

Pantheon Report

Generated at 2019-04-24 13:48:20 (UTC).

Data path: GCE London on `ens4` (*remote*) → GCE Sydney on `ens4` (*local*).

Repeated the test of 21 congestion control schemes 5 times.

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

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.

System info:

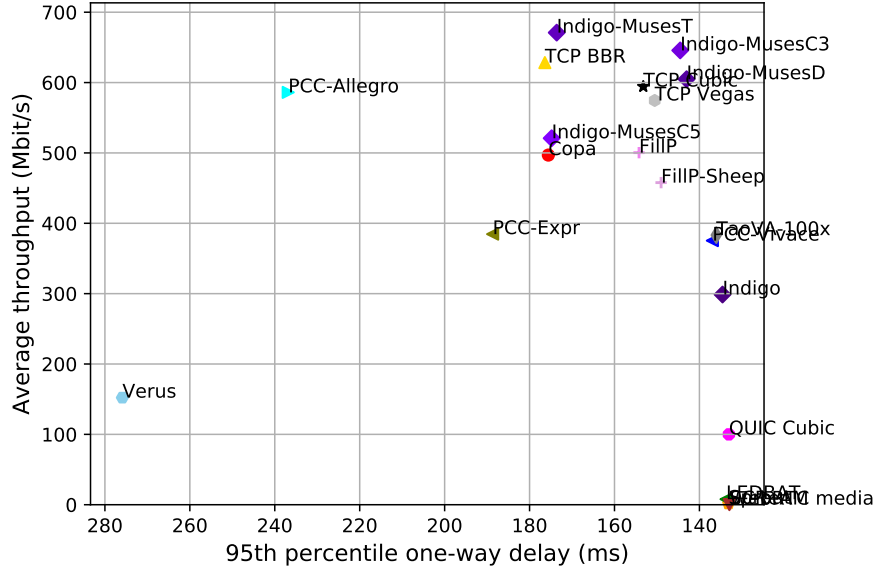
```
Linux 4.15.0-1028-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

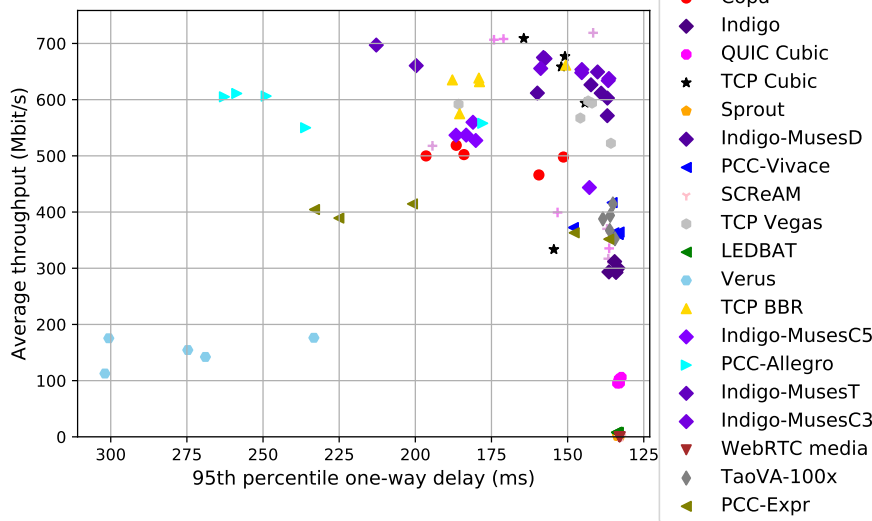
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from GCE London to GCE Sydney, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE London to GCE Sydney, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	335.72	324.69	236.90	175.34	187.73	173.93	1.11	1.91	4.94
Copa	5	269.71	249.58	189.38	179.96	168.89	153.65	0.89	1.39	3.97
TCP Cubic	5	302.78	317.74	247.61	138.79	159.19	172.37	1.23	1.53	3.81
FillP	5	222.18	313.33	218.20	161.93	136.76	134.06	0.48	1.10	2.91
FillP-Sheep	5	169.96	323.48	226.31	154.22	137.02	135.85	0.74	1.17	3.10
Indigo	5	159.58	149.95	120.40	134.67	134.44	137.24	0.82	1.30	3.28
Indigo-MusesC3	5	394.94	301.93	215.16	148.57	137.30	134.86	0.65	1.16	4.51
Indigo-MusesC5	5	312.03	291.98	83.75	184.92	138.39	133.34	0.69	1.41	4.88
Indigo-MusesD	5	386.69	308.11	78.24	140.13	150.81	133.25	0.76	1.55	4.51
Indigo-MusesT	5	426.98	333.89	109.70	177.62	145.29	133.70	0.92	1.55	4.45
LEDBAT	5	5.08	3.42	1.66	133.50	133.95	133.61	1.69	2.70	5.41
PCC-Allegro	5	333.26	272.80	223.78	228.97	226.29	237.59	2.47	4.03	3.93
PCC-Expr	5	231.25	169.52	126.95	195.22	137.26	135.54	1.39	1.59	3.50
QUIC Cubic	5	55.69	46.64	40.14	133.06	132.74	132.76	1.22	2.12	1.95
SCReAM	5	0.16	0.16	0.17	132.70	132.50	132.71	0.88	1.40	2.48
Sprout	5	0.70	0.67	0.59	133.05	133.12	133.14	0.94	1.48	3.12
TaoVA-100x	5	194.47	193.35	185.69	135.49	137.42	135.72	0.94	1.09	3.18
TCP Vegas	5	308.63	284.10	237.65	144.28	160.03	146.76	0.94	1.53	3.66
Verus	5	99.21	38.41	85.10	235.79	174.58	238.57	2.08	0.60	3.76
PCC-Vivace	5	220.68	174.89	120.14	138.52	133.33	140.43	0.88	1.77	4.36
WebRTC media	5	0.05	0.05	0.05	132.71	132.93	132.91	0.00	0.00	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-04-24 09:02:44

End at: 2019-04-24 09:03:14

Local clock offset: -0.071 ms

Remote clock offset: 0.07 ms

Below is generated by plot.py at 2019-04-24 12:03:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 631.98 Mbit/s

95th percentile per-packet one-way delay: 178.933 ms

Loss rate: 1.84%

-- Flow 1:

Average throughput: 344.23 Mbit/s

95th percentile per-packet one-way delay: 161.750 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 325.49 Mbit/s

95th percentile per-packet one-way delay: 229.815 ms

Loss rate: 2.36%

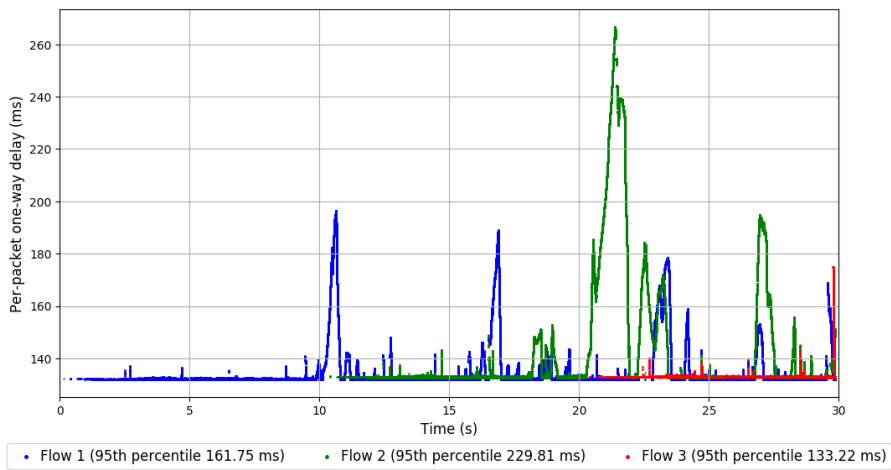
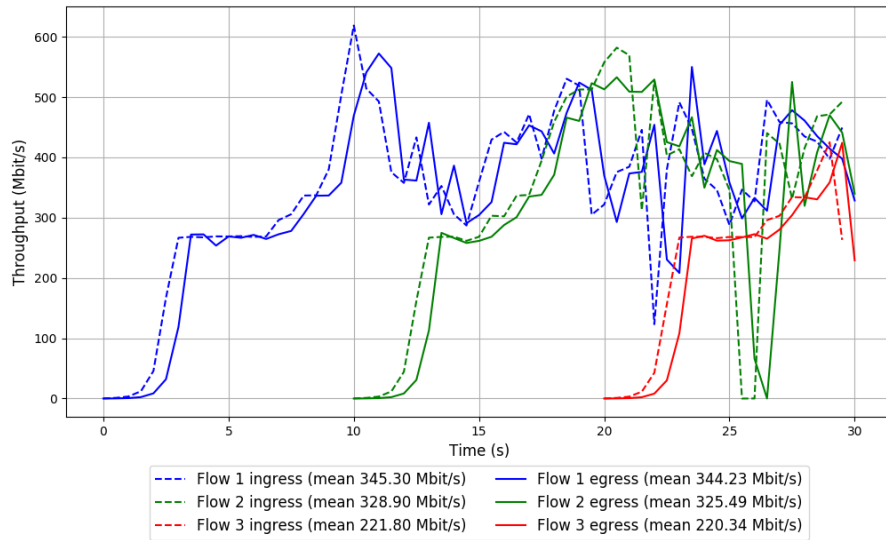
-- Flow 3:

Average throughput: 220.34 Mbit/s

95th percentile per-packet one-way delay: 133.216 ms

Loss rate: 3.32%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-04-24 09:40:32

End at: 2019-04-24 09:41:02

Local clock offset: 0.046 ms

Remote clock offset: 0.039 ms

Below is generated by plot.py at 2019-04-24 12:03:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 638.42 Mbit/s

95th percentile per-packet one-way delay: 179.141 ms

Loss rate: 2.07%

-- Flow 1:

Average throughput: 351.13 Mbit/s

95th percentile per-packet one-way delay: 224.619 ms

Loss rate: 1.67%

-- Flow 2:

Average throughput: 317.29 Mbit/s

95th percentile per-packet one-way delay: 165.981 ms

Loss rate: 1.62%

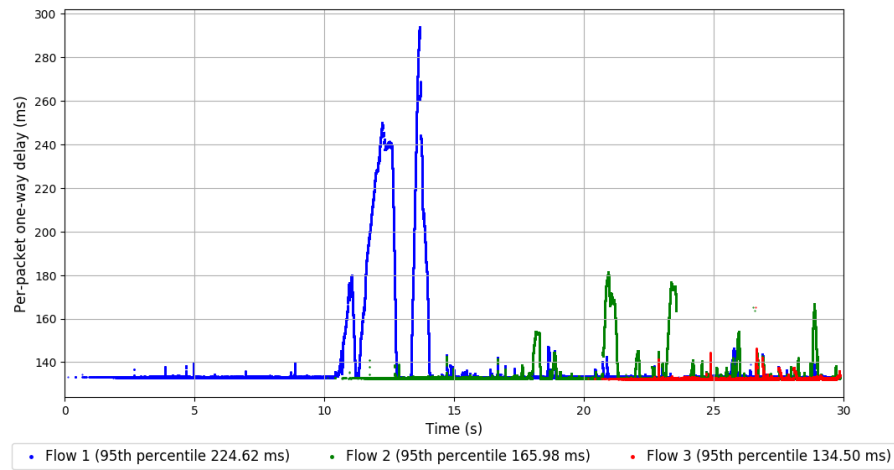
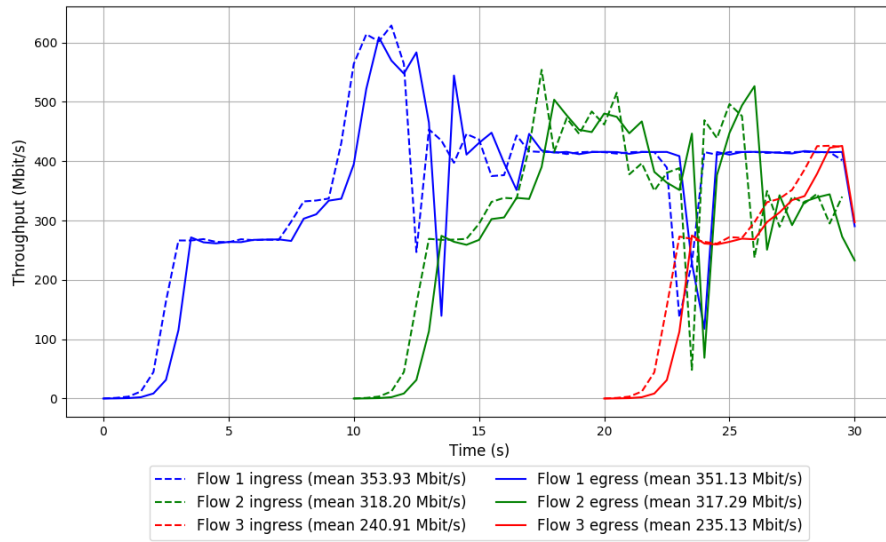
-- Flow 3:

Average throughput: 235.13 Mbit/s

95th percentile per-packet one-way delay: 134.498 ms

Loss rate: 5.00%

Run 2: Report of TCP BBR — Data Link

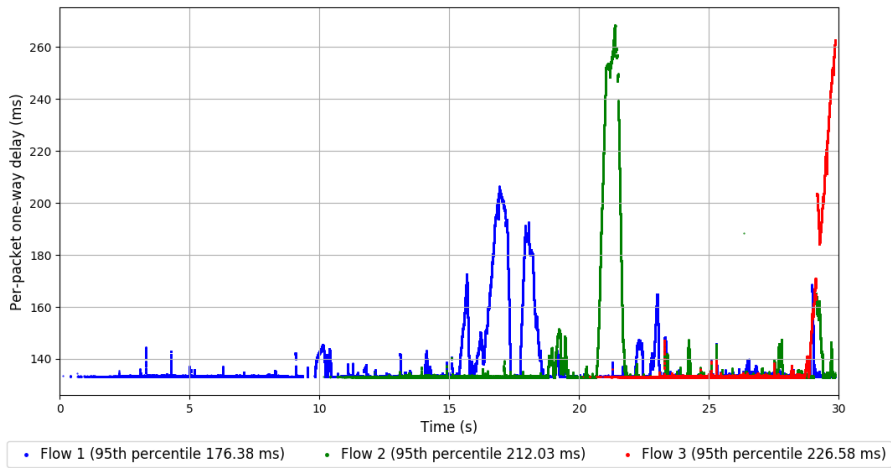
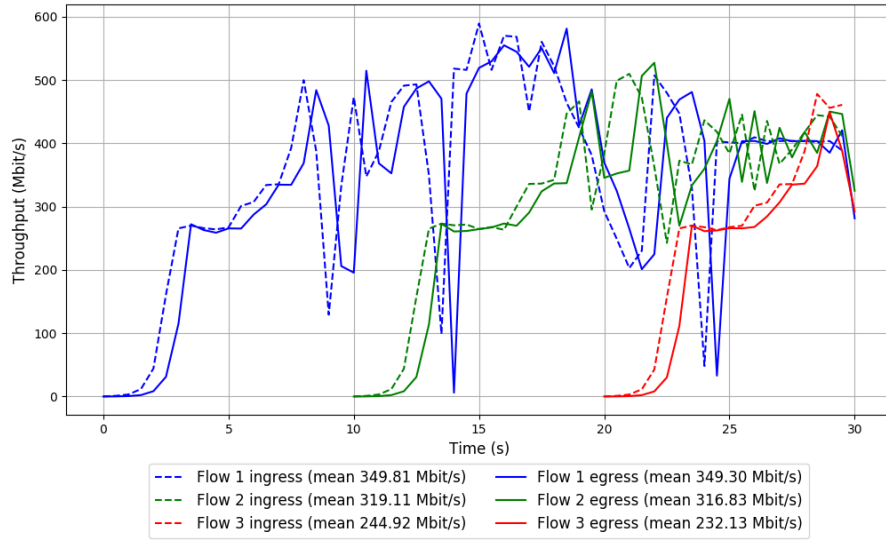


Run 3: Statistics of TCP BBR

Start at: 2019-04-24 10:18:39
End at: 2019-04-24 10:19:09
Local clock offset: -0.111 ms
Remote clock offset: -0.051 ms

```
# Below is generated by plot.py at 2019-04-24 12:03:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 635.19 Mbit/s
95th percentile per-packet one-way delay: 187.832 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 349.30 Mbit/s
95th percentile per-packet one-way delay: 176.379 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 316.83 Mbit/s
95th percentile per-packet one-way delay: 212.035 ms
Loss rate: 2.04%
-- Flow 3:
Average throughput: 232.13 Mbit/s
95th percentile per-packet one-way delay: 226.576 ms
Loss rate: 7.75%
```

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-04-24 10:55:49

End at: 2019-04-24 10:56:19

Local clock offset: -0.073 ms

Remote clock offset: 0.039 ms

Below is generated by plot.py at 2019-04-24 12:04:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 661.42 Mbit/s

95th percentile per-packet one-way delay: 150.621 ms

Loss rate: 1.77%

-- Flow 1:

Average throughput: 353.29 Mbit/s

95th percentile per-packet one-way delay: 141.566 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 349.30 Mbit/s

95th percentile per-packet one-way delay: 150.374 ms

Loss rate: 1.95%

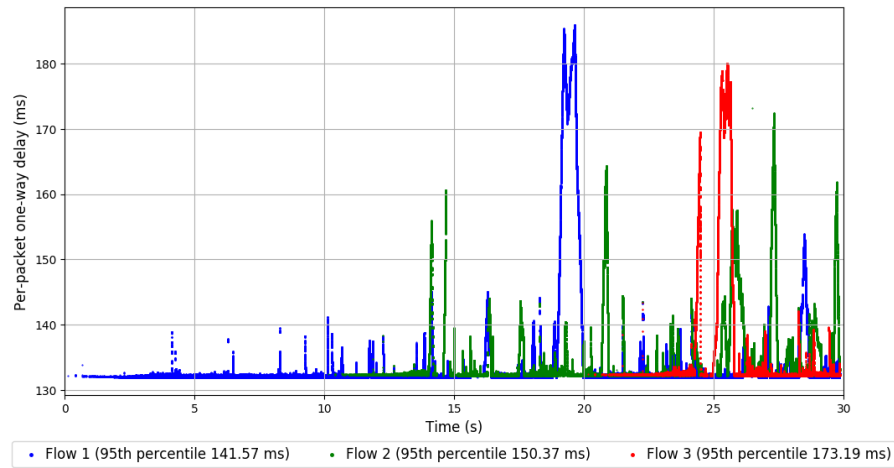
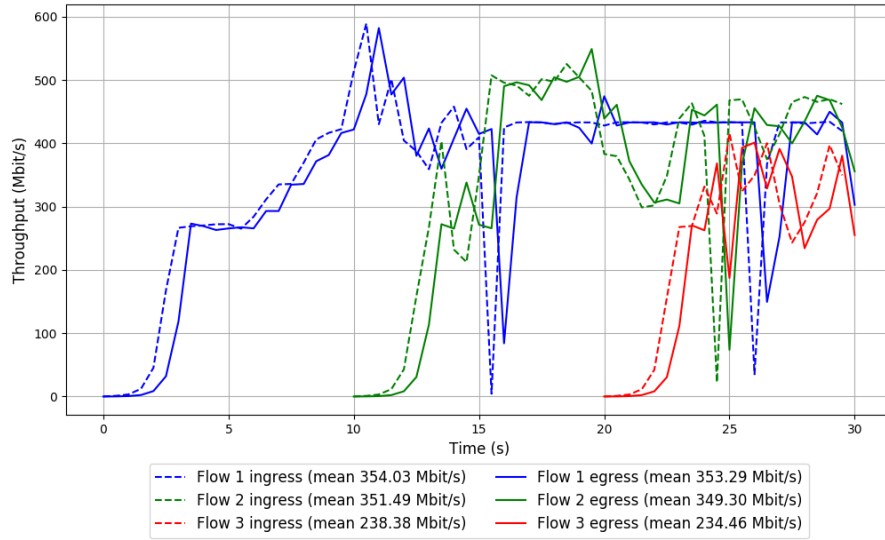
-- Flow 3:

Average throughput: 234.46 Mbit/s

95th percentile per-packet one-way delay: 173.189 ms

Loss rate: 4.26%

Run 4: Report of TCP BBR — Data Link

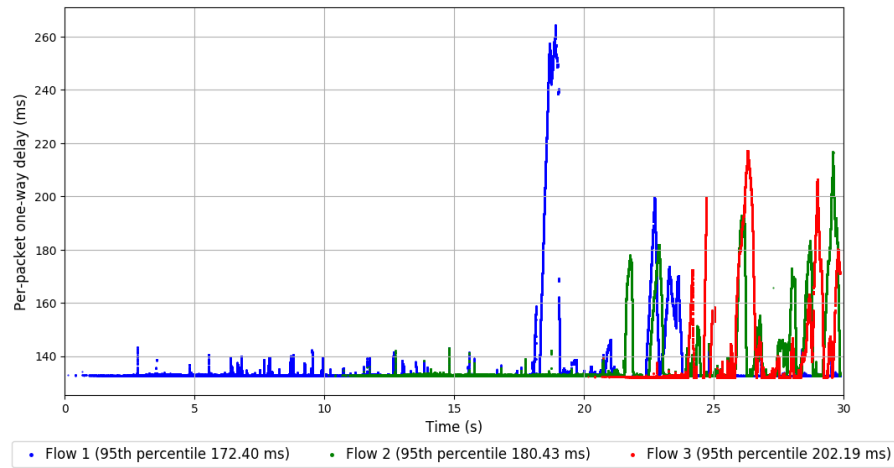
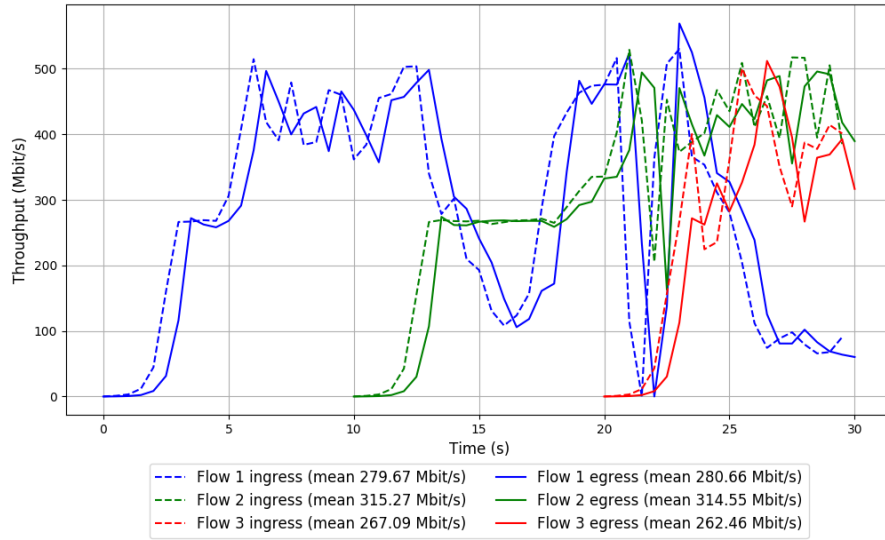


Run 5: Statistics of TCP BBR

Start at: 2019-04-24 11:32:59
End at: 2019-04-24 11:33:29
Local clock offset: -0.255 ms
Remote clock offset: -0.034 ms

```
# Below is generated by plot.py at 2019-04-24 12:04:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 574.95 Mbit/s
95th percentile per-packet one-way delay: 185.457 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 280.66 Mbit/s
95th percentile per-packet one-way delay: 172.402 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 314.55 Mbit/s
95th percentile per-packet one-way delay: 180.432 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 262.46 Mbit/s
95th percentile per-packet one-way delay: 202.194 ms
Loss rate: 4.36%
```

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-04-24 08:55:13

End at: 2019-04-24 08:55:43

Local clock offset: -0.063 ms

Remote clock offset: 0.034 ms

Below is generated by plot.py at 2019-04-24 12:09:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 518.78 Mbit/s

95th percentile per-packet one-way delay: 186.572 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 282.81 Mbit/s

95th percentile per-packet one-way delay: 181.667 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 263.04 Mbit/s

95th percentile per-packet one-way delay: 196.587 ms

Loss rate: 1.36%

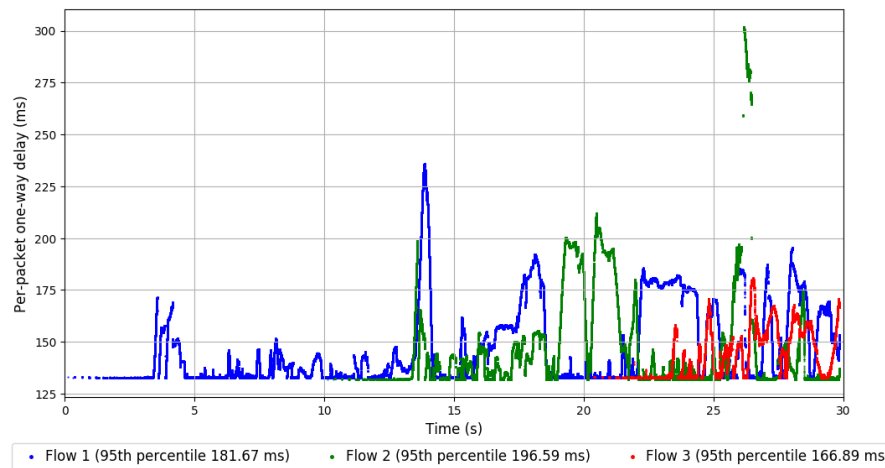
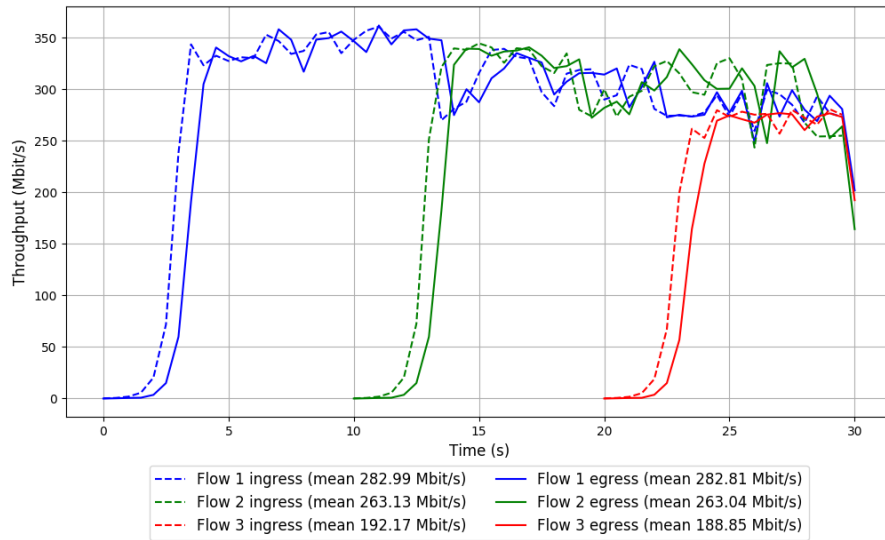
-- Flow 3:

Average throughput: 188.85 Mbit/s

95th percentile per-packet one-way delay: 166.894 ms

Loss rate: 4.34%

Run 1: Report of Copa — Data Link

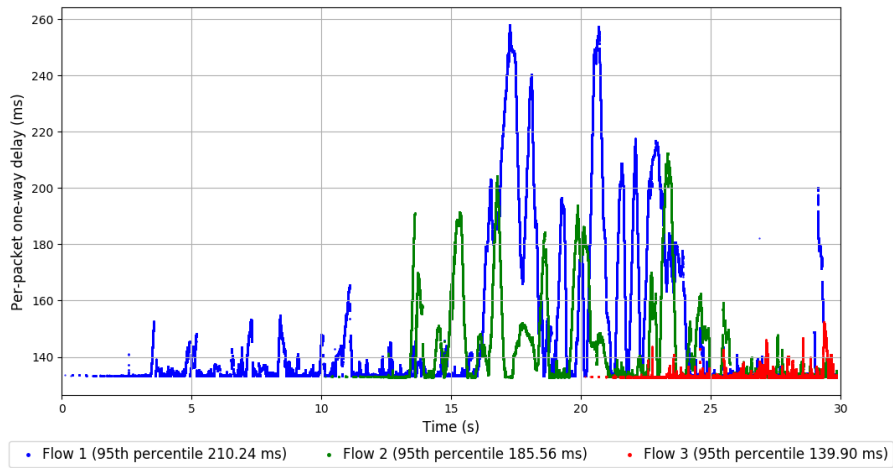
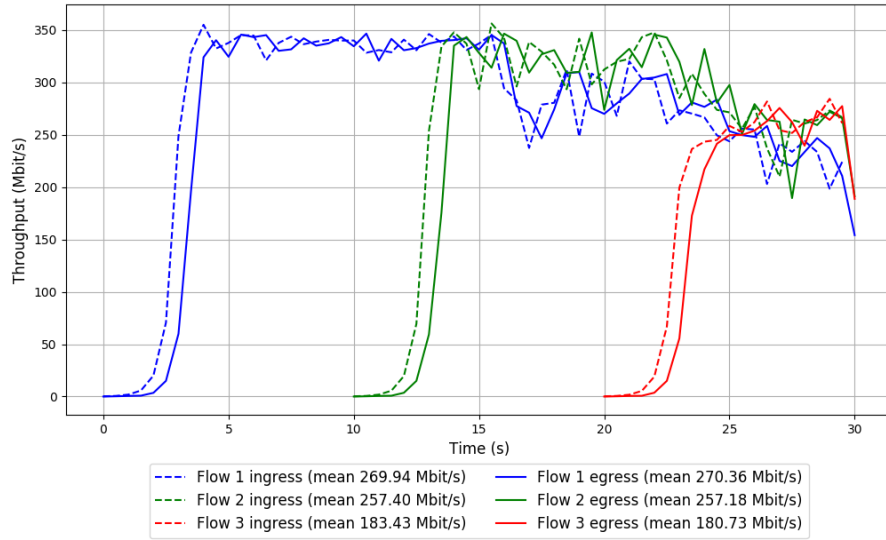


Run 2: Statistics of Copa

Start at: 2019-04-24 09:32:52
End at: 2019-04-24 09:33:22
Local clock offset: 0.058 ms
Remote clock offset: -0.334 ms

```
# Below is generated by plot.py at 2019-04-24 12:09:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 499.85 Mbit/s
95th percentile per-packet one-way delay: 196.479 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 270.36 Mbit/s
95th percentile per-packet one-way delay: 210.243 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 257.18 Mbit/s
95th percentile per-packet one-way delay: 185.556 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 180.73 Mbit/s
95th percentile per-packet one-way delay: 139.901 ms
Loss rate: 4.11%
```

Run 2: Report of Copa — Data Link

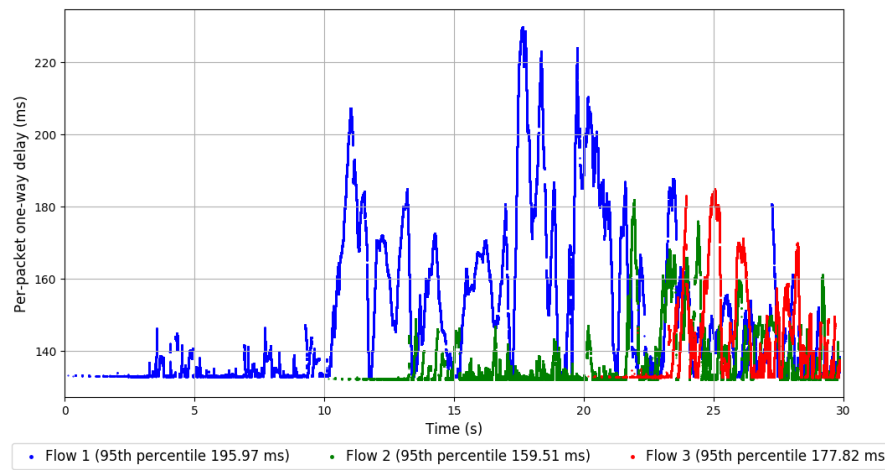
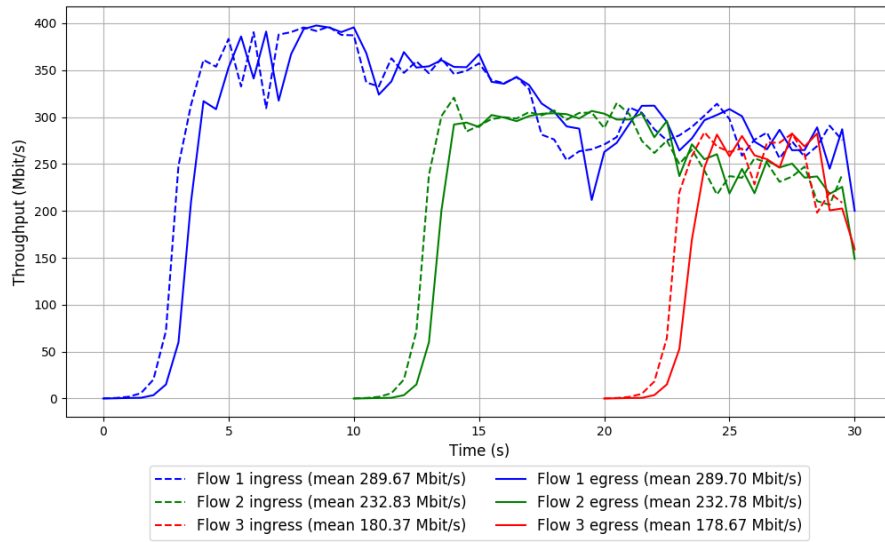


Run 3: Statistics of Copa

Start at: 2019-04-24 10:11:06
End at: 2019-04-24 10:11:36
Local clock offset: -0.115 ms
Remote clock offset: -0.021 ms

```
# Below is generated by plot.py at 2019-04-24 12:09:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 502.25 Mbit/s
95th percentile per-packet one-way delay: 184.036 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 289.70 Mbit/s
95th percentile per-packet one-way delay: 195.974 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 232.78 Mbit/s
95th percentile per-packet one-way delay: 159.508 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 178.67 Mbit/s
95th percentile per-packet one-way delay: 177.822 ms
Loss rate: 3.59%
```

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-04-24 10:48:18

End at: 2019-04-24 10:48:48

Local clock offset: -0.106 ms

Remote clock offset: 0.024 ms

Below is generated by plot.py at 2019-04-24 12:18:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 466.01 Mbit/s

95th percentile per-packet one-way delay: 159.428 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 248.68 Mbit/s

95th percentile per-packet one-way delay: 167.087 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 229.72 Mbit/s

95th percentile per-packet one-way delay: 146.692 ms

Loss rate: 1.30%

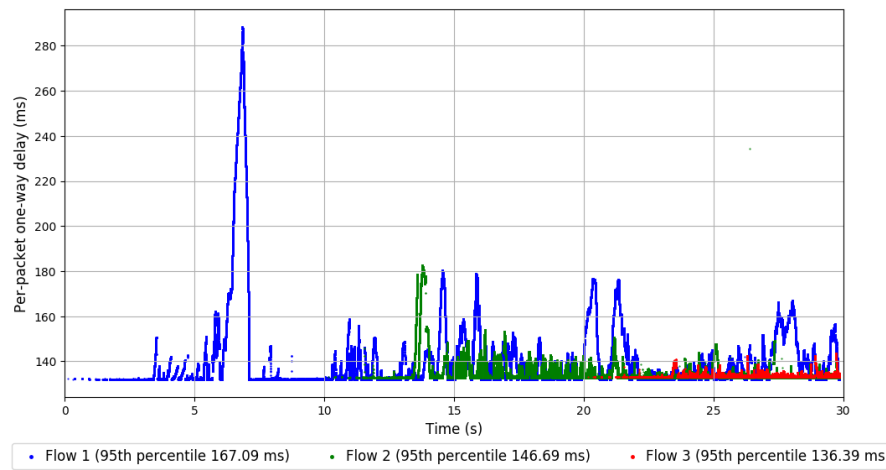
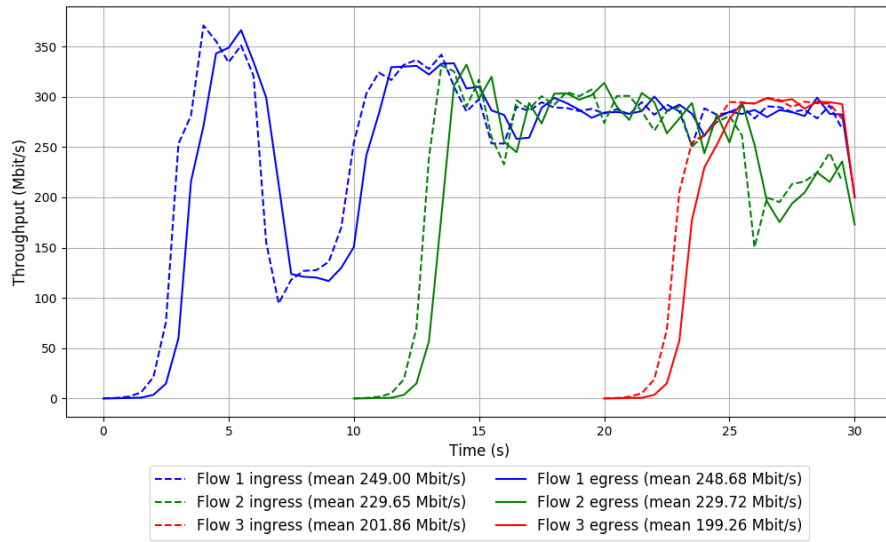
-- Flow 3:

Average throughput: 199.26 Mbit/s

95th percentile per-packet one-way delay: 136.394 ms

Loss rate: 3.92%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-04-24 11:25:27

End at: 2019-04-24 11:25:57

Local clock offset: -0.065 ms

Remote clock offset: 0.047 ms

Below is generated by plot.py at 2019-04-24 12:20:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 497.87 Mbit/s

95th percentile per-packet one-way delay: 151.370 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 256.98 Mbit/s

95th percentile per-packet one-way delay: 144.852 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 265.16 Mbit/s

95th percentile per-packet one-way delay: 156.103 ms

Loss rate: 1.51%

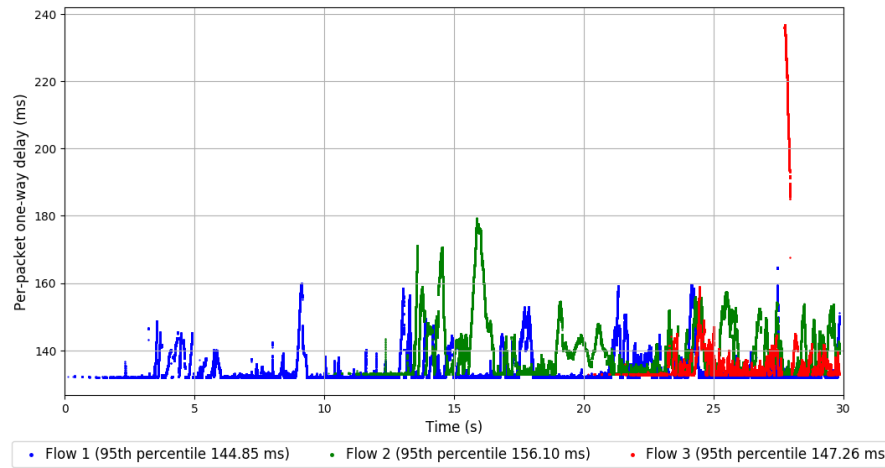
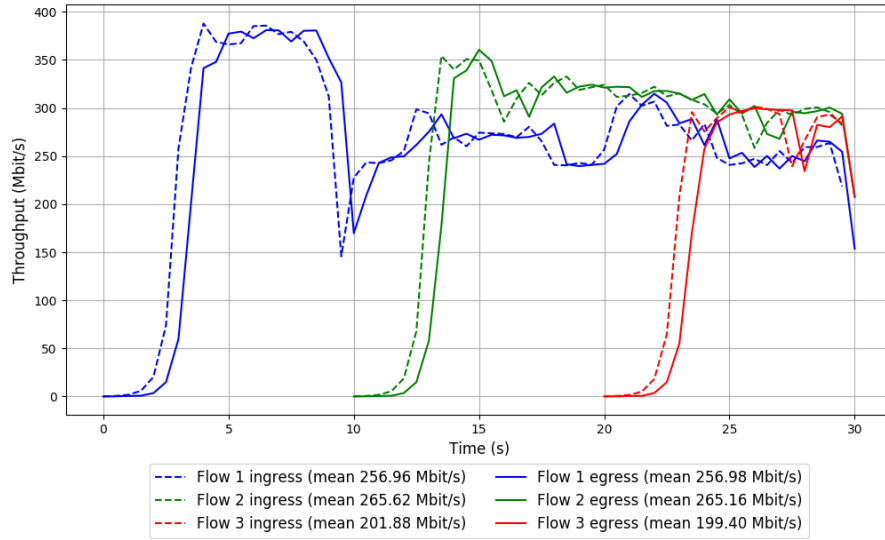
-- Flow 3:

Average throughput: 199.40 Mbit/s

95th percentile per-packet one-way delay: 147.258 ms

Loss rate: 3.87%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-04-24 09:04:48

End at: 2019-04-24 09:05:18

Local clock offset: -0.284 ms

Remote clock offset: 0.063 ms

Below is generated by plot.py at 2019-04-24 12:20:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 676.84 Mbit/s

95th percentile per-packet one-way delay: 150.866 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 382.48 Mbit/s

95th percentile per-packet one-way delay: 137.565 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 315.74 Mbit/s

95th percentile per-packet one-way delay: 159.911 ms

Loss rate: 1.58%

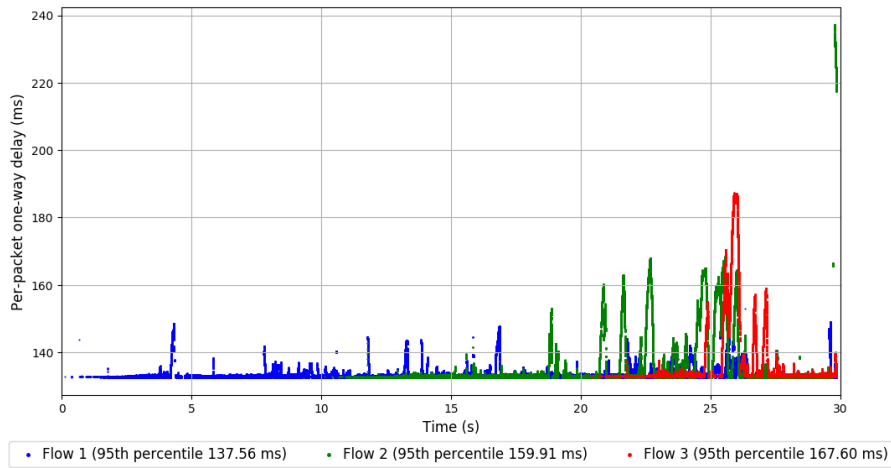
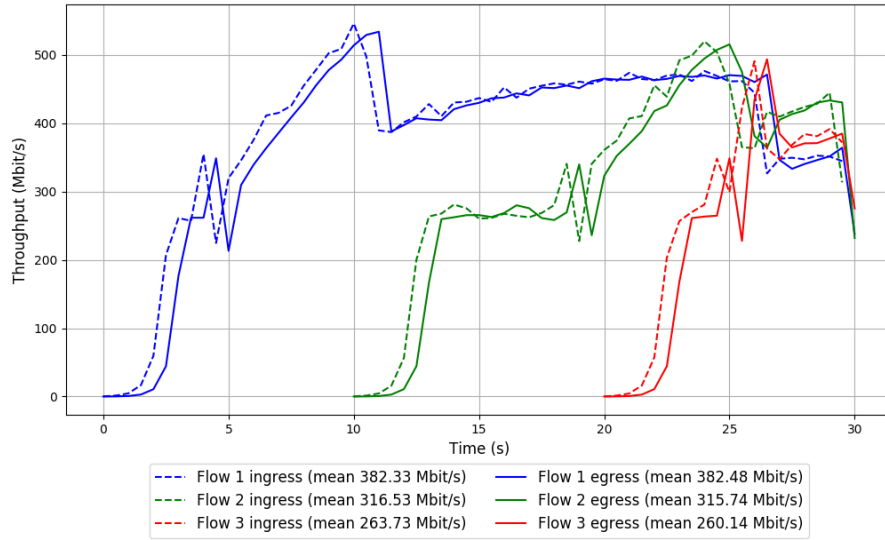
-- Flow 3:

Average throughput: 260.14 Mbit/s

95th percentile per-packet one-way delay: 167.597 ms

Loss rate: 3.99%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-04-24 09:42:35

End at: 2019-04-24 09:43:05

Local clock offset: 0.281 ms

Remote clock offset: 0.019 ms

Below is generated by plot.py at 2019-04-24 12:20:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 708.97 Mbit/s

95th percentile per-packet one-way delay: 164.393 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 374.52 Mbit/s

95th percentile per-packet one-way delay: 142.181 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 382.26 Mbit/s

95th percentile per-packet one-way delay: 196.073 ms

Loss rate: 1.84%

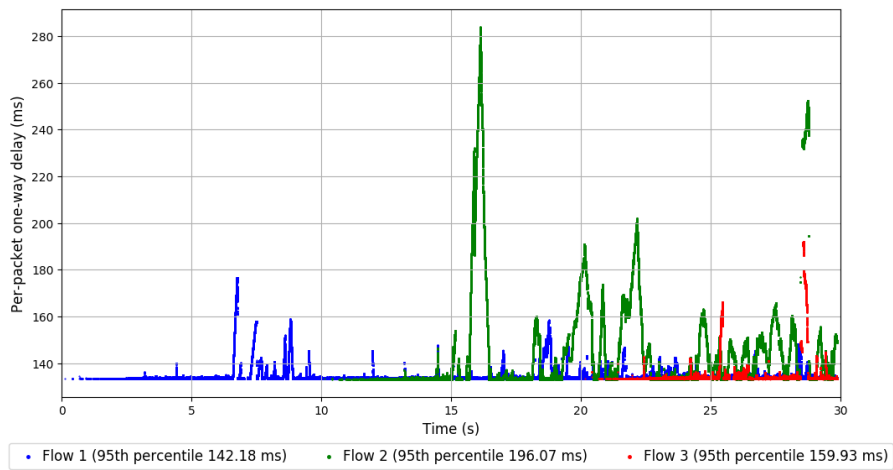
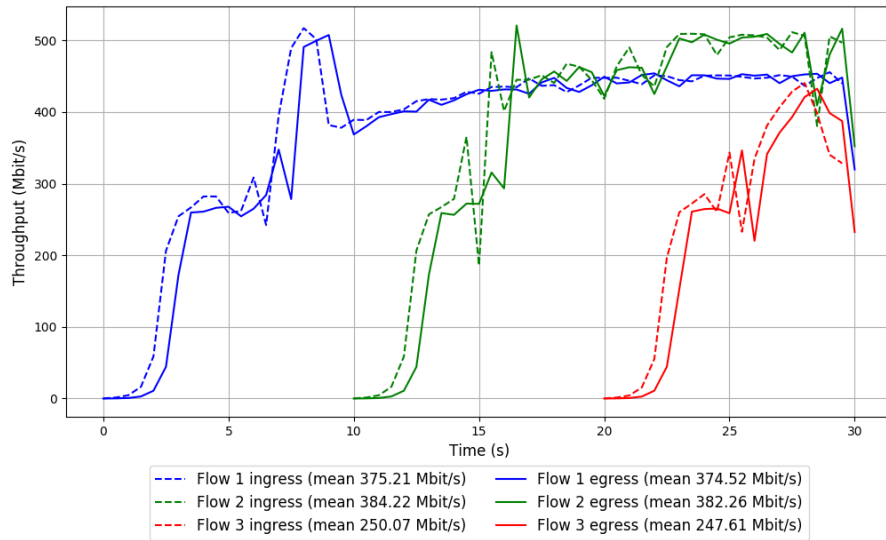
-- Flow 3:

Average throughput: 247.61 Mbit/s

95th percentile per-packet one-way delay: 159.927 ms

Loss rate: 3.62%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-04-24 10:20:42
End at: 2019-04-24 10:21:12
Local clock offset: -0.134 ms
Remote clock offset: -0.028 ms

Below is generated by plot.py at 2019-04-24 12:20:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 594.09 Mbit/s
95th percentile per-packet one-way delay: 144.281 ms
Loss rate: 1.49%

-- Flow 1:

Average throughput: 332.75 Mbit/s
95th percentile per-packet one-way delay: 144.253 ms
Loss rate: 0.92%

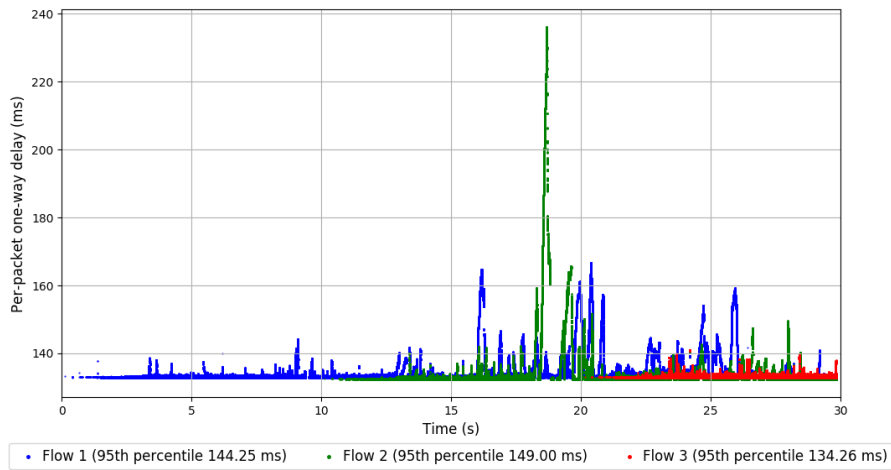
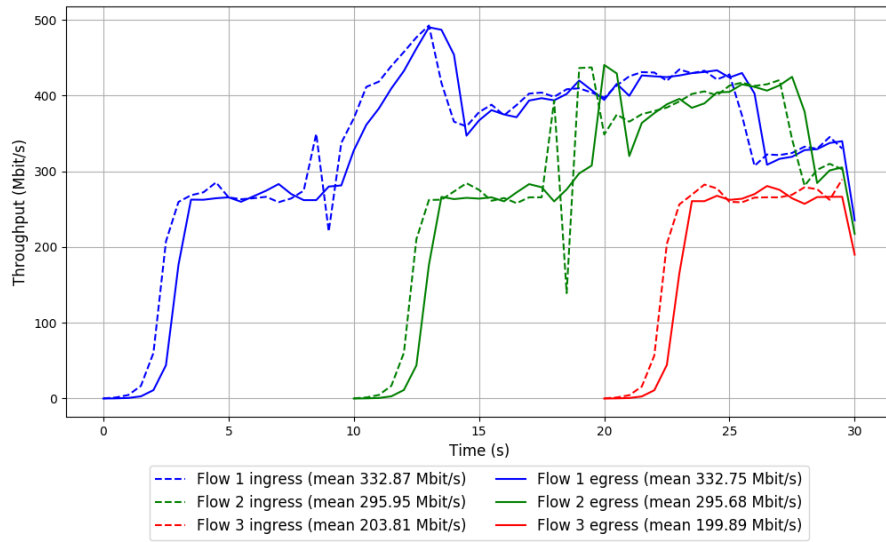
-- Flow 2:

Average throughput: 295.68 Mbit/s
95th percentile per-packet one-way delay: 149.005 ms
Loss rate: 1.41%

-- Flow 3:

Average throughput: 199.89 Mbit/s
95th percentile per-packet one-way delay: 134.262 ms
Loss rate: 4.54%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-04-24 10:57:53

End at: 2019-04-24 10:58:23

Local clock offset: -0.332 ms

Remote clock offset: 0.019 ms

Below is generated by plot.py at 2019-04-24 12:20:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 333.42 Mbit/s

95th percentile per-packet one-way delay: 154.516 ms

Loss rate: 2.13%

-- Flow 1:

Average throughput: 55.81 Mbit/s

95th percentile per-packet one-way delay: 132.734 ms

Loss rate: 2.39%

-- Flow 2:

Average throughput: 289.59 Mbit/s

95th percentile per-packet one-way delay: 133.375 ms

Loss rate: 1.73%

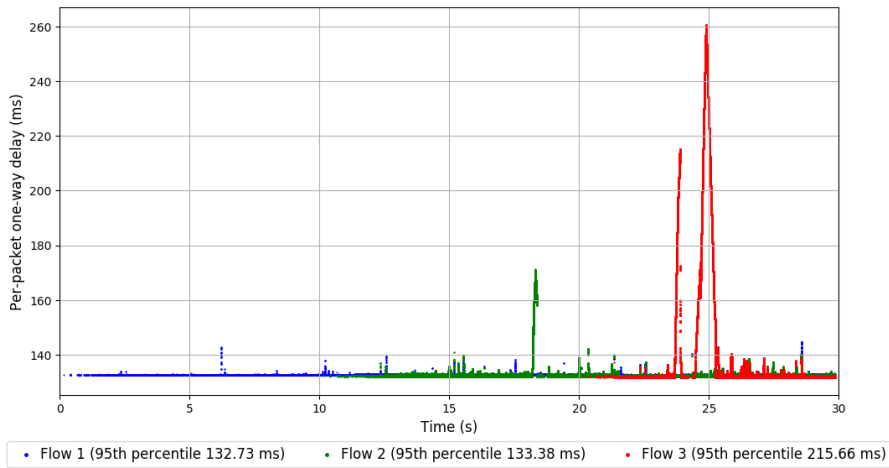
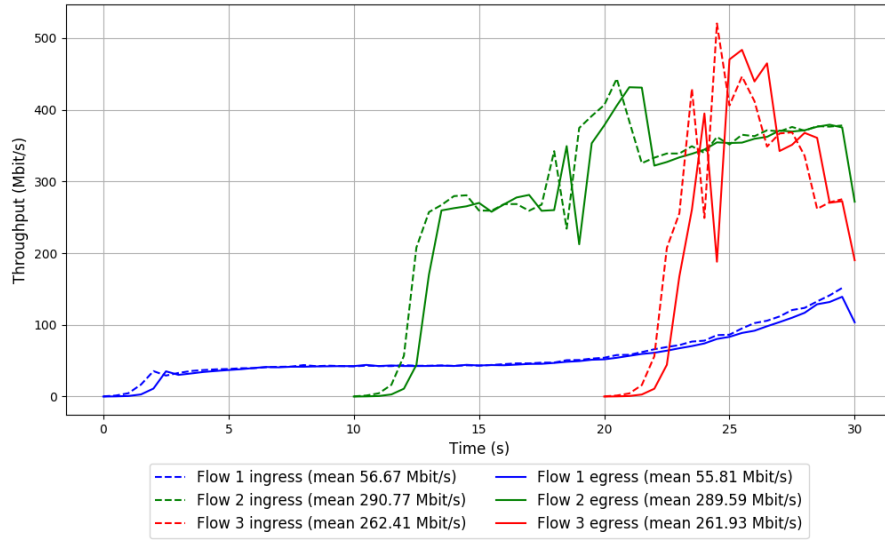
-- Flow 3:

Average throughput: 261.93 Mbit/s

95th percentile per-packet one-way delay: 215.656 ms

Loss rate: 2.84%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-04-24 11:35:00

End at: 2019-04-24 11:35:30

Local clock offset: -0.051 ms

Remote clock offset: -0.03 ms

Below is generated by plot.py at 2019-04-24 12:21:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 658.49 Mbit/s

95th percentile per-packet one-way delay: 152.068 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 368.35 Mbit/s

95th percentile per-packet one-way delay: 137.211 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 305.45 Mbit/s

95th percentile per-packet one-way delay: 157.584 ms

Loss rate: 1.11%

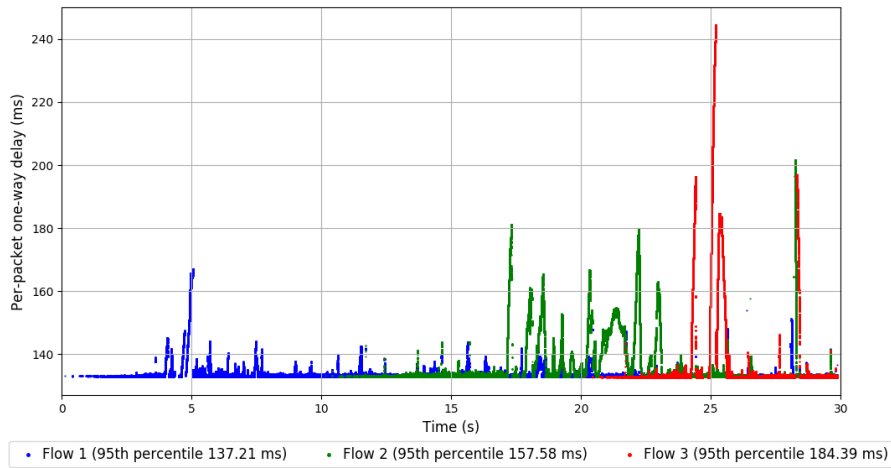
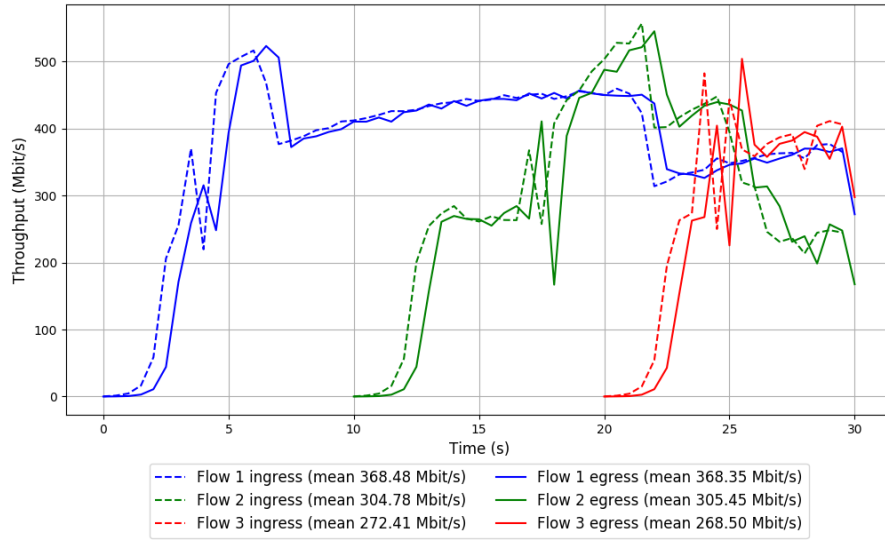
-- Flow 3:

Average throughput: 268.50 Mbit/s

95th percentile per-packet one-way delay: 184.393 ms

Loss rate: 4.06%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-04-24 08:41:10

End at: 2019-04-24 08:41:40

Local clock offset: 0.195 ms

Remote clock offset: 0.022 ms

Below is generated by plot.py at 2019-04-24 12:25:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 707.92 Mbit/s

95th percentile per-packet one-way delay: 171.052 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 443.20 Mbit/s

95th percentile per-packet one-way delay: 183.645 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 298.68 Mbit/s

95th percentile per-packet one-way delay: 137.978 ms

Loss rate: 1.12%

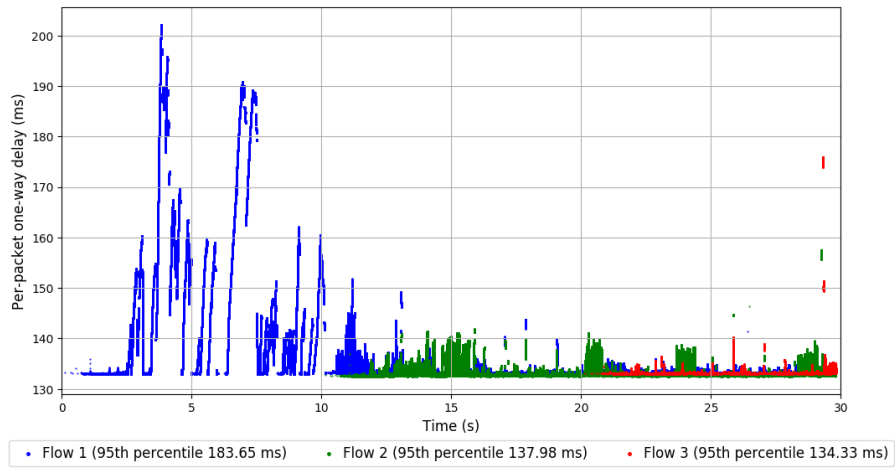
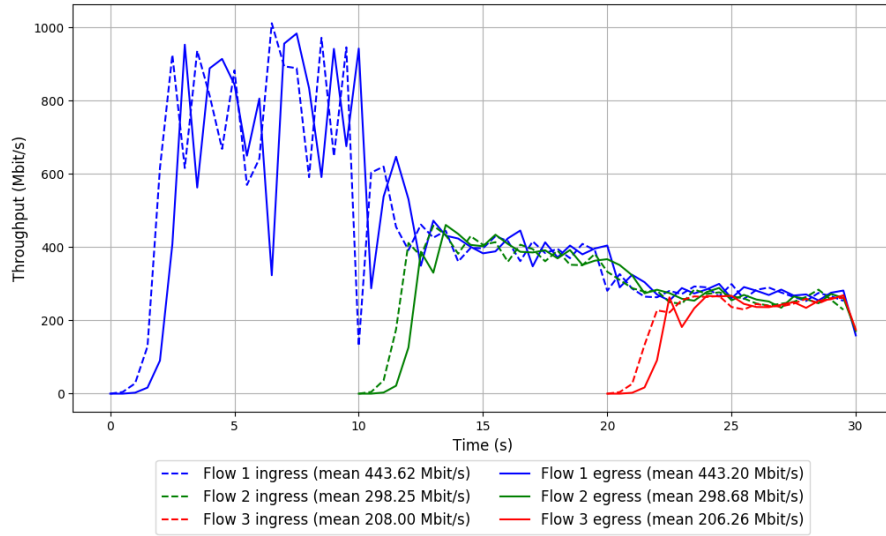
-- Flow 3:

Average throughput: 206.26 Mbit/s

95th percentile per-packet one-way delay: 134.328 ms

Loss rate: 3.38%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-04-24 09:18:46

End at: 2019-04-24 09:19:16

Local clock offset: 0.157 ms

Remote clock offset: 0.057 ms

Below is generated by plot.py at 2019-04-24 12:25:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 399.26 Mbit/s

95th percentile per-packet one-way delay: 153.303 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 109.62 Mbit/s

95th percentile per-packet one-way delay: 174.986 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 323.47 Mbit/s

95th percentile per-packet one-way delay: 136.066 ms

Loss rate: 1.24%

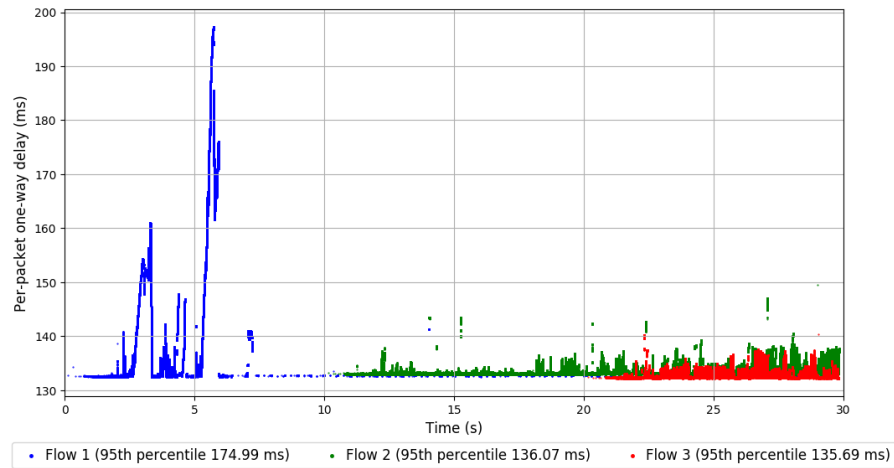
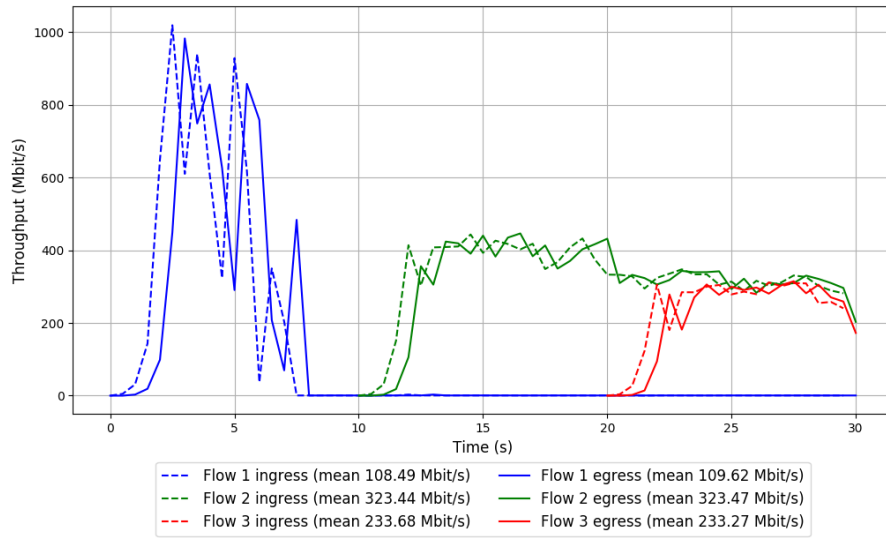
-- Flow 3:

Average throughput: 233.27 Mbit/s

95th percentile per-packet one-way delay: 135.693 ms

Loss rate: 3.05%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-04-24 09:57:08

End at: 2019-04-24 09:57:38

Local clock offset: 0.297 ms

Remote clock offset: 0.014 ms

Below is generated by plot.py at 2019-04-24 12:30:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 706.58 Mbit/s

95th percentile per-packet one-way delay: 174.178 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 434.87 Mbit/s

95th percentile per-packet one-way delay: 180.964 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 307.54 Mbit/s

95th percentile per-packet one-way delay: 135.479 ms

Loss rate: 1.05%

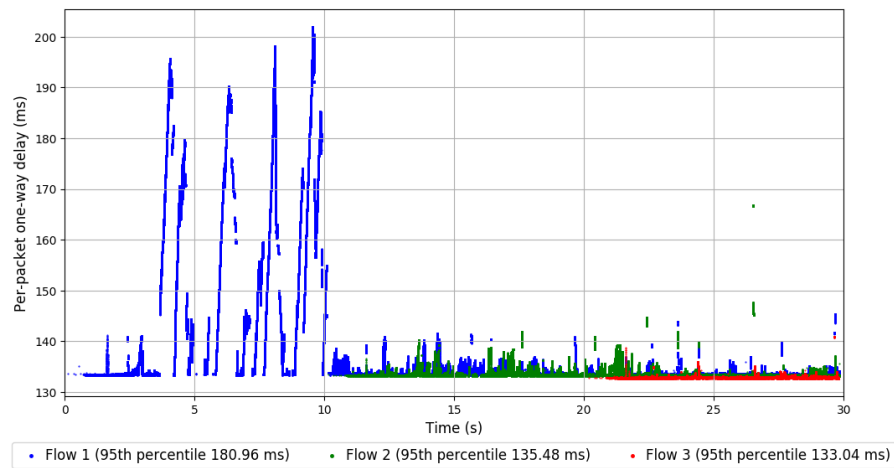
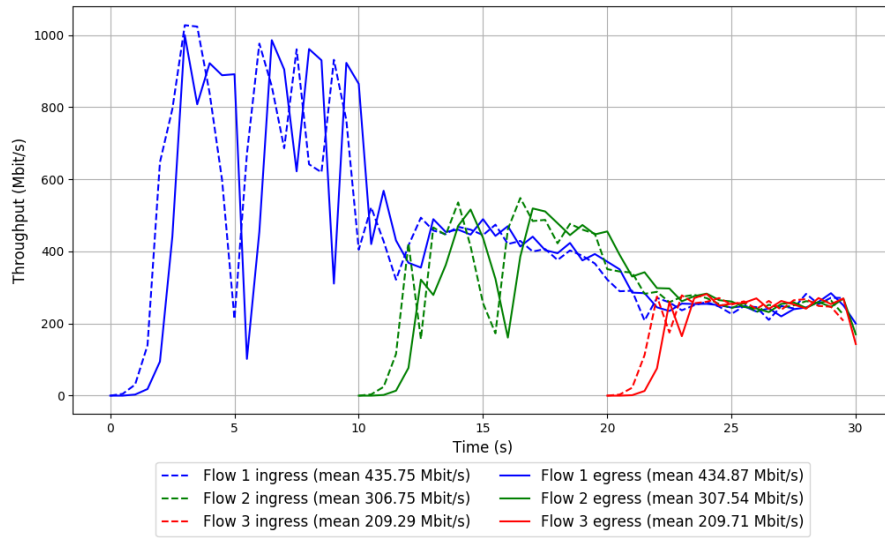
-- Flow 3:

Average throughput: 209.71 Mbit/s

95th percentile per-packet one-way delay: 133.045 ms

Loss rate: 2.65%

Run 3: Report of FillP — Data Link

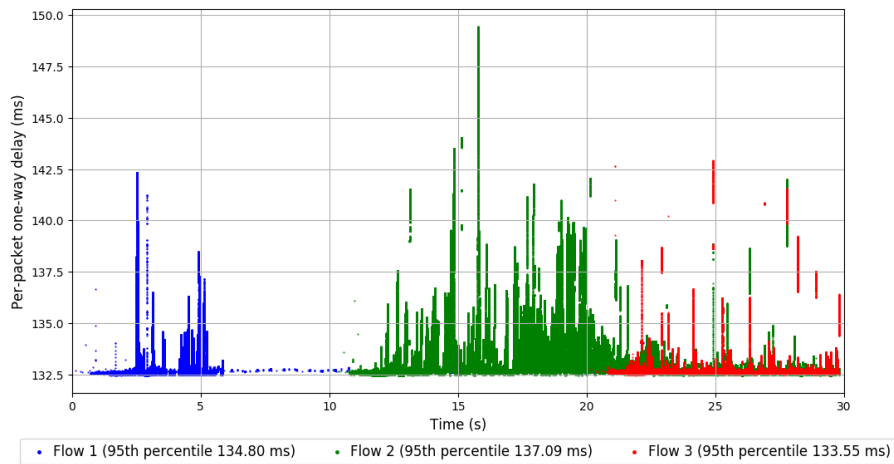
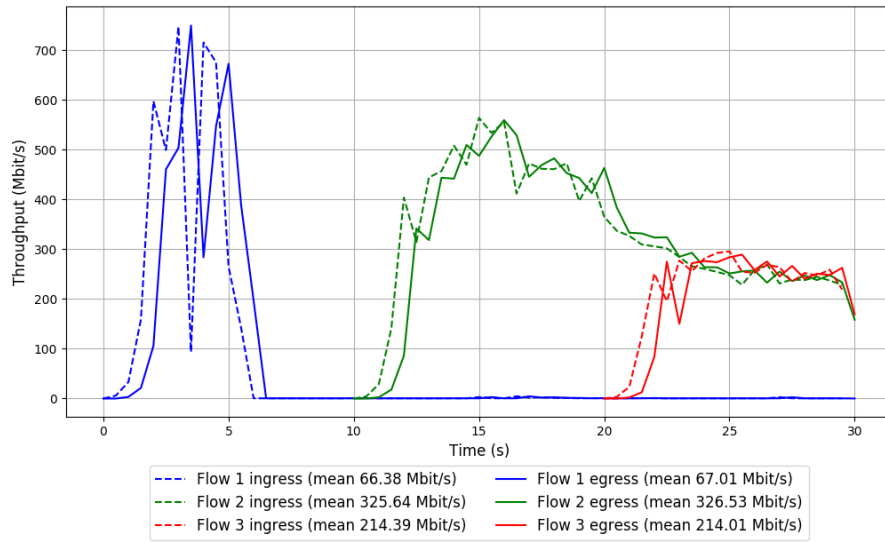


Run 4: Statistics of FillP

Start at: 2019-04-24 10:34:41
End at: 2019-04-24 10:35:11
Local clock offset: -0.359 ms
Remote clock offset: -0.011 ms

```
# Below is generated by plot.py at 2019-04-24 12:30:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.86 Mbit/s
95th percentile per-packet one-way delay: 136.208 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 67.01 Mbit/s
95th percentile per-packet one-way delay: 134.804 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 326.53 Mbit/s
95th percentile per-packet one-way delay: 137.095 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 214.01 Mbit/s
95th percentile per-packet one-way delay: 133.548 ms
Loss rate: 2.78%
```

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-04-24 11:11:43

End at: 2019-04-24 11:12:13

Local clock offset: -0.256 ms

Remote clock offset: -0.0 ms

Below is generated by plot.py at 2019-04-24 12:30:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 335.31 Mbit/s

95th percentile per-packet one-way delay: 136.362 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 56.20 Mbit/s

95th percentile per-packet one-way delay: 135.249 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 310.43 Mbit/s

95th percentile per-packet one-way delay: 137.159 ms

Loss rate: 1.09%

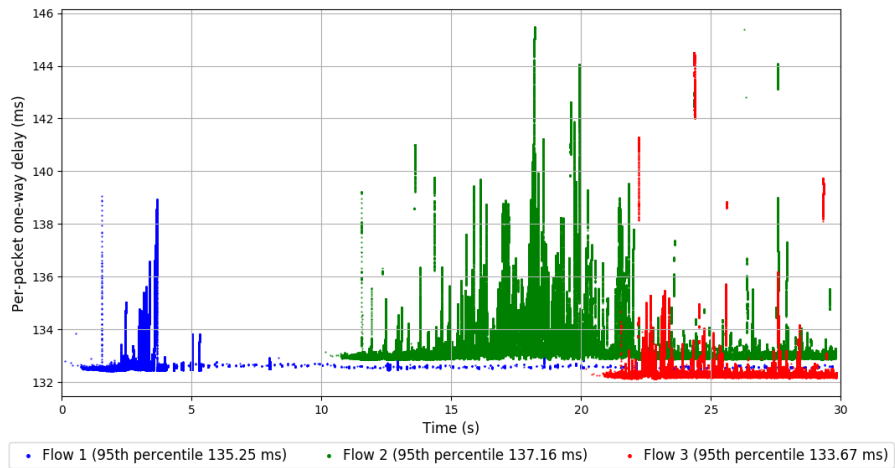
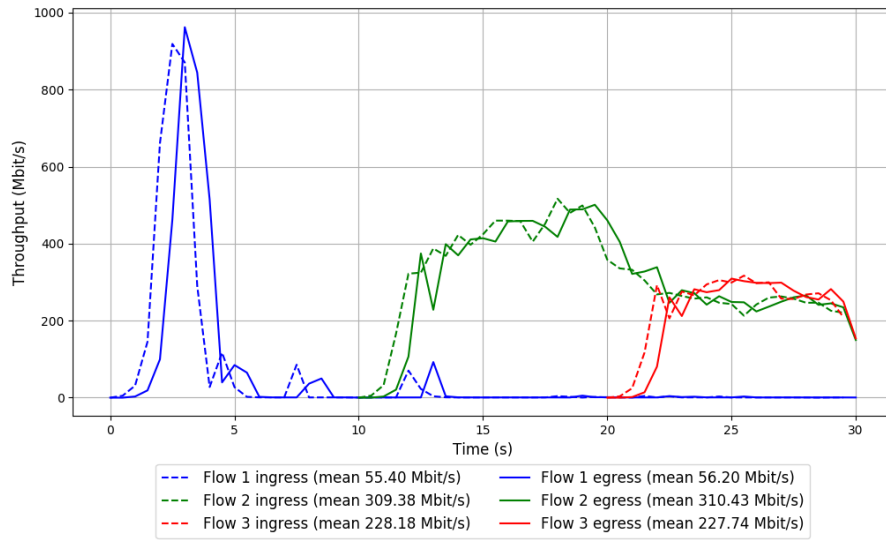
-- Flow 3:

Average throughput: 227.74 Mbit/s

95th percentile per-packet one-way delay: 133.668 ms

Loss rate: 2.71%

Run 5: Report of FillP — Data Link

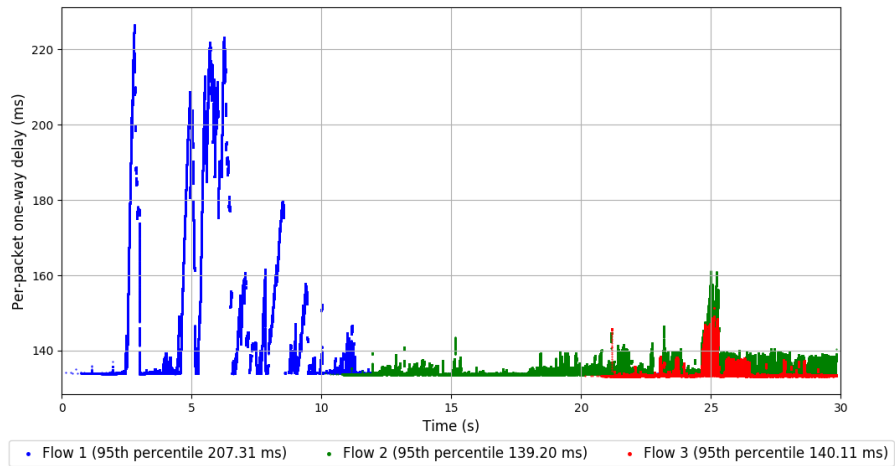
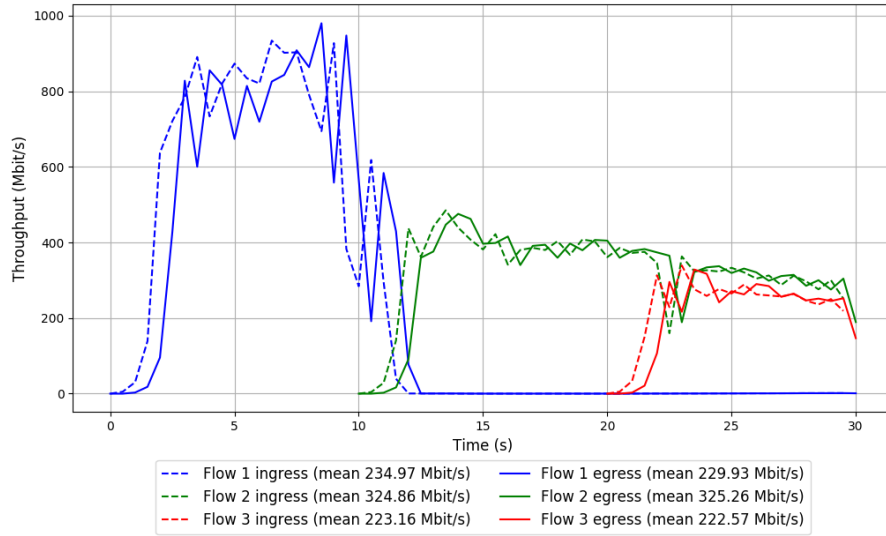


Run 1: Statistics of FillP-Sheep

Start at: 2019-04-24 08:39:24
End at: 2019-04-24 08:39:54
Local clock offset: 0.352 ms
Remote clock offset: -0.347 ms

```
# Below is generated by plot.py at 2019-04-24 12:30:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 517.80 Mbit/s
95th percentile per-packet one-way delay: 194.372 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 229.93 Mbit/s
95th percentile per-packet one-way delay: 207.314 ms
Loss rate: 3.08%
-- Flow 2:
Average throughput: 325.26 Mbit/s
95th percentile per-packet one-way delay: 139.201 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 222.57 Mbit/s
95th percentile per-packet one-way delay: 140.106 ms
Loss rate: 2.89%
```

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-04-24 09:17:08

End at: 2019-04-24 09:17:38

Local clock offset: -0.083 ms

Remote clock offset: 0.065 ms

Below is generated by plot.py at 2019-04-24 12:30:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 370.10 Mbit/s

95th percentile per-packet one-way delay: 137.056 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 98.32 Mbit/s

95th percentile per-packet one-way delay: 142.789 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 307.74 Mbit/s

95th percentile per-packet one-way delay: 134.952 ms

Loss rate: 1.38%

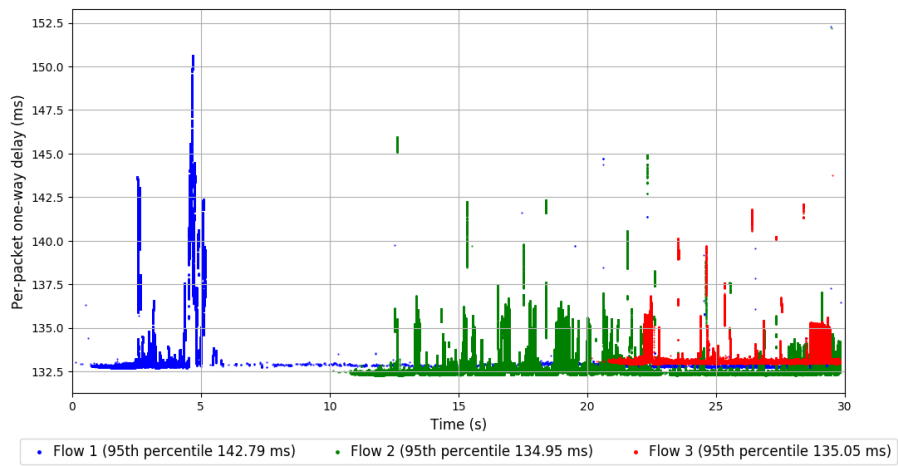
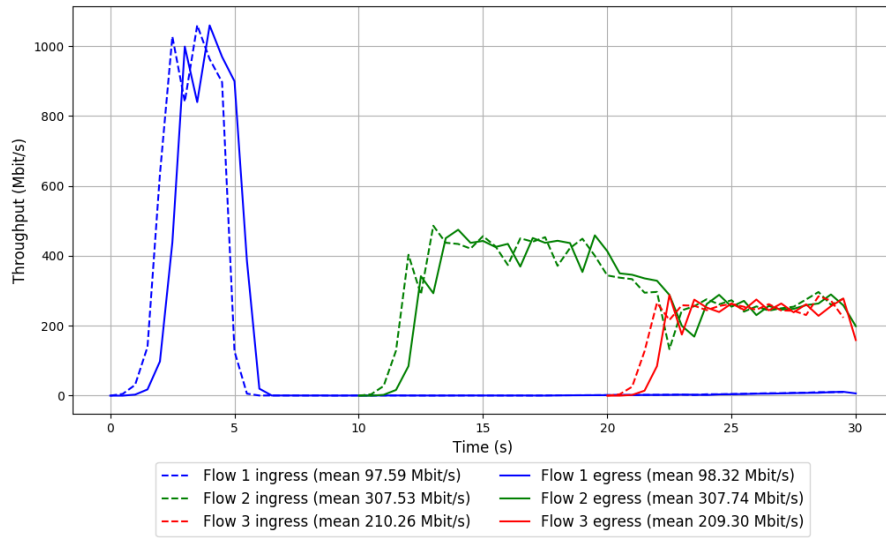
-- Flow 3:

Average throughput: 209.30 Mbit/s

95th percentile per-packet one-way delay: 135.053 ms

Loss rate: 3.21%

Run 2: Report of FillP-Sheep — Data Link

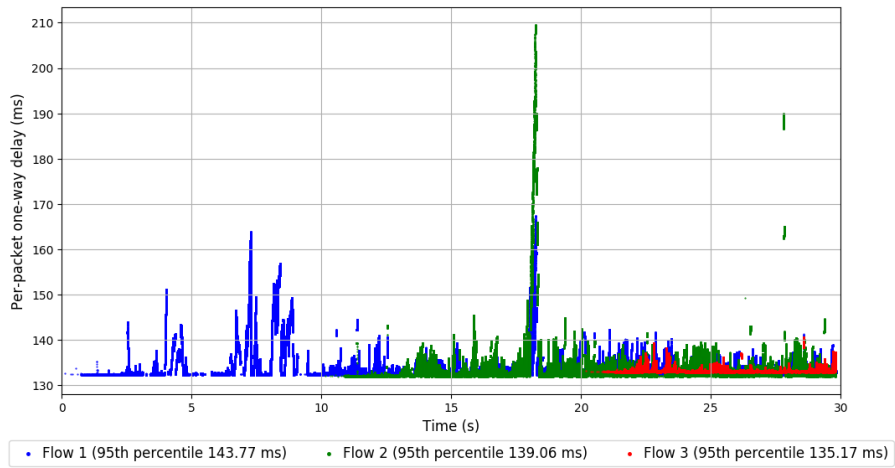
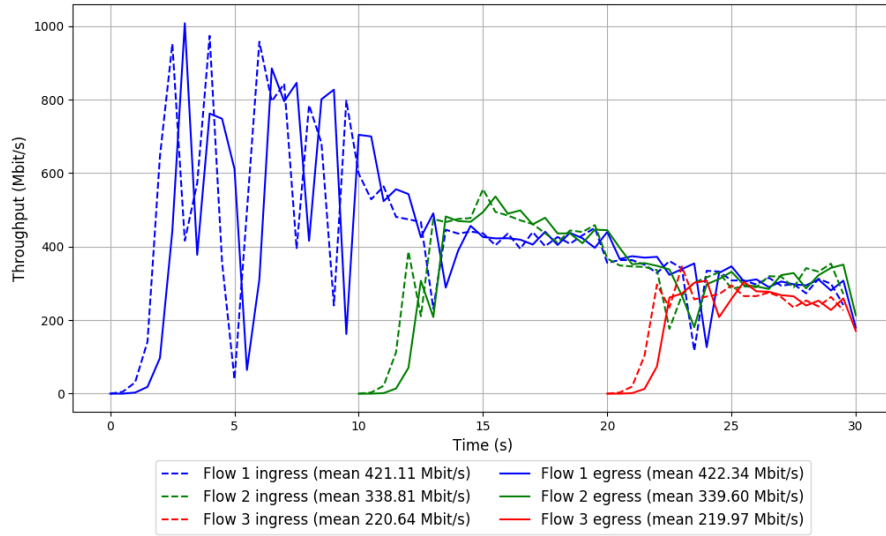


Run 3: Statistics of FillP-Sheep

Start at: 2019-04-24 09:55:13
End at: 2019-04-24 09:55:43
Local clock offset: -0.137 ms
Remote clock offset: -0.031 ms

```
# Below is generated by plot.py at 2019-04-24 12:37:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 718.90 Mbit/s
95th percentile per-packet one-way delay: 141.619 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 422.34 Mbit/s
95th percentile per-packet one-way delay: 143.772 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 339.60 Mbit/s
95th percentile per-packet one-way delay: 139.058 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 219.97 Mbit/s
95th percentile per-packet one-way delay: 135.168 ms
Loss rate: 3.02%
```

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-04-24 10:33:02
End at: 2019-04-24 10:33:32
Local clock offset: -0.337 ms
Remote clock offset: -0.004 ms

Below is generated by plot.py at 2019-04-24 12:37:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 365.23 Mbit/s
95th percentile per-packet one-way delay: 135.445 ms
Loss rate: 1.56%

-- Flow 1:

Average throughput: 57.25 Mbit/s
95th percentile per-packet one-way delay: 139.379 ms
Loss rate: 0.00%

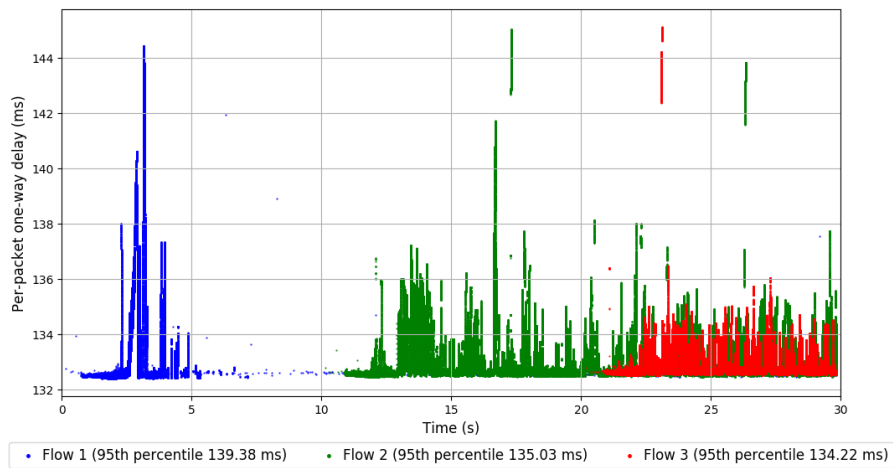
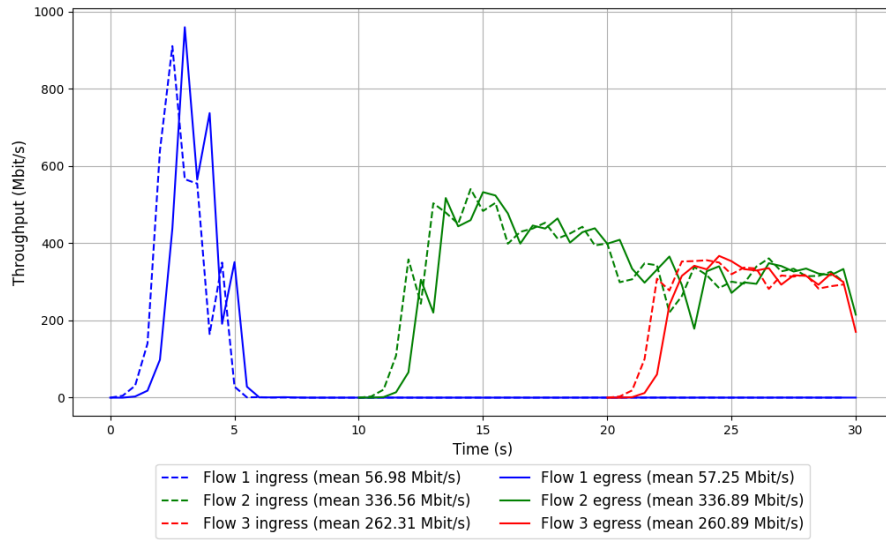
-- Flow 2:

Average throughput: 336.89 Mbit/s
95th percentile per-packet one-way delay: 135.030 ms
Loss rate: 1.25%

-- Flow 3:

Average throughput: 260.89 Mbit/s
95th percentile per-packet one-way delay: 134.220 ms
Loss rate: 3.37%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-04-24 11:10:05

End at: 2019-04-24 11:10:35

Local clock offset: -0.129 ms

Remote clock offset: 0.004 ms

Below is generated by plot.py at 2019-04-24 12:37:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 316.96 Mbit/s

95th percentile per-packet one-way delay: 136.644 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 41.94 Mbit/s

95th percentile per-packet one-way delay: 137.825 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 307.90 Mbit/s

95th percentile per-packet one-way delay: 136.837 ms

Loss rate: 1.00%

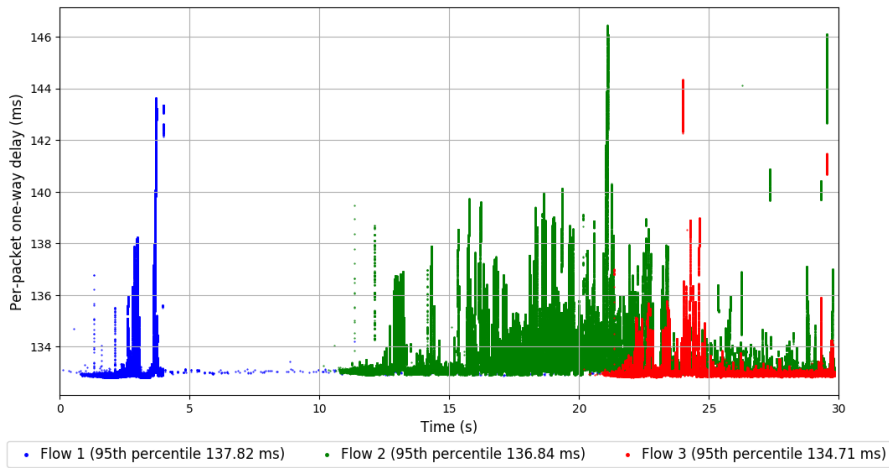
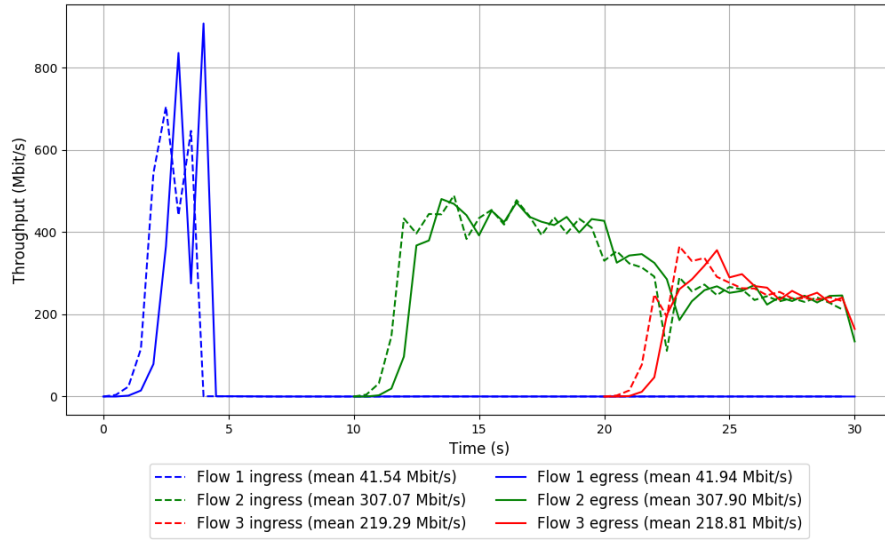
-- Flow 3:

Average throughput: 218.81 Mbit/s

95th percentile per-packet one-way delay: 134.710 ms

Loss rate: 3.01%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-04-24 08:36:13

End at: 2019-04-24 08:36:43

Local clock offset: 0.218 ms

Remote clock offset: 0.036 ms

Below is generated by plot.py at 2019-04-24 12:37:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 311.87 Mbit/s

95th percentile per-packet one-way delay: 134.562 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 166.00 Mbit/s

95th percentile per-packet one-way delay: 133.989 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 149.45 Mbit/s

95th percentile per-packet one-way delay: 134.415 ms

Loss rate: 1.26%

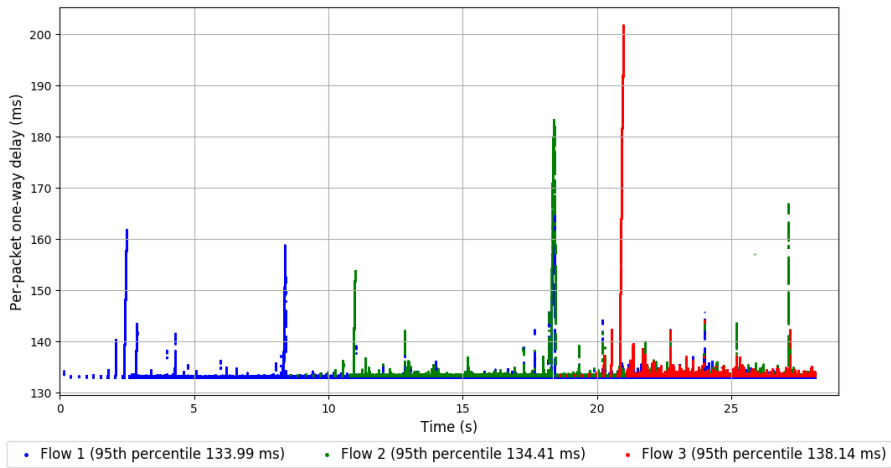
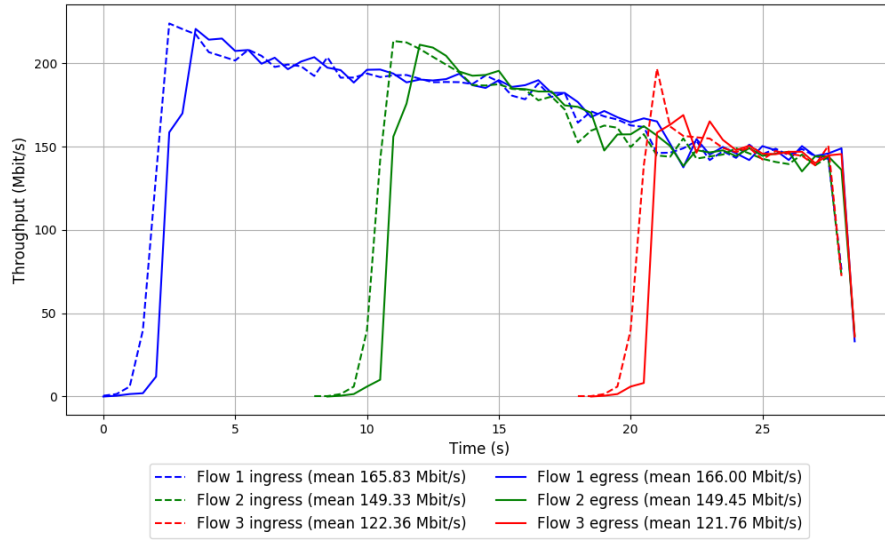
-- Flow 3:

Average throughput: 121.76 Mbit/s

95th percentile per-packet one-way delay: 138.136 ms

Loss rate: 3.20%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-04-24 09:13:56

End at: 2019-04-24 09:14:26

Local clock offset: -0.301 ms

Remote clock offset: 0.091 ms

Below is generated by plot.py at 2019-04-24 12:37:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 300.16 Mbit/s

95th percentile per-packet one-way delay: 133.477 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 165.39 Mbit/s

95th percentile per-packet one-way delay: 133.516 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 148.39 Mbit/s

95th percentile per-packet one-way delay: 133.216 ms

Loss rate: 1.30%

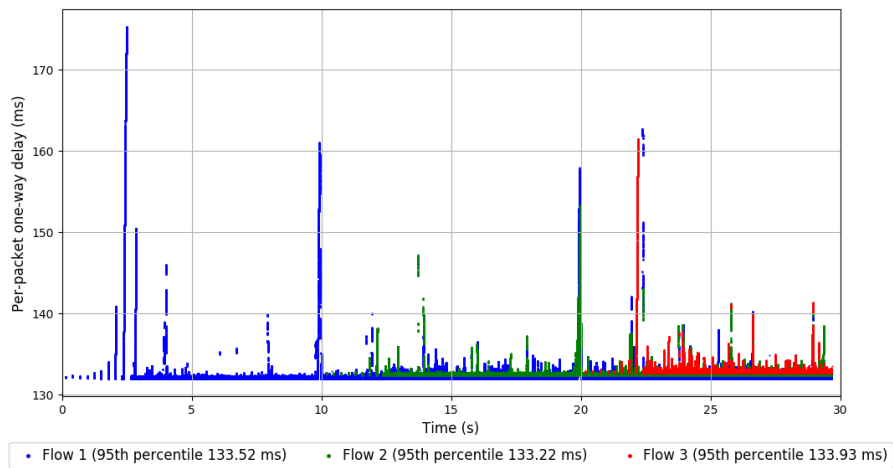
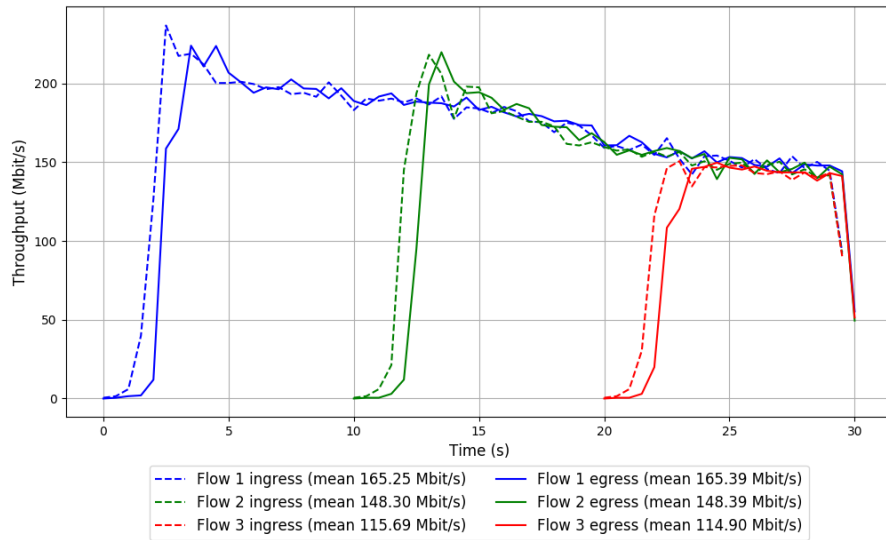
-- Flow 3:

Average throughput: 114.90 Mbit/s

95th percentile per-packet one-way delay: 133.927 ms

Loss rate: 3.41%

Run 2: Report of Indigo — Data Link

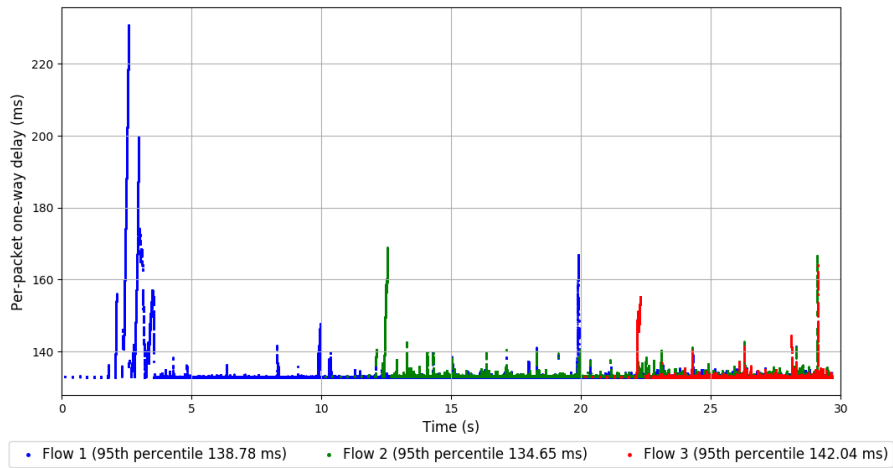
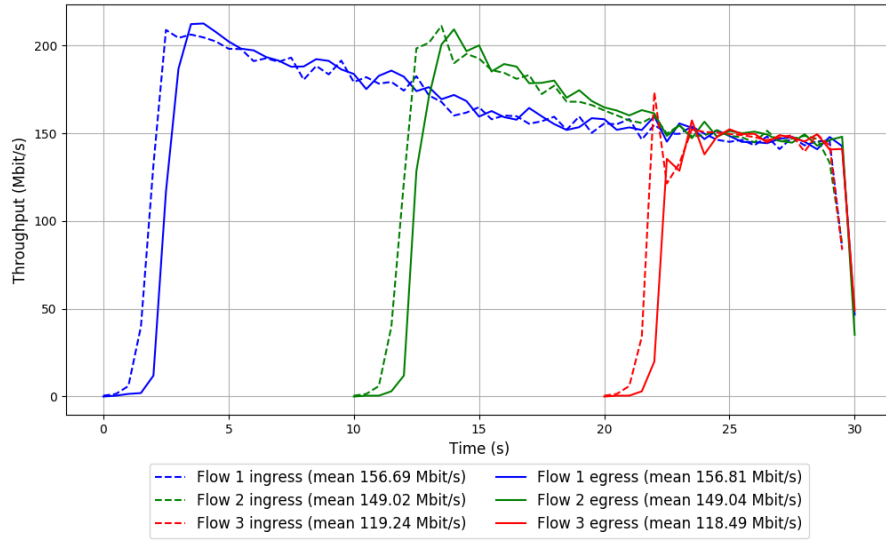


Run 3: Statistics of Indigo

Start at: 2019-04-24 09:52:01
End at: 2019-04-24 09:52:31
Local clock offset: -0.13 ms
Remote clock offset: -0.011 ms

```
# Below is generated by plot.py at 2019-04-24 12:39:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.40 Mbit/s
95th percentile per-packet one-way delay: 136.440 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 156.81 Mbit/s
95th percentile per-packet one-way delay: 138.779 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 149.04 Mbit/s
95th percentile per-packet one-way delay: 134.648 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 118.49 Mbit/s
95th percentile per-packet one-way delay: 142.045 ms
Loss rate: 3.33%
```

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-04-24 10:29:51

End at: 2019-04-24 10:30:21

Local clock offset: -0.249 ms

Remote clock offset: 0.013 ms

Below is generated by plot.py at 2019-04-24 12:40:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 292.54 Mbit/s

95th percentile per-packet one-way delay: 134.113 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 155.54 Mbit/s

95th percentile per-packet one-way delay: 133.450 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 151.28 Mbit/s

95th percentile per-packet one-way delay: 135.774 ms

Loss rate: 1.33%

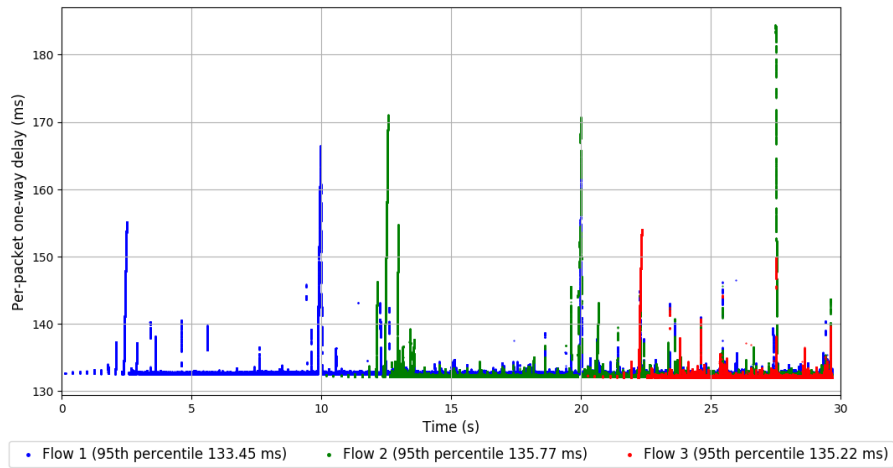
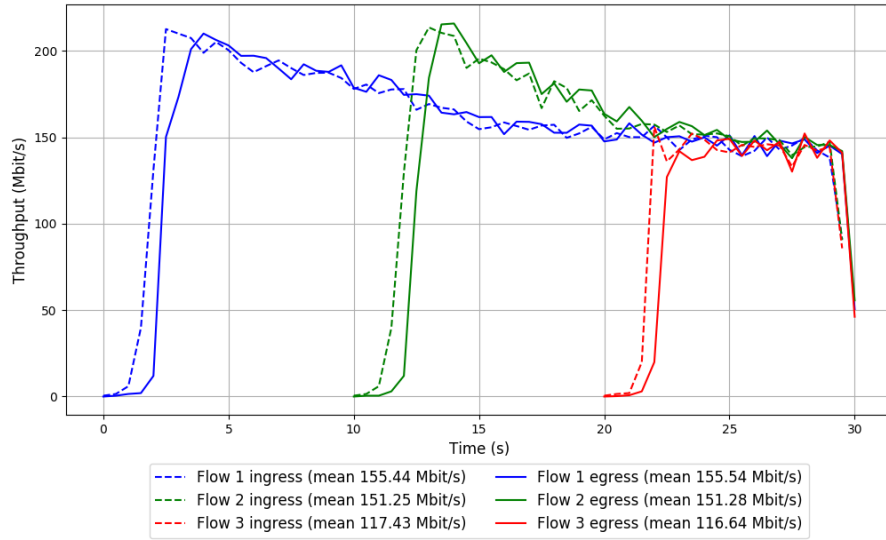
-- Flow 3:

Average throughput: 116.64 Mbit/s

95th percentile per-packet one-way delay: 135.223 ms

Loss rate: 3.40%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-04-24 11:06:53

End at: 2019-04-24 11:07:23

Local clock offset: -0.04 ms

Remote clock offset: 0.39 ms

Below is generated by plot.py at 2019-04-24 12:40:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 295.73 Mbit/s

95th percentile per-packet one-way delay: 134.202 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 154.16 Mbit/s

95th percentile per-packet one-way delay: 133.617 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 151.58 Mbit/s

95th percentile per-packet one-way delay: 134.155 ms

Loss rate: 1.29%

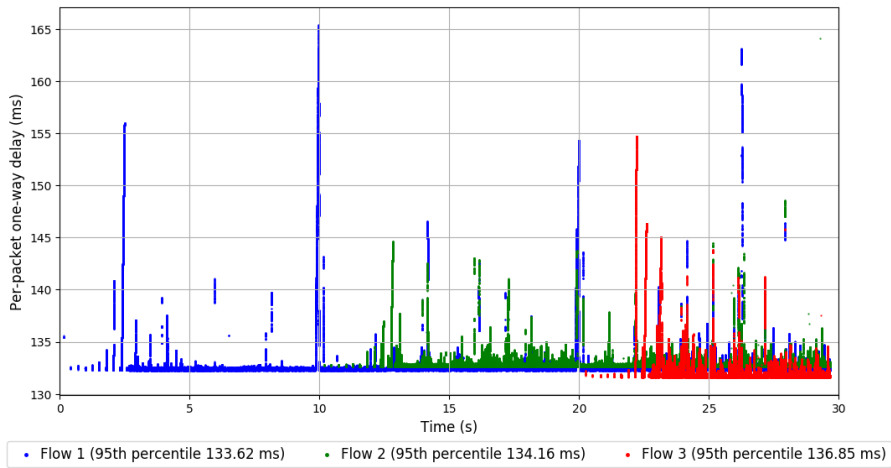
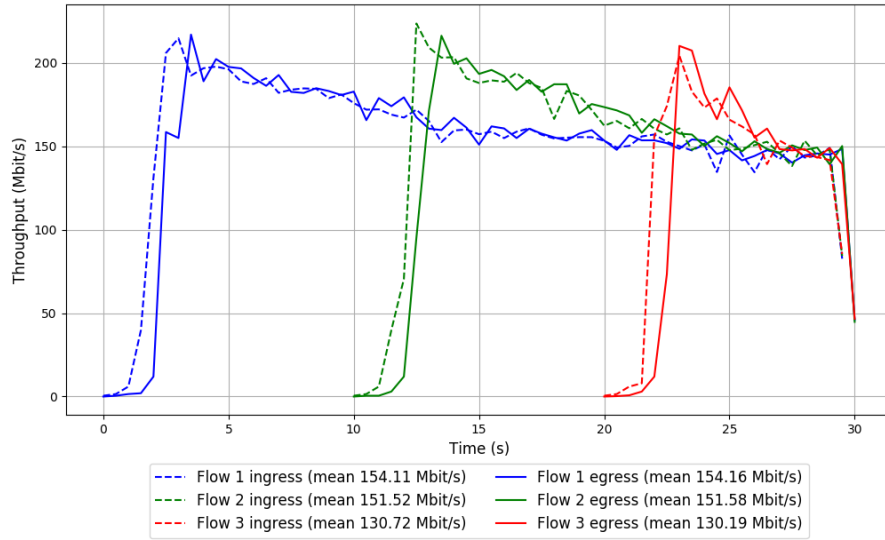
-- Flow 3:

Average throughput: 130.19 Mbit/s

95th percentile per-packet one-way delay: 136.846 ms

Loss rate: 3.06%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-04-24 08:47:30

End at: 2019-04-24 08:48:00

Local clock offset: 0.374 ms

Remote clock offset: 0.065 ms

Below is generated by plot.py at 2019-04-24 12:42:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 655.50 Mbit/s

95th percentile per-packet one-way delay: 158.839 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 403.14 Mbit/s

95th percentile per-packet one-way delay: 165.655 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 299.45 Mbit/s

95th percentile per-packet one-way delay: 139.014 ms

Loss rate: 1.24%

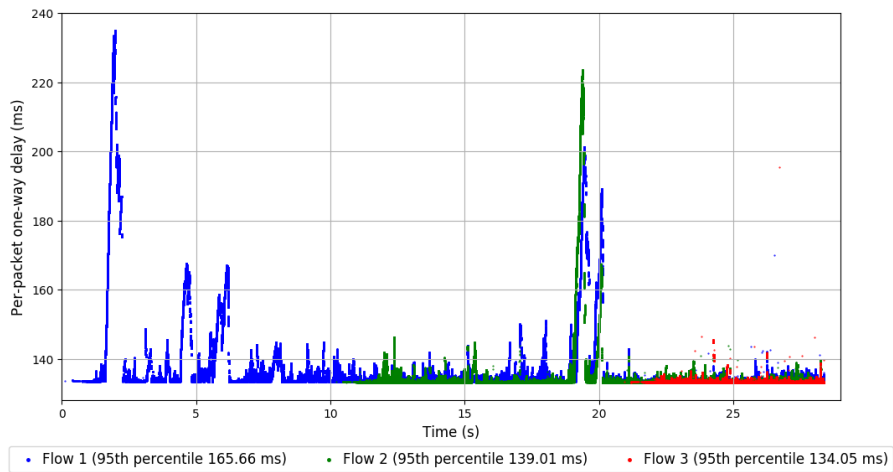
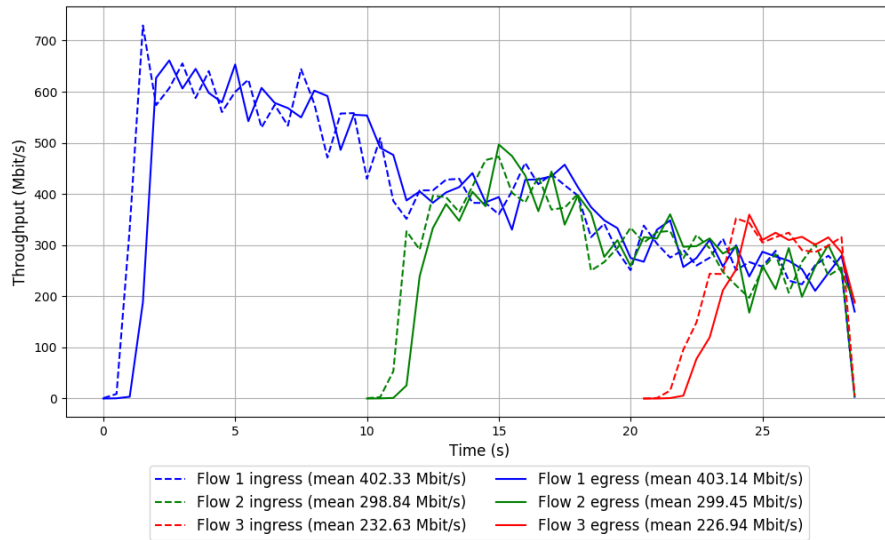
-- Flow 3:

Average throughput: 226.94 Mbit/s

95th percentile per-packet one-way delay: 134.052 ms

Loss rate: 5.83%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-04-24 09:25:00

End at: 2019-04-24 09:25:30

Local clock offset: -0.382 ms

Remote clock offset: 0.036 ms

Below is generated by plot.py at 2019-04-24 12:43:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 637.58 Mbit/s

95th percentile per-packet one-way delay: 136.445 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 380.89 Mbit/s

95th percentile per-packet one-way delay: 137.337 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 319.89 Mbit/s

95th percentile per-packet one-way delay: 134.883 ms

Loss rate: 0.82%

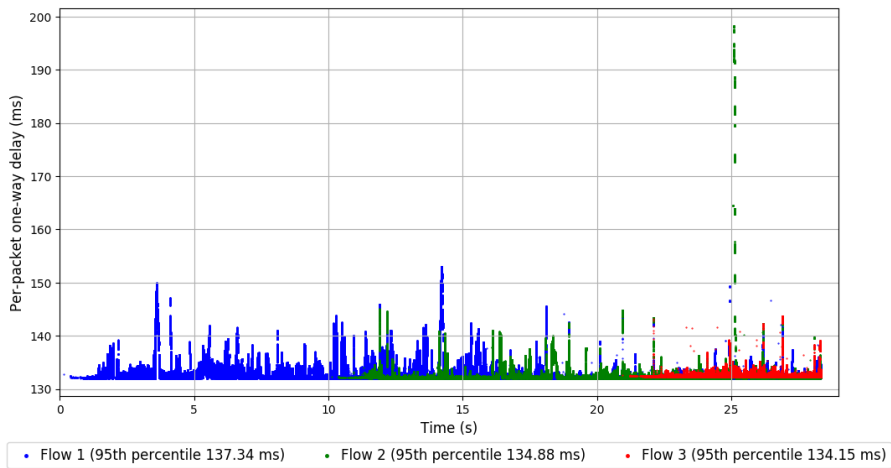
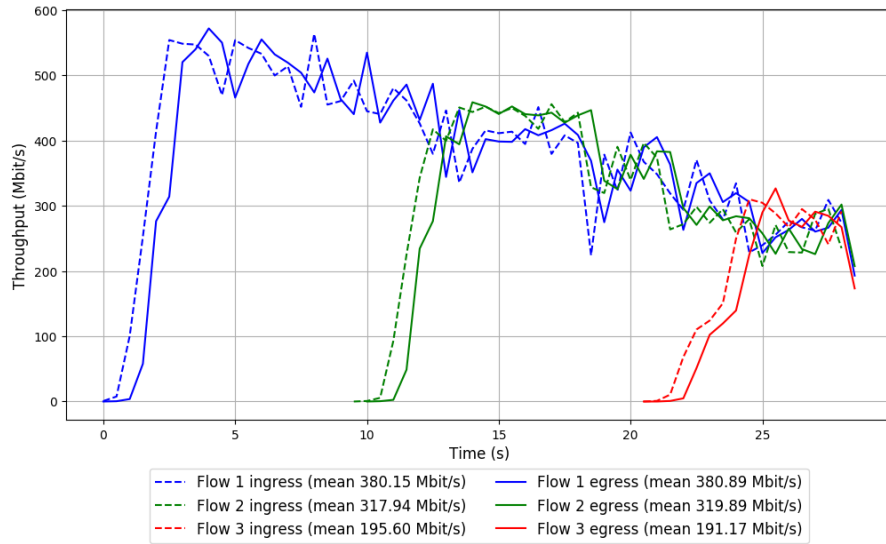
-- Flow 3:

Average throughput: 191.17 Mbit/s

95th percentile per-packet one-way delay: 134.152 ms

Loss rate: 5.68%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-04-24 10:03:26

End at: 2019-04-24 10:03:56

Local clock offset: 0.322 ms

Remote clock offset: 0.017 ms

Below is generated by plot.py at 2019-04-24 12:45:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 648.05 Mbit/s

95th percentile per-packet one-way delay: 145.358 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 395.12 Mbit/s

95th percentile per-packet one-way delay: 148.084 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 309.77 Mbit/s

95th percentile per-packet one-way delay: 141.030 ms

Loss rate: 1.03%

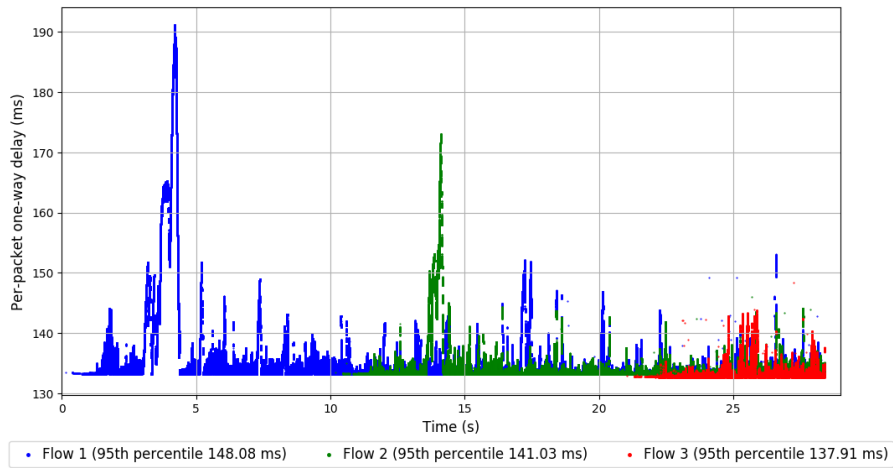
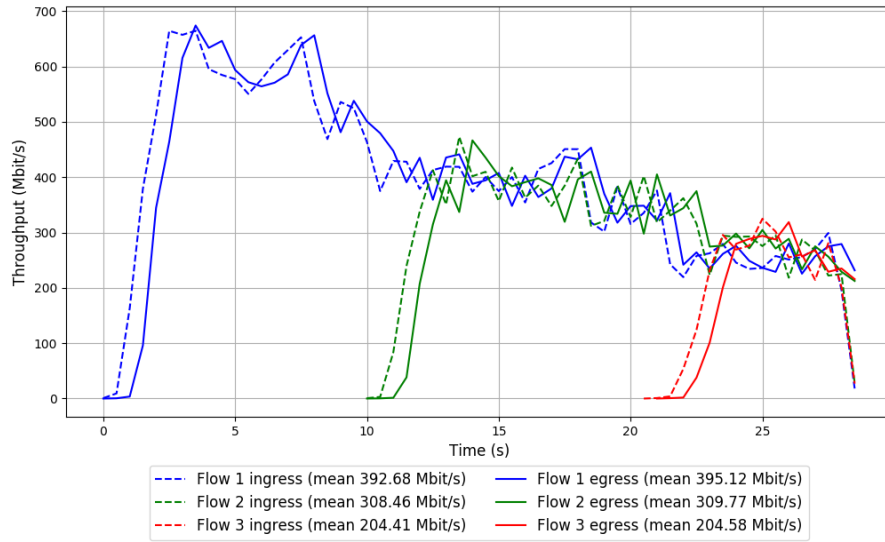
-- Flow 3:

Average throughput: 204.58 Mbit/s

95th percentile per-packet one-way delay: 137.915 ms

Loss rate: 3.42%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-04-24 10:40:42

End at: 2019-04-24 10:41:12

Local clock offset: -0.03 ms

Remote clock offset: 0.011 ms

Below is generated by plot.py at 2019-04-24 12:47:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 653.58 Mbit/s

95th percentile per-packet one-way delay: 145.317 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 403.65 Mbit/s

95th percentile per-packet one-way delay: 153.738 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 299.24 Mbit/s

95th percentile per-packet one-way delay: 136.396 ms

Loss rate: 1.72%

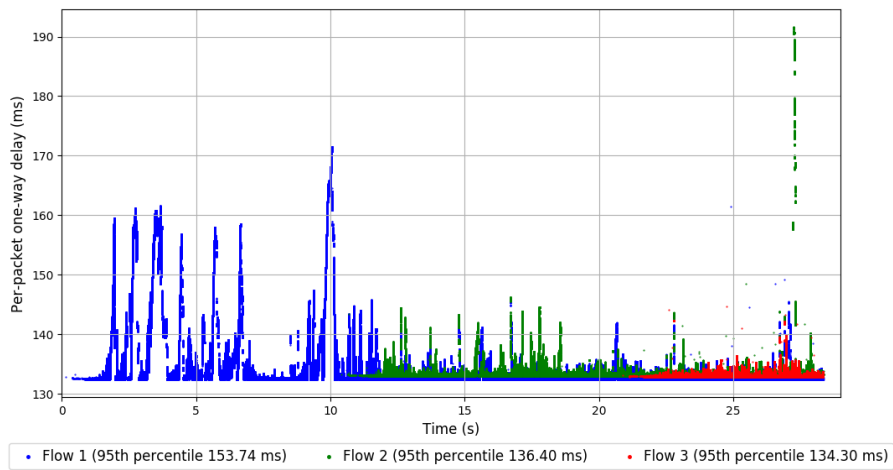
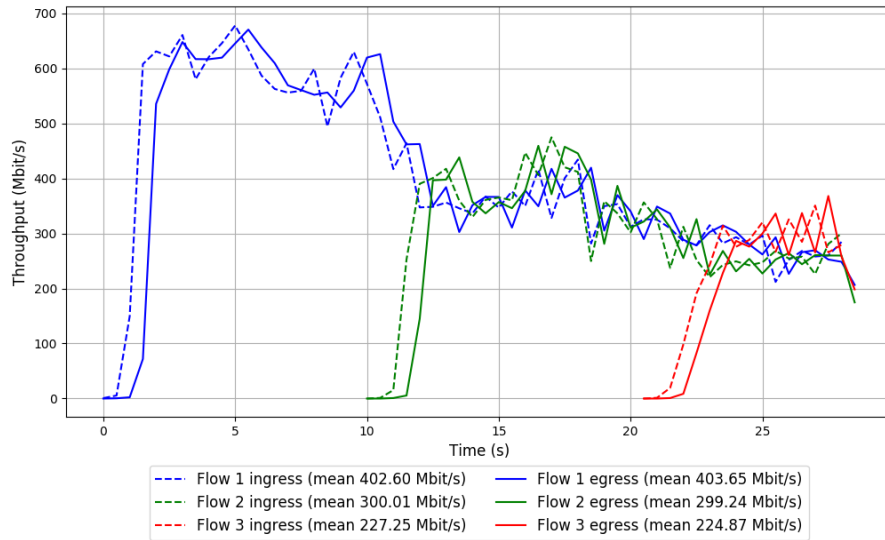
-- Flow 3:

Average throughput: 224.87 Mbit/s

95th percentile per-packet one-way delay: 134.302 ms

Loss rate: 4.47%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-04-24 11:17:47

End at: 2019-04-24 11:18:17

Local clock offset: -0.061 ms

Remote clock offset: 0.024 ms

Below is generated by plot.py at 2019-04-24 12:48:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 633.87 Mbit/s

95th percentile per-packet one-way delay: 136.674 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 391.90 Mbit/s

95th percentile per-packet one-way delay: 138.037 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 281.28 Mbit/s

95th percentile per-packet one-way delay: 135.165 ms

Loss rate: 0.98%

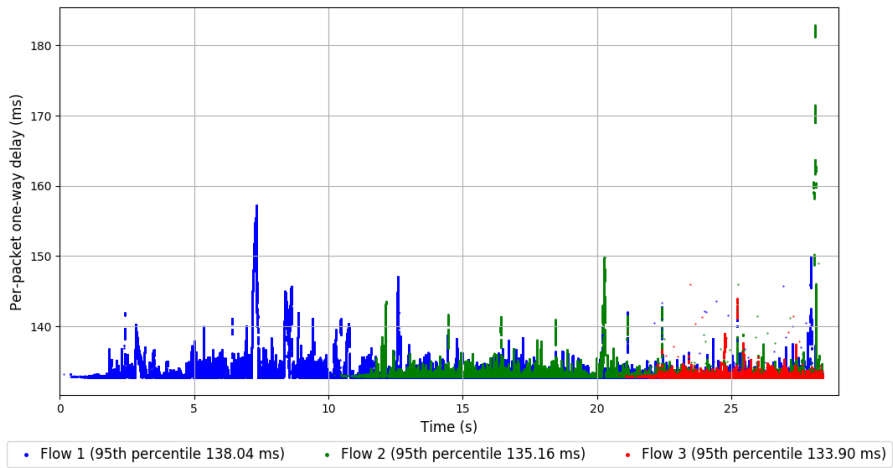
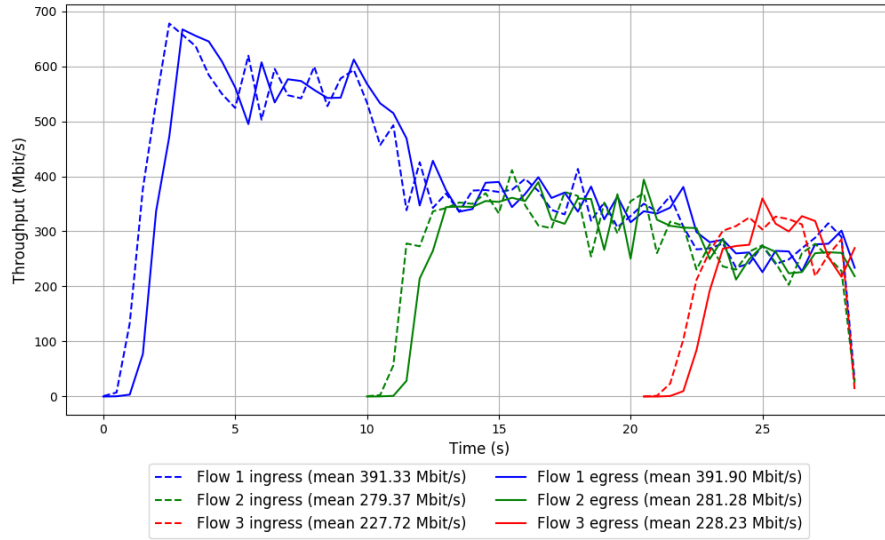
-- Flow 3:

Average throughput: 228.23 Mbit/s

95th percentile per-packet one-way delay: 133.899 ms

Loss rate: 3.15%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-04-24 08:49:27

End at: 2019-04-24 08:49:57

Local clock offset: -0.04 ms

Remote clock offset: 0.103 ms

Below is generated by plot.py at 2019-04-24 12:49:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 559.75 Mbit/s

95th percentile per-packet one-way delay: 181.068 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 346.77 Mbit/s

95th percentile per-packet one-way delay: 185.975 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 300.01 Mbit/s

95th percentile per-packet one-way delay: 136.367 ms

Loss rate: 1.62%

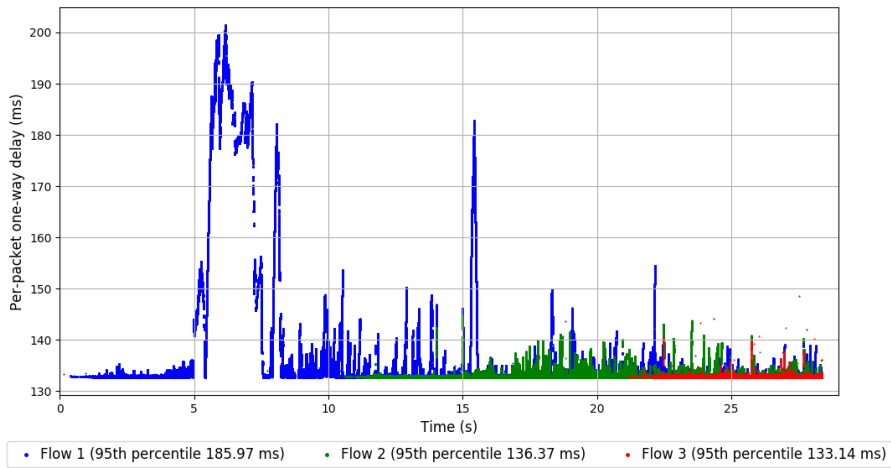
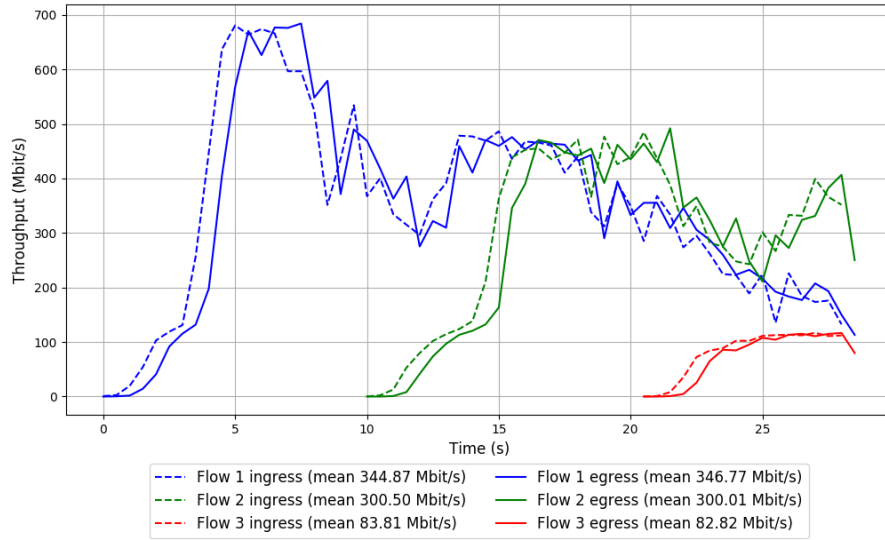
-- Flow 3:

Average throughput: 82.82 Mbit/s

95th percentile per-packet one-way delay: 133.136 ms

Loss rate: 4.60%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-04-24 09:26:55

End at: 2019-04-24 09:27:25

Local clock offset: -0.147 ms

Remote clock offset: 0.023 ms

Below is generated by plot.py at 2019-04-24 12:49:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 536.77 Mbit/s

95th percentile per-packet one-way delay: 186.646 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 317.84 Mbit/s

95th percentile per-packet one-way delay: 210.623 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 305.65 Mbit/s

95th percentile per-packet one-way delay: 137.456 ms

Loss rate: 1.53%

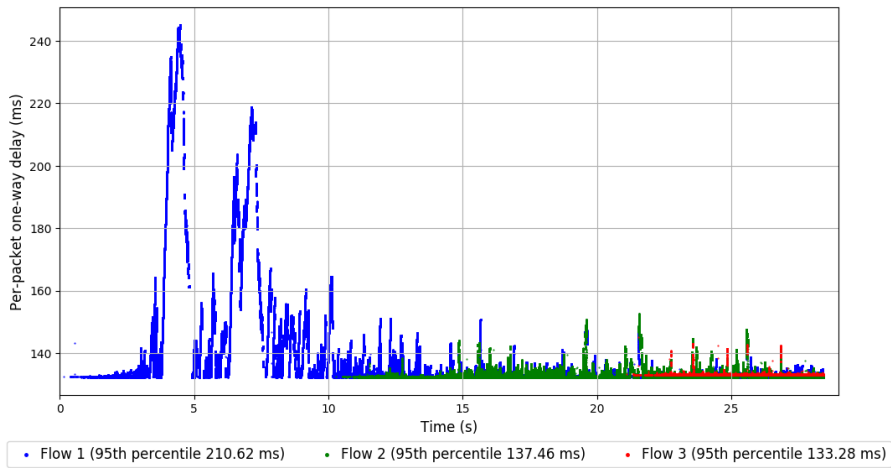
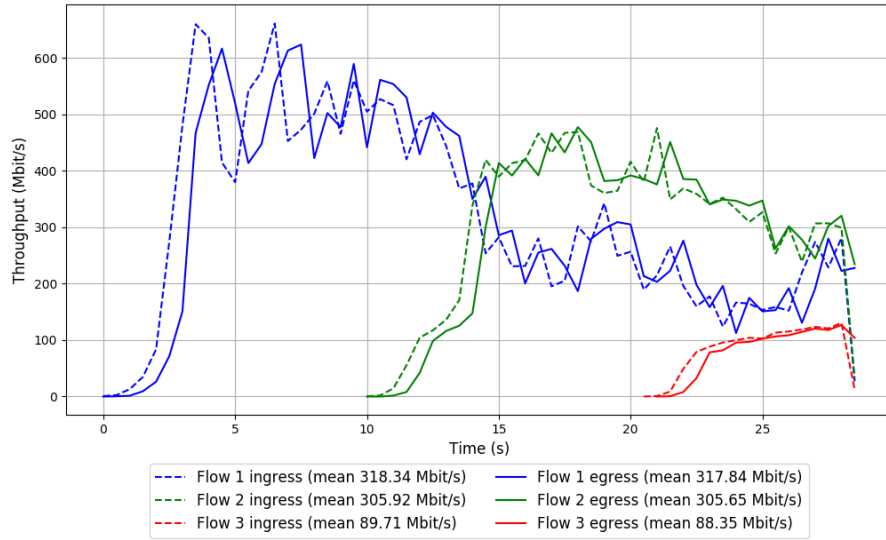
-- Flow 3:

Average throughput: 88.35 Mbit/s

95th percentile per-packet one-way delay: 133.276 ms

Loss rate: 4.99%

Run 2: Report of Indigo-MusesC5 — Data Link

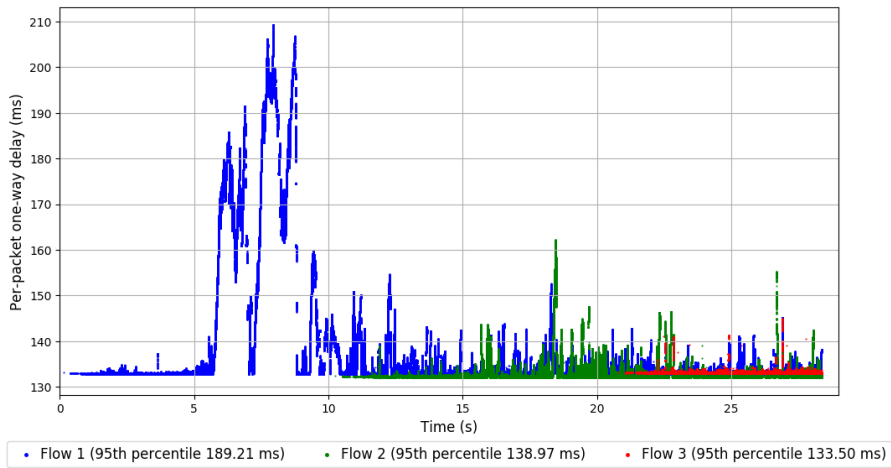
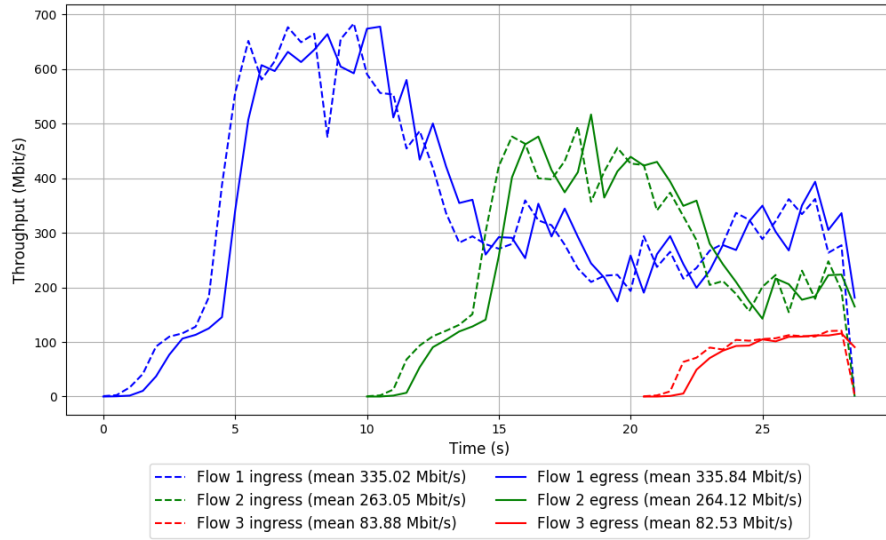


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-04-24 10:05:25
End at: 2019-04-24 10:05:55
Local clock offset: -0.285 ms
Remote clock offset: -0.426 ms

```
# Below is generated by plot.py at 2019-04-24 12:50:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 527.34 Mbit/s
95th percentile per-packet one-way delay: 180.153 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 335.84 Mbit/s
95th percentile per-packet one-way delay: 189.214 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 264.12 Mbit/s
95th percentile per-packet one-way delay: 138.971 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 82.53 Mbit/s
95th percentile per-packet one-way delay: 133.503 ms
Loss rate: 4.93%
```

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-04-24 10:42:39

End at: 2019-04-24 10:43:09

Local clock offset: 0.274 ms

Remote clock offset: 0.005 ms

Below is generated by plot.py at 2019-04-24 12:50:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 443.62 Mbit/s

95th percentile per-packet one-way delay: 142.851 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 242.46 Mbit/s

95th percentile per-packet one-way delay: 146.108 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 280.79 Mbit/s

95th percentile per-packet one-way delay: 138.387 ms

Loss rate: 1.45%

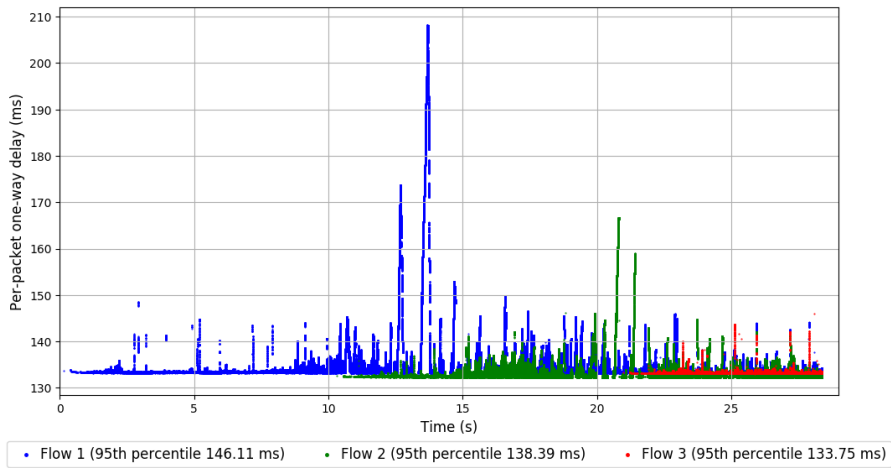
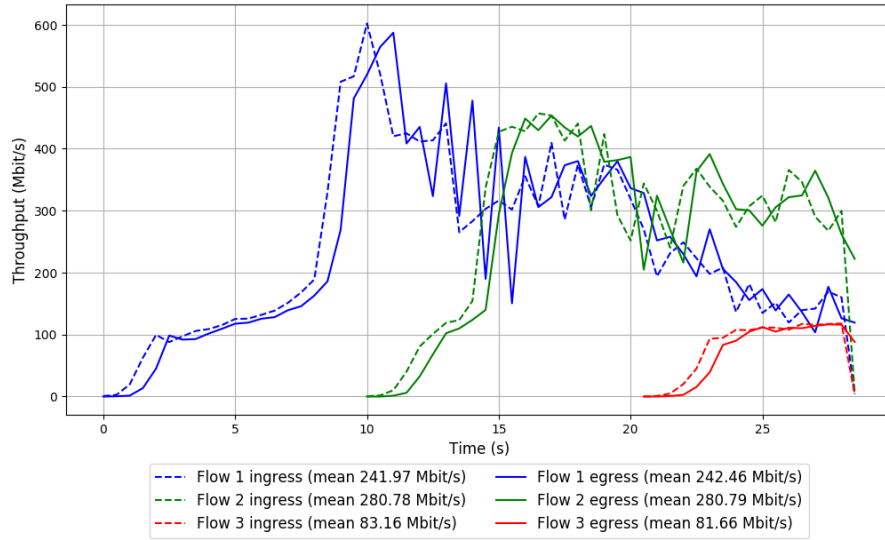
-- Flow 3:

Average throughput: 81.66 Mbit/s

95th percentile per-packet one-way delay: 133.754 ms

Loss rate: 5.24%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-04-24 11:19:43

End at: 2019-04-24 11:20:13

Local clock offset: -0.263 ms

Remote clock offset: 0.044 ms

Below is generated by plot.py at 2019-04-24 12:52:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 536.93 Mbit/s

95th percentile per-packet one-way delay: 183.301 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 317.24 Mbit/s

95th percentile per-packet one-way delay: 192.658 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 309.34 Mbit/s

95th percentile per-packet one-way delay: 140.755 ms

Loss rate: 1.41%

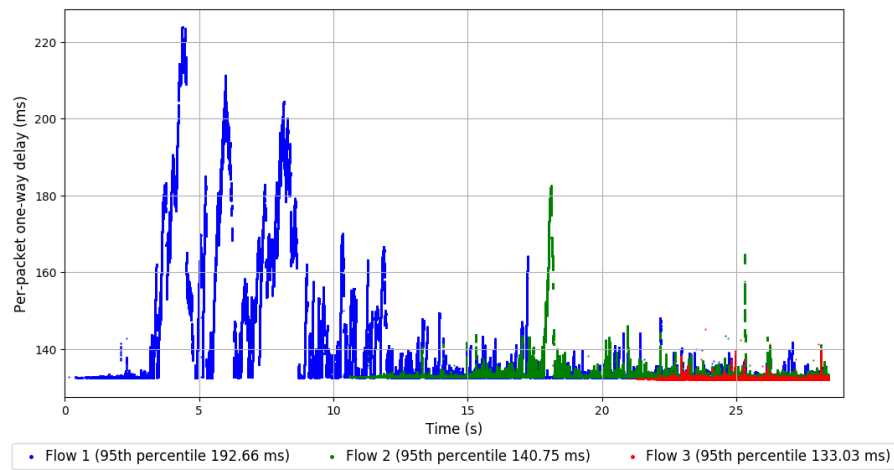
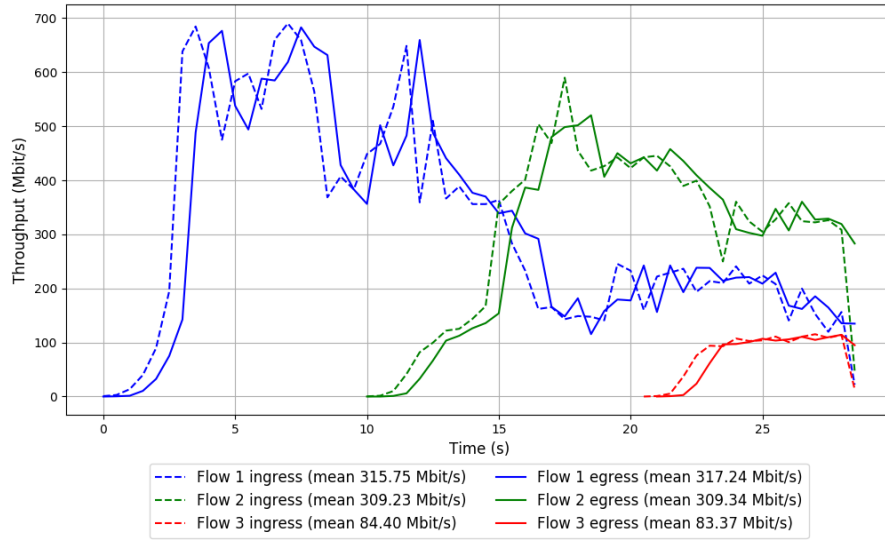
-- Flow 3:

Average throughput: 83.37 Mbit/s

95th percentile per-packet one-way delay: 133.034 ms

Loss rate: 4.63%

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-04-24 08:34:21

End at: 2019-04-24 08:34:51

Local clock offset: -0.353 ms

Remote clock offset: 0.045 ms

Below is generated by plot.py at 2019-04-24 12:55:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 571.49 Mbit/s

95th percentile per-packet one-way delay: 136.970 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 349.14 Mbit/s

95th percentile per-packet one-way delay: 136.805 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 311.81 Mbit/s

95th percentile per-packet one-way delay: 137.566 ms

Loss rate: 1.56%

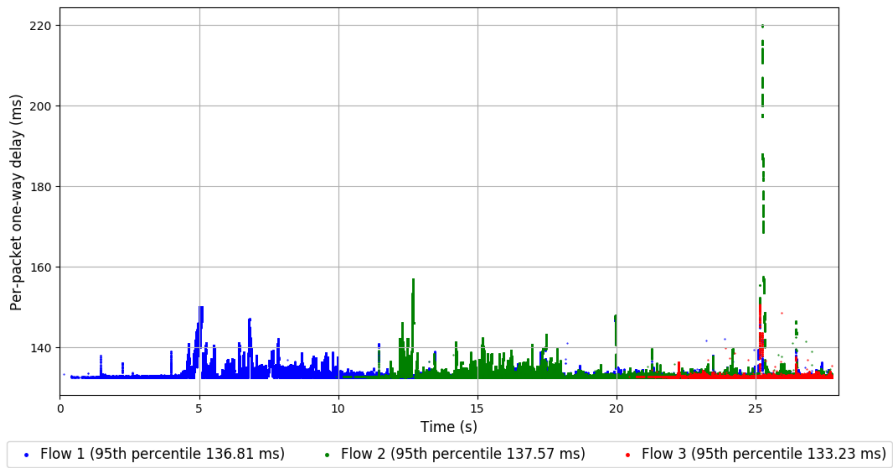
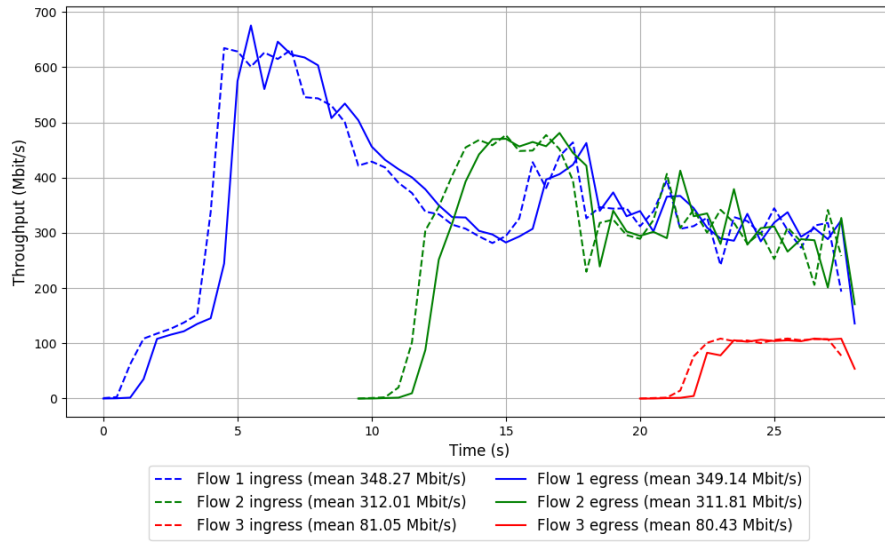
-- Flow 3:

Average throughput: 80.43 Mbit/s

95th percentile per-packet one-way delay: 133.233 ms

Loss rate: 4.22%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-04-24 09:12:02

End at: 2019-04-24 09:12:32

Local clock offset: -0.085 ms

Remote clock offset: 0.054 ms

Below is generated by plot.py at 2019-04-24 12:58:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 611.54 Mbit/s

95th percentile per-packet one-way delay: 138.970 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 407.94 Mbit/s

95th percentile per-packet one-way delay: 140.321 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 289.15 Mbit/s

95th percentile per-packet one-way delay: 135.351 ms

Loss rate: 1.76%

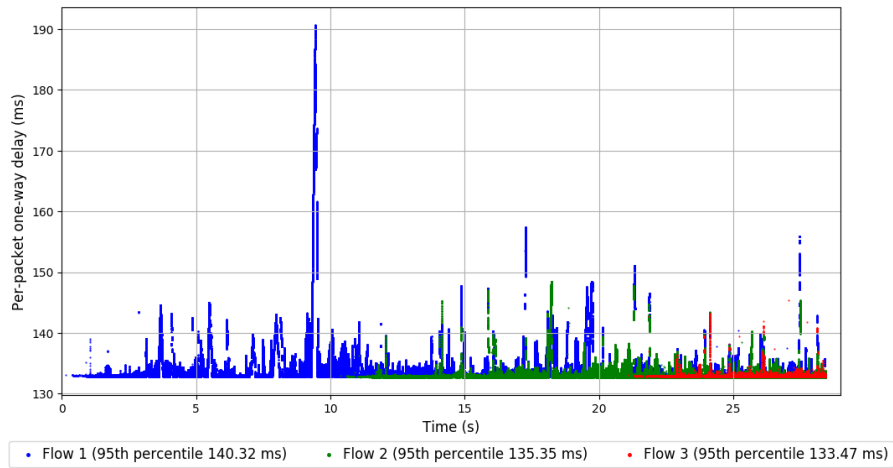
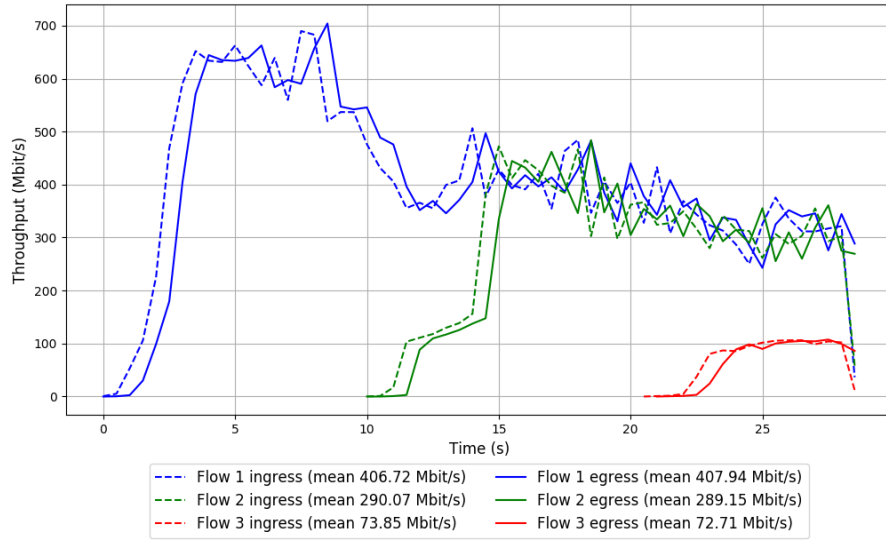
-- Flow 3:

Average throughput: 72.71 Mbit/s

95th percentile per-packet one-way delay: 133.471 ms

Loss rate: 4.94%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-04-24 09:50:07

End at: 2019-04-24 09:50:37

Local clock offset: -0.523 ms

Remote clock offset: 0.008 ms

Below is generated by plot.py at 2019-04-24 12:59:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 602.75 Mbit/s

95th percentile per-packet one-way delay: 136.934 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 378.35 Mbit/s

95th percentile per-packet one-way delay: 137.216 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 316.74 Mbit/s

95th percentile per-packet one-way delay: 136.746 ms

Loss rate: 1.56%

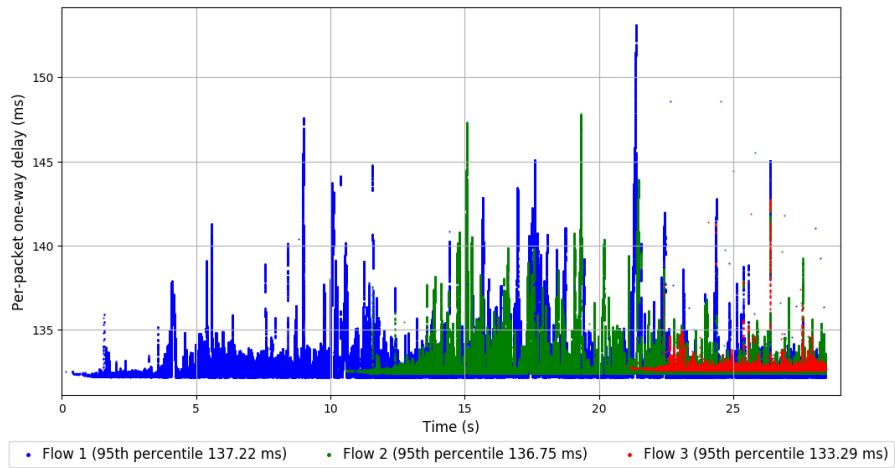
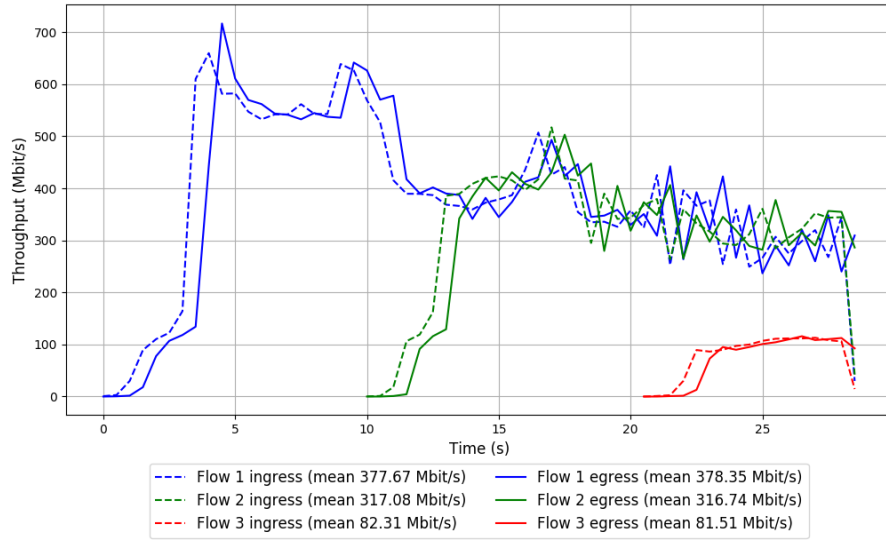
-- Flow 3:

Average throughput: 81.51 Mbit/s

95th percentile per-packet one-way delay: 133.286 ms

Loss rate: 4.38%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-04-24 10:27:56

End at: 2019-04-24 10:28:26

Local clock offset: 0.273 ms

Remote clock offset: 0.065 ms

Below is generated by plot.py at 2019-04-24 12:59:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 611.75 Mbit/s

95th percentile per-packet one-way delay: 159.932 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 386.30 Mbit/s

95th percentile per-packet one-way delay: 143.159 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 320.17 Mbit/s

95th percentile per-packet one-way delay: 204.128 ms

Loss rate: 1.53%

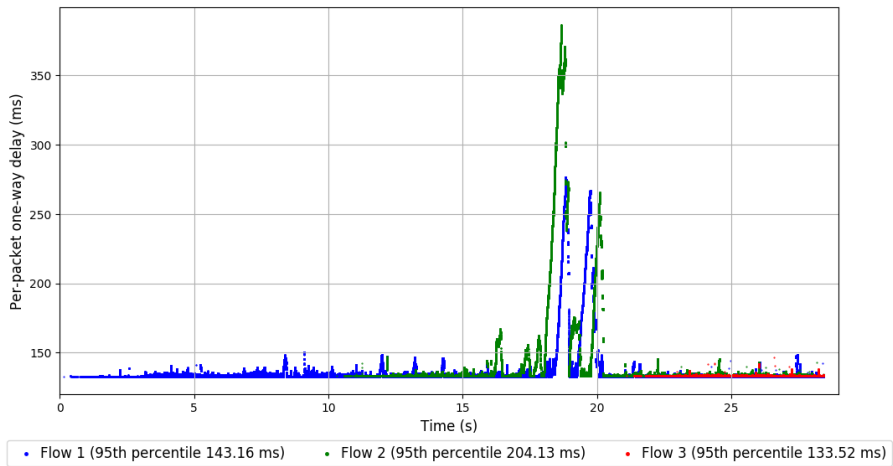
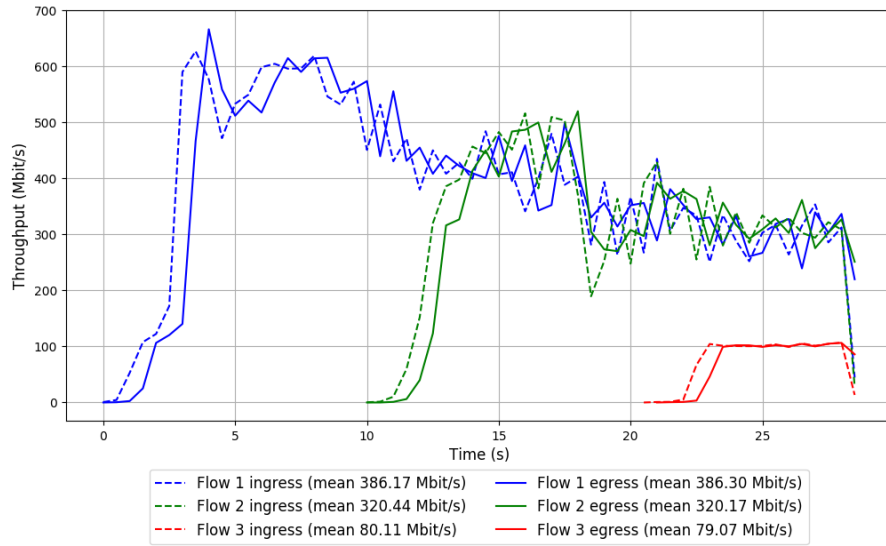
-- Flow 3:

Average throughput: 79.07 Mbit/s

95th percentile per-packet one-way delay: 133.520 ms

Loss rate: 4.77%

Run 4: Report of Indigo-MusesD — Data Link

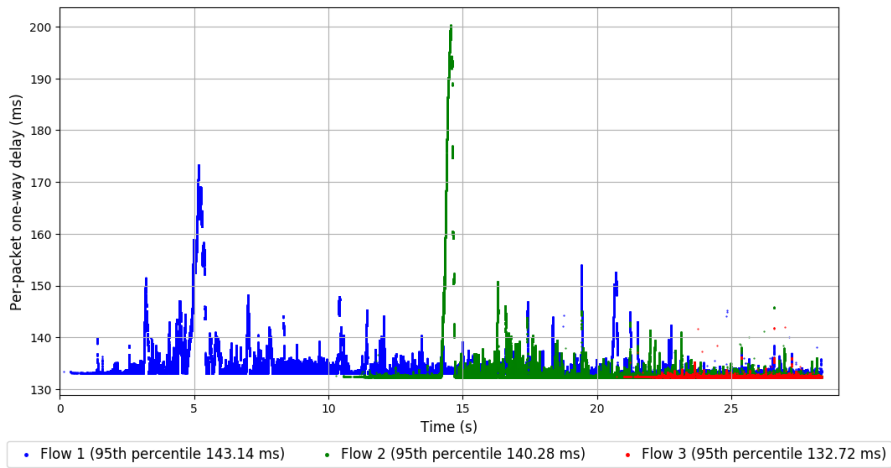
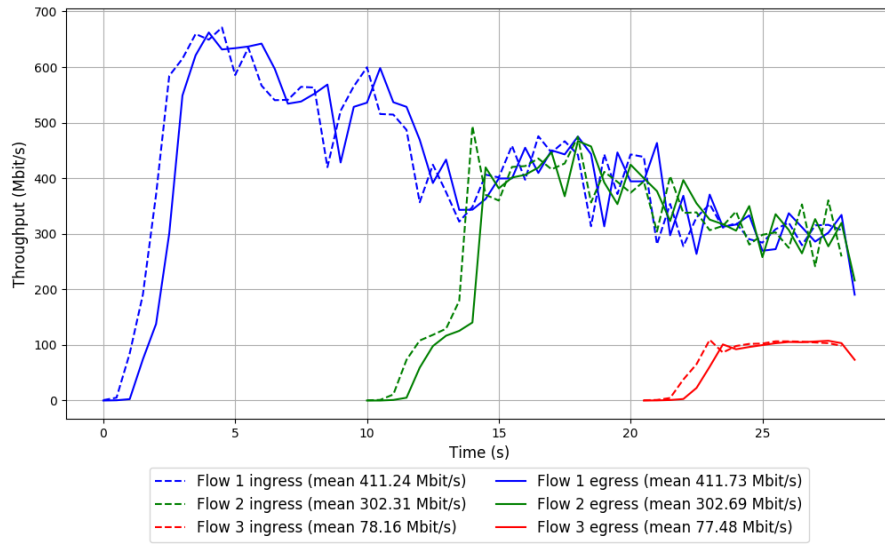


Run 5: Statistics of Indigo-MusesD

Start at: 2019-04-24 11:04:56
End at: 2019-04-24 11:05:26
Local clock offset: -0.087 ms
Remote clock offset: -0.013 ms

Below is generated by plot.py at 2019-04-24 13:00:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 626.45 Mbit/s
95th percentile per-packet one-way delay: 142.336 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 411.73 Mbit/s
95th percentile per-packet one-way delay: 143.144 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 302.69 Mbit/s
95th percentile per-packet one-way delay: 140.276 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 77.48 Mbit/s
95th percentile per-packet one-way delay: 132.717 ms
Loss rate: 4.24%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MuseST

Start at: 2019-04-24 09:00:47

End at: 2019-04-24 09:01:17

Local clock offset: -0.059 ms

Remote clock offset: 0.069 ms

Below is generated by plot.py at 2019-04-24 13:01:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 660.49 Mbit/s

95th percentile per-packet one-way delay: 199.703 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 427.35 Mbit/s

95th percentile per-packet one-way delay: 205.605 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 326.67 Mbit/s

95th percentile per-packet one-way delay: 135.071 ms

Loss rate: 1.68%

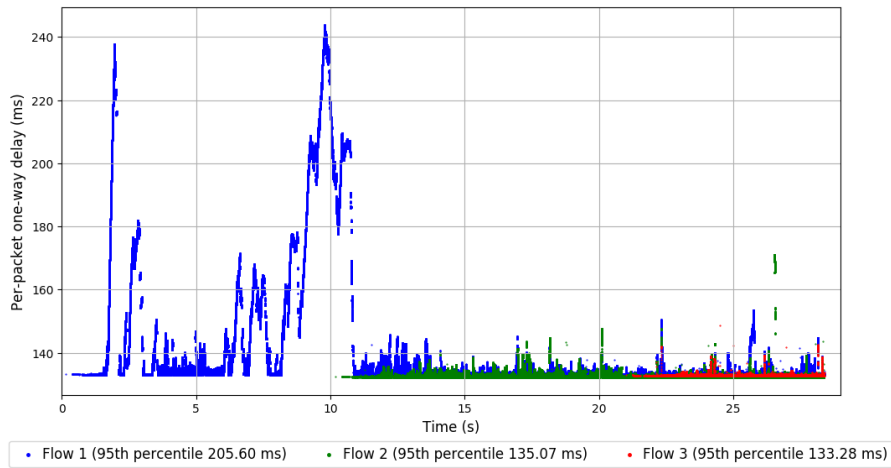
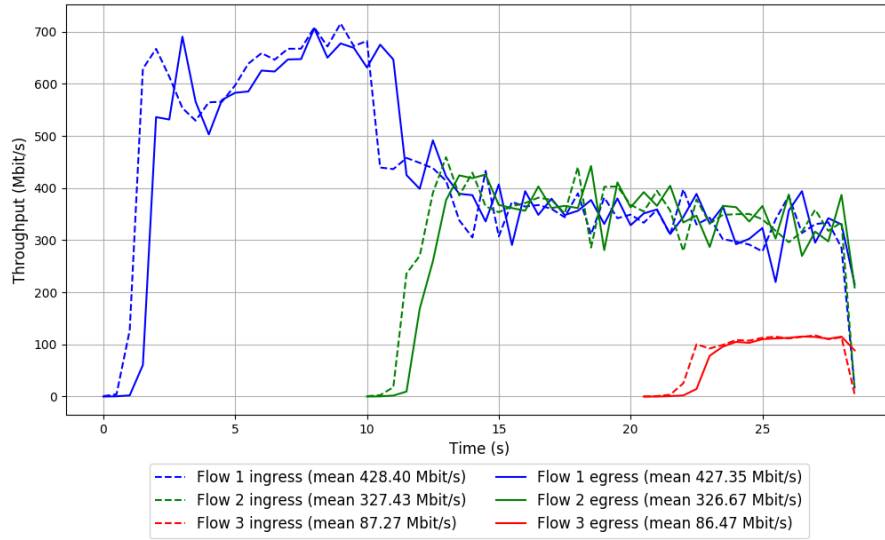
-- Flow 3:

Average throughput: 86.47 Mbit/s

95th percentile per-packet one-way delay: 133.279 ms

Loss rate: 4.36%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MuseST

Start at: 2019-04-24 09:38:25

End at: 2019-04-24 09:38:55

Local clock offset: -0.101 ms

Remote clock offset: 0.015 ms

Below is generated by plot.py at 2019-04-24 13:02:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 697.16 Mbit/s

95th percentile per-packet one-way delay: 212.814 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 429.60 Mbit/s

95th percentile per-packet one-way delay: 220.701 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 335.85 Mbit/s

95th percentile per-packet one-way delay: 145.775 ms

Loss rate: 1.62%

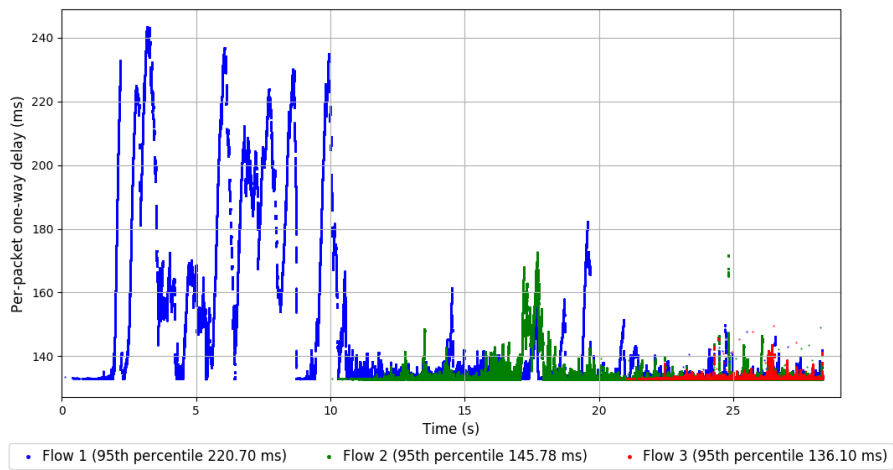
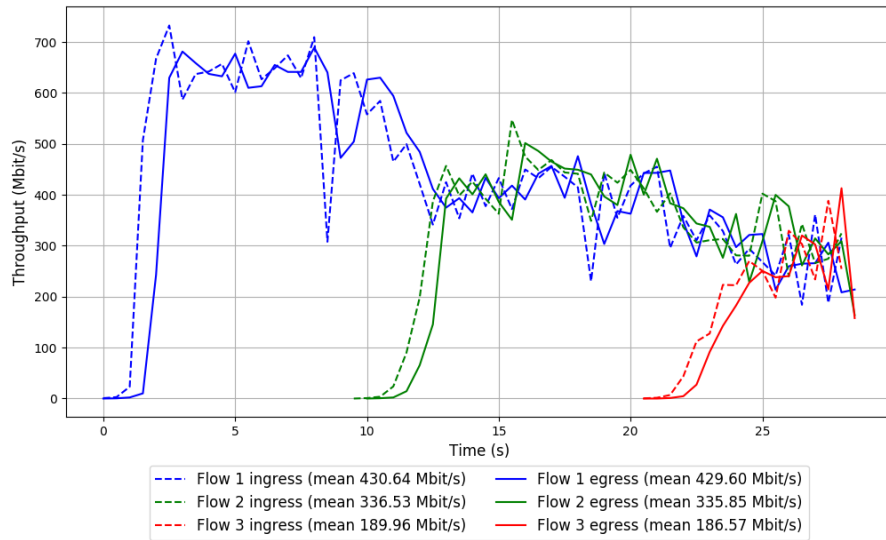
-- Flow 3:

Average throughput: 186.57 Mbit/s

95th percentile per-packet one-way delay: 136.098 ms

Loss rate: 5.14%

Run 2: Report of Indigo-MusesT — Data Link

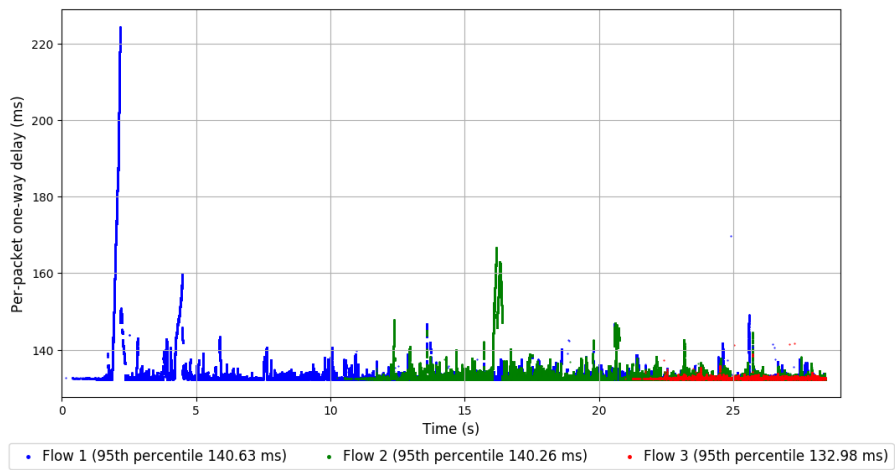
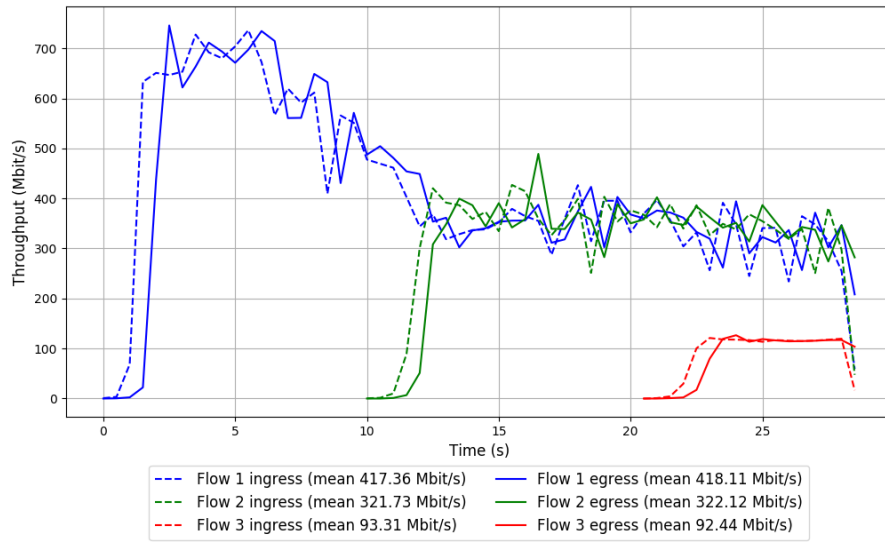


Run 3: Statistics of Indigo-MuseST

Start at: 2019-04-24 10:16:42
End at: 2019-04-24 10:17:12
Local clock offset: -0.531 ms
Remote clock offset: -0.039 ms

```
# Below is generated by plot.py at 2019-04-24 13:04:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 649.31 Mbit/s
95th percentile per-packet one-way delay: 140.171 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 418.11 Mbit/s
95th percentile per-packet one-way delay: 140.629 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 322.12 Mbit/s
95th percentile per-packet one-way delay: 140.259 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 92.44 Mbit/s
95th percentile per-packet one-way delay: 132.977 ms
Loss rate: 4.37%
```

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MuseST

Start at: 2019-04-24 10:53:51

End at: 2019-04-24 10:54:21

Local clock offset: -0.062 ms

Remote clock offset: 0.014 ms

Below is generated by plot.py at 2019-04-24 13:07:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 672.95 Mbit/s

95th percentile per-packet one-way delay: 157.427 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 428.08 Mbit/s

95th percentile per-packet one-way delay: 163.733 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 343.57 Mbit/s

95th percentile per-packet one-way delay: 145.308 ms

Loss rate: 1.62%

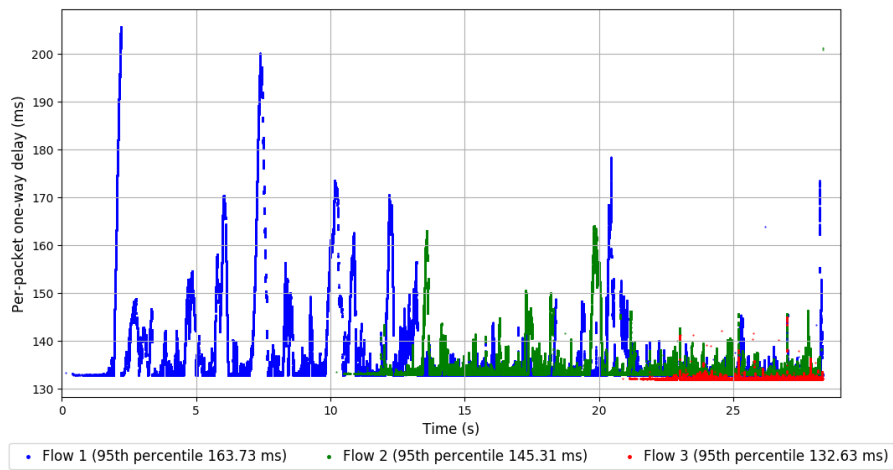
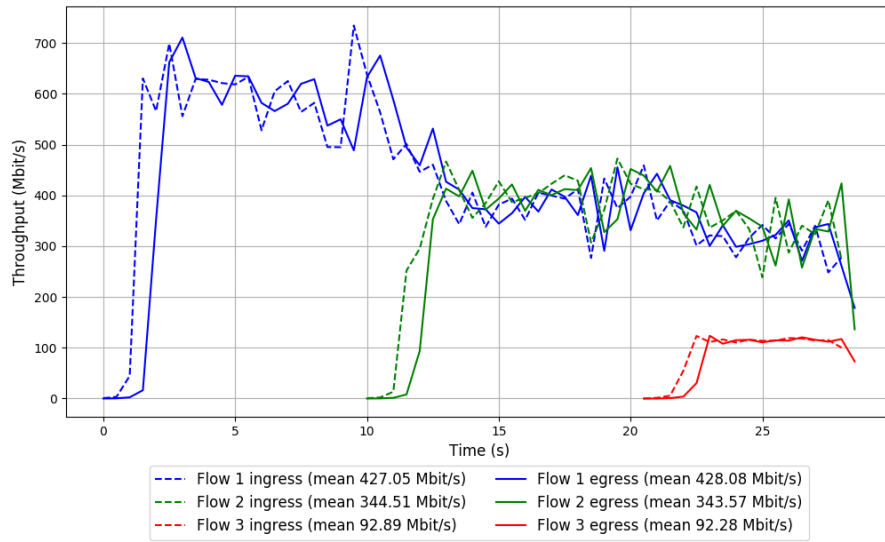
-- Flow 3:

Average throughput: 92.28 Mbit/s

95th percentile per-packet one-way delay: 132.626 ms

Loss rate: 4.08%

Run 4: Report of Indigo-MusesT — Data Link

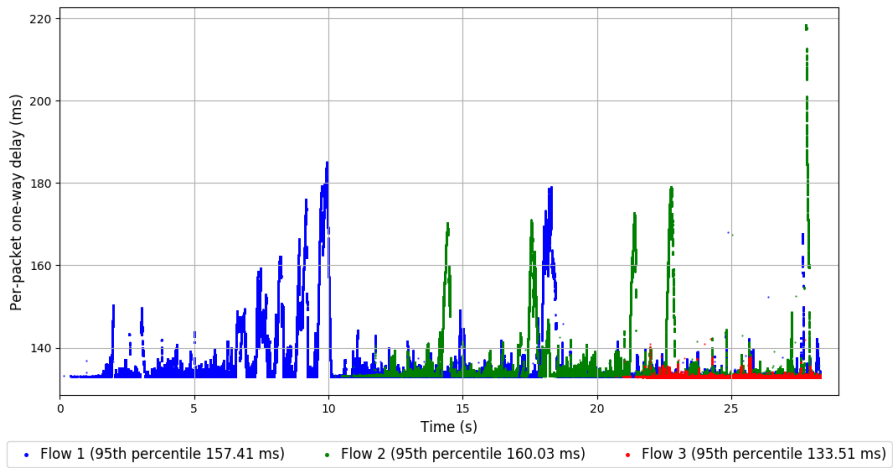
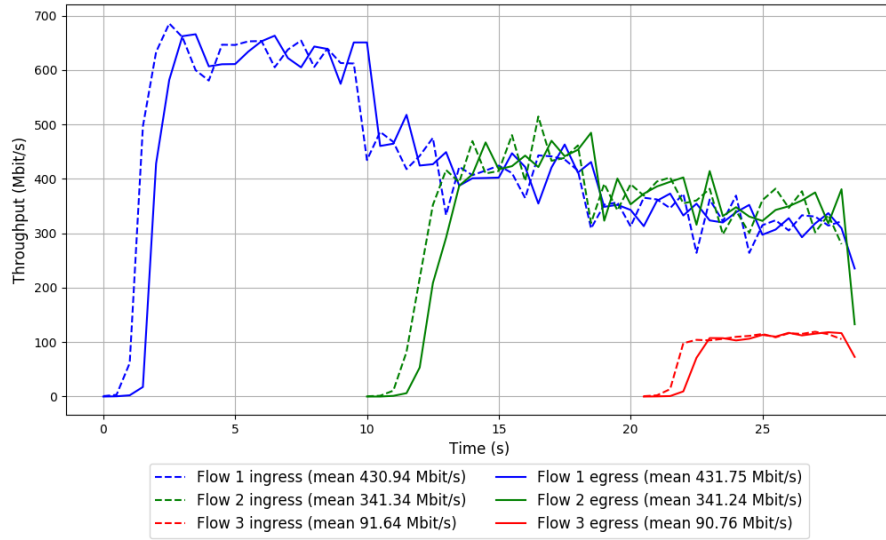


Run 5: Statistics of Indigo-MuseST

Start at: 2019-04-24 11:31:01
End at: 2019-04-24 11:31:31
Local clock offset: -0.402 ms
Remote clock offset: -0.435 ms

```
# Below is generated by plot.py at 2019-04-24 13:09:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 675.01 Mbit/s
95th percentile per-packet one-way delay: 157.937 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 431.75 Mbit/s
95th percentile per-packet one-way delay: 157.414 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 341.24 Mbit/s
95th percentile per-packet one-way delay: 160.035 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 90.76 Mbit/s
95th percentile per-packet one-way delay: 133.509 ms
Loss rate: 4.29%
```

Run 5: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-04-24 08:43:05

End at: 2019-04-24 08:43:35

Local clock offset: 0.344 ms

Remote clock offset: 0.056 ms

Below is generated by plot.py at 2019-04-24 13:09:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.02 Mbit/s

95th percentile per-packet one-way delay: 133.967 ms

Loss rate: 2.29%

-- Flow 1:

Average throughput: 5.24 Mbit/s

95th percentile per-packet one-way delay: 133.739 ms

Loss rate: 1.78%

-- Flow 2:

Average throughput: 3.43 Mbit/s

95th percentile per-packet one-way delay: 134.158 ms

Loss rate: 2.69%

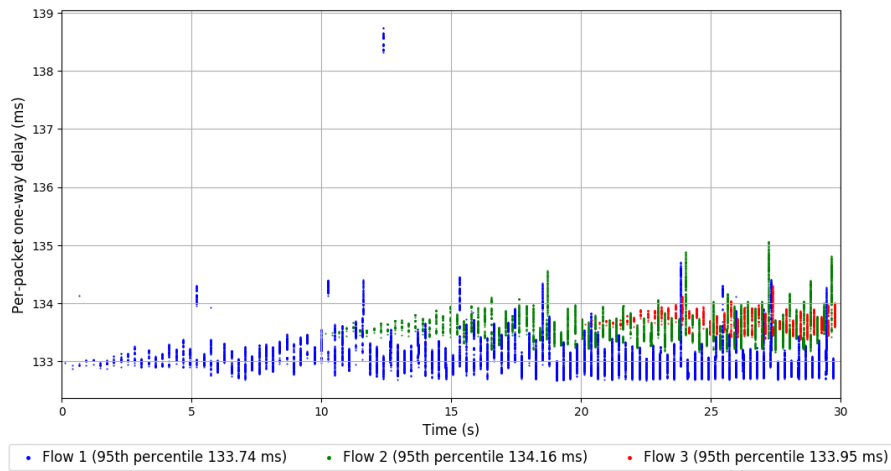
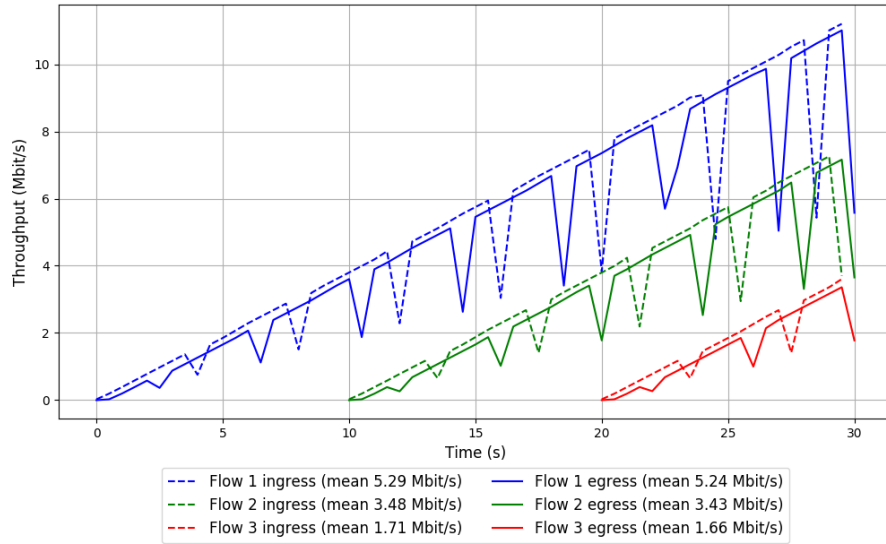
-- Flow 3:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 133.952 ms

Loss rate: 5.42%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-04-24 09:20:28

End at: 2019-04-24 09:20:58

Local clock offset: -0.318 ms

Remote clock offset: 0.007 ms

Below is generated by plot.py at 2019-04-24 13:09:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.01 Mbit/s

95th percentile per-packet one-way delay: 133.357 ms

Loss rate: 2.30%

-- Flow 1:

Average throughput: 5.24 Mbit/s

95th percentile per-packet one-way delay: 133.313 ms

Loss rate: 1.79%

-- Flow 2:

Average throughput: 3.42 Mbit/s

95th percentile per-packet one-way delay: 133.441 ms

Loss rate: 2.70%

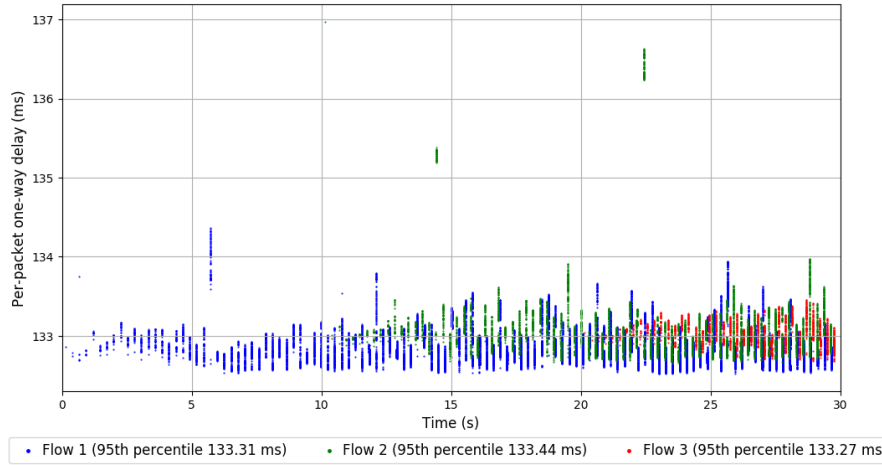
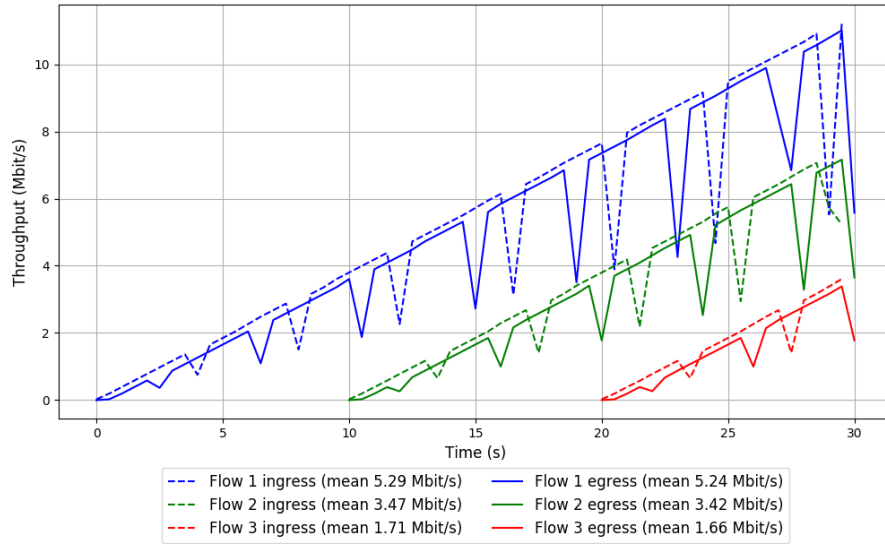
-- Flow 3:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 133.266 ms

Loss rate: 5.41%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-04-24 09:59:03
End at: 2019-04-24 09:59:33
Local clock offset: 0.308 ms
Remote clock offset: -0.016 ms

Below is generated by plot.py at 2019-04-24 13:09:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.24 Mbit/s
95th percentile per-packet one-way delay: 133.753 ms
Loss rate: 2.05%

-- Flow 1:

Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 133.421 ms
Loss rate: 1.29%

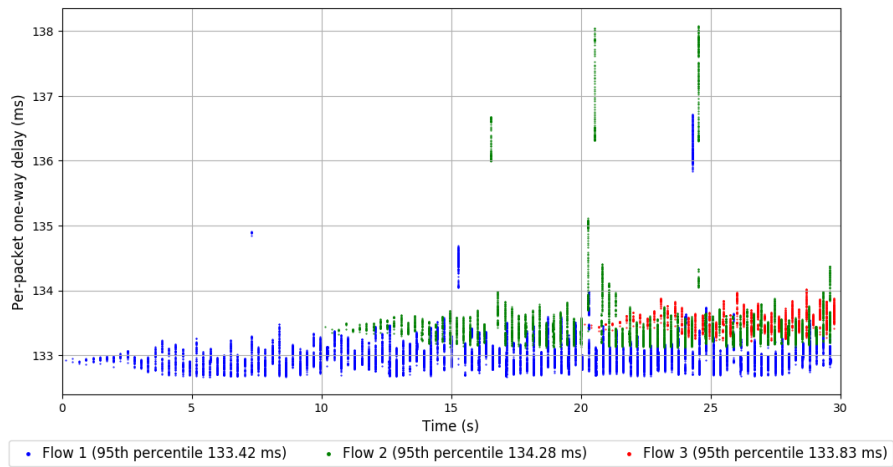
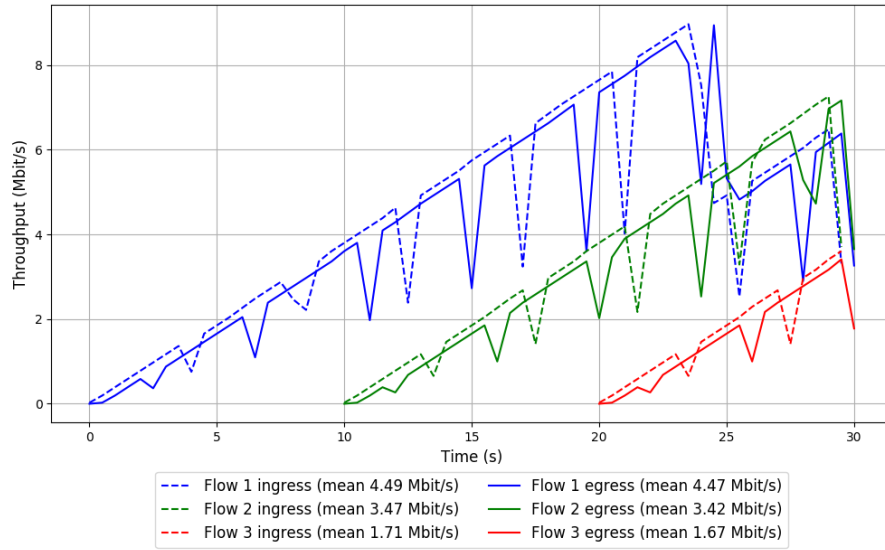
-- Flow 2:

Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 134.275 ms
Loss rate: 2.71%

-- Flow 3:

Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 133.826 ms
Loss rate: 5.40%

Run 3: Report of LEDBAT — Data Link

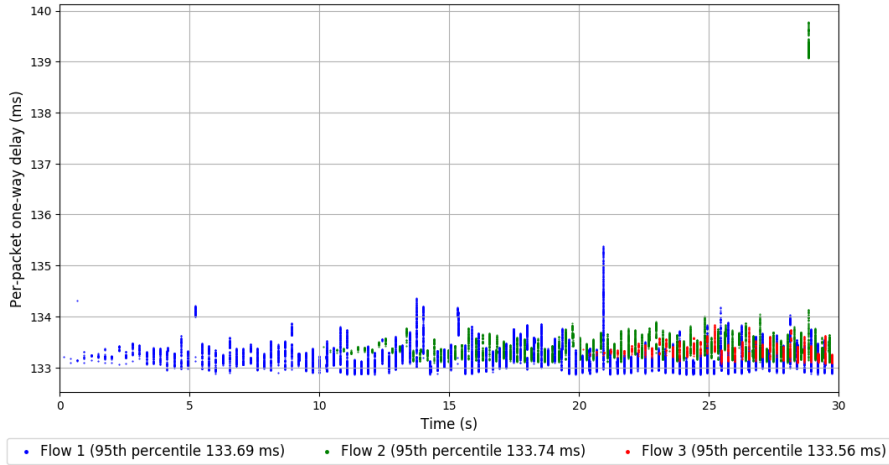
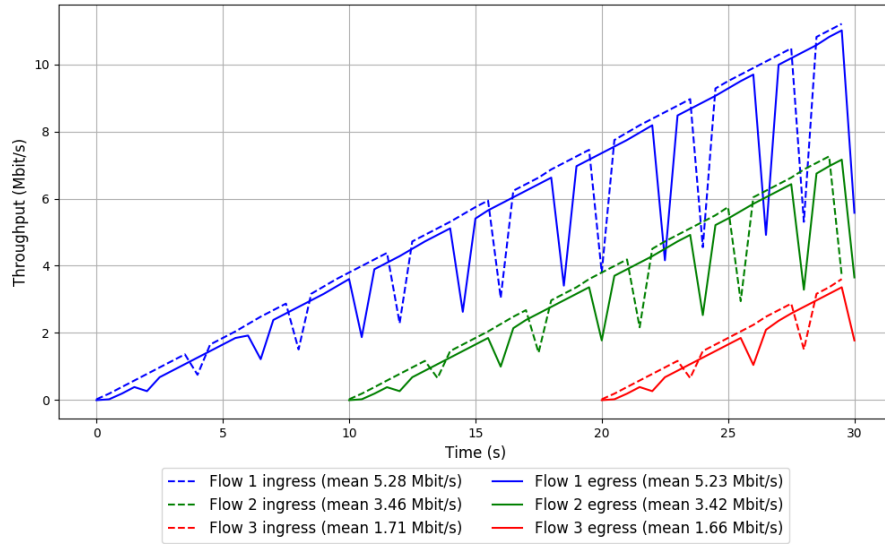


Run 4: Statistics of LEDBAT

Start at: 2019-04-24 10:36:20
End at: 2019-04-24 10:36:50
Local clock offset: 0.094 ms
Remote clock offset: 0.035 ms

```
# Below is generated by plot.py at 2019-04-24 13:09:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.02 Mbit/s
95th percentile per-packet one-way delay: 133.696 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 133.691 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 133.744 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 133.564 ms
Loss rate: 5.42%
```

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-04-24 11:13:21

End at: 2019-04-24 11:13:51

Local clock offset: 0.145 ms

Remote clock offset: 0.009 ms

Below is generated by plot.py at 2019-04-24 13:09:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.02 Mbit/s

95th percentile per-packet one-way delay: 133.889 ms

Loss rate: 2.30%

-- Flow 1:

Average throughput: 5.23 Mbit/s

95th percentile per-packet one-way delay: 133.333 ms

Loss rate: 1.79%

-- Flow 2:

Average throughput: 3.42 Mbit/s

95th percentile per-packet one-way delay: 134.109 ms

Loss rate: 2.70%

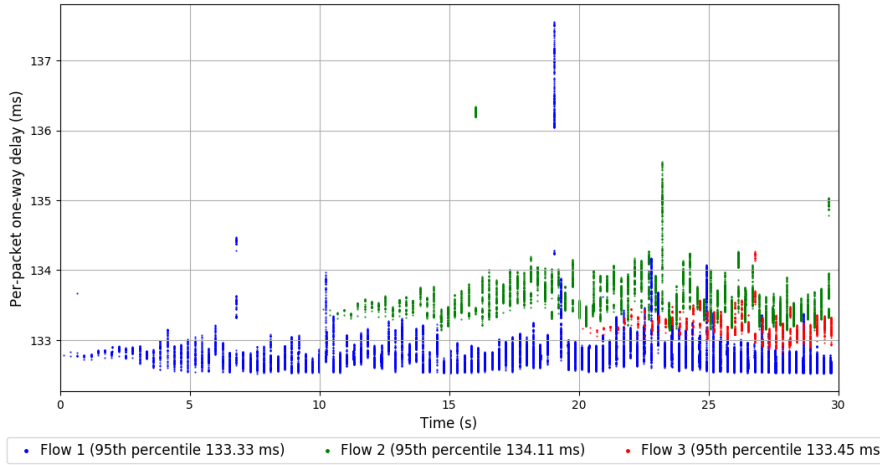
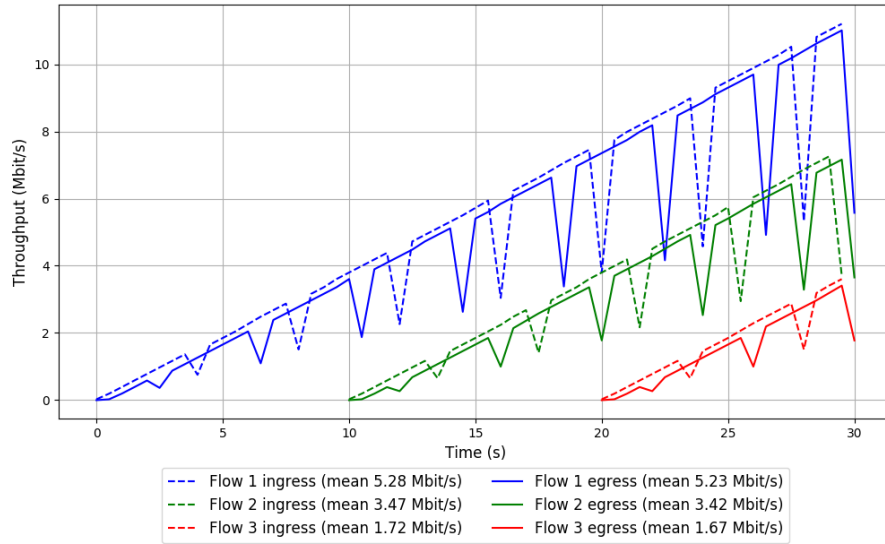
-- Flow 3:

Average throughput: 1.67 Mbit/s

95th percentile per-packet one-way delay: 133.454 ms

Loss rate: 5.40%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-04-24 09:06:49

End at: 2019-04-24 09:07:19

Local clock offset: -0.014 ms

Remote clock offset: 0.058 ms

Below is generated by plot.py at 2019-04-24 13:18:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 550.03 Mbit/s

95th percentile per-packet one-way delay: 236.012 ms

Loss rate: 3.13%

-- Flow 1:

Average throughput: 310.66 Mbit/s

95th percentile per-packet one-way delay: 233.563 ms

Loss rate: 1.92%

-- Flow 2:

Average throughput: 252.90 Mbit/s

95th percentile per-packet one-way delay: 248.499 ms

Loss rate: 4.77%

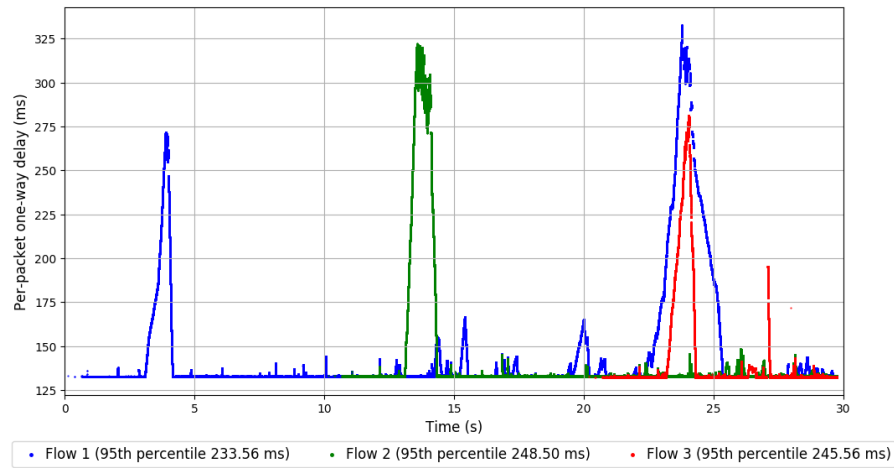
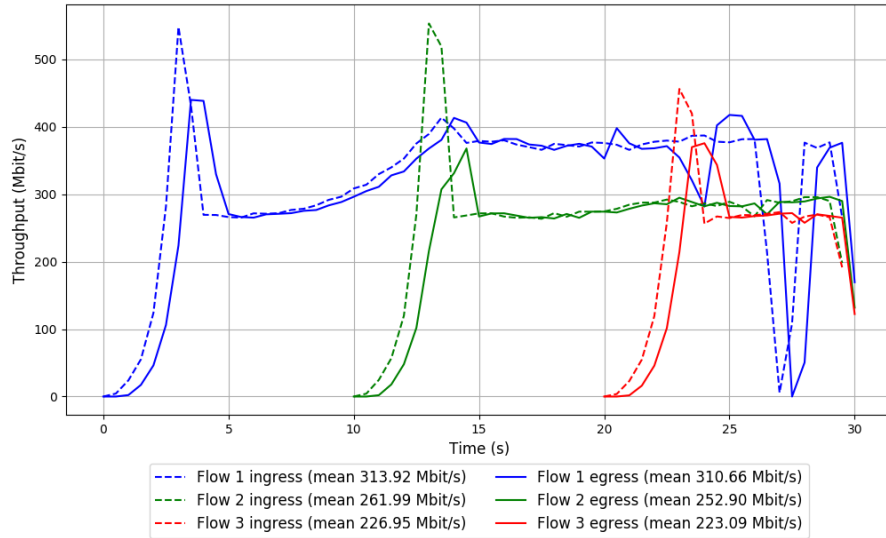
-- Flow 3:

Average throughput: 223.09 Mbit/s

95th percentile per-packet one-way delay: 245.564 ms

Loss rate: 4.36%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-04-24 09:44:38

End at: 2019-04-24 09:45:08

Local clock offset: -0.137 ms

Remote clock offset: 0.021 ms

Below is generated by plot.py at 2019-04-24 13:20:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 605.04 Mbit/s

95th percentile per-packet one-way delay: 262.678 ms

Loss rate: 4.61%

-- Flow 1:

Average throughput: 317.86 Mbit/s

95th percentile per-packet one-way delay: 234.406 ms

Loss rate: 1.84%

-- Flow 2:

Average throughput: 323.63 Mbit/s

95th percentile per-packet one-way delay: 274.979 ms

Loss rate: 8.78%

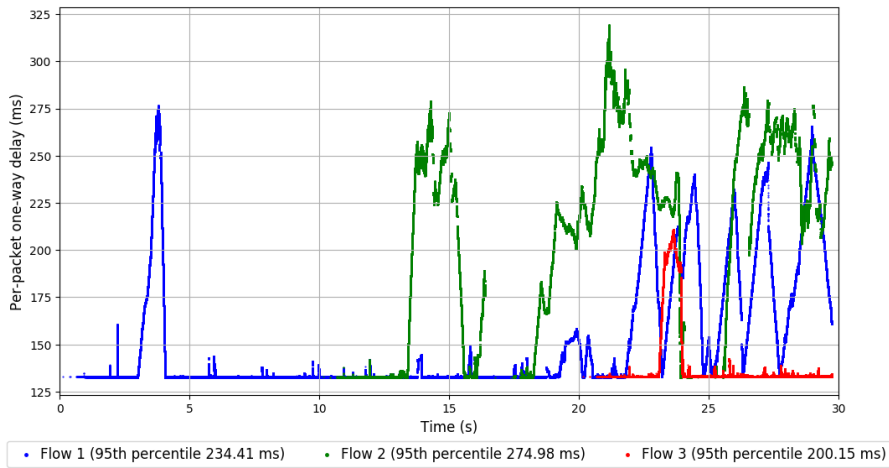
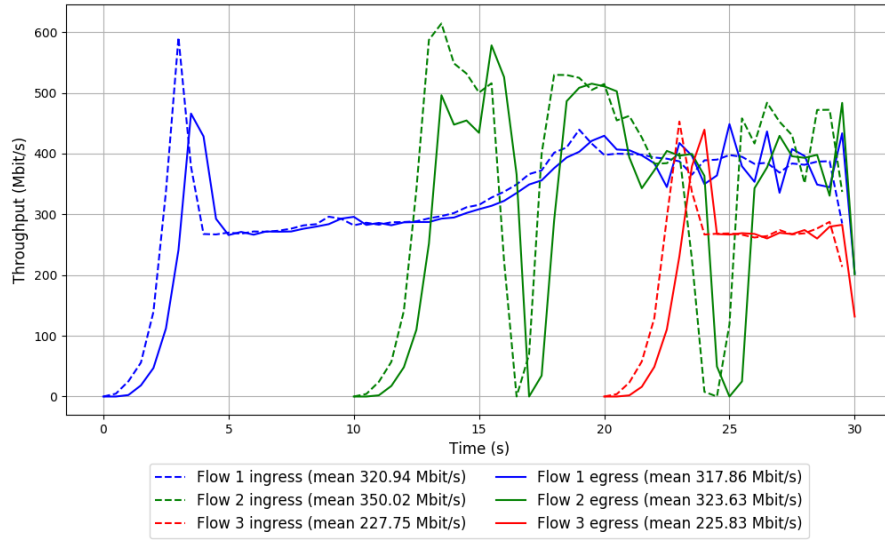
-- Flow 3:

Average throughput: 225.83 Mbit/s

95th percentile per-packet one-way delay: 200.151 ms

Loss rate: 3.54%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-04-24 10:22:39

End at: 2019-04-24 10:23:09

Local clock offset: 0.166 ms

Remote clock offset: 0.05 ms

Below is generated by plot.py at 2019-04-24 13:20:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 557.90 Mbit/s

95th percentile per-packet one-way delay: 177.860 ms

Loss rate: 2.00%

-- Flow 1:

Average throughput: 307.56 Mbit/s

95th percentile per-packet one-way delay: 160.565 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 269.14 Mbit/s

95th percentile per-packet one-way delay: 212.120 ms

Loss rate: 2.45%

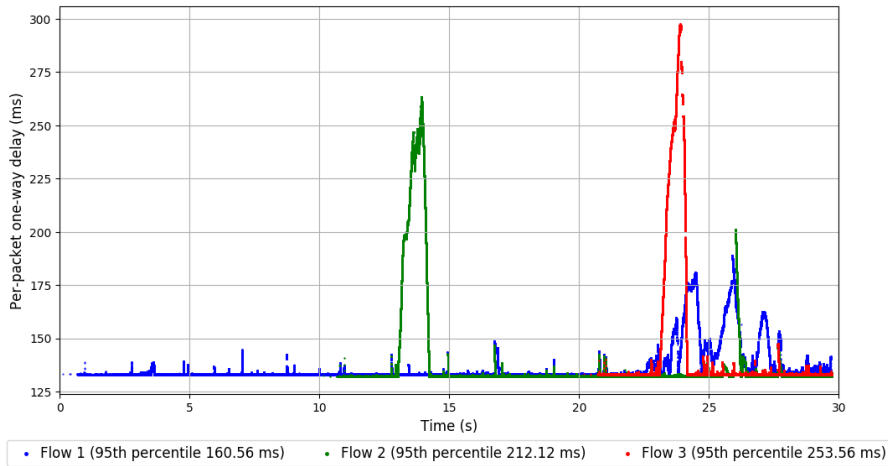
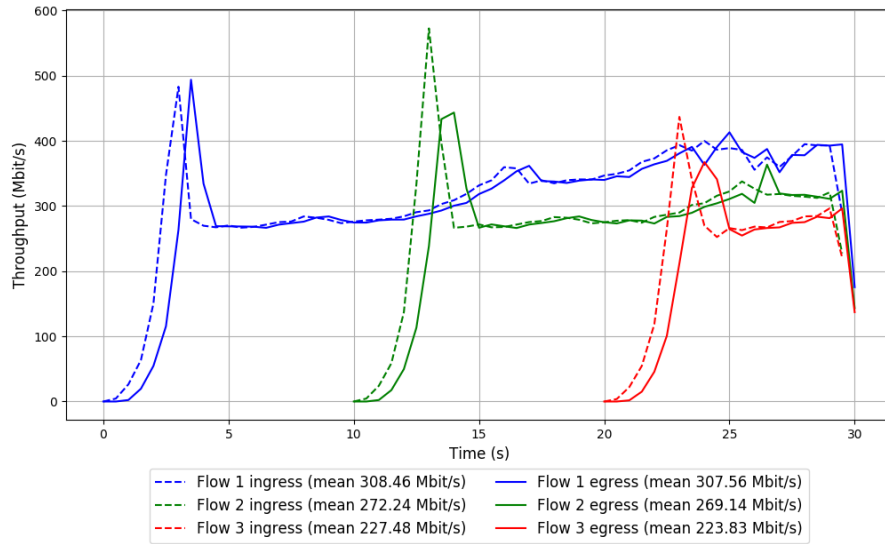
-- Flow 3:

Average throughput: 223.83 Mbit/s

95th percentile per-packet one-way delay: 253.564 ms

Loss rate: 4.27%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-04-24 10:59:34

End at: 2019-04-24 11:00:04

Local clock offset: -0.451 ms

Remote clock offset: 0.029 ms

Below is generated by plot.py at 2019-04-24 13:23:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 606.32 Mbit/s

95th percentile per-packet one-way delay: 248.970 ms

Loss rate: 2.90%

-- Flow 1:

Average throughput: 354.83 Mbit/s

95th percentile per-packet one-way delay: 254.911 ms

Loss rate: 2.96%

-- Flow 2:

Average throughput: 270.22 Mbit/s

95th percentile per-packet one-way delay: 213.076 ms

Loss rate: 2.64%

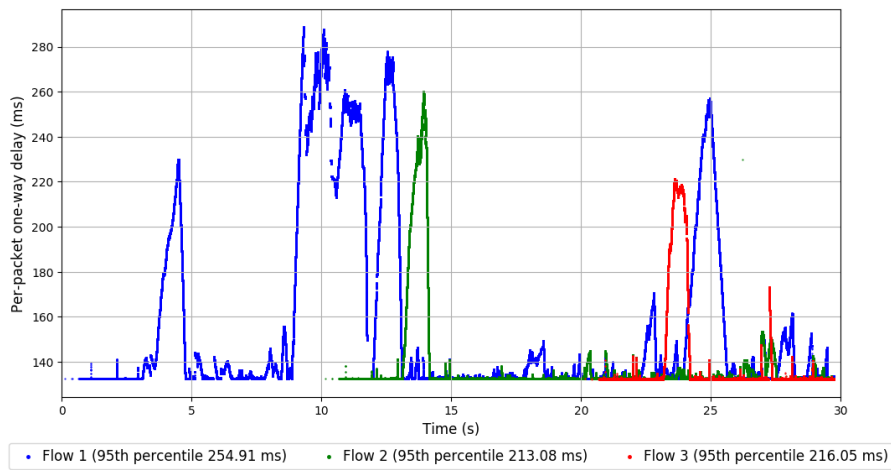
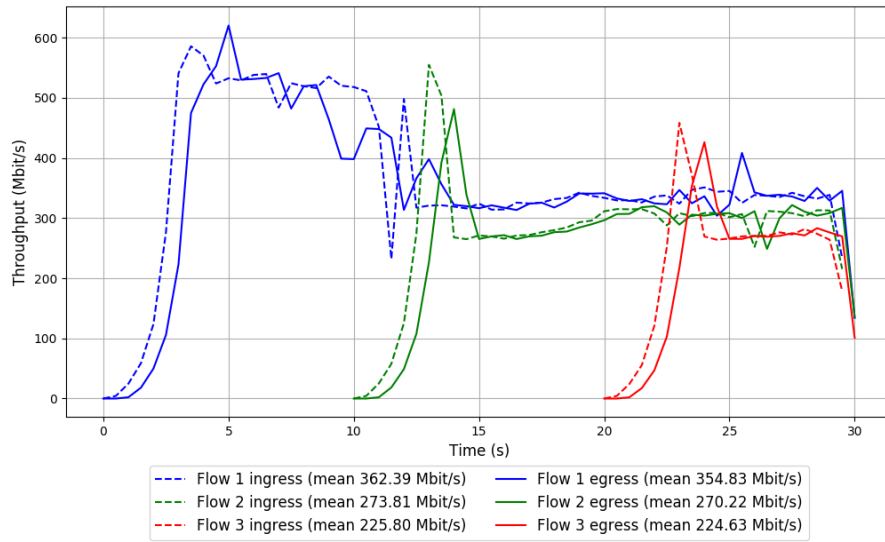
-- Flow 3:

Average throughput: 224.63 Mbit/s

95th percentile per-packet one-way delay: 216.049 ms

Loss rate: 3.22%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-04-24 11:37:00

End at: 2019-04-24 11:37:30

Local clock offset: 0.393 ms

Remote clock offset: -0.091 ms

Below is generated by plot.py at 2019-04-24 13:24:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 610.95 Mbit/s

95th percentile per-packet one-way delay: 258.626 ms

Loss rate: 3.65%

-- Flow 1:

Average throughput: 375.40 Mbit/s

95th percentile per-packet one-way delay: 261.422 ms

Loss rate: 4.45%

-- Flow 2:

Average throughput: 248.11 Mbit/s

95th percentile per-packet one-way delay: 182.791 ms

Loss rate: 1.49%

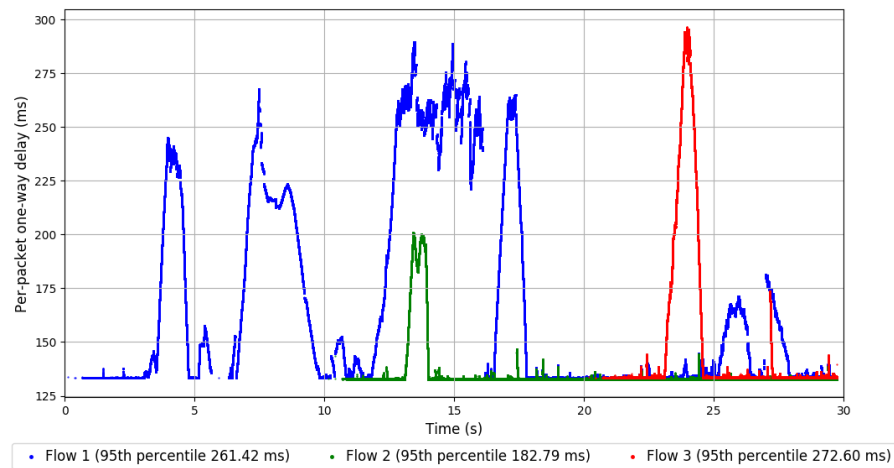
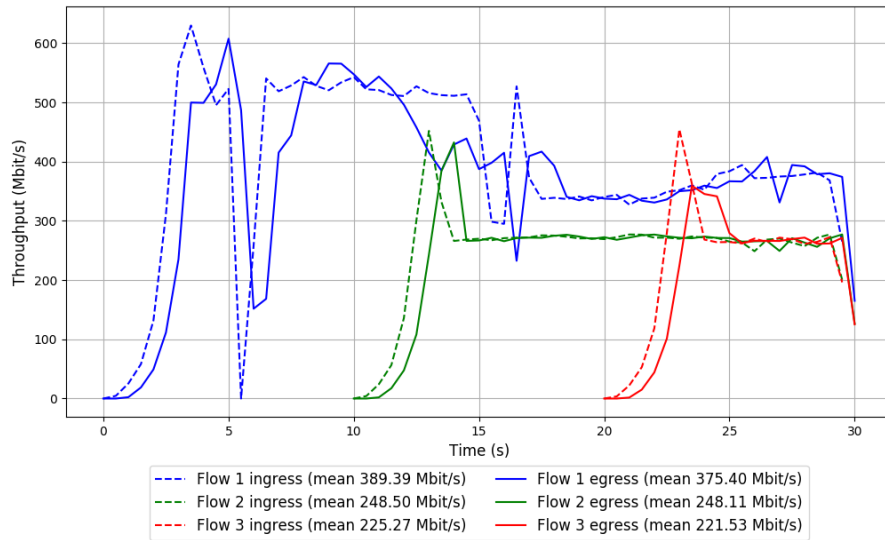
-- Flow 3:

Average throughput: 221.53 Mbit/s

95th percentile per-packet one-way delay: 272.604 ms

Loss rate: 4.27%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2019-04-24 08:57:30

End at: 2019-04-24 08:58:00

Local clock offset: 0.097 ms

Remote clock offset: 0.071 ms

Below is generated by plot.py at 2019-04-24 13:24:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 363.10 Mbit/s

95th percentile per-packet one-way delay: 147.845 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 206.55 Mbit/s

95th percentile per-packet one-way delay: 153.395 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 165.69 Mbit/s

95th percentile per-packet one-way delay: 134.385 ms

Loss rate: 1.56%

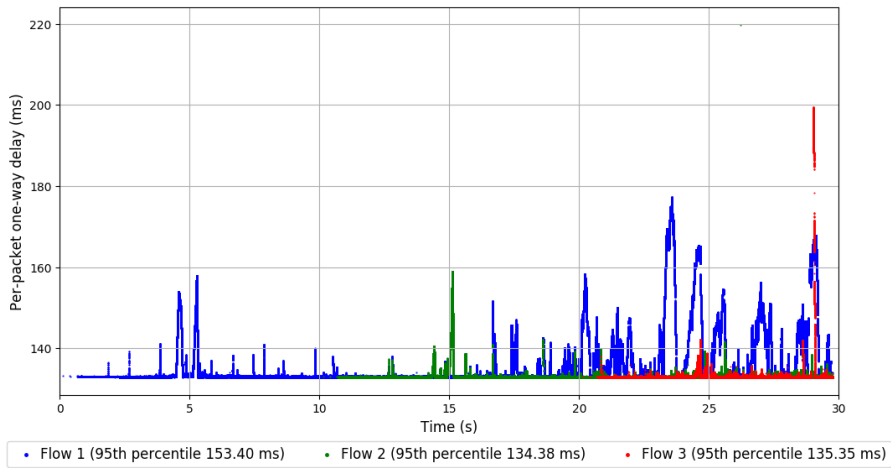
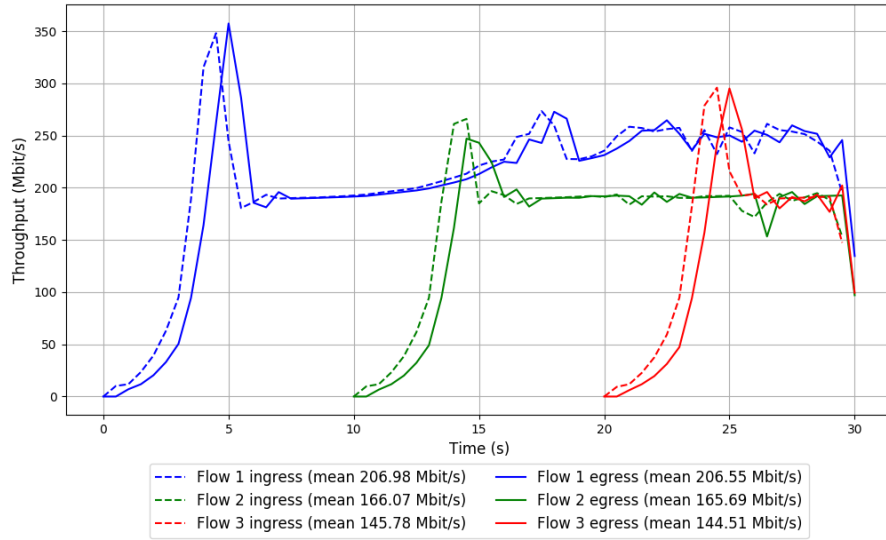
-- Flow 3:

Average throughput: 144.51 Mbit/s

95th percentile per-packet one-way delay: 135.346 ms

Loss rate: 3.55%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-04-24 09:35:06

End at: 2019-04-24 09:35:36

Local clock offset: -0.387 ms

Remote clock offset: -0.01 ms

Below is generated by plot.py at 2019-04-24 13:24:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 351.69 Mbit/s

95th percentile per-packet one-way delay: 136.492 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 194.47 Mbit/s

95th percentile per-packet one-way delay: 138.235 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 169.93 Mbit/s

95th percentile per-packet one-way delay: 133.184 ms

Loss rate: 1.52%

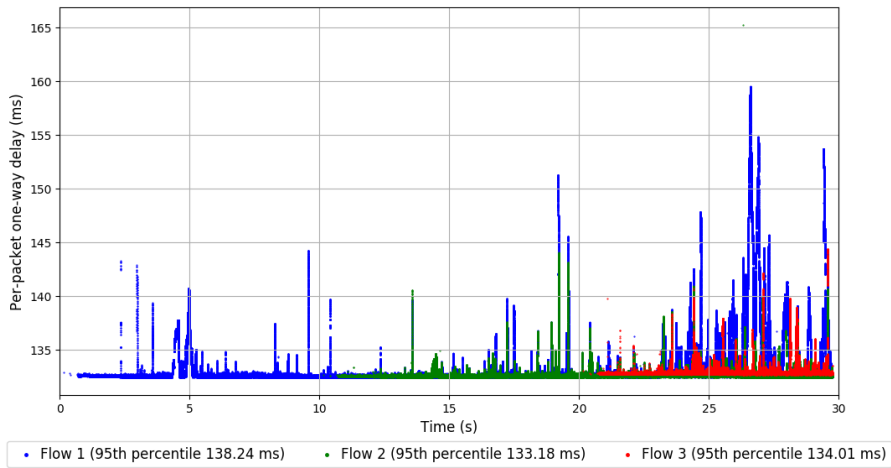
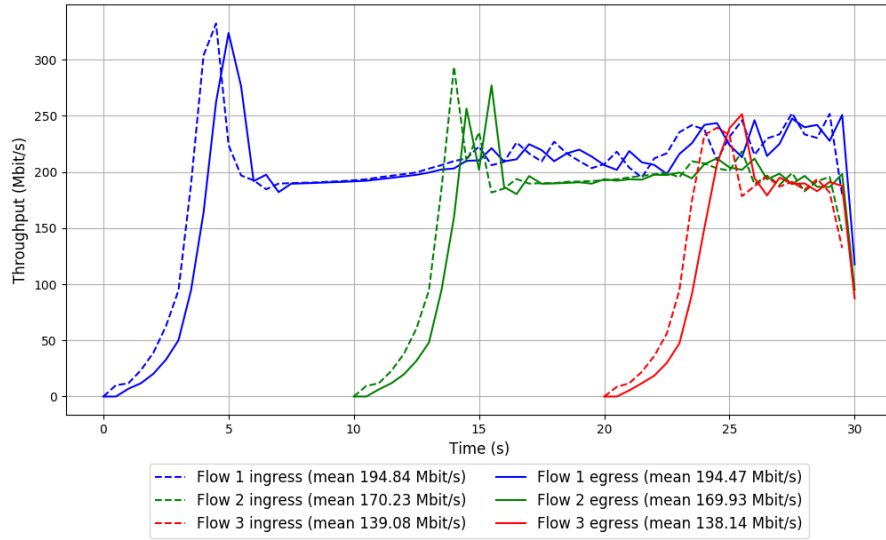
-- Flow 3:

Average throughput: 138.14 Mbit/s

95th percentile per-packet one-way delay: 134.006 ms

Loss rate: 3.36%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-04-24 10:13:22

End at: 2019-04-24 10:13:52

Local clock offset: -0.187 ms

Remote clock offset: 0.018 ms

Below is generated by plot.py at 2019-04-24 13:24:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 404.49 Mbit/s

95th percentile per-packet one-way delay: 233.101 ms

Loss rate: 2.05%

-- Flow 1:

Average throughput: 248.94 Mbit/s

95th percentile per-packet one-way delay: 239.911 ms

Loss rate: 1.95%

-- Flow 2:

Average throughput: 167.10 Mbit/s

95th percentile per-packet one-way delay: 133.988 ms

Loss rate: 1.66%

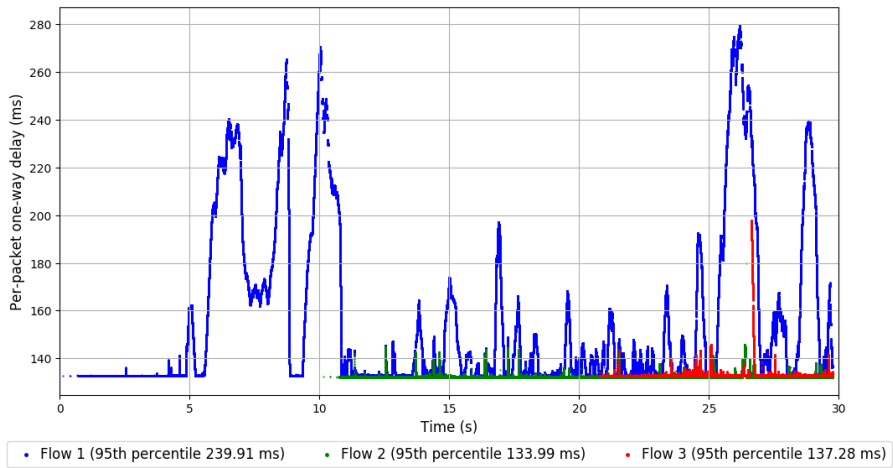
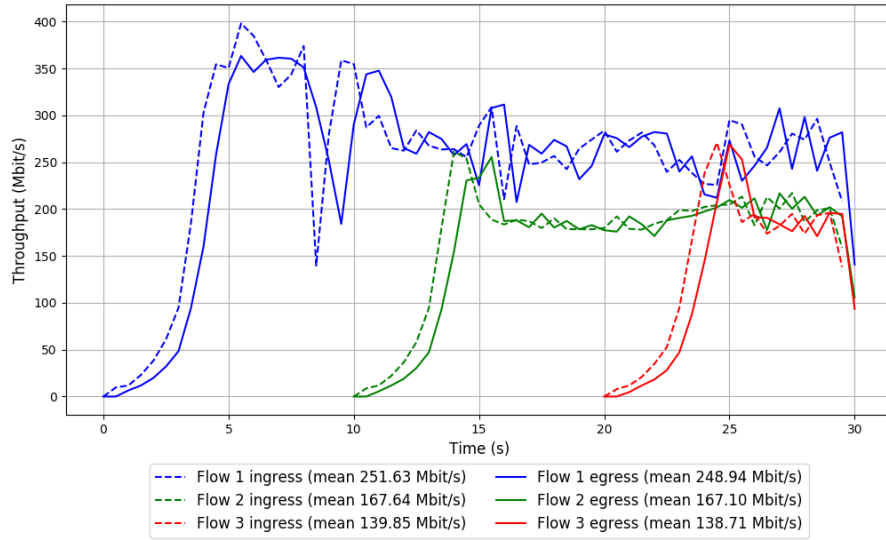
-- Flow 3:

Average throughput: 138.71 Mbit/s

95th percentile per-packet one-way delay: 137.278 ms

Loss rate: 3.49%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-04-24 10:50:29

End at: 2019-04-24 10:50:59

Local clock offset: -0.37 ms

Remote clock offset: 0.003 ms

Below is generated by plot.py at 2019-04-24 13:30:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 414.49 Mbit/s

95th percentile per-packet one-way delay: 200.947 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 249.51 Mbit/s

95th percentile per-packet one-way delay: 212.904 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 181.63 Mbit/s

95th percentile per-packet one-way delay: 136.975 ms

Loss rate: 1.62%

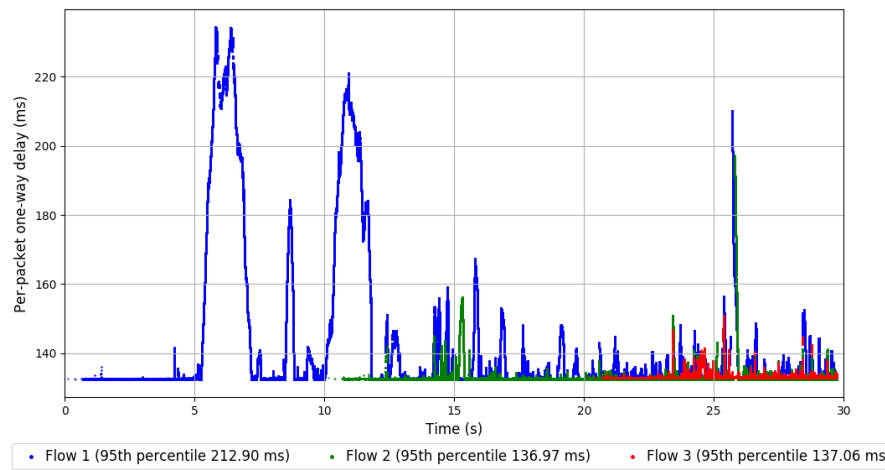
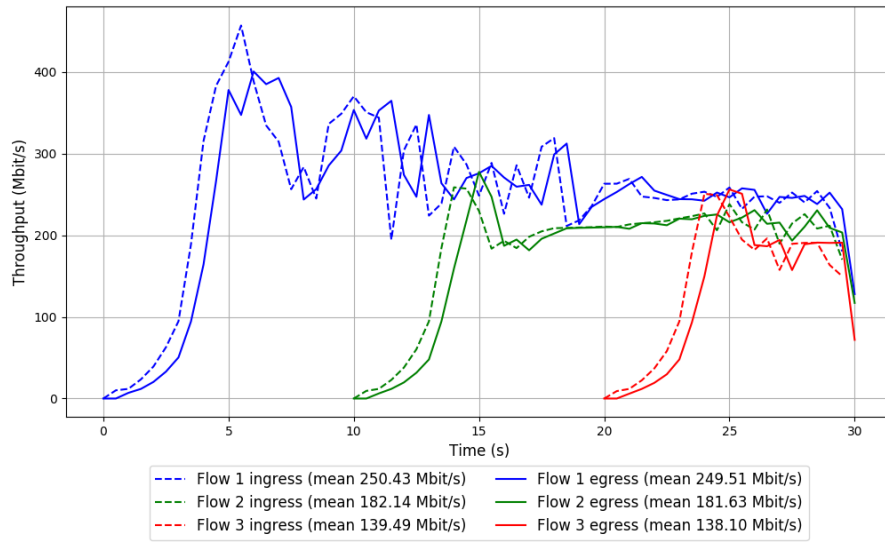
-- Flow 3:

Average throughput: 138.10 Mbit/s

95th percentile per-packet one-way delay: 137.058 ms

Loss rate: 3.69%

Run 4: Report of PCC-Expr — Data Link

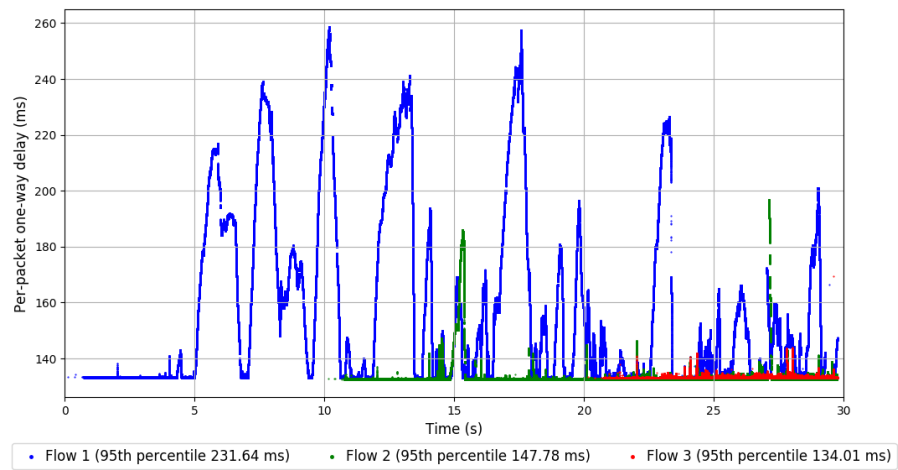
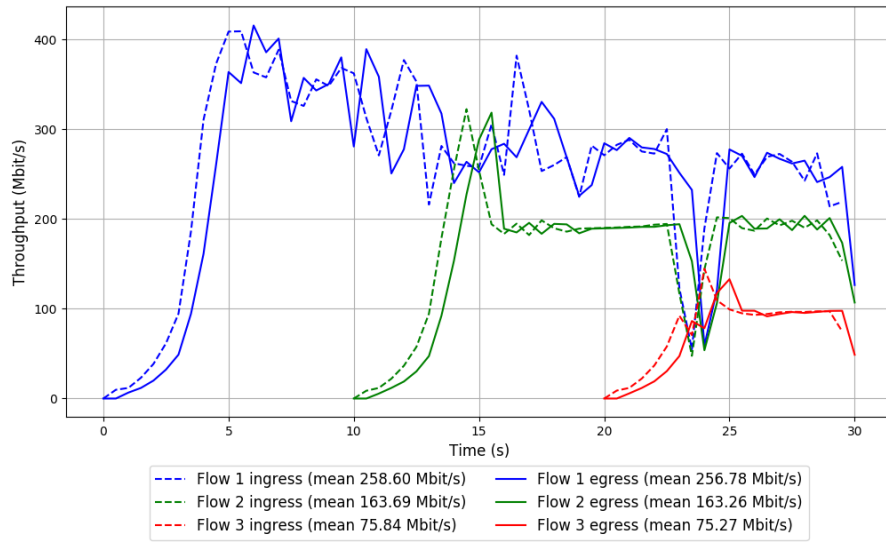


Run 5: Statistics of PCC-Expr

Start at: 2019-04-24 11:27:42
End at: 2019-04-24 11:28:12
Local clock offset: 0.106 ms
Remote clock offset: -0.005 ms

```
# Below is generated by plot.py at 2019-04-24 13:31:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.25 Mbit/s
95th percentile per-packet one-way delay: 225.113 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 256.78 Mbit/s
95th percentile per-packet one-way delay: 231.644 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 163.26 Mbit/s
95th percentile per-packet one-way delay: 147.781 ms
Loss rate: 1.61%
-- Flow 3:
Average throughput: 75.27 Mbit/s
95th percentile per-packet one-way delay: 134.008 ms
Loss rate: 3.43%
```

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-04-24 08:44:25

End at: 2019-04-24 08:44:55

Local clock offset: 0.134 ms

Remote clock offset: 0.012 ms

Below is generated by plot.py at 2019-04-24 13:31:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.64 Mbit/s

95th percentile per-packet one-way delay: 133.268 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 54.20 Mbit/s

95th percentile per-packet one-way delay: 133.287 ms

Loss rate: 1.41%

-- Flow 2:

Average throughput: 48.70 Mbit/s

95th percentile per-packet one-way delay: 132.539 ms

Loss rate: 2.10%

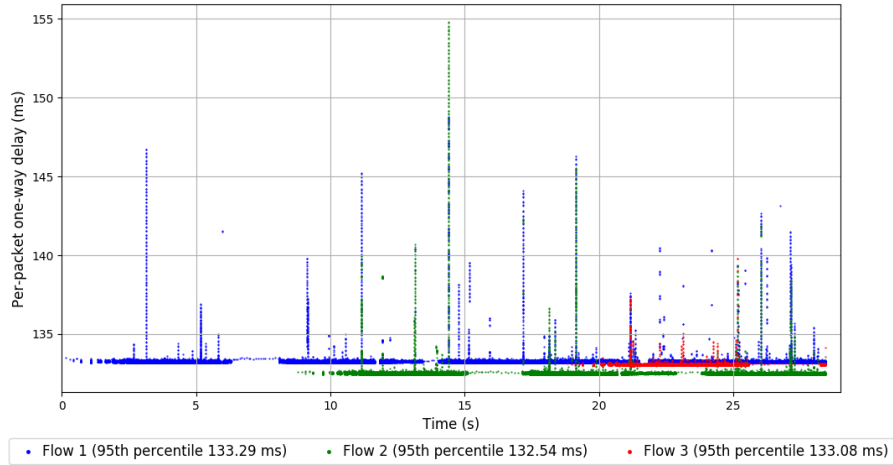
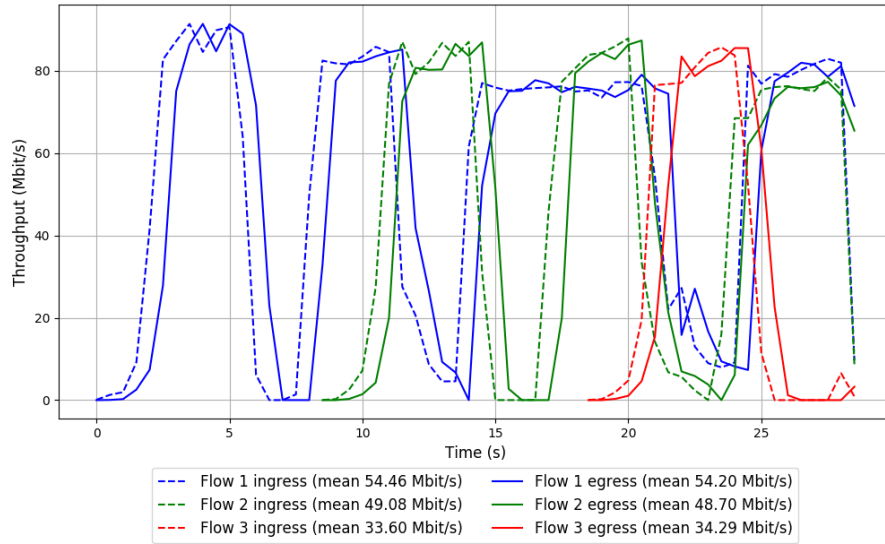
-- Flow 3:

Average throughput: 34.29 Mbit/s

95th percentile per-packet one-way delay: 133.081 ms

Loss rate: 0.63%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-04-24 09:21:48

End at: 2019-04-24 09:22:18

Local clock offset: 0.11 ms

Remote clock offset: -0.31 ms

Below is generated by plot.py at 2019-04-24 13:31:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.24 Mbit/s

95th percentile per-packet one-way delay: 133.659 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 58.66 Mbit/s

95th percentile per-packet one-way delay: 133.673 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 38.53 Mbit/s

95th percentile per-packet one-way delay: 132.946 ms

Loss rate: 2.40%

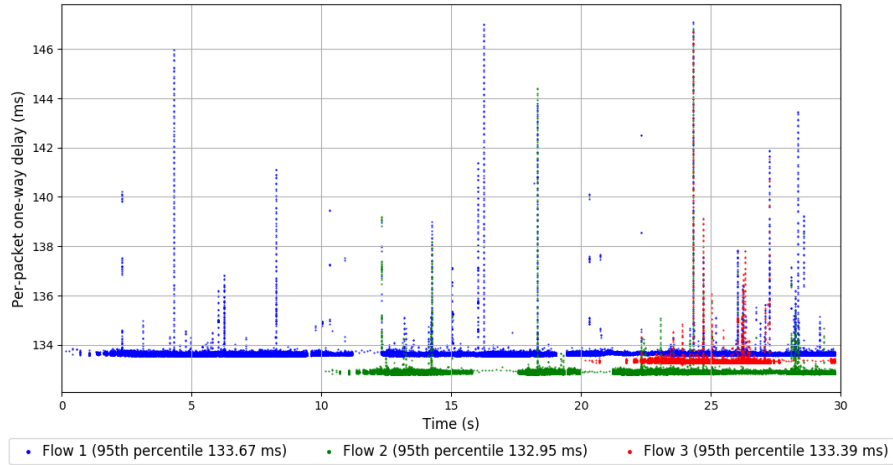
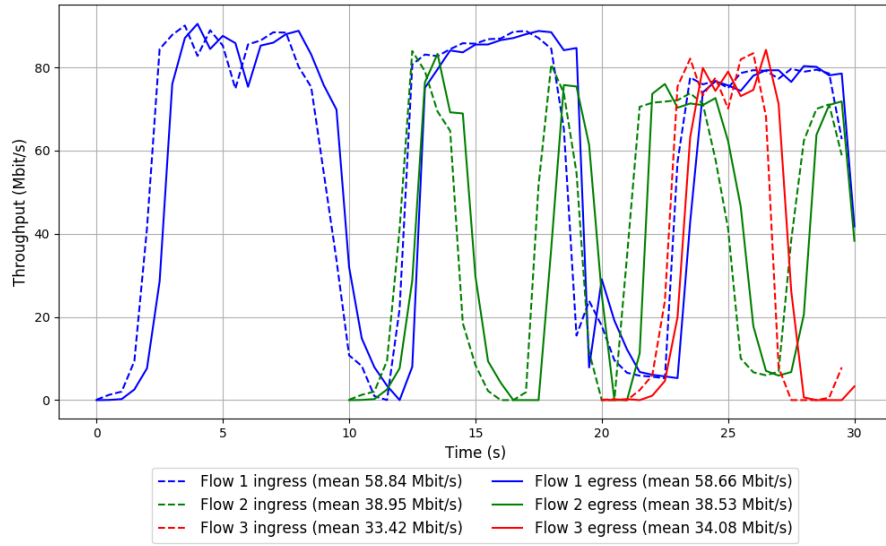
-- Flow 3:

Average throughput: 34.08 Mbit/s

95th percentile per-packet one-way delay: 133.394 ms

Loss rate: 0.78%

Run 2: Report of QUIC Cubic — Data Link

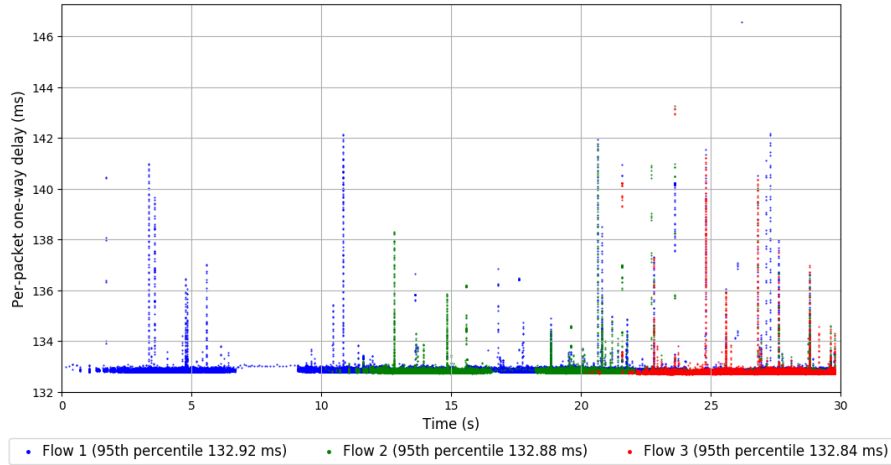
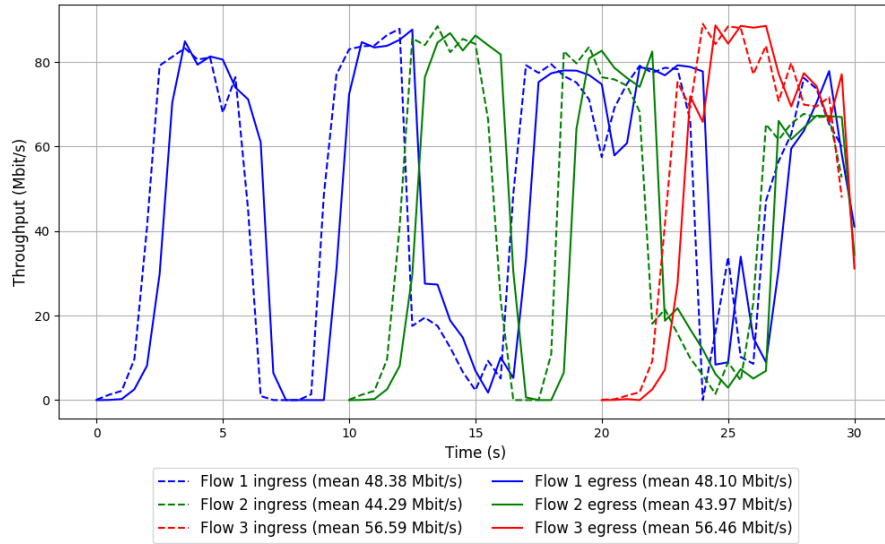


Run 3: Statistics of QUIC Cubic

Start at: 2019-04-24 10:00:23
End at: 2019-04-24 10:00:53
Local clock offset: -0.117 ms
Remote clock offset: -0.013 ms

```
# Below is generated by plot.py at 2019-04-24 13:31:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.55 Mbit/s
95th percentile per-packet one-way delay: 132.904 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 48.10 Mbit/s
95th percentile per-packet one-way delay: 132.917 ms
Loss rate: 1.47%
-- Flow 2:
Average throughput: 43.97 Mbit/s
95th percentile per-packet one-way delay: 132.881 ms
Loss rate: 2.05%
-- Flow 3:
Average throughput: 56.46 Mbit/s
95th percentile per-packet one-way delay: 132.837 ms
Loss rate: 2.93%
```

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-04-24 10:37:40

End at: 2019-04-24 10:38:10

Local clock offset: -0.502 ms

Remote clock offset: 0.04 ms

Below is generated by plot.py at 2019-04-24 13:31:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.25 Mbit/s

95th percentile per-packet one-way delay: 132.350 ms

Loss rate: 1.87%

-- Flow 1:

Average throughput: 57.18 Mbit/s

95th percentile per-packet one-way delay: 132.302 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 53.90 Mbit/s

95th percentile per-packet one-way delay: 132.371 ms

Loss rate: 1.93%

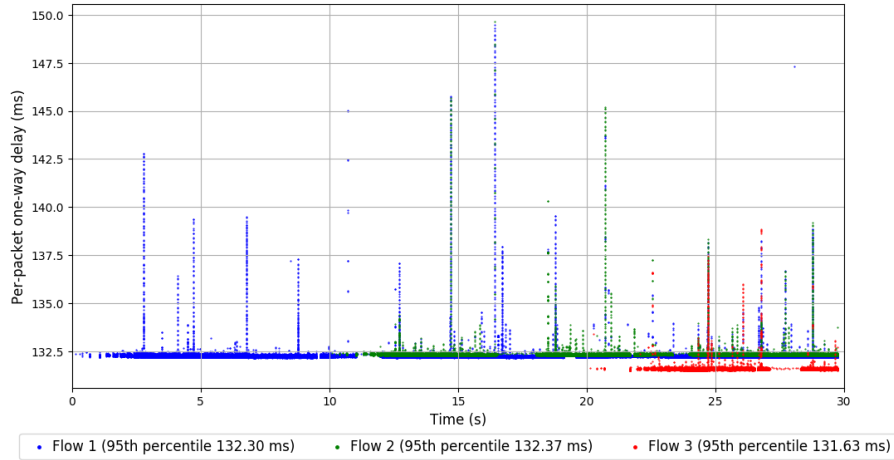
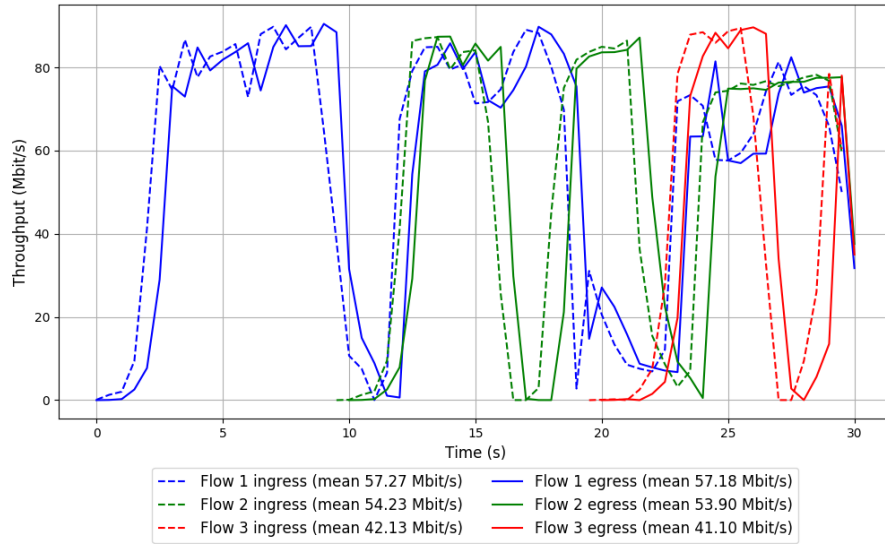
-- Flow 3:

Average throughput: 41.10 Mbit/s

95th percentile per-packet one-way delay: 131.631 ms

Loss rate: 5.06%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-04-24 11:14:41

End at: 2019-04-24 11:15:11

Local clock offset: -0.097 ms

Remote clock offset: 0.028 ms

Below is generated by plot.py at 2019-04-24 13:31:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.26 Mbit/s

95th percentile per-packet one-way delay: 133.111 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 60.33 Mbit/s

95th percentile per-packet one-way delay: 133.129 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 48.10 Mbit/s

95th percentile per-packet one-way delay: 132.953 ms

Loss rate: 2.10%

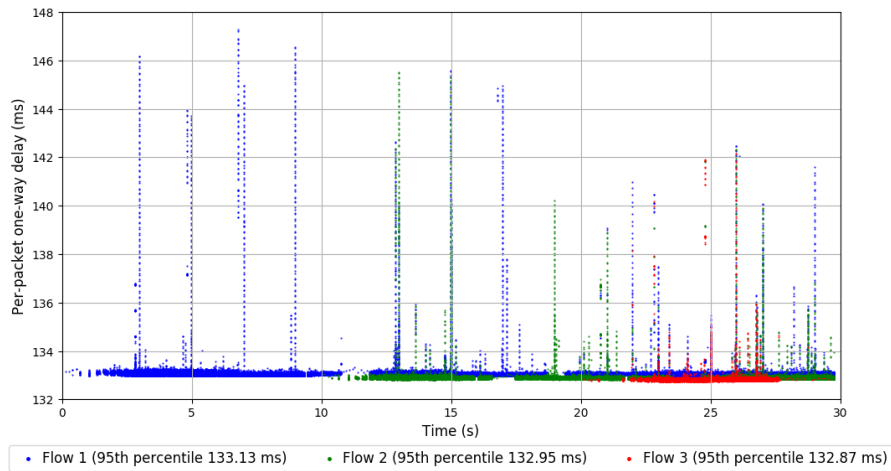
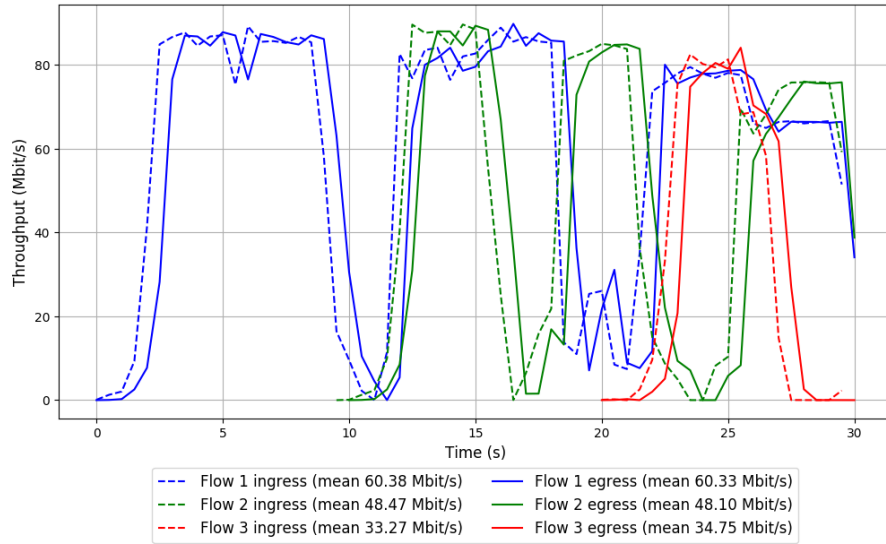
-- Flow 3:

Average throughput: 34.75 Mbit/s

95th percentile per-packet one-way delay: 132.873 ms

Loss rate: 0.35%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2019-04-24 09:08:52

End at: 2019-04-24 09:09:22

Local clock offset: -0.246 ms

Remote clock offset: 0.421 ms

Below is generated by plot.py at 2019-04-24 13:31:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 132.719 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 132.741 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 131.963 ms

Loss rate: 1.39%

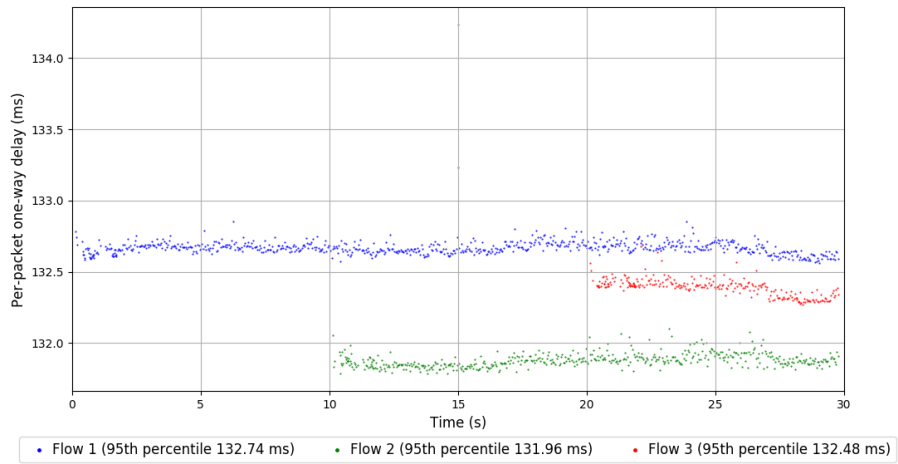
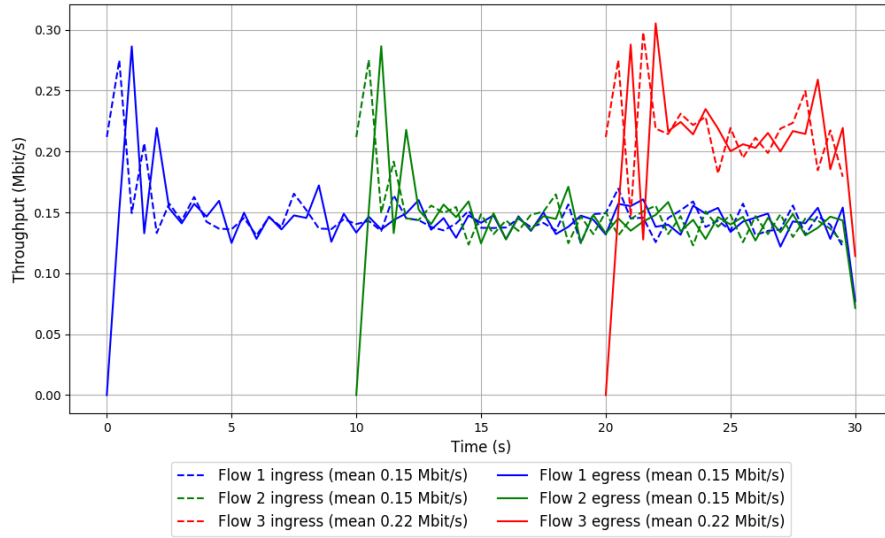
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 132.476 ms

Loss rate: 2.60%

Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-04-24 09:46:48

End at: 2019-04-24 09:47:18

Local clock offset: -0.57 ms

Remote clock offset: 0.018 ms

Below is generated by plot.py at 2019-04-24 13:31:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 132.121 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 132.127 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 131.703 ms

Loss rate: 1.39%

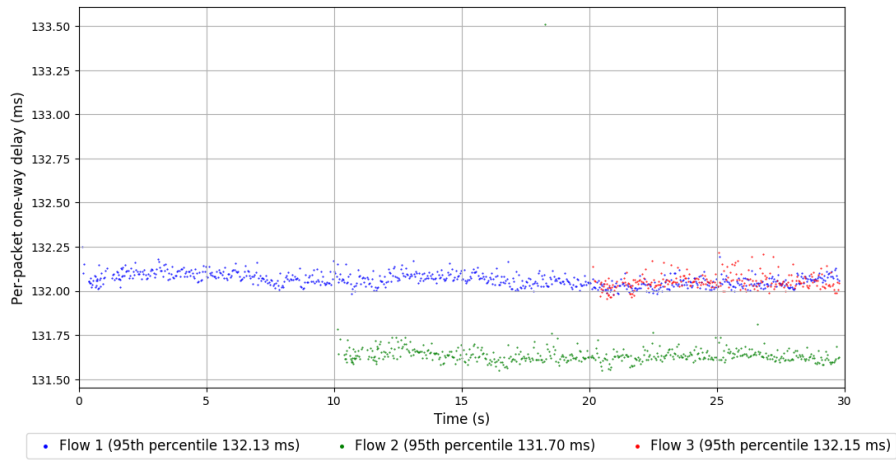
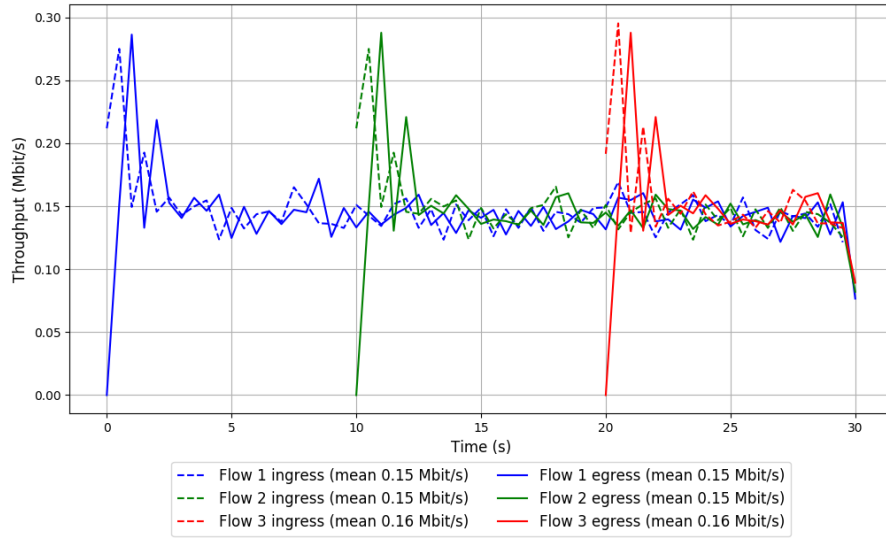
-- Flow 3:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 132.147 ms

Loss rate: 2.44%

Run 2: Report of SCReAM — Data Link

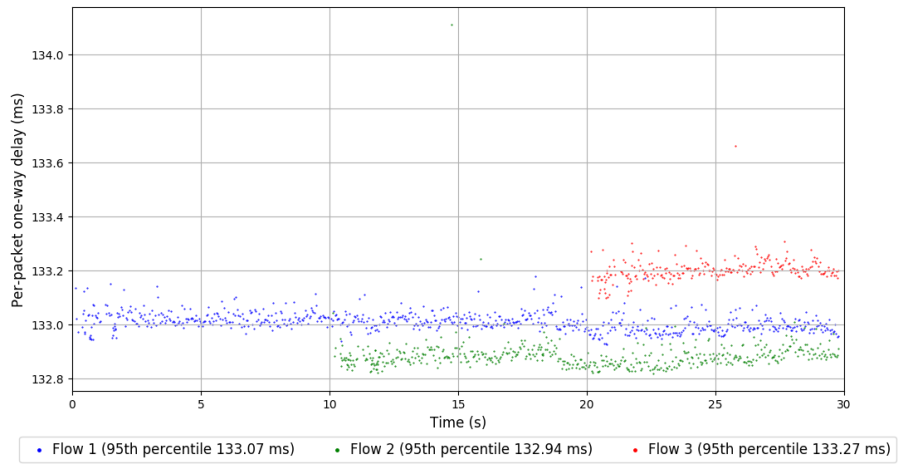
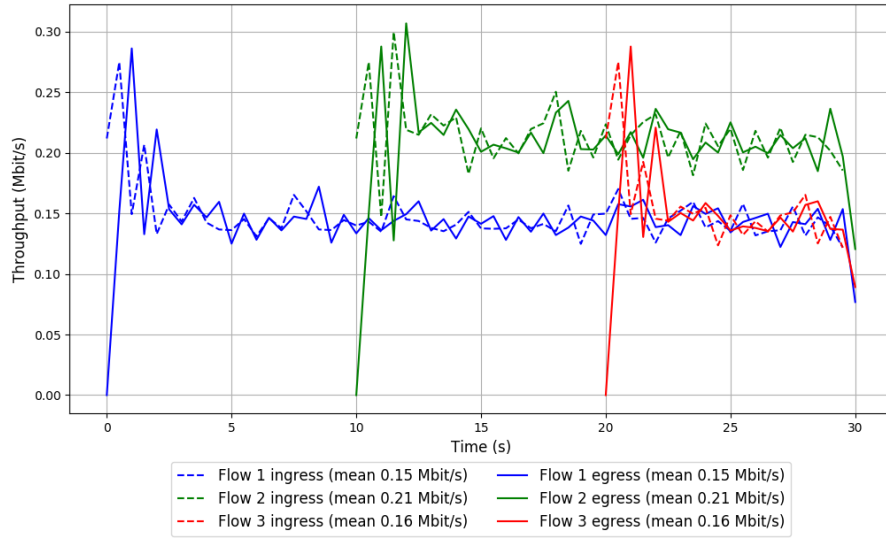


Run 3: Statistics of SCReAM

Start at: 2019-04-24 10:24:43
End at: 2019-04-24 10:25:13
Local clock offset: -0.075 ms
Remote clock offset: -0.007 ms

```
# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 133.214 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.068 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 132.942 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 133.271 ms
Loss rate: 2.44%
```

Run 3: Report of SCReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2019-04-24 11:01:42

End at: 2019-04-24 11:02:12

Local clock offset: -0.096 ms

Remote clock offset: 0.026 ms

Below is generated by plot.py at 2019-04-24 13:31:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 133.193 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 133.214 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 133.020 ms

Loss rate: 1.39%

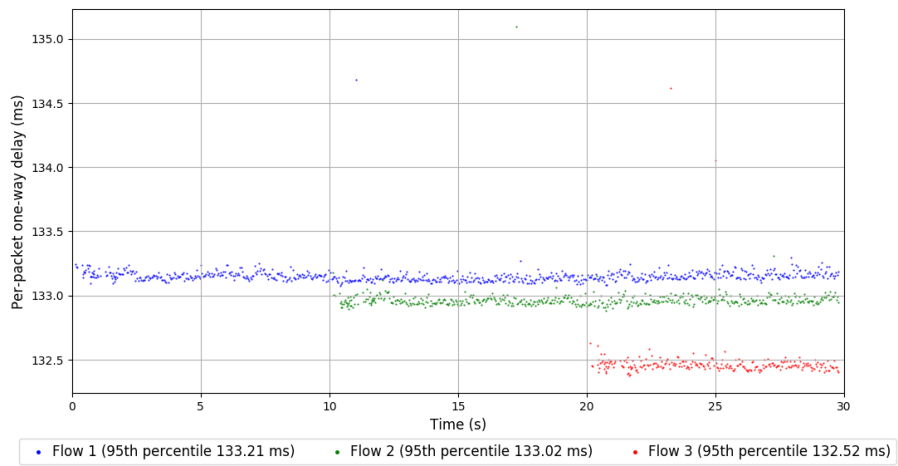
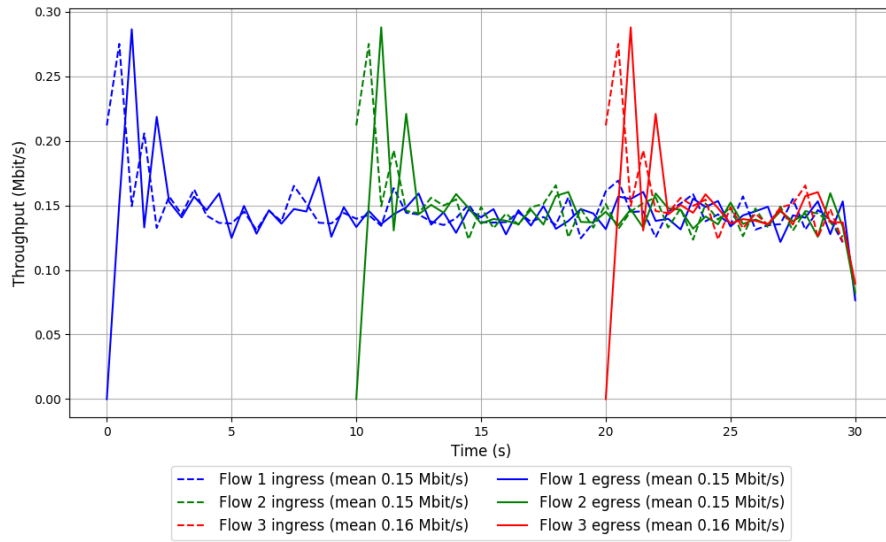
-- Flow 3:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 132.524 ms

Loss rate: 2.45%

Run 4: Report of SCReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2019-04-24 11:39:08

End at: 2019-04-24 11:39:38

Local clock offset: -0.135 ms

Remote clock offset: -0.06 ms

Below is generated by plot.py at 2019-04-24 13:31:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 133.080 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 132.370 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 132.861 ms

Loss rate: 1.39%

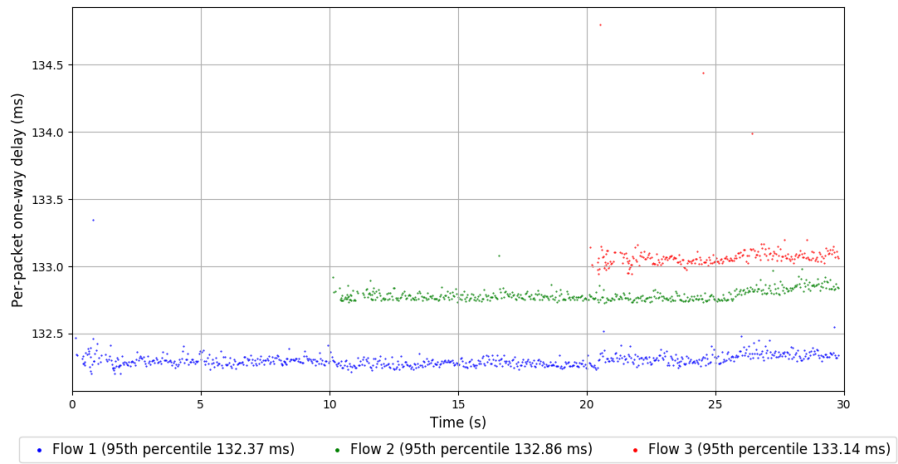
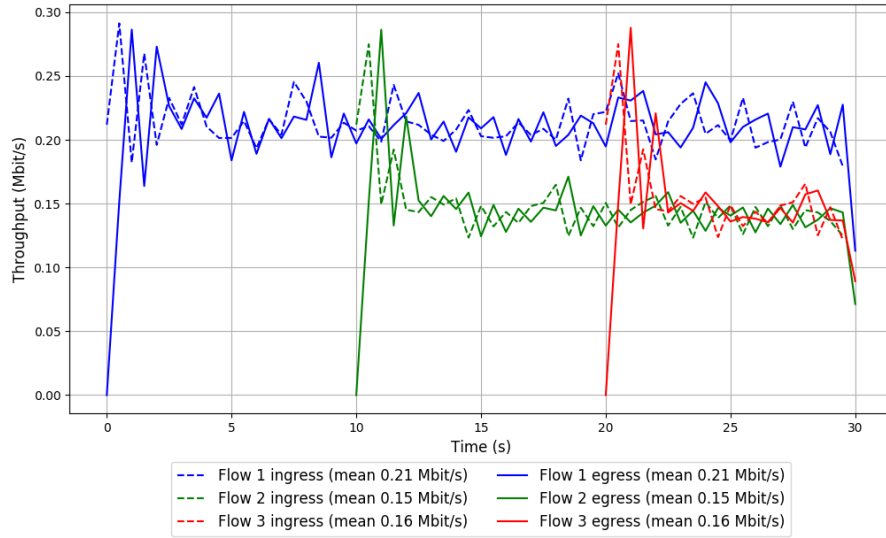
-- Flow 3:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 133.140 ms

Loss rate: 2.45%

Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-04-24 08:38:05

End at: 2019-04-24 08:38:35

Local clock offset: 0.418 ms

Remote clock offset: 0.023 ms

Below is generated by plot.py at 2019-04-24 13:31:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 133.696 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 0.84 Mbit/s

95th percentile per-packet one-way delay: 133.255 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.69 Mbit/s

95th percentile per-packet one-way delay: 133.631 ms

Loss rate: 1.39%

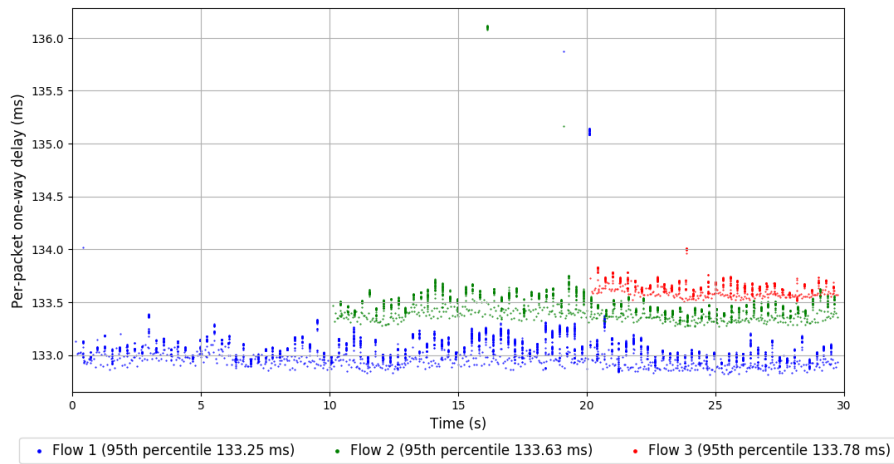
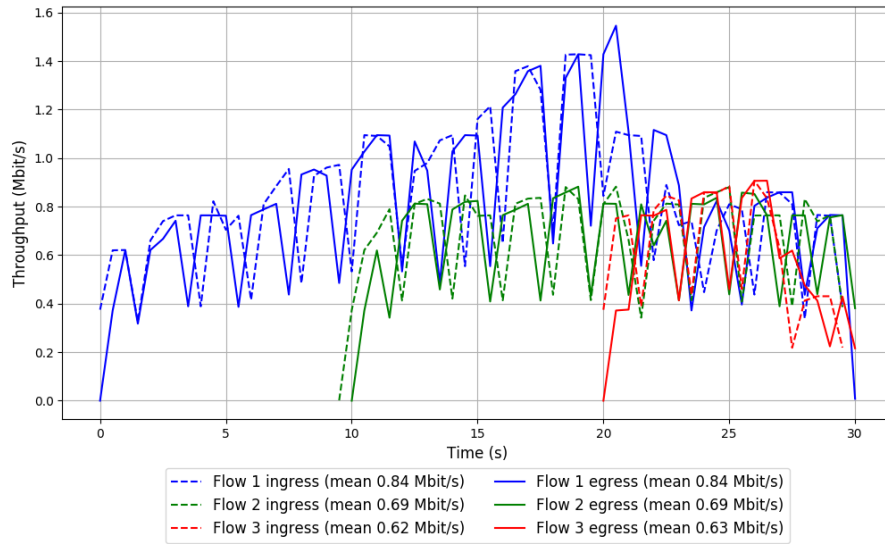
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 133.778 ms

Loss rate: 1.75%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-04-24 09:15:49

End at: 2019-04-24 09:16:19

Local clock offset: -0.45 ms

Remote clock offset: 0.043 ms

Below is generated by plot.py at 2019-04-24 13:31:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 132.750 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 0.69 Mbit/s

95th percentile per-packet one-way delay: 132.766 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 0.69 Mbit/s

95th percentile per-packet one-way delay: 132.678 ms

Loss rate: 1.22%

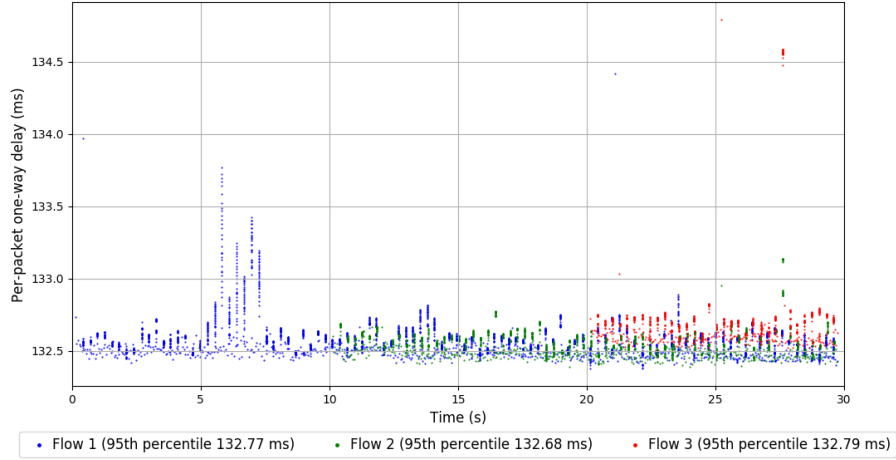
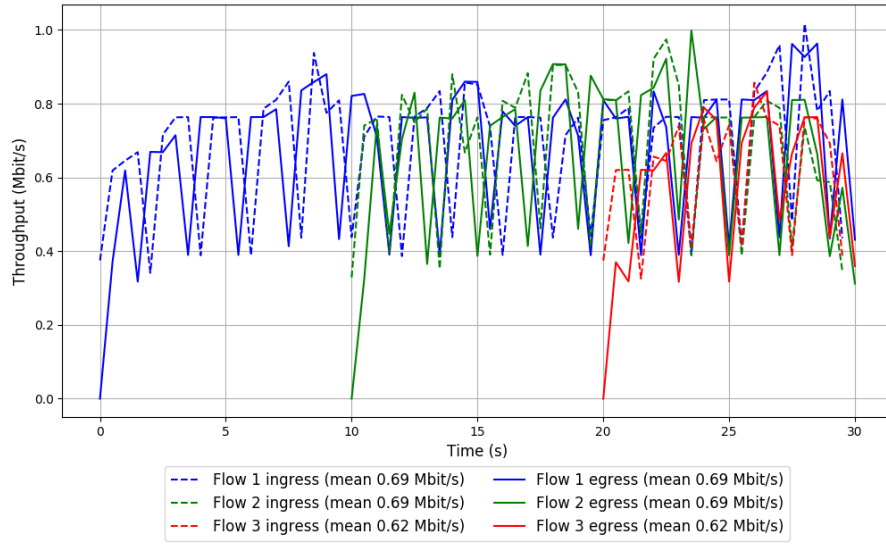
-- Flow 3:

Average throughput: 0.62 Mbit/s

95th percentile per-packet one-way delay: 132.792 ms

Loss rate: 3.12%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-04-24 09:53:54

End at: 2019-04-24 09:54:24

Local clock offset: -0.106 ms

Remote clock offset: 0.027 ms

Below is generated by plot.py at 2019-04-24 13:31:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 133.156 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 133.197 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 133.009 ms

Loss rate: 1.62%

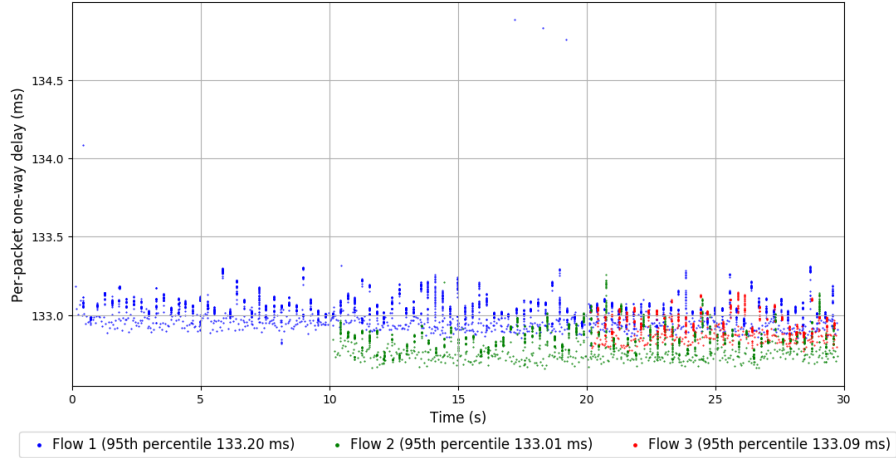
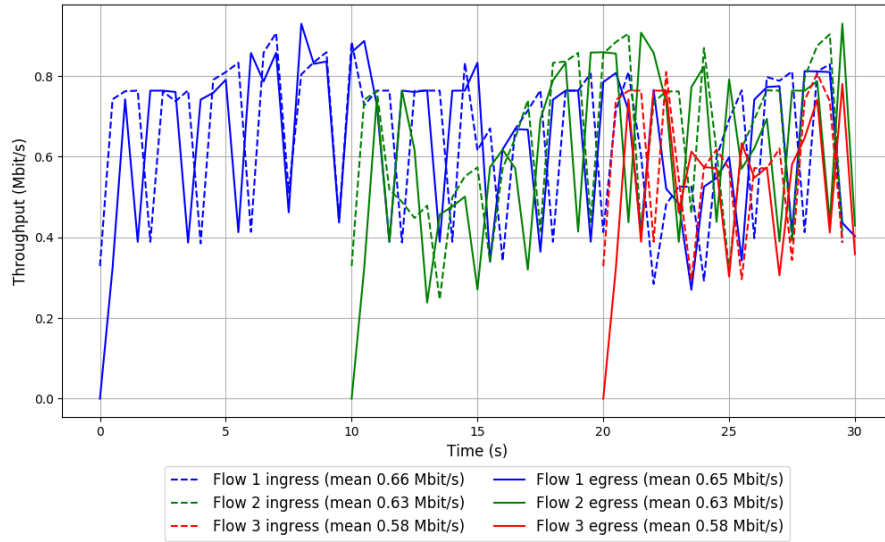
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 133.093 ms

Loss rate: 3.34%

Run 3: Report of Sprout — Data Link

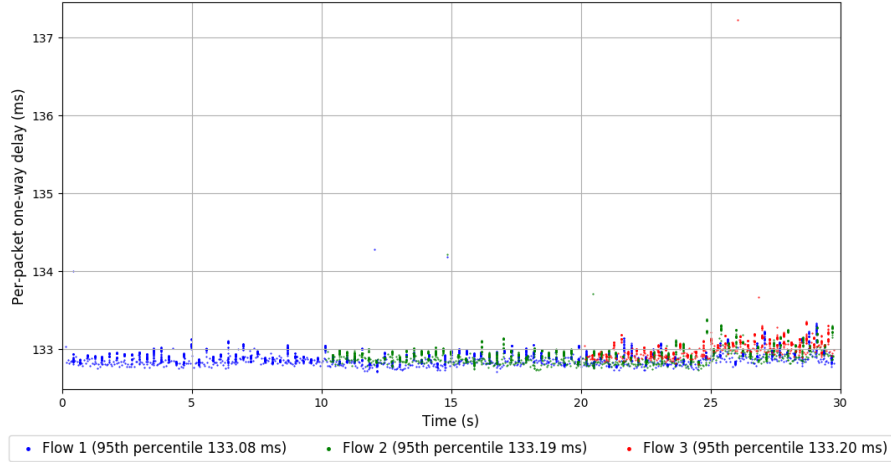
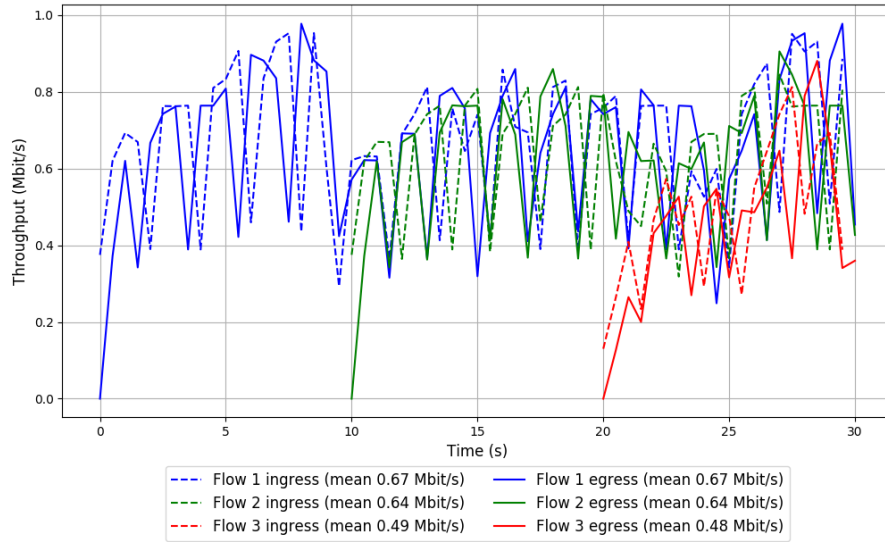


Run 4: Statistics of Sprout

Start at: 2019-04-24 10:31:43
End at: 2019-04-24 10:32:13
Local clock offset: -0.081 ms
Remote clock offset: -0.005 ms

```
# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 133.146 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 133.081 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 133.193 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 133.198 ms
Loss rate: 3.99%
```

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2019-04-24 11:08:46

End at: 2019-04-24 11:09:16

Local clock offset: -0.355 ms

Remote clock offset: 0.005 ms

Below is generated by plot.py at 2019-04-24 13:31:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 133.050 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 0.66 Mbit/s

95th percentile per-packet one-way delay: 132.969 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 0.68 Mbit/s

95th percentile per-packet one-way delay: 133.093 ms

Loss rate: 1.67%

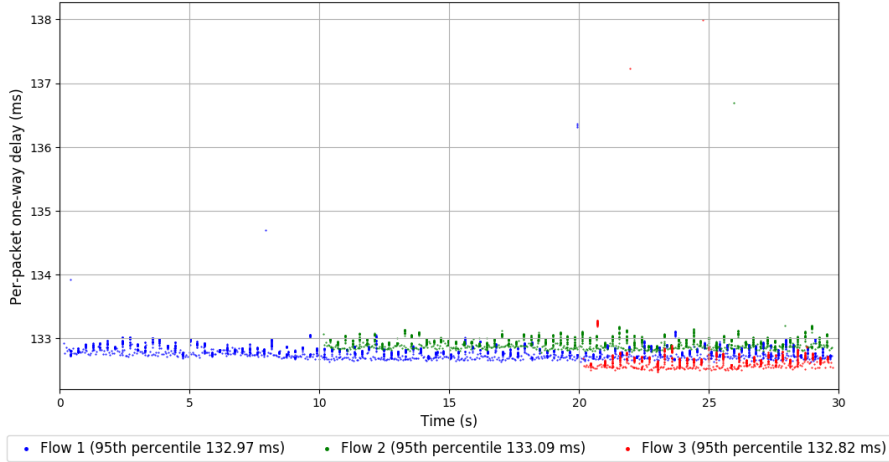
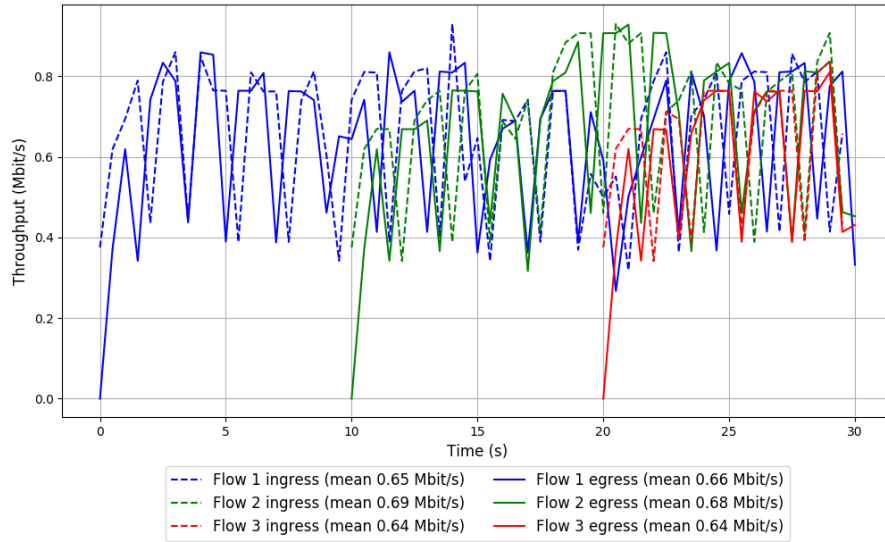
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 132.816 ms

Loss rate: 3.39%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-04-24 08:53:08
End at: 2019-04-24 08:53:38
Local clock offset: -0.102 ms
Remote clock offset: -0.287 ms

Below is generated by plot.py at 2019-04-24 13:37:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 414.42 Mbit/s
95th percentile per-packet one-way delay: 135.136 ms
Loss rate: 1.35%

-- Flow 1:

Average throughput: 211.83 Mbit/s
95th percentile per-packet one-way delay: 134.181 ms
Loss rate: 0.89%

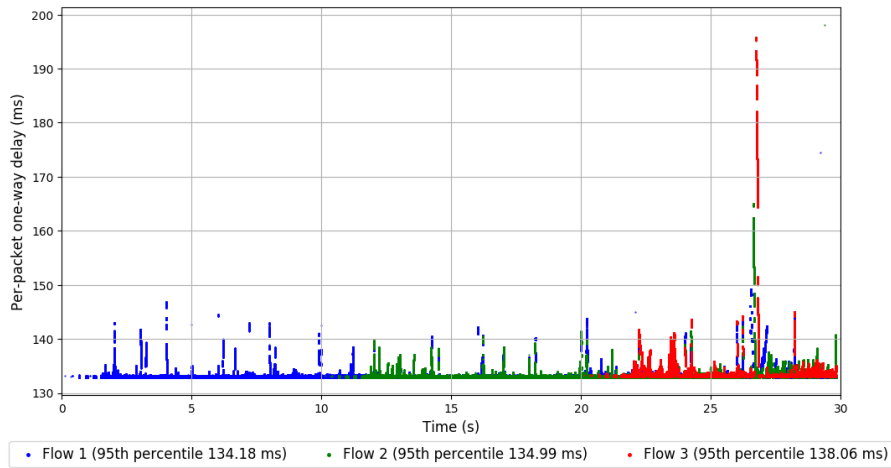
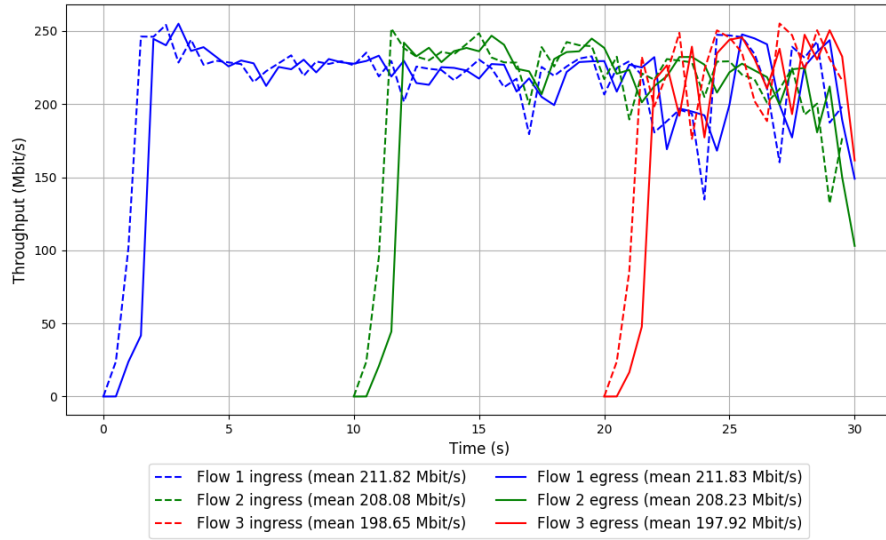
-- Flow 2:

Average throughput: 208.23 Mbit/s
95th percentile per-packet one-way delay: 134.985 ms
Loss rate: 1.26%

-- Flow 3:

Average throughput: 197.92 Mbit/s
95th percentile per-packet one-way delay: 138.063 ms
Loss rate: 3.01%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-04-24 09:30:49

End at: 2019-04-24 09:31:19

Local clock offset: -0.367 ms

Remote clock offset: 0.041 ms

Below is generated by plot.py at 2019-04-24 13:37:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 387.83 Mbit/s

95th percentile per-packet one-way delay: 138.424 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 196.07 Mbit/s

95th percentile per-packet one-way delay: 138.541 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 194.86 Mbit/s

95th percentile per-packet one-way delay: 138.865 ms

Loss rate: 0.76%

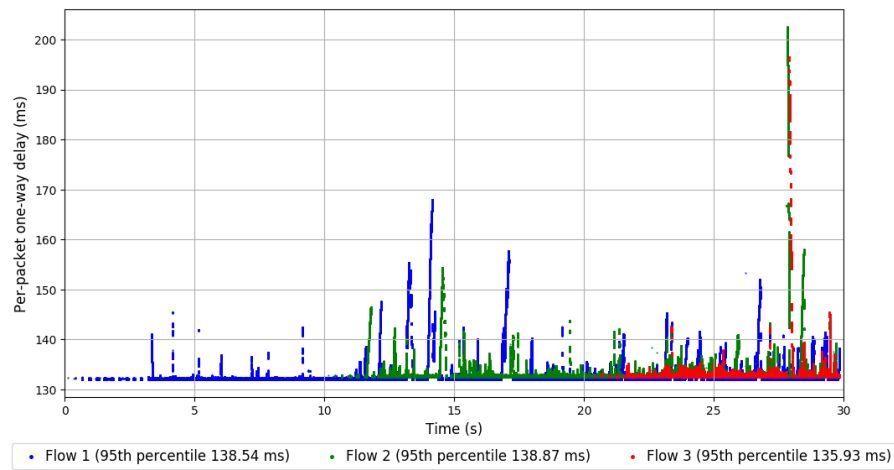
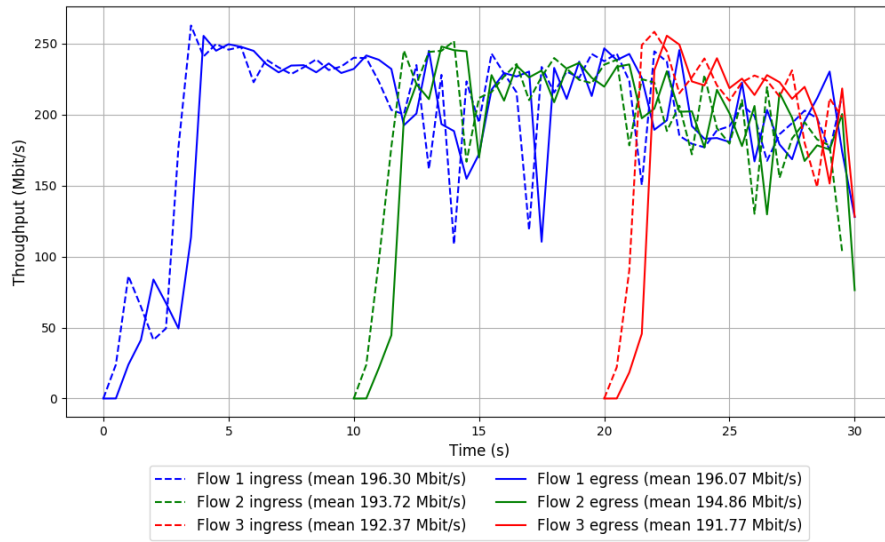
-- Flow 3:

Average throughput: 191.77 Mbit/s

95th percentile per-packet one-way delay: 135.931 ms

Loss rate: 2.98%

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

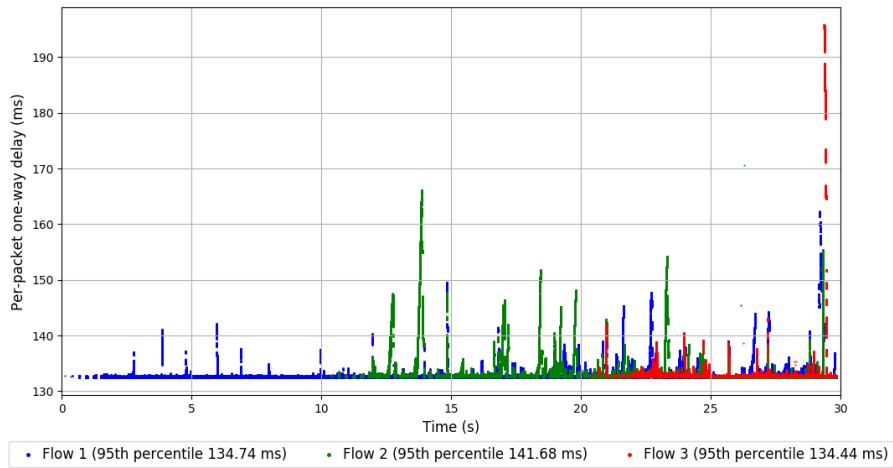
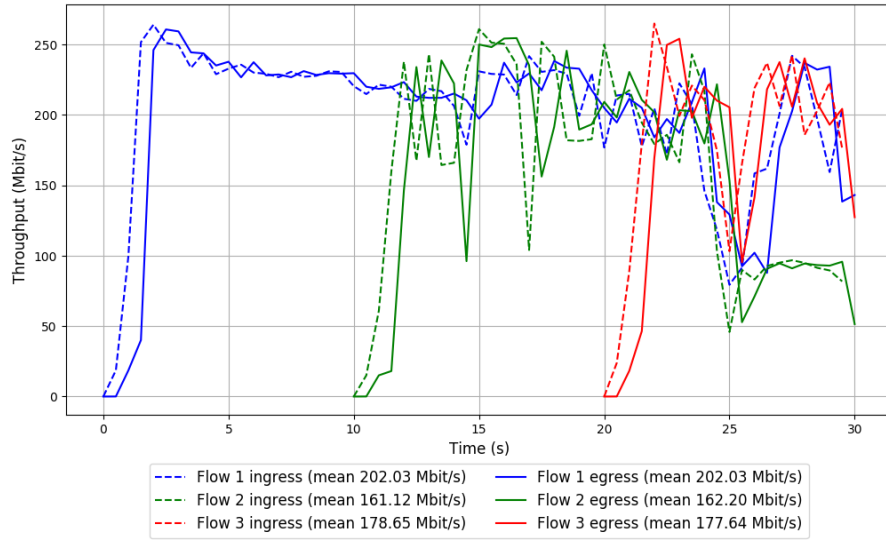


Run 3: Statistics of TaoVA-100x

Start at: 2019-04-24 10:09:06
End at: 2019-04-24 10:09:36
Local clock offset: -0.361 ms
Remote clock offset: -0.022 ms

```
# Below is generated by plot.py at 2019-04-24 13:37:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.13 Mbit/s
95th percentile per-packet one-way delay: 136.166 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 202.03 Mbit/s
95th percentile per-packet one-way delay: 134.742 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 162.20 Mbit/s
95th percentile per-packet one-way delay: 141.680 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 177.64 Mbit/s
95th percentile per-packet one-way delay: 134.439 ms
Loss rate: 3.24%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-04-24 10:46:15

End at: 2019-04-24 10:46:45

Local clock offset: -0.313 ms

Remote clock offset: 0.042 ms

Below is generated by plot.py at 2019-04-24 13:37:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 394.02 Mbit/s

95th percentile per-packet one-way delay: 136.013 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 207.43 Mbit/s

95th percentile per-packet one-way delay: 135.154 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 194.67 Mbit/s

95th percentile per-packet one-way delay: 137.538 ms

Loss rate: 1.30%

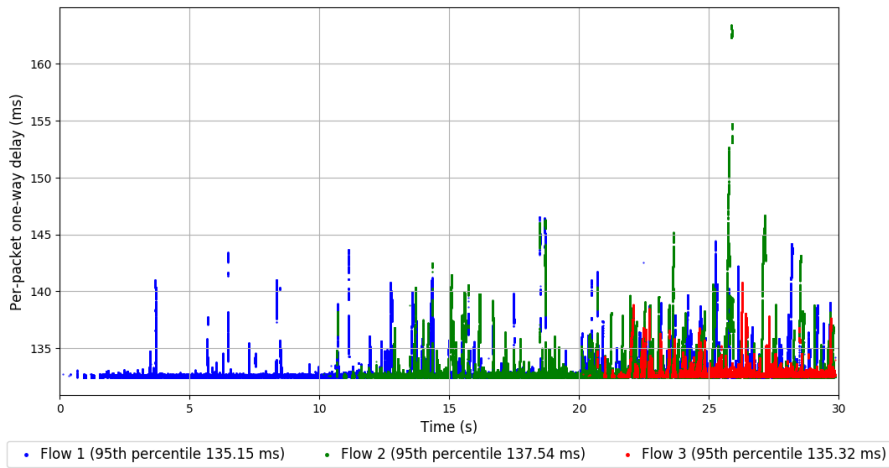
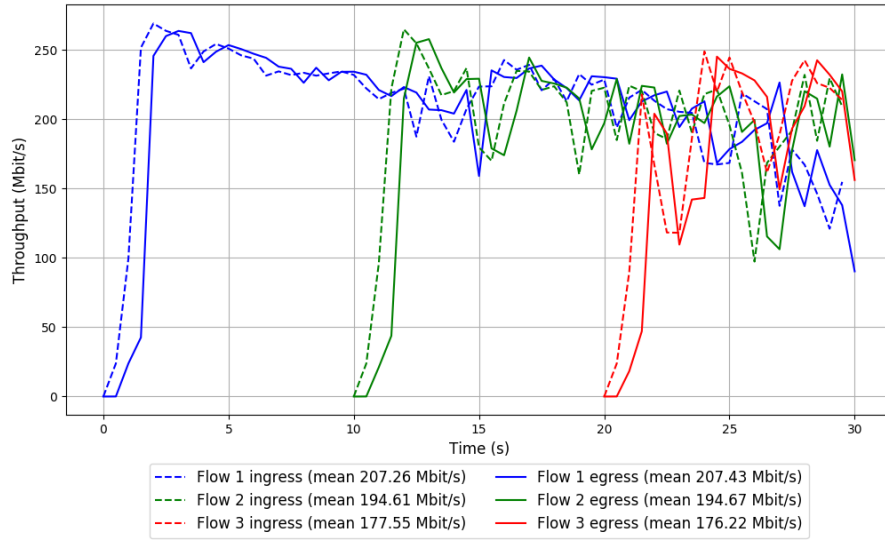
-- Flow 3:

Average throughput: 176.22 Mbit/s

95th percentile per-packet one-way delay: 135.323 ms

Loss rate: 3.38%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-04-24 11:23:28

End at: 2019-04-24 11:23:58

Local clock offset: -0.101 ms

Remote clock offset: 0.022 ms

Below is generated by plot.py at 2019-04-24 13:37:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 352.49 Mbit/s

95th percentile per-packet one-way delay: 134.460 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 155.01 Mbit/s

95th percentile per-packet one-way delay: 134.850 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 206.77 Mbit/s

95th percentile per-packet one-way delay: 134.024 ms

Loss rate: 1.35%

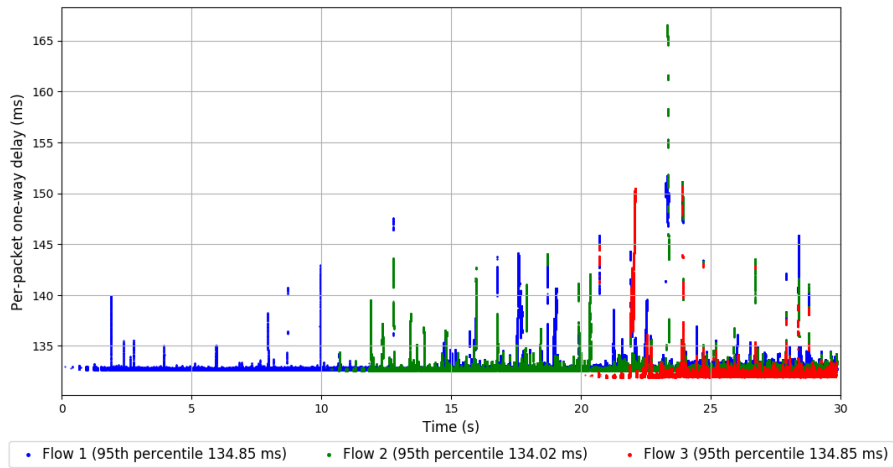
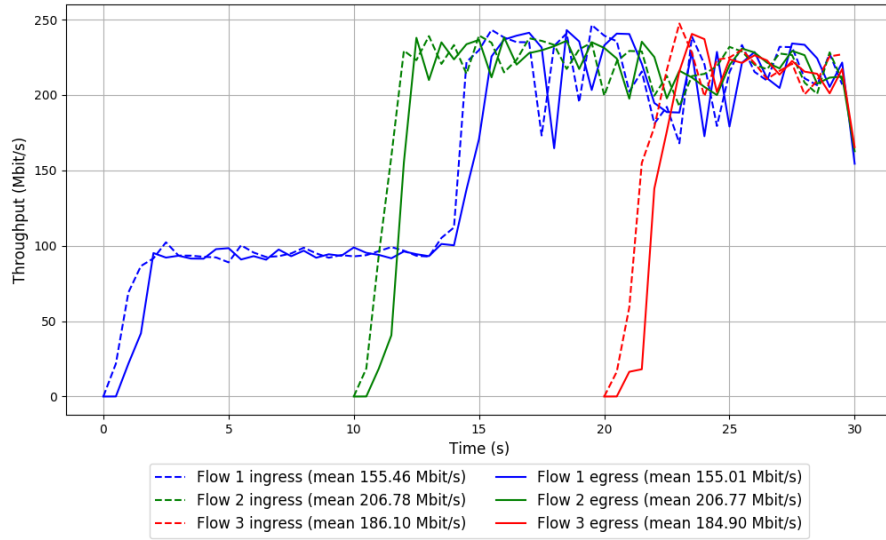
-- Flow 3:

Average throughput: 184.90 Mbit/s

95th percentile per-packet one-way delay: 134.848 ms

Loss rate: 3.30%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-04-24 08:32:25

End at: 2019-04-24 08:32:55

Local clock offset: 0.377 ms

Remote clock offset: 0.055 ms

Below is generated by plot.py at 2019-04-24 13:37:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 593.91 Mbit/s

95th percentile per-packet one-way delay: 141.985 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 296.03 Mbit/s

95th percentile per-packet one-way delay: 141.999 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 294.13 Mbit/s

95th percentile per-packet one-way delay: 140.858 ms

Loss rate: 1.60%

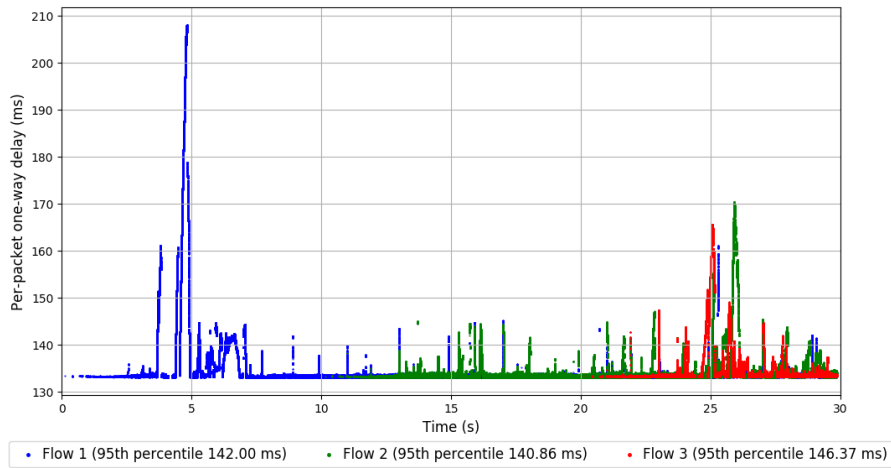
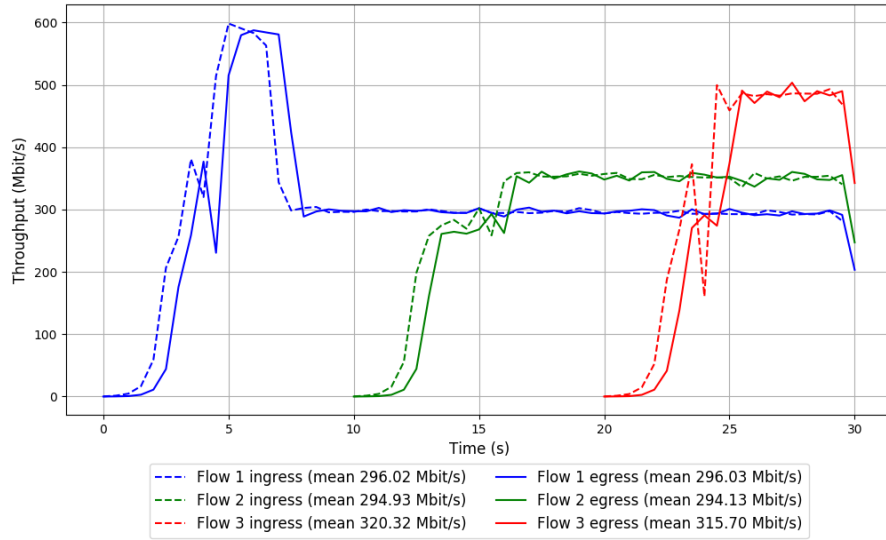
-- Flow 3:

Average throughput: 315.70 Mbit/s

95th percentile per-packet one-way delay: 146.368 ms

Loss rate: 4.07%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-04-24 09:10:10

End at: 2019-04-24 09:10:40

Local clock offset: 0.367 ms

Remote clock offset: 0.052 ms

Below is generated by plot.py at 2019-04-24 13:41:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 522.38 Mbit/s

95th percentile per-packet one-way delay: 135.789 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 319.56 Mbit/s

95th percentile per-packet one-way delay: 133.802 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 190.37 Mbit/s

95th percentile per-packet one-way delay: 164.016 ms

Loss rate: 1.33%

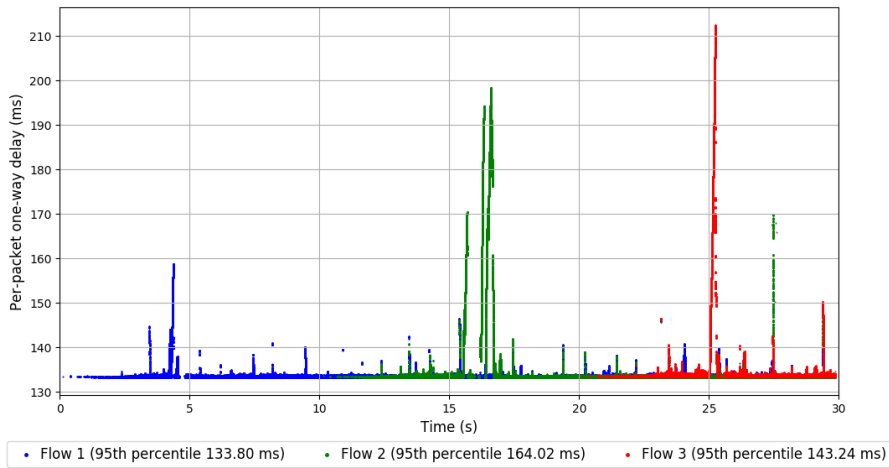
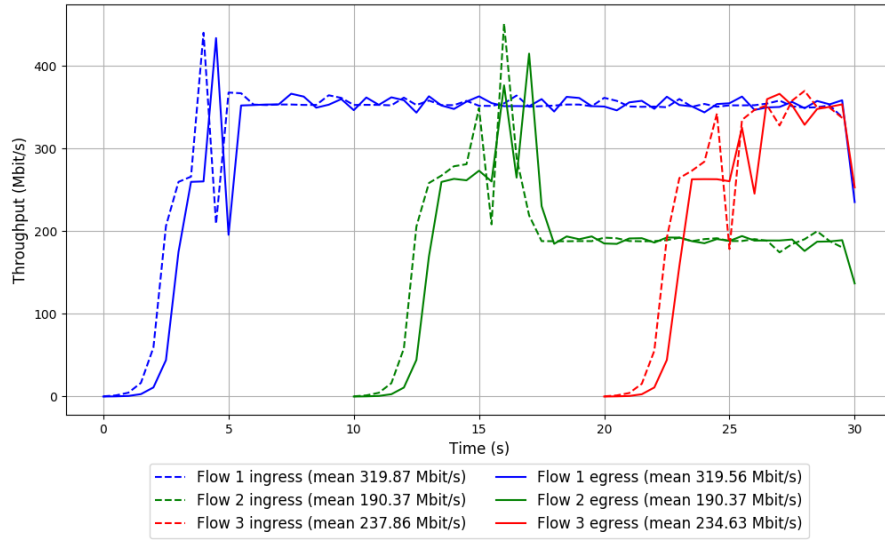
-- Flow 3:

Average throughput: 234.63 Mbit/s

95th percentile per-packet one-way delay: 143.239 ms

Loss rate: 3.98%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-04-24 09:48:06

End at: 2019-04-24 09:48:36

Local clock offset: 0.286 ms

Remote clock offset: 0.012 ms

Below is generated by plot.py at 2019-04-24 13:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 597.57 Mbit/s

95th percentile per-packet one-way delay: 143.251 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 331.25 Mbit/s

95th percentile per-packet one-way delay: 139.352 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 302.85 Mbit/s

95th percentile per-packet one-way delay: 159.952 ms

Loss rate: 1.65%

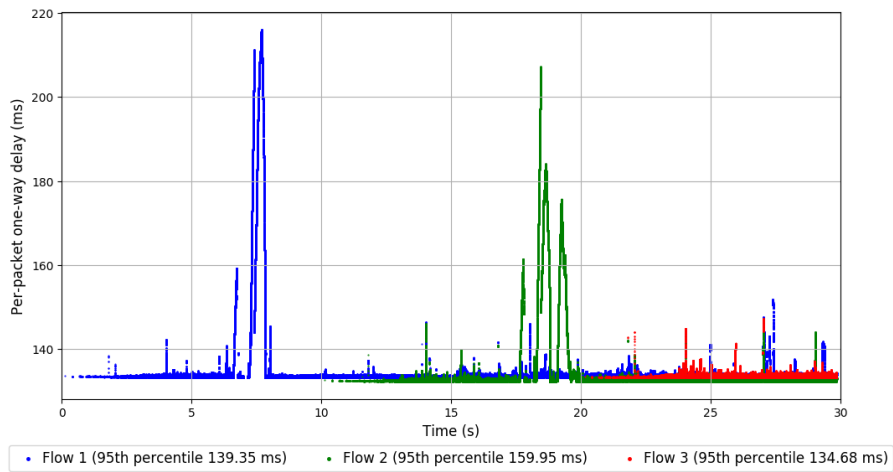
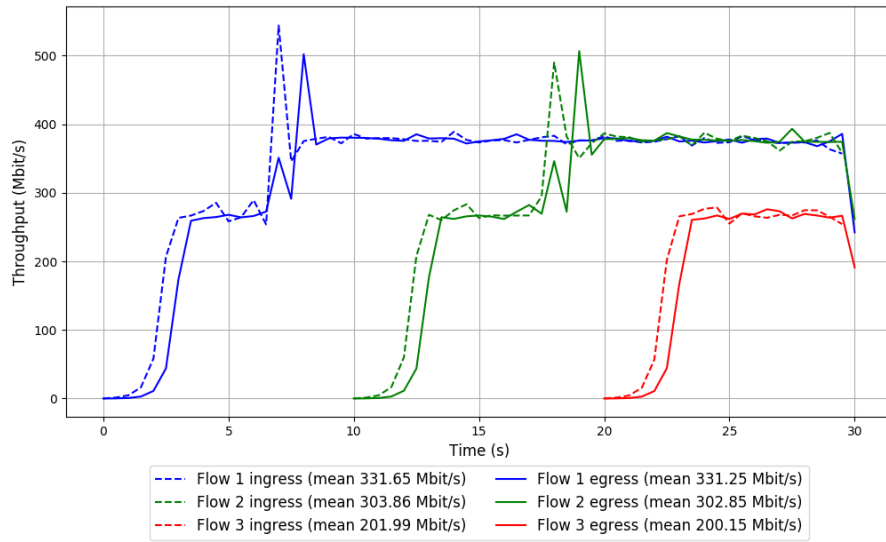
-- Flow 3:

Average throughput: 200.15 Mbit/s

95th percentile per-packet one-way delay: 134.679 ms

Loss rate: 3.54%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-04-24 10:26:01

End at: 2019-04-24 10:26:31

Local clock offset: 0.088 ms

Remote clock offset: 0.031 ms

Below is generated by plot.py at 2019-04-24 13:45:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 567.23 Mbit/s

95th percentile per-packet one-way delay: 145.820 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 290.27 Mbit/s

95th percentile per-packet one-way delay: 146.690 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 312.49 Mbit/s

95th percentile per-packet one-way delay: 134.959 ms

Loss rate: 1.81%

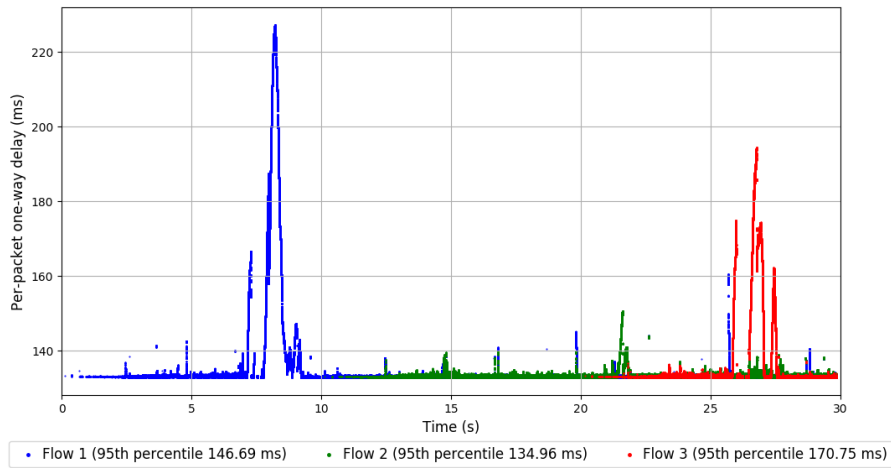
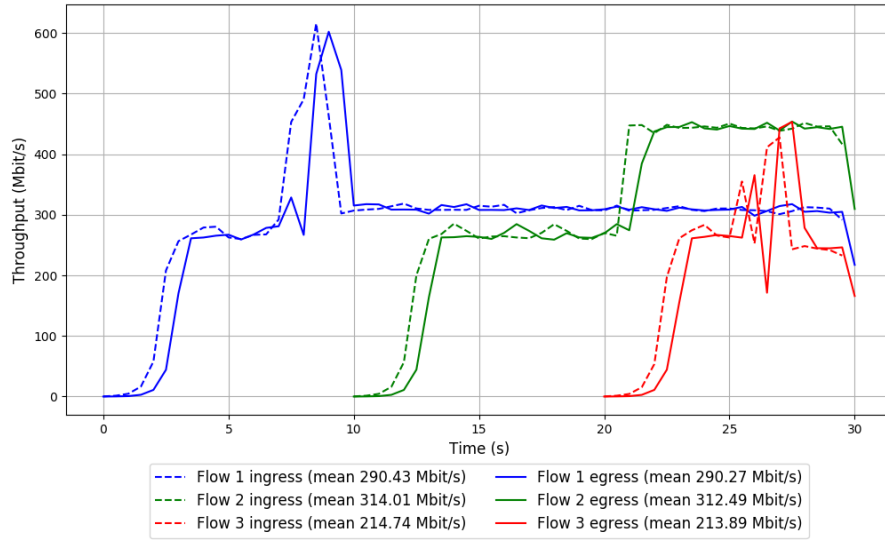
-- Flow 3:

Average throughput: 213.89 Mbit/s

95th percentile per-packet one-way delay: 170.745 ms

Loss rate: 3.04%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-04-24 11:03:00

End at: 2019-04-24 11:03:30

Local clock offset: -0.521 ms

Remote clock offset: 0.025 ms

Below is generated by plot.py at 2019-04-24 13:46:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 591.76 Mbit/s

95th percentile per-packet one-way delay: 185.809 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 306.05 Mbit/s

95th percentile per-packet one-way delay: 159.536 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 320.67 Mbit/s

95th percentile per-packet one-way delay: 200.383 ms

Loss rate: 1.28%

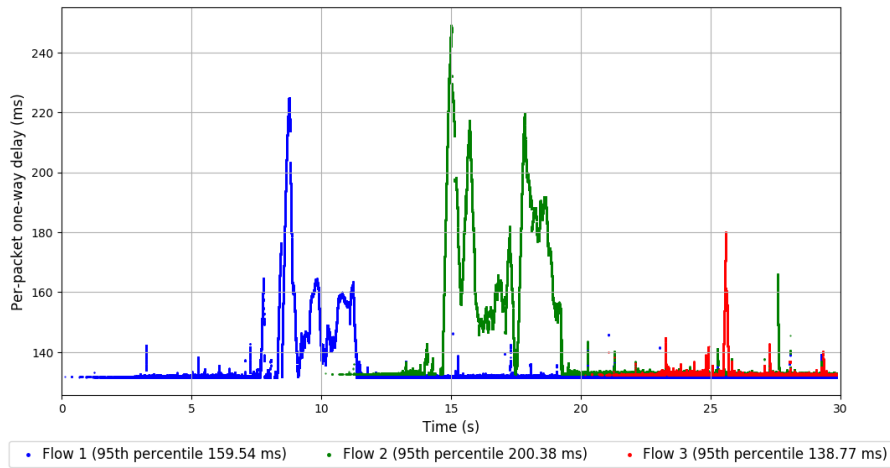
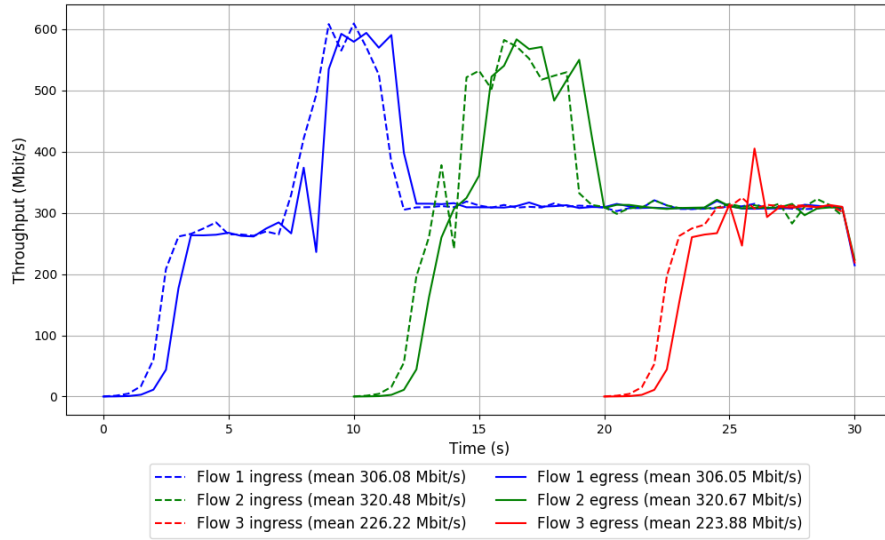
-- Flow 3:

Average throughput: 223.88 Mbit/s

95th percentile per-packet one-way delay: 138.773 ms

Loss rate: 3.68%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-04-24 08:45:50

End at: 2019-04-24 08:46:20

Local clock offset: -0.121 ms

Remote clock offset: 0.034 ms

Below is generated by plot.py at 2019-04-24 13:46:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 175.42 Mbit/s

95th percentile per-packet one-way delay: 300.640 ms

Loss rate: 2.42%

-- Flow 1:

Average throughput: 106.26 Mbit/s

95th percentile per-packet one-way delay: 216.312 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 34.17 Mbit/s

95th percentile per-packet one-way delay: 137.467 ms

Loss rate: 0.08%

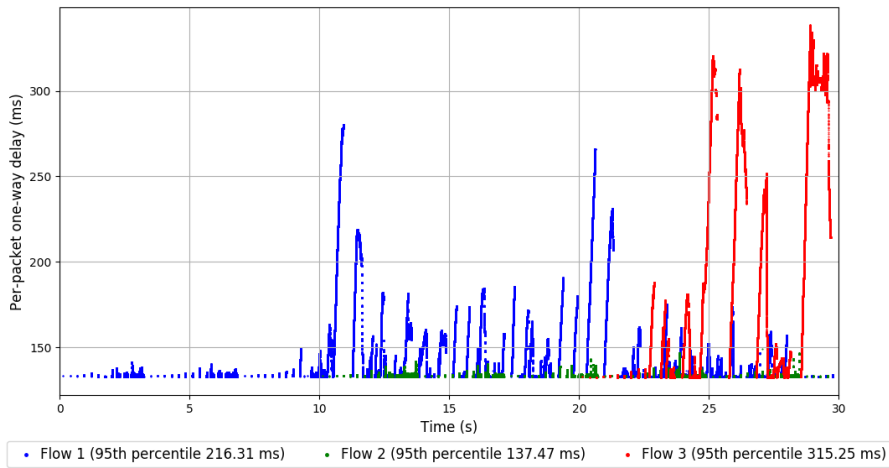
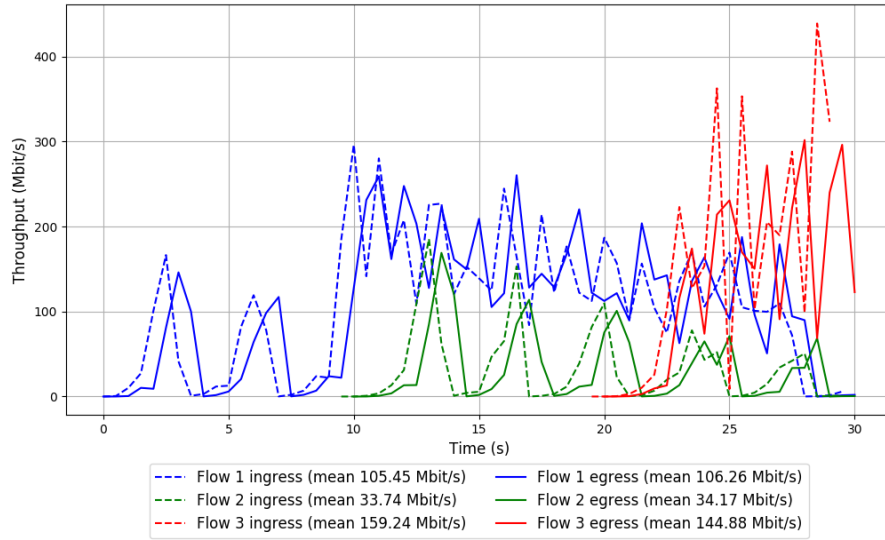
-- Flow 3:

Average throughput: 144.88 Mbit/s

95th percentile per-packet one-way delay: 315.250 ms

Loss rate: 8.23%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-04-24 09:23:16

End at: 2019-04-24 09:23:46

Local clock offset: -0.269 ms

Remote clock offset: 0.003 ms

Below is generated by plot.py at 2019-04-24 13:46:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 176.25 Mbit/s

95th percentile per-packet one-way delay: 233.308 ms

Loss rate: 1.89%

-- Flow 1:

Average throughput: 134.37 Mbit/s

95th percentile per-packet one-way delay: 243.723 ms

Loss rate: 2.32%

-- Flow 2:

Average throughput: 40.83 Mbit/s

95th percentile per-packet one-way delay: 172.383 ms

Loss rate: 0.25%

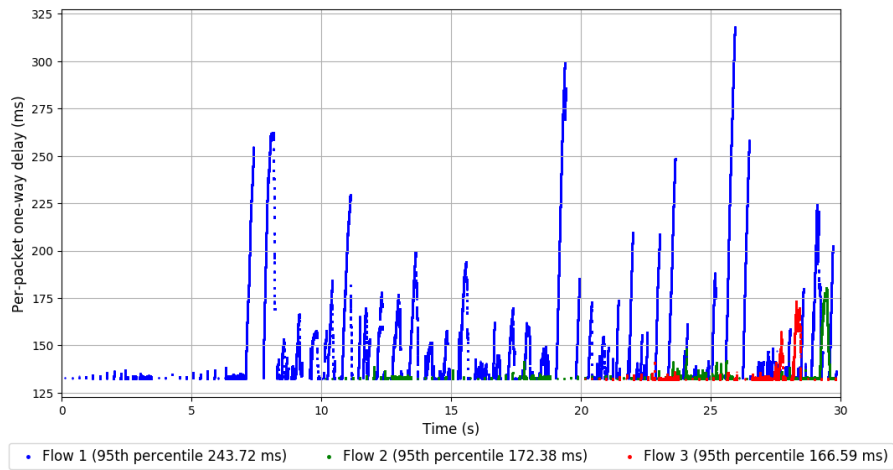
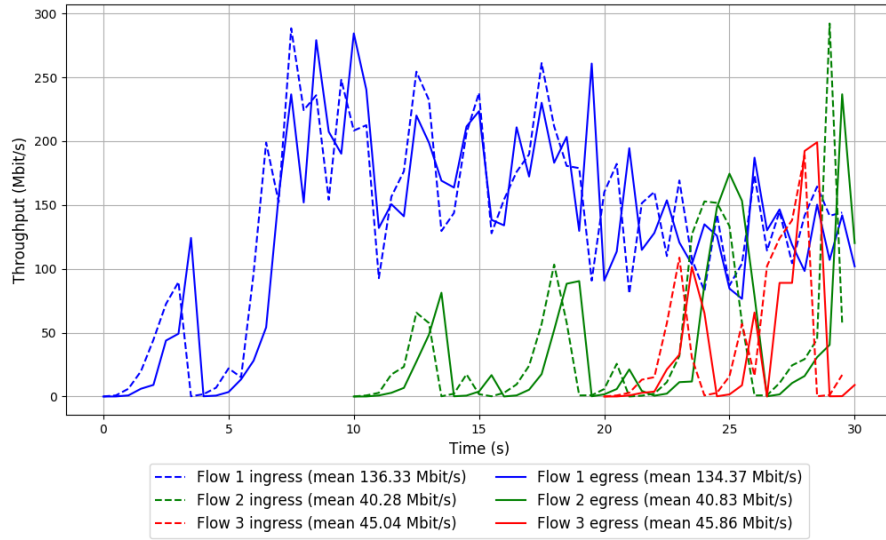
-- Flow 3:

Average throughput: 45.86 Mbit/s

95th percentile per-packet one-way delay: 166.587 ms

Loss rate: 0.98%

Run 2: Report of Verus — Data Link

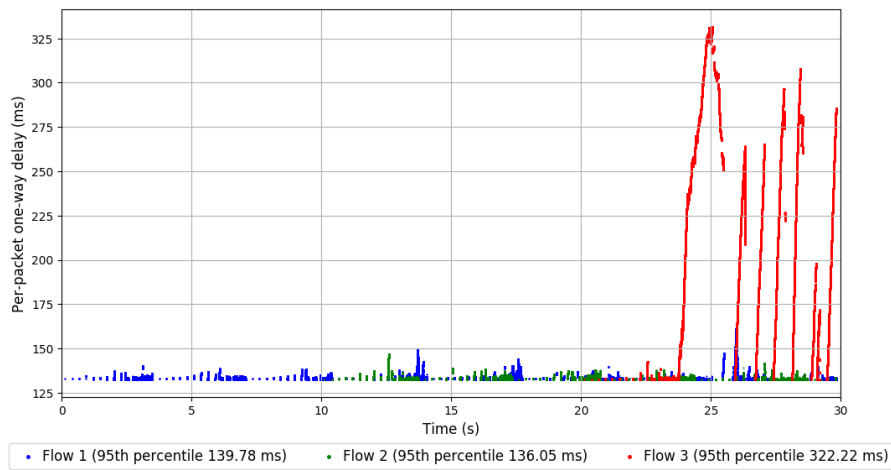
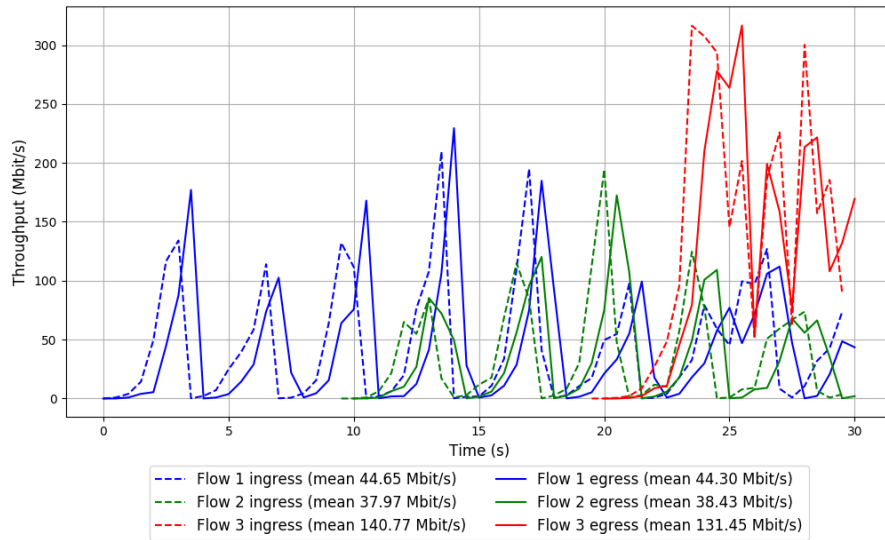


Run 3: Statistics of Verus

Start at: 2019-04-24 10:01:50
End at: 2019-04-24 10:02:20
Local clock offset: -0.152 ms
Remote clock offset: 0.006 ms

```
# Below is generated by plot.py at 2019-04-24 13:46:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.66 Mbit/s
95th percentile per-packet one-way delay: 301.909 ms
Loss rate: 2.96%
-- Flow 1:
Average throughput: 44.30 Mbit/s
95th percentile per-packet one-way delay: 139.776 ms
Loss rate: 1.67%
-- Flow 2:
Average throughput: 38.43 Mbit/s
95th percentile per-packet one-way delay: 136.050 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 131.45 Mbit/s
95th percentile per-packet one-way delay: 322.224 ms
Loss rate: 5.81%
```

Run 3: Report of Verus — Data Link

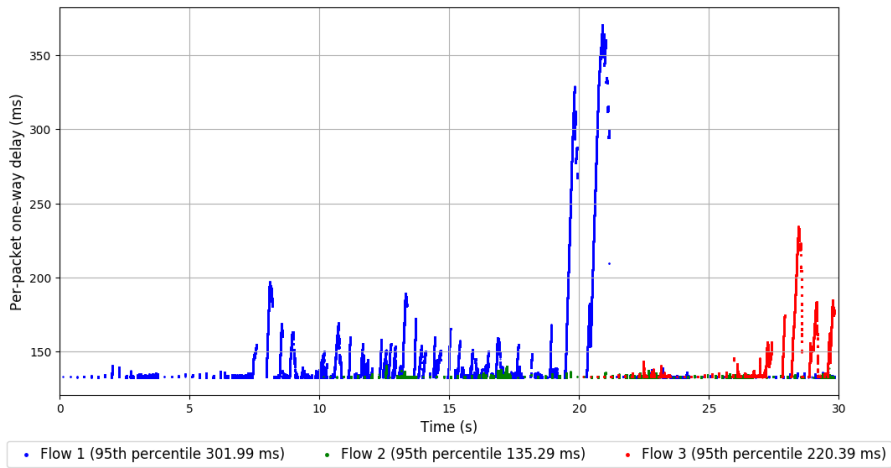
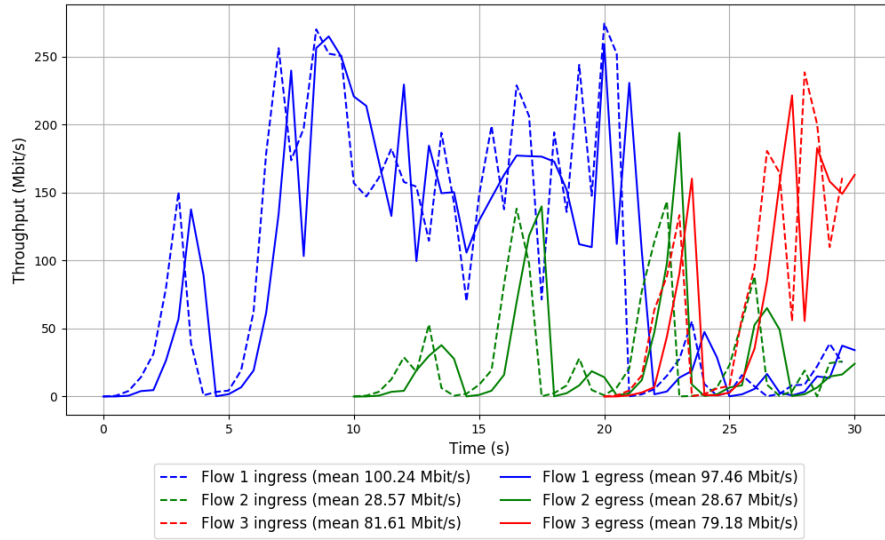


Run 4: Statistics of Verus

Start at: 2019-04-24 10:39:06
End at: 2019-04-24 10:39:36
Local clock offset: -0.477 ms
Remote clock offset: -0.353 ms

```
# Below is generated by plot.py at 2019-04-24 13:46:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 142.19 Mbit/s
95th percentile per-packet one-way delay: 268.910 ms
Loss rate: 2.70%
-- Flow 1:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 301.989 ms
Loss rate: 2.82%
-- Flow 2:
Average throughput: 28.67 Mbit/s
95th percentile per-packet one-way delay: 135.295 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 79.18 Mbit/s
95th percentile per-packet one-way delay: 220.386 ms
Loss rate: 3.56%
```

Run 4: Report of Verus — Data Link

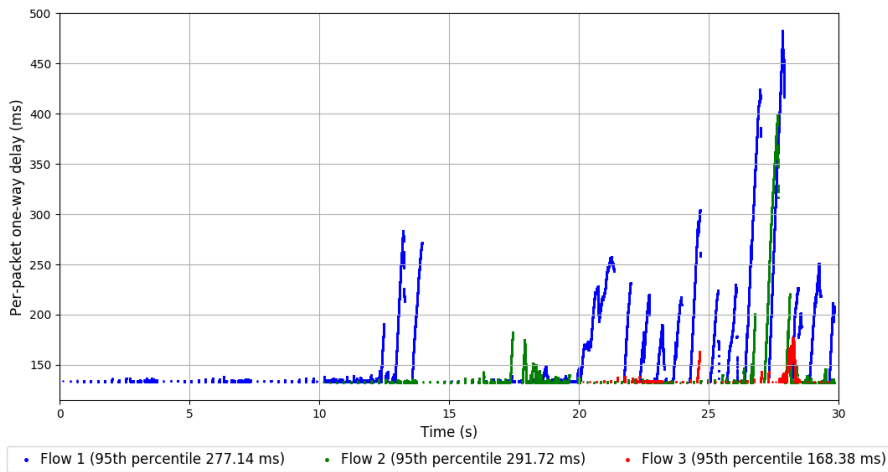
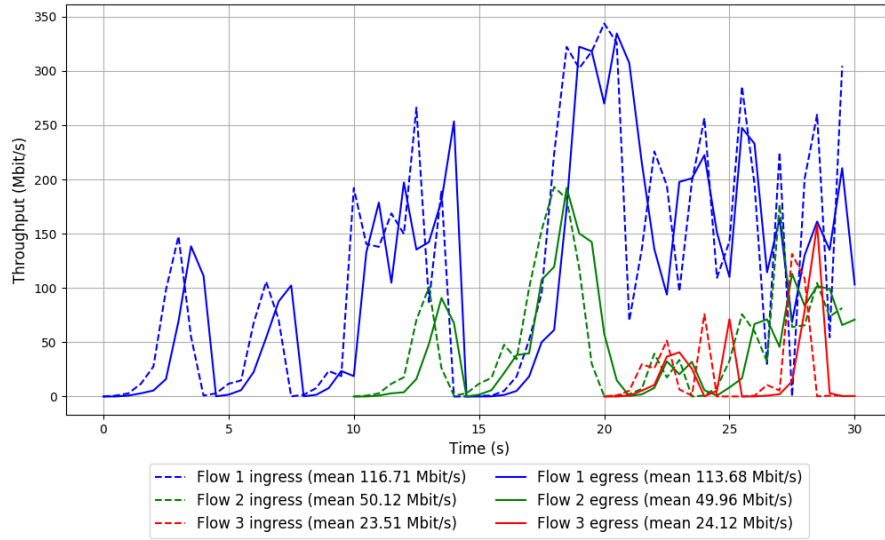


Run 5: Statistics of Verus

Start at: 2019-04-24 11:16:08
End at: 2019-04-24 11:16:38
Local clock offset: 0.12 ms
Remote clock offset: -0.021 ms

```
# Below is generated by plot.py at 2019-04-24 13:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.46 Mbit/s
95th percentile per-packet one-way delay: 274.703 ms
Loss rate: 2.92%
-- Flow 1:
Average throughput: 113.68 Mbit/s
95th percentile per-packet one-way delay: 277.142 ms
Loss rate: 3.47%
-- Flow 2:
Average throughput: 49.96 Mbit/s
95th percentile per-packet one-way delay: 291.720 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 24.12 Mbit/s
95th percentile per-packet one-way delay: 168.385 ms
Loss rate: 0.23%
```

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-04-24 08:51:19

End at: 2019-04-24 08:51:49

Local clock offset: -0.075 ms

Remote clock offset: 0.04 ms

Below is generated by plot.py at 2019-04-24 13:47:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 360.05 Mbit/s

95th percentile per-packet one-way delay: 133.385 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 210.24 Mbit/s

95th percentile per-packet one-way delay: 133.166 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 168.23 Mbit/s

95th percentile per-packet one-way delay: 133.220 ms

Loss rate: 1.74%

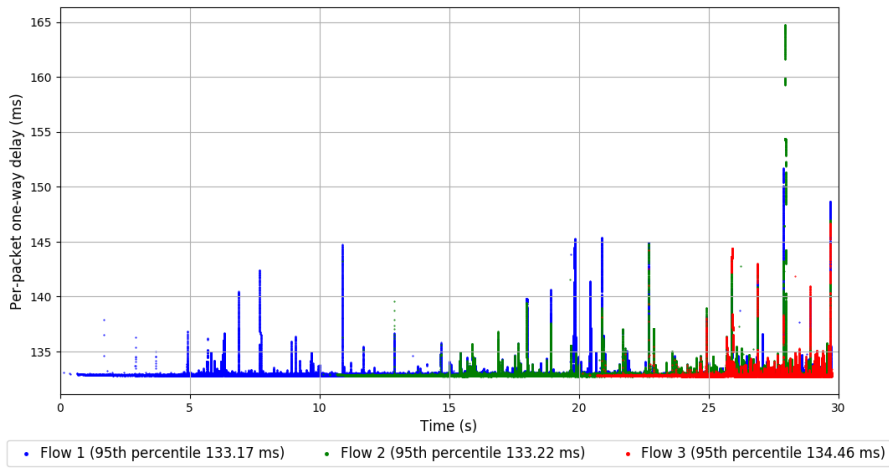
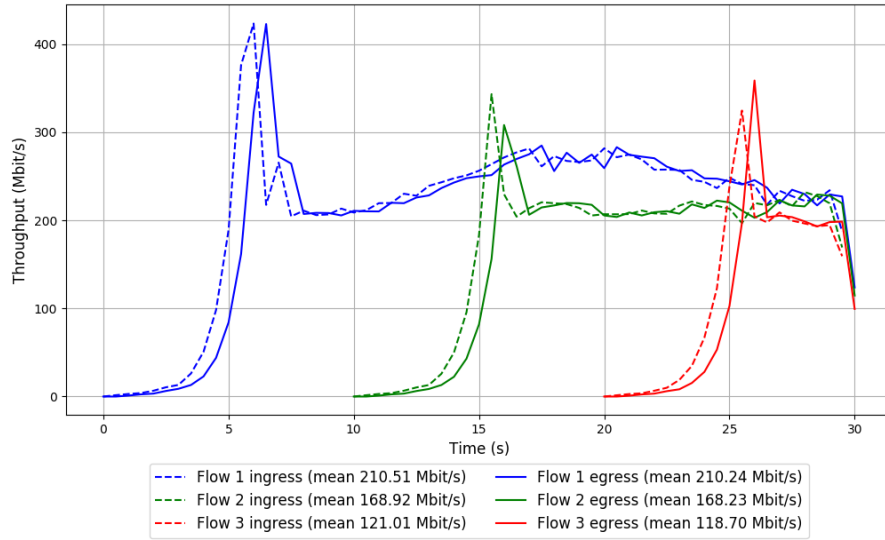
-- Flow 3:

Average throughput: 118.70 Mbit/s

95th percentile per-packet one-way delay: 134.460 ms

Loss rate: 4.55%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-04-24 09:28:58

End at: 2019-04-24 09:29:28

Local clock offset: -0.557 ms

Remote clock offset: 0.083 ms

Below is generated by plot.py at 2019-04-24 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 372.41 Mbit/s

95th percentile per-packet one-way delay: 148.108 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 241.35 Mbit/s

95th percentile per-packet one-way delay: 157.563 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 142.84 Mbit/s

95th percentile per-packet one-way delay: 132.563 ms

Loss rate: 1.42%

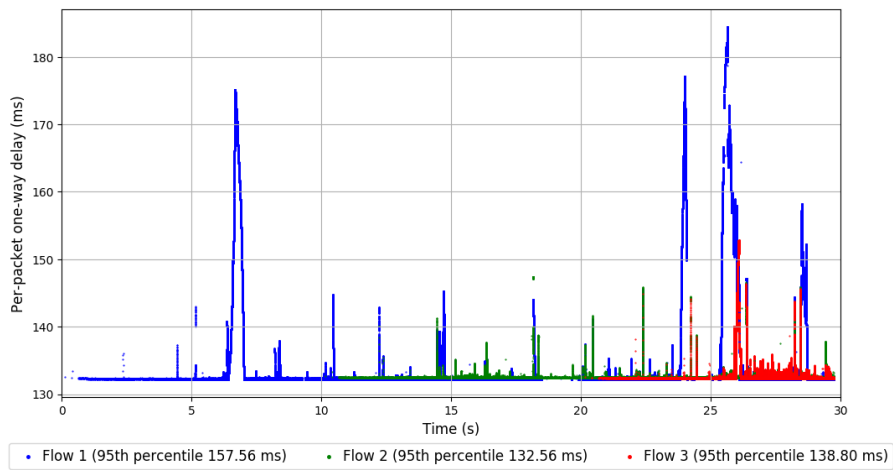
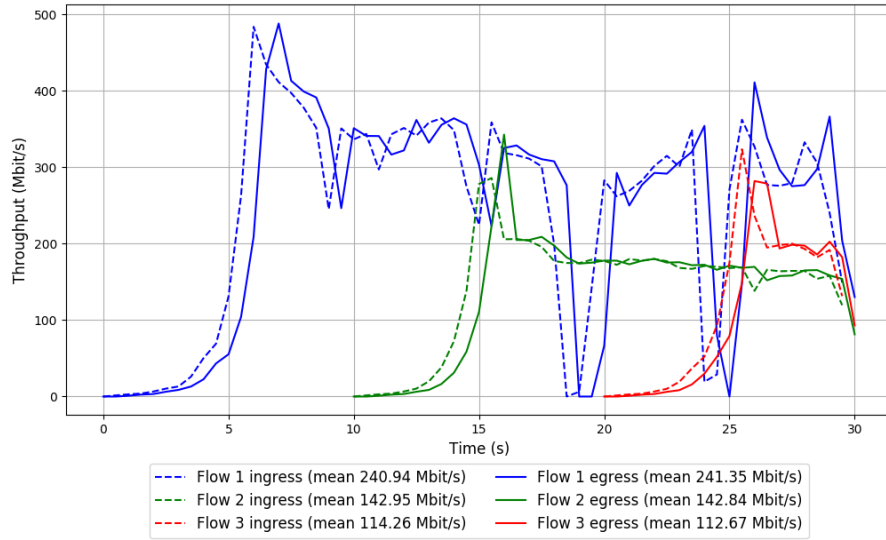
-- Flow 3:

Average throughput: 112.67 Mbit/s

95th percentile per-packet one-way delay: 138.798 ms

Loss rate: 4.05%

Run 2: Report of PCC-Vivace — Data Link

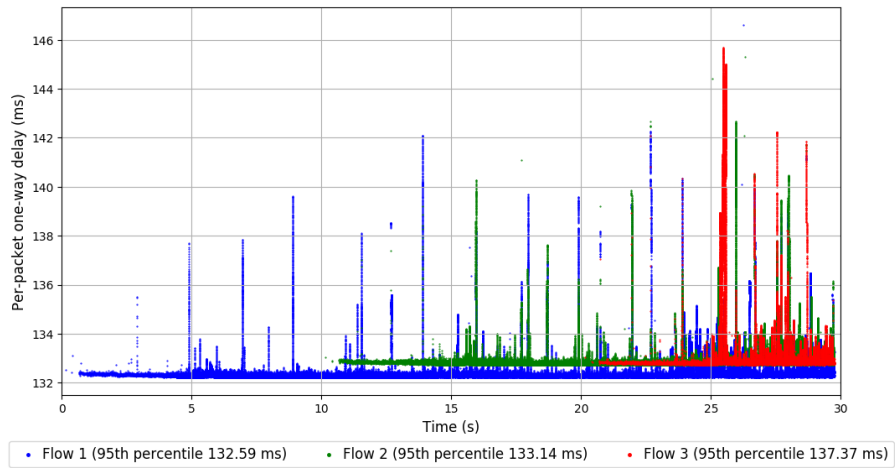
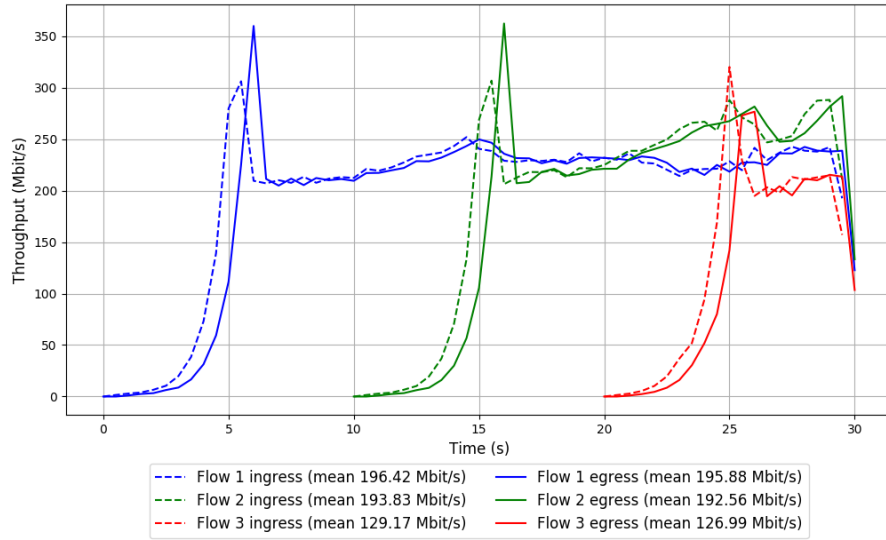


Run 3: Statistics of PCC-Vivace

Start at: 2019-04-24 10:07:16
End at: 2019-04-24 10:07:46
Local clock offset: -0.111 ms
Remote clock offset: -0.017 ms

```
# Below is generated by plot.py at 2019-04-24 13:47:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 364.42 Mbit/s
95th percentile per-packet one-way delay: 133.102 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 195.88 Mbit/s
95th percentile per-packet one-way delay: 132.594 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 192.56 Mbit/s
95th percentile per-packet one-way delay: 133.141 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 126.99 Mbit/s
95th percentile per-packet one-way delay: 137.374 ms
Loss rate: 4.35%
```

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-04-24 10:44:24

End at: 2019-04-24 10:44:54

Local clock offset: -0.005 ms

Remote clock offset: 0.375 ms

Below is generated by plot.py at 2019-04-24 13:48:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 363.06 Mbit/s

95th percentile per-packet one-way delay: 134.796 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 200.57 Mbit/s

95th percentile per-packet one-way delay: 133.906 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 184.74 Mbit/s

95th percentile per-packet one-way delay: 133.703 ms

Loss rate: 1.89%

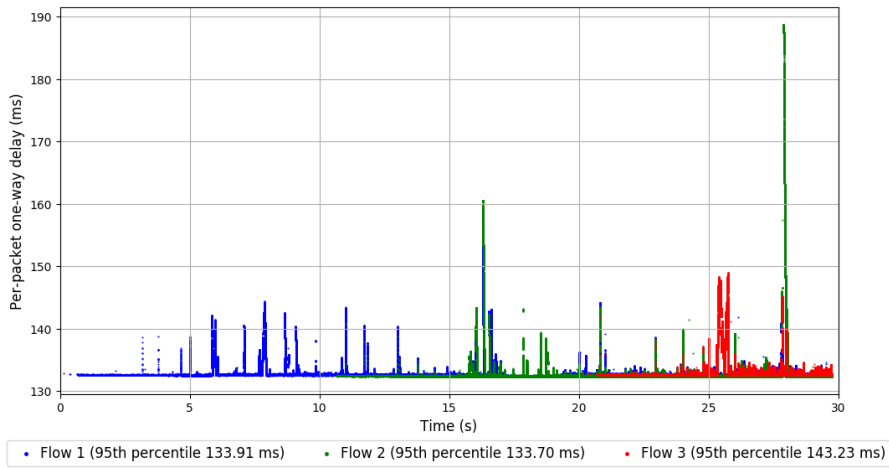
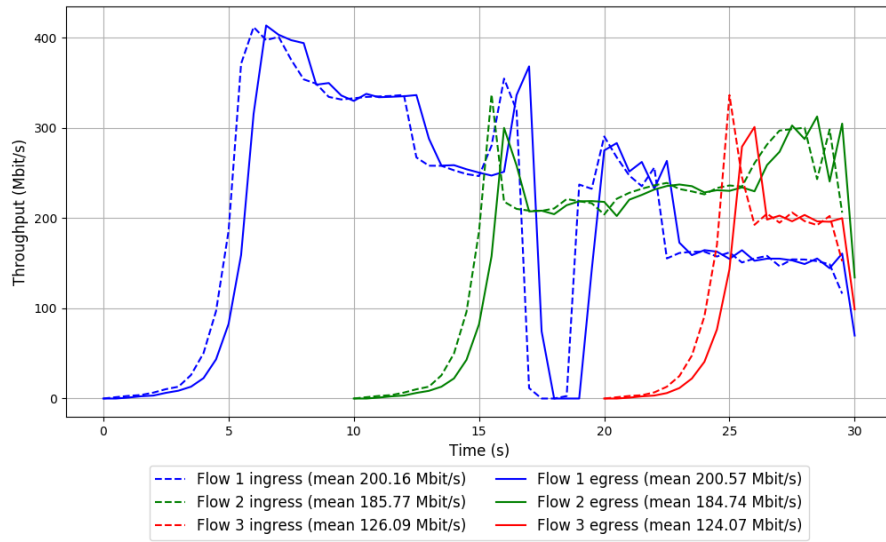
-- Flow 3:

Average throughput: 124.07 Mbit/s

95th percentile per-packet one-way delay: 143.230 ms

Loss rate: 4.28%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-04-24 11:21:34

End at: 2019-04-24 11:22:04

Local clock offset: -0.0 ms

Remote clock offset: 0.021 ms

Below is generated by plot.py at 2019-04-24 13:48:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 416.84 Mbit/s

95th percentile per-packet one-way delay: 135.398 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 255.35 Mbit/s

95th percentile per-packet one-way delay: 135.369 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 186.10 Mbit/s

95th percentile per-packet one-way delay: 134.001 ms

Loss rate: 1.78%

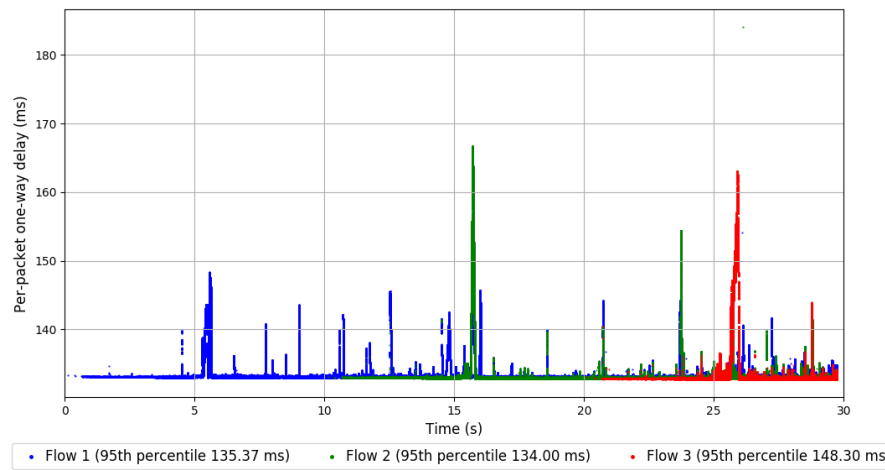
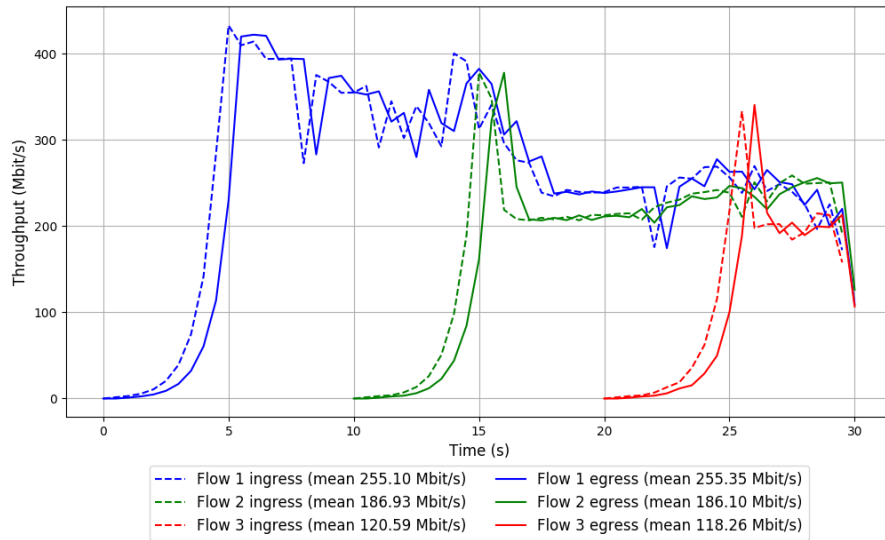
-- Flow 3:

Average throughput: 118.26 Mbit/s

95th percentile per-packet one-way delay: 148.298 ms

Loss rate: 4.58%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-04-24 08:59:29

End at: 2019-04-24 08:59:59

Local clock offset: -0.309 ms

Remote clock offset: 0.048 ms

Below is generated by plot.py at 2019-04-24 13:48:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 133.029 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 132.754 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.067 ms

Loss rate: 0.00%

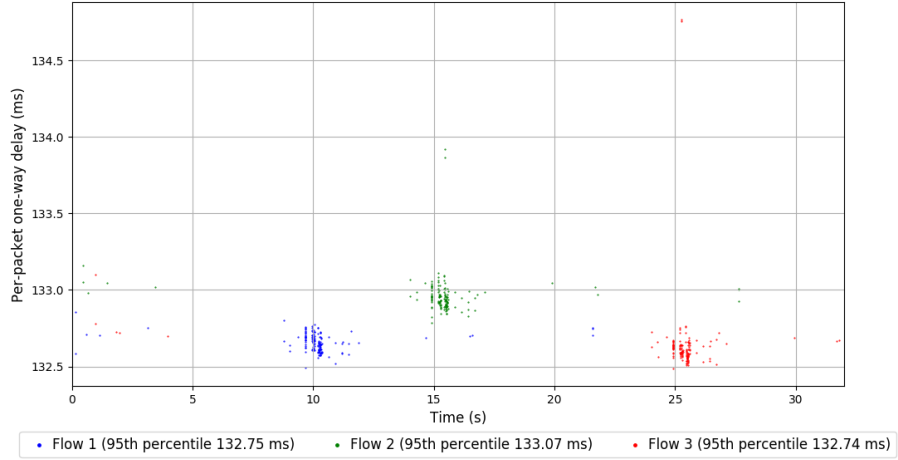
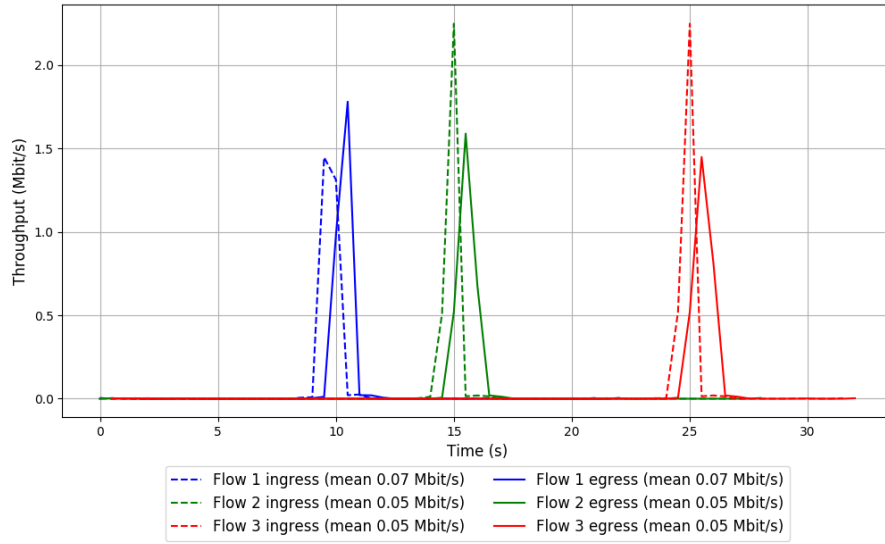
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.744 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-04-24 09:37:07

End at: 2019-04-24 09:37:37

Local clock offset: -0.52 ms

Remote clock offset: 0.042 ms

Below is generated by plot.py at 2019-04-24 13:48:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 132.705 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.714 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.707 ms

Loss rate: 0.00%

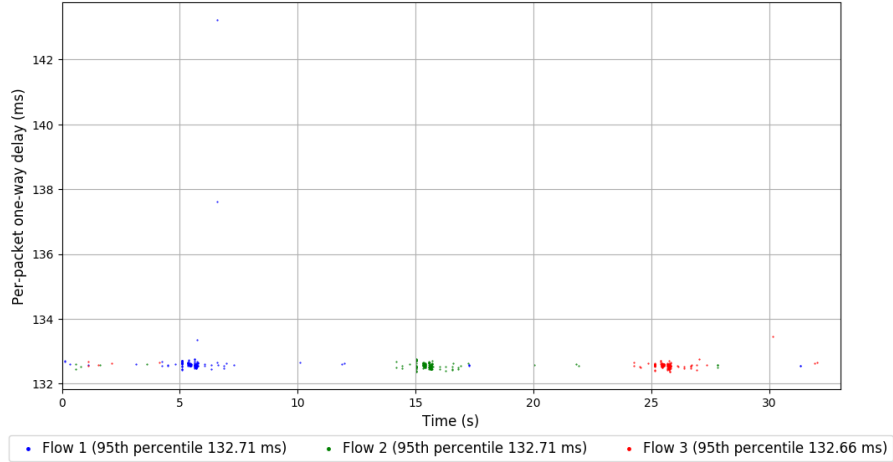
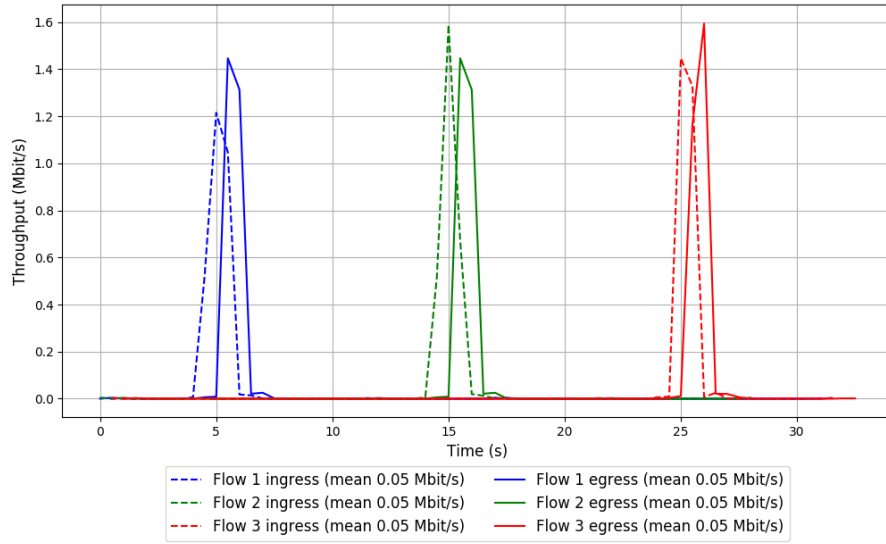
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.663 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-04-24 10:15:25

End at: 2019-04-24 10:15:55

Local clock offset: -0.098 ms

Remote clock offset: -0.01 ms

Below is generated by plot.py at 2019-04-24 13:48:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 133.058 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.035 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.015 ms

Loss rate: 0.00%

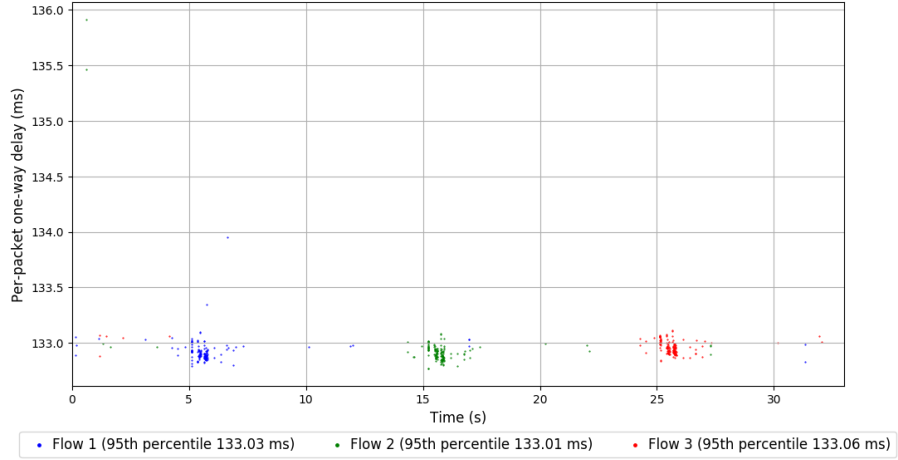
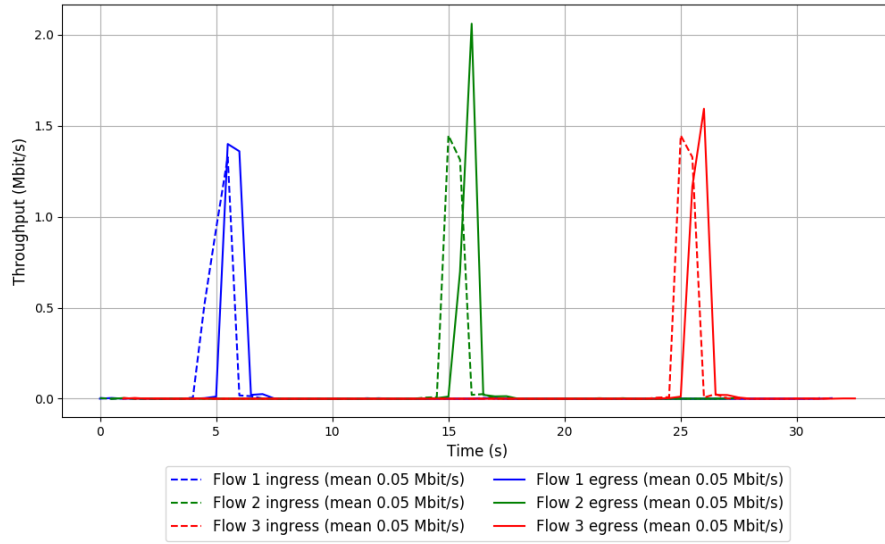
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.065 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-04-24 10:52:33

End at: 2019-04-24 10:53:03

Local clock offset: -0.164 ms

Remote clock offset: 0.026 ms

Below is generated by plot.py at 2019-04-24 13:48:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 133.012 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.988 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.966 ms

Loss rate: 0.00%

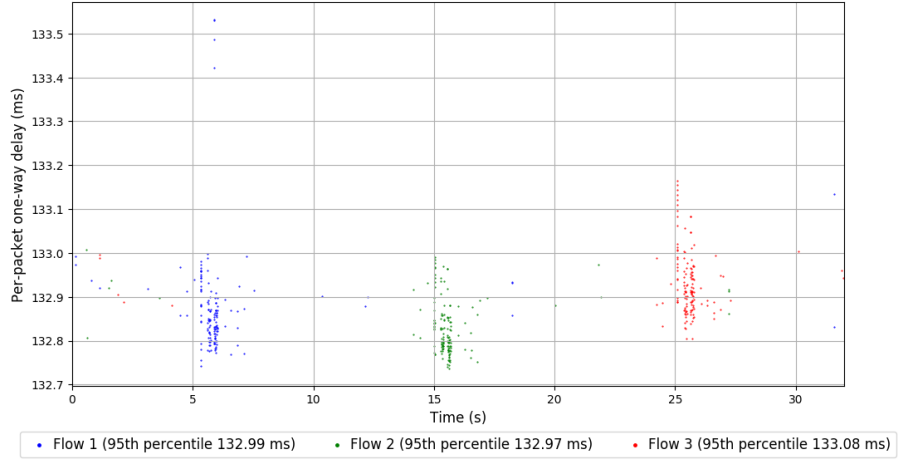
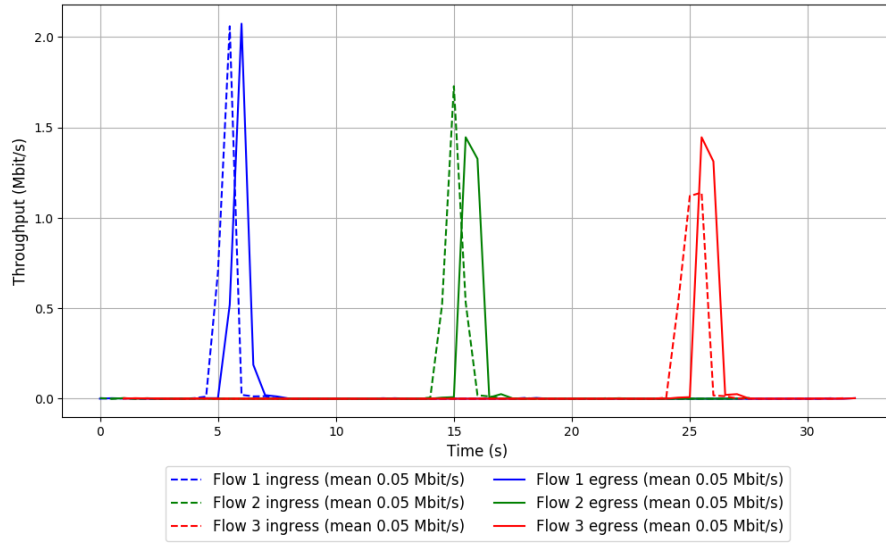
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.084 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-04-24 11:29:43

End at: 2019-04-24 11:30:13

Local clock offset: -0.135 ms

Remote clock offset: 0.018 ms

Below is generated by plot.py at 2019-04-24 13:48:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 132.949 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.073 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.891 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.001 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

