Pantheon Report

Generated at 2019-12-11 14:00:26 (UTC).

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

Repeated the test of 24 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.
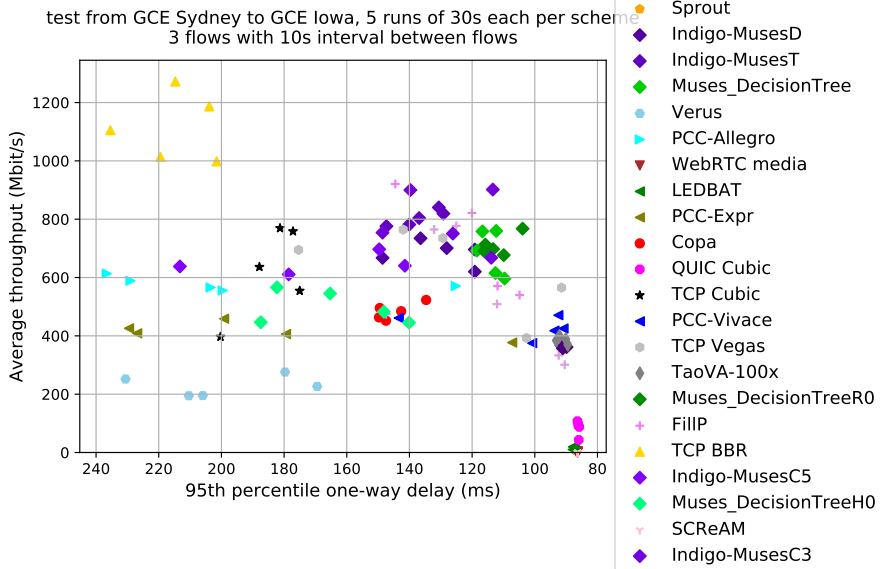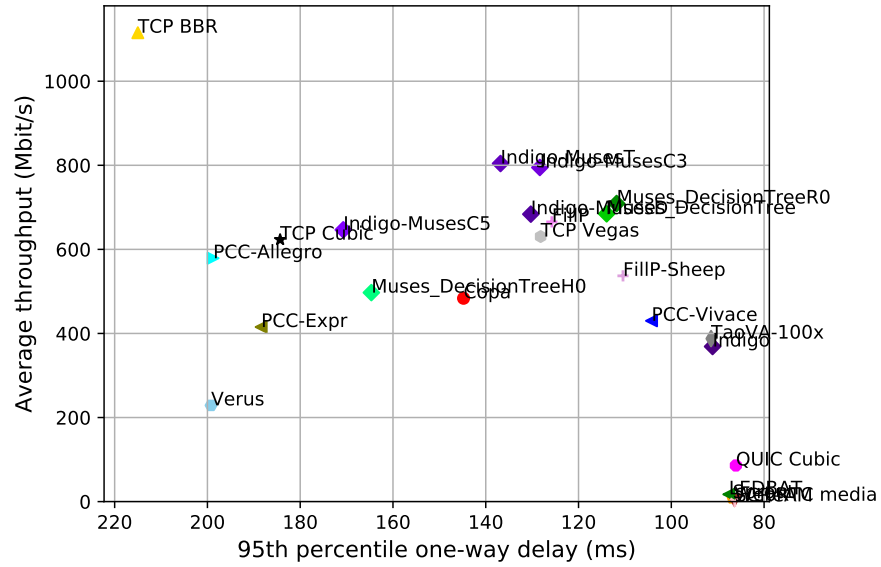
```
System info:
Linux 5.0.0-1025-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ de42328552b3776a75a932a94dfafd722537b0ec
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 387225f7b5f61ddbe92d708a8869ffbb84eb3200
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-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 Sydney to GCE Iowa, 5 runs of 30s each per scheme
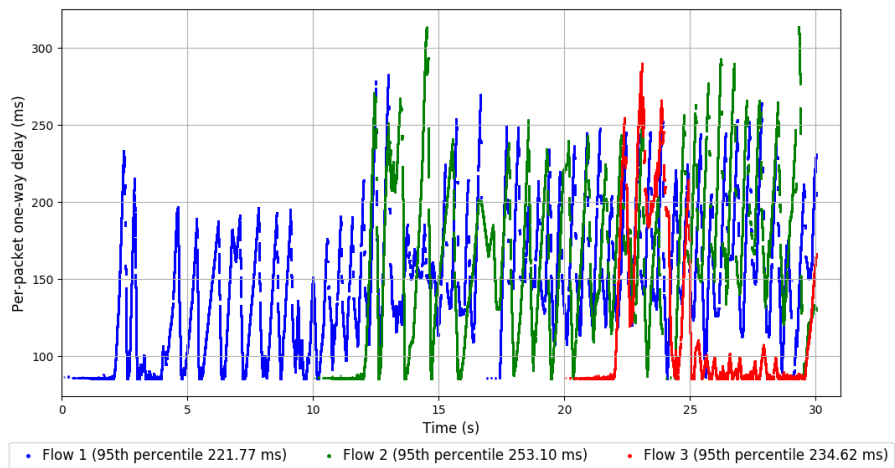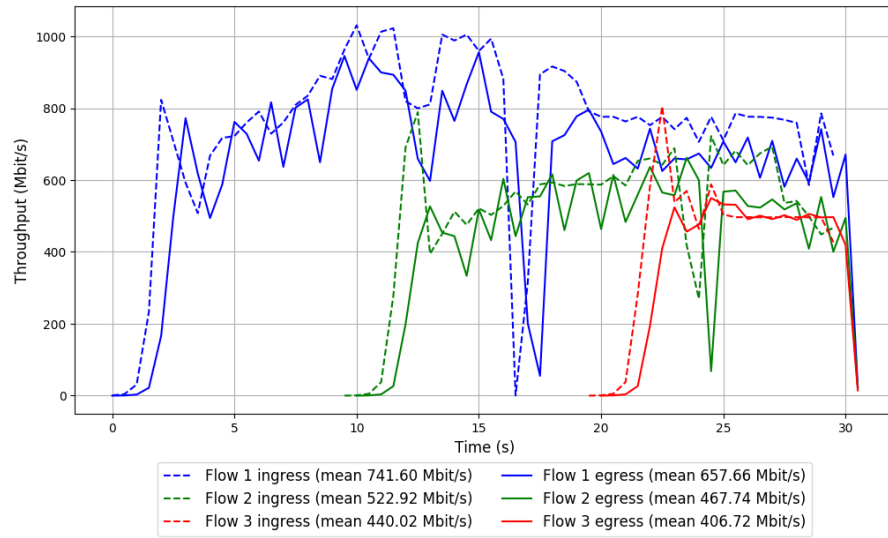3 flows with 10s interval between flows (mean of all runs by scheme)

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

3

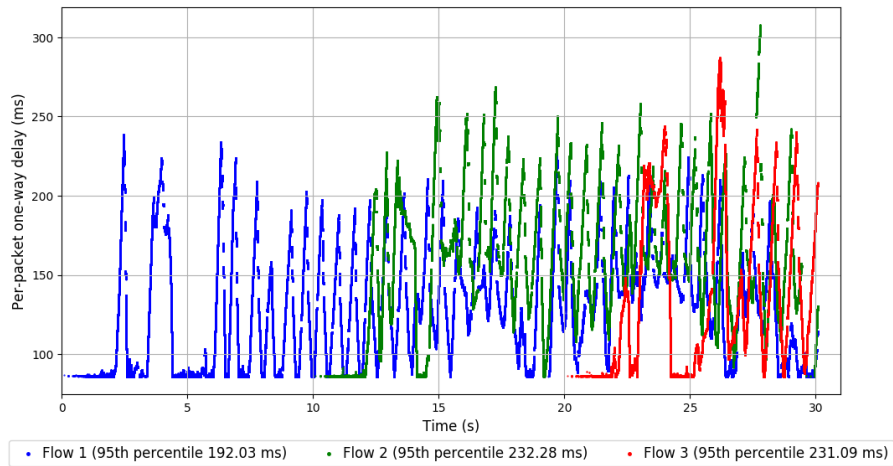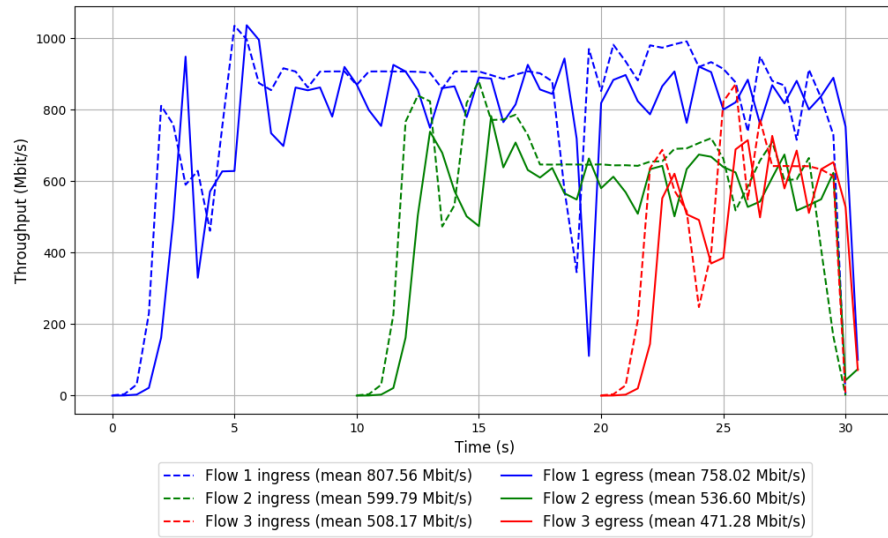| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	660.40	471.62	425.50	203.77	228.49	206.18	6.72	5.51	6.51
Copa	5	265.33	231.67	192.87	128.68	150.20	163.47	0.10	0.02	0.10
TCP Cubic	5	406.71	263.20	123.58	186.59	145.72	105.98	0.24	0.42	0.34
FillP	5	343.25	356.18	256.64	133.62	93.44	90.45	2.05	0.01	0.03
FillP-Sheep	5	255.02	308.61	231.79	117.91	90.86	90.35	0.19	0.00	0.00
Indigo	5	202.48	180.40	147.55	91.07	91.03	91.51	0.00	0.00	0.00
Indigo-MusesC3	5	469.30	390.34	265.65	123.43	129.31	102.27	0.00	0.07	0.05
Indigo-MusesC5	4	408.22	328.28	122.08	177.31	118.30	89.41	0.50	0.01	0.04
Indigo-MusesD	5	393.71	353.58	244.34	130.24	118.38	94.70	0.04	0.01	0.16
Indigo-MusesT	5	484.15	397.92	270.00	141.70	120.09	104.79	0.10	0.00	0.04
LEDBAT	5	10.71	7.79	4.10	87.99	87.40	87.16	0.00	0.00	0.00
Muses_DecisionTree	5	404.02	316.62	227.00	120.86	98.61	107.18	0.01	0.01	0.00
Muses_DecisionTreeH0	5	266.96	254.12	192.42	165.17	153.99	145.00	1.52	0.55	0.46
Muses_DecisionTreeR0	5	416.19	335.94	220.99	116.97	99.69	97.81	0.01	0.01	0.01
PCC-Allegro	5	319.06	274.60	234.69	199.28	165.55	200.31	5.79	1.99	1.46
PCC-Expr	5	229.07	196.57	167.99	192.63	153.29	211.46	2.12	0.73	1.68
QUIC Cubic	5	43.70	49.56	28.66	86.11	86.01	86.02	0.00	0.00	0.00
SCReAM	5	0.22	0.22	0.22	86.30	86.43	86.29	0.00	0.00	0.00
Sprout	5	4.48	4.09	3.32	86.70	86.89	86.67	0.00	0.00	0.00
TaoVA-100x	5	198.79	195.55	176.27	90.39	91.07	95.75	0.00	0.01	0.01
TCP Vegas	5	336.55	297.72	287.76	116.53	132.07	98.82	0.43	0.08	0.00
Verus	5	132.18	104.59	85.18	189.92	187.51	156.97	0.13	1.16	2.54
PCC-Vivace	5	255.19	197.73	131.39	108.55	94.64	108.43	0.33	0.00	0.00
WebRTC media	5	1.28	0.70	0.17	86.37	86.21	86.28	0.00	0.01	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-12-11 07:41:24
End at: 2019-12-11 07:41:54
Local clock offset: -0.015 ms
Remote clock offset: -0.075 ms


# Below is generated by plot.py at 2019-12-11 11:44:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1105.38 Mbit/s
95th percentile per-packet one-way delay: 235.431 ms
Loss rate: 10.66%
-- Flow 1:
Average throughput: 657.66 Mbit/s
95th percentile per-packet one-way delay: 221.767 ms
Loss rate: 11.32%
-- Flow 2:
Average throughput: 467.74 Mbit/s
95th percentile per-packet one-way delay: 253.103 ms
Loss rate: 10.55%
-- Flow 3:
Average throughput: 406.72 Mbit/s
95th percentile per-packet one-way delay: 234.623 ms
Loss rate: 7.57%
```
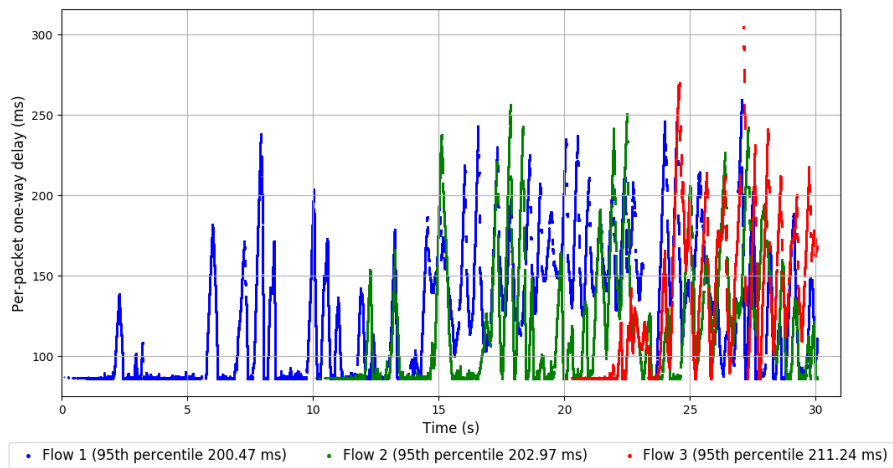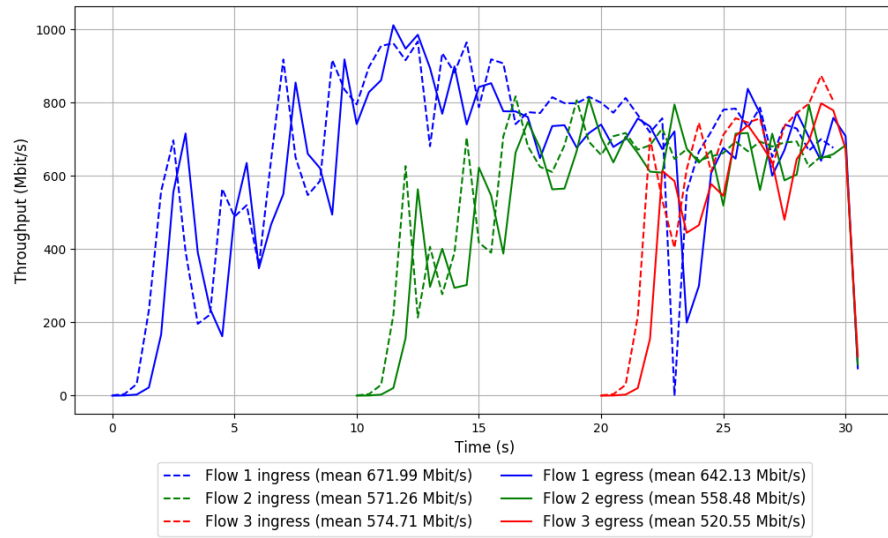
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 741.60 Mbit/s)   Flow 1 egress (mean 657.66 Mbit/s)
Flow 2 ingress (mean 522.92 Mbit/s)   Flow 2 egress (mean 467.74 Mbit/s)
Flow 3 ingress (mean 440.02 Mbit/s)   Flow 3 egress (mean 406.72 Mbit/s)

Flow 1 (95th percentile 221.77 ms)   Flow 2 (95th percentile 253.10 ms)   Flow 3 (95th percentile 234.62 ms)
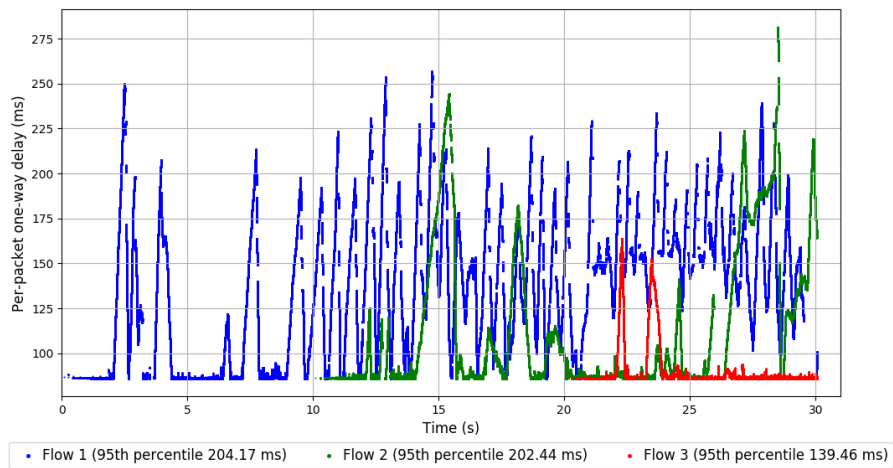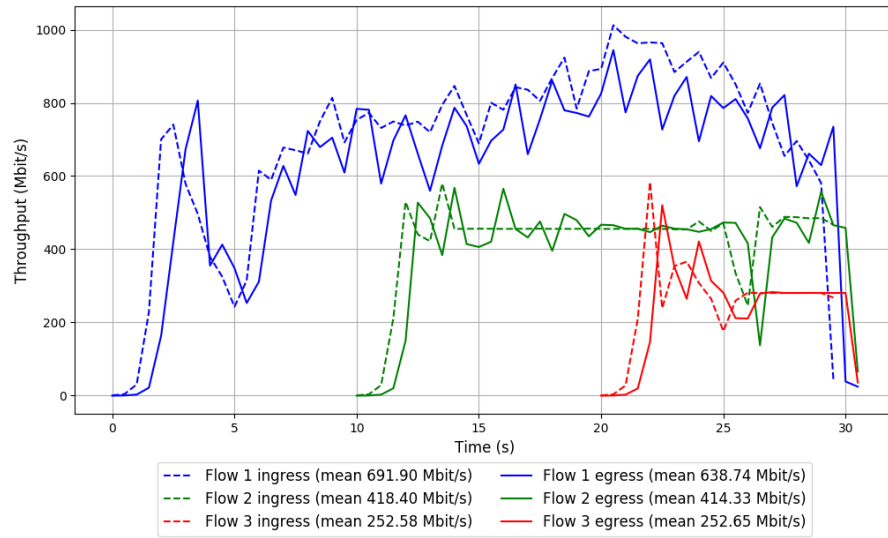
```
Run 2: Statistics of TCP BBR

Start at: 2019-12-11 08:22:15
End at: 2019-12-11 08:22:45
Local clock offset: -0.14 ms
Remote clock offset: -0.079 ms


# Below is generated by plot.py at 2019-12-11 11:46:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1272.10 Mbit/s
95th percentile per-packet one-way delay: 214.704 ms
Loss rate: 7.61%
-- Flow 1:
Average throughput: 758.02 Mbit/s
95th percentile per-packet one-way delay: 192.033 ms
Loss rate: 6.18%
-- Flow 2:
Average throughput: 536.60 Mbit/s
95th percentile per-packet one-way delay: 232.283 ms
Loss rate: 10.60%
-- Flow 3:
Average throughput: 471.28 Mbit/s
95th percentile per-packet one-way delay: 231.093 ms
Loss rate: 7.38%
```

Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-12-11 09:03:25
End at: 2019-12-11 09:03:55
Local clock offset: -0.161 ms
Remote clock offset: -0.07 ms


# Below is generated by plot.py at 2019-12-11 11:46:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1187.05 Mbit/s
95th percentile per-packet one-way delay: 203.862 ms
Loss rate: 4.53%
-- Flow 1:
Average throughput: 642.13 Mbit/s
95th percentile per-packet one-way delay: 200.469 ms
Loss rate: 4.44%
-- Flow 2:
Average throughput: 558.48 Mbit/s
95th percentile per-packet one-way delay: 202.967 ms
Loss rate: 2.24%
-- Flow 3:
Average throughput: 520.55 Mbit/s
95th percentile per-packet one-way delay: 211.239 ms
Loss rate: 9.41%
```
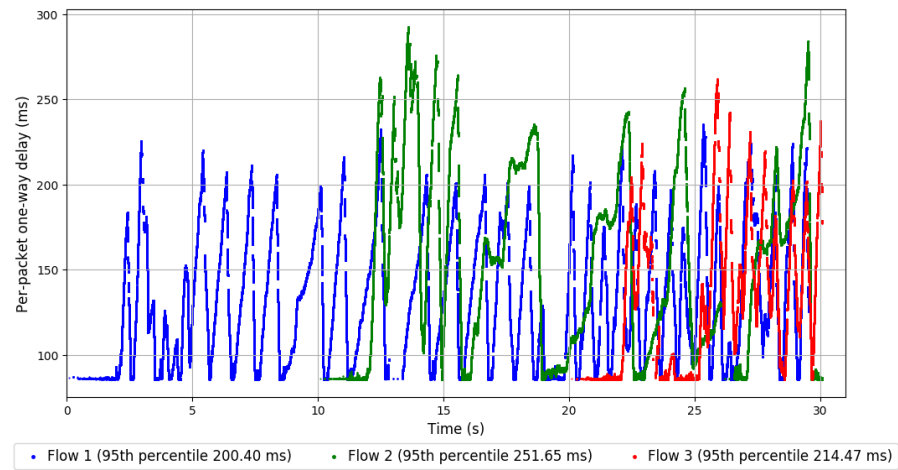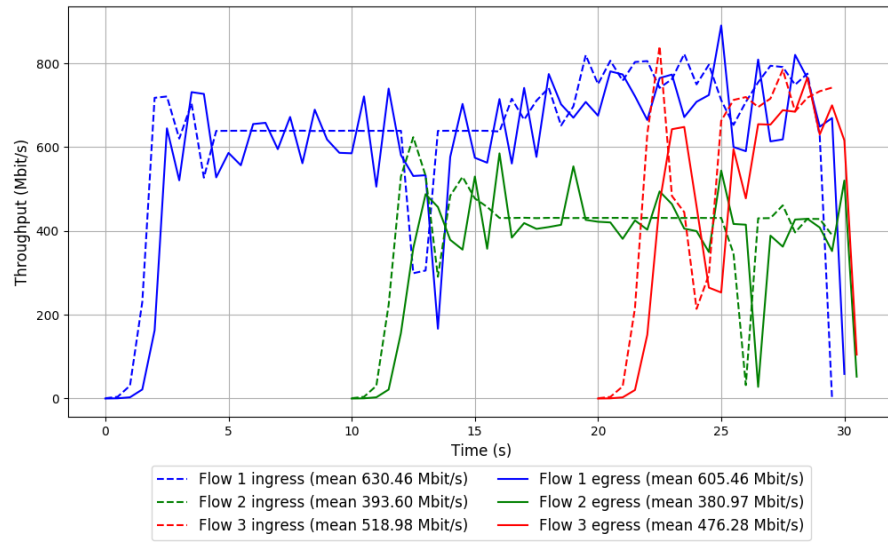
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 671.99 Mbit/s) --- Flow 1 egress (mean 642.13 Mbit/s)
Flow 2 ingress (mean 571.26 Mbit/s) --- Flow 2 egress (mean 558.48 Mbit/s)
Flow 3 ingress (mean 574.71 Mbit/s) --- Flow 3 egress (mean 520.55 Mbit/s)

Flow 1 (95th percentile 200.47 ms)   Flow 2 (95th percentile 202.97 ms)   Flow 3 (95th percentile 211.24 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-12-11 09:44:48
End at: 2019-12-11 09:45:18
Local clock offset: -0.161 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2019-12-11 11:46:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 998.37 Mbit/s
95th percentile per-packet one-way delay: 201.520 ms
Loss rate: 5.30%
-- Flow 1:
Average throughput: 638.74 Mbit/s
95th percentile per-packet one-way delay: 204.168 ms
Loss rate: 7.68%
-- Flow 2:
Average throughput: 414.33 Mbit/s
95th percentile per-packet one-way delay: 202.443 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 252.65 Mbit/s
95th percentile per-packet one-way delay: 139.459 ms
Loss rate: 0.00%
```
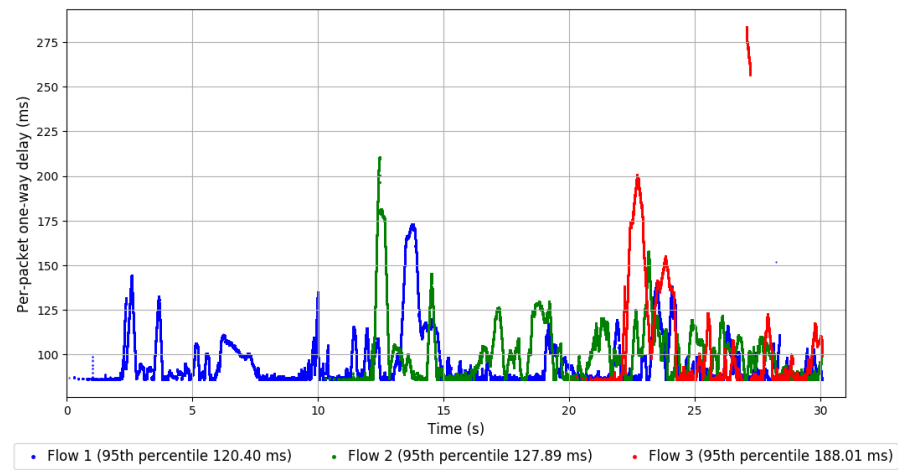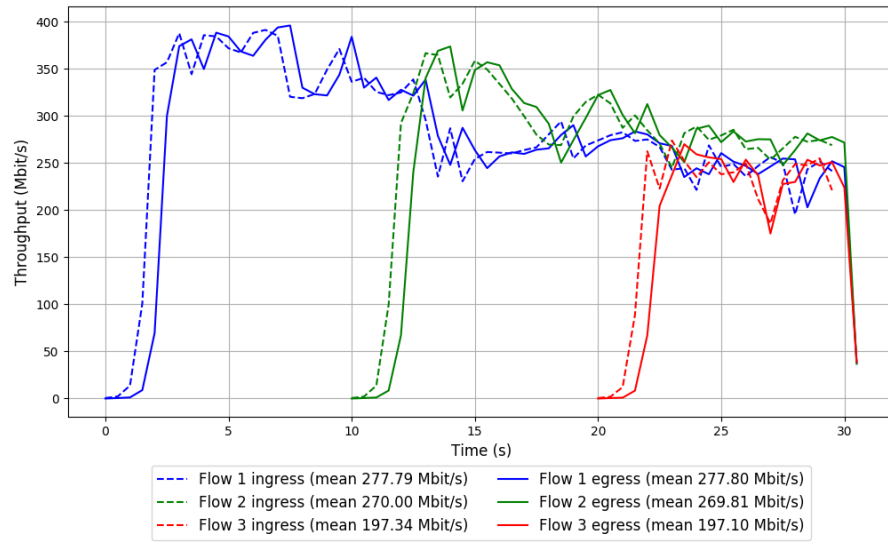
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 691.90 Mbit/s)   Flow 1 egress (mean 638.74 Mbit/s)
Flow 2 ingress (mean 418.40 Mbit/s)   Flow 2 egress (mean 414.33 Mbit/s)
Flow 3 ingress (mean 252.58 Mbit/s)   Flow 3 egress (mean 252.65 Mbit/s)

Flow 1 (95th percentile 204.17 ms)   Flow 2 (95th percentile 202.44 ms)   Flow 3 (95th percentile 139.46 ms)
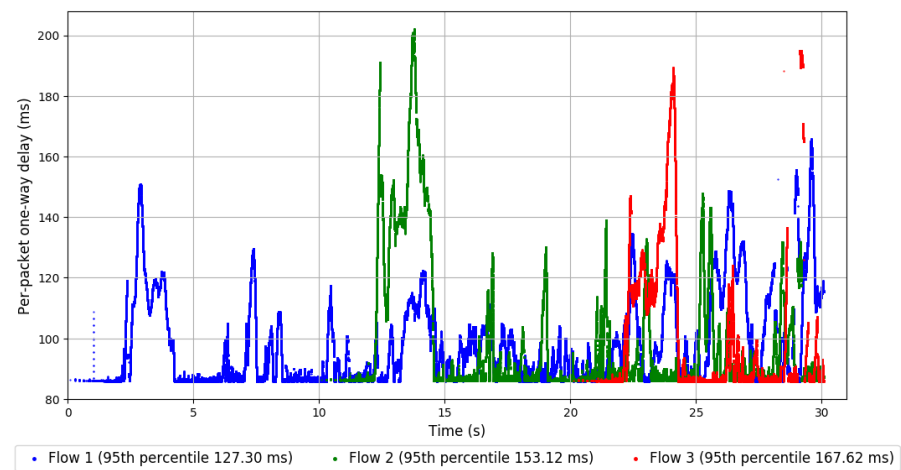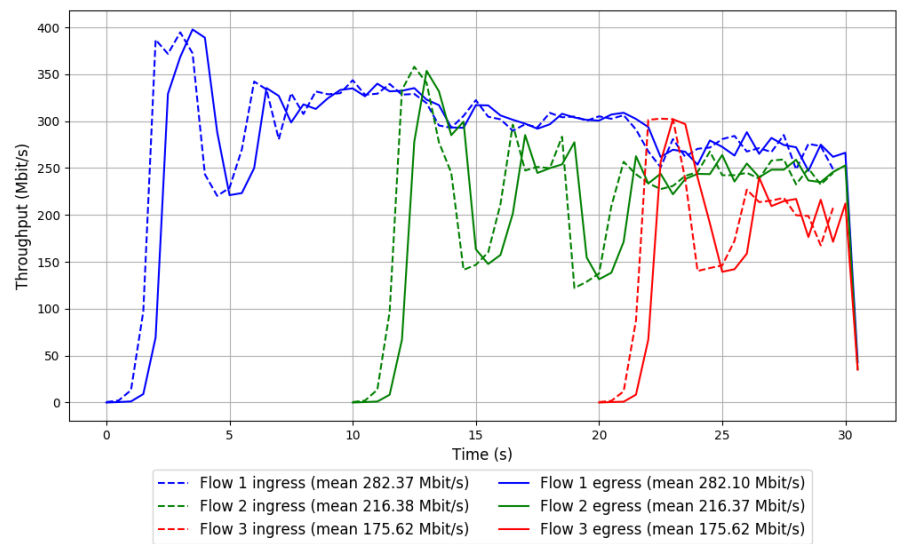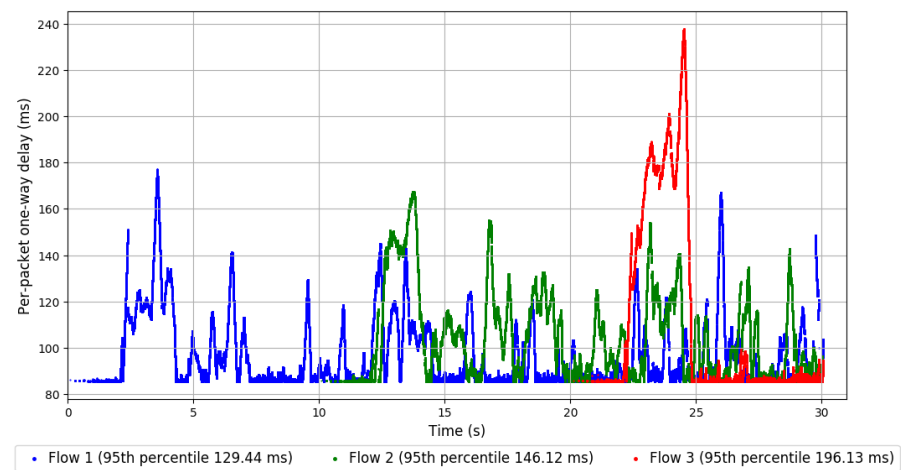
```
Run 5: Statistics of TCP BBR

Start at: 2019-12-11 10:25:45
End at: 2019-12-11 10:26:15
Local clock offset: -0.358 ms
Remote clock offset: -0.064 ms


# Below is generated by plot.py at 2019-12-11 11:46:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1013.86 Mbit/s
95th percentile per-packet one-way delay: 219.487 ms
Loss rate: 4.47%
-- Flow 1:
Average throughput: 605.46 Mbit/s
95th percentile per-packet one-way delay: 200.404 ms
Loss rate: 3.97%
-- Flow 2:
Average throughput: 380.97 Mbit/s
95th percentile per-packet one-way delay: 251.654 ms
Loss rate: 3.21%
-- Flow 3:
Average throughput: 476.28 Mbit/s
95th percentile per-packet one-way delay: 214.469 ms
Loss rate: 8.21%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 630.46 Mbit/s) --- Flow 1 egress (mean 605.46 Mbit/s)
Flow 2 ingress (mean 393.60 Mbit/s) --- Flow 2 egress (mean 380.97 Mbit/s)
Flow 3 ingress (mean 518.98 Mbit/s) --- Flow 3 egress (mean 476.28 Mbit/s)

Flow 1 (95th percentile 200.40 ms) • Flow 2 (95th percentile 251.65 ms) • Flow 3 (95th percentile 214.47 ms)

```
Run 1: Statistics of Copa

Start at: 2019-12-11 07:59:06
End at: 2019-12-11 07:59:36
Local clock offset: -0.257 ms
Remote clock offset: -0.042 ms


# Below is generated by plot.py at 2019-12-11 11:46:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 523.01 Mbit/s
95th percentile per-packet one-way delay: 134.674 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 277.80 Mbit/s
95th percentile per-packet one-way delay: 120.396 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 269.81 Mbit/s
95th percentile per-packet one-way delay: 127.895 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 197.10 Mbit/s
95th percentile per-packet one-way delay: 188.008 ms
Loss rate: 0.12%
```
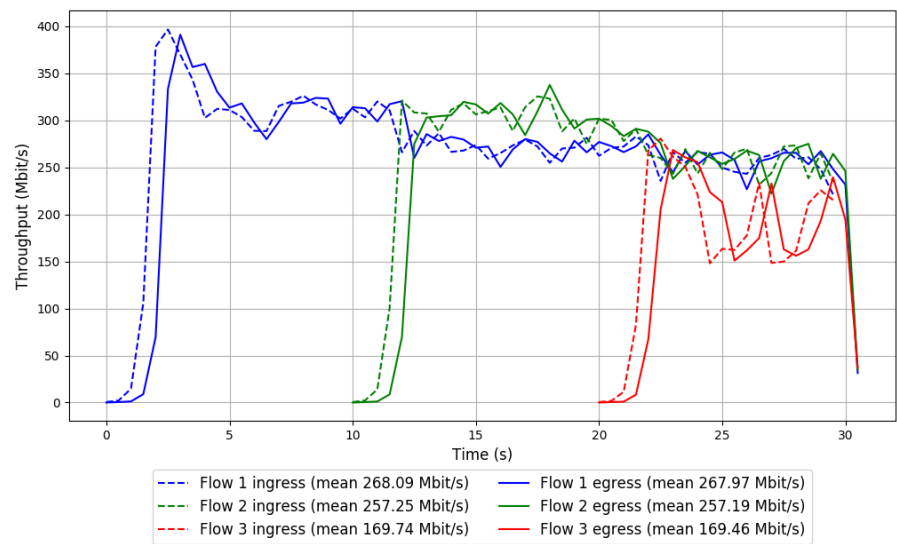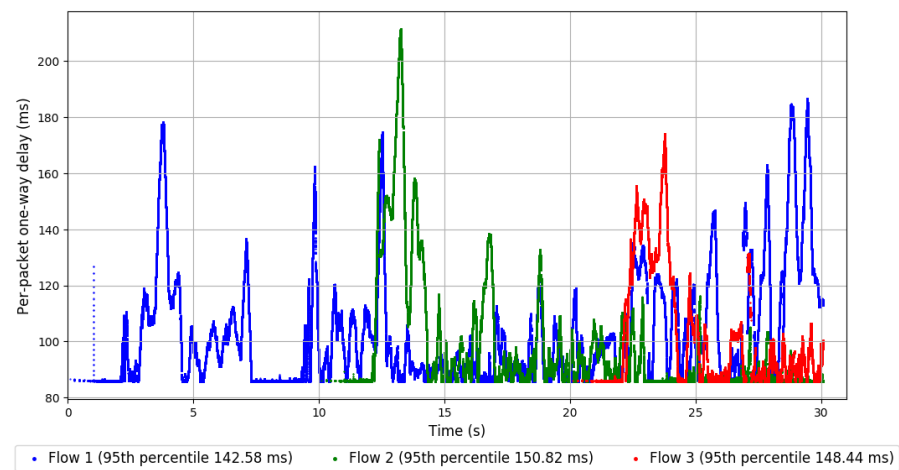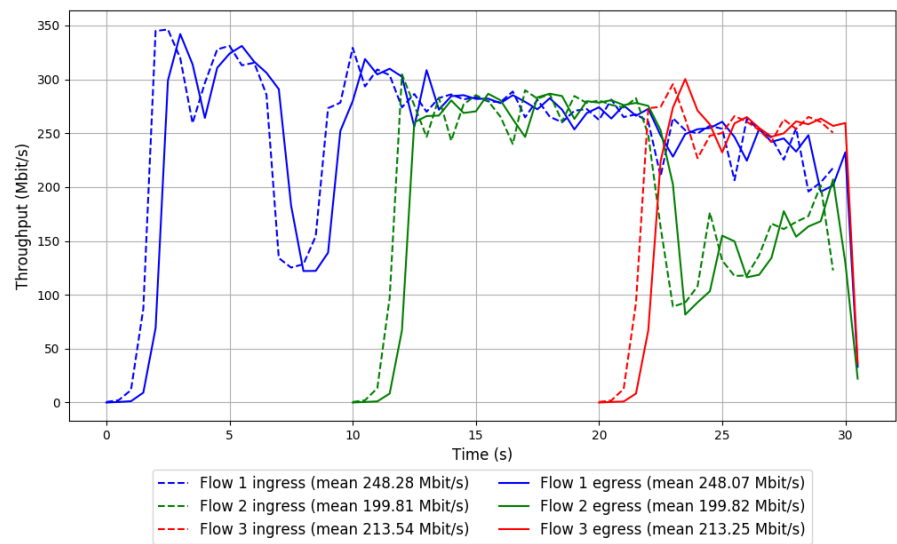
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-12-11 08:40:18
End at: 2019-12-11 08:40:48
Local clock offset: -0.116 ms
Remote clock offset: -0.106 ms


# Below is generated by plot.py at 2019-12-11 11:46:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 484.53 Mbit/s
95th percentile per-packet one-way delay: 142.641 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 282.10 Mbit/s
95th percentile per-packet one-way delay: 127.297 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 216.37 Mbit/s
95th percentile per-packet one-way delay: 153.116 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 175.62 Mbit/s
95th percentile per-packet one-way delay: 167.624 ms
Loss rate: 0.00%
```

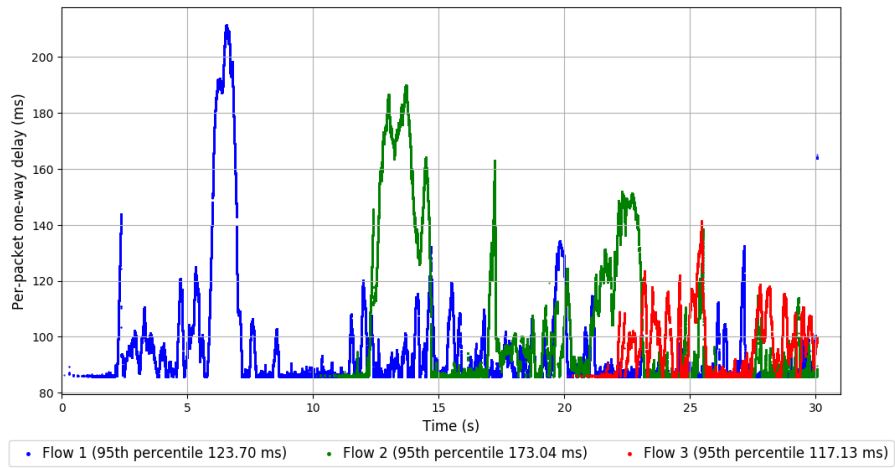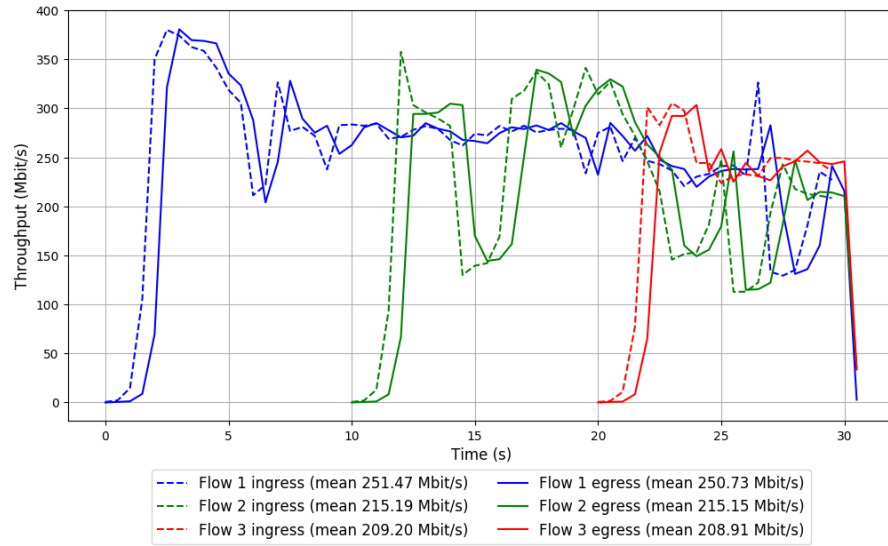Run 2: Report of Copa — Data Link

18

```
Run 3: Statistics of Copa

Start at: 2019-12-11 09:21:31
End at: 2019-12-11 09:22:01
Local clock offset: 0.237 ms
Remote clock offset: -0.064 ms


# Below is generated by plot.py at 2019-12-11 11:46:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 495.50 Mbit/s
95th percentile per-packet one-way delay: 149.453 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 267.97 Mbit/s
95th percentile per-packet one-way delay: 129.437 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 257.19 Mbit/s
95th percentile per-packet one-way delay: 146.125 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 169.46 Mbit/s
95th percentile per-packet one-way delay: 196.128 ms
Loss rate: 0.15%
```

Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-12-11 10:02:33
End at: 2019-12-11 10:03:03
Local clock offset: -0.203 ms
Remote clock offset: -0.115 ms


# Below is generated by plot.py at 2019-12-11 11:55:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 451.99 Mbit/s
95th percentile per-packet one-way delay: 147.485 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 248.07 Mbit/s
95th percentile per-packet one-way delay: 142.583 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 199.82 Mbit/s
95th percentile per-packet one-way delay: 150.823 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 213.25 Mbit/s
95th percentile per-packet one-way delay: 148.443 ms
Loss rate: 0.12%
```
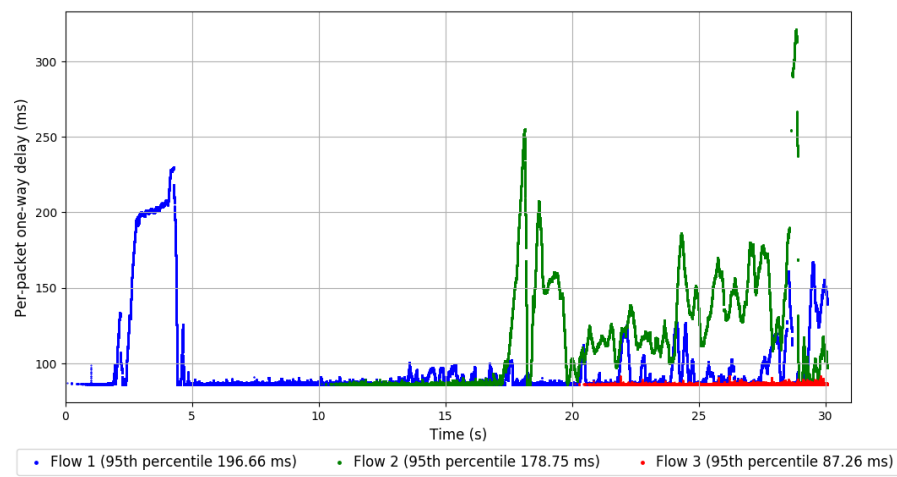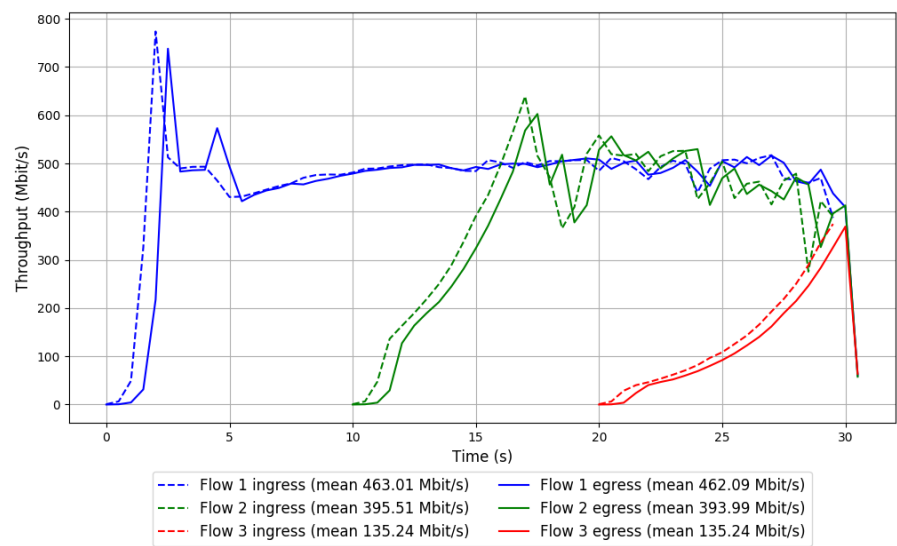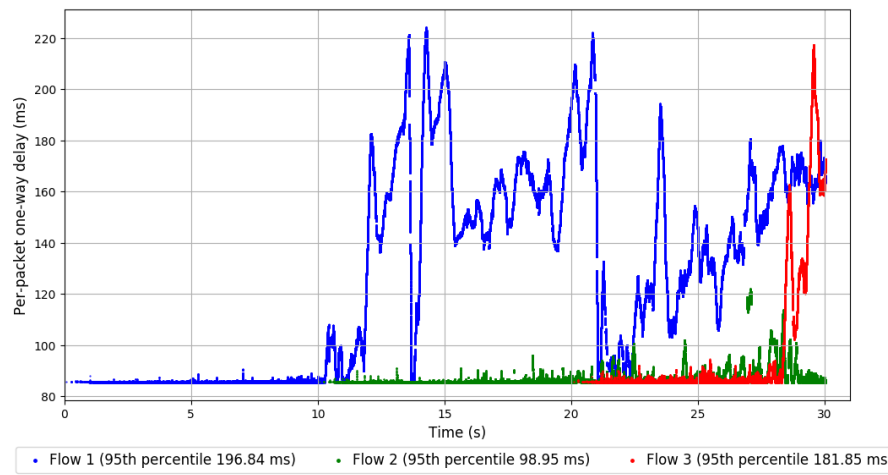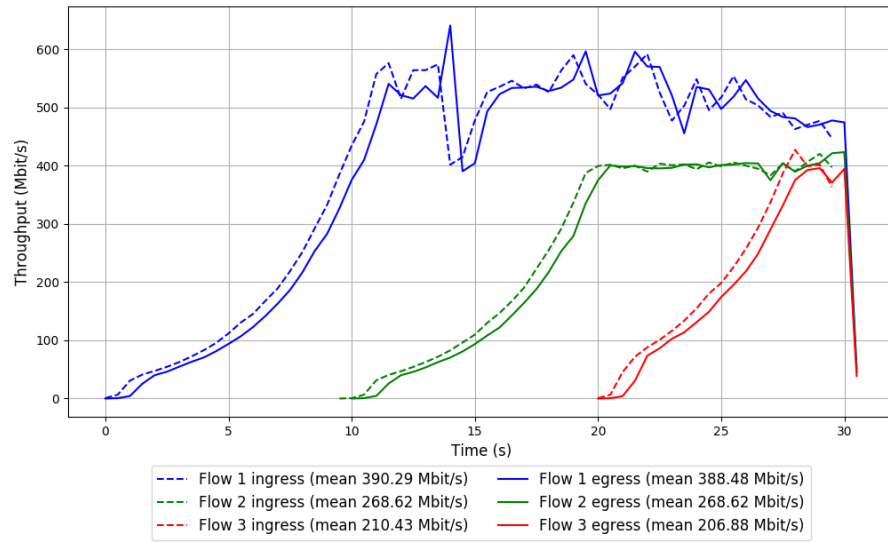
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2019-12-11 10:43:41
End at: 2019-12-11 10:44:11
Local clock offset: -0.278 ms
Remote clock offset: -0.096 ms


# Below is generated by plot.py at 2019-12-11 11:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 463.20 Mbit/s
95th percentile per-packet one-way delay: 149.701 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 250.73 Mbit/s
95th percentile per-packet one-way delay: 123.698 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 215.15 Mbit/s
95th percentile per-packet one-way delay: 173.045 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 208.91 Mbit/s
95th percentile per-packet one-way delay: 117.126 ms
Loss rate: 0.12%
```
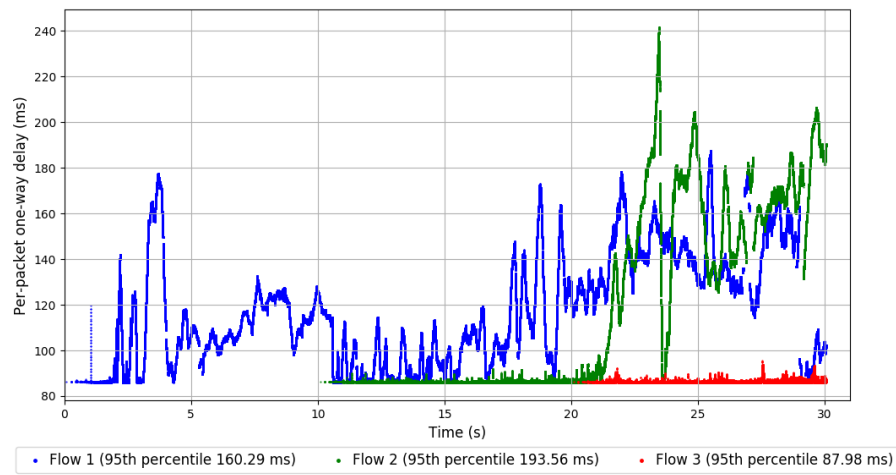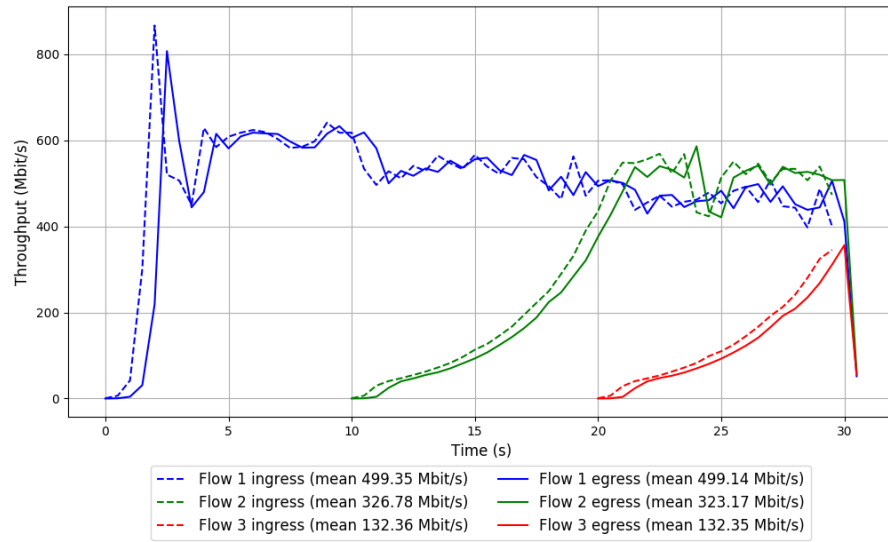
Run 5: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2019-12-11 08:02:57
End at: 2019-12-11 08:03:27
Local clock offset: -0.113 ms
Remote clock offset: 0.021 ms


# Below is generated by plot.py at 2019-12-11 11:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 769.37 Mbit/s
95th percentile per-packet one-way delay: 181.291 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 462.09 Mbit/s
95th percentile per-packet one-way delay: 196.663 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 393.99 Mbit/s
95th percentile per-packet one-way delay: 178.752 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 135.24 Mbit/s
95th percentile per-packet one-way delay: 87.257 ms
Loss rate: 0.00%
```

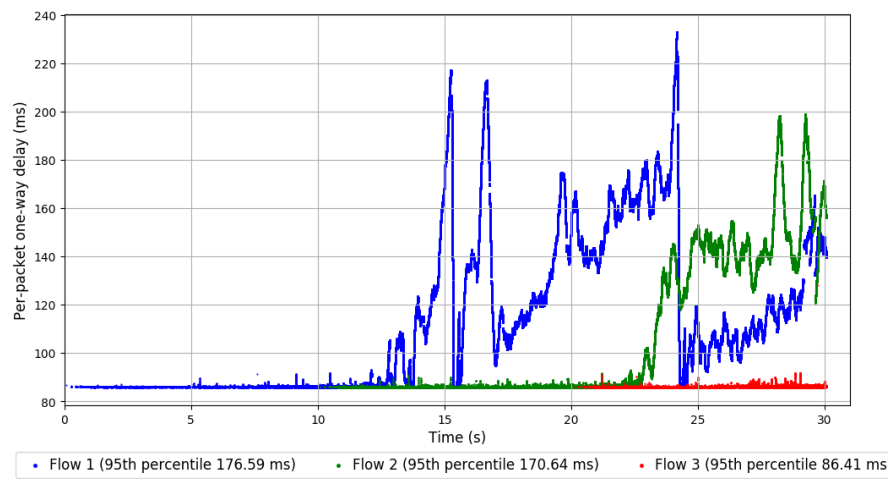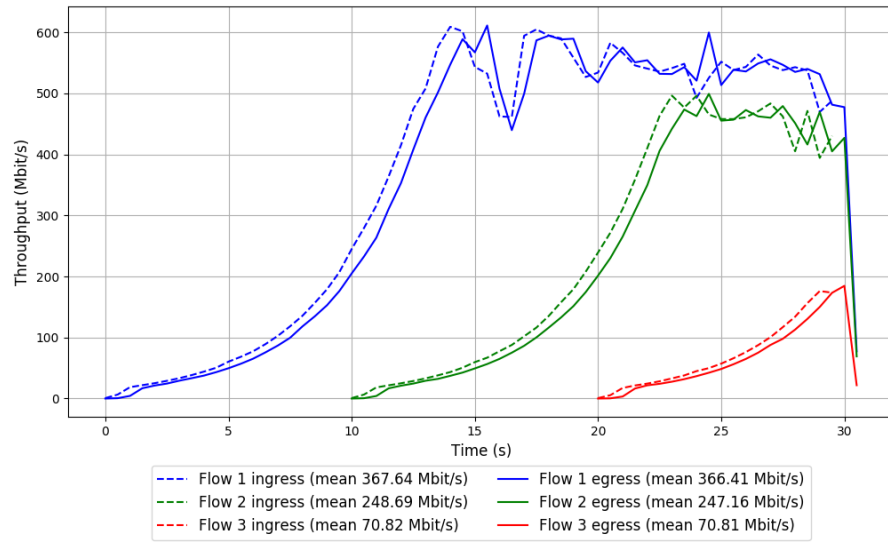Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-12-11 08:44:10
End at: 2019-12-11 08:44:40
Local clock offset: 0.284 ms
Remote clock offset: -0.105 ms


# Below is generated by plot.py at 2019-12-11 11:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 636.25 Mbit/s
95th percentile per-packet one-way delay: 187.874 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 388.48 Mbit/s
95th percentile per-packet one-way delay: 196.837 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 268.62 Mbit/s
95th percentile per-packet one-way delay: 98.951 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 206.88 Mbit/s
95th percentile per-packet one-way delay: 181.849 ms
Loss rate: 1.68%
```
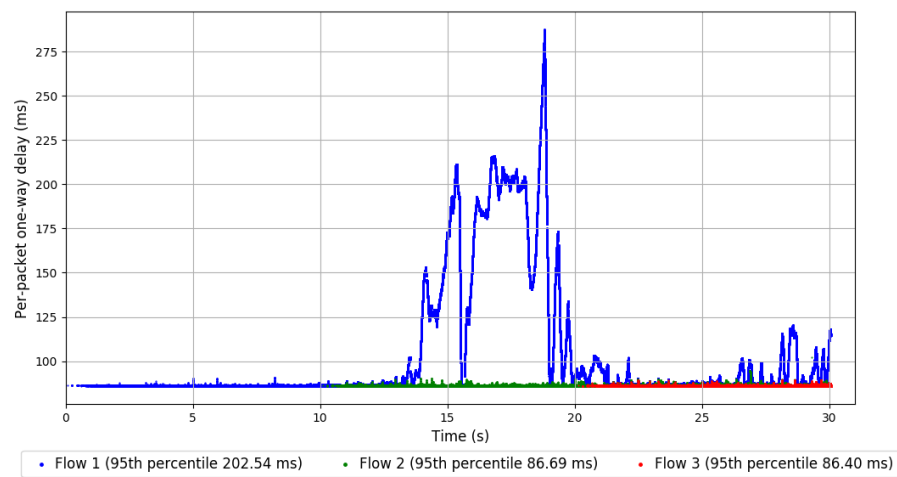
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 390.29 Mbit/s) --- Flow 1 egress (mean 388.48 Mbit/s)
Flow 2 ingress (mean 268.62 Mbit/s) --- Flow 2 egress (mean 268.62 Mbit/s)
Flow 3 ingress (mean 210.43 Mbit/s) --- Flow 3 egress (mean 206.88 Mbit/s)

Flow 1 (95th percentile 196.84 ms) • Flow 2 (95th percentile 98.95 ms) • Flow 3 (95th percentile 181.85 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2019-12-11 09:25:21
End at: 2019-12-11 09:25:51
Local clock offset: -0.134 ms
Remote clock offset: -0.092 ms


# Below is generated by plot.py at 2019-12-11 11:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 758.34 Mbit/s
95th percentile per-packet one-way delay: 177.162 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 499.14 Mbit/s
95th percentile per-packet one-way delay: 160.291 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 323.17 Mbit/s
95th percentile per-packet one-way delay: 193.559 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 132.35 Mbit/s
95th percentile per-packet one-way delay: 87.978 ms
Loss rate: 0.00%
```

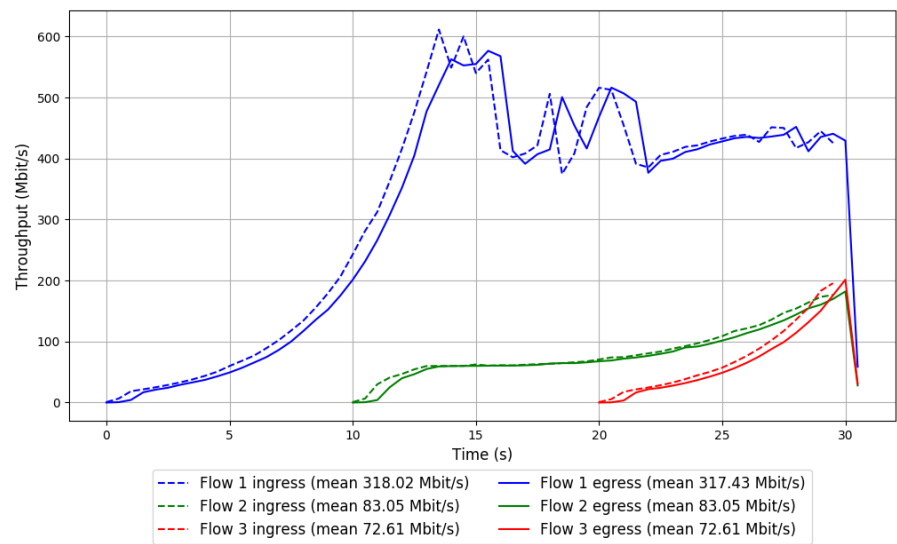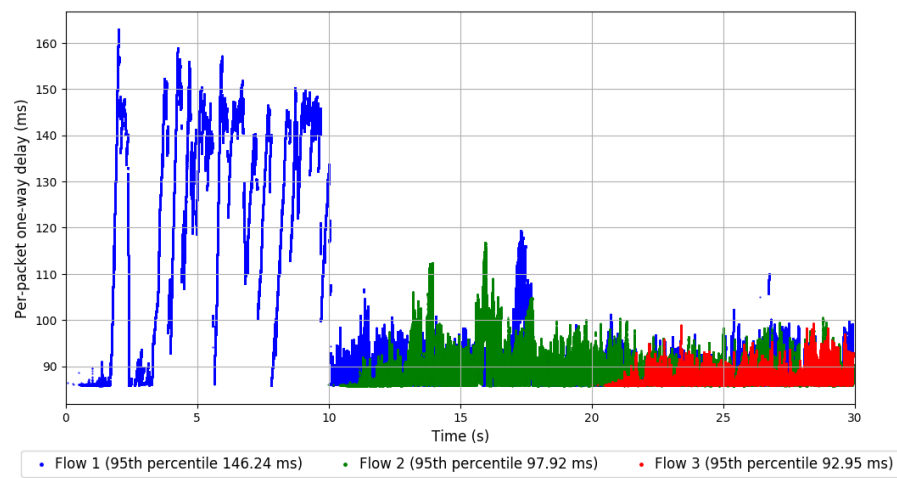Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2019-12-11 10:06:25
End at: 2019-12-11 10:06:55
Local clock offset: -0.207 ms
Remote clock offset: -0.081 ms


# Below is generated by plot.py at 2019-12-11 11:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 554.54 Mbit/s
95th percentile per-packet one-way delay: 175.021 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 366.41 Mbit/s
95th percentile per-packet one-way delay: 176.595 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 247.16 Mbit/s
95th percentile per-packet one-way delay: 170.637 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 70.81 Mbit/s
95th percentile per-packet one-way delay: 86.407 ms
Loss rate: 0.00%
```

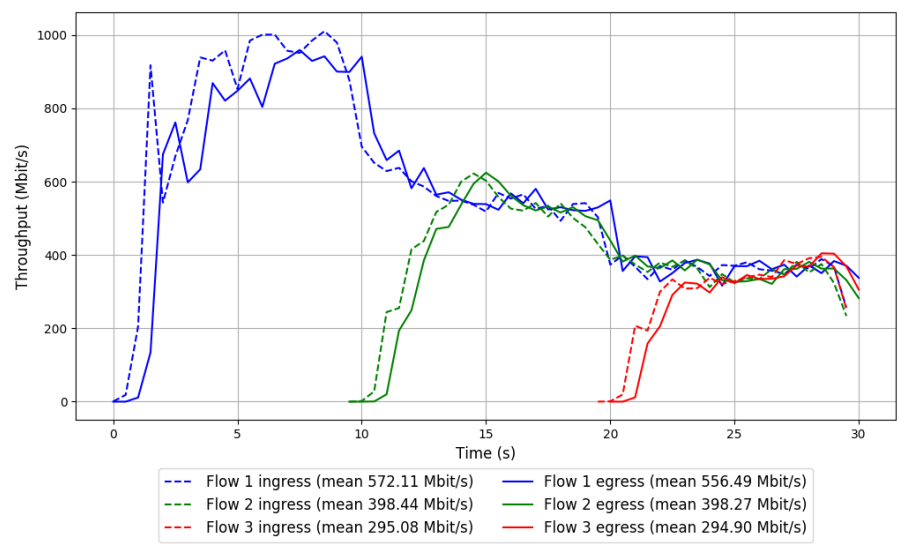Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2019-12-11 10:47:30
End at: 2019-12-11 10:48:00
Local clock offset: -0.406 ms
Remote clock offset: -0.106 ms


# Below is generated by plot.py at 2019-12-11 11:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 396.80 Mbit/s
95th percentile per-packet one-way delay: 200.296 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 317.43 Mbit/s
95th percentile per-packet one-way delay: 202.541 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 83.05 Mbit/s
95th percentile per-packet one-way delay: 86.687 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 72.61 Mbit/s
95th percentile per-packet one-way delay: 86.402 ms
Loss rate: 0.00%
```

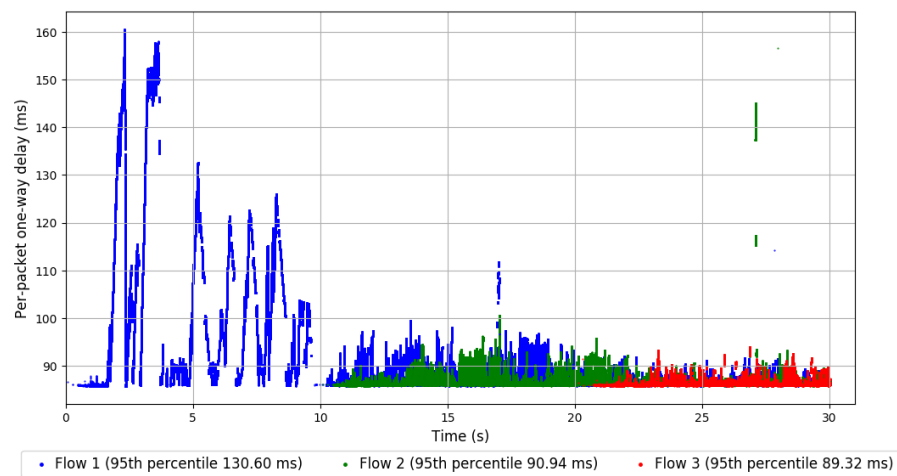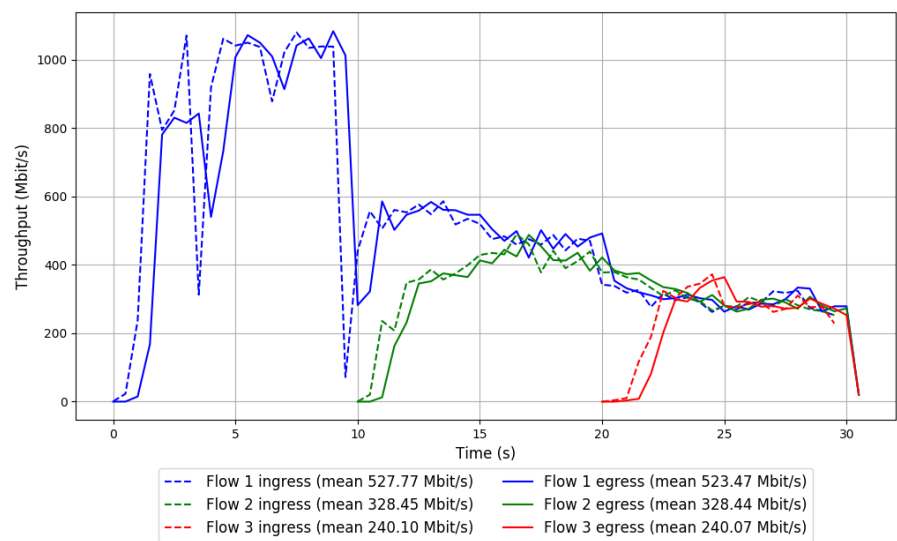Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2019-12-11 07:45:10
End at: 2019-12-11 07:45:40
Local clock offset: -0.257 ms
Remote clock offset: -0.081 ms


# Below is generated by plot.py at 2019-12-11 12:07:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 920.72 Mbit/s
95th percentile per-packet one-way delay: 144.513 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 556.49 Mbit/s
95th percentile per-packet one-way delay: 146.243 ms
Loss rate: 2.69%
-- Flow 2:
Average throughput: 398.27 Mbit/s
95th percentile per-packet one-way delay: 97.916 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 294.90 Mbit/s
95th percentile per-packet one-way delay: 92.954 ms
Loss rate: 0.00%
```
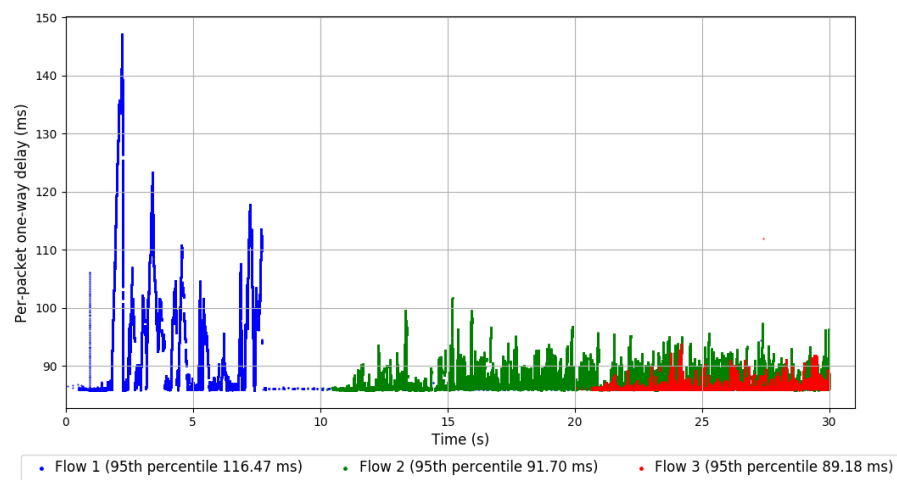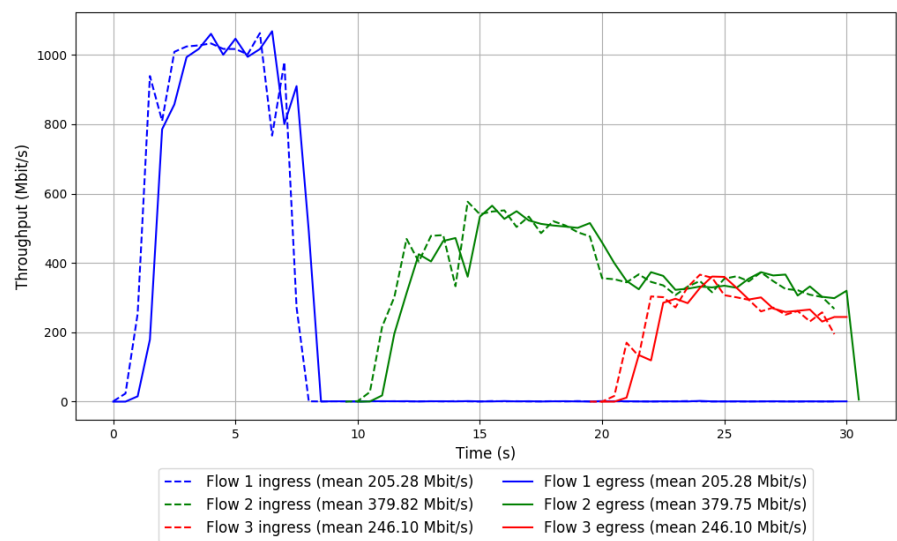
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 572.11 Mbit/s)   Flow 1 egress (mean 556.49 Mbit/s)
Flow 2 ingress (mean 398.44 Mbit/s)   Flow 2 egress (mean 398.27 Mbit/s)
Flow 3 ingress (mean 295.08 Mbit/s)   Flow 3 egress (mean 294.90 Mbit/s)

Flow 1 (95th percentile 146.24 ms)   Flow 2 (95th percentile 97.92 ms)   Flow 3 (95th percentile 92.95 ms)

```
Run 2: Statistics of FillP

Start at: 2019-12-11 08:26:11
End at: 2019-12-11 08:26:41
Local clock offset: -0.043 ms
Remote clock offset: -0.117 ms


# Below is generated by plot.py at 2019-12-11 12:10:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 821.28 Mbit/s
95th percentile per-packet one-way delay: 120.044 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 523.47 Mbit/s
95th percentile per-packet one-way delay: 130.598 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 328.44 Mbit/s
95th percentile per-packet one-way delay: 90.943 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 240.07 Mbit/s
95th percentile per-packet one-way delay: 89.319 ms
Loss rate: 0.02%
```
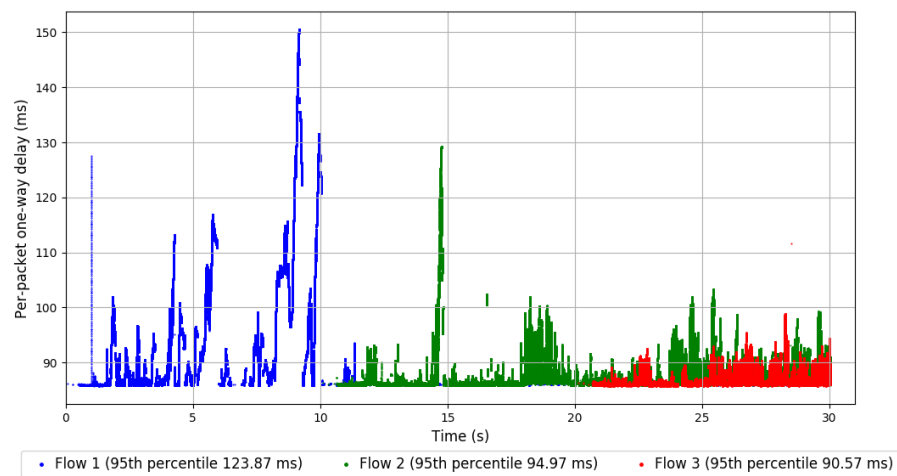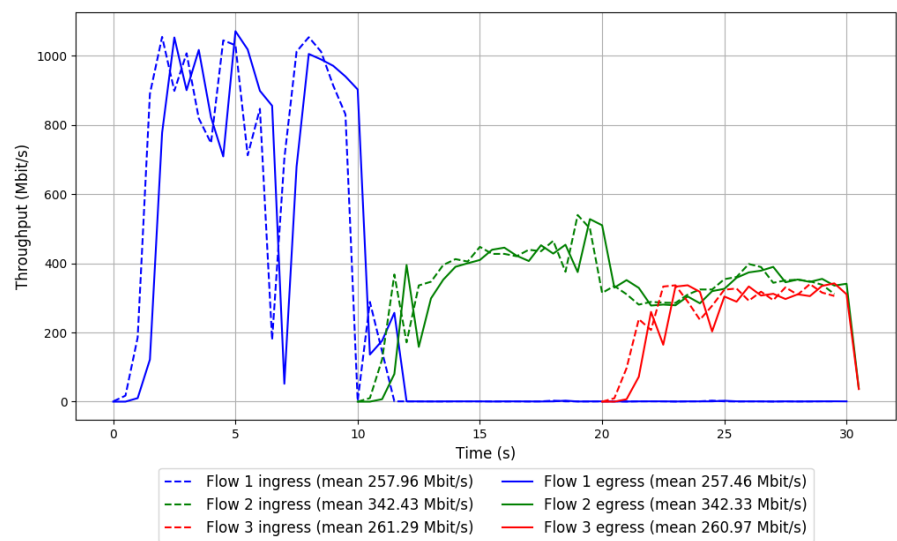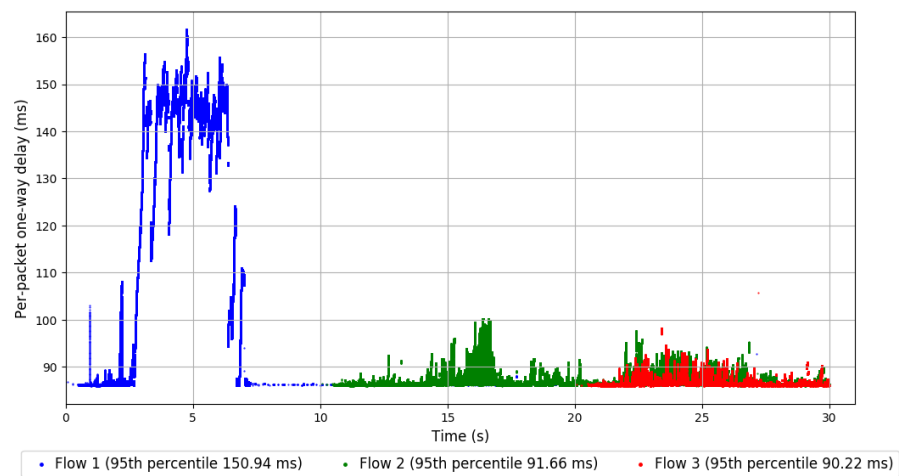
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-12-11 09:07:22
End at: 2019-12-11 09:07:52
Local clock offset: -0.158 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-12-11 12:10:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 539.89 Mbit/s
95th percentile per-packet one-way delay: 104.858 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 205.28 Mbit/s
95th percentile per-packet one-way delay: 116.471 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 379.75 Mbit/s
95th percentile per-packet one-way delay: 91.702 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 246.10 Mbit/s
95th percentile per-packet one-way delay: 89.182 ms
Loss rate: 0.00%
```
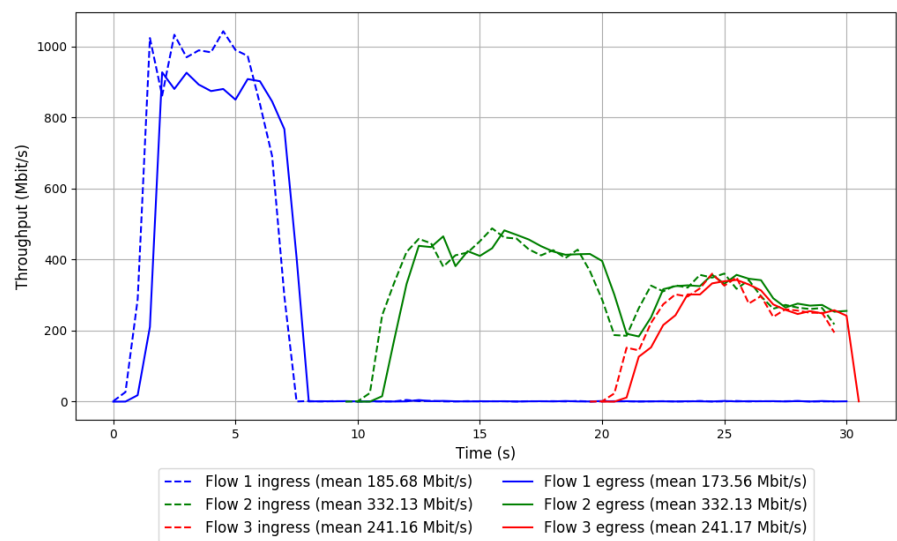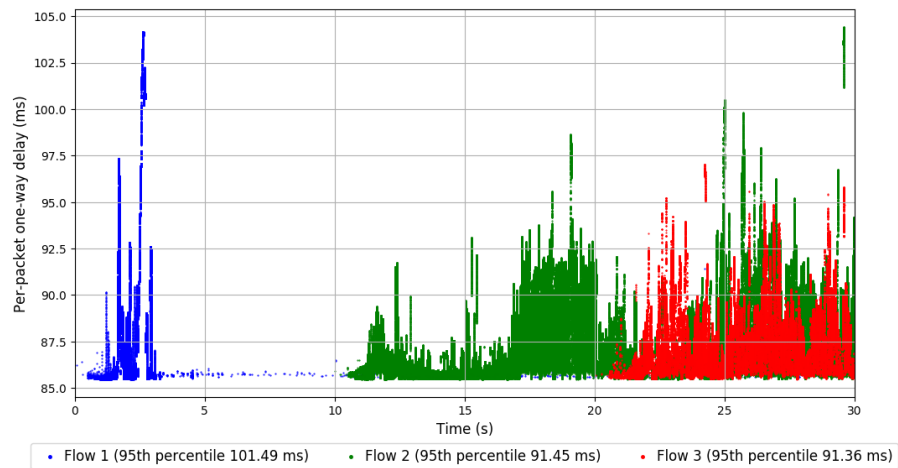
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-12-11 09:48:38
End at: 2019-12-11 09:49:08
Local clock offset: -0.073 ms
Remote clock offset: -0.079 ms


# Below is generated by plot.py at 2019-12-11 12:10:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 571.00 Mbit/s
95th percentile per-packet one-way delay: 111.891 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 257.46 Mbit/s
95th percentile per-packet one-way delay: 123.868 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 342.33 Mbit/s
95th percentile per-packet one-way delay: 94.975 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 260.97 Mbit/s
95th percentile per-packet one-way delay: 90.569 ms
Loss rate: 0.12%
```
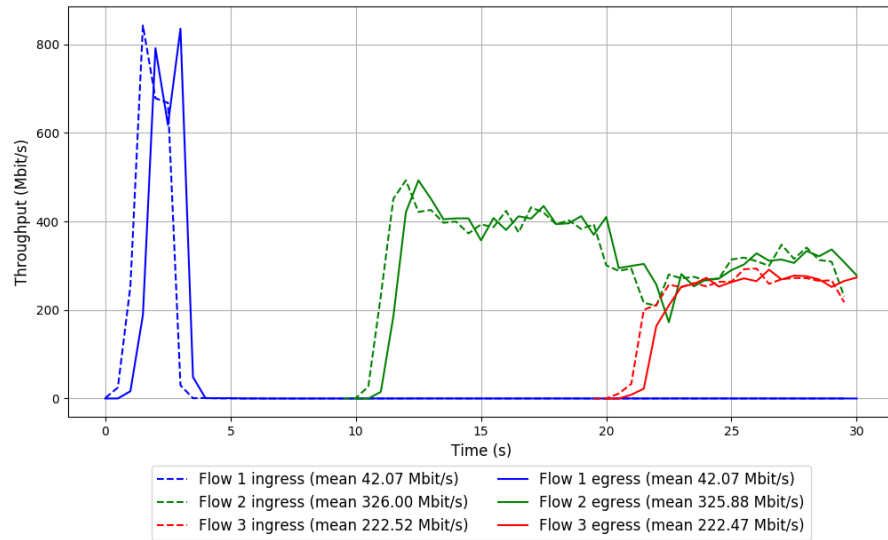
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2019-12-11 10:29:36
End at: 2019-12-11 10:30:06
Local clock offset: -0.473 ms
Remote clock offset: -0.076 ms


# Below is generated by plot.py at 2019-12-11 12:10:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 474.11 Mbit/s
95th percentile per-packet one-way delay: 147.435 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 173.56 Mbit/s
95th percentile per-packet one-way delay: 150.935 ms
Loss rate: 6.53%
-- Flow 2:
Average throughput: 332.13 Mbit/s
95th percentile per-packet one-way delay: 91.660 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 241.17 Mbit/s
95th percentile per-packet one-way delay: 90.223 ms
Loss rate: 0.00%
```
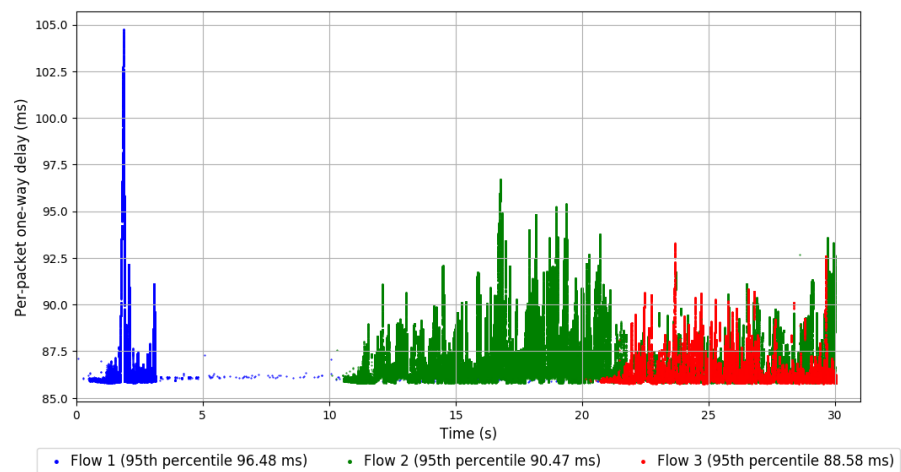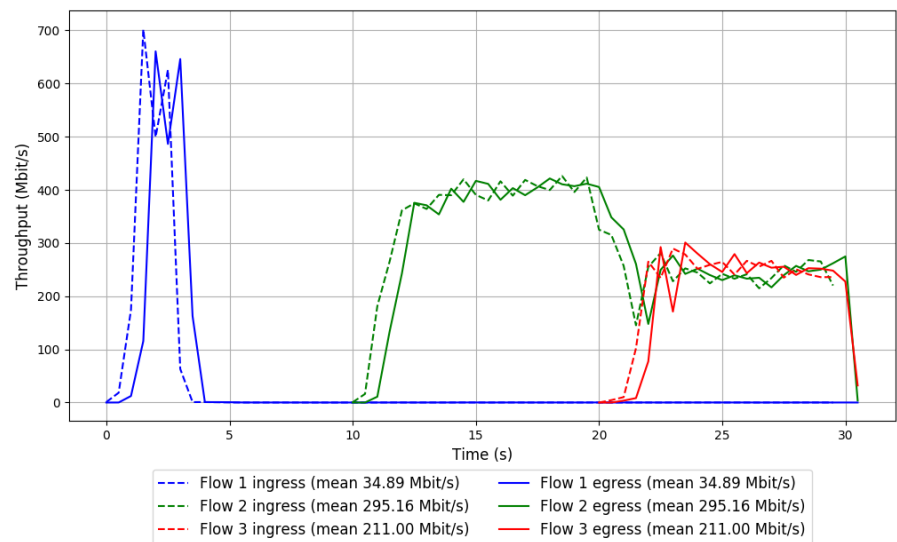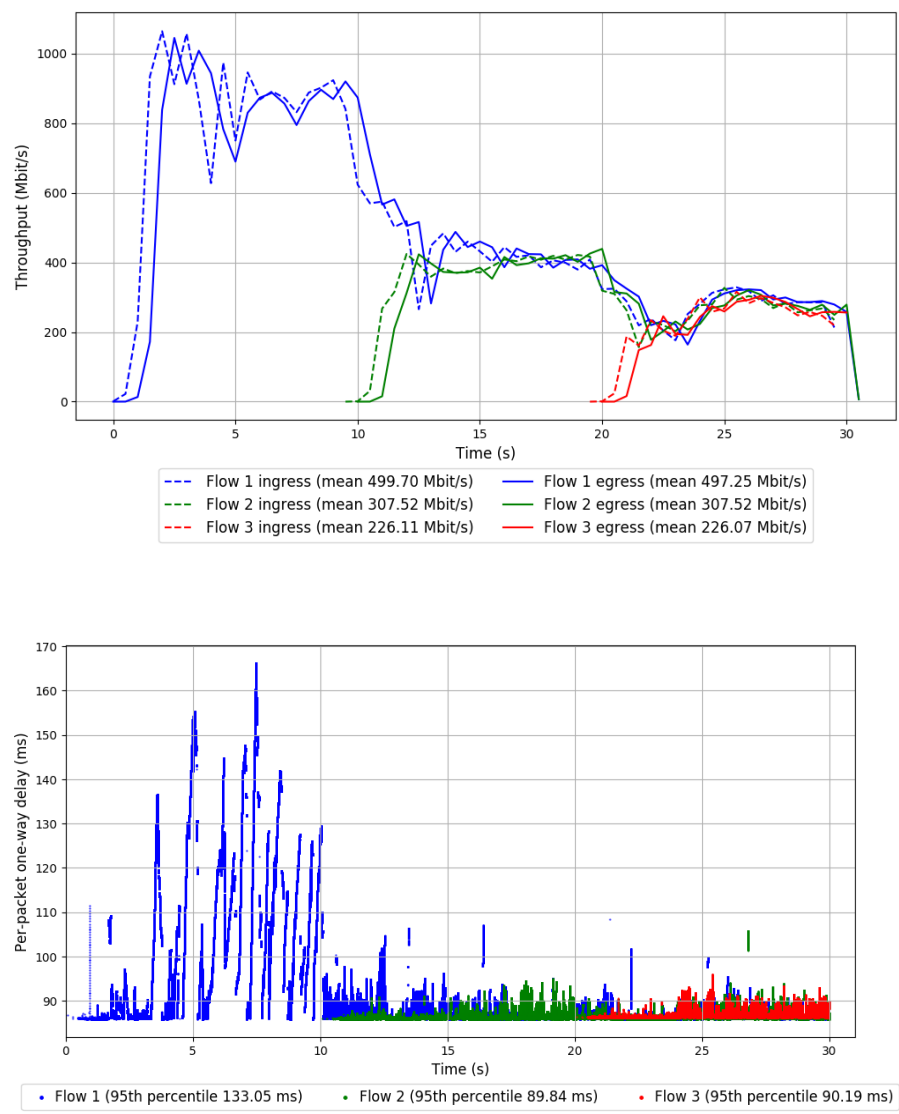
Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-12-11 07:48:49
End at: 2019-12-11 07:49:19
Local clock offset: 0.171 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2019-12-11 12:10:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.24 Mbit/s
95th percentile per-packet one-way delay: 92.369 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.07 Mbit/s
95th percentile per-packet one-way delay: 101.487 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 325.88 Mbit/s
95th percentile per-packet one-way delay: 91.446 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 222.47 Mbit/s
95th percentile per-packet one-way delay: 91.362 ms
Loss rate: 0.01%
```

Run 1: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 42.07 Mbit/s) — Flow 1 egress (mean 42.07 Mbit/s)
Flow 2 ingress (mean 326.00 Mbit/s) — Flow 2 egress (mean 325.88 Mbit/s)
Flow 3 ingress (mean 222.52 Mbit/s) — Flow 3 egress (mean 222.47 Mbit/s)

Flow 1 (95th percentile 101.49 ms)   Flow 2 (95th percentile 91.45 ms)   Flow 3 (95th percentile 91.36 ms)

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-12-11 08:29:52
End at: 2019-12-11 08:30:22
Local clock offset: -0.074 ms
Remote clock offset: -0.126 ms


# Below is generated by plot.py at 2019-12-11 12:10:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 301.00 Mbit/s
95th percentile per-packet one-way delay: 90.451 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.89 Mbit/s
95th percentile per-packet one-way delay: 96.478 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 295.16 Mbit/s
95th percentile per-packet one-way delay: 90.469 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 211.00 Mbit/s
95th percentile per-packet one-way delay: 88.585 ms
Loss rate: 0.00%
```

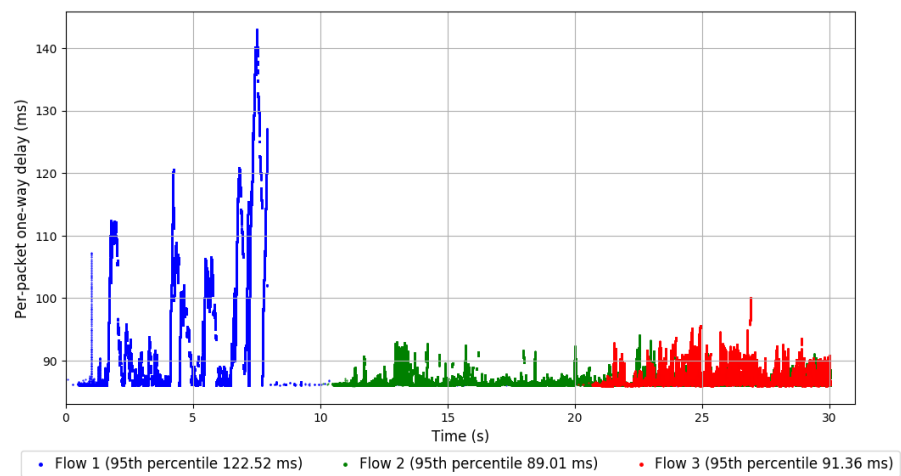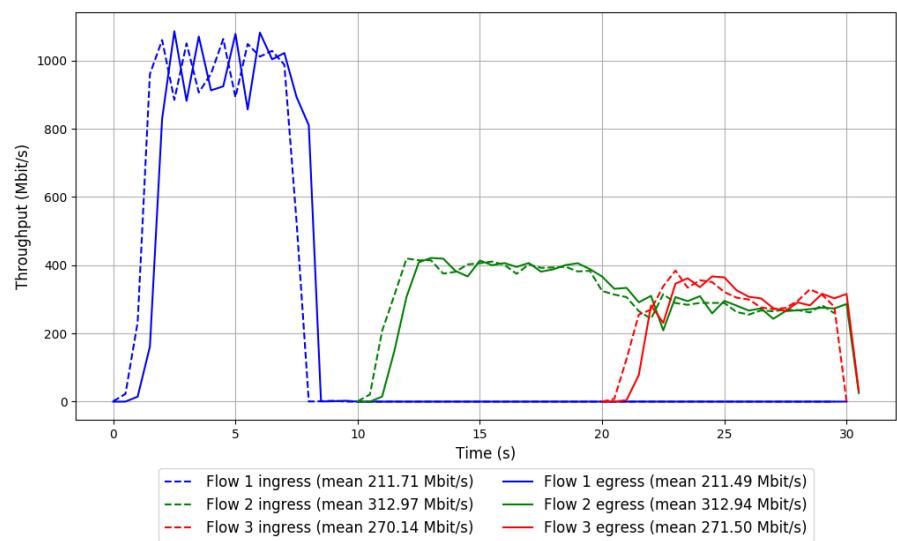Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-12-11 09:10:54
End at: 2019-12-11 09:11:24
Local clock offset: -0.077 ms
Remote clock offset: -0.031 ms


# Below is generated by plot.py at 2019-12-11 12:12:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 777.09 Mbit/s
95th percentile per-packet one-way delay: 125.064 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 497.25 Mbit/s
95th percentile per-packet one-way delay: 133.047 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 307.52 Mbit/s
95th percentile per-packet one-way delay: 89.840 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 226.07 Mbit/s
95th percentile per-packet one-way delay: 90.195 ms
Loss rate: 0.00%
```

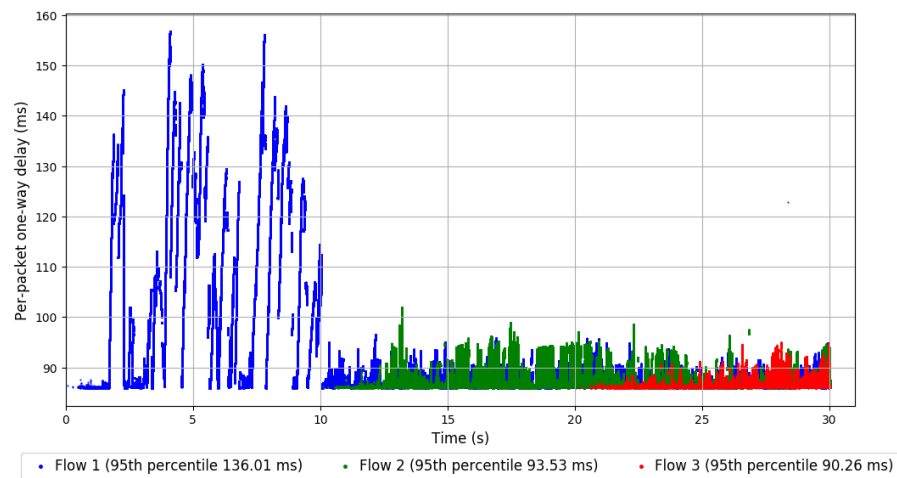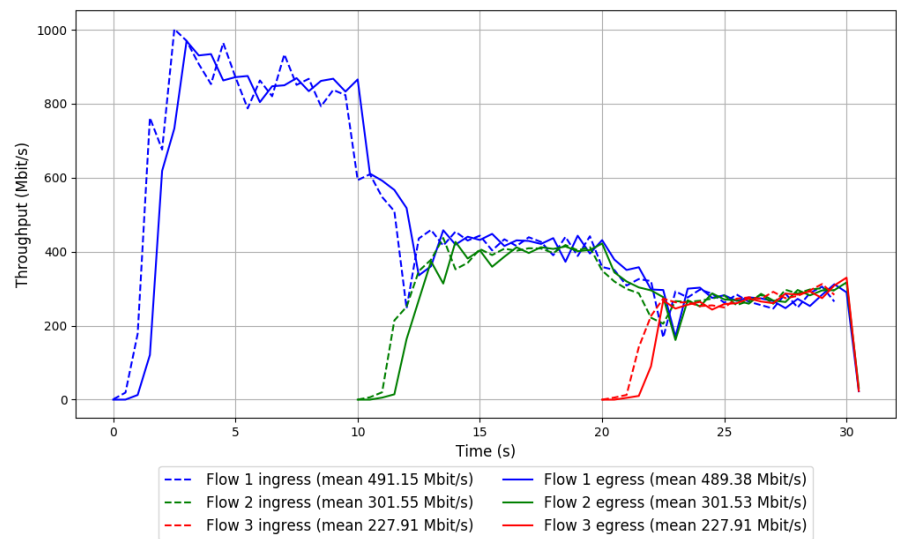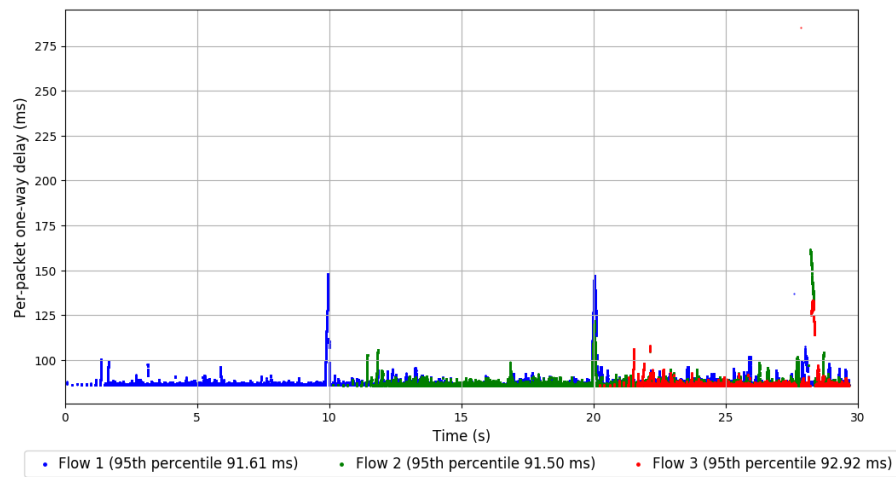Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 499.70 Mbit/s)   Flow 1 egress (mean 497.25 Mbit/s)
Flow 2 ingress (mean 307.52 Mbit/s)   Flow 2 egress (mean 307.52 Mbit/s)
Flow 3 ingress (mean 226.11 Mbit/s)   Flow 3 egress (mean 226.07 Mbit/s)

Flow 1 (95th percentile 133.05 ms)   Flow 2 (95th percentile 89.84 ms)   Flow 3 (95th percentile 90.19 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-12-11 09:52:13
End at: 2019-12-11 09:52:43
Local clock offset: -0.248 ms
Remote clock offset: -0.107 ms


# Below is generated by plot.py at 2019-12-11 12:12:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 509.03 Mbit/s
95th percentile per-packet one-way delay: 112.057 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 211.49 Mbit/s
95th percentile per-packet one-way delay: 122.518 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 312.94 Mbit/s
95th percentile per-packet one-way delay: 89.008 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 271.50 Mbit/s
95th percentile per-packet one-way delay: 91.363 ms
Loss rate: 0.00%
```

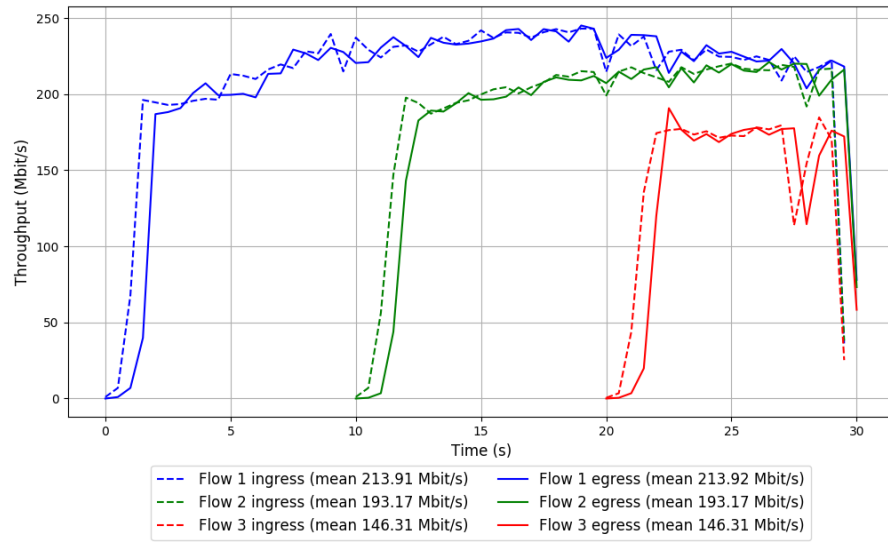Run 4: Report of FillP-Sheep — Data Link

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-12-11 10:33:07
End at: 2019-12-11 10:33:37
Local clock offset: -0.402 ms
Remote clock offset: -0.079 ms


# Below is generated by plot.py at 2019-12-11 12:19:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 764.77 Mbit/s
95th percentile per-packet one-way delay: 132.118 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 489.38 Mbit/s
95th percentile per-packet one-way delay: 136.015 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 301.53 Mbit/s
95th percentile per-packet one-way delay: 93.529 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 227.91 Mbit/s
95th percentile per-packet one-way delay: 90.262 ms
Loss rate: 0.00%
```

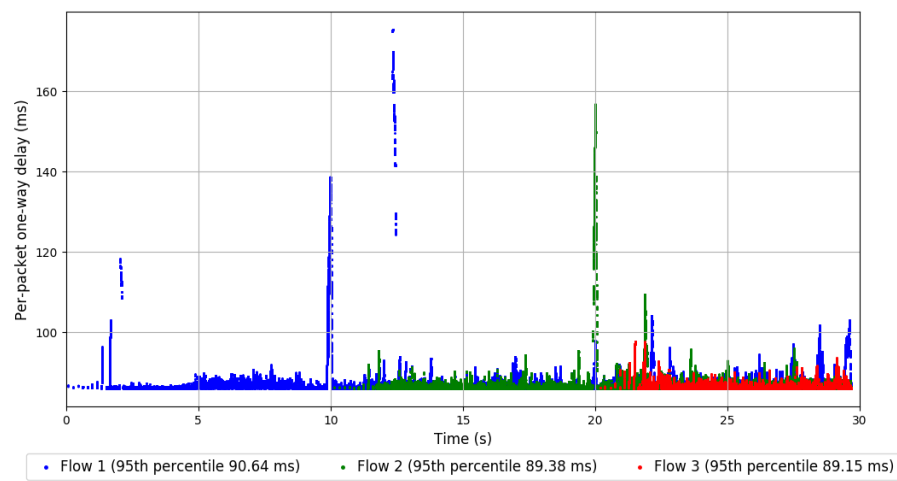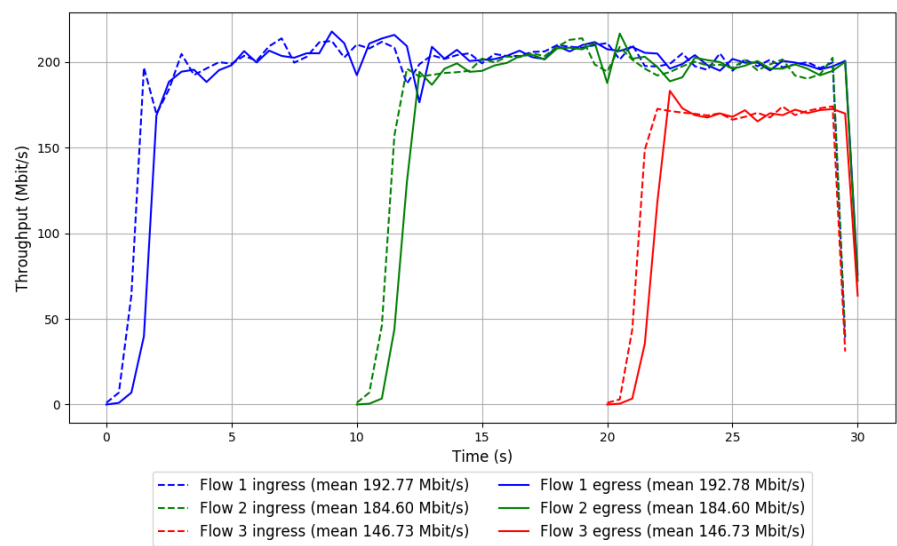Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2019-12-11 08:09:17
End at: 2019-12-11 08:09:47
Local clock offset: -0.043 ms
Remote clock offset: -0.04 ms


# Below is generated by plot.py at 2019-12-11 12:19:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.06 Mbit/s
95th percentile per-packet one-way delay: 91.786 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 213.92 Mbit/s
95th percentile per-packet one-way delay: 91.610 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 193.17 Mbit/s
95th percentile per-packet one-way delay: 91.496 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 146.31 Mbit/s
95th percentile per-packet one-way delay: 92.924 ms
Loss rate: 0.00%
```
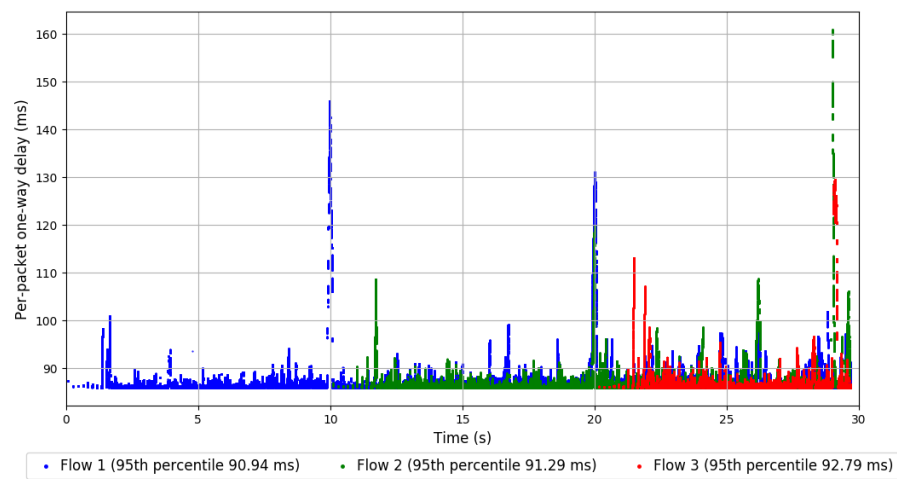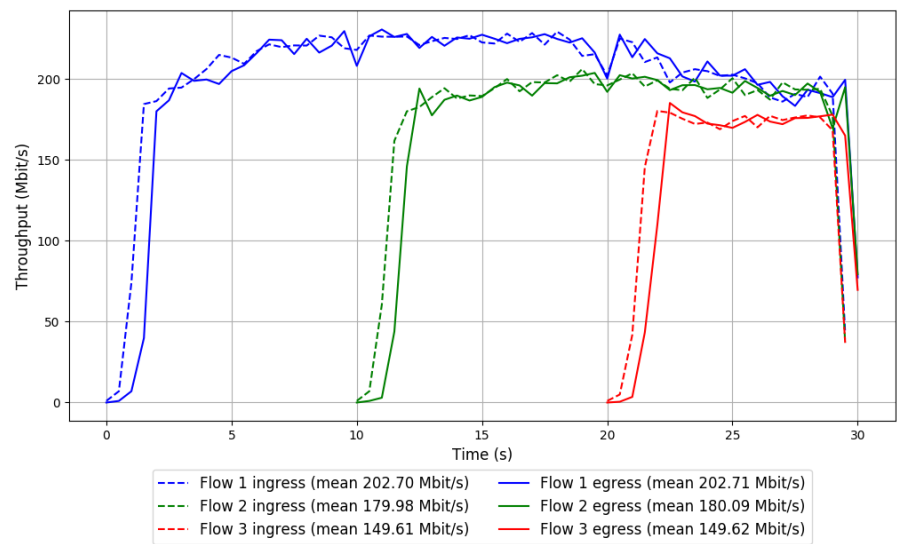
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-12-11 08:50:26
End at: 2019-12-11 08:50:56
Local clock offset: -0.144 ms
Remote clock offset: -0.053 ms


# Below is generated by plot.py at 2019-12-11 12:19:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 361.64 Mbit/s
95th percentile per-packet one-way delay: 89.863 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 192.78 Mbit/s
95th percentile per-packet one-way delay: 90.640 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 184.60 Mbit/s
95th percentile per-packet one-way delay: 89.383 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 146.73 Mbit/s
95th percentile per-packet one-way delay: 89.152 ms
Loss rate: 0.00%
```
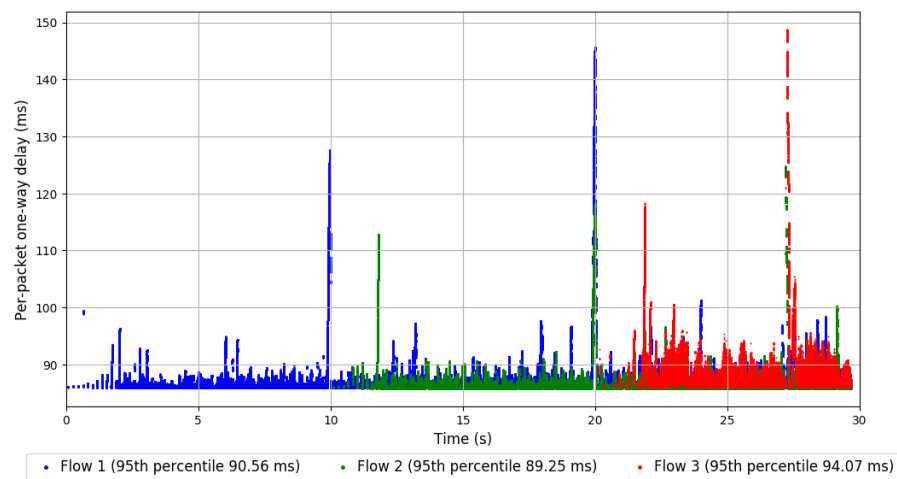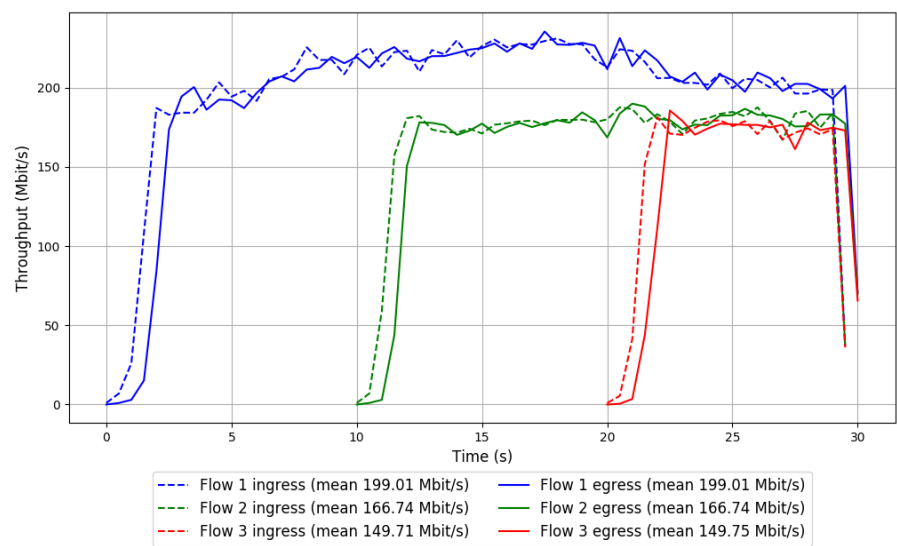
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-12-11 09:31:42
End at: 2019-12-11 09:32:12
Local clock offset: -0.126 ms
Remote clock offset: -0.097 ms


# Below is generated by plot.py at 2019-12-11 12:19:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.96 Mbit/s
95th percentile per-packet one-way delay: 91.310 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 202.71 Mbit/s
95th percentile per-packet one-way delay: 90.936 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 180.09 Mbit/s
95th percentile per-packet one-way delay: 91.291 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 149.62 Mbit/s
95th percentile per-packet one-way delay: 92.789 ms
Loss rate: 0.00%
```
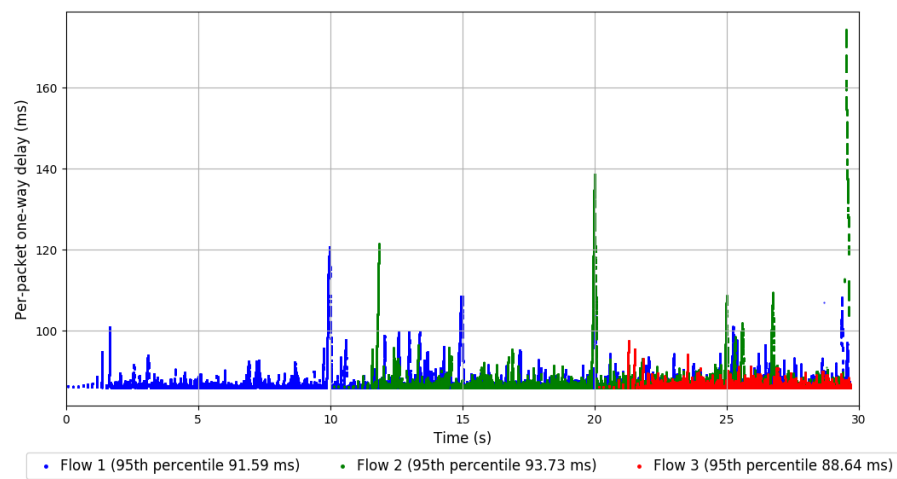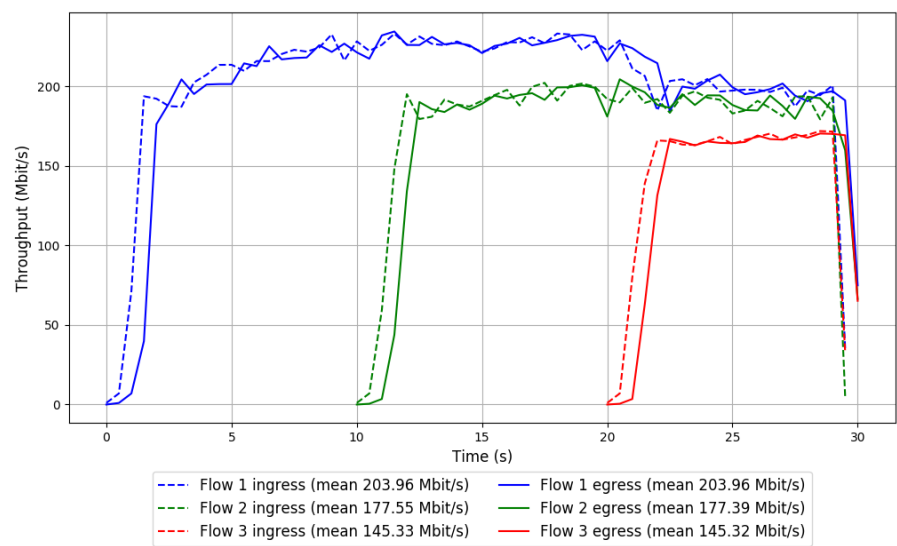
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-12-11 10:12:40
End at: 2019-12-11 10:13:10
Local clock offset: -0.285 ms
Remote clock offset: -0.081 ms


# Below is generated by plot.py at 2019-12-11 12:20:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.46 Mbit/s
95th percentile per-packet one-way delay: 91.061 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 199.01 Mbit/s
95th percentile per-packet one-way delay: 90.565 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 166.74 Mbit/s
95th percentile per-packet one-way delay: 89.251 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 149.75 Mbit/s
95th percentile per-packet one-way delay: 94.074 ms
Loss rate: 0.00%
```
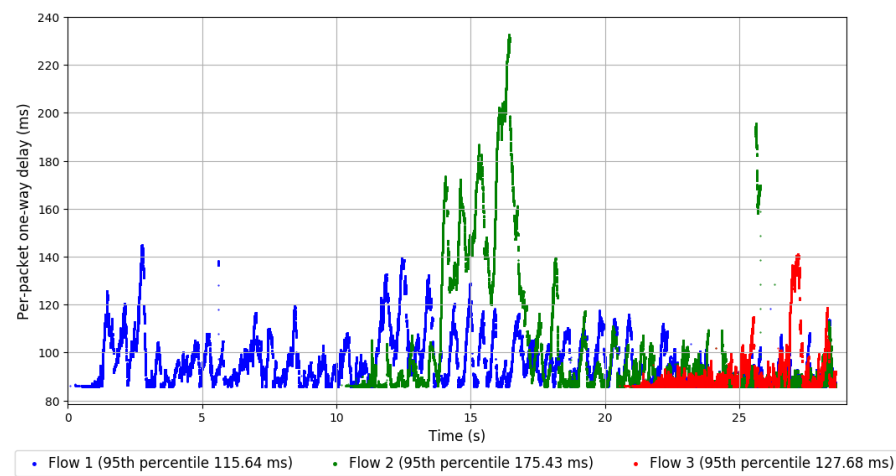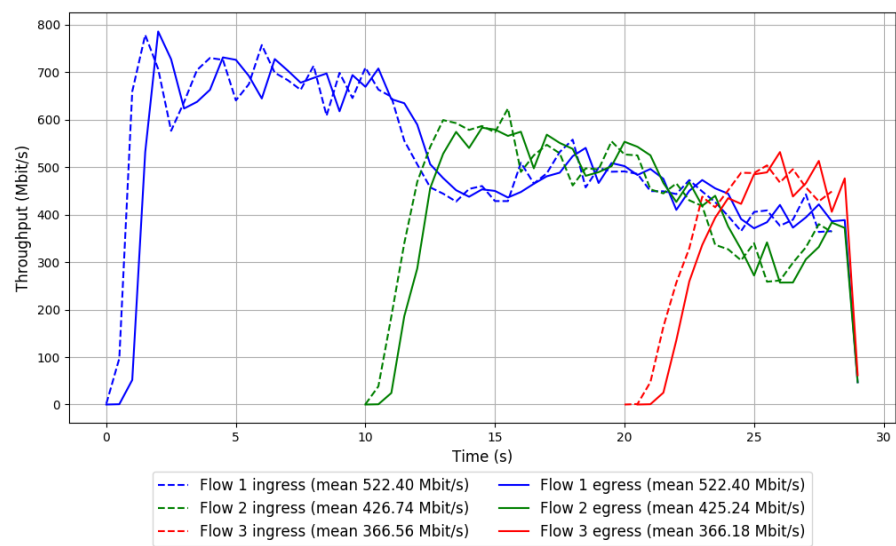
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-12-11 10:53:36
End at: 2019-12-11 10:54:06
Local clock offset: -0.297 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2019-12-11 12:22:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.53 Mbit/s
95th percentile per-packet one-way delay: 91.508 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 203.96 Mbit/s
95th percentile per-packet one-way delay: 91.586 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 177.39 Mbit/s
95th percentile per-packet one-way delay: 93.730 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 145.32 Mbit/s
95th percentile per-packet one-way delay: 88.635 ms
Loss rate: 0.00%
```
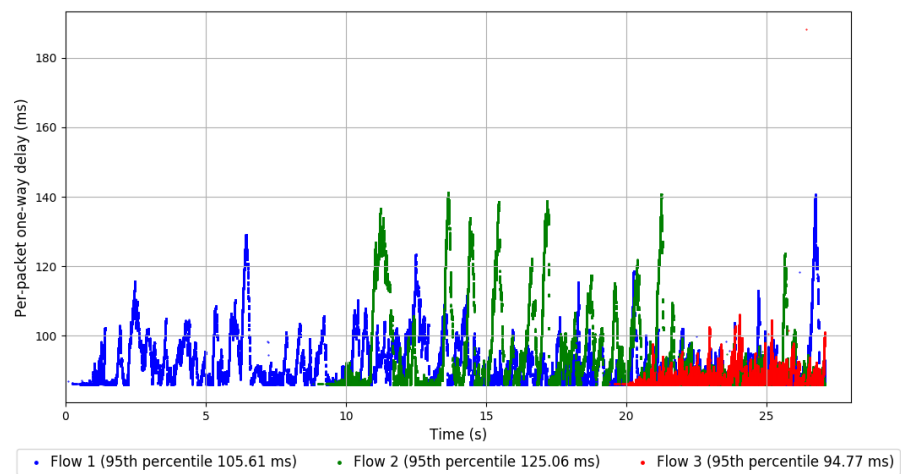
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-12-11 08:06:06
End at: 2019-12-11 08:06:36
Local clock offset: -0.113 ms
Remote clock offset: -0.021 ms


# Below is generated by plot.py at 2019-12-11 12:29:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 899.94 Mbit/s
95th percentile per-packet one-way delay: 139.694 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 522.40 Mbit/s
95th percentile per-packet one-way delay: 115.637 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 425.24 Mbit/s
95th percentile per-packet one-way delay: 175.432 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 366.18 Mbit/s
95th percentile per-packet one-way delay: 127.684 ms
Loss rate: 0.09%
```
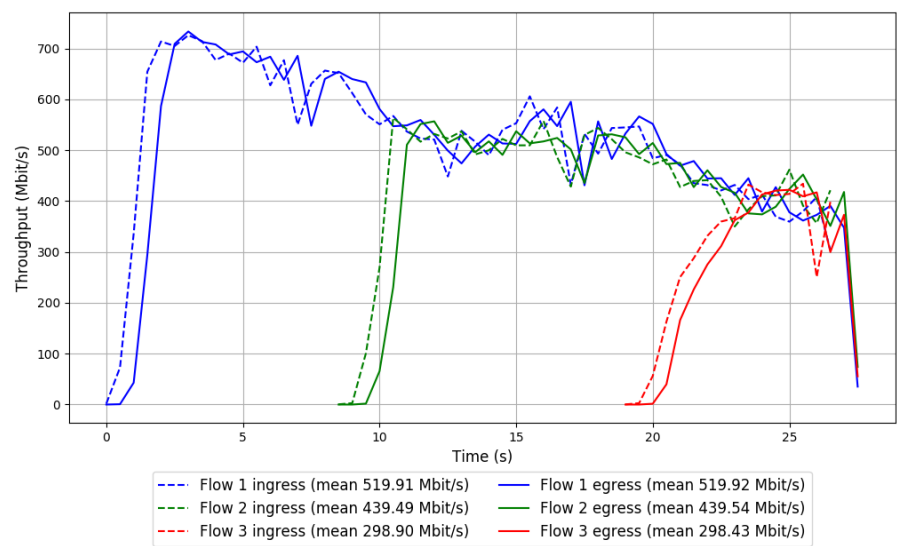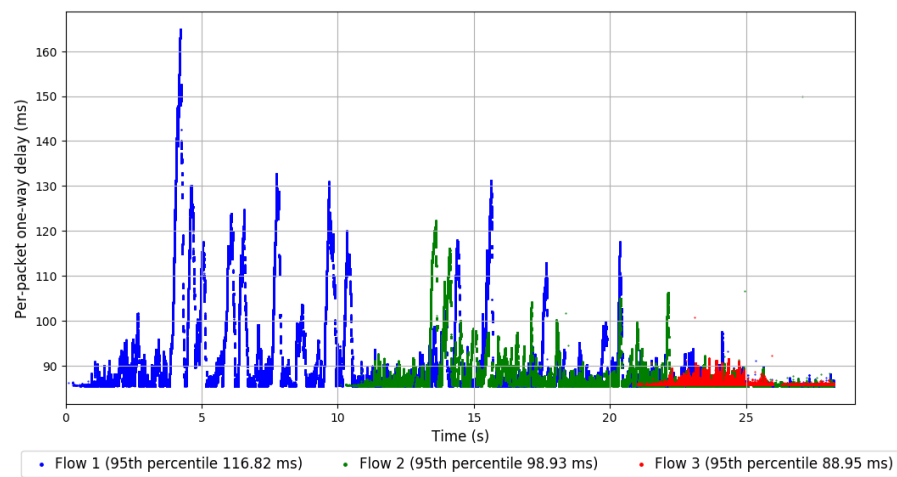
Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-12-11 08:47:16
End at: 2019-12-11 08:47:46
Local clock offset: -0.059 ms
Remote clock offset: -0.071 ms


# Below is generated by plot.py at 2019-12-11 12:29:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 901.67 Mbit/s
95th percentile per-packet one-way delay: 113.390 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 519.92 Mbit/s
95th percentile per-packet one-way delay: 105.612 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 439.54 Mbit/s
95th percentile per-packet one-way delay: 125.061 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 298.43 Mbit/s
95th percentile per-packet one-way delay: 94.771 ms
Loss rate: 0.15%
```
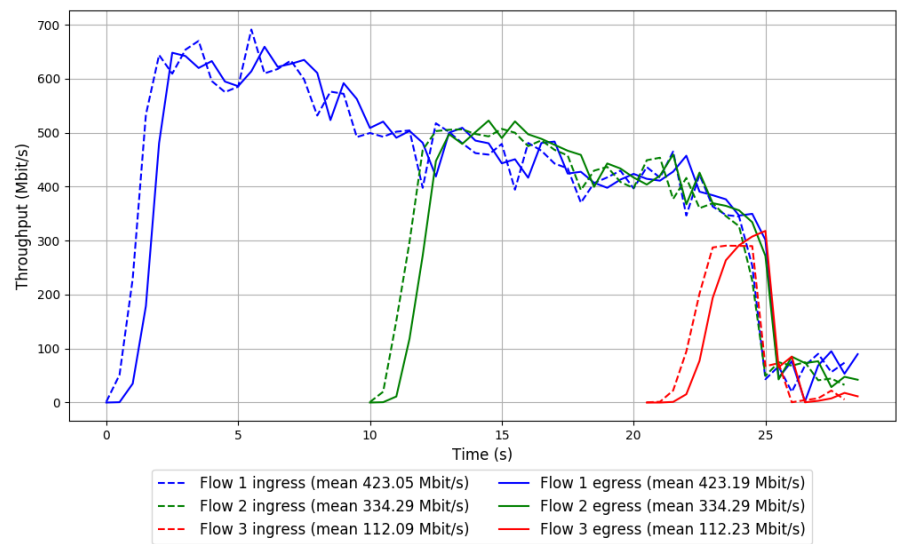
Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-12-11 09:28:37
End at: 2019-12-11 09:29:07
Local clock offset: 0.238 ms
Remote clock offset: -0.092 ms


# Below is generated by plot.py at 2019-12-11 12:29:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 667.78 Mbit/s
95th percentile per-packet one-way delay: 113.898 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 423.19 Mbit/s
95th percentile per-packet one-way delay: 116.816 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 334.29 Mbit/s
95th percentile per-packet one-way delay: 98.933 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 112.23 Mbit/s
95th percentile per-packet one-way delay: 88.954 ms
Loss rate: 0.00%
```

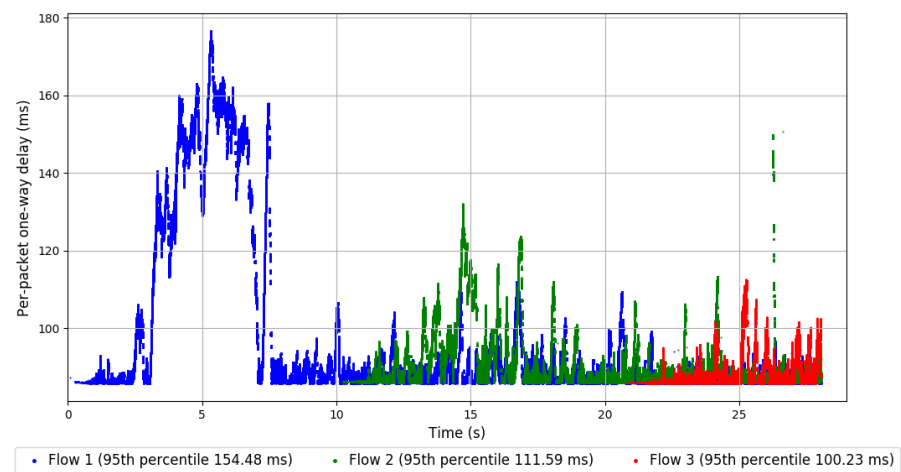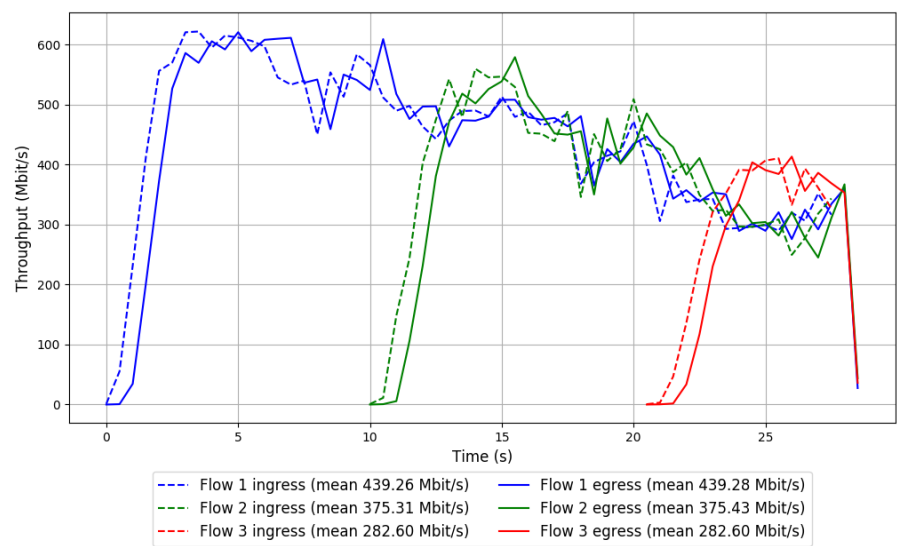# Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 423.05 Mbit/s) --- Flow 1 egress (mean 423.19 Mbit/s)
Flow 2 ingress (mean 334.29 Mbit/s) --- Flow 2 egress (mean 334.29 Mbit/s)
Flow 3 ingress (mean 112.09 Mbit/s) --- Flow 3 egress (mean 112.23 Mbit/s)

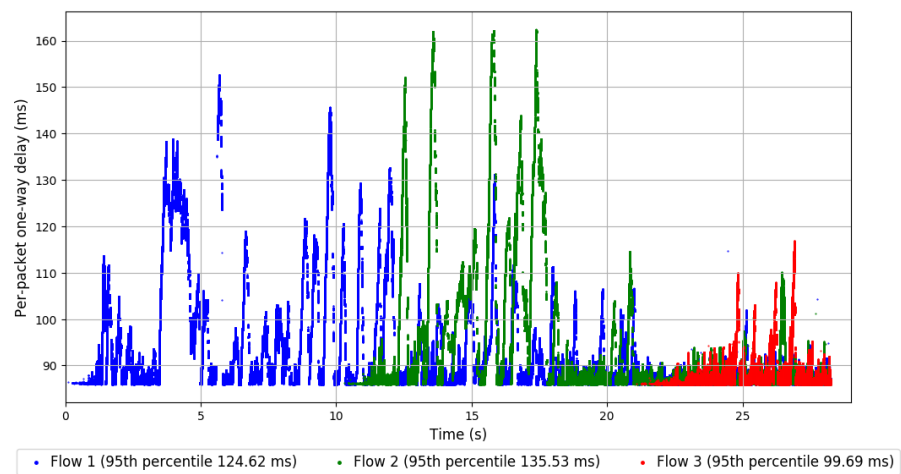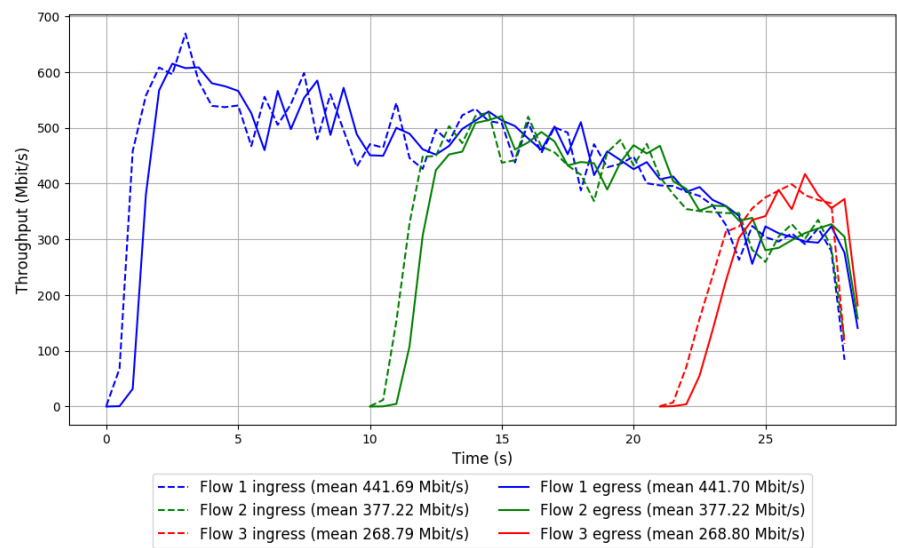Flow 1 (95th percentile 116.82 ms) • Flow 2 (95th percentile 98.93 ms) • Flow 3 (95th percentile 88.95 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-12-11 10:09:31
End at: 2019-12-11 10:10:01
Local clock offset: -0.229 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2019-12-11 12:31:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 753.92 Mbit/s
95th percentile per-packet one-way delay: 148.592 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 439.28 Mbit/s
95th percentile per-packet one-way delay: 154.479 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 375.43 Mbit/s
95th percentile per-packet one-way delay: 111.589 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 282.60 Mbit/s
95th percentile per-packet one-way delay: 100.230 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 439.26 Mbit/s) ——— Flow 1 egress (mean 439.28 Mbit/s)
- - - - Flow 2 ingress (mean 375.31 Mbit/s) ——— Flow 2 egress (mean 375.43 Mbit/s)
- - - - Flow 3 ingress (mean 282.60 Mbit/s) ——— Flow 3 egress (mean 282.60 Mbit/s)

• Flow 1 (95th percentile 154.48 ms)   • Flow 2 (95th percentile 111.59 ms)   • Flow 3 (95th percentile 100.23 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-12-11 10:50:28
End at: 2019-12-11 10:50:58
Local clock offset: -0.331 ms
Remote clock offset: -0.094 ms


# Below is generated by plot.py at 2019-12-11 12:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 750.61 Mbit/s
95th percentile per-packet one-way delay: 126.145 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 441.70 Mbit/s
95th percentile per-packet one-way delay: 124.624 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 377.22 Mbit/s
95th percentile per-packet one-way delay: 135.525 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 268.80 Mbit/s
95th percentile per-packet one-way delay: 99.690 ms
Loss rate: 0.00%
```
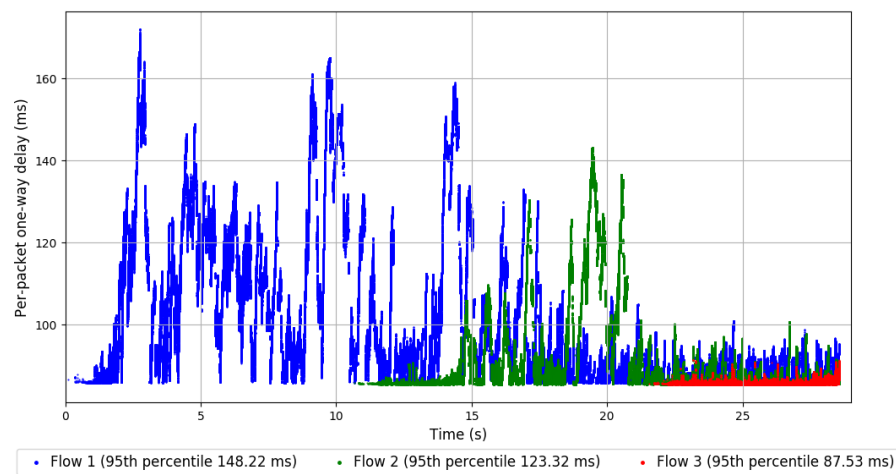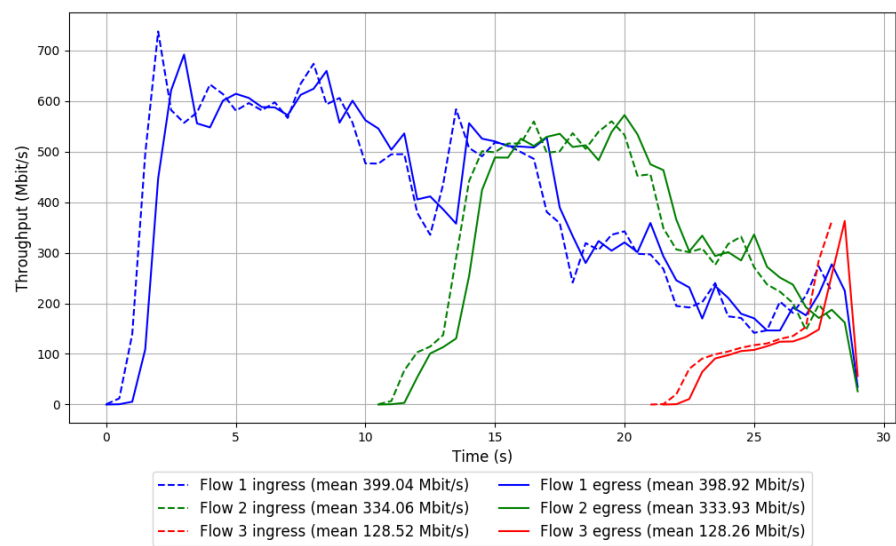
Run 5: Report of Indigo-MusesC3 — Data Link

Run 1: Statistics of Indigo-MusesC5

Start at: 2019-12-11 07:43:28
End at: 2019-12-11 07:43:58
Local clock offset: -0.228 ms
Remote clock offset: -0.064 ms
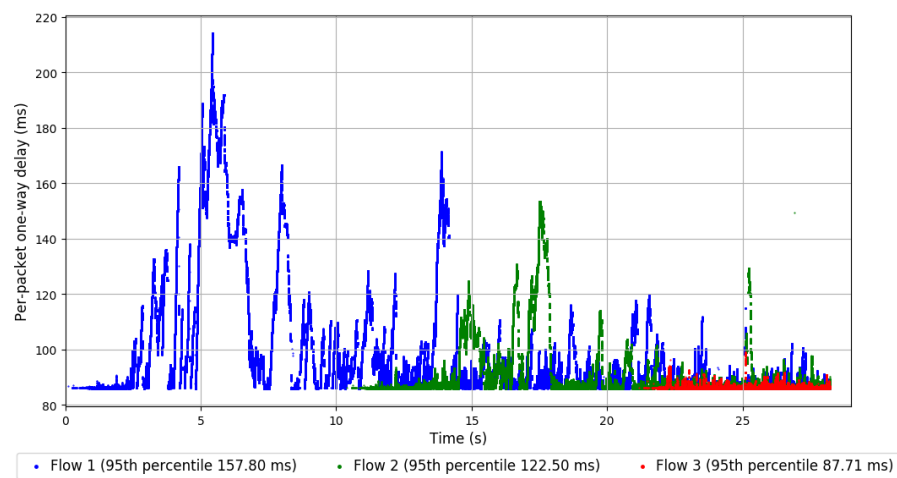
Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-12-11 08:24:24
End at: 2019-12-11 08:24:54
Local clock offset: 0.298 ms
Remote clock offset: -0.11 ms


# Below is generated by plot.py at 2019-12-11 12:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 640.43 Mbit/s
95th percentile per-packet one-way delay: 141.459 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 398.92 Mbit/s
95th percentile per-packet one-way delay: 148.220 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 333.93 Mbit/s
95th percentile per-packet one-way delay: 123.317 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 128.26 Mbit/s
95th percentile per-packet one-way delay: 87.535 ms
Loss rate: 0.18%
```

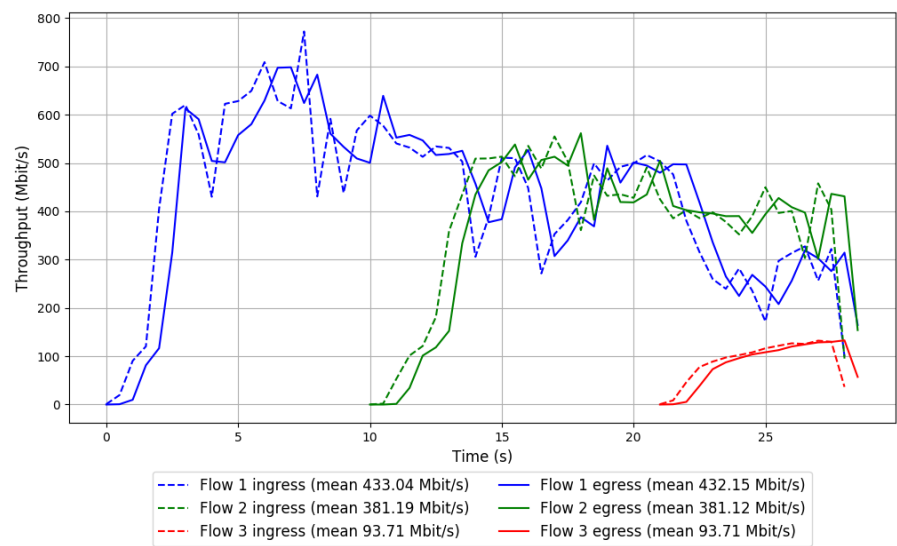Run 2: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 399.04 Mbit/s)   Flow 1 egress (mean 398.92 Mbit/s)
Flow 2 ingress (mean 334.06 Mbit/s)   Flow 2 egress (mean 333.93 Mbit/s)
Flow 3 ingress (mean 128.52 Mbit/s)   Flow 3 egress (mean 128.26 Mbit/s)

Flow 1 (95th percentile 148.22 ms)   Flow 2 (95th percentile 123.32 ms)   Flow 3 (95th percentile 87.53 ms)
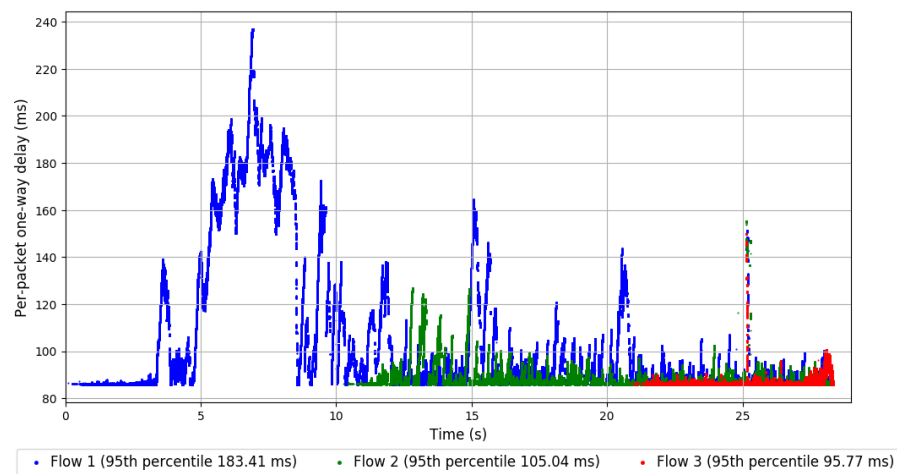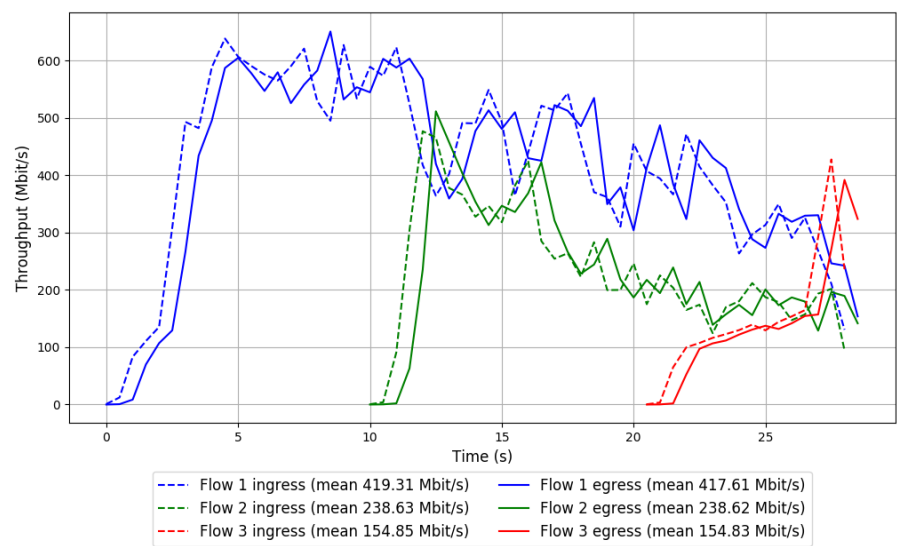
```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-12-11 09:05:32
End at: 2019-12-11 09:06:02
Local clock offset: -0.116 ms
Remote clock offset: -0.055 ms


# Below is generated by plot.py at 2019-12-11 12:34:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 696.86 Mbit/s
95th percentile per-packet one-way delay: 149.643 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 432.15 Mbit/s
95th percentile per-packet one-way delay: 157.797 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 381.12 Mbit/s
95th percentile per-packet one-way delay: 122.495 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 93.71 Mbit/s
95th percentile per-packet one-way delay: 87.712 ms
Loss rate: 0.00%
```
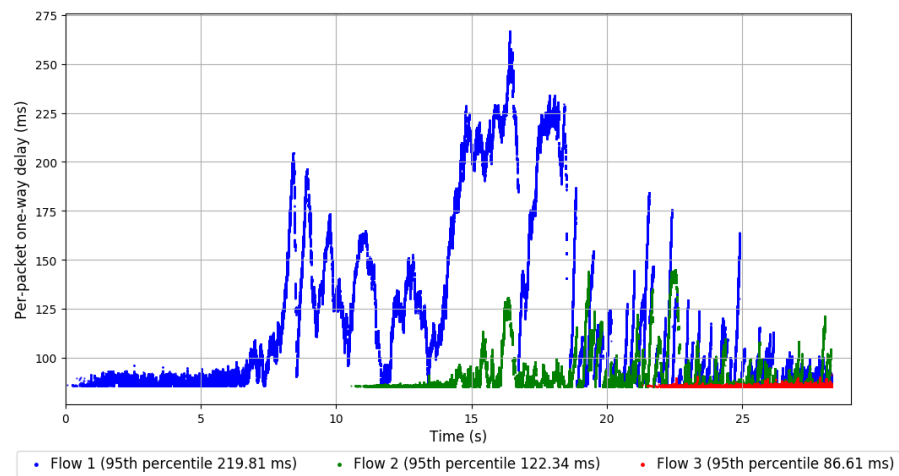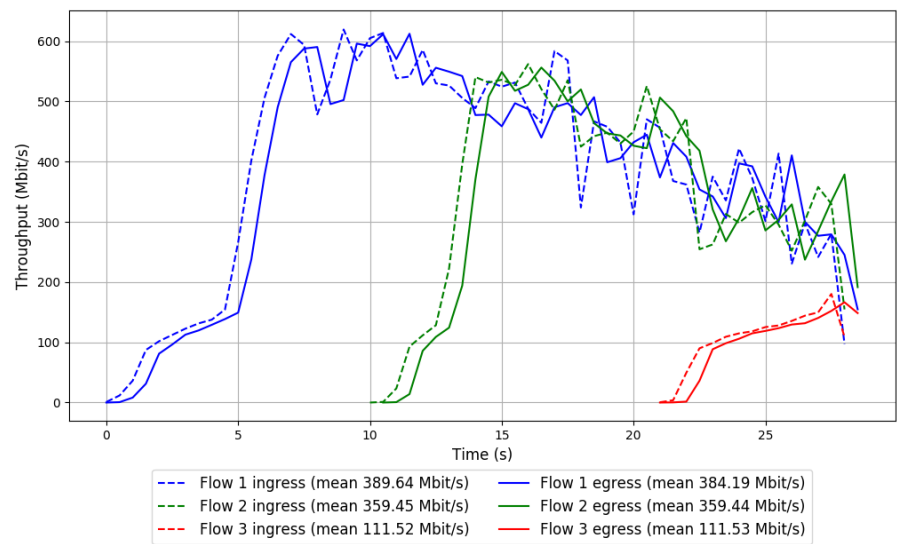
Run 3: Report of Indigo-MusesC5 — Data Link

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-12-11 09:46:51
End at: 2019-12-11 09:47:21
Local clock offset: -0.175 ms
Remote clock offset: -0.109 ms


# Below is generated by plot.py at 2019-12-11 12:38:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 610.83 Mbit/s
95th percentile per-packet one-way delay: 178.529 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 417.61 Mbit/s
95th percentile per-packet one-way delay: 183.413 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 238.62 Mbit/s
95th percentile per-packet one-way delay: 105.038 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 154.83 Mbit/s
95th percentile per-packet one-way delay: 95.773 ms
Loss rate: 0.00%
```
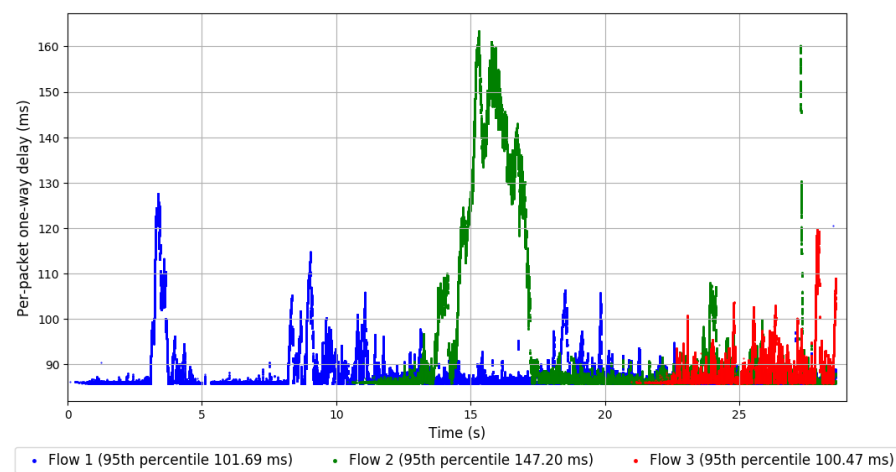
Run 4: Report of Indigo-MusesC5 — Data Link

82

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-12-11 10:27:49
End at: 2019-12-11 10:28:19
Local clock offset: 0.047 ms
Remote clock offset: -0.124 ms


# Below is generated by plot.py at 2019-12-11 12:39:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 637.95 Mbit/s
95th percentile per-packet one-way delay: 213.248 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 384.19 Mbit/s
95th percentile per-packet one-way delay: 219.805 ms
Loss rate: 1.39%
-- Flow 2:
Average throughput: 359.44 Mbit/s
95th percentile per-packet one-way delay: 122.342 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 111.53 Mbit/s
95th percentile per-packet one-way delay: 86.613 ms
Loss rate: 0.00%
```
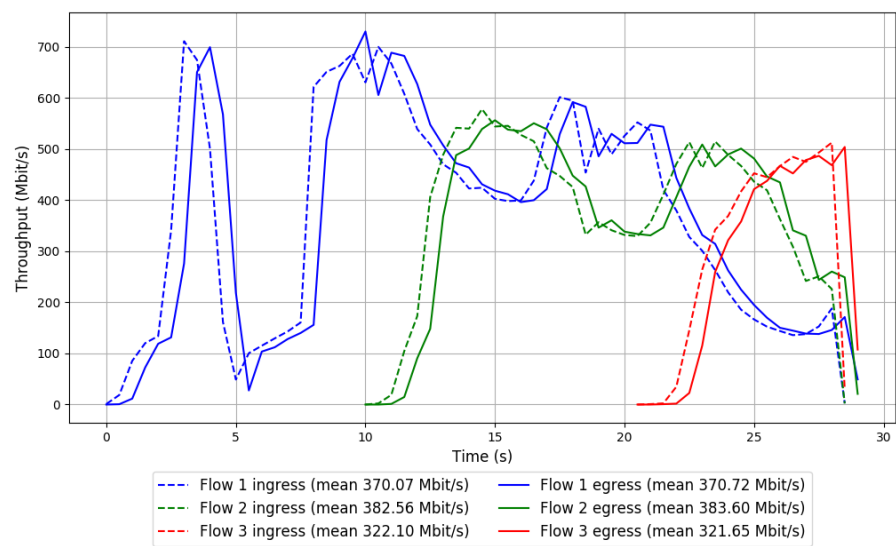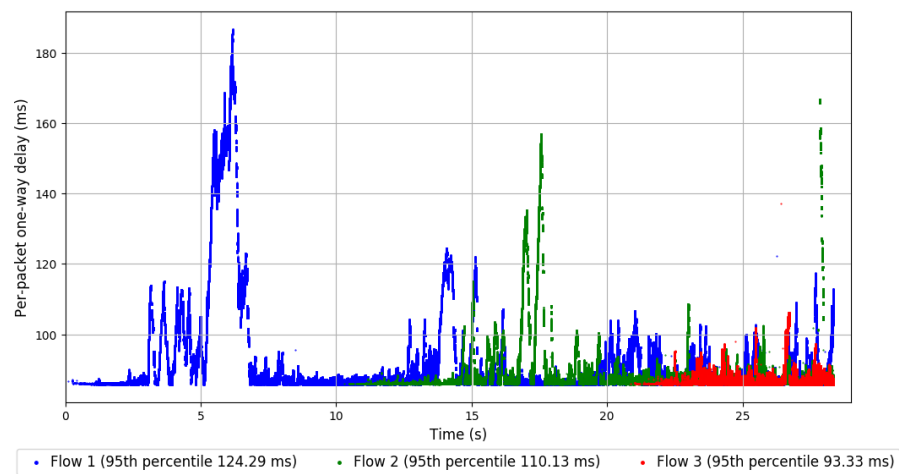
Run 5: Report of Indigo-MusesC5 — Data Link

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-12-11 08:12:57
End at: 2019-12-11 08:13:27
Local clock offset: -0.064 ms
Remote clock offset: -0.065 ms


# Below is generated by plot.py at 2019-12-11 12:41:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 700.85 Mbit/s
95th percentile per-packet one-way delay: 128.107 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 370.72 Mbit/s
95th percentile per-packet one-way delay: 101.686 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 383.60 Mbit/s
95th percentile per-packet one-way delay: 147.203 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 321.65 Mbit/s
95th percentile per-packet one-way delay: 100.469 ms
Loss rate: 0.63%
```
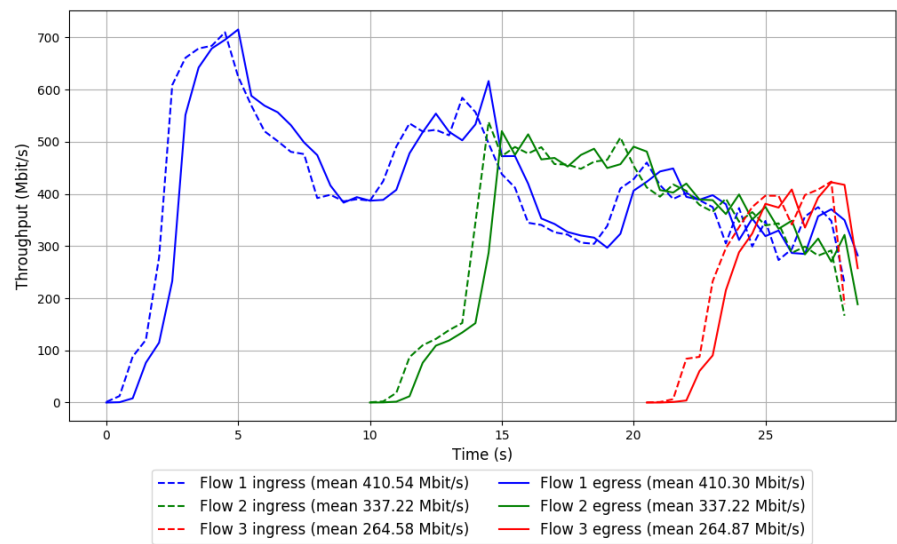
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-12-11 08:54:16
End at: 2019-12-11 08:54:46
Local clock offset: -0.028 ms
Remote clock offset: -0.045 ms


# Below is generated by plot.py at 2019-12-11 12:42:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 695.95 Mbit/s
95th percentile per-packet one-way delay: 119.156 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 410.30 Mbit/s
95th percentile per-packet one-way delay: 124.294 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 337.22 Mbit/s
95th percentile per-packet one-way delay: 110.133 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 264.87 Mbit/s
95th percentile per-packet one-way delay: 93.335 ms
Loss rate: 0.00%
```
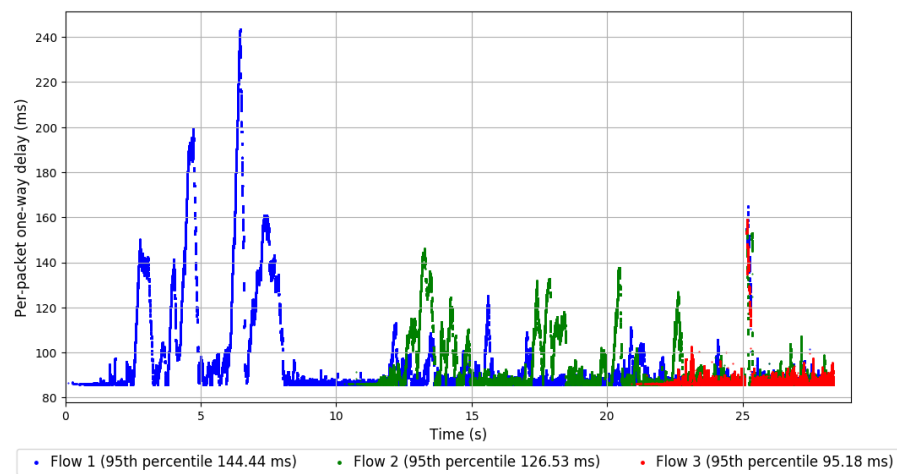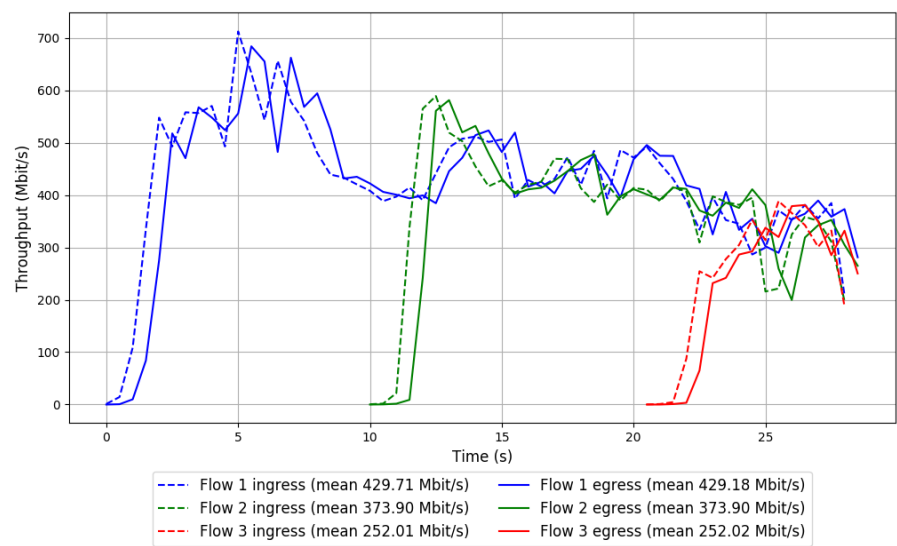
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-12-11 09:35:27
End at: 2019-12-11 09:35:57
Local clock offset: -0.104 ms
Remote clock offset: -0.057 ms


# Below is generated by plot.py at 2019-12-11 12:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 734.56 Mbit/s
95th percentile per-packet one-way delay: 136.459 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 429.18 Mbit/s
95th percentile per-packet one-way delay: 144.444 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 373.90 Mbit/s
95th percentile per-packet one-way delay: 126.528 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 252.02 Mbit/s
95th percentile per-packet one-way delay: 95.176 ms
Loss rate: 0.00%
```
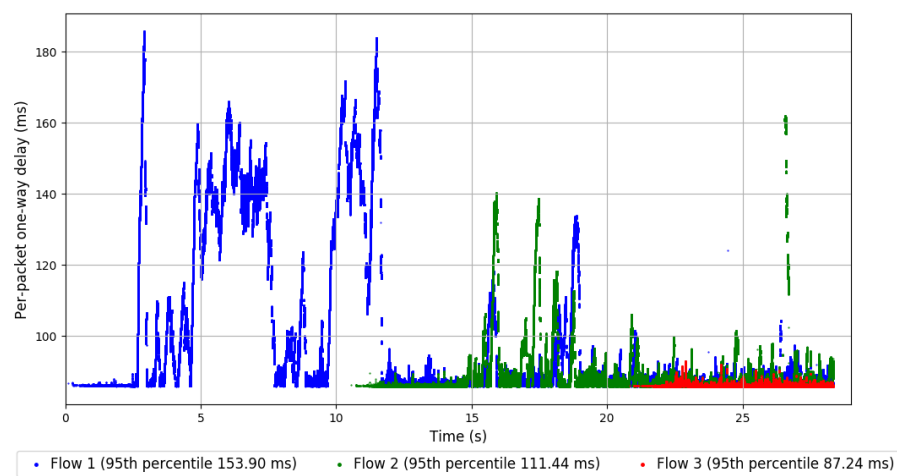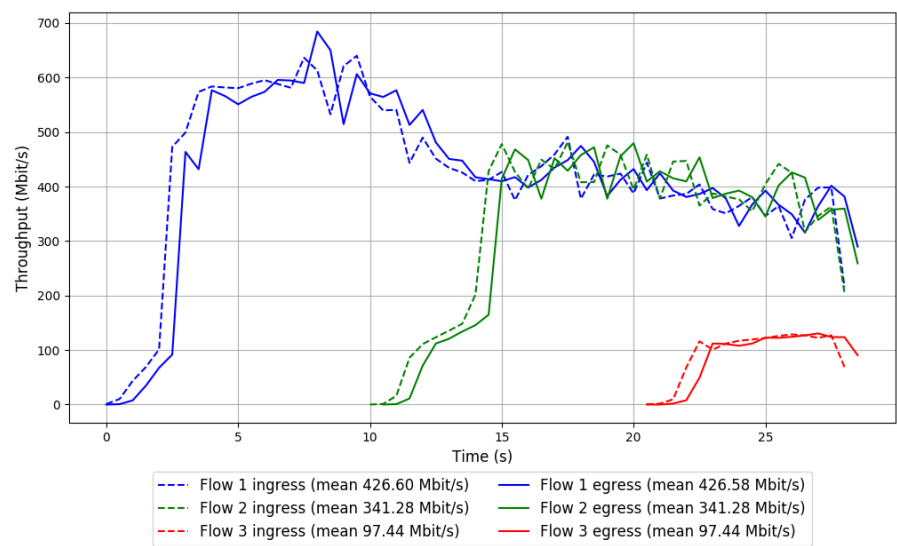
Run 3: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 429.71 Mbit/s) — Flow 1 egress (mean 429.18 Mbit/s)
Flow 2 ingress (mean 373.90 Mbit/s) — Flow 2 egress (mean 373.90 Mbit/s)
Flow 3 ingress (mean 252.01 Mbit/s) — Flow 3 egress (mean 252.02 Mbit/s)

Flow 1 (95th percentile 144.44 ms)   Flow 2 (95th percentile 126.53 ms)   Flow 3 (95th percentile 95.18 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-12-11 10:16:21
End at: 2019-12-11 10:16:51
Local clock offset: -0.255 ms
Remote clock offset: -0.085 ms


# Below is generated by plot.py at 2019-12-11 12:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 667.37 Mbit/s
95th percentile per-packet one-way delay: 148.582 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 426.58 Mbit/s
95th percentile per-packet one-way delay: 153.895 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 341.28 Mbit/s
95th percentile per-packet one-way delay: 111.441 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 97.44 Mbit/s
95th percentile per-packet one-way delay: 87.239 ms
Loss rate: 0.00%
```
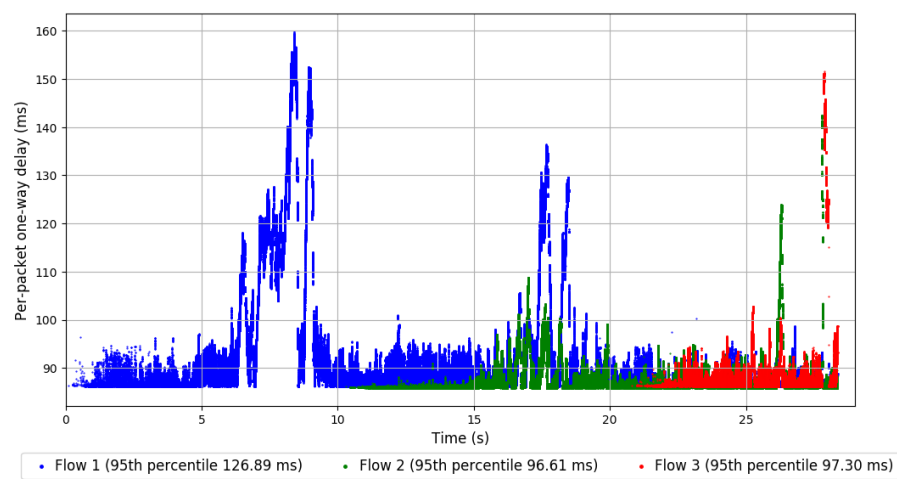
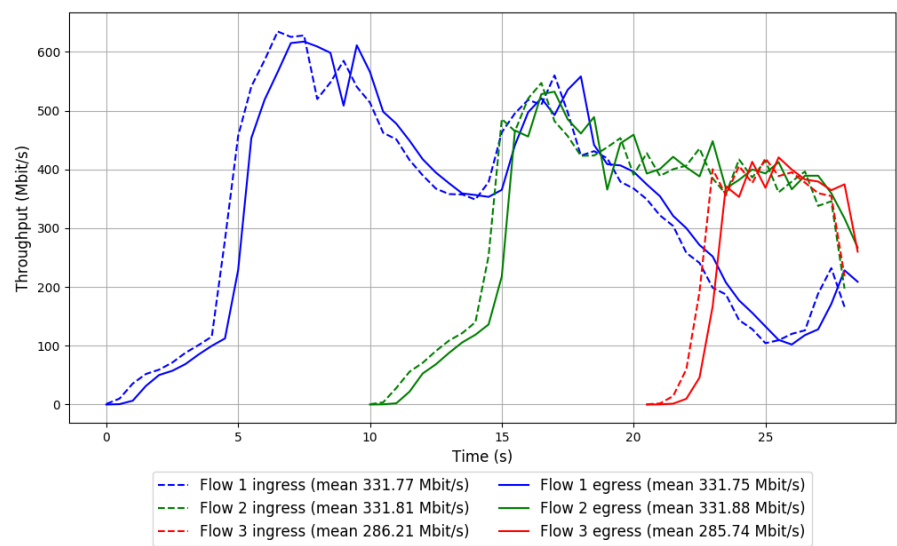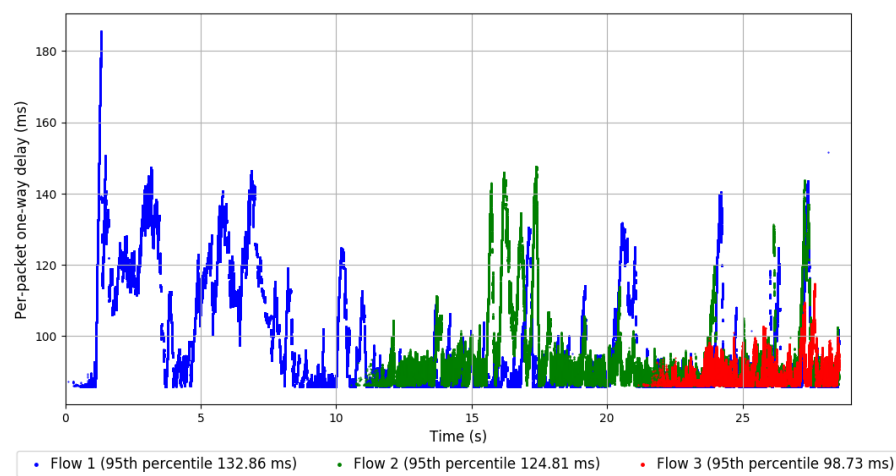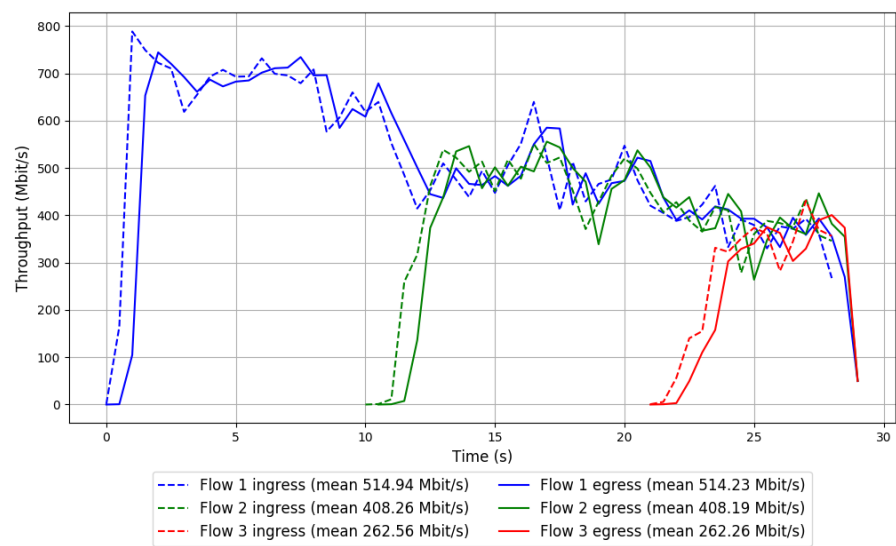Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 426.60 Mbit/s) --- Flow 1 egress (mean 426.58 Mbit/s)
Flow 2 ingress (mean 341.28 Mbit/s) --- Flow 2 egress (mean 341.28 Mbit/s)
Flow 3 ingress (mean 97.44 Mbit/s) --- Flow 3 egress (mean 97.44 Mbit/s)

Flow 1 (95th percentile 153.90 ms) • Flow 2 (95th percentile 111.44 ms) • Flow 3 (95th percentile 87.24 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-12-11 10:57:22
End at: 2019-12-11 10:57:52
Local clock offset: -0.285 ms
Remote clock offset: -0.133 ms


# Below is generated by plot.py at 2019-12-11 12:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 620.11 Mbit/s
95th percentile per-packet one-way delay: 119.127 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 331.75 Mbit/s
95th percentile per-packet one-way delay: 126.889 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 331.88 Mbit/s
95th percentile per-packet one-way delay: 96.612 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 285.74 Mbit/s
95th percentile per-packet one-way delay: 97.303 ms
Loss rate: 0.17%
```

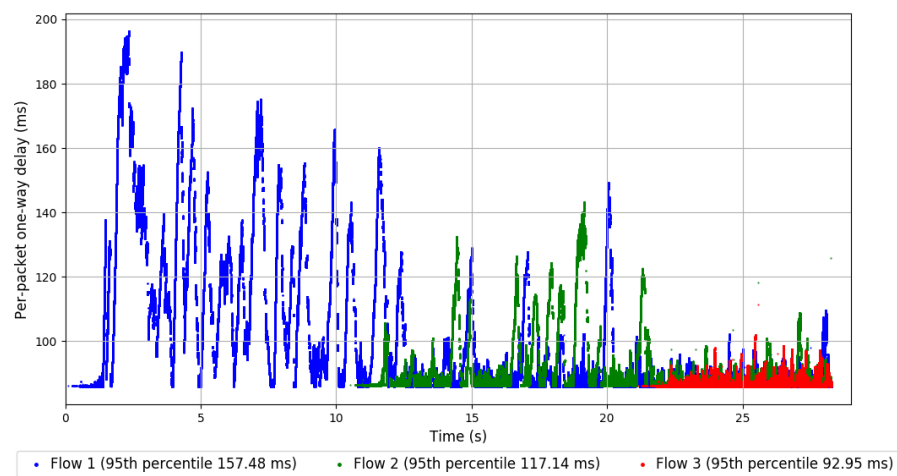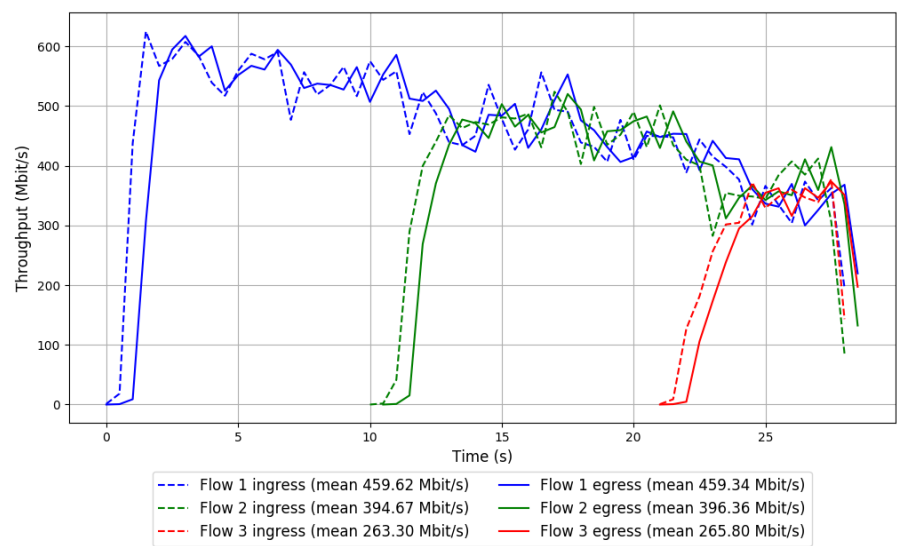Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-12-11 08:20:21
End at: 2019-12-11 08:20:51
Local clock offset: -0.027 ms
Remote clock offset: -0.068 ms


# Below is generated by plot.py at 2019-12-11 12:49:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 840.39 Mbit/s
95th percentile per-packet one-way delay: 130.624 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 514.23 Mbit/s
95th percentile per-packet one-way delay: 132.862 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 408.19 Mbit/s
95th percentile per-packet one-way delay: 124.808 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 262.26 Mbit/s
95th percentile per-packet one-way delay: 98.727 ms
Loss rate: 0.09%
```
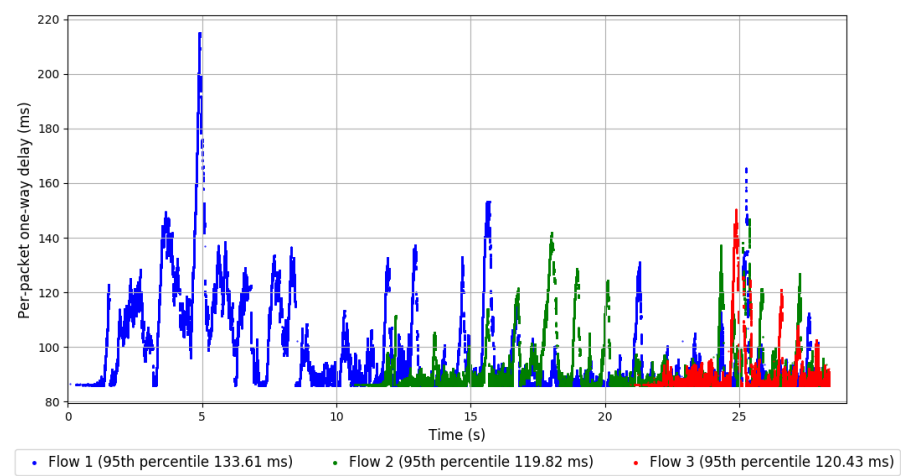
Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-12-11 09:01:31
End at: 2019-12-11 09:02:01
Local clock offset: -0.065 ms
Remote clock offset: -0.058 ms


# Below is generated by plot.py at 2019-12-11 12:52:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 776.03 Mbit/s
95th percentile per-packet one-way delay: 147.348 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 459.34 Mbit/s
95th percentile per-packet one-way delay: 157.477 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 396.36 Mbit/s
95th percentile per-packet one-way delay: 117.140 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 265.80 Mbit/s
95th percentile per-packet one-way delay: 92.950 ms
Loss rate: 0.01%
```
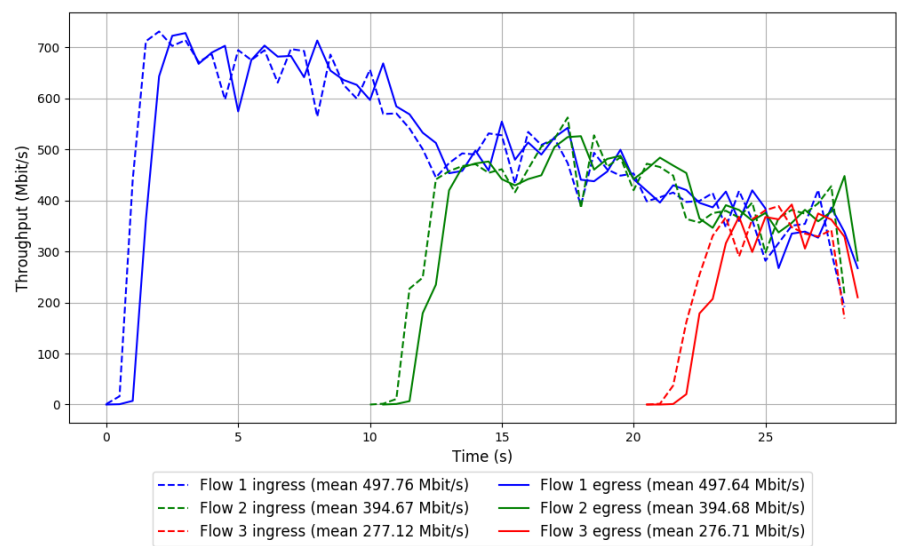
Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-12-11 09:42:52
End at: 2019-12-11 09:43:22
Local clock offset: -0.136 ms
Remote clock offset: -0.109 ms


# Below is generated by plot.py at 2019-12-11 12:54:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 819.15 Mbit/s
95th percentile per-packet one-way delay: 129.164 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 497.64 Mbit/s
95th percentile per-packet one-way delay: 133.611 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 394.68 Mbit/s
95th percentile per-packet one-way delay: 119.824 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 276.71 Mbit/s
95th percentile per-packet one-way delay: 120.428 ms
Loss rate: 0.09%
```
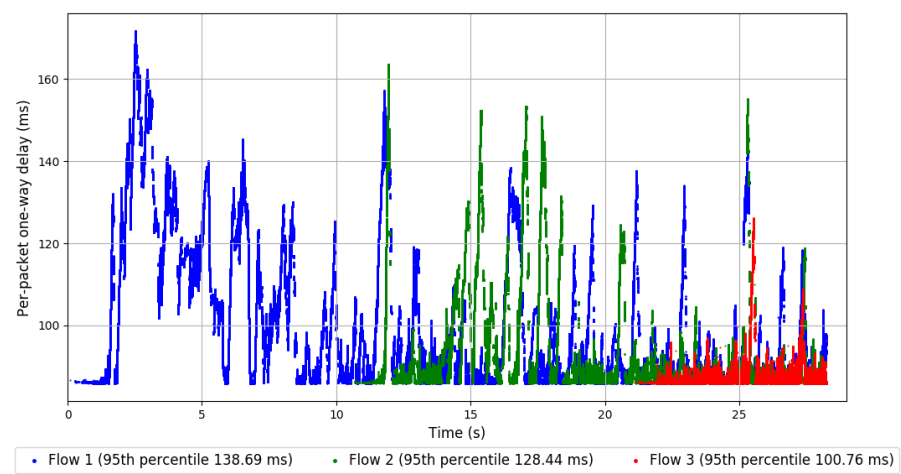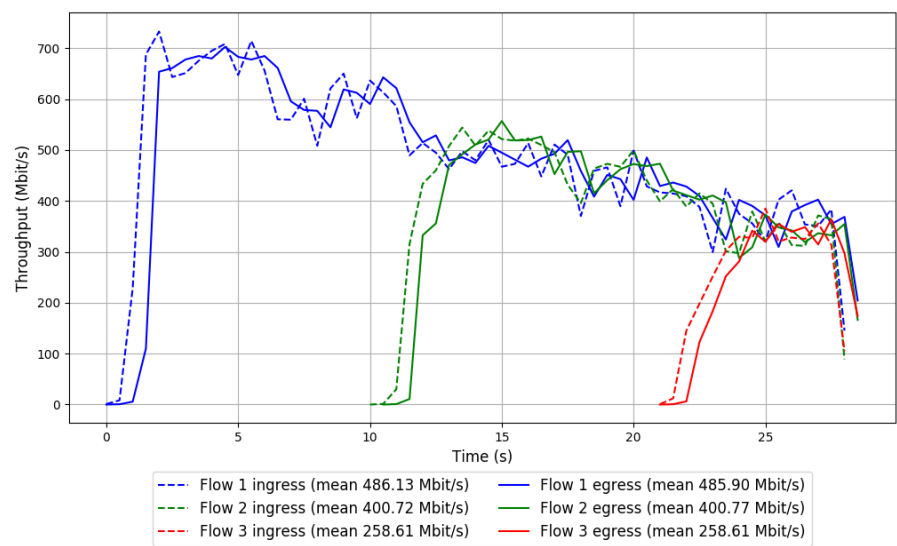
Run 3: Report of Indigo-MusesT — Data Link

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-12-11 10:23:51
End at: 2019-12-11 10:24:21
Local clock offset: -0.352 ms
Remote clock offset: -0.103 ms


# Below is generated by plot.py at 2019-12-11 12:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 803.81 Mbit/s
95th percentile per-packet one-way delay: 136.905 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 485.90 Mbit/s
95th percentile per-packet one-way delay: 138.695 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 400.77 Mbit/s
95th percentile per-packet one-way delay: 128.435 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 258.61 Mbit/s
95th percentile per-packet one-way delay: 100.761 ms
Loss rate: 0.00%
```
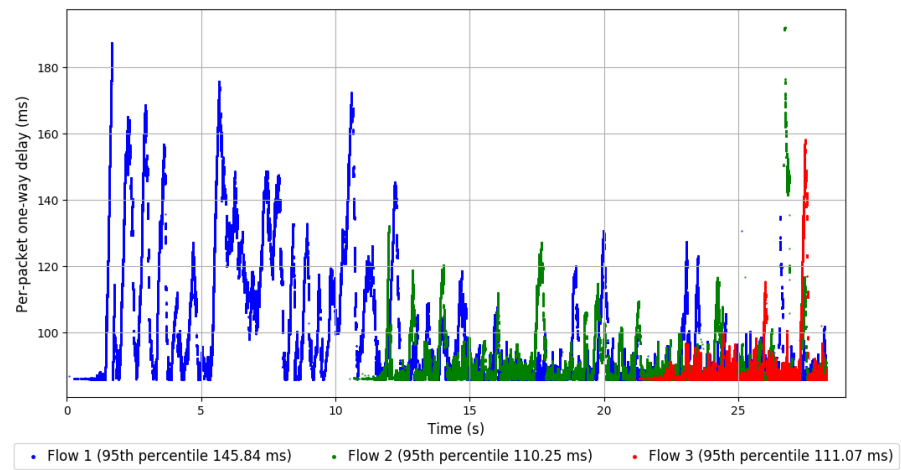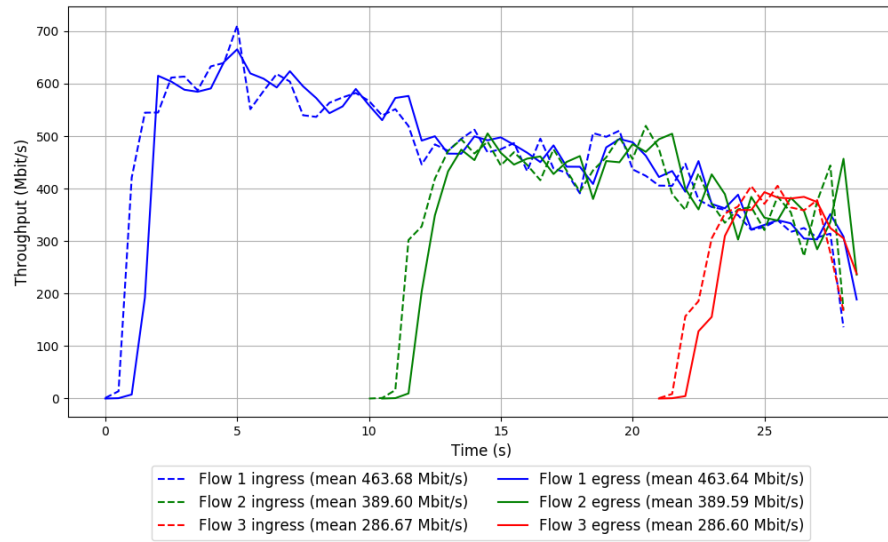
Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-12-11 11:04:48
End at: 2019-12-11 11:05:18
Local clock offset: -0.263 ms
Remote clock offset: -0.083 ms


# Below is generated by plot.py at 2019-12-11 12:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 781.66 Mbit/s
95th percentile per-packet one-way delay: 140.060 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 463.64 Mbit/s
95th percentile per-packet one-way delay: 145.842 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 389.59 Mbit/s
95th percentile per-packet one-way delay: 110.254 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 286.60 Mbit/s
95th percentile per-packet one-way delay: 111.066 ms
Loss rate: 0.00%
```
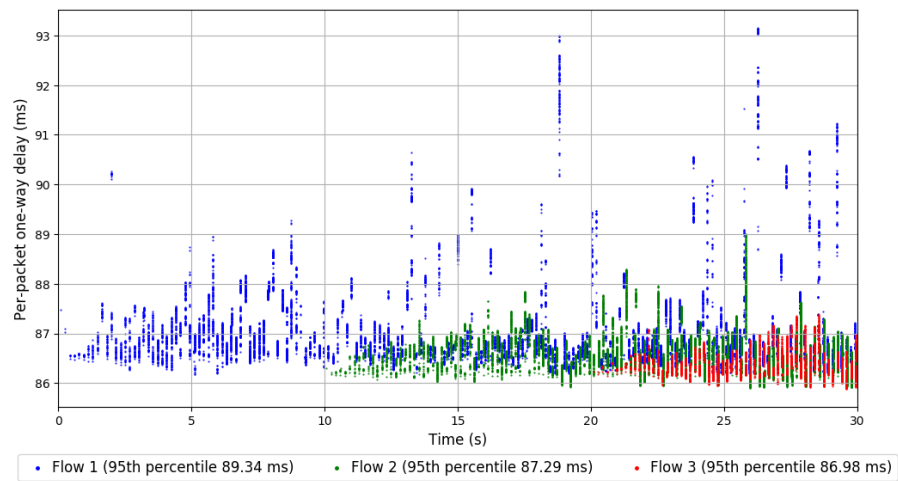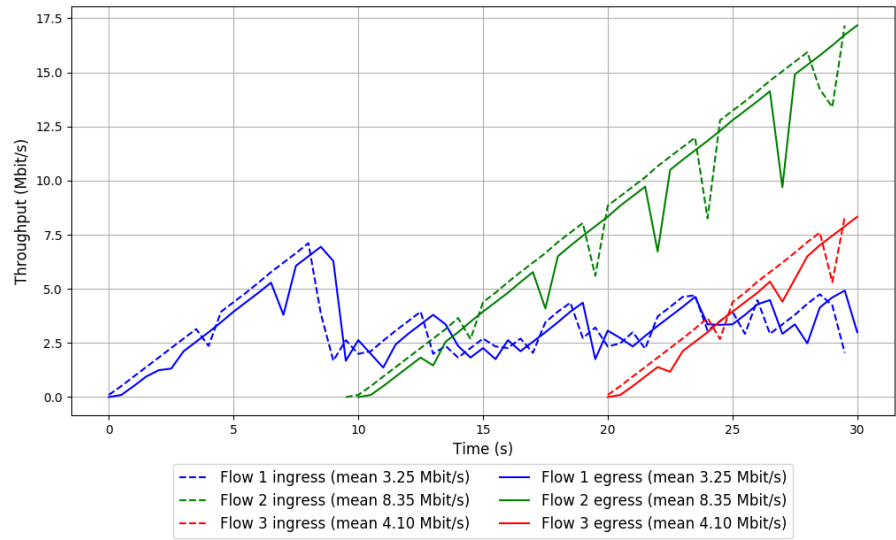
Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-12-11 08:19:05
End at: 2019-12-11 08:19:35
Local clock offset: -0.052 ms
Remote clock offset: -0.077 ms


# Below is generated by plot.py at 2019-12-11 12:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.15 Mbit/s
95th percentile per-packet one-way delay: 87.905 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 89.343 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.35 Mbit/s
95th percentile per-packet one-way delay: 87.294 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 86.978 ms
Loss rate: 0.00%
```
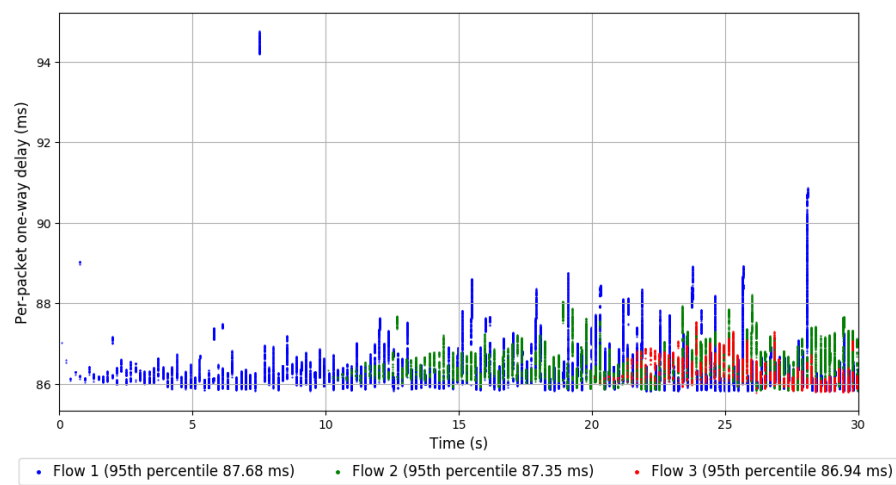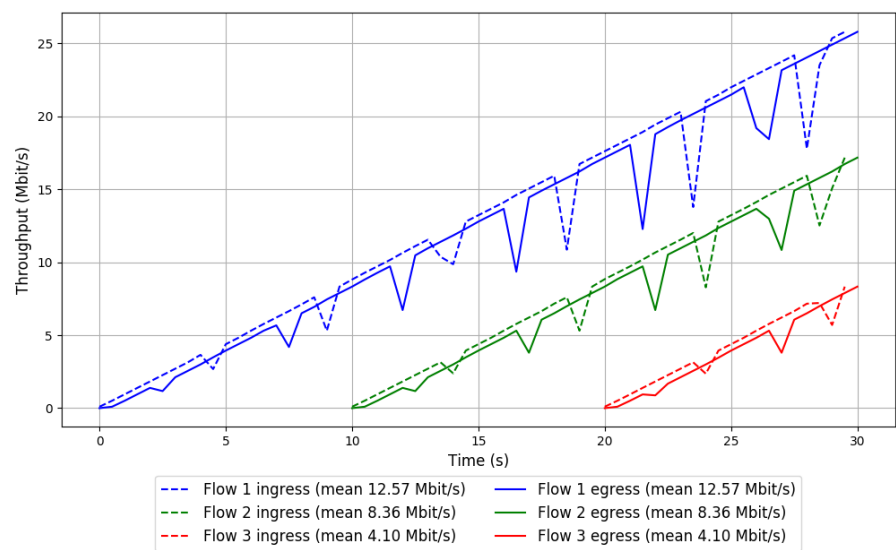
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-12-11 09:00:14
End at: 2019-12-11 09:00:44
Local clock offset: -0.095 ms
Remote clock offset: -0.047 ms


# Below is generated by plot.py at 2019-12-11 12:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.48 Mbit/s
95th percentile per-packet one-way delay: 87.500 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 87.681 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 87.354 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 86.935 ms
Loss rate: 0.00%
```
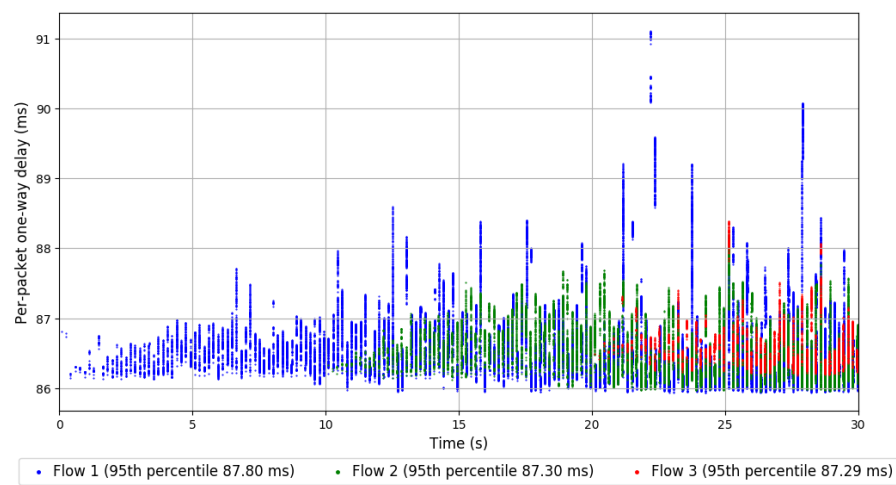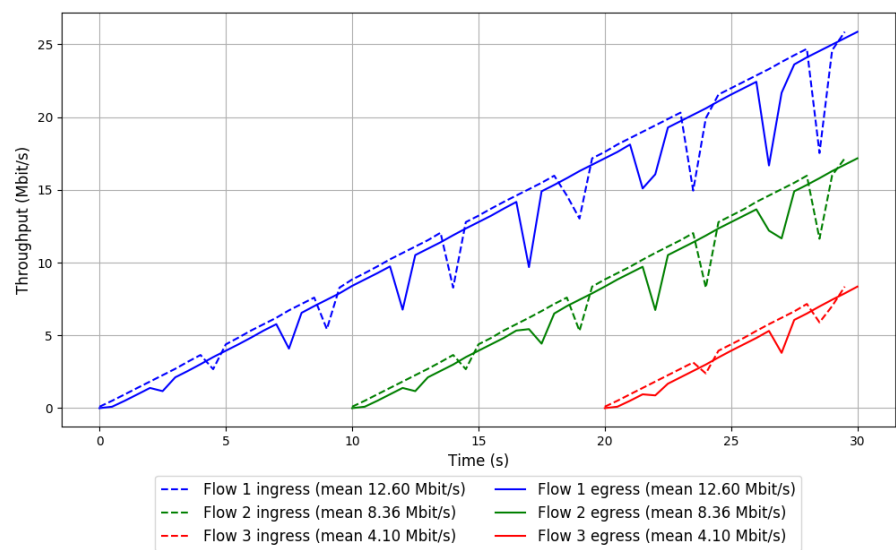
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-12-11 09:41:34
End at: 2019-12-11 09:42:04
Local clock offset: -0.209 ms
Remote clock offset: -0.087 ms


# Below is generated by plot.py at 2019-12-11 12:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.52 Mbit/s
95th percentile per-packet one-way delay: 87.532 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.60 Mbit/s
95th percentile per-packet one-way delay: 87.799 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 87.301 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 87.286 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-12-11 10:22:33
End at: 2019-12-11 10:23:03
Local clock offset: -0.364 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2019-12-11 12:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.61 Mbit/s
95th percentile per-packet one-way delay: 87.241 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 87.174 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 5.53 Mbit/s
95th percentile per-packet one-way delay: 87.402 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 87.306 ms
Loss rate: 0.00%
```
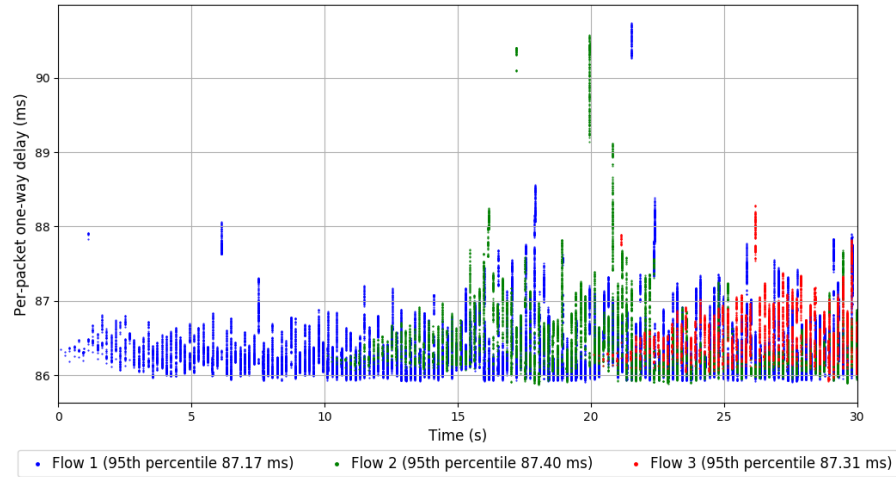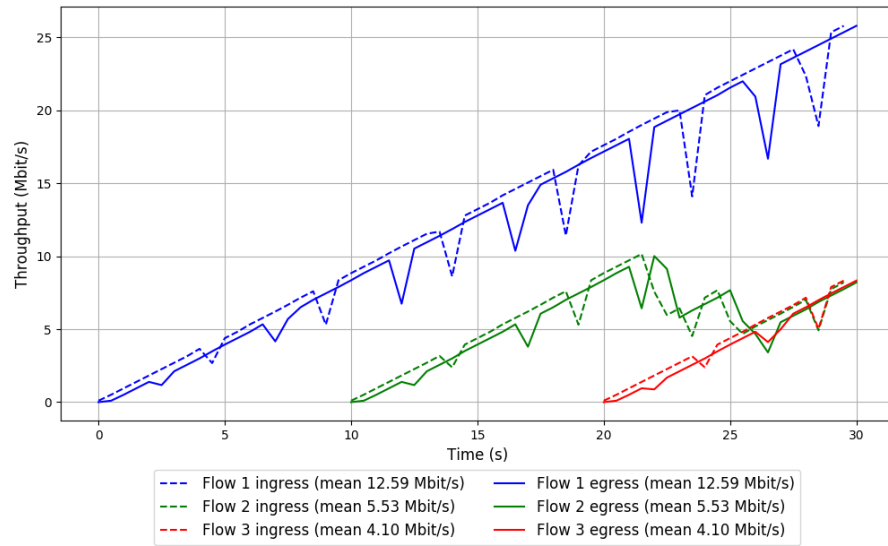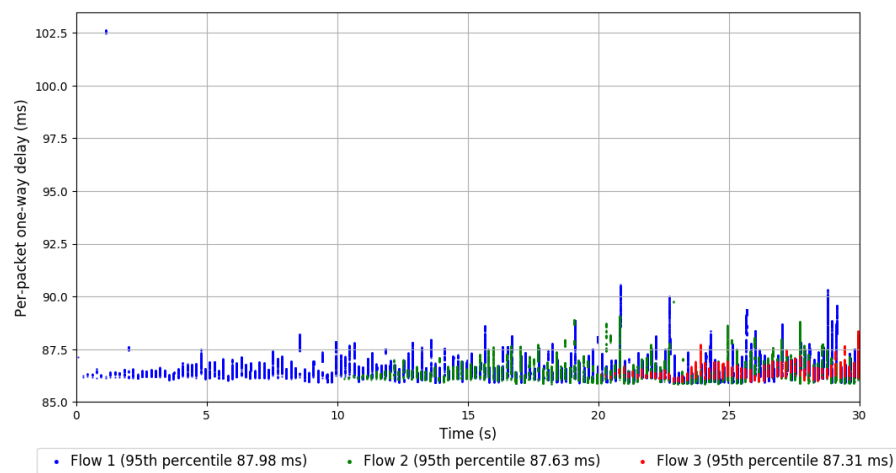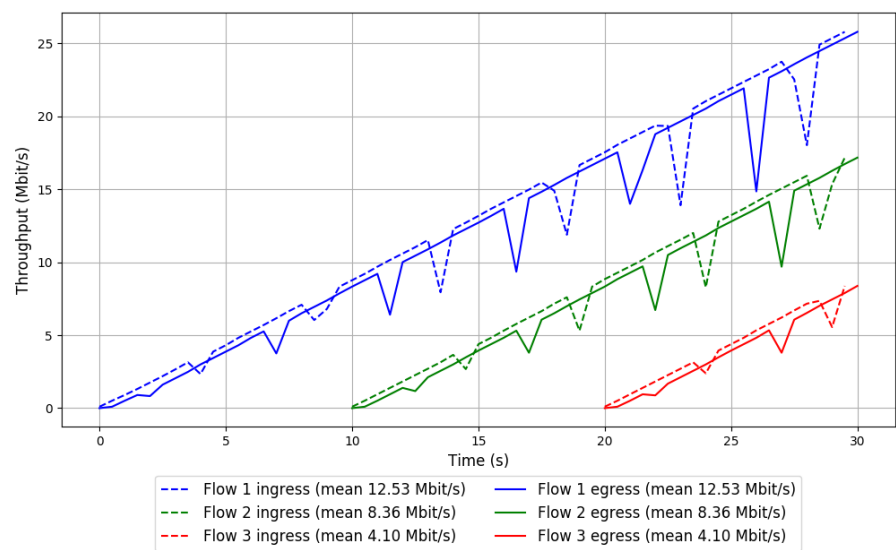
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-12-11 11:03:31
End at: 2019-12-11 11:04:01
Local clock offset: -0.256 ms
Remote clock offset: -0.051 ms


# Below is generated by plot.py at 2019-12-11 12:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.44 Mbit/s
95th percentile per-packet one-way delay: 87.815 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.53 Mbit/s
95th percentile per-packet one-way delay: 87.977 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 87.627 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 87.308 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link

114

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 08:01:06
End at: 2019-12-11 08:01:36
Local clock offset: -0.136 ms
Remote clock offset: 0.011 ms


# Below is generated by plot.py at 2019-12-11 12:57:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 759.86 Mbit/s
95th percentile per-packet one-way delay: 112.313 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 388.78 Mbit/s
95th percentile per-packet one-way delay: 122.869 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 437.29 Mbit/s
95th percentile per-packet one-way delay: 104.740 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 253.05 Mbit/s
95th percentile per-packet one-way delay: 122.892 ms
Loss rate: 0.00%
```
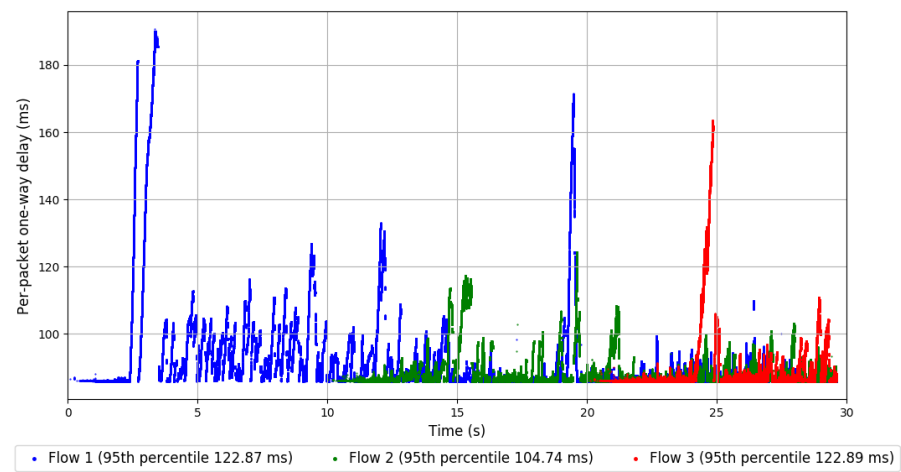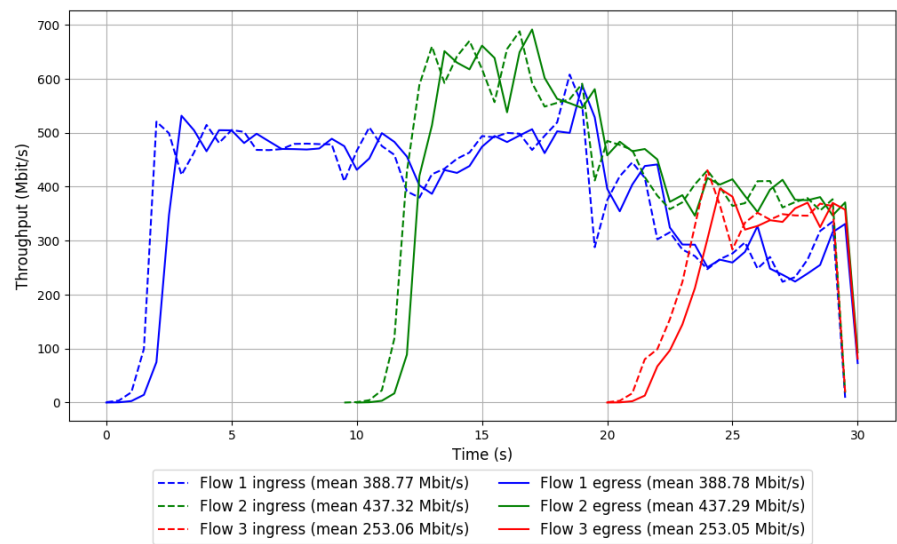
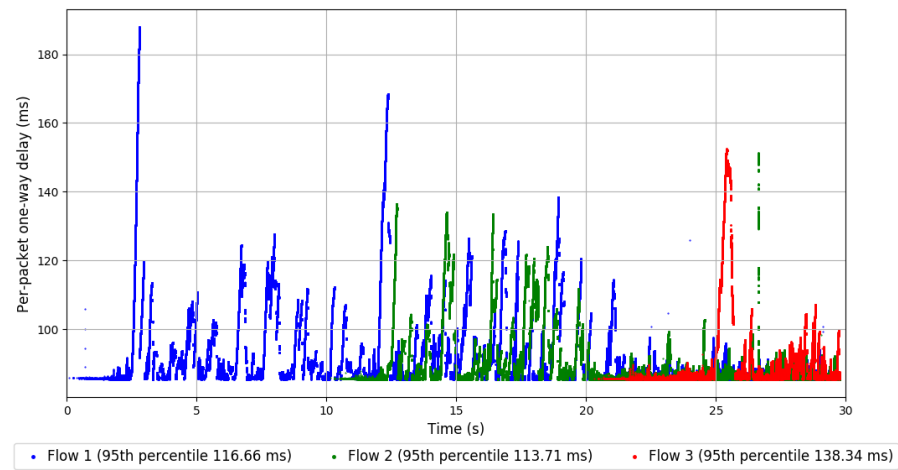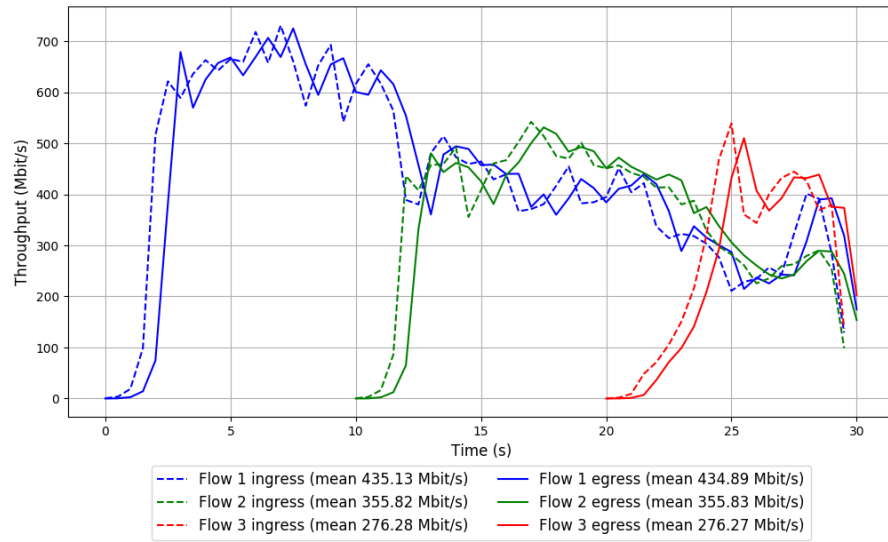Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 08:42:16
End at: 2019-12-11 08:42:46
Local clock offset: 0.21 ms
Remote clock offset: -0.096 ms


# Below is generated by plot.py at 2019-12-11 12:58:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 758.20 Mbit/s
95th percentile per-packet one-way delay: 116.719 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 434.89 Mbit/s
95th percentile per-packet one-way delay: 116.659 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 355.83 Mbit/s
95th percentile per-packet one-way delay: 113.714 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 276.27 Mbit/s
95th percentile per-packet one-way delay: 138.340 ms
Loss rate: 0.01%
```

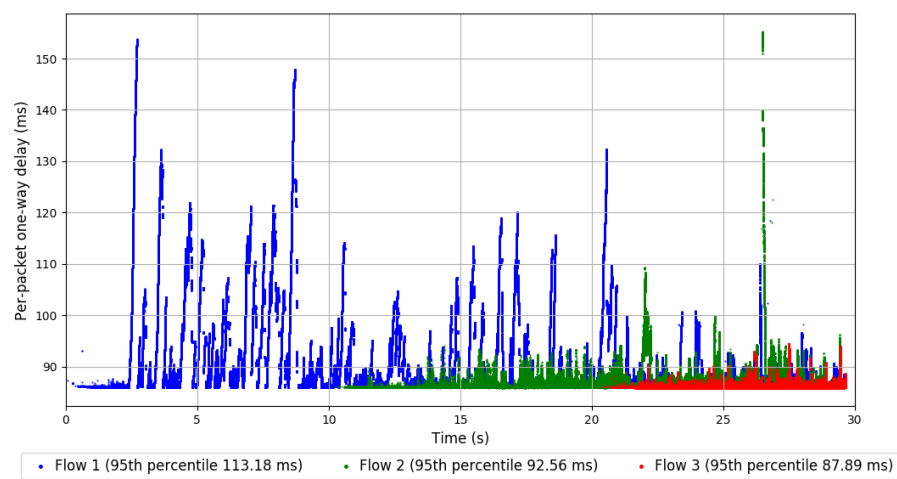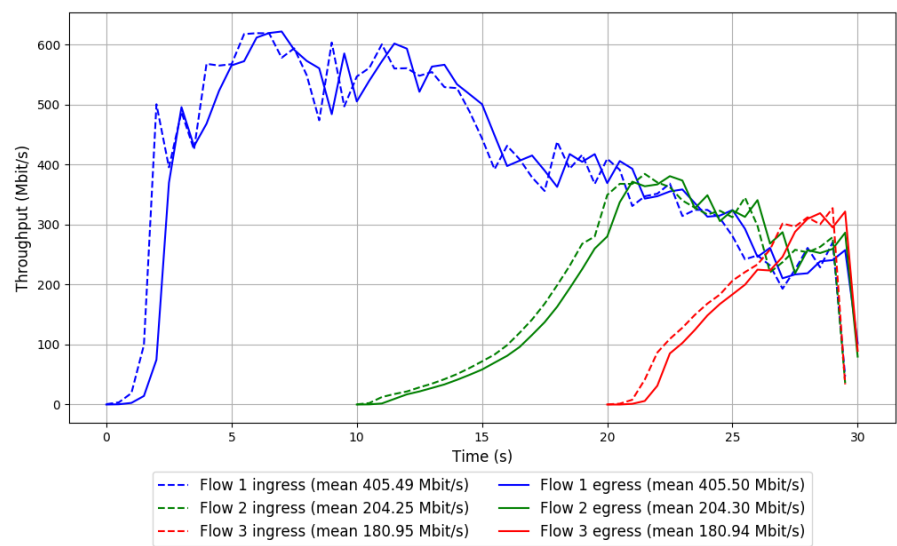Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 09:23:35
End at: 2019-12-11 09:24:05
Local clock offset: -0.123 ms
Remote clock offset: -0.053 ms


# Below is generated by plot.py at 2019-12-11 12:58:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 596.62 Mbit/s
95th percentile per-packet one-way delay: 109.660 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 405.50 Mbit/s
95th percentile per-packet one-way delay: 113.176 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 204.30 Mbit/s
95th percentile per-packet one-way delay: 92.563 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 180.94 Mbit/s
95th percentile per-packet one-way delay: 87.889 ms
Loss rate: 0.00%
```

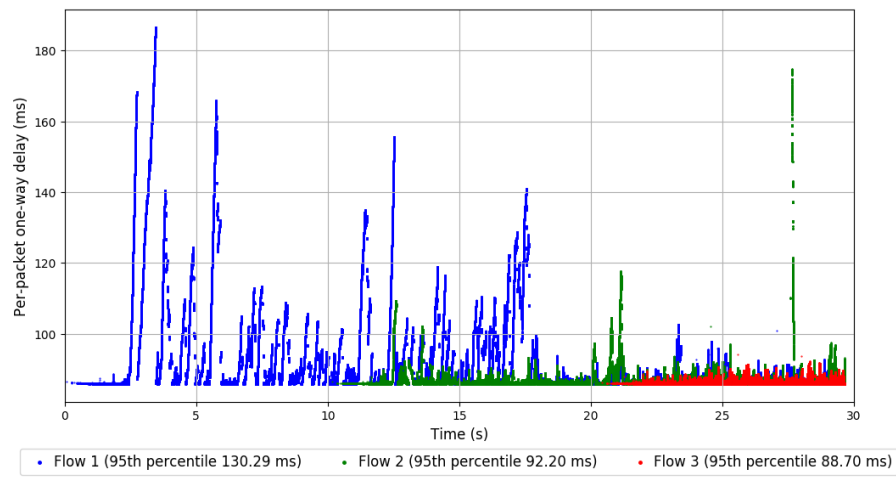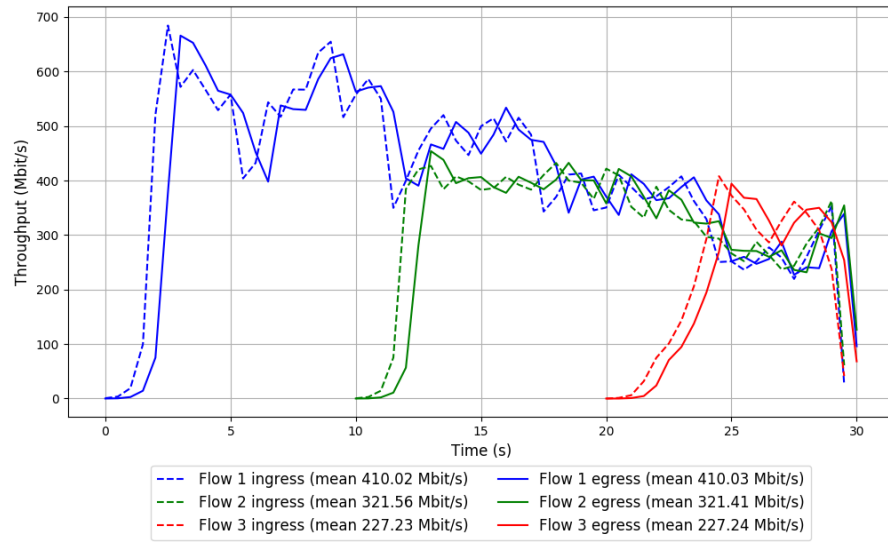Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 10:04:33
End at: 2019-12-11 10:05:03
Local clock offset: -0.181 ms
Remote clock offset: -0.099 ms


# Below is generated by plot.py at 2019-12-11 13:03:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 692.72 Mbit/s
95th percentile per-packet one-way delay: 118.455 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 410.03 Mbit/s
95th percentile per-packet one-way delay: 130.294 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 321.41 Mbit/s
95th percentile per-packet one-way delay: 92.197 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 227.24 Mbit/s
95th percentile per-packet one-way delay: 88.696 ms
Loss rate: 0.00%
```

Run 4: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 410.02 Mbit/s) Flow 1 egress (mean 410.03 Mbit/s)
Flow 2 ingress (mean 321.56 Mbit/s) Flow 2 egress (mean 321.41 Mbit/s)
Flow 3 ingress (mean 227.23 Mbit/s) Flow 3 egress (mean 227.24 Mbit/s)

Flow 1 (95th percentile 130.29 ms) Flow 2 (95th percentile 92.20 ms) Flow 3 (95th percentile 88.70 ms)
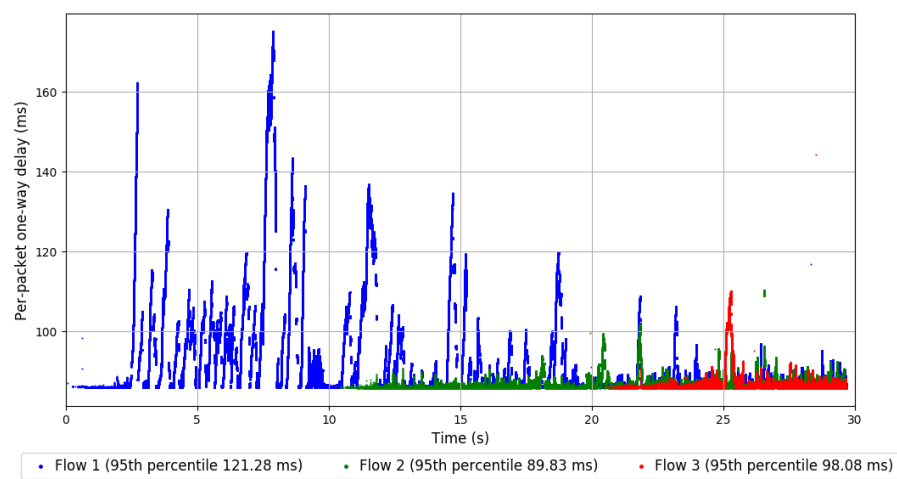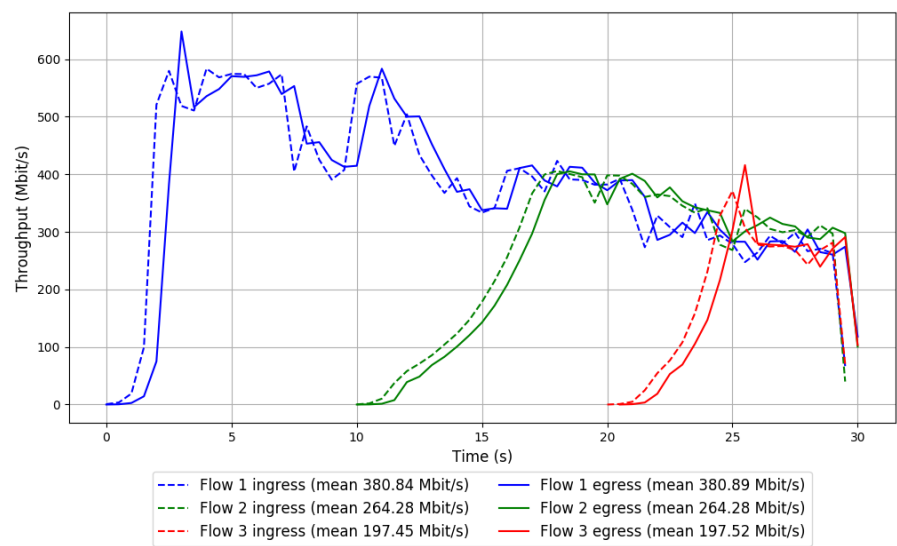
```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 10:45:42
End at: 2019-12-11 10:46:12
Local clock offset: -0.334 ms
Remote clock offset: -0.103 ms


# Below is generated by plot.py at 2019-12-11 13:04:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 615.39 Mbit/s
95th percentile per-packet one-way delay: 112.553 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 380.89 Mbit/s
95th percentile per-packet one-way delay: 121.278 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 264.28 Mbit/s
95th percentile per-packet one-way delay: 89.831 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 197.52 Mbit/s
95th percentile per-packet one-way delay: 98.082 ms
Loss rate: 0.00%
```

Run 5: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 380.84 Mbit/s) Flow 1 egress (mean 380.89 Mbit/s)
Flow 2 ingress (mean 264.28 Mbit/s) Flow 2 egress (mean 264.28 Mbit/s)
Flow 3 ingress (mean 197.45 Mbit/s) Flow 3 egress (mean 197.52 Mbit/s)

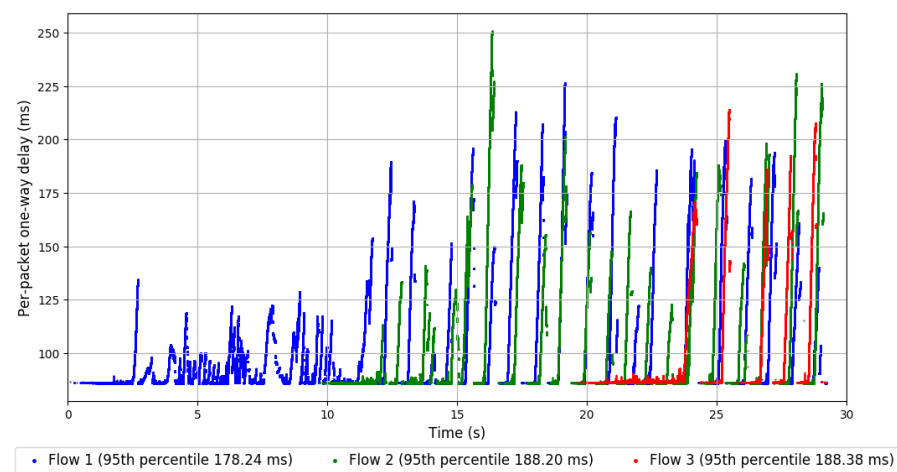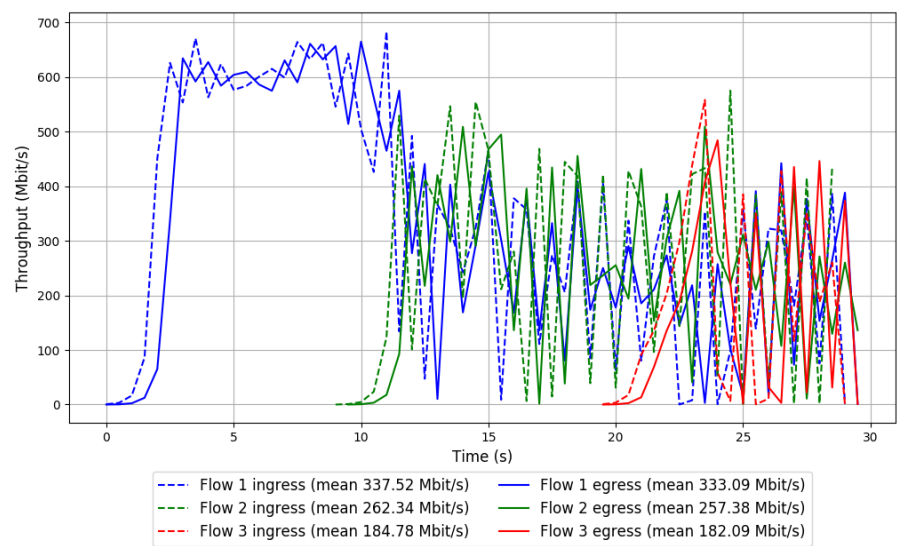Flow 1 (95th percentile 121.28 ms) Flow 2 (95th percentile 89.83 ms) Flow 3 (95th percentile 98.08 ms)

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 07:50:17
End at: 2019-12-11 07:50:47
Local clock offset: -0.214 ms
Remote clock offset: -0.028 ms


# Below is generated by plot.py at 2019-12-11 13:04:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 566.10 Mbit/s
95th percentile per-packet one-way delay: 182.267 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 333.09 Mbit/s
95th percentile per-packet one-way delay: 178.243 ms
Loss rate: 1.32%
-- Flow 2:
Average throughput: 257.38 Mbit/s
95th percentile per-packet one-way delay: 188.203 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 182.09 Mbit/s
95th percentile per-packet one-way delay: 188.385 ms
Loss rate: 1.45%
```

Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 08:31:20
End at: 2019-12-11 08:31:50
Local clock offset: -0.159 ms
Remote clock offset: 0.028 ms


# Below is generated by plot.py at 2019-12-11 13:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 545.22 Mbit/s
95th percentile per-packet one-way delay: 165.318 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 252.50 Mbit/s
95th percentile per-packet one-way delay: 181.392 ms
Loss rate: 2.13%
-- Flow 2:
Average throughput: 317.97 Mbit/s
95th percentile per-packet one-way delay: 140.046 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 258.94 Mbit/s
95th percentile per-packet one-way delay: 96.061 ms
Loss rate: 0.66%
```
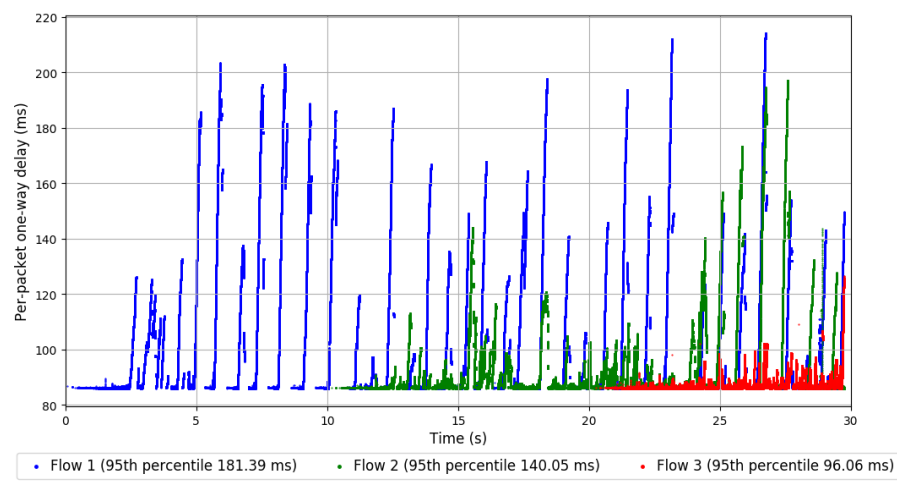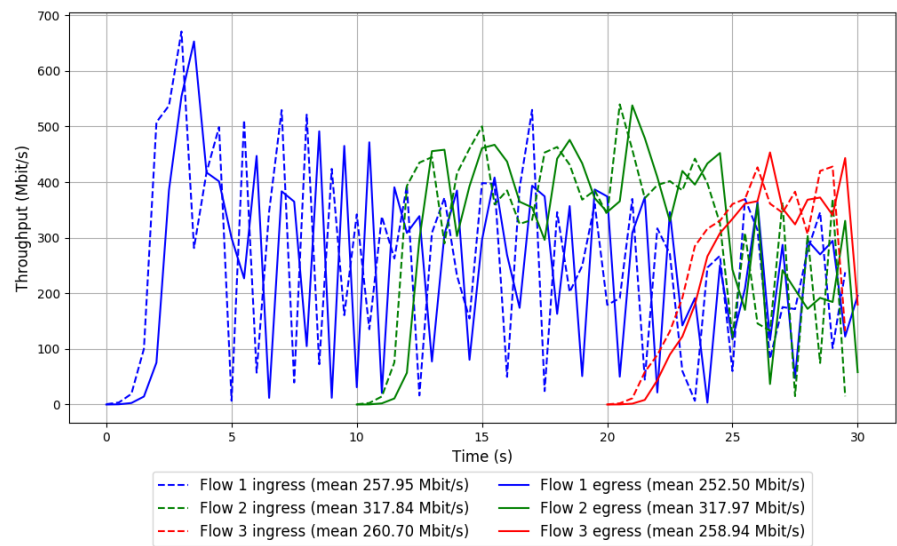
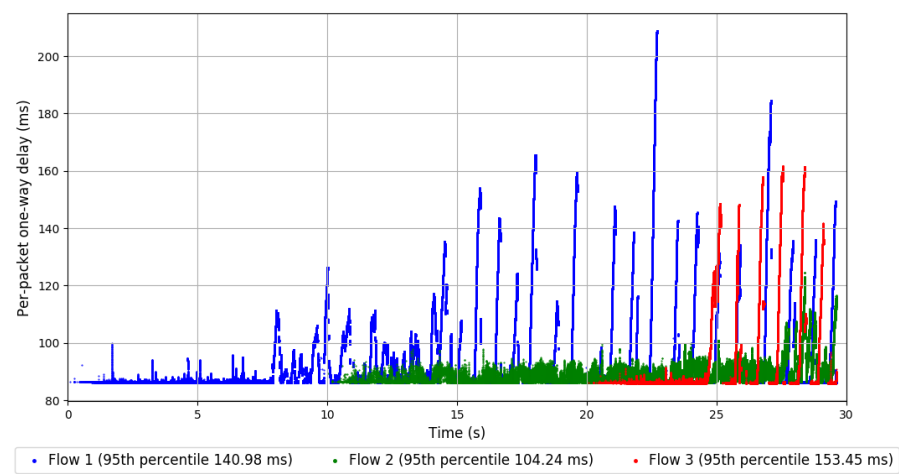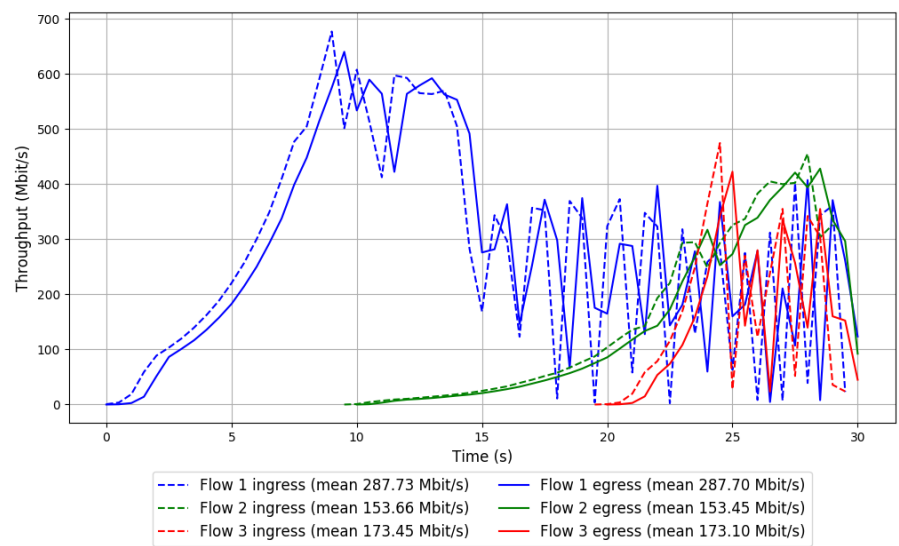Run 2: Report of Muses_DecisionTreeH0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 09:12:42
End at: 2019-12-11 09:13:12
Local clock offset: -0.126 ms
Remote clock offset: -0.053 ms


# Below is generated by plot.py at 2019-12-11 13:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.31 Mbit/s
95th percentile per-packet one-way delay: 140.138 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 287.70 Mbit/s
95th percentile per-packet one-way delay: 140.984 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 153.45 Mbit/s
95th percentile per-packet one-way delay: 104.237 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 173.10 Mbit/s
95th percentile per-packet one-way delay: 153.450 ms
Loss rate: 0.19%
```

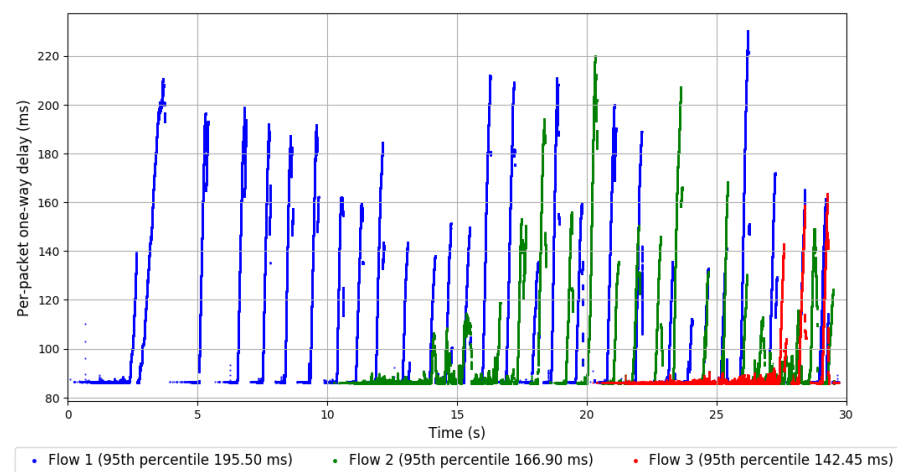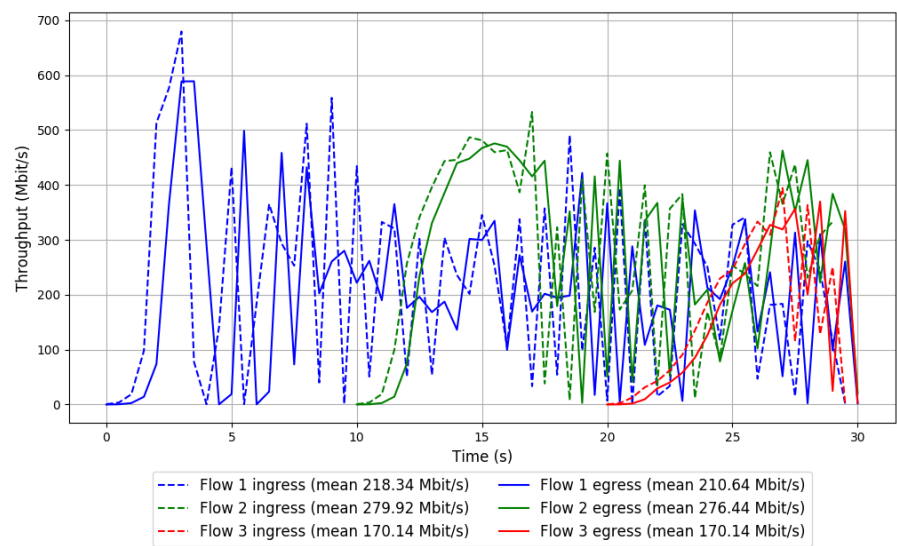Run 3: Report of Muses_DecisionTreeH0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 09:53:50
End at: 2019-12-11 09:54:20
Local clock offset: -0.159 ms
Remote clock offset: -0.086 ms


# Below is generated by plot.py at 2019-12-11 13:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 446.61 Mbit/s
95th percentile per-packet one-way delay: 187.428 ms
Loss rate: 2.19%
-- Flow 1:
Average throughput: 210.64 Mbit/s
95th percentile per-packet one-way delay: 195.495 ms
Loss rate: 3.53%
-- Flow 2:
Average throughput: 276.44 Mbit/s
95th percentile per-packet one-way delay: 166.899 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 170.14 Mbit/s
95th percentile per-packet one-way delay: 142.446 ms
Loss rate: 0.00%
```

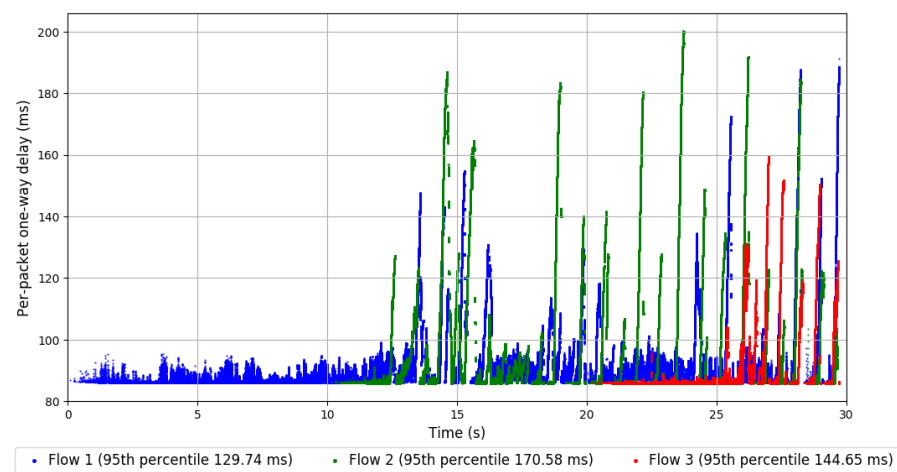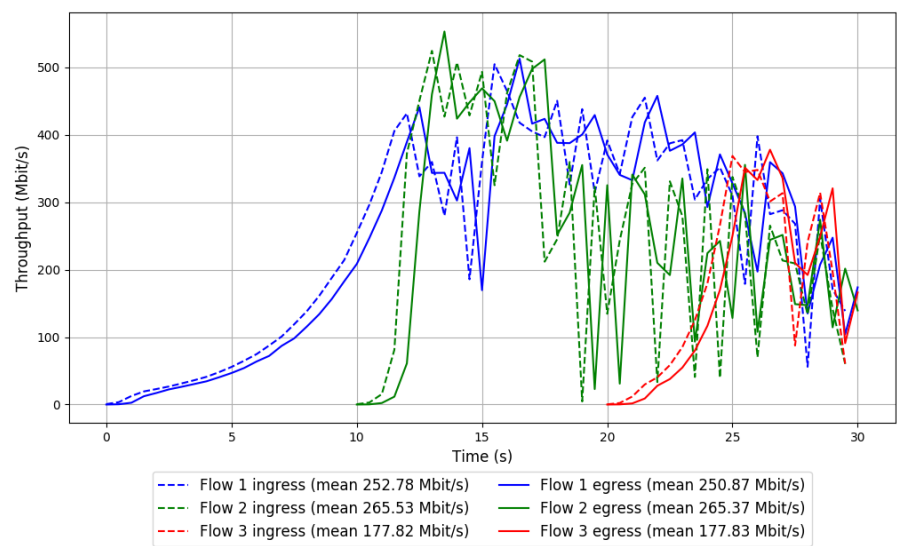Run 4: Report of Muses_DecisionTreeH0 — Data Link

Run 5: Statistics of Muses_DecisionTreeH0

Start at: 2019-12-11 10:34:55
End at: 2019-12-11 10:35:25
Local clock offset: -0.453 ms
Remote clock offset: -0.105 ms

Below is generated by plot.py at 2019-12-11 13:06:33
Datalink statistics
-- Total of 3 flows:
Average throughput: 482.53 Mbit/s
95th percentile per-packet one-way delay: 148.163 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 250.87 Mbit/s
95th percentile per-packet one-way delay: 129.742 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 265.37 Mbit/s
95th percentile per-packet one-way delay: 170.584 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 177.83 Mbit/s
95th percentile per-packet one-way delay: 144.649 ms
Loss rate: 0.00%

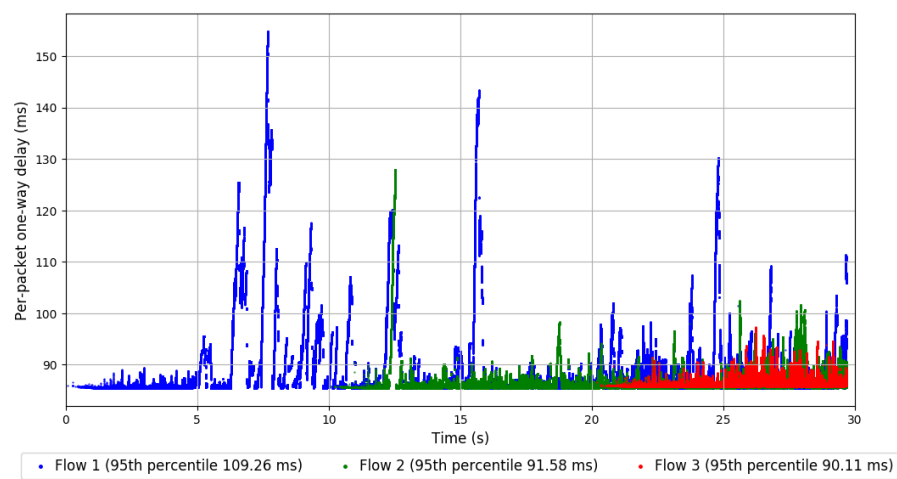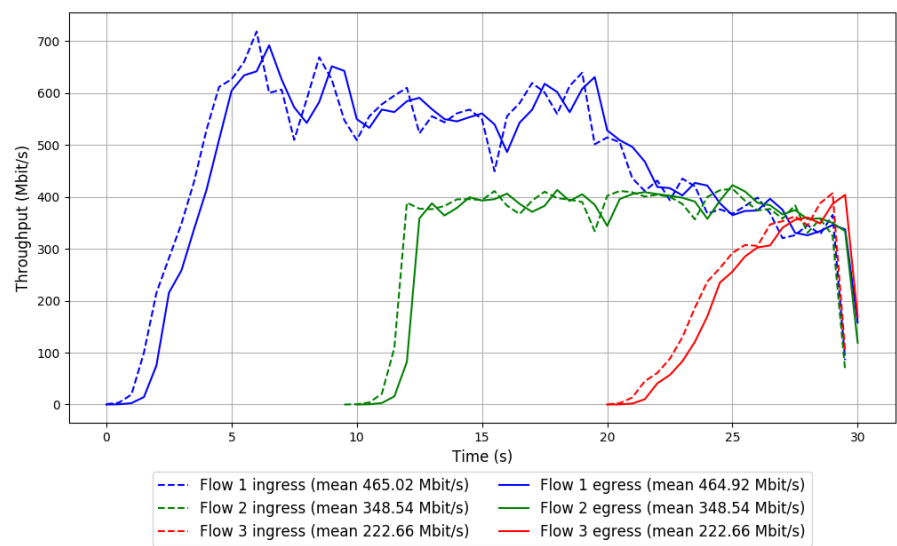Run 5: Report of Muses_DecisionTreeH0 — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 07:57:15
End at: 2019-12-11 07:57:45
Local clock offset: 0.247 ms
Remote clock offset: -0.023 ms


# Below is generated by plot.py at 2019-12-11 13:11:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 767.53 Mbit/s
95th percentile per-packet one-way delay: 103.887 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 464.92 Mbit/s
95th percentile per-packet one-way delay: 109.262 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 348.54 Mbit/s
95th percentile per-packet one-way delay: 91.582 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 222.66 Mbit/s
95th percentile per-packet one-way delay: 90.114 ms
Loss rate: 0.00%
```

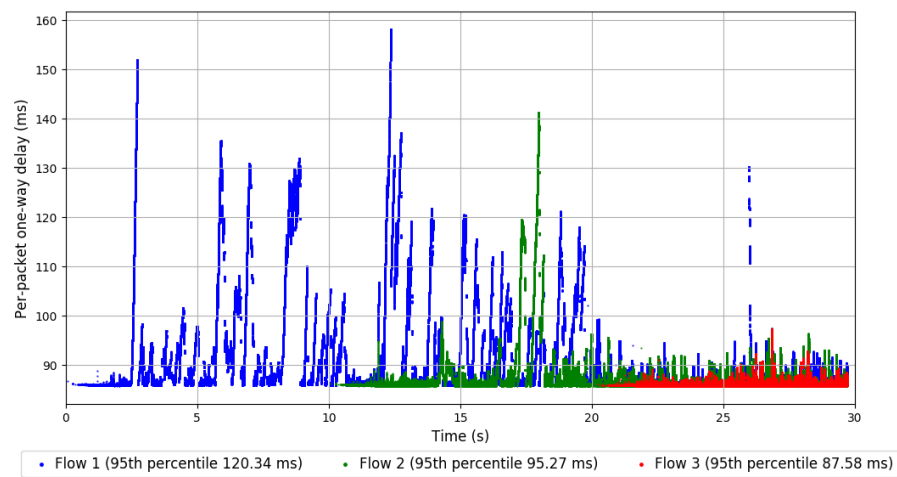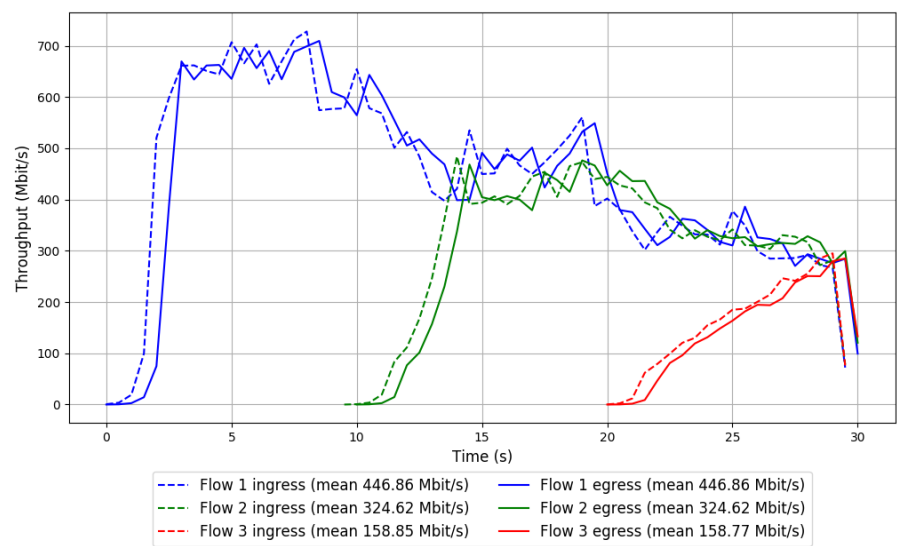Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 08:38:28
End at: 2019-12-11 08:38:58
Local clock offset: -0.033 ms
Remote clock offset: -0.103 ms


# Below is generated by plot.py at 2019-12-11 13:15:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 712.79 Mbit/s
95th percentile per-packet one-way delay: 115.765 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 446.86 Mbit/s
95th percentile per-packet one-way delay: 120.341 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 324.62 Mbit/s
95th percentile per-packet one-way delay: 95.269 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 158.77 Mbit/s
95th percentile per-packet one-way delay: 87.576 ms
Loss rate: 0.04%
```

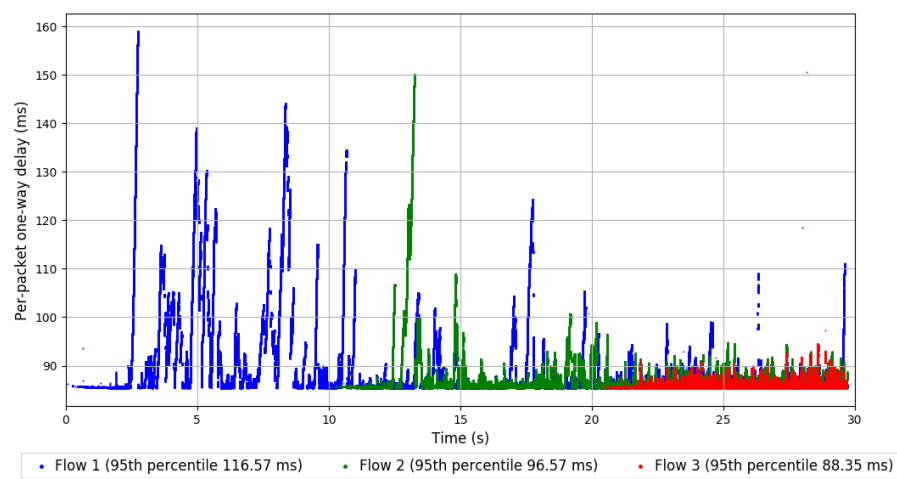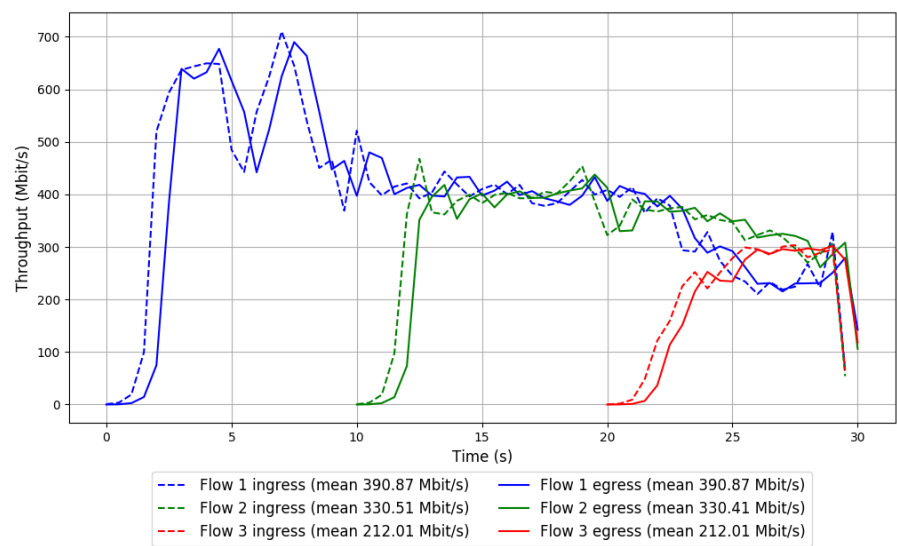Run 2: Report of Muses_DecisionTreeR0 — Data Link

Run 3: Statistics of Muses_DecisionTreeR0

Start at: 2019-12-11 09:19:40
End at: 2019-12-11 09:20:10
Local clock offset: 0.265 ms
Remote clock offset: -0.061 ms

Below is generated by plot.py at 2019-12-11 13:15:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 676.83 Mbit/s
95th percentile per-packet one-way delay: 109.904 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 390.87 Mbit/s
95th percentile per-packet one-way delay: 116.566 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 330.41 Mbit/s
95th percentile per-packet one-way delay: 96.568 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 212.01 Mbit/s
95th percentile per-packet one-way delay: 88.349 ms
Loss rate: 0.00%

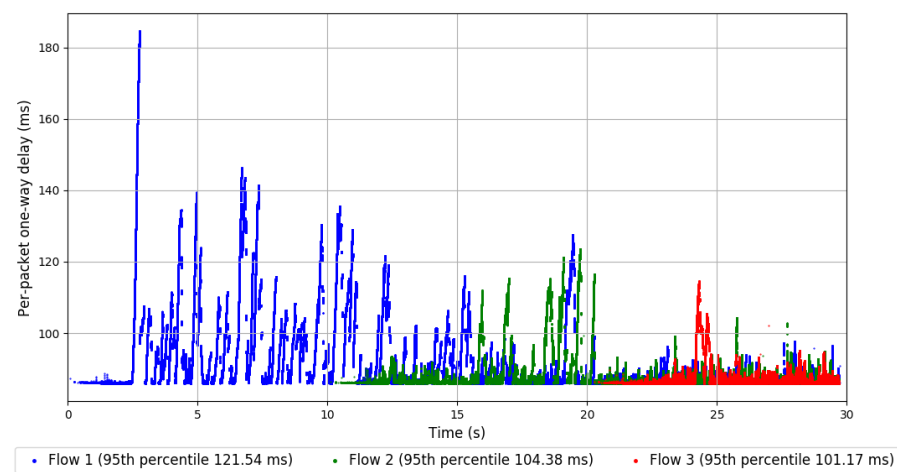Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 10:00:42
End at: 2019-12-11 10:01:12
Local clock offset: -0.154 ms
Remote clock offset: -0.097 ms


# Below is generated by plot.py at 2019-12-11 13:15:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 697.67 Mbit/s
95th percentile per-packet one-way delay: 113.300 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 392.85 Mbit/s
95th percentile per-packet one-way delay: 121.537 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 333.53 Mbit/s
95th percentile per-packet one-way delay: 104.375 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 264.95 Mbit/s
95th percentile per-packet one-way delay: 101.171 ms
Loss rate: 0.00%
```

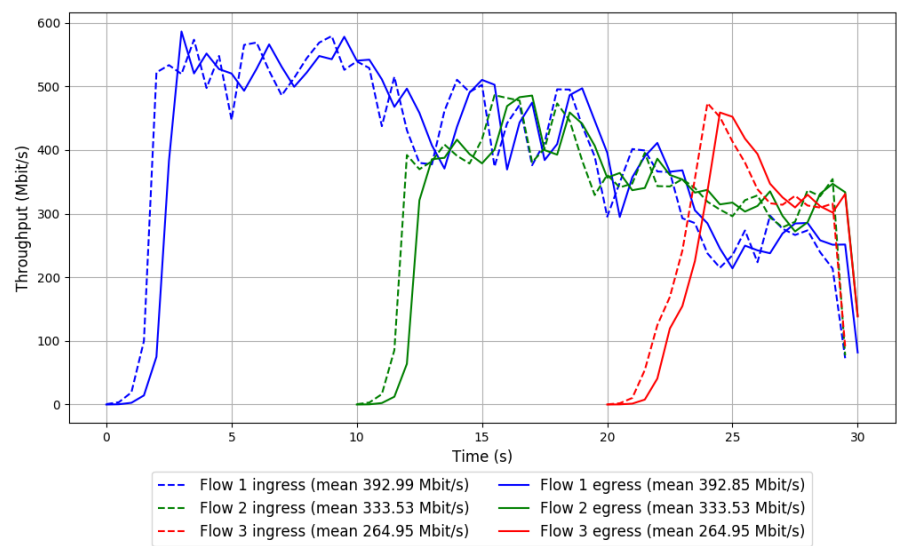Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 10:41:50
End at: 2019-12-11 10:42:20
Local clock offset: -0.363 ms
Remote clock offset: -0.104 ms


# Below is generated by plot.py at 2019-12-11 13:15:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 690.65 Mbit/s
95th percentile per-packet one-way delay: 116.115 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 385.45 Mbit/s
95th percentile per-packet one-way delay: 117.122 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 342.61 Mbit/s
95th percentile per-packet one-way delay: 110.656 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 246.55 Mbit/s
95th percentile per-packet one-way delay: 121.825 ms
Loss rate: 0.00%
```
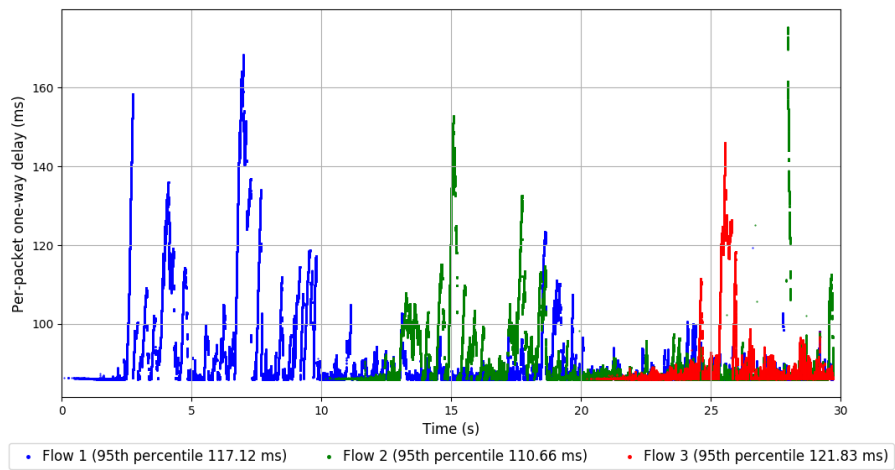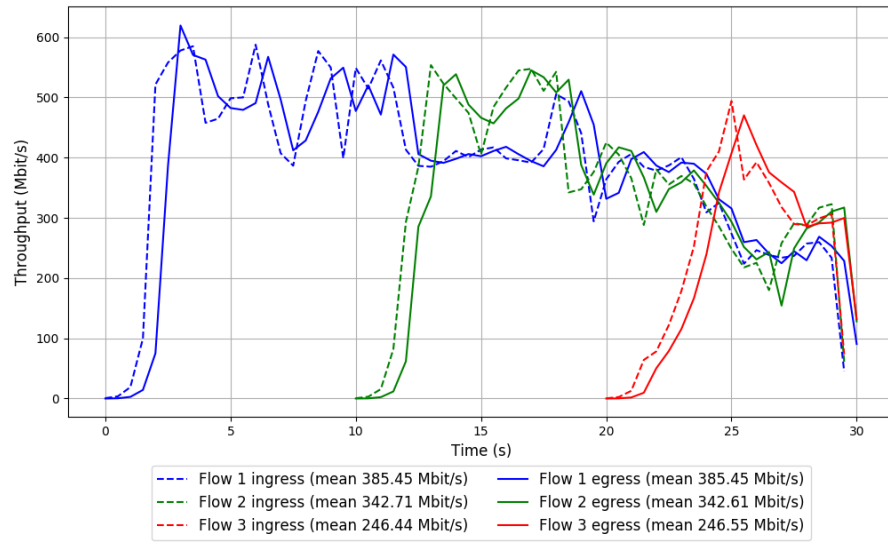
Run 5: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 385.45 Mbit/s) --- Flow 1 egress (mean 385.45 Mbit/s)
Flow 2 ingress (mean 342.71 Mbit/s) --- Flow 2 egress (mean 342.61 Mbit/s)
Flow 3 ingress (mean 246.44 Mbit/s) --- Flow 3 egress (mean 246.55 Mbit/s)

Flow 1 (95th percentile 117.12 ms)   Flow 2 (95th percentile 110.66 ms)   Flow 3 (95th percentile 121.83 ms)
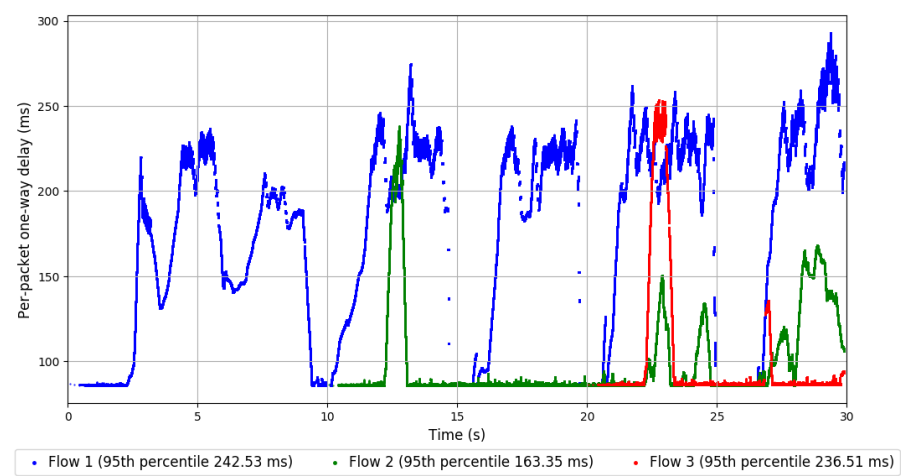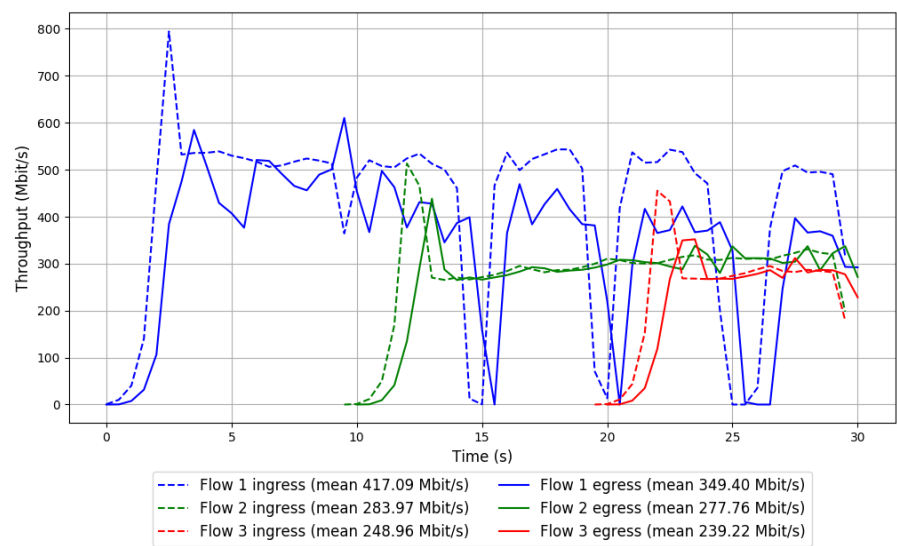
144

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-12-11 07:53:36
End at: 2019-12-11 07:54:06
Local clock offset: -0.168 ms
Remote clock offset: -0.055 ms


# Below is generated by plot.py at 2019-12-11 13:25:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 613.45 Mbit/s
95th percentile per-packet one-way delay: 236.597 ms
Loss rate: 10.90%
-- Flow 1:
Average throughput: 349.40 Mbit/s
95th percentile per-packet one-way delay: 242.530 ms
Loss rate: 16.23%
-- Flow 2:
Average throughput: 277.76 Mbit/s
95th percentile per-packet one-way delay: 163.352 ms
Loss rate: 2.18%
-- Flow 3:
Average throughput: 239.22 Mbit/s
95th percentile per-packet one-way delay: 236.511 ms
Loss rate: 3.91%
```

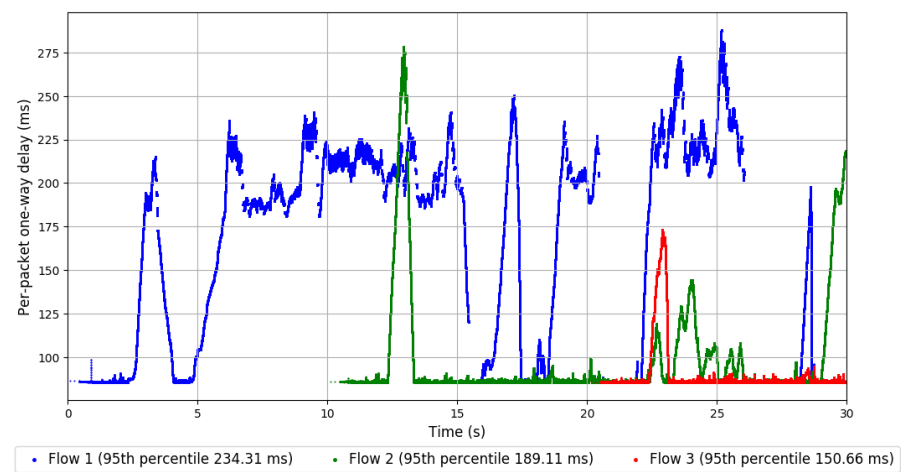Run 1: Report of PCC-Allegro — Data Link

146

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-12-11 08:34:45
End at: 2019-12-11 08:35:15
Local clock offset: -0.057 ms
Remote clock offset: -0.121 ms


# Below is generated by plot.py at 2019-12-11 13:25:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 588.84 Mbit/s
95th percentile per-packet one-way delay: 229.015 ms
Loss rate: 6.81%
-- Flow 1:
Average throughput: 326.04 Mbit/s
95th percentile per-packet one-way delay: 234.306 ms
Loss rate: 10.67%
-- Flow 2:
Average throughput: 280.90 Mbit/s
95th percentile per-packet one-way delay: 189.106 ms
Loss rate: 2.16%
-- Flow 3:
Average throughput: 232.08 Mbit/s
95th percentile per-packet one-way delay: 150.656 ms
Loss rate: 0.00%
```

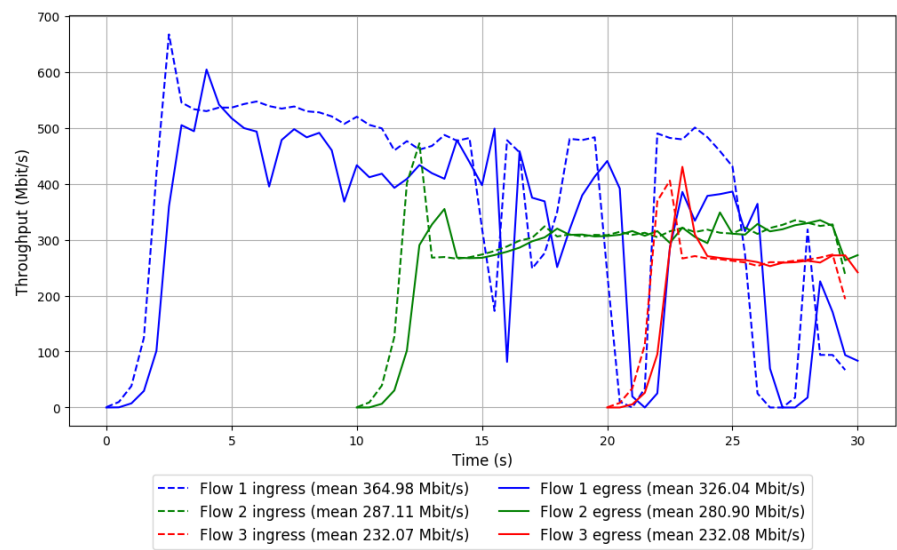Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-12-11 09:16:00
End at: 2019-12-11 09:16:30
Local clock offset: -0.146 ms
Remote clock offset: -0.048 ms


# Below is generated by plot.py at 2019-12-11 13:25:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 570.82 Mbit/s
95th percentile per-packet one-way delay: 125.189 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 299.48 Mbit/s
95th percentile per-packet one-way delay: 112.372 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 288.70 Mbit/s
95th percentile per-packet one-way delay: 126.942 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 240.43 Mbit/s
95th percentile per-packet one-way delay: 182.282 ms
Loss rate: 0.31%
```

Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 301.76 Mbit/s)   Flow 1 egress (mean 299.48 Mbit/s)
Flow 2 ingress (mean 290.87 Mbit/s)   Flow 2 egress (mean 288.70 Mbit/s)
Flow 3 ingress (mean 241.20 Mbit/s)   Flow 3 egress (mean 240.43 Mbit/s)

Flow 1 (95th percentile 112.37 ms)   Flow 2 (95th percentile 126.94 ms)   Flow 3 (95th percentile 182.28 ms)
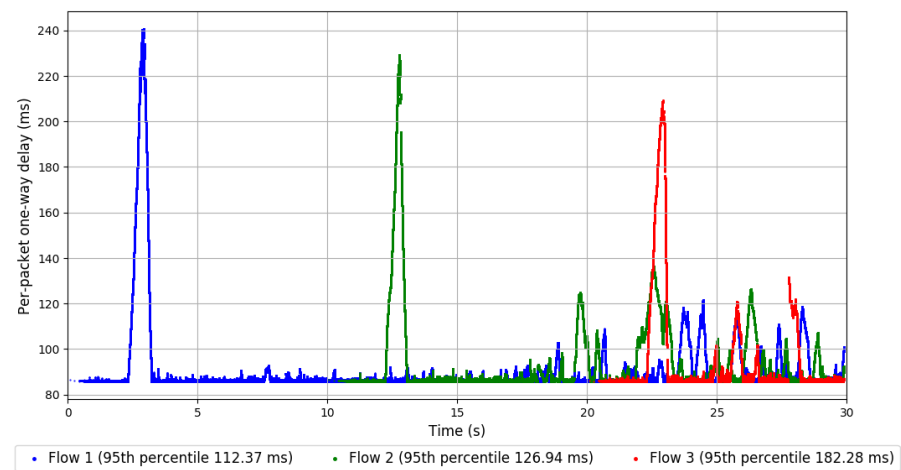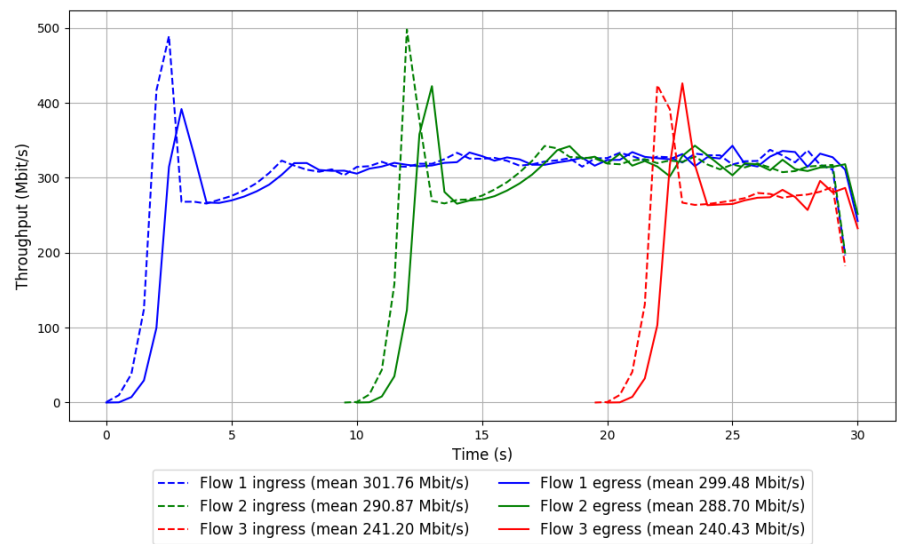
```
Run 4: Statistics of PCC-Allegro

Start at: 2019-12-11 09:57:04
End at: 2019-12-11 09:57:35
Local clock offset: -0.087 ms
Remote clock offset: -0.1 ms


# Below is generated by plot.py at 2019-12-11 13:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 565.75 Mbit/s
95th percentile per-packet one-way delay: 203.457 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 314.57 Mbit/s
95th percentile per-packet one-way delay: 206.656 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 262.35 Mbit/s
95th percentile per-packet one-way delay: 173.531 ms
Loss rate: 1.89%
-- Flow 3:
Average throughput: 233.56 Mbit/s
95th percentile per-packet one-way delay: 223.718 ms
Loss rate: 1.88%
```
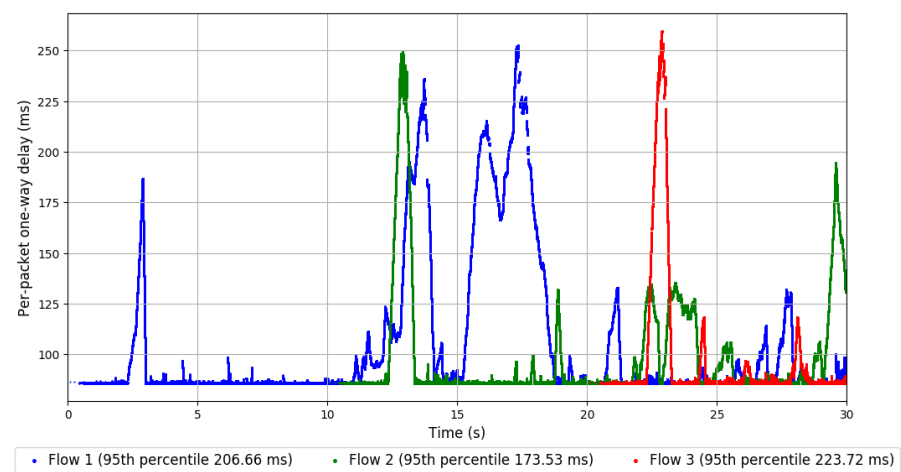
Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 316.52 Mbit/s) — Flow 1 egress (mean 314.57 Mbit/s)
Flow 2 ingress (mean 267.41 Mbit/s) — Flow 2 egress (mean 262.35 Mbit/s)
Flow 3 ingress (mean 238.05 Mbit/s) — Flow 3 egress (mean 233.56 Mbit/s)

Flow 1 (95th percentile 206.66 ms) — Flow 2 (95th percentile 173.53 ms) — Flow 3 (95th percentile 223.72 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-12-11 10:38:11
End at: 2019-12-11 10:38:41
Local clock offset: -0.378 ms
Remote clock offset: -0.073 ms


# Below is generated by plot.py at 2019-12-11 13:35:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 555.57 Mbit/s
95th percentile per-packet one-way delay: 199.600 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 305.81 Mbit/s
95th percentile per-packet one-way delay: 200.545 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 263.27 Mbit/s
95th percentile per-packet one-way delay: 174.822 ms
Loss rate: 2.98%
-- Flow 3:
Average throughput: 228.17 Mbit/s
95th percentile per-packet one-way delay: 208.361 ms
Loss rate: 1.22%
```
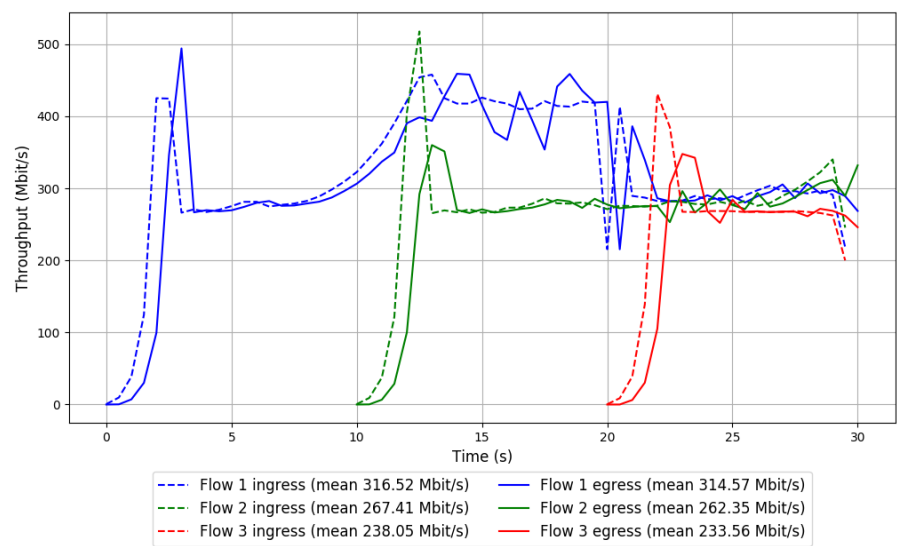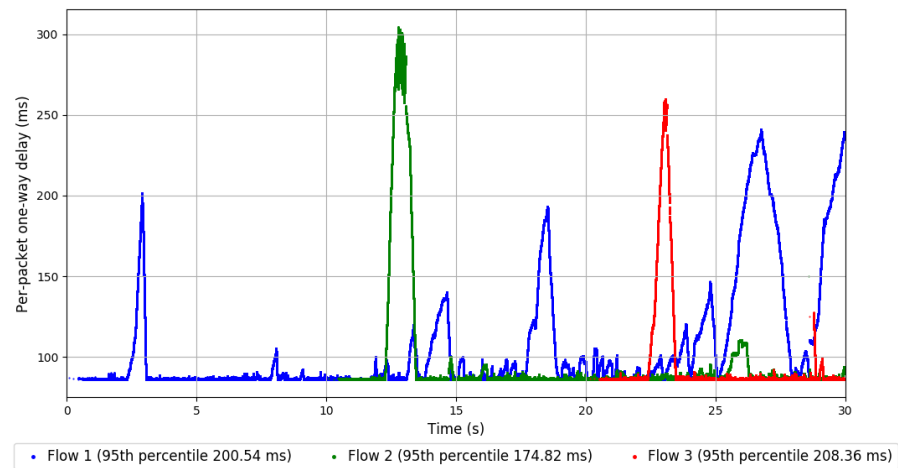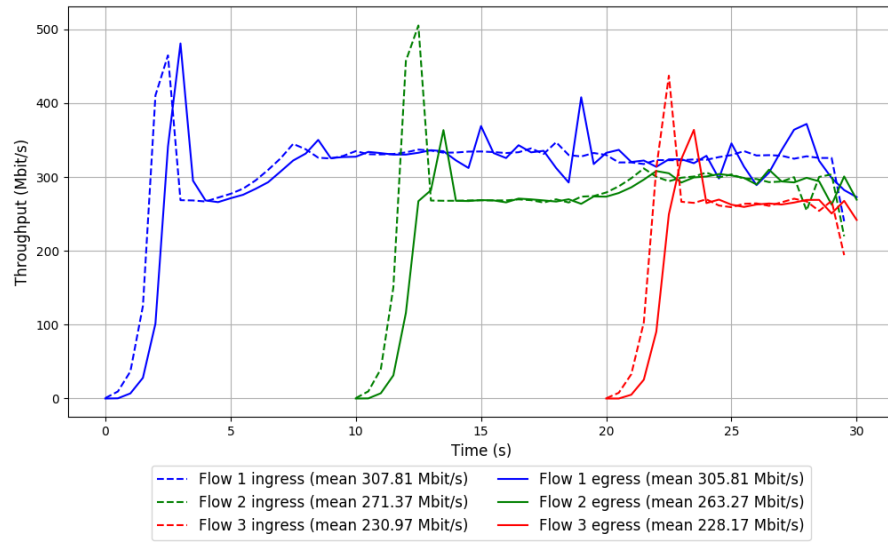
Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 307.81 Mbit/s) --- Flow 1 egress (mean 305.81 Mbit/s)
Flow 2 ingress (mean 271.37 Mbit/s) --- Flow 2 egress (mean 263.27 Mbit/s)
Flow 3 ingress (mean 230.97 Mbit/s) --- Flow 3 egress (mean 228.17 Mbit/s)

Flow 1 (95th percentile 200.54 ms)   Flow 2 (95th percentile 174.82 ms)   Flow 3 (95th percentile 208.36 ms)
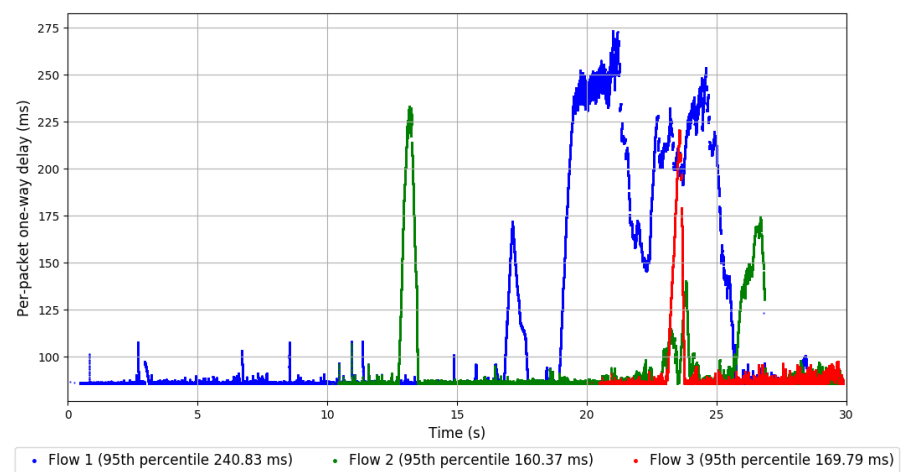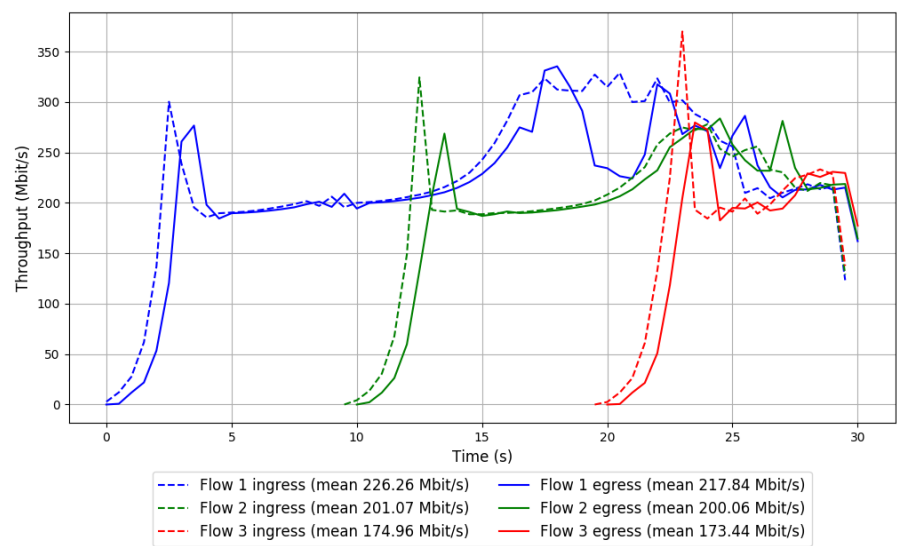
154

```
Run 1: Statistics of PCC-Expr

Start at: 2019-12-11 08:11:06
End at: 2019-12-11 08:11:36
Local clock offset: -0.077 ms
Remote clock offset: -0.05 ms


# Below is generated by plot.py at 2019-12-11 13:35:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 408.69 Mbit/s
95th percentile per-packet one-way delay: 226.885 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 217.84 Mbit/s
95th percentile per-packet one-way delay: 240.833 ms
Loss rate: 3.72%
-- Flow 2:
Average throughput: 200.06 Mbit/s
95th percentile per-packet one-way delay: 160.371 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 173.44 Mbit/s
95th percentile per-packet one-way delay: 169.789 ms
Loss rate: 0.87%
```

Run 1: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 226.26 Mbit/s)   Flow 1 egress (mean 217.84 Mbit/s)
Flow 2 ingress (mean 201.07 Mbit/s)   Flow 2 egress (mean 200.06 Mbit/s)
Flow 3 ingress (mean 174.96 Mbit/s)   Flow 3 egress (mean 173.44 Mbit/s)

Flow 1 (95th percentile 240.83 ms)   Flow 2 (95th percentile 160.37 ms)   Flow 3 (95th percentile 169.79 ms)

```
Run 2: Statistics of PCC-Expr

Start at: 2019-12-11 08:52:17
End at: 2019-12-11 08:52:47
Local clock offset: -0.119 ms
Remote clock offset: -0.056 ms


# Below is generated by plot.py at 2019-12-11 13:35:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 458.79 Mbit/s
95th percentile per-packet one-way delay: 199.148 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 263.16 Mbit/s
95th percentile per-packet one-way delay: 202.744 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 211.54 Mbit/s
95th percentile per-packet one-way delay: 187.741 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 167.01 Mbit/s
95th percentile per-packet one-way delay: 169.286 ms
Loss rate: 0.09%
```
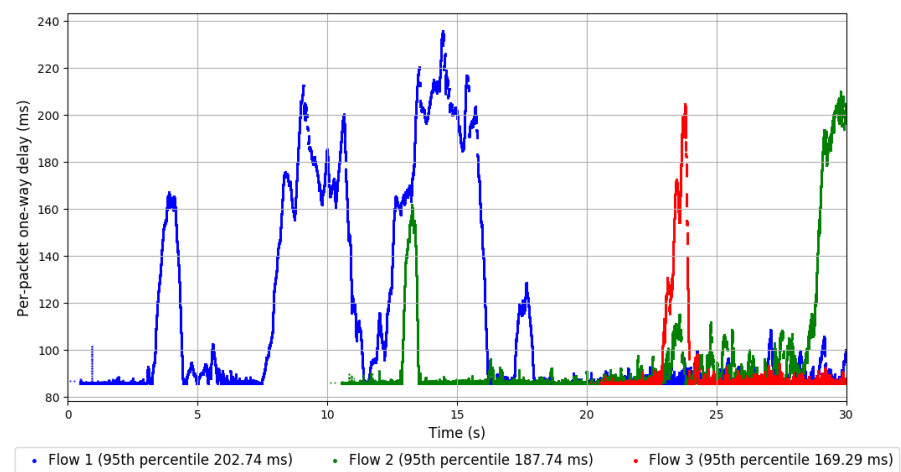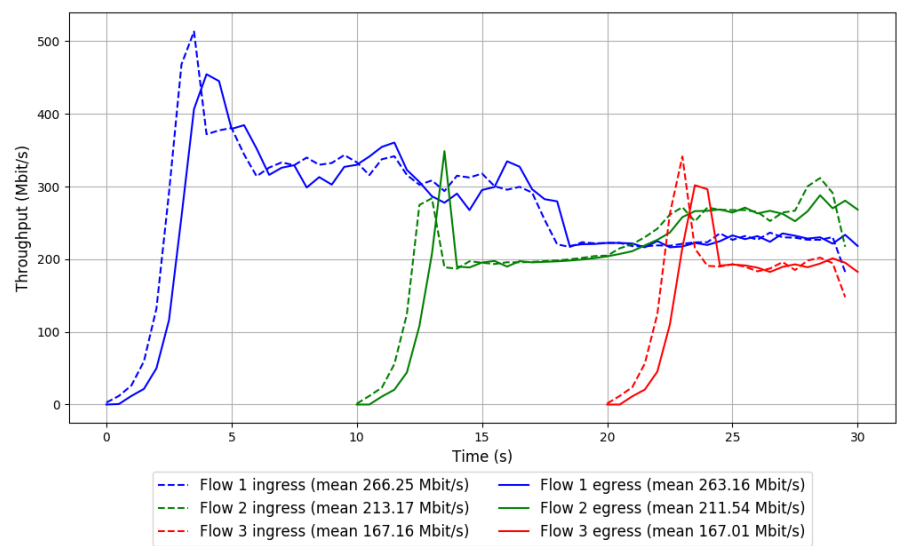
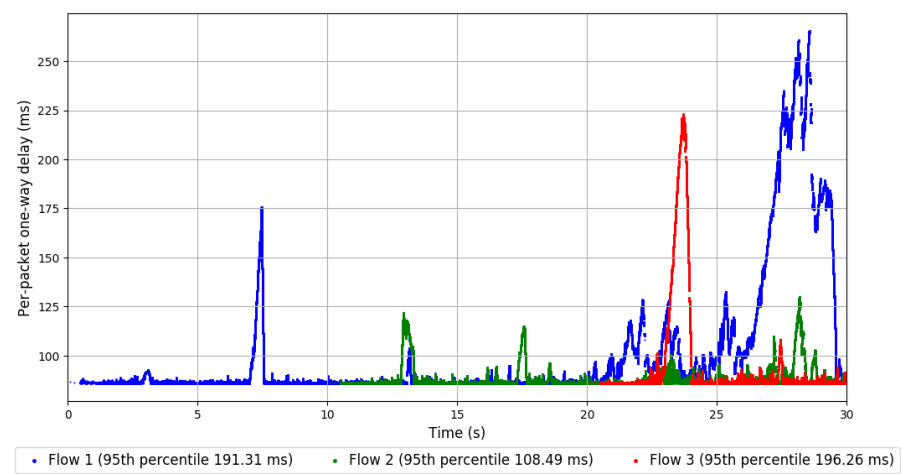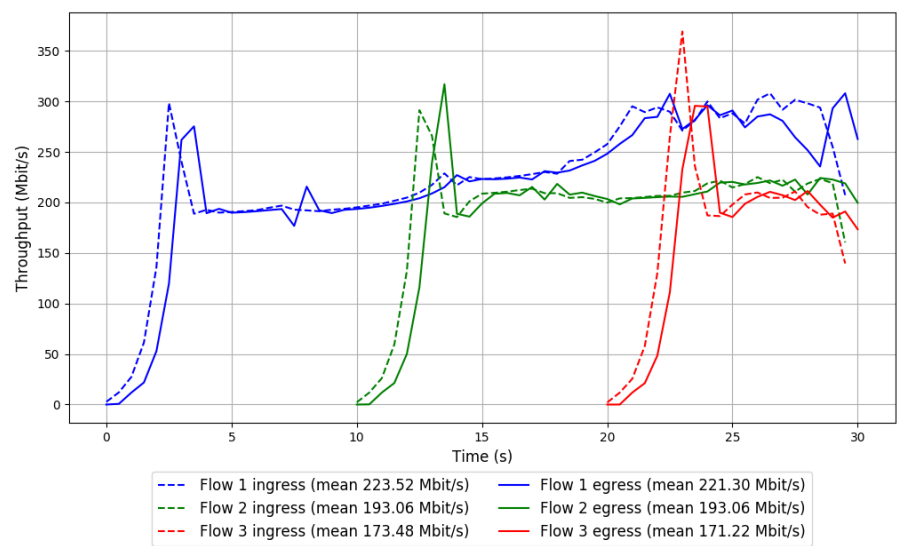Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-12-11 09:33:34
End at: 2019-12-11 09:34:04
Local clock offset: -0.165 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-12-11 13:35:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 406.20 Mbit/s
95th percentile per-packet one-way delay: 179.391 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 221.30 Mbit/s
95th percentile per-packet one-way delay: 191.307 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 193.06 Mbit/s
95th percentile per-packet one-way delay: 108.492 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 171.22 Mbit/s
95th percentile per-packet one-way delay: 196.256 ms
Loss rate: 1.31%
```

Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 223.52 Mbit/s) Flow 1 egress (mean 221.30 Mbit/s)
Flow 2 ingress (mean 193.06 Mbit/s) Flow 2 egress (mean 193.06 Mbit/s)
Flow 3 ingress (mean 173.48 Mbit/s) Flow 3 egress (mean 171.22 Mbit/s)

Flow 1 (95th percentile 191.31 ms)   Flow 2 (95th percentile 108.49 ms)   Flow 3 (95th percentile 196.26 ms)

160

```
Run 4: Statistics of PCC-Expr

Start at: 2019-12-11 10:14:29
End at: 2019-12-11 10:14:59
Local clock offset: -0.302 ms
Remote clock offset: -0.093 ms


# Below is generated by plot.py at 2019-12-11 13:38:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.95 Mbit/s
95th percentile per-packet one-way delay: 107.216 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 206.81 Mbit/s
95th percentile per-packet one-way delay: 102.431 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 168.40 Mbit/s
95th percentile per-packet one-way delay: 106.091 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 176.32 Mbit/s
95th percentile per-packet one-way delay: 189.486 ms
Loss rate: 0.34%
```
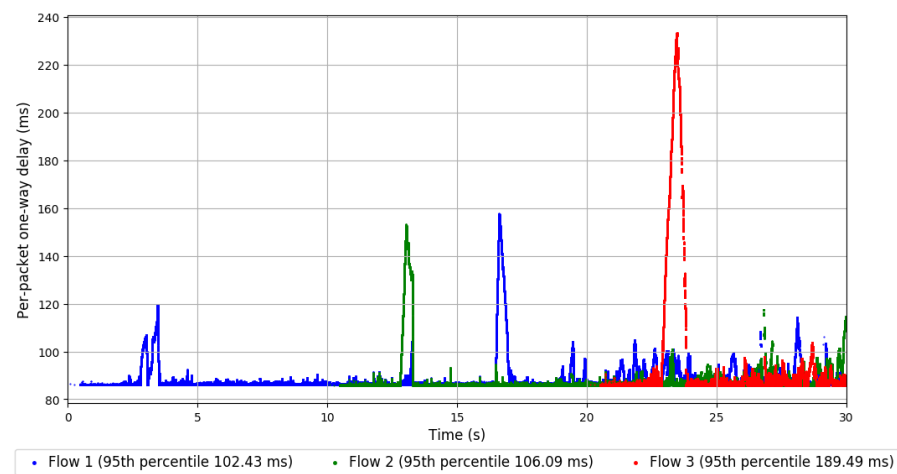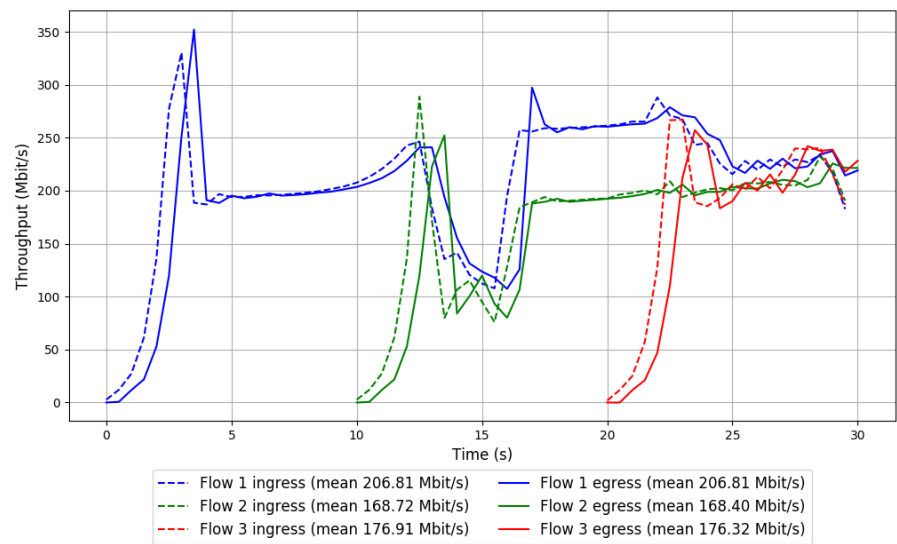
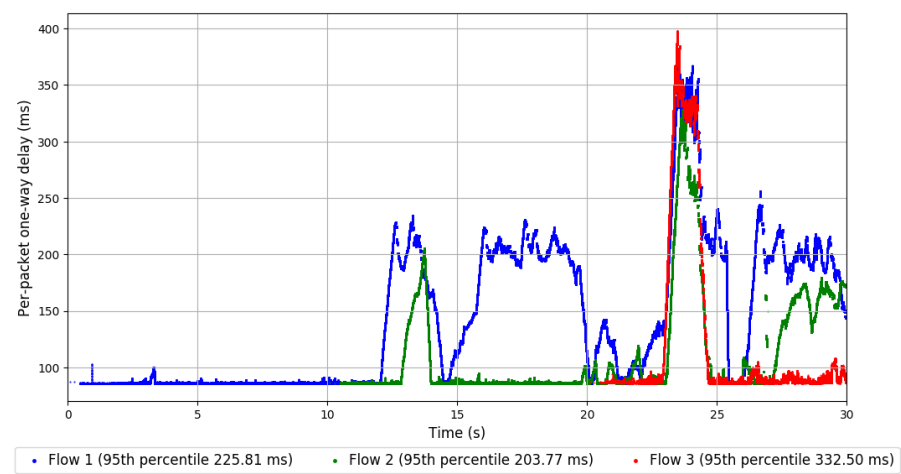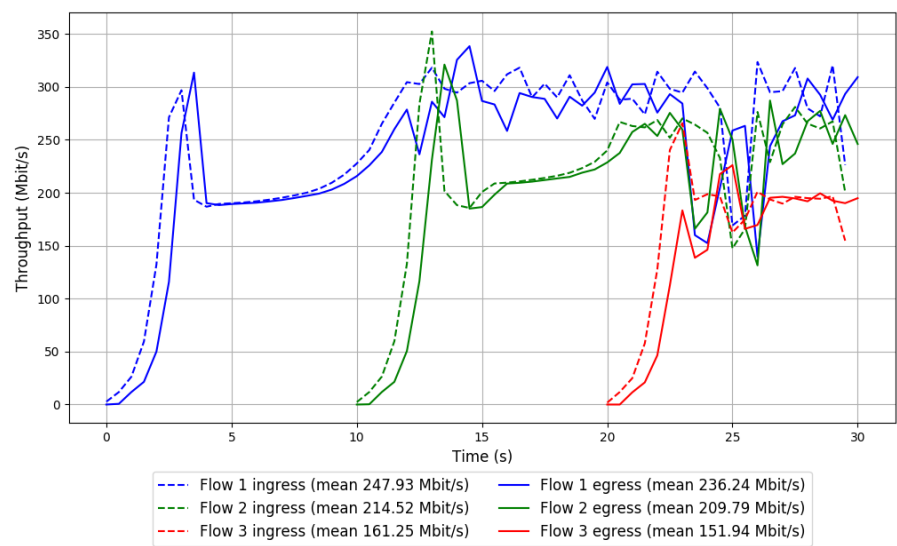Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-12-11 10:55:27
End at: 2019-12-11 10:55:57
Local clock offset: -0.314 ms
Remote clock offset: -0.105 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 425.82 Mbit/s
95th percentile per-packet one-way delay: 229.474 ms
Loss rate: 4.03%
-- Flow 1:
Average throughput: 236.24 Mbit/s
95th percentile per-packet one-way delay: 225.811 ms
Loss rate: 4.71%
-- Flow 2:
Average throughput: 209.79 Mbit/s
95th percentile per-packet one-way delay: 203.768 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 151.94 Mbit/s
95th percentile per-packet one-way delay: 332.500 ms
Loss rate: 5.77%
```

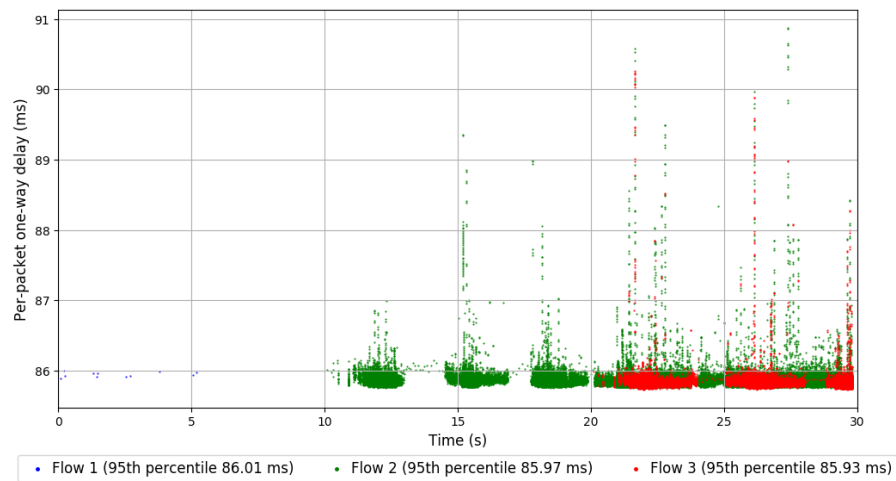## Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 247.93 Mbit/s)   Flow 1 egress (mean 236.24 Mbit/s)
Flow 2 ingress (mean 214.52 Mbit/s)   Flow 2 egress (mean 209.79 Mbit/s)
Flow 3 ingress (mean 161.25 Mbit/s)   Flow 3 egress (mean 151.94 Mbit/s)

Flow 1 (95th percentile 225.81 ms)   Flow 2 (95th percentile 203.77 ms)   Flow 3 (95th percentile 332.50 ms)
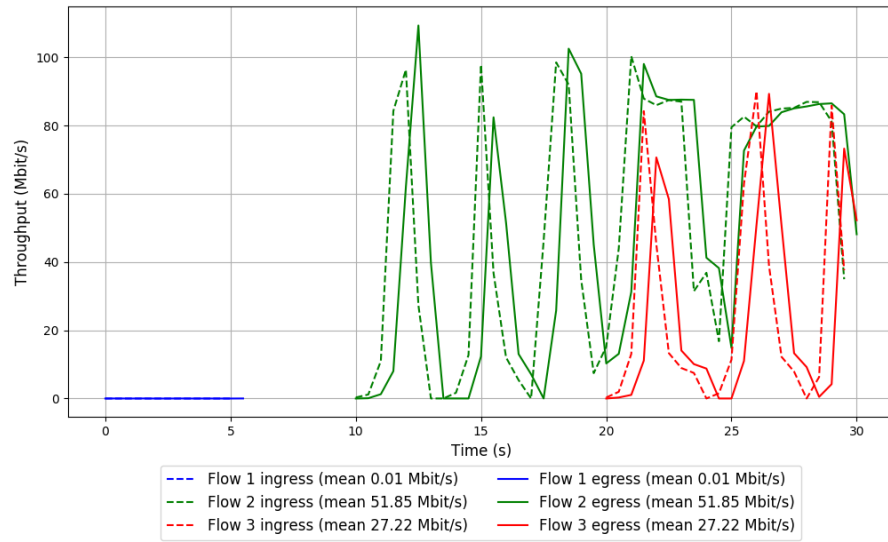
```
Run 1: Statistics of QUIC Cubic

Start at: 2019-12-11 08:04:49
End at: 2019-12-11 08:05:19
Local clock offset: -0.031 ms
Remote clock offset: -0.025 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.28 Mbit/s
95th percentile per-packet one-way delay: 85.958 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 86.006 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 51.85 Mbit/s
95th percentile per-packet one-way delay: 85.966 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.22 Mbit/s
95th percentile per-packet one-way delay: 85.927 ms
Loss rate: 0.00%
```

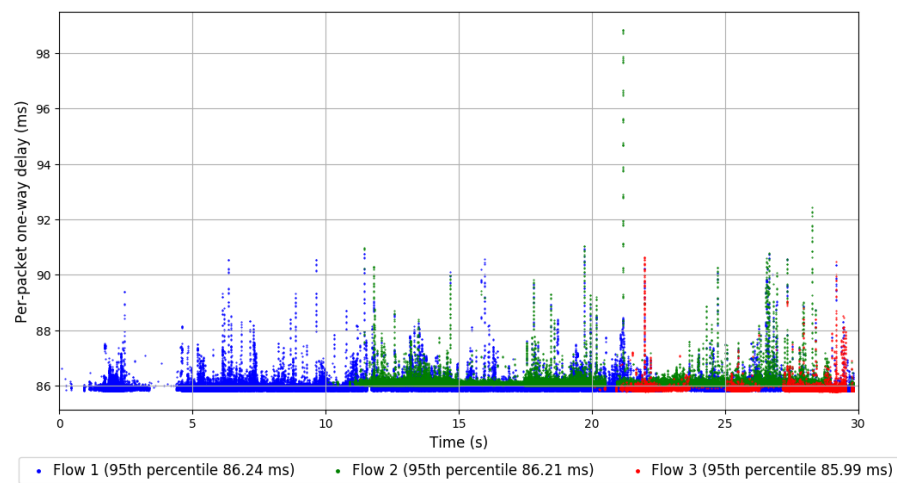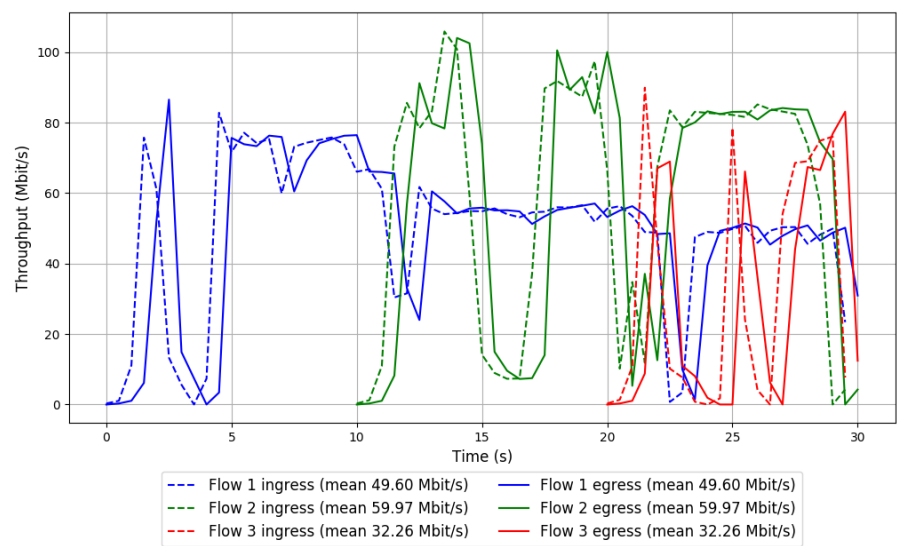Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-12-11 08:45:56
End at: 2019-12-11 08:46:27
Local clock offset: -0.064 ms
Remote clock offset: -0.088 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.90 Mbit/s
95th percentile per-packet one-way delay: 86.207 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.60 Mbit/s
95th percentile per-packet one-way delay: 86.237 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 59.97 Mbit/s
95th percentile per-packet one-way delay: 86.212 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.26 Mbit/s
95th percentile per-packet one-way delay: 85.991 ms
Loss rate: 0.00%
```

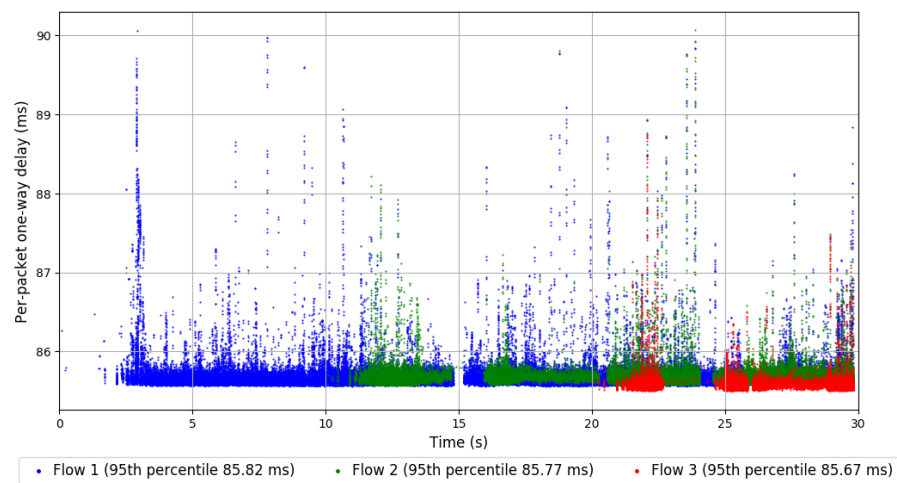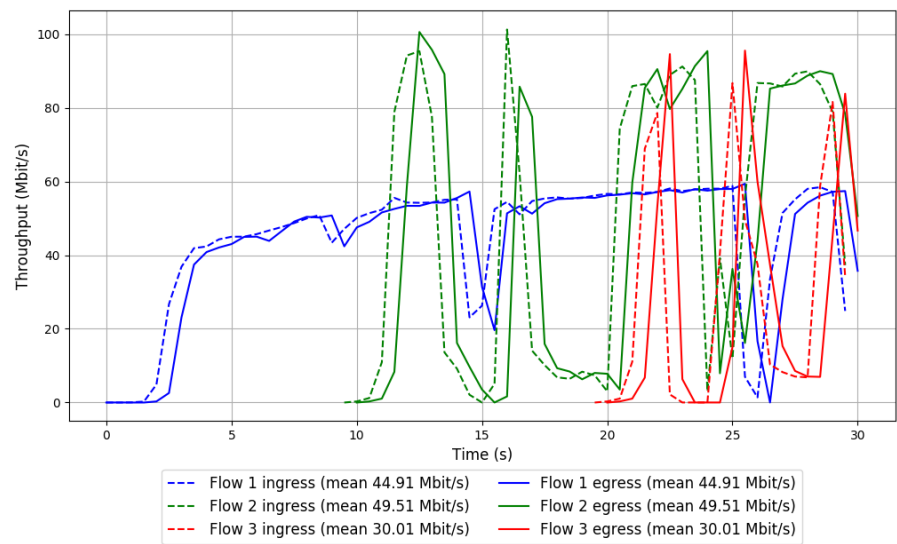Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-12-11 09:27:17
End at: 2019-12-11 09:27:47
Local clock offset: 0.196 ms
Remote clock offset: -0.084 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.58 Mbit/s
95th percentile per-packet one-way delay: 85.787 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.91 Mbit/s
95th percentile per-packet one-way delay: 85.821 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.51 Mbit/s
95th percentile per-packet one-way delay: 85.773 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.01 Mbit/s
95th percentile per-packet one-way delay: 85.675 ms
Loss rate: 0.00%
```

Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-12-11 10:08:11
End at: 2019-12-11 10:08:41
Local clock offset: -0.243 ms
Remote clock offset: -0.06 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.27 Mbit/s
95th percentile per-packet one-way delay: 86.066 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.37 Mbit/s
95th percentile per-packet one-way delay: 86.091 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.89 Mbit/s
95th percentile per-packet one-way delay: 86.019 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.84 Mbit/s
95th percentile per-packet one-way delay: 86.033 ms
Loss rate: 0.00%
```
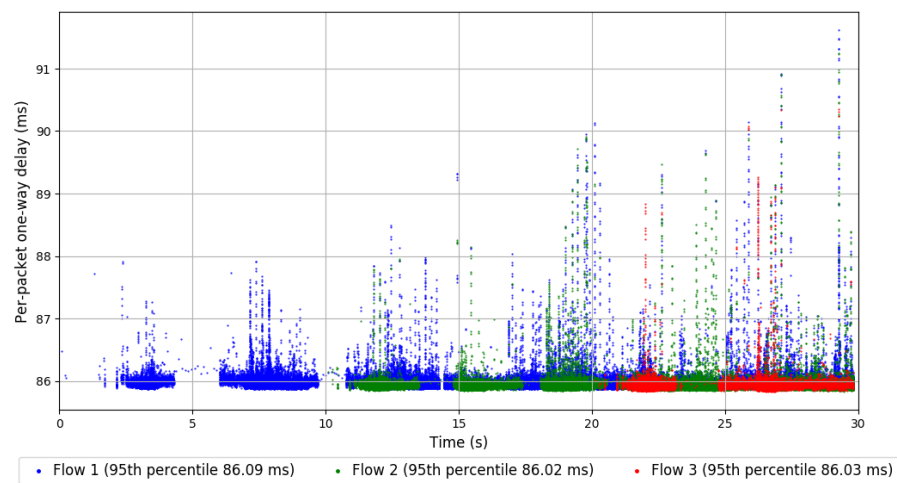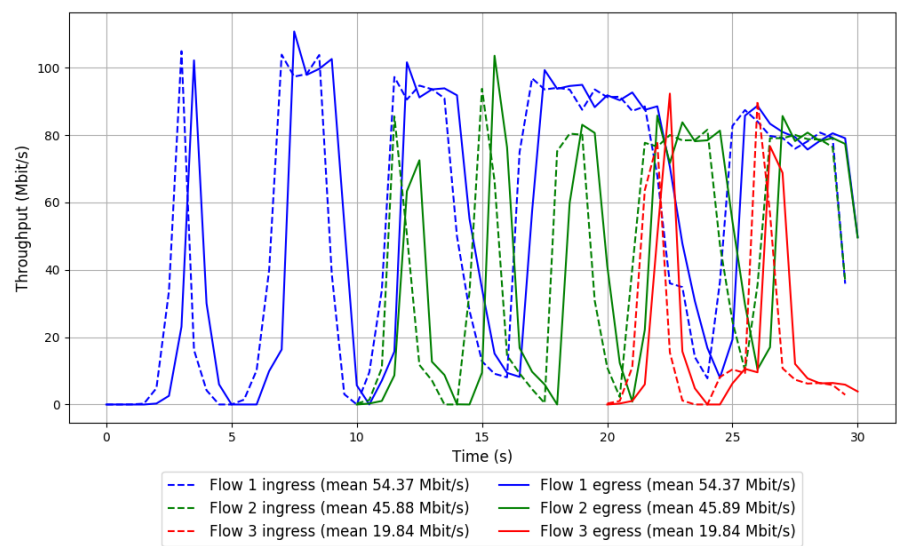
Run 4: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 54.37 Mbit/s) —— Flow 1 egress (mean 54.37 Mbit/s)
- - - Flow 2 ingress (mean 45.88 Mbit/s) —— Flow 2 egress (mean 45.89 Mbit/s)
- - - Flow 3 ingress (mean 19.84 Mbit/s) —— Flow 3 egress (mean 19.84 Mbit/s)

• Flow 1 (95th percentile 86.09 ms)   • Flow 2 (95th percentile 86.02 ms)   • Flow 3 (95th percentile 86.03 ms)
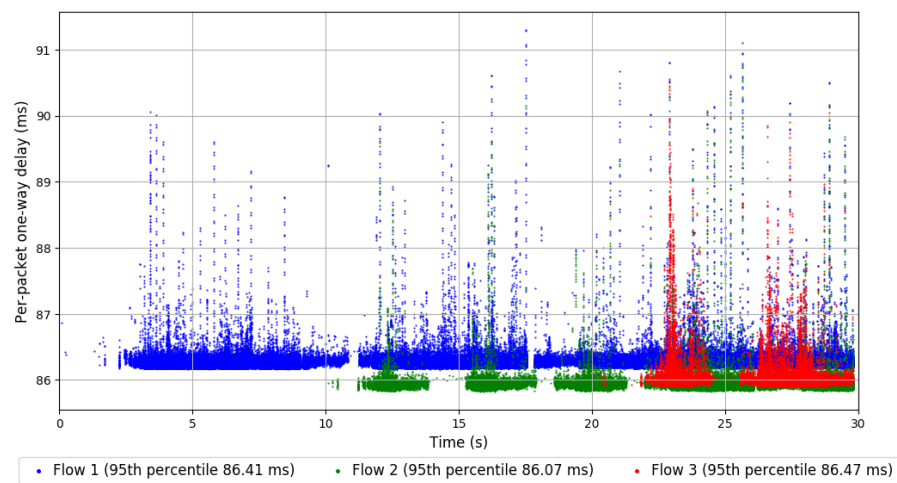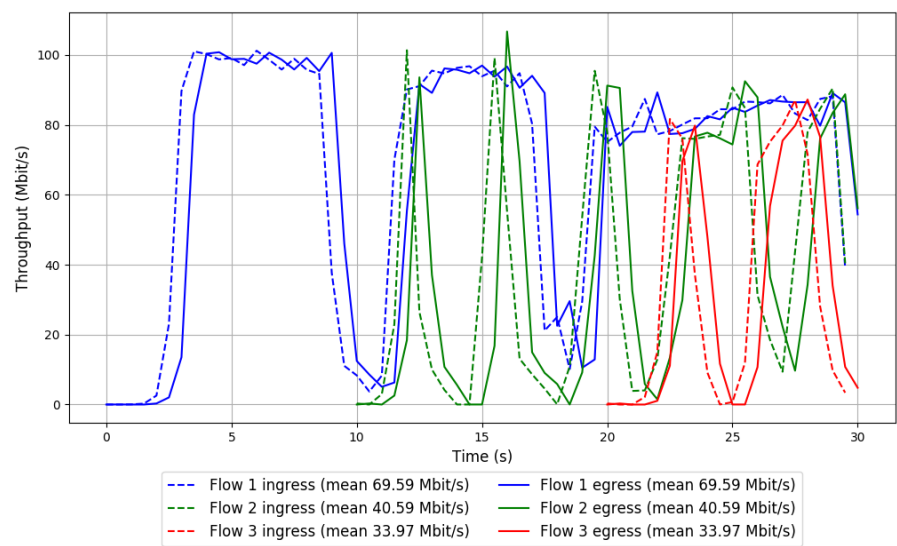
172

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-12-11 10:49:07
End at: 2019-12-11 10:49:37
Local clock offset: -0.304 ms
Remote clock offset: -0.121 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.58 Mbit/s
95th percentile per-packet one-way delay: 86.384 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.59 Mbit/s
95th percentile per-packet one-way delay: 86.408 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.59 Mbit/s
95th percentile per-packet one-way delay: 86.067 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.97 Mbit/s
95th percentile per-packet one-way delay: 86.466 ms
Loss rate: 0.00%
```

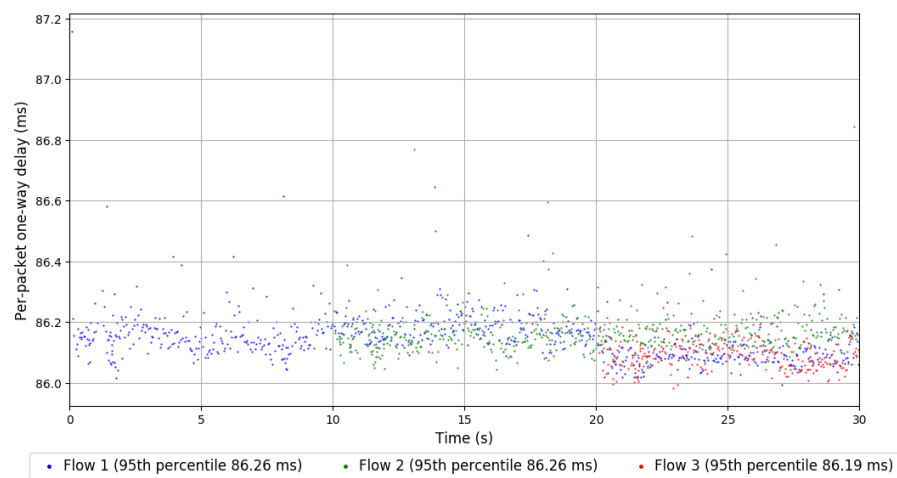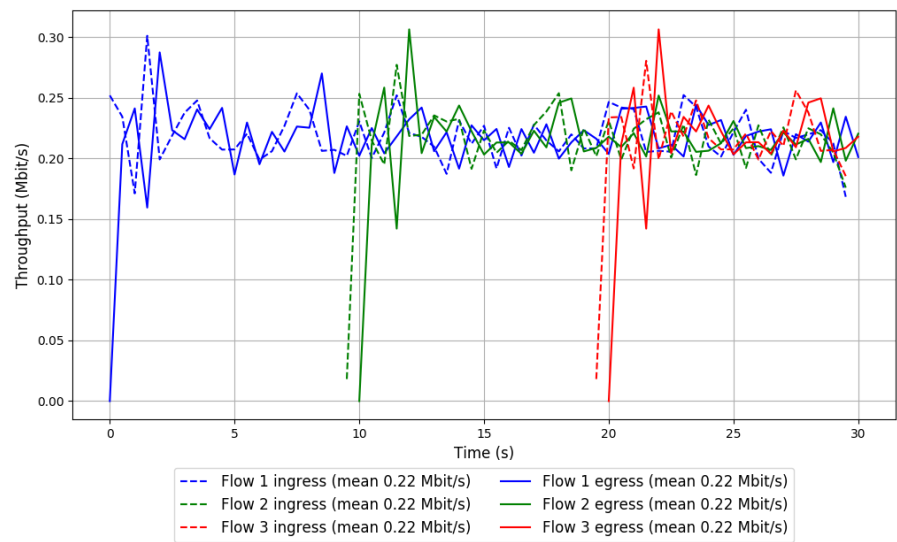Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-12-11 08:16:00
End at: 2019-12-11 08:16:30
Local clock offset: -0.015 ms
Remote clock offset: -0.05 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.255 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.257 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.258 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.192 ms
Loss rate: 0.00%
```
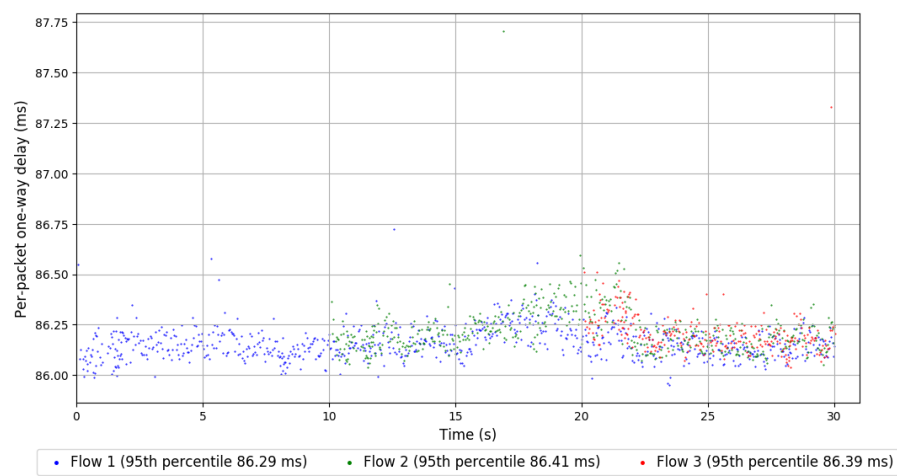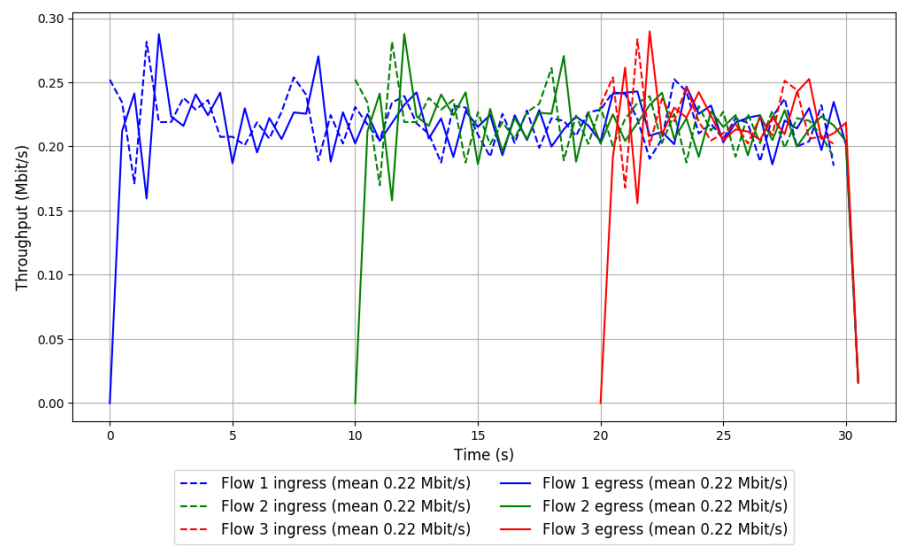
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-12-11 08:57:21
End at: 2019-12-11 08:57:51
Local clock offset: -0.144 ms
Remote clock offset: -0.095 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.361 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.292 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.408 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.390 ms
Loss rate: 0.00%
```
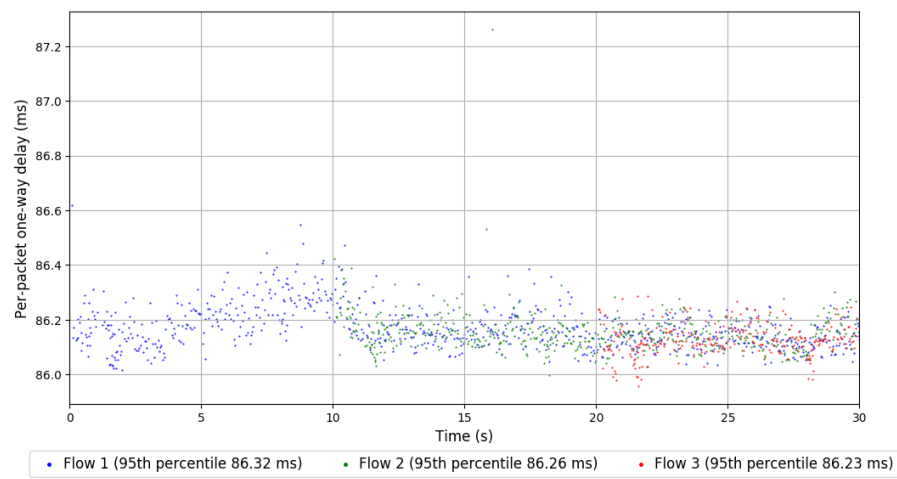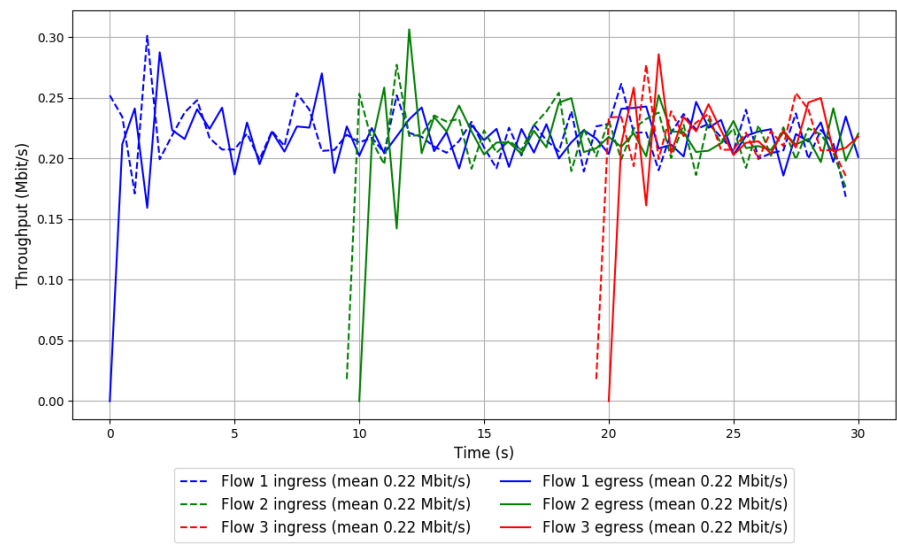
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-12-11 09:38:34
End at: 2019-12-11 09:39:04
Local clock offset: -0.143 ms
Remote clock offset: -0.088 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.287 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.317 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.264 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.234 ms
Loss rate: 0.00%
```

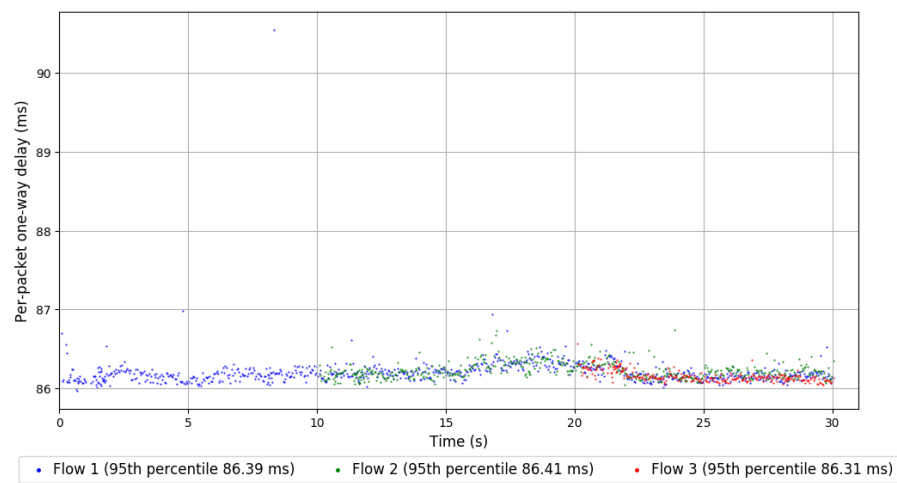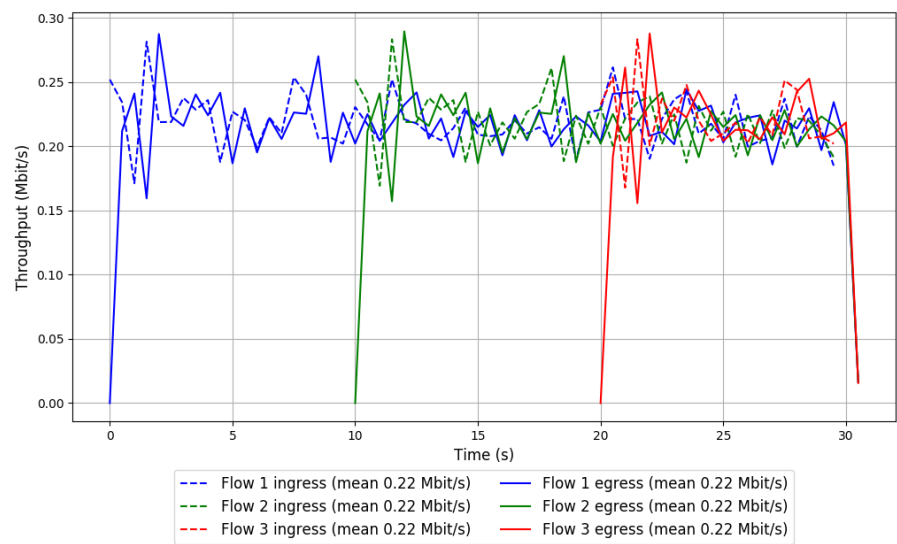# Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-12-11 10:19:24
End at: 2019-12-11 10:19:54
Local clock offset: -0.325 ms
Remote clock offset: -0.063 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.391 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.385 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.413 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.307 ms
Loss rate: 0.00%
```

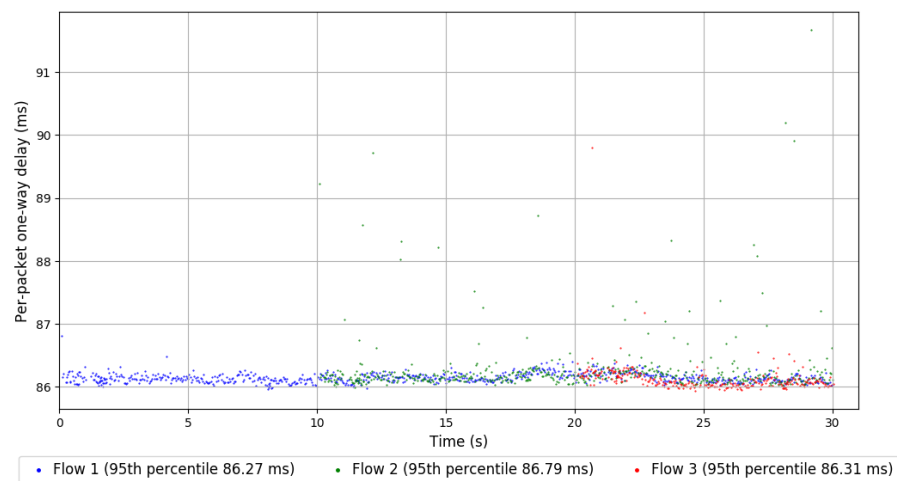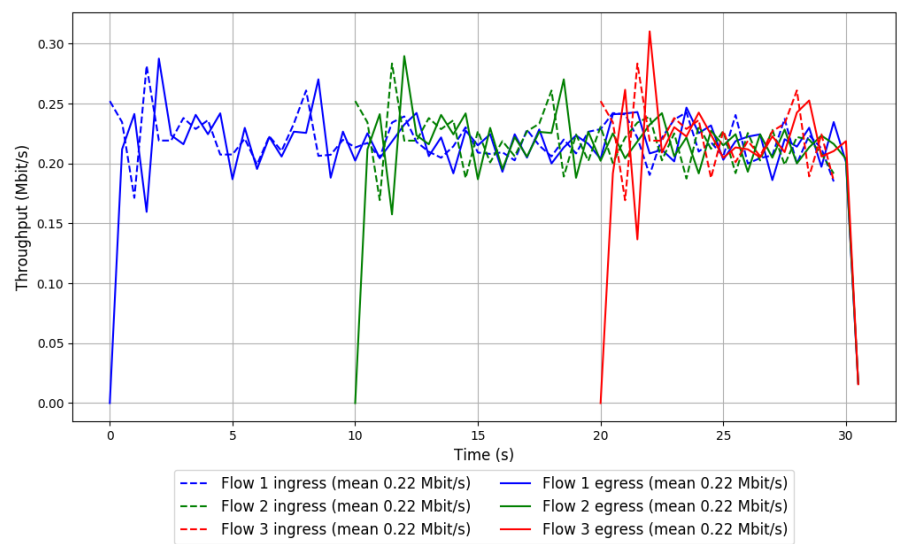# Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-12-11 11:00:22
End at: 2019-12-11 11:00:52
Local clock offset: -0.245 ms
Remote clock offset: -0.113 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.339 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.273 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.792 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.310 ms
Loss rate: 0.00%
```

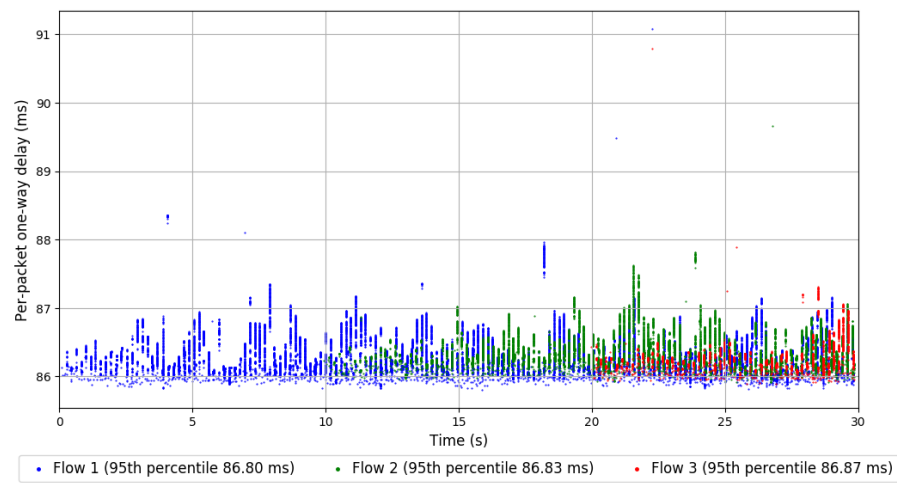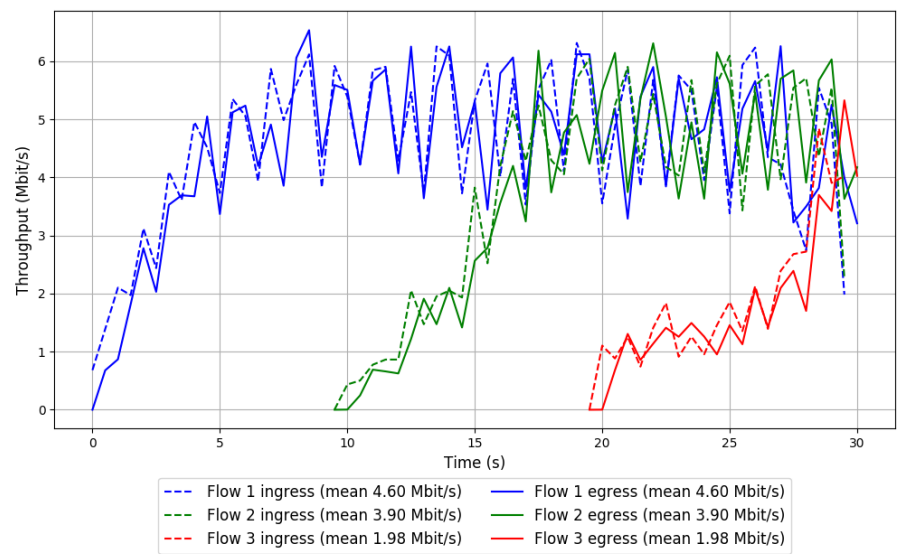# Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-12-11 08:08:01
End at: 2019-12-11 08:08:31
Local clock offset: -0.004 ms
Remote clock offset: -0.005 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 86.815 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.60 Mbit/s
95th percentile per-packet one-way delay: 86.801 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 86.834 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 86.866 ms
Loss rate: 0.00%
```
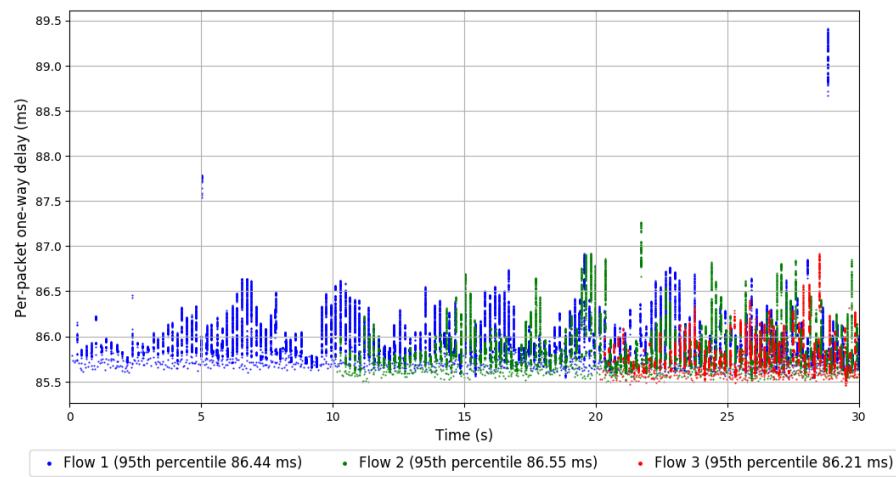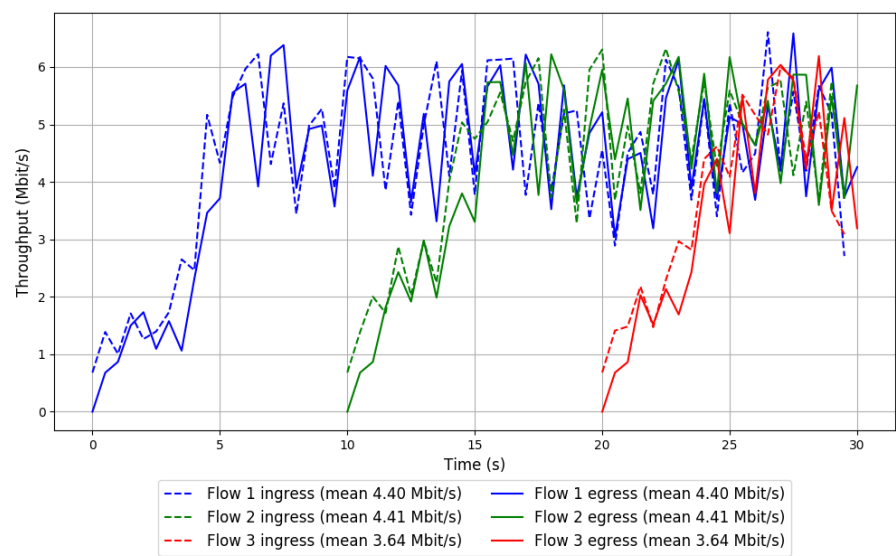
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-12-11 08:49:11
End at: 2019-12-11 08:49:41
Local clock offset: 0.315 ms
Remote clock offset: -0.067 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.53 Mbit/s
95th percentile per-packet one-way delay: 86.458 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 86.443 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.41 Mbit/s
95th percentile per-packet one-way delay: 86.546 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 86.212 ms
Loss rate: 0.00%
```
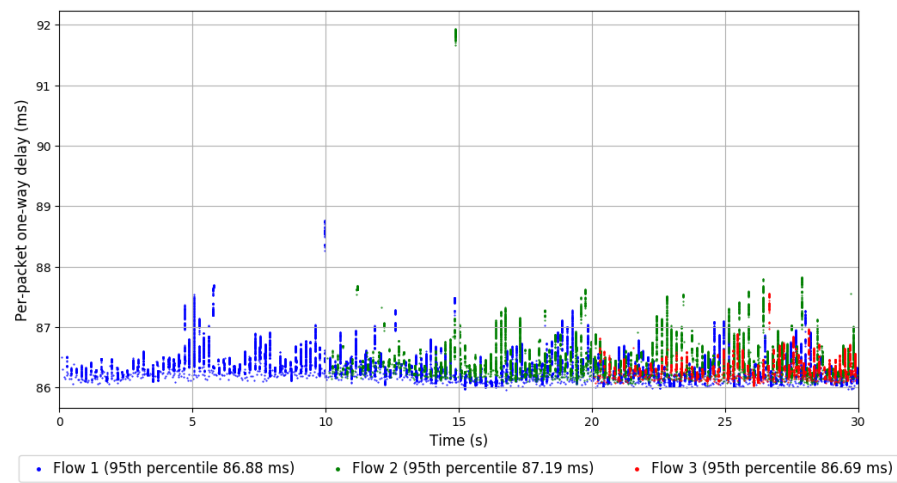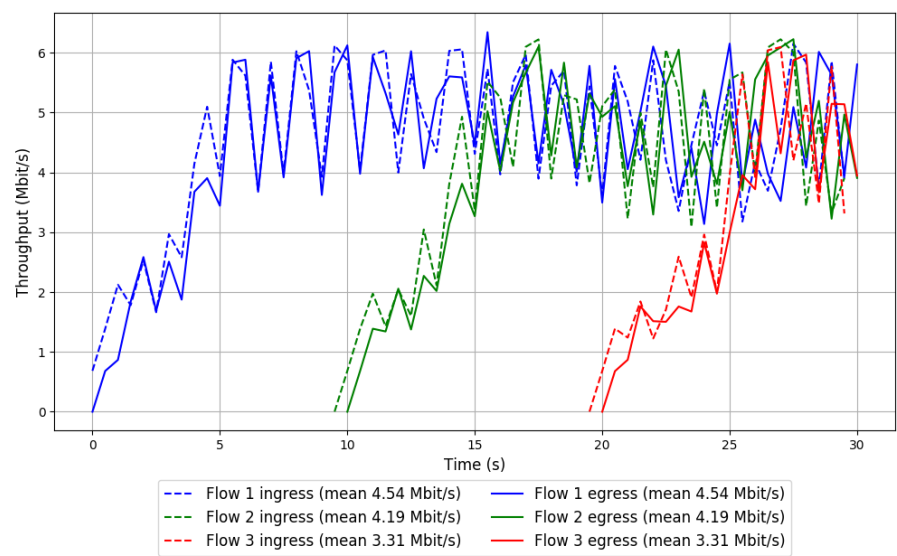
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-12-11 09:30:26
End at: 2019-12-11 09:30:56
Local clock offset: -0.225 ms
Remote clock offset: -0.106 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.42 Mbit/s
95th percentile per-packet one-way delay: 86.982 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 86.880 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.19 Mbit/s
95th percentile per-packet one-way delay: 87.187 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.31 Mbit/s
95th percentile per-packet one-way delay: 86.686 ms
Loss rate: 0.00%
```
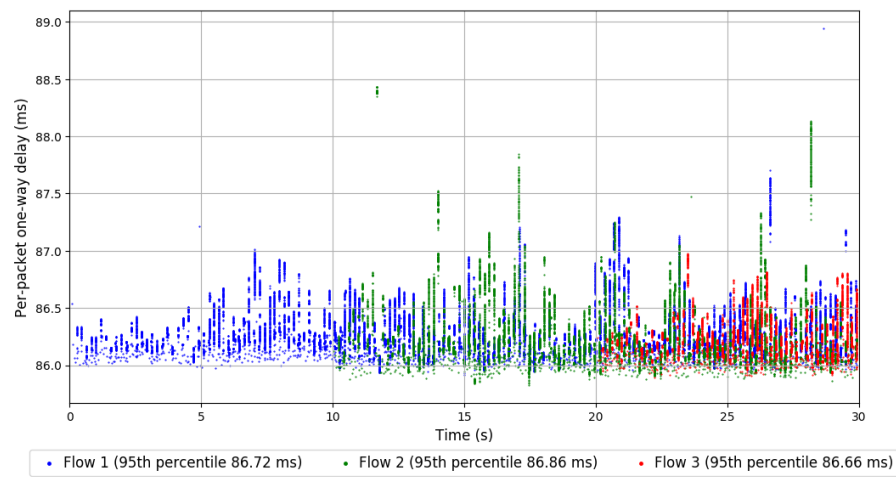
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-12-11 10:11:23
End at: 2019-12-11 10:11:53
Local clock offset: -0.27 ms
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.69 Mbit/s
95th percentile per-packet one-way delay: 86.751 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 86.720 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 86.856 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.95 Mbit/s
95th percentile per-packet one-way delay: 86.661 ms
Loss rate: 0.00%
```
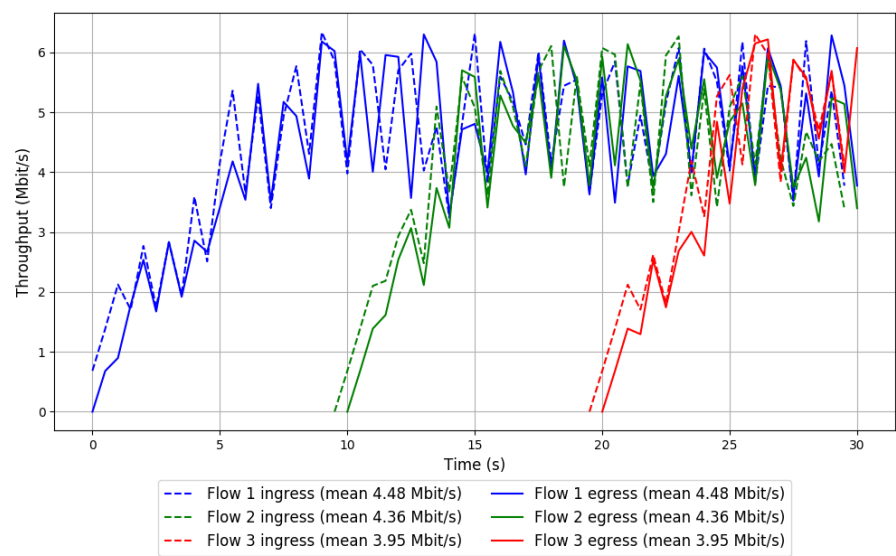
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-12-11 10:52:20
End at: 2019-12-11 10:52:50
Local clock offset: -0.373 ms
Remote clock offset: -0.142 ms


# Below is generated by plot.py at 2019-12-11 13:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.98 Mbit/s
95th percentile per-packet one-way delay: 86.871 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 86.643 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 87.017 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 86.923 ms
Loss rate: 0.00%
```
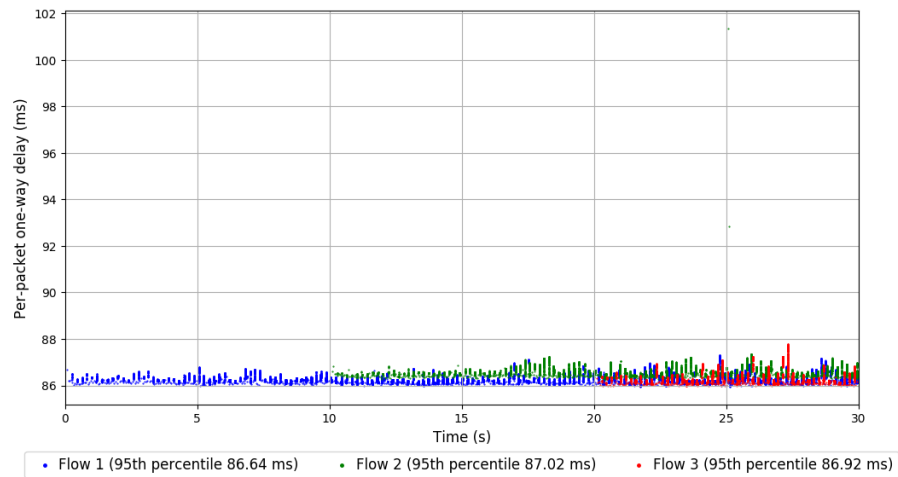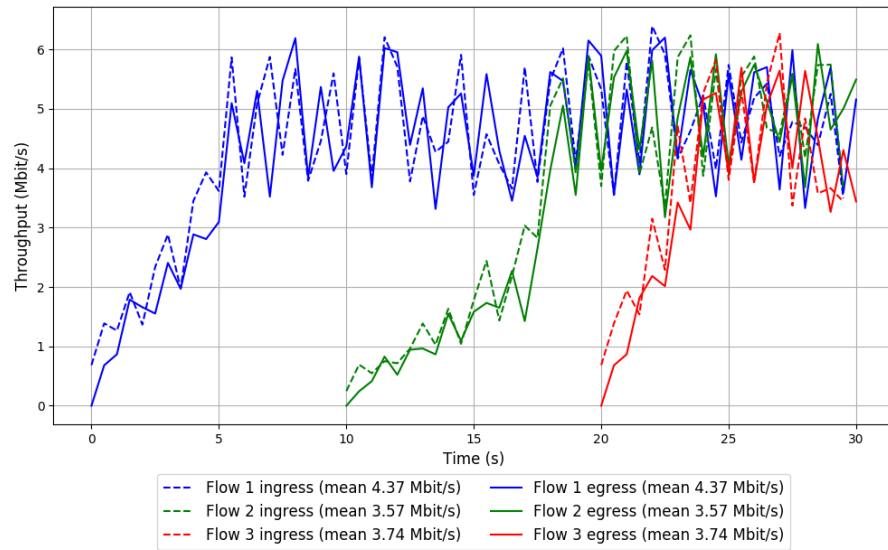
Run 5: Report of Sprout — Data Link

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

Start at: 2019-12-11 07:47:01
End at: 2019-12-11 07:47:31
Local clock offset: -0.213 ms
Remote clock offset: -0.073 ms


# Below is generated by plot.py at 2019-12-11 13:45:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.49 Mbit/s
95th percentile per-packet one-way delay: 90.102 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 200.87 Mbit/s
95th percentile per-packet one-way delay: 89.381 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 195.59 Mbit/s
95th percentile per-packet one-way delay: 89.704 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 170.29 Mbit/s
95th percentile per-packet one-way delay: 92.668 ms
Loss rate: 0.00%
```
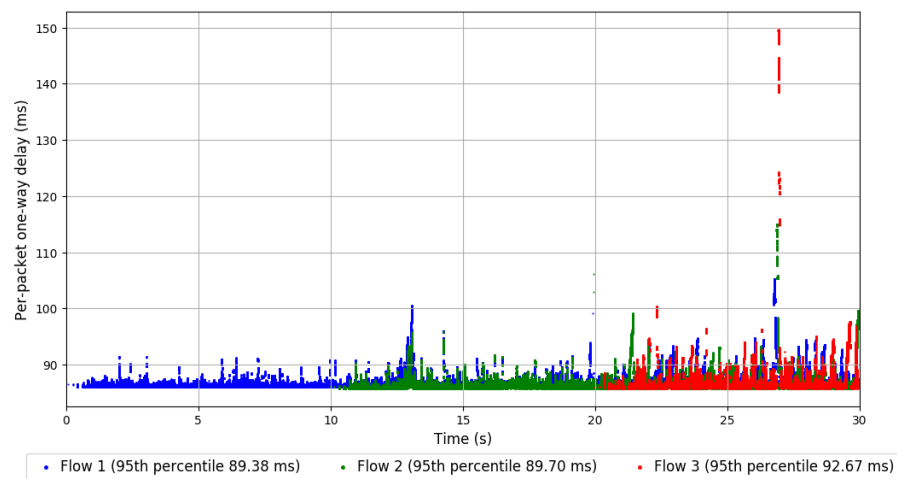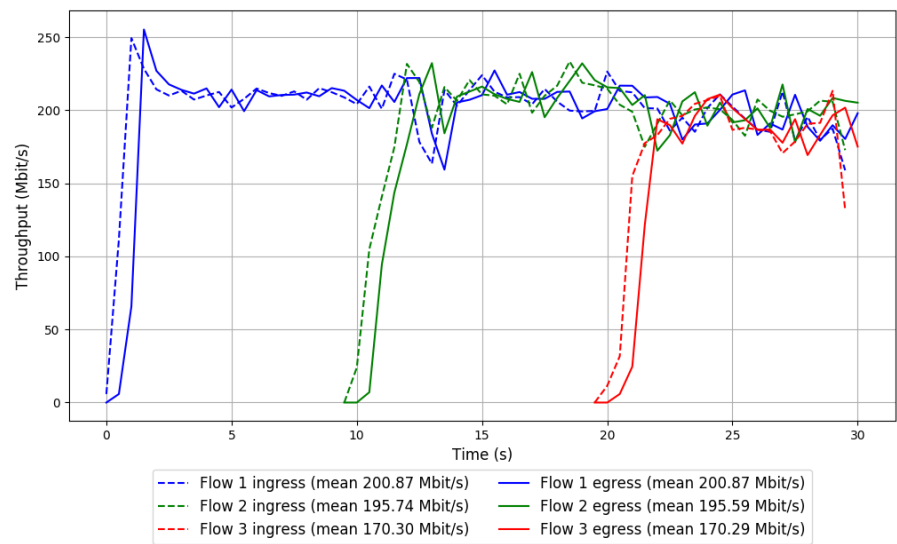
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-12-11 08:28:01
End at: 2019-12-11 08:28:31
Local clock offset: 0.202 ms
Remote clock offset: -0.112 ms


# Below is generated by plot.py at 2019-12-11 13:45:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.75 Mbit/s
95th percentile per-packet one-way delay: 89.483 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 190.09 Mbit/s
95th percentile per-packet one-way delay: 89.876 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 185.75 Mbit/s
95th percentile per-packet one-way delay: 88.409 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 168.56 Mbit/s
95th percentile per-packet one-way delay: 91.106 ms
Loss rate: 0.03%
```

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

- - - - Flow 1 ingress (mean 190.09 Mbit/s) ——— Flow 1 egress (mean 190.09 Mbit/s)
- - - - Flow 2 ingress (mean 185.75 Mbit/s) ——— Flow 2 egress (mean 185.75 Mbit/s)
- - - - Flow 3 ingress (mean 168.60 Mbit/s) ——— Flow 3 egress (mean 168.56 Mbit/s)

- Flow 1 (95th percentile 89.88 ms)   - Flow 2 (95th percentile 88.41 ms)   - Flow 3 (95th percentile 91.11 ms)
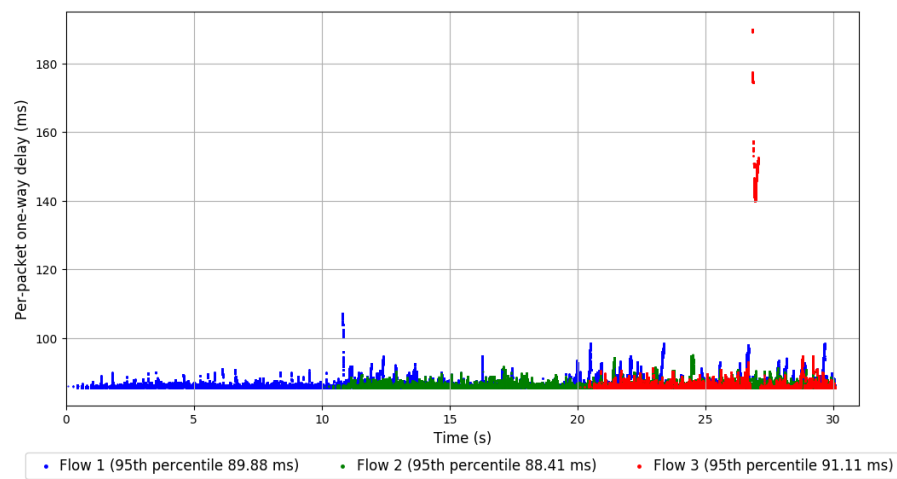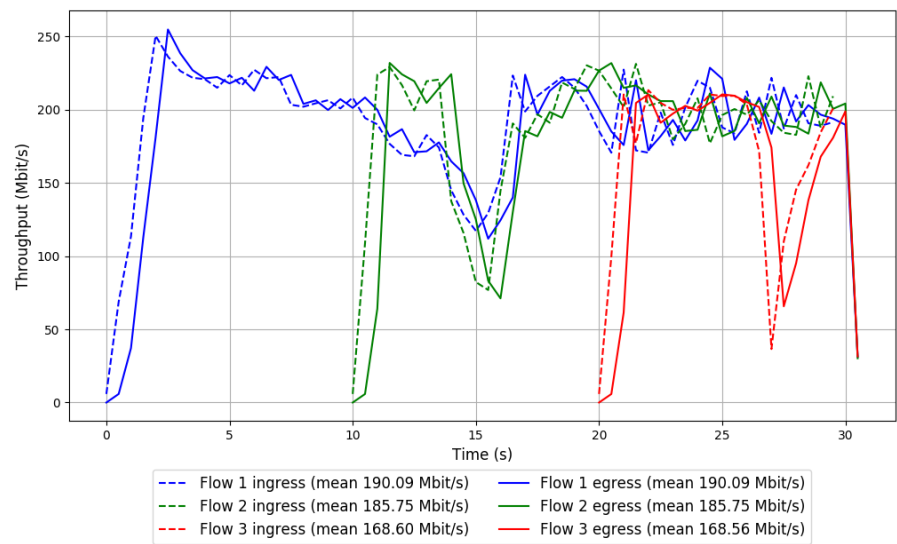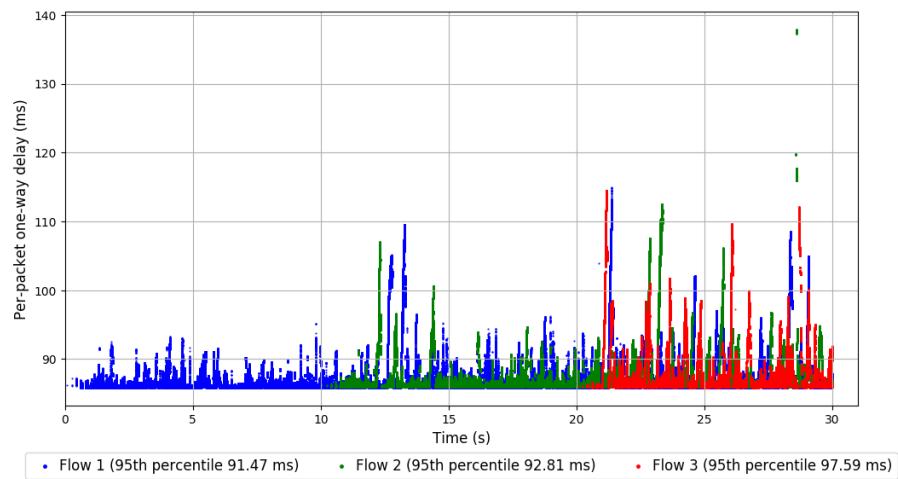
```
Run 3: Statistics of TaoVA-100x

Start at: 2019-12-11 09:09:01
End at: 2019-12-11 09:09:31
Local clock offset: -0.149 ms
Remote clock offset: -0.052 ms


# Below is generated by plot.py at 2019-12-11 13:45:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.21 Mbit/s
95th percentile per-packet one-way delay: 93.138 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 193.41 Mbit/s
95th percentile per-packet one-way delay: 91.467 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 196.61 Mbit/s
95th percentile per-packet one-way delay: 92.811 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 179.49 Mbit/s
95th percentile per-packet one-way delay: 97.587 ms
Loss rate: 0.00%
```

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

Flow 1 ingress (mean 193.41 Mbit/s) --- Flow 1 egress (mean 193.41 Mbit/s)
Flow 2 ingress (mean 196.61 Mbit/s) --- Flow 2 egress (mean 196.61 Mbit/s)
Flow 3 ingress (mean 179.50 Mbit/s) --- Flow 3 egress (mean 179.49 Mbit/s)

Flow 1 (95th percentile 91.47 ms)   Flow 2 (95th percentile 92.81 ms)   Flow 3 (95th percentile 97.59 ms)
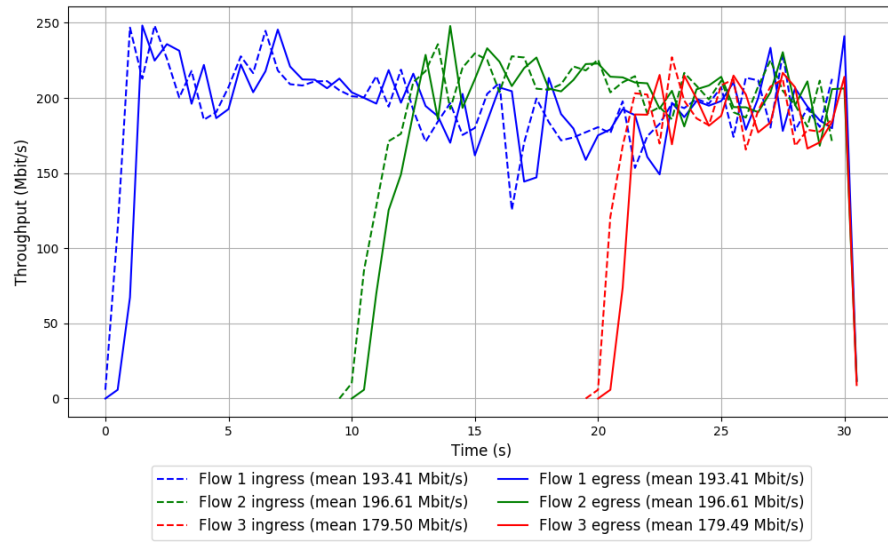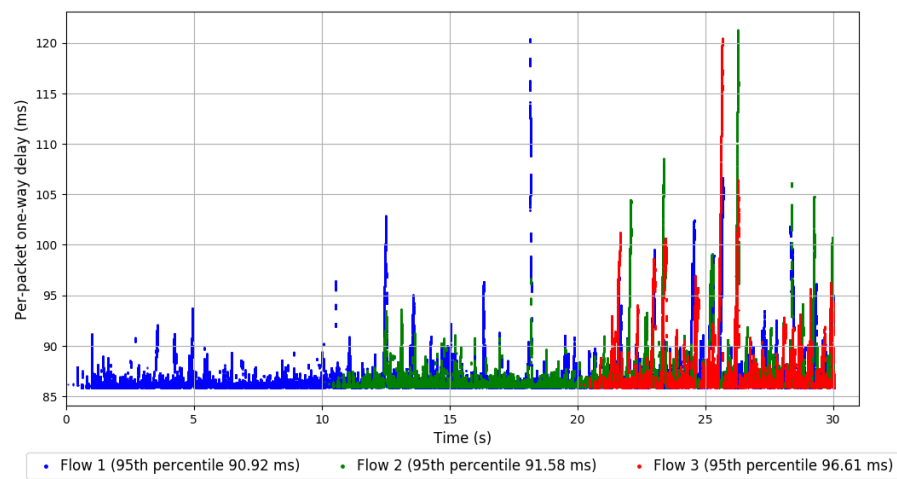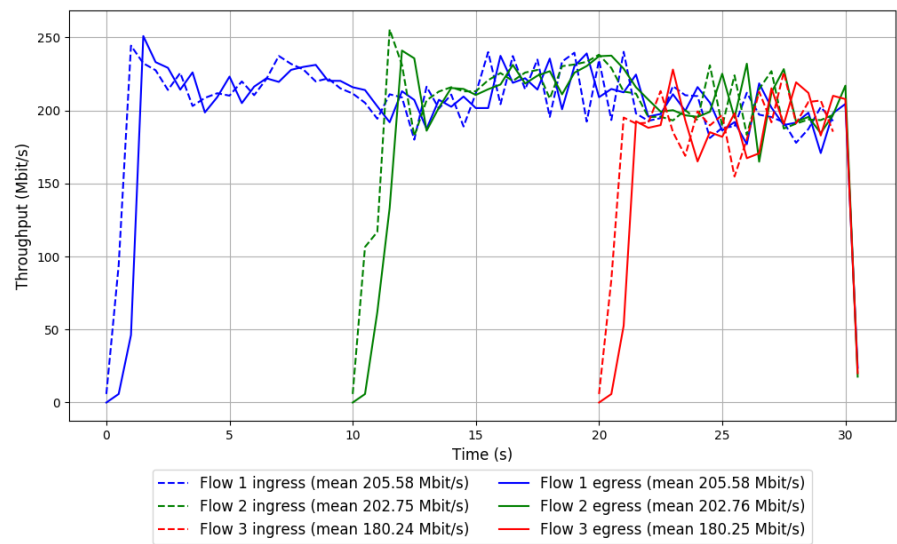
```
Run 4: Statistics of TaoVA-100x

Start at: 2019-12-11 09:50:18
End at: 2019-12-11 09:50:48
Local clock offset: -0.164 ms
Remote clock offset: -0.107 ms


# Below is generated by plot.py at 2019-12-11 13:46:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 400.16 Mbit/s
95th percentile per-packet one-way delay: 92.176 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 205.58 Mbit/s
95th percentile per-packet one-way delay: 90.923 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 202.76 Mbit/s
95th percentile per-packet one-way delay: 91.581 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 180.25 Mbit/s
95th percentile per-packet one-way delay: 96.611 ms
Loss rate: 0.00%
```

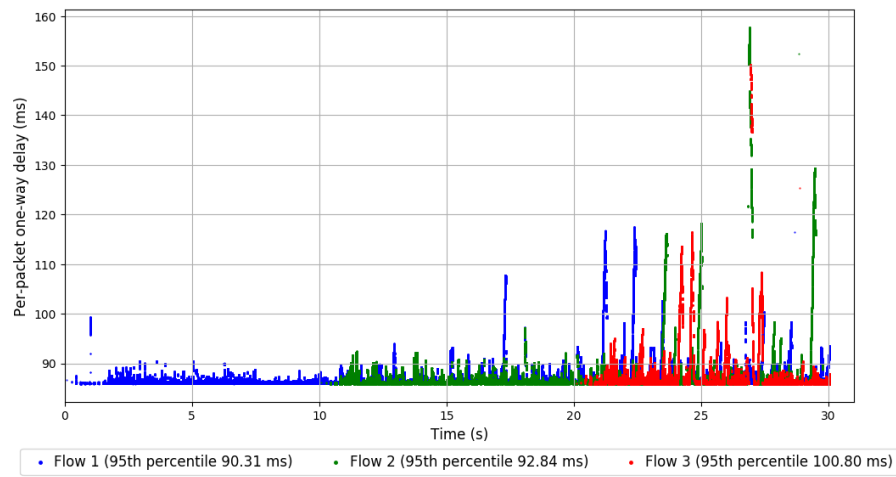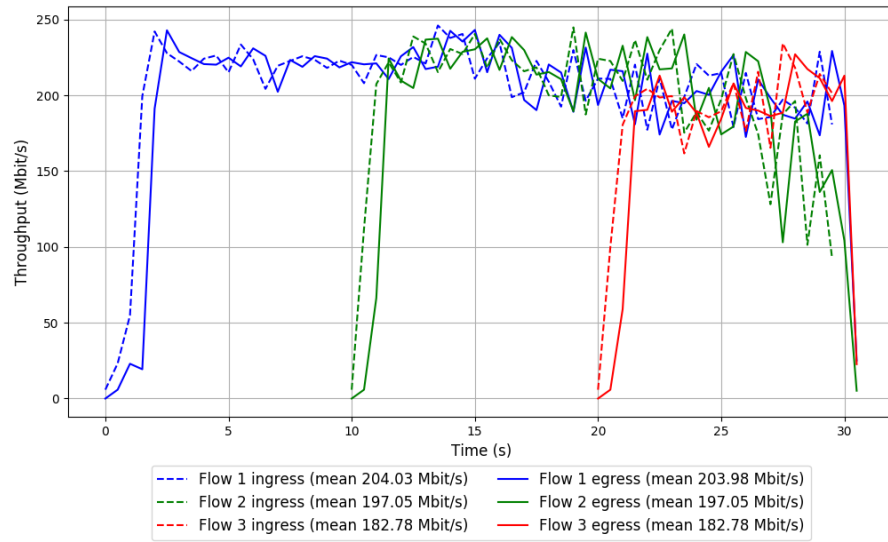# Run 4: Report of TaoVA-100x — Data Link

202

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

Start at: 2019-12-11 10:31:13
End at: 2019-12-11 10:31:43
Local clock offset: -0.35 ms
Remote clock offset: -0.068 ms


# Below is generated by plot.py at 2019-12-11 13:46:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.94 Mbit/s
95th percentile per-packet one-way delay: 92.266 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 203.98 Mbit/s
95th percentile per-packet one-way delay: 90.308 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 197.05 Mbit/s
95th percentile per-packet one-way delay: 92.840 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 182.78 Mbit/s
95th percentile per-packet one-way delay: 100.798 ms
Loss rate: 0.00%
```

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

Flow 1 ingress (mean 204.03 Mbit/s) — — — Flow 1 egress (mean 203.98 Mbit/s)
Flow 2 ingress (mean 197.05 Mbit/s) — — — Flow 2 egress (mean 197.05 Mbit/s)
Flow 3 ingress (mean 182.78 Mbit/s) — — — Flow 3 egress (mean 182.78 Mbit/s)

Flow 1 (95th percentile 90.31 ms) • Flow 2 (95th percentile 92.84 ms) • Flow 3 (95th percentile 100.80 ms)
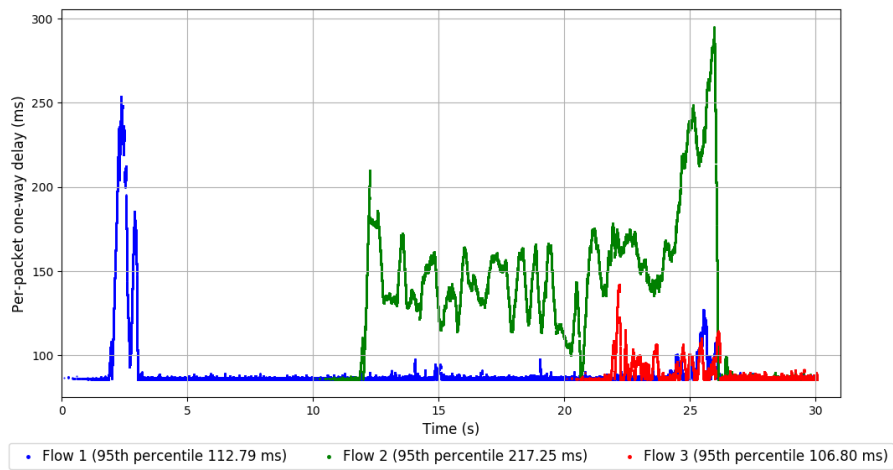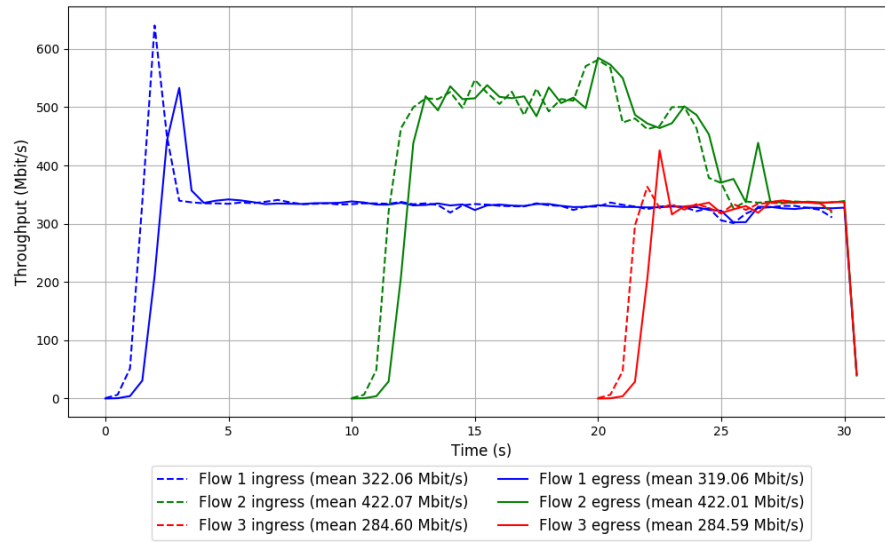
204

```
Run 1: Statistics of TCP Vegas

Start at: 2019-12-11 08:17:14
End at: 2019-12-11 08:17:44
Local clock offset: -0.044 ms
Remote clock offset: -0.087 ms


# Below is generated by plot.py at 2019-12-11 13:48:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 694.67 Mbit/s
95th percentile per-packet one-way delay: 175.394 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 319.06 Mbit/s
95th percentile per-packet one-way delay: 112.788 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 422.01 Mbit/s
95th percentile per-packet one-way delay: 217.252 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 284.59 Mbit/s
95th percentile per-packet one-way delay: 106.800 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 322.06 Mbit/s) --- Flow 1 egress (mean 319.06 Mbit/s)
Flow 2 ingress (mean 422.07 Mbit/s) --- Flow 2 egress (mean 422.01 Mbit/s)
Flow 3 ingress (mean 284.60 Mbit/s) --- Flow 3 egress (mean 284.59 Mbit/s)

Flow 1 (95th percentile 112.79 ms)   Flow 2 (95th percentile 217.25 ms)   Flow 3 (95th percentile 106.80 ms)
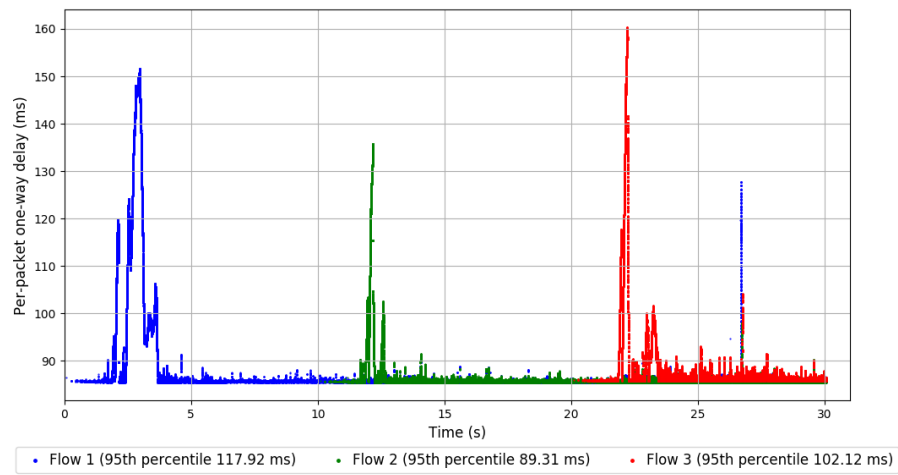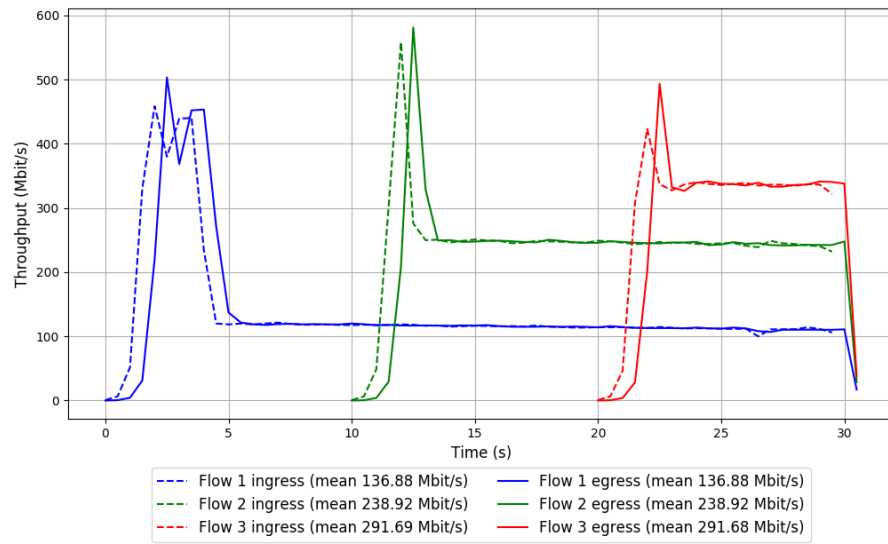
```
Run 2: Statistics of TCP Vegas

Start at: 2019-12-11 08:58:35
End at: 2019-12-11 08:59:05
Local clock offset: 0.294 ms
Remote clock offset: -0.059 ms


# Below is generated by plot.py at 2019-12-11 13:48:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.90 Mbit/s
95th percentile per-packet one-way delay: 102.660 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 136.88 Mbit/s
95th percentile per-packet one-way delay: 117.920 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 238.92 Mbit/s
95th percentile per-packet one-way delay: 89.314 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 291.68 Mbit/s
95th percentile per-packet one-way delay: 102.118 ms
Loss rate: 0.00%
```

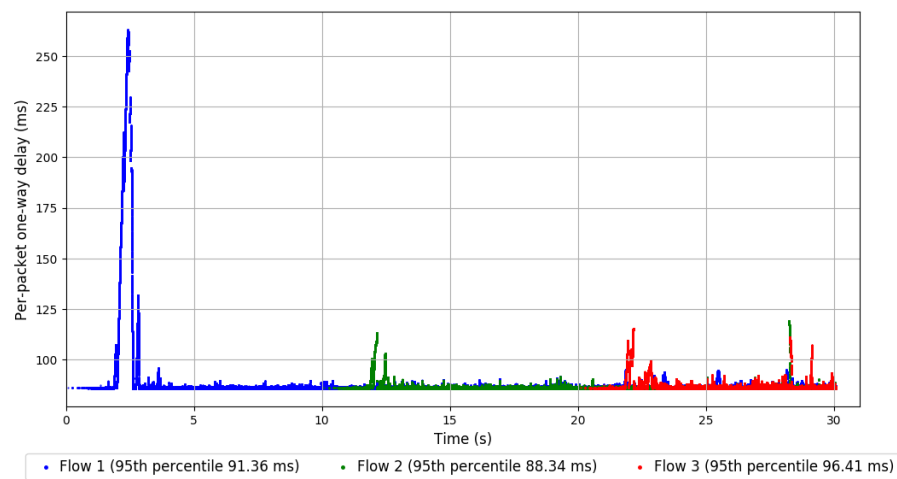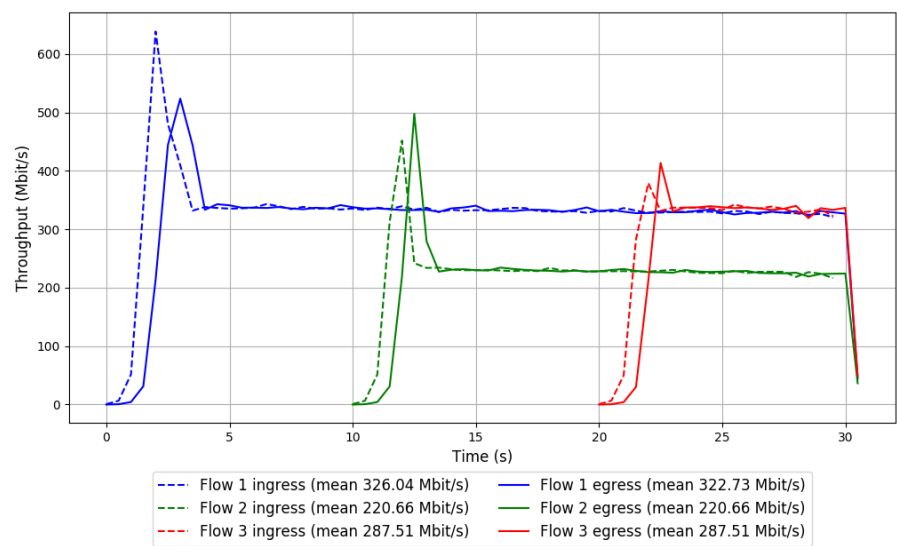Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-12-11 09:39:48
End at: 2019-12-11 09:40:18
Local clock offset: -0.147 ms
Remote clock offset: -0.083 ms


# Below is generated by plot.py at 2019-12-11 13:51:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 565.39 Mbit/s
95th percentile per-packet one-way delay: 91.463 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 322.73 Mbit/s
95th percentile per-packet one-way delay: 91.356 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 220.66 Mbit/s
95th percentile per-packet one-way delay: 88.342 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 287.51 Mbit/s
95th percentile per-packet one-way delay: 96.412 ms
Loss rate: 0.00%
```

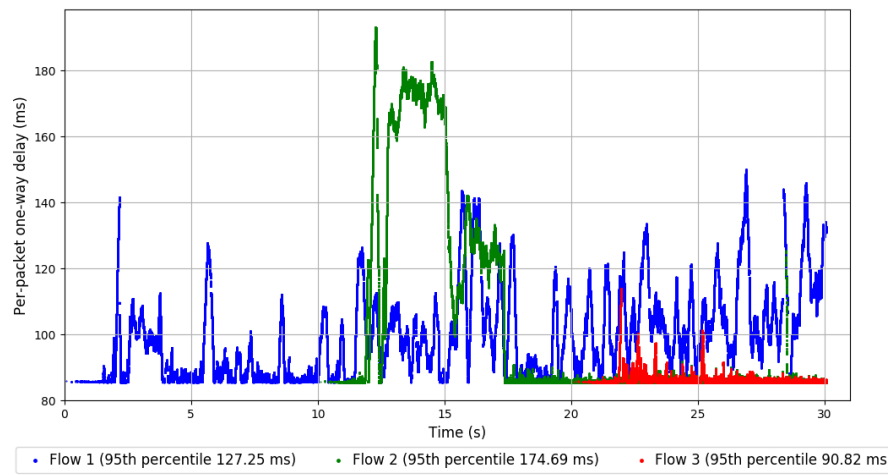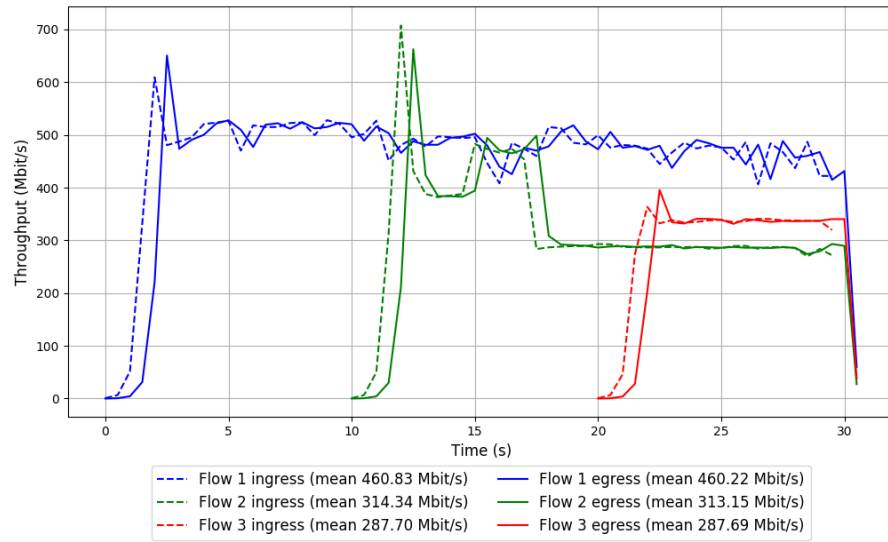## Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-12-11 10:20:38
End at: 2019-12-11 10:21:08
Local clock offset: 0.013 ms
Remote clock offset: -0.109 ms


# Below is generated by plot.py at 2019-12-11 13:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 764.33 Mbit/s
95th percentile per-packet one-way delay: 141.994 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 460.22 Mbit/s
95th percentile per-packet one-way delay: 127.253 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 313.15 Mbit/s
95th percentile per-packet one-way delay: 174.695 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 287.69 Mbit/s
95th percentile per-packet one-way delay: 90.818 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 460.83 Mbit/s) — Flow 1 egress (mean 460.22 Mbit/s)
Flow 2 ingress (mean 314.34 Mbit/s) — Flow 2 egress (mean 313.15 Mbit/s)
Flow 3 ingress (mean 287.70 Mbit/s) — Flow 3 egress (mean 287.69 Mbit/s)

Flow 1 (95th percentile 127.25 ms)   Flow 2 (95th percentile 174.69 ms)   Flow 3 (95th percentile 90.82 ms)
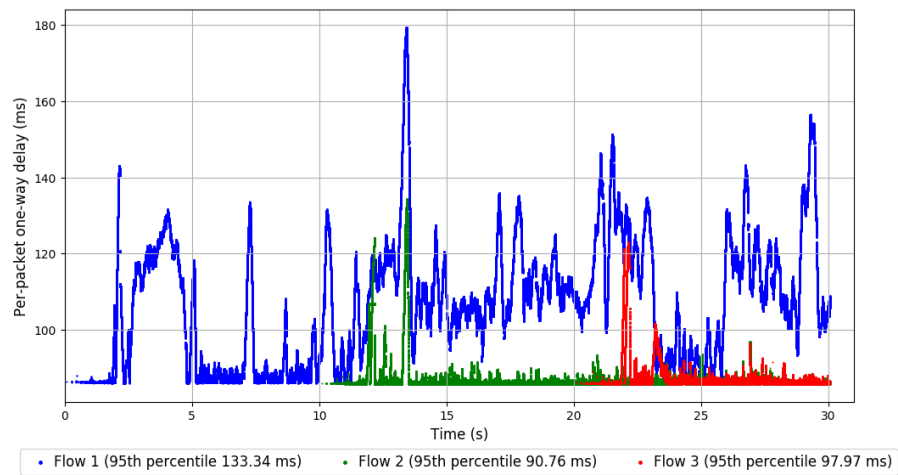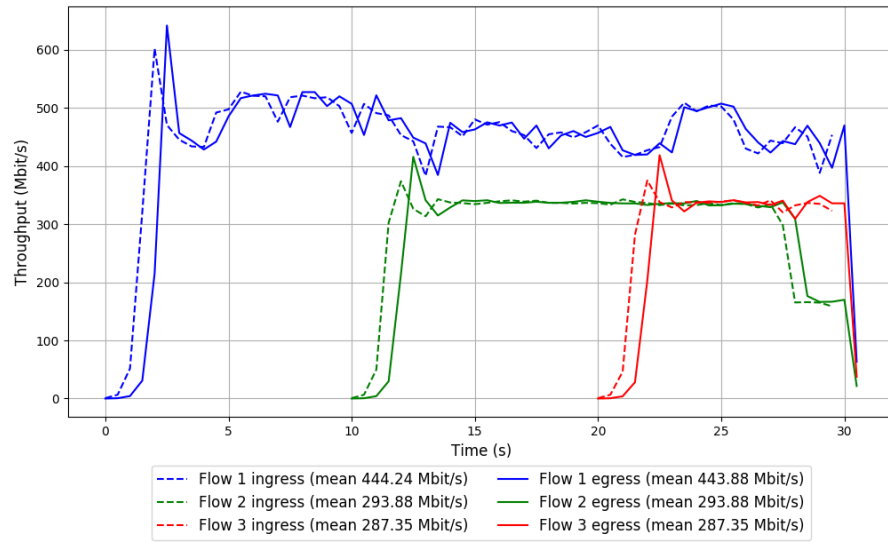
```
Run 5: Statistics of TCP Vegas

Start at: 2019-12-11 11:01:37
End at: 2019-12-11 11:02:07
Local clock offset: -0.283 ms
Remote clock offset: -0.114 ms


# Below is generated by plot.py at 2019-12-11 13:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 735.10 Mbit/s
95th percentile per-packet one-way delay: 129.338 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 443.88 Mbit/s
95th percentile per-packet one-way delay: 133.337 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 293.88 Mbit/s
95th percentile per-packet one-way delay: 90.762 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 287.35 Mbit/s
95th percentile per-packet one-way delay: 97.965 ms
Loss rate: 0.00%
```

Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 444.24 Mbit/s) --- Flow 1 egress (mean 443.88 Mbit/s)
Flow 2 ingress (mean 293.88 Mbit/s) --- Flow 2 egress (mean 293.88 Mbit/s)
Flow 3 ingress (mean 287.35 Mbit/s) --- Flow 3 egress (mean 287.35 Mbit/s)

Flow 1 (95th percentile 133.34 ms) Flow 2 (95th percentile 90.76 ms) Flow 3 (95th percentile 97.97 ms)
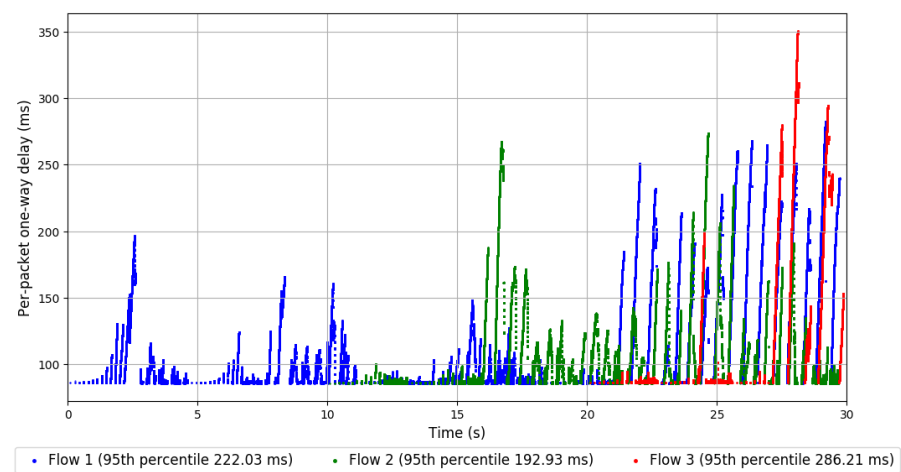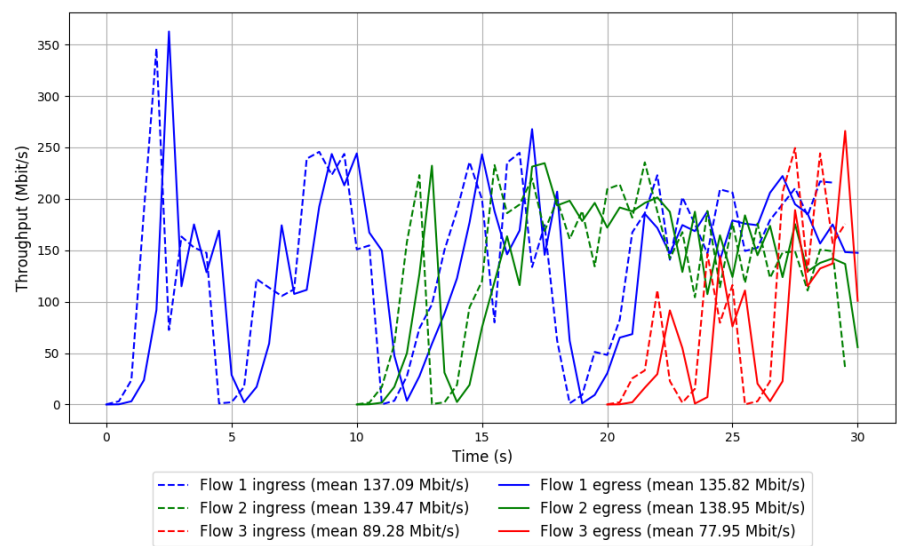
```
Run 1: Statistics of Verus

Start at: 2019-12-11 07:51:59
End at: 2019-12-11 07:52:29
Local clock offset: -0.264 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-12-11 13:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 251.97 Mbit/s
95th percentile per-packet one-way delay: 230.593 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 135.82 Mbit/s
95th percentile per-packet one-way delay: 222.034 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 138.95 Mbit/s
95th percentile per-packet one-way delay: 192.925 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 77.95 Mbit/s
95th percentile per-packet one-way delay: 286.214 ms
Loss rate: 12.68%
```

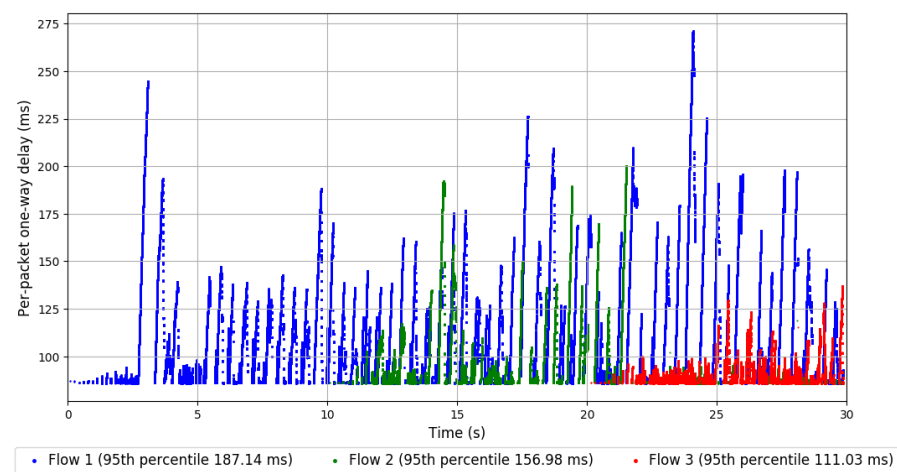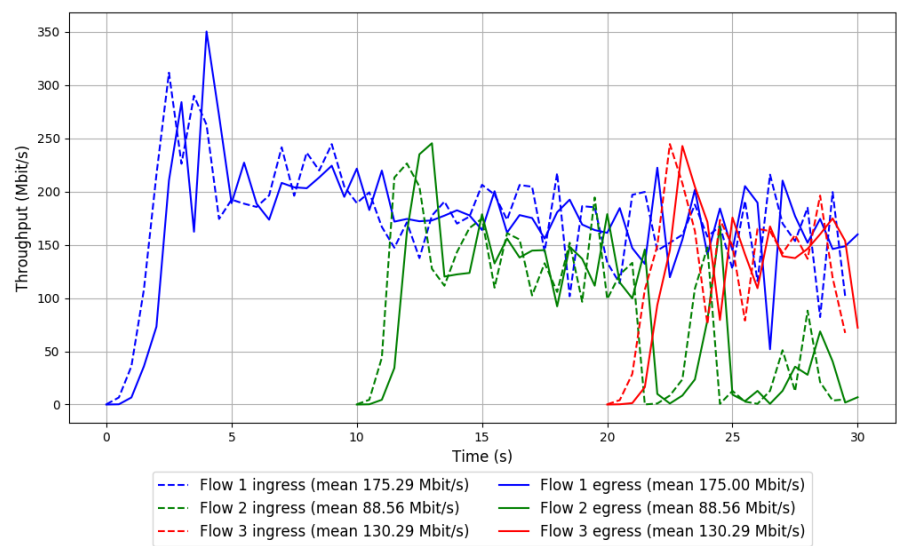Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-12-11 08:33:03
End at: 2019-12-11 08:33:33
Local clock offset: -0.084 ms
Remote clock offset: -0.101 ms


# Below is generated by plot.py at 2019-12-11 13:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 275.93 Mbit/s
95th percentile per-packet one-way delay: 179.701 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 175.00 Mbit/s
95th percentile per-packet one-way delay: 187.144 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 88.56 Mbit/s
95th percentile per-packet one-way delay: 156.979 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 130.29 Mbit/s
95th percentile per-packet one-way delay: 111.033 ms
Loss rate: 0.00%
```
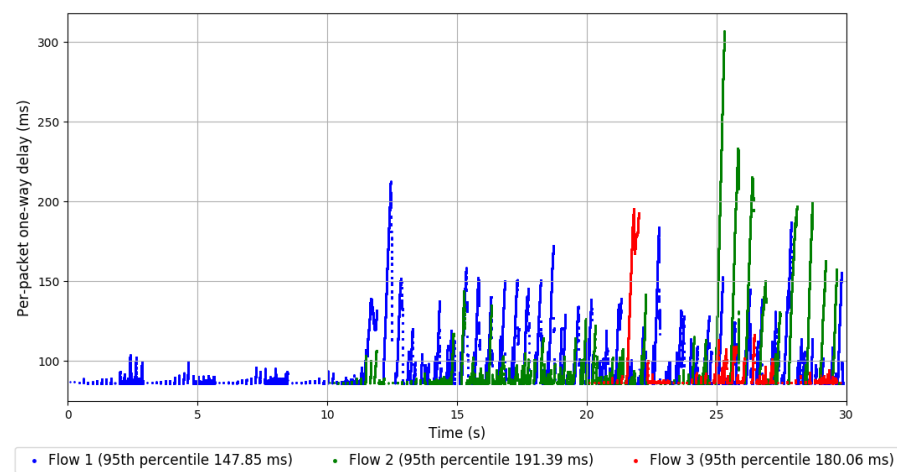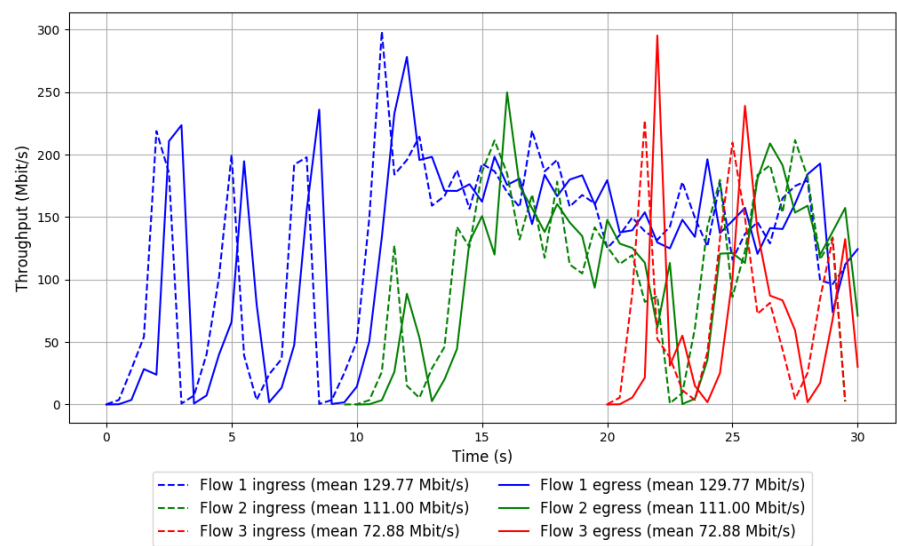
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-12-11 09:14:21
End at: 2019-12-11 09:14:51
Local clock offset: -0.11 ms
Remote clock offset: -0.026 ms


# Below is generated by plot.py at 2019-12-11 13:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 226.65 Mbit/s
95th percentile per-packet one-way delay: 169.440 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 129.77 Mbit/s
95th percentile per-packet one-way delay: 147.855 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 111.00 Mbit/s
95th percentile per-packet one-way delay: 191.394 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 72.88 Mbit/s
95th percentile per-packet one-way delay: 180.055 ms
Loss rate: 0.00%
```

Run 3: Report of Verus — Data Link

- --- Flow 1 ingress (mean 129.77 Mbit/s)   — Flow 1 egress (mean 129.77 Mbit/s)
- --- Flow 2 ingress (mean 111.00 Mbit/s)   — Flow 2 egress (mean 111.00 Mbit/s)
- --- Flow 3 ingress (mean 72.88 Mbit/s)   — Flow 3 egress (mean 72.88 Mbit/s)

- Flow 1 (95th percentile 147.85 ms)   • Flow 2 (95th percentile 191.39 ms)   • Flow 3 (95th percentile 180.06 ms)
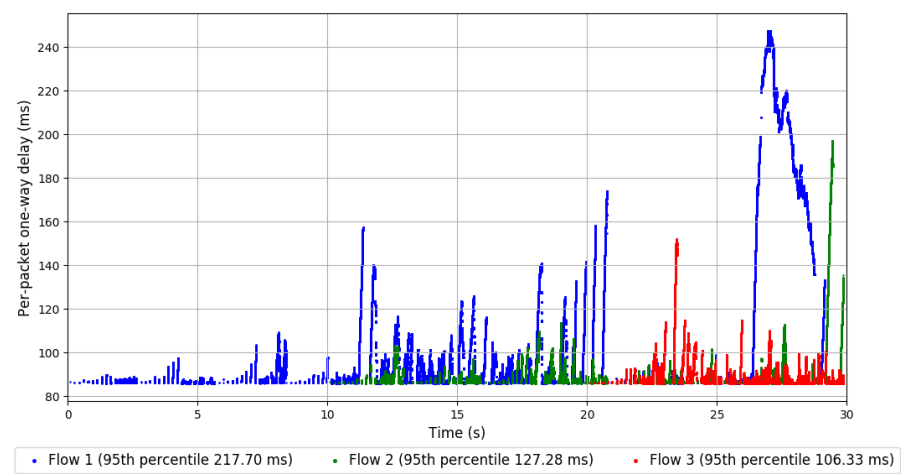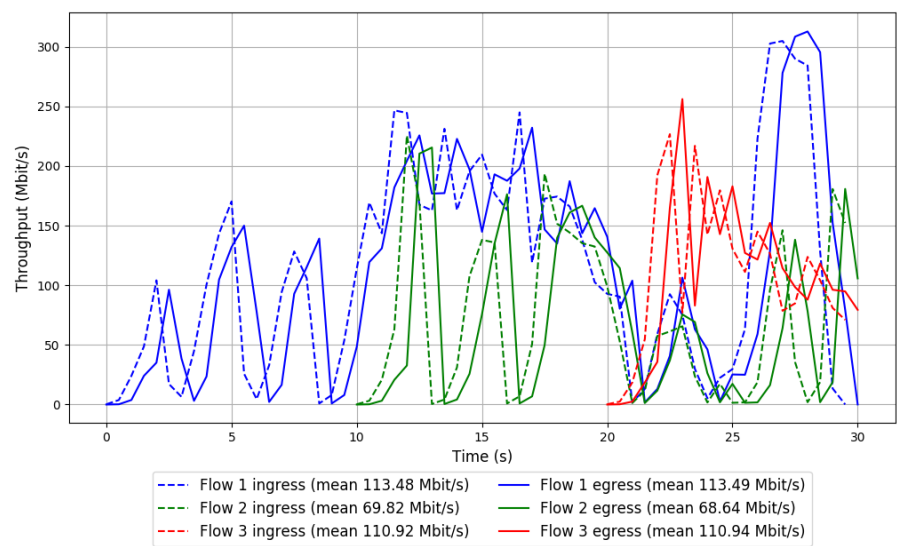
```
Run 4: Statistics of Verus

Start at: 2019-12-11 09:55:29
End at: 2019-12-11 09:55:59
Local clock offset: -0.16 ms
Remote clock offset: -0.074 ms


# Below is generated by plot.py at 2019-12-11 13:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 195.19 Mbit/s
95th percentile per-packet one-way delay: 205.947 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 113.49 Mbit/s
95th percentile per-packet one-way delay: 217.701 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 68.64 Mbit/s
95th percentile per-packet one-way delay: 127.278 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 110.94 Mbit/s
95th percentile per-packet one-way delay: 106.327 ms
Loss rate: 0.00%
```

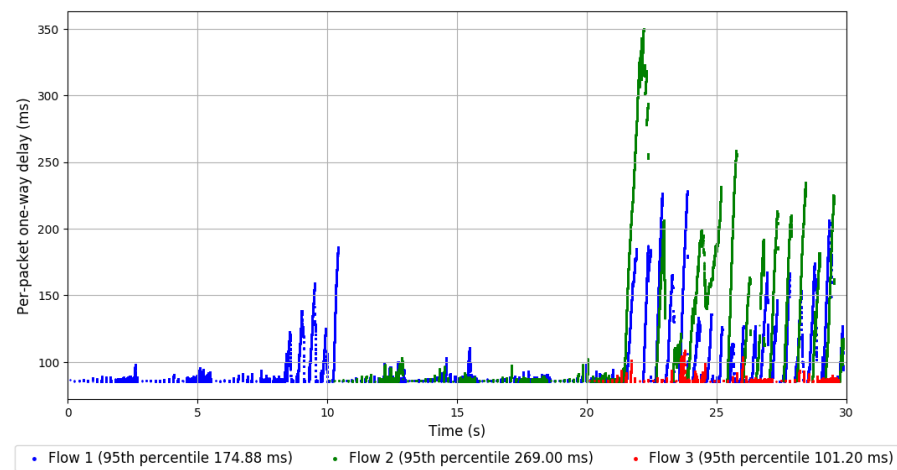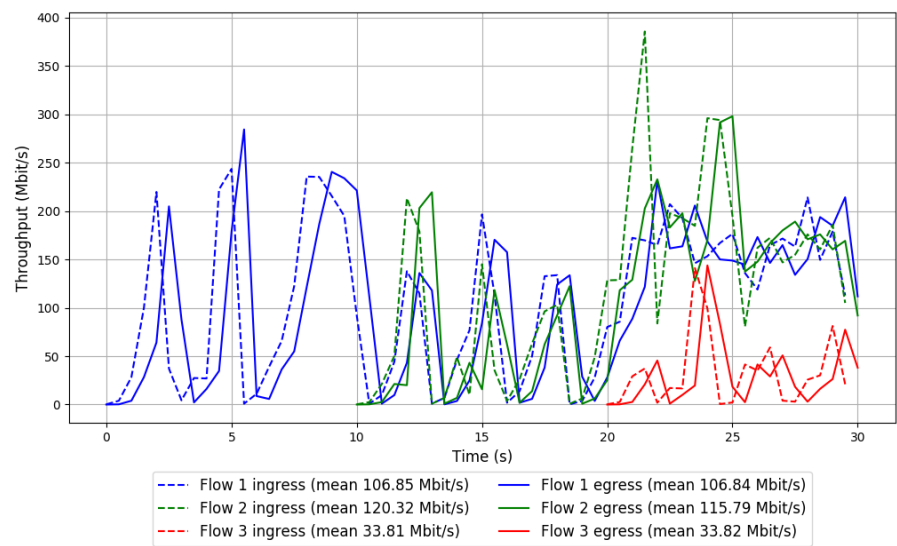Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-12-11 10:36:35
End at: 2019-12-11 10:37:05
Local clock offset: -0.073 ms
Remote clock offset: -0.084 ms


# Below is generated by plot.py at 2019-12-11 13:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 194.60 Mbit/s
95th percentile per-packet one-way delay: 210.402 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 106.84 Mbit/s
95th percentile per-packet one-way delay: 174.885 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 115.79 Mbit/s
95th percentile per-packet one-way delay: 268.995 ms
Loss rate: 3.76%
-- Flow 3:
Average throughput: 33.82 Mbit/s
95th percentile per-packet one-way delay: 101.196 ms
Loss rate: 0.00%
```

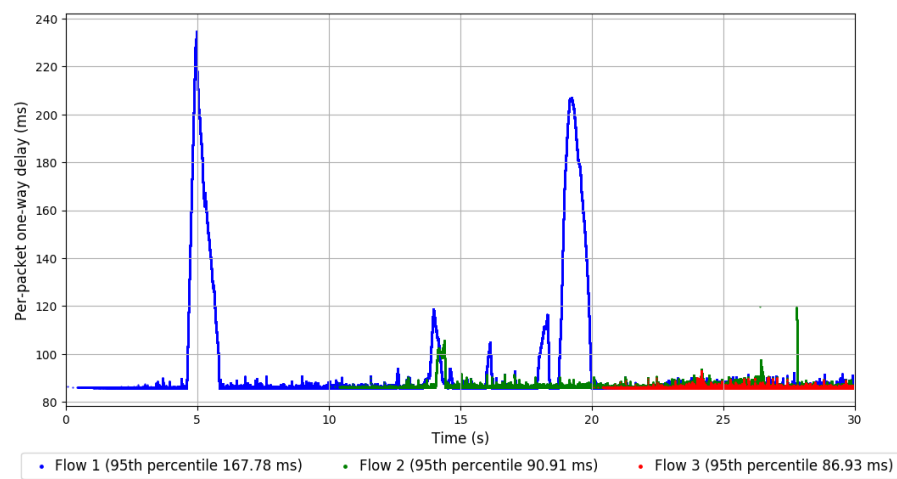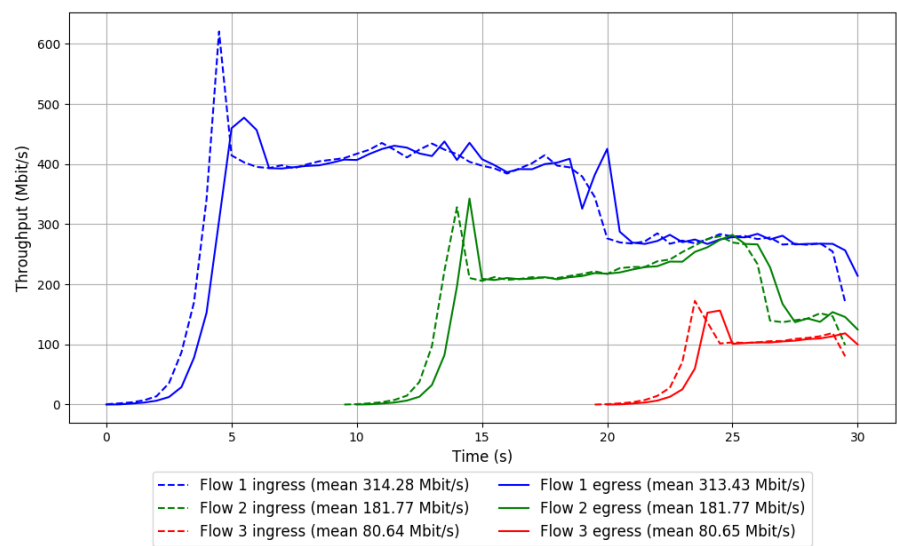Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-12-11 07:55:31
End at: 2019-12-11 07:56:01
Local clock offset: -0.163 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-12-11 13:59:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 461.19 Mbit/s
95th percentile per-packet one-way delay: 143.423 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 313.43 Mbit/s
95th percentile per-packet one-way delay: 167.780 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 181.77 Mbit/s
95th percentile per-packet one-way delay: 90.911 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 80.65 Mbit/s
95th percentile per-packet one-way delay: 86.926 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Vivace — Data Link

Legend:
- Flow 1 ingress (mean 314.28 Mbit/s)
- Flow 1 egress (mean 313.43 Mbit/s)
- Flow 2 ingress (mean 181.77 Mbit/s)
- Flow 2 egress (mean 181.77 Mbit/s)
- Flow 3 ingress (mean 80.64 Mbit/s)
- Flow 3 egress (mean 80.65 Mbit/s)

Legend:
- Flow 1 (95th percentile 167.78 ms)
- Flow 2 (95th percentile 90.91 ms)
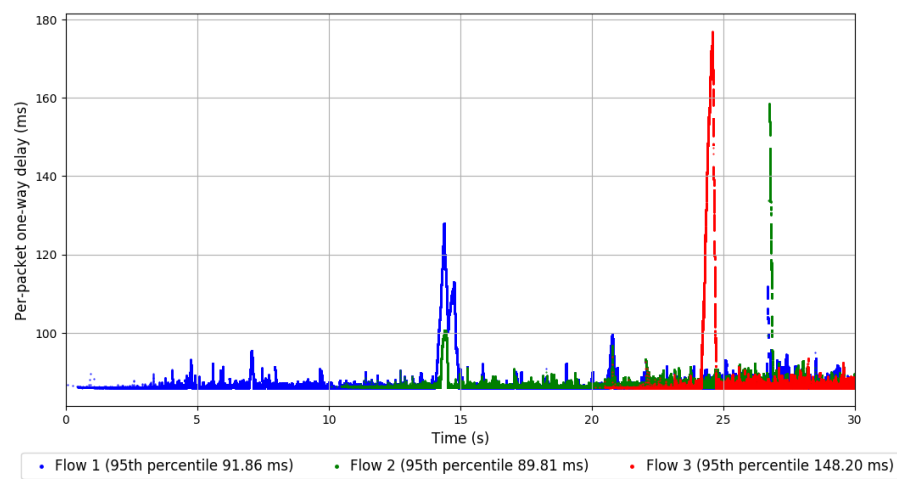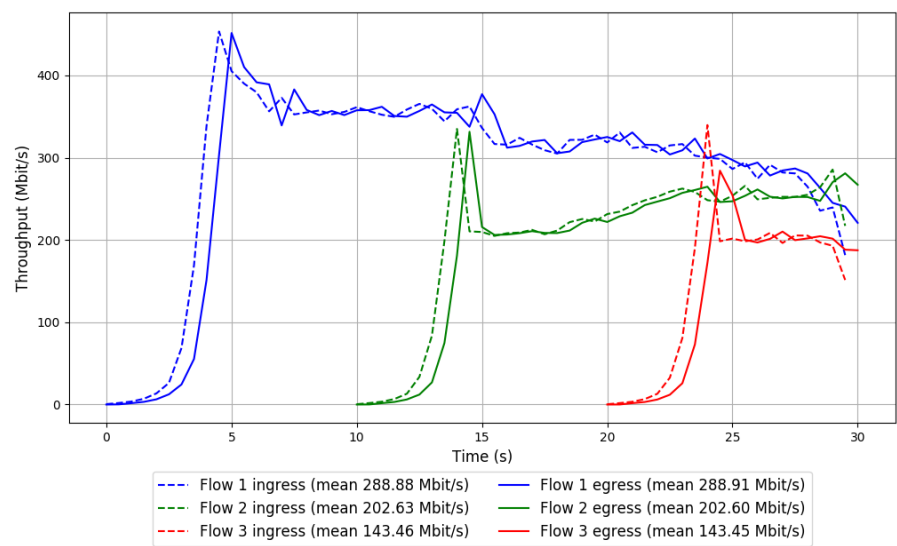- Flow 3 (95th percentile 86.93 ms)

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-12-11 08:36:40
End at: 2019-12-11 08:37:10
Local clock offset: -0.15 ms
Remote clock offset: -0.106 ms


# Below is generated by plot.py at 2019-12-11 14:00:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 470.79 Mbit/s
95th percentile per-packet one-way delay: 92.487 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 288.91 Mbit/s
95th percentile per-packet one-way delay: 91.865 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 202.60 Mbit/s
95th percentile per-packet one-way delay: 89.812 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 143.45 Mbit/s
95th percentile per-packet one-way delay: 148.198 ms
Loss rate: 0.00%
```

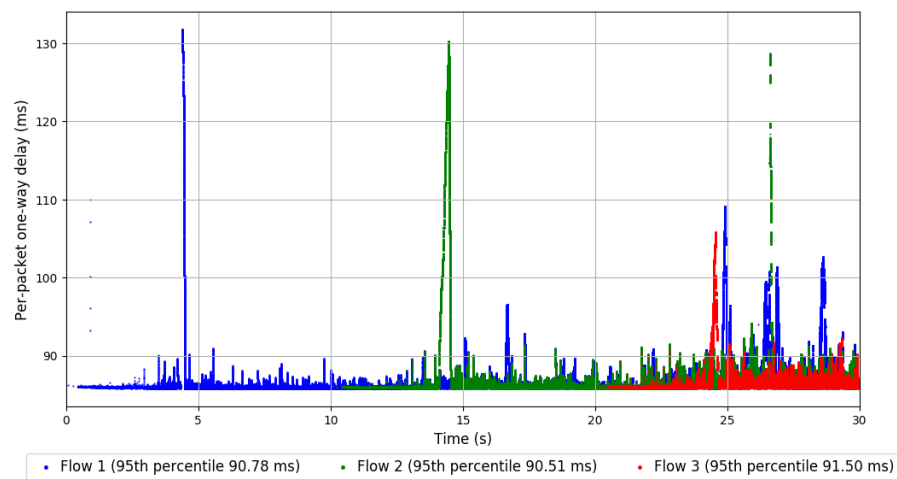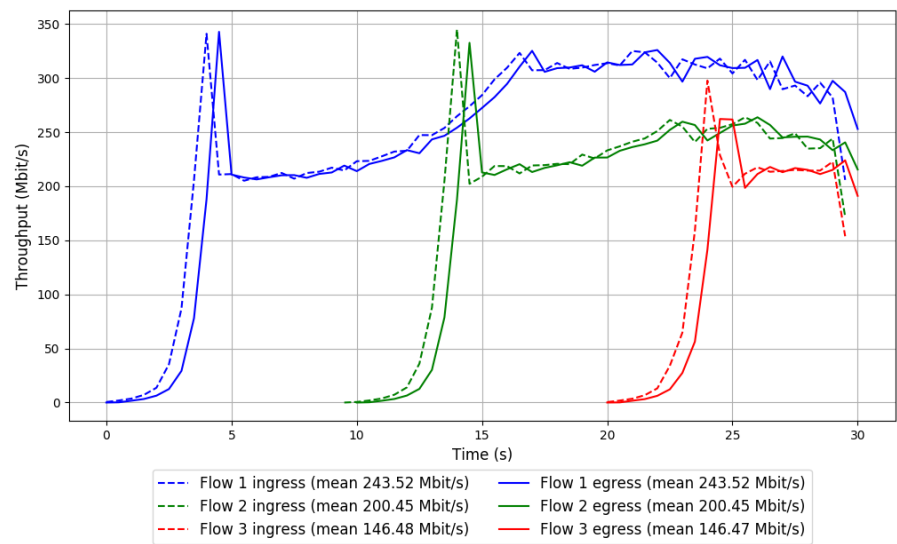Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-12-11 09:17:54
End at: 2019-12-11 09:18:25
Local clock offset: -0.138 ms
Remote clock offset: -0.065 ms


# Below is generated by plot.py at 2019-12-11 14:00:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 425.23 Mbit/s
95th percentile per-packet one-way delay: 90.837 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 243.52 Mbit/s
95th percentile per-packet one-way delay: 90.780 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 200.45 Mbit/s
95th percentile per-packet one-way delay: 90.511 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 146.47 Mbit/s
95th percentile per-packet one-way delay: 91.496 ms
Loss rate: 0.00%
```

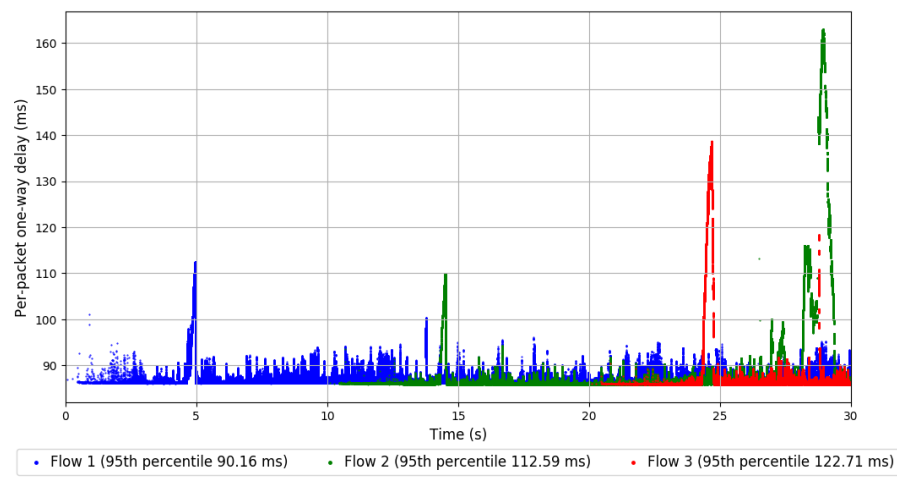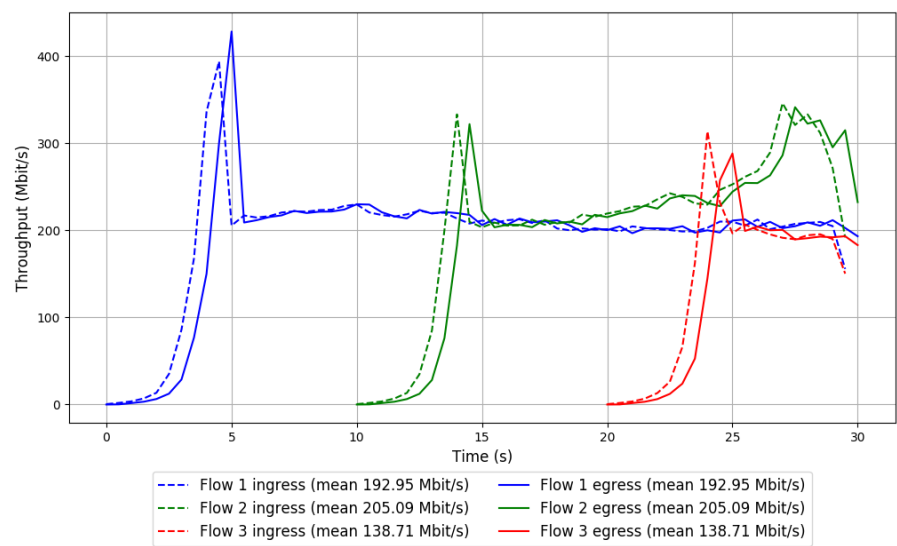# Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-12-11 09:58:59
End at: 2019-12-11 09:59:29
Local clock offset: -0.178 ms
Remote clock offset: -0.098 ms


# Below is generated by plot.py at 2019-12-11 14:00:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 375.09 Mbit/s
95th percentile per-packet one-way delay: 100.851 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 192.95 Mbit/s
95th percentile per-packet one-way delay: 90.162 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 205.09 Mbit/s
95th percentile per-packet one-way delay: 112.593 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 138.71 Mbit/s
95th percentile per-packet one-way delay: 122.710 ms
Loss rate: 0.00%
```
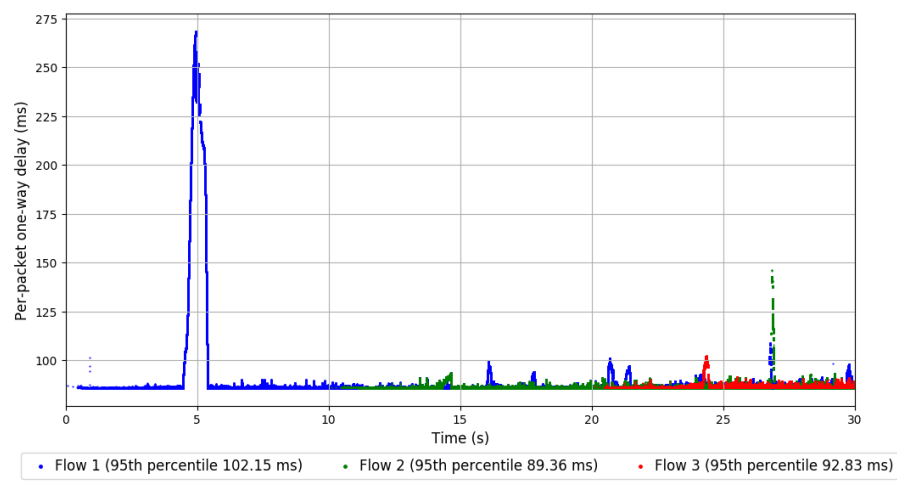
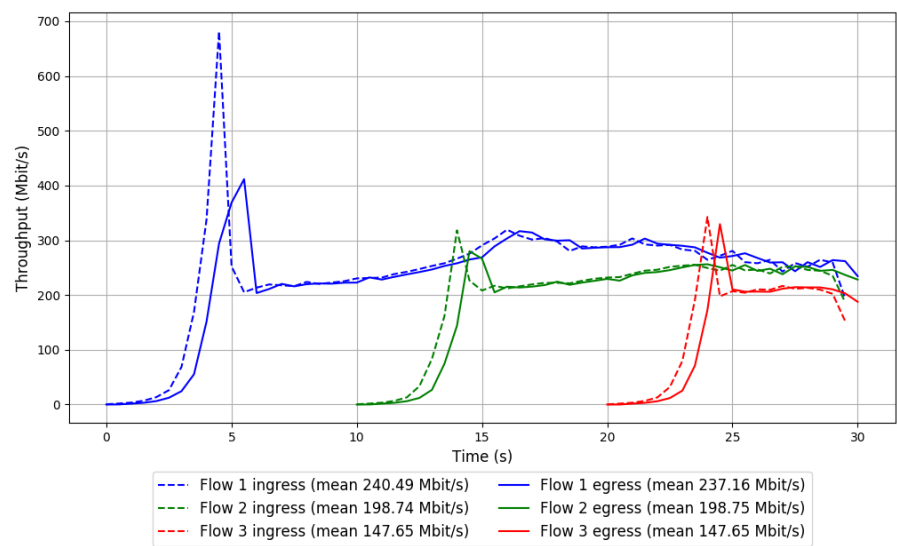## Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-12-11 10:40:05
End at: 2019-12-11 10:40:35
Local clock offset: -0.316 ms
Remote clock offset: -0.128 ms


# Below is generated by plot.py at 2019-12-11 14:00:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 417.84 Mbit/s
95th percentile per-packet one-way delay: 93.738 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 237.16 Mbit/s
95th percentile per-packet one-way delay: 102.148 ms
Loss rate: 1.39%
-- Flow 2:
Average throughput: 198.75 Mbit/s
95th percentile per-packet one-way delay: 89.356 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 147.65 Mbit/s
95th percentile per-packet one-way delay: 92.831 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 240.49 Mbit/s) --- Flow 1 egress (mean 237.16 Mbit/s)
Flow 2 ingress (mean 198.74 Mbit/s) --- Flow 2 egress (mean 198.75 Mbit/s)
Flow 3 ingress (mean 147.65 Mbit/s) --- Flow 3 egress (mean 147.65 Mbit/s)

Flow 1 (95th percentile 102.15 ms) • Flow 2 (95th percentile 89.36 ms) • Flow 3 (95th percentile 92.83 ms)
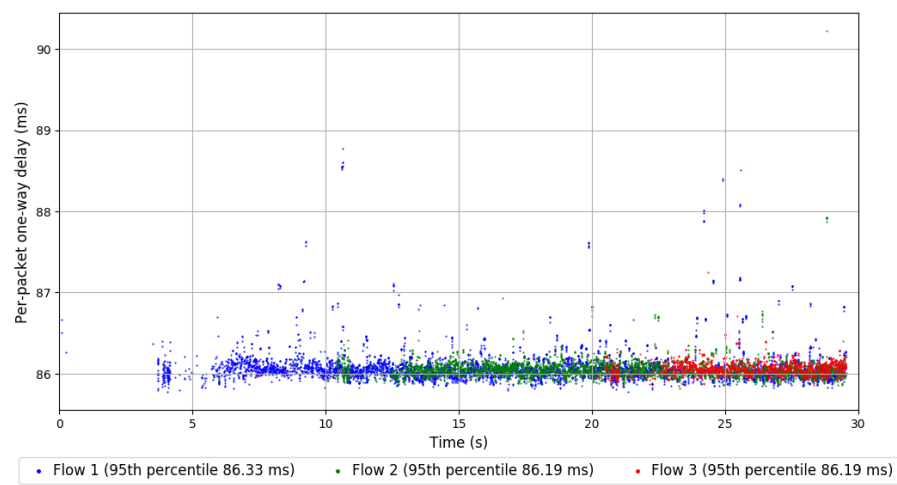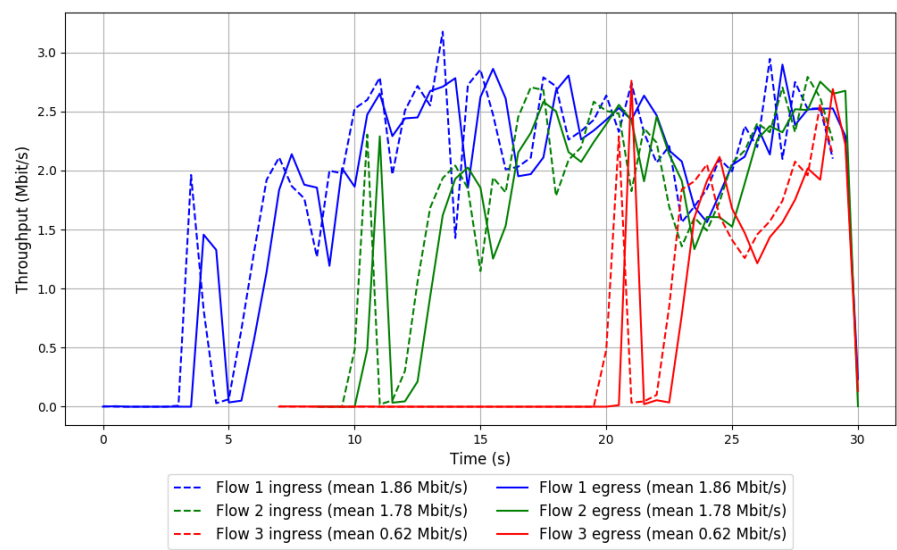
```
Run 1: Statistics of WebRTC media

Start at: 2019-12-11 08:14:45
End at: 2019-12-11 08:15:15
Local clock offset: 0.041 ms
Remote clock offset: -0.038 ms


# Below is generated by plot.py at 2019-12-11 14:00:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 86.245 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 86.328 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 86.187 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 86.194 ms
Loss rate: 0.00%
```

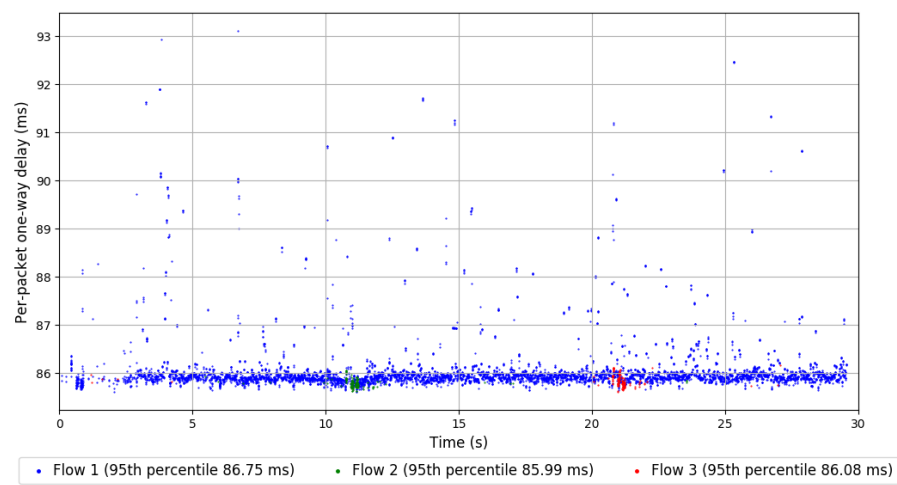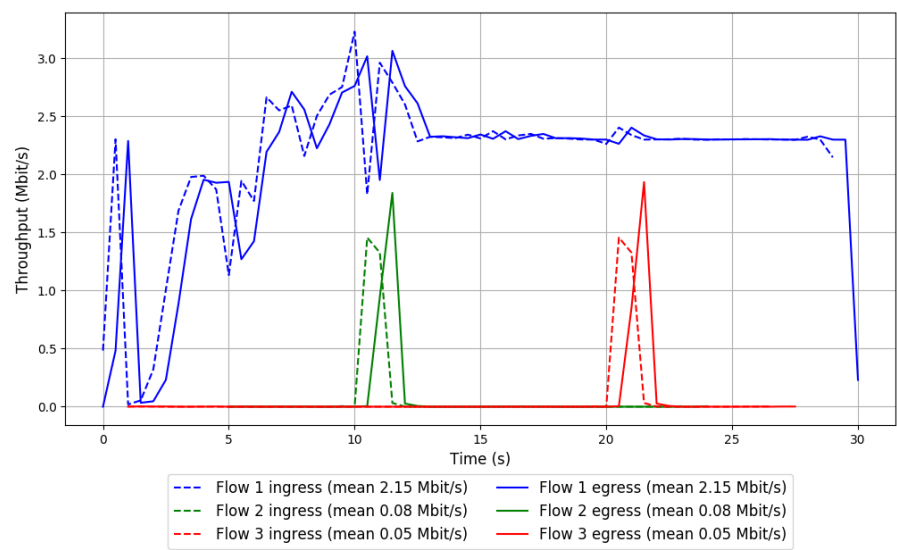Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-12-11 08:56:06
End at: 2019-12-11 08:56:36
Local clock offset: 0.184 ms
Remote clock offset: -0.065 ms


# Below is generated by plot.py at 2019-12-11 14:00:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 86.705 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 86.750 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 85.994 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.084 ms
Loss rate: 0.00%
```

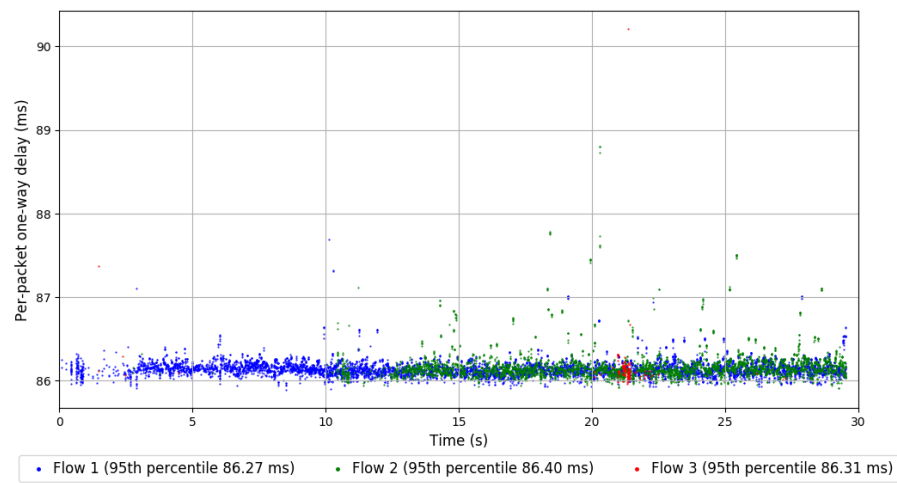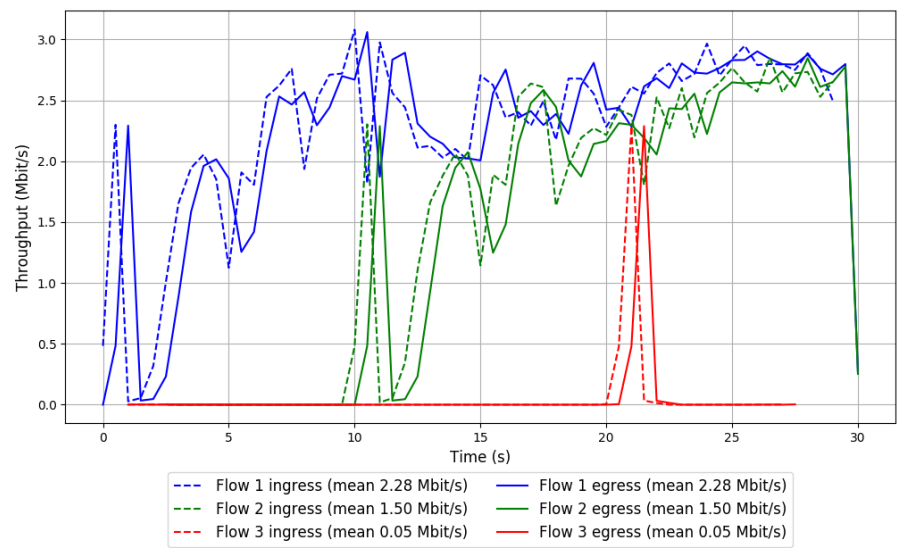Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-12-11 09:37:19
End at: 2019-12-11 09:37:49
Local clock offset: -0.136 ms
Remote clock offset: -0.073 ms


# Below is generated by plot.py at 2019-12-11 14:00:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.69 Mbit/s
95th percentile per-packet one-way delay: 86.292 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 86.265 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 86.397 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.307 ms
Loss rate: 0.00%
```

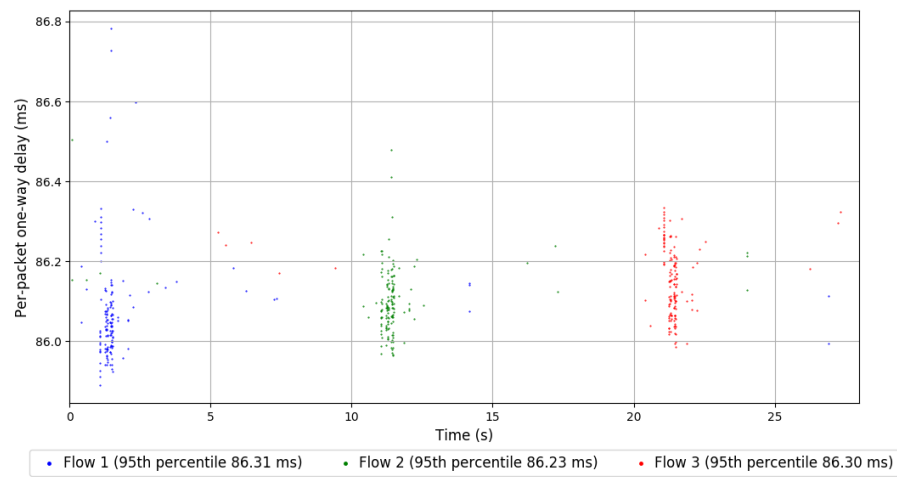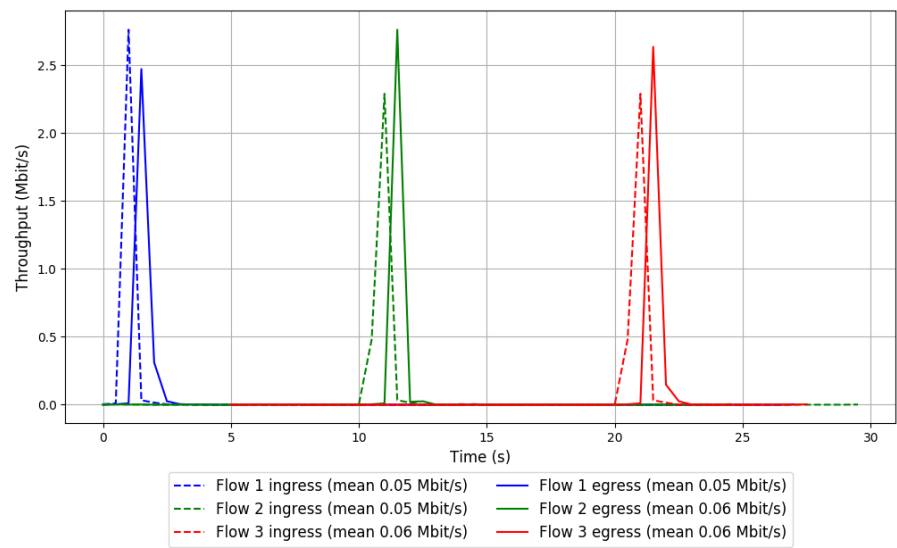Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-12-11 10:18:09
End at: 2019-12-11 10:18:39
Local clock offset: -0.31 ms
Remote clock offset: -0.049 ms


# Below is generated by plot.py at 2019-12-11 14:00:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 86.299 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.310 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 86.226 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 86.301 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-12-11 10:59:08
End at: 2019-12-11 10:59:38
Local clock offset: -0.274 ms
Remote clock offset: -0.106 ms


# Below is generated by plot.py at 2019-12-11 14:00:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 86.396 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.178 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 86.257 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 86.525 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link