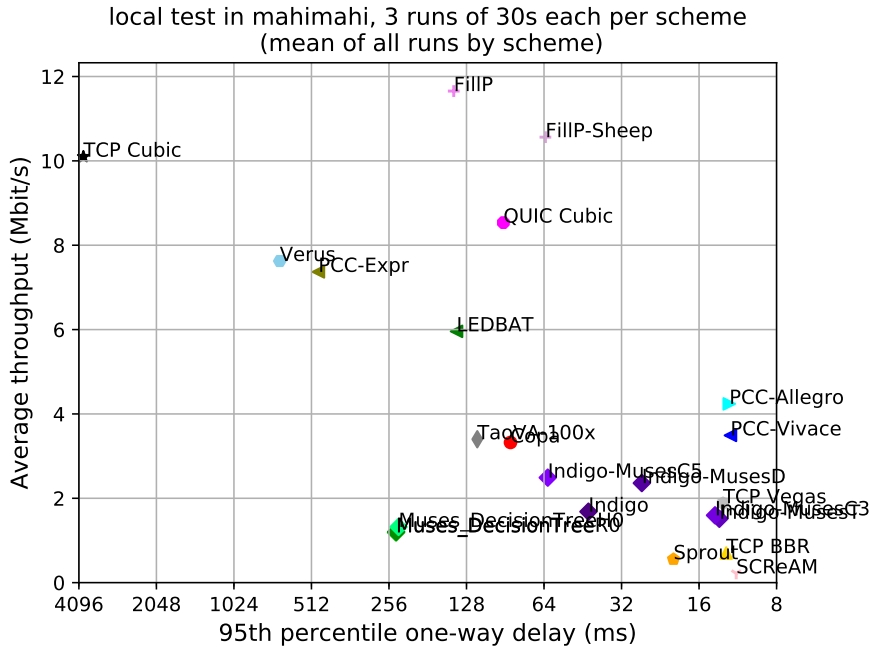
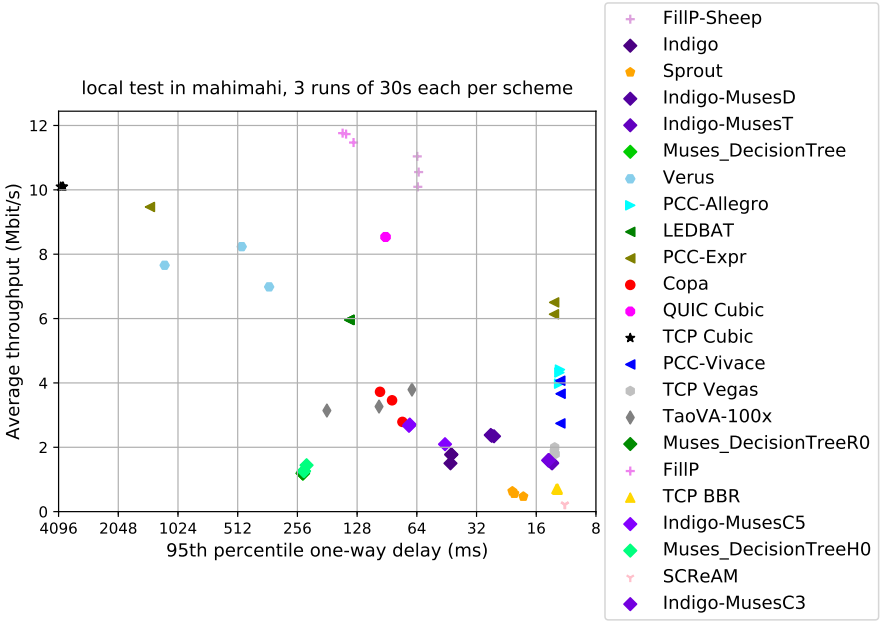
Pantheon Report

Generated at 2020-04-16 09:46:43 (UTC).
Tested in mahimahi: `mm-delay 10 mm-link 12mbps.trace 10-every-200.trace`
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)
FillP
FillP-Sheep
TCP Cubic
QUIC Cubic
Verus
PCC-Expr
LEDBAT
PCC-Allegro
TaoVA-100x
Copa
PCC-Vivace
Indigo-MusesC5
Indigo-MusesD
TCP Vegas
Indigo
Indigo-MusesC3
Indigo-MusesT
Muses_DecisionTreeH0
Muses_DecisionTreeR0
Sprout
TCP BBR
SCReAM


local test in mahimahi, 3 runs of 30s each per scheme
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
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

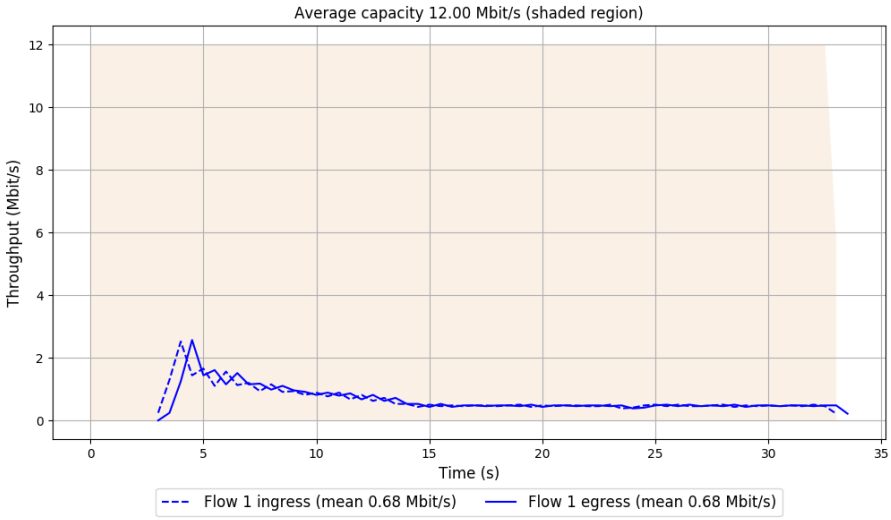
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	0.70	12.55	0.02
Copa	3	3.32	86.36	0.06
TCP Cubic	3	10.10	3934.46	19.23
FillP	3	11.65	143.46	0.34
FillP-Sheep	3	10.56	63.20	0.10
Indigo	3	1.68	43.03	0.36
Indigo-MusesC3	3	1.60	13.87	0.26
Indigo-MusesC5	3	2.49	61.91	0.96
Indigo-MusesD	3	2.36	26.70	0.53
Indigo-MusesT	3	1.51	13.35	0.07
LEDBAT	3	5.96	139.96	0.99
Muses_DecisionTree	3	1.19	240.36	0.00
Muses_DecisionTreeH0	3	1.32	235.05	0.03
Muses_DecisionTreeR0	3	1.21	240.05	0.01
PCC-Allegro	3	4.24	12.21	0.04
PCC-Expr	3	7.37	481.34	1.22
QUIC Cubic	3	8.54	92.02	0.15
SCReAM	3	0.22	11.48	0.09
Sprout	3	0.55	20.11	0.05
TaoVA-100x	3	3.40	116.25	0.04
TCP Vegas	3	1.88	12.91	0.05
Verus	3	7.62	679.87	1.92
PCC-Vivace	3	3.49	12.09	0.04
WebRTC media	0	N/A	N/A	N/A

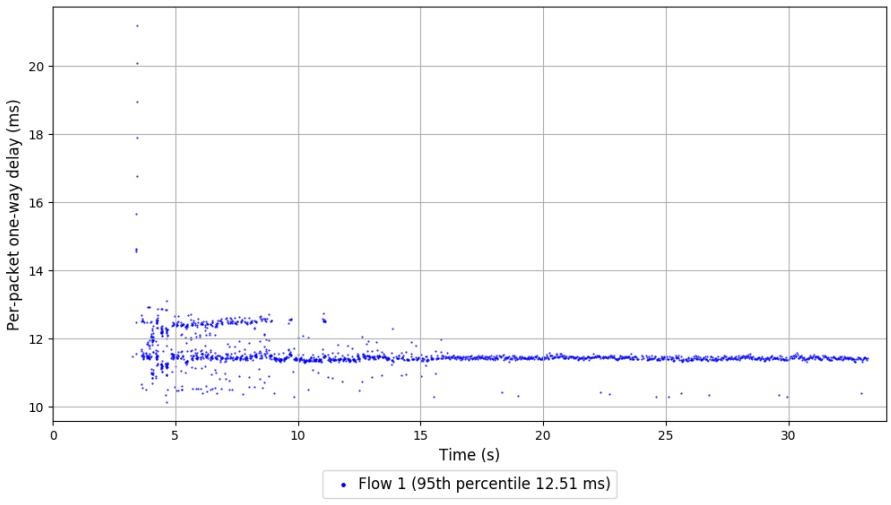
```
Run 1: Statistics of TCP BBR

Start at: 2020-04-16 09:10:00
End at: 2020-04-16 09:10:31

# Below is generated by plot.py at 2020-04-16 09:44:30
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.68 Mbit/s (5.7% utilization)
95th percentile per-packet one-way delay: 12.511 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 12.511 ms
Loss rate: 0.00%
```

Run 1: Report of TCP BBR — Data Link



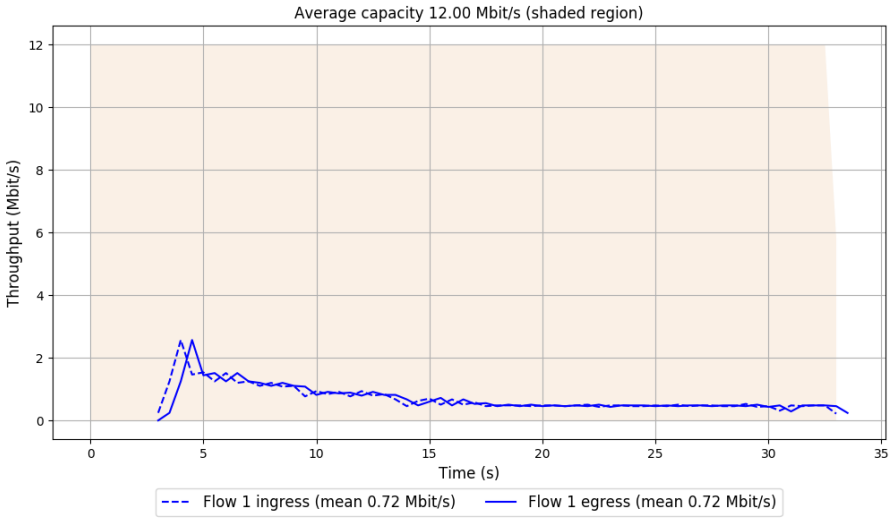


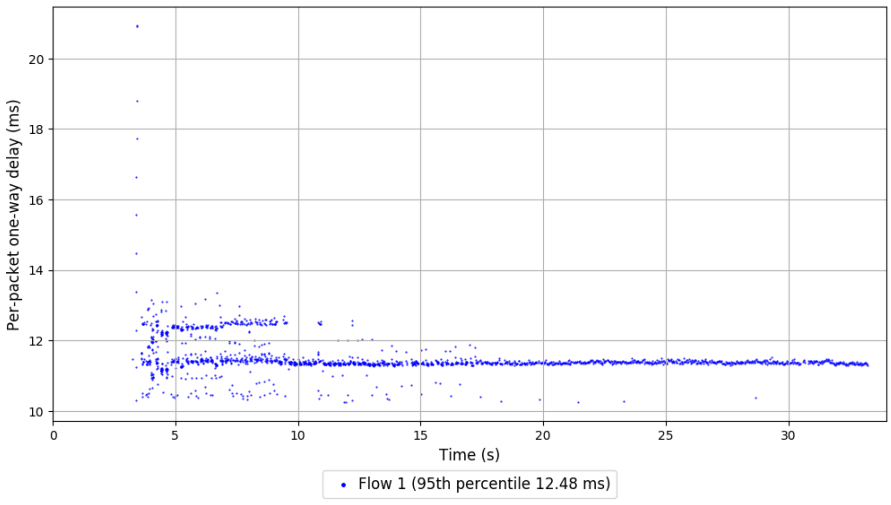
```
Run 2: Statistics of TCP BBR

Start at: 2020-04-16 09:23:57
End at: 2020-04-16 09:24:27

# Below is generated by plot.py at 2020-04-16 09:44:30
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.72 Mbit/s (6.0% utilization)
95th percentile per-packet one-way delay: 12.485 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 12.485 ms
Loss rate: 0.00%
```

Run 2: Report of TCP BBR — Data Link



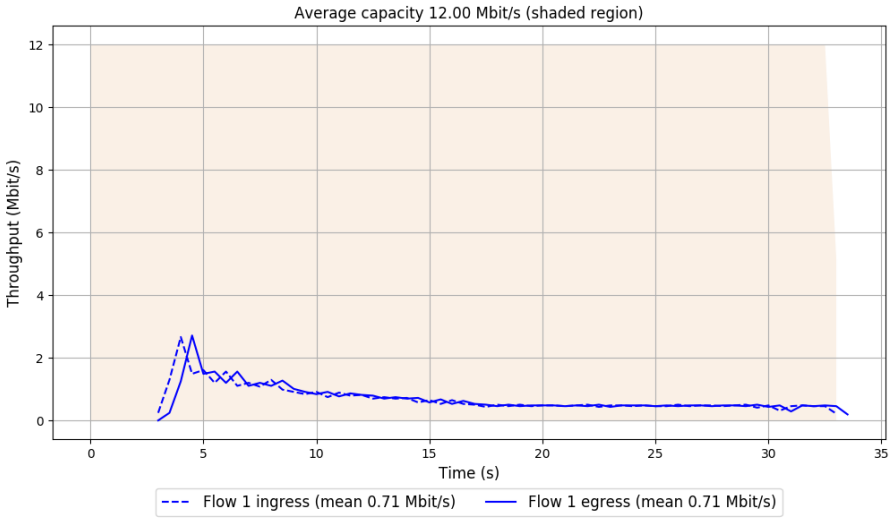


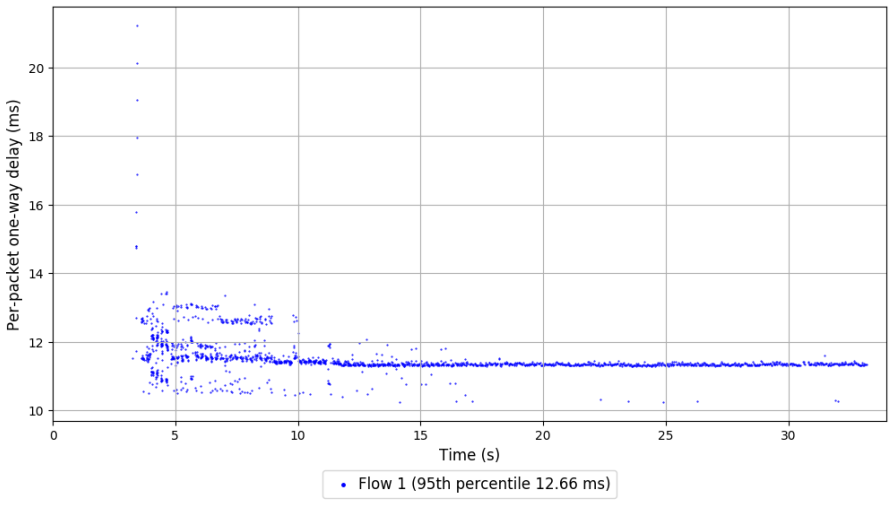
```
Run 3: Statistics of TCP BBR

Start at: 2020-04-16 09:37:54
End at: 2020-04-16 09:38:24

# Below is generated by plot.py at 2020-04-16 09:44:30
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.71 Mbit/s (5.9% utilization)
95th percentile per-packet one-way delay: 12.665 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 12.665 ms
Loss rate: 0.06%
```

Run 3: Report of TCP BBR — Data Link



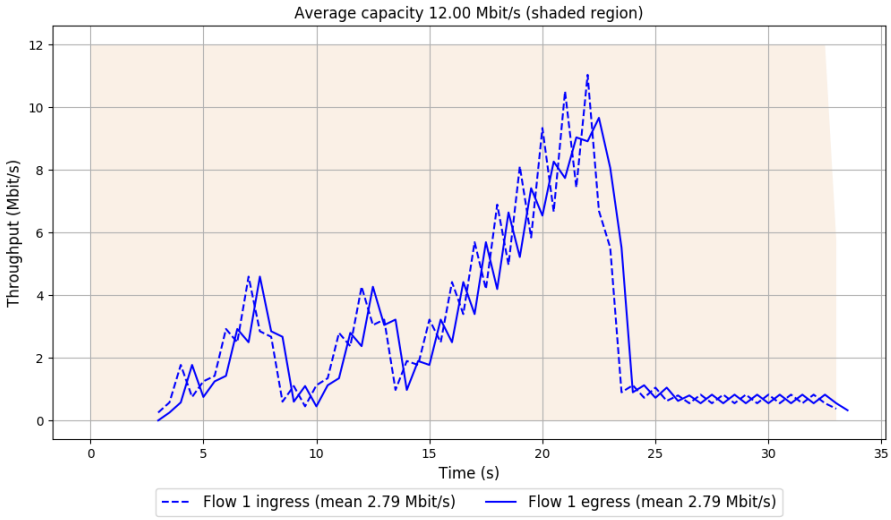


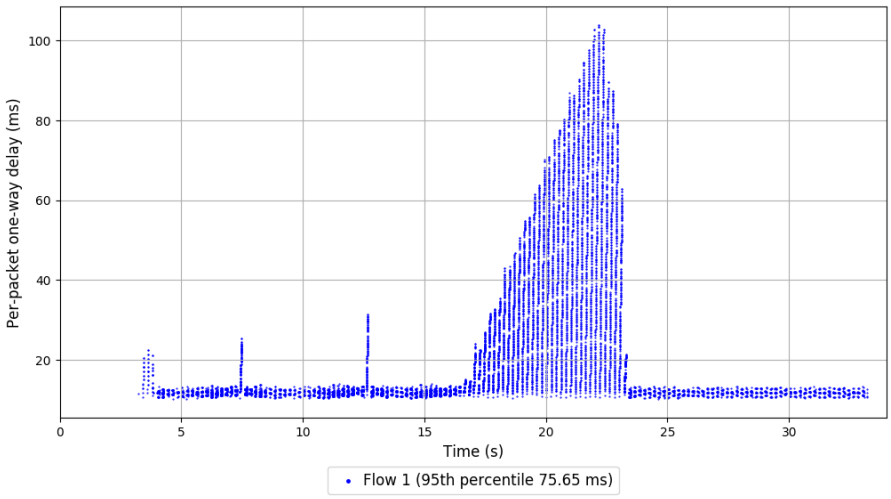
```
Run 1: Statistics of Copa

Start at: 2020-04-16 09:05:20
End at: 2020-04-16 09:05:50

# Below is generated by plot.py at 2020-04-16 09:44:36
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.79 Mbit/s (23.2% utilization)
95th percentile per-packet one-way delay: 75.651 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 75.651 ms
Loss rate: 0.03%
```

Run 1: Report of Copa — Data Link



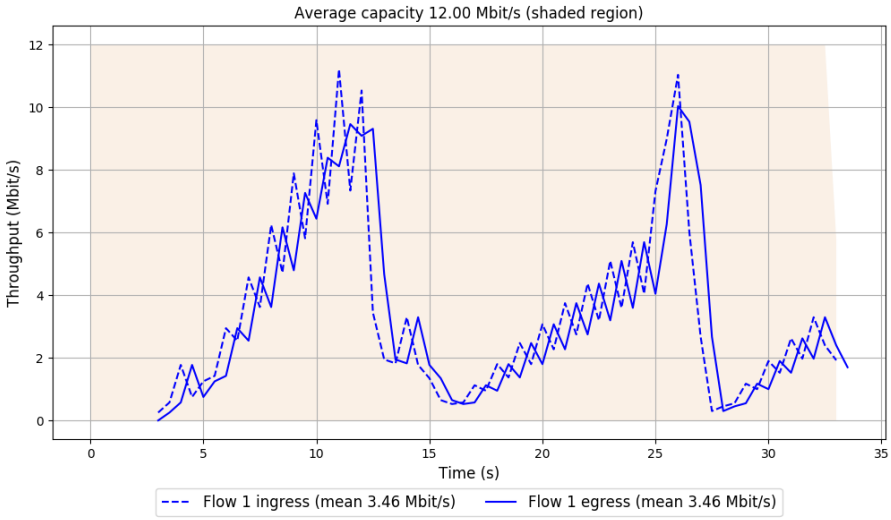


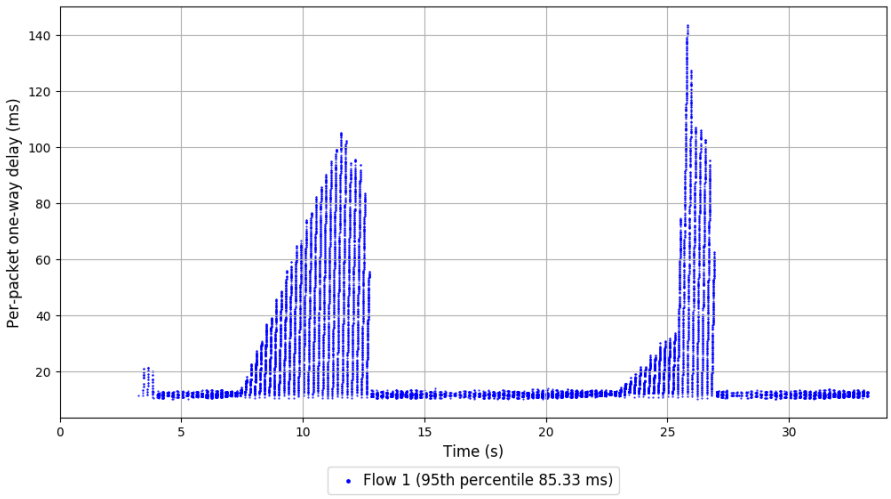
```
Run 2: Statistics of Copa

Start at: 2020-04-16 09:19:17
End at: 2020-04-16 09:19:47

# Below is generated by plot.py at 2020-04-16 09:44:37
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.46 Mbit/s (28.8% utilization)
95th percentile per-packet one-way delay: 85.325 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 3.46 Mbit/s
95th percentile per-packet one-way delay: 85.325 ms
Loss rate: 0.11%
```

Run 2: Report of Copa — Data Link



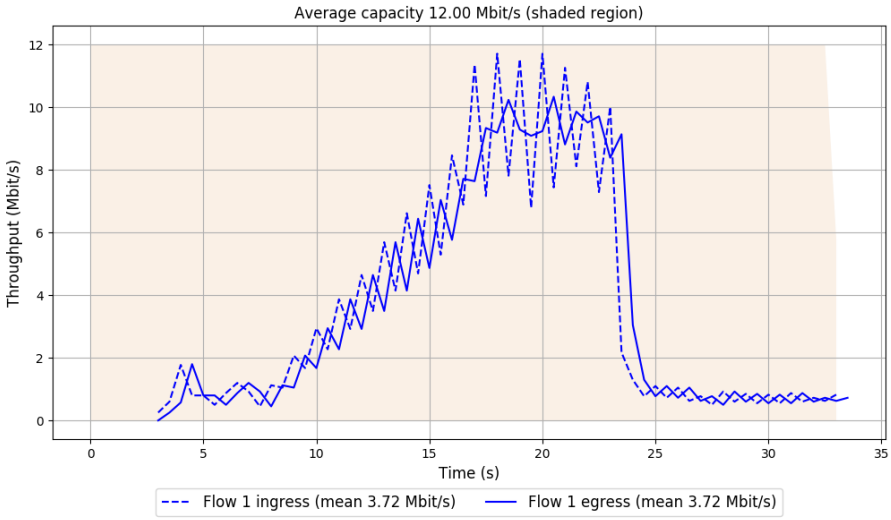


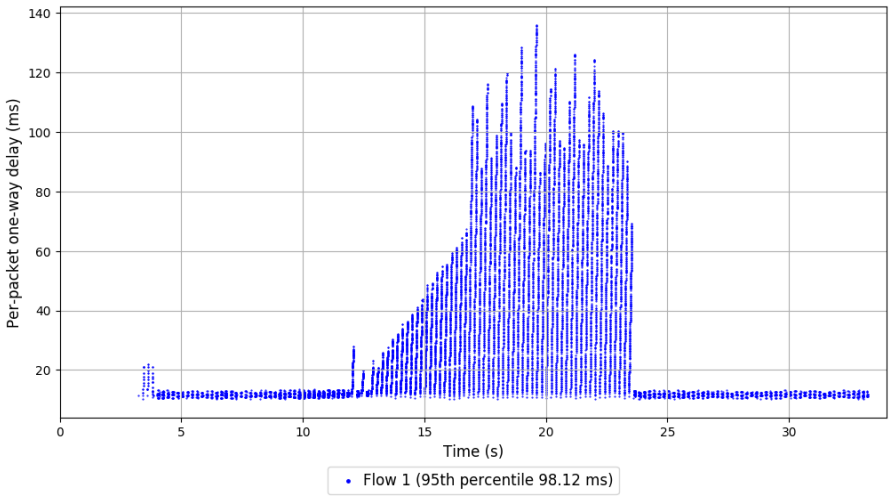
```
Run 3: Statistics of Copa

Start at: 2020-04-16 09:33:14
End at: 2020-04-16 09:33:44

# Below is generated by plot.py at 2020-04-16 09:44:39
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.72 Mbit/s (31.0% utilization)
95th percentile per-packet one-way delay: 98.116 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 3.72 Mbit/s
95th percentile per-packet one-way delay: 98.116 ms
Loss rate: 0.05%
```

Run 3: Report of Copa — Data Link



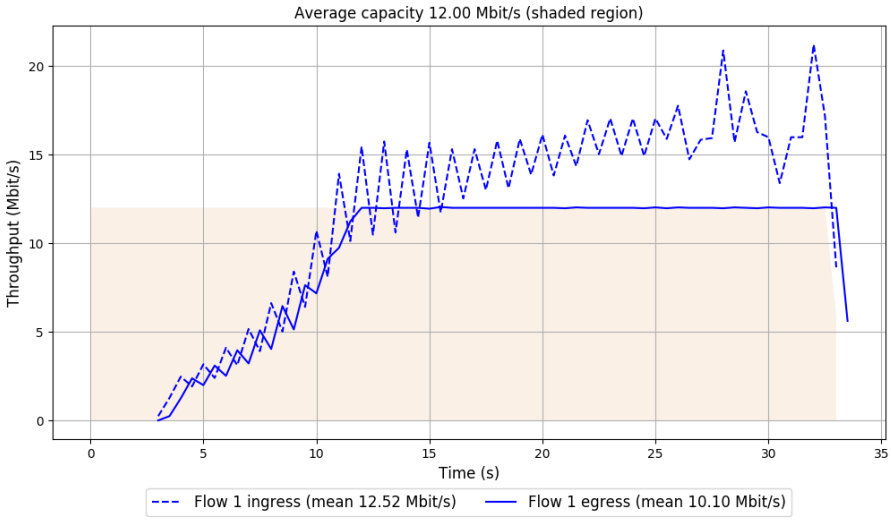


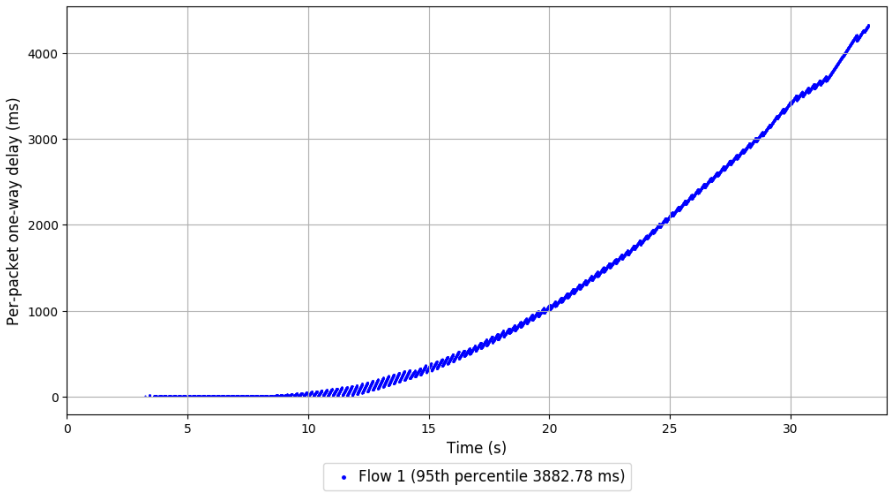
```
Run 1: Statistics of TCP Cubic

Start at: 2020-04-16 09:13:29
End at: 2020-04-16 09:13:59

# Below is generated by plot.py at 2020-04-16 09:44:43
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.10 Mbit/s (84.2% utilization)
95th percentile per-packet one-way delay: 3882.777 ms
Loss rate: 19.39%
-- Flow 1:
Average throughput: 10.10 Mbit/s
95th percentile per-packet one-way delay: 3882.777 ms
Loss rate: 19.39%
```

Run 1: Report of TCP Cubic — Data Link



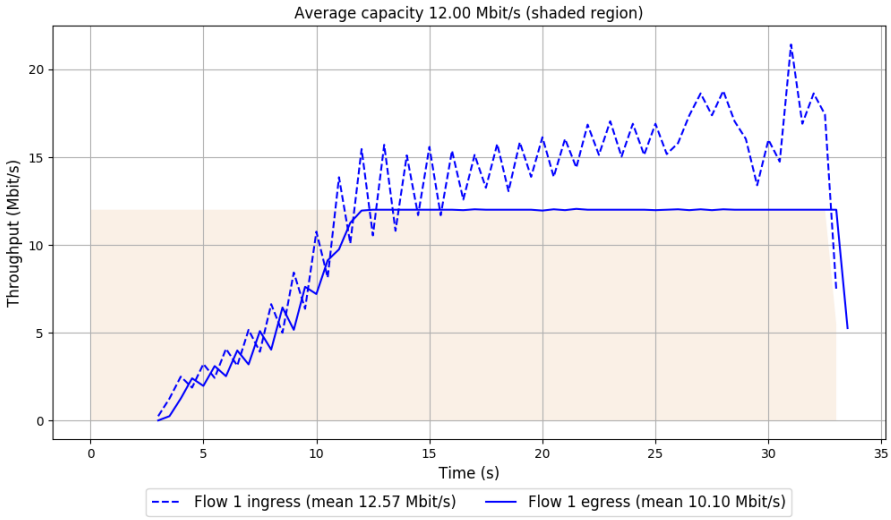


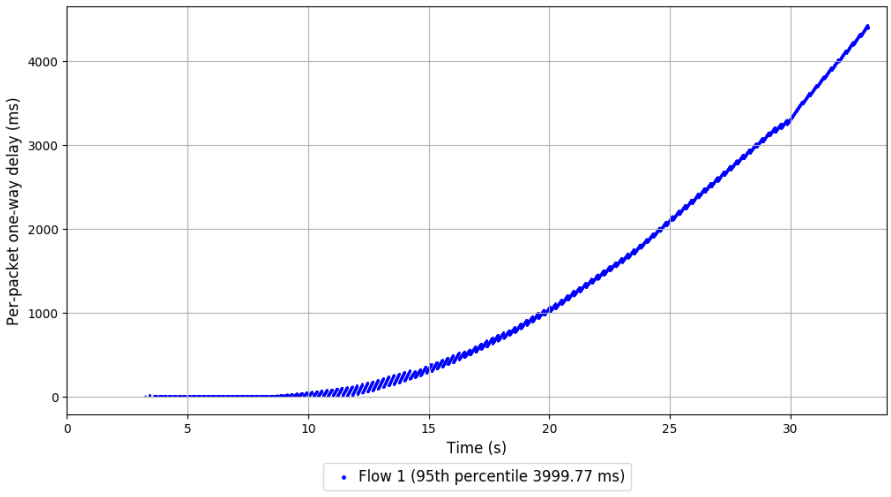
```
Run 2: Statistics of TCP Cubic

Start at: 2020-04-16 09:27:26
End at: 2020-04-16 09:27:56

# Below is generated by plot.py at 2020-04-16 09:44:44
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.10 Mbit/s (84.2% utilization)
95th percentile per-packet one-way delay: 3999.772 ms
Loss rate: 19.67%
-- Flow 1:
Average throughput: 10.10 Mbit/s
95th percentile per-packet one-way delay: 3999.772 ms
Loss rate: 19.67%
```

Run 2: Report of TCP Cubic — Data Link



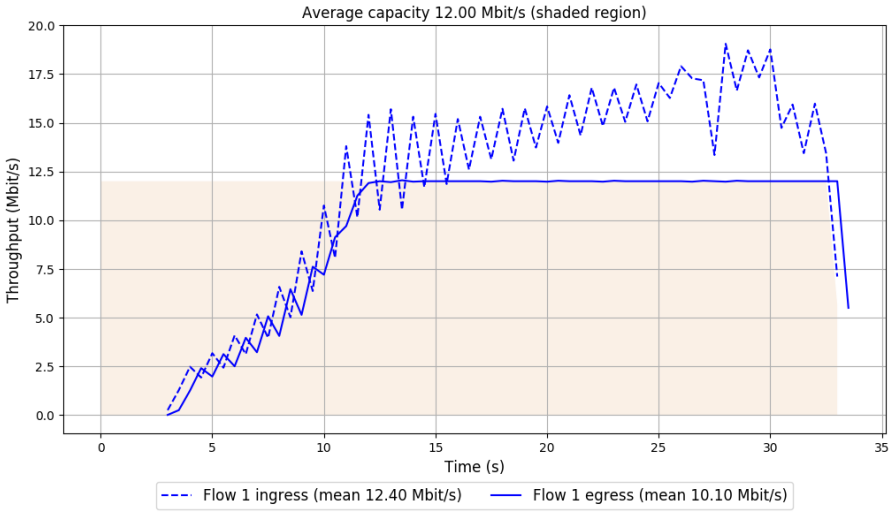


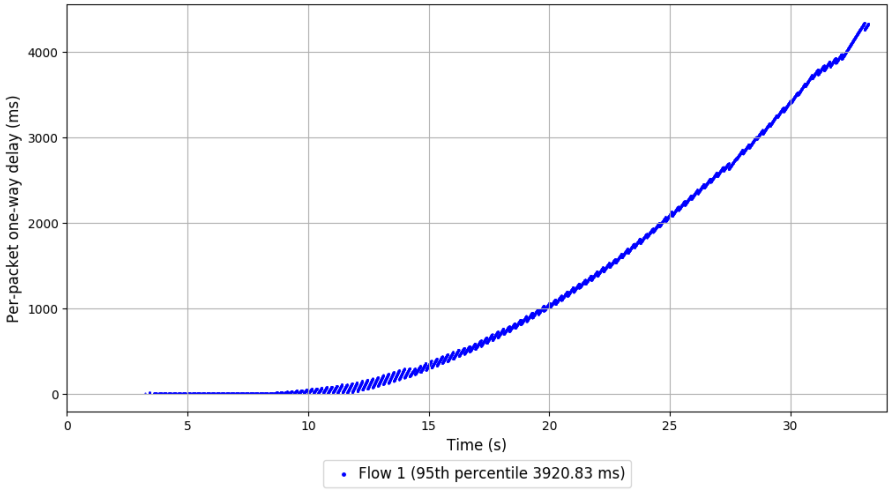
```
Run 3: Statistics of TCP Cubic

Start at: 2020-04-16 09:41:22
End at: 2020-04-16 09:41:52

# Below is generated by plot.py at 2020-04-16 09:44:51
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.10 Mbit/s (84.1% utilization)
95th percentile per-packet one-way delay: 3920.830 ms
Loss rate: 18.62%
-- Flow 1:
Average throughput: 10.10 Mbit/s
95th percentile per-packet one-way delay: 3920.830 ms
Loss rate: 18.62%
```

Run 3: Report of TCP Cubic — Data Link



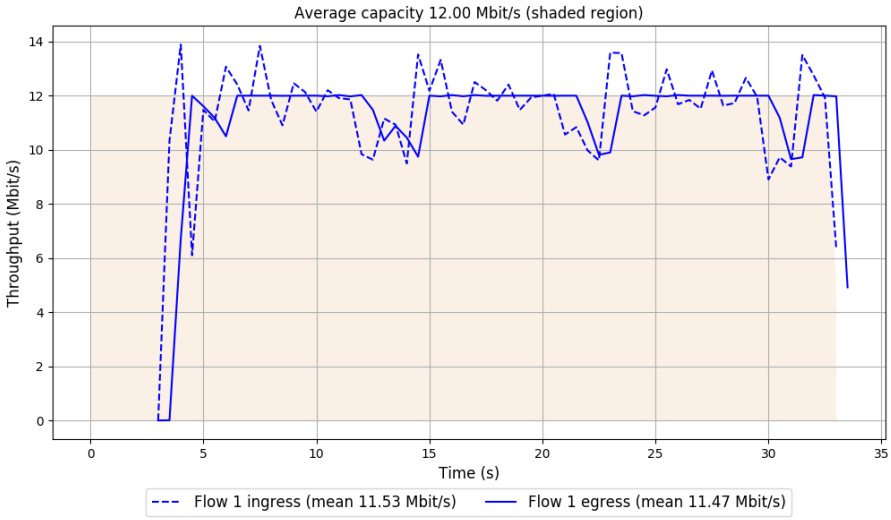


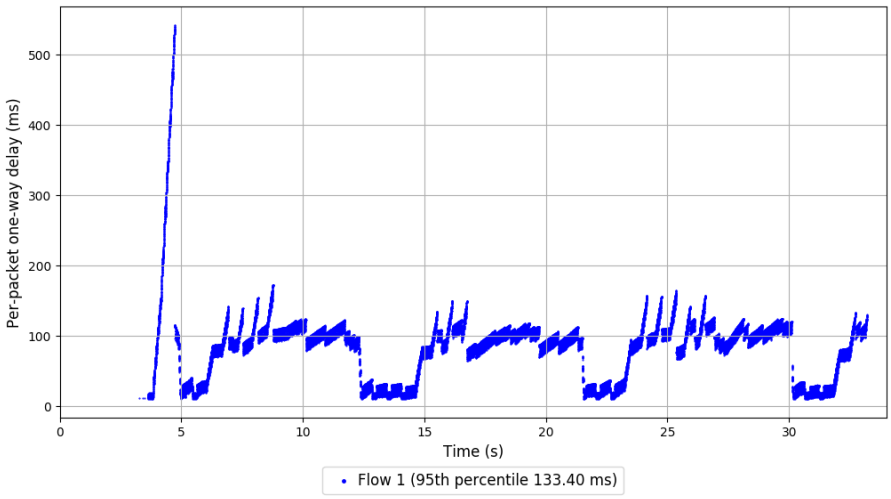
```
Run 1: Statistics of FillP

Start at: 2020-04-16 09:08:16
End at: 2020-04-16 09:08:46

# Below is generated by plot.py at 2020-04-16 09:44:57
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.47 Mbit/s (95.6% utilization)
95th percentile per-packet one-way delay: 133.397 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 11.47 Mbit/s
95th percentile per-packet one-way delay: 133.397 ms
Loss rate: 0.57%
```

Run 1: Report of FillP — Data Link



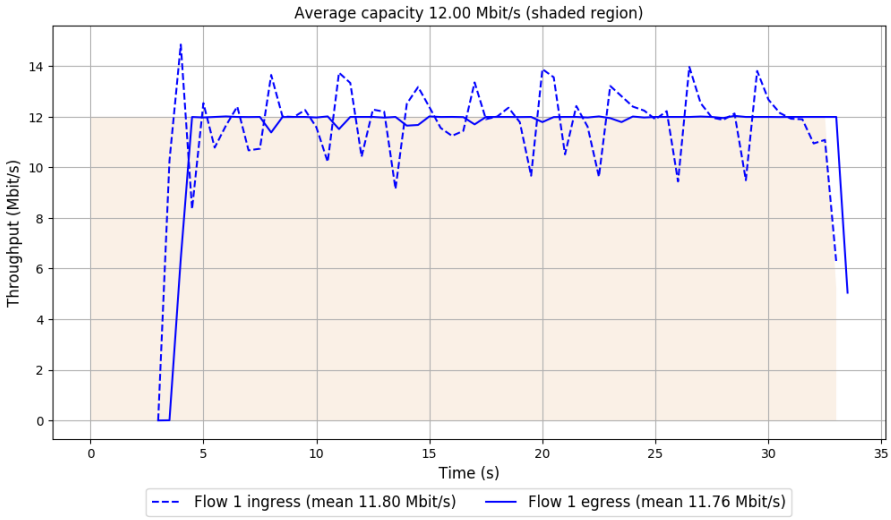


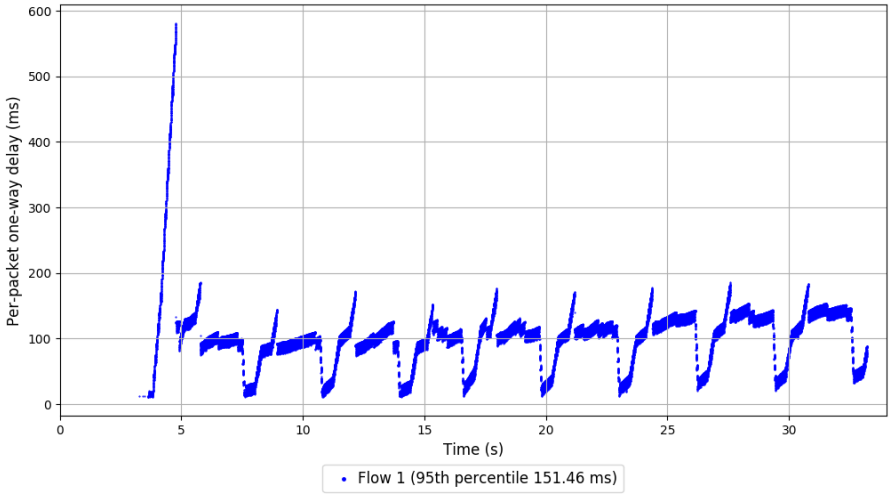
```
Run 2: Statistics of FillP

Start at: 2020-04-16 09:22:12
End at: 2020-04-16 09:22:42

# Below is generated by plot.py at 2020-04-16 09:44:59
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.76 Mbit/s (98.0% utilization)
95th percentile per-packet one-way delay: 151.464 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 151.464 ms
Loss rate: 0.37%
```

Run 2: Report of FillP — Data Link



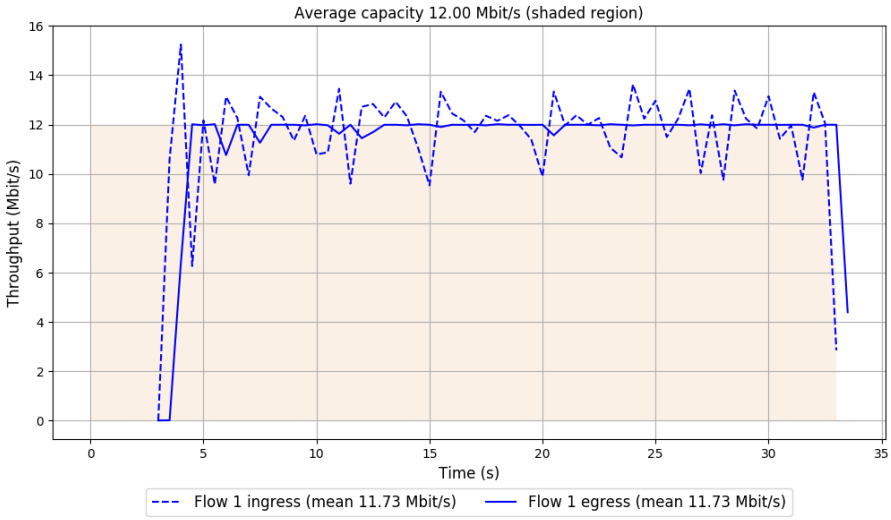


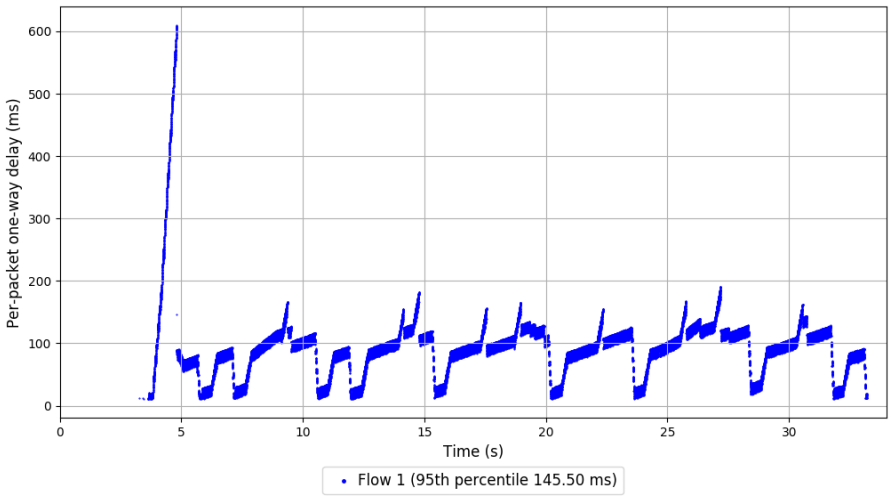
```
Run 3: Statistics of FillP

Start at: 2020-04-16 09:36:09
End at: 2020-04-16 09:36:39

# Below is generated by plot.py at 2020-04-16 09:45:04
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.73 Mbit/s (97.8% utilization)
95th percentile per-packet one-way delay: 145.504 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 11.73 Mbit/s
95th percentile per-packet one-way delay: 145.504 ms
Loss rate: 0.07%
```

Run 3: Report of FillP — Data Link



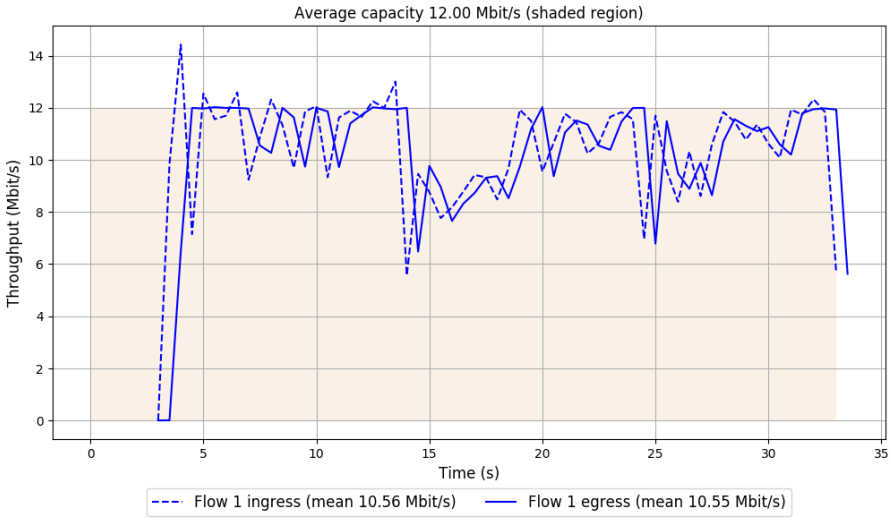


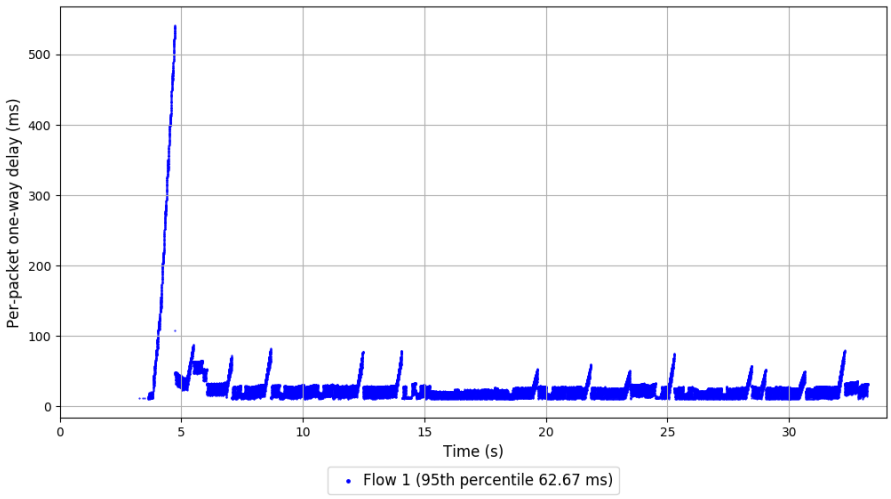
```
Run 1: Statistics of FillP-Sheep

Start at: 2020-04-16 09:07:06
End at: 2020-04-16 09:07:36

# Below is generated by plot.py at 2020-04-16 09:45:04
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.55 Mbit/s (87.9% utilization)
95th percentile per-packet one-way delay: 62.671 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 10.55 Mbit/s
95th percentile per-packet one-way delay: 62.671 ms
Loss rate: 0.12%
```

Run 1: Report of FillP-Sheep — Data Link



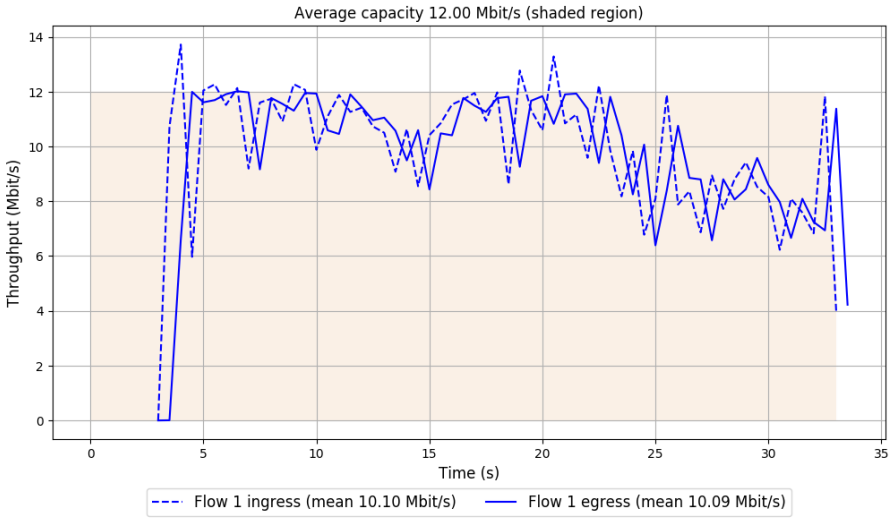


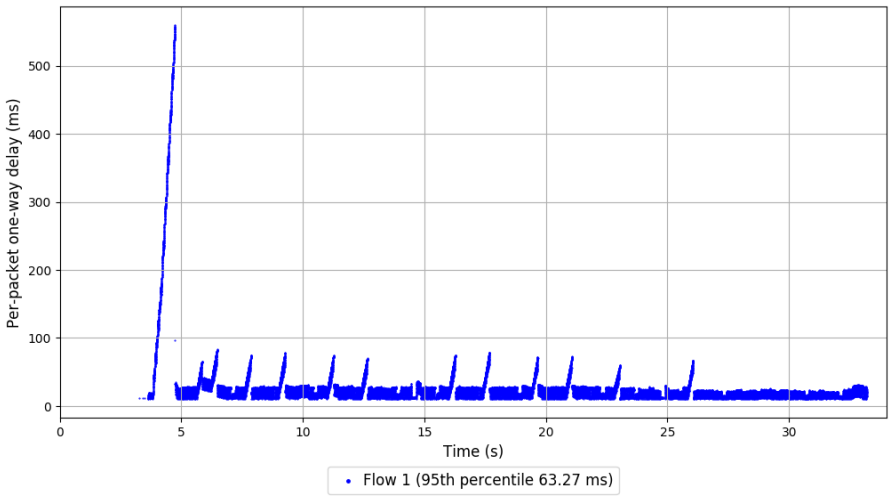
```
Run 2: Statistics of FillP-Sheep

Start at: 2020-04-16 09:21:03
End at: 2020-04-16 09:21:33

# Below is generated by plot.py at 2020-04-16 09:45:05
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.09 Mbit/s (84.1% utilization)
95th percentile per-packet one-way delay: 63.273 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 10.09 Mbit/s
95th percentile per-packet one-way delay: 63.273 ms
Loss rate: 0.07%
```

Run 2: Report of FillP-Sheep — Data Link



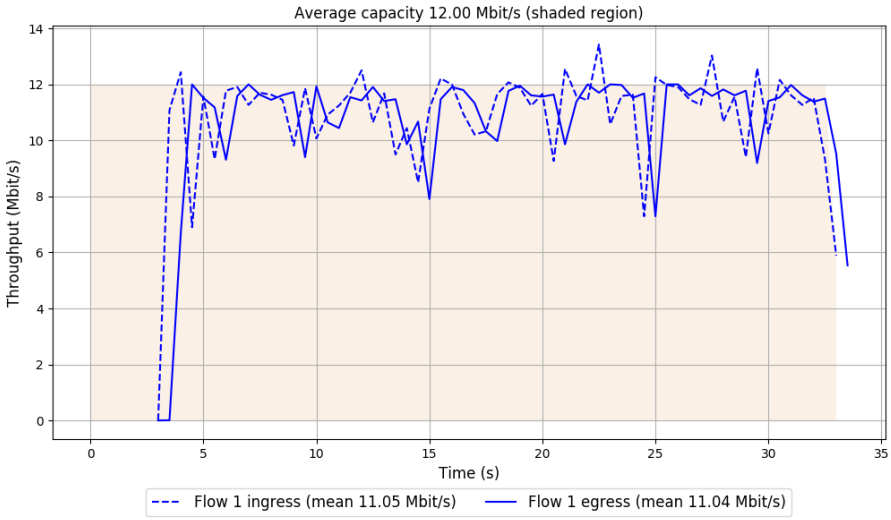


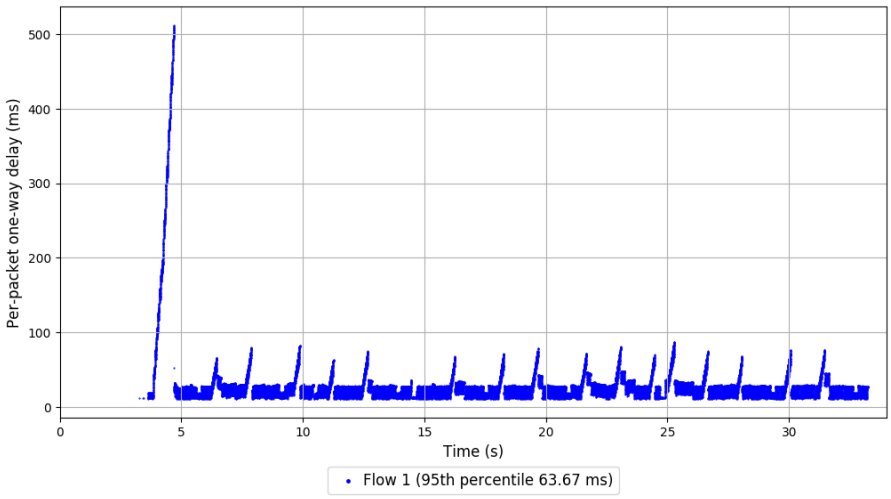
```
Run 3: Statistics of FillP-Sheep

Start at: 2020-04-16 09:34:59
End at: 2020-04-16 09:35:29

# Below is generated by plot.py at 2020-04-16 09:45:12
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.04 Mbit/s (92.0% utilization)
95th percentile per-packet one-way delay: 63.670 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 11.04 Mbit/s
95th percentile per-packet one-way delay: 63.670 ms
Loss rate: 0.11%
```

Run 3: Report of FillP-Sheep — Data Link



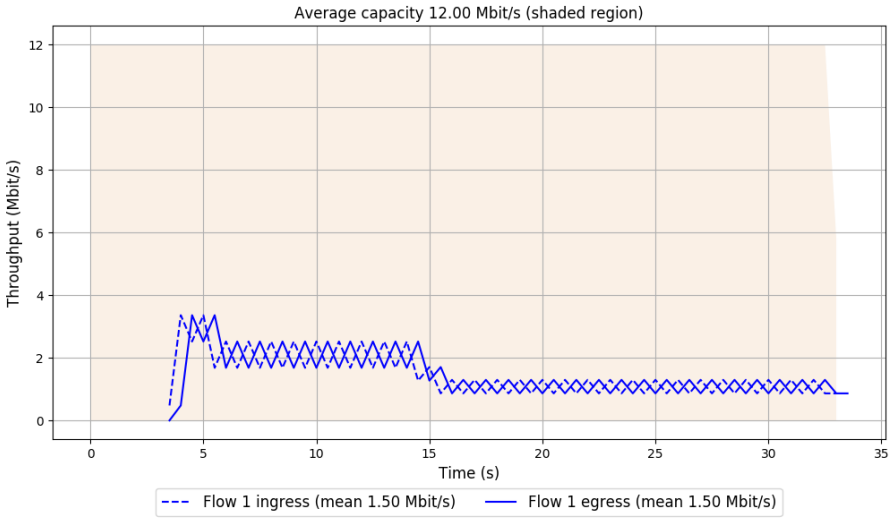


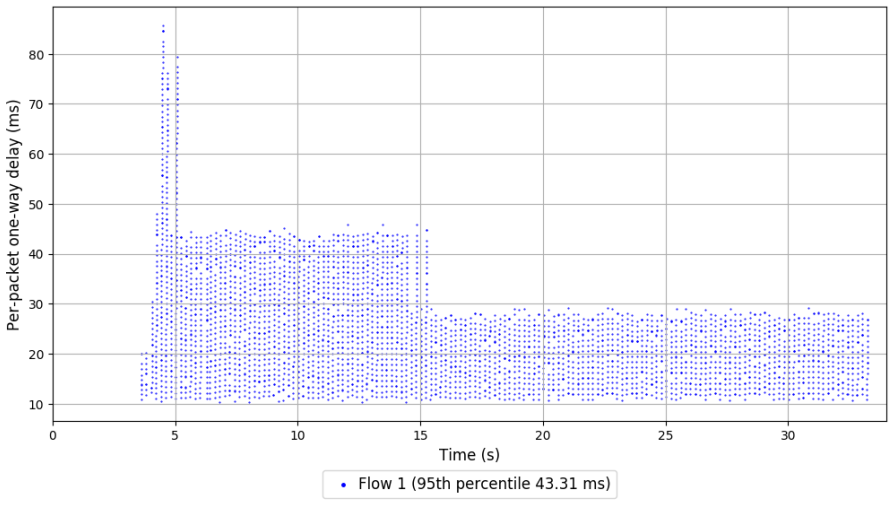
```
Run 1: Statistics of Indigo

Start at: 2020-04-16 09:03:36
End at: 2020-04-16 09:04:06

# Below is generated by plot.py at 2020-04-16 09:45:12
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.50 Mbit/s (12.5% utilization)
95th percentile per-packet one-way delay: 43.307 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 43.307 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link



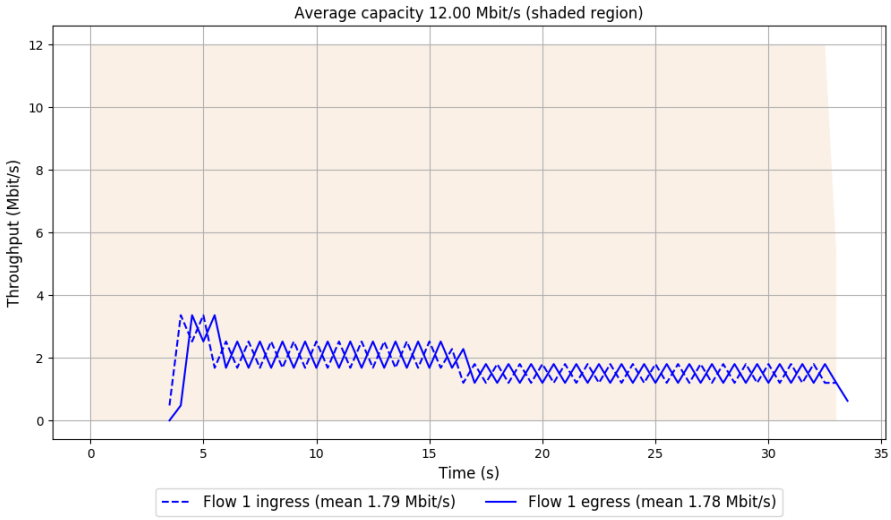


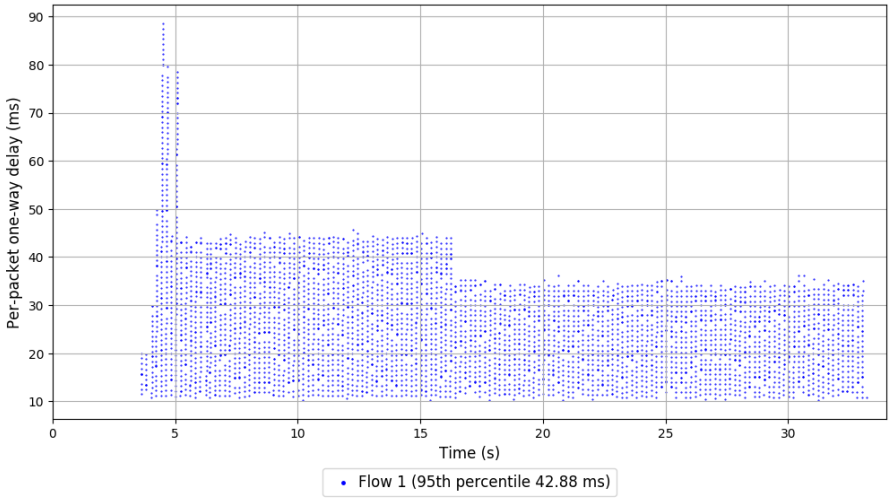
```
Run 2: Statistics of Indigo

Start at: 2020-04-16 09:17:33
End at: 2020-04-16 09:18:03

# Below is generated by plot.py at 2020-04-16 09:45:12
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.78 Mbit/s (14.9% utilization)
95th percentile per-packet one-way delay: 42.881 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 42.881 ms
Loss rate: 0.54%
```

Run 2: Report of Indigo — Data Link



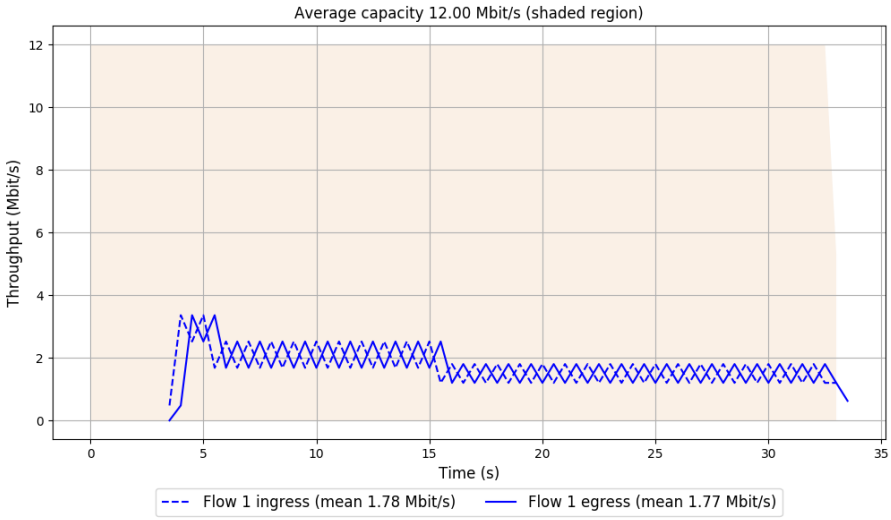


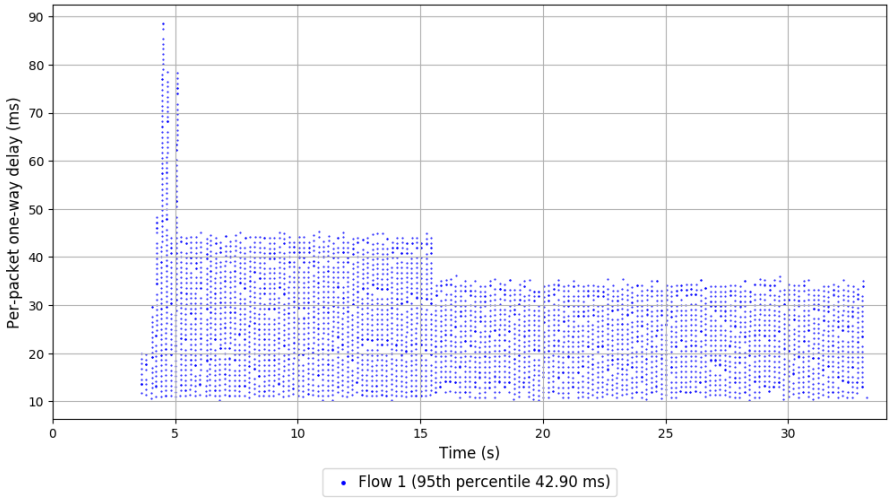
```
Run 3: Statistics of Indigo

Start at: 2020-04-16 09:31:30
End at: 2020-04-16 09:32:00

# Below is generated by plot.py at 2020-04-16 09:45:12
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.77 Mbit/s (14.7% utilization)
95th percentile per-packet one-way delay: 42.895 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 42.895 ms
Loss rate: 0.55%
```

Run 3: Report of Indigo — Data Link



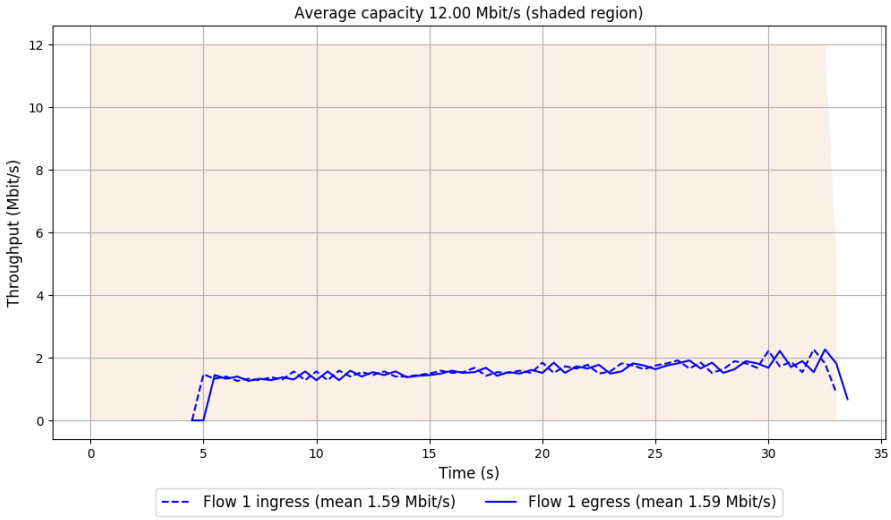


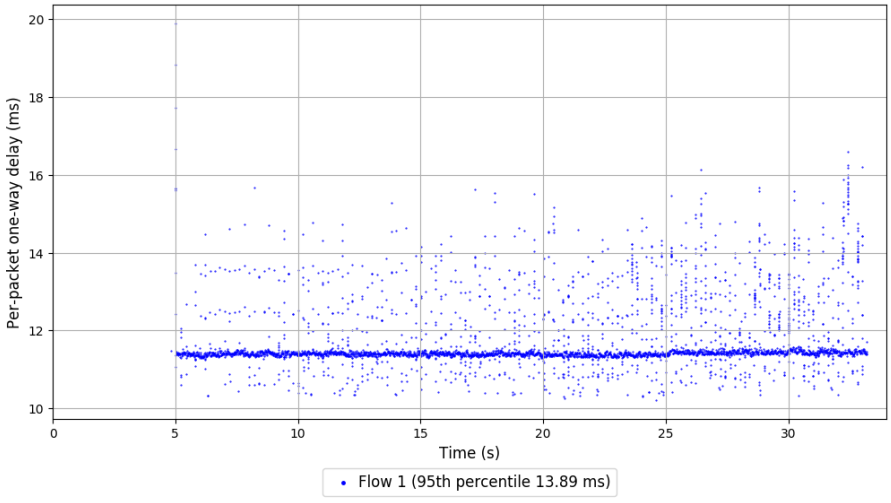
```
Run 1: Statistics of Indigo-MusesC3

Start at: 2020-04-16 09:07:41
End at: 2020-04-16 09:08:11

# Below is generated by plot.py at 2020-04-16 09:45:12
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.59 Mbit/s (13.2% utilization)
95th percentile per-packet one-way delay: 13.894 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 13.894 ms
Loss rate: 0.26%
```

Run 1: Report of Indigo-MusesC3 — Data Link



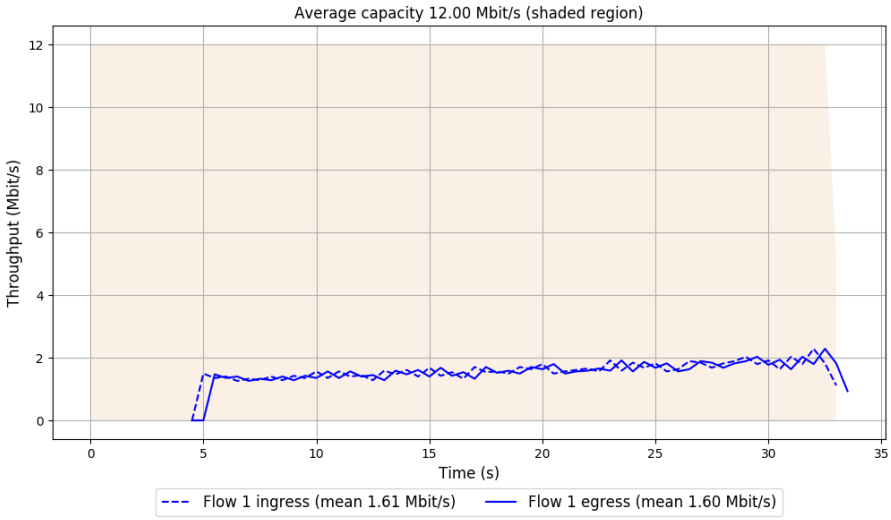


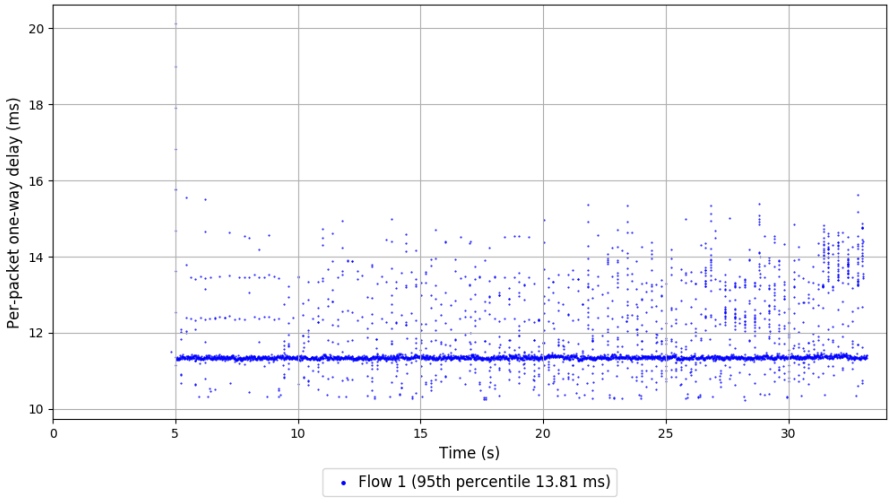
```
Run 2: Statistics of Indigo-MusesC3

Start at: 2020-04-16 09:21:38
End at: 2020-04-16 09:22:08

# Below is generated by plot.py at 2020-04-16 09:45:12
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.60 Mbit/s (13.4% utilization)
95th percentile per-packet one-way delay: 13.813 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 13.813 ms
Loss rate: 0.23%
```

Run 2: Report of Indigo-MusesC3 — Data Link



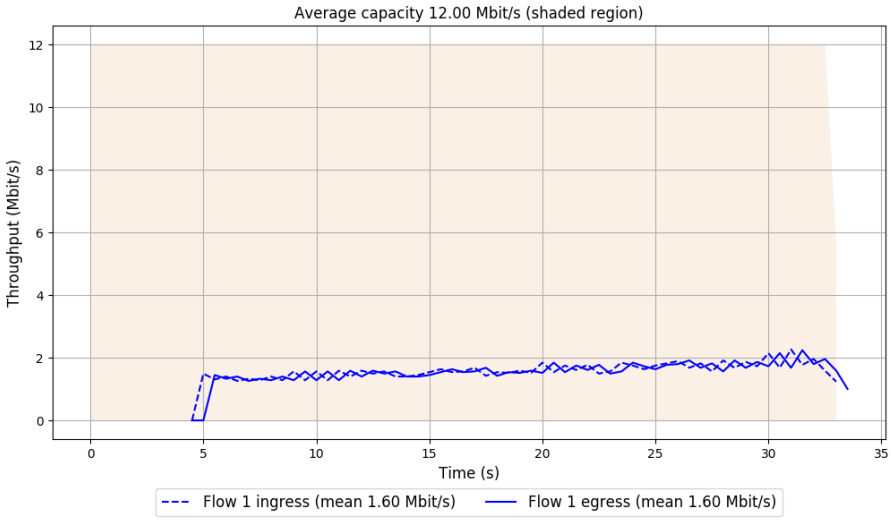


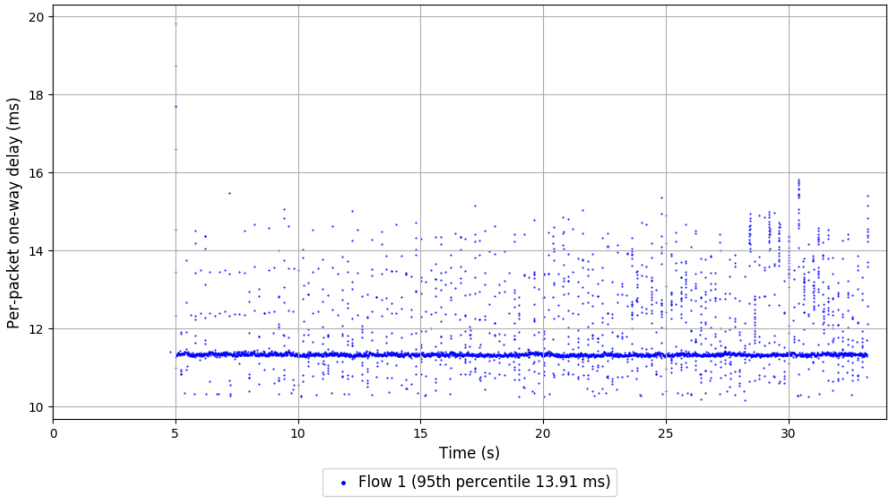
```
Run 3: Statistics of Indigo-MusesC3

Start at: 2020-04-16 09:35:34
End at: 2020-04-16 09:36:04

# Below is generated by plot.py at 2020-04-16 09:45:12
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.60 Mbit/s (13.3% utilization)
95th percentile per-packet one-way delay: 13.913 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 13.913 ms
Loss rate: 0.28%
```

Run 3: Report of Indigo-MusesC3 — Data Link



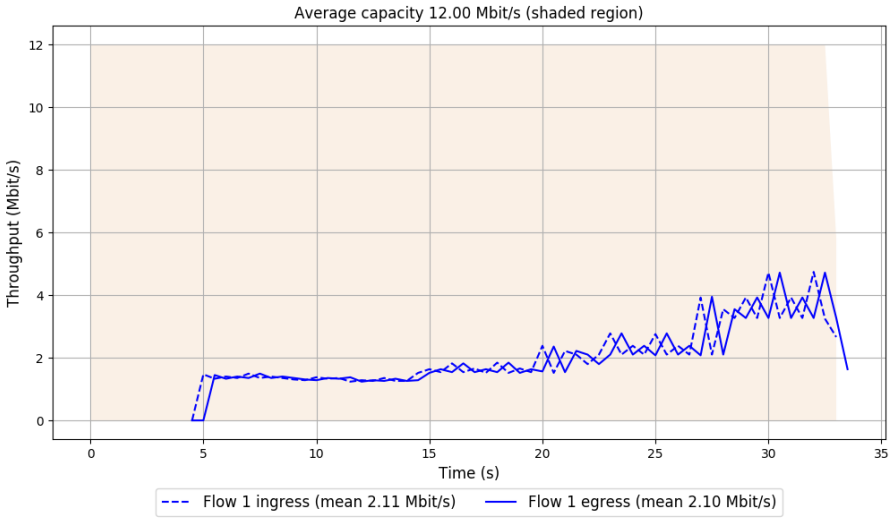


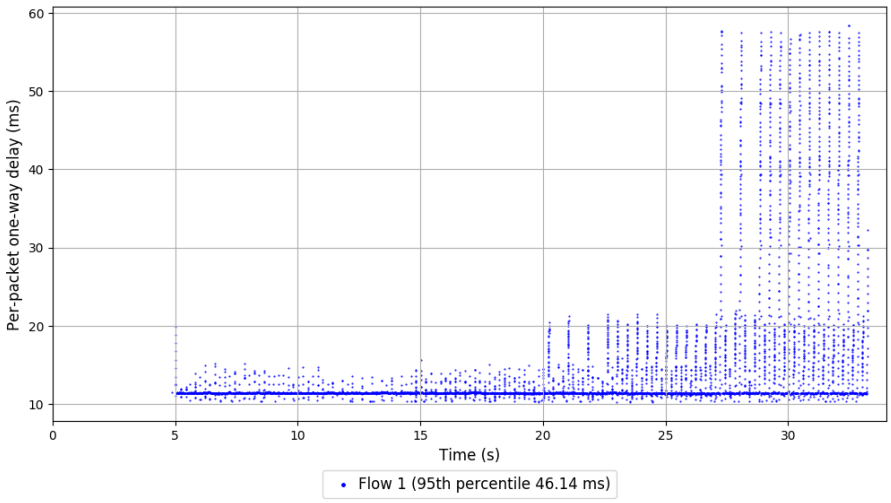
```
Run 1: Statistics of Indigo-MusesC5

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

# Below is generated by plot.py at 2020-04-16 09:45:15
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.10 Mbit/s (17.5% utilization)
95th percentile per-packet one-way delay: 46.137 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 46.137 ms
Loss rate: 0.88%
```

Run 1: Report of Indigo-MusesC5 — Data Link



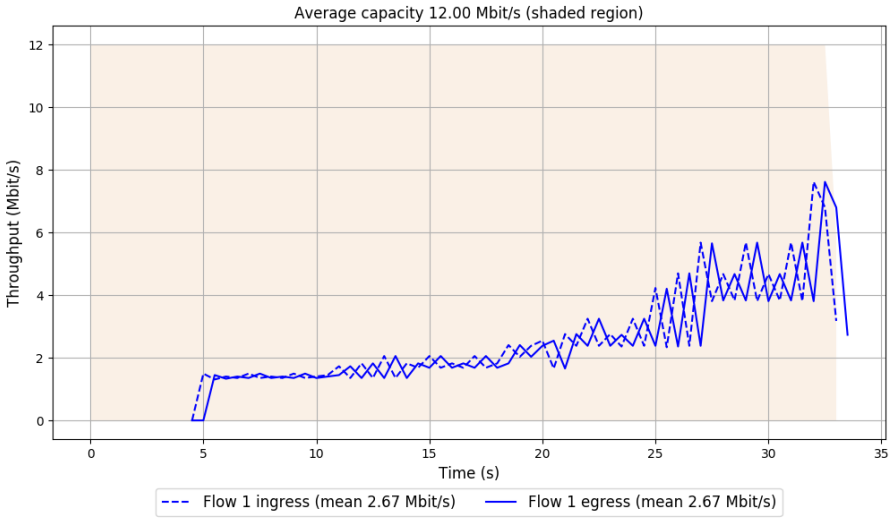


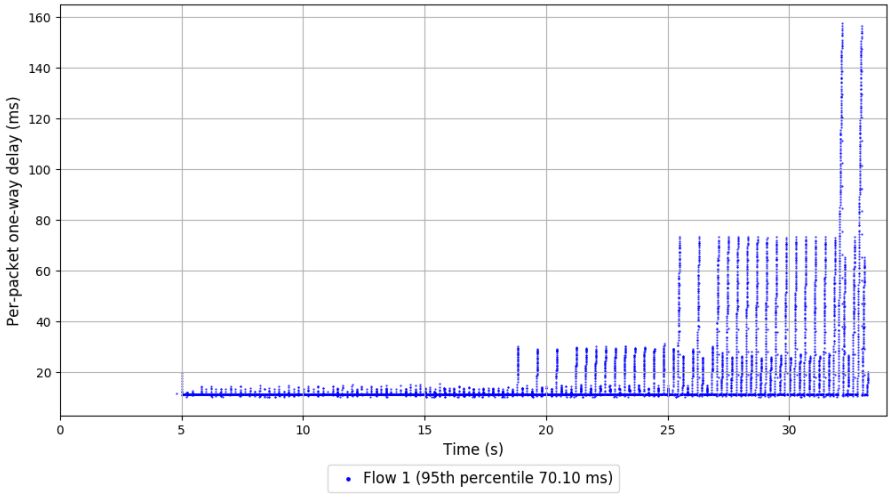
```
Run 2: Statistics of Indigo-MusesC5

Start at: 2020-04-16 09:22:47
End at: 2020-04-16 09:23:18

# Below is generated by plot.py at 2020-04-16 09:45:17
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.67 Mbit/s (22.2% utilization)
95th percentile per-packet one-way delay: 70.099 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 70.099 ms
Loss rate: 0.31%
```

Run 2: Report of Indigo-MusesC5 — Data Link



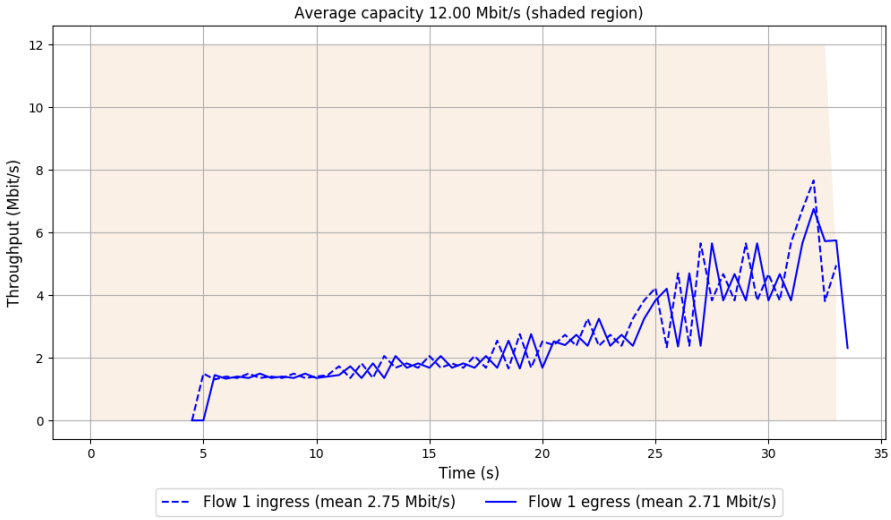


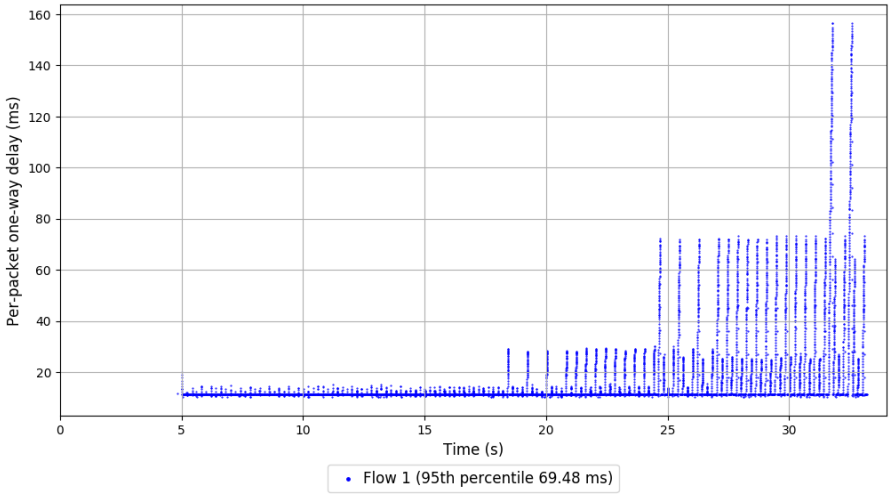
```
Run 3: Statistics of Indigo-MusesC5

Start at: 2020-04-16 09:36:44
End at: 2020-04-16 09:37:14

# Below is generated by plot.py at 2020-04-16 09:45:19
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.71 Mbit/s (22.6% utilization)
95th percentile per-packet one-way delay: 69.483 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 69.483 ms
Loss rate: 1.70%
```

Run 3: Report of Indigo-MusesC5 — Data Link



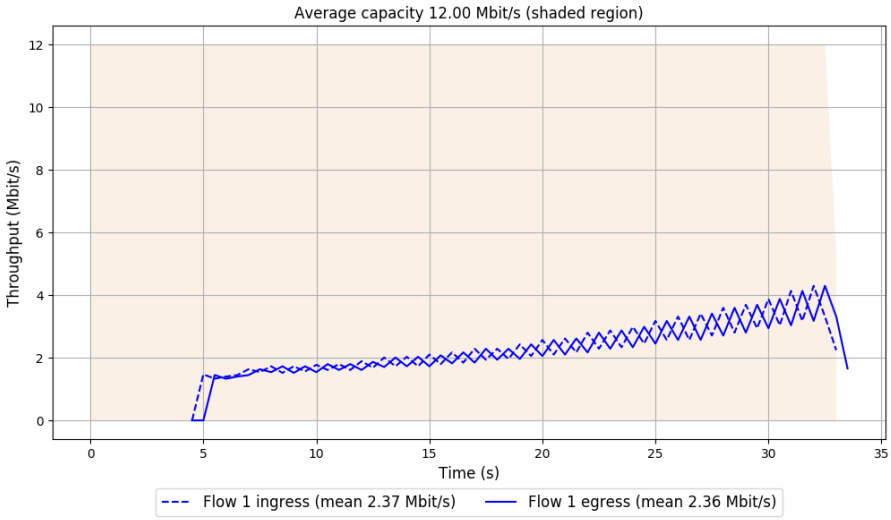


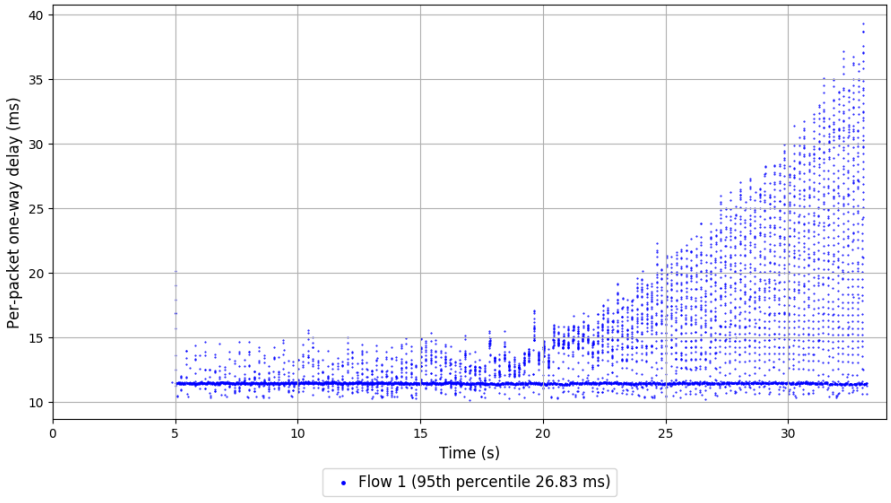
```
Run 1: Statistics of Indigo-MusesD

Start at: 2020-04-16 09:04:46
End at: 2020-04-16 09:05:16

# Below is generated by plot.py at 2020-04-16 09:45:19
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.36 Mbit/s (19.6% utilization)
95th percentile per-packet one-way delay: 26.833 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 26.833 ms
Loss rate: 0.45%
```

Run 1: Report of Indigo-MusesD — Data Link



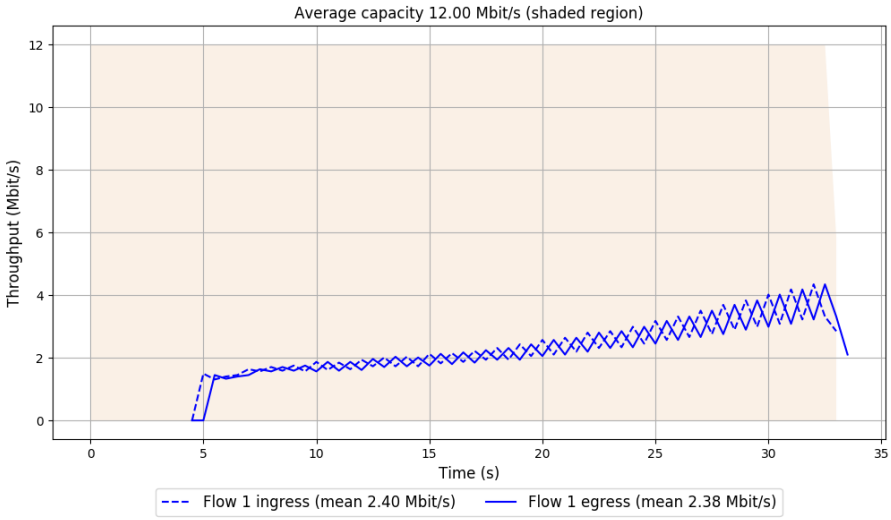


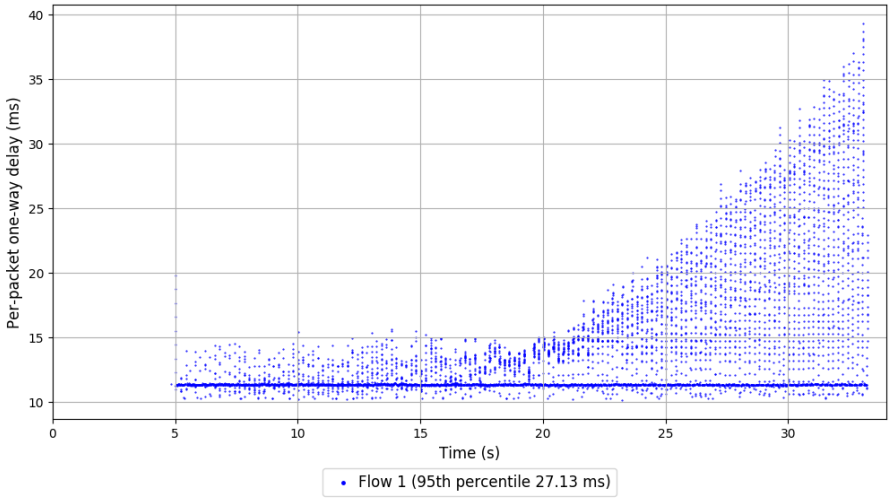
```
Run 2: Statistics of Indigo-MusesD

Start at: 2020-04-16 09:18:43
End at: 2020-04-16 09:19:13

# Below is generated by plot.py at 2020-04-16 09:45:21
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.38 Mbit/s (19.9% utilization)
95th percentile per-packet one-way delay: 27.127 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 27.127 ms
Loss rate: 0.57%
```

Run 2: Report of Indigo-MusesD — Data Link



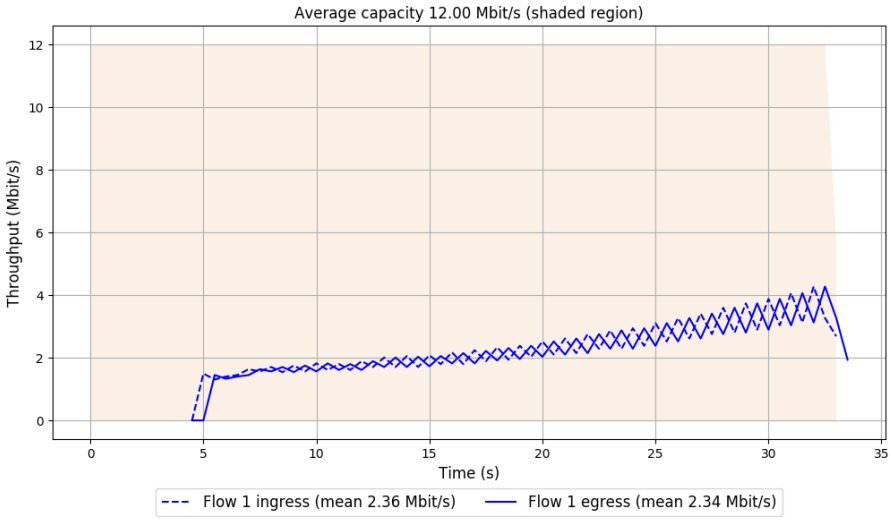


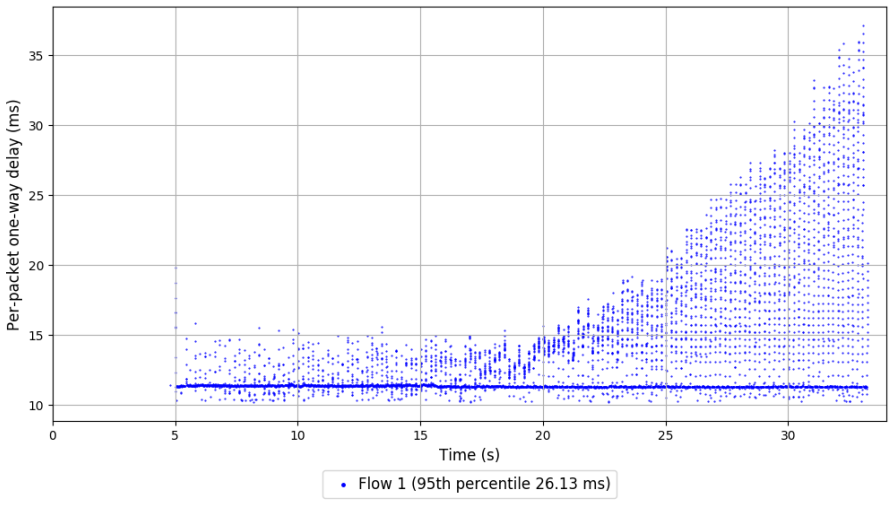
```
Run 3: Statistics of Indigo-MusesD

Start at: 2020-04-16 09:32:39
End at: 2020-04-16 09:33:09

# Below is generated by plot.py at 2020-04-16 09:45:21
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.34 Mbit/s (19.5% utilization)
95th percentile per-packet one-way delay: 26.128 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 26.128 ms
Loss rate: 0.58%
```

Run 3: Report of Indigo-MusesD — Data Link



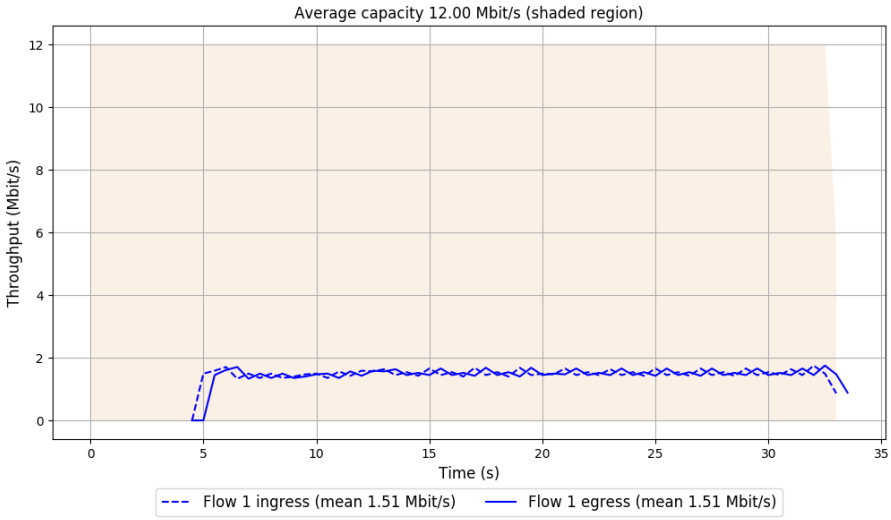


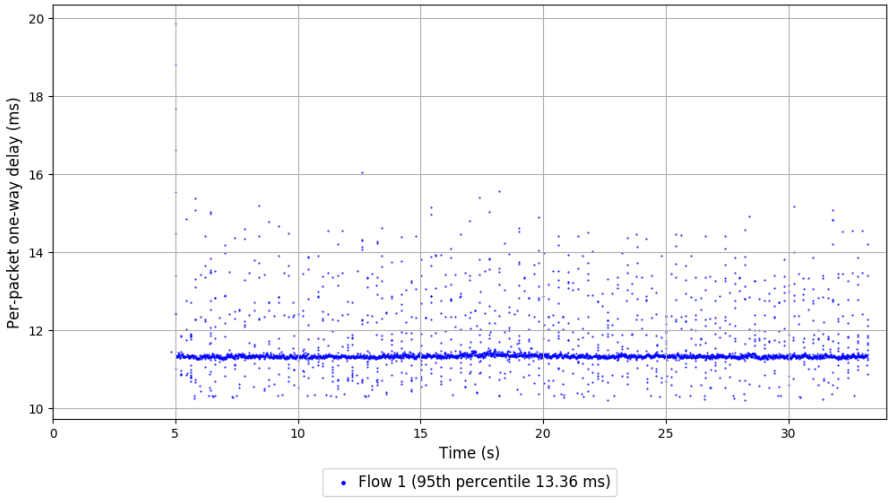
```
Run 1: Statistics of Indigo-MusesT

Start at: 2020-04-16 09:14:04
End at: 2020-04-16 09:14:34

# Below is generated by plot.py at 2020-04-16 09:45:24
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.51 Mbit/s (12.5% utilization)
95th percentile per-packet one-way delay: 13.358 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 13.358 ms
Loss rate: 0.03%
```

Run 1: Report of Indigo-MusesT — Data Link



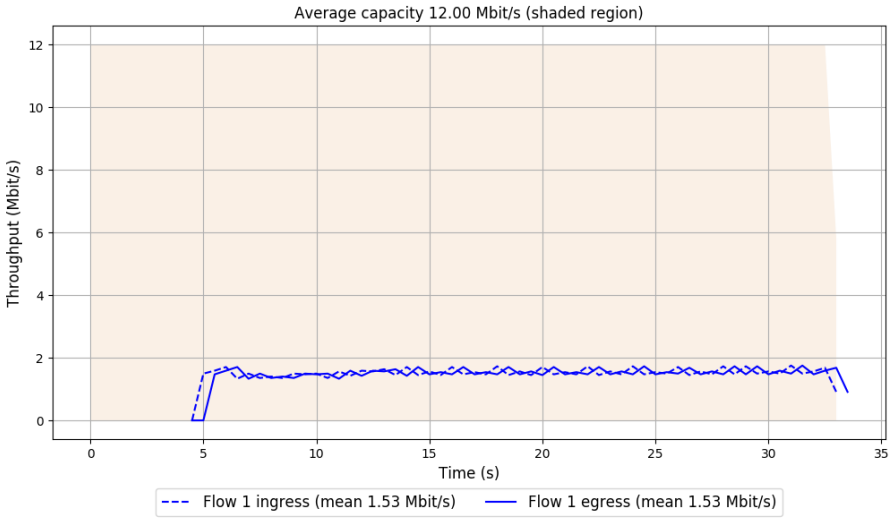


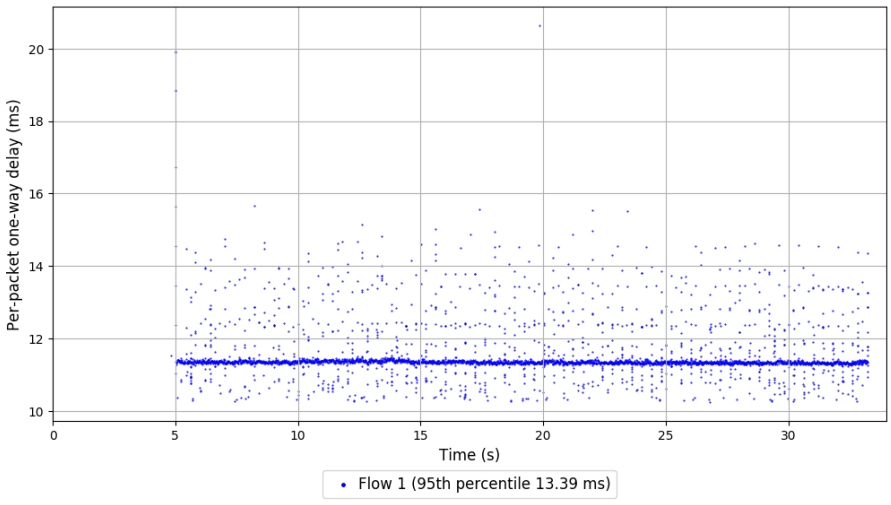
```
Run 2: Statistics of Indigo-MusesT

Start at: 2020-04-16 09:28:01
End at: 2020-04-16 09:28:31

# Below is generated by plot.py at 2020-04-16 09:45:24
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.53 Mbit/s (12.8% utilization)
95th percentile per-packet one-way delay: 13.393 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 13.393 ms
Loss rate: 0.03%
```

Run 2: Report of Indigo-MusesT — Data Link



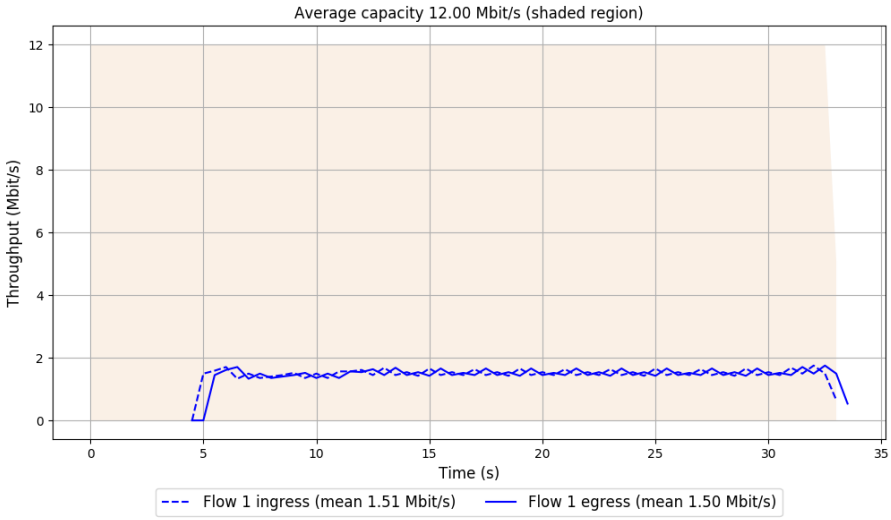


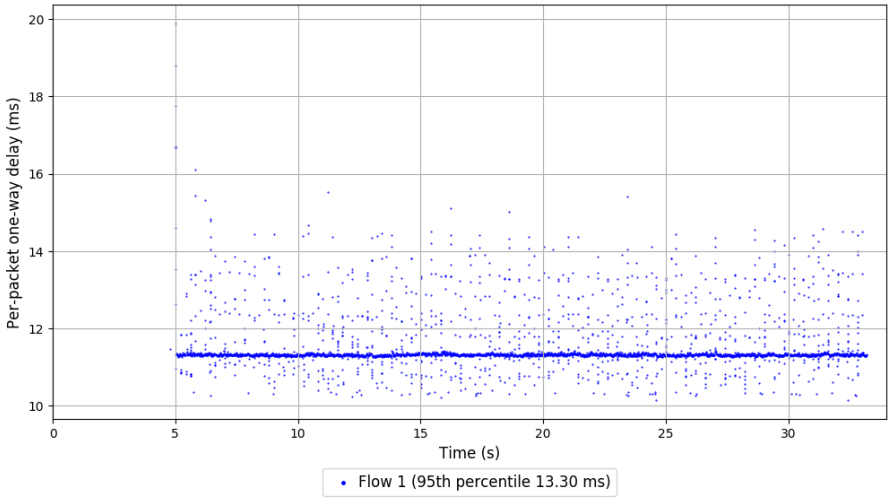
```
Run 3: Statistics of Indigo-MusesT

Start at: 2020-04-16 09:41:58
End at: 2020-04-16 09:42:28

# Below is generated by plot.py at 2020-04-16 09:45:26
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.50 Mbit/s (12.5% utilization)
95th percentile per-packet one-way delay: 13.296 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 13.296 ms
Loss rate: 0.16%
```

Run 3: Report of Indigo-MusesT — Data Link



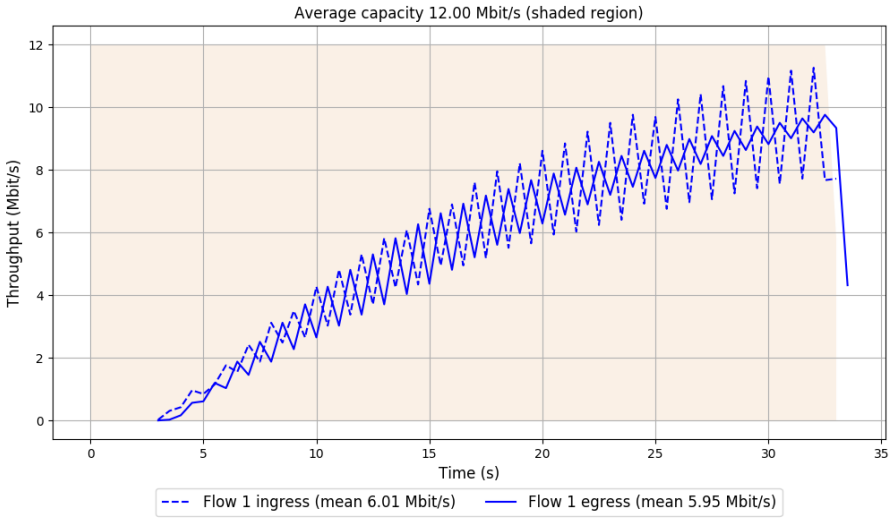


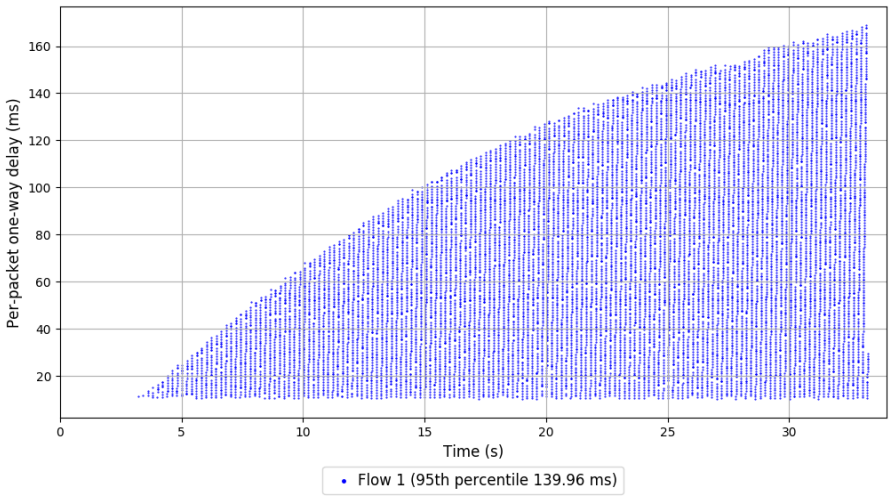
```
Run 1: Statistics of LEDBAT

Start at: 2020-04-16 09:11:10
End at: 2020-04-16 09:11:40

# Below is generated by plot.py at 2020-04-16 09:45:36
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.95 Mbit/s (49.6% utilization)
95th percentile per-packet one-way delay: 139.962 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 139.962 ms
Loss rate: 0.94%
```

Run 1: Report of LEDBAT — Data Link



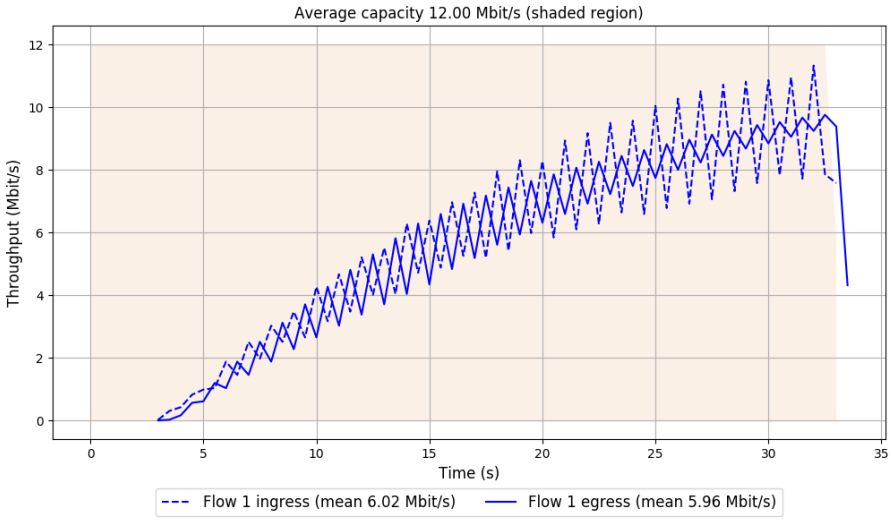


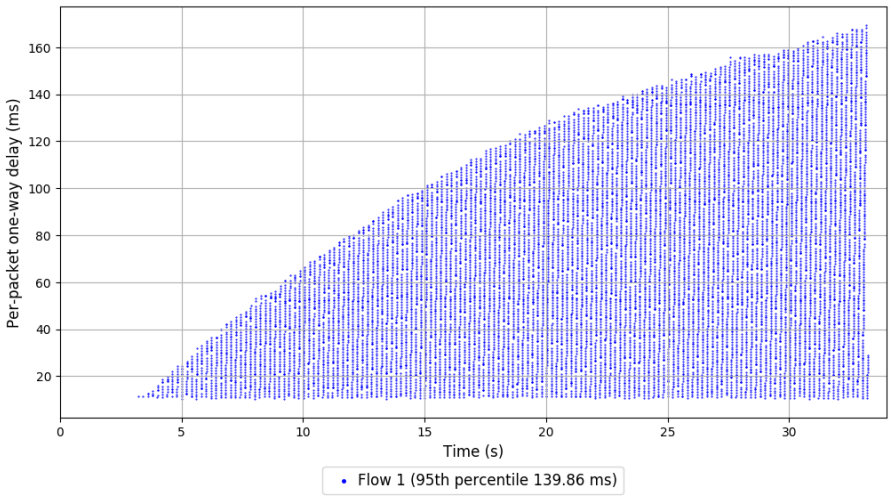
```
Run 2: Statistics of LEDBAT

Start at: 2020-04-16 09:25:07
End at: 2020-04-16 09:25:37

# Below is generated by plot.py at 2020-04-16 09:45:37
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.96 Mbit/s (49.7% utilization)
95th percentile per-packet one-way delay: 139.864 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 5.96 Mbit/s
95th percentile per-packet one-way delay: 139.864 ms
Loss rate: 0.95%
```

Run 2: Report of LEDBAT — Data Link



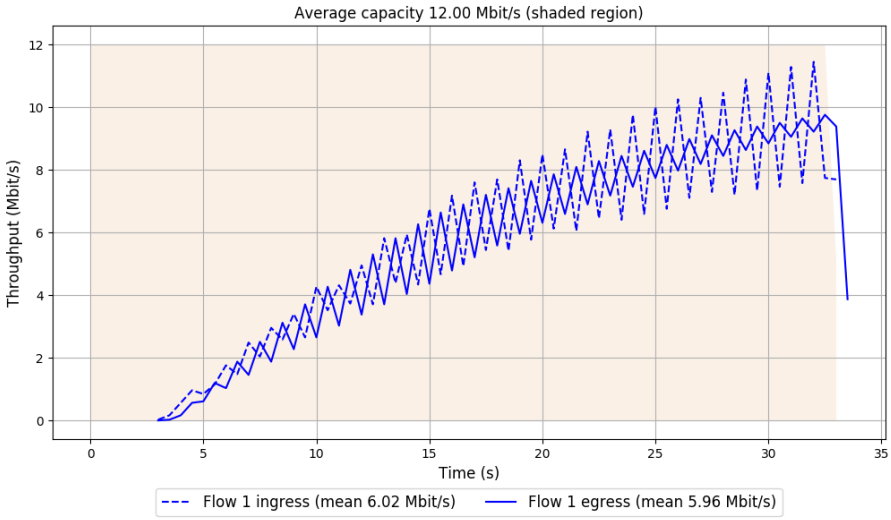


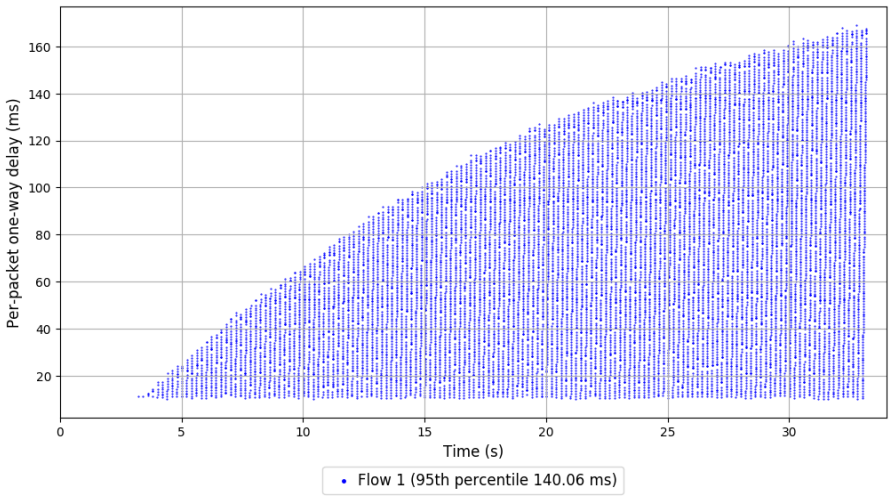
```
Run 3: Statistics of LEDBAT

Start at: 2020-04-16 09:39:03
End at: 2020-04-16 09:39:33

# Below is generated by plot.py at 2020-04-16 09:45:38
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.96 Mbit/s (49.7% utilization)
95th percentile per-packet one-way delay: 140.062 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 5.96 Mbit/s
95th percentile per-packet one-way delay: 140.062 ms
Loss rate: 1.07%
```

Run 3: Report of LEDBAT — Data Link



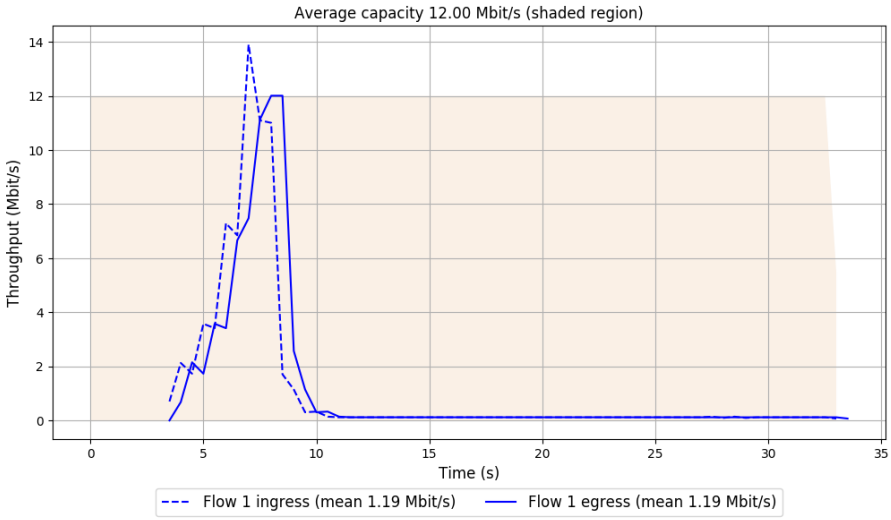


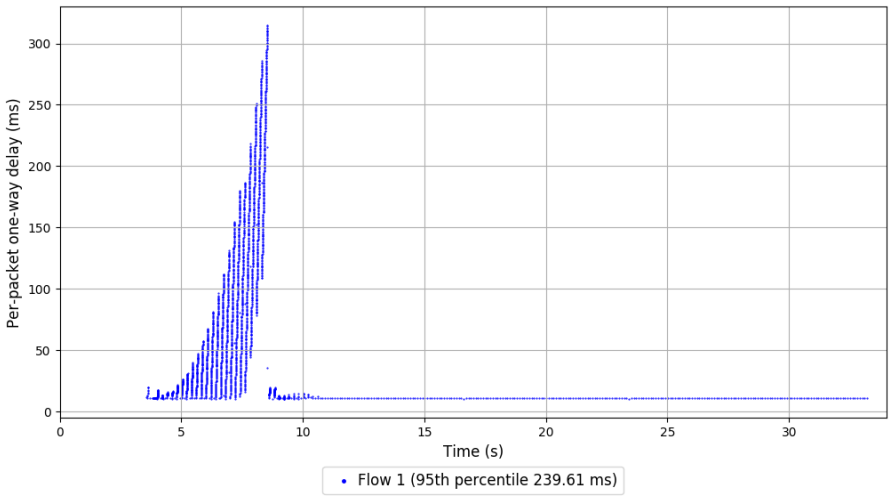
```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2020-04-16 09:15:49
End at: 2020-04-16 09:16:19

# Below is generated by plot.py at 2020-04-16 09:45:38
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.19 Mbit/s (9.9% utilization)
95th percentile per-packet one-way delay: 239.607 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 239.607 ms
Loss rate: 0.00%
```

Run 1: Report of Muses_DecisionTree — Data Link



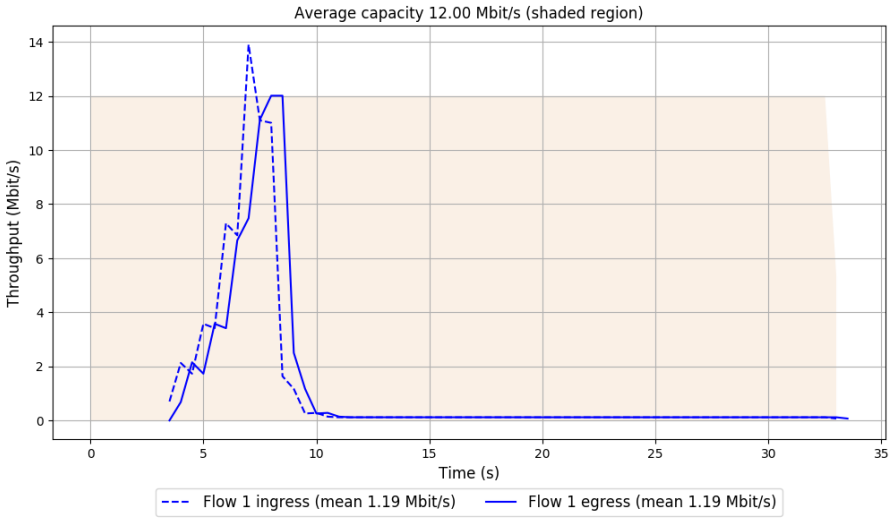


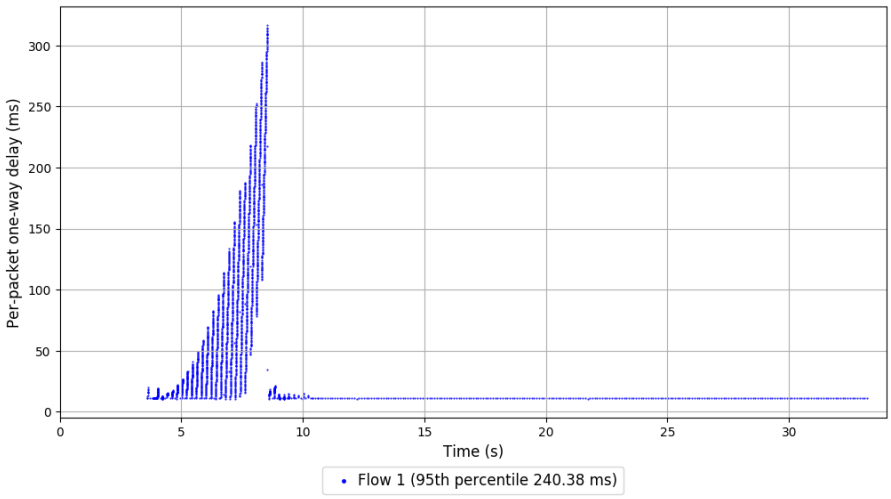
```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2020-04-16 09:29:45
End at: 2020-04-16 09:30:15

# Below is generated by plot.py at 2020-04-16 09:45:38
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.19 Mbit/s (9.9% utilization)
95th percentile per-packet one-way delay: 240.375 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 240.375 ms
Loss rate: 0.00%
```

Run 2: Report of Muses_DecisionTree — Data Link



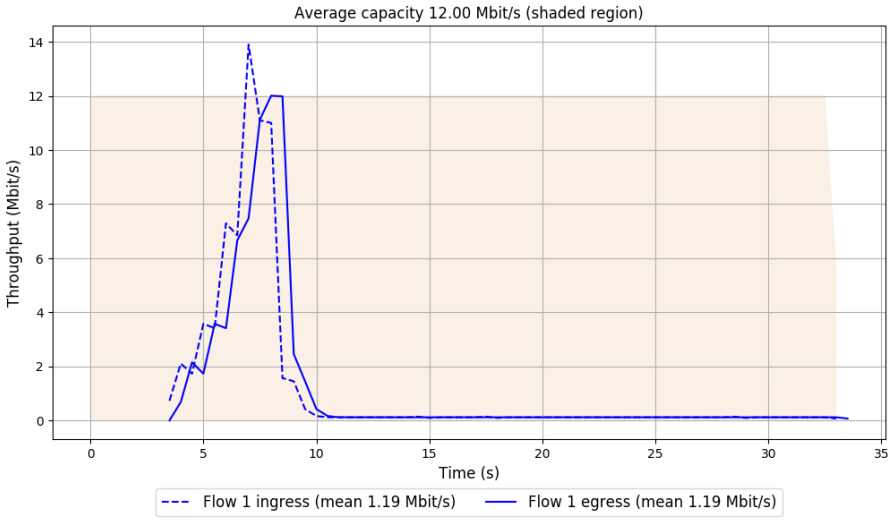


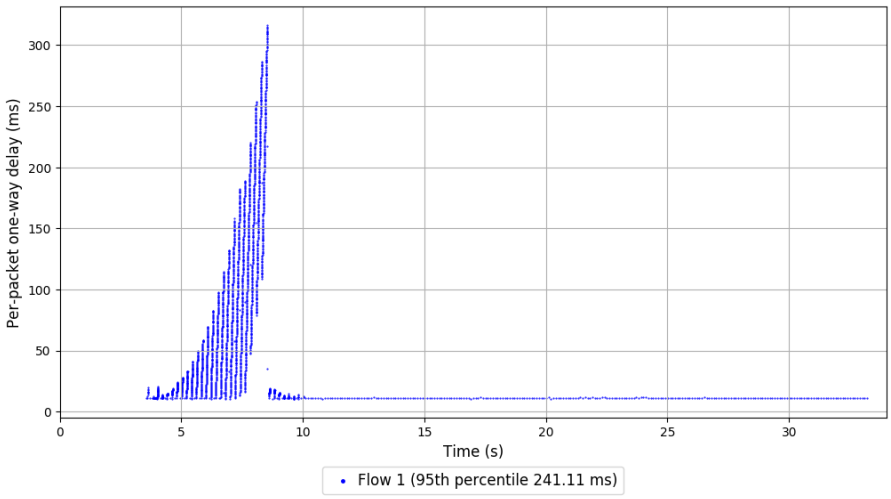
```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2020-04-16 09:43:42
End at: 2020-04-16 09:44:12

# Below is generated by plot.py at 2020-04-16 09:45:38
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.19 Mbit/s (9.9% utilization)
95th percentile per-packet one-way delay: 241.111 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 241.111 ms
Loss rate: 0.00%
```

Run 3: Report of Muses_DecisionTree — Data Link



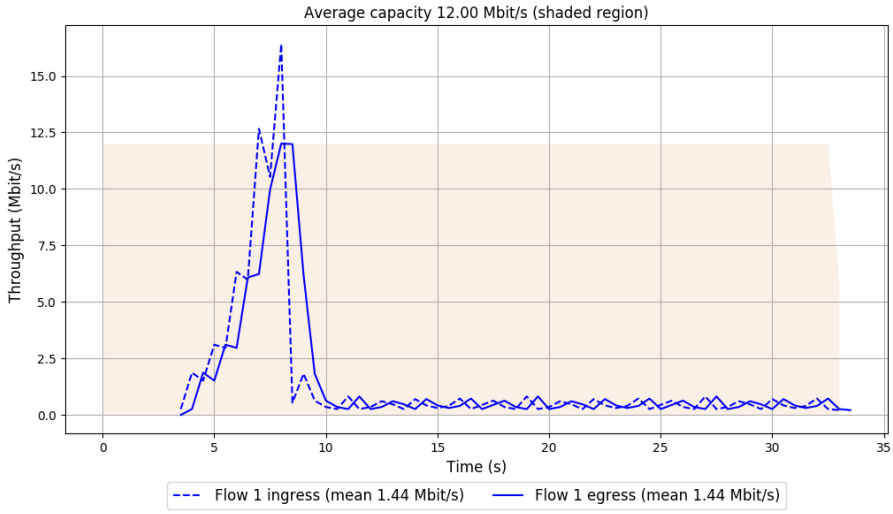


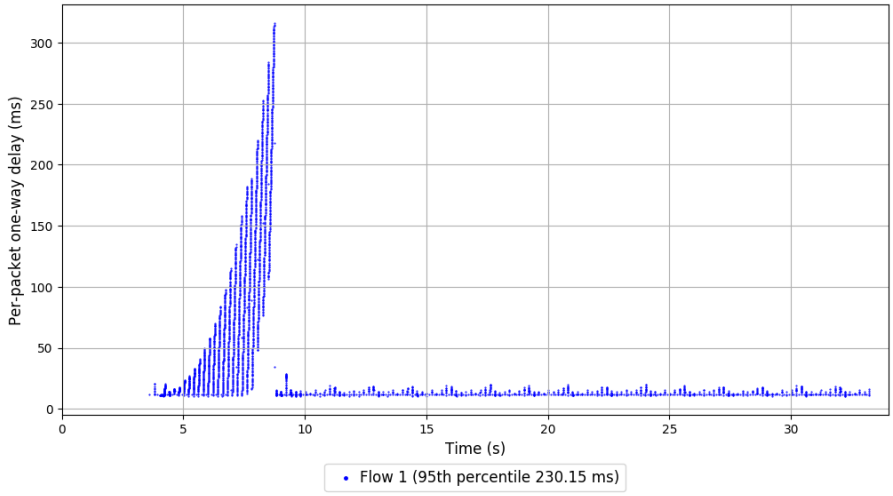
```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2020-04-16 09:02:26
End at: 2020-04-16 09:02:56

# Below is generated by plot.py at 2020-04-16 09:45:38
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.44 Mbit/s (12.0% utilization)
95th percentile per-packet one-way delay: 230.150 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 230.150 ms
Loss rate: 0.00%
```

Run 1: Report of Muses_DecisionTreeH0 — Data Link



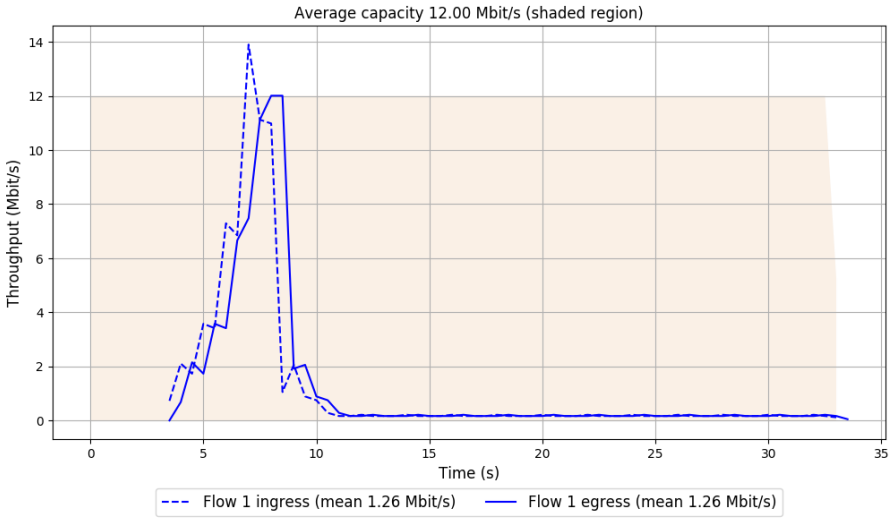


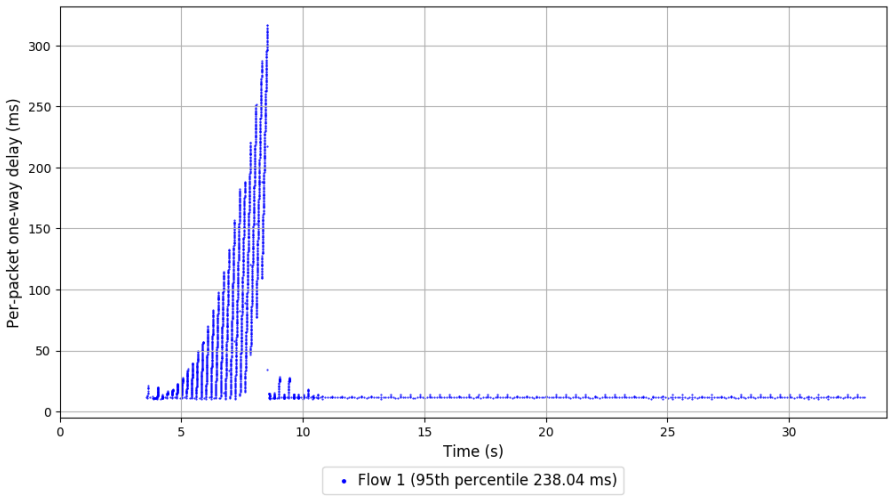
```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2020-04-16 09:16:23
End at: 2020-04-16 09:16:53

# Below is generated by plot.py at 2020-04-16 09:45:38
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.26 Mbit/s (10.5% utilization)
95th percentile per-packet one-way delay: 238.039 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 238.039 ms
Loss rate: 0.09%
```

Run 2: Report of Muses_DecisionTreeH0 — Data Link



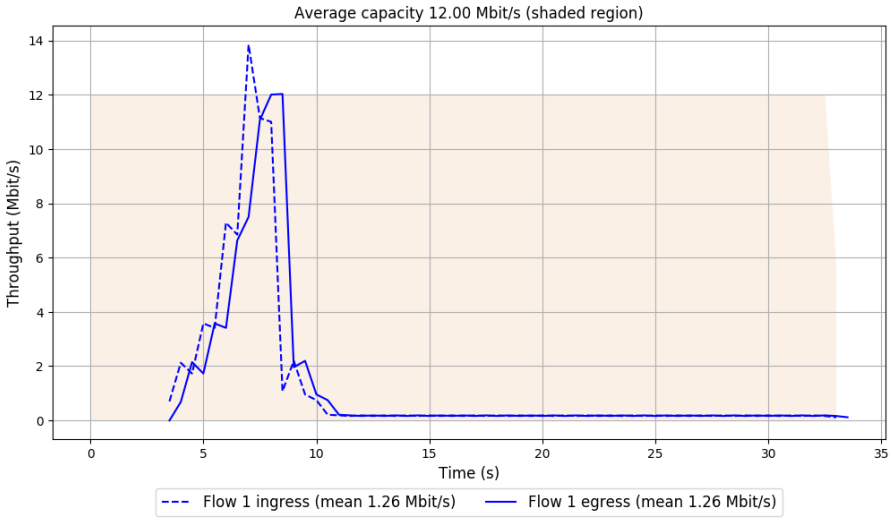


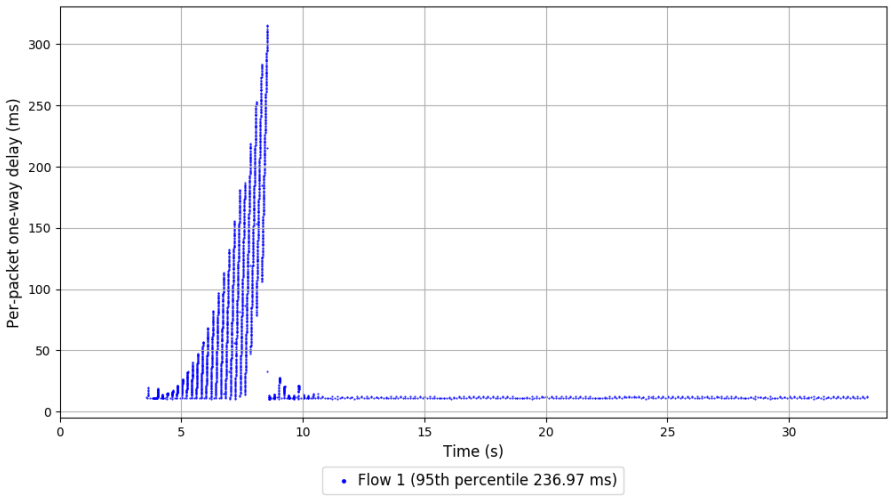
```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2020-04-16 09:30:20
End at: 2020-04-16 09:30:50

# Below is generated by plot.py at 2020-04-16 09:45:41
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.26 Mbit/s (10.5% utilization)
95th percentile per-packet one-way delay: 236.970 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 236.970 ms
Loss rate: 0.00%
```

Run 3: Report of Muses_DecisionTreeH0 — Data Link



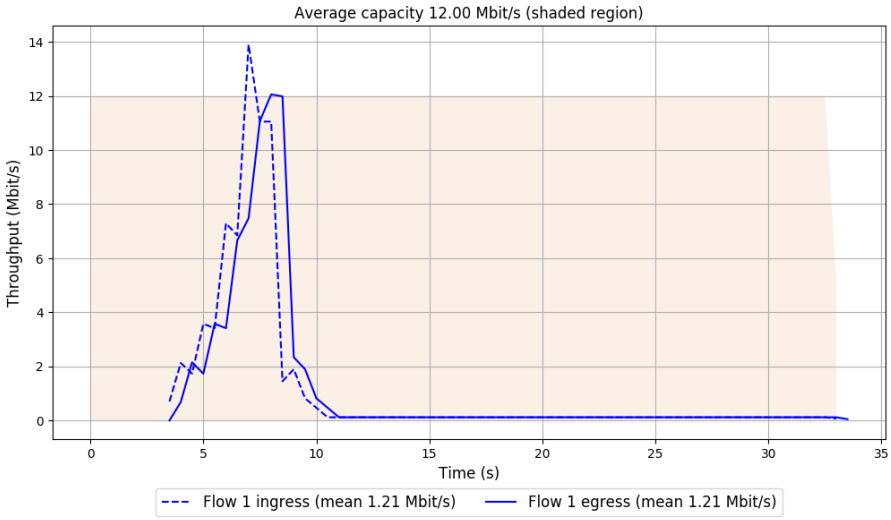


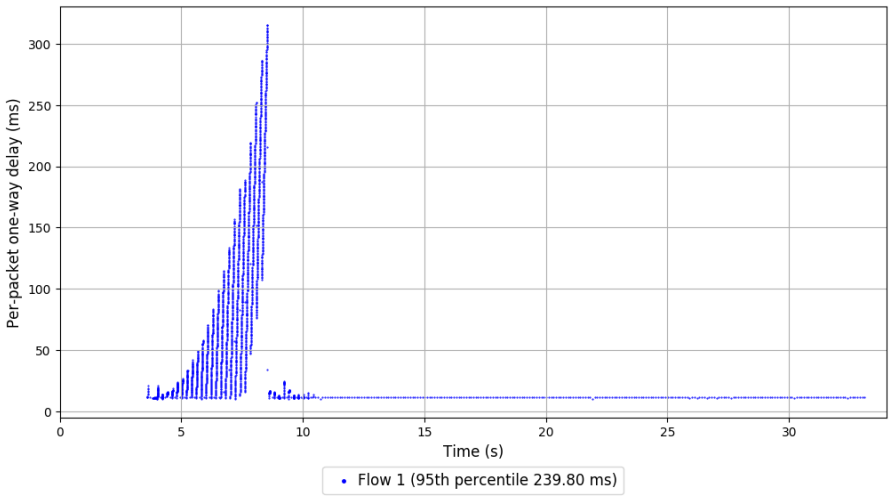
```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2020-04-16 09:12:54
End at: 2020-04-16 09:13:24

# Below is generated by plot.py at 2020-04-16 09:45:42
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.21 Mbit/s (10.1% utilization)
95th percentile per-packet one-way delay: 239.798 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 239.798 ms
Loss rate: 0.03%
```

Run 1: Report of Muses_DecisionTreeR0 — Data Link



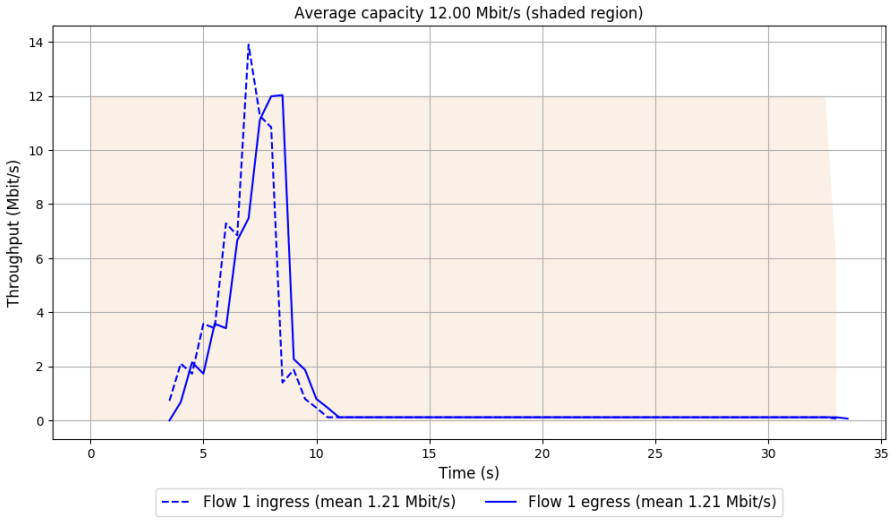


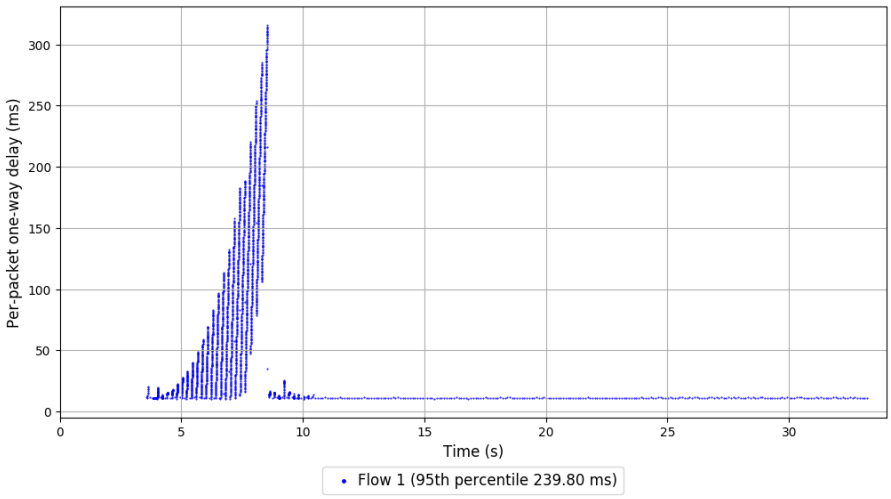
```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2020-04-16 09:26:51
End at: 2020-04-16 09:27:21

# Below is generated by plot.py at 2020-04-16 09:45:45
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.21 Mbit/s (10.1% utilization)
95th percentile per-packet one-way delay: 239.800 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 239.800 ms
Loss rate: 0.00%
```

Run 2: Report of Muses_DecisionTreeR0 — Data Link



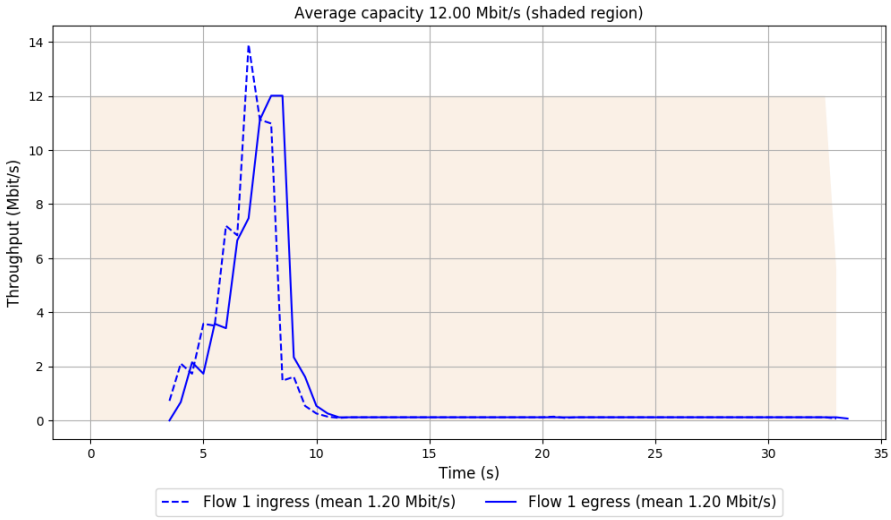


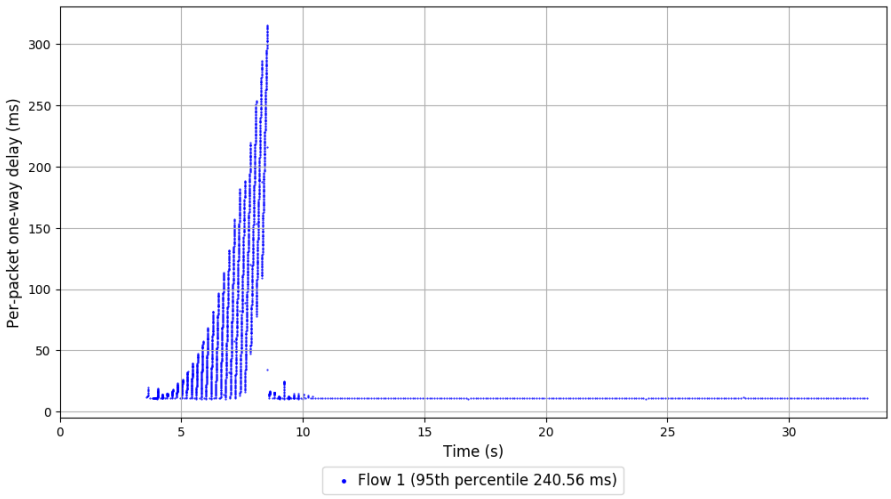
```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2020-04-16 09:40:48
End at: 2020-04-16 09:41:18

# Below is generated by plot.py at 2020-04-16 09:45:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.20 Mbit/s (10.0% utilization)
95th percentile per-packet one-way delay: 240.565 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 240.565 ms
Loss rate: 0.00%
```

Run 3: Report of Muses_DecisionTreeR0 — Data Link



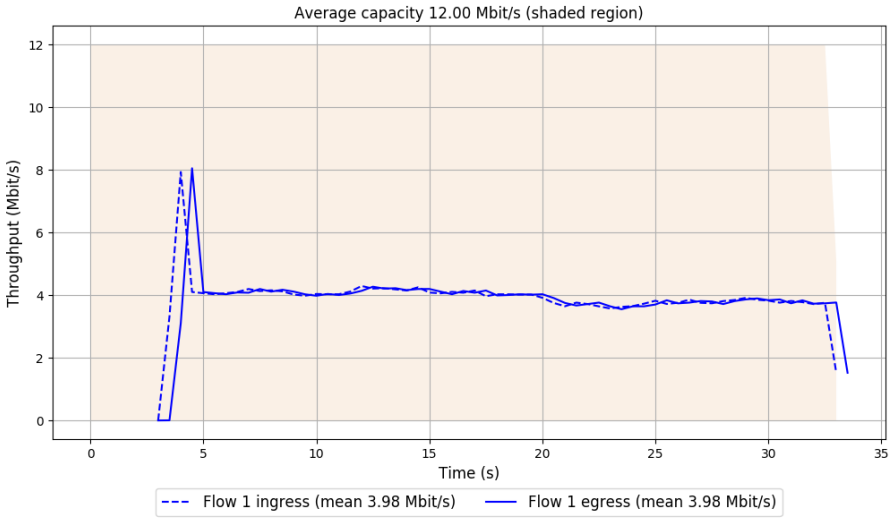


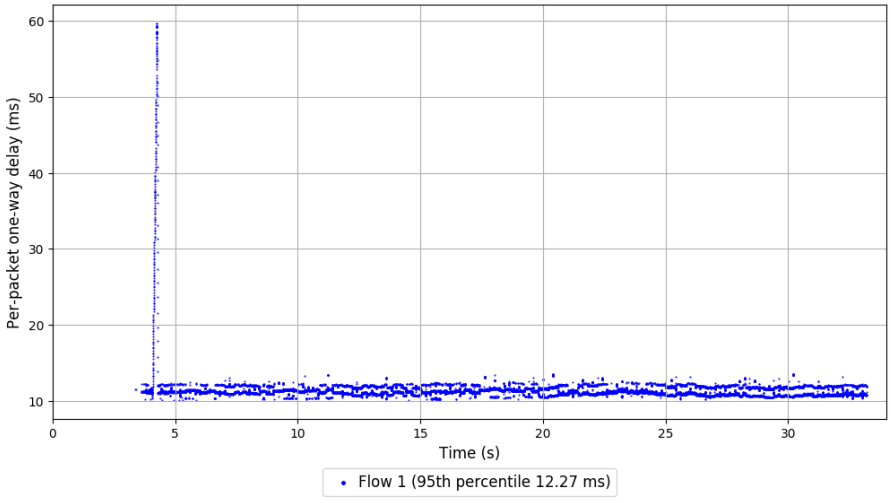
```
Run 1: Statistics of PCC-Allegro

Start at: 2020-04-16 09:11:45
End at: 2020-04-16 09:12:15

# Below is generated by plot.py at 2020-04-16 09:45:51
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.98 Mbit/s (33.1% utilization)
95th percentile per-packet one-way delay: 12.266 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 12.266 ms
Loss rate: 0.04%
```

Run 1: Report of PCC-Allegro — Data Link



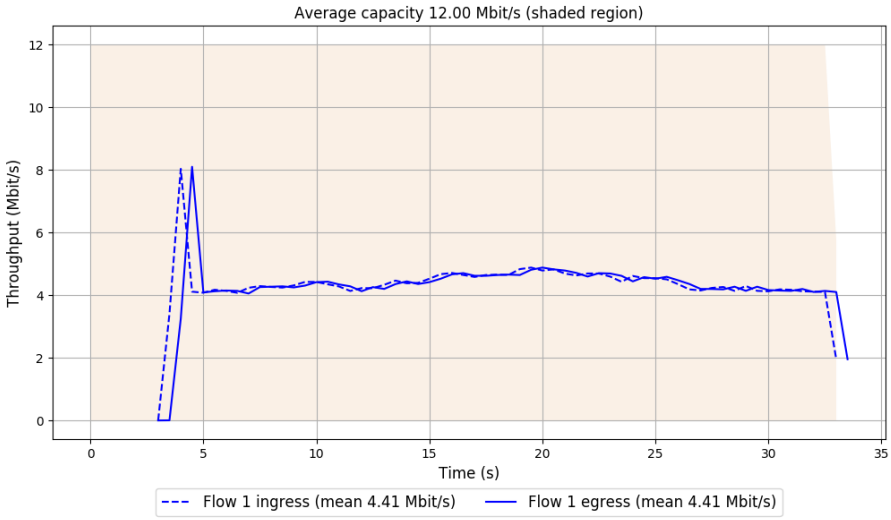


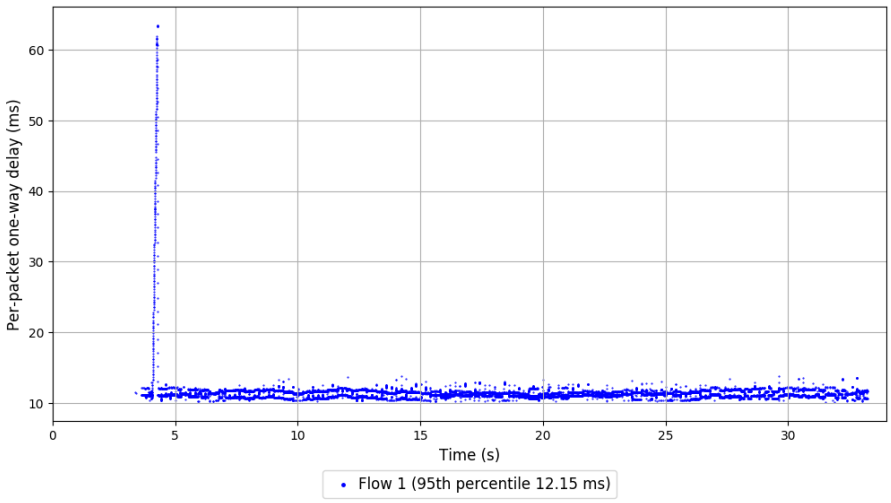
```
Run 2: Statistics of PCC-Allegro

Start at: 2020-04-16 09:25:42
End at: 2020-04-16 09:26:12

# Below is generated by plot.py at 2020-04-16 09:45:52
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 4.41 Mbit/s (36.8% utilization)
95th percentile per-packet one-way delay: 12.148 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 4.41 Mbit/s
95th percentile per-packet one-way delay: 12.148 ms
Loss rate: 0.04%
```

Run 2: Report of PCC-Allegro — Data Link



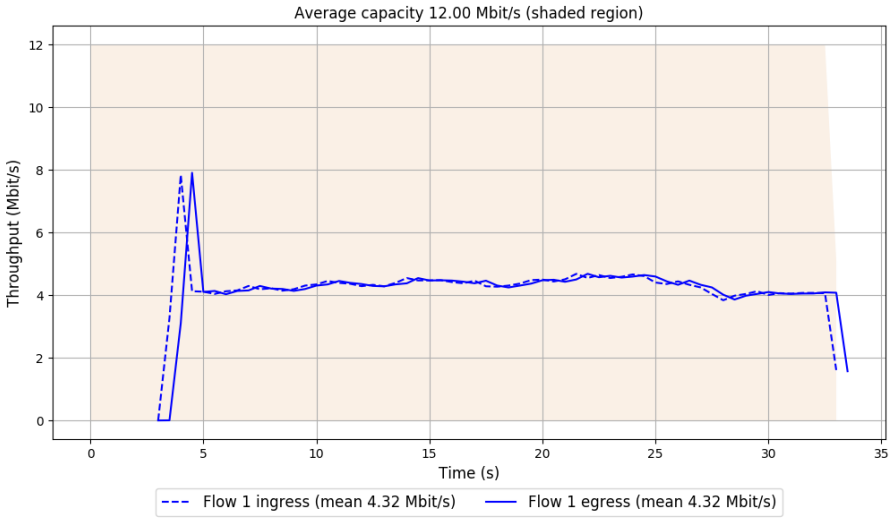


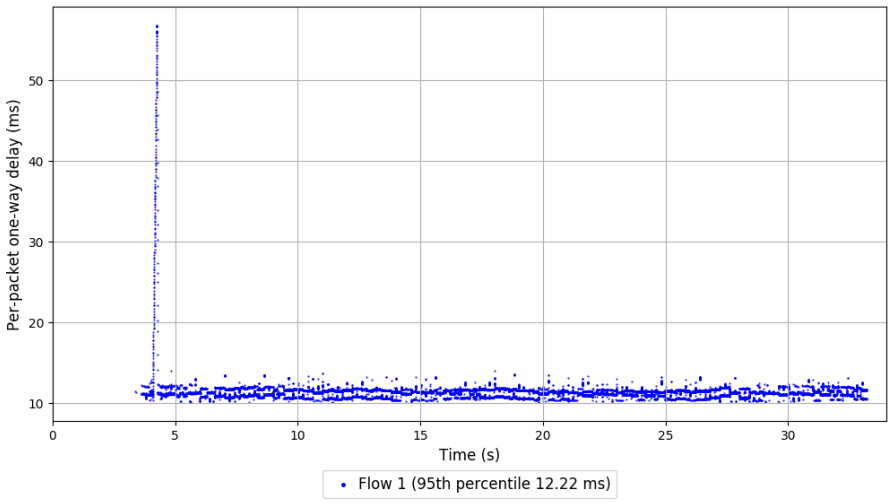
```
Run 3: Statistics of PCC-Allegro

Start at: 2020-04-16 09:39:38
End at: 2020-04-16 09:40:08

# Below is generated by plot.py at 2020-04-16 09:45:53
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 4.32 Mbit/s (36.0% utilization)
95th percentile per-packet one-way delay: 12.224 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 12.224 ms
Loss rate: 0.05%
```

Run 3: Report of PCC-Allegro — Data Link



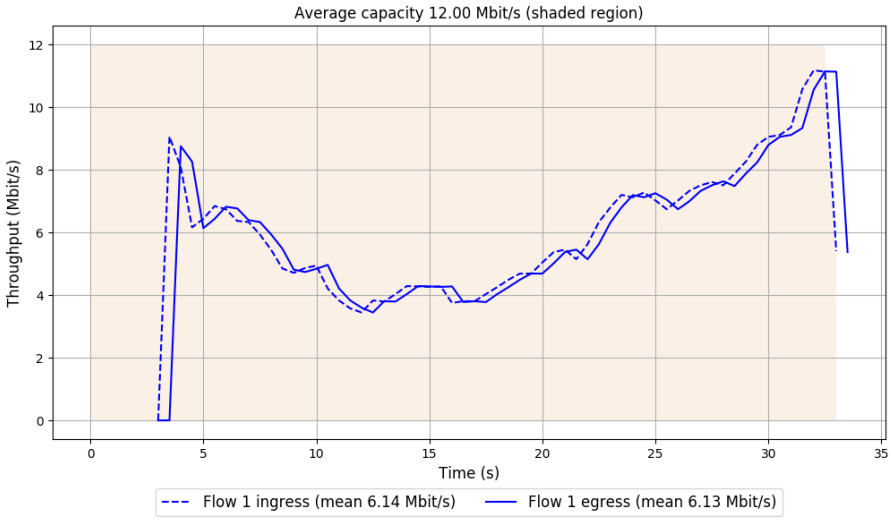


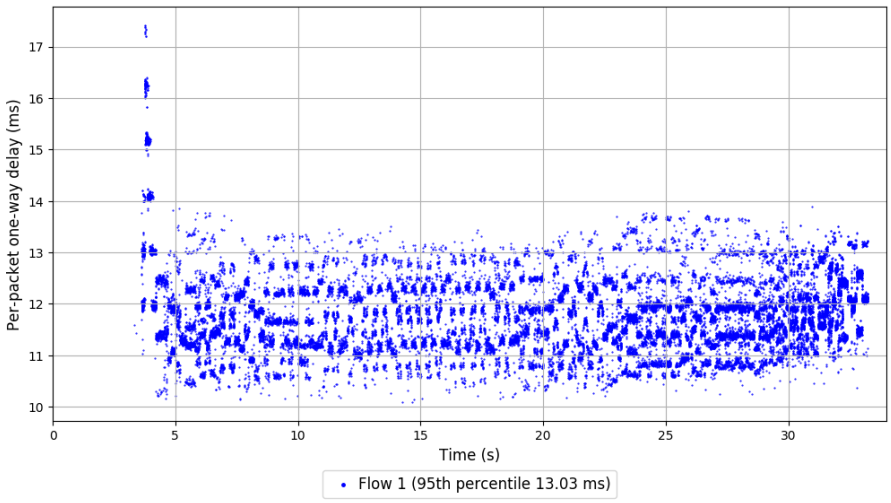
```
Run 1: Statistics of PCC-Expr

Start at: 2020-04-16 09:05:55
End at: 2020-04-16 09:06:25

# Below is generated by plot.py at 2020-04-16 09:46:03
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 6.13 Mbit/s (51.1% utilization)
95th percentile per-packet one-way delay: 13.025 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 6.13 Mbit/s
95th percentile per-packet one-way delay: 13.025 ms
Loss rate: 0.08%
```

Run 1: Report of PCC-Expr — Data Link



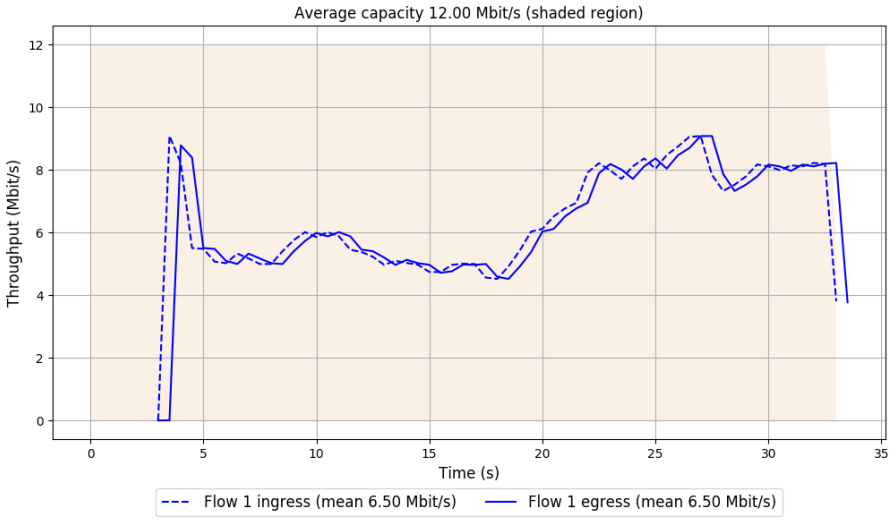


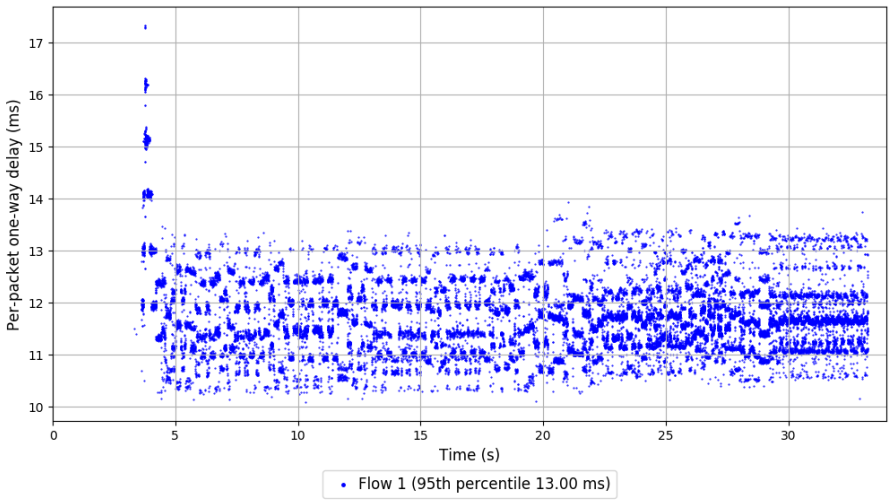
```
Run 2: Statistics of PCC-Expr

Start at: 2020-04-16 09:19:52
End at: 2020-04-16 09:20:22

# Below is generated by plot.py at 2020-04-16 09:46:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 6.50 Mbit/s (54.2% utilization)
95th percentile per-packet one-way delay: 12.999 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 12.999 ms
Loss rate: 0.05%
```

Run 2: Report of PCC-Expr — Data Link



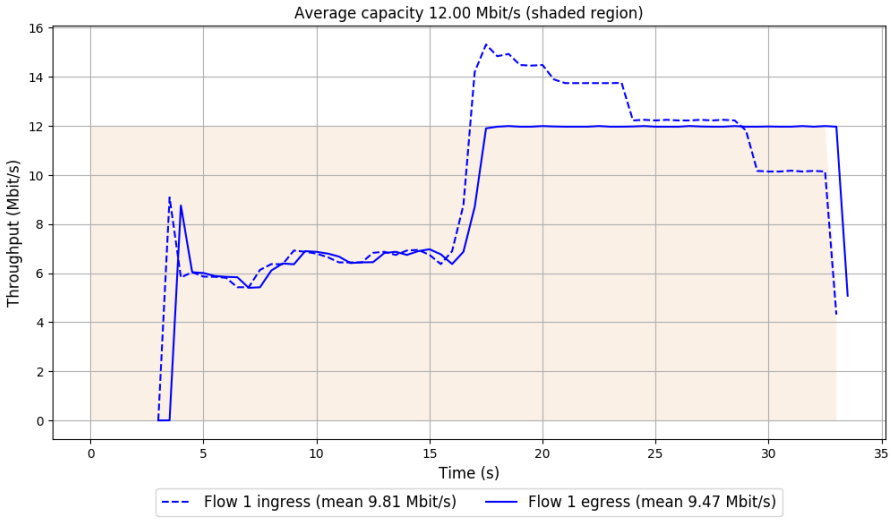


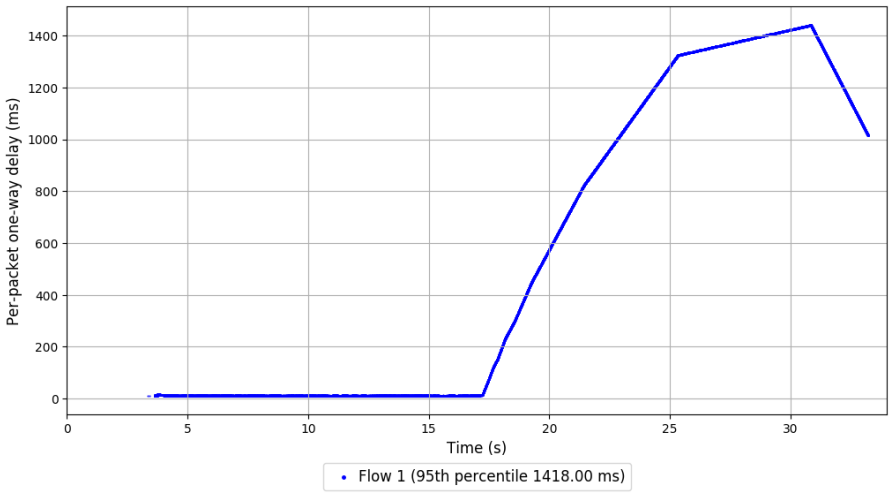
```
Run 3: Statistics of PCC-Expr

Start at: 2020-04-16 09:33:49
End at: 2020-04-16 09:34:19

# Below is generated by plot.py at 2020-04-16 09:46:16
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 9.47 Mbit/s (78.9% utilization)
95th percentile per-packet one-way delay: 1417.997 ms
Loss rate: 3.52%
-- Flow 1:
Average throughput: 9.47 Mbit/s
95th percentile per-packet one-way delay: 1417.997 ms
Loss rate: 3.52%
```

Run 3: Report of PCC-Expr — Data Link



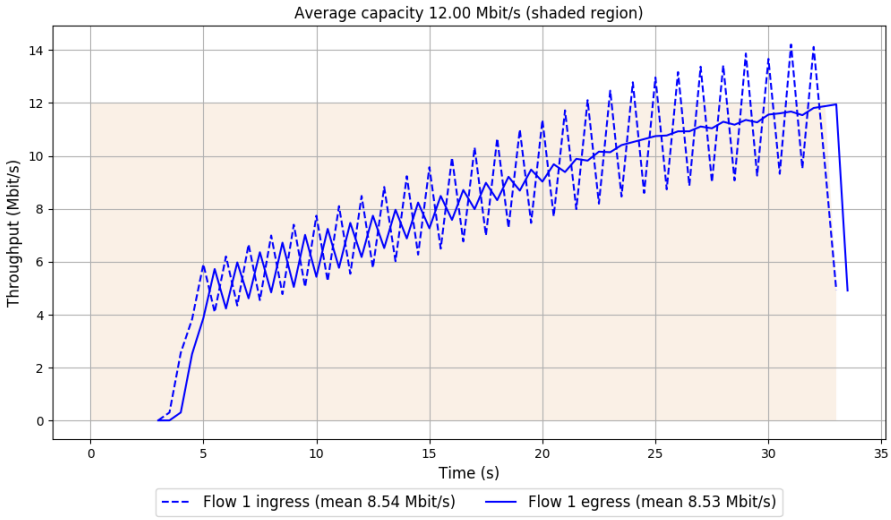


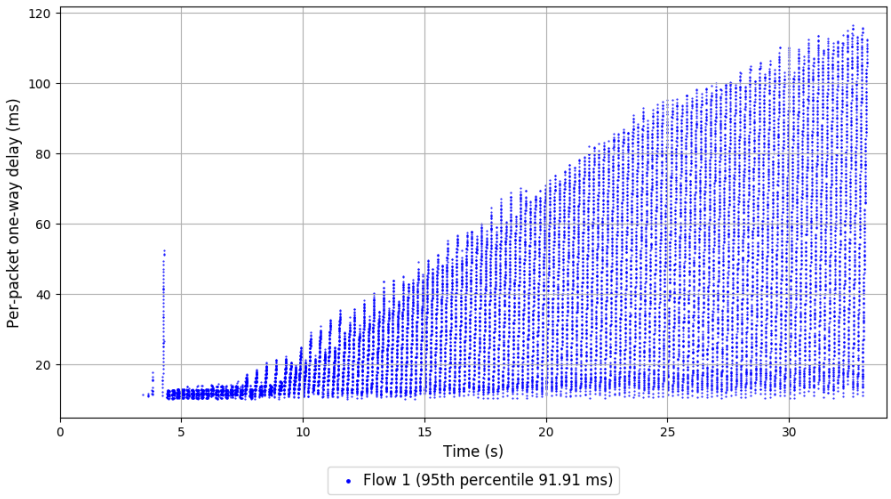
```
Run 1: Statistics of QUIC Cubic

Start at: 2020-04-16 09:06:31
End at: 2020-04-16 09:07:01

# Below is generated by plot.py at 2020-04-16 09:46:16
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 8.53 Mbit/s (71.1% utilization)
95th percentile per-packet one-way delay: 91.912 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 8.53 Mbit/s
95th percentile per-packet one-way delay: 91.912 ms
Loss rate: 0.07%
```

Run 1: Report of QUIC Cubic — Data Link



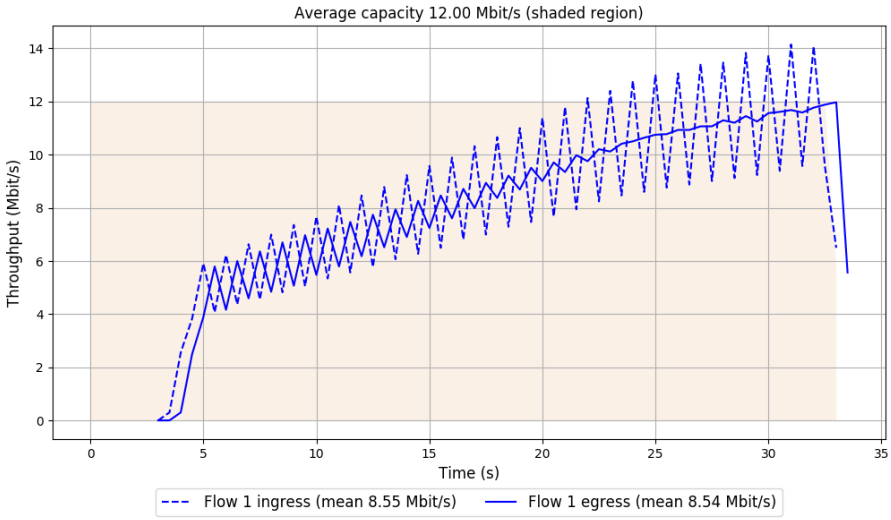


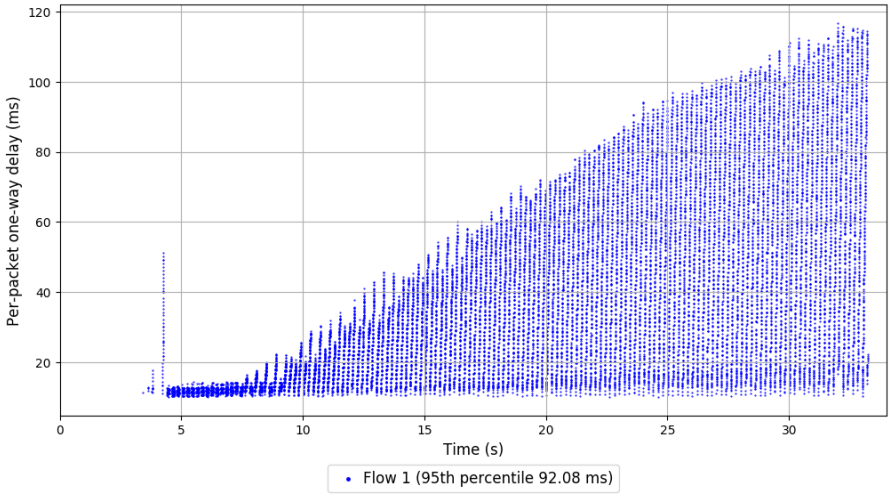
```
Run 2: Statistics of QUIC Cubic

Start at: 2020-04-16 09:20:27
End at: 2020-04-16 09:20:57

# Below is generated by plot.py at 2020-04-16 09:46:16
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 8.54 Mbit/s (71.1% utilization)
95th percentile per-packet one-way delay: 92.076 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 8.54 Mbit/s
95th percentile per-packet one-way delay: 92.076 ms
Loss rate: 0.23%
```

Run 2: Report of QUIC Cubic — Data Link



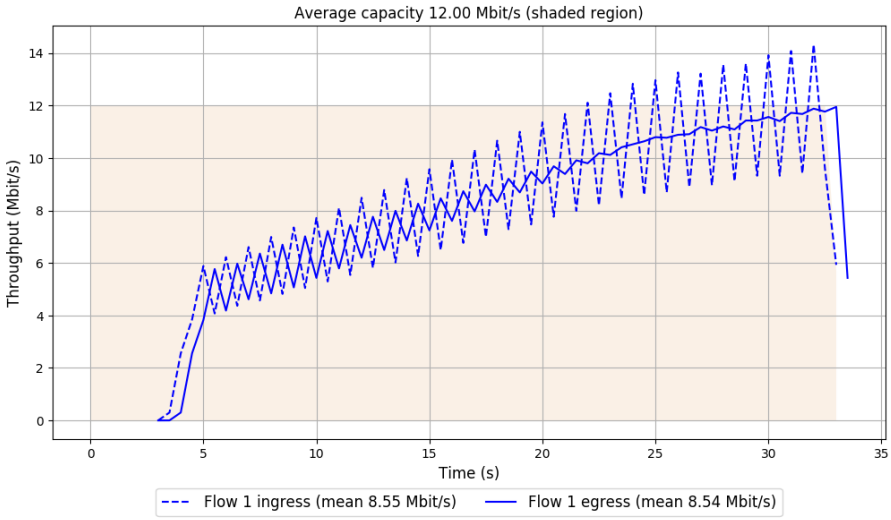


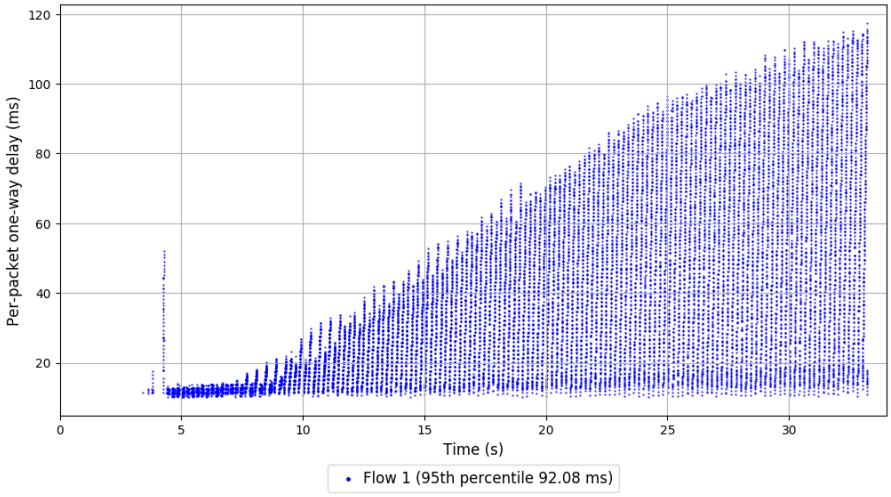
```
Run 3: Statistics of QUIC Cubic

Start at: 2020-04-16 09:34:24
End at: 2020-04-16 09:34:54

# Below is generated by plot.py at 2020-04-16 09:46:16
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 8.54 Mbit/s (71.1% utilization)
95th percentile per-packet one-way delay: 92.084 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 8.54 Mbit/s
95th percentile per-packet one-way delay: 92.084 ms
Loss rate: 0.16%
```

Run 3: Report of QUIC Cubic — Data Link



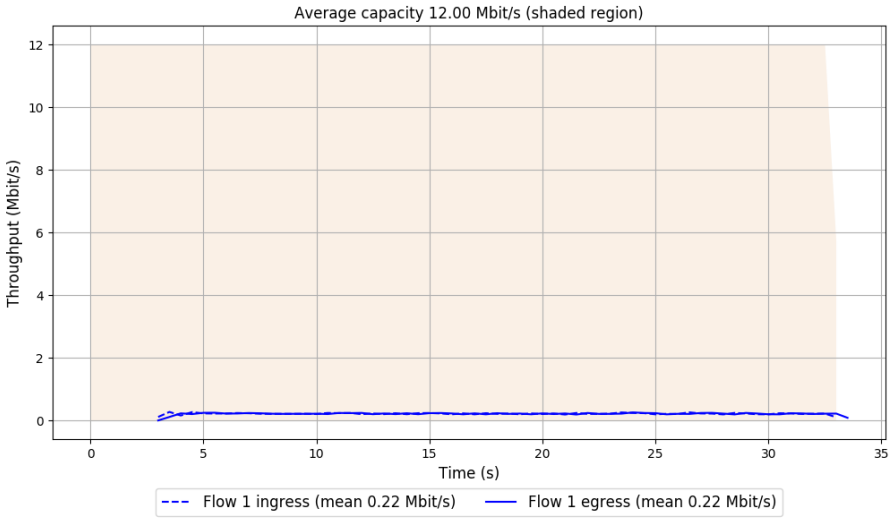


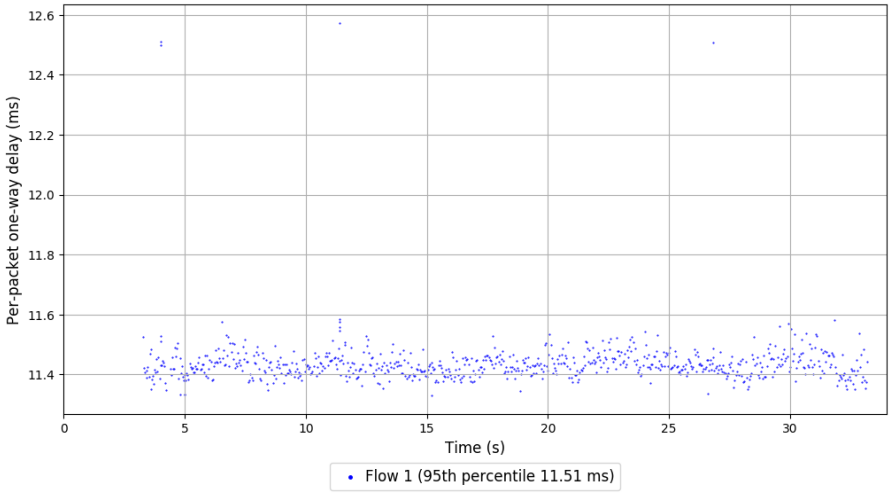
```
Run 1: Statistics of SCReAM

Start at: 2020-04-16 09:15:14
End at: 2020-04-16 09:15:44

# Below is generated by plot.py at 2020-04-16 09:46:16
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.22 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 11.509 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 11.509 ms
Loss rate: 0.13%
```

Run 1: Report of SCReAM — Data Link



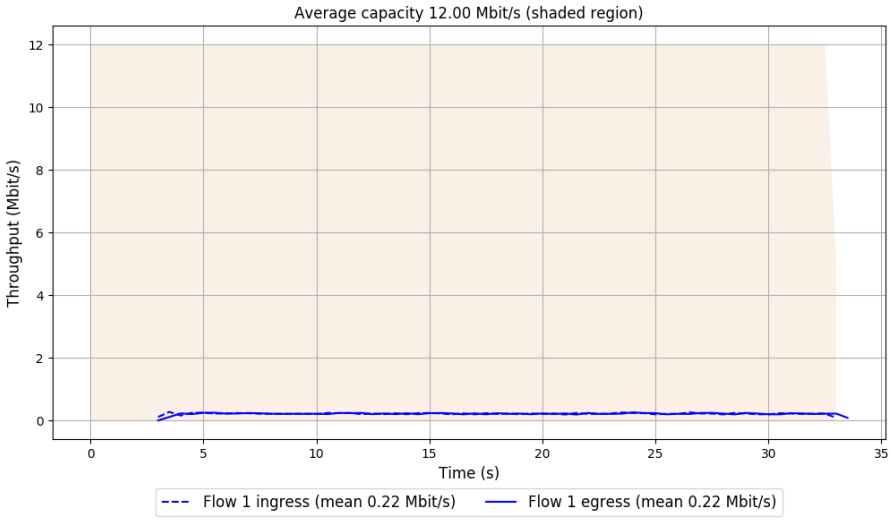


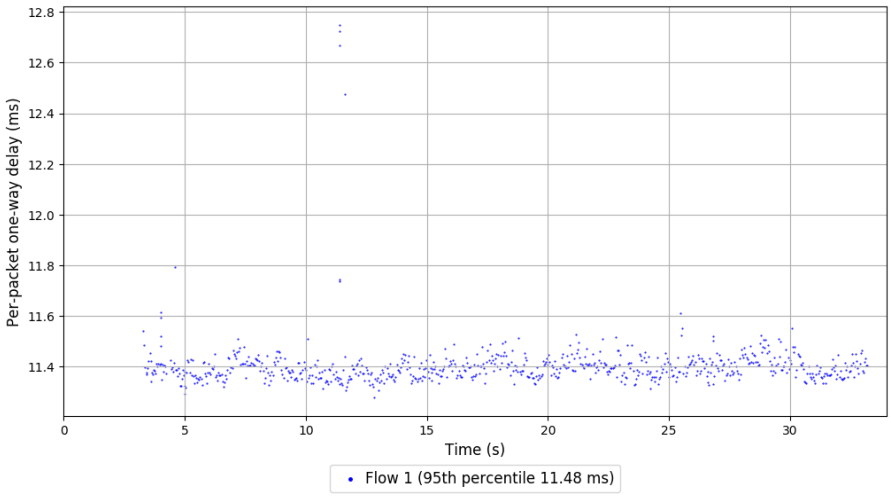
```
Run 2: Statistics of SCReAM

Start at: 2020-04-16 09:29:11
End at: 2020-04-16 09:29:41

# Below is generated by plot.py at 2020-04-16 09:46:16
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.22 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 11.485 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 11.485 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link



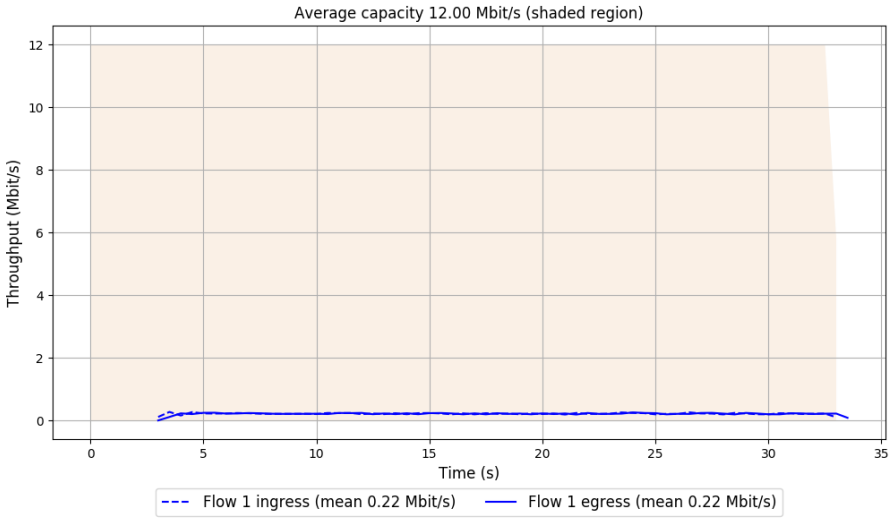


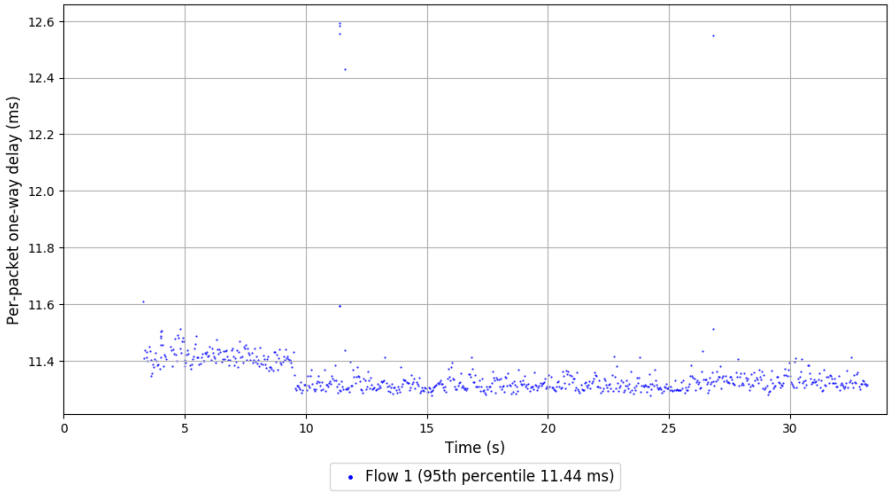
```
Run 3: Statistics of SCReAM

Start at: 2020-04-16 09:43:07
End at: 2020-04-16 09:43:37

# Below is generated by plot.py at 2020-04-16 09:46:16
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.22 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 11.442 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 11.442 ms
Loss rate: 0.13%
```

Run 3: Report of SCReAM — Data Link



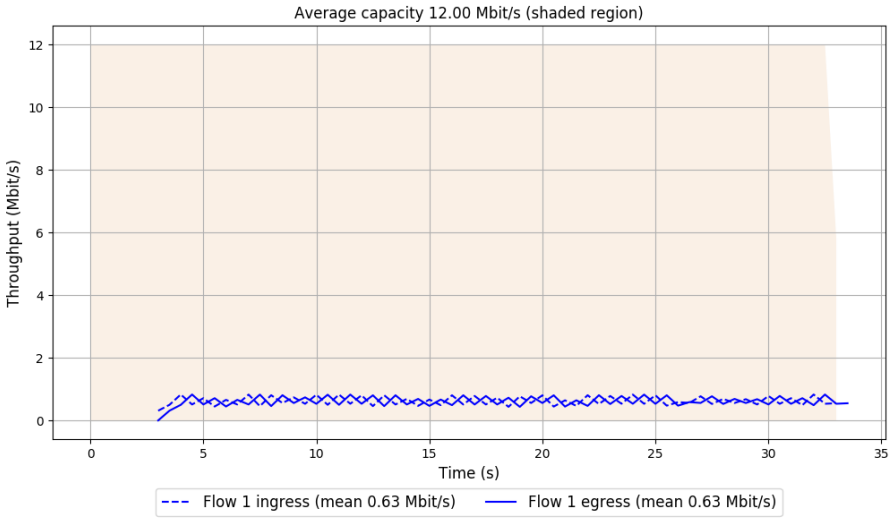


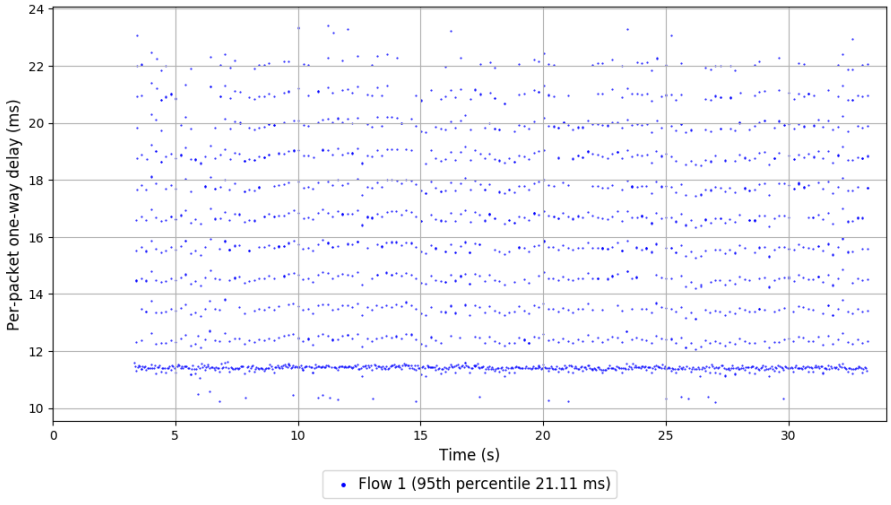
```
Run 1: Statistics of Sprout

Start at: 2020-04-16 09:12:20
End at: 2020-04-16 09:12:50

# Below is generated by plot.py at 2020-04-16 09:46:16
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.63 Mbit/s (5.3% utilization)
95th percentile per-packet one-way delay: 21.111 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 21.111 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link



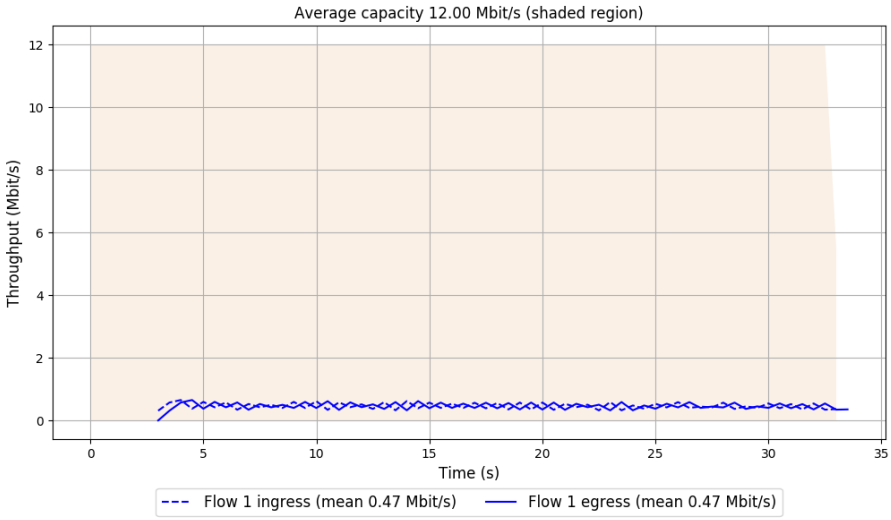


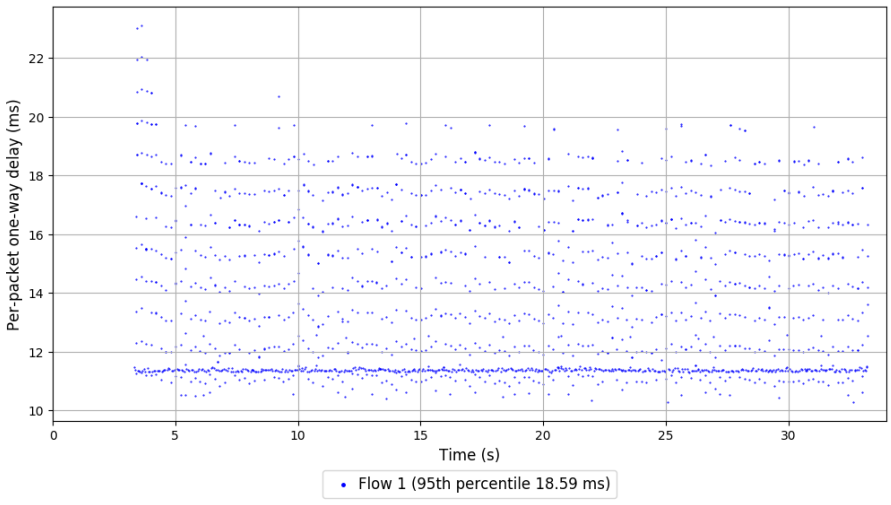
```
Run 2: Statistics of Sprout

Start at: 2020-04-16 09:26:17
End at: 2020-04-16 09:26:47

# Below is generated by plot.py at 2020-04-16 09:46:16
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.47 Mbit/s (3.9% utilization)
95th percentile per-packet one-way delay: 18.585 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 18.585 ms
Loss rate: 0.04%
```

Run 2: Report of Sprout — Data Link



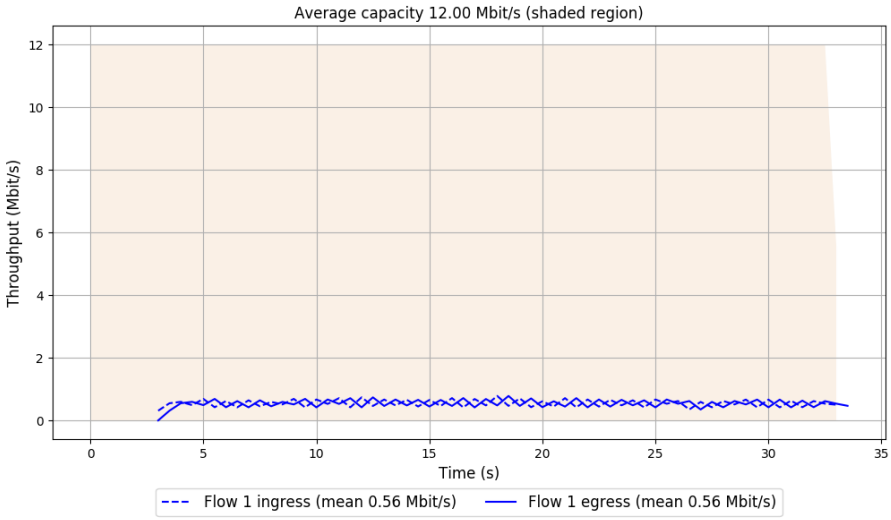


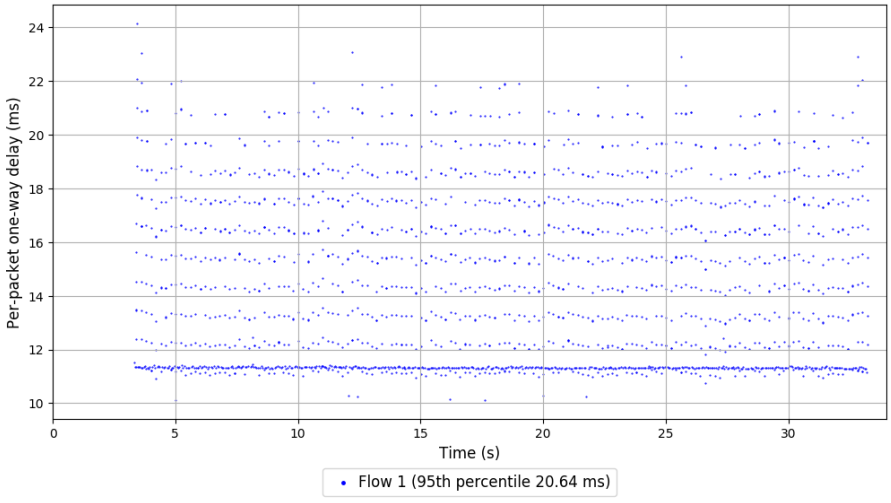
```
Run 3: Statistics of Sprout

Start at: 2020-04-16 09:40:13
End at: 2020-04-16 09:40:43

# Below is generated by plot.py at 2020-04-16 09:46:16
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.56 Mbit/s (4.7% utilization)
95th percentile per-packet one-way delay: 20.642 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 20.642 ms
Loss rate: 0.10%
```

Run 3: Report of Sprout — Data Link



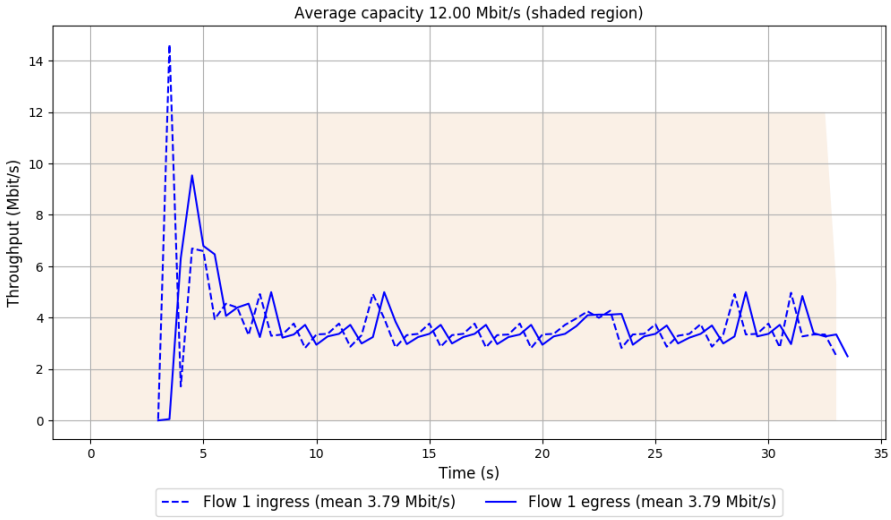


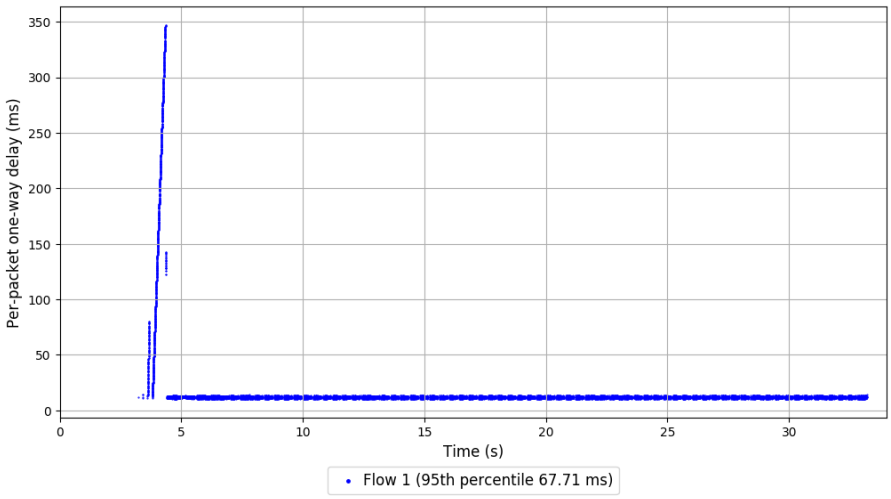
```
Run 1: Statistics of TaoVA-100x

Start at: 2020-04-16 09:14:39
End at: 2020-04-16 09:15:09

# Below is generated by plot.py at 2020-04-16 09:46:26
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.79 Mbit/s (31.6% utilization)
95th percentile per-packet one-way delay: 67.713 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 3.79 Mbit/s
95th percentile per-packet one-way delay: 67.713 ms
Loss rate: 0.04%
```

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



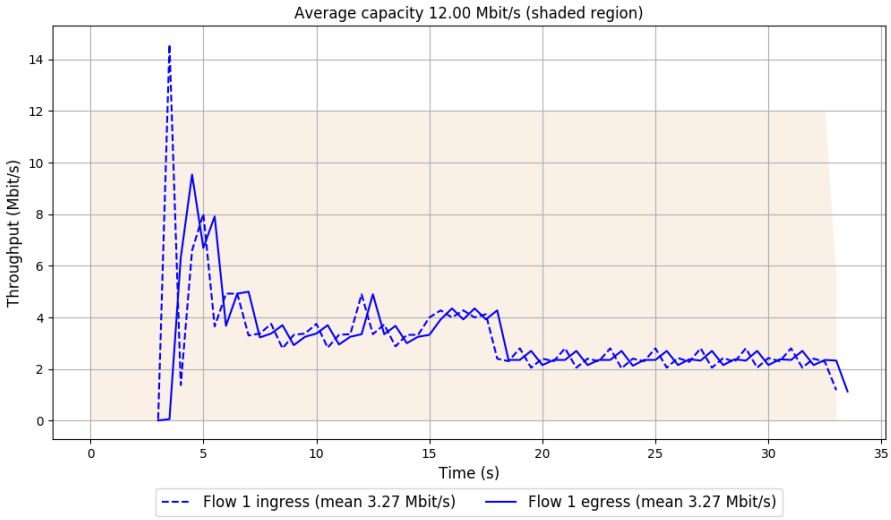


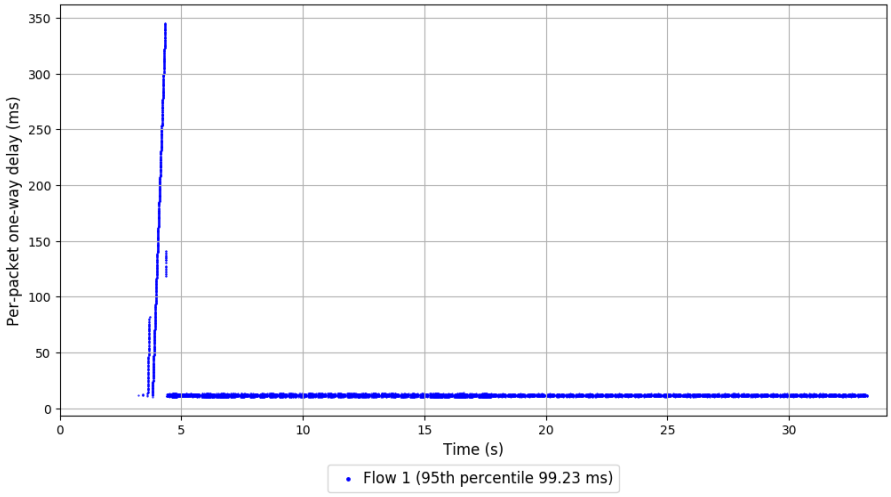
```
Run 2: Statistics of TaoVA-100x

Start at: 2020-04-16 09:28:36
End at: 2020-04-16 09:29:06

# Below is generated by plot.py at 2020-04-16 09:46:26
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.27 Mbit/s (27.2% utilization)
95th percentile per-packet one-way delay: 99.232 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 99.232 ms
Loss rate: 0.03%
```

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



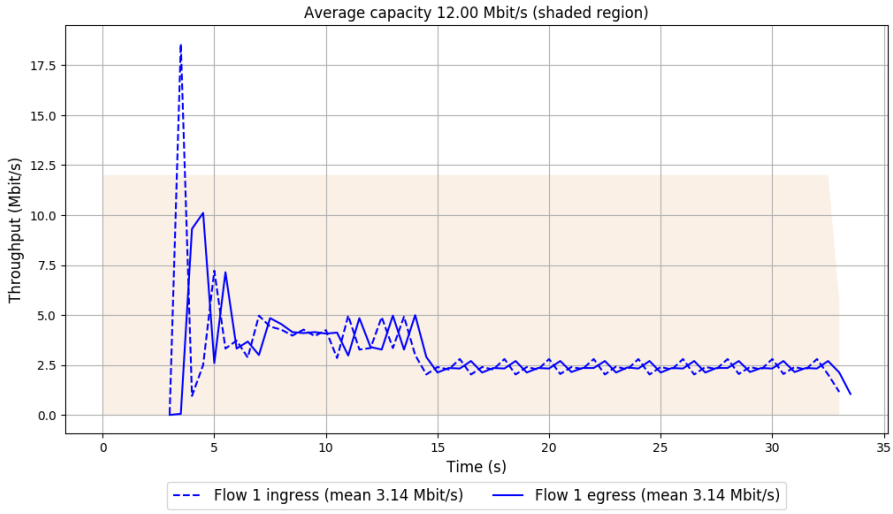


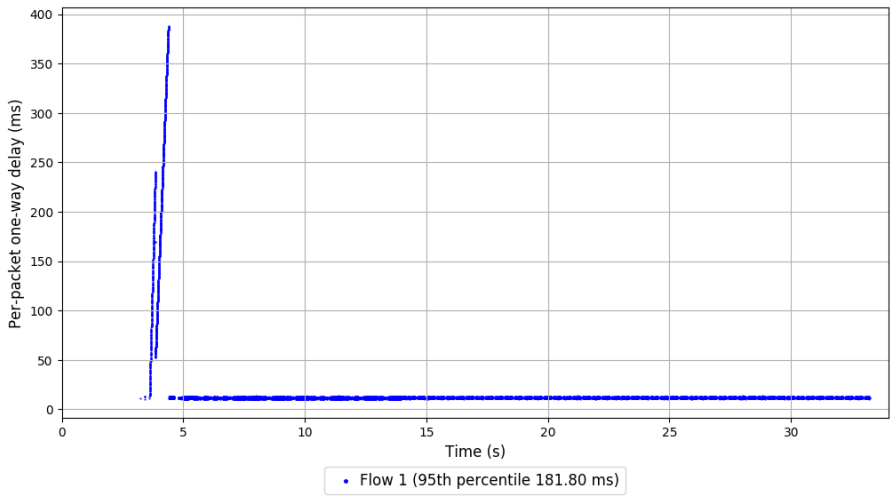
```
Run 3: Statistics of TaoVA-100x

Start at: 2020-04-16 09:42:32
End at: 2020-04-16 09:43:02

# Below is generated by plot.py at 2020-04-16 09:46:27
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.14 Mbit/s (26.2% utilization)
95th percentile per-packet one-way delay: 181.803 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 3.14 Mbit/s
95th percentile per-packet one-way delay: 181.803 ms
Loss rate: 0.05%
```

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



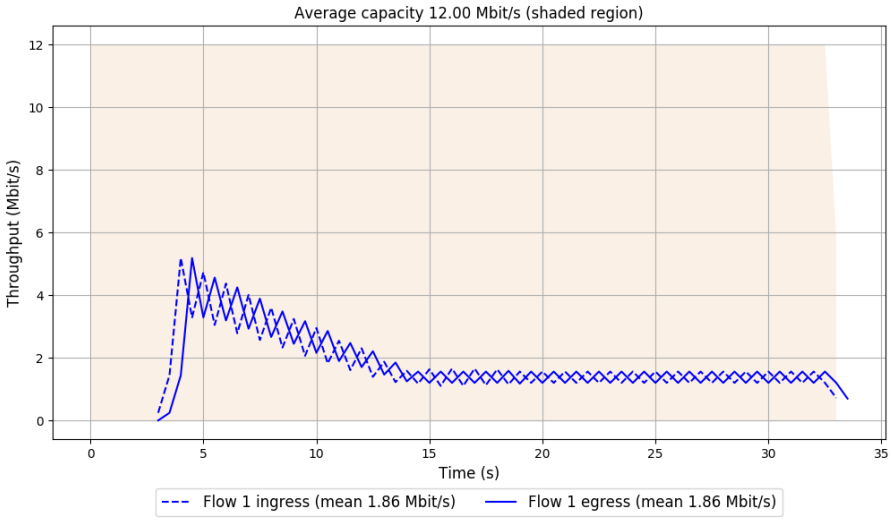


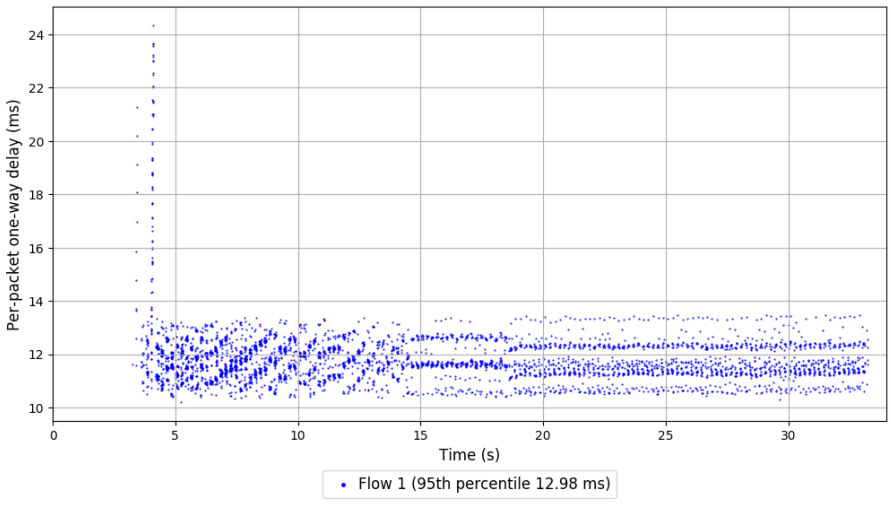
```
Run 1: Statistics of TCP Vegas

Start at: 2020-04-16 09:04:11
End at: 2020-04-16 09:04:41

# Below is generated by plot.py at 2020-04-16 09:46:27
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.86 Mbit/s (15.5% utilization)
95th percentile per-packet one-way delay: 12.977 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 12.977 ms
Loss rate: 0.06%
```

Run 1: Report of TCP Vegas — Data Link



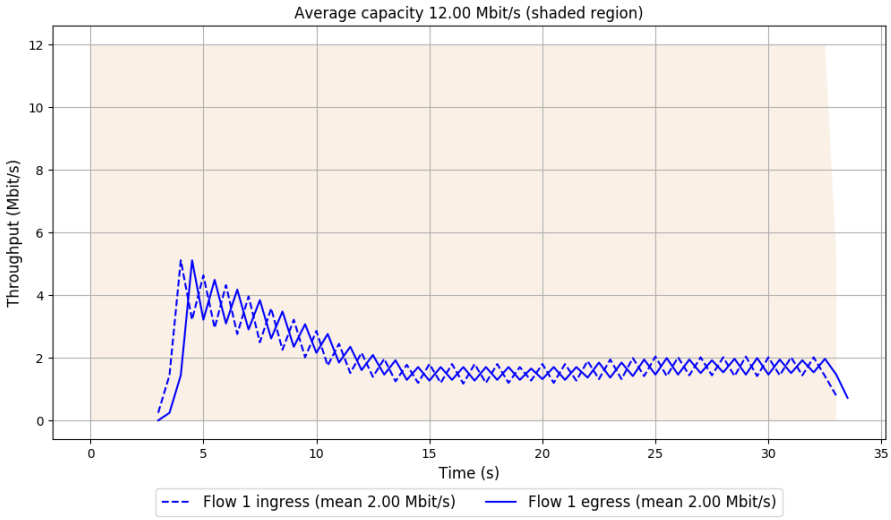


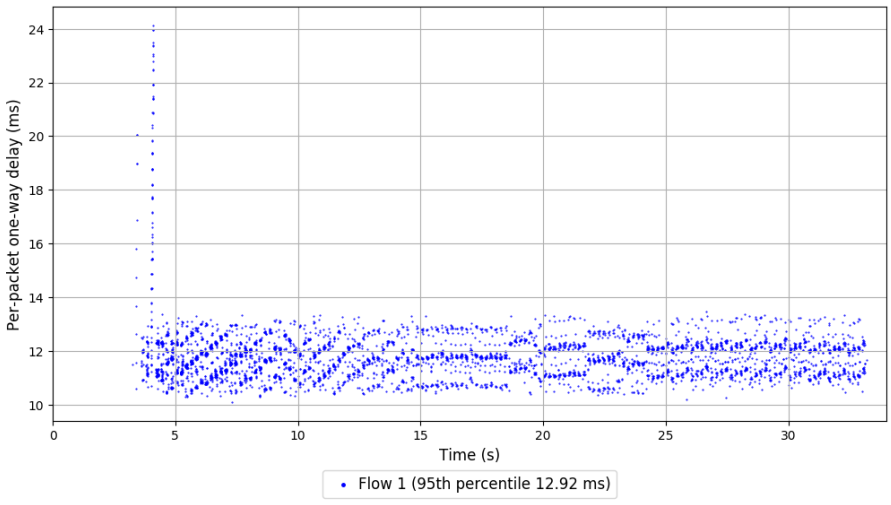
```
Run 2: Statistics of TCP Vegas

Start at: 2020-04-16 09:18:08
End at: 2020-04-16 09:18:38

# Below is generated by plot.py at 2020-04-16 09:46:27
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.00 Mbit/s (16.6% utilization)
95th percentile per-packet one-way delay: 12.920 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 12.920 ms
Loss rate: 0.06%
```

Run 2: Report of TCP Vegas — Data Link



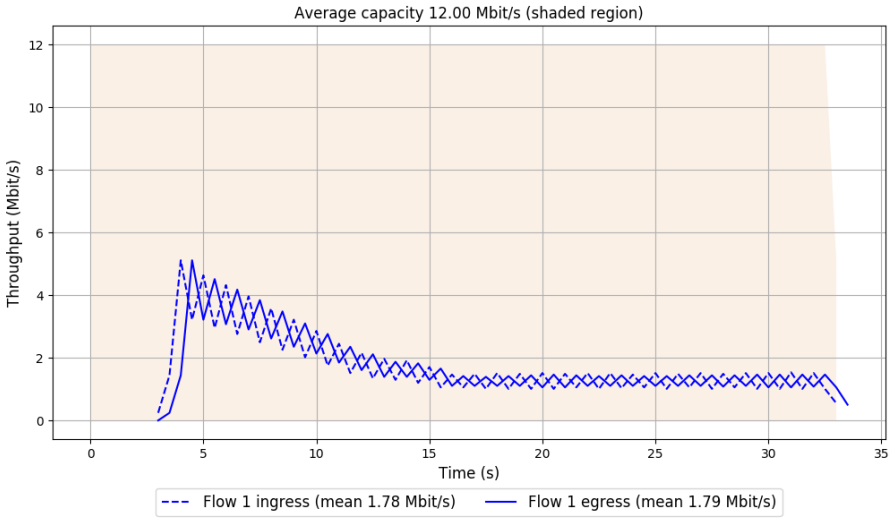


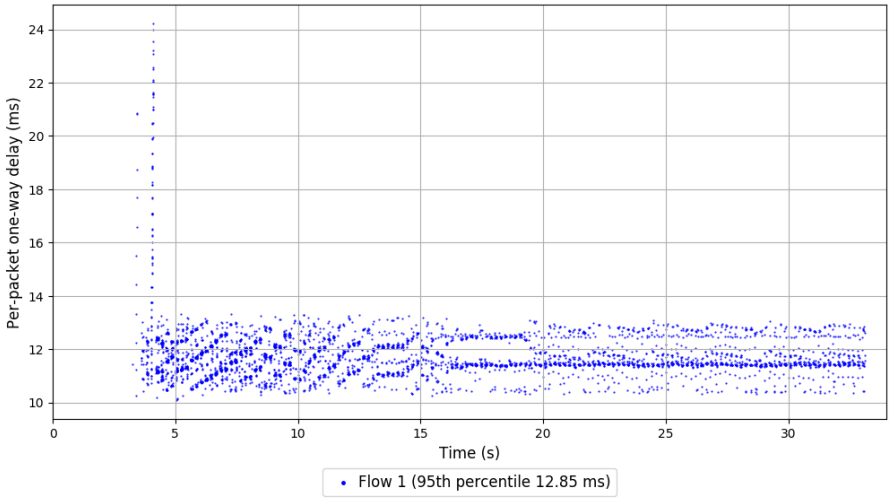
```
Run 3: Statistics of TCP Vegas

Start at: 2020-04-16 09:32:04
End at: 2020-04-16 09:32:34

# Below is generated by plot.py at 2020-04-16 09:46:27
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.79 Mbit/s (14.9% utilization)
95th percentile per-packet one-way delay: 12.847 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 12.847 ms
Loss rate: 0.04%
```

Run 3: Report of TCP Vegas — Data Link



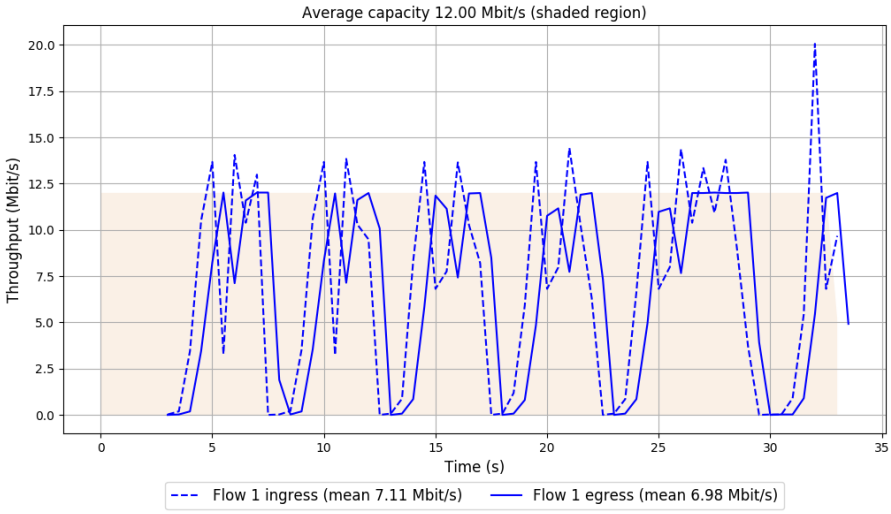


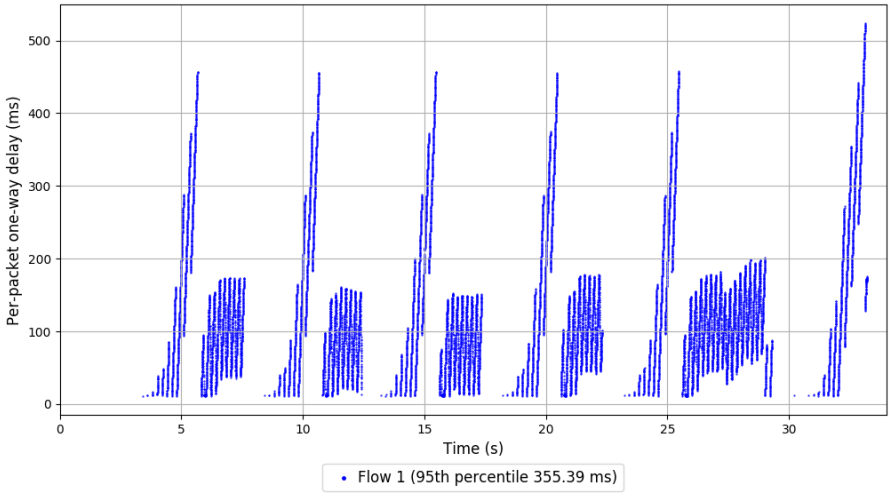
```
Run 1: Statistics of Verus

Start at: 2020-04-16 09:09:25
End at: 2020-04-16 09:09:55

# Below is generated by plot.py at 2020-04-16 09:46:33
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 6.98 Mbit/s (58.2% utilization)
95th percentile per-packet one-way delay: 355.395 ms
Loss rate: 1.86%
-- Flow 1:
Average throughput: 6.98 Mbit/s
95th percentile per-packet one-way delay: 355.395 ms
Loss rate: 1.86%
```

Run 1: Report of Verus — Data Link



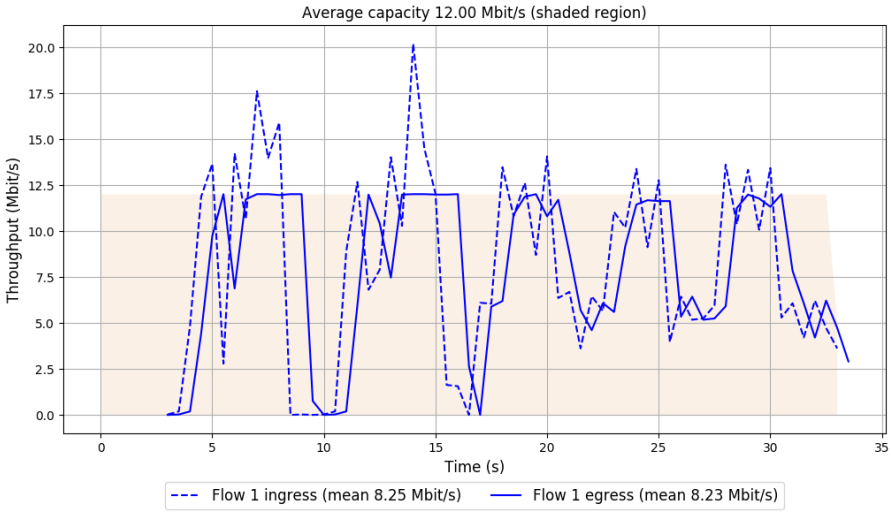


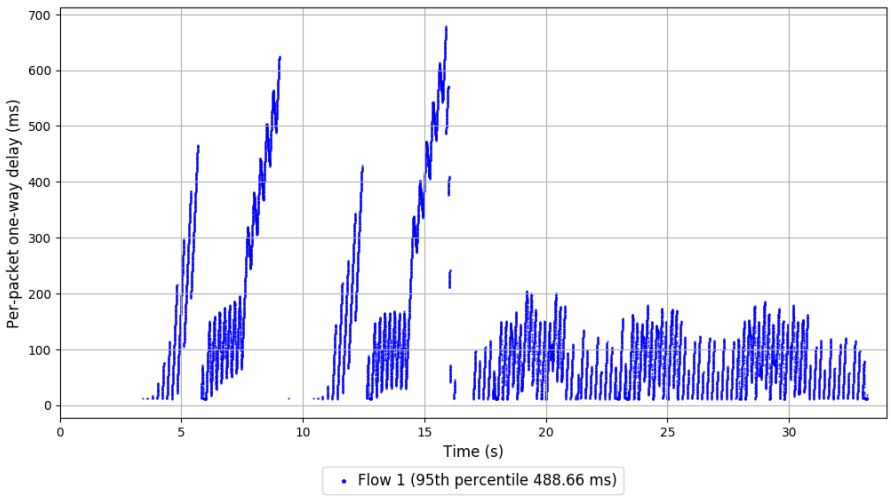
```
Run 2: Statistics of Verus

Start at: 2020-04-16 09:23:22
End at: 2020-04-16 09:23:52

# Below is generated by plot.py at 2020-04-16 09:46:36
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 8.23 Mbit/s (68.6% utilization)
95th percentile per-packet one-way delay: 488.660 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 488.660 ms
Loss rate: 0.14%
```

Run 2: Report of Verus — Data Link



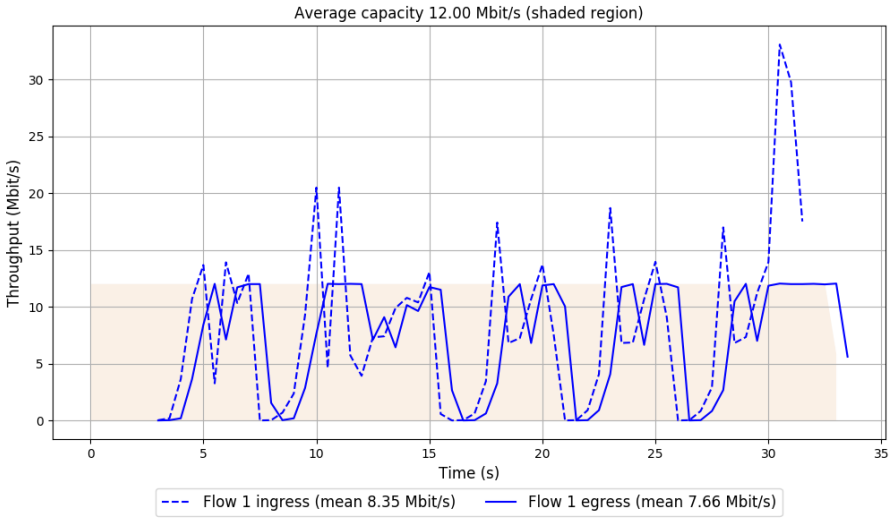


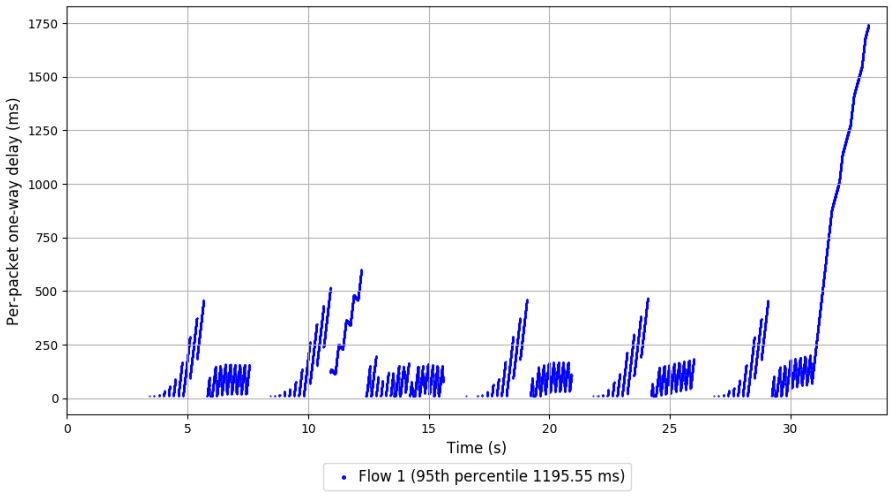
```
Run 3: Statistics of Verus

Start at: 2020-04-16 09:37:19
End at: 2020-04-16 09:37:49

# Below is generated by plot.py at 2020-04-16 09:46:41
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 7.66 Mbit/s (63.8% utilization)
95th percentile per-packet one-way delay: 1195.549 ms
Loss rate: 3.76%
-- Flow 1:
Average throughput: 7.66 Mbit/s
95th percentile per-packet one-way delay: 1195.549 ms
Loss rate: 3.76%
```

Run 3: Report of Verus — Data Link



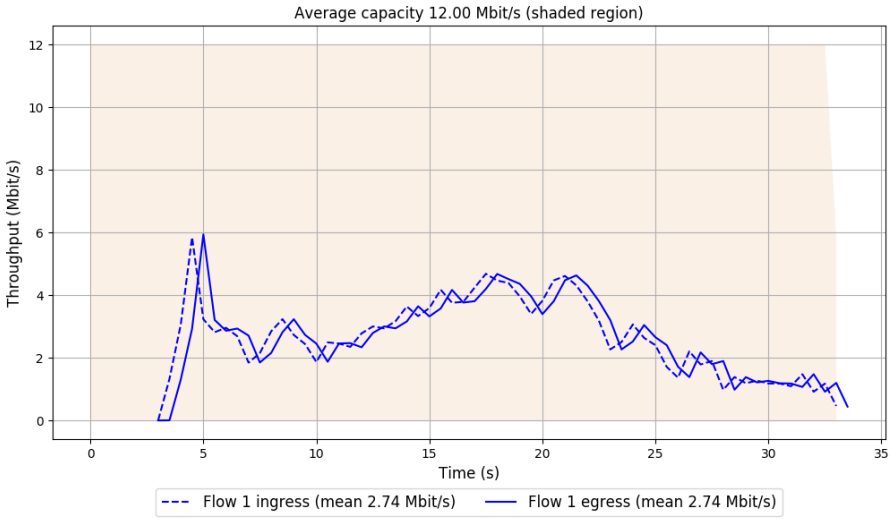


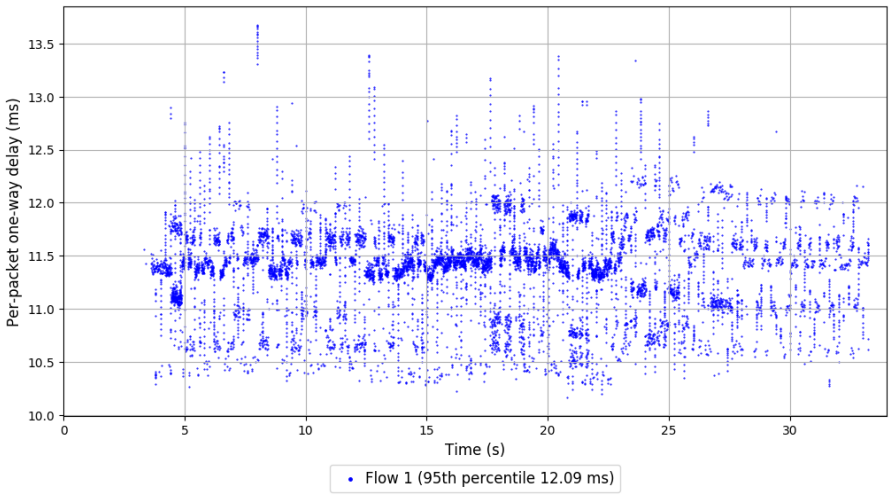
```
Run 1: Statistics of PCC-Vivace

Start at: 2020-04-16 09:03:01
End at: 2020-04-16 09:03:31

# Below is generated by plot.py at 2020-04-16 09:46:41
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.74 Mbit/s (22.8% utilization)
95th percentile per-packet one-way delay: 12.093 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 12.093 ms
Loss rate: 0.03%
```

Run 1: Report of PCC-Vivace — Data Link



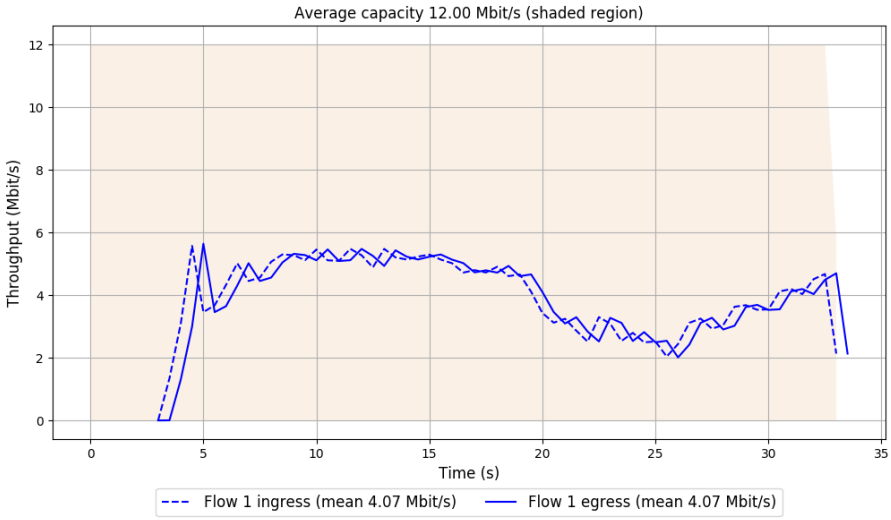


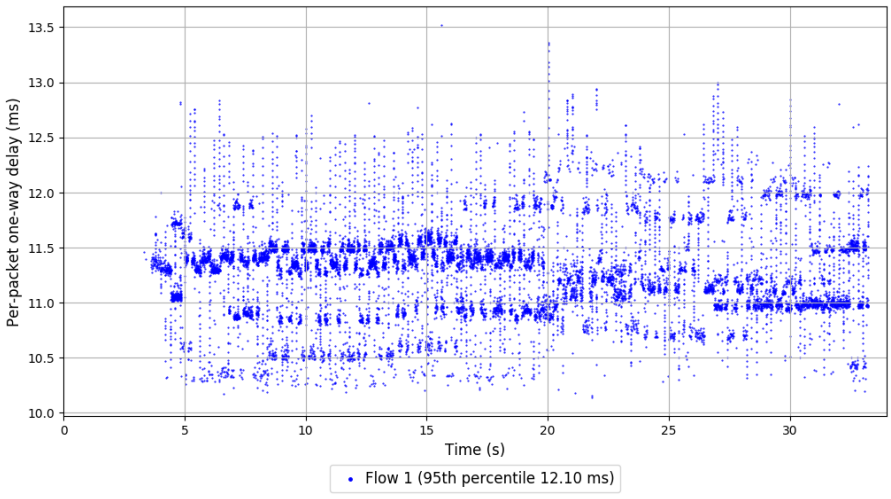
```
Run 2: Statistics of PCC-Vivace

Start at: 2020-04-16 09:16:58
End at: 2020-04-16 09:17:28

# Below is generated by plot.py at 2020-04-16 09:46:41
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 4.07 Mbit/s (33.9% utilization)
95th percentile per-packet one-way delay: 12.104 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 12.104 ms
Loss rate: 0.04%
```

Run 2: Report of PCC-Vivace — Data Link



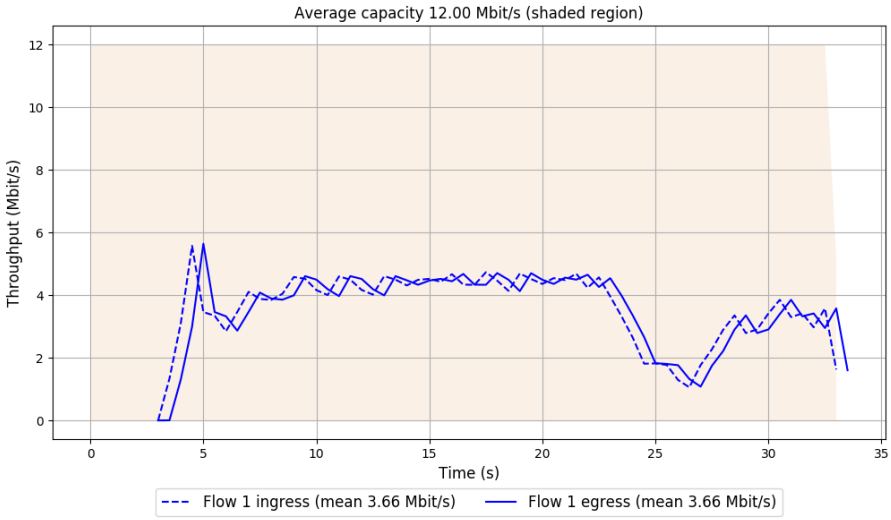


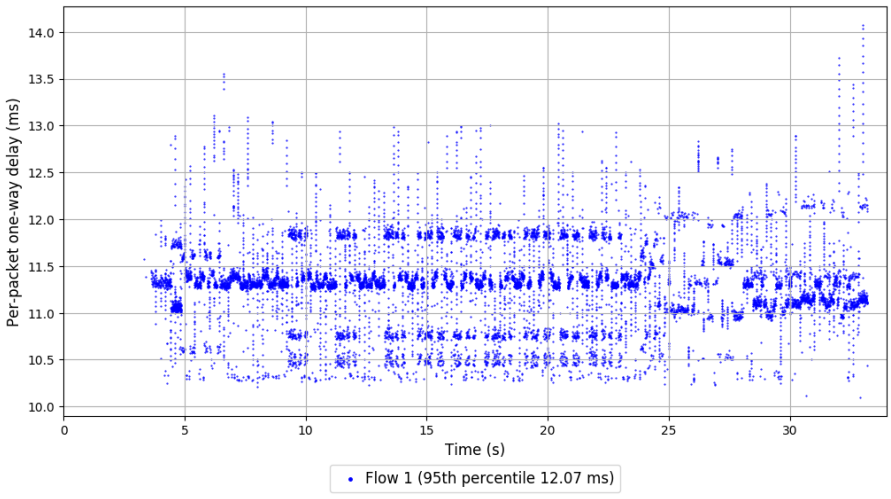
```
Run 3: Statistics of PCC-Vivace

Start at: 2020-04-16 09:30:55
End at: 2020-04-16 09:31:25

# Below is generated by plot.py at 2020-04-16 09:46:41
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.66 Mbit/s (30.5% utilization)
95th percentile per-packet one-way delay: 12.066 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 3.66 Mbit/s
95th percentile per-packet one-way delay: 12.066 ms
Loss rate: 0.05%
```

Run 3: Report of PCC-Vivace — Data Link

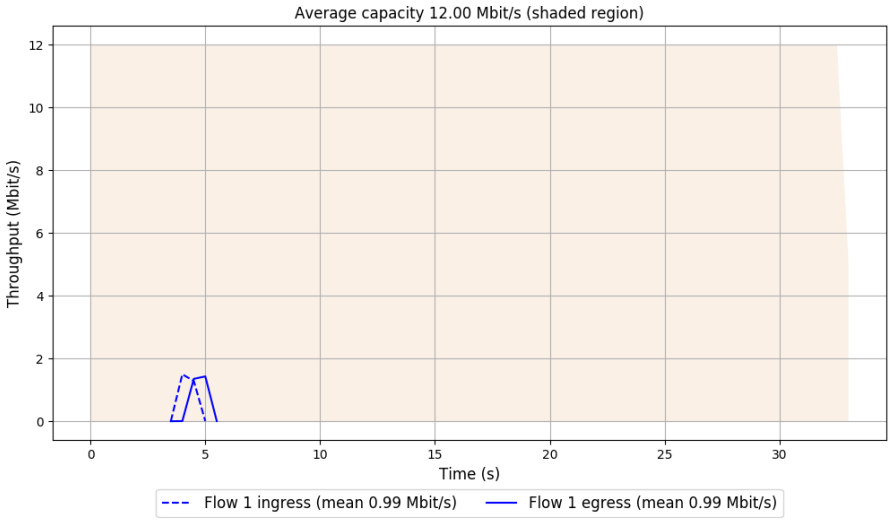


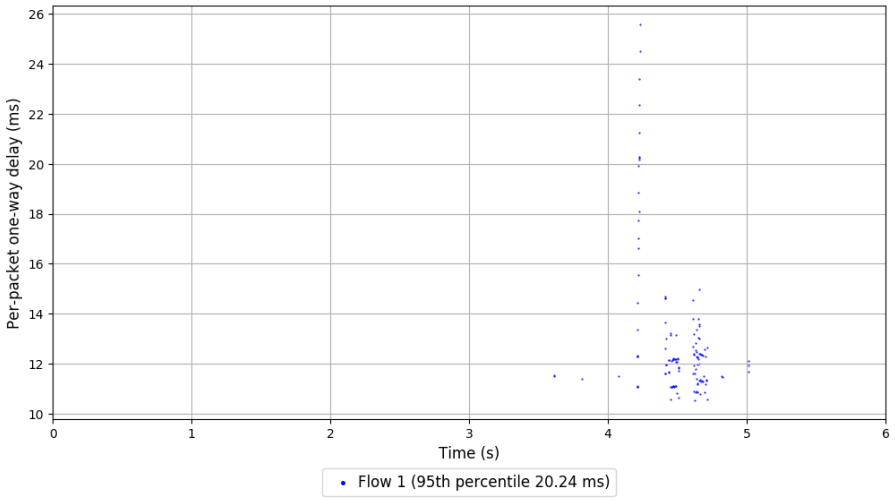


```
Run 1: Statistics of WebRTC media

Start at: 2020-04-16 09:10:35
End at: 2020-04-16 09:11:05
```

Run 1: Report of WebRTC media — Data Link

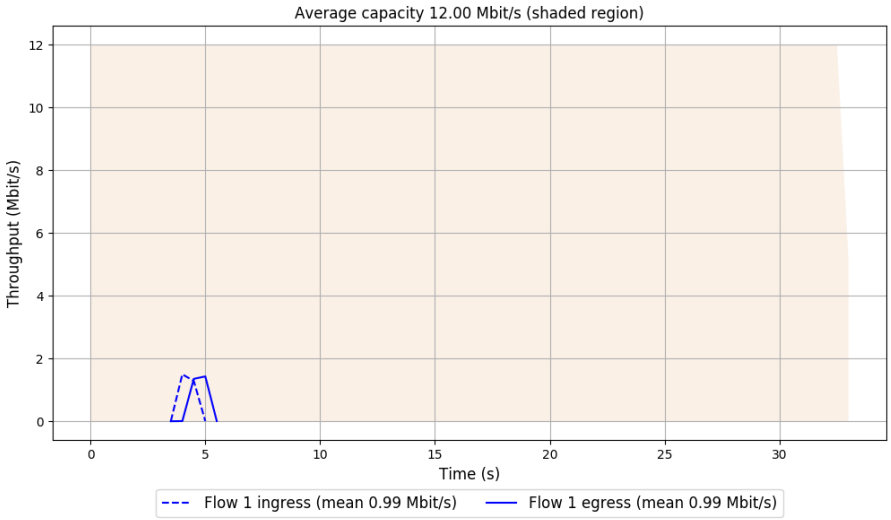


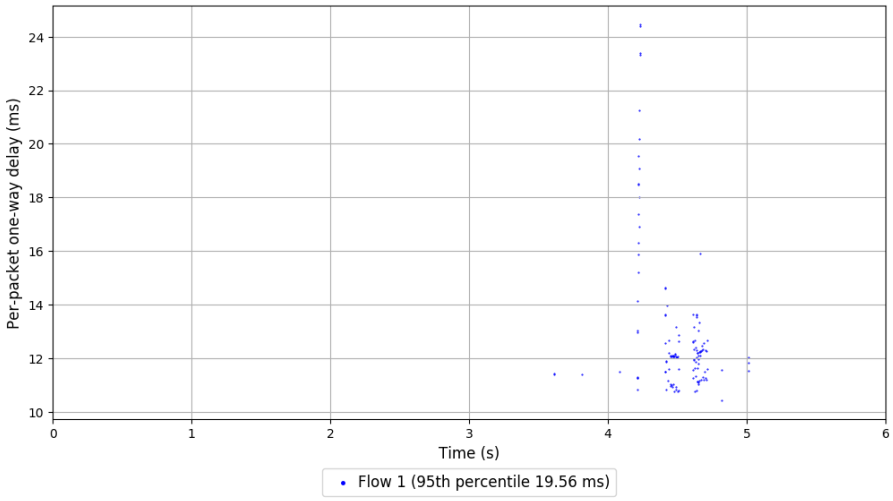


```
Run 2: Statistics of WebRTC media

Start at: 2020-04-16 09:24:32
End at: 2020-04-16 09:25:02
```

Run 2: Report of WebRTC media — Data Link





```
Run 3: Statistics of WebRTC media

Start at: 2020-04-16 09:38:29
End at: 2020-04-16 09:38:59
```

Run 3: Report of WebRTC media — Data Link