

## Pantheon Report

Generated at 2018-04-24 17:36:07 (UTC).

Tested in mahimahi: `mm-delay 30 mm-link 12mbps.trace 12mbps.trace --uplink-queue=droptail --uplink-queue-args=bytes=90000`

Repeated the test of 16 congestion control schemes 10 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

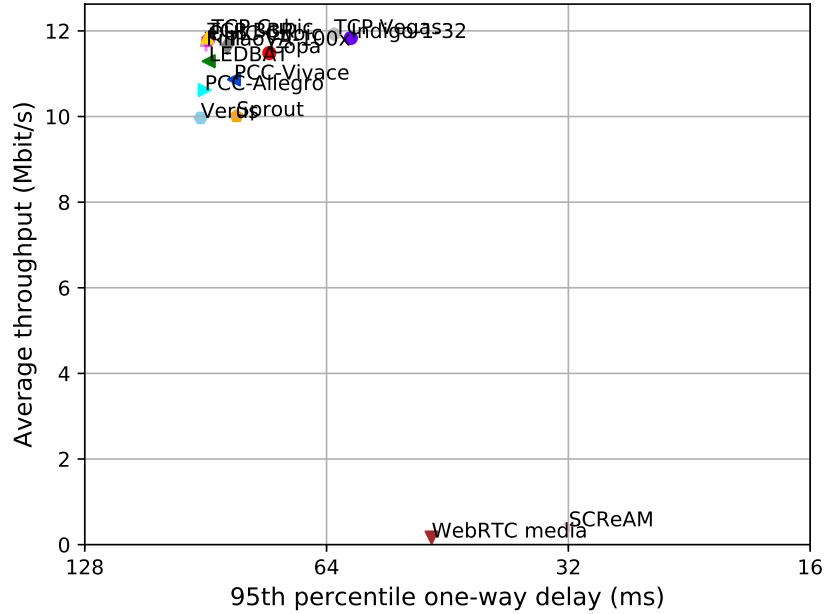
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

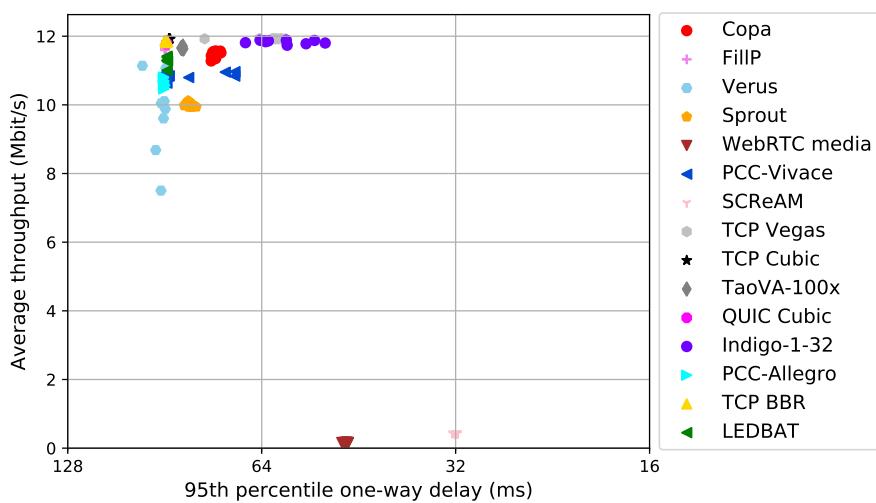
Git summary:

```
branch: master @ 114e807ac1bad7b85168ceb1f8a969063ee6c12c
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179aab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
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 @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bf7e749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581
```

local test in mahimahi, 10 runs of 30s each per scheme  
 3 flows with 10s interval between flows (mean of all runs by scheme)



local test in mahimahi, 10 runs of 30s each per scheme  
 3 flows with 10s interval between flows





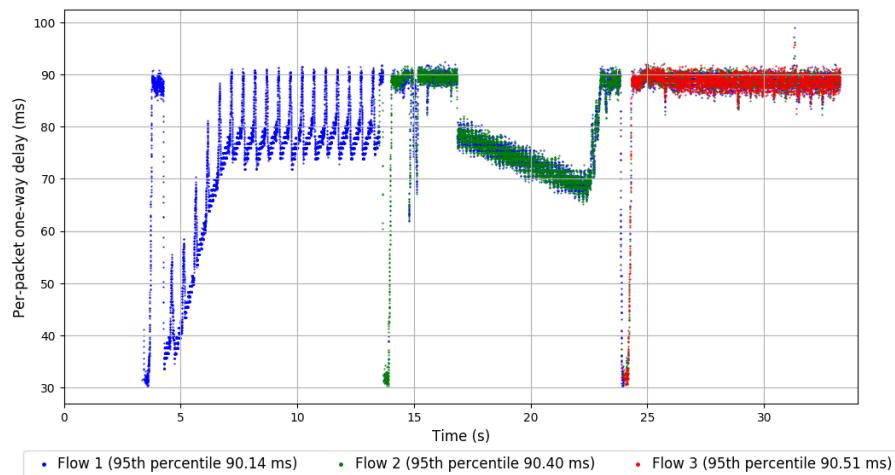
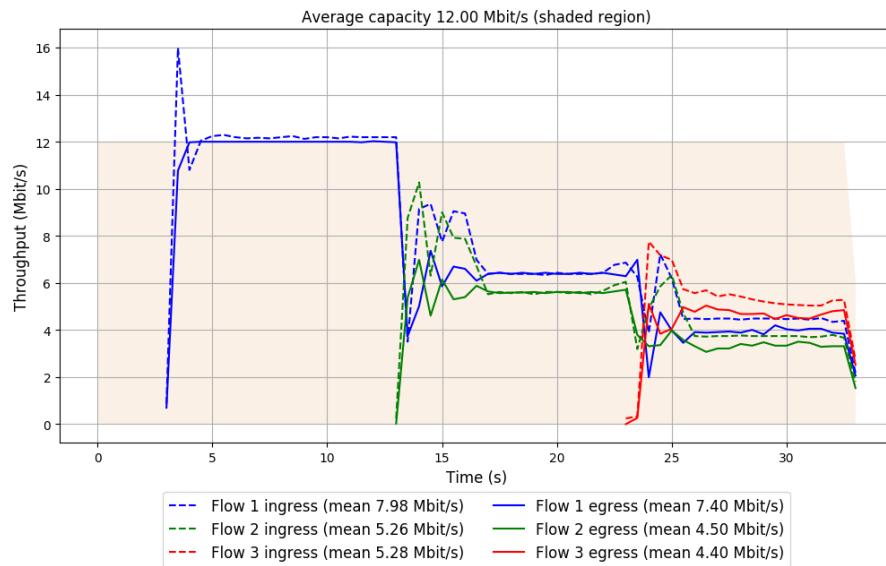
Run 1: Statistics of TCP BBR

Start at: 2018-04-24 15:58:30

End at: 2018-04-24 15:59:00

```
# Below is generated by plot.py at 2018-04-24 17:29:12
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.83 Mbit/s (98.6% utilization)
95th percentile per-packet one-way delay: 90.237 ms
Loss rate: 10.70%
-- Flow 1:
Average throughput: 7.40 Mbit/s
95th percentile per-packet one-way delay: 90.145 ms
Loss rate: 7.48%
-- Flow 2:
Average throughput: 4.50 Mbit/s
95th percentile per-packet one-way delay: 90.398 ms
Loss rate: 14.72%
-- Flow 3:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 90.513 ms
Loss rate: 17.37%
```

## Run 1: Report of TCP BBR — Data Link



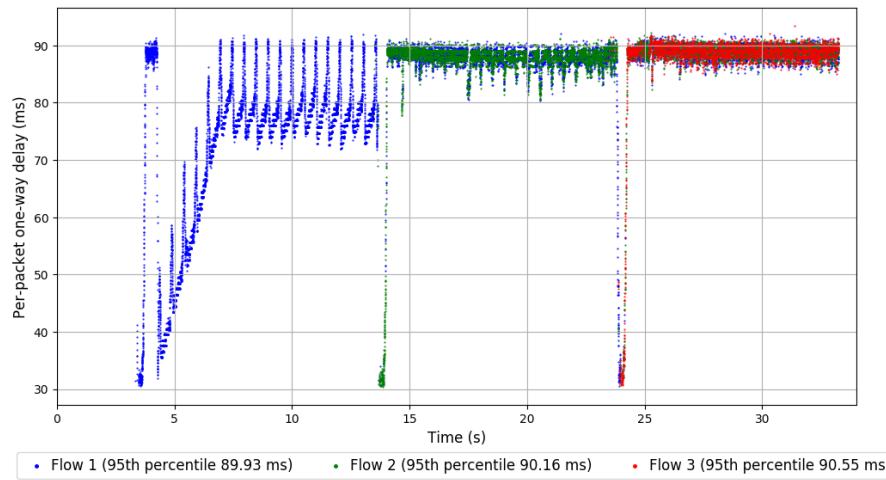
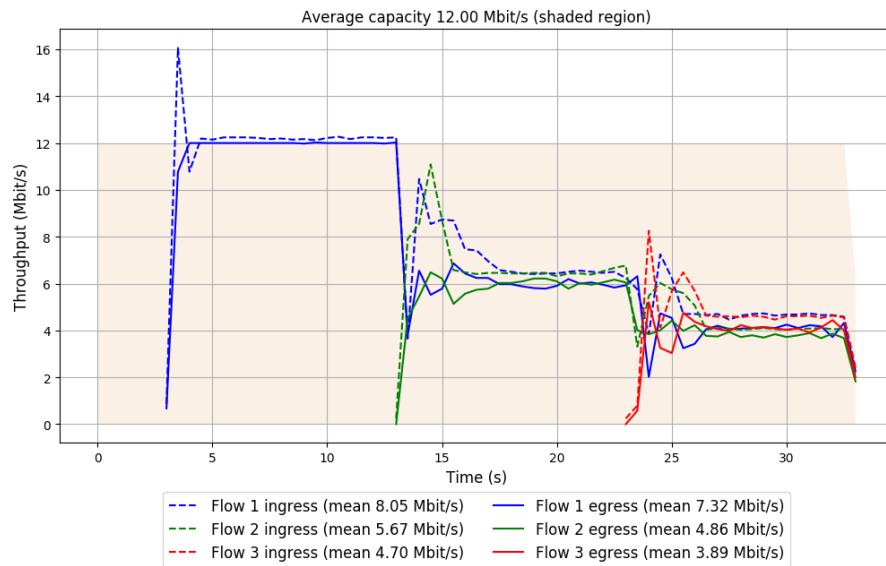
Run 2: Statistics of TCP BBR

Start at: 2018-04-24 16:08:16

End at: 2018-04-24 16:08:46

```
# Below is generated by plot.py at 2018-04-24 17:29:13
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.83 Mbit/s (98.6% utilization)
95th percentile per-packet one-way delay: 90.149 ms
Loss rate: 11.73%
-- Flow 1:
Average throughput: 7.32 Mbit/s
95th percentile per-packet one-way delay: 89.928 ms
Loss rate: 9.12%
-- Flow 2:
Average throughput: 4.86 Mbit/s
95th percentile per-packet one-way delay: 90.163 ms
Loss rate: 14.71%
-- Flow 3:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 90.548 ms
Loss rate: 17.93%
```

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



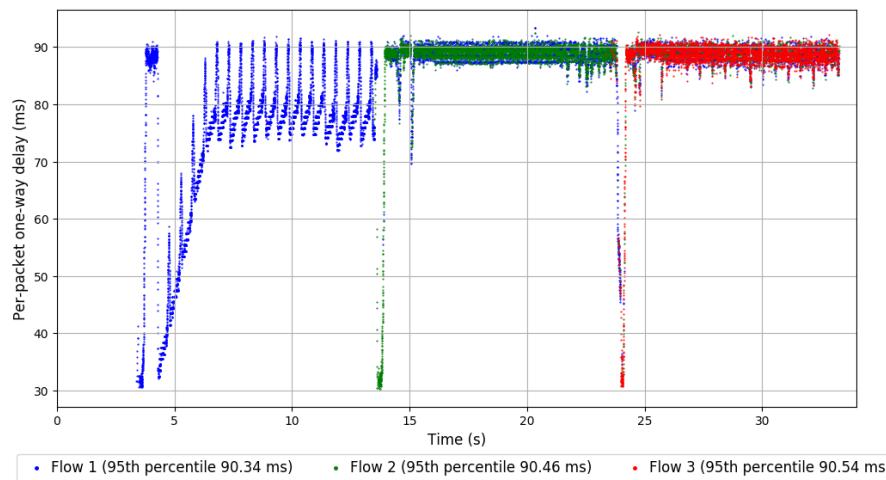
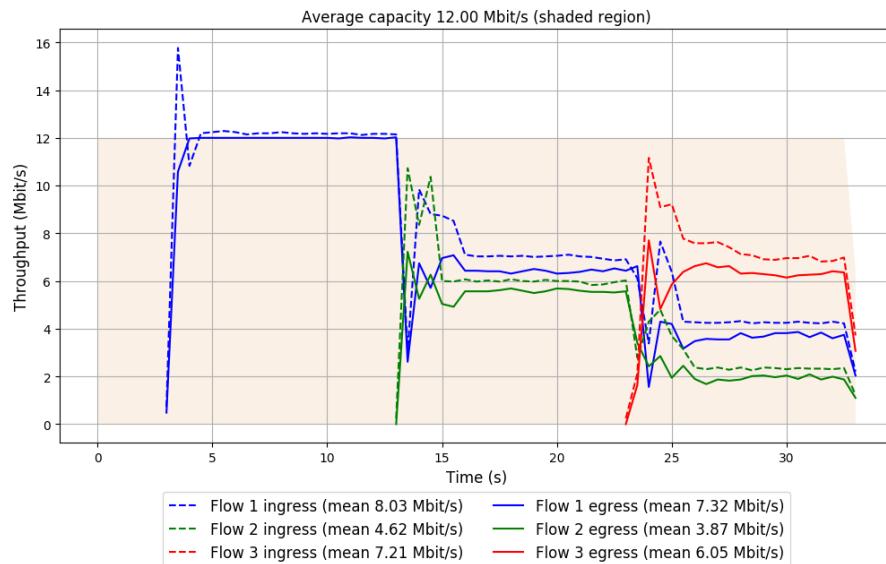
Run 3: Statistics of TCP BBR

Start at: 2018-04-24 16:18:05

End at: 2018-04-24 16:18:35

```
# Below is generated by plot.py at 2018-04-24 17:29:13
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.88 Mbit/s (99.0% utilization)
95th percentile per-packet one-way delay: 90.421 ms
Loss rate: 12.07%
-- Flow 1:
Average throughput: 7.32 Mbit/s
95th percentile per-packet one-way delay: 90.339 ms
Loss rate: 8.90%
-- Flow 2:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 90.463 ms
Loss rate: 16.55%
-- Flow 3:
Average throughput: 6.05 Mbit/s
95th percentile per-packet one-way delay: 90.540 ms
Loss rate: 16.93%
```

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



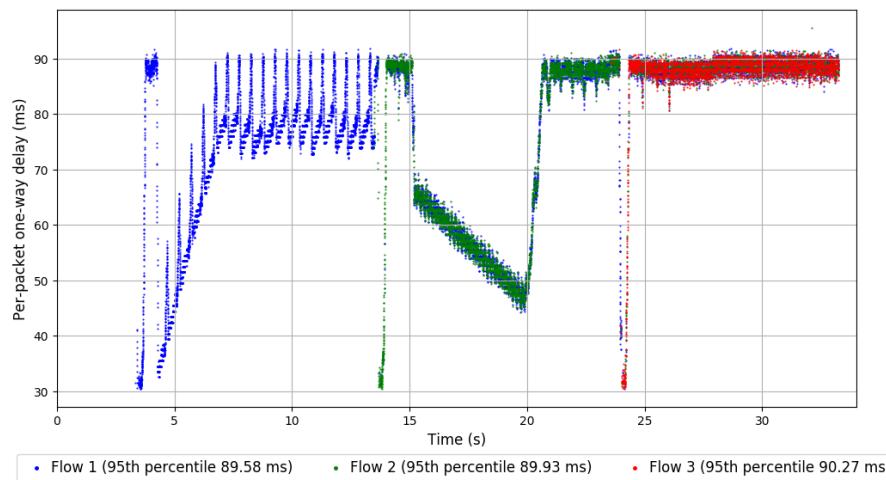
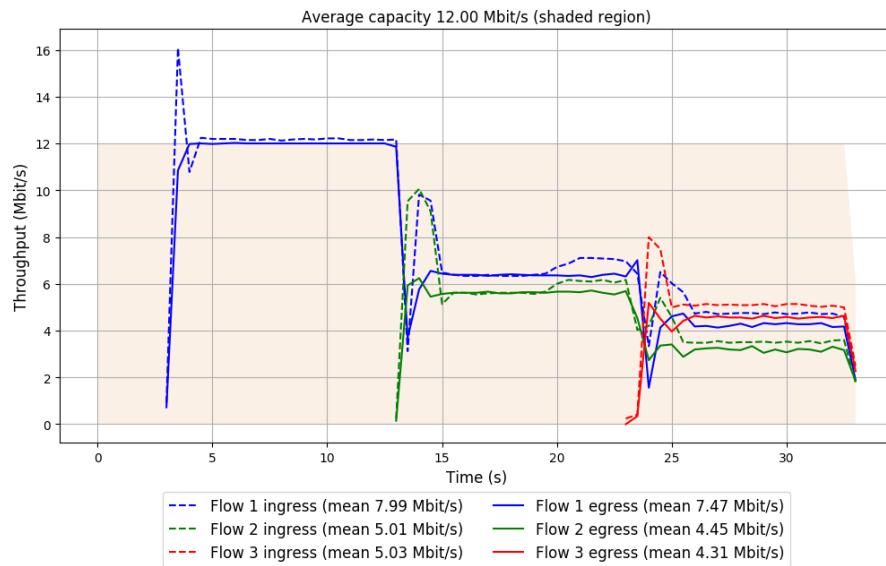
Run 4: Statistics of TCP BBR

Start at: 2018-04-24 16:27:52

End at: 2018-04-24 16:28:22

```
# Below is generated by plot.py at 2018-04-24 17:29:13
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.84 Mbit/s (98.7% utilization)
95th percentile per-packet one-way delay: 89.857 ms
Loss rate: 8.96%
-- Flow 1:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 89.576 ms
Loss rate: 6.58%
-- Flow 2:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 89.930 ms
Loss rate: 11.54%
-- Flow 3:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 90.265 ms
Loss rate: 15.21%
```

## Run 4: Report of TCP BBR — Data Link



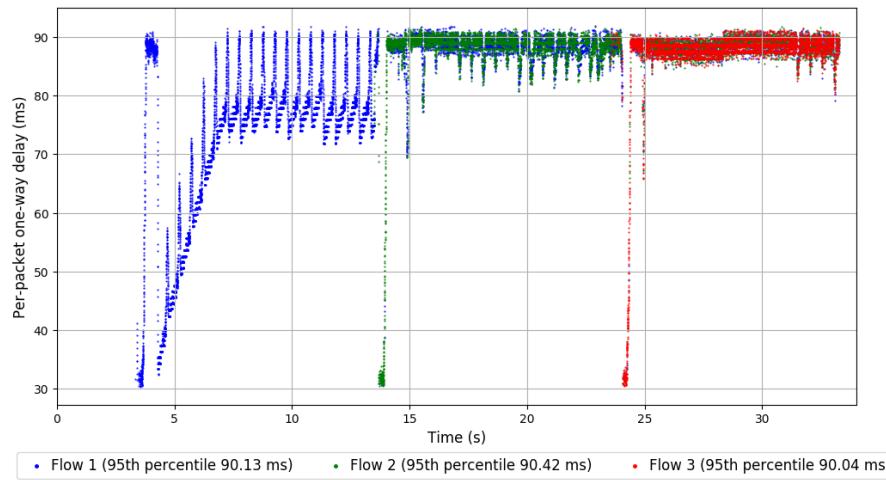
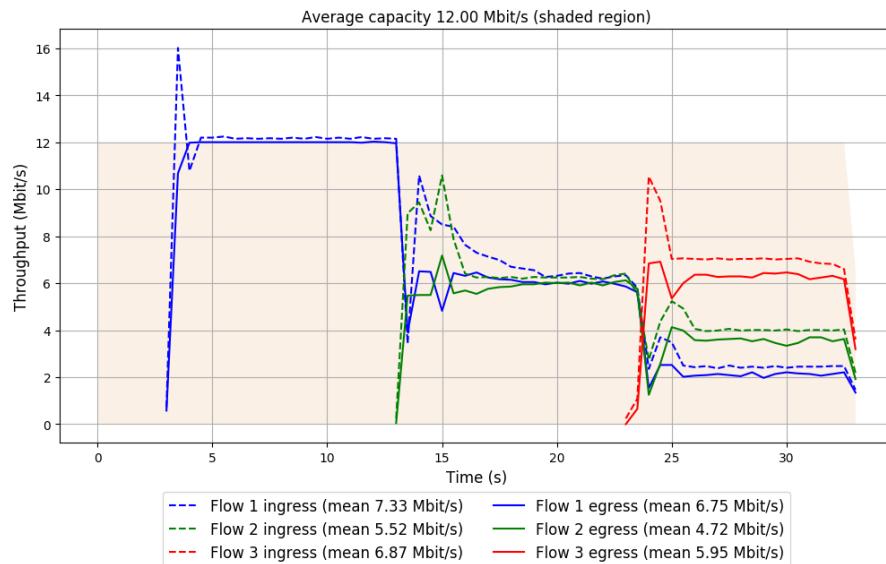
Run 5: Statistics of TCP BBR

Start at: 2018-04-24 16:37:43

End at: 2018-04-24 16:38:13

```
# Below is generated by plot.py at 2018-04-24 17:29:13
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.84 Mbit/s (98.7% utilization)
95th percentile per-packet one-way delay: 90.219 ms
Loss rate: 10.99%
-- Flow 1:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 90.132 ms
Loss rate: 8.06%
-- Flow 2:
Average throughput: 4.72 Mbit/s
95th percentile per-packet one-way delay: 90.422 ms
Loss rate: 14.92%
-- Flow 3:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 90.043 ms
Loss rate: 14.08%
```

## Run 5: Report of TCP BBR — Data Link



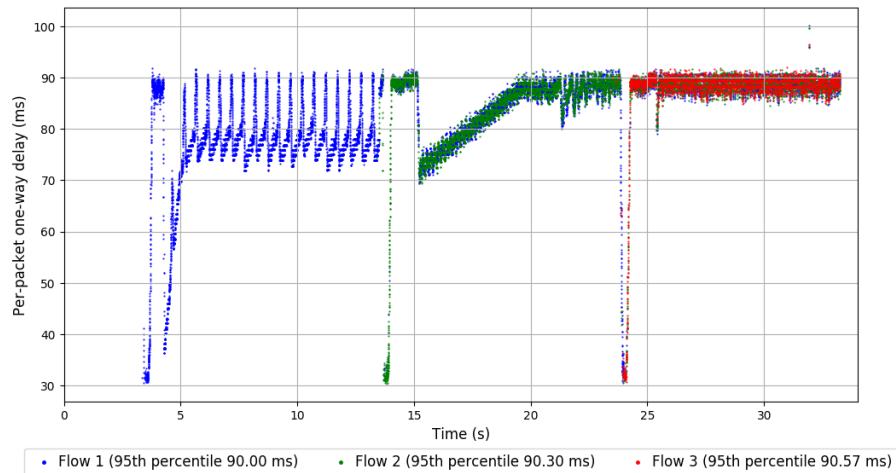
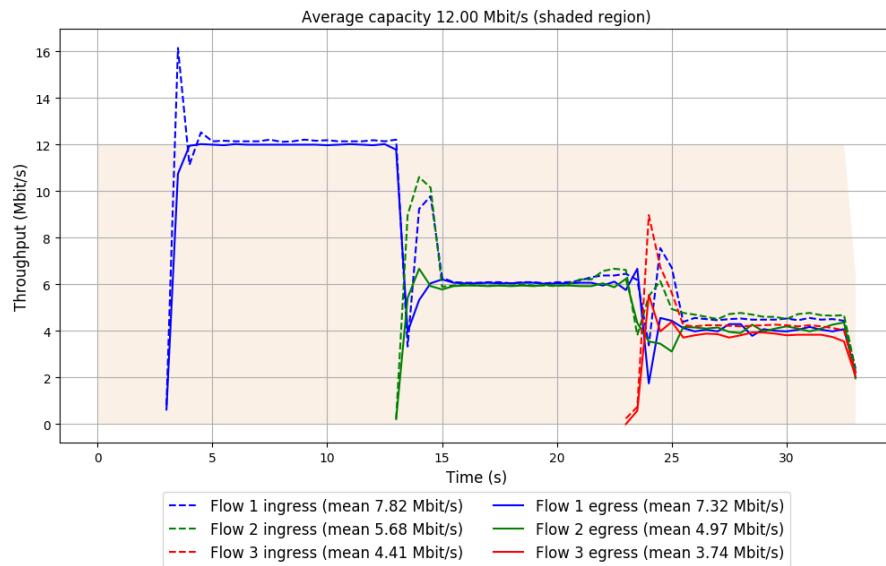
Run 6: Statistics of TCP BBR

Start at: 2018-04-24 16:47:30

End at: 2018-04-24 16:48:00

```
# Below is generated by plot.py at 2018-04-24 17:29:13
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.85 Mbit/s (98.8% utilization)
95th percentile per-packet one-way delay: 90.175 ms
Loss rate: 9.35%
-- Flow 1:
Average throughput: 7.32 Mbit/s
95th percentile per-packet one-way delay: 89.995 ms
Loss rate: 6.51%
-- Flow 2:
Average throughput: 4.97 Mbit/s
95th percentile per-packet one-way delay: 90.298 ms
Loss rate: 12.71%
-- Flow 3:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 90.574 ms
Loss rate: 15.85%
```

## Run 6: Report of TCP BBR — Data Link



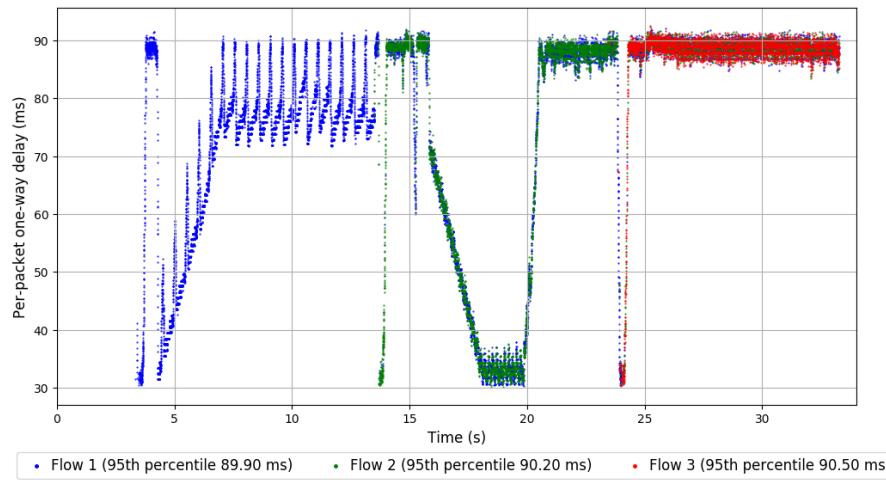
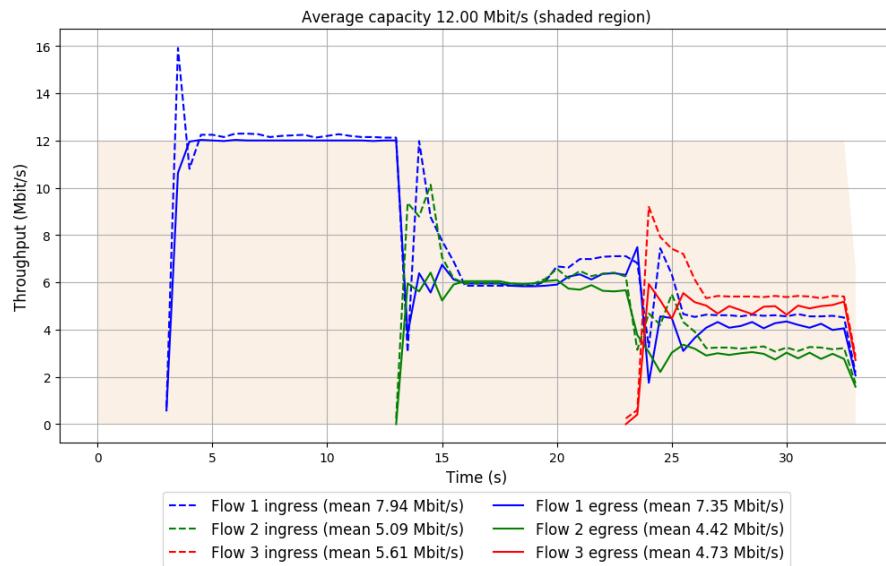
Run 7: Statistics of TCP BBR

Start at: 2018-04-24 16:57:17

End at: 2018-04-24 16:57:47

```
# Below is generated by plot.py at 2018-04-24 17:29:13
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.85 Mbit/s (98.7% utilization)
95th percentile per-packet one-way delay: 90.111 ms
Loss rate: 10.36%
-- Flow 1:
Average throughput: 7.35 Mbit/s
95th percentile per-packet one-way delay: 89.904 ms
Loss rate: 7.56%
-- Flow 2:
Average throughput: 4.42 Mbit/s
95th percentile per-packet one-way delay: 90.199 ms
Loss rate: 13.57%
-- Flow 3:
Average throughput: 4.73 Mbit/s
95th percentile per-packet one-way delay: 90.504 ms
Loss rate: 16.42%
```

## Run 7: Report of TCP BBR — Data Link



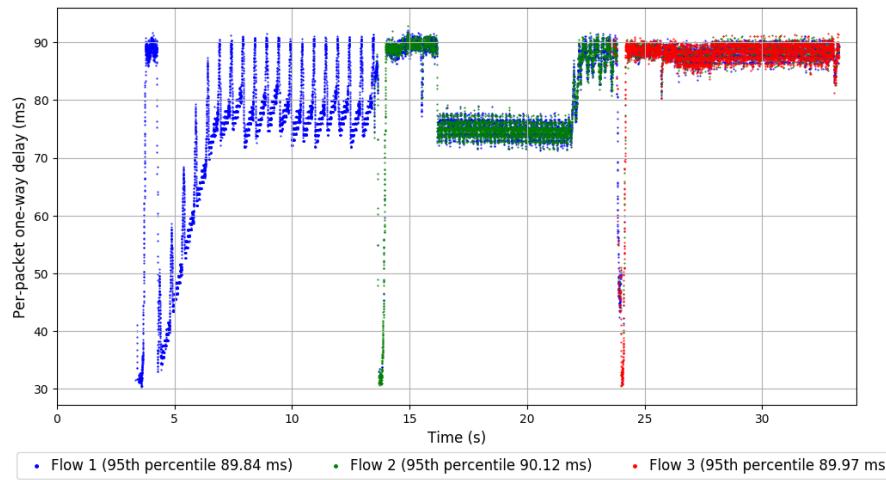
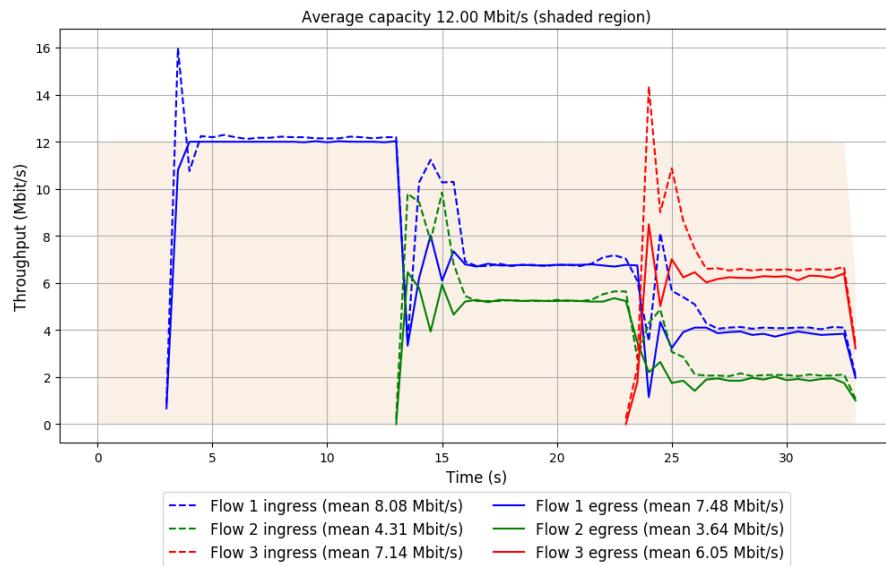
Run 8: Statistics of TCP BBR

Start at: 2018-04-24 17:07:05

End at: 2018-04-24 17:07:35

```
# Below is generated by plot.py at 2018-04-24 17:29:13
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.88 Mbit/s (99.0% utilization)
95th percentile per-packet one-way delay: 89.960 ms
Loss rate: 10.89%
-- Flow 1:
Average throughput: 7.48 Mbit/s
95th percentile per-packet one-way delay: 89.843 ms
Loss rate: 7.60%
-- Flow 2:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 90.121 ms
Loss rate: 16.02%
-- Flow 3:
Average throughput: 6.05 Mbit/s
95th percentile per-packet one-way delay: 89.969 ms
Loss rate: 15.92%
```

## Run 8: Report of TCP BBR — Data Link



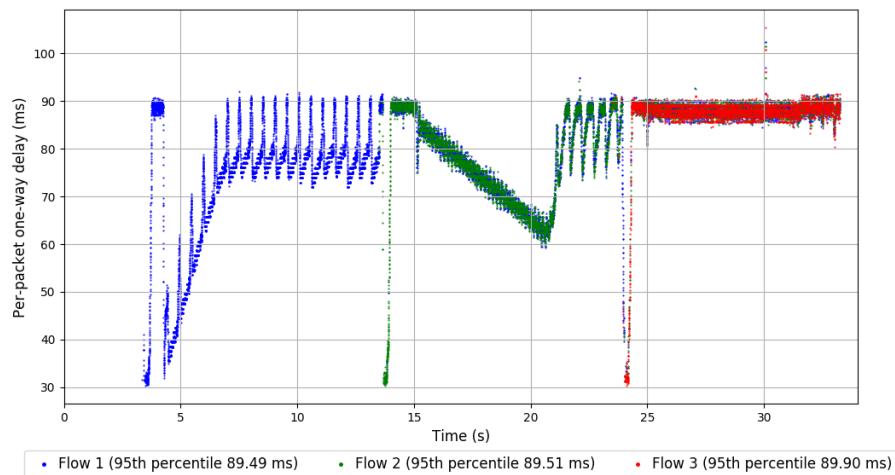
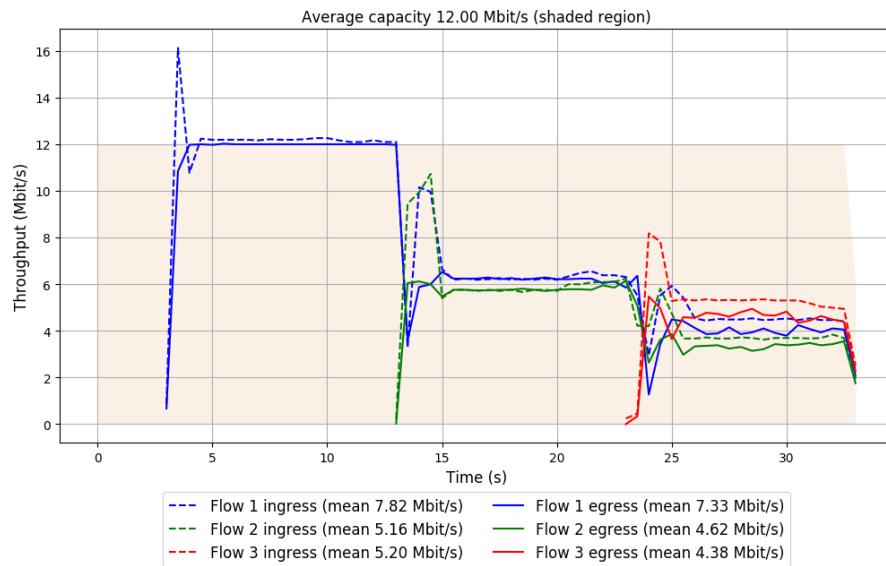
Run 9: Statistics of TCP BBR

Start at: 2018-04-24 17:16:51

End at: 2018-04-24 17:17:21

```
# Below is generated by plot.py at 2018-04-24 17:29:32
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.84 Mbit/s (98.6% utilization)
95th percentile per-packet one-way delay: 89.557 ms
Loss rate: 8.87%
-- Flow 1:
Average throughput: 7.33 Mbit/s
95th percentile per-packet one-way delay: 89.494 ms
Loss rate: 6.29%
-- Flow 2:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 89.507 ms
Loss rate: 10.91%
-- Flow 3:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 89.901 ms
Loss rate: 16.53%
```

## Run 9: Report of TCP BBR — Data Link



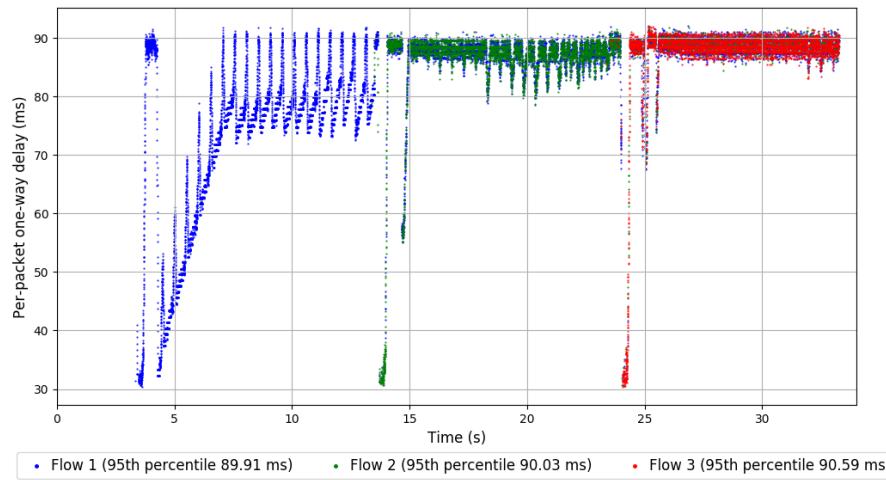
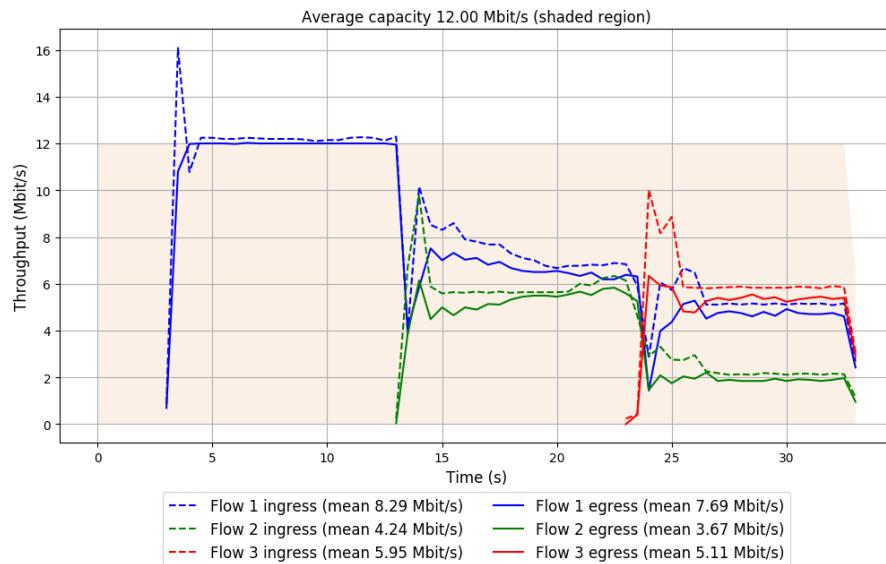
Run 10: Statistics of TCP BBR

Start at: 2018-04-24 17:26:37

End at: 2018-04-24 17:27:07

```
# Below is generated by plot.py at 2018-04-24 17:29:33
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.81 Mbit/s (98.4% utilization)
95th percentile per-packet one-way delay: 90.066 ms
Loss rate: 9.90%
-- Flow 1:
Average throughput: 7.69 Mbit/s
95th percentile per-packet one-way delay: 89.914 ms
Loss rate: 7.36%
-- Flow 2:
Average throughput: 3.67 Mbit/s
95th percentile per-packet one-way delay: 90.028 ms
Loss rate: 13.90%
-- Flow 3:
Average throughput: 5.11 Mbit/s
95th percentile per-packet one-way delay: 90.594 ms
Loss rate: 14.83%
```

## Run 10: Report of TCP BBR — Data Link

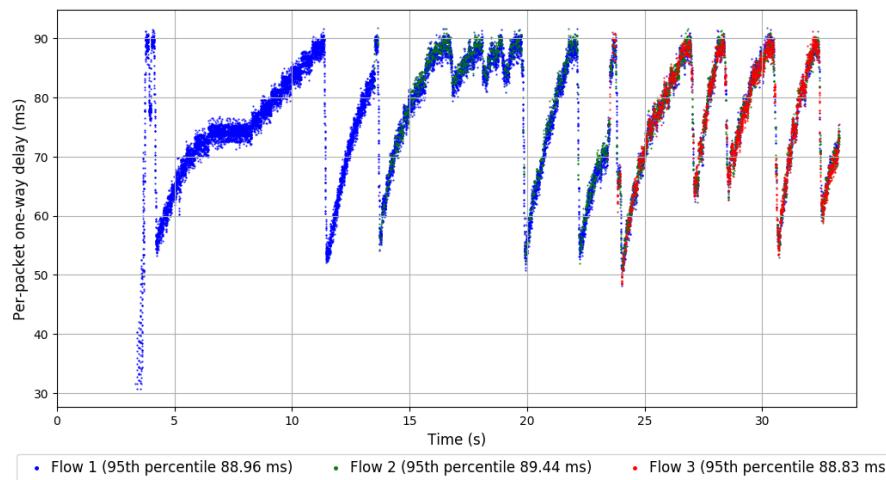
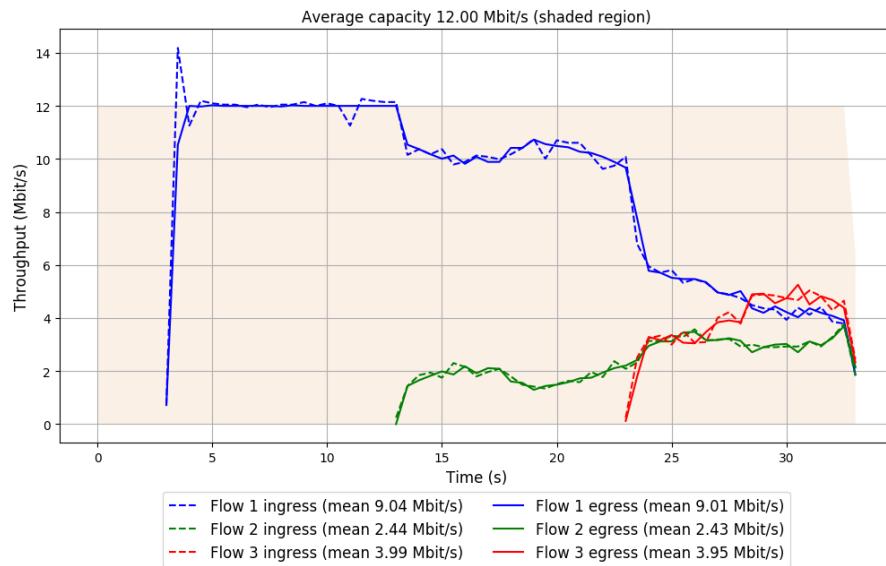


```
Run 1: Statistics of TCP Cubic

Start at: 2018-04-24 15:56:46
End at: 2018-04-24 15:57:16

# Below is generated by plot.py at 2018-04-24 17:29:34
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 89.038 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 9.01 Mbit/s
95th percentile per-packet one-way delay: 88.961 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 2.43 Mbit/s
95th percentile per-packet one-way delay: 89.439 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 3.95 Mbit/s
95th percentile per-packet one-way delay: 88.832 ms
Loss rate: 1.60%
```

Run 1: Report of TCP Cubic — Data Link



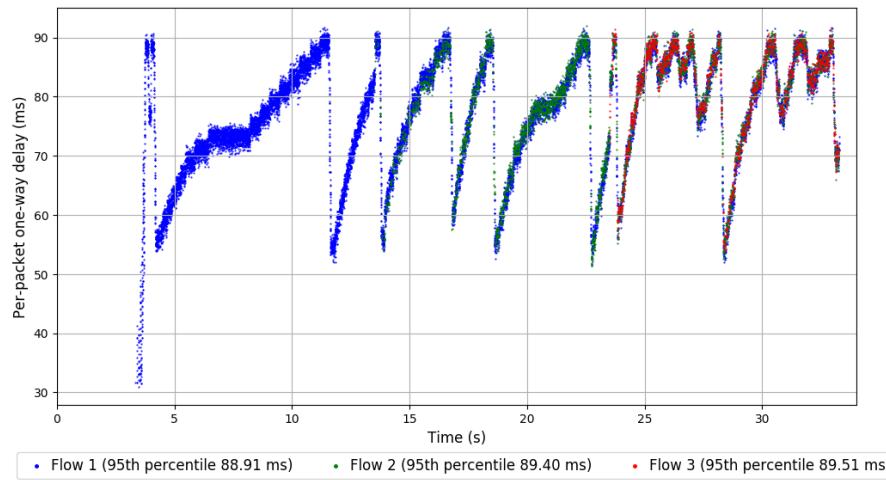
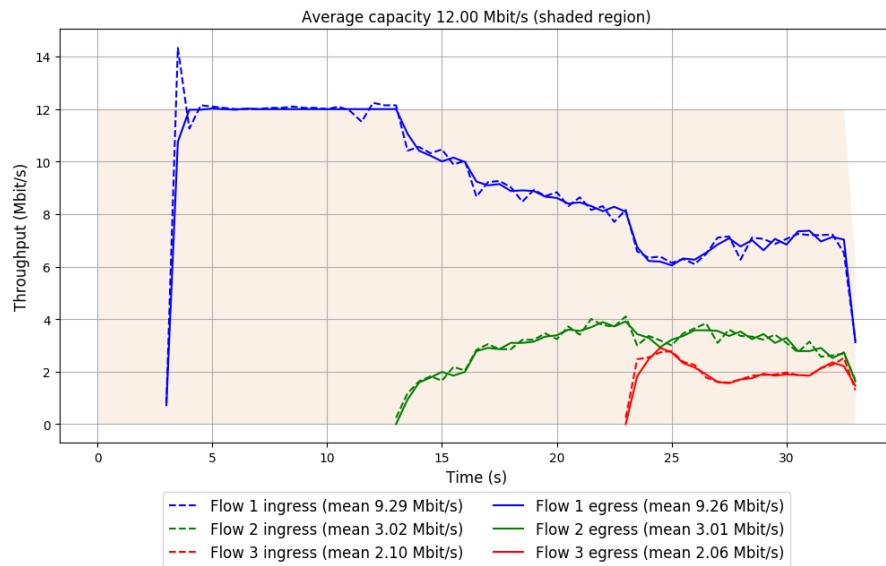
```
Run 2: Statistics of TCP Cubic
```

```
Start at: 2018-04-24 16:06:33
```

```
End at: 2018-04-24 16:07:03
```

```
# Below is generated by plot.py at 2018-04-24 17:29:34
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 89.054 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 9.26 Mbit/s
95th percentile per-packet one-way delay: 88.908 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 89.399 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 89.510 ms
Loss rate: 2.65%
```

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



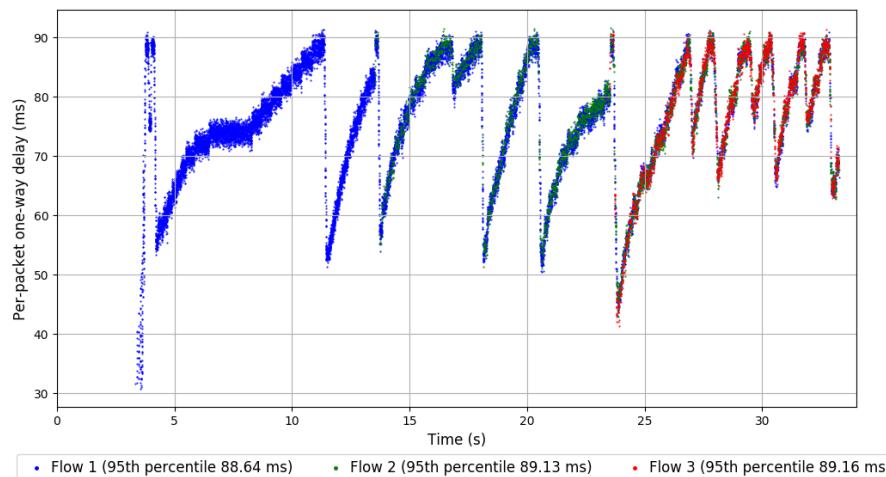
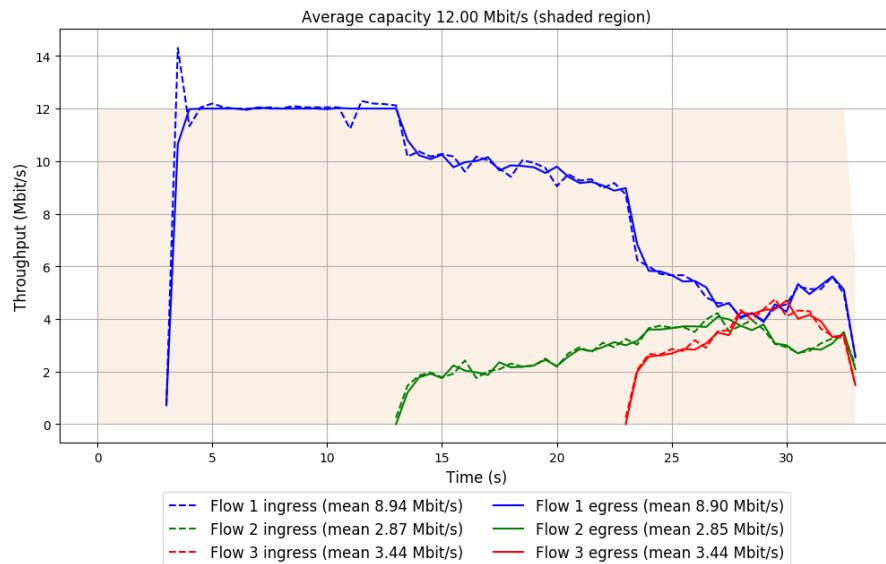
Run 3: Statistics of TCP Cubic

Start at: 2018-04-24 16:16:20

End at: 2018-04-24 16:16:50

```
# Below is generated by plot.py at 2018-04-24 17:29:36
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.92 Mbit/s (99.3% utilization)
95th percentile per-packet one-way delay: 88.760 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 8.90 Mbit/s
95th percentile per-packet one-way delay: 88.635 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 2.85 Mbit/s
95th percentile per-packet one-way delay: 89.132 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 89.161 ms
Loss rate: 1.05%
```

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



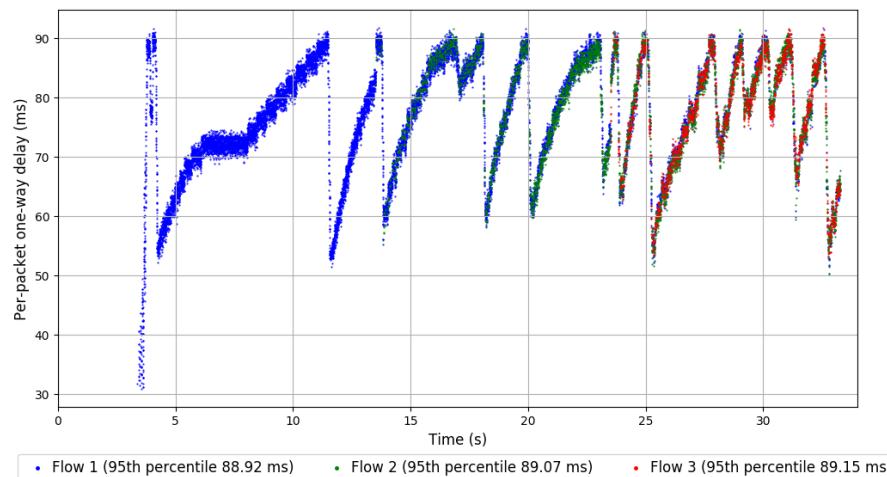
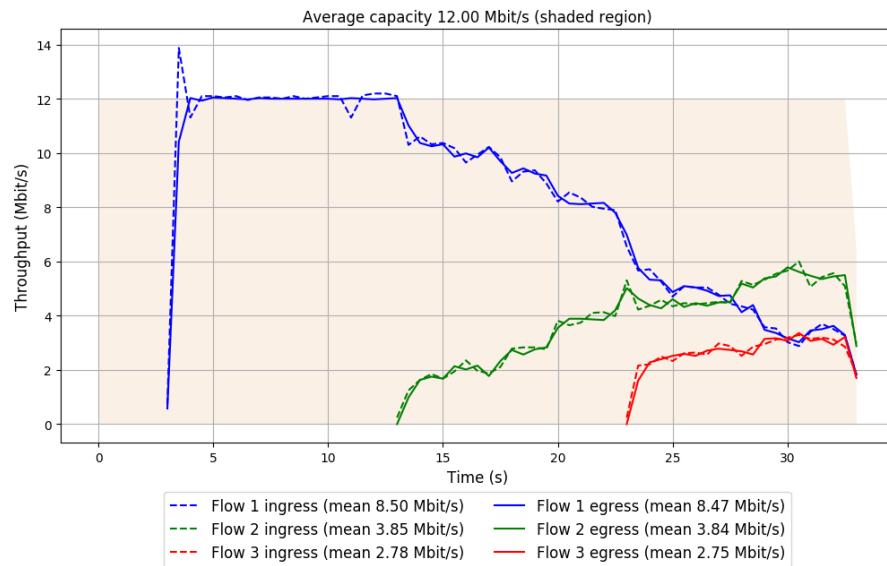
Run 4: Statistics of TCP Cubic

Start at: 2018-04-24 16:26:08

End at: 2018-04-24 16:26:38

```
# Below is generated by plot.py at 2018-04-24 17:29:36
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 88.975 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 8.47 Mbit/s
95th percentile per-packet one-way delay: 88.919 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 89.066 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 2.75 Mbit/s
95th percentile per-packet one-way delay: 89.148 ms
Loss rate: 1.83%
```

## Run 4: Report of TCP Cubic — Data Link



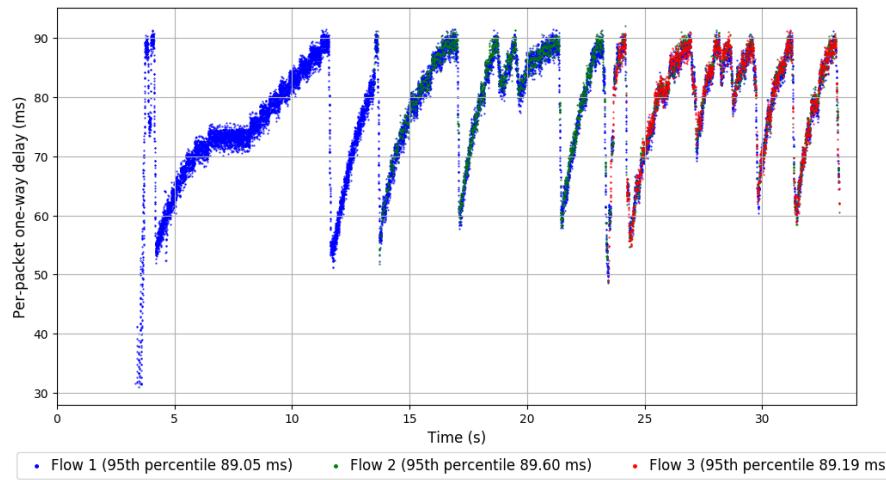
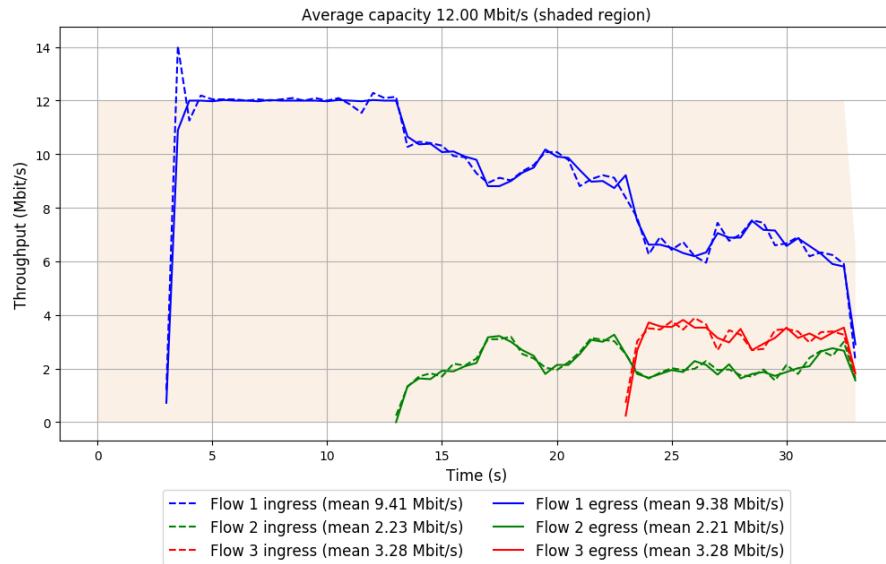
Run 5: Statistics of TCP Cubic

Start at: 2018-04-24 16:35:55

End at: 2018-04-24 16:36:25

```
# Below is generated by plot.py at 2018-04-24 17:29:36
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 89.156 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 9.38 Mbit/s
95th percentile per-packet one-way delay: 89.046 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 89.596 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 3.28 Mbit/s
95th percentile per-packet one-way delay: 89.194 ms
Loss rate: 0.77%
```

Run 5: Report of TCP Cubic — Data Link



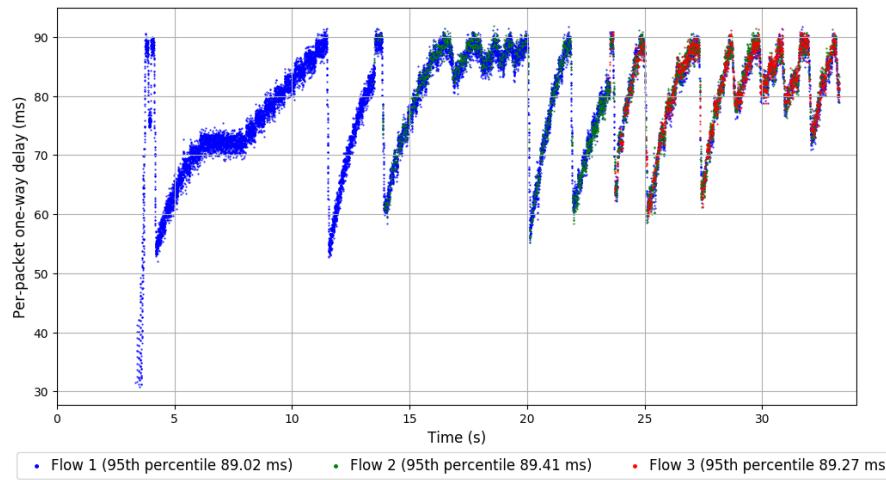
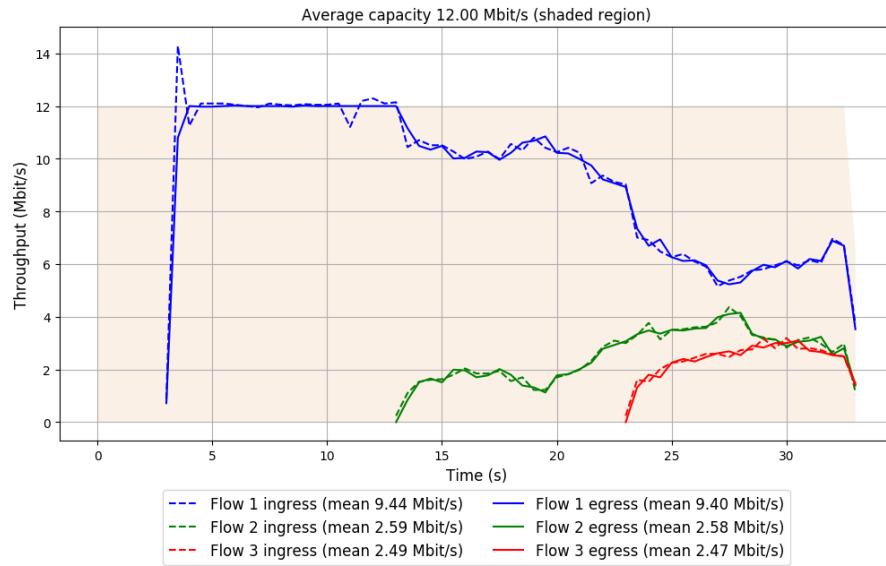
Run 6: Statistics of TCP Cubic

Start at: 2018-04-24 16:45:45

End at: 2018-04-24 16:46:15

```
# Below is generated by plot.py at 2018-04-24 17:29:36
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 89.114 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 9.40 Mbit/s
95th percentile per-packet one-way delay: 89.023 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 89.414 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 89.265 ms
Loss rate: 1.41%
```

Run 6: Report of TCP Cubic — Data Link



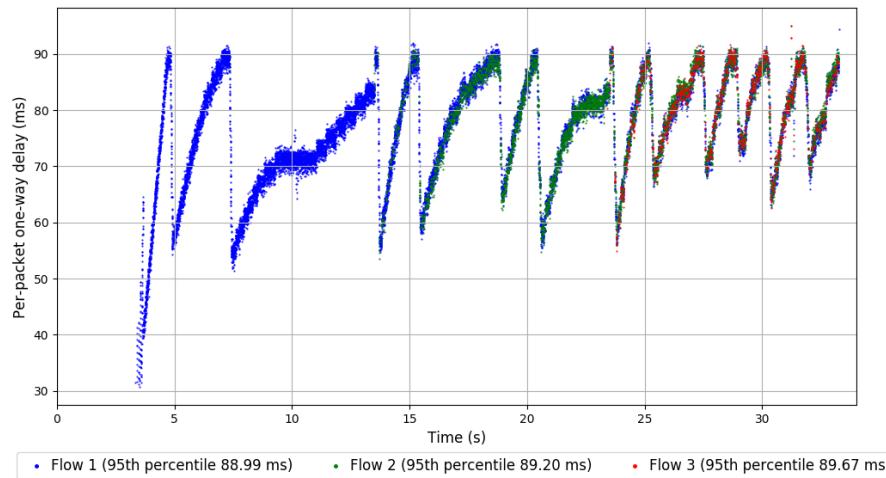
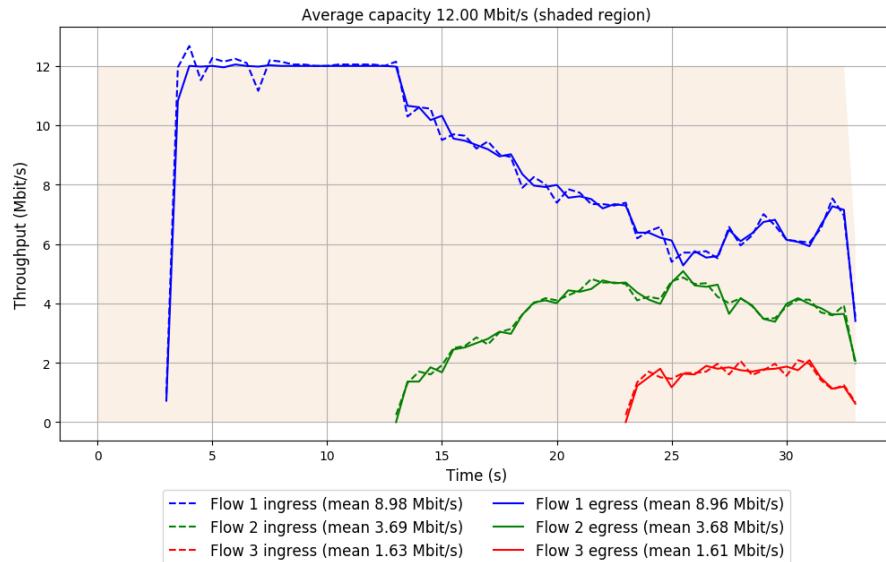
Run 7: Statistics of TCP Cubic

Start at: 2018-04-24 16:55:33

End at: 2018-04-24 16:56:03

```
# Below is generated by plot.py at 2018-04-24 17:29:54
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.92 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 89.084 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 8.96 Mbit/s
95th percentile per-packet one-way delay: 88.990 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 3.68 Mbit/s
95th percentile per-packet one-way delay: 89.196 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 89.669 ms
Loss rate: 1.86%
```

### Run 7: Report of TCP Cubic — Data Link



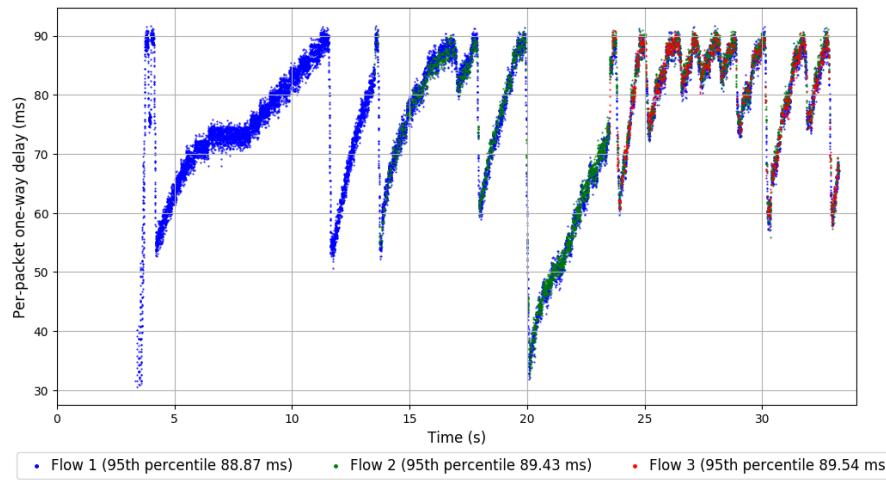
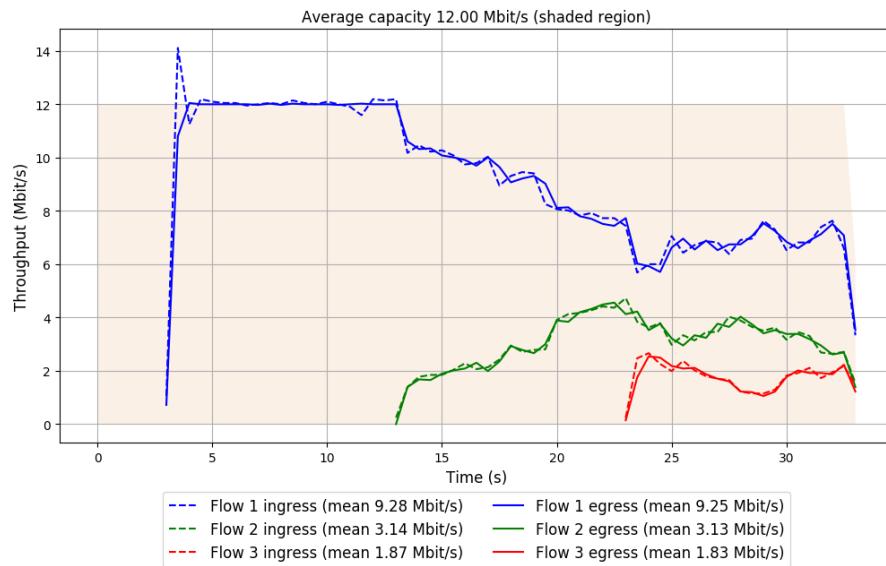
Run 8: Statistics of TCP Cubic

Start at: 2018-04-24 17:05:19

End at: 2018-04-24 17:05:49

```
# Below is generated by plot.py at 2018-04-24 17:29:55
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 89.040 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 9.25 Mbit/s
95th percentile per-packet one-way delay: 88.867 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 89.428 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 89.539 ms
Loss rate: 2.71%
```

Run 8: Report of TCP Cubic — Data Link



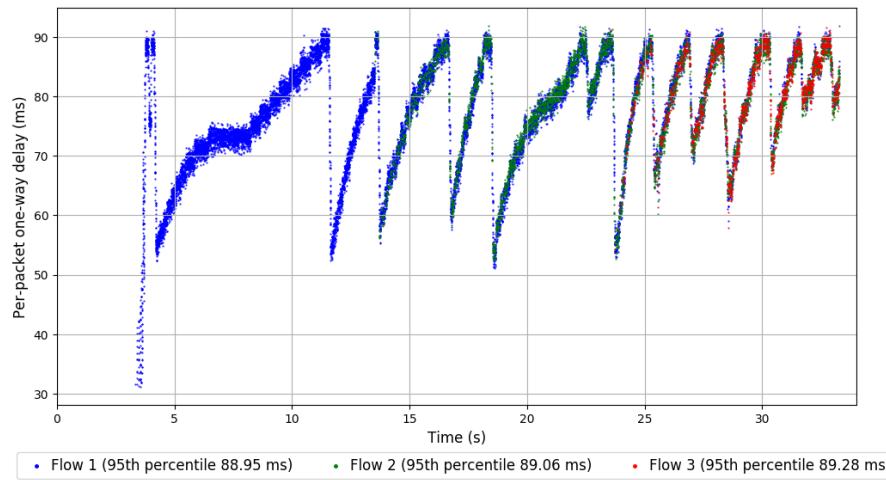
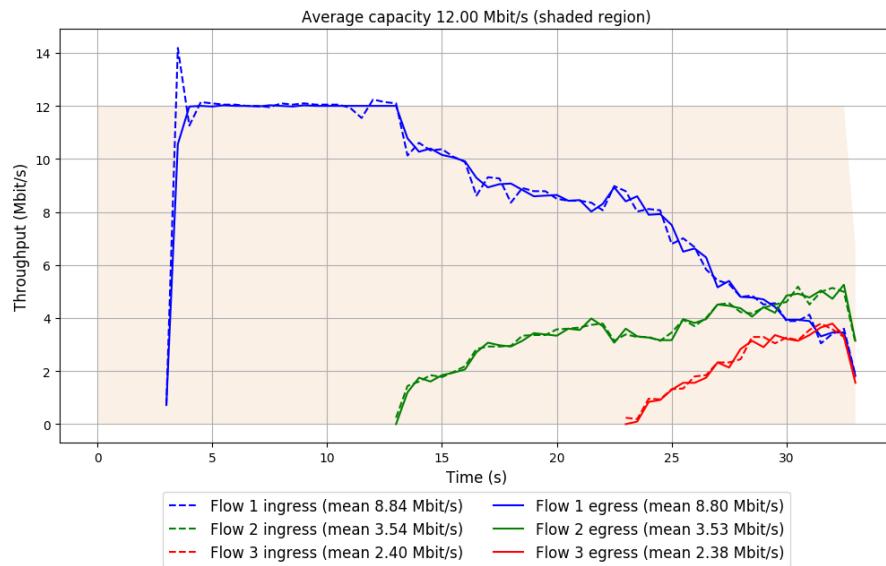
Run 9: Statistics of TCP Cubic

Start at: 2018-04-24 17:15:08

End at: 2018-04-24 17:15:38

```
# Below is generated by plot.py at 2018-04-24 17:29:55
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.92 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 88.993 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 88.947 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 89.055 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 89.275 ms
Loss rate: 1.96%
```

## Run 9: Report of TCP Cubic — Data Link



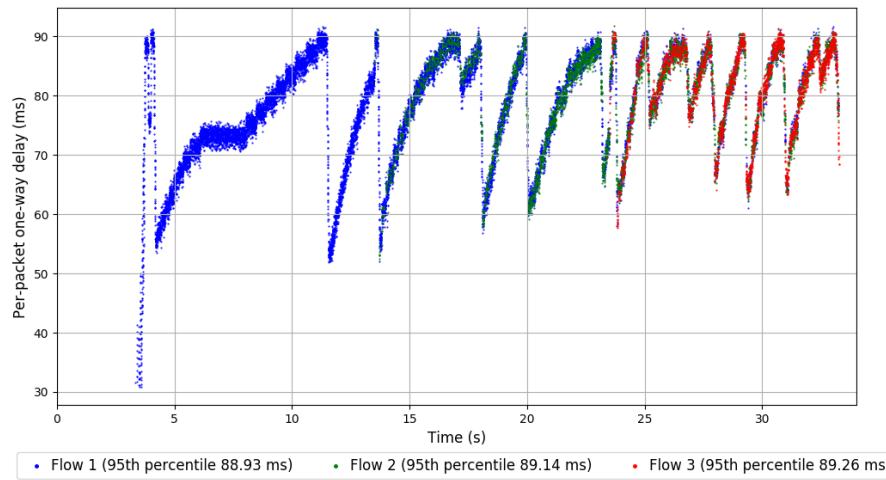
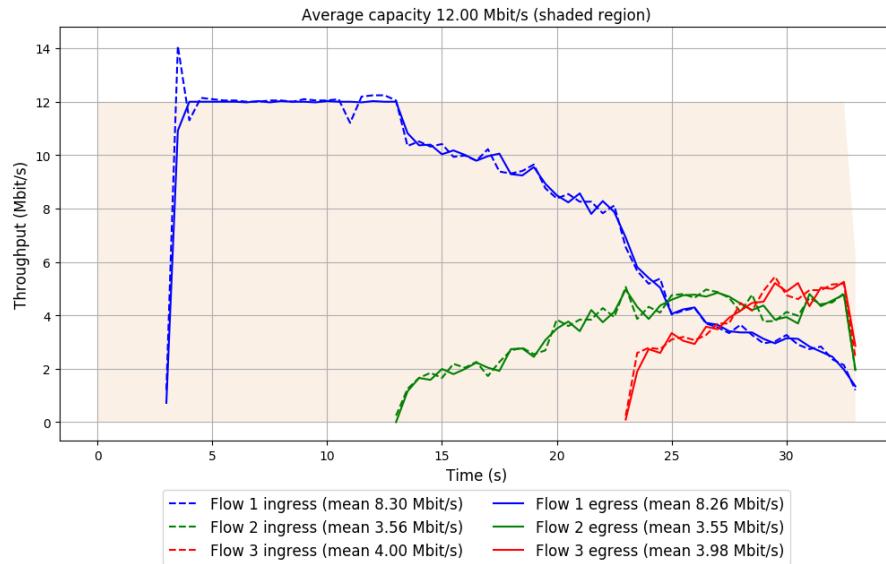
Run 10: Statistics of TCP Cubic

Start at: 2018-04-24 17:24:54

End at: 2018-04-24 17:25:24

```
# Below is generated by plot.py at 2018-04-24 17:29:56
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 89.036 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 8.26 Mbit/s
95th percentile per-packet one-way delay: 88.930 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 89.139 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 89.258 ms
Loss rate: 1.06%
```

## Run 10: Report of TCP Cubic — Data Link

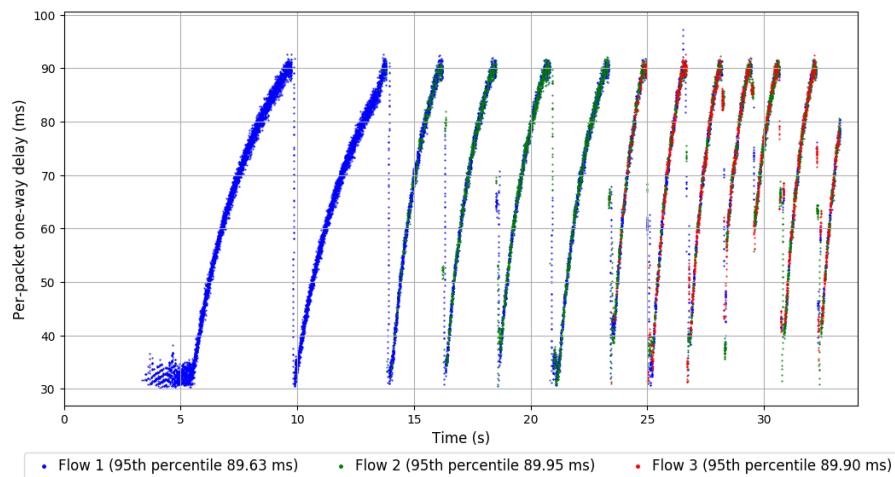
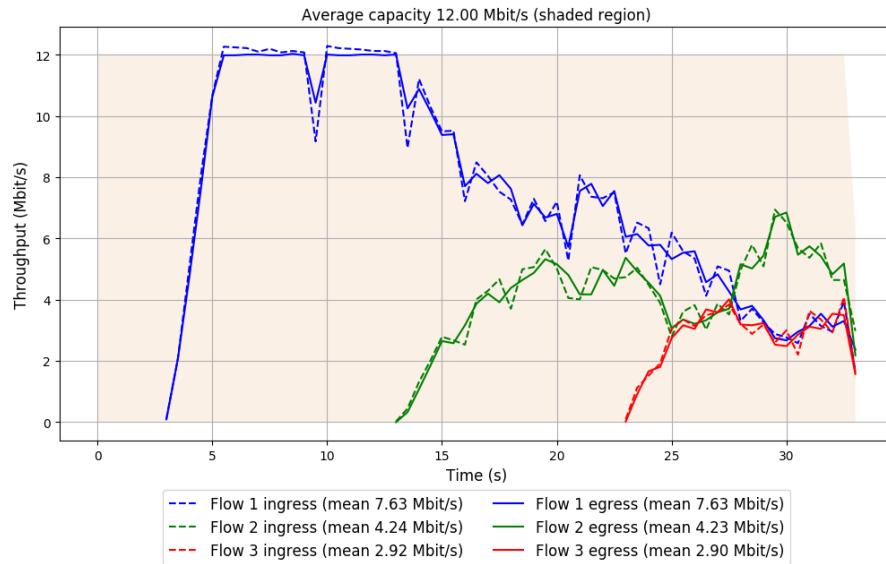


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-24 15:55:37
End at: 2018-04-24 15:56:07

# Below is generated by plot.py at 2018-04-24 17:29:56
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.38 Mbit/s (94.9% utilization)
95th percentile per-packet one-way delay: 89.730 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 89.626 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 89.950 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 89.899 ms
Loss rate: 1.66%
```

## Run 1: Report of LEDBAT — Data Link



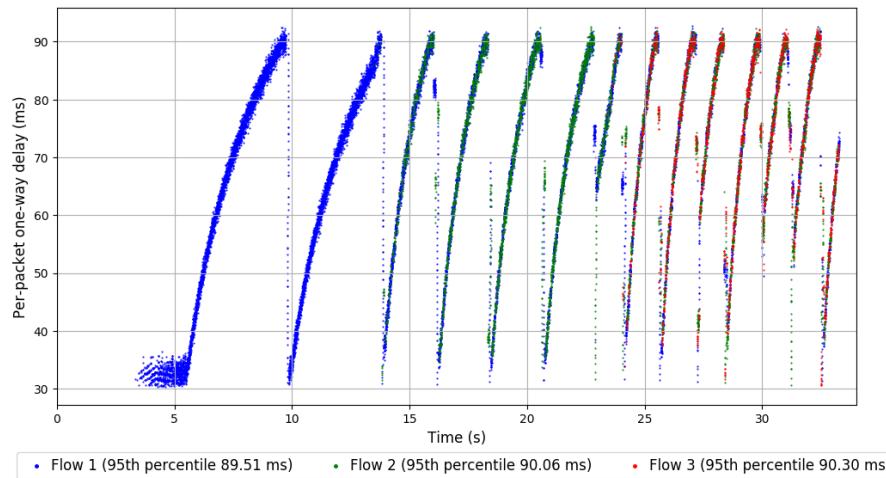
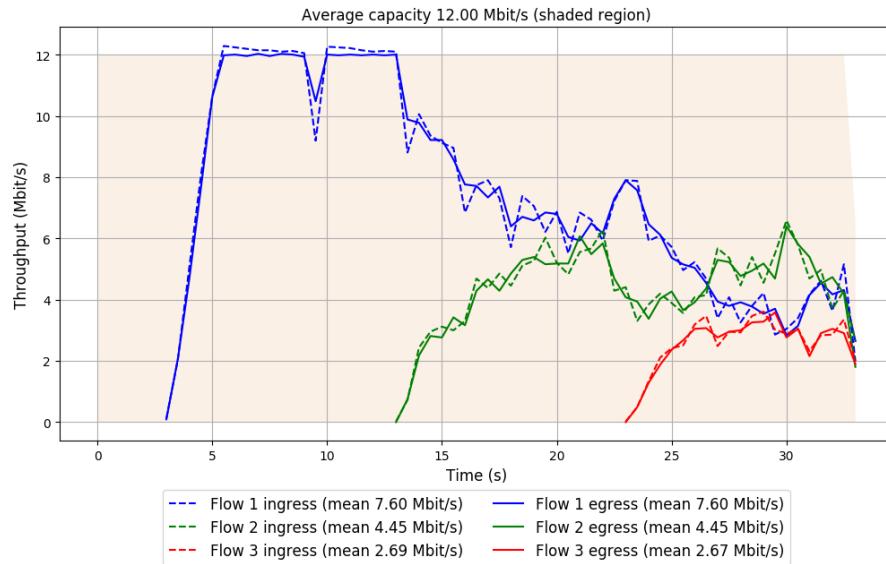
Run 2: Statistics of LEDBAT

Start at: 2018-04-24 16:05:23

End at: 2018-04-24 16:05:53

```
# Below is generated by plot.py at 2018-04-24 17:29:57
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.42 Mbit/s (95.1% utilization)
95th percentile per-packet one-way delay: 89.776 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 7.60 Mbit/s
95th percentile per-packet one-way delay: 89.508 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 90.055 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 90.296 ms
Loss rate: 1.71%
```

## Run 2: Report of LEDBAT — Data Link



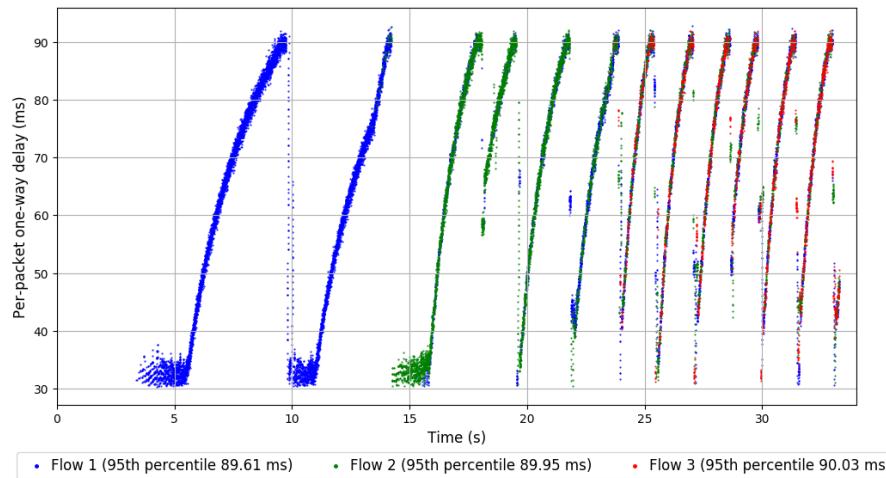
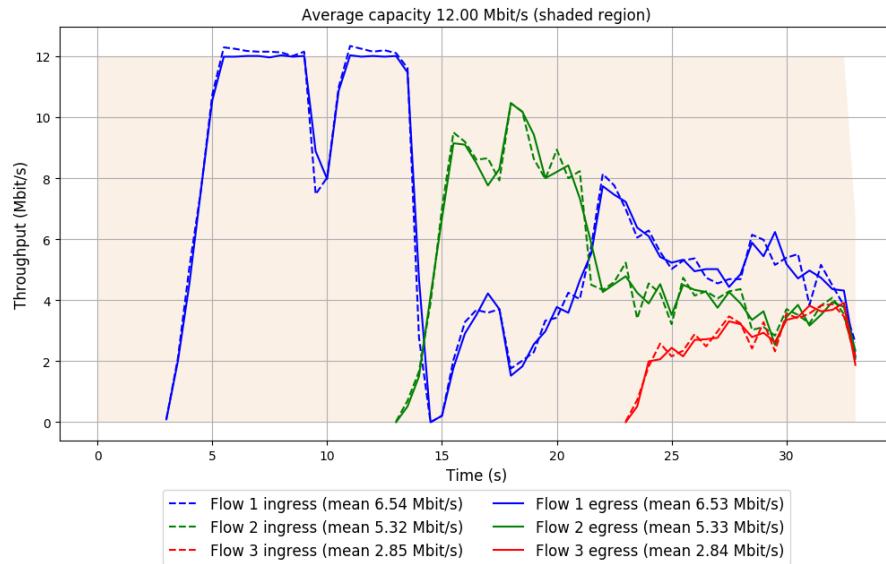
Run 3: Statistics of LEDBAT

Start at: 2018-04-24 16:15:10

End at: 2018-04-24 16:15:40

```
# Below is generated by plot.py at 2018-04-24 17:29:57
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.00 Mbit/s (91.7% utilization)
95th percentile per-packet one-way delay: 89.776 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 89.611 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 5.33 Mbit/s
95th percentile per-packet one-way delay: 89.951 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 90.025 ms
Loss rate: 1.12%
```

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



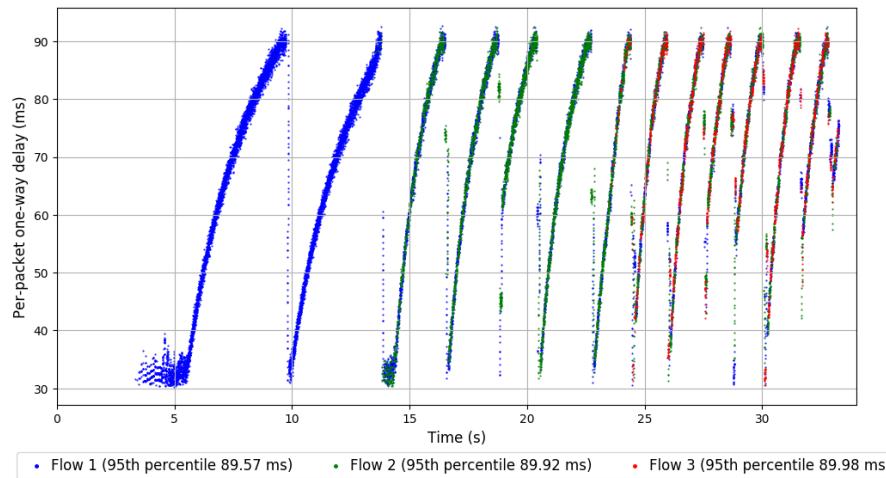
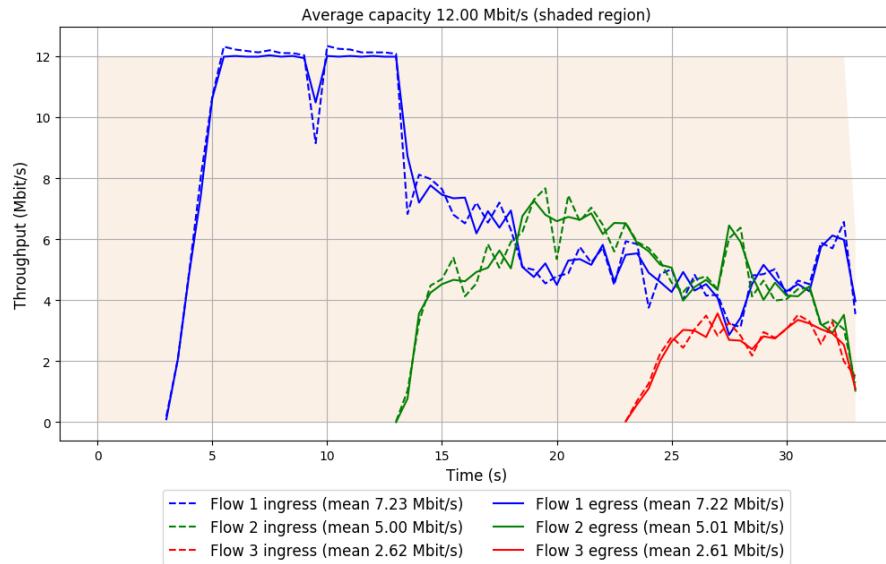
Run 4: Statistics of LEDBAT

Start at: 2018-04-24 16:24:58

End at: 2018-04-24 16:25:28

```
# Below is generated by plot.py at 2018-04-24 17:29:57
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.39 Mbit/s (94.9% utilization)
95th percentile per-packet one-way delay: 89.744 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 7.22 Mbit/s
95th percentile per-packet one-way delay: 89.571 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 5.01 Mbit/s
95th percentile per-packet one-way delay: 89.915 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 2.61 Mbit/s
95th percentile per-packet one-way delay: 89.980 ms
Loss rate: 1.40%
```

## Run 4: Report of LEDBAT — Data Link



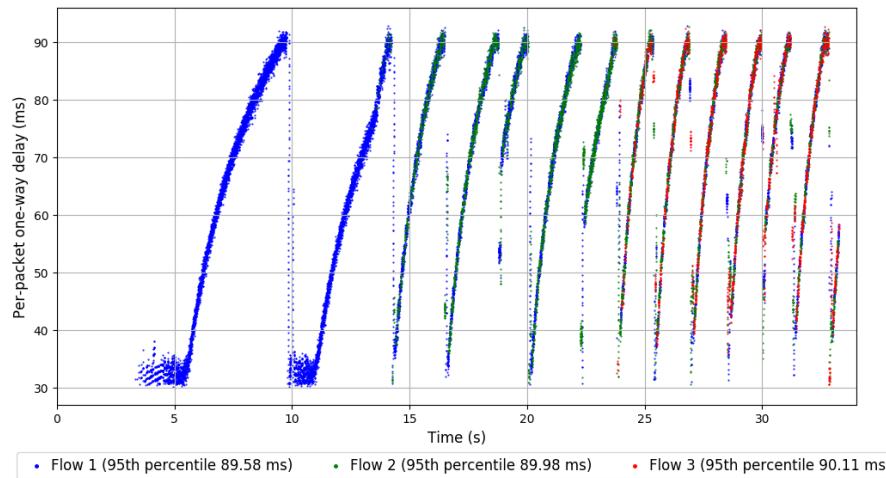
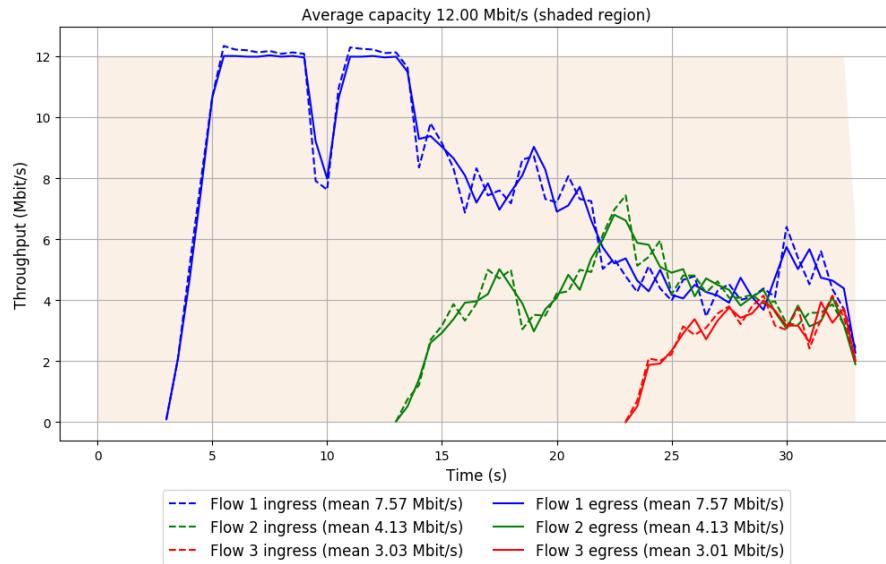
Run 5: Statistics of LEDBAT

Start at: 2018-04-24 16:34:46

End at: 2018-04-24 16:35:16

```
# Below is generated by plot.py at 2018-04-24 17:30:16
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.30 Mbit/s (94.2% utilization)
95th percentile per-packet one-way delay: 89.778 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 7.57 Mbit/s
95th percentile per-packet one-way delay: 89.582 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 4.13 Mbit/s
95th percentile per-packet one-way delay: 89.978 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 90.112 ms
Loss rate: 1.17%
```

## Run 5: Report of LEDBAT — Data Link



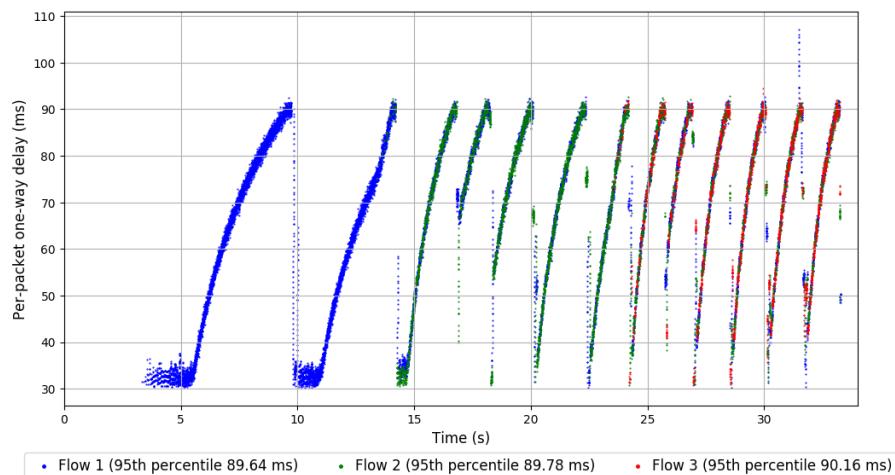
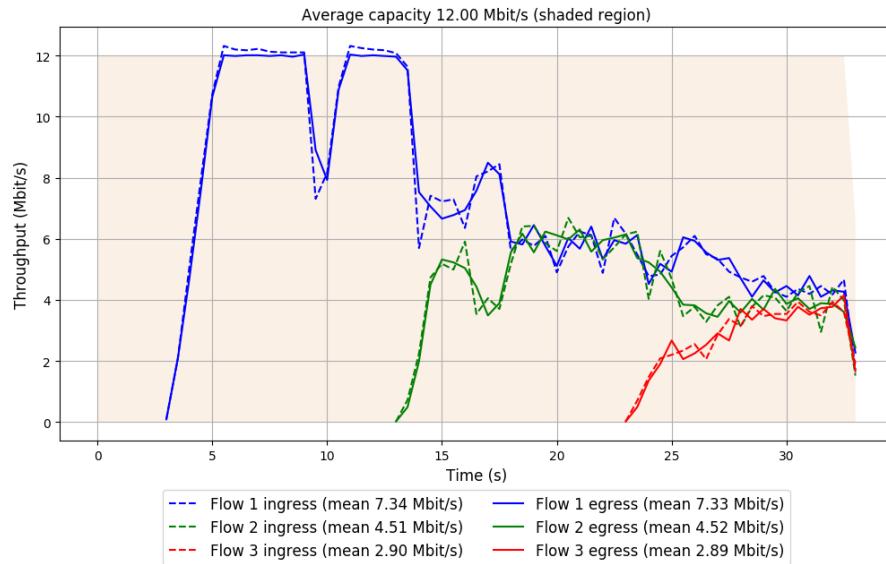
Run 6: Statistics of LEDBAT

Start at: 2018-04-24 16:44:36

End at: 2018-04-24 16:45:06

```
# Below is generated by plot.py at 2018-04-24 17:30:16
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.29 Mbit/s (94.1% utilization)
95th percentile per-packet one-way delay: 89.745 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 7.33 Mbit/s
95th percentile per-packet one-way delay: 89.638 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 4.52 Mbit/s
95th percentile per-packet one-way delay: 89.785 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 90.163 ms
Loss rate: 1.26%
```

## Run 6: Report of LEDBAT — Data Link



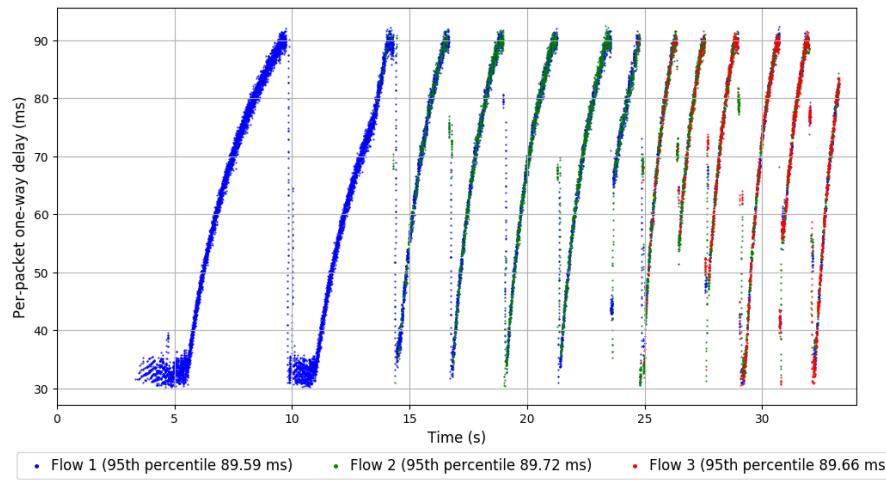
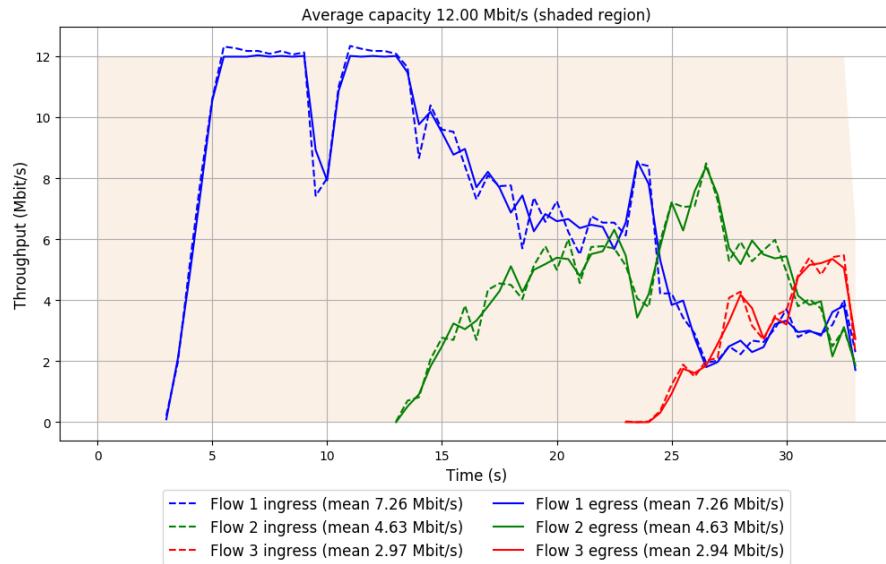
```
Run 7: Statistics of LEDBAT
```

```
Start at: 2018-04-24 16:54:23
```

```
End at: 2018-04-24 16:54:53
```

```
# Below is generated by plot.py at 2018-04-24 17:30:17
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.29 Mbit/s (94.1% utilization)
95th percentile per-packet one-way delay: 89.644 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 7.26 Mbit/s
95th percentile per-packet one-way delay: 89.587 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 89.725 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 89.659 ms
Loss rate: 1.46%
```

## Run 7: Report of LEDBAT — Data Link



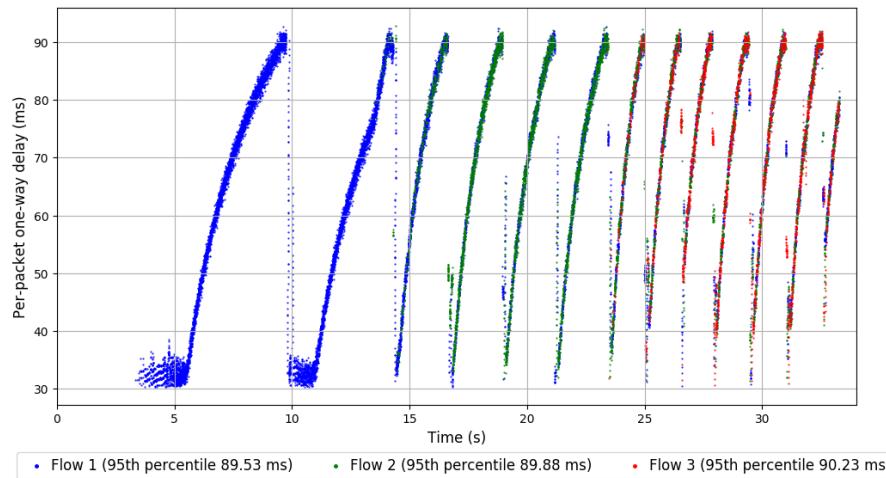
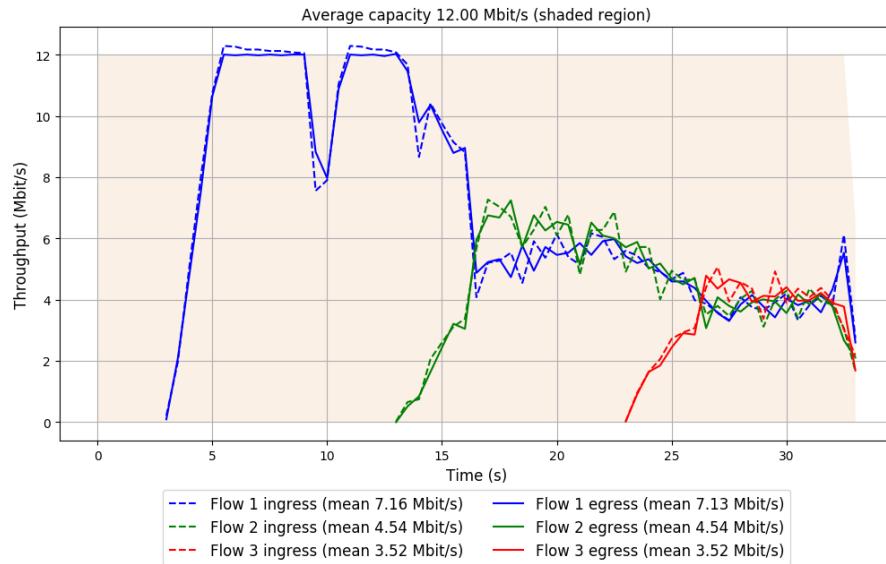
Run 8: Statistics of LEDBAT

Start at: 2018-04-24 17:04:10

End at: 2018-04-24 17:04:40

```
# Below is generated by plot.py at 2018-04-24 17:30:18
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.30 Mbit/s (94.2% utilization)
95th percentile per-packet one-way delay: 89.699 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 7.13 Mbit/s
95th percentile per-packet one-way delay: 89.526 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 89.879 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 90.235 ms
Loss rate: 1.24%
```

Run 8: Report of LEDBAT — Data Link



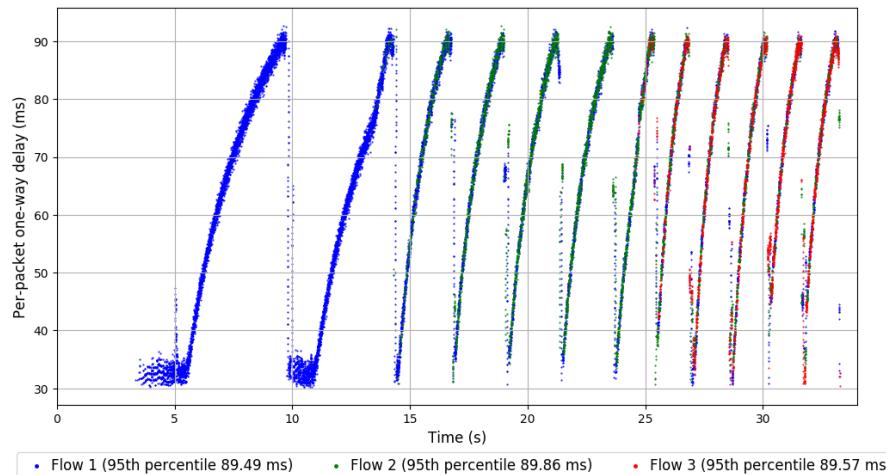
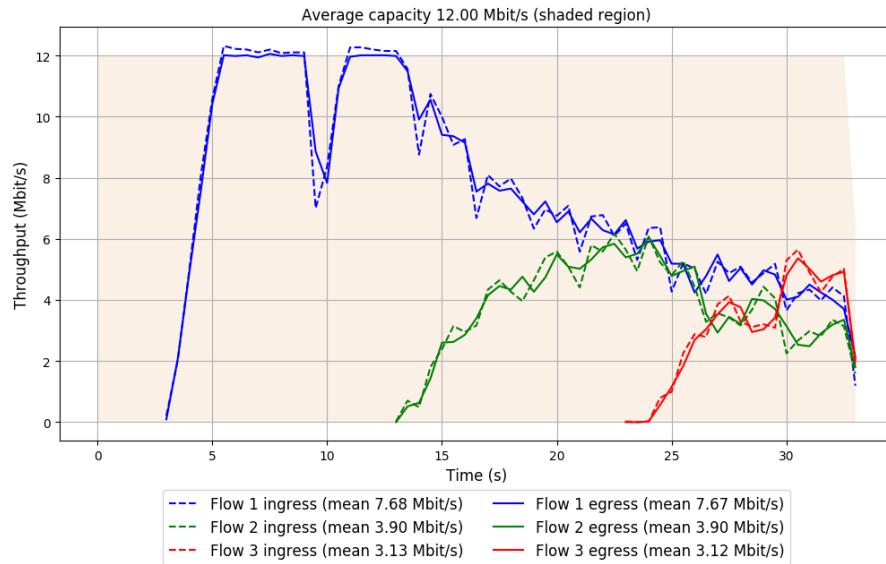
Run 9: Statistics of LEDBAT

Start at: 2018-04-24 17:13:58

End at: 2018-04-24 17:14:28

```
# Below is generated by plot.py at 2018-04-24 17:30:18
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.28 Mbit/s (94.0% utilization)
95th percentile per-packet one-way delay: 89.625 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 89.491 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 89.863 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 3.12 Mbit/s
95th percentile per-packet one-way delay: 89.569 ms
Loss rate: 1.12%
```

## Run 9: Report of LEDBAT — Data Link



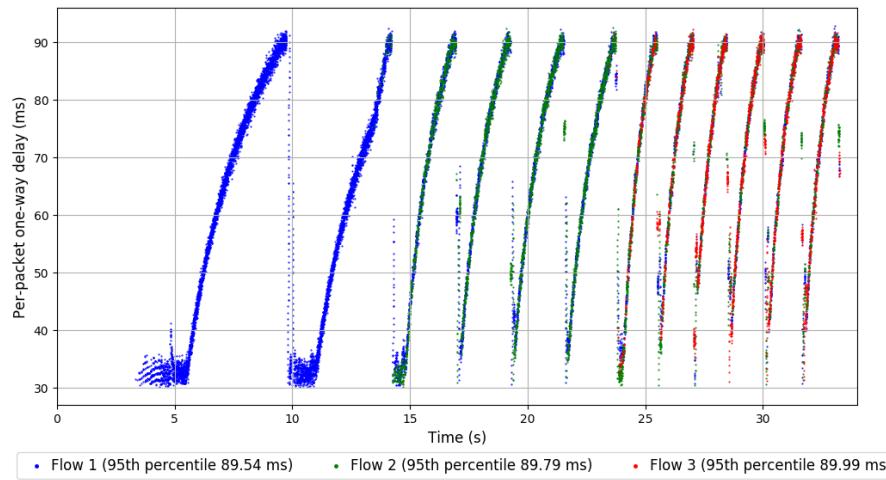
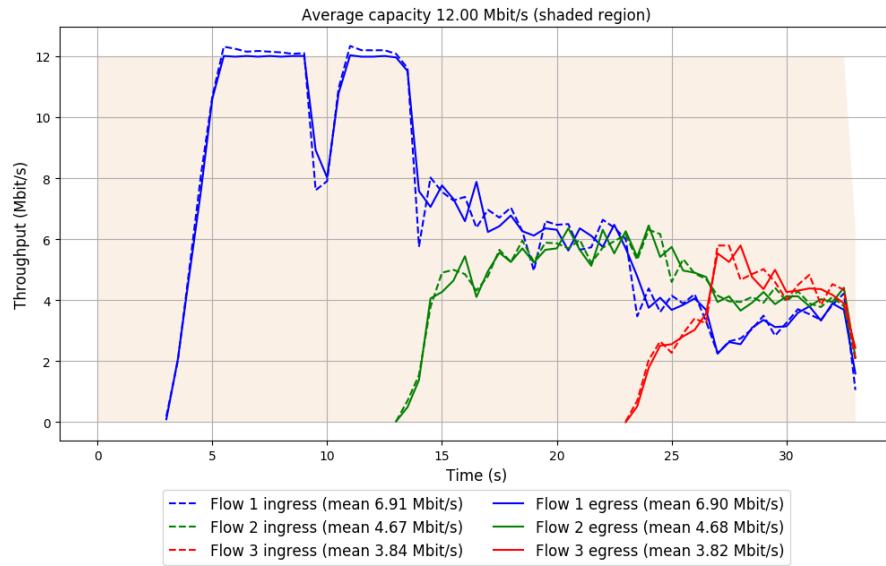
Run 10: Statistics of LEDBAT

Start at: 2018-04-24 17:23:44

End at: 2018-04-24 17:24:14

```
# Below is generated by plot.py at 2018-04-24 17:30:19
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.26 Mbit/s (93.9% utilization)
95th percentile per-packet one-way delay: 89.696 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 6.90 Mbit/s
95th percentile per-packet one-way delay: 89.537 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 4.68 Mbit/s
95th percentile per-packet one-way delay: 89.791 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 3.82 Mbit/s
95th percentile per-packet one-way delay: 89.992 ms
Loss rate: 1.02%
```

## Run 10: Report of LEDBAT — Data Link

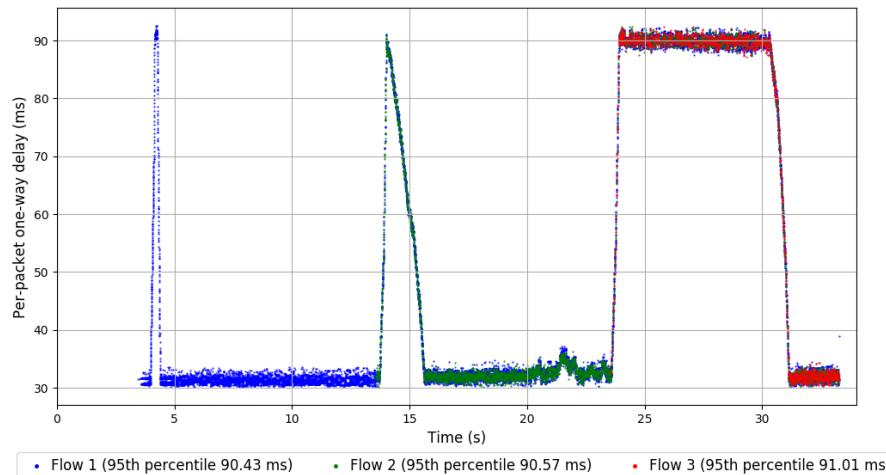
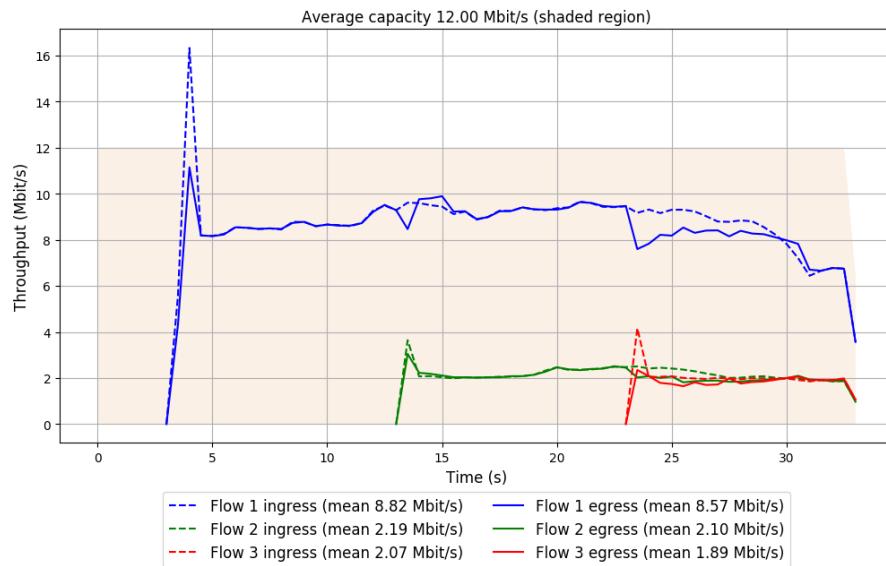


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-24 15:51:36
End at: 2018-04-24 15:52:06

# Below is generated by plot.py at 2018-04-24 17:30:20
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.58 Mbit/s (88.2% utilization)
95th percentile per-packet one-way delay: 90.537 ms
Loss rate: 3.54%
-- Flow 1:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 90.428 ms
Loss rate: 2.94%
-- Flow 2:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 90.566 ms
Loss rate: 4.52%
-- Flow 3:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 91.011 ms
Loss rate: 9.21%
```

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



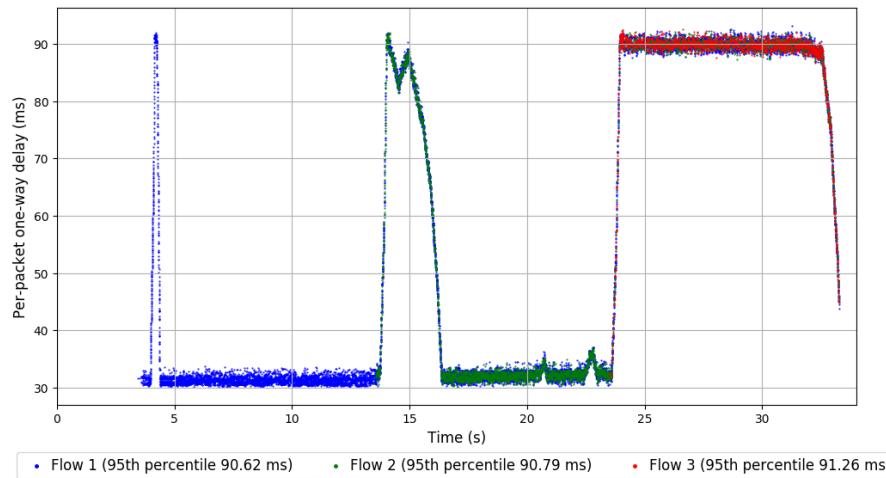
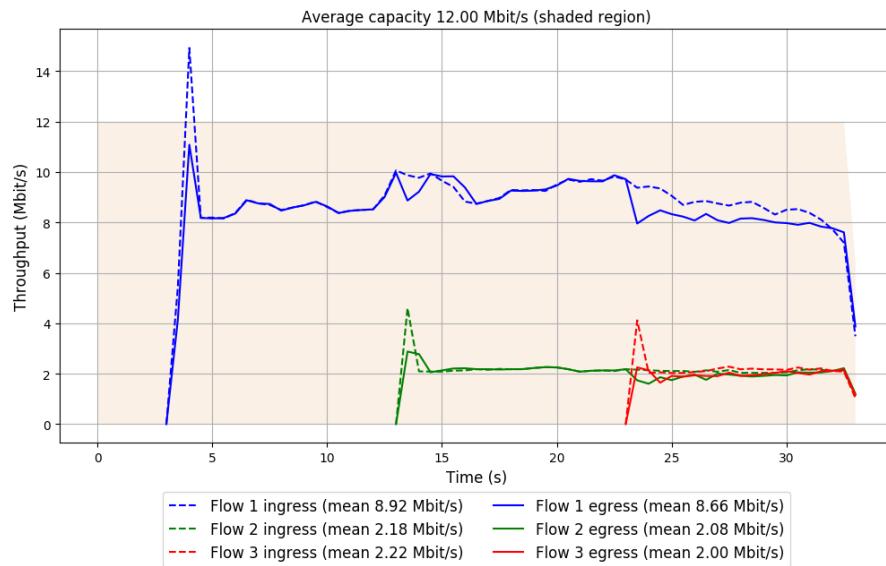
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-24 16:01:22

End at: 2018-04-24 16:01:52

```
# Below is generated by plot.py at 2018-04-24 17:30:20
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.70 Mbit/s (89.1% utilization)
95th percentile per-packet one-way delay: 90.728 ms
Loss rate: 3.74%
-- Flow 1:
Average throughput: 8.66 Mbit/s
95th percentile per-packet one-way delay: 90.619 ms
Loss rate: 3.04%
-- Flow 2:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 90.790 ms
Loss rate: 4.75%
-- Flow 3:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 91.260 ms
Loss rate: 10.37%
```

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



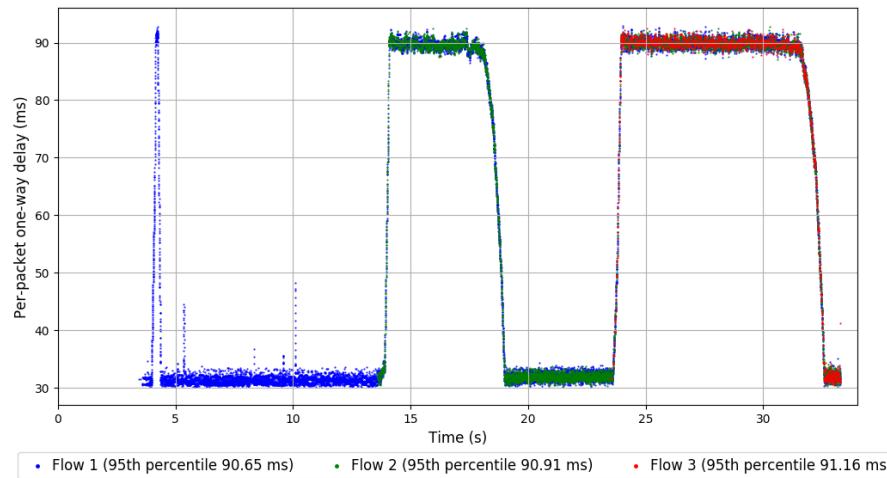
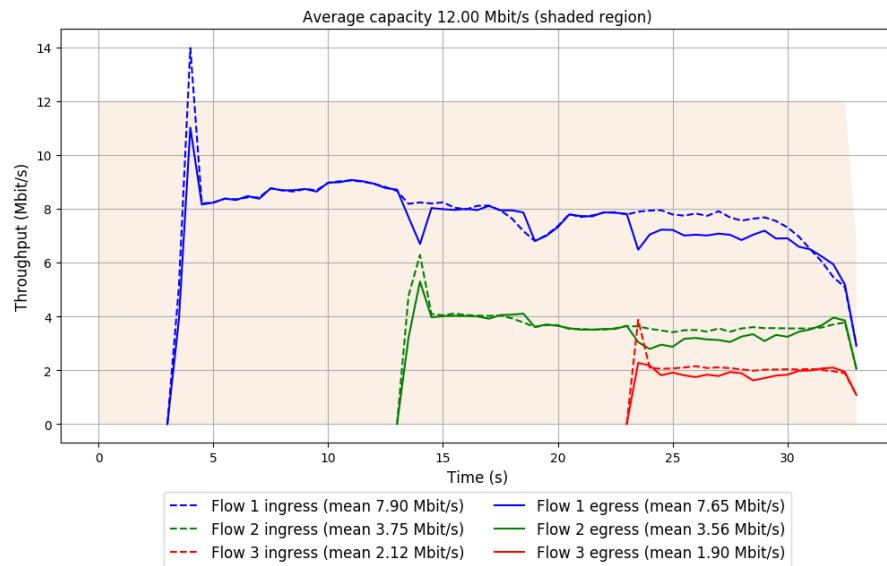
Run 3: Statistics of PCC-Allegro

Start at: 2018-04-24 16:11:09

End at: 2018-04-24 16:11:39

```
# Below is generated by plot.py at 2018-04-24 17:30:38
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.64 Mbit/s (88.6% utilization)
95th percentile per-packet one-way delay: 90.799 ms
Loss rate: 4.25%
-- Flow 1:
Average throughput: 7.65 Mbit/s
95th percentile per-packet one-way delay: 90.652 ms
Loss rate: 3.35%
-- Flow 2:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 90.911 ms
Loss rate: 5.32%
-- Flow 3:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 91.162 ms
Loss rate: 10.58%
```

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



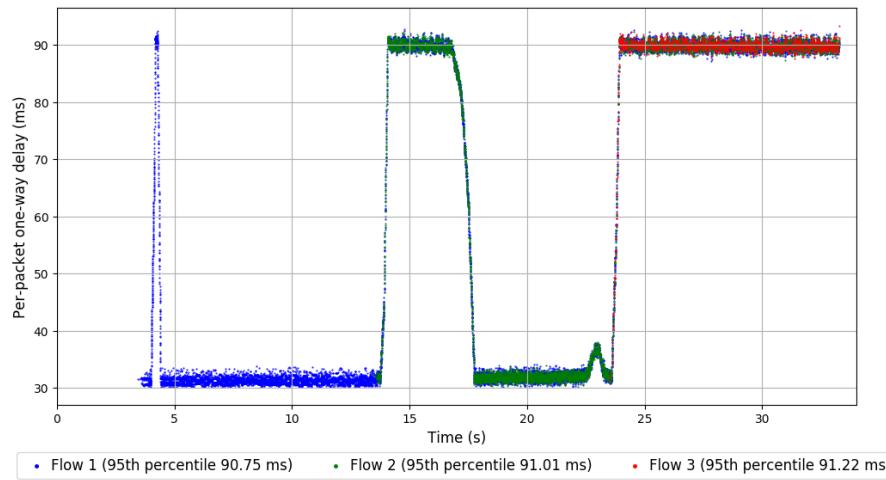
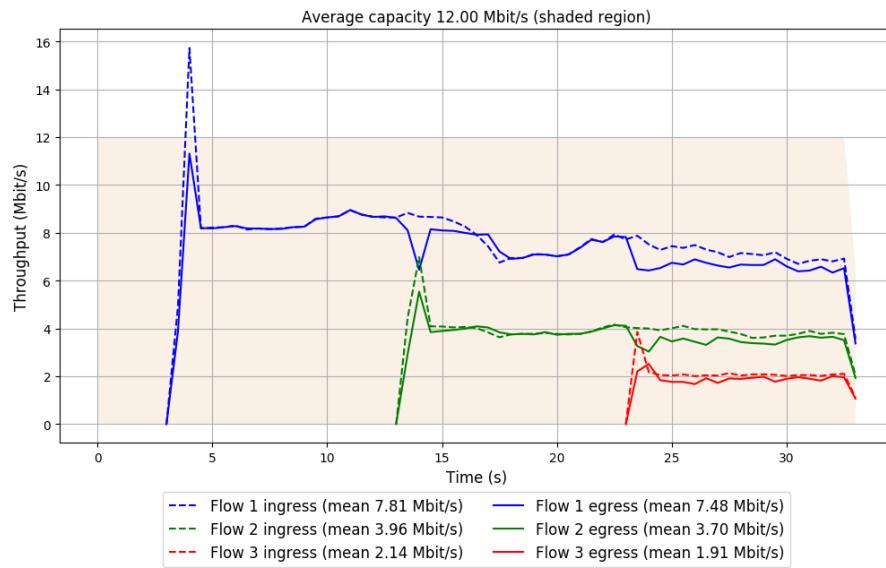
Run 4: Statistics of PCC-Allegro

Start at: 2018-04-24 16:20:57

End at: 2018-04-24 16:21:27

```
# Below is generated by plot.py at 2018-04-24 17:30:38
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.57 Mbit/s (88.1% utilization)
95th percentile per-packet one-way delay: 90.889 ms
Loss rate: 5.27%
-- Flow 1:
Average throughput: 7.48 Mbit/s
95th percentile per-packet one-way delay: 90.754 ms
Loss rate: 4.31%
-- Flow 2:
Average throughput: 3.70 Mbit/s
95th percentile per-packet one-way delay: 91.014 ms
Loss rate: 6.62%
-- Flow 3:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 91.225 ms
Loss rate: 10.86%
```

## Run 4: Report of PCC-Allegro — Data Link



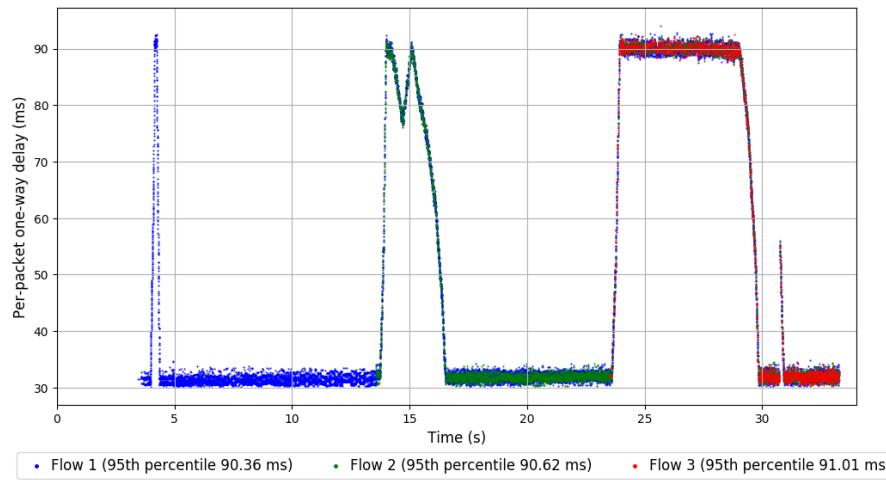
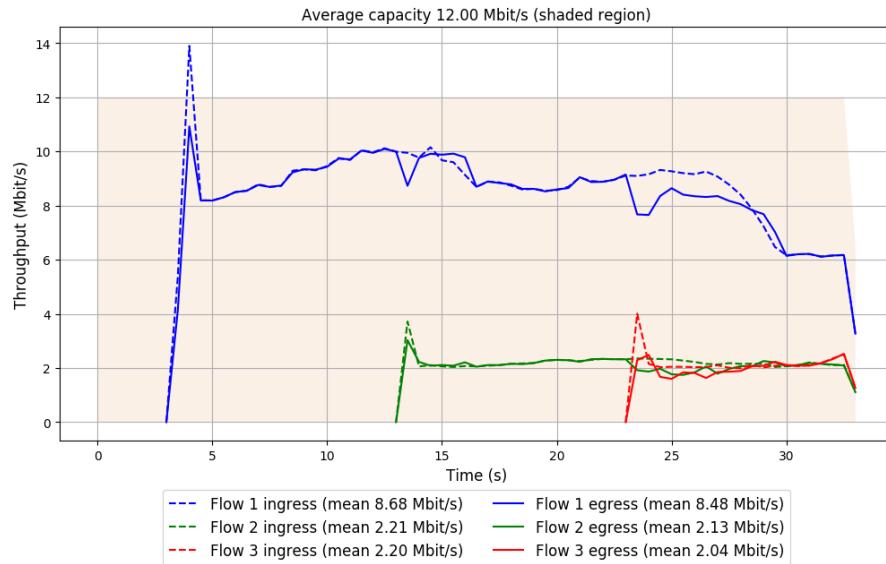
Run 5: Statistics of PCC-Allegro

Start at: 2018-04-24 16:30:45

End at: 2018-04-24 16:31:15

```
# Below is generated by plot.py at 2018-04-24 17:30:41
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.56 Mbit/s (88.0% utilization)
95th percentile per-packet one-way delay: 90.509 ms
Loss rate: 2.99%
-- Flow 1:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 90.355 ms
Loss rate: 2.40%
-- Flow 2:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 90.618 ms
Loss rate: 4.14%
-- Flow 3:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 91.012 ms
Loss rate: 7.75%
```

## Run 5: Report of PCC-Allegro — Data Link



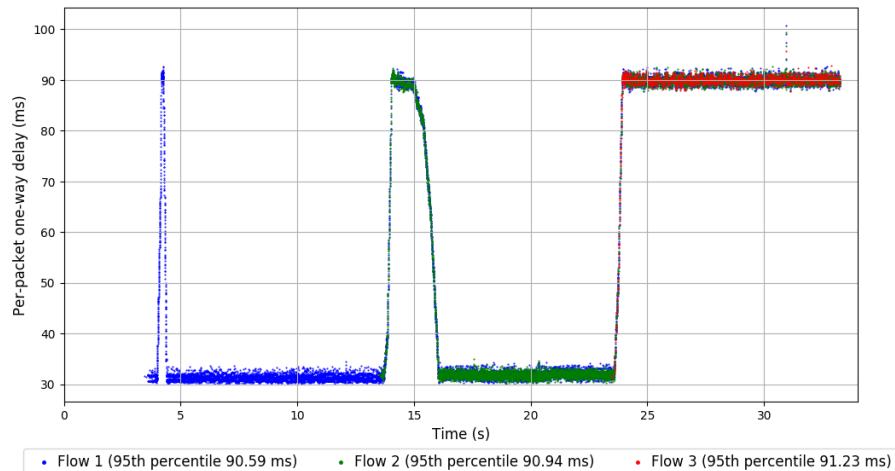
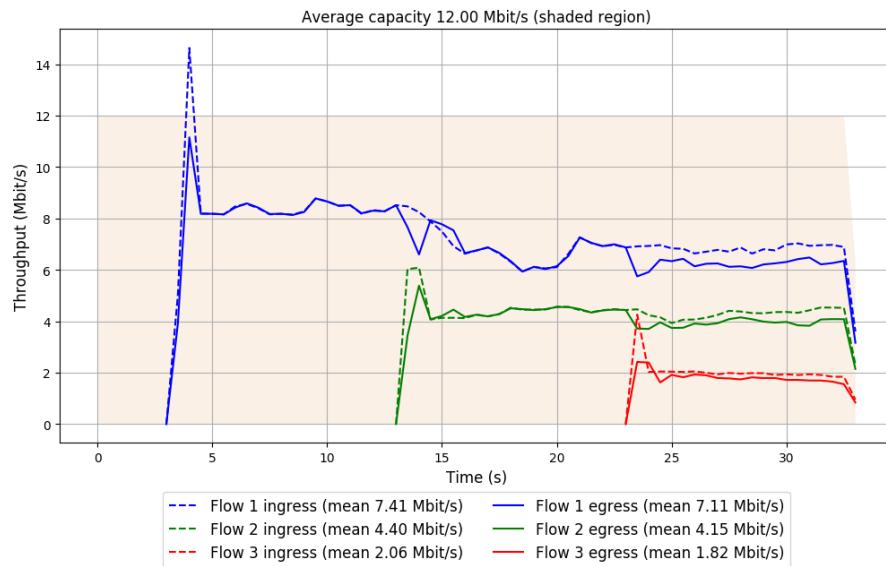
Run 6: Statistics of PCC-Allegro

Start at: 2018-04-24 16:40:35

End at: 2018-04-24 16:41:05

```
# Below is generated by plot.py at 2018-04-24 17:30:41
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.47 Mbit/s (87.2% utilization)
95th percentile per-packet one-way delay: 90.777 ms
Loss rate: 5.09%
-- Flow 1:
Average throughput: 7.11 Mbit/s
95th percentile per-packet one-way delay: 90.590 ms
Loss rate: 4.16%
-- Flow 2:
Average throughput: 4.15 Mbit/s
95th percentile per-packet one-way delay: 90.941 ms
Loss rate: 5.79%
-- Flow 3:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 91.234 ms
Loss rate: 12.22%
```

## Run 6: Report of PCC-Allegro — Data Link



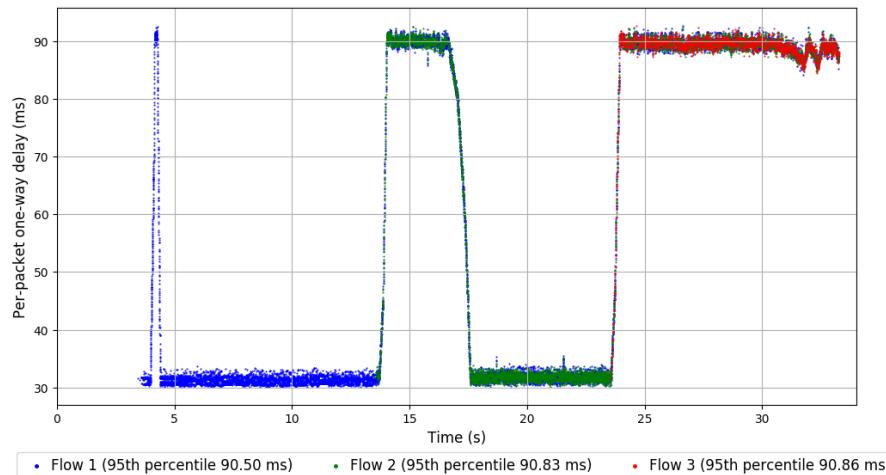
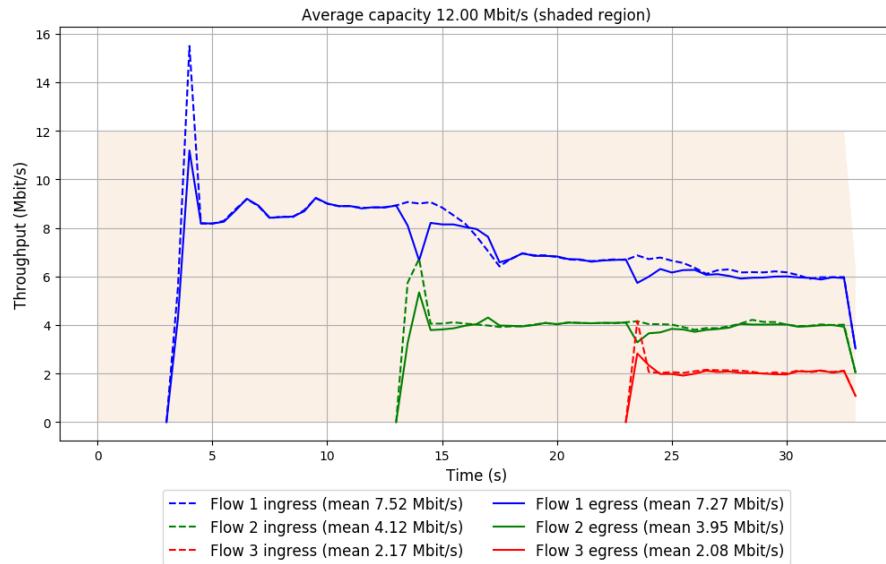
Run 7: Statistics of PCC-Allegro

Start at: 2018-04-24 16:50:23

End at: 2018-04-24 16:50:53

```
# Below is generated by plot.py at 2018-04-24 17:30:41
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.59 Mbit/s (88.2% utilization)
95th percentile per-packet one-way delay: 90.620 ms
Loss rate: 3.62%
-- Flow 1:
Average throughput: 7.27 Mbit/s
95th percentile per-packet one-way delay: 90.498 ms
Loss rate: 3.32%
-- Flow 2:
Average throughput: 3.95 Mbit/s
95th percentile per-packet one-way delay: 90.825 ms
Loss rate: 4.23%
-- Flow 3:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 90.860 ms
Loss rate: 4.39%
```

## Run 7: Report of PCC-Allegro — Data Link



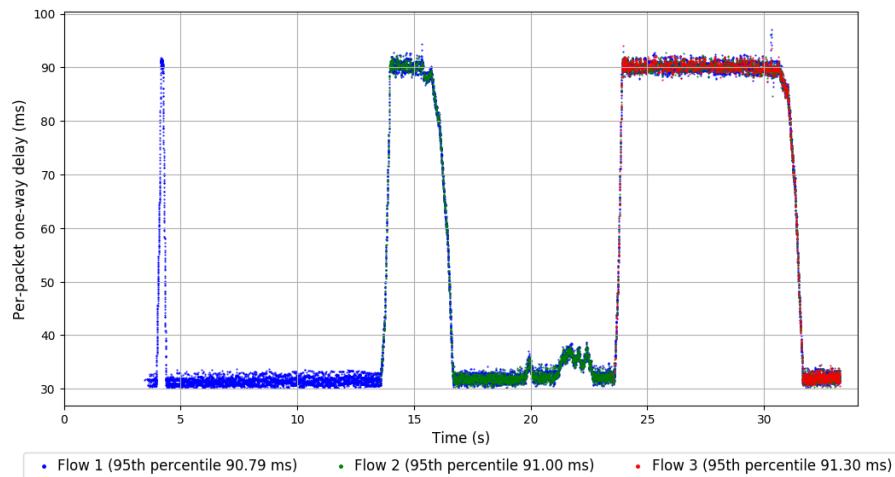
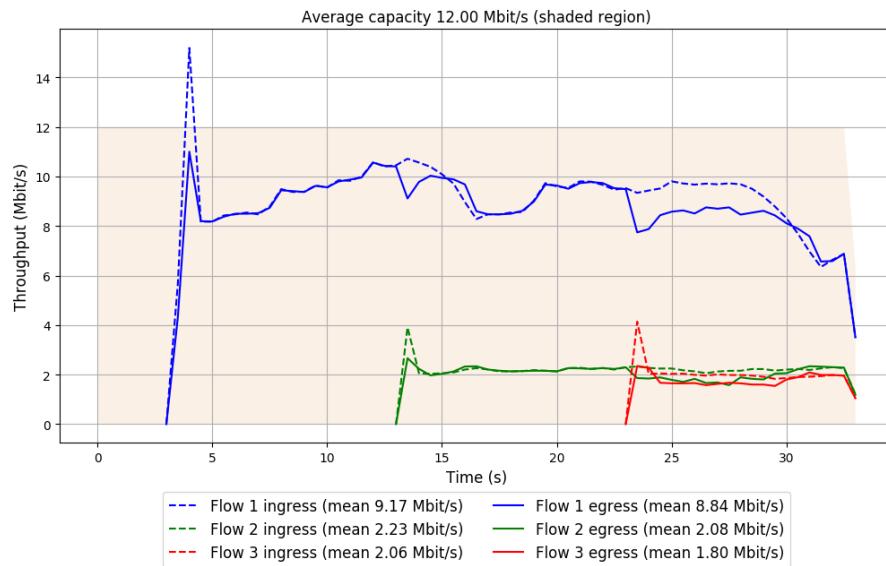
Run 8: Statistics of PCC-Allegro

Start at: 2018-04-24 17:00:09

End at: 2018-04-24 17:00:39

```
# Below is generated by plot.py at 2018-04-24 17:30:41
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.81 Mbit/s (90.1% utilization)
95th percentile per-packet one-way delay: 90.878 ms
Loss rate: 4.67%
-- Flow 1:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 90.793 ms
Loss rate: 3.73%
-- Flow 2:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 90.996 ms
Loss rate: 6.72%
-- Flow 3:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 91.303 ms
Loss rate: 12.94%
```

## Run 8: Report of PCC-Allegro — Data Link



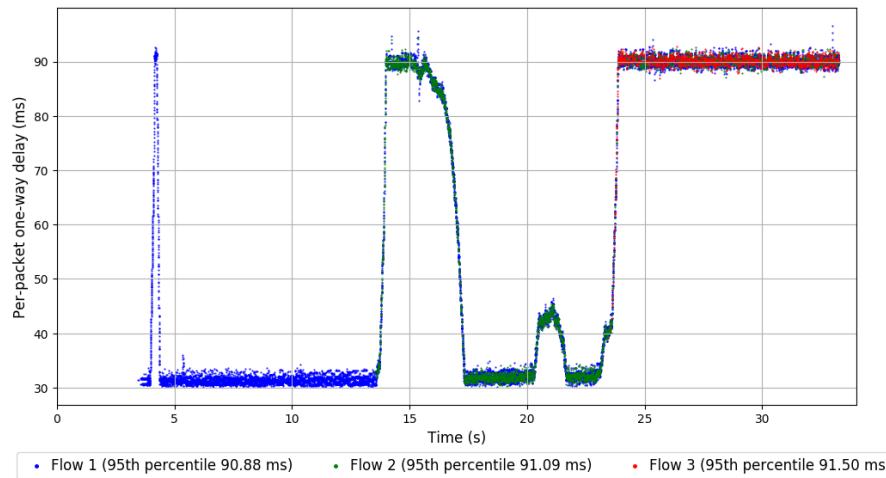
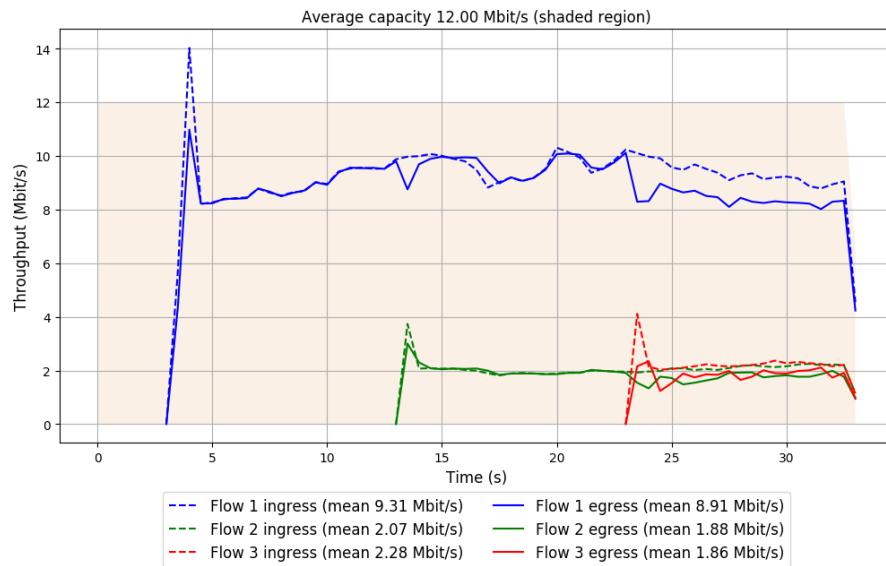
Run 9: Statistics of PCC-Allegro

Start at: 2018-04-24 17:09:58

End at: 2018-04-24 17:10:28

```
# Below is generated by plot.py at 2018-04-24 17:30:42
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.78 Mbit/s (89.8% utilization)
95th percentile per-packet one-way delay: 90.981 ms
Loss rate: 5.84%
-- Flow 1:
Average throughput: 8.91 Mbit/s
95th percentile per-packet one-way delay: 90.876 ms
Loss rate: 4.30%
-- Flow 2:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 91.094 ms
Loss rate: 9.33%
-- Flow 3:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 91.502 ms
Loss rate: 18.43%
```

## Run 9: Report of PCC-Allegro — Data Link

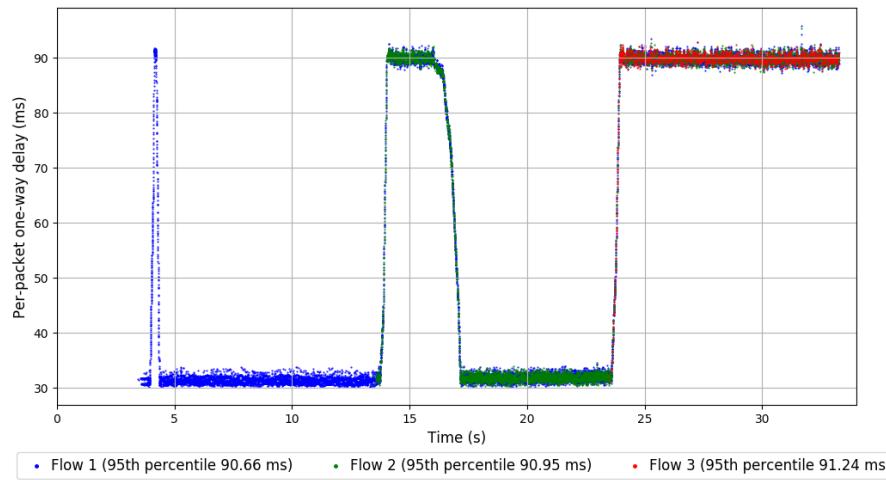
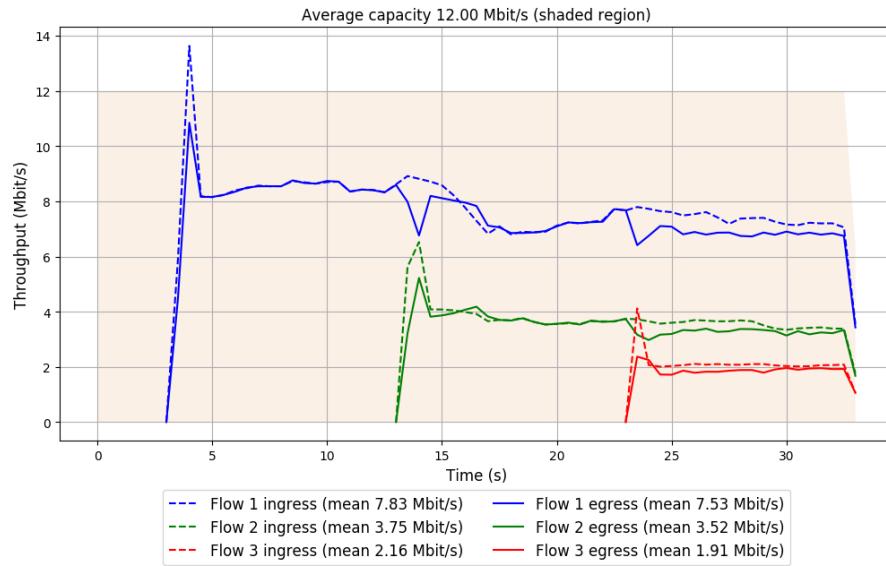


```
Run 10: Statistics of PCC-Allegro

Start at: 2018-04-24 17:19:44
End at: 2018-04-24 17:20:14

# Below is generated by plot.py at 2018-04-24 17:30:42
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.49 Mbit/s (87.4% utilization)
95th percentile per-packet one-way delay: 90.794 ms
Loss rate: 4.98%
-- Flow 1:
Average throughput: 7.53 Mbit/s
95th percentile per-packet one-way delay: 90.658 ms
Loss rate: 3.93%
-- Flow 2:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 90.955 ms
Loss rate: 6.34%
-- Flow 3:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 91.239 ms
Loss rate: 11.77%
```

## Run 10: Report of PCC-Allegro — Data Link

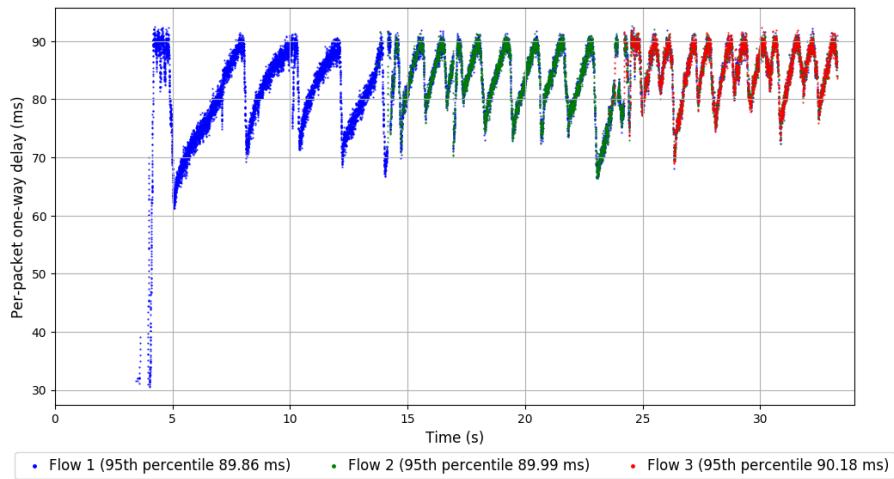
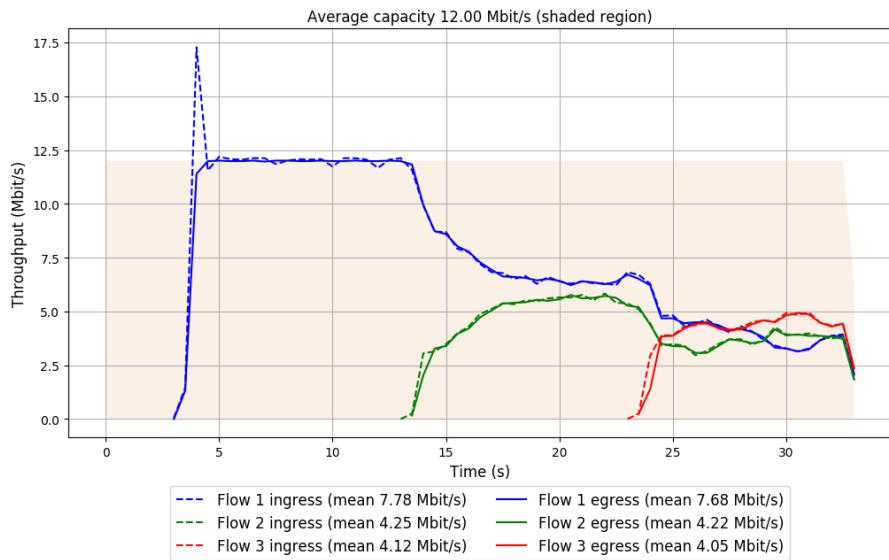


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-24 15:51:02
End at: 2018-04-24 15:51:32

# Below is generated by plot.py at 2018-04-24 17:31:01
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.79 Mbit/s (98.2% utilization)
95th percentile per-packet one-way delay: 89.950 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 7.68 Mbit/s
95th percentile per-packet one-way delay: 89.857 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 89.992 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 90.184 ms
Loss rate: 2.33%
```

## Run 1: Report of QUIC Cubic — Data Link



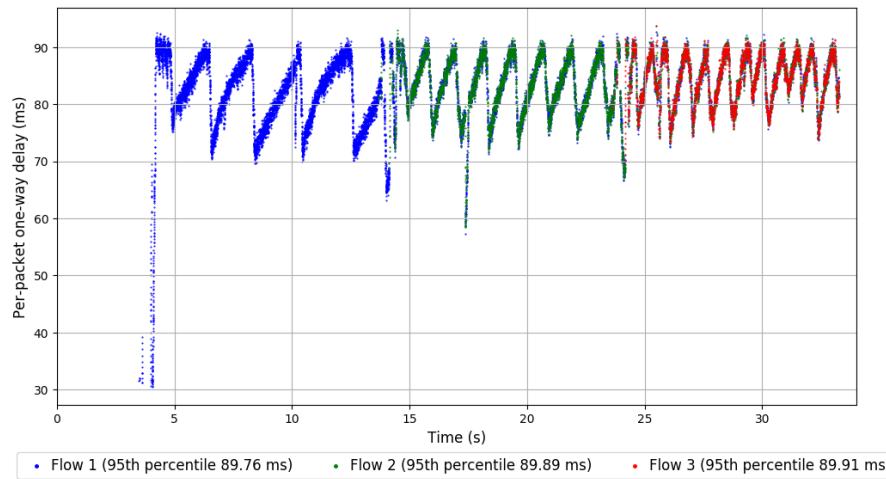
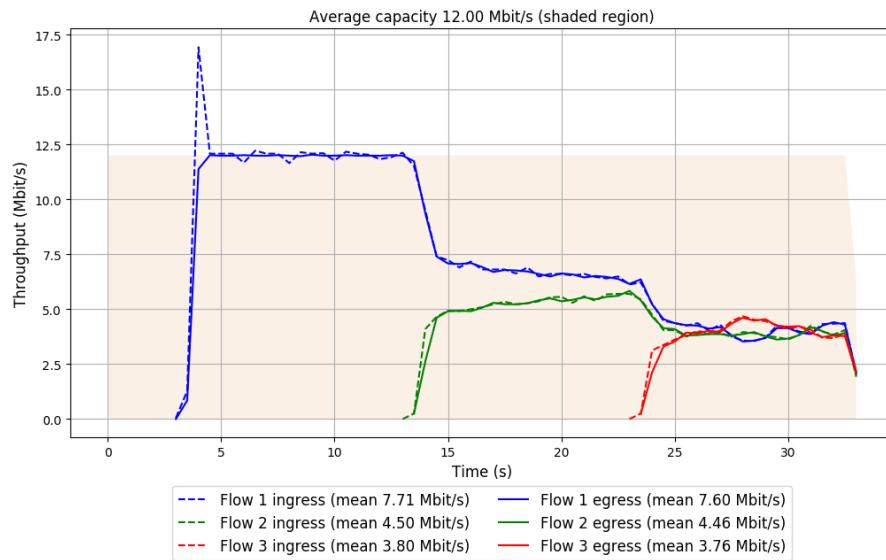
Run 2: Statistics of QUIC Cubic

Start at: 2018-04-24 16:00:48

End at: 2018-04-24 16:01:18

```
# Below is generated by plot.py at 2018-04-24 17:31:01
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.78 Mbit/s (98.2% utilization)
95th percentile per-packet one-way delay: 89.814 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 7.60 Mbit/s
95th percentile per-packet one-way delay: 89.760 ms
Loss rate: 1.41%
-- Flow 2:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 89.889 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 3.76 Mbit/s
95th percentile per-packet one-way delay: 89.913 ms
Loss rate: 1.91%
```

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



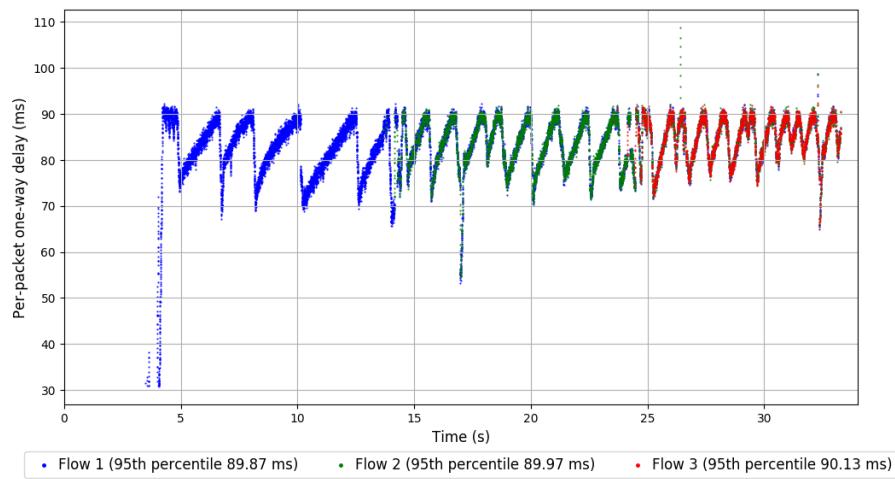
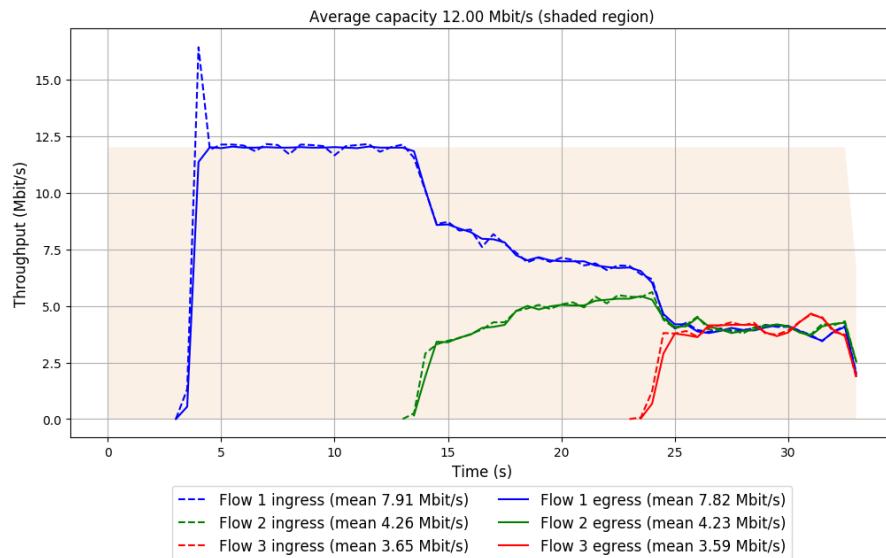
```
Run 3: Statistics of QUIC Cubic
```

```
Start at: 2018-04-24 16:10:35
```

```
End at: 2018-04-24 16:11:05
```

```
# Below is generated by plot.py at 2018-04-24 17:31:02
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.78 Mbit/s (98.2% utilization)
95th percentile per-packet one-way delay: 89.927 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 7.82 Mbit/s
95th percentile per-packet one-way delay: 89.870 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 89.965 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 90.128 ms
Loss rate: 2.56%
```

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



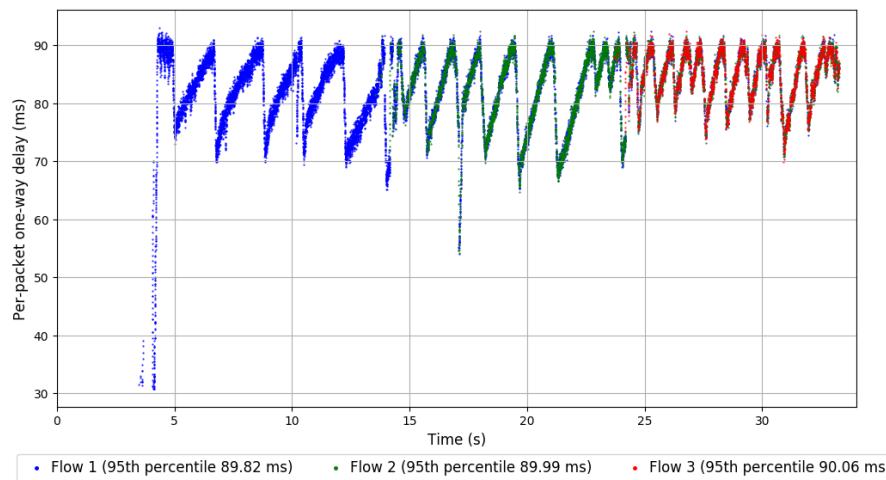
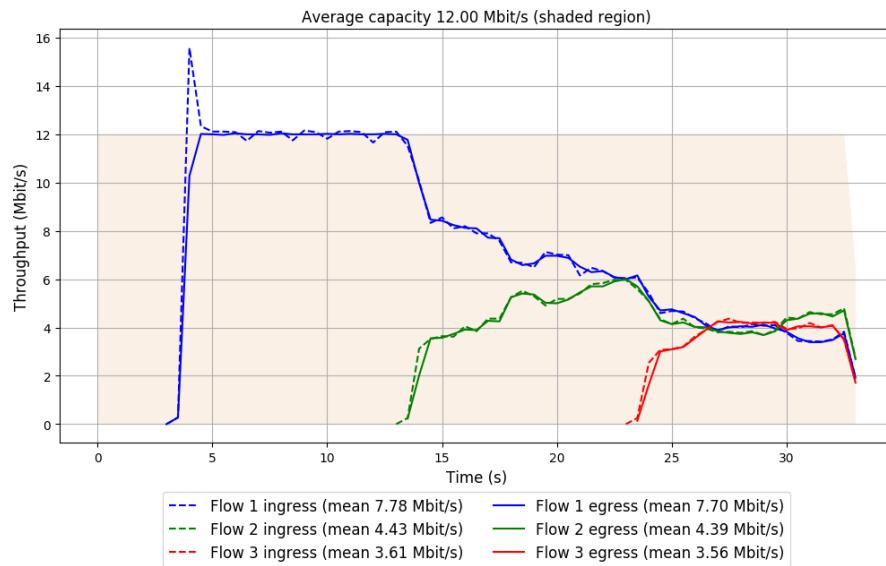
Run 4: Statistics of QUIC Cubic

Start at: 2018-04-24 16:20:23

End at: 2018-04-24 16:20:53

```
# Below is generated by plot.py at 2018-04-24 17:31:02
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.77 Mbit/s (98.1% utilization)
95th percentile per-packet one-way delay: 89.901 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 89.816 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 4.39 Mbit/s
95th percentile per-packet one-way delay: 89.990 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 90.057 ms
Loss rate: 2.05%
```

## Run 4: Report of QUIC Cubic — Data Link



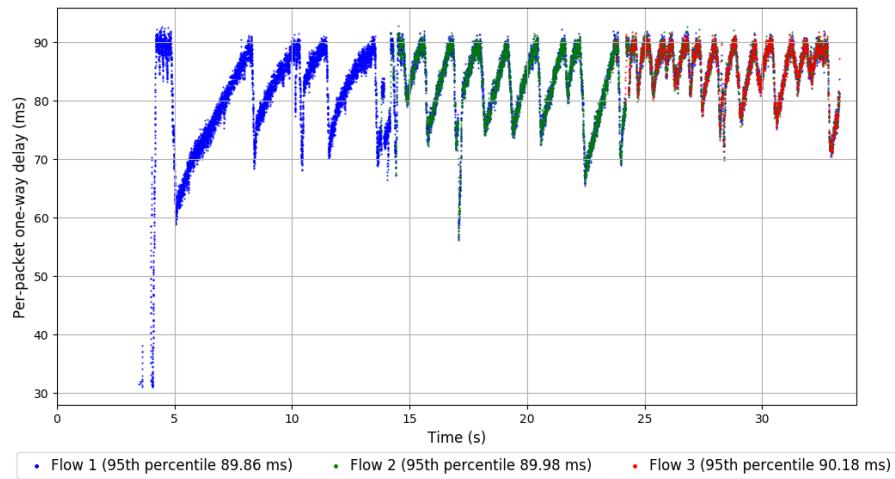
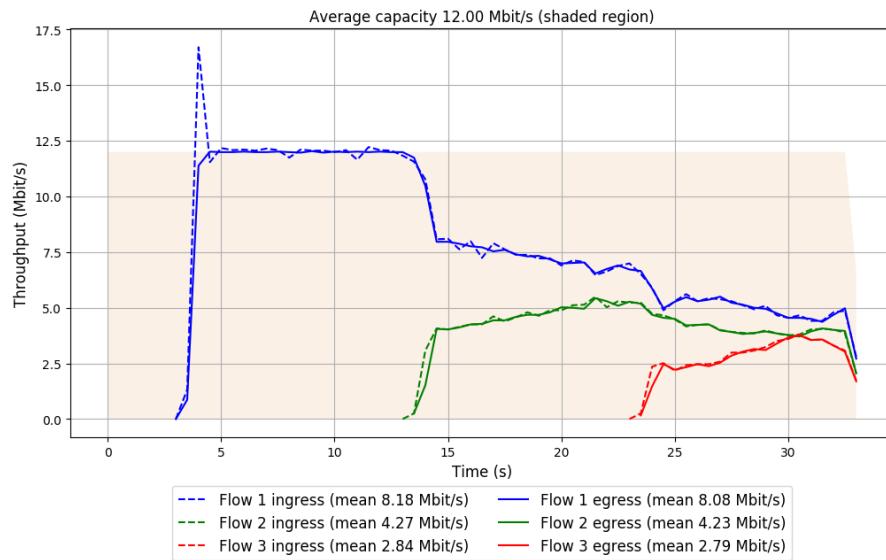
Run 5: Statistics of QUIC Cubic

Start at: 2018-04-24 16:30:10

End at: 2018-04-24 16:30:40

```
# Below is generated by plot.py at 2018-04-24 17:31:03
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.79 Mbit/s (98.2% utilization)
95th percentile per-packet one-way delay: 89.933 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 89.858 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 89.984 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 90.184 ms
Loss rate: 2.76%
```

## Run 5: Report of QUIC Cubic — Data Link



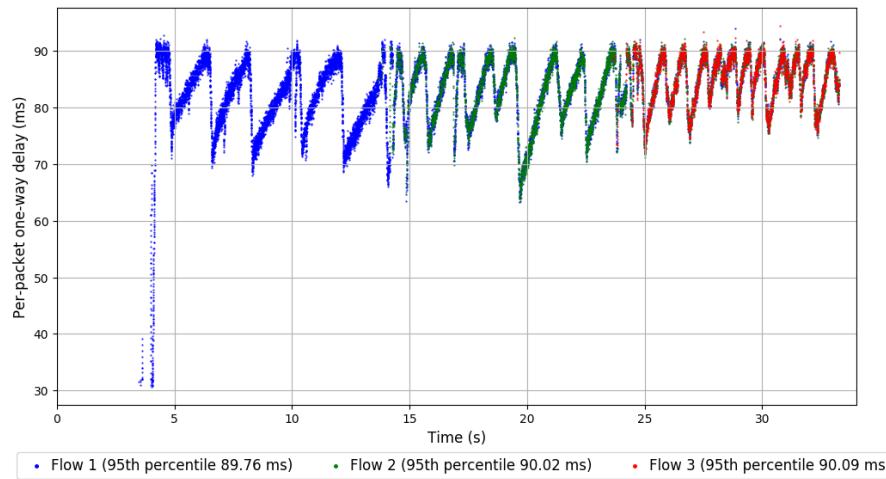
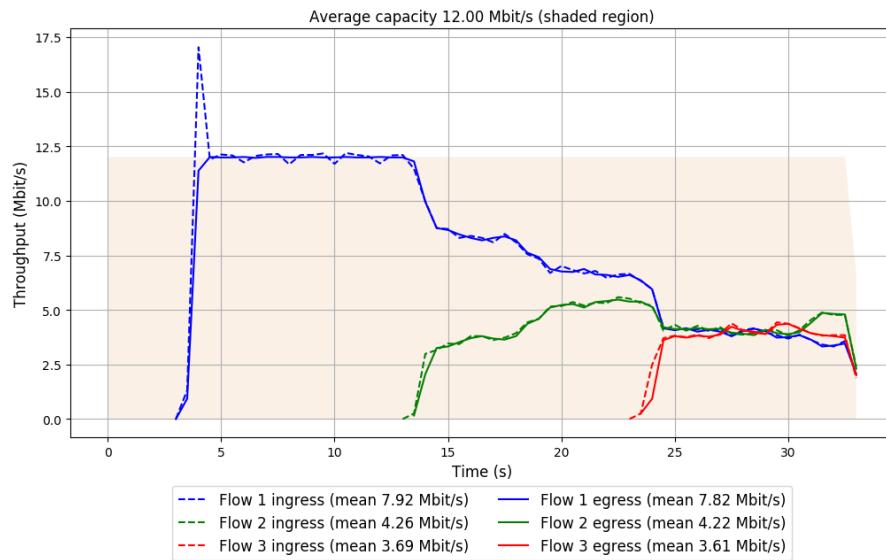
Run 6: Statistics of QUIC Cubic

Start at: 2018-04-24 16:40:01

End at: 2018-04-24 16:40:31

```
# Below is generated by plot.py at 2018-04-24 17:31:04
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.79 Mbit/s (98.2% utilization)
95th percentile per-packet one-way delay: 89.889 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 7.82 Mbit/s
95th percentile per-packet one-way delay: 89.764 ms
Loss rate: 1.32%
-- Flow 2:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 90.019 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 90.090 ms
Loss rate: 2.76%
```

## Run 6: Report of QUIC Cubic — Data Link



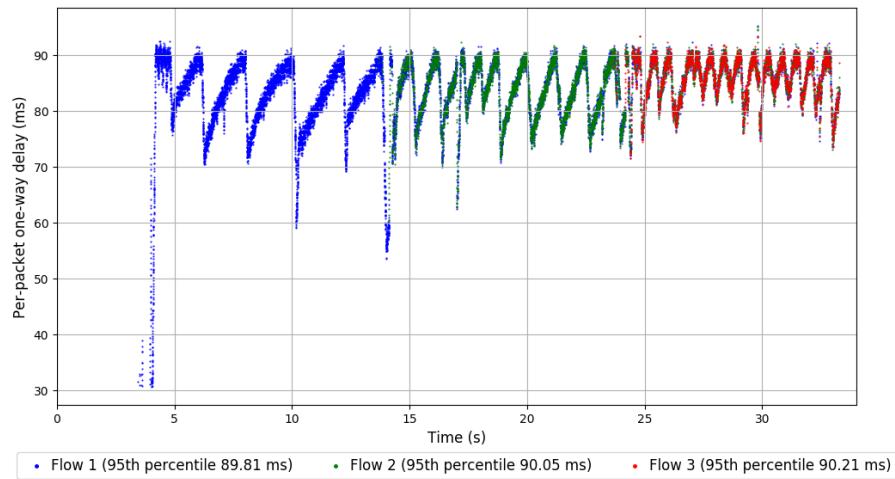
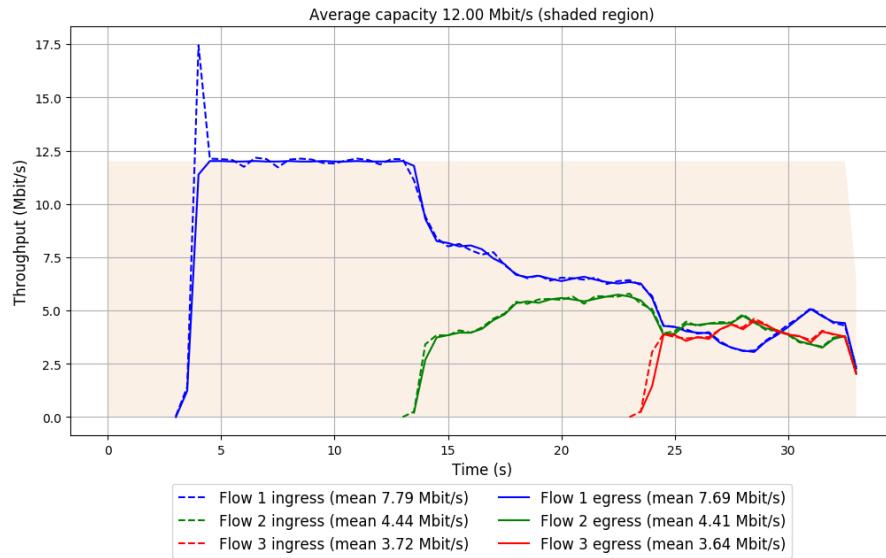
```
Run 7: Statistics of QUIC Cubic
```

```
Start at: 2018-04-24 16:49:48
```

```
End at: 2018-04-24 16:50:18
```

```
# Below is generated by plot.py at 2018-04-24 17:31:04
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.79 Mbit/s (98.2% utilization)
95th percentile per-packet one-way delay: 89.935 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 7.69 Mbit/s
95th percentile per-packet one-way delay: 89.812 ms
Loss rate: 1.44%
-- Flow 2:
Average throughput: 4.41 Mbit/s
95th percentile per-packet one-way delay: 90.054 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 90.207 ms
Loss rate: 2.71%
```

## Run 7: Report of QUIC Cubic — Data Link



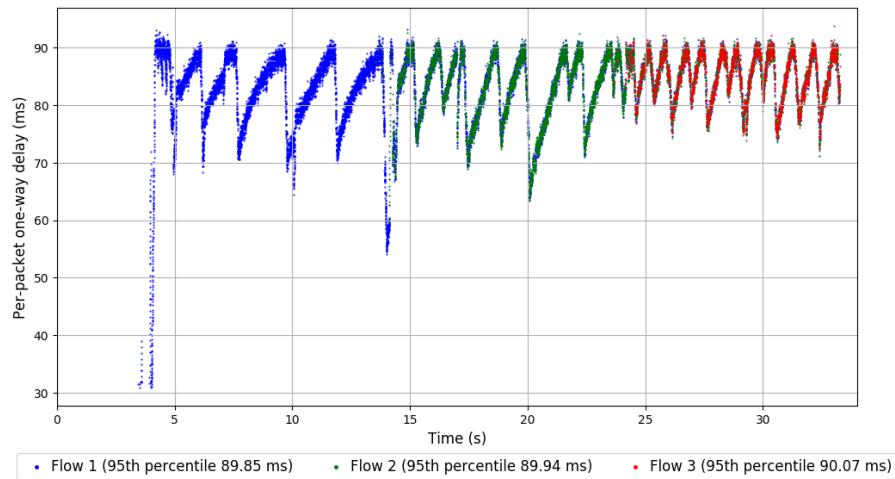
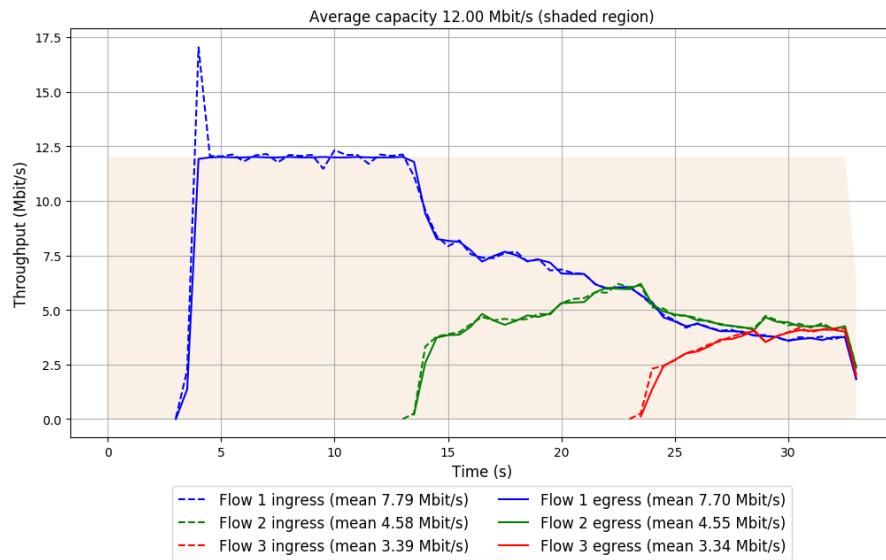
Run 8: Statistics of QUIC Cubic

Start at: 2018-04-24 16:59:35

End at: 2018-04-24 17:00:05

```
# Below is generated by plot.py at 2018-04-24 17:31:05
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.79 Mbit/s (98.3% utilization)
95th percentile per-packet one-way delay: 89.901 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 89.848 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 4.55 Mbit/s
95th percentile per-packet one-way delay: 89.943 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 90.067 ms
Loss rate: 2.28%
```

## Run 8: Report of QUIC Cubic — Data Link



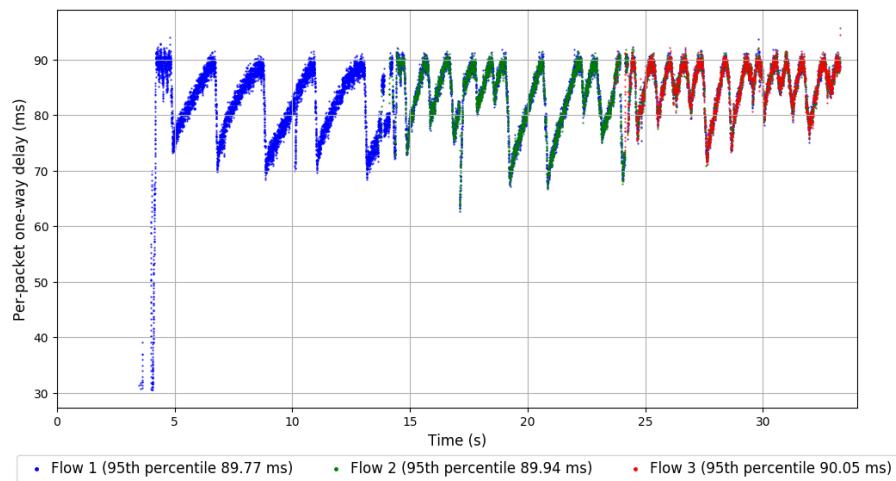
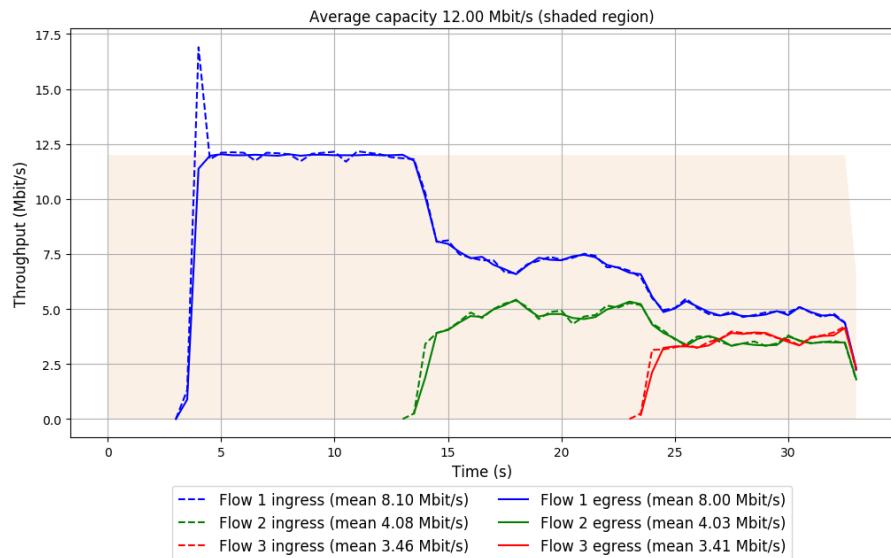
Run 9: Statistics of QUIC Cubic

Start at: 2018-04-24 17:09:24

End at: 2018-04-24 17:09:54

```
# Below is generated by plot.py at 2018-04-24 17:31:28
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.78 Mbit/s (98.2% utilization)
95th percentile per-packet one-way delay: 89.869 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 8.00 Mbit/s
95th percentile per-packet one-way delay: 89.774 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 89.935 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 90.054 ms
Loss rate: 2.30%
```

## Run 9: Report of QUIC Cubic — Data Link



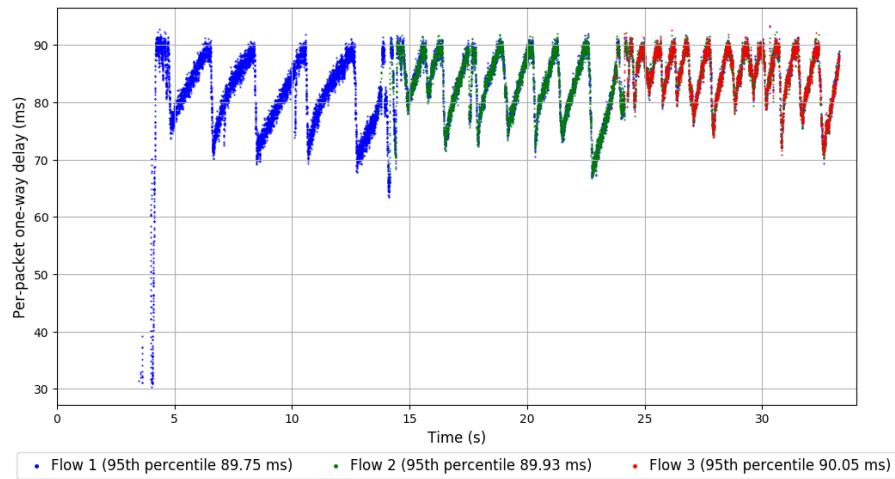
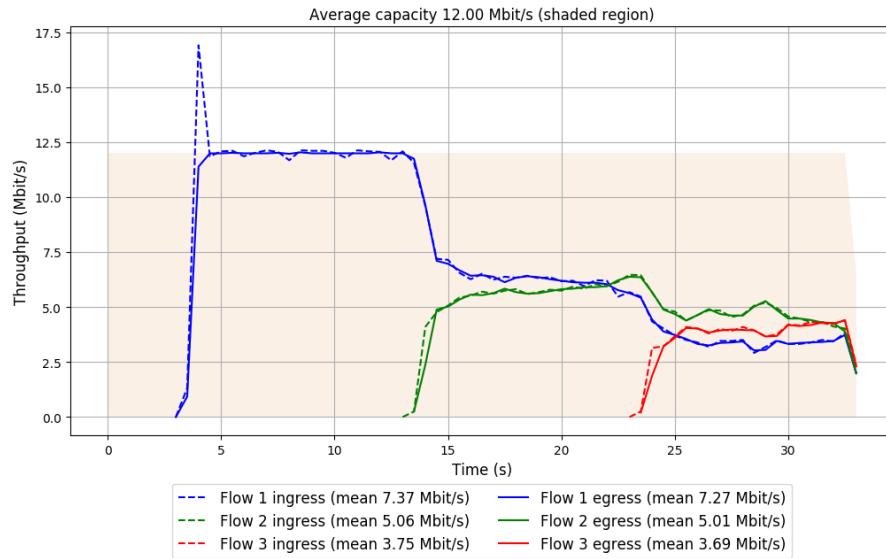
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-24 17:19:09

End at: 2018-04-24 17:19:39

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.79 Mbit/s (98.2% utilization)
95th percentile per-packet one-way delay: 89.857 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 7.27 Mbit/s
95th percentile per-packet one-way delay: 89.752 ms
Loss rate: 1.42%
-- Flow 2:
Average throughput: 5.01 Mbit/s
95th percentile per-packet one-way delay: 89.934 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 3.69 Mbit/s
95th percentile per-packet one-way delay: 90.054 ms
Loss rate: 2.46%
```

## Run 10: Report of QUIC Cubic — Data Link



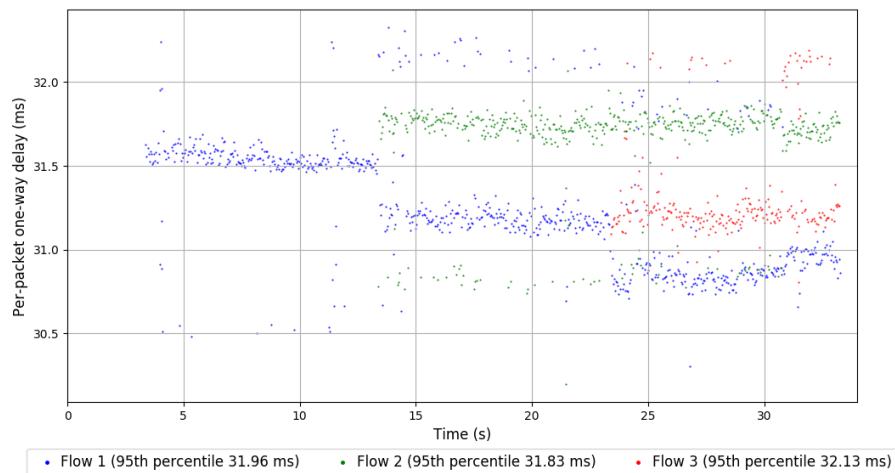
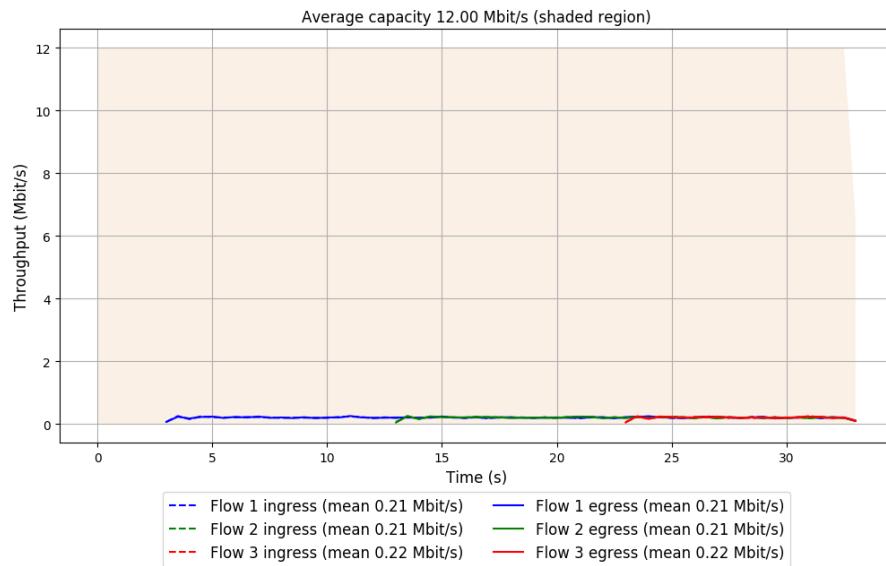
```
Run 1: Statistics of SCReAM
```

```
Start at: 2018-04-24 15:53:19
```

```
End at: 2018-04-24 15:53:49
```

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.43 Mbit/s (3.6% utilization)
95th percentile per-packet one-way delay: 31.950 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.961 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.830 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 32.128 ms
Loss rate: 0.35%
```

## Run 1: Report of SCReAM — Data Link



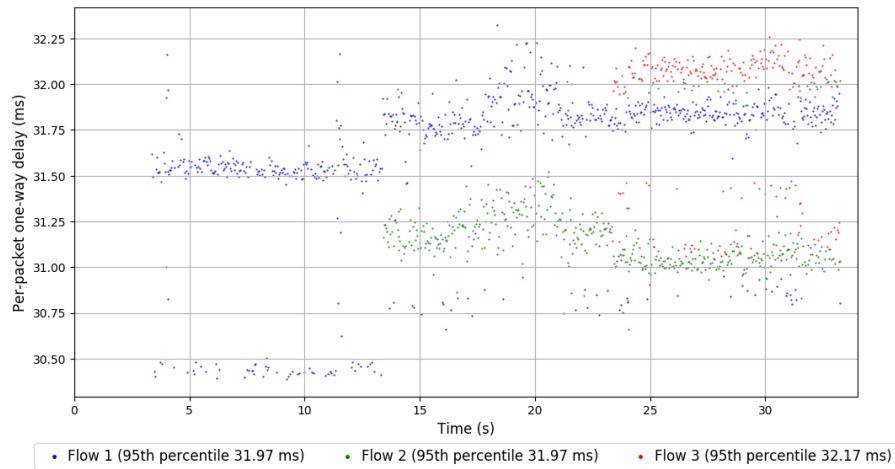
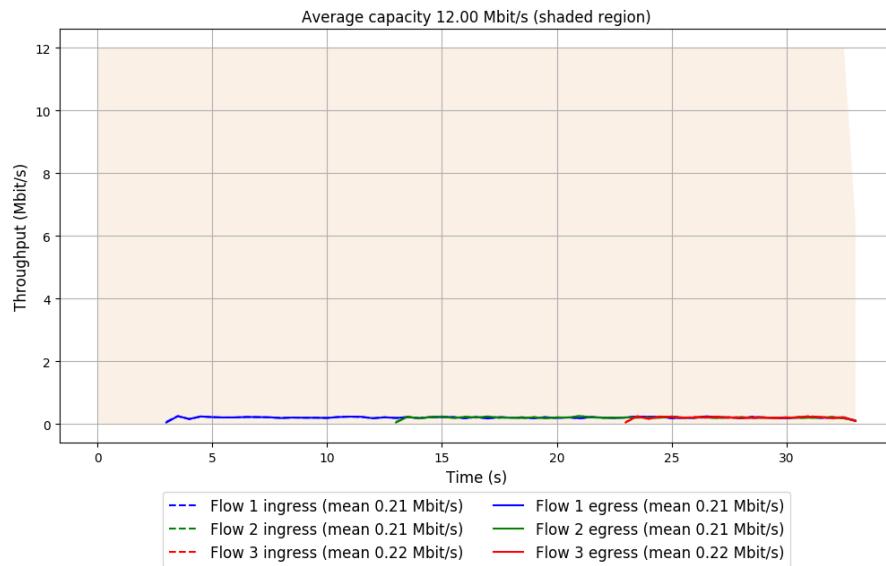
Run 2: Statistics of SCReAM

Start at: 2018-04-24 16:03:06

End at: 2018-04-24 16:03:36

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.43 Mbit/s (3.6% utilization)
95th percentile per-packet one-way delay: 32.103 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.971 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.973 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 32.171 ms
Loss rate: 0.36%
```

Run 2: Report of SCReAM — Data Link



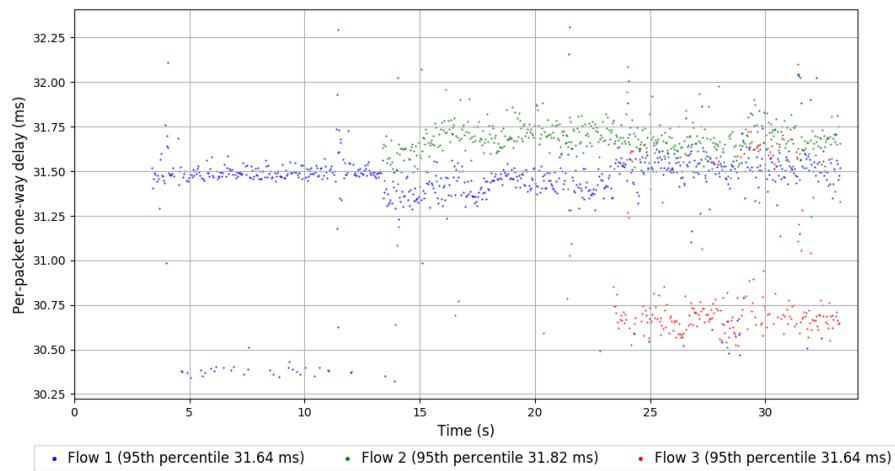
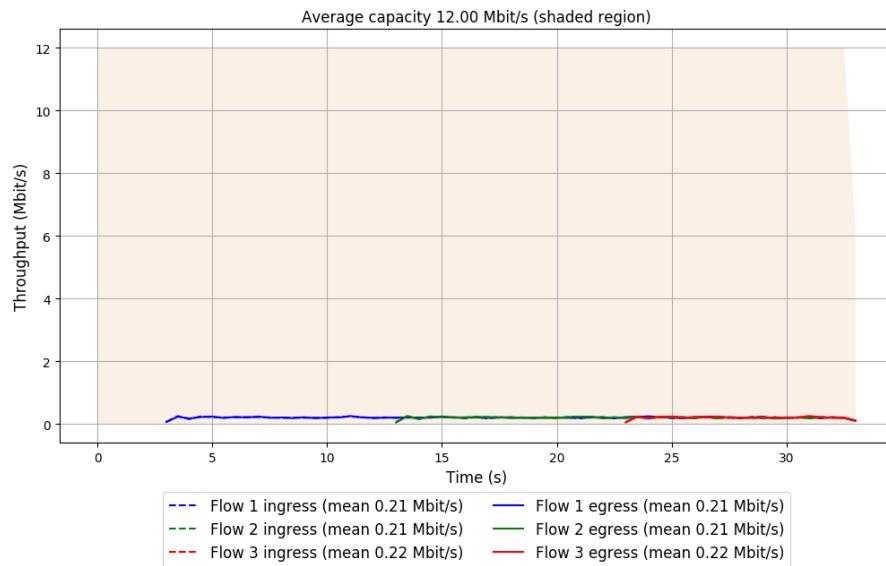
Run 3: Statistics of SCReAM

Start at: 2018-04-24 16:12:53

End at: 2018-04-24 16:13:23

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.43 Mbit/s (3.6% utilization)
95th percentile per-packet one-way delay: 31.772 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.638 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.818 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.640 ms
Loss rate: 0.36%
```

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



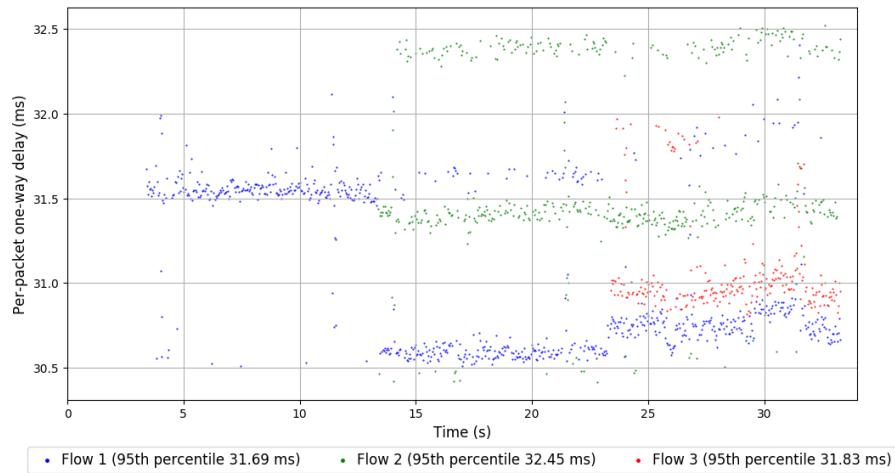
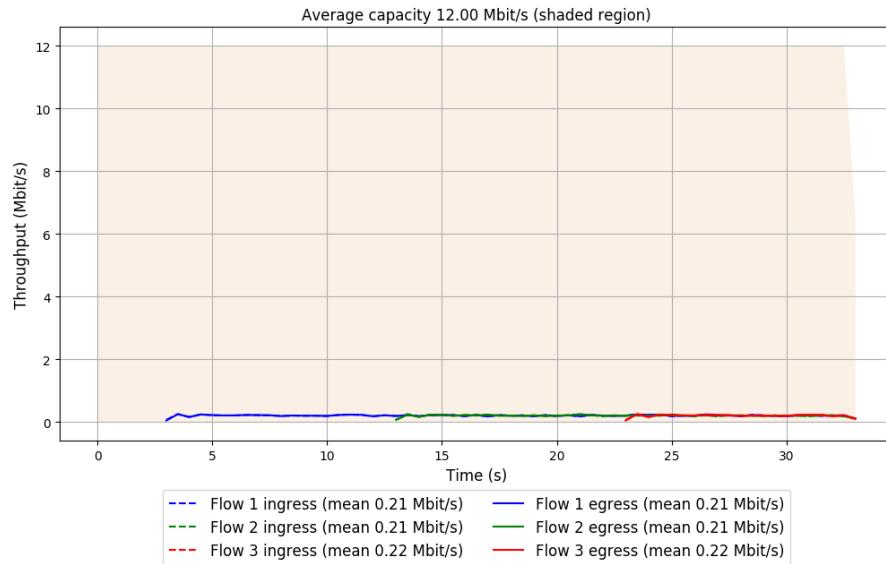
Run 4: Statistics of SCReAM

Start at: 2018-04-24 16:22:41

End at: 2018-04-24 16:23:11

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.43 Mbit/s (3.6% utilization)
95th percentile per-packet one-way delay: 32.396 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.687 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 32.446 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.831 ms
Loss rate: 0.00%
```

## Run 4: Report of SCReAM — Data Link



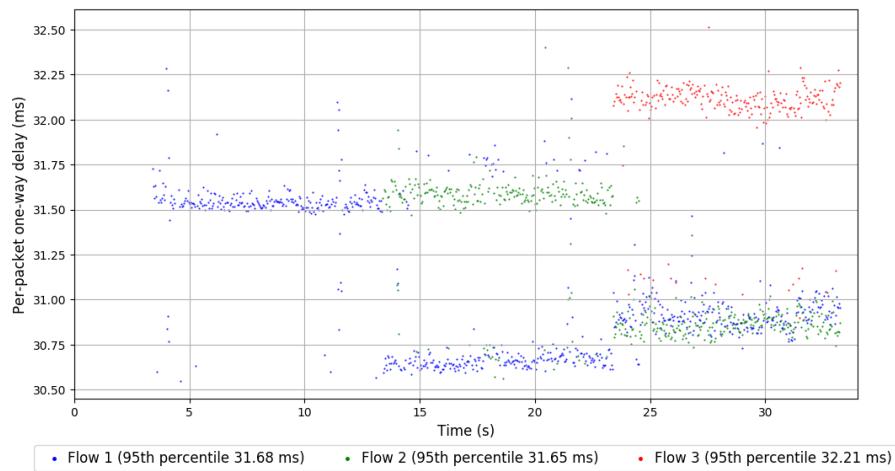
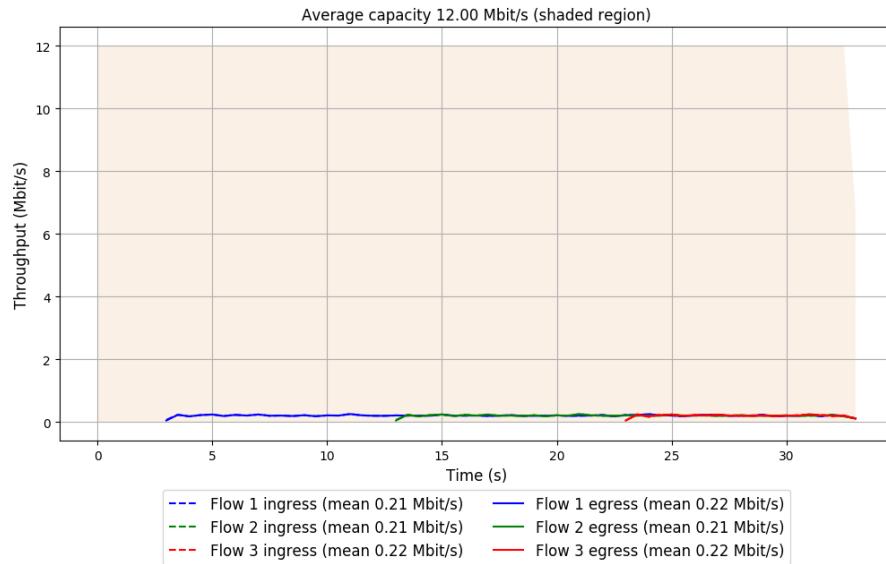
Run 5: Statistics of SCReAM

Start at: 2018-04-24 16:32:29

End at: 2018-04-24 16:32:59

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.43 Mbit/s (3.6% utilization)
95th percentile per-packet one-way delay: 32.143 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.685 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.649 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 32.214 ms
Loss rate: 0.35%
```

Run 5: Report of SCReAM — Data Link



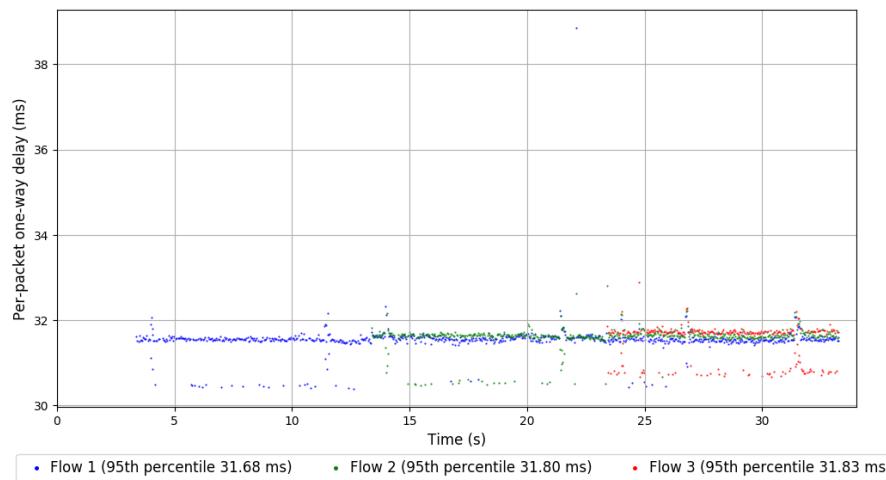
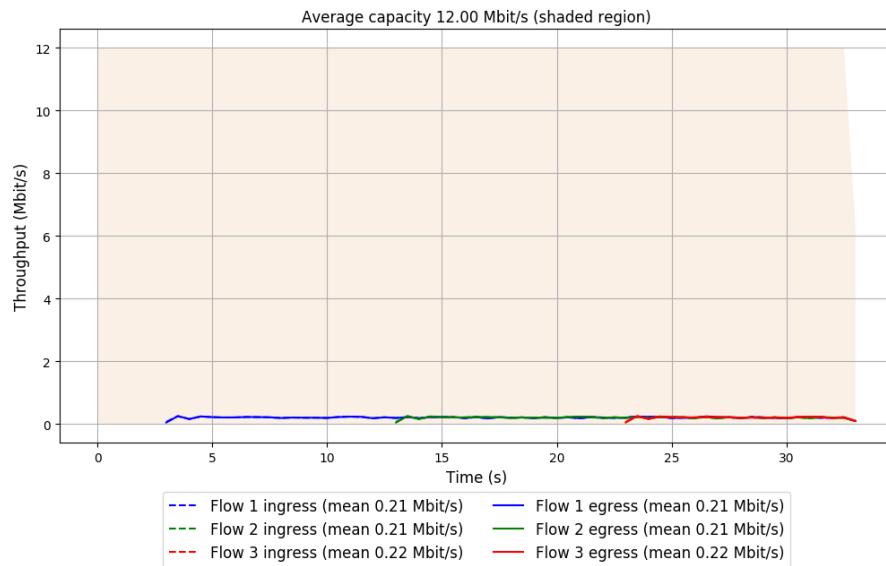
Run 6: Statistics of SCReAM

Start at: 2018-04-24 16:42:19

End at: 2018-04-24 16:42:49

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.43 Mbit/s (3.6% utilization)
95th percentile per-packet one-way delay: 31.786 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.681 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.795 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.831 ms
Loss rate: 0.36%
```

Run 6: Report of SCReAM — Data Link



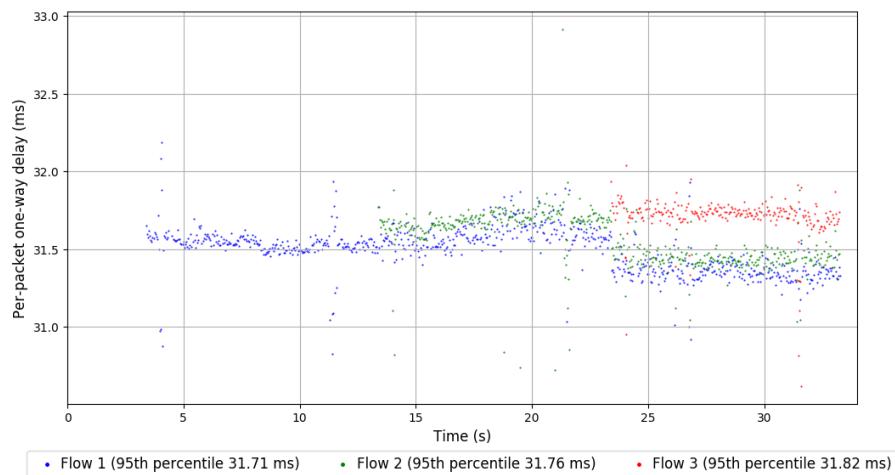
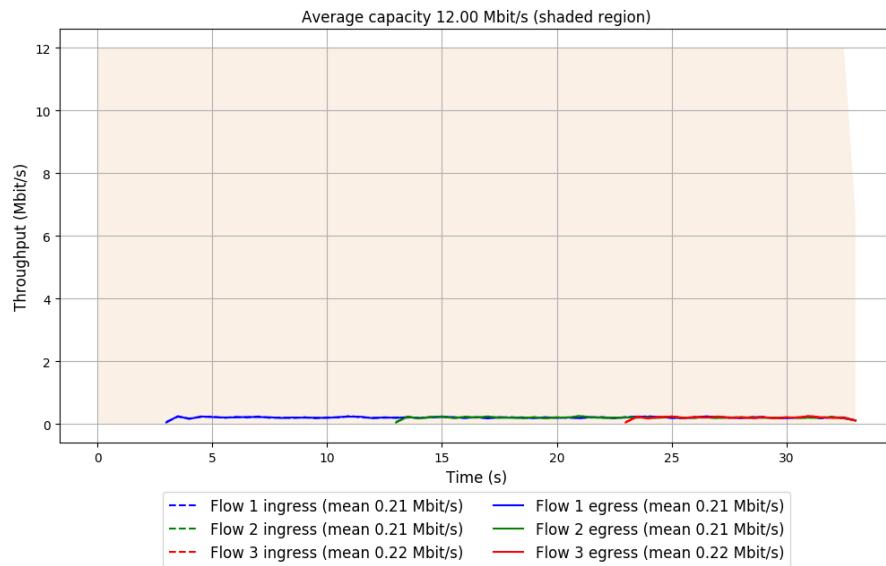
Run 7: Statistics of SCReAM

Start at: 2018-04-24 16:52:06

End at: 2018-04-24 16:52:36

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.43 Mbit/s (3.6% utilization)
95th percentile per-packet one-way delay: 31.775 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.706 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.758 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.816 ms
Loss rate: 0.36%
```

Run 7: Report of SCReAM — Data Link



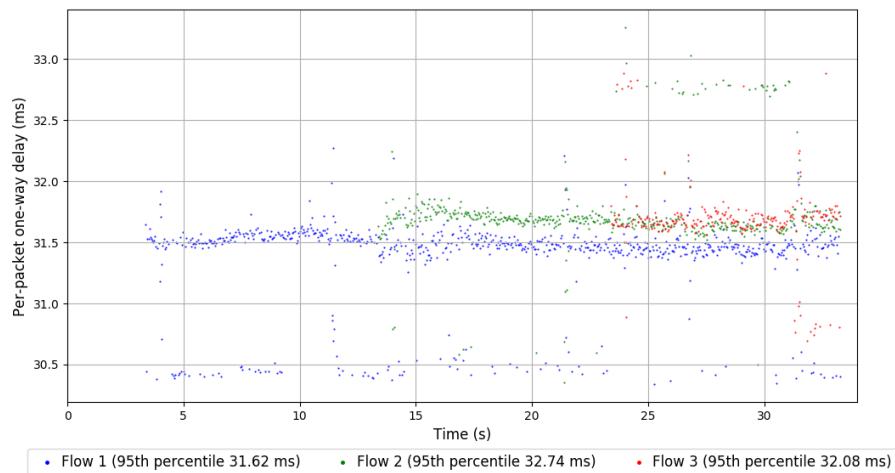
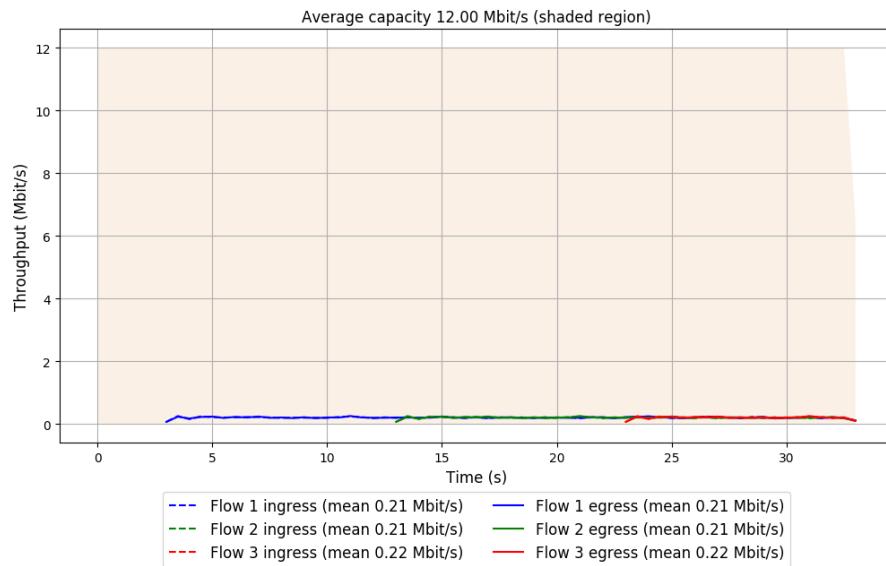
Run 8: Statistics of SCReAM

Start at: 2018-04-24 17:01:53

End at: 2018-04-24 17:02:23

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.43 Mbit/s (3.6% utilization)
95th percentile per-packet one-way delay: 31.861 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.616 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 32.744 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 32.079 ms
Loss rate: 0.00%
```

Run 8: Report of SCReAM — Data Link



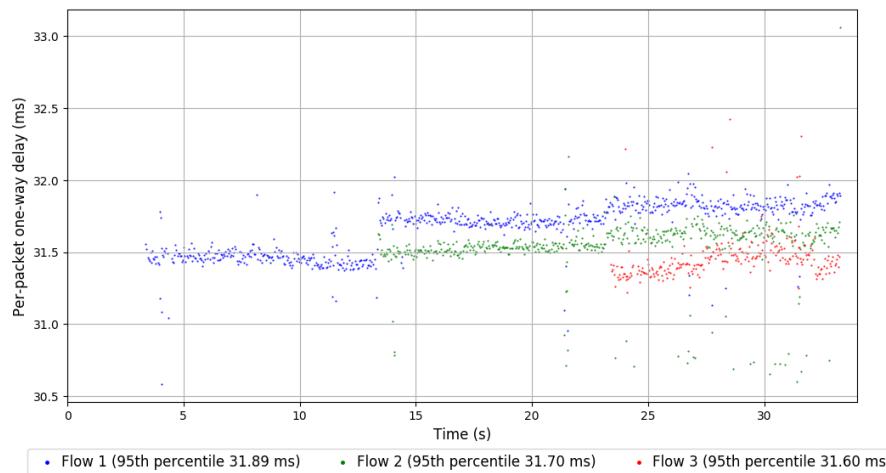
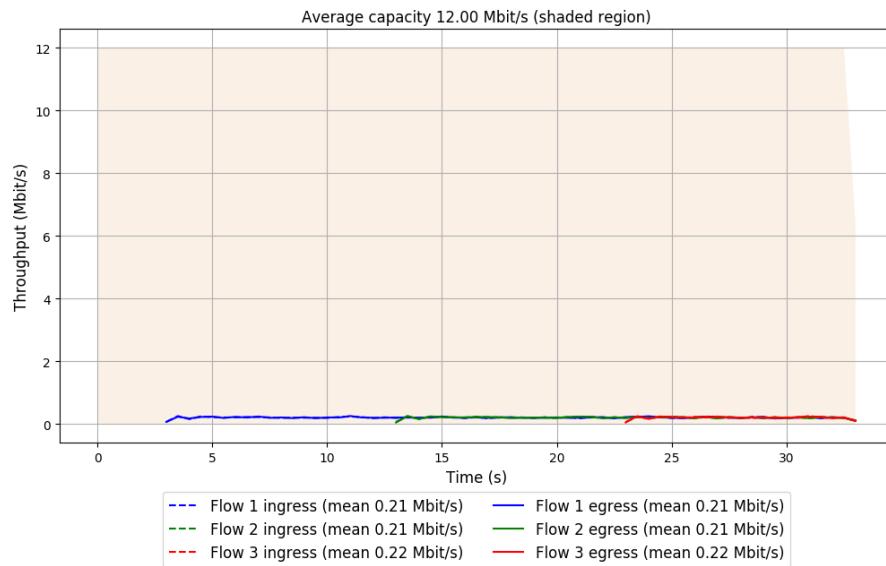
Run 9: Statistics of SCReAM

Start at: 2018-04-24 17:11:41

End at: 2018-04-24 17:12:11

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.43 Mbit/s (3.6% utilization)
95th percentile per-packet one-way delay: 31.860 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.887 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.698 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.603 ms
Loss rate: 0.36%
```

Run 9: Report of SCReAM — Data Link



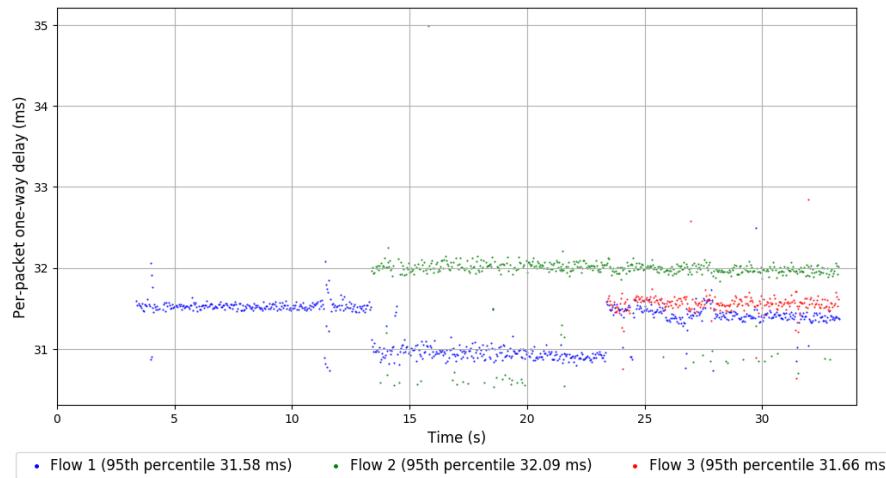
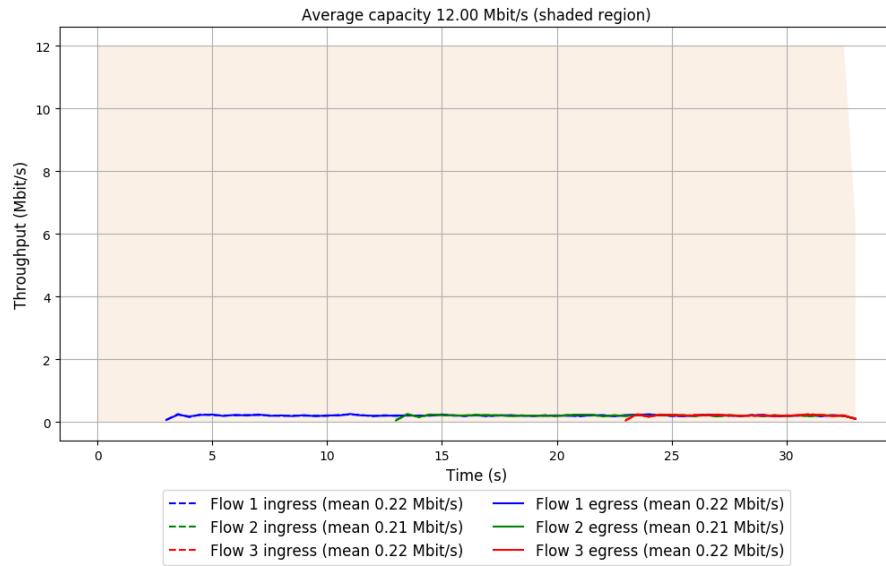
Run 10: Statistics of SCReAM

Start at: 2018-04-24 17:21:27

End at: 2018-04-24 17:21:57

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.43 Mbit/s (3.6% utilization)
95th percentile per-packet one-way delay: 32.058 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.579 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 32.093 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.658 ms
Loss rate: 0.36%
```

## Run 10: Report of SCReAM — Data Link

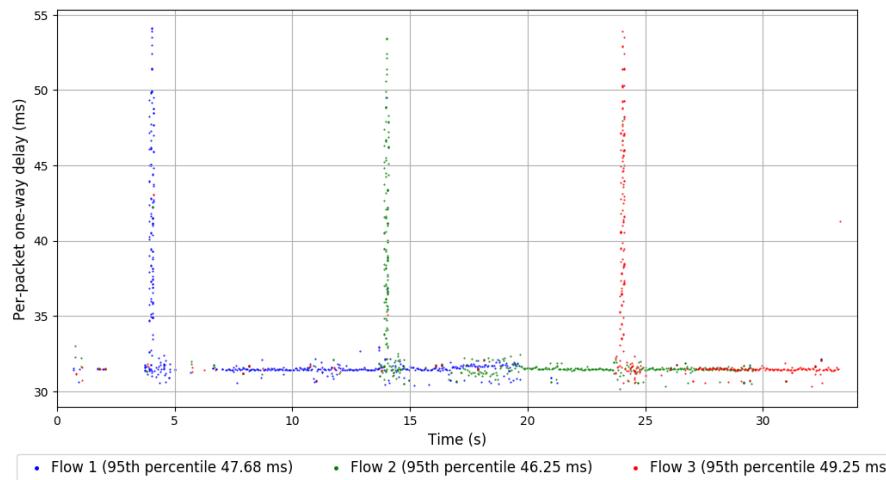
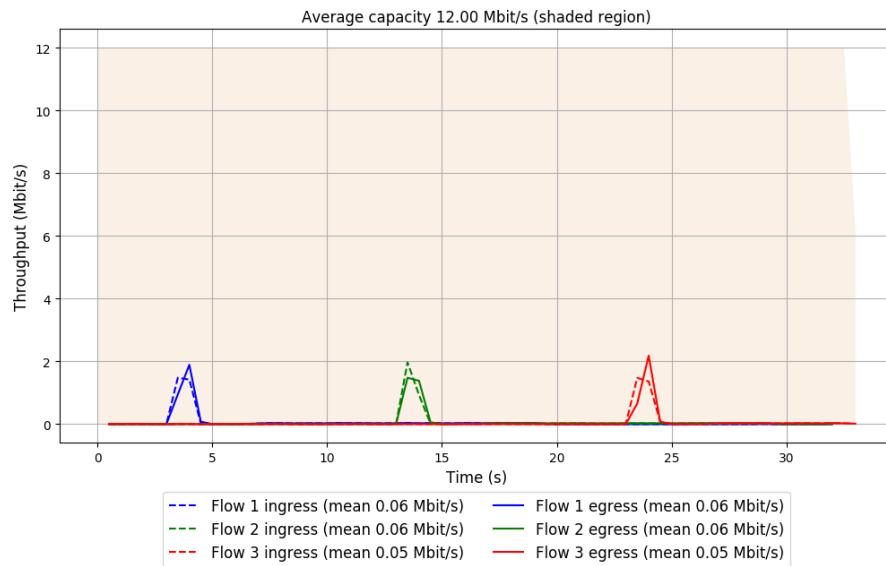


```
Run 1: Statistics of WebRTC media

Start at: 2018-04-24 15:59:04
End at: 2018-04-24 15:59:34

# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.17 Mbit/s (1.4% utilization)
95th percentile per-packet one-way delay: 47.696 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 47.682 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.254 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 49.251 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



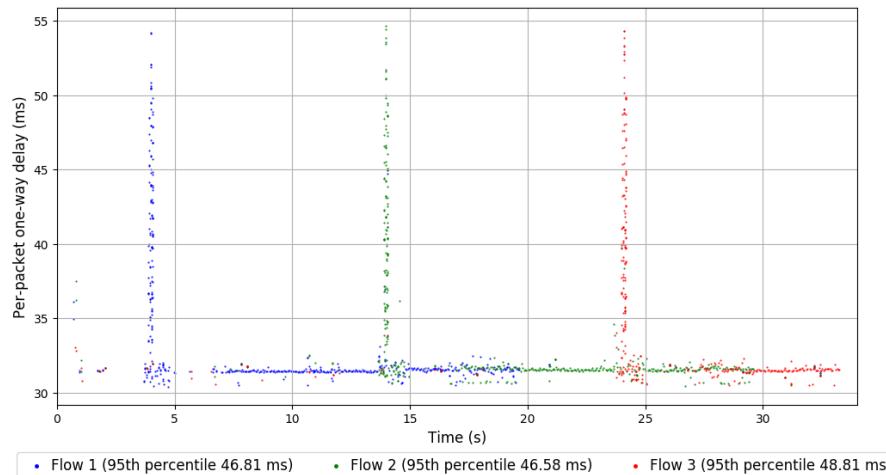
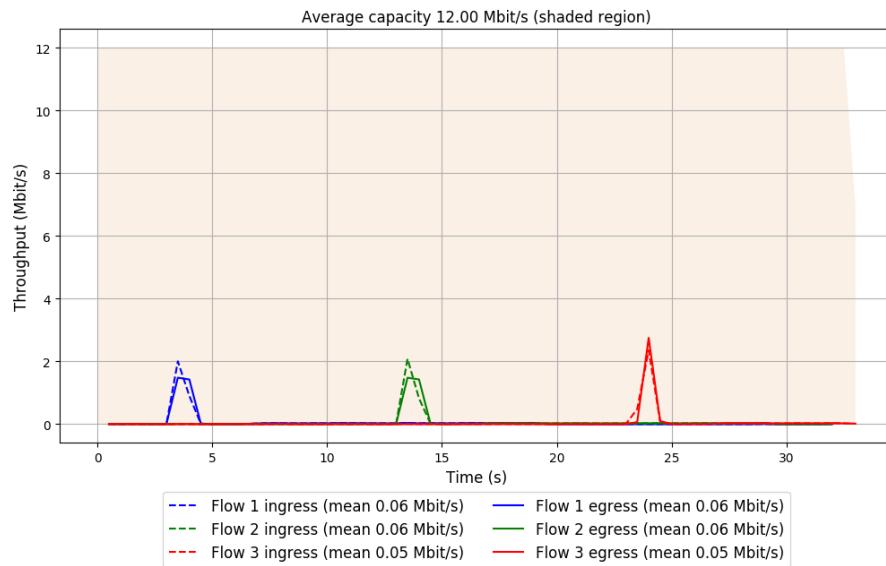
Run 2: Statistics of WebRTC media

Start at: 2018-04-24 16:08:51

End at: 2018-04-24 16:09:21

```
# Below is generated by plot.py at 2018-04-24 17:31:29
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.17 Mbit/s (1.4% utilization)
95th percentile per-packet one-way delay: 47.600 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.809 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.582 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 48.809 ms
Loss rate: 0.08%
```

Run 2: Report of WebRTC media — Data Link



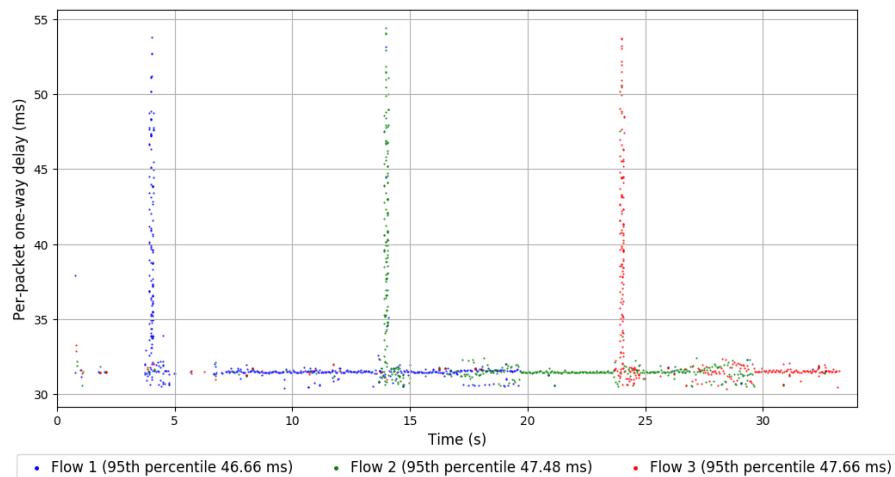
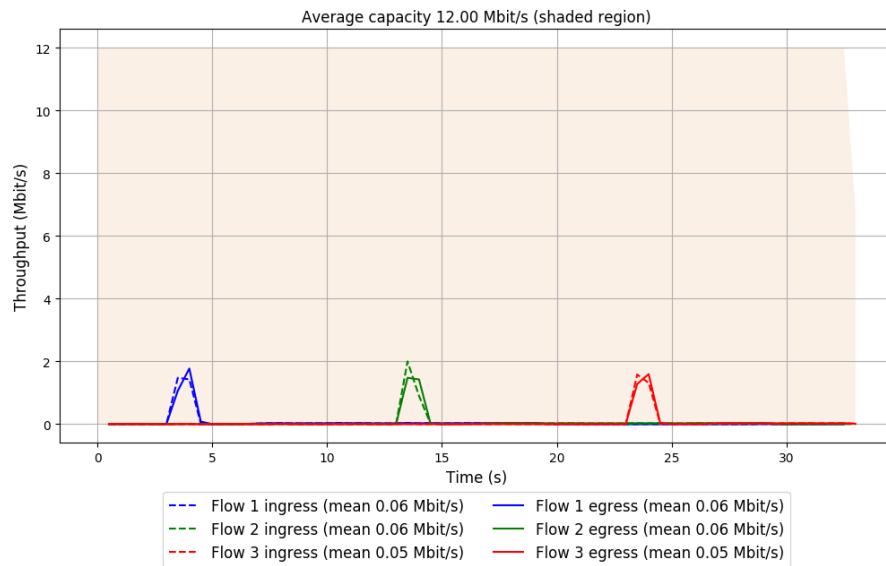
Run 3: Statistics of WebRTC media

Start at: 2018-04-24 16:18:39

End at: 2018-04-24 16:19:09

```
# Below is generated by plot.py at 2018-04-24 17:31:30
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.17 Mbit/s (1.4% utilization)
95th percentile per-packet one-way delay: 47.243 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.655 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 47.481 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.660 ms
Loss rate: 0.12%
```

Run 3: Report of WebRTC media — Data Link



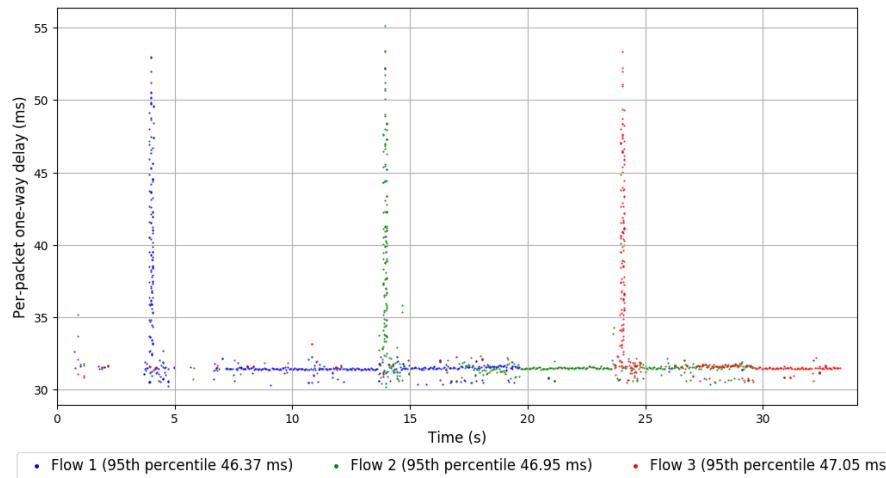
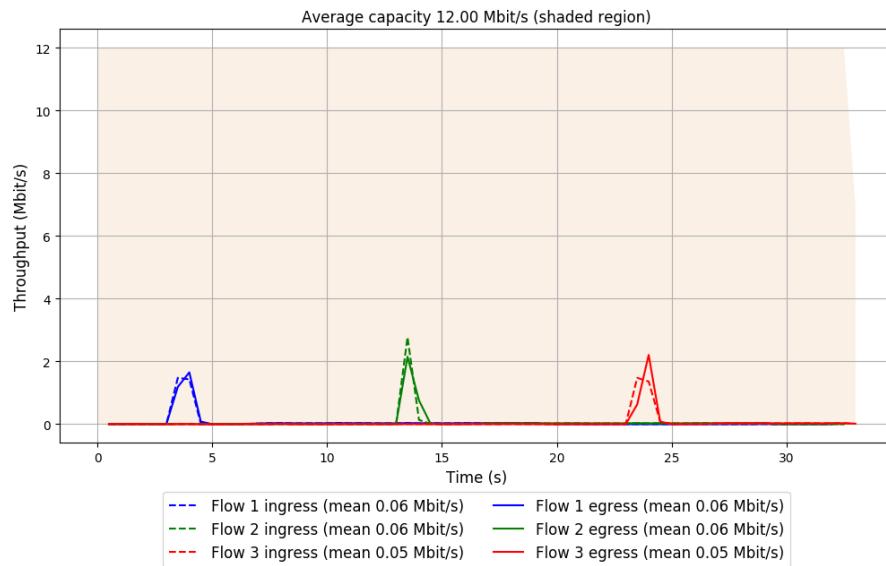
Run 4: Statistics of WebRTC media

Start at: 2018-04-24 16:28:27

End at: 2018-04-24 16:28:57

```
# Below is generated by plot.py at 2018-04-24 17:31:30
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.17 Mbit/s (1.4% utilization)
95th percentile per-packet one-way delay: 46.955 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.366 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.953 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.049 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



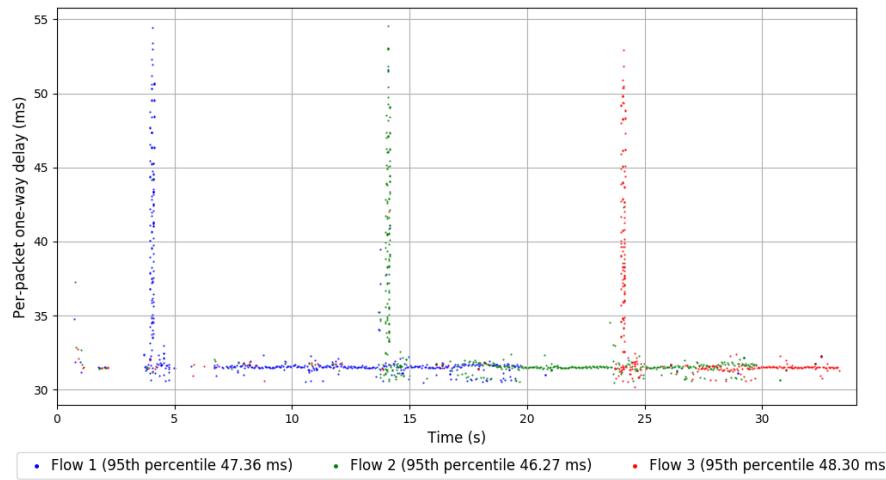
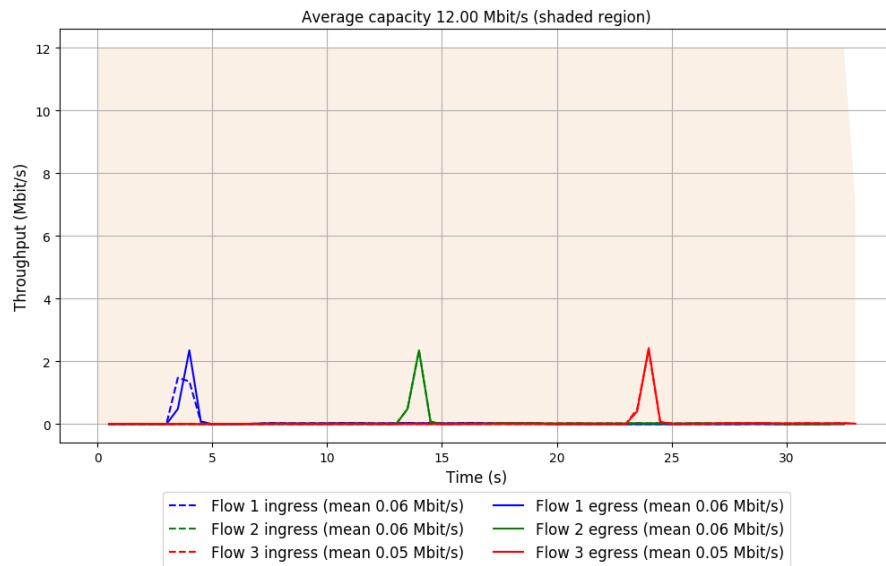
Run 5: Statistics of WebRTC media

Start at: 2018-04-24 16:38:17

End at: 2018-04-24 16:38:47

```
# Below is generated by plot.py at 2018-04-24 17:31:32
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.17 Mbit/s (1.4% utilization)
95th percentile per-packet one-way delay: 47.345 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 47.360 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.268 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 48.295 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link



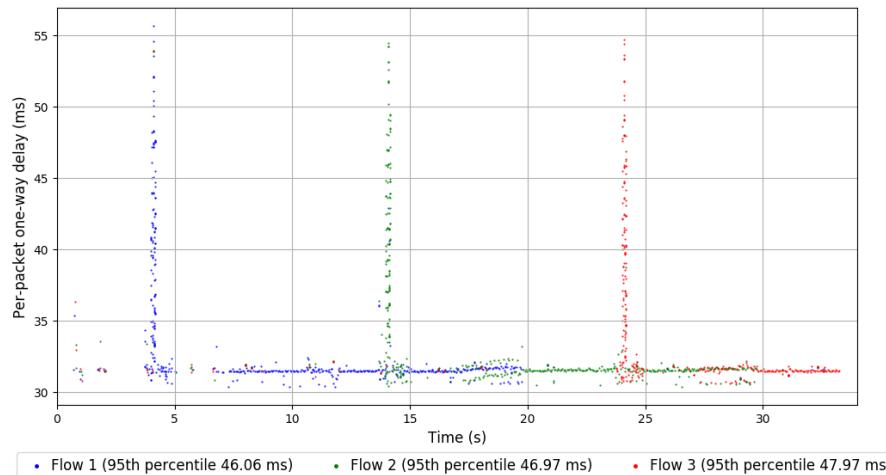
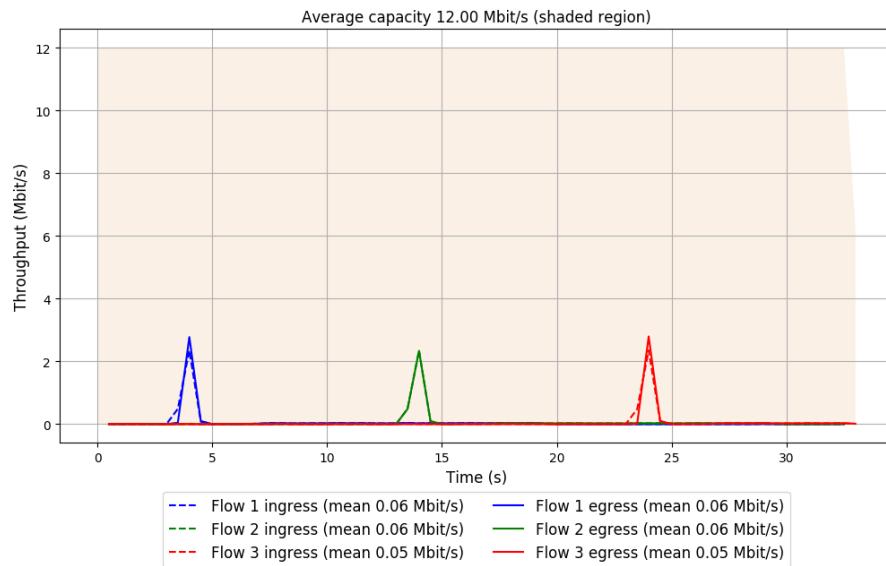
Run 6: Statistics of WebRTC media

Start at: 2018-04-24 16:48:05

End at: 2018-04-24 16:48:35

```
# Below is generated by plot.py at 2018-04-24 17:31:33
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.17 Mbit/s (1.4% utilization)
95th percentile per-packet one-way delay: 47.157 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.061 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.970 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.968 ms
Loss rate: 0.00%
```

Run 6: Report of WebRTC media — Data Link



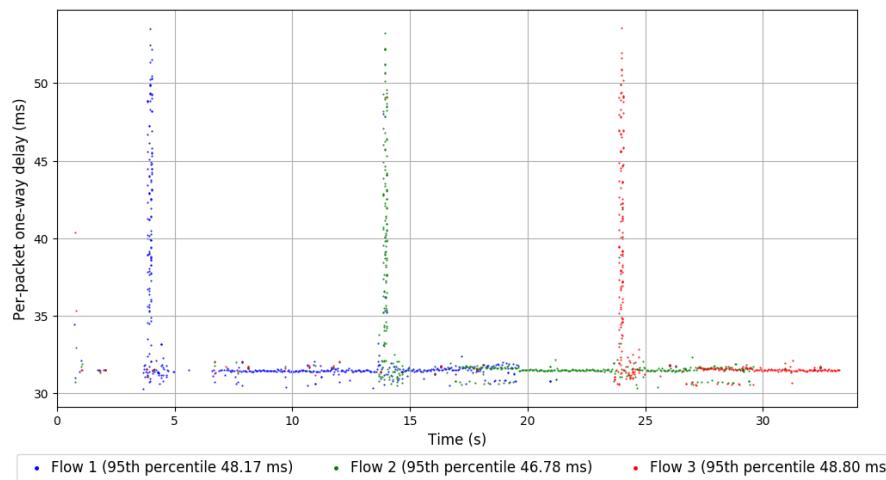
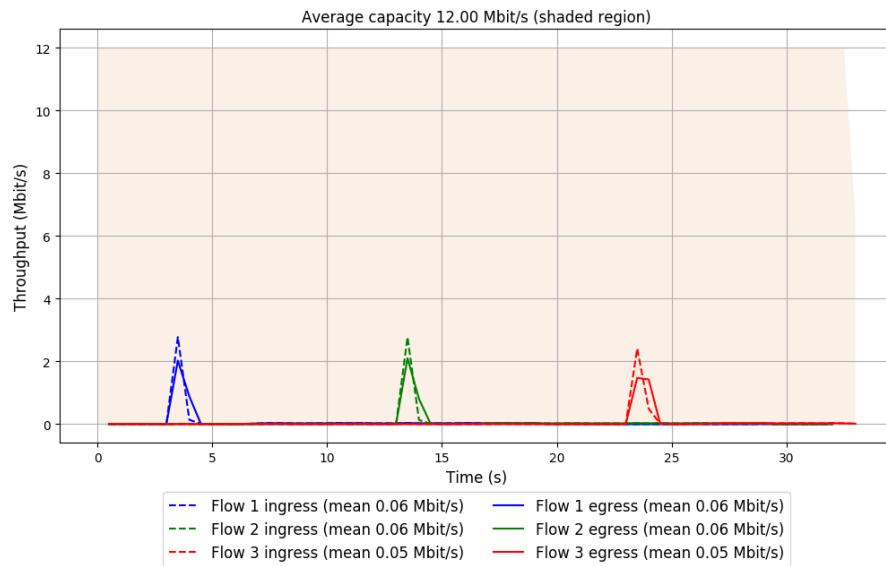
Run 7: Statistics of WebRTC media

Start at: 2018-04-24 16:57:51

End at: 2018-04-24 16:58:21

```
# Below is generated by plot.py at 2018-04-24 17:31:34
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.17 Mbit/s (1.4% utilization)
95th percentile per-packet one-way delay: 48.066 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 48.172 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.785 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 48.796 ms
Loss rate: 0.00%
```

Run 7: Report of WebRTC media — Data Link



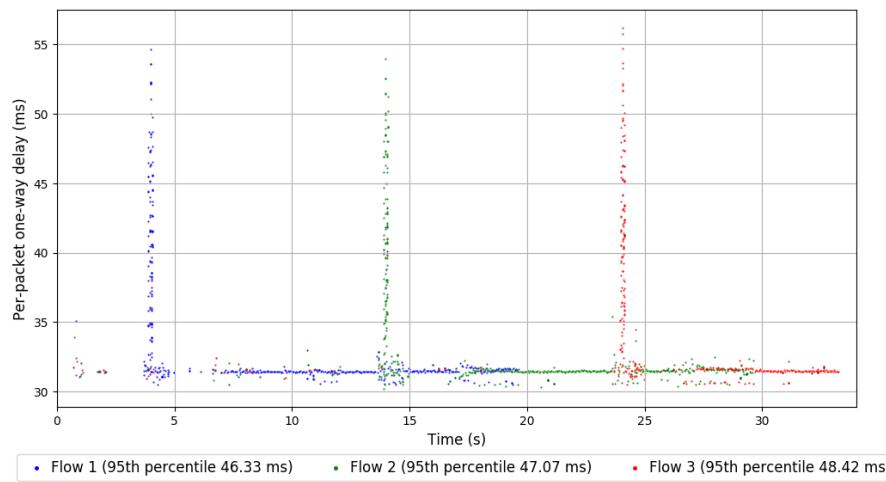
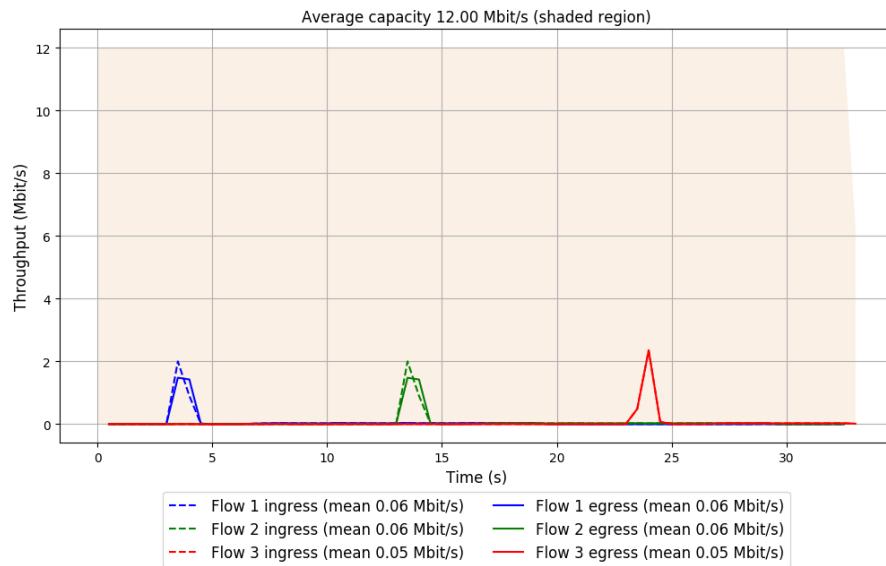
Run 8: Statistics of WebRTC media

Start at: 2018-04-24 17:07:40

End at: 2018-04-24 17:08:10

```
# Below is generated by plot.py at 2018-04-24 17:31:34
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.17 Mbit/s (1.4% utilization)
95th percentile per-packet one-way delay: 47.292 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.333 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 47.073 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 48.418 ms
Loss rate: 0.00%
```

Run 8: Report of WebRTC media — Data Link



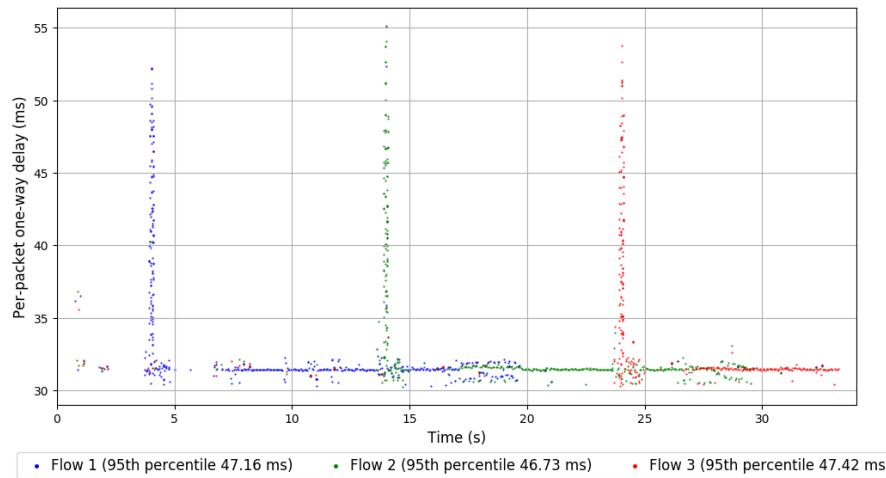
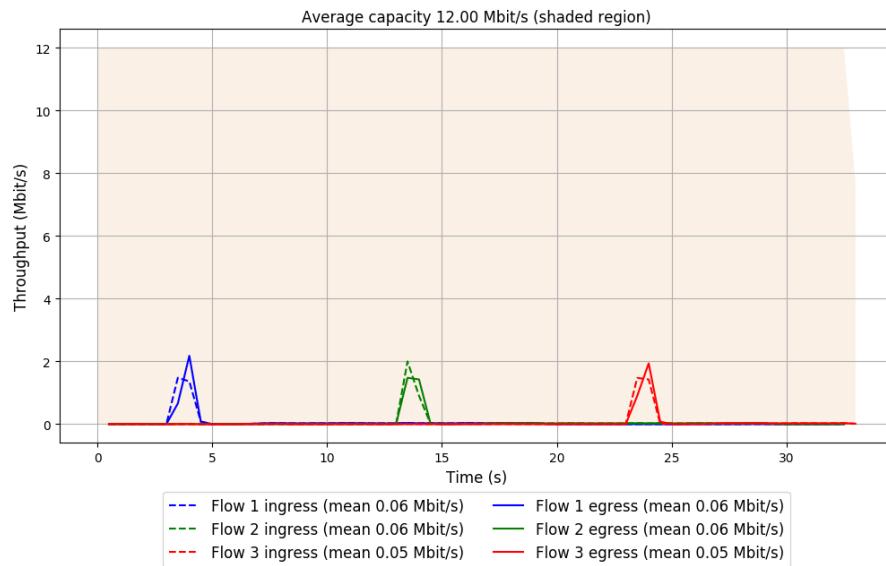
Run 9: Statistics of WebRTC media

Start at: 2018-04-24 17:17:26

End at: 2018-04-24 17:17:56

```
# Below is generated by plot.py at 2018-04-24 17:31:38
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.17 Mbit/s (1.4% utilization)
95th percentile per-packet one-way delay: 47.280 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 47.164 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.731 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.423 ms
Loss rate: 0.12%
```

Run 9: Report of WebRTC media — Data Link



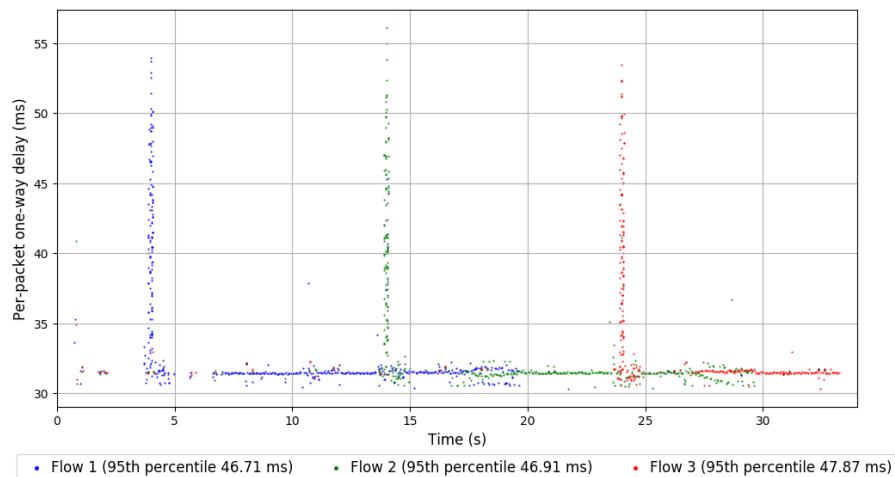
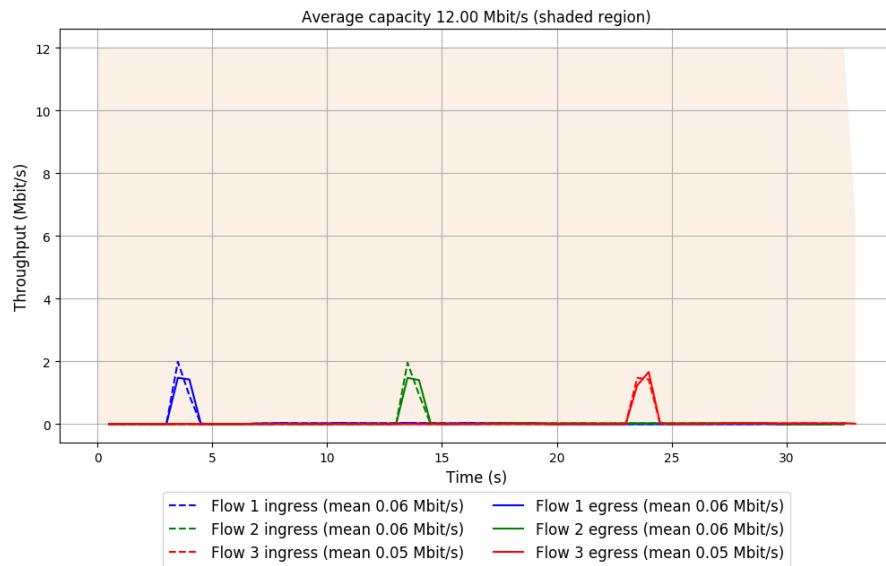
Run 10: Statistics of WebRTC media

Start at: 2018-04-24 17:27:12

End at: 2018-04-24 17:27:42

```
# Below is generated by plot.py at 2018-04-24 17:31:38
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 0.17 Mbit/s (1.4% utilization)
95th percentile per-packet one-way delay: 46.964 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.706 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.905 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.870 ms
Loss rate: 0.08%
```

Run 10: Report of WebRTC media — Data Link



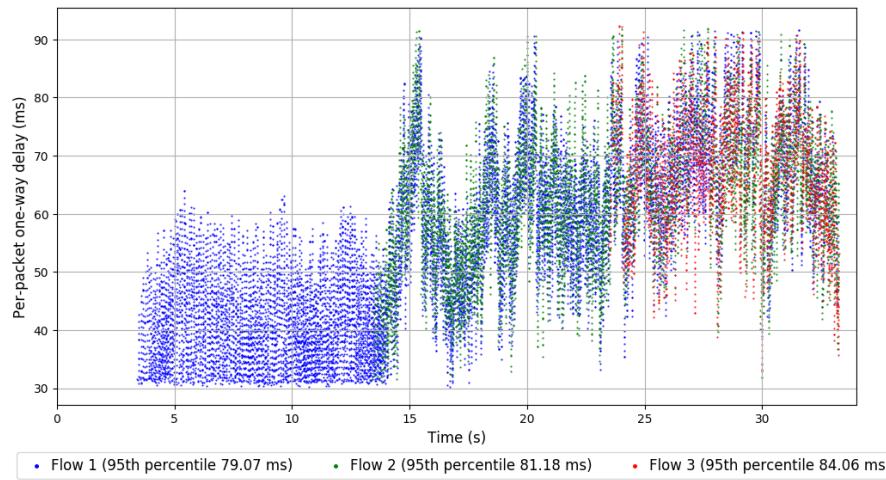
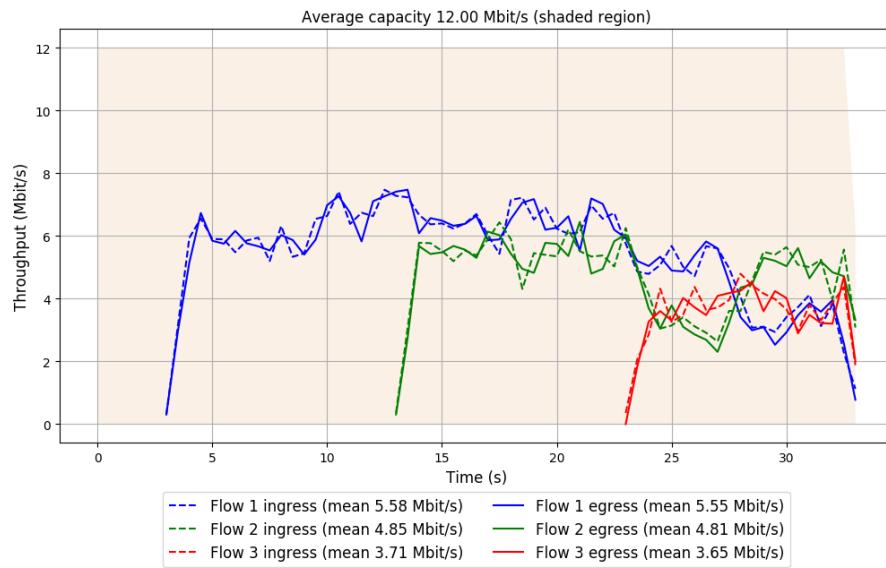
Run 1: Statistics of Sprout

Start at: 2018-04-24 15:57:21

End at: 2018-04-24 15:57:51

```
# Below is generated by plot.py at 2018-04-24 17:31:51
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 9.94 Mbit/s (82.9% utilization)
95th percentile per-packet one-way delay: 80.852 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 5.55 Mbit/s
95th percentile per-packet one-way delay: 79.071 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 81.176 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 3.65 Mbit/s
95th percentile per-packet one-way delay: 84.057 ms
Loss rate: 2.21%
```

Run 1: Report of Sprout — Data Link



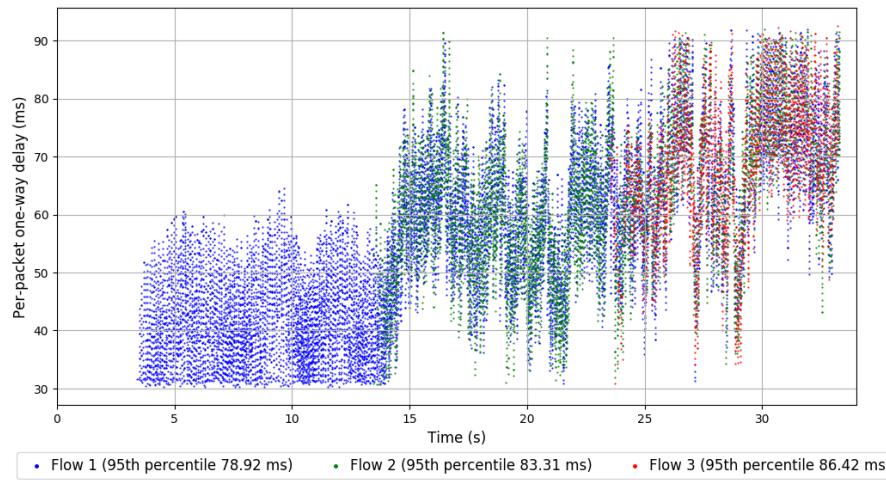
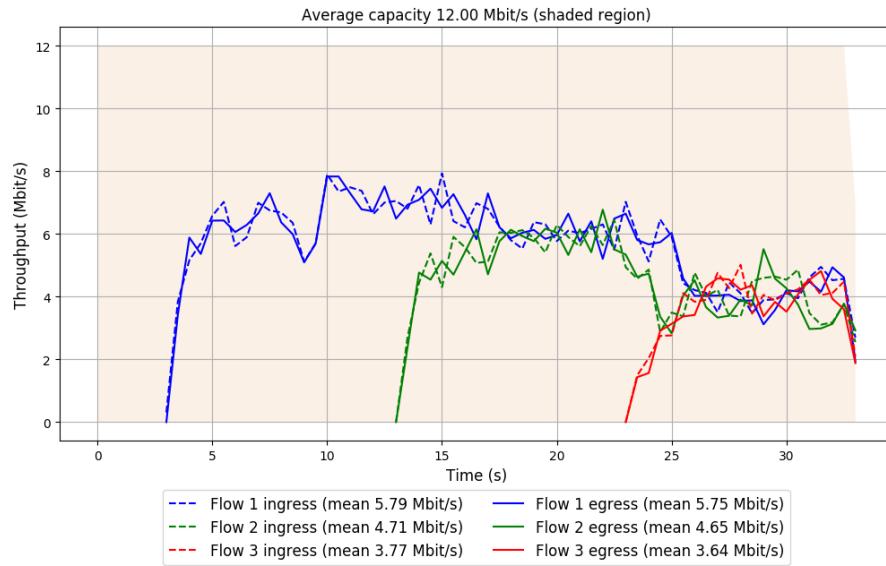
Run 2: Statistics of Sprout

Start at: 2018-04-24 16:07:07

End at: 2018-04-24 16:07:37

```
# Below is generated by plot.py at 2018-04-24 17:31:51
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.03 Mbit/s (83.6% utilization)
95th percentile per-packet one-way delay: 82.177 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 78.925 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 4.65 Mbit/s
95th percentile per-packet one-way delay: 83.310 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 86.415 ms
Loss rate: 3.40%
```

## Run 2: Report of Sprout — Data Link



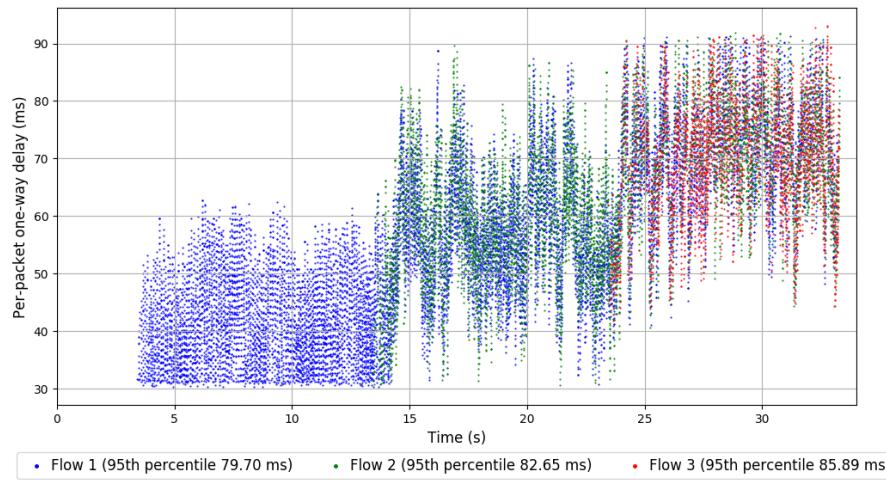
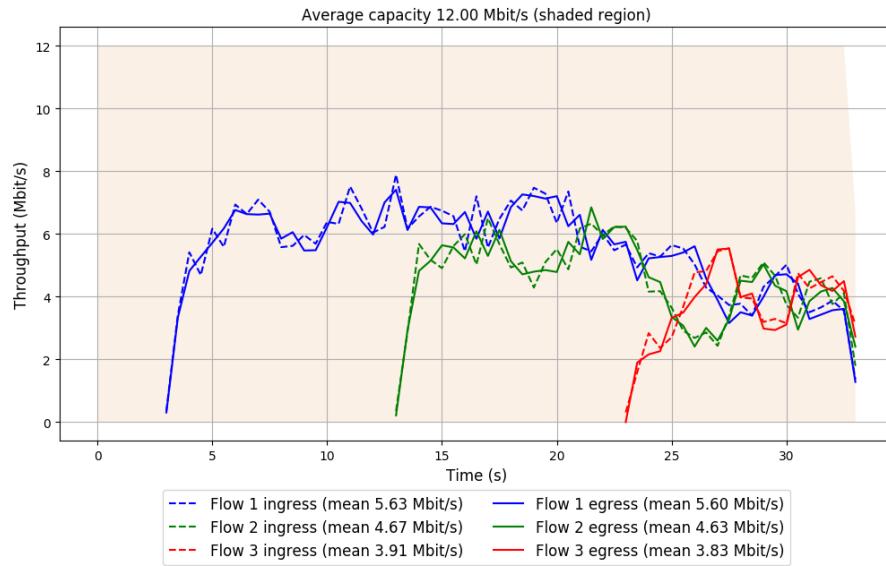
Run 3: Statistics of Sprout

Start at: 2018-04-24 16:16:54

End at: 2018-04-24 16:17:24

```
# Below is generated by plot.py at 2018-04-24 17:31:52
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 9.93 Mbit/s (82.7% utilization)
95th percentile per-packet one-way delay: 82.227 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 5.60 Mbit/s
95th percentile per-packet one-way delay: 79.699 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 82.648 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 85.888 ms
Loss rate: 2.74%
```

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



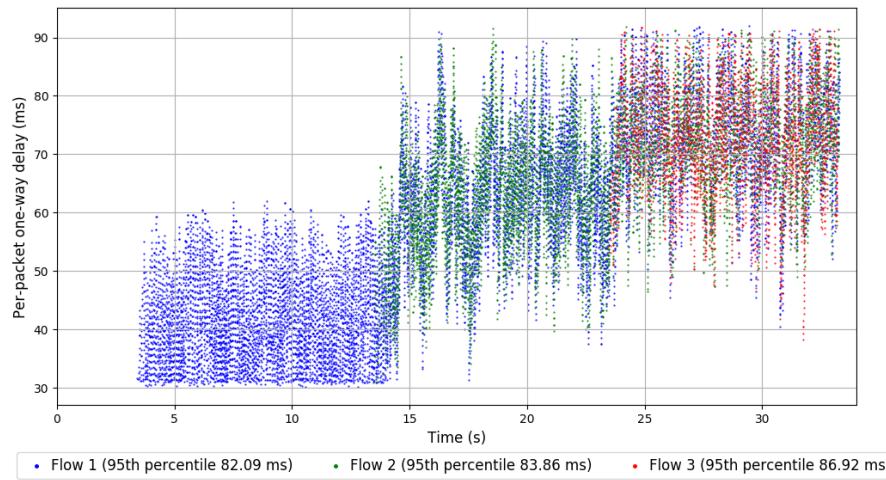
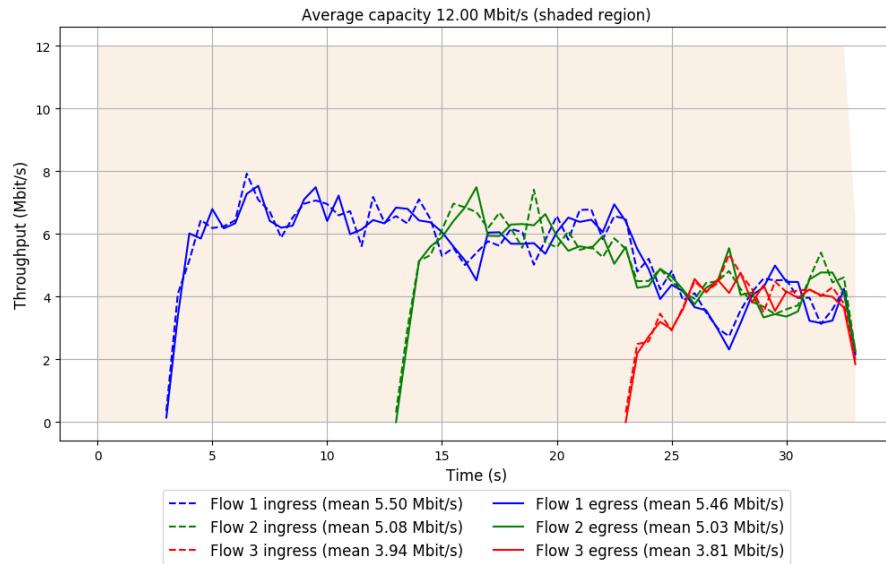
Run 4: Statistics of Sprout

Start at: 2018-04-24 16:26:42

End at: 2018-04-24 16:27:12

```
# Below is generated by plot.py at 2018-04-24 17:31:52
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.04 Mbit/s (83.7% utilization)
95th percentile per-packet one-way delay: 83.848 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 5.46 Mbit/s
95th percentile per-packet one-way delay: 82.086 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 83.865 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 86.924 ms
Loss rate: 3.91%
```

## Run 4: Report of Sprout — Data Link



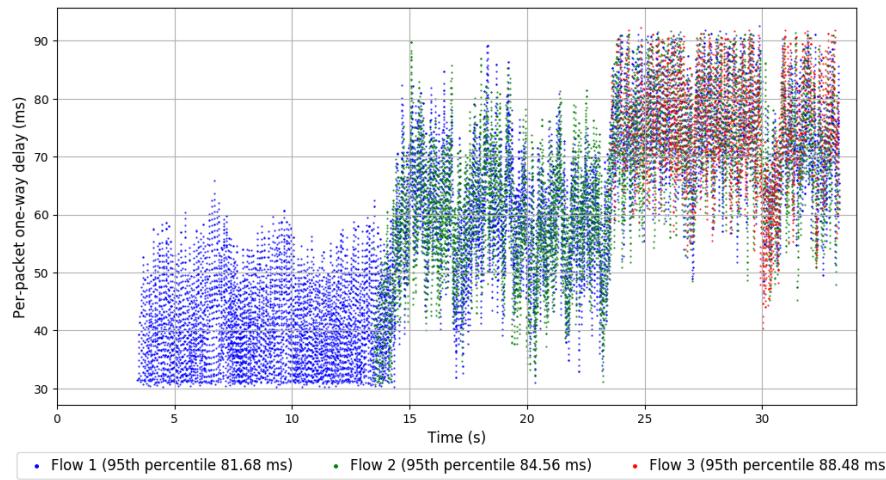
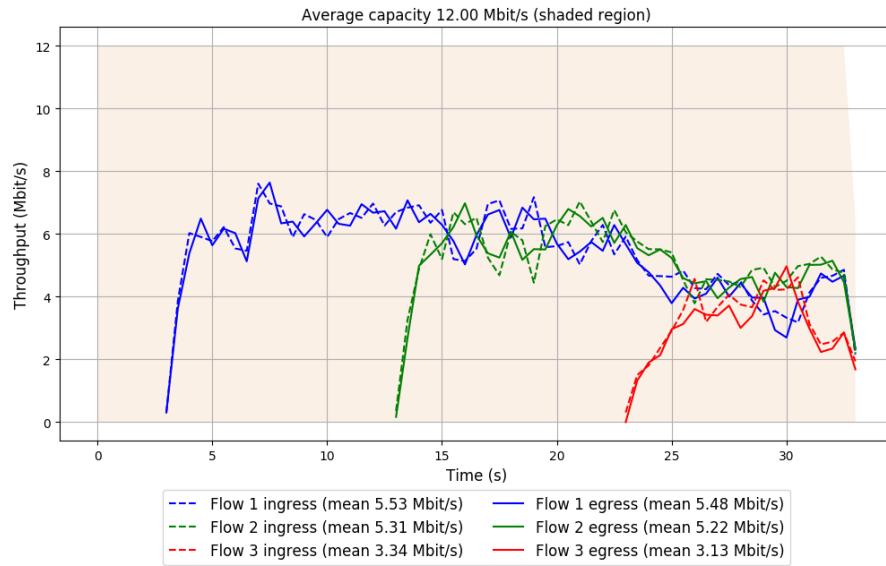
Run 5: Statistics of Sprout

Start at: 2018-04-24 16:36:30

End at: 2018-04-24 16:37:00

```
# Below is generated by plot.py at 2018-04-24 17:31:53
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 9.98 Mbit/s (83.1% utilization)
95th percentile per-packet one-way delay: 84.389 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 5.48 Mbit/s
95th percentile per-packet one-way delay: 81.681 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 84.558 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 88.481 ms
Loss rate: 6.94%
```

Run 5: Report of Sprout — Data Link



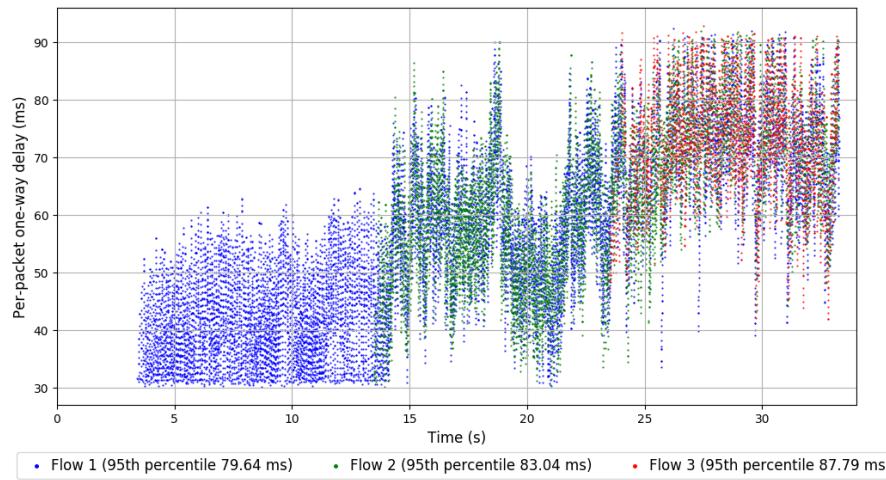
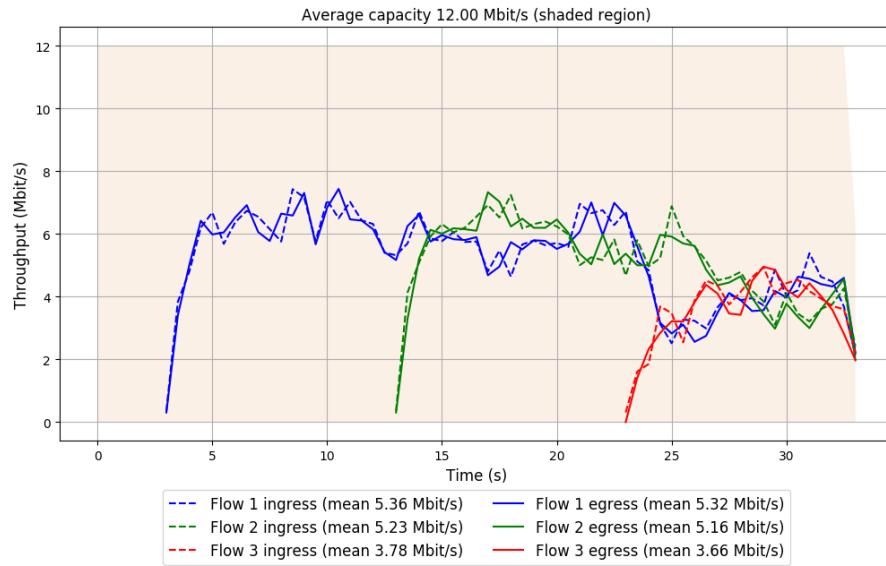
Run 6: Statistics of Sprout

Start at: 2018-04-24 16:46:20

End at: 2018-04-24 16:46:50

```
# Below is generated by plot.py at 2018-04-24 17:31:53
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 9.94 Mbit/s (82.8% utilization)
95th percentile per-packet one-way delay: 83.035 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 5.32 Mbit/s
95th percentile per-packet one-way delay: 79.636 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 5.16 Mbit/s
95th percentile per-packet one-way delay: 83.038 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 3.66 Mbit/s
95th percentile per-packet one-way delay: 87.792 ms
Loss rate: 3.80%
```

Run 6: Report of Sprout — Data Link



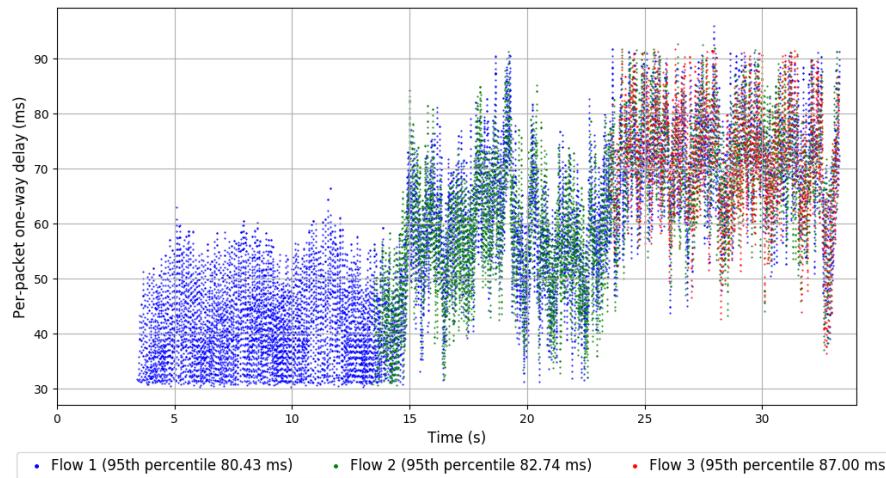
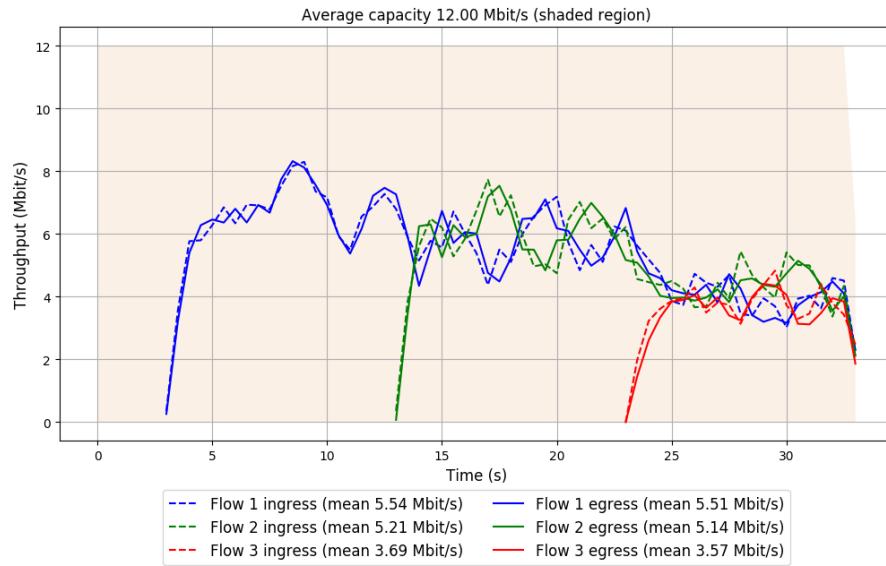
Run 7: Statistics of Sprout

Start at: 2018-04-24 16:56:07

End at: 2018-04-24 16:56:37

```
# Below is generated by plot.py at 2018-04-24 17:31:59
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.09 Mbit/s (84.1% utilization)
95th percentile per-packet one-way delay: 82.825 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 5.51 Mbit/s
95th percentile per-packet one-way delay: 80.429 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 82.737 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 87.003 ms
Loss rate: 4.36%
```

## Run 7: Report of Sprout — Data Link



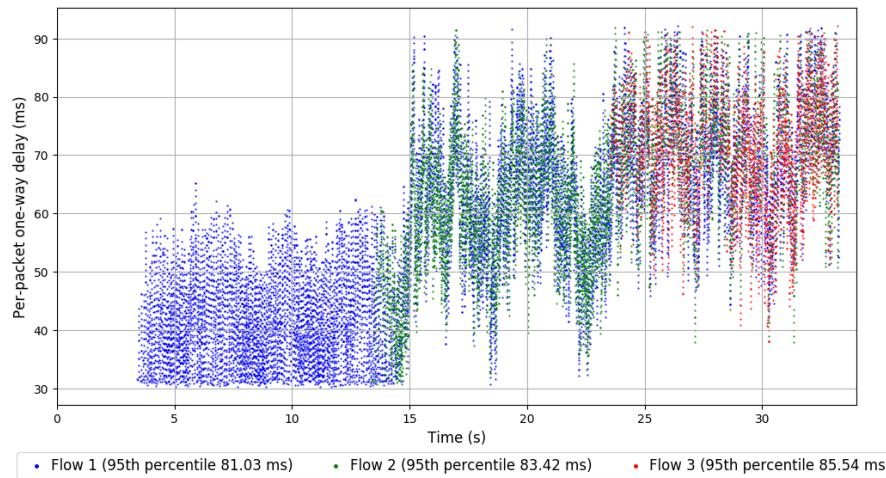
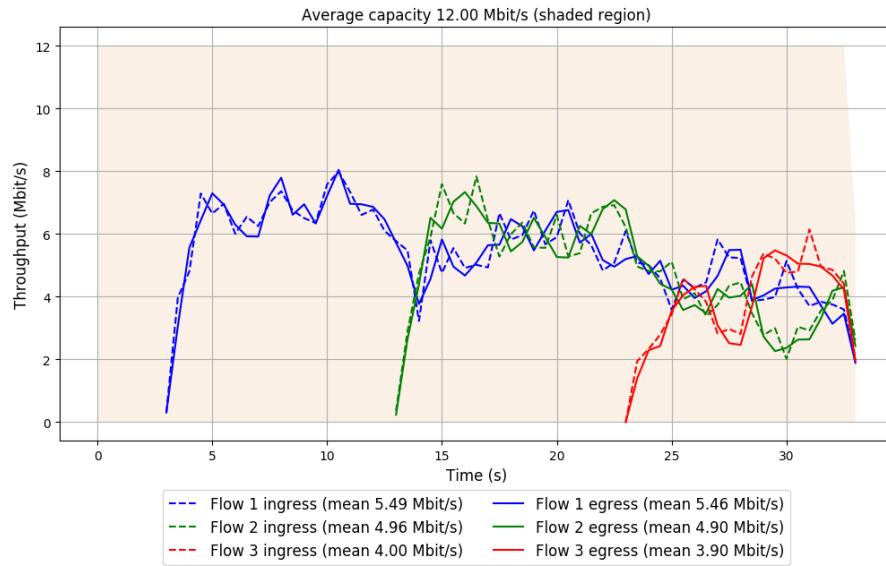
Run 8: Statistics of Sprout

Start at: 2018-04-24 17:05:54

End at: 2018-04-24 17:06:24

```
# Below is generated by plot.py at 2018-04-24 17:31:59
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 9.98 Mbit/s (83.2% utilization)
95th percentile per-packet one-way delay: 82.831 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 5.46 Mbit/s
95th percentile per-packet one-way delay: 81.027 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 4.90 Mbit/s
95th percentile per-packet one-way delay: 83.415 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 85.543 ms
Loss rate: 3.63%
```

Run 8: Report of Sprout — Data Link



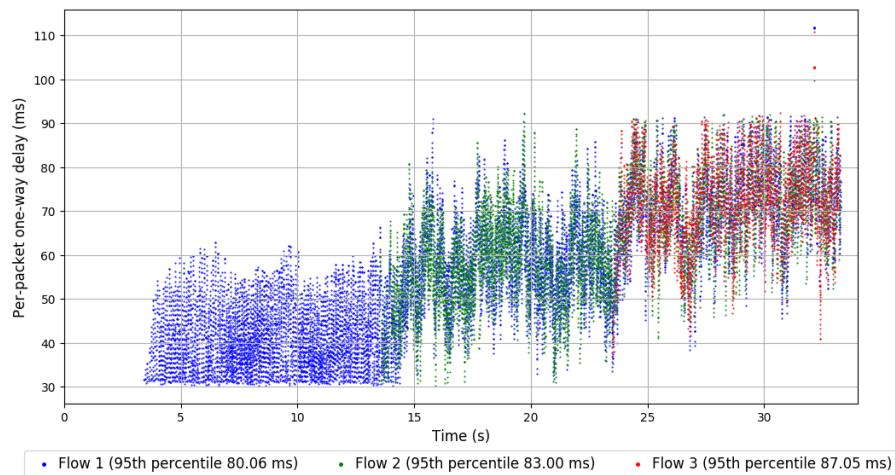
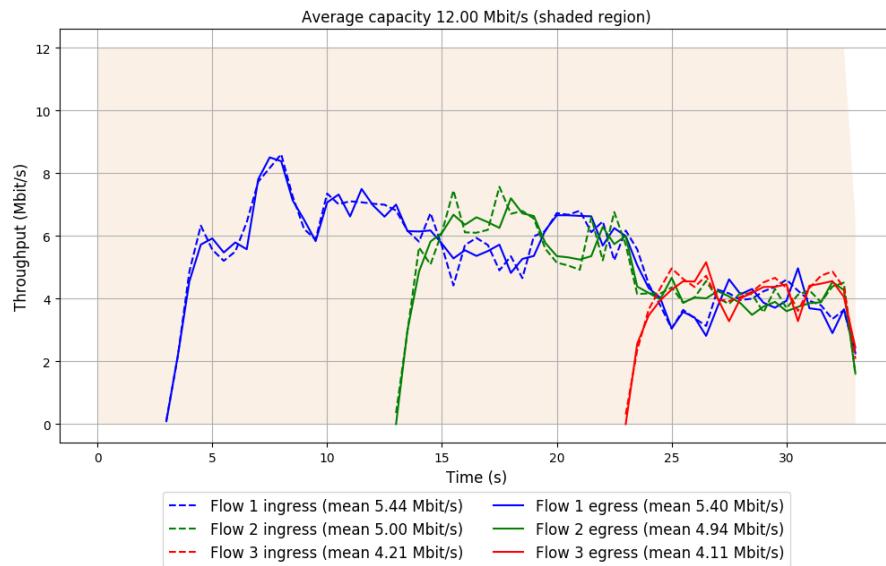
Run 9: Statistics of Sprout

Start at: 2018-04-24 17:15:42

End at: 2018-04-24 17:16:12

```
# Below is generated by plot.py at 2018-04-24 17:32:08
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.02 Mbit/s (83.5% utilization)
95th percentile per-packet one-way delay: 82.937 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 5.40 Mbit/s
95th percentile per-packet one-way delay: 80.056 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 4.94 Mbit/s
95th percentile per-packet one-way delay: 82.998 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 87.048 ms
Loss rate: 3.10%
```

## Run 9: Report of Sprout — Data Link



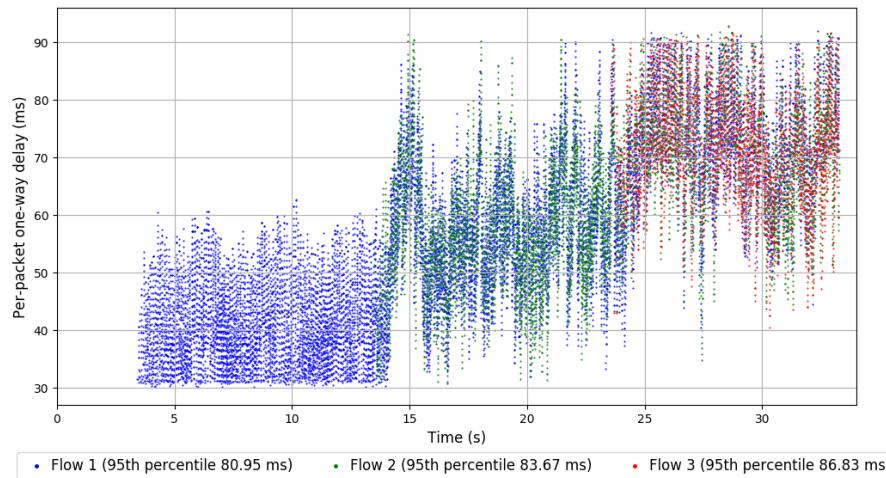
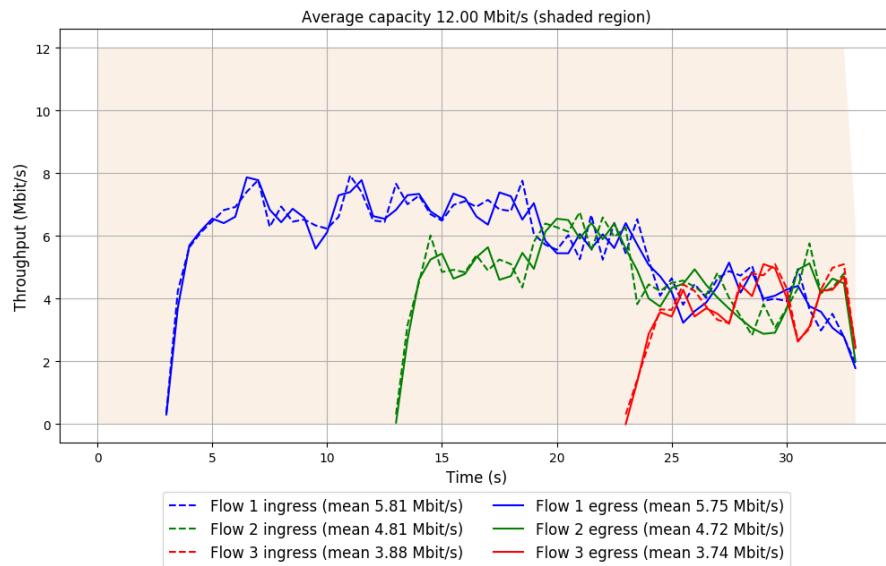
Run 10: Statistics of Sprout

Start at: 2018-04-24 17:25:28

End at: 2018-04-24 17:25:58

```
# Below is generated by plot.py at 2018-04-24 17:32:09
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.12 Mbit/s (84.3% utilization)
95th percentile per-packet one-way delay: 83.265 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 80.950 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 4.72 Mbit/s
95th percentile per-packet one-way delay: 83.675 ms
Loss rate: 1.93%
-- Flow 3:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 86.829 ms
Loss rate: 4.11%
```

Run 10: Report of Sprout — Data Link

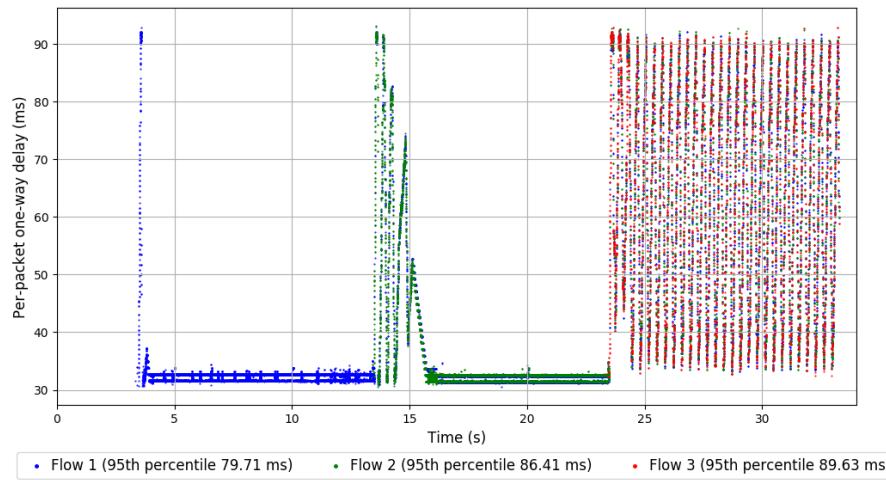
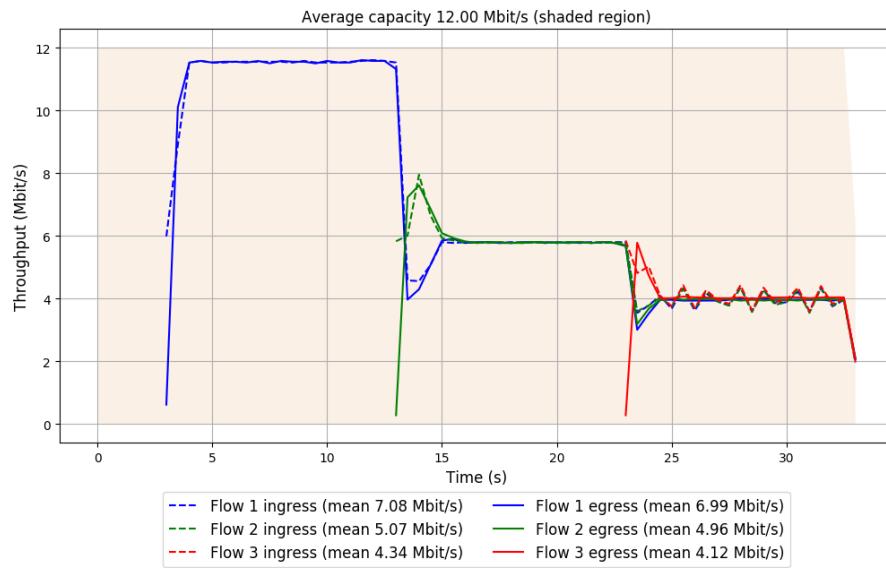


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-24 15:56:11
End at: 2018-04-24 15:56:41

# Below is generated by plot.py at 2018-04-24 17:32:25
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.65 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 85.270 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 79.710 ms
Loss rate: 1.39%
-- Flow 2:
Average throughput: 4.96 Mbit/s
95th percentile per-packet one-way delay: 86.409 ms
Loss rate: 2.36%
-- Flow 3:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 89.633 ms
Loss rate: 5.54%
```

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



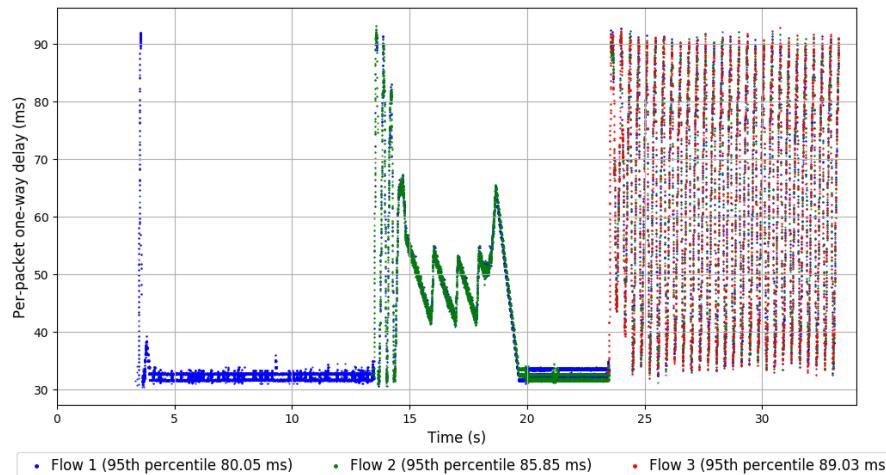
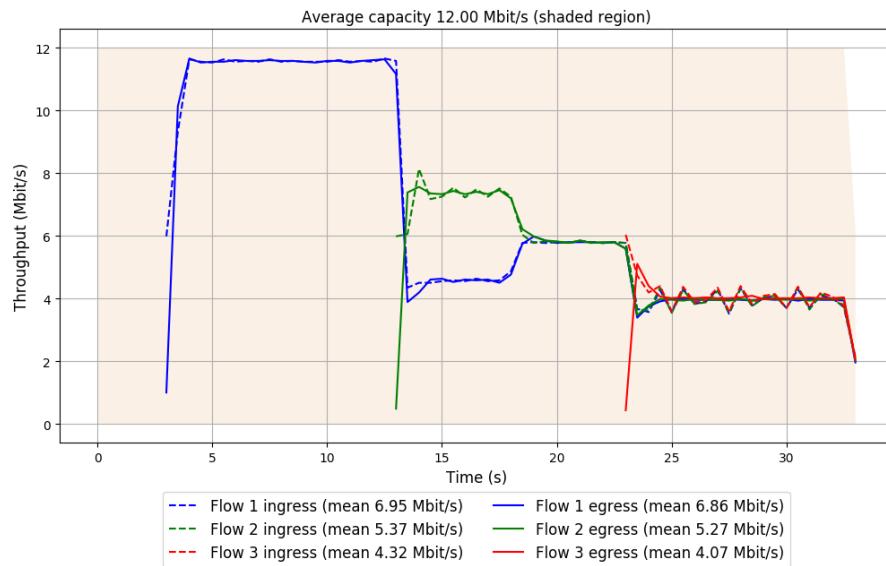
Run 2: Statistics of TaoVA-100x

Start at: 2018-04-24 16:05:58

End at: 2018-04-24 16:06:28

```
# Below is generated by plot.py at 2018-04-24 17:32:25
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.71 Mbit/s (97.6% utilization)
95th percentile per-packet one-way delay: 84.792 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 6.86 Mbit/s
95th percentile per-packet one-way delay: 80.046 ms
Loss rate: 1.35%
-- Flow 2:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 85.852 ms
Loss rate: 2.09%
-- Flow 3:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 89.027 ms
Loss rate: 6.00%
```

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



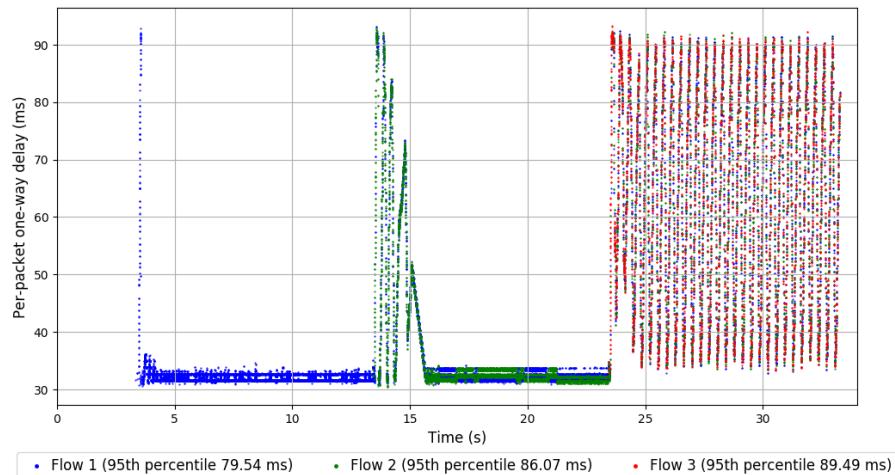
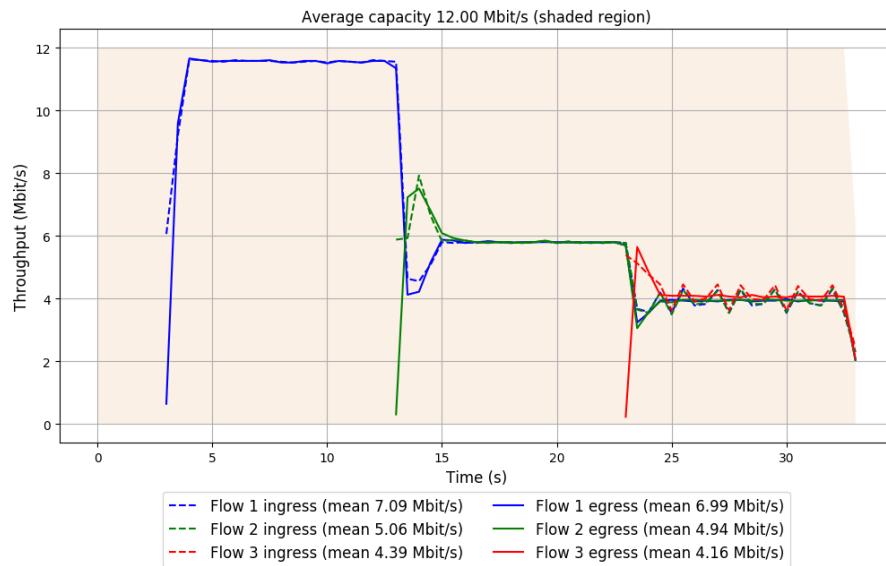
Run 3: Statistics of TaoVA-100x

Start at: 2018-04-24 16:15:45

End at: 2018-04-24 16:16:15

```
# Below is generated by plot.py at 2018-04-24 17:32:26
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.65 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 85.254 ms
Loss rate: 2.35%
-- Flow 1:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 79.537 ms
Loss rate: 1.58%
-- Flow 2:
Average throughput: 4.94 Mbit/s
95th percentile per-packet one-way delay: 86.074 ms
Loss rate: 2.55%
-- Flow 3:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 89.493 ms
Loss rate: 5.69%
```

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



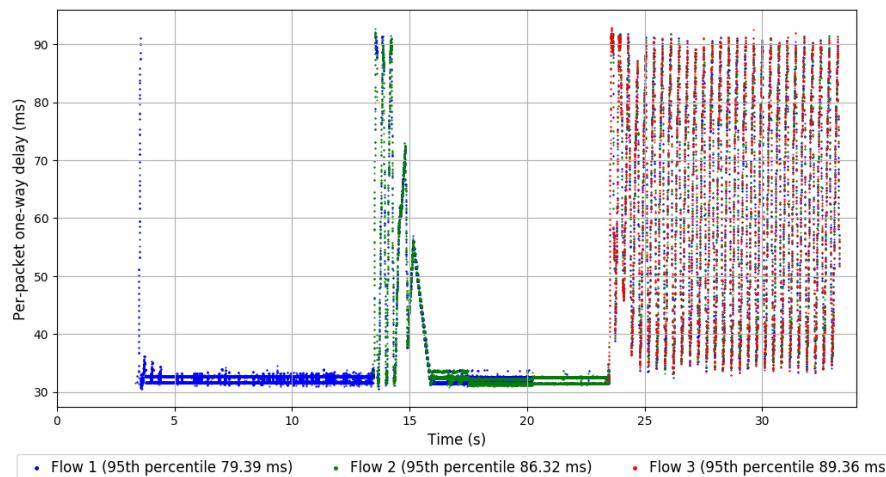
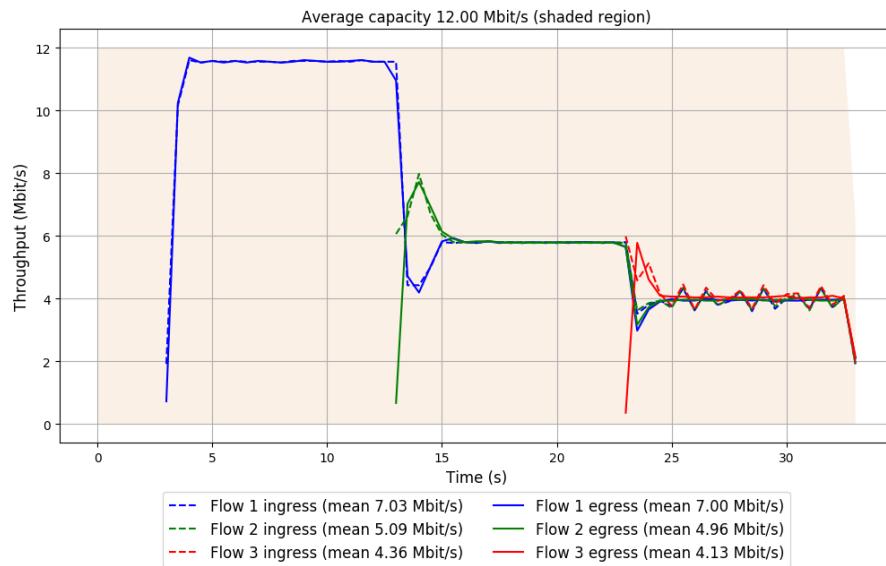
Run 4: Statistics of TaoVA-100x

Start at: 2018-04-24 16:25:33

End at: 2018-04-24 16:26:03

```
# Below is generated by plot.py at 2018-04-24 17:32:26
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.67 Mbit/s (97.2% utilization)
95th percentile per-packet one-way delay: 85.275 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 7.00 Mbit/s
95th percentile per-packet one-way delay: 79.388 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 4.96 Mbit/s
95th percentile per-packet one-way delay: 86.321 ms
Loss rate: 2.68%
-- Flow 3:
Average throughput: 4.13 Mbit/s
95th percentile per-packet one-way delay: 89.361 ms
Loss rate: 5.44%
```

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



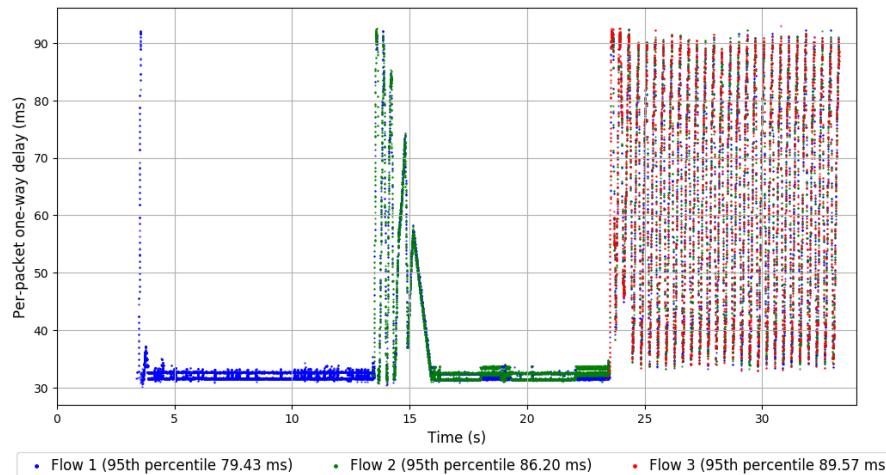
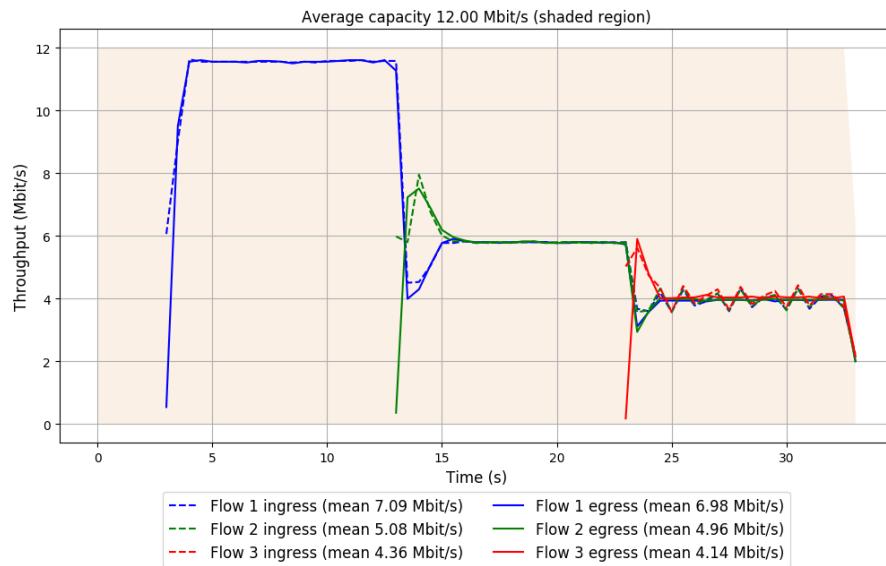
Run 5: Statistics of TaoVA-100x

Start at: 2018-04-24 16:35:21

End at: 2018-04-24 16:35:51

```
# Below is generated by plot.py at 2018-04-24 17:32:30
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.65 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 85.178 ms
Loss rate: 2.31%
-- Flow 1:
Average throughput: 6.98 Mbit/s
95th percentile per-packet one-way delay: 79.428 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 4.96 Mbit/s
95th percentile per-packet one-way delay: 86.196 ms
Loss rate: 2.53%
-- Flow 3:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 89.566 ms
Loss rate: 5.33%
```

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



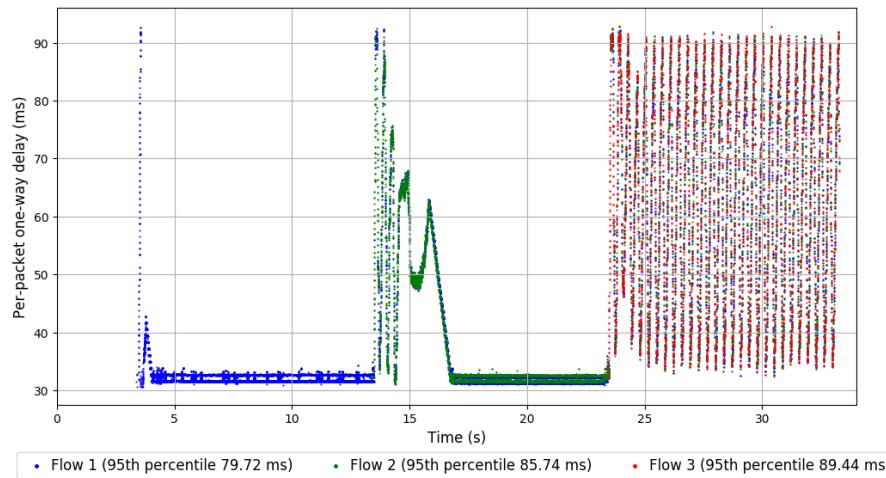
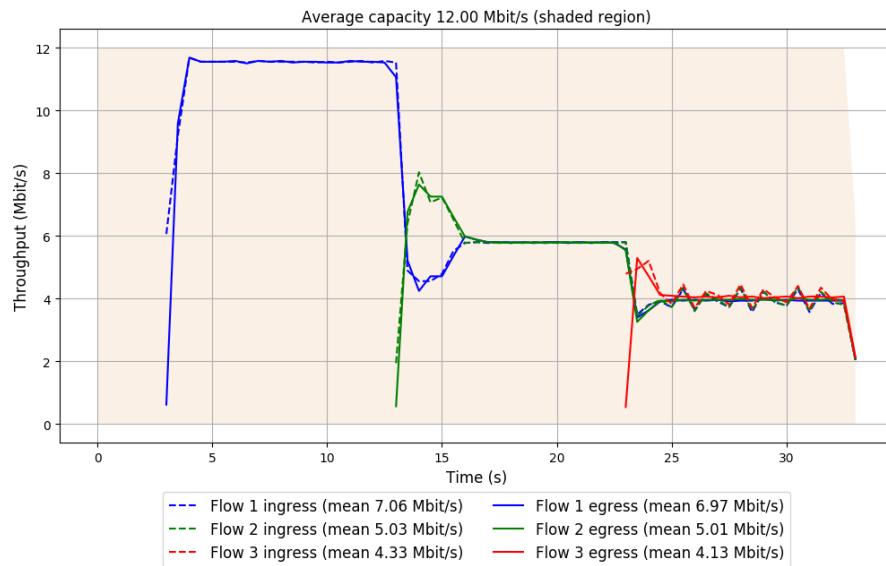
Run 6: Statistics of TaoVA-100x

Start at: 2018-04-24 16:45:10

End at: 2018-04-24 16:45:40

```
# Below is generated by plot.py at 2018-04-24 17:32:31
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.67 Mbit/s (97.2% utilization)
95th percentile per-packet one-way delay: 85.056 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 6.97 Mbit/s
95th percentile per-packet one-way delay: 79.720 ms
Loss rate: 1.35%
-- Flow 2:
Average throughput: 5.01 Mbit/s
95th percentile per-packet one-way delay: 85.741 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 4.13 Mbit/s
95th percentile per-packet one-way delay: 89.443 ms
Loss rate: 5.08%
```

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



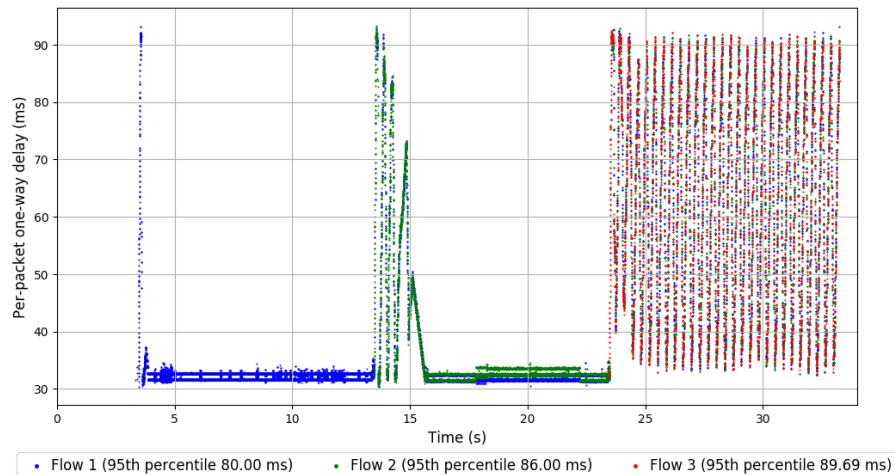
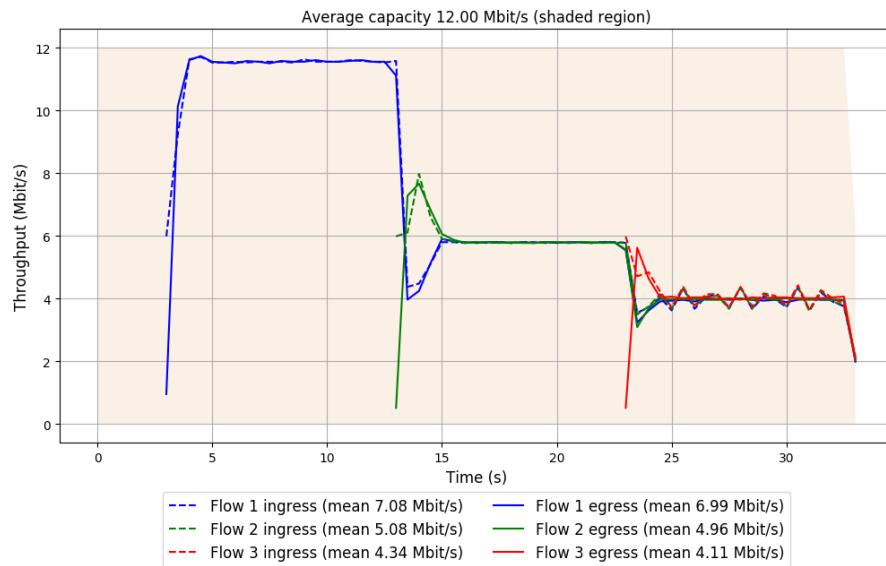
Run 7: Statistics of TaoVA-100x

Start at: 2018-04-24 16:54:58

End at: 2018-04-24 16:55:28

```
# Below is generated by plot.py at 2018-04-24 17:32:42
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.66 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 85.228 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 79.998 ms
Loss rate: 1.36%
-- Flow 2:
Average throughput: 4.96 Mbit/s
95th percentile per-packet one-way delay: 85.996 ms
Loss rate: 2.40%
-- Flow 3:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 89.694 ms
Loss rate: 5.65%
```

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



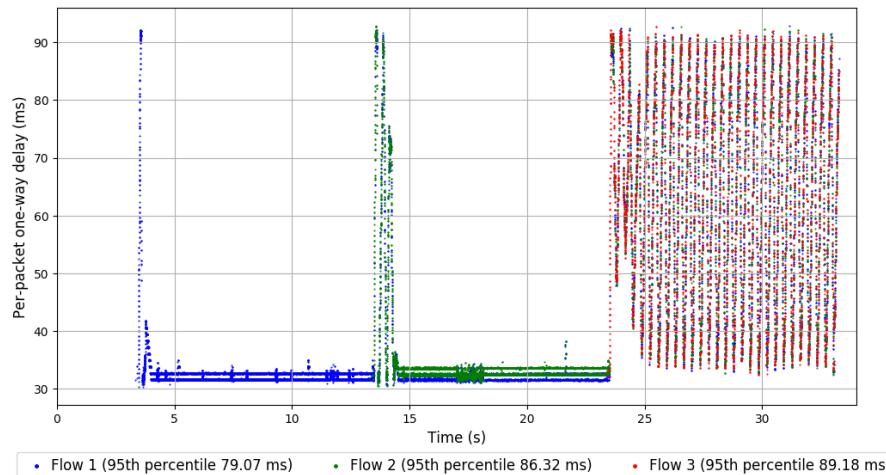
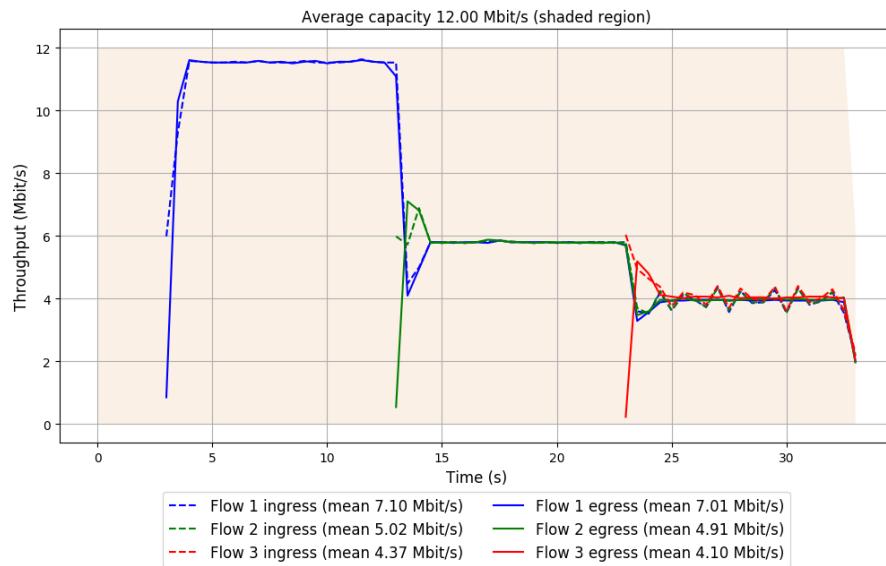
Run 8: Statistics of TaoVA-100x

Start at: 2018-04-24 17:04:45

End at: 2018-04-24 17:05:15

```
# Below is generated by plot.py at 2018-04-24 17:32:43
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.63 Mbit/s (96.9% utilization)
95th percentile per-packet one-way delay: 84.869 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 7.01 Mbit/s
95th percentile per-packet one-way delay: 79.073 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 4.91 Mbit/s
95th percentile per-packet one-way delay: 86.318 ms
Loss rate: 2.31%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 89.181 ms
Loss rate: 6.49%
```

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



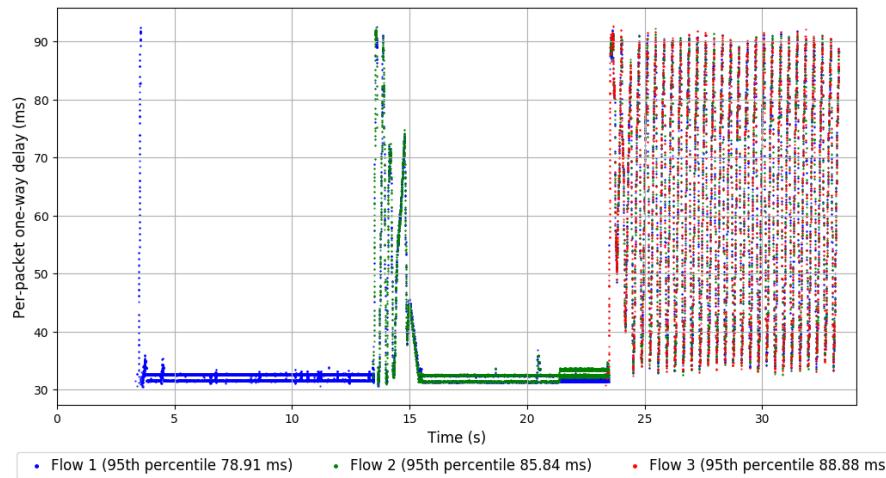
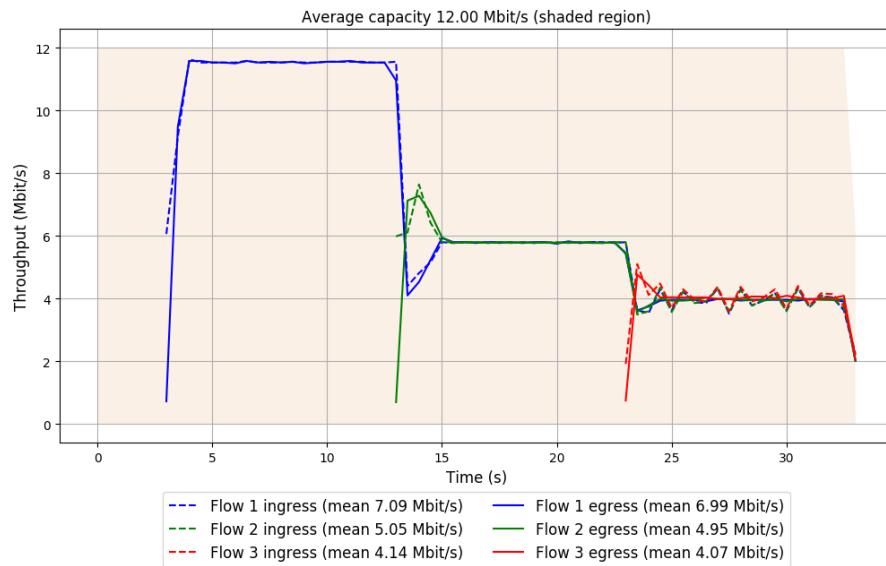
Run 9: Statistics of TaoVA-100x

Start at: 2018-04-24 17:14:33

End at: 2018-04-24 17:15:03

```
# Below is generated by plot.py at 2018-04-24 17:32:57
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.63 Mbit/s (96.9% utilization)
95th percentile per-packet one-way delay: 84.617 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 78.906 ms
Loss rate: 1.51%
-- Flow 2:
Average throughput: 4.95 Mbit/s
95th percentile per-packet one-way delay: 85.844 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 88.878 ms
Loss rate: 2.07%
```

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



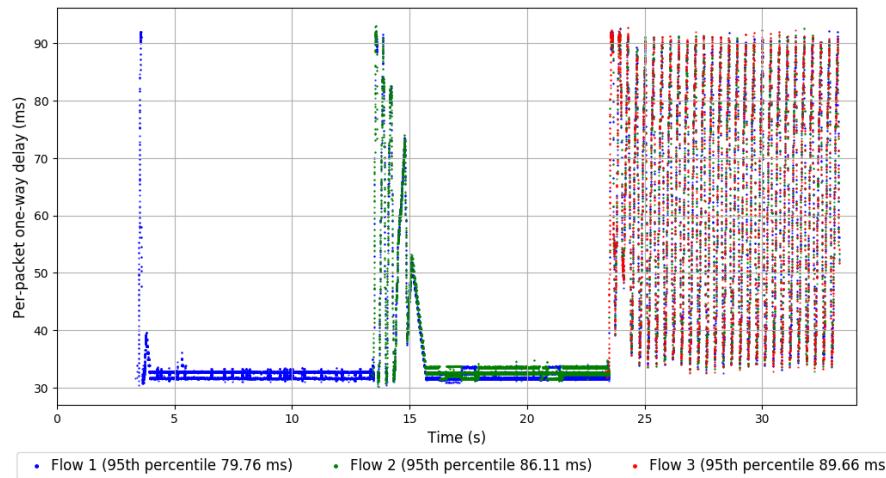
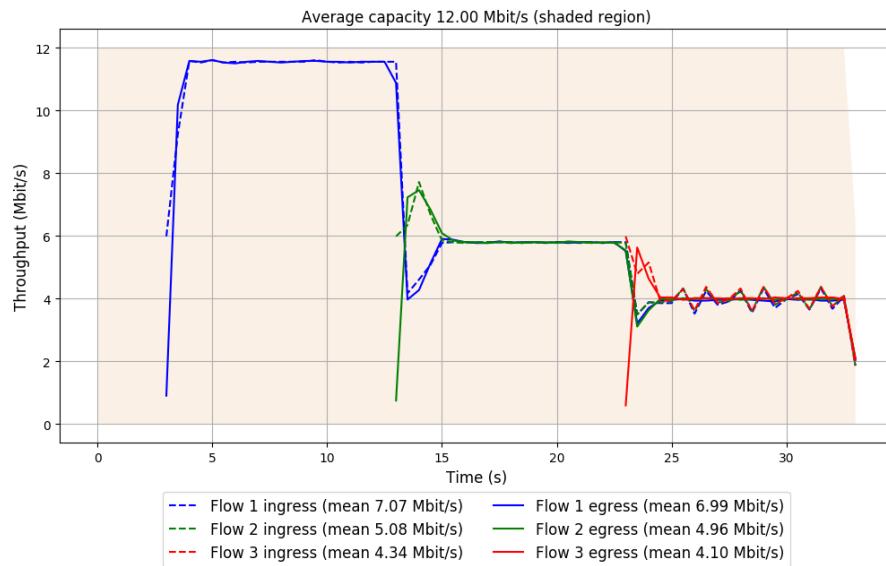
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-24 17:24:19

End at: 2018-04-24 17:24:49

```
# Below is generated by plot.py at 2018-04-24 17:32:57
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.65 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 85.100 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 79.763 ms
Loss rate: 1.32%
-- Flow 2:
Average throughput: 4.96 Mbit/s
95th percentile per-packet one-way delay: 86.112 ms
Loss rate: 2.42%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 89.655 ms
Loss rate: 5.74%
```

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



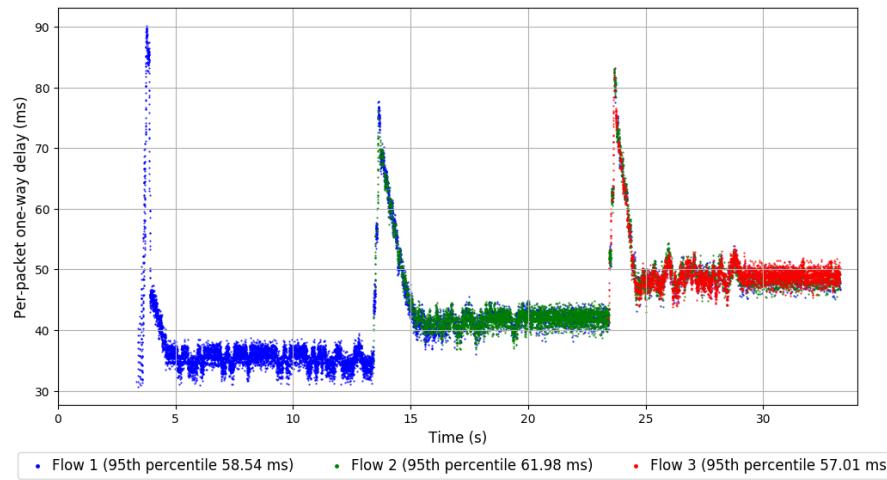
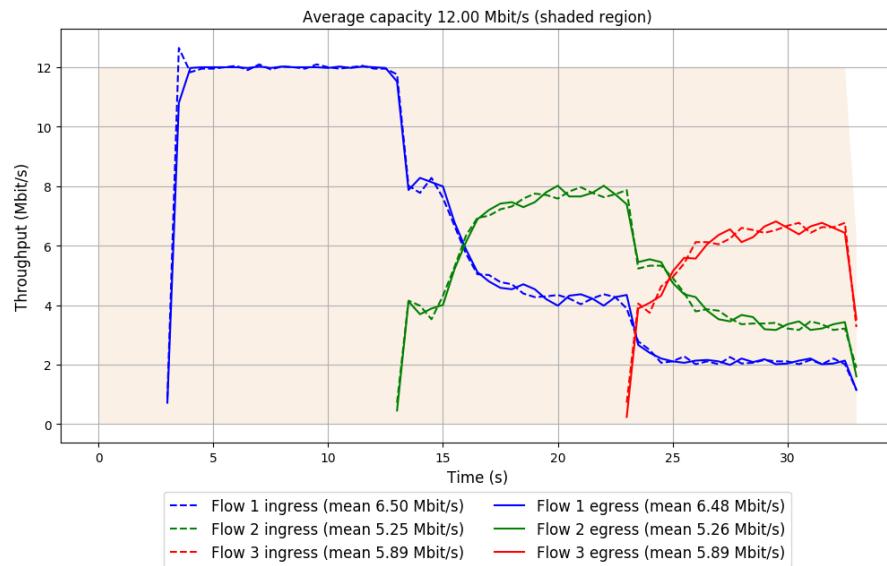
Run 1: Statistics of TCP Vegas

Start at: 2018-04-24 15:52:11

End at: 2018-04-24 15:52:41

```
# Below is generated by plot.py at 2018-04-24 17:32:57
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 59.749 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 58.543 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 5.26 Mbit/s
95th percentile per-packet one-way delay: 61.976 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 5.89 Mbit/s
95th percentile per-packet one-way delay: 57.012 ms
Loss rate: 0.55%
```

## Run 1: Report of TCP Vegas — Data Link



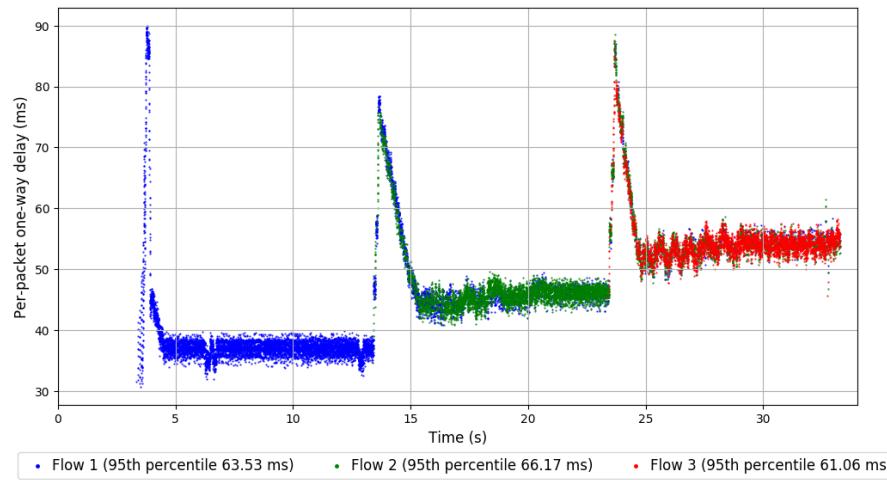
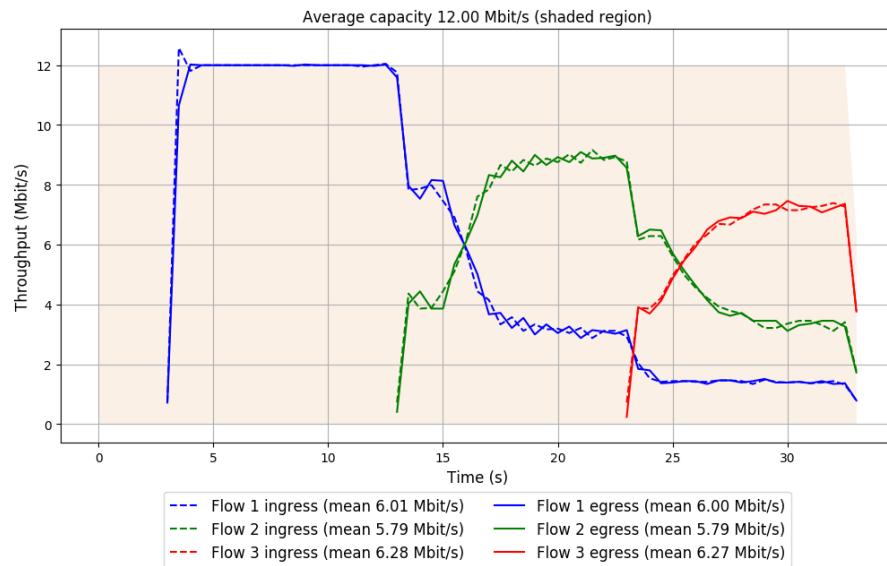
Run 2: Statistics of TCP Vegas

Start at: 2018-04-24 16:01:57

End at: 2018-04-24 16:02:27

```
# Below is generated by plot.py at 2018-04-24 17:32:57
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 64.591 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 6.00 Mbit/s
95th percentile per-packet one-way delay: 63.528 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 66.173 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 61.059 ms
Loss rate: 0.73%
```

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



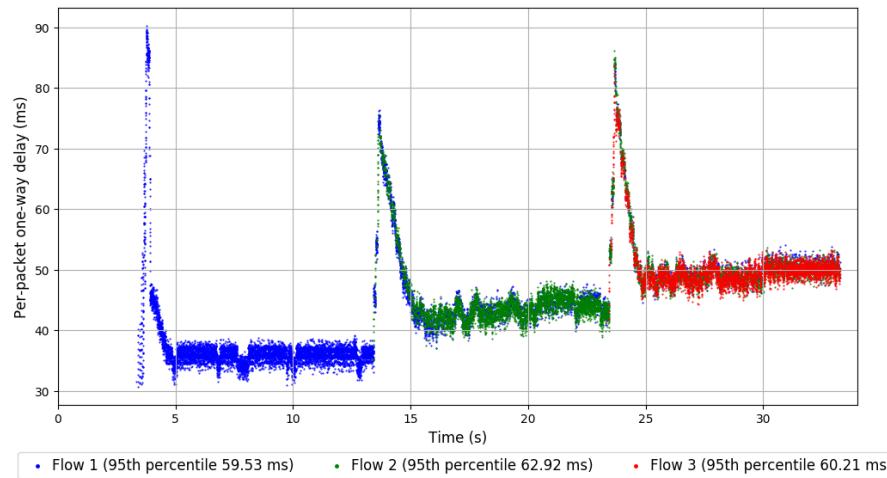
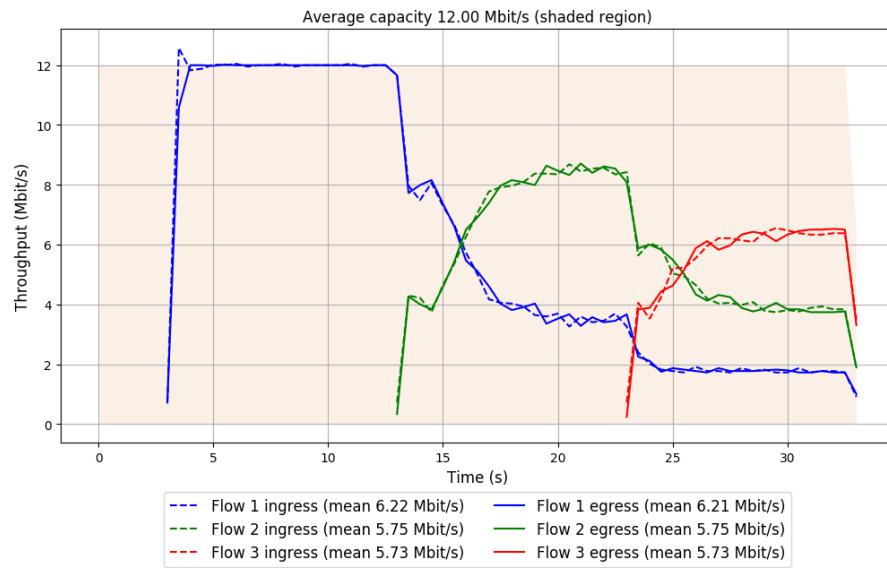
Run 3: Statistics of TCP Vegas

Start at: 2018-04-24 16:11:44

End at: 2018-04-24 16:12:14

```
# Below is generated by plot.py at 2018-04-24 17:32:57
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 60.960 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 6.21 Mbit/s
95th percentile per-packet one-way delay: 59.534 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 62.922 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 5.73 Mbit/s
95th percentile per-packet one-way delay: 60.208 ms
Loss rate: 0.46%
```

Run 3: Report of TCP Vegas — Data Link



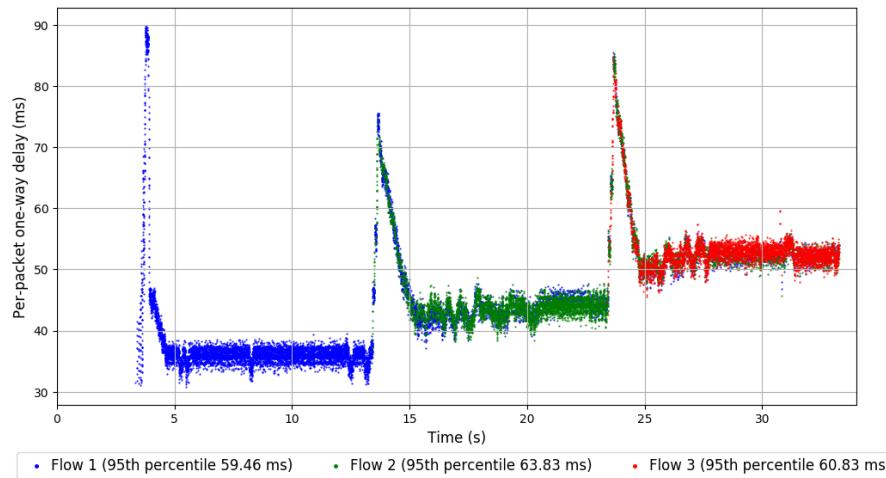
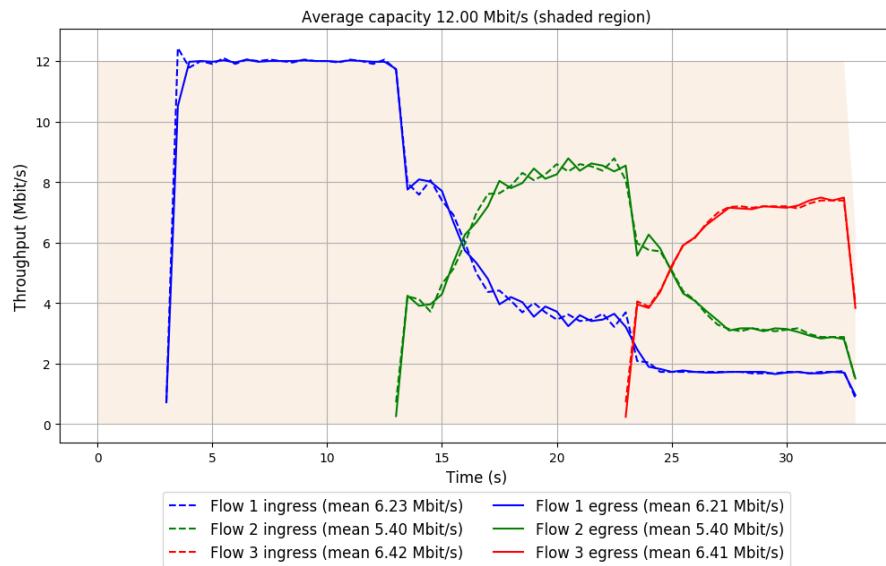
Run 4: Statistics of TCP Vegas

Start at: 2018-04-24 16:21:32

End at: 2018-04-24 16:22:02

```
# Below is generated by plot.py at 2018-04-24 17:32:57
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 61.623 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 6.21 Mbit/s
95th percentile per-packet one-way delay: 59.457 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 5.40 Mbit/s
95th percentile per-packet one-way delay: 63.831 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 6.41 Mbit/s
95th percentile per-packet one-way delay: 60.828 ms
Loss rate: 0.60%
```

## Run 4: Report of TCP Vegas — Data Link



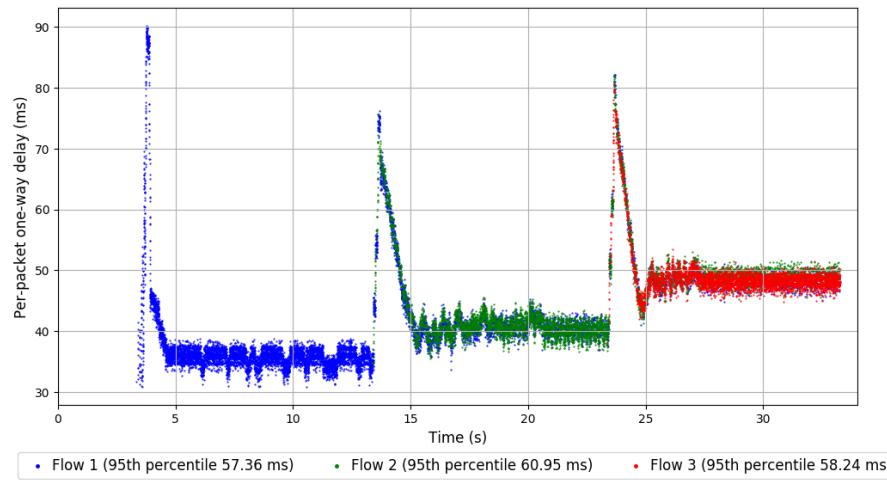
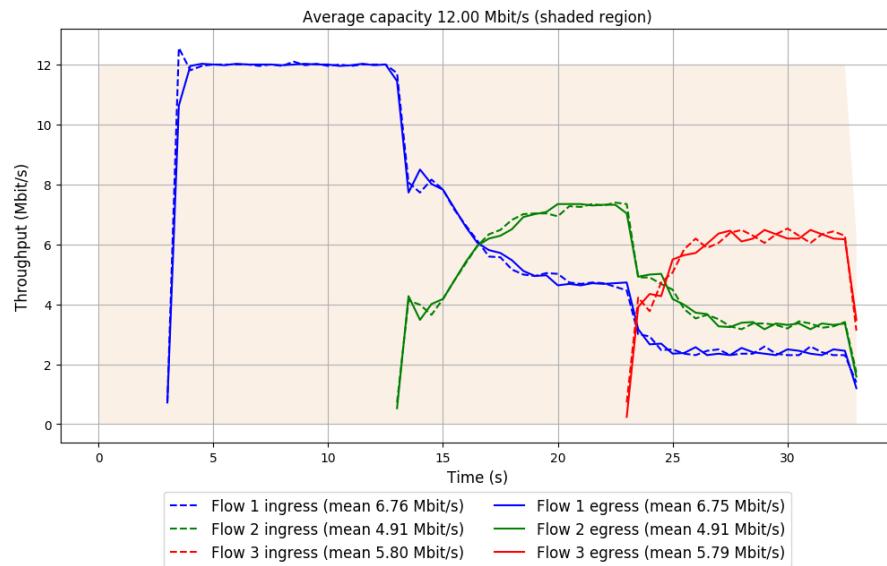
Run 5: Statistics of TCP Vegas

Start at: 2018-04-24 16:31:19

End at: 2018-04-24 16:31:49

```
# Below is generated by plot.py at 2018-04-24 17:33:05
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.92 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 58.820 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 57.359 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 4.91 Mbit/s
95th percentile per-packet one-way delay: 60.953 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 58.236 ms
Loss rate: 0.38%
```

Run 5: Report of TCP Vegas — Data Link



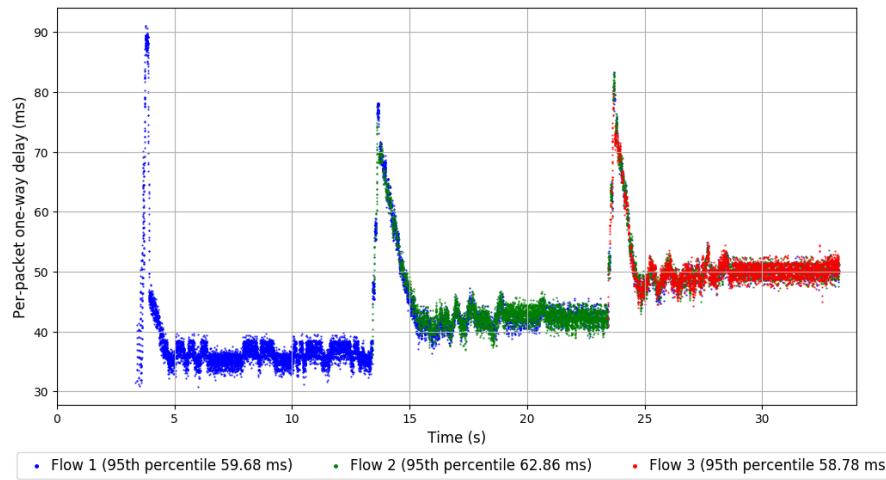
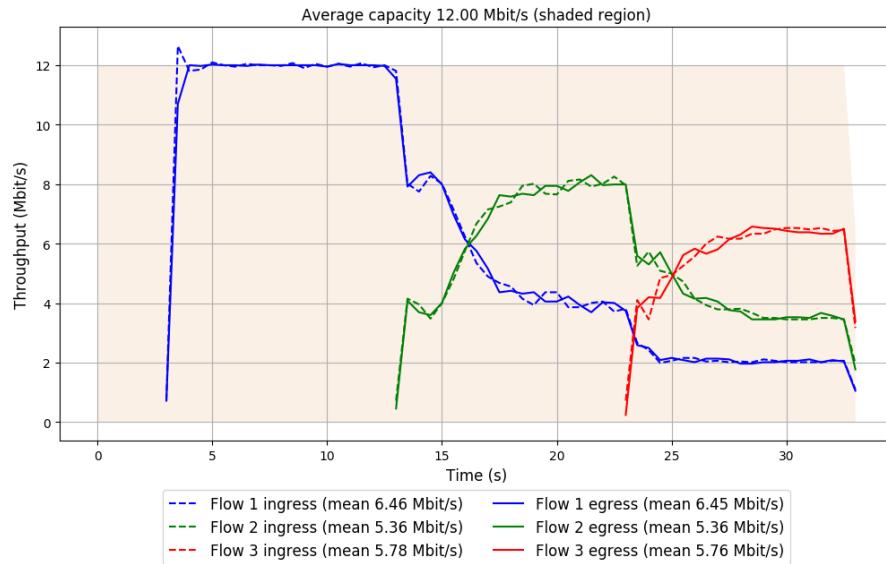
Run 6: Statistics of TCP Vegas

Start at: 2018-04-24 16:41:10

End at: 2018-04-24 16:41:40

```
# Below is generated by plot.py at 2018-04-24 17:33:06
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.93 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 61.123 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 6.45 Mbit/s
95th percentile per-packet one-way delay: 59.681 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 5.36 Mbit/s
95th percentile per-packet one-way delay: 62.863 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 5.76 Mbit/s
95th percentile per-packet one-way delay: 58.783 ms
Loss rate: 0.61%
```

Run 6: Report of TCP Vegas — Data Link



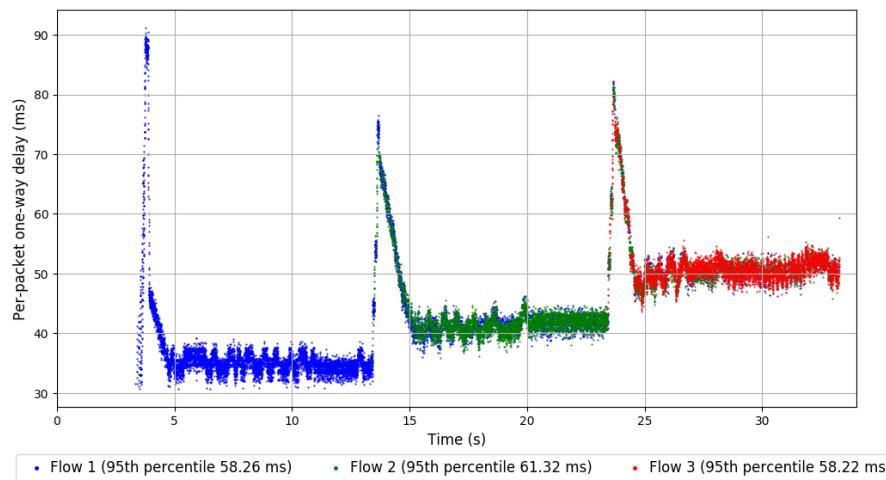
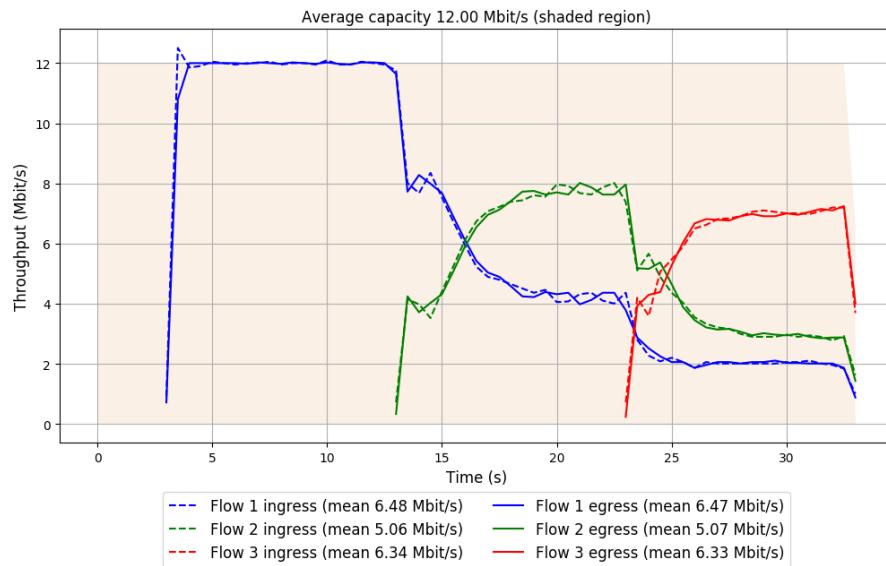
Run 7: Statistics of TCP Vegas

Start at: 2018-04-24 16:50:57

End at: 2018-04-24 16:51:27

```
# Below is generated by plot.py at 2018-04-24 17:33:07
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.92 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 59.590 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 6.47 Mbit/s
95th percentile per-packet one-way delay: 58.264 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 5.07 Mbit/s
95th percentile per-packet one-way delay: 61.321 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 6.33 Mbit/s
95th percentile per-packet one-way delay: 58.217 ms
Loss rate: 0.44%
```

Run 7: Report of TCP Vegas — Data Link



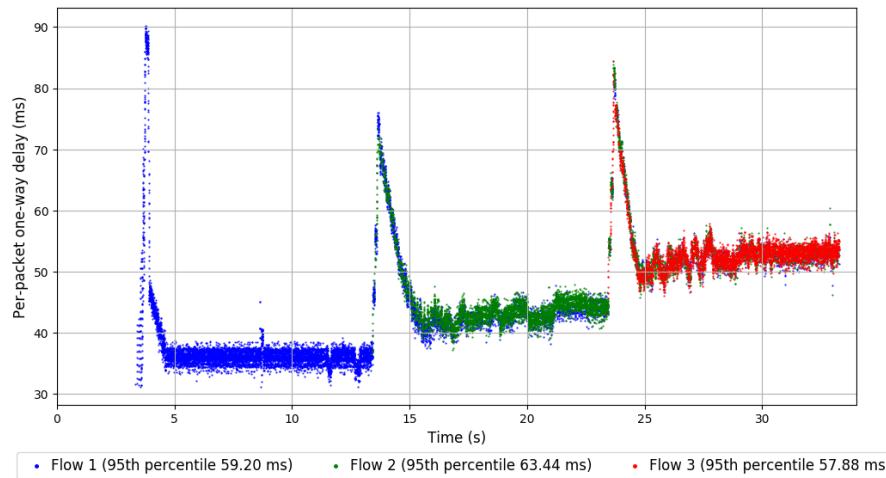
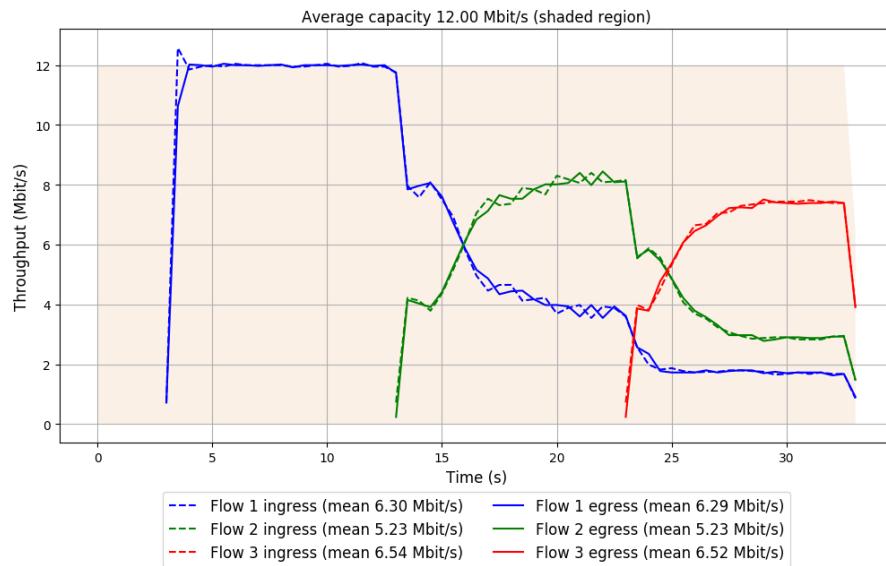
Run 8: Statistics of TCP Vegas

Start at: 2018-04-24 17:00:44

End at: 2018-04-24 17:01:14

```
# Below is generated by plot.py at 2018-04-24 17:33:07
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.92 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 60.871 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 6.29 Mbit/s
95th percentile per-packet one-way delay: 59.197 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 63.439 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 6.52 Mbit/s
95th percentile per-packet one-way delay: 57.882 ms
Loss rate: 0.61%
```

Run 8: Report of TCP Vegas — Data Link



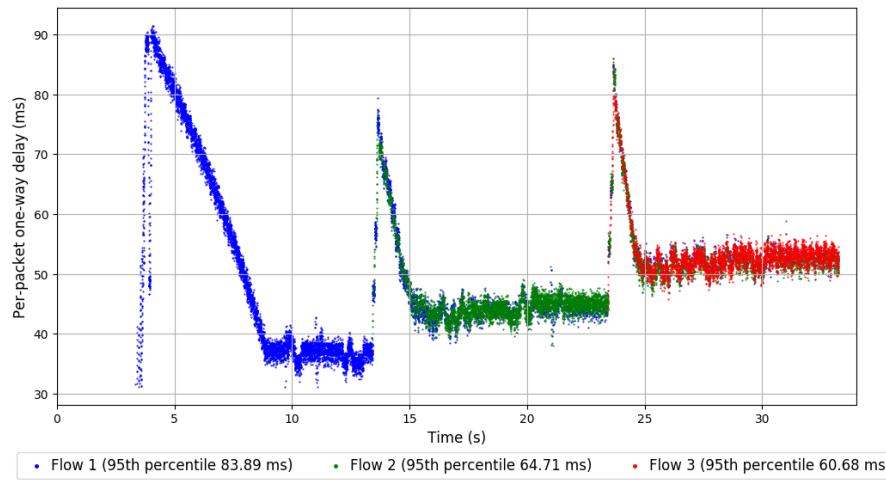
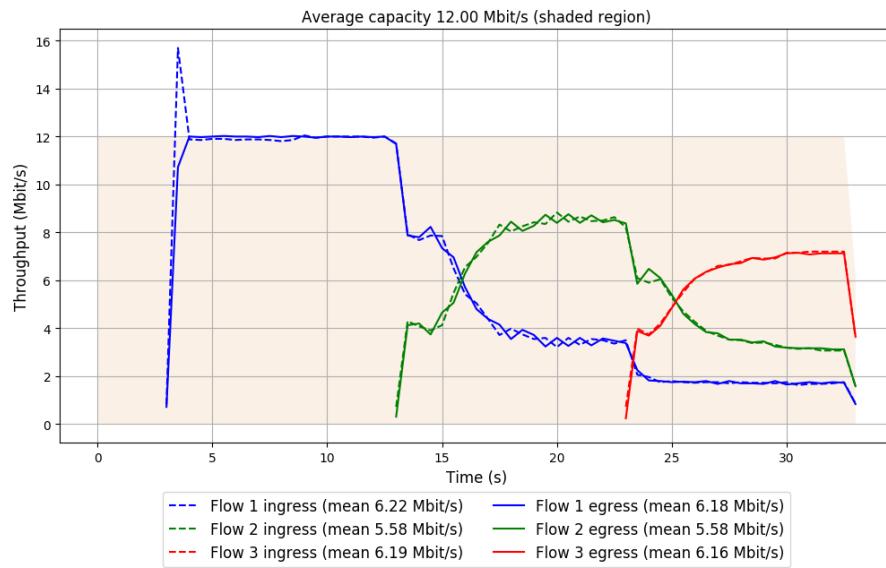
Run 9: Statistics of TCP Vegas

Start at: 2018-04-24 17:10:32

End at: 2018-04-24 17:11:02

```
# Below is generated by plot.py at 2018-04-24 17:33:13
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.92 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 78.483 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 6.18 Mbit/s
95th percentile per-packet one-way delay: 83.893 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 5.58 Mbit/s
95th percentile per-packet one-way delay: 64.713 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 6.16 Mbit/s
95th percentile per-packet one-way delay: 60.683 ms
Loss rate: 0.82%
```

Run 9: Report of TCP Vegas — Data Link



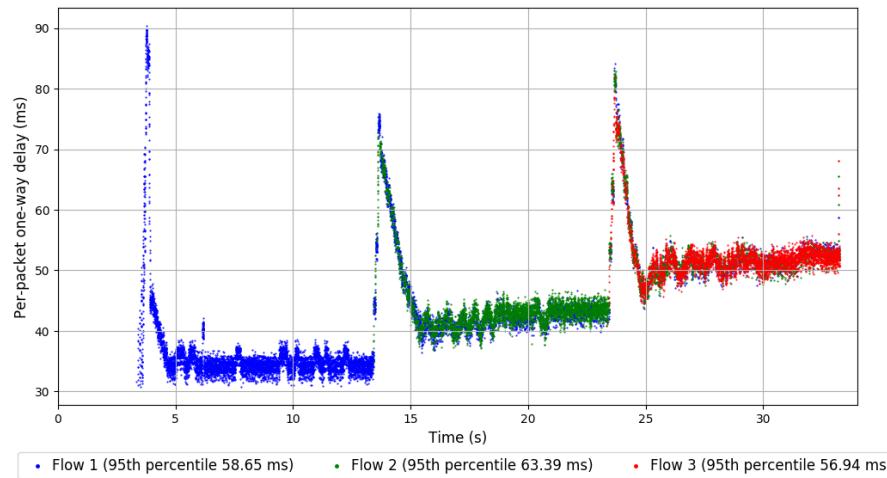
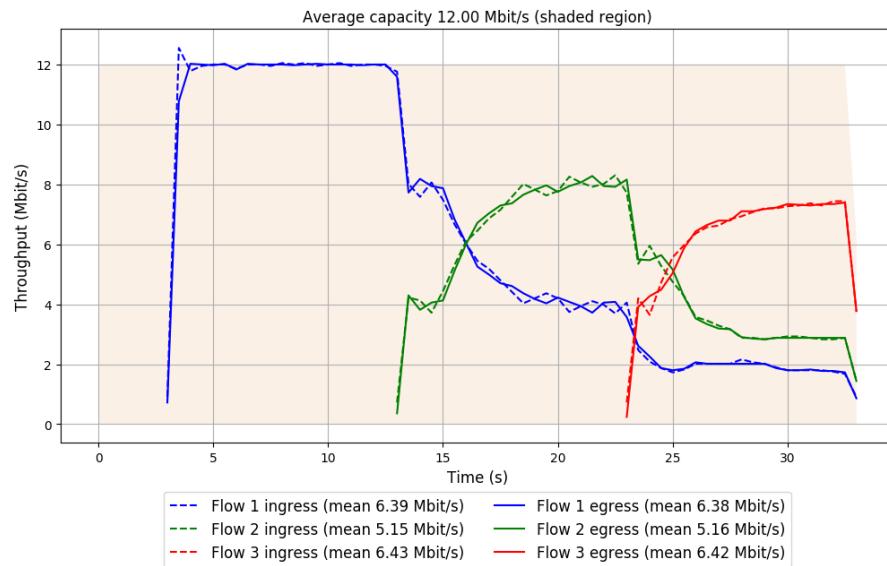
Run 10: Statistics of TCP Vegas

Start at: 2018-04-24 17:20:18

End at: 2018-04-24 17:20:48

```
# Below is generated by plot.py at 2018-04-24 17:33:14
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.92 Mbit/s (99.4% utilization)
95th percentile per-packet one-way delay: 60.309 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 6.38 Mbit/s
95th percentile per-packet one-way delay: 58.653 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 5.16 Mbit/s
95th percentile per-packet one-way delay: 63.389 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 6.42 Mbit/s
95th percentile per-packet one-way delay: 56.942 ms
Loss rate: 0.45%
```

Run 10: Report of TCP Vegas — Data Link



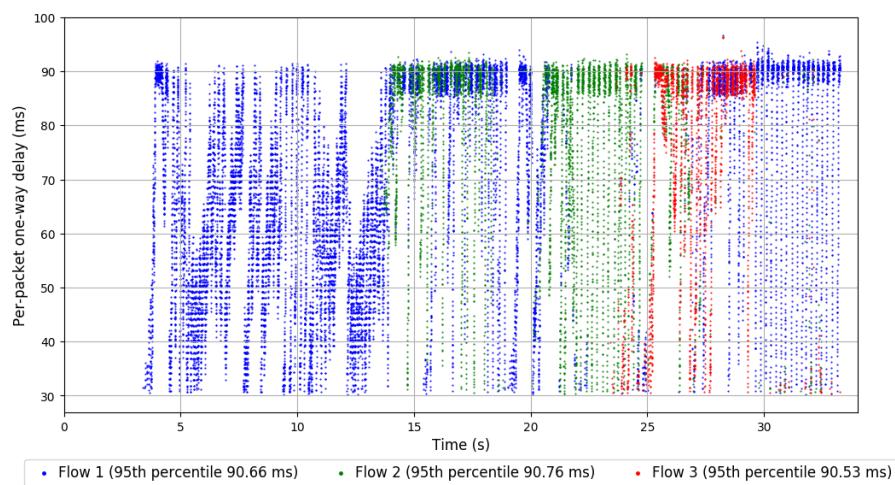
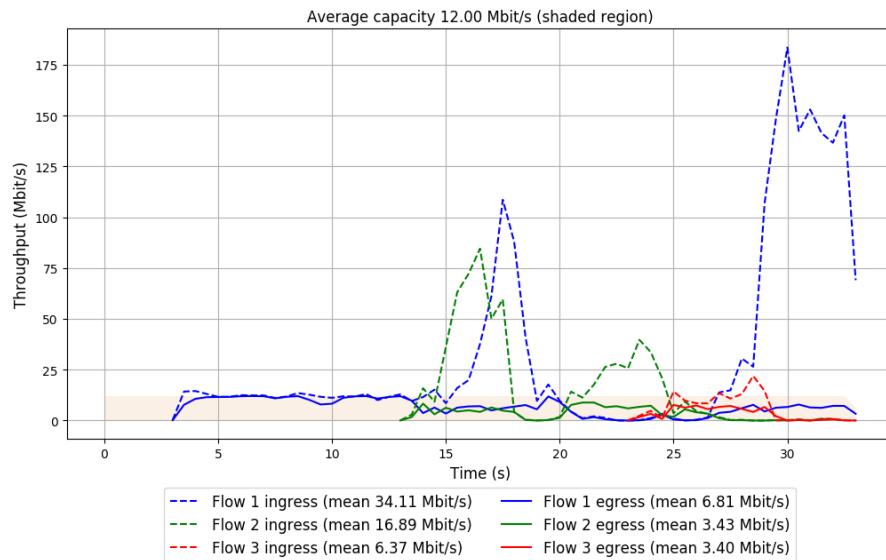
Run 1: Statistics of Verus

Start at: 2018-04-24 15:57:55

End at: 2018-04-24 15:58:25

```
# Below is generated by plot.py at 2018-04-24 17:33:27
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.11 Mbit/s (84.2% utilization)
95th percentile per-packet one-way delay: 90.664 ms
Loss rate: 78.46%
-- Flow 1:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 90.661 ms
Loss rate: 80.01%
-- Flow 2:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 90.762 ms
Loss rate: 79.76%
-- Flow 3:
Average throughput: 3.40 Mbit/s
95th percentile per-packet one-way delay: 90.535 ms
Loss rate: 46.66%
```

Run 1: Report of Verus — Data Link



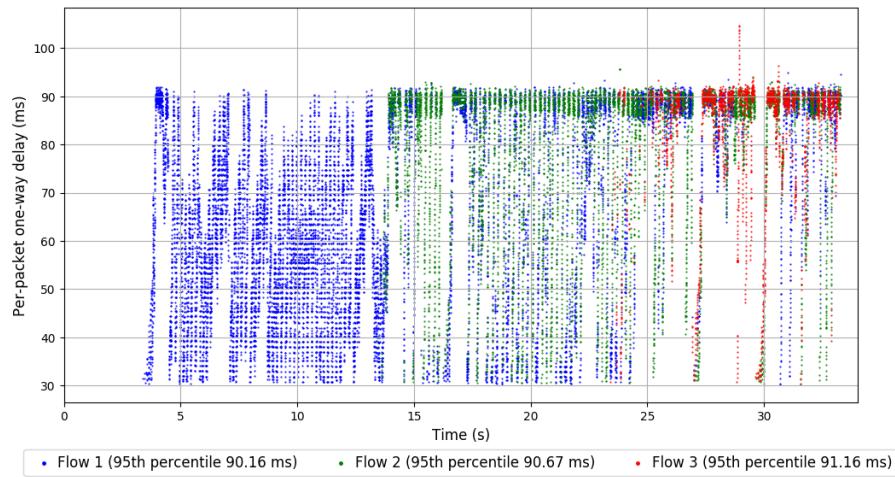
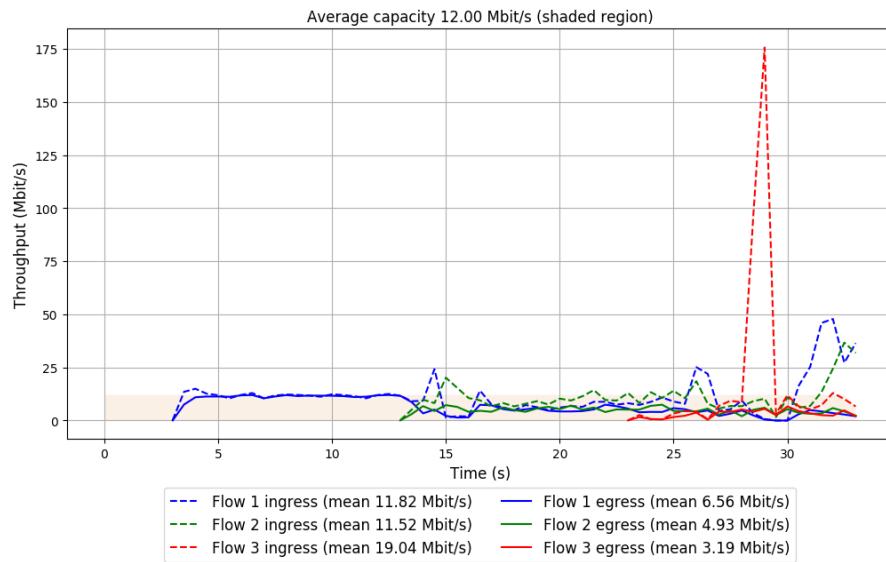
Run 2: Statistics of Verus

Start at: 2018-04-24 16:07:42

End at: 2018-04-24 16:08:12

```
# Below is generated by plot.py at 2018-04-24 17:33:27
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.89 Mbit/s (90.7% utilization)
95th percentile per-packet one-way delay: 90.507 ms
Loss rate: 57.72%
-- Flow 1:
Average throughput: 6.56 Mbit/s
95th percentile per-packet one-way delay: 90.157 ms
Loss rate: 44.45%
-- Flow 2:
Average throughput: 4.93 Mbit/s
95th percentile per-packet one-way delay: 90.668 ms
Loss rate: 57.10%
-- Flow 3:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 91.164 ms
Loss rate: 83.32%
```

## Run 2: Report of Verus — Data Link



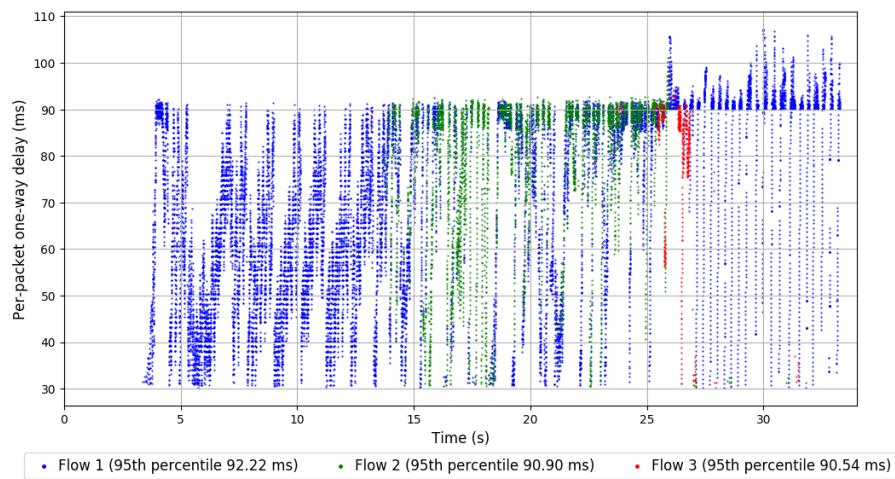
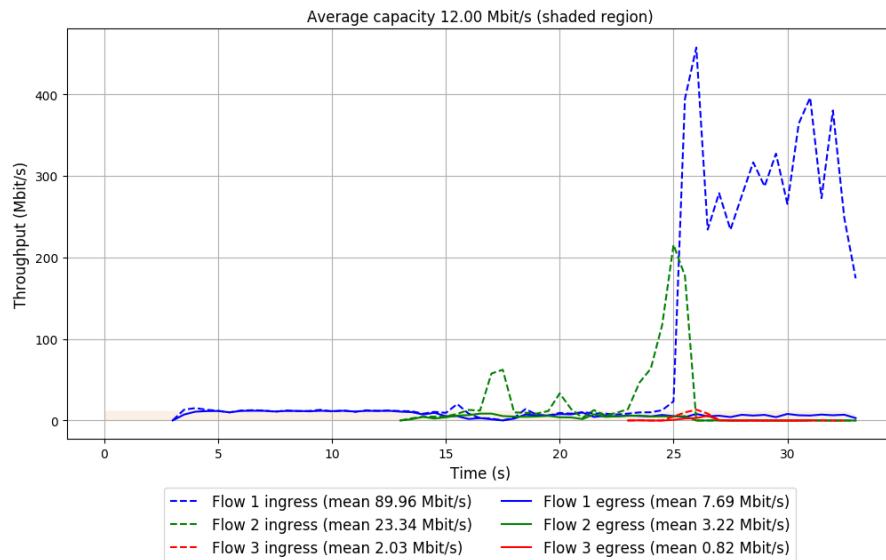
Run 3: Statistics of Verus

Start at: 2018-04-24 16:17:29

End at: 2018-04-24 16:17:59

```
# Below is generated by plot.py at 2018-04-24 17:33:50
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.05 Mbit/s (83.7% utilization)
95th percentile per-packet one-way delay: 91.640 ms
Loss rate: 90.52%
-- Flow 1:
Average throughput: 7.69 Mbit/s
95th percentile per-packet one-way delay: 92.220 ms
Loss rate: 91.44%
-- Flow 2:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 90.897 ms
Loss rate: 86.19%
-- Flow 3:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 90.536 ms
Loss rate: 65.91%
```

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



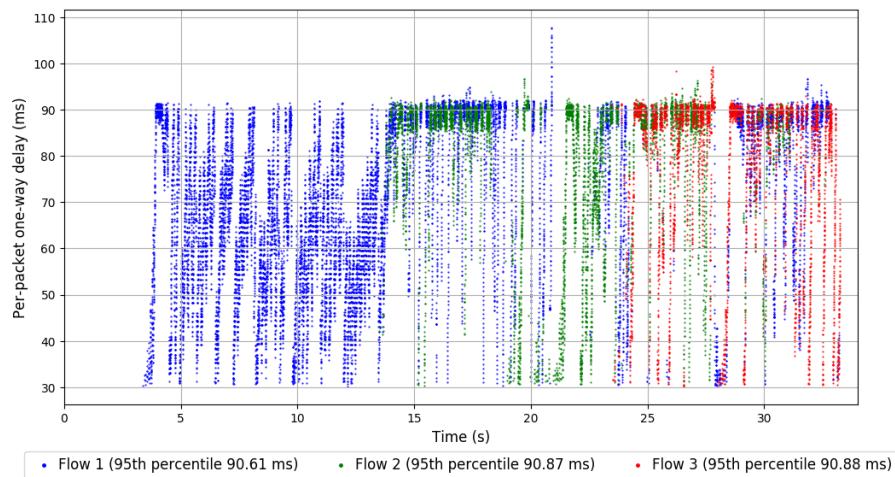
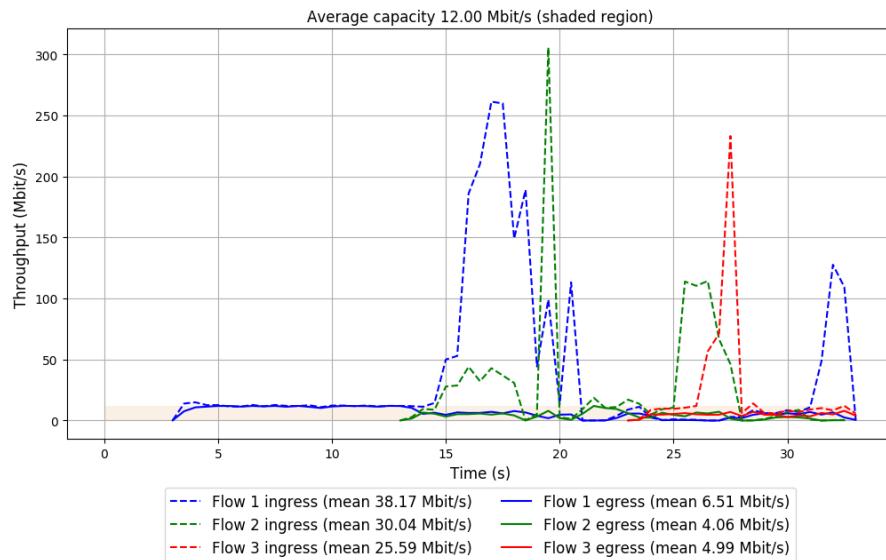
Run 4: Statistics of Verus

Start at: 2018-04-24 16:27:17

End at: 2018-04-24 16:27:47

```
# Below is generated by plot.py at 2018-04-24 17:33:50
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.76 Mbit/s (89.7% utilization)
95th percentile per-packet one-way delay: 90.737 ms
Loss rate: 83.70%
-- Flow 1:
Average throughput: 6.51 Mbit/s
95th percentile per-packet one-way delay: 90.614 ms
Loss rate: 82.98%
-- Flow 2:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 90.866 ms
Loss rate: 86.48%
-- Flow 3:
Average throughput: 4.99 Mbit/s
95th percentile per-packet one-way delay: 90.878 ms
Loss rate: 80.62%
```

## Run 4: Report of Verus — Data Link



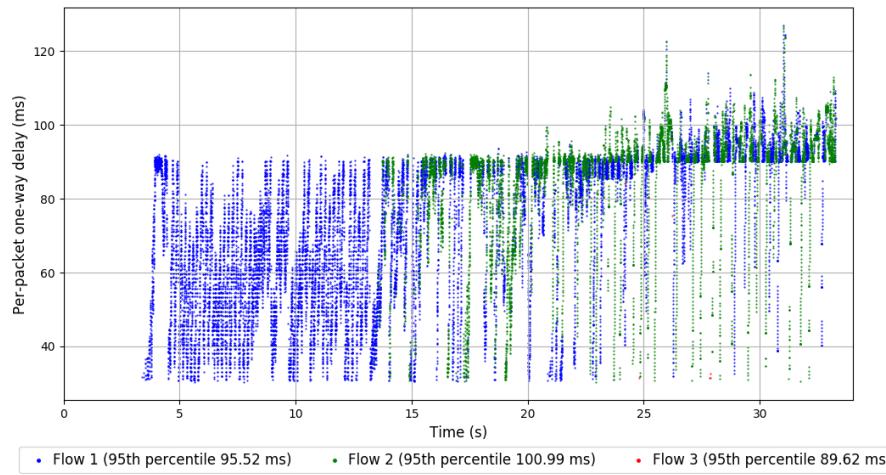
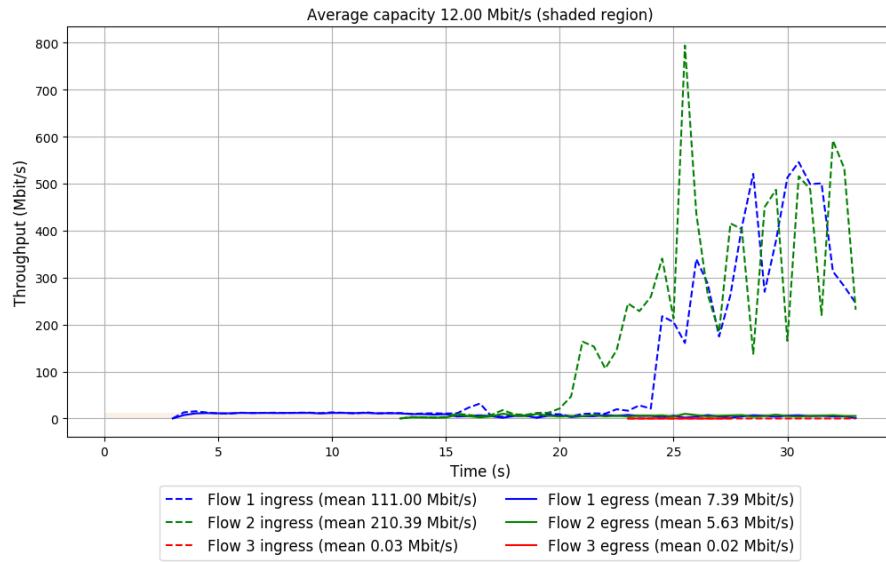
Run 5: Statistics of Verus

Start at: 2018-04-24 16:37:04

End at: 2018-04-24 16:37:34

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.14 Mbit/s (92.8% utilization)
95th percentile per-packet one-way delay: 98.026 ms
Loss rate: 95.56%
-- Flow 1:
Average throughput: 7.39 Mbit/s
95th percentile per-packet one-way delay: 95.519 ms
Loss rate: 93.35%
-- Flow 2:
Average throughput: 5.63 Mbit/s
95th percentile per-packet one-way delay: 100.994 ms
Loss rate: 97.31%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 89.616 ms
Loss rate: 74.07%
```

## Run 5: Report of Verus — Data Link



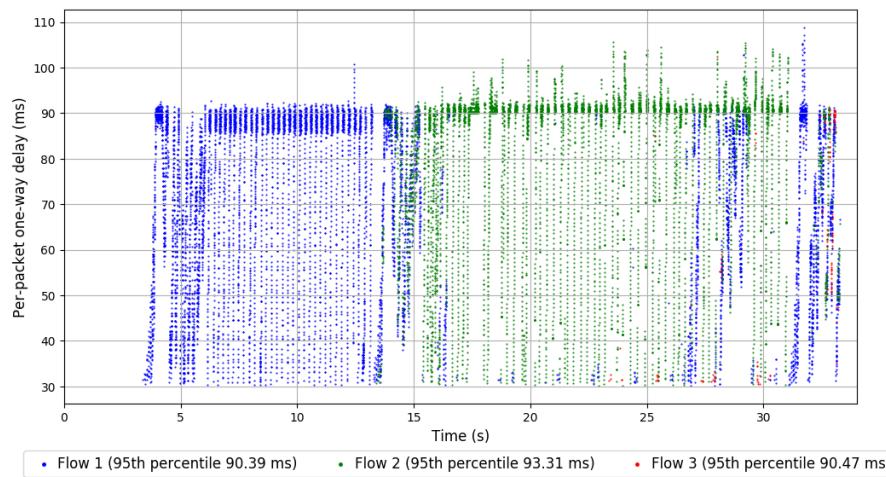
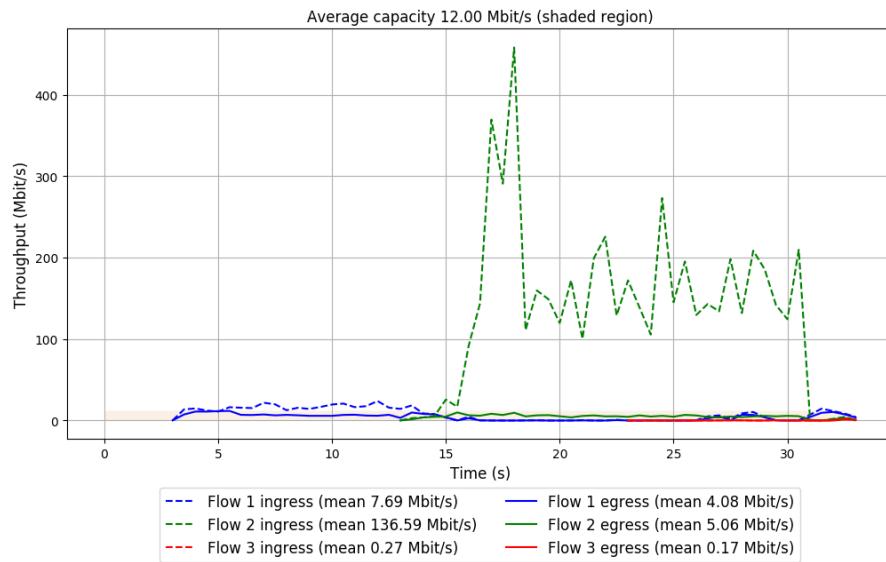
Run 6: Statistics of Verus

Start at: 2018-04-24 16:46:54

End at: 2018-04-24 16:47:24

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 7.50 Mbit/s (62.5% utilization)
95th percentile per-packet one-way delay: 91.735 ms
Loss rate: 92.38%
-- Flow 1:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 90.392 ms
Loss rate: 46.98%
-- Flow 2:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 93.308 ms
Loss rate: 96.29%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 90.467 ms
Loss rate: 37.78%
```

## Run 6: Report of Verus — Data Link



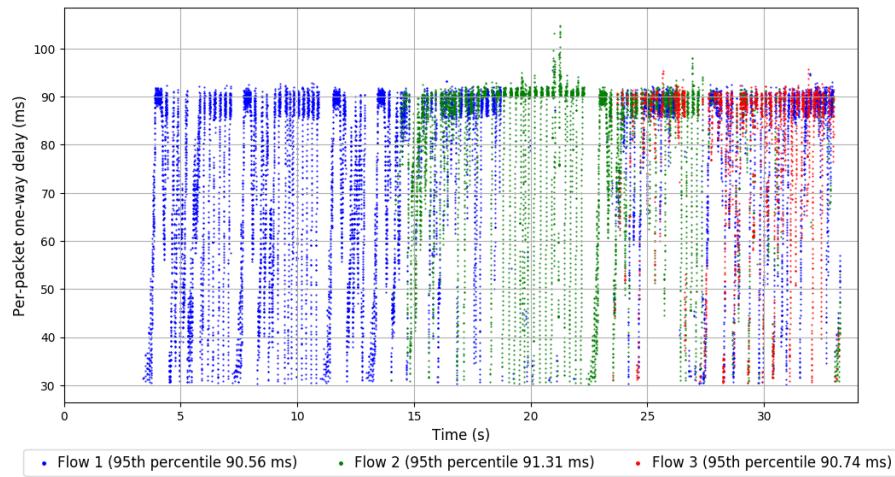
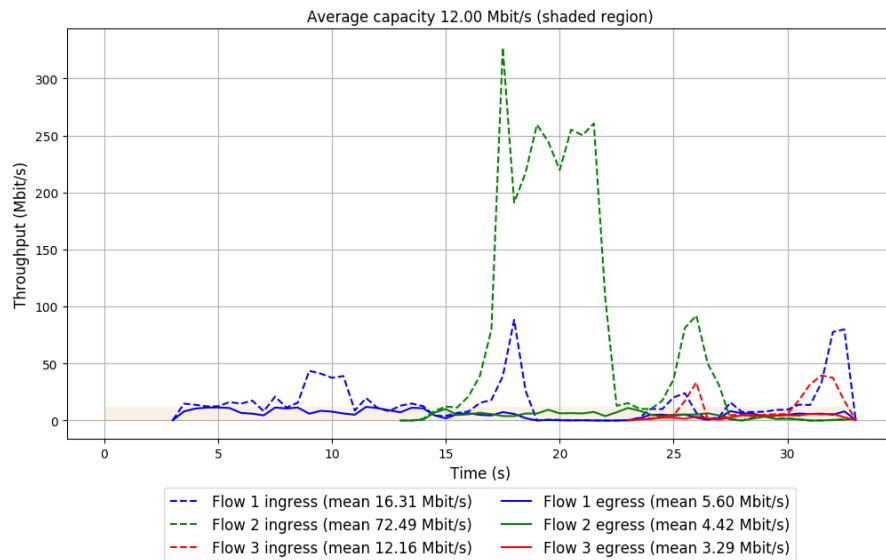
Run 7: Statistics of Verus

Start at: 2018-04-24 16:56:41

End at: 2018-04-24 16:57:11

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 9.60 Mbit/s (80.0% utilization)
95th percentile per-packet one-way delay: 90.902 ms
Loss rate: 85.97%
-- Flow 1:
Average throughput: 5.60 Mbit/s
95th percentile per-packet one-way delay: 90.560 ms
Loss rate: 65.63%
-- Flow 2:
Average throughput: 4.42 Mbit/s
95th percentile per-packet one-way delay: 91.306 ms
Loss rate: 93.91%
-- Flow 3:
Average throughput: 3.29 Mbit/s
95th percentile per-packet one-way delay: 90.739 ms
Loss rate: 73.28%
```

## Run 7: Report of Verus — Data Link



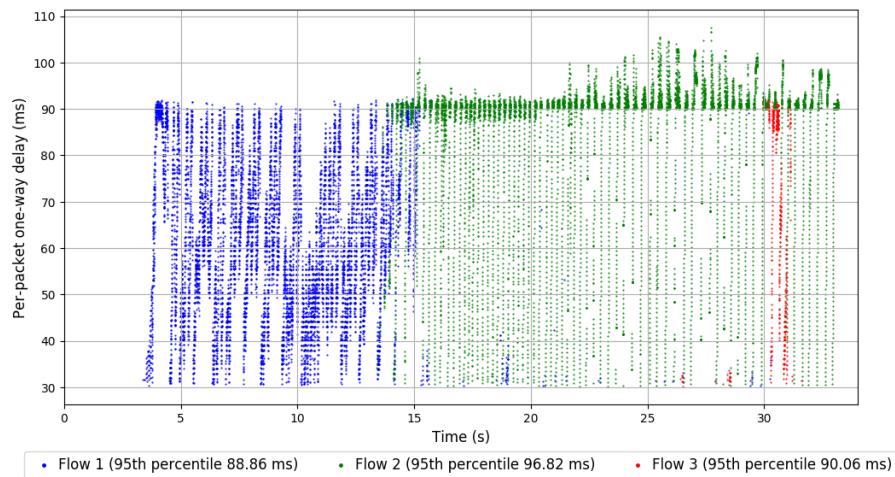
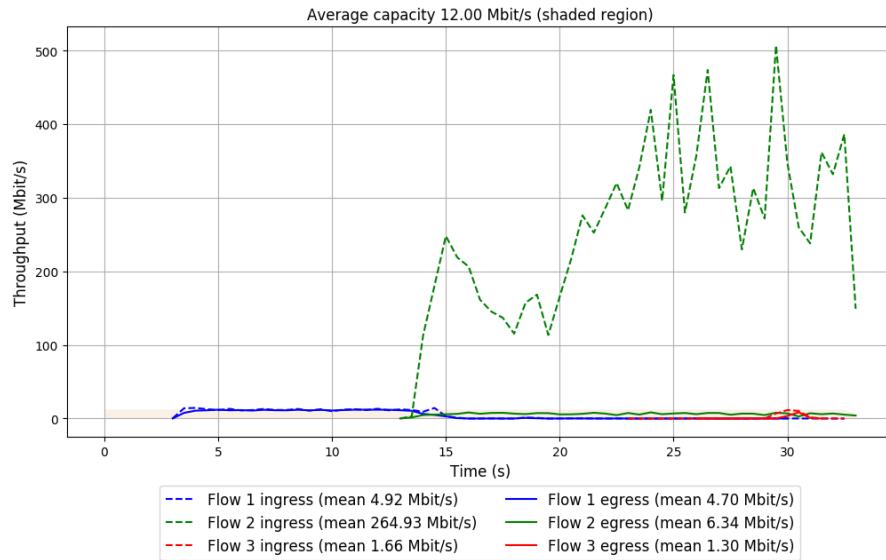
Run 8: Statistics of Verus

Start at: 2018-04-24 17:06:28

End at: 2018-04-24 17:06:58

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 8.68 Mbit/s (72.3% utilization)
95th percentile per-packet one-way delay: 93.456 ms
Loss rate: 95.20%
-- Flow 1:
Average throughput: 4.70 Mbit/s
95th percentile per-packet one-way delay: 88.861 ms
Loss rate: 12.24%
-- Flow 2:
Average throughput: 6.34 Mbit/s
95th percentile per-packet one-way delay: 96.818 ms
Loss rate: 97.60%
-- Flow 3:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 90.060 ms
Loss rate: 57.55%
```

## Run 8: Report of Verus — Data Link



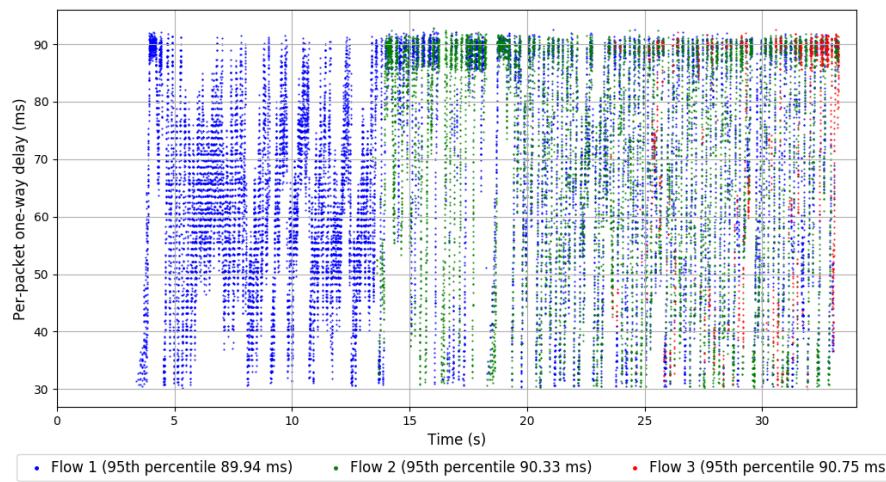
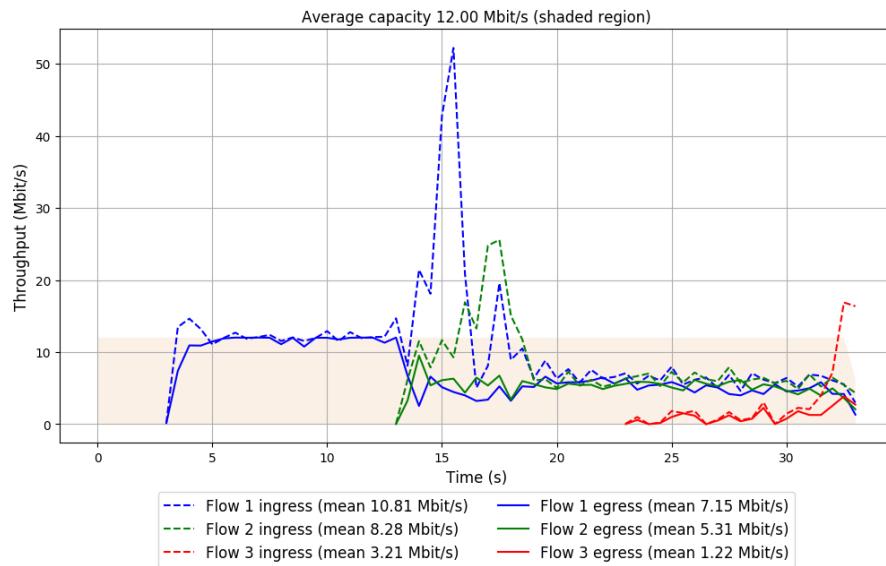
Run 9: Statistics of Verus

Start at: 2018-04-24 17:16:17

End at: 2018-04-24 17:16:47

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.07 Mbit/s (92.2% utilization)
95th percentile per-packet one-way delay: 90.149 ms
Loss rate: 36.37%
-- Flow 1:
Average throughput: 7.15 Mbit/s
95th percentile per-packet one-way delay: 89.942 ms
Loss rate: 33.97%
-- Flow 2:
Average throughput: 5.31 Mbit/s
95th percentile per-packet one-way delay: 90.328 ms
Loss rate: 36.09%
-- Flow 3:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 90.749 ms
Loss rate: 62.34%
```

Run 9: Report of Verus — Data Link



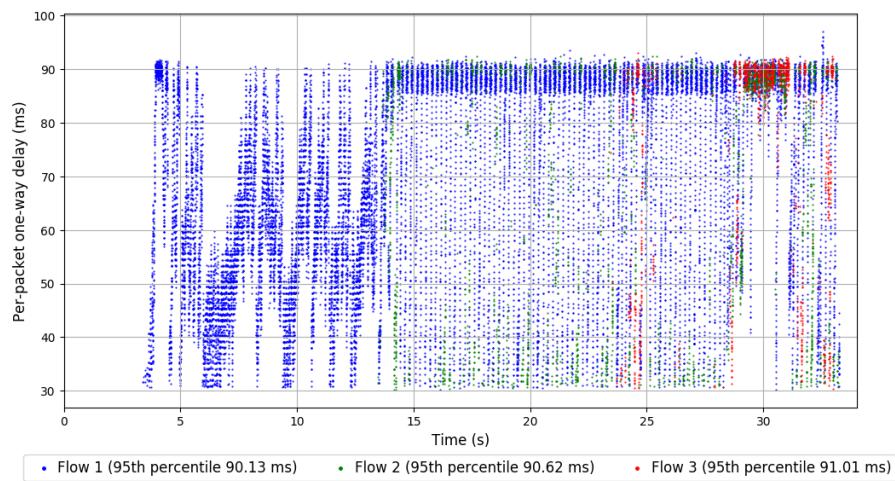
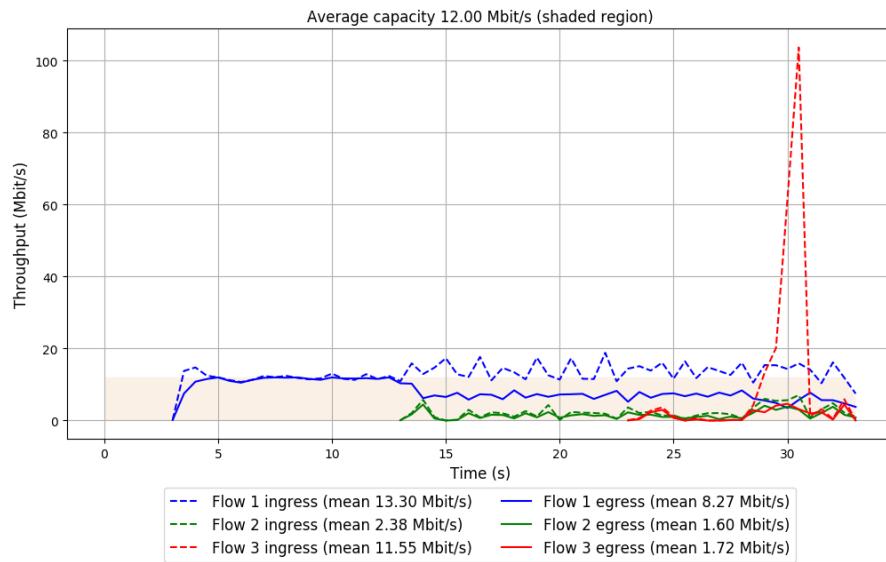
Run 10: Statistics of Verus

Start at: 2018-04-24 17:26:03

End at: 2018-04-24 17:26:33

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 9.88 Mbit/s (82.4% utilization)
95th percentile per-packet one-way delay: 90.320 ms
Loss rate: 46.94%
-- Flow 1:
Average throughput: 8.27 Mbit/s
95th percentile per-packet one-way delay: 90.133 ms
Loss rate: 37.90%
-- Flow 2:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 90.625 ms
Loss rate: 33.12%
-- Flow 3:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 91.014 ms
Loss rate: 85.12%
```

Run 10: Report of Verus — Data Link



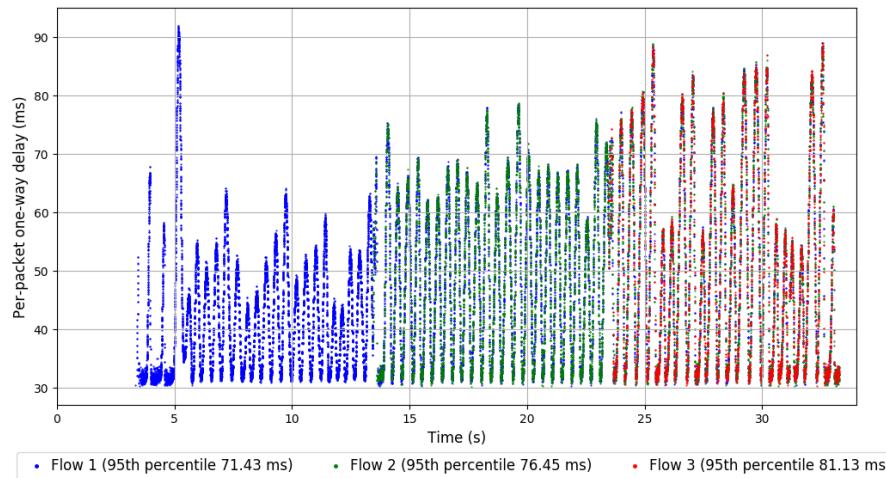
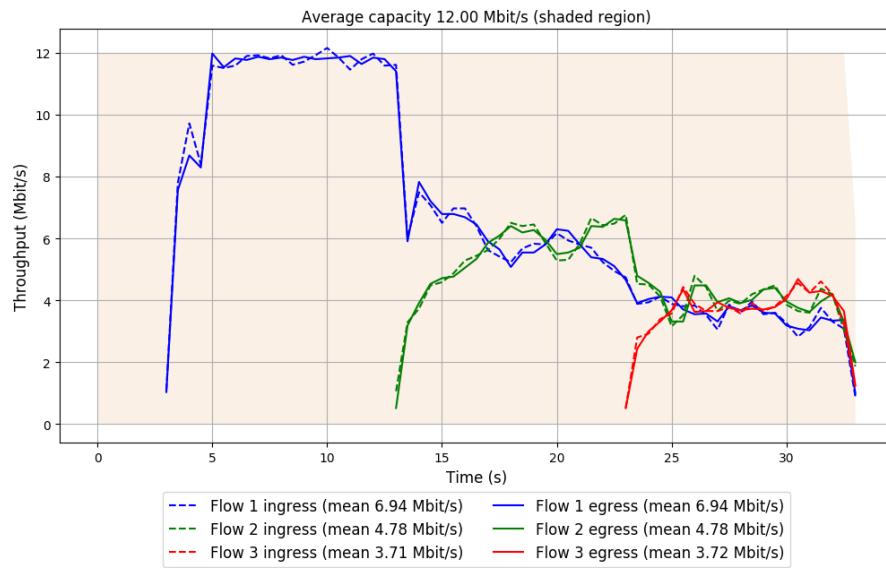
Run 1: Statistics of Copa

Start at: 2018-04-24 15:50:27

End at: 2018-04-24 15:50:57

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.35 Mbit/s (94.6% utilization)
95th percentile per-packet one-way delay: 75.447 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 6.94 Mbit/s
95th percentile per-packet one-way delay: 71.429 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 76.446 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 3.72 Mbit/s
95th percentile per-packet one-way delay: 81.129 ms
Loss rate: 0.28%
```

Run 1: Report of Copa — Data Link



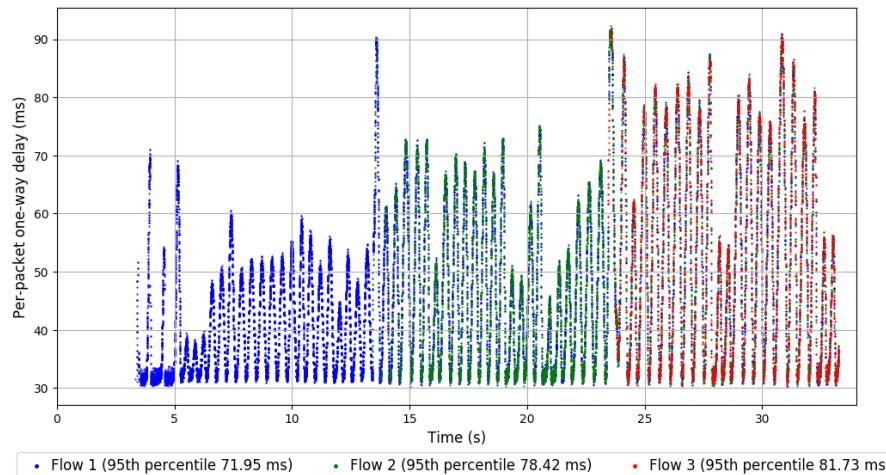
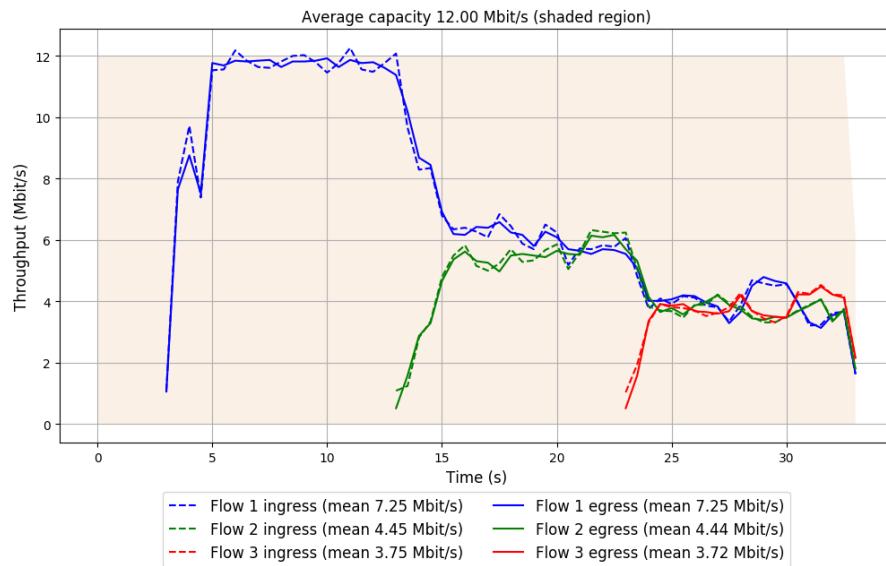
Run 2: Statistics of Copa

Start at: 2018-04-24 16:00:13

End at: 2018-04-24 16:00:43

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.43 Mbit/s (95.3% utilization)
95th percentile per-packet one-way delay: 76.620 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 7.25 Mbit/s
95th percentile per-packet one-way delay: 71.954 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 4.44 Mbit/s
95th percentile per-packet one-way delay: 78.418 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 3.72 Mbit/s
95th percentile per-packet one-way delay: 81.733 ms
Loss rate: 1.00%
```

Run 2: Report of Copa — Data Link



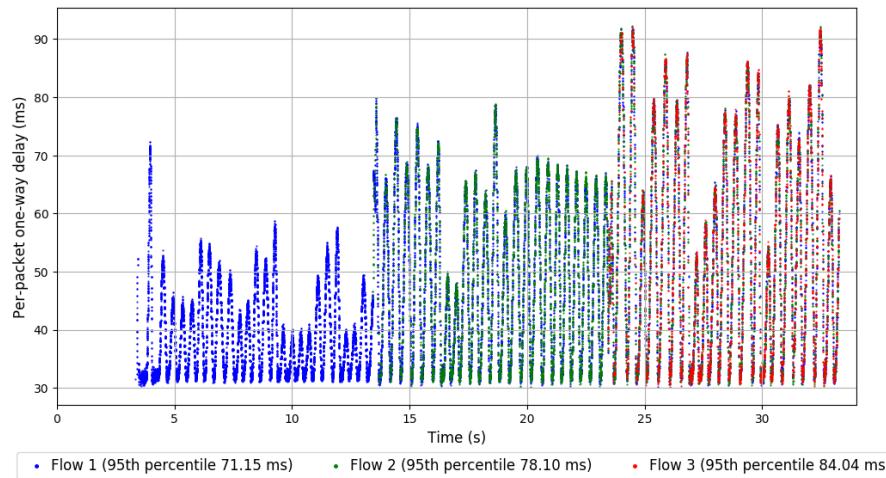
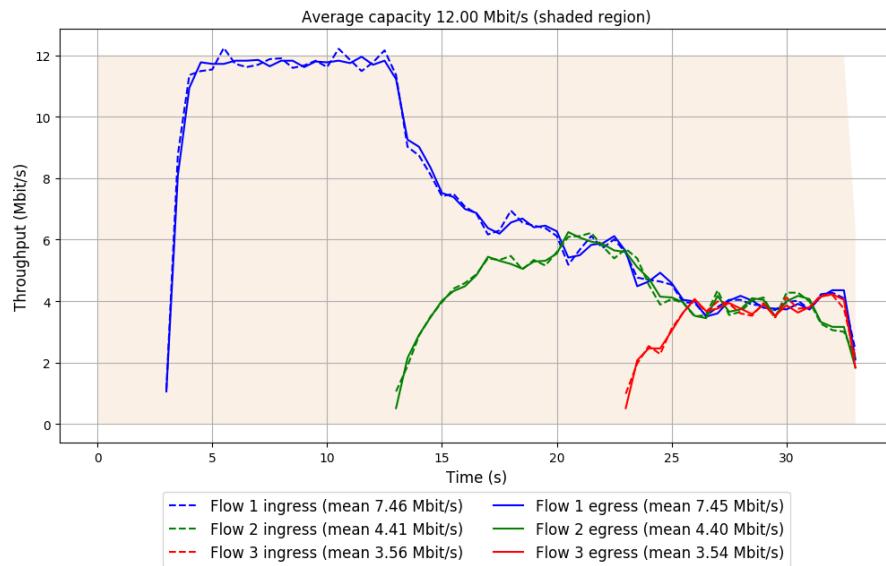
Run 3: Statistics of Copa

Start at: 2018-04-24 16:10:00

End at: 2018-04-24 16:10:30

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.55 Mbit/s (96.3% utilization)
95th percentile per-packet one-way delay: 75.987 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 7.45 Mbit/s
95th percentile per-packet one-way delay: 71.149 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 78.099 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 84.042 ms
Loss rate: 0.99%
```

Run 3: Report of Copa — Data Link



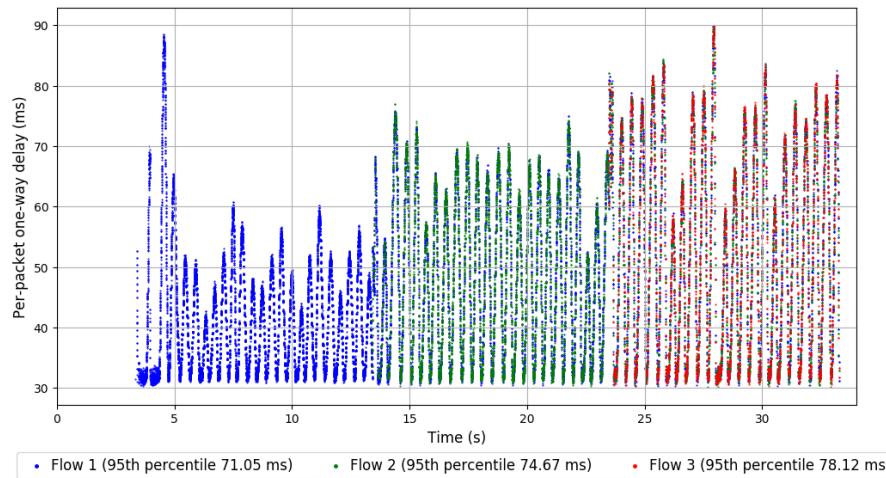
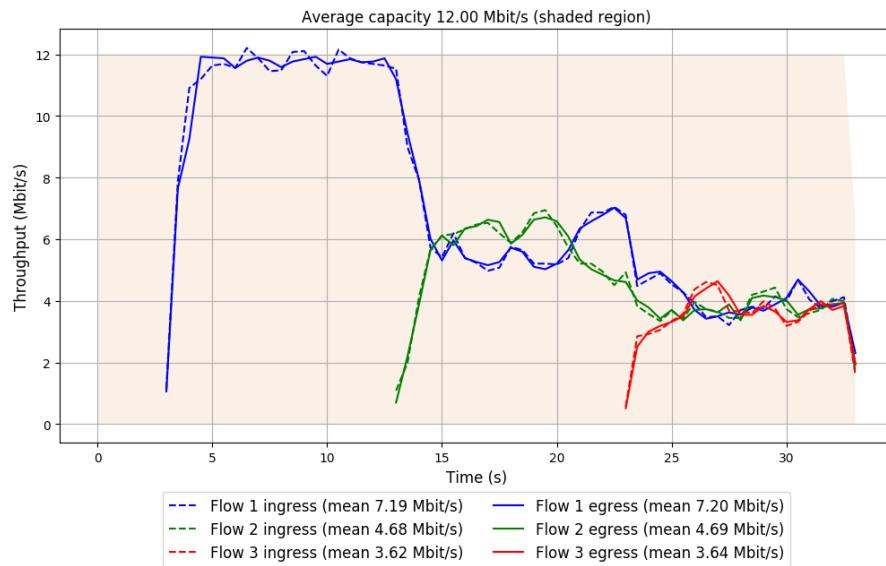
Run 4: Statistics of Copa

Start at: 2018-04-24 16:19:48

End at: 2018-04-24 16:20:18

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.52 Mbit/s (96.0% utilization)
95th percentile per-packet one-way delay: 74.039 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 7.20 Mbit/s
95th percentile per-packet one-way delay: 71.053 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 4.69 Mbit/s
95th percentile per-packet one-way delay: 74.673 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 78.120 ms
Loss rate: 0.14%
```

Run 4: Report of Copa — Data Link



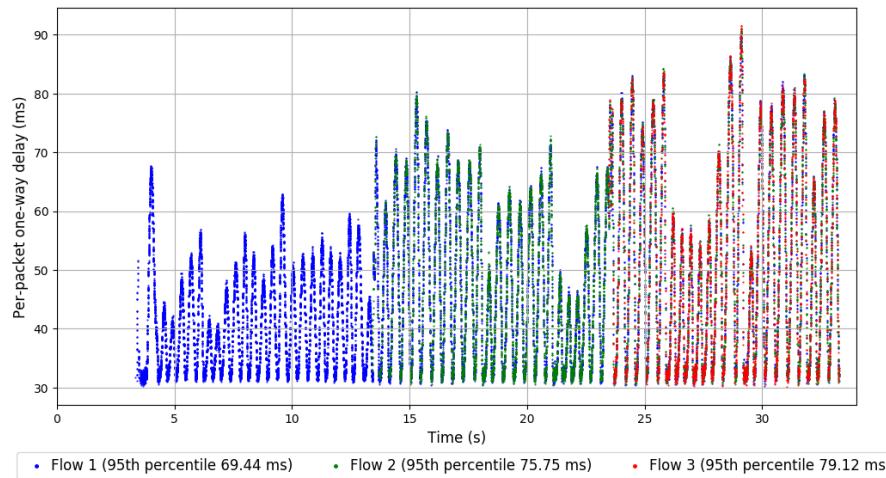
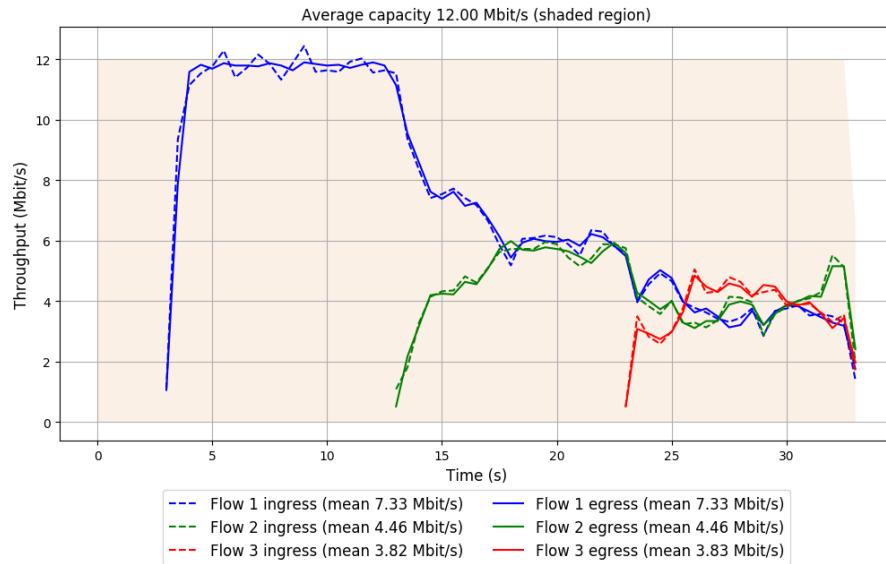
Run 5: Statistics of Copa

Start at: 2018-04-24 16:29:35

End at: 2018-04-24 16:30:05

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.56 Mbit/s (96.4% utilization)
95th percentile per-packet one-way delay: 74.191 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 7.33 Mbit/s
95th percentile per-packet one-way delay: 69.443 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 75.754 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 79.121 ms
Loss rate: 0.34%
```

Run 5: Report of Copa — Data Link



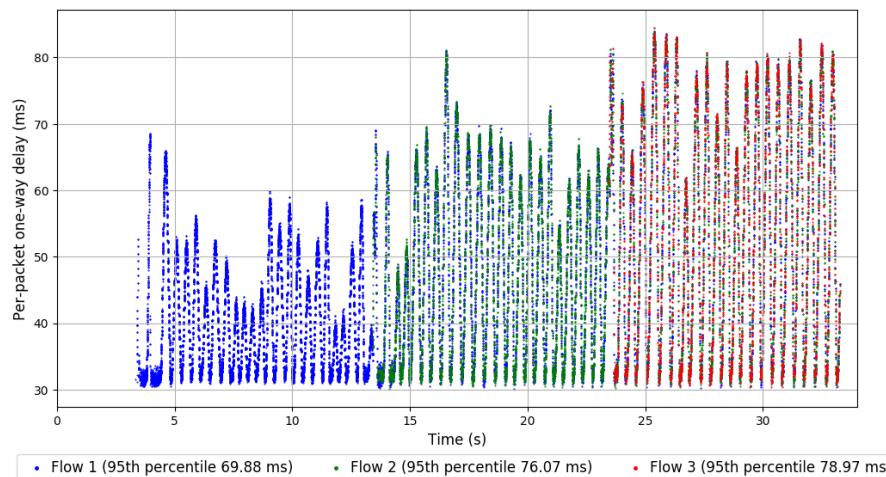
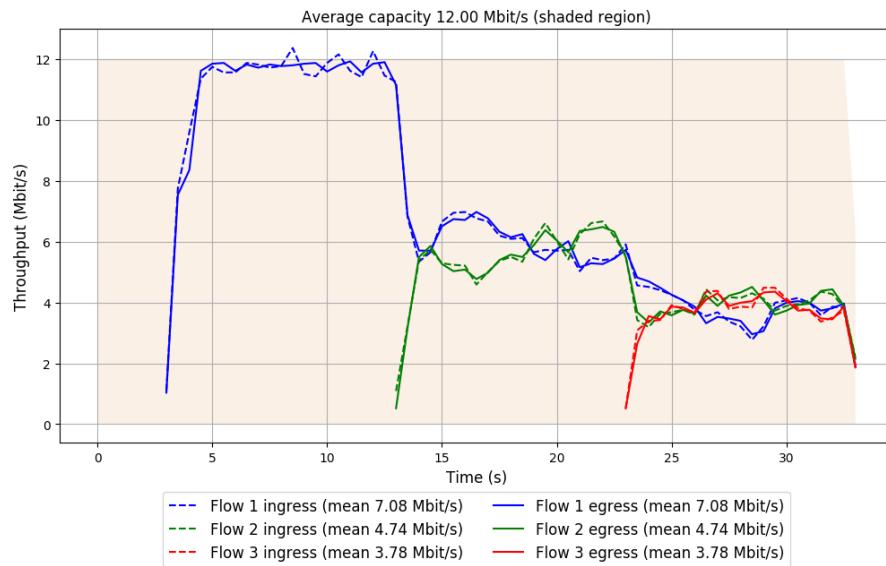
Run 6: Statistics of Copa

Start at: 2018-04-24 16:39:26

End at: 2018-04-24 16:39:56

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.48 Mbit/s (95.7% utilization)
95th percentile per-packet one-way delay: 74.841 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 7.08 Mbit/s
95th percentile per-packet one-way delay: 69.879 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 4.74 Mbit/s
95th percentile per-packet one-way delay: 76.074 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 78.970 ms
Loss rate: 0.59%
```

Run 6: Report of Copa — Data Link



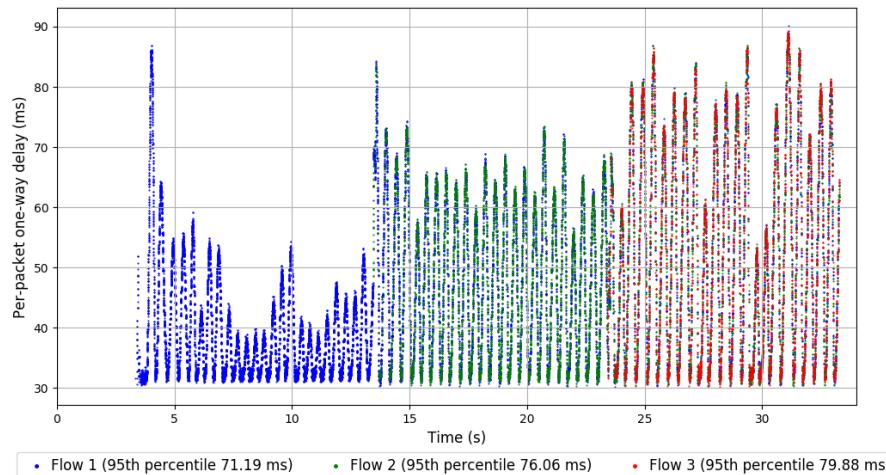
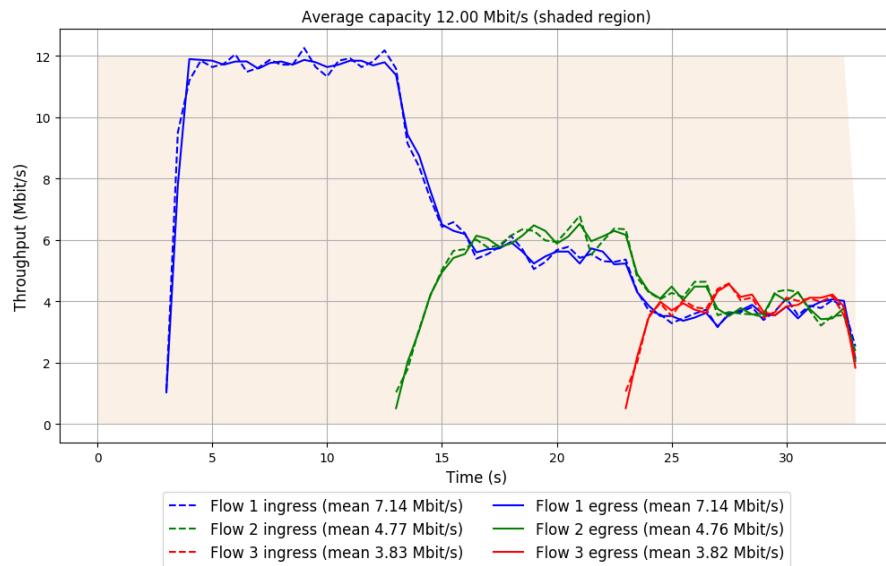
Run 7: Statistics of Copa

Start at: 2018-04-24 16:49:13

End at: 2018-04-24 16:49:43

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.57 Mbit/s (96.4% utilization)
95th percentile per-packet one-way delay: 75.439 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 7.14 Mbit/s
95th percentile per-packet one-way delay: 71.193 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 4.76 Mbit/s
95th percentile per-packet one-way delay: 76.059 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 3.82 Mbit/s
95th percentile per-packet one-way delay: 79.877 ms
Loss rate: 0.72%
```

Run 7: Report of Copa — Data Link



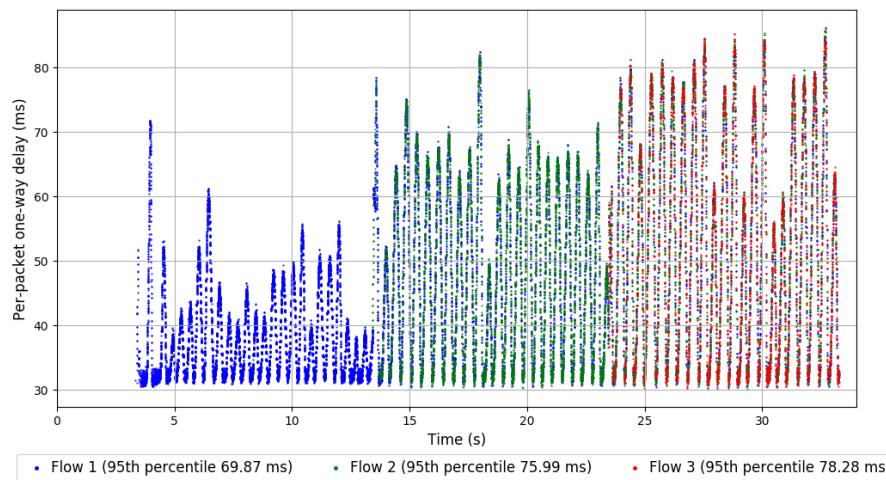
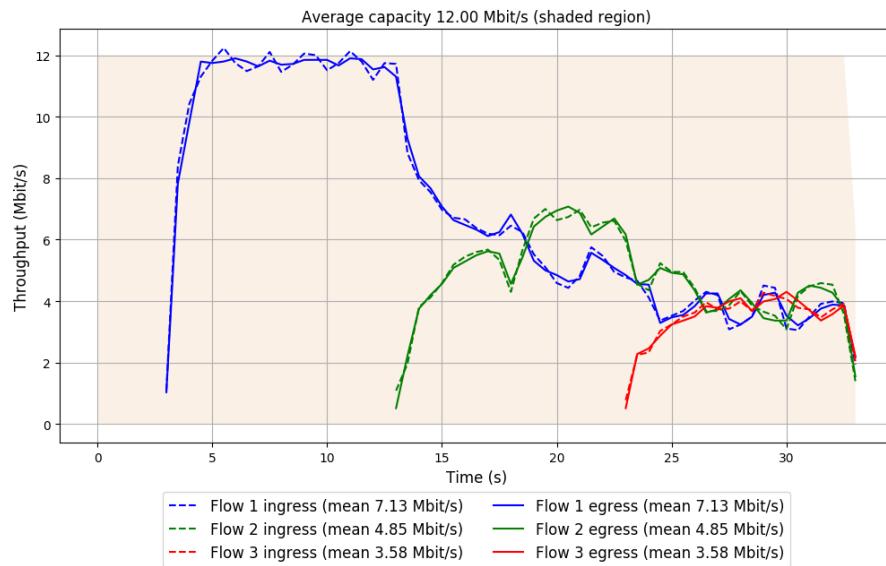
Run 8: Statistics of Copa

Start at: 2018-04-24 16:59:00

End at: 2018-04-24 16:59:30

```
# Below is generated by plot.py at 2018-04-24 17:34:45
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.54 Mbit/s (96.1% utilization)
95th percentile per-packet one-way delay: 74.682 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 7.13 Mbit/s
95th percentile per-packet one-way delay: 69.868 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 75.989 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 78.282 ms
Loss rate: 0.51%
```

Run 8: Report of Copa — Data Link



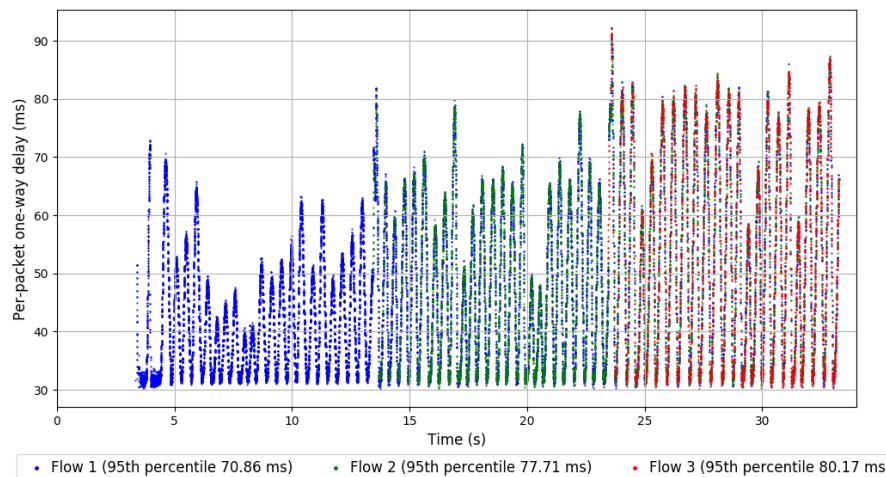
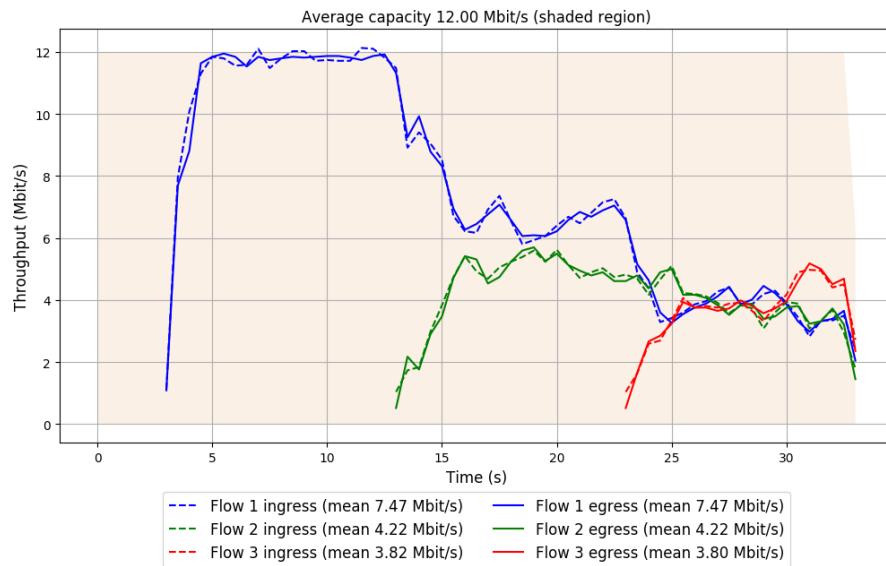
Run 9: Statistics of Copa

Start at: 2018-04-24 17:08:49

End at: 2018-04-24 17:09:19

```
# Below is generated by plot.py at 2018-04-24 17:34:46
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.53 Mbit/s (96.1% utilization)
95th percentile per-packet one-way delay: 76.260 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 70.862 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 77.710 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 3.80 Mbit/s
95th percentile per-packet one-way delay: 80.167 ms
Loss rate: 0.92%
```

Run 9: Report of Copa — Data Link



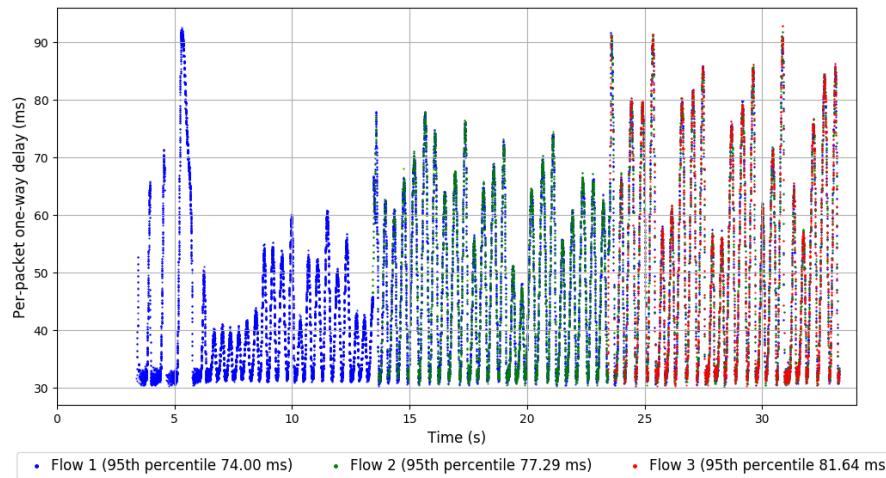
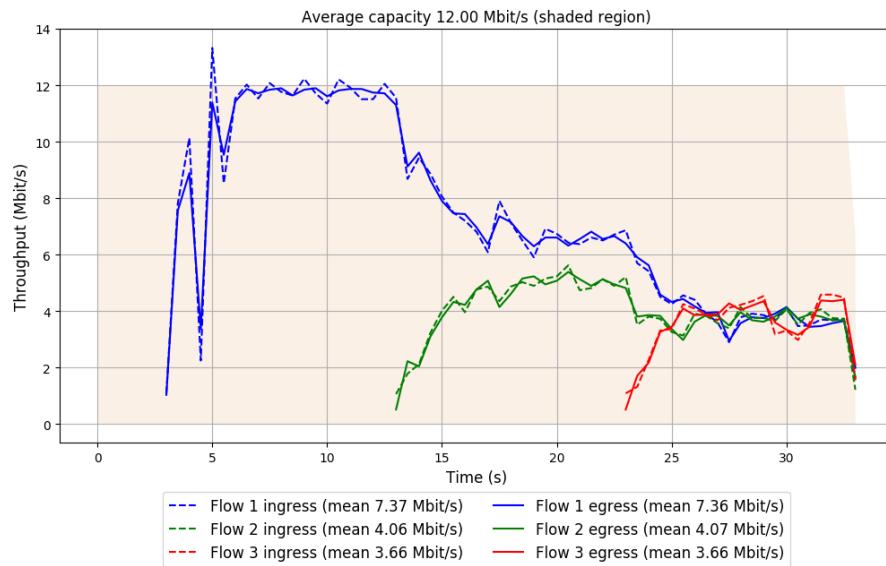
Run 10: Statistics of Copa

Start at: 2018-04-24 17:18:35

End at: 2018-04-24 17:19:05

```
# Below is generated by plot.py at 2018-04-24 17:34:47
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.28 Mbit/s (94.0% utilization)
95th percentile per-packet one-way delay: 76.655 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 7.36 Mbit/s
95th percentile per-packet one-way delay: 74.003 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 77.286 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 3.66 Mbit/s
95th percentile per-packet one-way delay: 81.644 ms
Loss rate: 0.39%
```

Run 10: Report of Copa — Data Link

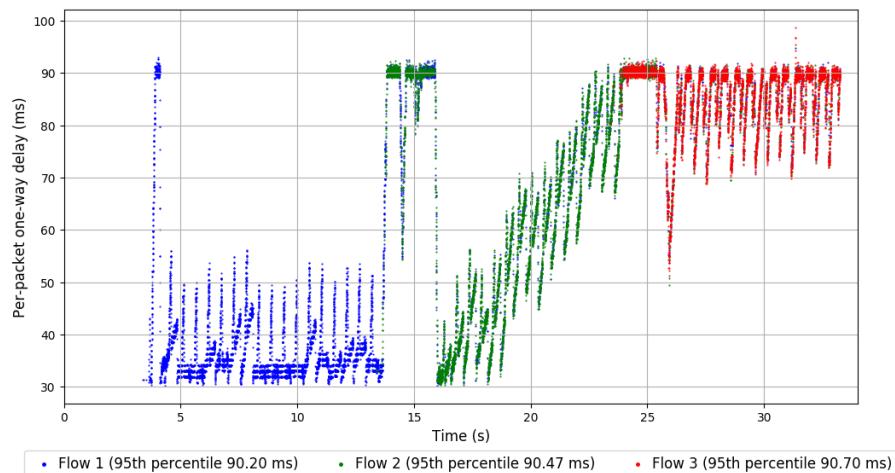
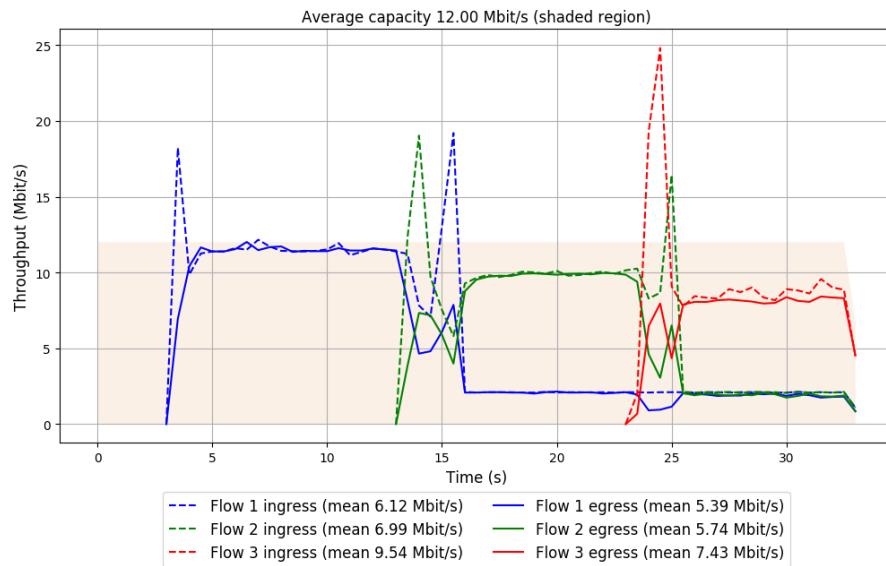


```
Run 1: Statistics of FillP

Start at: 2018-04-24 15:52:45
End at: 2018-04-24 15:53:15

# Below is generated by plot.py at 2018-04-24 17:34:47
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.66 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 90.445 ms
Loss rate: 16.47%
-- Flow 1:
Average throughput: 5.39 Mbit/s
95th percentile per-packet one-way delay: 90.196 ms
Loss rate: 11.95%
-- Flow 2:
Average throughput: 5.74 Mbit/s
95th percentile per-packet one-way delay: 90.471 ms
Loss rate: 18.10%
-- Flow 3:
Average throughput: 7.43 Mbit/s
95th percentile per-packet one-way delay: 90.701 ms
Loss rate: 22.81%
```

Run 1: Report of FillP — Data Link



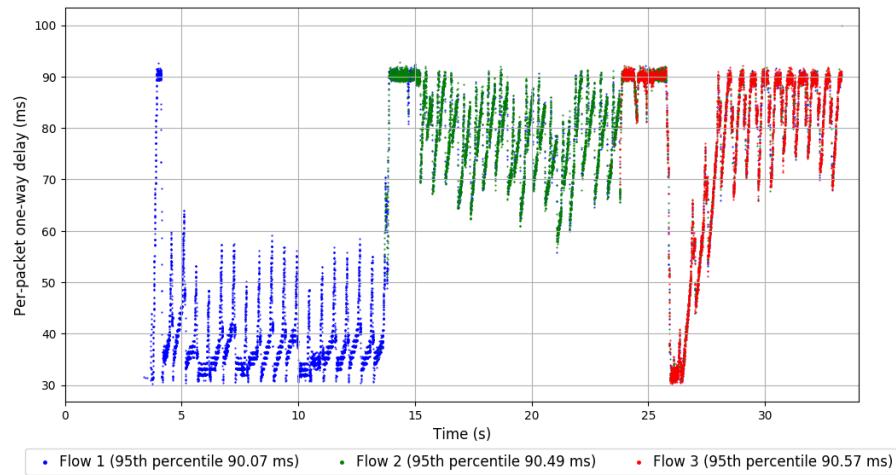
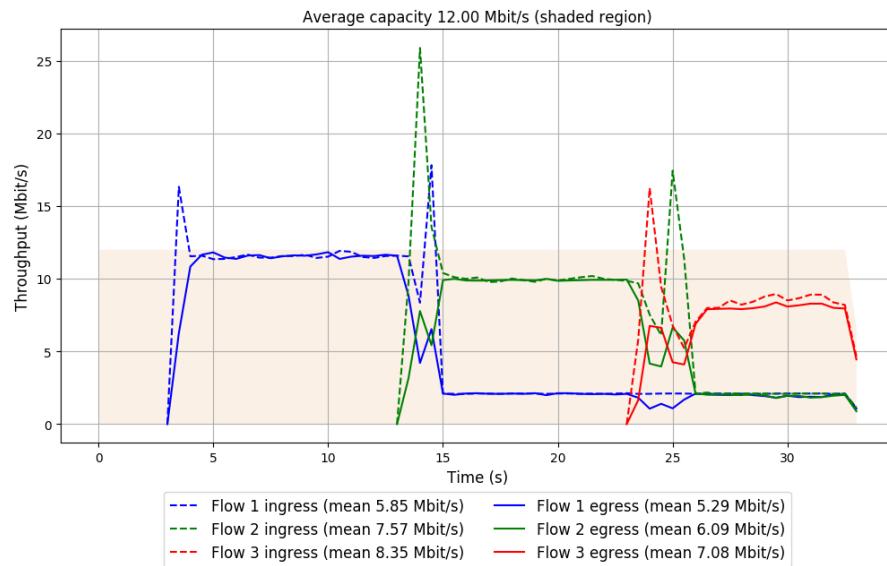
Run 2: Statistics of FillP

Start at: 2018-04-24 16:02:31

End at: 2018-04-24 16:03:01

```
# Below is generated by plot.py at 2018-04-24 17:34:47
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.68 Mbit/s (97.3% utilization)
95th percentile per-packet one-way delay: 90.374 ms
Loss rate: 14.58%
-- Flow 1:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 90.068 ms
Loss rate: 9.67%
-- Flow 2:
Average throughput: 6.09 Mbit/s
95th percentile per-packet one-way delay: 90.486 ms
Loss rate: 19.67%
-- Flow 3:
Average throughput: 7.08 Mbit/s
95th percentile per-packet one-way delay: 90.572 ms
Loss rate: 15.67%
```

## Run 2: Report of FillP — Data Link



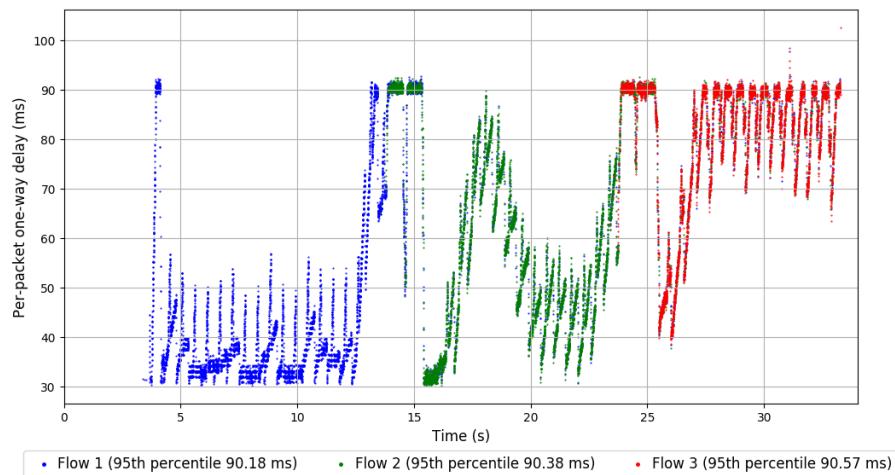
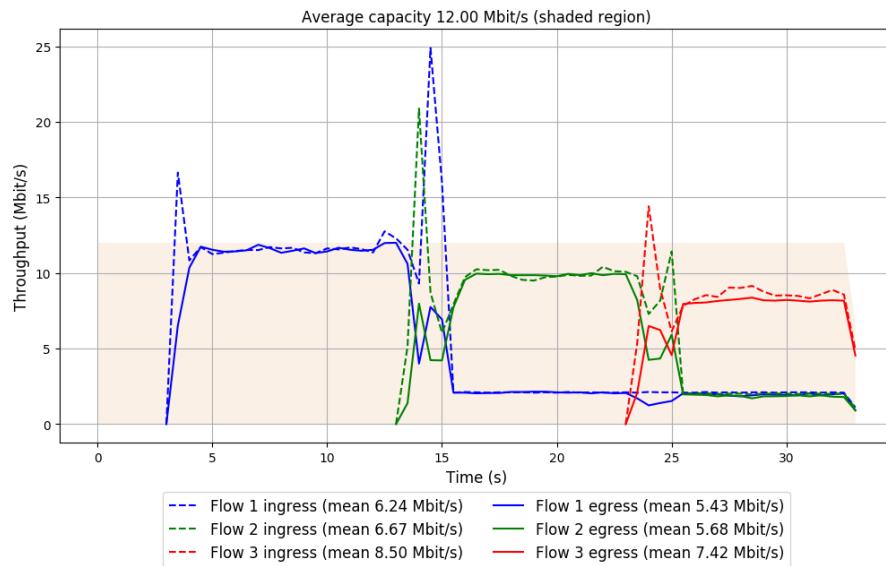
Run 3: Statistics of FillP

Start at: 2018-04-24 16:12:18

End at: 2018-04-24 16:12:48

```
# Below is generated by plot.py at 2018-04-24 17:34:47
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.64 Mbit/s (97.0% utilization)
95th percentile per-packet one-way delay: 90.362 ms
Loss rate: 13.78%
-- Flow 1:
Average throughput: 5.43 Mbit/s
95th percentile per-packet one-way delay: 90.182 ms
Loss rate: 13.07%
-- Flow 2:
Average throughput: 5.68 Mbit/s
95th percentile per-packet one-way delay: 90.379 ms
Loss rate: 15.14%
-- Flow 3:
Average throughput: 7.42 Mbit/s
95th percentile per-packet one-way delay: 90.571 ms
Loss rate: 13.22%
```

Run 3: Report of FillP — Data Link



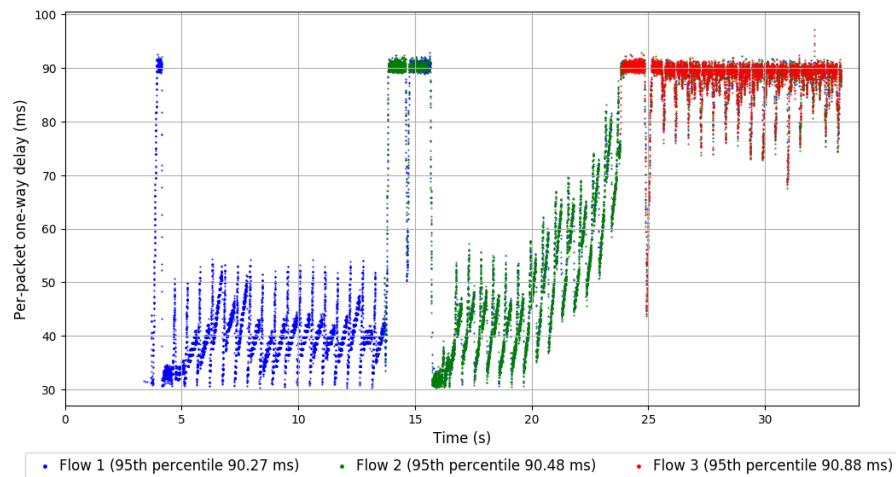
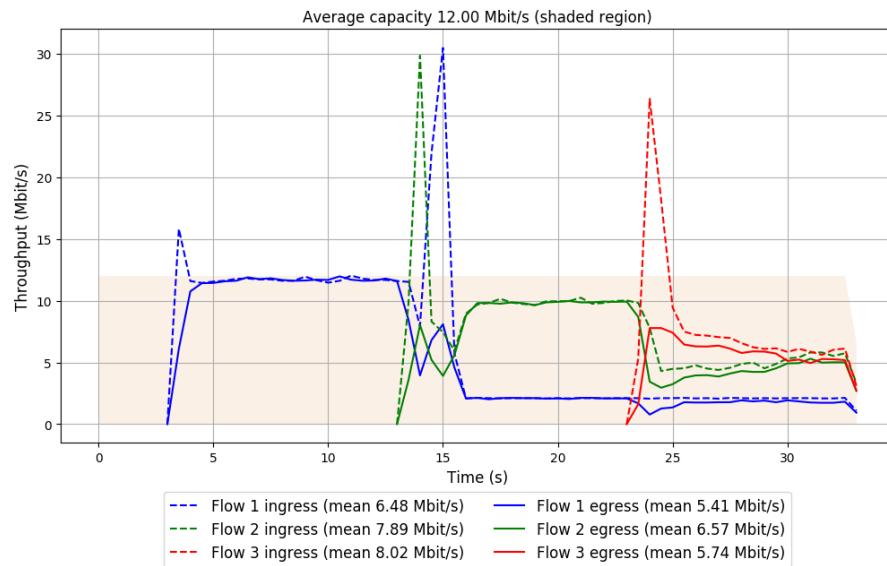
Run 4: Statistics of FillP

Start at: 2018-04-24 16:22:06

End at: 2018-04-24 16:22:36

```
# Below is generated by plot.py at 2018-04-24 17:34:59
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.67 Mbit/s (97.2% utilization)
95th percentile per-packet one-way delay: 90.495 ms
Loss rate: 18.97%
-- Flow 1:
Average throughput: 5.41 Mbit/s
95th percentile per-packet one-way delay: 90.271 ms
Loss rate: 16.63%
-- Flow 2:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 90.483 ms
Loss rate: 16.89%
-- Flow 3:
Average throughput: 5.74 Mbit/s
95th percentile per-packet one-way delay: 90.880 ms
Loss rate: 28.82%
```

Run 4: Report of FillP — Data Link



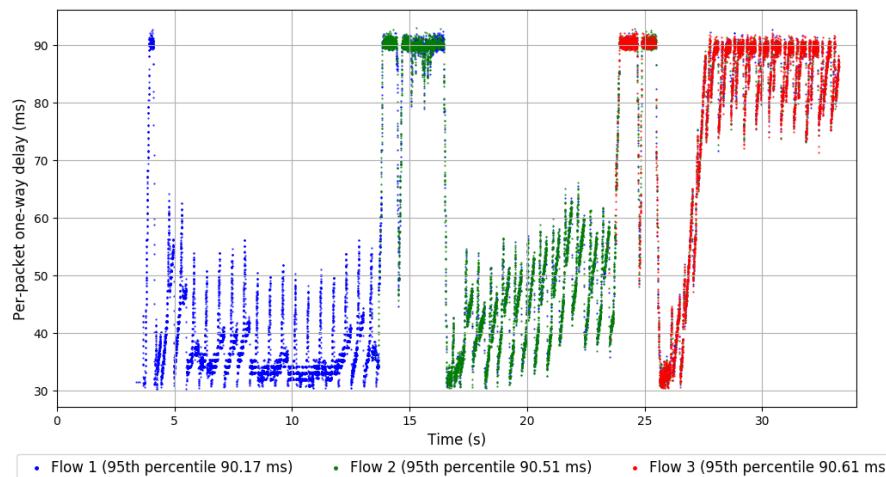
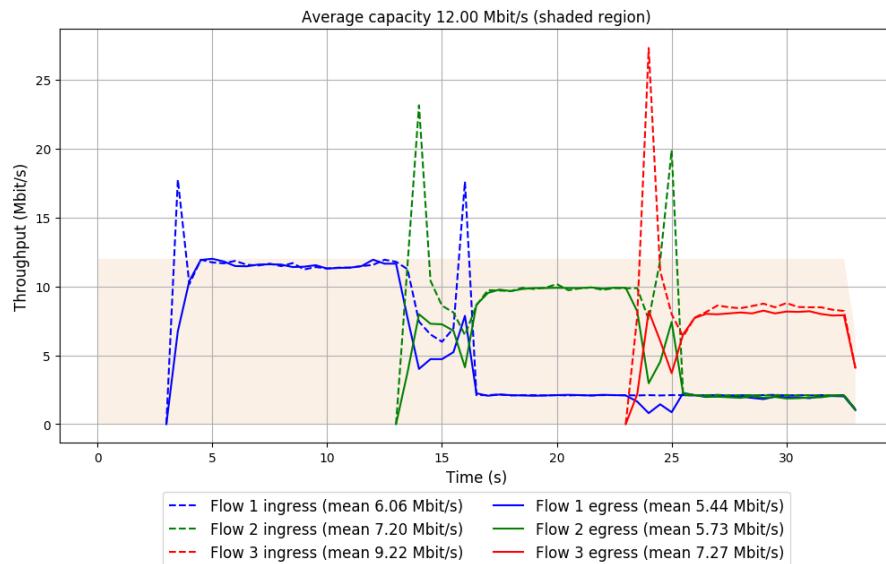
Run 5: Statistics of FillP

Start at: 2018-04-24 16:31:54

End at: 2018-04-24 16:32:24

```
# Below is generated by plot.py at 2018-04-24 17:35:05
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.65 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 90.428 ms
Loss rate: 16.33%
-- Flow 1:
Average throughput: 5.44 Mbit/s
95th percentile per-packet one-way delay: 90.172 ms
Loss rate: 10.32%
-- Flow 2:
Average throughput: 5.73 Mbit/s
95th percentile per-packet one-way delay: 90.508 ms
Loss rate: 20.58%
-- Flow 3:
Average throughput: 7.27 Mbit/s
95th percentile per-packet one-way delay: 90.612 ms
Loss rate: 21.58%
```

Run 5: Report of FillP — Data Link



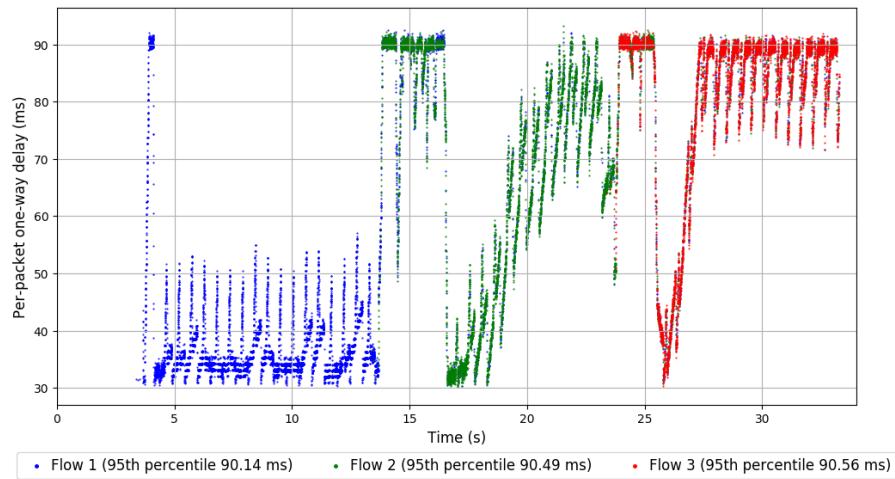
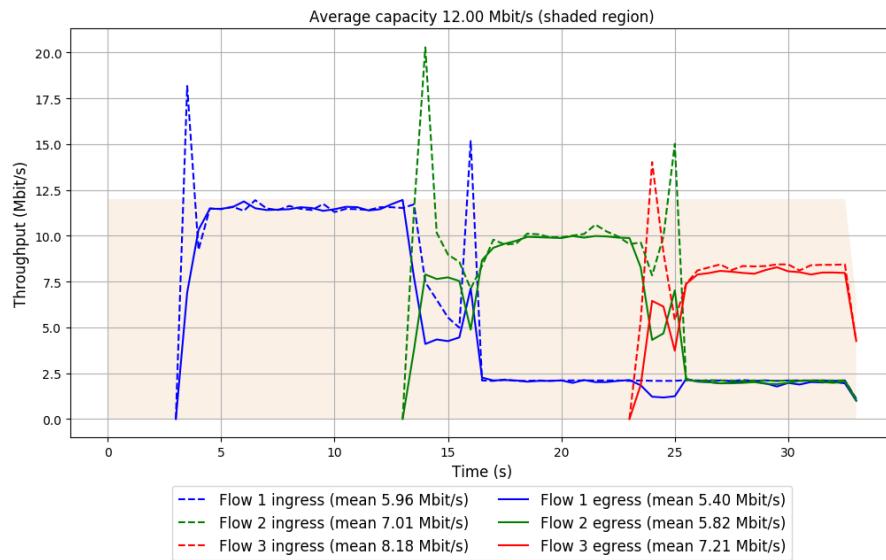
Run 6: Statistics of FillP

Start at: 2018-04-24 16:41:44

End at: 2018-04-24 16:42:14

```
# Below is generated by plot.py at 2018-04-24 17:35:05
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.65 Mbit/s (97.0% utilization)
95th percentile per-packet one-way delay: 90.374 ms
Loss rate: 12.76%
-- Flow 1:
Average throughput: 5.40 Mbit/s
95th percentile per-packet one-way delay: 90.143 ms
Loss rate: 9.51%
-- Flow 2:
Average throughput: 5.82 Mbit/s
95th percentile per-packet one-way delay: 90.491 ms
Loss rate: 17.11%
-- Flow 3:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 90.559 ms
Loss rate: 12.38%
```

Run 6: Report of FillP — Data Link



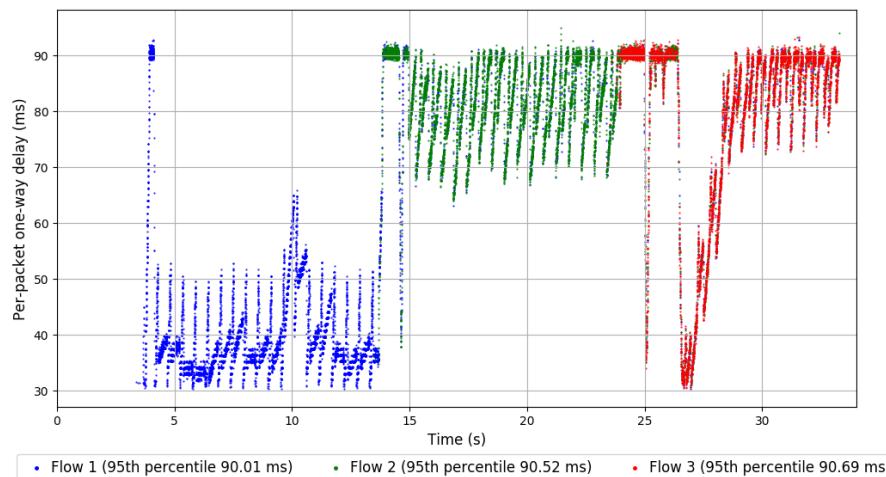
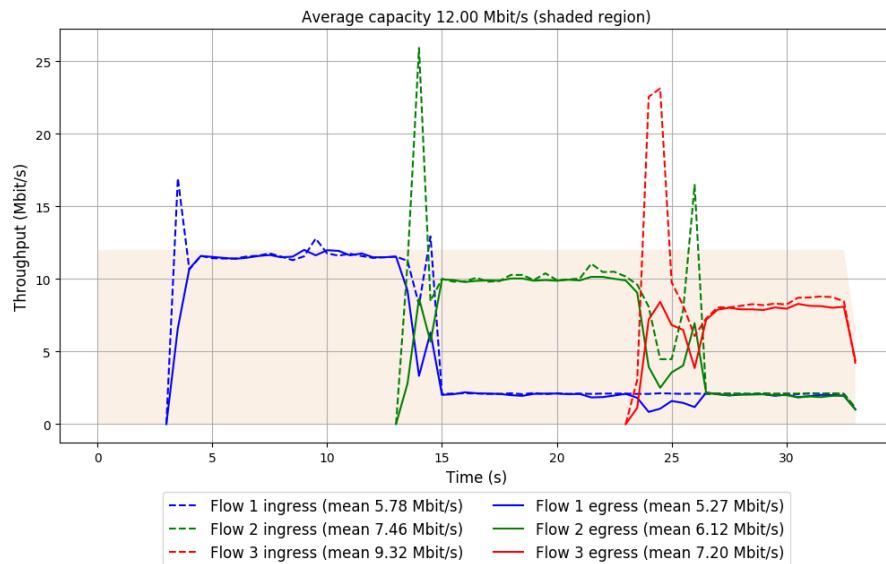
Run 7: Statistics of FillP

Start at: 2018-04-24 16:51:31

End at: 2018-04-24 16:52:01

```
# Below is generated by plot.py at 2018-04-24 17:35:08
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.71 Mbit/s (97.6% utilization)
95th percentile per-packet one-way delay: 90.407 ms
Loss rate: 15.43%
-- Flow 1:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 90.011 ms
Loss rate: 8.86%
-- Flow 2:
Average throughput: 6.12 Mbit/s
95th percentile per-packet one-way delay: 90.522 ms
Loss rate: 18.17%
-- Flow 3:
Average throughput: 7.20 Mbit/s
95th percentile per-packet one-way delay: 90.693 ms
Loss rate: 23.32%
```

Run 7: Report of FillP — Data Link



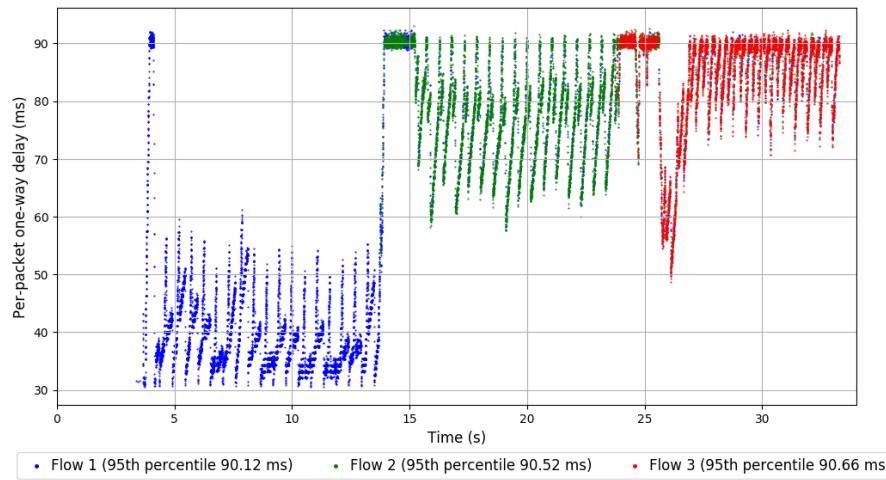
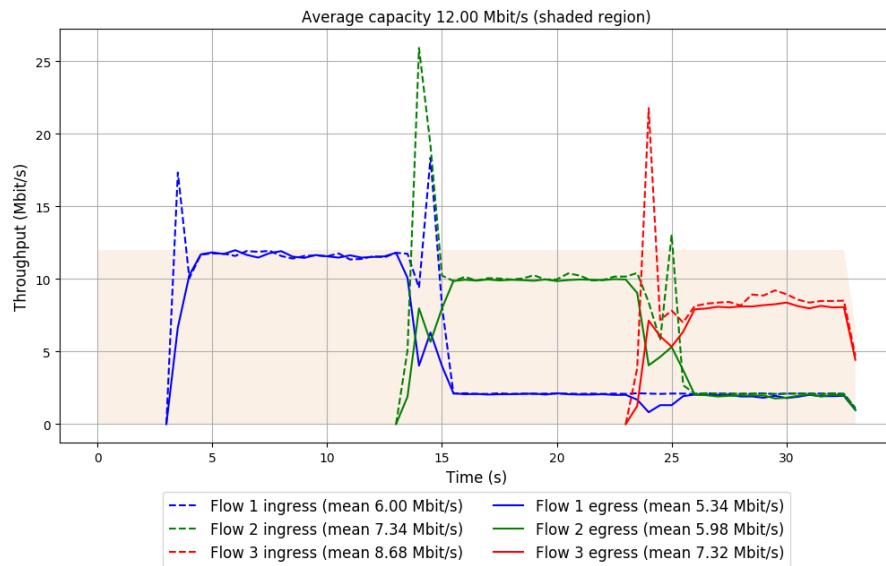
Run 8: Statistics of FillP

Start at: 2018-04-24 17:01:18

End at: 2018-04-24 17:01:48

```
# Below is generated by plot.py at 2018-04-24 17:35:09
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.72 Mbit/s (97.7% utilization)
95th percentile per-packet one-way delay: 90.436 ms
Loss rate: 14.91%
-- Flow 1:
Average throughput: 5.34 Mbit/s
95th percentile per-packet one-way delay: 90.123 ms
Loss rate: 11.11%
-- Flow 2:
Average throughput: 5.98 Mbit/s
95th percentile per-packet one-way delay: 90.522 ms
Loss rate: 18.76%
-- Flow 3:
Average throughput: 7.32 Mbit/s
95th percentile per-packet one-way delay: 90.656 ms
Loss rate: 16.33%
```

Run 8: Report of FillP — Data Link



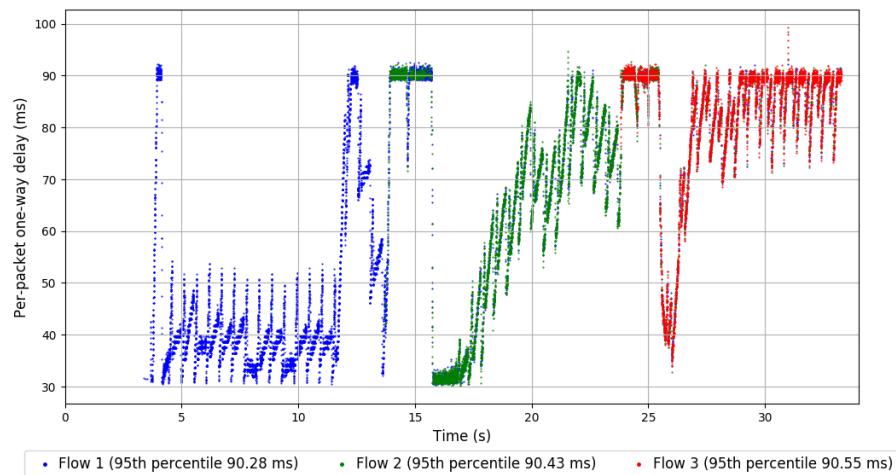
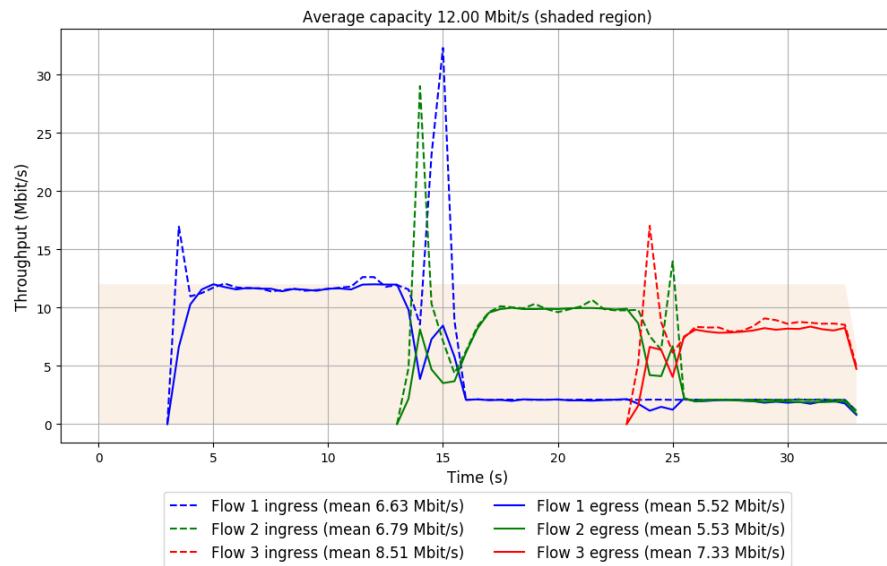
Run 9: Statistics of FillP

Start at: 2018-04-24 17:11:07

End at: 2018-04-24 17:11:37

```
# Below is generated by plot.py at 2018-04-24 17:35:11
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.60 Mbit/s (96.7% utilization)
95th percentile per-packet one-way delay: 90.412 ms
Loss rate: 17.01%
-- Flow 1:
Average throughput: 5.52 Mbit/s
95th percentile per-packet one-way delay: 90.281 ms
Loss rate: 16.84%
-- Flow 2:
Average throughput: 5.53 Mbit/s
95th percentile per-packet one-way delay: 90.431 ms
Loss rate: 18.81%
-- Flow 3:
Average throughput: 7.33 Mbit/s
95th percentile per-packet one-way delay: 90.545 ms
Loss rate: 14.54%
```

Run 9: Report of FillP — Data Link



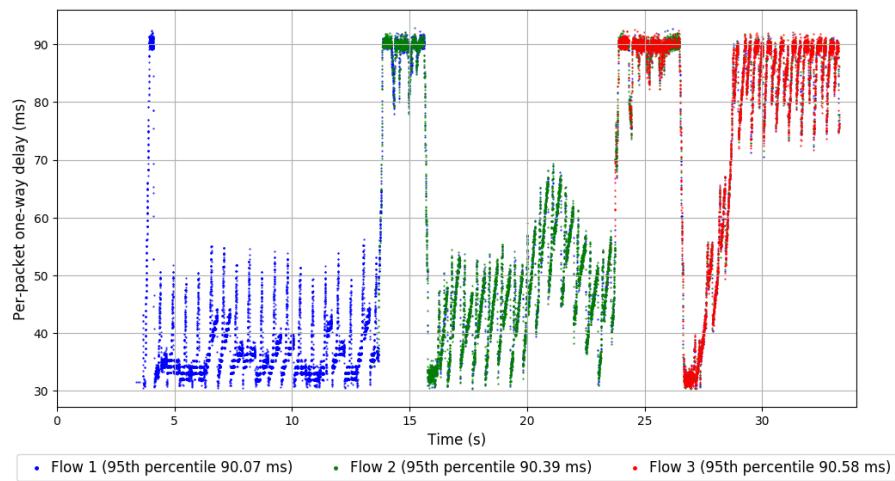
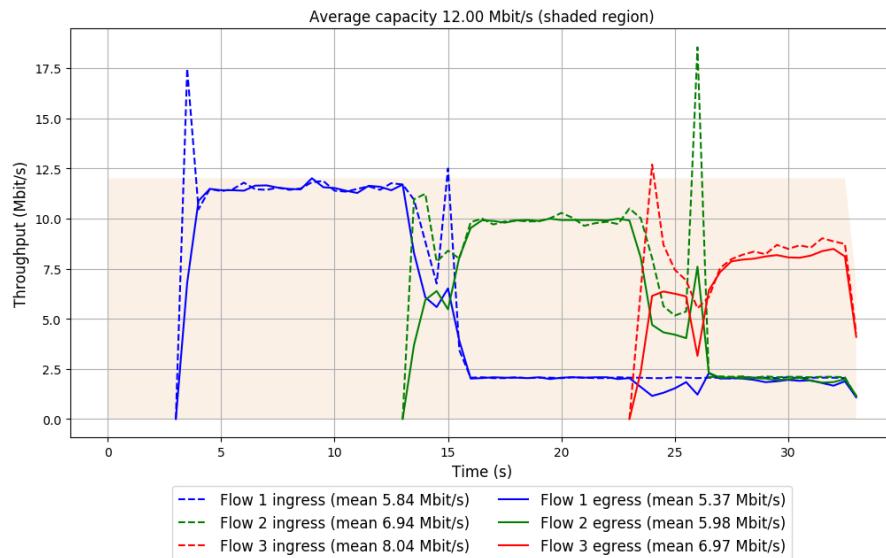
Run 10: Statistics of FillP

Start at: 2018-04-24 17:20:53

End at: 2018-04-24 17:21:23

```
# Below is generated by plot.py at 2018-04-24 17:35:11
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.65 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 90.325 ms
Loss rate: 11.22%
-- Flow 1:
Average throughput: 5.37 Mbit/s
95th percentile per-packet one-way delay: 90.069 ms
Loss rate: 8.02%
-- Flow 2:
Average throughput: 5.98 Mbit/s
95th percentile per-packet one-way delay: 90.392 ms
Loss rate: 13.87%
-- Flow 3:
Average throughput: 6.97 Mbit/s
95th percentile per-packet one-way delay: 90.582 ms
Loss rate: 13.66%
```

Run 10: Report of FillP — Data Link

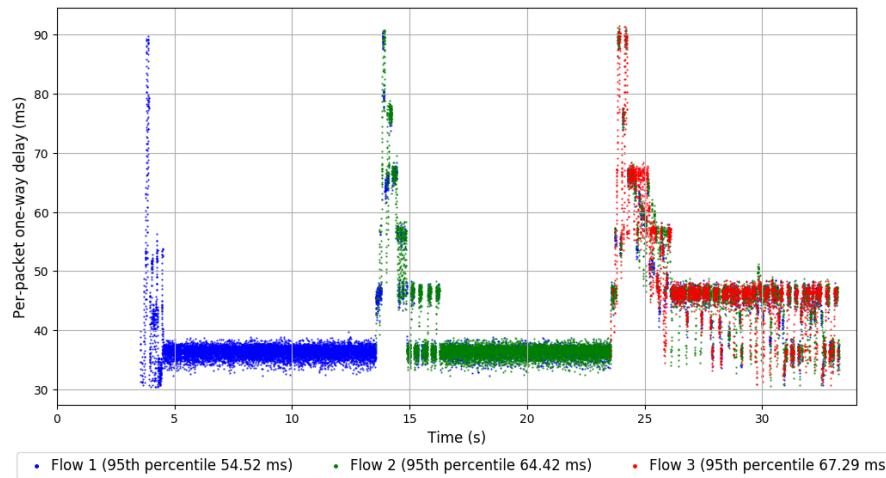
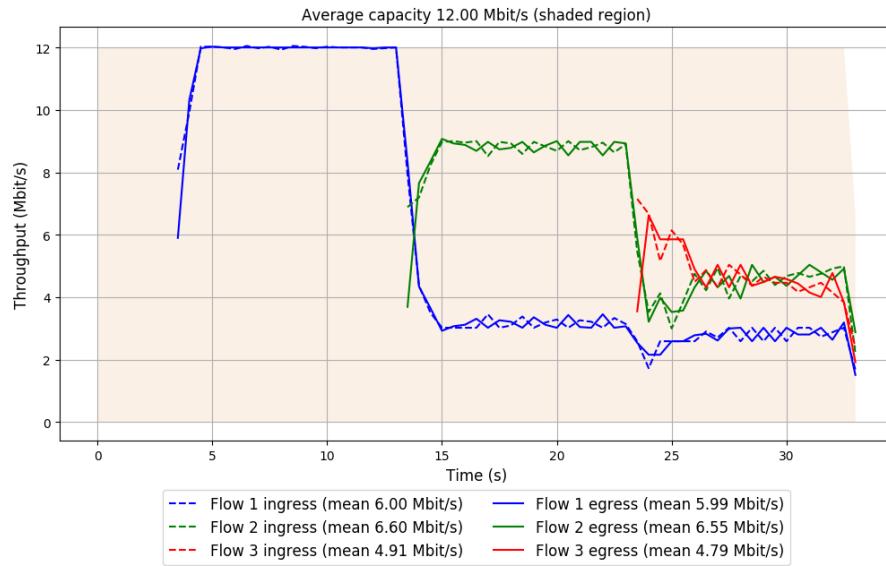


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-24 15:59:38
End at: 2018-04-24 16:00:08

# Below is generated by plot.py at 2018-04-24 17:35:11
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.88 Mbit/s (99.0% utilization)
95th percentile per-packet one-way delay: 64.335 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 5.99 Mbit/s
95th percentile per-packet one-way delay: 54.523 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 64.423 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 67.286 ms
Loss rate: 3.11%
```

Run 1: Report of Indigo-1-32 — Data Link



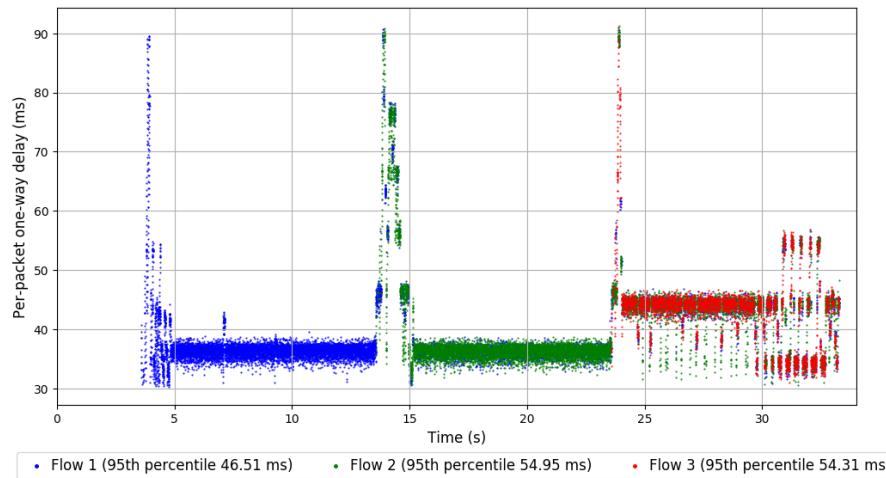
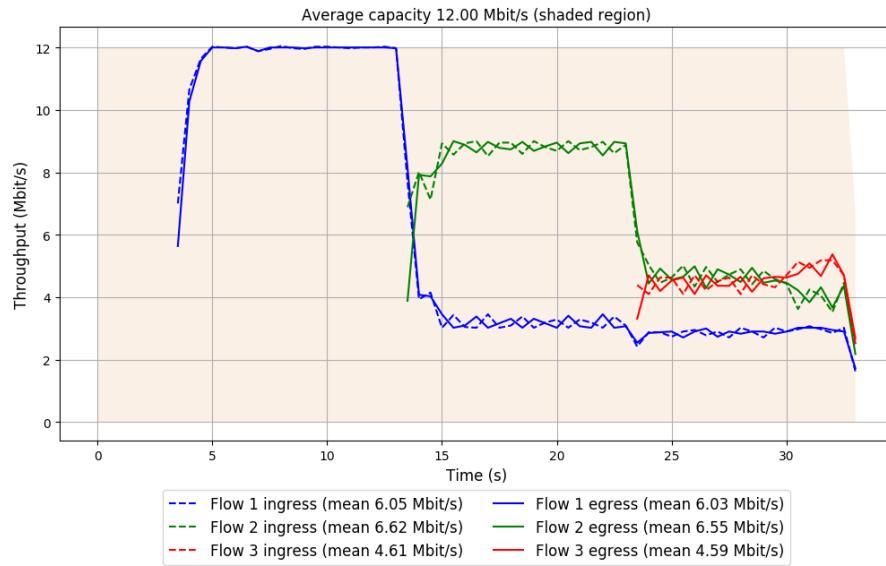
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-24 16:09:25

End at: 2018-04-24 16:09:55

```
# Below is generated by plot.py at 2018-04-24 17:35:21
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.88 Mbit/s (99.0% utilization)
95th percentile per-packet one-way delay: 52.985 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 6.03 Mbit/s
95th percentile per-packet one-way delay: 46.514 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 54.953 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 4.59 Mbit/s
95th percentile per-packet one-way delay: 54.308 ms
Loss rate: 0.99%
```

Run 2: Report of Indigo-1-32 — Data Link



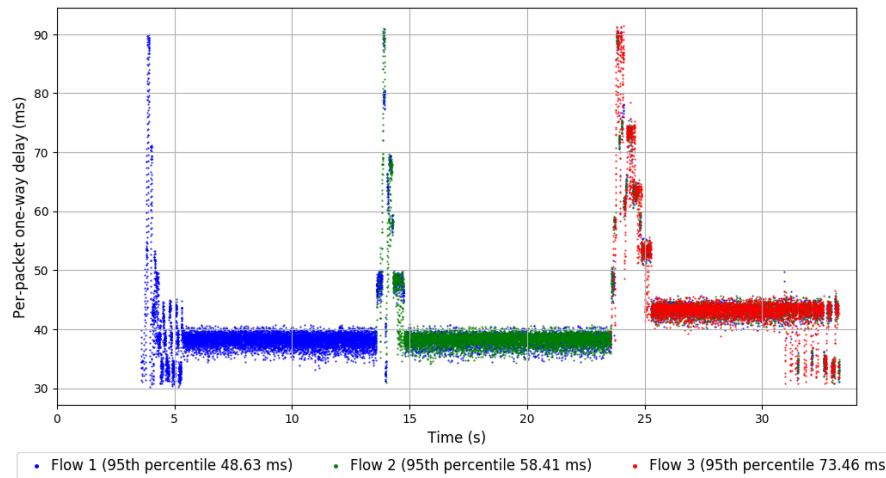
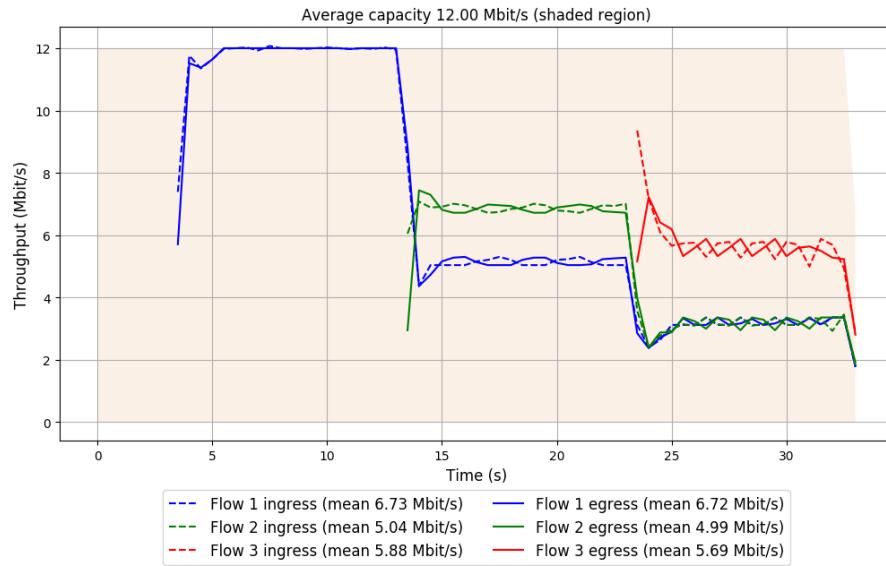
Run 3: Statistics of Indigo-1-32

Start at: 2018-04-24 16:19:13

End at: 2018-04-24 16:19:43

```
# Below is generated by plot.py at 2018-04-24 17:35:27
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.88 Mbit/s (99.0% utilization)
95th percentile per-packet one-way delay: 58.603 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 6.72 Mbit/s
95th percentile per-packet one-way delay: 48.632 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 4.99 Mbit/s
95th percentile per-packet one-way delay: 58.412 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 5.69 Mbit/s
95th percentile per-packet one-way delay: 73.459 ms
Loss rate: 3.27%
```

Run 3: Report of Indigo-1-32 — Data Link



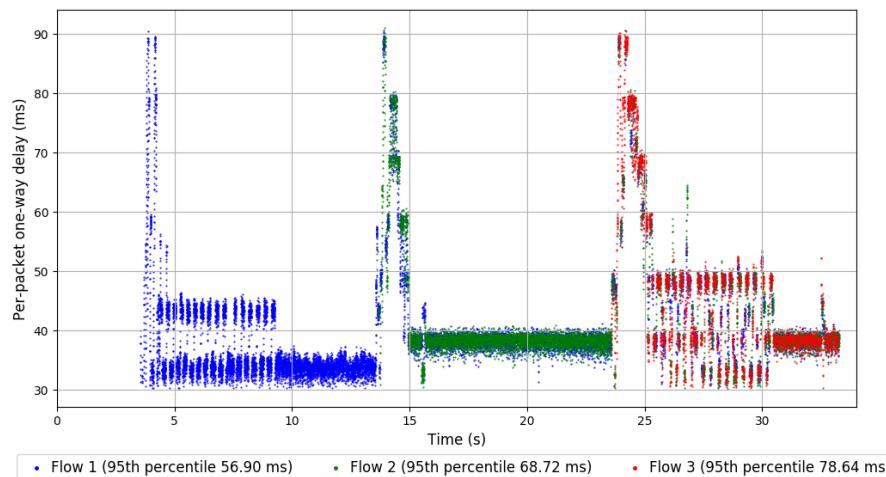
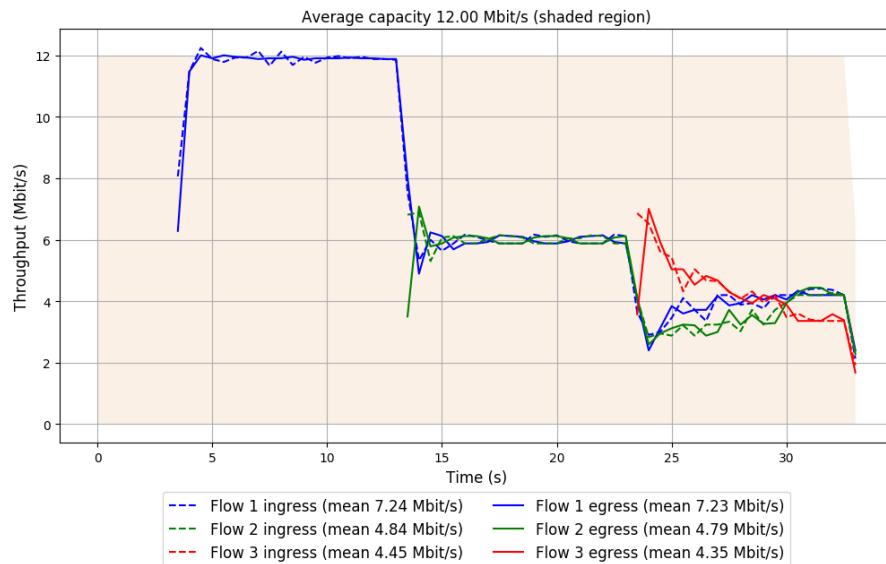
Run 4: Statistics of Indigo-1-32

Start at: 2018-04-24 16:29:01

End at: 2018-04-24 16:29:31

```
# Below is generated by plot.py at 2018-04-24 17:35:28
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.81 Mbit/s (98.4% utilization)
95th percentile per-packet one-way delay: 67.828 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 7.23 Mbit/s
95th percentile per-packet one-way delay: 56.903 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 68.718 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 78.639 ms
Loss rate: 3.05%
```

Run 4: Report of Indigo-1-32 — Data Link



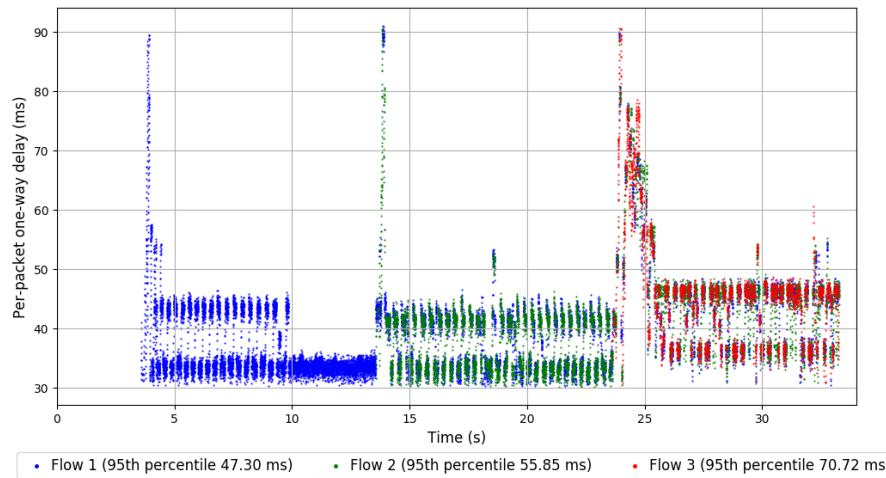
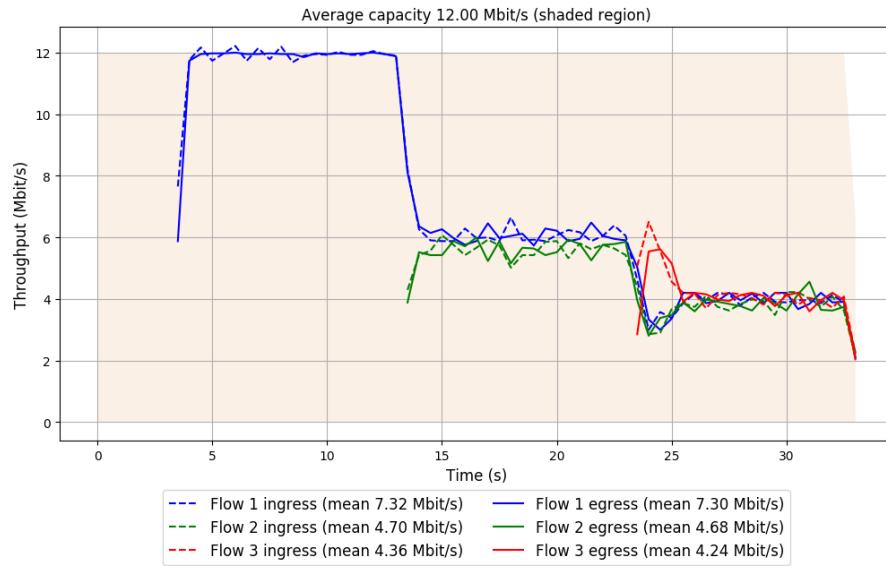
Run 5: Statistics of Indigo-1-32

Start at: 2018-04-24 16:38:51

End at: 2018-04-24 16:39:21

```
# Below is generated by plot.py at 2018-04-24 17:35:31
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.78 Mbit/s (98.2% utilization)
95th percentile per-packet one-way delay: 54.618 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 7.30 Mbit/s
95th percentile per-packet one-way delay: 47.301 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 4.68 Mbit/s
95th percentile per-packet one-way delay: 55.849 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 70.715 ms
Loss rate: 3.10%
```

Run 5: Report of Indigo-1-32 — Data Link



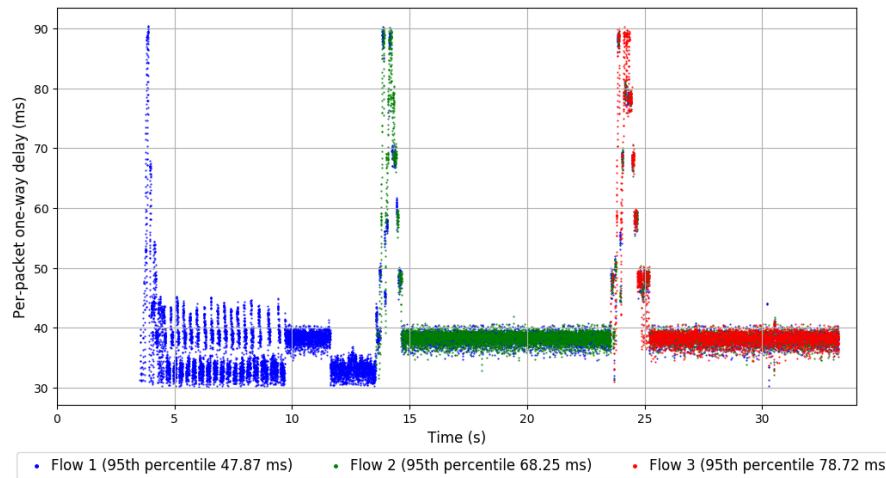
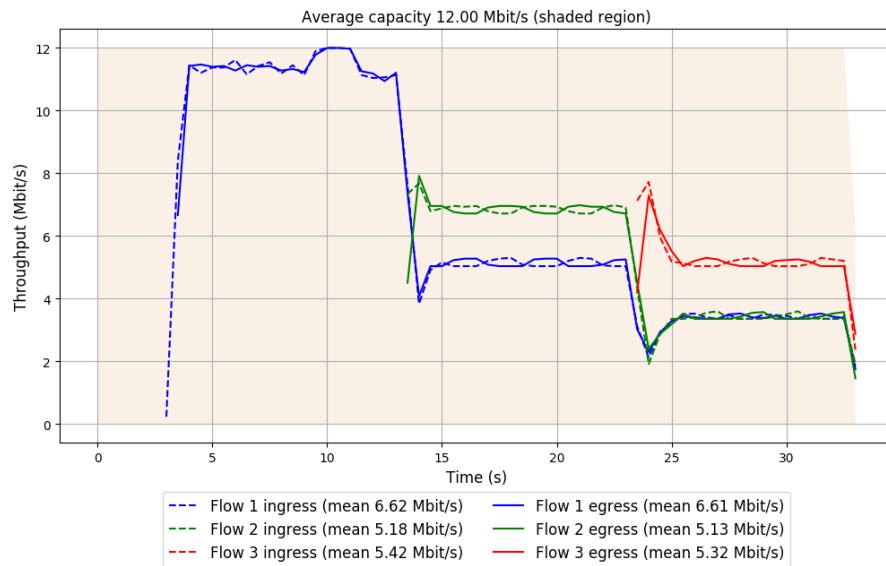
Run 6: Statistics of Indigo-1-32

Start at: 2018-04-24 16:48:38

End at: 2018-04-24 16:49:08

```
# Below is generated by plot.py at 2018-04-24 17:35:31
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.74 Mbit/s (97.8% utilization)
95th percentile per-packet one-way delay: 58.435 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 6.61 Mbit/s
95th percentile per-packet one-way delay: 47.874 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 5.13 Mbit/s
95th percentile per-packet one-way delay: 68.250 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 5.32 Mbit/s
95th percentile per-packet one-way delay: 78.719 ms
Loss rate: 2.25%
```

Run 6: Report of Indigo-1-32 — Data Link



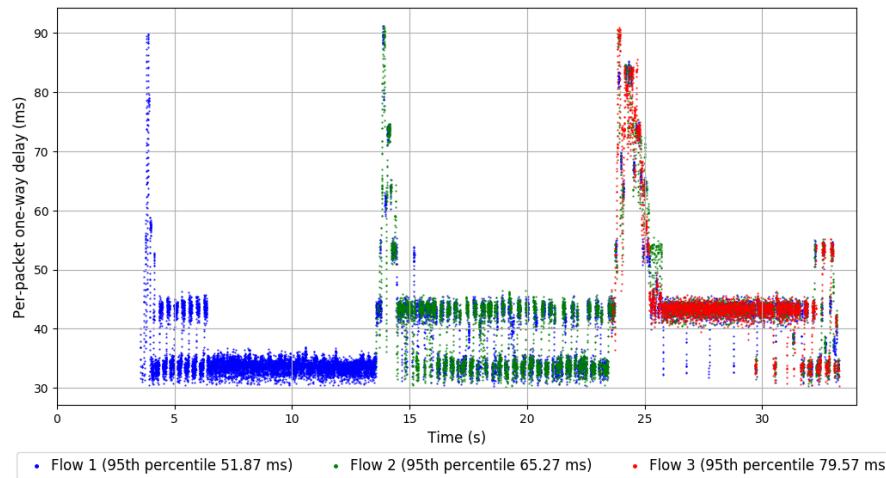
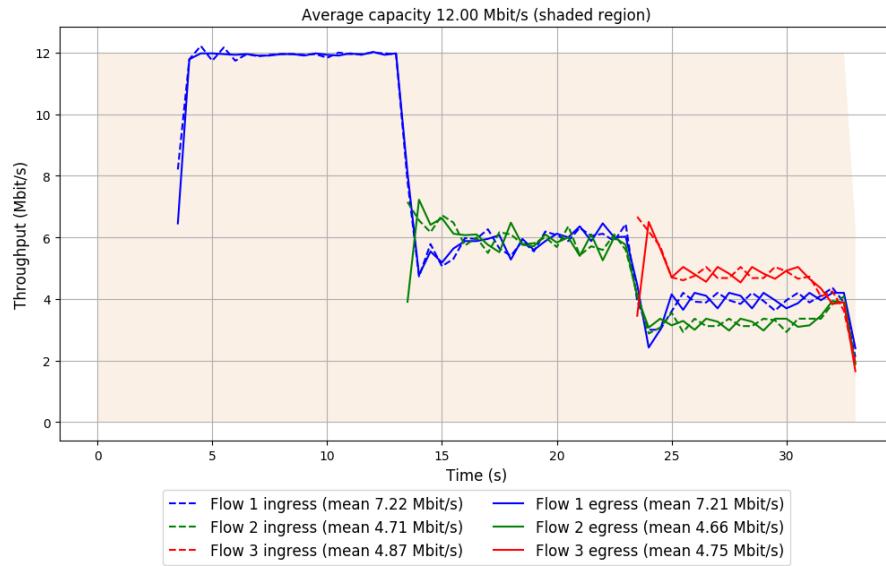
Run 7: Statistics of Indigo-1-32

Start at: 2018-04-24 16:58:25

End at: 2018-04-24 16:58:55

```
# Below is generated by plot.py at 2018-04-24 17:35:32
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.84 Mbit/s (98.7% utilization)
95th percentile per-packet one-way delay: 63.109 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 51.866 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 4.66 Mbit/s
95th percentile per-packet one-way delay: 65.272 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 4.75 Mbit/s
95th percentile per-packet one-way delay: 79.568 ms
Loss rate: 2.82%
```

Run 7: Report of Indigo-1-32 — Data Link



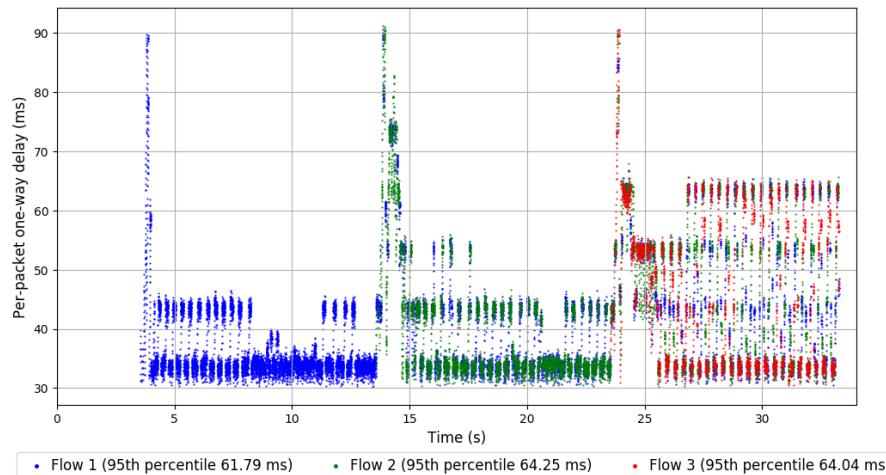
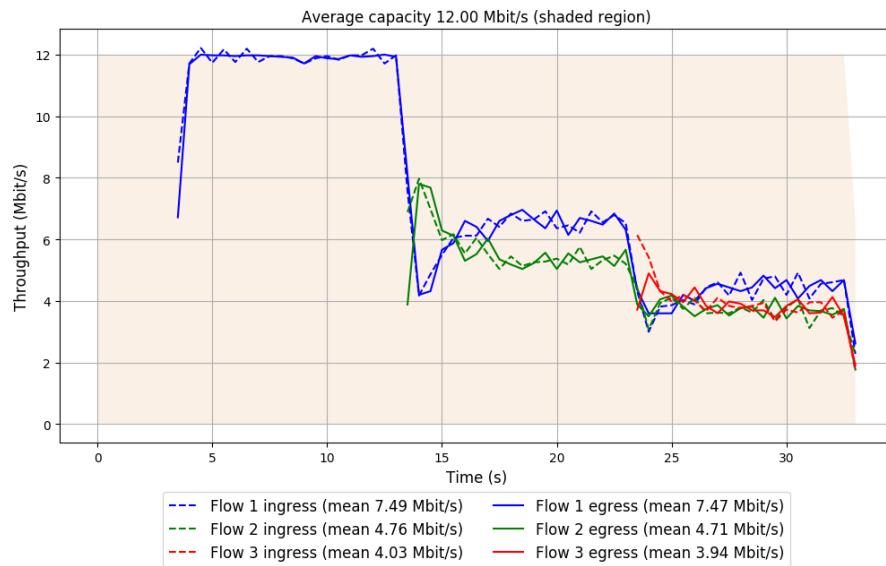
Run 8: Statistics of Indigo-1-32

Start at: 2018-04-24 17:08:14

End at: 2018-04-24 17:08:44

```
# Below is generated by plot.py at 2018-04-24 17:35:33
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.87 Mbit/s (98.9% utilization)
95th percentile per-packet one-way delay: 63.519 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 61.786 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 4.71 Mbit/s
95th percentile per-packet one-way delay: 64.253 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 64.038 ms
Loss rate: 2.90%
```

Run 8: Report of Indigo-1-32 — Data Link



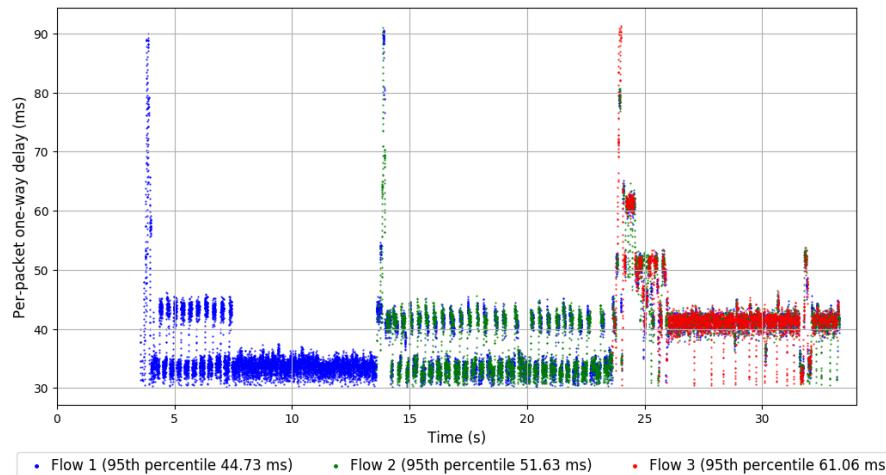
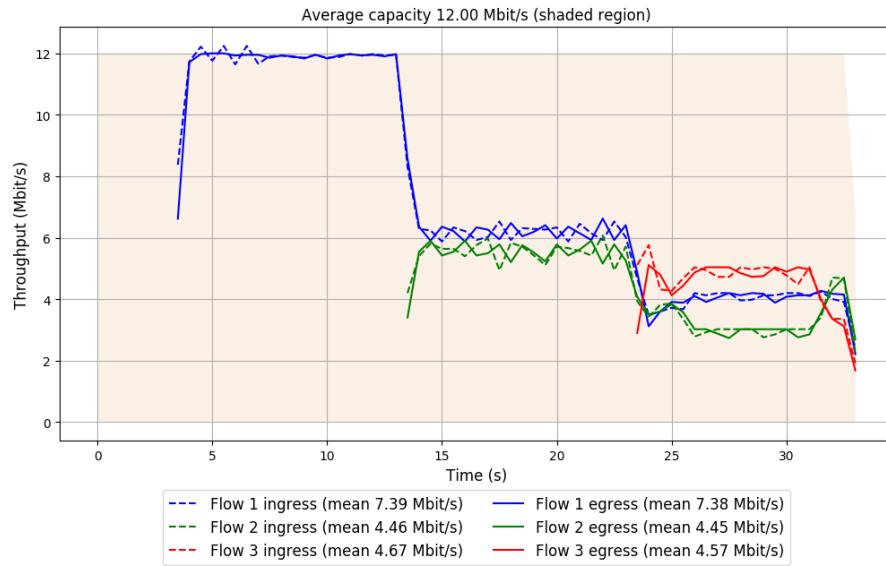
Run 9: Statistics of Indigo-1-32

Start at: 2018-04-24 17:18:00

End at: 2018-04-24 17:18:30

```
# Below is generated by plot.py at 2018-04-24 17:35:33
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.80 Mbit/s (98.3% utilization)
95th percentile per-packet one-way delay: 51.005 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 7.38 Mbit/s
95th percentile per-packet one-way delay: 44.732 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 51.630 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 4.57 Mbit/s
95th percentile per-packet one-way delay: 61.059 ms
Loss rate: 2.97%
```

Run 9: Report of Indigo-1-32 — Data Link



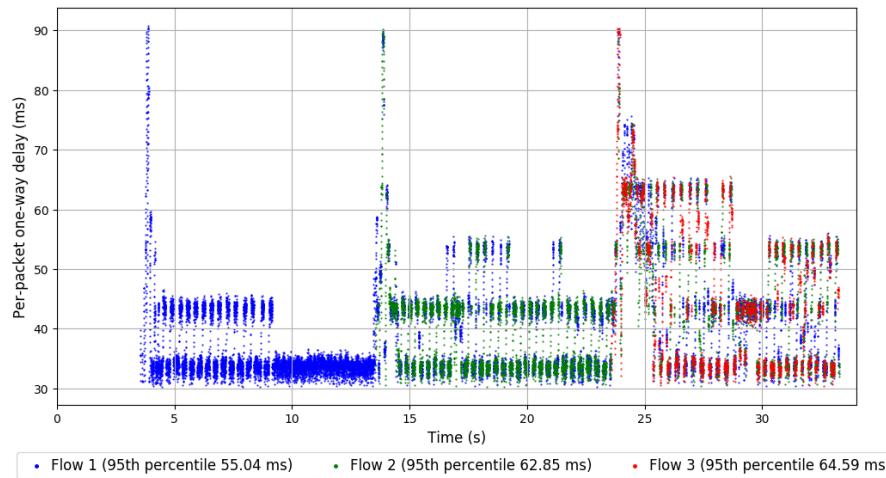
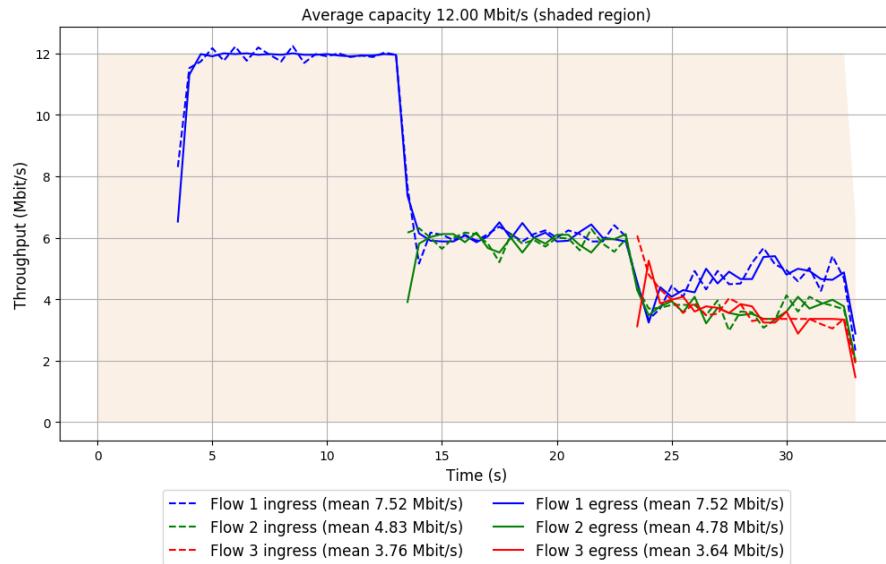
Run 10: Statistics of Indigo-1-32

Start at: 2018-04-24 17:27:46

End at: 2018-04-24 17:28:16

```
# Below is generated by plot.py at 2018-04-24 17:35:44
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 11.87 Mbit/s (98.9% utilization)
95th percentile per-packet one-way delay: 62.490 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 55.038 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 62.851 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 64.595 ms
Loss rate: 3.71%
```

Run 10: Report of Indigo-1-32 — Data Link

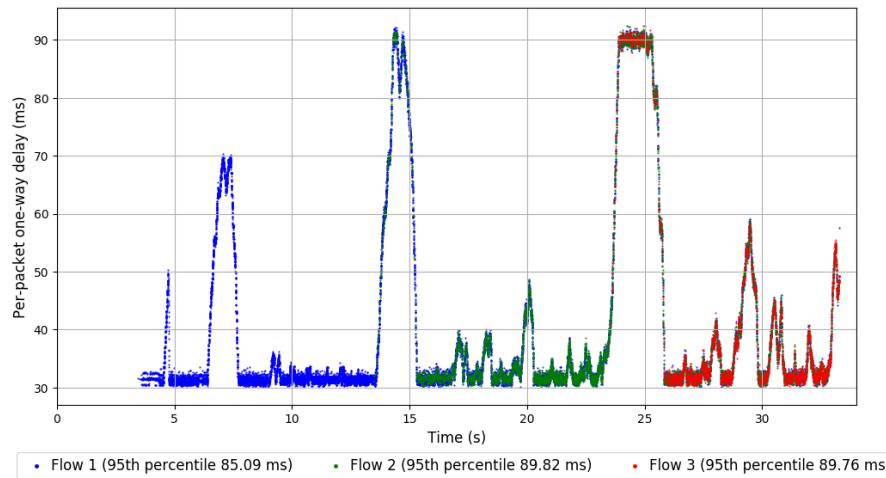
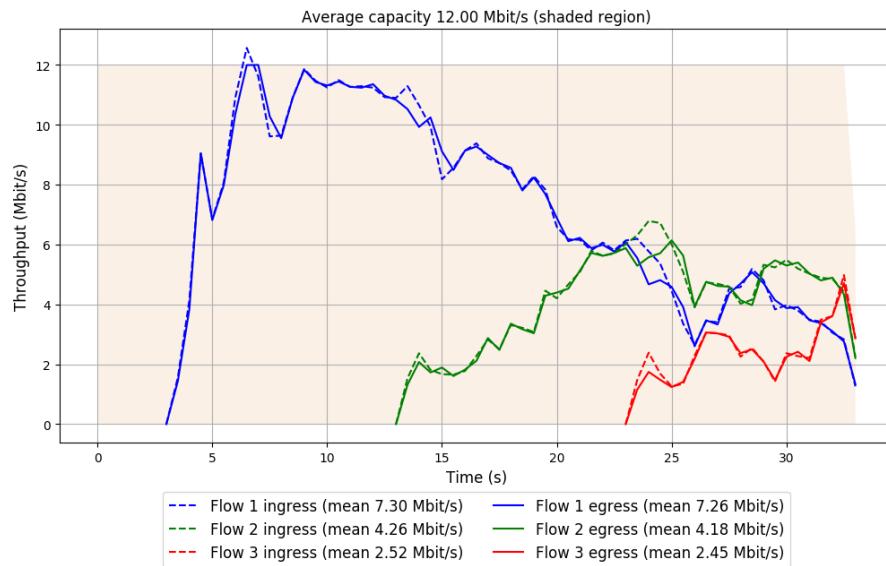


```
Run 1: Statistics of PCC-Vivace

Start at: 2018-04-24 15:54:27
End at: 2018-04-24 15:54:57

# Below is generated by plot.py at 2018-04-24 17:35:52
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.85 Mbit/s (90.4% utilization)
95th percentile per-packet one-way delay: 89.061 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 7.26 Mbit/s
95th percentile per-packet one-way delay: 85.089 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 89.820 ms
Loss rate: 2.08%
-- Flow 3:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 89.759 ms
Loss rate: 3.25%
```

Run 1: Report of PCC-Vivace — Data Link



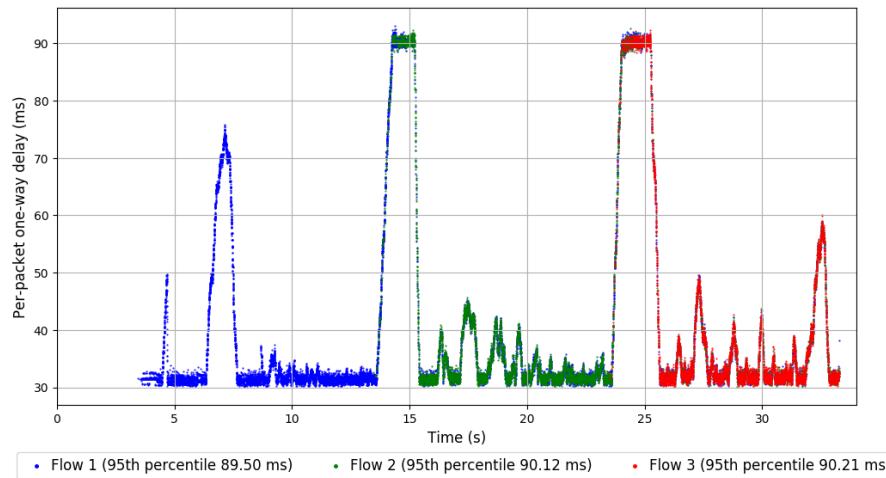
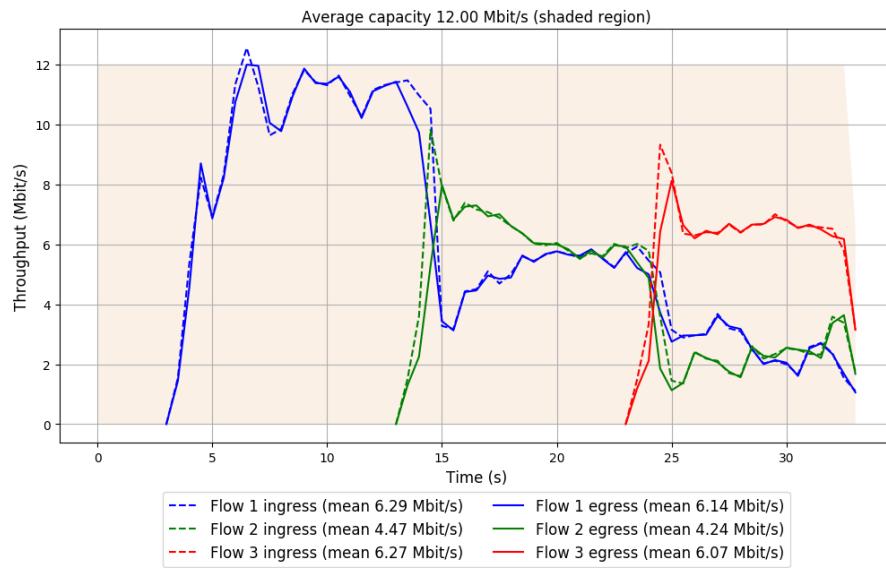
Run 2: Statistics of PCC-Vivace

Start at: 2018-04-24 16:04:14

End at: 2018-04-24 16:04:44

```
# Below is generated by plot.py at 2018-04-24 17:35:52
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.94 Mbit/s (91.2% utilization)
95th percentile per-packet one-way delay: 89.839 ms
Loss rate: 3.47%
-- Flow 1:
Average throughput: 6.14 Mbit/s
95th percentile per-packet one-way delay: 89.504 ms
Loss rate: 2.49%
-- Flow 2:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 90.117 ms
Loss rate: 5.45%
-- Flow 3:
Average throughput: 6.07 Mbit/s
95th percentile per-packet one-way delay: 90.211 ms
Loss rate: 3.57%
```

Run 2: Report of PCC-Vivace — Data Link



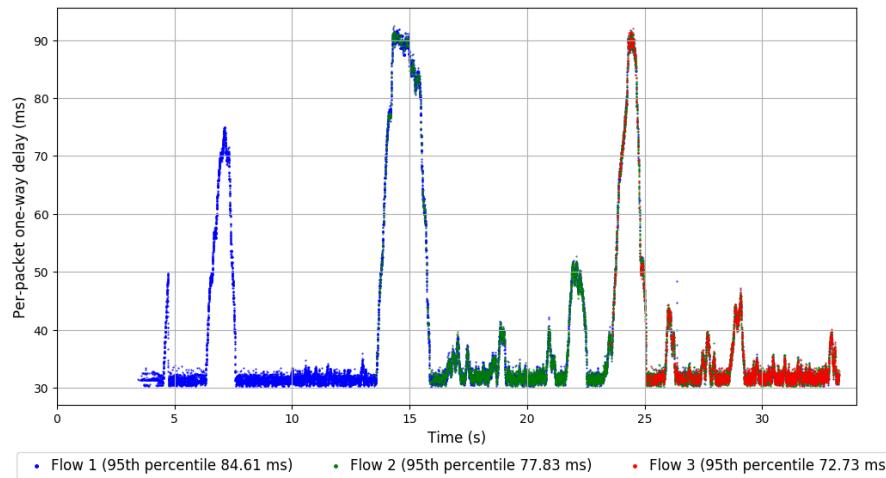
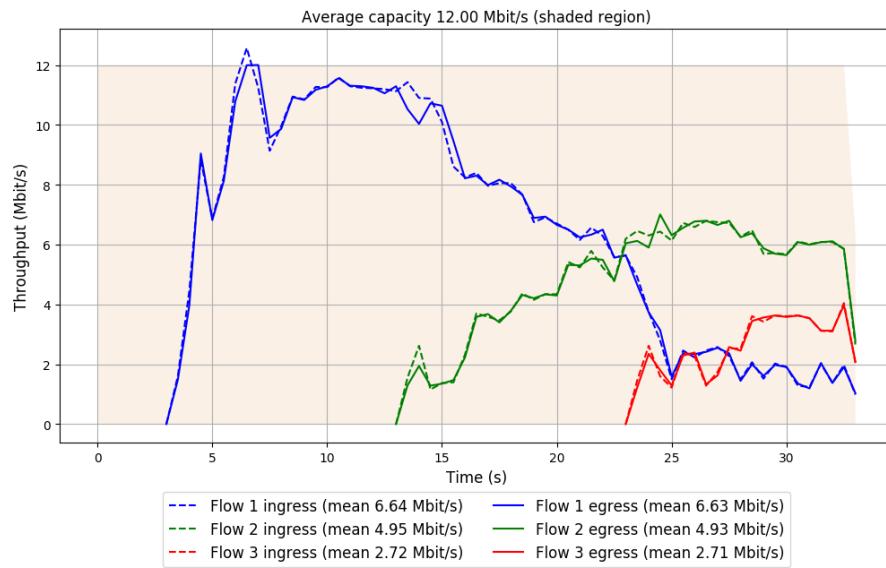
Run 3: Statistics of PCC-Vivace

Start at: 2018-04-24 16:14:01

End at: 2018-04-24 16:14:31

```
# Below is generated by plot.py at 2018-04-24 17:35:54
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.80 Mbit/s (90.0% utilization)
95th percentile per-packet one-way delay: 83.090 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 84.608 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 4.93 Mbit/s
95th percentile per-packet one-way delay: 77.830 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 72.730 ms
Loss rate: 0.65%
```

Run 3: Report of PCC-Vivace — Data Link



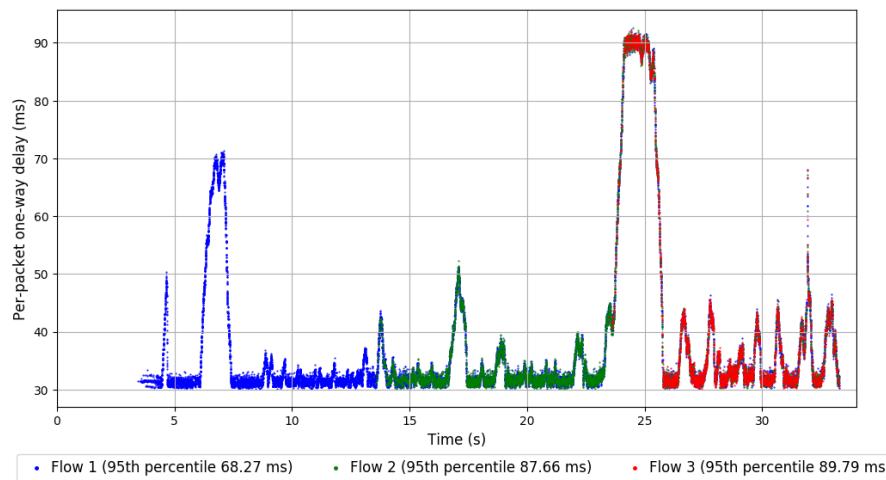
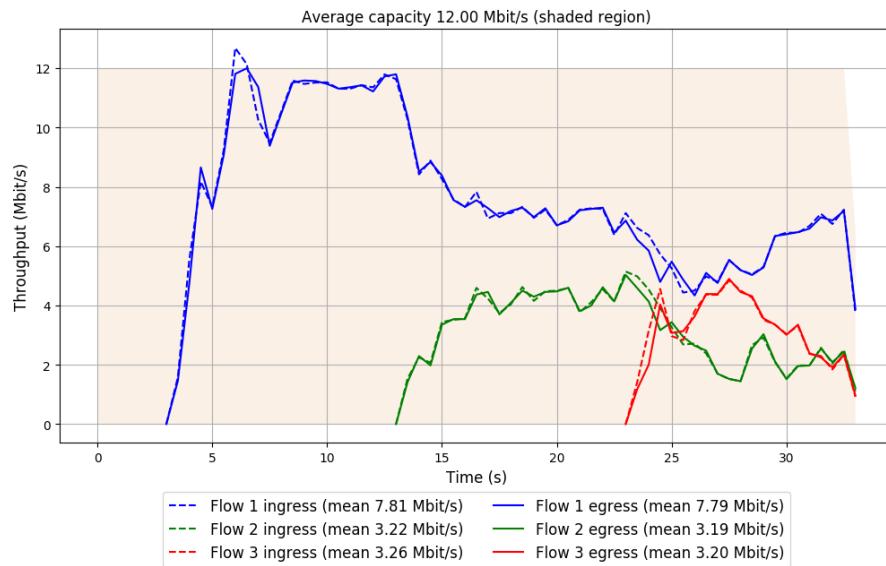
Run 4: Statistics of PCC-Vivace

Start at: 2018-04-24 16:23:49

End at: 2018-04-24 16:24:19

```
# Below is generated by plot.py at 2018-04-24 17:35:56
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.95 Mbit/s (91.3% utilization)
95th percentile per-packet one-way delay: 72.908 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 7.79 Mbit/s
95th percentile per-packet one-way delay: 68.266 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 87.658 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 89.790 ms
Loss rate: 2.22%
```

Run 4: Report of PCC-Vivace — Data Link



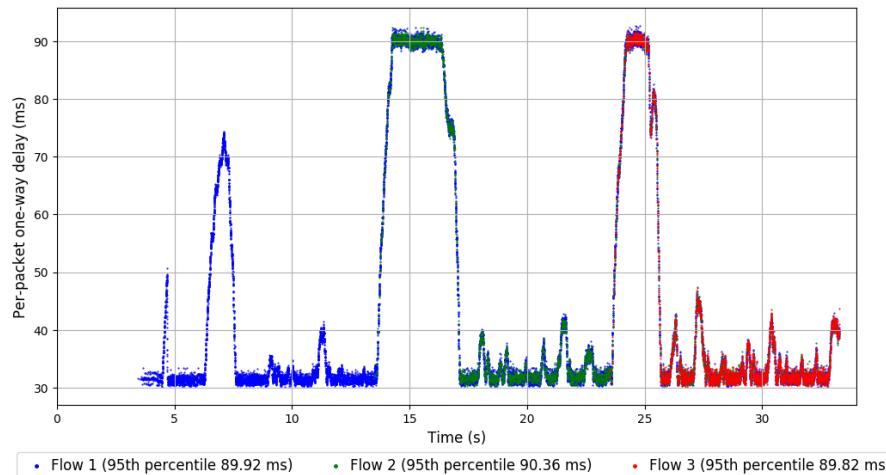
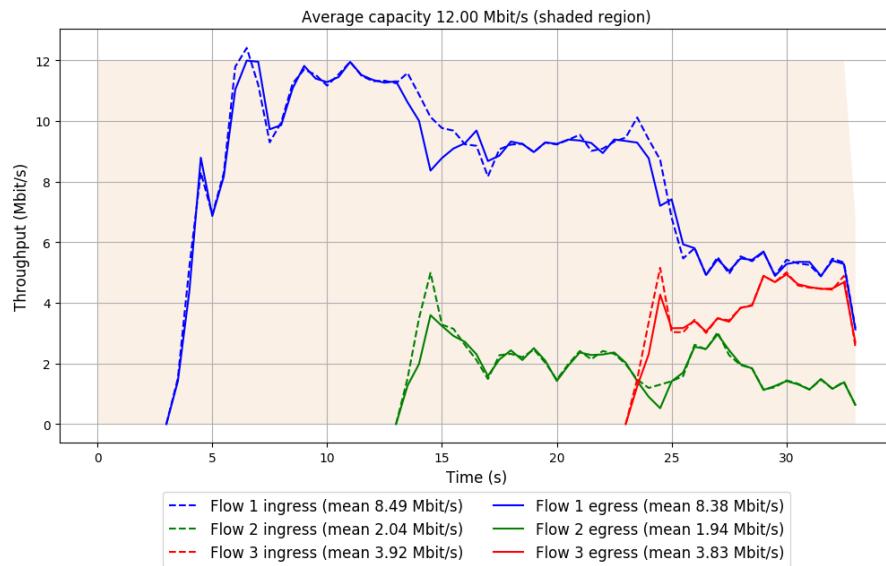
Run 5: Statistics of PCC-Vivace

Start at: 2018-04-24 16:33:36

End at: 2018-04-24 16:34:06

```
# Below is generated by plot.py at 2018-04-24 17:35:58
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.93 Mbit/s (91.1% utilization)
95th percentile per-packet one-way delay: 89.979 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 8.38 Mbit/s
95th percentile per-packet one-way delay: 89.920 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 90.357 ms
Loss rate: 4.93%
-- Flow 3:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 89.820 ms
Loss rate: 2.62%
```

Run 5: Report of PCC-Vivace — Data Link



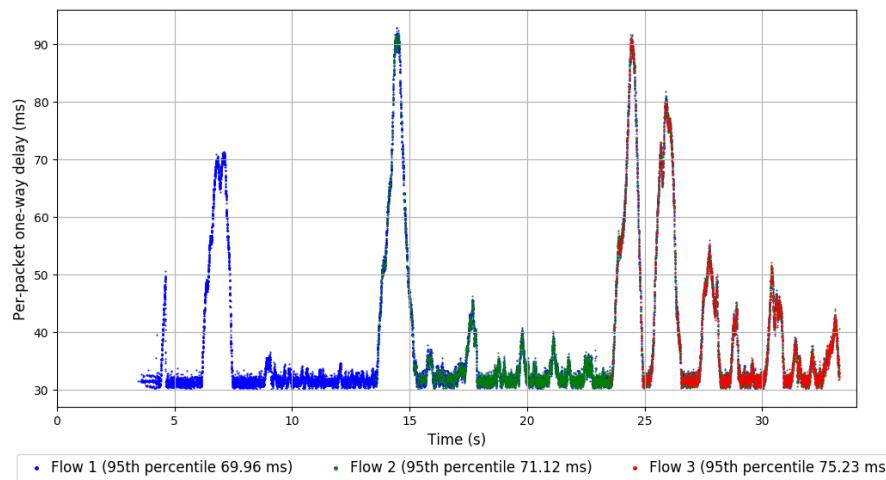
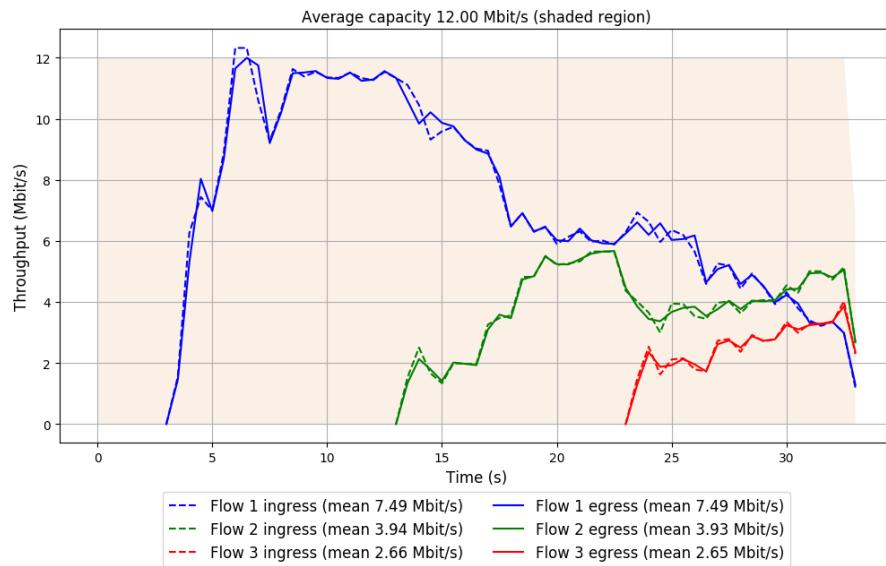
Run 6: Statistics of PCC-Vivace

Start at: 2018-04-24 16:43:26

End at: 2018-04-24 16:43:56

```
# Below is generated by plot.py at 2018-04-24 17:35:59
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.97 Mbit/s (91.4% utilization)
95th percentile per-packet one-way delay: 70.415 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 7.49 Mbit/s
95th percentile per-packet one-way delay: 69.959 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 3.93 Mbit/s
95th percentile per-packet one-way delay: 71.124 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 75.226 ms
Loss rate: 0.62%
```

Run 6: Report of PCC-Vivace — Data Link



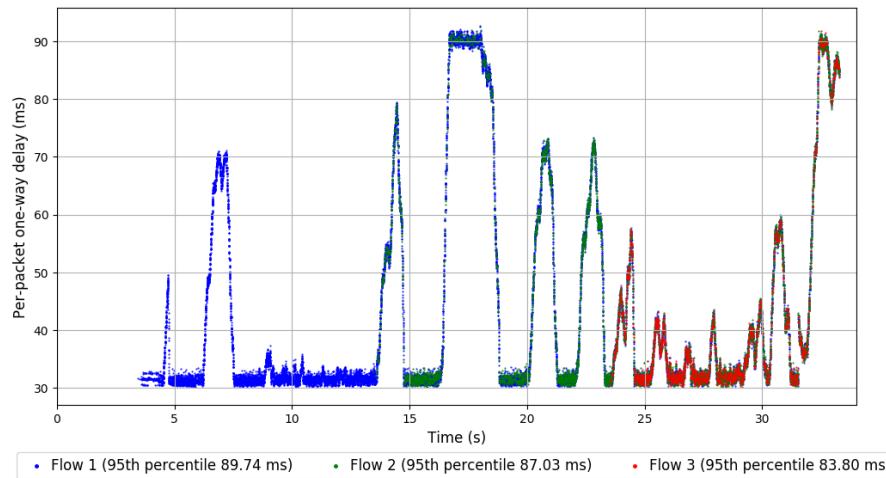
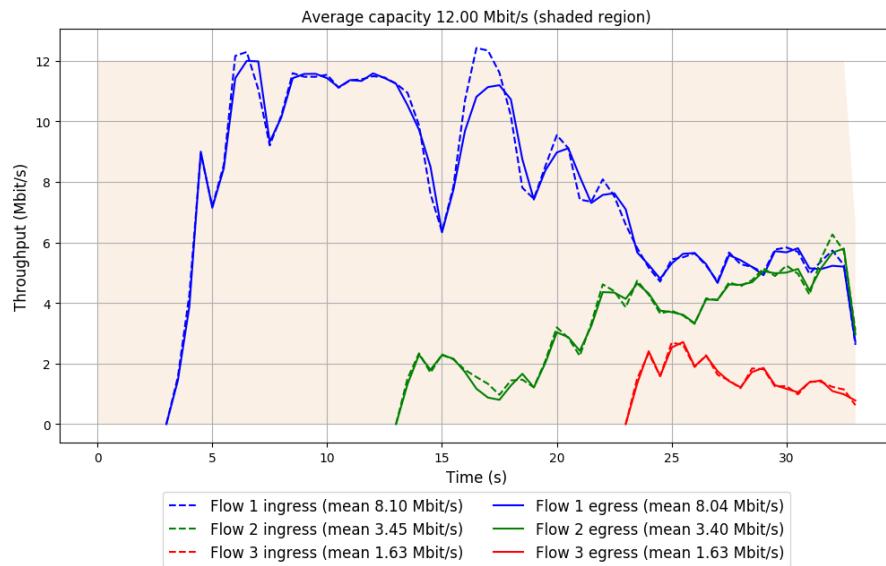
Run 7: Statistics of PCC-Vivace

Start at: 2018-04-24 16:53:14

End at: 2018-04-24 16:53:44

```
# Below is generated by plot.py at 2018-04-24 17:35:59
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.83 Mbit/s (90.3% utilization)
95th percentile per-packet one-way delay: 89.416 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 8.04 Mbit/s
95th percentile per-packet one-way delay: 89.739 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 3.40 Mbit/s
95th percentile per-packet one-way delay: 87.029 ms
Loss rate: 1.70%
-- Flow 3:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 83.801 ms
Loss rate: 0.68%
```

Run 7: Report of PCC-Vivace — Data Link



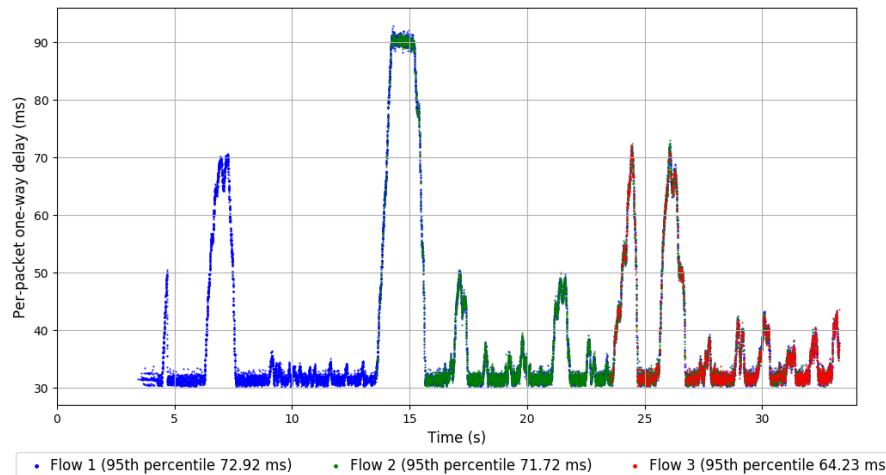
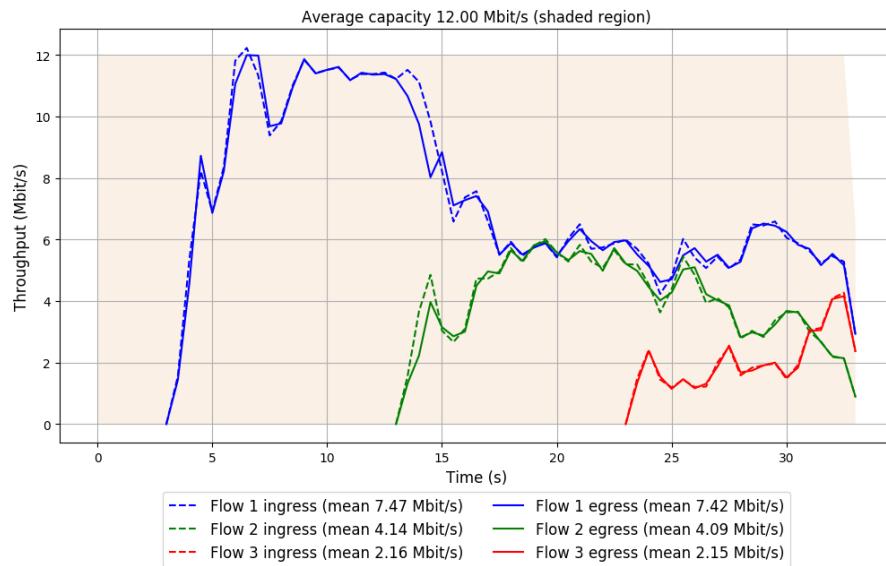
Run 8: Statistics of PCC-Vivace

Start at: 2018-04-24 17:03:01

End at: 2018-04-24 17:03:31

```
# Below is generated by plot.py at 2018-04-24 17:36:03
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.84 Mbit/s (90.3% utilization)
95th percentile per-packet one-way delay: 70.463 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 7.42 Mbit/s
95th percentile per-packet one-way delay: 72.915 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 71.723 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 64.231 ms
Loss rate: 0.82%
```

Run 8: Report of PCC-Vivace — Data Link



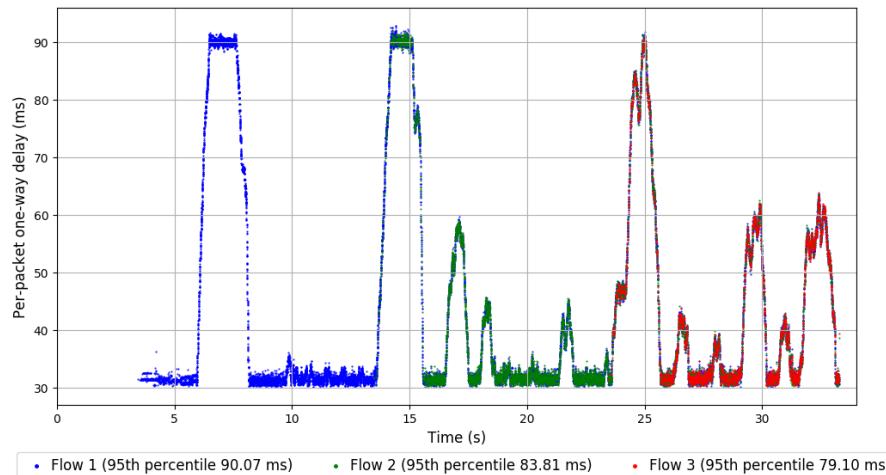
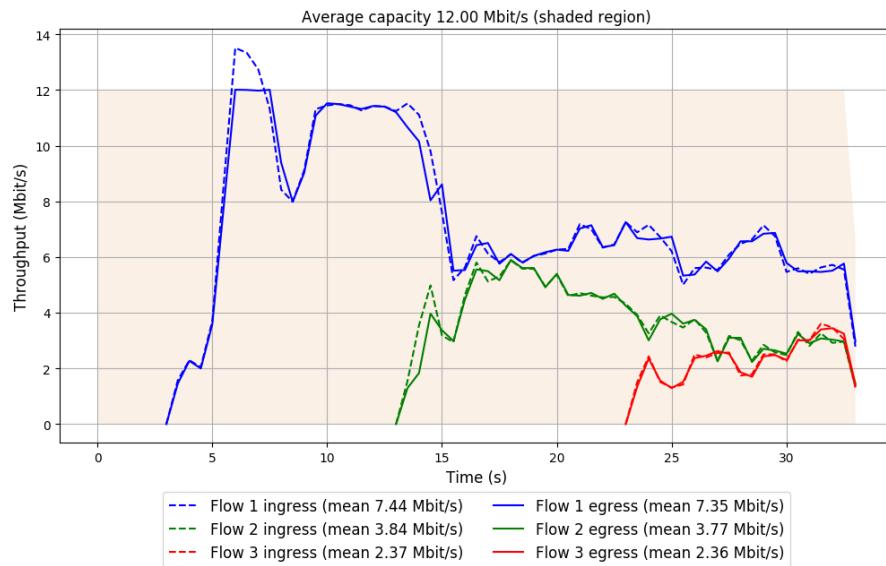
Run 9: Statistics of PCC-Vivace

Start at: 2018-04-24 17:12:49

End at: 2018-04-24 17:13:19

```
# Below is generated by plot.py at 2018-04-24 17:36:04
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.63 Mbit/s (88.6% utilization)
95th percentile per-packet one-way delay: 89.793 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 7.35 Mbit/s
95th percentile per-packet one-way delay: 90.067 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 83.808 ms
Loss rate: 1.79%
-- Flow 3:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 79.098 ms
Loss rate: 0.35%
```

Run 9: Report of PCC-Vivace — Data Link



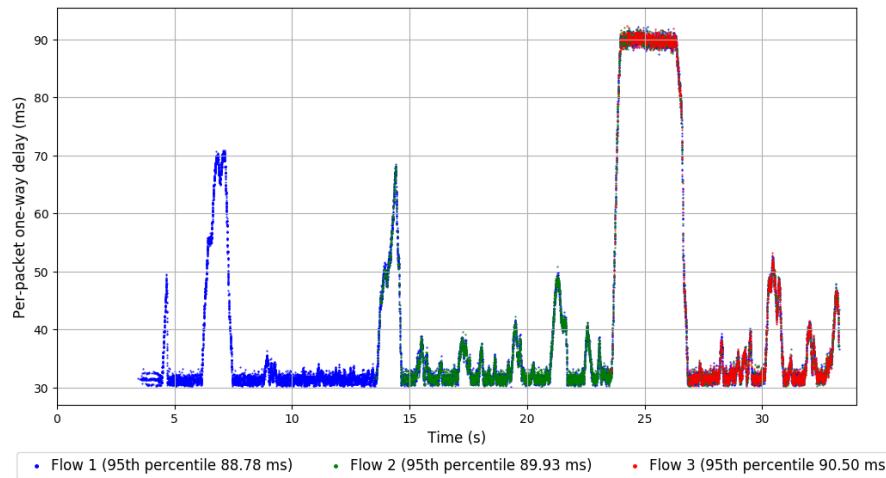
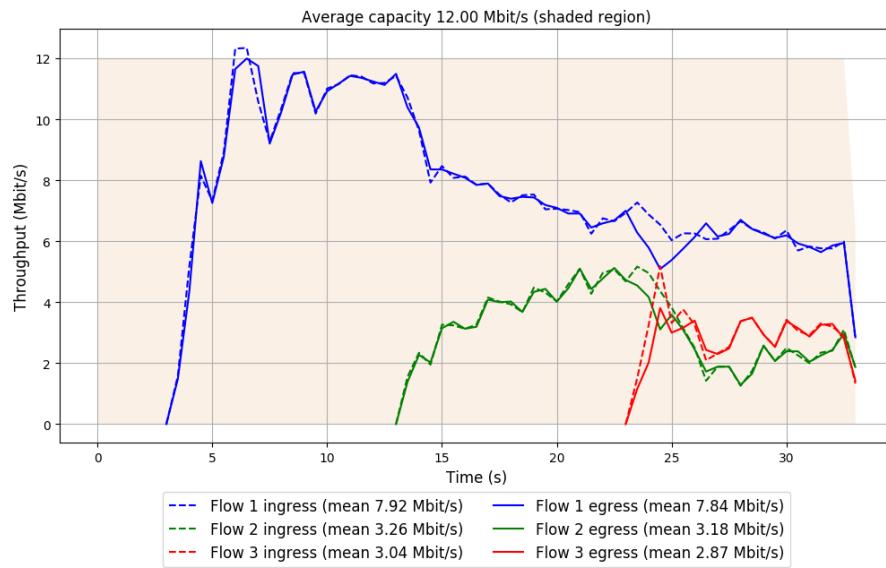
Run 10: Statistics of PCC-Vivace

Start at: 2018-04-24 17:22:35

End at: 2018-04-24 17:23:05

```
# Below is generated by plot.py at 2018-04-24 17:36:04
# Datalink statistics
-- Total of 3 flows:
Average capacity: 12.00 Mbit/s
Average throughput: 10.90 Mbit/s (90.9% utilization)
95th percentile per-packet one-way delay: 89.667 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 88.778 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 89.933 ms
Loss rate: 2.47%
-- Flow 3:
Average throughput: 2.87 Mbit/s
95th percentile per-packet one-way delay: 90.500 ms
Loss rate: 5.76%
```

Run 10: Report of PCC-Vivace — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-04-24 15:53:53

End at: 2018-04-24 15:54:23

Run 1: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 2: Statistics of PCC-Expr

Start at: 2018-04-24 16:03:40

End at: 2018-04-24 16:04:10

Run 2: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 3: Statistics of PCC-Expr

Start at: 2018-04-24 16:13:27

End at: 2018-04-24 16:13:57

Run 3: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 4: Statistics of PCC-Expr

Start at: 2018-04-24 16:23:15

End at: 2018-04-24 16:23:45

Run 4: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 5: Statistics of PCC-Expr

Start at: 2018-04-24 16:33:03

End at: 2018-04-24 16:33:33

Run 5: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 6: Statistics of PCC-Expr

Start at: 2018-04-24 16:42:53

End at: 2018-04-24 16:43:23

Run 6: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 7: Statistics of PCC-Expr

Start at: 2018-04-24 16:52:40

End at: 2018-04-24 16:53:10

Run 7: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 8: Statistics of PCC-Expr

Start at: 2018-04-24 17:02:27

End at: 2018-04-24 17:02:57

Run 8: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 9: Statistics of PCC-Expr

Start at: 2018-04-24 17:12:15

End at: 2018-04-24 17:12:45

Run 9: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 10: Statistics of PCC-Expr

Start at: 2018-04-24 17:22:01

End at: 2018-04-24 17:22:31

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing