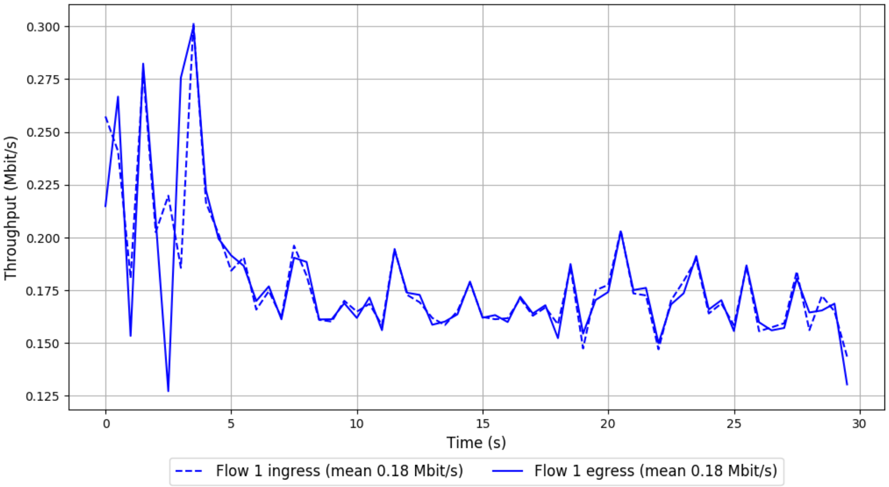


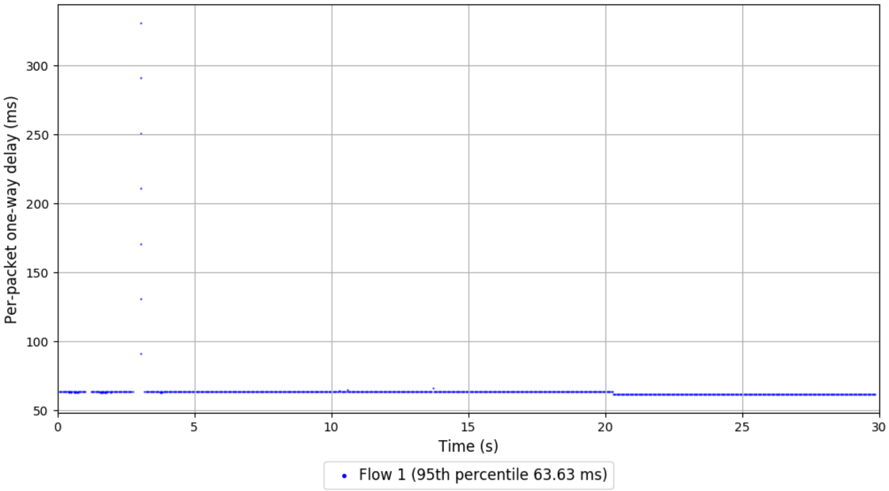
```
Run 7: Statistics of SCReAM

Start at: 2017-09-18 09:37:50
End at: 2017-09-18 09:38:20

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 63.633 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 63.633 ms
Loss rate: 0.36%
```

Run 7: Report of SCReAM — Data Link



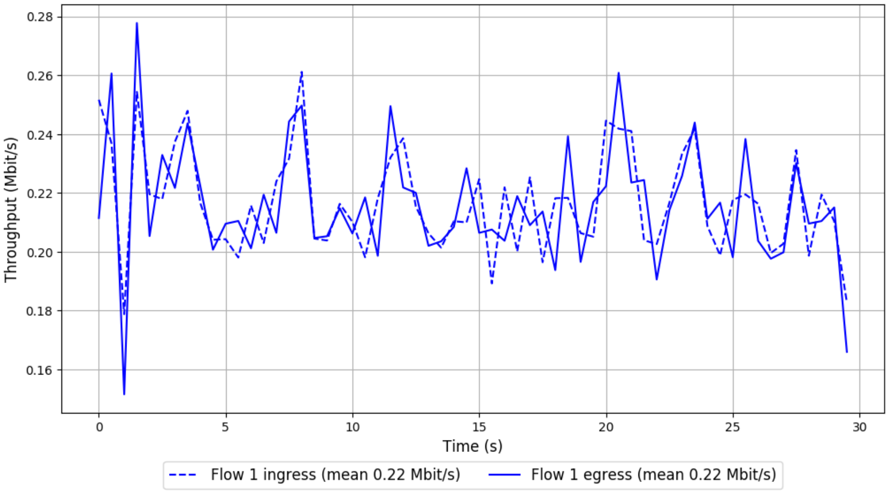


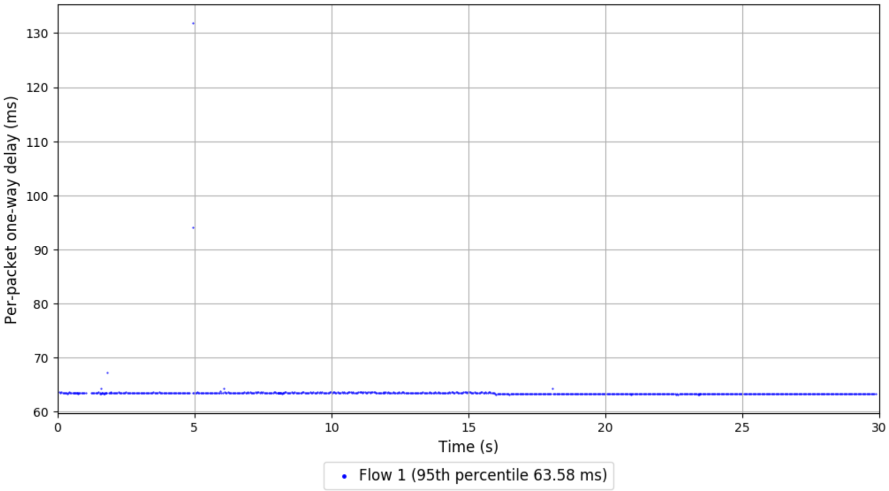
```
Run 8: Statistics of SCReAM

Start at: 2017-09-18 09:49:25
End at: 2017-09-18 09:49:55

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.579 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.579 ms
Loss rate: 0.38%
```

Run 8: Report of SCReAM — Data Link



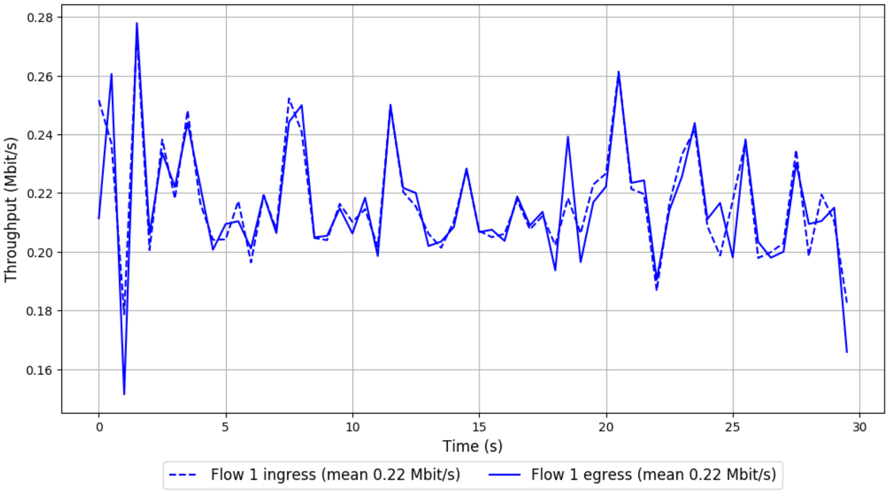


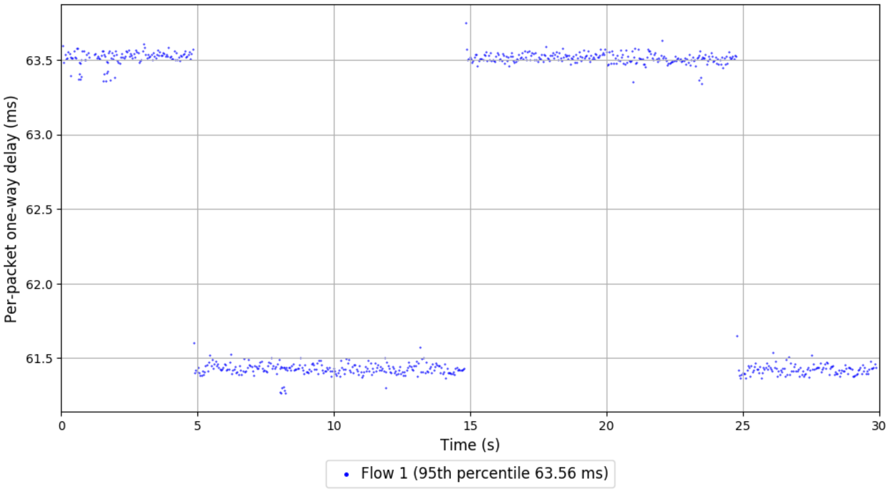
```
Run 9: Statistics of SCReAM

Start at: 2017-09-18 10:01:06
End at: 2017-09-18 10:01:36

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.557 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.557 ms
Loss rate: 0.38%
```

Run 9: Report of SCReAM — Data Link



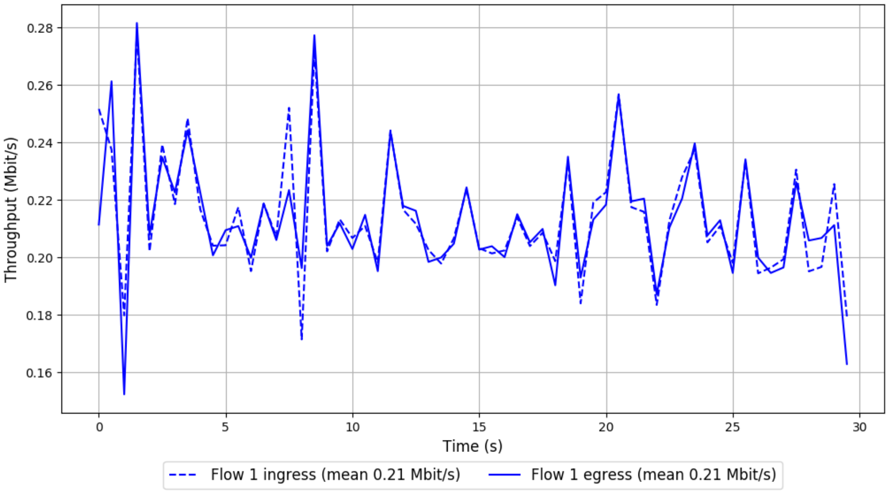


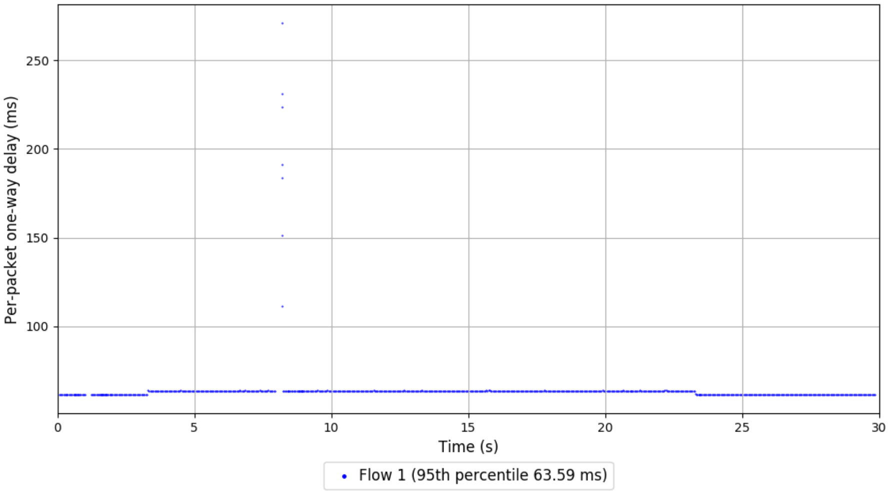
```
Run 10: Statistics of SCReAM

Start at: 2017-09-18 10:12:45
End at: 2017-09-18 10:13:15

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 63.587 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 63.587 ms
Loss rate: 0.38%
```

Run 10: Report of SCReAM — Data Link



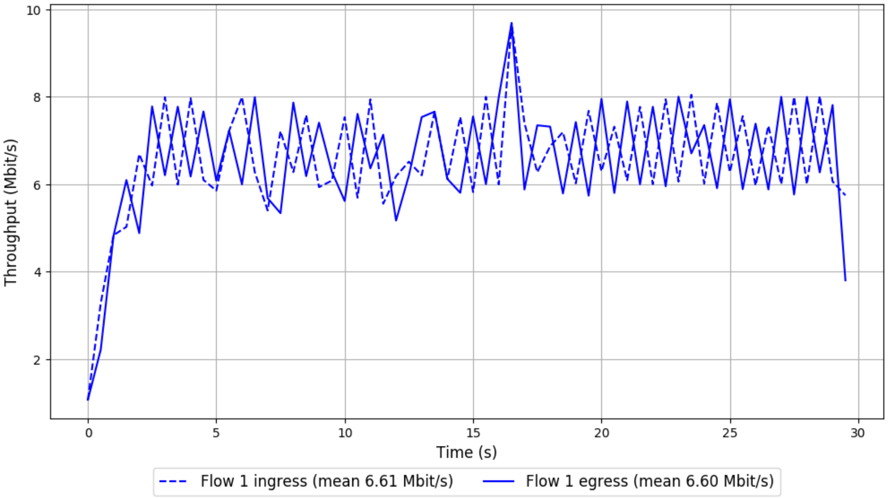


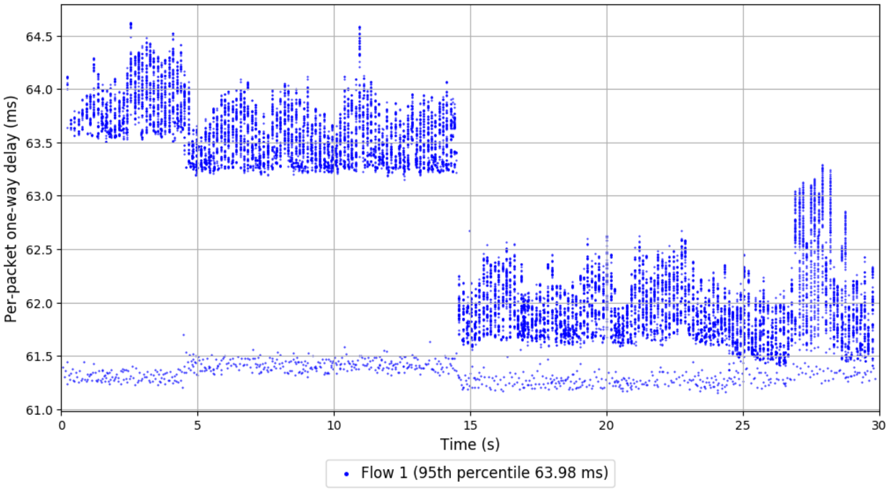
```
Run 1: Statistics of Sprout

Start at: 2017-09-18 08:21:34
End at: 2017-09-18 08:22:04

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 63.977 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 63.977 ms
Loss rate: 0.56%
```

Run 1: Report of Sprout — Data Link



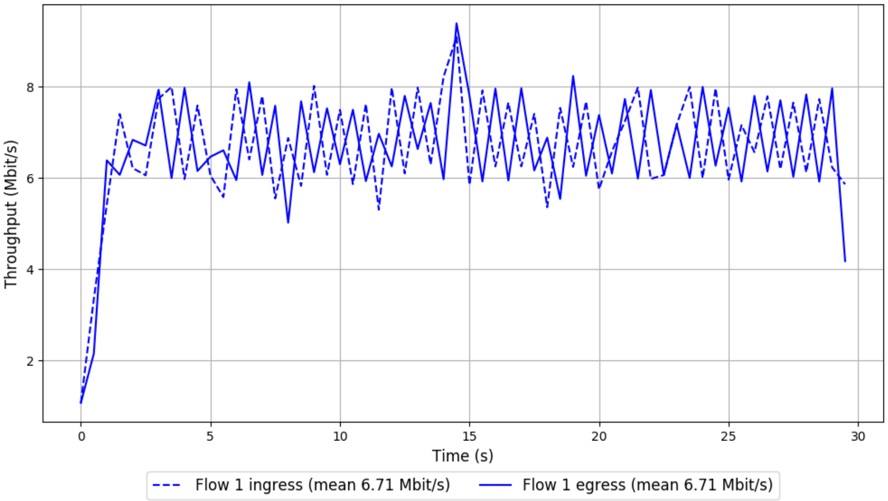


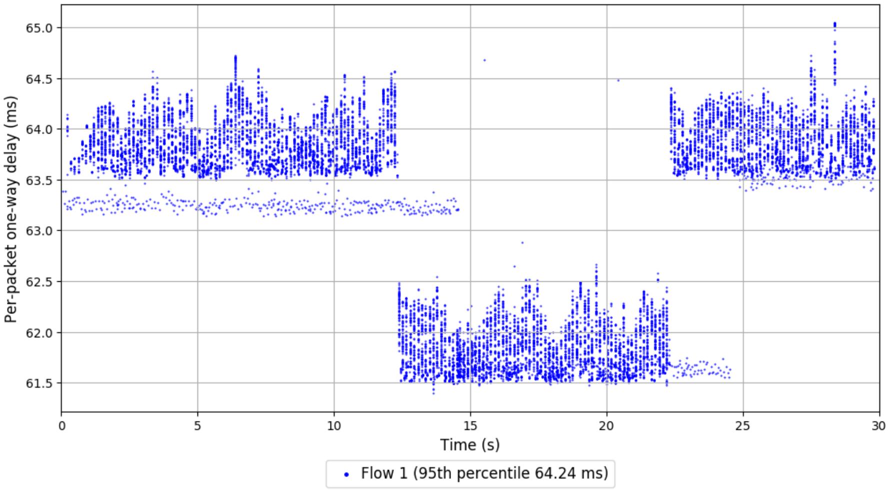
```
Run 2: Statistics of Sprout

Start at: 2017-09-18 08:33:06
End at: 2017-09-18 08:33:36

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.71 Mbit/s
95th percentile per-packet one-way delay: 64.240 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 6.71 Mbit/s
95th percentile per-packet one-way delay: 64.240 ms
Loss rate: 0.53%
```

Run 2: Report of Sprout — Data Link



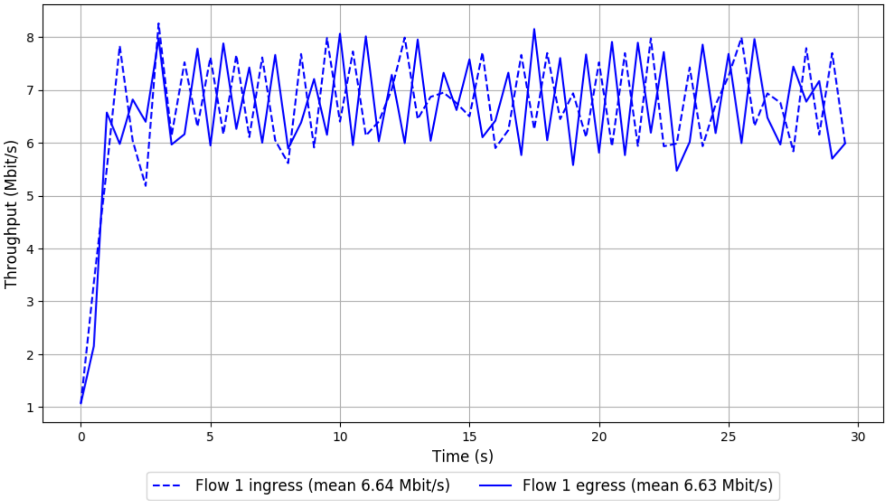


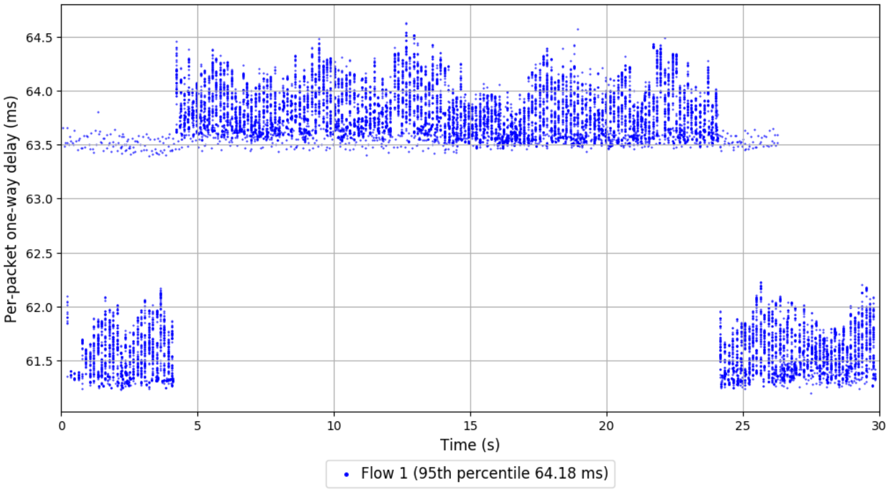
```
Run 3: Statistics of Sprout

Start at: 2017-09-18 08:44:34
End at: 2017-09-18 08:45:04

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 64.177 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 64.177 ms
Loss rate: 0.60%
```

Run 3: Report of Sprout — Data Link



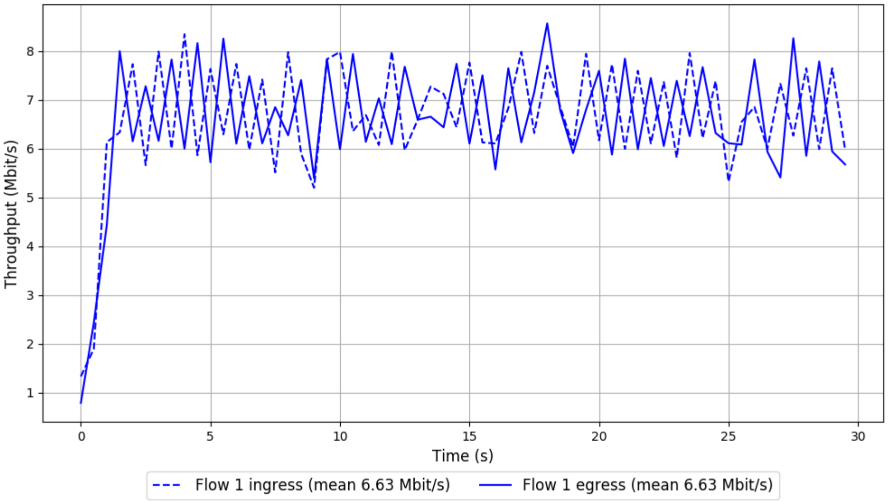


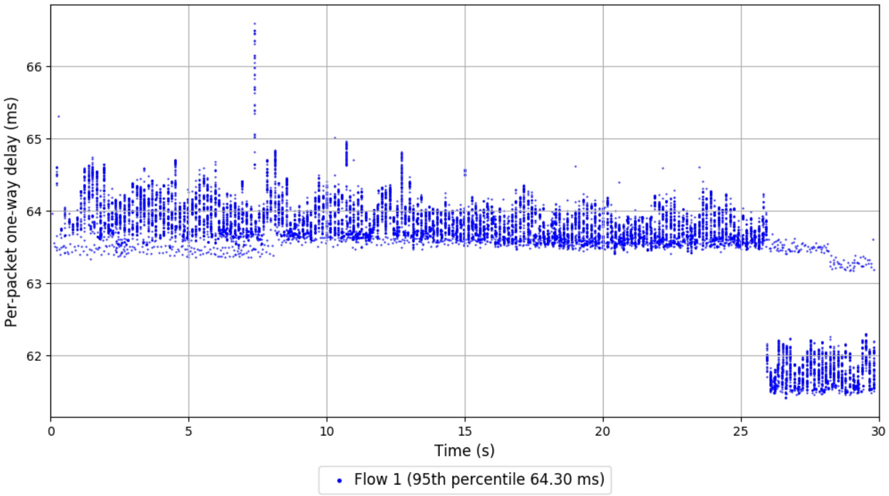
```
Run 4: Statistics of Sprout

Start at: 2017-09-18 08:56:02
End at: 2017-09-18 08:56:32

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 64.301 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 64.301 ms
Loss rate: 0.60%
```

Run 4: Report of Sprout — Data Link



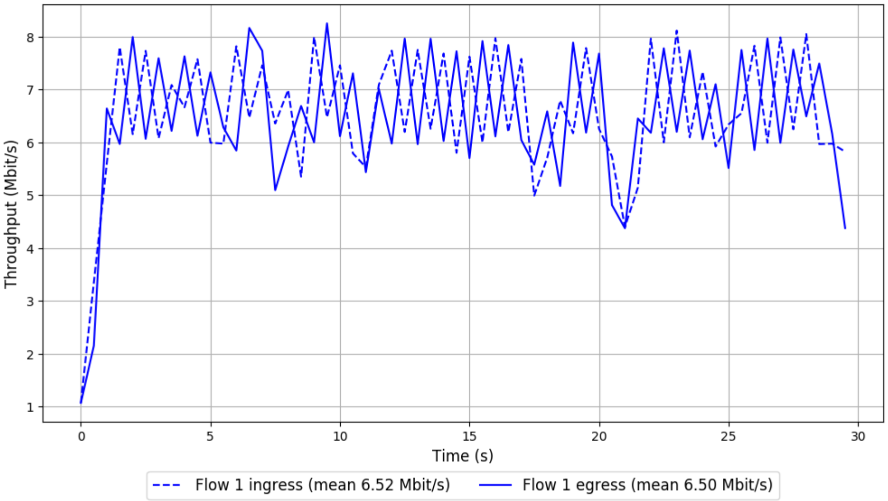


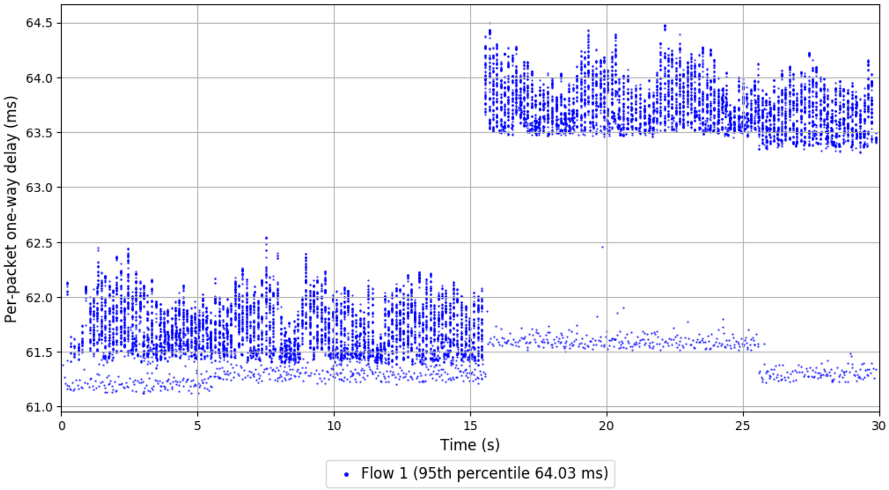
```
Run 5: Statistics of Sprout

Start at: 2017-09-18 09:07:23
End at: 2017-09-18 09:07:53

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 64.033 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 64.033 ms
Loss rate: 0.72%
```

Run 5: Report of Sprout — Data Link



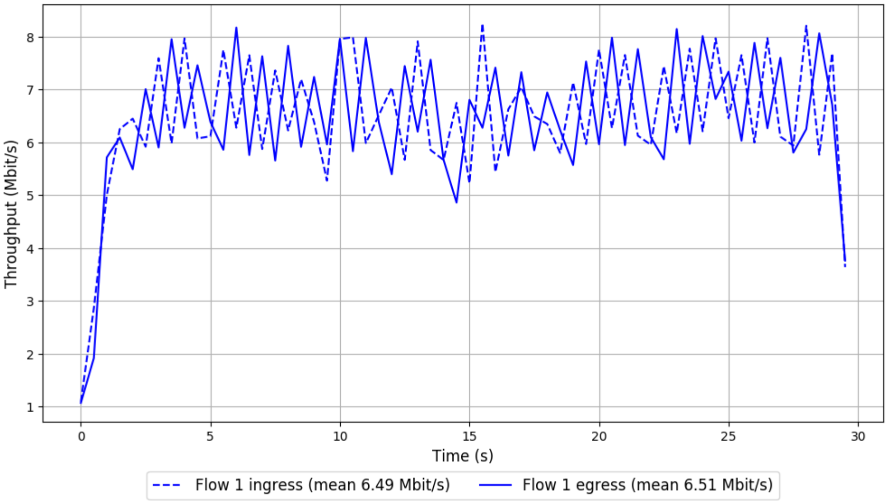


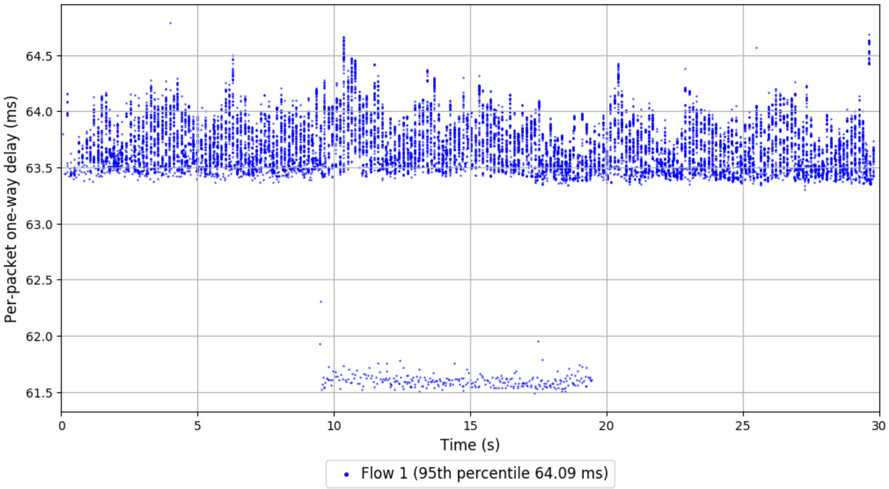
```
Run 6: Statistics of Sprout

Start at: 2017-09-18 09:18:51
End at: 2017-09-18 09:19:21

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.51 Mbit/s
95th percentile per-packet one-way delay: 64.086 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 6.51 Mbit/s
95th percentile per-packet one-way delay: 64.086 ms
Loss rate: 0.34%
```

Run 6: Report of Sprout — Data Link



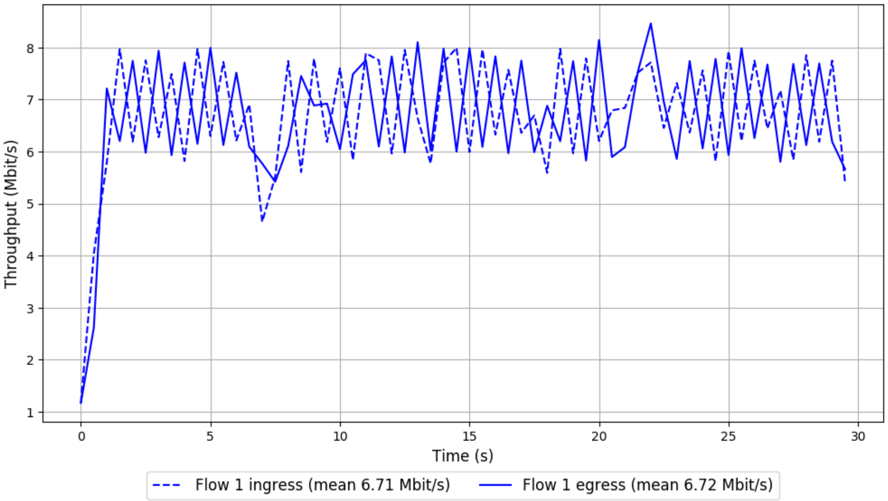


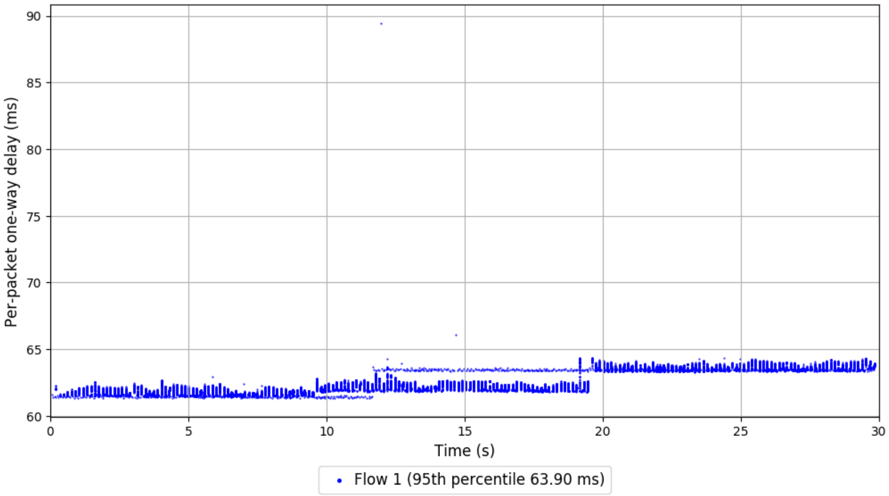
```
Run 7: Statistics of Sprout

Start at: 2017-09-18 09:30:29
End at: 2017-09-18 09:30:59

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.72 Mbit/s
95th percentile per-packet one-way delay: 63.896 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 6.72 Mbit/s
95th percentile per-packet one-way delay: 63.896 ms
Loss rate: 0.38%
```

Run 7: Report of Sprout — Data Link



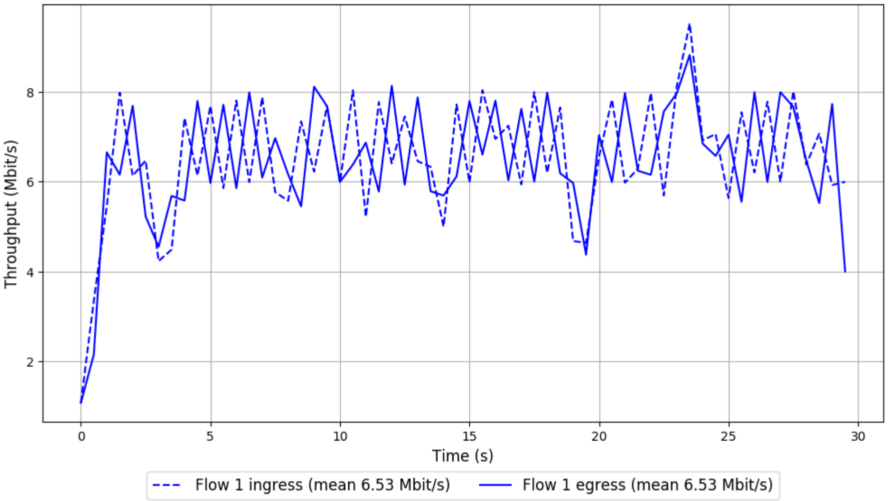


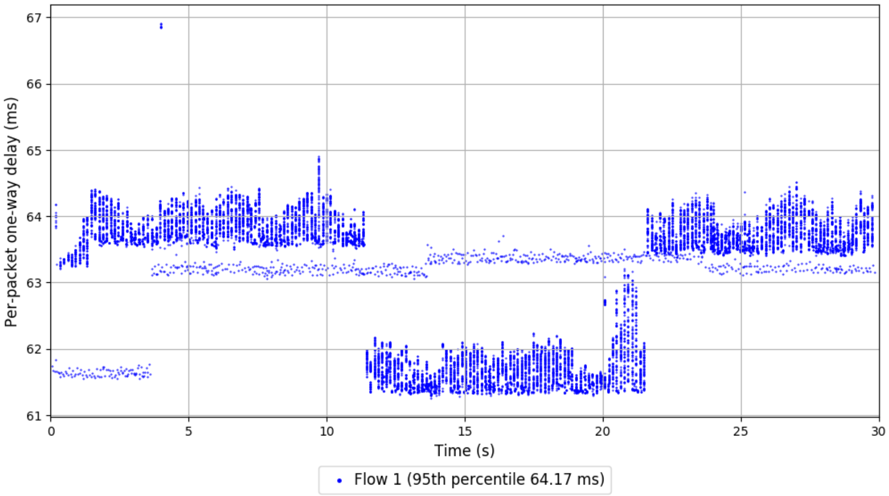
```
Run 8: Statistics of Sprout

Start at: 2017-09-18 09:41:57
End at: 2017-09-18 09:42:27

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 64.168 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 64.168 ms
Loss rate: 0.54%
```

Run 8: Report of Sprout — Data Link



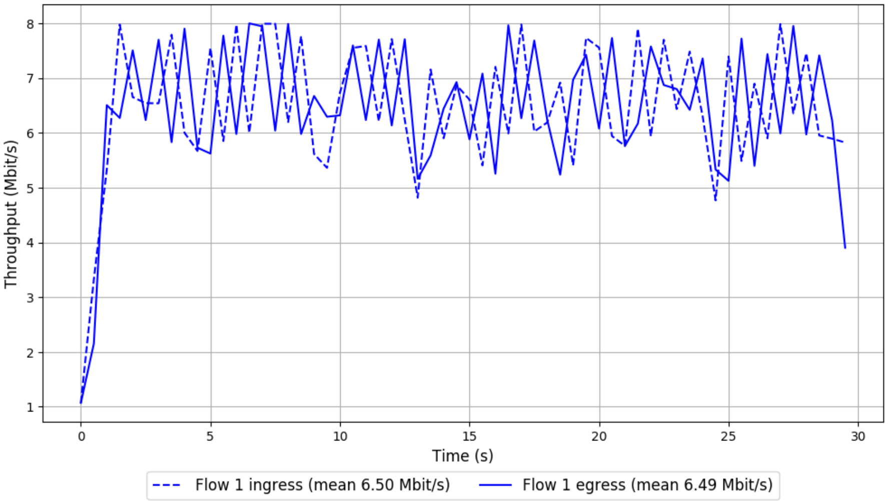


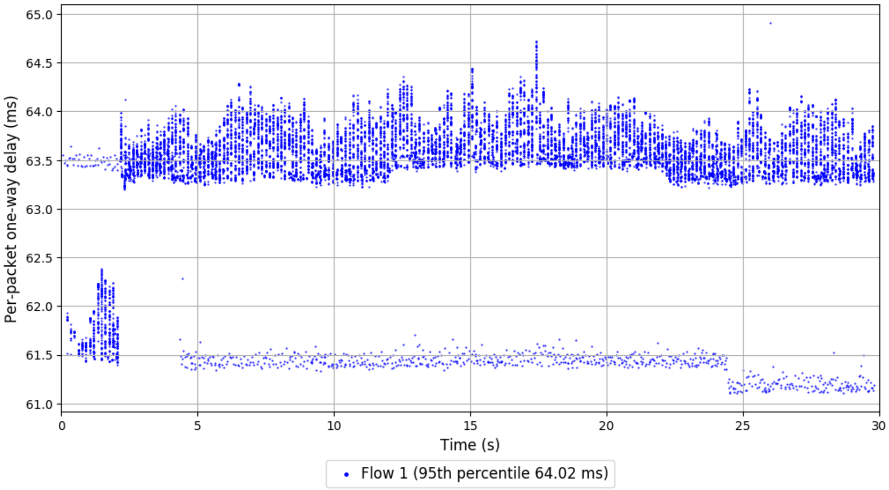
```
Run 9: Statistics of Sprout

Start at: 2017-09-18 09:53:36
End at: 2017-09-18 09:54:06

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 64.018 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 64.018 ms
Loss rate: 0.55%
```

Run 9: Report of Sprout — Data Link



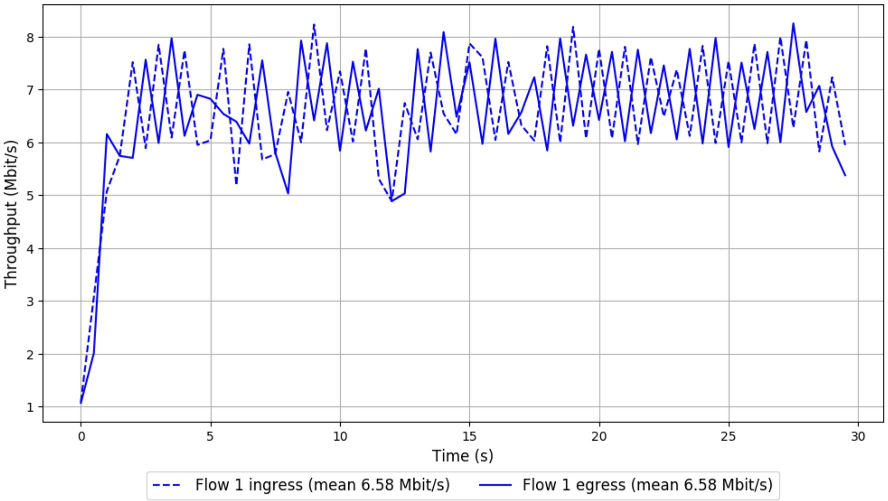


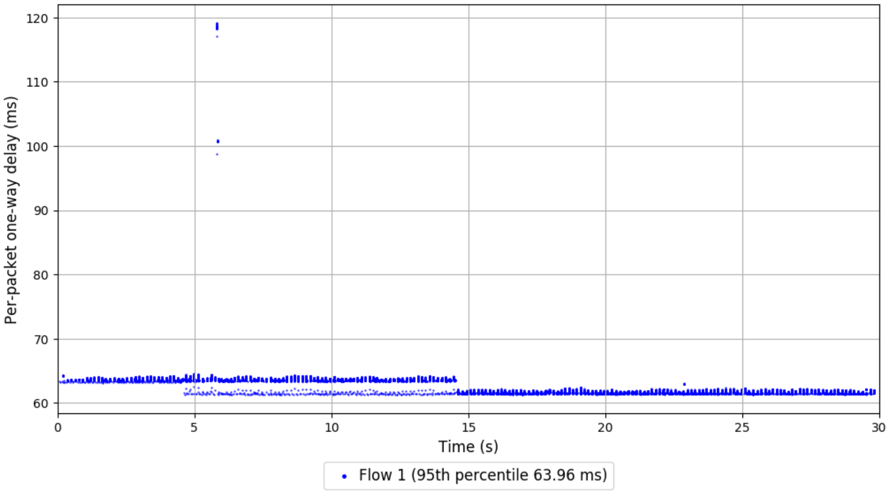
```
Run 10: Statistics of Sprout

Start at: 2017-09-18 10:05:14
End at: 2017-09-18 10:05:44

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.58 Mbit/s
95th percentile per-packet one-way delay: 63.962 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 6.58 Mbit/s
95th percentile per-packet one-way delay: 63.962 ms
Loss rate: 0.51%
```

Run 10: Report of Sprout — Data Link



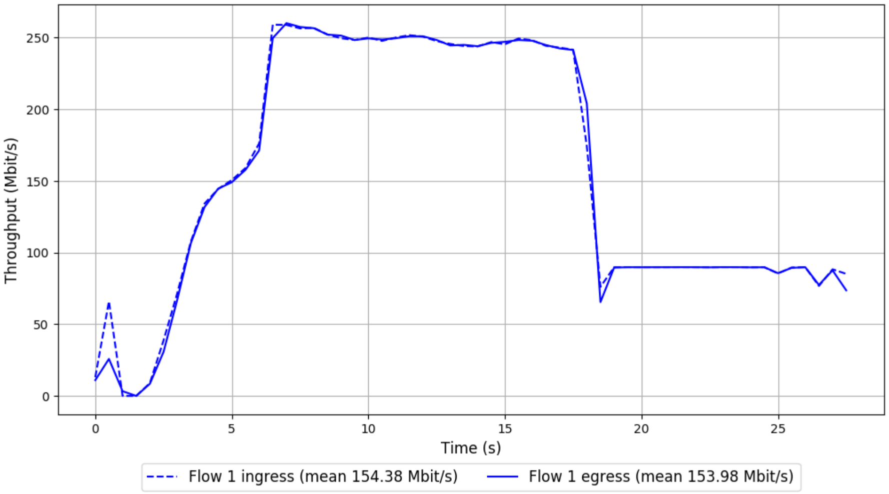


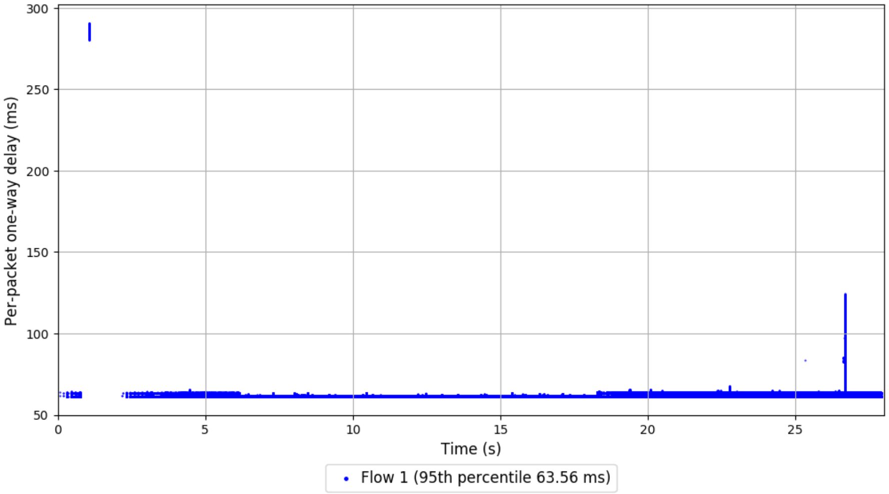
```
Run 1: Statistics of TaoVA-100x

Start at: 2017-09-18 08:22:50
End at: 2017-09-18 08:23:20

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 153.98 Mbit/s
95th percentile per-packet one-way delay: 63.556 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 153.98 Mbit/s
95th percentile per-packet one-way delay: 63.556 ms
Loss rate: 0.71%
```

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



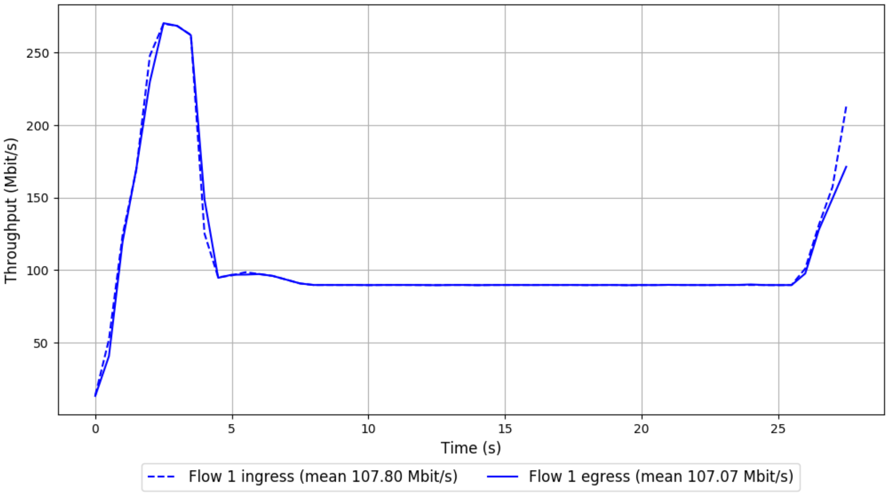


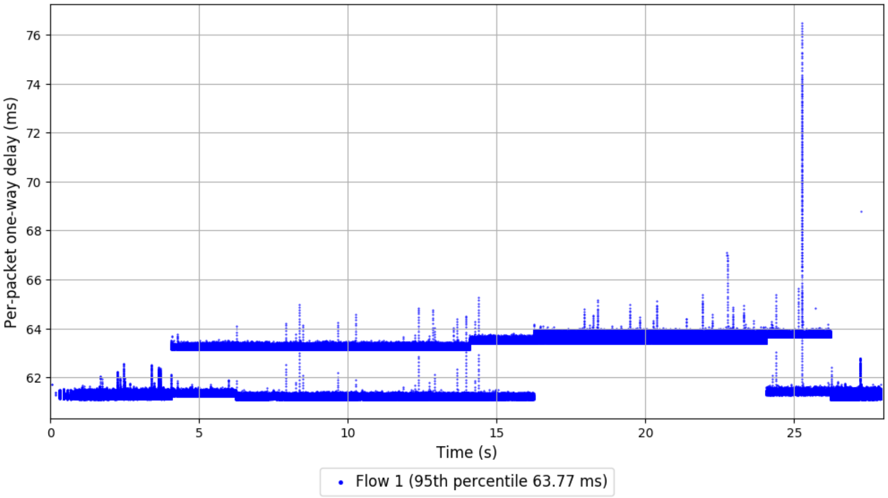
```
Run 2: Statistics of TaoVA-100x

Start at: 2017-09-18 08:34:22
End at: 2017-09-18 08:34:52

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 107.07 Mbit/s
95th percentile per-packet one-way delay: 63.768 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 107.07 Mbit/s
95th percentile per-packet one-way delay: 63.768 ms
Loss rate: 1.11%
```

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



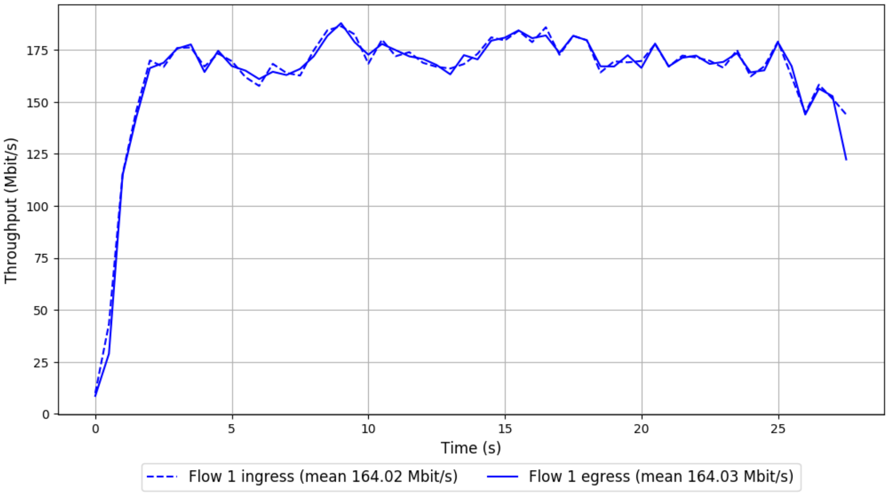


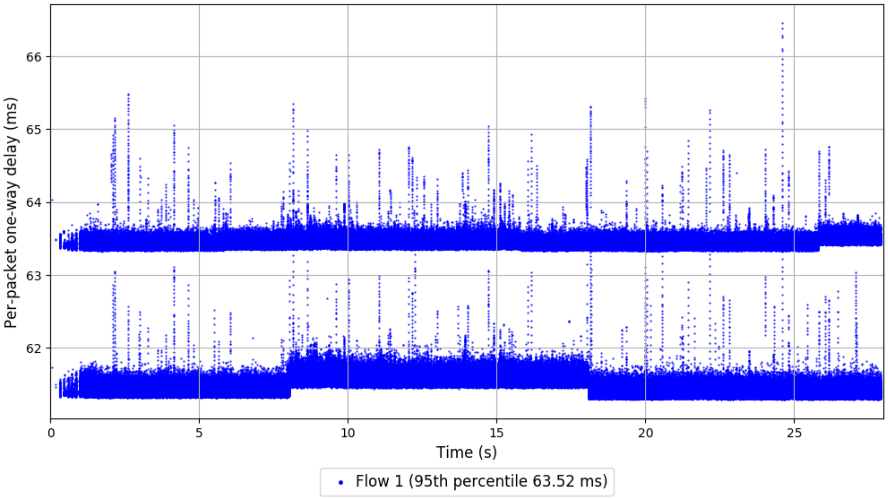
```
Run 3: Statistics of TaoVA-100x

Start at: 2017-09-18 08:45:51
End at: 2017-09-18 08:46:21

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 164.03 Mbit/s
95th percentile per-packet one-way delay: 63.525 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 164.03 Mbit/s
95th percentile per-packet one-way delay: 63.525 ms
Loss rate: 0.44%
```

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



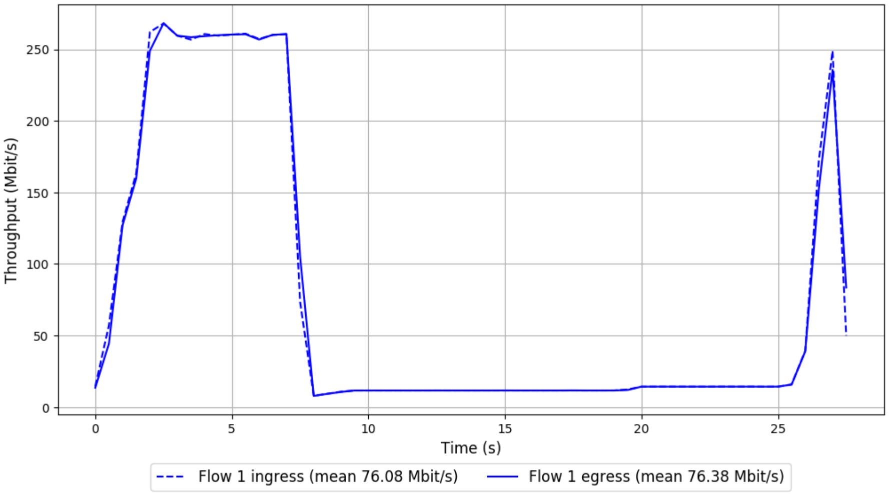


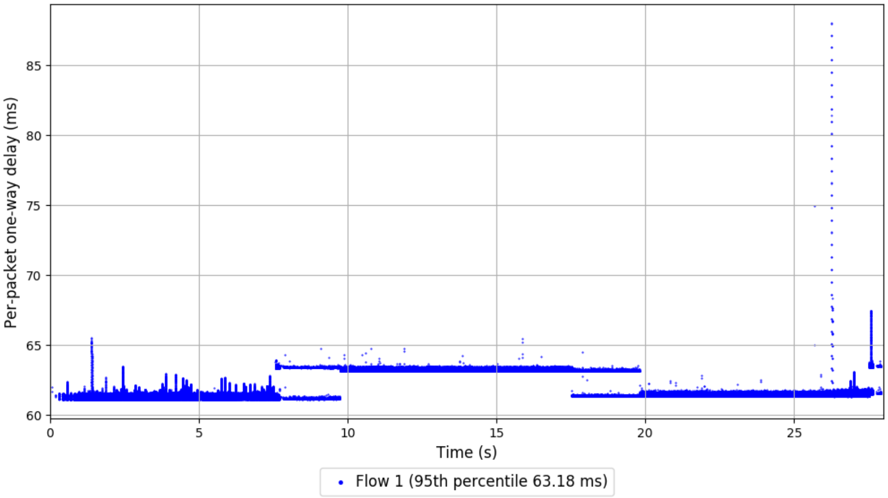
```
Run 4: Statistics of TaoVA-100x

Start at: 2017-09-18 08:57:19
End at: 2017-09-18 08:57:49

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.38 Mbit/s
95th percentile per-packet one-way delay: 63.182 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 76.38 Mbit/s
95th percentile per-packet one-way delay: 63.182 ms
Loss rate: 0.04%
```

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



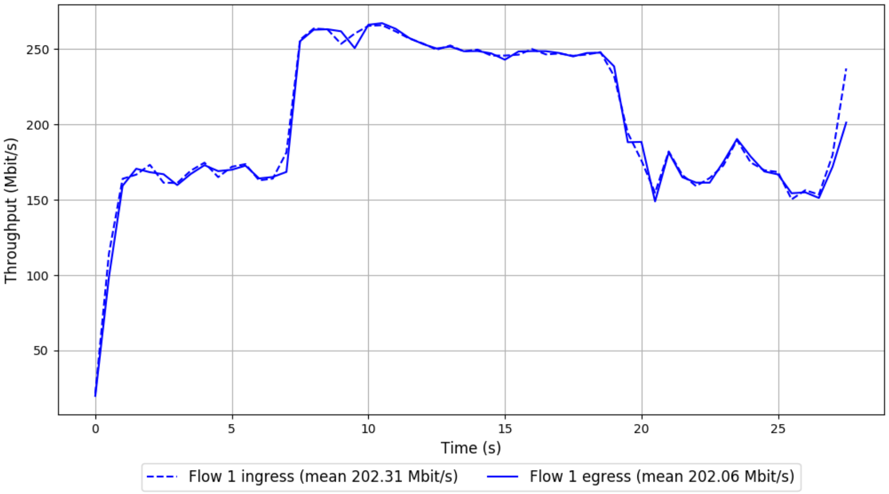


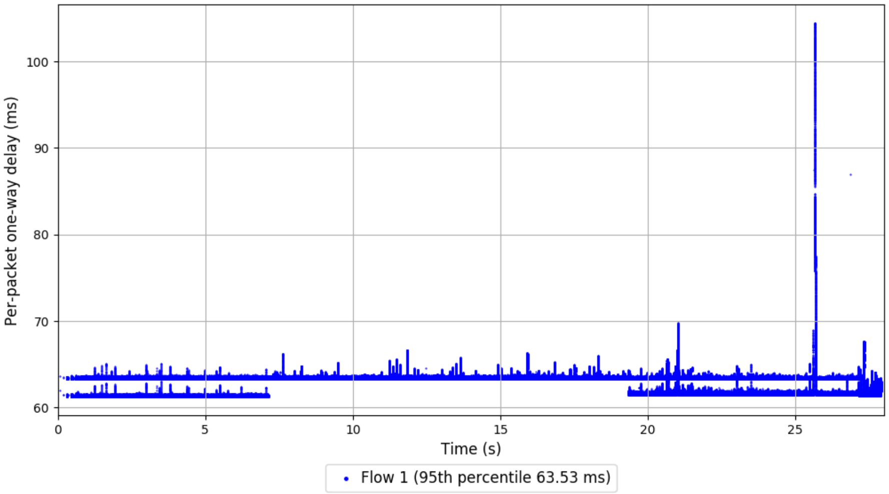
```
Run 5: Statistics of TaoVA-100x

Start at: 2017-09-18 09:08:39
End at: 2017-09-18 09:09:09

# Below is generated by plot.py at 2017-09-18 13:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 202.06 Mbit/s
95th percentile per-packet one-way delay: 63.528 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 202.06 Mbit/s
95th percentile per-packet one-way delay: 63.528 ms
Loss rate: 0.57%
```

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



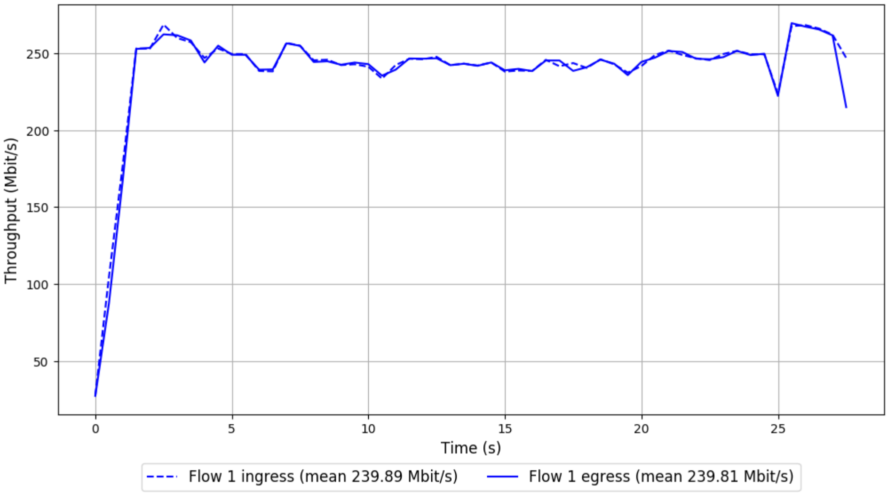


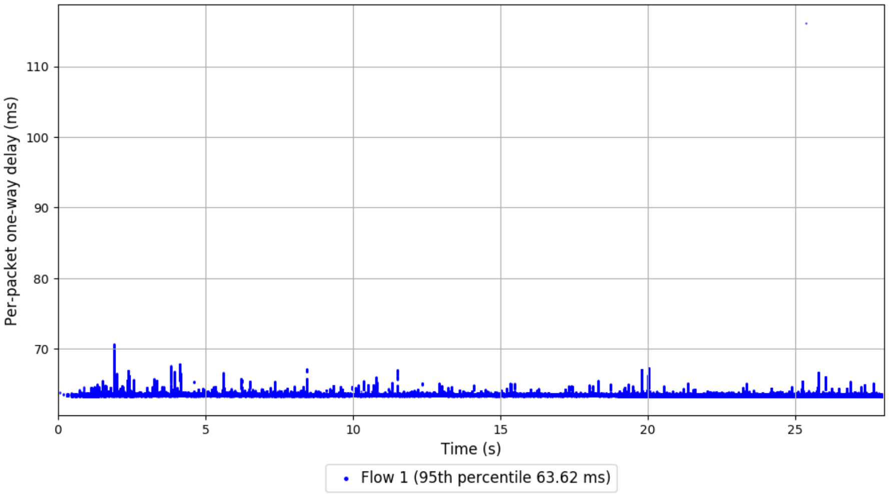
```
Run 6: Statistics of TaoVA-100x

Start at: 2017-09-18 09:20:07
End at: 2017-09-18 09:20:37

# Below is generated by plot.py at 2017-09-18 13:08:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 239.81 Mbit/s
95th percentile per-packet one-way delay: 63.621 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 239.81 Mbit/s
95th percentile per-packet one-way delay: 63.621 ms
Loss rate: 0.49%
```

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



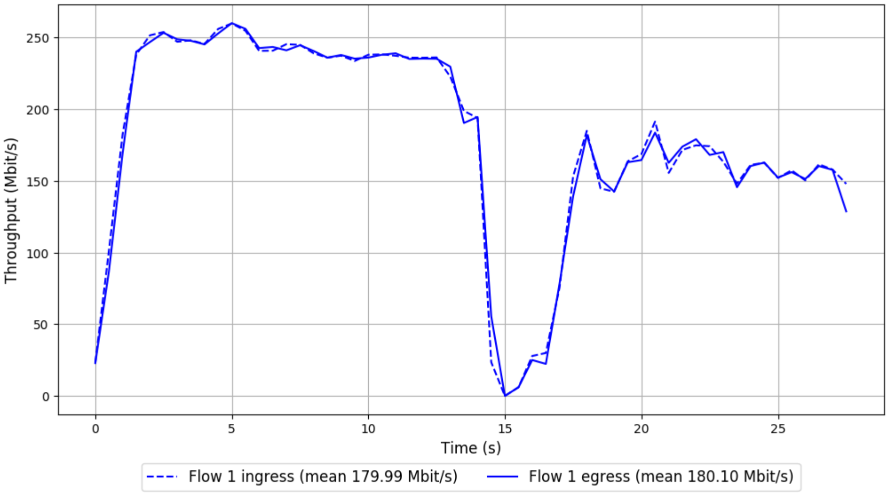


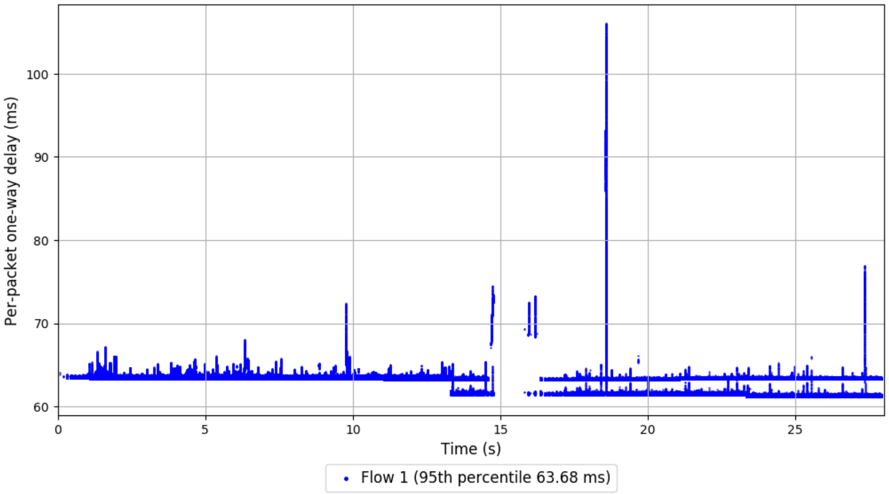
```
Run 7: Statistics of TaoVA-100x

Start at: 2017-09-18 09:31:45
End at: 2017-09-18 09:32:15

# Below is generated by plot.py at 2017-09-18 13:09:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 180.10 Mbit/s
95th percentile per-packet one-way delay: 63.680 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 180.10 Mbit/s
95th percentile per-packet one-way delay: 63.680 ms
Loss rate: 0.40%
```

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



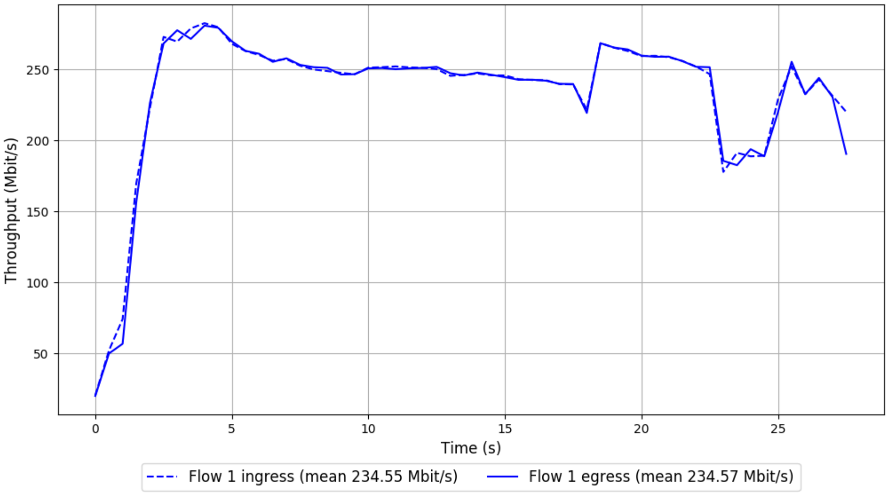


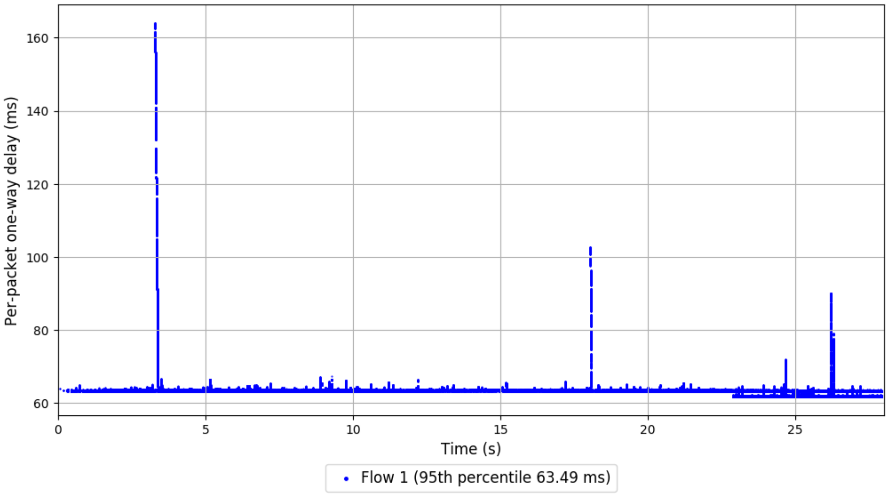
```
Run 8: Statistics of TaoVA-100x

Start at: 2017-09-18 09:43:14
End at: 2017-09-18 09:43:44

# Below is generated by plot.py at 2017-09-18 13:11:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 234.57 Mbit/s
95th percentile per-packet one-way delay: 63.489 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 234.57 Mbit/s
95th percentile per-packet one-way delay: 63.489 ms
Loss rate: 0.45%
```

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



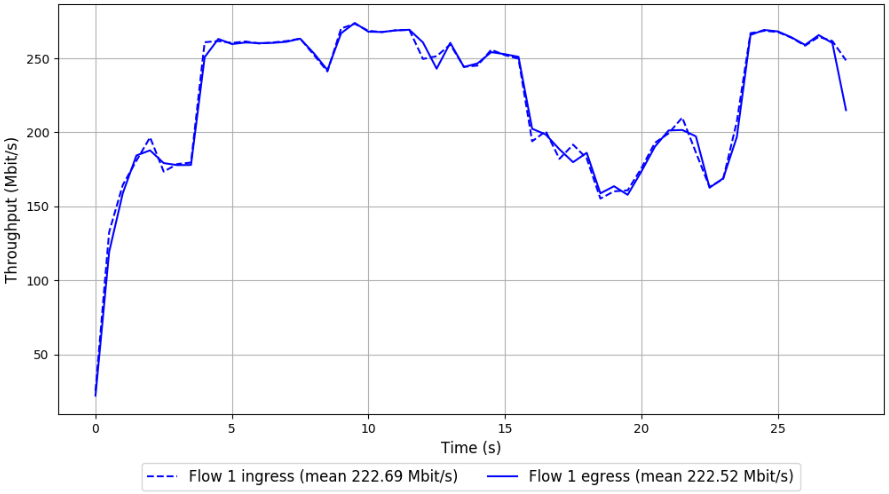


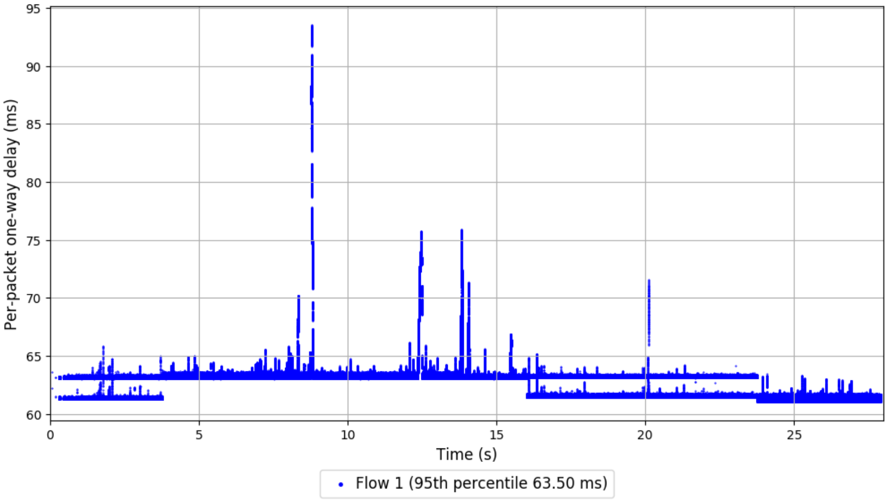
```
Run 9: Statistics of TaoVA-100x

Start at: 2017-09-18 09:54:53
End at: 2017-09-18 09:55:23

# Below is generated by plot.py at 2017-09-18 13:13:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.52 Mbit/s
95th percentile per-packet one-way delay: 63.496 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 222.52 Mbit/s
95th percentile per-packet one-way delay: 63.496 ms
Loss rate: 0.53%
```

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



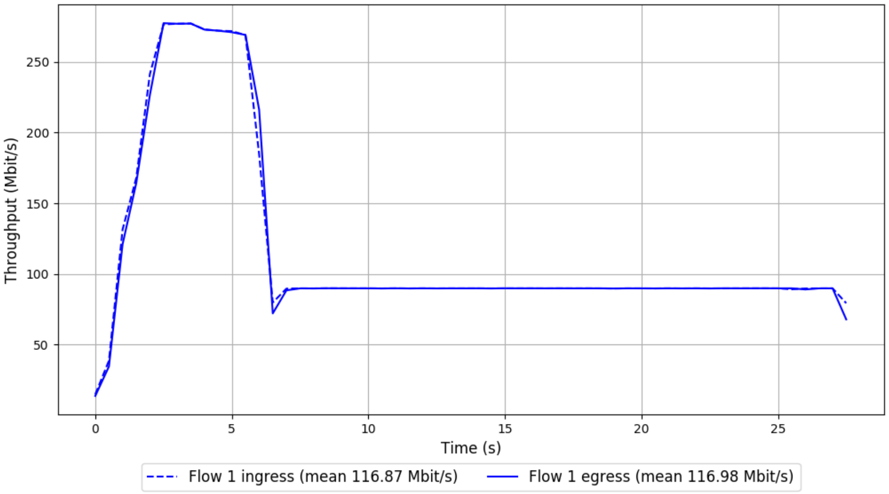


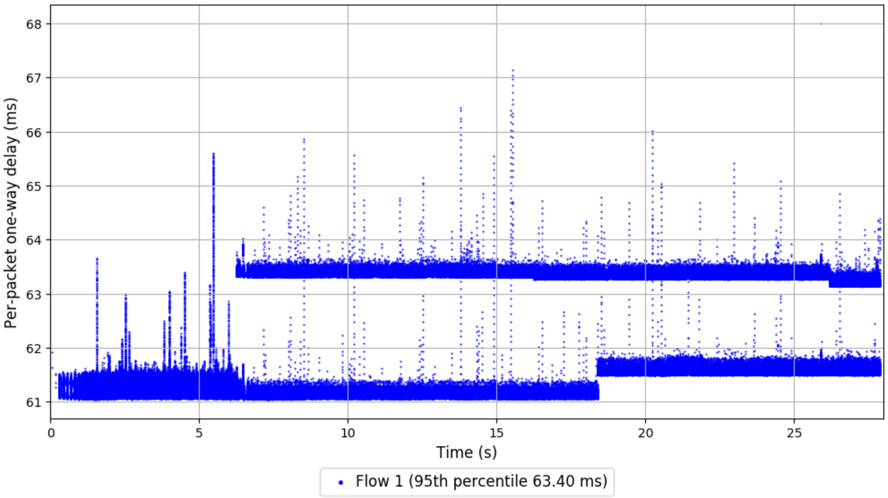
```
Run 10: Statistics of TaoVA-100x

Start at: 2017-09-18 10:06:30
End at: 2017-09-18 10:07:00

# Below is generated by plot.py at 2017-09-18 13:13:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 116.98 Mbit/s
95th percentile per-packet one-way delay: 63.395 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 116.98 Mbit/s
95th percentile per-packet one-way delay: 63.395 ms
Loss rate: 0.35%
```

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



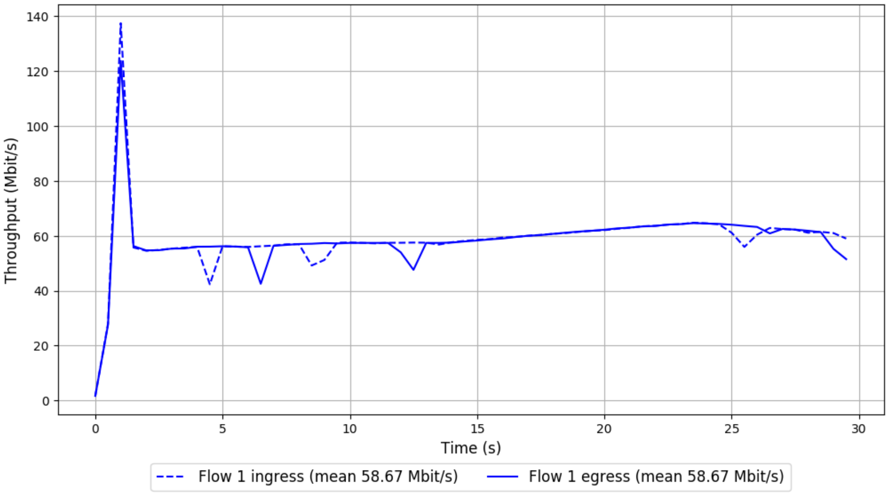


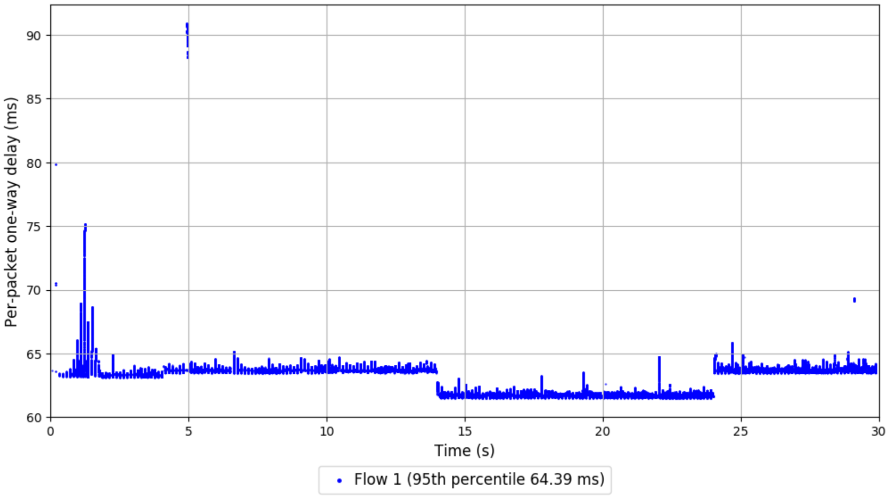
```
Run 1: Statistics of TCP Vegas

Start at: 2017-09-18 08:28:14
End at: 2017-09-18 08:28:44

# Below is generated by plot.py at 2017-09-18 13:13:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.67 Mbit/s
95th percentile per-packet one-way delay: 64.392 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 58.67 Mbit/s
95th percentile per-packet one-way delay: 64.392 ms
Loss rate: 0.43%
```

Run 1: Report of TCP Vegas — Data Link



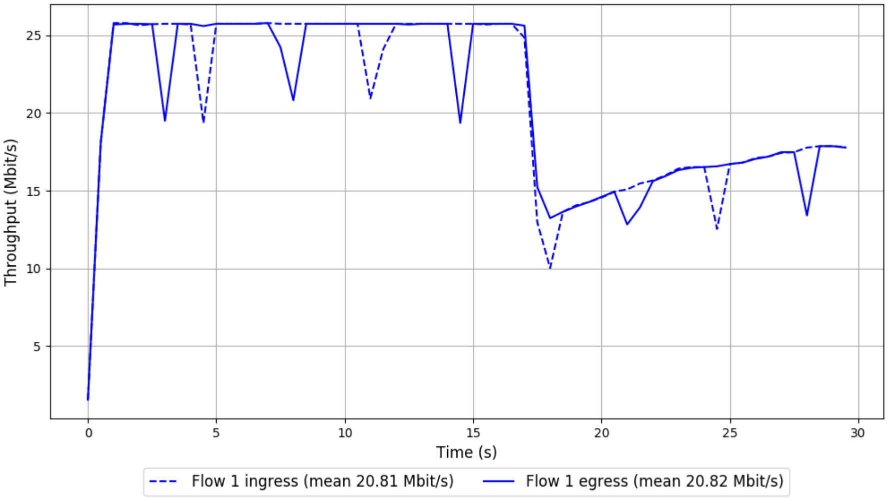


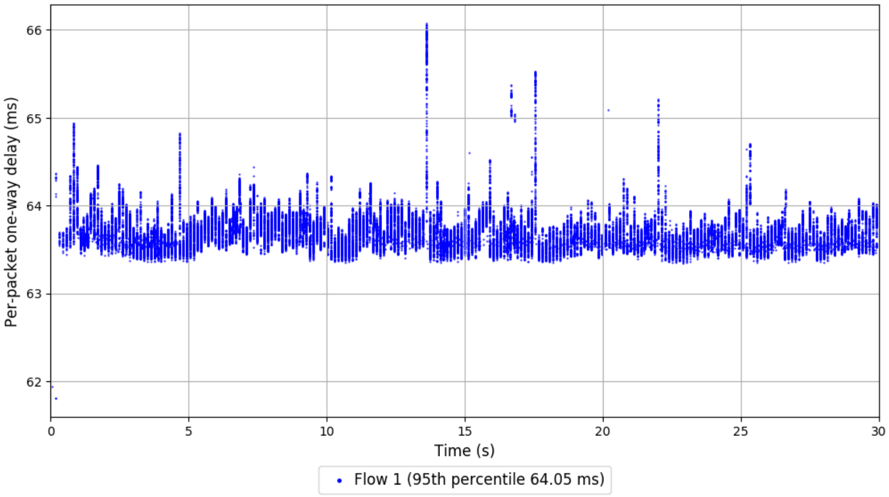
```
Run 2: Statistics of TCP Vegas

Start at: 2017-09-18 08:39:46
End at: 2017-09-18 08:40:16

# Below is generated by plot.py at 2017-09-18 13:13:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.82 Mbit/s
95th percentile per-packet one-way delay: 64.052 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 20.82 Mbit/s
95th percentile per-packet one-way delay: 64.052 ms
Loss rate: 0.37%
```

Run 2: Report of TCP Vegas — Data Link



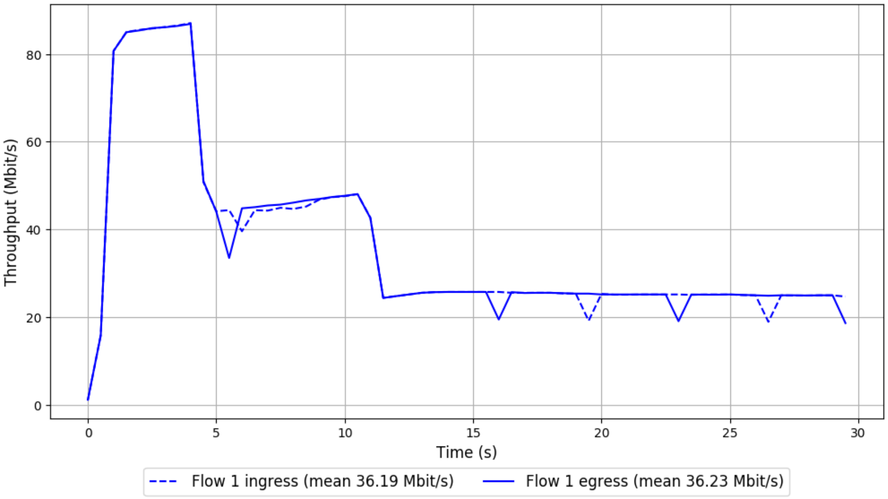


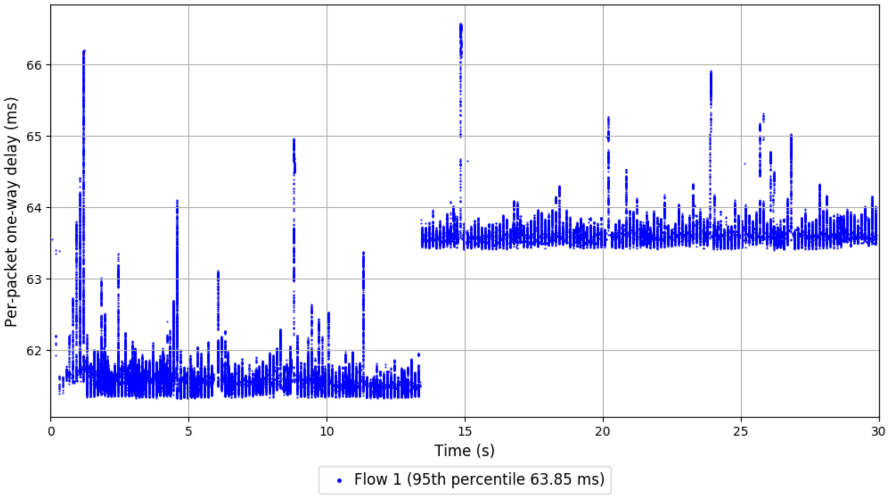
```
Run 3: Statistics of TCP Vegas

Start at: 2017-09-18 08:51:15
End at: 2017-09-18 08:51:45

# Below is generated by plot.py at 2017-09-18 13:13:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.23 Mbit/s
95th percentile per-packet one-way delay: 63.853 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 36.23 Mbit/s
95th percentile per-packet one-way delay: 63.853 ms
Loss rate: 0.30%
```

Run 3: Report of TCP Vegas — Data Link



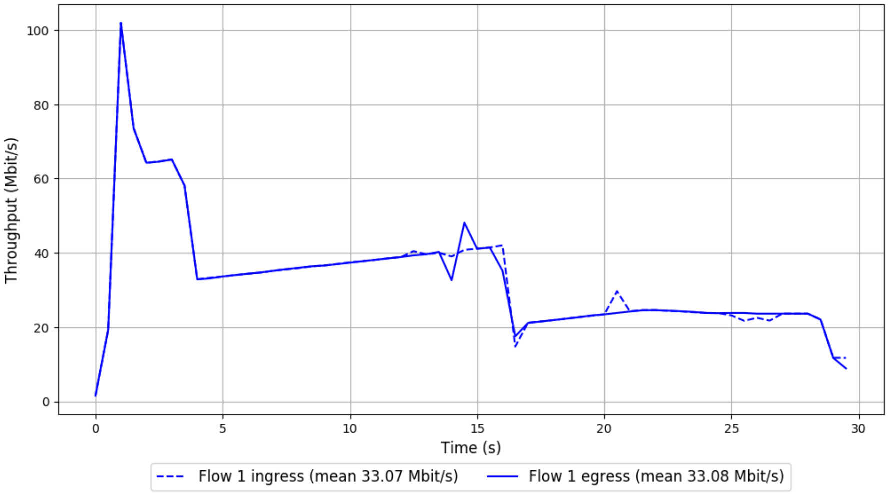


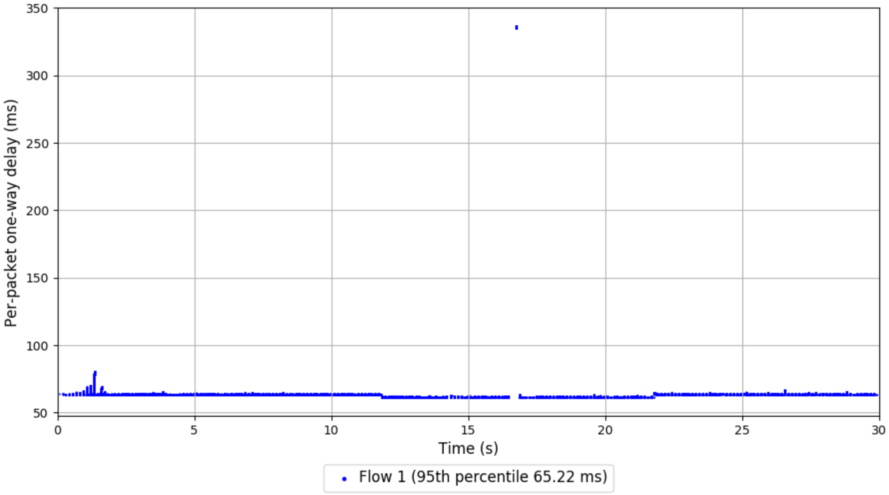
```
Run 4: Statistics of TCP Vegas

Start at: 2017-09-18 09:02:37
End at: 2017-09-18 09:03:07

# Below is generated by plot.py at 2017-09-18 13:13:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 33.08 Mbit/s
95th percentile per-packet one-way delay: 65.223 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 33.08 Mbit/s
95th percentile per-packet one-way delay: 65.223 ms
Loss rate: 0.37%
```

Run 4: Report of TCP Vegas — Data Link



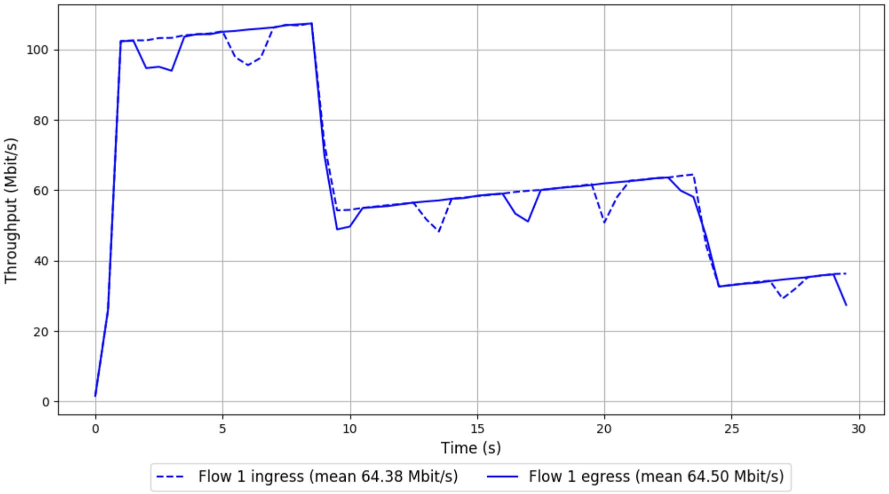


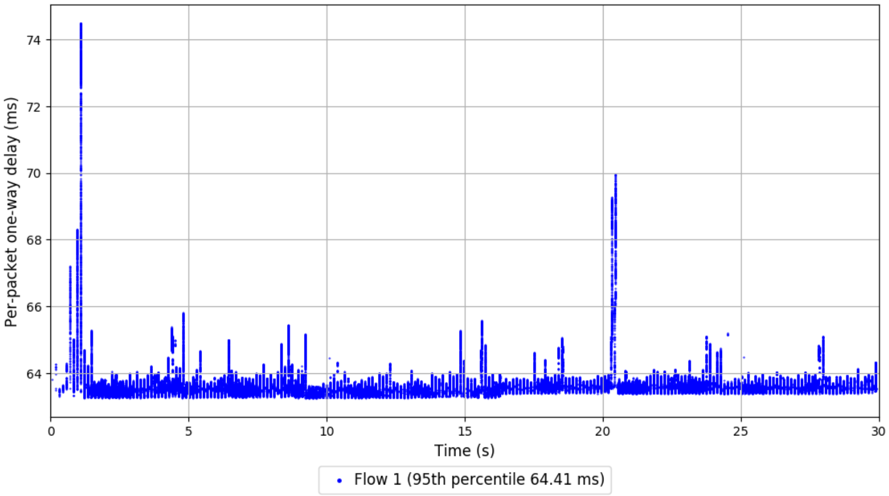
```
Run 5: Statistics of TCP Vegas

Start at: 2017-09-18 09:14:02
End at: 2017-09-18 09:14:32

# Below is generated by plot.py at 2017-09-18 13:13:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.50 Mbit/s
95th percentile per-packet one-way delay: 64.412 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 64.50 Mbit/s
95th percentile per-packet one-way delay: 64.412 ms
Loss rate: 0.24%
```

Run 5: Report of TCP Vegas — Data Link



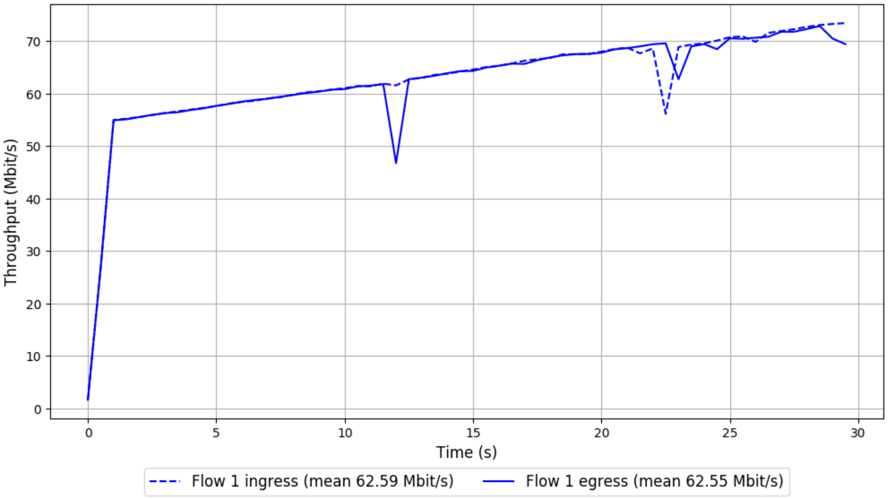


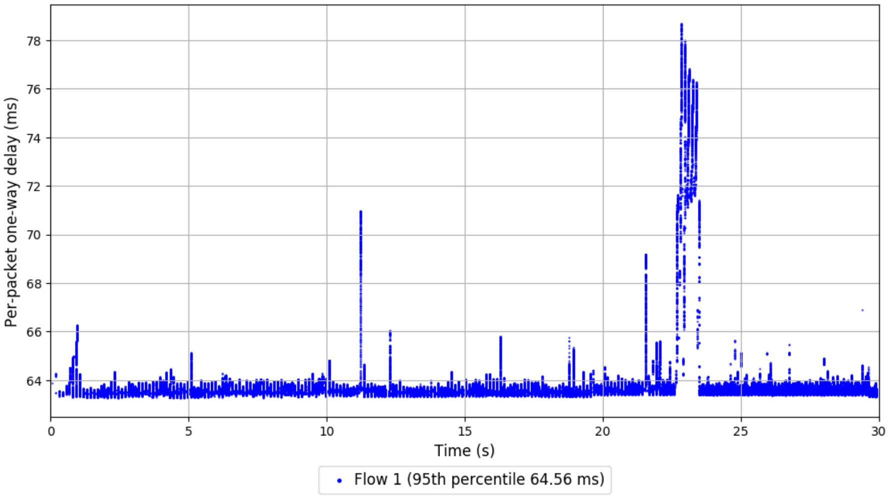
```
Run 6: Statistics of TCP Vegas

Start at: 2017-09-18 09:25:39
End at: 2017-09-18 09:26:09

# Below is generated by plot.py at 2017-09-18 13:13:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 62.55 Mbit/s
95th percentile per-packet one-way delay: 64.560 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 62.55 Mbit/s
95th percentile per-packet one-way delay: 64.560 ms
Loss rate: 0.49%
```

Run 6: Report of TCP Vegas — Data Link



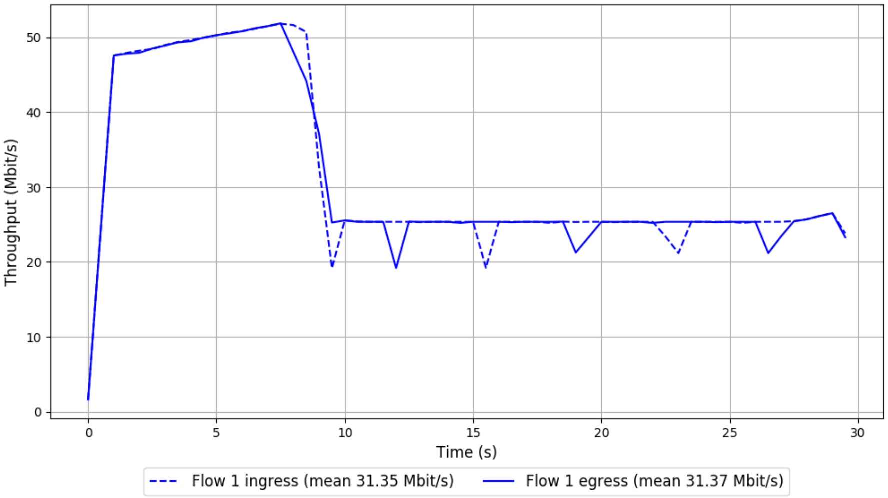


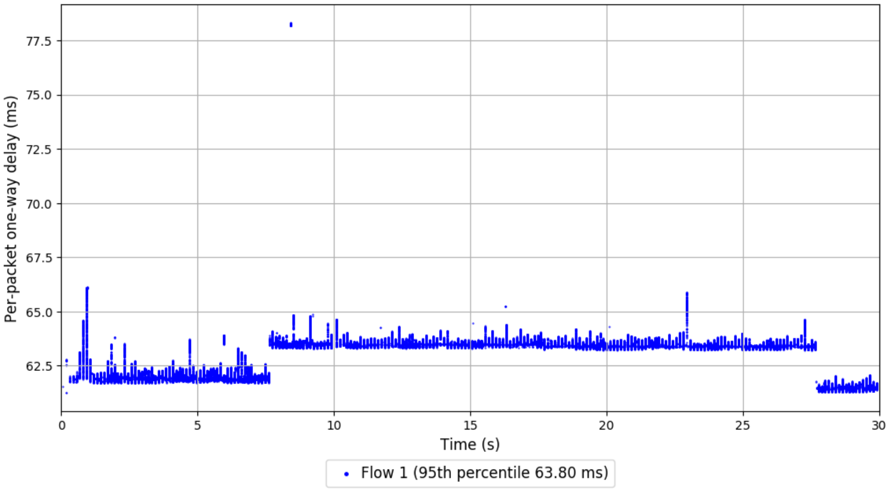
```
Run 7: Statistics of TCP Vegas

Start at: 2017-09-18 09:37:11
End at: 2017-09-18 09:37:41

# Below is generated by plot.py at 2017-09-18 13:13:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 31.37 Mbit/s
95th percentile per-packet one-way delay: 63.795 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 31.37 Mbit/s
95th percentile per-packet one-way delay: 63.795 ms
Loss rate: 0.36%
```

Run 7: Report of TCP Vegas — Data Link



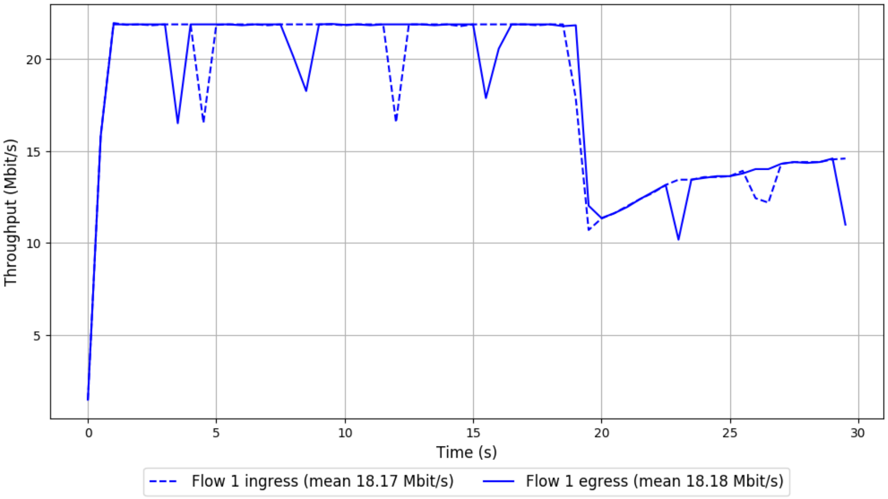


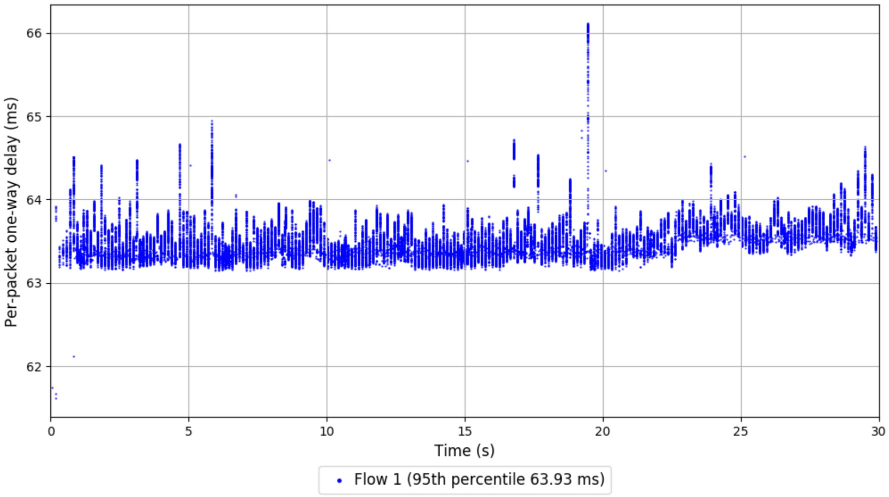
```
Run 8: Statistics of TCP Vegas

Start at: 2017-09-18 09:48:46
End at: 2017-09-18 09:49:16

# Below is generated by plot.py at 2017-09-18 13:13:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 18.18 Mbit/s
95th percentile per-packet one-way delay: 63.932 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 18.18 Mbit/s
95th percentile per-packet one-way delay: 63.932 ms
Loss rate: 0.34%
```

Run 8: Report of TCP Vegas — Data Link



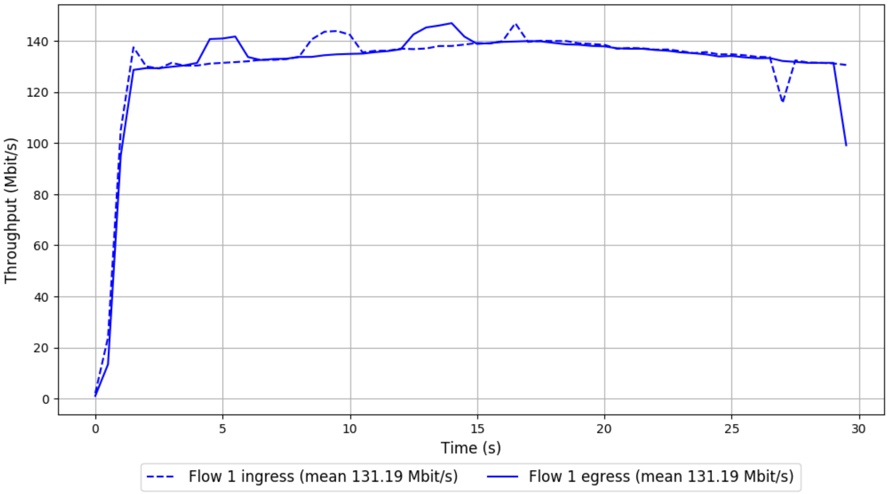


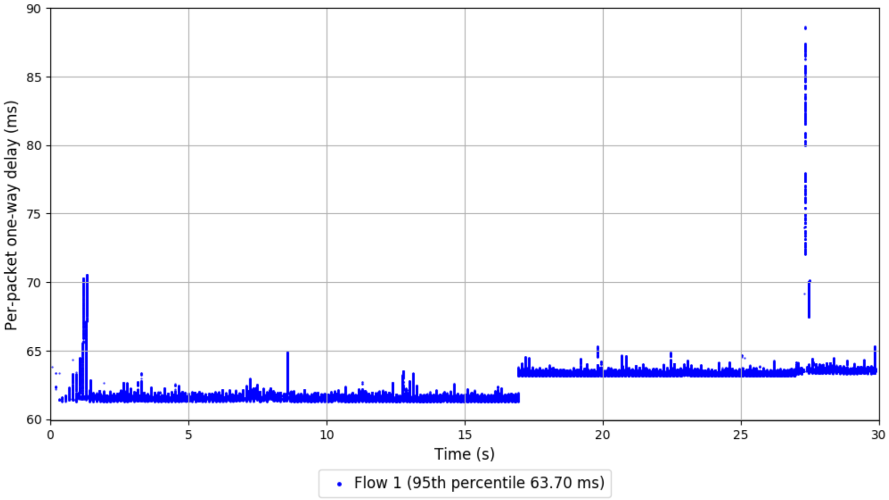
```
Run 9: Statistics of TCP Vegas

Start at: 2017-09-18 10:00:21
End at: 2017-09-18 10:00:51

# Below is generated by plot.py at 2017-09-18 13:13:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 131.19 Mbit/s
95th percentile per-packet one-way delay: 63.697 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 131.19 Mbit/s
95th percentile per-packet one-way delay: 63.697 ms
Loss rate: 0.41%
```

Run 9: Report of TCP Vegas — Data Link



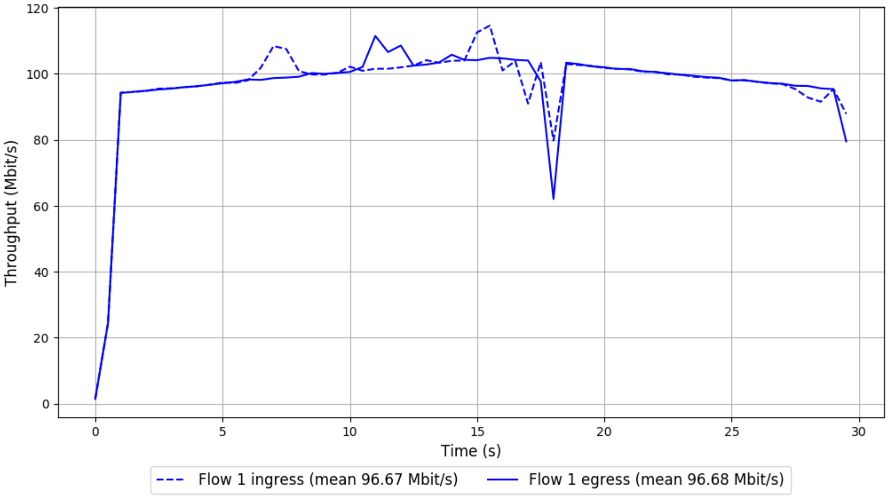


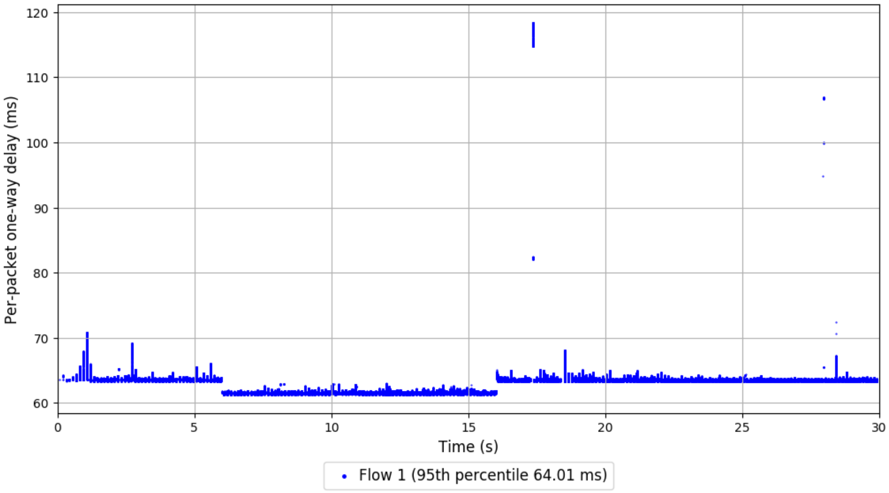
```
Run 10: Statistics of TCP Vegas

Start at: 2017-09-18 10:12:02
End at: 2017-09-18 10:12:33

# Below is generated by plot.py at 2017-09-18 13:13:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.68 Mbit/s
95th percentile per-packet one-way delay: 64.008 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 96.68 Mbit/s
95th percentile per-packet one-way delay: 64.008 ms
Loss rate: 0.41%
```

Run 10: Report of TCP Vegas — Data Link



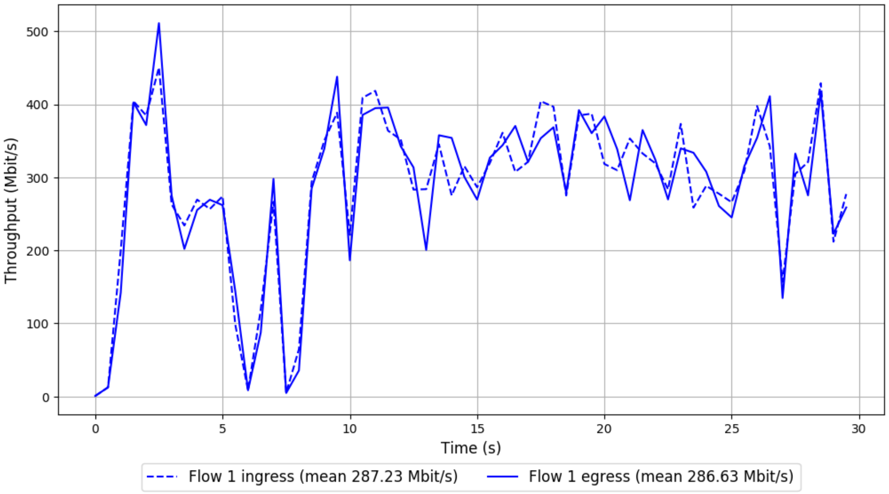


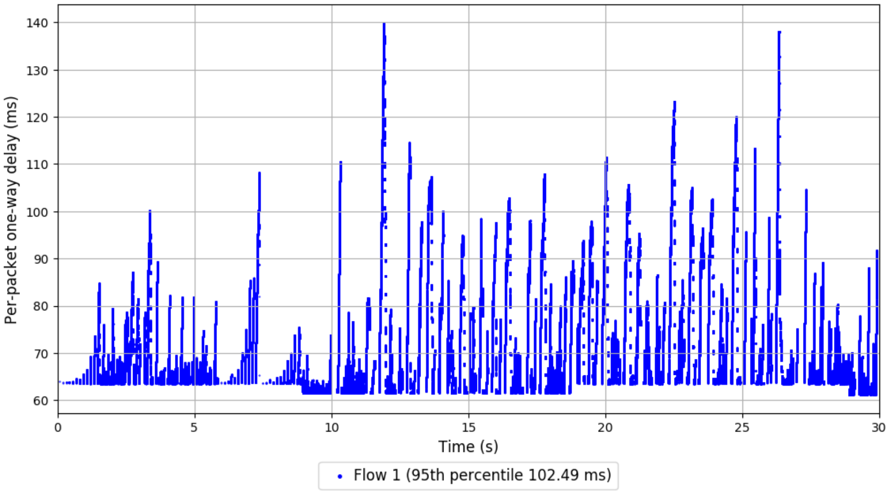
```
Run 1: Statistics of Verus

Start at: 2017-09-18 08:26:39
End at: 2017-09-18 08:27:10

# Below is generated by plot.py at 2017-09-18 13:14:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 286.63 Mbit/s
95th percentile per-packet one-way delay: 102.491 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 286.63 Mbit/s
95th percentile per-packet one-way delay: 102.491 ms
Loss rate: 0.38%
```

Run 1: Report of Verus — Data Link



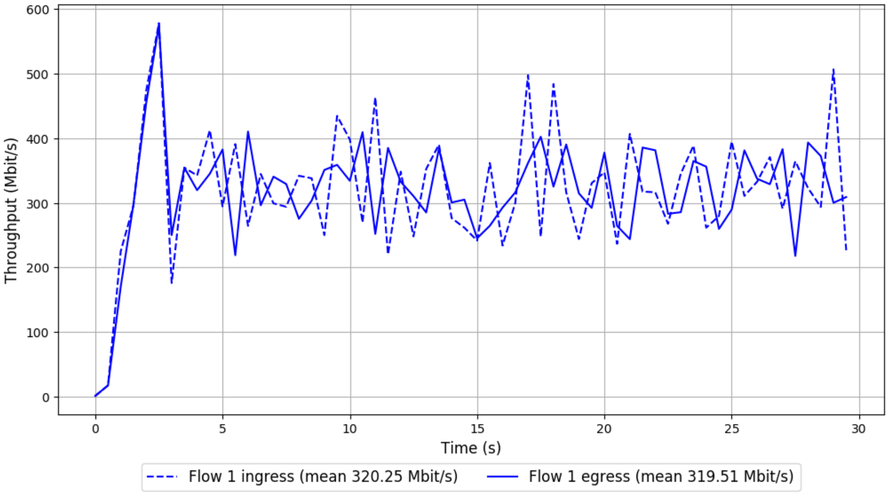


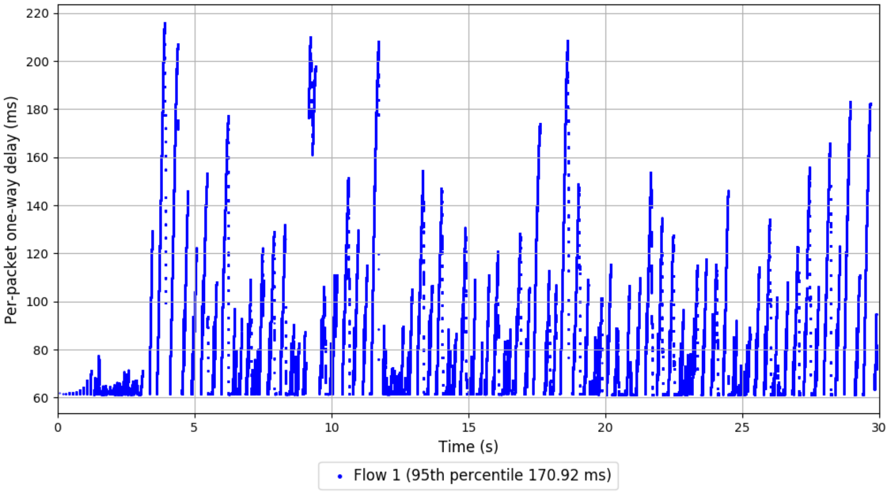
```
Run 2: Statistics of Verus

Start at: 2017-09-18 08:38:09
End at: 2017-09-18 08:38:39

# Below is generated by plot.py at 2017-09-18 13:15:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 319.51 Mbit/s
95th percentile per-packet one-way delay: 170.917 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 319.51 Mbit/s
95th percentile per-packet one-way delay: 170.917 ms
Loss rate: 0.65%
```

Run 2: Report of Verus — Data Link



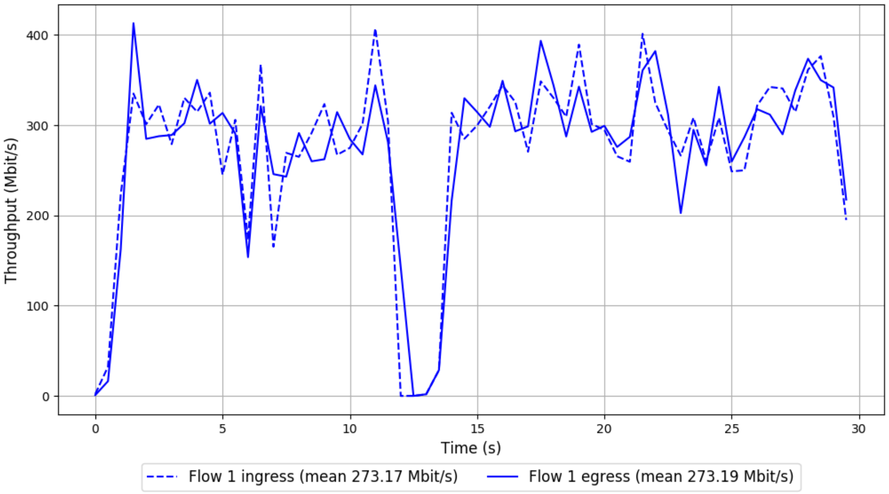


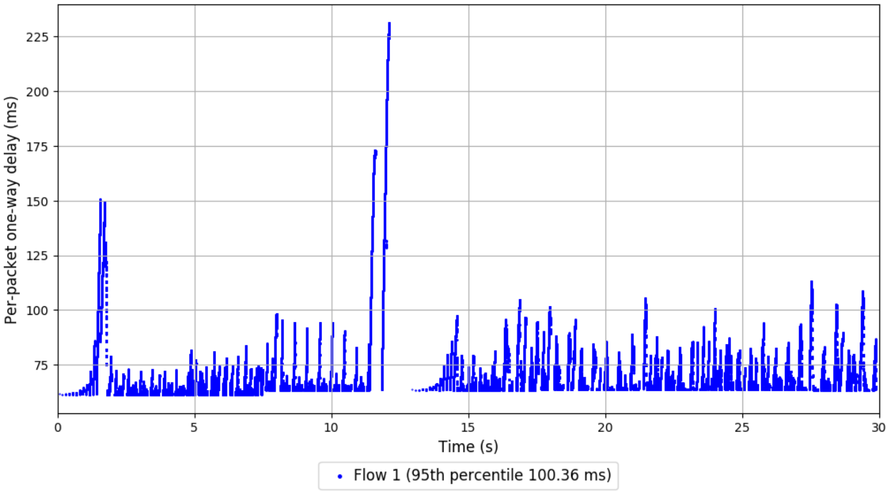
```
Run 3: Statistics of Verus

Start at: 2017-09-18 08:49:41
End at: 2017-09-18 08:50:11

# Below is generated by plot.py at 2017-09-18 13:15:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 273.19 Mbit/s
95th percentile per-packet one-way delay: 100.365 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 273.19 Mbit/s
95th percentile per-packet one-way delay: 100.365 ms
Loss rate: 0.21%
```

Run 3: Report of Verus — Data Link



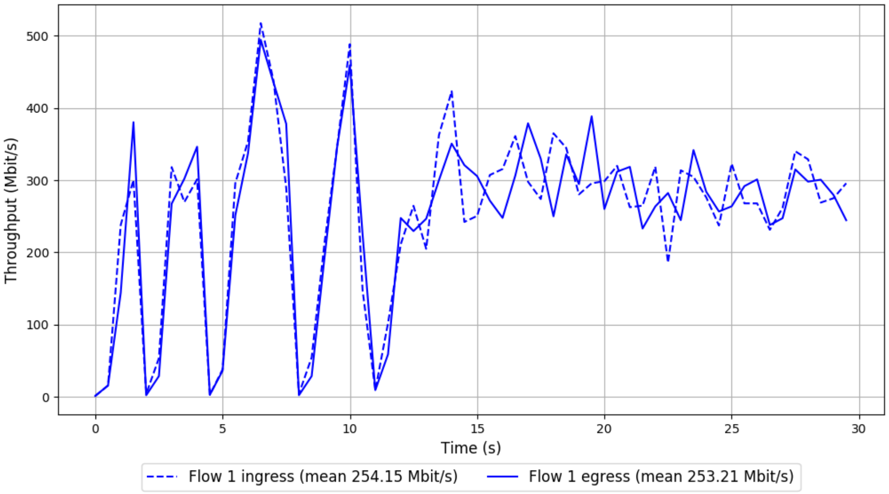


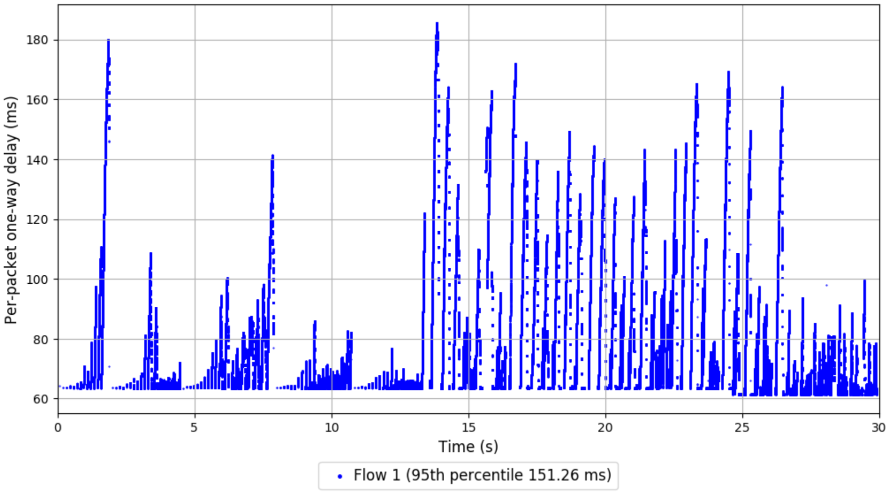
```
Run 4: Statistics of Verus

Start at: 2017-09-18 09:01:04
End at: 2017-09-18 09:01:34

# Below is generated by plot.py at 2017-09-18 13:15:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 253.21 Mbit/s
95th percentile per-packet one-way delay: 151.263 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 253.21 Mbit/s
95th percentile per-packet one-way delay: 151.263 ms
Loss rate: 0.79%
```

Run 4: Report of Verus — Data Link



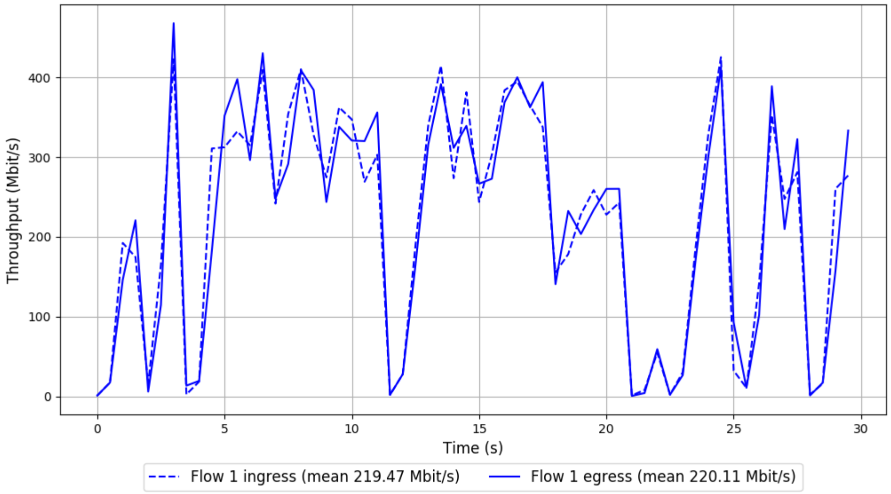


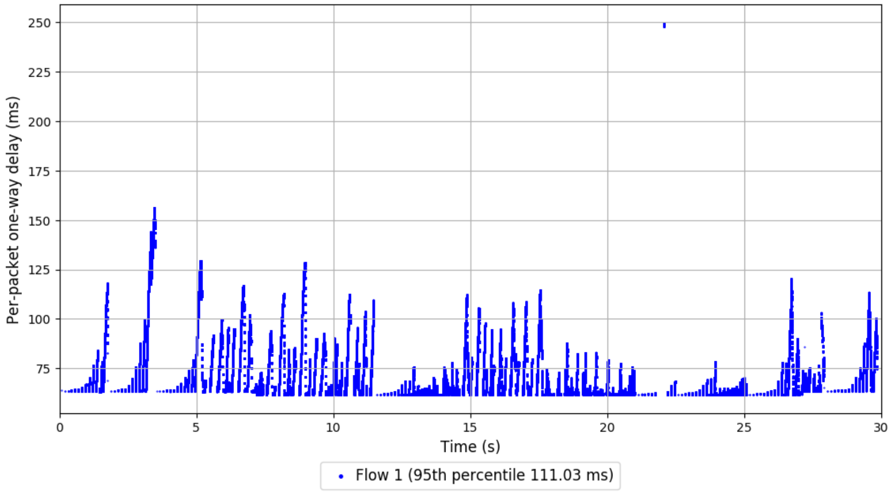
```
Run 5: Statistics of Verus

Start at: 2017-09-18 09:12:31
End at: 2017-09-18 09:13:01

# Below is generated by plot.py at 2017-09-18 13:15:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 220.11 Mbit/s
95th percentile per-packet one-way delay: 111.026 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 220.11 Mbit/s
95th percentile per-packet one-way delay: 111.026 ms
Loss rate: 0.37%
```

Run 5: Report of Verus — Data Link



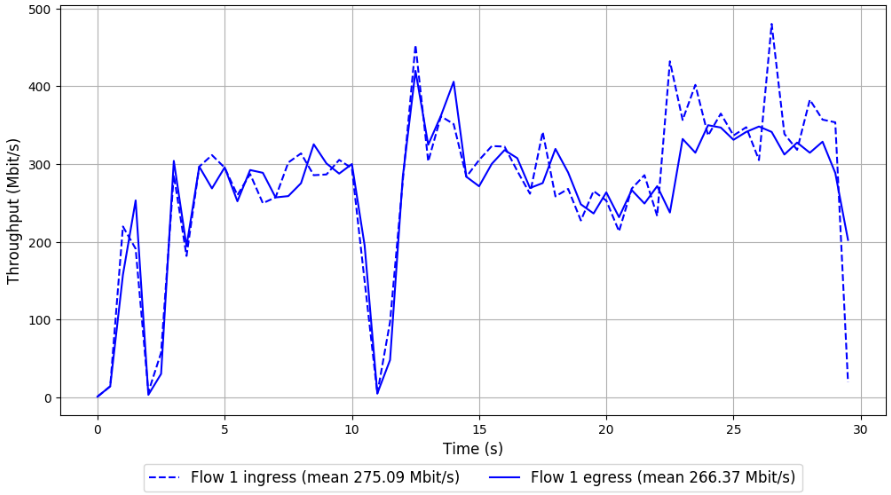


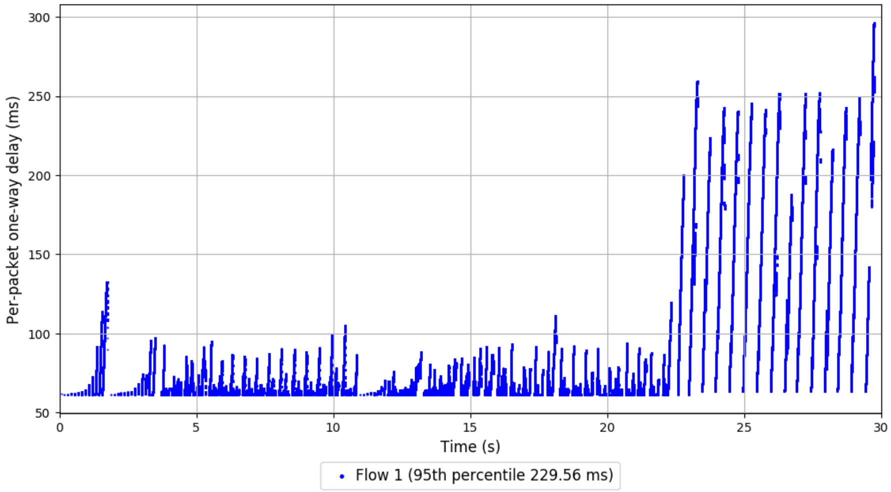
```
Run 6: Statistics of Verus

Start at: 2017-09-18 09:24:05
End at: 2017-09-18 09:24:35

# Below is generated by plot.py at 2017-09-18 13:15:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 266.37 Mbit/s
95th percentile per-packet one-way delay: 229.563 ms
Loss rate: 2.55%
-- Flow 1:
Average throughput: 266.37 Mbit/s
95th percentile per-packet one-way delay: 229.563 ms
Loss rate: 2.55%
```

Run 6: Report of Verus — Data Link



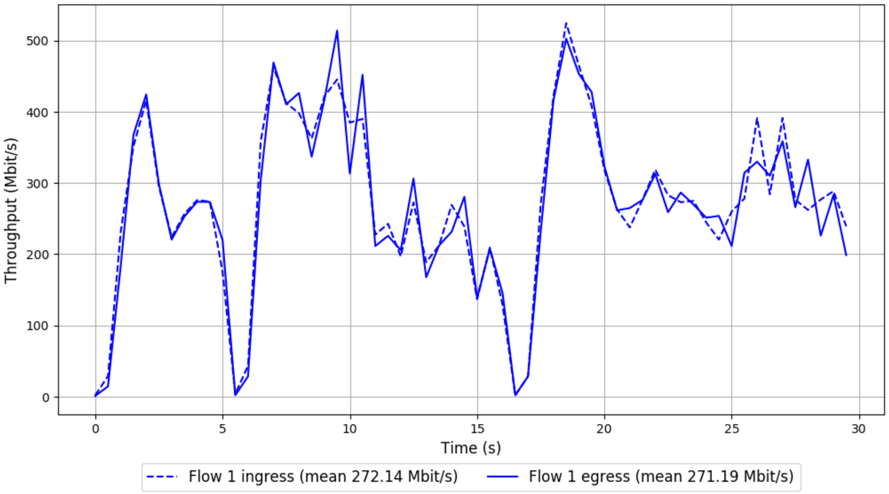


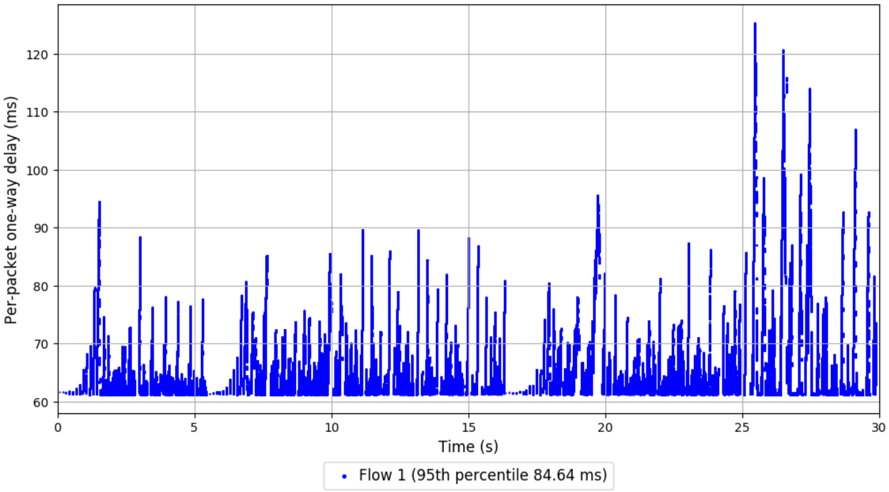
```
Run 7: Statistics of Verus

Start at: 2017-09-18 09:35:37
End at: 2017-09-18 09:36:07

# Below is generated by plot.py at 2017-09-18 13:15:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 271.19 Mbit/s
95th percentile per-packet one-way delay: 84.637 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 271.19 Mbit/s
95th percentile per-packet one-way delay: 84.637 ms
Loss rate: 0.77%
```

Run 7: Report of Verus — Data Link



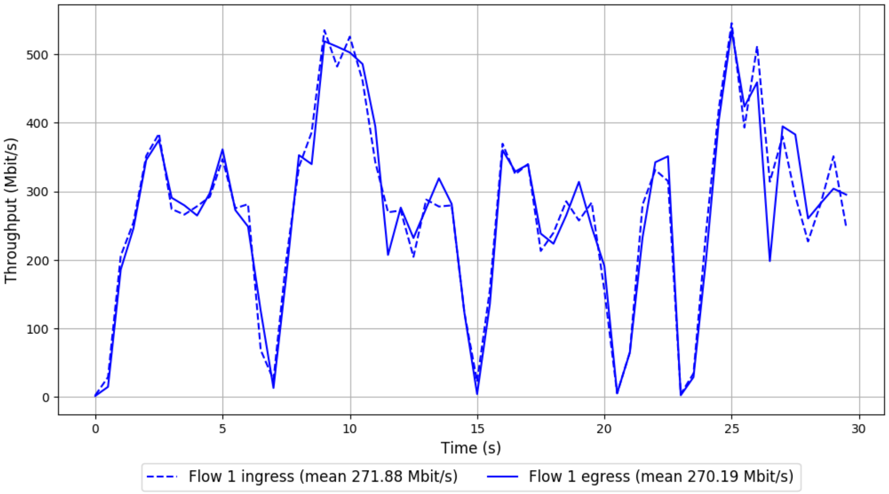


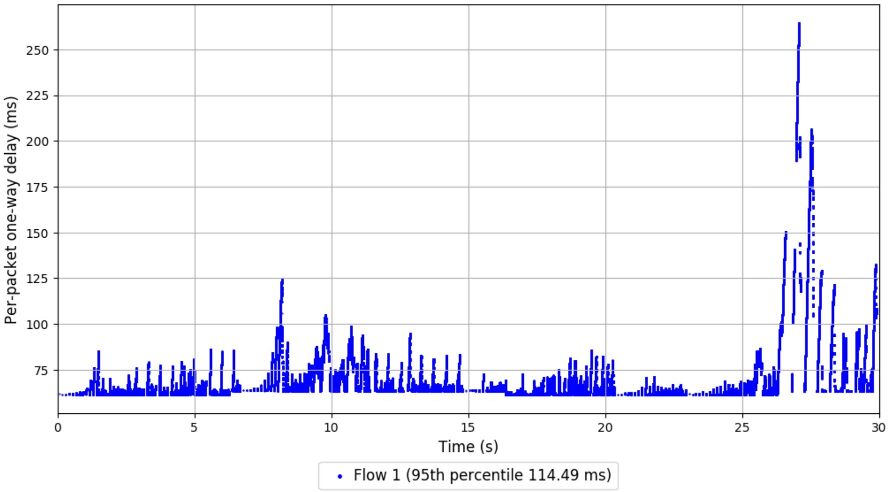
```
Run 8: Statistics of Verus

Start at: 2017-09-18 09:47:12
End at: 2017-09-18 09:47:42

# Below is generated by plot.py at 2017-09-18 13:16:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 270.19 Mbit/s
95th percentile per-packet one-way delay: 114.491 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 270.19 Mbit/s
95th percentile per-packet one-way delay: 114.491 ms
Loss rate: 0.47%
```

Run 8: Report of Verus — Data Link



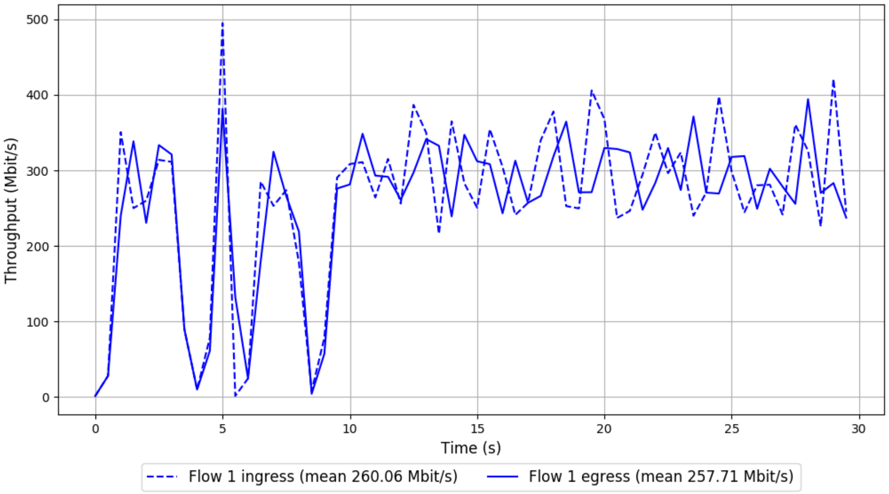


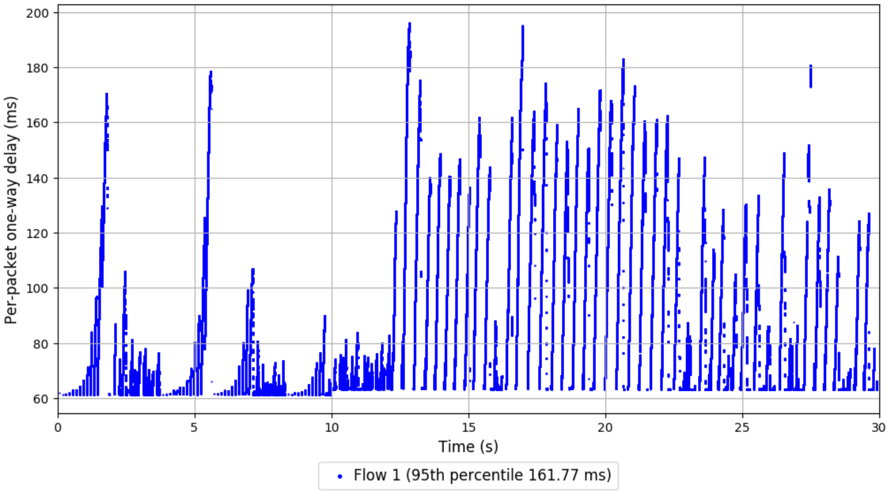
```
Run 9: Statistics of Verus

Start at: 2017-09-18 09:58:48
End at: 2017-09-18 09:59:19

# Below is generated by plot.py at 2017-09-18 13:16:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 257.71 Mbit/s
95th percentile per-packet one-way delay: 161.772 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 257.71 Mbit/s
95th percentile per-packet one-way delay: 161.772 ms
Loss rate: 1.33%
```

Run 9: Report of Verus — Data Link



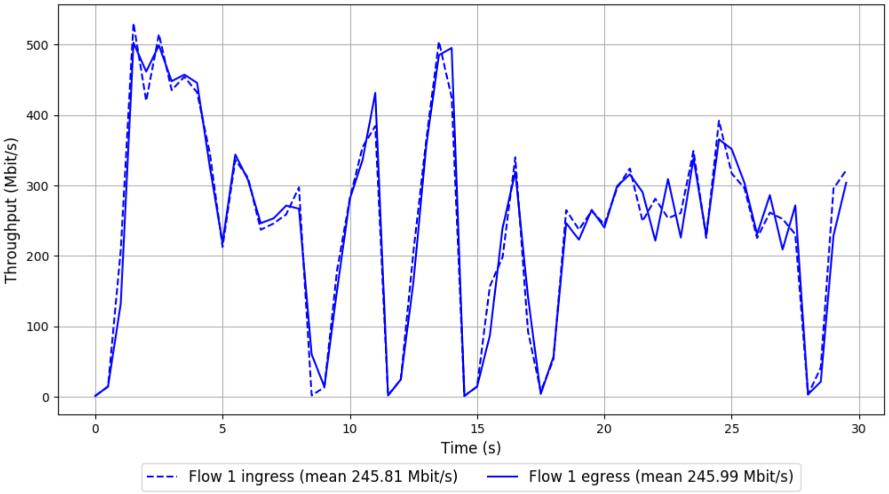


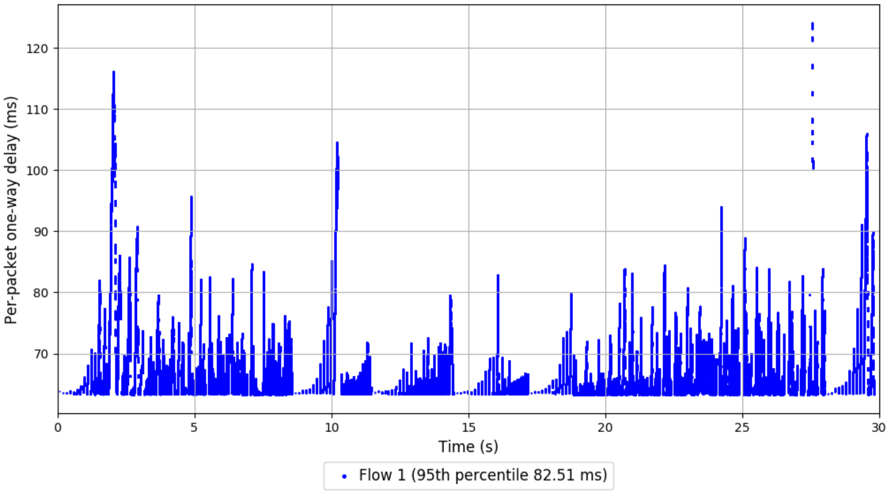
```
Run 10: Statistics of Verus

Start at: 2017-09-18 10:10:30
End at: 2017-09-18 10:11:00

# Below is generated by plot.py at 2017-09-18 13:16:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 245.99 Mbit/s
95th percentile per-packet one-way delay: 82.514 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 245.99 Mbit/s
95th percentile per-packet one-way delay: 82.514 ms
Loss rate: 0.72%
```

Run 10: Report of Verus — Data Link



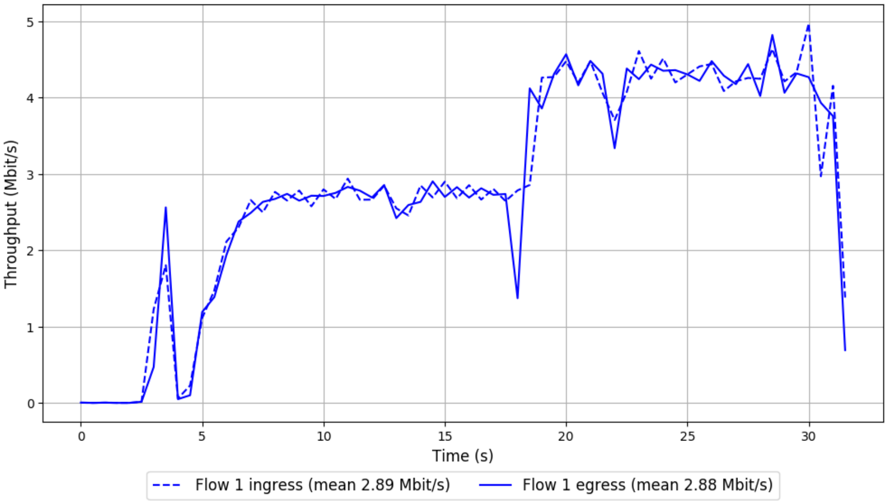


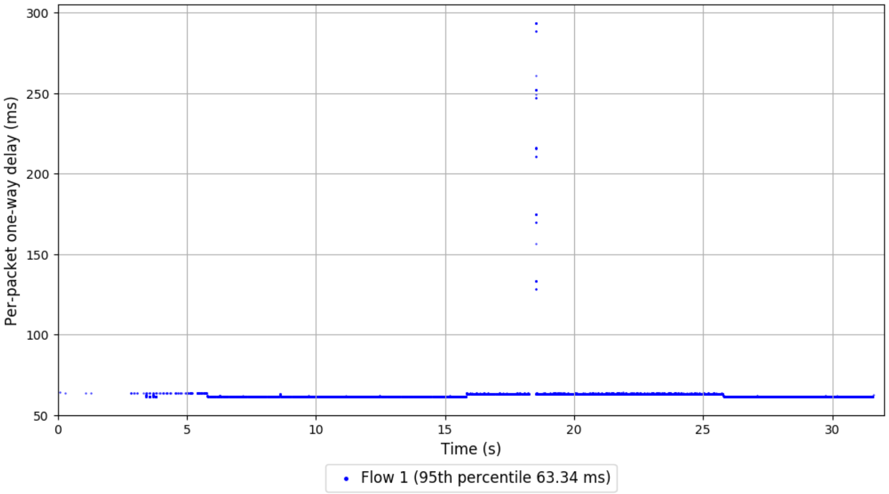
```
Run 1: Statistics of WebRTC media

Start at: 2017-09-18 08:27:37
End at: 2017-09-18 08:28:07

# Below is generated by plot.py at 2017-09-18 13:16:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 63.344 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 63.344 ms
Loss rate: 0.86%
```

Run 1: Report of WebRTC media — Data Link



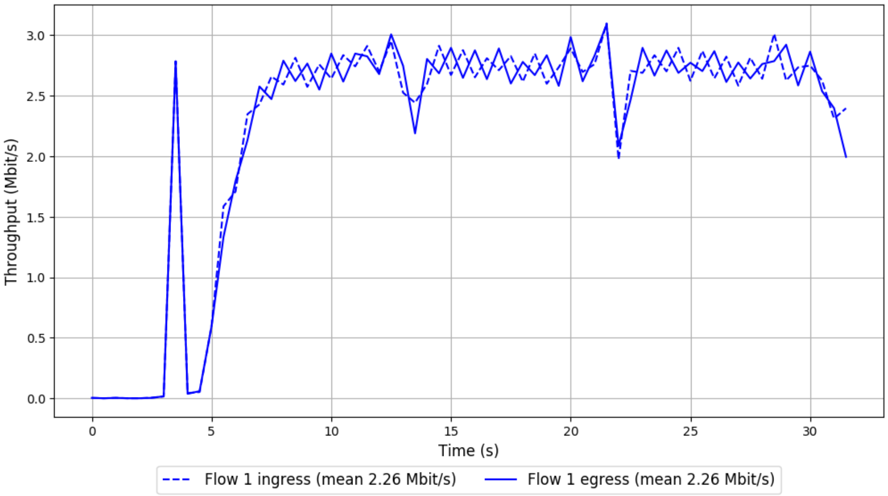


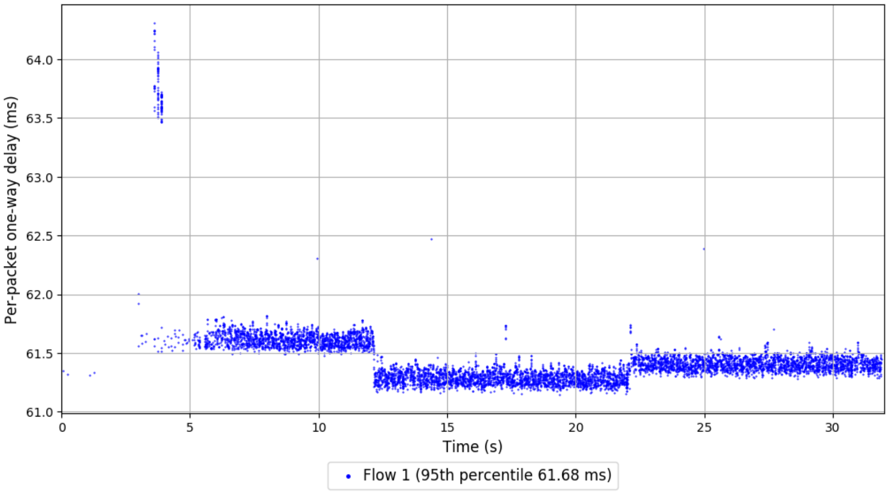
```
Run 2: Statistics of WebRTC media

Start at: 2017-09-18 08:39:08
End at: 2017-09-18 08:39:38

# Below is generated by plot.py at 2017-09-18 13:16:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 61.679 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 61.679 ms
Loss rate: 0.45%
```

Run 2: Report of WebRTC media — Data Link



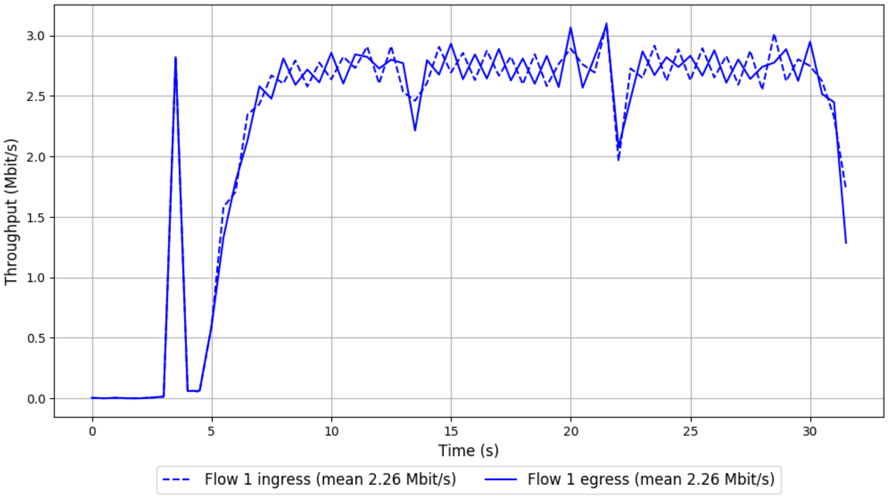


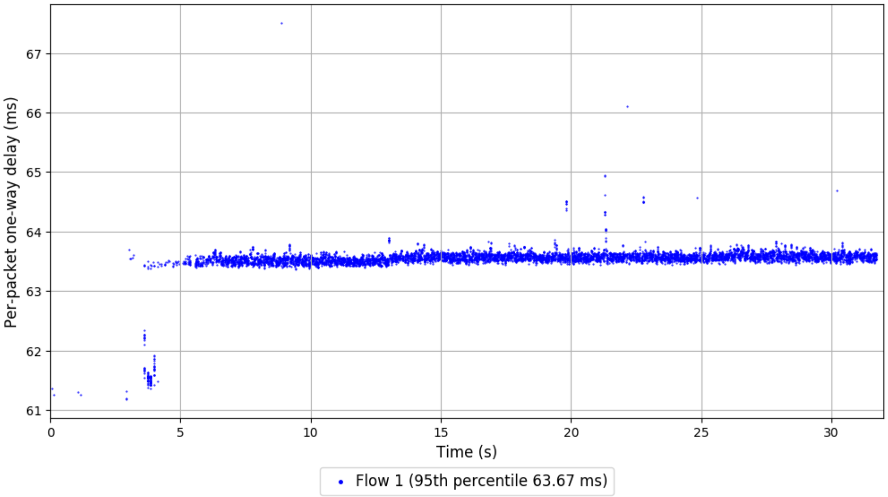
```
Run 3: Statistics of WebRTC media

Start at: 2017-09-18 08:50:37
End at: 2017-09-18 08:51:07

# Below is generated by plot.py at 2017-09-18 13:16:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 63.673 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 63.673 ms
Loss rate: 0.45%
```

Run 3: Report of WebRTC media — Data Link



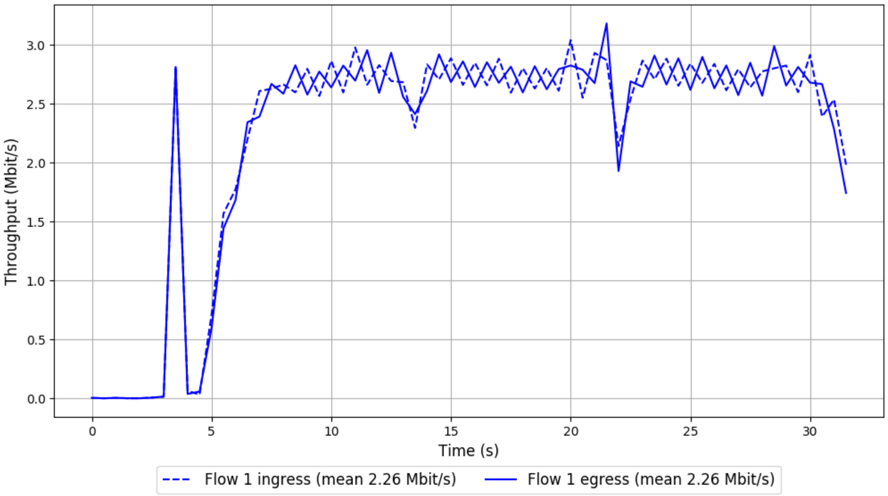


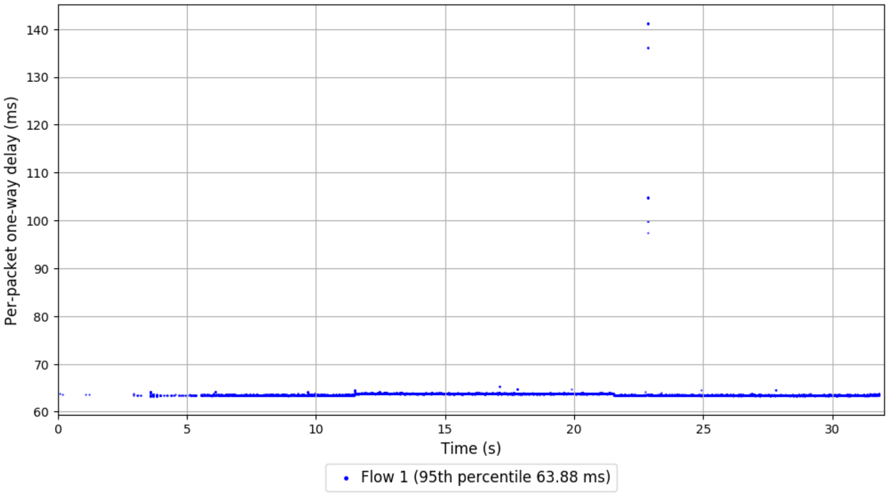
```
Run 4: Statistics of WebRTC media

Start at: 2017-09-18 09:01:59
End at: 2017-09-18 09:02:29

# Below is generated by plot.py at 2017-09-18 13:16:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 63.885 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 63.885 ms
Loss rate: 0.46%
```

Run 4: Report of WebRTC media — Data Link



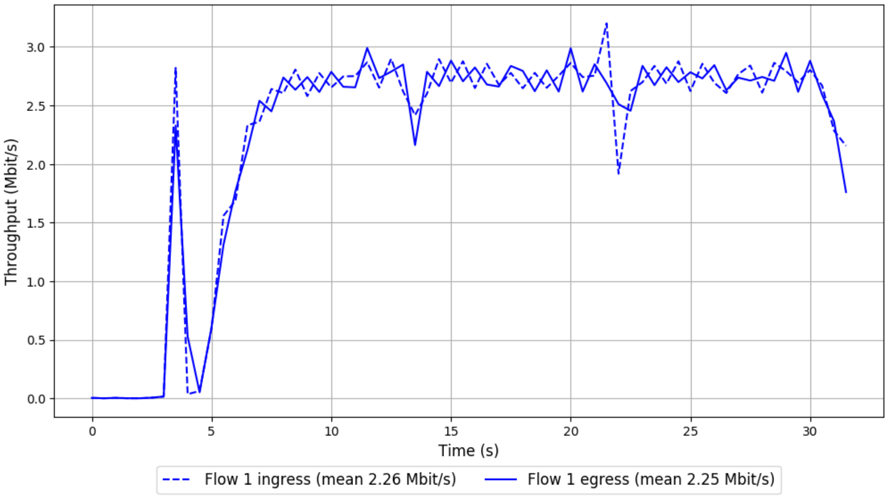


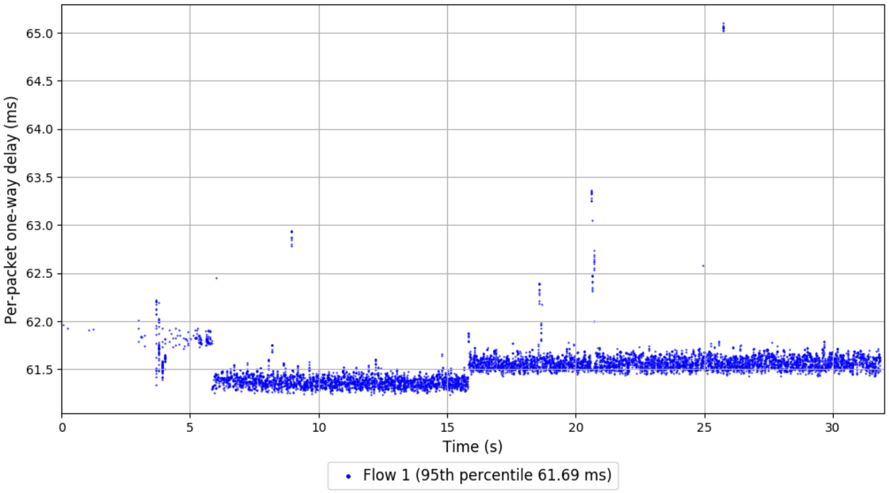
```
Run 5: Statistics of WebRTC media

Start at: 2017-09-18 09:13:25
End at: 2017-09-18 09:13:55

# Below is generated by plot.py at 2017-09-18 13:16:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 61.687 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 61.687 ms
Loss rate: 0.45%
```

Run 5: Report of WebRTC media — Data Link



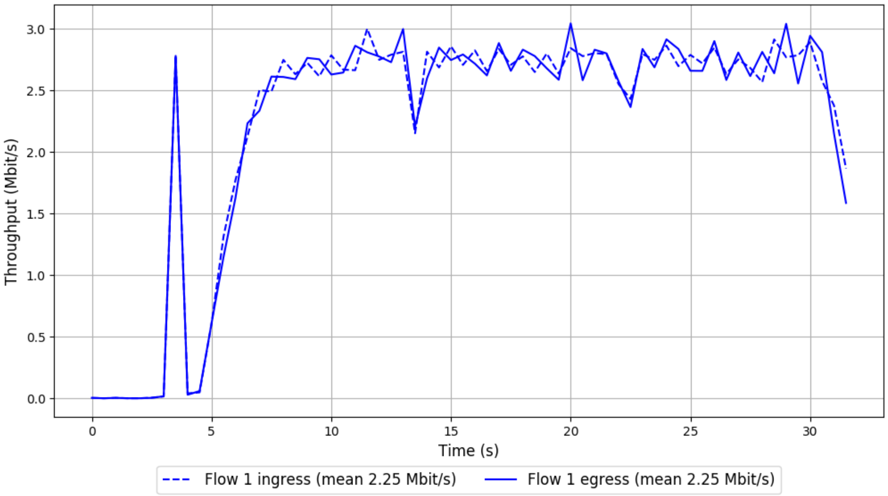


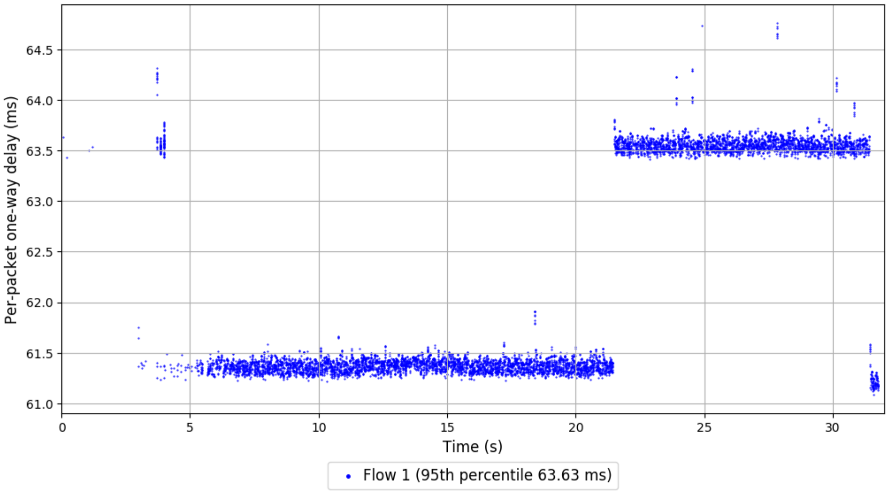
```
Run 6: Statistics of WebRTC media

Start at: 2017-09-18 09:25:01
End at: 2017-09-18 09:25:31

# Below is generated by plot.py at 2017-09-18 13:16:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 63.628 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 63.628 ms
Loss rate: 0.46%
```

Run 6: Report of WebRTC media — Data Link



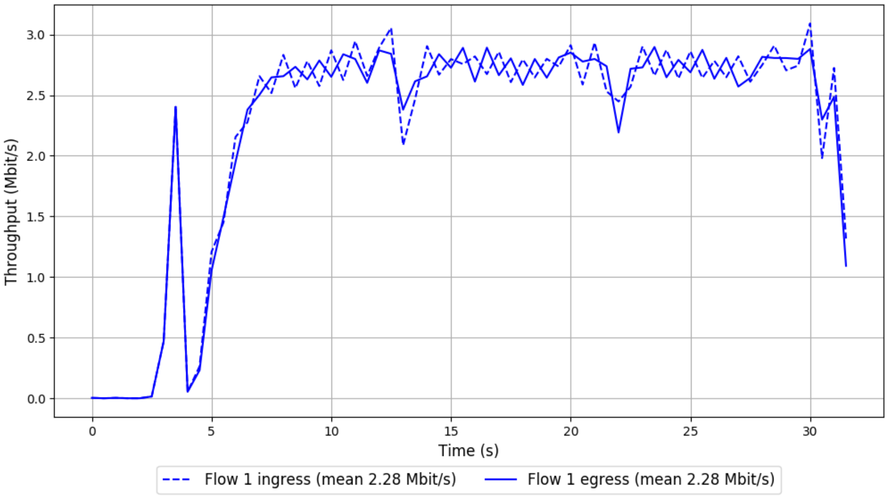


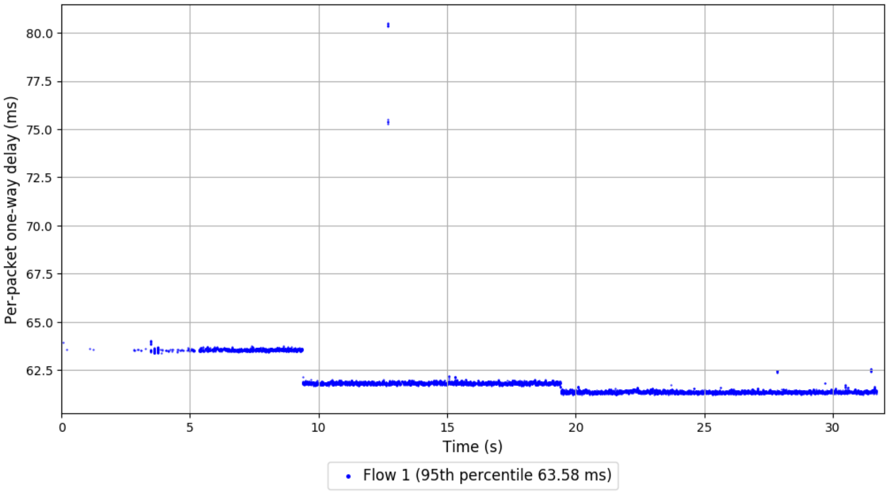
```
Run 7: Statistics of WebRTC media

Start at: 2017-09-18 09:36:33
End at: 2017-09-18 09:37:03

# Below is generated by plot.py at 2017-09-18 13:16:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 63.582 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 63.582 ms
Loss rate: 0.46%
```

Run 7: Report of WebRTC media — Data Link



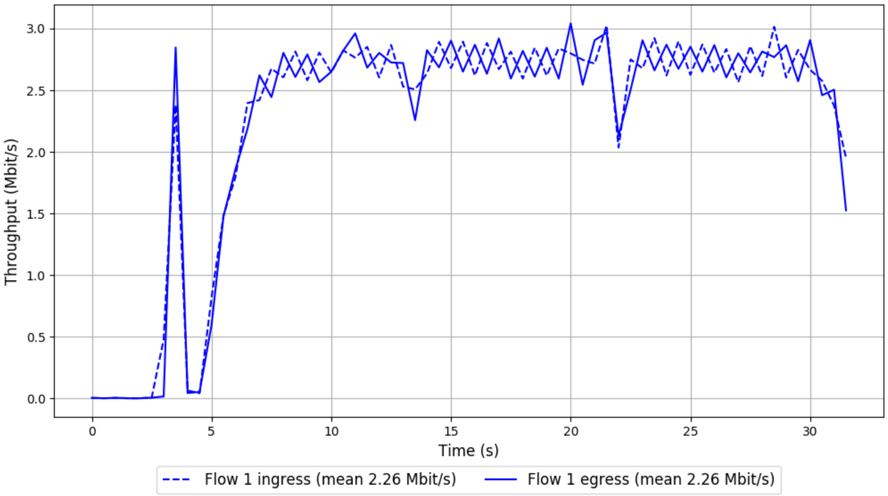


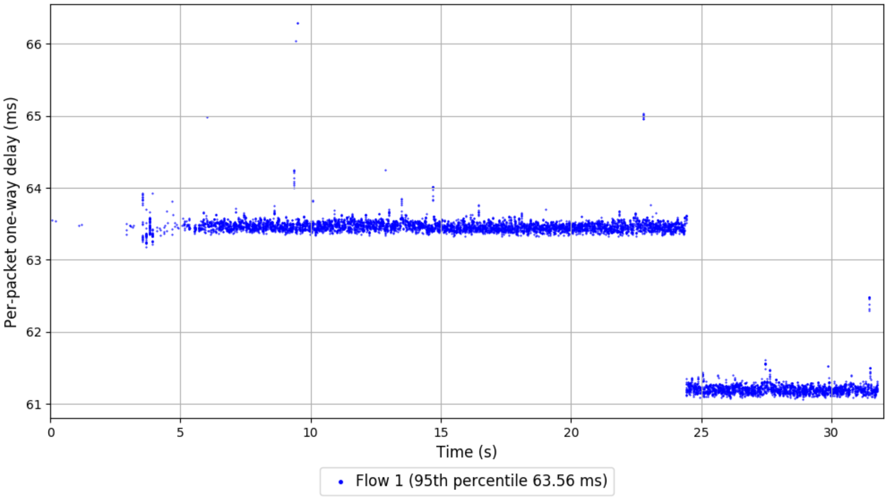
```
Run 8: Statistics of WebRTC media

Start at: 2017-09-18 09:48:08
End at: 2017-09-18 09:48:38

# Below is generated by plot.py at 2017-09-18 13:16:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 63.558 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 63.558 ms
Loss rate: 0.44%
```

Run 8: Report of WebRTC media — Data Link



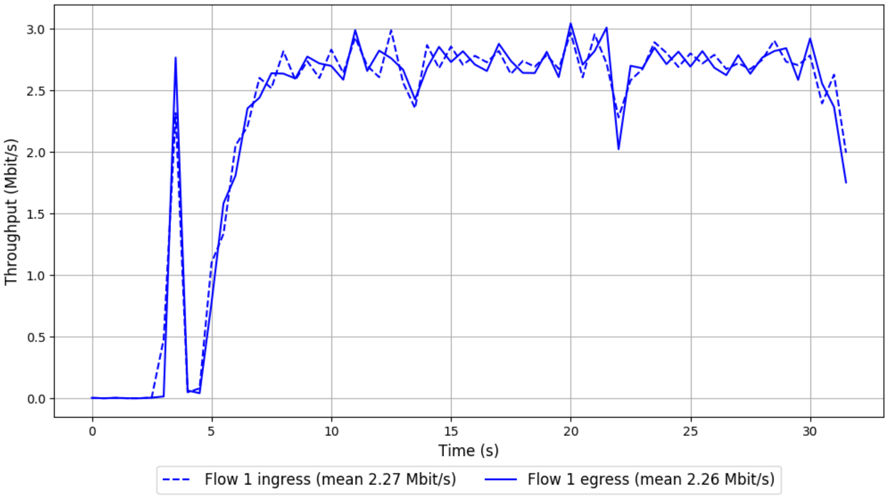


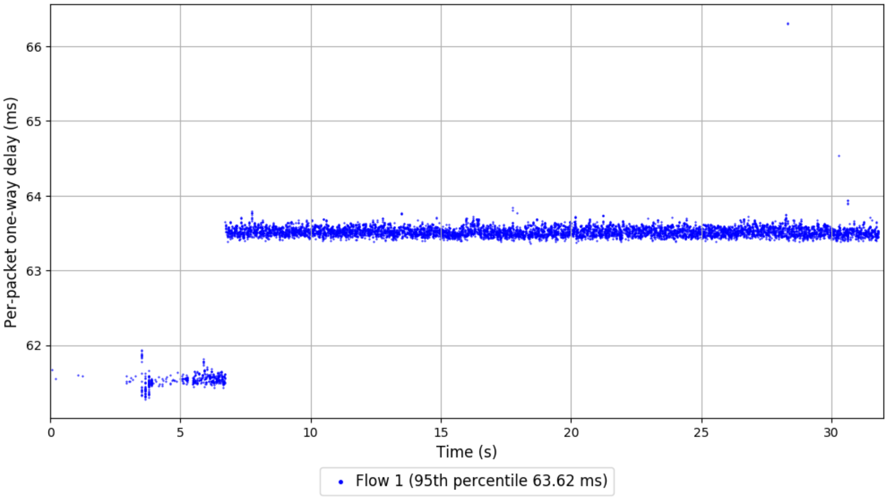
```
Run 9: Statistics of WebRTC media

Start at: 2017-09-18 09:59:44
End at: 2017-09-18 10:00:14

# Below is generated by plot.py at 2017-09-18 13:16:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 63.617 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 63.617 ms
Loss rate: 0.47%
```

Run 9: Report of WebRTC media — Data Link

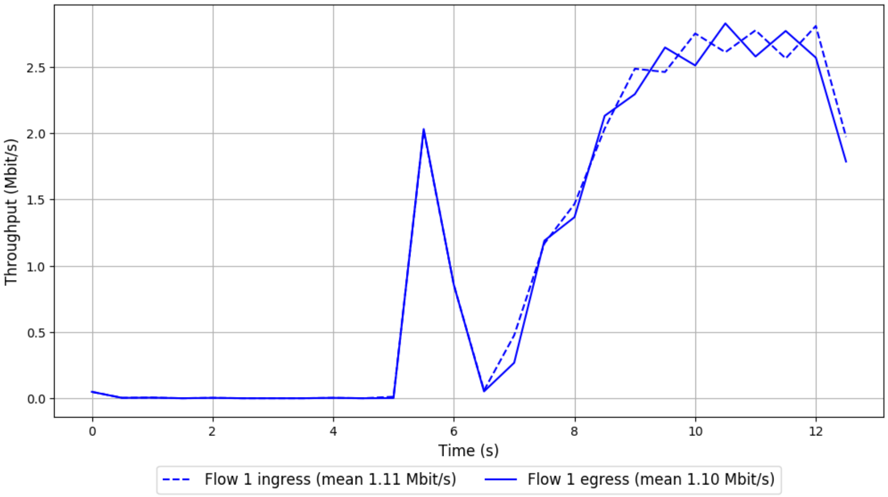




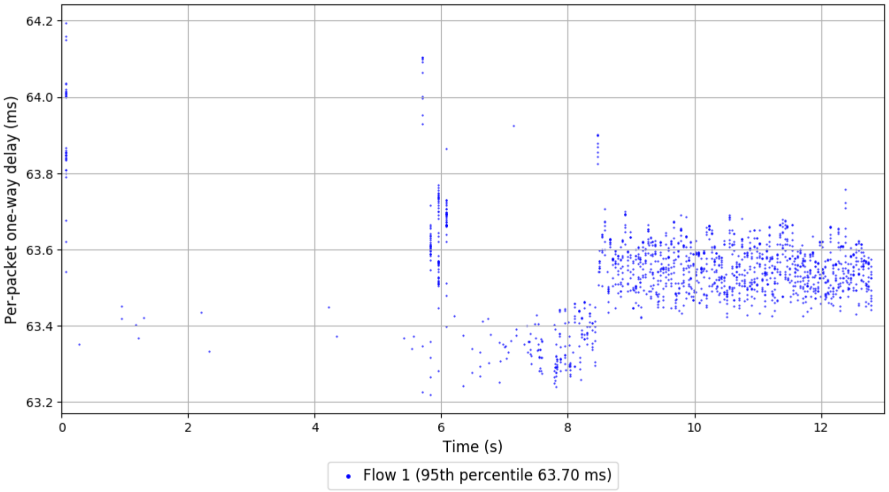
```
Run 10: Statistics of WebRTC media

Start at: 2017-09-18 10:11:25
End at: 2017-09-18 10:11:55
```

Run 10: Report of WebRTC media — Data Link



Throughput (Mbit/s)
0.0
0.5
1.0
1.5
2.0
2.5
0
2
4
6
8
10
12
Time (s)
Flow 1 ingress (mean 1.11 Mbit/s)
Flow 1 egress (mean 1.10 Mbit/s)



Per-packet one-way delay (ms)
63.2
63.4
63.6
63.8
64.0
64.2
0
2
4
6
8
10
12
Time (s)
Flow 1 (95th percentile 63.70 ms)