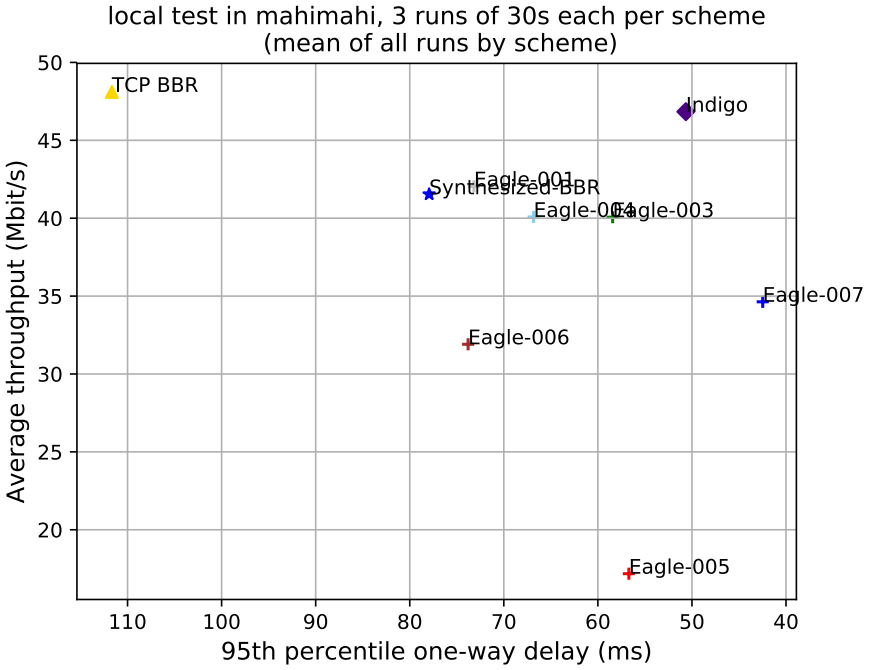
Pantheon Report

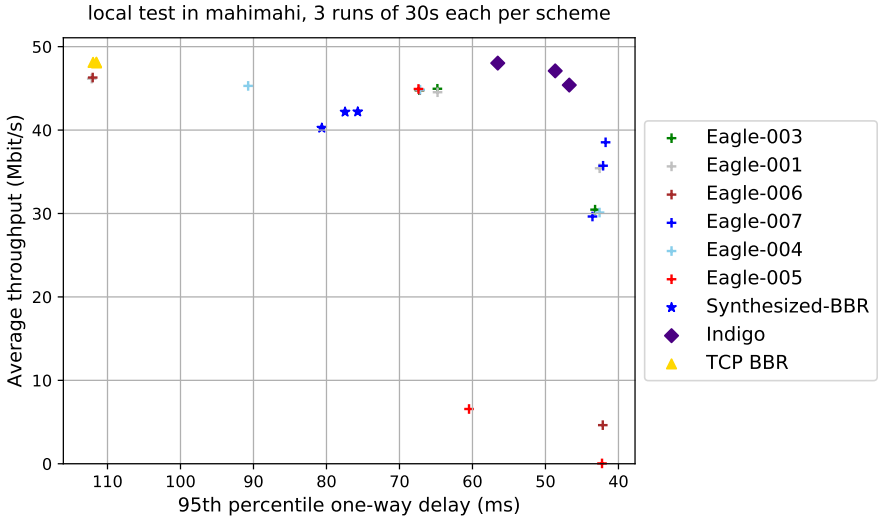
Generated at 2019-10-27 03:02:44 (UTC).
Tested in mahimahi: `mm-delay 40 mm-link 50mbps.trace 50mbps.trace --uplink-queue=droptail --uplink-queue-args=packets=300`
Repeated the test of 9 congestion control schemes 3 times.
Each test lasted for 30 seconds running 1 flow.

```
System info:
Linux 4.15.0-65-generic
net.core.default_qdisc = fq
net.core.rmem_default = 212992
net.core.rmem_max = 212992
net.core.wmem_default = 212992
net.core.wmem_max = 212992
net.ipv4.tcp_rmem = 4096 87380 6291456
net.ipv4.tcp_wmem = 4096 16384 4194304
```

```
Git summary:
branch: master @ b54fc866b3140559c1fa1782d26fa636f7a43a8d
third_party/aurora @ f3e943d61015b39960854ba6391797e0c7984d74
third_party/aurora-model @ e292c316c23fb837255c4e142e40590d154bbe95
third_party/eagle-v1 @ c68d985e042be5c30704c0aee48c363861951a95
third_party/eagle-v2 @ c8a1737b3c84d7d49eada5b8785045d272a70120
third_party/eagle-v3 @ d5f1ab4416fa417052ddc65de5dbdbd20955d293
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/datagram_pb2.cpython-36.
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/helpers.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/mahimahi.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/project_root.cpython-36.
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/receiver.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/example-xentropy-random-switch.py
 M sender-receiver/sender-receiver/sender_receiver/envs/example-xentropy.py
 D sender-receiver/sender-receiver/sender_receiver/envs/model-xentropy/model-xentropy-2.pt
 D sender-receiver/sender-receiver/sender_receiver/envs/model-xentropy/model-xentropy-240ite
 M sender-receiver/sender-receiver/sender_receiver/envs/model-xentropy/model-xentropy.pt
 M sender-receiver/sender-receiver/sender_receiver/logs.txt
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
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/synthesizedBBR @ d5f1ab4416fa417052ddc65de5dbdbd20955d293
 M sender-receiver/sender-receiver/sender_receiver/__pycache__/__init__.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/__init__.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/datagram_pb2.cpython-36
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/helpers.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/mahimahi.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/project_root.cpython-36
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/receiver.cpython-36.pyc
 M sender-receiver/sender-receiver/sender_receiver/envs/__pycache__/sender_receiver_env.cpyt
 M sender-receiver/sender-receiver/sender_receiver/envs/example-xentropy.py
 M sender-receiver/sender-receiver/sender_receiver/logs.txt
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)
TCP BBR
Indigo
Eagle-001
Synthesized-BBR
Eagle-004
Eagle-003
Eagle-007
Eagle-006
Eagle-005


local test in mahimahi, 3 runs of 30s each per scheme
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
Eagle-003
Eagle-001
Eagle-006
Eagle-007
Eagle-004
Eagle-005
Synthesized-BBR
Indigo
TCP BBR

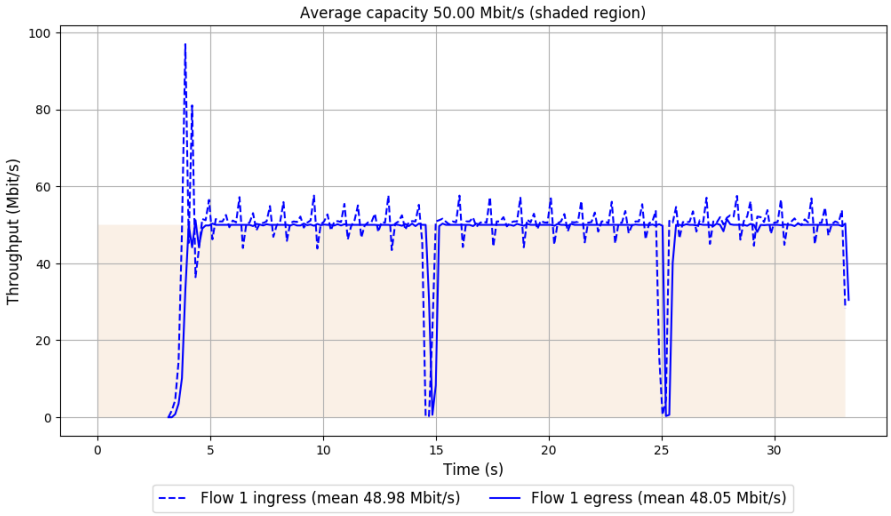
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	48.11	111.67	2.17
Eagle-001	3	42.04	73.17	1.70
Eagle-003	3	40.06	58.43	0.16
Eagle-004	3	40.08	66.83	0.29
Eagle-005	3	17.18	56.71	0.05
Eagle-006	3	31.91	73.80	1.81
Eagle-007	3	34.63	42.48	0.11
Indigo	3	46.84	50.65	0.54
Synthesized-BBR	3	41.53	77.94	0.25

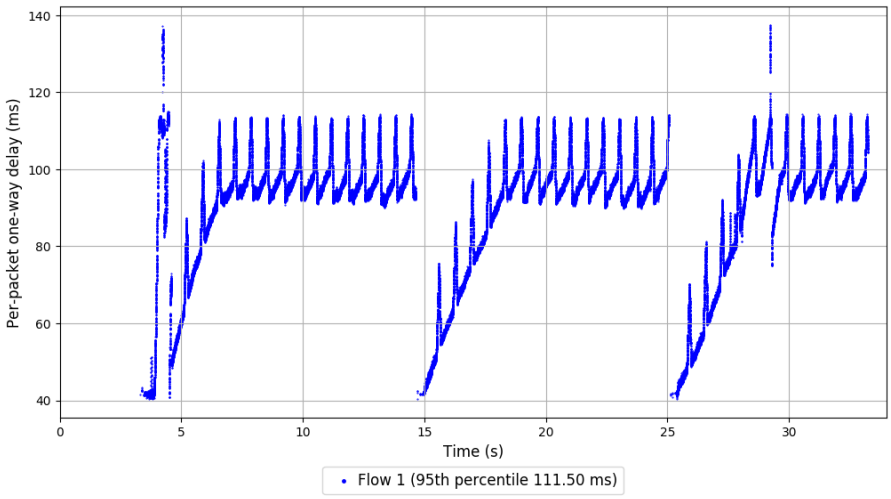
```
Run 1: Statistics of TCP BBR

Start at: 2019-10-27 02:45:07
End at: 2019-10-27 02:45:38

# Below is generated by plot.py at 2019-10-27 03:00:22
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 48.05 Mbit/s (96.1% utilization)
95th percentile per-packet one-way delay: 111.501 ms
Loss rate: 2.06%
-- Flow 1:
Average throughput: 48.05 Mbit/s
95th percentile per-packet one-way delay: 111.501 ms
Loss rate: 2.06%
```

Run 1: Report of TCP BBR — Data Link



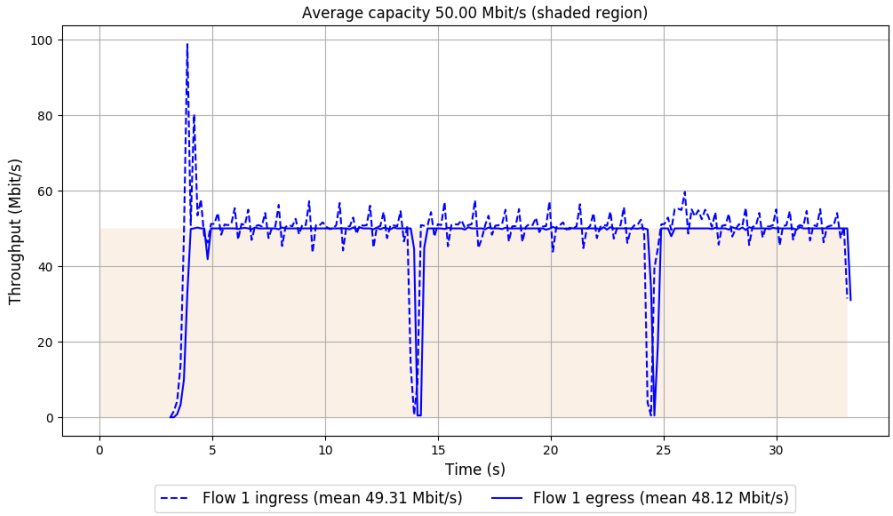


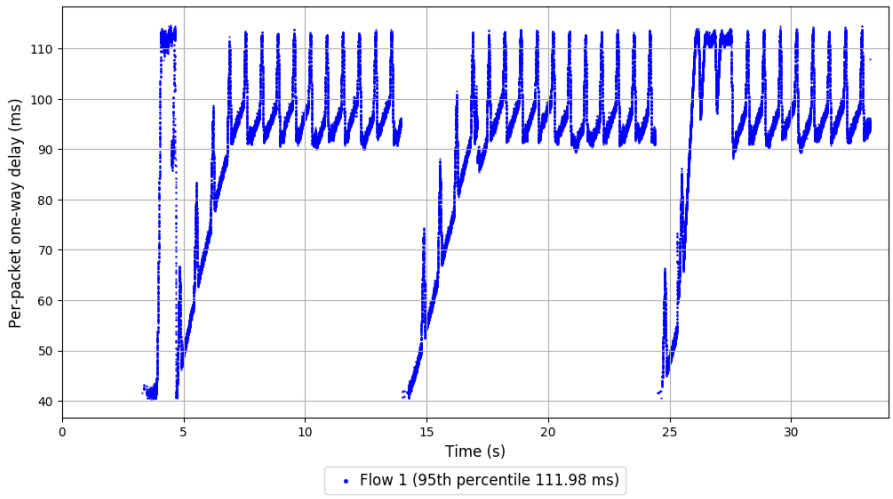
```
Run 2: Statistics of TCP BBR

Start at: 2019-10-27 02:50:35
End at: 2019-10-27 02:51:05

# Below is generated by plot.py at 2019-10-27 03:00:22
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 48.12 Mbit/s (96.2% utilization)
95th percentile per-packet one-way delay: 111.978 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 48.12 Mbit/s
95th percentile per-packet one-way delay: 111.978 ms
Loss rate: 2.54%
```

Run 2: Report of TCP BBR — Data Link



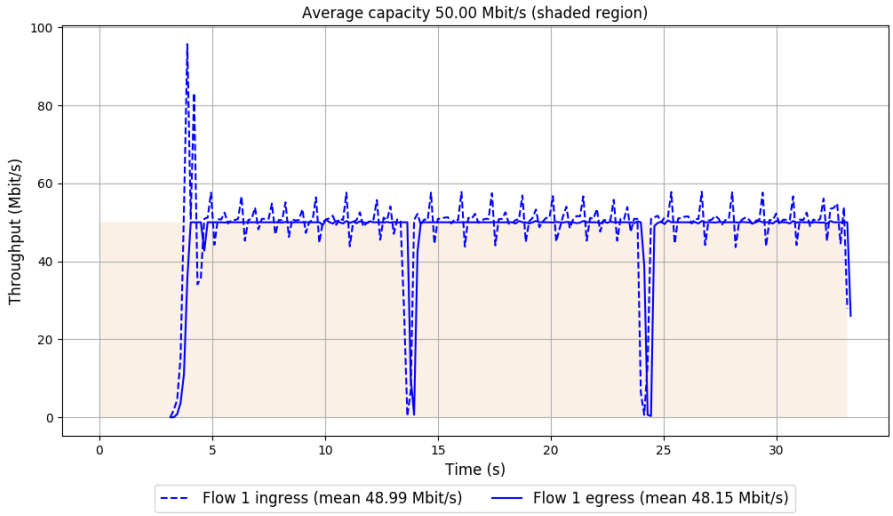


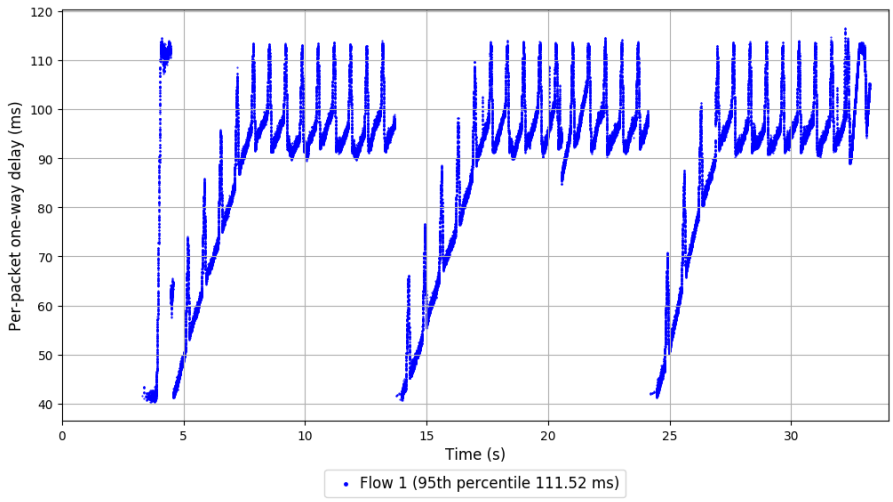
```
Run 3: Statistics of TCP BBR

Start at: 2019-10-27 02:56:01
End at: 2019-10-27 02:56:31

# Below is generated by plot.py at 2019-10-27 03:00:22
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 48.15 Mbit/s (96.3% utilization)
95th percentile per-packet one-way delay: 111.523 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 48.15 Mbit/s
95th percentile per-packet one-way delay: 111.523 ms
Loss rate: 1.92%
```

Run 3: Report of TCP BBR — Data Link



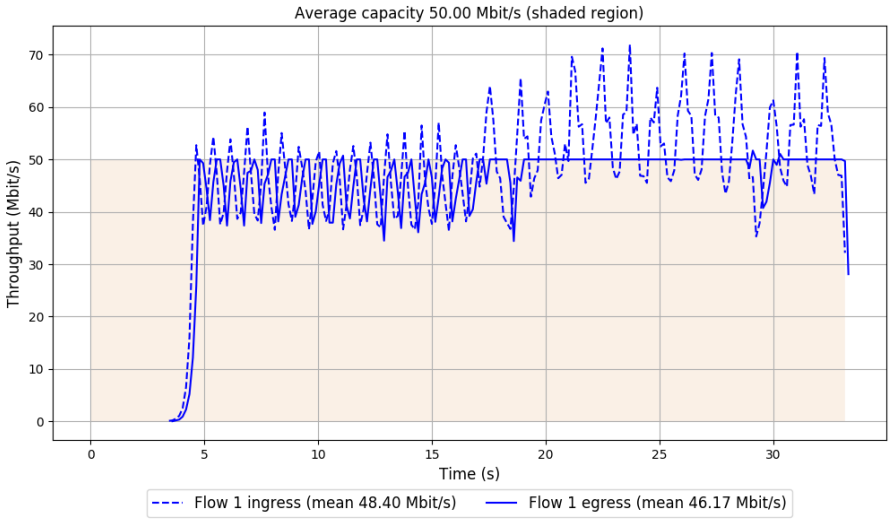


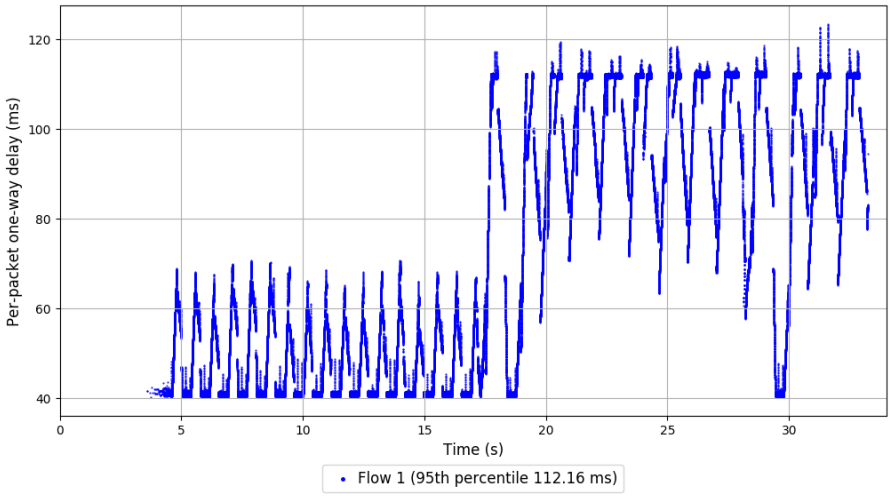
```
Run 1: Statistics of Eagle-001

Start at: 2019-10-27 02:40:53
End at: 2019-10-27 02:41:23

# Below is generated by plot.py at 2019-10-27 03:00:22
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 46.17 Mbit/s (92.3% utilization)
95th percentile per-packet one-way delay: 112.157 ms
Loss rate: 4.78%
-- Flow 1:
Average throughput: 46.17 Mbit/s
95th percentile per-packet one-way delay: 112.157 ms
Loss rate: 4.78%
```

Run 1: Report of Eagle-001 — Data Link



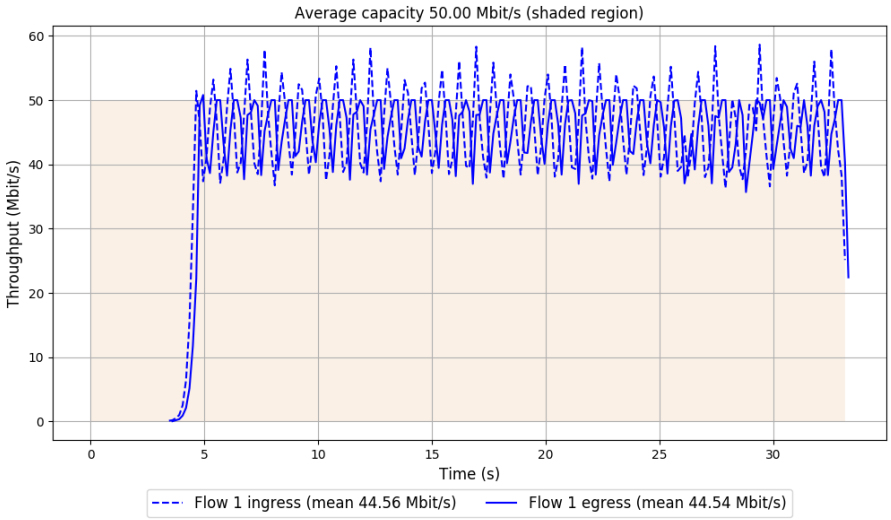


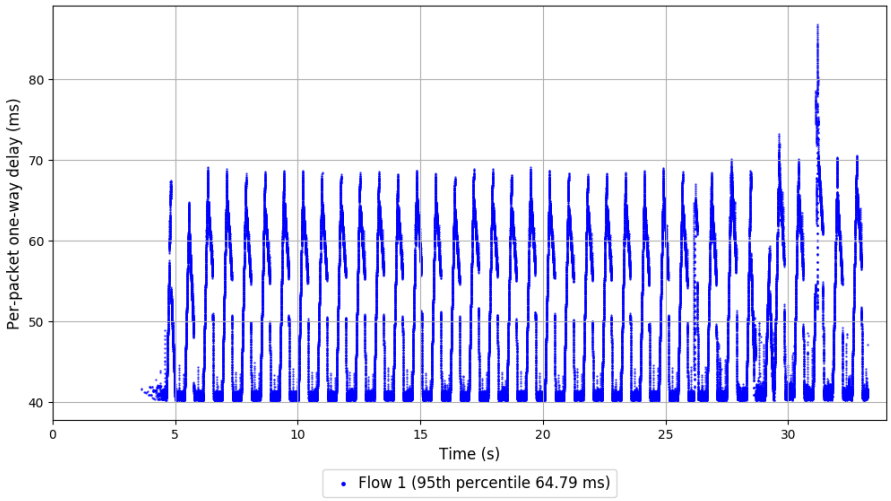
```
Run 2: Statistics of Eagle-001

Start at: 2019-10-27 02:46:21
End at: 2019-10-27 02:46:51

# Below is generated by plot.py at 2019-10-27 03:00:47
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 44.54 Mbit/s (89.1% utilization)
95th percentile per-packet one-way delay: 64.786 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 44.54 Mbit/s
95th percentile per-packet one-way delay: 64.786 ms
Loss rate: 0.19%
```

Run 2: Report of Eagle-001 — Data Link



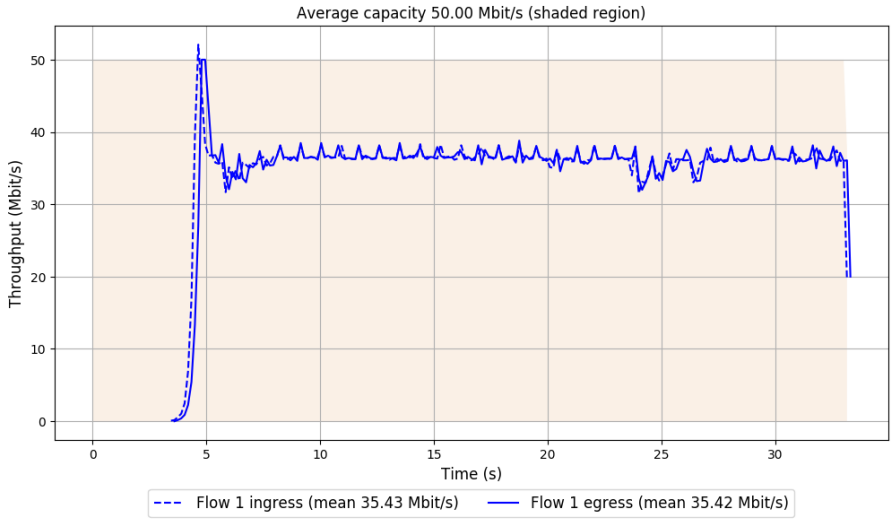


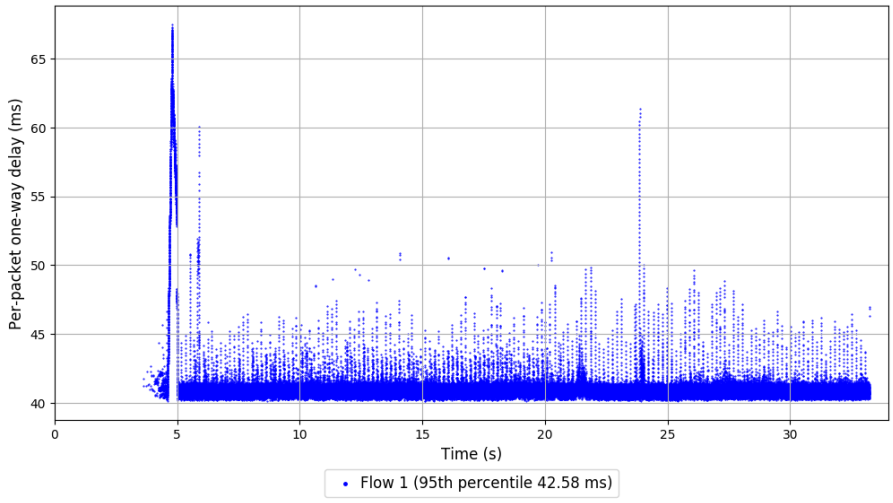
```
Run 3: Statistics of Eagle-001

Start at: 2019-10-27 02:51:48
End at: 2019-10-27 02:52:18

# Below is generated by plot.py at 2019-10-27 03:00:47
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 35.42 Mbit/s (70.8% utilization)
95th percentile per-packet one-way delay: 42.580 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 35.42 Mbit/s
95th percentile per-packet one-way delay: 42.580 ms
Loss rate: 0.14%
```

Run 3: Report of Eagle-001 — Data Link



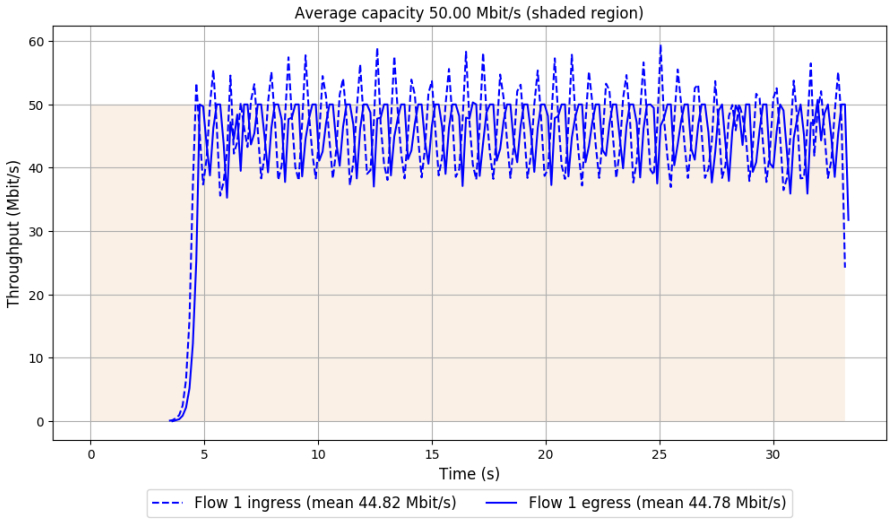


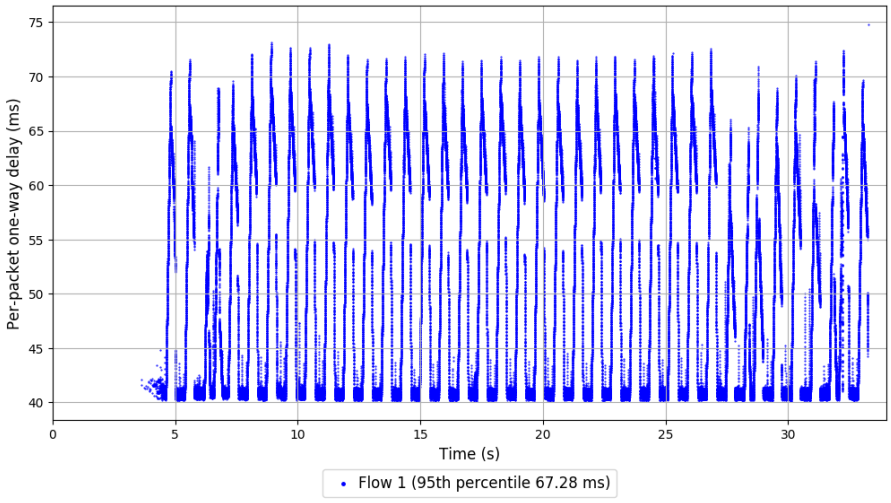
```
Run 1: Statistics of Eagle-003

Start at: 2019-10-27 02:41:30
End at: 2019-10-27 02:42:00

# Below is generated by plot.py at 2019-10-27 03:00:49
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 44.78 Mbit/s (89.6% utilization)
95th percentile per-packet one-way delay: 67.280 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 44.78 Mbit/s
95th percentile per-packet one-way delay: 67.280 ms
Loss rate: 0.13%
```

Run 1: Report of Eagle-003 — Data Link



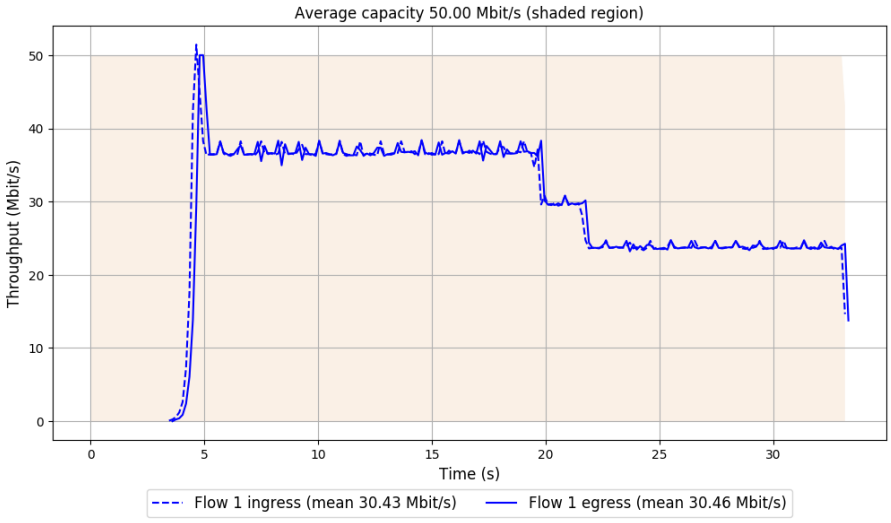


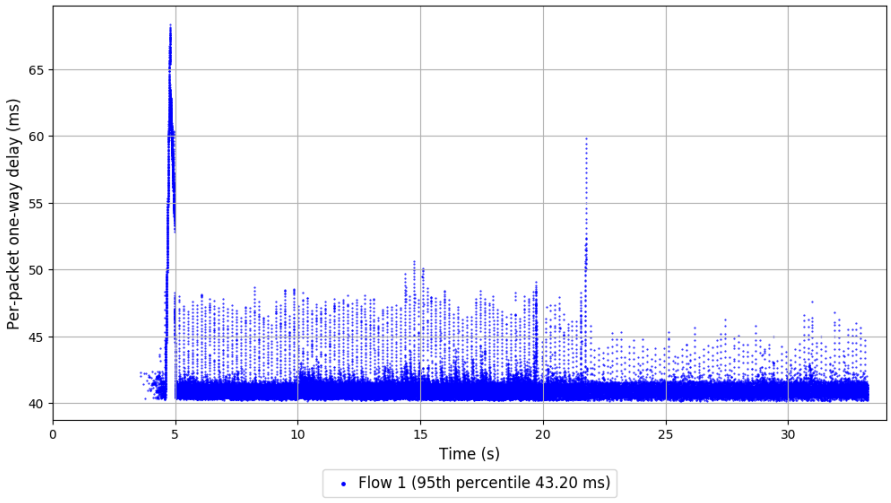
```
Run 2: Statistics of Eagle-003

Start at: 2019-10-27 02:46:57
End at: 2019-10-27 02:47:27

# Below is generated by plot.py at 2019-10-27 03:00:49
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 30.46 Mbit/s (60.9% utilization)
95th percentile per-packet one-way delay: 43.203 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 30.46 Mbit/s
95th percentile per-packet one-way delay: 43.203 ms
Loss rate: 0.11%
```

Run 2: Report of Eagle-003 — Data Link



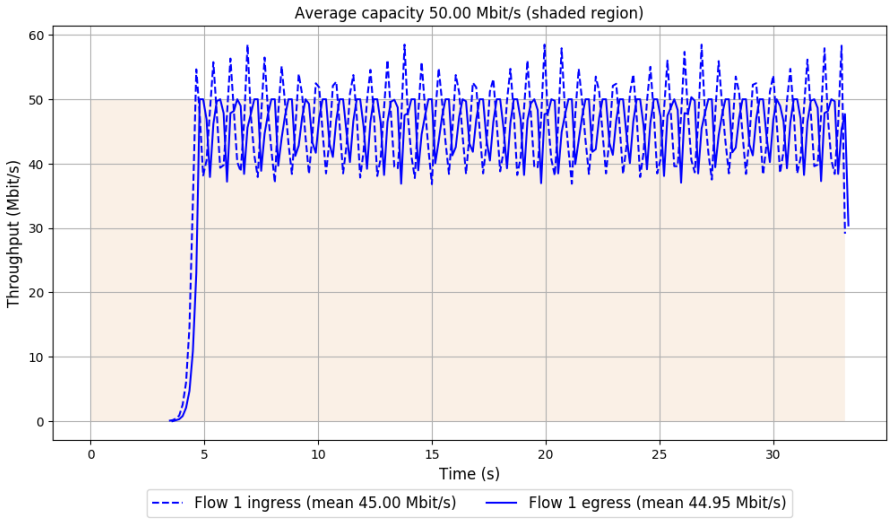


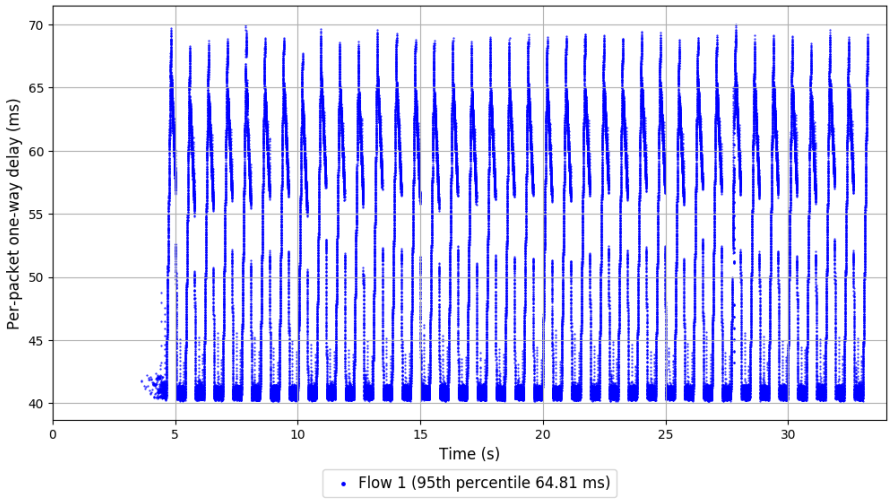
```
Run 3: Statistics of Eagle-003

Start at: 2019-10-27 02:52:24
End at: 2019-10-27 02:52:54

# Below is generated by plot.py at 2019-10-27 03:01:10
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 44.95 Mbit/s (89.9% utilization)
95th percentile per-packet one-way delay: 64.807 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 44.95 Mbit/s
95th percentile per-packet one-way delay: 64.807 ms
Loss rate: 0.23%
```

Run 3: Report of Eagle-003 — Data Link



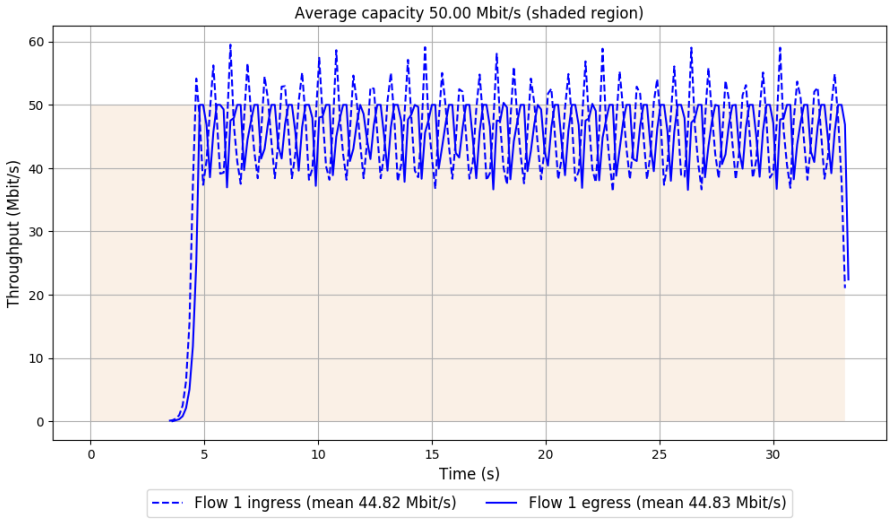


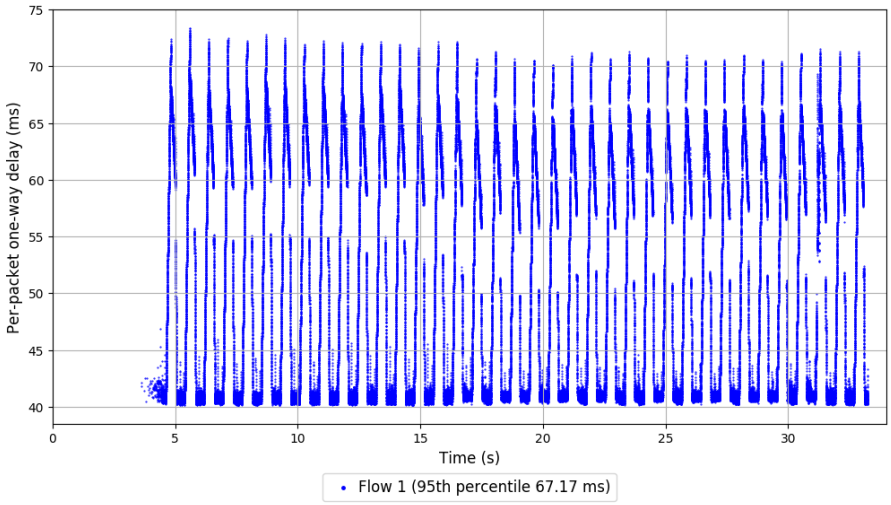
```
Run 1: Statistics of Eagle-004

Start at: 2019-10-27 02:42:07
End at: 2019-10-27 02:42:37

# Below is generated by plot.py at 2019-10-27 03:01:19
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 44.83 Mbit/s (89.7% utilization)
95th percentile per-packet one-way delay: 67.173 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 44.83 Mbit/s
95th percentile per-packet one-way delay: 67.173 ms
Loss rate: 0.10%
```

Run 1: Report of Eagle-004 — Data Link



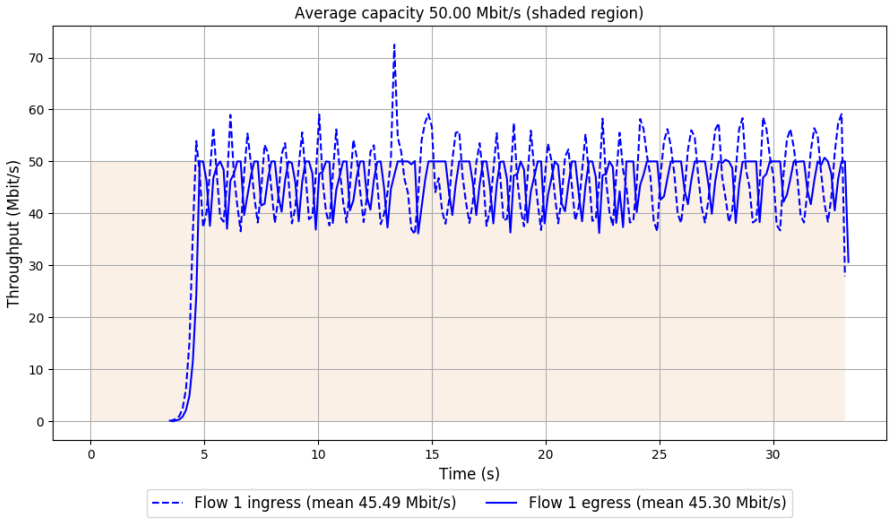


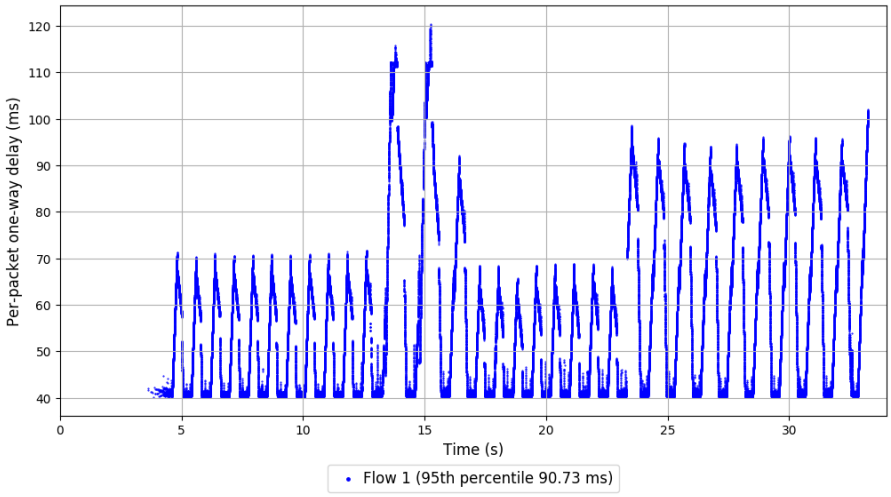
```
Run 2: Statistics of Eagle-004

Start at: 2019-10-27 02:47:33
End at: 2019-10-27 02:48:03

# Below is generated by plot.py at 2019-10-27 03:01:19
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 45.30 Mbit/s (90.6% utilization)
95th percentile per-packet one-way delay: 90.732 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 45.30 Mbit/s
95th percentile per-packet one-way delay: 90.732 ms
Loss rate: 0.58%
```

Run 2: Report of Eagle-004 — Data Link



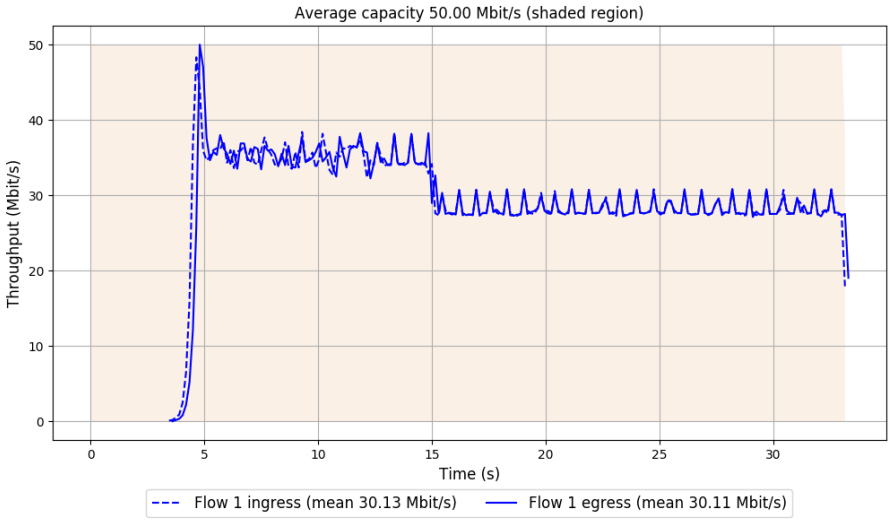


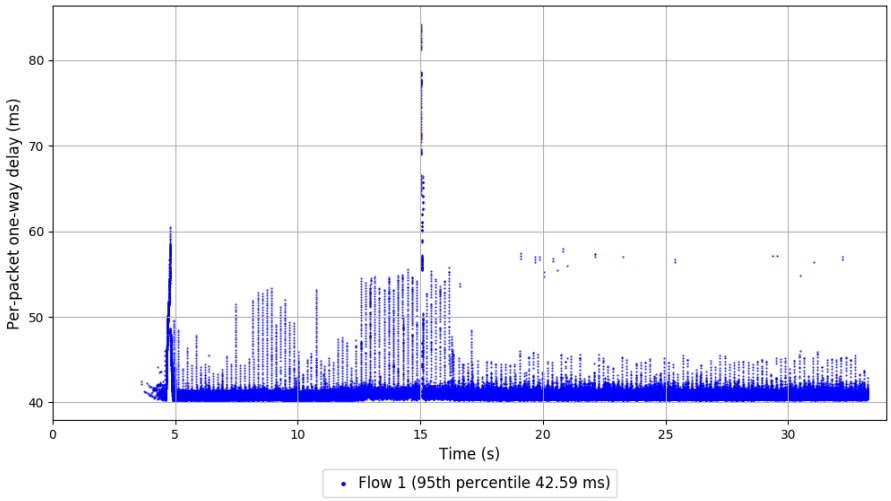
```
Run 3: Statistics of Eagle-004

Start at: 2019-10-27 02:53:01
End at: 2019-10-27 02:53:31

# Below is generated by plot.py at 2019-10-27 03:01:19
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 30.11 Mbit/s (60.2% utilization)
95th percentile per-packet one-way delay: 42.590 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 30.11 Mbit/s
95th percentile per-packet one-way delay: 42.590 ms
Loss rate: 0.18%
```

Run 3: Report of Eagle-004 — Data Link



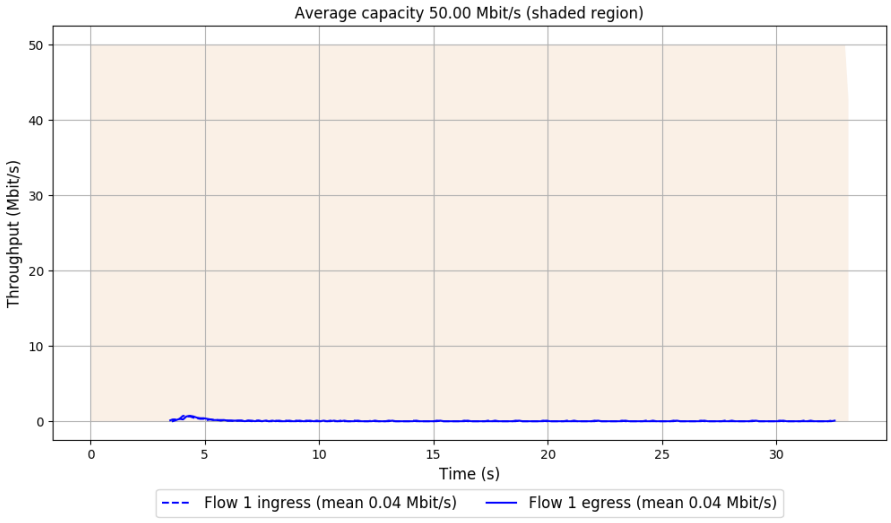


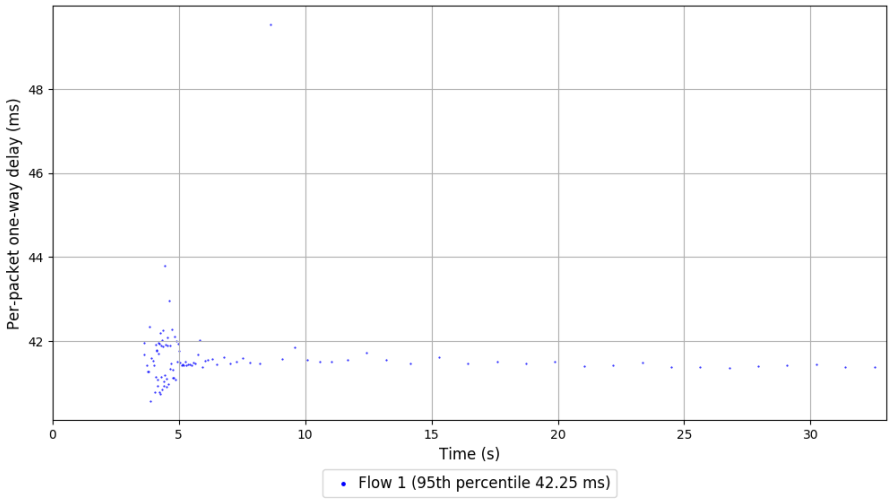
```
Run 1: Statistics of Eagle-005

Start at: 2019-10-27 02:42:43
End at: 2019-10-27 02:43:13

# Below is generated by plot.py at 2019-10-27 03:01:19
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 0.04 Mbit/s (0.1% utilization)
95th percentile per-packet one-way delay: 42.253 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 42.253 ms
Loss rate: 0.00%
```

Run 1: Report of Eagle-005 — Data Link



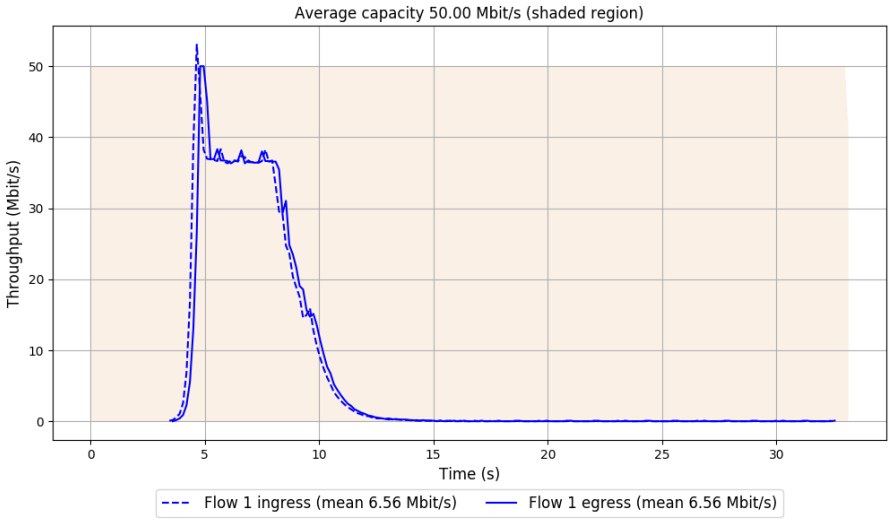


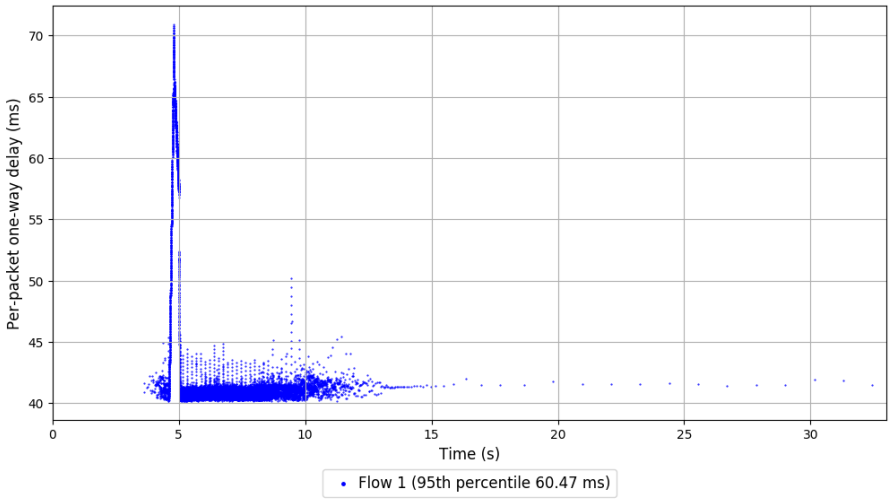
```
Run 2: Statistics of Eagle-005

Start at: 2019-10-27 02:48:10
End at: 2019-10-27 02:48:40

# Below is generated by plot.py at 2019-10-27 03:01:24
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 6.56 Mbit/s (13.1% utilization)
95th percentile per-packet one-way delay: 60.471 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.56 Mbit/s
95th percentile per-packet one-way delay: 60.471 ms
Loss rate: 0.00%
```

Run 2: Report of Eagle-005 — Data Link



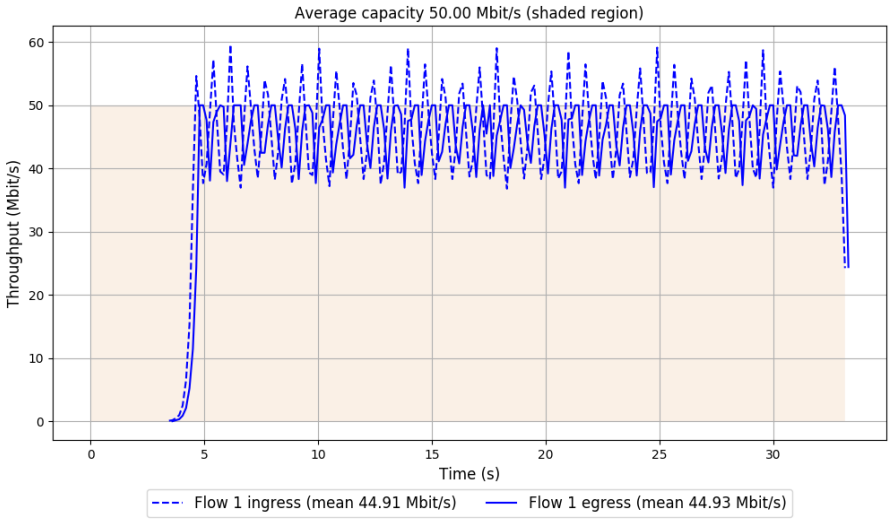


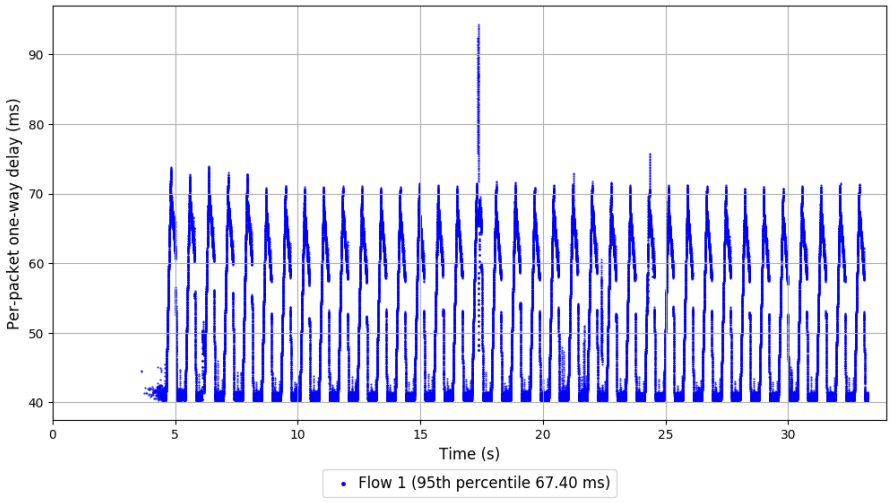
```
Run 3: Statistics of Eagle-005

Start at: 2019-10-27 02:53:37
End at: 2019-10-27 02:54:07

# Below is generated by plot.py at 2019-10-27 03:01:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 44.93 Mbit/s (89.9% utilization)
95th percentile per-packet one-way delay: 67.396 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 44.93 Mbit/s
95th percentile per-packet one-way delay: 67.396 ms
Loss rate: 0.15%
```

Run 3: Report of Eagle-005 — Data Link



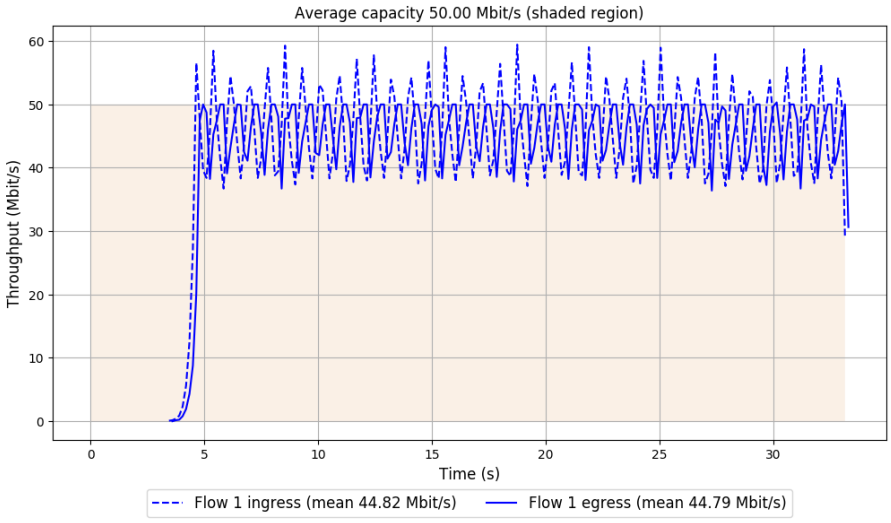


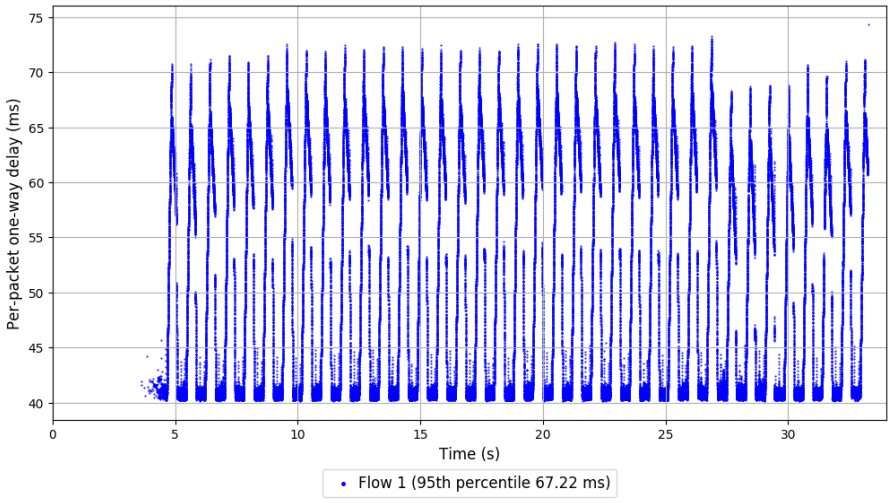
```
Run 1: Statistics of Eagle-006

Start at: 2019-10-27 02:43:18
End at: 2019-10-27 02:43:48

# Below is generated by plot.py at 2019-10-27 03:01:47
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 44.79 Mbit/s (89.6% utilization)
95th percentile per-packet one-way delay: 67.216 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 44.79 Mbit/s
95th percentile per-packet one-way delay: 67.216 ms
Loss rate: 0.22%
```

Run 1: Report of Eagle-006 — Data Link



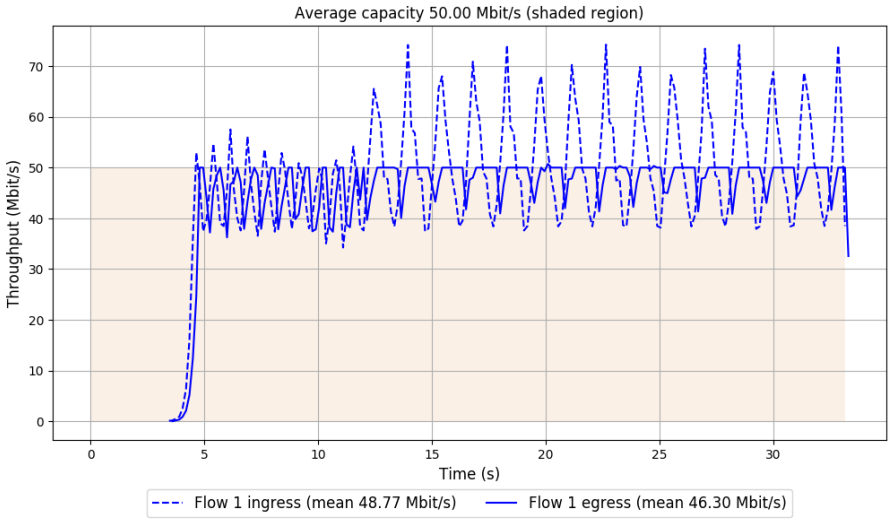


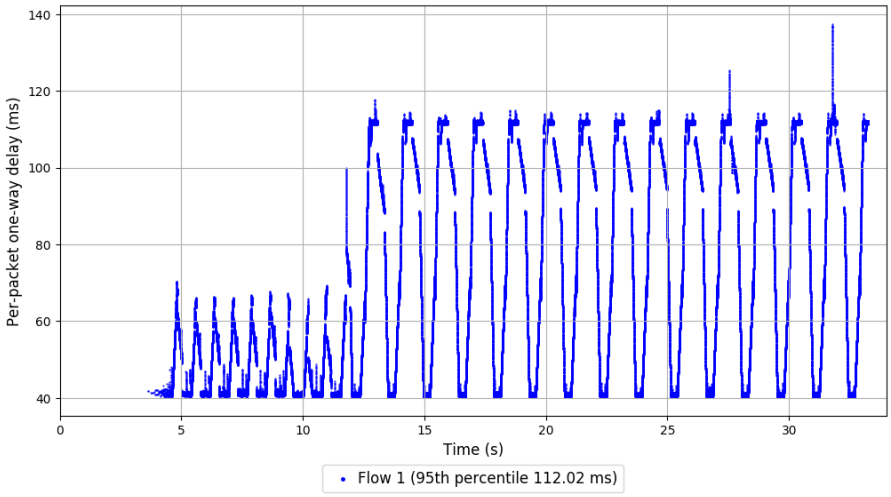
```
Run 2: Statistics of Eagle-006

Start at: 2019-10-27 02:48:45
End at: 2019-10-27 02:49:15

# Below is generated by plot.py at 2019-10-27 03:01:51
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 46.30 Mbit/s (92.6% utilization)
95th percentile per-packet one-way delay: 112.024 ms
Loss rate: 5.21%
-- Flow 1:
Average throughput: 46.30 Mbit/s
95th percentile per-packet one-way delay: 112.024 ms
Loss rate: 5.21%
```

Run 2: Report of Eagle-006 — Data Link



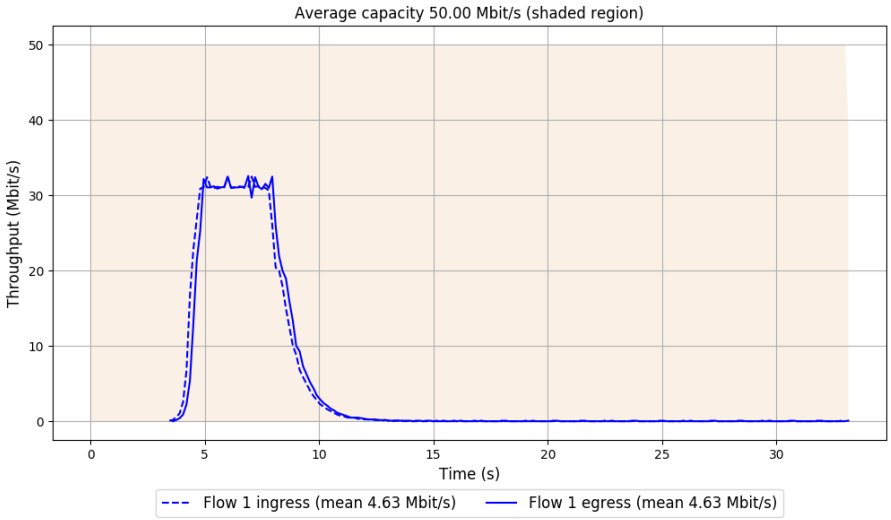


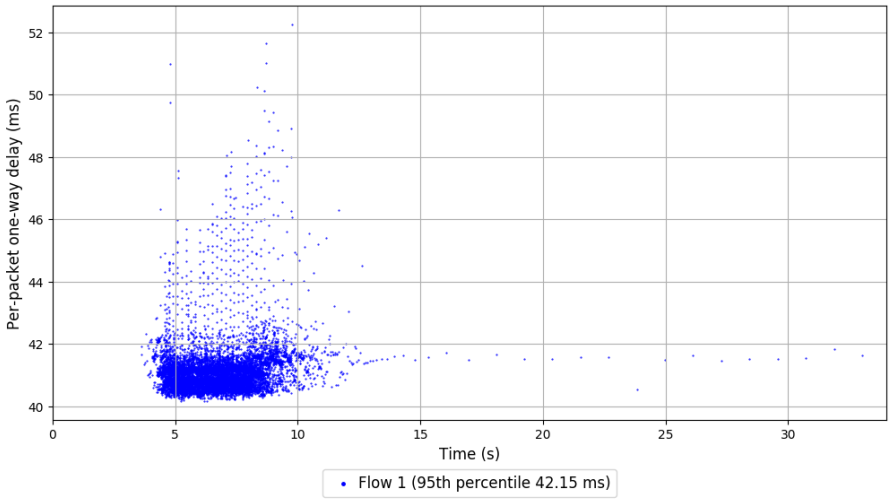
```
Run 3: Statistics of Eagle-006

Start at: 2019-10-27 02:54:14
End at: 2019-10-27 02:54:44

# Below is generated by plot.py at 2019-10-27 03:01:51
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 4.63 Mbit/s (9.3% utilization)
95th percentile per-packet one-way delay: 42.148 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 42.148 ms
Loss rate: 0.00%
```

Run 3: Report of Eagle-006 — Data Link



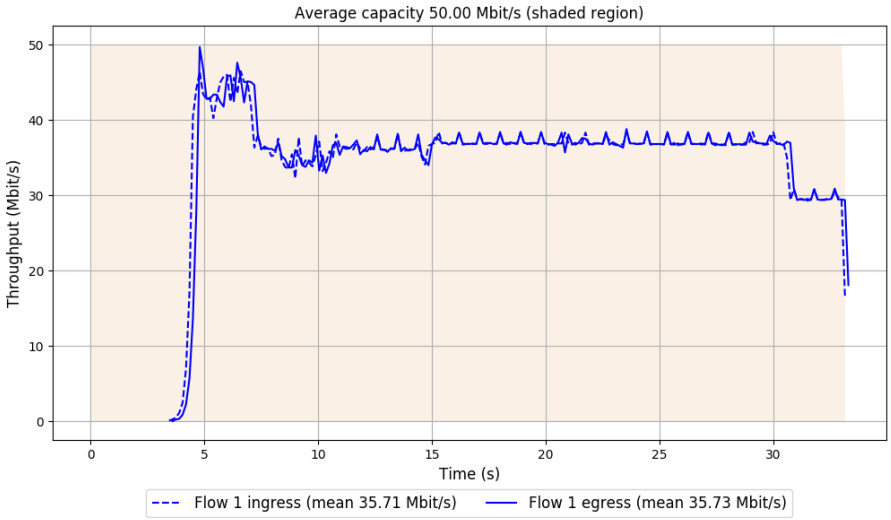


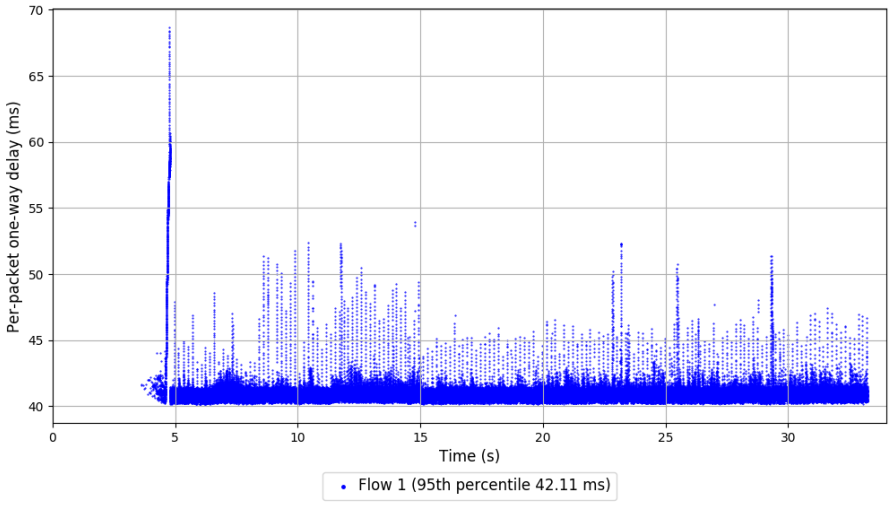
```
Run 1: Statistics of Eagle-007

Start at: 2019-10-27 02:43:55
End at: 2019-10-27 02:44:25

# Below is generated by plot.py at 2019-10-27 03:02:00
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 35.73 Mbit/s (71.4% utilization)
95th percentile per-packet one-way delay: 42.107 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 35.73 Mbit/s
95th percentile per-packet one-way delay: 42.107 ms
Loss rate: 0.10%
```

Run 1: Report of Eagle-007 — Data Link



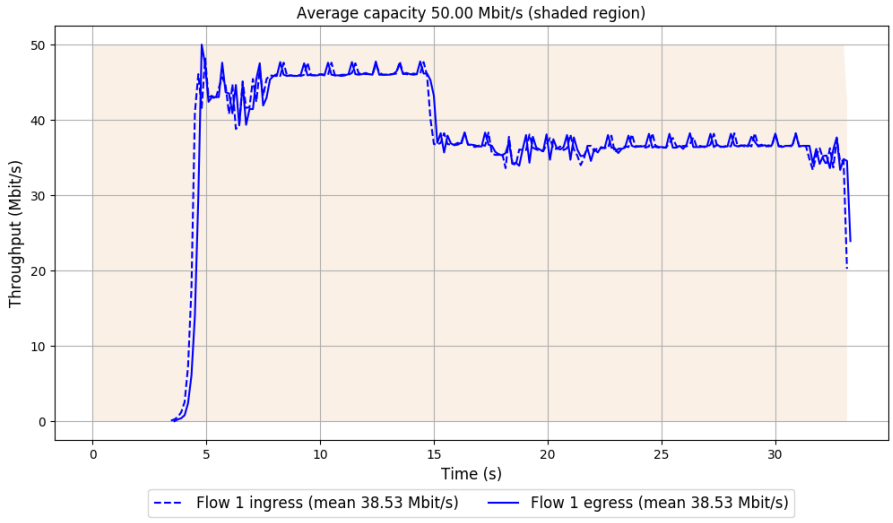


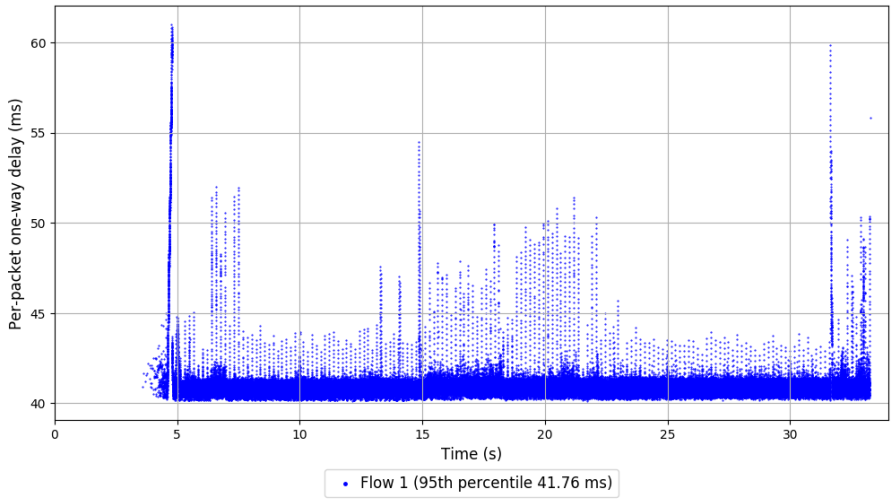
```
Run 2: Statistics of Eagle-007

Start at: 2019-10-27 02:49:22
End at: 2019-10-27 02:49:52

# Below is generated by plot.py at 2019-10-27 03:02:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 38.53 Mbit/s (77.1% utilization)
95th percentile per-packet one-way delay: 41.761 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 38.53 Mbit/s
95th percentile per-packet one-way delay: 41.761 ms
Loss rate: 0.09%
```

Run 2: Report of Eagle-007 — Data Link



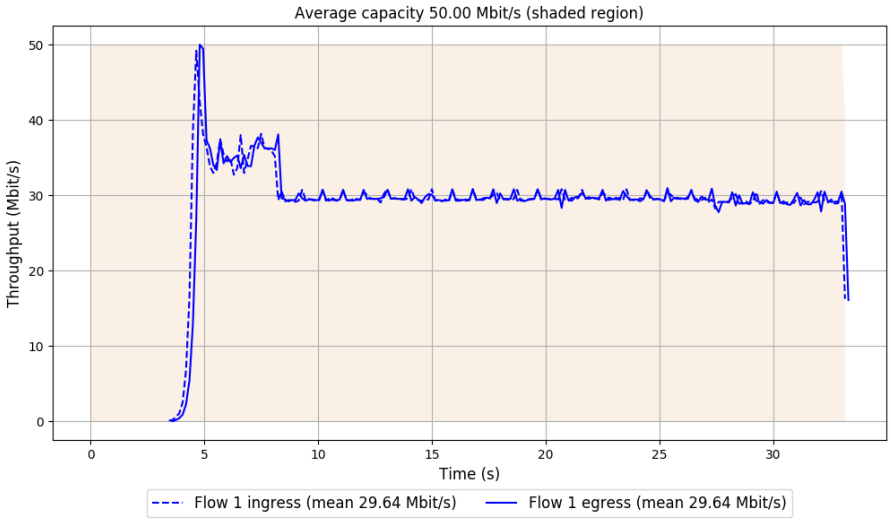


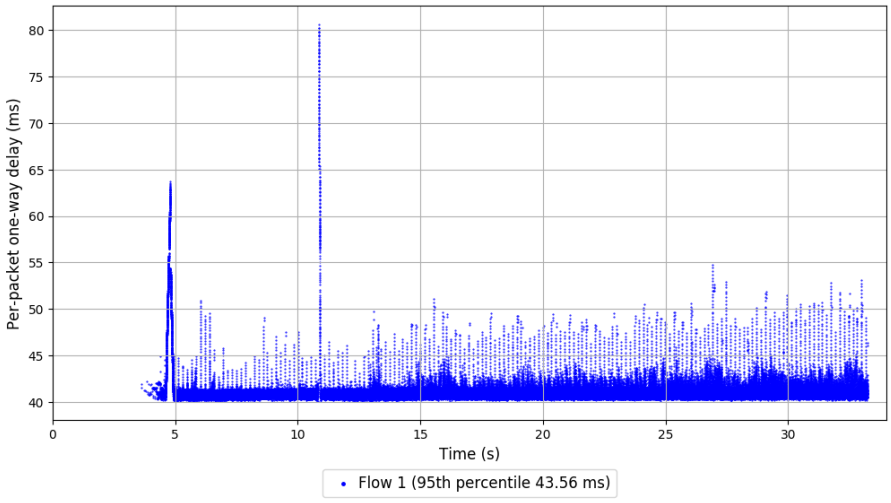
```
Run 3: Statistics of Eagle-007

Start at: 2019-10-27 02:54:48
End at: 2019-10-27 02:55:18

# Below is generated by plot.py at 2019-10-27 03:02:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 29.64 Mbit/s (59.3% utilization)
95th percentile per-packet one-way delay: 43.562 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 29.64 Mbit/s
95th percentile per-packet one-way delay: 43.562 ms
Loss rate: 0.15%
```

Run 3: Report of Eagle-007 — Data Link



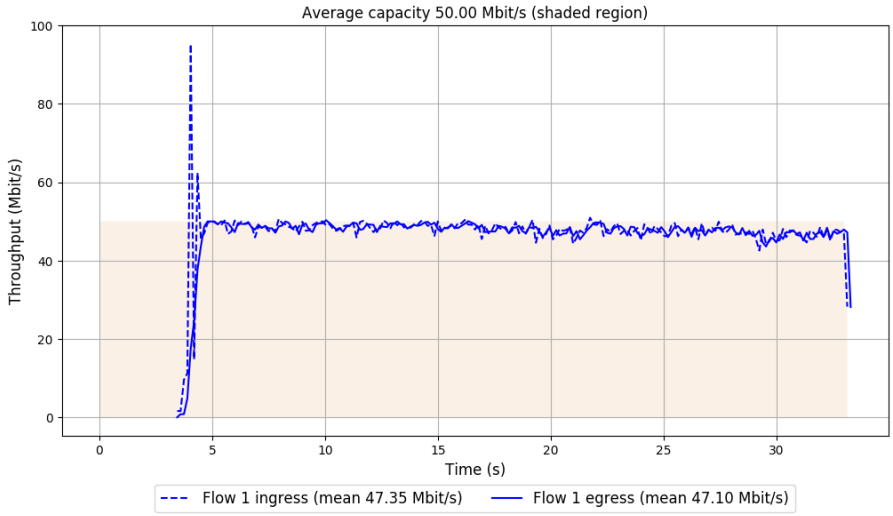


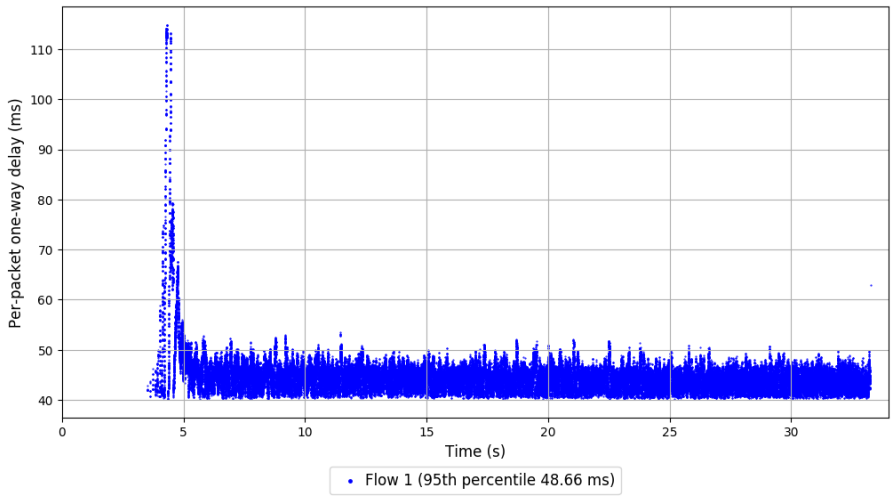
```
Run 1: Statistics of Indigo

Start at: 2019-10-27 02:45:44
End at: 2019-10-27 02:46:14

# Below is generated by plot.py at 2019-10-27 03:02:20
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 47.10 Mbit/s (94.2% utilization)
95th percentile per-packet one-way delay: 48.664 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 47.10 Mbit/s
95th percentile per-packet one-way delay: 48.664 ms
Loss rate: 0.61%
```

Run 1: Report of Indigo — Data Link



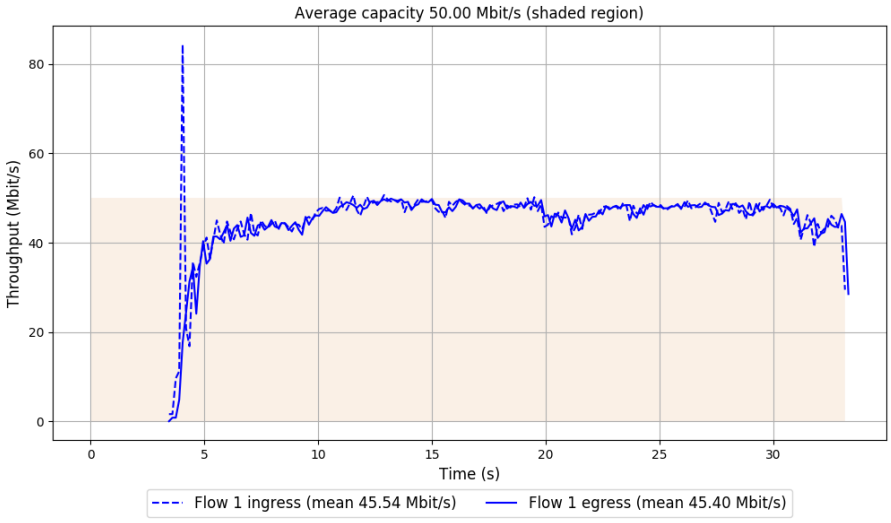


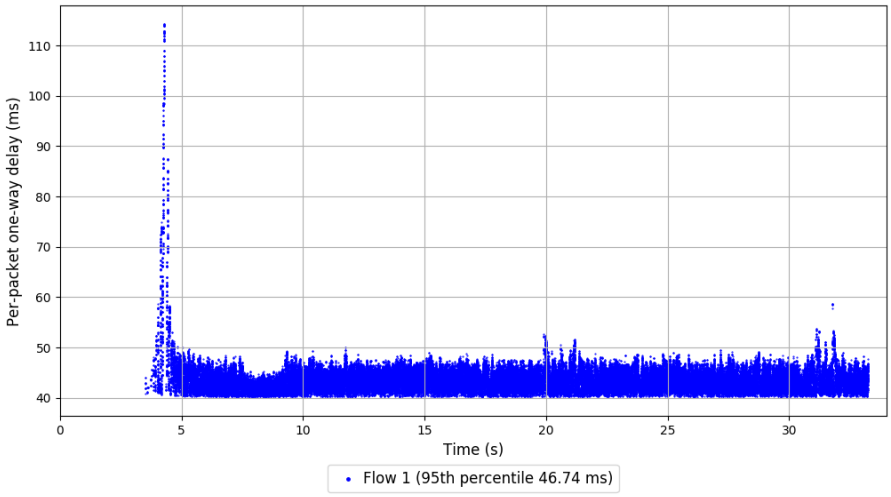
```
Run 2: Statistics of Indigo

Start at: 2019-10-27 02:51:11
End at: 2019-10-27 02:51:41

# Below is generated by plot.py at 2019-10-27 03:02:32
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 45.40 Mbit/s (90.8% utilization)
95th percentile per-packet one-way delay: 46.738 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 45.40 Mbit/s
95th percentile per-packet one-way delay: 46.738 ms
Loss rate: 0.45%
```

Run 2: Report of Indigo — Data Link



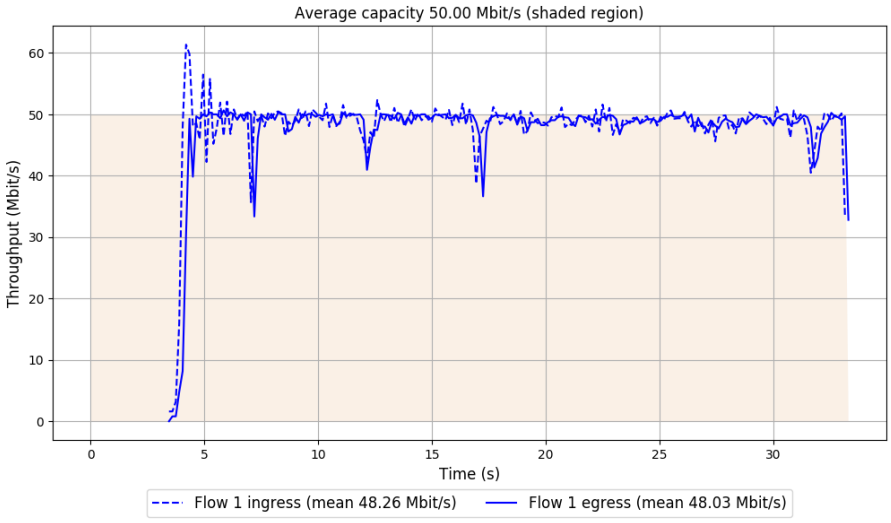


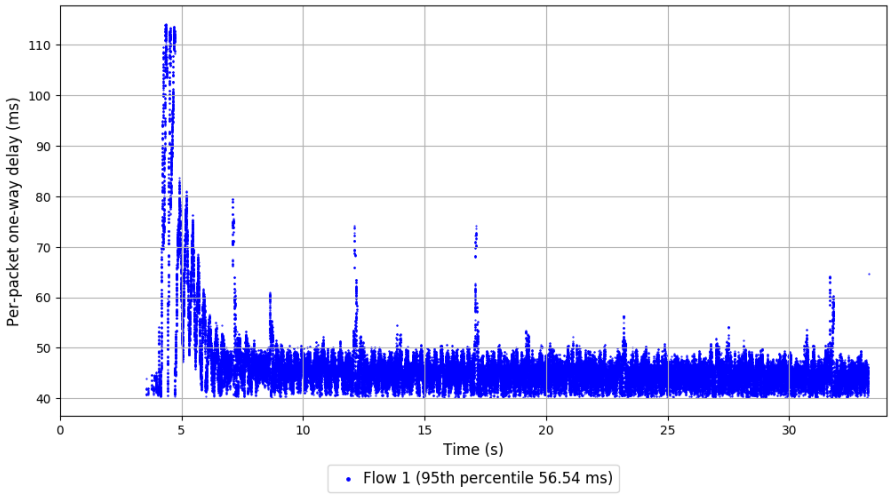
```
Run 3: Statistics of Indigo

Start at: 2019-10-27 02:56:37
End at: 2019-10-27 02:57:07

# Below is generated by plot.py at 2019-10-27 03:02:38
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 48.03 Mbit/s (96.1% utilization)
95th percentile per-packet one-way delay: 56.537 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 48.03 Mbit/s
95th percentile per-packet one-way delay: 56.537 ms
Loss rate: 0.57%
```

Run 3: Report of Indigo — Data Link



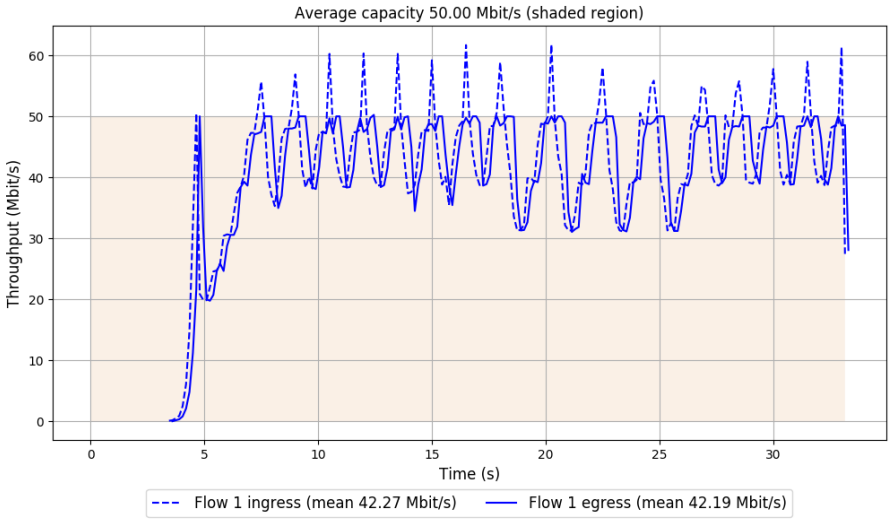


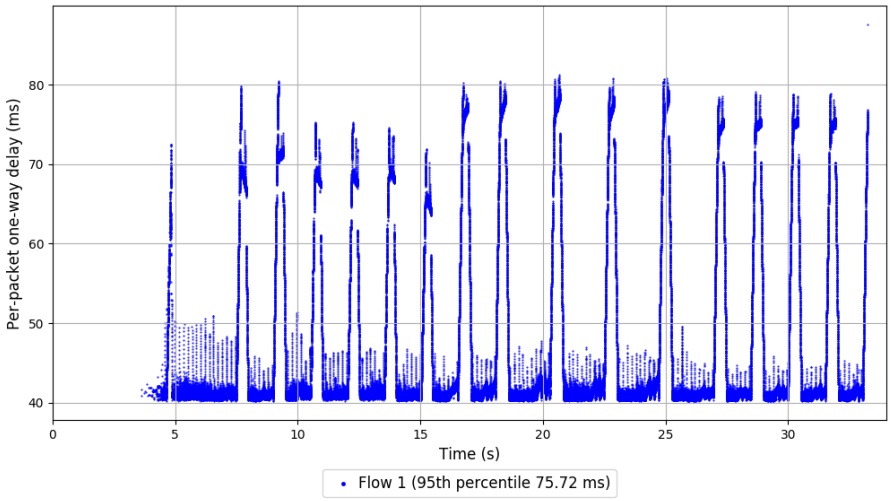
```
Run 1: Statistics of Synthesized-BBR

Start at: 2019-10-27 02:44:31
End at: 2019-10-27 02:45:01

# Below is generated by plot.py at 2019-10-27 03:02:38
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 42.19 Mbit/s (84.4% utilization)
95th percentile per-packet one-way delay: 75.718 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 42.19 Mbit/s
95th percentile per-packet one-way delay: 75.718 ms
Loss rate: 0.29%
```

Run 1: Report of Synthesized-BBR — Data Link



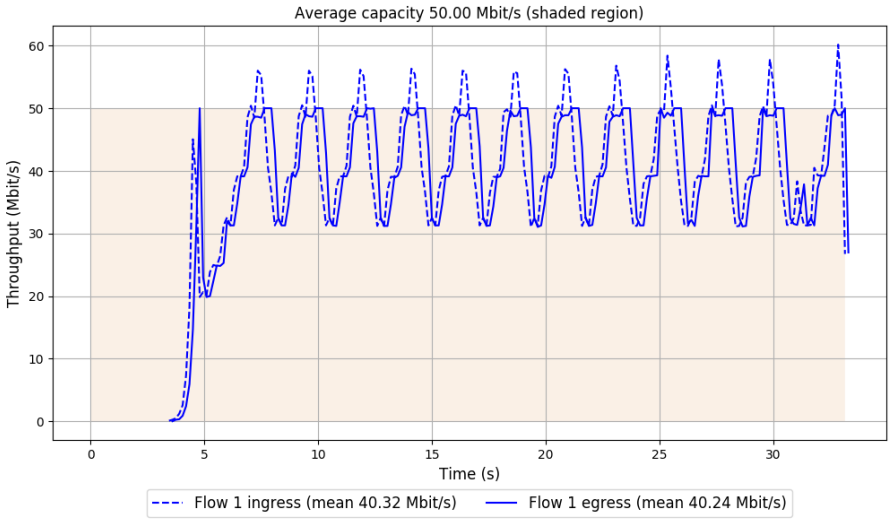


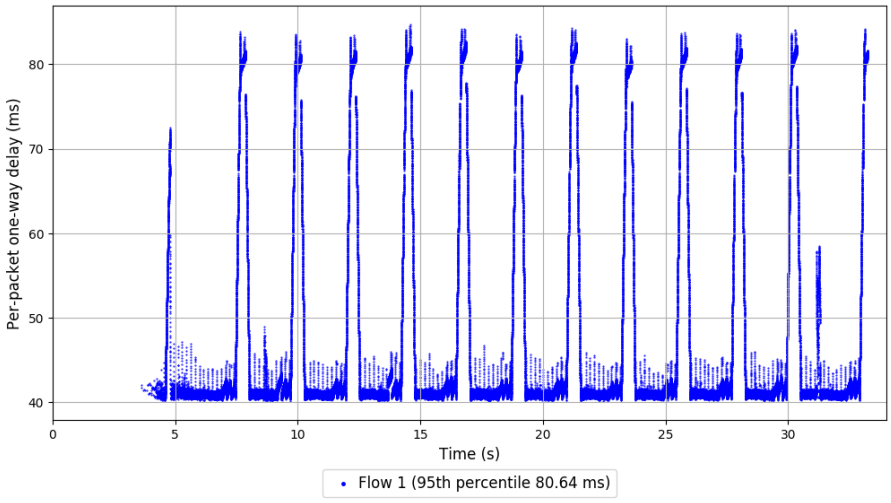
```
Run 2: Statistics of Synthesized-BBR

Start at: 2019-10-27 02:49:58
End at: 2019-10-27 02:50:28

# Below is generated by plot.py at 2019-10-27 03:02:41
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 40.24 Mbit/s (80.5% utilization)
95th percentile per-packet one-way delay: 80.640 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 40.24 Mbit/s
95th percentile per-packet one-way delay: 80.640 ms
Loss rate: 0.34%
```

Run 2: Report of Synthesized-BBR — Data Link





```
Run 3: Statistics of Synthesized-BBR

Start at: 2019-10-27 02:55:24
End at: 2019-10-27 02:55:54

# Below is generated by plot.py at 2019-10-27 03:02:43
# Datalink statistics
-- Total of 1 flow:
Average capacity: 50.00 Mbit/s
Average throughput: 42.17 Mbit/s (84.3% utilization)
95th percentile per-packet one-way delay: 77.453 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 42.17 Mbit/s
95th percentile per-packet one-way delay: 77.453 ms
Loss rate: 0.12%
```

Run 3: Report of Synthesized-BBR — Data Link