

Pantheon Report

Generated at 2018-04-18 10:13:21 (UTC).

Data path: GCE London Ethernet (*local*) → GCE Tokyo Ethernet (*remote*).

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.

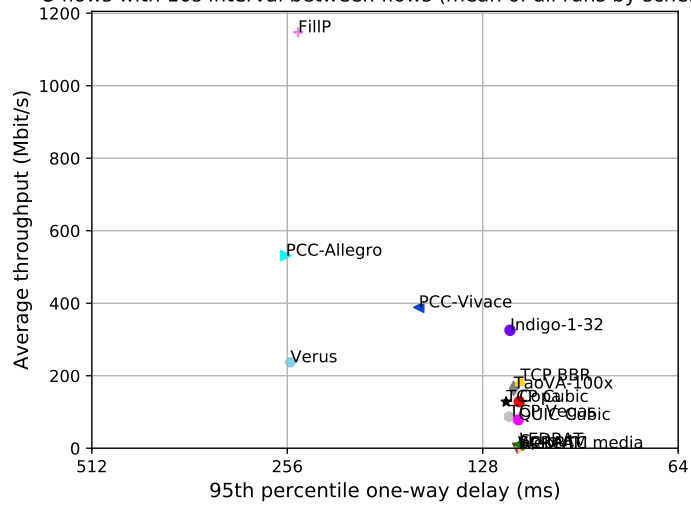
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

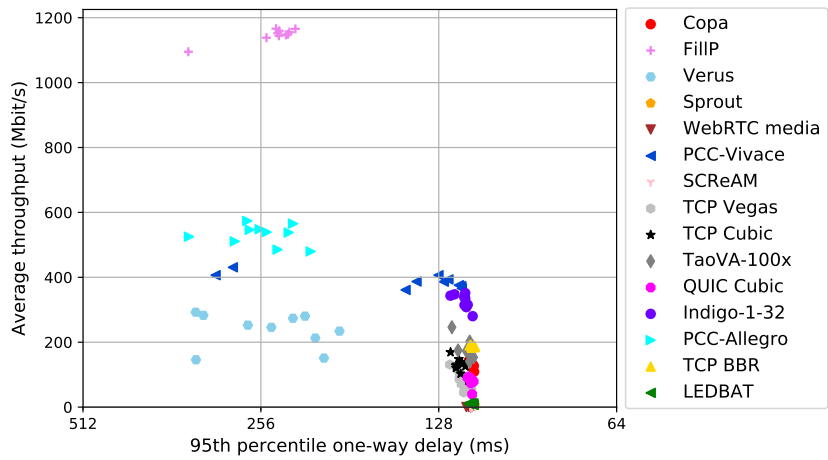
Git summary:

```
branch: master @ b3d6e7098641364fd3a292656a51aa81e316d0b4
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 @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
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 @ f1a14bffe749737437f61b1eaaeb30b267cde681
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
```

test from GCE London Ethernet to GCE Tokyo Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE London Ethernet to GCE Tokyo Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows

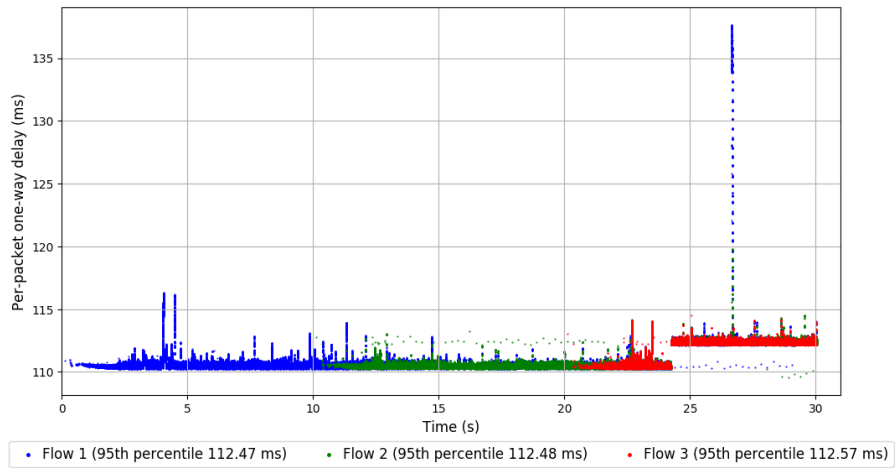
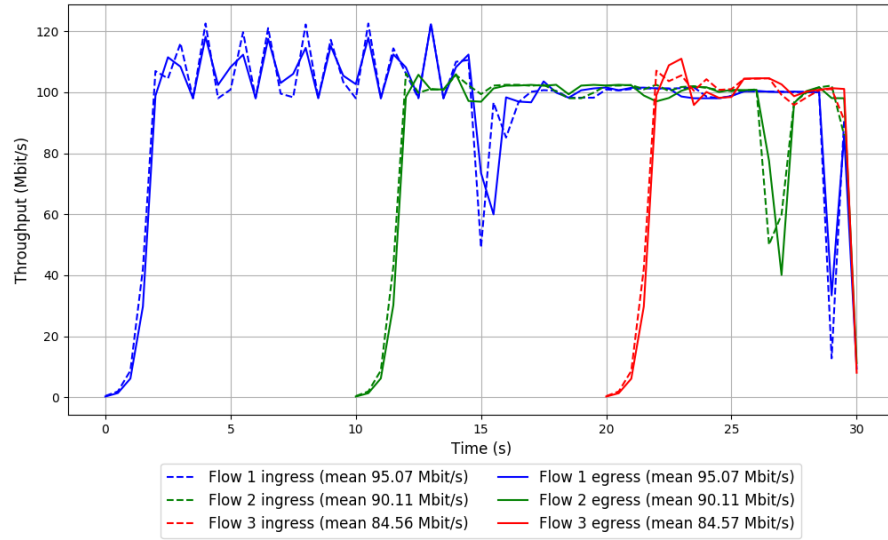



```
Run 1: Statistics of TCP BBR

Start at: 2018-04-18 04:19:41
End at: 2018-04-18 04:20:11

# Below is generated by plot.py at 2018-04-18 08:50:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 182.95 Mbit/s
95th percentile per-packet one-way delay: 112.495 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 95.07 Mbit/s
95th percentile per-packet one-way delay: 112.470 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 90.11 Mbit/s
95th percentile per-packet one-way delay: 112.476 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 84.57 Mbit/s
95th percentile per-packet one-way delay: 112.568 ms
Loss rate: 0.00%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-04-18 04:36:56

End at: 2018-04-18 04:37:26

Below is generated by plot.py at 2018-04-18 08:50:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.18 Mbit/s

95th percentile per-packet one-way delay: 113.495 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 95.04 Mbit/s

95th percentile per-packet one-way delay: 111.485 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 98.80 Mbit/s

95th percentile per-packet one-way delay: 113.588 ms

Loss rate: 0.00%

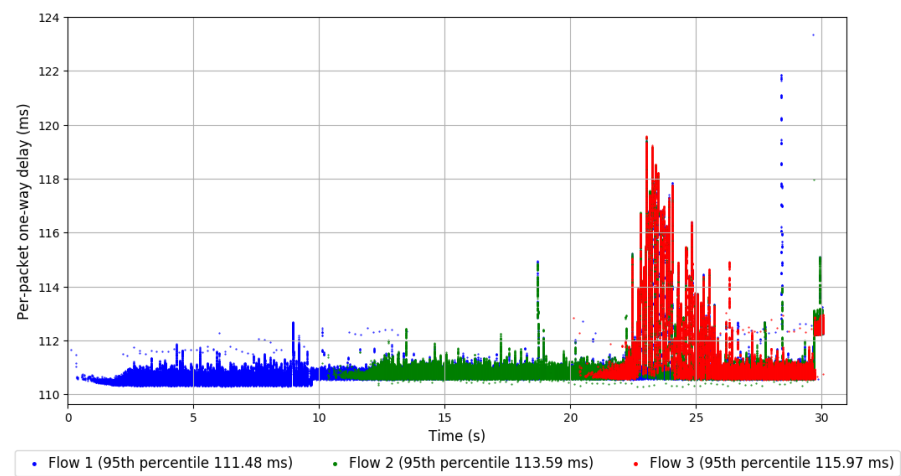
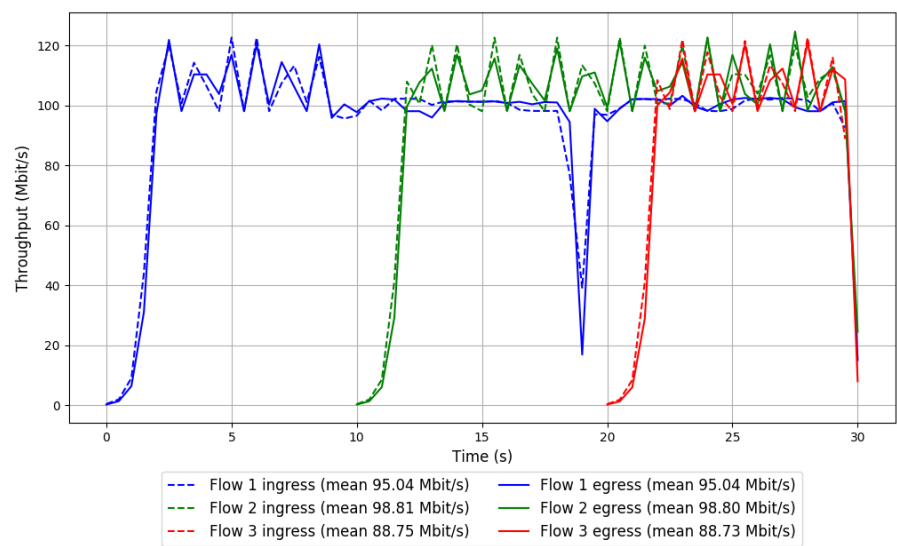
-- Flow 3:

Average throughput: 88.73 Mbit/s

95th percentile per-packet one-way delay: 115.972 ms

Loss rate: 0.04%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-04-18 04:54:13

End at: 2018-04-18 04:54:43

Below is generated by plot.py at 2018-04-18 08:50:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 184.91 Mbit/s

95th percentile per-packet one-way delay: 111.356 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 94.07 Mbit/s

95th percentile per-packet one-way delay: 111.245 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 91.87 Mbit/s

95th percentile per-packet one-way delay: 111.270 ms

Loss rate: 0.00%

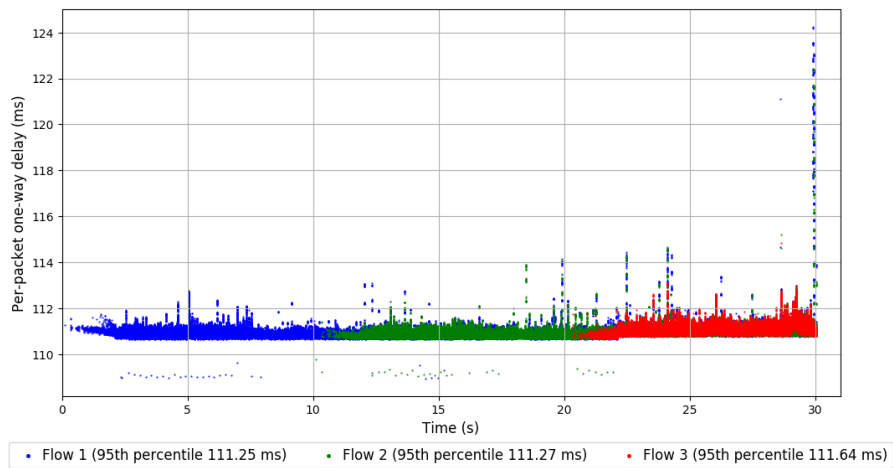
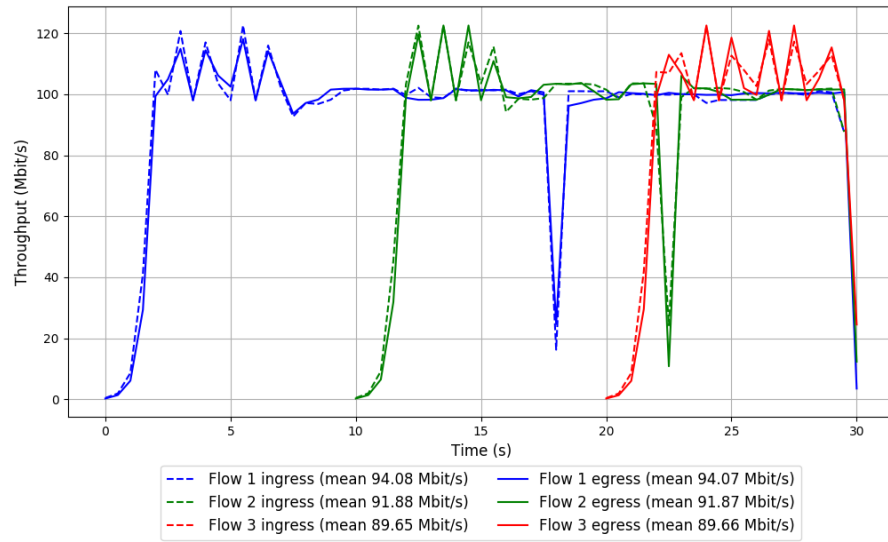
-- Flow 3:

Average throughput: 89.66 Mbit/s

95th percentile per-packet one-way delay: 111.635 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-04-18 05:11:27

End at: 2018-04-18 05:11:57

Below is generated by plot.py at 2018-04-18 08:50:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 186.20 Mbit/s

95th percentile per-packet one-way delay: 111.368 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 94.99 Mbit/s

95th percentile per-packet one-way delay: 111.307 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 92.69 Mbit/s

95th percentile per-packet one-way delay: 111.289 ms

Loss rate: 0.00%

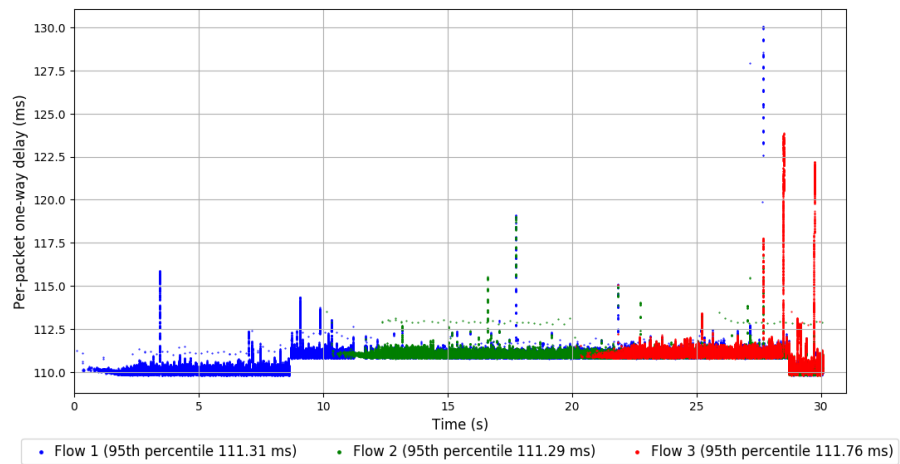
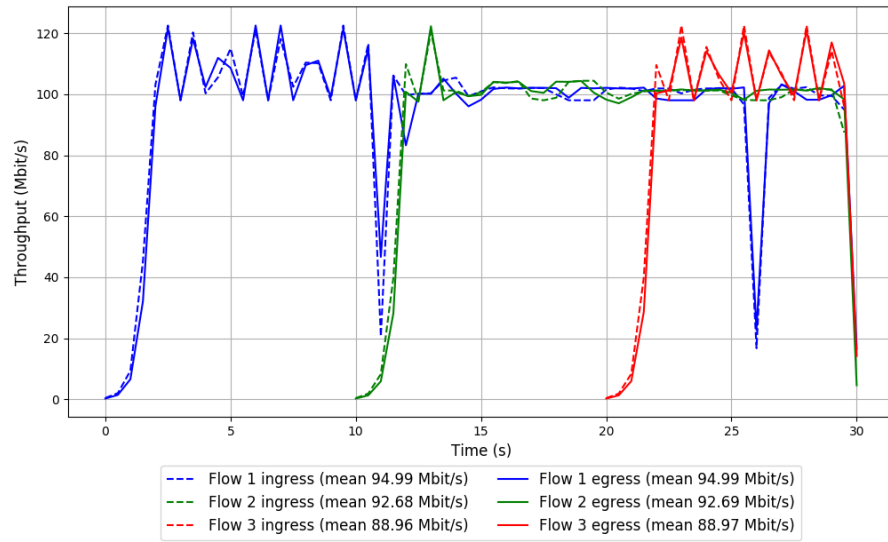
-- Flow 3:

Average throughput: 88.97 Mbit/s

95th percentile per-packet one-way delay: 111.763 ms

Loss rate: 0.00%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-04-18 05:29:02

End at: 2018-04-18 05:29:32

Below is generated by plot.py at 2018-04-18 08:50:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 186.78 Mbit/s

95th percentile per-packet one-way delay: 112.609 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 98.55 Mbit/s

95th percentile per-packet one-way delay: 112.814 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 89.55 Mbit/s

95th percentile per-packet one-way delay: 111.283 ms

Loss rate: 0.00%

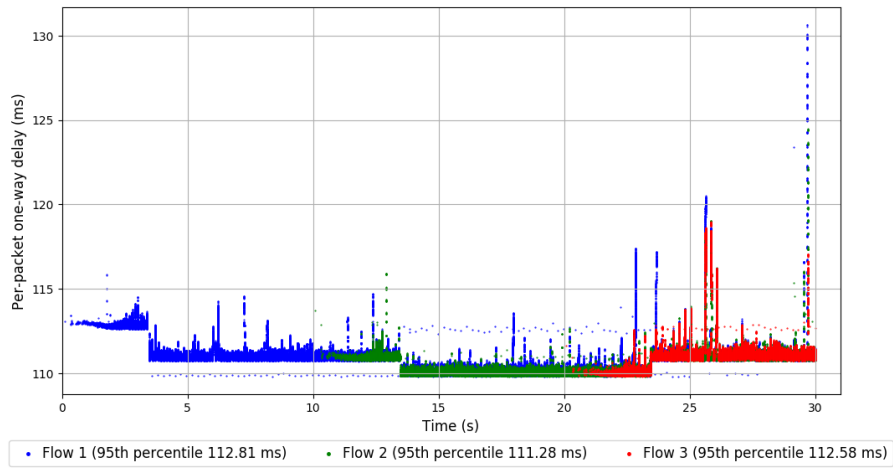
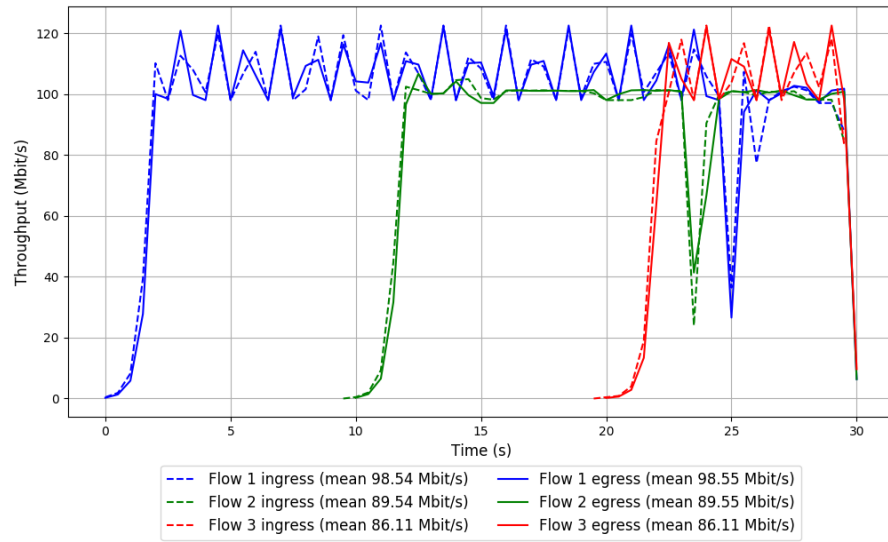
-- Flow 3:

Average throughput: 86.11 Mbit/s

95th percentile per-packet one-way delay: 112.581 ms

Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-04-18 05:46:24

End at: 2018-04-18 05:46:54

Below is generated by plot.py at 2018-04-18 08:50:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 186.24 Mbit/s

95th percentile per-packet one-way delay: 112.049 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 94.59 Mbit/s

95th percentile per-packet one-way delay: 111.463 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 93.24 Mbit/s

95th percentile per-packet one-way delay: 112.898 ms

Loss rate: 0.01%

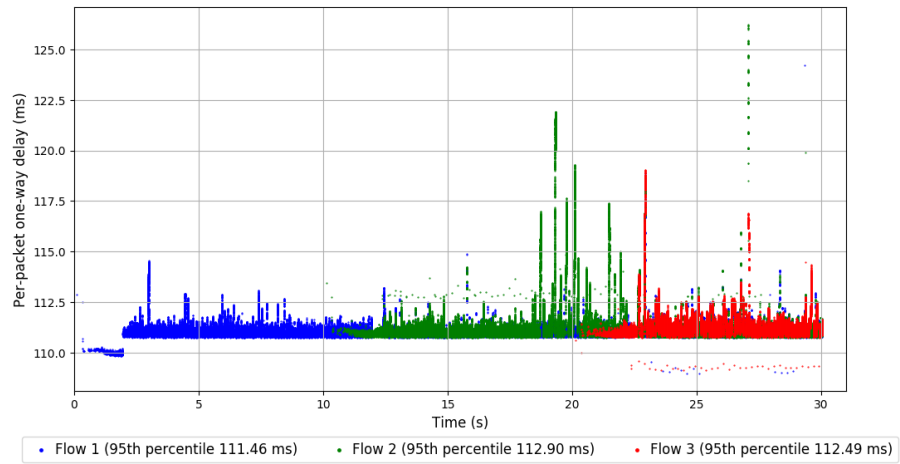
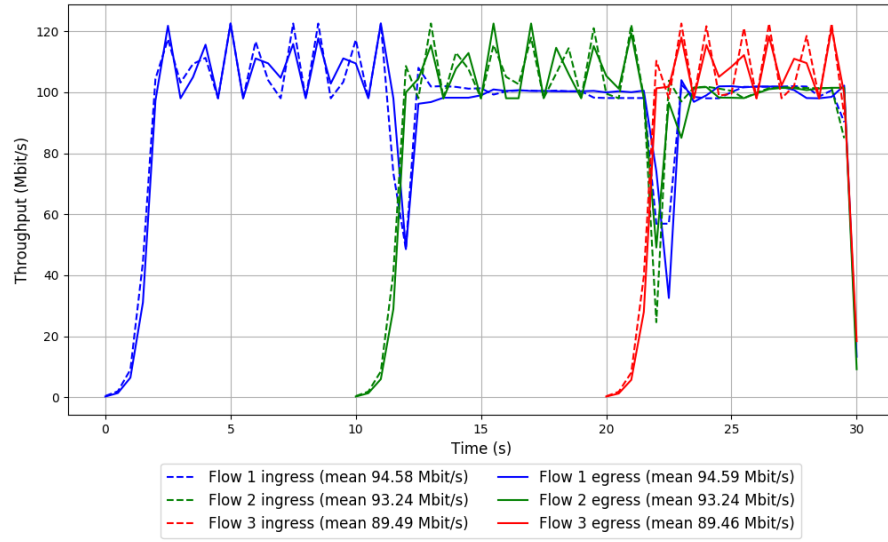
-- Flow 3:

Average throughput: 89.46 Mbit/s

95th percentile per-packet one-way delay: 112.488 ms

Loss rate: 0.04%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-04-18 06:03:39

End at: 2018-04-18 06:04:09

Below is generated by plot.py at 2018-04-18 08:50:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 187.25 Mbit/s

95th percentile per-packet one-way delay: 111.373 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 97.01 Mbit/s

95th percentile per-packet one-way delay: 111.346 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 91.42 Mbit/s

95th percentile per-packet one-way delay: 111.326 ms

Loss rate: 0.01%

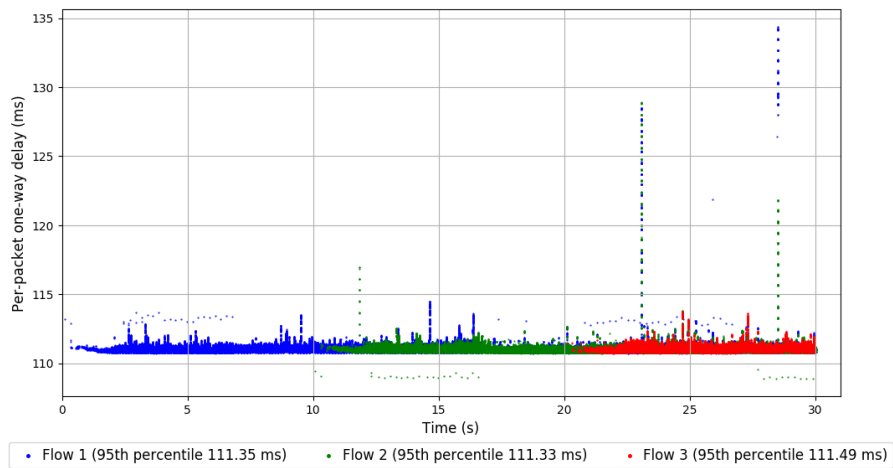
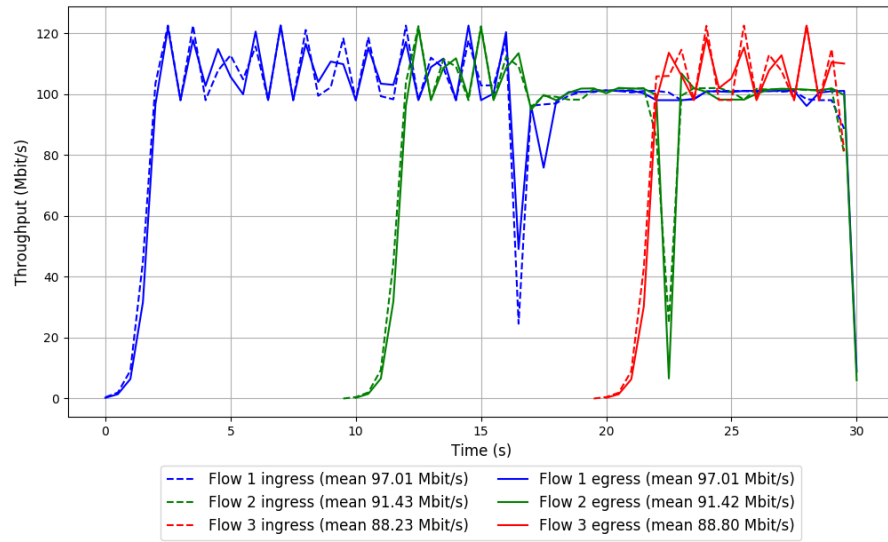
-- Flow 3:

Average throughput: 88.80 Mbit/s

95th percentile per-packet one-way delay: 111.493 ms

Loss rate: 0.00%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-04-18 06:20:56

End at: 2018-04-18 06:21:26

Below is generated by plot.py at 2018-04-18 08:50:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 186.55 Mbit/s

95th percentile per-packet one-way delay: 111.148 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 95.16 Mbit/s

95th percentile per-packet one-way delay: 111.071 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 95.28 Mbit/s

95th percentile per-packet one-way delay: 111.403 ms

Loss rate: 0.01%

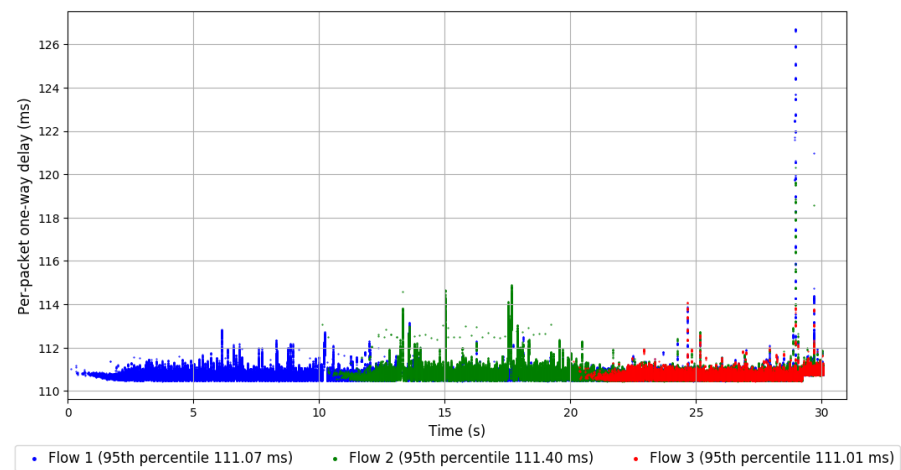
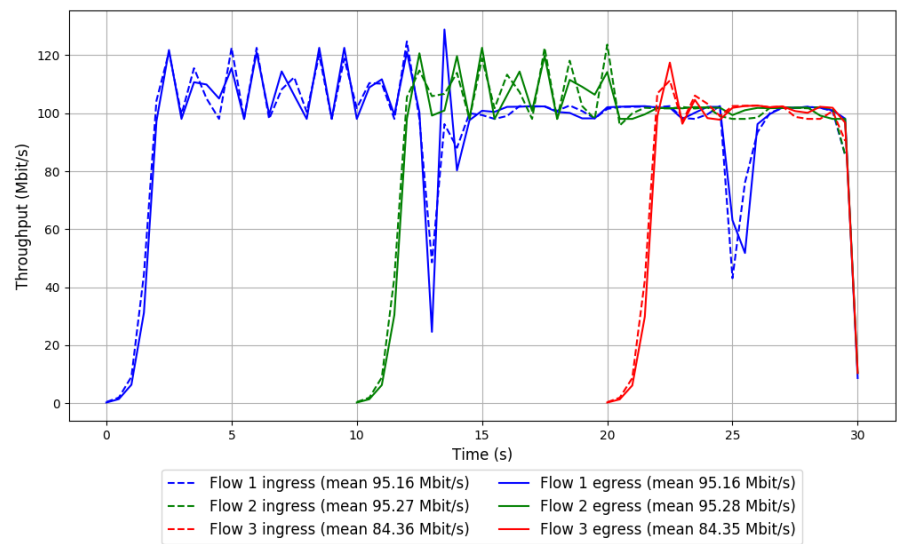
-- Flow 3:

Average throughput: 84.35 Mbit/s

95th percentile per-packet one-way delay: 111.012 ms

Loss rate: 0.02%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-04-18 06:38:06

End at: 2018-04-18 06:38:36

Below is generated by plot.py at 2018-04-18 08:53:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 191.73 Mbit/s

95th percentile per-packet one-way delay: 112.936 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 97.54 Mbit/s

95th percentile per-packet one-way delay: 112.490 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 97.15 Mbit/s

95th percentile per-packet one-way delay: 112.915 ms

Loss rate: 0.00%

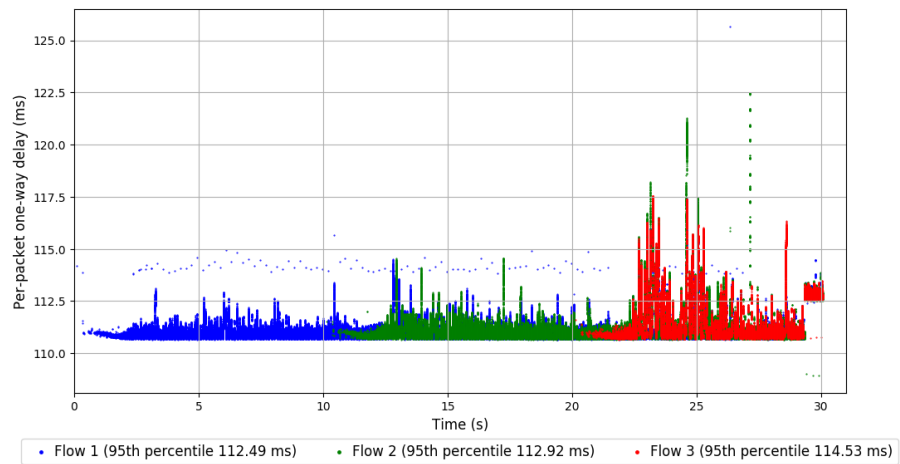
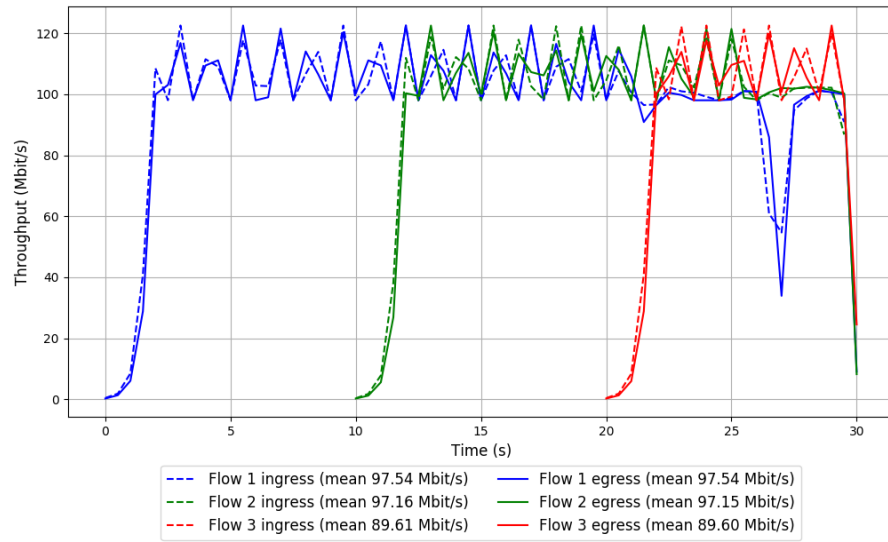
-- Flow 3:

Average throughput: 89.60 Mbit/s

95th percentile per-packet one-way delay: 114.532 ms

Loss rate: 0.00%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-04-18 06:55:04

End at: 2018-04-18 06:55:34

Below is generated by plot.py at 2018-04-18 08:53:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 185.66 Mbit/s

95th percentile per-packet one-way delay: 111.304 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 94.64 Mbit/s

95th percentile per-packet one-way delay: 111.330 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 92.39 Mbit/s

95th percentile per-packet one-way delay: 111.234 ms

Loss rate: 0.00%

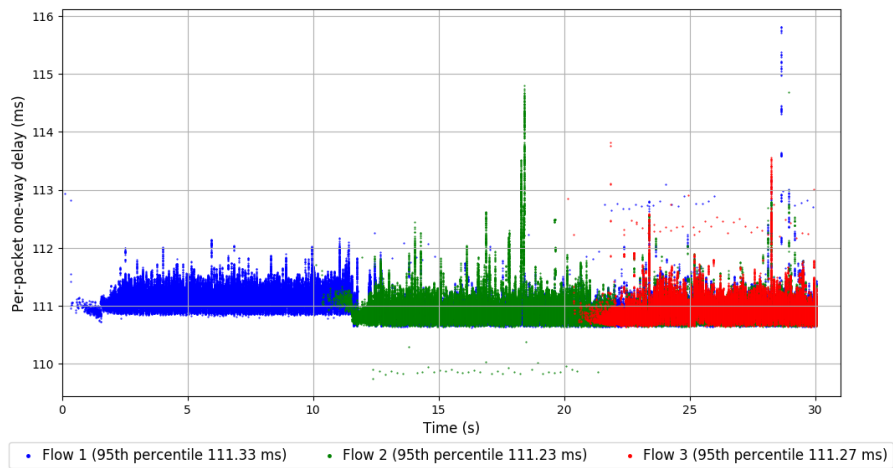
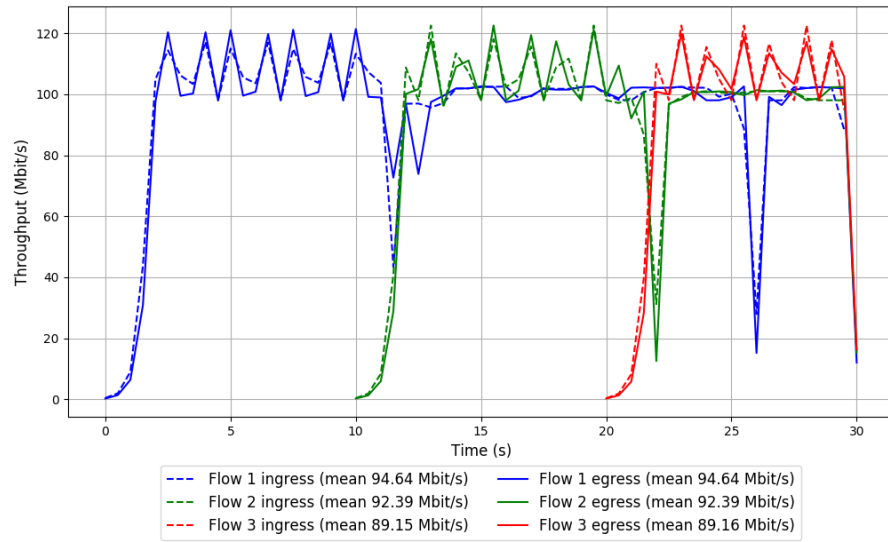
-- Flow 3:

Average throughput: 89.16 Mbit/s

95th percentile per-packet one-way delay: 111.268 ms

Loss rate: 0.02%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-04-18 04:15:39

End at: 2018-04-18 04:16:09

Below is generated by plot.py at 2018-04-18 08:53:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.02 Mbit/s

95th percentile per-packet one-way delay: 119.628 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 54.98 Mbit/s

95th percentile per-packet one-way delay: 116.378 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 54.20 Mbit/s

95th percentile per-packet one-way delay: 117.865 ms

Loss rate: 0.00%

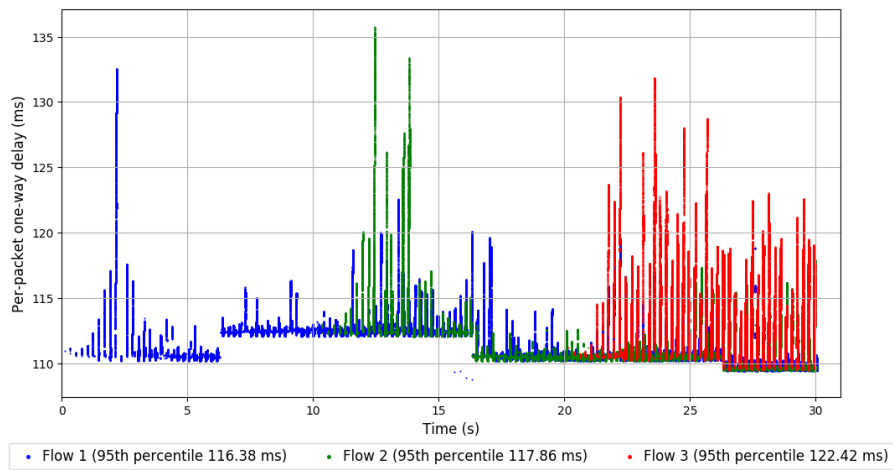
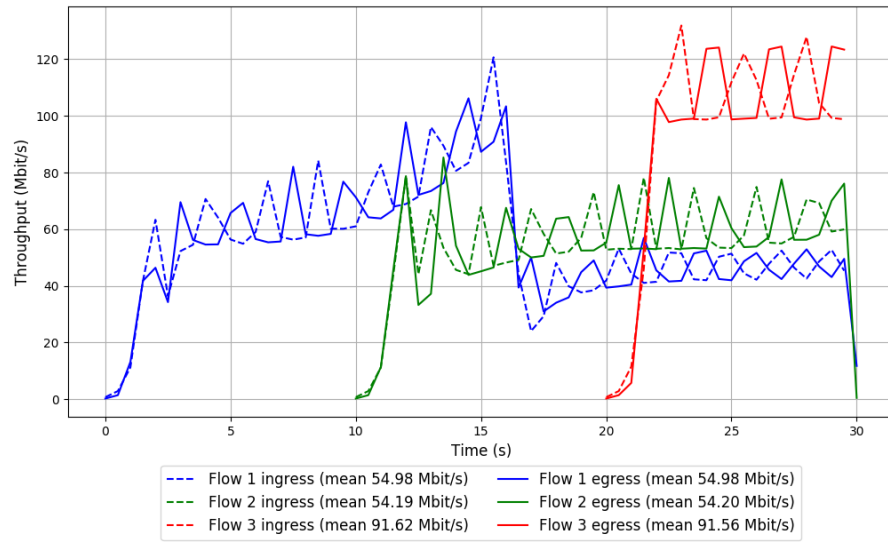
-- Flow 3:

Average throughput: 91.56 Mbit/s

95th percentile per-packet one-way delay: 122.425 ms

Loss rate: 0.00%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-04-18 04:32:54

End at: 2018-04-18 04:33:24

Below is generated by plot.py at 2018-04-18 08:53:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.99 Mbit/s

95th percentile per-packet one-way delay: 114.740 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 83.51 Mbit/s

95th percentile per-packet one-way delay: 114.470 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 62.00 Mbit/s

95th percentile per-packet one-way delay: 114.969 ms

Loss rate: 0.00%

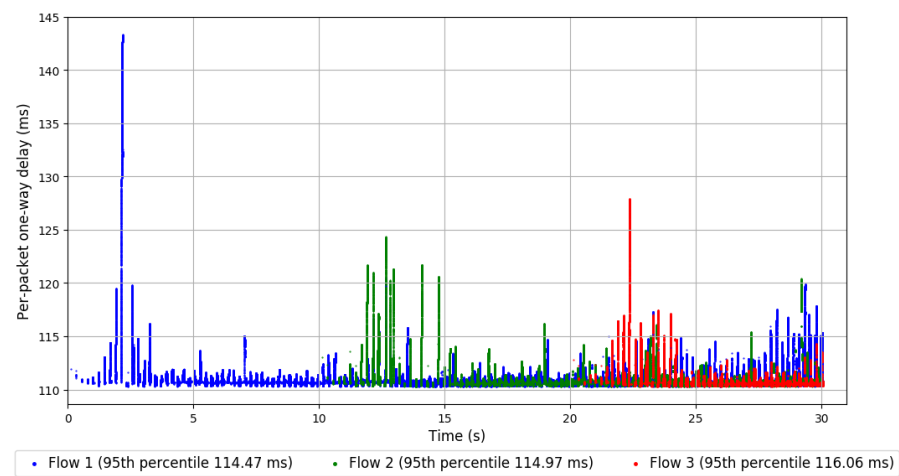
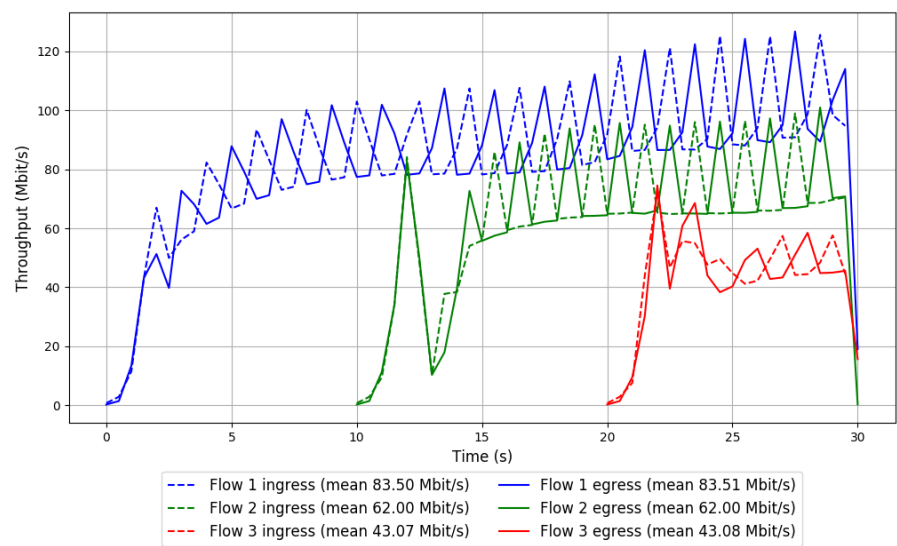
-- Flow 3:

Average throughput: 43.08 Mbit/s

95th percentile per-packet one-way delay: 116.061 ms

Loss rate: 0.00%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-04-18 04:50:07

End at: 2018-04-18 04:50:37

Below is generated by plot.py at 2018-04-18 08:53:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.59 Mbit/s

95th percentile per-packet one-way delay: 115.396 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 82.10 Mbit/s

95th percentile per-packet one-way delay: 116.815 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 64.54 Mbit/s

95th percentile per-packet one-way delay: 113.005 ms

Loss rate: 0.00%

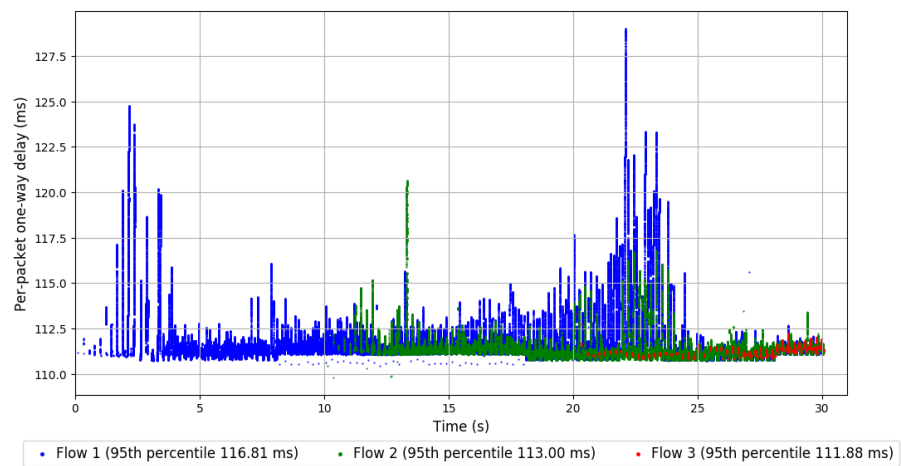
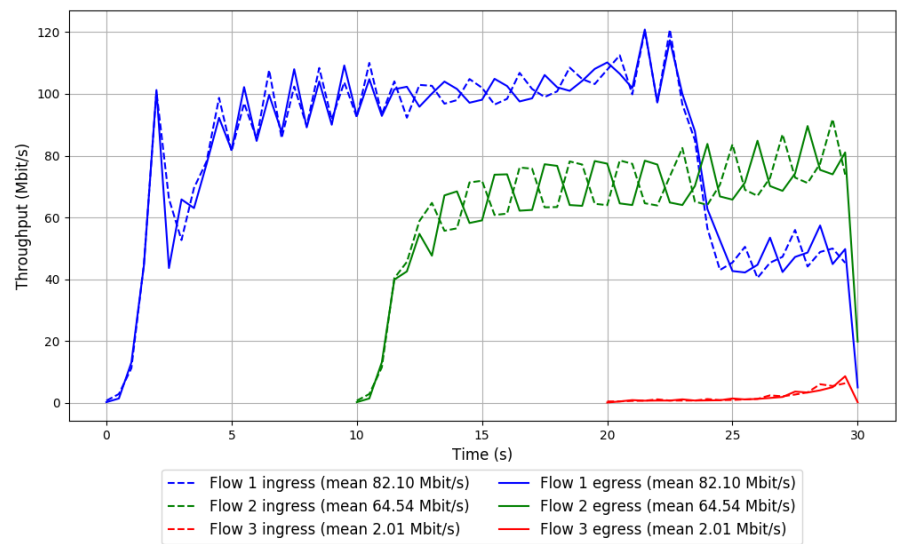
-- Flow 3:

Average throughput: 2.01 Mbit/s

95th percentile per-packet one-way delay: 111.881 ms

Loss rate: 0.30%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-04-18 05:07:29

End at: 2018-04-18 05:07:59

Below is generated by plot.py at 2018-04-18 08:53:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.91 Mbit/s

95th percentile per-packet one-way delay: 114.133 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 66.63 Mbit/s

95th percentile per-packet one-way delay: 114.418 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 22.15 Mbit/s

95th percentile per-packet one-way delay: 113.633 ms

Loss rate: 0.07%

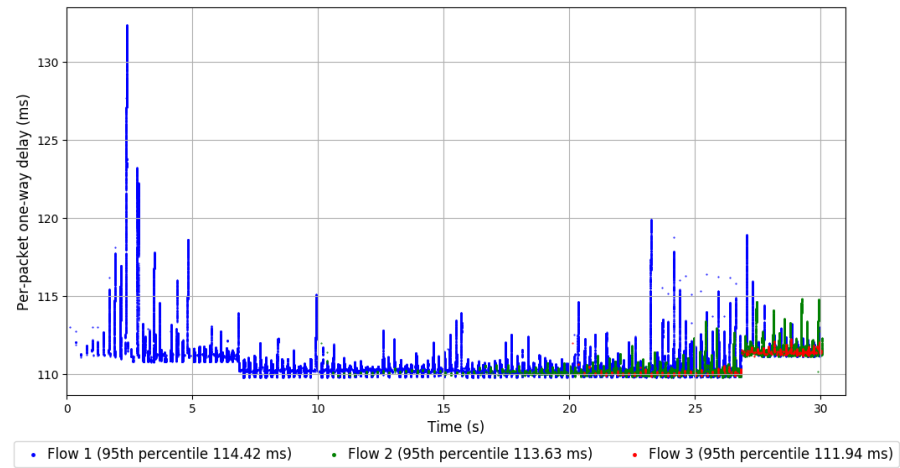
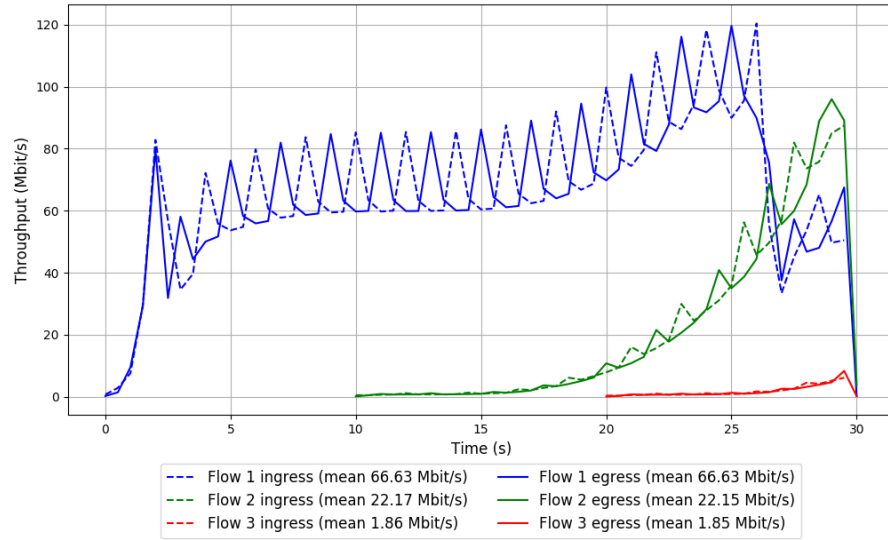
-- Flow 3:

Average throughput: 1.85 Mbit/s

95th percentile per-packet one-way delay: 111.940 ms

Loss rate: 0.46%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-04-18 05:24:57

End at: 2018-04-18 05:25:27

Below is generated by plot.py at 2018-04-18 08:53:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.07 Mbit/s

95th percentile per-packet one-way delay: 116.834 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 70.80 Mbit/s

95th percentile per-packet one-way delay: 117.524 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 67.52 Mbit/s

95th percentile per-packet one-way delay: 116.626 ms

Loss rate: 0.00%

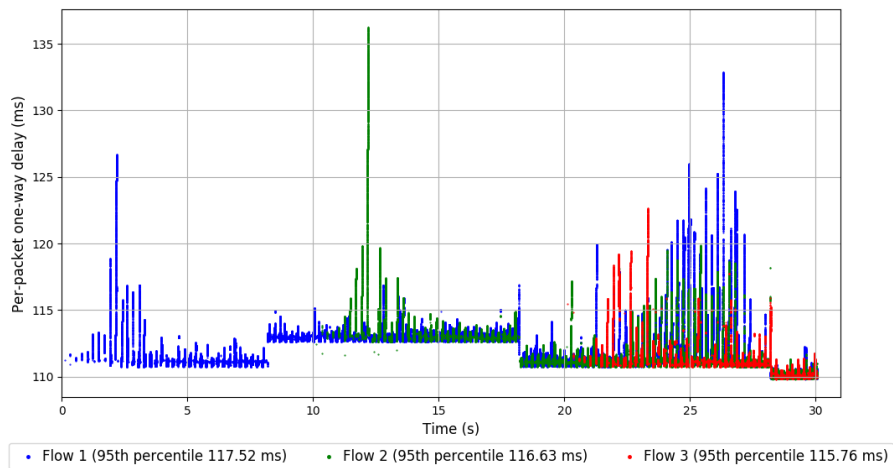
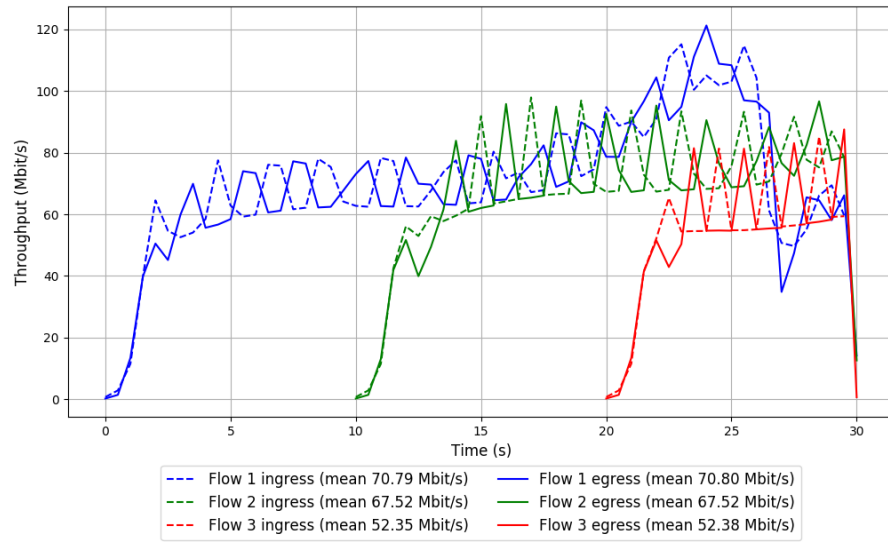
-- Flow 3:

Average throughput: 52.38 Mbit/s

95th percentile per-packet one-way delay: 115.756 ms

Loss rate: 0.00%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-04-18 05:42:23

End at: 2018-04-18 05:42:53

Below is generated by plot.py at 2018-04-18 08:53:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.02 Mbit/s

95th percentile per-packet one-way delay: 117.529 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 71.30 Mbit/s

95th percentile per-packet one-way delay: 118.931 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 21.84 Mbit/s

95th percentile per-packet one-way delay: 113.090 ms

Loss rate: 0.06%

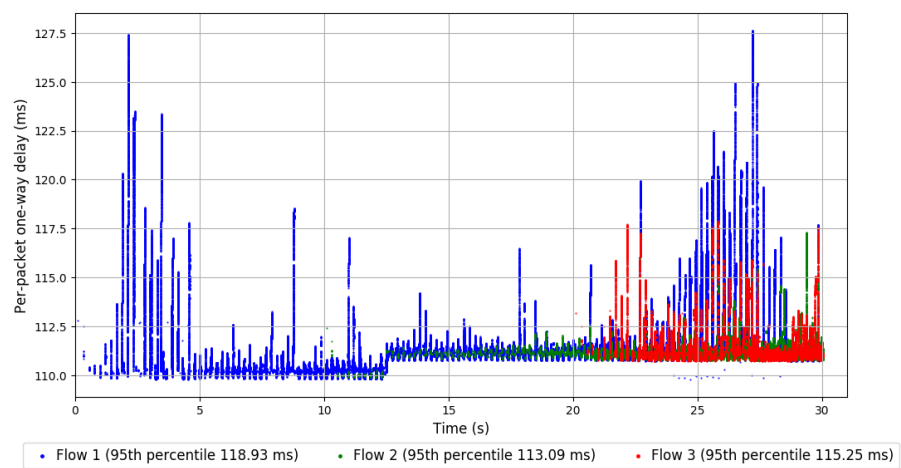
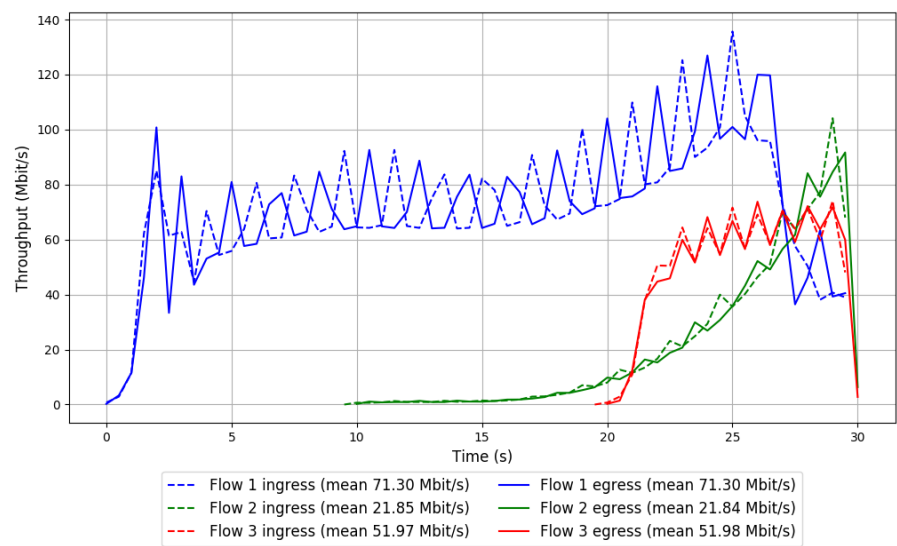
-- Flow 3:

Average throughput: 51.98 Mbit/s

95th percentile per-packet one-way delay: 115.252 ms

Loss rate: 0.00%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-04-18 05:59:36

End at: 2018-04-18 06:00:06

Below is generated by plot.py at 2018-04-18 08:54:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 169.15 Mbit/s

95th percentile per-packet one-way delay: 122.245 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 90.28 Mbit/s

95th percentile per-packet one-way delay: 122.858 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 72.60 Mbit/s

95th percentile per-packet one-way delay: 122.069 ms

Loss rate: 0.00%

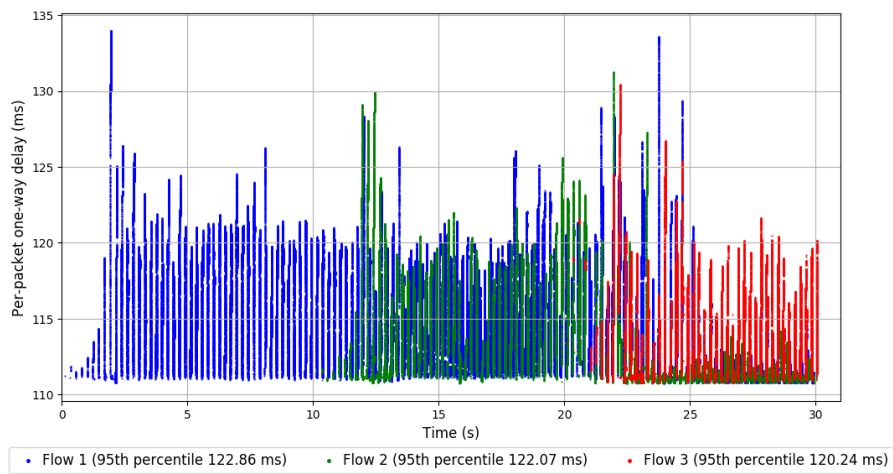
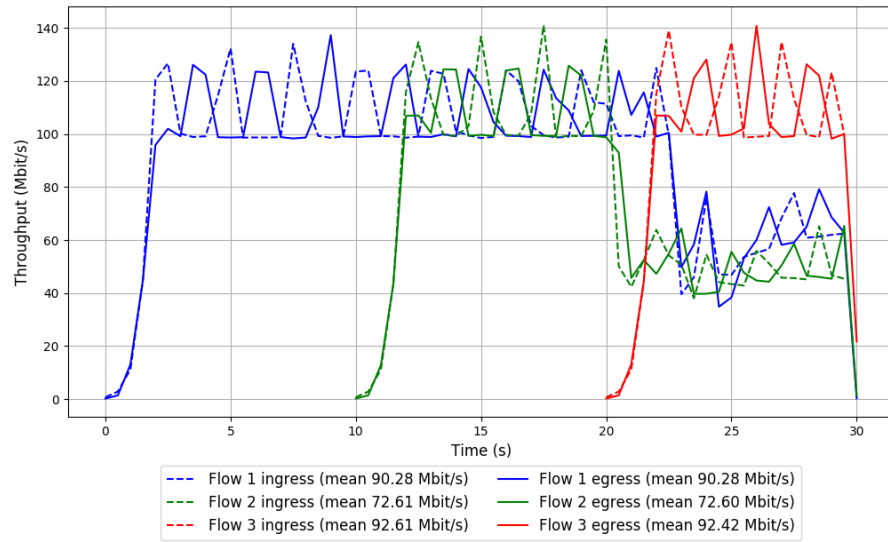
-- Flow 3:

Average throughput: 92.42 Mbit/s

95th percentile per-packet one-way delay: 120.244 ms

Loss rate: 0.17%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-04-18 06:16:56

End at: 2018-04-18 06:17:26

Below is generated by plot.py at 2018-04-18 08:54:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.67 Mbit/s

95th percentile per-packet one-way delay: 119.355 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 66.82 Mbit/s

95th percentile per-packet one-way delay: 117.482 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 51.14 Mbit/s

95th percentile per-packet one-way delay: 117.019 ms

Loss rate: 0.00%

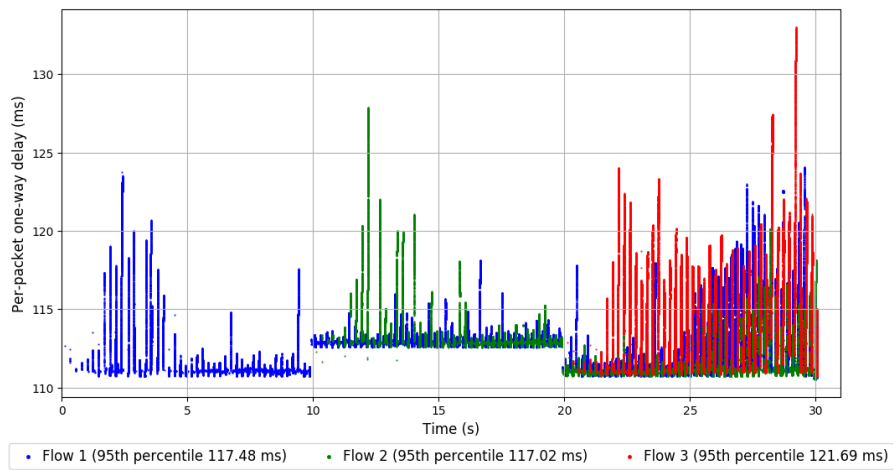
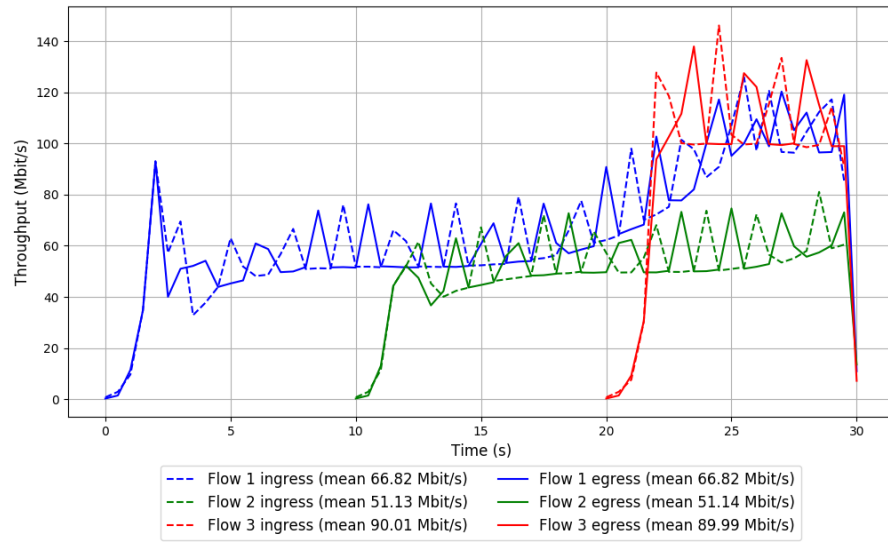
-- Flow 3:

Average throughput: 89.99 Mbit/s

95th percentile per-packet one-way delay: 121.687 ms

Loss rate: 0.00%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-04-18 06:34:12

End at: 2018-04-18 06:34:42

Below is generated by plot.py at 2018-04-18 08:54:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.20 Mbit/s

95th percentile per-packet one-way delay: 119.702 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 76.88 Mbit/s

95th percentile per-packet one-way delay: 120.194 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 47.83 Mbit/s

95th percentile per-packet one-way delay: 115.402 ms

Loss rate: 0.00%

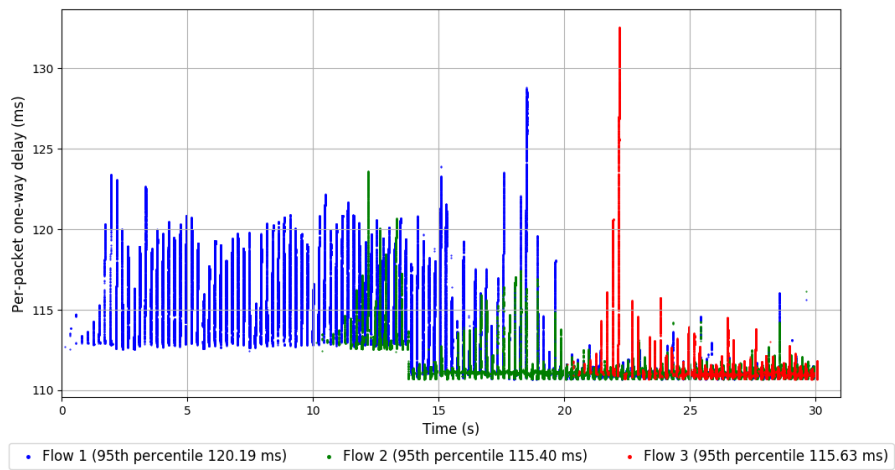
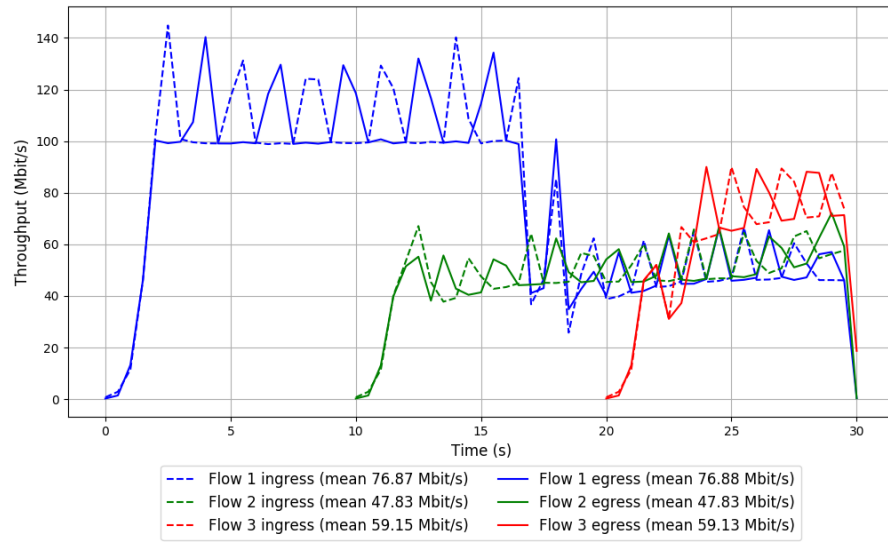
-- Flow 3:

Average throughput: 59.13 Mbit/s

95th percentile per-packet one-way delay: 115.632 ms

Loss rate: 0.06%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-04-18 06:51:10

End at: 2018-04-18 06:51:40

Below is generated by plot.py at 2018-04-18 08:55:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.87 Mbit/s

95th percentile per-packet one-way delay: 118.355 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 72.56 Mbit/s

95th percentile per-packet one-way delay: 114.708 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 67.95 Mbit/s

95th percentile per-packet one-way delay: 115.793 ms

Loss rate: 0.00%

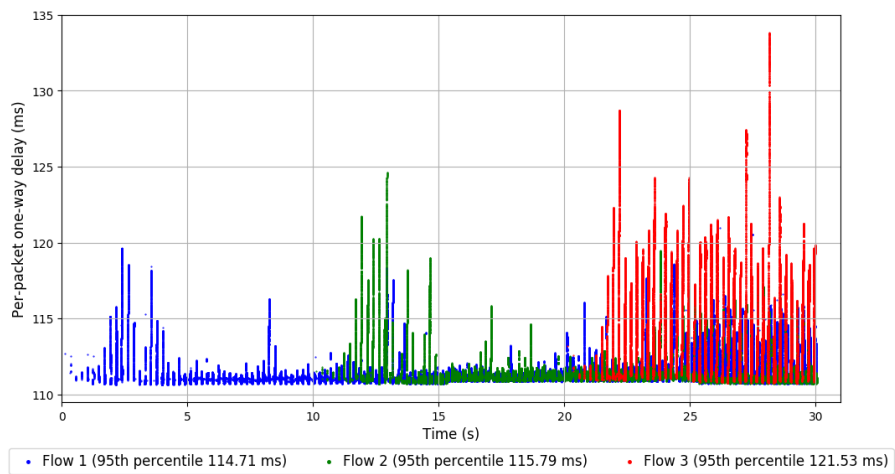
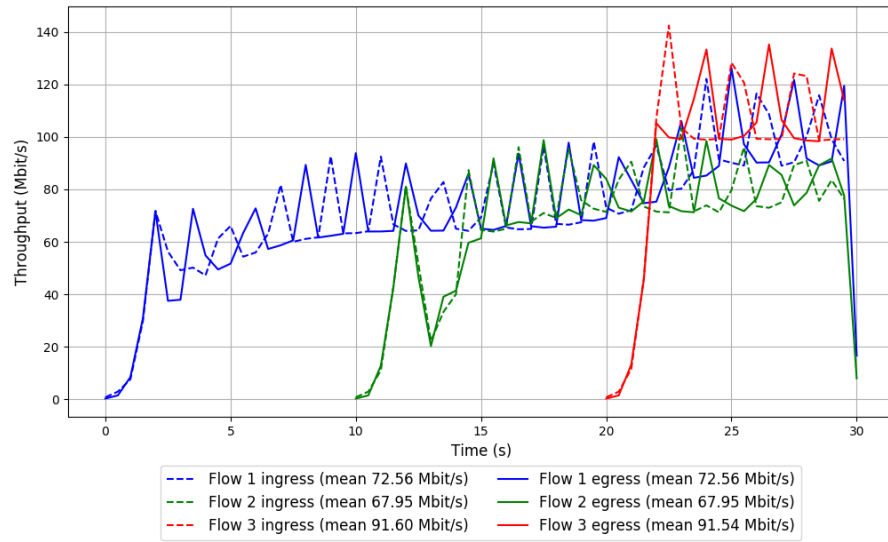
-- Flow 3:

Average throughput: 91.54 Mbit/s

95th percentile per-packet one-way delay: 121.527 ms

Loss rate: 0.00%

Run 10: Report of TCP Cubic — Data Link

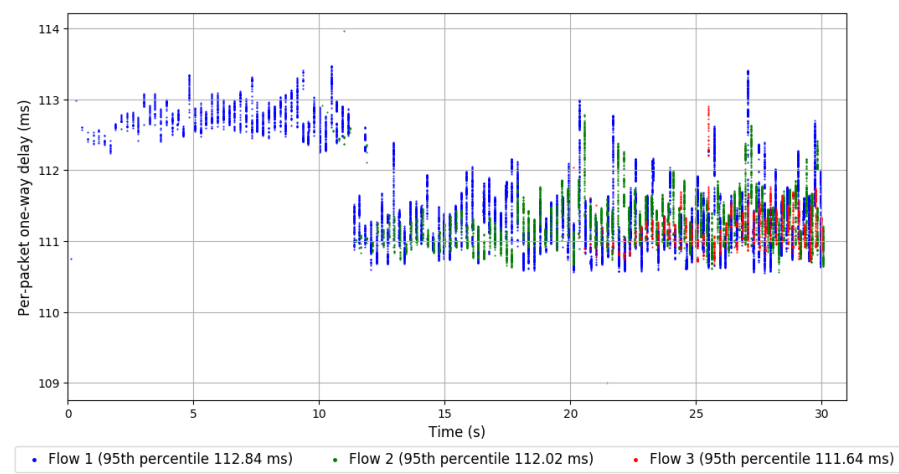
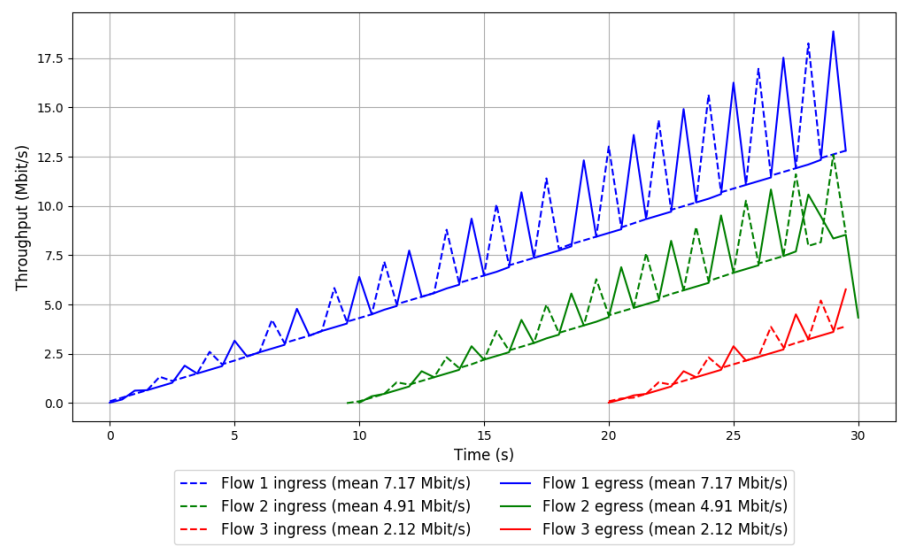


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-18 04:24:14
End at: 2018-04-18 04:24:44

# Below is generated by plot.py at 2018-04-18 08:55:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.11 Mbit/s
95th percentile per-packet one-way delay: 112.746 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 112.837 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.91 Mbit/s
95th percentile per-packet one-way delay: 112.022 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 111.645 ms
Loss rate: 0.00%
```


Run 1: Report of LEDBAT — Data Link

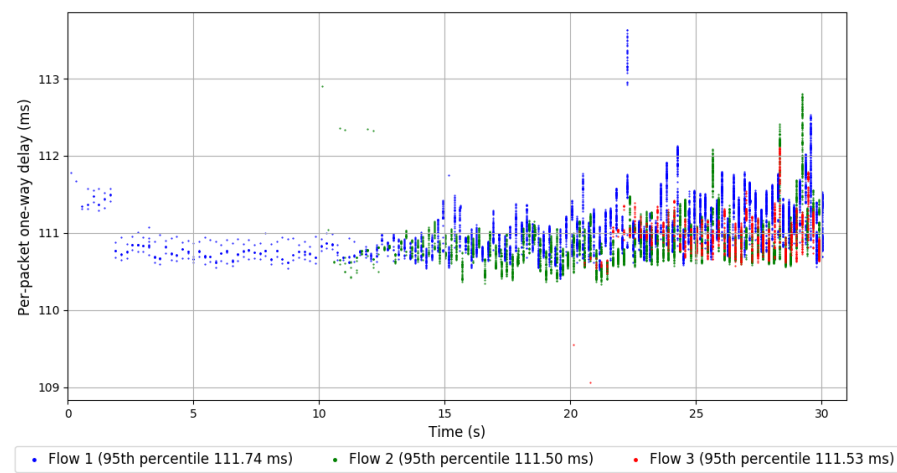
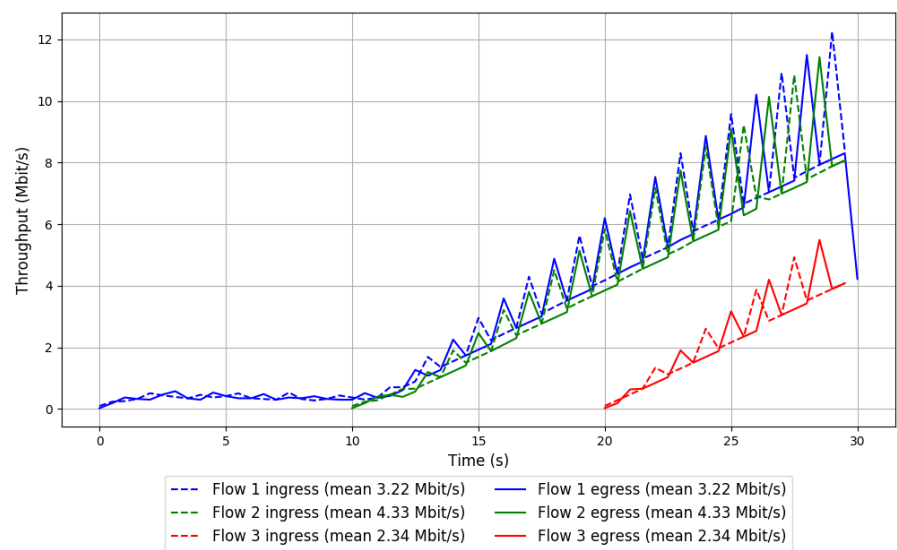


```
Run 2: Statistics of LEDBAT

Start at: 2018-04-18 04:41:34
End at: 2018-04-18 04:42:04

# Below is generated by plot.py at 2018-04-18 08:55:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 111.693 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 111.741 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 111.504 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 111.530 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link

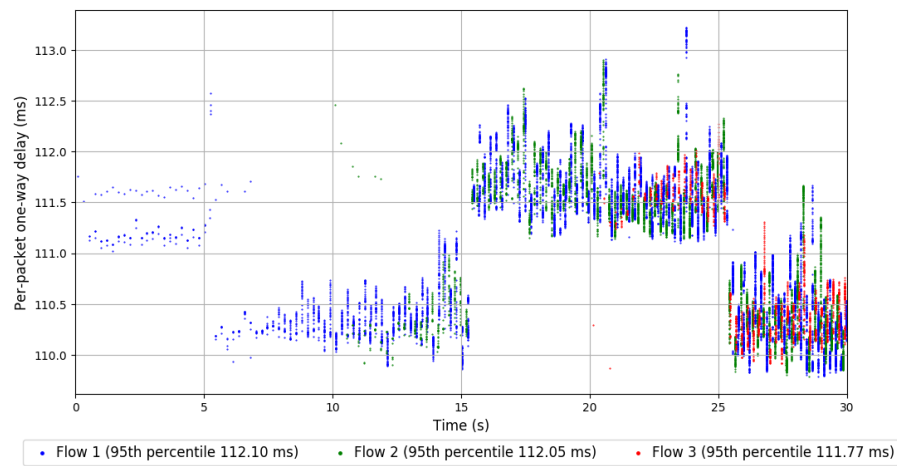
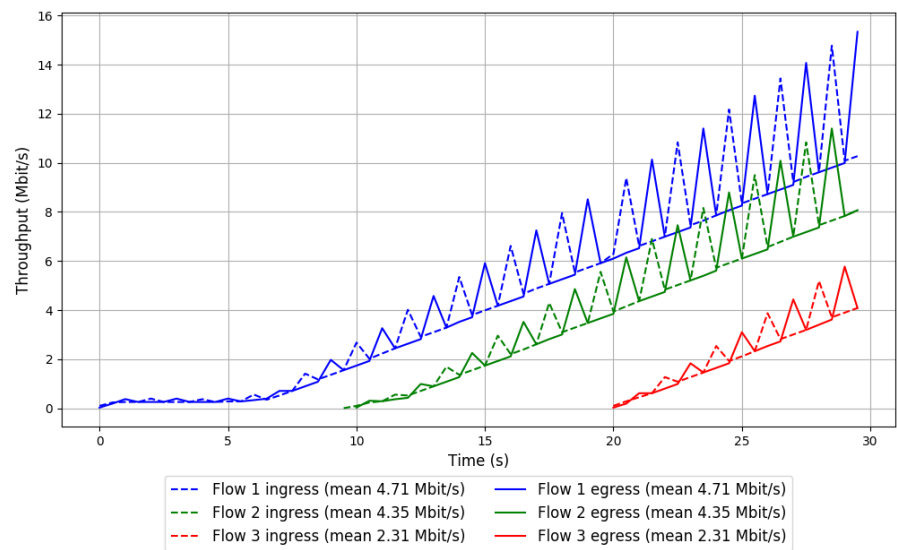


```
Run 3: Statistics of LEDBAT

Start at: 2018-04-18 04:58:50
End at: 2018-04-18 04:59:20

# Below is generated by plot.py at 2018-04-18 08:55:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.34 Mbit/s
95th percentile per-packet one-way delay: 112.051 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.71 Mbit/s
95th percentile per-packet one-way delay: 112.097 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 112.047 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 111.774 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-04-18 05:16:10

End at: 2018-04-18 05:16:40

Below is generated by plot.py at 2018-04-18 08:55:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.70 Mbit/s

95th percentile per-packet one-way delay: 111.984 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.17 Mbit/s

95th percentile per-packet one-way delay: 112.102 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 3.51 Mbit/s

95th percentile per-packet one-way delay: 111.774 ms

Loss rate: 0.00%

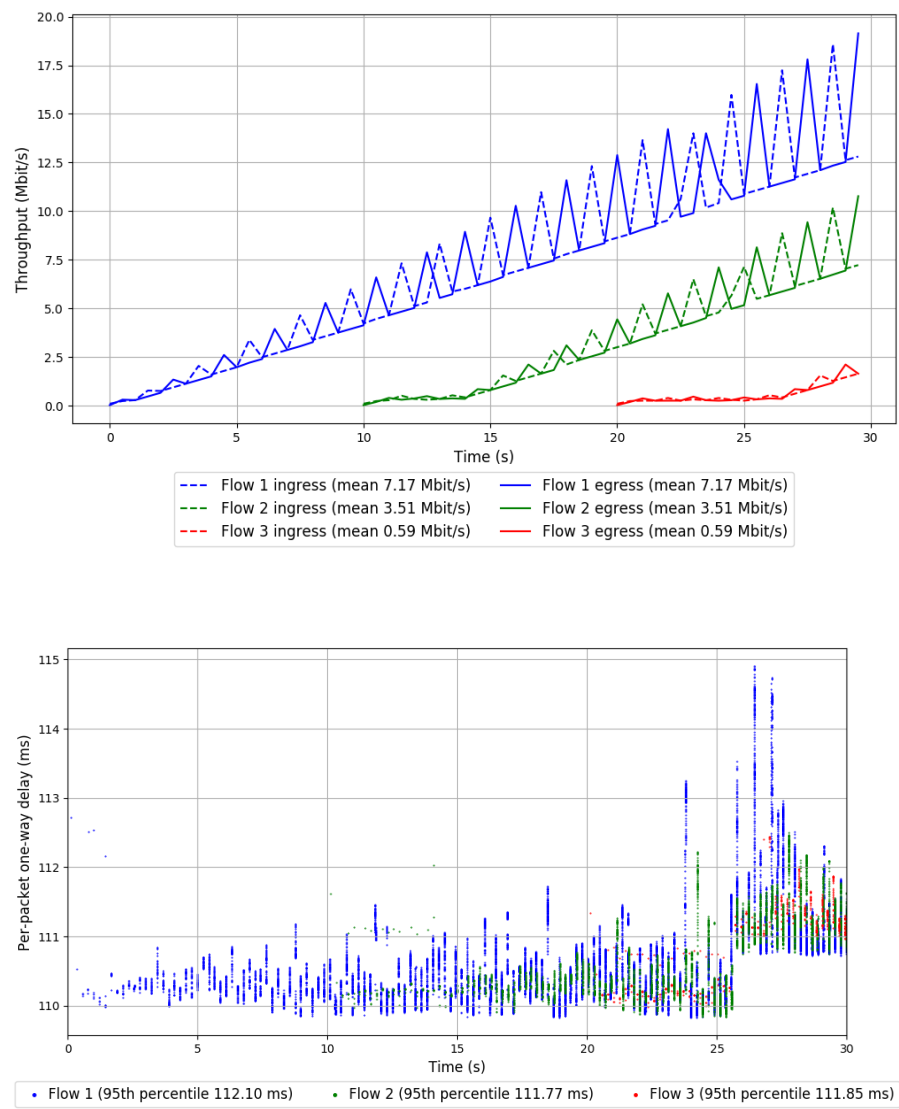
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 111.850 ms

Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-04-18 05:33:40

End at: 2018-04-18 05:34:10

Below is generated by plot.py at 2018-04-18 08:55:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.01 Mbit/s

95th percentile per-packet one-way delay: 113.952 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.12 Mbit/s

95th percentile per-packet one-way delay: 114.100 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 4.72 Mbit/s

95th percentile per-packet one-way delay: 113.669 ms

Loss rate: 0.00%

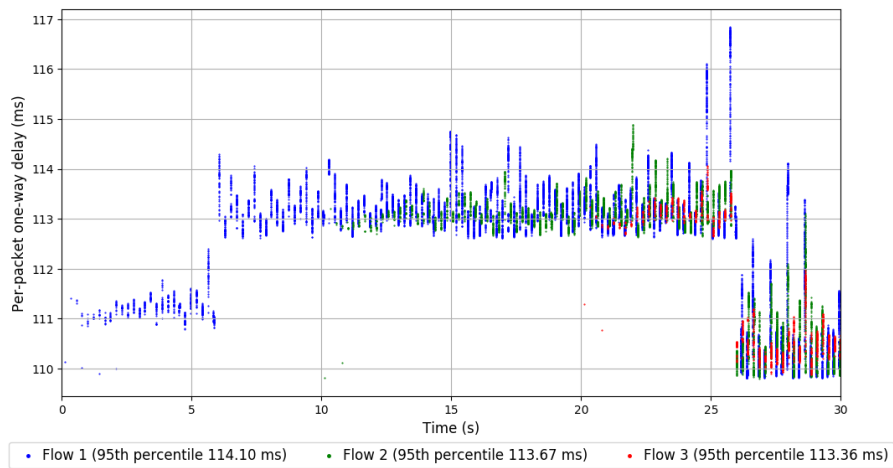
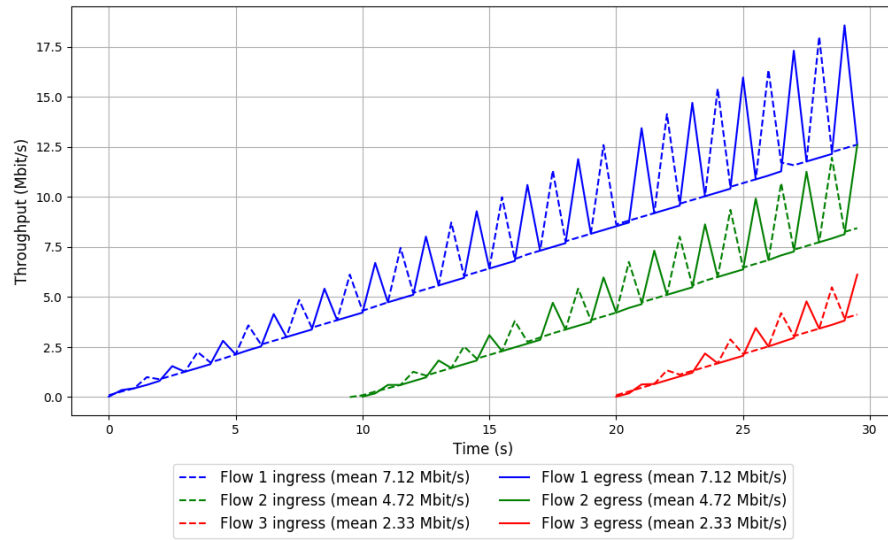
-- Flow 3:

Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 113.363 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

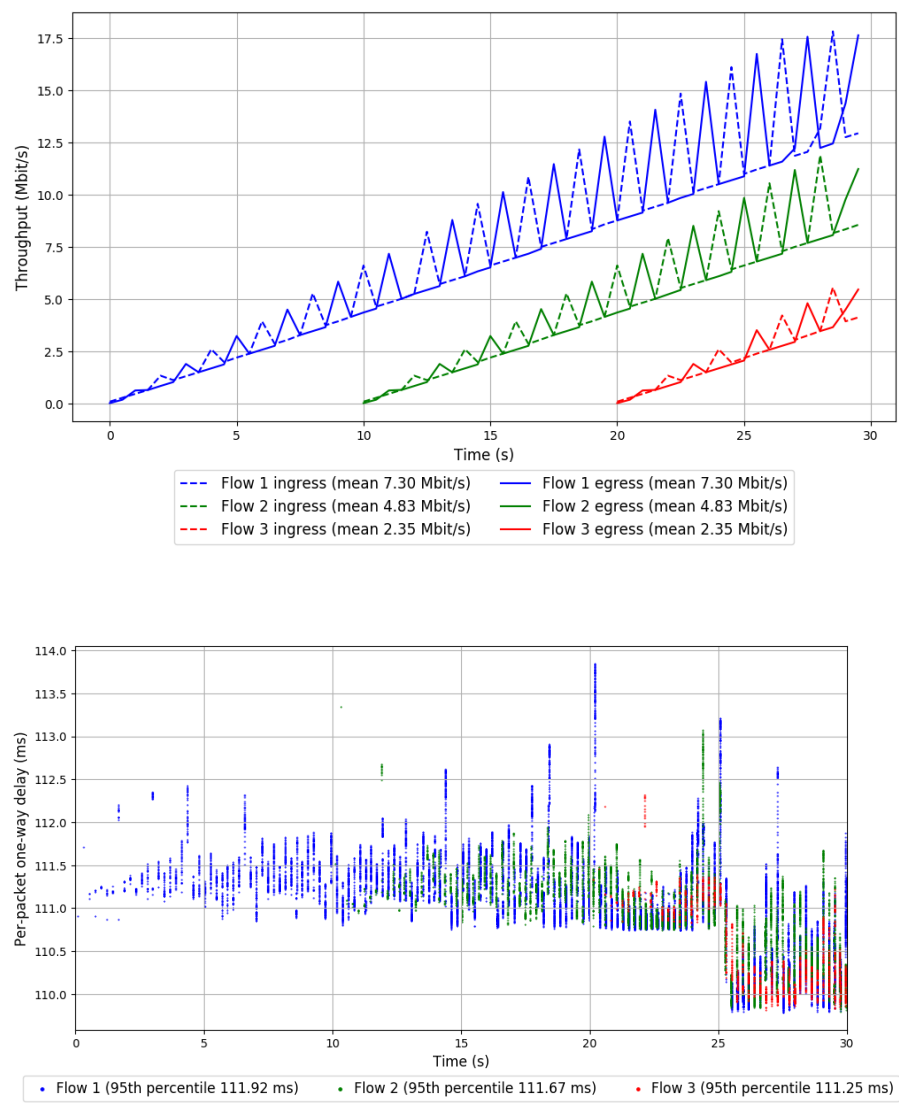


```
Run 6: Statistics of LEDBAT

Start at: 2018-04-18 05:51:00
End at: 2018-04-18 05:51:30

# Below is generated by plot.py at 2018-04-18 08:55:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.28 Mbit/s
95th percentile per-packet one-way delay: 111.835 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.30 Mbit/s
95th percentile per-packet one-way delay: 111.923 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 111.665 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 111.246 ms
Loss rate: 0.00%
```

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-04-18 06:08:15

End at: 2018-04-18 06:08:45

Below is generated by plot.py at 2018-04-18 08:55:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.85 Mbit/s

95th percentile per-packet one-way delay: 112.295 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.03 Mbit/s

95th percentile per-packet one-way delay: 112.355 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 4.61 Mbit/s

95th percentile per-packet one-way delay: 112.318 ms

Loss rate: 0.00%

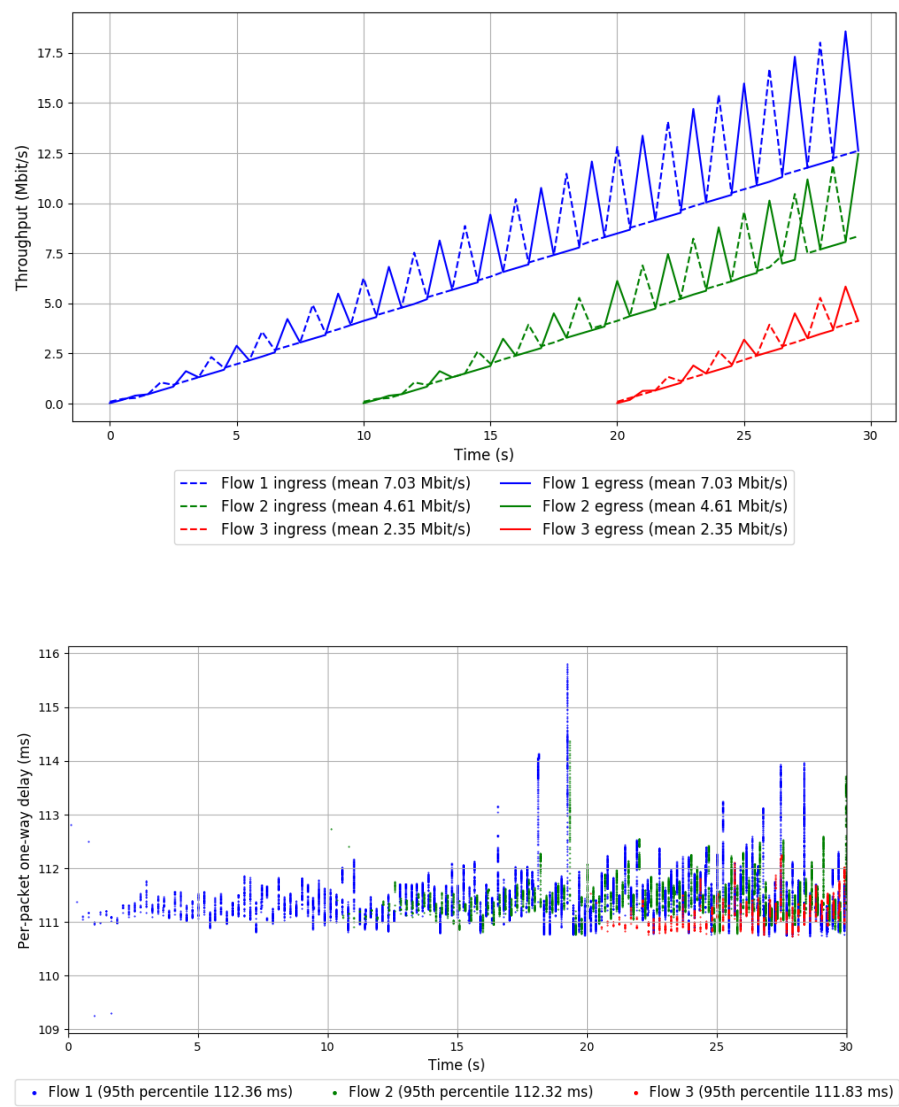
-- Flow 3:

Average throughput: 2.35 Mbit/s

95th percentile per-packet one-way delay: 111.825 ms

Loss rate: 0.00%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-04-18 06:25:36

End at: 2018-04-18 06:26:06

Below is generated by plot.py at 2018-04-18 08:55:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.38 Mbit/s

95th percentile per-packet one-way delay: 113.673 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 6.59 Mbit/s

95th percentile per-packet one-way delay: 113.751 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 3.05 Mbit/s

95th percentile per-packet one-way delay: 113.220 ms

Loss rate: 0.00%

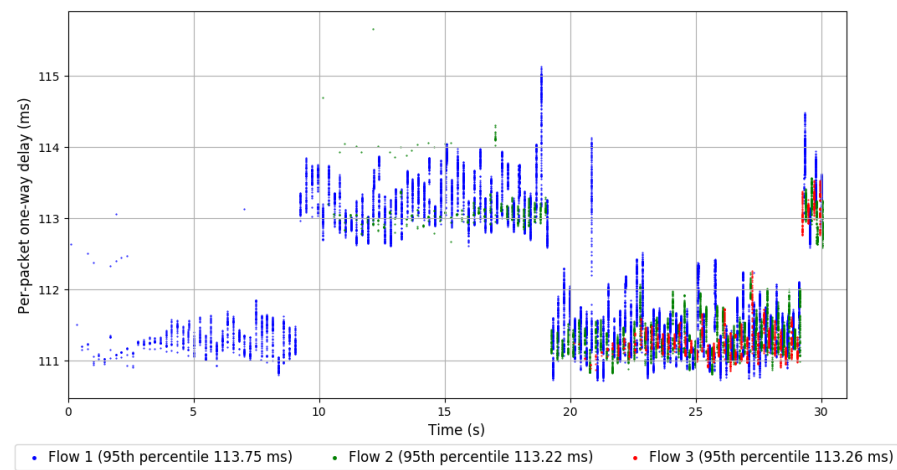
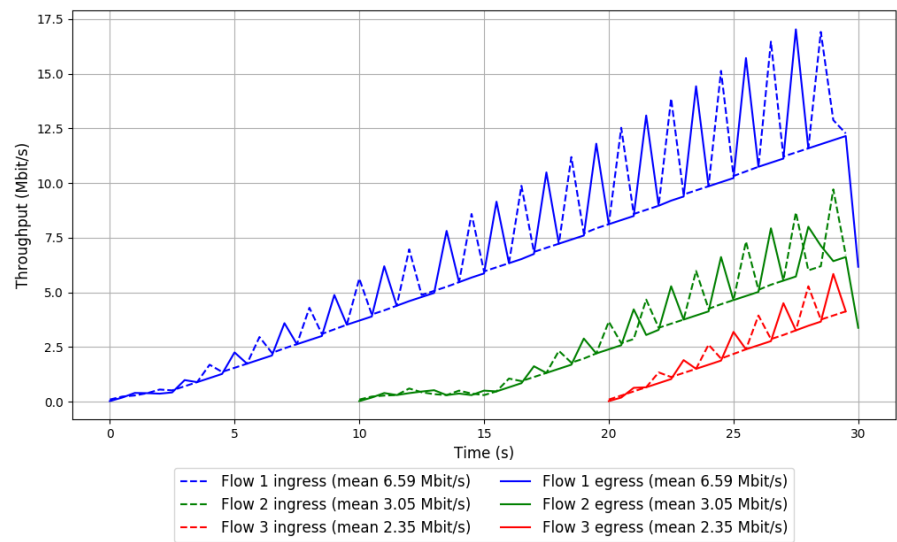
-- Flow 3:

Average throughput: 2.35 Mbit/s

95th percentile per-packet one-way delay: 113.262 ms

Loss rate: 0.00%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-04-18 06:42:40

End at: 2018-04-18 06:43:10

Below is generated by plot.py at 2018-04-18 08:55:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.07 Mbit/s

95th percentile per-packet one-way delay: 113.639 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.17 Mbit/s

95th percentile per-packet one-way delay: 113.628 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 4.74 Mbit/s

95th percentile per-packet one-way delay: 113.752 ms

Loss rate: 0.00%

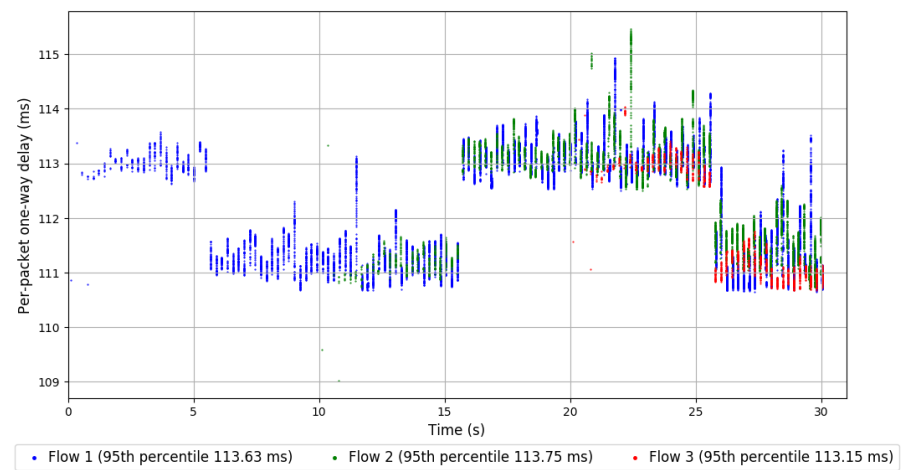
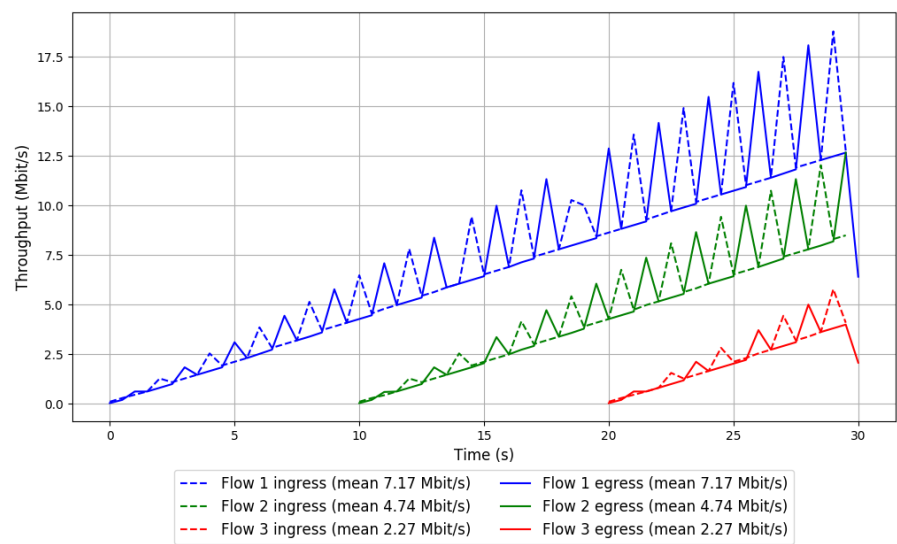
-- Flow 3:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 113.146 ms

Loss rate: 0.00%

Run 9: Report of LEDBAT — Data Link

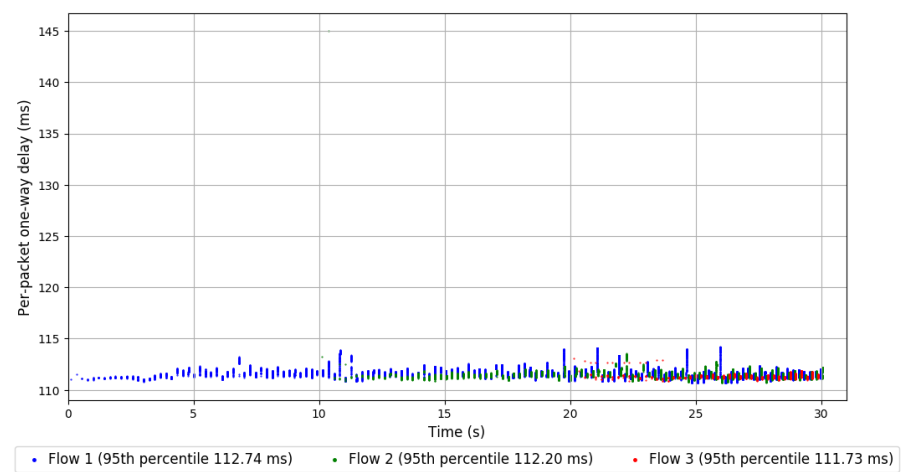
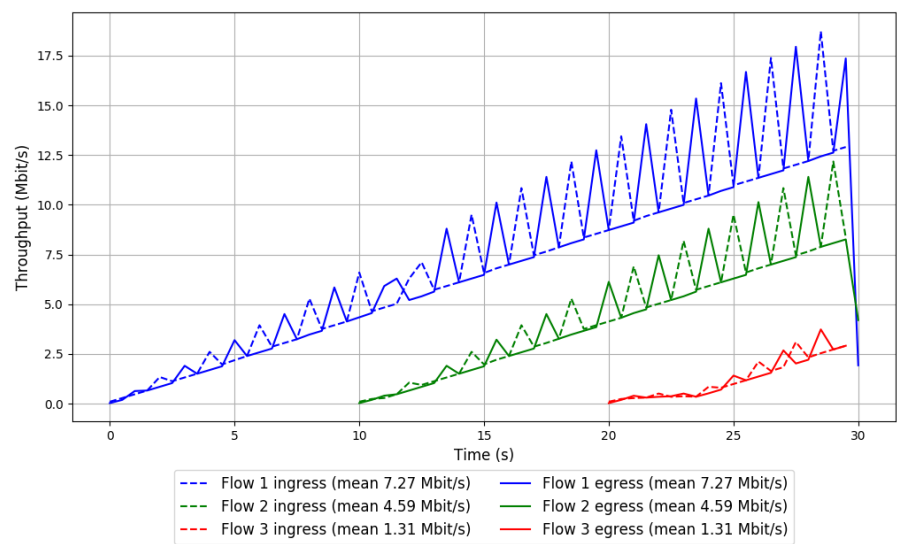


```
Run 10: Statistics of LEDBAT

Start at: 2018-04-18 06:59:42
End at: 2018-04-18 07:00:12

# Below is generated by plot.py at 2018-04-18 08:55:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.73 Mbit/s
95th percentile per-packet one-way delay: 112.454 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.27 Mbit/s
95th percentile per-packet one-way delay: 112.736 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.59 Mbit/s
95th percentile per-packet one-way delay: 112.196 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 111.732 ms
Loss rate: 0.00%
```

Run 10: Report of LEDBAT — Data Link

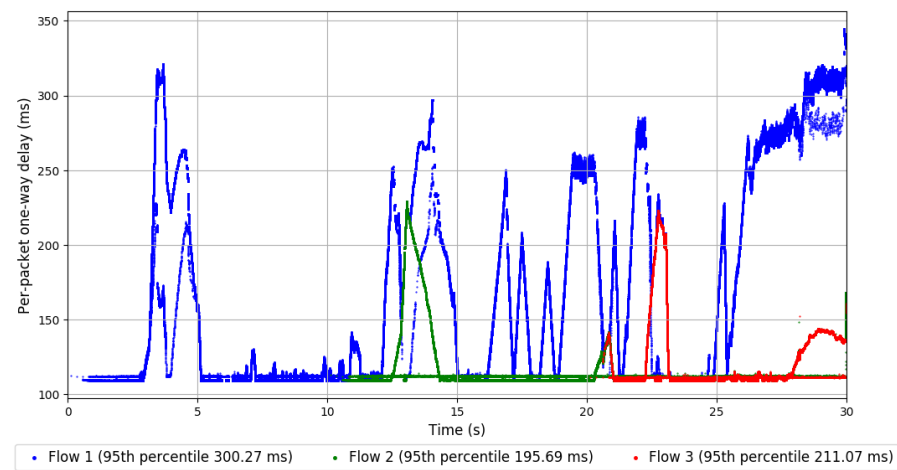
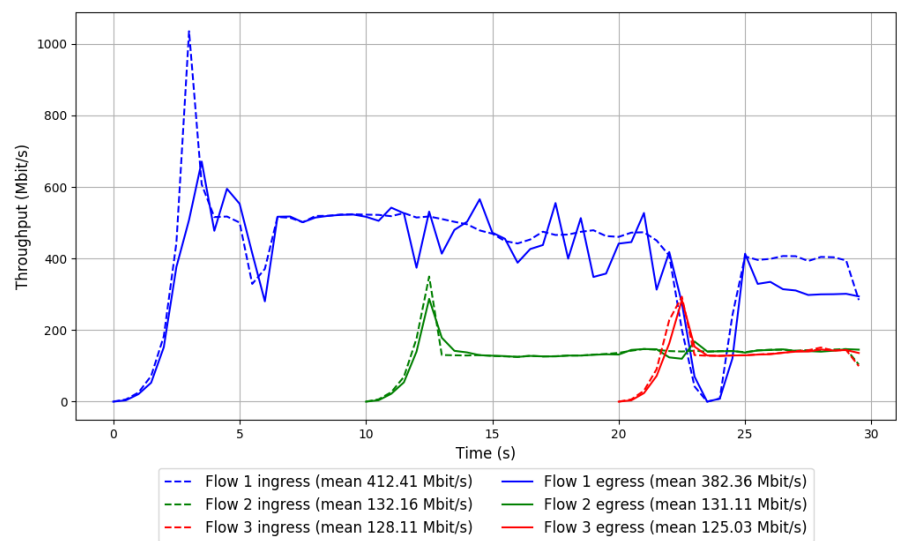


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-18 04:14:30
End at: 2018-04-18 04:15:00

# Below is generated by plot.py at 2018-04-18 09:03:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 510.80 Mbit/s
95th percentile per-packet one-way delay: 283.396 ms
Loss rate: 5.75%
-- Flow 1:
Average throughput: 382.36 Mbit/s
95th percentile per-packet one-way delay: 300.272 ms
Loss rate: 7.20%
-- Flow 2:
Average throughput: 131.11 Mbit/s
95th percentile per-packet one-way delay: 195.686 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 125.03 Mbit/s
95th percentile per-packet one-way delay: 211.070 ms
Loss rate: 2.13%
```

Run 1: Report of PCC-Allegro — Data Link

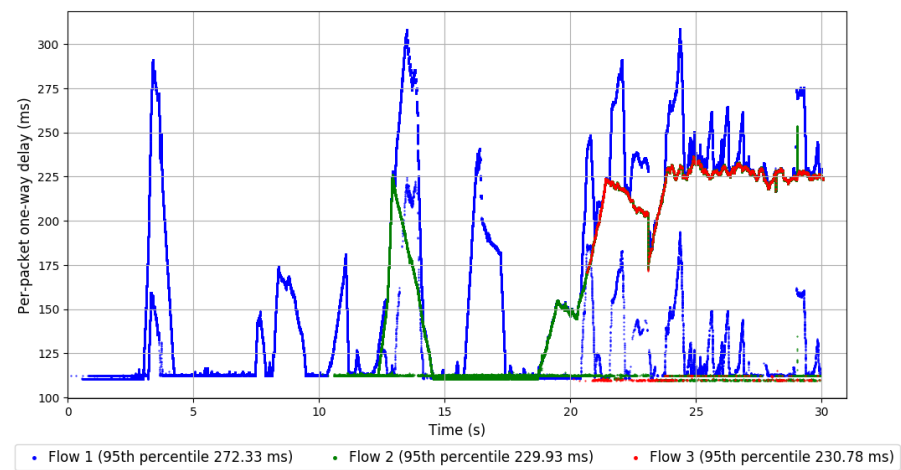
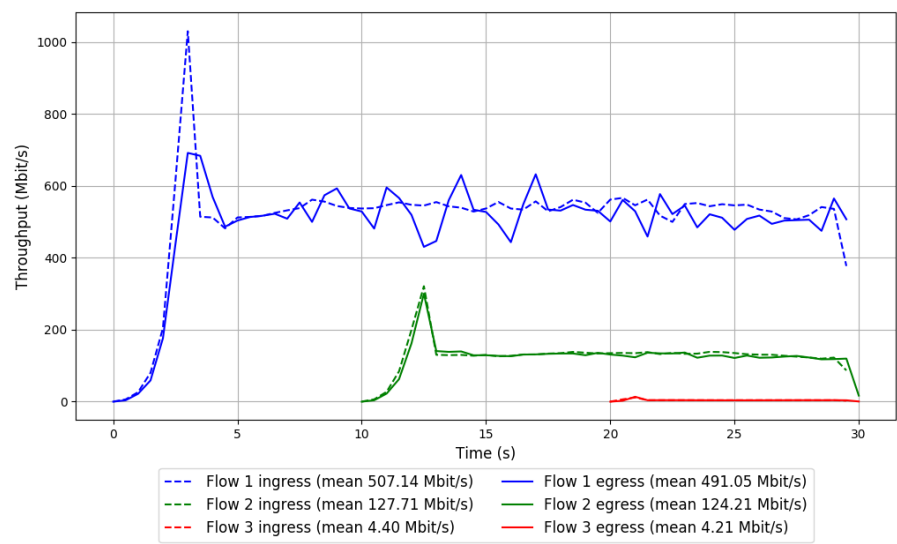


```
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-18 04:31:42
End at: 2018-04-18 04:32:12

# Below is generated by plot.py at 2018-04-18 09:04:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 573.87 Mbit/s
95th percentile per-packet one-way delay: 269.915 ms
Loss rate: 2.95%
-- Flow 1:
Average throughput: 491.05 Mbit/s
95th percentile per-packet one-way delay: 272.330 ms
Loss rate: 3.07%
-- Flow 2:
Average throughput: 124.21 Mbit/s
95th percentile per-packet one-way delay: 229.927 ms
Loss rate: 2.21%
-- Flow 3:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 230.784 ms
Loss rate: 3.03%
```

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-04-18 04:49:00

End at: 2018-04-18 04:49:30

Below is generated by plot.py at 2018-04-18 09:04:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 479.61 Mbit/s

95th percentile per-packet one-way delay: 210.840 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 311.87 Mbit/s

95th percentile per-packet one-way delay: 210.536 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 249.86 Mbit/s

95th percentile per-packet one-way delay: 212.518 ms

Loss rate: 1.44%

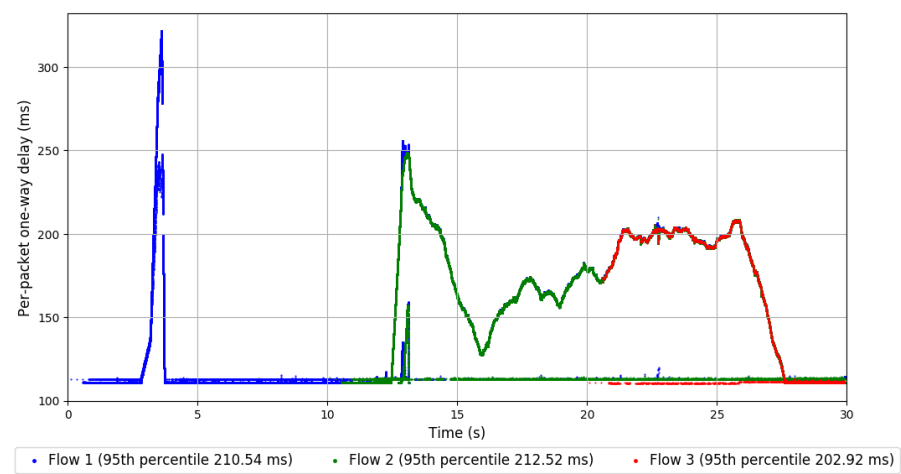
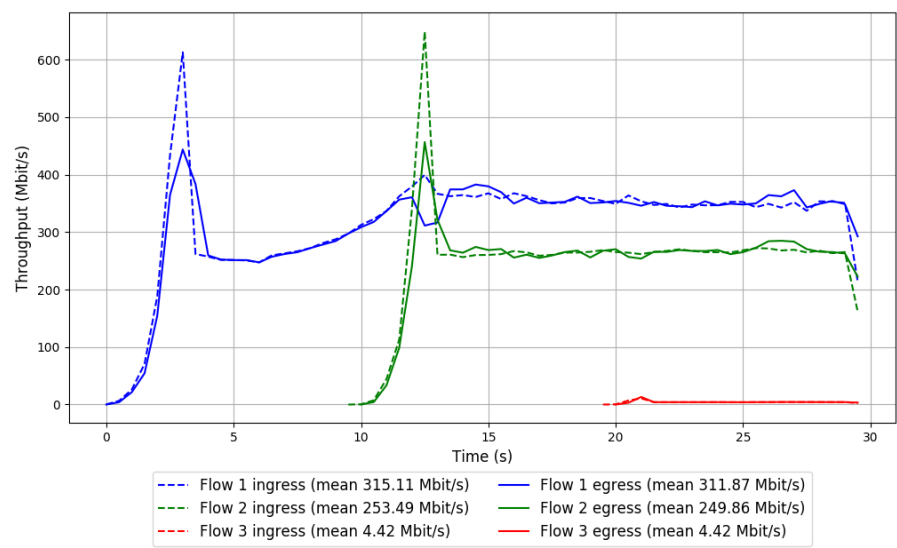
-- Flow 3:

Average throughput: 4.42 Mbit/s

95th percentile per-packet one-way delay: 202.923 ms

Loss rate: 0.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-04-18 05:06:18

End at: 2018-04-18 05:06:48

Below is generated by plot.py at 2018-04-18 09:04:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 537.93 Mbit/s

95th percentile per-packet one-way delay: 229.684 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 456.62 Mbit/s

95th percentile per-packet one-way delay: 230.005 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 120.22 Mbit/s

95th percentile per-packet one-way delay: 228.469 ms

Loss rate: 1.87%

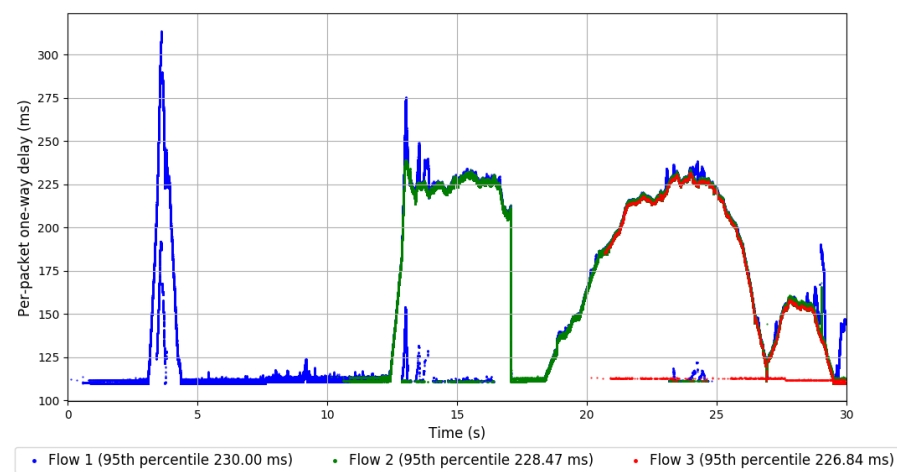
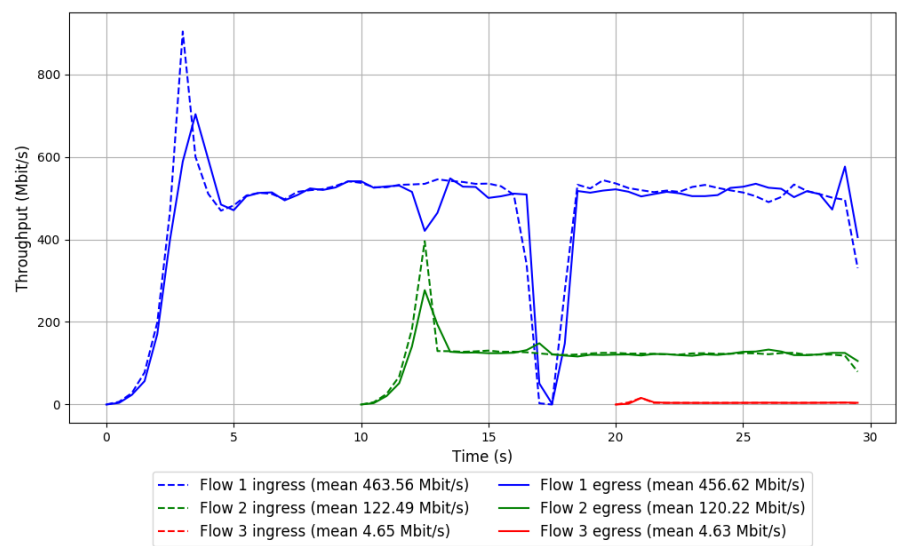
-- Flow 3:

Average throughput: 4.63 Mbit/s

95th percentile per-packet one-way delay: 226.838 ms

Loss rate: 0.53%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-04-18 05:23:46

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

Below is generated by plot.py at 2018-04-18 09:04:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 565.39 Mbit/s

95th percentile per-packet one-way delay: 225.795 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 481.34 Mbit/s

95th percentile per-packet one-way delay: 226.758 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 124.42 Mbit/s

95th percentile per-packet one-way delay: 204.284 ms

Loss rate: 0.72%

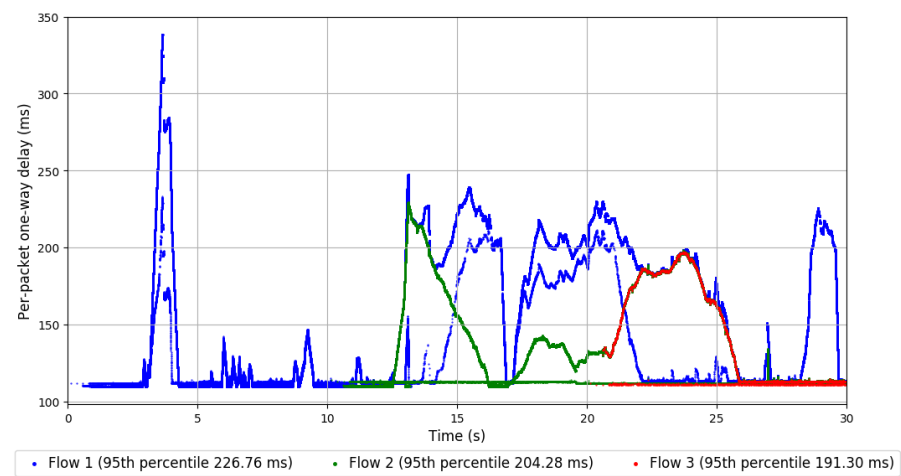
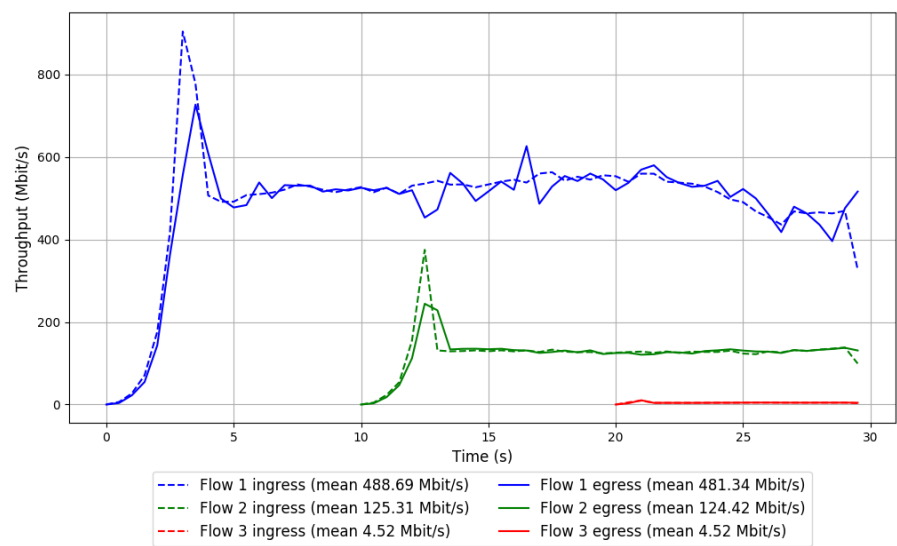
-- Flow 3:

Average throughput: 4.52 Mbit/s

95th percentile per-packet one-way delay: 191.297 ms

Loss rate: 0.00%

Run 5: Report of PCC-Allegro — Data Link



Run 6: Statistics of PCC-Allegro

Start at: 2018-04-18 05:41:14

End at: 2018-04-18 05:41:44

Below is generated by plot.py at 2018-04-18 09:04:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 485.33 Mbit/s

95th percentile per-packet one-way delay: 239.882 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 284.97 Mbit/s

95th percentile per-packet one-way delay: 254.183 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 270.92 Mbit/s

95th percentile per-packet one-way delay: 217.374 ms

Loss rate: 1.90%

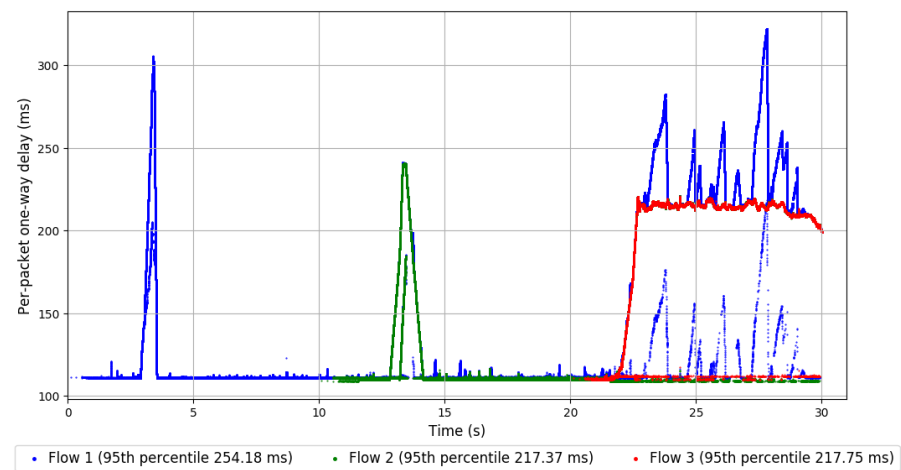
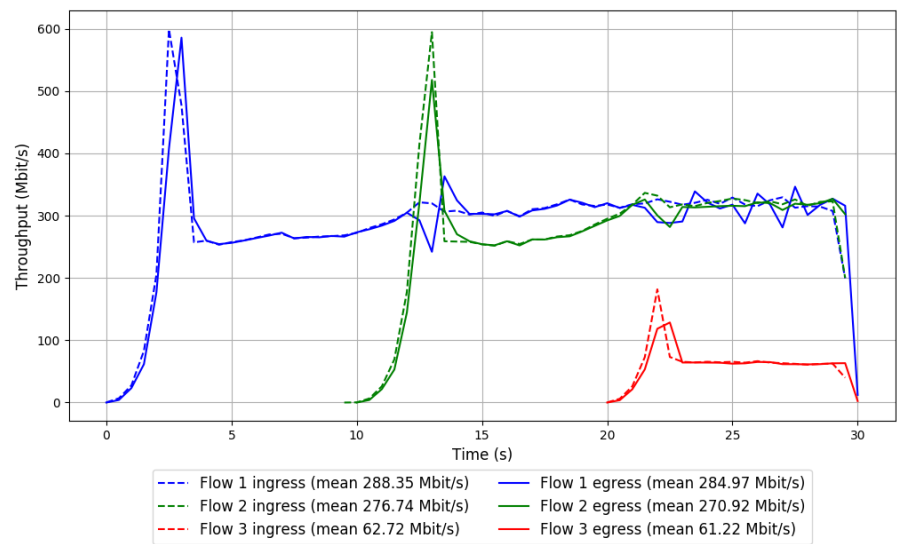
-- Flow 3:

Average throughput: 61.22 Mbit/s

95th percentile per-packet one-way delay: 217.748 ms

Loss rate: 1.50%

Run 6: Report of PCC-Allegro — Data Link



Run 7: Statistics of PCC-Allegro

Start at: 2018-04-18 05:58:26

End at: 2018-04-18 05:58:56

Below is generated by plot.py at 2018-04-18 09:04:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 525.16 Mbit/s

95th percentile per-packet one-way delay: 338.742 ms

Loss rate: 8.15%

-- Flow 1:

Average throughput: 428.80 Mbit/s

95th percentile per-packet one-way delay: 345.846 ms

Loss rate: 9.68%

-- Flow 2:

Average throughput: 128.89 Mbit/s

95th percentile per-packet one-way delay: 219.137 ms

Loss rate: 0.75%

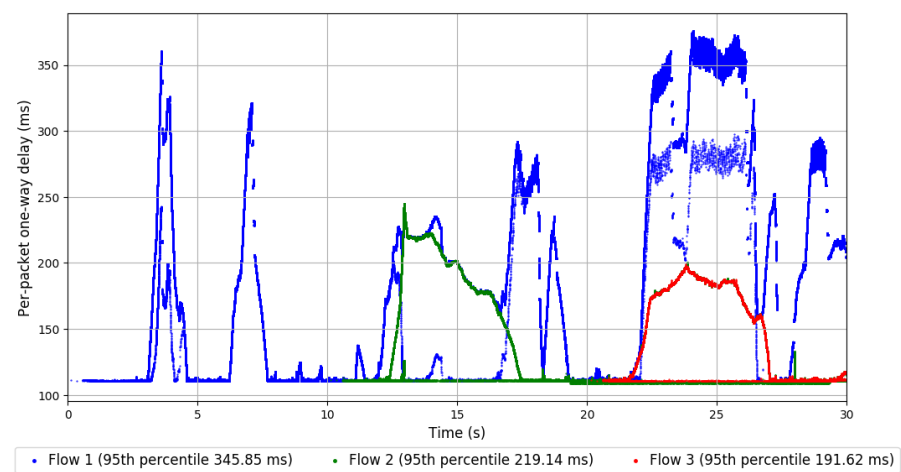
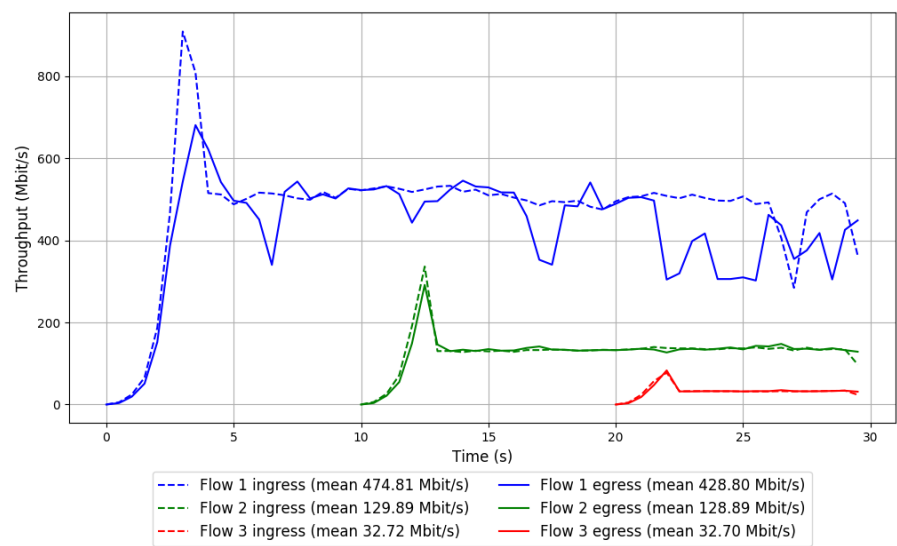
-- Flow 3:

Average throughput: 32.70 Mbit/s

95th percentile per-packet one-way delay: 191.616 ms

Loss rate: 0.01%

Run 7: Report of PCC-Allegro — Data Link



Run 8: Statistics of PCC-Allegro

Start at: 2018-04-18 06:15:45

End at: 2018-04-18 06:16:15

Below is generated by plot.py at 2018-04-18 09:05:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 546.29 Mbit/s

95th percentile per-packet one-way delay: 267.268 ms

Loss rate: 2.84%

-- Flow 1:

Average throughput: 386.33 Mbit/s

95th percentile per-packet one-way delay: 286.419 ms

Loss rate: 3.29%

-- Flow 2:

Average throughput: 233.89 Mbit/s

95th percentile per-packet one-way delay: 227.919 ms

Loss rate: 1.78%

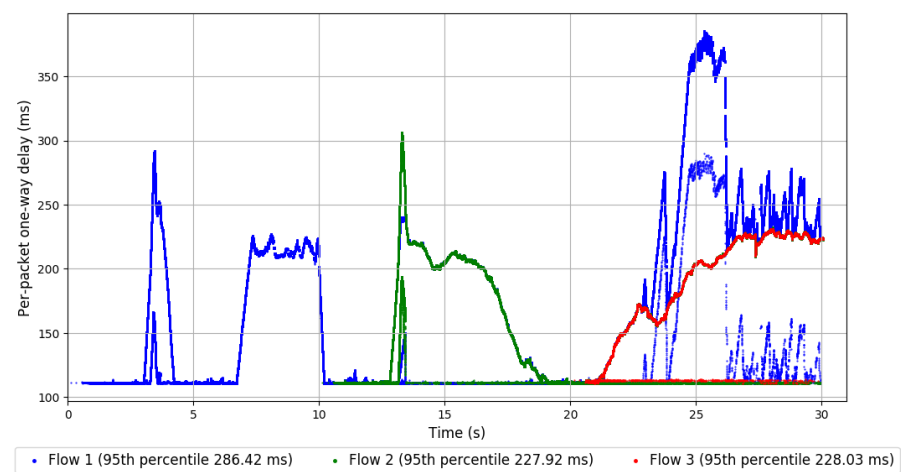
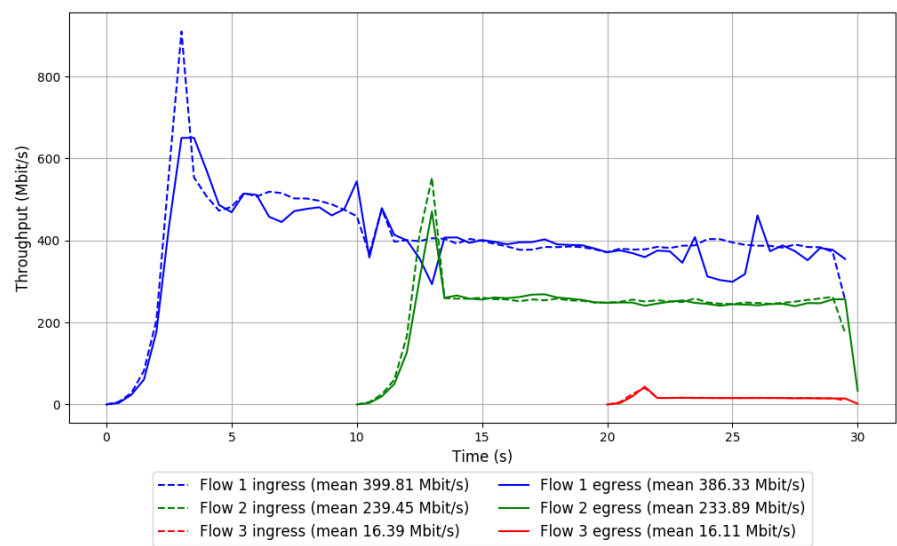
-- Flow 3:

Average throughput: 16.11 Mbit/s

95th percentile per-packet one-way delay: 228.035 ms

Loss rate: 0.66%

Run 8: Report of PCC-Allegro — Data Link



Run 9: Statistics of PCC-Allegro

Start at: 2018-04-18 06:33:01

End at: 2018-04-18 06:33:32

Below is generated by plot.py at 2018-04-18 09:13:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 548.05 Mbit/s

95th percentile per-packet one-way delay: 257.193 ms

Loss rate: 2.75%

-- Flow 1:

Average throughput: 467.20 Mbit/s

95th percentile per-packet one-way delay: 260.237 ms

Loss rate: 2.98%

-- Flow 2:

Average throughput: 119.41 Mbit/s

95th percentile per-packet one-way delay: 229.046 ms

Loss rate: 1.38%

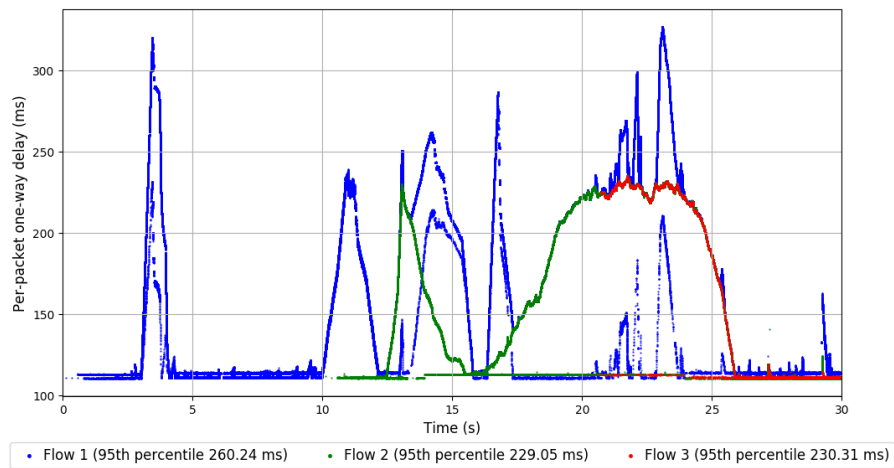
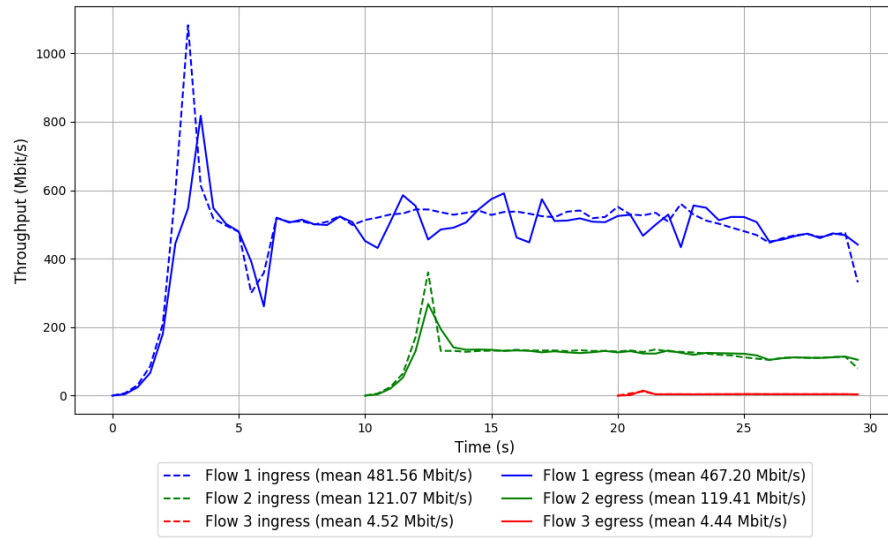
-- Flow 3:

Average throughput: 4.44 Mbit/s

95th percentile per-packet one-way delay: 230.311 ms

Loss rate: 1.76%

Run 9: Report of PCC-Allegro — Data Link

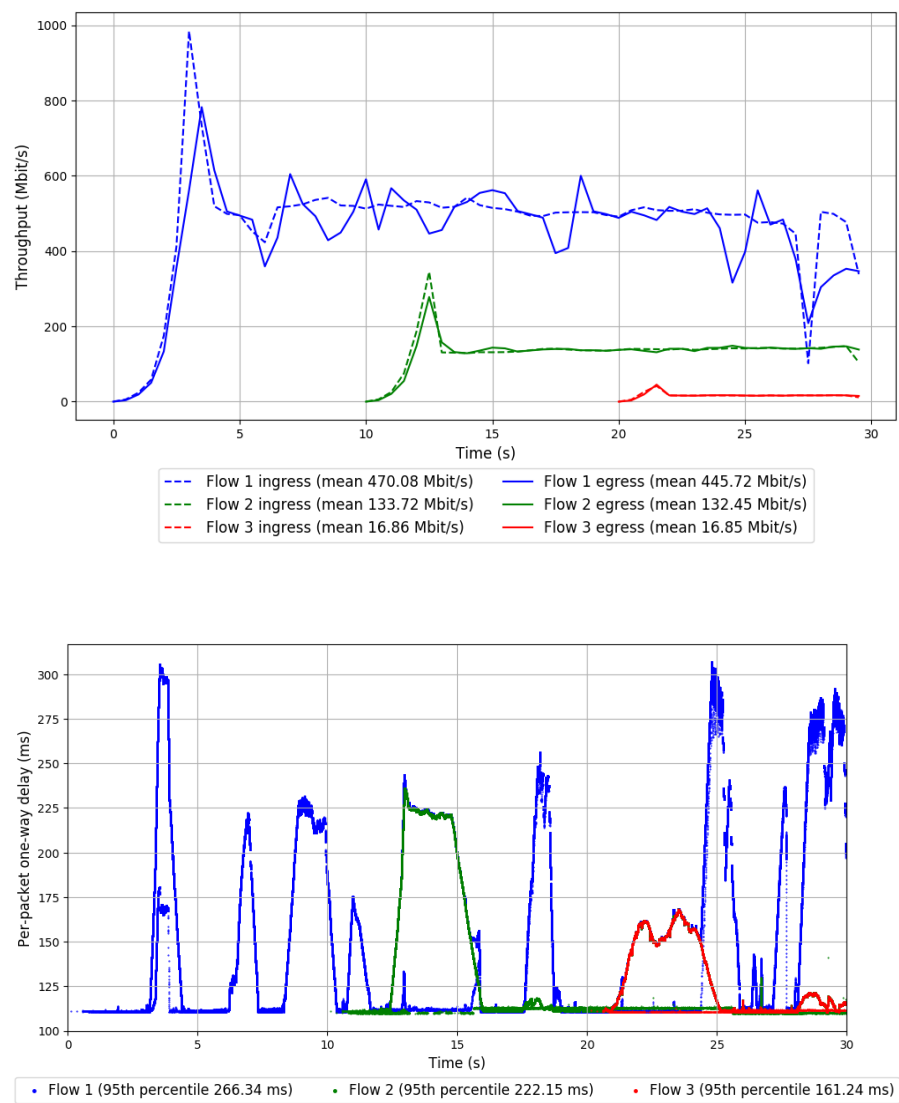


```
Run 10: Statistics of PCC-Allegro

Start at: 2018-04-18 06:50:00
End at: 2018-04-18 06:50:30

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 539.27 Mbit/s
95th percentile per-packet one-way delay: 250.219 ms
Loss rate: 4.45%
-- Flow 1:
Average throughput: 445.72 Mbit/s
95th percentile per-packet one-way delay: 266.338 ms
Loss rate: 5.17%
-- Flow 2:
Average throughput: 132.45 Mbit/s
95th percentile per-packet one-way delay: 222.154 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 16.85 Mbit/s
95th percentile per-packet one-way delay: 161.241 ms
Loss rate: 0.01%
```

Run 10: Report of PCC-Allegro — Data Link

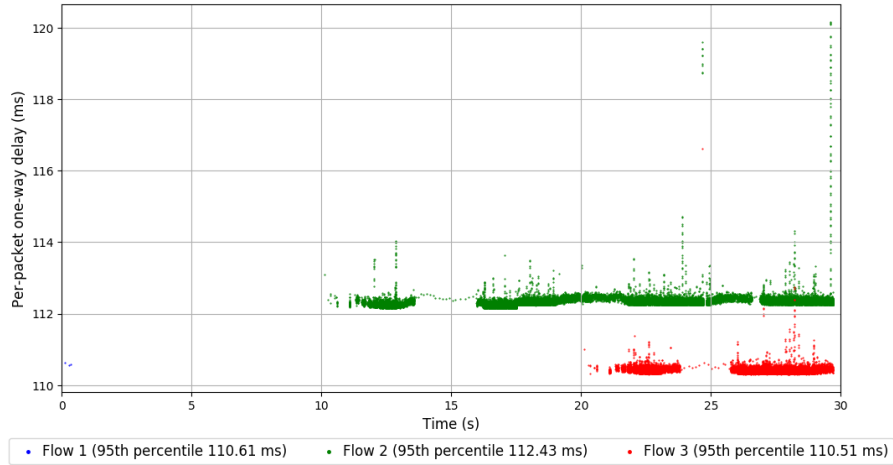
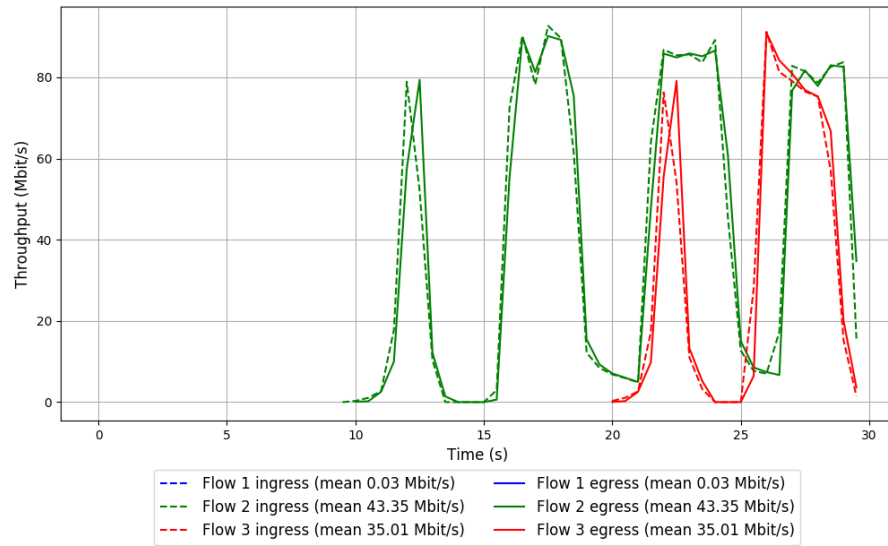


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-18 04:25:48
End at: 2018-04-18 04:26:18

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 40.04 Mbit/s
95th percentile per-packet one-way delay: 112.407 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 110.615 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.35 Mbit/s
95th percentile per-packet one-way delay: 112.426 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.01 Mbit/s
95th percentile per-packet one-way delay: 110.507 ms
Loss rate: 0.00%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-04-18 04:43:07

End at: 2018-04-18 04:43:37

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.85 Mbit/s

95th percentile per-packet one-way delay: 112.315 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 46.80 Mbit/s

95th percentile per-packet one-way delay: 111.626 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 32.06 Mbit/s

95th percentile per-packet one-way delay: 110.660 ms

Loss rate: 0.00%

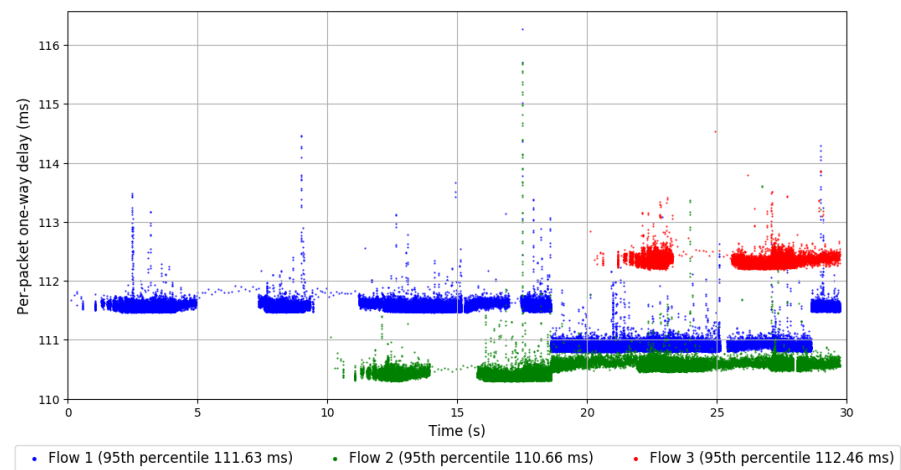
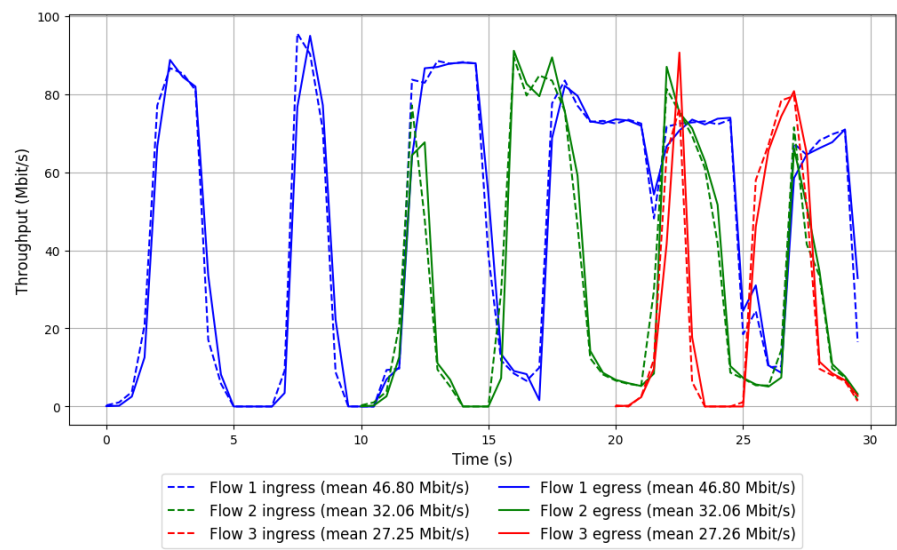
-- Flow 3:

Average throughput: 27.26 Mbit/s

95th percentile per-packet one-way delay: 112.456 ms

Loss rate: 0.01%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-04-18 05:00:23

End at: 2018-04-18 05:00:53

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.49 Mbit/s

95th percentile per-packet one-way delay: 112.325 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.91 Mbit/s

95th percentile per-packet one-way delay: 111.223 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 42.66 Mbit/s

95th percentile per-packet one-way delay: 111.053 ms

Loss rate: 0.00%

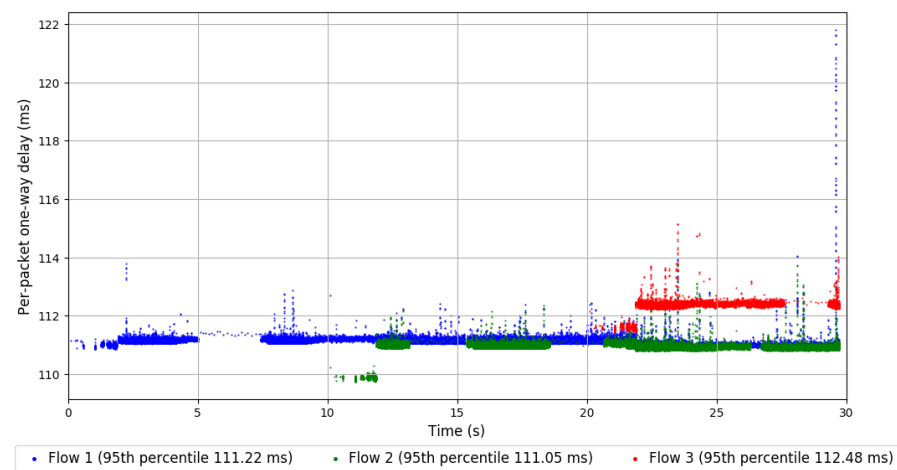
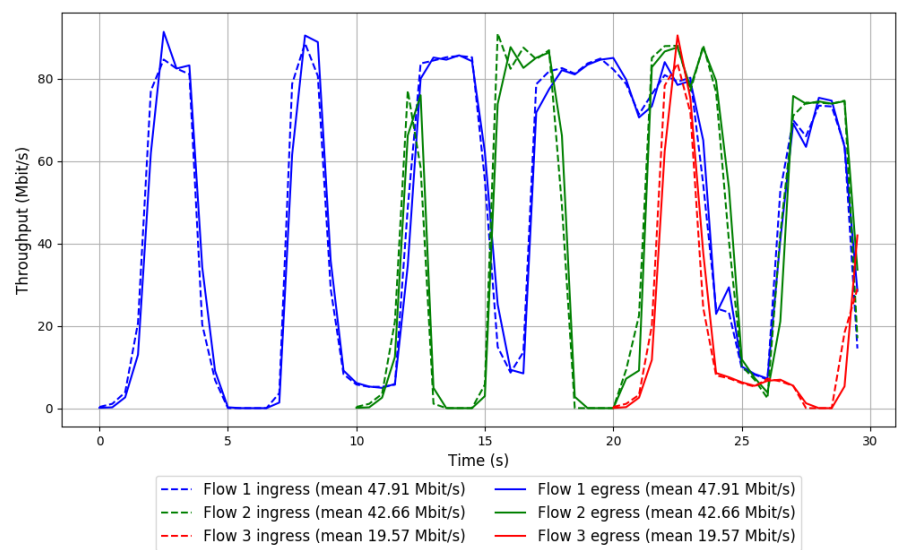
-- Flow 3:

Average throughput: 19.57 Mbit/s

95th percentile per-packet one-way delay: 112.485 ms

Loss rate: 0.02%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-04-18 05:17:43

End at: 2018-04-18 05:18:13

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.53 Mbit/s

95th percentile per-packet one-way delay: 112.825 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 40.49 Mbit/s

95th percentile per-packet one-way delay: 112.841 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.98 Mbit/s

95th percentile per-packet one-way delay: 112.821 ms

Loss rate: 0.01%

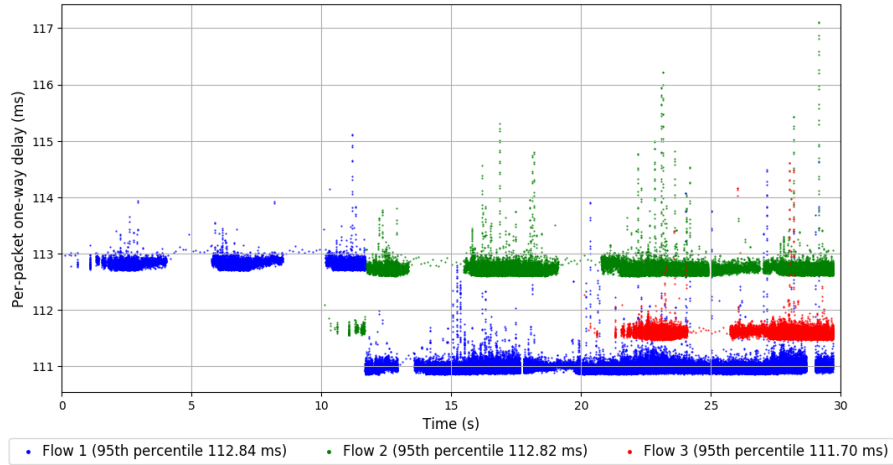
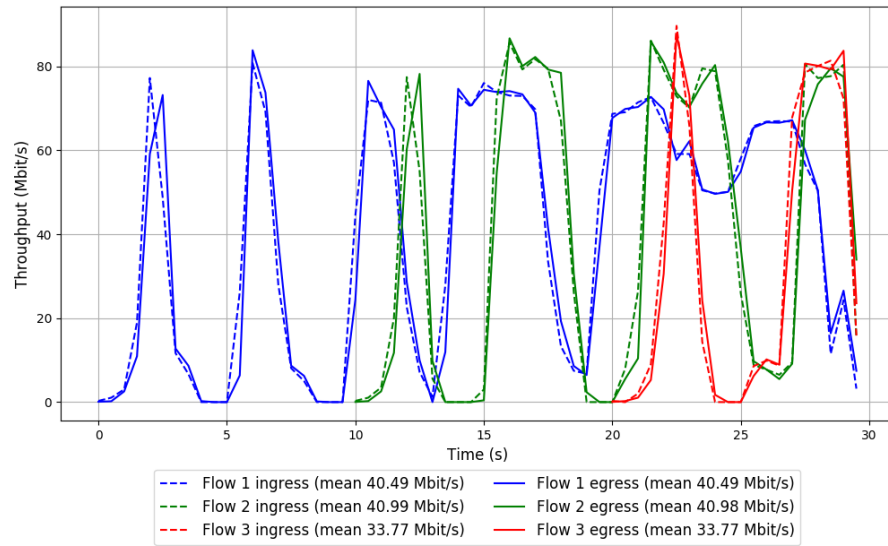
-- Flow 3:

Average throughput: 33.77 Mbit/s

95th percentile per-packet one-way delay: 111.697 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-04-18 05:35:13

End at: 2018-04-18 05:35:43

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.70 Mbit/s

95th percentile per-packet one-way delay: 111.691 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 44.62 Mbit/s

95th percentile per-packet one-way delay: 111.721 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 34.76 Mbit/s

95th percentile per-packet one-way delay: 110.870 ms

Loss rate: 0.00%

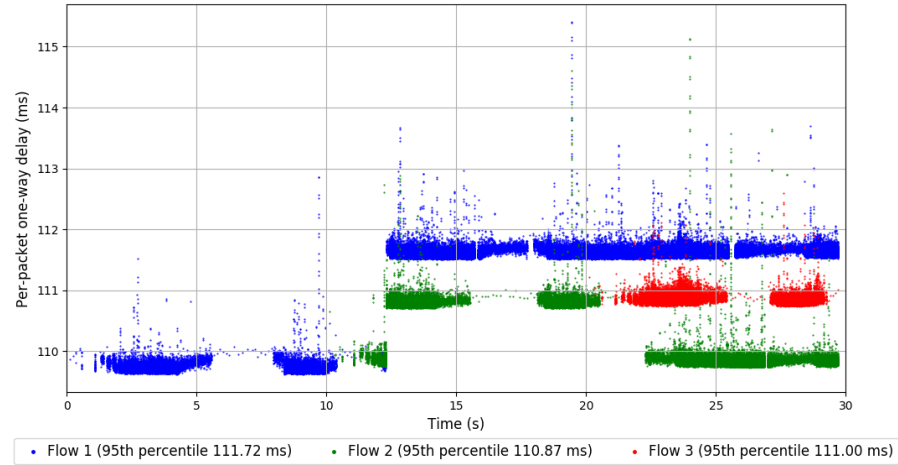
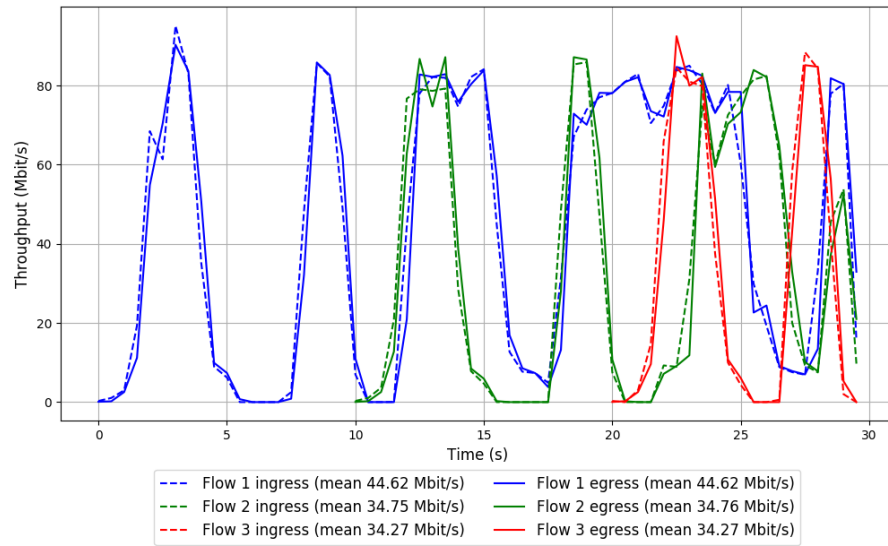
-- Flow 3:

Average throughput: 34.27 Mbit/s

95th percentile per-packet one-way delay: 111.000 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-04-18 05:52:33

End at: 2018-04-18 05:53:03

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.07 Mbit/s

95th percentile per-packet one-way delay: 112.961 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 49.22 Mbit/s

95th percentile per-packet one-way delay: 112.421 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 27.59 Mbit/s

95th percentile per-packet one-way delay: 109.006 ms

Loss rate: 0.00%

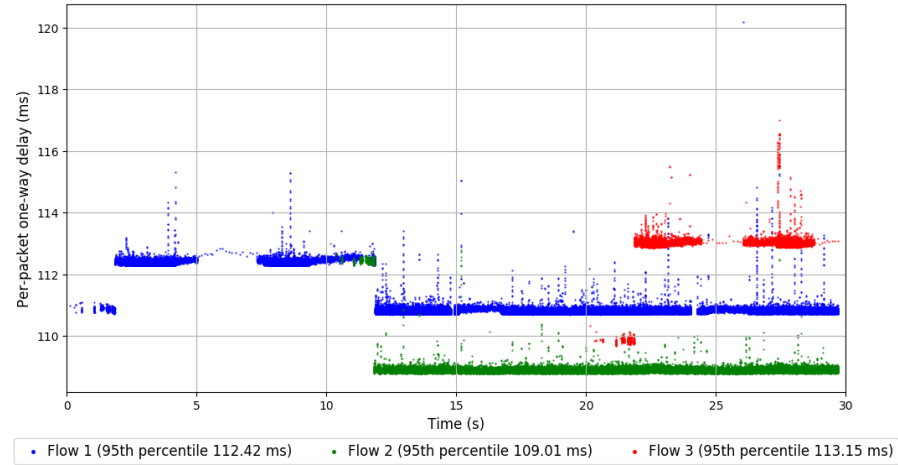
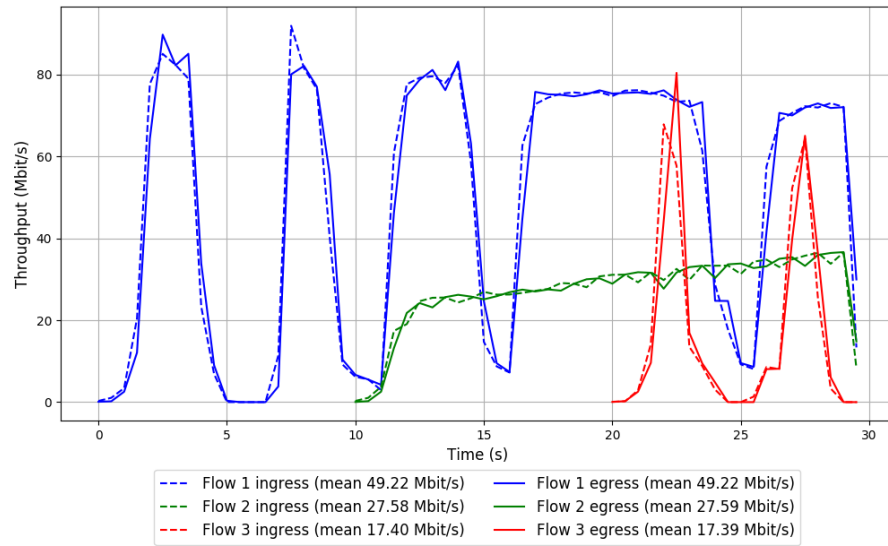
-- Flow 3:

Average throughput: 17.39 Mbit/s

95th percentile per-packet one-way delay: 113.153 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-04-18 06:09:48

End at: 2018-04-18 06:10:18

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.04 Mbit/s

95th percentile per-packet one-way delay: 114.453 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 40.53 Mbit/s

95th percentile per-packet one-way delay: 114.493 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 45.25 Mbit/s

95th percentile per-packet one-way delay: 112.404 ms

Loss rate: 0.00%

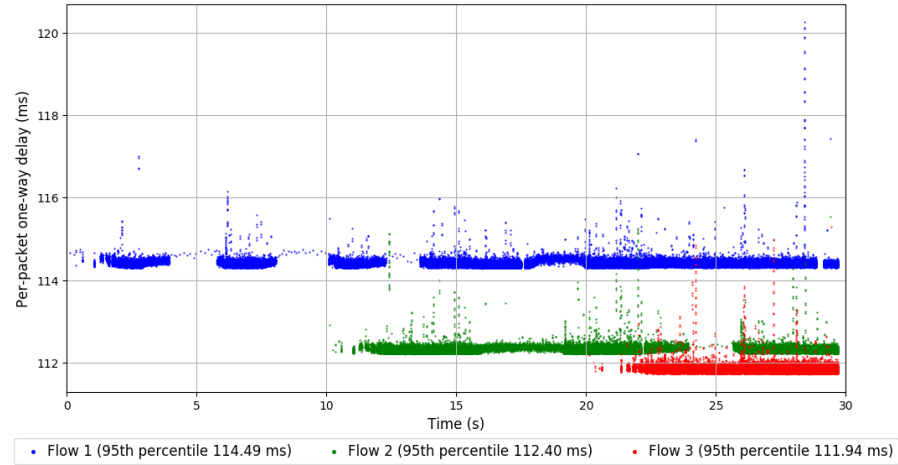
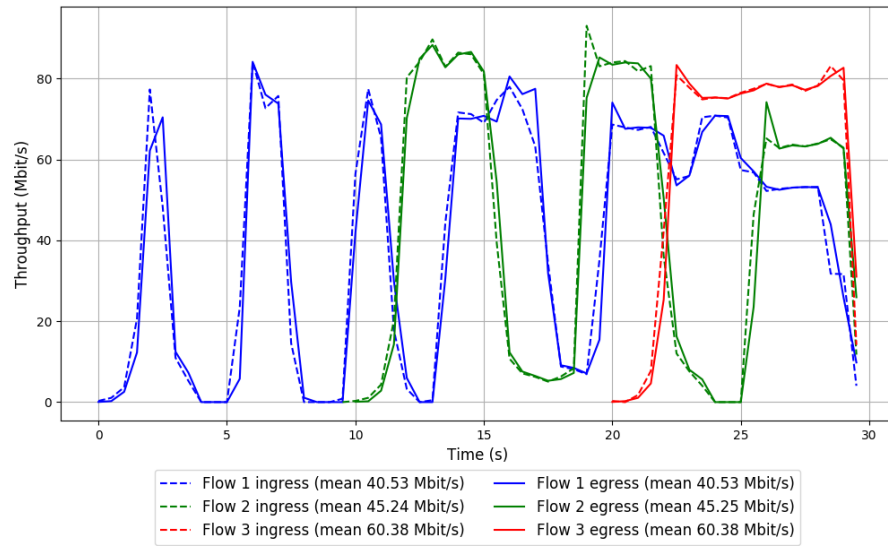
-- Flow 3:

Average throughput: 60.38 Mbit/s

95th percentile per-packet one-way delay: 111.944 ms

Loss rate: 0.00%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-04-18 06:27:09

End at: 2018-04-18 06:27:39

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.97 Mbit/s

95th percentile per-packet one-way delay: 112.842 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 49.59 Mbit/s

95th percentile per-packet one-way delay: 112.415 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.65 Mbit/s

95th percentile per-packet one-way delay: 112.894 ms

Loss rate: 0.00%

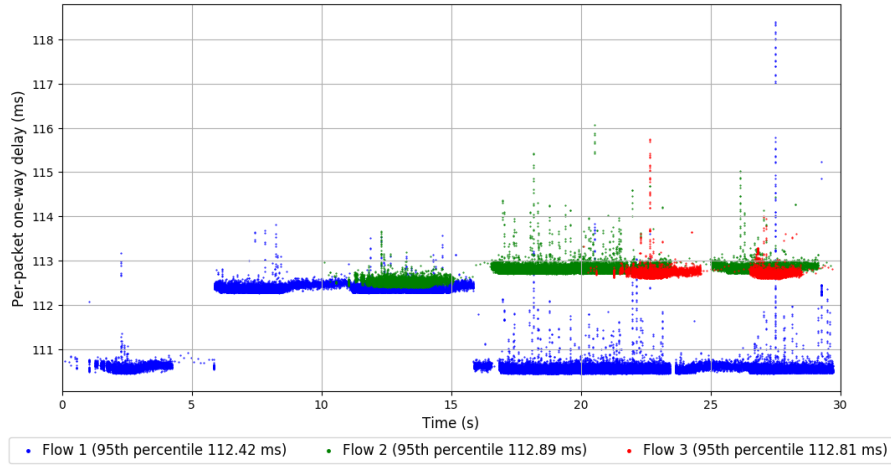
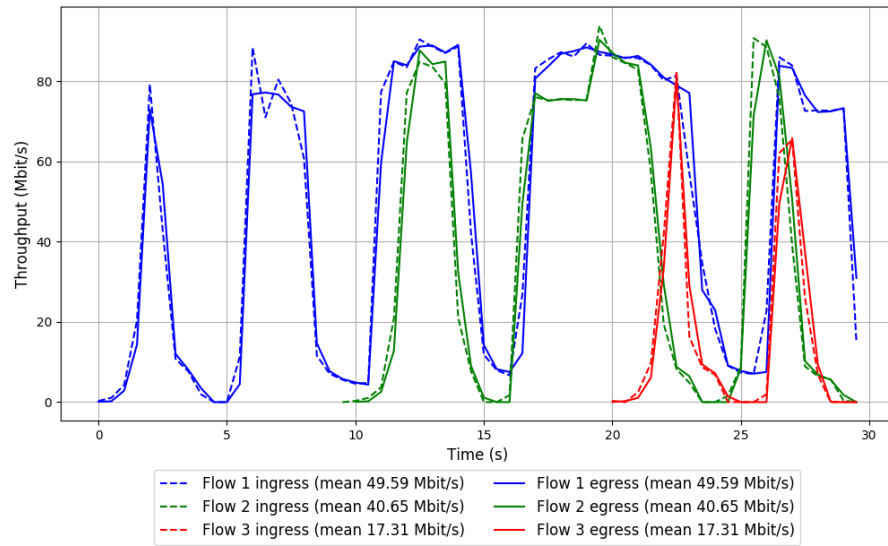
-- Flow 3:

Average throughput: 17.31 Mbit/s

95th percentile per-packet one-way delay: 112.809 ms

Loss rate: 0.00%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-04-18 06:44:13

End at: 2018-04-18 06:44:43

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.05 Mbit/s

95th percentile per-packet one-way delay: 113.821 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 49.64 Mbit/s

95th percentile per-packet one-way delay: 113.726 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 50.92 Mbit/s

95th percentile per-packet one-way delay: 111.016 ms

Loss rate: 0.00%

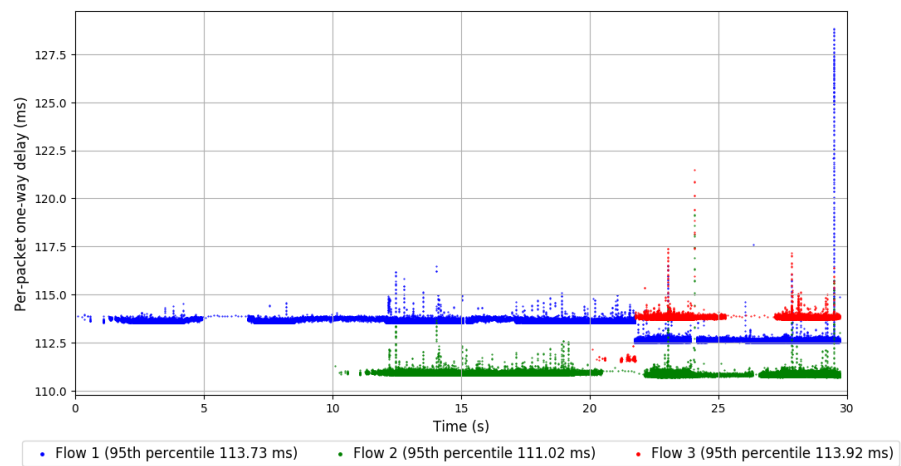
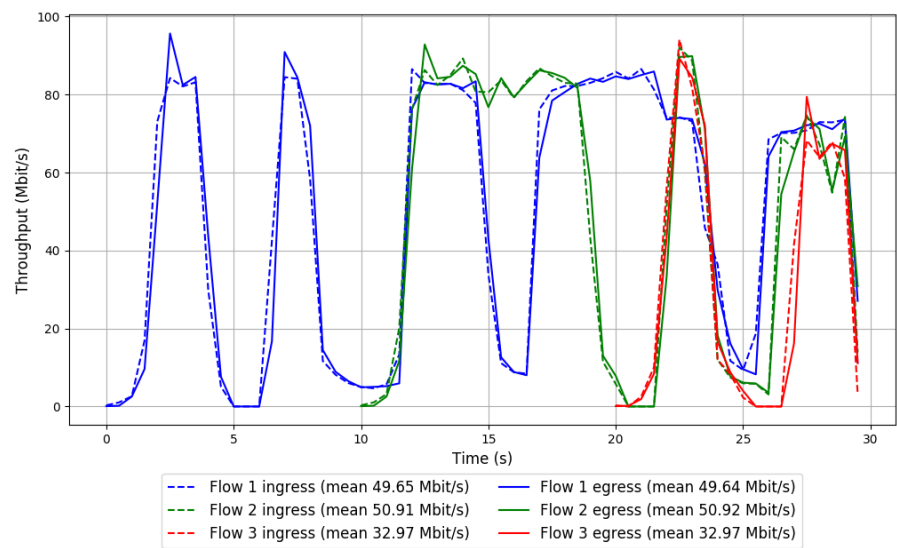
-- Flow 3:

Average throughput: 32.97 Mbit/s

95th percentile per-packet one-way delay: 113.925 ms

Loss rate: 0.02%

Run 9: Report of QUIC Cubic — Data Link

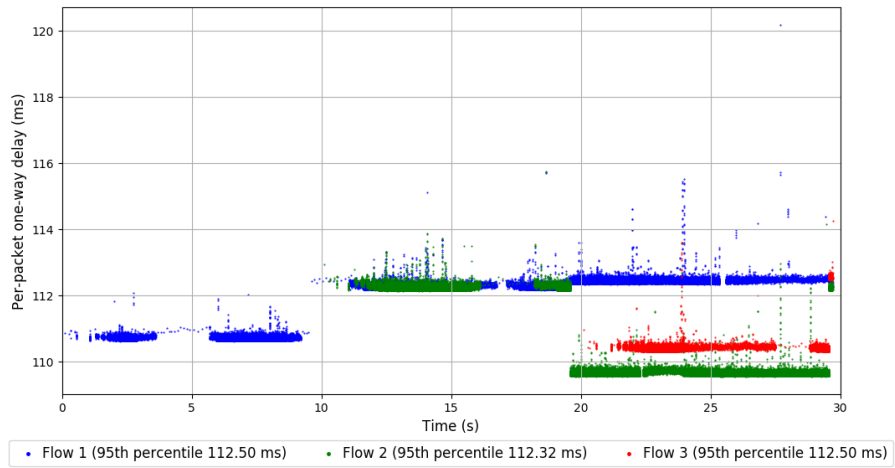
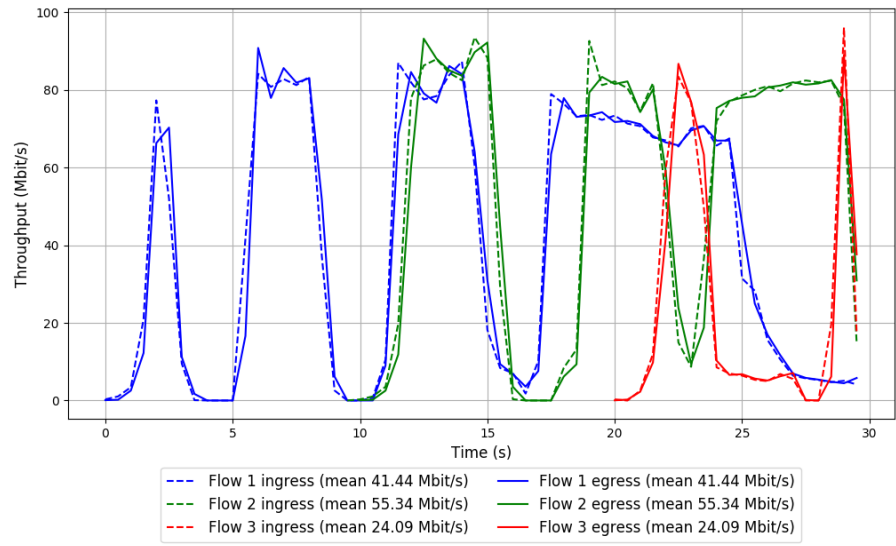


```
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-18 07:01:16
End at: 2018-04-18 07:01:46

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.88 Mbit/s
95th percentile per-packet one-way delay: 112.475 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.44 Mbit/s
95th percentile per-packet one-way delay: 112.501 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 55.34 Mbit/s
95th percentile per-packet one-way delay: 112.317 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.09 Mbit/s
95th percentile per-packet one-way delay: 112.501 ms
Loss rate: 0.01%
```

Run 10: Report of QUIC Cubic — Data Link

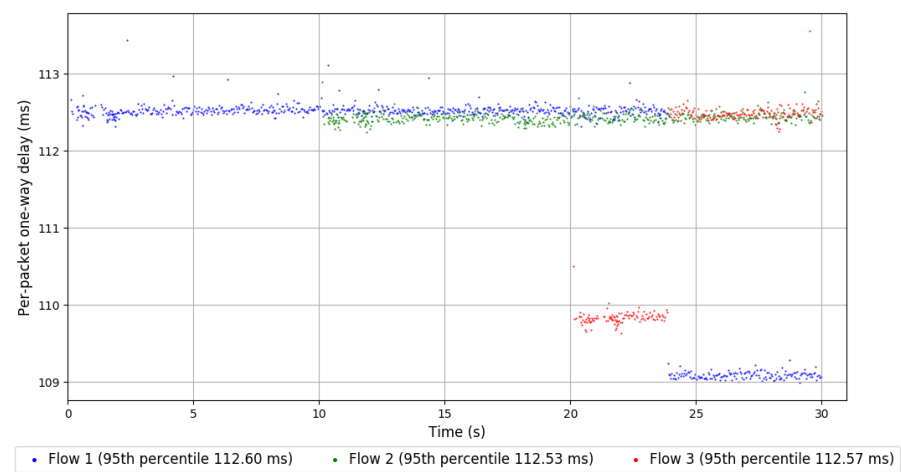
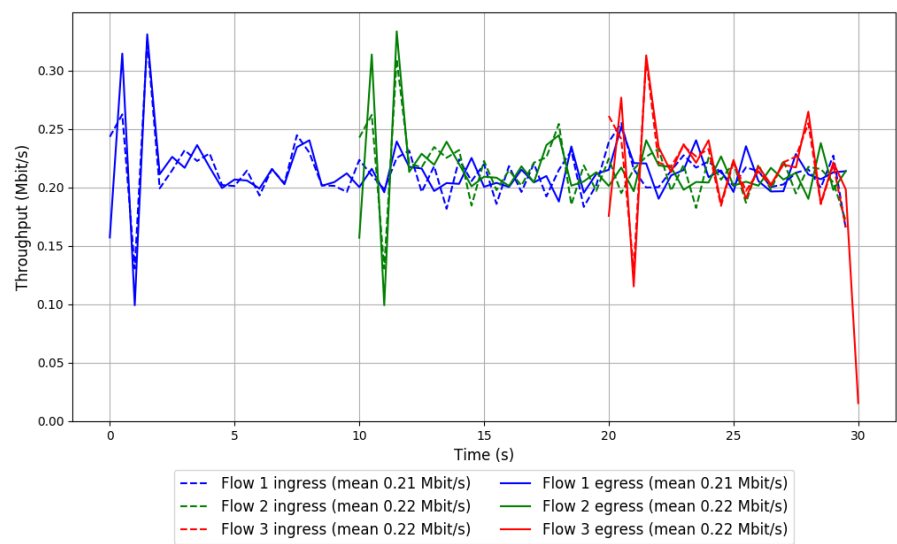


```
Run 1: Statistics of SCReAM

Start at: 2018-04-18 04:25:02
End at: 2018-04-18 04:25:32

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.582 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.601 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.529 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.566 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

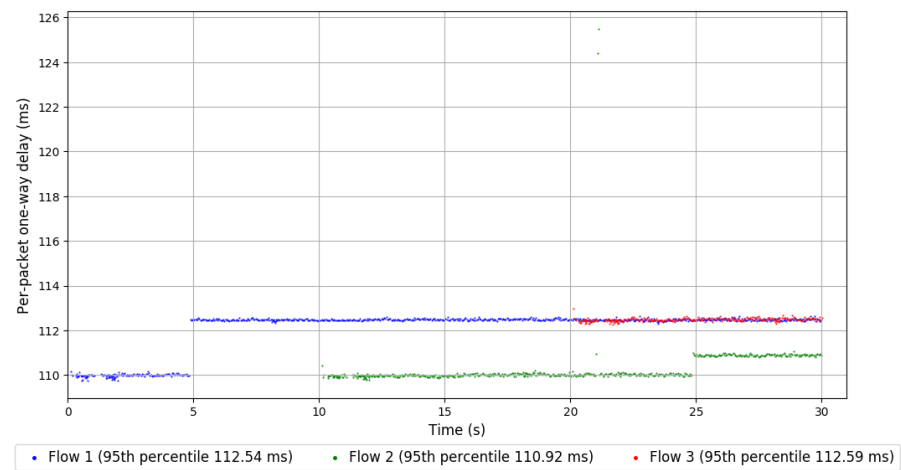
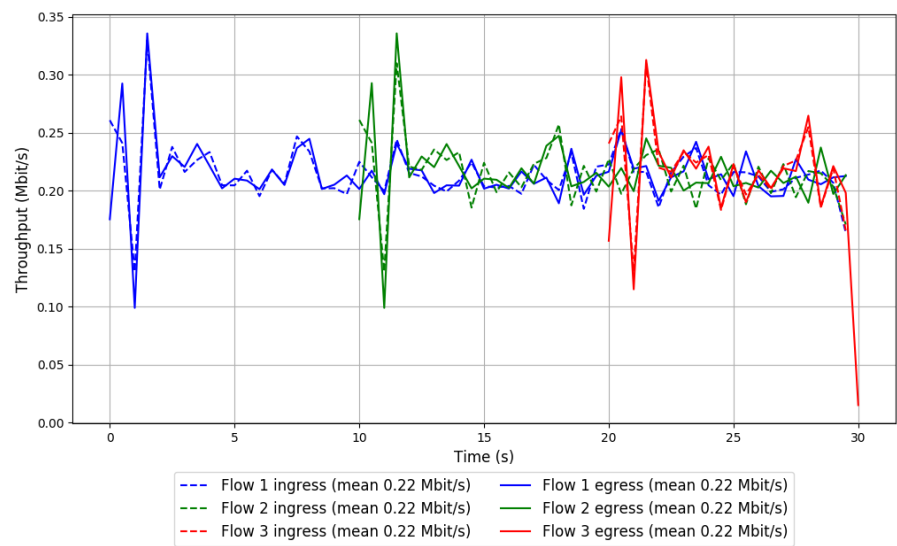


```
Run 2: Statistics of SReAM

Start at: 2018-04-18 04:42:21
End at: 2018-04-18 04:42:51

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.544 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.540 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.925 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.589 ms
Loss rate: 0.00%
```

Run 2: Report of SReAM — Data Link

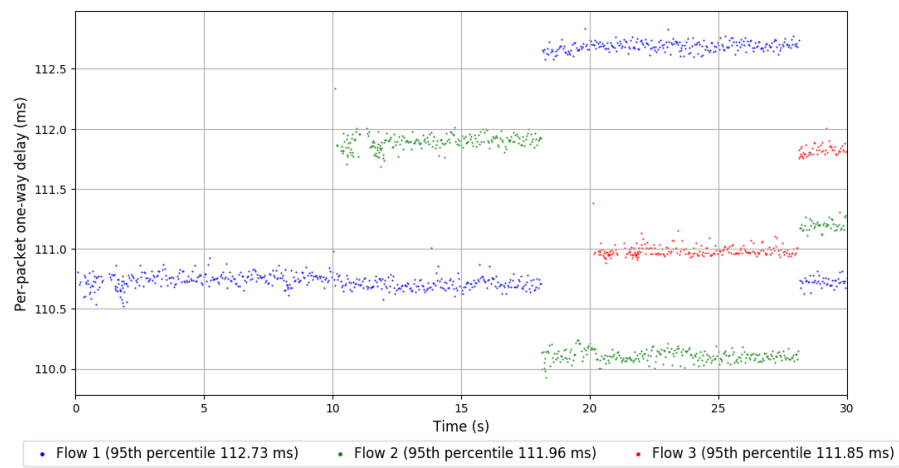
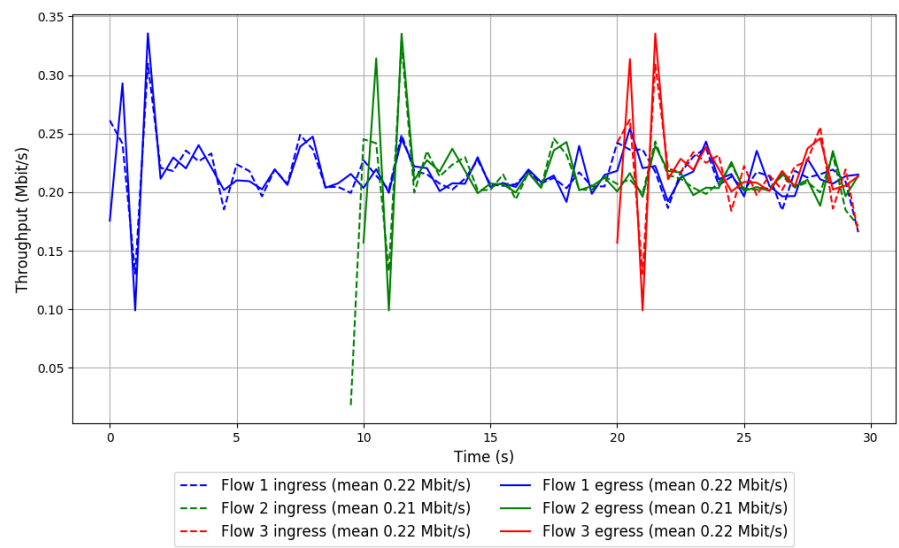


```
Run 3: Statistics of SReAM

Start at: 2018-04-18 04:59:37
End at: 2018-04-18 05:00:07

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.710 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.730 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 111.958 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.851 ms
Loss rate: 0.00%
```


Run 3: Report of SReAM — Data Link

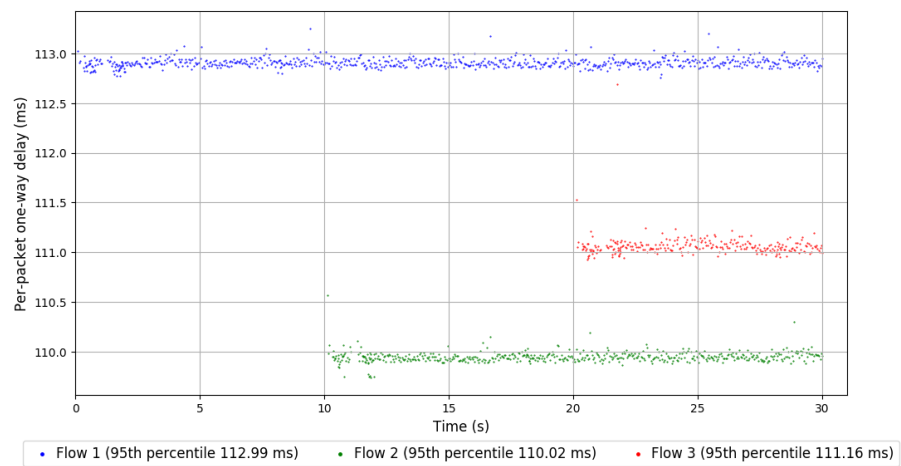
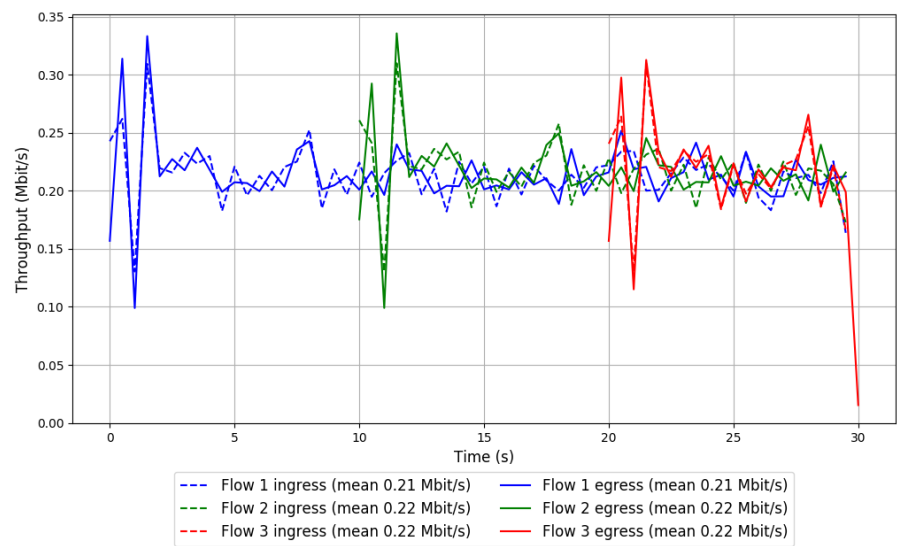


```
Run 4: Statistics of SCReAM

Start at: 2018-04-18 05:16:57
End at: 2018-04-18 05:17:27

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.959 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.988 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.023 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.160 ms
Loss rate: 0.00%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2018-04-18 05:34:27

End at: 2018-04-18 05:34:57

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.931 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.709 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.967 ms

Loss rate: 0.00%

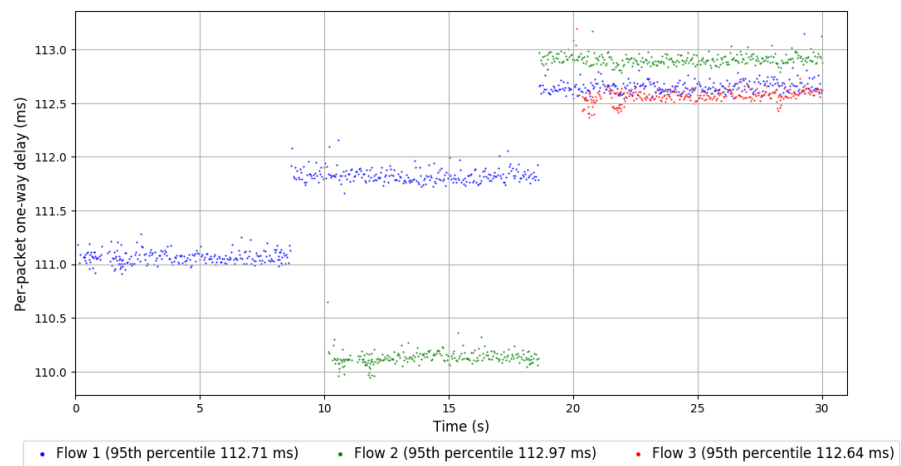
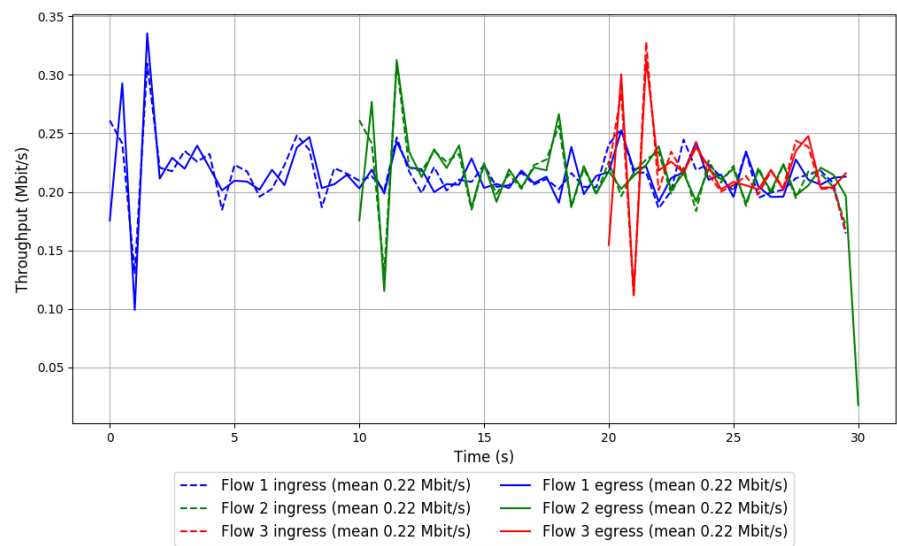
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.637 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

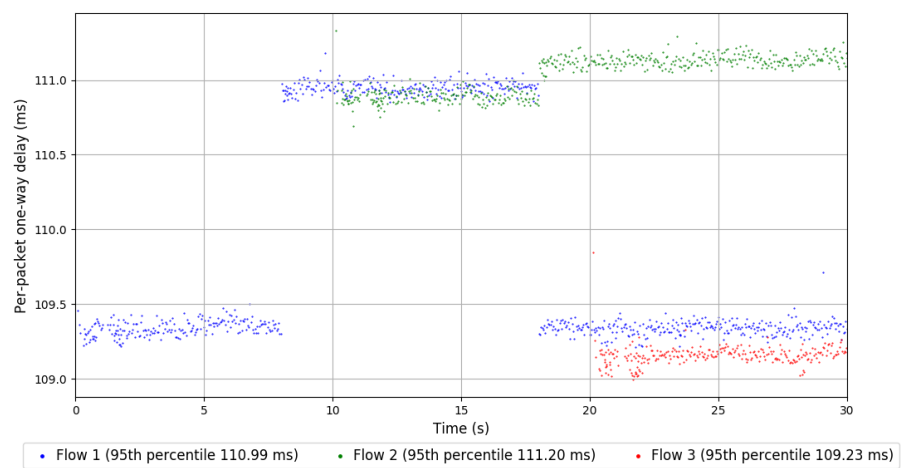
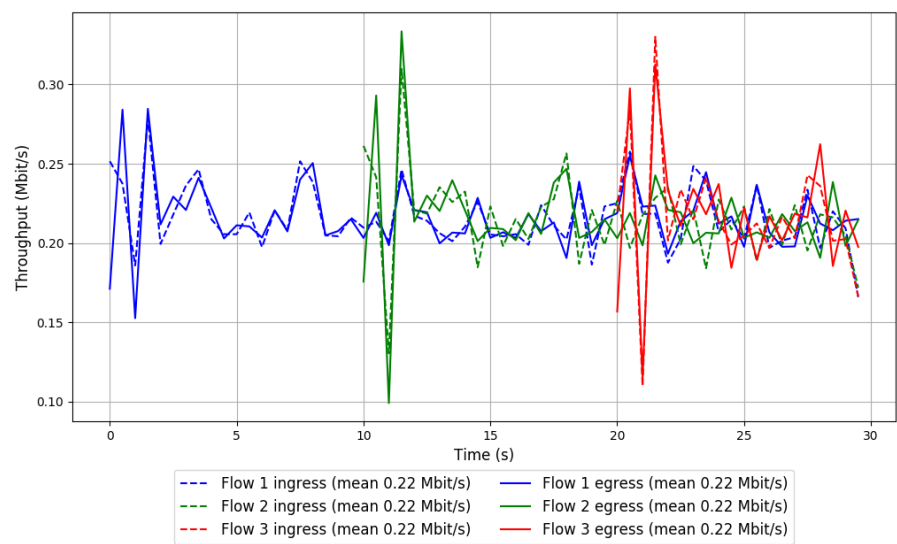


```
Run 6: Statistics of SCReAM

Start at: 2018-04-18 05:51:47
End at: 2018-04-18 05:52:17

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 111.157 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.990 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.196 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.231 ms
Loss rate: 0.00%
```

Run 6: Report of SReAM — Data Link

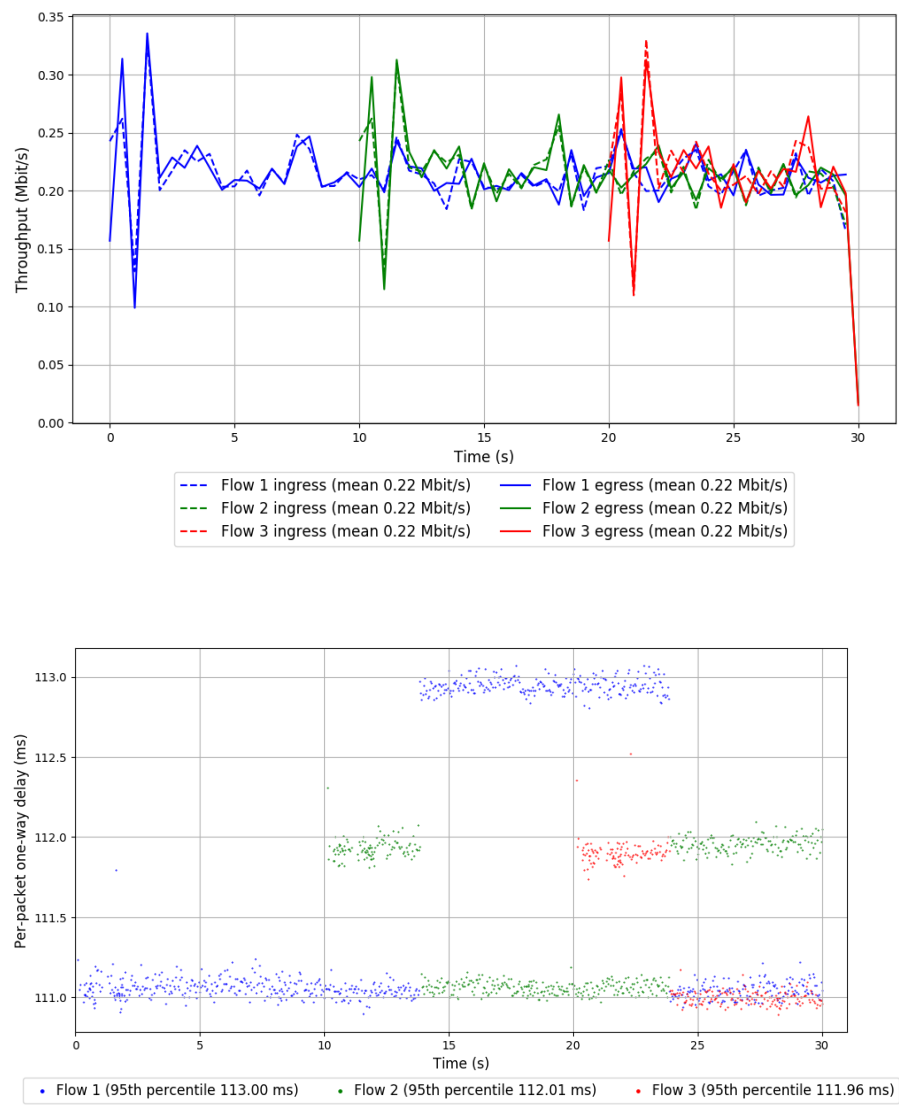


```
Run 7: Statistics of SReAM

Start at: 2018-04-18 06:09:02
End at: 2018-04-18 06:09:32

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.967 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.998 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.010 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.956 ms
Loss rate: 0.00%
```


Run 7: Report of SReAM — Data Link

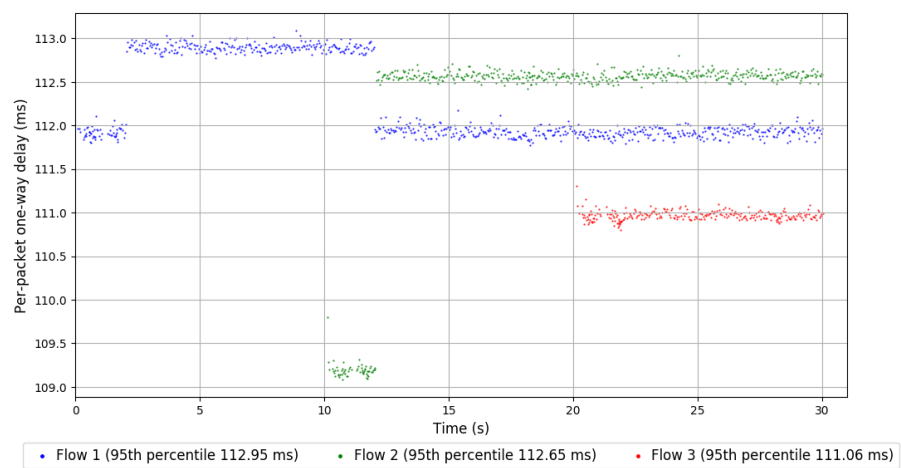
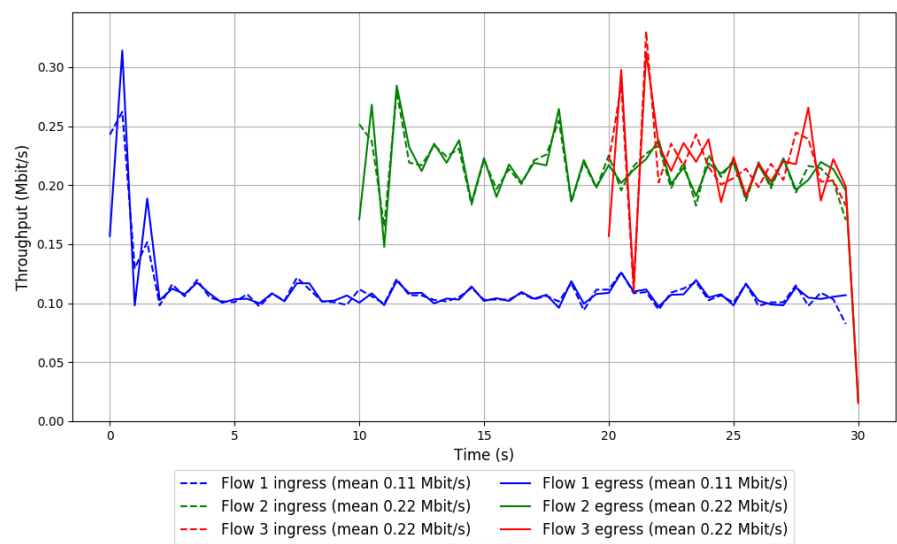


```
Run 8: Statistics of SCReAM

Start at: 2018-04-18 06:26:23
End at: 2018-04-18 06:26:53

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 112.918 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 112.948 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.647 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.058 ms
Loss rate: 0.00%
```

Run 8: Report of SCSReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-04-18 06:43:27

End at: 2018-04-18 06:43:57

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.346 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.722 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.379 ms

Loss rate: 0.00%

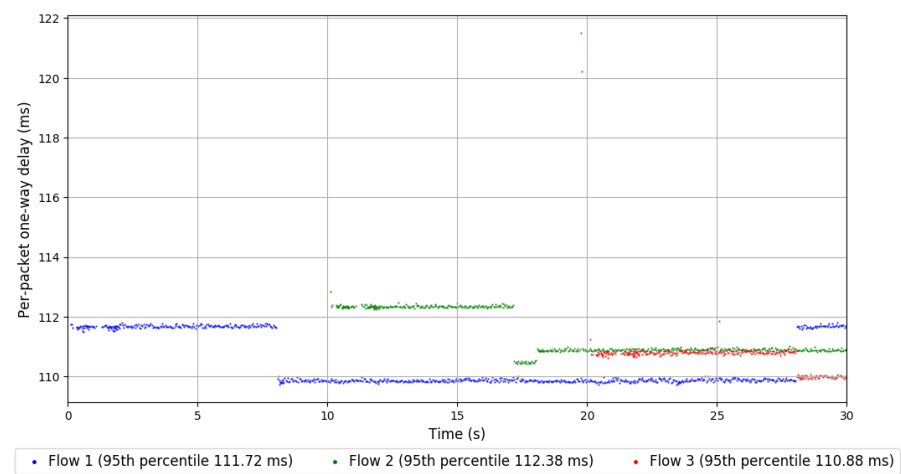
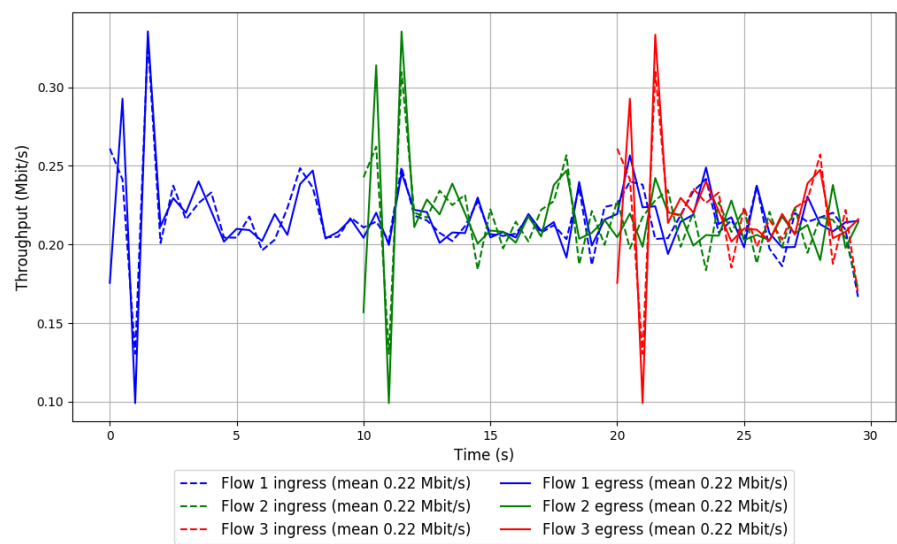
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.880 ms

Loss rate: 0.00%

Run 9: Report of SReAM — Data Link

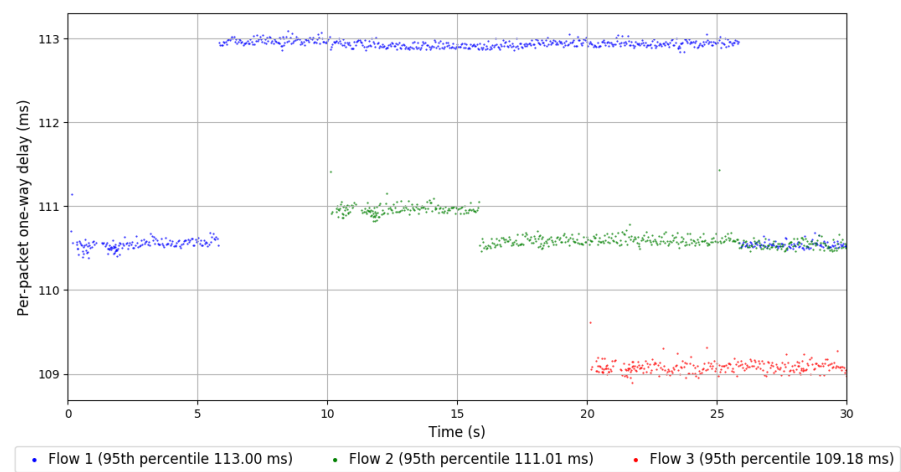
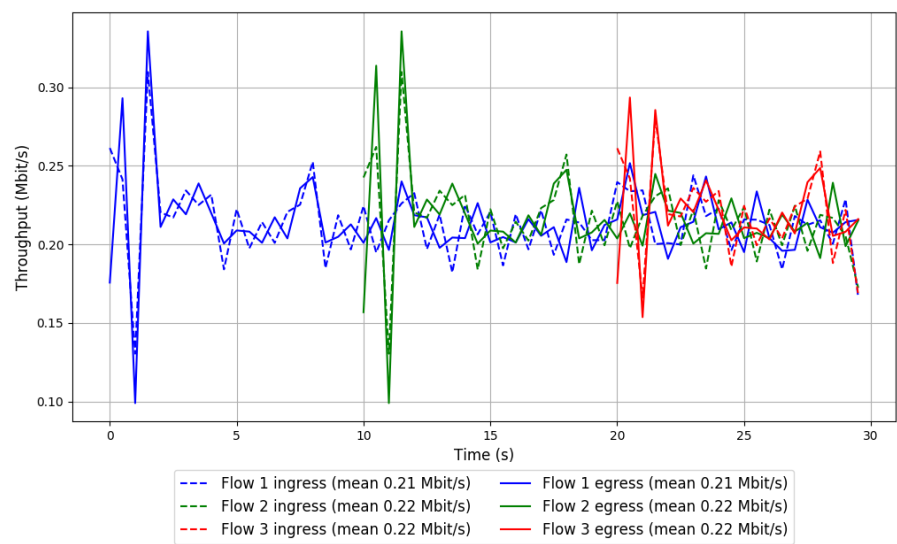


```
Run 10: Statistics of SReAM

Start at: 2018-04-18 07:00:30
End at: 2018-04-18 07:01:00

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.983 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 113.001 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.008 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.179 ms
Loss rate: 0.00%
```

Run 10: Report of SReAM — Data Link

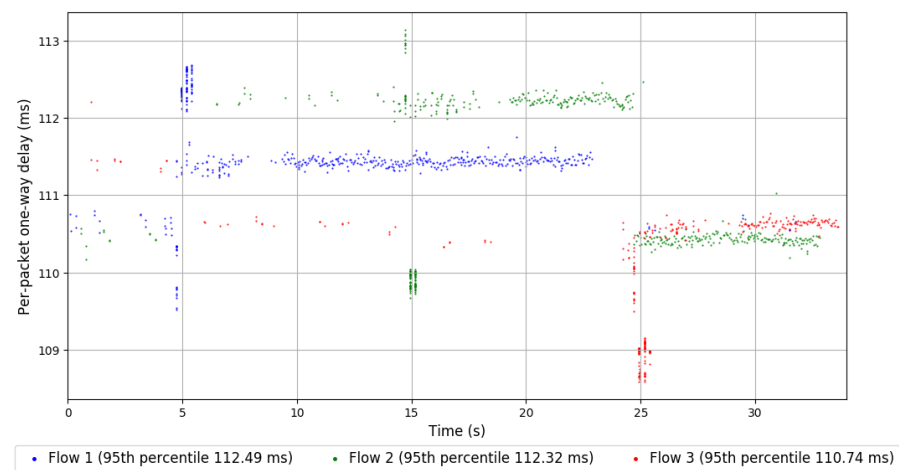
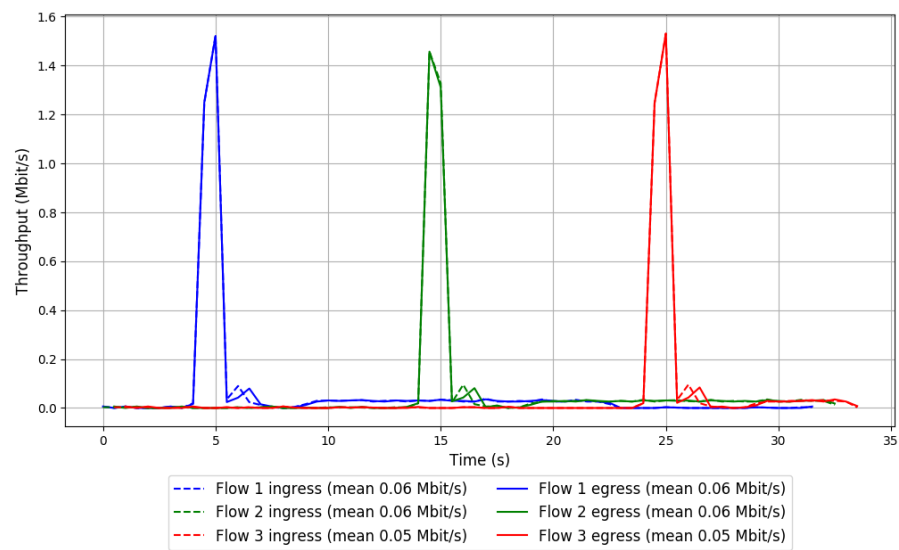


```
Run 1: Statistics of WebRTC media

Start at: 2018-04-18 04:13:44
End at: 2018-04-18 04:14:14

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 112.363 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 112.488 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 112.321 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 110.738 ms
Loss rate: 0.00%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-04-18 04:30:56

End at: 2018-04-18 04:31:26

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.574 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 110.985 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 111.028 ms

Loss rate: 0.00%

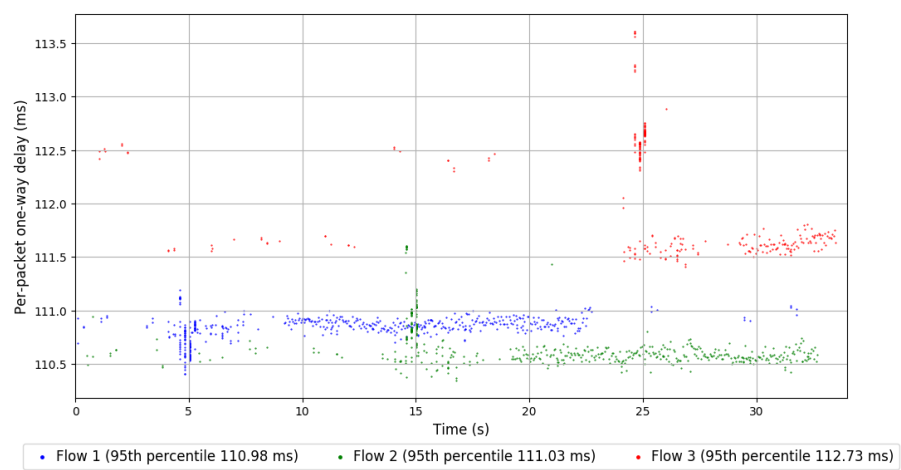
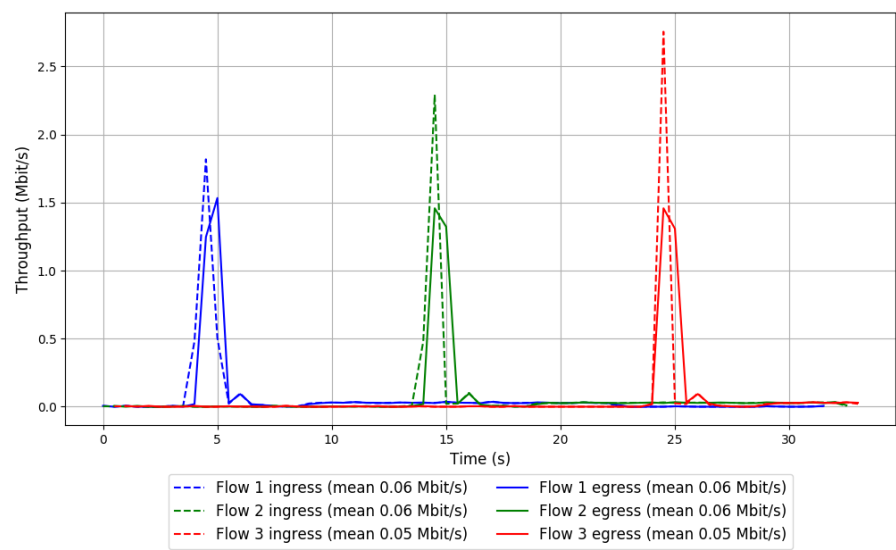
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.726 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-04-18 04:48:14

End at: 2018-04-18 04:48:44

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 112.986 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.922 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 111.905 ms

Loss rate: 0.00%

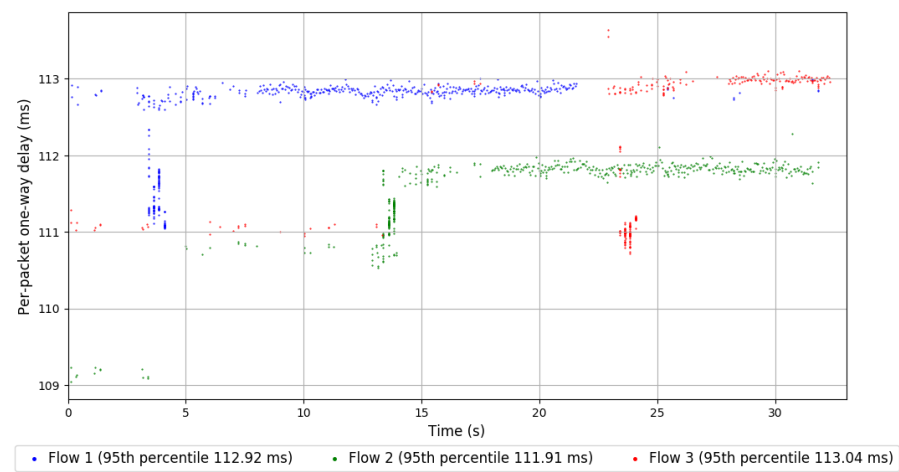
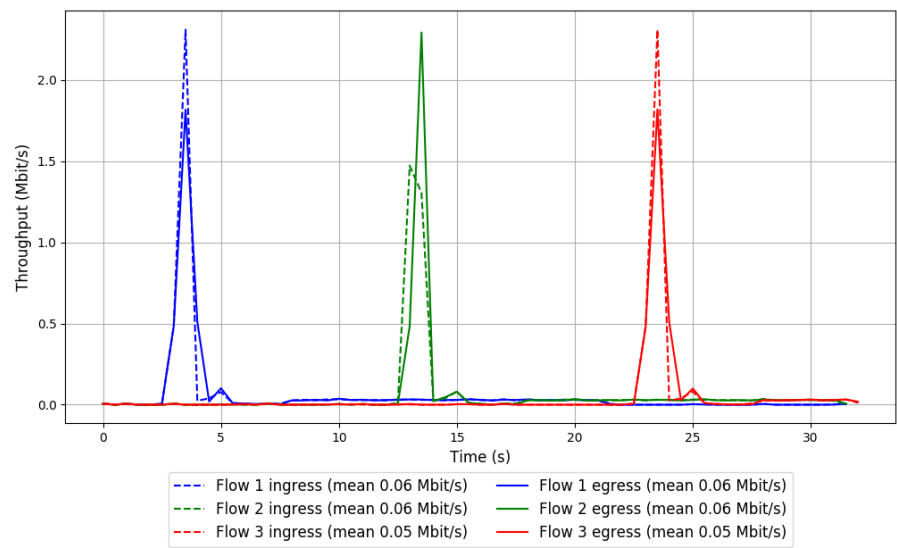
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.036 ms

Loss rate: 0.04%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-04-18 05:05:32

End at: 2018-04-18 05:06:02

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 113.754 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.580 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.793 ms

Loss rate: 0.00%

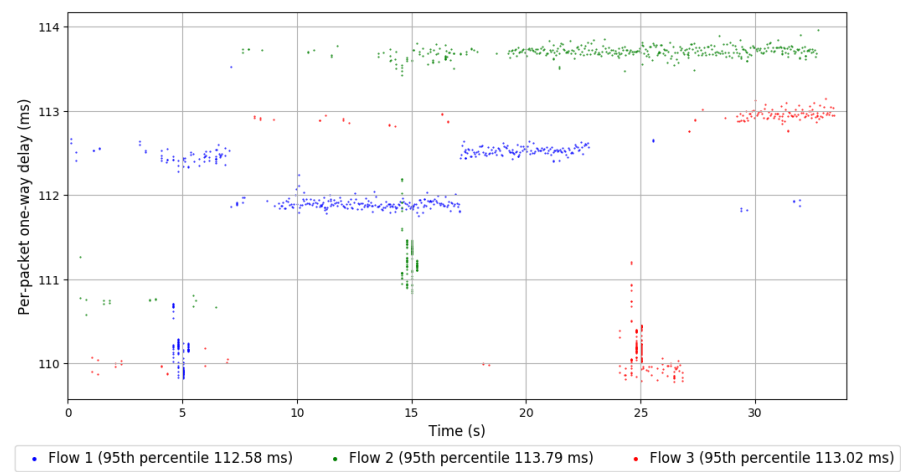
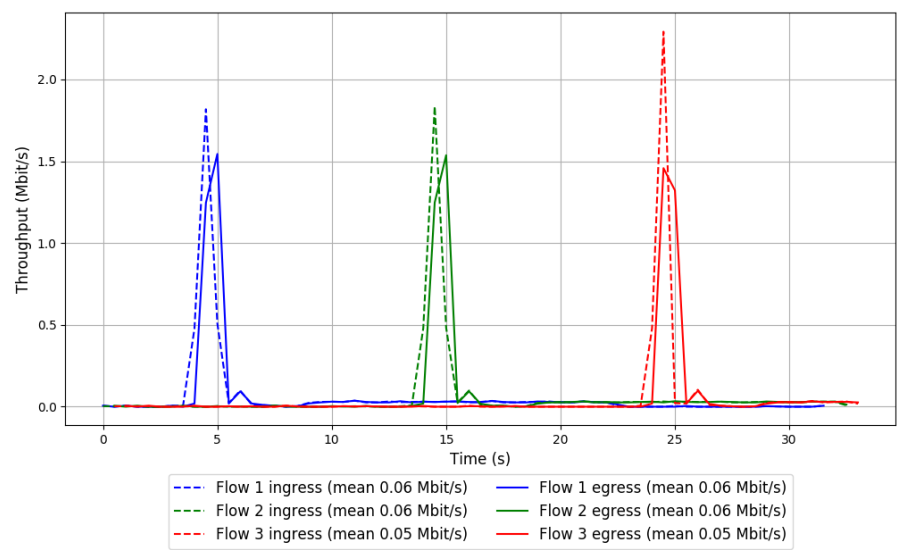
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.021 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-04-18 05:23:00

End at: 2018-04-18 05:23:30

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.980 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.162 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.132 ms

Loss rate: 0.00%

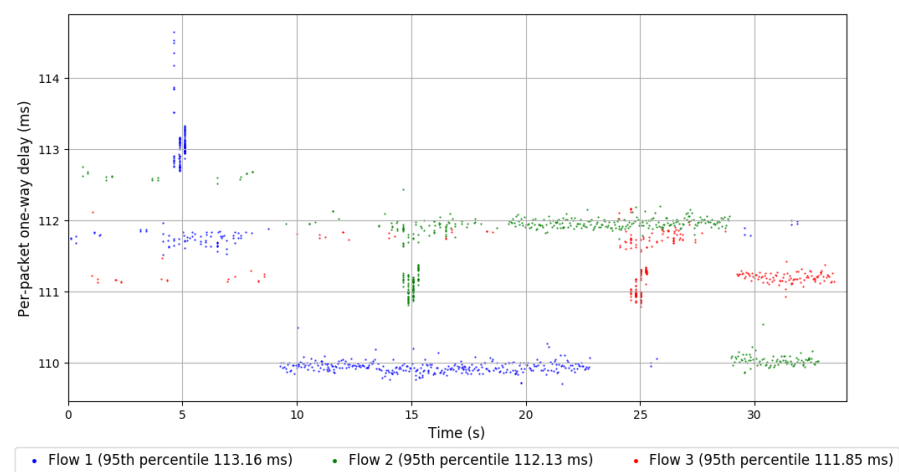
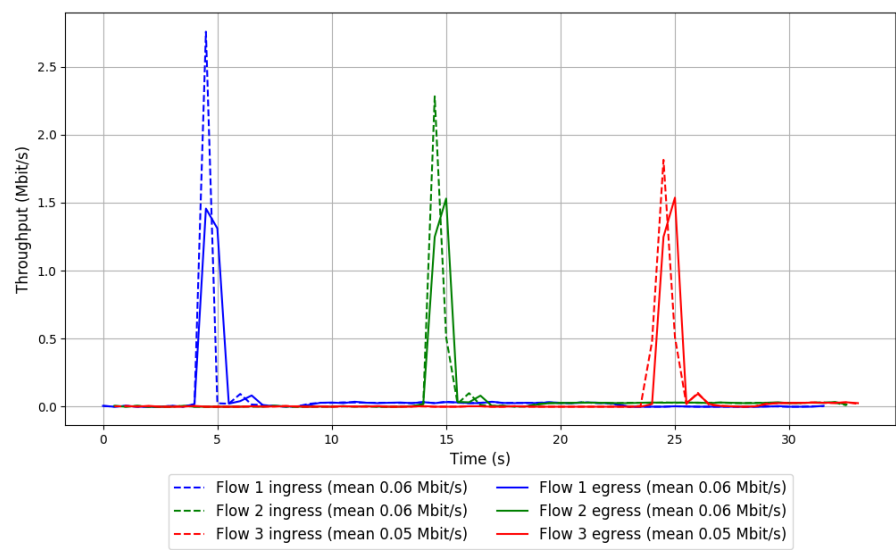
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 111.853 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-04-18 05:40:28

End at: 2018-04-18 05:40:58

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.684 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 111.061 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.723 ms

Loss rate: 0.00%

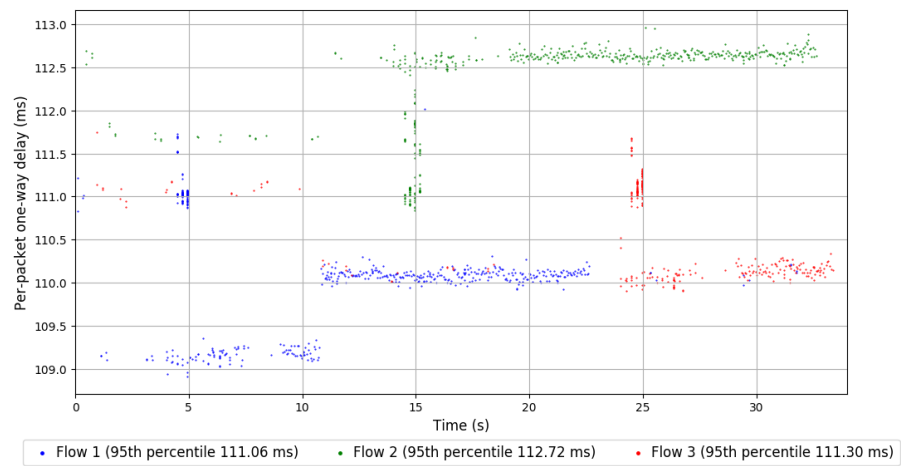
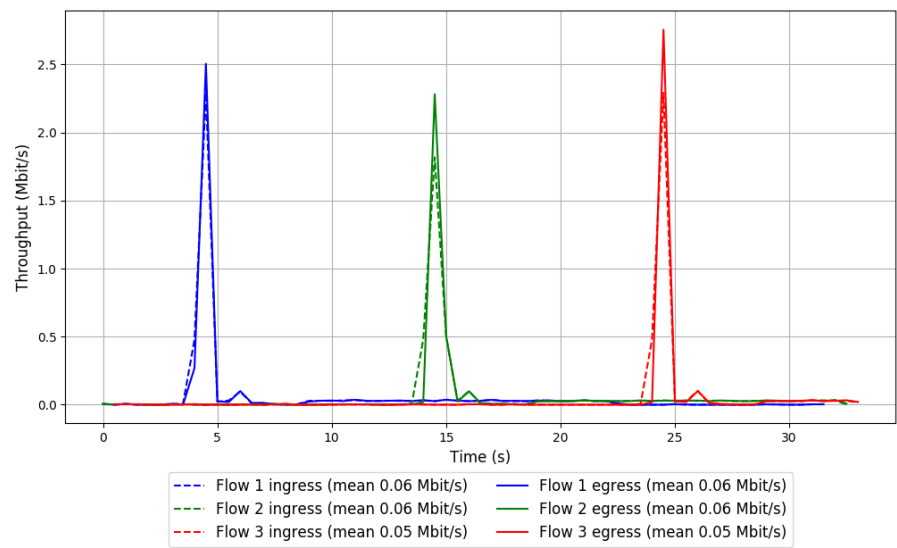
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 111.296 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-04-18 05:57:40

End at: 2018-04-18 05:58:10

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.939 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 111.843 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.979 ms

Loss rate: 0.00%

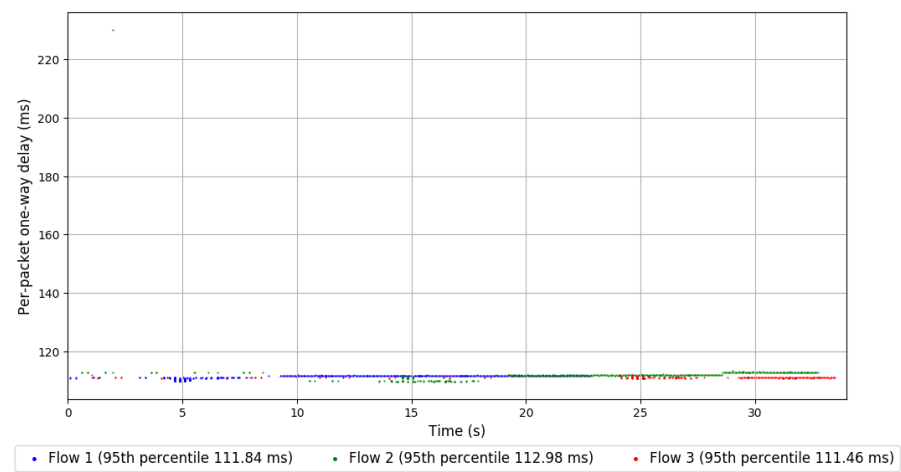
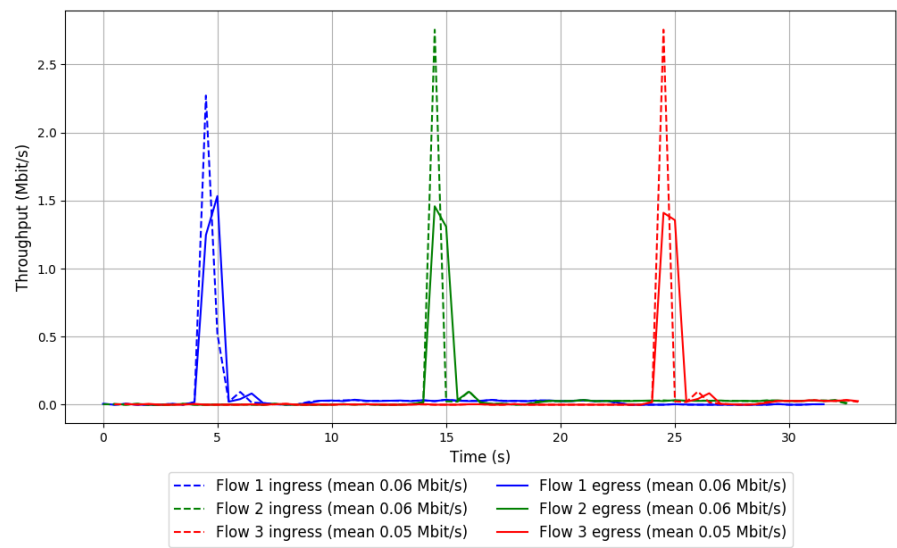
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 111.459 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-04-18 06:14:59

End at: 2018-04-18 06:15:29

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.959 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.116 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.873 ms

Loss rate: 0.04%

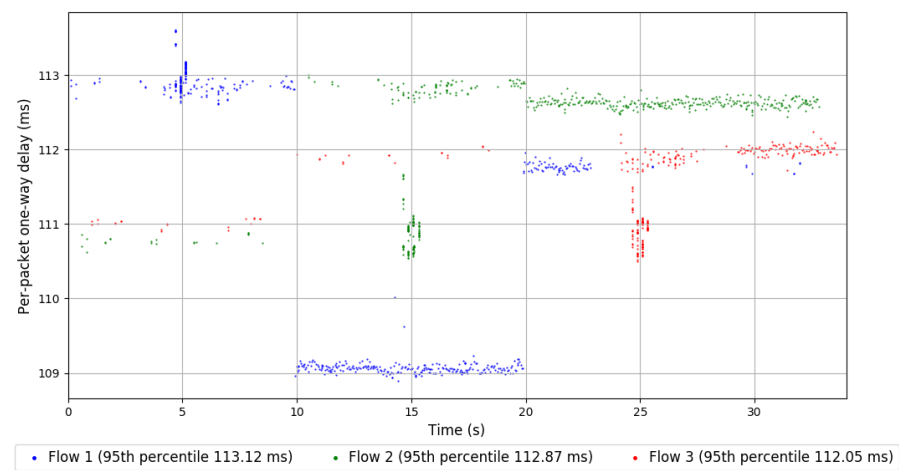
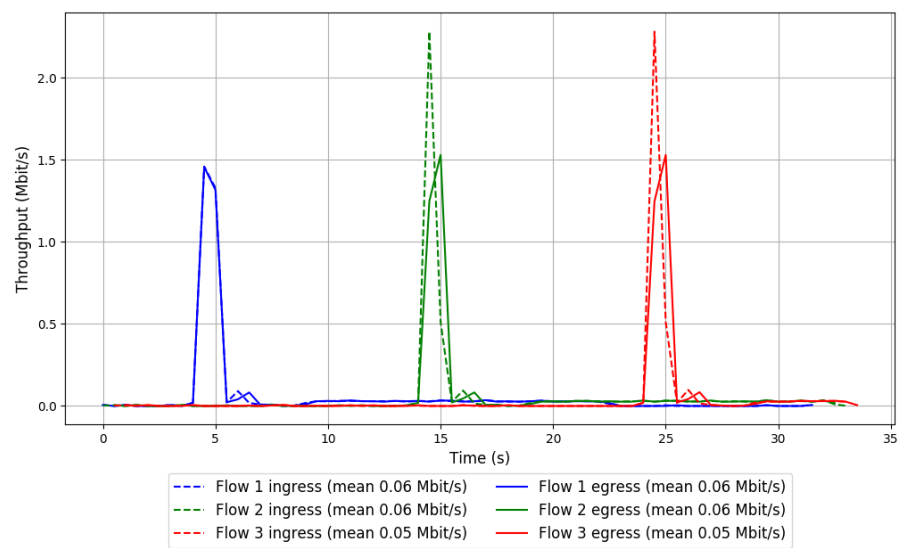
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.051 ms

Loss rate: 0.00%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-04-18 06:32:16

End at: 2018-04-18 06:32:46

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 114.915 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 114.955 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 111.223 ms

Loss rate: 0.00%

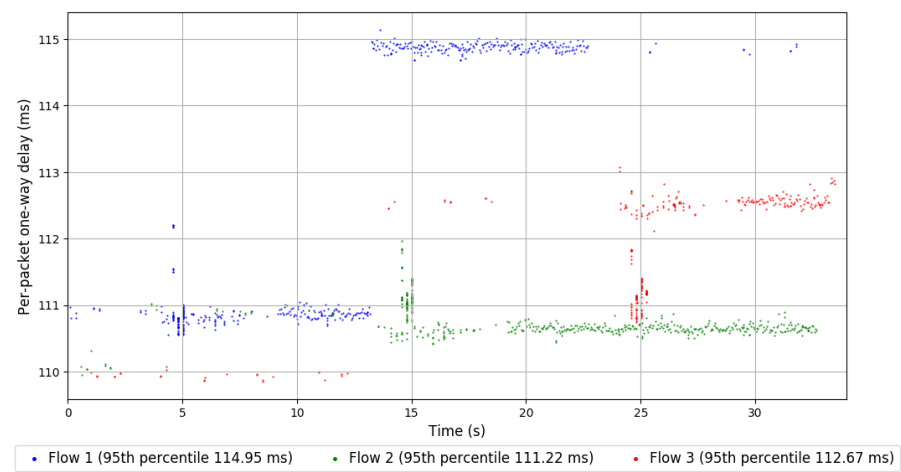
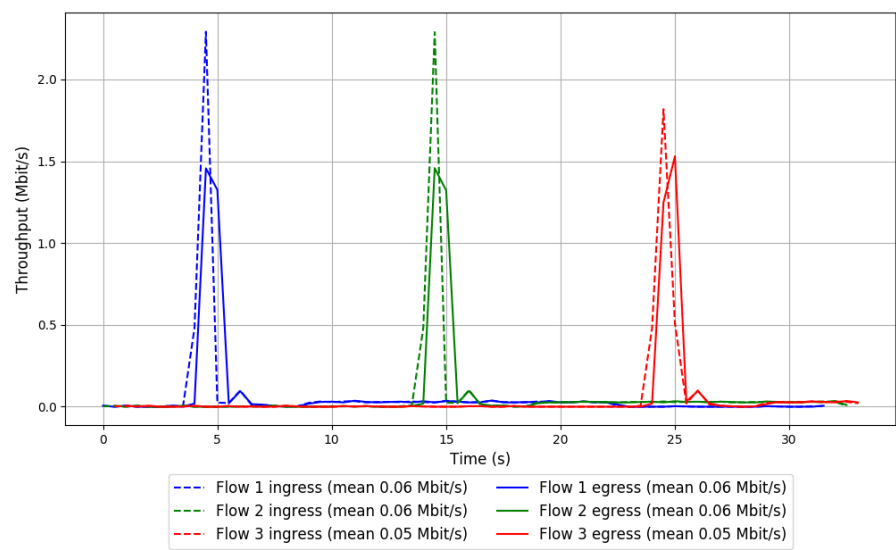
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.673 ms

Loss rate: 0.00%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-04-18 06:49:14

End at: 2018-04-18 06:49:44

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 113.034 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.475 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 113.069 ms

Loss rate: 0.00%

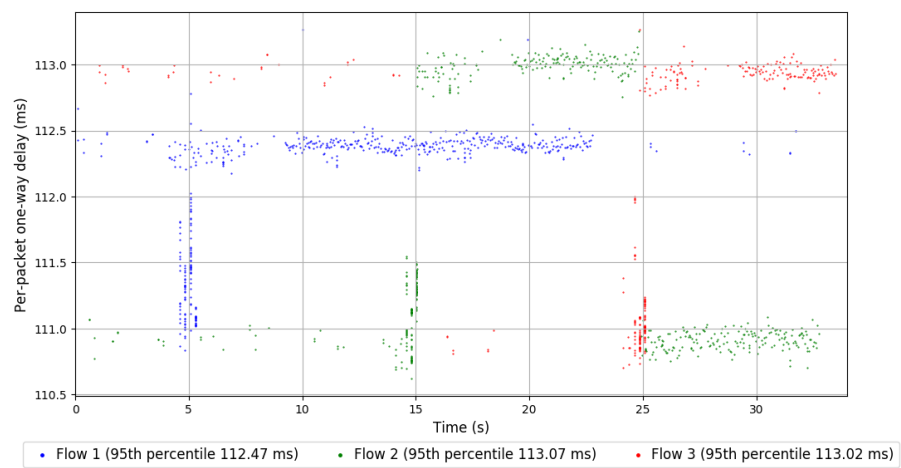
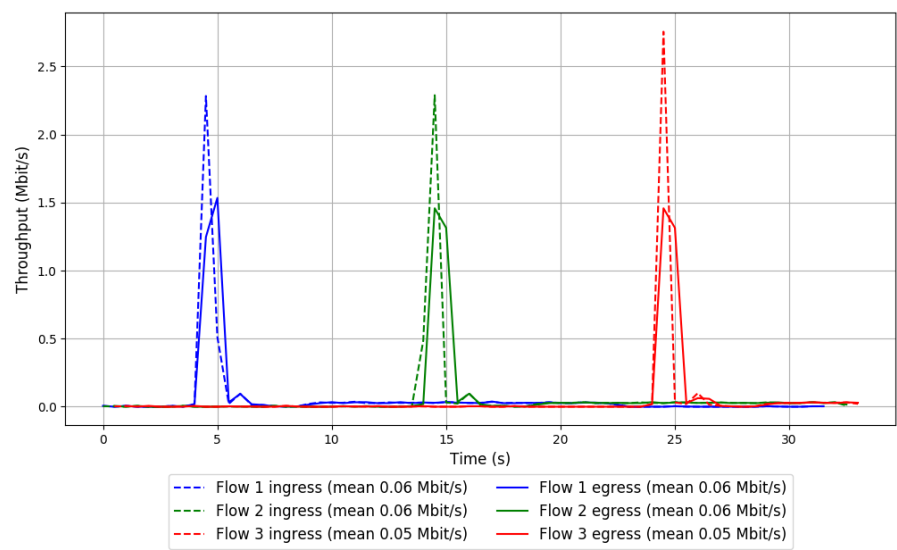
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.017 ms

Loss rate: 0.00%

Run 10: Report of WebRTC media — Data Link

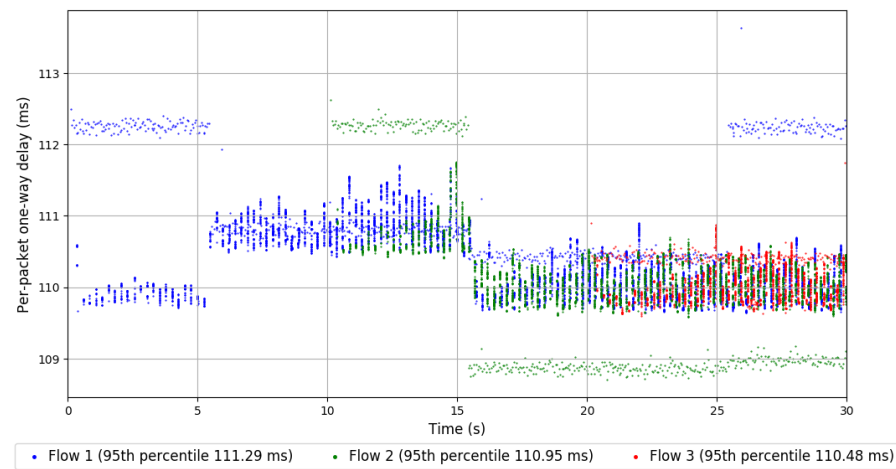
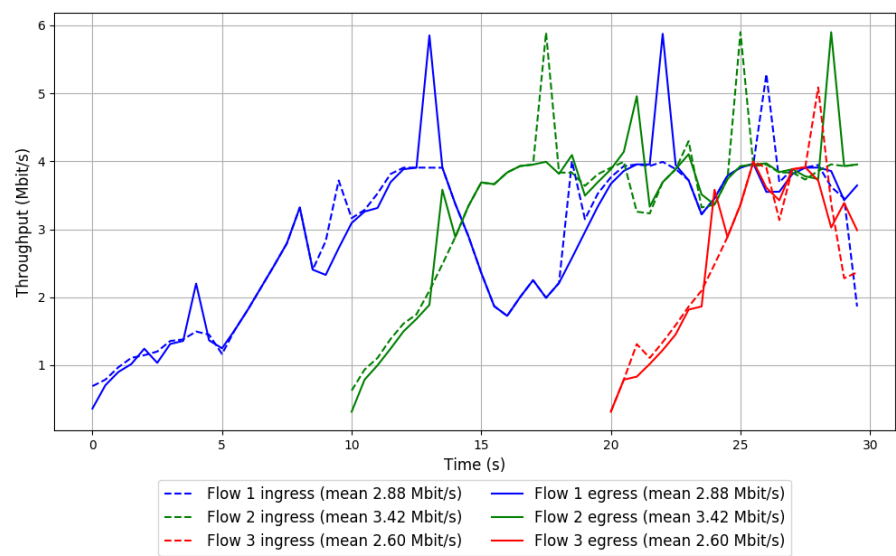


```
Run 1: Statistics of Sprout

Start at: 2018-04-18 04:17:40
End at: 2018-04-18 04:18:10

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.00 Mbit/s
95th percentile per-packet one-way delay: 111.155 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 111.291 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 110.947 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.60 Mbit/s
95th percentile per-packet one-way delay: 110.477 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-04-18 04:34:58

End at: 2018-04-18 04:35:28

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.46 Mbit/s

95th percentile per-packet one-way delay: 111.575 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 3.05 Mbit/s

95th percentile per-packet one-way delay: 111.698 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 111.385 ms

Loss rate: 0.00%

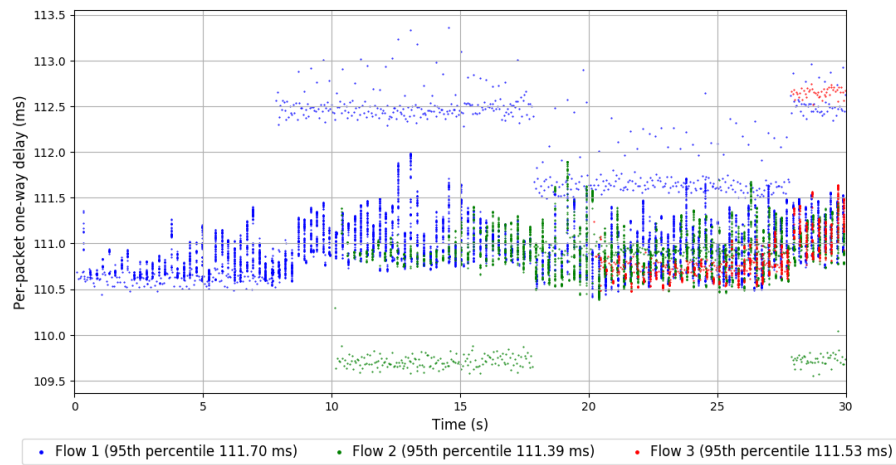
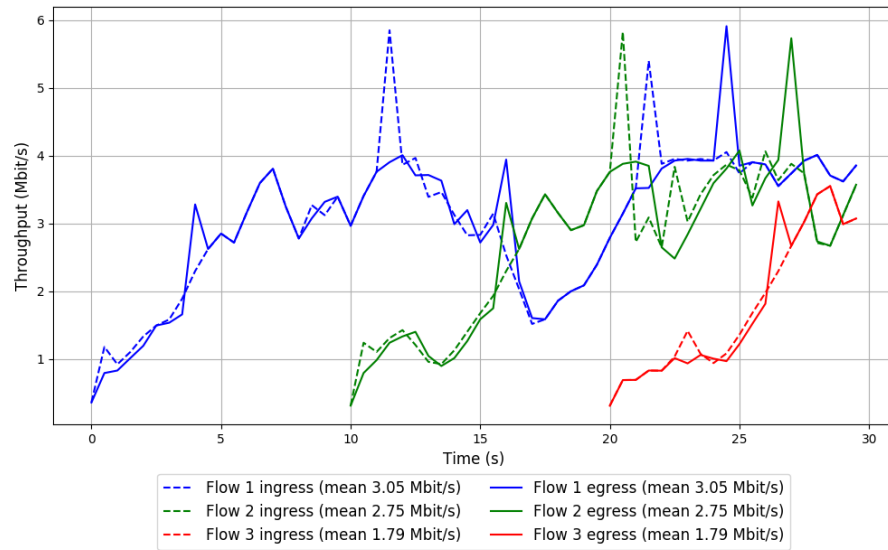
-- Flow 3:

Average throughput: 1.79 Mbit/s

95th percentile per-packet one-way delay: 111.526 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-04-18 04:52:13

End at: 2018-04-18 04:52:43

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.32 Mbit/s

95th percentile per-packet one-way delay: 111.988 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 3.00 Mbit/s

95th percentile per-packet one-way delay: 112.806 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.92 Mbit/s

95th percentile per-packet one-way delay: 111.715 ms

Loss rate: 0.00%

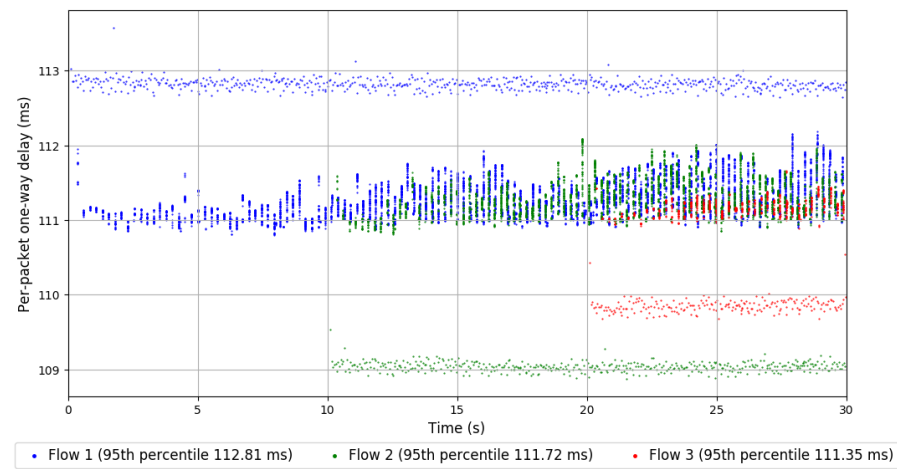
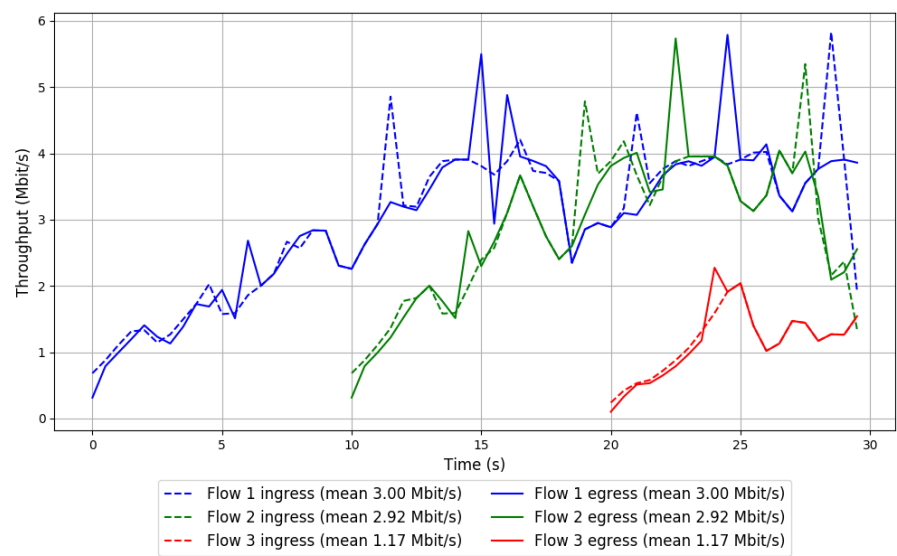
-- Flow 3:

Average throughput: 1.17 Mbit/s

95th percentile per-packet one-way delay: 111.347 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-04-18 05:09:25

End at: 2018-04-18 05:09:55

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.20 Mbit/s

95th percentile per-packet one-way delay: 113.211 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.97 Mbit/s

95th percentile per-packet one-way delay: 113.293 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 113.229 ms

Loss rate: 0.00%

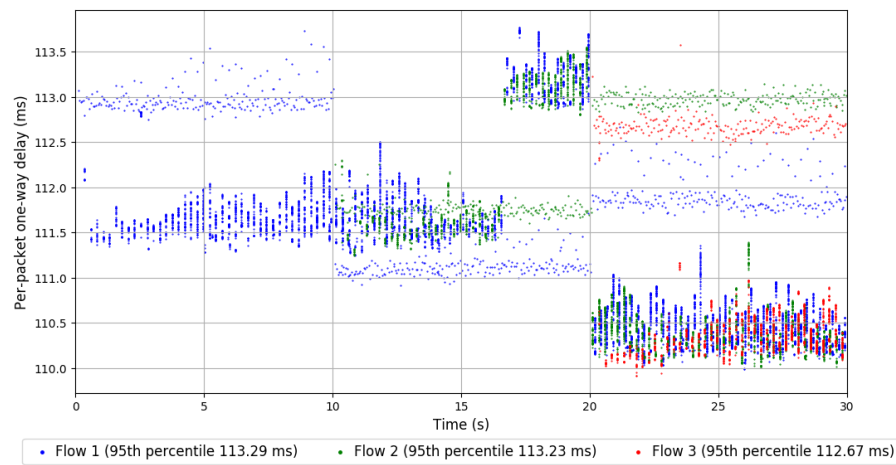
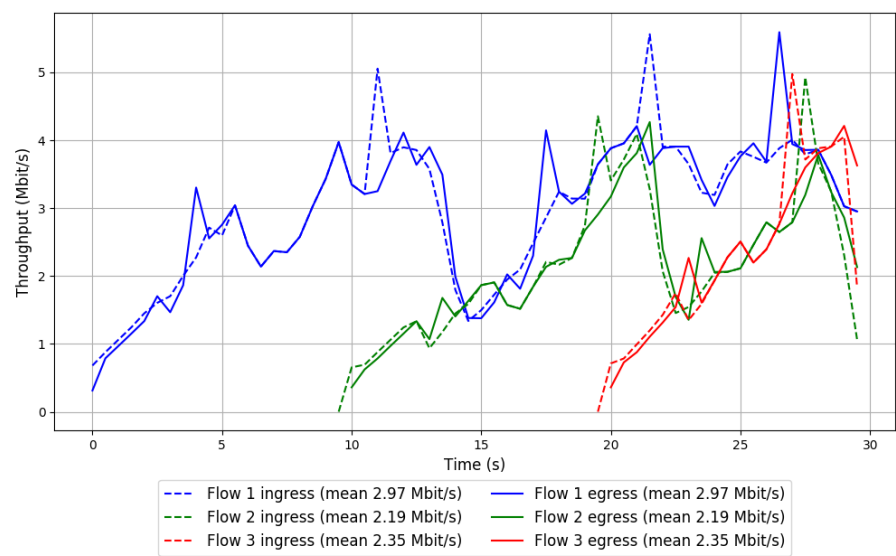
-- Flow 3:

Average throughput: 2.35 Mbit/s

95th percentile per-packet one-way delay: 112.674 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-04-18 05:27:03

End at: 2018-04-18 05:27:33

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.59 Mbit/s

95th percentile per-packet one-way delay: 113.291 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.94 Mbit/s

95th percentile per-packet one-way delay: 113.483 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.65 Mbit/s

95th percentile per-packet one-way delay: 112.884 ms

Loss rate: 0.00%

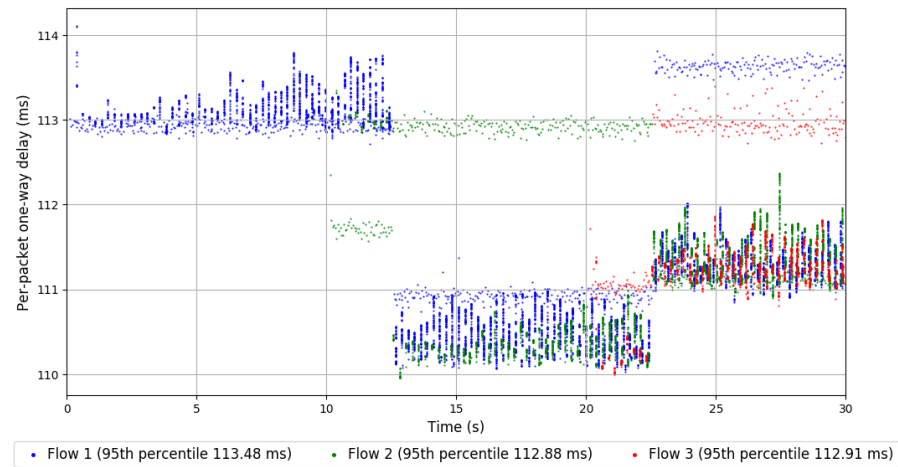
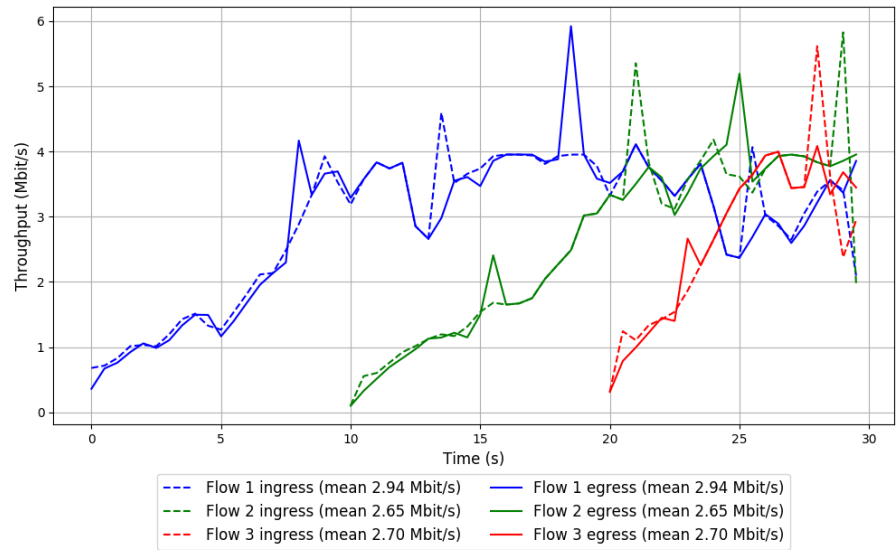
-- Flow 3:

Average throughput: 2.70 Mbit/s

95th percentile per-packet one-way delay: 112.906 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-04-18 05:44:26

End at: 2018-04-18 05:44:56

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.44 Mbit/s

95th percentile per-packet one-way delay: 111.720 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 112.029 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.44 Mbit/s

95th percentile per-packet one-way delay: 111.531 ms

Loss rate: 0.00%

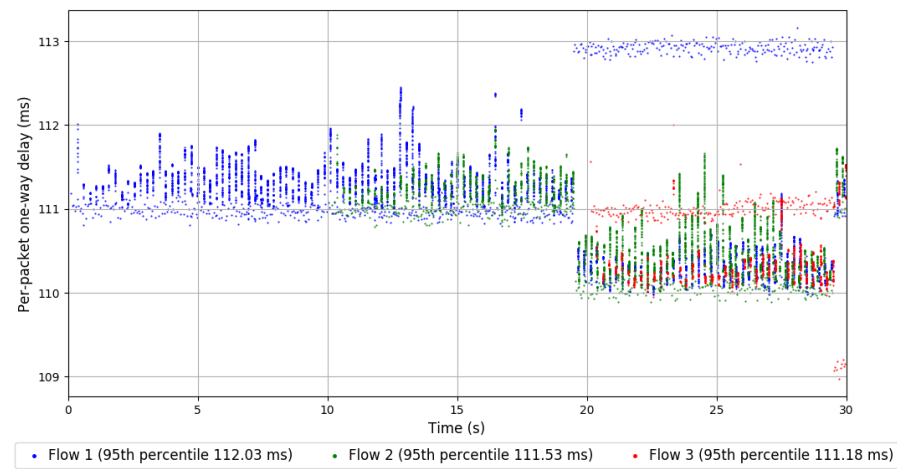
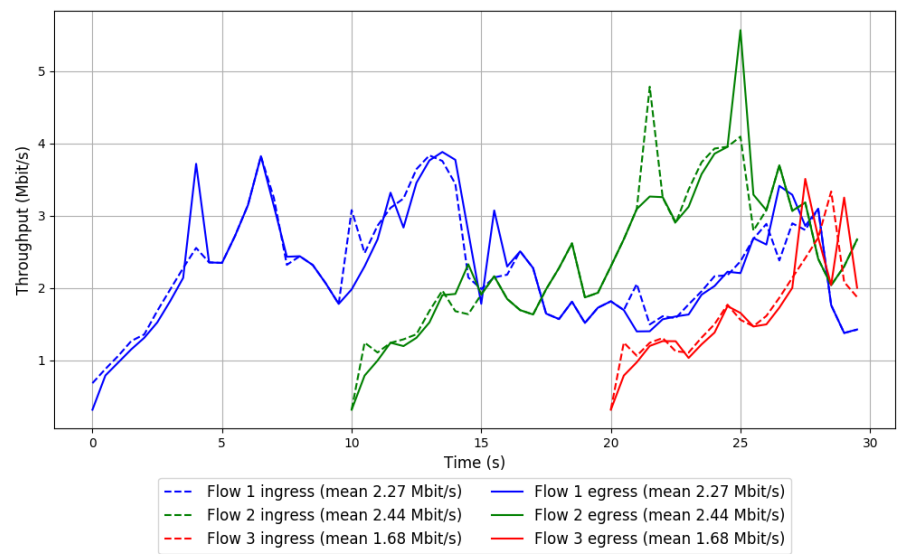
-- Flow 3:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 111.176 ms

Loss rate: 0.00%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-04-18 06:01:40

End at: 2018-04-18 06:02:10

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.59 Mbit/s

95th percentile per-packet one-way delay: 112.198 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 3.04 Mbit/s

95th percentile per-packet one-way delay: 112.152 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.64 Mbit/s

95th percentile per-packet one-way delay: 112.722 ms

Loss rate: 0.00%

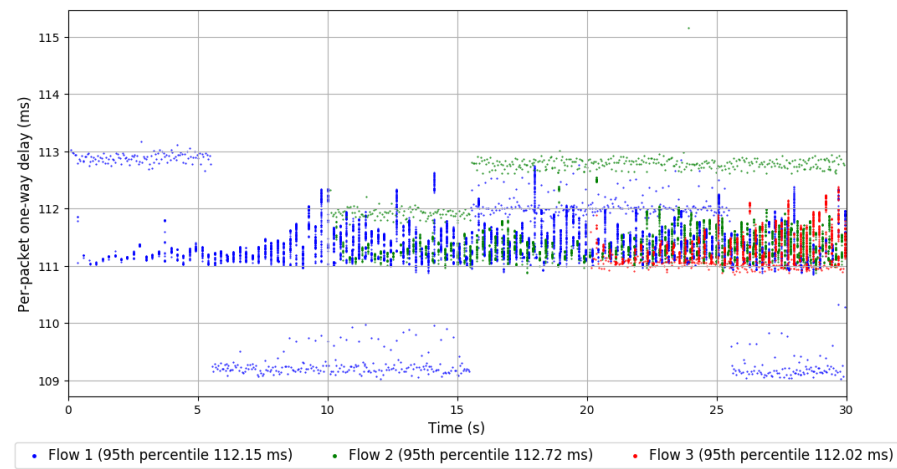
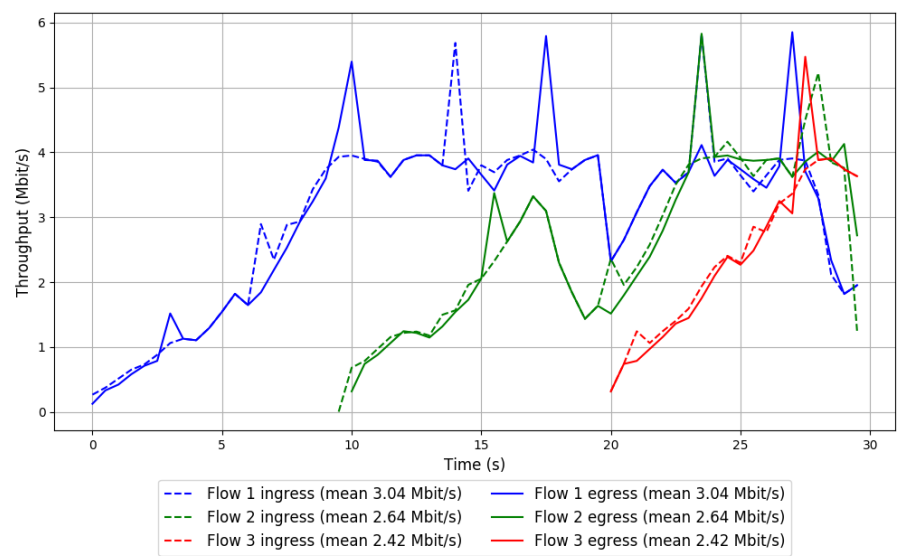
-- Flow 3:

Average throughput: 2.42 Mbit/s

95th percentile per-packet one-way delay: 112.017 ms

Loss rate: 0.00%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-04-18 06:18:56

End at: 2018-04-18 06:19:26

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.45 Mbit/s

95th percentile per-packet one-way delay: 111.870 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.93 Mbit/s

95th percentile per-packet one-way delay: 111.649 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.91 Mbit/s

95th percentile per-packet one-way delay: 112.291 ms

Loss rate: 0.00%

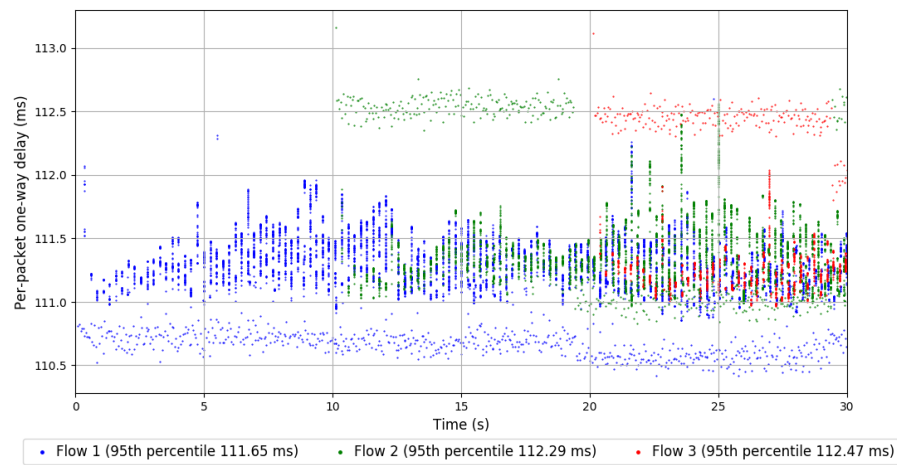
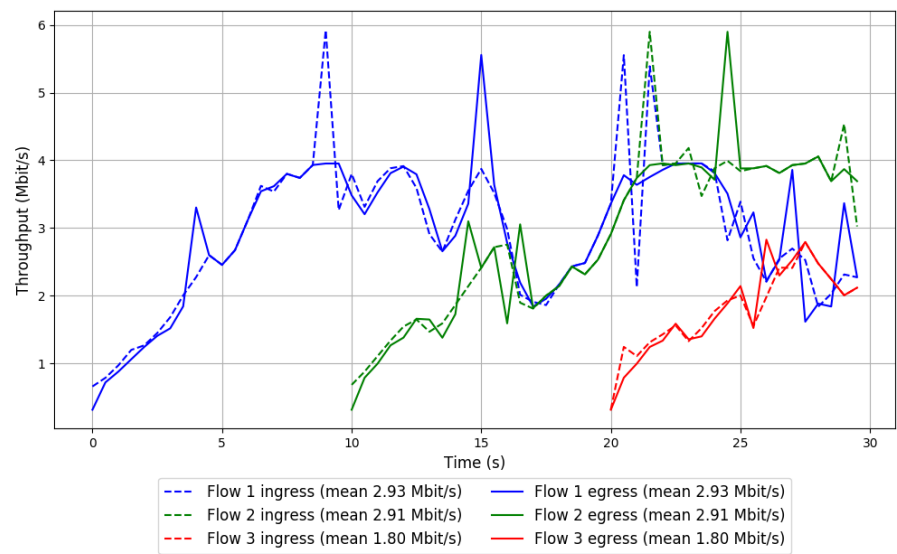
-- Flow 3:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 112.474 ms

Loss rate: 0.00%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-04-18 06:36:06

End at: 2018-04-18 06:36:36

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.18 Mbit/s

95th percentile per-packet one-way delay: 112.074 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 112.644 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 111.810 ms

Loss rate: 0.00%

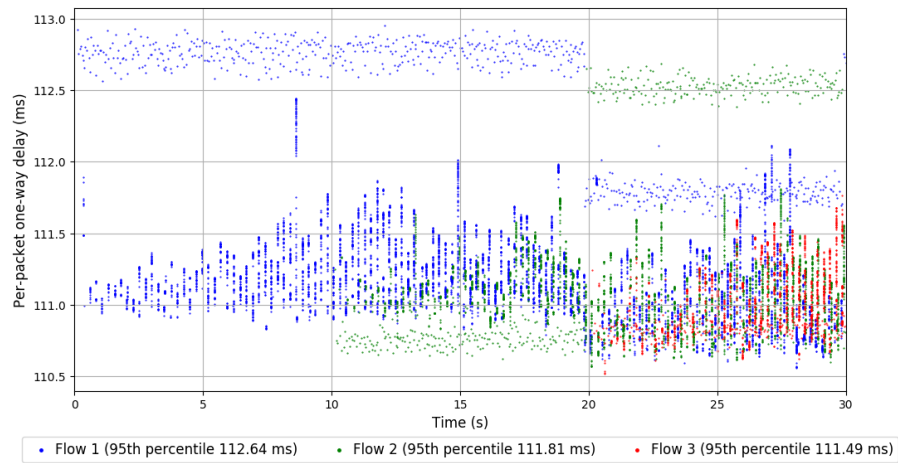
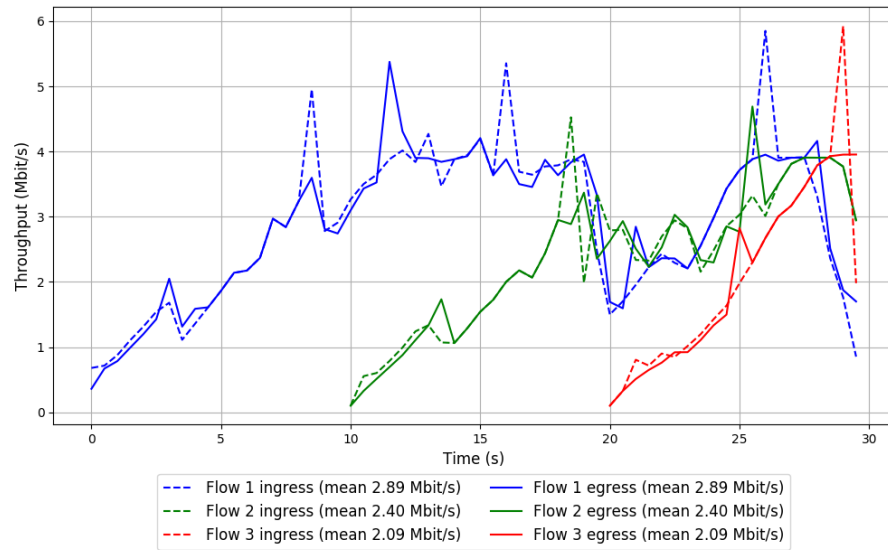
-- Flow 3:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 111.493 ms

Loss rate: 0.00%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-04-18 06:53:05

End at: 2018-04-18 06:53:35

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.15 Mbit/s

95th percentile per-packet one-way delay: 112.362 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 3.00 Mbit/s

95th percentile per-packet one-way delay: 112.357 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 2.50 Mbit/s

95th percentile per-packet one-way delay: 112.272 ms

Loss rate: 0.00%

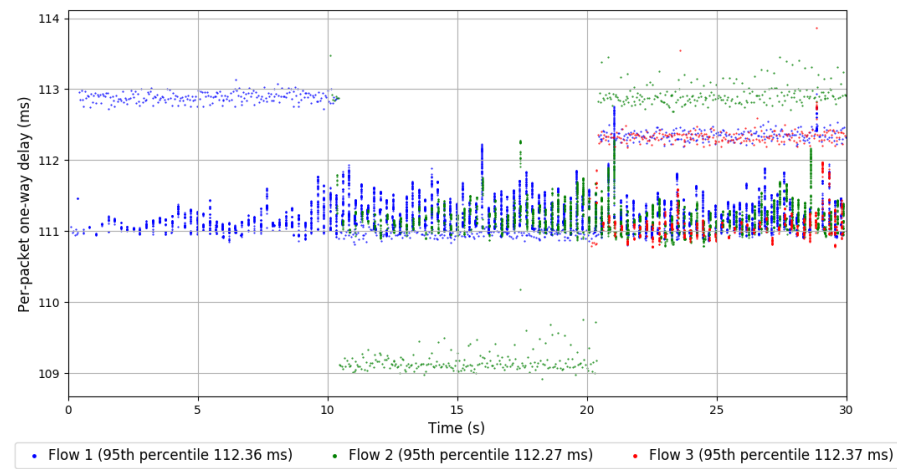
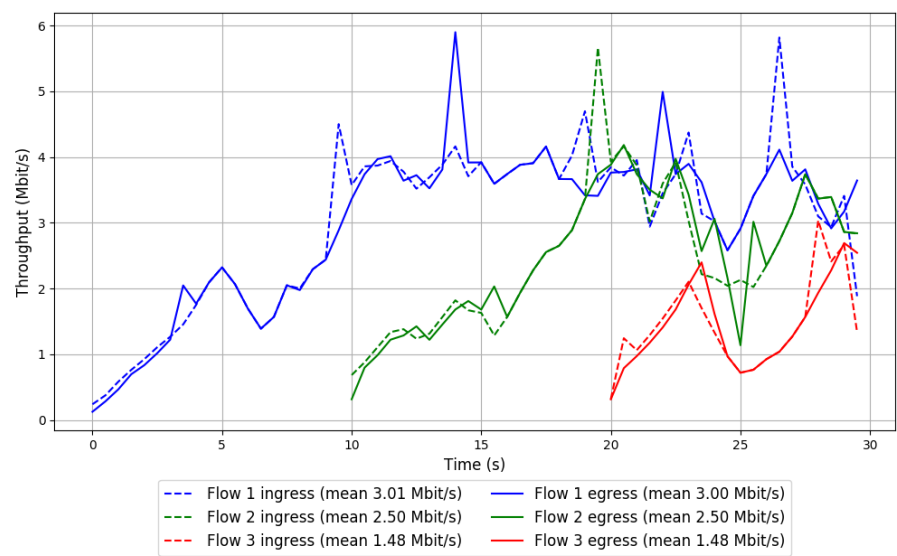
-- Flow 3:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 112.366 ms

Loss rate: 0.00%

Run 10: Report of Sprout — Data Link

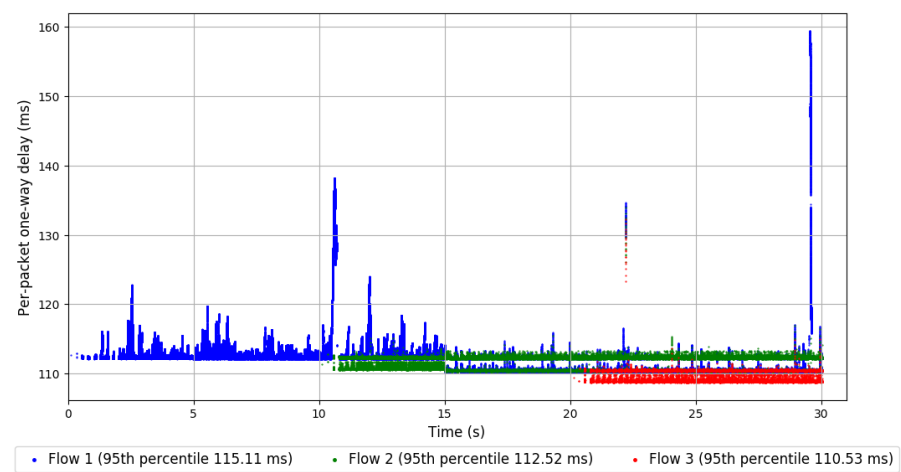
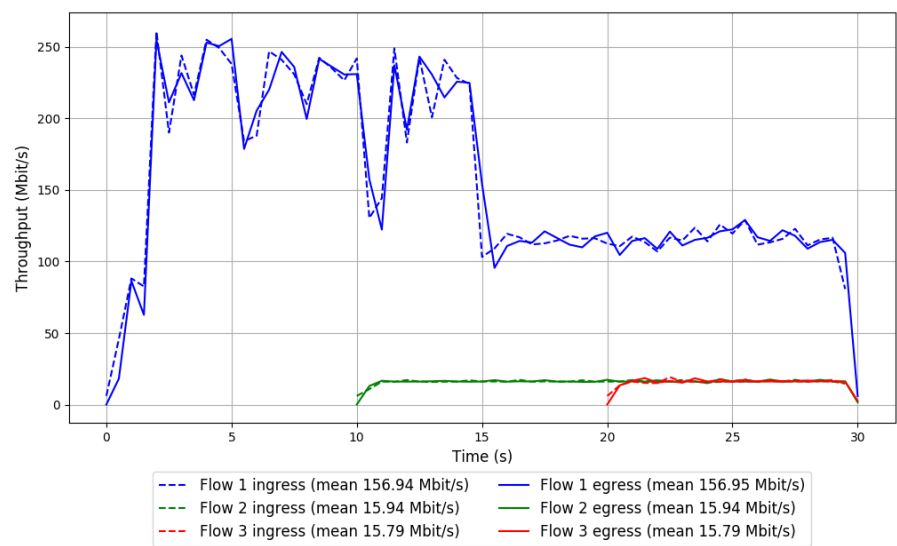


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-18 04:27:31
End at: 2018-04-18 04:28:01

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 172.77 Mbit/s
95th percentile per-packet one-way delay: 114.937 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 156.95 Mbit/s
95th percentile per-packet one-way delay: 115.115 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.94 Mbit/s
95th percentile per-packet one-way delay: 112.524 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.79 Mbit/s
95th percentile per-packet one-way delay: 110.529 ms
Loss rate: 0.00%
```


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

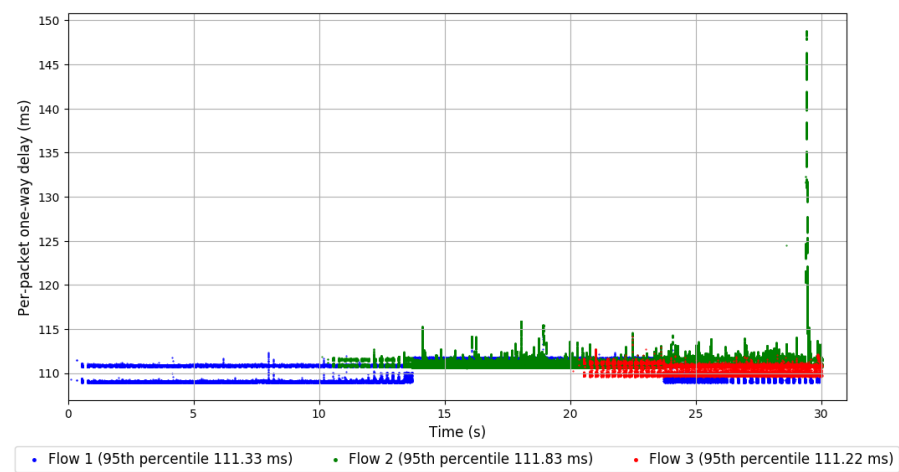
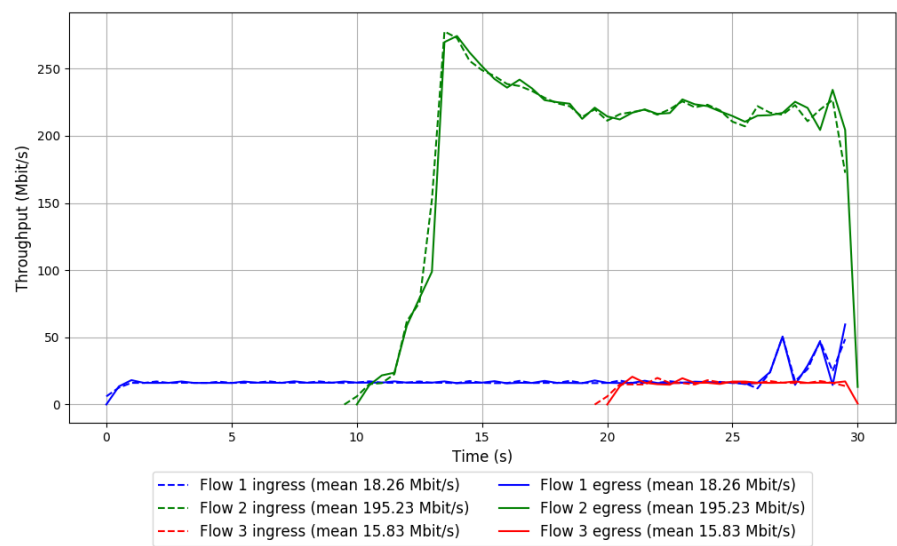


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-04-18 04:44:52
End at: 2018-04-18 04:45:22

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 153.47 Mbit/s
95th percentile per-packet one-way delay: 111.762 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 18.26 Mbit/s
95th percentile per-packet one-way delay: 111.330 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 195.23 Mbit/s
95th percentile per-packet one-way delay: 111.826 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.83 Mbit/s
95th percentile per-packet one-way delay: 111.221 ms
Loss rate: 0.00%
```

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

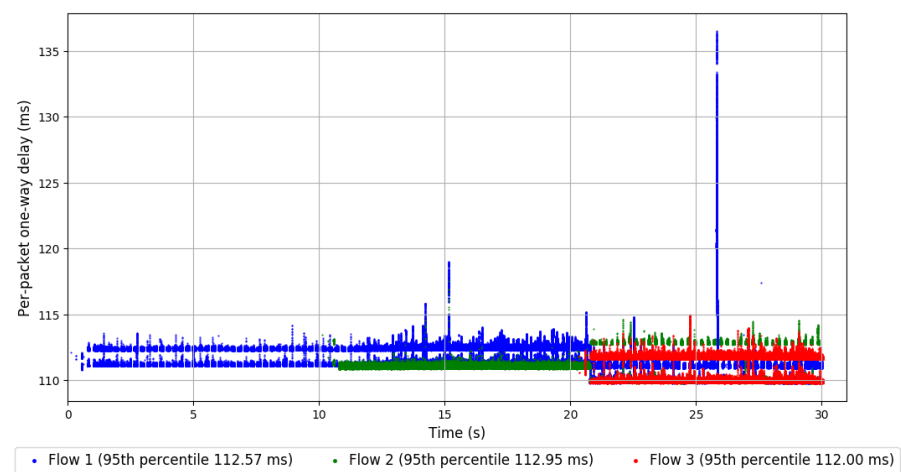
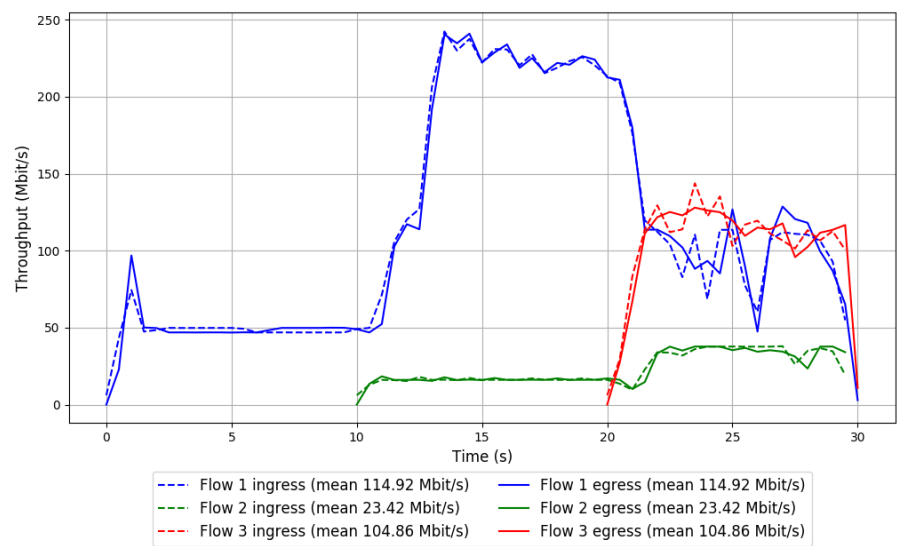


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-04-18 05:02:05
End at: 2018-04-18 05:02:35

# Below is generated by plot.py at 2018-04-18 09:13:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 165.00 Mbit/s
95th percentile per-packet one-way delay: 112.664 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 114.92 Mbit/s
95th percentile per-packet one-way delay: 112.568 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.42 Mbit/s
95th percentile per-packet one-way delay: 112.955 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 104.86 Mbit/s
95th percentile per-packet one-way delay: 111.995 ms
Loss rate: 0.00%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-04-18 05:19:30

End at: 2018-04-18 05:20:01

Below is generated by plot.py at 2018-04-18 09:13:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.66 Mbit/s

95th percentile per-packet one-way delay: 118.707 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 8.75 Mbit/s

95th percentile per-packet one-way delay: 110.933 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 149.20 Mbit/s

95th percentile per-packet one-way delay: 125.305 ms

Loss rate: 0.00%

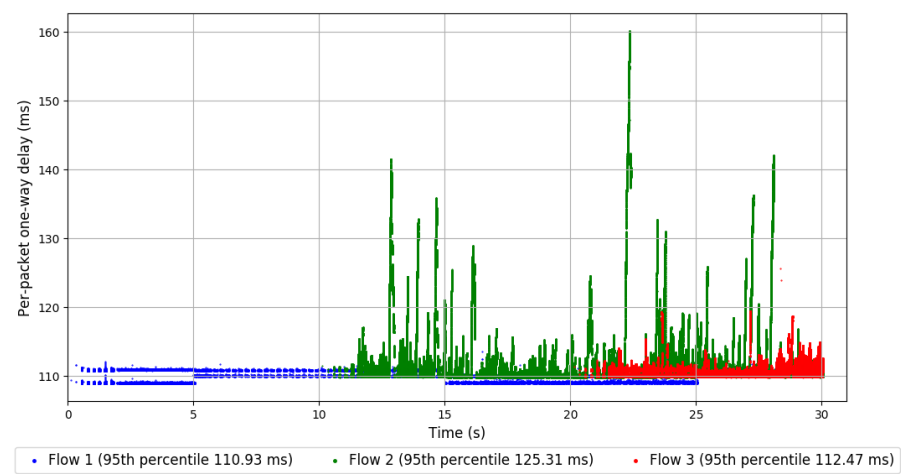
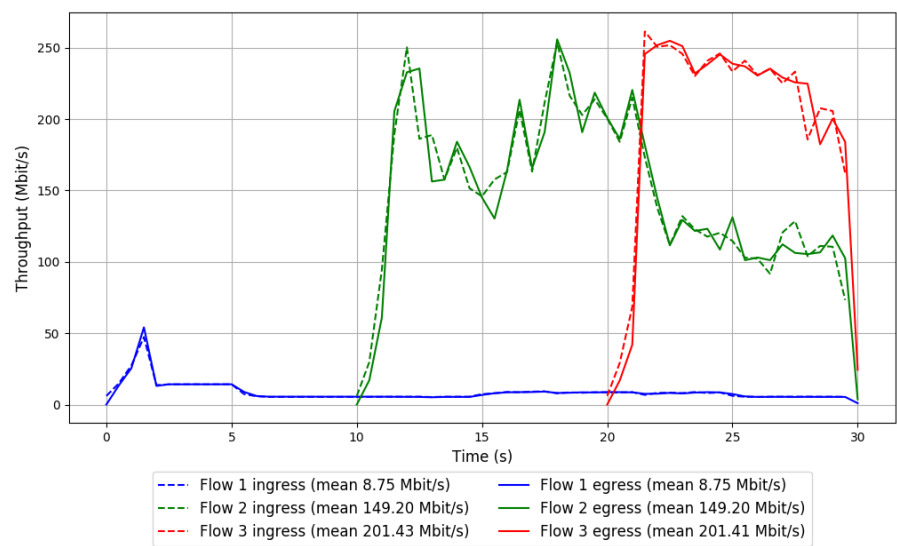
-- Flow 3:

Average throughput: 201.41 Mbit/s

95th percentile per-packet one-way delay: 112.469 ms

Loss rate: 0.00%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-04-18 05:36:55

End at: 2018-04-18 05:37:25

Below is generated by plot.py at 2018-04-18 09:16:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 246.21 Mbit/s

95th percentile per-packet one-way delay: 121.599 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 145.50 Mbit/s

95th percentile per-packet one-way delay: 116.994 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 106.04 Mbit/s

95th percentile per-packet one-way delay: 121.564 ms

Loss rate: 0.00%

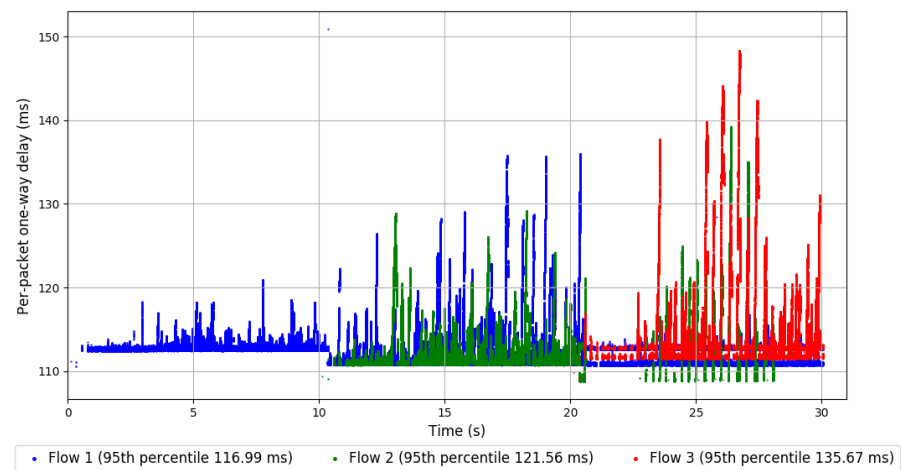
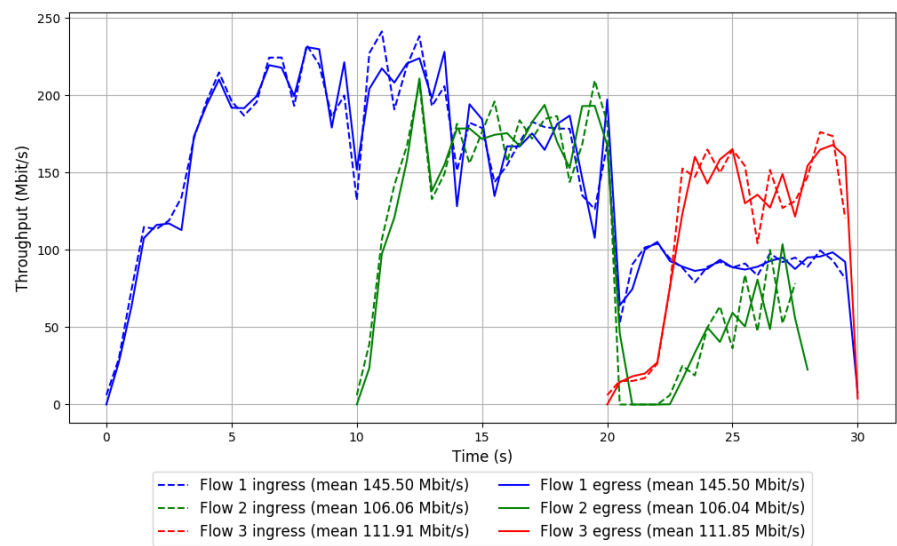
-- Flow 3:

Average throughput: 111.85 Mbit/s

95th percentile per-packet one-way delay: 135.668 ms

Loss rate: 0.05%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-04-18 05:54:13

End at: 2018-04-18 05:54:43

Below is generated by plot.py at 2018-04-18 09:16:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 183.34 Mbit/s

95th percentile per-packet one-way delay: 113.918 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 34.35 Mbit/s

95th percentile per-packet one-way delay: 112.777 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 179.81 Mbit/s

95th percentile per-packet one-way delay: 112.198 ms

Loss rate: 0.00%

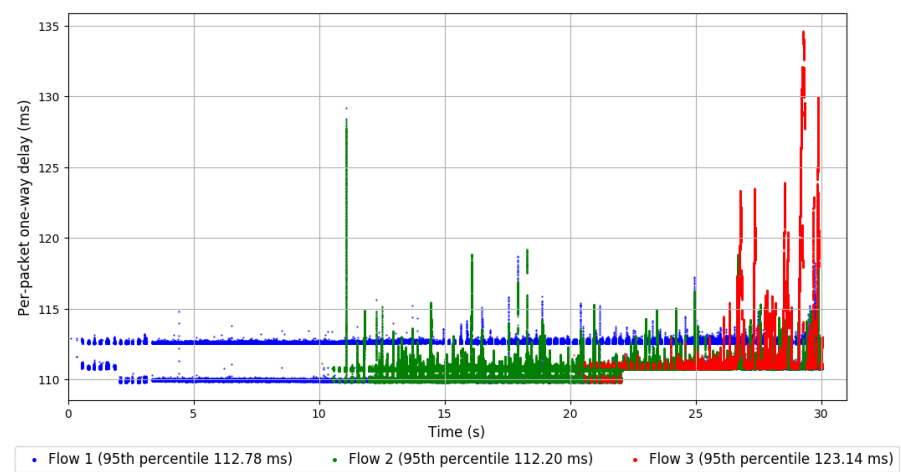
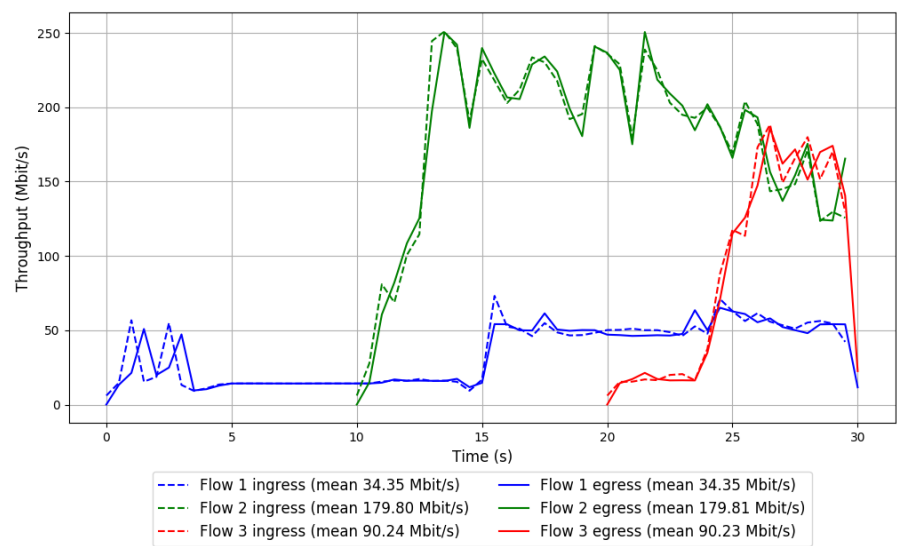
-- Flow 3:

Average throughput: 90.23 Mbit/s

95th percentile per-packet one-way delay: 123.143 ms

Loss rate: 0.02%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-04-18 06:11:30

End at: 2018-04-18 06:12:00

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 201.73 Mbit/s

95th percentile per-packet one-way delay: 113.454 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 143.75 Mbit/s

95th percentile per-packet one-way delay: 113.951 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.80 Mbit/s

95th percentile per-packet one-way delay: 112.763 ms

Loss rate: 0.00%

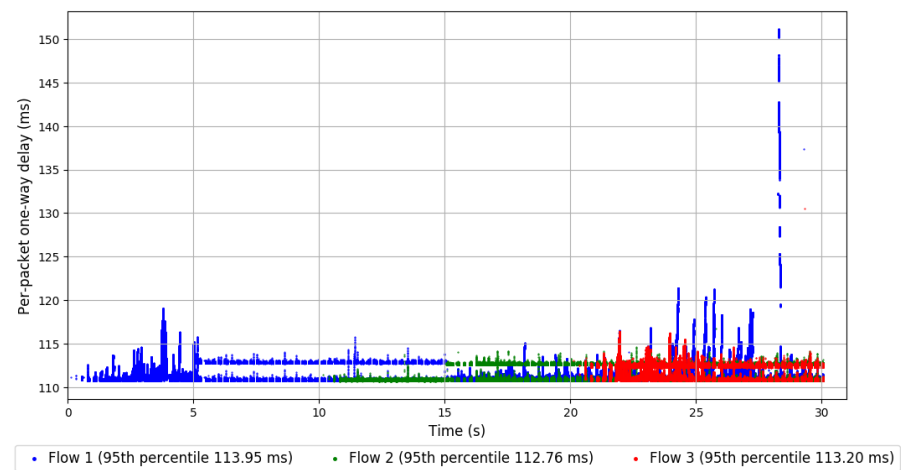
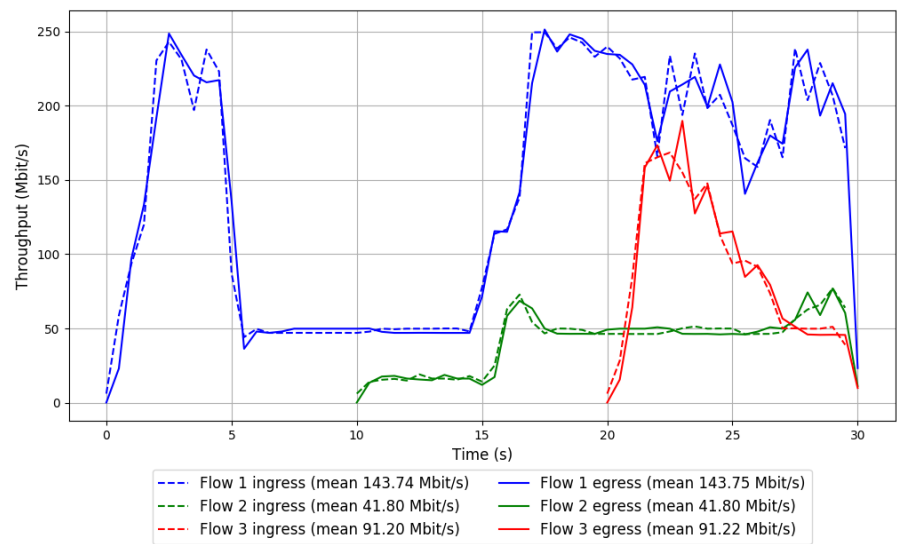
-- Flow 3:

Average throughput: 91.22 Mbit/s

95th percentile per-packet one-way delay: 113.200 ms

Loss rate: 0.00%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-04-18 06:28:51

End at: 2018-04-18 06:29:21

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.22 Mbit/s

95th percentile per-packet one-way delay: 113.569 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 89.75 Mbit/s

95th percentile per-packet one-way delay: 112.733 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 11.27 Mbit/s

95th percentile per-packet one-way delay: 112.777 ms

Loss rate: 0.00%

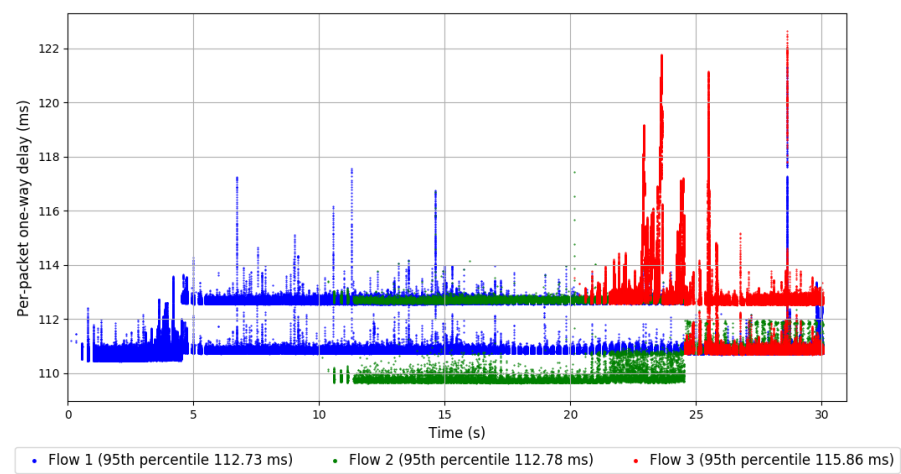
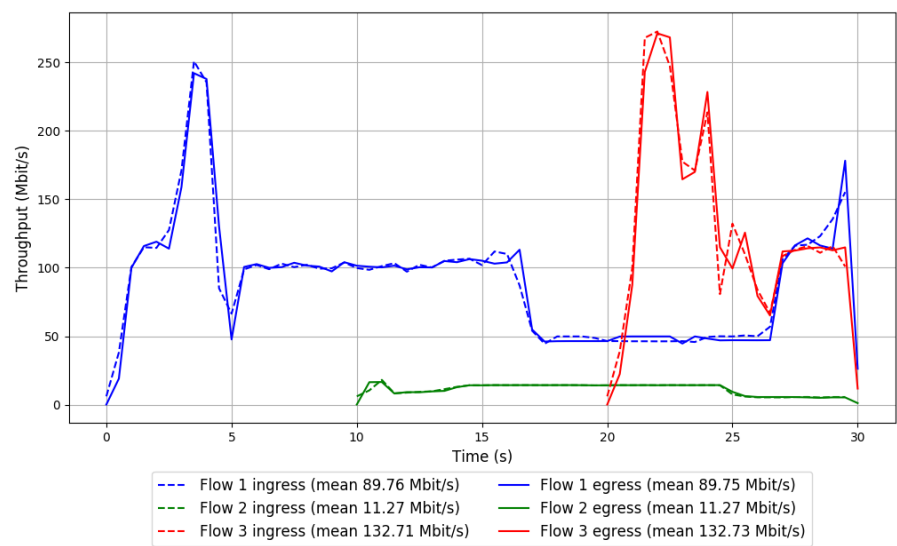
-- Flow 3:

Average throughput: 132.73 Mbit/s

95th percentile per-packet one-way delay: 115.855 ms

Loss rate: 0.02%

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

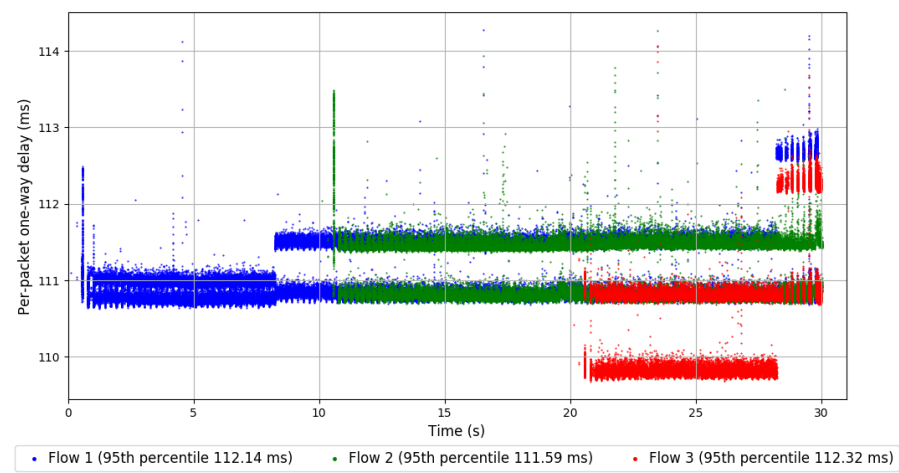
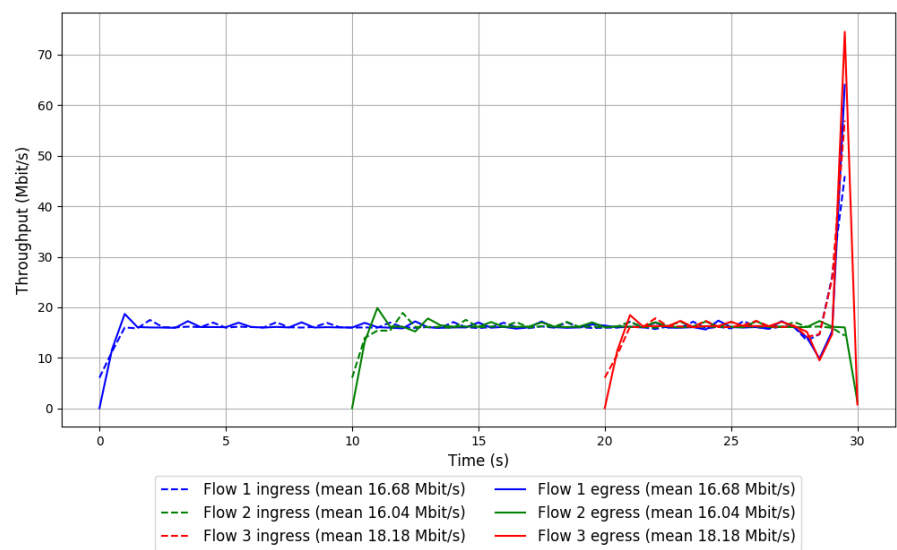


```
Run 9: Statistics of TaoVA-100x

Start at: 2018-04-18 06:45:57
End at: 2018-04-18 06:46:27

# Below is generated by plot.py at 2018-04-18 09:19:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.27 Mbit/s
95th percentile per-packet one-way delay: 112.217 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 16.68 Mbit/s
95th percentile per-packet one-way delay: 112.138 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 16.04 Mbit/s
95th percentile per-packet one-way delay: 111.588 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.18 Mbit/s
95th percentile per-packet one-way delay: 112.319 ms
Loss rate: 0.00%
```


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

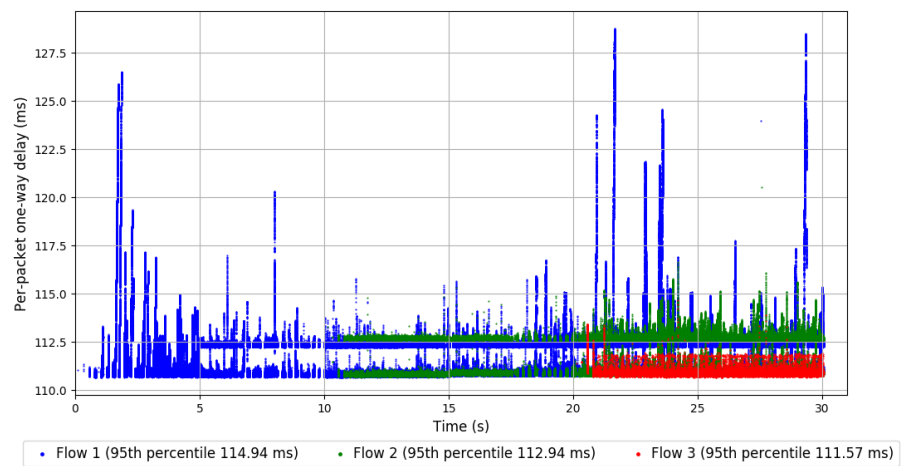
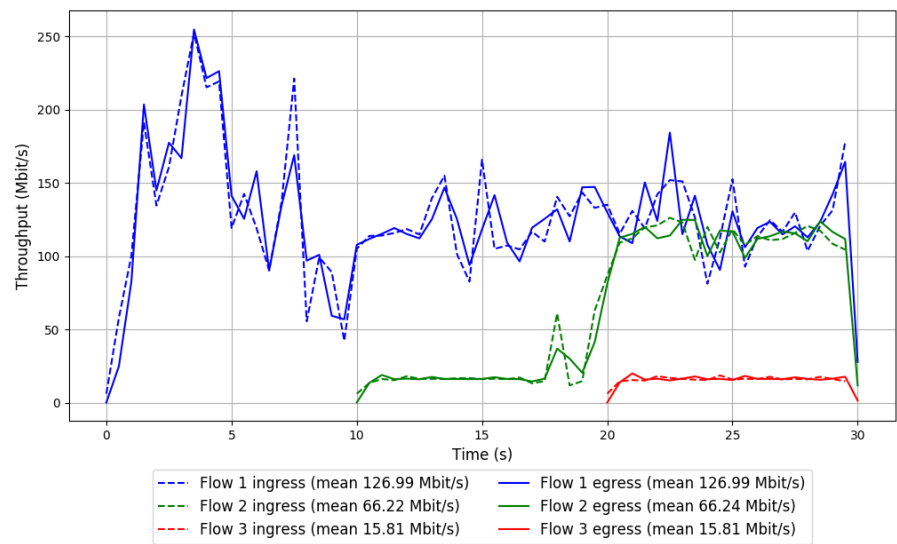


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-18 07:03:01
End at: 2018-04-18 07:03:31

# Below is generated by plot.py at 2018-04-18 09:19:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 176.32 Mbit/s
95th percentile per-packet one-way delay: 113.954 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 126.99 Mbit/s
95th percentile per-packet one-way delay: 114.944 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 66.24 Mbit/s
95th percentile per-packet one-way delay: 112.945 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.81 Mbit/s
95th percentile per-packet one-way delay: 111.570 ms
Loss rate: 0.00%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-04-18 04:26:37

End at: 2018-04-18 04:27:07

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 131.15 Mbit/s

95th percentile per-packet one-way delay: 122.639 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 48.32 Mbit/s

95th percentile per-packet one-way delay: 117.308 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 99.52 Mbit/s

95th percentile per-packet one-way delay: 124.665 ms

Loss rate: 0.00%

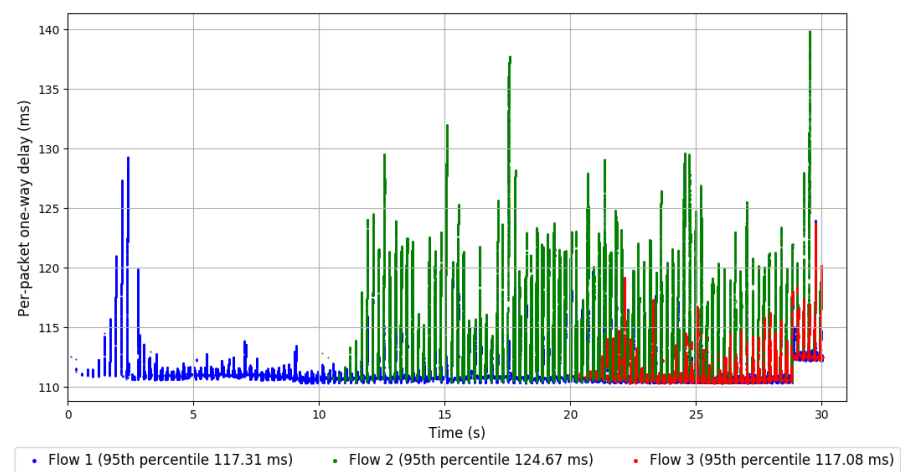
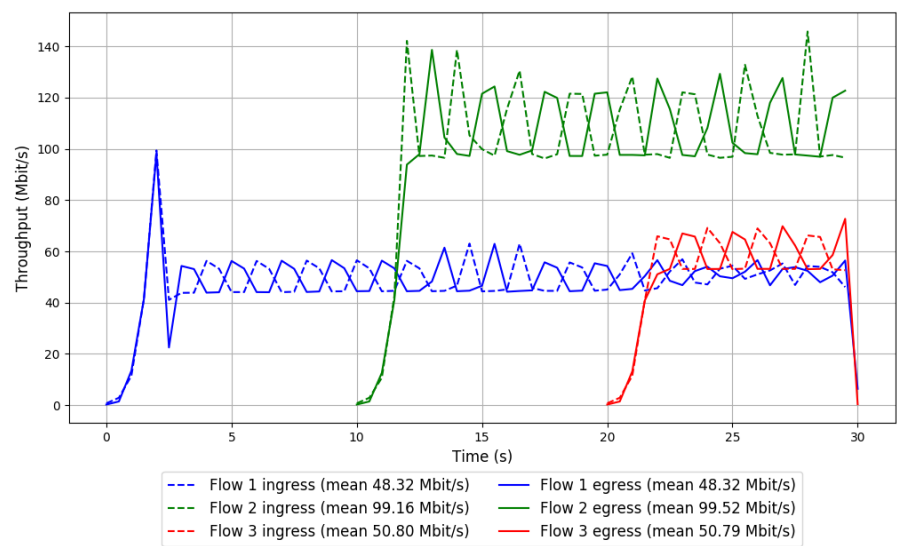
-- Flow 3:

Average throughput: 50.79 Mbit/s

95th percentile per-packet one-way delay: 117.075 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-04-18 04:43:58

End at: 2018-04-18 04:44:28

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 117.17 Mbit/s

95th percentile per-packet one-way delay: 119.279 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 38.93 Mbit/s

95th percentile per-packet one-way delay: 113.132 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 99.21 Mbit/s

95th percentile per-packet one-way delay: 119.912 ms

Loss rate: 0.07%

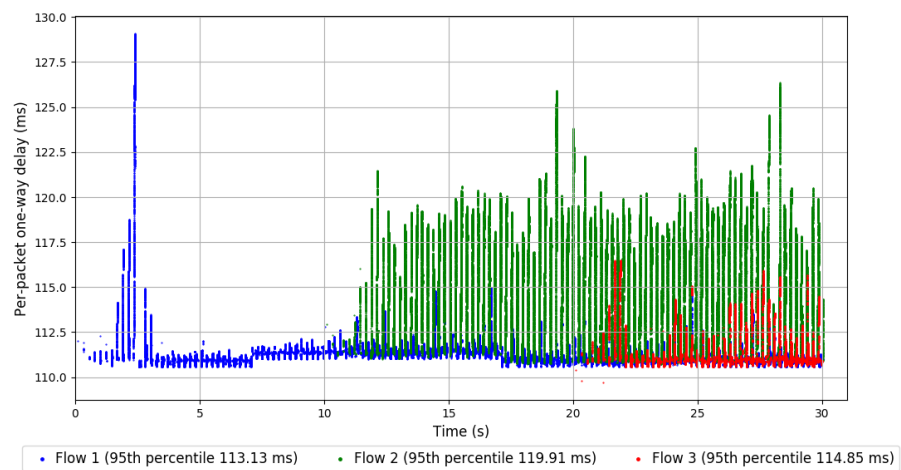
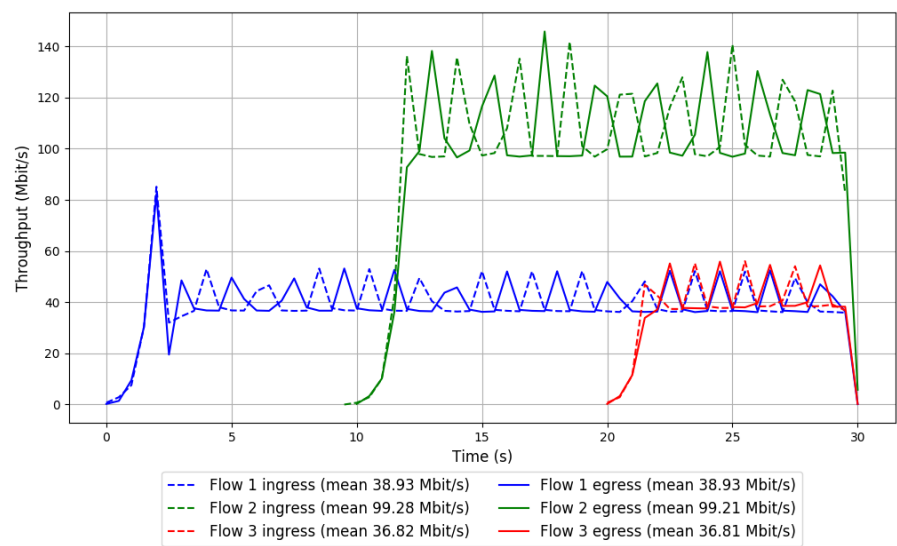
-- Flow 3:

Average throughput: 36.81 Mbit/s

95th percentile per-packet one-way delay: 114.853 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-04-18 05:01:15

End at: 2018-04-18 05:01:45

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 51.67 Mbit/s

95th percentile per-packet one-way delay: 112.568 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 38.92 Mbit/s

95th percentile per-packet one-way delay: 112.661 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 111.477 ms

Loss rate: 0.09%

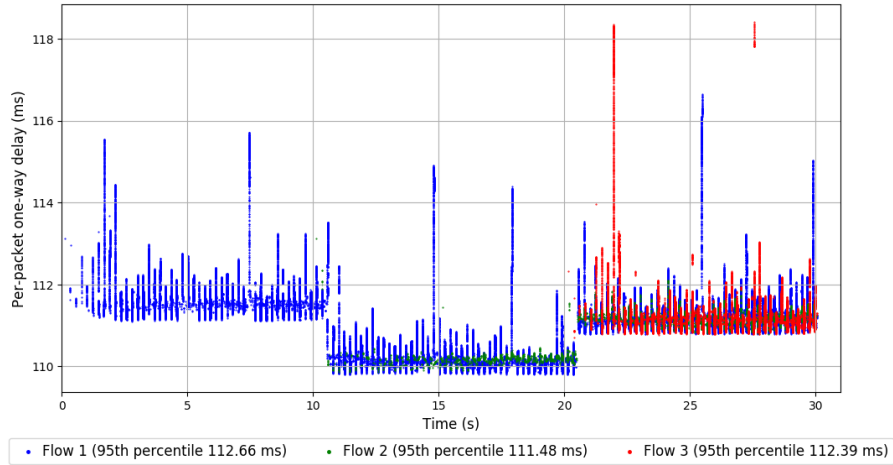
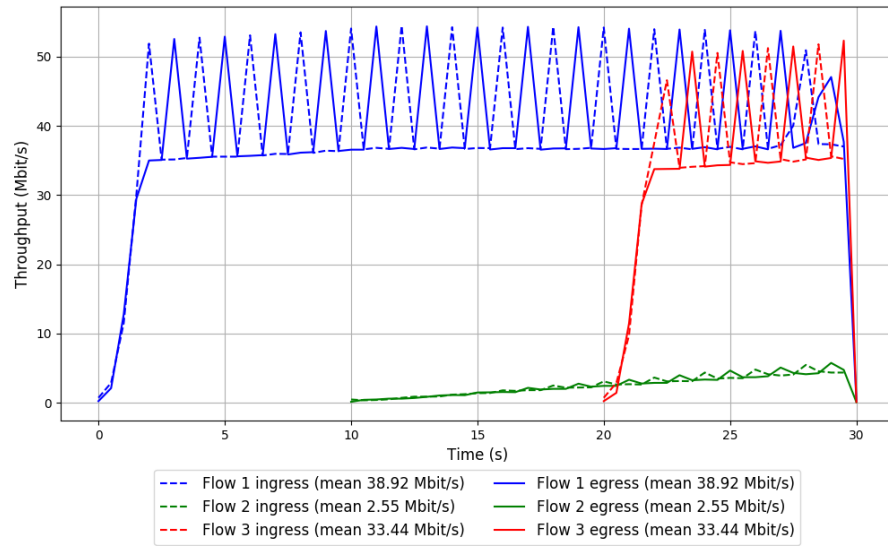
-- Flow 3:

Average throughput: 33.44 Mbit/s

95th percentile per-packet one-way delay: 112.393 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-04-18 05:18:35

End at: 2018-04-18 05:19:05

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.09 Mbit/s

95th percentile per-packet one-way delay: 114.703 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 73.86 Mbit/s

95th percentile per-packet one-way delay: 114.399 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 68.45 Mbit/s

95th percentile per-packet one-way delay: 114.743 ms

Loss rate: 0.00%

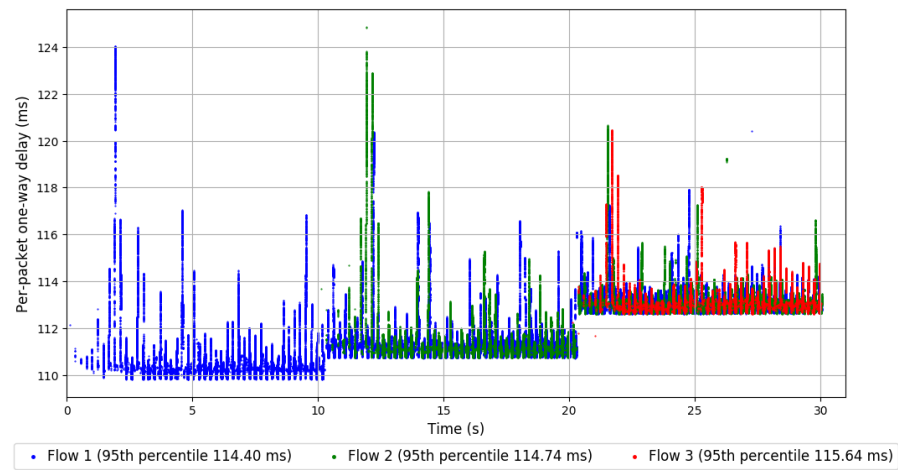
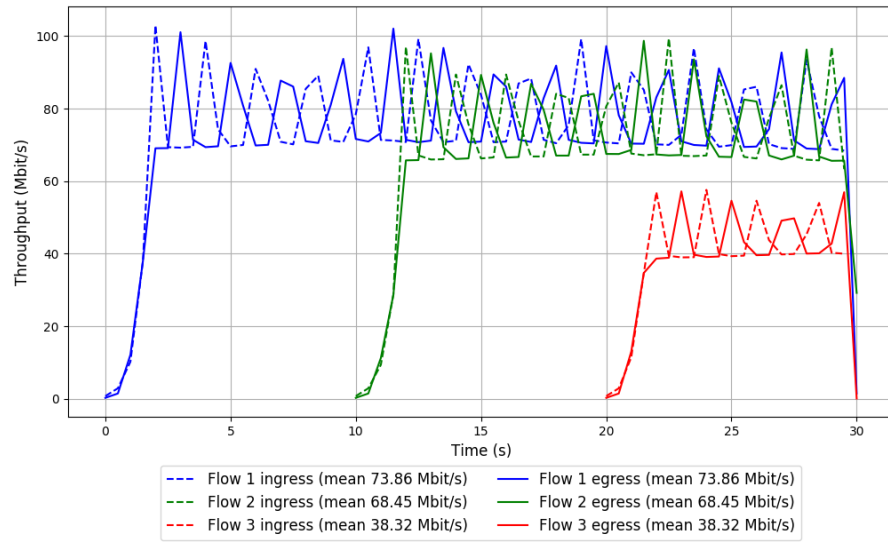
-- Flow 3:

Average throughput: 38.32 Mbit/s

95th percentile per-packet one-way delay: 115.636 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-04-18 05:36:05

End at: 2018-04-18 05:36:35

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 66.65 Mbit/s

95th percentile per-packet one-way delay: 112.700 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 35.23 Mbit/s

95th percentile per-packet one-way delay: 112.689 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 31.23 Mbit/s

95th percentile per-packet one-way delay: 114.126 ms

Loss rate: 0.00%

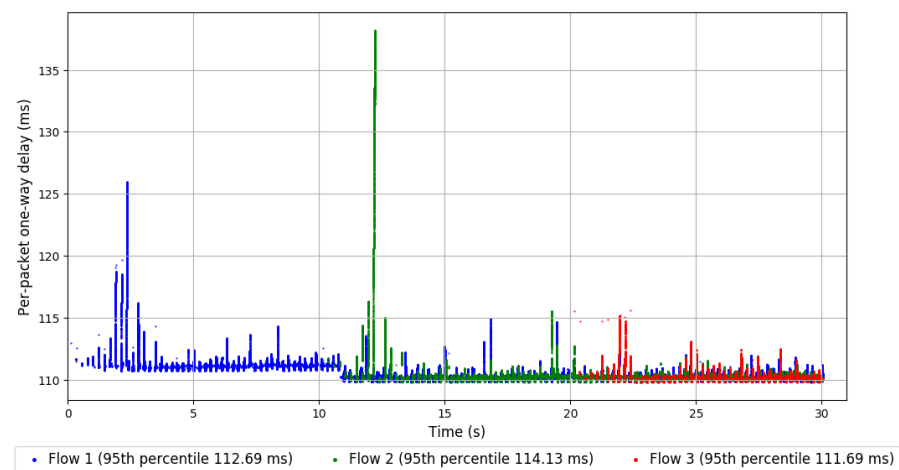
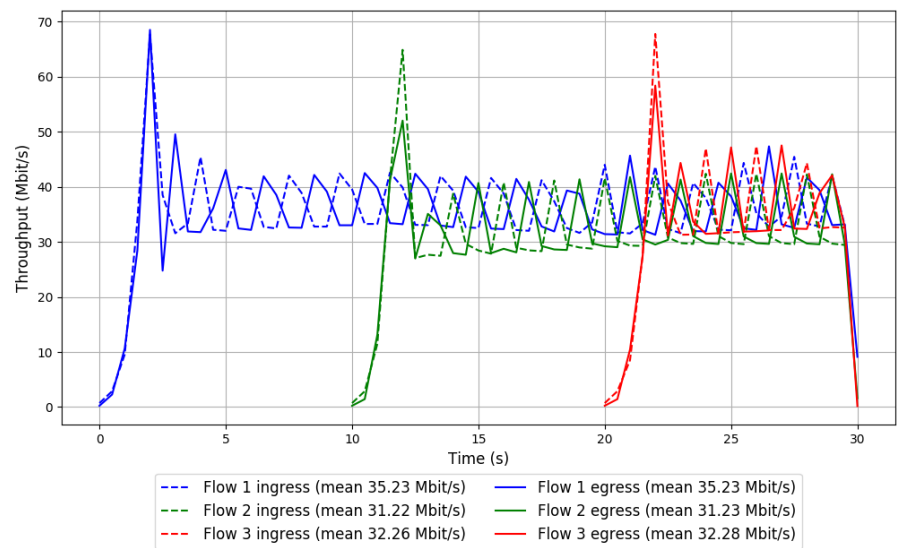
-- Flow 3:

Average throughput: 32.28 Mbit/s

95th percentile per-packet one-way delay: 111.692 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-04-18 05:53:24

End at: 2018-04-18 05:53:54

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 45.28 Mbit/s

95th percentile per-packet one-way delay: 116.125 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 33.00 Mbit/s

95th percentile per-packet one-way delay: 115.334 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 111.444 ms

Loss rate: 0.30%

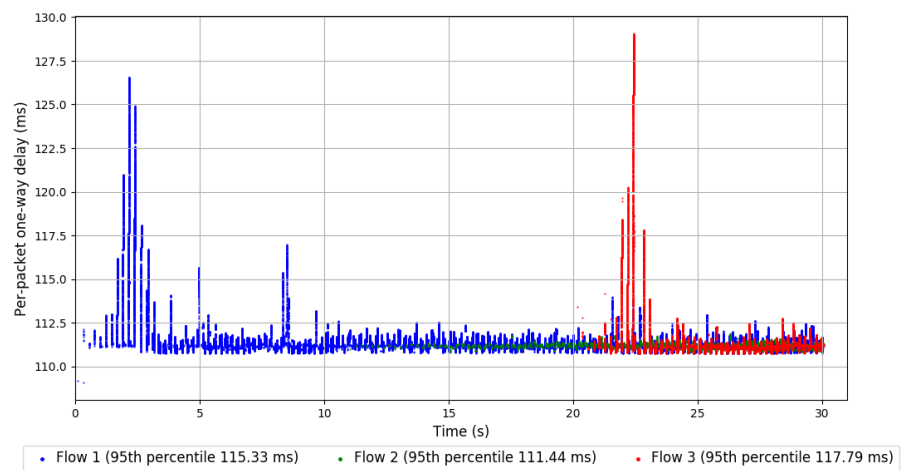
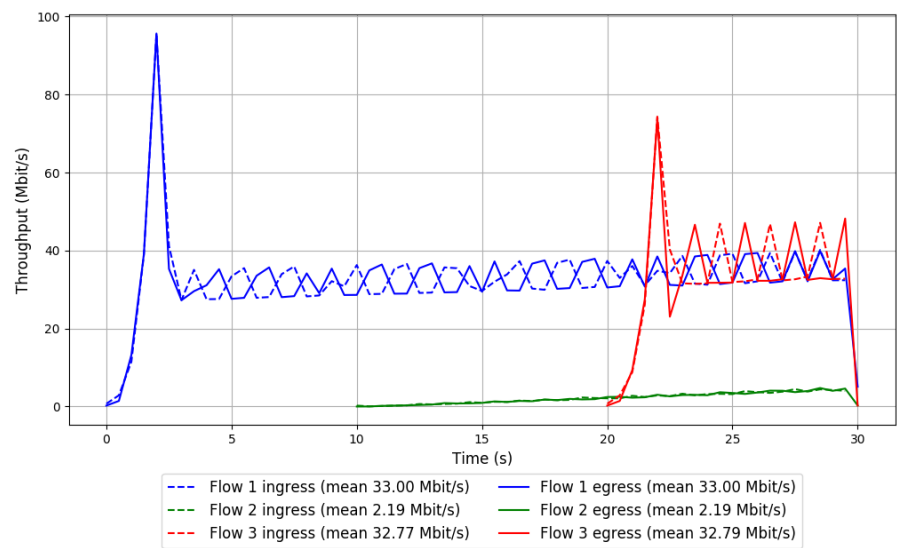
-- Flow 3:

Average throughput: 32.79 Mbit/s

95th percentile per-packet one-way delay: 117.792 ms

Loss rate: 0.00%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-04-18 06:10:40

End at: 2018-04-18 06:11:10

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.08 Mbit/s

95th percentile per-packet one-way delay: 117.238 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 32.10 Mbit/s

95th percentile per-packet one-way delay: 114.159 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 31.98 Mbit/s

95th percentile per-packet one-way delay: 117.570 ms

Loss rate: 0.03%

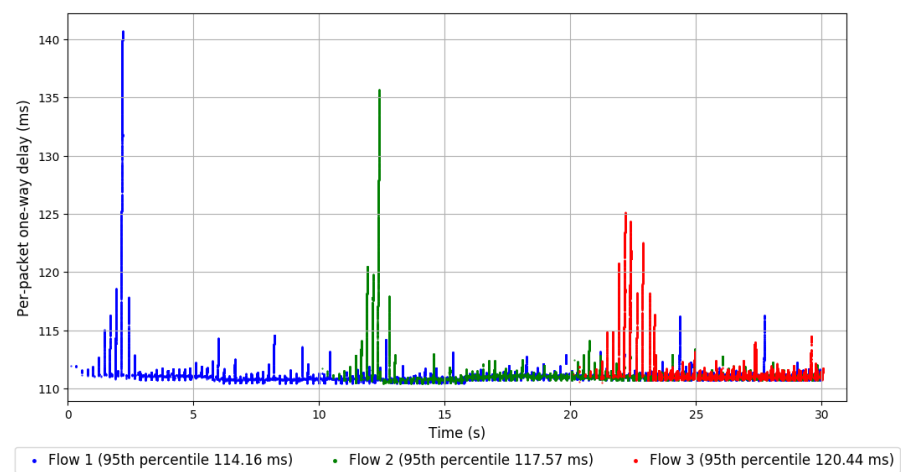
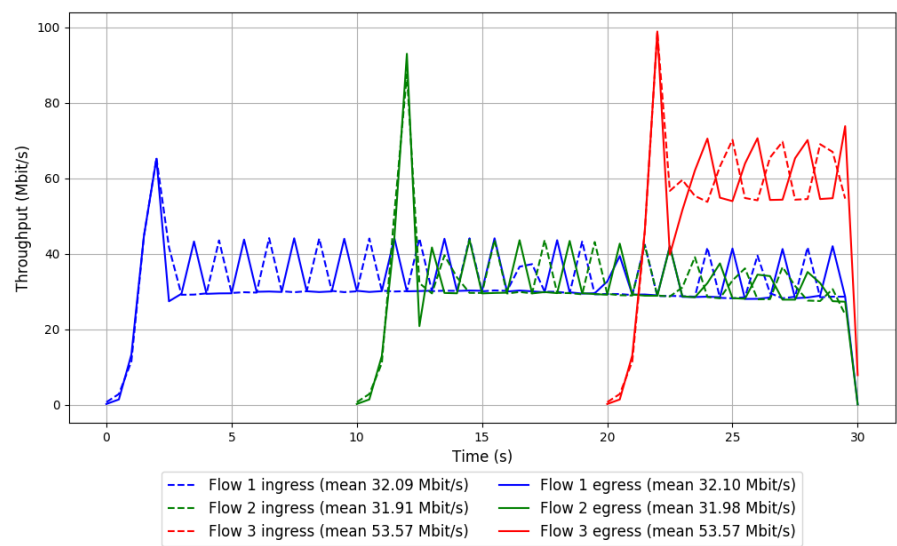
-- Flow 3:

Average throughput: 53.57 Mbit/s

95th percentile per-packet one-way delay: 120.445 ms

Loss rate: 0.00%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-04-18 06:28:01

End at: 2018-04-18 06:28:31

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 62.74 Mbit/s

95th percentile per-packet one-way delay: 114.535 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 36.82 Mbit/s

95th percentile per-packet one-way delay: 114.744 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.29 Mbit/s

95th percentile per-packet one-way delay: 113.911 ms

Loss rate: 0.00%

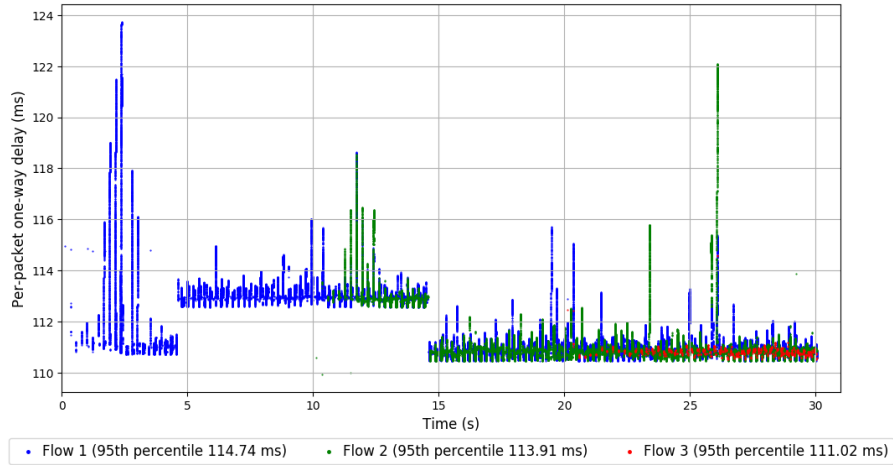
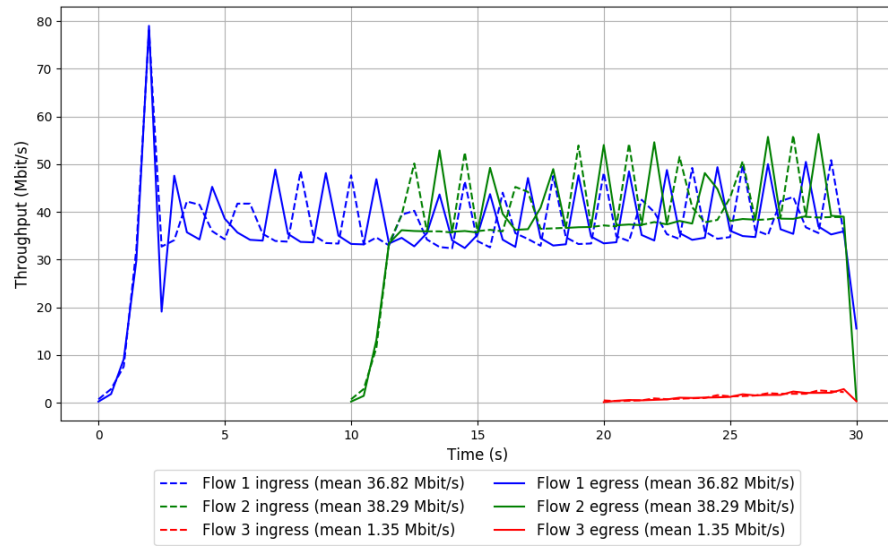
-- Flow 3:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 111.021 ms

Loss rate: 0.45%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-04-18 06:45:06

End at: 2018-04-18 06:45:36

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.39 Mbit/s

95th percentile per-packet one-way delay: 118.151 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 54.86 Mbit/s

95th percentile per-packet one-way delay: 118.706 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 31.20 Mbit/s

95th percentile per-packet one-way delay: 113.908 ms

Loss rate: 0.00%

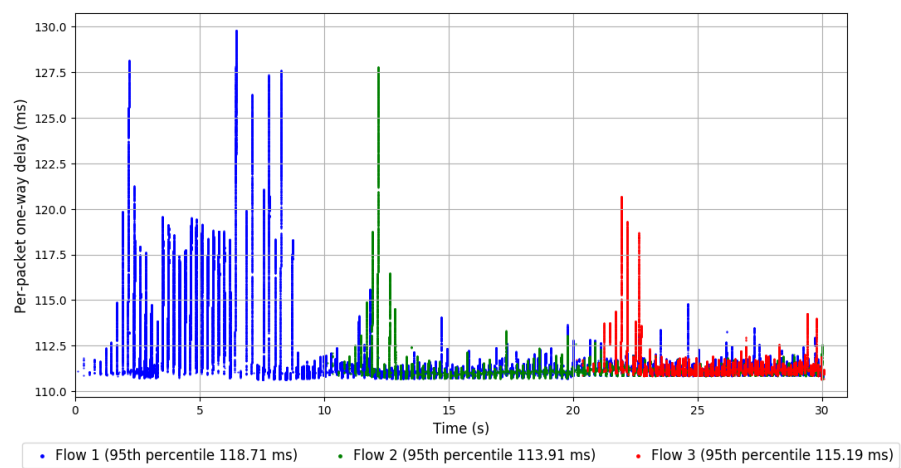
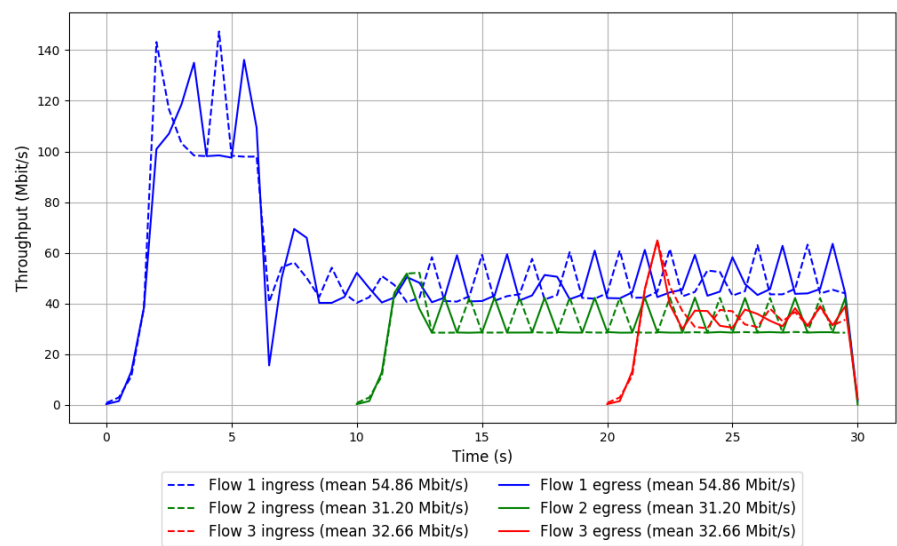
-- Flow 3:

Average throughput: 32.66 Mbit/s

95th percentile per-packet one-way delay: 115.192 ms

Loss rate: 0.00%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-04-18 07:02:08

End at: 2018-04-18 07:02:38

Below is generated by plot.py at 2018-04-18 09:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.11 Mbit/s

95th percentile per-packet one-way delay: 118.022 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 72.04 Mbit/s

95th percentile per-packet one-way delay: 112.765 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.43 Mbit/s

95th percentile per-packet one-way delay: 111.627 ms

Loss rate: 0.20%

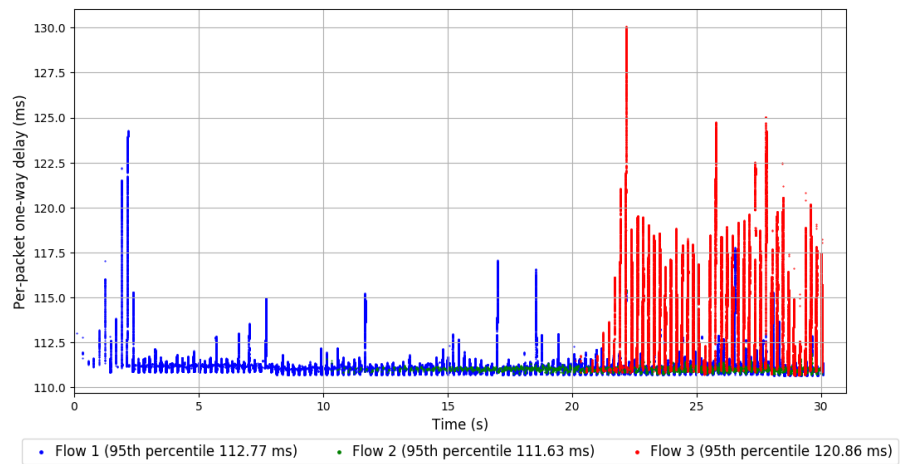
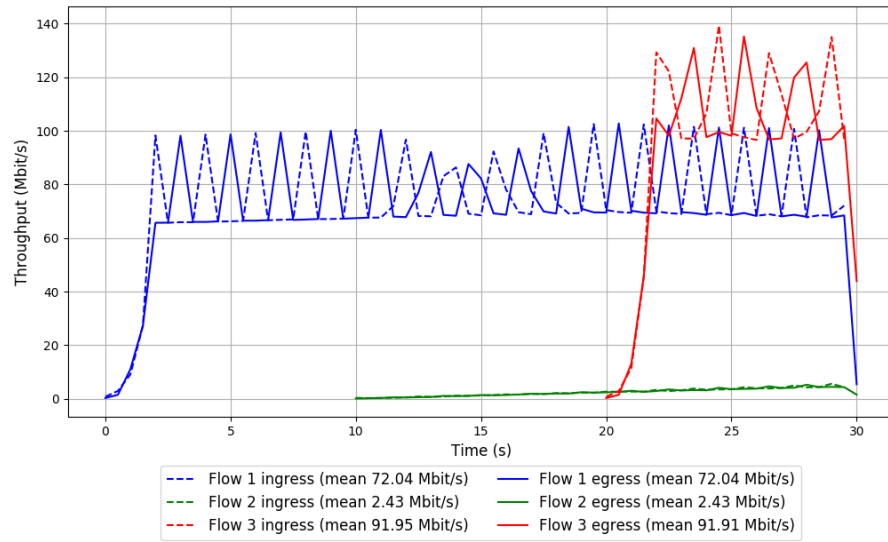
-- Flow 3:

Average throughput: 91.91 Mbit/s

95th percentile per-packet one-way delay: 120.857 ms

Loss rate: 0.00%

Run 10: Report of TCP Vegas — Data Link

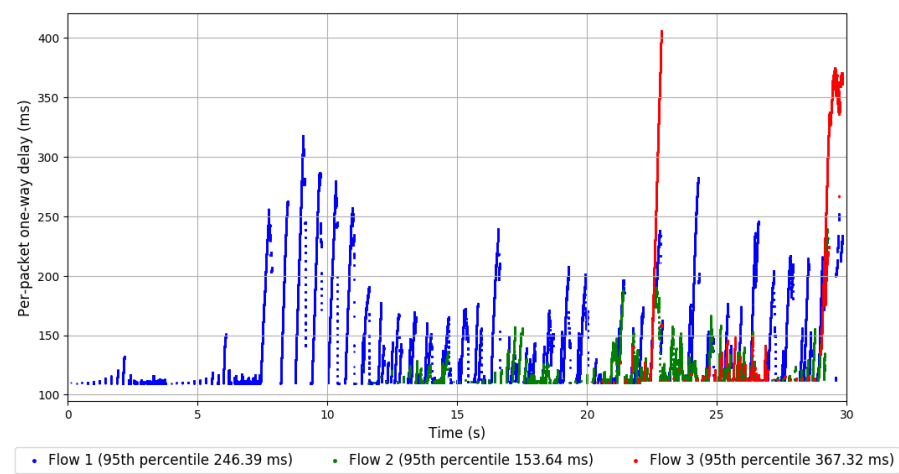
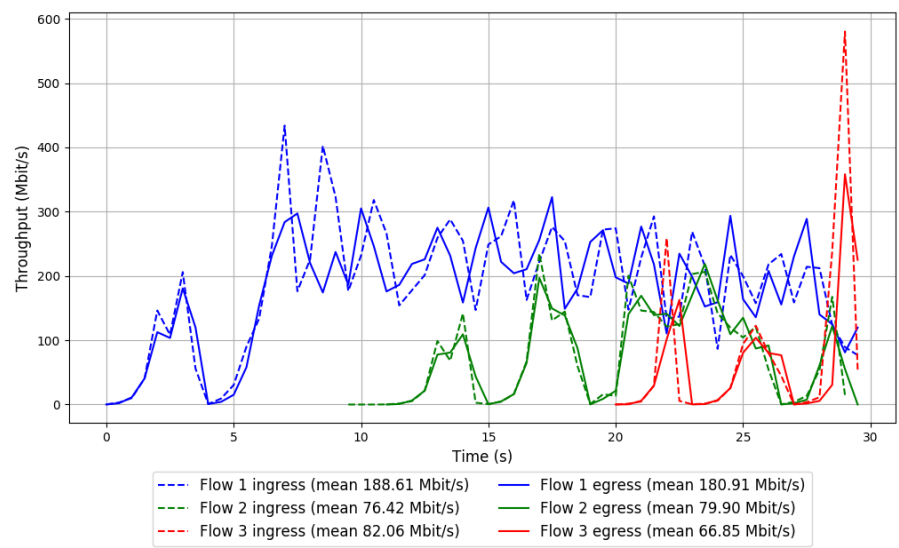


```
Run 1: Statistics of Verus

Start at: 2018-04-18 04:16:33
End at: 2018-04-18 04:17:03

# Below is generated by plot.py at 2018-04-18 09:21:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 252.57 Mbit/s
95th percentile per-packet one-way delay: 269.300 ms
Loss rate: 4.41%
-- Flow 1:
Average throughput: 180.91 Mbit/s
95th percentile per-packet one-way delay: 246.387 ms
Loss rate: 3.75%
-- Flow 2:
Average throughput: 79.90 Mbit/s
95th percentile per-packet one-way delay: 153.636 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 66.85 Mbit/s
95th percentile per-packet one-way delay: 367.320 ms
Loss rate: 17.06%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-04-18 04:33:49

End at: 2018-04-18 04:34:19

Below is generated by plot.py at 2018-04-18 09:22:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 282.77 Mbit/s

95th percentile per-packet one-way delay: 320.286 ms

Loss rate: 9.88%

-- Flow 1:

Average throughput: 202.60 Mbit/s

95th percentile per-packet one-way delay: 327.657 ms

Loss rate: 12.67%

-- Flow 2:

Average throughput: 63.94 Mbit/s

95th percentile per-packet one-way delay: 196.774 ms

Loss rate: 0.49%

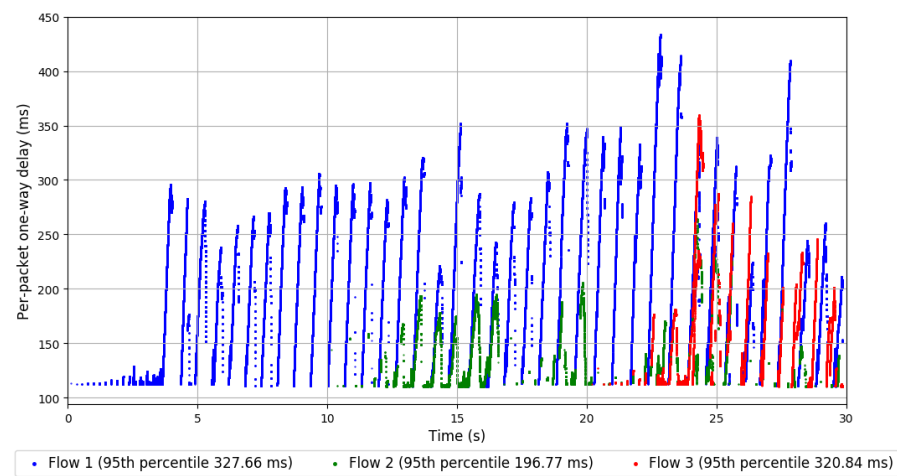
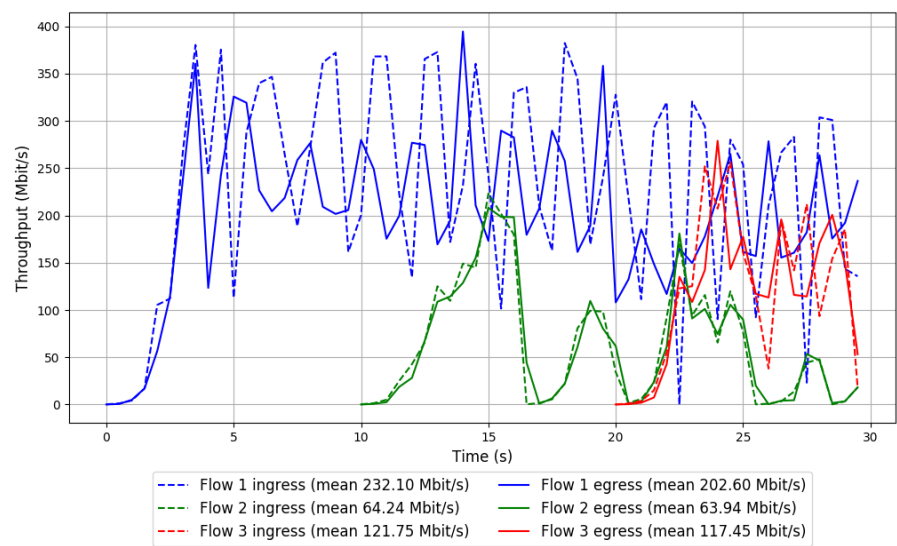
-- Flow 3:

Average throughput: 117.45 Mbit/s

95th percentile per-packet one-way delay: 320.841 ms

Loss rate: 3.55%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-04-18 04:51:02

End at: 2018-04-18 04:51:32

Below is generated by plot.py at 2018-04-18 09:23:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 292.51 Mbit/s

95th percentile per-packet one-way delay: 330.033 ms

Loss rate: 5.79%

-- Flow 1:

Average throughput: 191.36 Mbit/s

95th percentile per-packet one-way delay: 325.945 ms

Loss rate: 5.98%

-- Flow 2:

Average throughput: 144.55 Mbit/s

95th percentile per-packet one-way delay: 338.011 ms

Loss rate: 5.71%

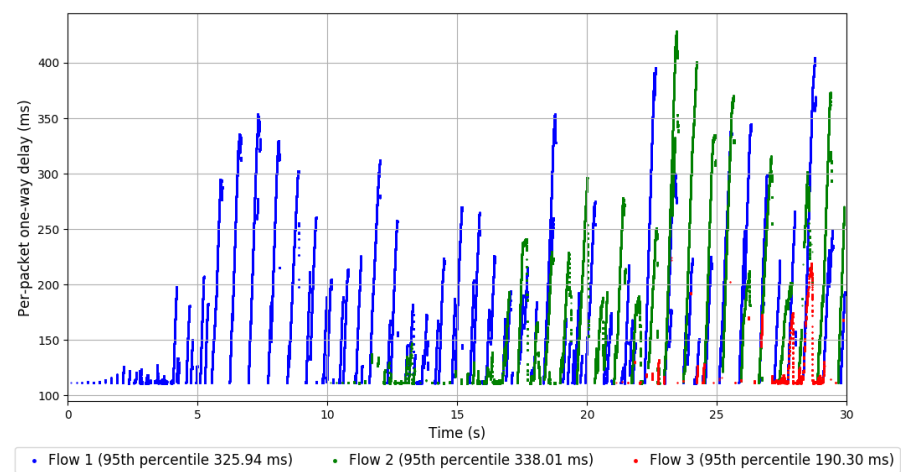
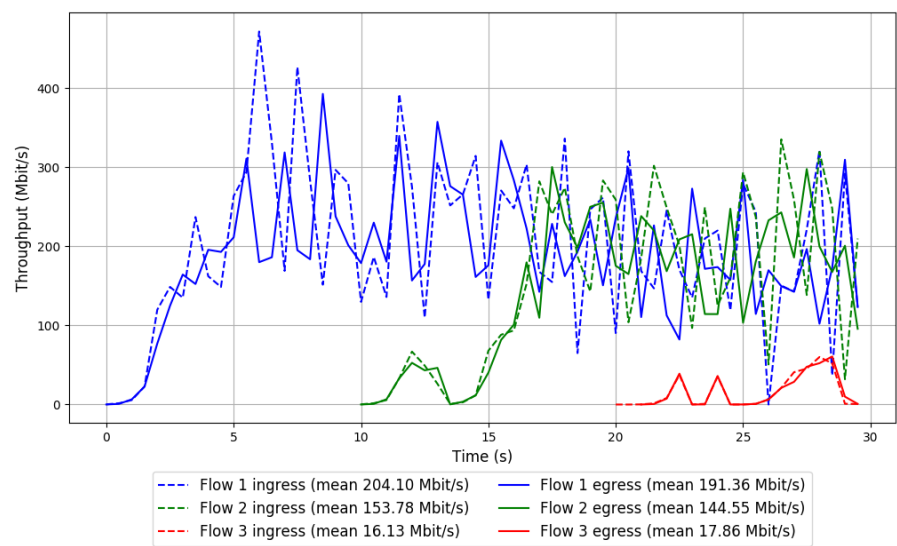
-- Flow 3:

Average throughput: 17.86 Mbit/s

95th percentile per-packet one-way delay: 190.303 ms

Loss rate: 0.02%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-04-18 05:08:21

End at: 2018-04-18 05:08:51

Below is generated by plot.py at 2018-04-18 09:23:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 212.73 Mbit/s

95th percentile per-packet one-way delay: 207.074 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 67.63 Mbit/s

95th percentile per-packet one-way delay: 176.664 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 146.76 Mbit/s

95th percentile per-packet one-way delay: 197.362 ms

Loss rate: 0.00%

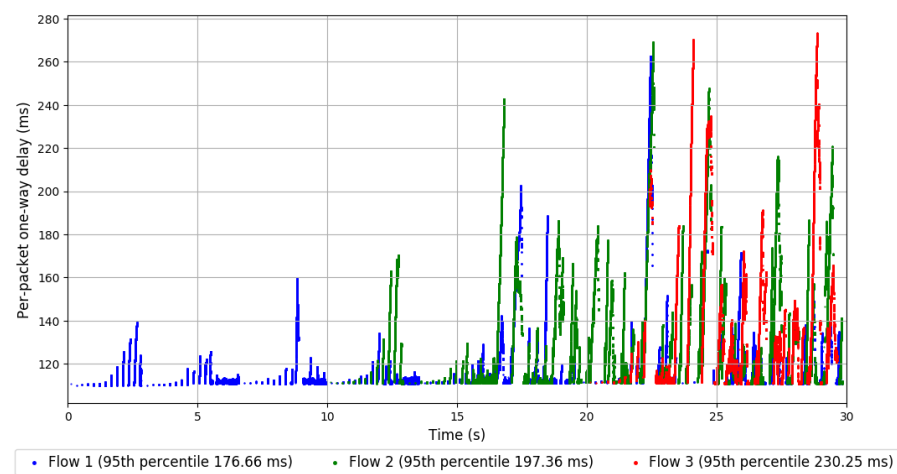
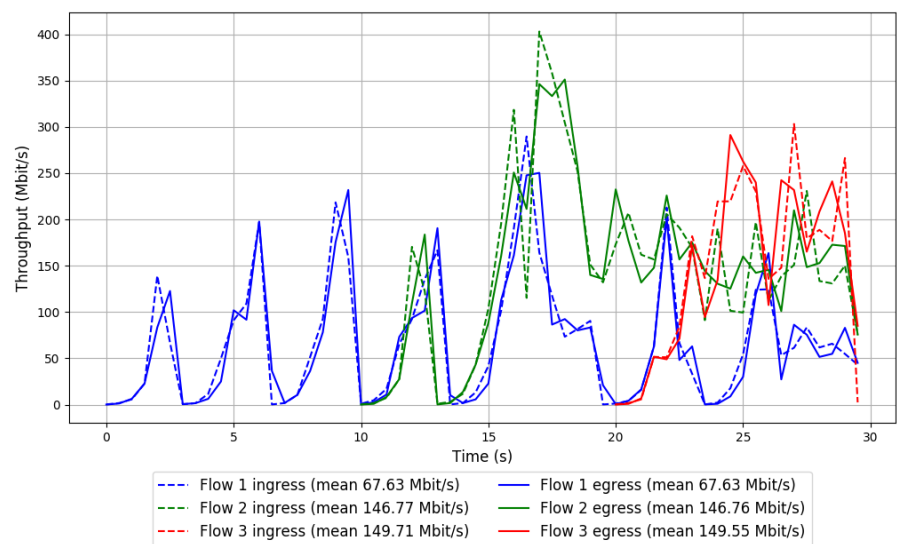
-- Flow 3:

Average throughput: 149.55 Mbit/s

95th percentile per-packet one-way delay: 230.249 ms

Loss rate: 0.00%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-04-18 05:25:53

End at: 2018-04-18 05:26:23

Below is generated by plot.py at 2018-04-18 09:23:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 280.32 Mbit/s

95th percentile per-packet one-way delay: 215.561 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 177.15 Mbit/s

95th percentile per-packet one-way delay: 195.228 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 140.04 Mbit/s

95th percentile per-packet one-way delay: 252.096 ms

Loss rate: 0.00%

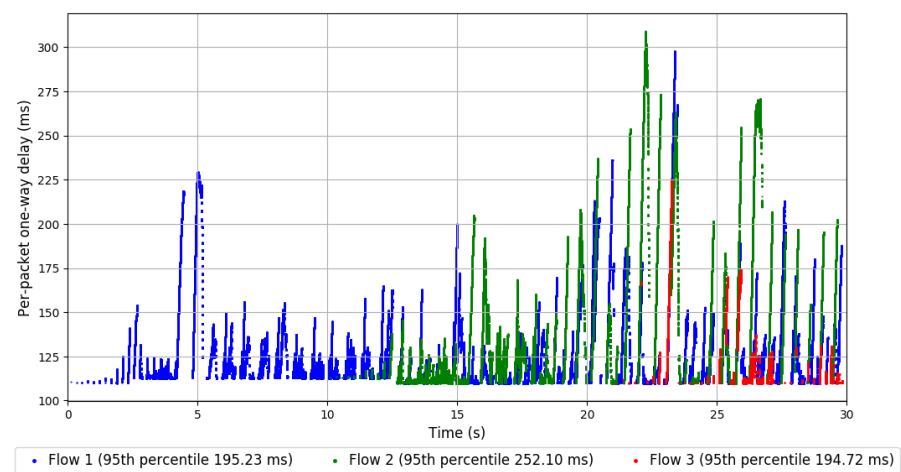
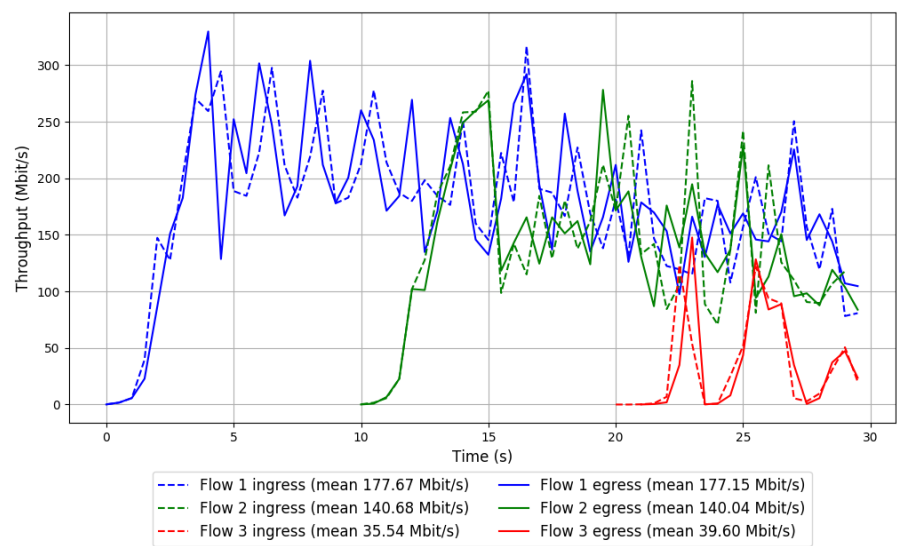
-- Flow 3:

Average throughput: 39.60 Mbit/s

95th percentile per-packet one-way delay: 194.716 ms

Loss rate: 0.00%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-04-18 05:43:16

End at: 2018-04-18 05:43:46

Below is generated by plot.py at 2018-04-18 09:23:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 273.78 Mbit/s

95th percentile per-packet one-way delay: 225.920 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 149.68 Mbit/s

95th percentile per-packet one-way delay: 241.195 ms

Loss rate: 2.40%

-- Flow 2:

Average throughput: 148.78 Mbit/s

95th percentile per-packet one-way delay: 179.873 ms

Loss rate: 0.00%

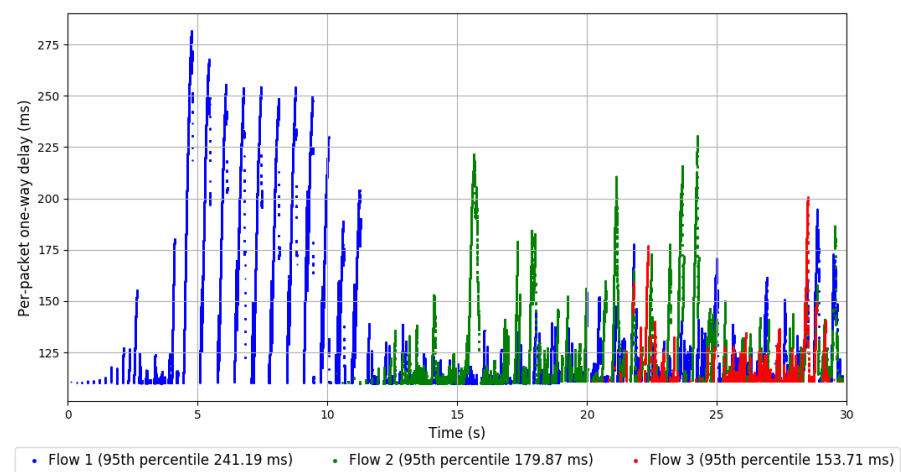
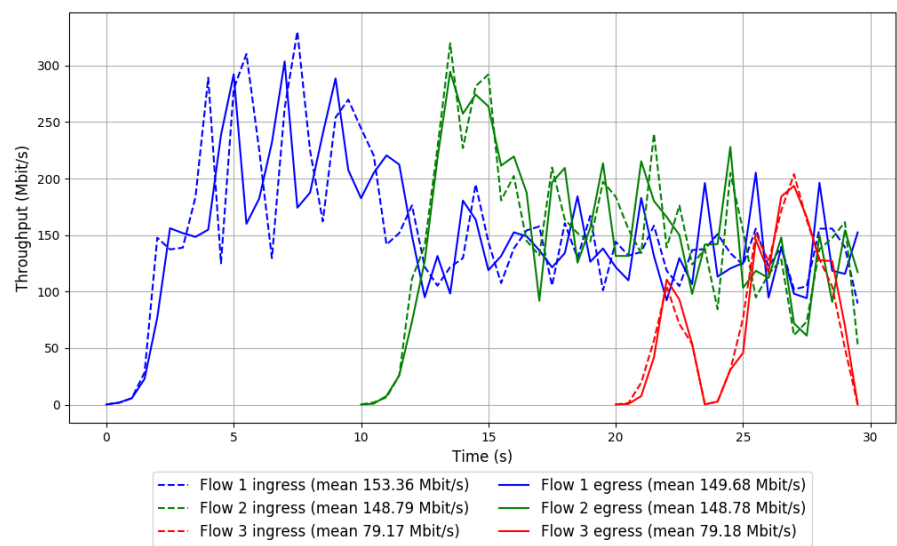
-- Flow 3:

Average throughput: 79.18 Mbit/s

95th percentile per-packet one-way delay: 153.707 ms

Loss rate: 0.00%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-04-18 06:00:33

End at: 2018-04-18 06:01:03

Below is generated by plot.py at 2018-04-18 09:23:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 245.86 Mbit/s

95th percentile per-packet one-way delay: 245.731 ms

Loss rate: 2.09%

-- Flow 1:

Average throughput: 117.05 Mbit/s

95th percentile per-packet one-way delay: 172.481 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 162.75 Mbit/s

95th percentile per-packet one-way delay: 278.586 ms

Loss rate: 4.03%

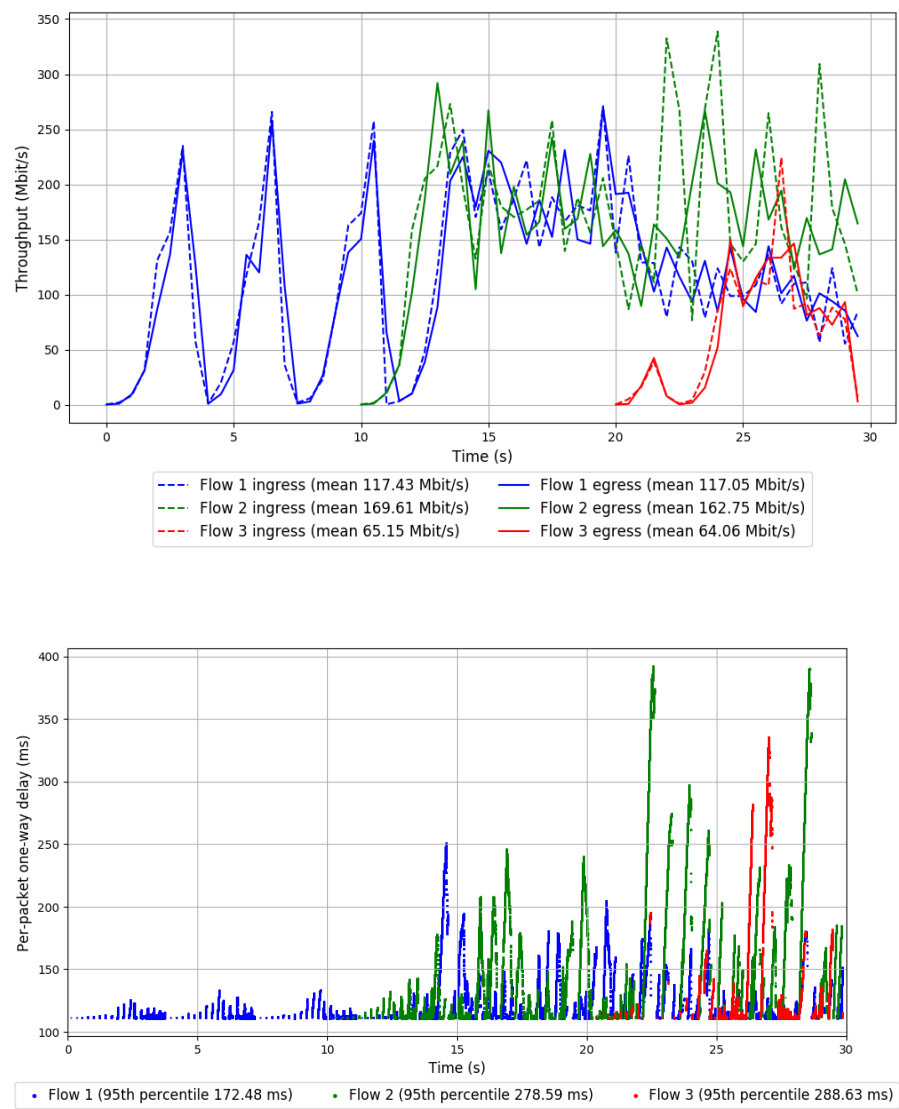
-- Flow 3:

Average throughput: 64.06 Mbit/s

95th percentile per-packet one-way delay: 288.627 ms

Loss rate: 1.66%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-04-18 06:17:50

End at: 2018-04-18 06:18:20

Below is generated by plot.py at 2018-04-18 09:23:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 234.13 Mbit/s

95th percentile per-packet one-way delay: 188.447 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 117.38 Mbit/s

95th percentile per-packet one-way delay: 172.702 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 146.53 Mbit/s

95th percentile per-packet one-way delay: 204.223 ms

Loss rate: 0.06%

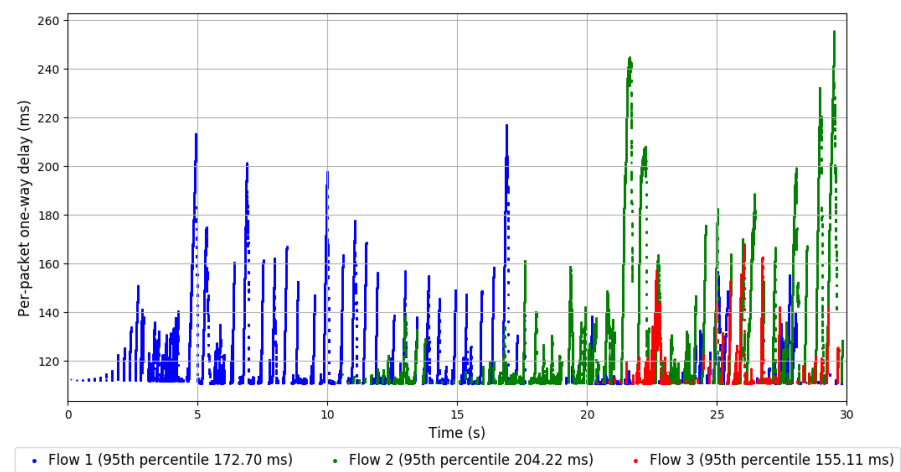
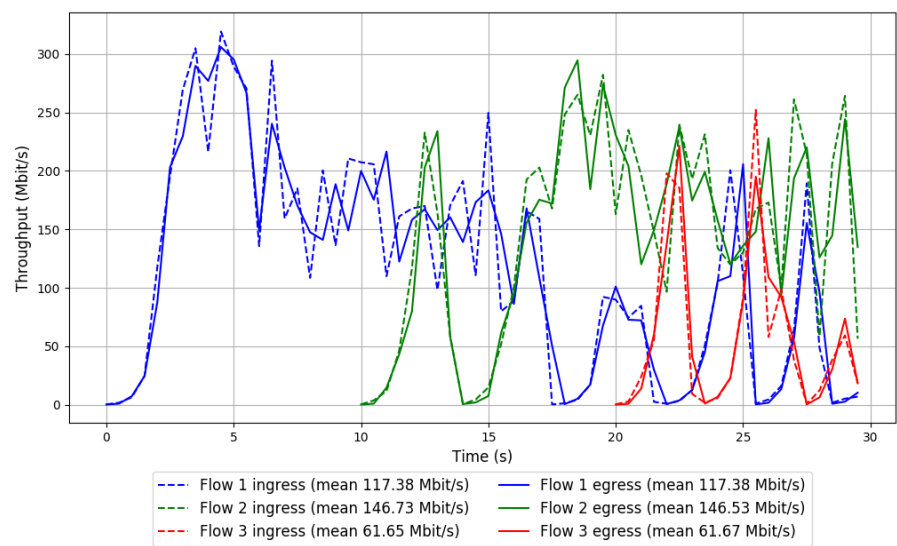
-- Flow 3:

Average throughput: 61.67 Mbit/s

95th percentile per-packet one-way delay: 155.113 ms

Loss rate: 0.00%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-04-18 06:35:06

End at: 2018-04-18 06:35:36

Below is generated by plot.py at 2018-04-18 09:24:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 151.07 Mbit/s

95th percentile per-packet one-way delay: 200.233 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 83.74 Mbit/s

95th percentile per-packet one-way delay: 192.369 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 84.99 Mbit/s

95th percentile per-packet one-way delay: 208.967 ms

Loss rate: 0.00%

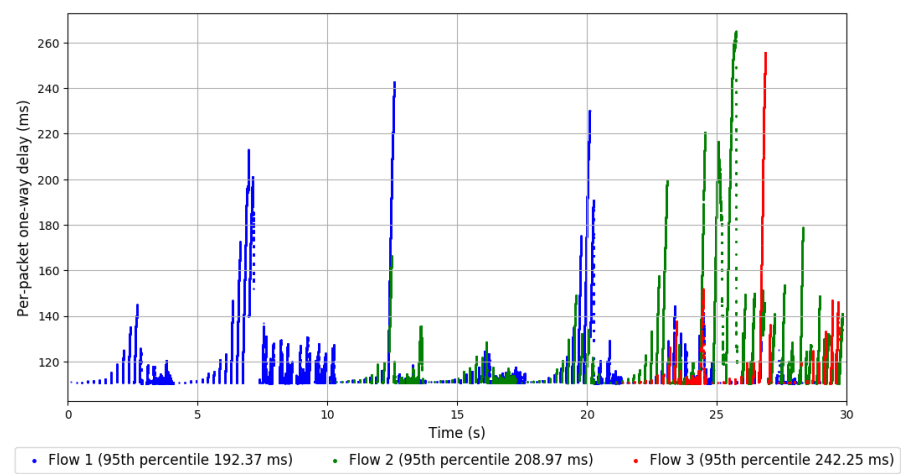
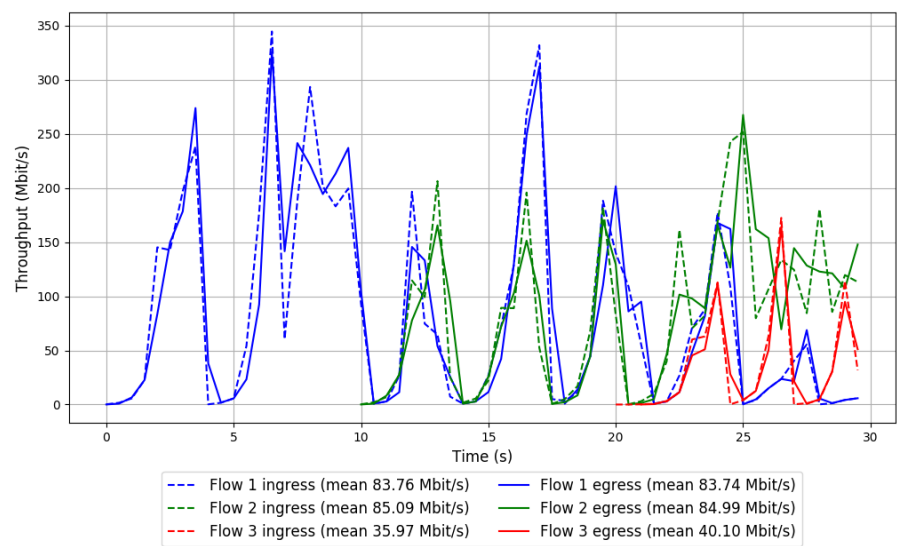
-- Flow 3:

Average throughput: 40.10 Mbit/s

95th percentile per-packet one-way delay: 242.252 ms

Loss rate: 0.00%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-04-18 06:52:06

End at: 2018-04-18 06:52:36

Below is generated by plot.py at 2018-04-18 09:24:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 145.87 Mbit/s

95th percentile per-packet one-way delay: 329.669 ms

Loss rate: 6.77%

-- Flow 1:

Average throughput: 85.76 Mbit/s

95th percentile per-packet one-way delay: 345.633 ms

Loss rate: 10.70%

-- Flow 2:

Average throughput: 68.34 Mbit/s

95th percentile per-packet one-way delay: 264.170 ms

Loss rate: 0.51%

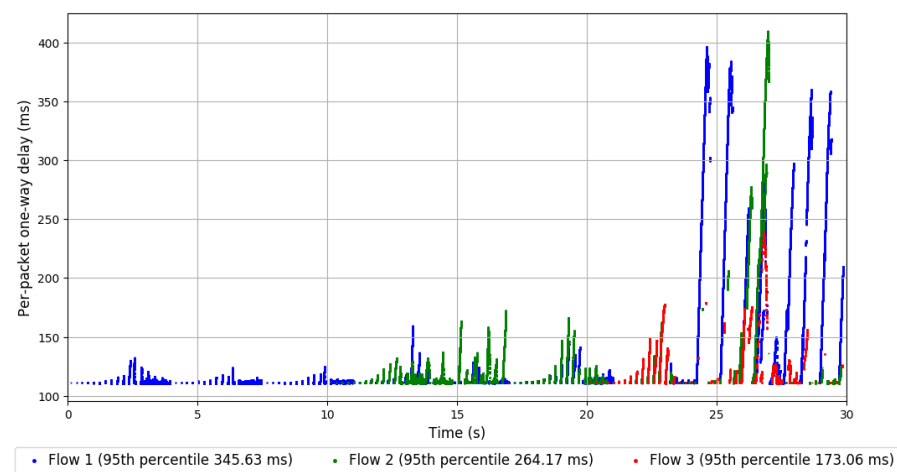
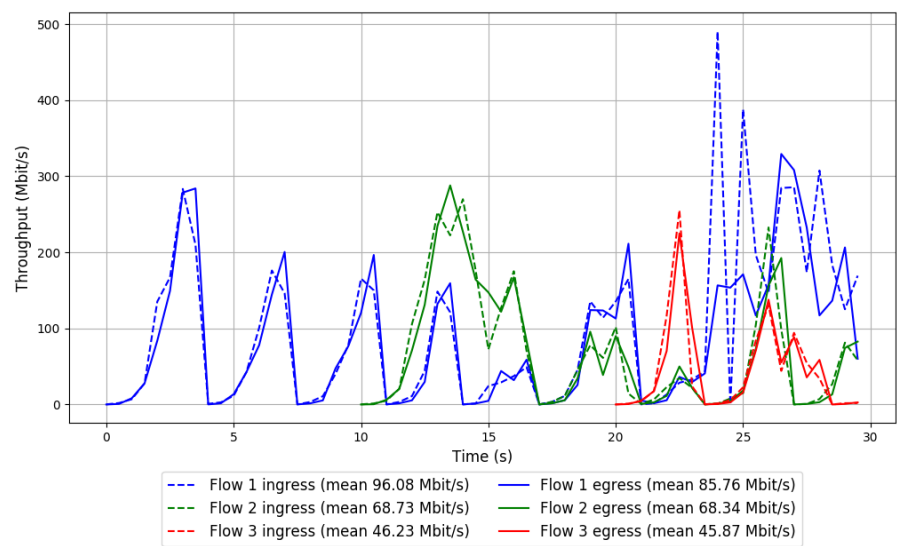
-- Flow 3:

Average throughput: 45.87 Mbit/s

95th percentile per-packet one-way delay: 173.063 ms

Loss rate: 0.63%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-04-18 04:12:44

End at: 2018-04-18 04:13:14

Below is generated by plot.py at 2018-04-18 09:26:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.98 Mbit/s

95th percentile per-packet one-way delay: 112.185 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 66.32 Mbit/s

95th percentile per-packet one-way delay: 112.167 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 57.09 Mbit/s

95th percentile per-packet one-way delay: 112.187 ms

Loss rate: 0.00%

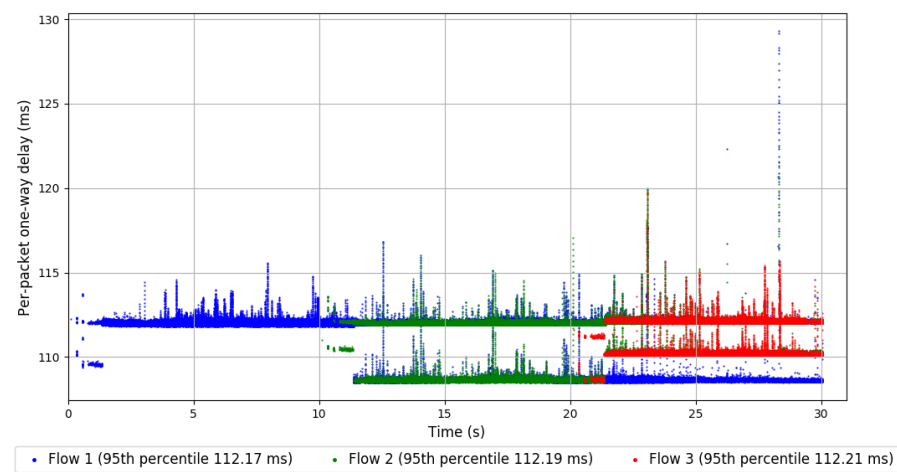
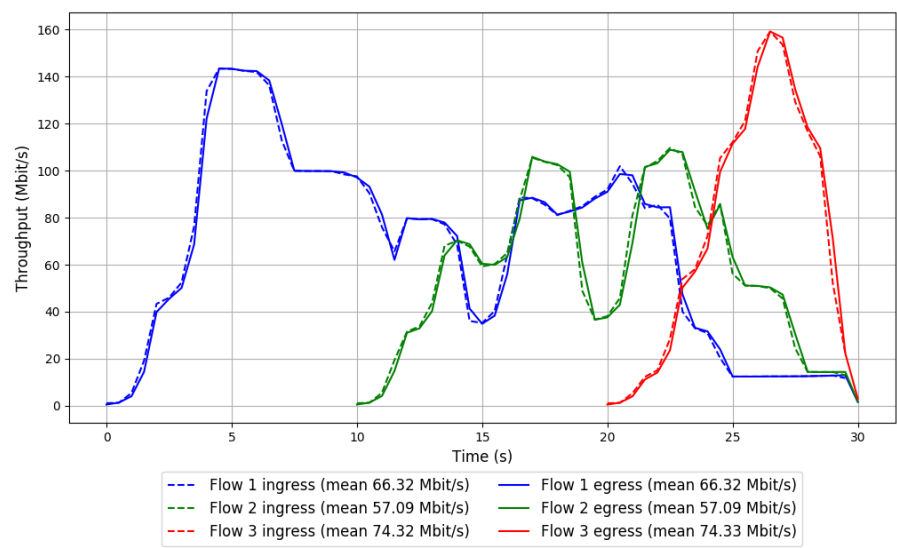
-- Flow 3:

Average throughput: 74.33 Mbit/s

95th percentile per-packet one-way delay: 112.211 ms

Loss rate: 0.01%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-04-18 04:29:55

End at: 2018-04-18 04:30:25

Below is generated by plot.py at 2018-04-18 09:27:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.25 Mbit/s

95th percentile per-packet one-way delay: 112.319 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 60.64 Mbit/s

95th percentile per-packet one-way delay: 110.768 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 69.58 Mbit/s

95th percentile per-packet one-way delay: 112.435 ms

Loss rate: 0.01%

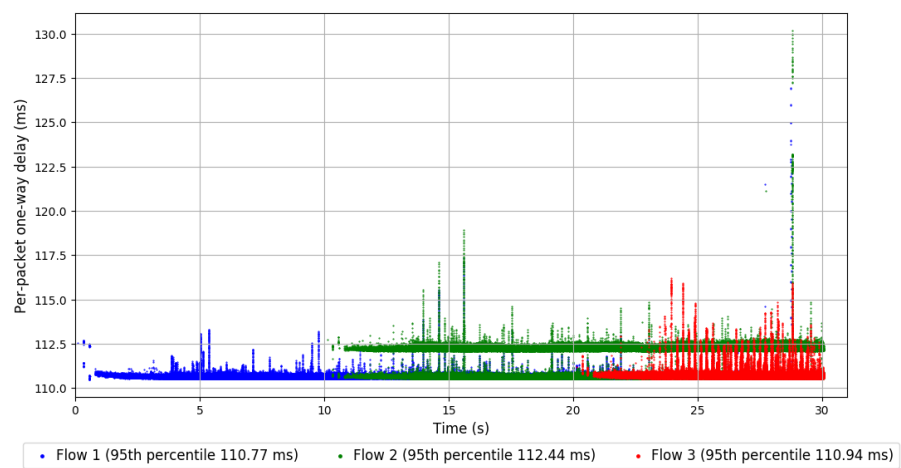
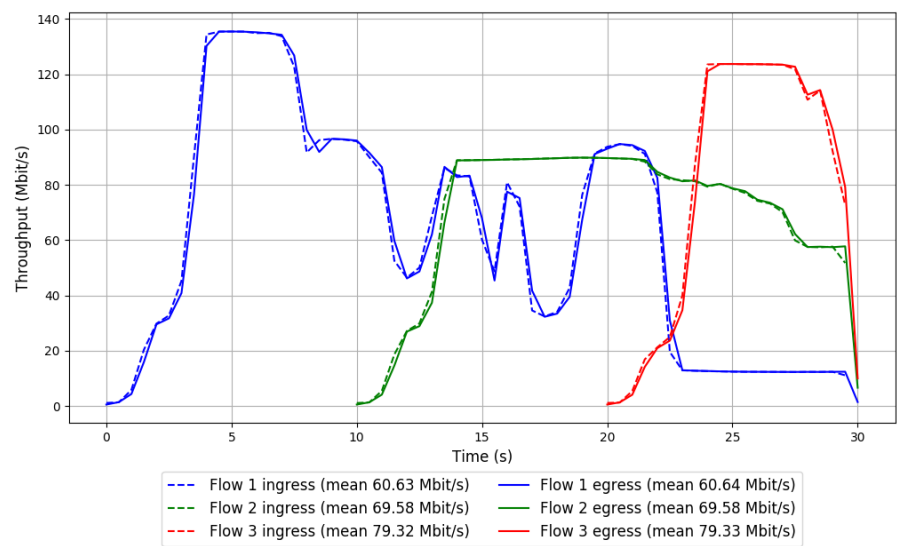
-- Flow 3:

Average throughput: 79.33 Mbit/s

95th percentile per-packet one-way delay: 110.937 ms

Loss rate: 0.01%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-04-18 04:47:14

End at: 2018-04-18 04:47:44

Below is generated by plot.py at 2018-04-18 09:27:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.04 Mbit/s

95th percentile per-packet one-way delay: 111.534 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 38.46 Mbit/s

95th percentile per-packet one-way delay: 111.188 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 69.63 Mbit/s

95th percentile per-packet one-way delay: 111.230 ms

Loss rate: 0.00%

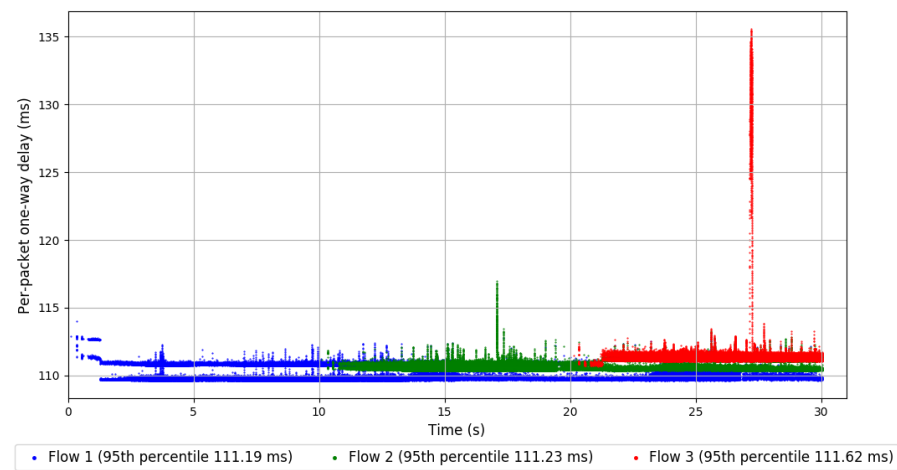
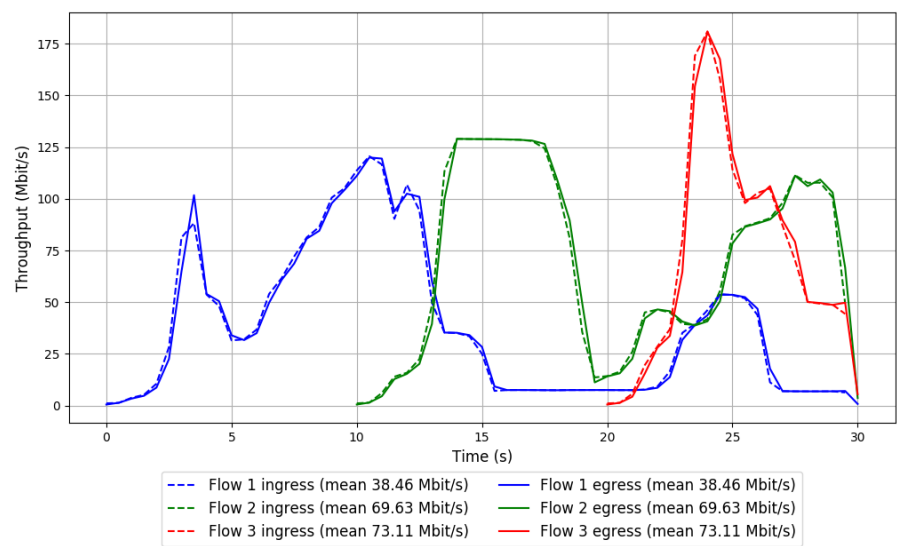
-- Flow 3:

Average throughput: 73.11 Mbit/s

95th percentile per-packet one-way delay: 111.616 ms

Loss rate: 0.00%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-04-18 05:04:30

End at: 2018-04-18 05:05:00

Below is generated by plot.py at 2018-04-18 09:27:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.88 Mbit/s

95th percentile per-packet one-way delay: 111.657 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 55.09 Mbit/s

95th percentile per-packet one-way delay: 111.719 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 71.44 Mbit/s

95th percentile per-packet one-way delay: 111.128 ms

Loss rate: 0.00%

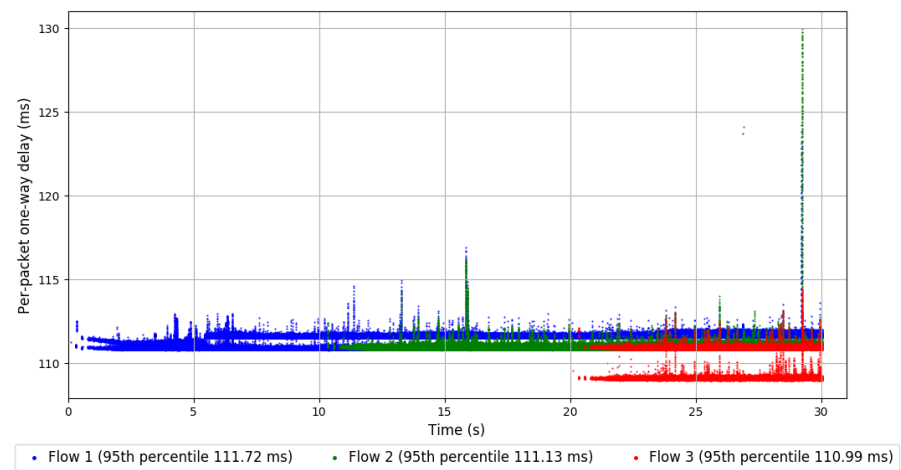
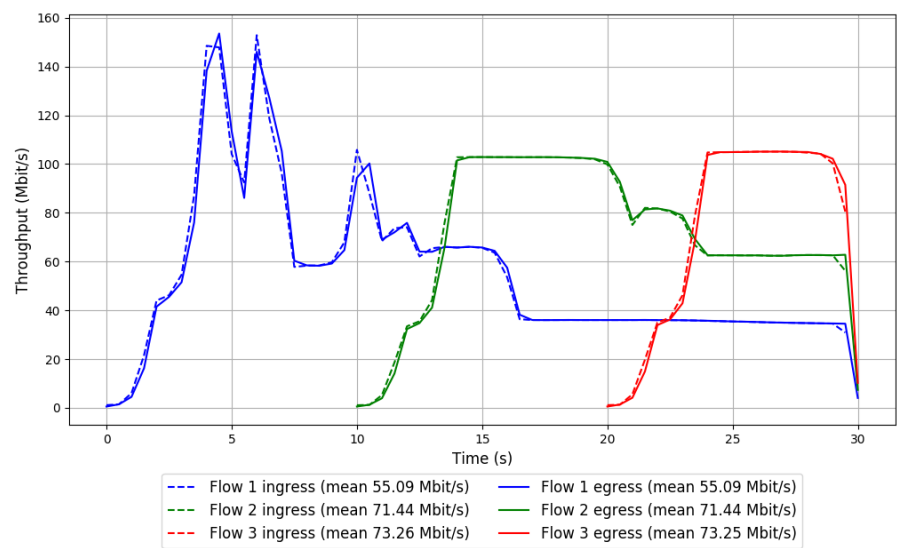
-- Flow 3:

Average throughput: 73.25 Mbit/s

95th percentile per-packet one-way delay: 110.992 ms

Loss rate: 0.00%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-04-18 05:21:57

End at: 2018-04-18 05:22:27

Below is generated by plot.py at 2018-04-18 09:28:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.86 Mbit/s

95th percentile per-packet one-way delay: 112.824 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 69.87 Mbit/s

95th percentile per-packet one-way delay: 112.814 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 68.48 Mbit/s

95th percentile per-packet one-way delay: 112.824 ms

Loss rate: 0.00%

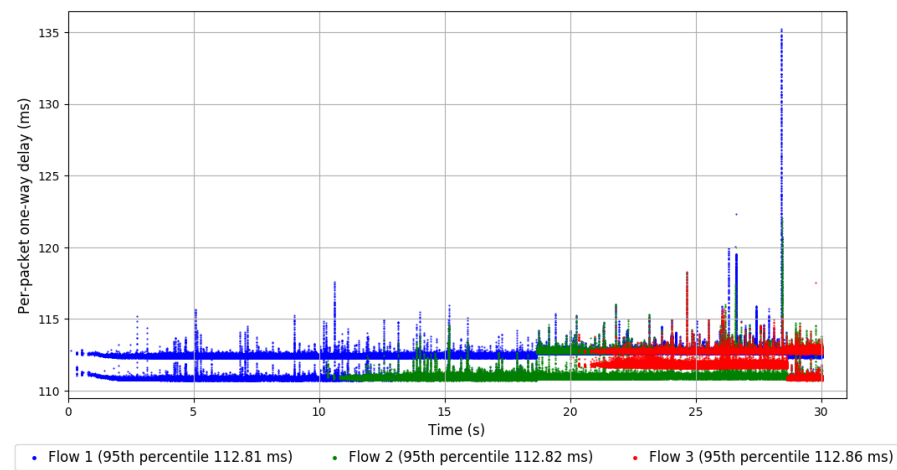
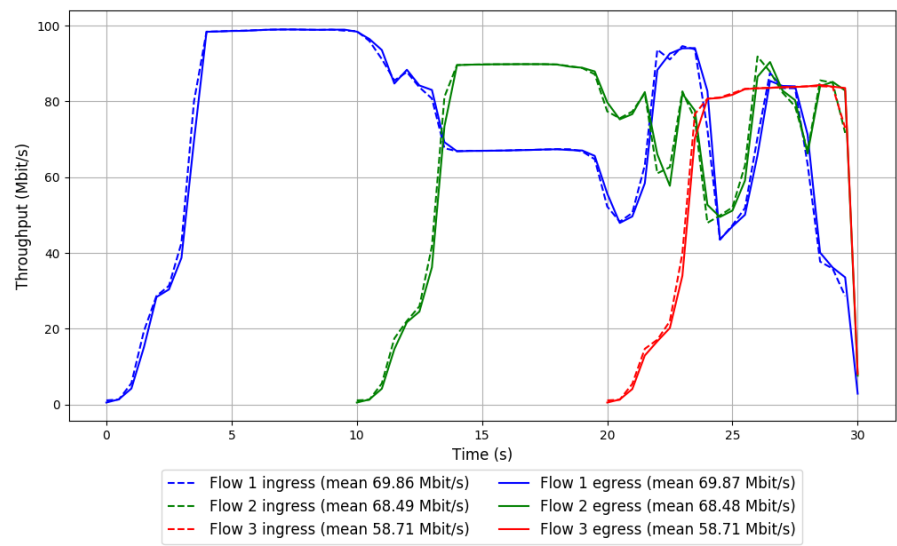
-- Flow 3:

Average throughput: 58.71 Mbit/s

95th percentile per-packet one-way delay: 112.860 ms

Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-04-18 05:39:27

End at: 2018-04-18 05:39:57

Below is generated by plot.py at 2018-04-18 09:28:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.89 Mbit/s

95th percentile per-packet one-way delay: 112.452 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 57.21 Mbit/s

95th percentile per-packet one-way delay: 112.598 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 72.45 Mbit/s

95th percentile per-packet one-way delay: 110.941 ms

Loss rate: 0.00%

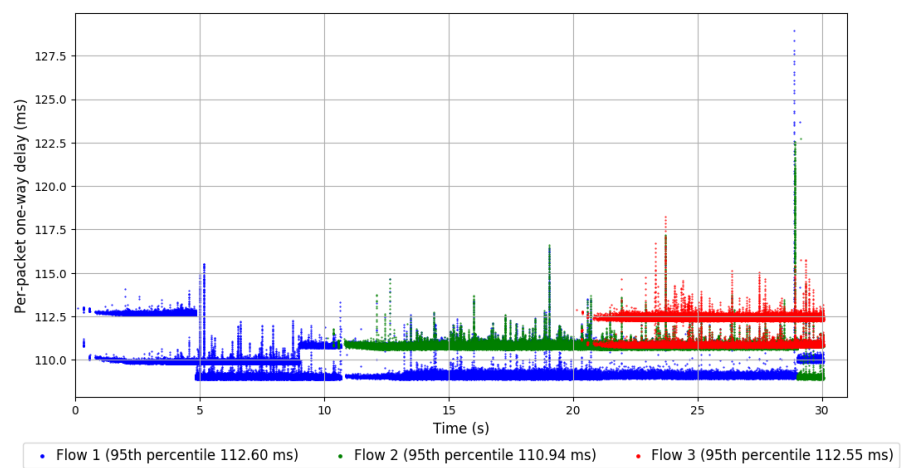
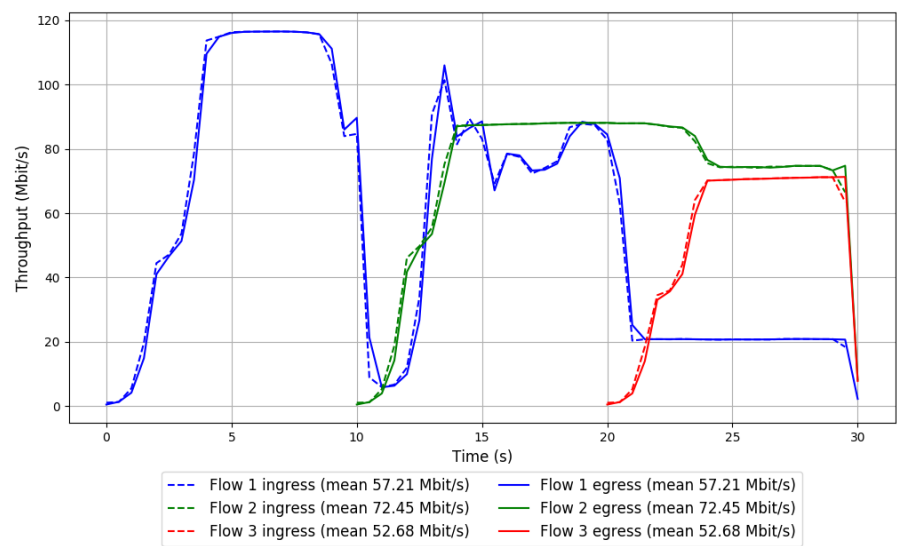
-- Flow 3:

Average throughput: 52.68 Mbit/s

95th percentile per-packet one-way delay: 112.551 ms

Loss rate: 0.02%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-04-18 05:56:39

End at: 2018-04-18 05:57:09

Below is generated by plot.py at 2018-04-18 09:28:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 131.13 Mbit/s

95th percentile per-packet one-way delay: 112.683 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 67.59 Mbit/s

95th percentile per-packet one-way delay: 111.663 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 66.34 Mbit/s

95th percentile per-packet one-way delay: 111.143 ms

Loss rate: 0.01%

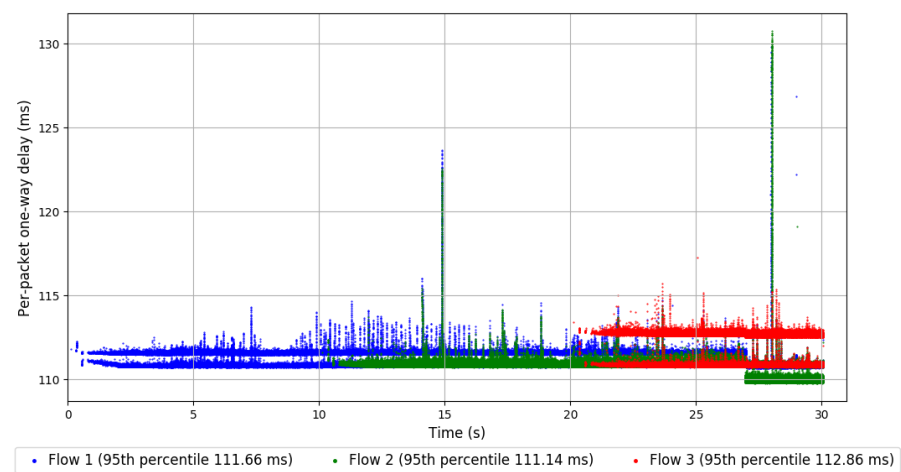
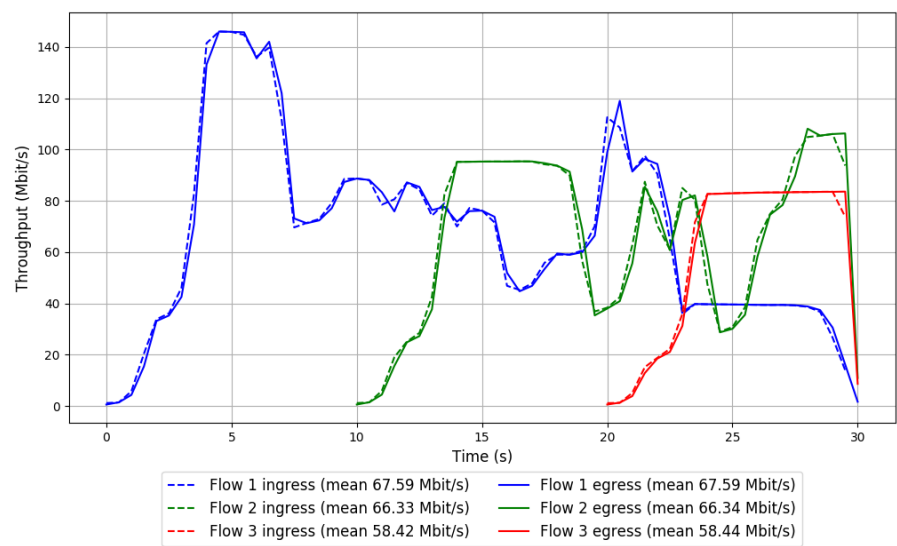
-- Flow 3:

Average throughput: 58.44 Mbit/s

95th percentile per-packet one-way delay: 112.858 ms

Loss rate: 0.01%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-04-18 06:13:57

End at: 2018-04-18 06:14:27

Below is generated by plot.py at 2018-04-18 09:28:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.02 Mbit/s

95th percentile per-packet one-way delay: 112.422 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 64.25 Mbit/s

95th percentile per-packet one-way delay: 112.455 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 76.40 Mbit/s

95th percentile per-packet one-way delay: 112.416 ms

Loss rate: 0.00%

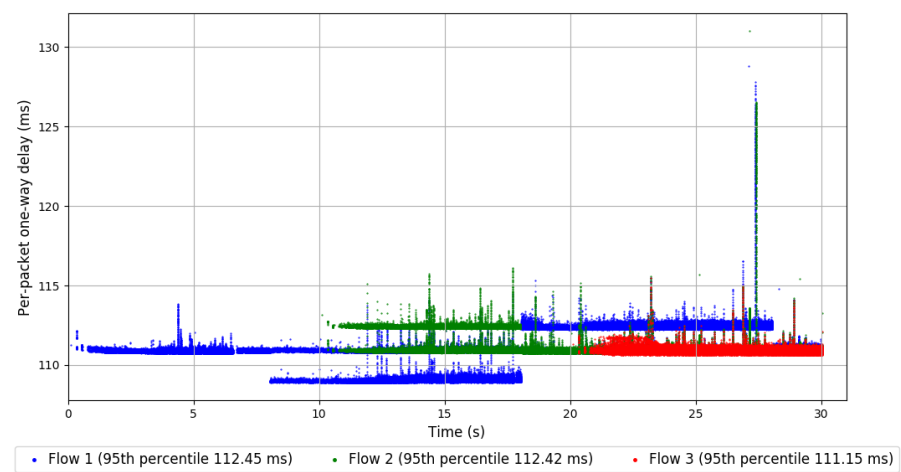
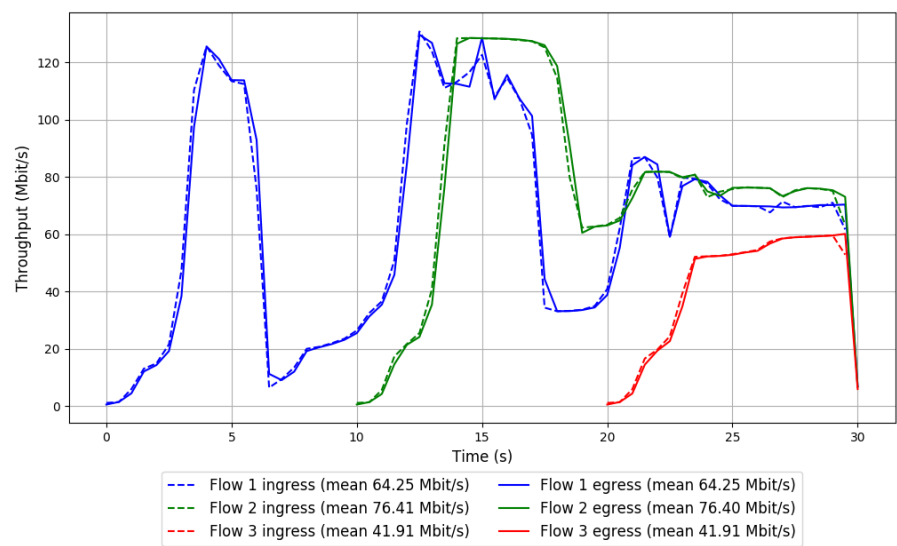
-- Flow 3:

Average throughput: 41.91 Mbit/s

95th percentile per-packet one-way delay: 111.152 ms

Loss rate: 0.01%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-04-18 06:31:14

End at: 2018-04-18 06:31:44

Below is generated by plot.py at 2018-04-18 09:30:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.82 Mbit/s

95th percentile per-packet one-way delay: 112.709 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 54.33 Mbit/s

95th percentile per-packet one-way delay: 112.693 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 63.08 Mbit/s

95th percentile per-packet one-way delay: 112.694 ms

Loss rate: 0.00%

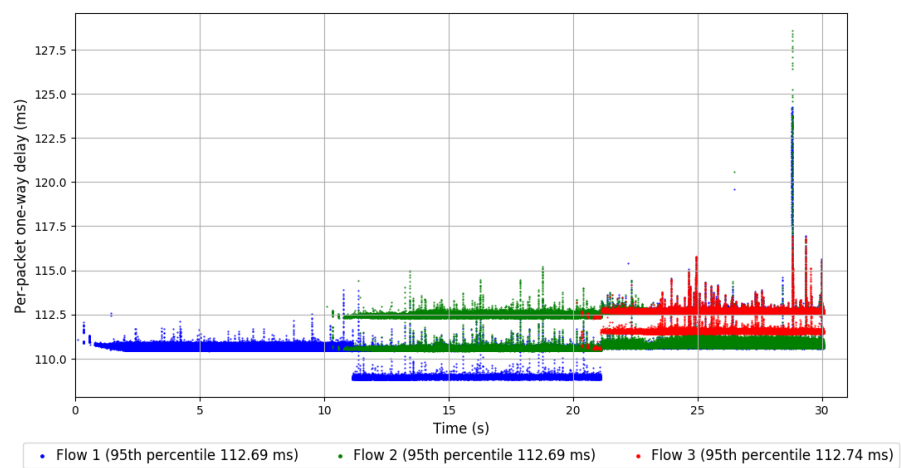
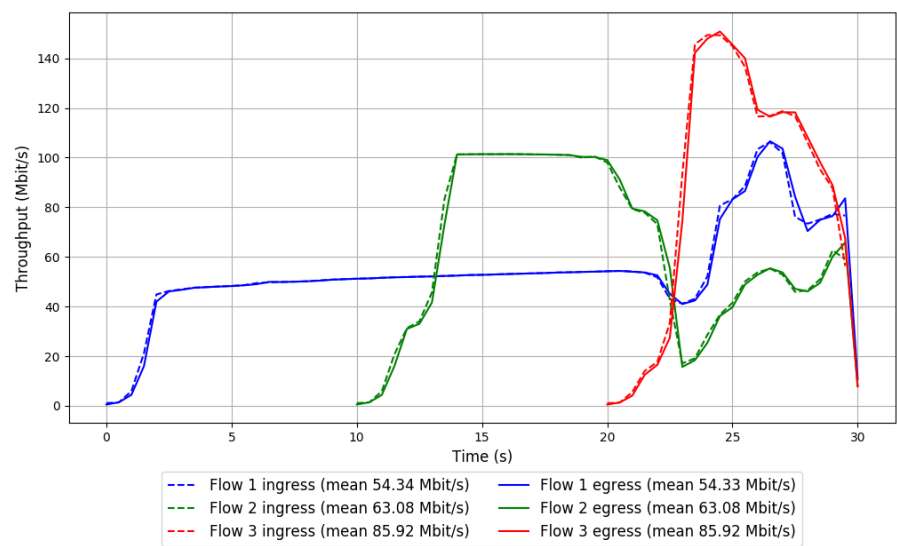
-- Flow 3:

Average throughput: 85.92 Mbit/s

95th percentile per-packet one-way delay: 112.739 ms

Loss rate: 0.00%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-04-18 06:48:11

End at: 2018-04-18 06:48:41

Below is generated by plot.py at 2018-04-18 09:31:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 144.89 Mbit/s

95th percentile per-packet one-way delay: 113.689 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 73.05 Mbit/s

95th percentile per-packet one-way delay: 113.769 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 72.16 Mbit/s

95th percentile per-packet one-way delay: 110.918 ms

Loss rate: 0.00%

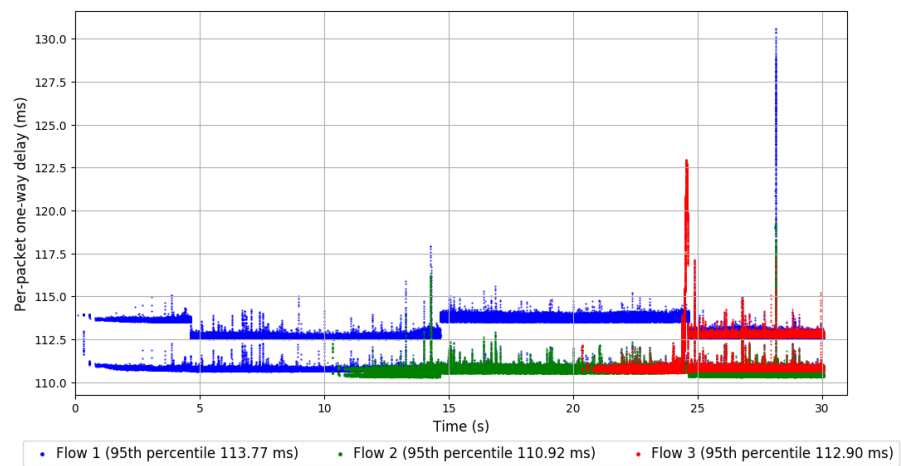
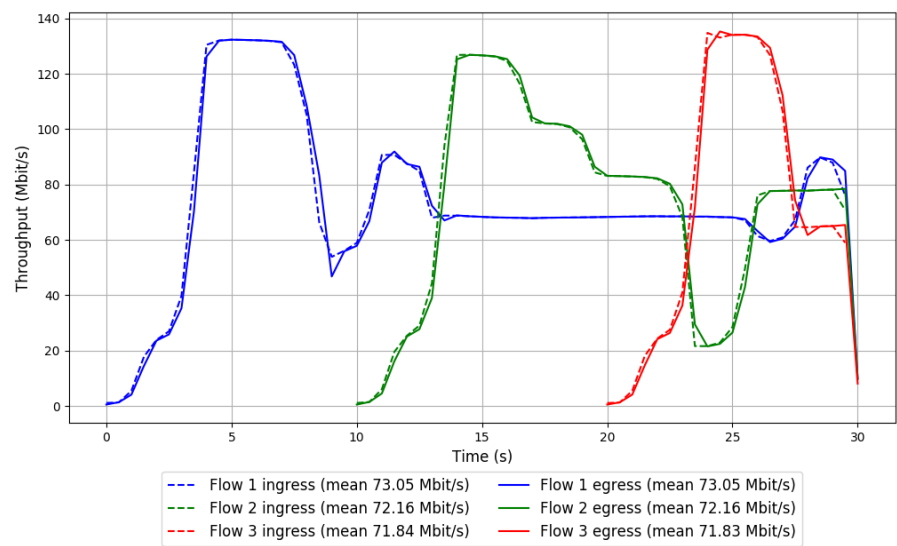
-- Flow 3:

Average throughput: 71.83 Mbit/s

95th percentile per-packet one-way delay: 112.897 ms

Loss rate: 0.00%

Run 10: Report of Copa — Data Link

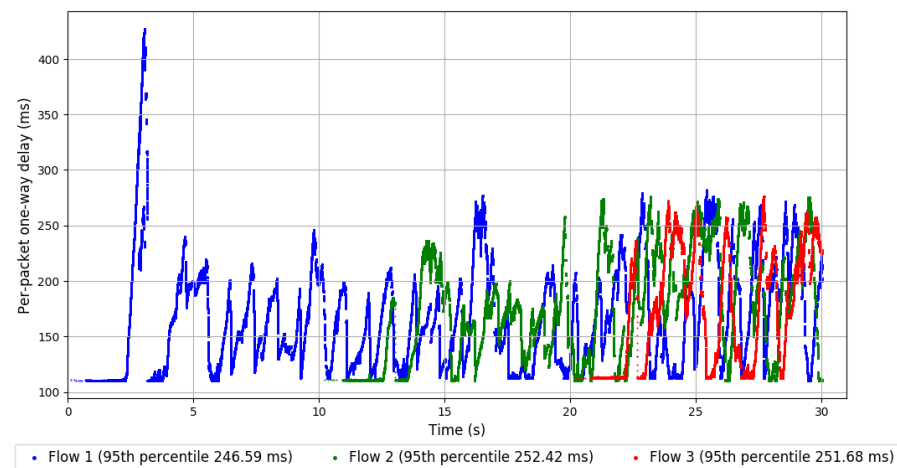
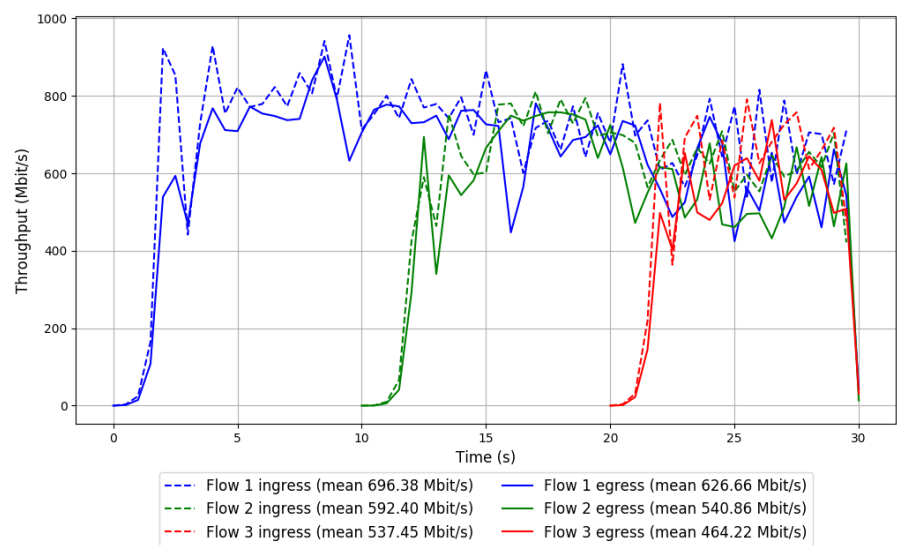


```
Run 1: Statistics of FillP

Start at: 2018-04-18 04:22:38
End at: 2018-04-18 04:23:08

# Below is generated by plot.py at 2018-04-18 09:49:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1138.29 Mbit/s
95th percentile per-packet one-way delay: 250.452 ms
Loss rate: 10.11%
-- Flow 1:
Average throughput: 626.66 Mbit/s
95th percentile per-packet one-way delay: 246.587 ms
Loss rate: 10.01%
-- Flow 2:
Average throughput: 540.86 Mbit/s
95th percentile per-packet one-way delay: 252.421 ms
Loss rate: 8.70%
-- Flow 3:
Average throughput: 464.22 Mbit/s
95th percentile per-packet one-way delay: 251.681 ms
Loss rate: 13.59%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-04-18 04:39:56

End at: 2018-04-18 04:40:26

Below is generated by plot.py at 2018-04-18 09:49:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 1152.16 Mbit/s

95th percentile per-packet one-way delay: 239.729 ms

Loss rate: 8.71%

-- Flow 1:

Average throughput: 600.94 Mbit/s

95th percentile per-packet one-way delay: 246.264 ms

Loss rate: 9.42%

-- Flow 2:

Average throughput: 587.88 Mbit/s

95th percentile per-packet one-way delay: 226.123 ms

Loss rate: 7.56%

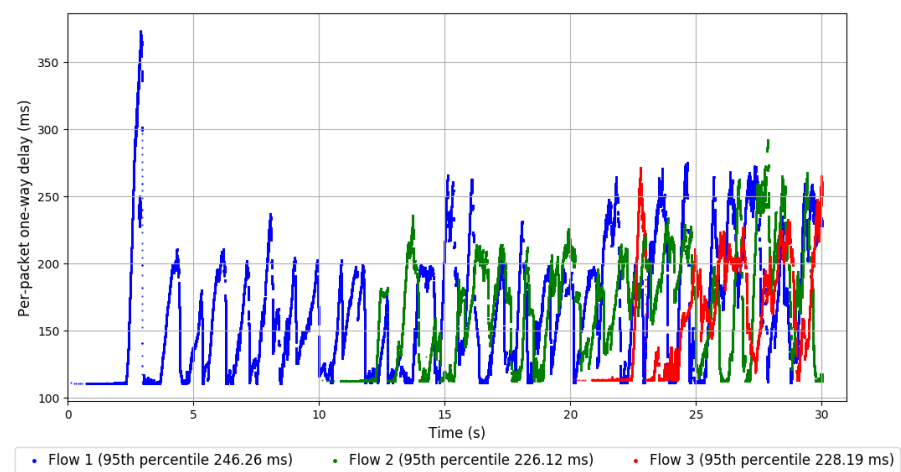
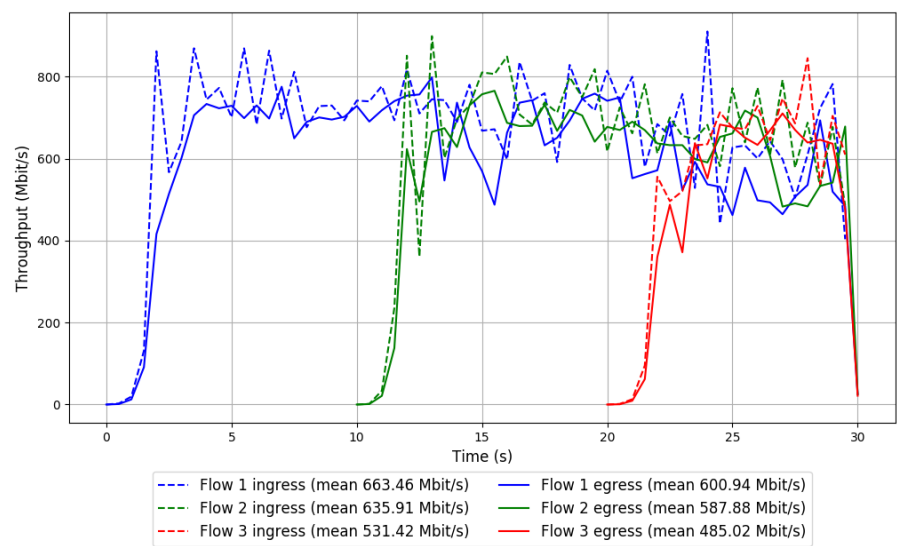
-- Flow 3:

Average throughput: 485.02 Mbit/s

95th percentile per-packet one-way delay: 228.192 ms

Loss rate: 8.75%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-04-18 04:57:11

End at: 2018-04-18 04:57:41

Below is generated by plot.py at 2018-04-18 09:50:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 1166.19 Mbit/s

95th percentile per-packet one-way delay: 241.329 ms

Loss rate: 7.73%

-- Flow 1:

Average throughput: 619.51 Mbit/s

95th percentile per-packet one-way delay: 243.409 ms

Loss rate: 6.80%

-- Flow 2:

Average throughput: 551.91 Mbit/s

95th percentile per-packet one-way delay: 245.659 ms

Loss rate: 10.43%

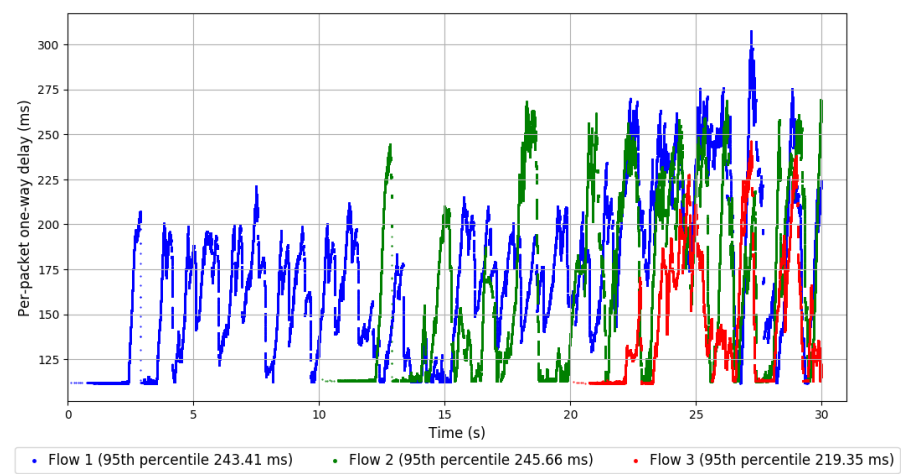
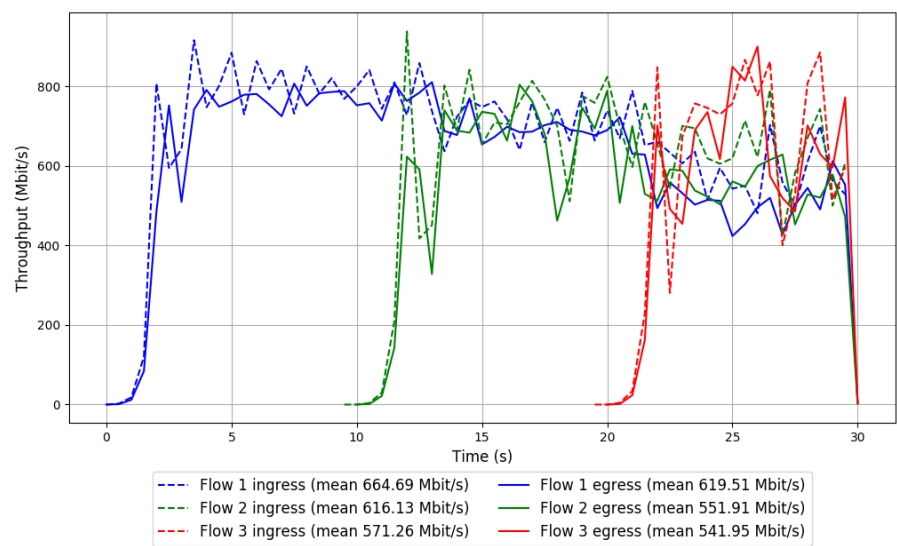
-- Flow 3:

Average throughput: 541.95 Mbit/s

95th percentile per-packet one-way delay: 219.354 ms

Loss rate: 5.13%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-04-18 05:14:29

End at: 2018-04-18 05:14:59

Below is generated by plot.py at 2018-04-18 09:50:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 1155.64 Mbit/s

95th percentile per-packet one-way delay: 229.073 ms

Loss rate: 7.42%

-- Flow 1:

Average throughput: 608.73 Mbit/s

95th percentile per-packet one-way delay: 218.969 ms

Loss rate: 6.41%

-- Flow 2:

Average throughput: 558.90 Mbit/s

95th percentile per-packet one-way delay: 237.915 ms

Loss rate: 7.66%

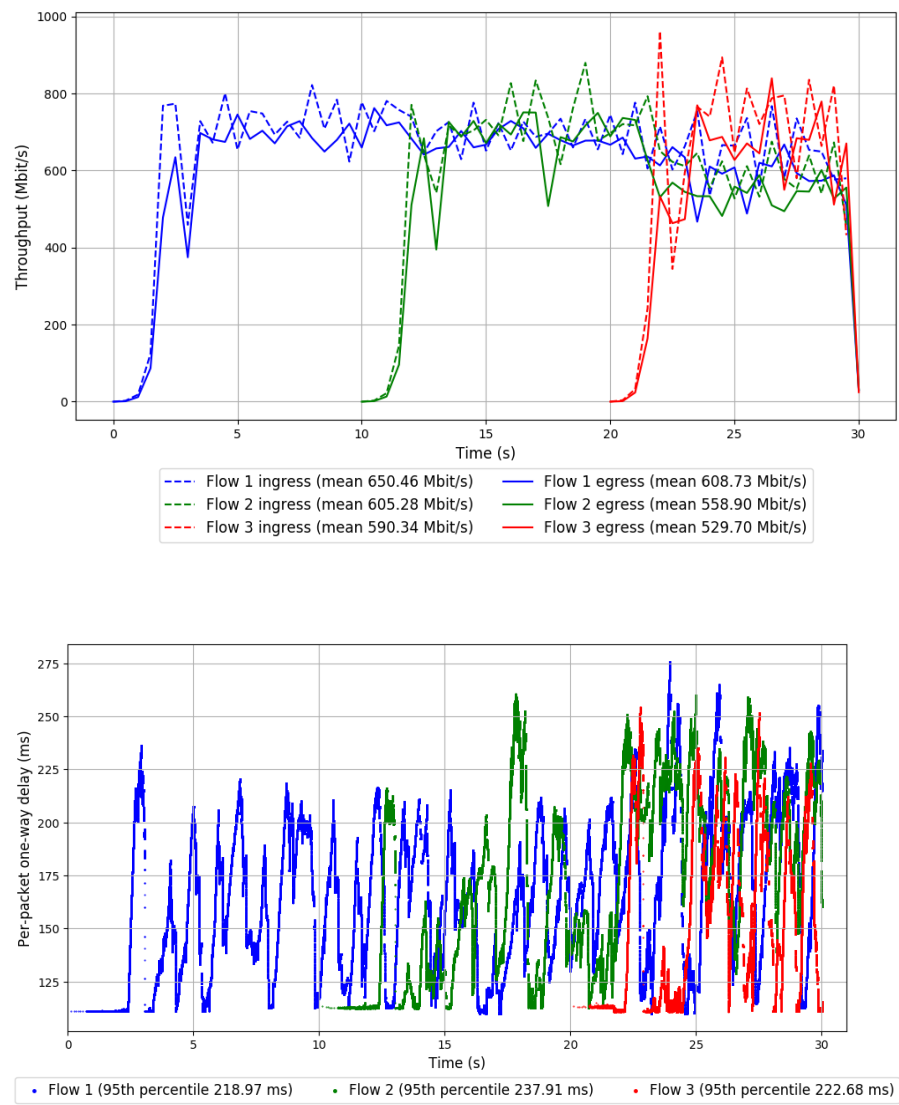
-- Flow 3:

Average throughput: 529.70 Mbit/s

95th percentile per-packet one-way delay: 222.678 ms

Loss rate: 10.27%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-04-18 05:32:02

End at: 2018-04-18 05:32:32

Below is generated by plot.py at 2018-04-18 09:50:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 1147.03 Mbit/s

95th percentile per-packet one-way delay: 232.237 ms

Loss rate: 7.46%

-- Flow 1:

Average throughput: 618.59 Mbit/s

95th percentile per-packet one-way delay: 226.641 ms

Loss rate: 7.13%

-- Flow 2:

Average throughput: 560.70 Mbit/s

95th percentile per-packet one-way delay: 233.024 ms

Loss rate: 5.67%

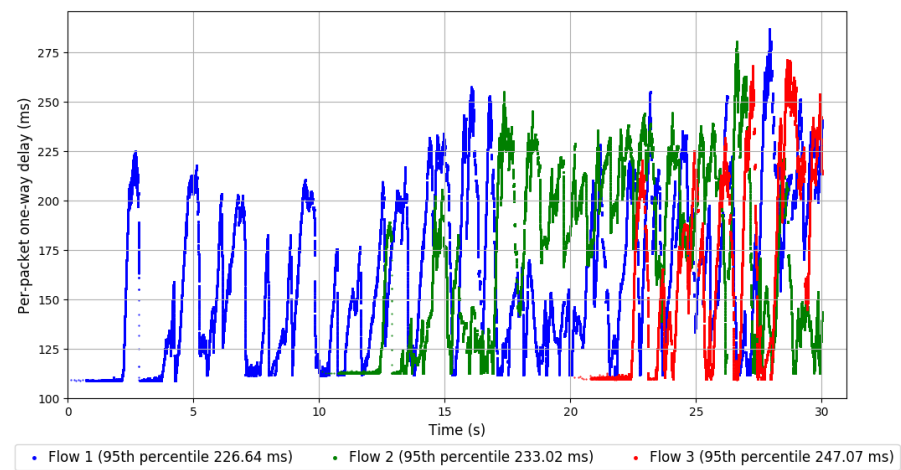
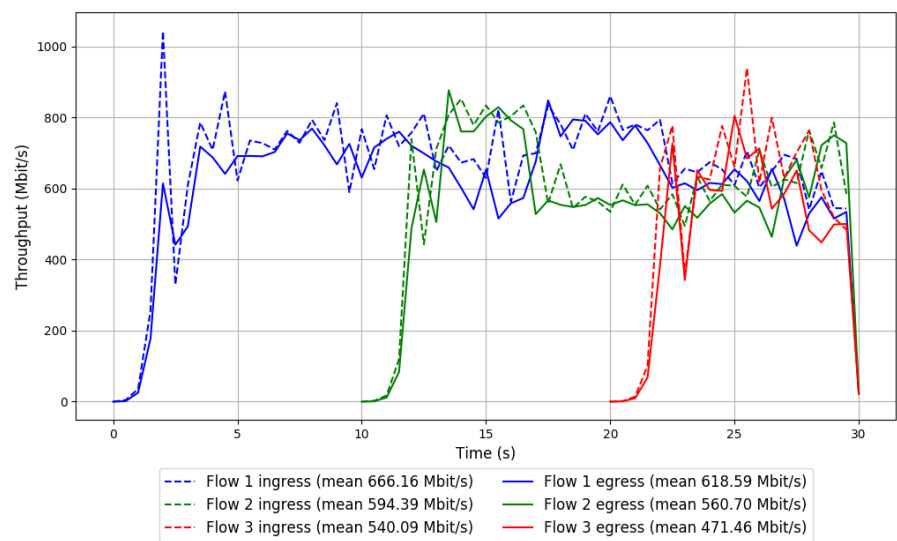
-- Flow 3:

Average throughput: 471.46 Mbit/s

95th percentile per-packet one-way delay: 247.072 ms

Loss rate: 12.68%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-04-18 05:49:22

End at: 2018-04-18 05:49:52

Below is generated by plot.py at 2018-04-18 09:50:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 1144.46 Mbit/s

95th percentile per-packet one-way delay: 238.580 ms

Loss rate: 8.22%

-- Flow 1:

Average throughput: 630.81 Mbit/s

95th percentile per-packet one-way delay: 223.682 ms

Loss rate: 7.40%

-- Flow 2:

Average throughput: 573.47 Mbit/s

95th percentile per-packet one-way delay: 240.119 ms

Loss rate: 8.64%

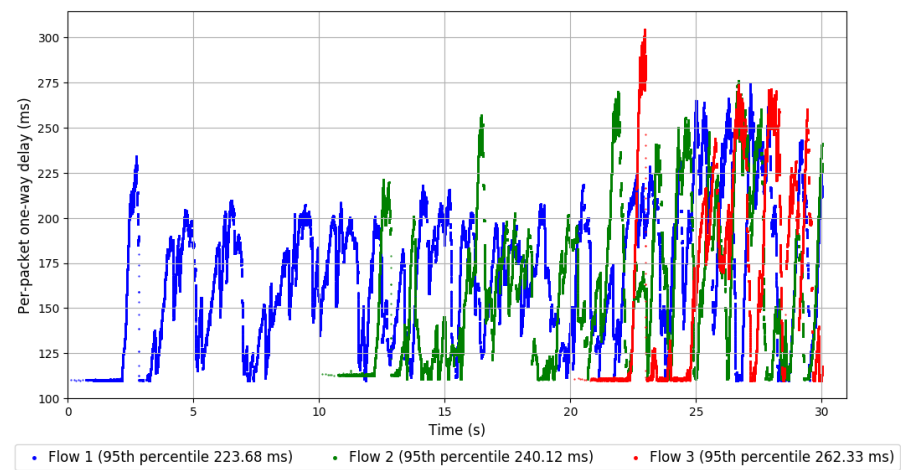
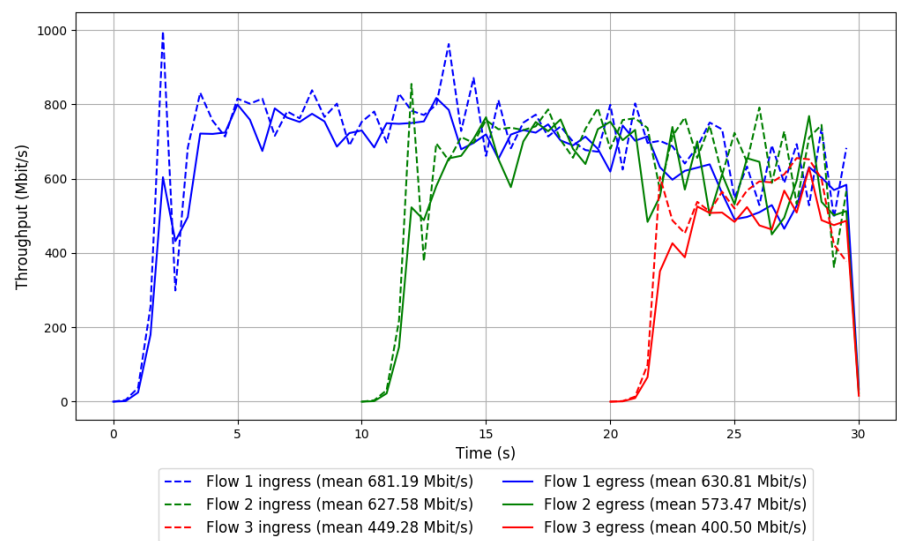
-- Flow 3:

Average throughput: 400.50 Mbit/s

95th percentile per-packet one-way delay: 262.335 ms

Loss rate: 10.86%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-04-18 06:06:37

End at: 2018-04-18 06:07:07

Below is generated by plot.py at 2018-04-18 09:52:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 1148.97 Mbit/s

95th percentile per-packet one-way delay: 230.354 ms

Loss rate: 7.15%

-- Flow 1:

Average throughput: 629.12 Mbit/s

95th percentile per-packet one-way delay: 213.079 ms

Loss rate: 5.89%

-- Flow 2:

Average throughput: 575.08 Mbit/s

95th percentile per-packet one-way delay: 228.080 ms

Loss rate: 5.88%

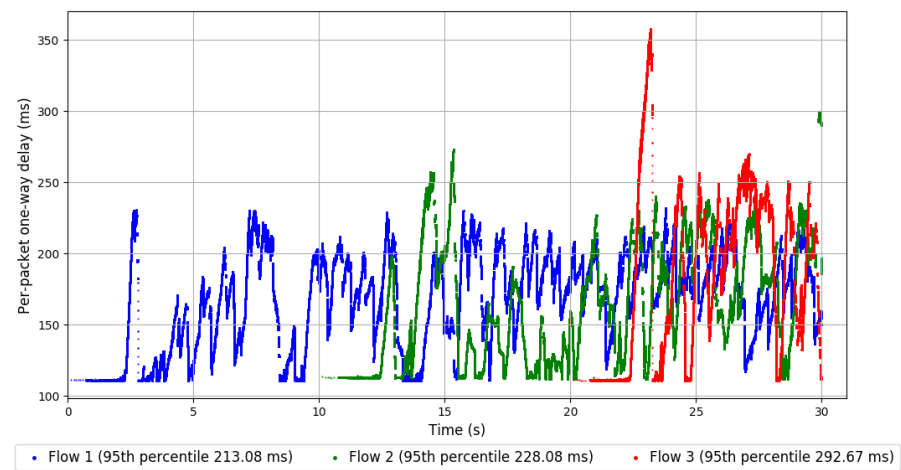
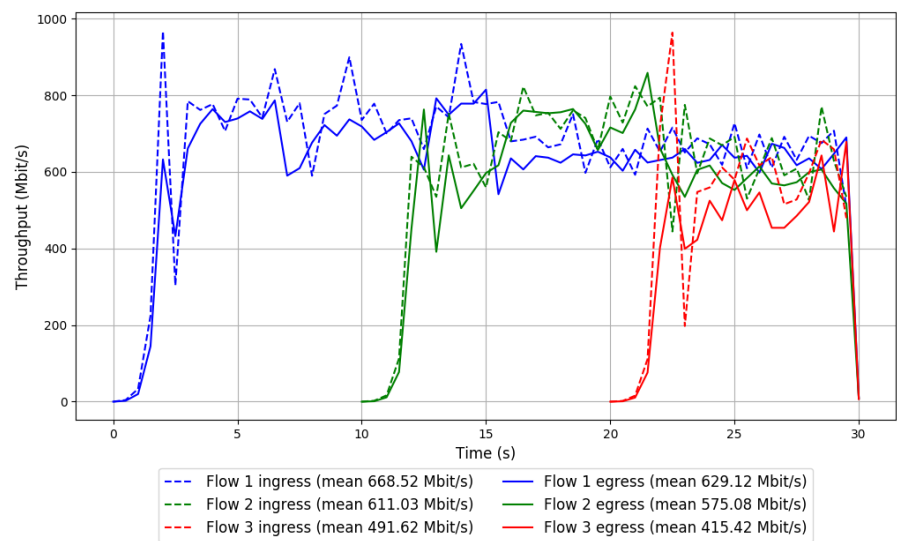
-- Flow 3:

Average throughput: 415.42 Mbit/s

95th percentile per-packet one-way delay: 292.665 ms

Loss rate: 15.49%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-04-18 06:23:56

End at: 2018-04-18 06:24:26

Below is generated by plot.py at 2018-04-18 09:54:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 1165.61 Mbit/s

95th percentile per-packet one-way delay: 223.781 ms

Loss rate: 8.28%

-- Flow 1:

Average throughput: 626.57 Mbit/s

95th percentile per-packet one-way delay: 214.625 ms

Loss rate: 6.29%

-- Flow 2:

Average throughput: 601.41 Mbit/s

95th percentile per-packet one-way delay: 216.798 ms

Loss rate: 7.62%

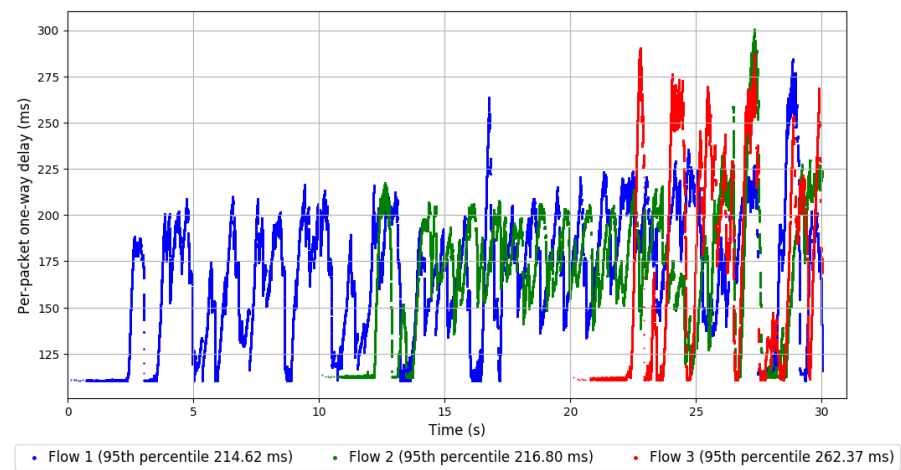
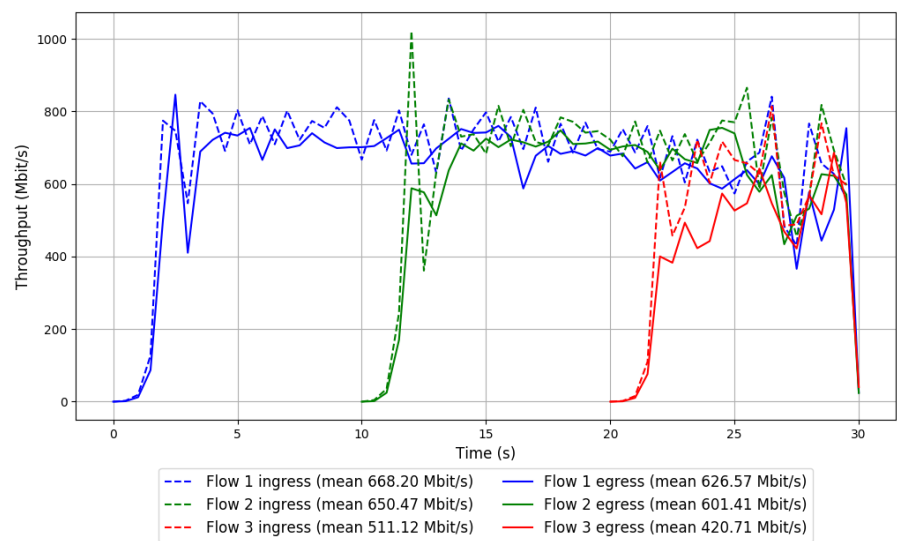
-- Flow 3:

Average throughput: 420.71 Mbit/s

95th percentile per-packet one-way delay: 262.368 ms

Loss rate: 17.81%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-04-18 06:41:03

End at: 2018-04-18 06:41:33

Below is generated by plot.py at 2018-04-18 10:10:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1095.05 Mbit/s

95th percentile per-packet one-way delay: 339.580 ms

Loss rate: 7.65%

-- Flow 1:

Average throughput: 602.62 Mbit/s

95th percentile per-packet one-way delay: 332.843 ms

Loss rate: 6.26%

-- Flow 2:

Average throughput: 539.73 Mbit/s

95th percentile per-packet one-way delay: 360.310 ms

Loss rate: 6.83%

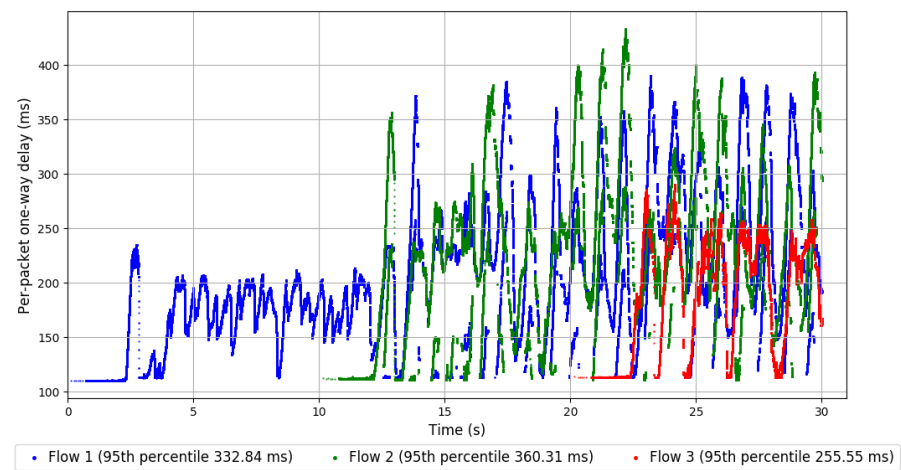
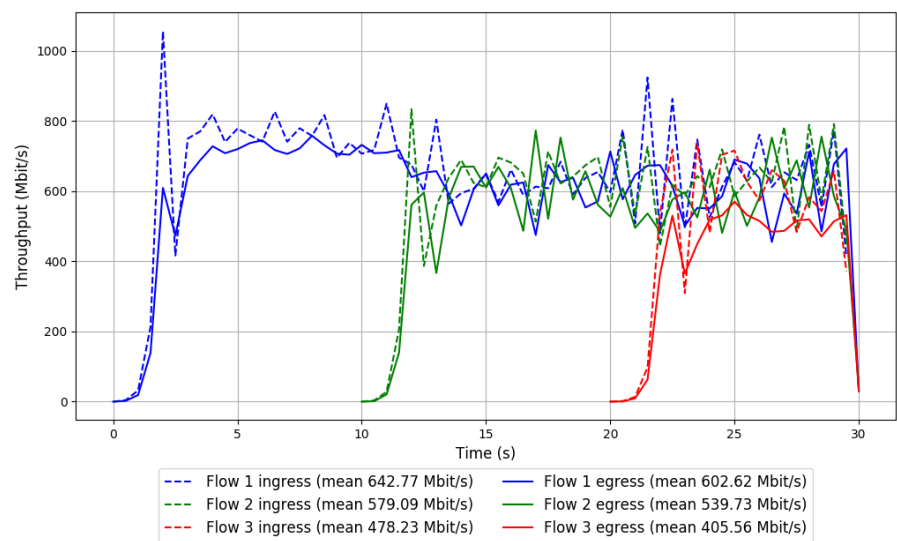
-- Flow 3:

Average throughput: 405.56 Mbit/s

95th percentile per-packet one-way delay: 255.547 ms

Loss rate: 15.27%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-04-18 06:58:05

End at: 2018-04-18 06:58:35

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 1159.86 Mbit/s

95th percentile per-packet one-way delay: 238.360 ms

Loss rate: 8.87%

-- Flow 1:

Average throughput: 637.67 Mbit/s

95th percentile per-packet one-way delay: 215.268 ms

Loss rate: 6.05%

-- Flow 2:

Average throughput: 581.57 Mbit/s

95th percentile per-packet one-way delay: 246.511 ms

Loss rate: 9.99%

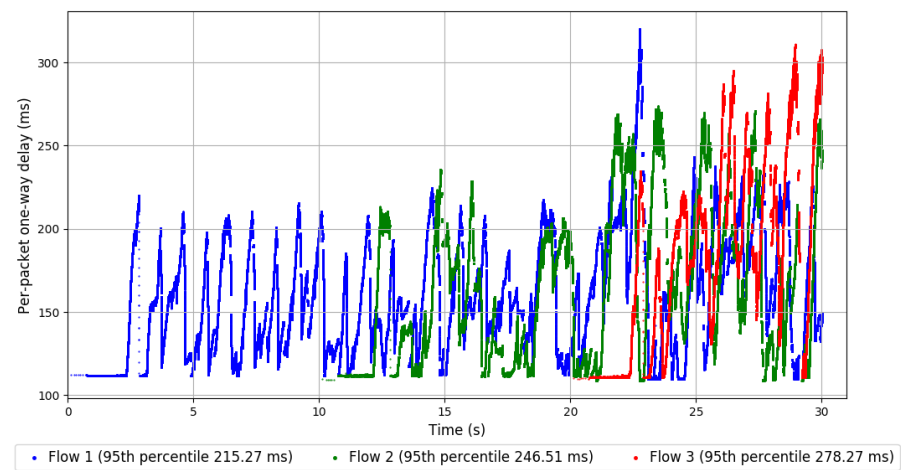
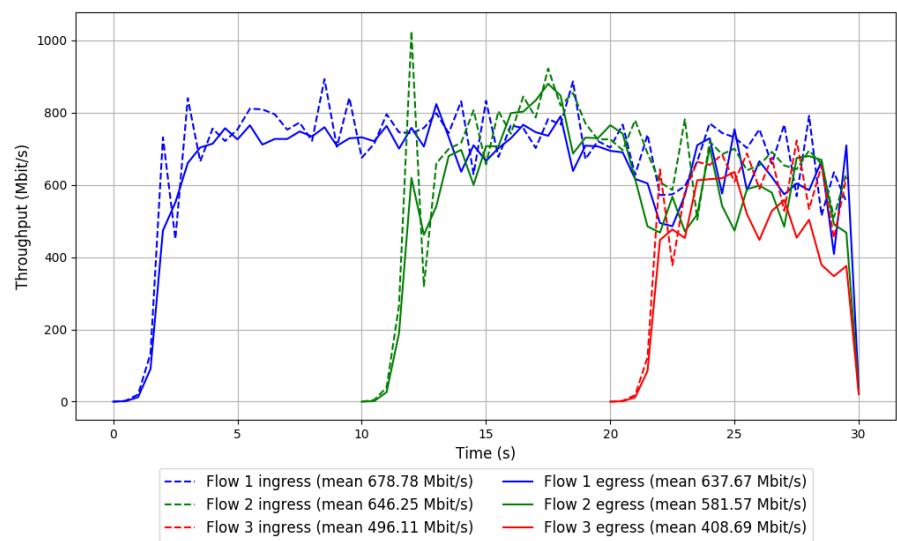
-- Flow 3:

Average throughput: 408.69 Mbit/s

95th percentile per-packet one-way delay: 278.269 ms

Loss rate: 17.59%

Run 10: Report of FillP — Data Link

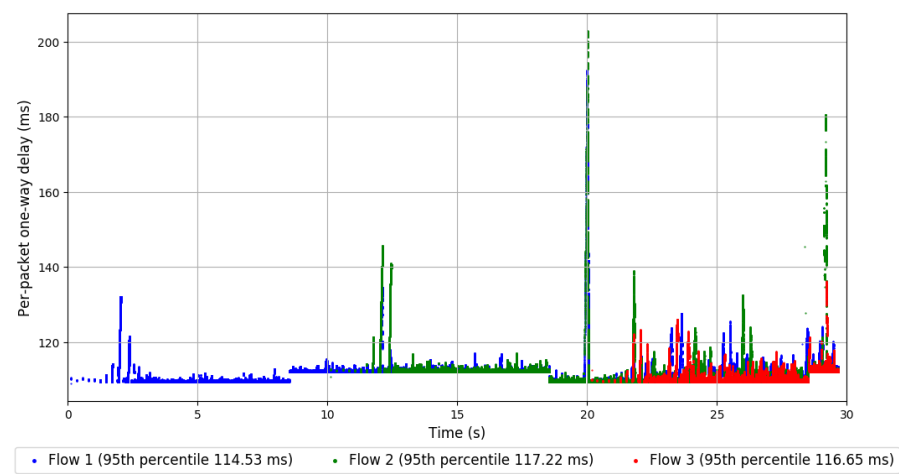
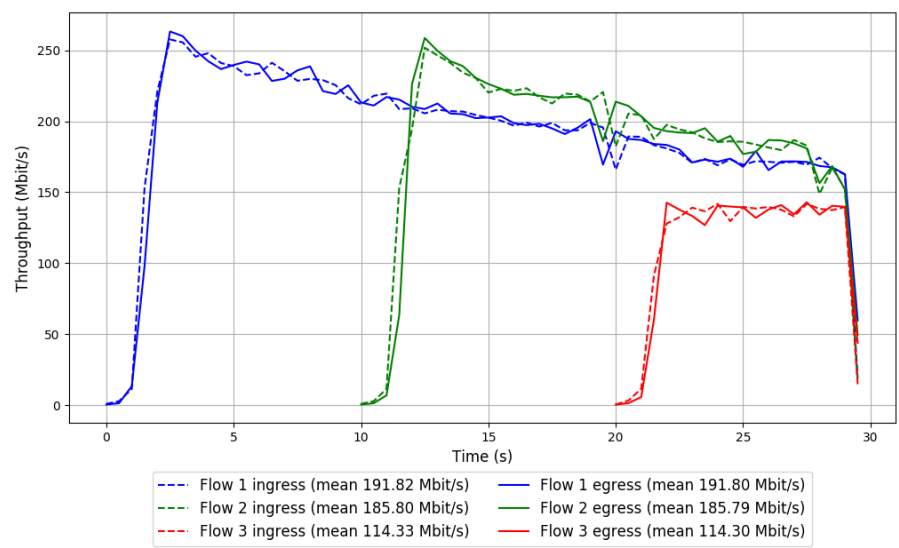


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-18 04:18:27
End at: 2018-04-18 04:18:57

# Below is generated by plot.py at 2018-04-18 10:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 351.43 Mbit/s
95th percentile per-packet one-way delay: 115.451 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 191.80 Mbit/s
95th percentile per-packet one-way delay: 114.530 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 185.79 Mbit/s
95th percentile per-packet one-way delay: 117.219 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 114.30 Mbit/s
95th percentile per-packet one-way delay: 116.651 ms
Loss rate: 0.00%
```

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



Run 2: Statistics of Indigo-1-32

Start at: 2018-04-18 04:35:44

End at: 2018-04-18 04:36:14

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 307.99 Mbit/s

95th percentile per-packet one-way delay: 114.946 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 159.25 Mbit/s

95th percentile per-packet one-way delay: 114.477 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 142.26 Mbit/s

95th percentile per-packet one-way delay: 114.465 ms

Loss rate: 0.00%

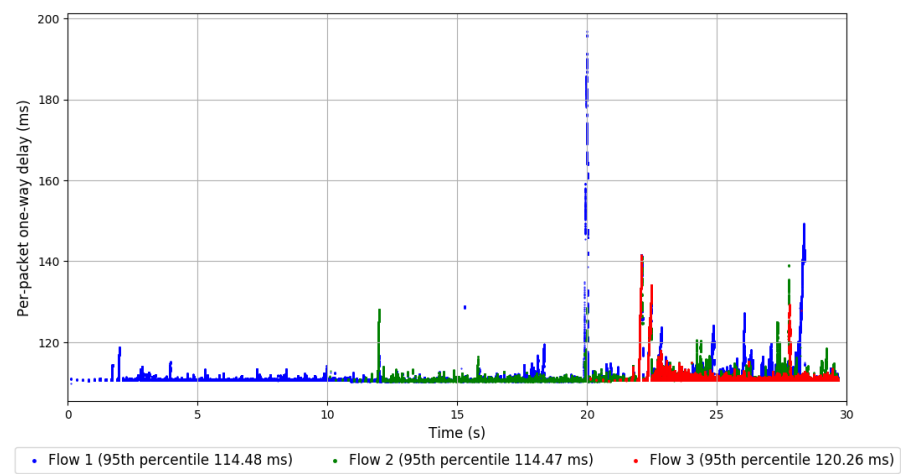
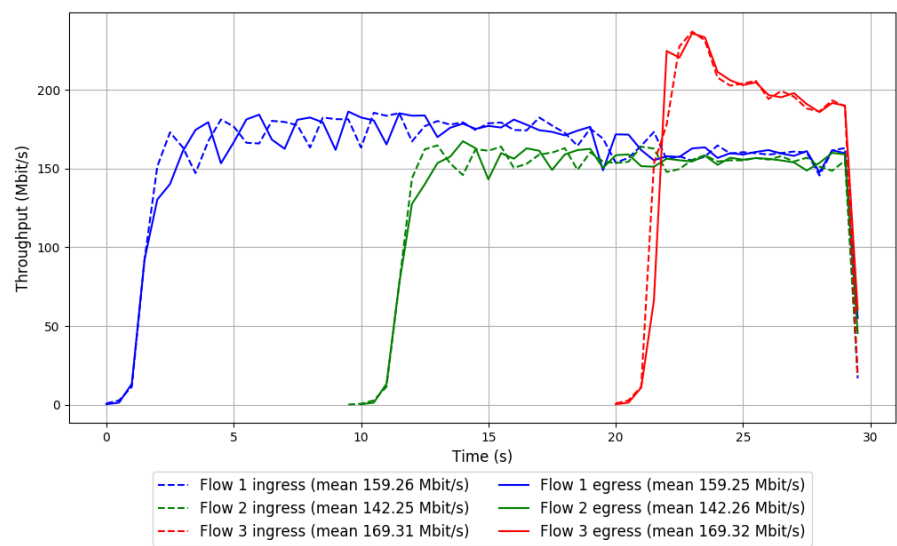
-- Flow 3:

Average throughput: 169.32 Mbit/s

95th percentile per-packet one-way delay: 120.258 ms

Loss rate: 0.00%

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-04-18 04:52:59

End at: 2018-04-18 04:53:29

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 338.84 Mbit/s

95th percentile per-packet one-way delay: 115.882 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 201.94 Mbit/s

95th percentile per-packet one-way delay: 117.224 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 145.29 Mbit/s

95th percentile per-packet one-way delay: 115.631 ms

Loss rate: 0.00%

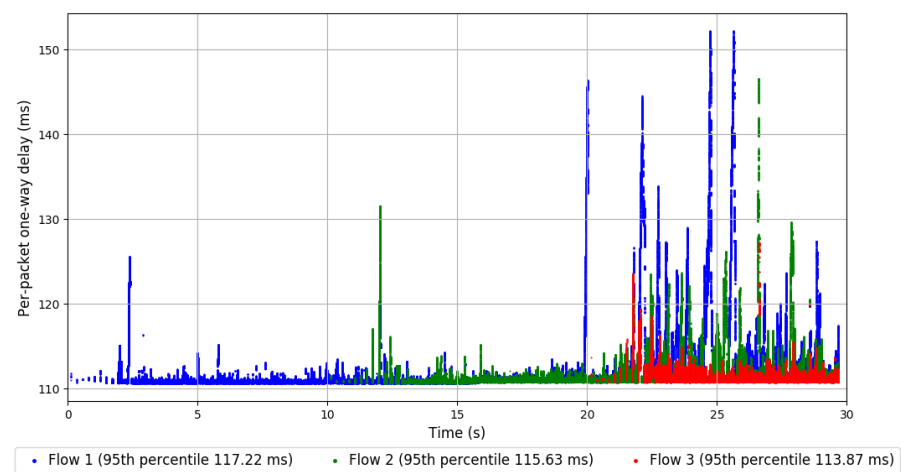
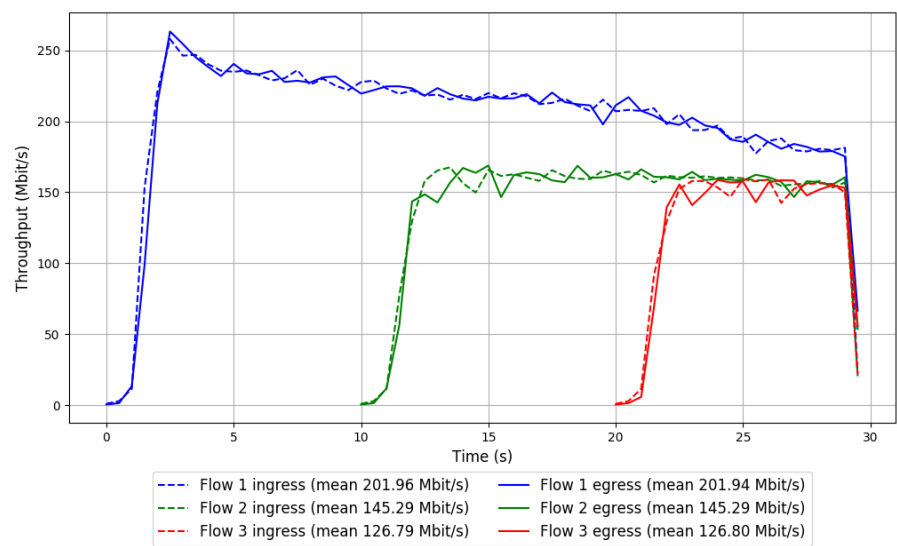
-- Flow 3:

Average throughput: 126.80 Mbit/s

95th percentile per-packet one-way delay: 113.873 ms

Loss rate: 0.00%

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



Run 4: Statistics of Indigo-1-32

Start at: 2018-04-18 05:10:12

End at: 2018-04-18 05:10:42

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 343.45 Mbit/s

95th percentile per-packet one-way delay: 122.294 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 184.05 Mbit/s

95th percentile per-packet one-way delay: 115.639 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 171.36 Mbit/s

95th percentile per-packet one-way delay: 123.960 ms

Loss rate: 0.00%

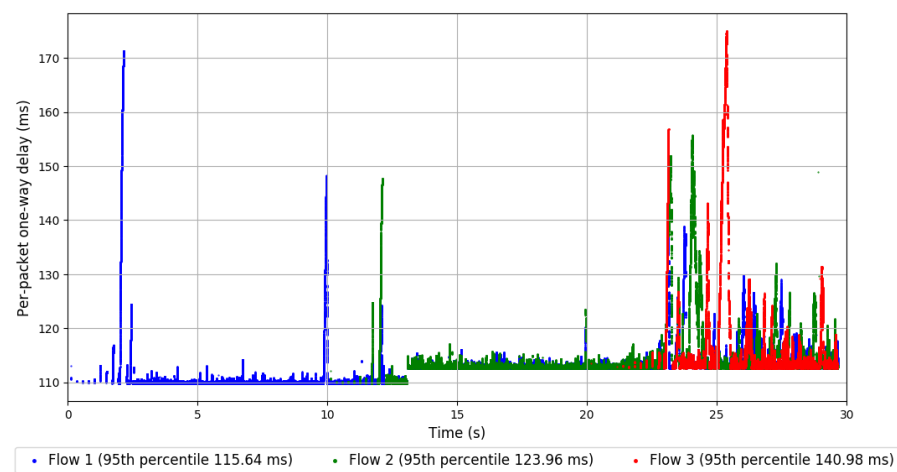
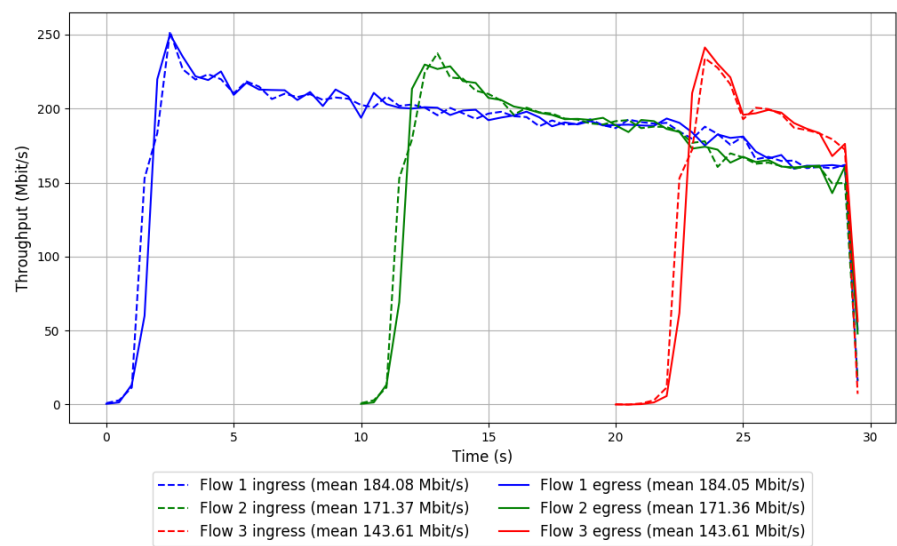
-- Flow 3:

Average throughput: 143.61 Mbit/s

95th percentile per-packet one-way delay: 140.984 ms

Loss rate: 0.01%

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



Run 5: Statistics of Indigo-1-32

Start at: 2018-04-18 05:27:50

End at: 2018-04-18 05:28:20

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 314.64 Mbit/s

95th percentile per-packet one-way delay: 115.790 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 149.38 Mbit/s

95th percentile per-packet one-way delay: 114.246 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 179.61 Mbit/s

95th percentile per-packet one-way delay: 117.967 ms

Loss rate: 0.00%

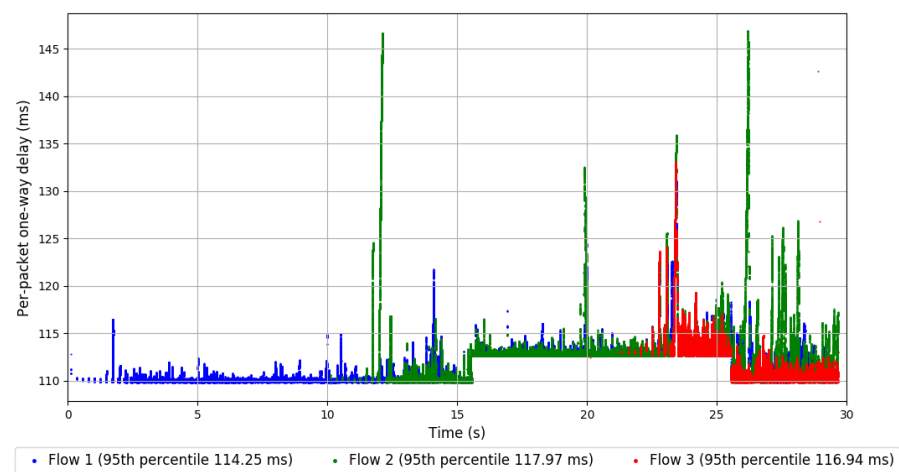
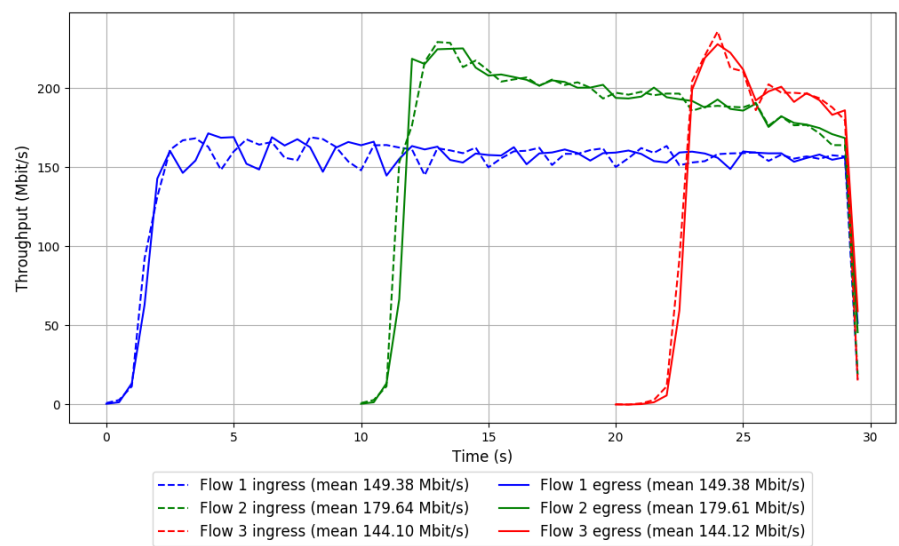
-- Flow 3:

Average throughput: 144.12 Mbit/s

95th percentile per-packet one-way delay: 116.940 ms

Loss rate: 0.01%

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



Run 6: Statistics of Indigo-1-32

Start at: 2018-04-18 05:45:12

End at: 2018-04-18 05:45:42

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 280.14 Mbit/s

95th percentile per-packet one-way delay: 112.155 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 145.44 Mbit/s

95th percentile per-packet one-way delay: 112.025 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 141.22 Mbit/s

95th percentile per-packet one-way delay: 112.983 ms

Loss rate: 0.00%

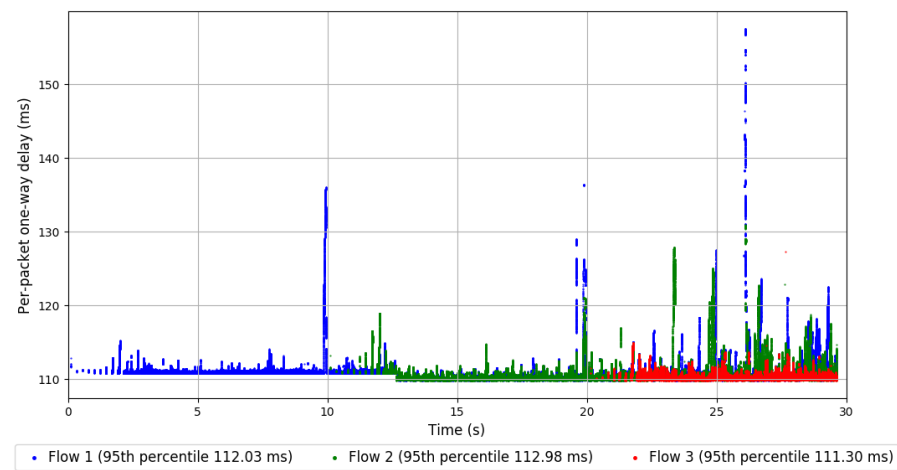
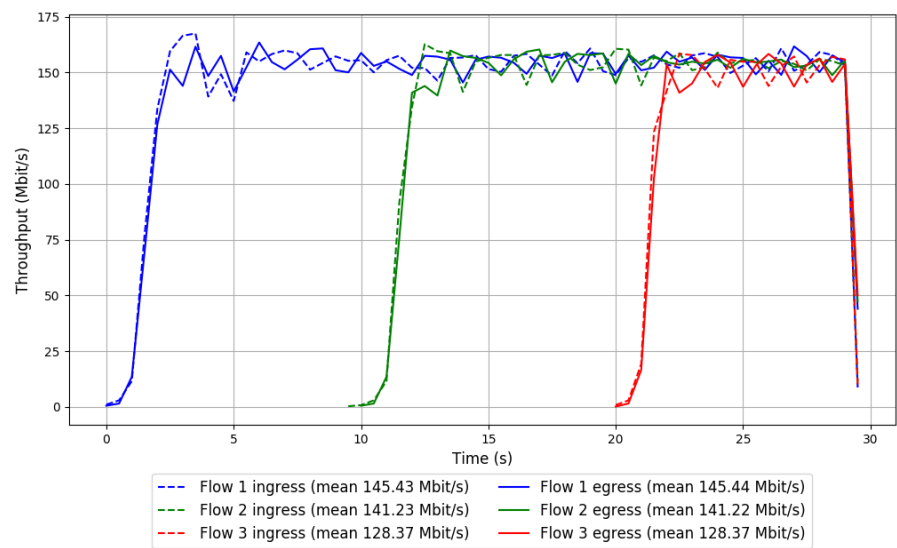
-- Flow 3:

Average throughput: 128.37 Mbit/s

95th percentile per-packet one-way delay: 111.300 ms

Loss rate: 0.01%

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



Run 7: Statistics of Indigo-1-32

Start at: 2018-04-18 06:02:26

End at: 2018-04-18 06:02:56

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 315.43 Mbit/s

95th percentile per-packet one-way delay: 114.337 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 149.41 Mbit/s

95th percentile per-packet one-way delay: 112.639 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 190.92 Mbit/s

95th percentile per-packet one-way delay: 115.550 ms

Loss rate: 0.01%

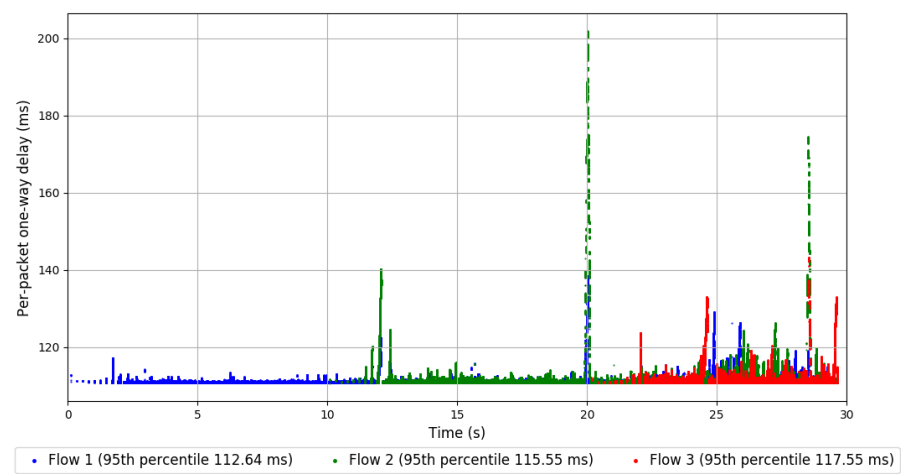
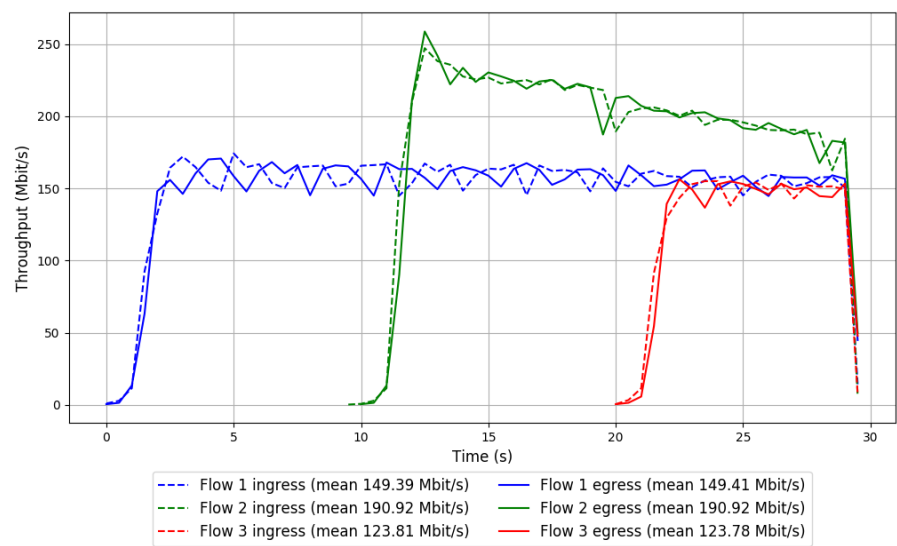
-- Flow 3:

Average throughput: 123.78 Mbit/s

95th percentile per-packet one-way delay: 117.546 ms

Loss rate: 0.00%

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



Run 8: Statistics of Indigo-1-32

Start at: 2018-04-18 06:19:43

End at: 2018-04-18 06:20:13

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 335.24 Mbit/s

95th percentile per-packet one-way delay: 115.427 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 183.21 Mbit/s

95th percentile per-packet one-way delay: 115.103 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 148.15 Mbit/s

95th percentile per-packet one-way delay: 115.197 ms

Loss rate: 0.00%

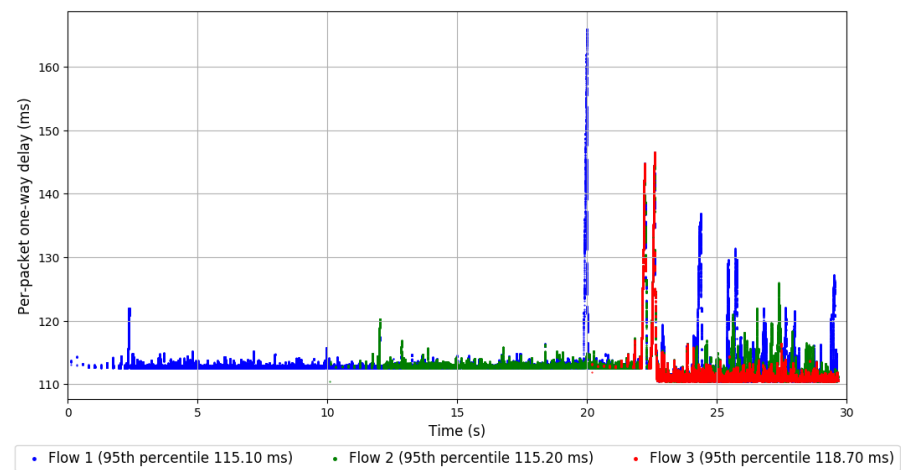
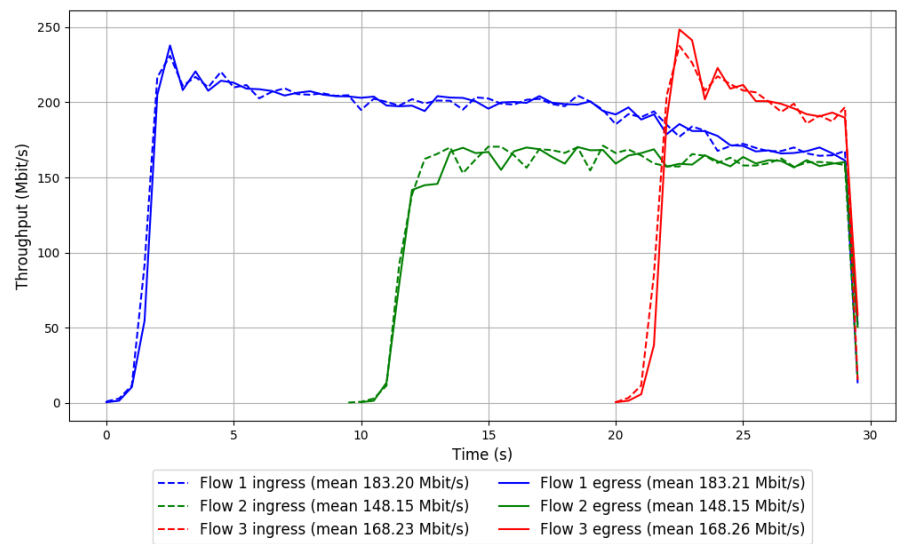
-- Flow 3:

Average throughput: 168.26 Mbit/s

95th percentile per-packet one-way delay: 118.699 ms

Loss rate: 0.00%

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



Run 9: Statistics of Indigo-1-32

Start at: 2018-04-18 06:36:52

End at: 2018-04-18 06:37:22

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 347.53 Mbit/s

95th percentile per-packet one-way delay: 120.381 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 182.92 Mbit/s

95th percentile per-packet one-way delay: 116.314 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 172.16 Mbit/s

95th percentile per-packet one-way delay: 129.827 ms

Loss rate: 0.00%

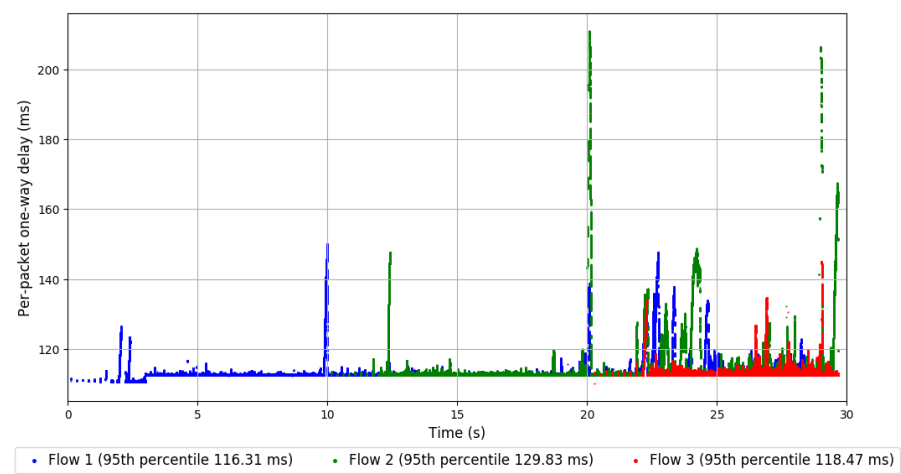
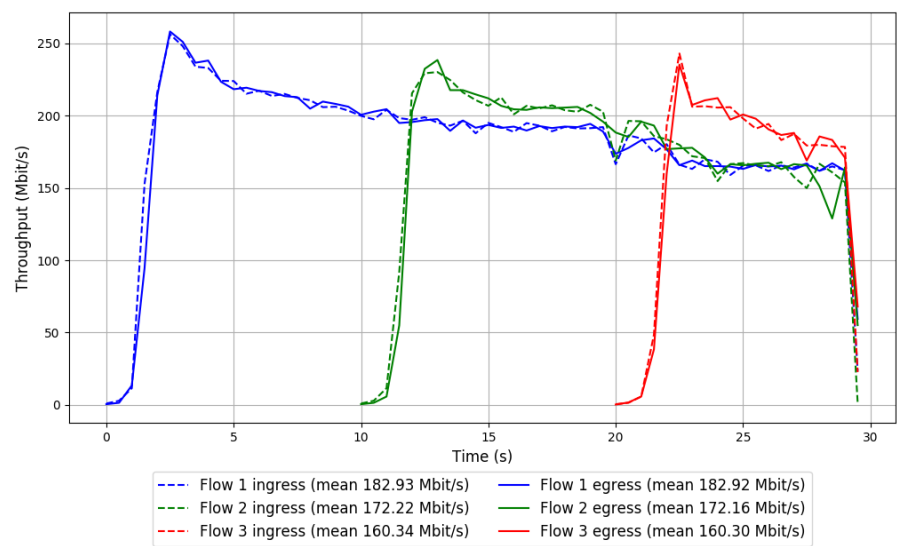
-- Flow 3:

Average throughput: 160.30 Mbit/s

95th percentile per-packet one-way delay: 118.472 ms

Loss rate: 0.00%

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



Run 10: Statistics of Indigo-1-32

Start at: 2018-04-18 06:53:52

End at: 2018-04-18 06:54:22

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 320.06 Mbit/s

95th percentile per-packet one-way delay: 115.229 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 150.45 Mbit/s

95th percentile per-packet one-way delay: 112.696 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 192.05 Mbit/s

95th percentile per-packet one-way delay: 119.235 ms

Loss rate: 0.00%

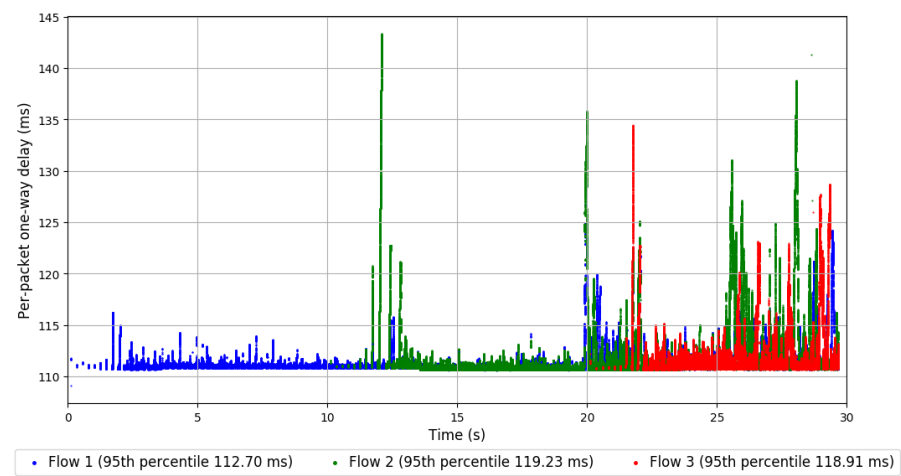
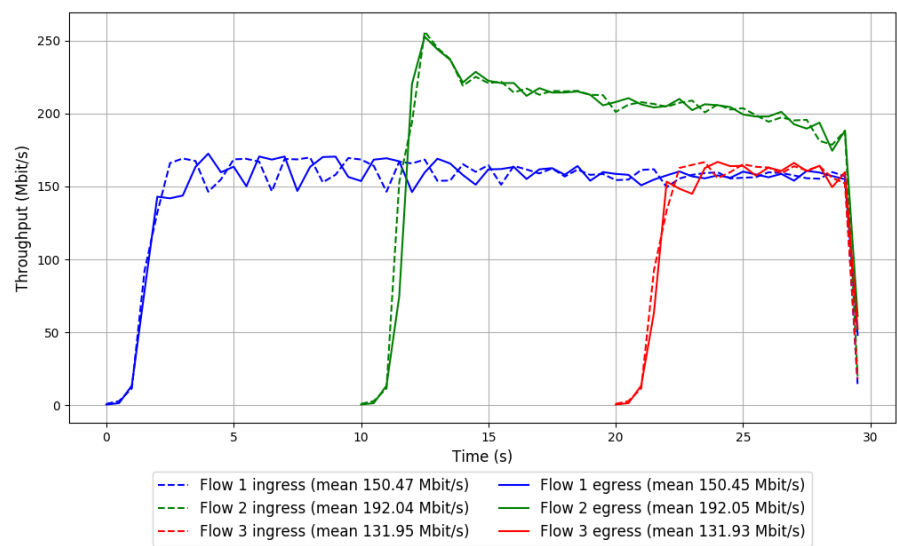
-- Flow 3:

Average throughput: 131.93 Mbit/s

95th percentile per-packet one-way delay: 118.912 ms

Loss rate: 0.00%

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



Run 1: Statistics of PCC-Vivace

Start at: 2018-04-18 04:11:25

End at: 2018-04-18 04:11:55

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 406.41 Mbit/s

95th percentile per-packet one-way delay: 128.153 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 235.07 Mbit/s

95th percentile per-packet one-way delay: 119.496 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 190.15 Mbit/s

95th percentile per-packet one-way delay: 132.897 ms

Loss rate: 0.03%

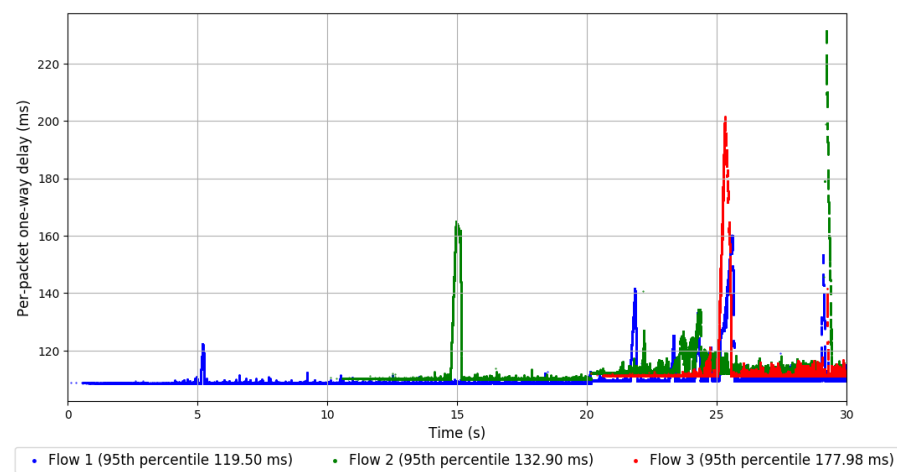
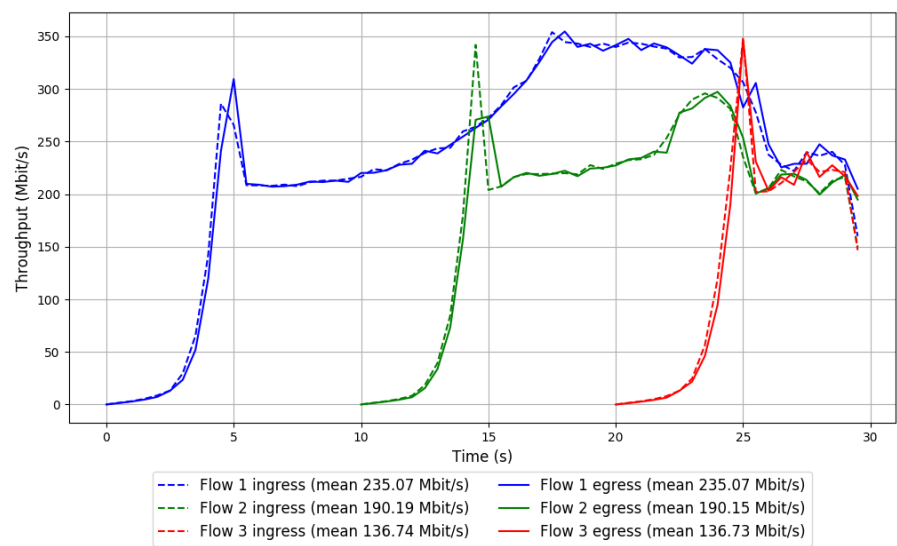
-- Flow 3:

Average throughput: 136.73 Mbit/s

95th percentile per-packet one-way delay: 177.980 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-04-18 04:28:36

End at: 2018-04-18 04:29:06

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 386.40 Mbit/s

95th percentile per-packet one-way delay: 125.473 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 227.49 Mbit/s

95th percentile per-packet one-way delay: 121.674 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 174.75 Mbit/s

95th percentile per-packet one-way delay: 117.657 ms

Loss rate: 0.01%

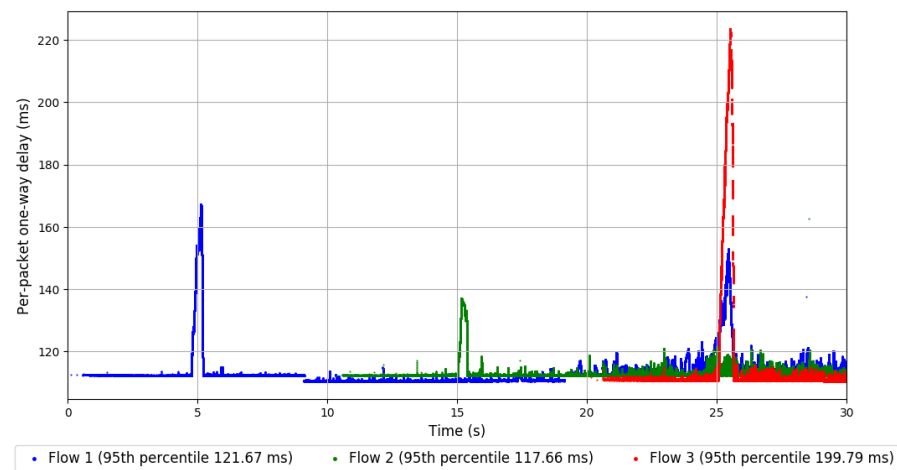
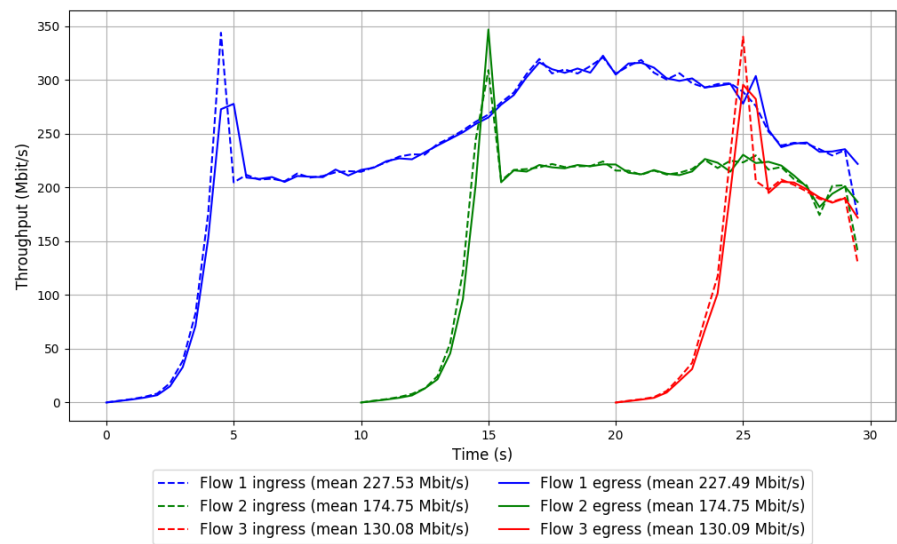
-- Flow 3:

Average throughput: 130.09 Mbit/s

95th percentile per-packet one-way delay: 199.795 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-04-18 04:45:56

End at: 2018-04-18 04:46:26

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 365.85 Mbit/s

95th percentile per-packet one-way delay: 117.016 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 214.31 Mbit/s

95th percentile per-packet one-way delay: 120.066 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 190.91 Mbit/s

95th percentile per-packet one-way delay: 113.593 ms

Loss rate: 0.00%

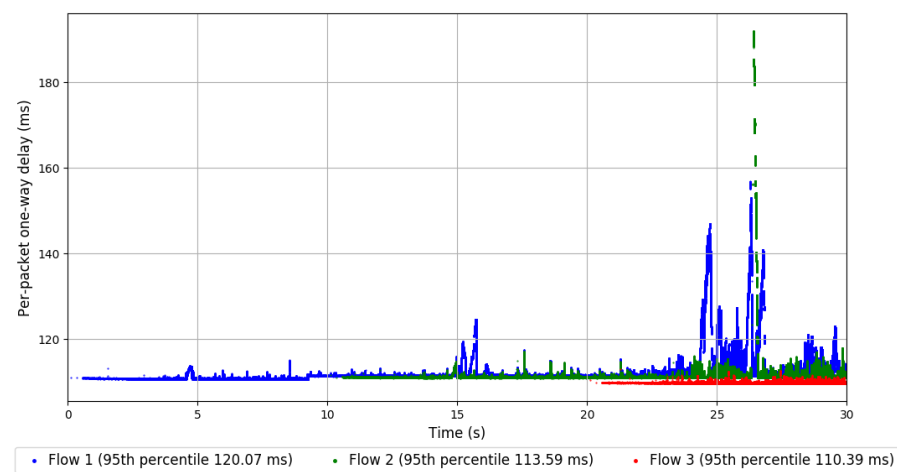
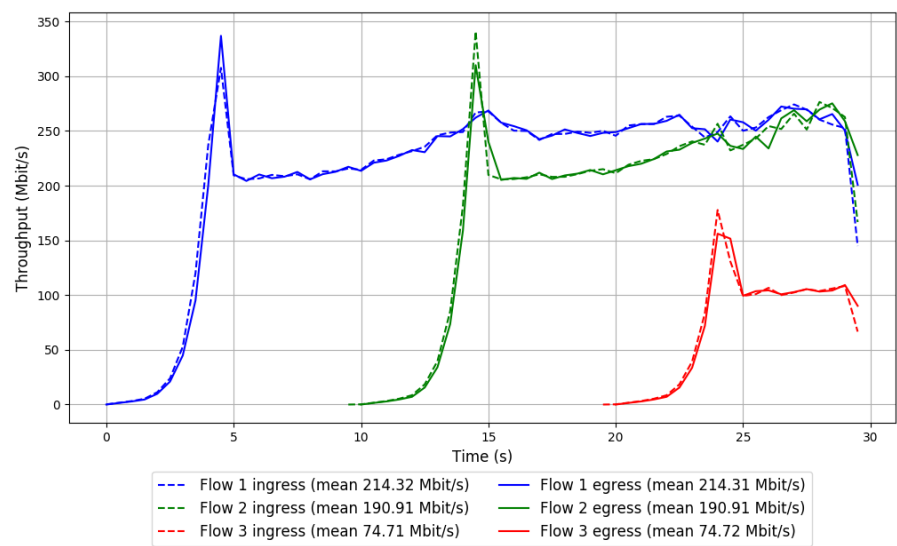
-- Flow 3:

Average throughput: 74.72 Mbit/s

95th percentile per-packet one-way delay: 110.391 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2018-04-18 05:03:10

End at: 2018-04-18 05:03:40

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 393.44 Mbit/s

95th percentile per-packet one-way delay: 123.272 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 236.41 Mbit/s

95th percentile per-packet one-way delay: 132.067 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 168.44 Mbit/s

95th percentile per-packet one-way delay: 113.646 ms

Loss rate: 0.00%

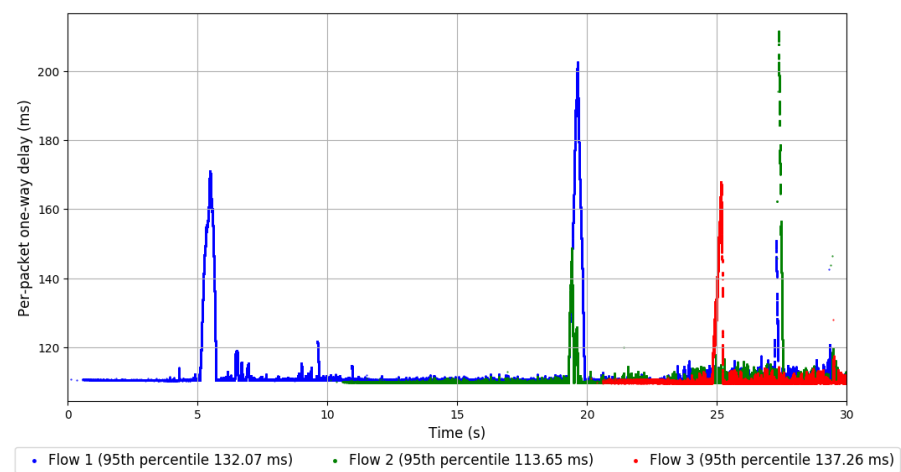
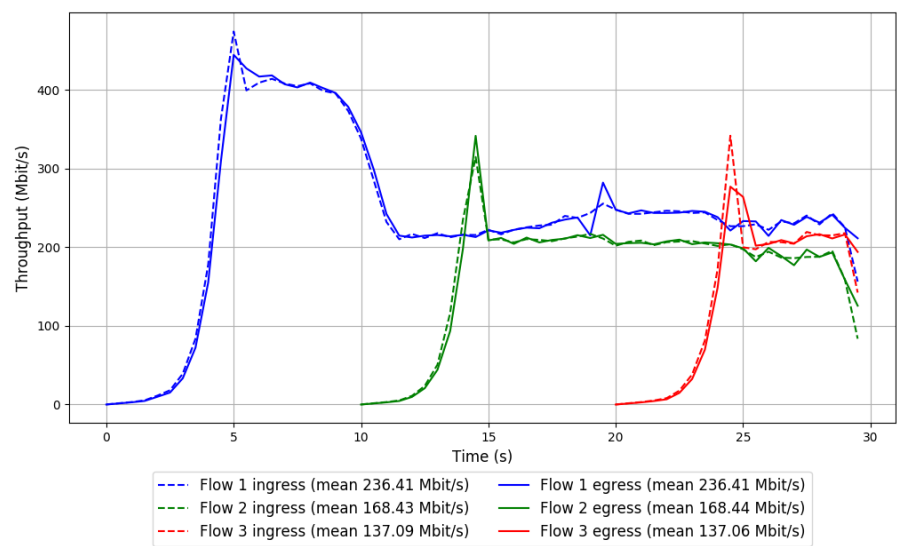
-- Flow 3:

Average throughput: 137.06 Mbit/s

95th percentile per-packet one-way delay: 137.256 ms

Loss rate: 0.01%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2018-04-18 05:20:37

End at: 2018-04-18 05:21:07

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 375.67 Mbit/s

95th percentile per-packet one-way delay: 118.348 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 217.44 Mbit/s

95th percentile per-packet one-way delay: 117.991 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 168.86 Mbit/s

95th percentile per-packet one-way delay: 115.532 ms

Loss rate: 0.00%

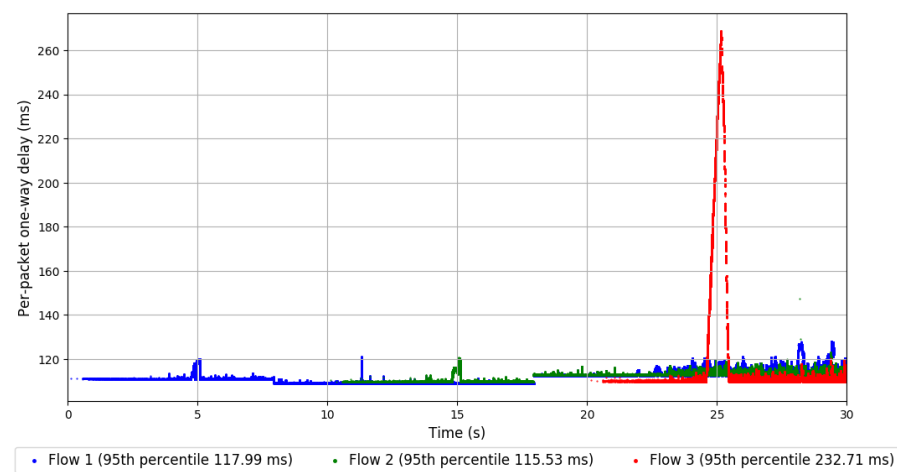
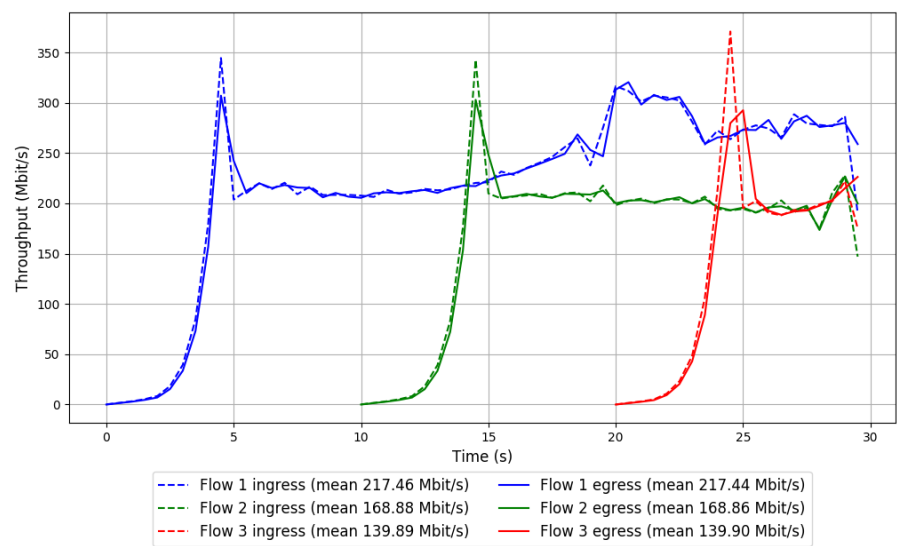
-- Flow 3:

Average throughput: 139.90 Mbit/s

95th percentile per-packet one-way delay: 232.706 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 6: Statistics of PCC-Vivace

Start at: 2018-04-18 05:38:09

End at: 2018-04-18 05:38:39

Below is generated by plot.py at 2018-04-18 10:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 361.13 Mbit/s

95th percentile per-packet one-way delay: 145.682 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 205.05 Mbit/s

95th percentile per-packet one-way delay: 136.574 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 174.40 Mbit/s

95th percentile per-packet one-way delay: 141.237 ms

Loss rate: 0.00%

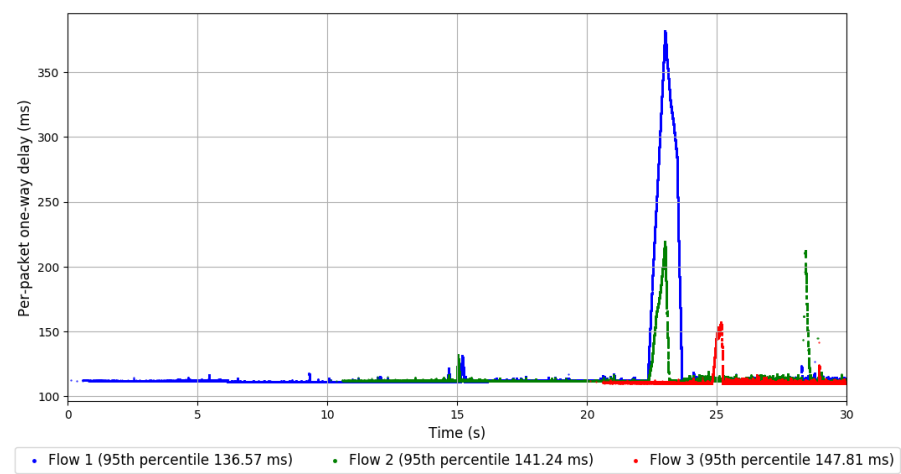
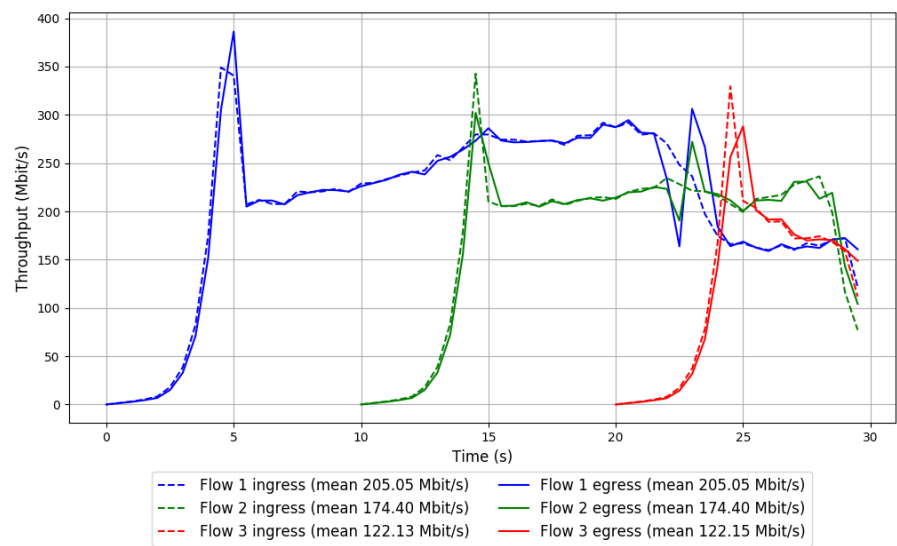
-- Flow 3:

Average throughput: 122.15 Mbit/s

95th percentile per-packet one-way delay: 147.810 ms

Loss rate: 0.00%

Run 6: Report of PCC-Vivace — Data Link



Run 7: Statistics of PCC-Vivace

Start at: 2018-04-18 05:55:21

End at: 2018-04-18 05:55:51

Below is generated by plot.py at 2018-04-18 10:12:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 372.85 Mbit/s

95th percentile per-packet one-way delay: 117.265 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 218.08 Mbit/s

95th percentile per-packet one-way delay: 117.400 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 194.94 Mbit/s

95th percentile per-packet one-way delay: 118.345 ms

Loss rate: 0.01%

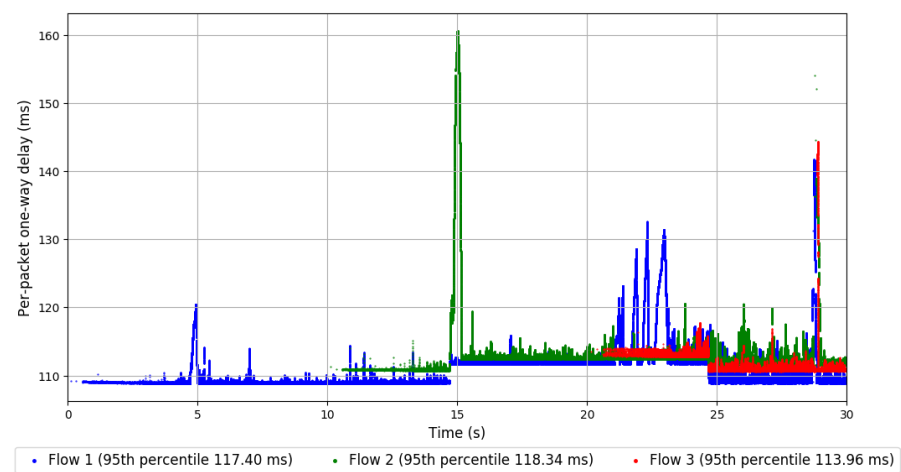
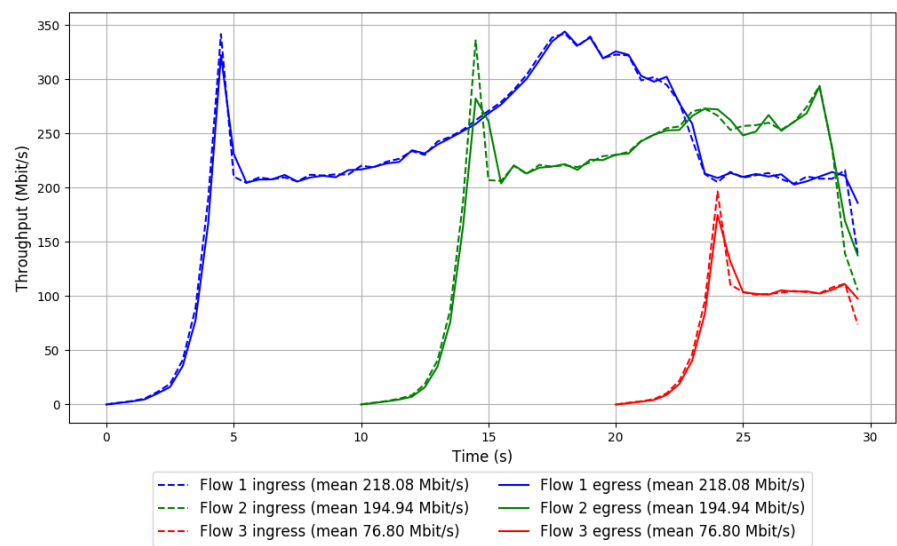
-- Flow 3:

Average throughput: 76.80 Mbit/s

95th percentile per-packet one-way delay: 113.958 ms

Loss rate: 0.03%

Run 7: Report of PCC-Vivace — Data Link



Run 8: Statistics of PCC-Vivace

Start at: 2018-04-18 06:12:39

End at: 2018-04-18 06:13:09

Below is generated by plot.py at 2018-04-18 10:12:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 386.94 Mbit/s

95th percentile per-packet one-way delay: 139.585 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 226.27 Mbit/s

95th percentile per-packet one-way delay: 146.804 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 173.90 Mbit/s

95th percentile per-packet one-way delay: 116.407 ms

Loss rate: 0.00%

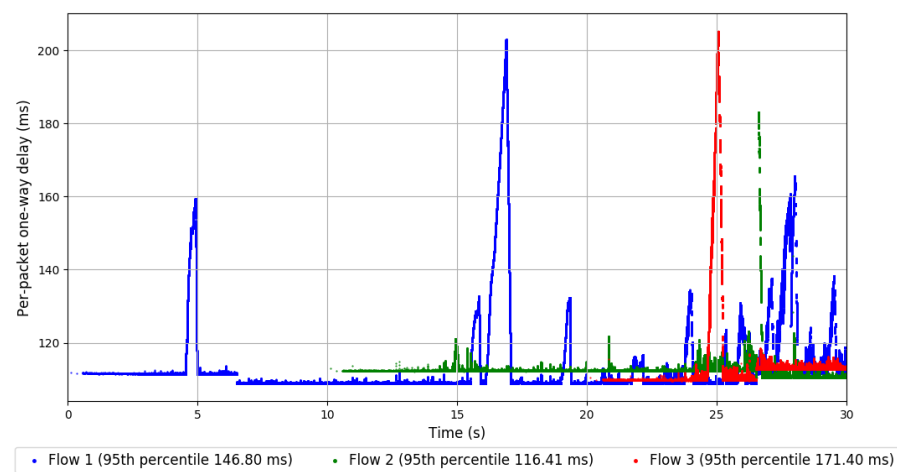
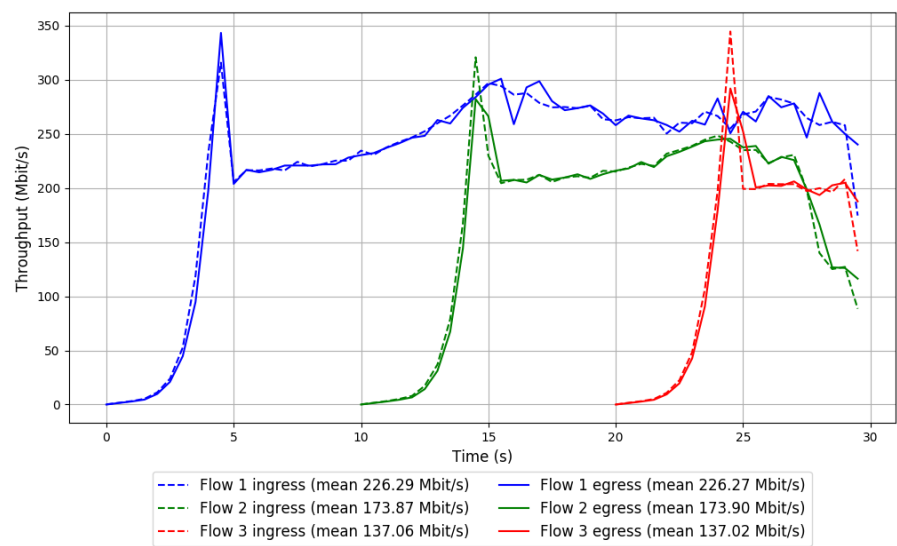
-- Flow 3:

Average throughput: 137.02 Mbit/s

95th percentile per-packet one-way delay: 171.399 ms

Loss rate: 0.02%

Run 8: Report of PCC-Vivace — Data Link



Run 9: Statistics of PCC-Vivace

Start at: 2018-04-18 06:29:54

End at: 2018-04-18 06:30:24

Below is generated by plot.py at 2018-04-18 10:13:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 406.50 Mbit/s

95th percentile per-packet one-way delay: 305.404 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 243.87 Mbit/s

95th percentile per-packet one-way delay: 312.130 ms

Loss rate: 2.04%

-- Flow 2:

Average throughput: 176.52 Mbit/s

95th percentile per-packet one-way delay: 120.727 ms

Loss rate: 0.01%

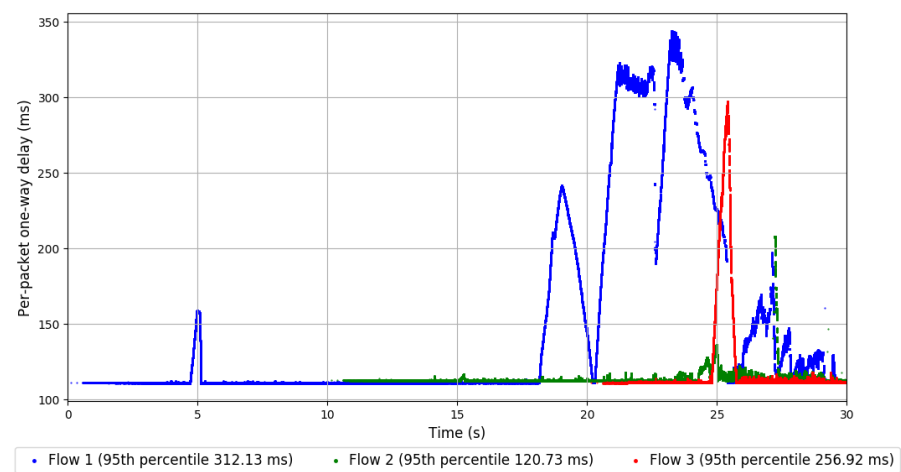
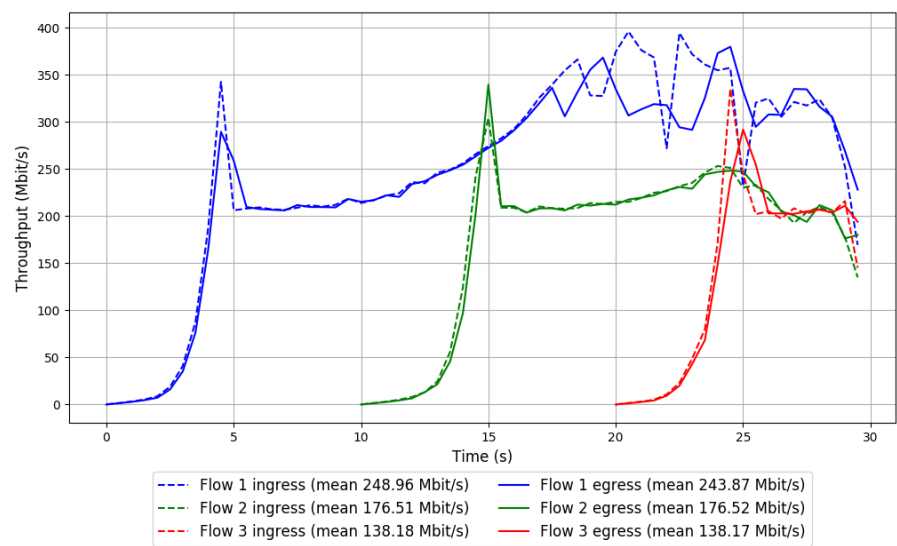
-- Flow 3:

Average throughput: 138.17 Mbit/s

95th percentile per-packet one-way delay: 256.923 ms

Loss rate: 0.01%

Run 9: Report of PCC-Vivace — Data Link



Run 10: Statistics of PCC-Vivace

Start at: 2018-04-18 06:46:48

End at: 2018-04-18 06:47:18

Below is generated by plot.py at 2018-04-18 10:13:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 430.77 Mbit/s

95th percentile per-packet one-way delay: 285.570 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 262.41 Mbit/s

95th percentile per-packet one-way delay: 333.756 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 181.63 Mbit/s

95th percentile per-packet one-way delay: 114.668 ms

Loss rate: 0.00%

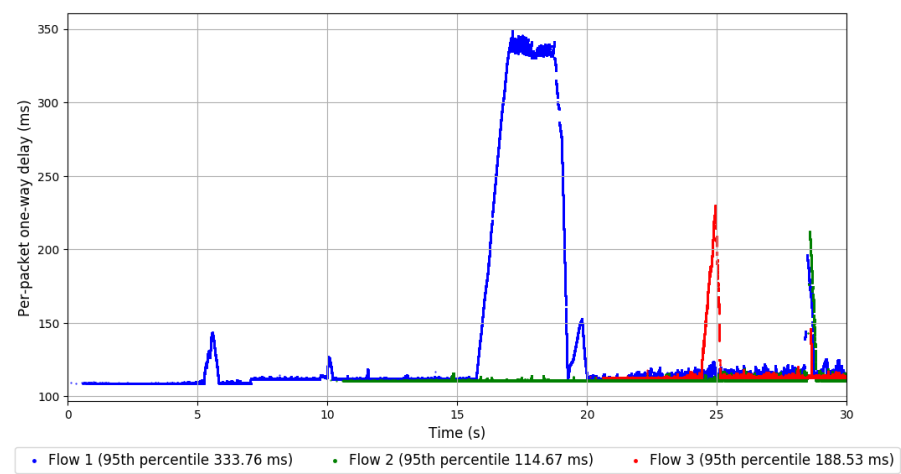
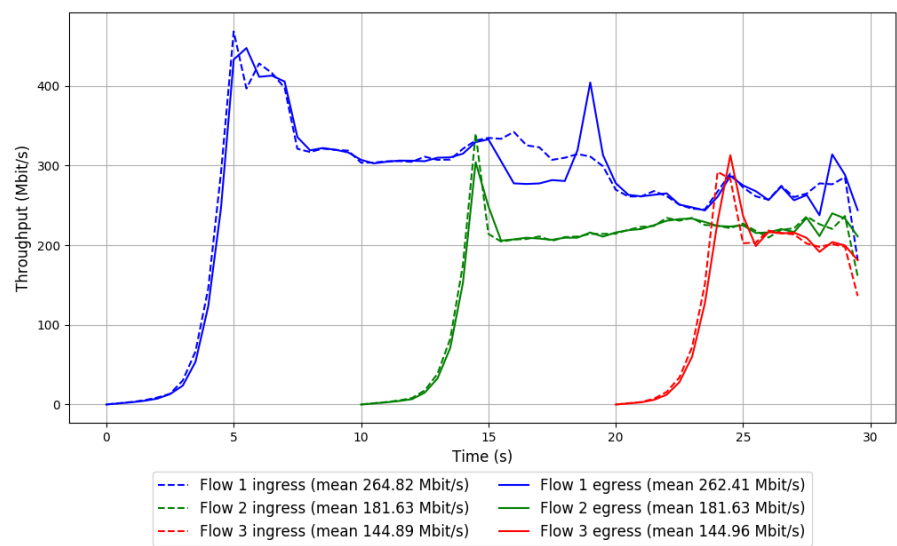
-- Flow 3:

Average throughput: 144.96 Mbit/s

95th percentile per-packet one-way delay: 188.528 ms

Loss rate: 0.00%

Run 10: Report of PCC-Vivace — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-04-18 04:21:52

End at: 2018-04-18 04:22:22

Run 1: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 2: Statistics of PCC-Expr

Start at: 2018-04-18 04:39:10

End at: 2018-04-18 04:39:40

Run 2: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 3: Statistics of PCC-Expr

Start at: 2018-04-18 04:56:26

End at: 2018-04-18 04:56:56

Run 3: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 4: Statistics of PCC-Expr

Start at: 2018-04-18 05:13:43

End at: 2018-04-18 05:14:13

Run 4: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 5: Statistics of PCC-Expr

Start at: 2018-04-18 05:31:16

End at: 2018-04-18 05:31:46

Run 5: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 6: Statistics of PCC-Expr

Start at: 2018-04-18 05:48:37

End at: 2018-04-18 05:49:07

Run 6: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 7: Statistics of PCC-Expr

Start at: 2018-04-18 06:05:51

End at: 2018-04-18 06:06:21

Run 7: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 8: Statistics of PCC-Expr

Start at: 2018-04-18 06:23:11

End at: 2018-04-18 06:23:41

Run 8: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 9: Statistics of PCC-Expr

Start at: 2018-04-18 06:40:17

End at: 2018-04-18 06:40:47

Run 9: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 10: Statistics of PCC-Expr

Start at: 2018-04-18 06:57:19

End at: 2018-04-18 06:57:49

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing