

# Pantheon Report

Generated at 2020-04-16 09:00:55 (UTC).

Tested in mahimahi: mm-delay 50 mm-link 108mbps.trace 108mbps.trace  
--uplink-queue=droptail --uplink-queue-args=packets=1 --downlink-queue=droptail  
--downlink-queue-args=packets=1

Repeated the test of 24 congestion control schemes 3 times.

Each test lasted for 30 seconds running 1 flow.

## System info:

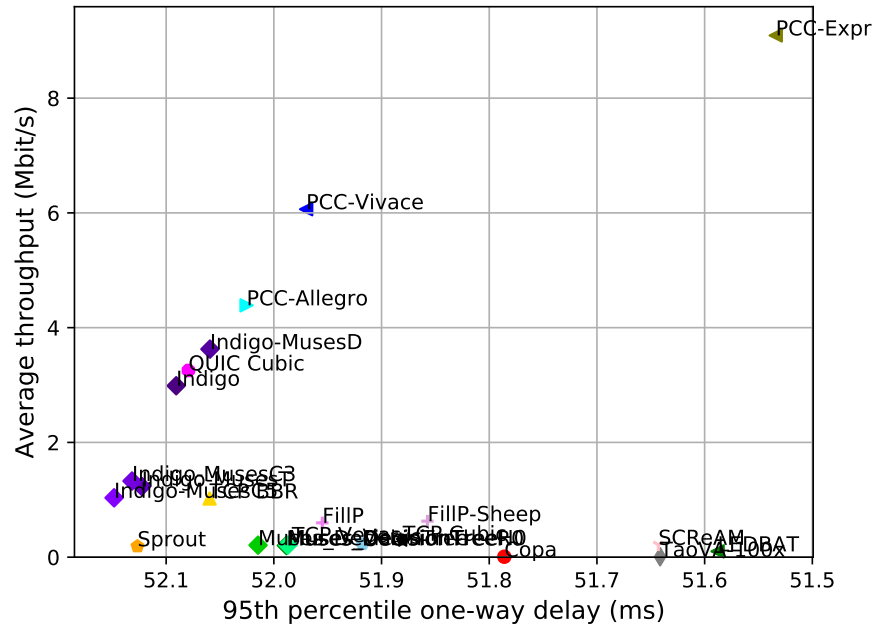
Linux 5.0.0-1031-gcp  
net.core.default\_qdisc = fq  
net.core.rmem\_default = 16777216  
net.core.rmem\_max = 536870912  
net.core.wmem\_default = 16777216  
net.core.wmem\_max = 536870912  
net.ipv4.tcp\_rmem = 4096 16777216 536870912  
net.ipv4.tcp\_wmem = 4096 16777216 536870912

## Git summary:

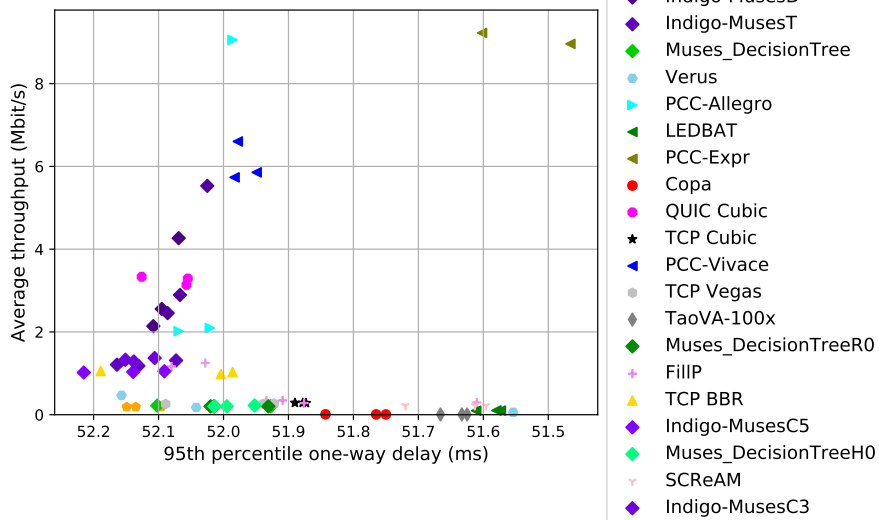
branch: muses @ de42328552b3776a75a932a94dfafd722537b0ec  
third\_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519  
third\_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9  
third\_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4  
third\_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d  
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-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42  
third\_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2  
M src/ScreamClient  
M src/ScreamServer  
third\_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26  
M src/examples/cellsim.cc  
M src/examples/sproutbt2.cc  
M src/network/sproutconn.cc  
third\_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494  
M src/verus.hpp  
M tools/plot.py

third\_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4  
third\_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

local test in mahimahi, 3 runs of 30s each per scheme  
 (mean of all runs by scheme)



local test in mahimahi, 3 runs of 30s each per scheme



scheme	# runs	mean avg tput (Mbit/s)	mean 95th-%ile delay (ms)	mean loss rate (%)
		flow 1	flow 1	flow 1
TCP BBR	3	1.02	52.06	9.80
Copa	3	0.01	51.79	88.64
TCP Cubic	3	0.29	51.88	12.71
FillP	3	0.60	51.95	45.65
FillP-Sheep	3	0.63	51.86	34.55
Indigo	3	2.99	52.09	96.99
Indigo-MusesC3	3	1.33	52.13	31.83
Indigo-MusesC5	3	1.03	52.15	38.69
Indigo-MusesD	3	3.63	52.06	42.04
Indigo-MusesT	3	1.23	52.12	24.02
LEDBAT	3	0.10	51.59	36.58
Muses_DecisionTree	3	0.21	52.01	11.27
Muses_DecisionTreeH0	3	0.21	51.99	7.36
Muses_DecisionTreeR0	3	0.20	51.99	1.91
PCC-Allegro	3	4.39	52.03	2.73
PCC-Expr	2	9.10	51.53	96.56
QUIC Cubic	3	3.25	52.08	1.36
SCReAM	3	0.21	51.64	0.22
Sprout	3	0.19	52.13	8.35
TaoVA-100x	3	0.01	51.64	51.91
TCP Vegas	3	0.26	51.98	14.19
Verus	3	0.24	51.92	77.92
PCC-Vivace	3	6.06	51.97	0.50
WebRTC media	0	N/A	N/A	N/A

Run 1: Statistics of TCP BBR

Start at: 2020-04-16 08:24:43

End at: 2020-04-16 08:25:13

# Below is generated by plot.py at 2020-04-16 08:55:32

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.06 Mbit/s (1.0% utilization)

95th percentile per-packet one-way delay: 52.189 ms

Loss rate: 10.52%

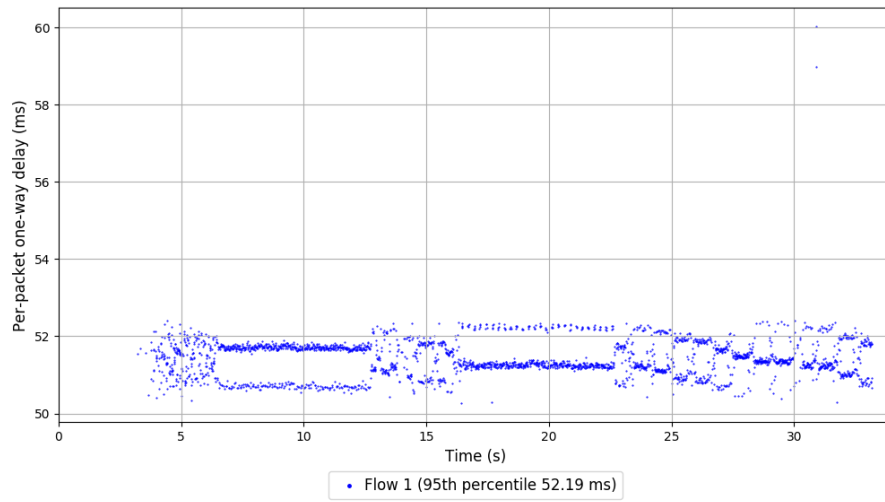
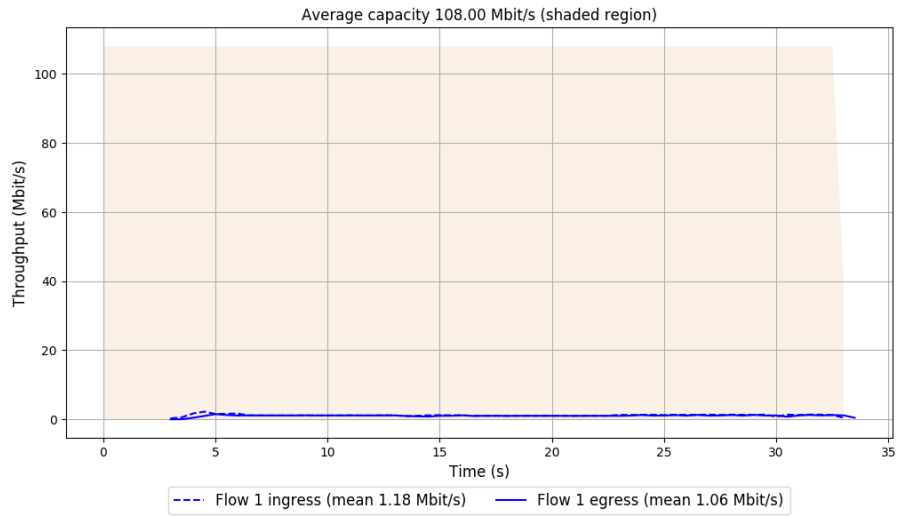
-- Flow 1:

Average throughput: 1.06 Mbit/s

95th percentile per-packet one-way delay: 52.189 ms

Loss rate: 10.52%

# Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2020-04-16 08:39:25

End at: 2020-04-16 08:39:55

# Below is generated by plot.py at 2020-04-16 08:55:32

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.98 Mbit/s (0.9% utilization)

95th percentile per-packet one-way delay: 52.004 ms

Loss rate: 8.75%

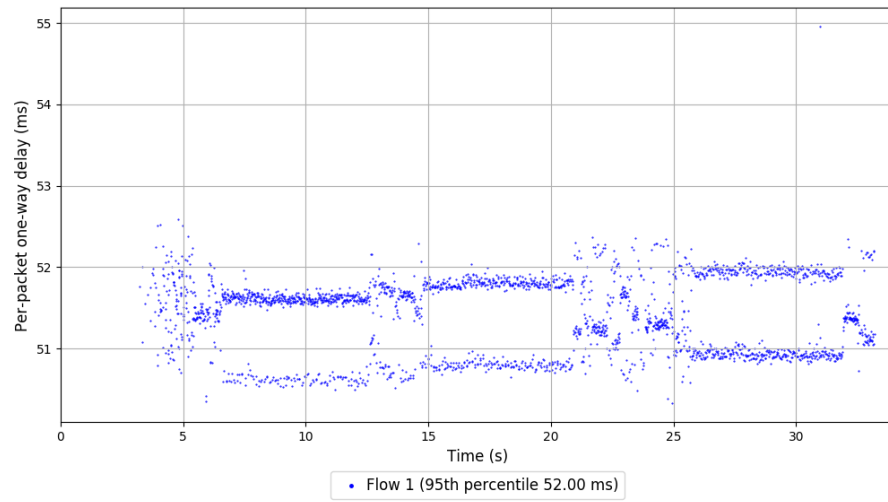
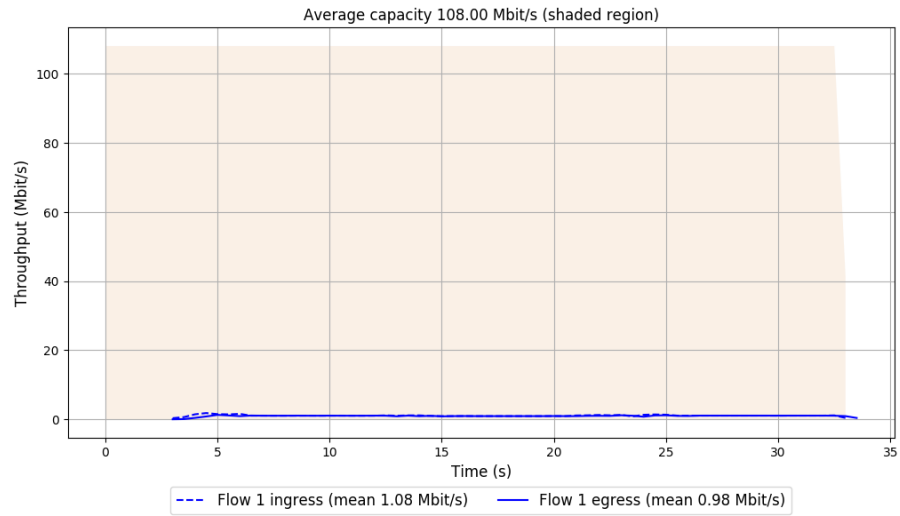
-- Flow 1:

Average throughput: 0.98 Mbit/s

95th percentile per-packet one-way delay: 52.004 ms

Loss rate: 8.75%

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



Run 3: Statistics of TCP BBR

Start at: 2020-04-16 08:54:04

End at: 2020-04-16 08:54:34

# Below is generated by plot.py at 2020-04-16 08:55:32

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.03 Mbit/s (1.0% utilization)

95th percentile per-packet one-way delay: 51.986 ms

Loss rate: 10.14%

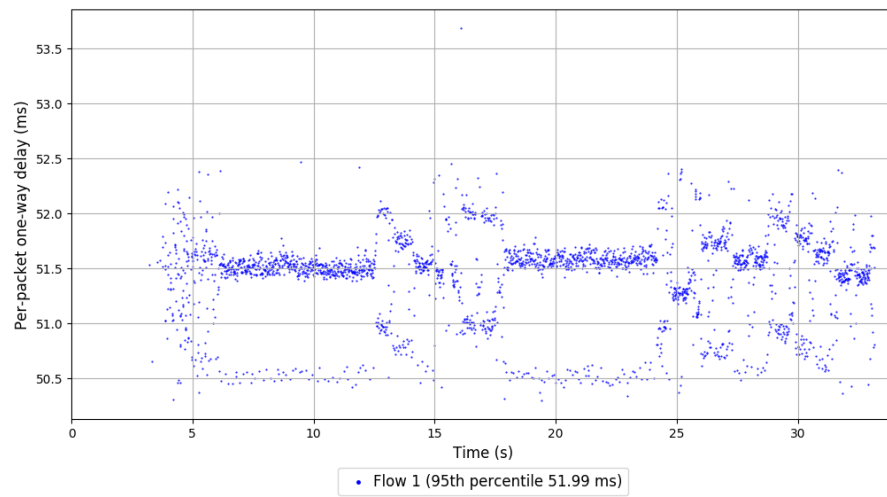
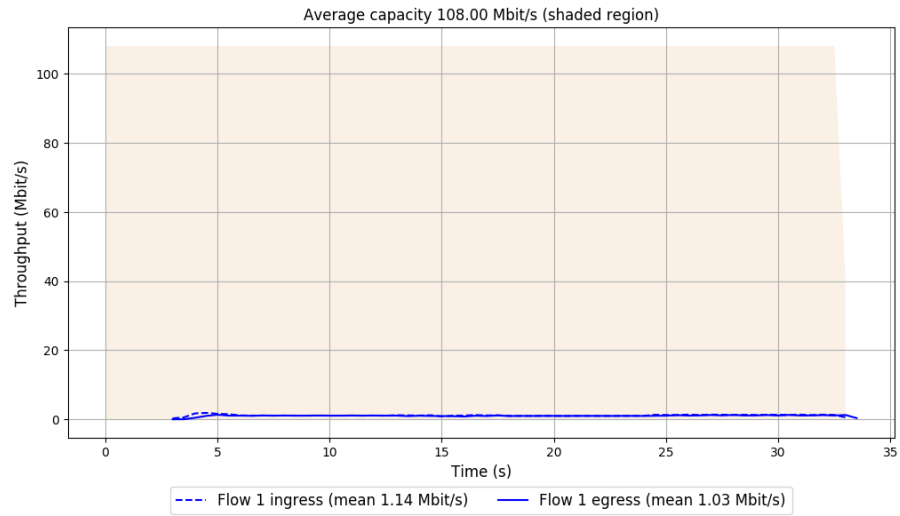
-- Flow 1:

Average throughput: 1.03 Mbit/s

95th percentile per-packet one-way delay: 51.986 ms

Loss rate: 10.14%

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



Run 1: Statistics of Copa

Start at: 2020-04-16 08:22:19

End at: 2020-04-16 08:22:49

# Below is generated by plot.py at 2020-04-16 08:55:32

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.01 Mbit/s (0.0% utilization)

95th percentile per-packet one-way delay: 51.765 ms

Loss rate: 89.03%

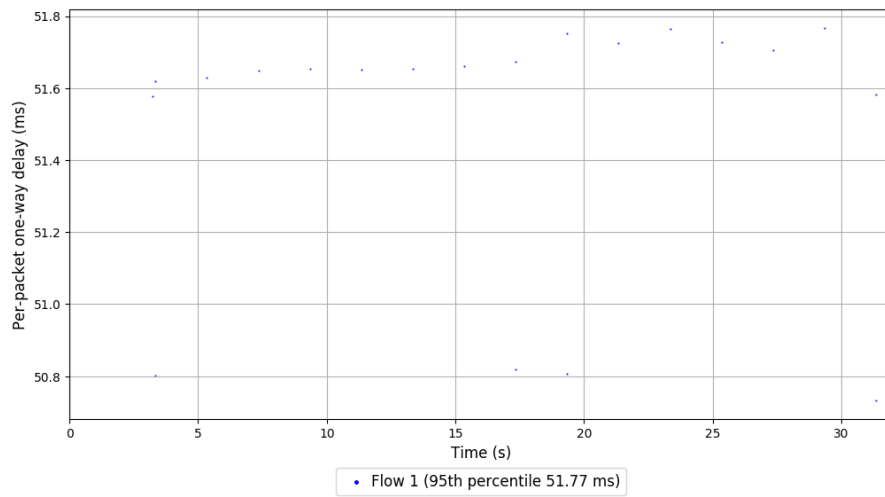
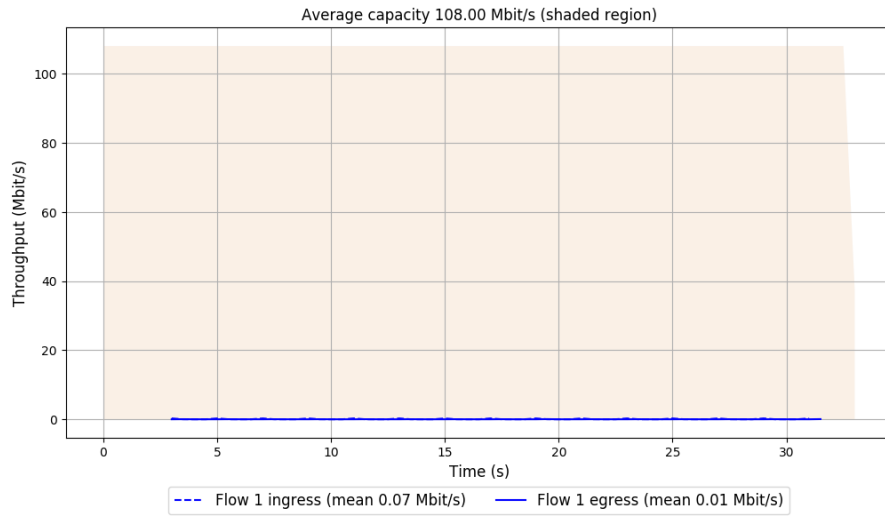
-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 51.765 ms

Loss rate: 89.03%

# Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2020-04-16 08:37:00

End at: 2020-04-16 08:37:30

# Below is generated by plot.py at 2020-04-16 08:55:32

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.01 Mbit/s (0.0% utilization)

95th percentile per-packet one-way delay: 51.843 ms

Loss rate: 86.52%

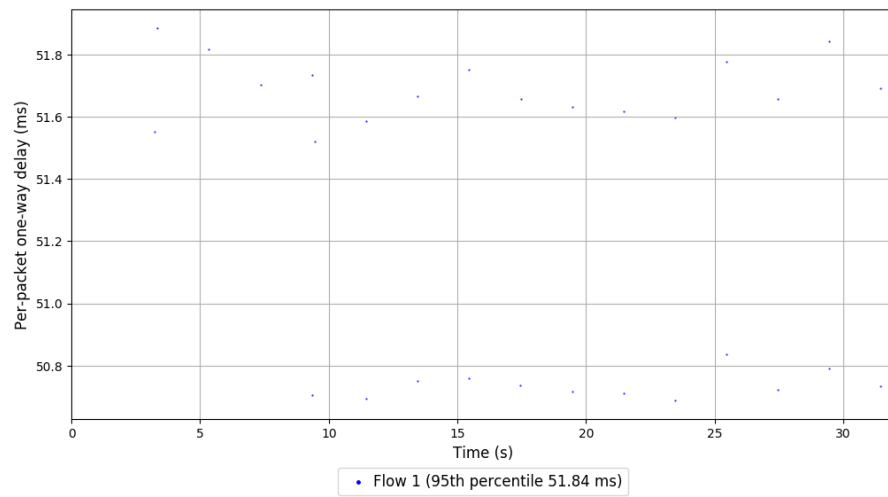
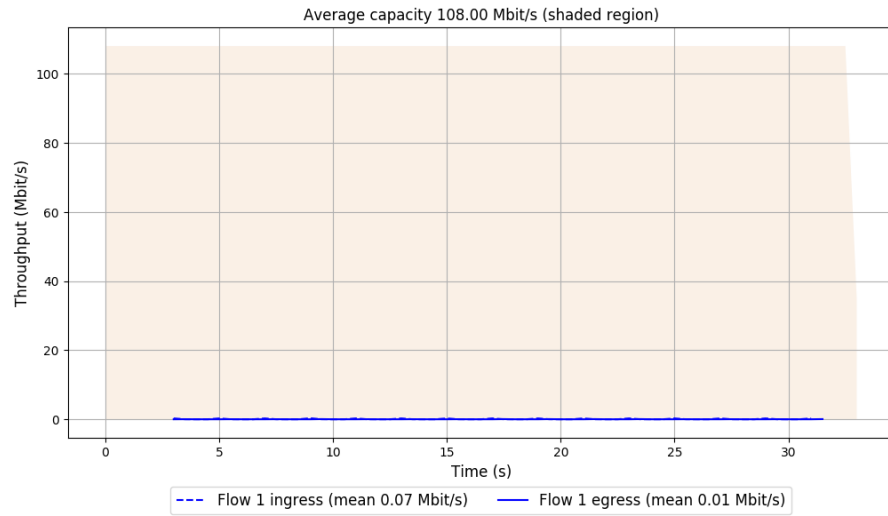
-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 51.843 ms

Loss rate: 86.52%

## Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2020-04-16 08:51:39

End at: 2020-04-16 08:52:09

# Below is generated by plot.py at 2020-04-16 08:55:32

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.01 Mbit/s (0.0% utilization)

95th percentile per-packet one-way delay: 51.750 ms

Loss rate: 90.36%

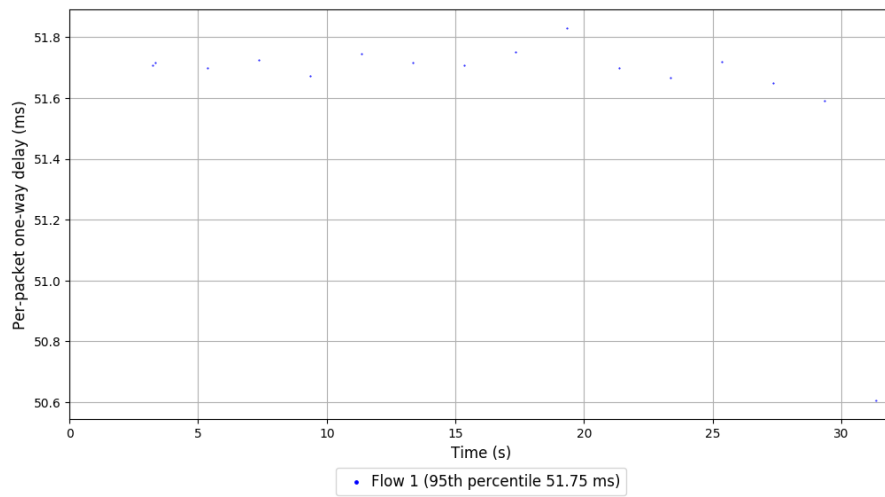
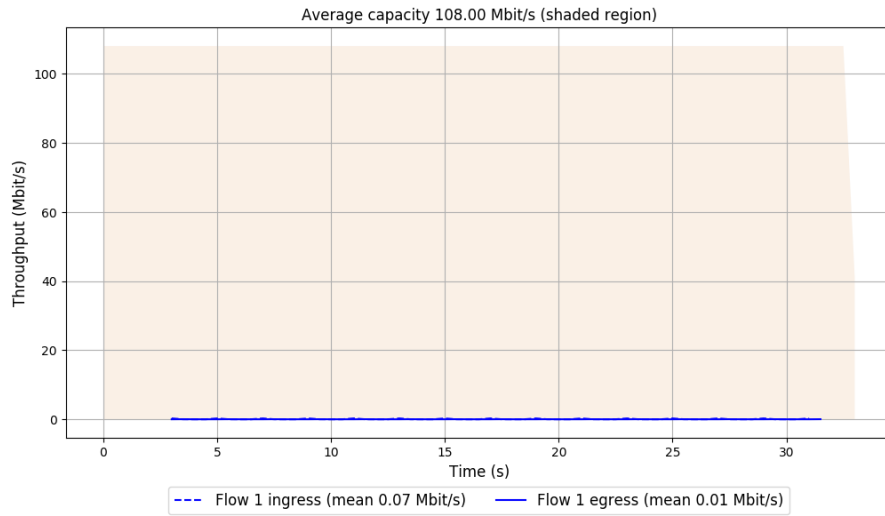
-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 51.750 ms

Loss rate: 90.36%

### Run 3: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2020-04-16 08:18:41

End at: 2020-04-16 08:19:11

# Below is generated by plot.py at 2020-04-16 08:55:32

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.29 Mbit/s (0.3% utilization)

95th percentile per-packet one-way delay: 51.878 ms

Loss rate: 12.70%

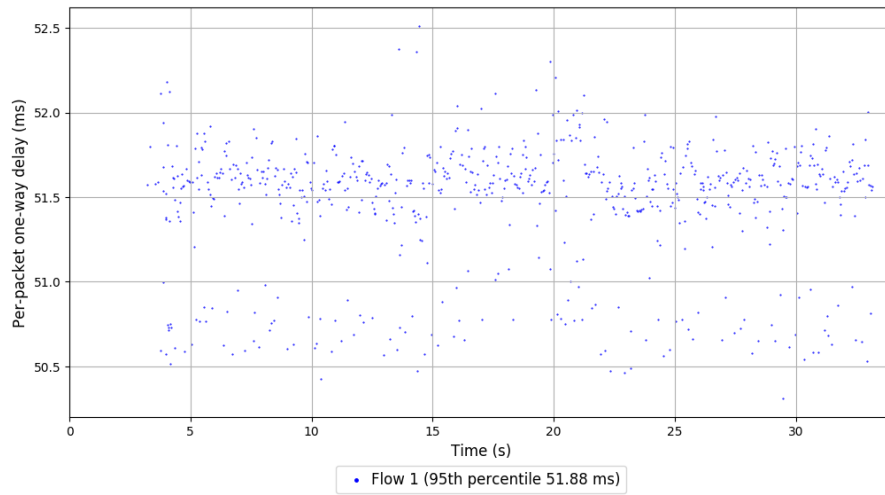
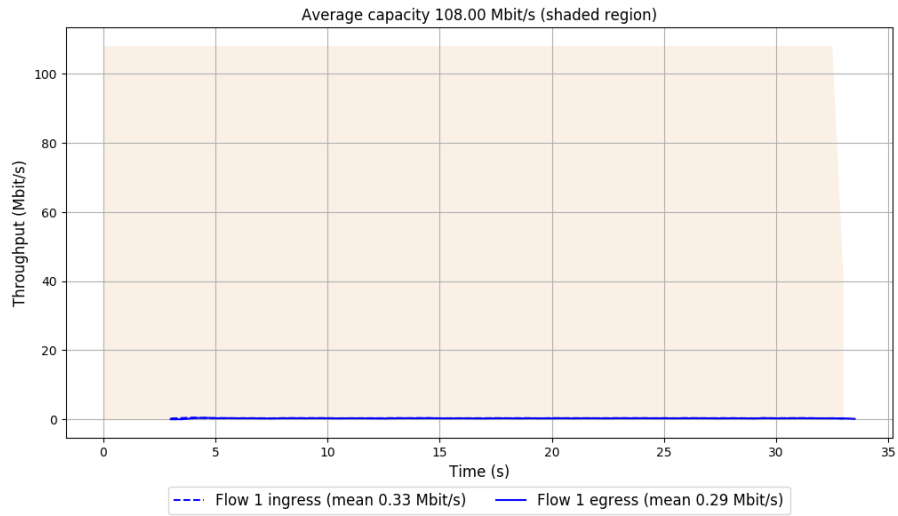
-- Flow 1:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 51.878 ms

Loss rate: 12.70%

# Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2020-04-16 08:33:22

End at: 2020-04-16 08:33:52

# Below is generated by plot.py at 2020-04-16 08:55:32

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.28 Mbit/s (0.3% utilization)

95th percentile per-packet one-way delay: 51.873 ms

Loss rate: 13.19%

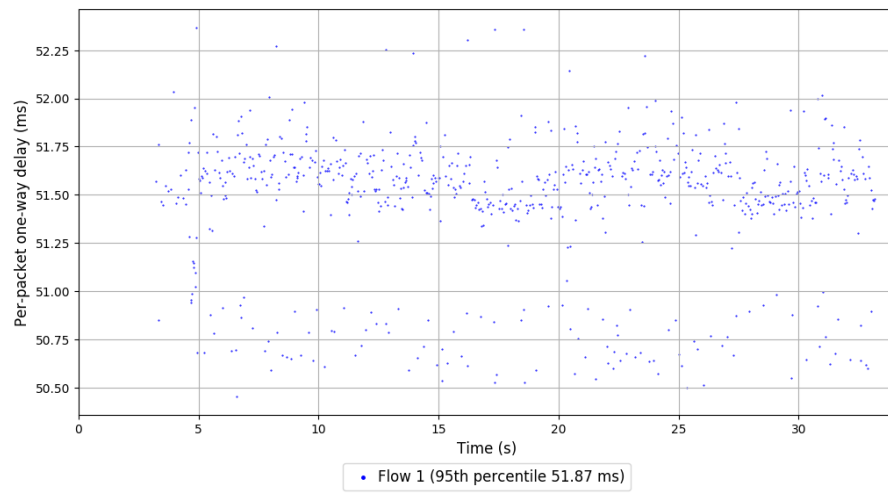
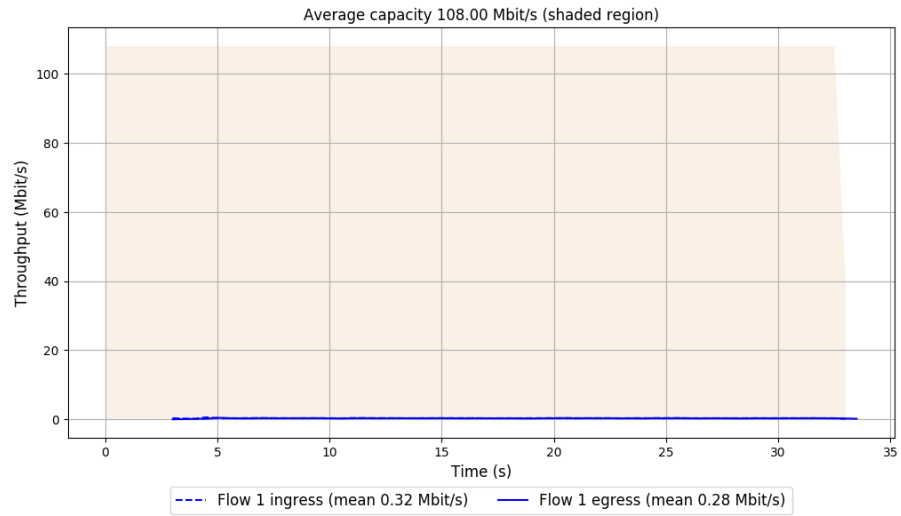
-- Flow 1:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 51.873 ms

Loss rate: 13.19%

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



Run 3: Statistics of TCP Cubic

Start at: 2020-04-16 08:48:02

End at: 2020-04-16 08:48:32

# Below is generated by plot.py at 2020-04-16 08:55:58

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.29 Mbit/s (0.3% utilization)

95th percentile per-packet one-way delay: 51.890 ms

Loss rate: 12.24%

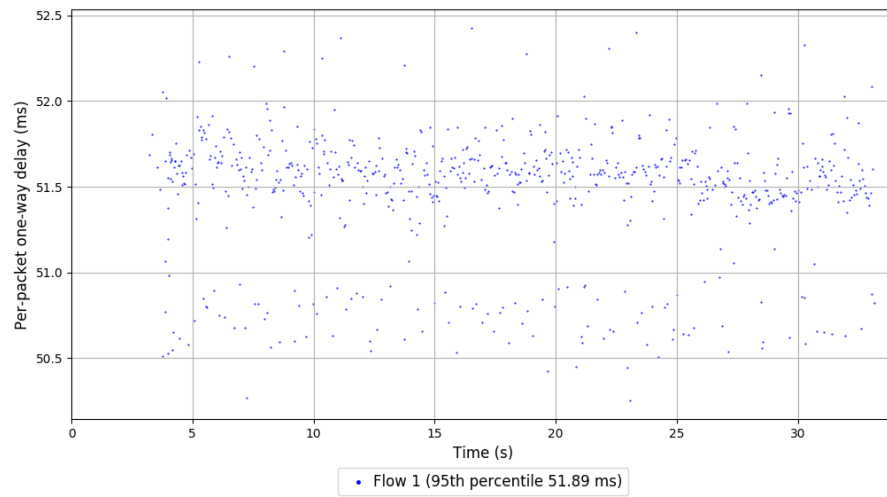
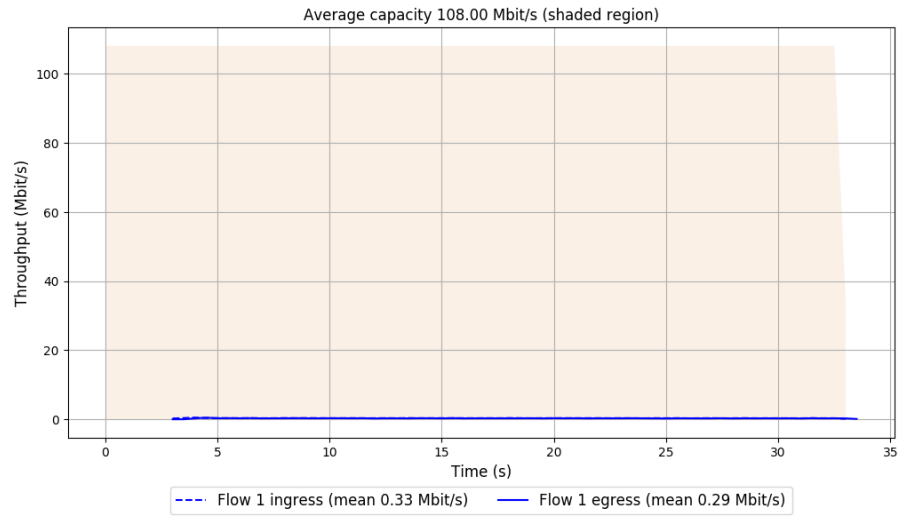
-- Flow 1:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 51.890 ms

Loss rate: 12.24%

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



Run 1: Statistics of FillP

Start at: 2020-04-16 08:10:43

End at: 2020-04-16 08:11:13

# Below is generated by plot.py at 2020-04-16 08:55:59

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.28 Mbit/s (0.3% utilization)

95th percentile per-packet one-way delay: 51.876 ms

Loss rate: 46.07%

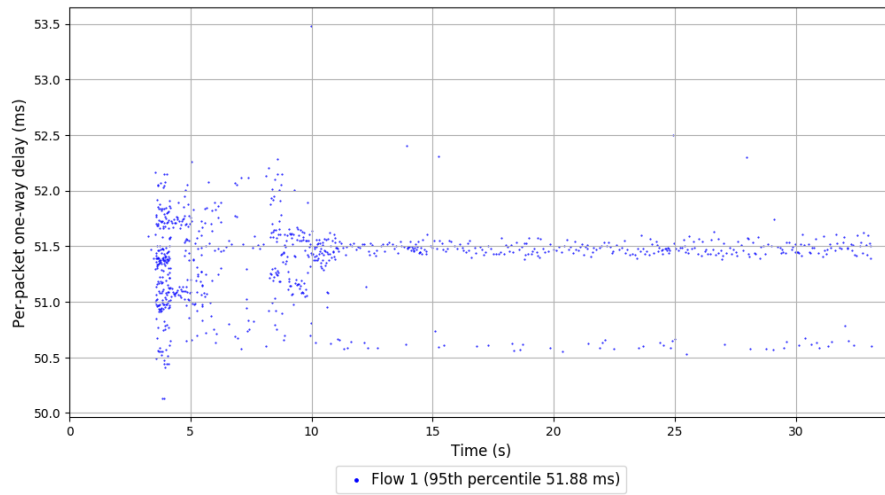
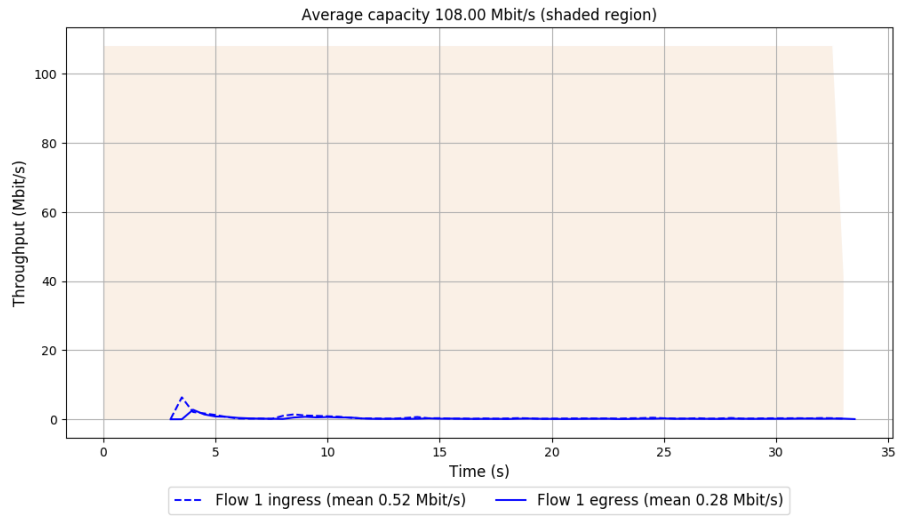
-- Flow 1:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 51.876 ms

Loss rate: 46.07%

# Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2020-04-16 08:25:20

End at: 2020-04-16 08:25:50

# Below is generated by plot.py at 2020-04-16 08:56:03

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.17 Mbit/s (1.1% utilization)

95th percentile per-packet one-way delay: 52.080 ms

Loss rate: 43.48%

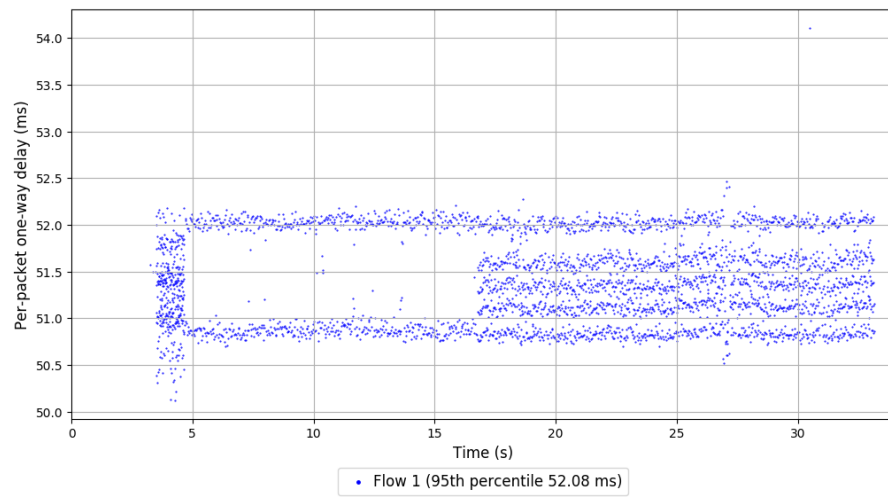
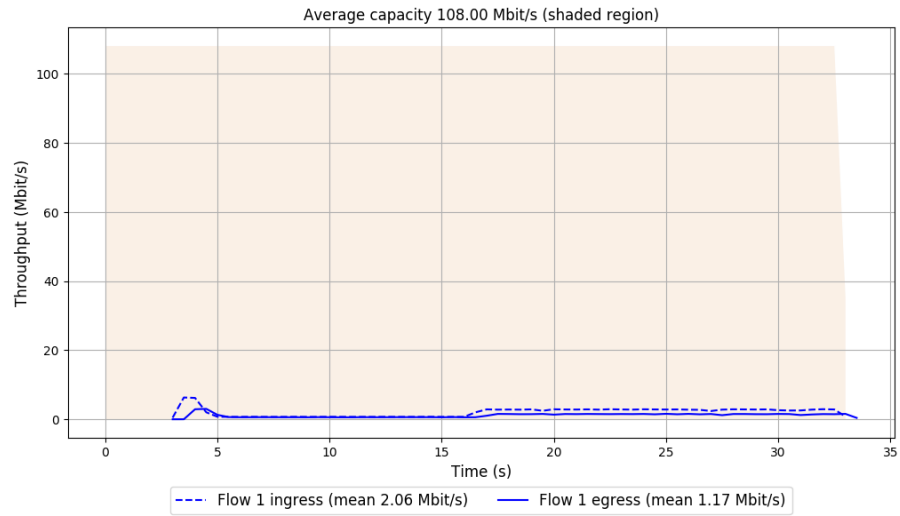
-- Flow 1:

Average throughput: 1.17 Mbit/s

95th percentile per-packet one-way delay: 52.080 ms

Loss rate: 43.48%

## Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2020-04-16 08:40:01

End at: 2020-04-16 08:40:31

# Below is generated by plot.py at 2020-04-16 08:56:03

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.35 Mbit/s (0.3% utilization)

95th percentile per-packet one-way delay: 51.909 ms

Loss rate: 47.41%

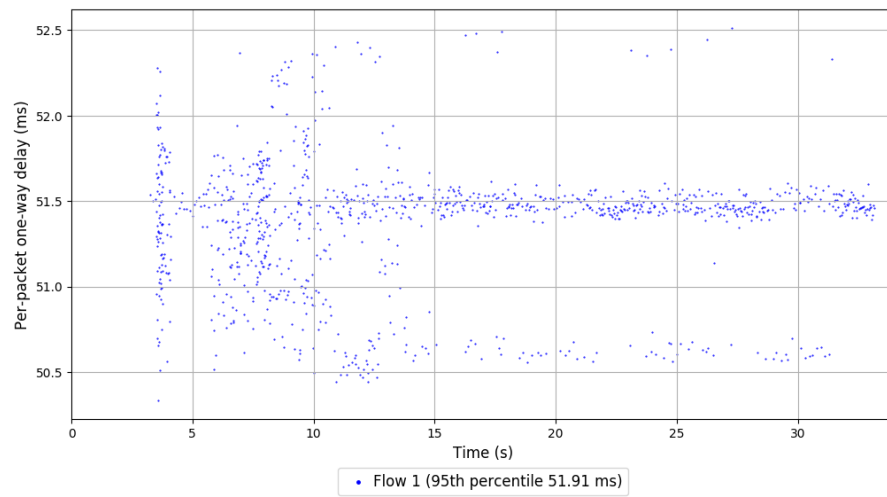
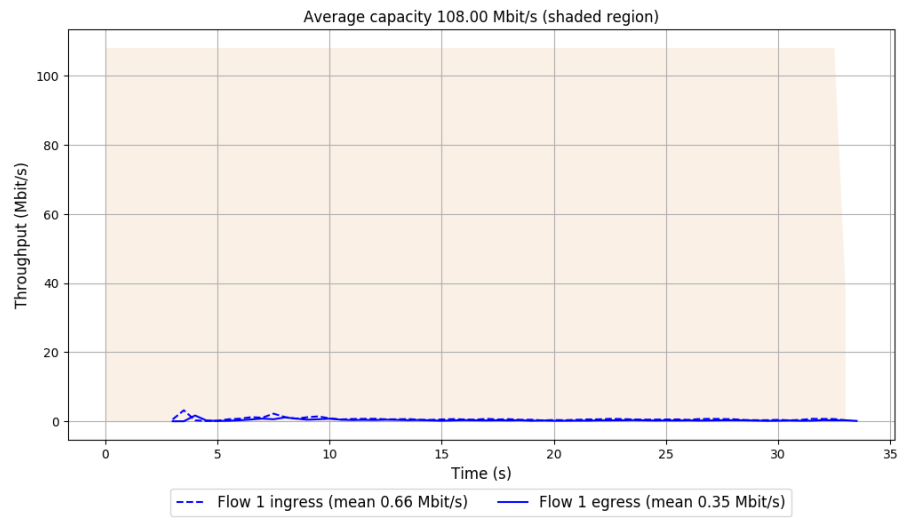
-- Flow 1:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 51.909 ms

Loss rate: 47.41%

### Run 3: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2020-04-16 08:22:55

End at: 2020-04-16 08:23:25

# Below is generated by plot.py at 2020-04-16 08:56:03

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.34 Mbit/s (0.3% utilization)

95th percentile per-packet one-way delay: 51.934 ms

Loss rate: 28.41%

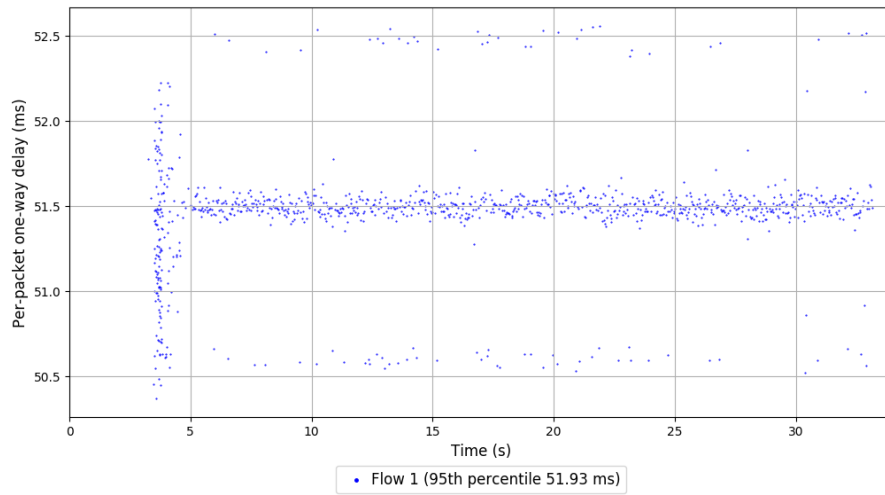
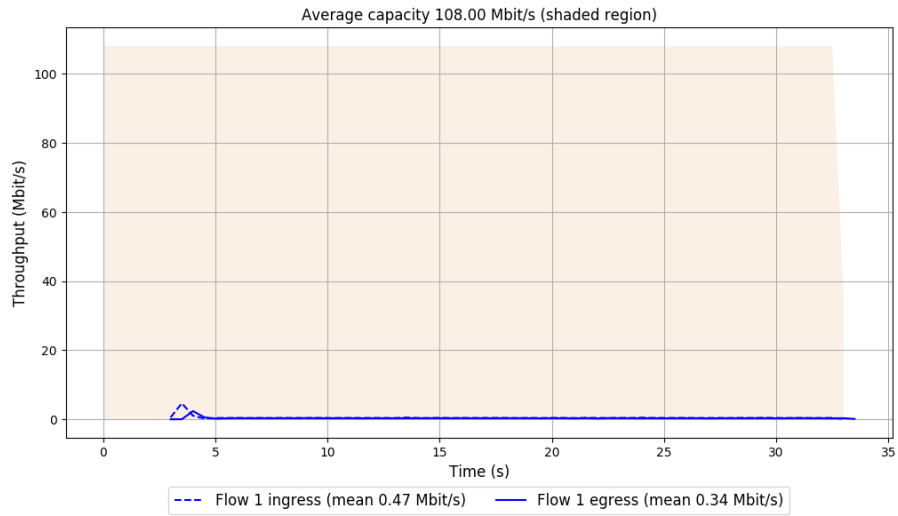
-- Flow 1:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 51.934 ms

Loss rate: 28.41%

# Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2020-04-16 08:37:36

End at: 2020-04-16 08:38:06

# Below is generated by plot.py at 2020-04-16 08:56:04

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.25 Mbit/s (1.2% utilization)

95th percentile per-packet one-way delay: 52.028 ms

Loss rate: 47.44%

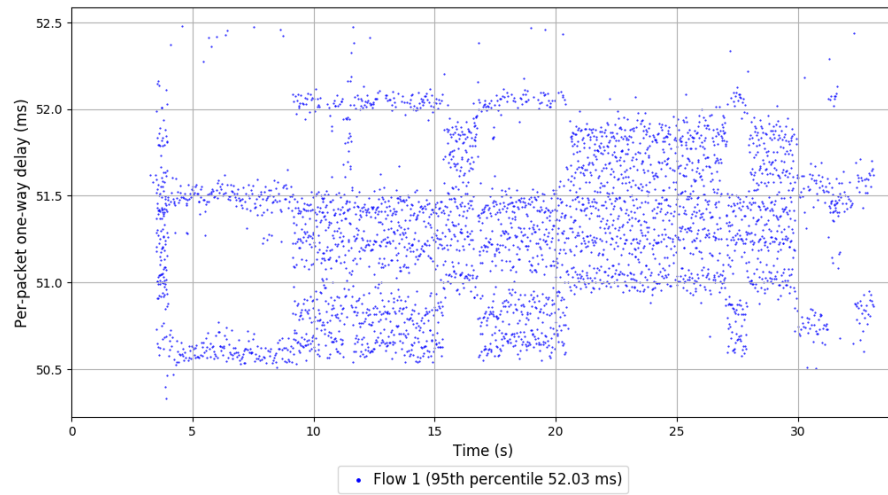
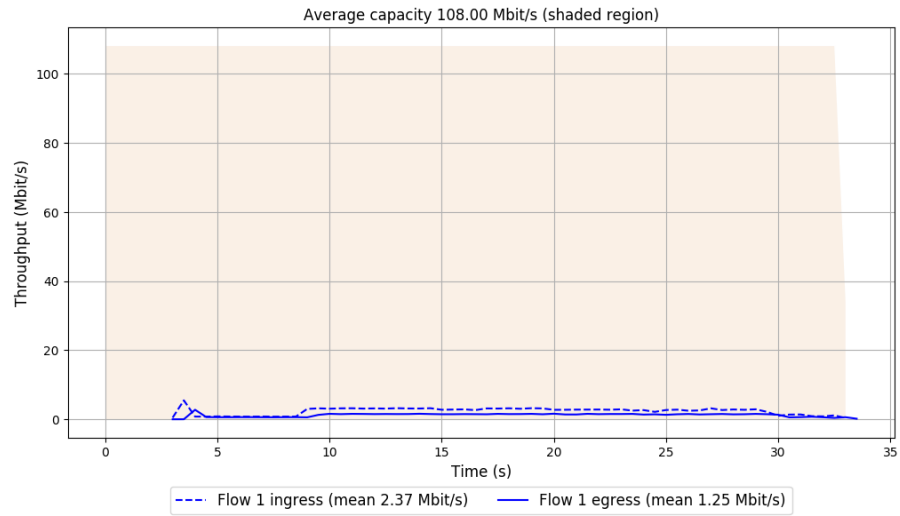
-- Flow 1:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 52.028 ms

Loss rate: 47.44%

## Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2020-04-16 08:52:15

End at: 2020-04-16 08:52:45

# Below is generated by plot.py at 2020-04-16 08:56:04

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.29 Mbit/s (0.3% utilization)

95th percentile per-packet one-way delay: 51.610 ms

Loss rate: 27.80%

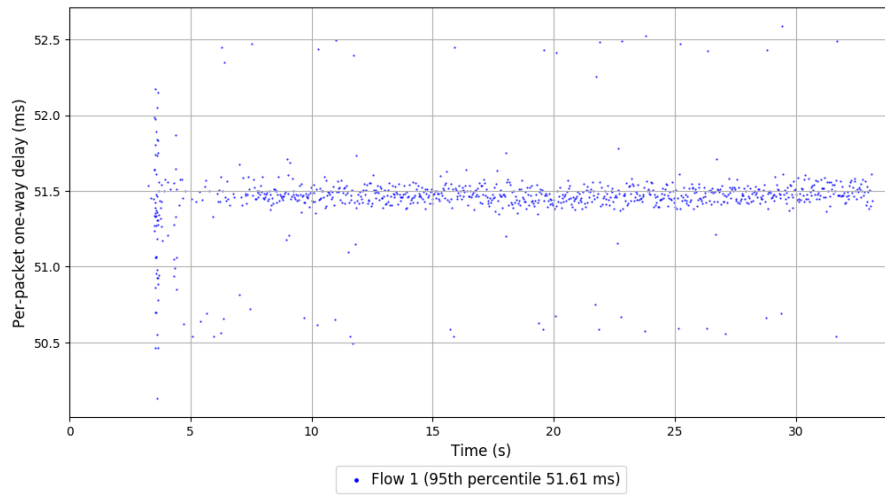
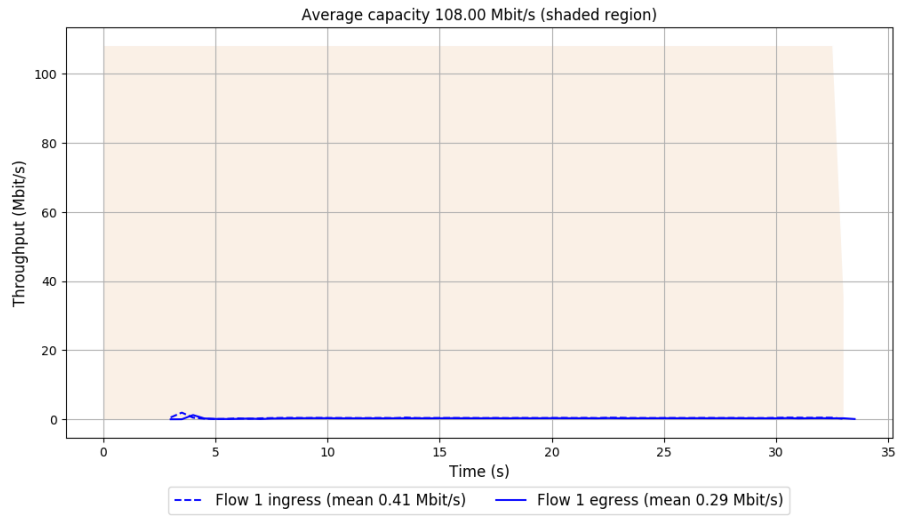
-- Flow 1:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 51.610 ms

Loss rate: 27.80%

### Run 3: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2020-04-16 08:12:31

End at: 2020-04-16 08:13:01

# Below is generated by plot.py at 2020-04-16 08:56:22

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 2.56 Mbit/s (2.4% utilization)

95th percentile per-packet one-way delay: 52.095 ms

Loss rate: 97.02%

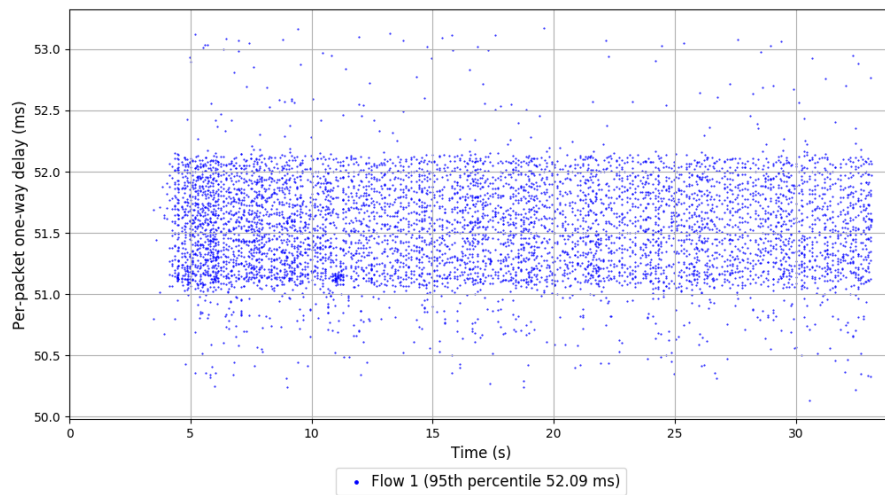
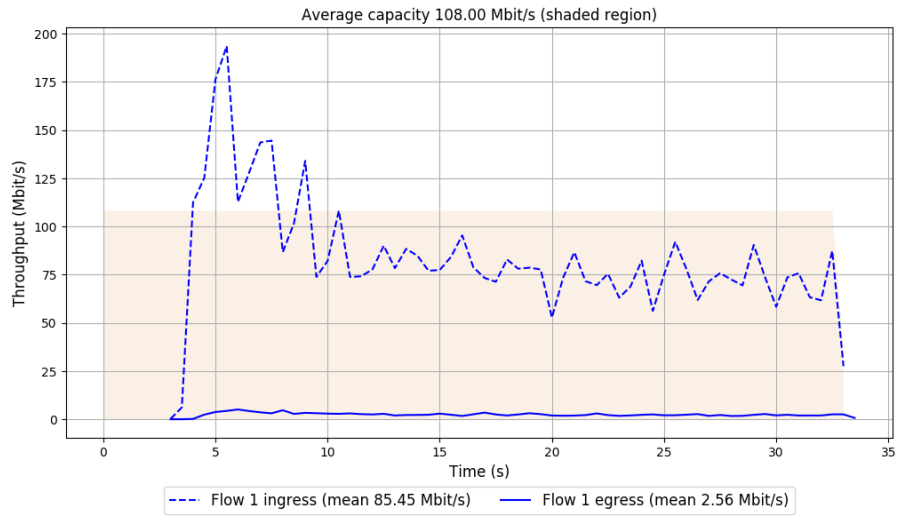
-- Flow 1:

Average throughput: 2.56 Mbit/s

95th percentile per-packet one-way delay: 52.095 ms

Loss rate: 97.02%

# Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2020-04-16 08:27:08

End at: 2020-04-16 08:27:39

# Below is generated by plot.py at 2020-04-16 08:57:09

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 4.27 Mbit/s (4.0% utilization)

95th percentile per-packet one-way delay: 52.069 ms

Loss rate: 96.97%

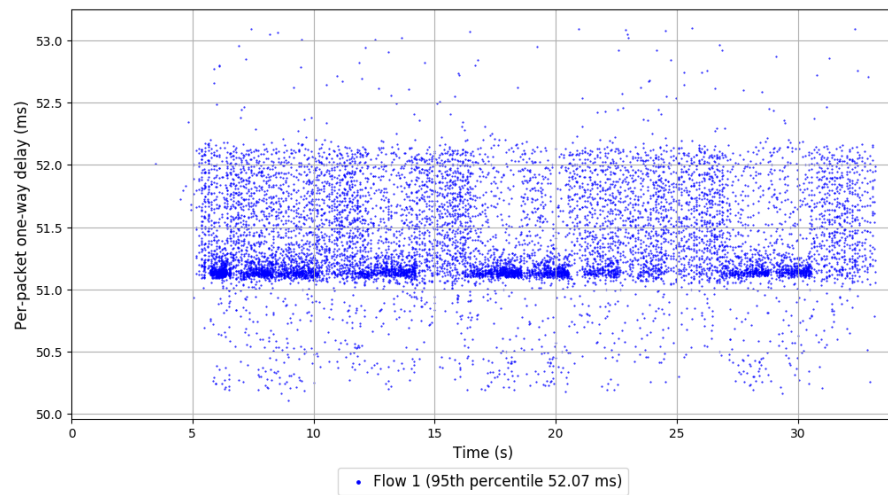
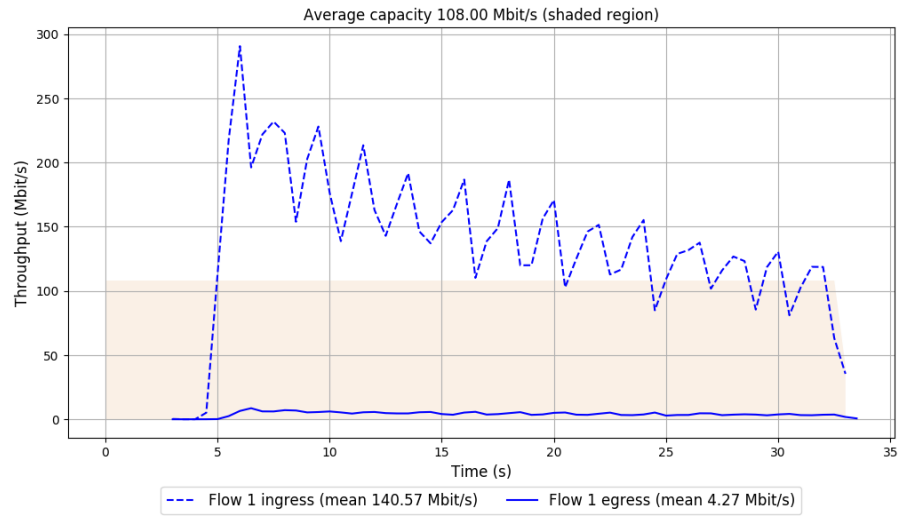
-- Flow 1:

Average throughput: 4.27 Mbit/s

95th percentile per-packet one-way delay: 52.069 ms

Loss rate: 96.97%

## Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2020-04-16 08:41:50

End at: 2020-04-16 08:42:20

# Below is generated by plot.py at 2020-04-16 08:57:09

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 2.14 Mbit/s (2.0% utilization)

95th percentile per-packet one-way delay: 52.108 ms

Loss rate: 96.97%

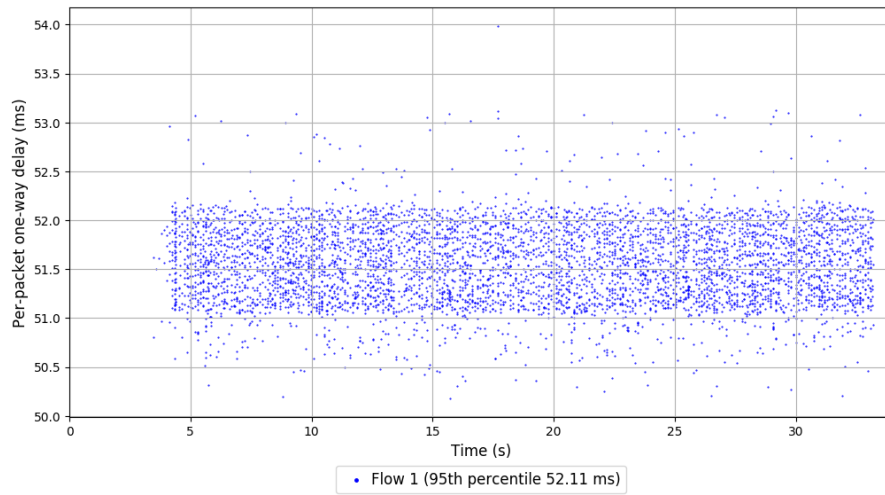
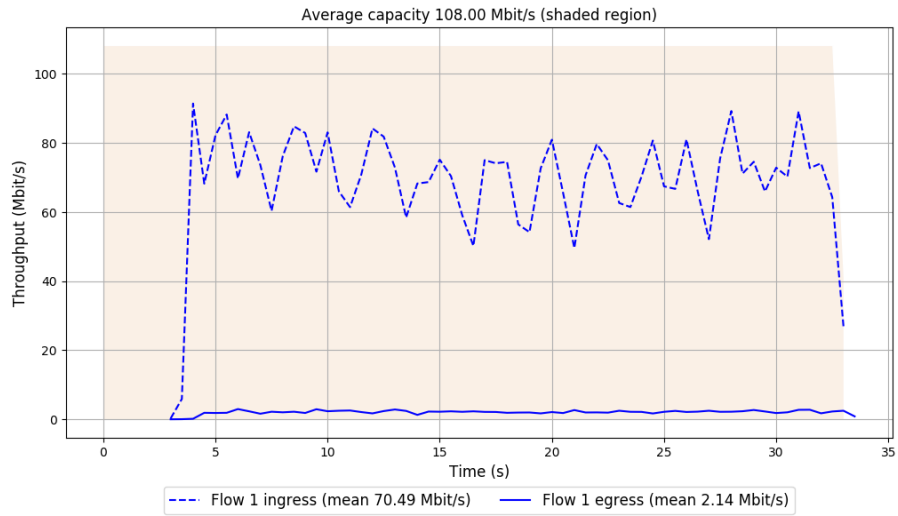
-- Flow 1:

Average throughput: 2.14 Mbit/s

95th percentile per-packet one-way delay: 52.108 ms

Loss rate: 96.97%

### Run 3: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2020-04-16 08:21:42

End at: 2020-04-16 08:22:12

# Below is generated by plot.py at 2020-04-16 08:57:09

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.33 Mbit/s (1.2% utilization)

95th percentile per-packet one-way delay: 52.151 ms

Loss rate: 31.20%

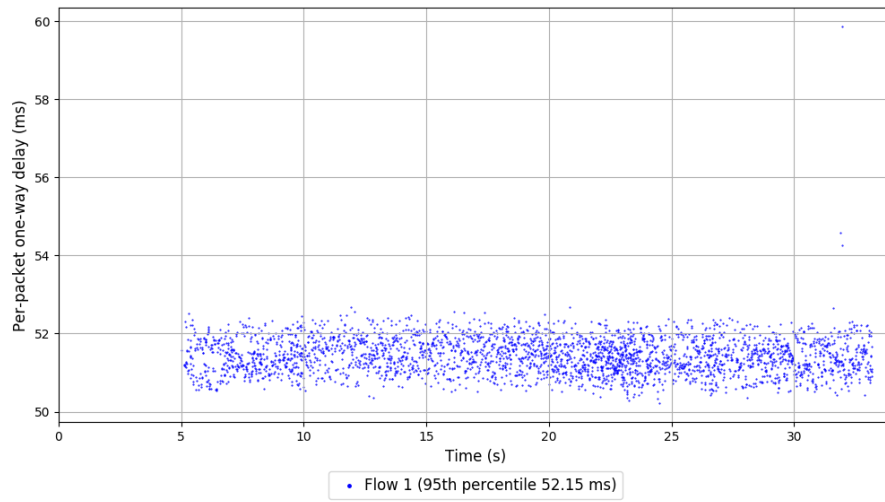
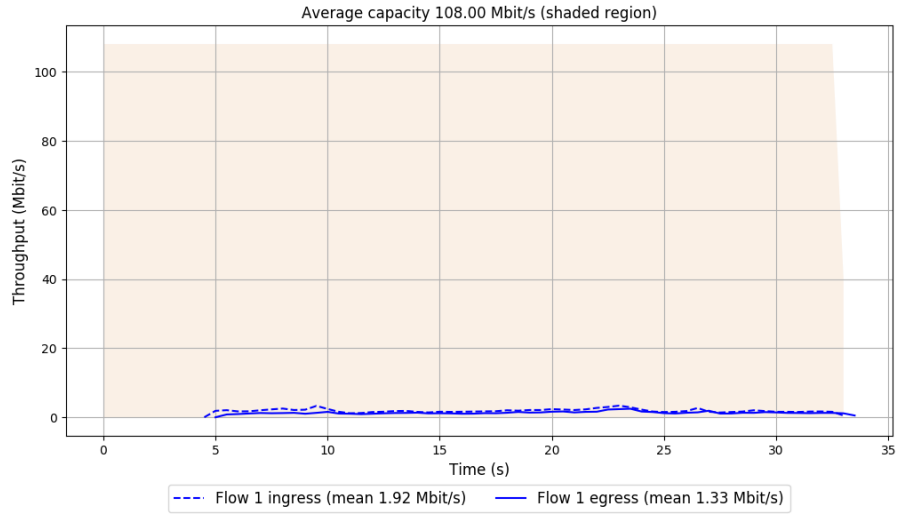
-- Flow 1:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 52.151 ms

Loss rate: 31.20%

# Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2020-04-16 08:36:24

End at: 2020-04-16 08:36:54

# Below is generated by plot.py at 2020-04-16 08:57:09

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.37 Mbit/s (1.3% utilization)

95th percentile per-packet one-way delay: 52.106 ms

Loss rate: 32.22%

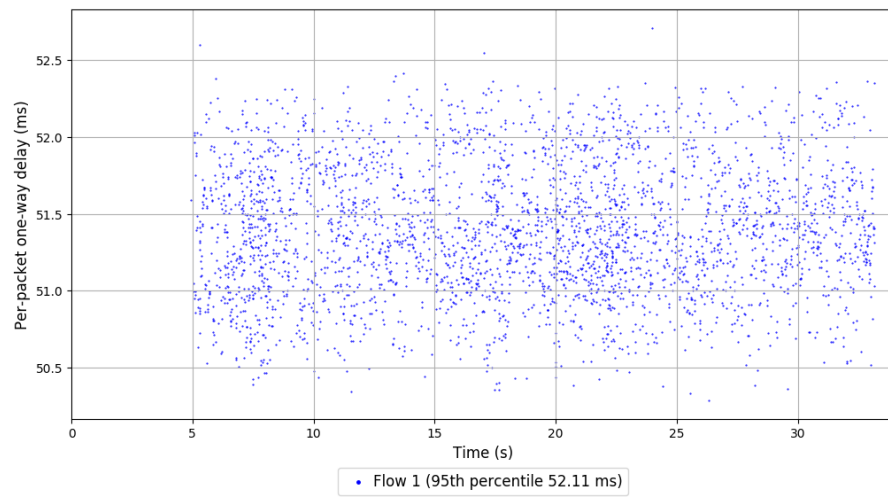
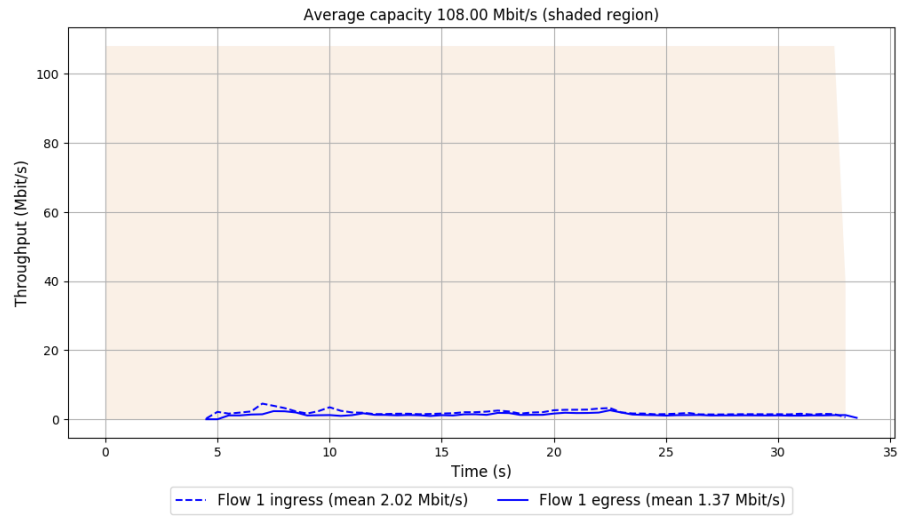
-- Flow 1:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 52.106 ms

Loss rate: 32.22%

## Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2020-04-16 08:51:03

End at: 2020-04-16 08:51:33

# Below is generated by plot.py at 2020-04-16 08:57:09

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.29 Mbit/s (1.2% utilization)

95th percentile per-packet one-way delay: 52.138 ms

Loss rate: 32.07%

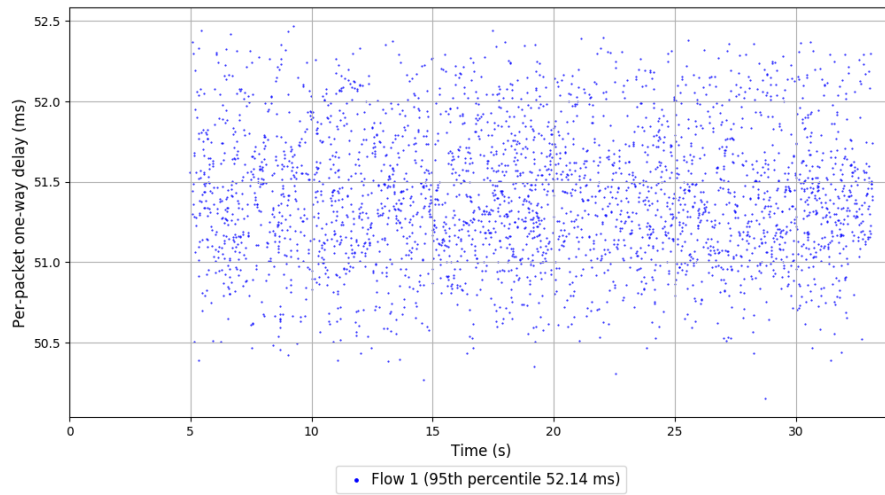
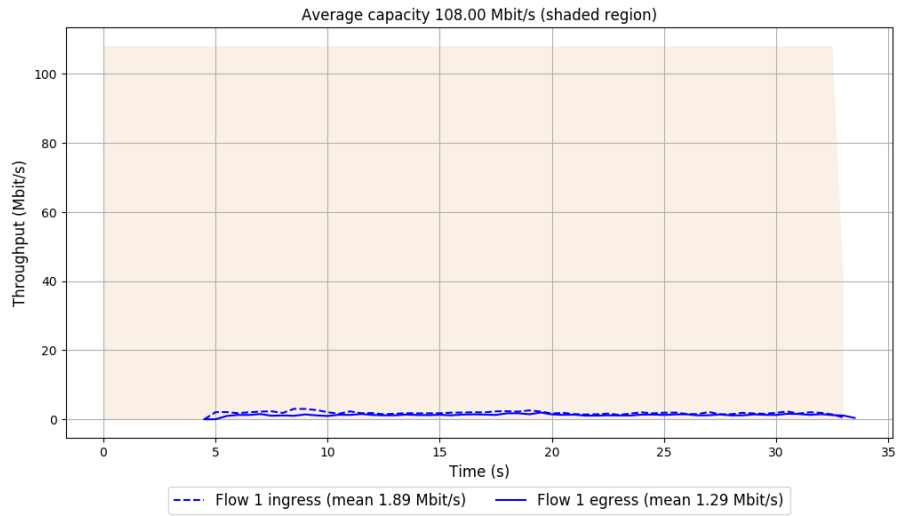
-- Flow 1:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 52.138 ms

Loss rate: 32.07%

### Run 3: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2020-04-16 08:13:09

End at: 2020-04-16 08:13:39

# Below is generated by plot.py at 2020-04-16 08:57:09

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.05 Mbit/s (1.0% utilization)

95th percentile per-packet one-way delay: 52.091 ms

Loss rate: 39.52%

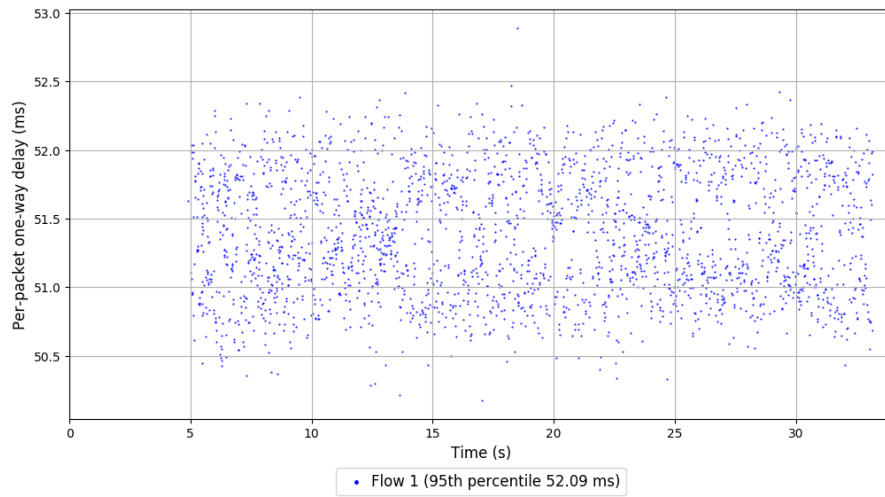
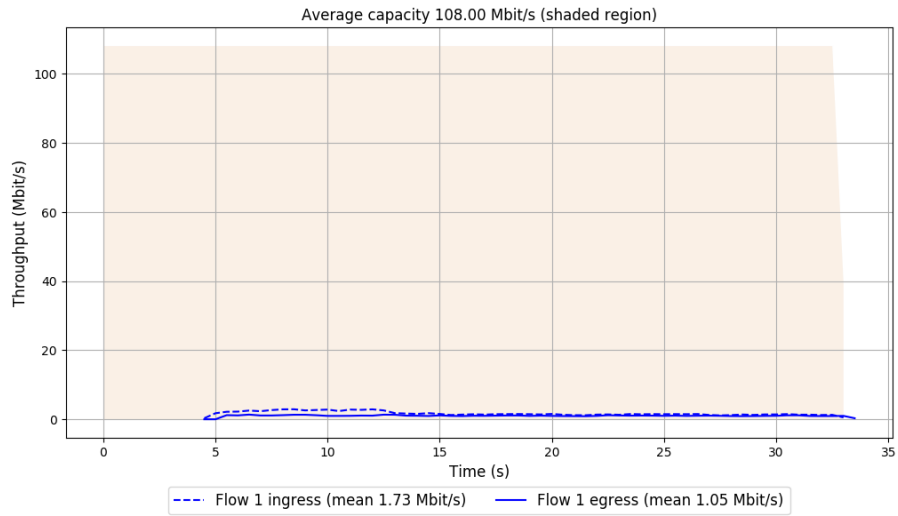
-- Flow 1:

Average throughput: 1.05 Mbit/s

95th percentile per-packet one-way delay: 52.091 ms

Loss rate: 39.52%

# Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2020-04-16 08:27:47

End at: 2020-04-16 08:28:17

# Below is generated by plot.py at 2020-04-16 08:57:09

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.03 Mbit/s (1.0% utilization)

95th percentile per-packet one-way delay: 52.139 ms

Loss rate: 39.91%

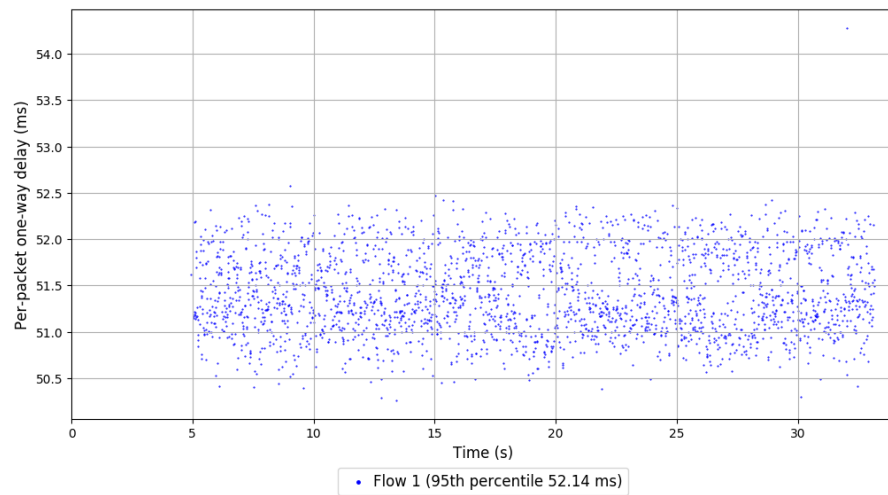
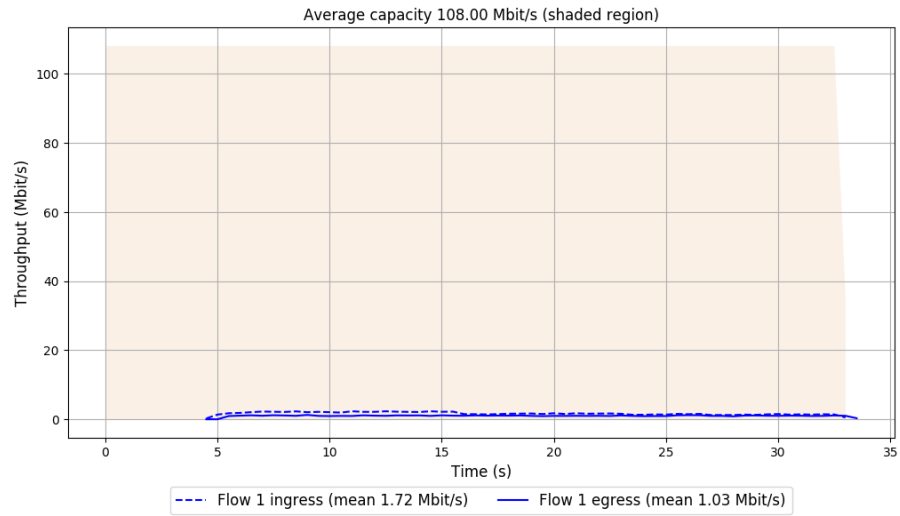
-- Flow 1:

Average throughput: 1.03 Mbit/s

95th percentile per-packet one-way delay: 52.139 ms

Loss rate: 39.91%

## Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2020-04-16 08:42:28

End at: 2020-04-16 08:42:58

# Below is generated by plot.py at 2020-04-16 08:57:09

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.02 Mbit/s (0.9% utilization)

95th percentile per-packet one-way delay: 52.215 ms

Loss rate: 36.64%

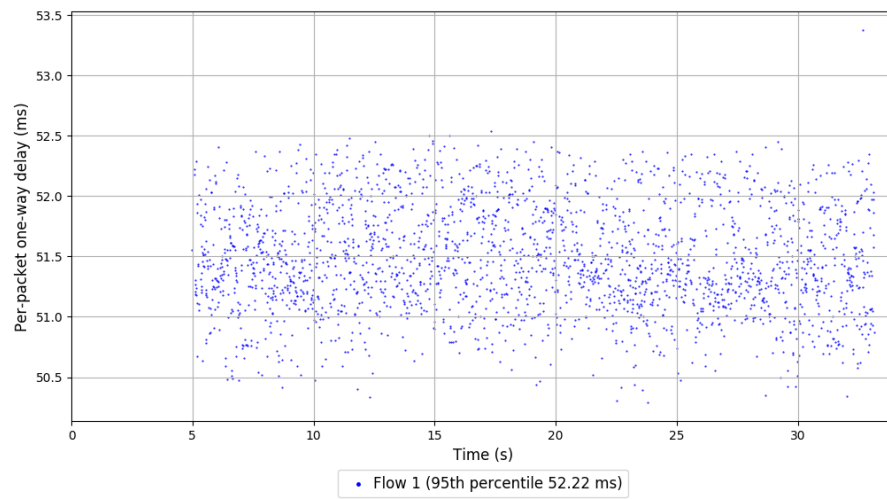
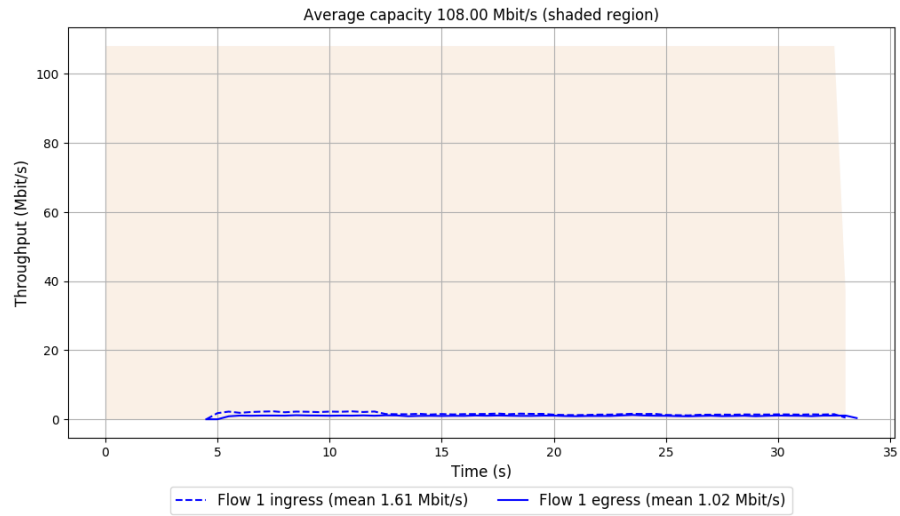
-- Flow 1:

Average throughput: 1.02 Mbit/s

95th percentile per-packet one-way delay: 52.215 ms

Loss rate: 36.64%

### Run 3: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2020-04-16 08:11:55

End at: 2020-04-16 08:12:25

# Below is generated by plot.py at 2020-04-16 08:57:10

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 2.89 Mbit/s (2.7% utilization)

95th percentile per-packet one-way delay: 52.067 ms

Loss rate: 46.89%

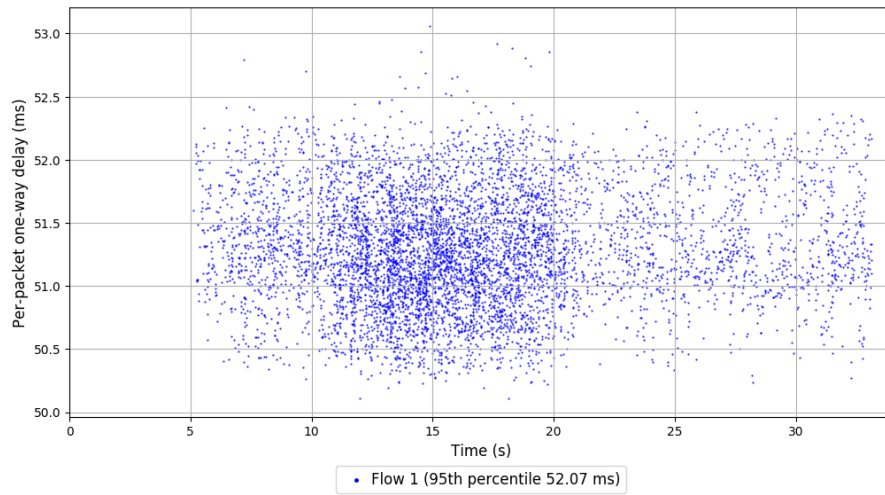
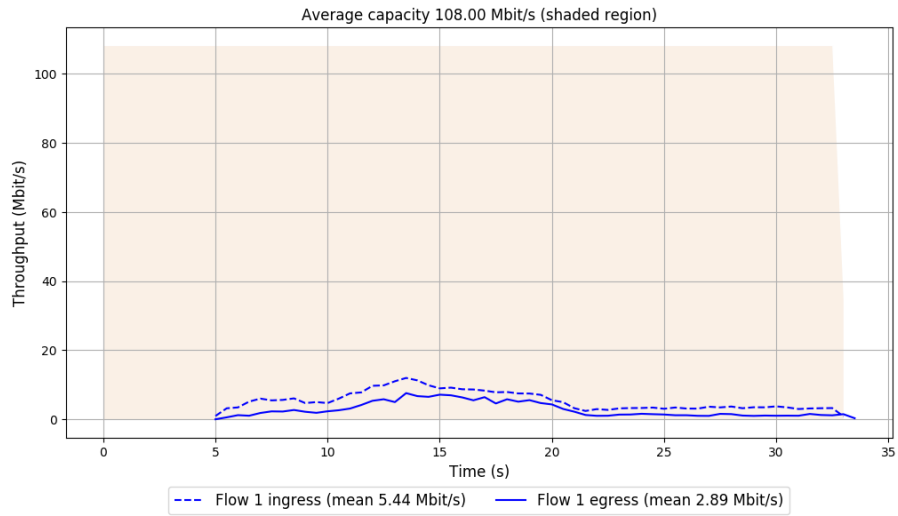
-- Flow 1:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 52.067 ms

Loss rate: 46.89%

# Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2020-04-16 08:26:32

End at: 2020-04-16 08:27:02

# Below is generated by plot.py at 2020-04-16 08:57:10

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 2.46 Mbit/s (2.3% utilization)

95th percentile per-packet one-way delay: 52.086 ms

Loss rate: 47.85%

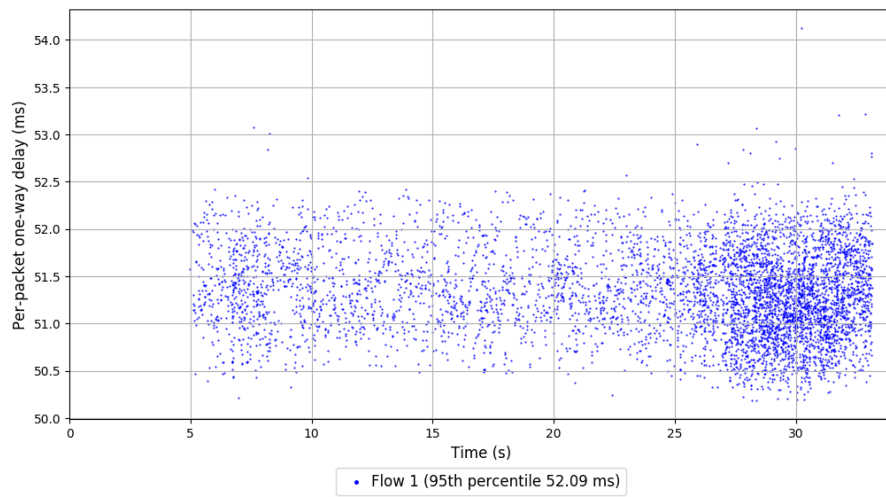
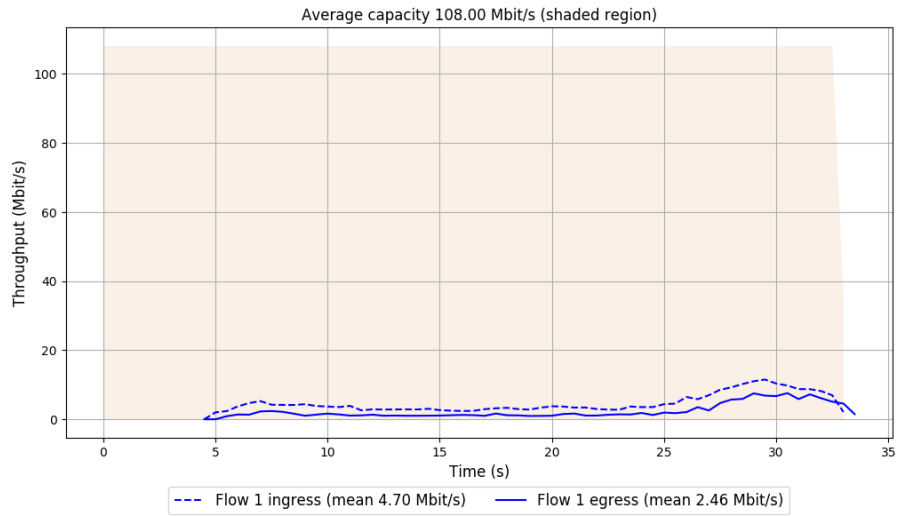
-- Flow 1:

Average throughput: 2.46 Mbit/s

95th percentile per-packet one-way delay: 52.086 ms

Loss rate: 47.85%

## Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2020-04-16 08:41:14

End at: 2020-04-16 08:41:44

# Below is generated by plot.py at 2020-04-16 08:57:13

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 5.53 Mbit/s (5.1% utilization)

95th percentile per-packet one-way delay: 52.025 ms

Loss rate: 31.37%

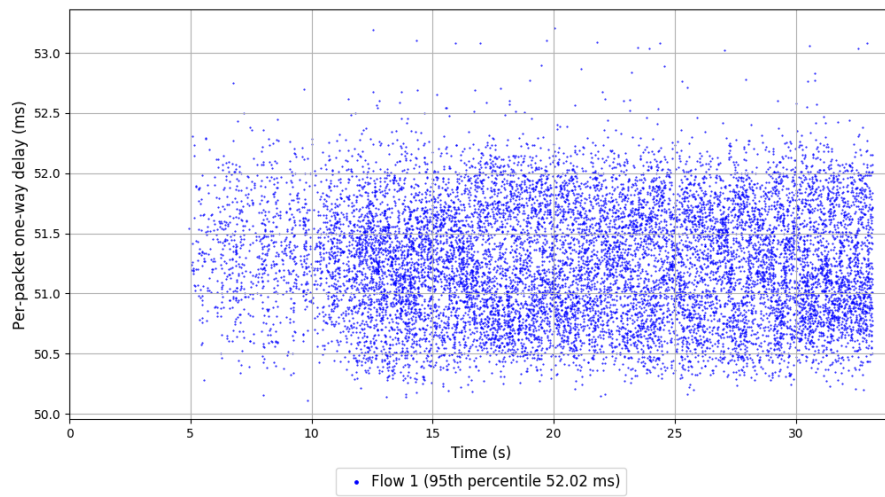
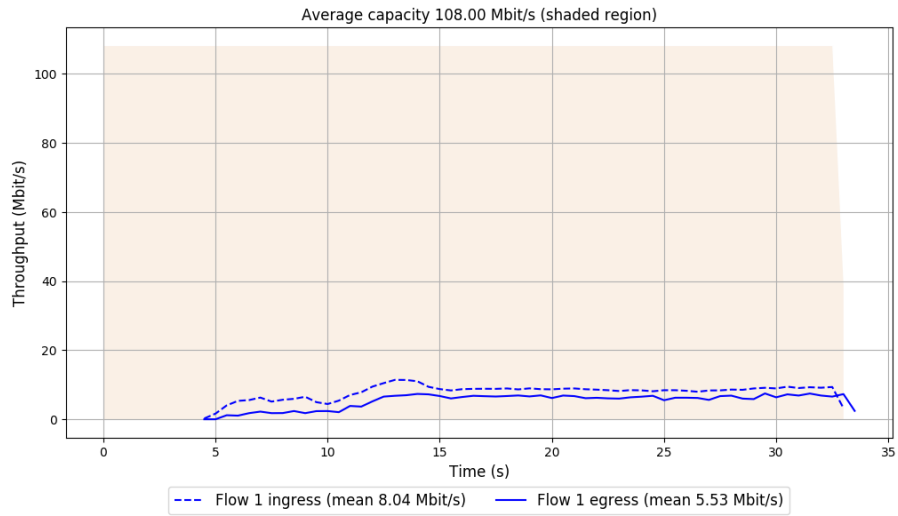
-- Flow 1:

Average throughput: 5.53 Mbit/s

95th percentile per-packet one-way delay: 52.025 ms

Loss rate: 31.37%

### Run 3: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MuseST

Start at: 2020-04-16 08:15:35

End at: 2020-04-16 08:16:05

# Below is generated by plot.py at 2020-04-16 08:57:13

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.31 Mbit/s (1.2% utilization)

95th percentile per-packet one-way delay: 52.073 ms

Loss rate: 23.69%

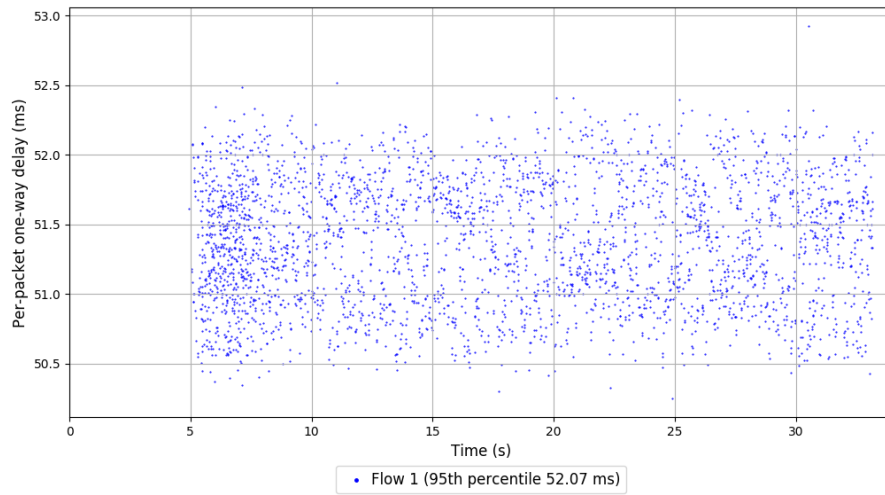
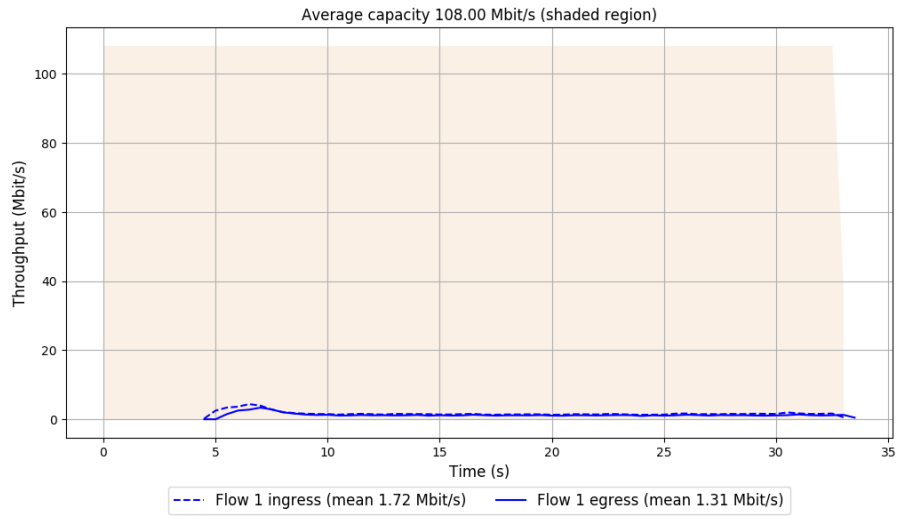
-- Flow 1:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 52.073 ms

Loss rate: 23.69%

# Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MuseST

Start at: 2020-04-16 08:30:12

End at: 2020-04-16 08:30:42

# Below is generated by plot.py at 2020-04-16 08:57:13

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.18 Mbit/s (1.1% utilization)

95th percentile per-packet one-way delay: 52.131 ms

Loss rate: 24.16%

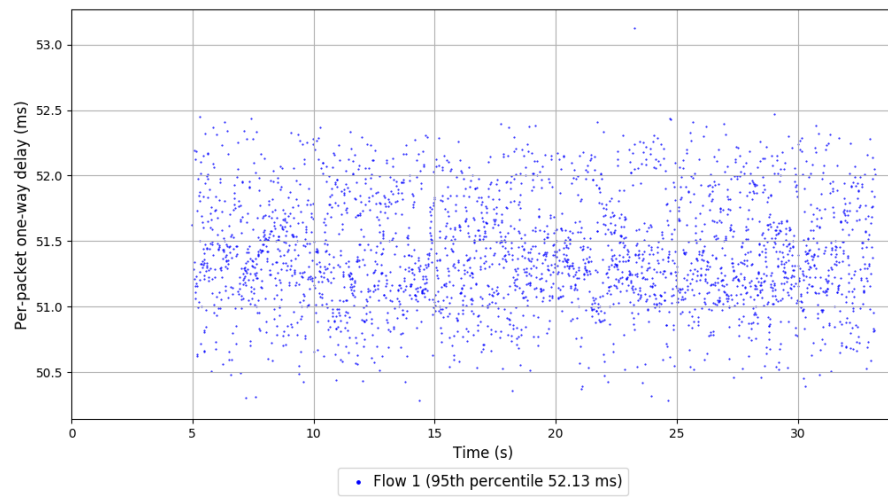
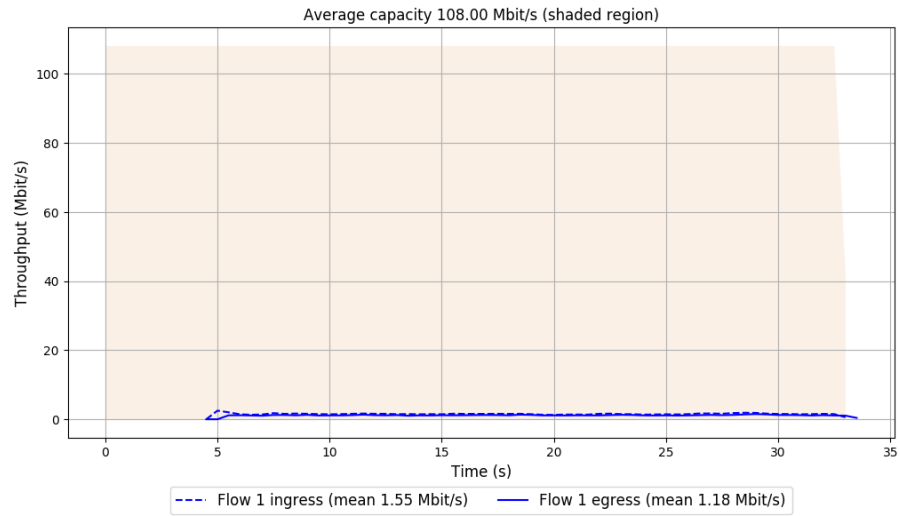
-- Flow 1:

Average throughput: 1.18 Mbit/s

95th percentile per-packet one-way delay: 52.131 ms

Loss rate: 24.16%

## Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MuseST

Start at: 2020-04-16 08:44:53

End at: 2020-04-16 08:45:23

# Below is generated by plot.py at 2020-04-16 08:57:23

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 1.21 Mbit/s (1.1% utilization)

95th percentile per-packet one-way delay: 52.164 ms

Loss rate: 24.20%

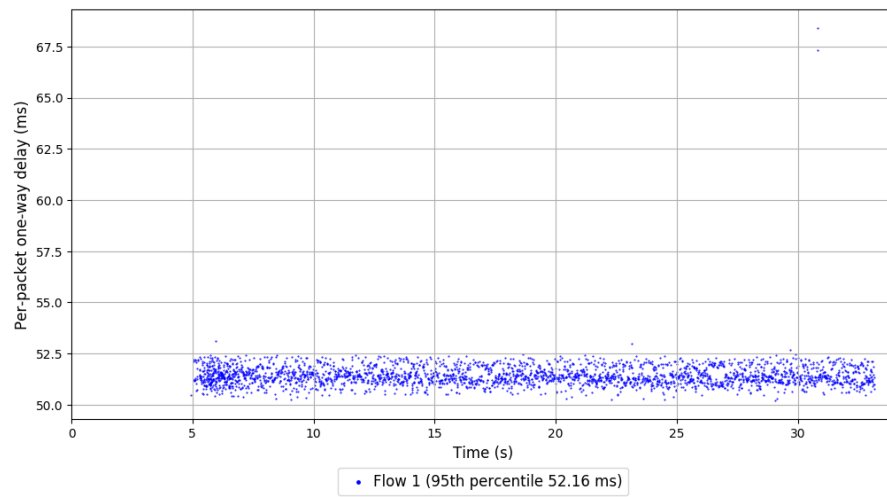
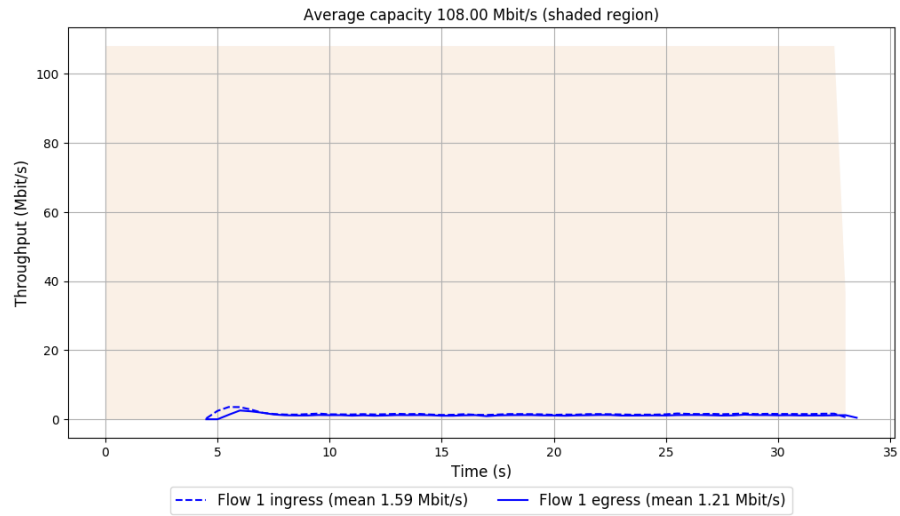
-- Flow 1:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 52.164 ms

Loss rate: 24.20%

### Run 3: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2020-04-16 08:20:30

End at: 2020-04-16 08:21:00

# Below is generated by plot.py at 2020-04-16 08:57:28

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.10 Mbit/s (0.1% utilization)

95th percentile per-packet one-way delay: 51.580 ms

Loss rate: 32.30%

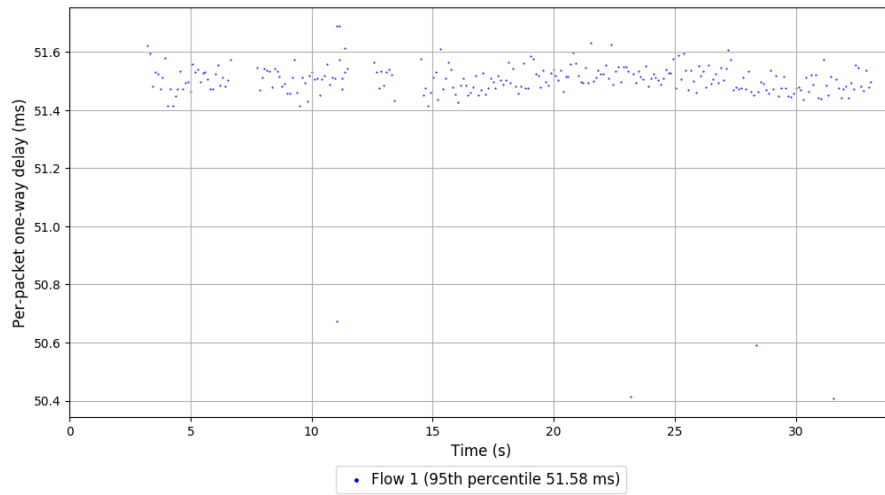
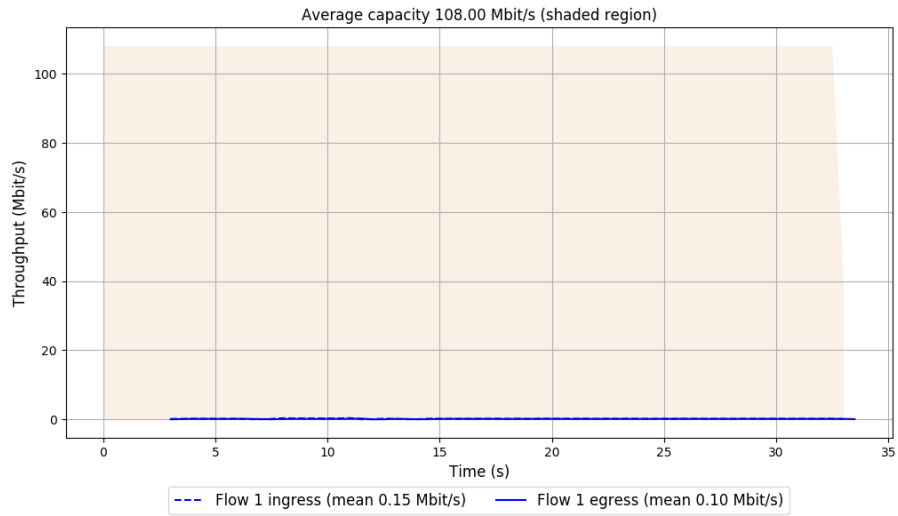
-- Flow 1:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 51.580 ms

Loss rate: 32.30%

# Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2020-04-16 08:35:11

End at: 2020-04-16 08:35:41

# Below is generated by plot.py at 2020-04-16 08:57:39

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.10 Mbit/s (0.1% utilization)

95th percentile per-packet one-way delay: 51.611 ms

Loss rate: 43.18%

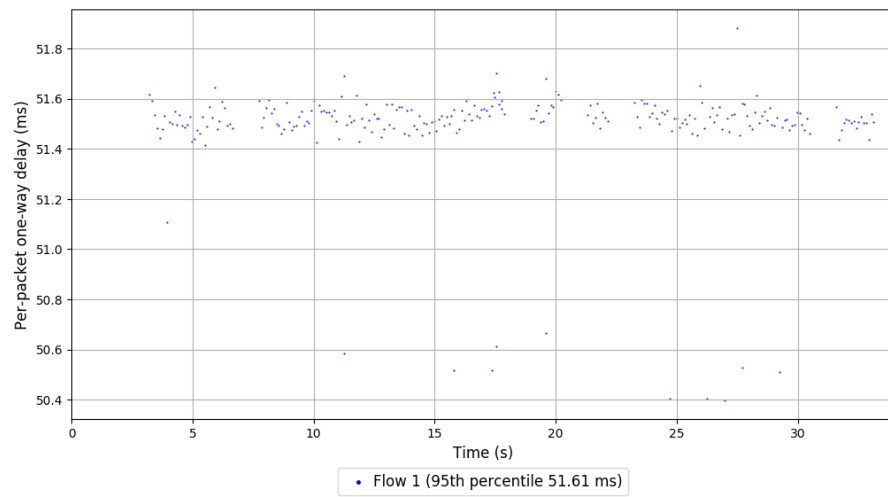
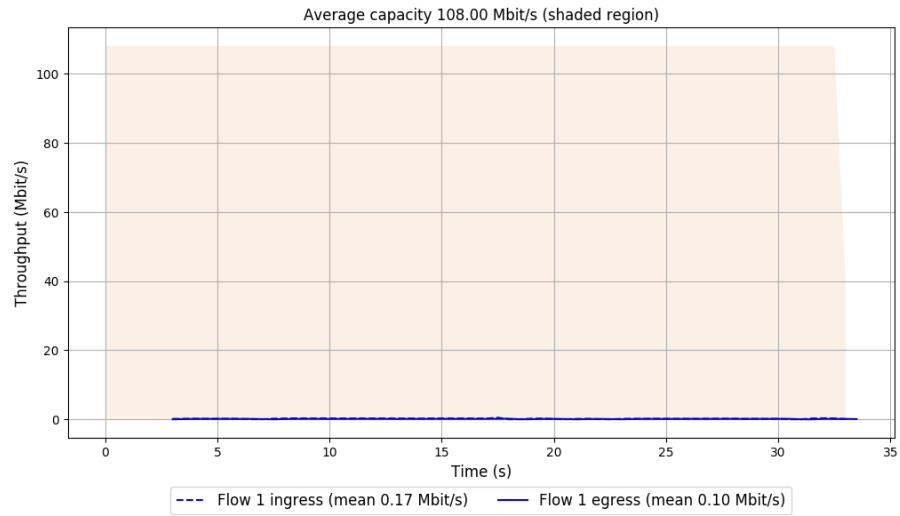
-- Flow 1:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 51.611 ms

Loss rate: 43.18%

## Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2020-04-16 08:49:50

End at: 2020-04-16 08:50:20

# Below is generated by plot.py at 2020-04-16 08:57:41

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.10 Mbit/s (0.1% utilization)

95th percentile per-packet one-way delay: 51.573 ms

Loss rate: 34.27%

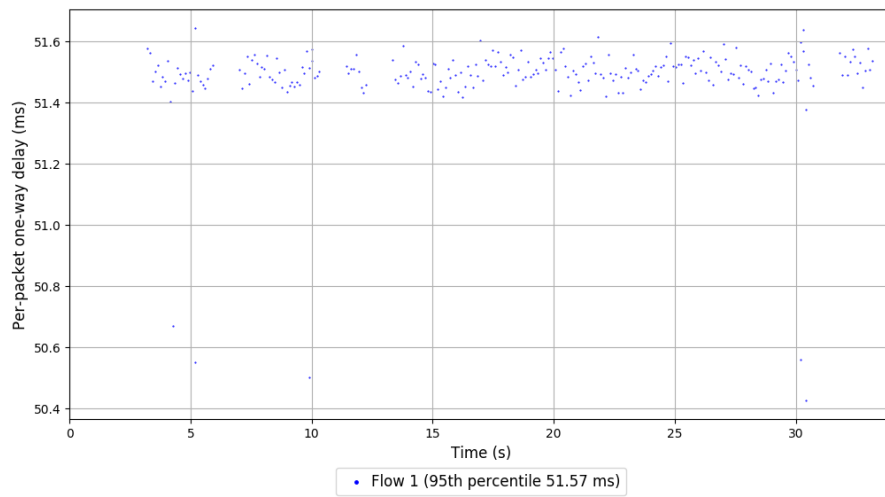
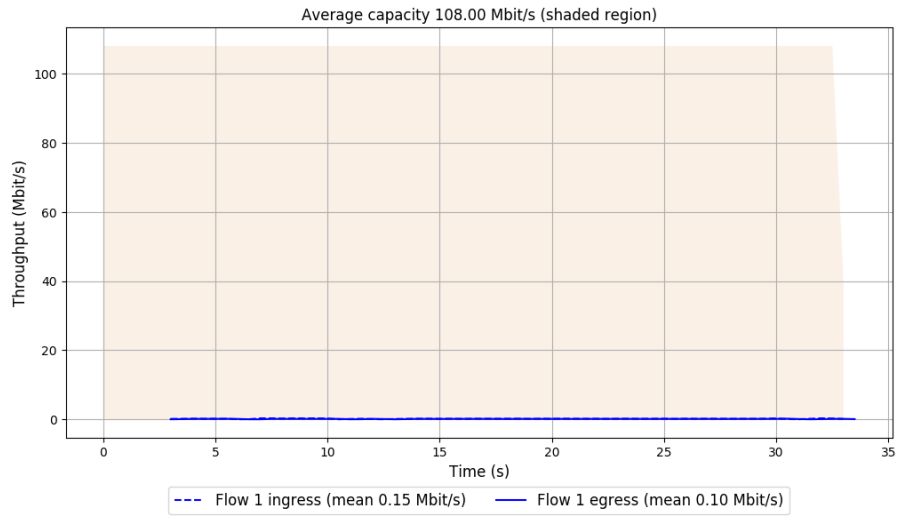
-- Flow 1:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 51.573 ms

Loss rate: 34.27%

### Run 3: Report of LEDBAT — Data Link



Run 1: Statistics of Muses\\_DecisionTree

Start at: 2020-04-16 08:18:05

End at: 2020-04-16 08:18:35

# Below is generated by plot.py at 2020-04-16 08:57:42

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.20 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 51.927 ms

Loss rate: 1.90%

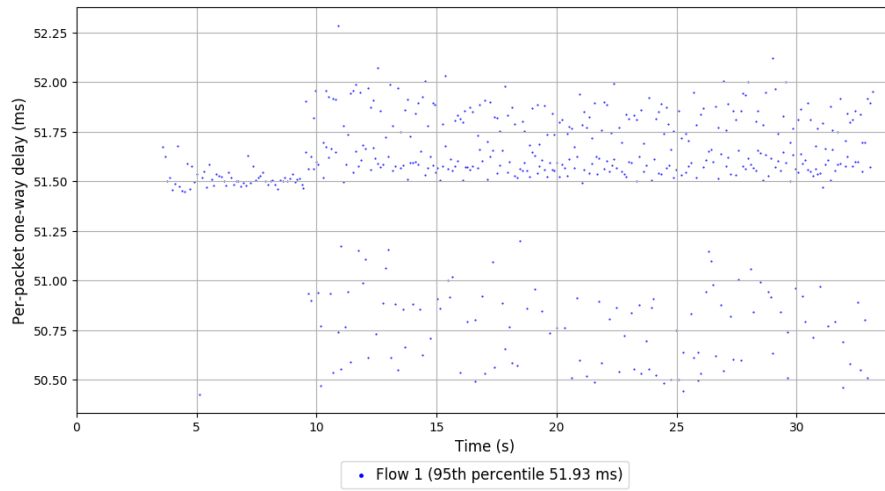
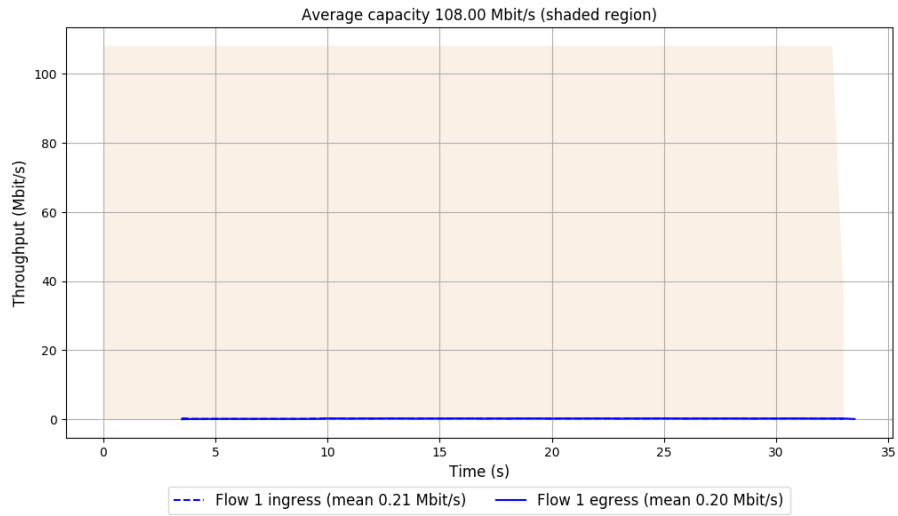
-- Flow 1:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 51.927 ms

Loss rate: 1.90%

Run 1: Report of Muses\_DecisionTree — Data Link



Run 2: Statistics of Muses\\_DecisionTree

Start at: 2020-04-16 08:32:46

End at: 2020-04-16 08:33:16

# Below is generated by plot.py at 2020-04-16 08:57:42

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.20 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 52.015 ms

Loss rate: 2.10%

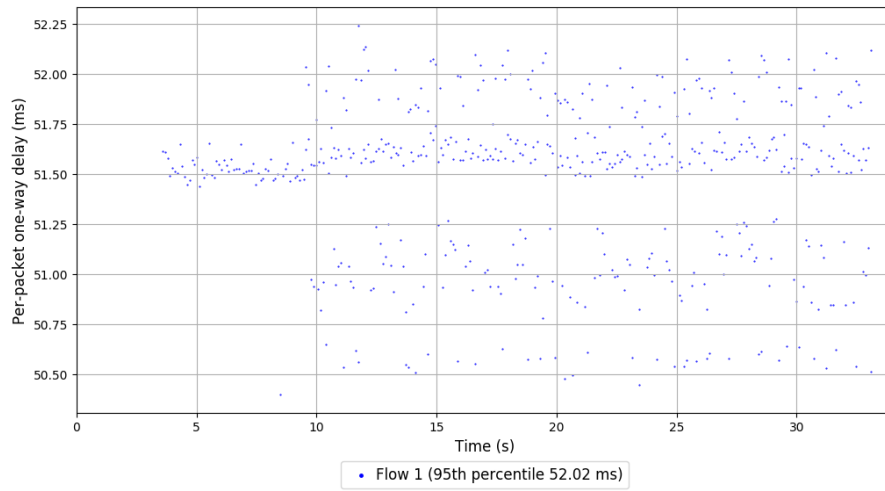
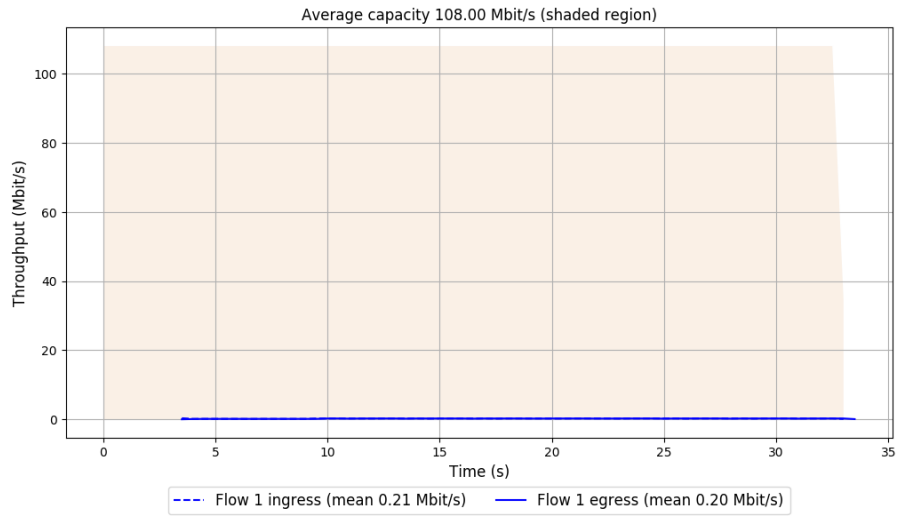
-- Flow 1:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 52.015 ms

Loss rate: 2.10%

Run 2: Report of Muses\_DecisionTree — Data Link



Run 3: Statistics of Muses\\_DecisionTree

Start at: 2020-04-16 08:47:25

End at: 2020-04-16 08:47:55

# Below is generated by plot.py at 2020-04-16 08:57:43

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.22 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 52.102 ms

Loss rate: 29.80%

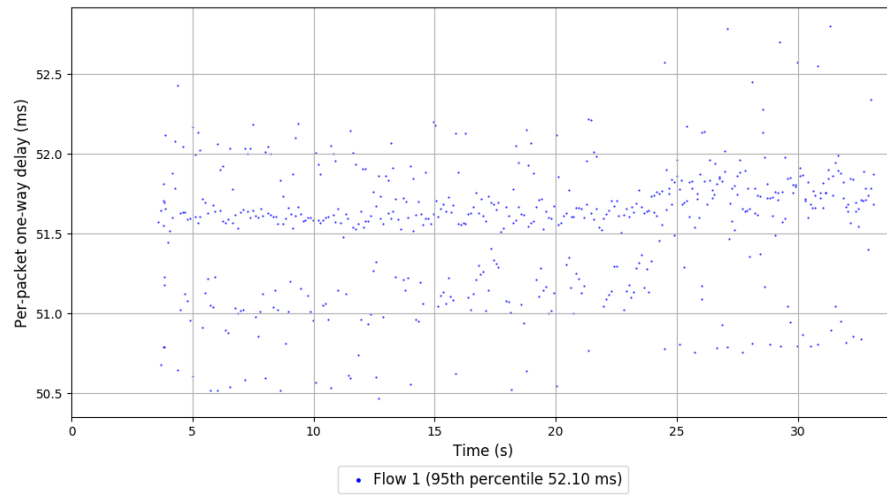
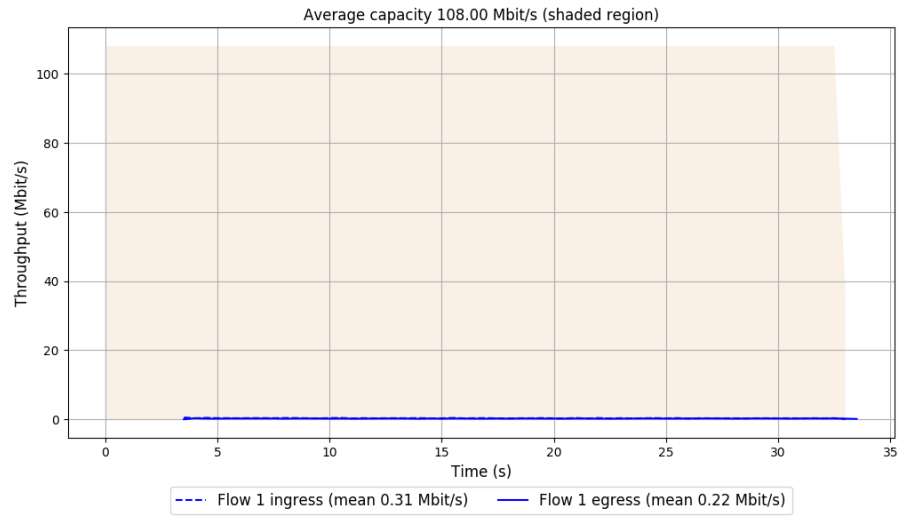
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 52.102 ms

Loss rate: 29.80%

### Run 3: Report of Muses\_DecisionTree — Data Link



Run 1: Statistics of Muses\\_DecisionTreeH0

Start at: 2020-04-16 08:14:58

End at: 2020-04-16 08:15:28

# Below is generated by plot.py at 2020-04-16 08:57:45

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.23 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 51.952 ms

Loss rate: 18.27%

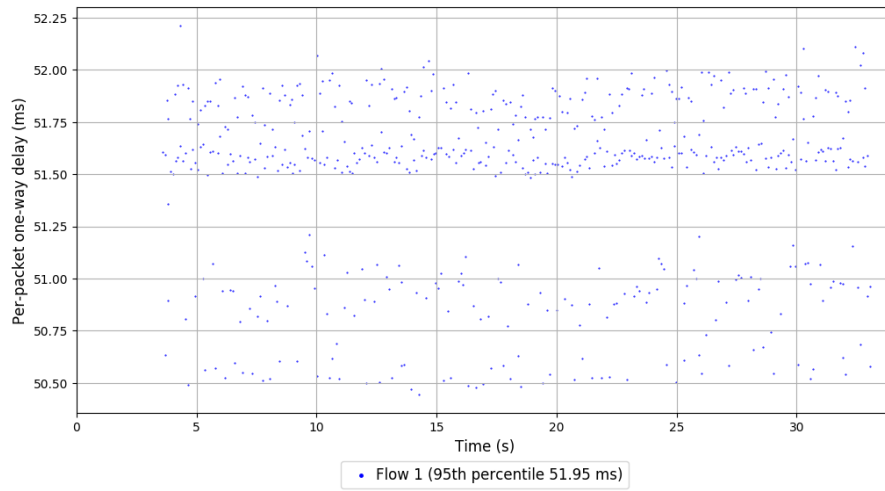
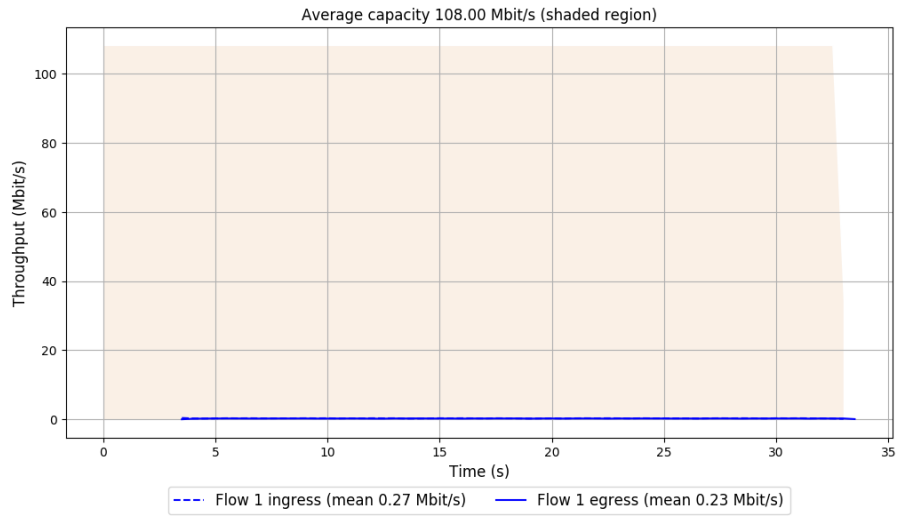
-- Flow 1:

Average throughput: 0.23 Mbit/s

95th percentile per-packet one-way delay: 51.952 ms

Loss rate: 18.27%

Run 1: Report of Muses\_DecisionTreeH0 — Data Link



Run 2: Statistics of Muses\\_DecisionTreeH0

Start at: 2020-04-16 08:29:36

End at: 2020-04-16 08:30:06

# Below is generated by plot.py at 2020-04-16 08:57:55

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.20 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 51.995 ms

Loss rate: 1.71%

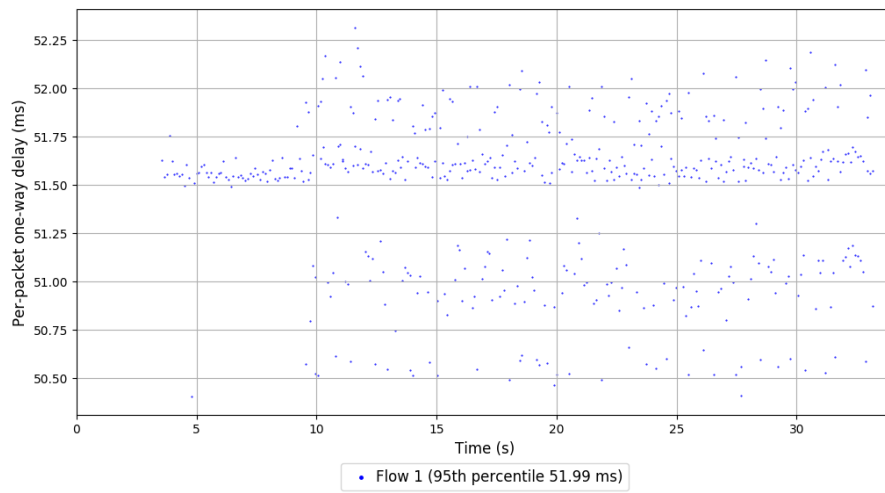
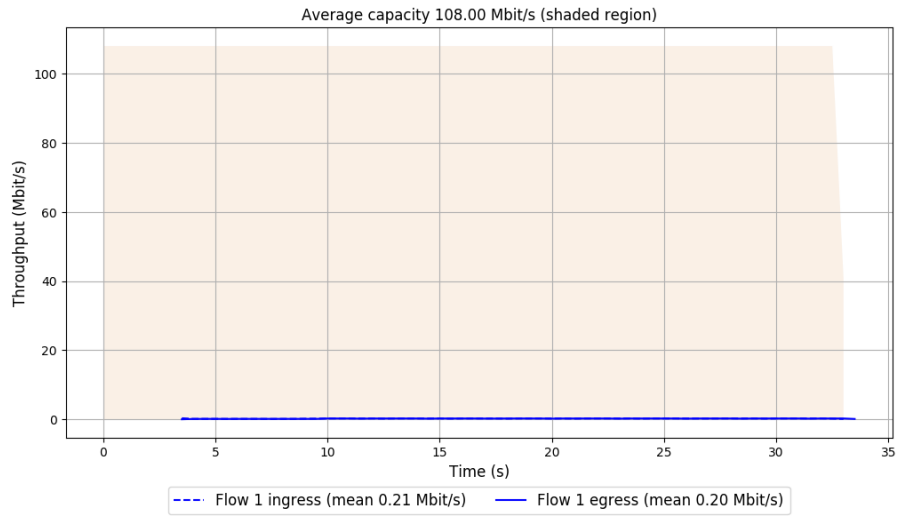
-- Flow 1:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 51.995 ms

Loss rate: 1.71%

Run 2: Report of Muses\_DecisionTreeH0 — Data Link



Run 3: Statistics of Muses\\_DecisionTreeH0

Start at: 2020-04-16 08:44:17

End at: 2020-04-16 08:44:47

# Below is generated by plot.py at 2020-04-16 08:58:00

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.20 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 52.014 ms

Loss rate: 2.10%

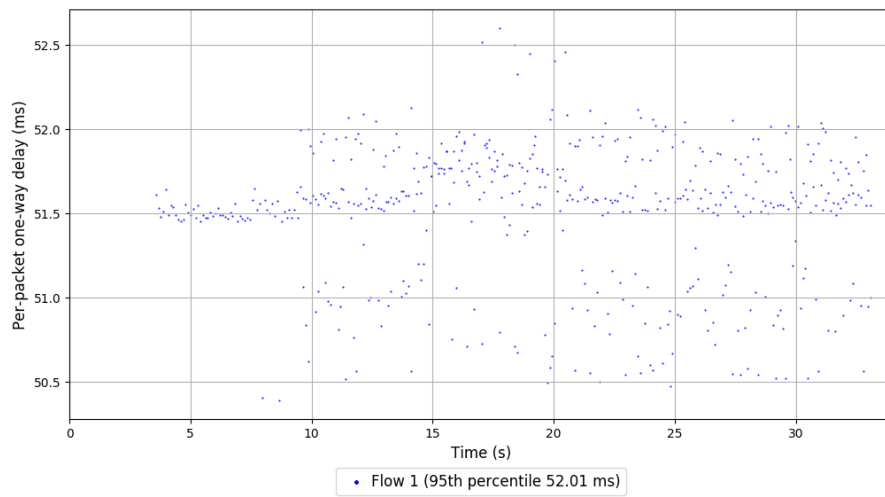
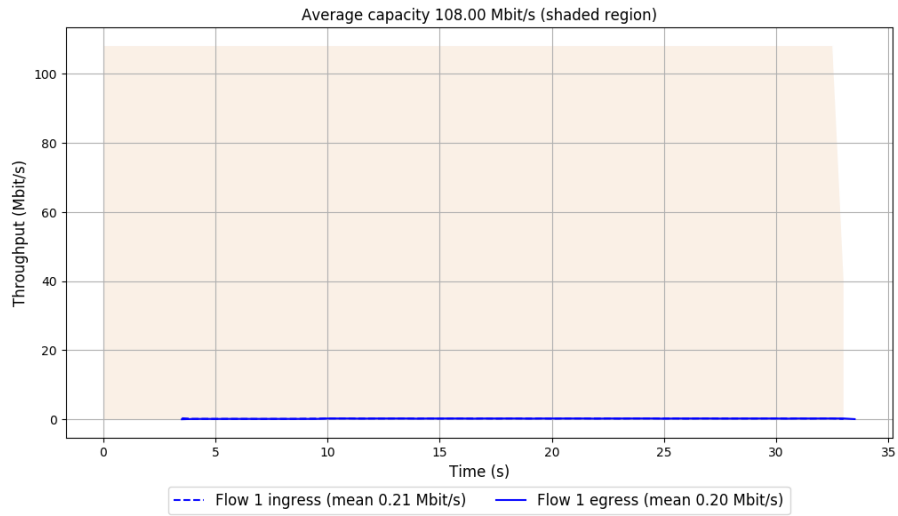
-- Flow 1:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 52.014 ms

Loss rate: 2.10%

Run 3: Report of Muses\_DecisionTreeH0 — Data Link



Run 1: Statistics of Muses\\_DecisionTreeR0

Start at: 2020-04-16 08:16:52

End at: 2020-04-16 08:17:22

# Below is generated by plot.py at 2020-04-16 08:58:11

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.20 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 51.931 ms

Loss rate: 1.90%

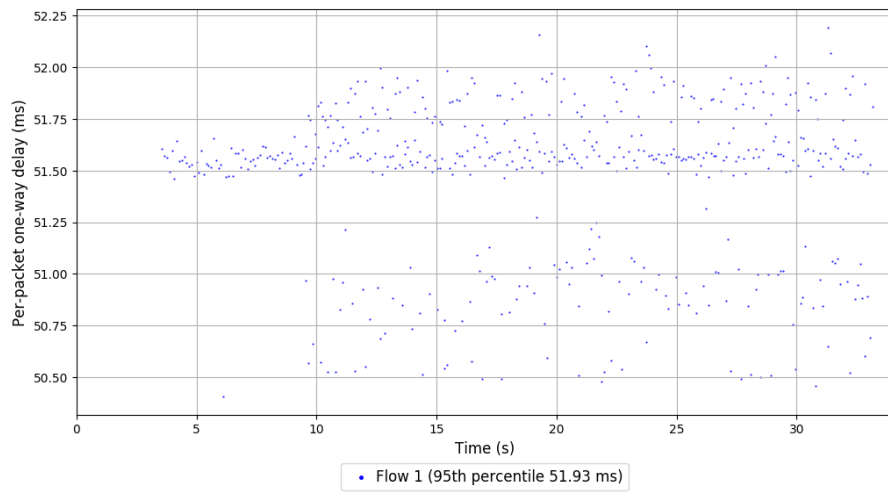
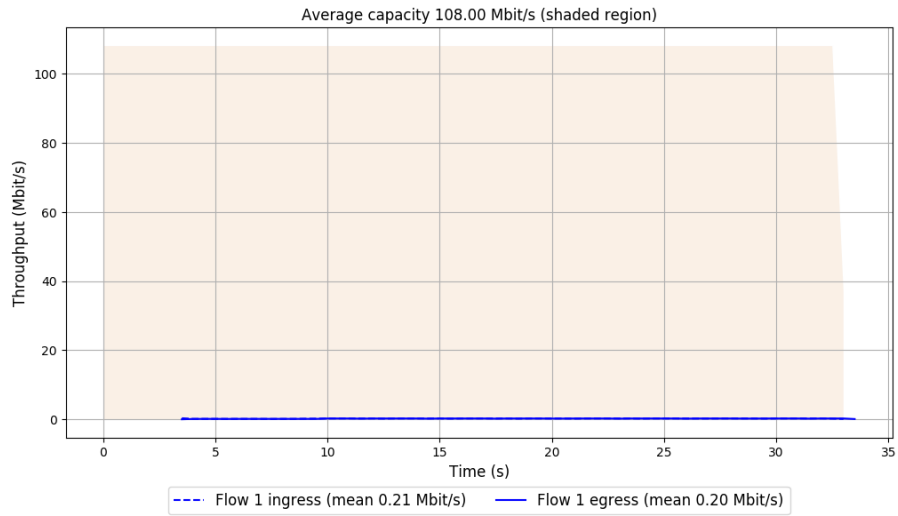
-- Flow 1:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 51.931 ms

Loss rate: 1.90%

Run 1: Report of Muses\_DecisionTreeR0 — Data Link



Run 2: Statistics of Muses\\_DecisionTreeR0

Start at: 2020-04-16 08:31:34

End at: 2020-04-16 08:32:04

# Below is generated by plot.py at 2020-04-16 08:58:13

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.20 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 52.020 ms

Loss rate: 2.10%

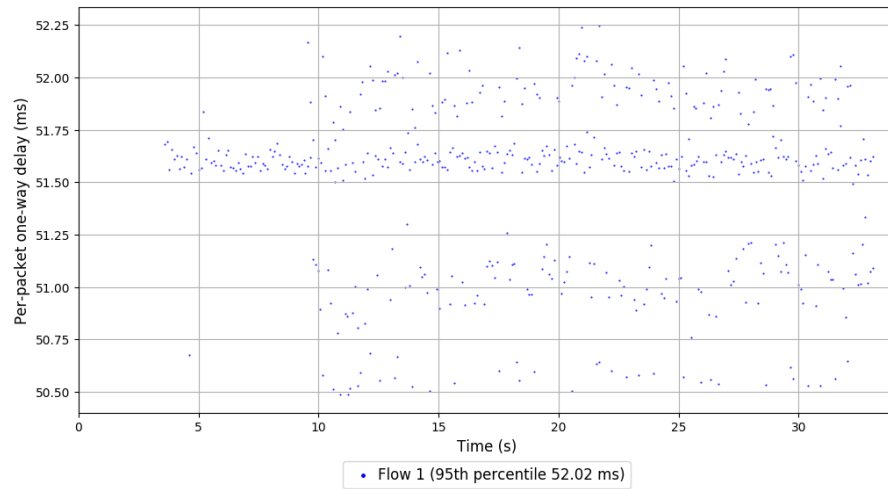
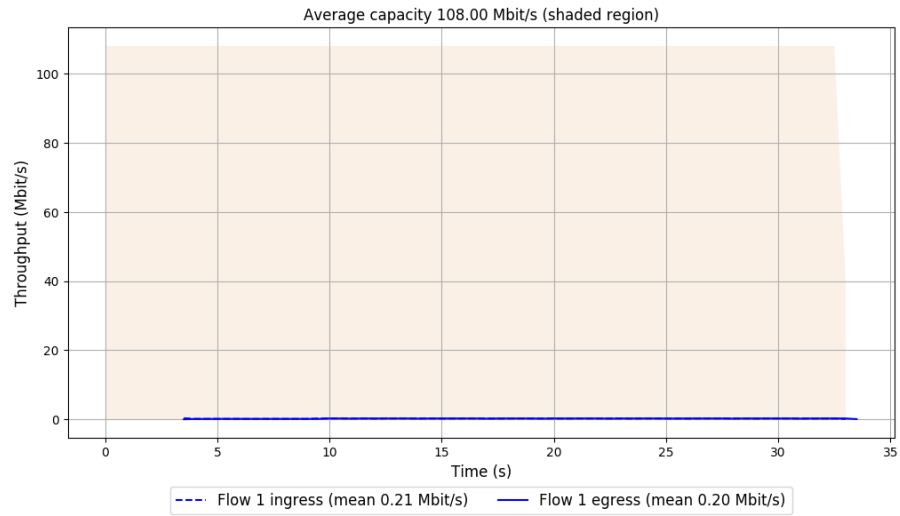
-- Flow 1:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 52.020 ms

Loss rate: 2.10%

## Run 2: Report of Muses\_DecisionTreeR0 — Data Link



Run 3: Statistics of Muses\\_DecisionTreeR0

Start at: 2020-04-16 08:46:13

End at: 2020-04-16 08:46:43

# Below is generated by plot.py at 2020-04-16 08:58:14

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.20 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 52.014 ms

Loss rate: 1.72%

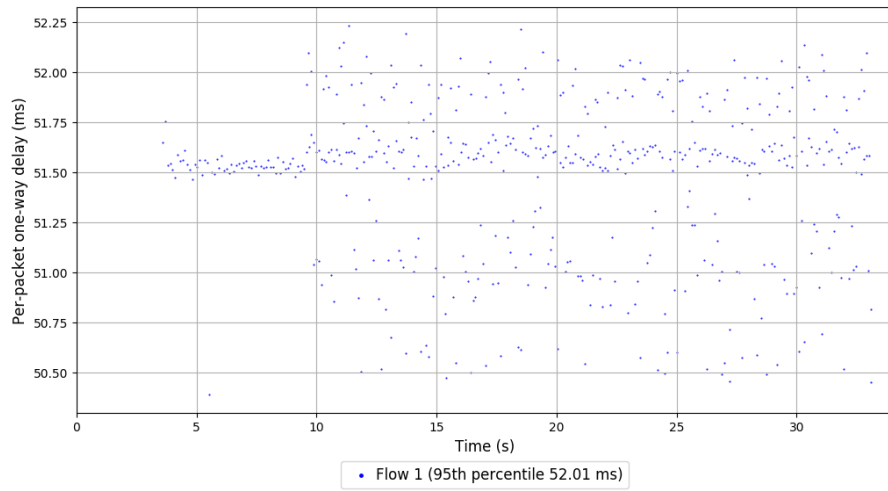
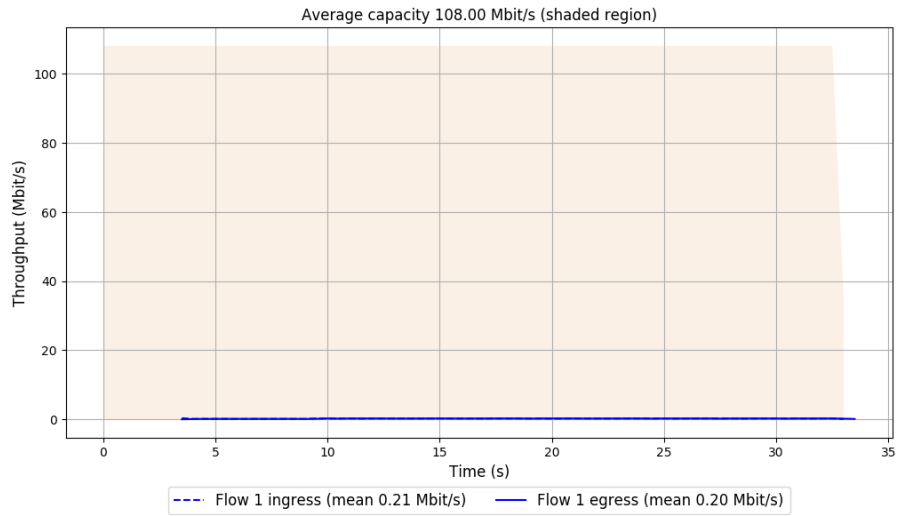
-- Flow 1:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 52.014 ms

Loss rate: 1.72%

### Run 3: Report of Muses\_DecisionTreeR0 — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2020-04-16 08:21:06

End at: 2020-04-16 08:21:36

# Below is generated by plot.py at 2020-04-16 08:58:24

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 9.06 Mbit/s (8.4% utilization)

95th percentile per-packet one-way delay: 51.986 ms

Loss rate: 2.92%

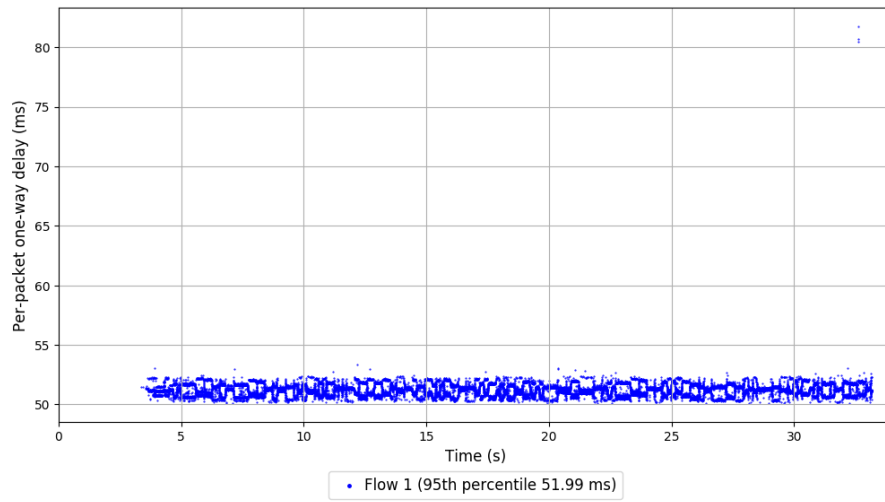
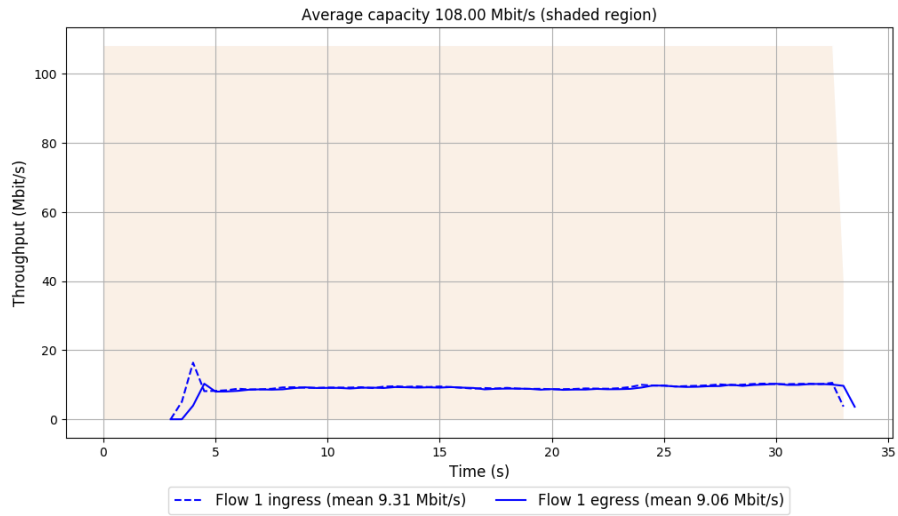
-- Flow 1:

Average throughput: 9.06 Mbit/s

95th percentile per-packet one-way delay: 51.986 ms

Loss rate: 2.92%

# Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2020-04-16 08:35:47

End at: 2020-04-16 08:36:17

# Below is generated by plot.py at 2020-04-16 08:58:24

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 2.09 Mbit/s (1.9% utilization)

95th percentile per-packet one-way delay: 52.021 ms

Loss rate: 2.61%

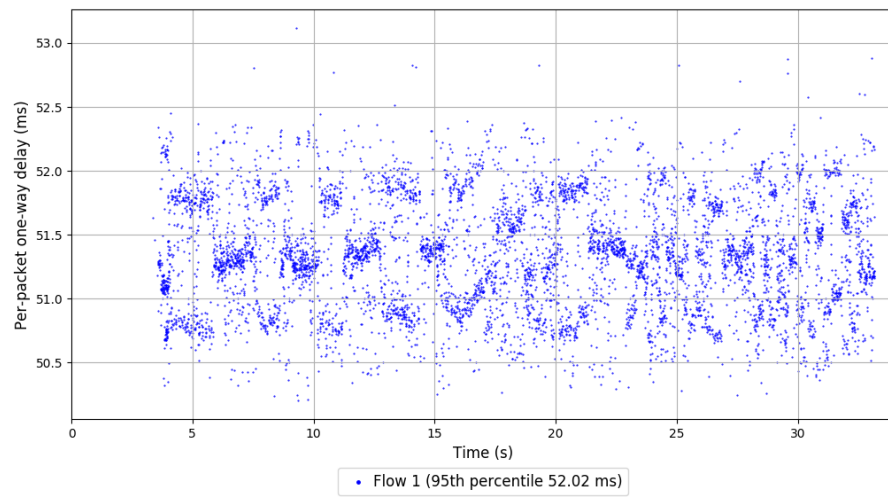
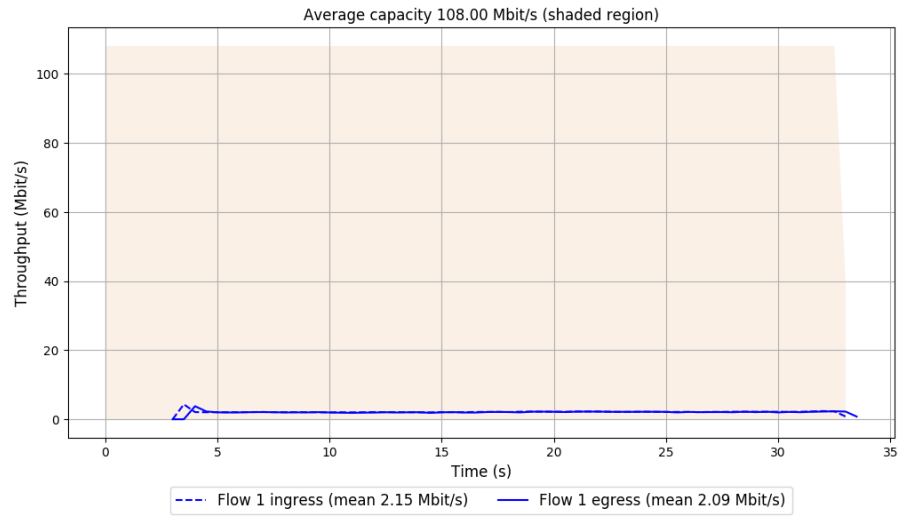
-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 52.021 ms

Loss rate: 2.61%

## Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2020-04-16 08:50:26

End at: 2020-04-16 08:50:56

# Below is generated by plot.py at 2020-04-16 08:58:24

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 2.02 Mbit/s (1.9% utilization)

95th percentile per-packet one-way delay: 52.069 ms

Loss rate: 2.65%

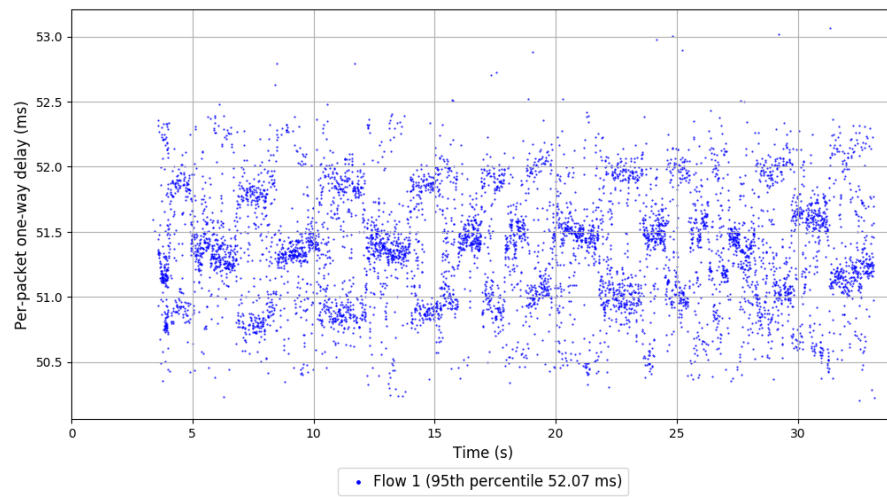
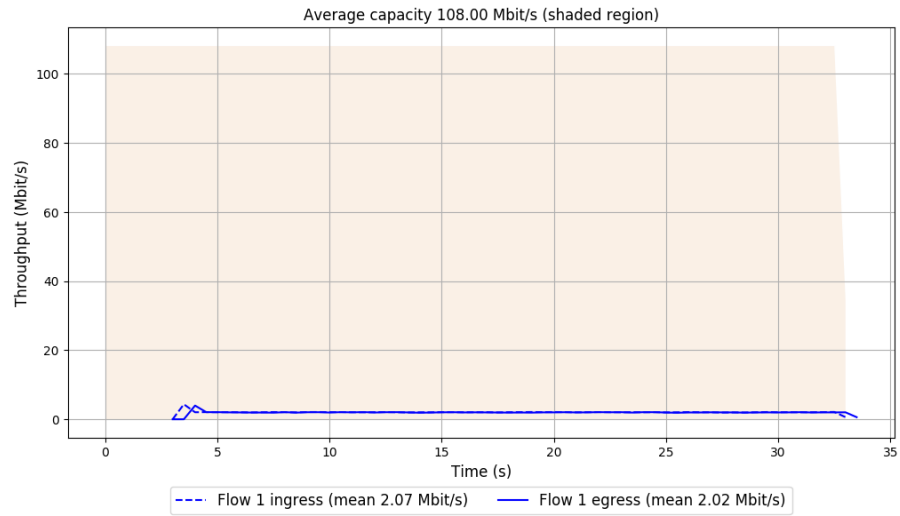
-- Flow 1:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 52.069 ms

Loss rate: 2.65%

### Run 3: Report of PCC-Allegro — Data Link

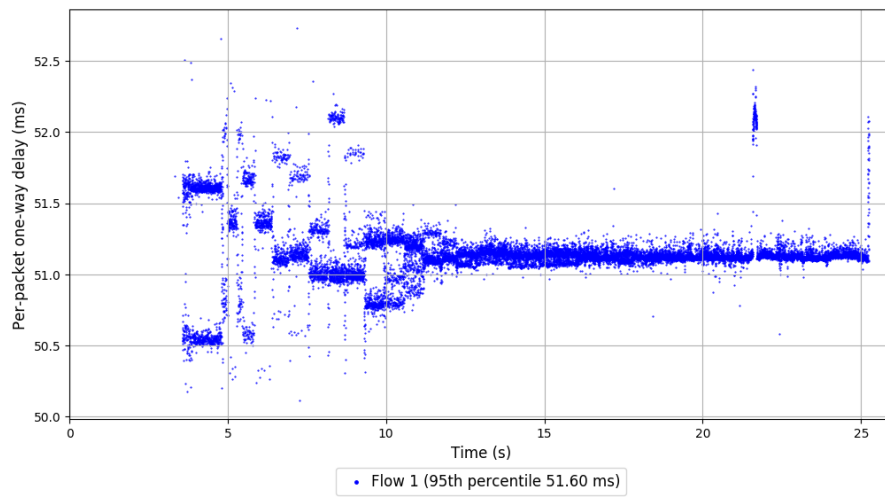
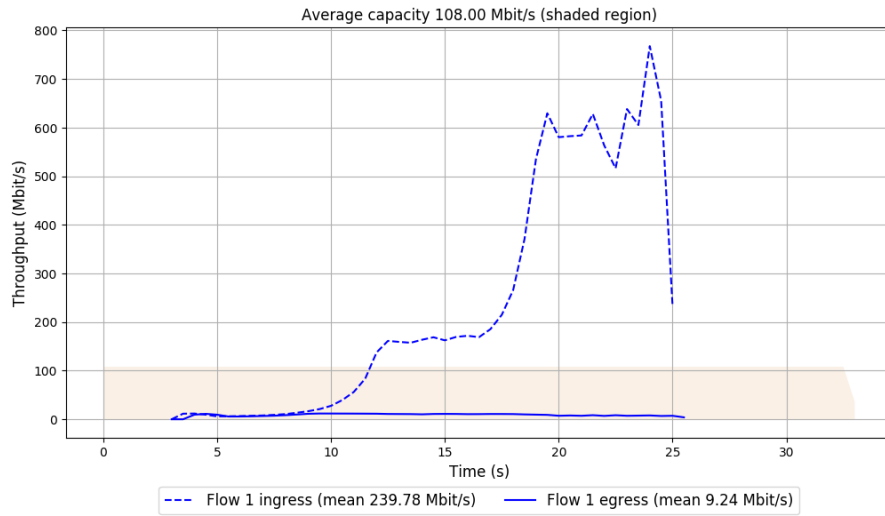


Run 1: Statistics of PCC-Expr

Start at: 2020-04-16 08:16:11

End at: 2020-04-16 08:16:41

# Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2020-04-16 08:30:49

End at: 2020-04-16 08:31:19

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 8.96 Mbit/s (8.3% utilization)

95th percentile per-packet one-way delay: 51.466 ms

Loss rate: 96.86%

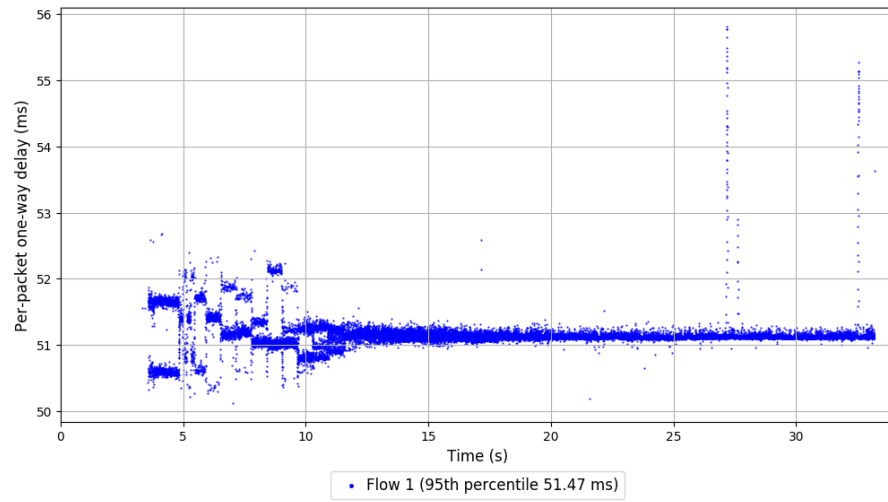
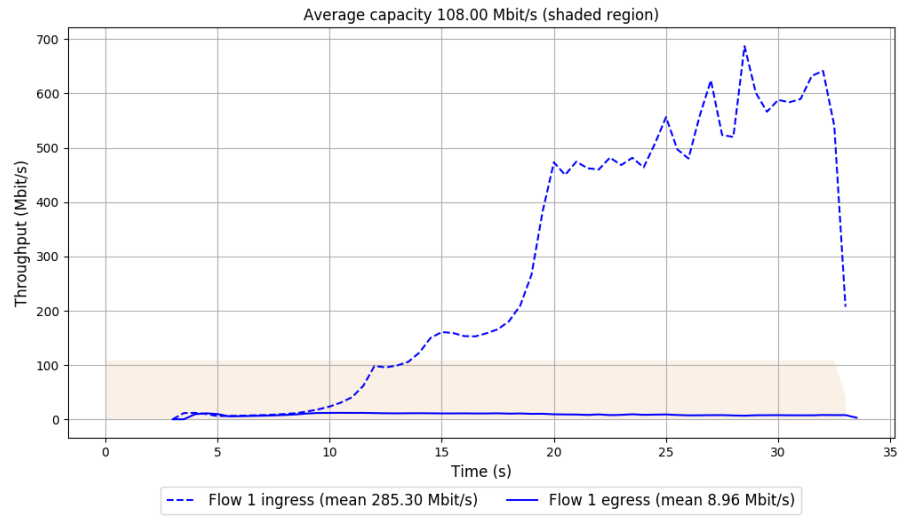
-- Flow 1:

Average throughput: 8.96 Mbit/s

95th percentile per-packet one-way delay: 51.466 ms

Loss rate: 96.86%

## Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2020-04-16 08:45:29

End at: 2020-04-16 08:45:59

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 9.23 Mbit/s (8.5% utilization)

95th percentile per-packet one-way delay: 51.602 ms

Loss rate: 96.25%

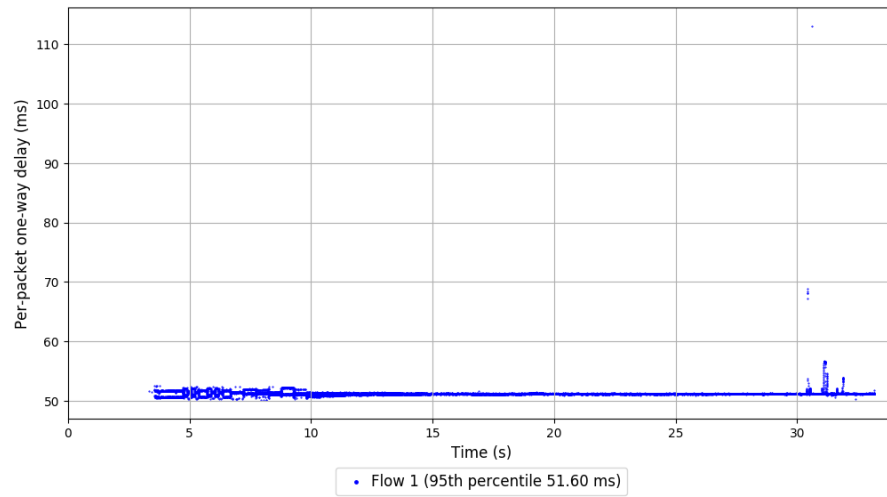
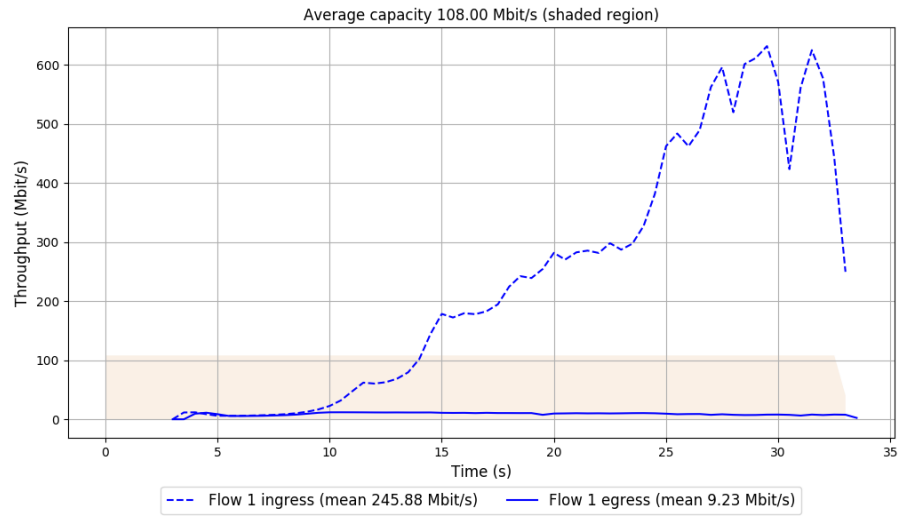
-- Flow 1:

Average throughput: 9.23 Mbit/s

95th percentile per-packet one-way delay: 51.602 ms

Loss rate: 96.25%

### Run 3: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2020-04-16 08:19:53

End at: 2020-04-16 08:20:23

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 3.14 Mbit/s (2.9% utilization)

95th percentile per-packet one-way delay: 52.057 ms

Loss rate: 1.40%

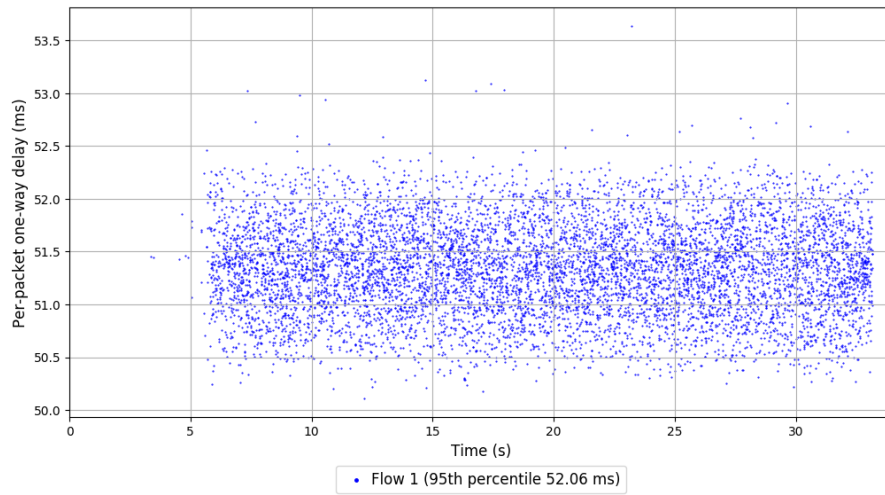
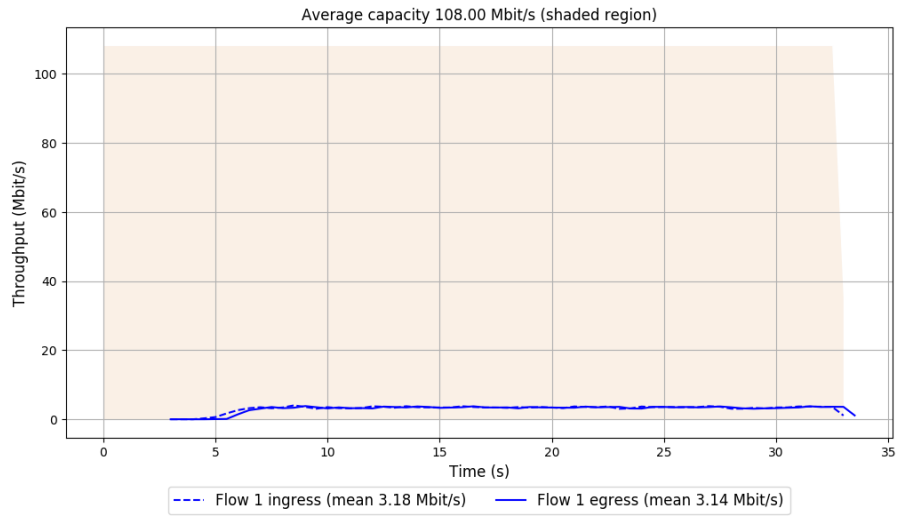
-- Flow 1:

Average throughput: 3.14 Mbit/s

95th percentile per-packet one-way delay: 52.057 ms

Loss rate: 1.40%

# Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2020-04-16 08:34:35

End at: 2020-04-16 08:35:05

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 3.29 Mbit/s (3.0% utilization)

95th percentile per-packet one-way delay: 52.055 ms

Loss rate: 1.29%

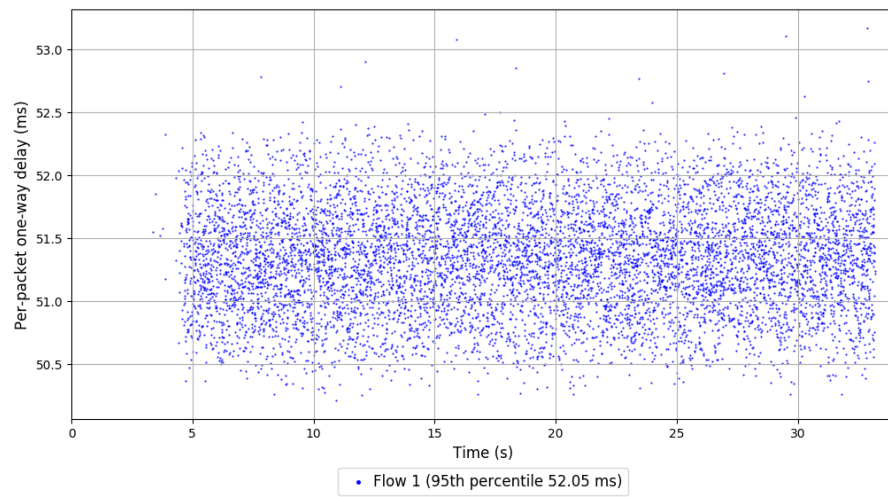
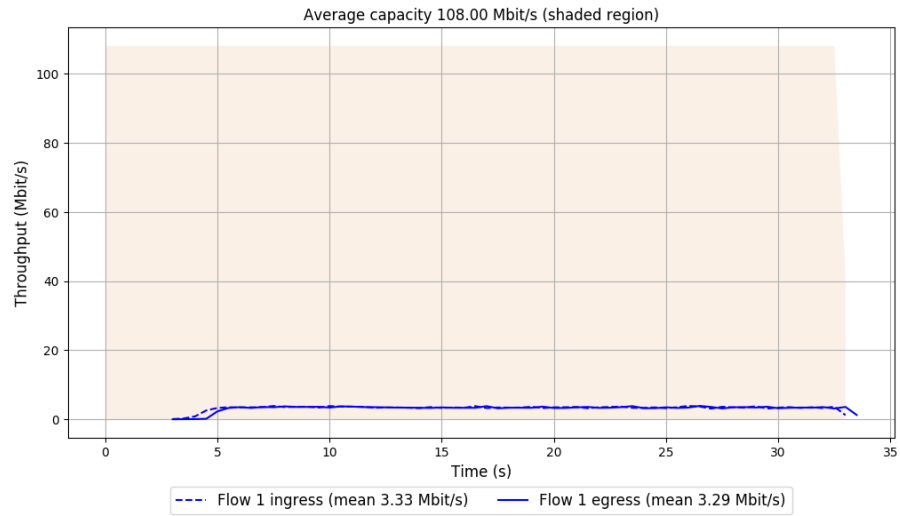
-- Flow 1:

Average throughput: 3.29 Mbit/s

95th percentile per-packet one-way delay: 52.055 ms

Loss rate: 1.29%

## Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2020-04-16 08:49:14

End at: 2020-04-16 08:49:44

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 3.33 Mbit/s (3.1% utilization)

95th percentile per-packet one-way delay: 52.126 ms

Loss rate: 1.38%

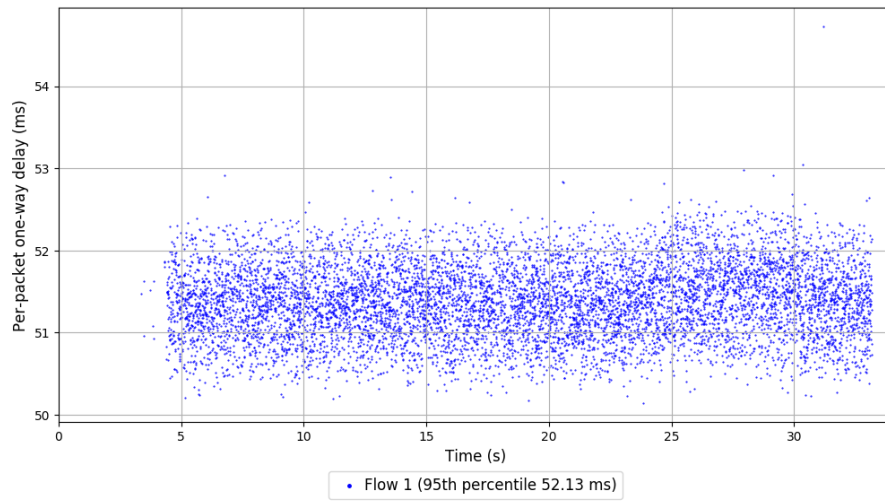
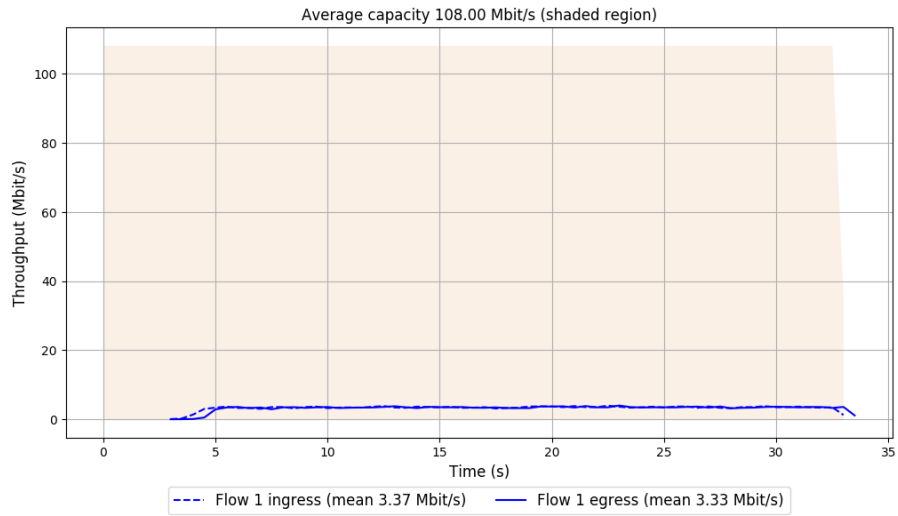
-- Flow 1:

Average throughput: 3.33 Mbit/s

95th percentile per-packet one-way delay: 52.126 ms

Loss rate: 1.38%

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



Run 1: Statistics of SCReAM

Start at: 2020-04-16 08:17:29

End at: 2020-04-16 08:17:59

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.21 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 51.596 ms

Loss rate: 0.26%

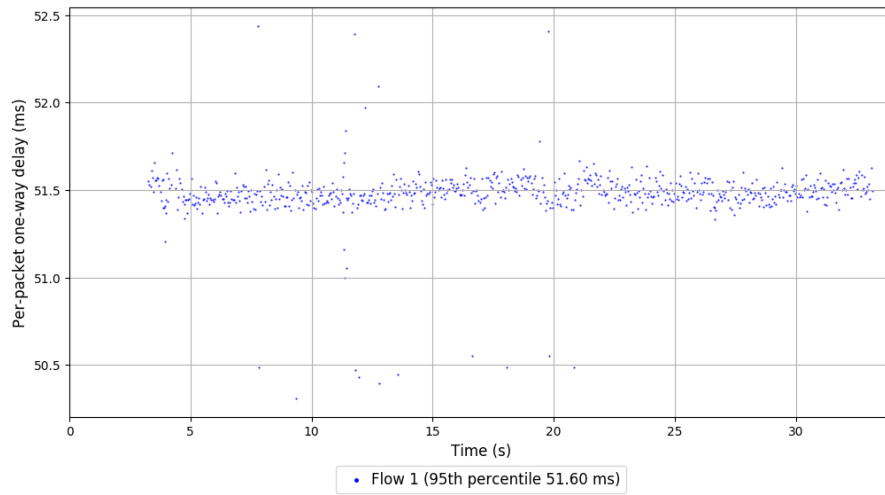
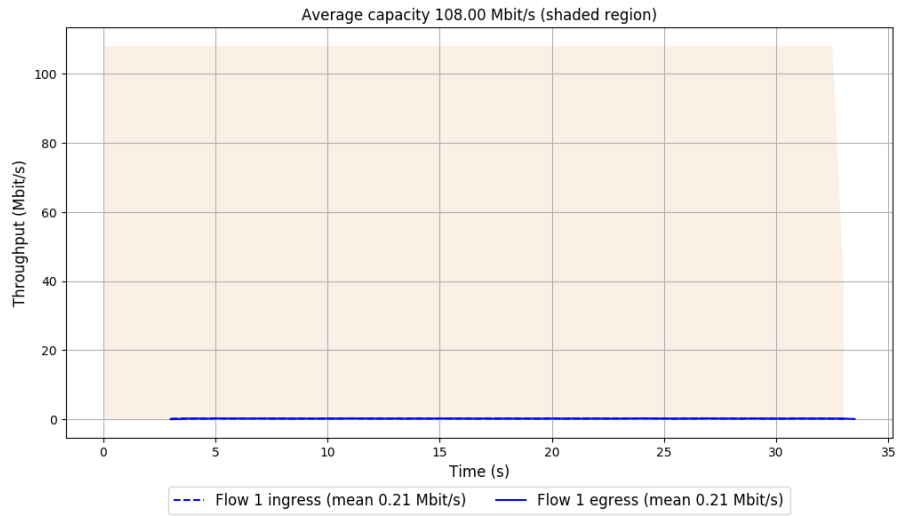
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 51.596 ms

Loss rate: 0.26%

# Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2020-04-16 08:32:10

End at: 2020-04-16 08:32:40

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.21 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 51.720 ms

Loss rate: 0.13%

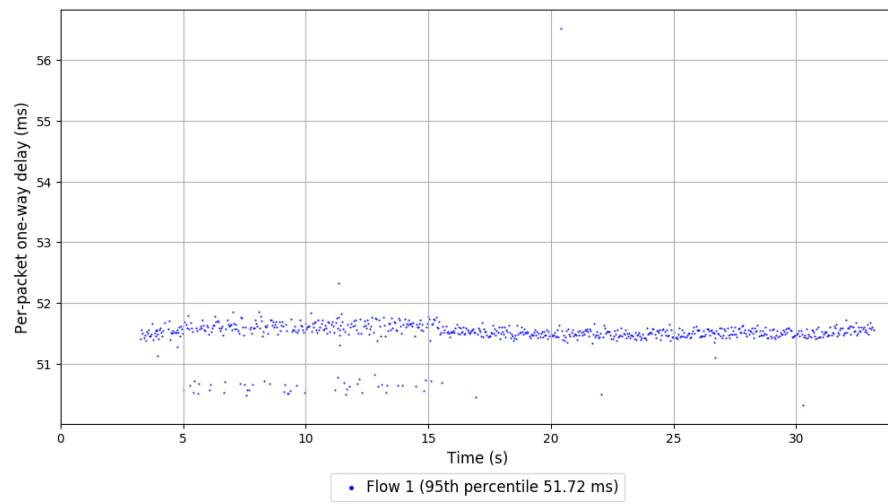
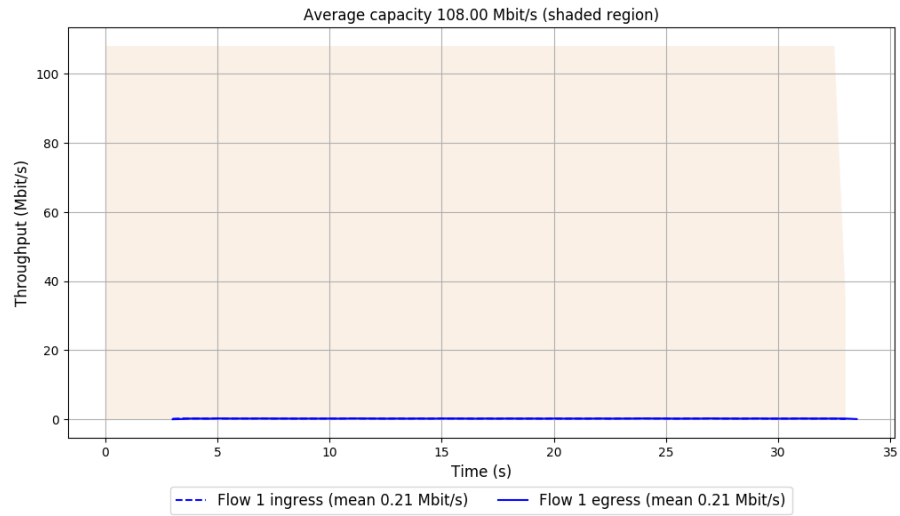
-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 51.720 ms

Loss rate: 0.13%

## Run 2: Report of SCReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2020-04-16 08:46:49

End at: 2020-04-16 08:47:19

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.22 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 51.613 ms

Loss rate: 0.26%

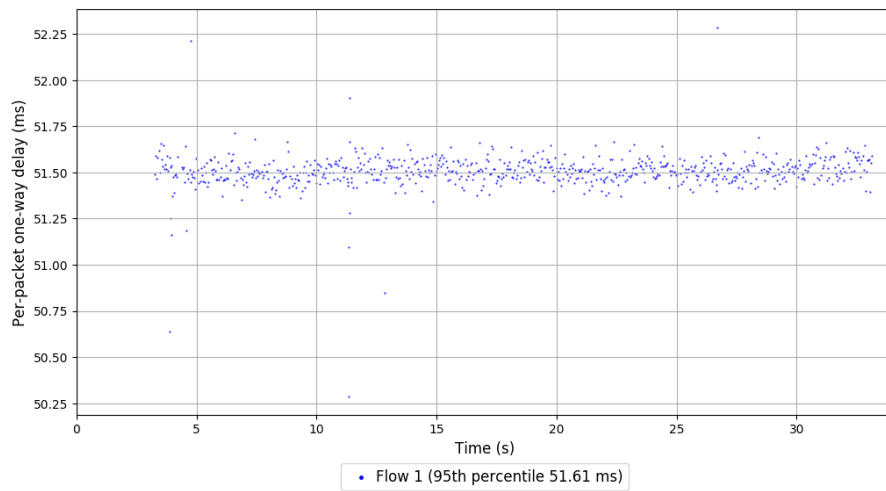
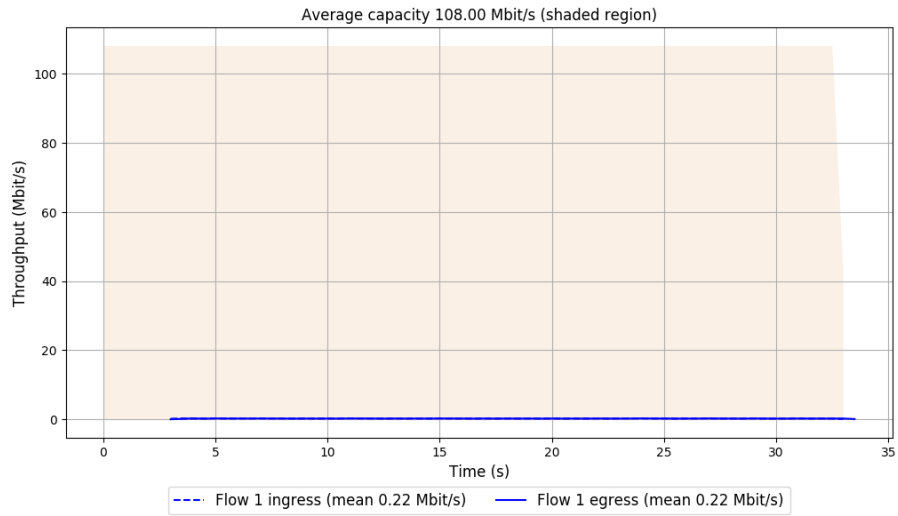
-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 51.613 ms

Loss rate: 0.26%

### Run 3: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2020-04-16 08:14:22

End at: 2020-04-16 08:14:52

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.19 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 52.096 ms

Loss rate: 7.36%

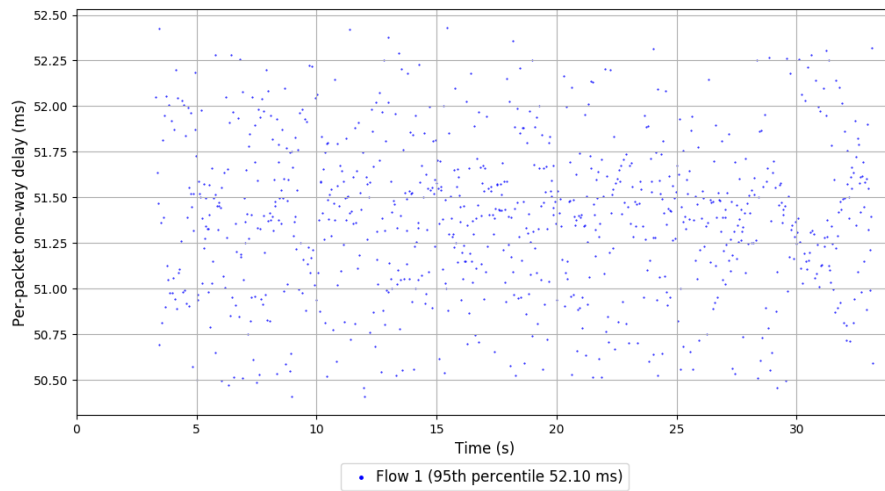
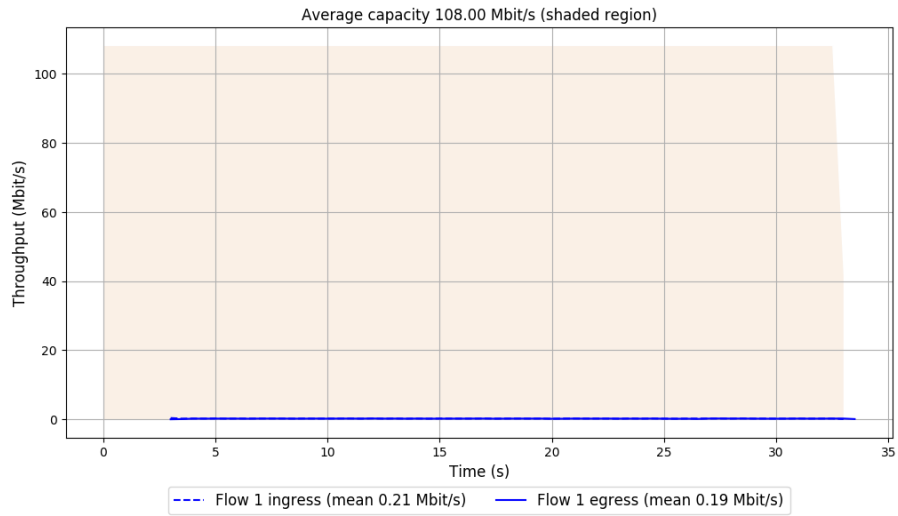
-- Flow 1:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 52.096 ms

Loss rate: 7.36%

# Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2020-04-16 08:29:00

End at: 2020-04-16 08:29:30

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.19 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 52.149 ms

Loss rate: 9.01%

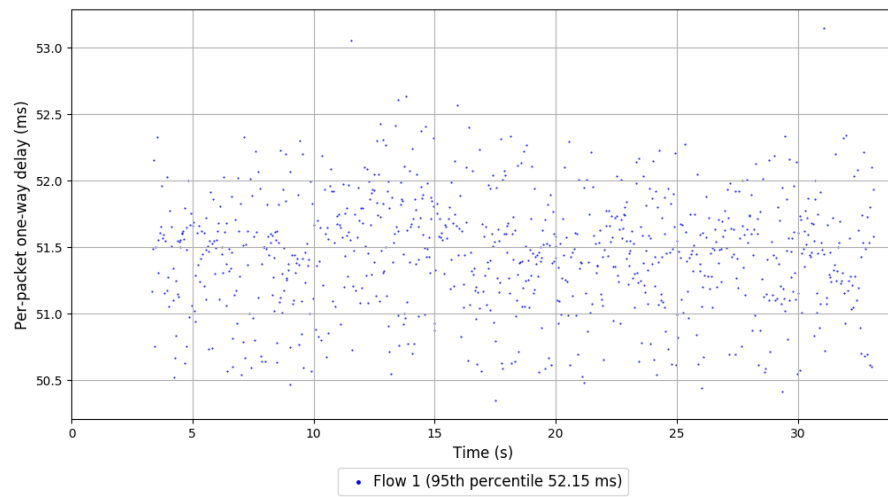
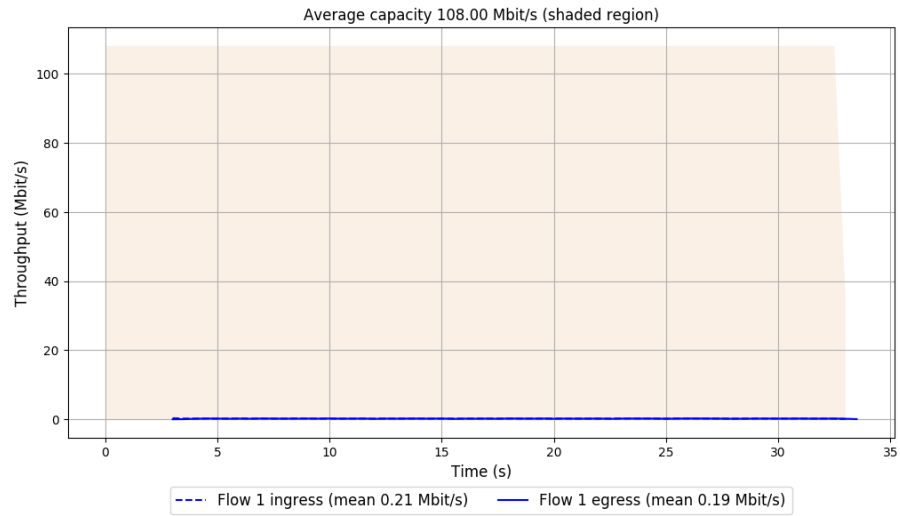
-- Flow 1:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 52.149 ms

Loss rate: 9.01%

## Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2020-04-16 08:43:40

End at: 2020-04-16 08:44:10

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.19 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 52.135 ms

Loss rate: 8.67%

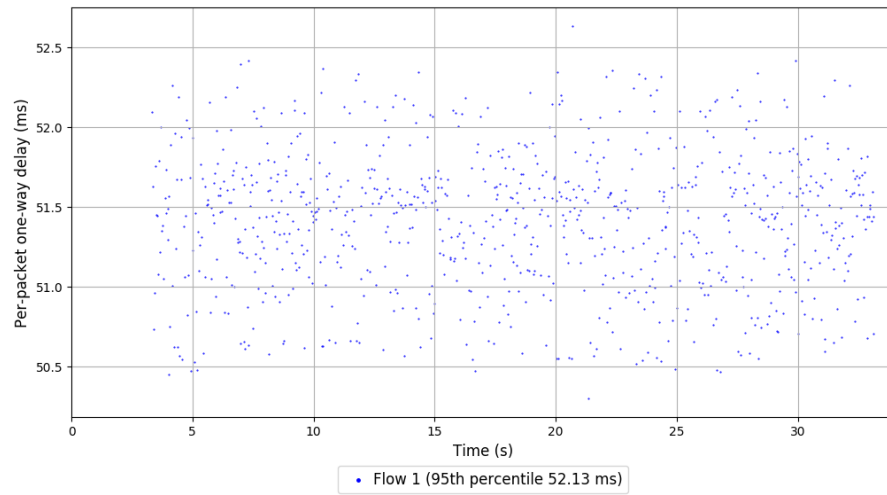
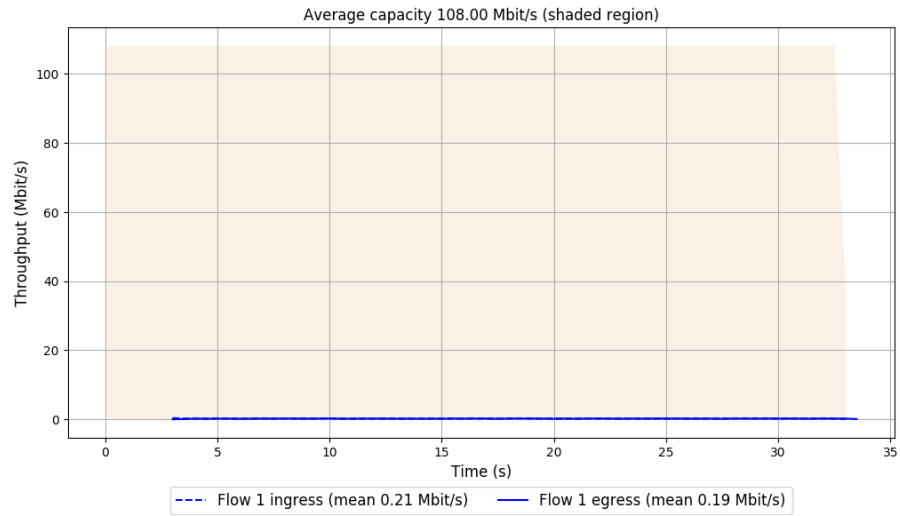
-- Flow 1:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 52.135 ms

Loss rate: 8.67%

### Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2020-04-16 08:11:19

End at: 2020-04-16 08:11:49

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.01 Mbit/s (0.0% utilization)

95th percentile per-packet one-way delay: 51.666 ms

Loss rate: 51.91%

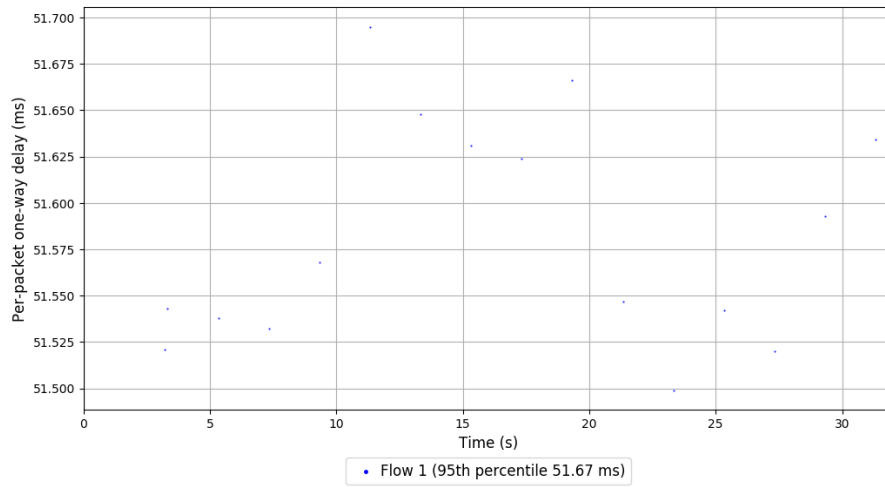
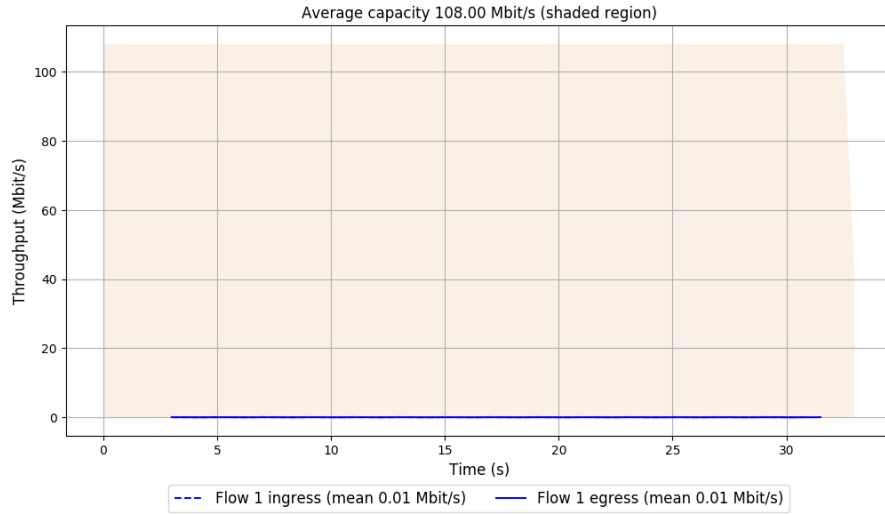
-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 51.666 ms

Loss rate: 51.91%

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



Run 2: Statistics of TaoVA-100x

Start at: 2020-04-16 08:25:56

End at: 2020-04-16 08:26:26

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.01 Mbit/s (0.0% utilization)

95th percentile per-packet one-way delay: 51.625 ms

Loss rate: 51.91%

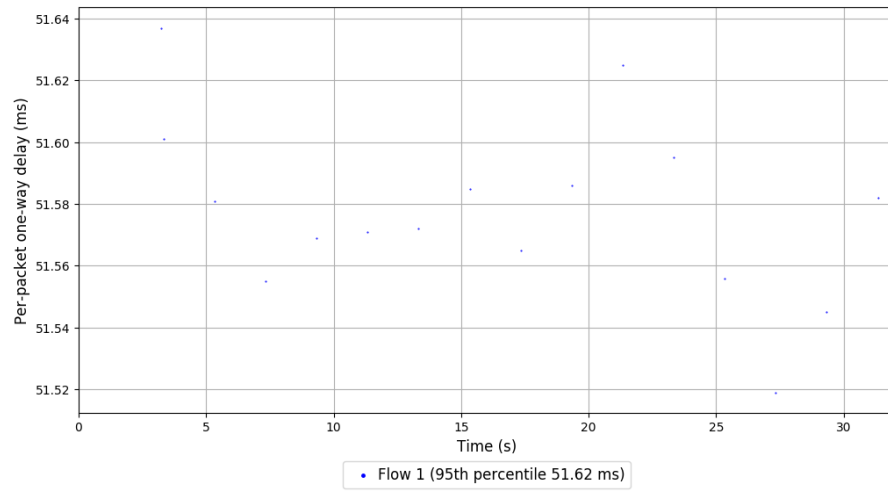
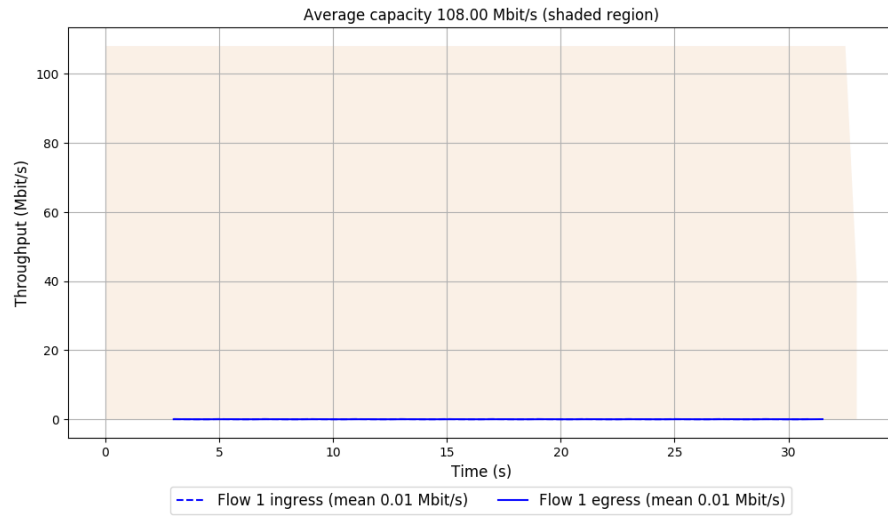
-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 51.625 ms

Loss rate: 51.91%

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



Run 3: Statistics of TaoVA-100x

Start at: 2020-04-16 08:40:38

End at: 2020-04-16 08:41:08

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.01 Mbit/s (0.0% utilization)

95th percentile per-packet one-way delay: 51.633 ms

Loss rate: 51.91%

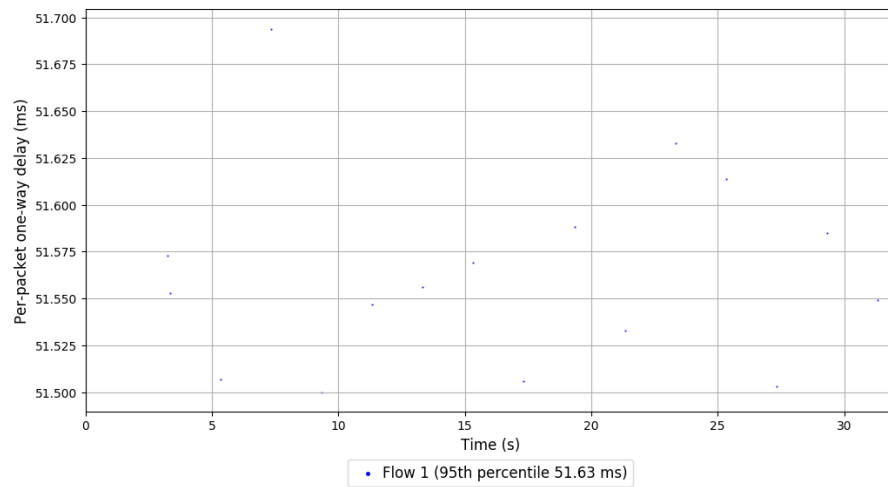
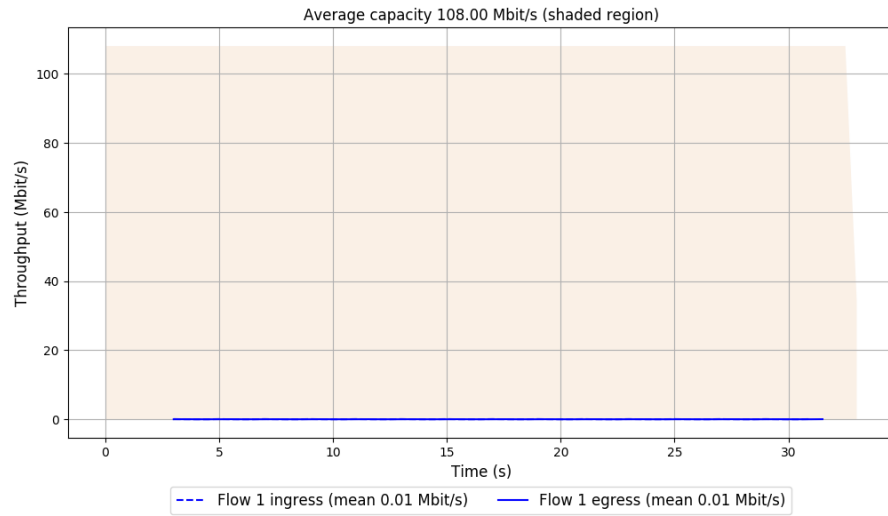
-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 51.633 ms

Loss rate: 51.91%

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



Run 1: Statistics of TCP Vegas

Start at: 2020-04-16 08:19:17

End at: 2020-04-16 08:19:47

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.27 Mbit/s (0.3% utilization)

95th percentile per-packet one-way delay: 51.922 ms

Loss rate: 13.92%

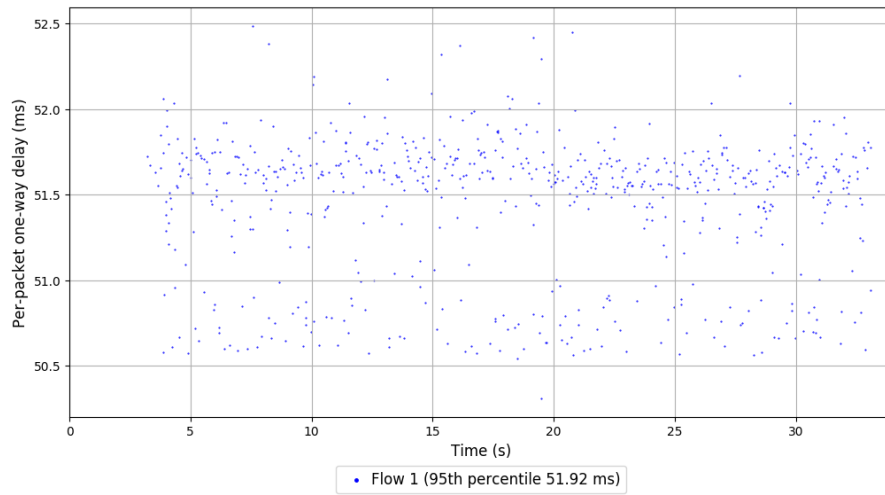
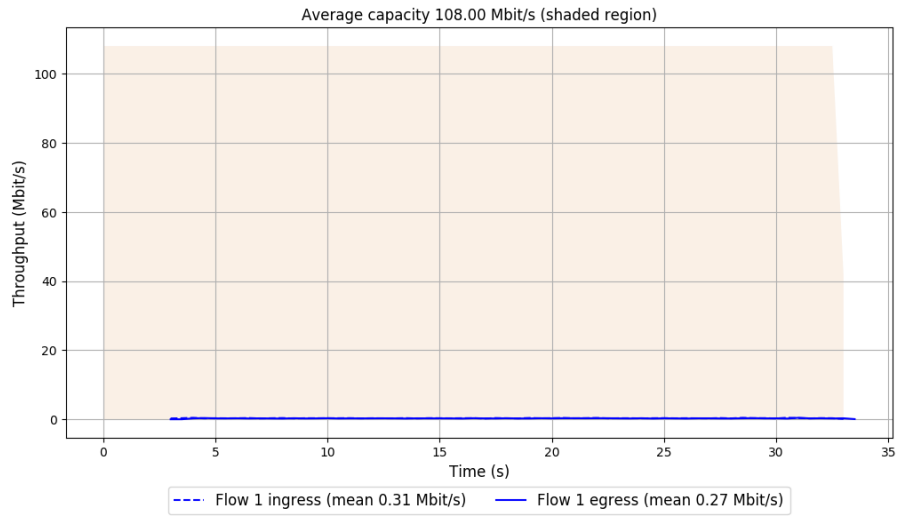
-- Flow 1:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 51.922 ms

Loss rate: 13.92%

# Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2020-04-16 08:33:59

End at: 2020-04-16 08:34:29

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.26 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 52.089 ms

Loss rate: 14.25%

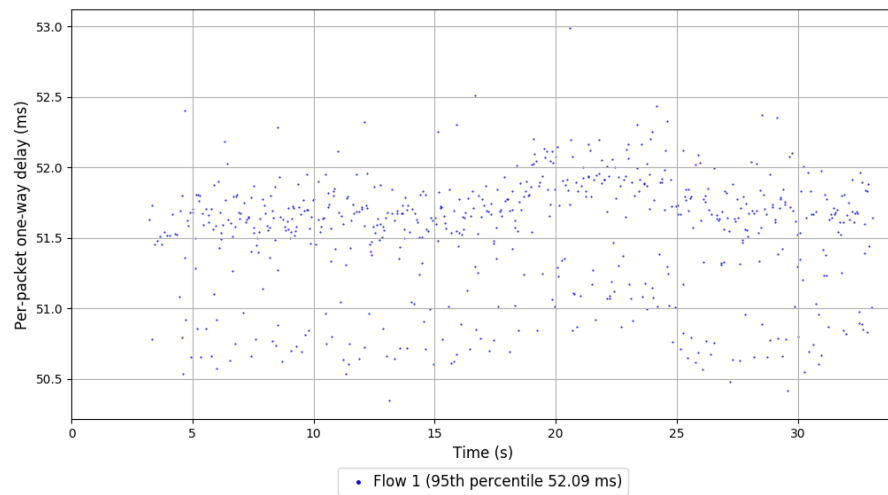
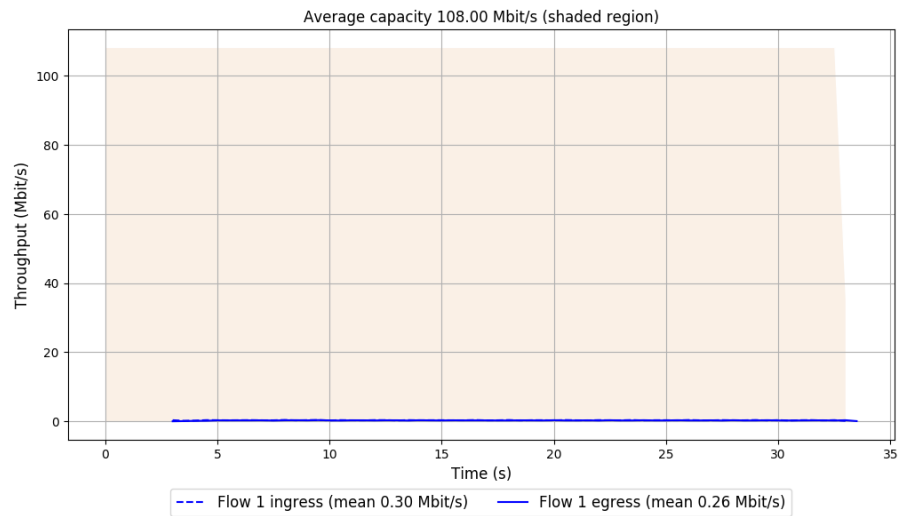
-- Flow 1:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 52.089 ms

Loss rate: 14.25%

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



Run 3: Statistics of TCP Vegas

Start at: 2020-04-16 08:48:38

End at: 2020-04-16 08:49:08

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.26 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 51.939 ms

Loss rate: 14.41%

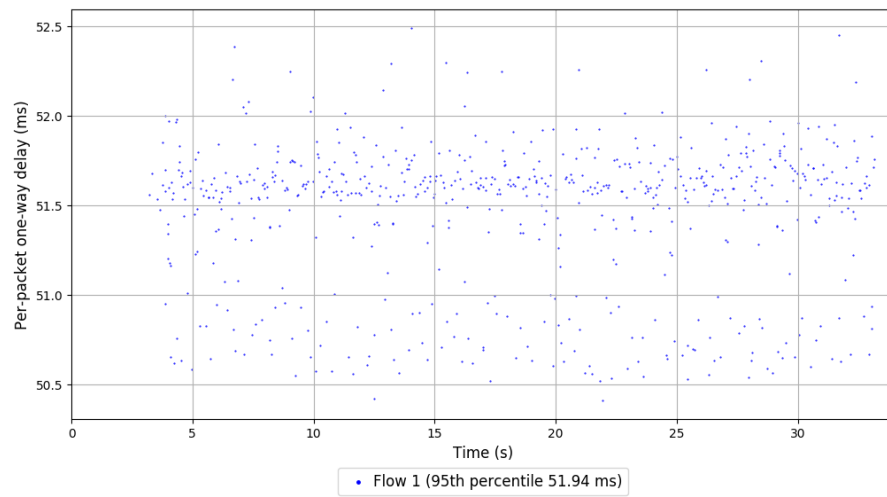
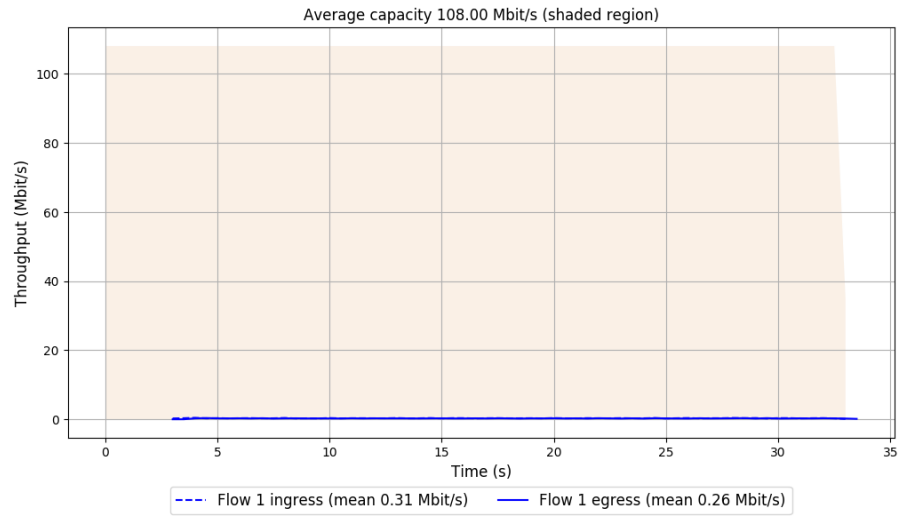
-- Flow 1:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 51.939 ms

Loss rate: 14.41%

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



Run 1: Statistics of Verus

Start at: 2020-04-16 08:24:07

End at: 2020-04-16 08:24:37

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.18 Mbit/s (0.2% utilization)

95th percentile per-packet one-way delay: 52.042 ms

Loss rate: 92.79%

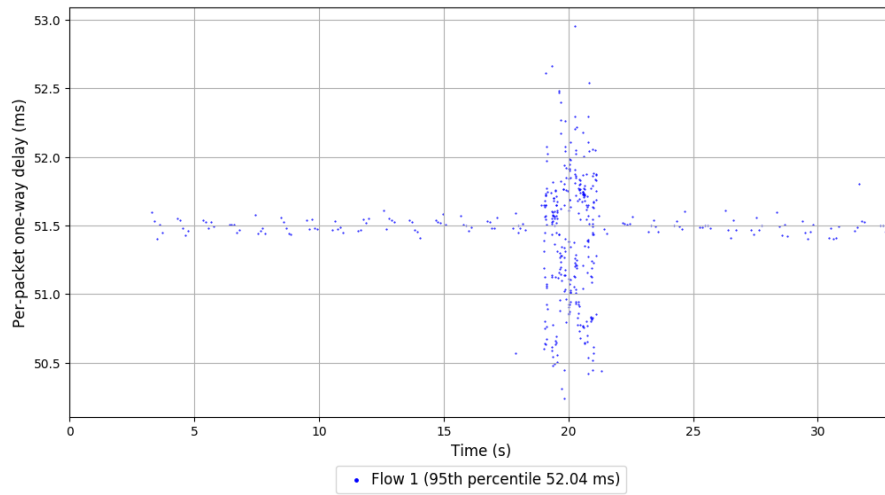
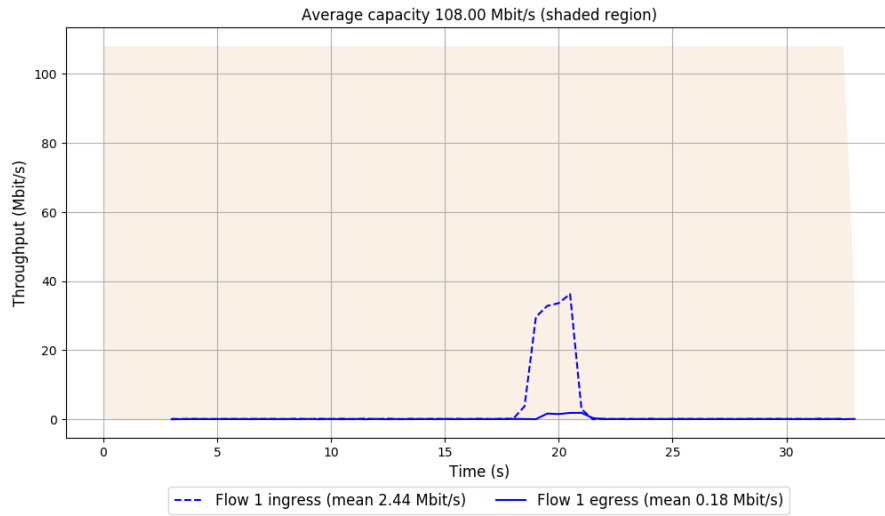
-- Flow 1:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 52.042 ms

Loss rate: 92.79%

# Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2020-04-16 08:38:49

End at: 2020-04-16 08:39:19

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.47 Mbit/s (0.4% utilization)

95th percentile per-packet one-way delay: 52.157 ms

Loss rate: 96.86%

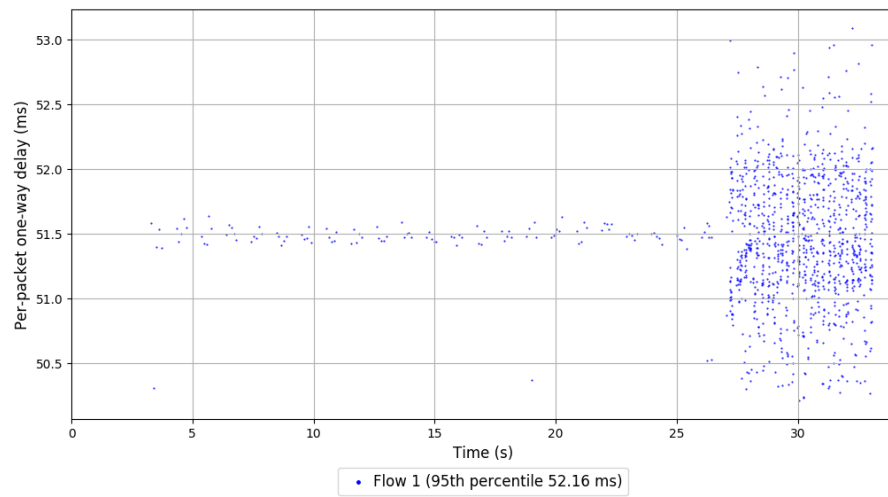
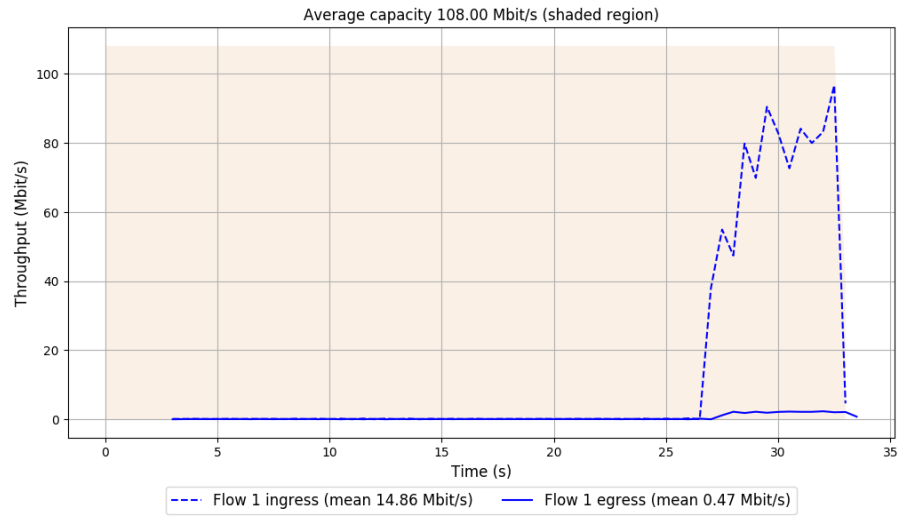
-- Flow 1:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 52.157 ms

Loss rate: 96.86%

## Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2020-04-16 08:53:28

End at: 2020-04-16 08:53:58

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 0.06 Mbit/s (0.1% utilization)

95th percentile per-packet one-way delay: 51.554 ms

Loss rate: 44.11%

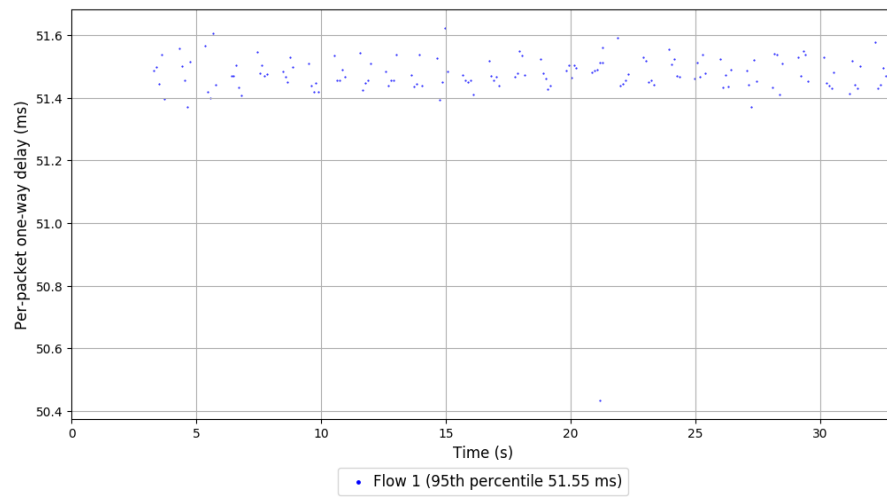
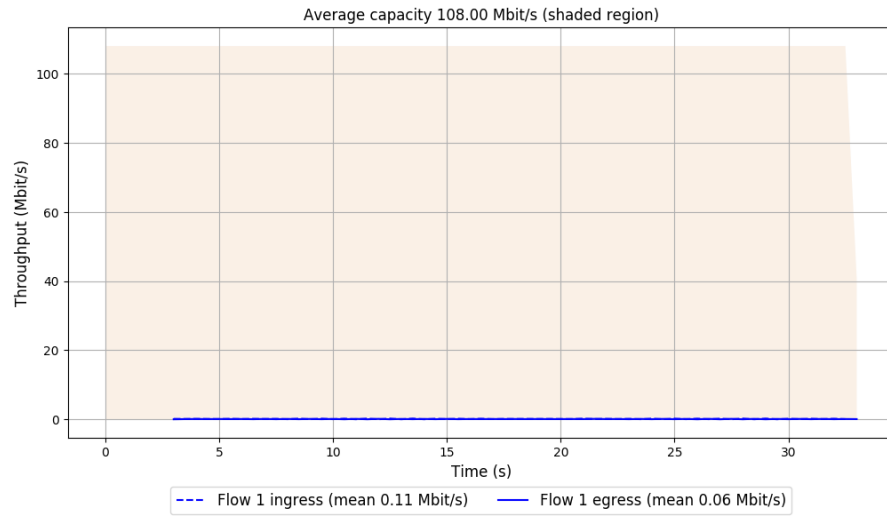
-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 51.554 ms

Loss rate: 44.11%

### Run 3: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2020-04-16 08:13:46

End at: 2020-04-16 08:14:16

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 6.60 Mbit/s (6.1% utilization)

95th percentile per-packet one-way delay: 51.978 ms

Loss rate: 0.60%

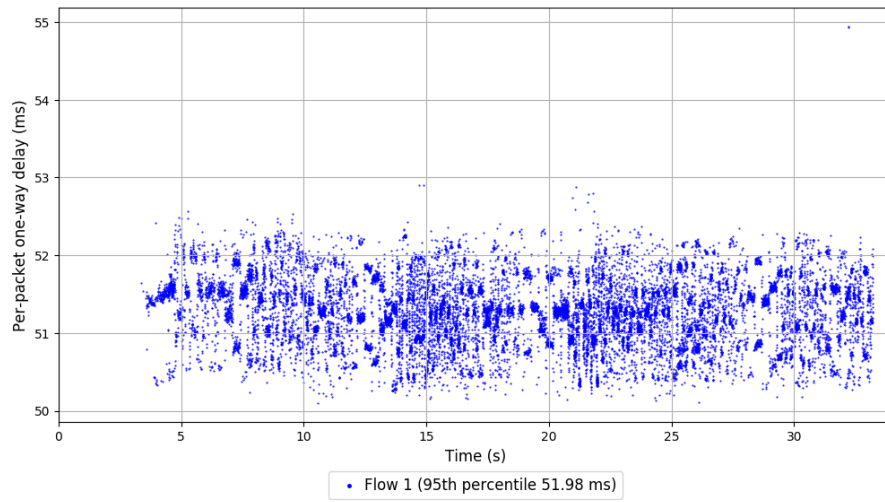
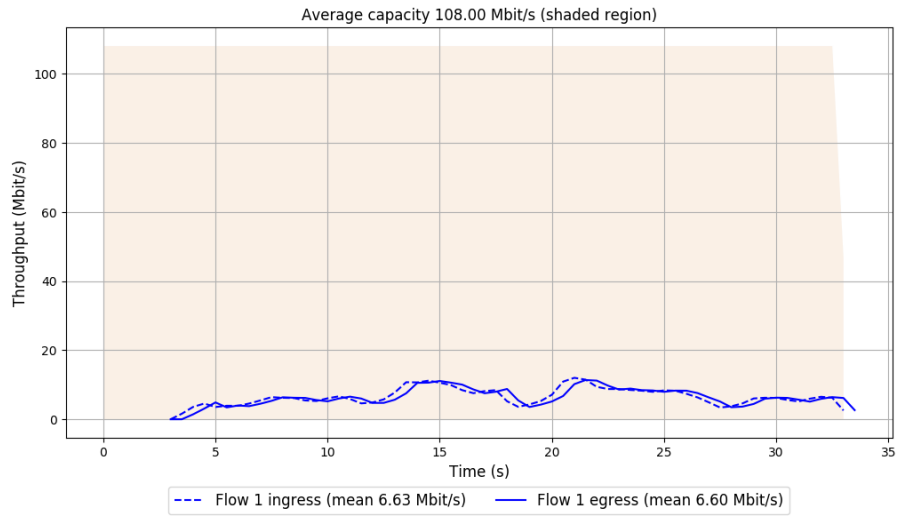
-- Flow 1:

Average throughput: 6.60 Mbit/s

95th percentile per-packet one-way delay: 51.978 ms

Loss rate: 0.60%

# Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2020-04-16 08:28:23

End at: 2020-04-16 08:28:53

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 5.73 Mbit/s (5.3% utilization)

95th percentile per-packet one-way delay: 51.983 ms

Loss rate: 0.47%

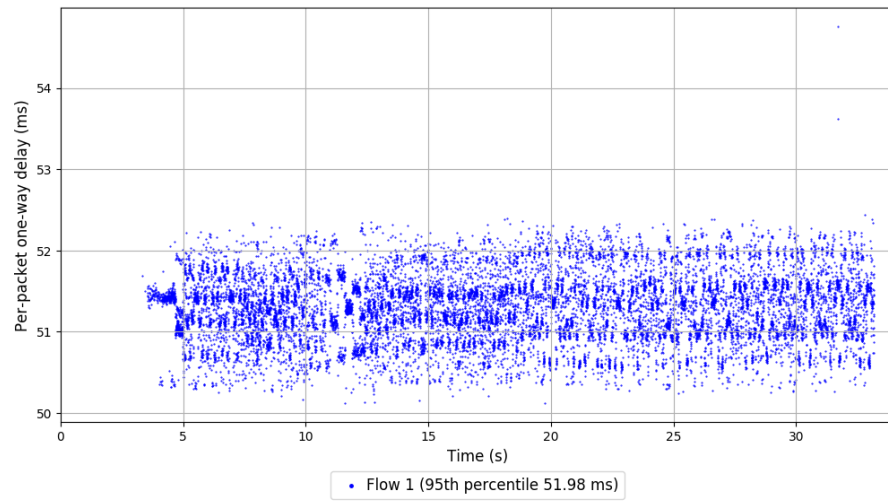
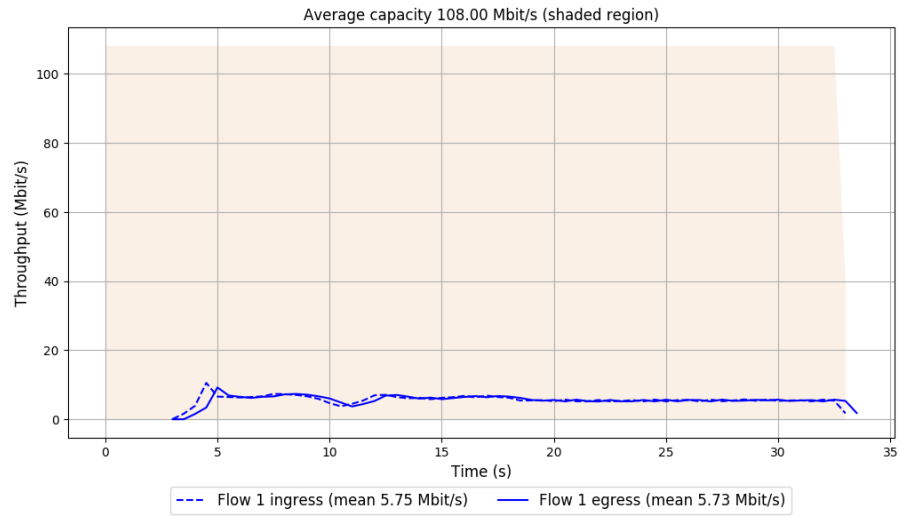
-- Flow 1:

Average throughput: 5.73 Mbit/s

95th percentile per-packet one-way delay: 51.983 ms

Loss rate: 0.47%

## Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2020-04-16 08:43:04

End at: 2020-04-16 08:43:34

# Below is generated by plot.py at 2020-04-16 09:00:51

# Datalink statistics

-- Total of 1 flow:

Average capacity: 108.00 Mbit/s

Average throughput: 5.86 Mbit/s (5.4% utilization)

95th percentile per-packet one-way delay: 51.949 ms

Loss rate: 0.44%

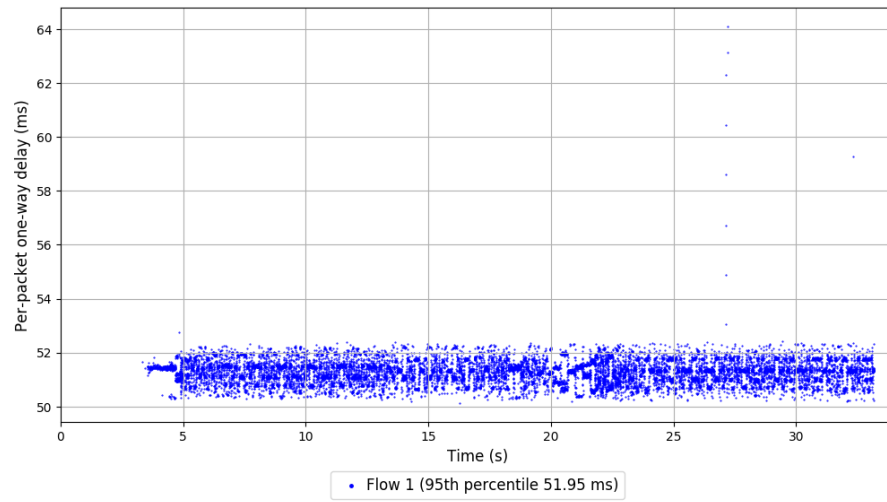
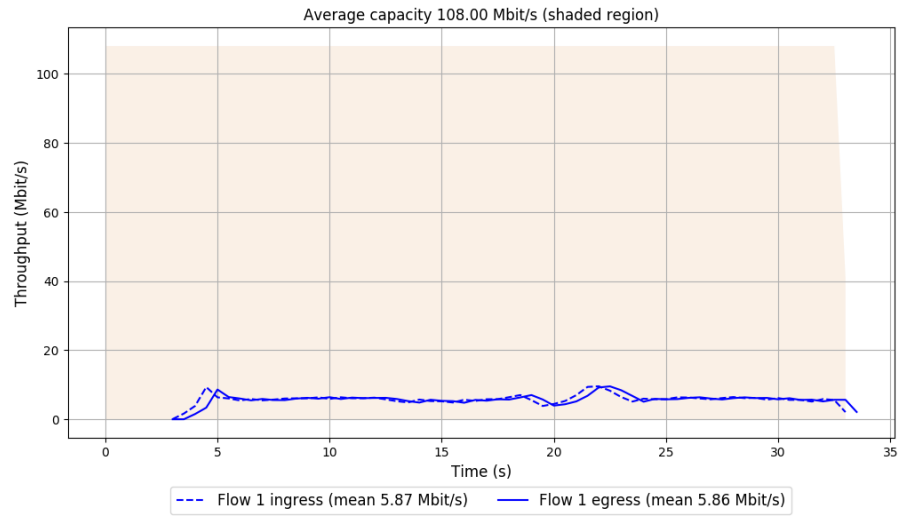
-- Flow 1:

Average throughput: 5.86 Mbit/s

95th percentile per-packet one-way delay: 51.949 ms

Loss rate: 0.44%

### Run 3: Report of PCC-Vivace — Data Link

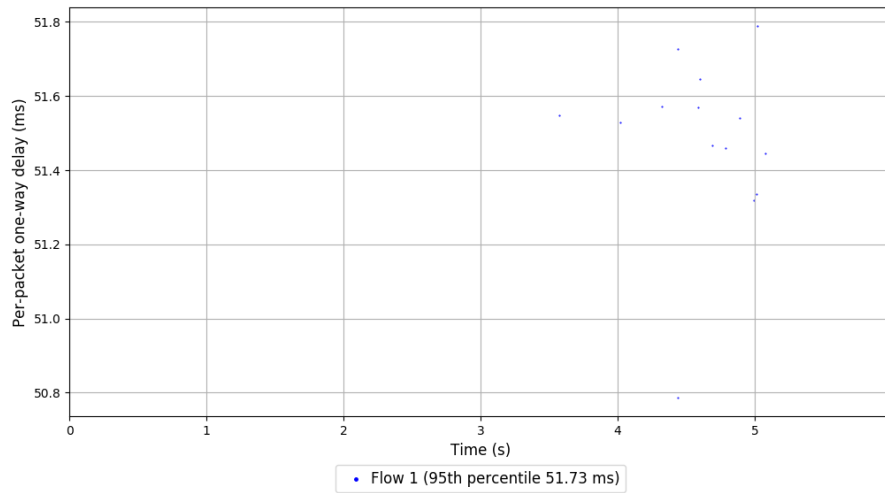
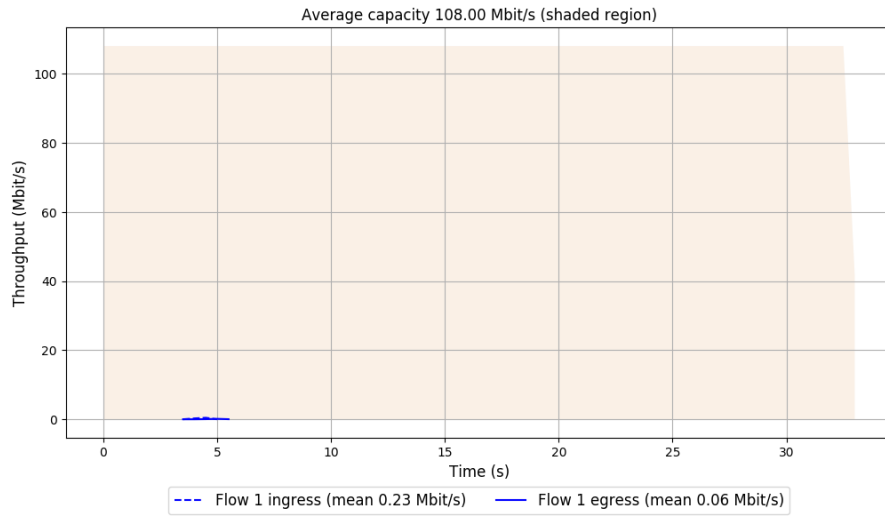


Run 1: Statistics of WebRTC media

Start at: 2020-04-16 08:23:31

End at: 2020-04-16 08:24:01

# Run 1: Report of WebRTC media — Data Link

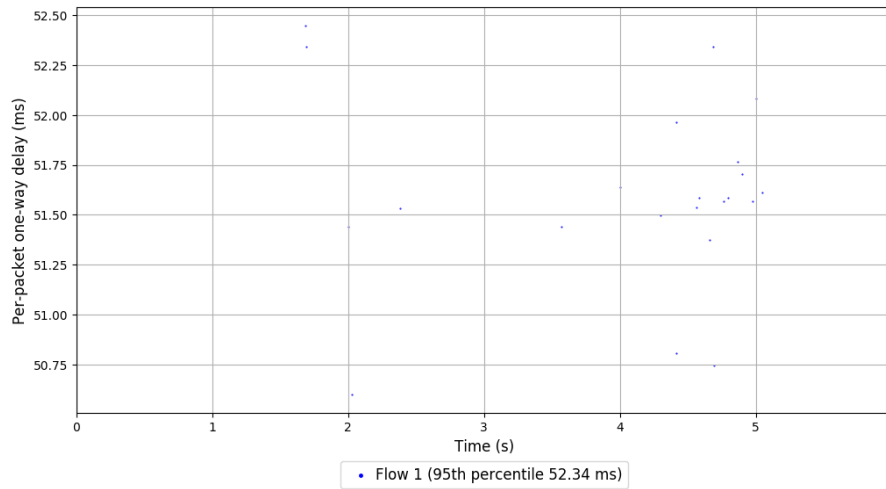
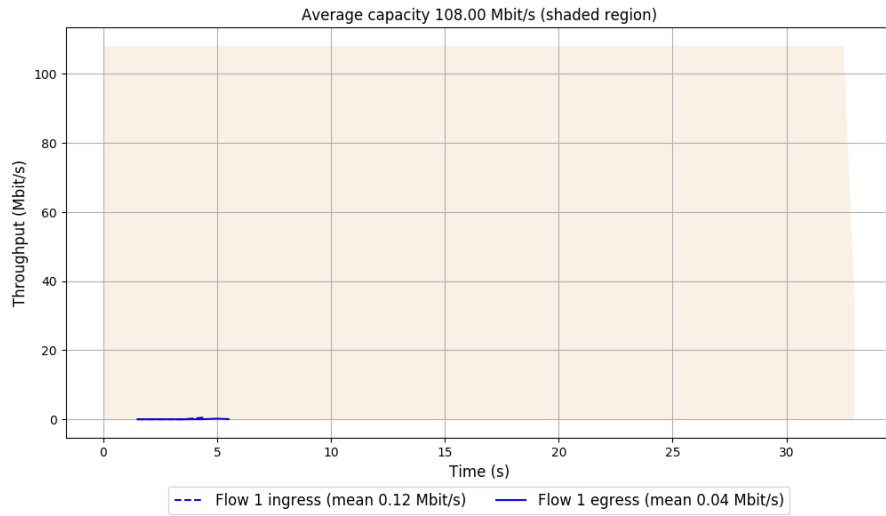


Run 2: Statistics of WebRTC media

Start at: 2020-04-16 08:38:12

End at: 2020-04-16 08:38:42

## Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2020-04-16 08:52:51

End at: 2020-04-16 08:53:21

### Run 3: Report of WebRTC media — Data Link

