Pantheon Report

Generated at 2019-01-19 15:49:09 (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.
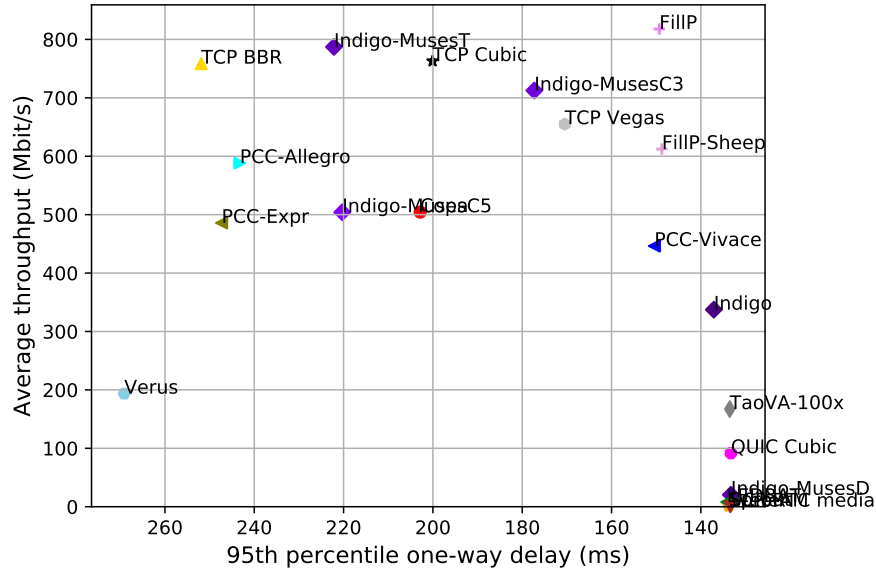
```
System info:
Linux 4.15.0-1026-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ c80a283586bf7b0cc1fe08c69c8f60d56498f81c
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ c3eee875824760ec5b2fd207fefe166e1afe2170
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
```
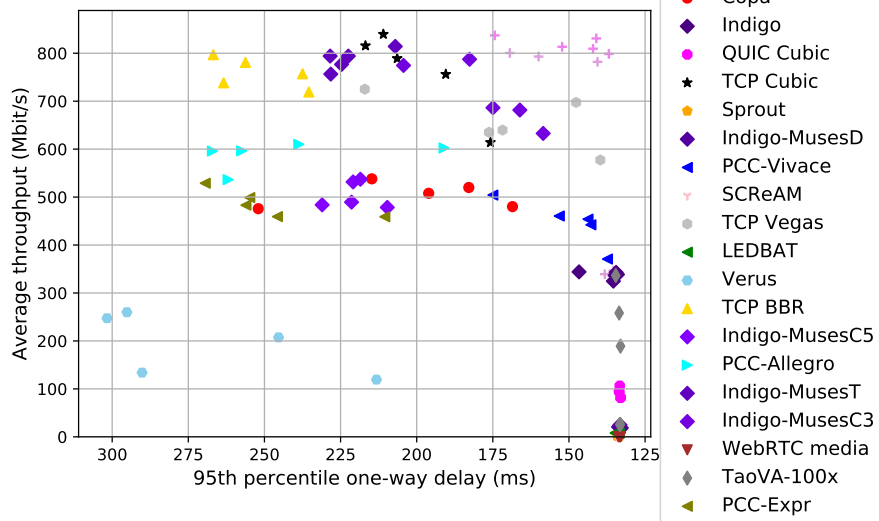
```
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

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)

Average throughput (Mbit/s)

FillP
Indigo-MusesT
TCP BBR
TCP Cubic
Indigo-MusesC3
TCP Vegas
FillP-Sheep
PCC-Allegro
PCC-Expr
Indigo-MusesC5 Copa
PCC-Vivace
Indigo
Verus
TaoVA-100x
QUIC Cubic
Indigo-MusesD
WebRTC media

95th percentile one-way delay (ms)

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

Average throughput (Mbit/s)

95th percentile one-way delay (ms)

FillP
FillP-Sheep
Copa
Indigo
QUIC Cubic
TCP Cubic
Sprout
Indigo-MusesD
PCC-Vivace
SCReAM
TCP Vegas
LEDBAT
Verus
TCP BBR
Indigo-MusesC5
PCC-Allegro
Indigo-MusesT
Indigo-MusesC3
WebRTC media
TaoVA-100x
PCC-Expr

3

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	423.92	378.47	256.15	250.88	250.46	184.83	2.82	3.46	5.67
Copa	5	274.43	253.10	190.60	208.58	200.15	187.83	0.88	1.50	3.75
TCP Cubic	5	425.71	366.11	289.23	186.15	192.49	204.86	0.99	1.77	5.61
FillP	5	514.16	339.07	243.73	158.96	137.52	137.67	0.97	1.19	3.39
FillP-Sheep	5	324.81	324.94	222.75	153.63	142.30	136.08	0.36	1.12	3.34
Indigo	5	173.48	172.09	152.75	134.87	136.85	153.47	0.82	1.33	3.15
Indigo-MusesC3	5	472.24	346.39	69.65	179.83	167.84	138.41	1.05	2.22	11.23
Indigo-MusesC5	5	357.57	211.62	40.47	226.87	170.06	135.57	3.04	3.08	8.56
Indigo-MusesD	5	13.13	9.04	5.33	133.12	133.26	133.21	1.81	2.34	6.26
Indigo-MusesT	5	566.10	326.58	40.37	225.39	171.38	138.67	3.55	2.46	8.89
LEDBAT	5	5.24	3.44	1.67	134.28	133.84	133.62	1.79	2.70	5.40
PCC-Allegro	5	330.64	278.67	226.42	222.19	223.75	259.45	2.47	4.97	6.59
PCC-Expr	5	297.05	213.40	146.75	241.32	218.37	190.68	5.94	5.67	3.96
QUIC Cubic	5	51.70	44.84	30.44	133.17	132.95	133.02	1.33	2.19	3.21
SCReAM	5	0.16	0.16	0.16	133.25	133.39	133.34	0.88	1.40	2.38
Sprout	5	0.66	0.66	0.60	133.61	133.60	133.76	1.01	1.51	3.33
TaoVA-100x	5	80.48	78.29	106.38	133.51	133.28	133.15	0.95	1.45	3.05
TCP Vegas	5	354.23	331.48	247.54	158.20	166.24	191.20	1.03	1.46	4.10
Verus	5	135.88	73.42	30.46	278.94	233.33	144.73	4.68	5.08	4.55
PCC-Vivace	5	279.96	187.63	130.10	161.73	142.69	163.35	1.70	1.59	4.55
WebRTC media	5	0.05	0.05	0.05	133.17	132.82	133.33	0.01	0.00	0.01

```
Run 1: Statistics of TCP BBR

Start at: 2019-01-19 10:07:40
End at: 2019-01-19 10:08:10
Local clock offset: -0.015 ms
Remote clock offset: 0.292 ms


# Below is generated by plot.py at 2019-01-19 13:44:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 757.18 Mbit/s
95th percentile per-packet one-way delay: 237.482 ms
Loss rate: 2.72%
-- Flow 1:
Average throughput: 424.72 Mbit/s
95th percentile per-packet one-way delay: 242.453 ms
Loss rate: 2.38%
-- Flow 2:
Average throughput: 385.69 Mbit/s
95th percentile per-packet one-way delay: 213.367 ms
Loss rate: 1.87%
-- Flow 3:
Average throughput: 235.00 Mbit/s
95th percentile per-packet one-way delay: 203.980 ms
Loss rate: 7.24%
```
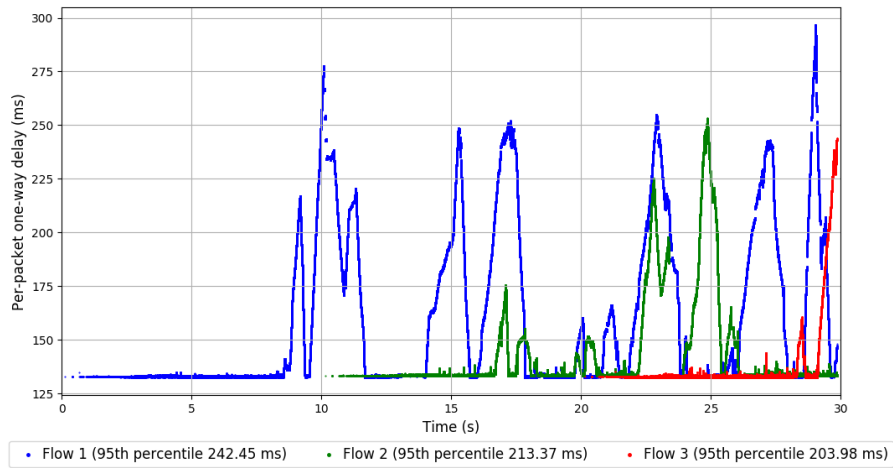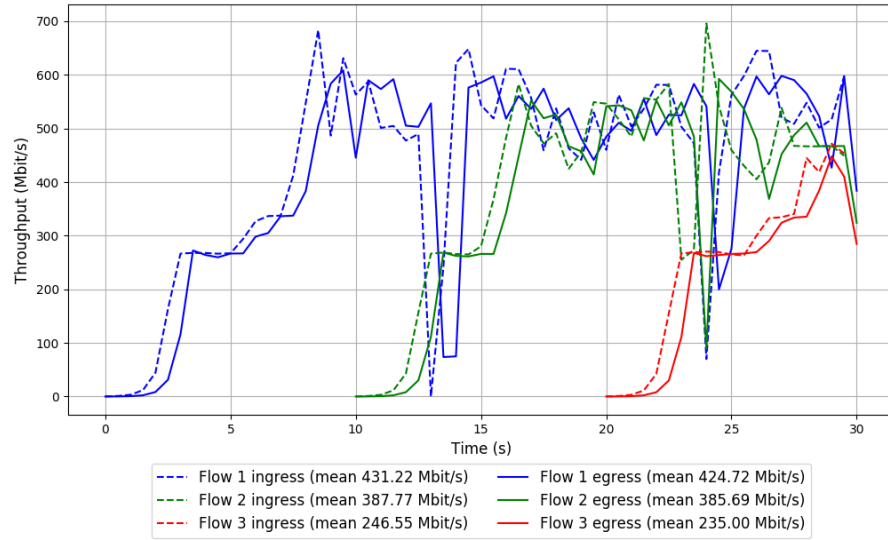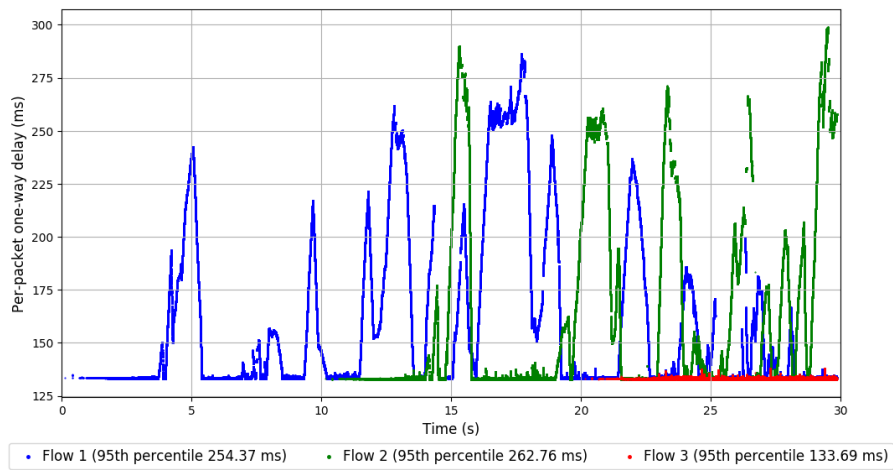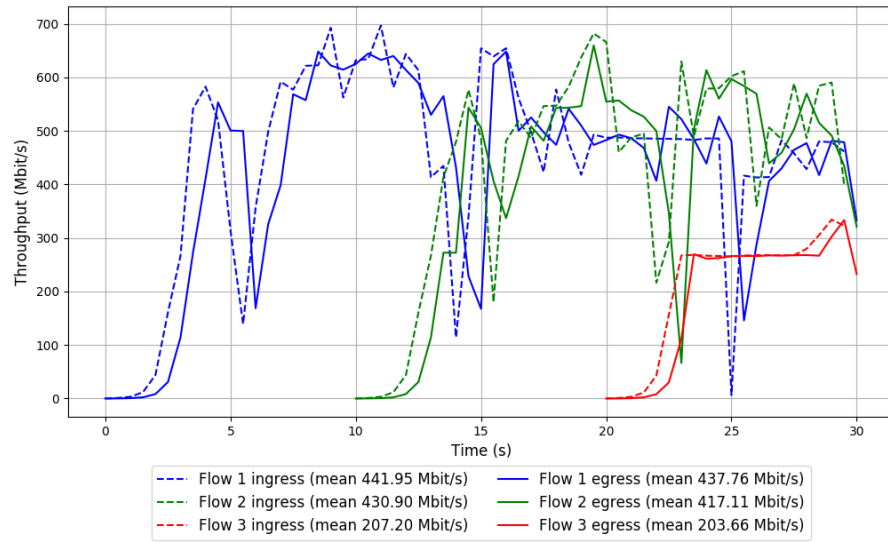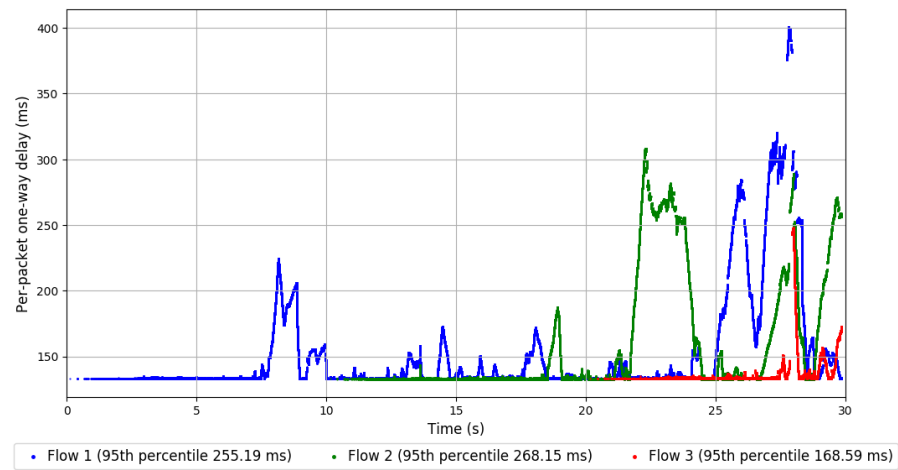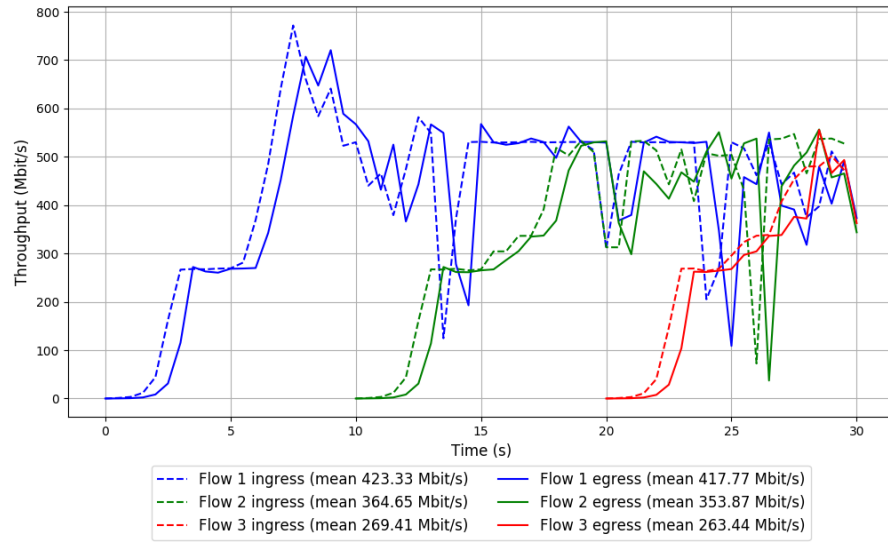
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 431.22 Mbit/s) --- Flow 1 egress (mean 424.72 Mbit/s)
Flow 2 ingress (mean 387.77 Mbit/s) --- Flow 2 egress (mean 385.69 Mbit/s)
Flow 3 ingress (mean 246.55 Mbit/s) --- Flow 3 egress (mean 235.00 Mbit/s)

Flow 1 (95th percentile 242.45 ms)   Flow 2 (95th percentile 213.37 ms)   Flow 3 (95th percentile 203.98 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2019-01-19 10:48:20
End at: 2019-01-19 10:48:50
Local clock offset: 0.189 ms
Remote clock offset: -0.075 ms


# Below is generated by plot.py at 2019-01-19 13:45:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 780.85 Mbit/s
95th percentile per-packet one-way delay: 256.234 ms
Loss rate: 3.00%
-- Flow 1:
Average throughput: 437.76 Mbit/s
95th percentile per-packet one-way delay: 254.371 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 417.11 Mbit/s
95th percentile per-packet one-way delay: 262.757 ms
Loss rate: 4.49%
-- Flow 3:
Average throughput: 203.66 Mbit/s
95th percentile per-packet one-way delay: 133.685 ms
Loss rate: 4.34%
```
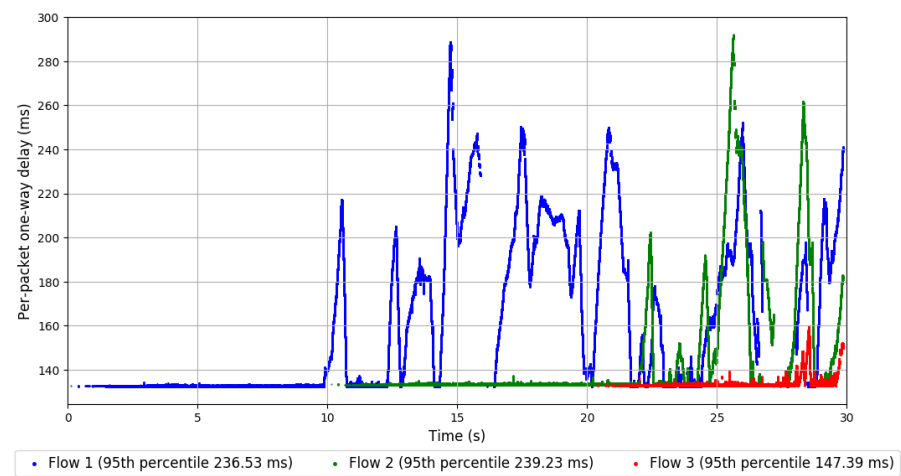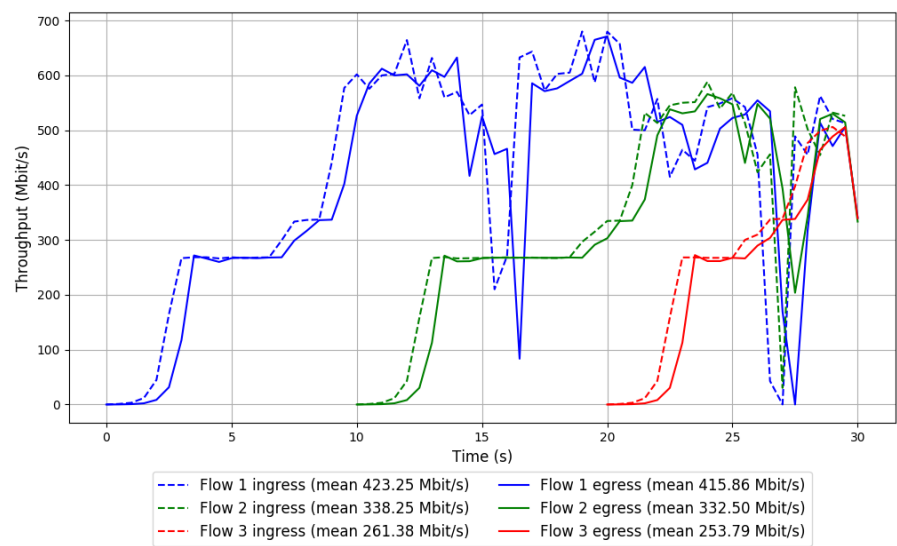
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 441.95 Mbit/s) --- Flow 1 egress (mean 437.76 Mbit/s)
Flow 2 ingress (mean 430.90 Mbit/s) --- Flow 2 egress (mean 417.11 Mbit/s)
Flow 3 ingress (mean 207.20 Mbit/s) --- Flow 3 egress (mean 203.66 Mbit/s)

Flow 1 (95th percentile 254.37 ms)   Flow 2 (95th percentile 262.76 ms)   Flow 3 (95th percentile 133.69 ms)
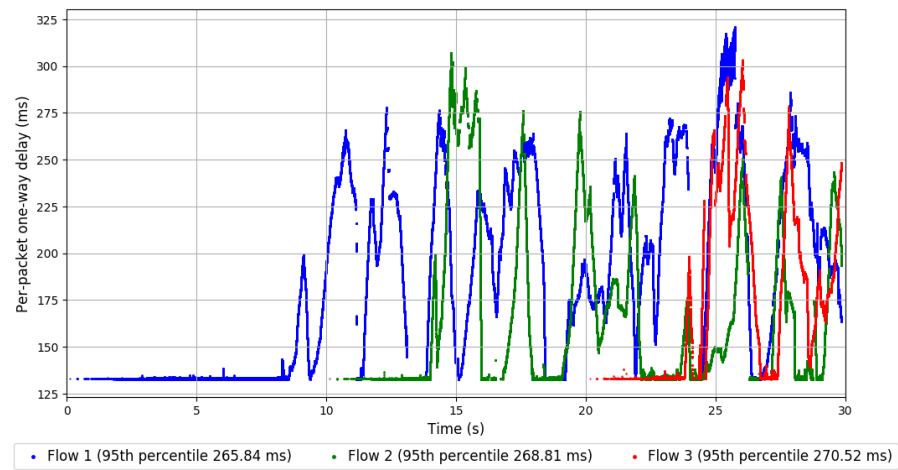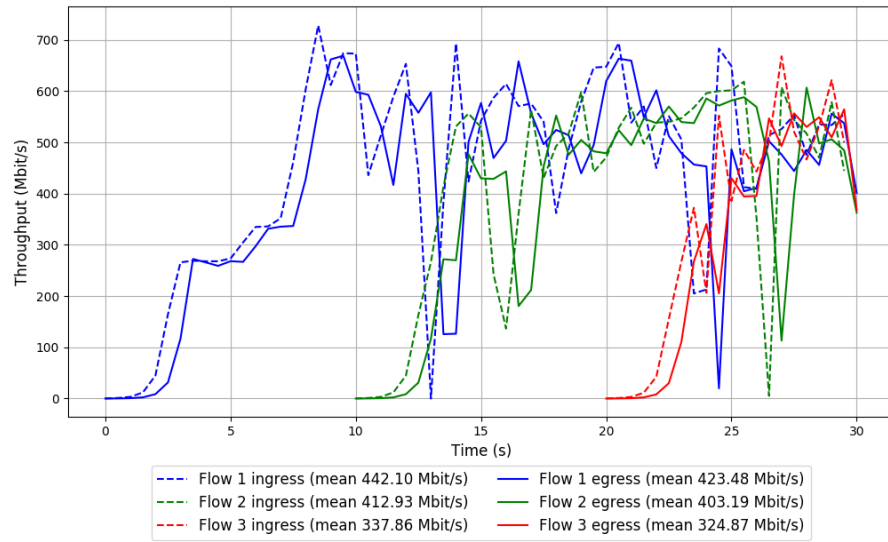
```
Run 3: Statistics of TCP BBR

Start at: 2019-01-19 11:30:44
End at: 2019-01-19 11:31:14
Local clock offset: -0.09 ms
Remote clock offset: -0.058 ms


# Below is generated by plot.py at 2019-01-19 13:45:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 738.29 Mbit/s
95th percentile per-packet one-way delay: 263.411 ms
Loss rate: 3.17%
-- Flow 1:
Average throughput: 417.77 Mbit/s
95th percentile per-packet one-way delay: 255.192 ms
Loss rate: 2.19%
-- Flow 2:
Average throughput: 353.87 Mbit/s
95th percentile per-packet one-way delay: 268.150 ms
Loss rate: 4.25%
-- Flow 3:
Average throughput: 263.44 Mbit/s
95th percentile per-packet one-way delay: 168.590 ms
Loss rate: 4.84%
```
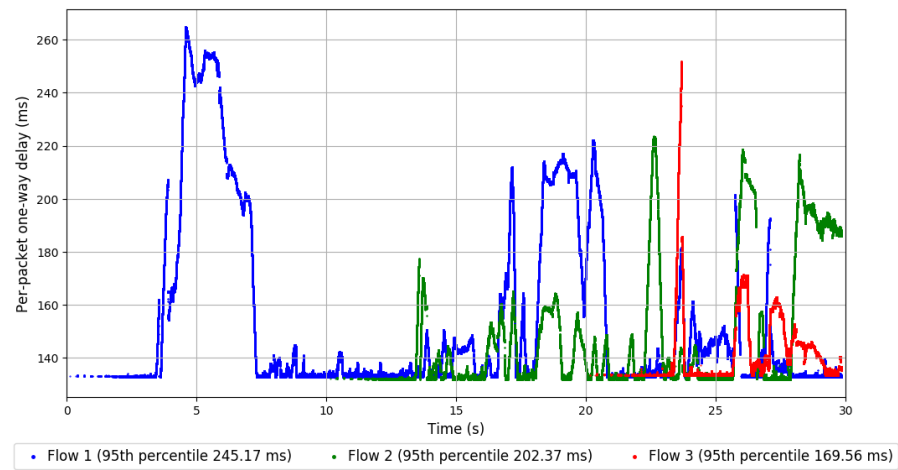
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2019-01-19 12:12:20
End at: 2019-01-19 12:12:50
Local clock offset: -0.147 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-01-19 13:45:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 719.15 Mbit/s
95th percentile per-packet one-way delay: 235.419 ms
Loss rate: 3.08%
-- Flow 1:
Average throughput: 415.86 Mbit/s
95th percentile per-packet one-way delay: 236.531 ms
Loss rate: 2.62%
-- Flow 2:
Average throughput: 332.50 Mbit/s
95th percentile per-packet one-way delay: 239.232 ms
Loss rate: 3.01%
-- Flow 3:
Average throughput: 253.79 Mbit/s
95th percentile per-packet one-way delay: 147.386 ms
Loss rate: 5.51%
```
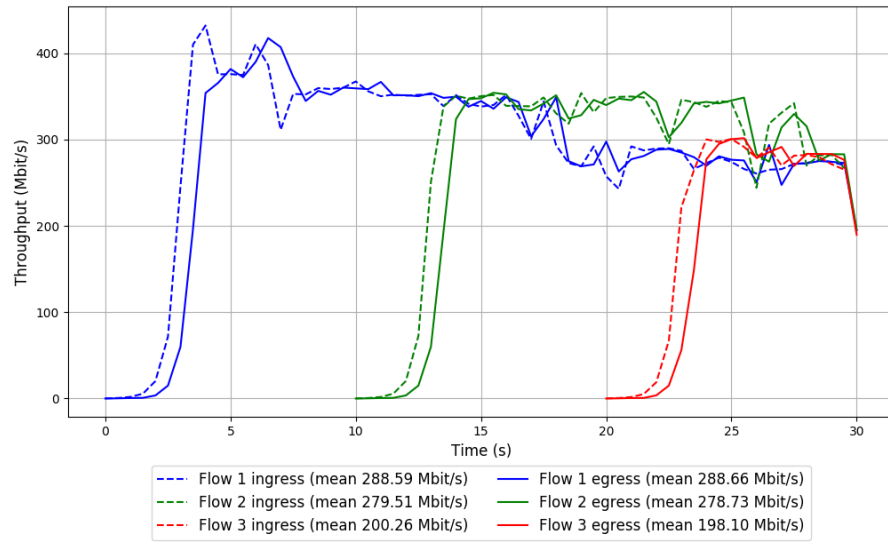
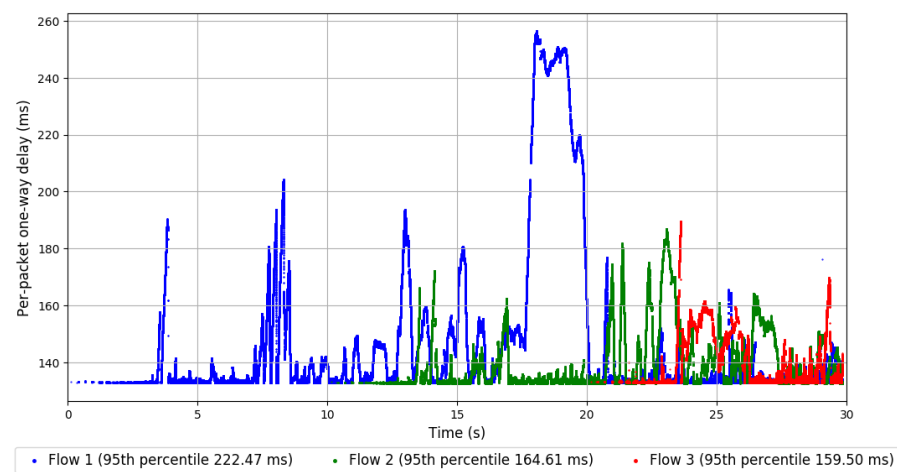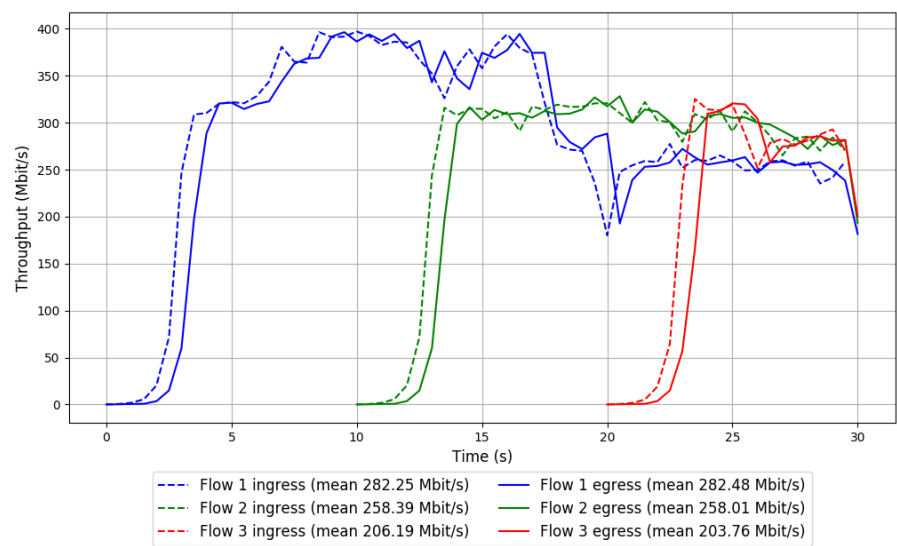# Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2019-01-19 12:54:14
End at: 2019-01-19 12:54:44
Local clock offset: -0.05 ms
Remote clock offset: -0.177 ms


# Below is generated by plot.py at 2019-01-19 13:45:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 796.98 Mbit/s
95th percentile per-packet one-way delay: 266.798 ms
Loss rate: 4.78%
-- Flow 1:
Average throughput: 423.48 Mbit/s
95th percentile per-packet one-way delay: 265.839 ms
Loss rate: 5.06%
-- Flow 2:
Average throughput: 403.19 Mbit/s
95th percentile per-packet one-way delay: 268.805 ms
Loss rate: 3.66%
-- Flow 3:
Average throughput: 324.87 Mbit/s
95th percentile per-packet one-way delay: 270.522 ms
Loss rate: 6.42%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 442.10 Mbit/s) --- Flow 1 egress (mean 423.48 Mbit/s)
Flow 2 ingress (mean 412.93 Mbit/s) --- Flow 2 egress (mean 403.19 Mbit/s)
Flow 3 ingress (mean 337.86 Mbit/s) --- Flow 3 egress (mean 324.87 Mbit/s)

Flow 1 (95th percentile 265.84 ms) Flow 2 (95th percentile 268.81 ms) Flow 3 (95th percentile 270.52 ms)

```
Run 1: Statistics of Copa

Start at: 2019-01-19 09:49:05
End at: 2019-01-19 09:49:35
Local clock offset: -0.042 ms
Remote clock offset: -0.089 ms


# Below is generated by plot.py at 2019-01-19 13:49:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 538.08 Mbit/s
95th percentile per-packet one-way delay: 214.741 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 288.66 Mbit/s
95th percentile per-packet one-way delay: 245.171 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 278.73 Mbit/s
95th percentile per-packet one-way delay: 202.374 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 198.10 Mbit/s
95th percentile per-packet one-way delay: 169.563 ms
Loss rate: 3.72%
```
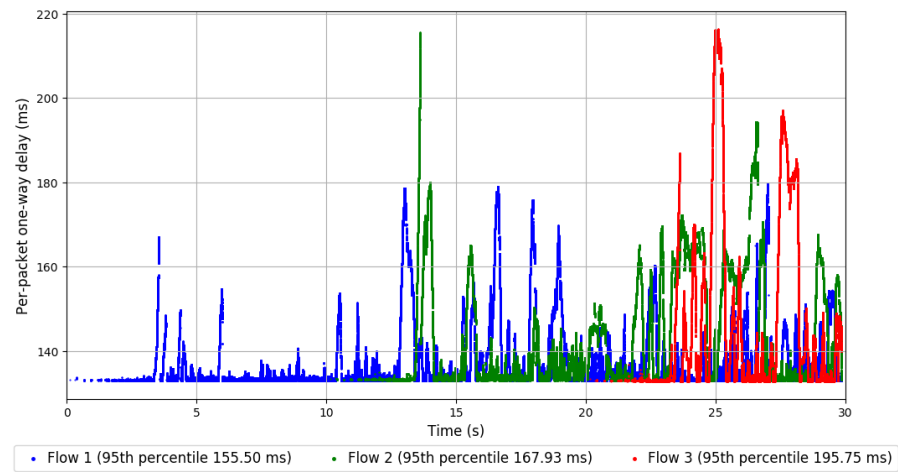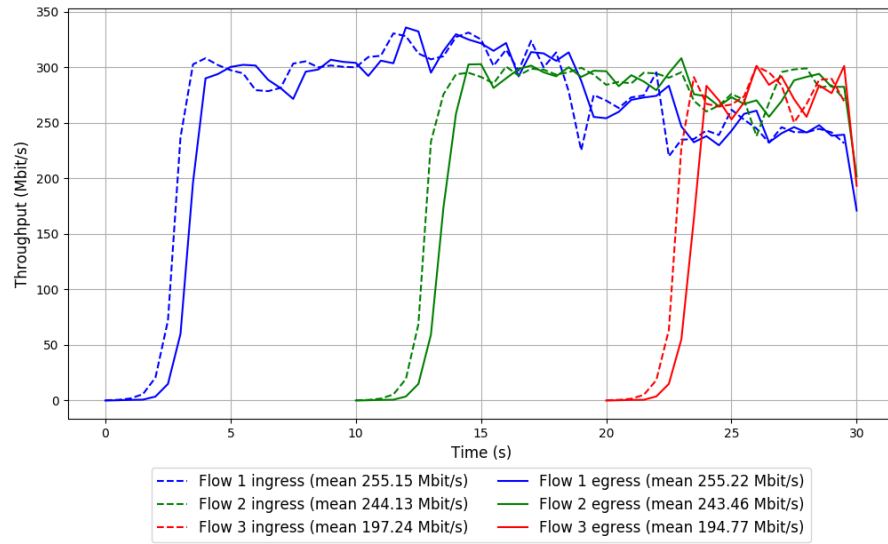
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-01-19 10:29:49
End at: 2019-01-19 10:30:19
Local clock offset: -0.054 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2019-01-19 13:49:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 519.97 Mbit/s
95th percentile per-packet one-way delay: 182.889 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 282.48 Mbit/s
95th percentile per-packet one-way delay: 222.470 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 258.01 Mbit/s
95th percentile per-packet one-way delay: 164.607 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 203.76 Mbit/s
95th percentile per-packet one-way delay: 159.497 ms
Loss rate: 3.81%
```

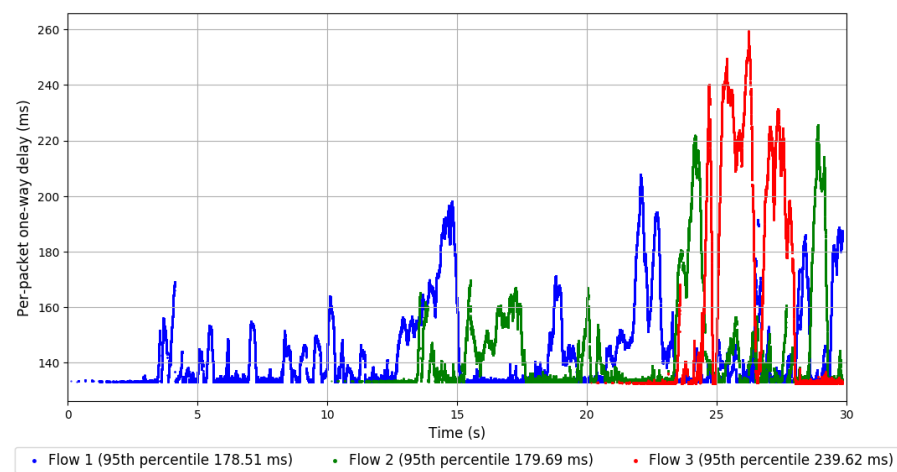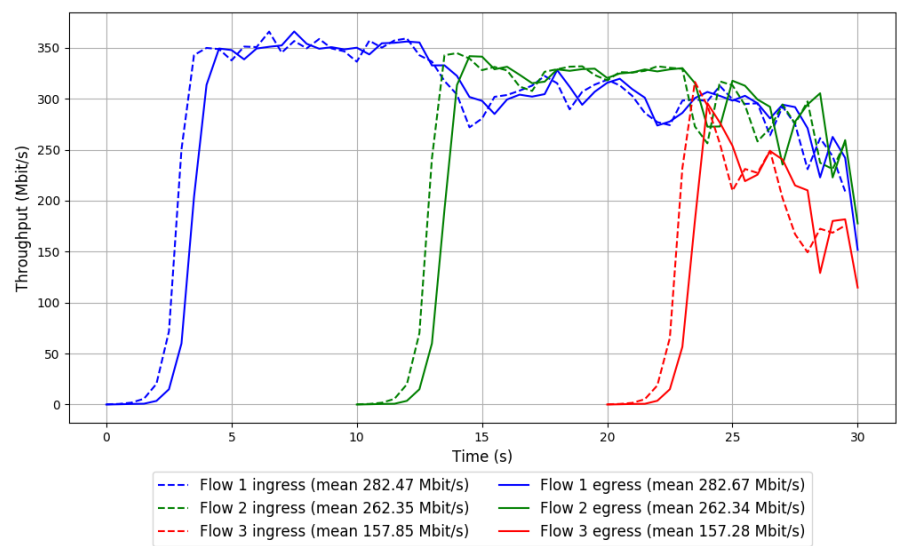Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-01-19 11:10:55
End at: 2019-01-19 11:11:25
Local clock offset: 0.198 ms
Remote clock offset: -0.141 ms


# Below is generated by plot.py at 2019-01-19 13:49:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 480.13 Mbit/s
95th percentile per-packet one-way delay: 168.539 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 255.22 Mbit/s
95th percentile per-packet one-way delay: 155.498 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 243.46 Mbit/s
95th percentile per-packet one-way delay: 167.931 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 194.77 Mbit/s
95th percentile per-packet one-way delay: 195.751 ms
Loss rate: 3.89%
```

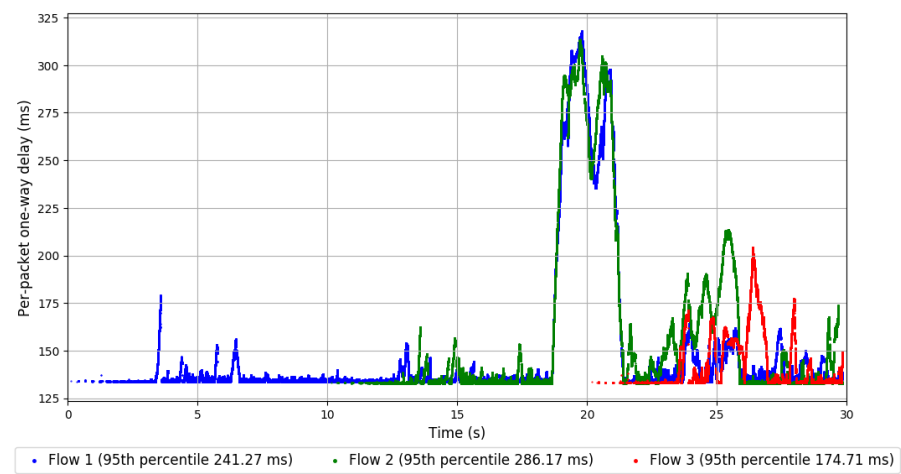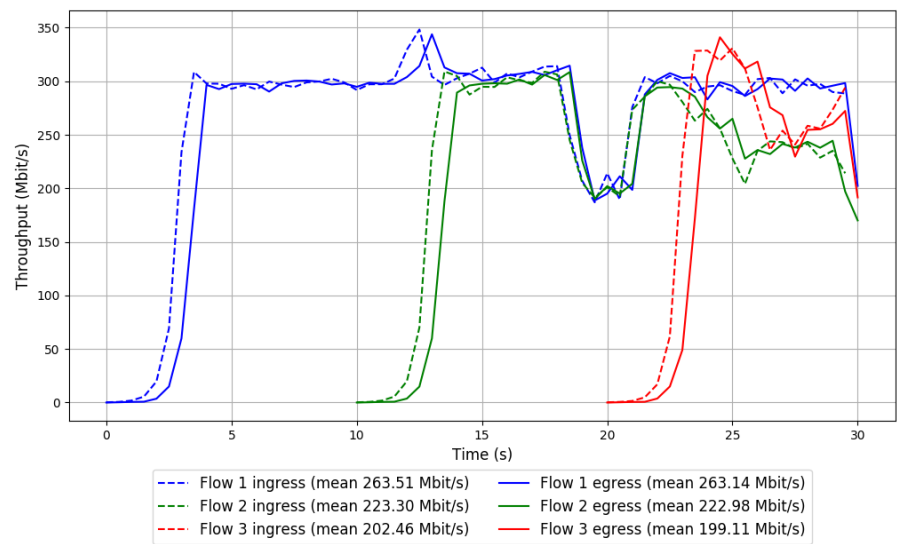Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-01-19 11:52:59
End at: 2019-01-19 11:53:29
Local clock offset: 0.127 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2019-01-19 14:03:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 507.92 Mbit/s
95th percentile per-packet one-way delay: 196.066 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 282.67 Mbit/s
95th percentile per-packet one-way delay: 178.512 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 262.34 Mbit/s
95th percentile per-packet one-way delay: 179.686 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 157.28 Mbit/s
95th percentile per-packet one-way delay: 239.624 ms
Loss rate: 3.02%
```
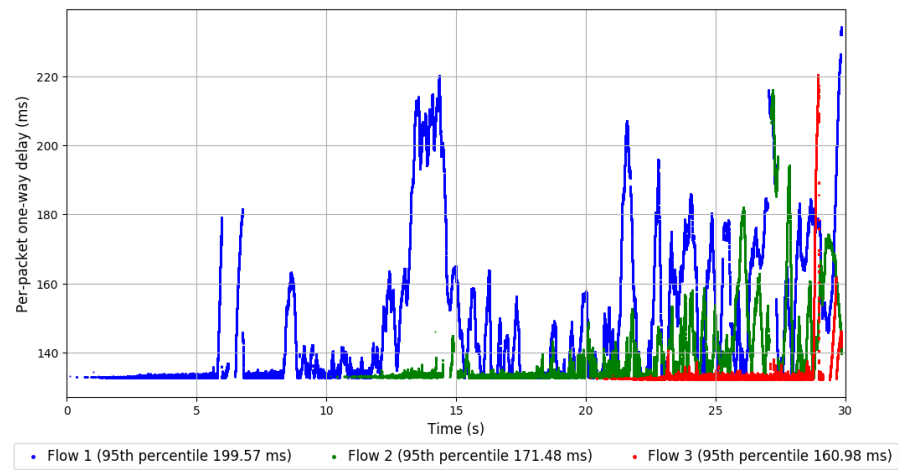
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2019-01-19 12:34:51
End at: 2019-01-19 12:35:21
Local clock offset: 0.094 ms
Remote clock offset: -0.149 ms


# Below is generated by plot.py at 2019-01-19 14:03:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 475.79 Mbit/s
95th percentile per-packet one-way delay: 252.017 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 263.14 Mbit/s
95th percentile per-packet one-way delay: 241.270 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 222.98 Mbit/s
95th percentile per-packet one-way delay: 286.171 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 199.11 Mbit/s
95th percentile per-packet one-way delay: 174.710 ms
Loss rate: 4.29%
```
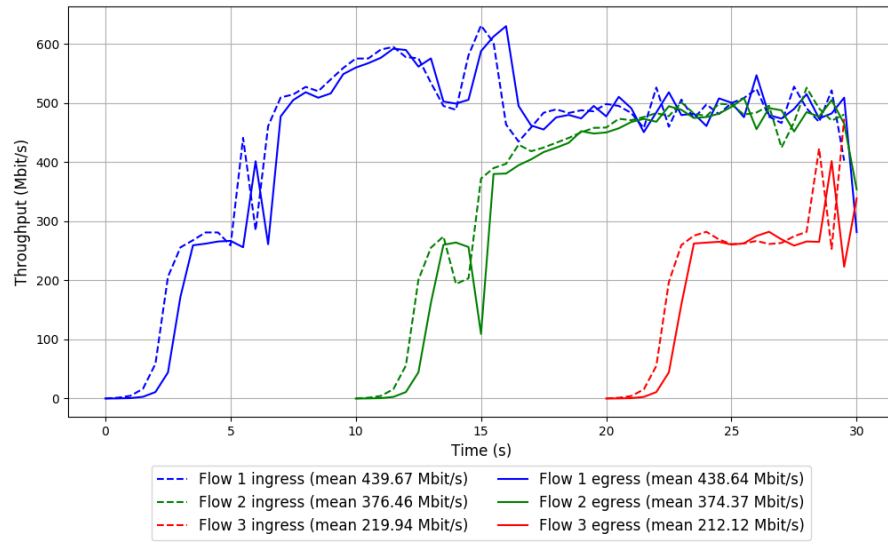
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 263.51 Mbit/s) --- Flow 1 egress (mean 263.14 Mbit/s)
Flow 2 ingress (mean 223.30 Mbit/s) --- Flow 2 egress (mean 222.98 Mbit/s)
Flow 3 ingress (mean 202.46 Mbit/s) --- Flow 3 egress (mean 199.11 Mbit/s)

Flow 1 (95th percentile 241.27 ms) · Flow 2 (95th percentile 286.17 ms) · Flow 3 (95th percentile 174.71 ms)
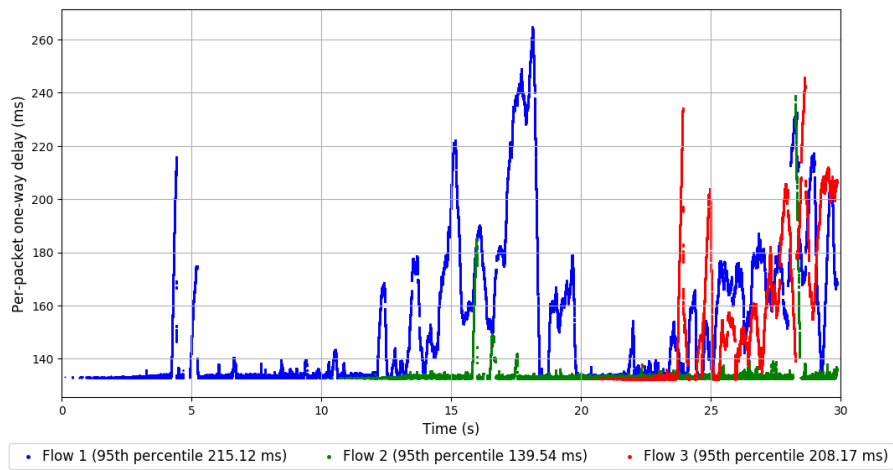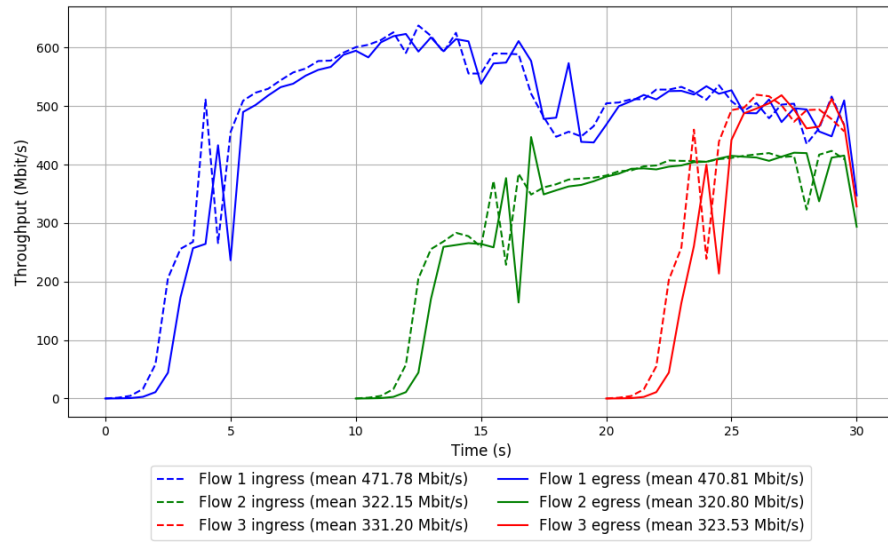
24

```
Run 1: Statistics of TCP Cubic

Start at: 2019-01-19 10:19:59
End at: 2019-01-19 10:20:29
Local clock offset: -0.115 ms
Remote clock offset: -0.066 ms


# Below is generated by plot.py at 2019-01-19 14:03:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 756.10 Mbit/s
95th percentile per-packet one-way delay: 190.456 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 438.64 Mbit/s
95th percentile per-packet one-way delay: 199.567 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 374.37 Mbit/s
95th percentile per-packet one-way delay: 171.477 ms
Loss rate: 1.88%
-- Flow 3:
Average throughput: 212.12 Mbit/s
95th percentile per-packet one-way delay: 160.976 ms
Loss rate: 6.13%
```

Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 439.67 Mbit/s) --- Flow 1 egress (mean 438.64 Mbit/s)
Flow 2 ingress (mean 376.46 Mbit/s) --- Flow 2 egress (mean 374.37 Mbit/s)
Flow 3 ingress (mean 219.94 Mbit/s) --- Flow 3 egress (mean 212.12 Mbit/s)

Flow 1 (95th percentile 199.57 ms) Flow 2 (95th percentile 171.48 ms) Flow 3 (95th percentile 160.98 ms)
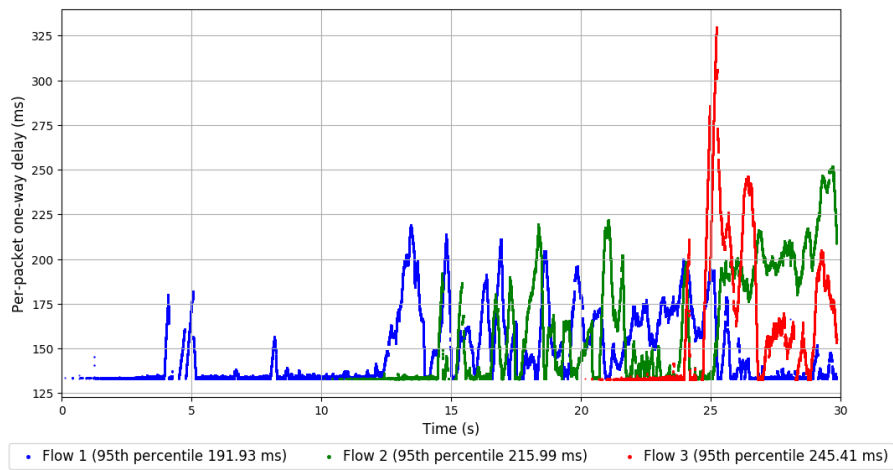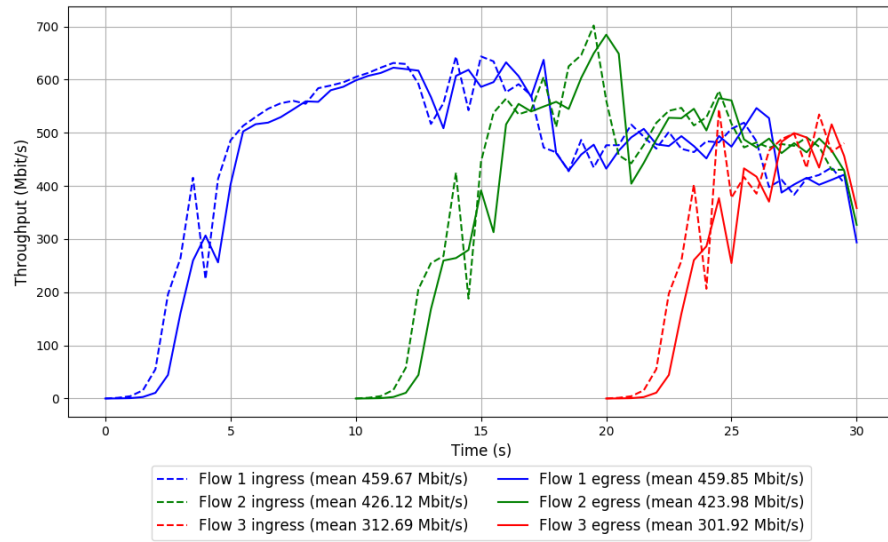
26

```
Run 2: Statistics of TCP Cubic

Start at: 2019-01-19 11:00:46
End at: 2019-01-19 11:01:16
Local clock offset: -0.029 ms
Remote clock offset: -0.076 ms


# Below is generated by plot.py at 2019-01-19 14:03:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 789.11 Mbit/s
95th percentile per-packet one-way delay: 206.401 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 470.81 Mbit/s
95th percentile per-packet one-way delay: 215.122 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 320.80 Mbit/s
95th percentile per-packet one-way delay: 139.543 ms
Loss rate: 1.75%
-- Flow 3:
Average throughput: 323.53 Mbit/s
95th percentile per-packet one-way delay: 208.170 ms
Loss rate: 4.92%
```

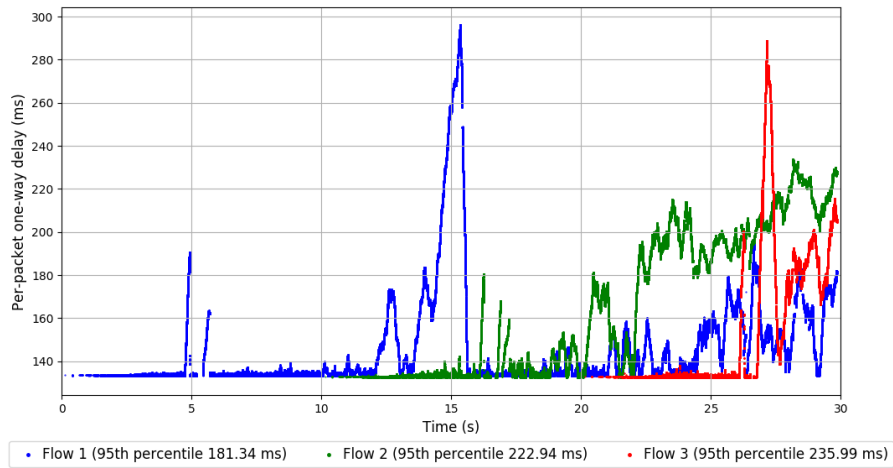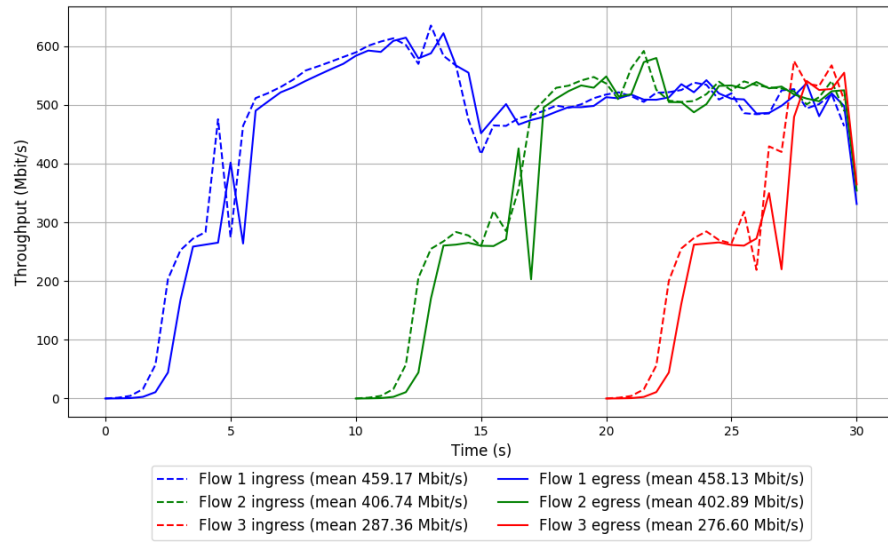Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-01-19 11:43:05
End at: 2019-01-19 11:43:35
Local clock offset: -0.008 ms
Remote clock offset: -0.017 ms


# Below is generated by plot.py at 2019-01-19 14:03:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 839.65 Mbit/s
95th percentile per-packet one-way delay: 210.947 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 459.85 Mbit/s
95th percentile per-packet one-way delay: 191.934 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 423.98 Mbit/s
95th percentile per-packet one-way delay: 215.992 ms
Loss rate: 1.83%
-- Flow 3:
Average throughput: 301.92 Mbit/s
95th percentile per-packet one-way delay: 245.412 ms
Loss rate: 6.02%
```

Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 459.67 Mbit/s) --- Flow 1 egress (mean 459.85 Mbit/s)
Flow 2 ingress (mean 426.12 Mbit/s) --- Flow 2 egress (mean 423.98 Mbit/s)
Flow 3 ingress (mean 312.69 Mbit/s) --- Flow 3 egress (mean 301.92 Mbit/s)

Flow 1 (95th percentile 191.93 ms)   Flow 2 (95th percentile 215.99 ms)   Flow 3 (95th percentile 245.41 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-01-19 12:25:23
End at: 2019-01-19 12:25:53
Local clock offset: -0.202 ms
Remote clock offset: -0.026 ms


# Below is generated by plot.py at 2019-01-19 14:04:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 815.64 Mbit/s
95th percentile per-packet one-way delay: 216.824 ms
Loss rate: 2.09%
-- Flow 1:
Average throughput: 458.13 Mbit/s
95th percentile per-packet one-way delay: 181.337 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 402.89 Mbit/s
95th percentile per-packet one-way delay: 222.937 ms
Loss rate: 2.27%
-- Flow 3:
Average throughput: 276.60 Mbit/s
95th percentile per-packet one-way delay: 235.992 ms
Loss rate: 6.31%
```
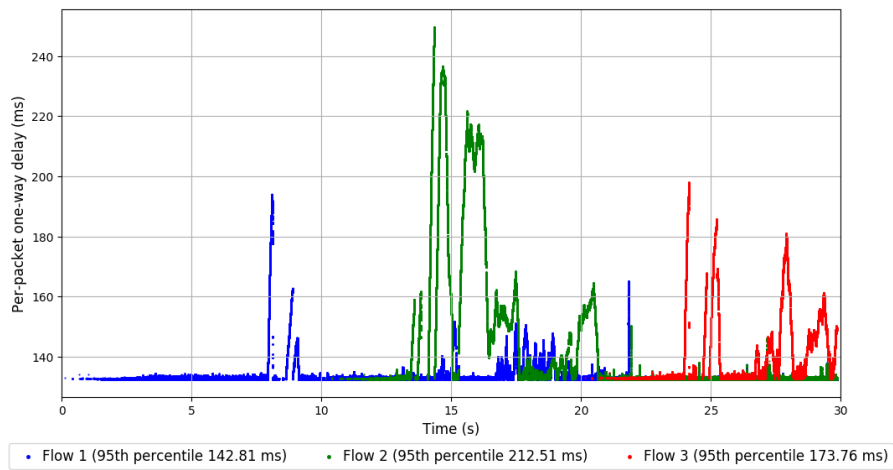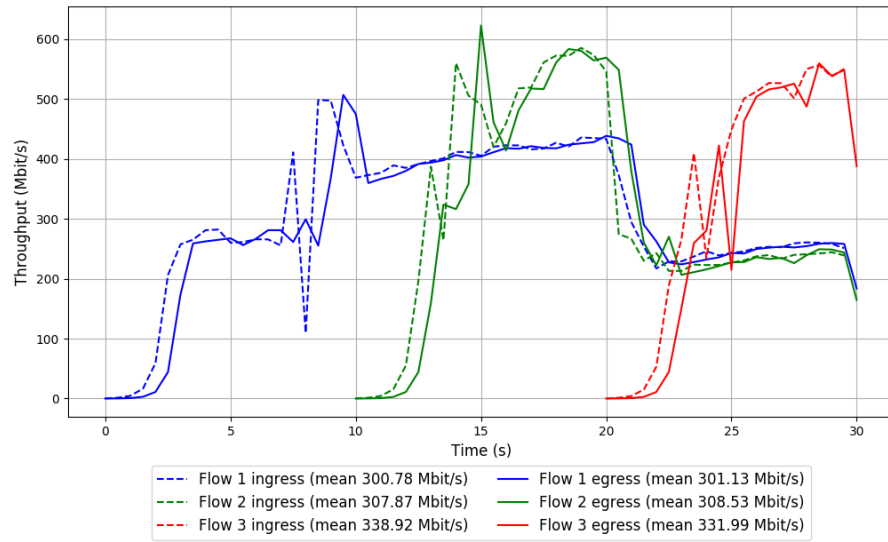
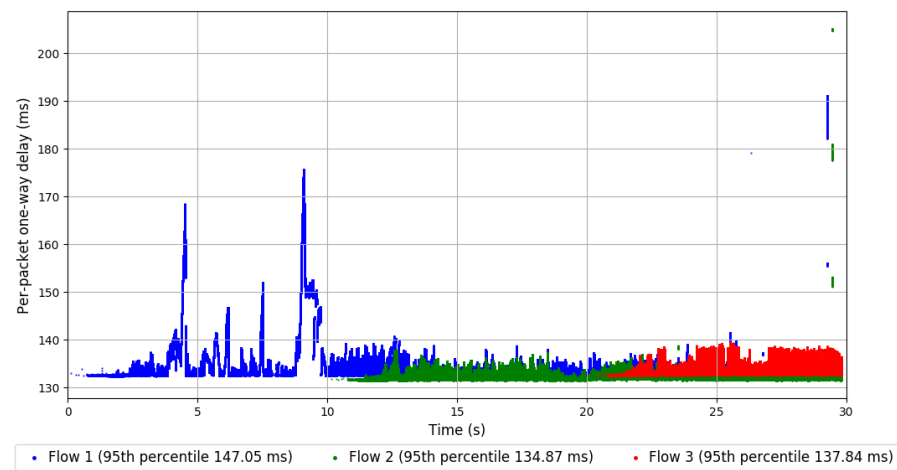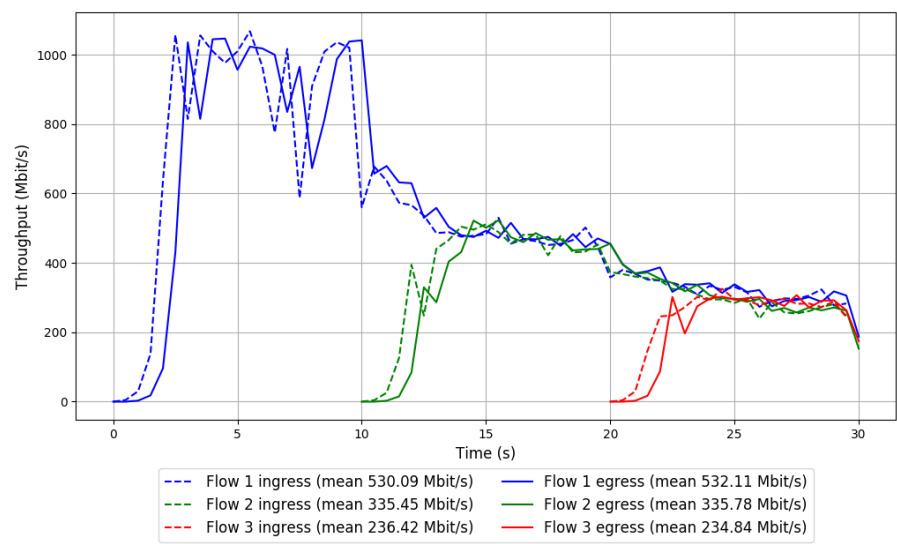# Run 4: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 459.17 Mbit/s) — Flow 1 egress (mean 458.13 Mbit/s)
- - - Flow 2 ingress (mean 406.74 Mbit/s) — Flow 2 egress (mean 402.89 Mbit/s)
- - - Flow 3 ingress (mean 287.36 Mbit/s) — Flow 3 egress (mean 276.60 Mbit/s)

- Flow 1 (95th percentile 181.34 ms)   - Flow 2 (95th percentile 222.94 ms)   - Flow 3 (95th percentile 235.99 ms)

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```
Run 5: Statistics of TCP Cubic

Start at: 2019-01-19 13:07:42
End at: 2019-01-19 13:08:12
Local clock offset: -0.029 ms
Remote clock offset: 0.306 ms


# Below is generated by plot.py at 2019-01-19 14:04:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 613.98 Mbit/s
95th percentile per-packet one-way delay: 175.781 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 301.13 Mbit/s
95th percentile per-packet one-way delay: 142.810 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 308.53 Mbit/s
95th percentile per-packet one-way delay: 212.507 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 331.99 Mbit/s
95th percentile per-packet one-way delay: 173.758 ms
Loss rate: 4.67%
```
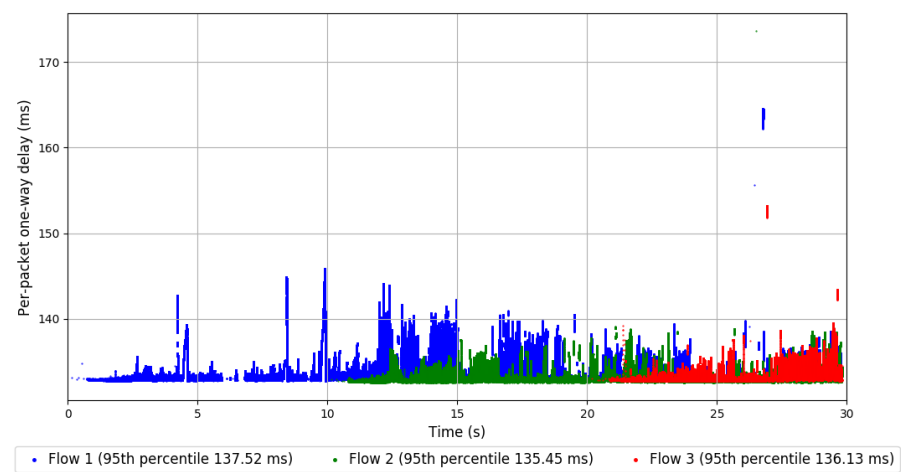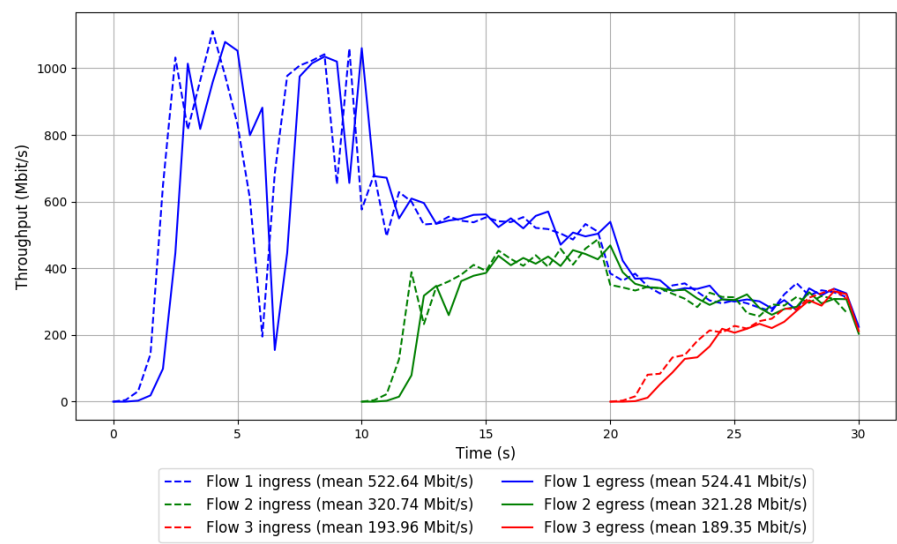
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 300.78 Mbit/s) --- Flow 1 egress (mean 301.13 Mbit/s)
Flow 2 ingress (mean 307.87 Mbit/s) --- Flow 2 egress (mean 308.53 Mbit/s)
Flow 3 ingress (mean 338.92 Mbit/s) --- Flow 3 egress (mean 331.99 Mbit/s)

Flow 1 (95th percentile 142.81 ms)   Flow 2 (95th percentile 212.51 ms)   Flow 3 (95th percentile 173.76 ms)
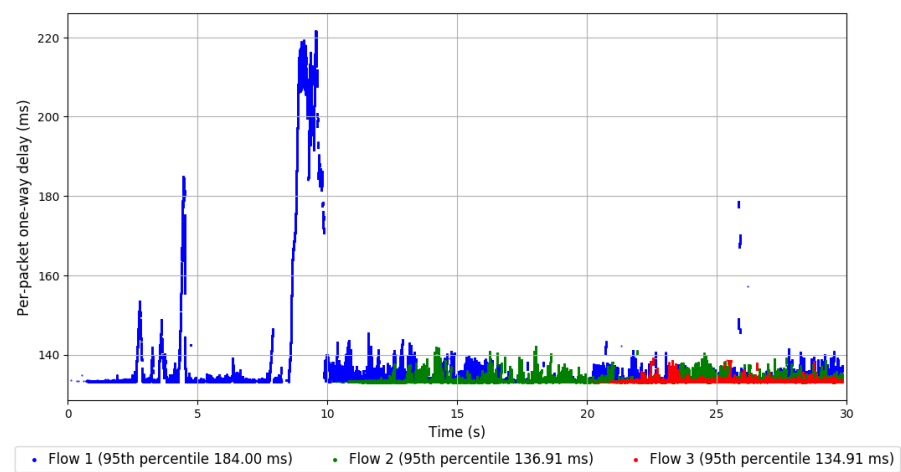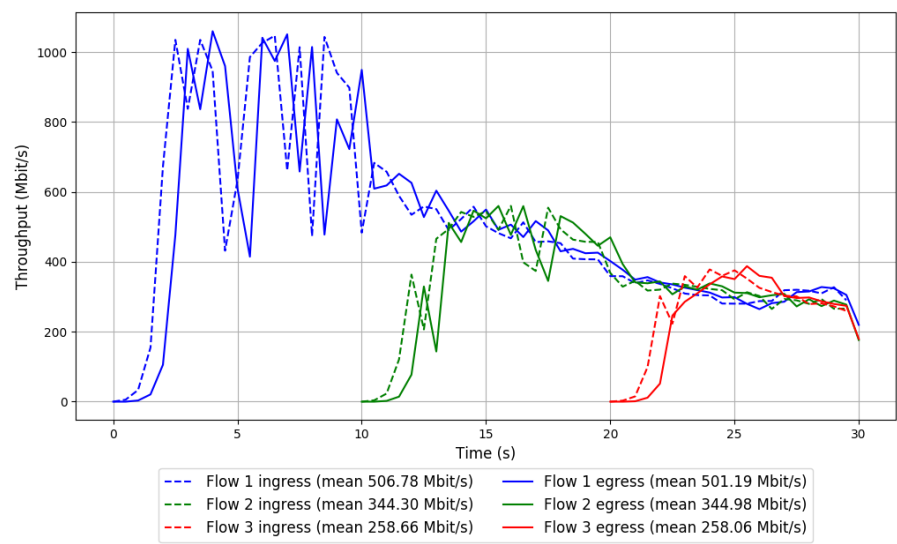
34

```
Run 1: Statistics of FillP

Start at: 2019-01-19 10:04:09
End at: 2019-01-19 10:04:39
Local clock offset: -0.541 ms
Remote clock offset: -0.081 ms


# Below is generated by plot.py at 2019-01-19 14:09:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 830.90 Mbit/s
95th percentile per-packet one-way delay: 141.011 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 532.11 Mbit/s
95th percentile per-packet one-way delay: 147.050 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 335.78 Mbit/s
95th percentile per-packet one-way delay: 134.869 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 234.84 Mbit/s
95th percentile per-packet one-way delay: 137.842 ms
Loss rate: 3.21%
```

Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 530.09 Mbit/s) --- Flow 1 egress (mean 532.11 Mbit/s)
Flow 2 ingress (mean 335.45 Mbit/s) --- Flow 2 egress (mean 335.78 Mbit/s)
Flow 3 ingress (mean 236.42 Mbit/s) --- Flow 3 egress (mean 234.84 Mbit/s)

Flow 1 (95th percentile 147.05 ms)   Flow 2 (95th percentile 134.87 ms)   Flow 3 (95th percentile 137.84 ms)
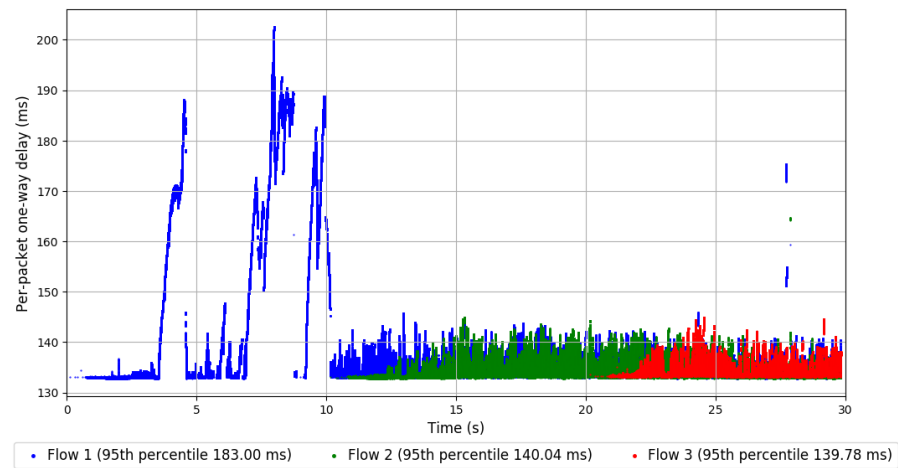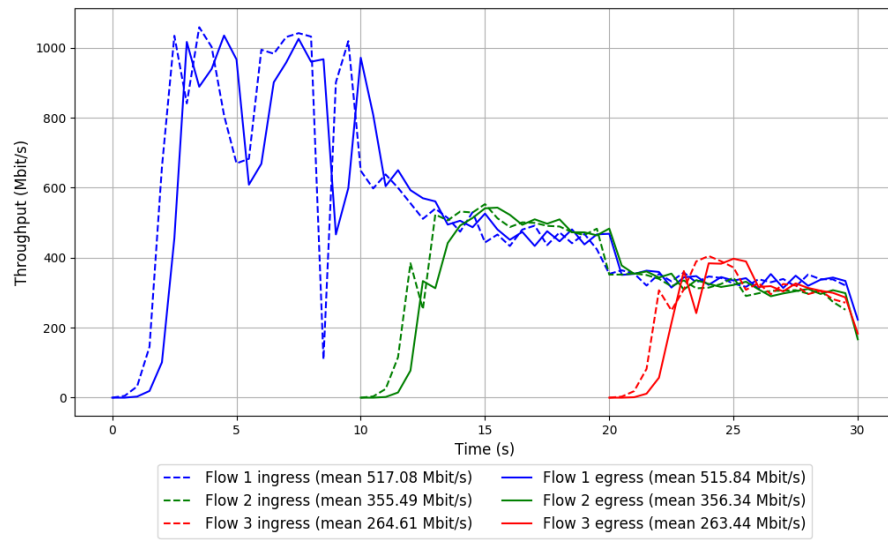
```
Run 2: Statistics of FillP

Start at: 2019-01-19 10:44:37
End at: 2019-01-19 10:45:07
Local clock offset: -0.107 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-01-19 14:19:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 798.55 Mbit/s
95th percentile per-packet one-way delay: 136.898 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 524.41 Mbit/s
95th percentile per-packet one-way delay: 137.517 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 321.28 Mbit/s
95th percentile per-packet one-way delay: 135.448 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 189.35 Mbit/s
95th percentile per-packet one-way delay: 136.135 ms
Loss rate: 4.92%
```

Run 2: Report of FillP — Data Link

- - - - Flow 1 ingress (mean 522.64 Mbit/s)   —— Flow 1 egress (mean 524.41 Mbit/s)
- - - - Flow 2 ingress (mean 320.74 Mbit/s)   —— Flow 2 egress (mean 321.28 Mbit/s)
- - - - Flow 3 ingress (mean 193.96 Mbit/s)   —— Flow 3 egress (mean 189.35 Mbit/s)

• Flow 1 (95th percentile 137.52 ms)   • Flow 2 (95th percentile 135.45 ms)   • Flow 3 (95th percentile 136.13 ms)
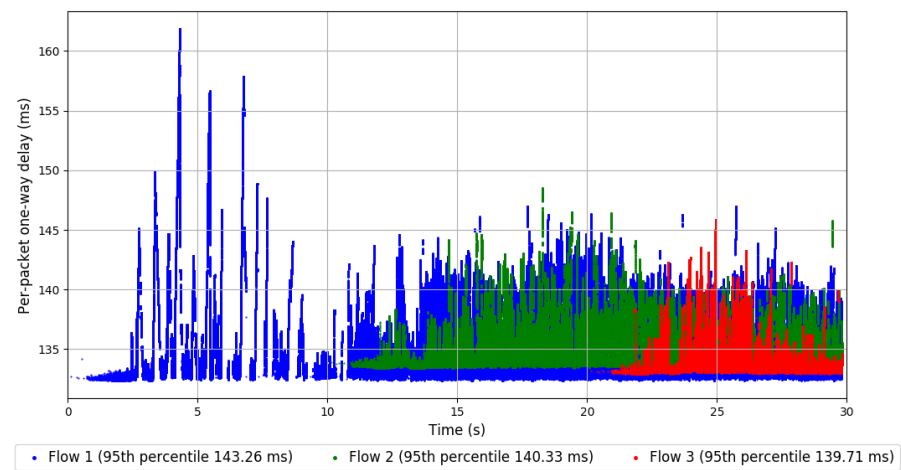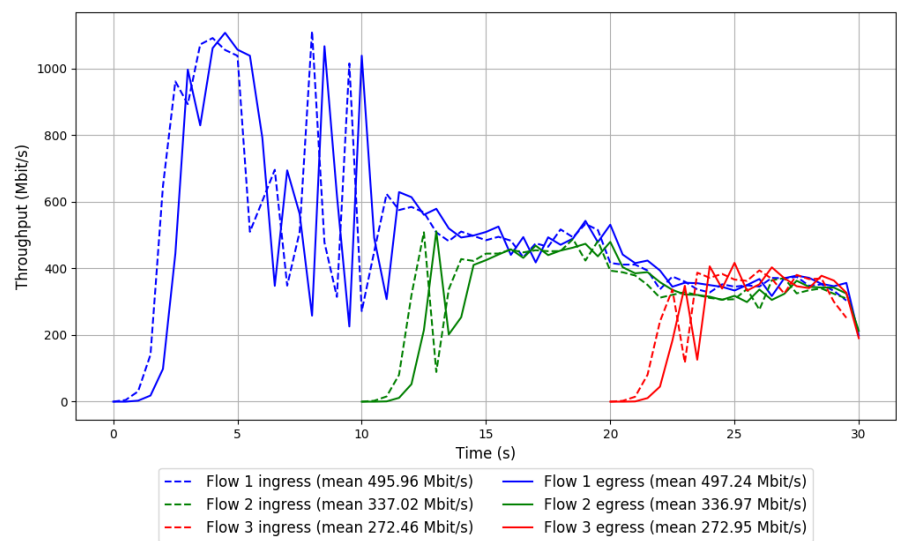
```
Run 3: Statistics of FillP

Start at: 2019-01-19 11:26:58
End at: 2019-01-19 11:27:28
Local clock offset: 0.196 ms
Remote clock offset: -0.069 ms


# Below is generated by plot.py at 2019-01-19 14:21:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 813.43 Mbit/s
95th percentile per-packet one-way delay: 152.229 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 501.19 Mbit/s
95th percentile per-packet one-way delay: 184.000 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 344.98 Mbit/s
95th percentile per-packet one-way delay: 136.913 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 258.06 Mbit/s
95th percentile per-packet one-way delay: 134.909 ms
Loss rate: 3.12%
```
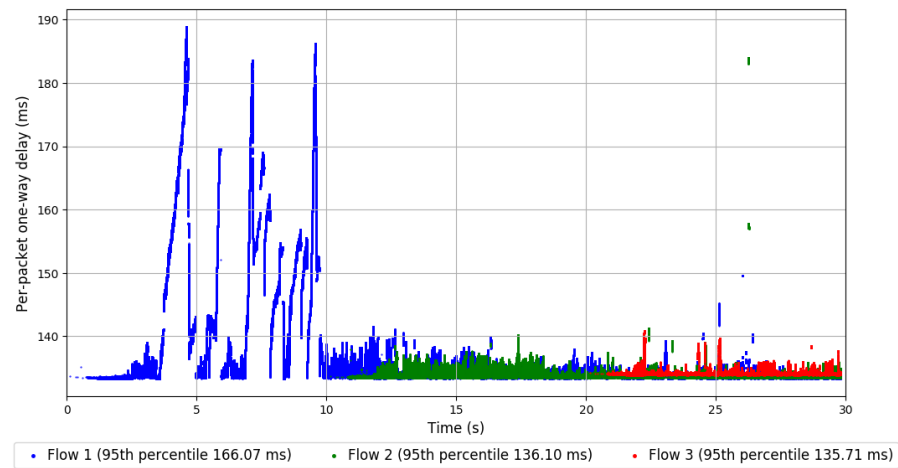
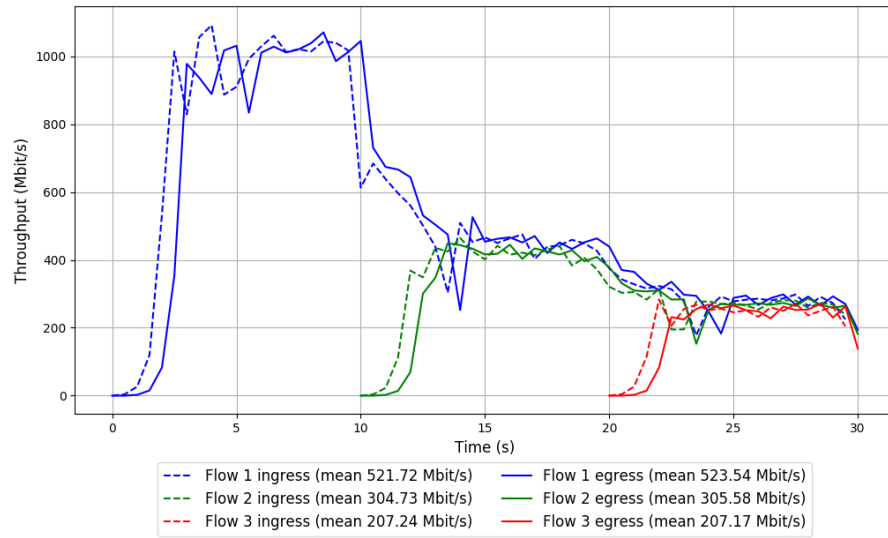## Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-01-19 12:08:42
End at: 2019-01-19 12:09:12
Local clock offset: 0.013 ms
Remote clock offset: -0.017 ms


# Below is generated by plot.py at 2019-01-19 14:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 837.25 Mbit/s
95th percentile per-packet one-way delay: 174.345 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 515.84 Mbit/s
95th percentile per-packet one-way delay: 182.998 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 356.34 Mbit/s
95th percentile per-packet one-way delay: 140.036 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 263.44 Mbit/s
95th percentile per-packet one-way delay: 139.777 ms
Loss rate: 3.12%
```

Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 517.08 Mbit/s)   Flow 1 egress (mean 515.84 Mbit/s)
Flow 2 ingress (mean 355.49 Mbit/s)   Flow 2 egress (mean 356.34 Mbit/s)
Flow 3 ingress (mean 264.61 Mbit/s)   Flow 3 egress (mean 263.44 Mbit/s)

Flow 1 (95th percentile 183.00 ms)   Flow 2 (95th percentile 140.04 ms)   Flow 3 (95th percentile 139.78 ms)
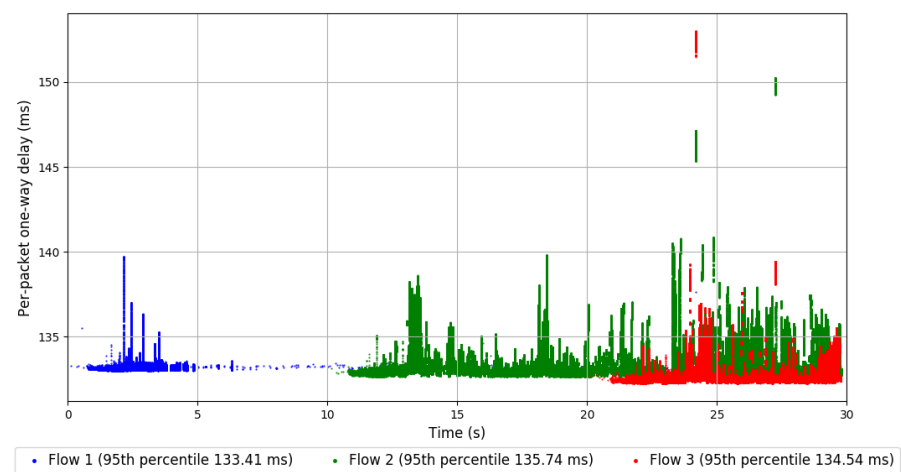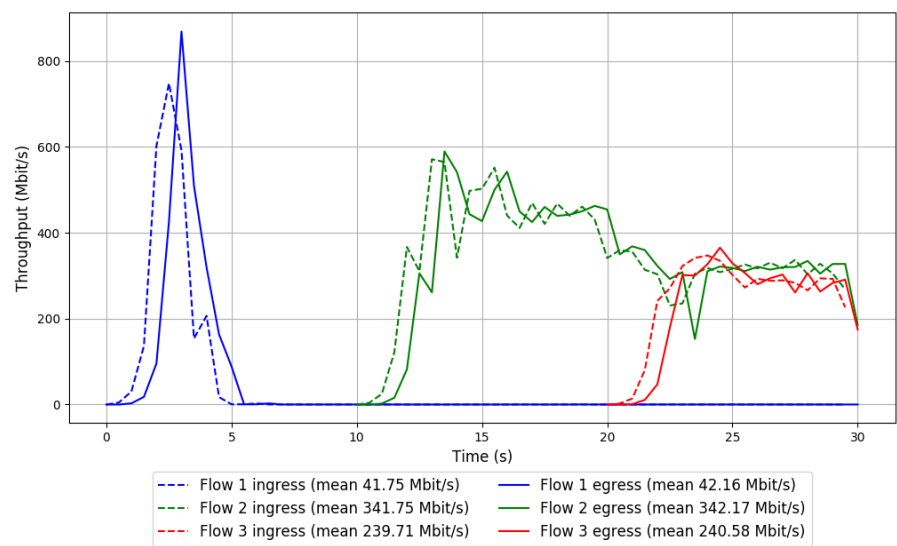
42

```
Run 5: Statistics of FillP

Start at: 2019-01-19 12:50:23
End at: 2019-01-19 12:50:53
Local clock offset: -0.015 ms
Remote clock offset: -0.165 ms


# Below is generated by plot.py at 2019-01-19 14:22:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 809.34 Mbit/s
95th percentile per-packet one-way delay: 142.095 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 497.24 Mbit/s
95th percentile per-packet one-way delay: 143.258 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 336.97 Mbit/s
95th percentile per-packet one-way delay: 140.329 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 272.95 Mbit/s
95th percentile per-packet one-way delay: 139.707 ms
Loss rate: 2.56%
```
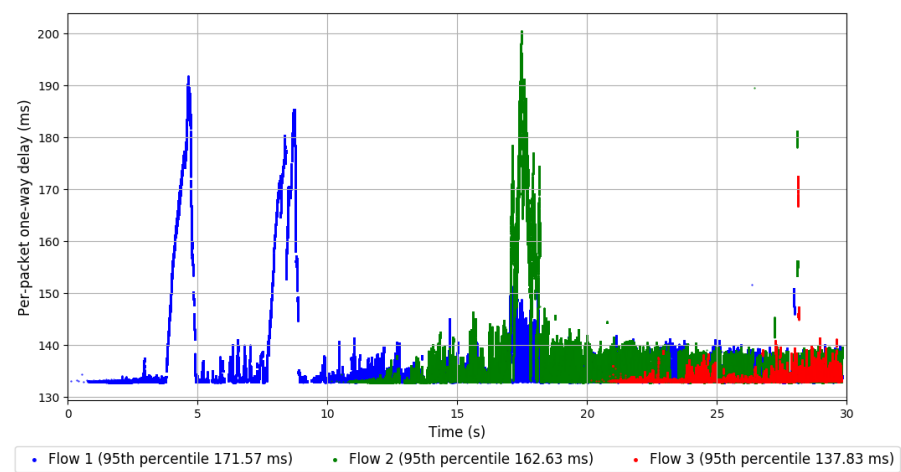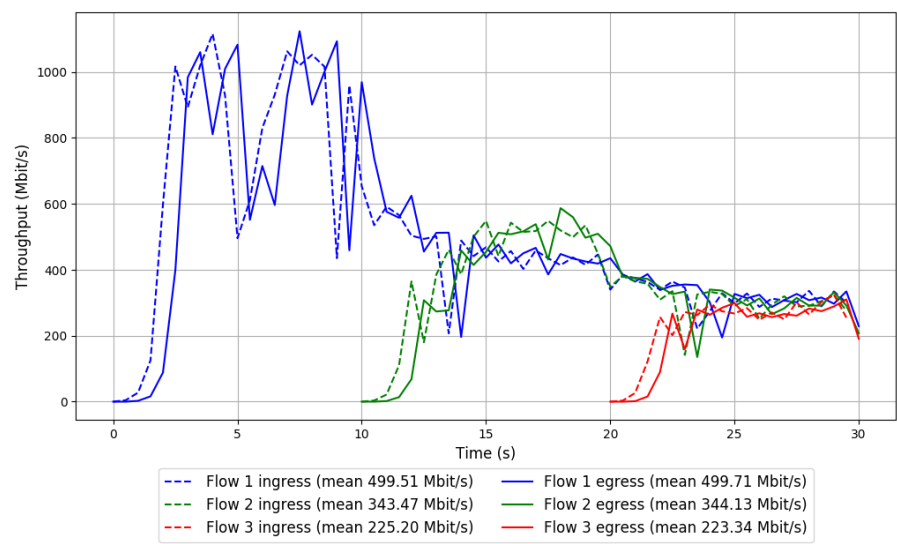
Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-01-19 10:11:16
End at: 2019-01-19 10:11:46
Local clock offset: 0.427 ms
Remote clock offset: -0.106 ms


# Below is generated by plot.py at 2019-01-19 14:22:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 793.07 Mbit/s
95th percentile per-packet one-way delay: 159.971 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 523.54 Mbit/s
95th percentile per-packet one-way delay: 166.074 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 305.58 Mbit/s
95th percentile per-packet one-way delay: 136.102 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 207.17 Mbit/s
95th percentile per-packet one-way delay: 135.710 ms
Loss rate: 3.06%
```

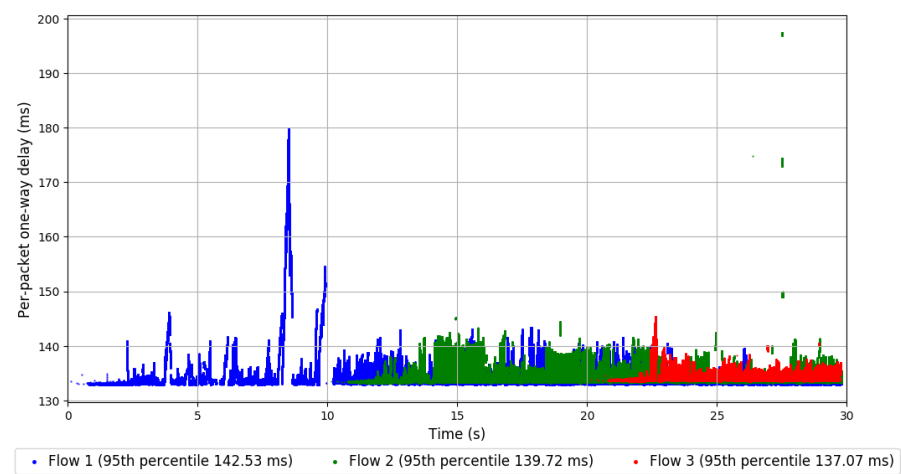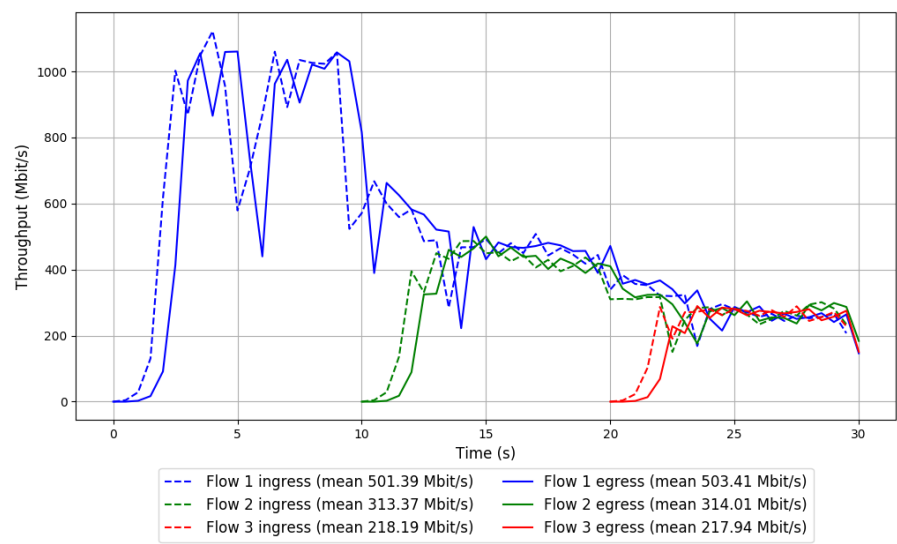Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-01-19 10:52:10
End at: 2019-01-19 10:52:40
Local clock offset: -0.019 ms
Remote clock offset: -0.095 ms


# Below is generated by plot.py at 2019-01-19 14:22:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 346.78 Mbit/s
95th percentile per-packet one-way delay: 135.431 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 42.16 Mbit/s
95th percentile per-packet one-way delay: 133.414 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 342.17 Mbit/s
95th percentile per-packet one-way delay: 135.743 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 240.58 Mbit/s
95th percentile per-packet one-way delay: 134.545 ms
Loss rate: 2.92%
```

Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 41.75 Mbit/s)   Flow 1 egress (mean 42.16 Mbit/s)
Flow 2 ingress (mean 341.75 Mbit/s)   Flow 2 egress (mean 342.17 Mbit/s)
Flow 3 ingress (mean 239.71 Mbit/s)   Flow 3 egress (mean 240.58 Mbit/s)

Flow 1 (95th percentile 133.41 ms)   Flow 2 (95th percentile 135.74 ms)   Flow 3 (95th percentile 134.54 ms)
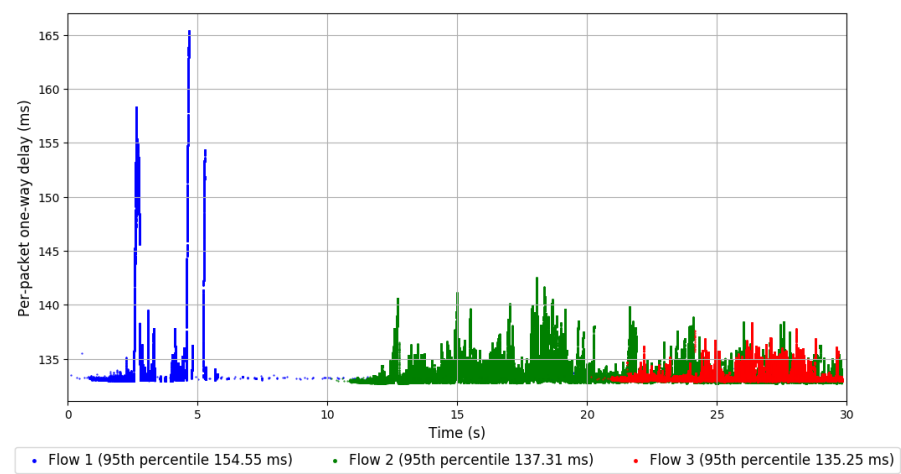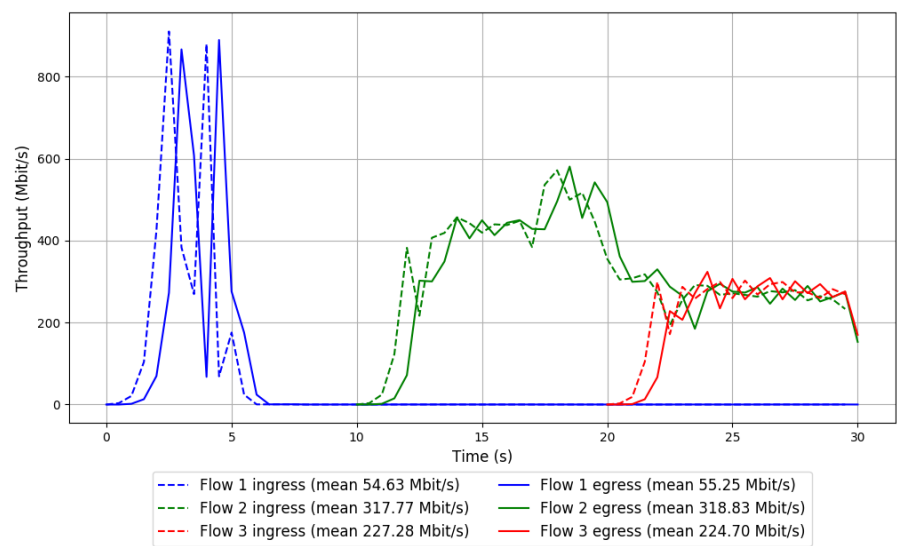
```
Run 3: Statistics of FillP-Sheep

Start at: 2019-01-19 11:34:30
End at: 2019-01-19 11:35:00
Local clock offset: -0.266 ms
Remote clock offset: -0.361 ms


# Below is generated by plot.py at 2019-01-19 14:23:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 800.49 Mbit/s
95th percentile per-packet one-way delay: 169.410 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 499.71 Mbit/s
95th percentile per-packet one-way delay: 171.567 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 344.13 Mbit/s
95th percentile per-packet one-way delay: 162.635 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 223.34 Mbit/s
95th percentile per-packet one-way delay: 137.829 ms
Loss rate: 3.70%
```
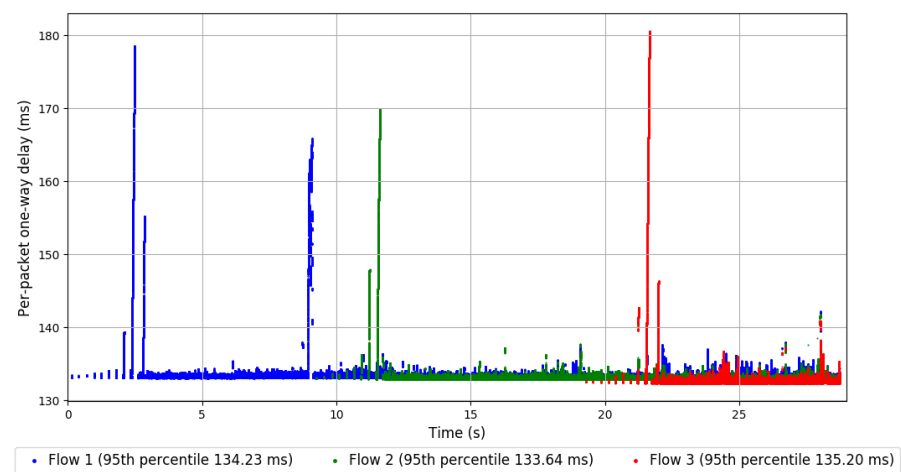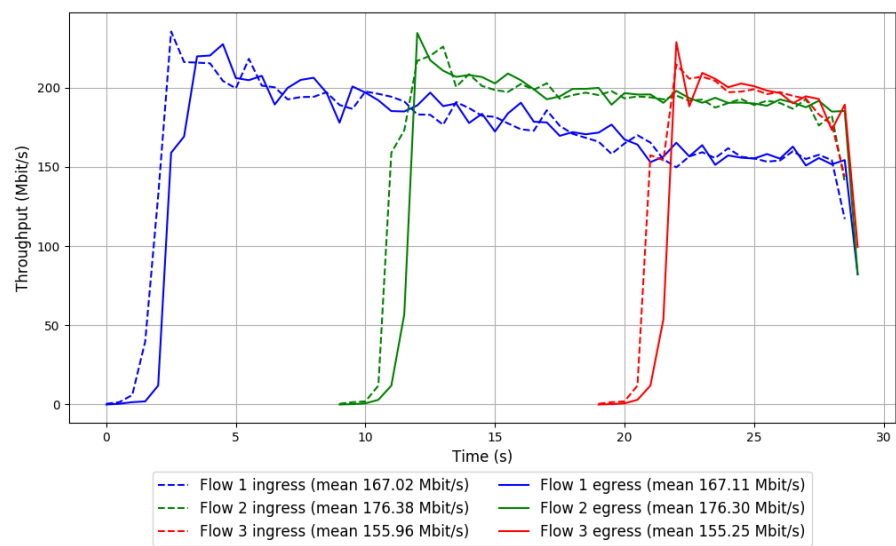
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 499.51 Mbit/s) --- Flow 1 egress (mean 499.71 Mbit/s)
Flow 2 ingress (mean 343.47 Mbit/s) --- Flow 2 egress (mean 344.13 Mbit/s)
Flow 3 ingress (mean 225.20 Mbit/s) --- Flow 3 egress (mean 223.34 Mbit/s)

Flow 1 (95th percentile 171.57 ms) • Flow 2 (95th percentile 162.63 ms) • Flow 3 (95th percentile 137.83 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-01-19 12:16:06
End at: 2019-01-19 12:16:36
Local clock offset: 0.067 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2019-01-19 14:29:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 781.98 Mbit/s
95th percentile per-packet one-way delay: 140.618 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 503.41 Mbit/s
95th percentile per-packet one-way delay: 142.530 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 314.01 Mbit/s
95th percentile per-packet one-way delay: 139.723 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 217.94 Mbit/s
95th percentile per-packet one-way delay: 137.069 ms
Loss rate: 3.32%
```

Run 4: Report of FillP-Sheep — Data Link

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-01-19 12:58:09
End at: 2019-01-19 12:58:39
Local clock offset: -0.032 ms
Remote clock offset: -0.221 ms


# Below is generated by plot.py at 2019-01-19 14:29:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.23 Mbit/s
95th percentile per-packet one-way delay: 138.231 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 55.25 Mbit/s
95th percentile per-packet one-way delay: 154.554 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 318.83 Mbit/s
95th percentile per-packet one-way delay: 137.307 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 224.70 Mbit/s
95th percentile per-packet one-way delay: 135.254 ms
Loss rate: 3.70%
```
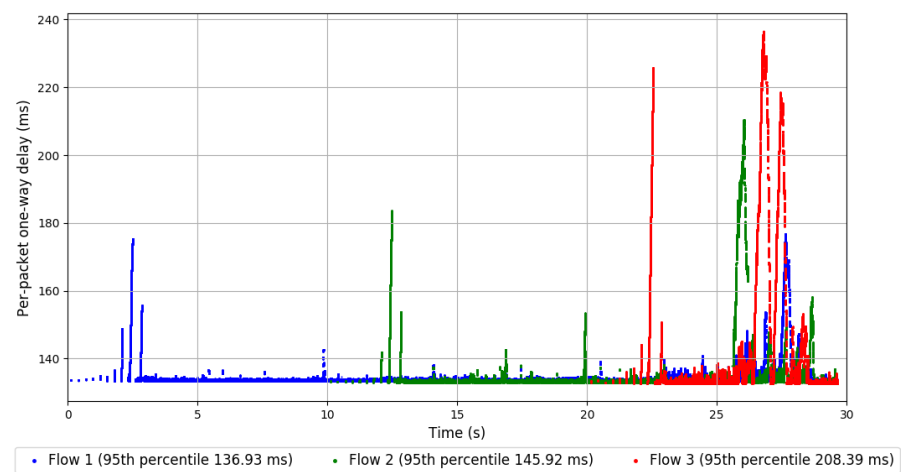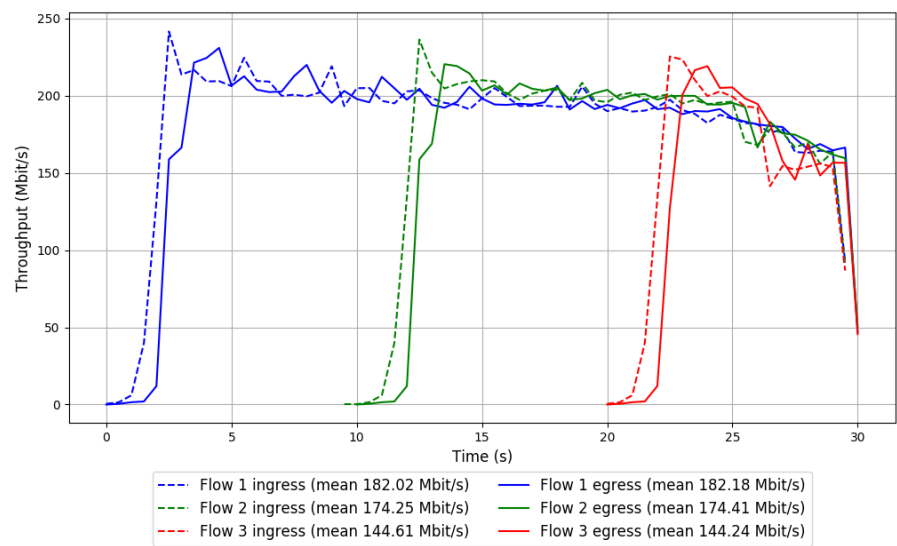
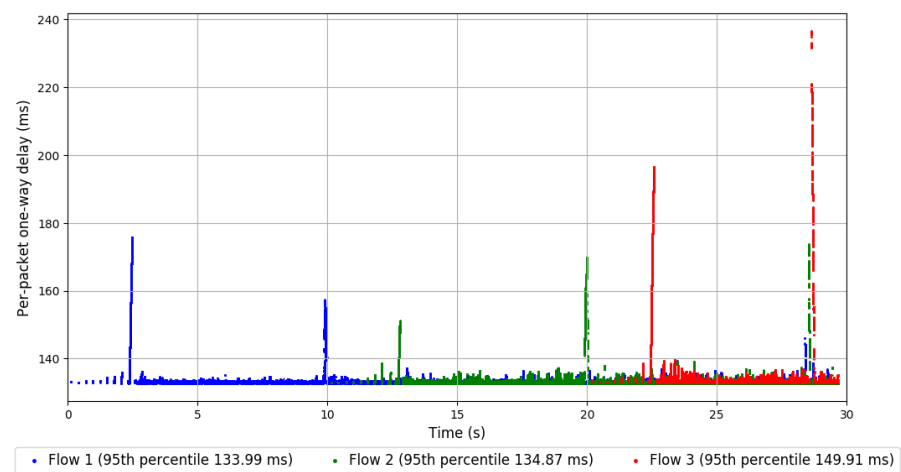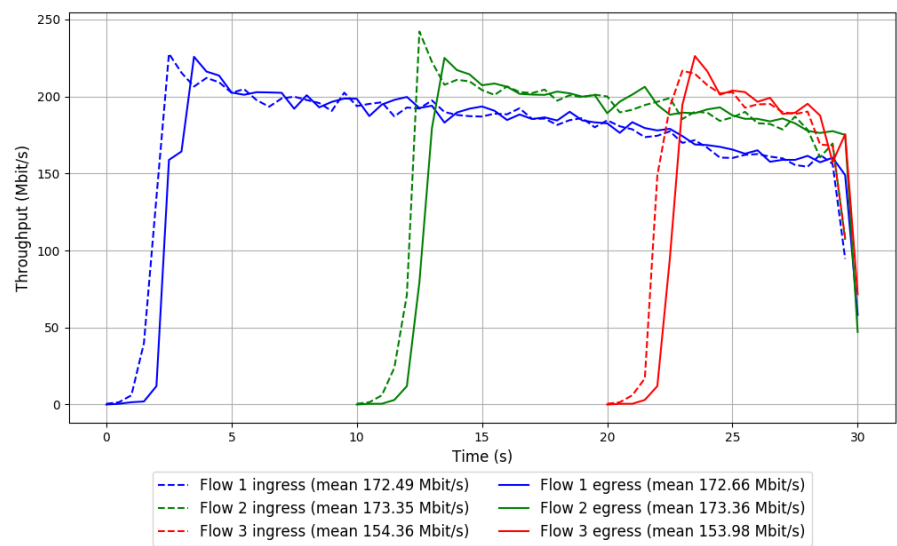# Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2019-01-19 09:53:01
End at: 2019-01-19 09:53:31
Local clock offset: -0.051 ms
Remote clock offset: -0.082 ms


# Below is generated by plot.py at 2019-01-19 14:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 338.51 Mbit/s
95th percentile per-packet one-way delay: 134.076 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 167.11 Mbit/s
95th percentile per-packet one-way delay: 134.232 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 176.30 Mbit/s
95th percentile per-packet one-way delay: 133.638 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 155.25 Mbit/s
95th percentile per-packet one-way delay: 135.197 ms
Loss rate: 3.21%
```

Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-01-19 10:33:59
End at: 2019-01-19 10:34:29
Local clock offset: -0.48 ms
Remote clock offset: -0.48 ms

# Below is generated by plot.py at 2019-01-19 14:33:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 344.04 Mbit/s
95th percentile per-packet one-way delay: 146.686 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 182.18 Mbit/s
95th percentile per-packet one-way delay: 136.933 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 174.41 Mbit/s
95th percentile per-packet one-way delay: 145.923 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 144.24 Mbit/s
95th percentile per-packet one-way delay: 208.392 ms
Loss rate: 2.91%
```
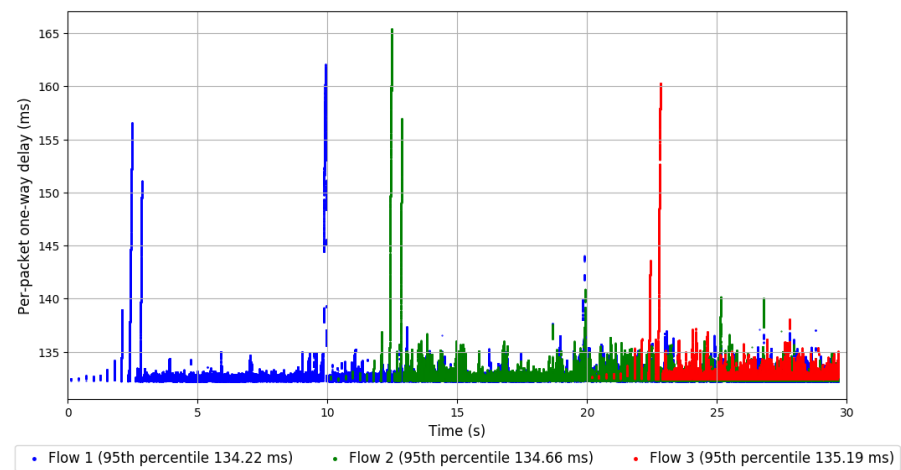
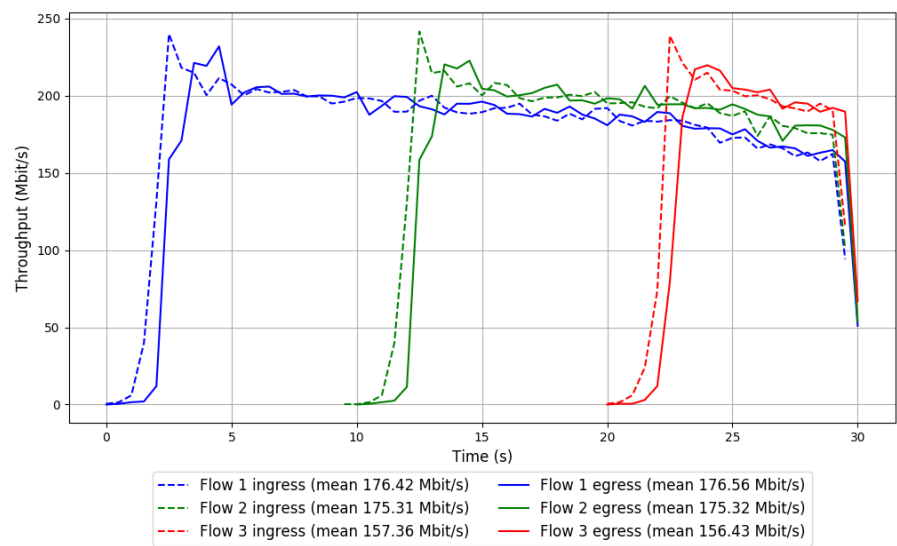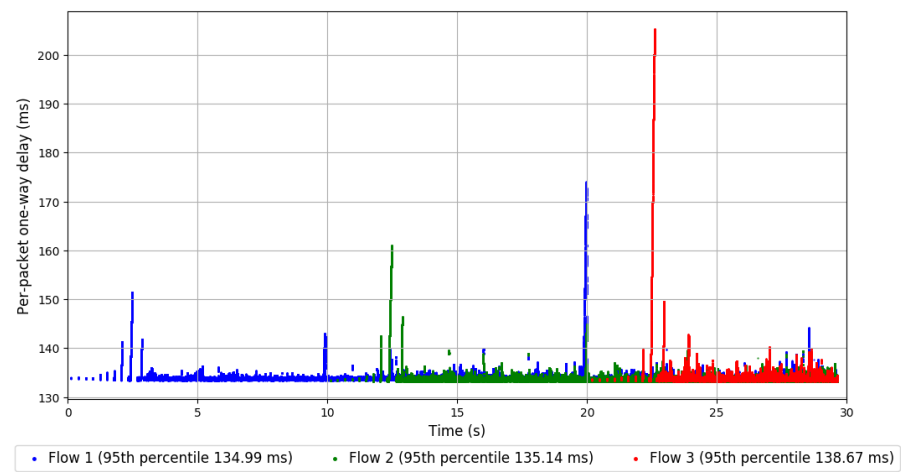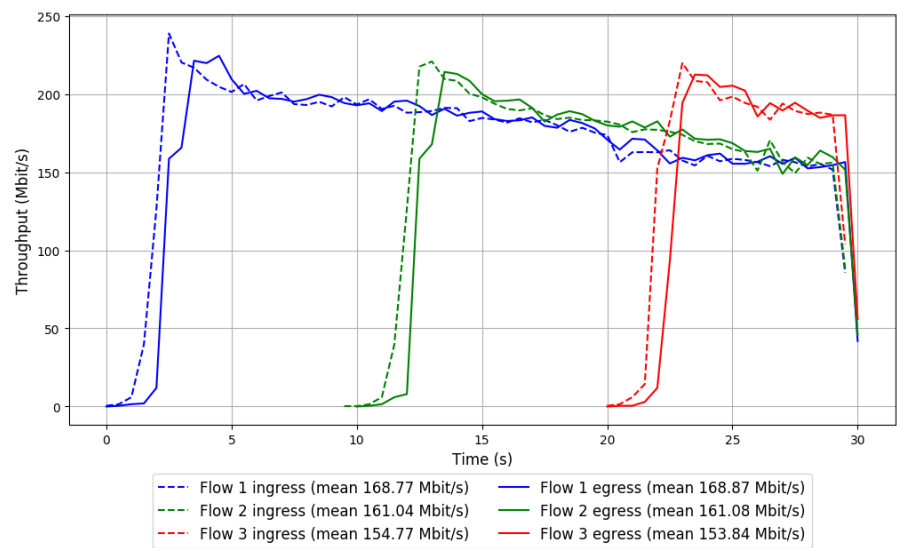Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-01-19 11:16:01
End at: 2019-01-19 11:16:31
Local clock offset: -0.031 ms
Remote clock offset: -0.132 ms


# Below is generated by plot.py at 2019-01-19 14:34:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 336.57 Mbit/s
95th percentile per-packet one-way delay: 134.828 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 172.66 Mbit/s
95th percentile per-packet one-way delay: 133.994 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 173.36 Mbit/s
95th percentile per-packet one-way delay: 134.866 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 153.98 Mbit/s
95th percentile per-packet one-way delay: 149.912 ms
Loss rate: 2.99%
```

Run 3: Report of Indigo — Data Link

- Flow 1 ingress (mean 172.49 Mbit/s)
- Flow 1 egress (mean 172.66 Mbit/s)
- Flow 2 ingress (mean 173.35 Mbit/s)
- Flow 2 egress (mean 173.36 Mbit/s)
- Flow 3 ingress (mean 154.36 Mbit/s)
- Flow 3 egress (mean 153.98 Mbit/s)

- Flow 1 (95th percentile 133.99 ms)
- Flow 2 (95th percentile 134.87 ms)
- Flow 3 (95th percentile 149.91 ms)

```
Run 4: Statistics of Indigo

Start at: 2019-01-19 11:57:23
End at: 2019-01-19 11:57:53
Local clock offset: -0.538 ms
Remote clock offset: -0.004 ms


# Below is generated by plot.py at 2019-01-19 14:35:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 342.85 Mbit/s
95th percentile per-packet one-way delay: 134.516 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 176.56 Mbit/s
95th percentile per-packet one-way delay: 134.219 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 175.32 Mbit/s
95th percentile per-packet one-way delay: 134.665 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 156.43 Mbit/s
95th percentile per-packet one-way delay: 135.188 ms
Loss rate: 3.32%
```
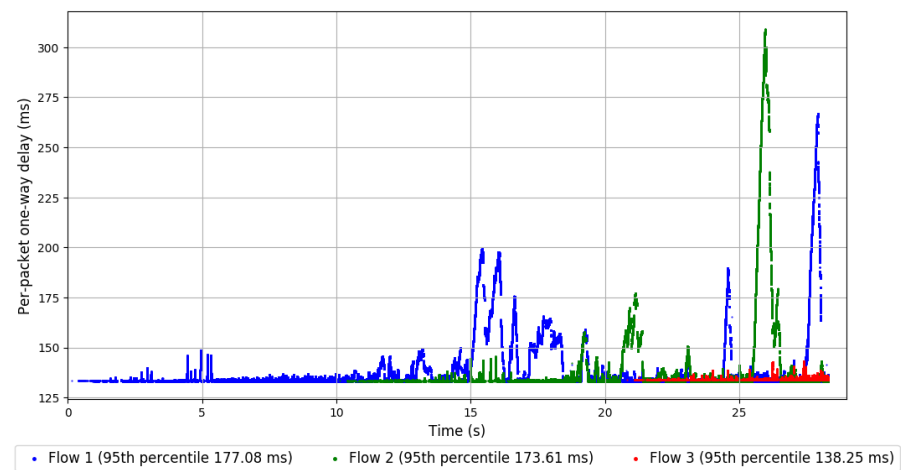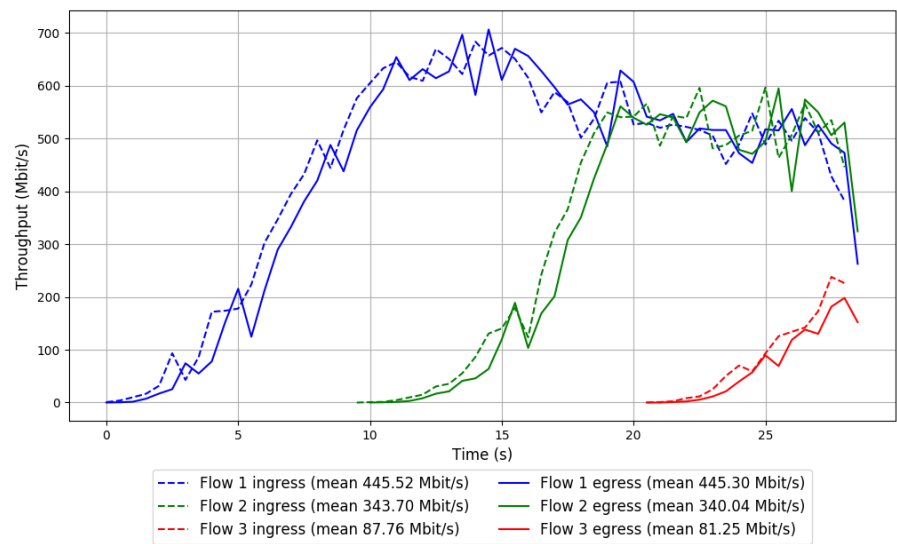
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-01-19 12:39:20
End at: 2019-01-19 12:39:50
Local clock offset: 0.146 ms
Remote clock offset: -0.507 ms


# Below is generated by plot.py at 2019-01-19 14:35:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.74 Mbit/s
95th percentile per-packet one-way delay: 135.416 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 168.87 Mbit/s
95th percentile per-packet one-way delay: 134.994 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 161.08 Mbit/s
95th percentile per-packet one-way delay: 135.144 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 153.84 Mbit/s
95th percentile per-packet one-way delay: 138.670 ms
Loss rate: 3.32%
```
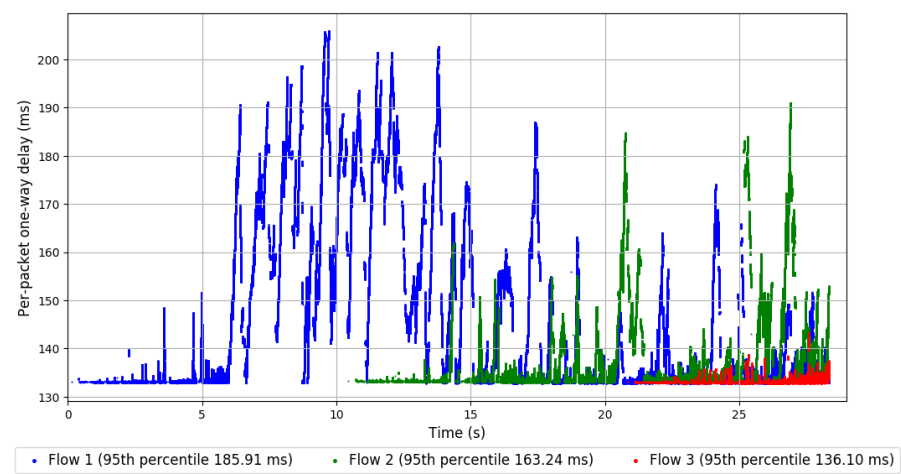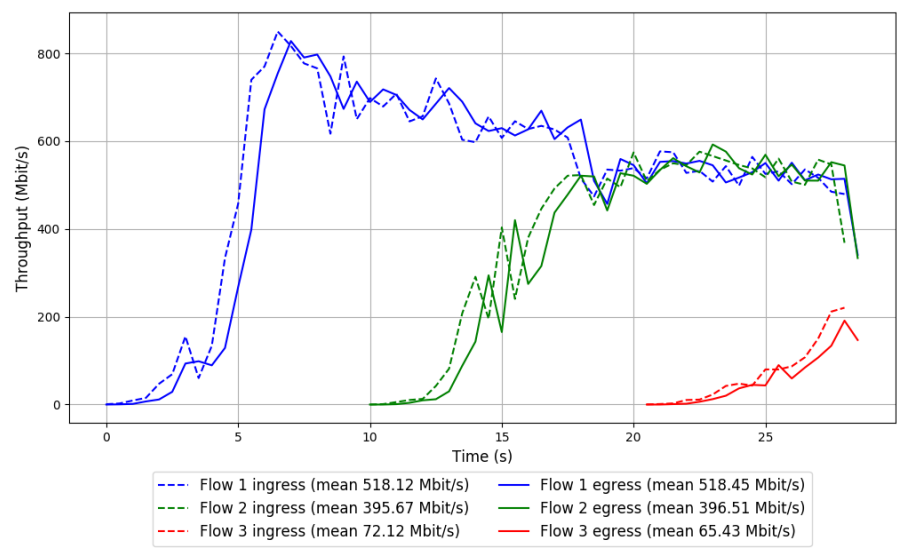
Run 5: Report of Indigo — Data Link

Flow 1 ingress (mean 168.77 Mbit/s) --- Flow 1 egress (mean 168.87 Mbit/s) ---
Flow 2 ingress (mean 161.04 Mbit/s) --- Flow 2 egress (mean 161.08 Mbit/s) ---
Flow 3 ingress (mean 154.77 Mbit/s) --- Flow 3 egress (mean 153.84 Mbit/s) ---

• Flow 1 (95th percentile 134.99 ms)   • Flow 2 (95th percentile 135.14 ms)   • Flow 3 (95th percentile 138.67 ms)
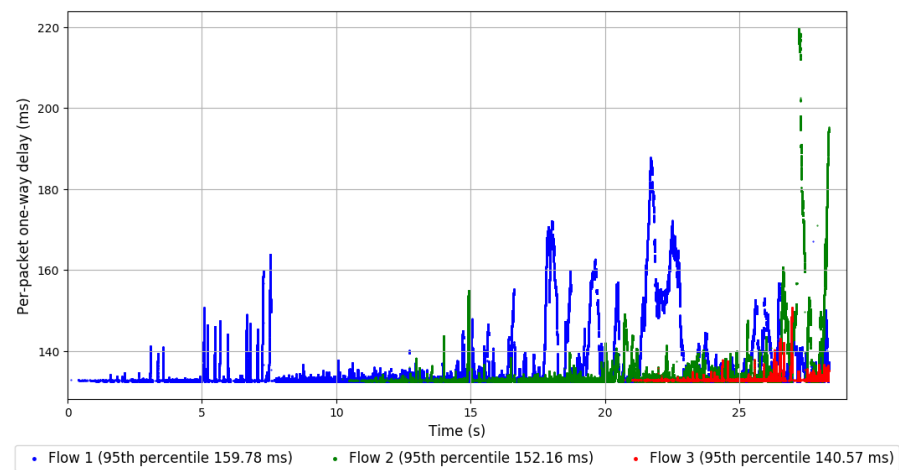
64

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-19 10:13:27
End at: 2019-01-19 10:13:57
Local clock offset: 0.347 ms
Remote clock offset: -0.049 ms


# Below is generated by plot.py at 2019-01-19 14:36:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 686.30 Mbit/s
95th percentile per-packet one-way delay: 174.947 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 445.30 Mbit/s
95th percentile per-packet one-way delay: 177.078 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 340.04 Mbit/s
95th percentile per-packet one-way delay: 173.610 ms
Loss rate: 2.50%
-- Flow 3:
Average throughput: 81.25 Mbit/s
95th percentile per-packet one-way delay: 138.247 ms
Loss rate: 10.62%
```
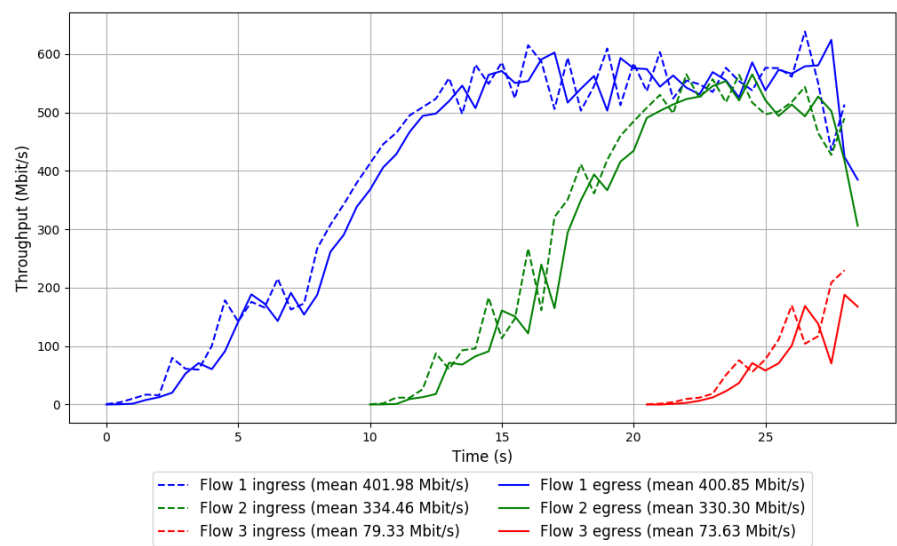
Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-19 10:53:54
End at: 2019-01-19 10:54:24
Local clock offset: -0.043 ms
Remote clock offset: -0.11 ms


# Below is generated by plot.py at 2019-01-19 14:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 787.44 Mbit/s
95th percentile per-packet one-way delay: 182.638 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 518.45 Mbit/s
95th percentile per-packet one-way delay: 185.913 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 396.51 Mbit/s
95th percentile per-packet one-way delay: 163.242 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 65.43 Mbit/s
95th percentile per-packet one-way delay: 136.105 ms
Loss rate: 12.43%
```

Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-19 11:36:50
End at: 2019-01-19 11:37:20
Local clock offset: -0.231 ms
Remote clock offset: -0.039 ms


# Below is generated by plot.py at 2019-01-19 14:42:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 632.79 Mbit/s
95th percentile per-packet one-way delay: 158.461 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 400.85 Mbit/s
95th percentile per-packet one-way delay: 159.778 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 330.30 Mbit/s
95th percentile per-packet one-way delay: 152.155 ms
Loss rate: 2.68%
-- Flow 3:
Average throughput: 73.63 Mbit/s
95th percentile per-packet one-way delay: 140.566 ms
Loss rate: 10.42%
```
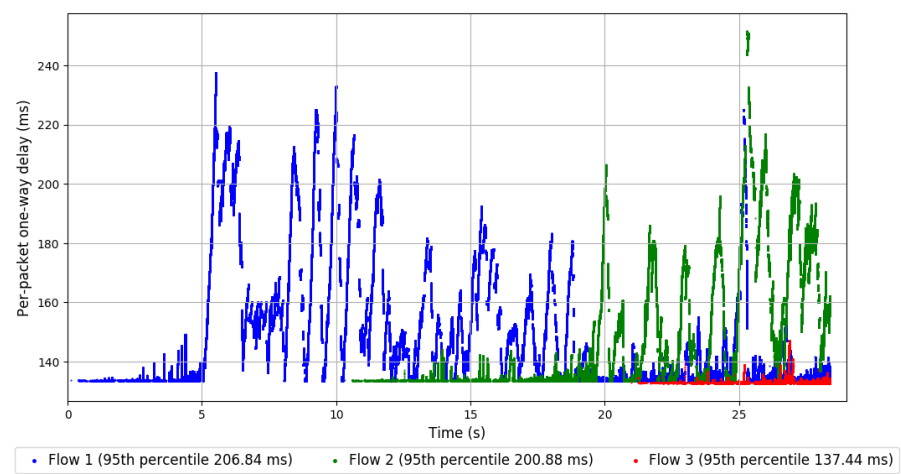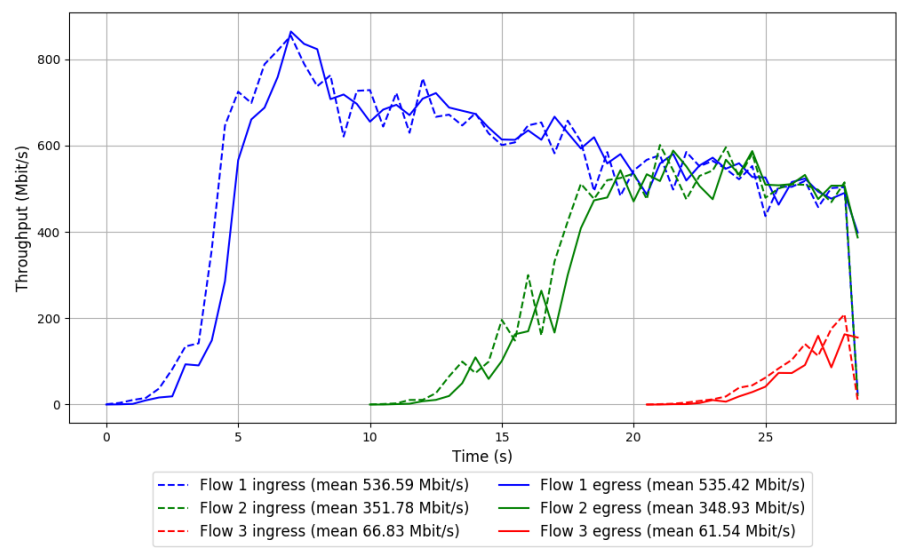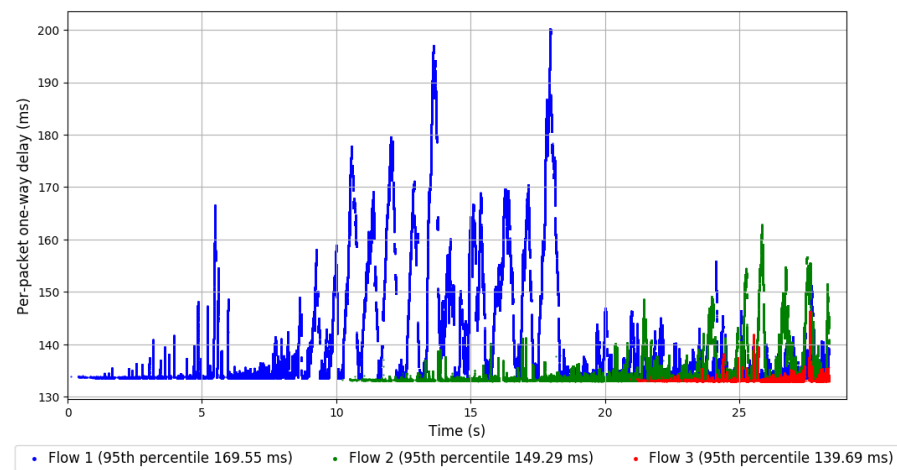
Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 401.98 Mbit/s) --- Flow 1 egress (mean 400.85 Mbit/s)
Flow 2 ingress (mean 334.46 Mbit/s) --- Flow 2 egress (mean 330.30 Mbit/s)
Flow 3 ingress (mean 79.33 Mbit/s) --- Flow 3 egress (mean 73.63 Mbit/s)

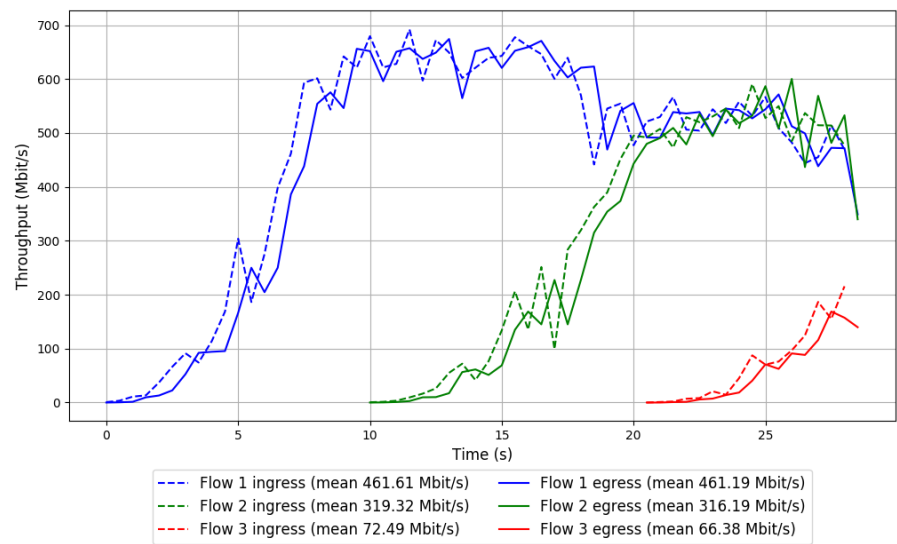Flow 1 (95th percentile 159.78 ms)   Flow 2 (95th percentile 152.16 ms)   Flow 3 (95th percentile 140.57 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-19 12:18:21
End at: 2019-01-19 12:18:51
Local clock offset: -0.173 ms
Remote clock offset: 0.0 ms


# Below is generated by plot.py at 2019-01-19 14:48:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 774.53 Mbit/s
95th percentile per-packet one-way delay: 204.325 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 535.42 Mbit/s
95th percentile per-packet one-way delay: 206.839 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 348.93 Mbit/s
95th percentile per-packet one-way delay: 200.880 ms
Loss rate: 2.26%
-- Flow 3:
Average throughput: 61.54 Mbit/s
95th percentile per-packet one-way delay: 137.435 ms
Loss rate: 11.12%
```

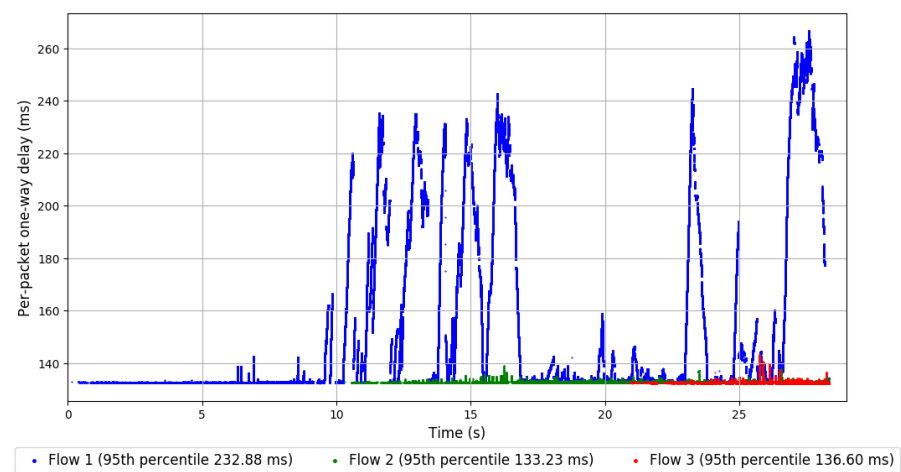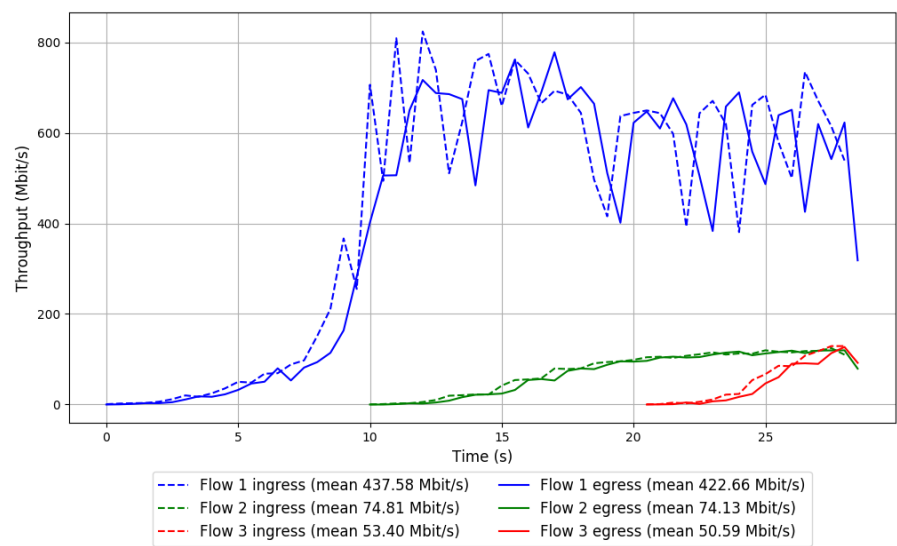# Run 4: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 536.59 Mbit/s)   ——— Flow 1 egress (mean 535.42 Mbit/s)
- - - - Flow 2 ingress (mean 351.78 Mbit/s)   ——— Flow 2 egress (mean 348.93 Mbit/s)
- - - - Flow 3 ingress (mean 66.83 Mbit/s)   ——— Flow 3 egress (mean 61.54 Mbit/s)

- Flow 1 (95th percentile 206.84 ms)   • Flow 2 (95th percentile 200.88 ms)   • Flow 3 (95th percentile 137.44 ms)
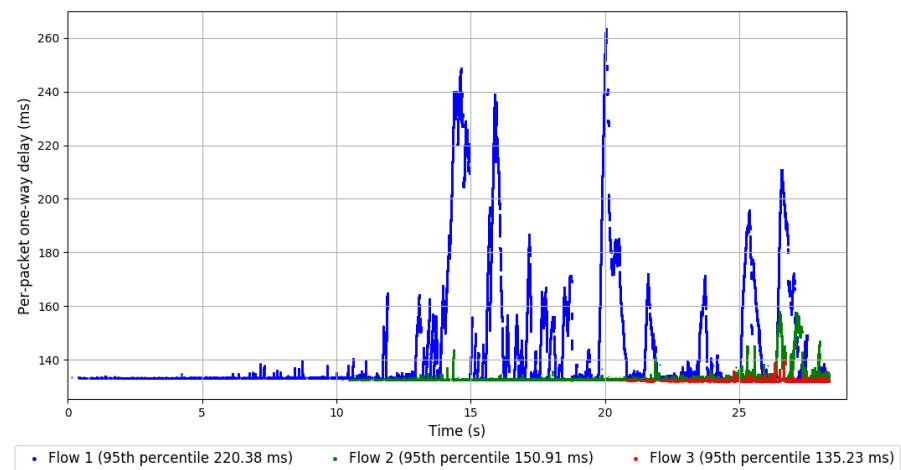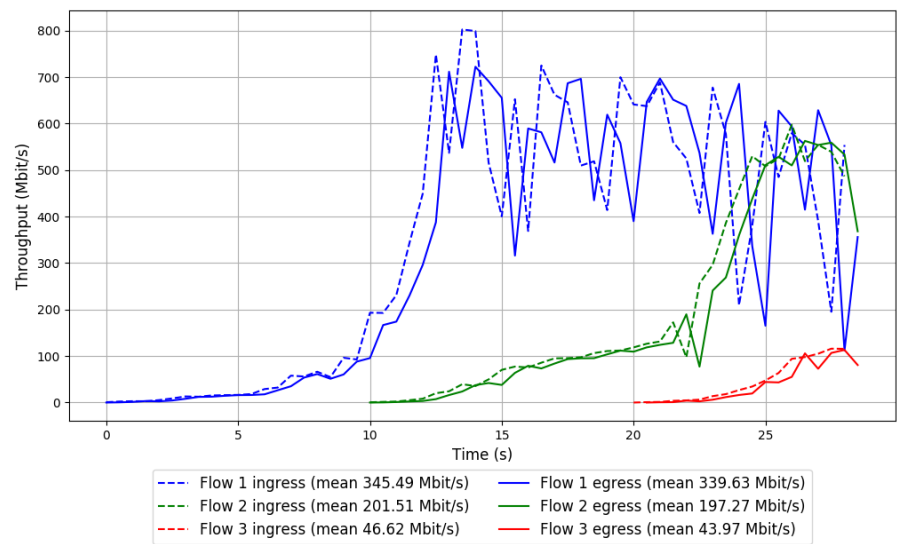
72

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-19 12:59:52
End at: 2019-01-19 13:00:22
Local clock offset: 0.079 ms
Remote clock offset: -0.112 ms


# Below is generated by plot.py at 2019-01-19 14:48:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 681.50 Mbit/s
95th percentile per-packet one-way delay: 166.128 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 461.19 Mbit/s
95th percentile per-packet one-way delay: 169.548 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 316.19 Mbit/s
95th percentile per-packet one-way delay: 149.292 ms
Loss rate: 2.42%
-- Flow 3:
Average throughput: 66.38 Mbit/s
95th percentile per-packet one-way delay: 139.693 ms
Loss rate: 11.58%
```

Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 461.61 Mbit/s)   Flow 1 egress (mean 461.19 Mbit/s)
Flow 2 ingress (mean 319.32 Mbit/s)   Flow 2 egress (mean 316.19 Mbit/s)
Flow 3 ingress (mean 72.49 Mbit/s)   Flow 3 egress (mean 66.38 Mbit/s)

Flow 1 (95th percentile 169.55 ms)   Flow 2 (95th percentile 149.29 ms)   Flow 3 (95th percentile 139.69 ms)
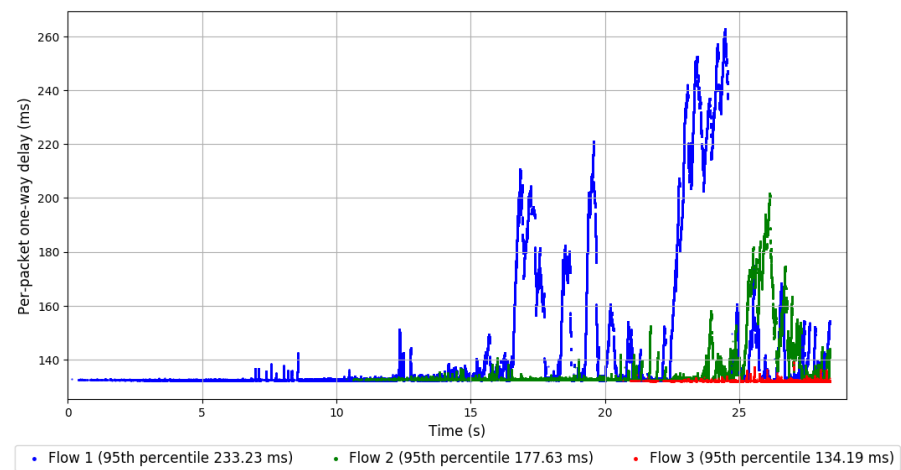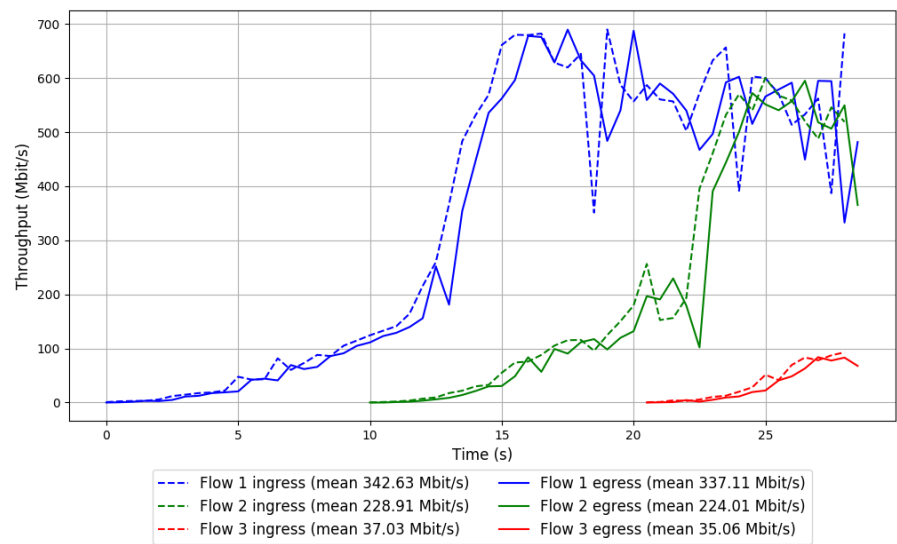
```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-19 09:56:42
End at: 2019-01-19 09:57:12
Local clock offset: -0.486 ms
Remote clock offset: -0.111 ms


# Below is generated by plot.py at 2019-01-19 14:48:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 483.77 Mbit/s
95th percentile per-packet one-way delay: 231.045 ms
Loss rate: 4.25%
-- Flow 1:
Average throughput: 422.66 Mbit/s
95th percentile per-packet one-way delay: 232.878 ms
Loss rate: 4.32%
-- Flow 2:
Average throughput: 74.13 Mbit/s
95th percentile per-packet one-way delay: 133.228 ms
Loss rate: 2.35%
-- Flow 3:
Average throughput: 50.59 Mbit/s
95th percentile per-packet one-way delay: 136.603 ms
Loss rate: 8.45%
```
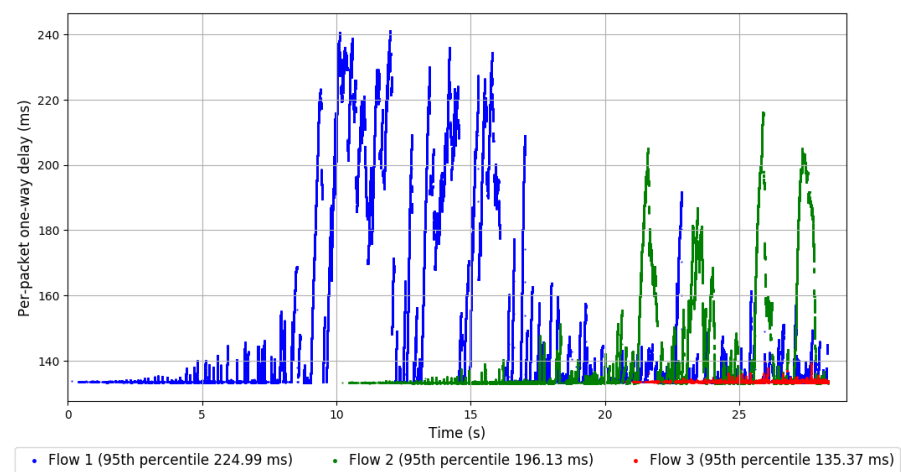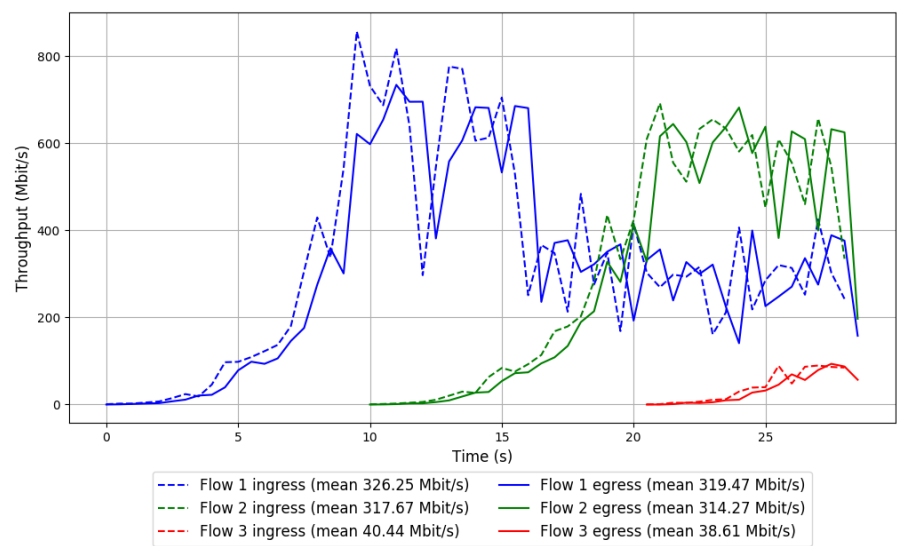
Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-19 10:37:23
End at: 2019-01-19 10:37:53
Local clock offset: -0.319 ms
Remote clock offset: -0.072 ms


# Below is generated by plot.py at 2019-01-19 14:48:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 478.50 Mbit/s
95th percentile per-packet one-way delay: 209.661 ms
Loss rate: 3.03%
-- Flow 1:
Average throughput: 339.63 Mbit/s
95th percentile per-packet one-way delay: 220.378 ms
Loss rate: 2.62%
-- Flow 2:
Average throughput: 197.27 Mbit/s
95th percentile per-packet one-way delay: 150.907 ms
Loss rate: 3.53%
-- Flow 3:
Average throughput: 43.97 Mbit/s
95th percentile per-packet one-way delay: 135.229 ms
Loss rate: 8.78%
```

Run 2: Report of Indigo-MusesC5 — Data Link

- - - - Flow 1 ingress (mean 345.49 Mbit/s) ——— Flow 1 egress (mean 339.63 Mbit/s)
- - - - Flow 2 ingress (mean 201.51 Mbit/s) ——— Flow 2 egress (mean 197.27 Mbit/s)
- - - - Flow 3 ingress (mean 46.62 Mbit/s) ——— Flow 3 egress (mean 43.97 Mbit/s)

- Flow 1 (95th percentile 220.38 ms)　　• Flow 2 (95th percentile 150.91 ms)　　• Flow 3 (95th percentile 135.23 ms)
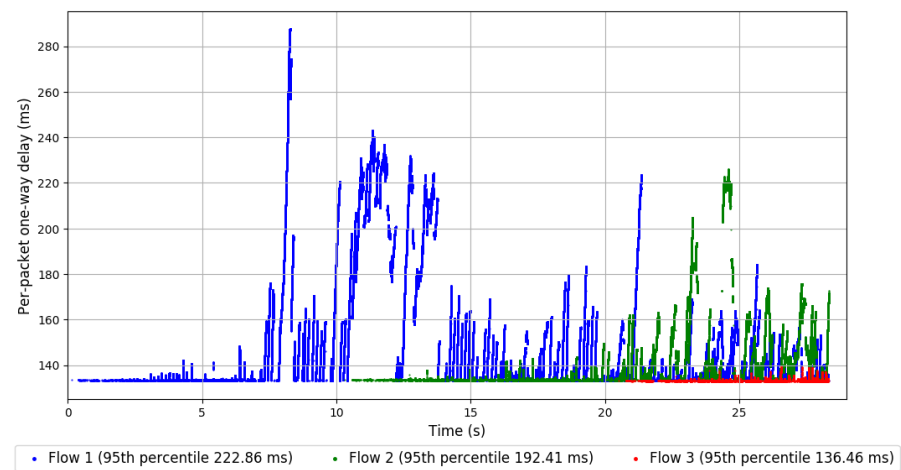
```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-19 11:19:41
End at: 2019-01-19 11:20:11
Local clock offset: -0.451 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-01-19 14:48:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 489.47 Mbit/s
95th percentile per-packet one-way delay: 221.400 ms
Loss rate: 2.97%
-- Flow 1:
Average throughput: 337.11 Mbit/s
95th percentile per-packet one-way delay: 233.227 ms
Loss rate: 2.54%
-- Flow 2:
Average throughput: 224.01 Mbit/s
95th percentile per-packet one-way delay: 177.633 ms
Loss rate: 3.57%
-- Flow 3:
Average throughput: 35.06 Mbit/s
95th percentile per-packet one-way delay: 134.187 ms
Loss rate: 8.49%
```
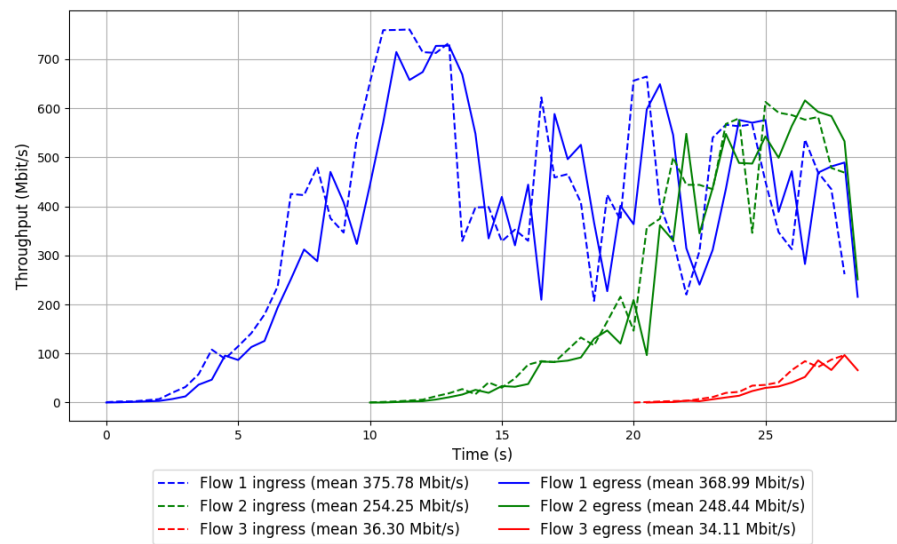
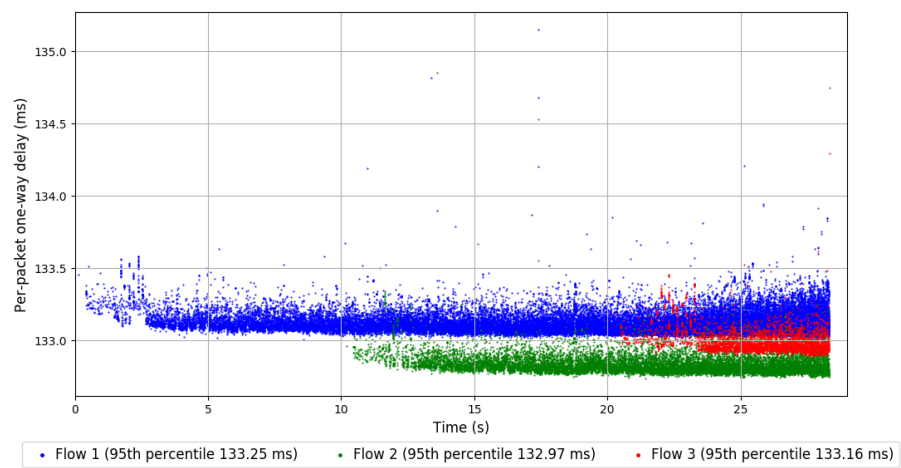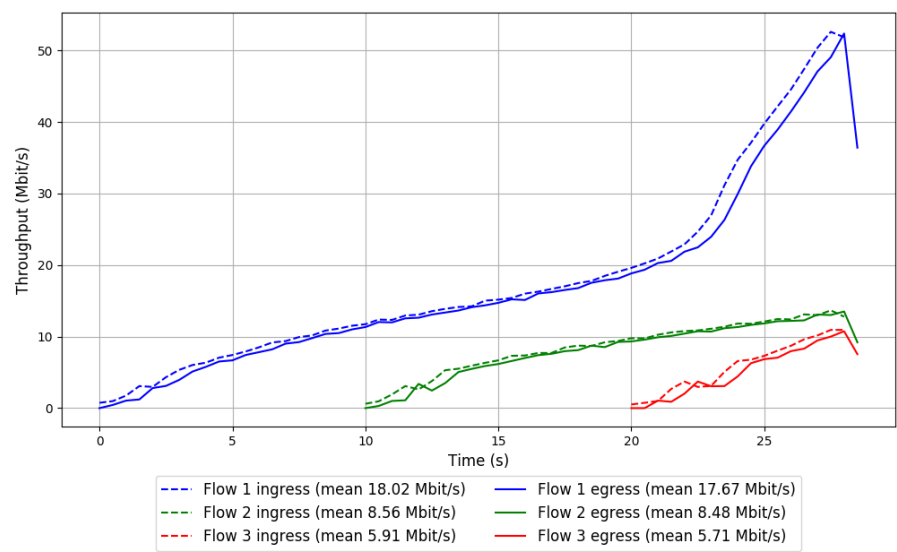Run 3: Report of Indigo-MusesC5 — Data Link

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-19 12:01:00
End at: 2019-01-19 12:01:30
Local clock offset: 0.437 ms
Remote clock offset: -0.014 ms


# Below is generated by plot.py at 2019-01-19 14:48:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 531.59 Mbit/s
95th percentile per-packet one-way delay: 220.883 ms
Loss rate: 2.90%
-- Flow 1:
Average throughput: 319.47 Mbit/s
95th percentile per-packet one-way delay: 224.989 ms
Loss rate: 2.98%
-- Flow 2:
Average throughput: 314.27 Mbit/s
95th percentile per-packet one-way delay: 196.132 ms
Loss rate: 2.51%
-- Flow 3:
Average throughput: 38.61 Mbit/s
95th percentile per-packet one-way delay: 135.370 ms
Loss rate: 7.79%
```

Run 4: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 326.25 Mbit/s) --- Flow 1 egress (mean 319.47 Mbit/s)
Flow 2 ingress (mean 317.67 Mbit/s) --- Flow 2 egress (mean 314.27 Mbit/s)
Flow 3 ingress (mean 40.44 Mbit/s) --- Flow 3 egress (mean 38.61 Mbit/s)

Flow 1 (95th percentile 224.99 ms)   Flow 2 (95th percentile 196.13 ms)   Flow 3 (95th percentile 135.37 ms)
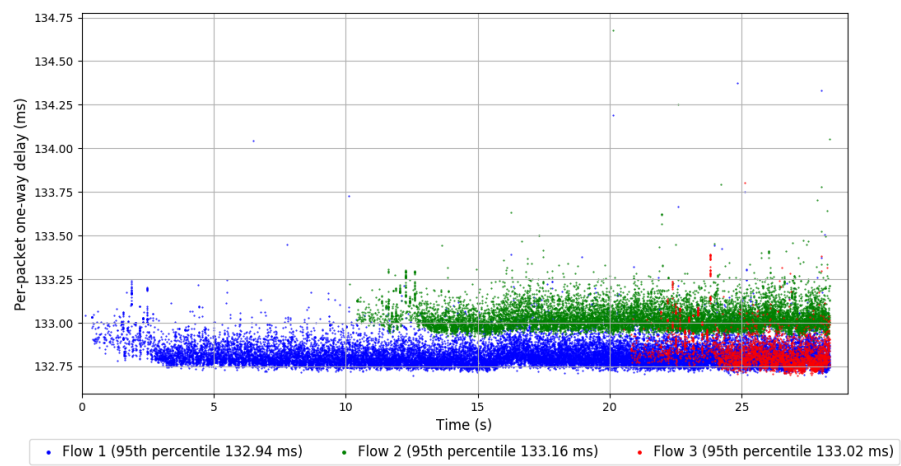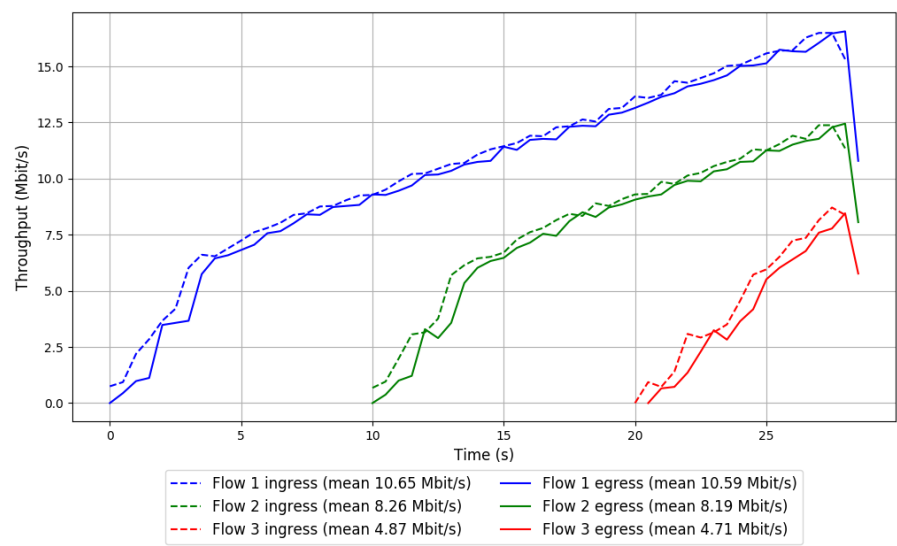
```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-19 12:43:05
End at: 2019-01-19 12:43:35
Local clock offset: 0.125 ms
Remote clock offset: -0.204 ms


# Below is generated by plot.py at 2019-01-19 14:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 537.21 Mbit/s
95th percentile per-packet one-way delay: 218.493 ms
Loss rate: 3.06%
-- Flow 1:
Average throughput: 368.99 Mbit/s
95th percentile per-packet one-way delay: 222.859 ms
Loss rate: 2.72%
-- Flow 2:
Average throughput: 248.44 Mbit/s
95th percentile per-packet one-way delay: 192.405 ms
Loss rate: 3.44%
-- Flow 3:
Average throughput: 34.11 Mbit/s
95th percentile per-packet one-way delay: 136.457 ms
Loss rate: 9.31%
```

Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 375.78 Mbit/s) --- Flow 1 egress (mean 368.99 Mbit/s)
Flow 2 ingress (mean 254.25 Mbit/s) --- Flow 2 egress (mean 248.44 Mbit/s)
Flow 3 ingress (mean 36.30 Mbit/s) --- Flow 3 egress (mean 34.11 Mbit/s)

Flow 1 (95th percentile 222.86 ms) · Flow 2 (95th percentile 192.41 ms) · Flow 3 (95th percentile 136.46 ms)
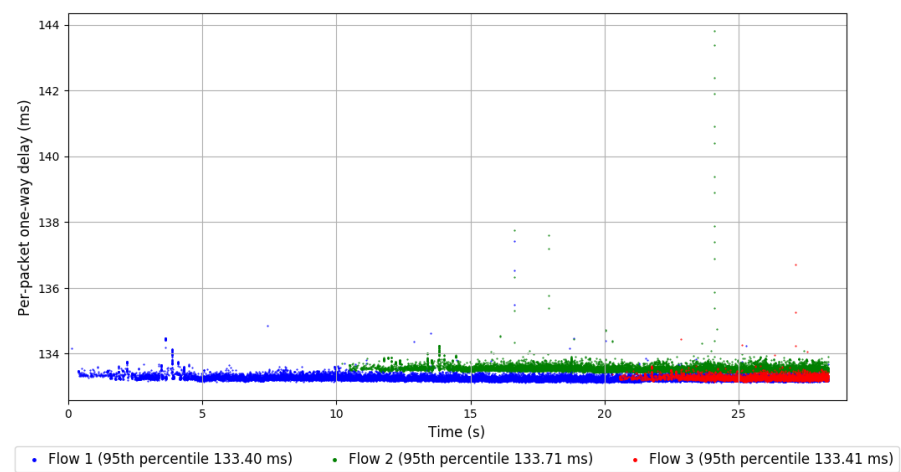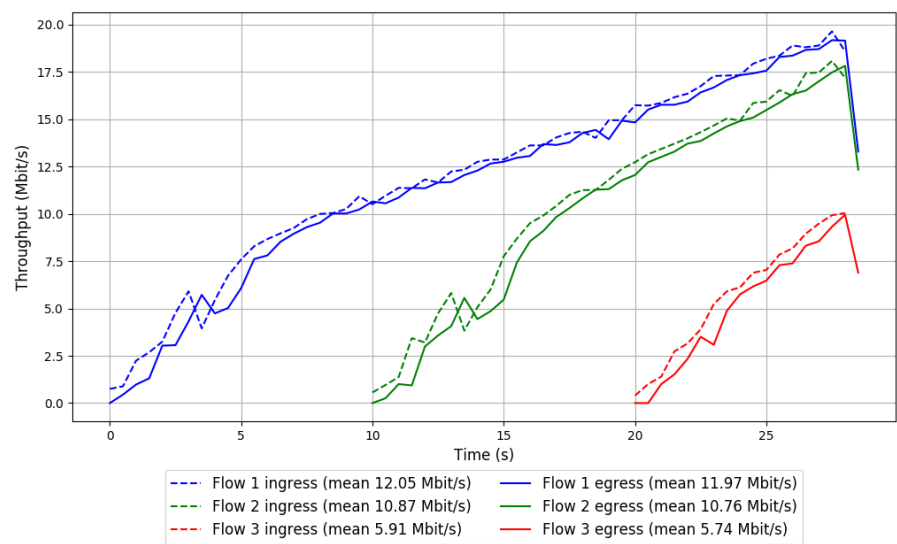
```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-19 10:02:48
End at: 2019-01-19 10:03:18
Local clock offset: -0.082 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-01-19 14:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.76 Mbit/s
95th percentile per-packet one-way delay: 133.236 ms
Loss rate: 2.99%
-- Flow 1:
Average throughput: 17.67 Mbit/s
95th percentile per-packet one-way delay: 133.255 ms
Loss rate: 2.86%
-- Flow 2:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 132.968 ms
Loss rate: 2.29%
-- Flow 3:
Average throughput: 5.71 Mbit/s
95th percentile per-packet one-way delay: 133.162 ms
Loss rate: 6.47%
```
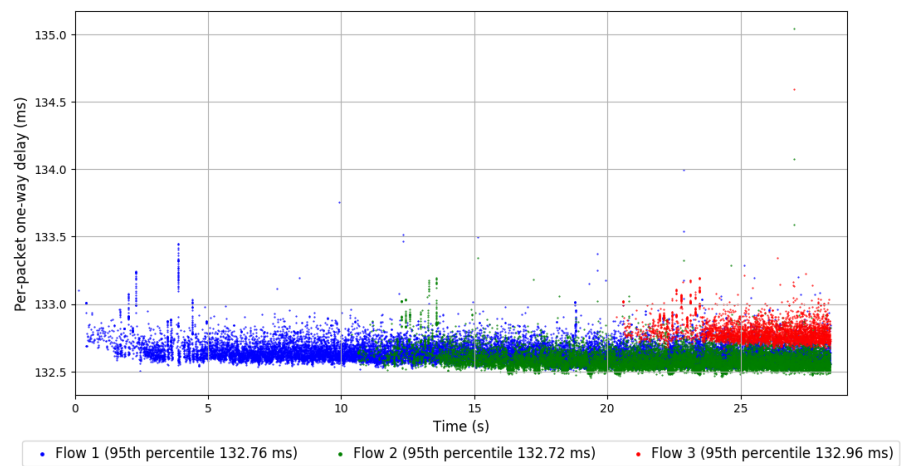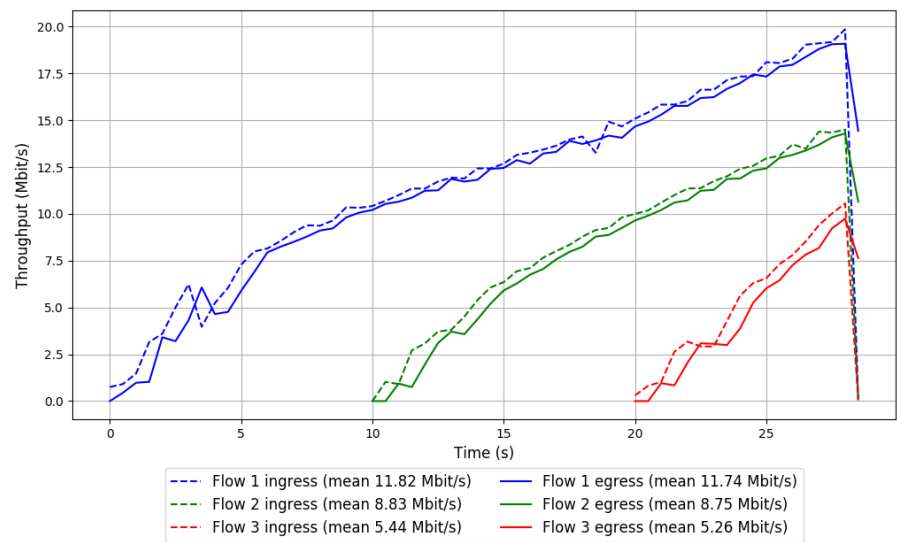
Run 1: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 18.02 Mbit/s)   Flow 1 egress (mean 17.67 Mbit/s)
Flow 2 ingress (mean 8.56 Mbit/s)   Flow 2 egress (mean 8.48 Mbit/s)
Flow 3 ingress (mean 5.91 Mbit/s)   Flow 3 egress (mean 5.71 Mbit/s)

Flow 1 (95th percentile 133.25 ms)   Flow 2 (95th percentile 132.97 ms)   Flow 3 (95th percentile 133.16 ms)

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-19 10:43:17
End at: 2019-01-19 10:43:47
Local clock offset: -0.026 ms
Remote clock offset: -0.094 ms


# Below is generated by plot.py at 2019-01-19 14:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.17 Mbit/s
95th percentile per-packet one-way delay: 133.095 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 10.59 Mbit/s
95th percentile per-packet one-way delay: 132.941 ms
Loss rate: 1.47%
-- Flow 2:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 133.161 ms
Loss rate: 2.17%
-- Flow 3:
Average throughput: 4.71 Mbit/s
95th percentile per-packet one-way delay: 133.020 ms
Loss rate: 6.50%
```
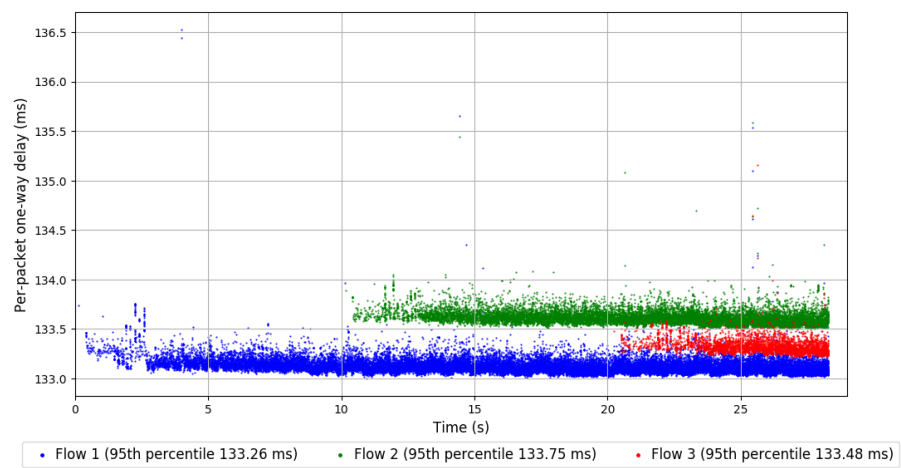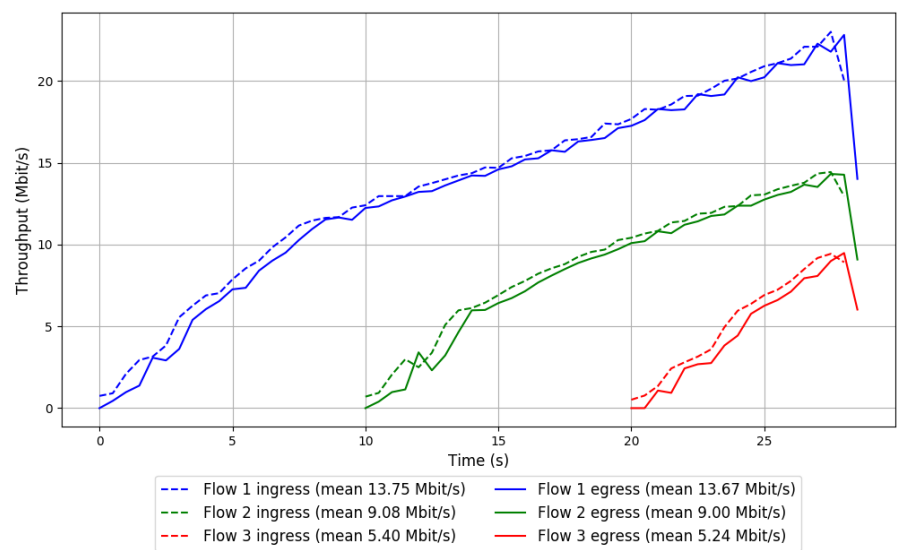
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-19 11:25:37
End at: 2019-01-19 11:26:07
Local clock offset: 0.005 ms
Remote clock offset: -0.426 ms


# Below is generated by plot.py at 2019-01-19 14:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.52 Mbit/s
95th percentile per-packet one-way delay: 133.614 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 133.395 ms
Loss rate: 1.56%
-- Flow 2:
Average throughput: 10.76 Mbit/s
95th percentile per-packet one-way delay: 133.706 ms
Loss rate: 2.45%
-- Flow 3:
Average throughput: 5.74 Mbit/s
95th percentile per-packet one-way delay: 133.409 ms
Loss rate: 5.90%
```
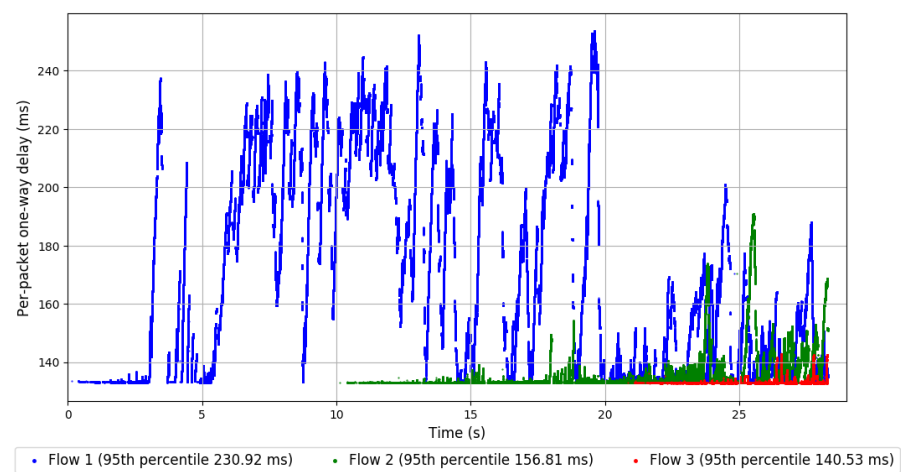
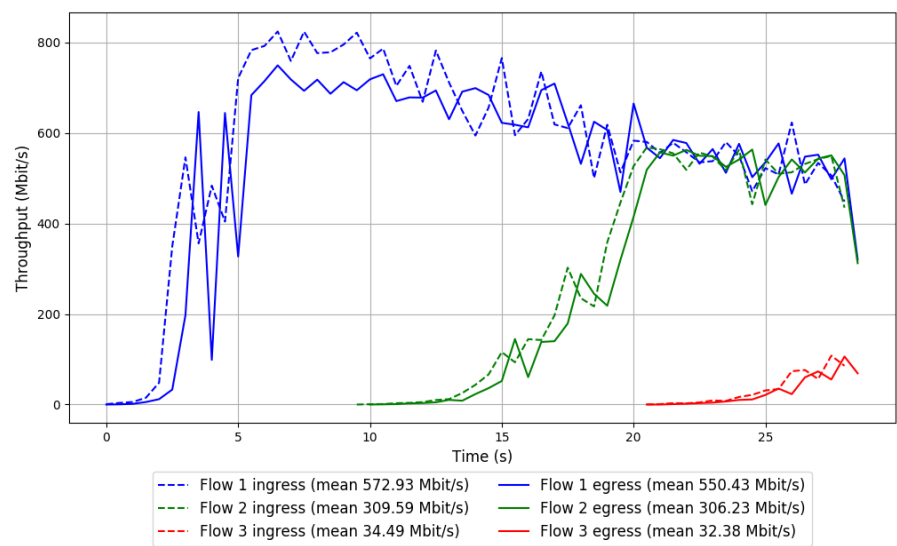Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-19 12:07:21
End at: 2019-01-19 12:07:51
Local clock offset: -0.364 ms
Remote clock offset: -0.011 ms


# Below is generated by plot.py at 2019-01-19 14:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.81 Mbit/s
95th percentile per-packet one-way delay: 132.805 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 132.763 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 8.75 Mbit/s
95th percentile per-packet one-way delay: 132.725 ms
Loss rate: 2.42%
-- Flow 3:
Average throughput: 5.26 Mbit/s
95th percentile per-packet one-way delay: 132.961 ms
Loss rate: 6.39%
```

Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 11.82 Mbit/s) Flow 1 egress (mean 11.74 Mbit/s)
Flow 2 ingress (mean 8.83 Mbit/s) Flow 2 egress (mean 8.75 Mbit/s)
Flow 3 ingress (mean 5.44 Mbit/s) Flow 3 egress (mean 5.26 Mbit/s)

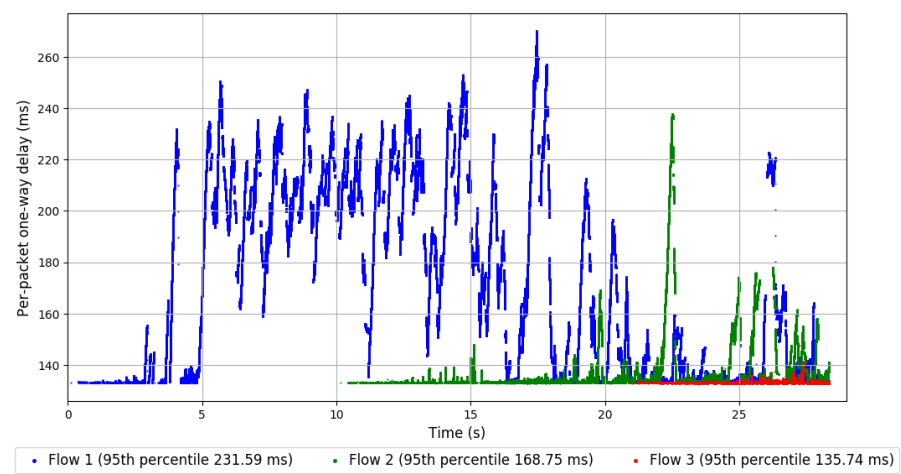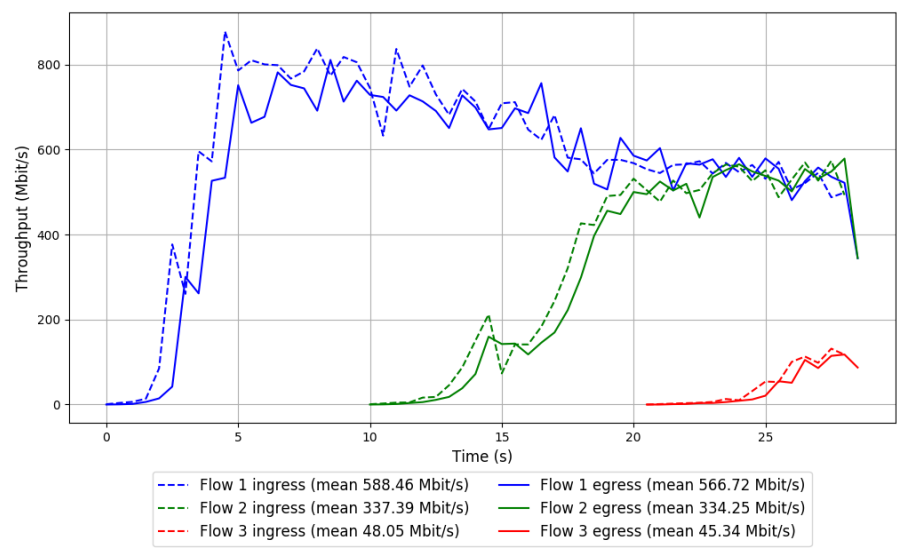Flow 1 (95th percentile 132.76 ms) Flow 2 (95th percentile 132.72 ms) Flow 3 (95th percentile 132.96 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-19 12:49:03
End at: 2019-01-19 12:49:33
Local clock offset: 0.105 ms
Remote clock offset: -0.145 ms


# Below is generated by plot.py at 2019-01-19 14:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.96 Mbit/s
95th percentile per-packet one-way delay: 133.668 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 13.67 Mbit/s
95th percentile per-packet one-way delay: 133.256 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 133.751 ms
Loss rate: 2.37%
-- Flow 3:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 133.478 ms
Loss rate: 6.06%
```
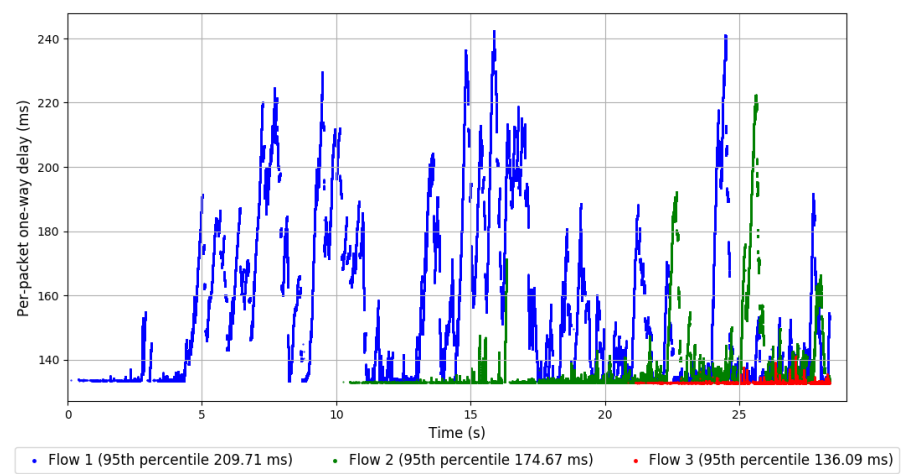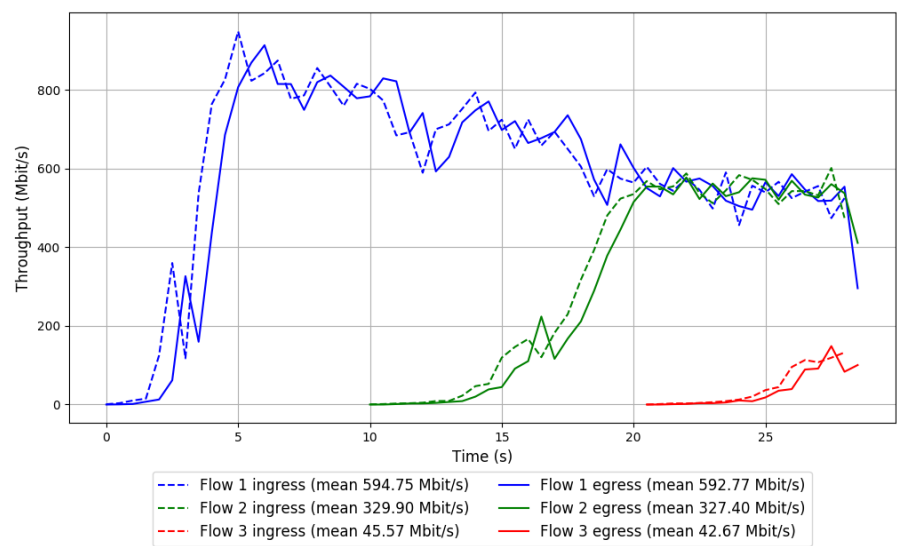
Run 5: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 13.75 Mbit/s) --- Flow 1 egress (mean 13.67 Mbit/s)
Flow 2 ingress (mean 9.08 Mbit/s) --- Flow 2 egress (mean 9.00 Mbit/s)
Flow 3 ingress (mean 5.40 Mbit/s) --- Flow 3 egress (mean 5.24 Mbit/s)

Flow 1 (95th percentile 133.26 ms)   Flow 2 (95th percentile 133.75 ms)   Flow 3 (95th percentile 133.48 ms)
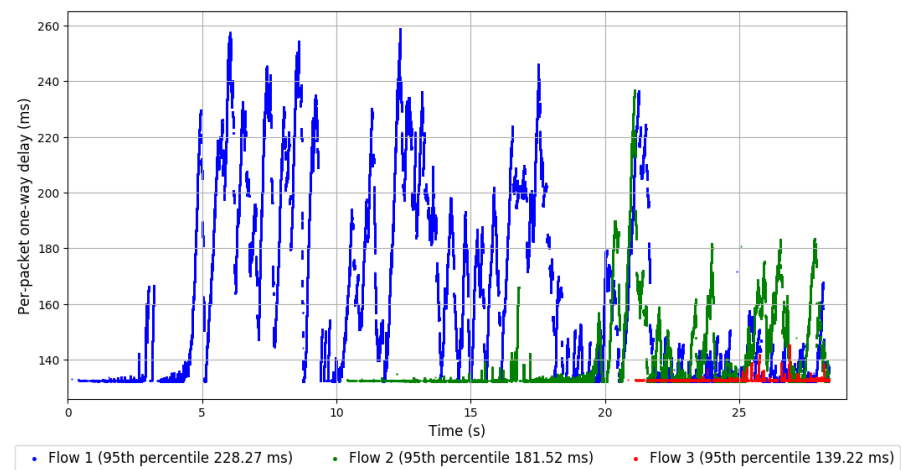
```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-19 09:58:44
End at: 2019-01-19 09:59:14
Local clock offset: -0.044 ms
Remote clock offset: -0.072 ms


# Below is generated by plot.py at 2019-01-19 14:59:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 756.48 Mbit/s
95th percentile per-packet one-way delay: 228.213 ms
Loss rate: 4.29%
-- Flow 1:
Average throughput: 550.43 Mbit/s
95th percentile per-packet one-way delay: 230.916 ms
Loss rate: 4.83%
-- Flow 2:
Average throughput: 306.23 Mbit/s
95th percentile per-packet one-way delay: 156.815 ms
Loss rate: 2.52%
-- Flow 3:
Average throughput: 32.38 Mbit/s
95th percentile per-packet one-way delay: 140.530 ms
Loss rate: 9.46%
```

Run 1: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 572.93 Mbit/s) --- Flow 1 egress (mean 550.43 Mbit/s)
Flow 2 ingress (mean 309.59 Mbit/s) --- Flow 2 egress (mean 306.23 Mbit/s)
Flow 3 ingress (mean 34.49 Mbit/s) --- Flow 3 egress (mean 32.38 Mbit/s)

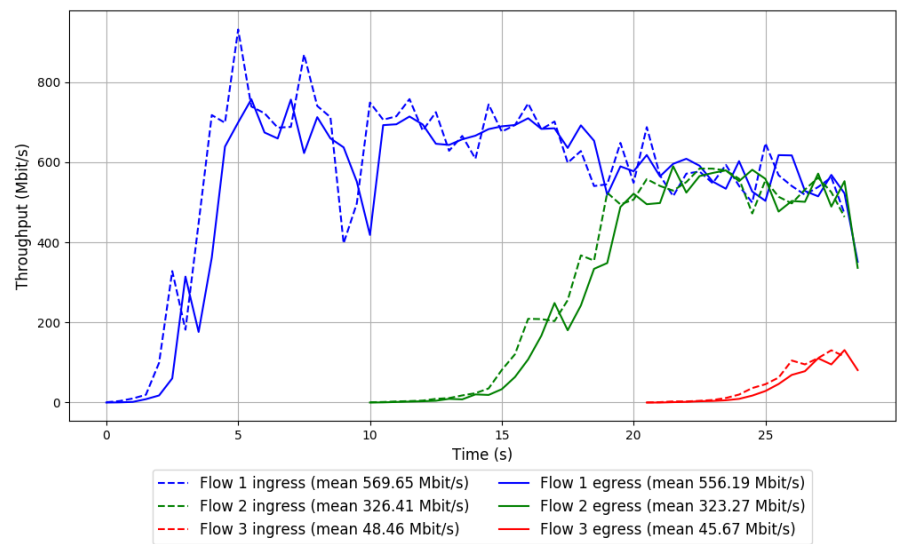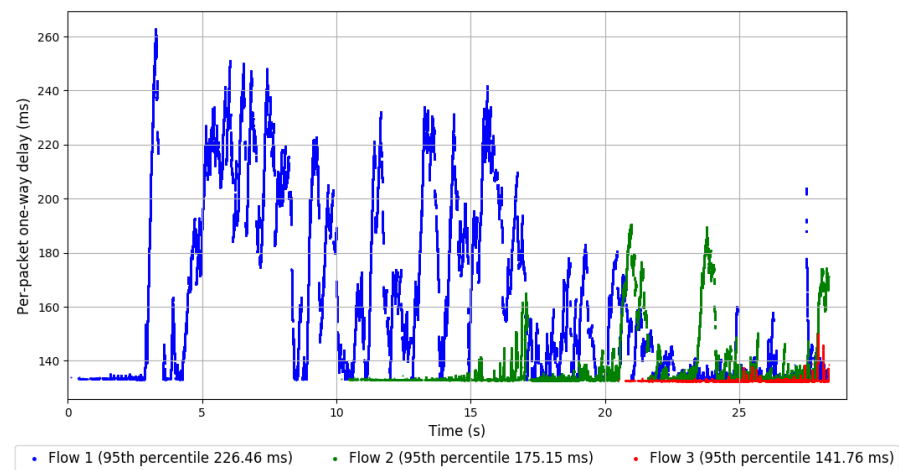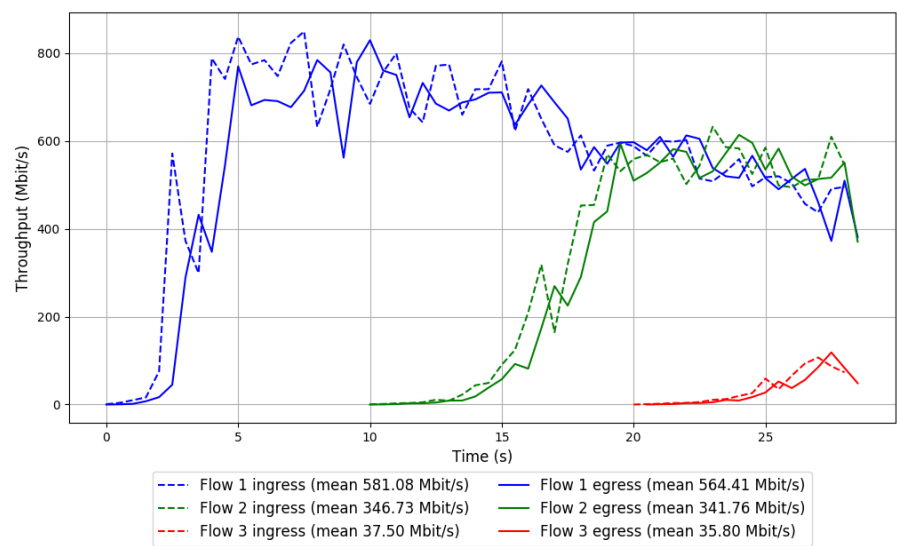Flow 1 (95th percentile 230.92 ms)   Flow 2 (95th percentile 156.81 ms)   Flow 3 (95th percentile 140.53 ms)

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-19 10:39:11
End at: 2019-01-19 10:39:41
Local clock offset: 0.168 ms
Remote clock offset: -0.111 ms


# Below is generated by plot.py at 2019-01-19 15:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 794.05 Mbit/s
95th percentile per-packet one-way delay: 228.411 ms
Loss rate: 4.06%
-- Flow 1:
Average throughput: 566.72 Mbit/s
95th percentile per-packet one-way delay: 231.589 ms
Loss rate: 4.59%
-- Flow 2:
Average throughput: 334.25 Mbit/s
95th percentile per-packet one-way delay: 168.752 ms
Loss rate: 2.33%
-- Flow 3:
Average throughput: 45.34 Mbit/s
95th percentile per-packet one-way delay: 135.735 ms
Loss rate: 8.94%
```

Run 2: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 588.46 Mbit/s) --- Flow 1 egress (mean 566.72 Mbit/s)
Flow 2 ingress (mean 337.39 Mbit/s) --- Flow 2 egress (mean 334.25 Mbit/s)
Flow 3 ingress (mean 48.05 Mbit/s) --- Flow 3 egress (mean 45.34 Mbit/s)

Flow 1 (95th percentile 231.59 ms)   Flow 2 (95th percentile 168.75 ms)   Flow 3 (95th percentile 135.74 ms)

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-19 11:21:35
End at: 2019-01-19 11:22:05
Local clock offset: -0.103 ms
Remote clock offset: -0.039 ms


# Below is generated by plot.py at 2019-01-19 15:01:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 814.19 Mbit/s
95th percentile per-packet one-way delay: 207.035 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 592.77 Mbit/s
95th percentile per-packet one-way delay: 209.707 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 327.40 Mbit/s
95th percentile per-packet one-way delay: 174.668 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 42.67 Mbit/s
95th percentile per-packet one-way delay: 136.089 ms
Loss rate: 9.58%
```
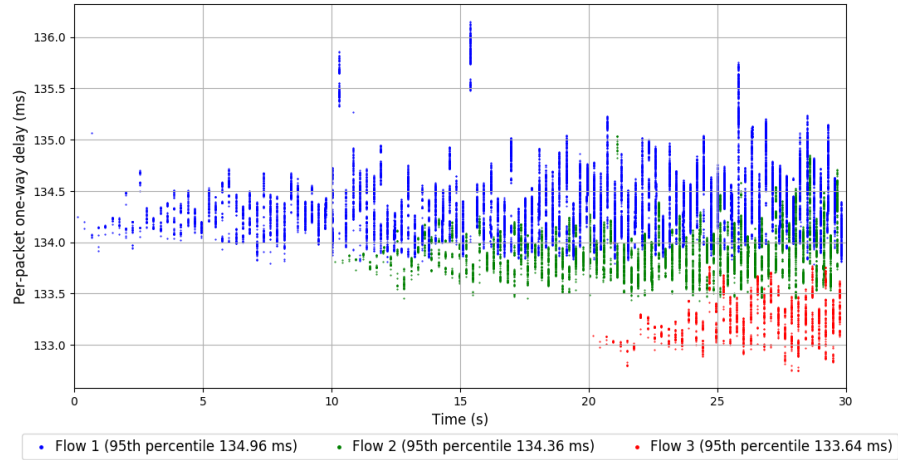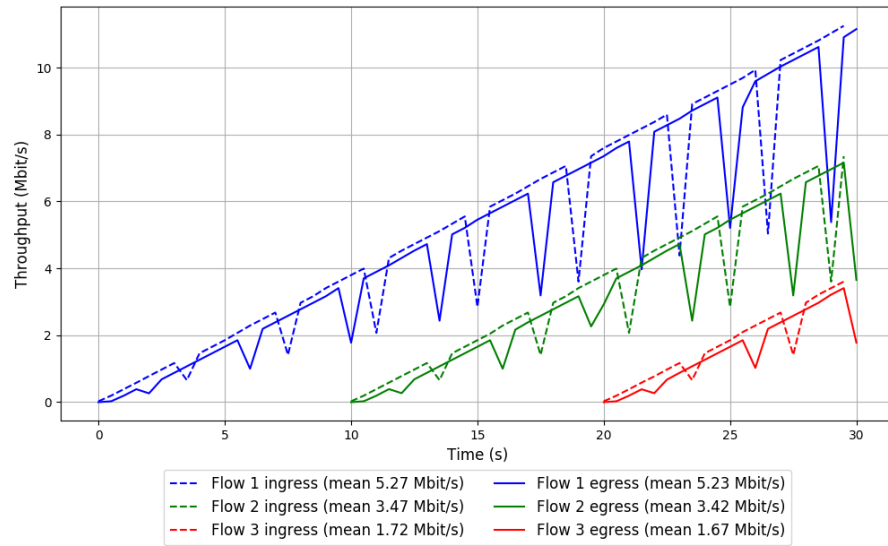
Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 594.75 Mbit/s) — Flow 1 egress (mean 592.77 Mbit/s)
Flow 2 ingress (mean 329.90 Mbit/s) — Flow 2 egress (mean 327.40 Mbit/s)
Flow 3 ingress (mean 45.57 Mbit/s) — Flow 3 egress (mean 42.67 Mbit/s)

Flow 1 (95th percentile 209.71 ms) — Flow 2 (95th percentile 174.67 ms) — Flow 3 (95th percentile 136.09 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-19 12:02:59
End at: 2019-01-19 12:03:29
Local clock offset: -0.487 ms
Remote clock offset: -0.007 ms


# Below is generated by plot.py at 2019-01-19 15:01:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 776.68 Mbit/s
95th percentile per-packet one-way delay: 224.668 ms
Loss rate: 3.13%
-- Flow 1:
Average throughput: 556.19 Mbit/s
95th percentile per-packet one-way delay: 228.269 ms
Loss rate: 3.27%
-- Flow 2:
Average throughput: 323.27 Mbit/s
95th percentile per-packet one-way delay: 181.522 ms
Loss rate: 2.39%
-- Flow 3:
Average throughput: 45.67 Mbit/s
95th percentile per-packet one-way delay: 139.217 ms
Loss rate: 8.99%
```

Run 4: Report of Indigo-MusesT — Data Link
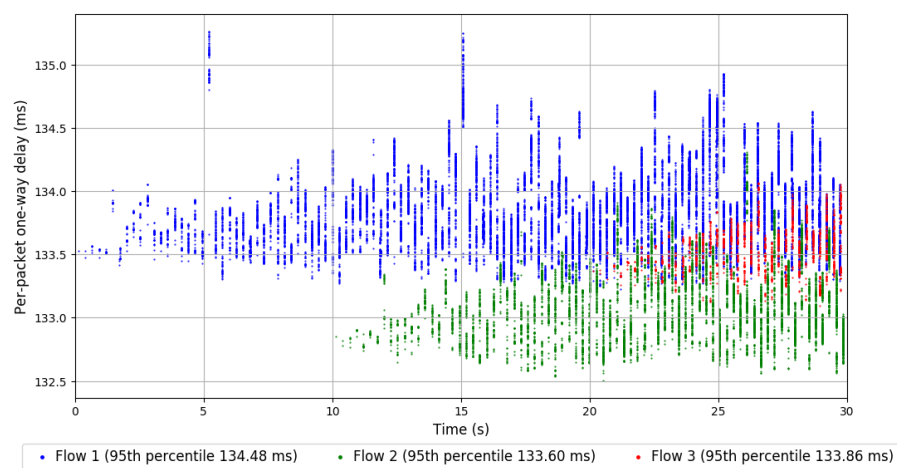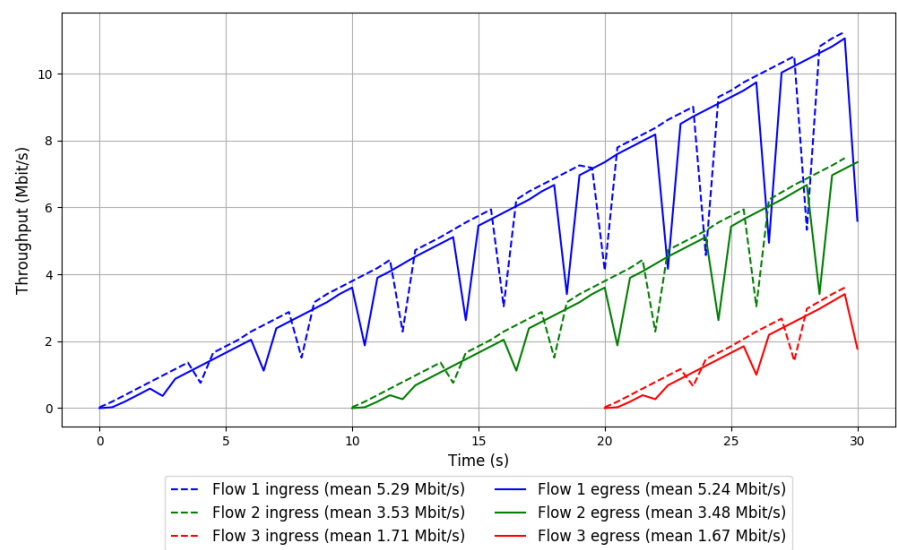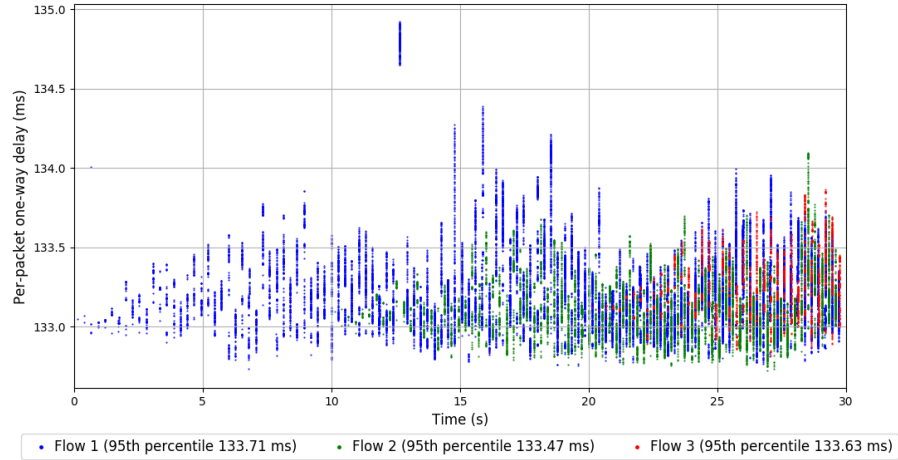

- - - - Flow 1 ingress (mean 569.65 Mbit/s) —— Flow 1 egress (mean 556.19 Mbit/s)
- - - - Flow 2 ingress (mean 326.41 Mbit/s) —— Flow 2 egress (mean 323.27 Mbit/s)
- - - - Flow 3 ingress (mean 48.46 Mbit/s) —— Flow 3 egress (mean 45.67 Mbit/s)

• Flow 1 (95th percentile 228.27 ms)   • Flow 2 (95th percentile 181.52 ms)   • Flow 3 (95th percentile 139.22 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-19 12:45:11
End at: 2019-01-19 12:45:41
Local clock offset: -0.287 ms
Remote clock offset: -0.171 ms


# Below is generated by plot.py at 2019-01-19 15:02:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 794.06 Mbit/s
95th percentile per-packet one-way delay: 222.444 ms
Loss rate: 3.58%
-- Flow 1:
Average throughput: 564.41 Mbit/s
95th percentile per-packet one-way delay: 226.464 ms
Loss rate: 3.78%
-- Flow 2:
Average throughput: 341.76 Mbit/s
95th percentile per-packet one-way delay: 175.149 ms
Loss rate: 2.87%
-- Flow 3:
Average throughput: 35.80 Mbit/s
95th percentile per-packet one-way delay: 141.756 ms
Loss rate: 7.48%
```
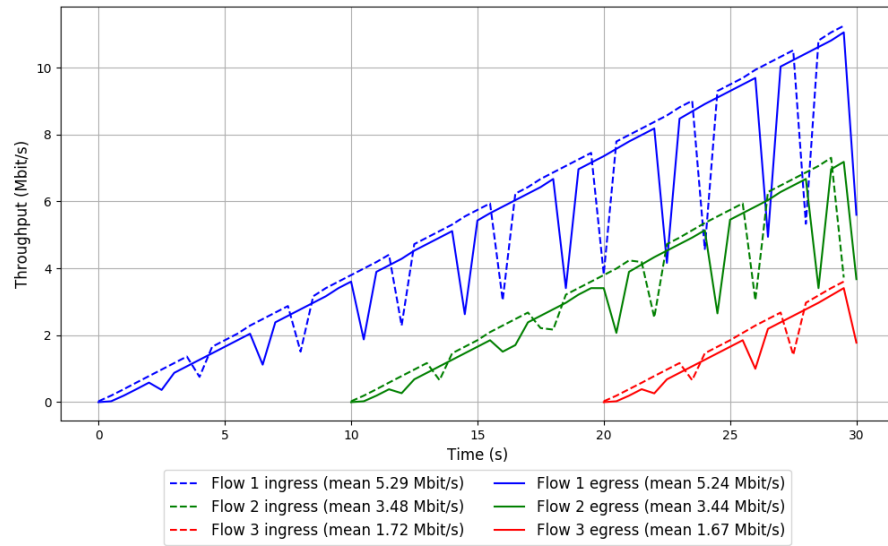
Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-01-19 10:06:20
End at: 2019-01-19 10:06:50
Local clock offset: 0.318 ms
Remote clock offset: -0.102 ms


# Below is generated by plot.py at 2019-01-19 15:02:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 134.864 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 134.964 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 134.363 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 133.642 ms
Loss rate: 5.39%
```
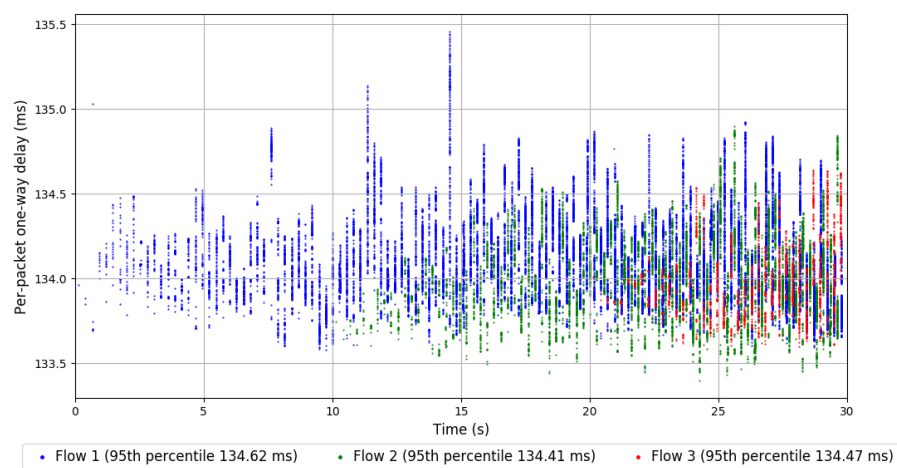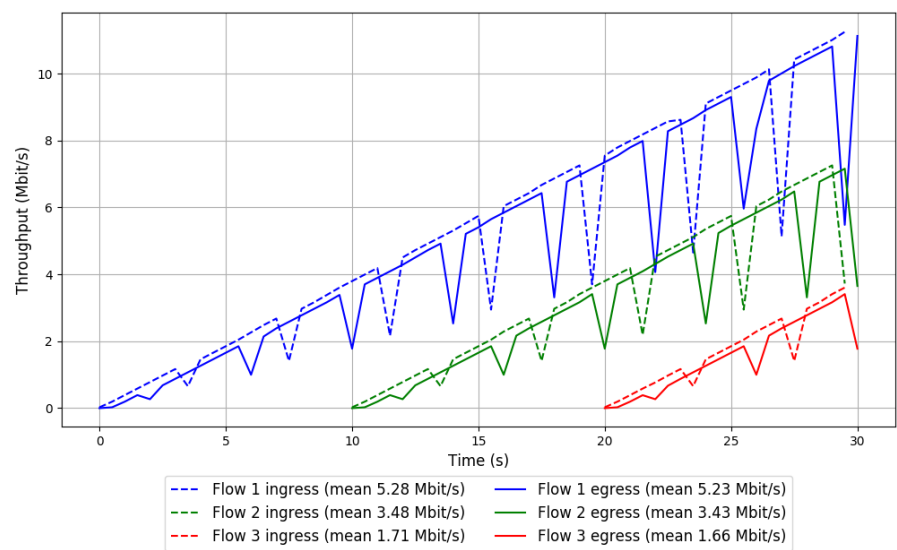
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-01-19 10:46:59
End at: 2019-01-19 10:47:29
Local clock offset: 0.2 ms
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2019-01-19 15:02:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.07 Mbit/s
95th percentile per-packet one-way delay: 134.363 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 134.479 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 3.48 Mbit/s
95th percentile per-packet one-way delay: 133.596 ms
Loss rate: 2.68%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 133.864 ms
Loss rate: 5.40%
```
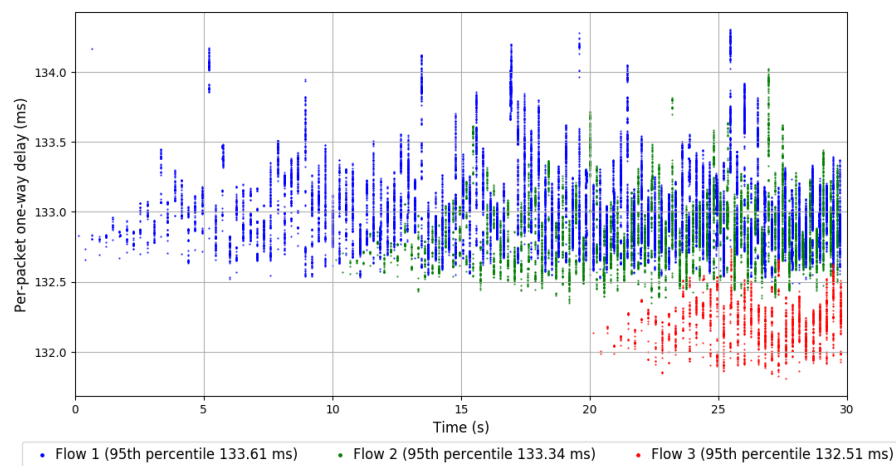
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-01-19 11:29:23
End at: 2019-01-19 11:29:53
Local clock offset: 0.03 ms
Remote clock offset: -0.058 ms


# Below is generated by plot.py at 2019-01-19 15:02:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.04 Mbit/s
95th percentile per-packet one-way delay: 133.649 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 133.711 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 133.467 ms
Loss rate: 2.71%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 133.626 ms
Loss rate: 5.40%
```
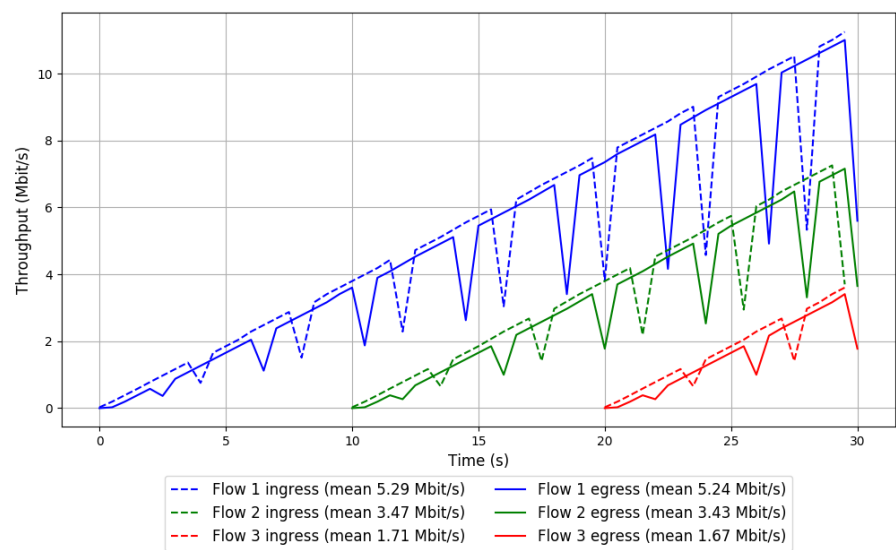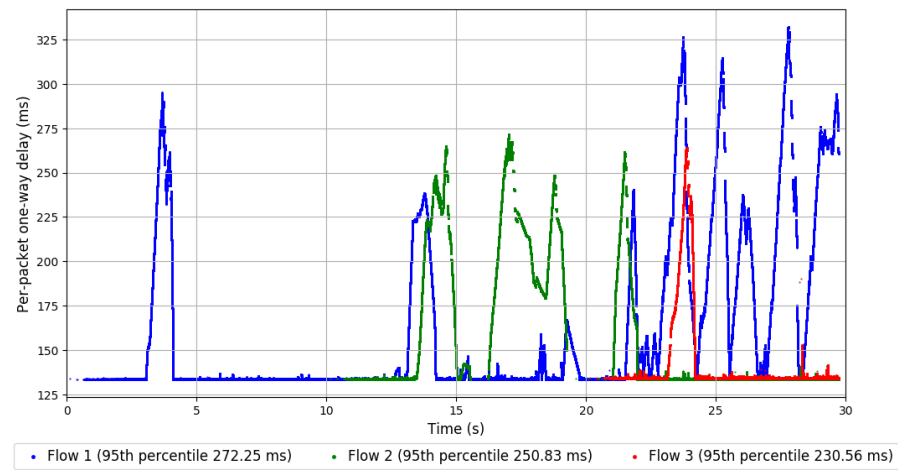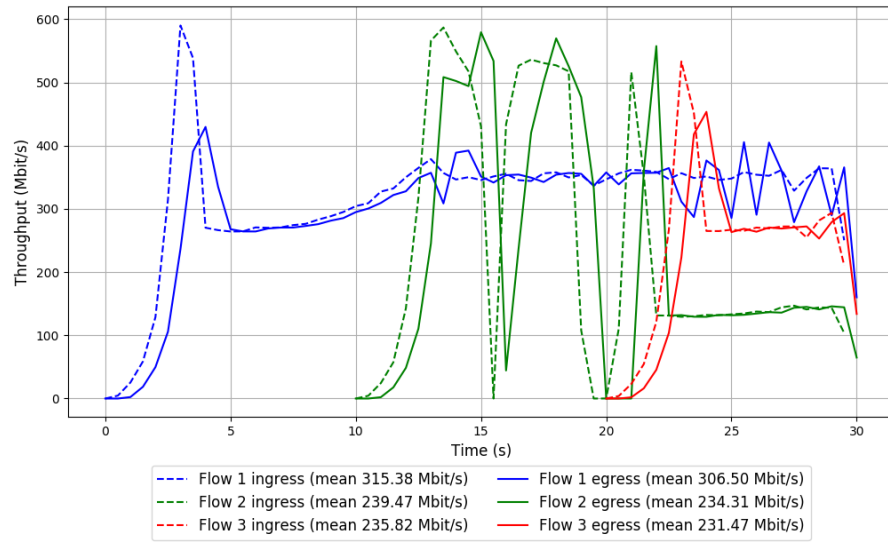
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 5.29 Mbit/s)   Flow 1 egress (mean 5.24 Mbit/s)
Flow 2 ingress (mean 3.48 Mbit/s)   Flow 2 egress (mean 3.44 Mbit/s)
Flow 3 ingress (mean 1.72 Mbit/s)   Flow 3 egress (mean 1.67 Mbit/s)

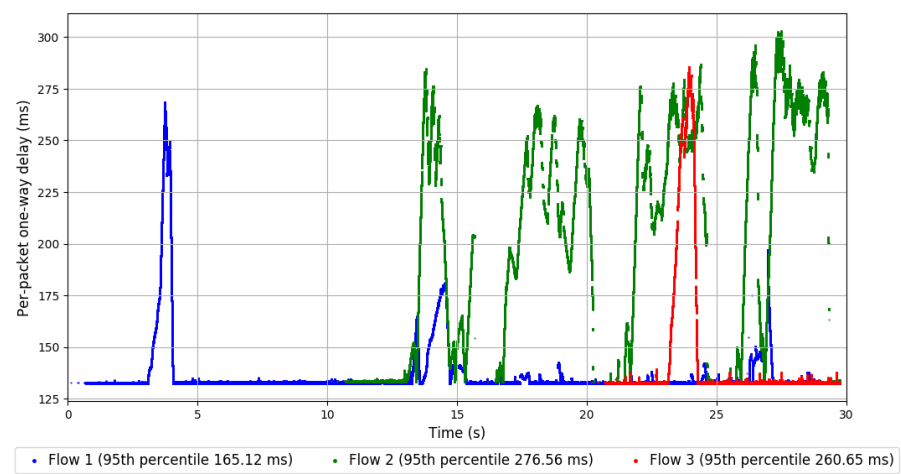Flow 1 (95th percentile 133.71 ms)   Flow 2 (95th percentile 133.47 ms)   Flow 3 (95th percentile 133.63 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2019-01-19 12:11:00
End at: 2019-01-19 12:11:30
Local clock offset: 0.371 ms
Remote clock offset: -0.058 ms


# Below is generated by plot.py at 2019-01-19 15:02:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.02 Mbit/s
95th percentile per-packet one-way delay: 134.560 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 134.616 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 134.411 ms
Loss rate: 2.72%
-- Flow 3:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 134.473 ms
Loss rate: 5.41%
```

Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-01-19 12:52:54
End at: 2019-01-19 12:53:24
Local clock offset: -0.243 ms
Remote clock offset: 0.171 ms

# Below is generated by plot.py at 2019-01-19 15:02:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 133.517 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 133.612 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 133.339 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 132.509 ms
Loss rate: 5.40%
```
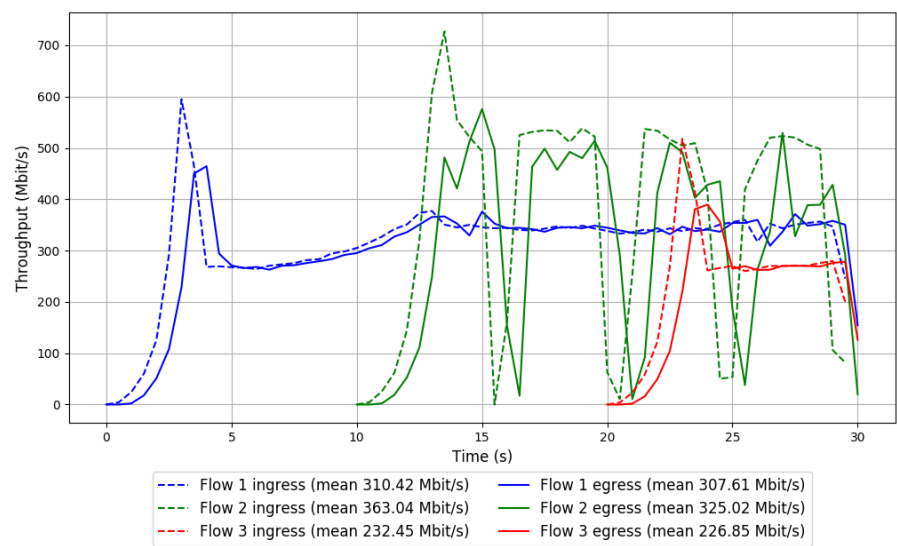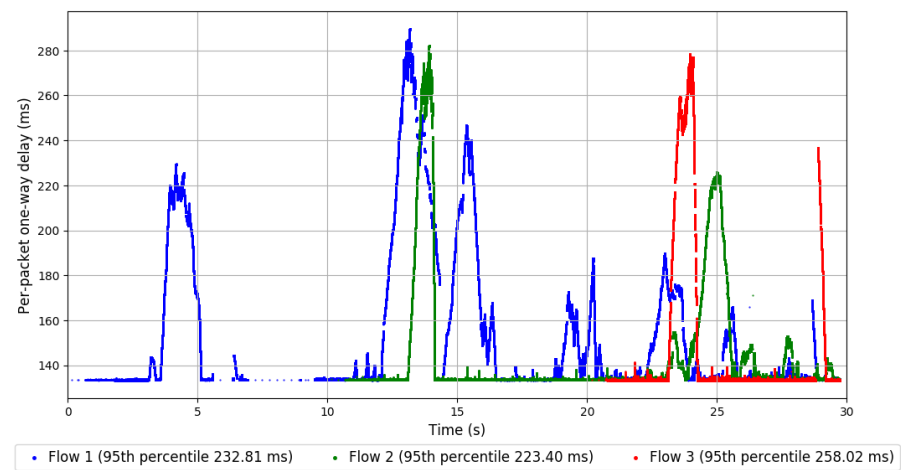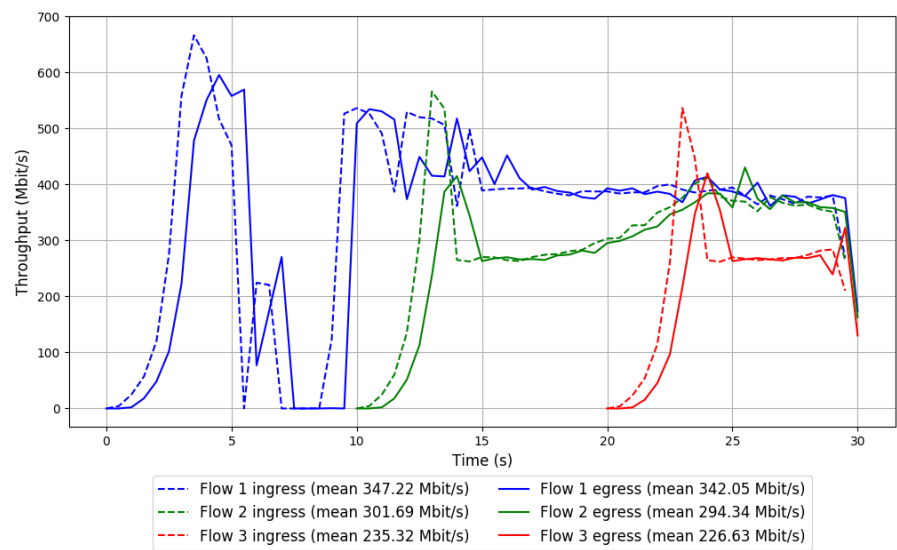
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-01-19 10:15:39
End at: 2019-01-19 10:16:09
Local clock offset: 0.488 ms
Remote clock offset: -0.124 ms


# Below is generated by plot.py at 2019-01-19 15:09:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 536.44 Mbit/s
95th percentile per-packet one-way delay: 261.922 ms
Loss rate: 3.74%
-- Flow 1:
Average throughput: 306.50 Mbit/s
95th percentile per-packet one-way delay: 272.252 ms
Loss rate: 3.69%
-- Flow 2:
Average throughput: 234.31 Mbit/s
95th percentile per-packet one-way delay: 250.827 ms
Loss rate: 3.47%
-- Flow 3:
Average throughput: 231.47 Mbit/s
95th percentile per-packet one-way delay: 230.558 ms
Loss rate: 4.52%
```
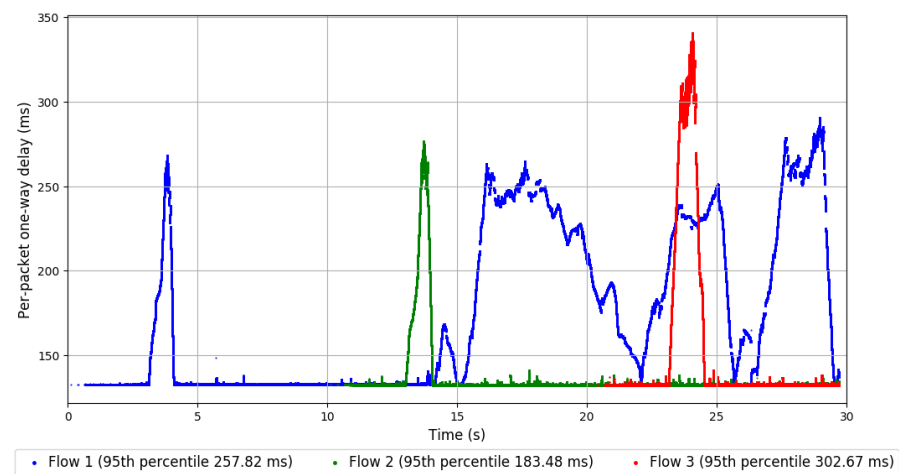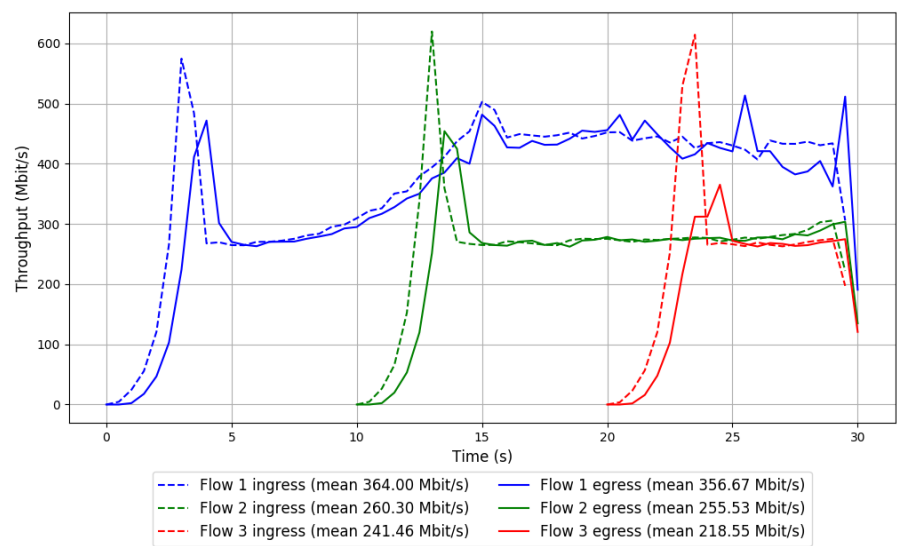
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-01-19 10:56:18
End at: 2019-01-19 10:56:48
Local clock offset: -0.21 ms
Remote clock offset: -0.057 ms


# Below is generated by plot.py at 2019-01-19 15:11:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 596.02 Mbit/s
95th percentile per-packet one-way delay: 267.074 ms
Loss rate: 5.98%
-- Flow 1:
Average throughput: 307.61 Mbit/s
95th percentile per-packet one-way delay: 165.121 ms
Loss rate: 1.78%
-- Flow 2:
Average throughput: 325.02 Mbit/s
95th percentile per-packet one-way delay: 276.565 ms
Loss rate: 11.67%
-- Flow 3:
Average throughput: 226.85 Mbit/s
95th percentile per-packet one-way delay: 260.655 ms
Loss rate: 5.04%
```

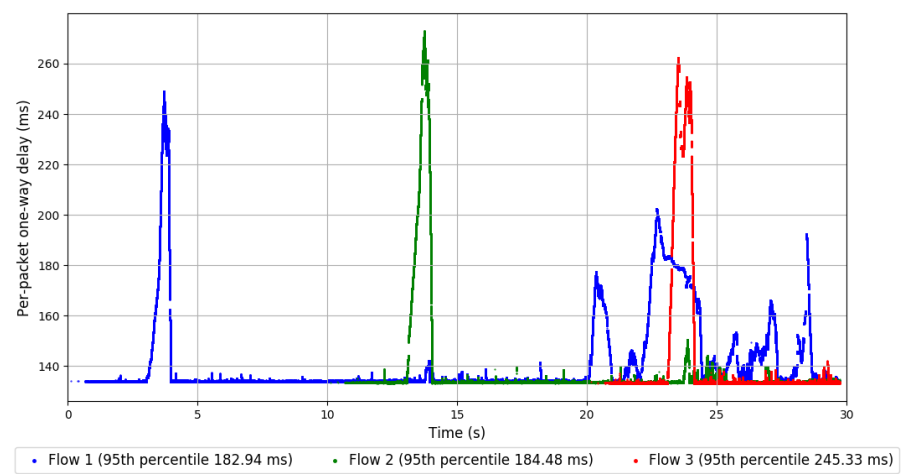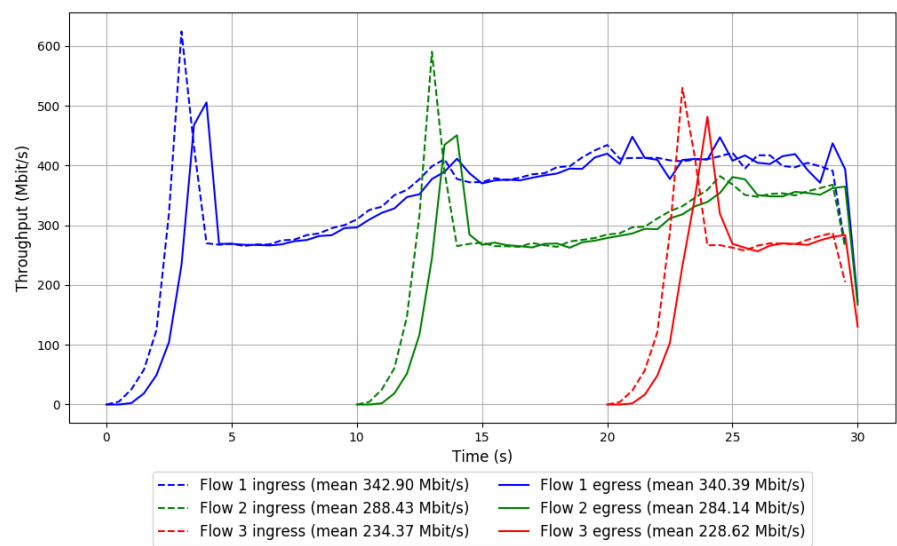# Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-01-19 11:38:54
End at: 2019-01-19 11:39:24
Local clock offset: 0.536 ms
Remote clock offset: -0.003 ms


# Below is generated by plot.py at 2019-01-19 15:14:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 609.98 Mbit/s
95th percentile per-packet one-way delay: 238.706 ms
Loss rate: 3.30%
-- Flow 1:
Average throughput: 342.05 Mbit/s
95th percentile per-packet one-way delay: 232.811 ms
Loss rate: 2.37%
-- Flow 2:
Average throughput: 294.34 Mbit/s
95th percentile per-packet one-way delay: 223.396 ms
Loss rate: 3.75%
-- Flow 3:
Average throughput: 226.63 Mbit/s
95th percentile per-packet one-way delay: 258.022 ms
Loss rate: 6.32%
```
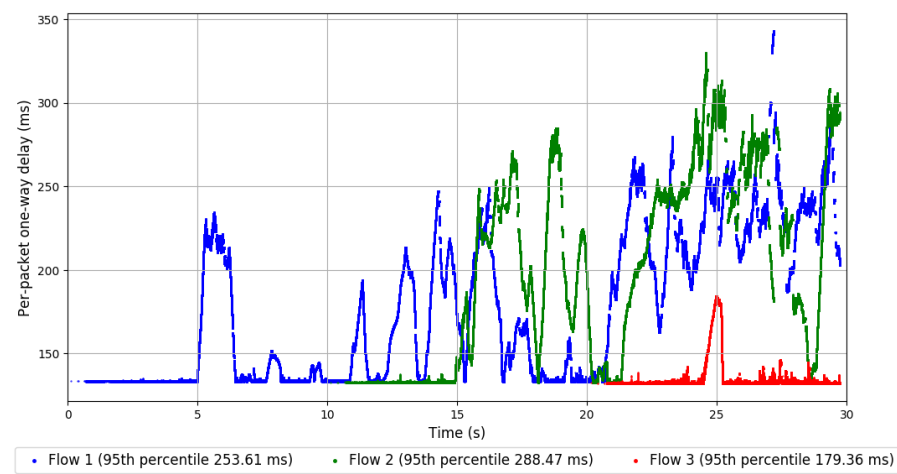
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 347.22 Mbit/s) --- Flow 1 egress (mean 342.05 Mbit/s)
Flow 2 ingress (mean 301.69 Mbit/s) --- Flow 2 egress (mean 294.34 Mbit/s)
Flow 3 ingress (mean 235.32 Mbit/s) --- Flow 3 egress (mean 226.63 Mbit/s)

Flow 1 (95th percentile 232.81 ms)   Flow 2 (95th percentile 223.40 ms)   Flow 3 (95th percentile 258.02 ms)
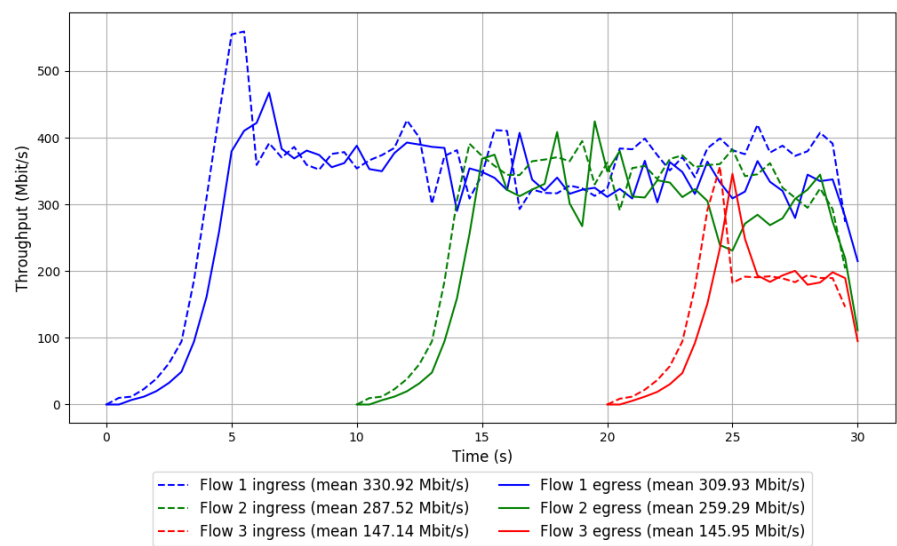
```
Run 4: Statistics of PCC-Allegro

Start at: 2019-01-19 12:20:38
End at: 2019-01-19 12:21:08
Local clock offset: -0.548 ms
Remote clock offset: -0.001 ms


# Below is generated by plot.py at 2019-01-19 15:24:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 596.37 Mbit/s
95th percentile per-packet one-way delay: 257.462 ms
Loss rate: 4.13%
-- Flow 1:
Average throughput: 356.67 Mbit/s
95th percentile per-packet one-way delay: 257.820 ms
Loss rate: 2.89%
-- Flow 2:
Average throughput: 255.53 Mbit/s
95th percentile per-packet one-way delay: 183.477 ms
Loss rate: 3.15%
-- Flow 3:
Average throughput: 218.55 Mbit/s
95th percentile per-packet one-way delay: 302.671 ms
Loss rate: 11.95%
```

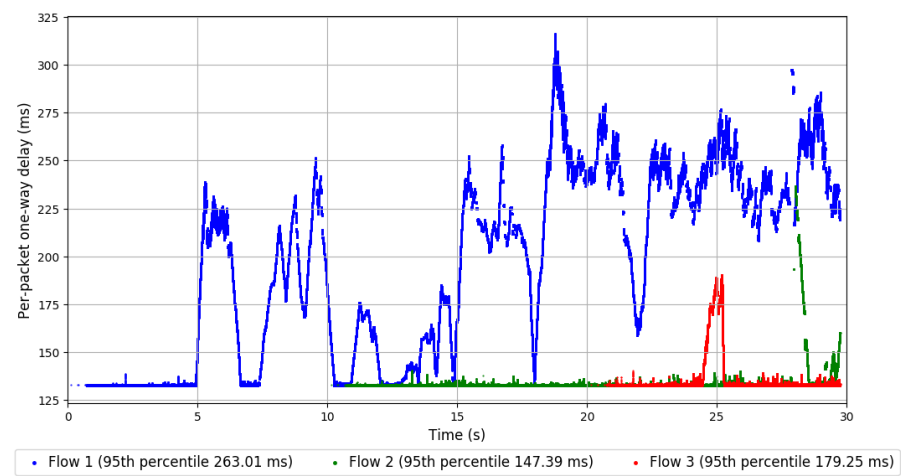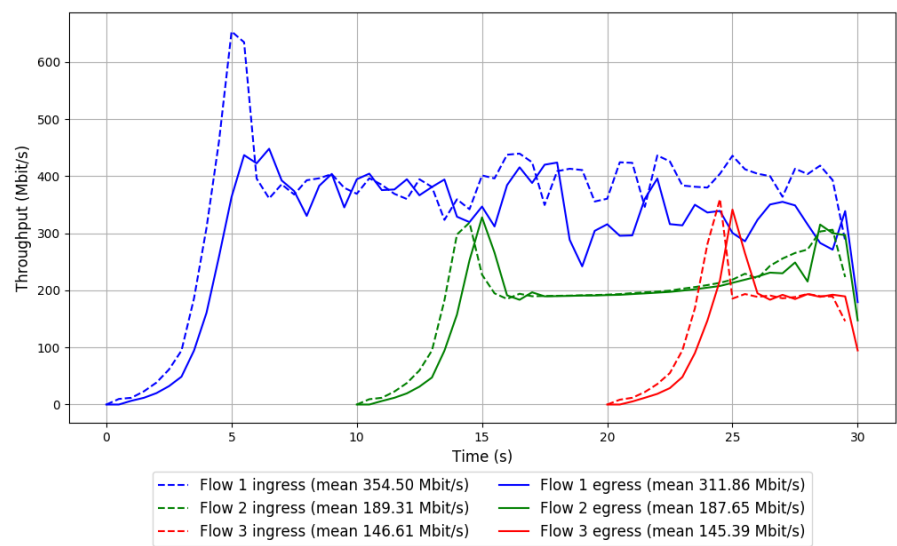# Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-01-19 13:02:14
End at: 2019-01-19 13:02:44
Local clock offset: 0.354 ms
Remote clock offset: -0.125 ms


# Below is generated by plot.py at 2019-01-19 15:25:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 602.40 Mbit/s
95th percentile per-packet one-way delay: 190.993 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 340.39 Mbit/s
95th percentile per-packet one-way delay: 182.938 ms
Loss rate: 1.62%
-- Flow 2:
Average throughput: 284.14 Mbit/s
95th percentile per-packet one-way delay: 184.483 ms
Loss rate: 2.80%
-- Flow 3:
Average throughput: 228.62 Mbit/s
95th percentile per-packet one-way delay: 245.334 ms
Loss rate: 5.10%
```

Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 342.90 Mbit/s) — Flow 1 egress (mean 340.39 Mbit/s)
Flow 2 ingress (mean 288.43 Mbit/s) — Flow 2 egress (mean 284.14 Mbit/s)
Flow 3 ingress (mean 234.37 Mbit/s) — Flow 3 egress (mean 228.62 Mbit/s)

Flow 1 (95th percentile 182.94 ms)   Flow 2 (95th percentile 184.48 ms)   Flow 3 (95th percentile 245.33 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-01-19 10:24:33
End at: 2019-01-19 10:25:03
Local clock offset: -0.25 ms
Remote clock offset: -0.101 ms


# Below is generated by plot.py at 2019-01-19 15:25:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 528.95 Mbit/s
95th percentile per-packet one-way delay: 269.444 ms
Loss rate: 8.16%
-- Flow 1:
Average throughput: 309.93 Mbit/s
95th percentile per-packet one-way delay: 253.607 ms
Loss rate: 7.18%
-- Flow 2:
Average throughput: 259.29 Mbit/s
95th percentile per-packet one-way delay: 288.469 ms
Loss rate: 11.03%
-- Flow 3:
Average throughput: 145.95 Mbit/s
95th percentile per-packet one-way delay: 179.359 ms
Loss rate: 3.49%
```
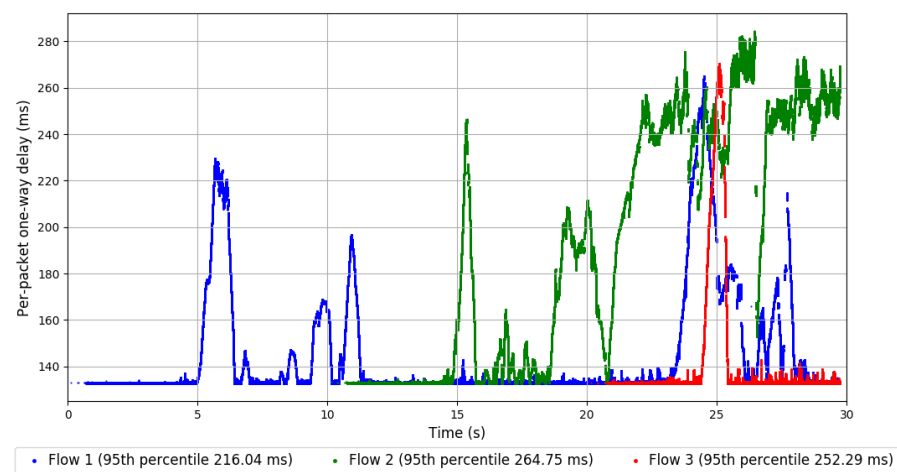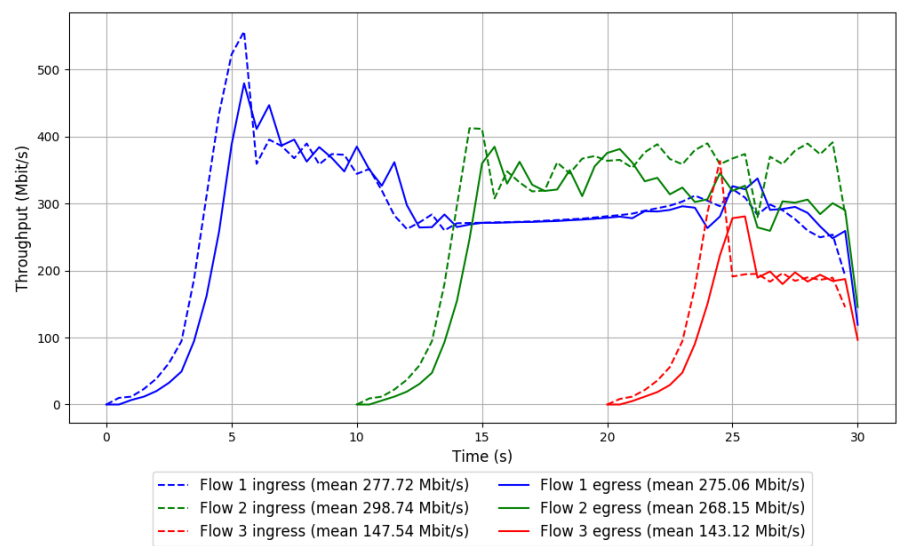
Run 1: Report of PCC-Expr — Data Link

- - - Flow 1 ingress (mean 330.92 Mbit/s) —— Flow 1 egress (mean 309.93 Mbit/s)
- - - Flow 2 ingress (mean 287.52 Mbit/s) —— Flow 2 egress (mean 259.29 Mbit/s)
- - - Flow 3 ingress (mean 147.14 Mbit/s) —— Flow 3 egress (mean 145.95 Mbit/s)

• Flow 1 (95th percentile 253.61 ms)   • Flow 2 (95th percentile 288.47 ms)   • Flow 3 (95th percentile 179.36 ms)
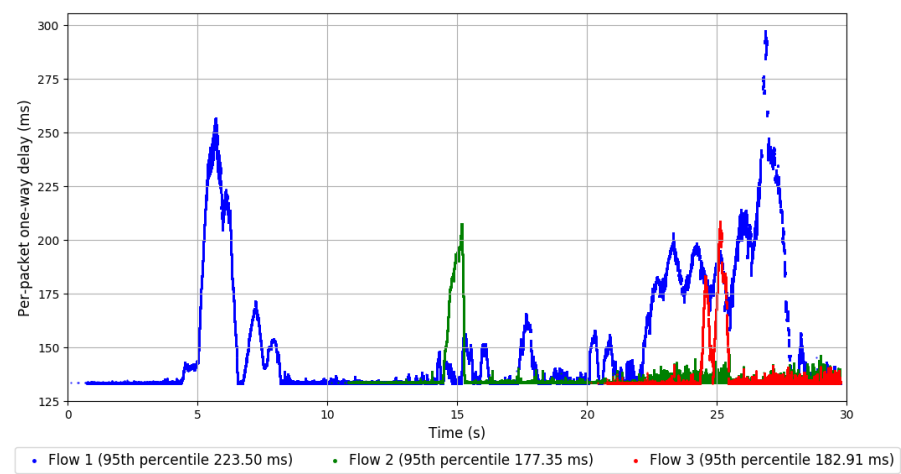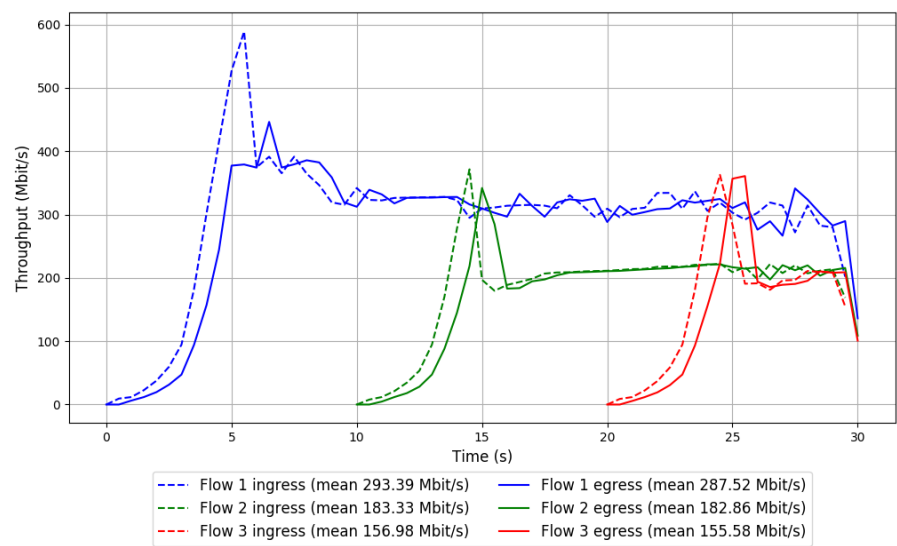
```
Run 2: Statistics of PCC-Expr

Start at: 2019-01-19 11:05:38
End at: 2019-01-19 11:06:08
Local clock offset: -0.24 ms
Remote clock offset: -0.137 ms


# Below is generated by plot.py at 2019-01-19 15:25:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 483.18 Mbit/s
95th percentile per-packet one-way delay: 256.093 ms
Loss rate: 9.44%
-- Flow 1:
Average throughput: 311.86 Mbit/s
95th percentile per-packet one-way delay: 263.012 ms
Loss rate: 12.81%
-- Flow 2:
Average throughput: 187.65 Mbit/s
95th percentile per-packet one-way delay: 147.386 ms
Loss rate: 2.21%
-- Flow 3:
Average throughput: 145.39 Mbit/s
95th percentile per-packet one-way delay: 179.251 ms
Loss rate: 3.51%
```
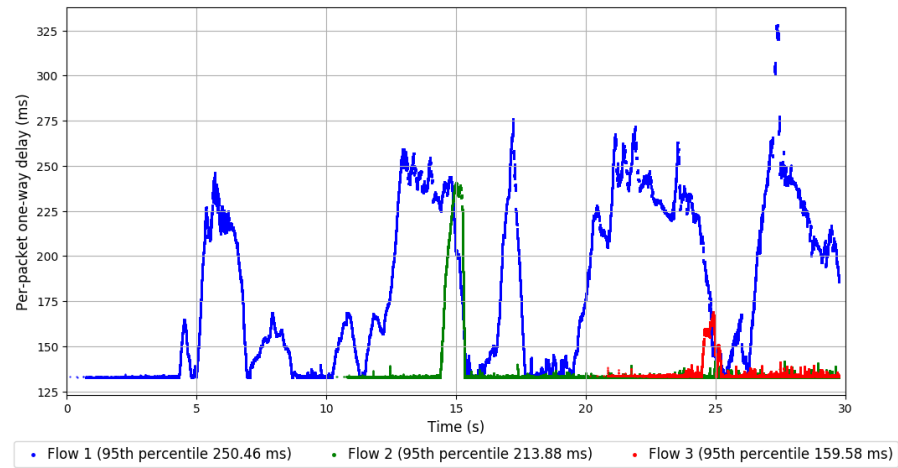
Run 2: Report of PCC-Expr — Data Link

- - - Flow 1 ingress (mean 354.50 Mbit/s)   —— Flow 1 egress (mean 311.86 Mbit/s)
- - - Flow 2 ingress (mean 189.31 Mbit/s)   —— Flow 2 egress (mean 187.65 Mbit/s)
- - - Flow 3 ingress (mean 146.61 Mbit/s)   —— Flow 3 egress (mean 145.39 Mbit/s)

• Flow 1 (95th percentile 263.01 ms)   • Flow 2 (95th percentile 147.39 ms)   • Flow 3 (95th percentile 179.25 ms)

```
Run 3: Statistics of PCC-Expr

Start at: 2019-01-19 11:47:43
End at: 2019-01-19 11:48:13
Local clock offset: -0.113 ms
Remote clock offset: 0.004 ms


# Below is generated by plot.py at 2019-01-19 15:25:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 498.94 Mbit/s
95th percentile per-packet one-way delay: 254.823 ms
Loss rate: 5.83%
-- Flow 1:
Average throughput: 275.06 Mbit/s
95th percentile per-packet one-way delay: 216.040 ms
Loss rate: 1.84%
-- Flow 2:
Average throughput: 268.15 Mbit/s
95th percentile per-packet one-way delay: 264.749 ms
Loss rate: 11.45%
-- Flow 3:
Average throughput: 143.12 Mbit/s
95th percentile per-packet one-way delay: 252.289 ms
Loss rate: 5.61%
```
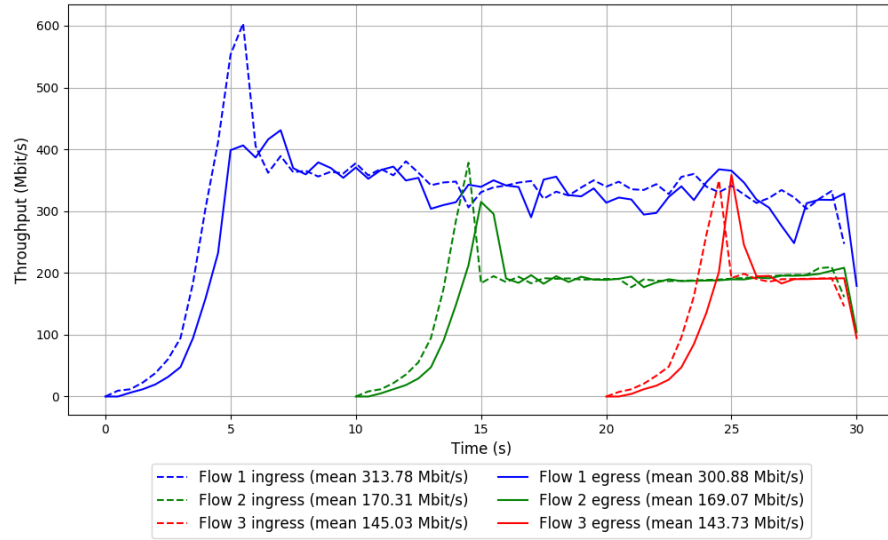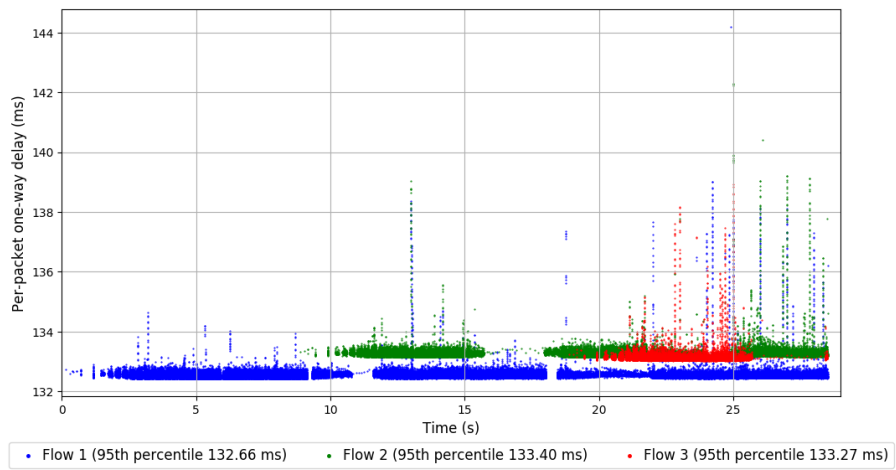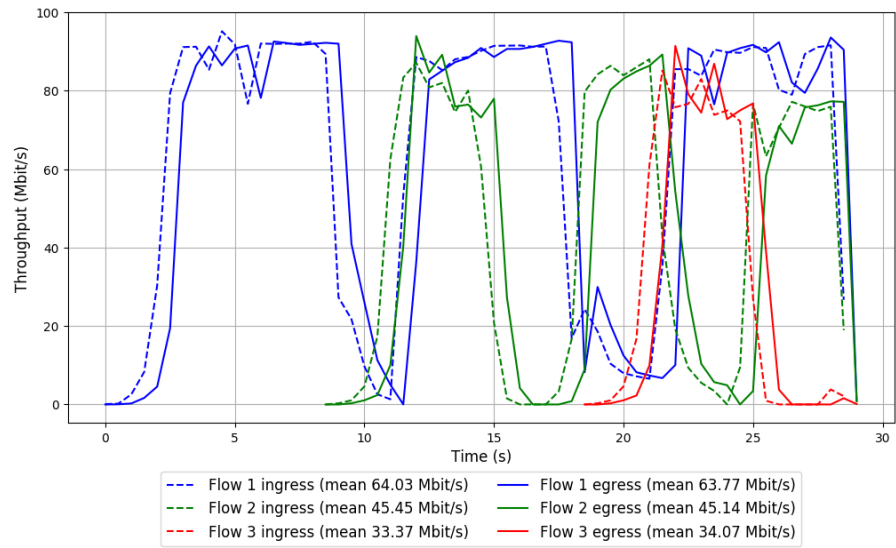
Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 277.72 Mbit/s) --- Flow 1 egress (mean 275.06 Mbit/s)
Flow 2 ingress (mean 298.74 Mbit/s) --- Flow 2 egress (mean 268.15 Mbit/s)
Flow 3 ingress (mean 147.54 Mbit/s) --- Flow 3 egress (mean 143.12 Mbit/s)

Flow 1 (95th percentile 216.04 ms) • Flow 2 (95th percentile 264.75 ms) • Flow 3 (95th percentile 252.29 ms)
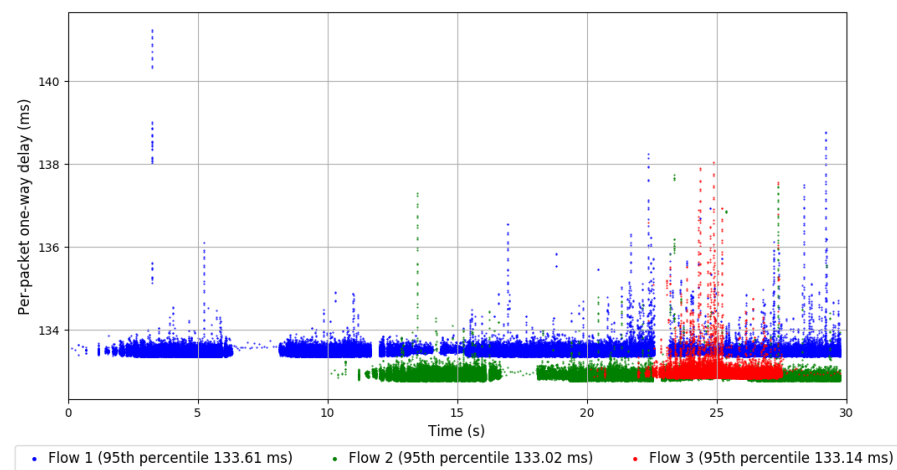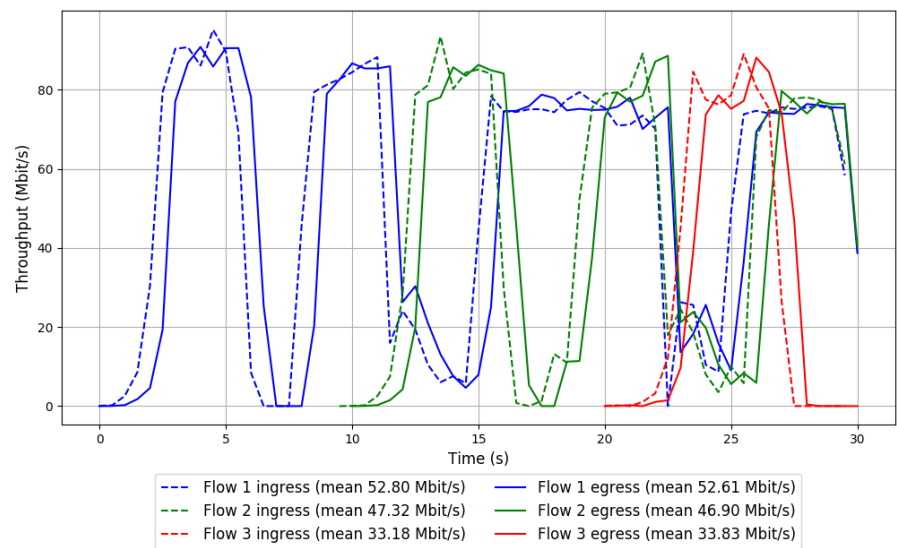
```
Run 4: Statistics of PCC-Expr

Start at: 2019-01-19 12:29:46
End at: 2019-01-19 12:30:16
Local clock offset: 0.336 ms
Remote clock offset: -0.102 ms


# Below is generated by plot.py at 2019-01-19 15:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 458.99 Mbit/s
95th percentile per-packet one-way delay: 210.478 ms
Loss rate: 2.62%
-- Flow 1:
Average throughput: 287.52 Mbit/s
95th percentile per-packet one-way delay: 223.498 ms
Loss rate: 2.88%
-- Flow 2:
Average throughput: 182.86 Mbit/s
95th percentile per-packet one-way delay: 177.355 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 155.58 Mbit/s
95th percentile per-packet one-way delay: 182.906 ms
Loss rate: 3.57%
```

Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-01-19 13:12:05
End at: 2019-01-19 13:12:35
Local clock offset: 0.034 ms
Remote clock offset: -0.05 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 459.31 Mbit/s
95th percentile per-packet one-way delay: 245.749 ms
Loss rate: 4.14%
-- Flow 1:
Average throughput: 300.88 Mbit/s
95th percentile per-packet one-way delay: 250.461 ms
Loss rate: 4.97%
-- Flow 2:
Average throughput: 169.07 Mbit/s
95th percentile per-packet one-way delay: 213.885 ms
Loss rate: 2.06%
-- Flow 3:
Average throughput: 143.73 Mbit/s
95th percentile per-packet one-way delay: 159.579 ms
Loss rate: 3.60%
```

Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-01-19 09:55:13
End at: 2019-01-19 09:55:43
Local clock offset: 0.101 ms
Remote clock offset: -0.06 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 106.53 Mbit/s
95th percentile per-packet one-way delay: 133.323 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 63.77 Mbit/s
95th percentile per-packet one-way delay: 132.657 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 45.14 Mbit/s
95th percentile per-packet one-way delay: 133.399 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 34.07 Mbit/s
95th percentile per-packet one-way delay: 133.272 ms
Loss rate: 0.64%
```
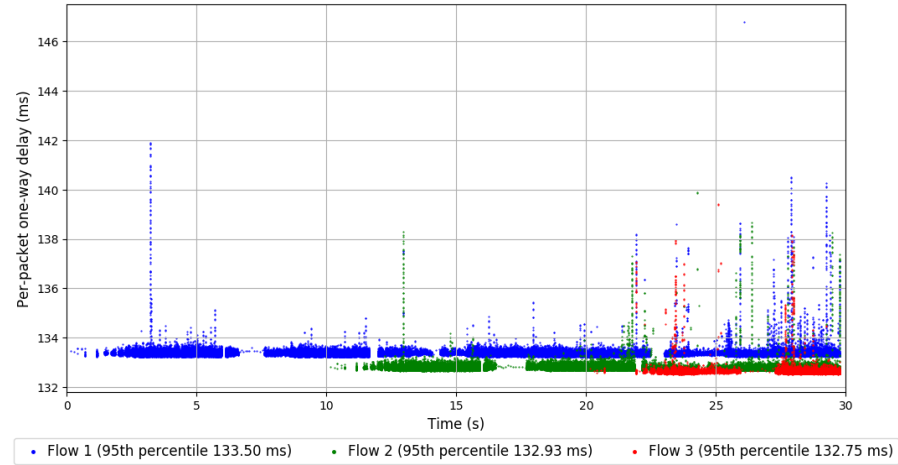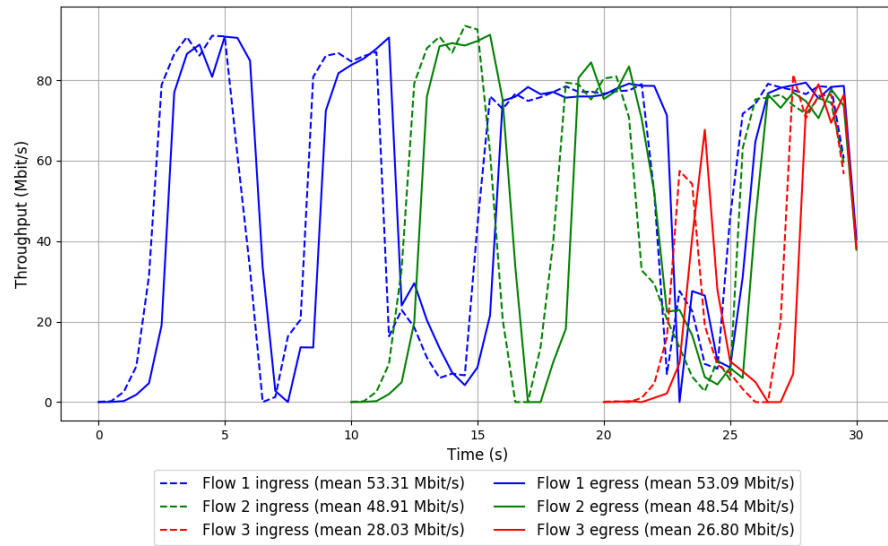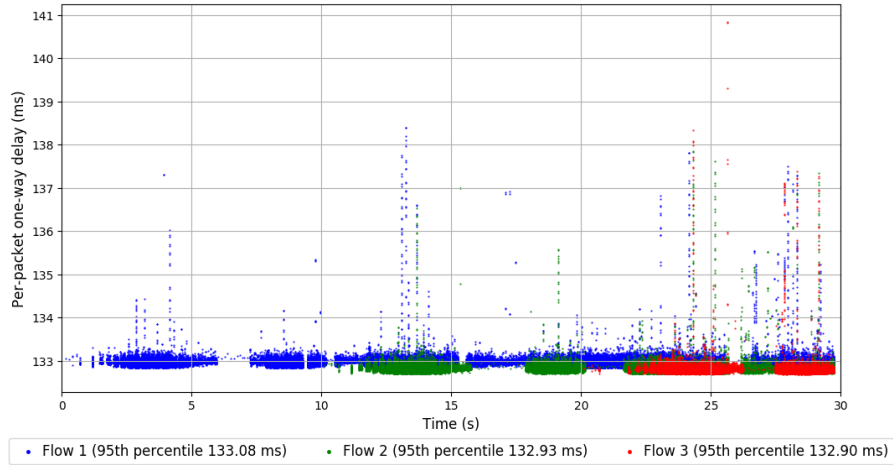
Run 1: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 64.03 Mbit/s) — — — Flow 1 egress (mean 63.77 Mbit/s)
Flow 2 ingress (mean 45.45 Mbit/s) — — — Flow 2 egress (mean 45.14 Mbit/s)
Flow 3 ingress (mean 33.37 Mbit/s) — — — Flow 3 egress (mean 34.07 Mbit/s)

Flow 1 (95th percentile 132.66 ms) • Flow 2 (95th percentile 133.40 ms) • Flow 3 (95th percentile 133.27 ms)

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```
Run 2: Statistics of QUIC Cubic

Start at: 2019-01-19 10:35:58
End at: 2019-01-19 10:36:28
Local clock offset: -0.095 ms
Remote clock offset: -0.123 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.66 Mbit/s
95th percentile per-packet one-way delay: 133.572 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 52.61 Mbit/s
95th percentile per-packet one-way delay: 133.609 ms
Loss rate: 1.24%
-- Flow 2:
Average throughput: 46.90 Mbit/s
95th percentile per-packet one-way delay: 133.017 ms
Loss rate: 2.19%
-- Flow 3:
Average throughput: 33.83 Mbit/s
95th percentile per-packet one-way delay: 133.144 ms
Loss rate: 0.00%
```
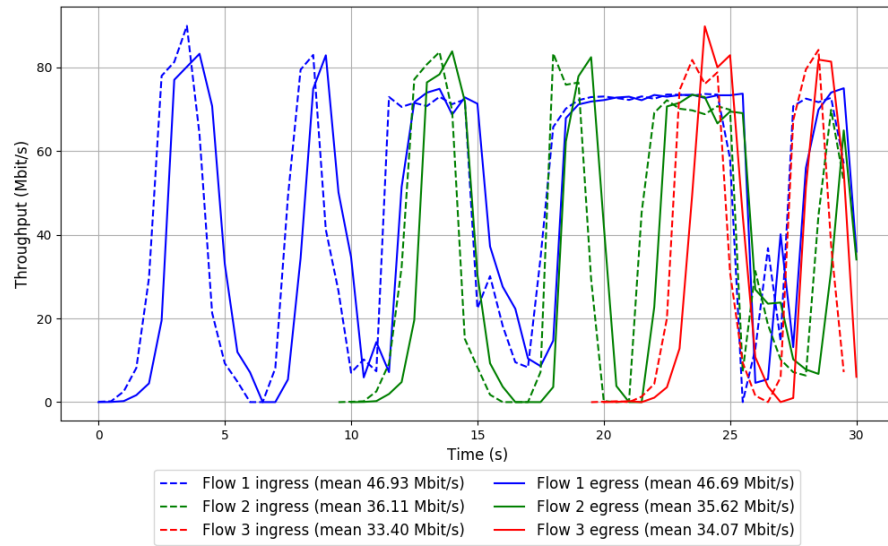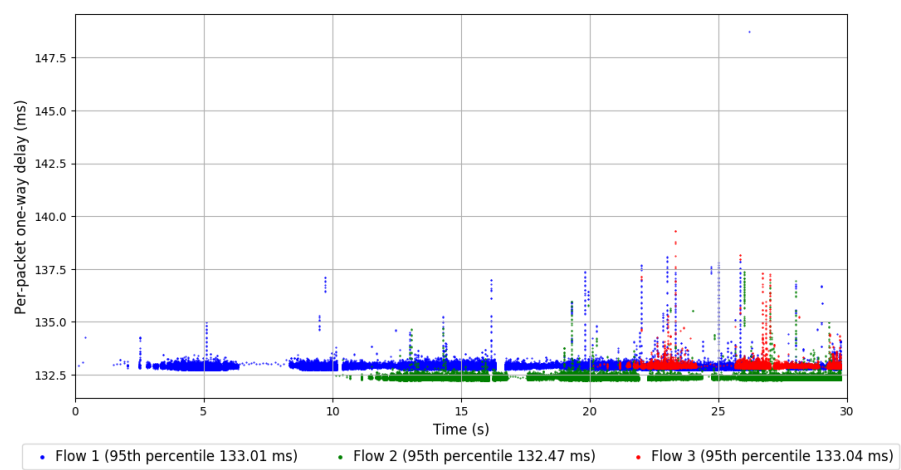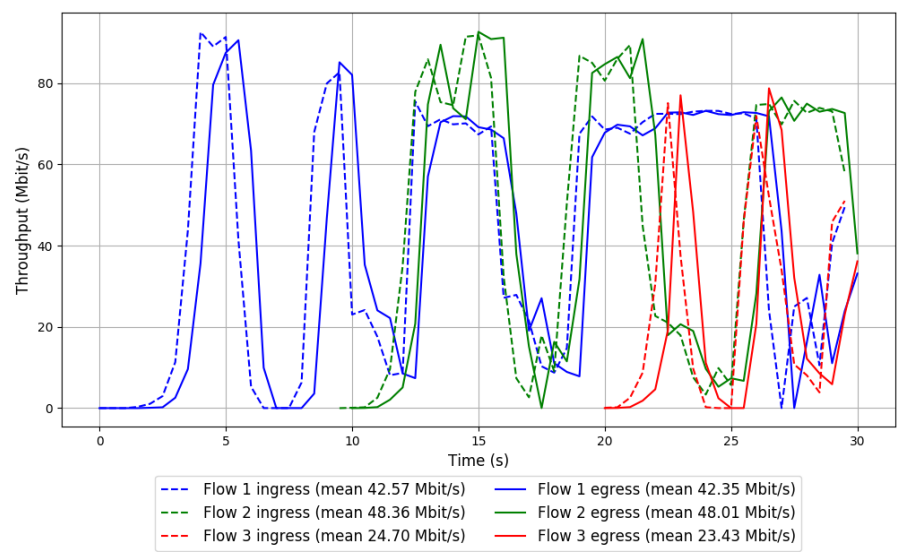
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-01-19 11:18:15
End at: 2019-01-19 11:18:45
Local clock offset: 0.274 ms
Remote clock offset: 0.342 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.92 Mbit/s
95th percentile per-packet one-way delay: 133.465 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 53.09 Mbit/s
95th percentile per-packet one-way delay: 133.500 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 48.54 Mbit/s
95th percentile per-packet one-way delay: 132.934 ms
Loss rate: 2.07%
-- Flow 3:
Average throughput: 26.80 Mbit/s
95th percentile per-packet one-way delay: 132.747 ms
Loss rate: 6.94%
```
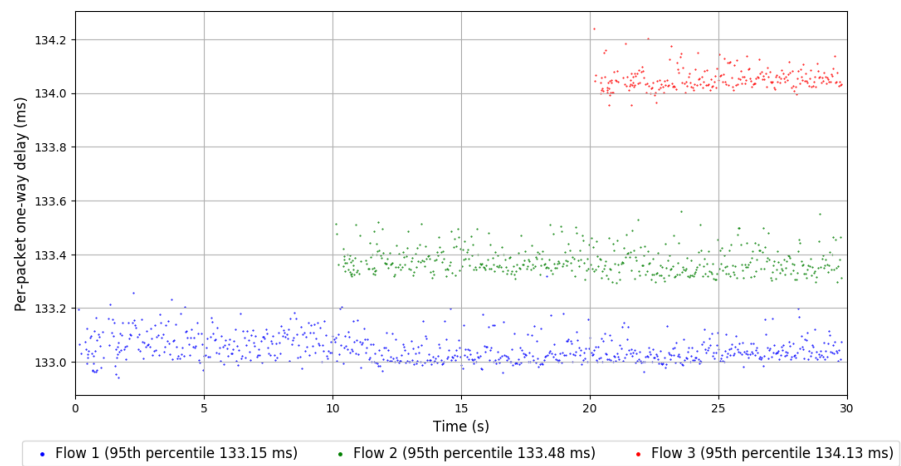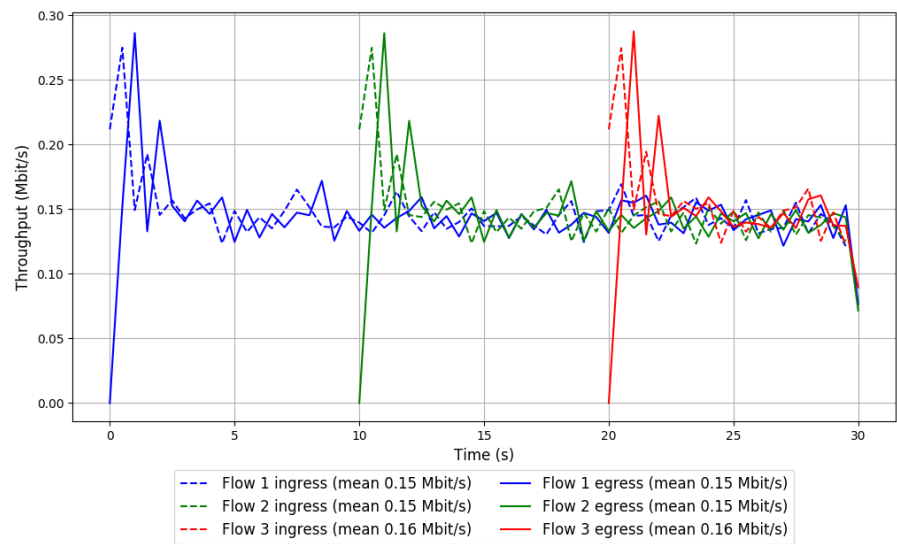
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 53.31 Mbit/s)   Flow 1 egress (mean 53.09 Mbit/s)
Flow 2 ingress (mean 48.91 Mbit/s)   Flow 2 egress (mean 48.54 Mbit/s)
Flow 3 ingress (mean 28.03 Mbit/s)   Flow 3 egress (mean 26.80 Mbit/s)

Flow 1 (95th percentile 133.50 ms)   Flow 2 (95th percentile 132.93 ms)   Flow 3 (95th percentile 132.75 ms)
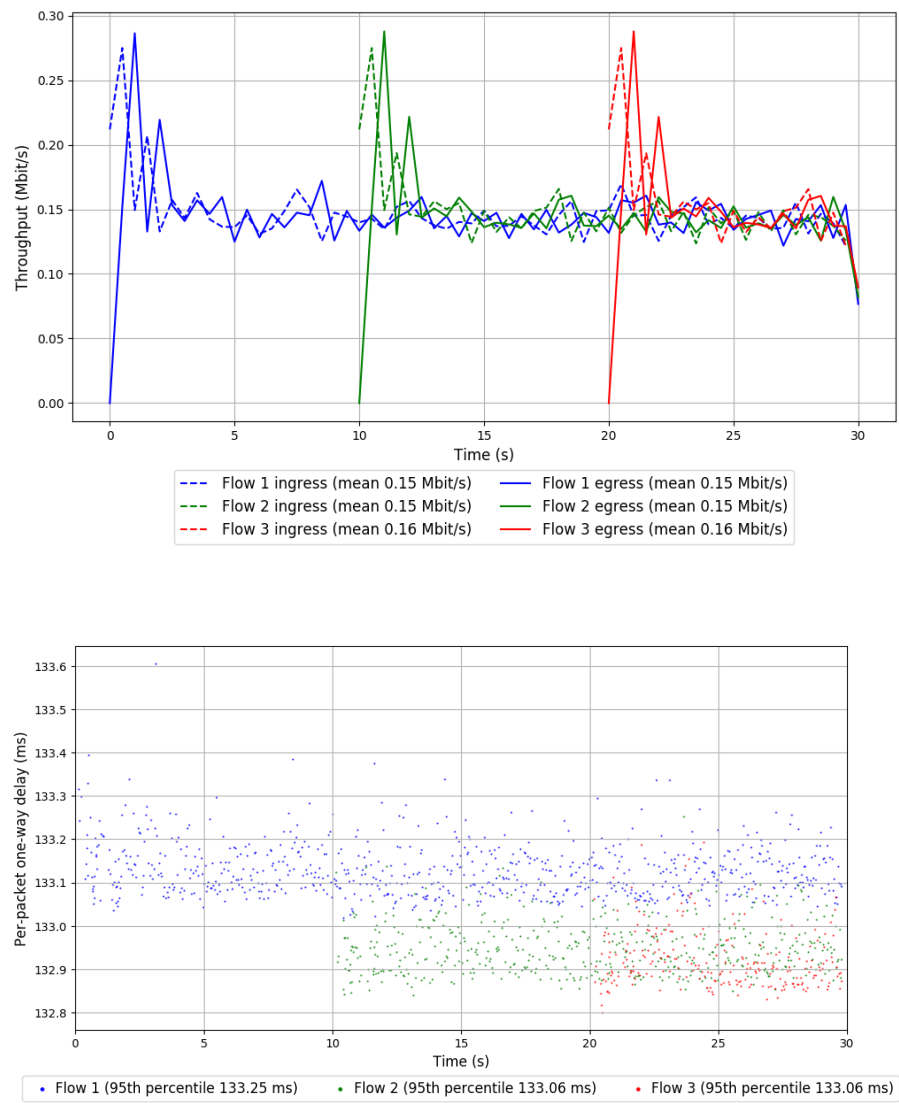
```
Run 4: Statistics of QUIC Cubic

Start at: 2019-01-19 11:59:35
End at: 2019-01-19 12:00:05
Local clock offset: -0.099 ms
Remote clock offset: -0.01 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.38 Mbit/s
95th percentile per-packet one-way delay: 133.048 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 46.69 Mbit/s
95th percentile per-packet one-way delay: 133.076 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 35.62 Mbit/s
95th percentile per-packet one-way delay: 132.933 ms
Loss rate: 2.66%
-- Flow 3:
Average throughput: 34.07 Mbit/s
95th percentile per-packet one-way delay: 132.900 ms
Loss rate: 0.75%
```

Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-01-19 12:41:38
End at: 2019-01-19 12:42:08
Local clock offset: -0.117 ms
Remote clock offset: -0.141 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.77 Mbit/s
95th percentile per-packet one-way delay: 132.983 ms
Loss rate: 2.27%
-- Flow 1:
Average throughput: 42.35 Mbit/s
95th percentile per-packet one-way delay: 133.012 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 48.01 Mbit/s
95th percentile per-packet one-way delay: 132.470 ms
Loss rate: 2.05%
-- Flow 3:
Average throughput: 23.43 Mbit/s
95th percentile per-packet one-way delay: 133.038 ms
Loss rate: 7.71%
```

Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 42.57 Mbit/s) --- Flow 1 egress (mean 42.35 Mbit/s)
Flow 2 ingress (mean 48.36 Mbit/s) --- Flow 2 egress (mean 48.01 Mbit/s)
Flow 3 ingress (mean 24.70 Mbit/s) --- Flow 3 egress (mean 23.43 Mbit/s)

Flow 1 (95th percentile 133.01 ms) • Flow 2 (95th percentile 132.47 ms) • Flow 3 (95th percentile 133.04 ms)
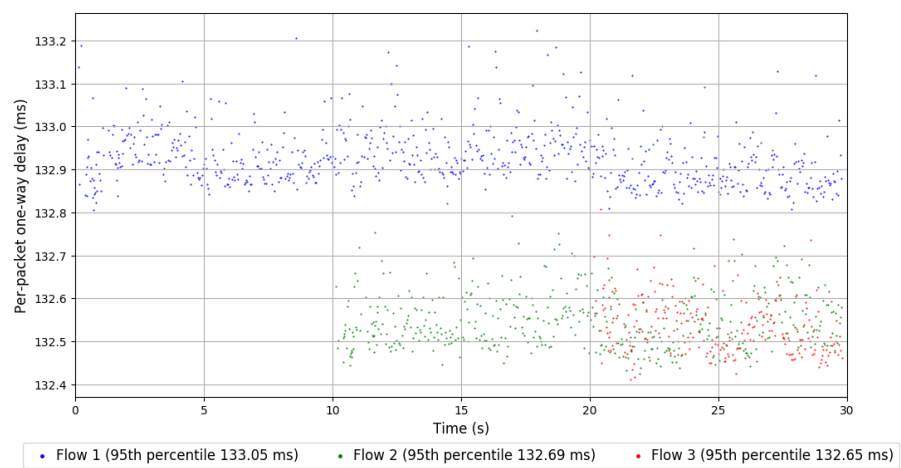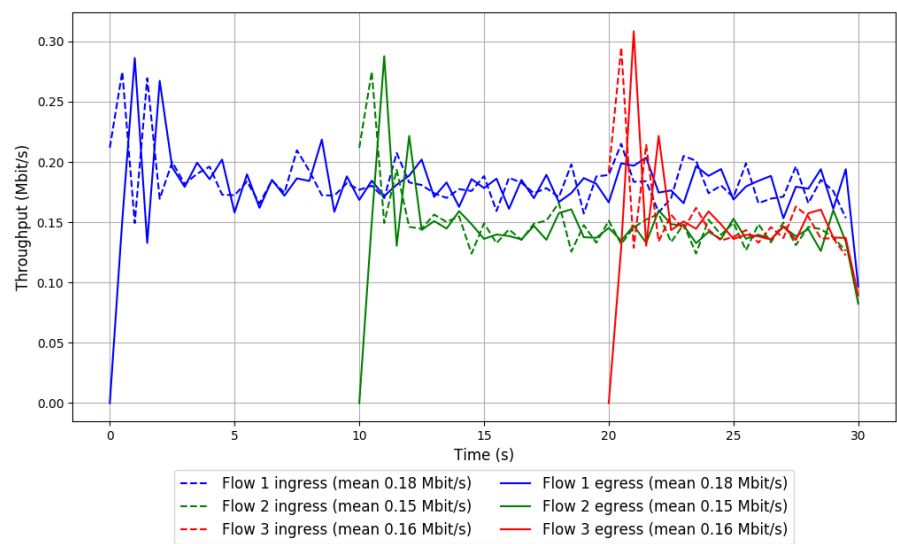
```
Run 1: Statistics of SCReAM

Start at: 2019-01-19 10:27:13
End at: 2019-01-19 10:27:43
Local clock offset: 0.359 ms
Remote clock offset: -0.136 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 134.062 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.147 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.477 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 134.130 ms
Loss rate: 2.45%
```

Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-01-19 11:08:18
End at: 2019-01-19 11:08:48
Local clock offset: 0.043 ms
Remote clock offset: -0.104 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 133.209 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.245 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.056 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 133.056 ms
Loss rate: 2.45%
```
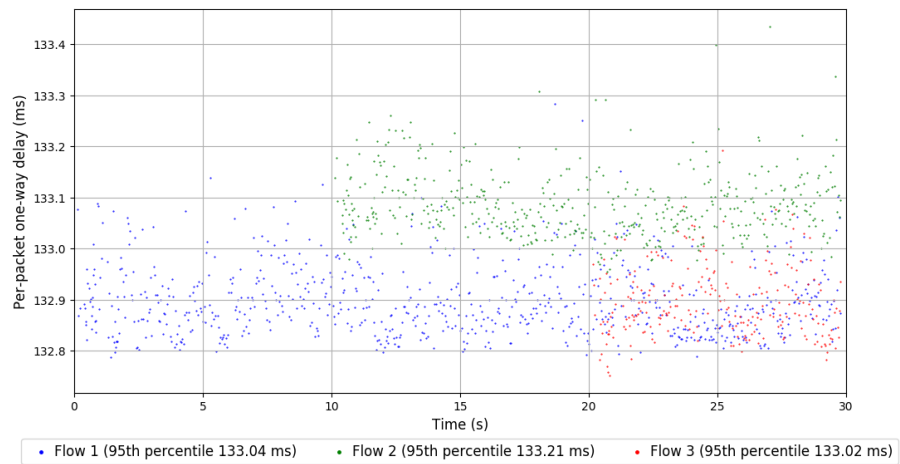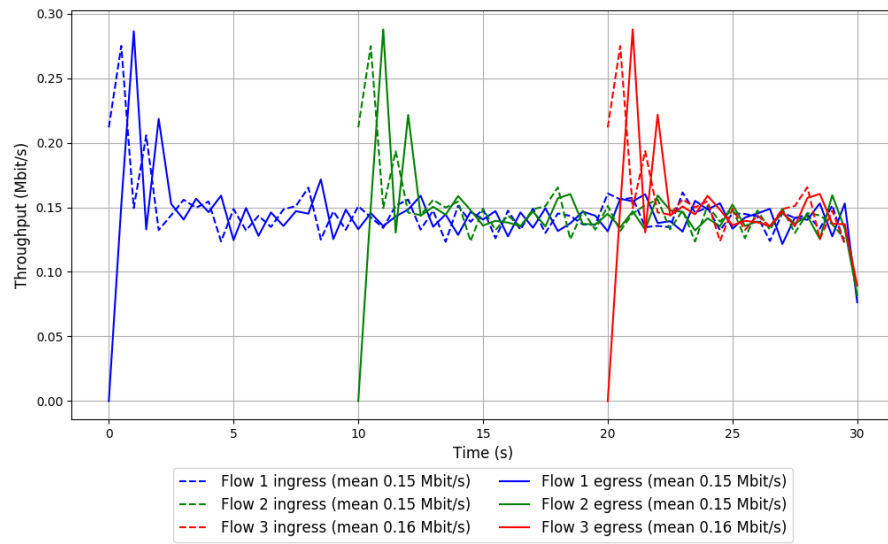
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-01-19 11:50:22
End at: 2019-01-19 11:50:52
Local clock offset: 0.607 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 134.389 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.775 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 134.499 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 133.852 ms
Loss rate: 2.44%
```
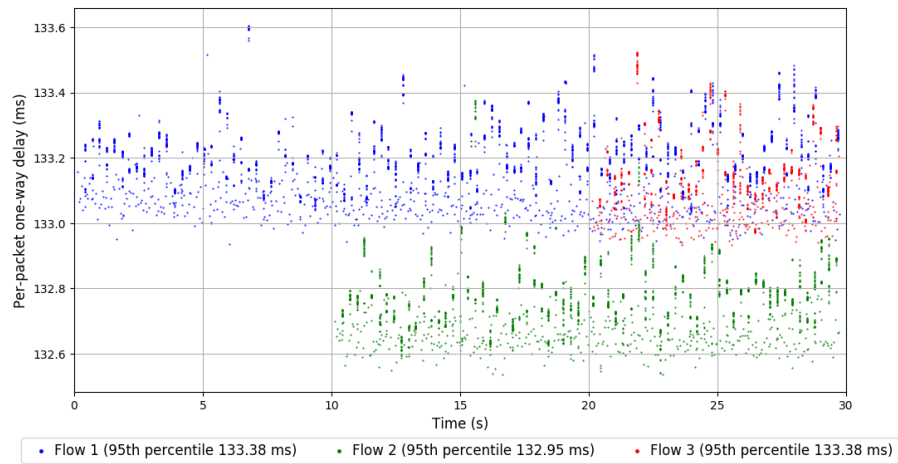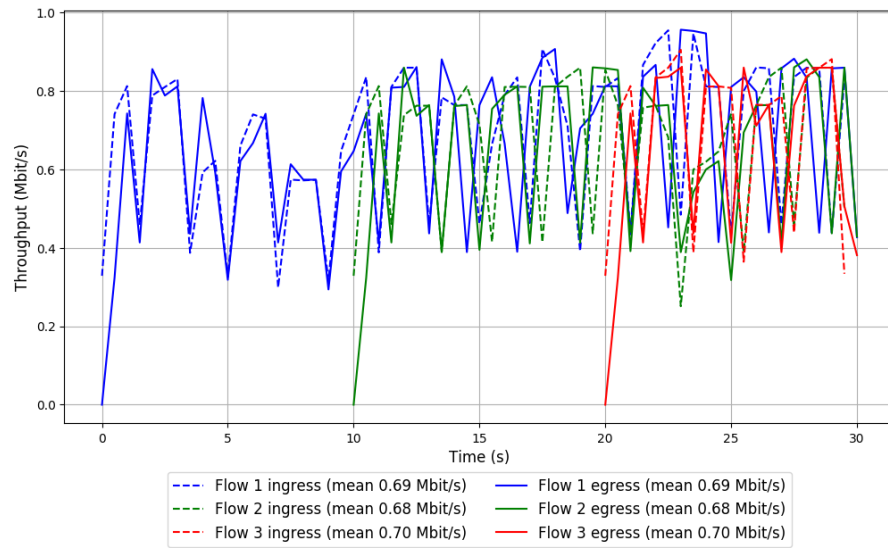
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-01-19 12:32:15
End at: 2019-01-19 12:32:45
Local clock offset: -0.445 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 133.003 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 133.054 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 132.688 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 132.649 ms
Loss rate: 2.12%
```
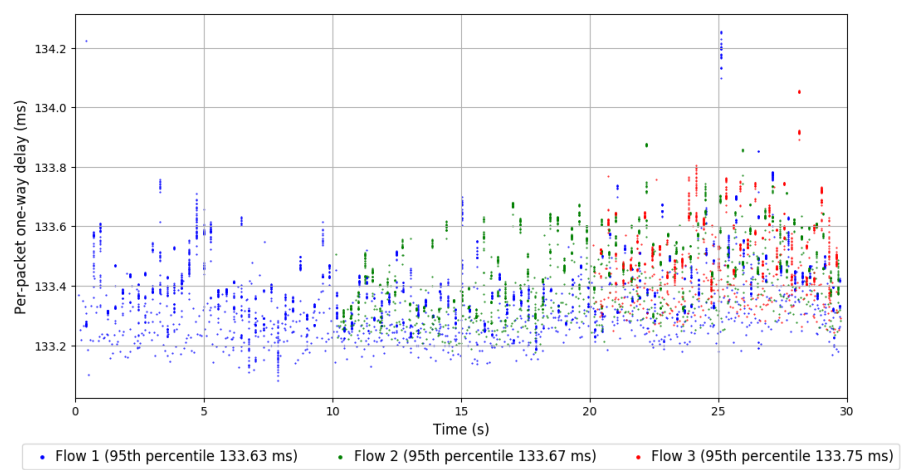
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-01-19 13:14:43
End at: 2019-01-19 13:15:13
Local clock offset: -0.245 ms
Remote clock offset: -0.033 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 133.147 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.038 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.206 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 133.024 ms
Loss rate: 2.45%
```
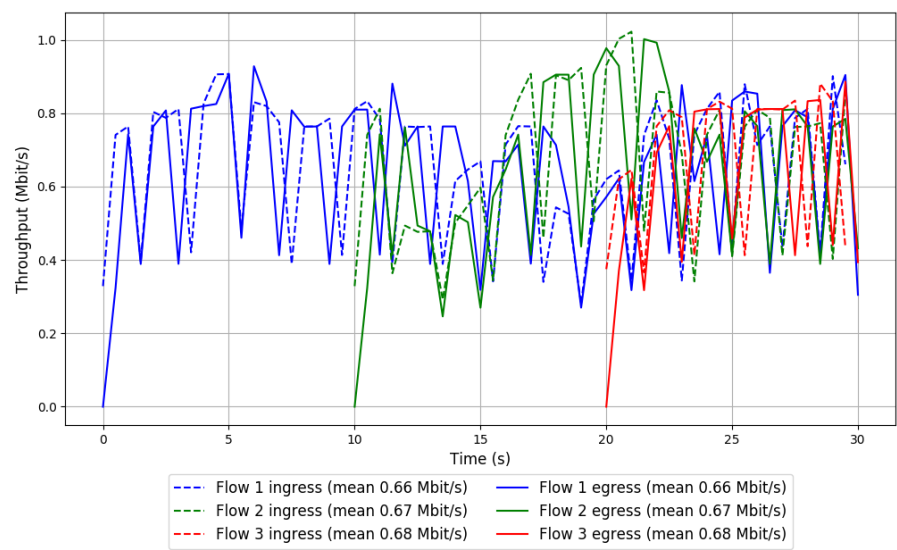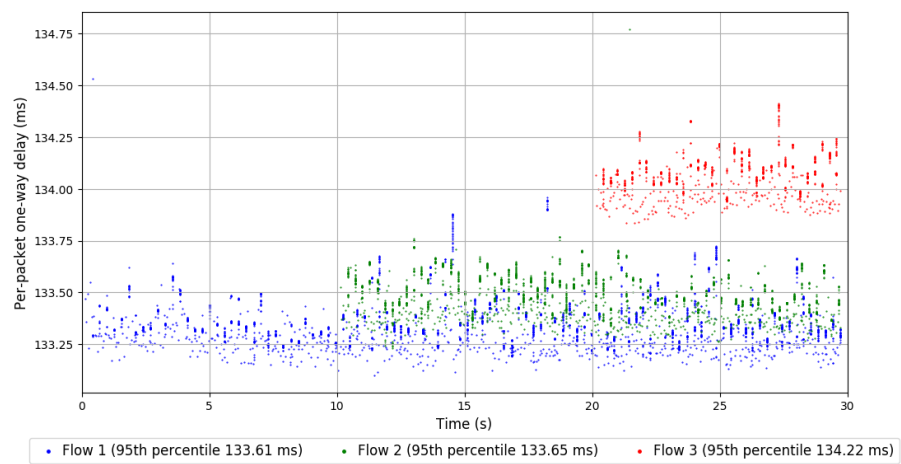
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-01-19 10:09:58
End at: 2019-01-19 10:10:28
Local clock offset: 0.02 ms
Remote clock offset: -0.095 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 133.353 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 133.385 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 132.953 ms
Loss rate: 1.85%
-- Flow 3:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 133.382 ms
Loss rate: 2.40%
```
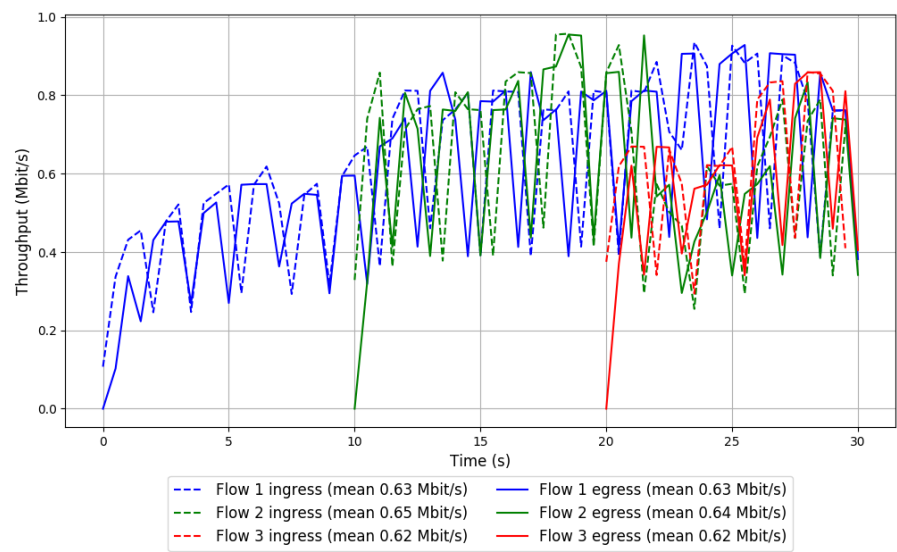
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-01-19 10:50:52
End at: 2019-01-19 10:51:22
Local clock offset: 0.235 ms
Remote clock offset: -0.062 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 133.678 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 133.629 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 133.667 ms
Loss rate: 1.61%
-- Flow 3:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 133.747 ms
Loss rate: 3.20%
```
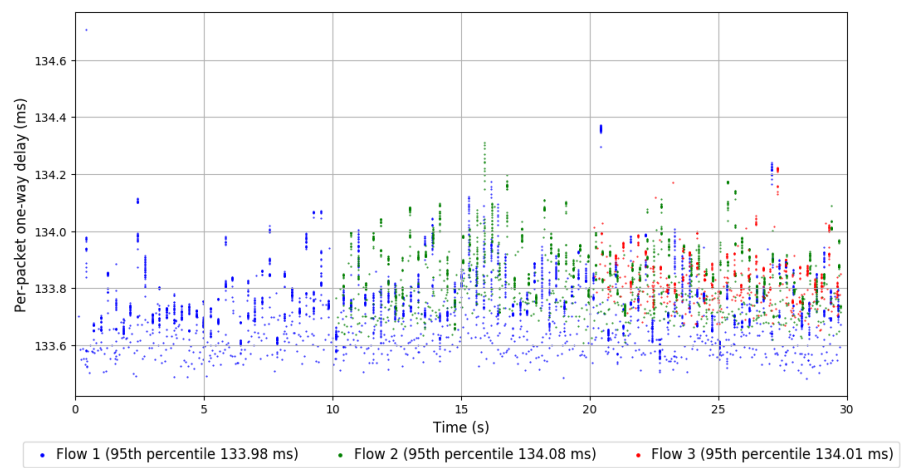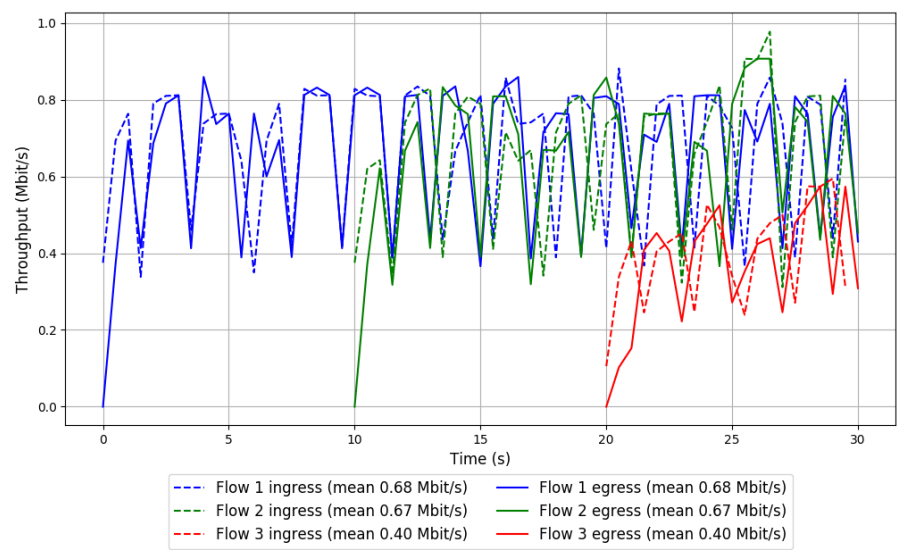
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-01-19 11:33:11
End at: 2019-01-19 11:33:41
Local clock offset: 0.333 ms
Remote clock offset: -0.048 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 134.111 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 133.611 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 133.646 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 134.219 ms
Loss rate: 3.30%
```
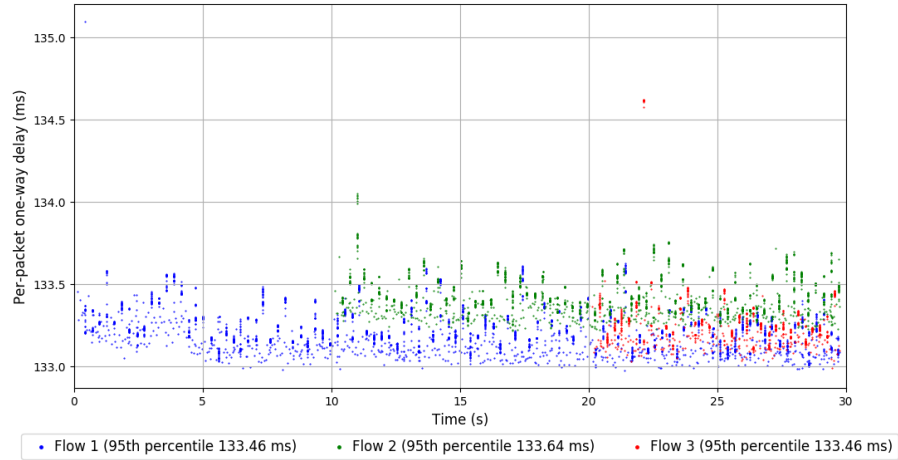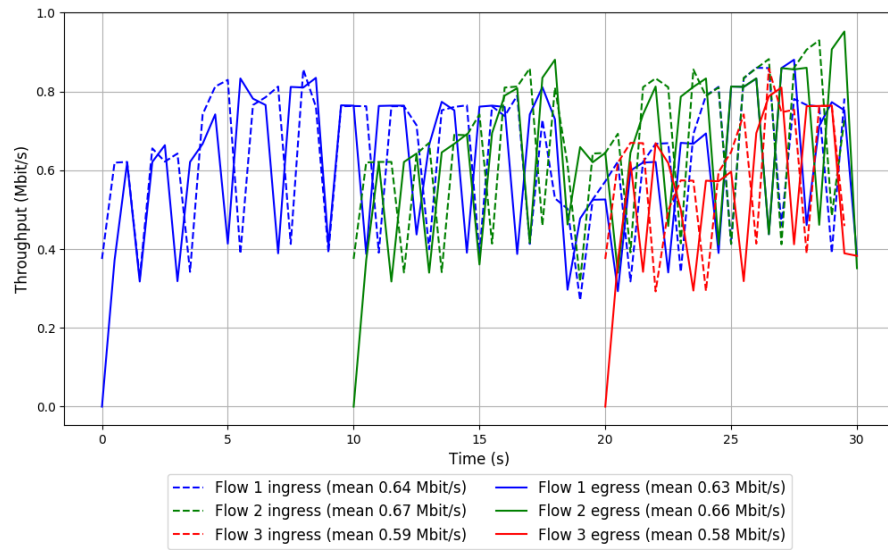
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-01-19 12:14:47
End at: 2019-01-19 12:15:17
Local clock offset: 0.51 ms
Remote clock offset: -0.033 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 134.023 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 133.978 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 134.076 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 134.013 ms
Loss rate: 3.85%
```
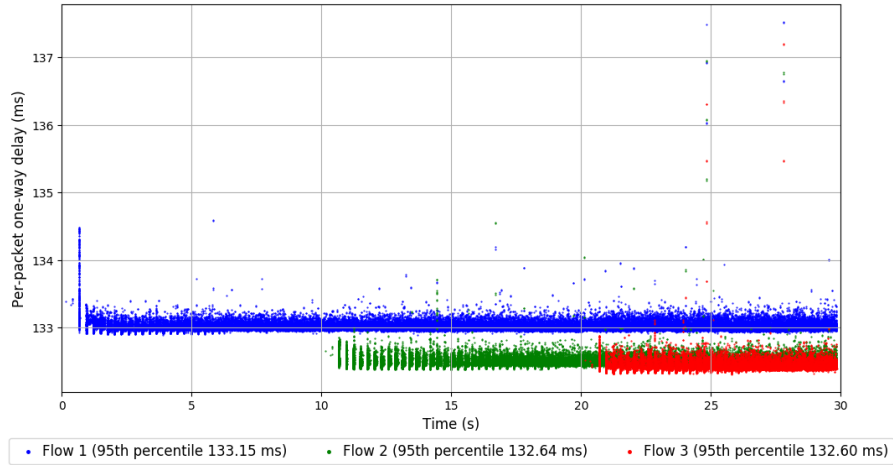
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-01-19 12:56:50
End at: 2019-01-19 12:57:20
Local clock offset: -0.04 ms
Remote clock offset: -0.212 ms


# Below is generated by plot.py at 2019-01-19 15:31:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 133.578 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 133.459 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 133.638 ms
Loss rate: 1.45%
-- Flow 3:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 133.460 ms
Loss rate: 3.88%
```

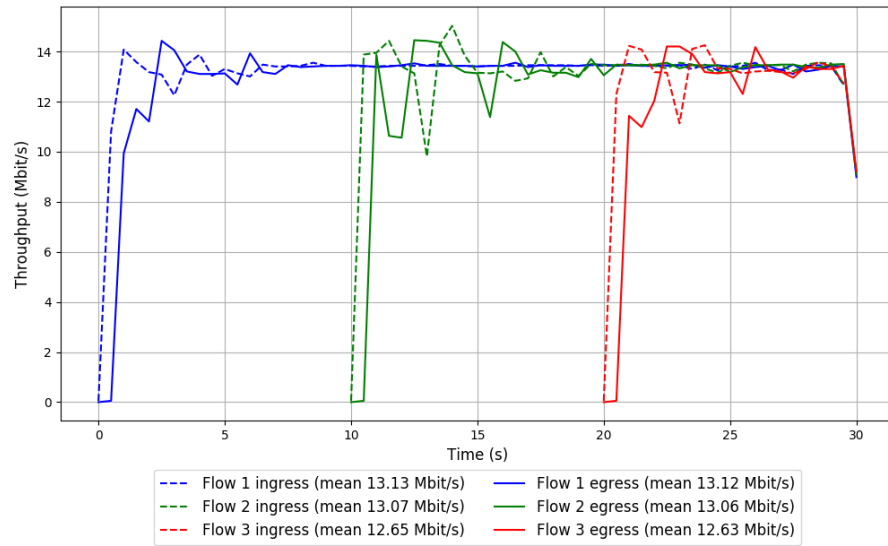## Run 5: Report of Sprout — Data Link

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

Start at: 2019-01-19 10:01:24
End at: 2019-01-19 10:01:54
Local clock offset: -0.494 ms
Remote clock offset: -0.054 ms


# Below is generated by plot.py at 2019-01-19 15:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.90 Mbit/s
95th percentile per-packet one-way delay: 133.114 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 13.12 Mbit/s
95th percentile per-packet one-way delay: 133.154 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 132.638 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 12.63 Mbit/s
95th percentile per-packet one-way delay: 132.603 ms
Loss rate: 2.83%
```

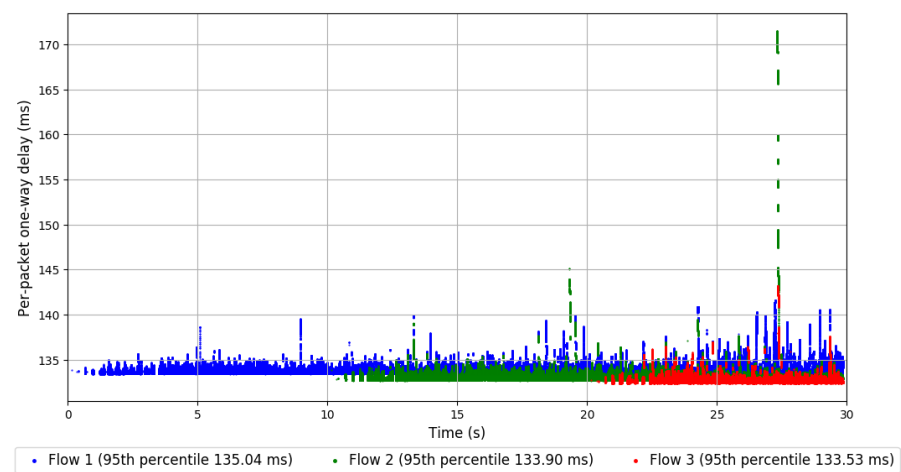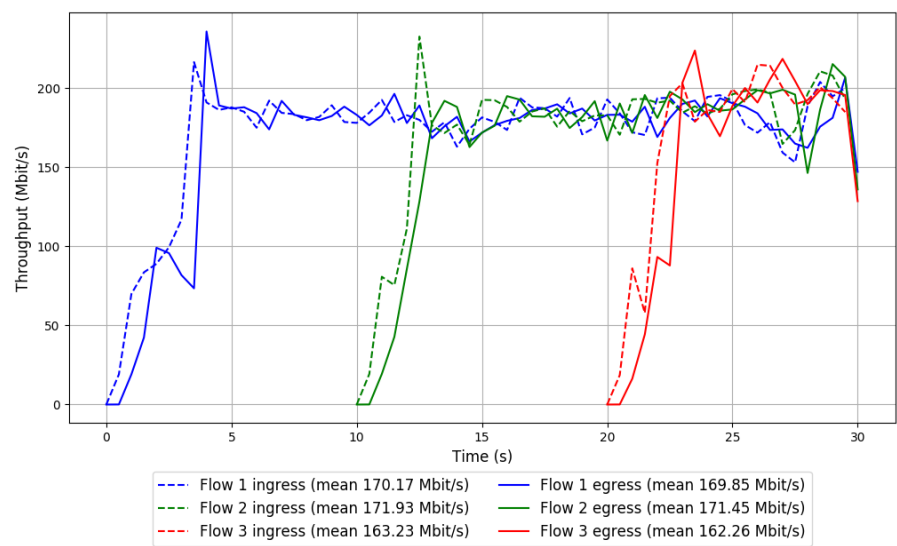# Run 1: Report of TaoVA-100x — Data Link

- Flow 1 ingress (mean 13.13 Mbit/s)
- Flow 1 egress (mean 13.12 Mbit/s)
- Flow 2 ingress (mean 13.07 Mbit/s)
- Flow 2 egress (mean 13.06 Mbit/s)
- Flow 3 ingress (mean 12.65 Mbit/s)
- Flow 3 egress (mean 12.63 Mbit/s)

- Flow 1 (95th percentile 133.15 ms)
- Flow 2 (95th percentile 132.64 ms)
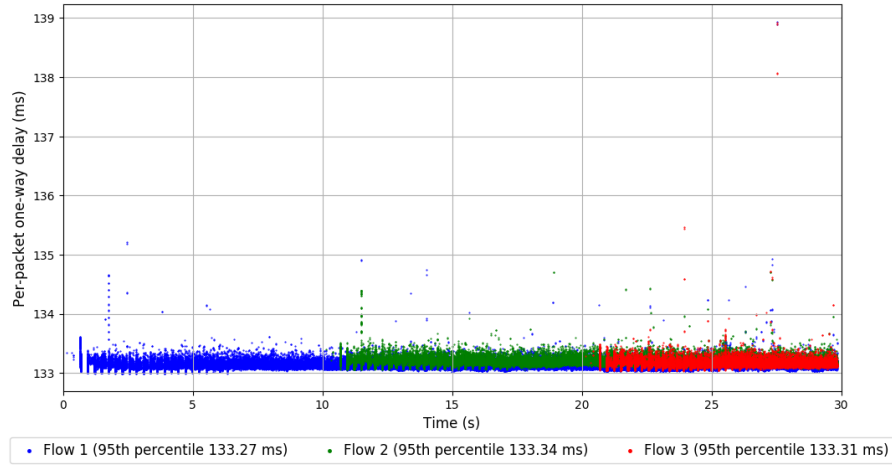- Flow 3 (95th percentile 132.60 ms)

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

Start at: 2019-01-19 10:41:16
End at: 2019-01-19 10:41:46
Local clock offset: -0.003 ms
Remote clock offset: -0.118 ms


# Below is generated by plot.py at 2019-01-19 15:36:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 336.39 Mbit/s
95th percentile per-packet one-way delay: 134.619 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 169.85 Mbit/s
95th percentile per-packet one-way delay: 135.042 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 171.45 Mbit/s
95th percentile per-packet one-way delay: 133.895 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 162.26 Mbit/s
95th percentile per-packet one-way delay: 133.531 ms
Loss rate: 3.17%
```

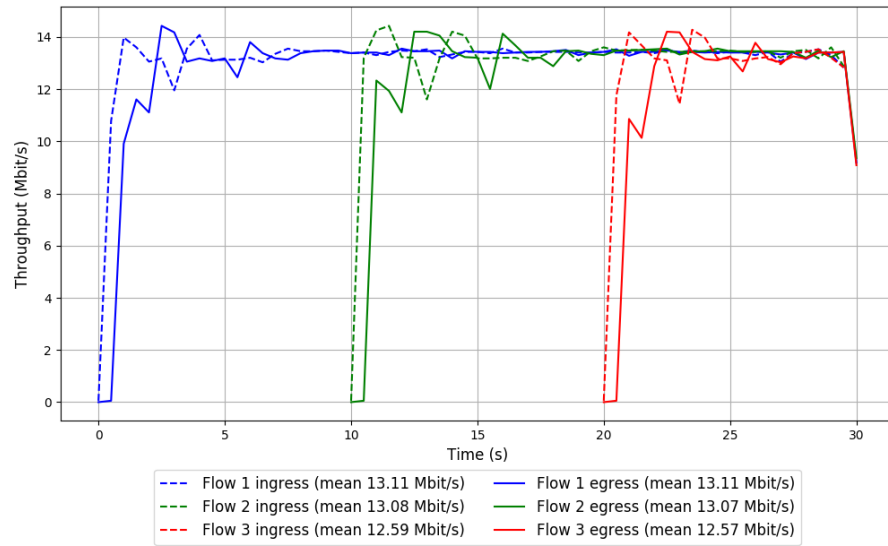# Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 170.17 Mbit/s) --- Flow 1 egress (mean 169.85 Mbit/s)
Flow 2 ingress (mean 171.93 Mbit/s) --- Flow 2 egress (mean 171.45 Mbit/s)
Flow 3 ingress (mean 163.23 Mbit/s) --- Flow 3 egress (mean 162.26 Mbit/s)

Flow 1 (95th percentile 135.04 ms)   Flow 2 (95th percentile 133.90 ms)   Flow 3 (95th percentile 133.53 ms)
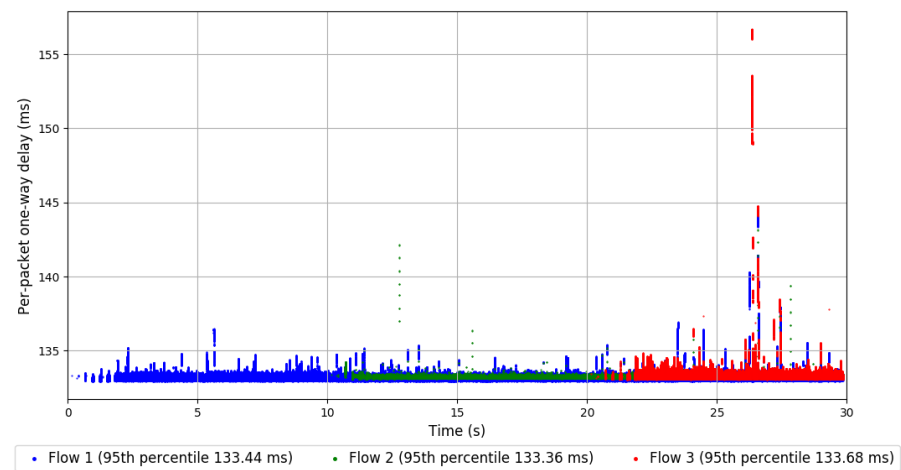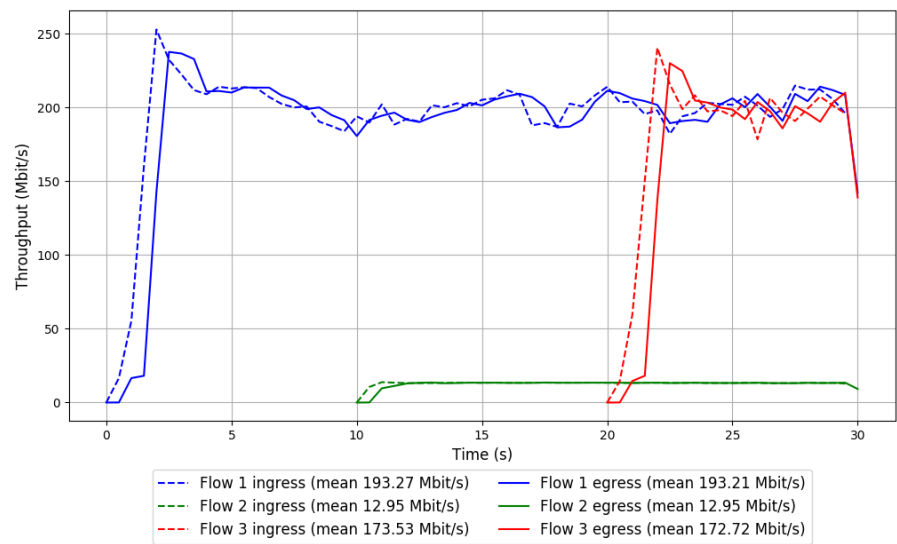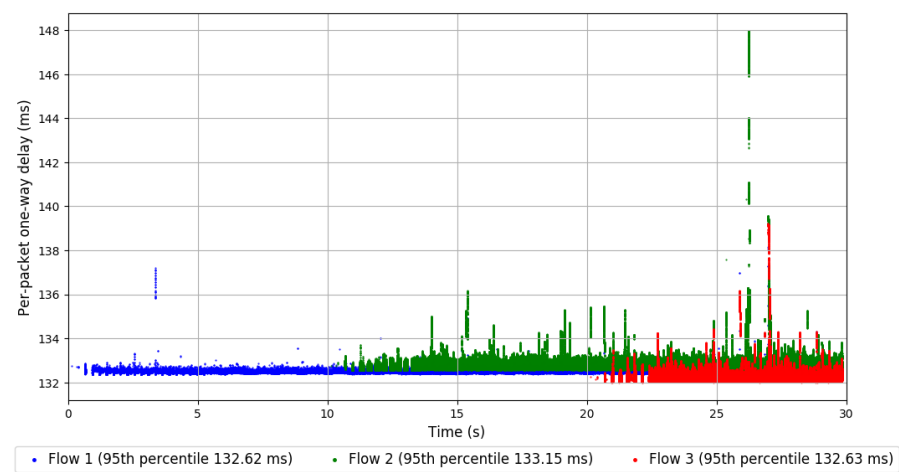
```
Run 3: Statistics of TaoVA-100x

Start at: 2019-01-19 11:24:13
End at: 2019-01-19 11:24:43
Local clock offset: 0.16 ms
Remote clock offset: -0.038 ms


# Below is generated by plot.py at 2019-01-19 15:36:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.88 Mbit/s
95th percentile per-packet one-way delay: 133.307 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 13.11 Mbit/s
95th percentile per-packet one-way delay: 133.269 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 13.07 Mbit/s
95th percentile per-packet one-way delay: 133.339 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 133.307 ms
Loss rate: 2.86%
```

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

Flow 1 ingress (mean 13.11 Mbit/s) Flow 1 egress (mean 13.11 Mbit/s)
Flow 2 ingress (mean 13.08 Mbit/s) Flow 2 egress (mean 13.07 Mbit/s)
Flow 3 ingress (mean 12.59 Mbit/s) Flow 3 egress (mean 12.57 Mbit/s)

Flow 1 (95th percentile 133.27 ms) Flow 2 (95th percentile 133.34 ms) Flow 3 (95th percentile 133.31 ms)
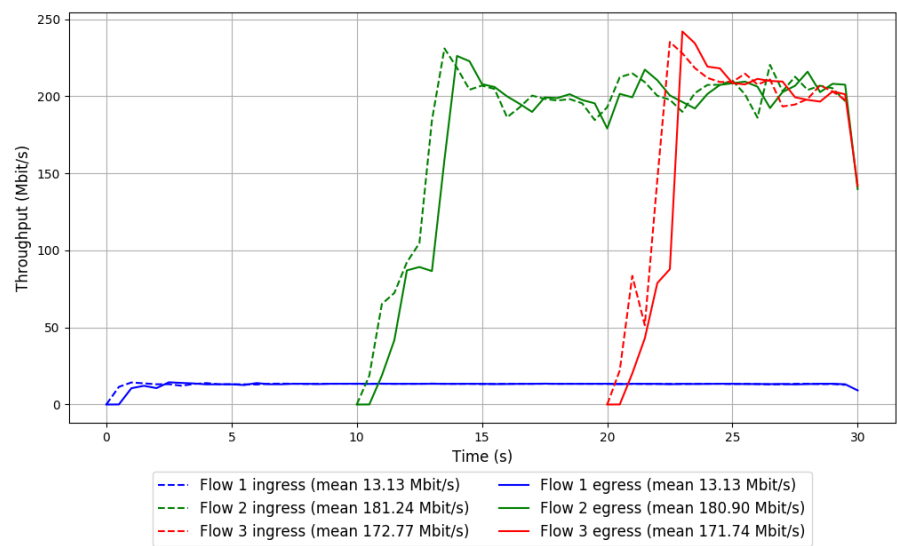
```
Run 4: Statistics of TaoVA-100x

Start at: 2019-01-19 12:05:17
End at: 2019-01-19 12:05:47
Local clock offset: -0.11 ms
Remote clock offset: -0.038 ms


# Below is generated by plot.py at 2019-01-19 15:36:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 258.14 Mbit/s
95th percentile per-packet one-way delay: 133.518 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 193.21 Mbit/s
95th percentile per-packet one-way delay: 133.445 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 12.95 Mbit/s
95th percentile per-packet one-way delay: 133.356 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 172.72 Mbit/s
95th percentile per-packet one-way delay: 133.683 ms
Loss rate: 3.13%
```

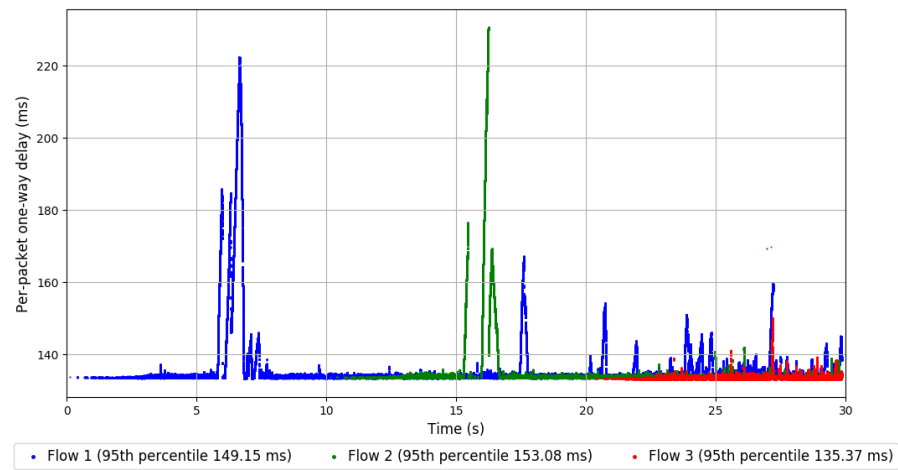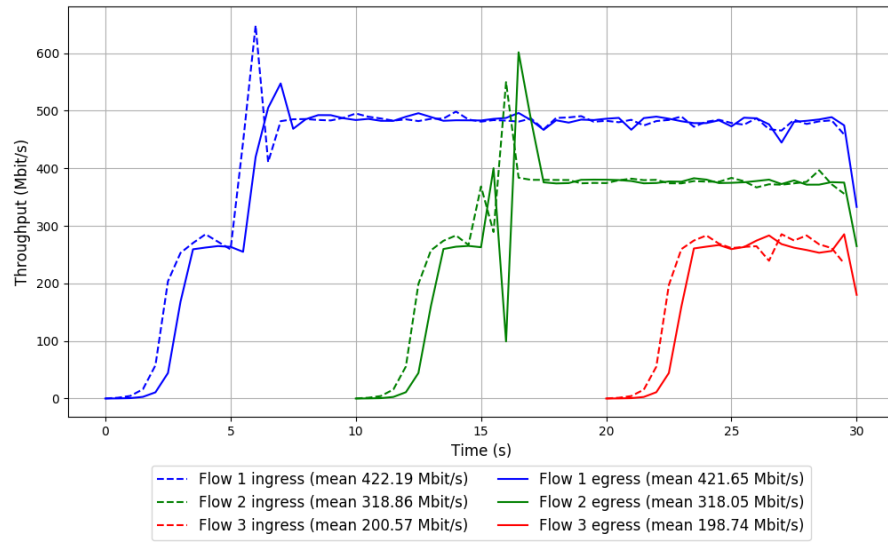# Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 193.27 Mbit/s) -- -- Flow 1 egress (mean 193.21 Mbit/s) ——
Flow 2 ingress (mean 12.95 Mbit/s) -- -- Flow 2 egress (mean 12.95 Mbit/s) ——
Flow 3 ingress (mean 173.53 Mbit/s) -- -- Flow 3 egress (mean 172.72 Mbit/s) ——

Flow 1 (95th percentile 133.44 ms)   Flow 2 (95th percentile 133.36 ms)   Flow 3 (95th percentile 133.68 ms)

```
Run 5: Statistics of TaoVA-100x

Start at: 2019-01-19 12:47:18
End at: 2019-01-19 12:47:48
Local clock offset: -0.31 ms
Remote clock offset: -0.116 ms


# Below is generated by plot.py at 2019-01-19 15:36:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 189.15 Mbit/s
95th percentile per-packet one-way delay: 133.080 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 13.13 Mbit/s
95th percentile per-packet one-way delay: 132.622 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 180.90 Mbit/s
95th percentile per-packet one-way delay: 133.151 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 171.74 Mbit/s
95th percentile per-packet one-way delay: 132.633 ms
Loss rate: 3.25%
```

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

```
Run 1: Statistics of TCP Vegas

Start at: 2019-01-19 10:22:15
End at: 2019-01-19 10:22:45
Local clock offset: -0.495 ms
Remote clock offset: -0.456 ms

# Below is generated by plot.py at 2019-01-19 15:39:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 697.40 Mbit/s
95th percentile per-packet one-way delay: 147.641 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 421.65 Mbit/s
95th percentile per-packet one-way delay: 149.147 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 318.05 Mbit/s
95th percentile per-packet one-way delay: 153.083 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 198.74 Mbit/s
95th percentile per-packet one-way delay: 135.367 ms
Loss rate: 3.56%
```
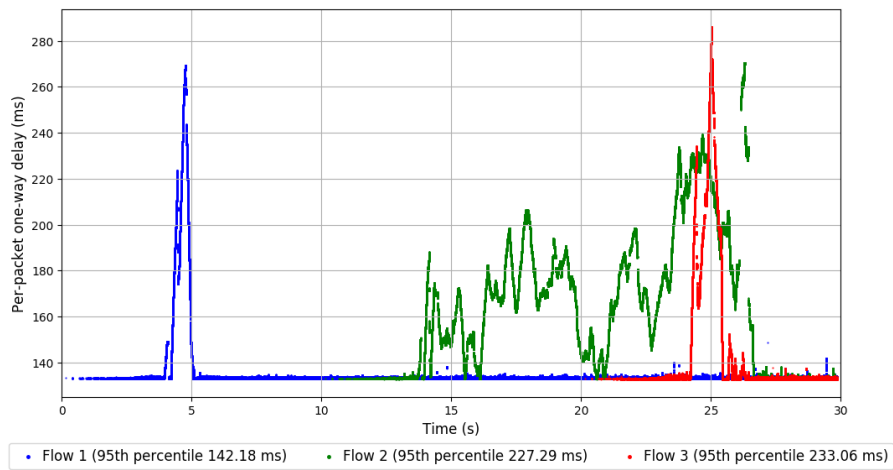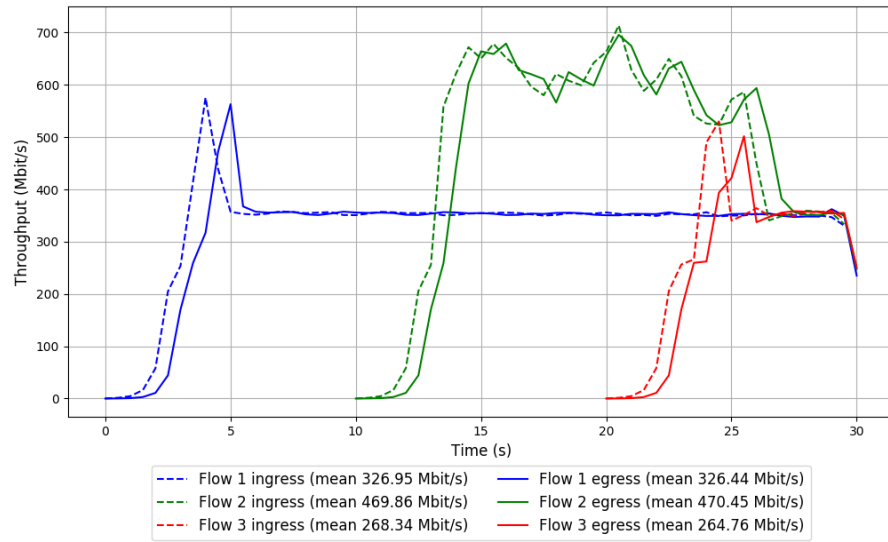
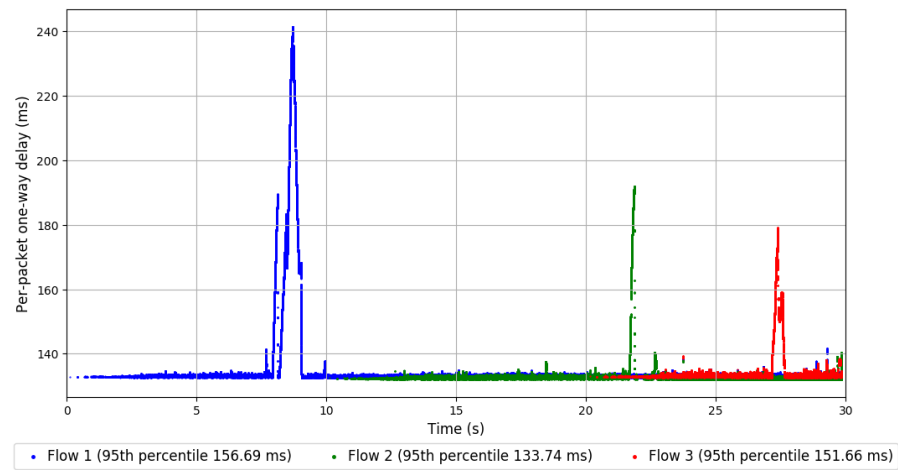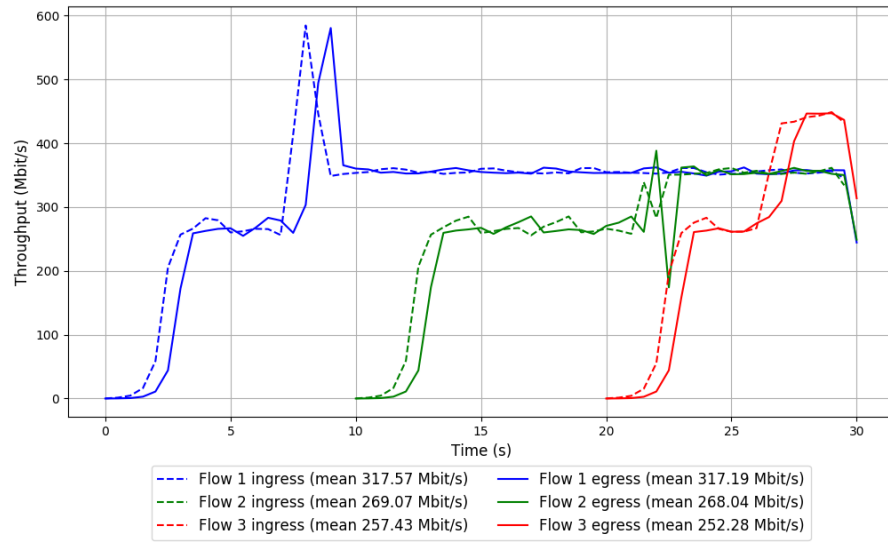# Run 1: Report of TCP Vegas — Data Link

- - - - Flow 1 ingress (mean 422.19 Mbit/s)   ——— Flow 1 egress (mean 421.65 Mbit/s)
- - - - Flow 2 ingress (mean 318.86 Mbit/s)   ——— Flow 2 egress (mean 318.05 Mbit/s)
- - - - Flow 3 ingress (mean 200.57 Mbit/s)   ——— Flow 3 egress (mean 198.74 Mbit/s)

• Flow 1 (95th percentile 149.15 ms)   • Flow 2 (95th percentile 153.08 ms)   • Flow 3 (95th percentile 135.37 ms)

```
Run 2: Statistics of TCP Vegas

Start at: 2019-01-19 11:03:09
End at: 2019-01-19 11:03:39
Local clock offset: 0.088 ms
Remote clock offset: -0.09 ms


# Below is generated by plot.py at 2019-01-19 15:39:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 725.02 Mbit/s
95th percentile per-packet one-way delay: 217.045 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 326.44 Mbit/s
95th percentile per-packet one-way delay: 142.182 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 470.45 Mbit/s
95th percentile per-packet one-way delay: 227.286 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 264.76 Mbit/s
95th percentile per-packet one-way delay: 233.055 ms
Loss rate: 3.94%
```
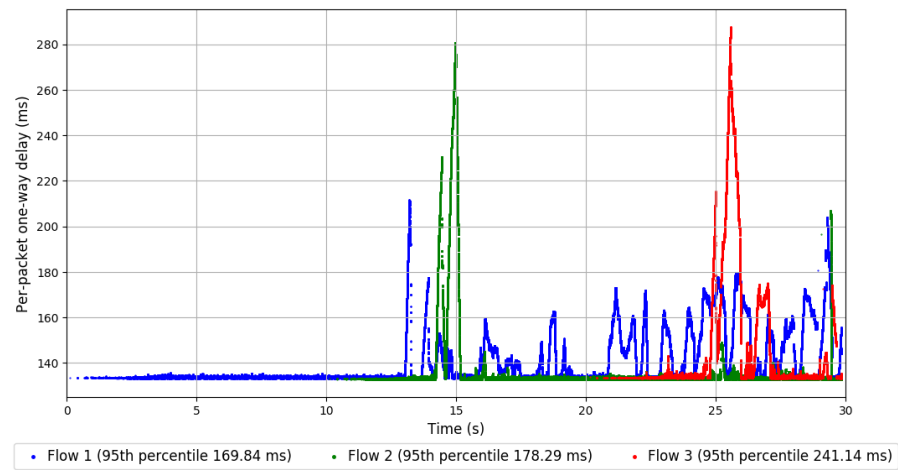
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-01-19 11:45:31
End at: 2019-01-19 11:46:01
Local clock offset: -0.202 ms
Remote clock offset: 0.018 ms


# Below is generated by plot.py at 2019-01-19 15:39:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 577.32 Mbit/s
95th percentile per-packet one-way delay: 139.689 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 317.19 Mbit/s
95th percentile per-packet one-way delay: 156.695 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 268.04 Mbit/s
95th percentile per-packet one-way delay: 133.736 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 252.28 Mbit/s
95th percentile per-packet one-way delay: 151.657 ms
Loss rate: 4.62%
```
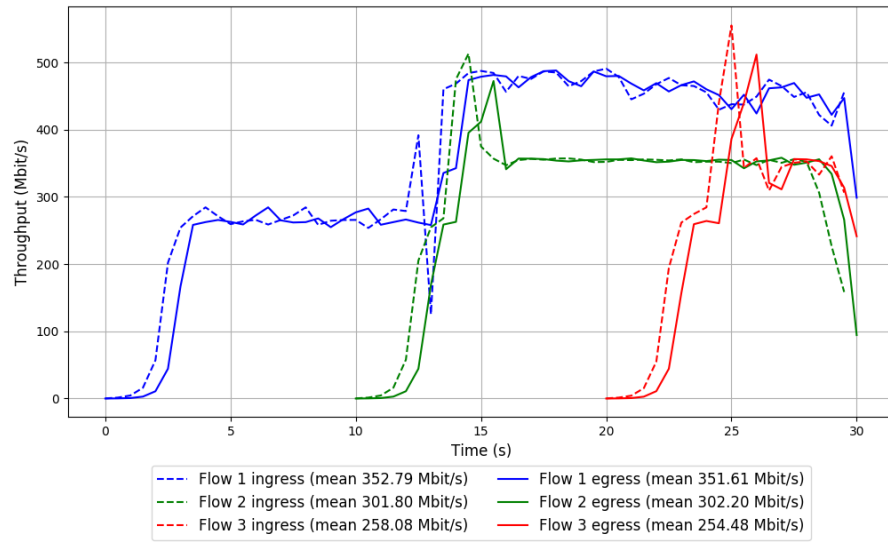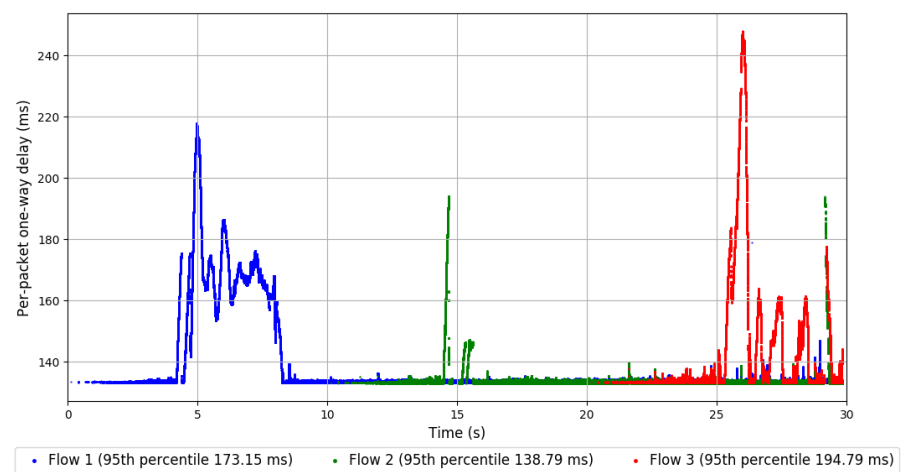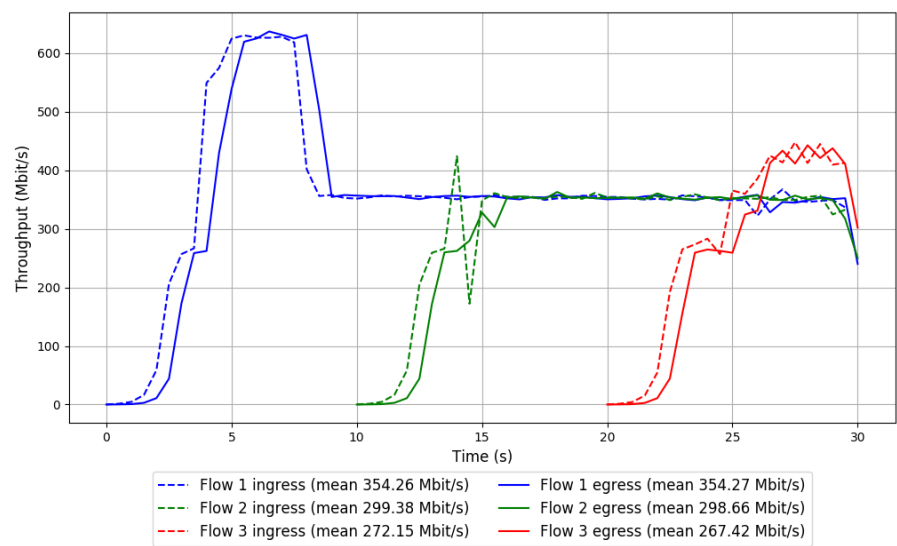
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 317.57 Mbit/s) --- Flow 1 egress (mean 317.19 Mbit/s)
Flow 2 ingress (mean 269.07 Mbit/s) --- Flow 2 egress (mean 268.04 Mbit/s)
Flow 3 ingress (mean 257.43 Mbit/s) --- Flow 3 egress (mean 252.28 Mbit/s)

Flow 1 (95th percentile 156.69 ms)   Flow 2 (95th percentile 133.74 ms)   Flow 3 (95th percentile 151.66 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-01-19 12:27:34
End at: 2019-01-19 12:28:04
Local clock offset: 0.175 ms
Remote clock offset: 0.266 ms


# Below is generated by plot.py at 2019-01-19 15:42:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 635.11 Mbit/s
95th percentile per-packet one-way delay: 176.245 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 351.61 Mbit/s
95th percentile per-packet one-way delay: 169.836 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 302.20 Mbit/s
95th percentile per-packet one-way delay: 178.288 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 254.48 Mbit/s
95th percentile per-packet one-way delay: 241.141 ms
Loss rate: 4.04%
```

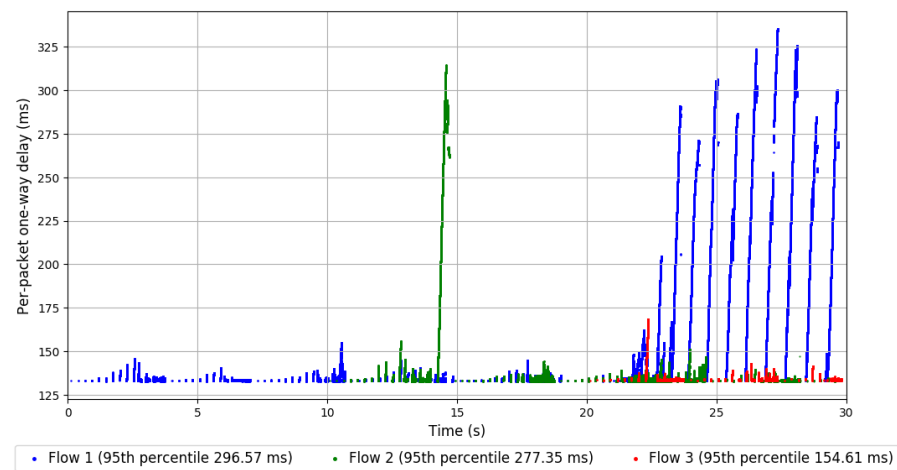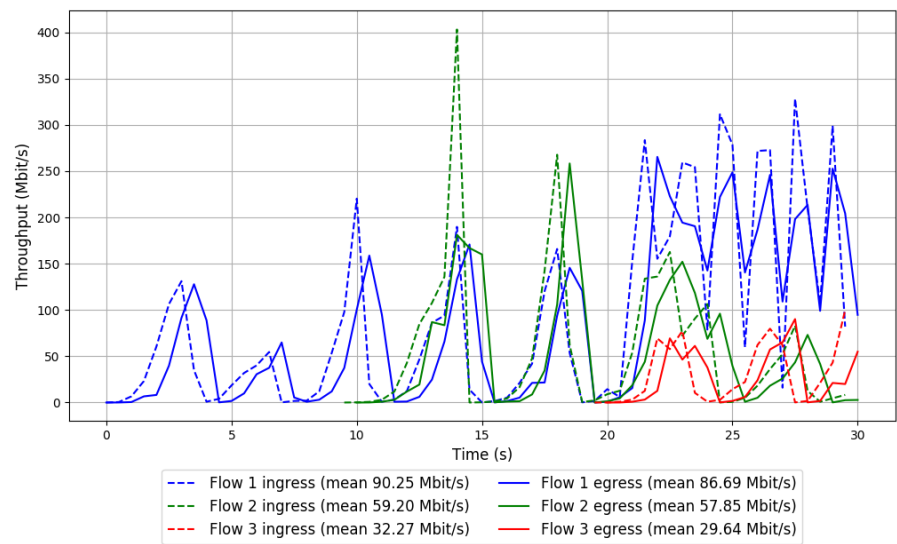Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-01-19 13:09:49
End at: 2019-01-19 13:10:19
Local clock offset: 0.221 ms
Remote clock offset: -0.063 ms


# Below is generated by plot.py at 2019-01-19 15:45:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 639.68 Mbit/s
95th percentile per-packet one-way delay: 171.809 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 354.27 Mbit/s
95th percentile per-packet one-way delay: 173.151 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 298.66 Mbit/s
95th percentile per-packet one-way delay: 138.789 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 267.42 Mbit/s
95th percentile per-packet one-way delay: 194.789 ms
Loss rate: 4.36%
```

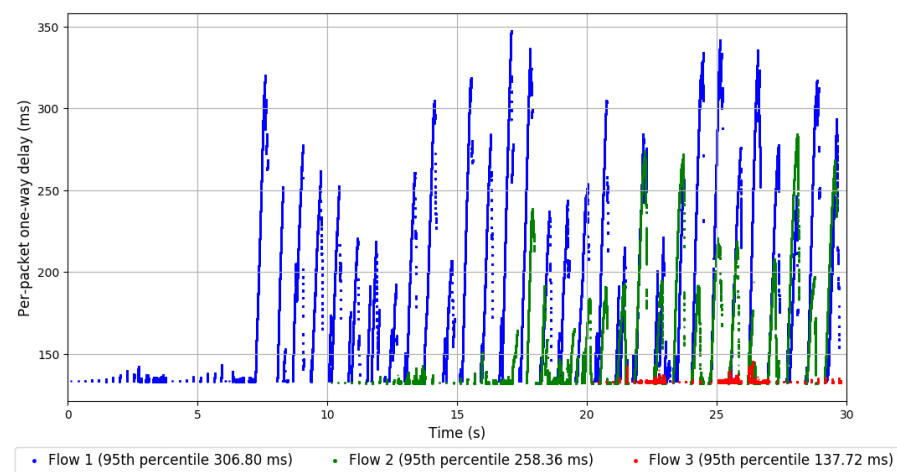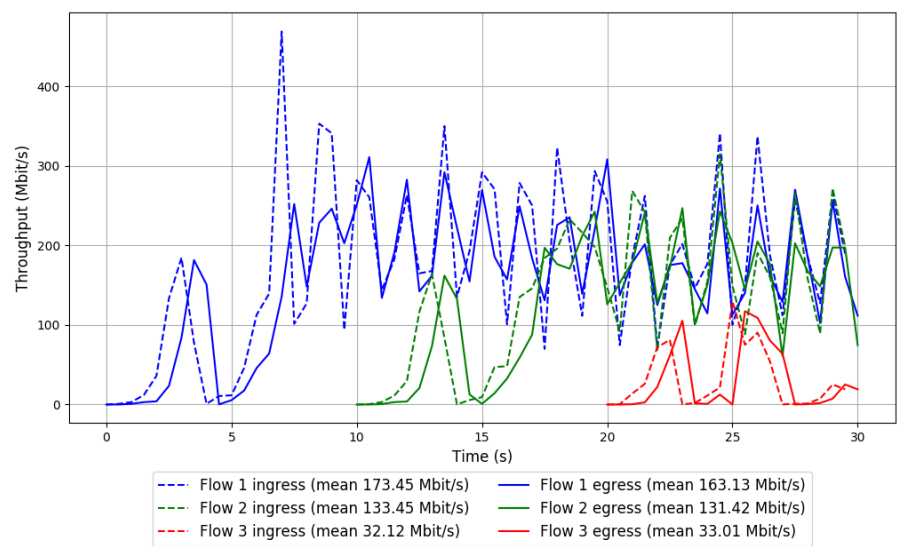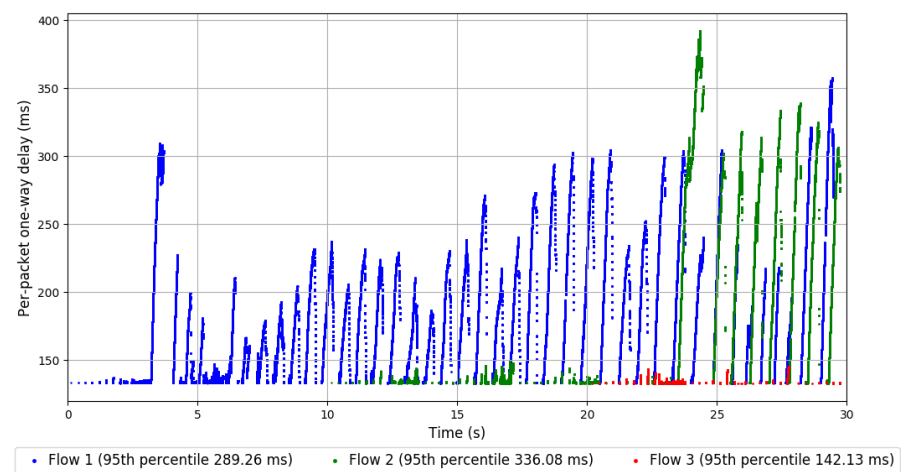Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-01-19 09:51:24
End at: 2019-01-19 09:51:54
Local clock offset: -0.045 ms
Remote clock offset: -0.047 ms


# Below is generated by plot.py at 2019-01-19 15:45:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 133.97 Mbit/s
95th percentile per-packet one-way delay: 290.177 ms
Loss rate: 5.16%
-- Flow 1:
Average throughput: 86.69 Mbit/s
95th percentile per-packet one-way delay: 296.574 ms
Loss rate: 5.19%
-- Flow 2:
Average throughput: 57.85 Mbit/s
95th percentile per-packet one-way delay: 277.354 ms
Loss rate: 3.62%
-- Flow 3:
Average throughput: 29.64 Mbit/s
95th percentile per-packet one-way delay: 154.609 ms
Loss rate: 10.61%
```

Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 90.25 Mbit/s) — Flow 1 egress (mean 86.69 Mbit/s)
Flow 2 ingress (mean 59.20 Mbit/s) — Flow 2 egress (mean 57.85 Mbit/s)
Flow 3 ingress (mean 32.27 Mbit/s) — Flow 3 egress (mean 29.64 Mbit/s)

Flow 1 (95th percentile 296.57 ms) • Flow 2 (95th percentile 277.35 ms) • Flow 3 (95th percentile 154.61 ms)
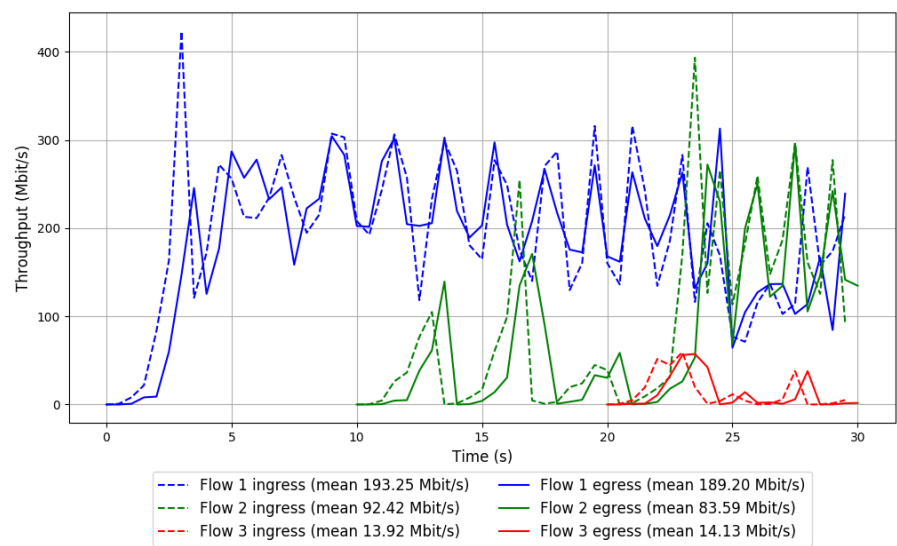
```
Run 2: Statistics of Verus

Start at: 2019-01-19 10:32:08
End at: 2019-01-19 10:32:38
Local clock offset: -0.326 ms
Remote clock offset: -0.098 ms


# Below is generated by plot.py at 2019-01-19 15:45:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 259.87 Mbit/s
95th percentile per-packet one-way delay: 295.165 ms
Loss rate: 5.78%
-- Flow 1:
Average throughput: 163.13 Mbit/s
95th percentile per-packet one-way delay: 306.798 ms
Loss rate: 7.19%
-- Flow 2:
Average throughput: 131.42 Mbit/s
95th percentile per-packet one-way delay: 258.359 ms
Loss rate: 3.73%
-- Flow 3:
Average throughput: 33.01 Mbit/s
95th percentile per-packet one-way delay: 137.717 ms
Loss rate: 0.01%
```
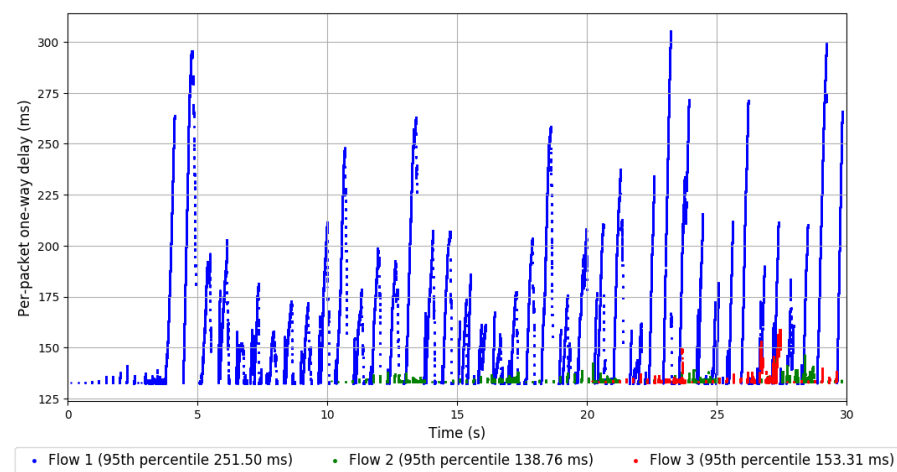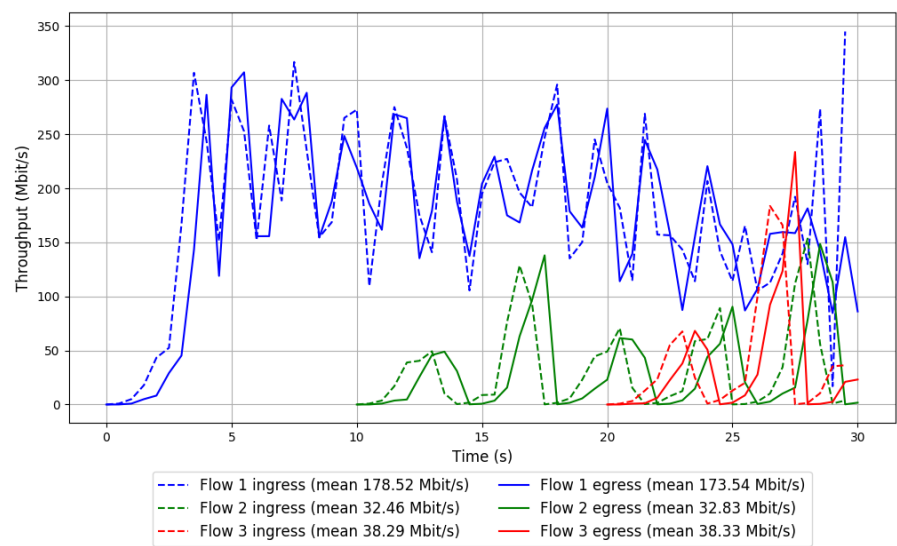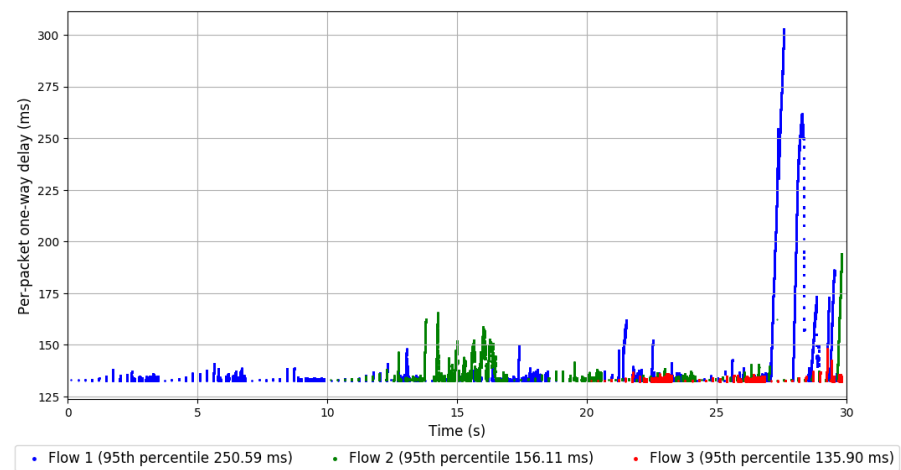
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-01-19 11:13:46
End at: 2019-01-19 11:14:16
Local clock offset: 0.216 ms
Remote clock offset: -0.094 ms


# Below is generated by plot.py at 2019-01-19 15:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 247.38 Mbit/s
95th percentile per-packet one-way delay: 301.684 ms
Loss rate: 5.73%
-- Flow 1:
Average throughput: 189.20 Mbit/s
95th percentile per-packet one-way delay: 289.263 ms
Loss rate: 4.08%
-- Flow 2:
Average throughput: 83.59 Mbit/s
95th percentile per-packet one-way delay: 336.083 ms
Loss rate: 11.22%
-- Flow 3:
Average throughput: 14.13 Mbit/s
95th percentile per-packet one-way delay: 142.126 ms
Loss rate: 1.26%
```

Run 3: Report of Verus — Data Link

- - - - Flow 1 ingress (mean 193.25 Mbit/s)   —— Flow 1 egress (mean 189.20 Mbit/s)
- - - - Flow 2 ingress (mean 92.42 Mbit/s)   —— Flow 2 egress (mean 83.59 Mbit/s)
- - - - Flow 3 ingress (mean 13.92 Mbit/s)   —— Flow 3 egress (mean 14.13 Mbit/s)

• Flow 1 (95th percentile 289.26 ms)   • Flow 2 (95th percentile 336.08 ms)   • Flow 3 (95th percentile 142.13 ms)
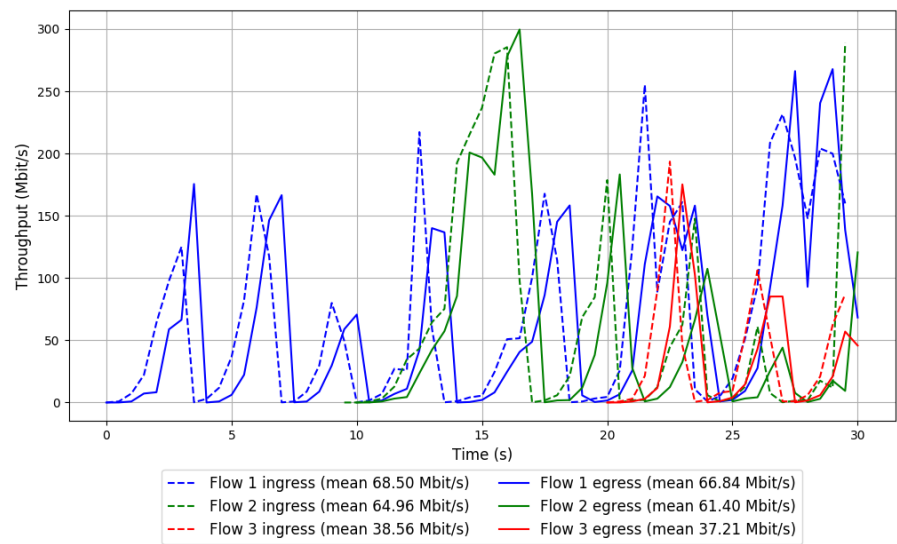
```
Run 4: Statistics of Verus

Start at: 2019-01-19 11:55:35
End at: 2019-01-19 11:56:05
Local clock offset: -0.014 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-01-19 15:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 207.45 Mbit/s
95th percentile per-packet one-way delay: 245.360 ms
Loss rate: 2.96%
-- Flow 1:
Average throughput: 173.54 Mbit/s
95th percentile per-packet one-way delay: 251.501 ms
Loss rate: 3.17%
-- Flow 2:
Average throughput: 32.83 Mbit/s
95th percentile per-packet one-way delay: 138.759 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 38.33 Mbit/s
95th percentile per-packet one-way delay: 153.307 ms
Loss rate: 4.79%
```
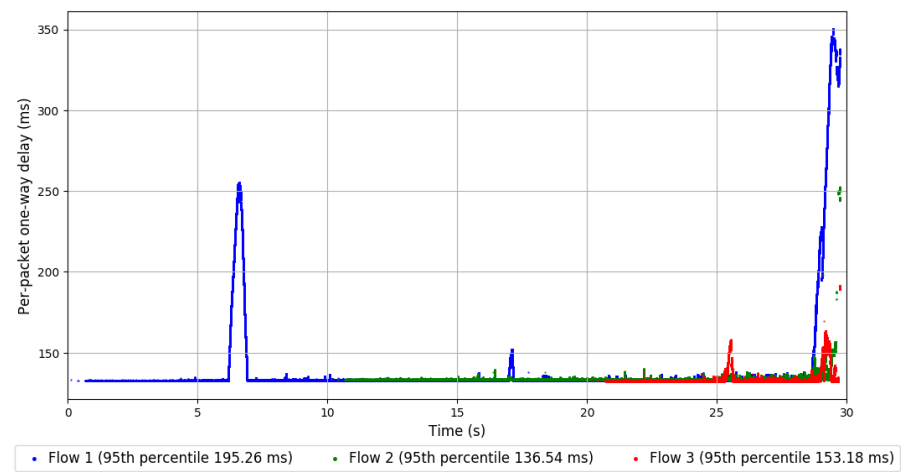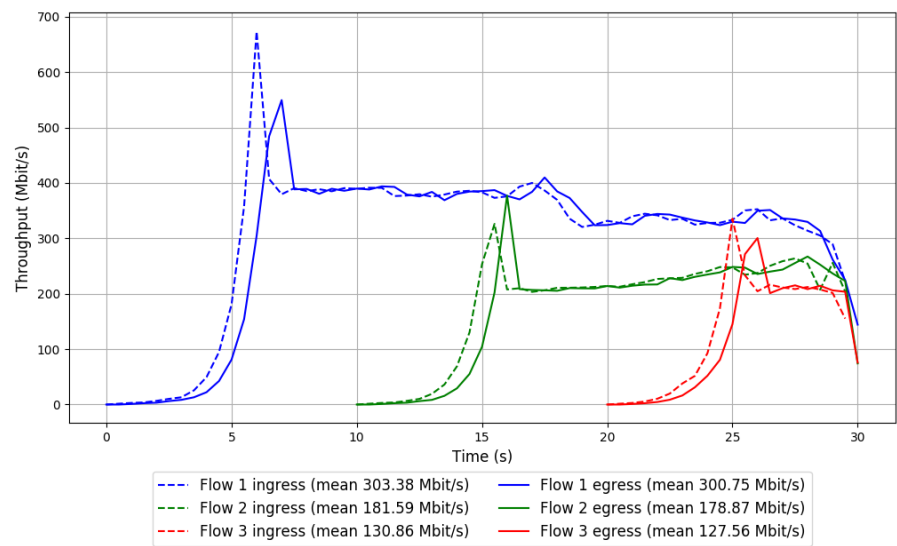
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-01-19 12:37:42
End at: 2019-01-19 12:38:12
Local clock offset: -0.298 ms
Remote clock offset: -0.12 ms


# Below is generated by plot.py at 2019-01-19 15:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 119.36 Mbit/s
95th percentile per-packet one-way delay: 213.209 ms
Loss rate: 4.98%
-- Flow 1:
Average throughput: 66.84 Mbit/s
95th percentile per-packet one-way delay: 250.585 ms
Loss rate: 3.75%
-- Flow 2:
Average throughput: 61.40 Mbit/s
95th percentile per-packet one-way delay: 156.113 ms
Loss rate: 6.60%
-- Flow 3:
Average throughput: 37.21 Mbit/s
95th percentile per-packet one-way delay: 135.898 ms
Loss rate: 6.09%
```

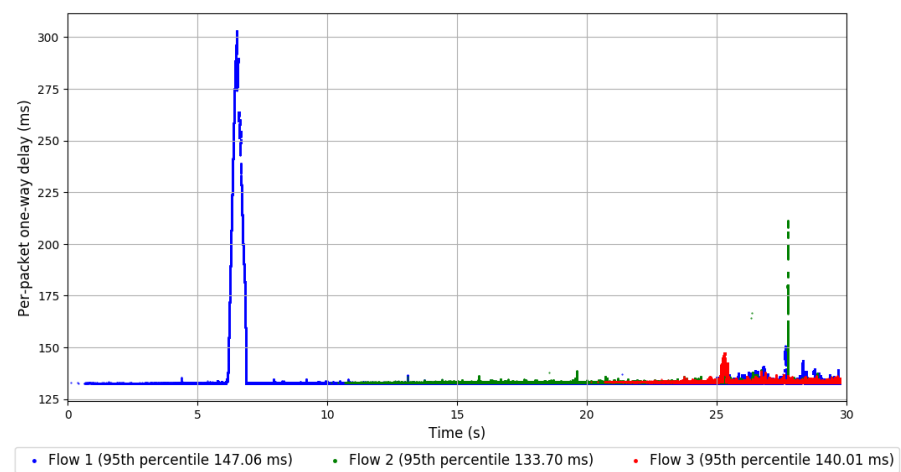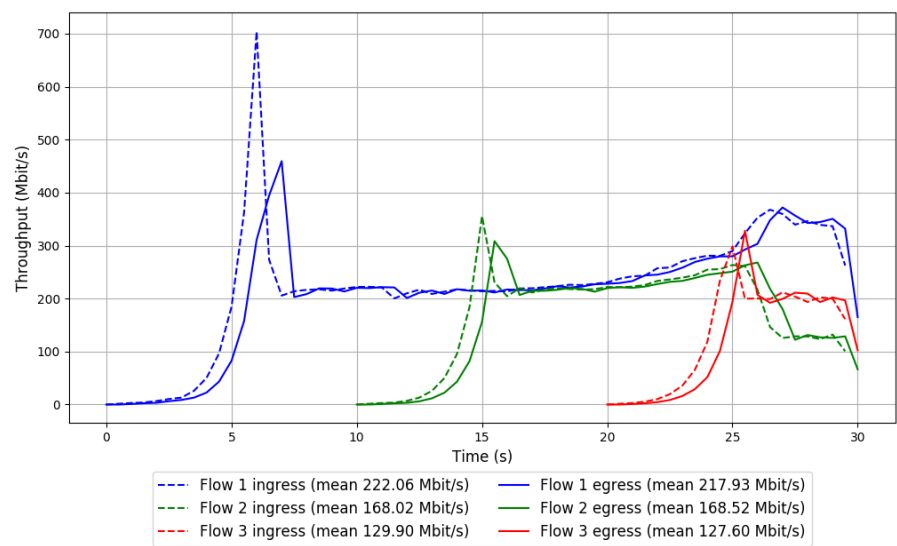Run 5: Report of Verus — Data Link

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```
Run 1: Statistics of PCC-Vivace

Start at: 2019-01-19 10:17:52
End at: 2019-01-19 10:18:22
Local clock offset: -0.086 ms
Remote clock offset: -0.101 ms


# Below is generated by plot.py at 2019-01-19 15:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 460.50 Mbit/s
95th percentile per-packet one-way delay: 153.184 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 300.75 Mbit/s
95th percentile per-packet one-way delay: 195.258 ms
Loss rate: 1.75%
-- Flow 2:
Average throughput: 178.87 Mbit/s
95th percentile per-packet one-way delay: 136.542 ms
Loss rate: 2.82%
-- Flow 3:
Average throughput: 127.56 Mbit/s
95th percentile per-packet one-way delay: 153.184 ms
Loss rate: 5.16%
```

Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-01-19 10:58:48
End at: 2019-01-19 10:59:18
Local clock offset: 0.23 ms
Remote clock offset: -0.081 ms


# Below is generated by plot.py at 2019-01-19 15:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 370.80 Mbit/s
95th percentile per-packet one-way delay: 137.362 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 217.93 Mbit/s
95th percentile per-packet one-way delay: 147.064 ms
Loss rate: 2.73%
-- Flow 2:
Average throughput: 168.52 Mbit/s
95th percentile per-packet one-way delay: 133.699 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 127.60 Mbit/s
95th percentile per-packet one-way delay: 140.009 ms
Loss rate: 4.42%
```

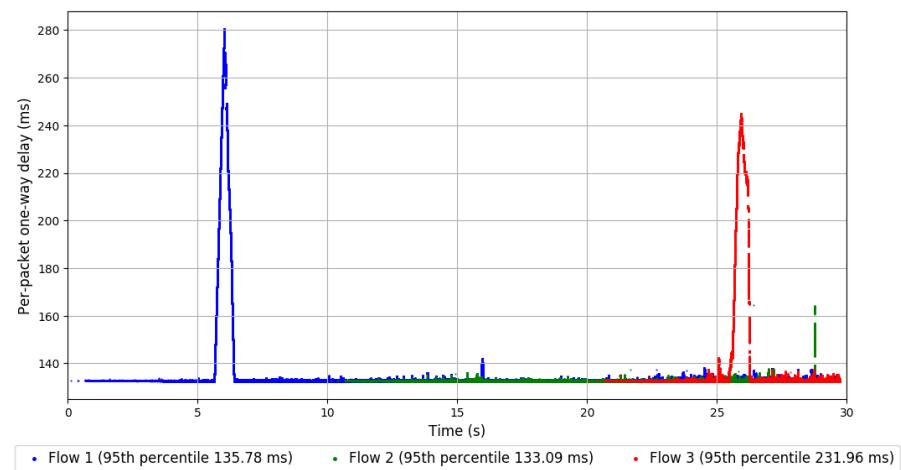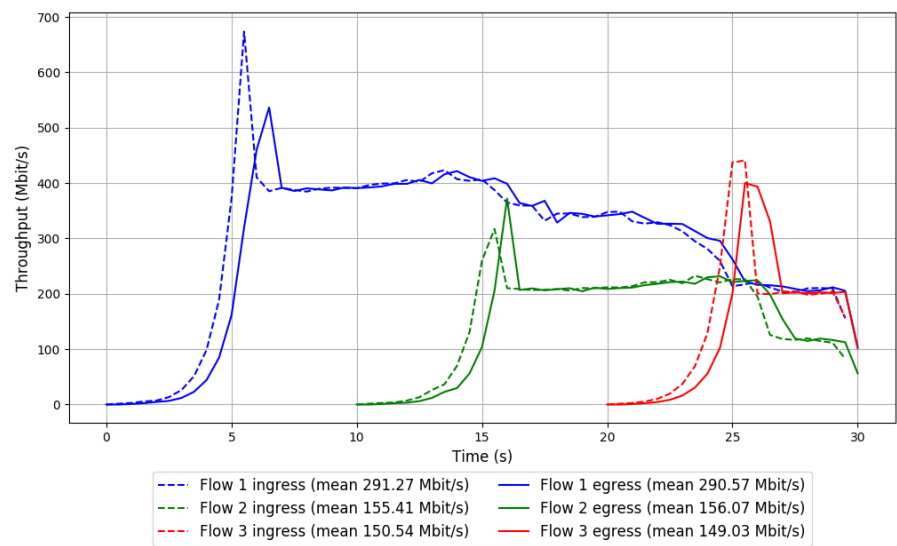Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-01-19 11:41:04
End at: 2019-01-19 11:41:34
Local clock offset: -0.417 ms
Remote clock offset: -0.007 ms


# Below is generated by plot.py at 2019-01-19 15:48:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 442.17 Mbit/s
95th percentile per-packet one-way delay: 142.801 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 290.57 Mbit/s
95th percentile per-packet one-way delay: 135.776 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 156.07 Mbit/s
95th percentile per-packet one-way delay: 133.087 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 149.03 Mbit/s
95th percentile per-packet one-way delay: 231.955 ms
Loss rate: 3.68%
```
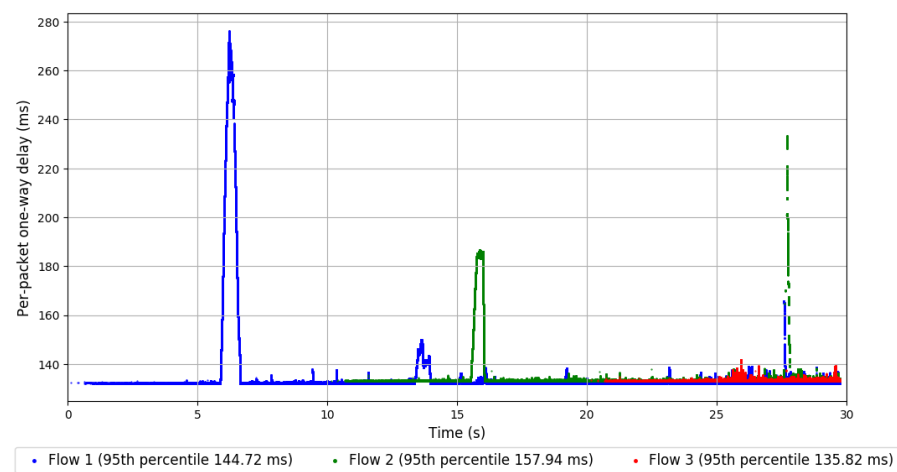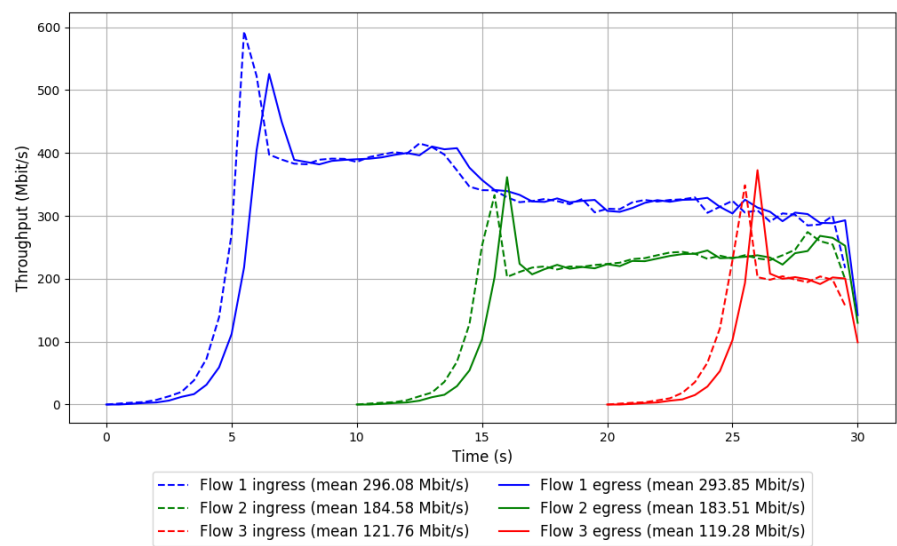
Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 291.27 Mbit/s) --- Flow 1 egress (mean 290.57 Mbit/s)
Flow 2 ingress (mean 155.41 Mbit/s) --- Flow 2 egress (mean 156.07 Mbit/s)
Flow 3 ingress (mean 150.54 Mbit/s) --- Flow 3 egress (mean 149.03 Mbit/s)

Flow 1 (95th percentile 135.78 ms)   Flow 2 (95th percentile 133.09 ms)   Flow 3 (95th percentile 231.96 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-01-19 12:23:11
End at: 2019-01-19 12:23:41
Local clock offset: -0.047 ms
Remote clock offset: 0.312 ms


# Below is generated by plot.py at 2019-01-19 15:48:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 453.96 Mbit/s
95th percentile per-packet one-way delay: 143.757 ms
Loss rate: 1.98%
-- Flow 1:
Average throughput: 293.85 Mbit/s
95th percentile per-packet one-way delay: 144.717 ms
Loss rate: 1.64%
-- Flow 2:
Average throughput: 183.51 Mbit/s
95th percentile per-packet one-way delay: 157.938 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 119.28 Mbit/s
95th percentile per-packet one-way delay: 135.823 ms
Loss rate: 4.69%
```

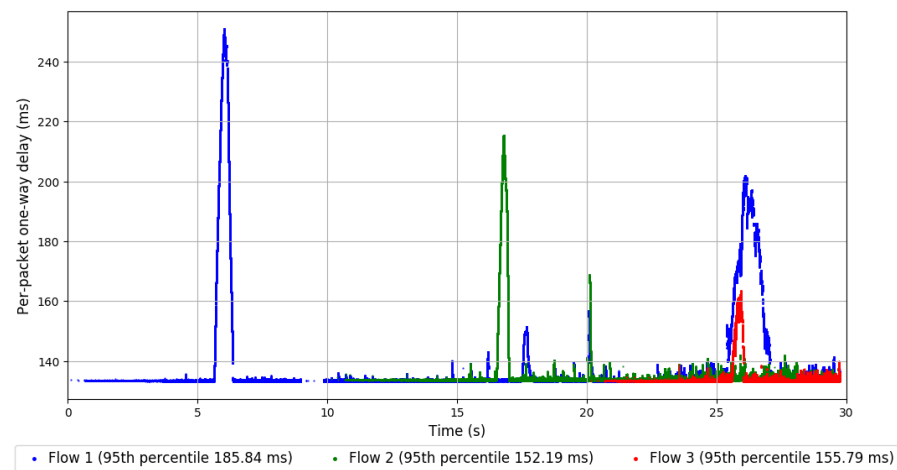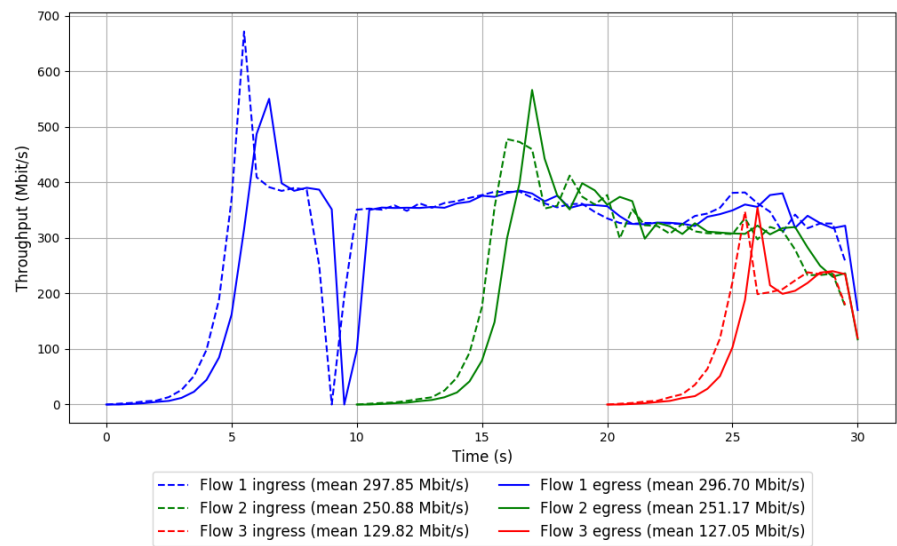# Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-01-19 13:05:13
End at: 2019-01-19 13:05:43
Local clock offset: 0.518 ms
Remote clock offset: -0.046 ms


# Below is generated by plot.py at 2019-01-19 15:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 504.13 Mbit/s
95th percentile per-packet one-way delay: 174.996 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 296.70 Mbit/s
95th percentile per-packet one-way delay: 185.840 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 251.17 Mbit/s
95th percentile per-packet one-way delay: 152.187 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 127.05 Mbit/s
95th percentile per-packet one-way delay: 155.786 ms
Loss rate: 4.78%
```

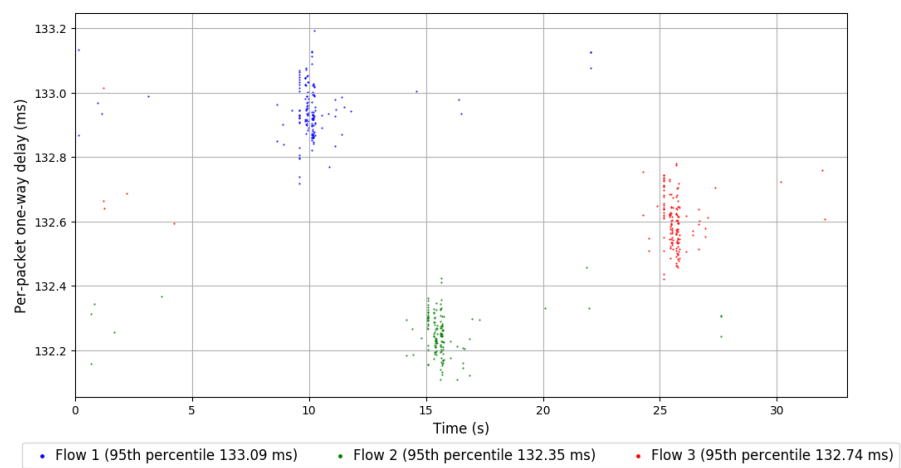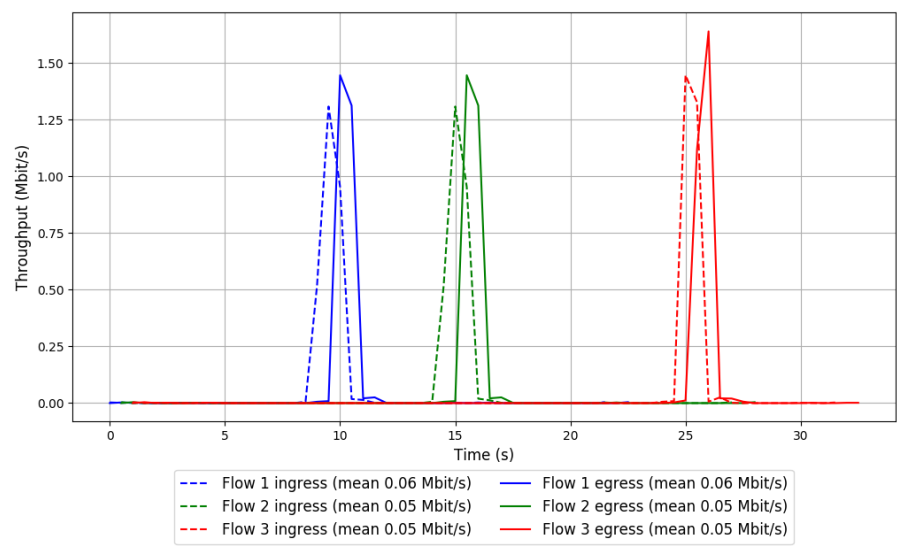## Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-01-19 09:47:47
End at: 2019-01-19 09:48:17
Local clock offset: -0.054 ms
Remote clock offset: -0.125 ms


# Below is generated by plot.py at 2019-01-19 15:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 133.033 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 133.091 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.346 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.735 ms
Loss rate: 0.00%
```

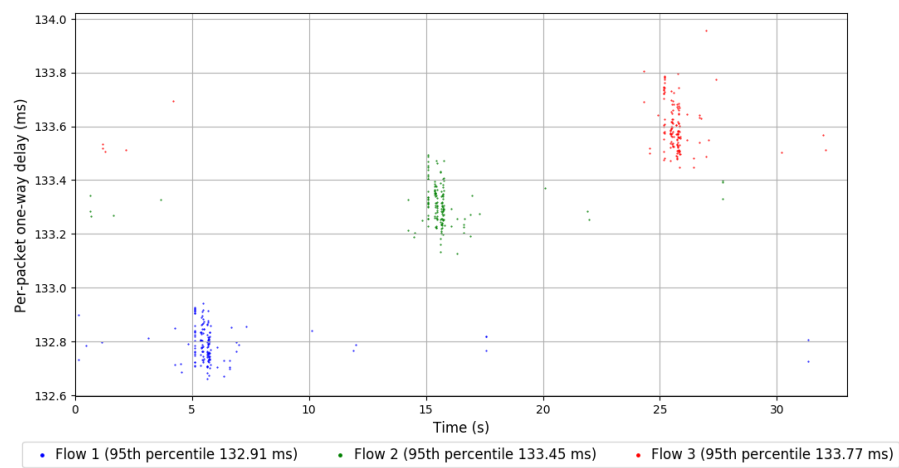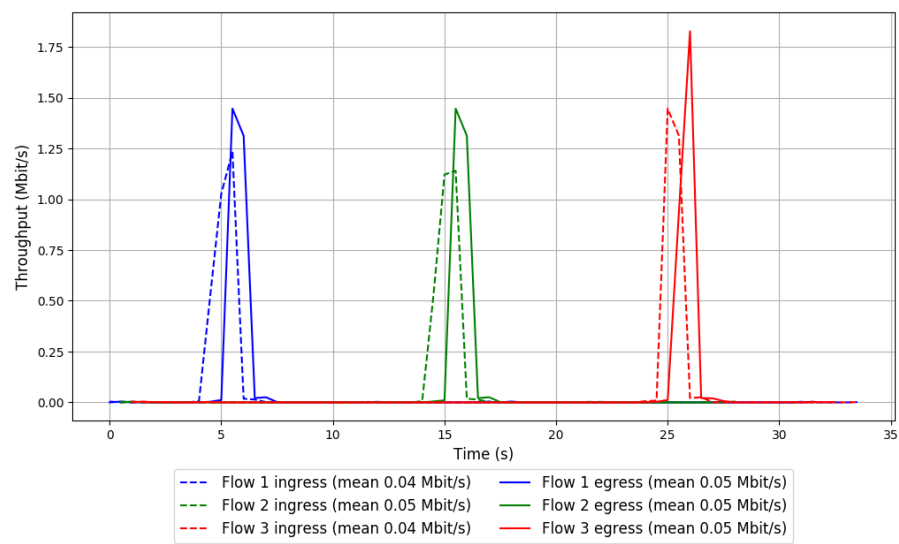Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-01-19 10:28:31
End at: 2019-01-19 10:29:01
Local clock offset: 0.187 ms
Remote clock offset: -0.076 ms


# Below is generated by plot.py at 2019-01-19 15:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 133.695 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.912 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.447 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.774 ms
Loss rate: 0.05%
```

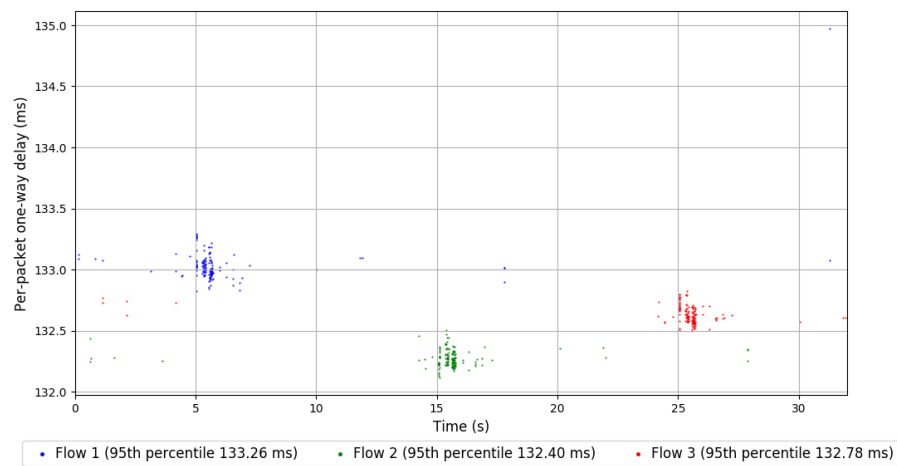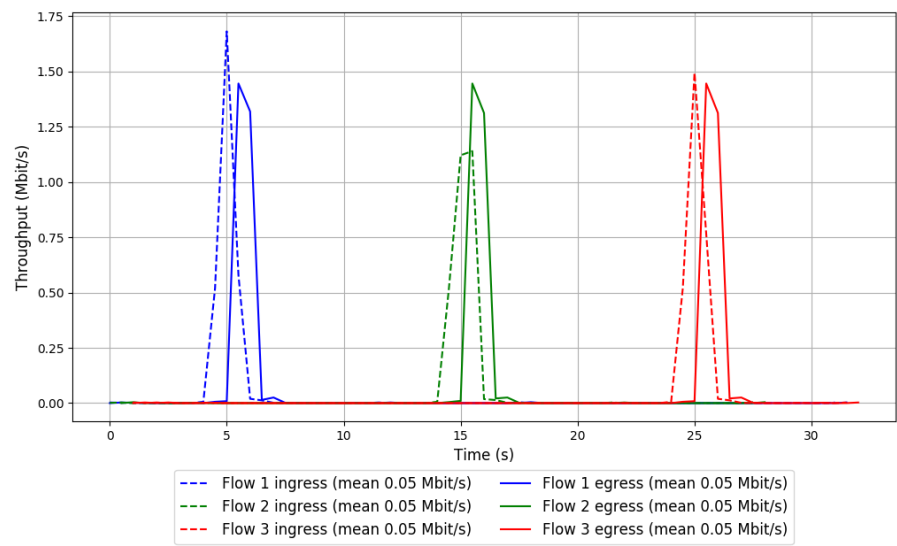Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-01-19 11:09:37
End at: 2019-01-19 11:10:07
Local clock offset: -0.223 ms
Remote clock offset: -0.076 ms


# Below is generated by plot.py at 2019-01-19 15:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 133.122 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.257 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.395 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.775 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-01-19 11:51:41
End at: 2019-01-19 11:52:11
Local clock offset: 0.097 ms
Remote clock offset: 0.049 ms


# Below is generated by plot.py at 2019-01-19 15:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 133.520 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 133.494 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.181 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.557 ms
Loss rate: 0.00%
```
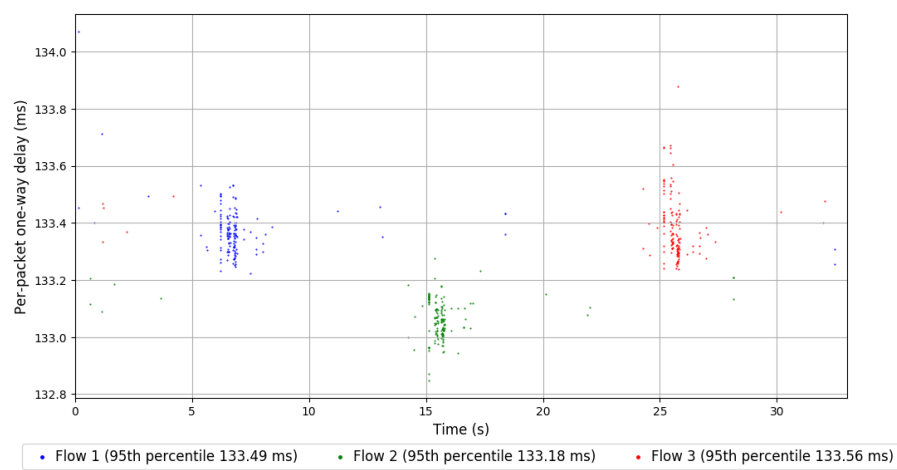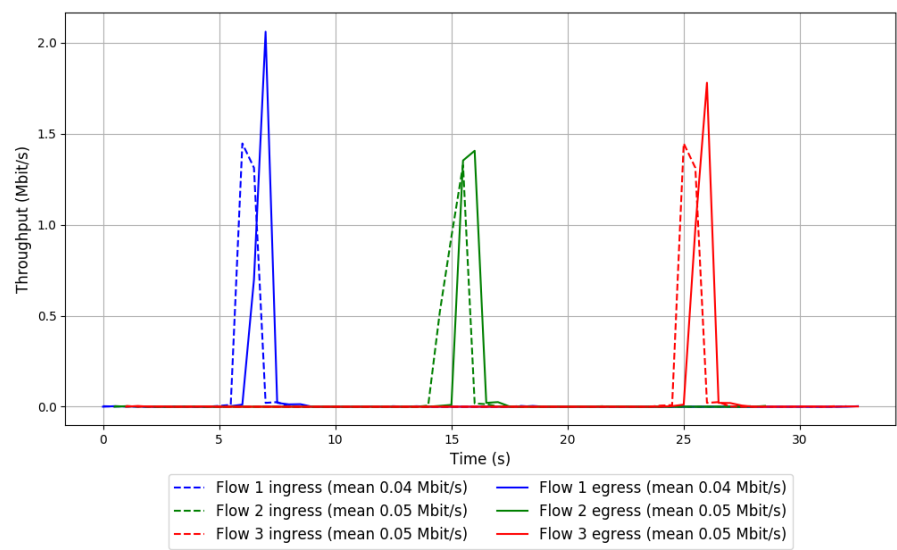
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-01-19 12:33:34
End at: 2019-01-19 12:34:04
Local clock offset: -0.171 ms
Remote clock offset: -0.114 ms


# Below is generated by plot.py at 2019-01-19 15:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 133.626 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.094 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.715 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.833 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link