Pantheon Report

Generated at 2020-04-16 07:40:31 (UTC).

Tested in mahimahi: `mm-delay 130 mm-link 3.04mbps-poisson.trace 3.04mbps-poisson.trace --uplink-queue=droptail --uplink-queue-args=packets=426`

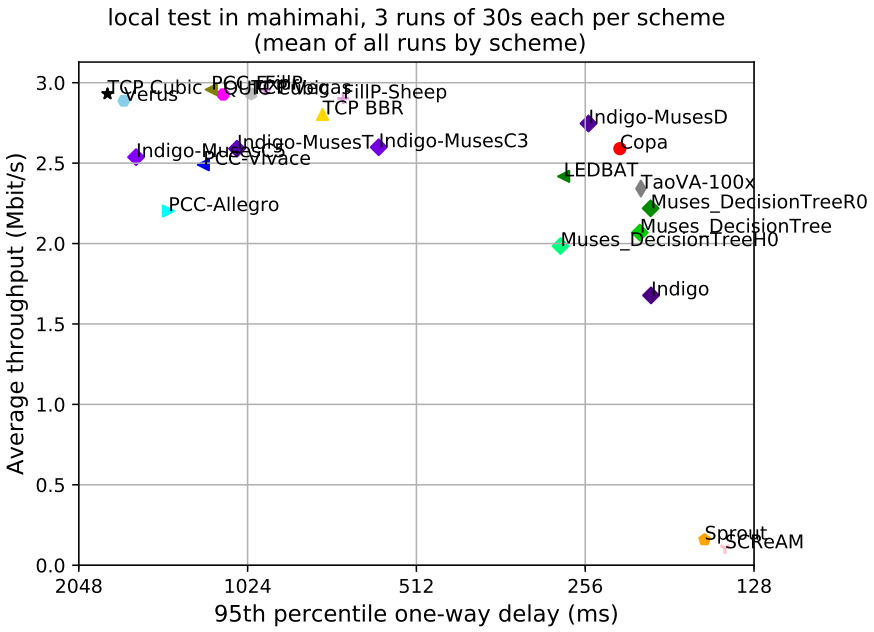
Repeated the test of 24 congestion control schemes 3 times.

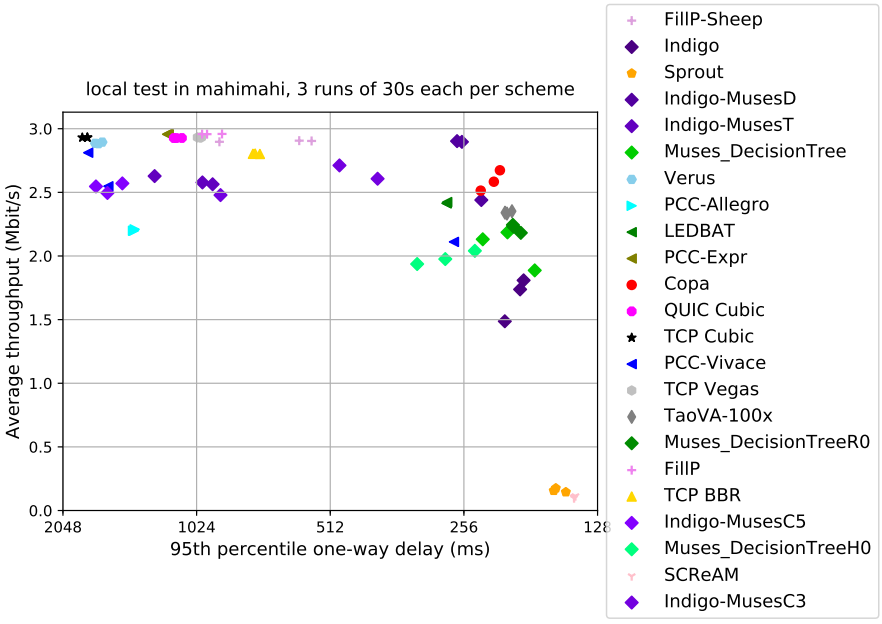
Each test lasted for 30 seconds running 1 flow.

```
System info:
Linux 5.0.0-1031-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

```
Git summary:
branch: muses @ de42328552b3776a75a932a94dfafd722537b0ec
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 387225f7b5f61ddbe92d708a8869ffbb84eb3200
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
```

third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851


local test in mahimahi, 3 runs of 30s each per scheme
(mean of all runs by scheme)
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2048
1024
512
256
128
Verus
FillP-Sheep
TCP BBR
Indigo-MusesD
Copa
Indigo-MusesT
Indigo-MusesC3
PCC-Vivace
LEDBAT
TaoVA-100x
Muses_DecisionTreeR0
PCC-Allegro
Muses_DecisionTree
Muses_DecisionTreeH0
Indigo
Sprout
SCReAM


local test in mahimahi, 3 runs of 30s each per scheme
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2048
1024
512
256
128
FillP-Sheep
Indigo
Sprout
Indigo-MusesD
Indigo-MusesT
Muses_DecisionTree
Verus
PCC-Allegro
LEDBAT
PCC-Expr
Copa
QUIC Cubic
TCP Cubic
PCC-Vivace
TCP Vegas
TaoVA-100x
Muses_DecisionTreeR0
FillP
TCP BBR
Indigo-MusesC5
Muses_DecisionTreeH0
SCReAM
Indigo-MusesC3

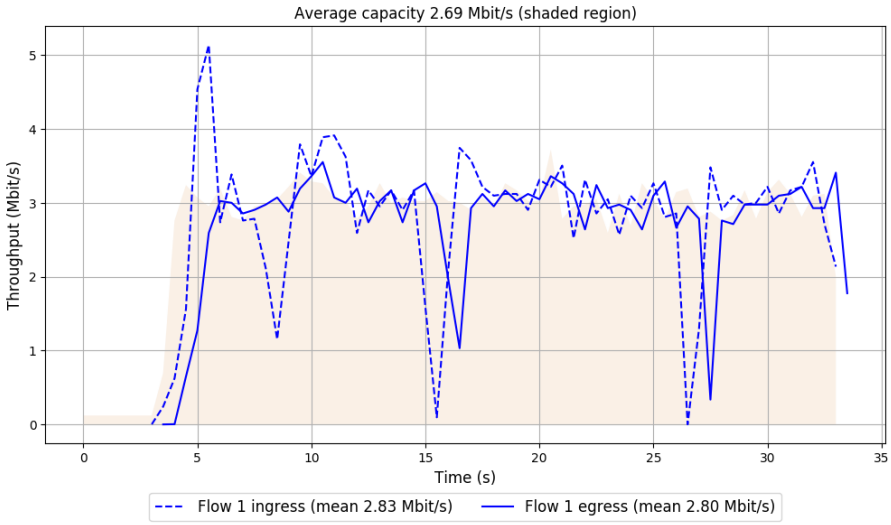
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	2.80	752.67	1.53
Copa	3	2.59	222.06	0.72
TCP Cubic	3	2.93	1820.25	8.29
FillP	3	2.96	954.23	3.43
FillP-Sheep	3	2.90	691.70	1.09
Indigo	3	1.68	195.39	0.68
Indigo-MusesC3	3	2.60	597.74	0.88
Indigo-MusesC5	3	2.54	1618.94	21.50
Indigo-MusesD	3	2.75	252.60	0.64
Indigo-MusesT	3	2.59	1069.64	1.47
LEDBAT	3	2.41	279.70	1.06
Muses_DecisionTree	3	2.07	204.56	0.54
Muses_DecisionTreeH0	3	1.99	283.35	1.07
Muses_DecisionTreeR0	3	2.22	195.71	0.49
PCC-Allegro	3	2.20	1417.67	1.95
PCC-Expr	3	2.96	1188.80	47.53
QUIC Cubic	3	2.93	1131.71	4.17
SCReAM	3	0.11	144.25	0.41
Sprout	3	0.16	156.83	1.19
TaoVA-100x	3	2.34	203.70	0.59
TCP Vegas	3	2.93	1008.63	2.95
Verus	3	2.89	1701.92	3.76
PCC-Vivace	3	2.49	1228.17	7.63
WebRTC media	0	N/A	N/A	N/A

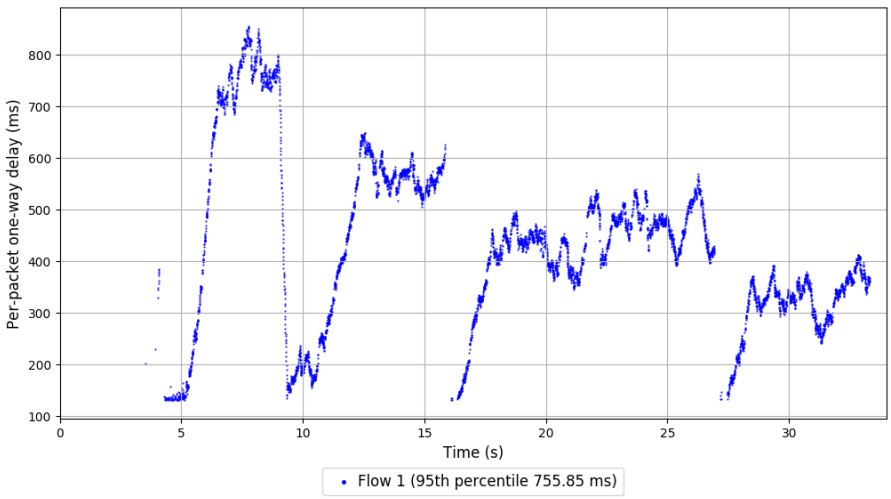
```
Run 1: Statistics of TCP BBR

Start at: 2020-04-16 06:58:55
End at: 2020-04-16 06:59:25

# Below is generated by plot.py at 2020-04-16 07:38:54
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.80 Mbit/s (104.2% utilization)
95th percentile per-packet one-way delay: 755.846 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 2.80 Mbit/s
95th percentile per-packet one-way delay: 755.846 ms
Loss rate: 1.42%
```

Run 1: Report of TCP BBR — Data Link



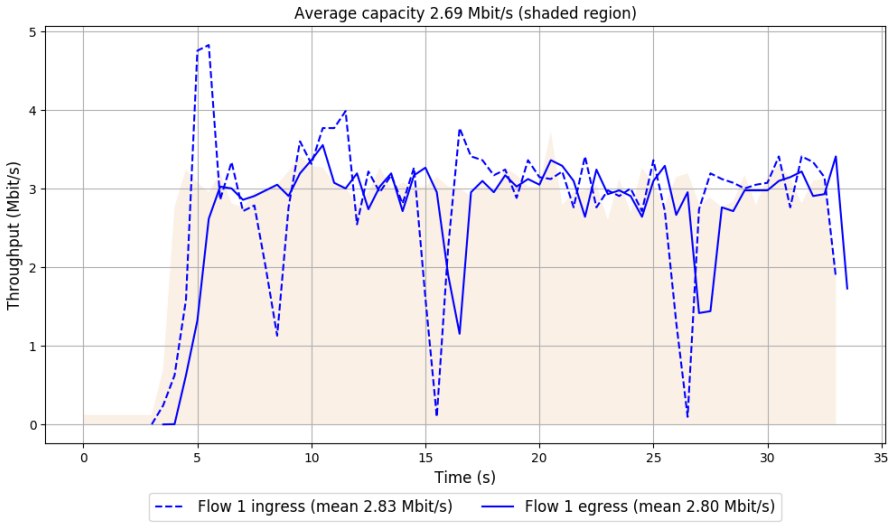


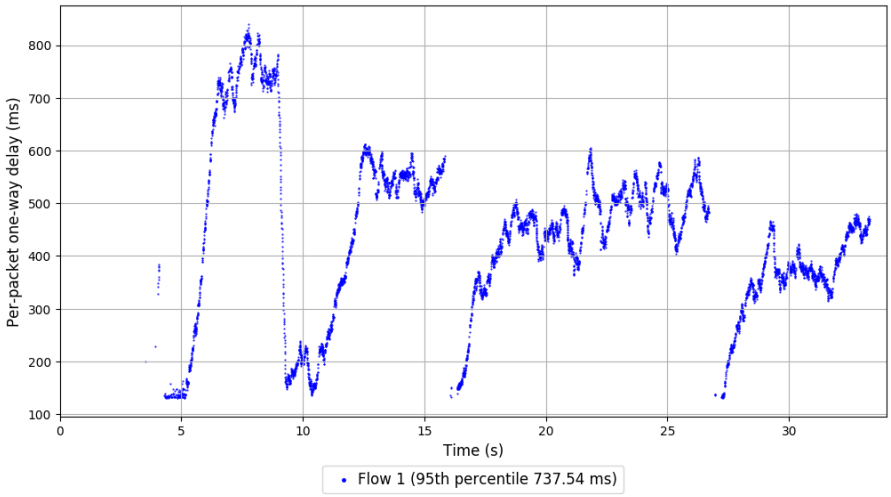
```
Run 2: Statistics of TCP BBR

Start at: 2020-04-16 07:12:56
End at: 2020-04-16 07:13:26

# Below is generated by plot.py at 2020-04-16 07:38:54
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.80 Mbit/s (104.1% utilization)
95th percentile per-packet one-way delay: 737.544 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 2.80 Mbit/s
95th percentile per-packet one-way delay: 737.544 ms
Loss rate: 1.71%
```

Run 2: Report of TCP BBR — Data Link



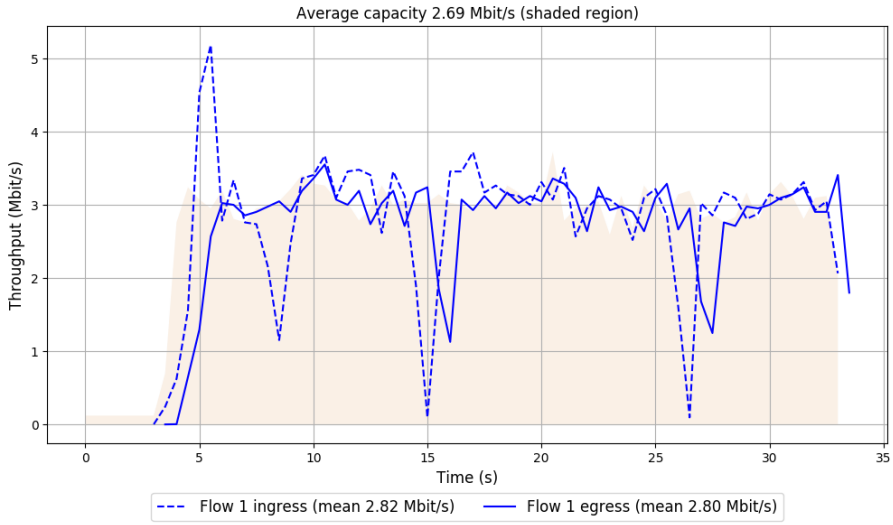


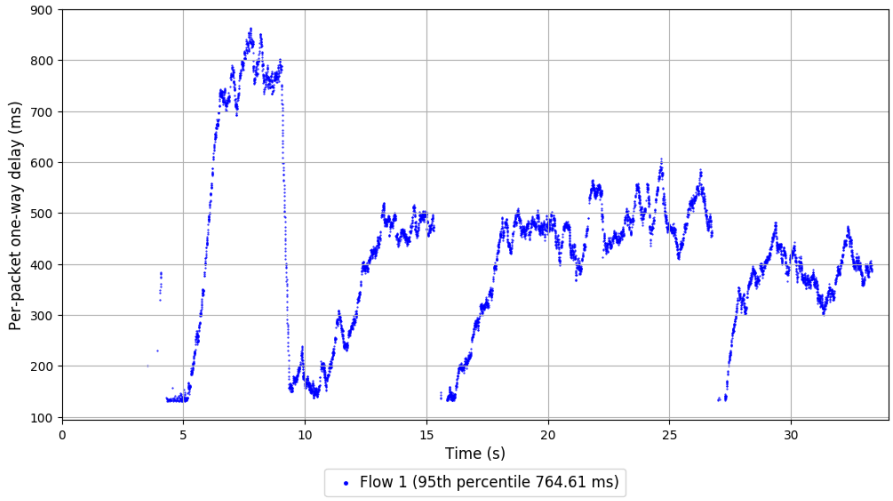
```
Run 3: Statistics of TCP BBR

Start at: 2020-04-16 07:26:58
End at: 2020-04-16 07:27:28

# Below is generated by plot.py at 2020-04-16 07:38:54
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.80 Mbit/s (104.1% utilization)
95th percentile per-packet one-way delay: 764.612 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 2.80 Mbit/s
95th percentile per-packet one-way delay: 764.612 ms
Loss rate: 1.46%
```

Run 3: Report of TCP BBR — Data Link



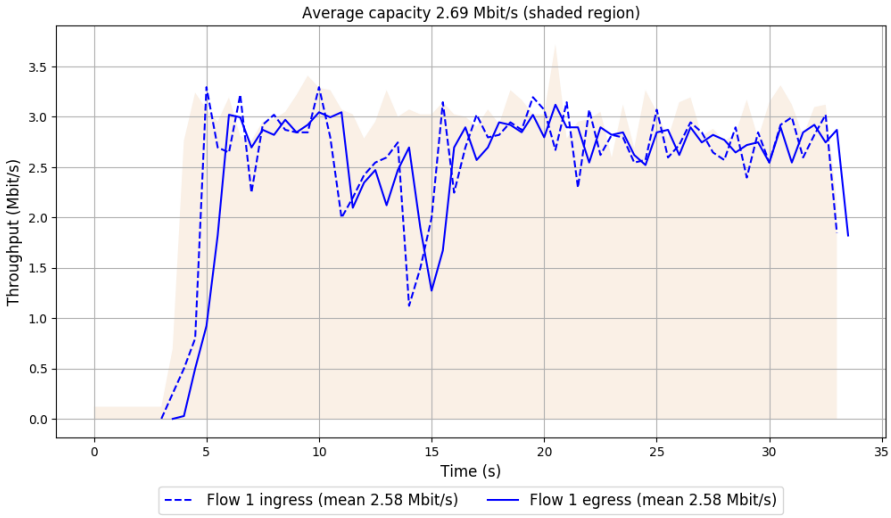


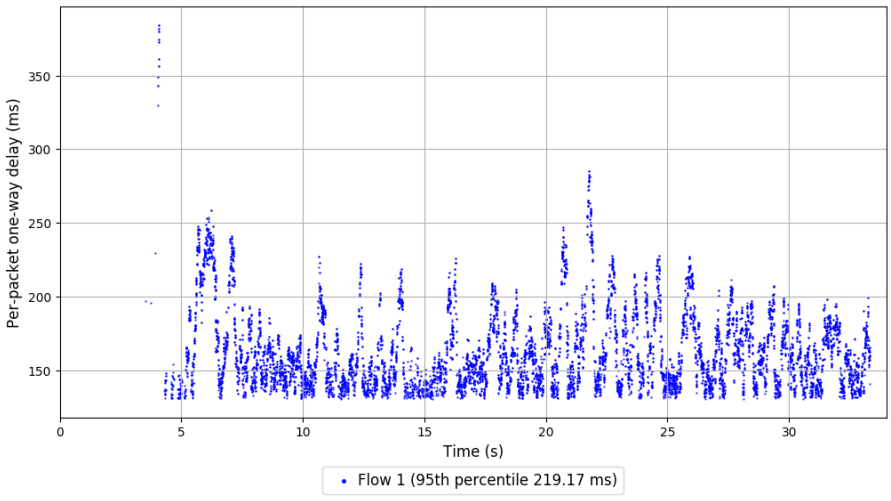
```
Run 1: Statistics of Copa

Start at: 2020-04-16 06:58:20
End at: 2020-04-16 06:58:50

# Below is generated by plot.py at 2020-04-16 07:38:55
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.58 Mbit/s (96.0% utilization)
95th percentile per-packet one-way delay: 219.166 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 219.166 ms
Loss rate: 0.66%
```

Run 1: Report of Copa — Data Link



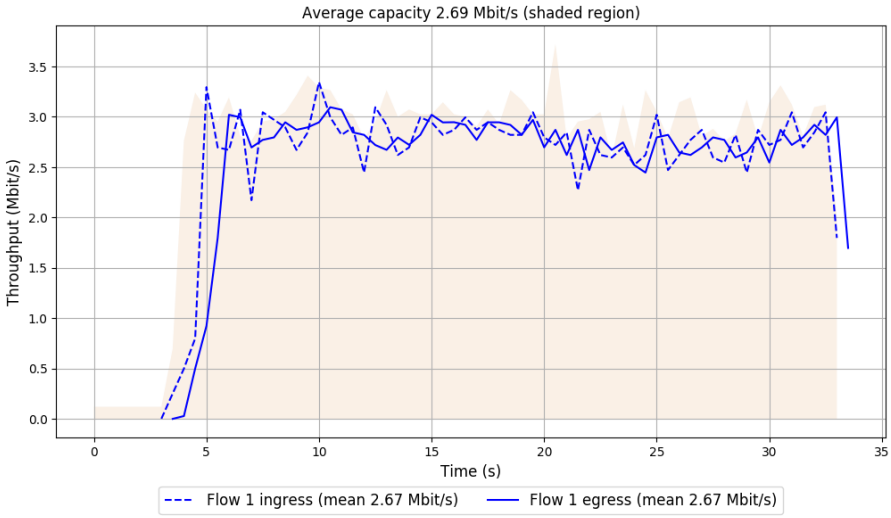


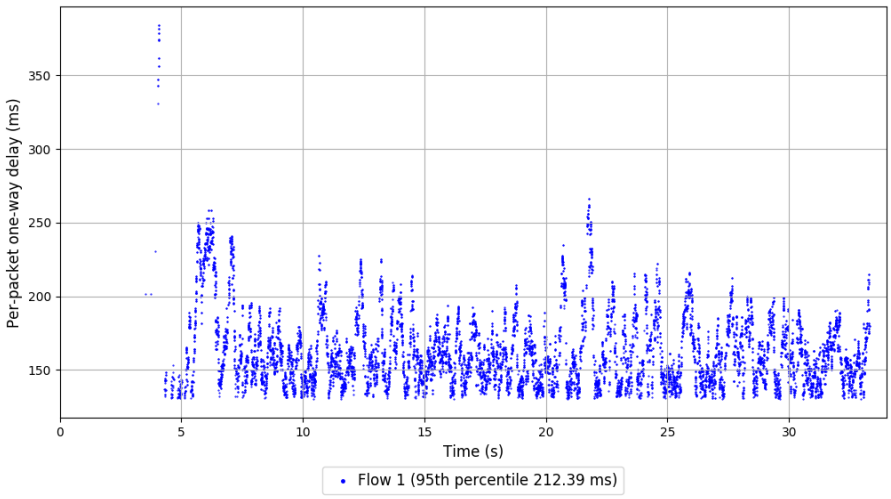
```
Run 2: Statistics of Copa

Start at: 2020-04-16 07:12:21
End at: 2020-04-16 07:12:51

# Below is generated by plot.py at 2020-04-16 07:38:56
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.67 Mbit/s (99.3% utilization)
95th percentile per-packet one-way delay: 212.389 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 212.389 ms
Loss rate: 0.64%
```

Run 2: Report of Copa — Data Link



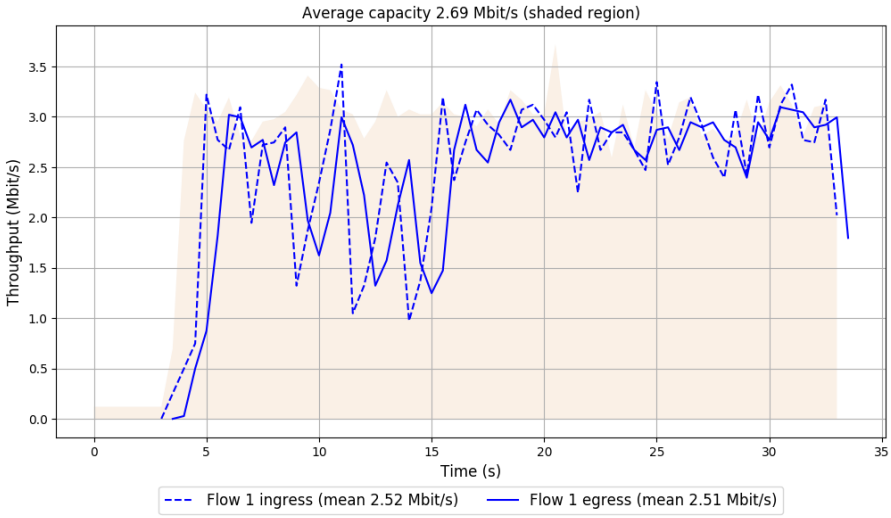


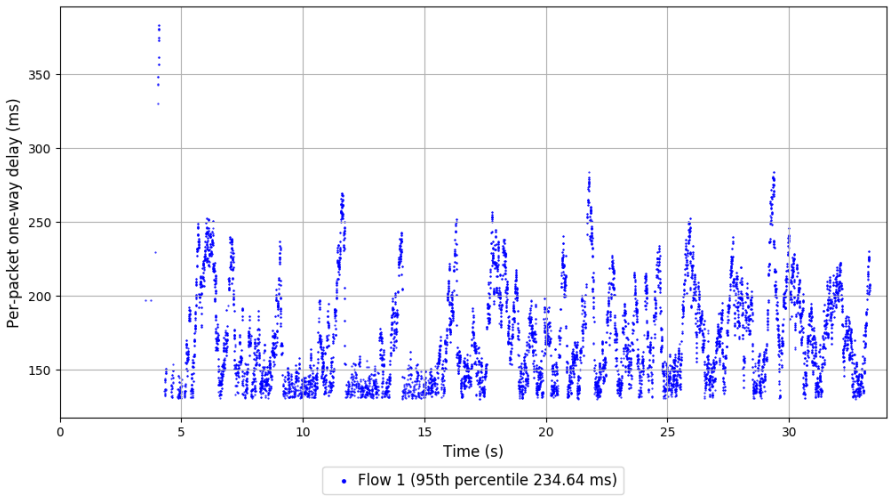
```
Run 3: Statistics of Copa

Start at: 2020-04-16 07:26:22
End at: 2020-04-16 07:26:52

# Below is generated by plot.py at 2020-04-16 07:38:56
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.51 Mbit/s (93.4% utilization)
95th percentile per-packet one-way delay: 234.637 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 234.637 ms
Loss rate: 0.86%
```

Run 3: Report of Copa — Data Link



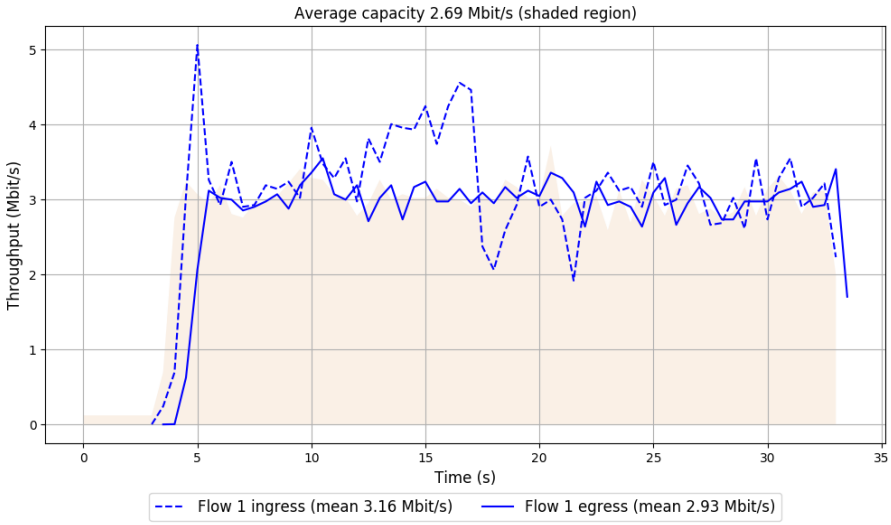


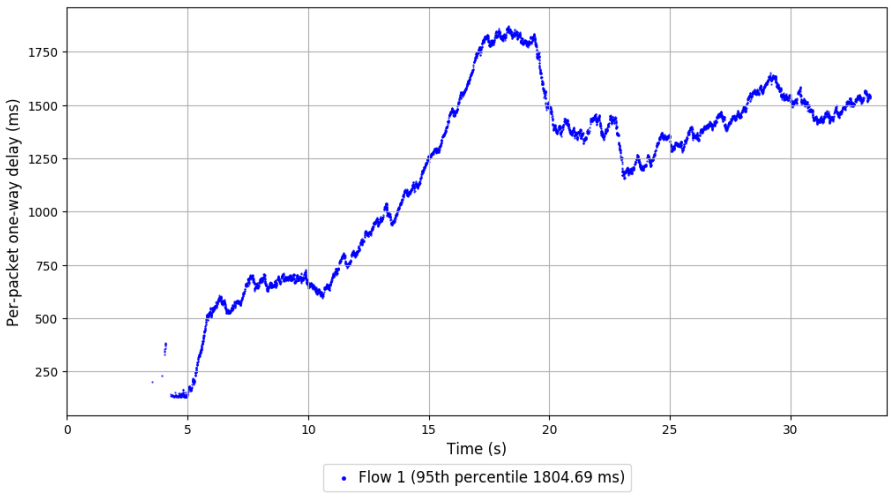
```
Run 1: Statistics of TCP Cubic

Start at: 2020-04-16 07:05:56
End at: 2020-04-16 07:06:26

# Below is generated by plot.py at 2020-04-16 07:38:56
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.93 Mbit/s (108.8% utilization)
95th percentile per-packet one-way delay: 1804.691 ms
Loss rate: 7.82%
-- Flow 1:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 1804.691 ms
Loss rate: 7.82%
```

Run 1: Report of TCP Cubic — Data Link



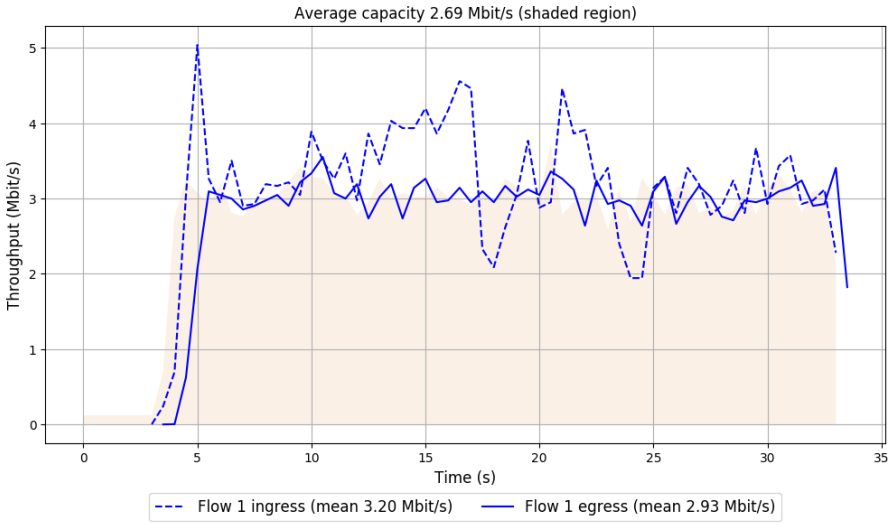


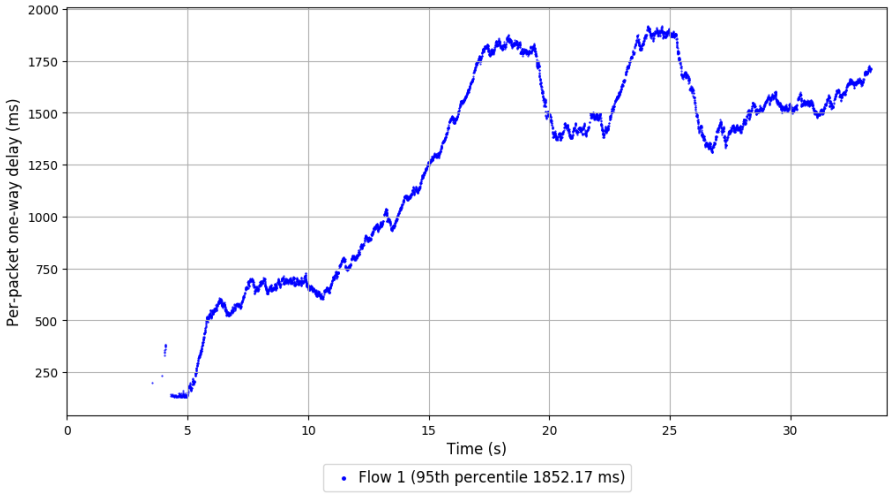
```
Run 2: Statistics of TCP Cubic

Start at: 2020-04-16 07:19:57
End at: 2020-04-16 07:20:27

# Below is generated by plot.py at 2020-04-16 07:38:56
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.93 Mbit/s (108.9% utilization)
95th percentile per-packet one-way delay: 1852.171 ms
Loss rate: 9.14%
-- Flow 1:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 1852.171 ms
Loss rate: 9.14%
```

Run 2: Report of TCP Cubic — Data Link



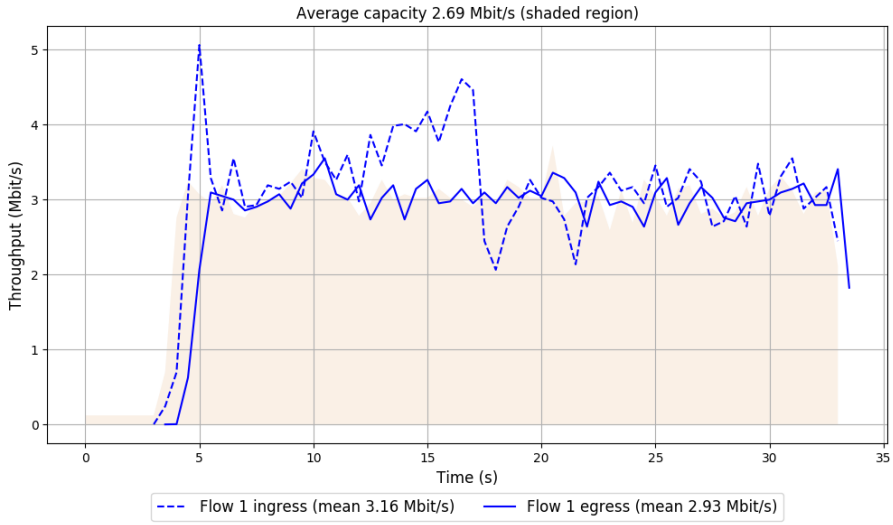


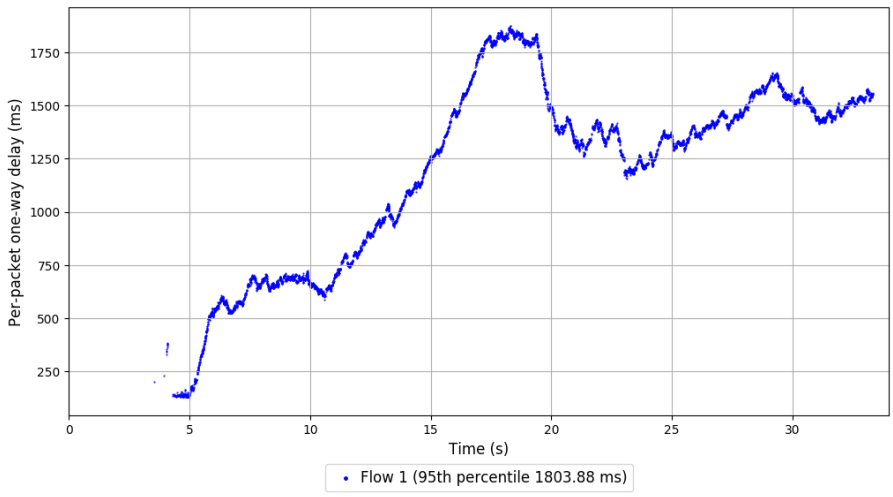
```
Run 3: Statistics of TCP Cubic

Start at: 2020-04-16 07:33:58
End at: 2020-04-16 07:34:28

# Below is generated by plot.py at 2020-04-16 07:39:04
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.93 Mbit/s (108.9% utilization)
95th percentile per-packet one-way delay: 1803.880 ms
Loss rate: 7.91%
-- Flow 1:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 1803.880 ms
Loss rate: 7.91%
```

Run 3: Report of TCP Cubic — Data Link



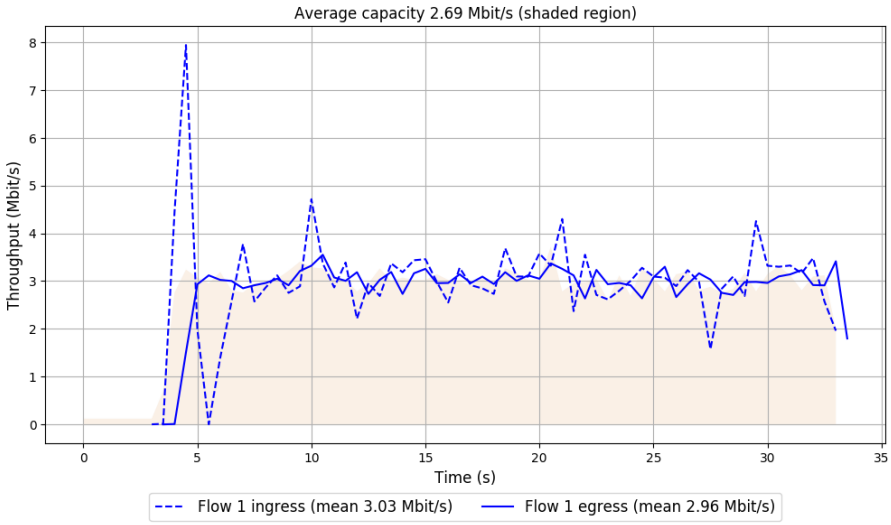


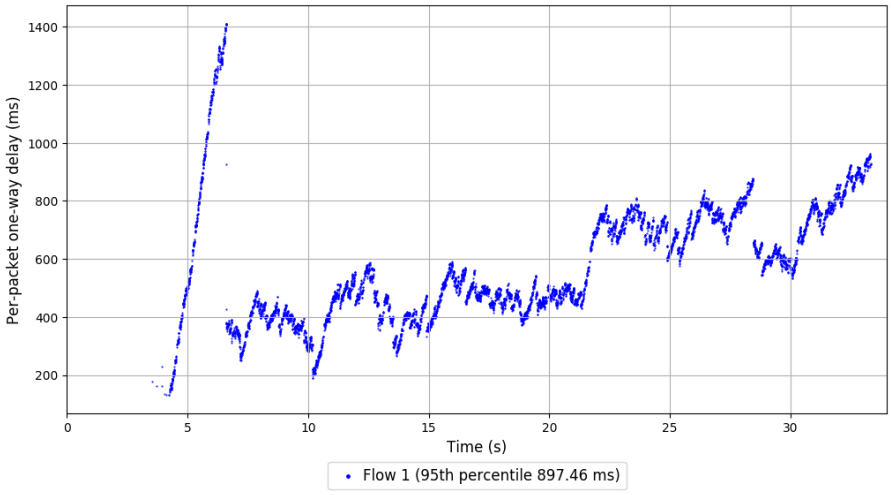
```
Run 1: Statistics of FillP

Start at: 2020-04-16 07:07:41
End at: 2020-04-16 07:08:11

# Below is generated by plot.py at 2020-04-16 07:39:06
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.96 Mbit/s (109.9% utilization)
95th percentile per-packet one-way delay: 897.462 ms
Loss rate: 2.91%
-- Flow 1:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 897.462 ms
Loss rate: 2.91%
```

Run 1: Report of FillP — Data Link



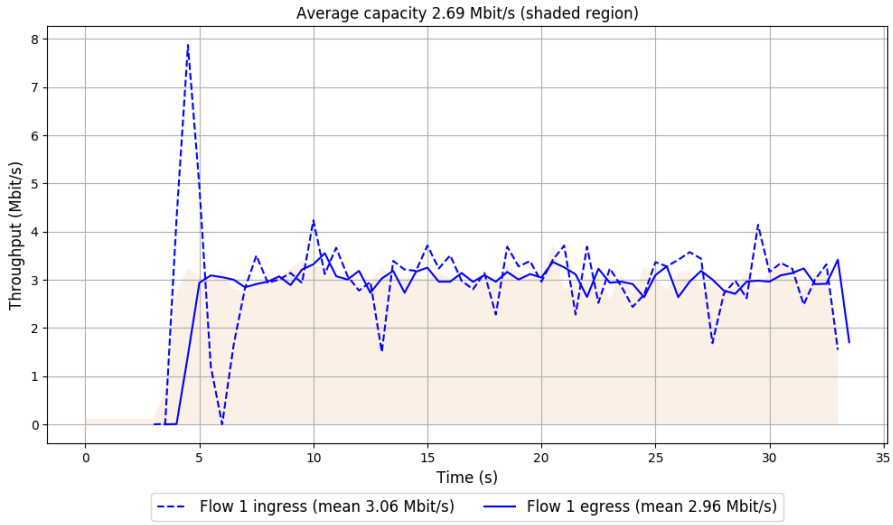


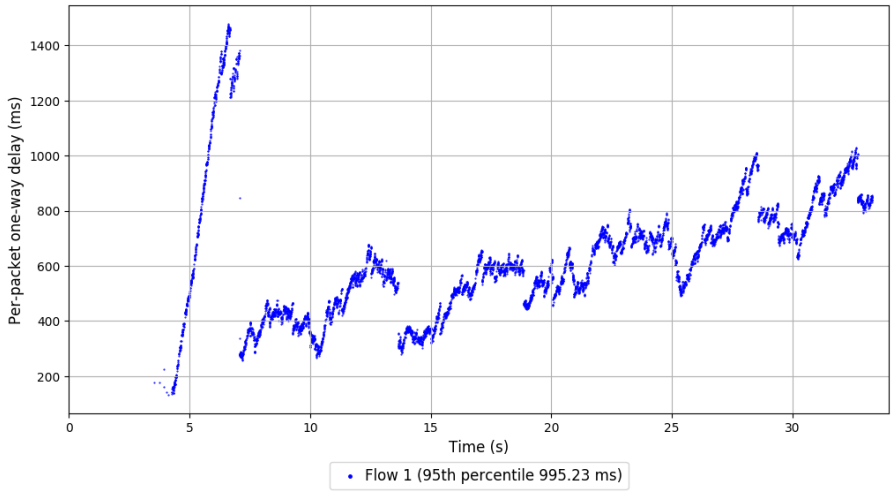
```
Run 2: Statistics of FillP

Start at: 2020-04-16 07:21:42
End at: 2020-04-16 07:22:12

# Below is generated by plot.py at 2020-04-16 07:39:06
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.96 Mbit/s (109.9% utilization)
95th percentile per-packet one-way delay: 995.225 ms
Loss rate: 3.52%
-- Flow 1:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 995.225 ms
Loss rate: 3.52%
```

Run 2: Report of FillP — Data Link



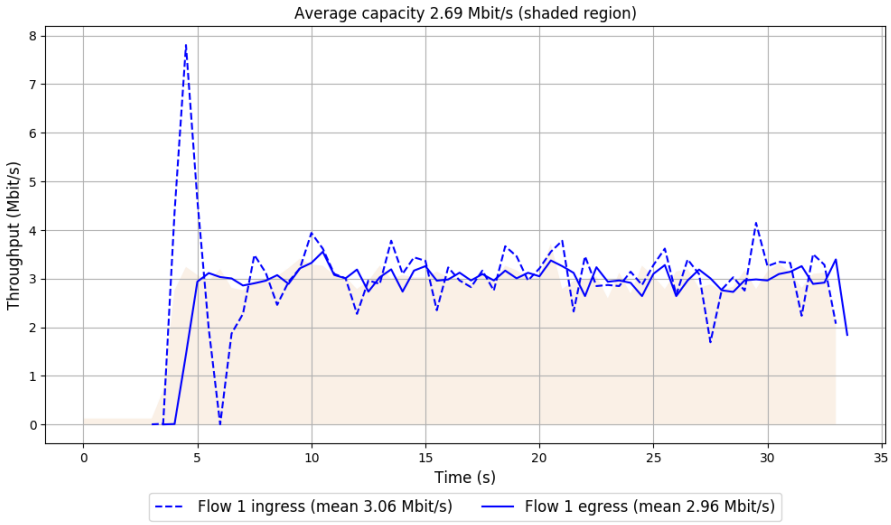


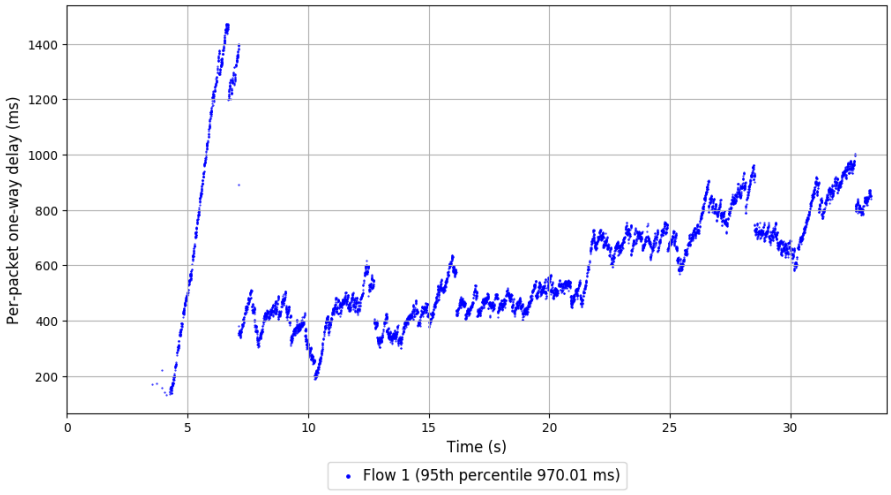
```
Run 3: Statistics of FillP

Start at: 2020-04-16 07:35:44
End at: 2020-04-16 07:36:14

# Below is generated by plot.py at 2020-04-16 07:39:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.96 Mbit/s (109.8% utilization)
95th percentile per-packet one-way delay: 970.014 ms
Loss rate: 3.85%
-- Flow 1:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 970.014 ms
Loss rate: 3.85%
```

Run 3: Report of FillP — Data Link



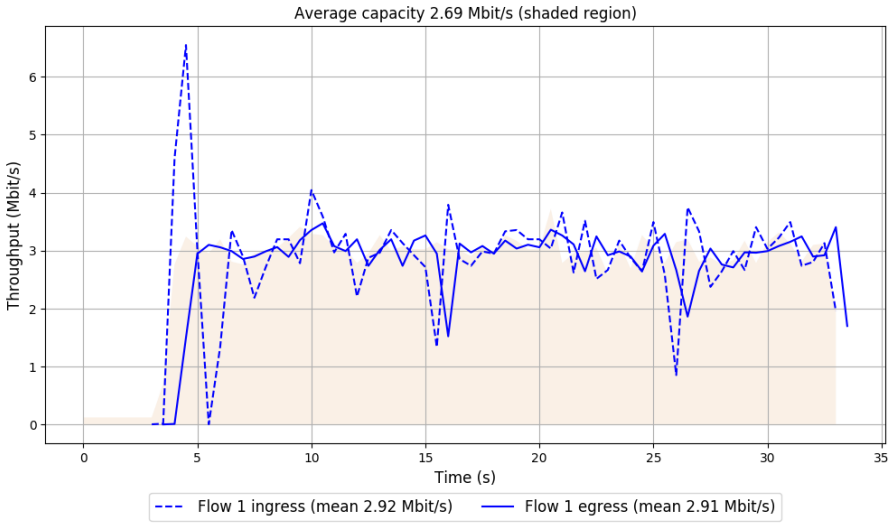


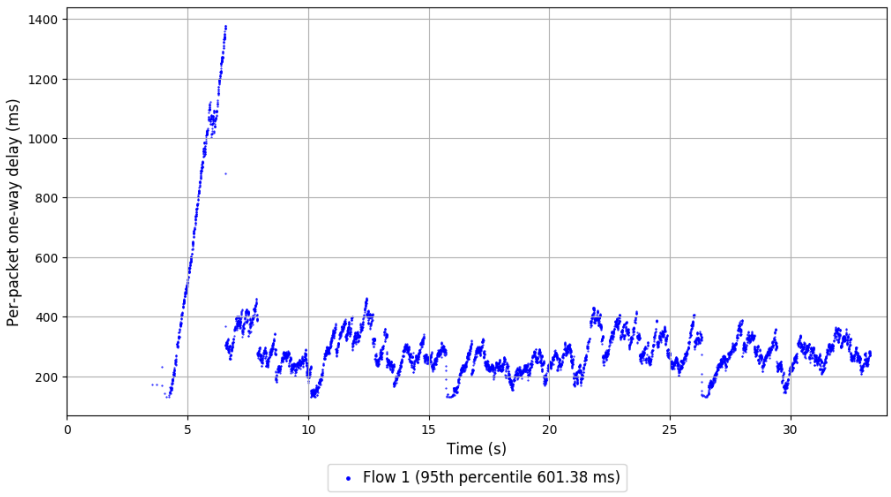
```
Run 1: Statistics of FillP-Sheep

Start at: 2020-04-16 06:56:35
End at: 2020-04-16 06:57:05

# Below is generated by plot.py at 2020-04-16 07:39:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.91 Mbit/s (107.9% utilization)
95th percentile per-packet one-way delay: 601.384 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 601.384 ms
Loss rate: 0.97%
```

Run 1: Report of FillP-Sheep — Data Link



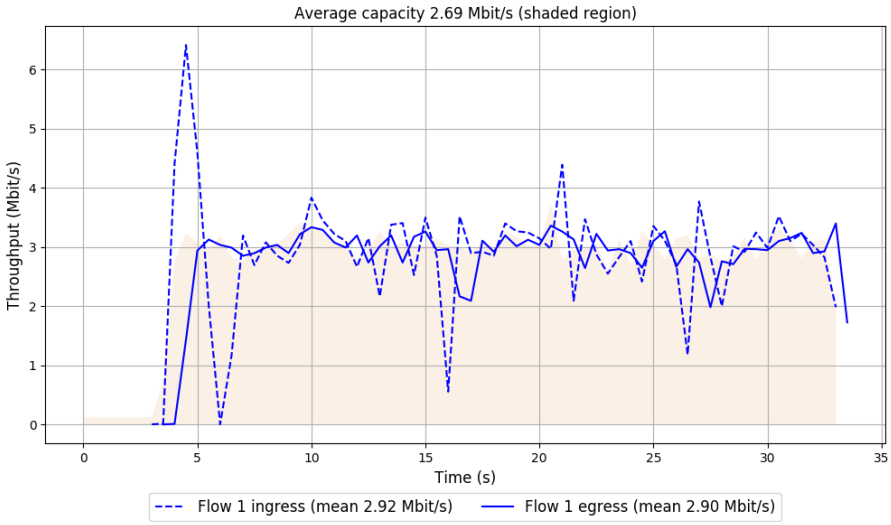


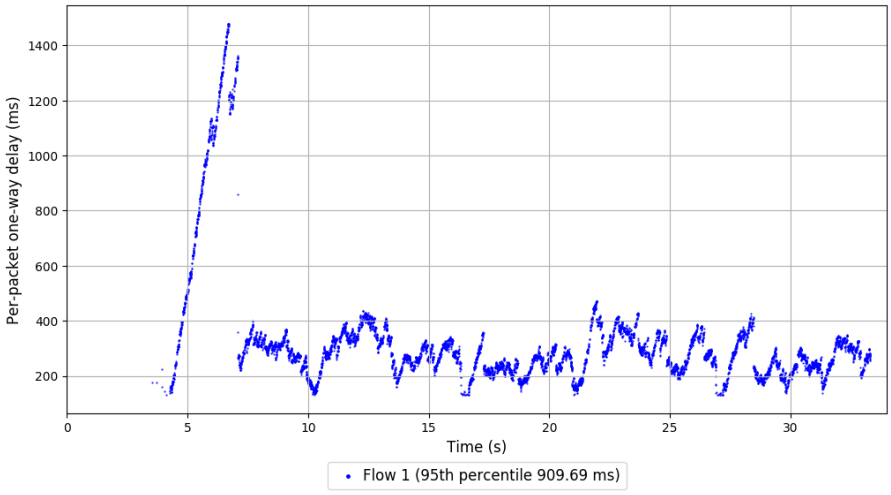
```
Run 2: Statistics of FillP-Sheep

Start at: 2020-04-16 07:10:36
End at: 2020-04-16 07:11:06

# Below is generated by plot.py at 2020-04-16 07:39:09
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.90 Mbit/s (107.6% utilization)
95th percentile per-packet one-way delay: 909.691 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 909.691 ms
Loss rate: 1.25%
```

Run 2: Report of FillP-Sheep — Data Link



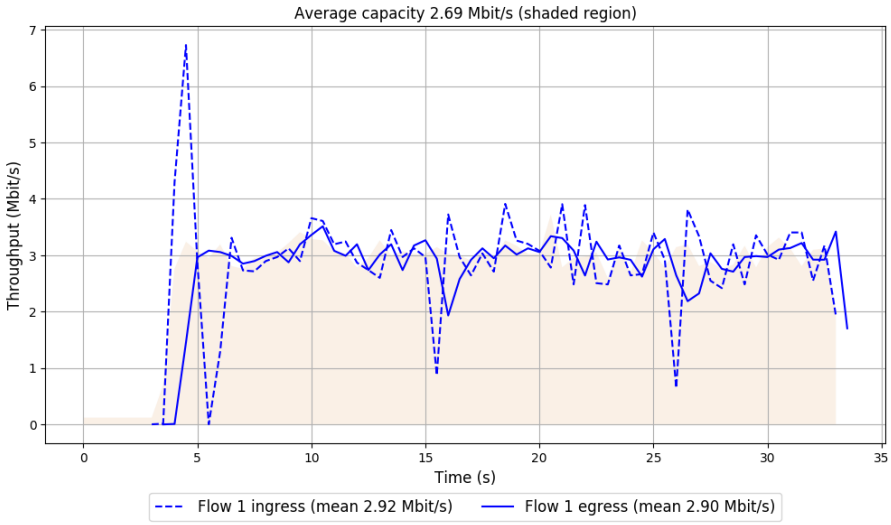


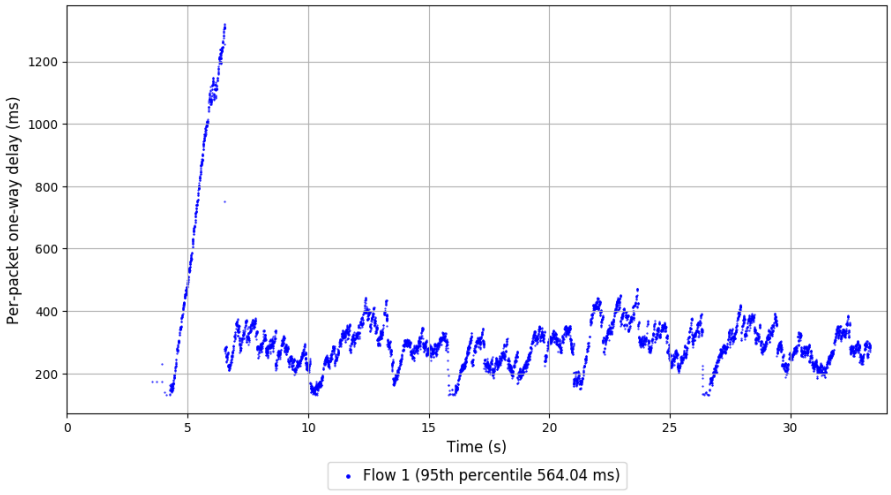
```
Run 3: Statistics of FillP-Sheep

Start at: 2020-04-16 07:24:37
End at: 2020-04-16 07:25:07

# Below is generated by plot.py at 2020-04-16 07:39:09
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.90 Mbit/s (107.9% utilization)
95th percentile per-packet one-way delay: 564.040 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 564.040 ms
Loss rate: 1.04%
```

Run 3: Report of FillP-Sheep — Data Link



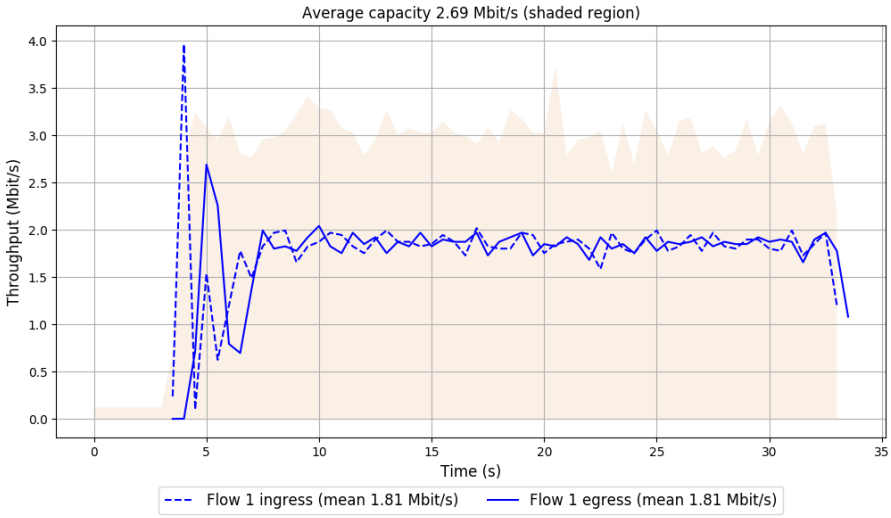


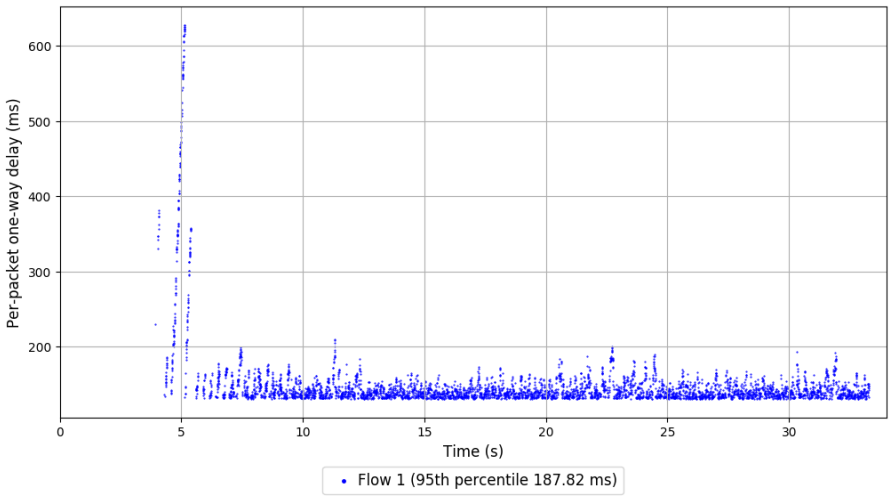
```
Run 1: Statistics of Indigo

Start at: 2020-04-16 07:03:01
End at: 2020-04-16 07:03:31

# Below is generated by plot.py at 2020-04-16 07:39:09
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 1.81 Mbit/s (67.2% utilization)
95th percentile per-packet one-way delay: 187.823 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 187.823 ms
Loss rate: 0.65%
```

Run 1: Report of Indigo — Data Link



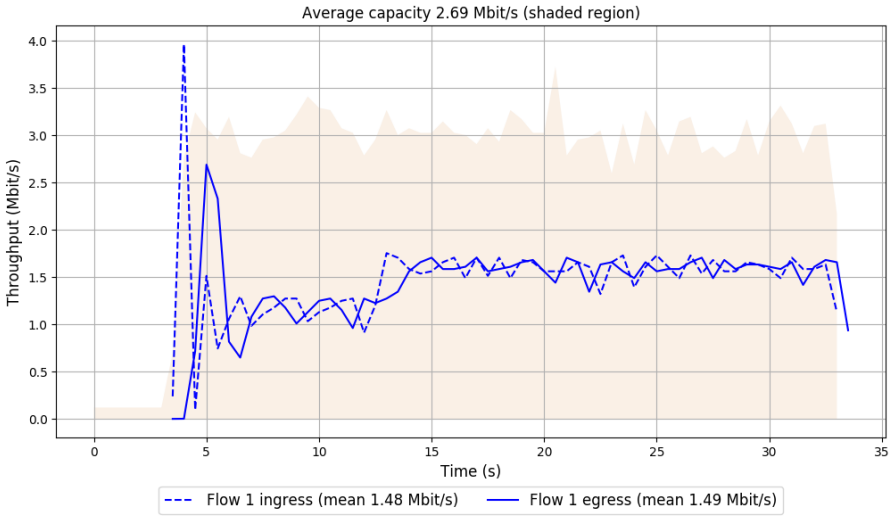


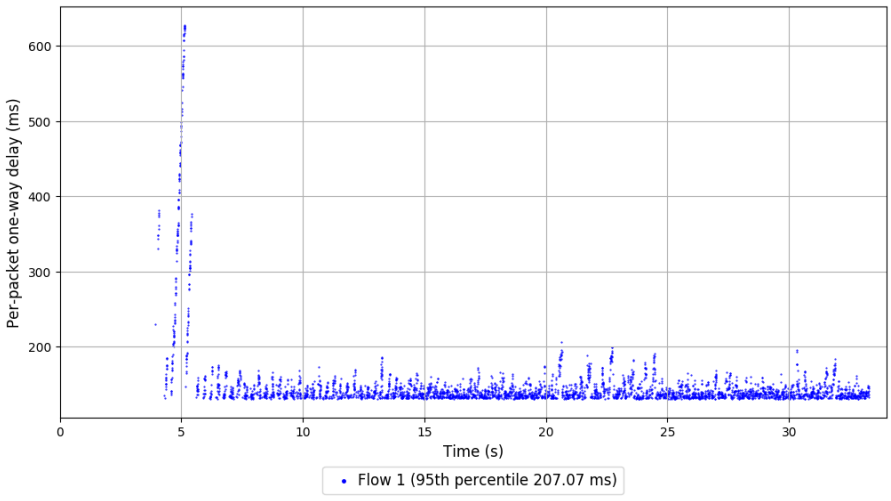
```
Run 2: Statistics of Indigo

Start at: 2020-04-16 07:17:02
End at: 2020-04-16 07:17:32

# Below is generated by plot.py at 2020-04-16 07:39:12
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 1.49 Mbit/s (55.2% utilization)
95th percentile per-packet one-way delay: 207.066 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 207.066 ms
Loss rate: 0.68%
```

Run 2: Report of Indigo — Data Link



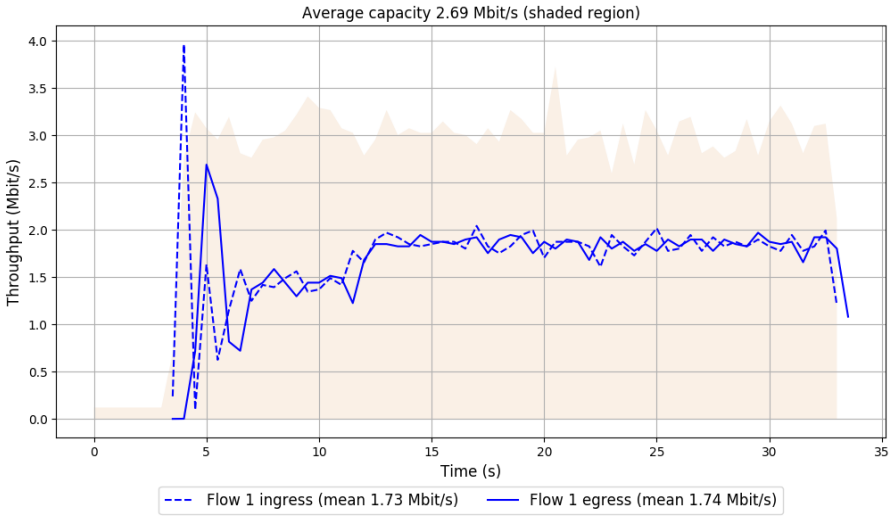


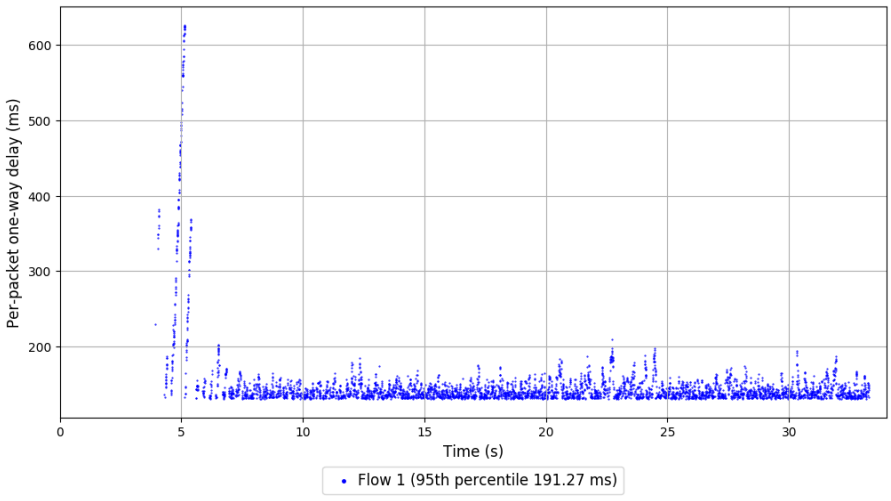
```
Run 3: Statistics of Indigo

Start at: 2020-04-16 07:31:03
End at: 2020-04-16 07:31:33

# Below is generated by plot.py at 2020-04-16 07:39:14
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 1.74 Mbit/s (64.5% utilization)
95th percentile per-packet one-way delay: 191.270 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 191.270 ms
Loss rate: 0.70%
```

Run 3: Report of Indigo — Data Link



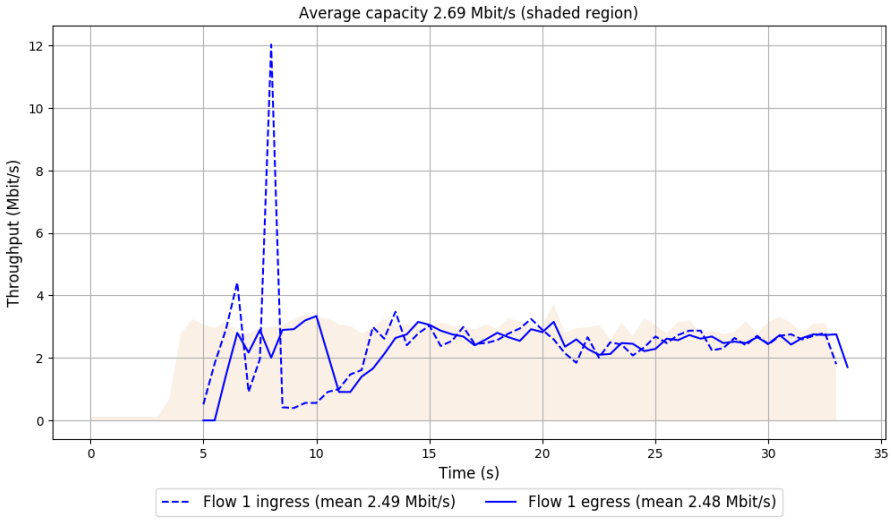


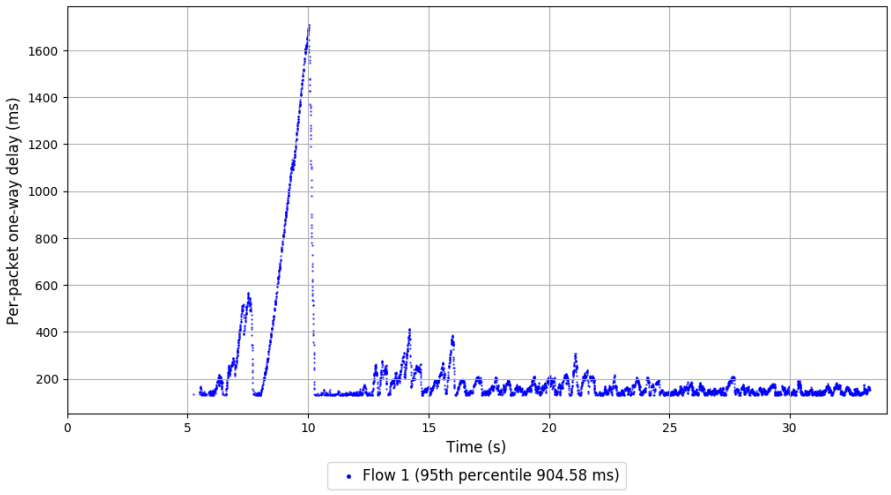
```
Run 1: Statistics of Indigo-MusesC3

Start at: 2020-04-16 07:02:26
End at: 2020-04-16 07:02:56

# Below is generated by plot.py at 2020-04-16 07:39:18
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.48 Mbit/s (92.0% utilization)
95th percentile per-packet one-way delay: 904.580 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 904.580 ms
Loss rate: 0.95%
```

Run 1: Report of Indigo-MusesC3 — Data Link



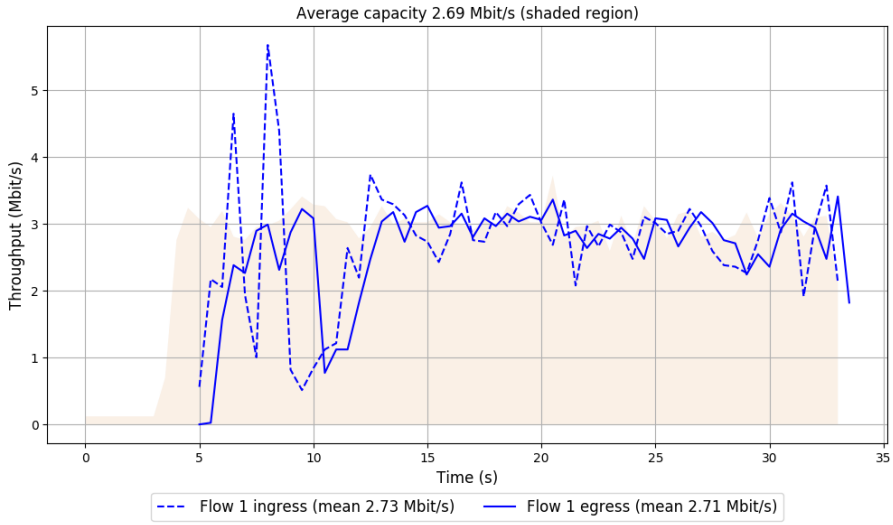


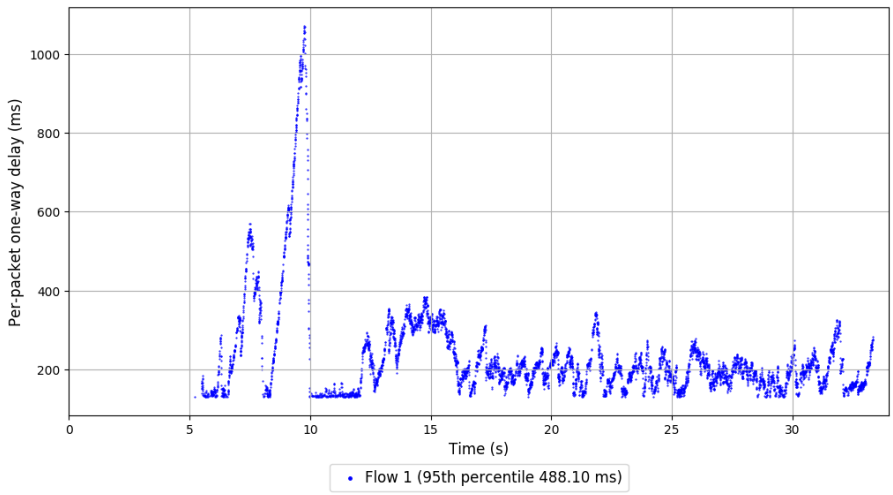
```
Run 2: Statistics of Indigo-MusesC3

Start at: 2020-04-16 07:16:27
End at: 2020-04-16 07:16:57

# Below is generated by plot.py at 2020-04-16 07:39:19
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.71 Mbit/s (100.7% utilization)
95th percentile per-packet one-way delay: 488.104 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 488.104 ms
Loss rate: 1.08%
```

Run 2: Report of Indigo-MusesC3 — Data Link



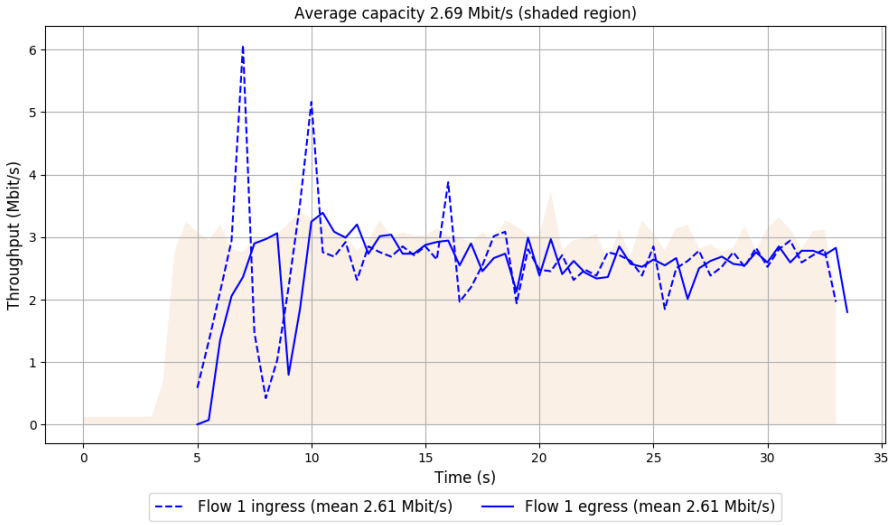


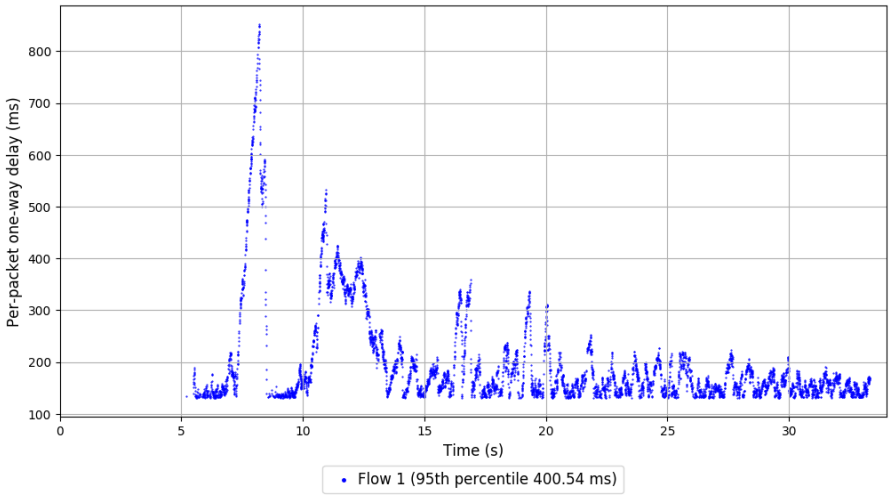
```
Run 3: Statistics of Indigo-MusesC3

Start at: 2020-04-16 07:30:28
End at: 2020-04-16 07:30:58

# Below is generated by plot.py at 2020-04-16 07:39:20
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.61 Mbit/s (96.8% utilization)
95th percentile per-packet one-way delay: 400.540 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 2.61 Mbit/s
95th percentile per-packet one-way delay: 400.540 ms
Loss rate: 0.62%
```

Run 3: Report of Indigo-MusesC3 — Data Link



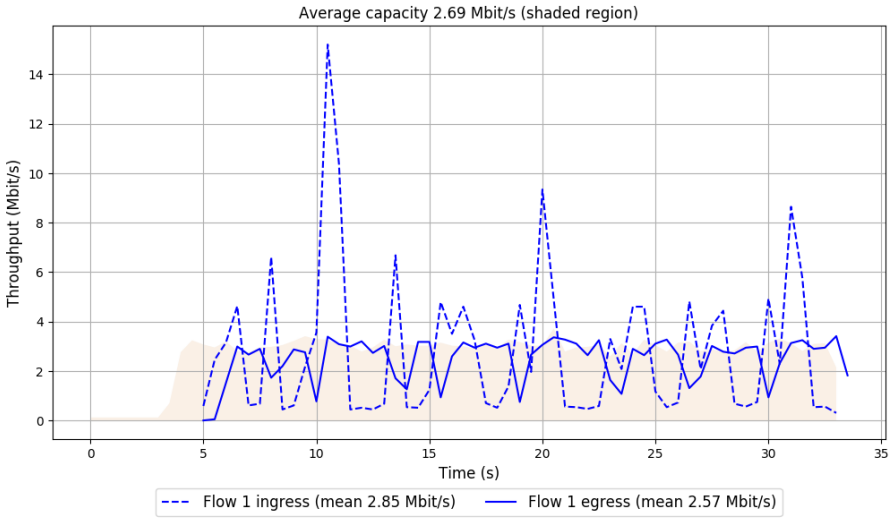


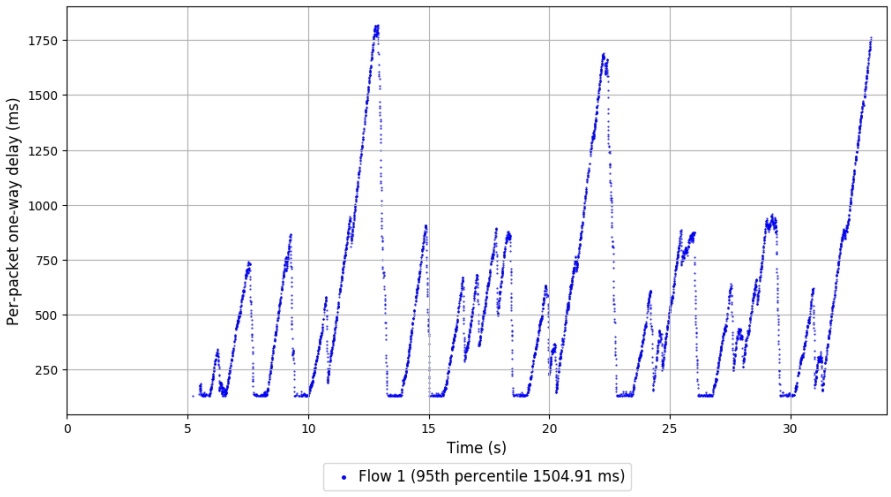
```
Run 1: Statistics of Indigo-MusesC5

Start at: 2020-04-16 07:06:31
End at: 2020-04-16 07:07:01

# Below is generated by plot.py at 2020-04-16 07:39:20
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.57 Mbit/s (95.5% utilization)
95th percentile per-packet one-way delay: 1504.912 ms
Loss rate: 10.25%
-- Flow 1:
Average throughput: 2.57 Mbit/s
95th percentile per-packet one-way delay: 1504.912 ms
Loss rate: 10.25%
```

Run 1: Report of Indigo-MusesC5 — Data Link



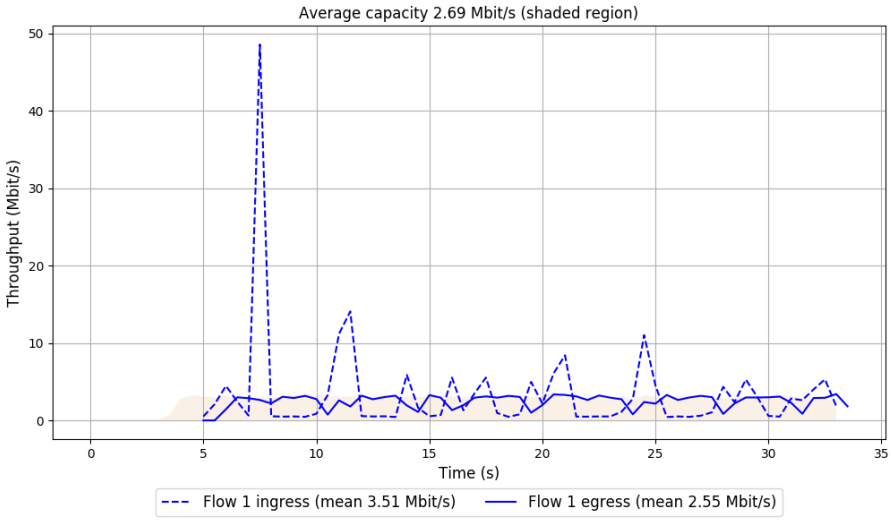


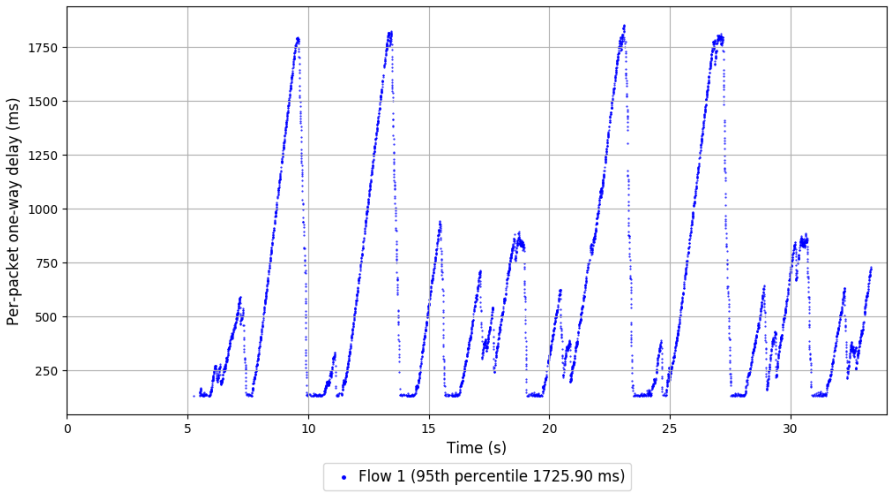
```
Run 2: Statistics of Indigo-MusesC5

Start at: 2020-04-16 07:20:32
End at: 2020-04-16 07:21:02

# Below is generated by plot.py at 2020-04-16 07:39:21
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.55 Mbit/s (94.6% utilization)
95th percentile per-packet one-way delay: 1725.901 ms
Loss rate: 27.72%
-- Flow 1:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 1725.901 ms
Loss rate: 27.72%
```

Run 2: Report of Indigo-MusesC5 — Data Link



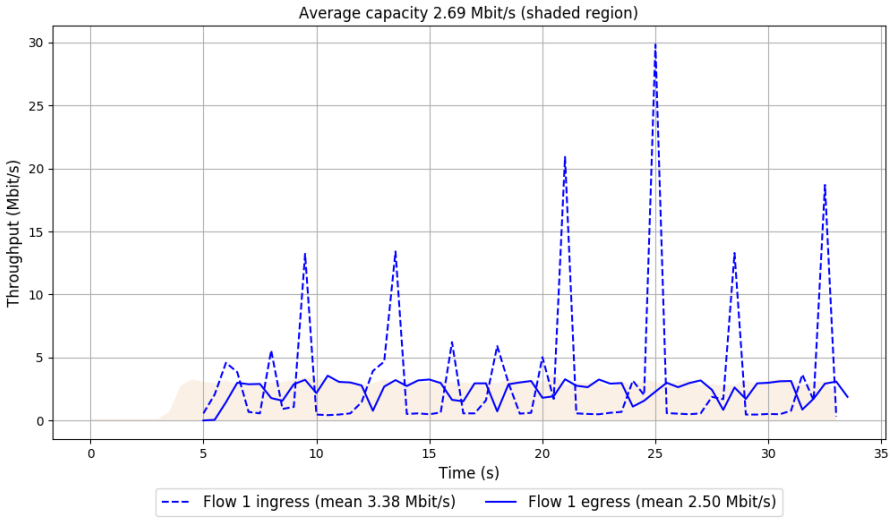


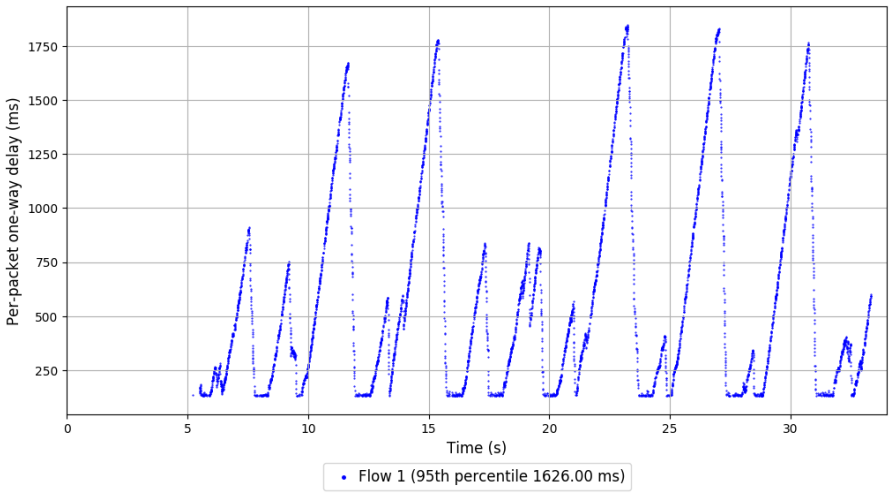
```
Run 3: Statistics of Indigo-MusesC5

Start at: 2020-04-16 07:34:33
End at: 2020-04-16 07:35:03

# Below is generated by plot.py at 2020-04-16 07:39:22
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.50 Mbit/s (92.7% utilization)
95th percentile per-packet one-way delay: 1625.997 ms
Loss rate: 26.54%
-- Flow 1:
Average throughput: 2.50 Mbit/s
95th percentile per-packet one-way delay: 1625.997 ms
Loss rate: 26.54%
```

Run 3: Report of Indigo-MusesC5 — Data Link



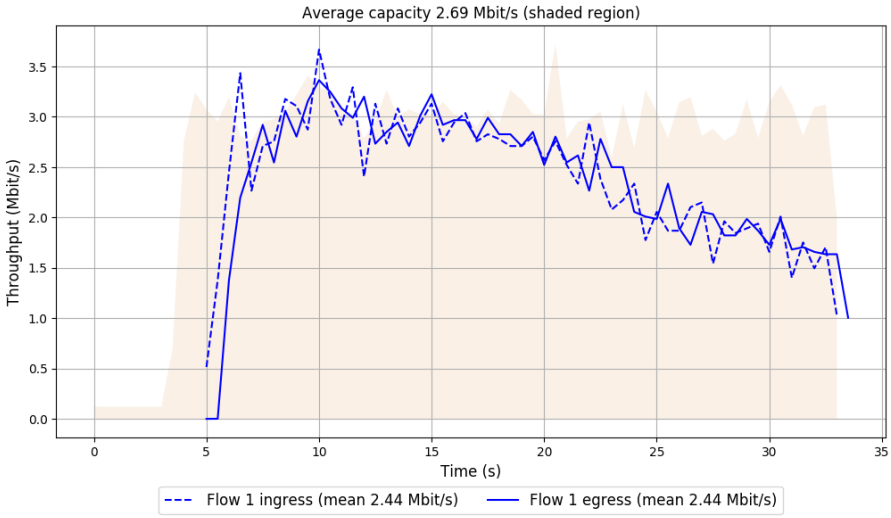


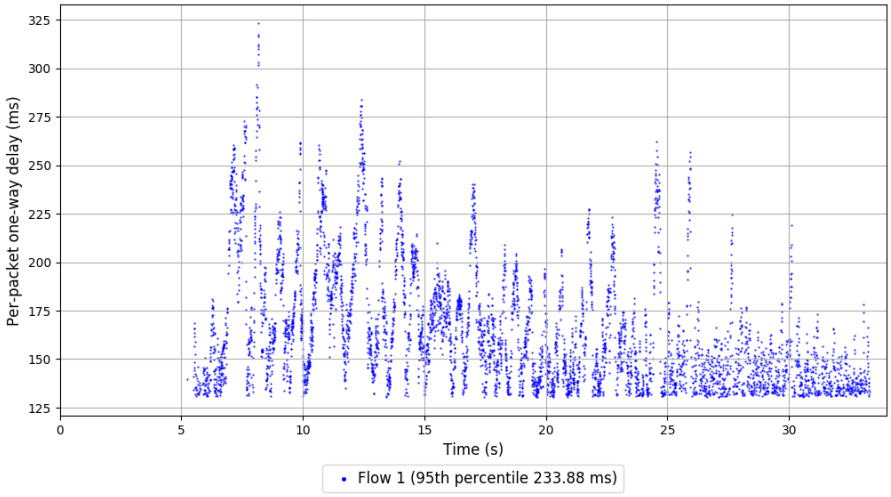
```
Run 1: Statistics of Indigo-MusesD

Start at: 2020-04-16 06:57:45
End at: 2020-04-16 06:58:15

# Below is generated by plot.py at 2020-04-16 07:39:24
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.44 Mbit/s (90.6% utilization)
95th percentile per-packet one-way delay: 233.884 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 233.884 ms
Loss rate: 0.34%
```

Run 1: Report of Indigo-MusesD — Data Link



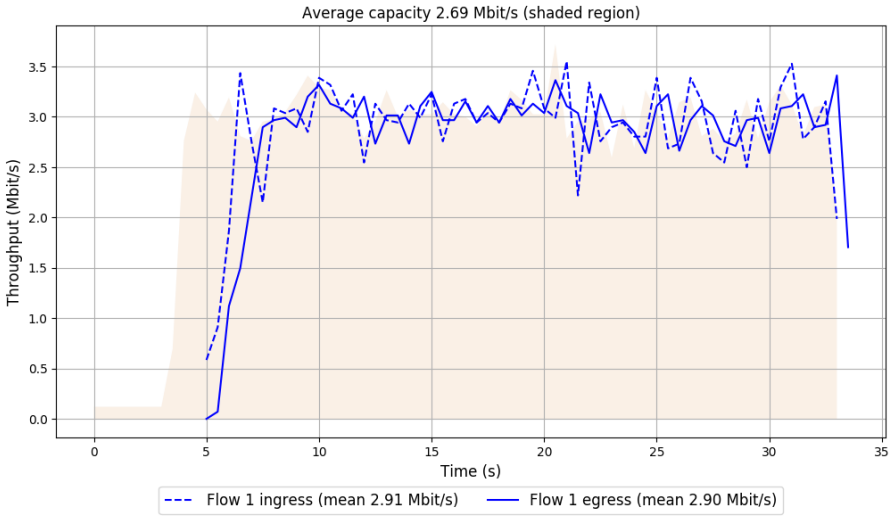


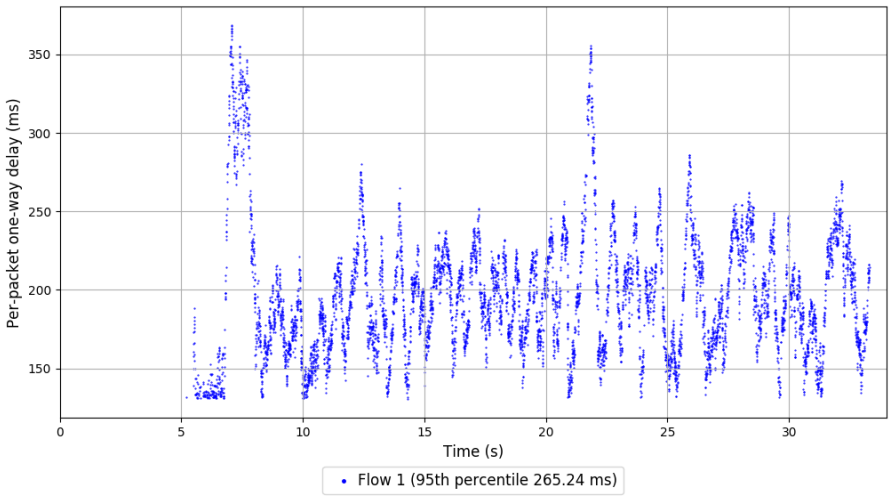
```
Run 2: Statistics of Indigo-MusesD

Start at: 2020-04-16 07:11:46
End at: 2020-04-16 07:12:16

# Below is generated by plot.py at 2020-04-16 07:39:25
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.90 Mbit/s (107.8% utilization)
95th percentile per-packet one-way delay: 265.242 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 265.242 ms
Loss rate: 0.78%
```

Run 2: Report of Indigo-MusesD — Data Link



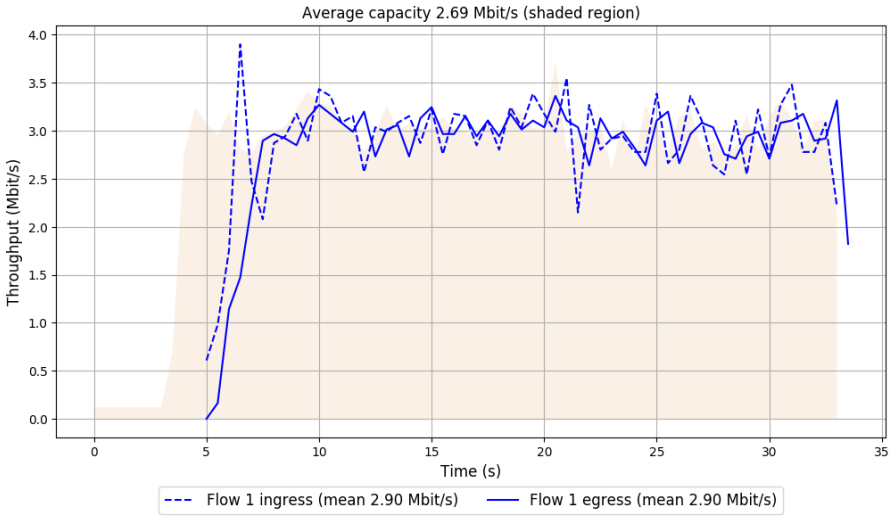


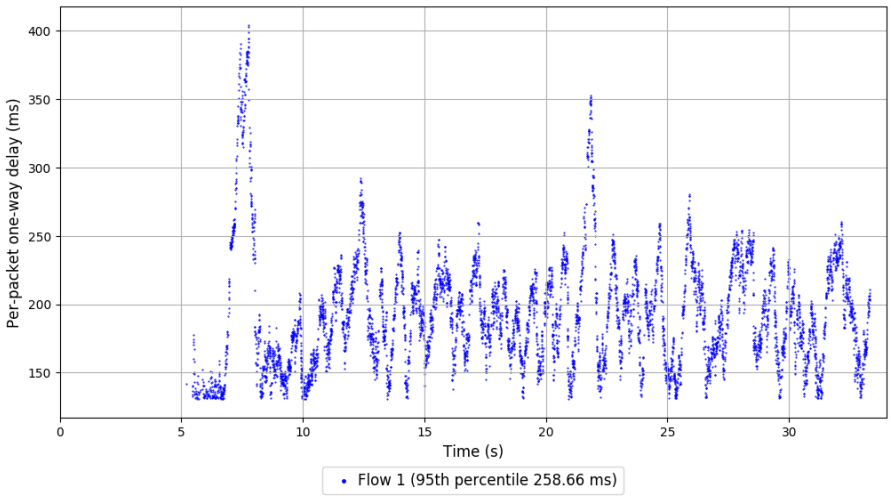
```
Run 3: Statistics of Indigo-MusesD

Start at: 2020-04-16 07:25:47
End at: 2020-04-16 07:26:17

# Below is generated by plot.py at 2020-04-16 07:39:30
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.90 Mbit/s (107.6% utilization)
95th percentile per-packet one-way delay: 258.661 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 258.661 ms
Loss rate: 0.80%
```

Run 3: Report of Indigo-MusesD — Data Link



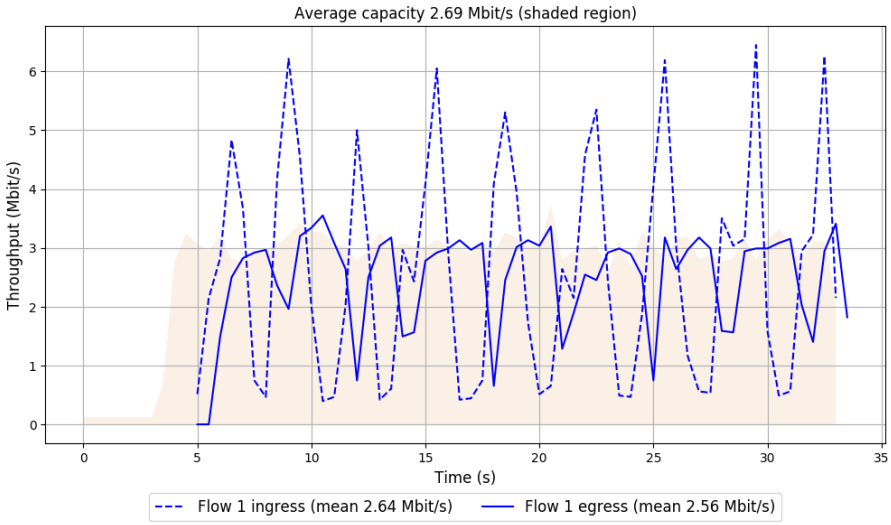


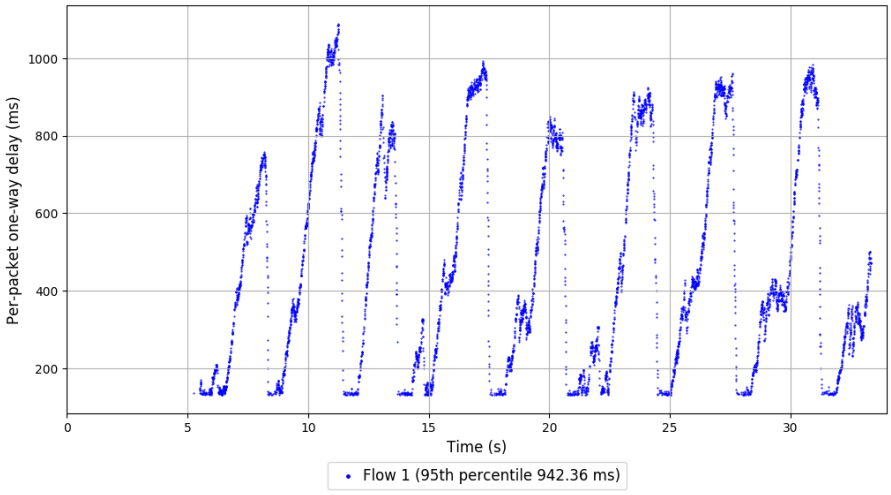
```
Run 1: Statistics of Indigo-MusesT

Start at: 2020-04-16 07:09:26
End at: 2020-04-16 07:09:56

# Below is generated by plot.py at 2020-04-16 07:39:31
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.56 Mbit/s (95.2% utilization)
95th percentile per-packet one-way delay: 942.355 ms
Loss rate: 3.52%
-- Flow 1:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 942.355 ms
Loss rate: 3.52%
```

Run 1: Report of Indigo-MusesT — Data Link



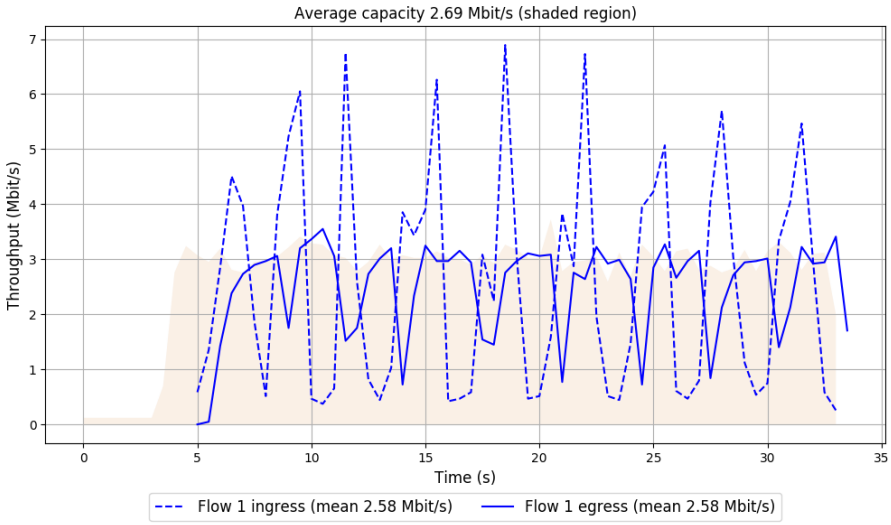


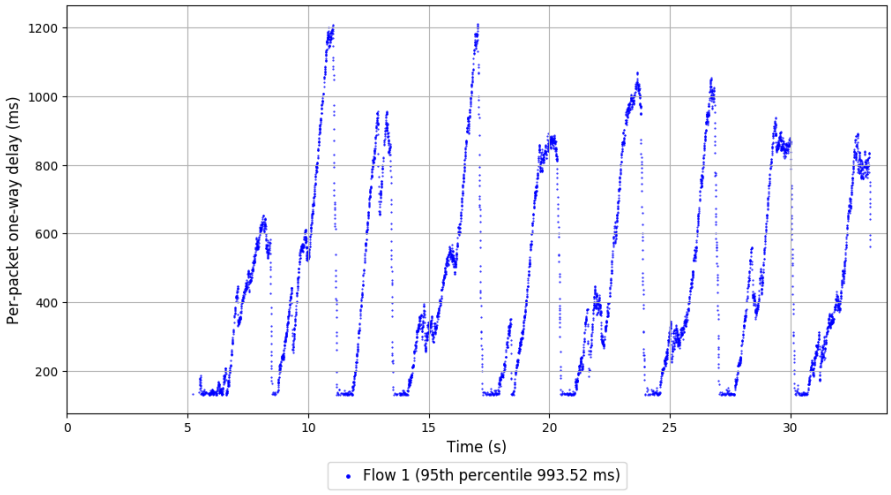
```
Run 2: Statistics of Indigo-MusesT

Start at: 2020-04-16 07:23:27
End at: 2020-04-16 07:23:57

# Below is generated by plot.py at 2020-04-16 07:39:32
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.58 Mbit/s (95.7% utilization)
95th percentile per-packet one-way delay: 993.523 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 993.523 ms
Loss rate: 0.40%
```

Run 2: Report of Indigo-MusesT — Data Link



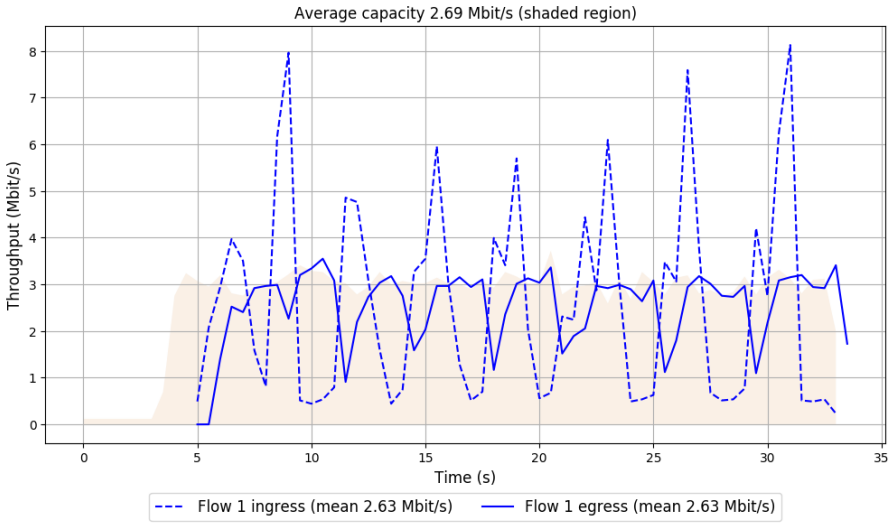


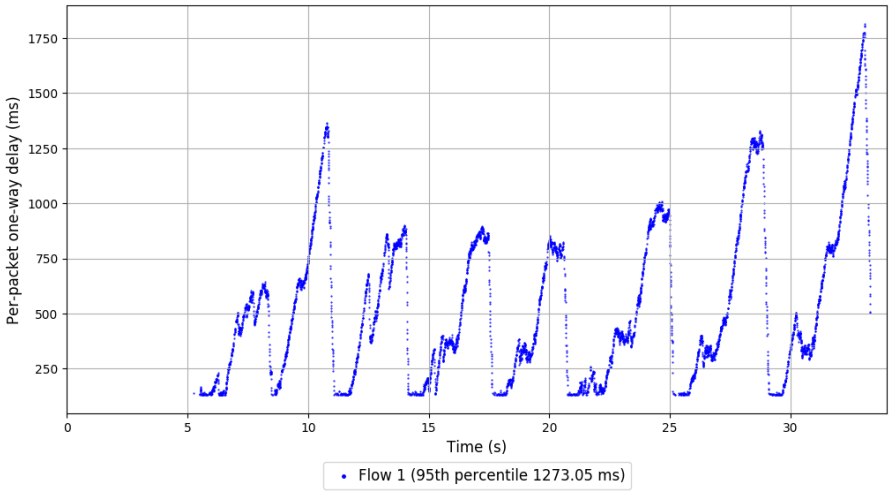
```
Run 3: Statistics of Indigo-MusesT

Start at: 2020-04-16 07:37:29
End at: 2020-04-16 07:37:59

# Below is generated by plot.py at 2020-04-16 07:39:33
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.63 Mbit/s (97.6% utilization)
95th percentile per-packet one-way delay: 1273.054 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 2.63 Mbit/s
95th percentile per-packet one-way delay: 1273.054 ms
Loss rate: 0.49%
```

Run 3: Report of Indigo-MusesT — Data Link



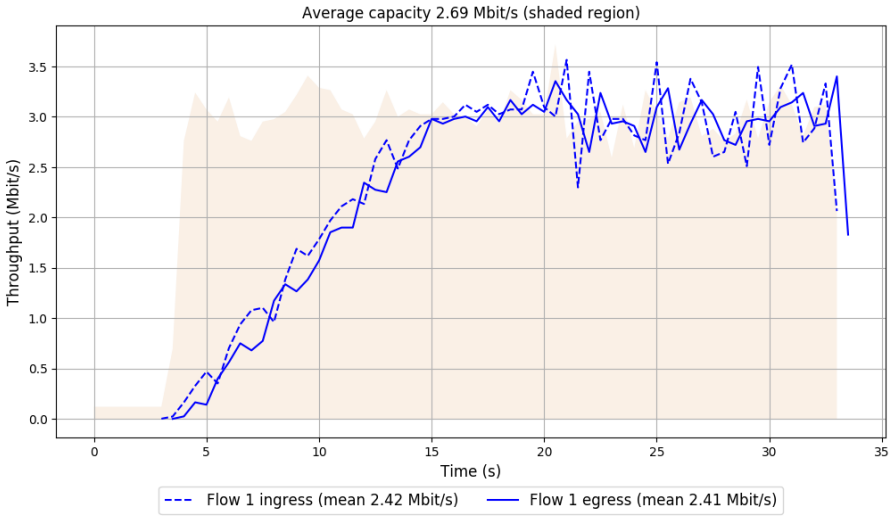


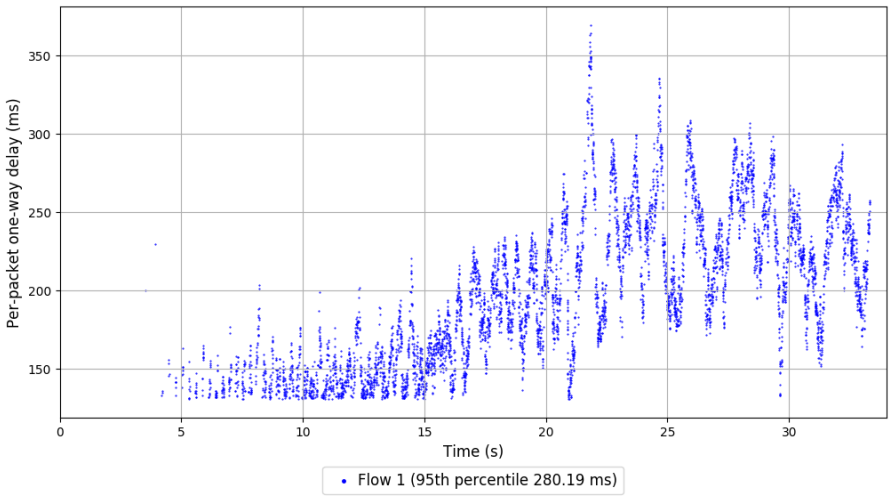
```
Run 1: Statistics of LEDBAT

Start at: 2020-04-16 07:04:46
End at: 2020-04-16 07:05:16

# Below is generated by plot.py at 2020-04-16 07:39:34
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.41 Mbit/s (89.7% utilization)
95th percentile per-packet one-way delay: 280.186 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 280.186 ms
Loss rate: 1.05%
```

Run 1: Report of LEDBAT — Data Link



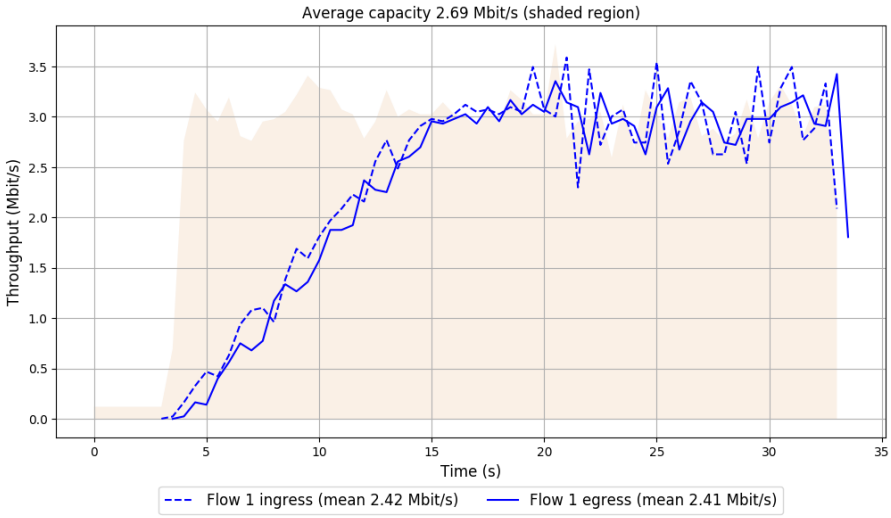


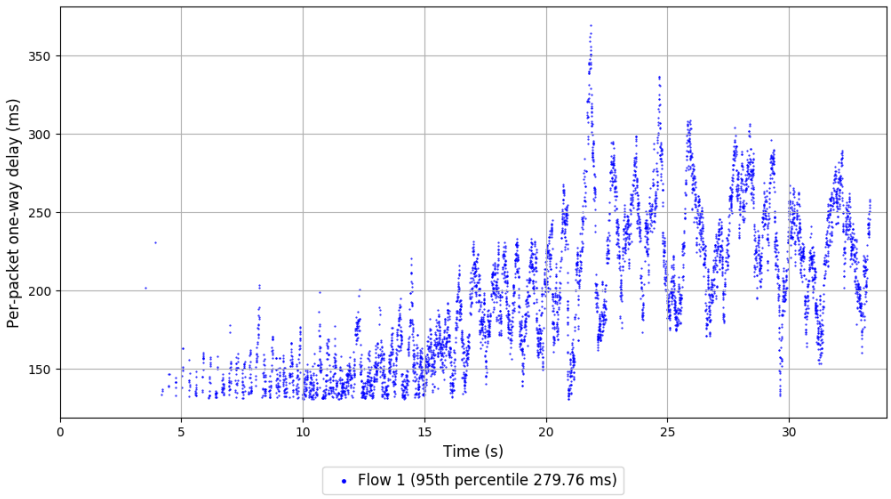
```
Run 2: Statistics of LEDBAT

Start at: 2020-04-16 07:18:47
End at: 2020-04-16 07:19:17

# Below is generated by plot.py at 2020-04-16 07:39:34
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.41 Mbit/s (89.7% utilization)
95th percentile per-packet one-way delay: 279.756 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 279.756 ms
Loss rate: 1.08%
```

Run 2: Report of LEDBAT — Data Link



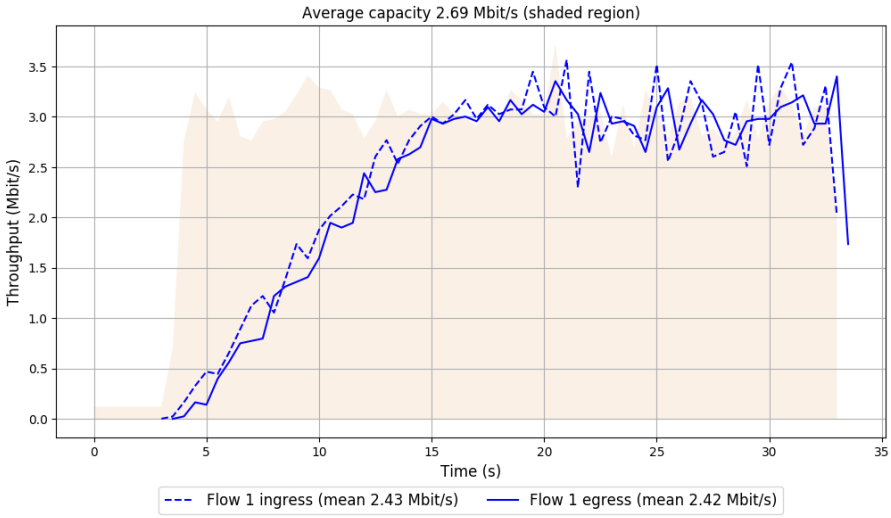


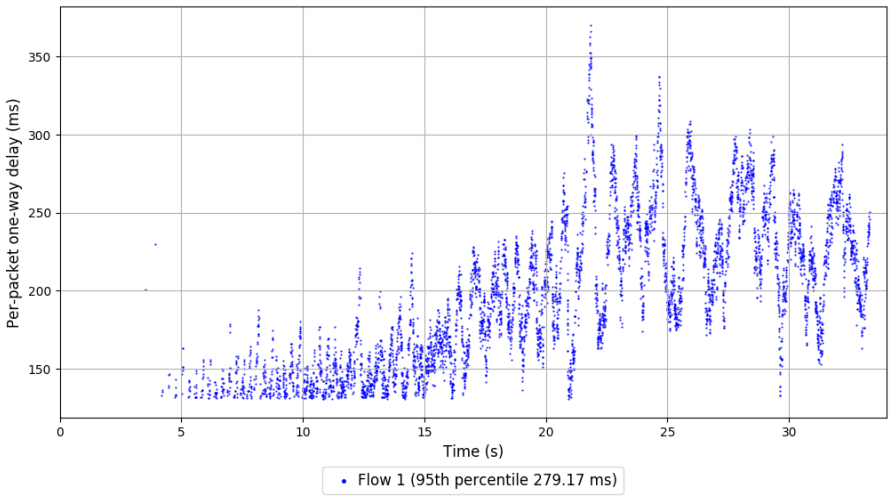
```
Run 3: Statistics of LEDBAT

Start at: 2020-04-16 07:32:48
End at: 2020-04-16 07:33:18

# Below is generated by plot.py at 2020-04-16 07:39:35
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.42 Mbit/s (90.0% utilization)
95th percentile per-packet one-way delay: 279.172 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 279.172 ms
Loss rate: 1.06%
```

Run 3: Report of LEDBAT — Data Link



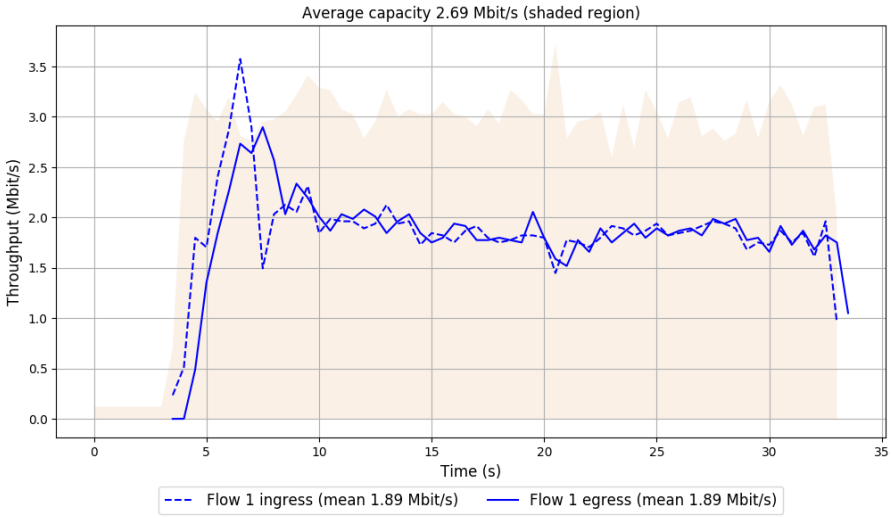


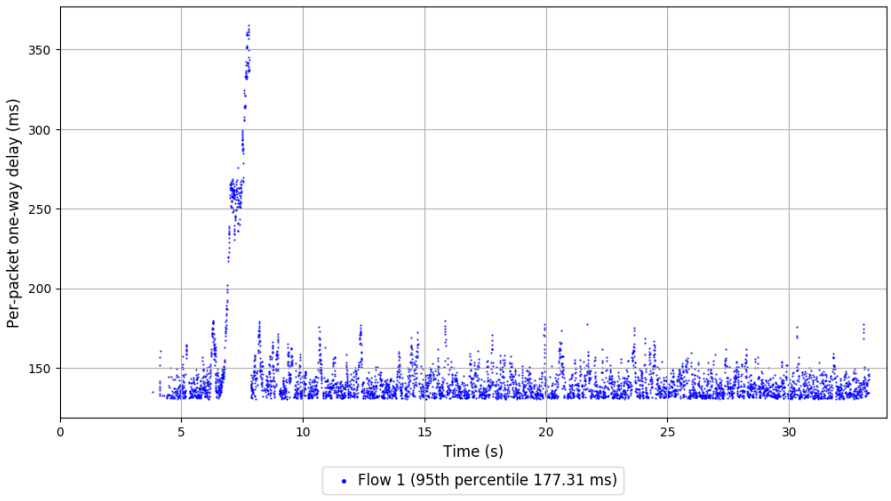
```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2020-04-16 07:07:06
End at: 2020-04-16 07:07:36

# Below is generated by plot.py at 2020-04-16 07:39:36
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 1.89 Mbit/s (70.1% utilization)
95th percentile per-packet one-way delay: 177.305 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 177.305 ms
Loss rate: 0.42%
```

Run 1: Report of Muses_DecisionTree — Data Link



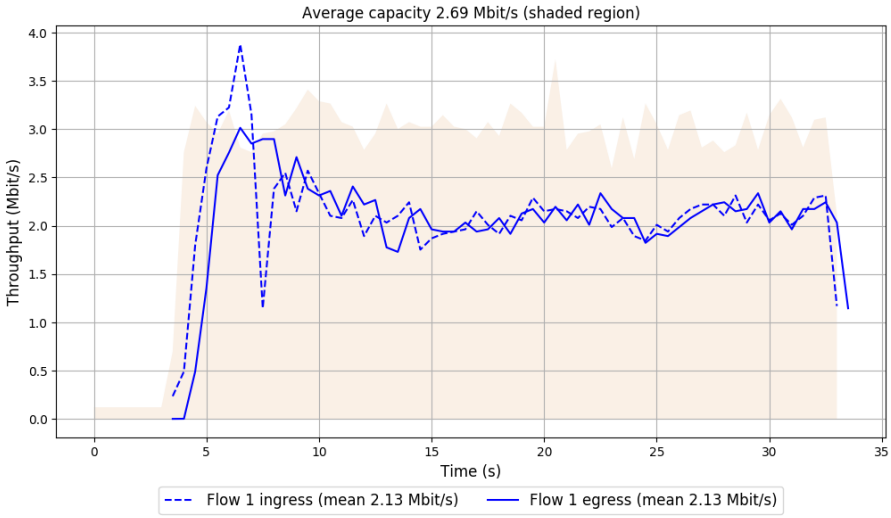


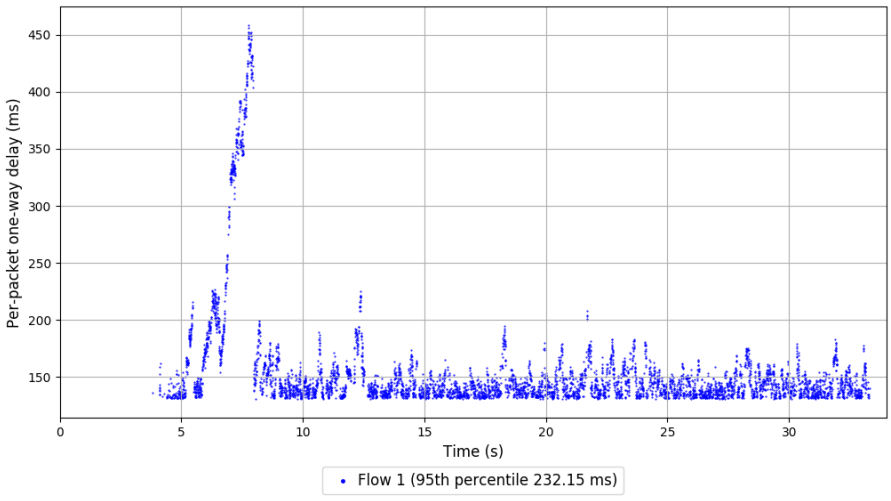
```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2020-04-16 07:21:07
End at: 2020-04-16 07:21:37

# Below is generated by plot.py at 2020-04-16 07:39:41
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.13 Mbit/s (79.2% utilization)
95th percentile per-packet one-way delay: 232.146 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 232.146 ms
Loss rate: 0.61%
```

Run 2: Report of Muses_DecisionTree — Data Link



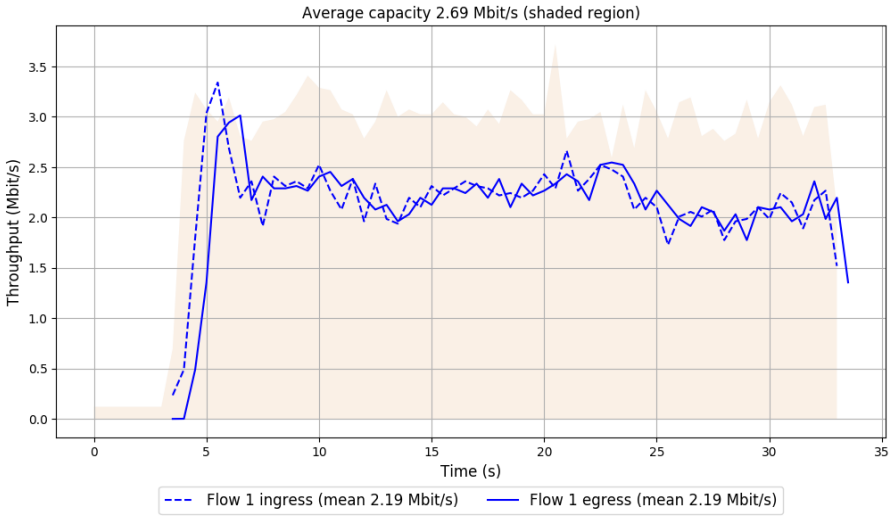


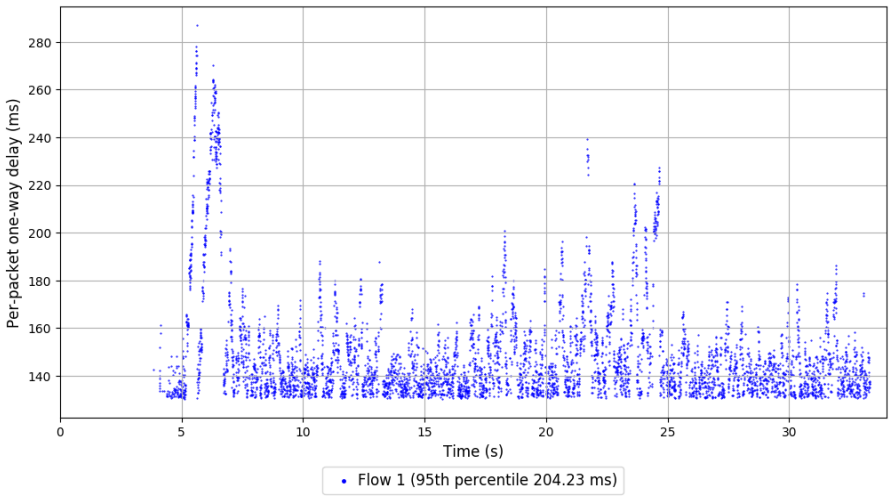
```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2020-04-16 07:35:08
End at: 2020-04-16 07:35:39

# Below is generated by plot.py at 2020-04-16 07:39:43
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.19 Mbit/s (81.2% utilization)
95th percentile per-packet one-way delay: 204.228 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 204.228 ms
Loss rate: 0.59%
```

Run 3: Report of Muses_DecisionTree — Data Link



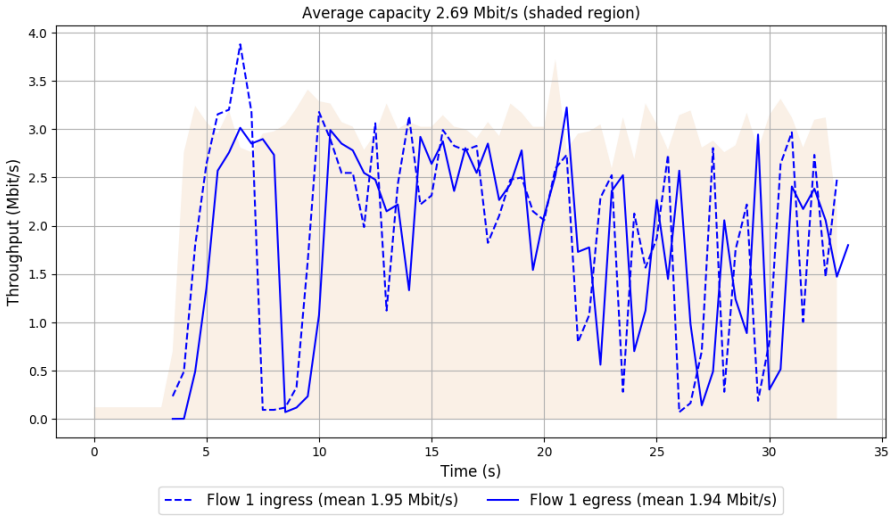


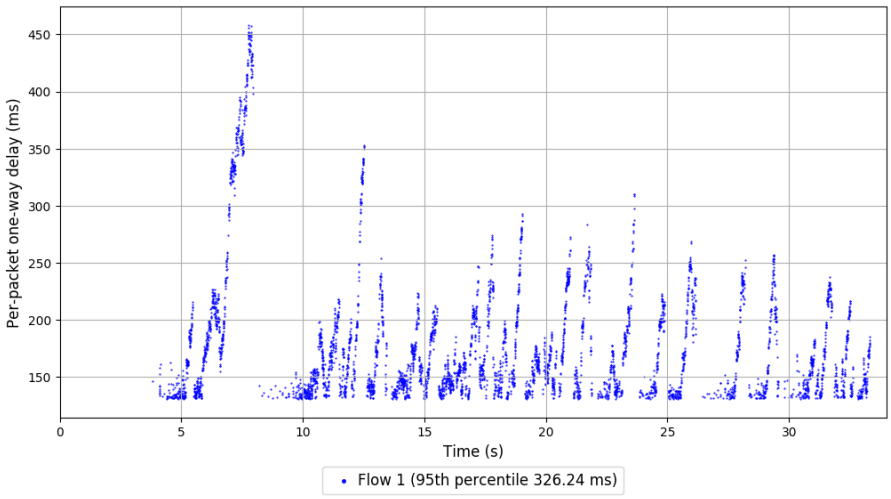
```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2020-04-16 07:04:11
End at: 2020-04-16 07:04:41

# Below is generated by plot.py at 2020-04-16 07:39:44
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 1.94 Mbit/s (71.9% utilization)
95th percentile per-packet one-way delay: 326.239 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 326.239 ms
Loss rate: 1.19%
```

Run 1: Report of Muses_DecisionTreeH0 — Data Link



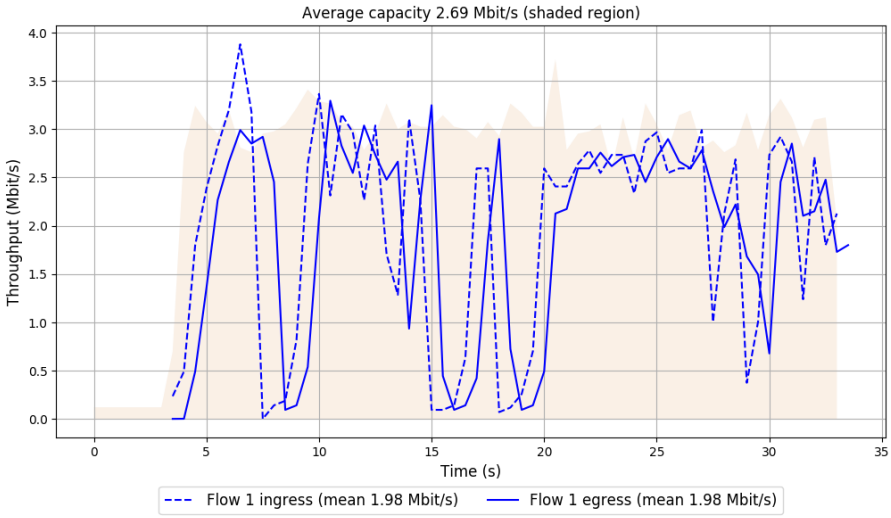


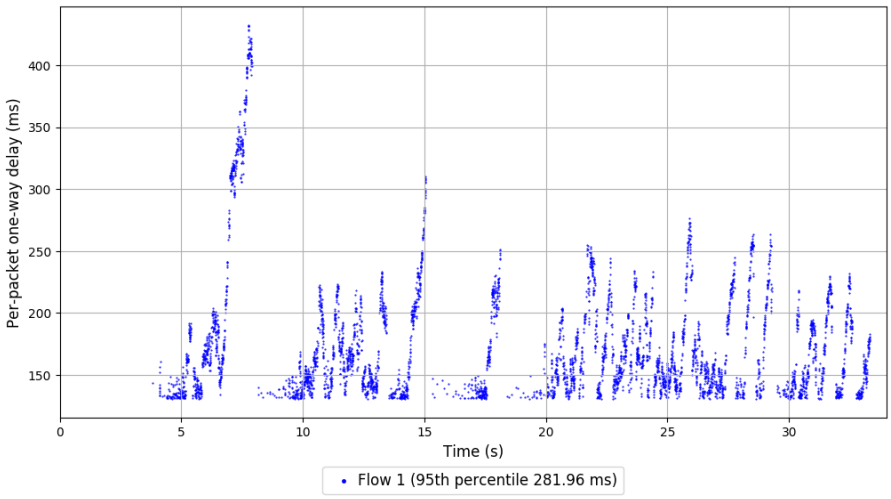
```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2020-04-16 07:18:12
End at: 2020-04-16 07:18:42

# Below is generated by plot.py at 2020-04-16 07:39:44
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 1.98 Mbit/s (73.4% utilization)
95th percentile per-packet one-way delay: 281.959 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 281.959 ms
Loss rate: 0.95%
```

Run 2: Report of Muses_DecisionTreeH0 — Data Link



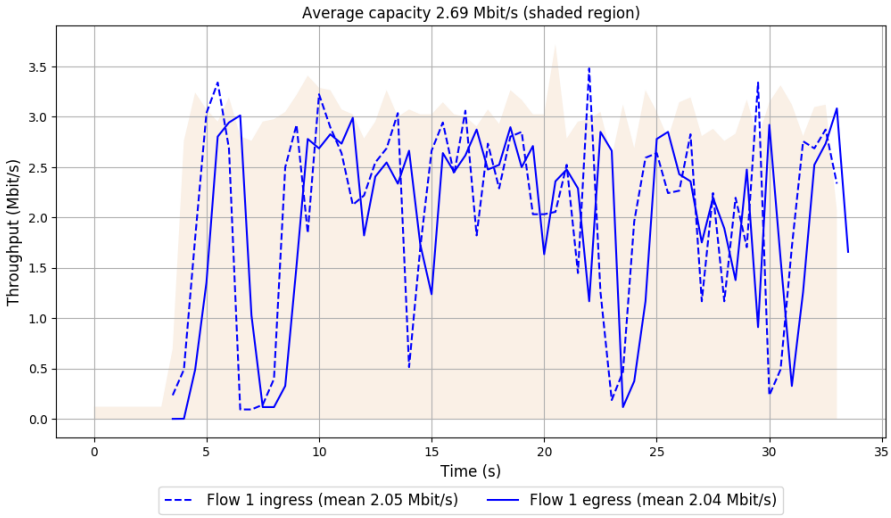


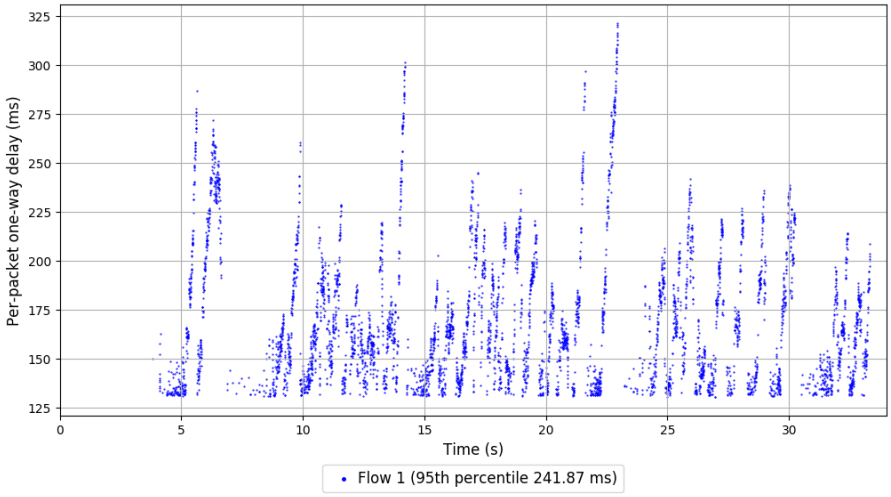
```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2020-04-16 07:32:13
End at: 2020-04-16 07:32:43

# Below is generated by plot.py at 2020-04-16 07:39:45
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.04 Mbit/s (75.8% utilization)
95th percentile per-packet one-way delay: 241.865 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 241.865 ms
Loss rate: 1.08%
```

Run 3: Report of Muses_DecisionTreeH0 — Data Link



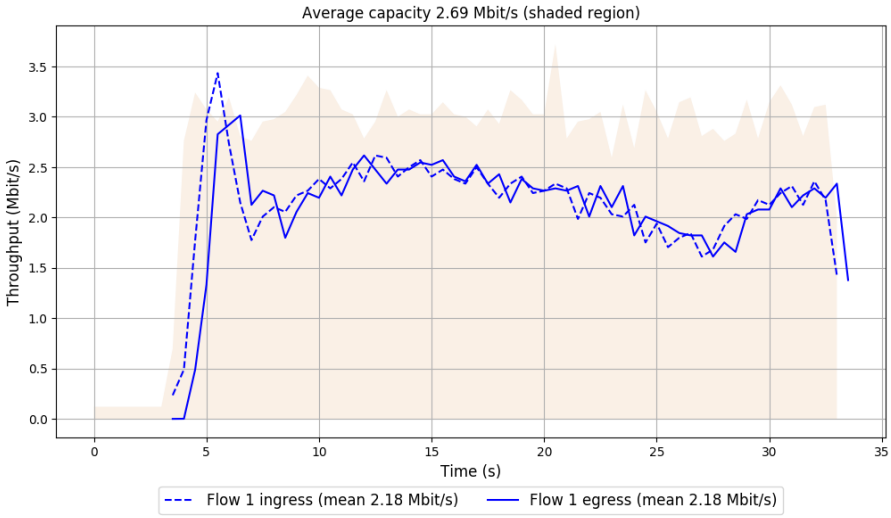


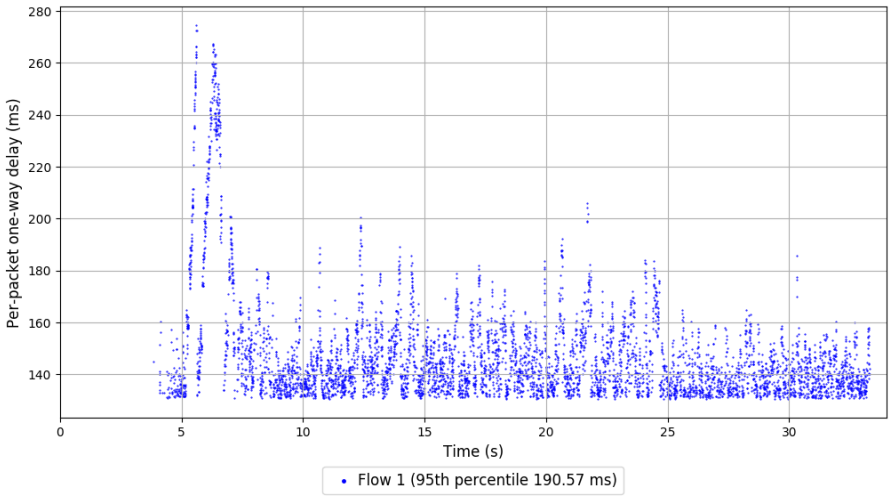
```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2020-04-16 07:00:41
End at: 2020-04-16 07:01:11

# Below is generated by plot.py at 2020-04-16 07:39:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.18 Mbit/s (81.0% utilization)
95th percentile per-packet one-way delay: 190.567 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 190.567 ms
Loss rate: 0.45%
```

Run 1: Report of Muses_DecisionTreeR0 — Data Link



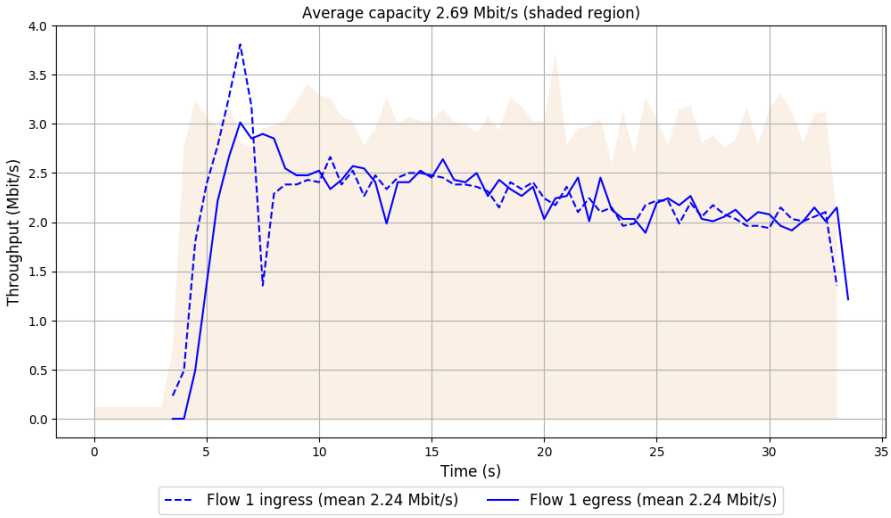


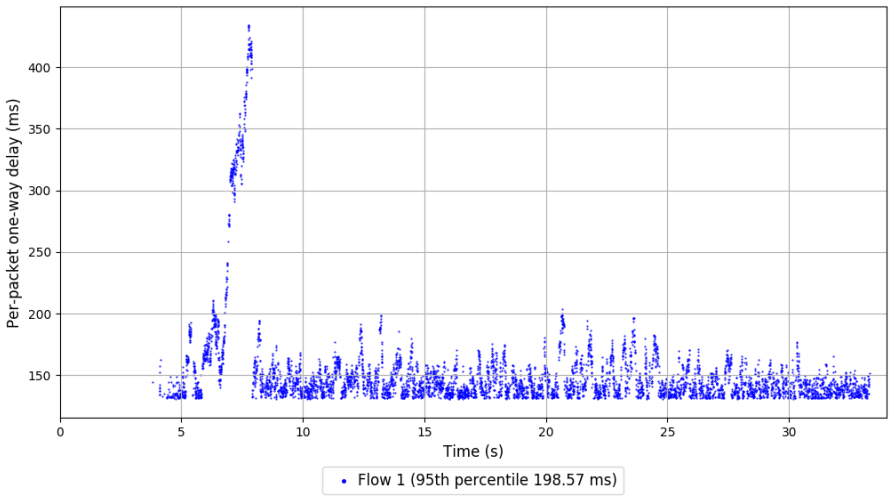
```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2020-04-16 07:14:42
End at: 2020-04-16 07:15:12

# Below is generated by plot.py at 2020-04-16 07:39:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.24 Mbit/s (83.4% utilization)
95th percentile per-packet one-way delay: 198.572 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 198.572 ms
Loss rate: 0.51%
```

Run 2: Report of Muses_DecisionTreeR0 — Data Link



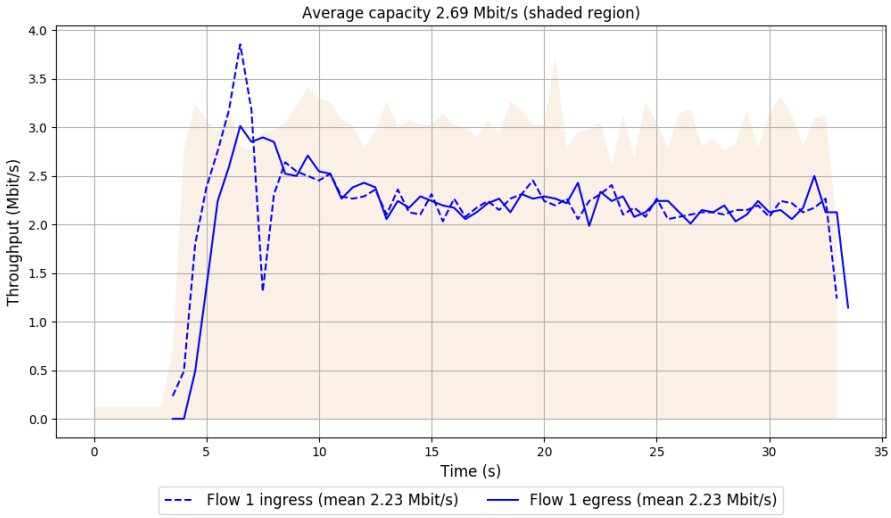


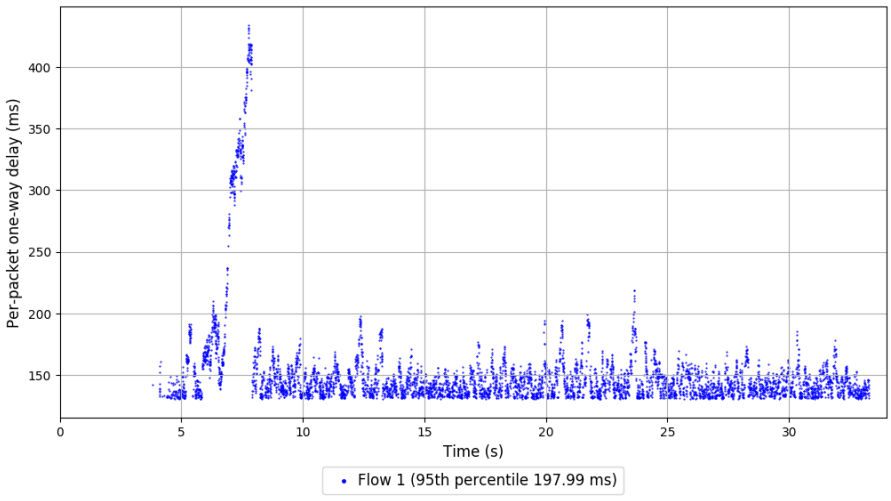
```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2020-04-16 07:28:43
End at: 2020-04-16 07:29:13

# Below is generated by plot.py at 2020-04-16 07:39:47
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.23 Mbit/s (82.9% utilization)
95th percentile per-packet one-way delay: 197.990 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 197.990 ms
Loss rate: 0.51%
```

Run 3: Report of Muses_DecisionTreeR0 — Data Link



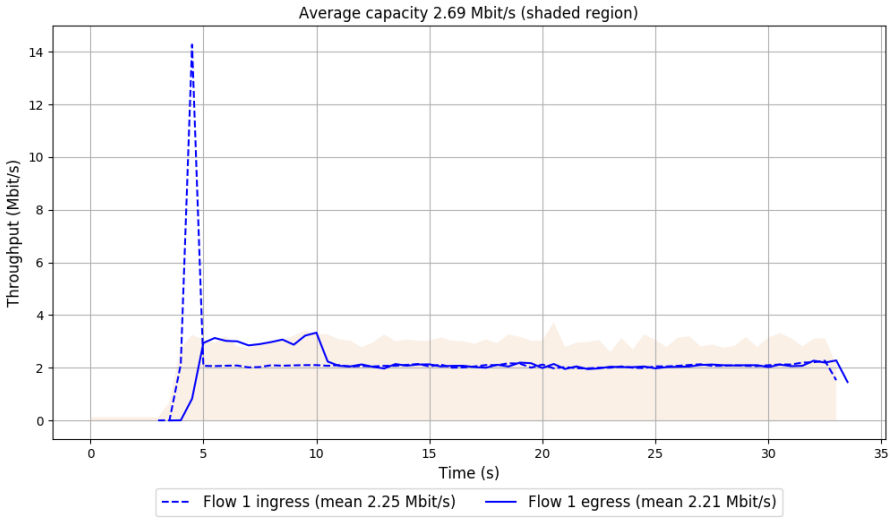


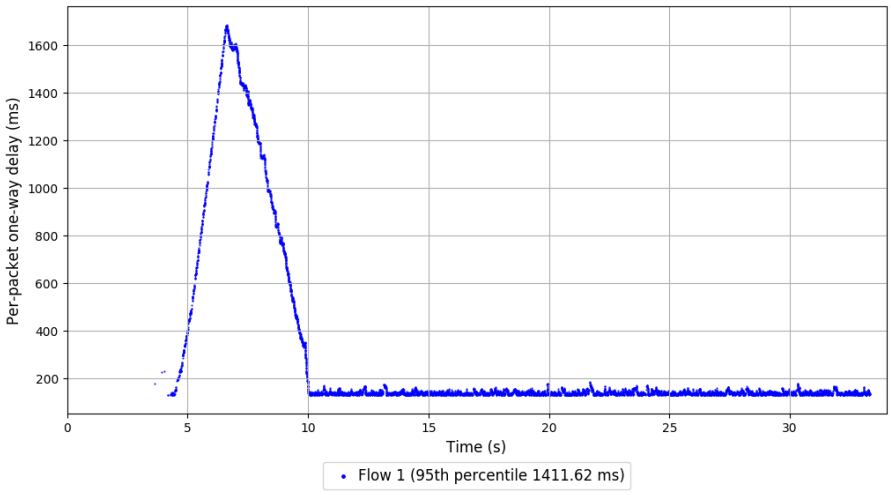
```
Run 1: Statistics of PCC-Allegro

Start at: 2020-04-16 07:08:16
End at: 2020-04-16 07:08:46

# Below is generated by plot.py at 2020-04-16 07:39:51
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.21 Mbit/s (82.1% utilization)
95th percentile per-packet one-way delay: 1411.615 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 1411.615 ms
Loss rate: 2.18%
```

Run 1: Report of PCC-Allegro — Data Link



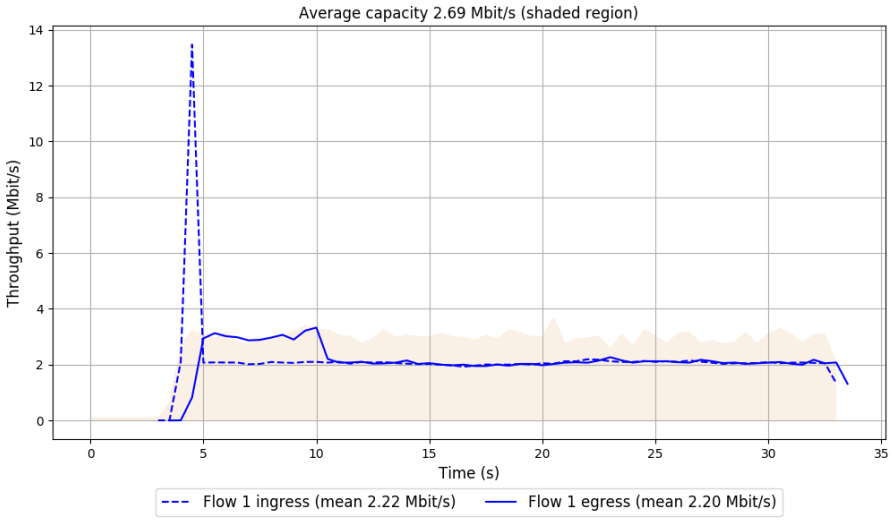


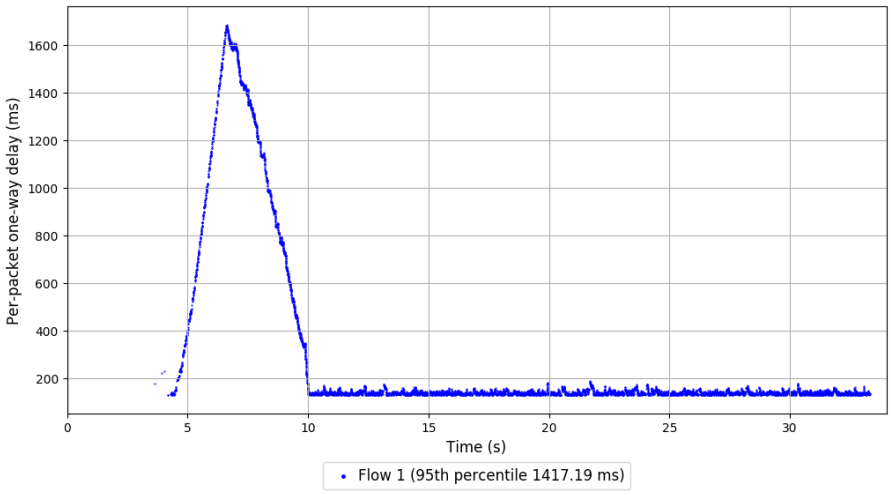
```
Run 2: Statistics of PCC-Allegro

Start at: 2020-04-16 07:22:17
End at: 2020-04-16 07:22:47

# Below is generated by plot.py at 2020-04-16 07:39:53
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.20 Mbit/s (81.7% utilization)
95th percentile per-packet one-way delay: 1417.195 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 1417.195 ms
Loss rate: 1.51%
```

Run 2: Report of PCC-Allegro — Data Link



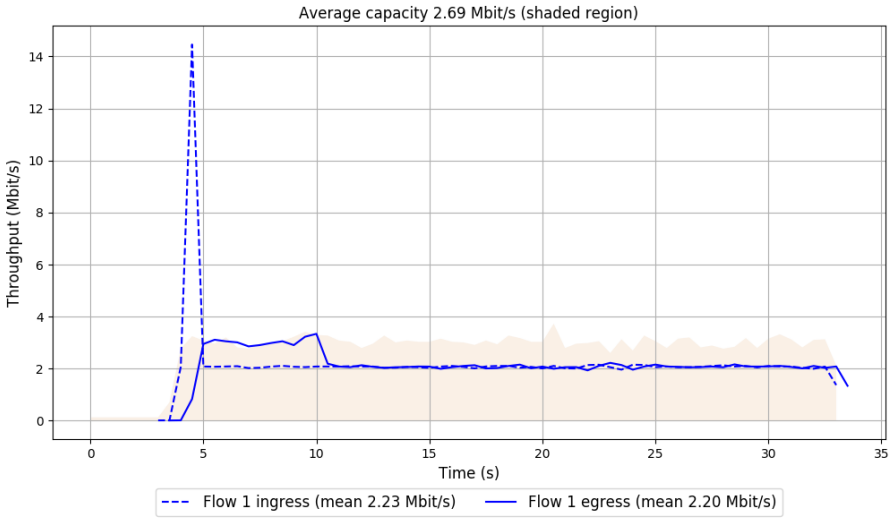


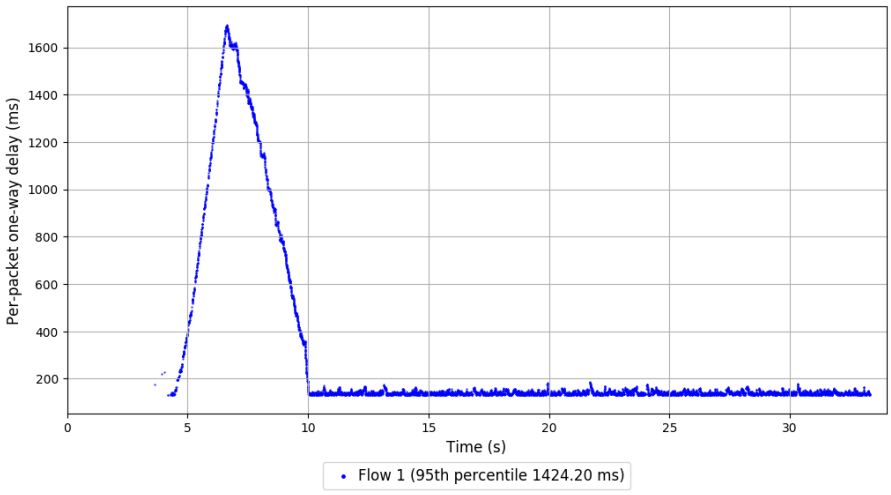
```
Run 3: Statistics of PCC-Allegro

Start at: 2020-04-16 07:36:19
End at: 2020-04-16 07:36:49

# Below is generated by plot.py at 2020-04-16 07:39:55
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.20 Mbit/s (81.7% utilization)
95th percentile per-packet one-way delay: 1424.196 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 1424.196 ms
Loss rate: 2.17%
```

Run 3: Report of PCC-Allegro — Data Link



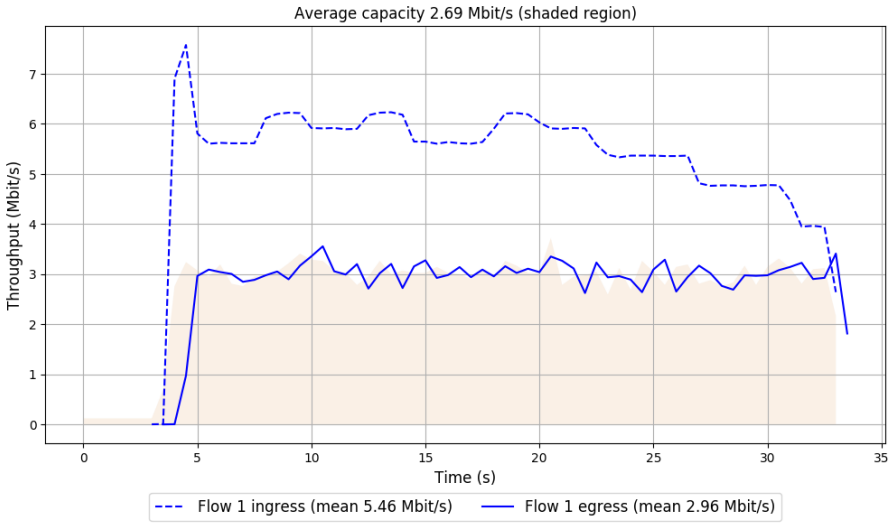


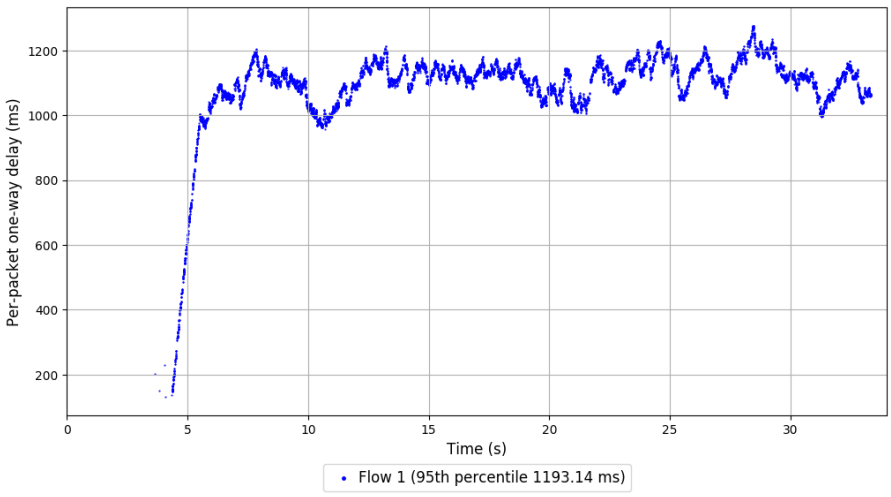
```
Run 1: Statistics of PCC-Expr

Start at: 2020-04-16 07:05:21
End at: 2020-04-16 07:05:51

# Below is generated by plot.py at 2020-04-16 07:40:05
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.96 Mbit/s (109.8% utilization)
95th percentile per-packet one-way delay: 1193.143 ms
Loss rate: 46.25%
-- Flow 1:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 1193.143 ms
Loss rate: 46.25%
```

Run 1: Report of PCC-Expr — Data Link



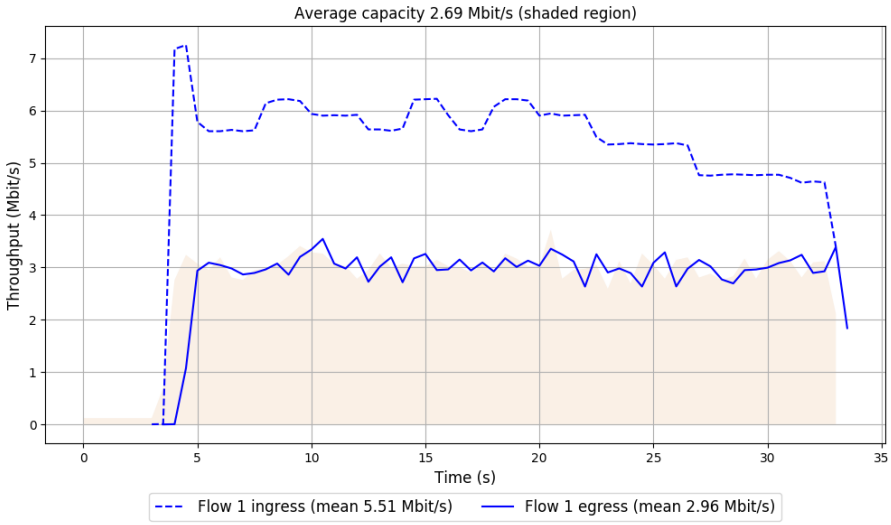


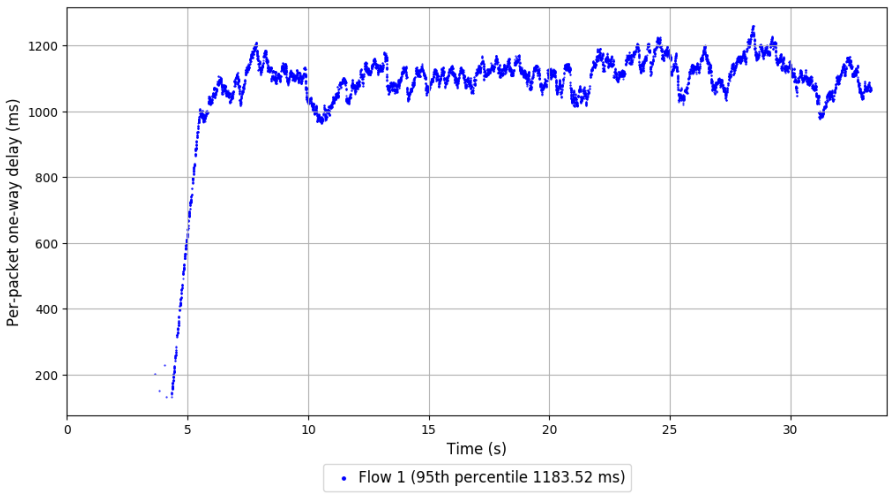
```
Run 2: Statistics of PCC-Expr

Start at: 2020-04-16 07:19:22
End at: 2020-04-16 07:19:52

# Below is generated by plot.py at 2020-04-16 07:40:07
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.96 Mbit/s (109.9% utilization)
95th percentile per-packet one-way delay: 1183.517 ms
Loss rate: 46.67%
-- Flow 1:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 1183.517 ms
Loss rate: 46.67%
```

Run 2: Report of PCC-Expr — Data Link



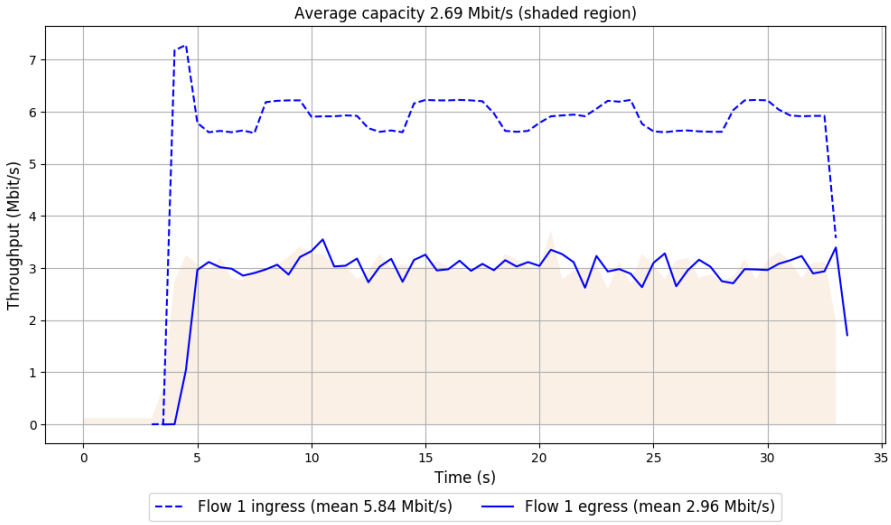


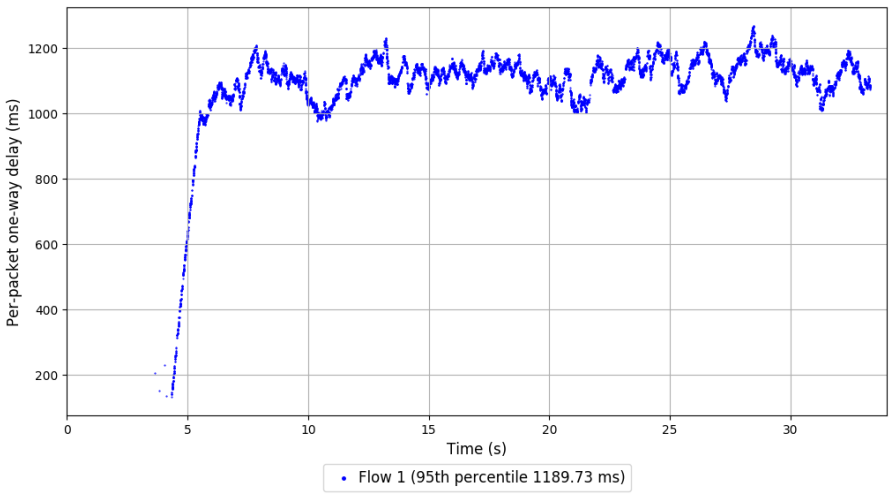
```
Run 3: Statistics of PCC-Expr

Start at: 2020-04-16 07:33:23
End at: 2020-04-16 07:33:53

# Below is generated by plot.py at 2020-04-16 07:40:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.96 Mbit/s (109.8% utilization)
95th percentile per-packet one-way delay: 1189.735 ms
Loss rate: 49.66%
-- Flow 1:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 1189.735 ms
Loss rate: 49.66%
```

Run 3: Report of PCC-Expr — Data Link



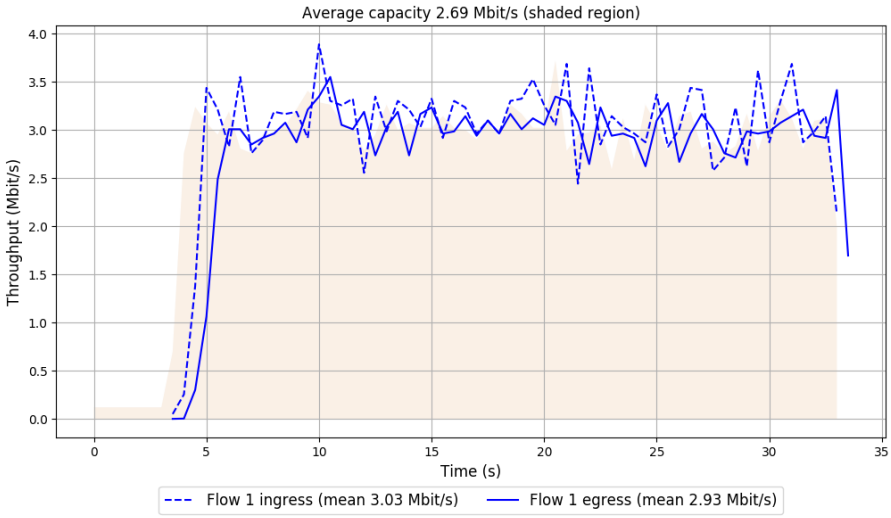


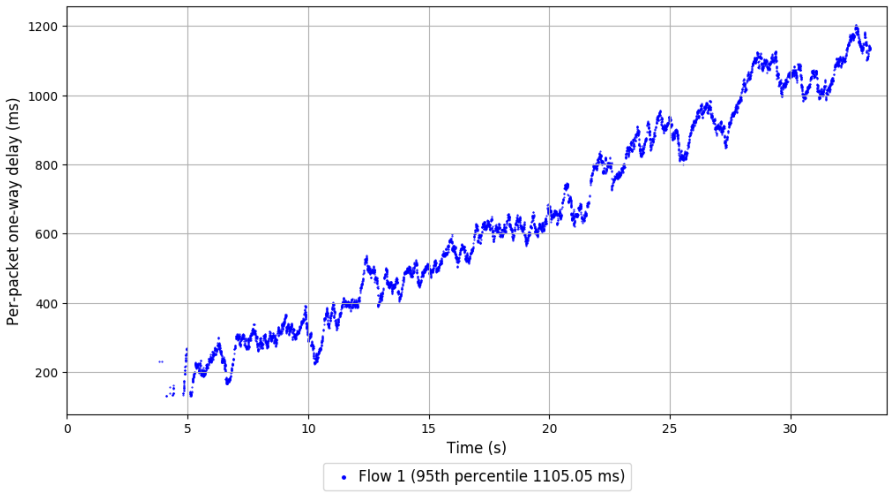
```
Run 1: Statistics of QUIC Cubic

Start at: 2020-04-16 07:01:16
End at: 2020-04-16 07:01:46

# Below is generated by plot.py at 2020-04-16 07:40:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.93 Mbit/s (108.7% utilization)
95th percentile per-packet one-way delay: 1105.050 ms
Loss rate: 4.04%
-- Flow 1:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 1105.050 ms
Loss rate: 4.04%
```

Run 1: Report of QUIC Cubic — Data Link



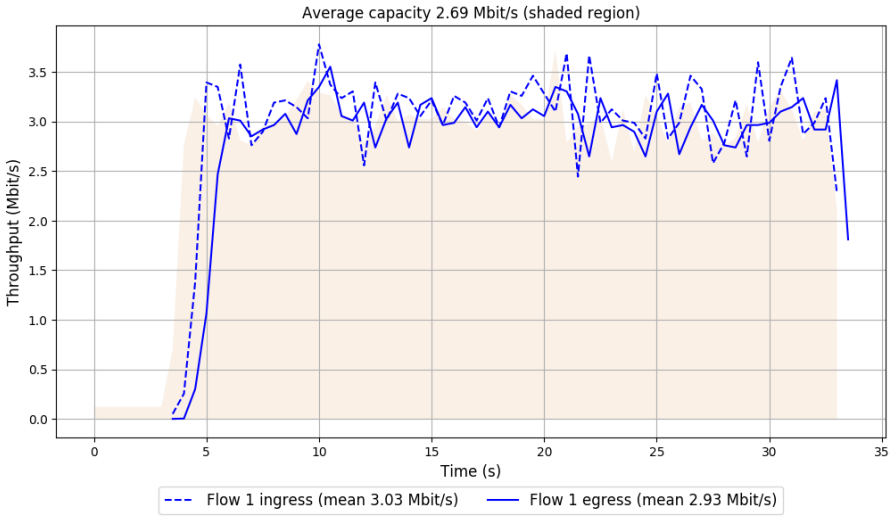


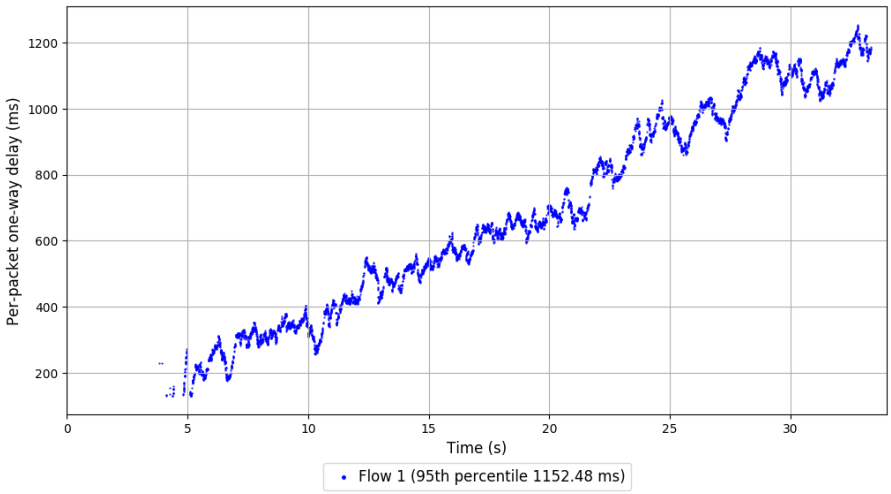
```
Run 2: Statistics of QUIC Cubic

Start at: 2020-04-16 07:15:17
End at: 2020-04-16 07:15:47

# Below is generated by plot.py at 2020-04-16 07:40:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.93 Mbit/s (108.7% utilization)
95th percentile per-packet one-way delay: 1152.476 ms
Loss rate: 4.24%
-- Flow 1:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 1152.476 ms
Loss rate: 4.24%
```

Run 2: Report of QUIC Cubic — Data Link



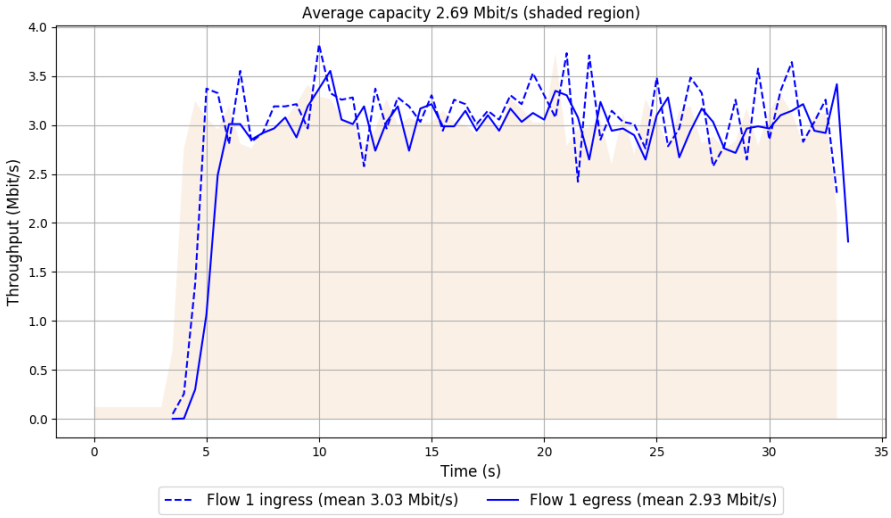


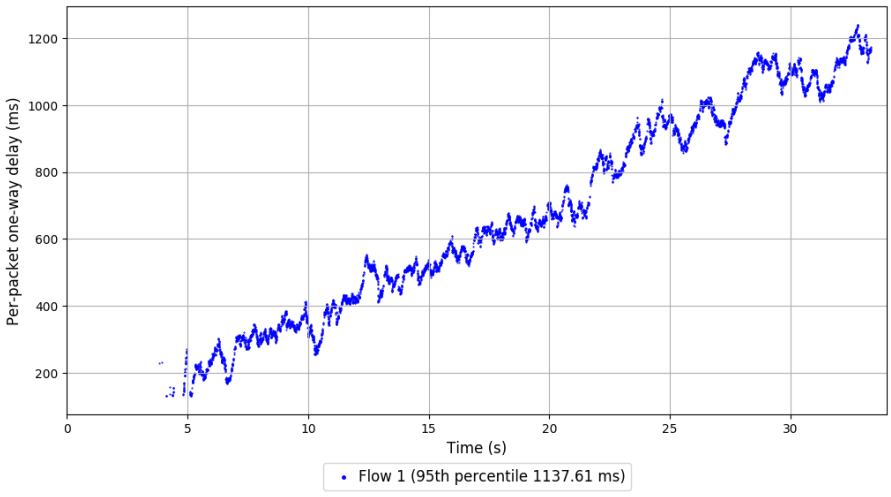
```
Run 3: Statistics of QUIC Cubic

Start at: 2020-04-16 07:29:18
End at: 2020-04-16 07:29:48

# Below is generated by plot.py at 2020-04-16 07:40:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.93 Mbit/s (108.7% utilization)
95th percentile per-packet one-way delay: 1137.607 ms
Loss rate: 4.24%
-- Flow 1:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 1137.607 ms
Loss rate: 4.24%
```

Run 3: Report of QUIC Cubic — Data Link



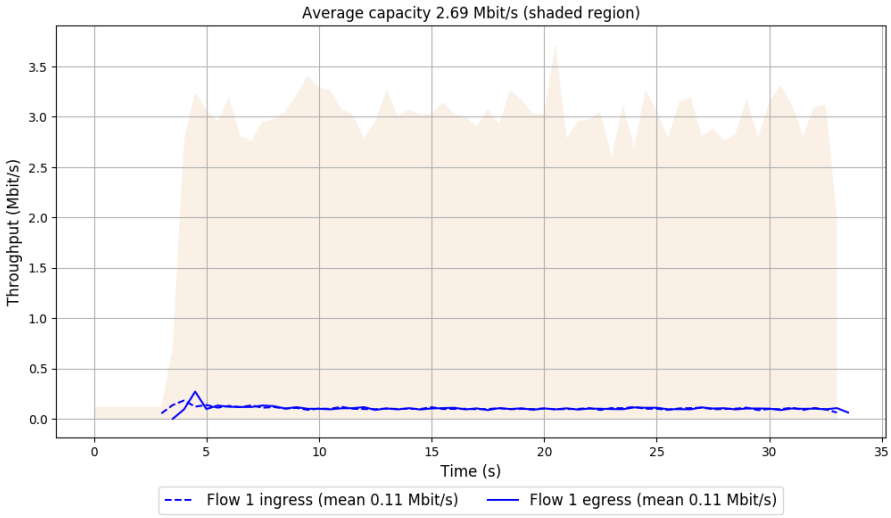


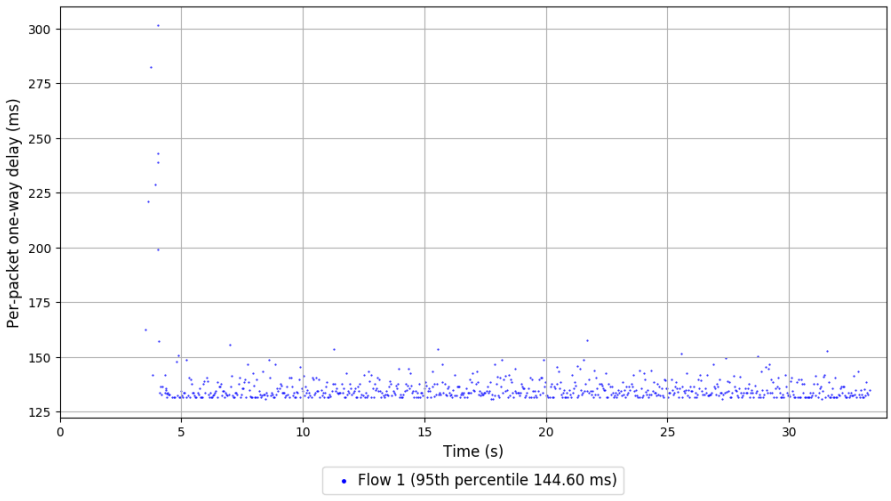
```
Run 1: Statistics of SCReAM

Start at: 2020-04-16 07:08:51
End at: 2020-04-16 07:09:21

# Below is generated by plot.py at 2020-04-16 07:40:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 0.11 Mbit/s (3.9% utilization)
95th percentile per-packet one-way delay: 144.600 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 144.600 ms
Loss rate: 0.37%
```

Run 1: Report of SCReAM — Data Link



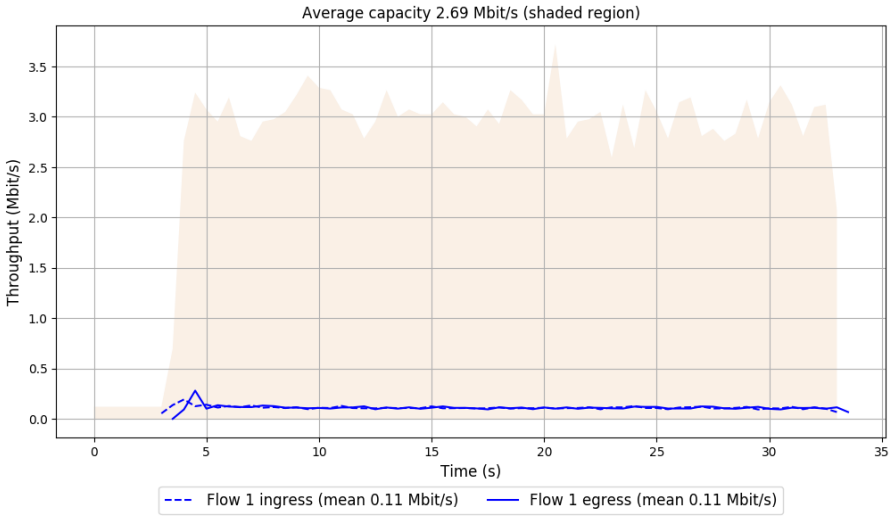


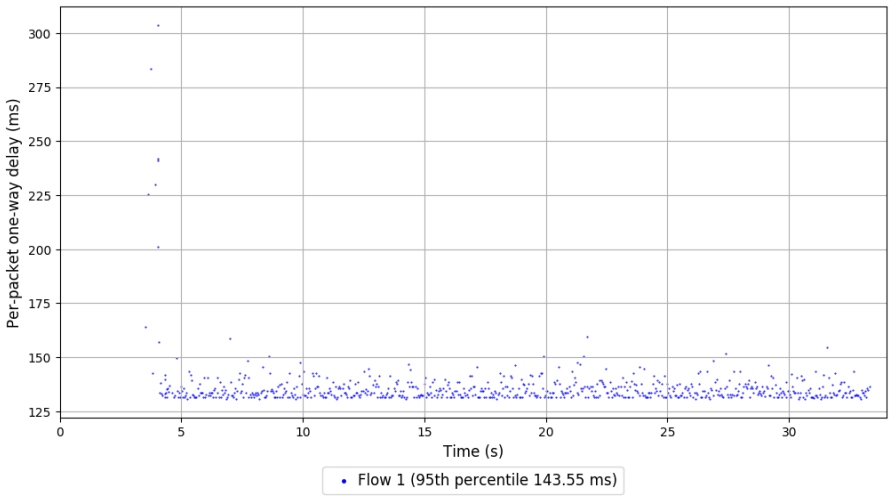
```
Run 2: Statistics of SCReAM

Start at: 2020-04-16 07:22:52
End at: 2020-04-16 07:23:22

# Below is generated by plot.py at 2020-04-16 07:40:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 0.11 Mbit/s (4.2% utilization)
95th percentile per-packet one-way delay: 143.551 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 143.551 ms
Loss rate: 0.37%
```

Run 2: Report of SCReAM — Data Link



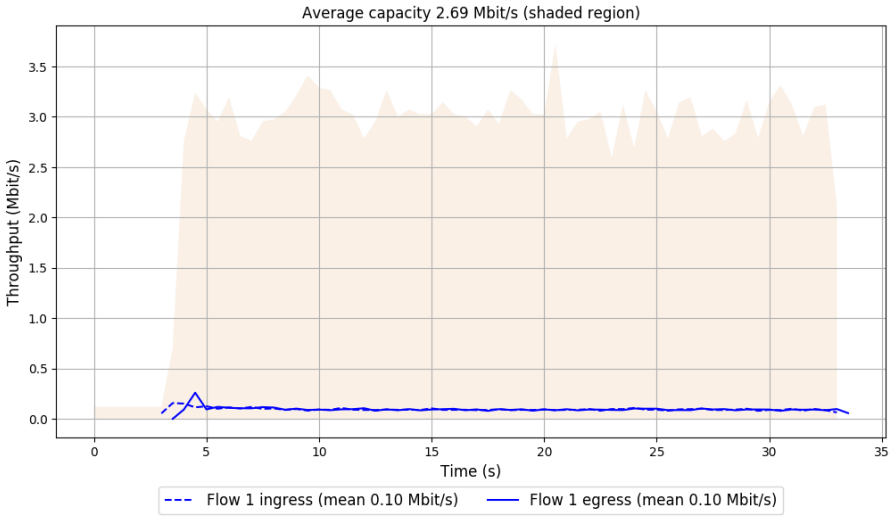


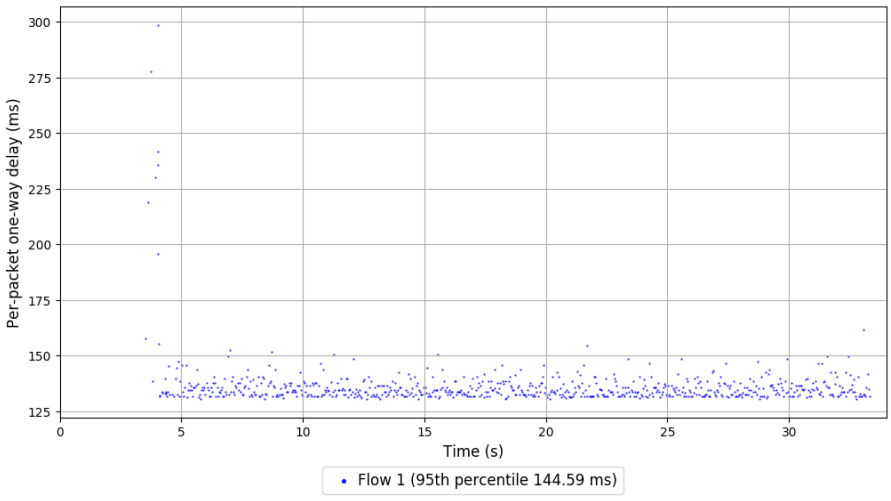
```
Run 3: Statistics of SCReAM

Start at: 2020-04-16 07:36:54
End at: 2020-04-16 07:37:24

# Below is generated by plot.py at 2020-04-16 07:40:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 0.10 Mbit/s (3.6% utilization)
95th percentile per-packet one-way delay: 144.586 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 144.586 ms
Loss rate: 0.49%
```

Run 3: Report of SCReAM — Data Link



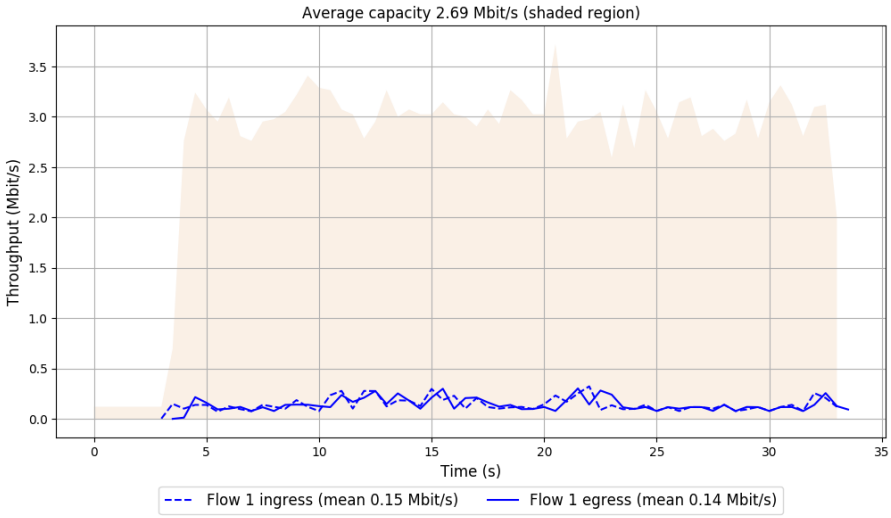


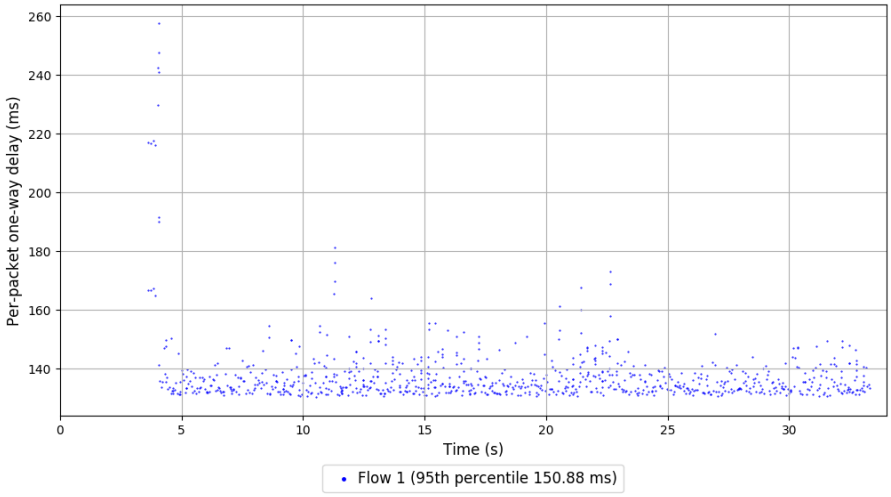
```
Run 1: Statistics of Sprout

Start at: 2020-04-16 07:10:01
End at: 2020-04-16 07:10:31

# Below is generated by plot.py at 2020-04-16 07:40:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 0.14 Mbit/s (5.4% utilization)
95th percentile per-packet one-way delay: 150.878 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 150.878 ms
Loss rate: 1.30%
```

Run 1: Report of Sprout — Data Link



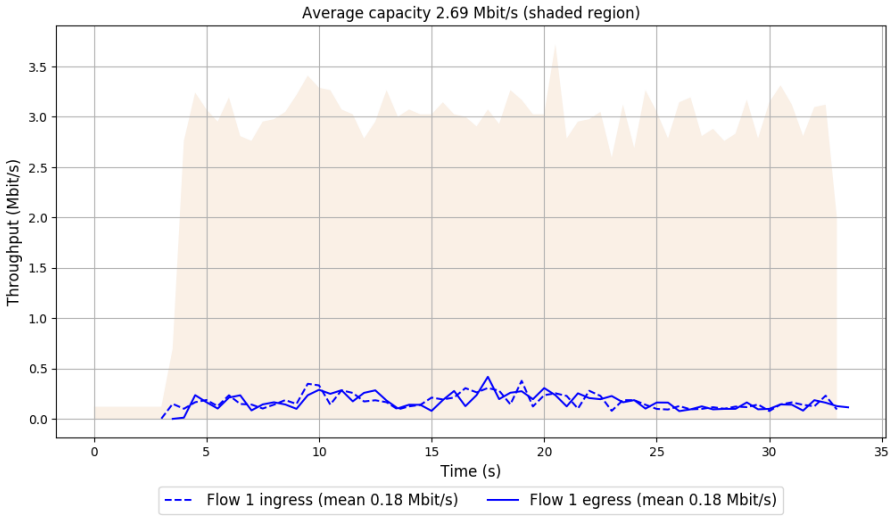


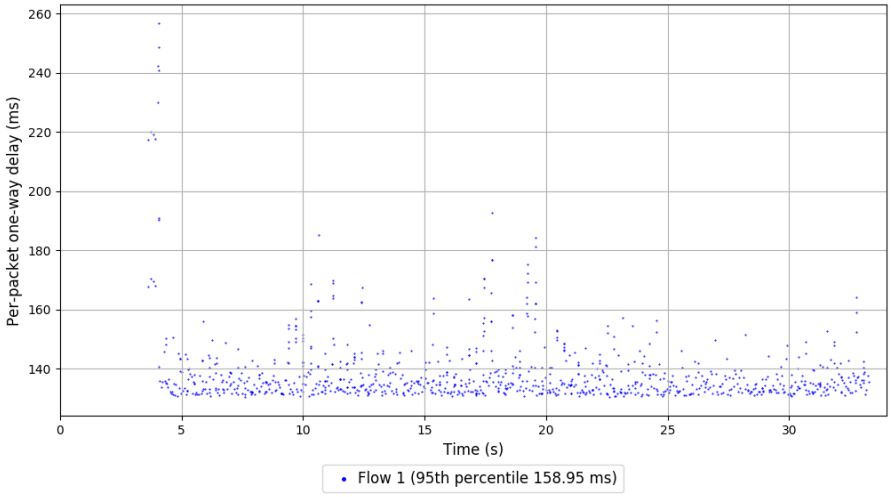
```
Run 2: Statistics of Sprout

Start at: 2020-04-16 07:24:02
End at: 2020-04-16 07:24:32

# Below is generated by plot.py at 2020-04-16 07:40:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 0.18 Mbit/s (6.5% utilization)
95th percentile per-packet one-way delay: 158.947 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 158.947 ms
Loss rate: 0.84%
```

Run 2: Report of Sprout — Data Link



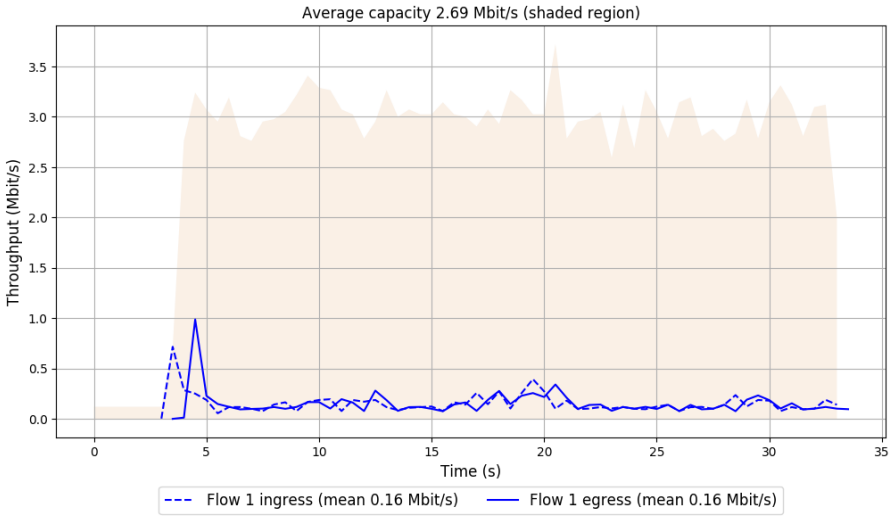


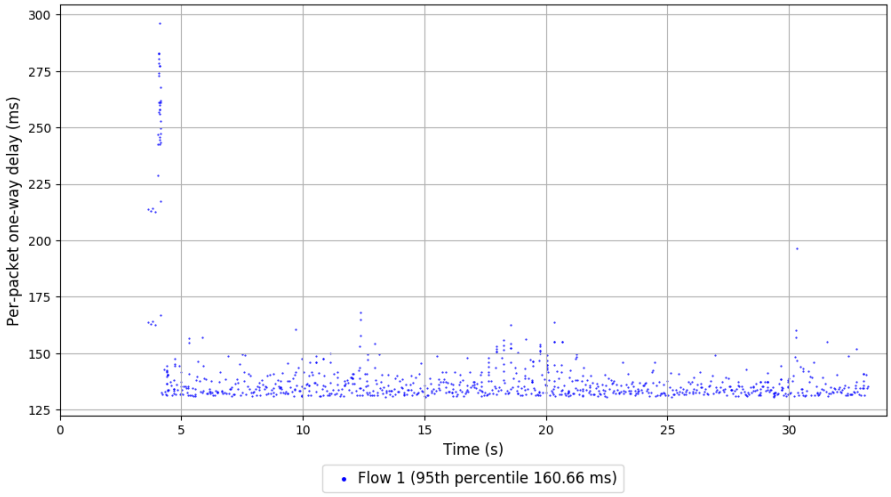
```
Run 3: Statistics of Sprout

Start at: 2020-04-16 07:38:04
End at: 2020-04-16 07:38:34

# Below is generated by plot.py at 2020-04-16 07:40:09
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 0.16 Mbit/s (5.8% utilization)
95th percentile per-packet one-way delay: 160.662 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 160.662 ms
Loss rate: 1.44%
```

Run 3: Report of Sprout — Data Link



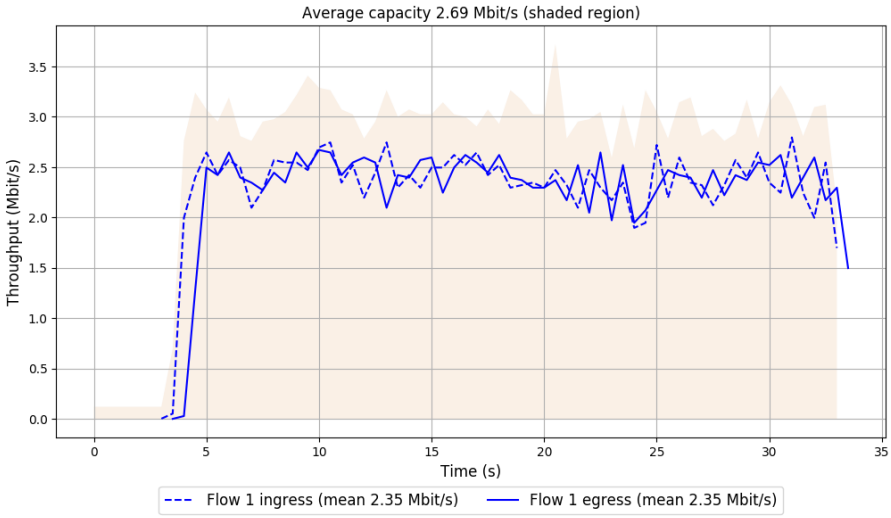


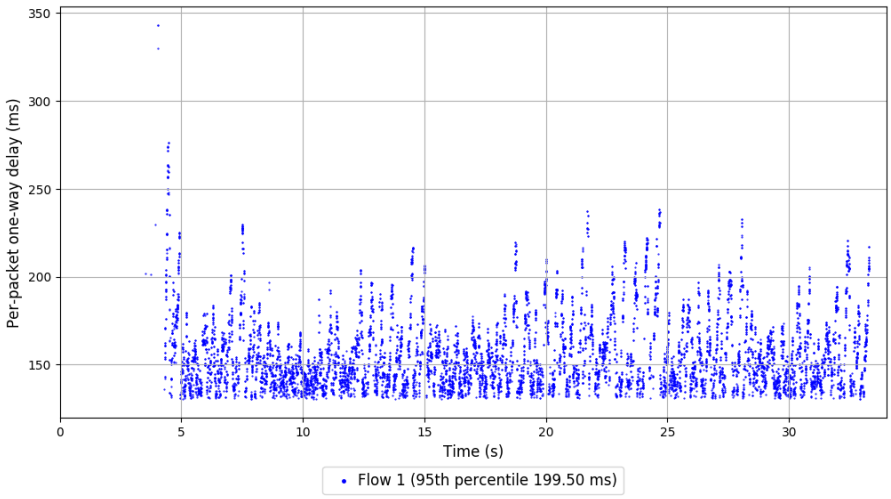
```
Run 1: Statistics of TaoVA-100x

Start at: 2020-04-16 07:01:51
End at: 2020-04-16 07:02:21

# Below is generated by plot.py at 2020-04-16 07:40:20
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.35 Mbit/s (87.4% utilization)
95th percentile per-packet one-way delay: 199.505 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 199.505 ms
Loss rate: 0.64%
```

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



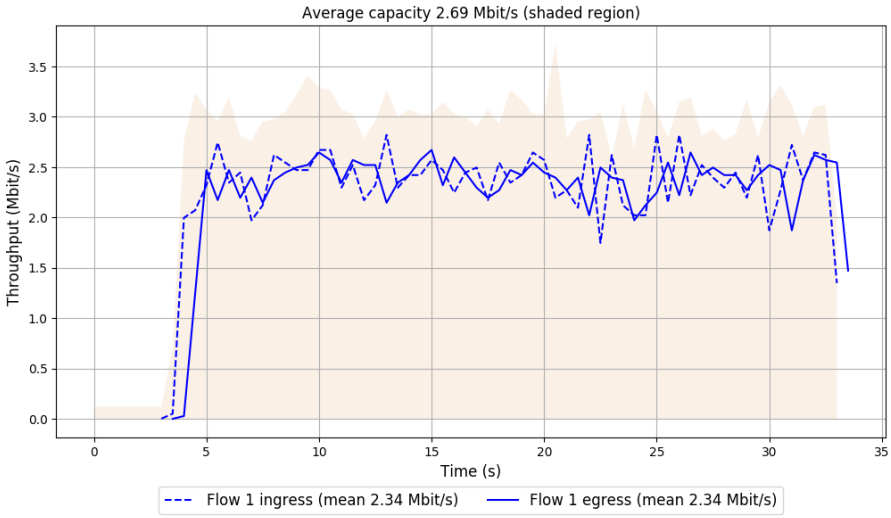


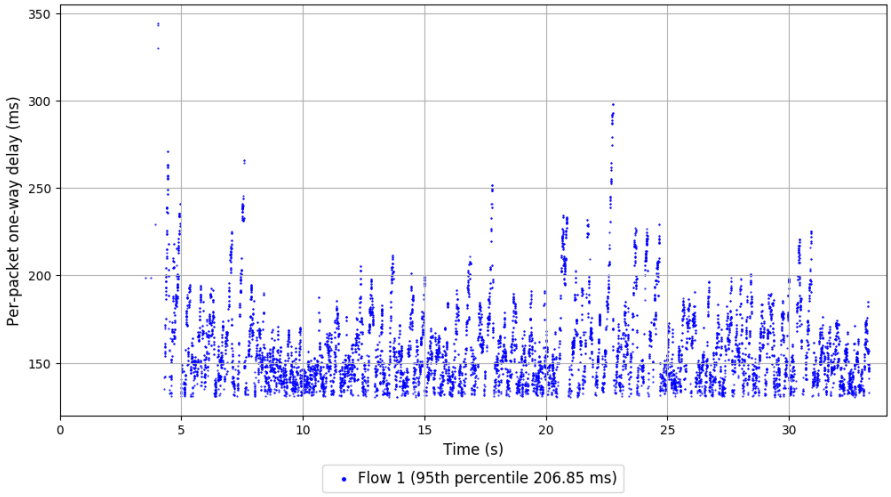
```
Run 2: Statistics of TaoVA-100x

Start at: 2020-04-16 07:15:52
End at: 2020-04-16 07:16:22

# Below is generated by plot.py at 2020-04-16 07:40:20
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.34 Mbit/s (86.9% utilization)
95th percentile per-packet one-way delay: 206.854 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 206.854 ms
Loss rate: 0.48%
```

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



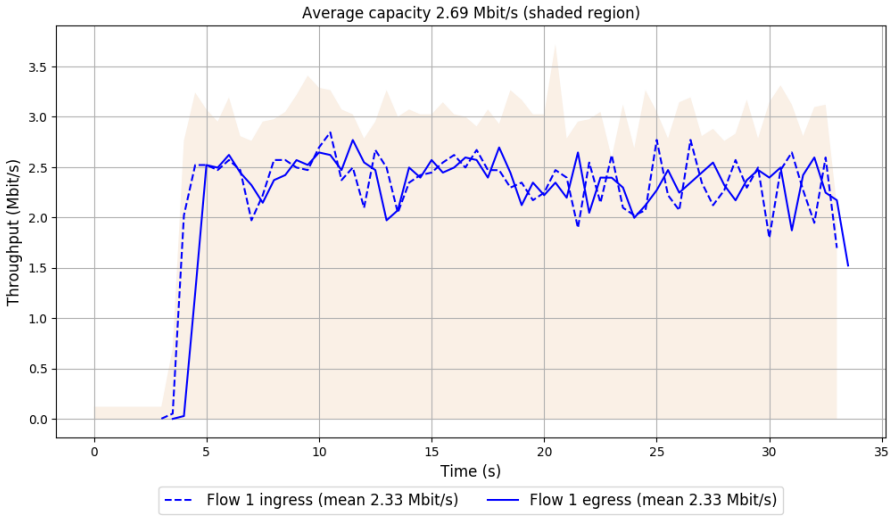


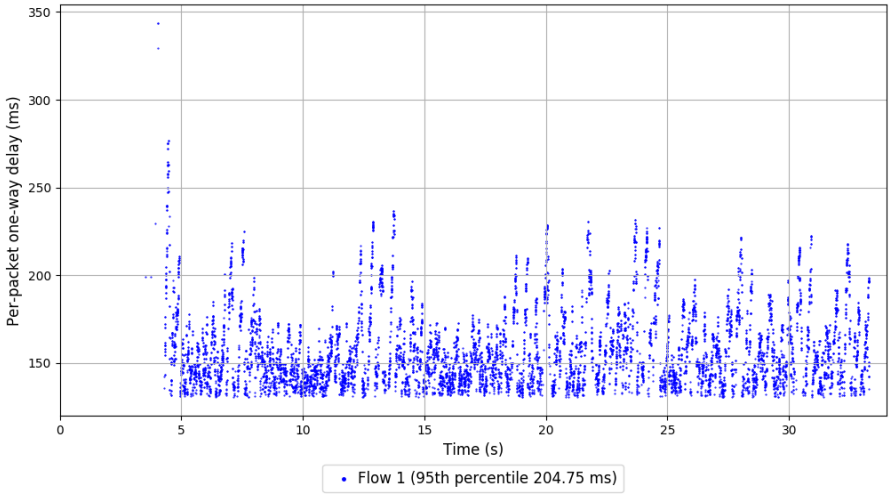
```
Run 3: Statistics of TaoVA-100x

Start at: 2020-04-16 07:29:53
End at: 2020-04-16 07:30:23

# Below is generated by plot.py at 2020-04-16 07:40:21
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.33 Mbit/s (86.7% utilization)
95th percentile per-packet one-way delay: 204.755 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 204.755 ms
Loss rate: 0.66%
```

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



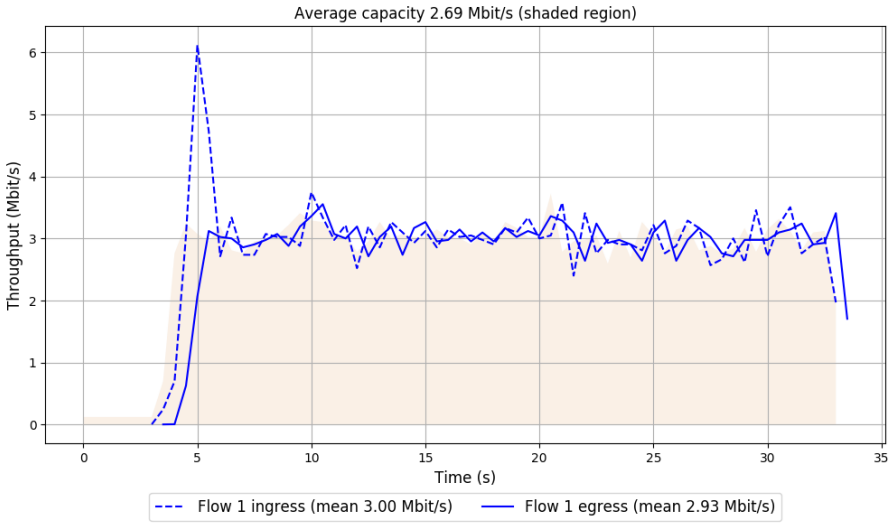


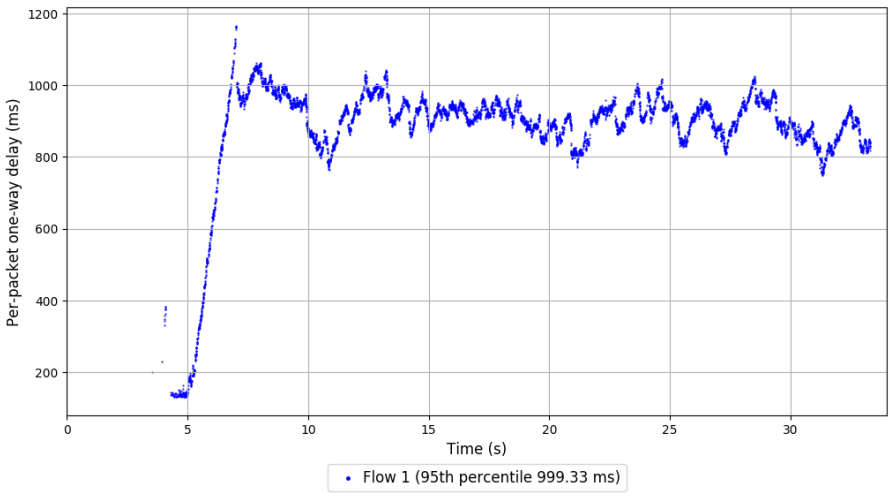
```
Run 1: Statistics of TCP Vegas

Start at: 2020-04-16 06:59:30
End at: 2020-04-16 07:00:00

# Below is generated by plot.py at 2020-04-16 07:40:21
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.93 Mbit/s (108.8% utilization)
95th percentile per-packet one-way delay: 999.330 ms
Loss rate: 2.86%
-- Flow 1:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 999.330 ms
Loss rate: 2.86%
```

Run 1: Report of TCP Vegas — Data Link



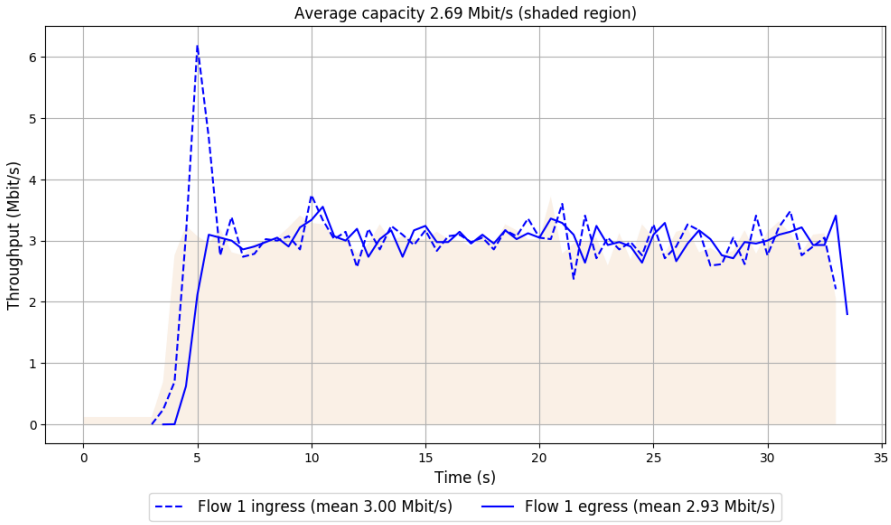


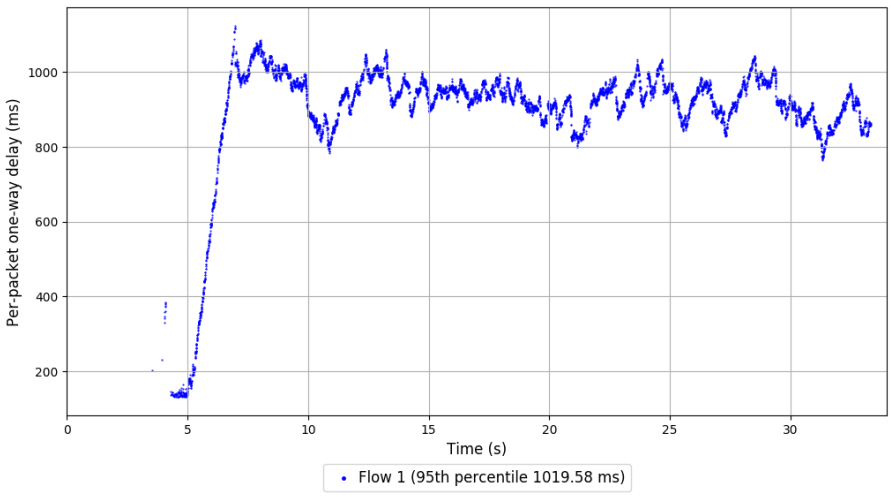
```
Run 2: Statistics of TCP Vegas

Start at: 2020-04-16 07:13:31
End at: 2020-04-16 07:14:01

# Below is generated by plot.py at 2020-04-16 07:40:21
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.93 Mbit/s (108.9% utilization)
95th percentile per-packet one-way delay: 1019.583 ms
Loss rate: 3.01%
-- Flow 1:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 1019.583 ms
Loss rate: 3.01%
```

Run 2: Report of TCP Vegas — Data Link



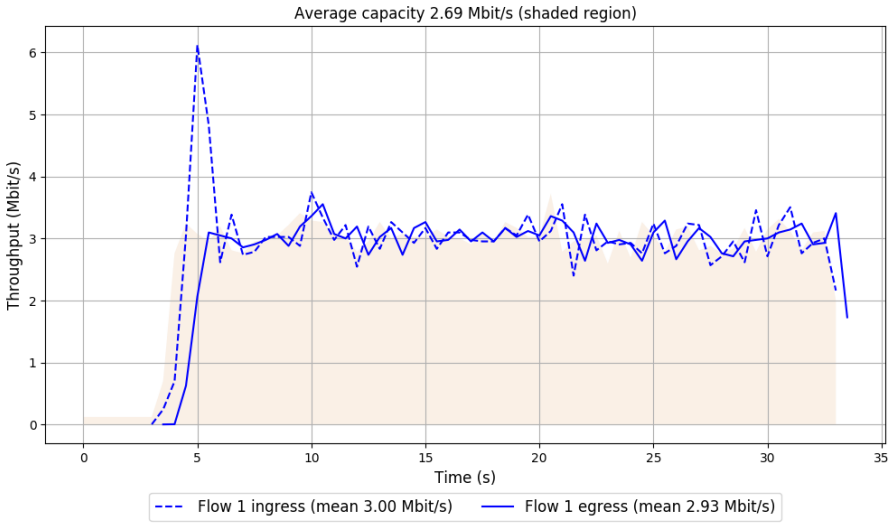


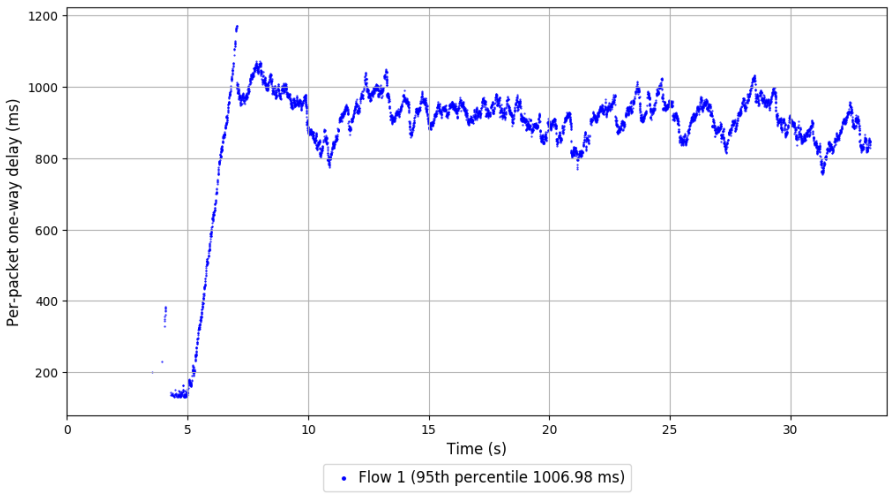
```
Run 3: Statistics of TCP Vegas

Start at: 2020-04-16 07:27:33
End at: 2020-04-16 07:28:03

# Below is generated by plot.py at 2020-04-16 07:40:21
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.93 Mbit/s (108.8% utilization)
95th percentile per-packet one-way delay: 1006.982 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 1006.982 ms
Loss rate: 2.98%
```

Run 3: Report of TCP Vegas — Data Link



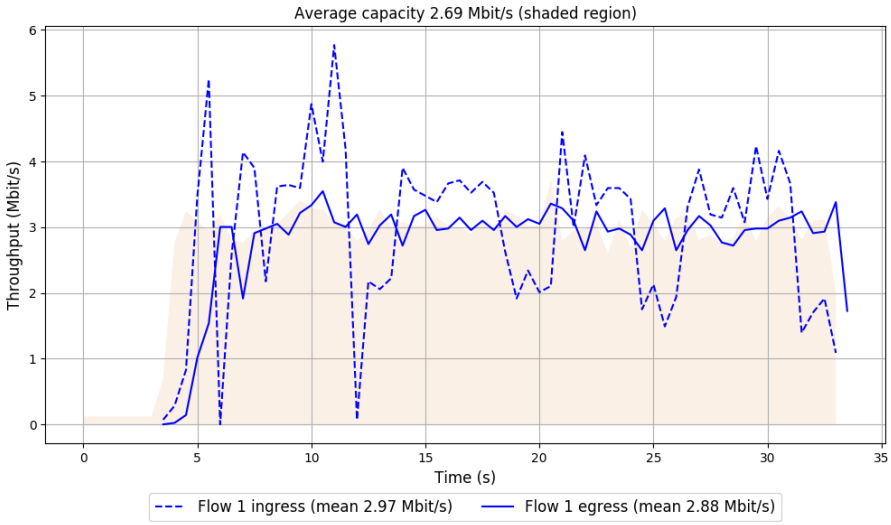


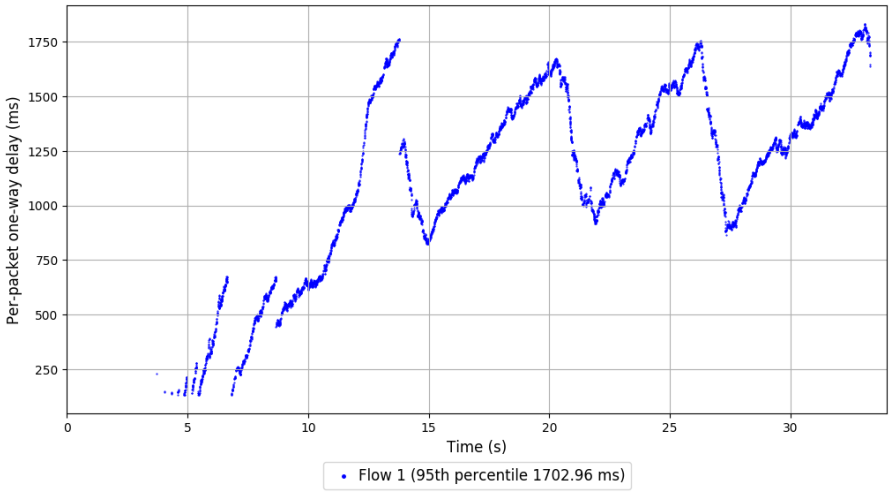
```
Run 1: Statistics of Verus

Start at: 2020-04-16 07:03:36
End at: 2020-04-16 07:04:06

# Below is generated by plot.py at 2020-04-16 07:40:21
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.88 Mbit/s (107.1% utilization)
95th percentile per-packet one-way delay: 1702.964 ms
Loss rate: 3.65%
-- Flow 1:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 1702.964 ms
Loss rate: 3.65%
```

Run 1: Report of Verus — Data Link



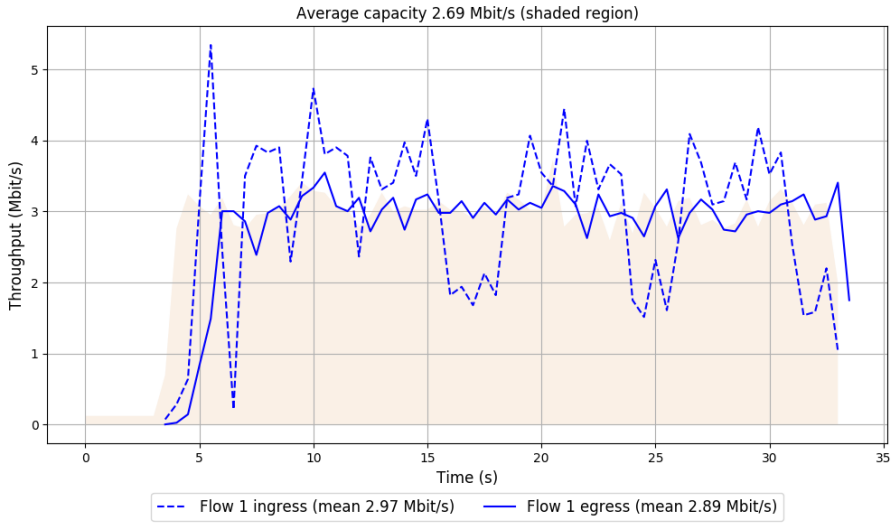


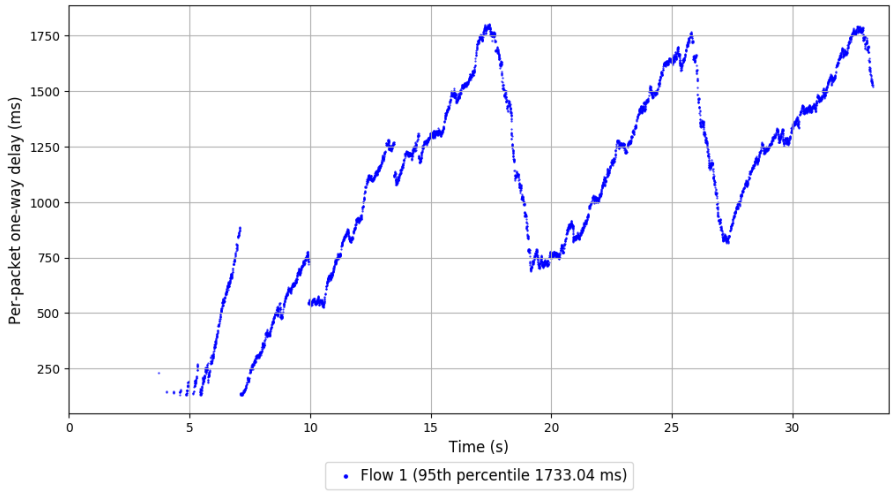
```
Run 2: Statistics of Verus

Start at: 2020-04-16 07:17:37
End at: 2020-04-16 07:18:07

# Below is generated by plot.py at 2020-04-16 07:40:21
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.89 Mbit/s (107.2% utilization)
95th percentile per-packet one-way delay: 1733.043 ms
Loss rate: 3.48%
-- Flow 1:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 1733.043 ms
Loss rate: 3.48%
```

Run 2: Report of Verus — Data Link



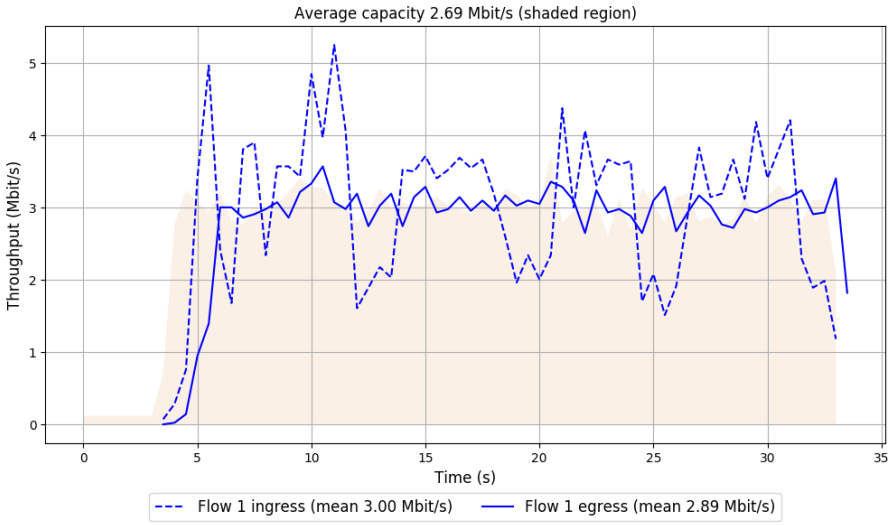


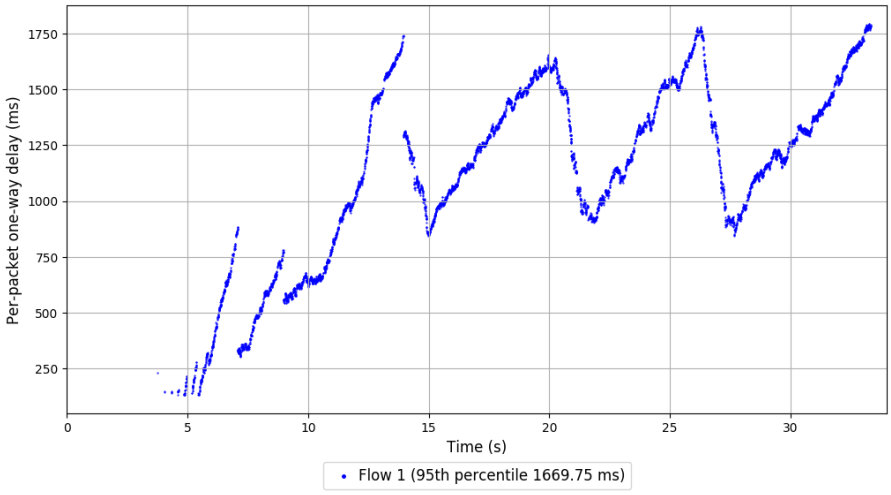
```
Run 3: Statistics of Verus

Start at: 2020-04-16 07:31:38
End at: 2020-04-16 07:32:08

# Below is generated by plot.py at 2020-04-16 07:40:27
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.89 Mbit/s (107.5% utilization)
95th percentile per-packet one-way delay: 1669.751 ms
Loss rate: 4.14%
-- Flow 1:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 1669.751 ms
Loss rate: 4.14%
```

Run 3: Report of Verus — Data Link



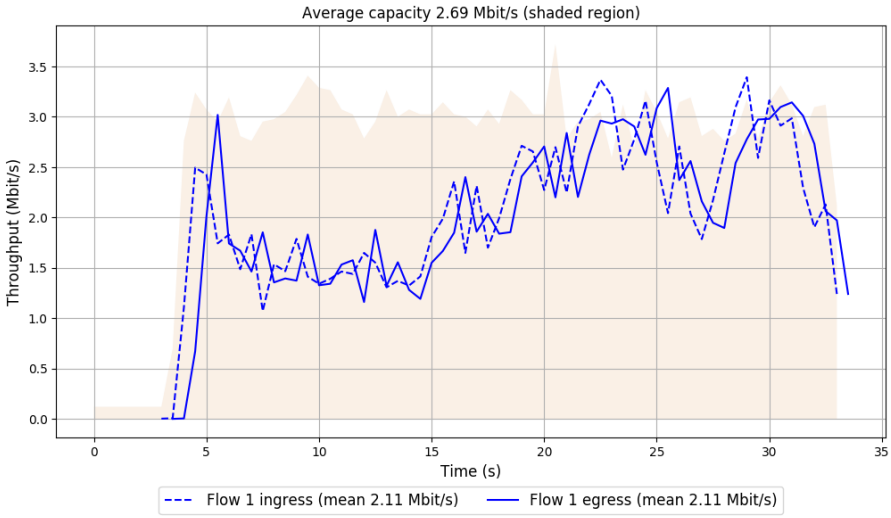


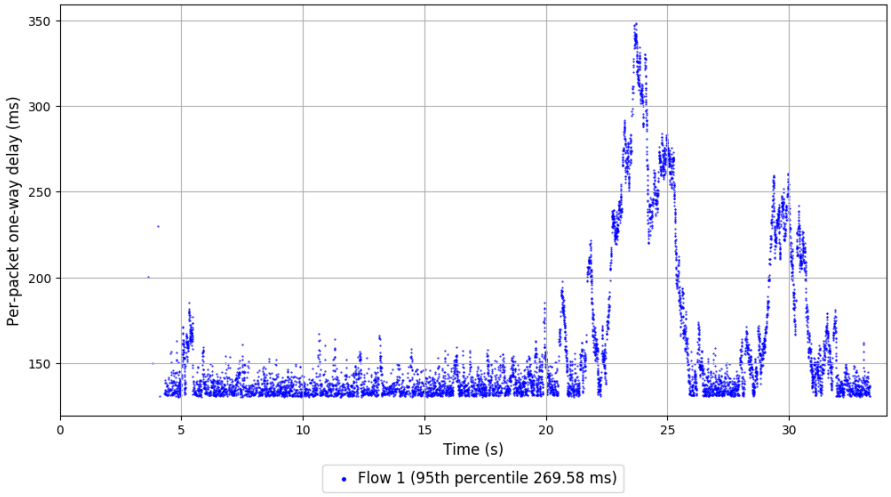
```
Run 1: Statistics of PCC-Vivace

Start at: 2020-04-16 07:00:05
End at: 2020-04-16 07:00:35

# Below is generated by plot.py at 2020-04-16 07:40:28
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.11 Mbit/s (78.4% utilization)
95th percentile per-packet one-way delay: 269.577 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 269.577 ms
Loss rate: 0.41%
```

Run 1: Report of PCC-Vivace — Data Link



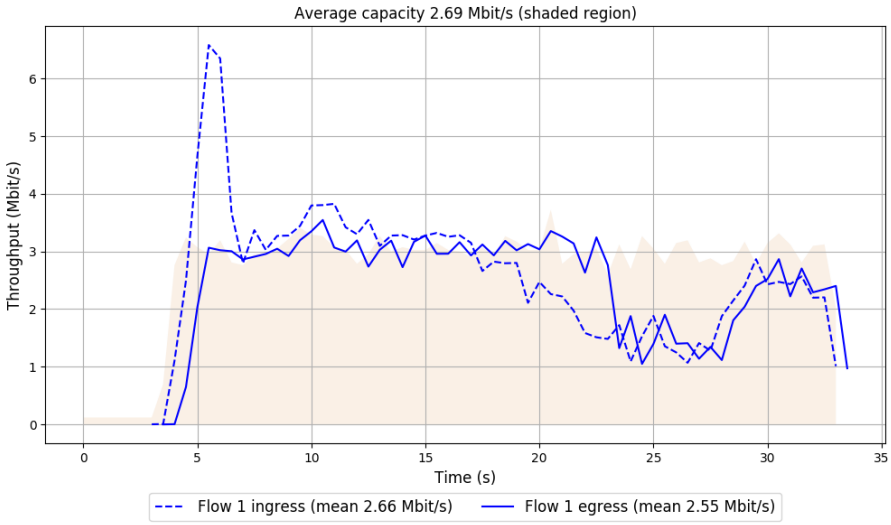


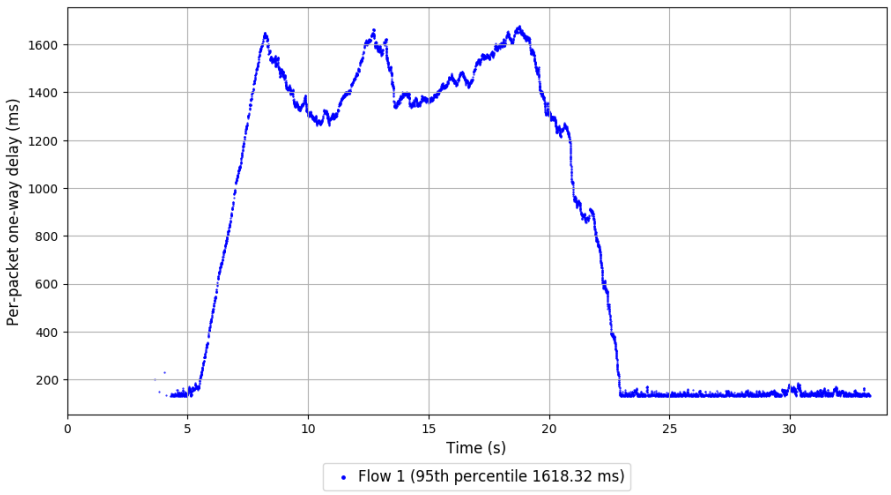
```
Run 2: Statistics of PCC-Vivace

Start at: 2020-04-16 07:14:06
End at: 2020-04-16 07:14:36

# Below is generated by plot.py at 2020-04-16 07:40:28
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.55 Mbit/s (94.7% utilization)
95th percentile per-packet one-way delay: 1618.321 ms
Loss rate: 4.71%
-- Flow 1:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 1618.321 ms
Loss rate: 4.71%
```

Run 2: Report of PCC-Vivace — Data Link



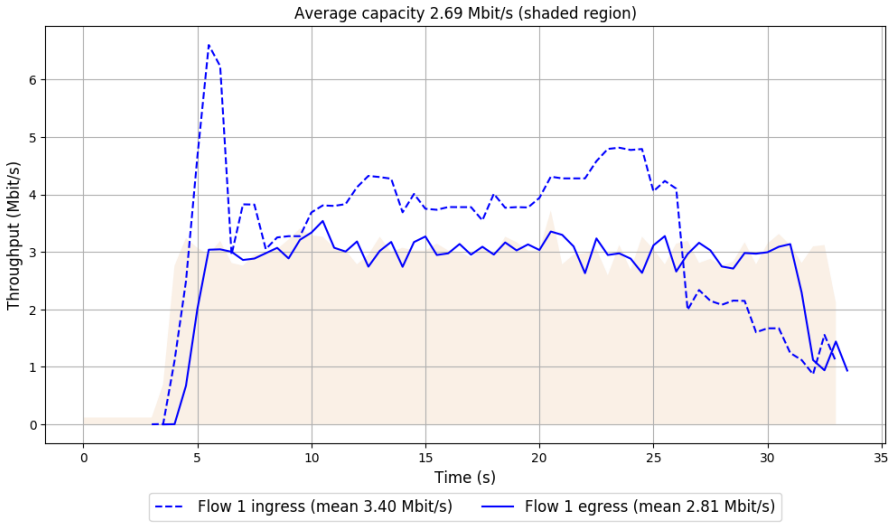


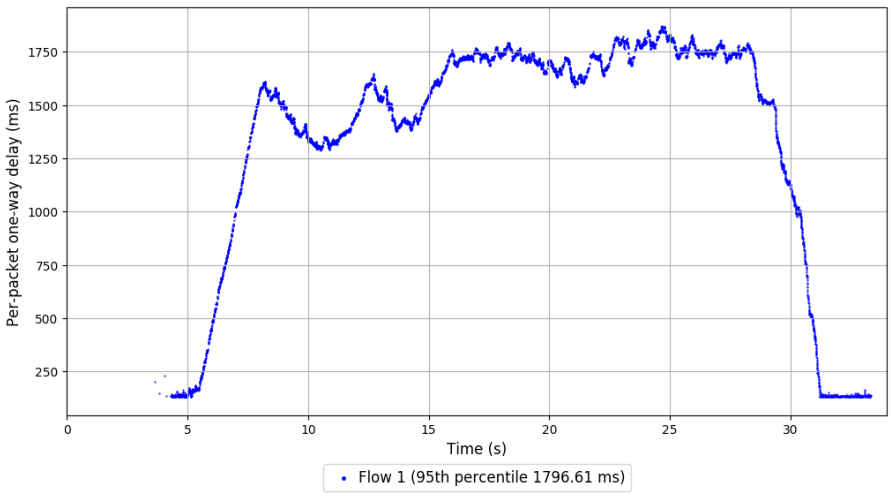
```
Run 3: Statistics of PCC-Vivace

Start at: 2020-04-16 07:28:08
End at: 2020-04-16 07:28:38

# Below is generated by plot.py at 2020-04-16 07:40:28
# Datalink statistics
-- Total of 1 flow:
Average capacity: 2.69 Mbit/s
Average throughput: 2.81 Mbit/s (104.4% utilization)
95th percentile per-packet one-way delay: 1796.614 ms
Loss rate: 17.77%
-- Flow 1:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 1796.614 ms
Loss rate: 17.77%
```

Run 3: Report of PCC-Vivace — Data Link

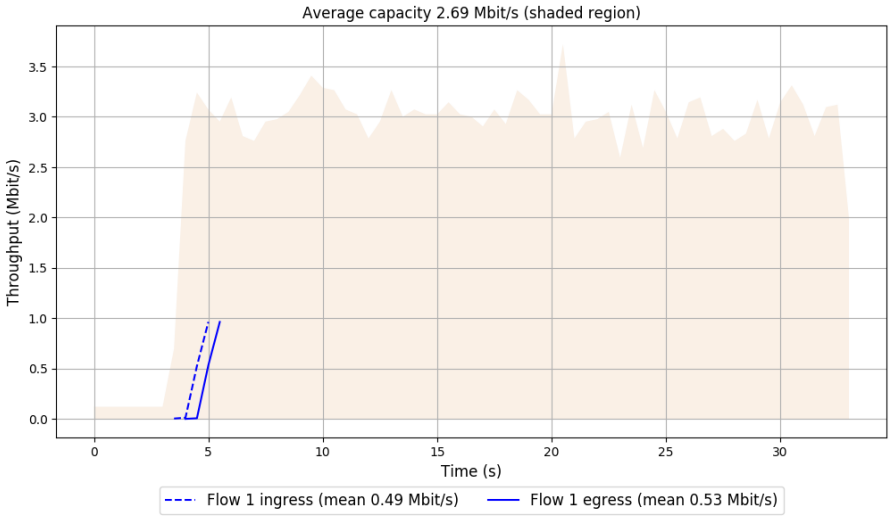


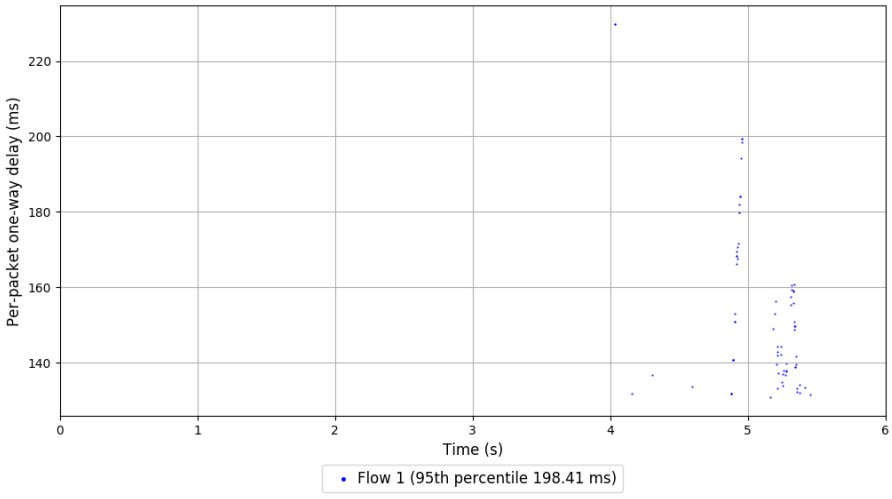


```
Run 1: Statistics of WebRTC media

Start at: 2020-04-16 06:57:10
End at: 2020-04-16 06:57:40
```

Run 1: Report of WebRTC media — Data Link

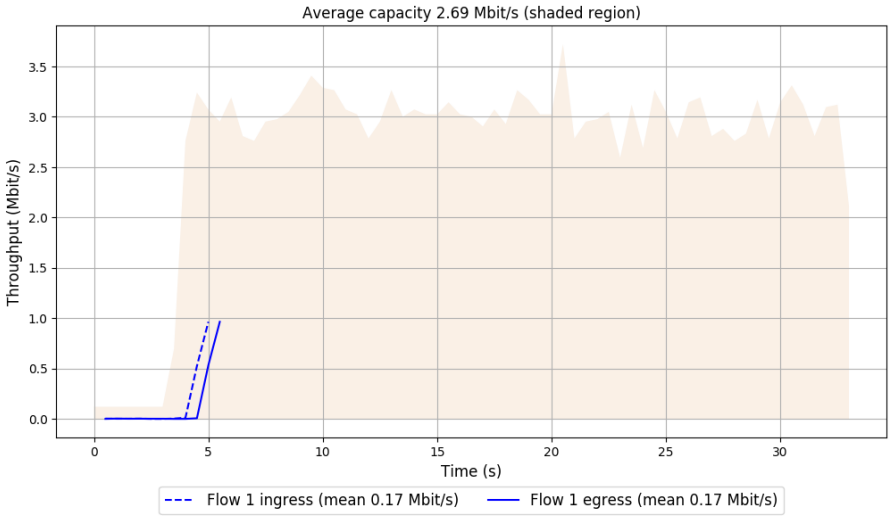


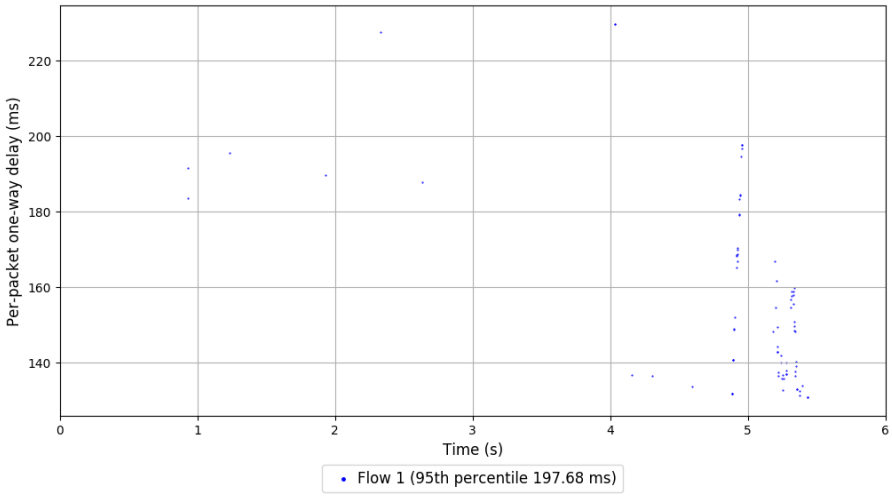


```
Run 2: Statistics of WebRTC media

Start at: 2020-04-16 07:11:11
End at: 2020-04-16 07:11:41
```

Run 2: Report of WebRTC media — Data Link





```
Run 3: Statistics of WebRTC media

Start at: 2020-04-16 07:25:12
End at: 2020-04-16 07:25:42
```

Run 3: Report of WebRTC media — Data Link