Pantheon Report

Generated at 2019-08-28 02:14:44 (UTC).

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

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.
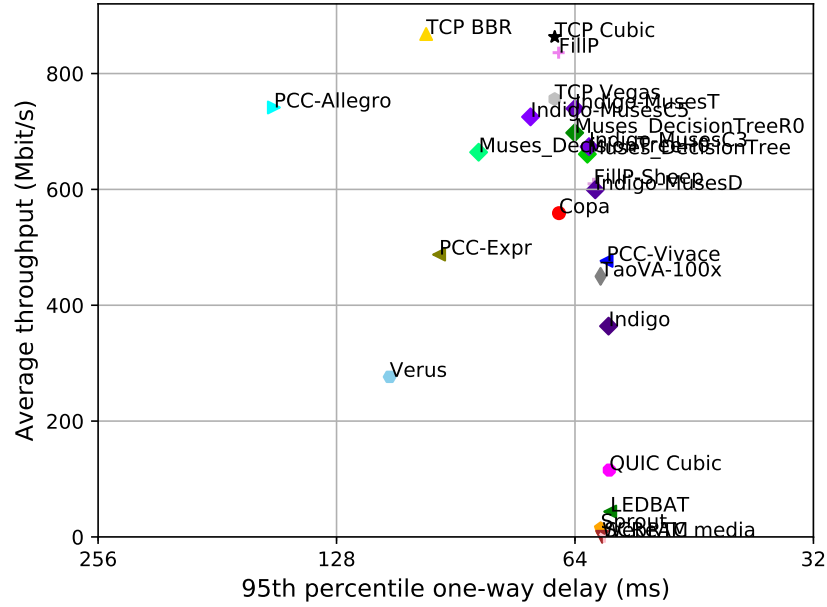
```
System info:
Linux 4.15.0-1036-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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
```
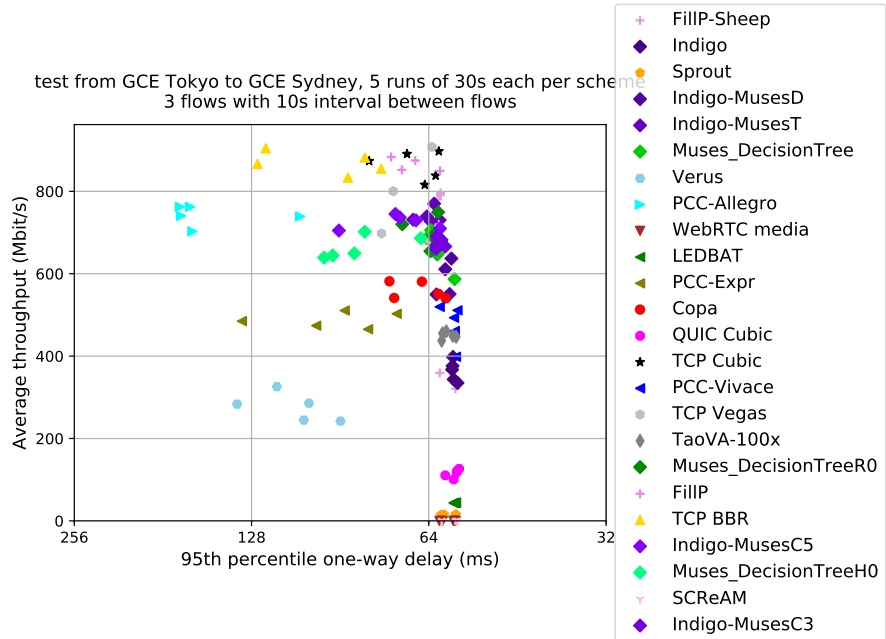
```
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

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

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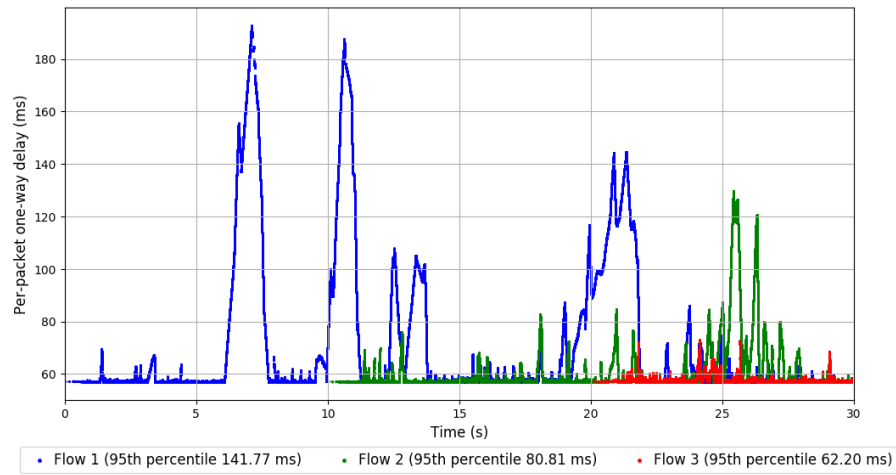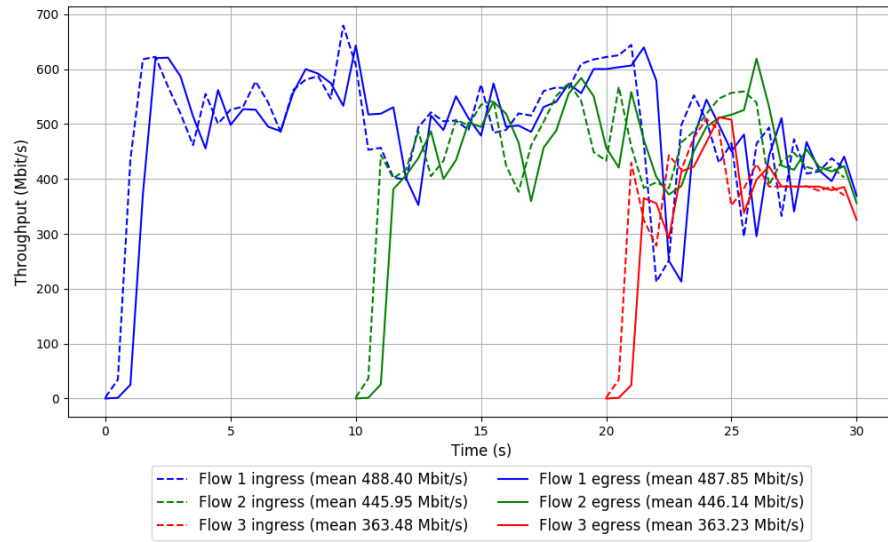3 flows with 10s interval between flows

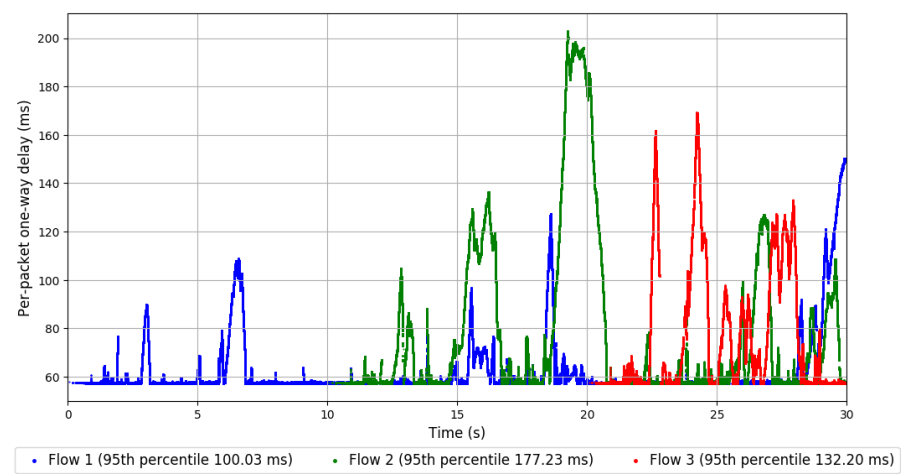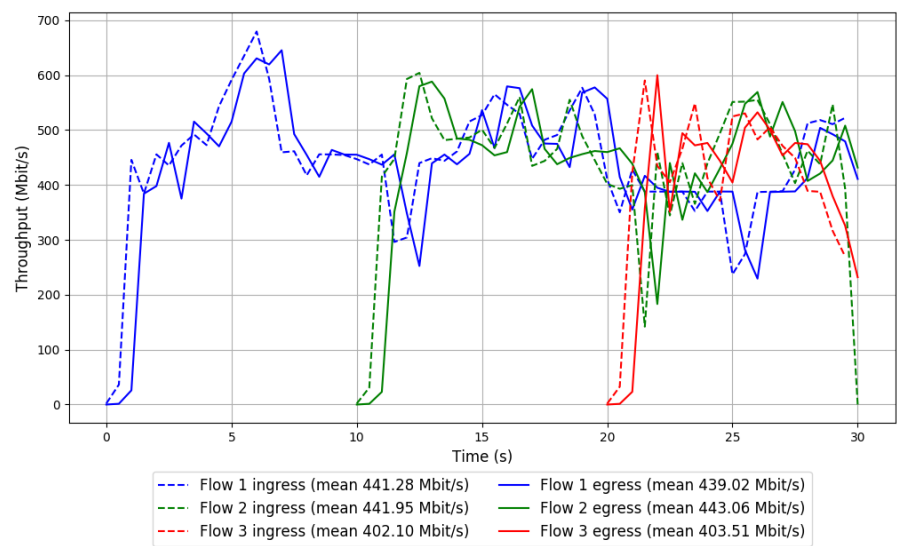| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	450.60	436.07	387.30	96.99	104.65	79.99	0.51	0.59	1.18
Copa	5	303.78	273.15	223.77	67.55	65.65	66.61	0.33	0.61	1.33
TCP Cubic	5	451.72	430.05	380.59	65.00	69.76	64.94	0.37	0.56	1.18
FillP	5	513.36	355.71	263.11	70.79	59.91	60.93	0.23	0.51	1.25
FillP-Sheep	5	323.59	315.07	233.35	61.44	60.11	58.81	0.17	0.43	1.32
Indigo	5	191.85	185.76	145.49	58.03	58.13	57.79	0.39	0.61	1.30
Indigo-MusesC3	5	401.63	340.77	225.88	62.61	59.48	60.80	0.29	0.54	2.52
Indigo-MusesC5	5	442.55	369.35	190.84	79.65	65.12	58.39	0.31	0.51	2.03
Indigo-MusesD	5	372.14	269.90	222.91	60.17	59.50	58.89	0.29	0.52	2.05
Indigo-MusesT	5	452.39	373.59	193.34	69.15	59.64	58.67	0.30	0.57	1.90
LEDBAT	5	28.26	18.83	9.20	57.76	57.75	57.55	0.76	1.14	2.33
Muses_DecisionTree	5	385.35	318.18	208.48	63.15	60.56	59.53	0.20	0.53	1.67
Muses_DecisionTreeH0	5	365.41	337.50	242.51	95.09	64.85	58.93	0.31	0.60	1.33
Muses_DecisionTreeR0	5	405.57	342.37	210.64	66.04	62.68	58.94	0.28	0.48	1.36
PCC-Allegro	5	430.74	347.71	245.28	144.08	136.33	70.80	1.35	1.69	1.40
PCC-Expr	5	279.81	245.82	135.98	97.66	83.65	60.02	0.56	1.00	1.92
QUIC Cubic	5	61.72	59.06	42.47	57.89	57.13	57.29	0.57	0.60	0.56
SCReAM	5	0.22	0.22	0.22	57.37	57.45	58.72	0.38	0.61	1.08
Sprout	5	7.66	7.61	7.06	58.16	58.12	58.29	0.32	0.64	1.31
TaoVA-100x	5	228.86	222.43	221.90	58.82	57.80	58.40	0.36	0.59	1.09
TCP Vegas	5	402.15	371.76	323.23	64.98	62.15	78.74	0.32	0.52	1.04
Verus	5	157.11	124.48	112.52	111.12	86.03	89.72	0.54	0.25	2.14
PCC-Vivace	5	296.94	212.23	118.72	58.55	57.65	57.85	0.43	0.74	1.93
WebRTC media	5	0.05	0.05	0.05	58.51	57.76	58.48	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-08-27 20:47:45
End at: 2019-08-27 20:48:15
Local clock offset: -0.564 ms
Remote clock offset: -0.655 ms

# Below is generated by plot.py at 2019-08-28 00:07:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 904.40 Mbit/s
95th percentile per-packet one-way delay: 121.101 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 487.85 Mbit/s
95th percentile per-packet one-way delay: 141.768 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 446.14 Mbit/s
95th percentile per-packet one-way delay: 80.810 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 363.23 Mbit/s
95th percentile per-packet one-way delay: 62.197 ms
Loss rate: 1.23%
```
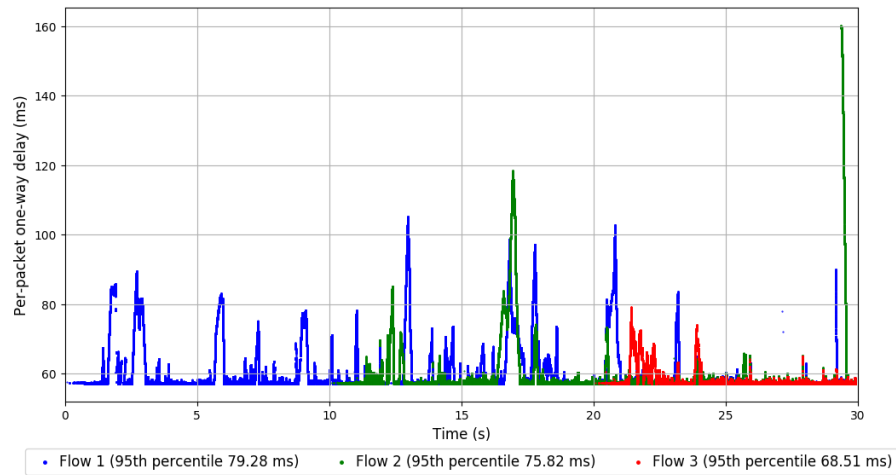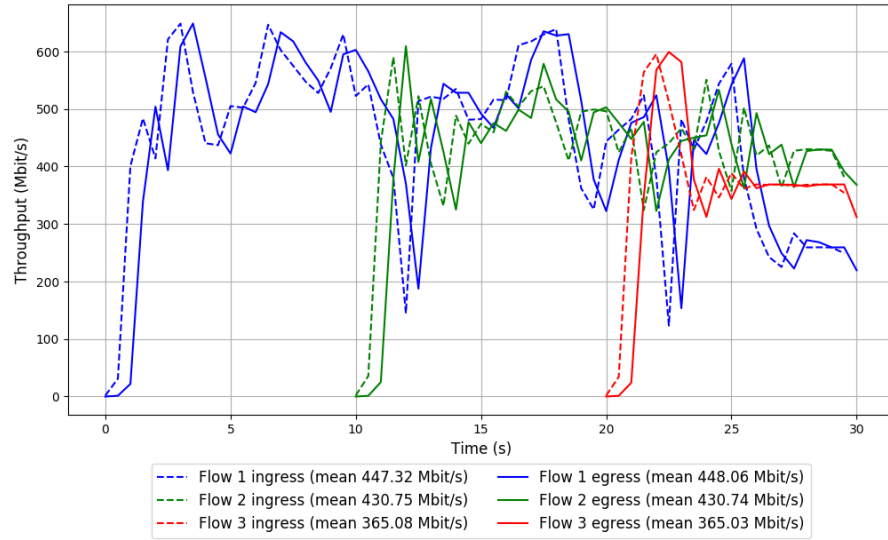
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-08-27 21:26:52
End at: 2019-08-27 21:27:22
Local clock offset: -0.182 ms
Remote clock offset: -0.785 ms


# Below is generated by plot.py at 2019-08-28 00:07:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 866.64 Mbit/s
95th percentile per-packet one-way delay: 125.020 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 439.02 Mbit/s
95th percentile per-packet one-way delay: 100.029 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 443.06 Mbit/s
95th percentile per-packet one-way delay: 177.226 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 403.51 Mbit/s
95th percentile per-packet one-way delay: 132.199 ms
Loss rate: 0.81%
```

Run 2: Report of TCP BBR — Data Link

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```
Run 3: Statistics of TCP BBR

Start at: 2019-08-27 22:06:05
End at: 2019-08-27 22:06:35
Local clock offset: 0.257 ms
Remote clock offset: -0.185 ms


# Below is generated by plot.py at 2019-08-28 00:07:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 854.88 Mbit/s
95th percentile per-packet one-way delay: 77.078 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 448.06 Mbit/s
95th percentile per-packet one-way delay: 79.285 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 430.74 Mbit/s
95th percentile per-packet one-way delay: 75.821 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 365.03 Mbit/s
95th percentile per-packet one-way delay: 68.514 ms
Loss rate: 1.17%
```
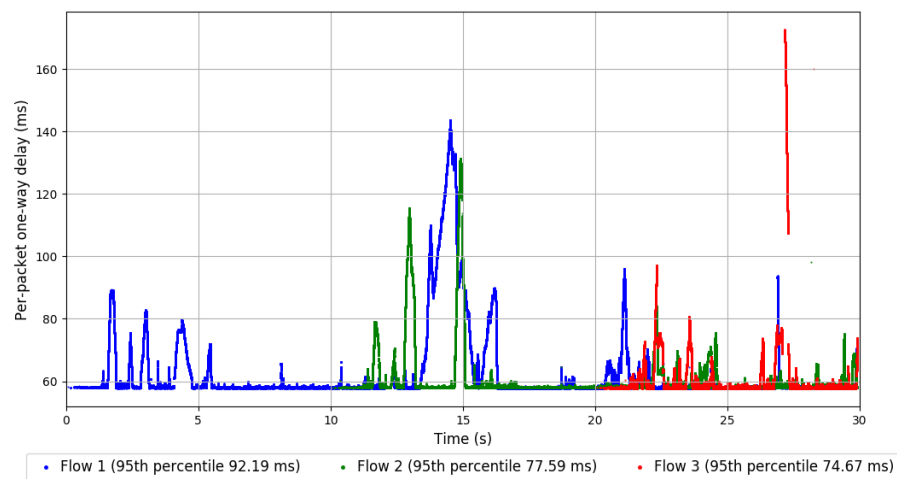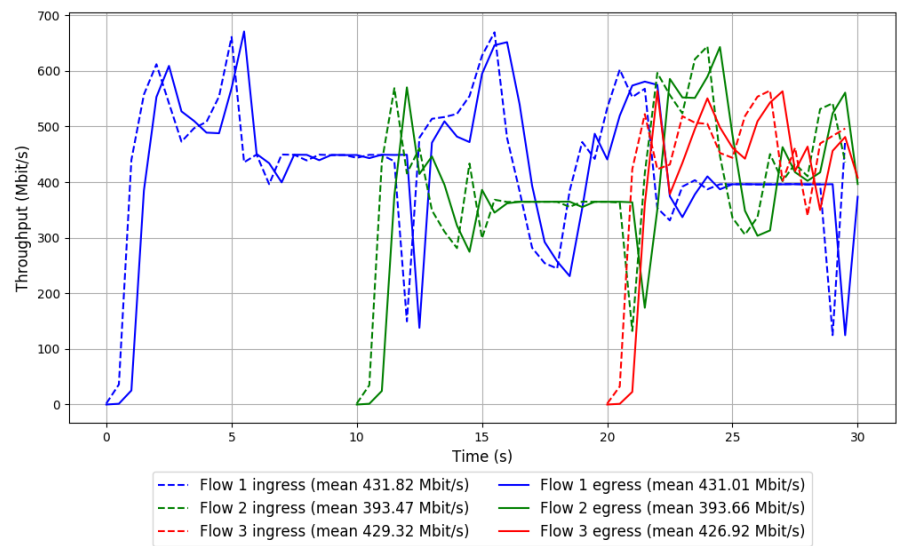
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2019-08-27 22:45:16
End at: 2019-08-27 22:45:46
Local clock offset: -0.025 ms
Remote clock offset: -0.642 ms


# Below is generated by plot.py at 2019-08-28 00:07:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 833.43 Mbit/s
95th percentile per-packet one-way delay: 87.826 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 431.01 Mbit/s
95th percentile per-packet one-way delay: 92.195 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 393.66 Mbit/s
95th percentile per-packet one-way delay: 77.588 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 426.92 Mbit/s
95th percentile per-packet one-way delay: 74.666 ms
Loss rate: 1.71%
```
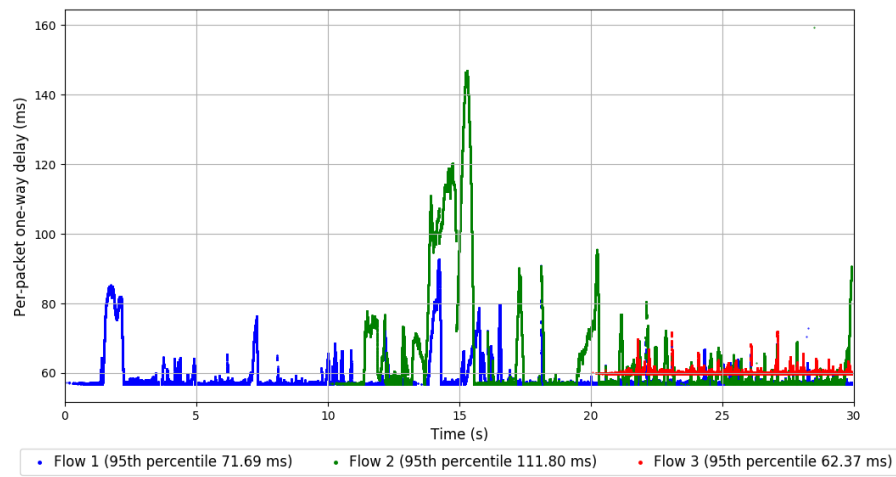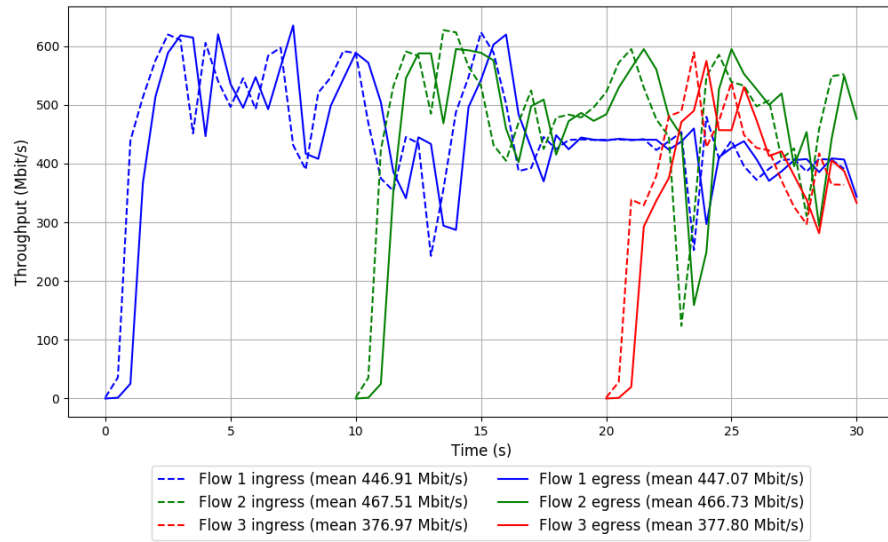
Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2019-08-27 23:24:24
End at: 2019-08-27 23:24:54
Local clock offset: -0.535 ms
Remote clock offset: 0.011 ms


# Below is generated by plot.py at 2019-08-28 00:07:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 881.94 Mbit/s
95th percentile per-packet one-way delay: 82.187 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 447.07 Mbit/s
95th percentile per-packet one-way delay: 71.692 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 466.73 Mbit/s
95th percentile per-packet one-way delay: 111.802 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 377.80 Mbit/s
95th percentile per-packet one-way delay: 62.368 ms
Loss rate: 0.97%
```
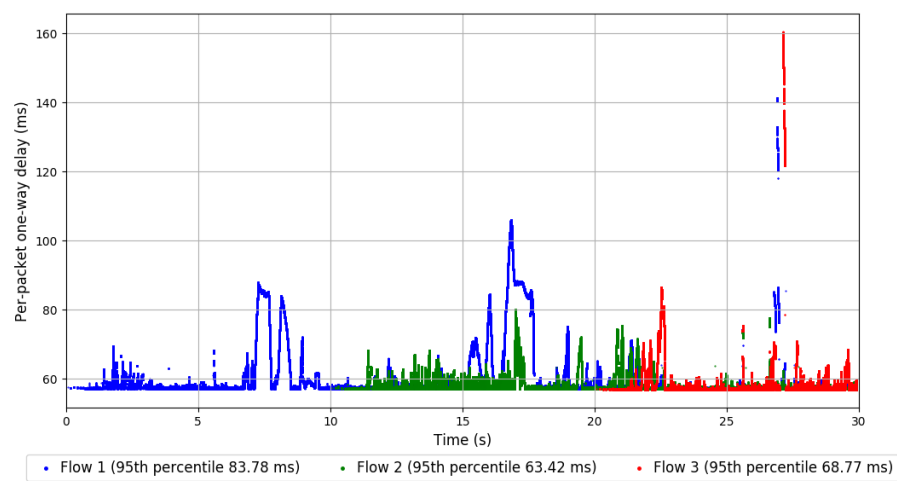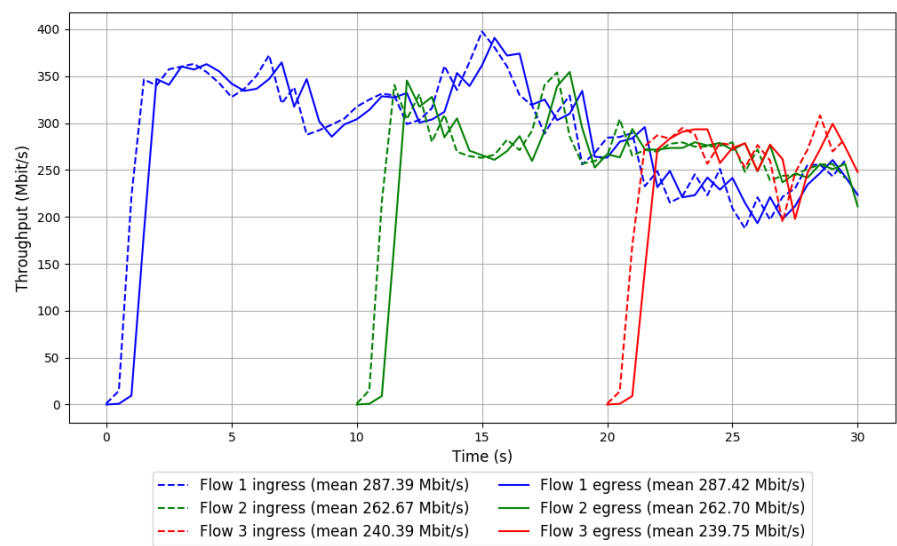
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 446.91 Mbit/s) ---- Flow 1 egress (mean 447.07 Mbit/s)
Flow 2 ingress (mean 467.51 Mbit/s) ---- Flow 2 egress (mean 466.73 Mbit/s)
Flow 3 ingress (mean 376.97 Mbit/s) ---- Flow 3 egress (mean 377.80 Mbit/s)

Flow 1 (95th percentile 71.69 ms)   Flow 2 (95th percentile 111.80 ms)   Flow 3 (95th percentile 62.37 ms)
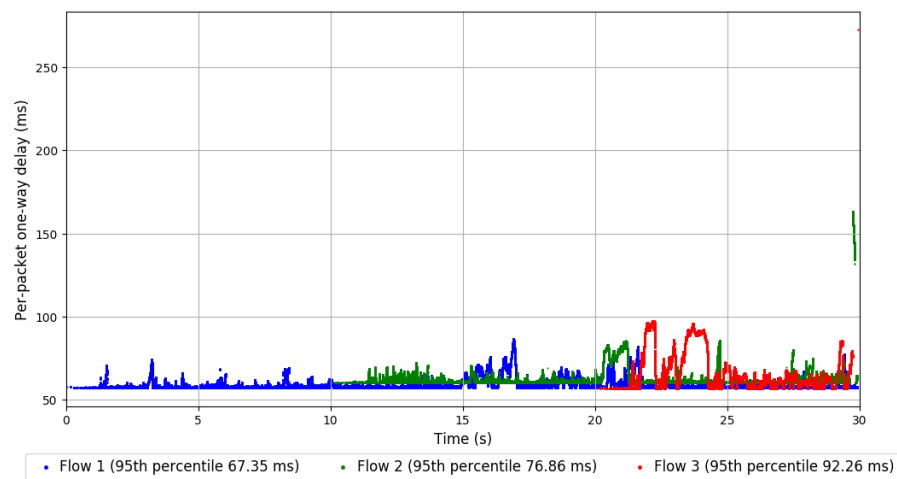
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```
Run 1: Statistics of Copa

Start at: 2019-08-27 20:55:56
End at: 2019-08-27 20:56:26
Local clock offset: -0.252 ms
Remote clock offset: -0.155 ms


# Below is generated by plot.py at 2019-08-28 00:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 541.10 Mbit/s
95th percentile per-packet one-way delay: 73.288 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 287.42 Mbit/s
95th percentile per-packet one-way delay: 83.775 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 262.70 Mbit/s
95th percentile per-packet one-way delay: 63.416 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 239.75 Mbit/s
95th percentile per-packet one-way delay: 68.771 ms
Loss rate: 1.41%
```

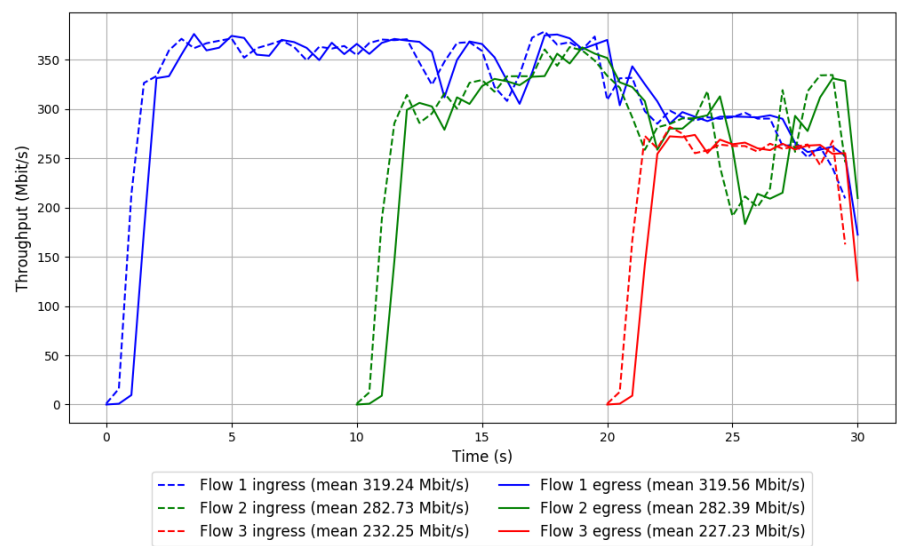Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-08-27 21:35:00
End at: 2019-08-27 21:35:30
Local clock offset: -0.075 ms
Remote clock offset: -0.169 ms


# Below is generated by plot.py at 2019-08-28 00:09:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 581.72 Mbit/s
95th percentile per-packet one-way delay: 74.663 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 319.56 Mbit/s
95th percentile per-packet one-way delay: 67.351 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 282.39 Mbit/s
95th percentile per-packet one-way delay: 76.857 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 227.23 Mbit/s
95th percentile per-packet one-way delay: 92.258 ms
Loss rate: 1.55%
```
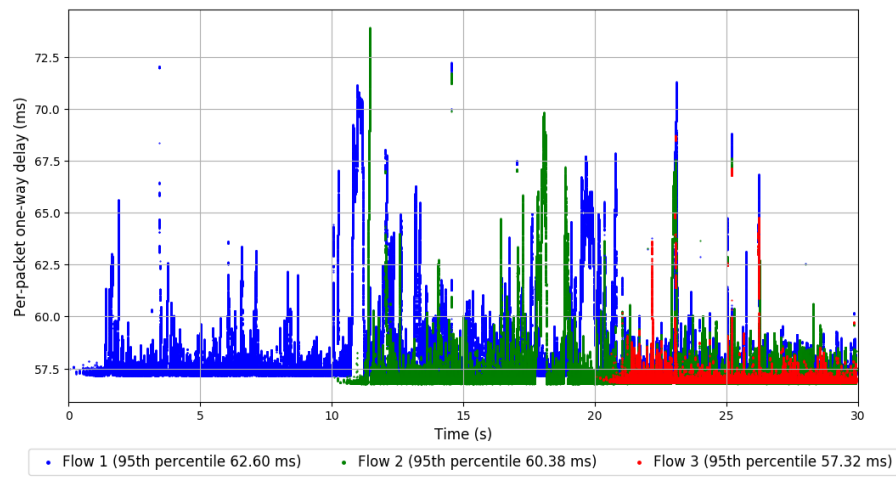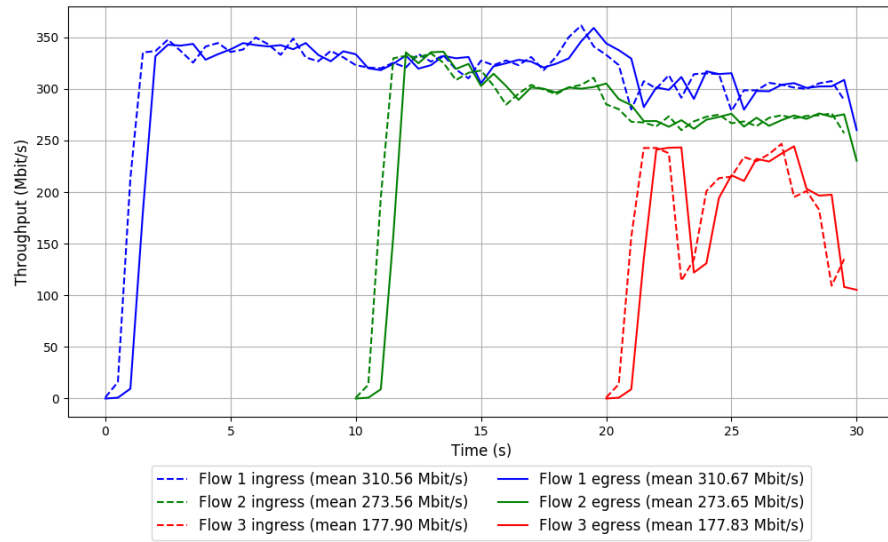
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 319.24 Mbit/s) --- Flow 1 egress (mean 319.56 Mbit/s)
Flow 2 ingress (mean 282.73 Mbit/s) --- Flow 2 egress (mean 282.39 Mbit/s)
Flow 3 ingress (mean 232.25 Mbit/s) --- Flow 3 egress (mean 227.23 Mbit/s)

Flow 1 (95th percentile 67.35 ms)   Flow 2 (95th percentile 76.86 ms)   Flow 3 (95th percentile 92.26 ms)

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```
Run 3: Statistics of Copa

Start at: 2019-08-27 22:14:10
End at: 2019-08-27 22:14:40
Local clock offset: -0.093 ms
Remote clock offset: -0.123 ms


# Below is generated by plot.py at 2019-08-28 00:09:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 551.05 Mbit/s
95th percentile per-packet one-way delay: 61.631 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 310.67 Mbit/s
95th percentile per-packet one-way delay: 62.596 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 273.65 Mbit/s
95th percentile per-packet one-way delay: 60.378 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 177.83 Mbit/s
95th percentile per-packet one-way delay: 57.318 ms
Loss rate: 1.19%
```
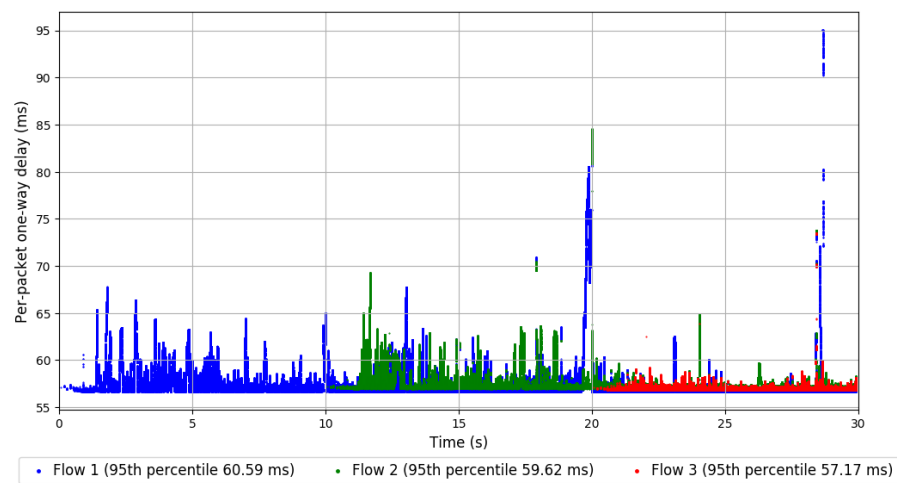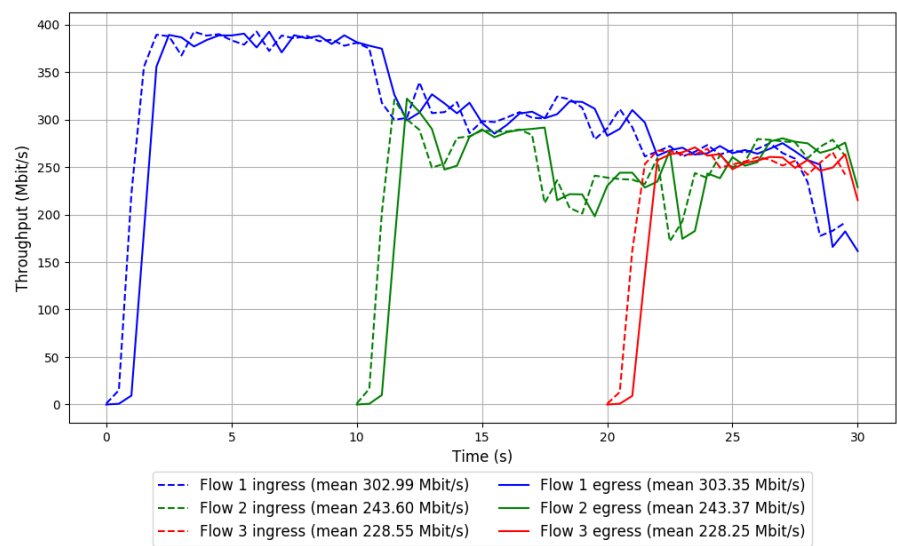
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 310.56 Mbit/s) --- Flow 1 egress (mean 310.67 Mbit/s)
Flow 2 ingress (mean 273.56 Mbit/s) --- Flow 2 egress (mean 273.65 Mbit/s)
Flow 3 ingress (mean 177.90 Mbit/s) --- Flow 3 egress (mean 177.83 Mbit/s)

Flow 1 (95th percentile 62.60 ms) Flow 2 (95th percentile 60.38 ms) Flow 3 (95th percentile 57.32 ms)

```
Run 4: Statistics of Copa

Start at: 2019-08-27 22:53:22
End at: 2019-08-27 22:53:52
Local clock offset: -0.061 ms
Remote clock offset: 0.167 ms


# Below is generated by plot.py at 2019-08-28 00:20:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 540.20 Mbit/s
95th percentile per-packet one-way delay: 59.901 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 303.35 Mbit/s
95th percentile per-packet one-way delay: 60.591 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 243.37 Mbit/s
95th percentile per-packet one-way delay: 59.618 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 228.25 Mbit/s
95th percentile per-packet one-way delay: 57.167 ms
Loss rate: 1.28%
```
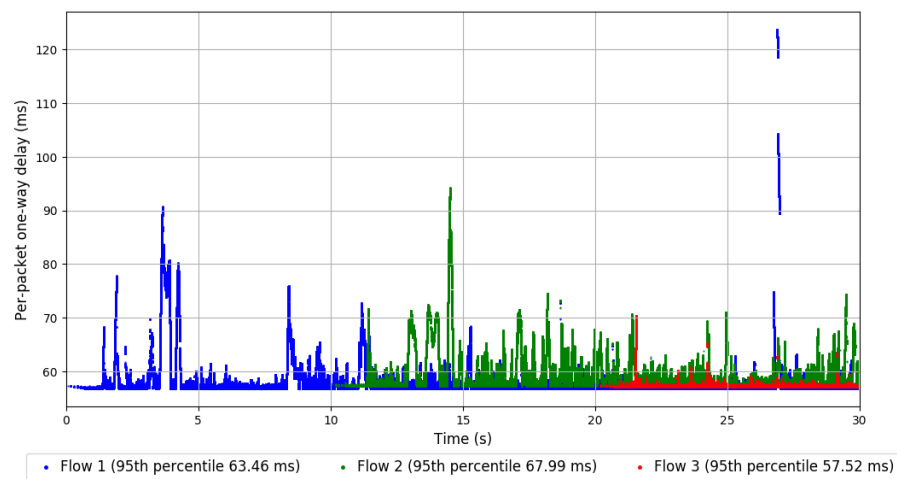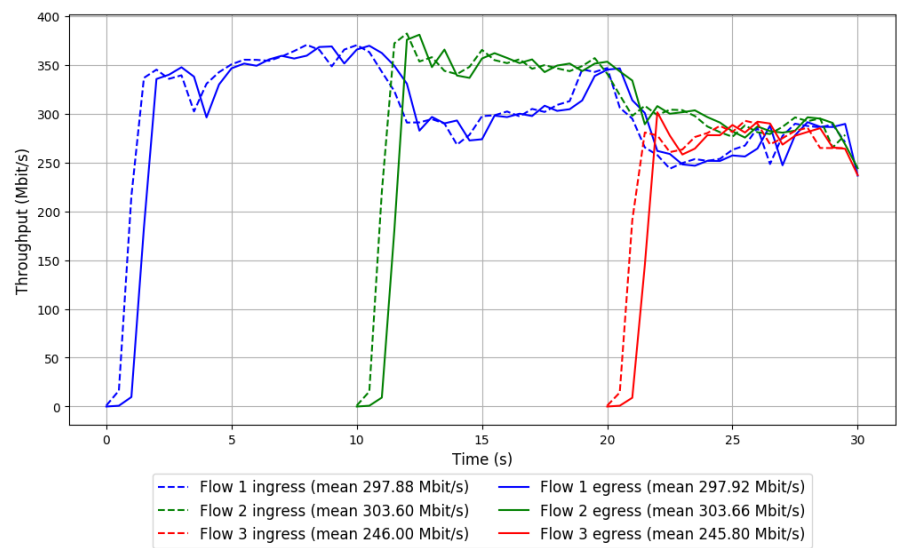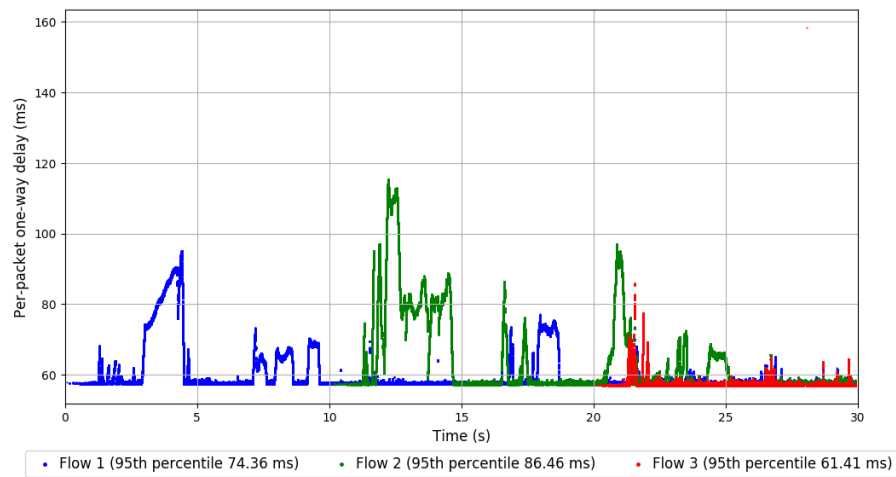
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 302.99 Mbit/s) Flow 1 egress (mean 303.35 Mbit/s)
Flow 2 ingress (mean 243.60 Mbit/s) Flow 2 egress (mean 243.37 Mbit/s)
Flow 3 ingress (mean 228.55 Mbit/s) Flow 3 egress (mean 228.25 Mbit/s)

Flow 1 (95th percentile 60.59 ms)   Flow 2 (95th percentile 59.62 ms)   Flow 3 (95th percentile 57.17 ms)

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```
Run 5: Statistics of Copa

Start at: 2019-08-27 23:32:30
End at: 2019-08-27 23:33:00
Local clock offset: -0.111 ms
Remote clock offset: 0.048 ms


# Below is generated by plot.py at 2019-08-28 00:22:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 580.84 Mbit/s
95th percentile per-packet one-way delay: 65.749 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 297.92 Mbit/s
95th percentile per-packet one-way delay: 63.462 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 303.66 Mbit/s
95th percentile per-packet one-way delay: 67.987 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 245.80 Mbit/s
95th percentile per-packet one-way delay: 57.524 ms
Loss rate: 1.24%
```
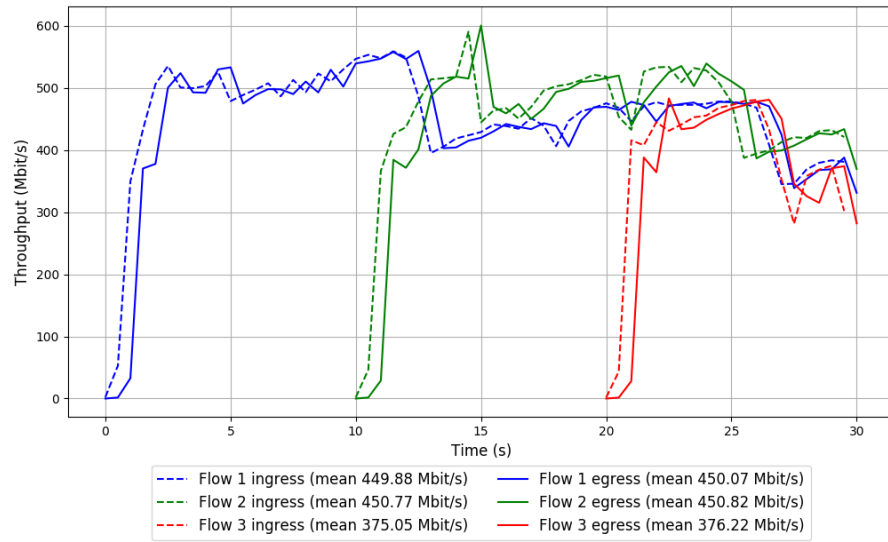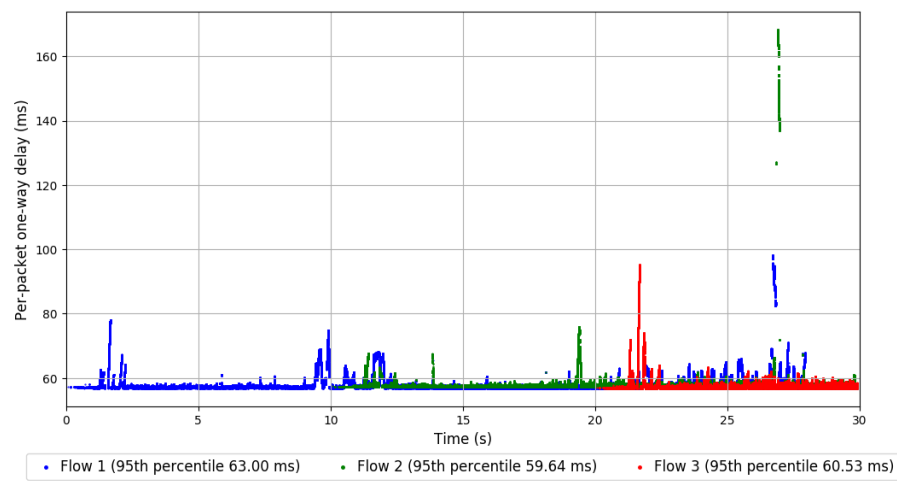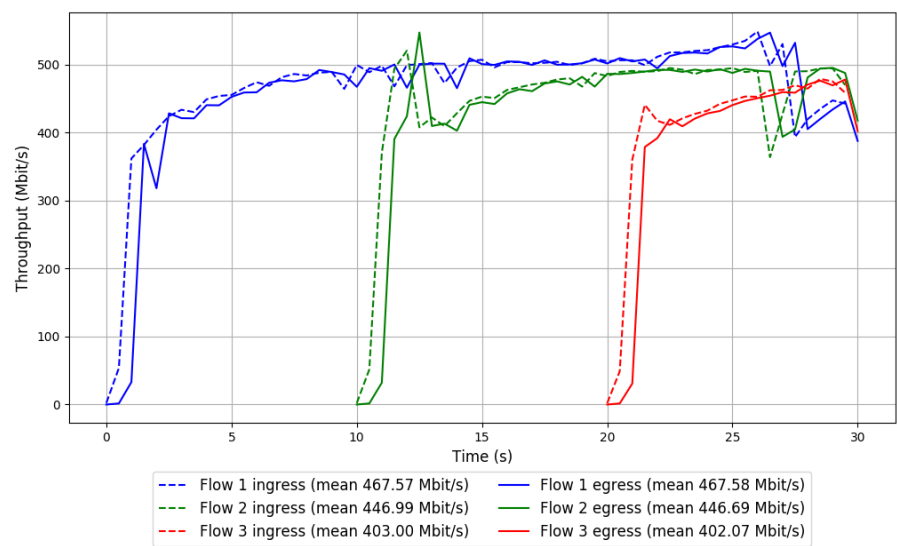
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 297.88 Mbit/s) — Flow 1 egress (mean 297.92 Mbit/s)
Flow 2 ingress (mean 303.60 Mbit/s) — Flow 2 egress (mean 303.66 Mbit/s)
Flow 3 ingress (mean 246.00 Mbit/s) — Flow 3 egress (mean 245.80 Mbit/s)

Flow 1 (95th percentile 63.46 ms)   Flow 2 (95th percentile 67.99 ms)   Flow 3 (95th percentile 57.52 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-08-27 20:20:29
End at: 2019-08-27 20:20:59
Local clock offset: -0.432 ms
Remote clock offset: 0.152 ms


# Below is generated by plot.py at 2019-08-28 00:22:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 873.54 Mbit/s
95th percentile per-packet one-way delay: 80.812 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 450.07 Mbit/s
95th percentile per-packet one-way delay: 74.362 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 450.82 Mbit/s
95th percentile per-packet one-way delay: 86.464 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 376.22 Mbit/s
95th percentile per-packet one-way delay: 61.408 ms
Loss rate: 0.83%
```
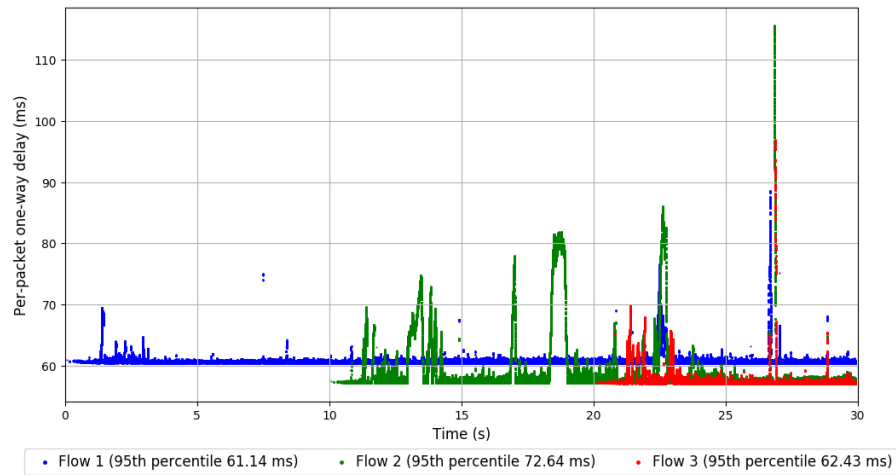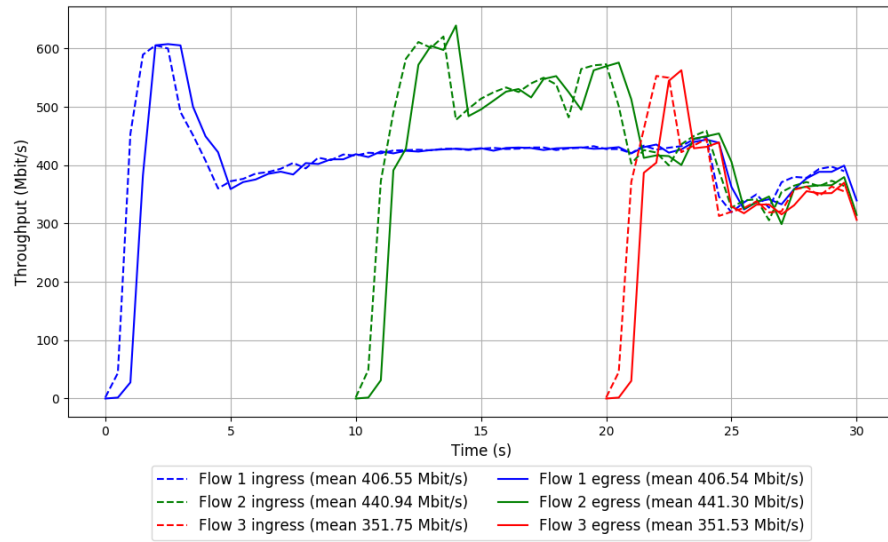
Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 449.88 Mbit/s) --- Flow 1 egress (mean 450.07 Mbit/s) ---
Flow 2 ingress (mean 450.77 Mbit/s) --- Flow 2 egress (mean 450.82 Mbit/s) ---
Flow 3 ingress (mean 375.05 Mbit/s) --- Flow 3 egress (mean 376.22 Mbit/s) ---

Flow 1 (95th percentile 74.36 ms)   Flow 2 (95th percentile 86.46 ms)   Flow 3 (95th percentile 61.41 ms)

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```
Run 2: Statistics of TCP Cubic

Start at: 2019-08-27 20:59:35
End at: 2019-08-27 21:00:05
Local clock offset: -0.291 ms
Remote clock offset: -0.277 ms


# Below is generated by plot.py at 2019-08-28 00:22:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 897.30 Mbit/s
95th percentile per-packet one-way delay: 61.552 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 467.58 Mbit/s
95th percentile per-packet one-way delay: 63.001 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 446.69 Mbit/s
95th percentile per-packet one-way delay: 59.637 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 402.07 Mbit/s
95th percentile per-packet one-way delay: 60.527 ms
Loss rate: 1.37%
```
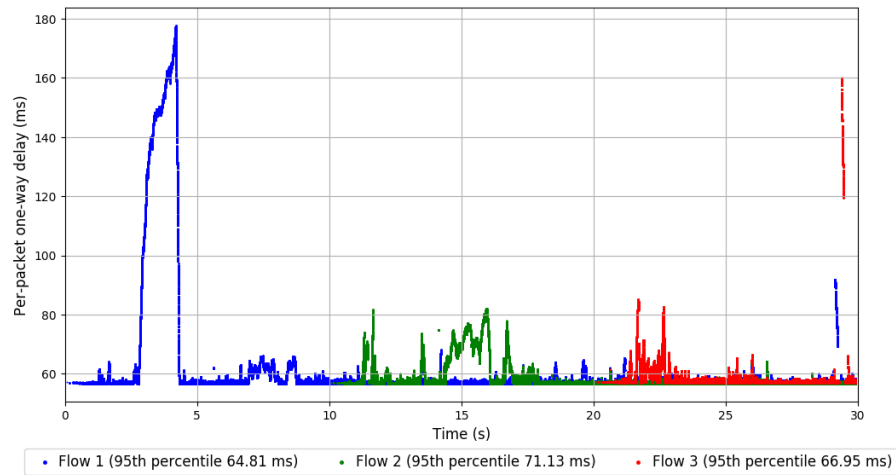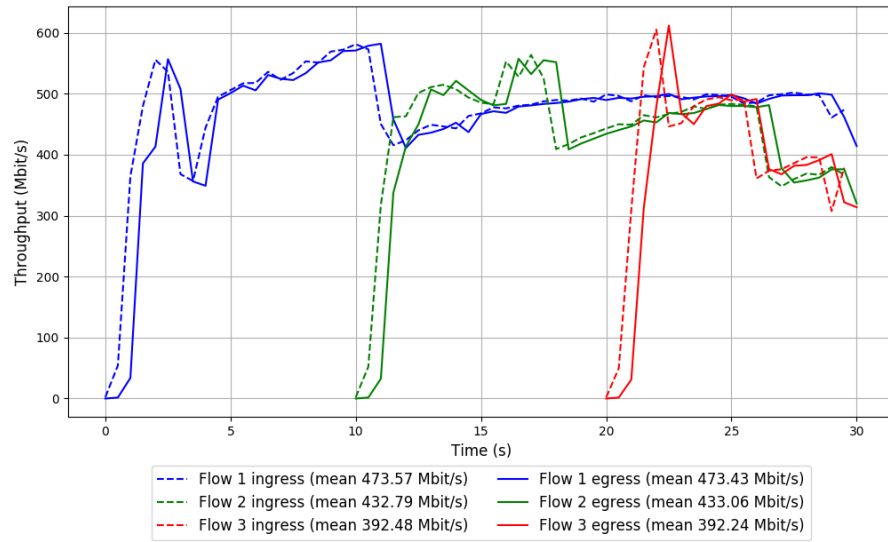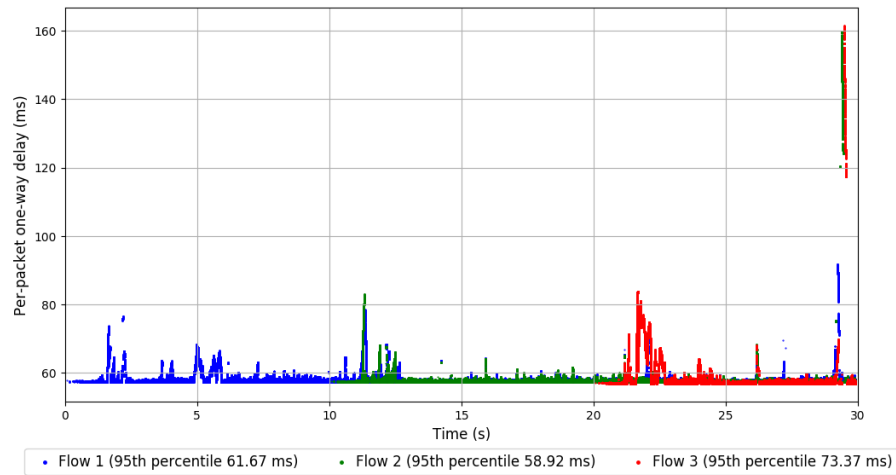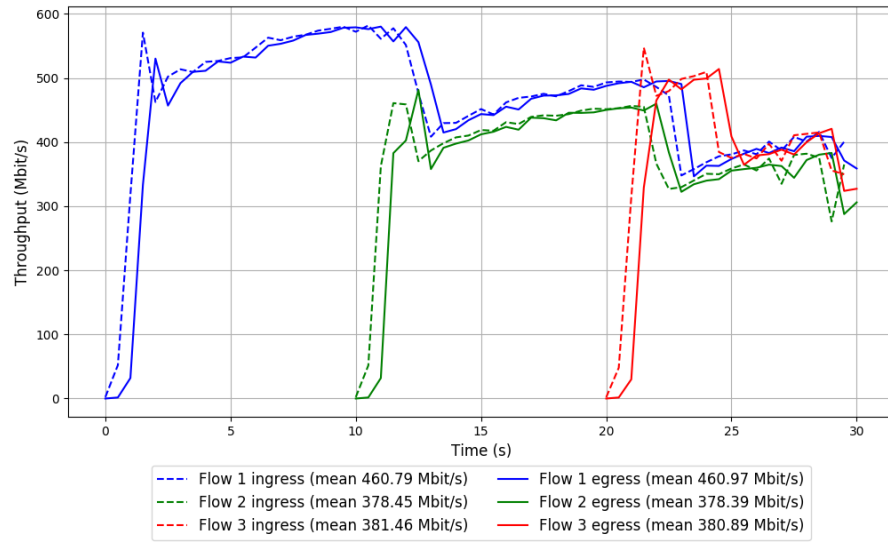
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 467.57 Mbit/s) --- Flow 1 egress (mean 467.58 Mbit/s)
Flow 2 ingress (mean 446.99 Mbit/s) --- Flow 2 egress (mean 446.69 Mbit/s)
Flow 3 ingress (mean 403.00 Mbit/s) --- Flow 3 egress (mean 402.07 Mbit/s)

Flow 1 (95th percentile 63.00 ms)   Flow 2 (95th percentile 59.64 ms)   Flow 3 (95th percentile 60.53 ms)

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```
Run 3: Statistics of TCP Cubic

Start at: 2019-08-27 21:38:41
End at: 2019-08-27 21:39:11
Local clock offset: 0.175 ms
Remote clock offset: -0.289 ms


# Below is generated by plot.py at 2019-08-28 00:22:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 815.96 Mbit/s
95th percentile per-packet one-way delay: 65.027 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 406.54 Mbit/s
95th percentile per-packet one-way delay: 61.140 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 441.30 Mbit/s
95th percentile per-packet one-way delay: 72.640 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 351.53 Mbit/s
95th percentile per-packet one-way delay: 62.428 ms
Loss rate: 1.21%
```

Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 406.55 Mbit/s) Flow 1 egress (mean 406.54 Mbit/s)
Flow 2 ingress (mean 440.94 Mbit/s) Flow 2 egress (mean 441.30 Mbit/s)
Flow 3 ingress (mean 351.75 Mbit/s) Flow 3 egress (mean 351.53 Mbit/s)

Flow 1 (95th percentile 61.14 ms)   Flow 2 (95th percentile 72.64 ms)   Flow 3 (95th percentile 62.43 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-08-27 22:17:50
End at: 2019-08-27 22:18:20
Local clock offset: -0.073 ms
Remote clock offset: 0.031 ms


# Below is generated by plot.py at 2019-08-28 00:22:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 890.83 Mbit/s
95th percentile per-packet one-way delay: 69.701 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 473.43 Mbit/s
95th percentile per-packet one-way delay: 64.815 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 433.06 Mbit/s
95th percentile per-packet one-way delay: 71.131 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 392.24 Mbit/s
95th percentile per-packet one-way delay: 66.946 ms
Loss rate: 1.21%
```
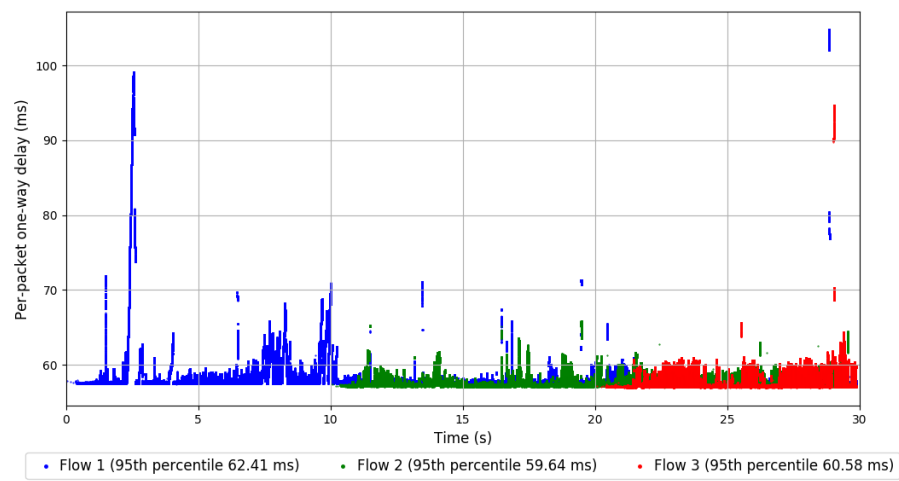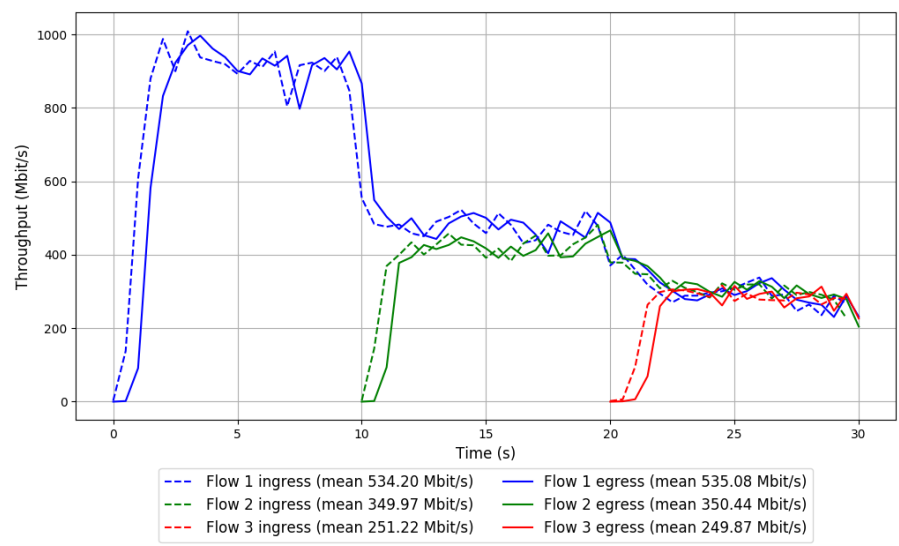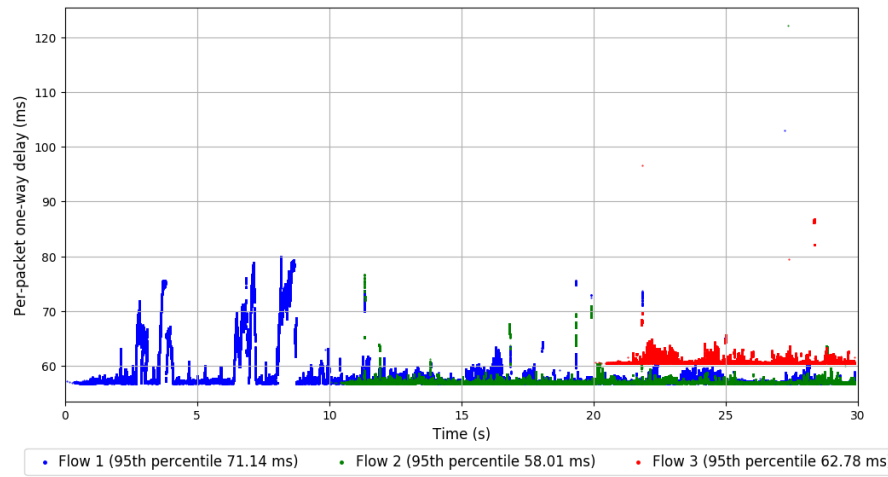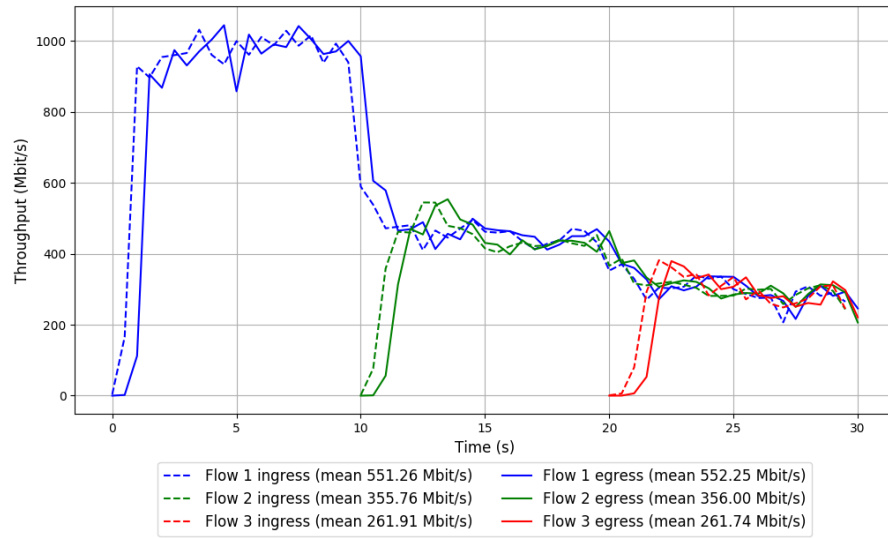
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 473.57 Mbit/s) --- Flow 1 egress (mean 473.43 Mbit/s)
Flow 2 ingress (mean 432.79 Mbit/s) --- Flow 2 egress (mean 433.06 Mbit/s)
Flow 3 ingress (mean 392.48 Mbit/s) --- Flow 3 egress (mean 392.24 Mbit/s)

Flow 1 (95th percentile 64.81 ms)   Flow 2 (95th percentile 71.13 ms)   Flow 3 (95th percentile 66.95 ms)
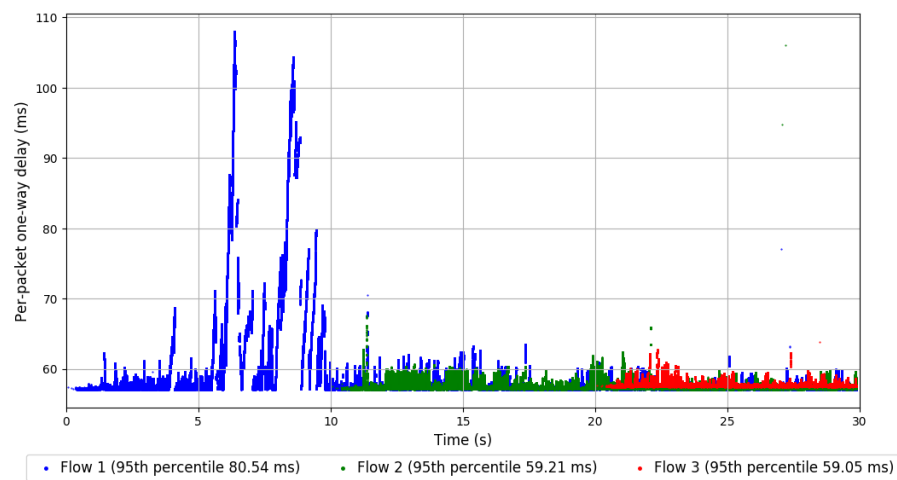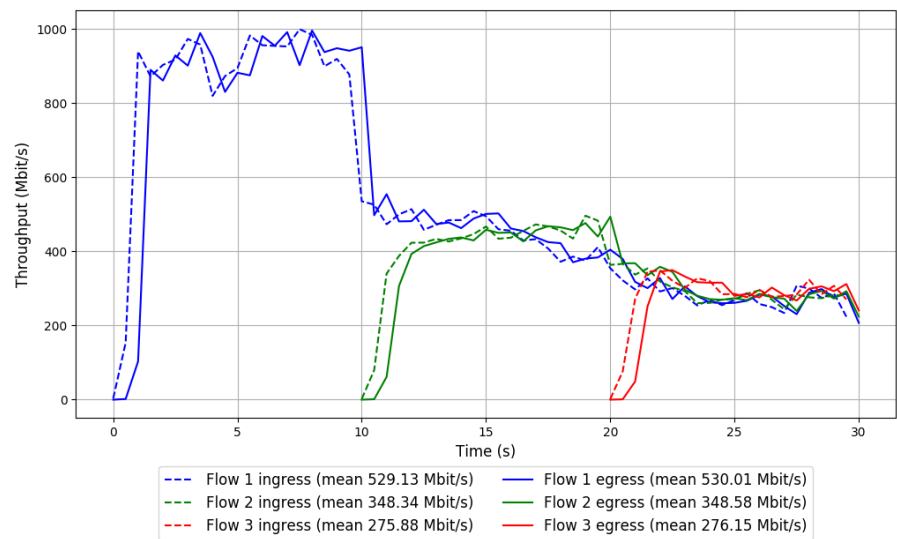
```
Run 5: Statistics of TCP Cubic

Start at: 2019-08-27 22:57:00
End at: 2019-08-27 22:57:30
Local clock offset: -0.122 ms
Remote clock offset: -0.109 ms


# Below is generated by plot.py at 2019-08-28 00:22:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 838.19 Mbit/s
95th percentile per-packet one-way delay: 62.317 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 460.97 Mbit/s
95th percentile per-packet one-way delay: 61.673 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 378.39 Mbit/s
95th percentile per-packet one-way delay: 58.924 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 380.89 Mbit/s
95th percentile per-packet one-way delay: 73.373 ms
Loss rate: 1.29%
```

Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2019-08-27 20:26:39
End at: 2019-08-27 20:27:09
Local clock offset: 0.003 ms
Remote clock offset: 0.402 ms


# Below is generated by plot.py at 2019-08-28 00:25:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 849.77 Mbit/s
95th percentile per-packet one-way delay: 61.257 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 535.08 Mbit/s
95th percentile per-packet one-way delay: 62.409 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 350.44 Mbit/s
95th percentile per-packet one-way delay: 59.640 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 249.87 Mbit/s
95th percentile per-packet one-way delay: 60.583 ms
Loss rate: 1.68%
```
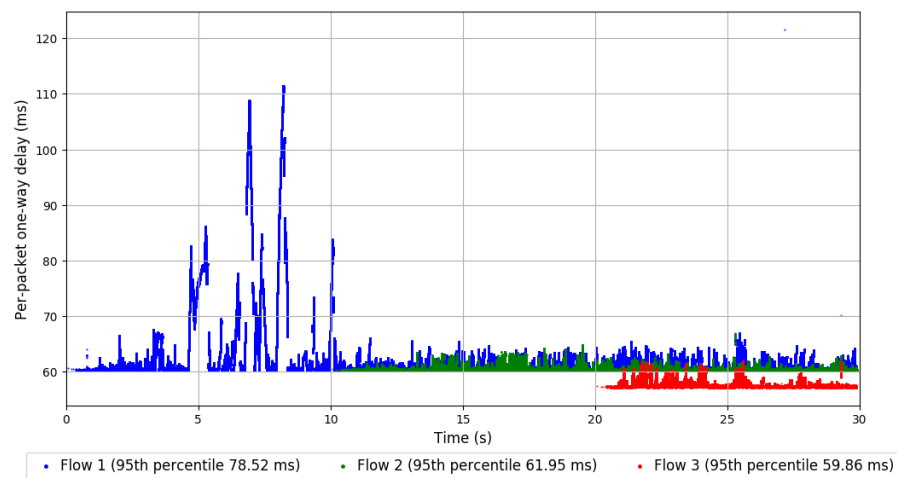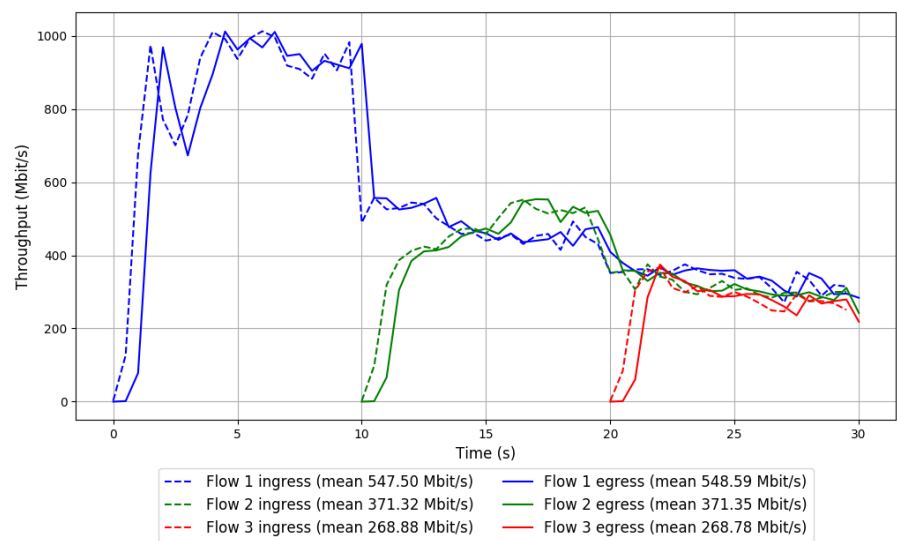
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 534.20 Mbit/s)   Flow 1 egress (mean 535.08 Mbit/s)
Flow 2 ingress (mean 349.97 Mbit/s)   Flow 2 egress (mean 350.44 Mbit/s)
Flow 3 ingress (mean 251.22 Mbit/s)   Flow 3 egress (mean 249.87 Mbit/s)

Flow 1 (95th percentile 62.41 ms)   Flow 2 (95th percentile 59.64 ms)   Flow 3 (95th percentile 60.58 ms)

```
Run 2: Statistics of FillP

Start at: 2019-08-27 21:05:45
End at: 2019-08-27 21:06:15
Local clock offset: -0.029 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2019-08-28 00:34:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 874.76 Mbit/s
95th percentile per-packet one-way delay: 67.489 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 552.25 Mbit/s
95th percentile per-packet one-way delay: 71.138 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 356.00 Mbit/s
95th percentile per-packet one-way delay: 58.011 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 261.74 Mbit/s
95th percentile per-packet one-way delay: 62.779 ms
Loss rate: 1.19%
```
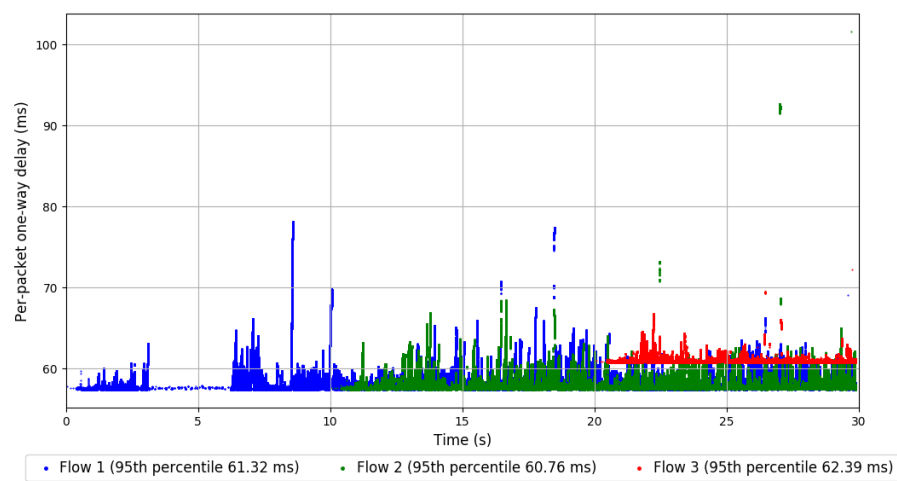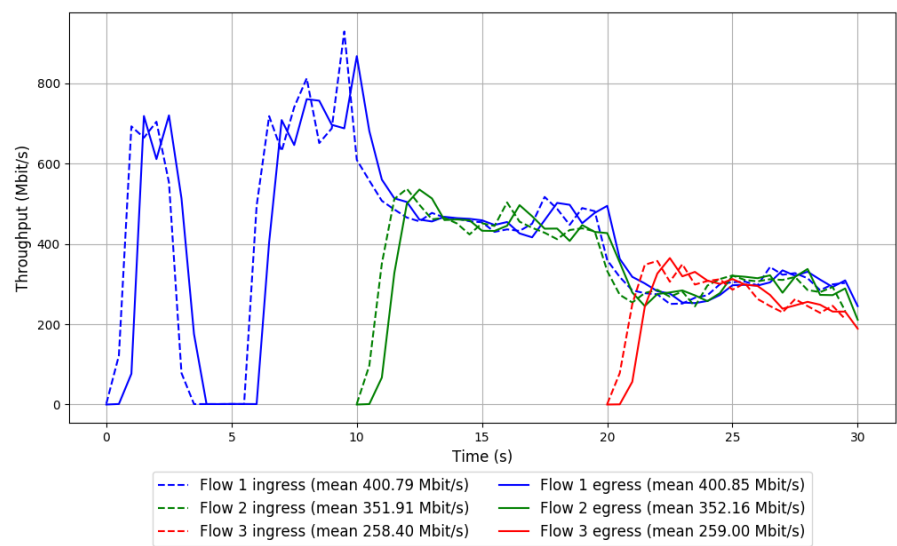
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-08-27 21:45:04
End at: 2019-08-27 21:45:34
Local clock offset: -0.135 ms
Remote clock offset: -0.488 ms


# Below is generated by plot.py at 2019-08-28 00:34:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 852.27 Mbit/s
95th percentile per-packet one-way delay: 71.120 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 530.01 Mbit/s
95th percentile per-packet one-way delay: 80.536 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 348.58 Mbit/s
95th percentile per-packet one-way delay: 59.209 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 276.15 Mbit/s
95th percentile per-packet one-way delay: 59.050 ms
Loss rate: 1.12%
```
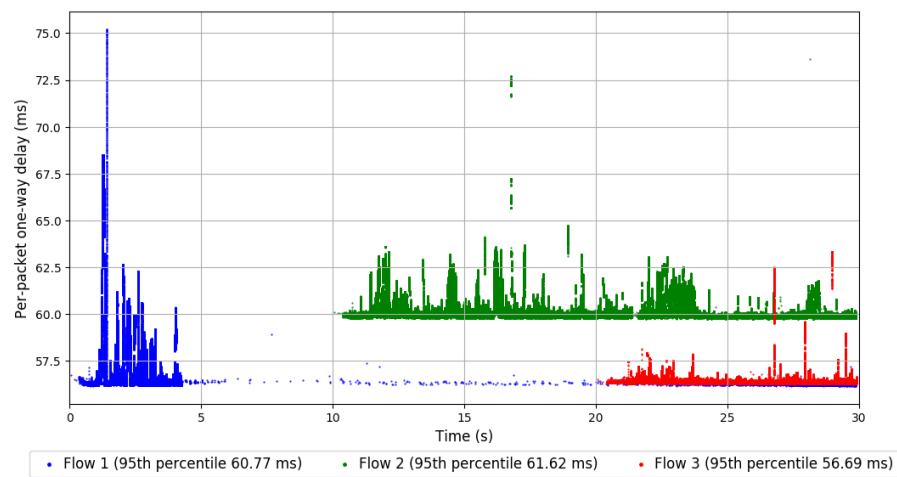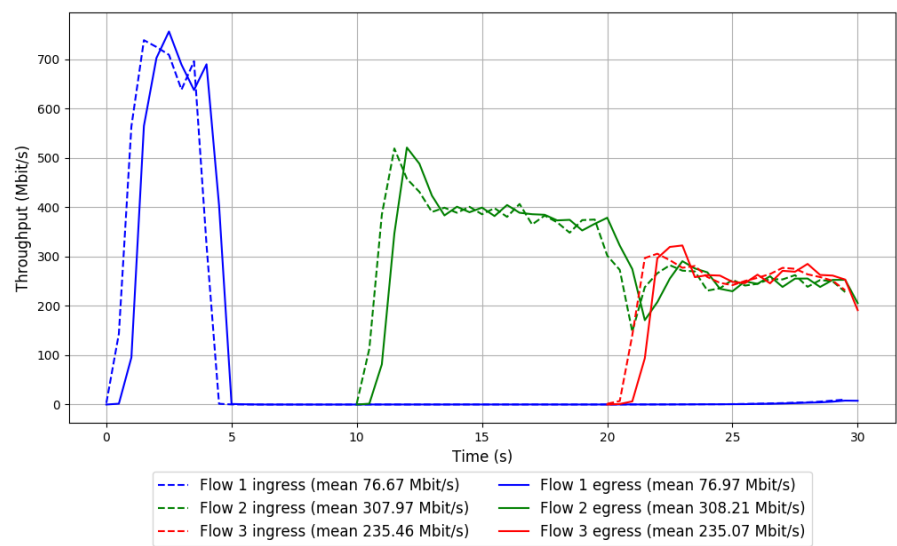
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-08-27 22:24:17
End at: 2019-08-27 22:24:47
Local clock offset: 0.249 ms
Remote clock offset: 0.251 ms


# Below is generated by plot.py at 2019-08-28 00:35:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 883.43 Mbit/s
95th percentile per-packet one-way delay: 74.161 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 548.59 Mbit/s
95th percentile per-packet one-way delay: 78.521 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 371.35 Mbit/s
95th percentile per-packet one-way delay: 61.949 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 268.78 Mbit/s
95th percentile per-packet one-way delay: 59.859 ms
Loss rate: 1.14%
```
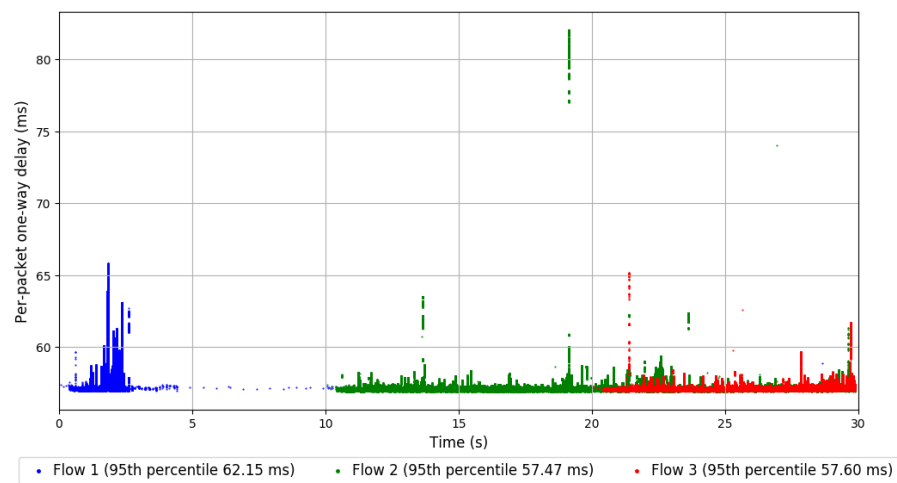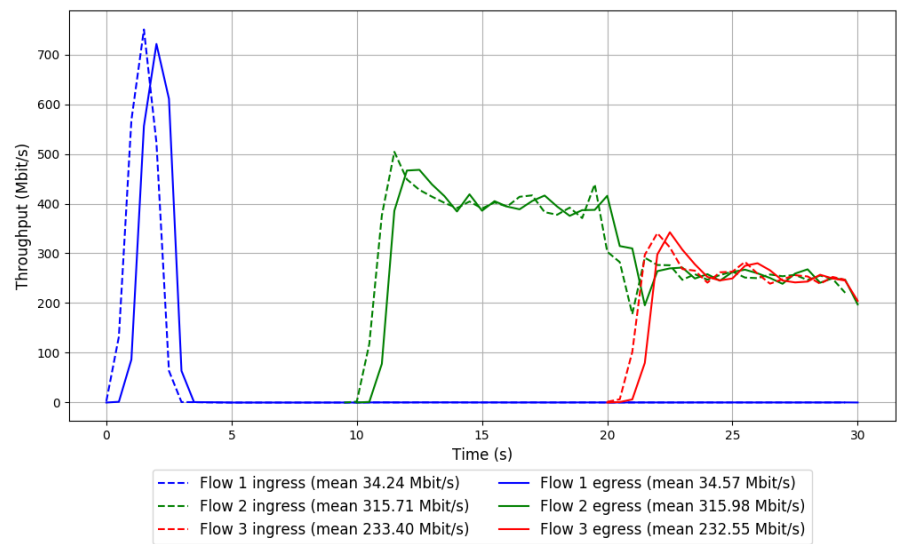
Run 4: Report of FillP — Data Link

- - - - Flow 1 ingress (mean 547.50 Mbit/s)   —— Flow 1 egress (mean 548.59 Mbit/s)
- - - - Flow 2 ingress (mean 371.32 Mbit/s)   —— Flow 2 egress (mean 371.35 Mbit/s)
- - - - Flow 3 ingress (mean 268.88 Mbit/s)   —— Flow 3 egress (mean 268.78 Mbit/s)

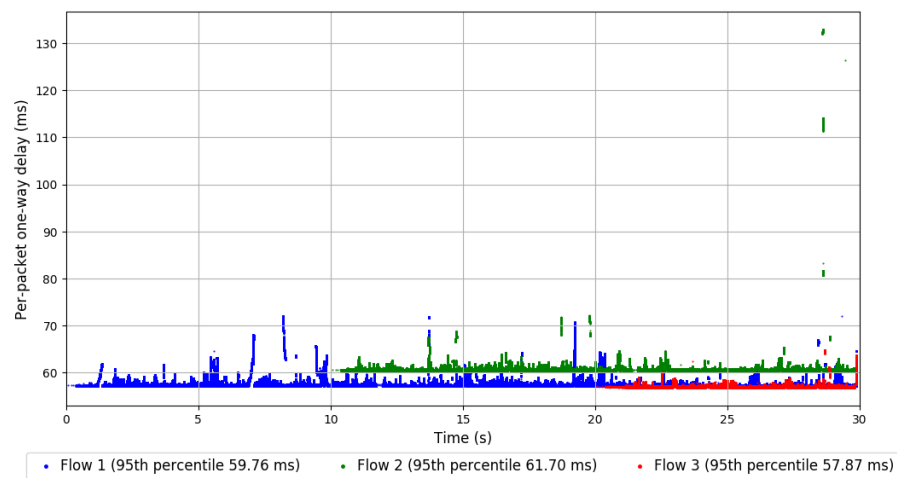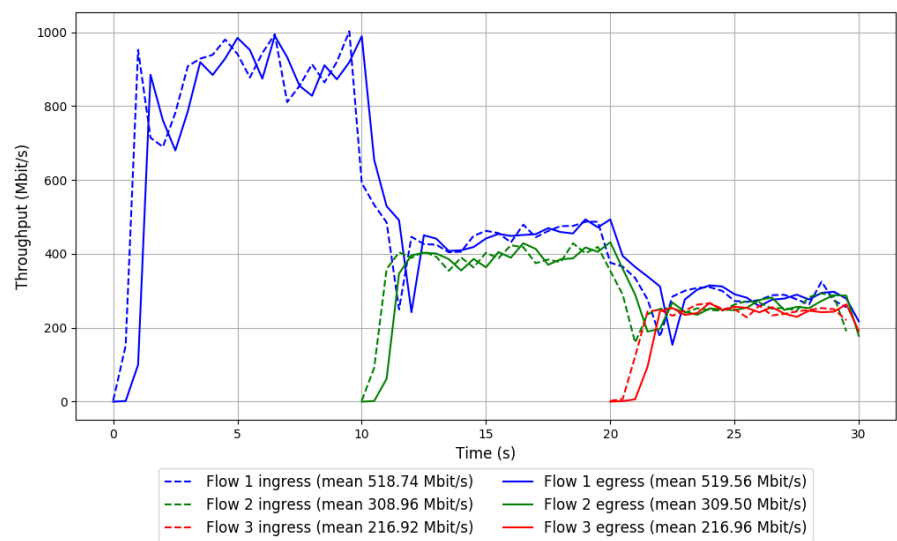- Flow 1 (95th percentile 78.52 ms)   • Flow 2 (95th percentile 61.95 ms)   • Flow 3 (95th percentile 59.86 ms)

```
Run 5: Statistics of FillP

Start at: 2019-08-27 23:03:25
End at: 2019-08-27 23:03:55
Local clock offset: 0.227 ms
Remote clock offset: -0.304 ms


# Below is generated by plot.py at 2019-08-28 00:35:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 719.83 Mbit/s
95th percentile per-packet one-way delay: 61.542 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 400.85 Mbit/s
95th percentile per-packet one-way delay: 61.323 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 352.16 Mbit/s
95th percentile per-packet one-way delay: 60.760 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 259.00 Mbit/s
95th percentile per-packet one-way delay: 62.391 ms
Loss rate: 1.13%
```

Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-08-27 20:25:14
End at: 2019-08-27 20:25:44
Local clock offset: -0.964 ms
Remote clock offset: 0.515 ms


# Below is generated by plot.py at 2019-08-28 00:35:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 359.11 Mbit/s
95th percentile per-packet one-way delay: 61.327 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 76.97 Mbit/s
95th percentile per-packet one-way delay: 60.769 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 308.21 Mbit/s
95th percentile per-packet one-way delay: 61.625 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 235.07 Mbit/s
95th percentile per-packet one-way delay: 56.692 ms
Loss rate: 1.27%
```

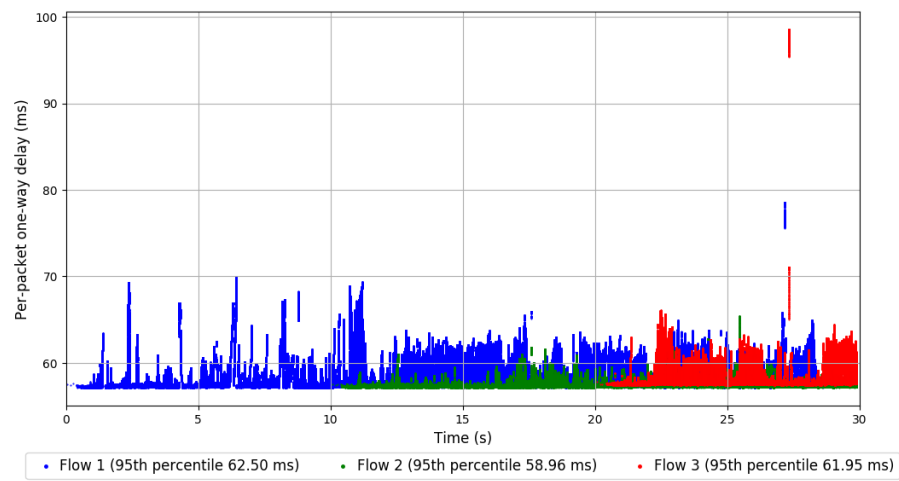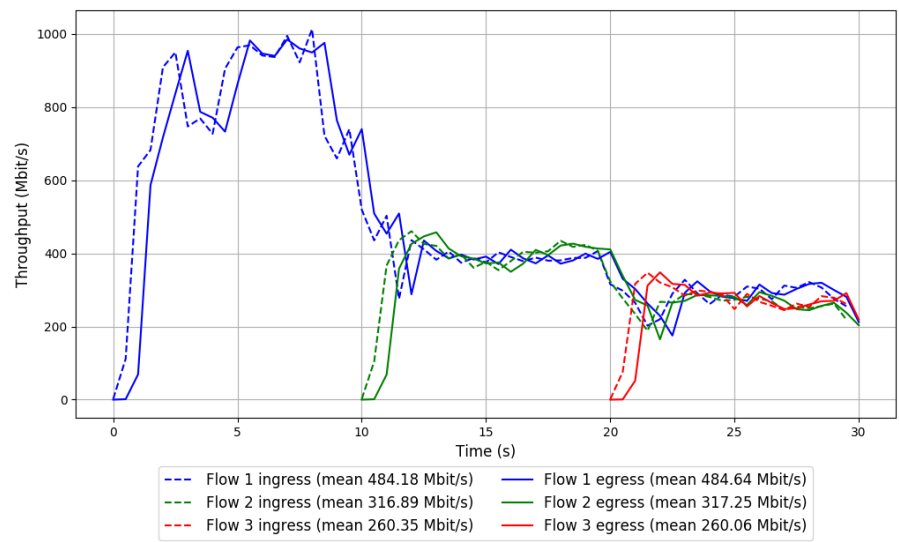Run 1: Report of FillP-Sheep — Data Link

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```
Run 2: Statistics of FillP-Sheep

Start at: 2019-08-27 21:04:21
End at: 2019-08-27 21:04:51
Local clock offset: -0.351 ms
Remote clock offset: -0.166 ms

# Below is generated by plot.py at 2019-08-28 00:35:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.96 Mbit/s
95th percentile per-packet one-way delay: 57.669 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 34.57 Mbit/s
95th percentile per-packet one-way delay: 62.146 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 315.98 Mbit/s
95th percentile per-packet one-way delay: 57.472 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 232.55 Mbit/s
95th percentile per-packet one-way delay: 57.597 ms
Loss rate: 1.49%
```
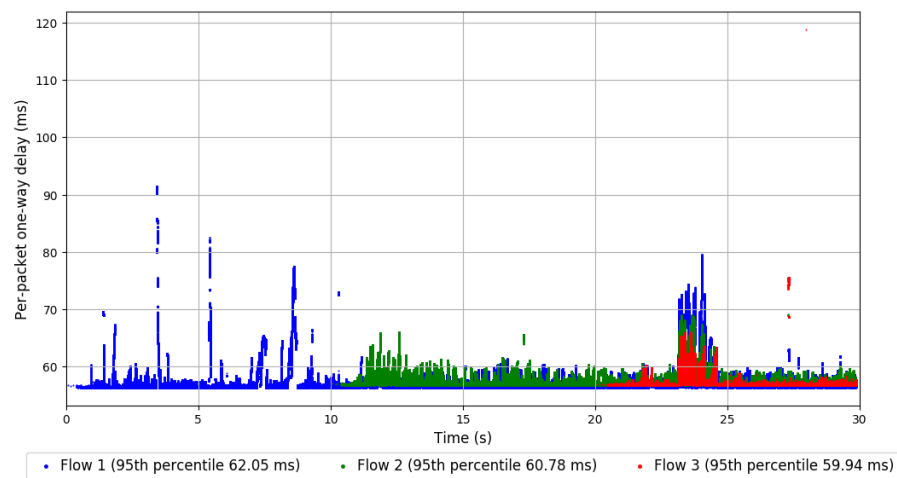
Run 2: Report of FillP-Sheep — Data Link

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```
Run 3: Statistics of FillP-Sheep

Start at: 2019-08-27 21:43:23
End at: 2019-08-27 21:43:53
Local clock offset: -0.123 ms
Remote clock offset: -0.213 ms


# Below is generated by plot.py at 2019-08-28 00:36:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 796.45 Mbit/s
95th percentile per-packet one-way delay: 61.126 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 519.56 Mbit/s
95th percentile per-packet one-way delay: 59.764 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 309.50 Mbit/s
95th percentile per-packet one-way delay: 61.695 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 216.96 Mbit/s
95th percentile per-packet one-way delay: 57.874 ms
Loss rate: 1.29%
```
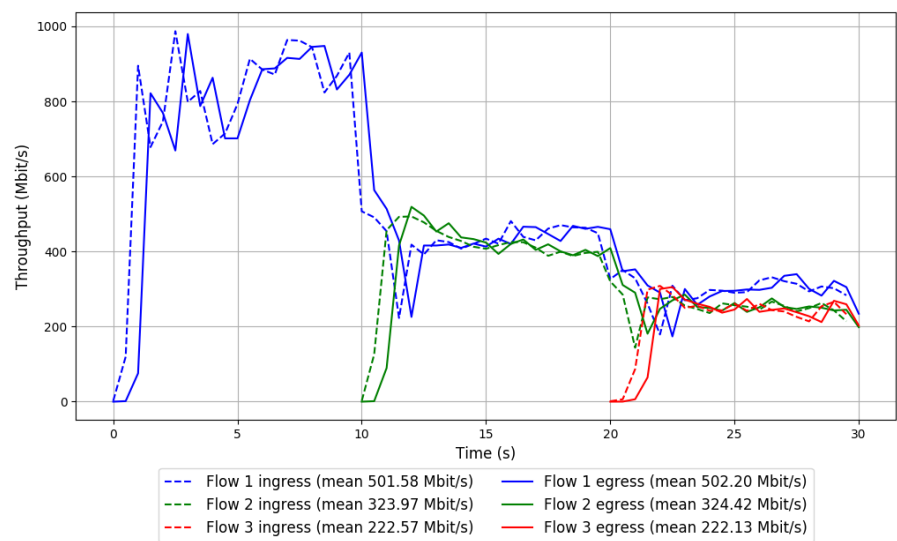
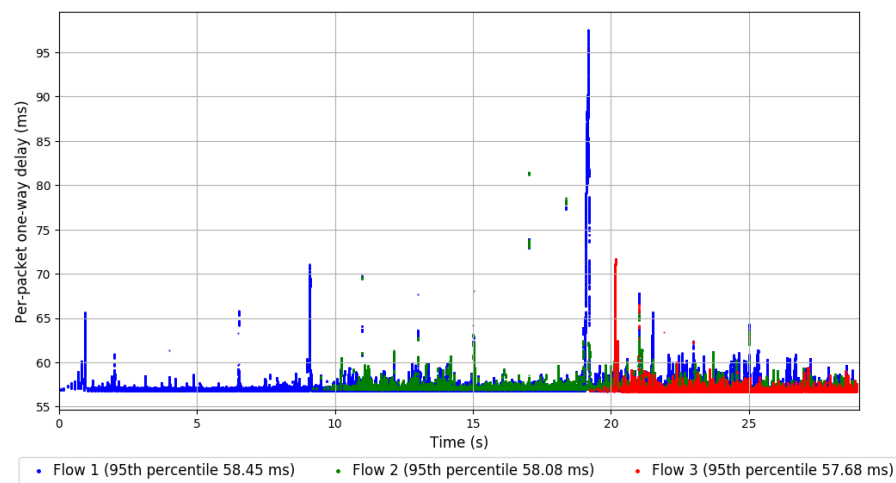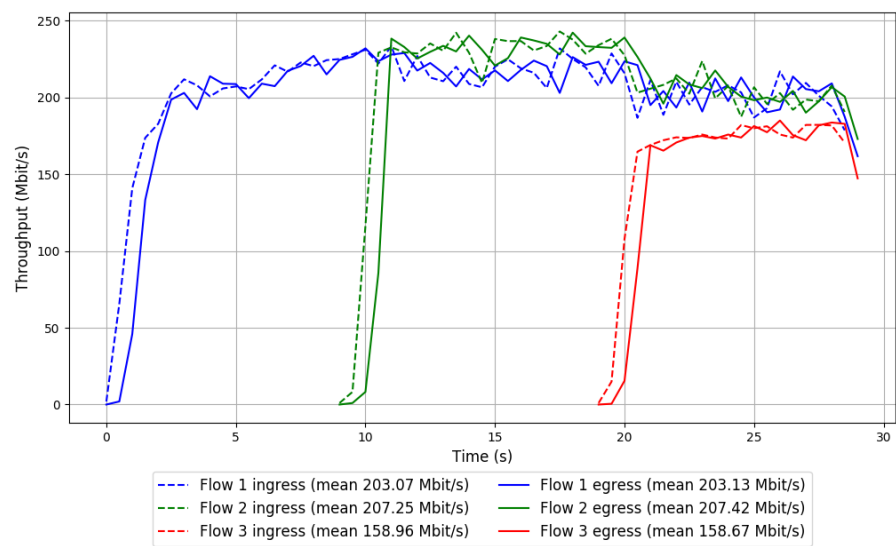# Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 518.74 Mbit/s) --- Flow 1 egress (mean 519.56 Mbit/s)
Flow 2 ingress (mean 308.96 Mbit/s) --- Flow 2 egress (mean 309.50 Mbit/s)
Flow 3 ingress (mean 216.92 Mbit/s) --- Flow 3 egress (mean 216.96 Mbit/s)

Flow 1 (95th percentile 59.76 ms) • Flow 2 (95th percentile 61.70 ms) • Flow 3 (95th percentile 57.87 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-08-27 22:22:37
End at: 2019-08-27 22:23:07
Local clock offset: 0.212 ms
Remote clock offset: -0.107 ms


# Below is generated by plot.py at 2019-08-28 00:39:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 780.99 Mbit/s
95th percentile per-packet one-way delay: 61.850 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 484.64 Mbit/s
95th percentile per-packet one-way delay: 62.497 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 317.25 Mbit/s
95th percentile per-packet one-way delay: 58.957 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 260.06 Mbit/s
95th percentile per-packet one-way delay: 61.948 ms
Loss rate: 1.27%
```

Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 484.18 Mbit/s) --- Flow 1 egress (mean 484.64 Mbit/s)
Flow 2 ingress (mean 316.89 Mbit/s) --- Flow 2 egress (mean 317.25 Mbit/s)
Flow 3 ingress (mean 260.35 Mbit/s) --- Flow 3 egress (mean 260.06 Mbit/s)

Flow 1 (95th percentile 62.50 ms) · Flow 2 (95th percentile 58.96 ms) · Flow 3 (95th percentile 61.95 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-08-27 23:01:44
End at: 2019-08-27 23:02:14
Local clock offset: -0.413 ms
Remote clock offset: 0.018 ms


# Below is generated by plot.py at 2019-08-28 00:42:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 790.66 Mbit/s
95th percentile per-packet one-way delay: 61.196 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 502.20 Mbit/s
95th percentile per-packet one-way delay: 62.045 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 324.42 Mbit/s
95th percentile per-packet one-way delay: 60.784 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 222.13 Mbit/s
95th percentile per-packet one-way delay: 59.938 ms
Loss rate: 1.30%
```

Run 5: Report of FillP-Sheep — Data Link
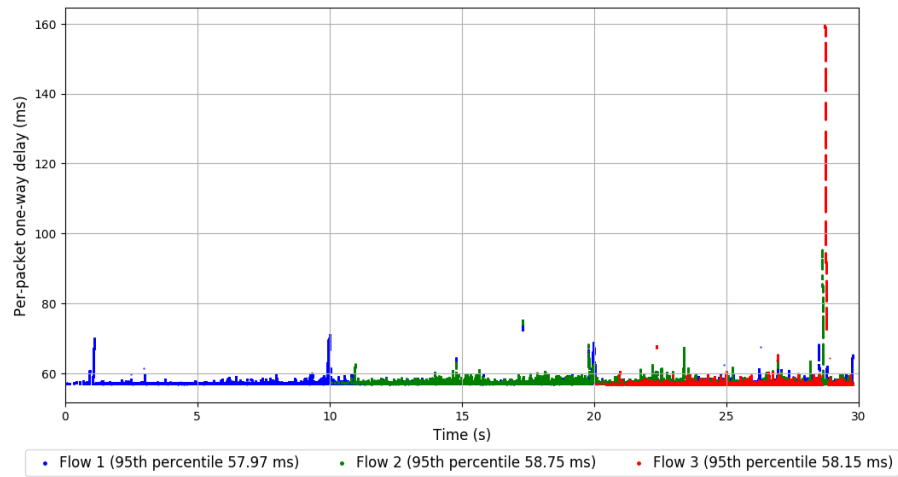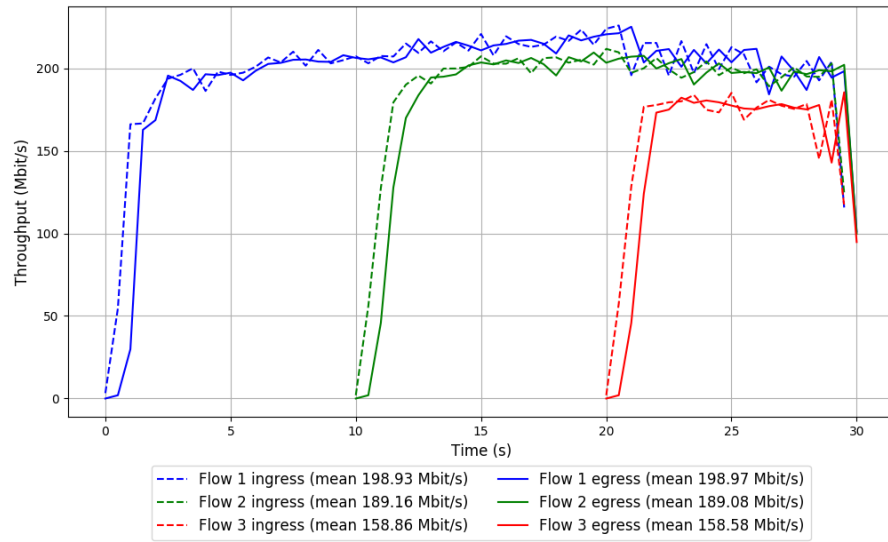

Flow 1 ingress (mean 501.58 Mbit/s) --- Flow 1 egress (mean 502.20 Mbit/s)
Flow 2 ingress (mean 323.97 Mbit/s) --- Flow 2 egress (mean 324.42 Mbit/s)
Flow 3 ingress (mean 222.57 Mbit/s) --- Flow 3 egress (mean 222.13 Mbit/s)

Flow 1 (95th percentile 62.05 ms)   Flow 2 (95th percentile 60.78 ms)   Flow 3 (95th percentile 59.94 ms)
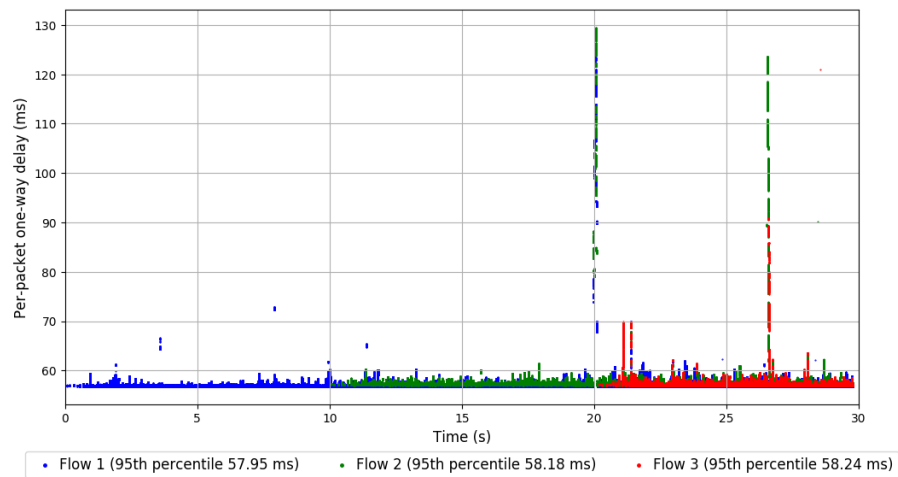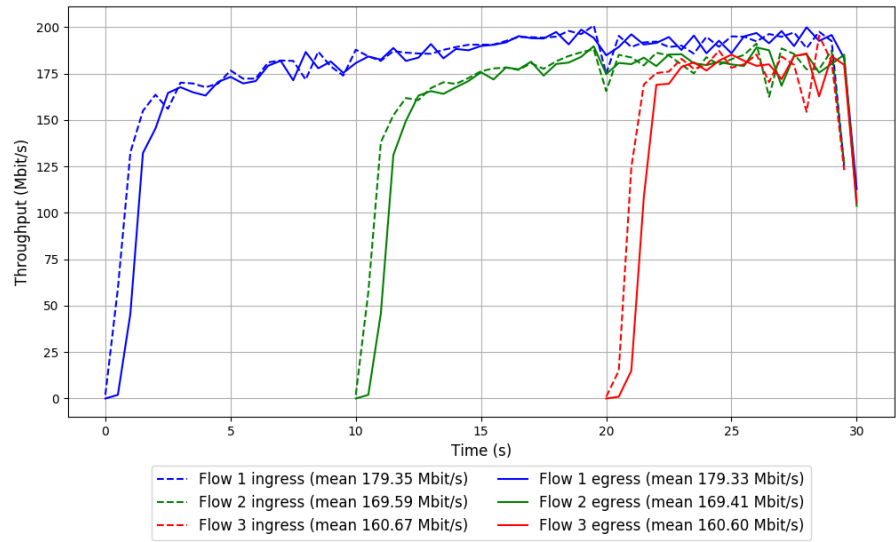
```
Run 1: Statistics of Indigo

Start at: 2019-08-27 20:57:52
End at: 2019-08-27 20:58:22
Local clock offset: -0.418 ms
Remote clock offset: -0.406 ms


# Below is generated by plot.py at 2019-08-28 00:42:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 397.90 Mbit/s
95th percentile per-packet one-way delay: 58.222 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 203.13 Mbit/s
95th percentile per-packet one-way delay: 58.455 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 207.42 Mbit/s
95th percentile per-packet one-way delay: 58.078 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 158.67 Mbit/s
95th percentile per-packet one-way delay: 57.681 ms
Loss rate: 1.34%
```

Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-08-27 21:36:58
End at: 2019-08-27 21:37:28
Local clock offset: -0.079 ms
Remote clock offset: -0.273 ms


# Below is generated by plot.py at 2019-08-28 00:44:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.21 Mbit/s
95th percentile per-packet one-way delay: 58.430 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 201.83 Mbit/s
95th percentile per-packet one-way delay: 58.612 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 177.11 Mbit/s
95th percentile per-packet one-way delay: 58.376 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 147.23 Mbit/s
95th percentile per-packet one-way delay: 57.529 ms
Loss rate: 1.26%
```
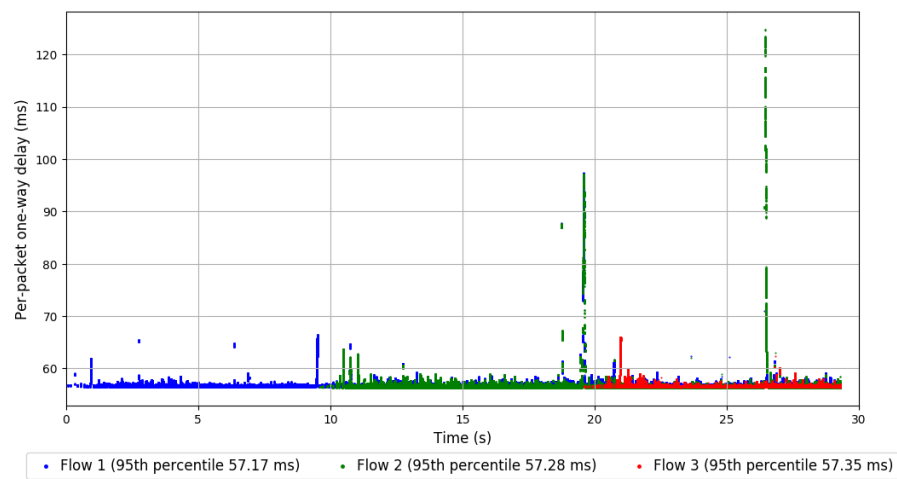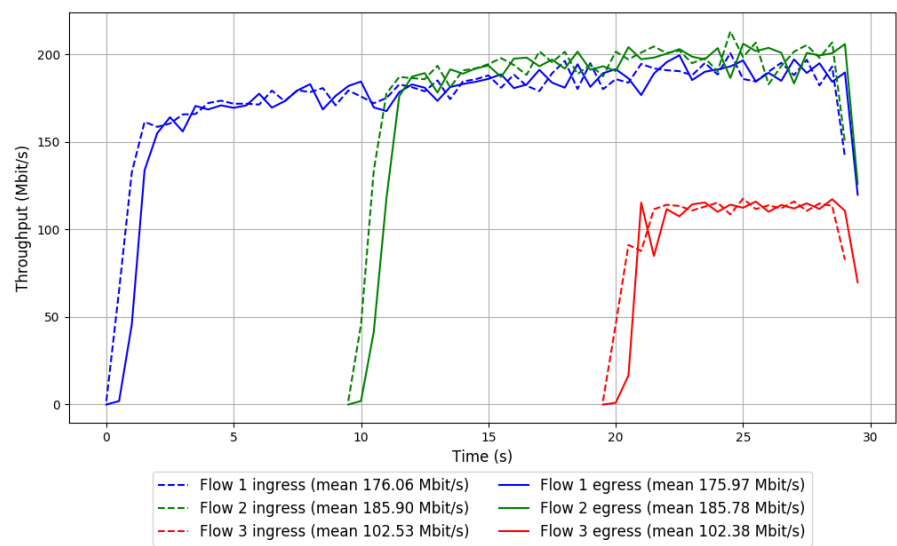
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-08-27 22:16:07
End at: 2019-08-27 22:16:37
Local clock offset: -0.087 ms
Remote clock offset: -0.025 ms


# Below is generated by plot.py at 2019-08-28 00:45:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.07 Mbit/s
95th percentile per-packet one-way delay: 58.323 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 198.97 Mbit/s
95th percentile per-packet one-way delay: 57.969 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 189.08 Mbit/s
95th percentile per-packet one-way delay: 58.746 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 158.58 Mbit/s
95th percentile per-packet one-way delay: 58.148 ms
Loss rate: 1.34%
```
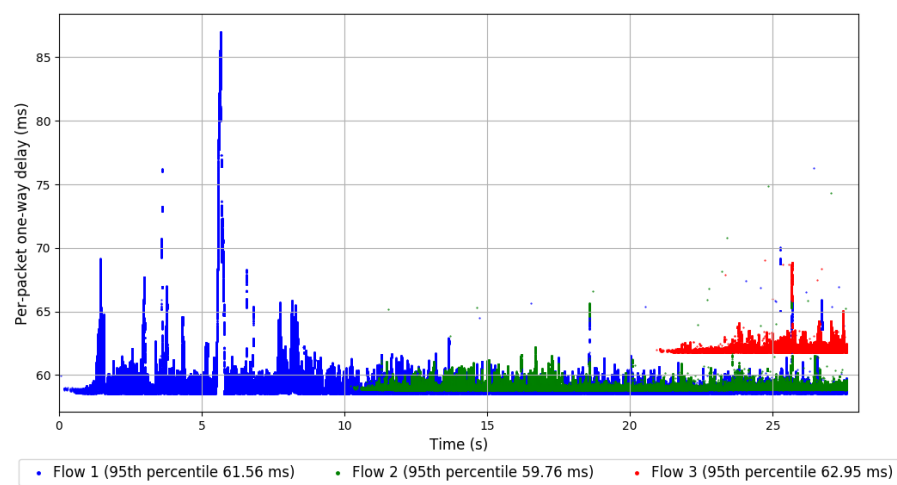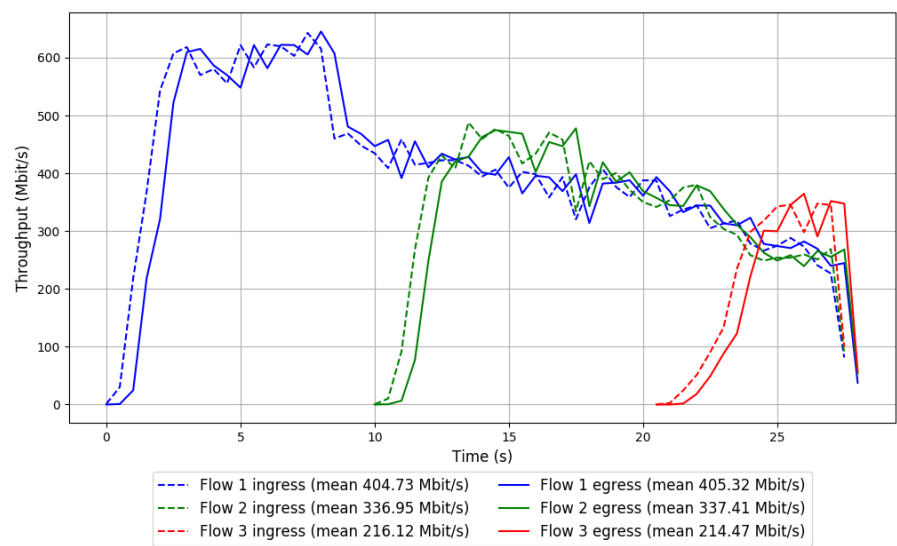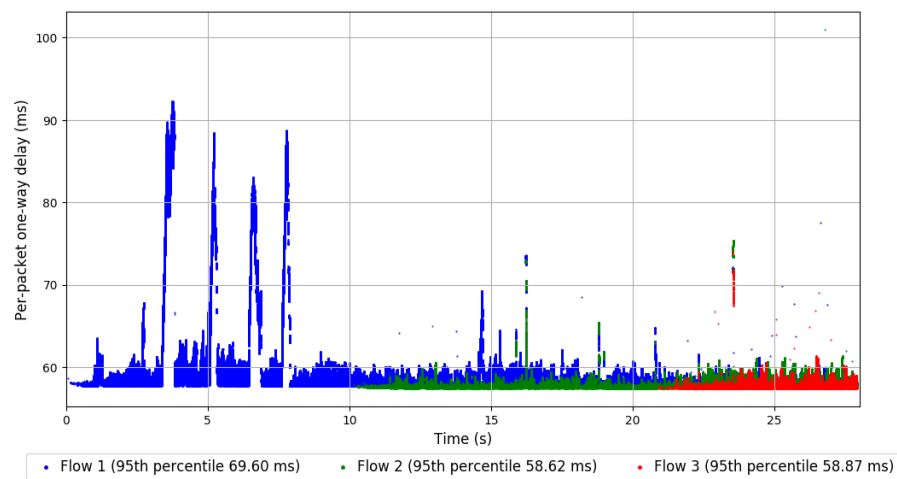
Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 198.93 Mbit/s) --- Flow 1 egress (mean 198.97 Mbit/s)
Flow 2 ingress (mean 189.16 Mbit/s) --- Flow 2 egress (mean 189.08 Mbit/s)
Flow 3 ingress (mean 158.86 Mbit/s) --- Flow 3 egress (mean 158.58 Mbit/s)

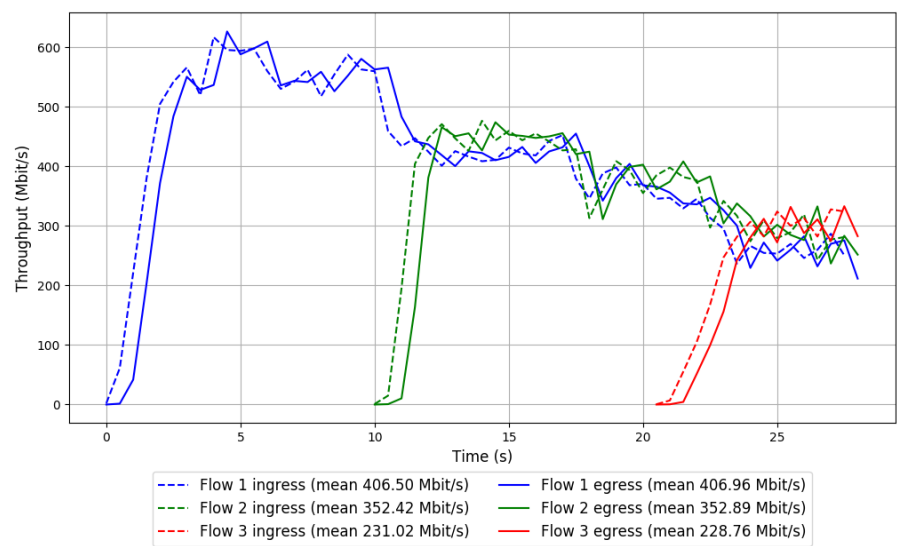Flow 1 (95th percentile 57.97 ms)   Flow 2 (95th percentile 58.75 ms)   Flow 3 (95th percentile 58.15 ms)

```
Run 4: Statistics of Indigo

Start at: 2019-08-27 22:55:19
End at: 2019-08-27 22:55:49
Local clock offset: -0.37 ms
Remote clock offset: -0.283 ms


# Below is generated by plot.py at 2019-08-28 00:45:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 343.55 Mbit/s
95th percentile per-packet one-way delay: 58.071 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 179.33 Mbit/s
95th percentile per-packet one-way delay: 57.949 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 169.41 Mbit/s
95th percentile per-packet one-way delay: 58.179 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 160.60 Mbit/s
95th percentile per-packet one-way delay: 58.242 ms
Loss rate: 1.23%
```

Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-08-27 23:34:29
End at: 2019-08-27 23:34:59
Local clock offset: -0.434 ms
Remote clock offset: 0.214 ms


# Below is generated by plot.py at 2019-08-28 00:45:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.93 Mbit/s
95th percentile per-packet one-way delay: 57.216 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 175.97 Mbit/s
95th percentile per-packet one-way delay: 57.171 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 185.78 Mbit/s
95th percentile per-packet one-way delay: 57.276 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 102.38 Mbit/s
95th percentile per-packet one-way delay: 57.355 ms
Loss rate: 1.31%
```
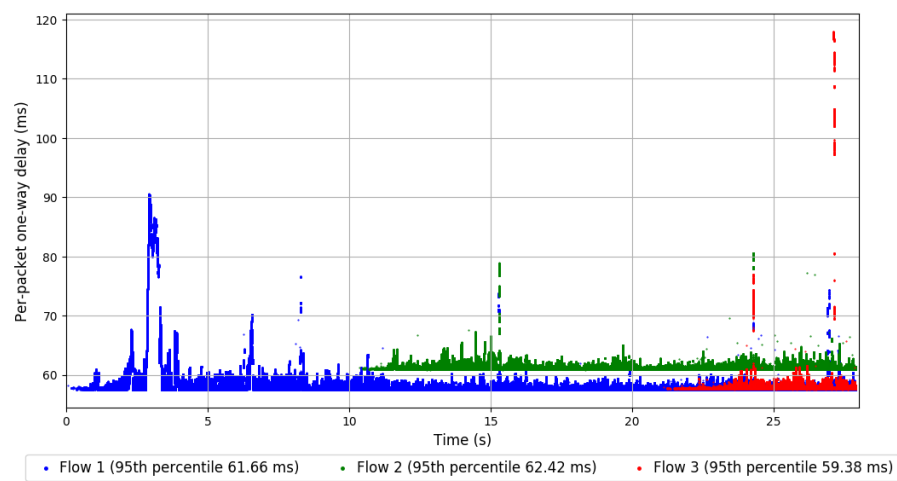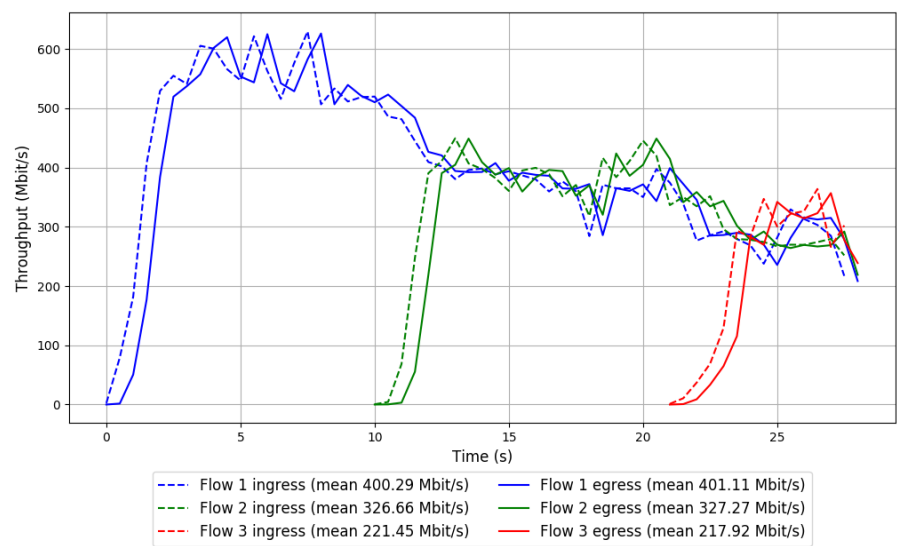
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-08-27 20:23:35
End at: 2019-08-27 20:24:05
Local clock offset: -0.06 ms
Remote clock offset: -0.87 ms


# Below is generated by plot.py at 2019-08-28 00:45:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 670.11 Mbit/s
95th percentile per-packet one-way delay: 62.084 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 405.32 Mbit/s
95th percentile per-packet one-way delay: 61.556 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 337.41 Mbit/s
95th percentile per-packet one-way delay: 59.755 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 214.47 Mbit/s
95th percentile per-packet one-way delay: 62.945 ms
Loss rate: 2.54%
```
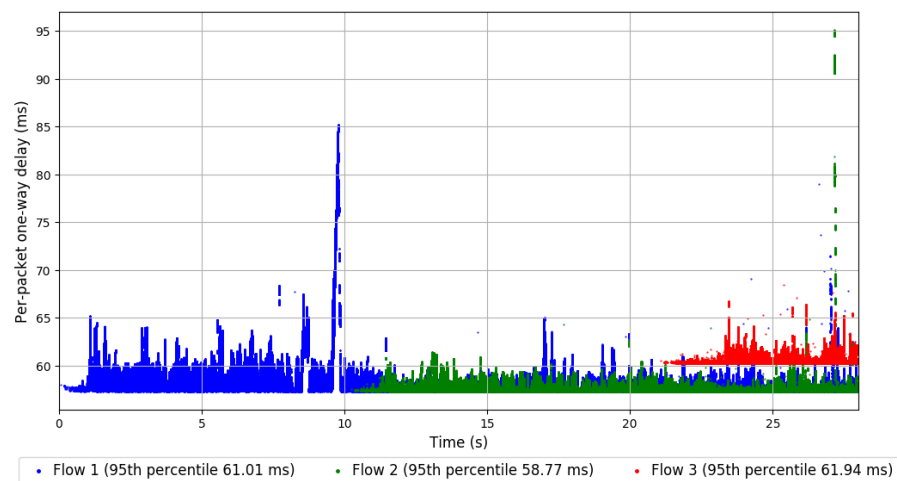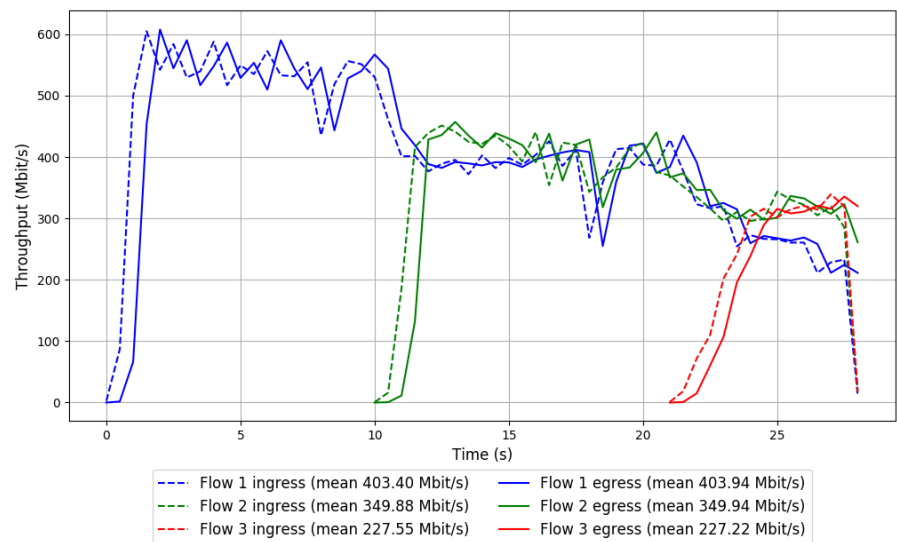
Run 1: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 404.73 Mbit/s) ---- Flow 1 egress (mean 405.32 Mbit/s)
Flow 2 ingress (mean 336.95 Mbit/s) ---- Flow 2 egress (mean 337.41 Mbit/s)
Flow 3 ingress (mean 216.12 Mbit/s) ---- Flow 3 egress (mean 214.47 Mbit/s)

Flow 1 (95th percentile 61.56 ms)   Flow 2 (95th percentile 59.76 ms)   Flow 3 (95th percentile 62.95 ms)

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-08-27 21:02:41
End at: 2019-08-27 21:03:11
Local clock offset: -0.165 ms
Remote clock offset: -0.815 ms


# Below is generated by plot.py at 2019-08-28 00:48:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 690.10 Mbit/s
95th percentile per-packet one-way delay: 61.973 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 406.96 Mbit/s
95th percentile per-packet one-way delay: 69.600 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 352.89 Mbit/s
95th percentile per-packet one-way delay: 58.624 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 228.76 Mbit/s
95th percentile per-packet one-way delay: 58.868 ms
Loss rate: 2.55%
```
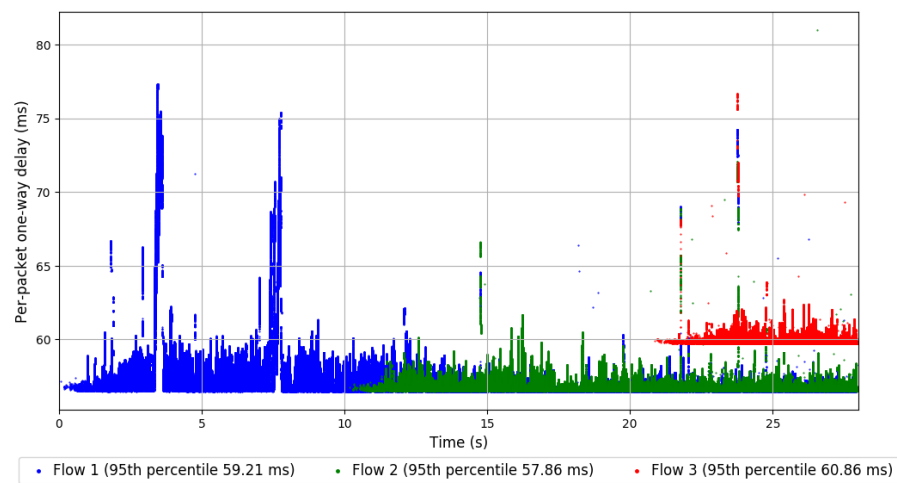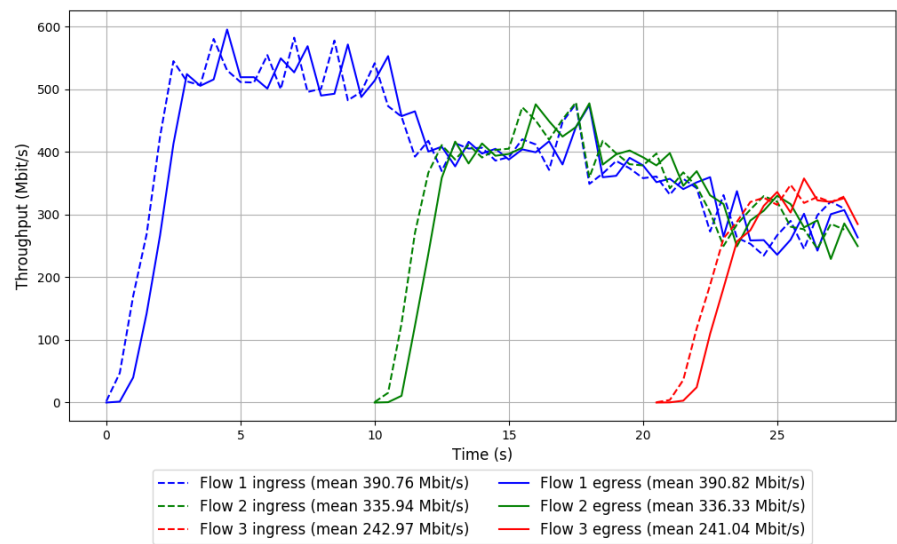
Run 2: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 406.50 Mbit/s) --- Flow 1 egress (mean 406.96 Mbit/s)
Flow 2 ingress (mean 352.42 Mbit/s) --- Flow 2 egress (mean 352.89 Mbit/s)
Flow 3 ingress (mean 231.02 Mbit/s) --- Flow 3 egress (mean 228.76 Mbit/s)

Flow 1 (95th percentile 69.60 ms)   Flow 2 (95th percentile 58.62 ms)   Flow 3 (95th percentile 58.87 ms)
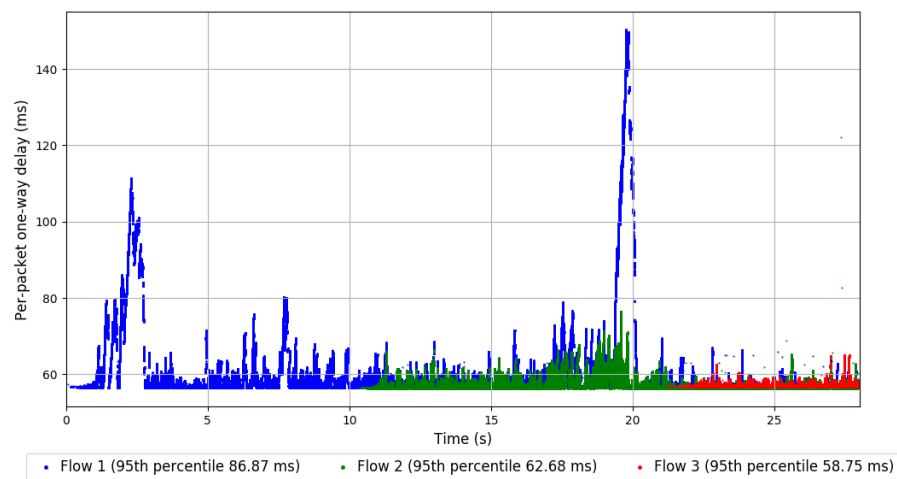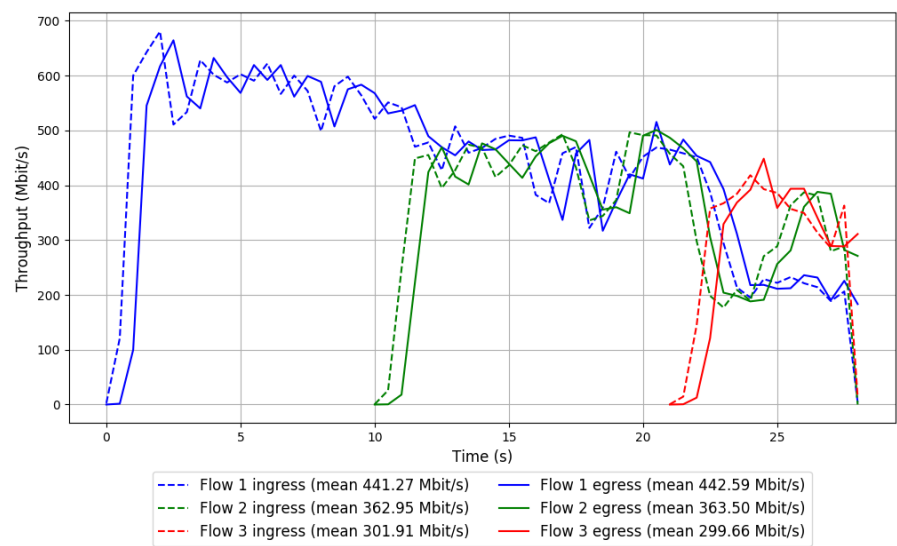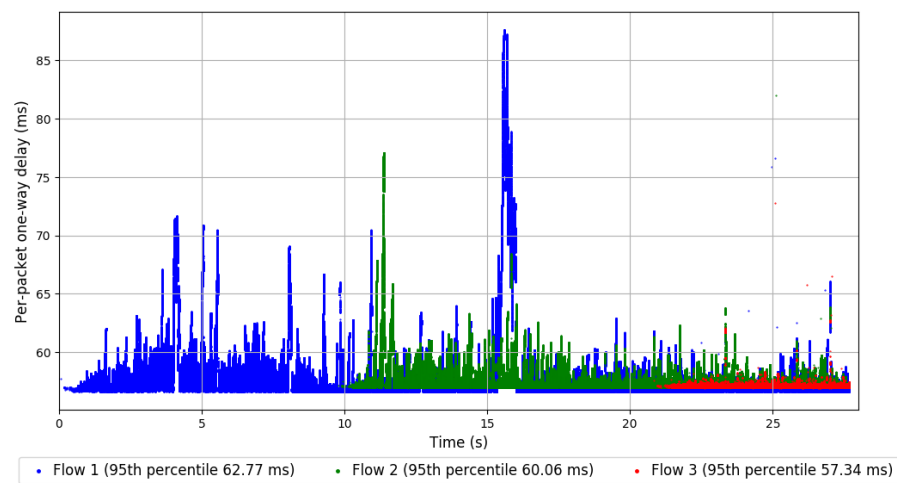
68

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-08-27 21:41:44
End at: 2019-08-27 21:42:14
Local clock offset: 0.038 ms
Remote clock offset: -0.795 ms


# Below is generated by plot.py at 2019-08-28 00:49:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 660.18 Mbit/s
95th percentile per-packet one-way delay: 62.207 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 401.11 Mbit/s
95th percentile per-packet one-way delay: 61.658 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 327.27 Mbit/s
95th percentile per-packet one-way delay: 62.416 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 217.92 Mbit/s
95th percentile per-packet one-way delay: 59.380 ms
Loss rate: 3.26%
```

Run 3: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 400.29 Mbit/s)   —— Flow 1 egress (mean 401.11 Mbit/s)
- - - - Flow 2 ingress (mean 326.66 Mbit/s)   —— Flow 2 egress (mean 327.27 Mbit/s)
- - - - Flow 3 ingress (mean 221.45 Mbit/s)   —— Flow 3 egress (mean 217.92 Mbit/s)

- Flow 1 (95th percentile 61.66 ms)   • Flow 2 (95th percentile 62.42 ms)   • Flow 3 (95th percentile 59.38 ms)
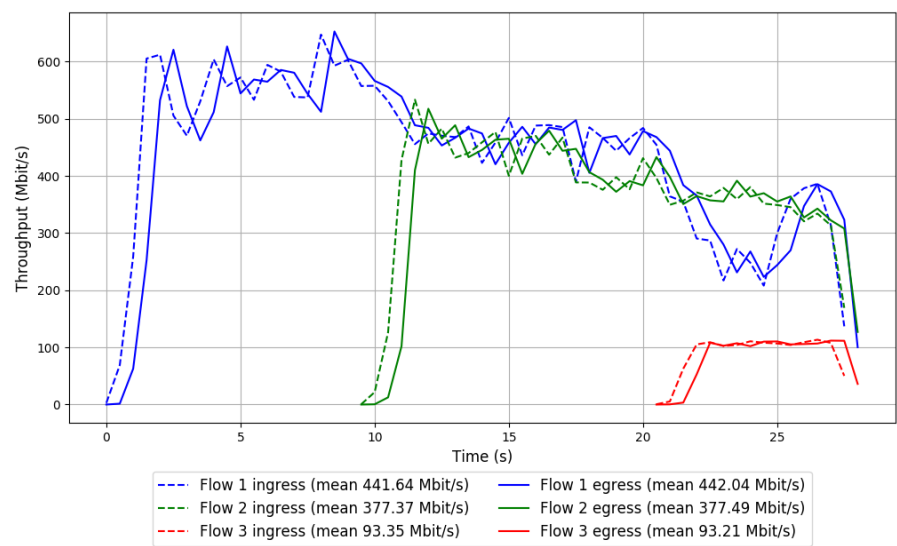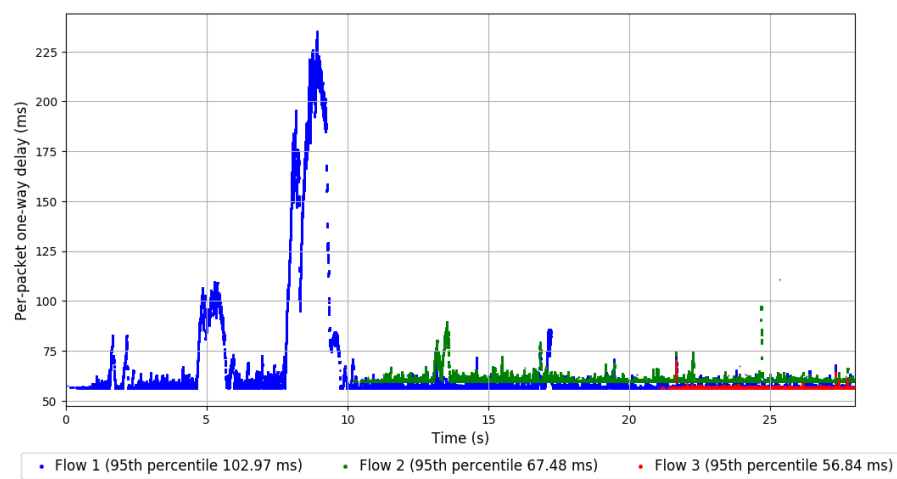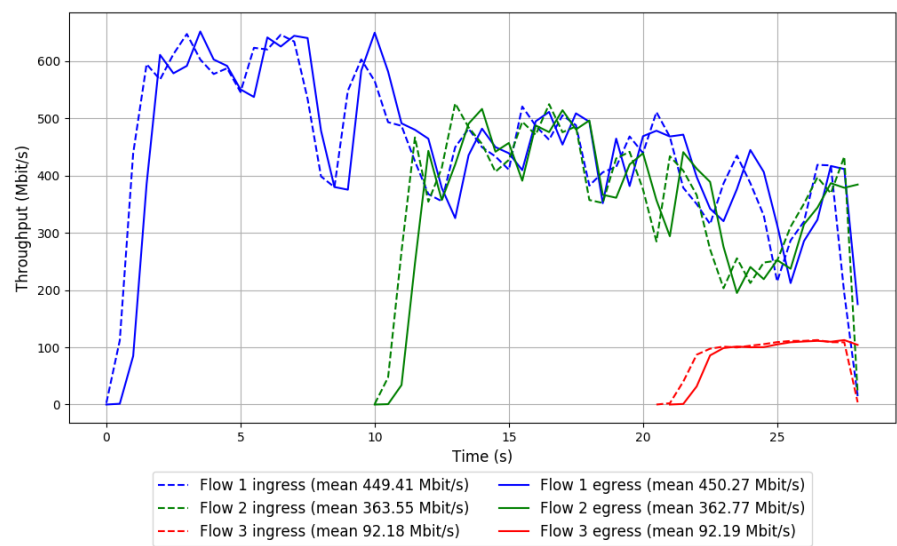
70

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-08-27 22:20:57
End at: 2019-08-27 22:21:27
Local clock offset: 0.147 ms
Remote clock offset: 0.01 ms


# Below is generated by plot.py at 2019-08-28 00:51:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 682.32 Mbit/s
95th percentile per-packet one-way delay: 60.912 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 403.94 Mbit/s
95th percentile per-packet one-way delay: 61.008 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 349.94 Mbit/s
95th percentile per-packet one-way delay: 58.769 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 227.22 Mbit/s
95th percentile per-packet one-way delay: 61.935 ms
Loss rate: 1.83%
```

Run 4: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 403.40 Mbit/s) ---- Flow 1 egress (mean 403.94 Mbit/s)
Flow 2 ingress (mean 349.88 Mbit/s) ---- Flow 2 egress (mean 349.94 Mbit/s)
Flow 3 ingress (mean 227.55 Mbit/s) ---- Flow 3 egress (mean 227.22 Mbit/s)

Flow 1 (95th percentile 61.01 ms) Flow 2 (95th percentile 58.77 ms) Flow 3 (95th percentile 61.94 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-08-27 23:00:05
End at: 2019-08-27 23:00:35
Local clock offset: 0.377 ms
Remote clock offset: 0.816 ms


# Below is generated by plot.py at 2019-08-28 00:53:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 666.06 Mbit/s
95th percentile per-packet one-way delay: 60.036 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 390.82 Mbit/s
95th percentile per-packet one-way delay: 59.214 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 336.33 Mbit/s
95th percentile per-packet one-way delay: 57.857 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 241.04 Mbit/s
95th percentile per-packet one-way delay: 60.862 ms
Loss rate: 2.43%
```
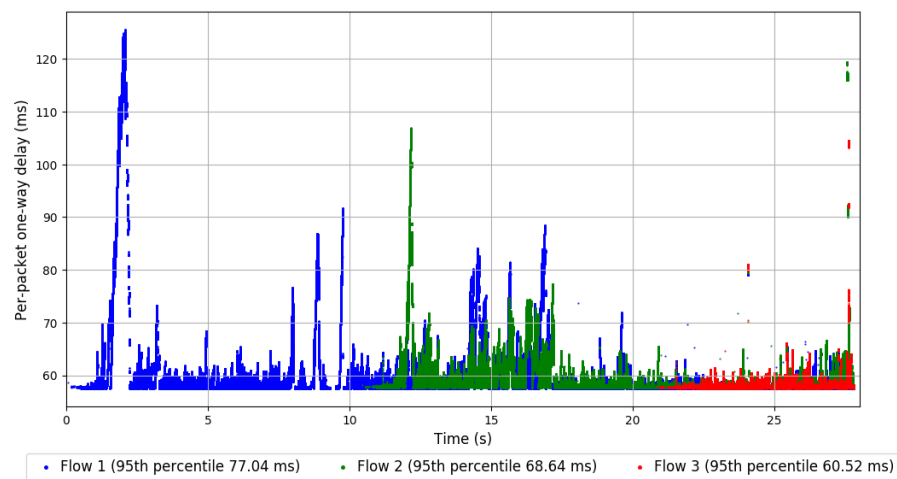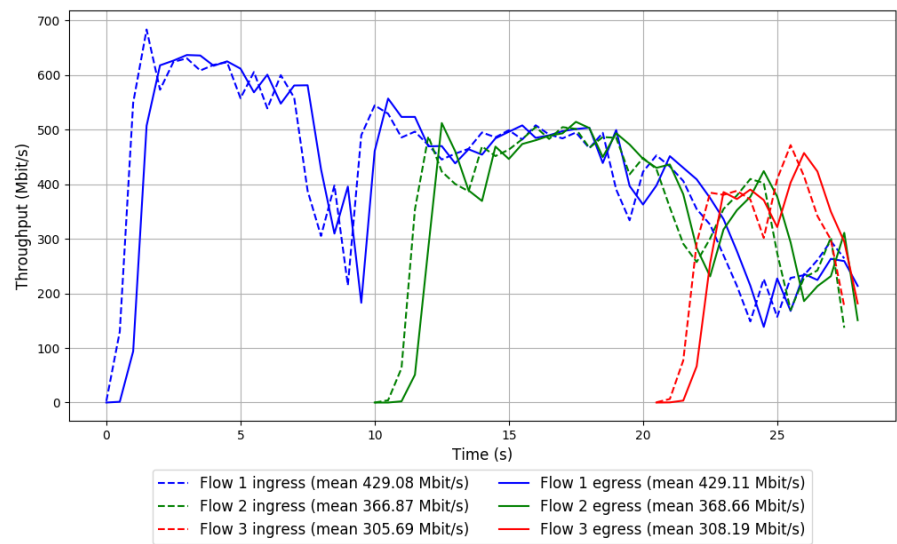
Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 390.76 Mbit/s) --- Flow 1 egress (mean 390.82 Mbit/s)
Flow 2 ingress (mean 335.94 Mbit/s) --- Flow 2 egress (mean 336.33 Mbit/s)
Flow 3 ingress (mean 242.97 Mbit/s) --- Flow 3 egress (mean 241.04 Mbit/s)

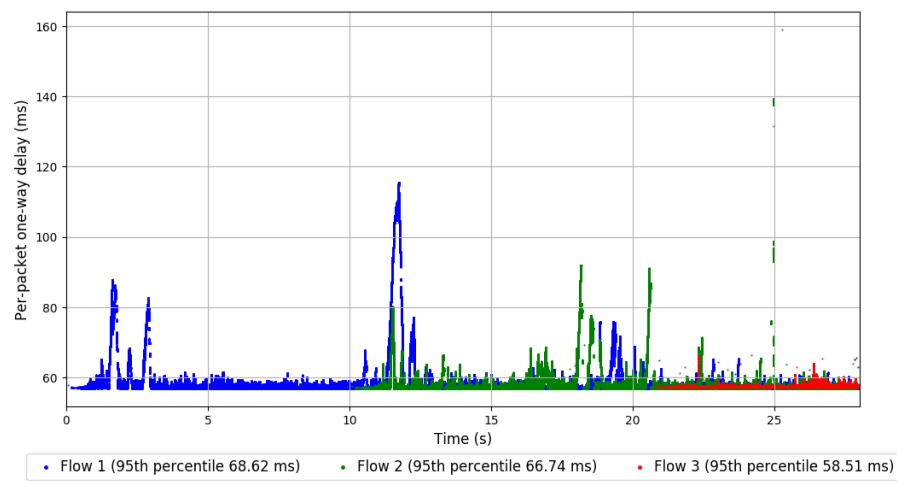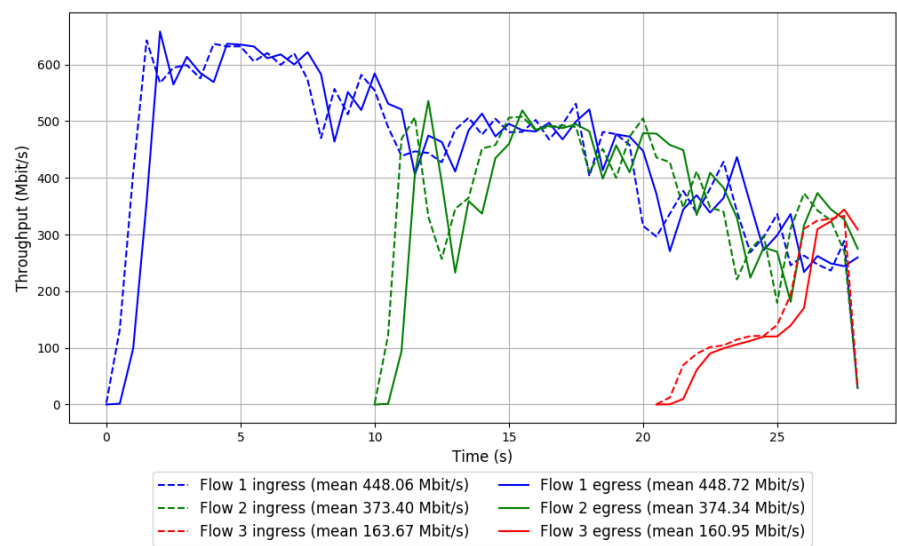Flow 1 (95th percentile 59.21 ms) • Flow 2 (95th percentile 57.86 ms) • Flow 3 (95th percentile 60.86 ms)

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-08-27 20:51:24
End at: 2019-08-27 20:51:54
Local clock offset: -0.606 ms
Remote clock offset: -0.117 ms


# Below is generated by plot.py at 2019-08-28 00:54:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 744.98 Mbit/s
95th percentile per-packet one-way delay: 72.935 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 442.59 Mbit/s
95th percentile per-packet one-way delay: 86.874 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 363.50 Mbit/s
95th percentile per-packet one-way delay: 62.679 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 299.66 Mbit/s
95th percentile per-packet one-way delay: 58.754 ms
Loss rate: 2.42%
```
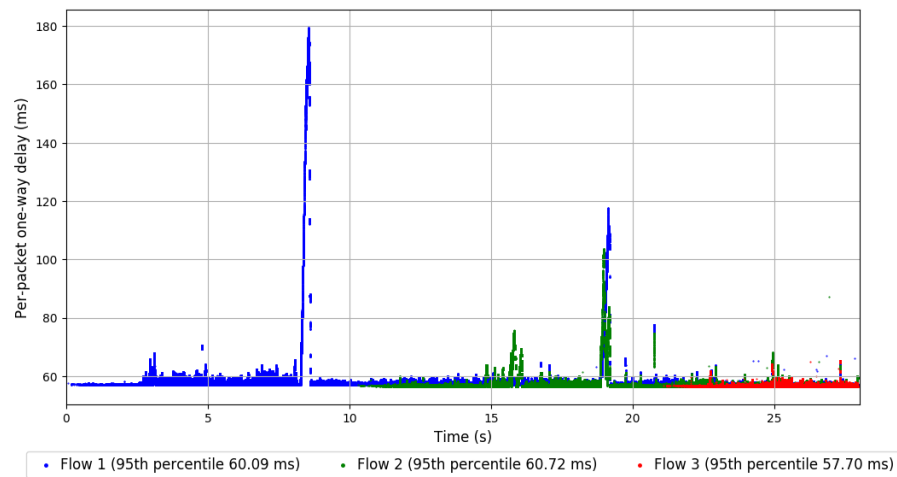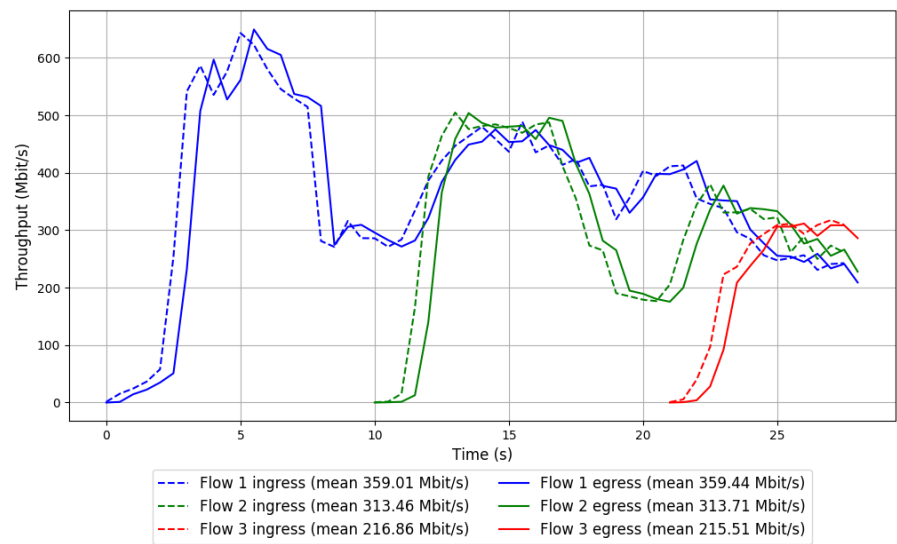
Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-08-27 21:30:29
End at: 2019-08-27 21:30:59
Local clock offset: -0.311 ms
Remote clock offset: -0.238 ms

# Below is generated by plot.py at 2019-08-28 00:54:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 709.70 Mbit/s
95th percentile per-packet one-way delay: 61.258 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 442.04 Mbit/s
95th percentile per-packet one-way delay: 62.765 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 377.49 Mbit/s
95th percentile per-packet one-way delay: 60.061 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 93.21 Mbit/s
95th percentile per-packet one-way delay: 57.336 ms
Loss rate: 1.93%
```

Run 2: Report of Indigo-MusesC5 — Data Link

- - - - Flow 1 ingress (mean 441.64 Mbit/s)   —— Flow 1 egress (mean 442.04 Mbit/s)
- - - - Flow 2 ingress (mean 377.37 Mbit/s)   —— Flow 2 egress (mean 377.49 Mbit/s)
- - - - Flow 3 ingress (mean 93.35 Mbit/s)   —— Flow 3 egress (mean 93.21 Mbit/s)

- Flow 1 (95th percentile 62.77 ms)   • Flow 2 (95th percentile 60.06 ms)   • Flow 3 (95th percentile 57.34 ms)

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```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-08-27 22:09:41
End at: 2019-08-27 22:10:11
Local clock offset: -0.67 ms
Remote clock offset: -0.251 ms


# Below is generated by plot.py at 2019-08-28 00:55:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 704.87 Mbit/s
95th percentile per-packet one-way delay: 90.959 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 450.27 Mbit/s
95th percentile per-packet one-way delay: 102.968 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 362.77 Mbit/s
95th percentile per-packet one-way delay: 67.479 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 92.19 Mbit/s
95th percentile per-packet one-way delay: 56.836 ms
Loss rate: 1.63%
```
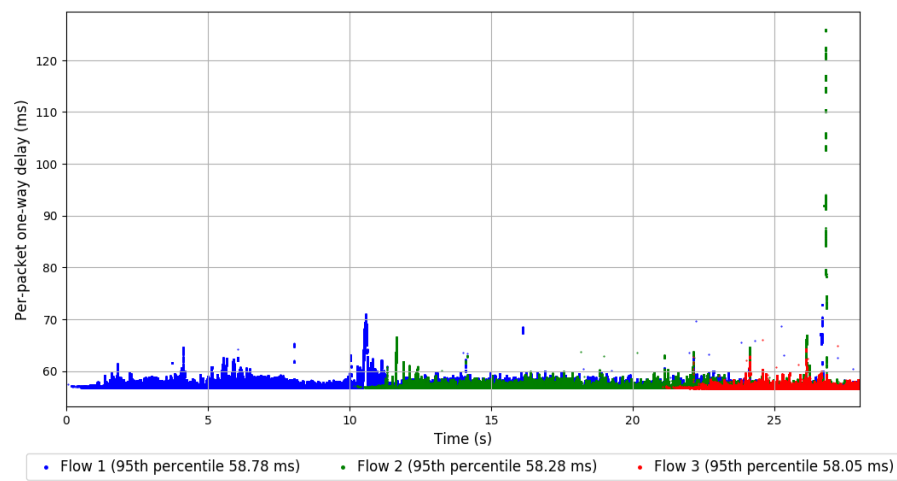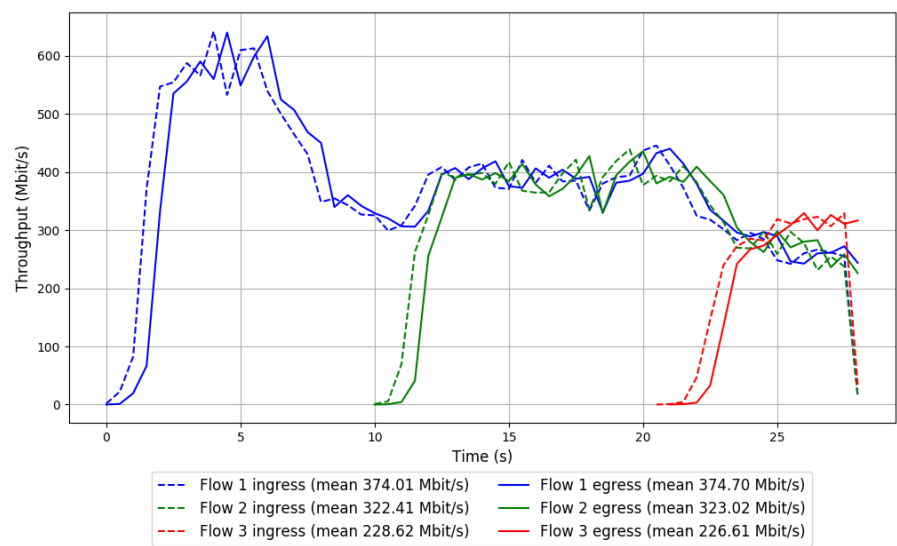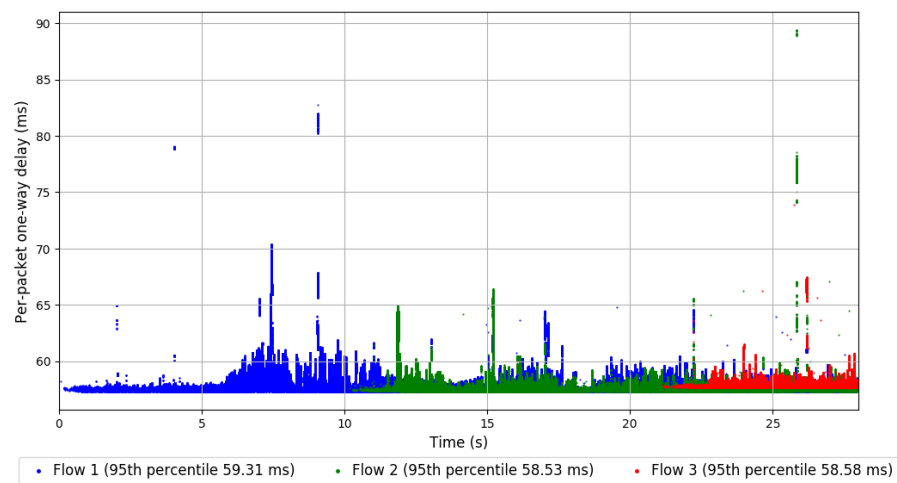
Run 3: Report of Indigo-MusesC5 — Data Link

- - - - Flow 1 ingress (mean 449.41 Mbit/s) —— Flow 1 egress (mean 450.27 Mbit/s)
- - - - Flow 2 ingress (mean 363.55 Mbit/s) —— Flow 2 egress (mean 362.77 Mbit/s)
- - - - Flow 3 ingress (mean 92.18 Mbit/s) —— Flow 3 egress (mean 92.19 Mbit/s)

• Flow 1 (95th percentile 102.97 ms)   • Flow 2 (95th percentile 67.48 ms)   • Flow 3 (95th percentile 56.84 ms)
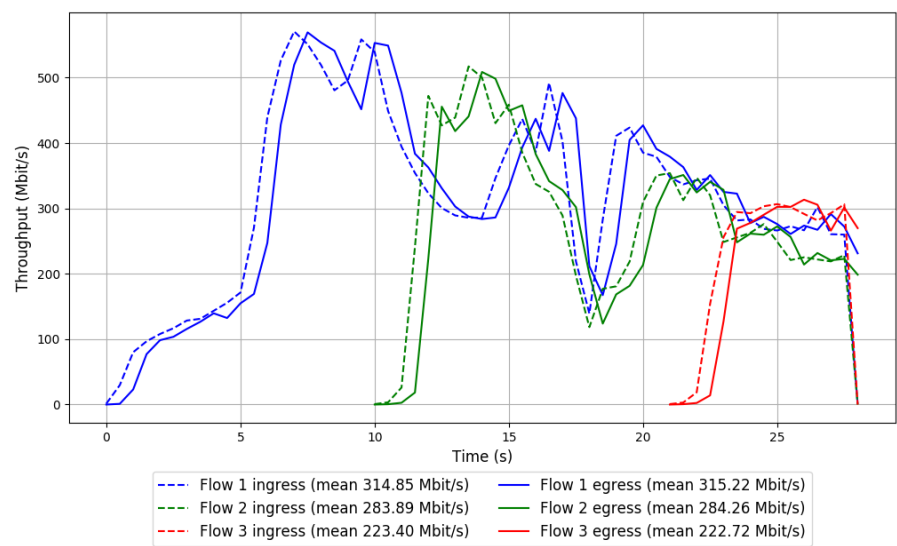
80

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-08-27 22:48:53
End at: 2019-08-27 22:49:23
Local clock offset: 0.391 ms
Remote clock offset: 0.065 ms


# Below is generated by plot.py at 2019-08-28 00:56:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 736.70 Mbit/s
95th percentile per-packet one-way delay: 71.695 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 429.11 Mbit/s
95th percentile per-packet one-way delay: 77.040 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 368.66 Mbit/s
95th percentile per-packet one-way delay: 68.635 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 308.19 Mbit/s
95th percentile per-packet one-way delay: 60.520 ms
Loss rate: 0.91%
```

Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-08-27 23:27:56
End at: 2019-08-27 23:28:26
Local clock offset: -0.154 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2019-08-28 00:59:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 729.61 Mbit/s
95th percentile per-packet one-way delay: 67.294 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 448.72 Mbit/s
95th percentile per-packet one-way delay: 68.619 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 374.34 Mbit/s
95th percentile per-packet one-way delay: 66.740 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 160.95 Mbit/s
95th percentile per-packet one-way delay: 58.509 ms
Loss rate: 3.28%
```
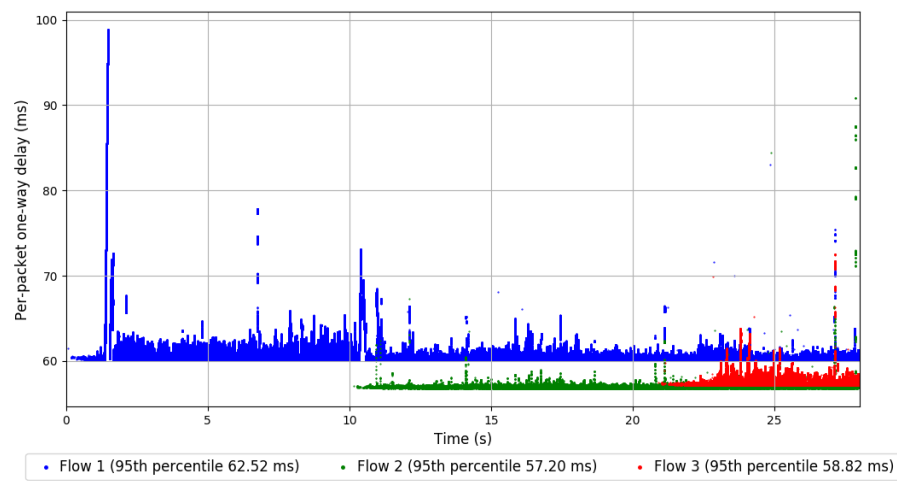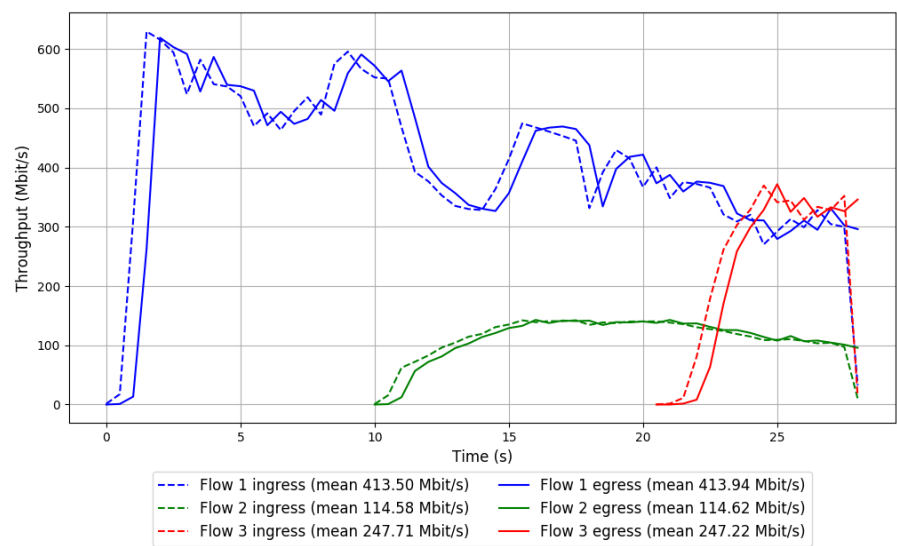
Run 5: Report of Indigo-MusesC5 — Data Link

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```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-08-27 20:54:19
End at: 2019-08-27 20:54:49
Local clock offset: -0.592 ms
Remote clock offset: -0.278 ms


# Below is generated by plot.py at 2019-08-28 00:59:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 610.96 Mbit/s
95th percentile per-packet one-way delay: 60.010 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 359.44 Mbit/s
95th percentile per-packet one-way delay: 60.093 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 313.71 Mbit/s
95th percentile per-packet one-way delay: 60.719 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 215.51 Mbit/s
95th percentile per-packet one-way delay: 57.700 ms
Loss rate: 2.24%
```
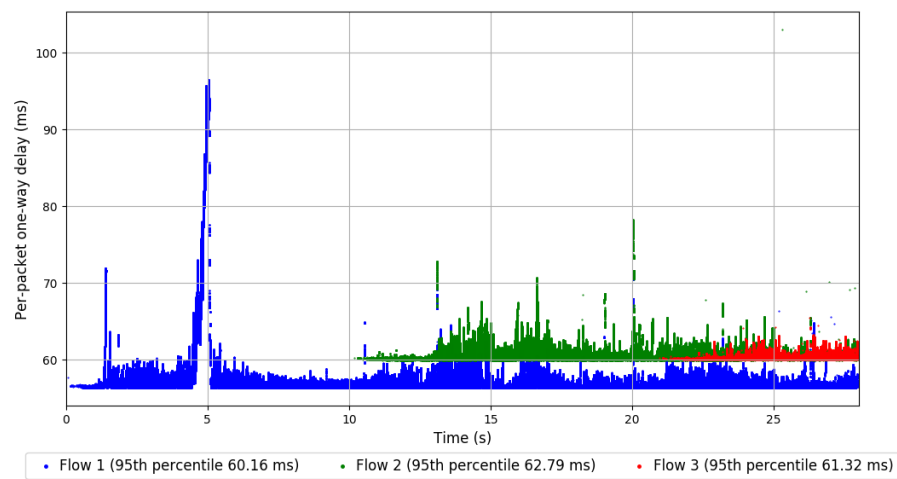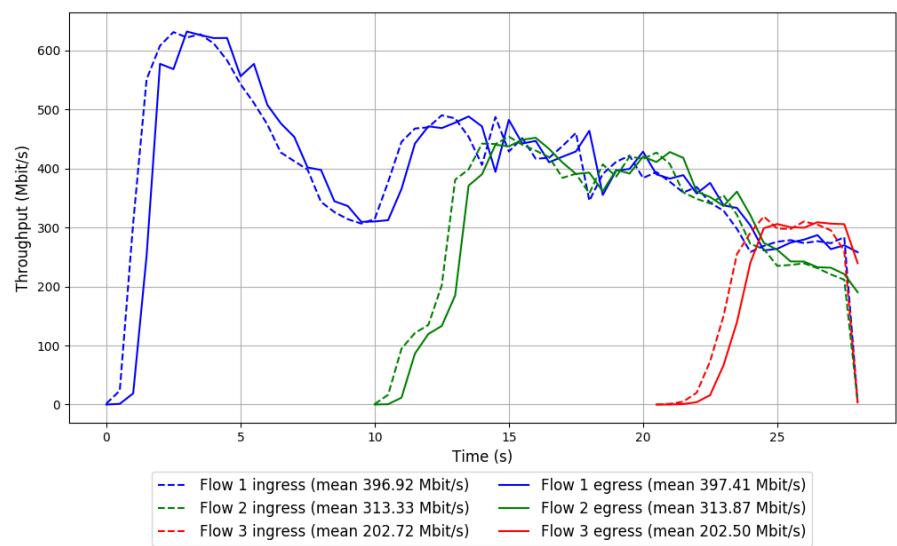
Run 1: Report of Indigo-MusesD — Data Link

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```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-08-27 21:33:22
End at: 2019-08-27 21:33:52
Local clock offset: -0.091 ms
Remote clock offset: -0.14 ms

# Below is generated by plot.py at 2019-08-28 01:00:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 636.95 Mbit/s
95th percentile per-packet one-way delay: 58.592 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 374.70 Mbit/s
95th percentile per-packet one-way delay: 58.783 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 323.02 Mbit/s
95th percentile per-packet one-way delay: 58.279 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 226.61 Mbit/s
95th percentile per-packet one-way delay: 58.055 ms
Loss rate: 2.53%
```
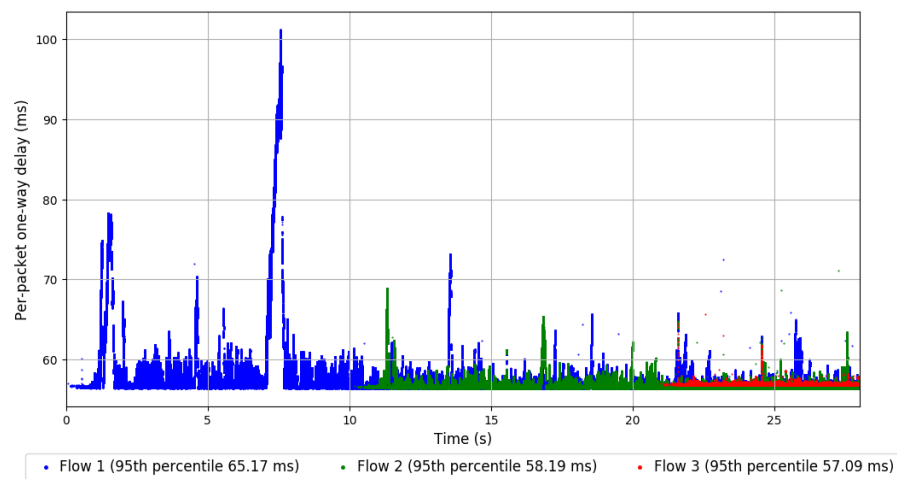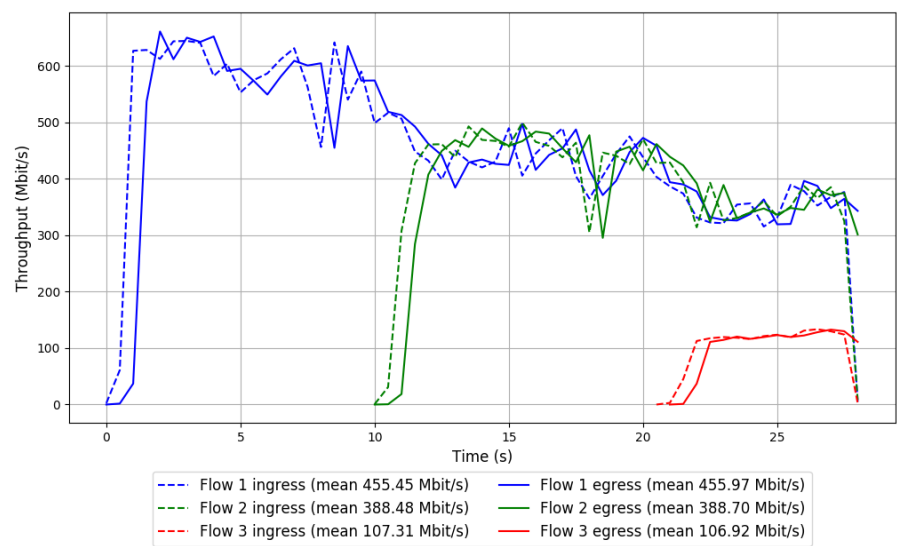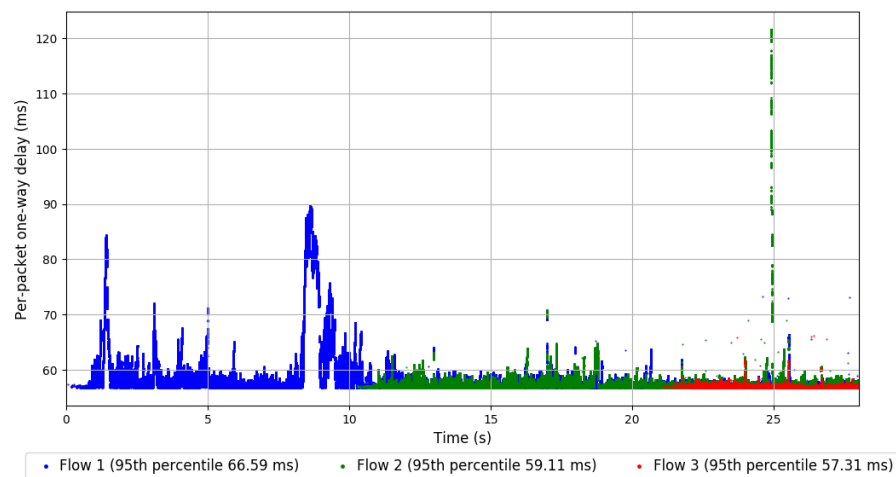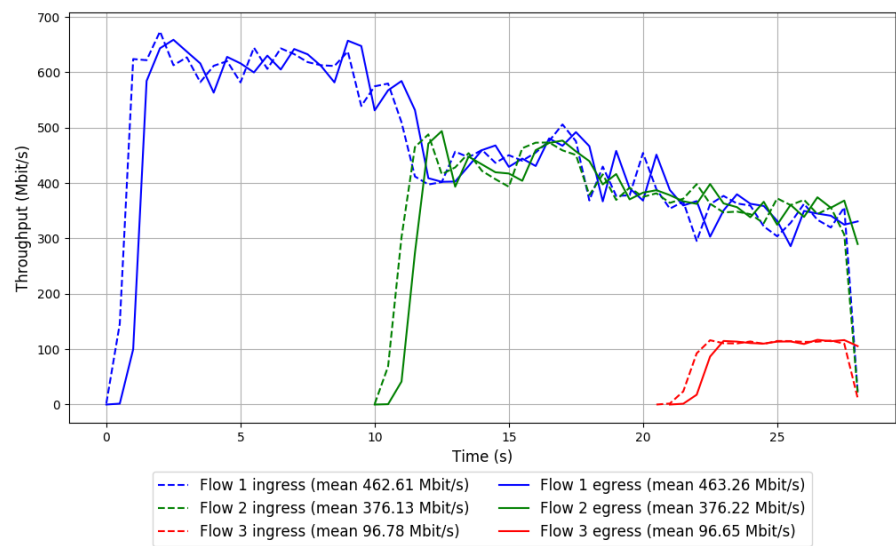
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-08-27 22:12:35
End at: 2019-08-27 22:13:05
Local clock offset: 0.32 ms
Remote clock offset: -0.184 ms


# Below is generated by plot.py at 2019-08-28 01:01:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 550.69 Mbit/s
95th percentile per-packet one-way delay: 59.014 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 315.22 Mbit/s
95th percentile per-packet one-way delay: 59.315 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 284.26 Mbit/s
95th percentile per-packet one-way delay: 58.533 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 222.72 Mbit/s
95th percentile per-packet one-way delay: 58.575 ms
Loss rate: 1.99%
```
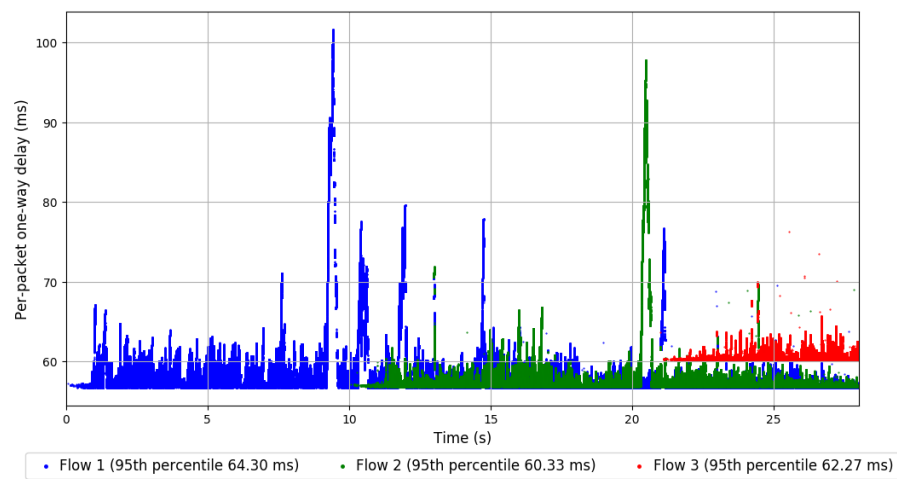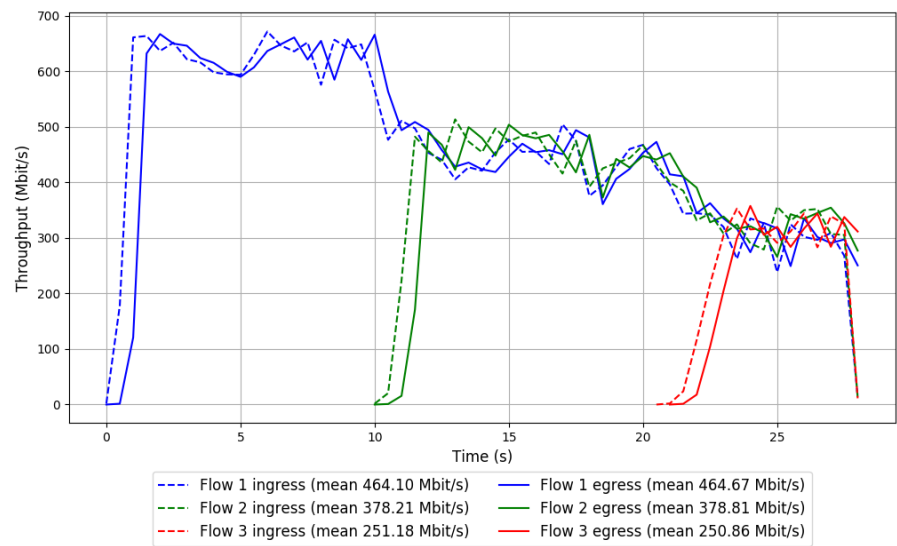
Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-08-27 22:51:48
End at: 2019-08-27 22:52:18
Local clock offset: -0.051 ms
Remote clock offset: 0.024 ms


# Below is generated by plot.py at 2019-08-28 01:02:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 549.71 Mbit/s
95th percentile per-packet one-way delay: 62.114 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 413.94 Mbit/s
95th percentile per-packet one-way delay: 62.518 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 114.62 Mbit/s
95th percentile per-packet one-way delay: 57.203 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 247.22 Mbit/s
95th percentile per-packet one-way delay: 58.816 ms
Loss rate: 1.79%
```

Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-08-27 23:30:51
End at: 2019-08-27 23:31:21
Local clock offset: -0.54 ms
Remote clock offset: 0.051 ms


# Below is generated by plot.py at 2019-08-28 01:04:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 648.05 Mbit/s
95th percentile per-packet one-way delay: 61.986 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 397.41 Mbit/s
95th percentile per-packet one-way delay: 60.160 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 313.87 Mbit/s
95th percentile per-packet one-way delay: 62.789 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 202.50 Mbit/s
95th percentile per-packet one-way delay: 61.324 ms
Loss rate: 1.72%
```
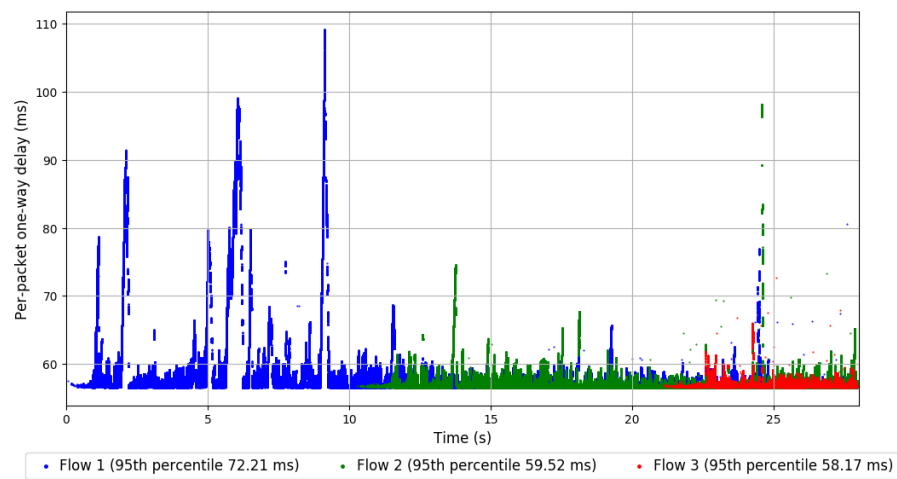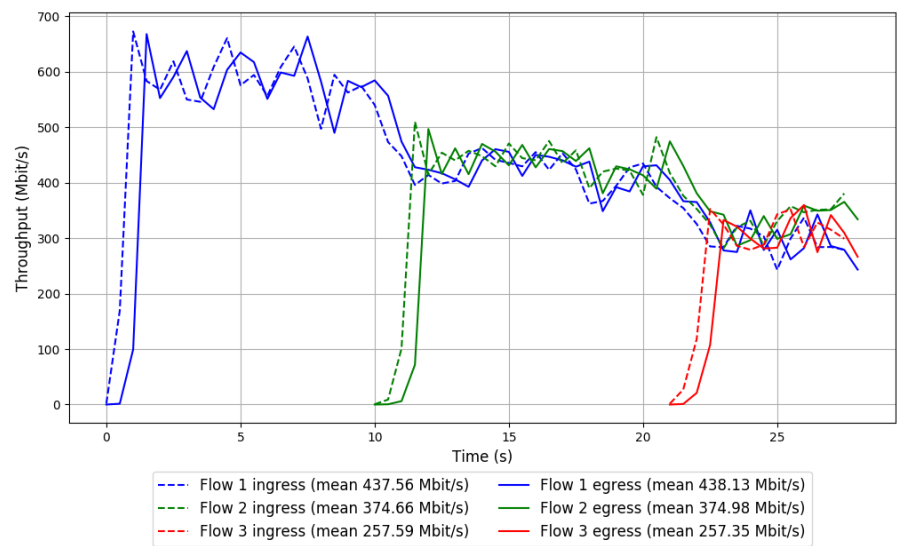
Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-08-27 20:31:23
End at: 2019-08-27 20:31:53
Local clock offset: -0.719 ms
Remote clock offset: 0.127 ms


# Below is generated by plot.py at 2019-08-28 01:05:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 730.18 Mbit/s
95th percentile per-packet one-way delay: 61.344 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 455.97 Mbit/s
95th percentile per-packet one-way delay: 65.168 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 388.70 Mbit/s
95th percentile per-packet one-way delay: 58.194 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 106.92 Mbit/s
95th percentile per-packet one-way delay: 57.087 ms
Loss rate: 1.98%
```

Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-08-27 21:10:32
End at: 2019-08-27 21:11:02
Local clock offset: -0.082 ms
Remote clock offset: -0.111 ms


# Below is generated by plot.py at 2019-08-28 01:07:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 726.98 Mbit/s
95th percentile per-packet one-way delay: 63.497 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 463.26 Mbit/s
95th percentile per-packet one-way delay: 66.586 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 376.22 Mbit/s
95th percentile per-packet one-way delay: 59.111 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 96.65 Mbit/s
95th percentile per-packet one-way delay: 57.314 ms
Loss rate: 1.92%
```
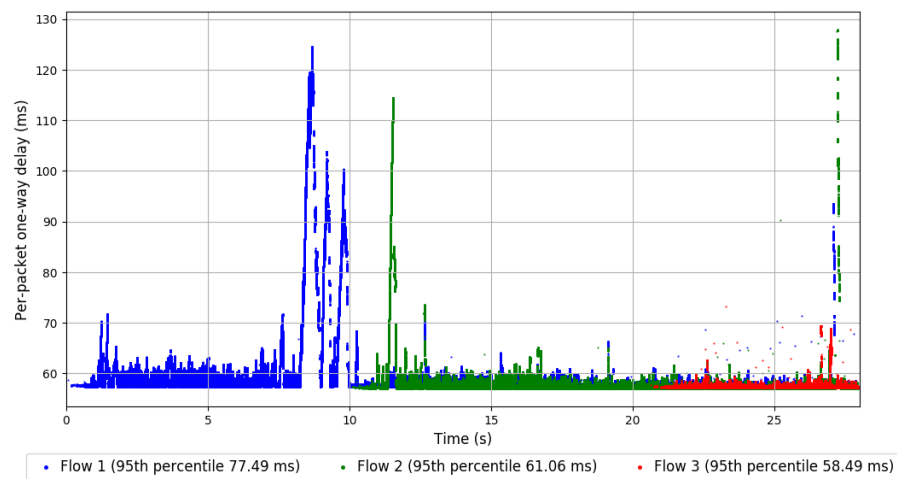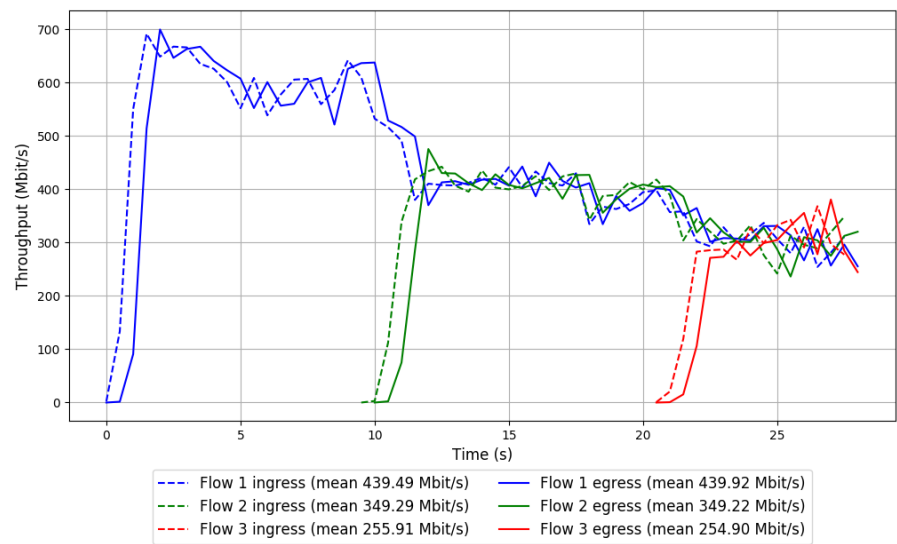
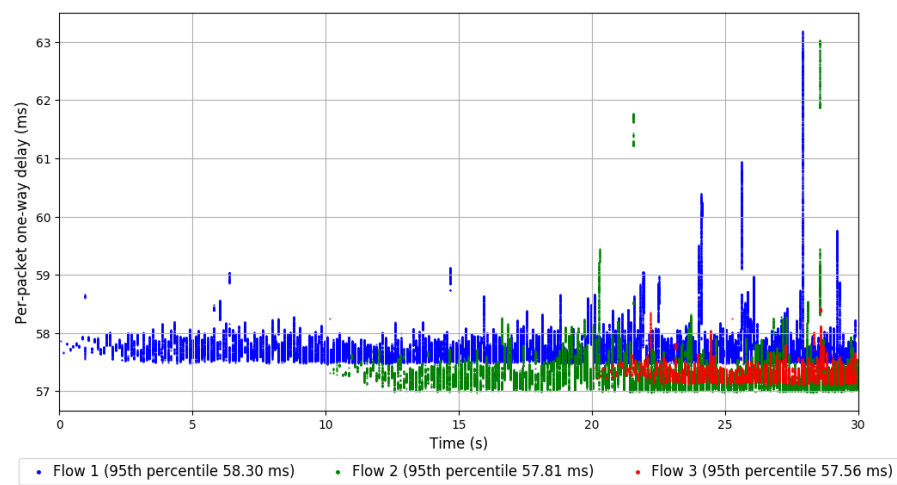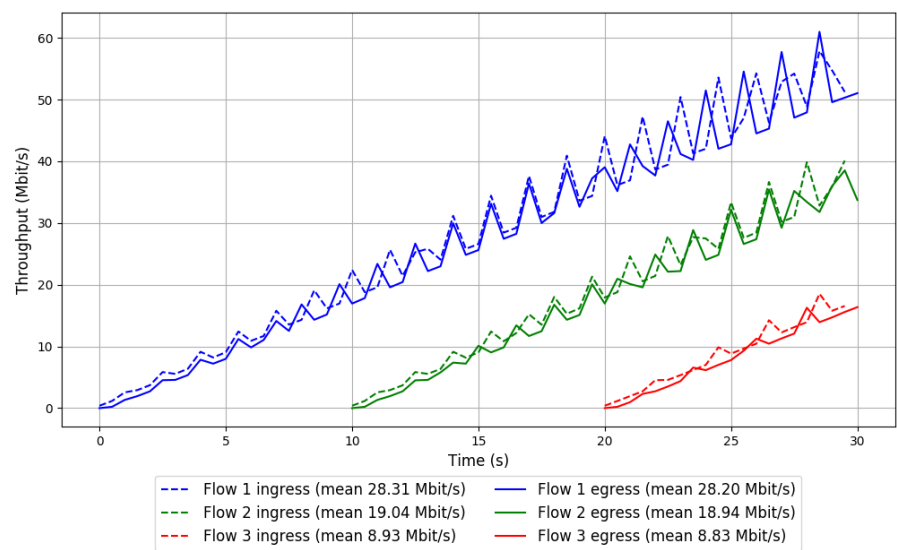Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-08-27 21:49:49
End at: 2019-08-27 21:50:19
Local clock offset: -0.171 ms
Remote clock offset: -0.252 ms


# Below is generated by plot.py at 2019-08-28 01:09:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 770.01 Mbit/s
95th percentile per-packet one-way delay: 62.683 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 464.67 Mbit/s
95th percentile per-packet one-way delay: 64.296 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 378.81 Mbit/s
95th percentile per-packet one-way delay: 60.333 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 250.86 Mbit/s
95th percentile per-packet one-way delay: 62.265 ms
Loss rate: 1.85%
```

Run 3: Report of Indigo-MusesT — Data Link
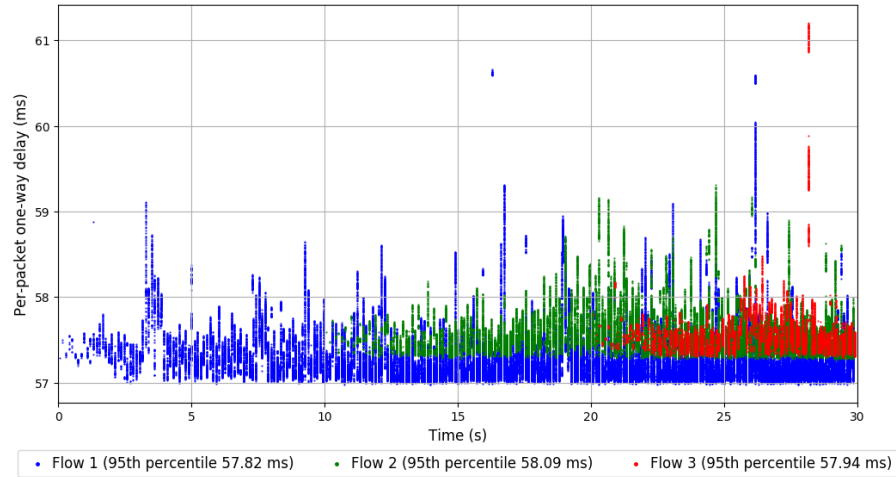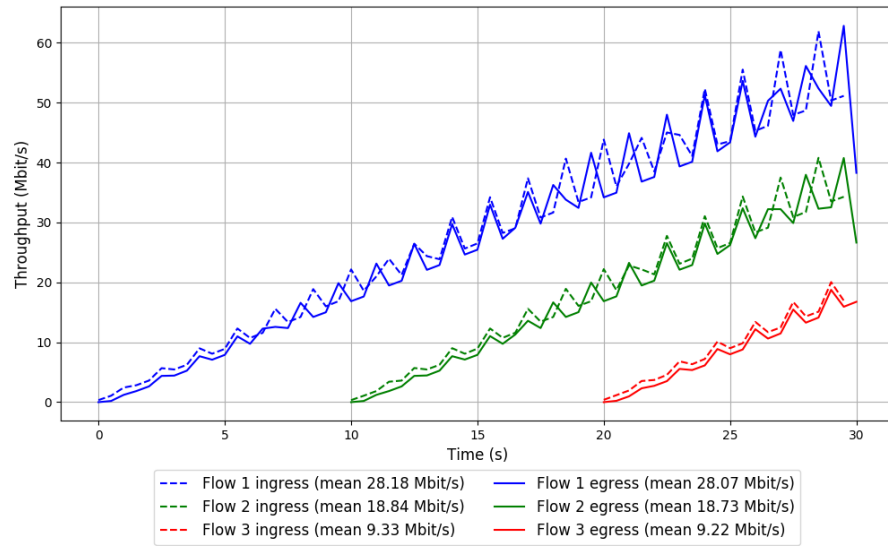
```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-08-27 22:29:02
End at: 2019-08-27 22:29:32
Local clock offset: -0.256 ms
Remote clock offset: 0.038 ms


# Below is generated by plot.py at 2019-08-28 01:09:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 738.99 Mbit/s
95th percentile per-packet one-way delay: 64.504 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 438.13 Mbit/s
95th percentile per-packet one-way delay: 72.209 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 374.98 Mbit/s
95th percentile per-packet one-way delay: 59.517 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 257.35 Mbit/s
95th percentile per-packet one-way delay: 58.174 ms
Loss rate: 1.78%
```

Run 4: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 437.56 Mbit/s)   Flow 1 egress (mean 438.13 Mbit/s)
Flow 2 ingress (mean 374.66 Mbit/s)   Flow 2 egress (mean 374.98 Mbit/s)
Flow 3 ingress (mean 257.59 Mbit/s)   Flow 3 egress (mean 257.35 Mbit/s)

Flow 1 (95th percentile 72.21 ms)   Flow 2 (95th percentile 59.52 ms)   Flow 3 (95th percentile 58.17 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-08-27 23:08:07
End at: 2019-08-27 23:08:37
Local clock offset: 0.368 ms
Remote clock offset: 0.112 ms

# Below is generated by plot.py at 2019-08-28 01:11:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 731.19 Mbit/s
95th percentile per-packet one-way delay: 68.034 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 439.92 Mbit/s
95th percentile per-packet one-way delay: 77.491 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 349.22 Mbit/s
95th percentile per-packet one-way delay: 61.058 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 254.90 Mbit/s
95th percentile per-packet one-way delay: 58.492 ms
Loss rate: 1.96%
```

Run 5: Report of Indigo-MusesT — Data Link

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```
Run 1: Statistics of LEDBAT

Start at: 2019-08-27 20:22:19
End at: 2019-08-27 20:22:49
Local clock offset: -0.161 ms
Remote clock offset: 0.384 ms


# Below is generated by plot.py at 2019-08-28 01:11:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.65 Mbit/s
95th percentile per-packet one-way delay: 58.129 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 28.20 Mbit/s
95th percentile per-packet one-way delay: 58.304 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 18.94 Mbit/s
95th percentile per-packet one-way delay: 57.815 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 8.83 Mbit/s
95th percentile per-packet one-way delay: 57.562 ms
Loss rate: 2.38%
```
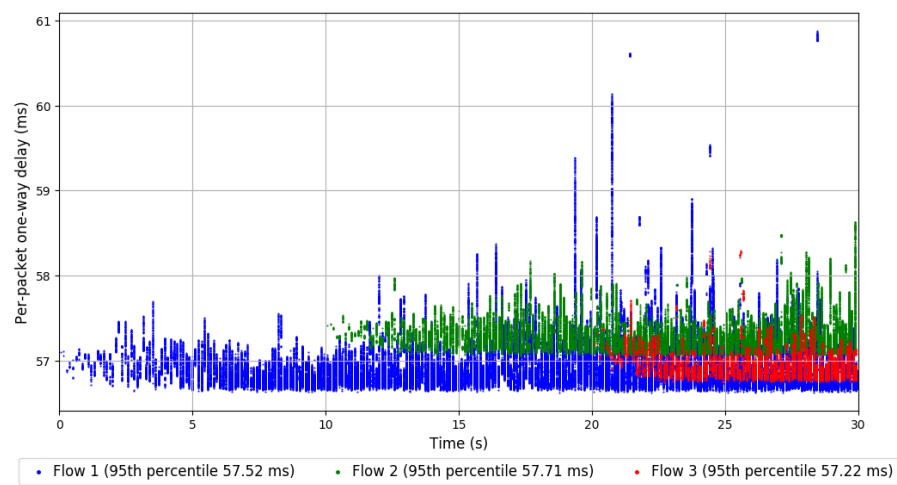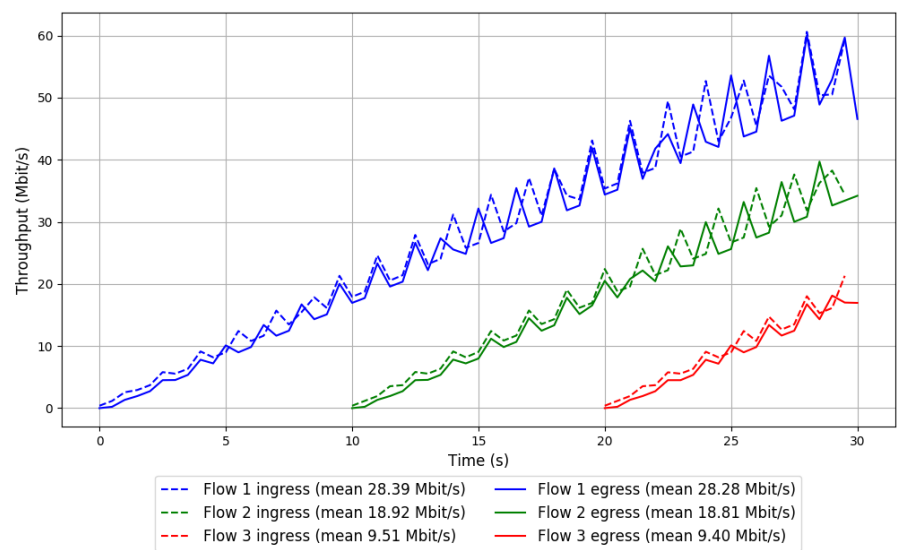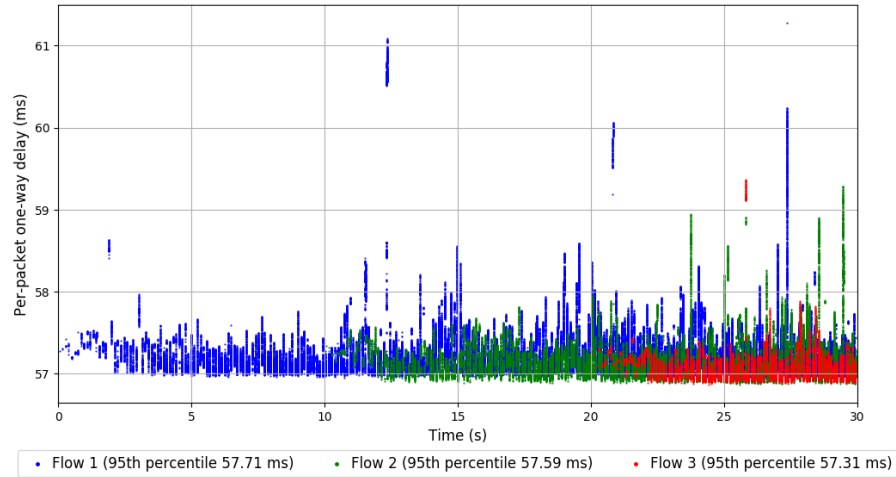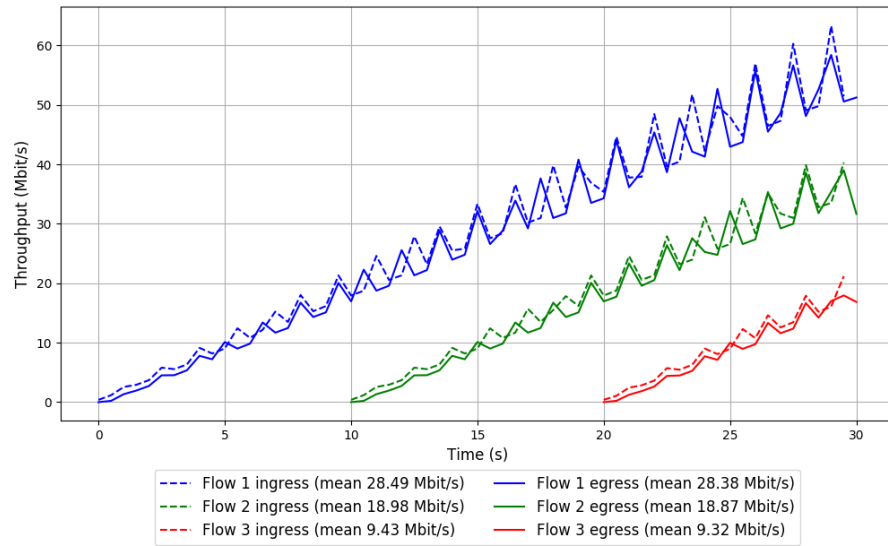
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-08-27 21:01:26
End at: 2019-08-27 21:01:56
Local clock offset: -0.029 ms
Remote clock offset: -0.184 ms


# Below is generated by plot.py at 2019-08-28 01:11:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.46 Mbit/s
95th percentile per-packet one-way delay: 57.949 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 28.07 Mbit/s
95th percentile per-packet one-way delay: 57.824 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 18.73 Mbit/s
95th percentile per-packet one-way delay: 58.090 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 9.22 Mbit/s
95th percentile per-packet one-way delay: 57.937 ms
Loss rate: 2.33%
```
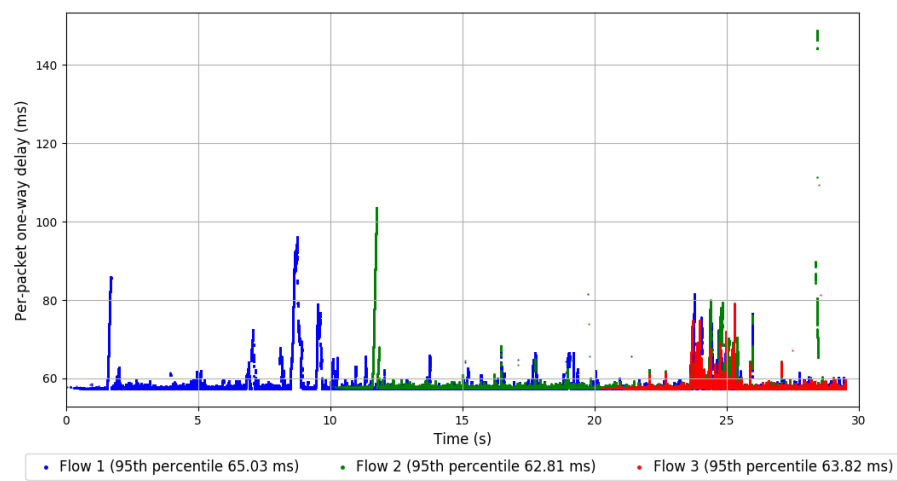
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-08-27 21:40:29
End at: 2019-08-27 21:40:59
Local clock offset: -0.303 ms
Remote clock offset: -0.234 ms


# Below is generated by plot.py at 2019-08-28 01:11:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.89 Mbit/s
95th percentile per-packet one-way delay: 57.534 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 28.38 Mbit/s
95th percentile per-packet one-way delay: 57.466 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 18.81 Mbit/s
95th percentile per-packet one-way delay: 57.547 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 9.25 Mbit/s
95th percentile per-packet one-way delay: 57.729 ms
Loss rate: 2.33%
```
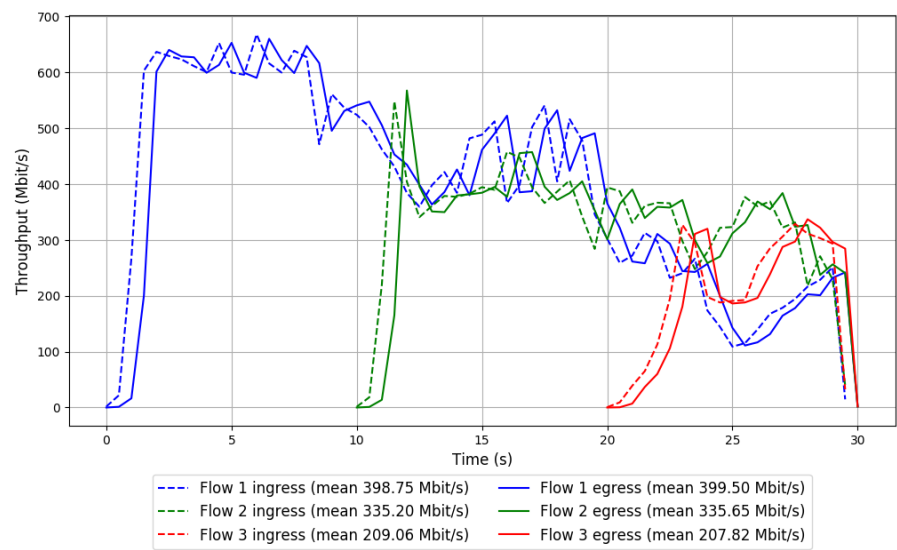
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 28.49 Mbit/s)   Flow 1 egress (mean 28.38 Mbit/s)
Flow 2 ingress (mean 18.91 Mbit/s)   Flow 2 egress (mean 18.81 Mbit/s)
Flow 3 ingress (mean 9.36 Mbit/s)   Flow 3 egress (mean 9.25 Mbit/s)

Flow 1 (95th percentile 57.47 ms)   Flow 2 (95th percentile 57.55 ms)   Flow 3 (95th percentile 57.73 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2019-08-27 22:19:41
End at: 2019-08-27 22:20:11
Local clock offset: 0.369 ms
Remote clock offset: 0.463 ms


# Below is generated by plot.py at 2019-08-28 01:11:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.85 Mbit/s
95th percentile per-packet one-way delay: 57.605 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 28.28 Mbit/s
95th percentile per-packet one-way delay: 57.516 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 18.81 Mbit/s
95th percentile per-packet one-way delay: 57.713 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 9.40 Mbit/s
95th percentile per-packet one-way delay: 57.219 ms
Loss rate: 2.30%
```
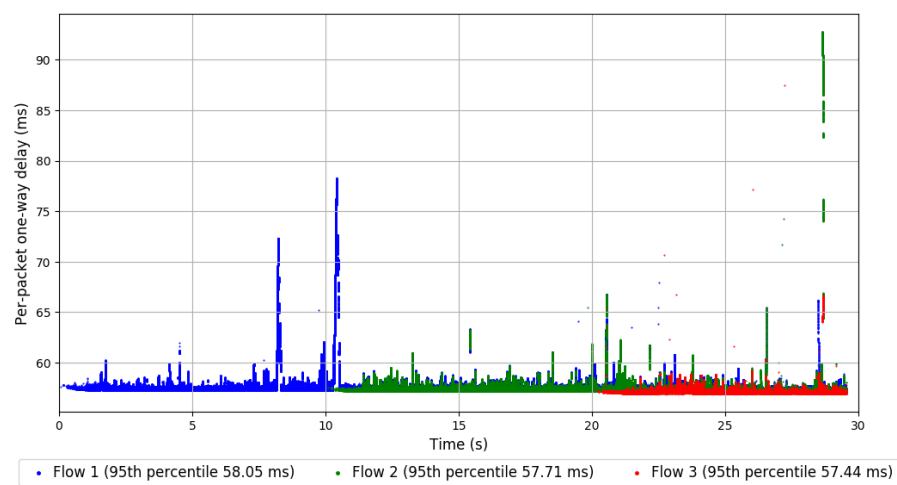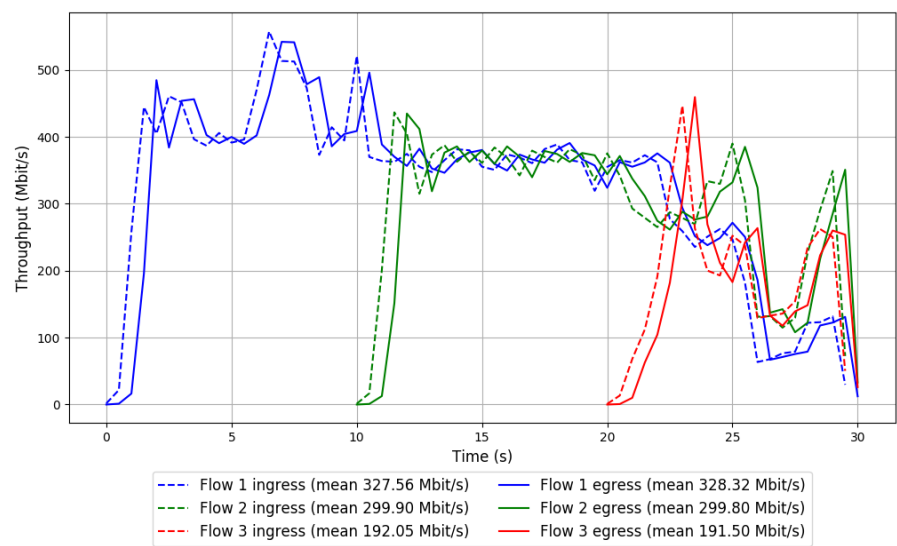
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-08-27 22:58:49
End at: 2019-08-27 22:59:19
Local clock offset: -0.029 ms
Remote clock offset: -0.068 ms


# Below is generated by plot.py at 2019-08-28 01:11:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.97 Mbit/s
95th percentile per-packet one-way delay: 57.653 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 28.38 Mbit/s
95th percentile per-packet one-way delay: 57.708 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 18.87 Mbit/s
95th percentile per-packet one-way delay: 57.595 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 9.32 Mbit/s
95th percentile per-packet one-way delay: 57.311 ms
Loss rate: 2.31%
```
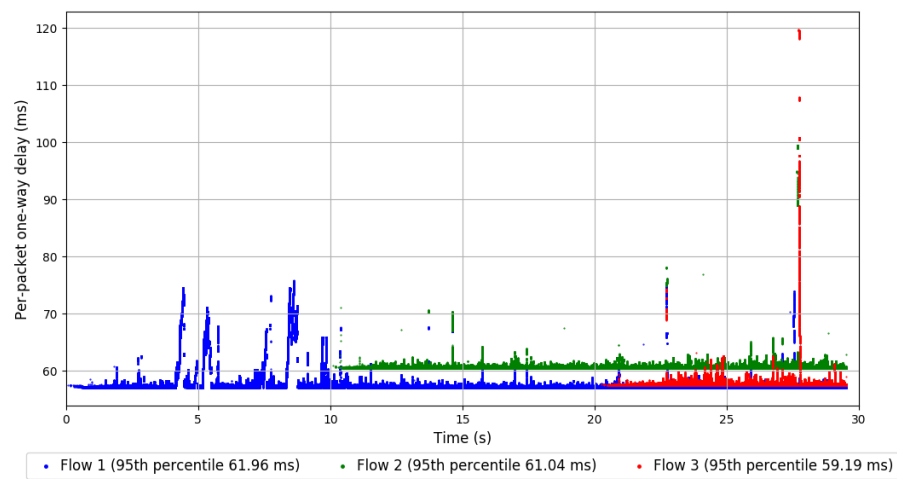
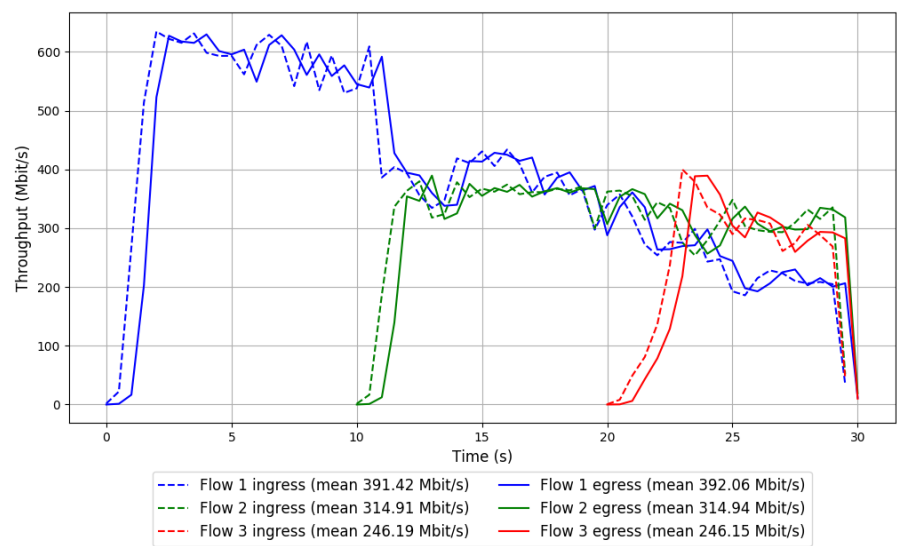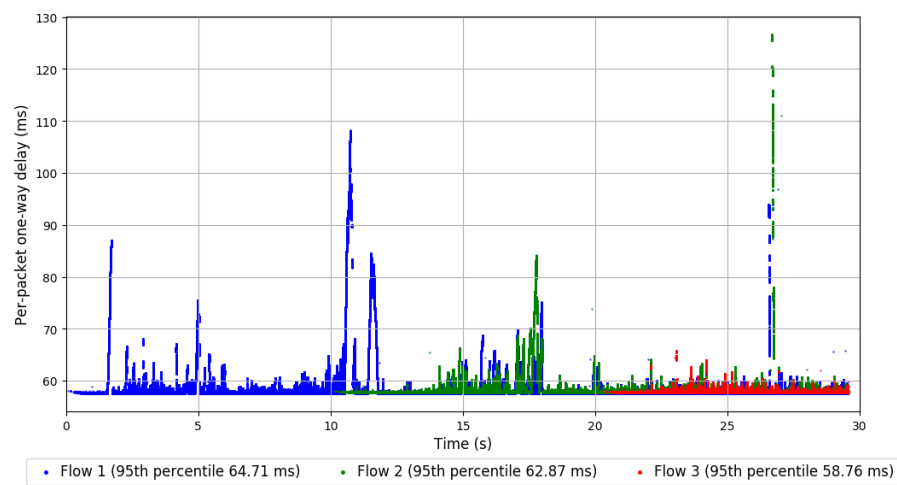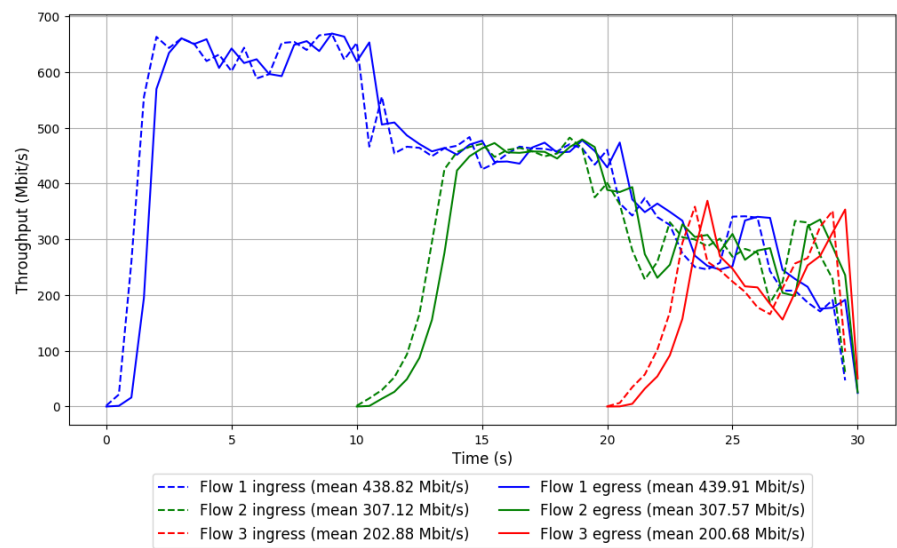## Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-08-27 20:41:01
End at: 2019-08-27 20:41:31
Local clock offset: 0.063 ms
Remote clock offset: -0.023 ms


# Below is generated by plot.py at 2019-08-28 01:14:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 686.16 Mbit/s
95th percentile per-packet one-way delay: 64.499 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 399.50 Mbit/s
95th percentile per-packet one-way delay: 65.028 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 335.65 Mbit/s
95th percentile per-packet one-way delay: 62.806 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 207.82 Mbit/s
95th percentile per-packet one-way delay: 63.817 ms
Loss rate: 1.81%
```

Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-08-27 21:20:18
End at: 2019-08-27 21:20:48
Local clock offset: 0.19 ms
Remote clock offset: -0.128 ms


# Below is generated by plot.py at 2019-08-28 01:14:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 586.85 Mbit/s
95th percentile per-packet one-way delay: 57.876 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 328.32 Mbit/s
95th percentile per-packet one-way delay: 58.055 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 299.80 Mbit/s
95th percentile per-packet one-way delay: 57.713 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 191.50 Mbit/s
95th percentile per-packet one-way delay: 57.440 ms
Loss rate: 1.56%
```
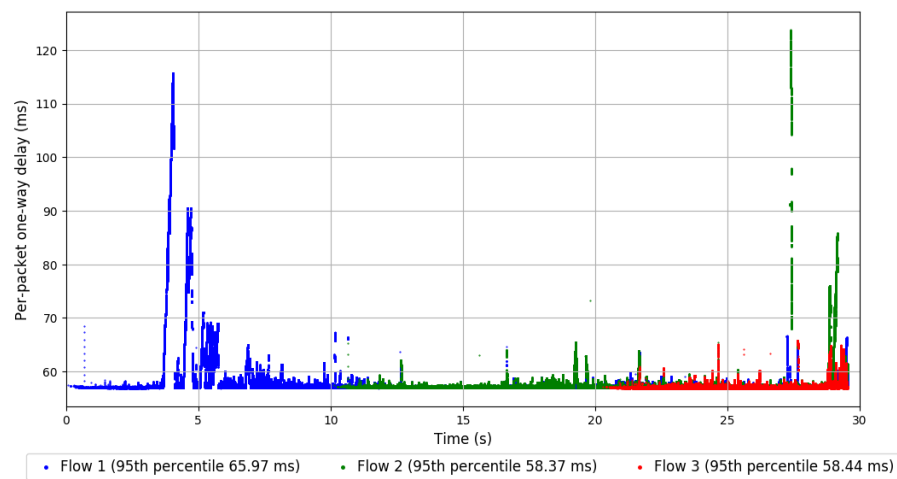
Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-08-27 21:59:28
End at: 2019-08-27 21:59:58
Local clock offset: 0.182 ms
Remote clock offset: -0.227 ms

# Below is generated by plot.py at 2019-08-28 01:15:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 677.20 Mbit/s
95th percentile per-packet one-way delay: 61.054 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 392.06 Mbit/s
95th percentile per-packet one-way delay: 61.962 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 314.94 Mbit/s
95th percentile per-packet one-way delay: 61.038 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 246.15 Mbit/s
95th percentile per-packet one-way delay: 59.186 ms
Loss rate: 1.23%
```
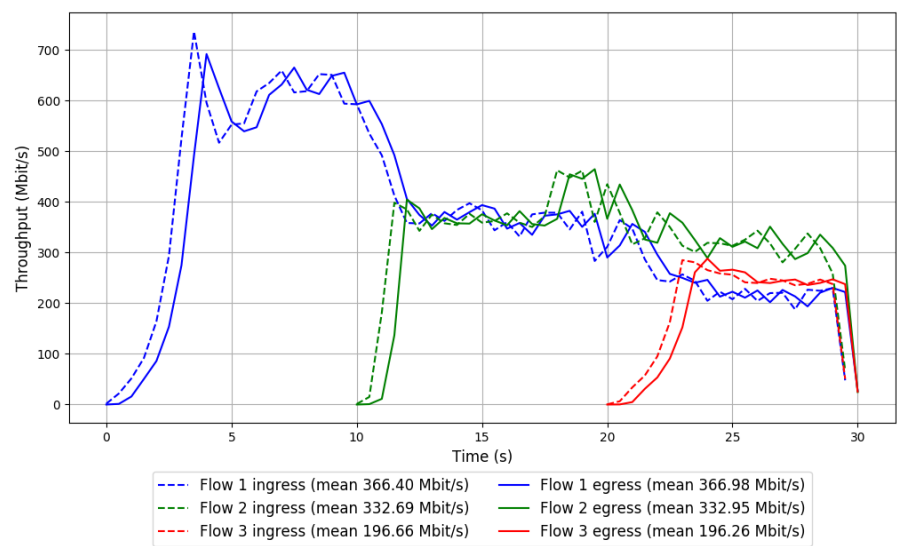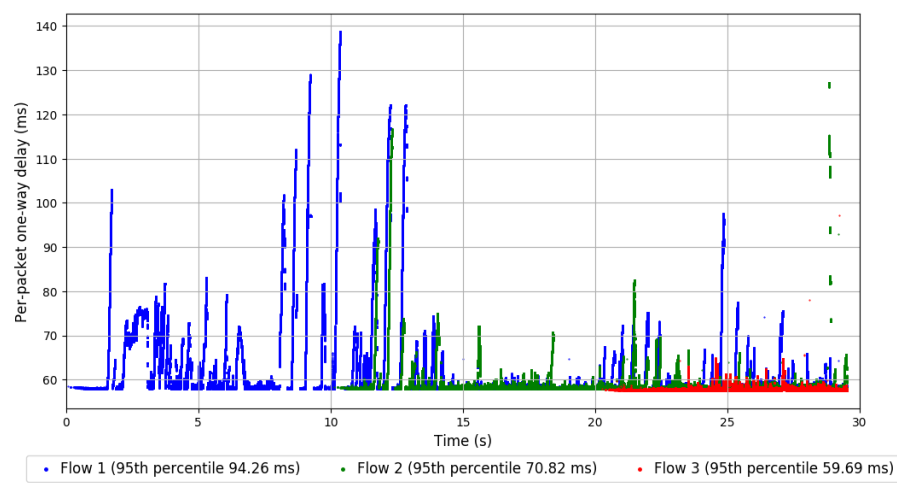
Run 3: Report of Muses_DecisionTree — Data Link

Run 4: Statistics of Muses_DecisionTree

Start at: 2019-08-27 22:38:38
End at: 2019-08-27 22:39:08
Local clock offset: 0.407 ms
Remote clock offset: -0.184 ms

Below is generated by plot.py at 2019-08-28 01:16:10
Datalink statistics
-- Total of 3 flows:
Average throughput: 705.92 Mbit/s
95th percentile per-packet one-way delay: 63.428 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 439.91 Mbit/s
95th percentile per-packet one-way delay: 64.709 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 307.57 Mbit/s
95th percentile per-packet one-way delay: 62.865 ms
Loss rate: 0.45%
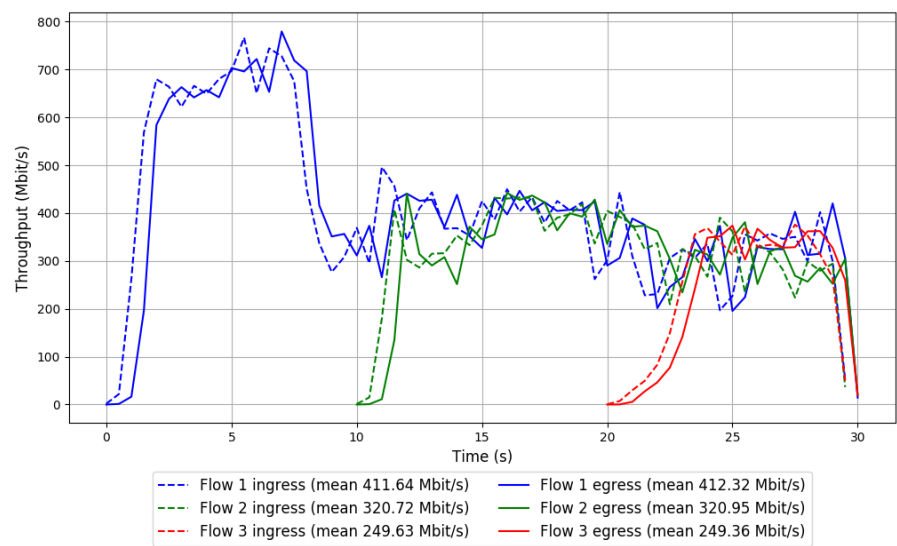-- Flow 3:
Average throughput: 200.68 Mbit/s
95th percentile per-packet one-way delay: 58.764 ms
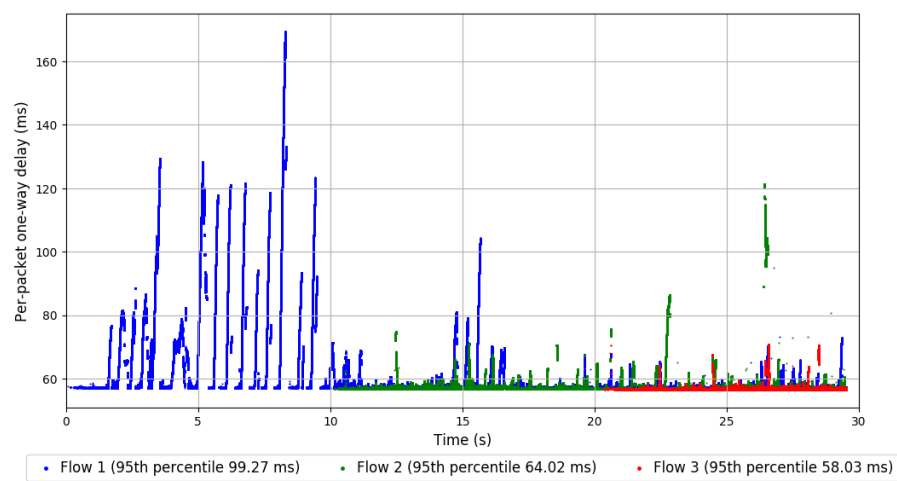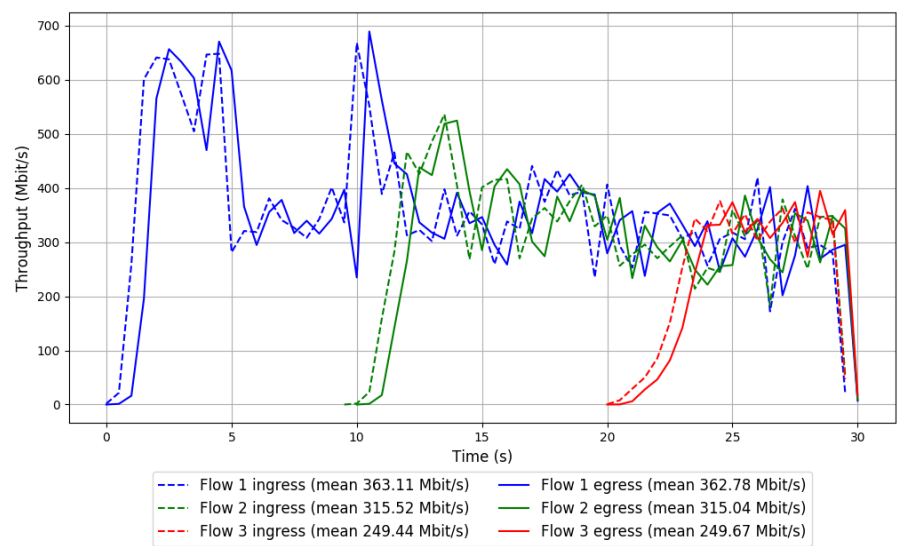Loss rate: 2.27%

Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-08-27 23:17:44
End at: 2019-08-27 23:18:14
Local clock offset: 0.074 ms
Remote clock offset: 0.079 ms


# Below is generated by plot.py at 2019-08-28 01:16:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 647.68 Mbit/s
95th percentile per-packet one-way delay: 61.823 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 366.98 Mbit/s
95th percentile per-packet one-way delay: 65.972 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 332.95 Mbit/s
95th percentile per-packet one-way delay: 58.371 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 196.26 Mbit/s
95th percentile per-packet one-way delay: 58.441 ms
Loss rate: 1.46%
```
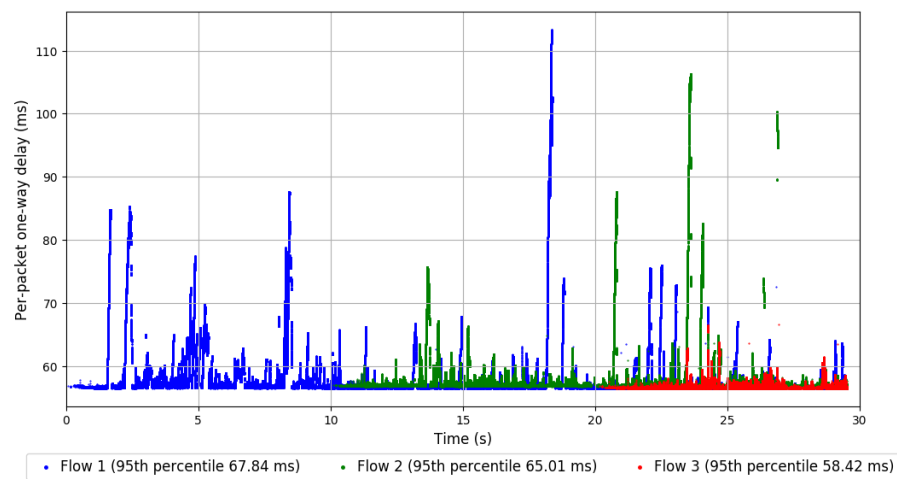
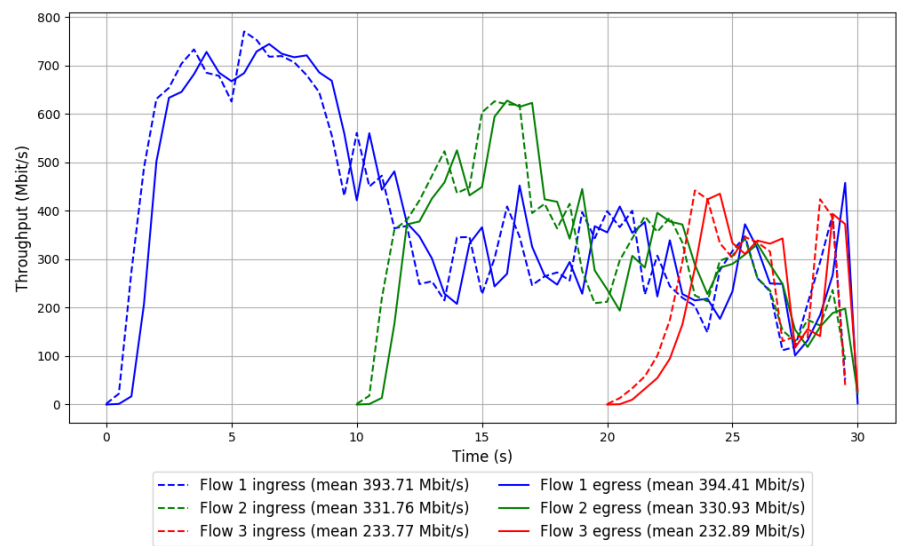Run 5: Report of Muses_DecisionTree — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-08-27 20:46:02
End at: 2019-08-27 20:46:32
Local clock offset: -0.141 ms
Remote clock offset: -0.88 ms


# Below is generated by plot.py at 2019-08-28 01:19:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 701.77 Mbit/s
95th percentile per-packet one-way delay: 82.206 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 412.32 Mbit/s
95th percentile per-packet one-way delay: 94.258 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 320.95 Mbit/s
95th percentile per-packet one-way delay: 70.824 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 249.36 Mbit/s
95th percentile per-packet one-way delay: 59.690 ms
Loss rate: 1.32%
```

Run 1: Report of Muses_DecisionTreeH0 — Data Link

Run 2: Statistics of Muses_DecisionTreeH0

Start at: 2019-08-27 21:25:12
End at: 2019-08-27 21:25:42
Local clock offset: -0.081 ms
Remote clock offset: -0.039 ms

Below is generated by plot.py at 2019-08-28 01:19:51
Datalink statistics
-- Total of 3 flows:
Average throughput: 649.40 Mbit/s
95th percentile per-packet one-way delay: 85.620 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 362.78 Mbit/s
95th percentile per-packet one-way delay: 99.270 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 315.04 Mbit/s
95th percentile per-packet one-way delay: 64.020 ms
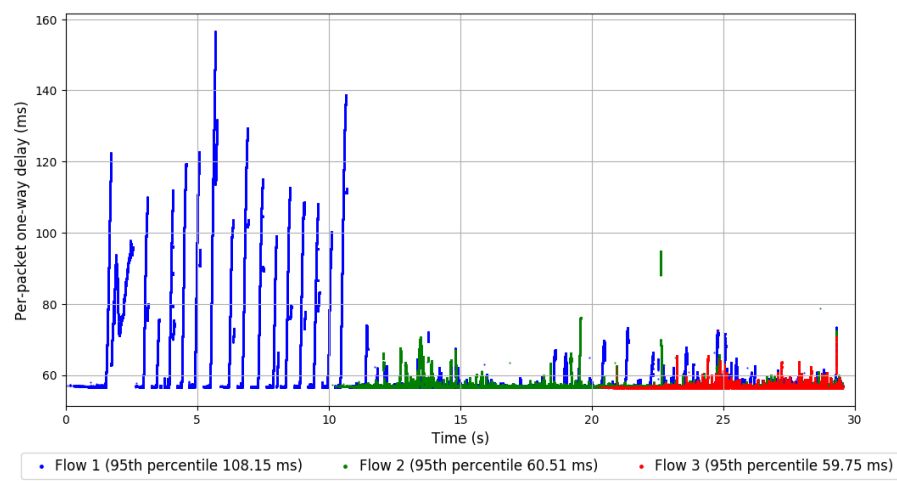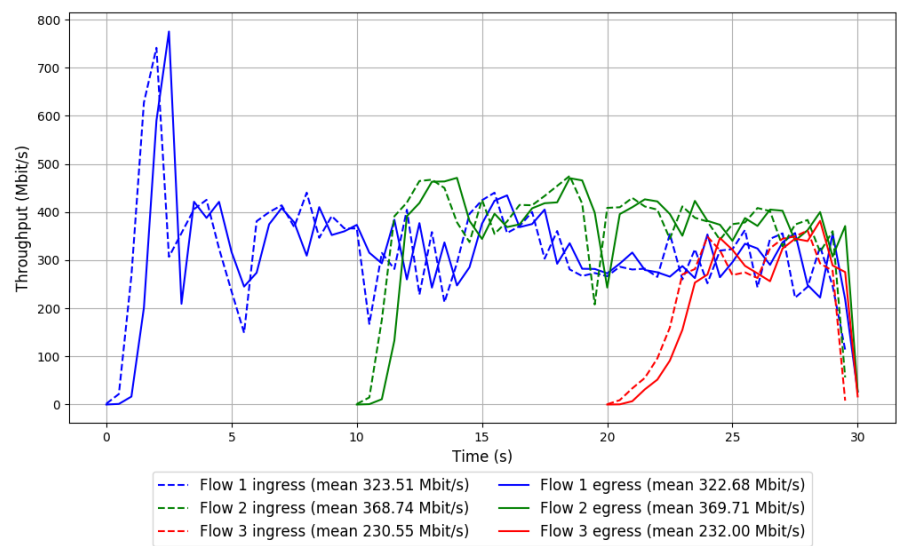Loss rate: 0.74%
-- Flow 3:
Average throughput: 249.67 Mbit/s
95th percentile per-packet one-way delay: 58.029 ms
Loss rate: 1.16%

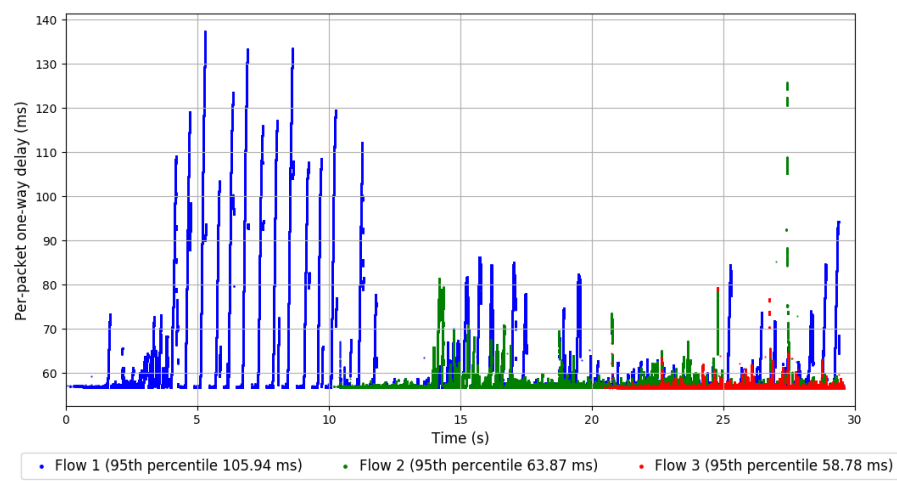Run 2: Report of Muses_DecisionTreeH0 — Data Link

Run 3: Statistics of Muses_DecisionTreeH0

Start at: 2019-08-27 22:04:23
End at: 2019-08-27 22:04:53
Local clock offset: -0.596 ms
Remote clock offset: -0.295 ms

Below is generated by plot.py at 2019-08-28 01:21:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 686.27 Mbit/s
95th percentile per-packet one-way delay: 66.025 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 394.41 Mbit/s
95th percentile per-packet one-way delay: 67.845 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 330.93 Mbit/s
95th percentile per-packet one-way delay: 65.006 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 232.89 Mbit/s
95th percentile per-packet one-way delay: 58.419 ms
Loss rate: 1.60%

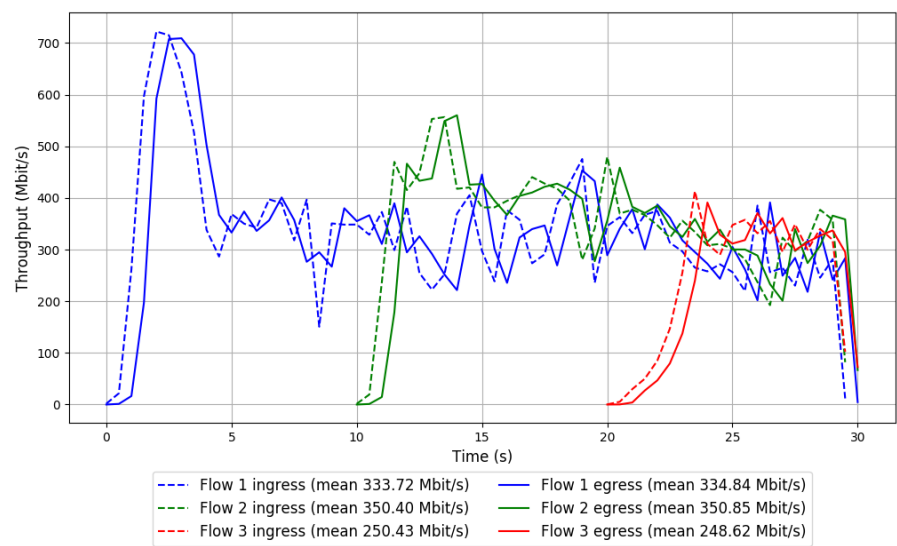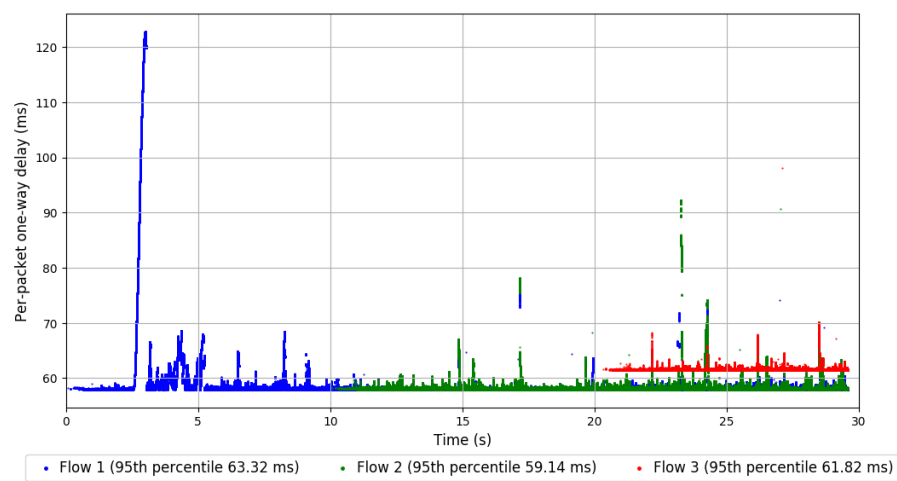Run 3: Report of Muses_DecisionTreeH0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-08-27 22:43:37
End at: 2019-08-27 22:44:07
Local clock offset: -0.294 ms
Remote clock offset: 0.22 ms


# Below is generated by plot.py at 2019-08-28 01:23:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 639.06 Mbit/s
95th percentile per-packet one-way delay: 96.383 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 322.68 Mbit/s
95th percentile per-packet one-way delay: 108.151 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 369.71 Mbit/s
95th percentile per-packet one-way delay: 60.512 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 232.00 Mbit/s
95th percentile per-packet one-way delay: 59.749 ms
Loss rate: 0.60%
```
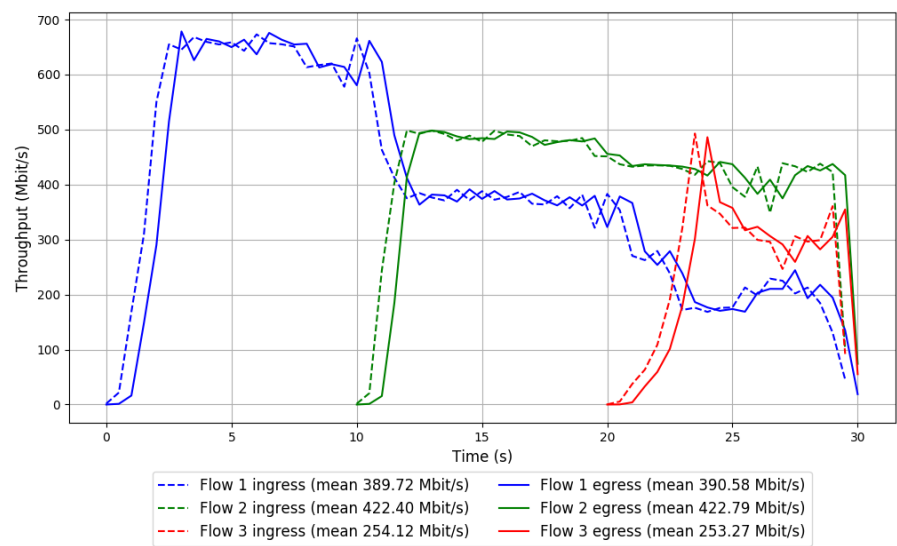
Run 4: Report of Muses_DecisionTreeH0 — Data Link

Run 5: Statistics of Muses_DecisionTreeH0

Start at: 2019-08-27 23:22:44
End at: 2019-08-27 23:23:14
Local clock offset: -0.352 ms
Remote clock offset: -0.211 ms

Below is generated by plot.py at 2019-08-28 01:24:20
Datalink statistics
-- Total of 3 flows:
Average throughput: 644.29 Mbit/s
95th percentile per-packet one-way delay: 93.215 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 334.84 Mbit/s
95th percentile per-packet one-way delay: 105.941 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 350.85 Mbit/s
95th percentile per-packet one-way delay: 63.868 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 248.62 Mbit/s
95th percentile per-packet one-way delay: 58.776 ms
Loss rate: 1.95%

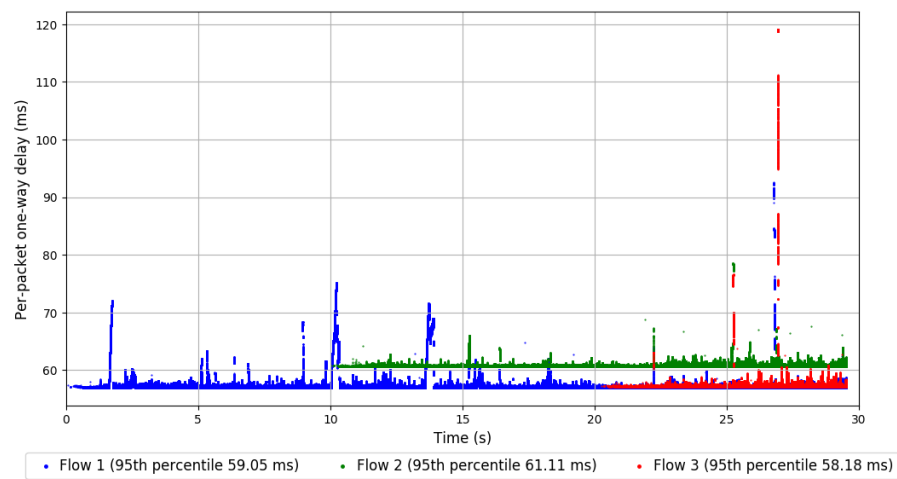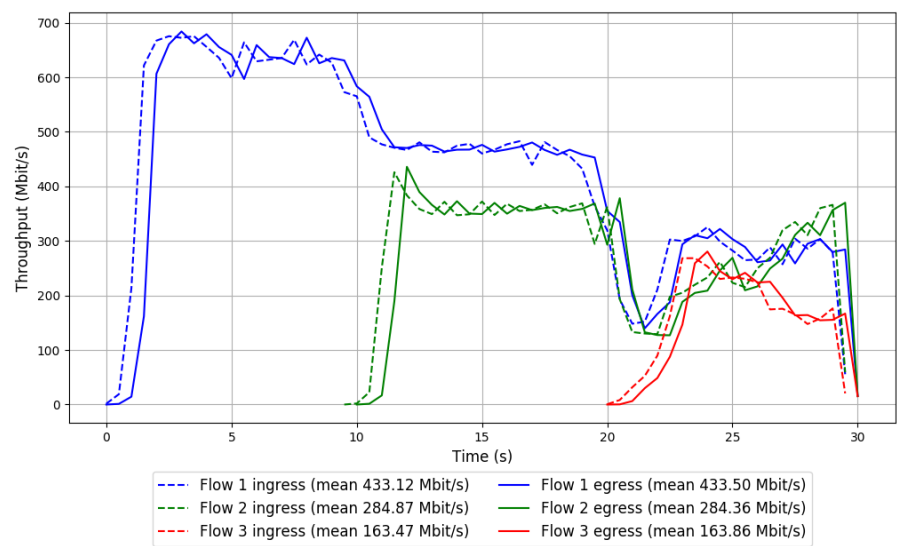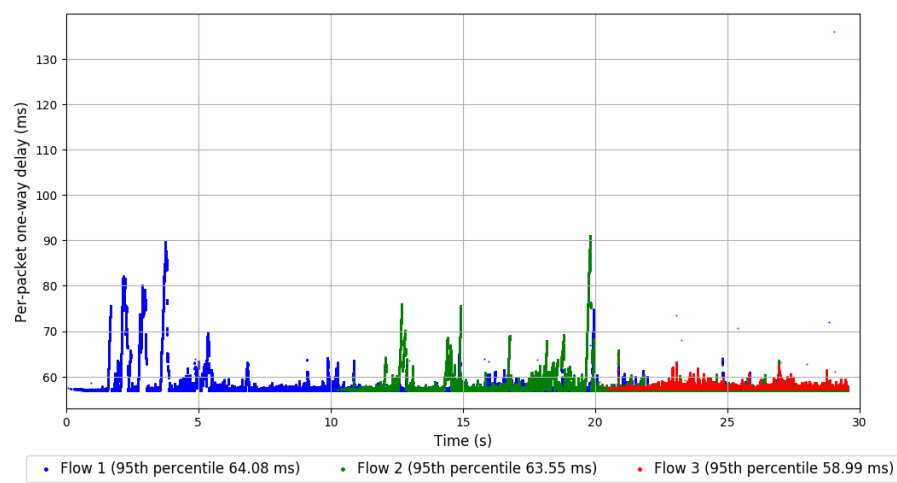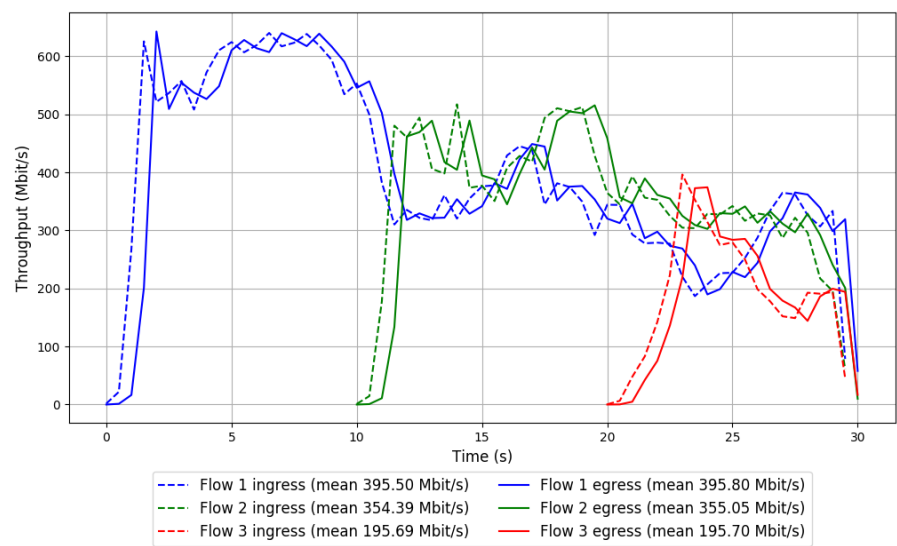Run 5: Report of Muses_DecisionTreeH0 — Data Link

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```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-08-27 20:44:18
End at: 2019-08-27 20:44:48
Local clock offset: 0.221 ms
Remote clock offset: -0.694 ms


# Below is generated by plot.py at 2019-08-28 01:26:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 749.41 Mbit/s
95th percentile per-packet one-way delay: 61.719 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 390.58 Mbit/s
95th percentile per-packet one-way delay: 63.324 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 422.79 Mbit/s
95th percentile per-packet one-way delay: 59.139 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 253.27 Mbit/s
95th percentile per-packet one-way delay: 61.817 ms
Loss rate: 1.63%
```

Run 1: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 389.72 Mbit/s) — — — Flow 1 egress (mean 390.58 Mbit/s) ———
Flow 2 ingress (mean 422.40 Mbit/s) — — — Flow 2 egress (mean 422.79 Mbit/s) ———
Flow 3 ingress (mean 254.12 Mbit/s) — — — Flow 3 egress (mean 253.27 Mbit/s) ———

Flow 1 (95th percentile 63.32 ms)   Flow 2 (95th percentile 59.14 ms)   Flow 3 (95th percentile 61.82 ms)
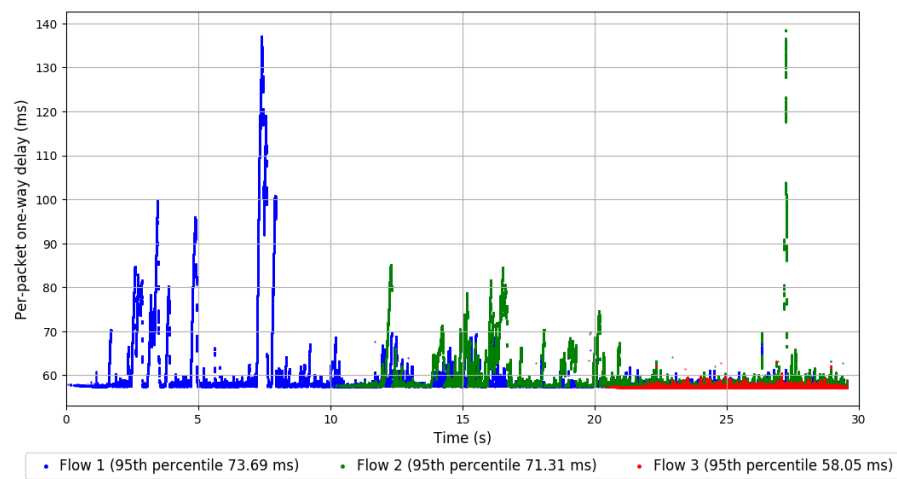
```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-08-27 21:23:31
End at: 2019-08-27 21:24:01
Local clock offset: -0.134 ms
Remote clock offset: -0.453 ms


# Below is generated by plot.py at 2019-08-28 01:26:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 673.21 Mbit/s
95th percentile per-packet one-way delay: 60.894 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 433.50 Mbit/s
95th percentile per-packet one-way delay: 59.046 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 284.36 Mbit/s
95th percentile per-packet one-way delay: 61.108 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 163.86 Mbit/s
95th percentile per-packet one-way delay: 58.183 ms
Loss rate: 1.01%
```

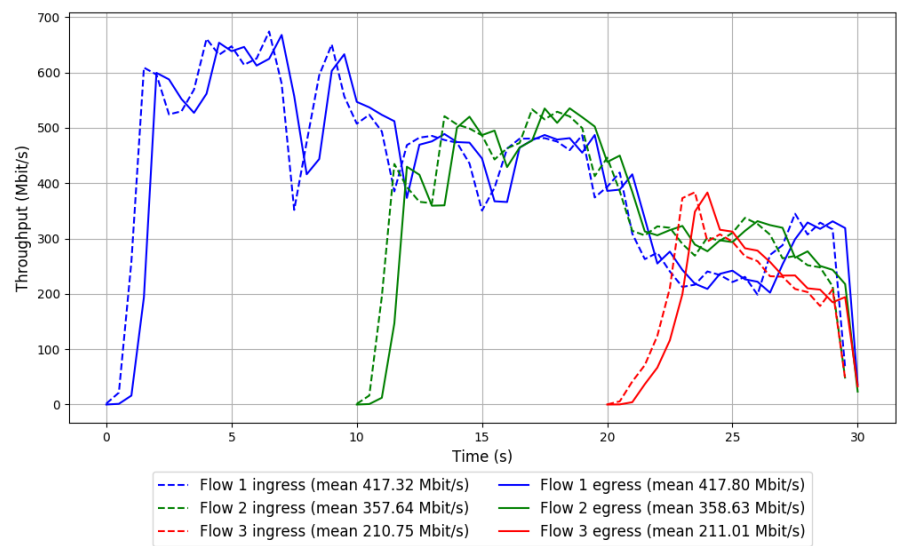Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-08-27 22:02:42
End at: 2019-08-27 22:03:12
Local clock offset: -0.077 ms
Remote clock offset: -0.263 ms


# Below is generated by plot.py at 2019-08-28 01:27:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 690.94 Mbit/s
95th percentile per-packet one-way delay: 63.043 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 395.80 Mbit/s
95th percentile per-packet one-way delay: 64.084 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 355.05 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 195.70 Mbit/s
95th percentile per-packet one-way delay: 58.993 ms
Loss rate: 1.23%
```

Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-08-27 22:41:54
End at: 2019-08-27 22:42:24
Local clock offset: -0.267 ms
Remote clock offset: -0.568 ms


# Below is generated by plot.py at 2019-08-28 01:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 720.14 Mbit/s
95th percentile per-packet one-way delay: 71.011 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 417.80 Mbit/s
95th percentile per-packet one-way delay: 73.685 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 358.63 Mbit/s
95th percentile per-packet one-way delay: 71.306 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 211.01 Mbit/s
95th percentile per-packet one-way delay: 58.052 ms
Loss rate: 1.11%
```
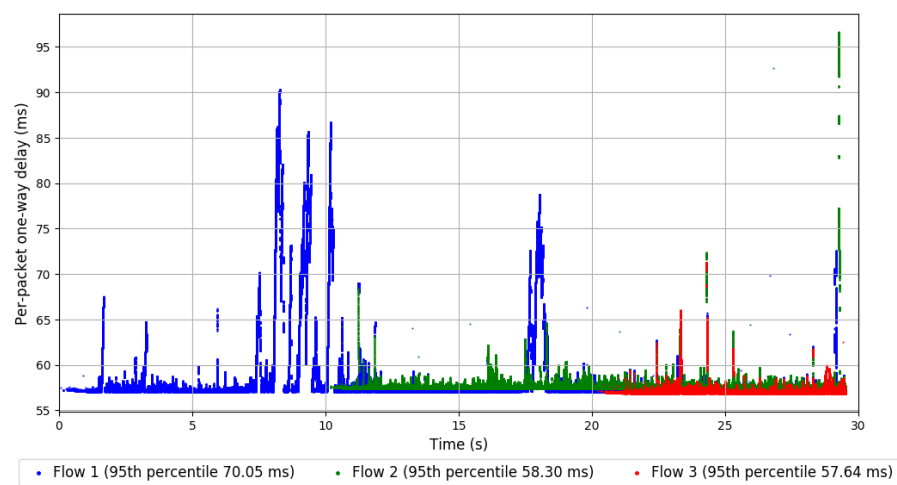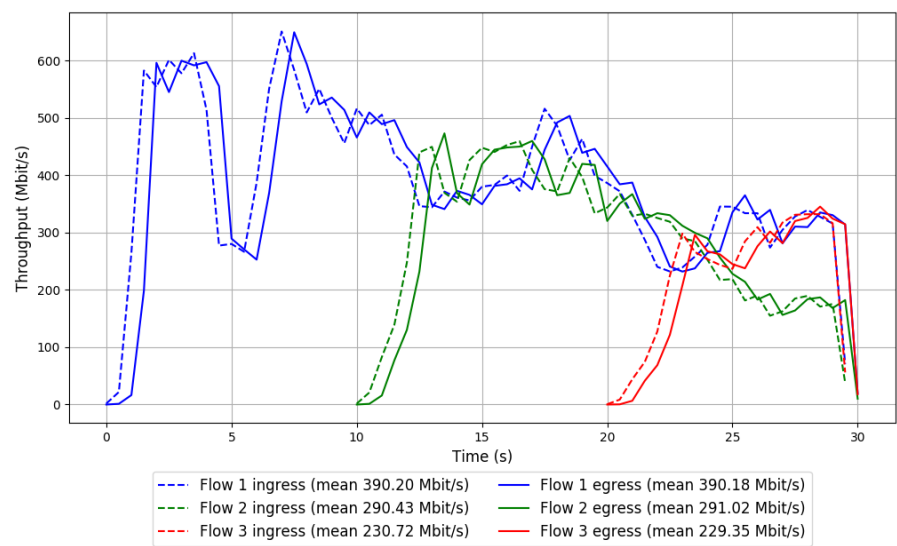
Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-08-27 23:21:03
End at: 2019-08-27 23:21:33
Local clock offset: 0.084 ms
Remote clock offset: 0.026 ms


# Below is generated by plot.py at 2019-08-28 01:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 654.62 Mbit/s
95th percentile per-packet one-way delay: 63.598 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 390.18 Mbit/s
95th percentile per-packet one-way delay: 70.052 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 291.02 Mbit/s
95th percentile per-packet one-way delay: 58.305 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 229.35 Mbit/s
95th percentile per-packet one-way delay: 57.637 ms
Loss rate: 1.80%
```
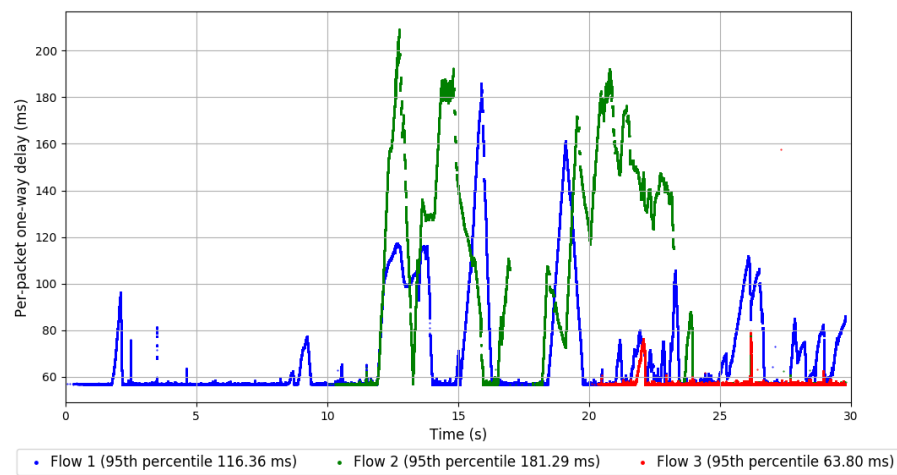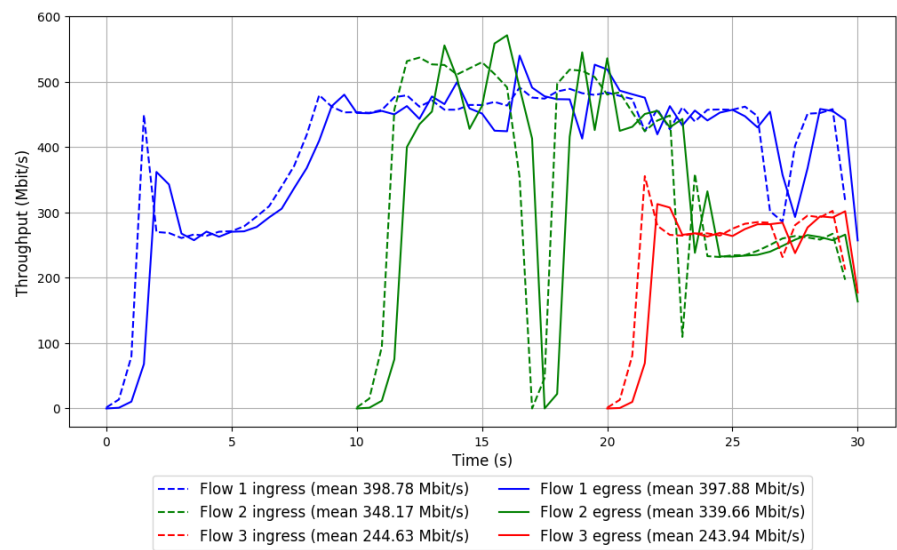
Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-08-27 20:37:58
End at: 2019-08-27 20:38:28
Local clock offset: -0.607 ms
Remote clock offset: 0.047 ms


# Below is generated by plot.py at 2019-08-28 01:42:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 702.76 Mbit/s
95th percentile per-packet one-way delay: 161.263 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 397.88 Mbit/s
95th percentile per-packet one-way delay: 116.360 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 339.66 Mbit/s
95th percentile per-packet one-way delay: 181.293 ms
Loss rate: 3.01%
-- Flow 3:
Average throughput: 243.94 Mbit/s
95th percentile per-packet one-way delay: 63.799 ms
Loss rate: 1.45%
```
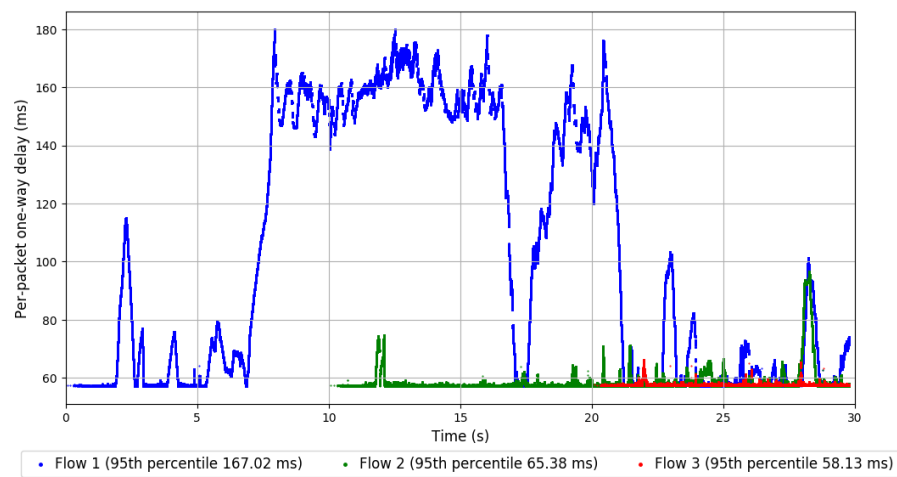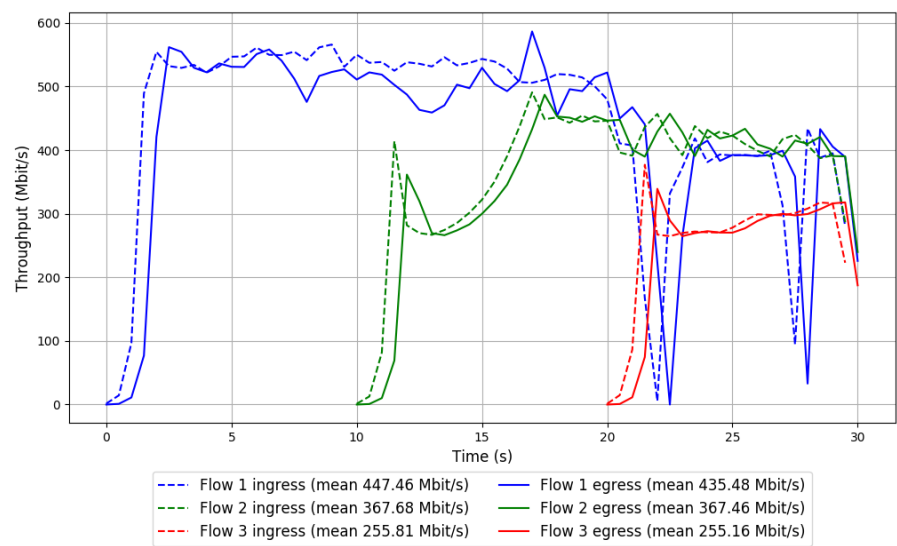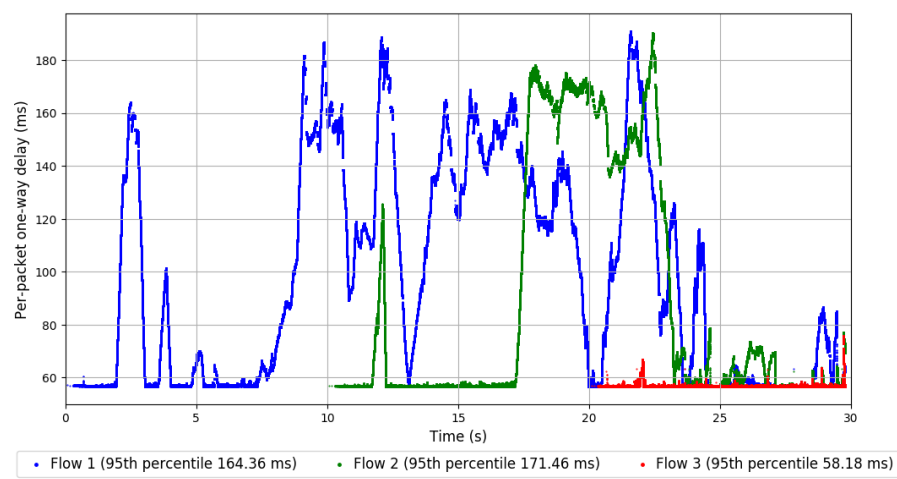
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-08-27 21:17:11
End at: 2019-08-27 21:17:41
Local clock offset: -0.058 ms
Remote clock offset: -0.5 ms


# Below is generated by plot.py at 2019-08-28 01:45:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 762.30 Mbit/s
95th percentile per-packet one-way delay: 162.699 ms
Loss rate: 2.12%
-- Flow 1:
Average throughput: 435.48 Mbit/s
95th percentile per-packet one-way delay: 167.022 ms
Loss rate: 3.06%
-- Flow 2:
Average throughput: 367.46 Mbit/s
95th percentile per-packet one-way delay: 65.376 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 255.16 Mbit/s
95th percentile per-packet one-way delay: 58.133 ms
Loss rate: 1.43%
```

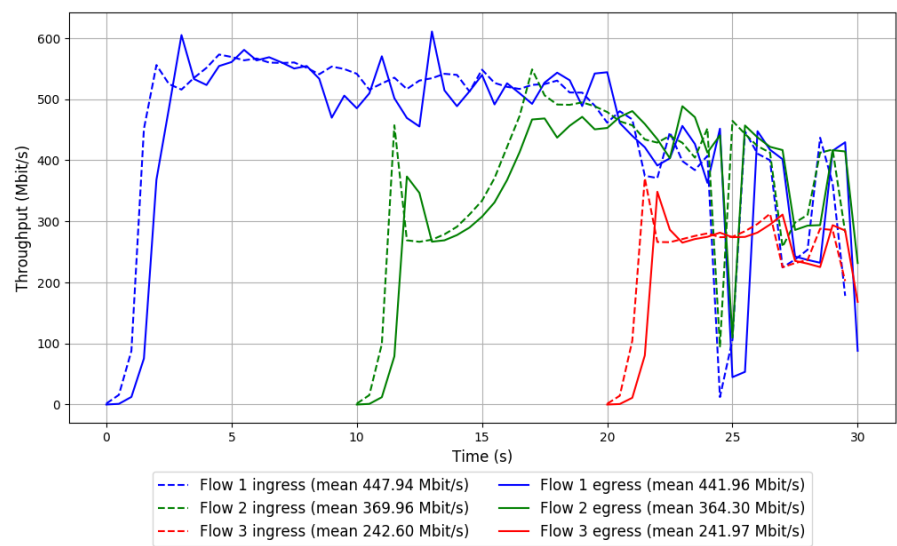## Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 447.46 Mbit/s) — Flow 1 egress (mean 435.48 Mbit/s)
Flow 2 ingress (mean 367.68 Mbit/s) — Flow 2 egress (mean 367.46 Mbit/s)
Flow 3 ingress (mean 255.81 Mbit/s) — Flow 3 egress (mean 255.16 Mbit/s)

Flow 1 (95th percentile 167.02 ms) • Flow 2 (95th percentile 65.38 ms) • Flow 3 (95th percentile 58.13 ms)

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```
Run 3: Statistics of PCC-Allegro

Start at: 2019-08-27 21:56:21
End at: 2019-08-27 21:56:51
Local clock offset: -0.267 ms
Remote clock offset: -0.164 ms

# Below is generated by plot.py at 2019-08-28 01:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 762.61 Mbit/s
95th percentile per-packet one-way delay: 169.389 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 441.96 Mbit/s
95th percentile per-packet one-way delay: 164.359 ms
Loss rate: 1.71%
-- Flow 2:
Average throughput: 364.30 Mbit/s
95th percentile per-packet one-way delay: 171.462 ms
Loss rate: 2.09%
-- Flow 3:
Average throughput: 241.97 Mbit/s
95th percentile per-packet one-way delay: 58.180 ms
Loss rate: 1.41%
```
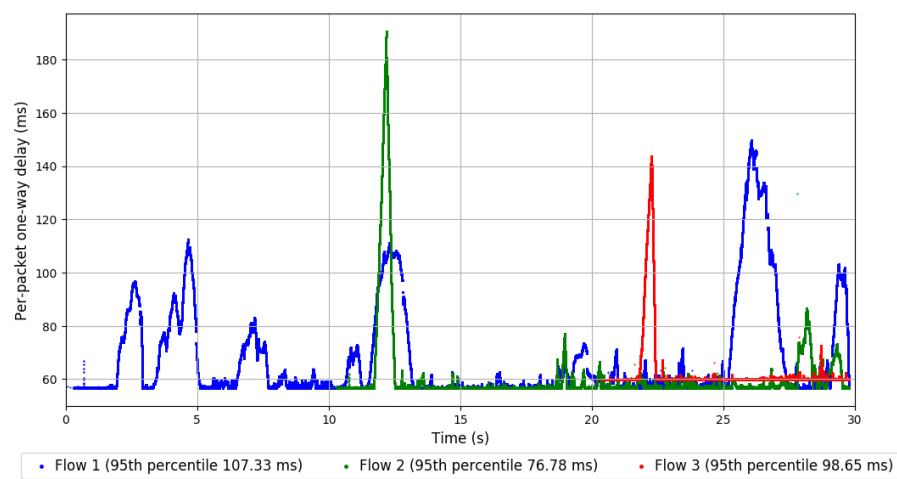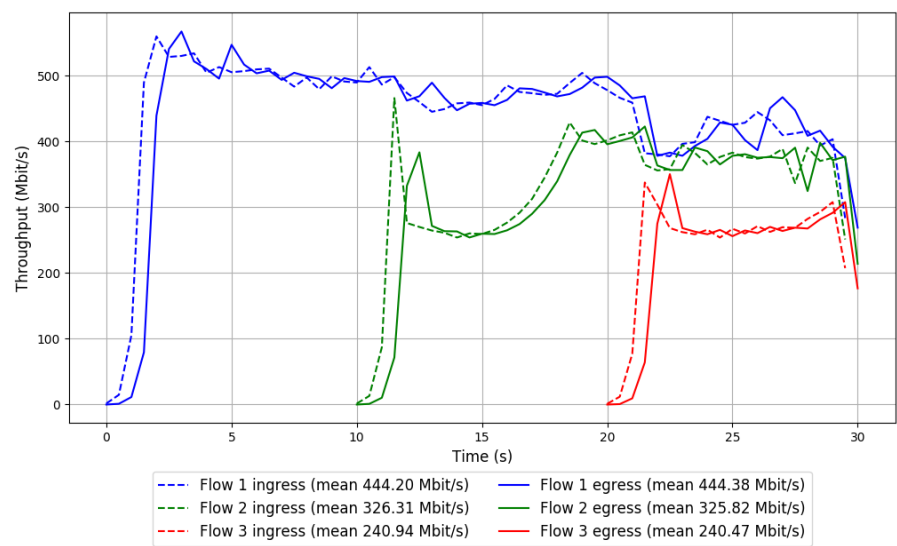
Run 3: Report of PCC-Allegro — Data Link

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-08-27 22:35:32
End at: 2019-08-27 22:36:02
Local clock offset: -0.544 ms
Remote clock offset: 0.0 ms


# Below is generated by plot.py at 2019-08-28 01:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 739.01 Mbit/s
95th percentile per-packet one-way delay: 105.856 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 444.38 Mbit/s
95th percentile per-packet one-way delay: 107.325 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 325.82 Mbit/s
95th percentile per-packet one-way delay: 76.782 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 240.47 Mbit/s
95th percentile per-packet one-way delay: 98.648 ms
Loss rate: 1.40%
```
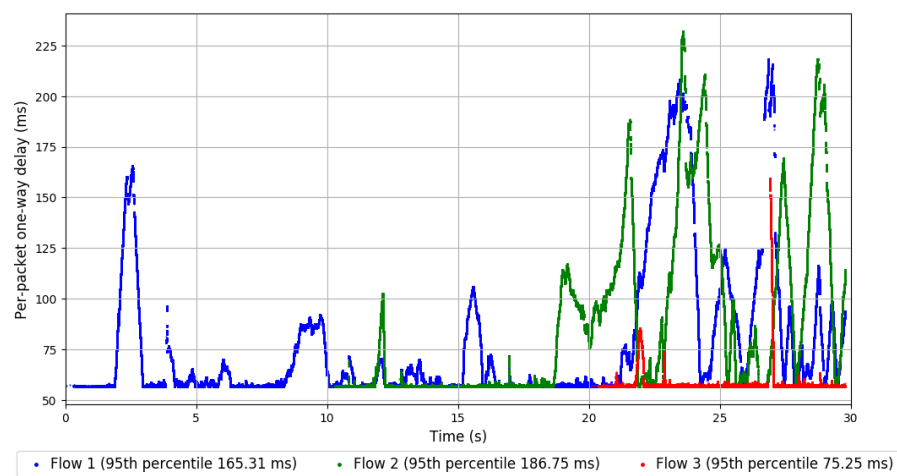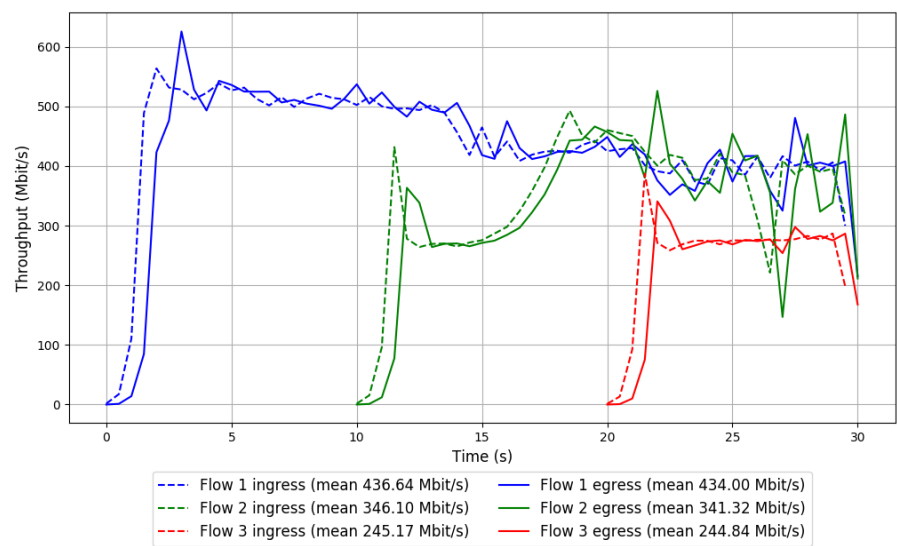
Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-08-27 23:14:38
End at: 2019-08-27 23:15:08
Local clock offset: -0.122 ms
Remote clock offset: 0.074 ms


# Below is generated by plot.py at 2019-08-28 01:48:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 740.25 Mbit/s
95th percentile per-packet one-way delay: 168.643 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 434.00 Mbit/s
95th percentile per-packet one-way delay: 165.312 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 341.32 Mbit/s
95th percentile per-packet one-way delay: 186.751 ms
Loss rate: 1.96%
-- Flow 3:
Average throughput: 244.84 Mbit/s
95th percentile per-packet one-way delay: 75.249 ms
Loss rate: 1.31%
```

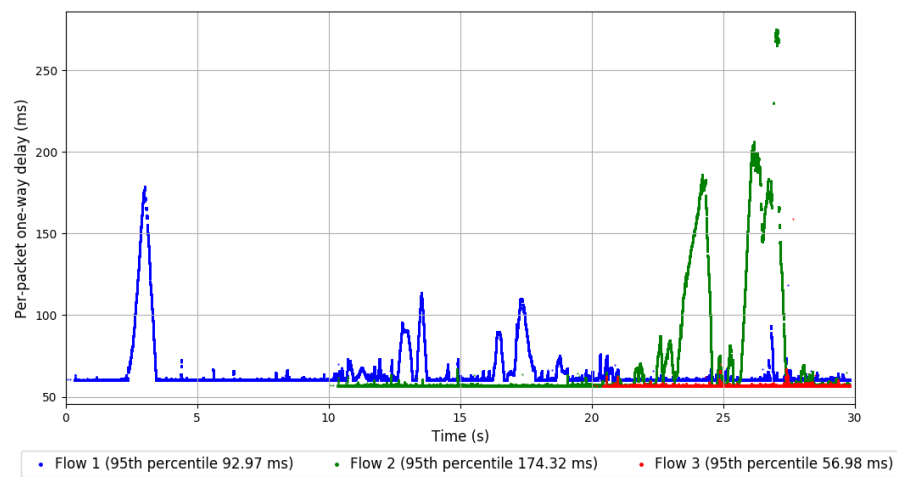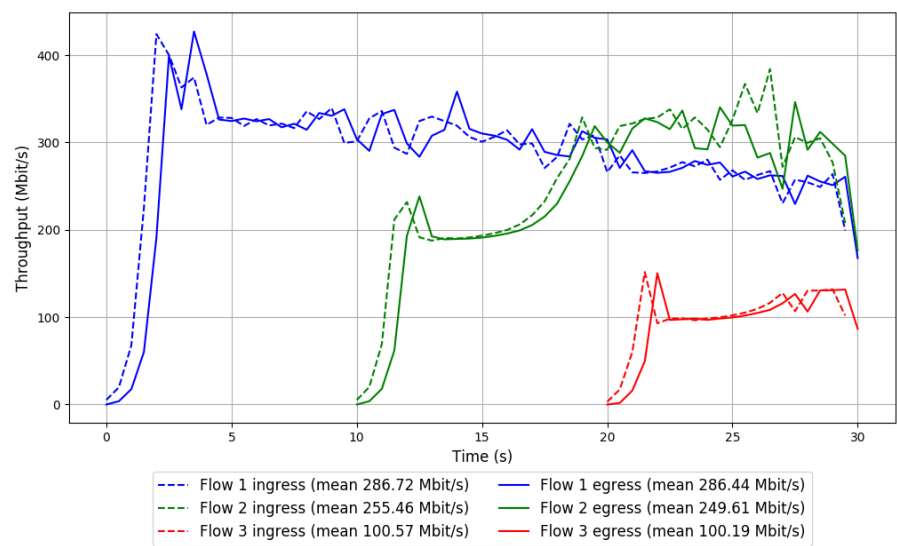Run 5: Report of PCC-Allegro — Data Link

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```
Run 1: Statistics of PCC-Expr

Start at: 2019-08-27 20:29:33
End at: 2019-08-27 20:30:03
Local clock offset: -0.398 ms
Remote clock offset: 0.261 ms


# Below is generated by plot.py at 2019-08-28 01:48:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 484.89 Mbit/s
95th percentile per-packet one-way delay: 132.918 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 286.44 Mbit/s
95th percentile per-packet one-way delay: 92.967 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 249.61 Mbit/s
95th percentile per-packet one-way delay: 174.324 ms
Loss rate: 2.85%
-- Flow 3:
Average throughput: 100.19 Mbit/s
95th percentile per-packet one-way delay: 56.985 ms
Loss rate: 1.53%
```

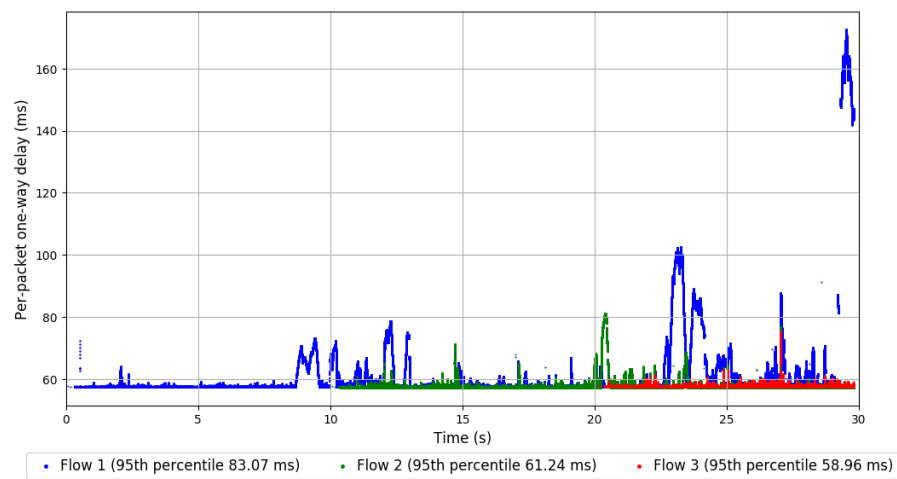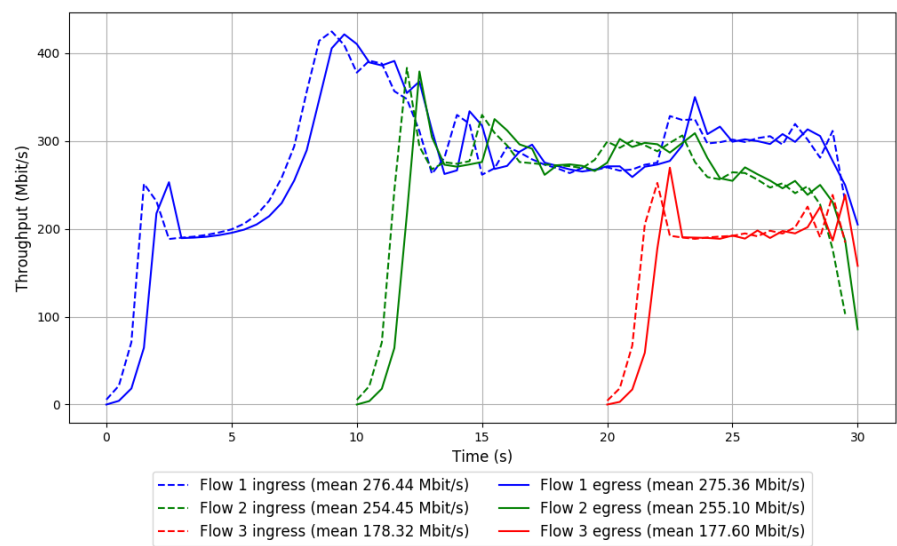# Run 1: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 286.72 Mbit/s) --- Flow 1 egress (mean 286.44 Mbit/s)
Flow 2 ingress (mean 255.46 Mbit/s) --- Flow 2 egress (mean 249.61 Mbit/s)
Flow 3 ingress (mean 100.57 Mbit/s) --- Flow 3 egress (mean 100.19 Mbit/s)

Flow 1 (95th percentile 92.97 ms) • Flow 2 (95th percentile 174.32 ms) • Flow 3 (95th percentile 56.98 ms)
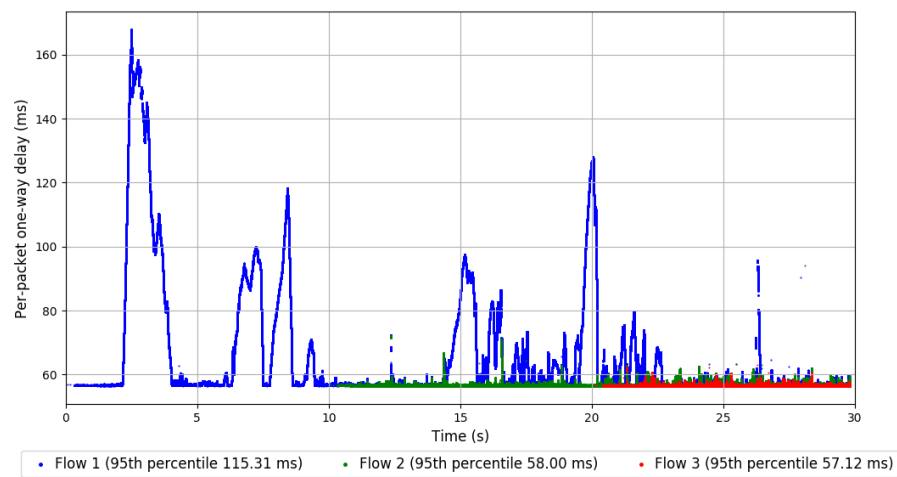
```
Run 2: Statistics of PCC-Expr

Start at: 2019-08-27 21:08:40
End at: 2019-08-27 21:09:10
Local clock offset: 0.43 ms
Remote clock offset: -0.232 ms


# Below is generated by plot.py at 2019-08-28 01:48:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 502.71 Mbit/s
95th percentile per-packet one-way delay: 72.587 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 275.36 Mbit/s
95th percentile per-packet one-way delay: 83.066 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 255.10 Mbit/s
95th percentile per-packet one-way delay: 61.244 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 177.60 Mbit/s
95th percentile per-packet one-way delay: 58.957 ms
Loss rate: 1.55%
```

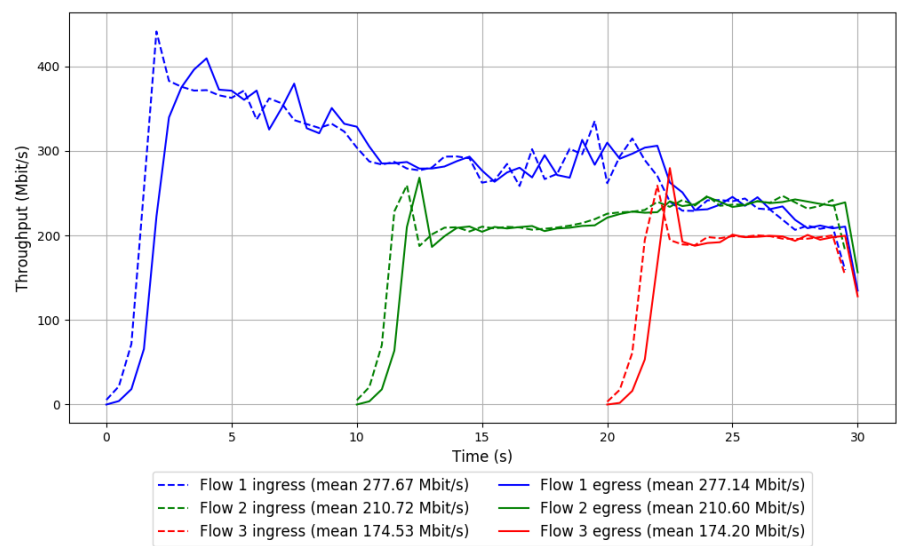Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-08-27 21:47:59
End at: 2019-08-27 21:48:29
Local clock offset: -0.407 ms
Remote clock offset: -0.122 ms

# Below is generated by plot.py at 2019-08-28 01:48:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 473.88 Mbit/s
95th percentile per-packet one-way delay: 99.415 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 277.14 Mbit/s
95th percentile per-packet one-way delay: 115.308 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 210.60 Mbit/s
95th percentile per-packet one-way delay: 57.998 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 174.20 Mbit/s
95th percentile per-packet one-way delay: 57.118 ms
Loss rate: 1.38%
```
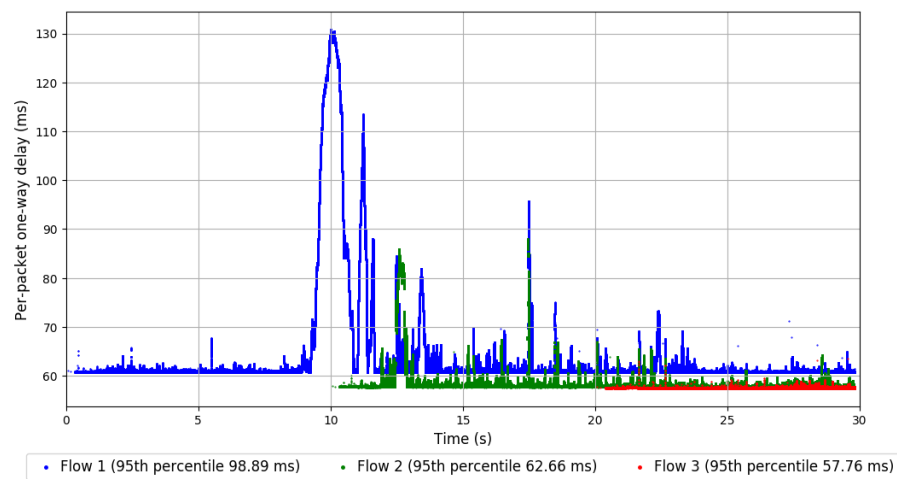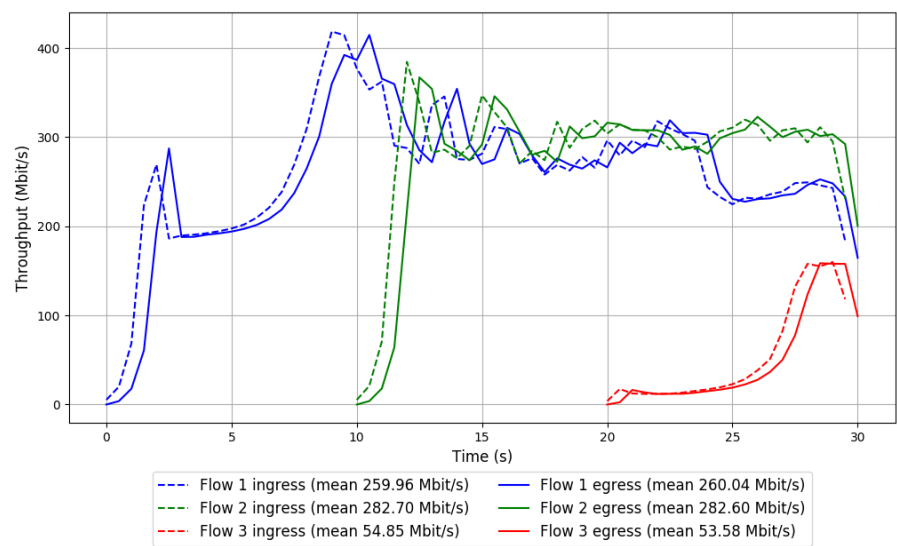
Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2019-08-27 22:27:13
End at: 2019-08-27 22:27:43
Local clock offset: 0.411 ms
Remote clock offset: -0.122 ms


# Below is generated by plot.py at 2019-08-28 01:53:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 465.19 Mbit/s
95th percentile per-packet one-way delay: 81.167 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 260.04 Mbit/s
95th percentile per-packet one-way delay: 98.893 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 282.60 Mbit/s
95th percentile per-packet one-way delay: 62.660 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 53.58 Mbit/s
95th percentile per-packet one-way delay: 57.755 ms
Loss rate: 3.45%
```
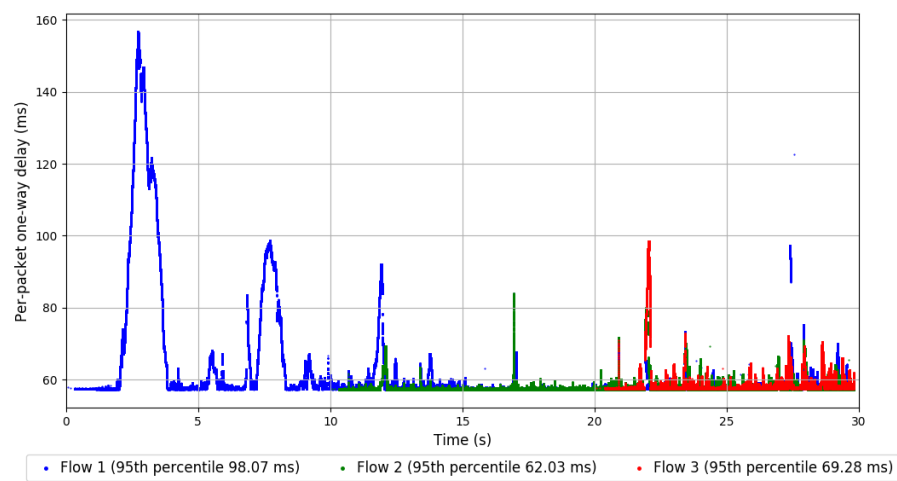
Run 4: Report of PCC-Expr — Data Link

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```
Run 5: Statistics of PCC-Expr

Start at: 2019-08-27 23:06:15
End at: 2019-08-27 23:06:45
Local clock offset: 0.336 ms
Remote clock offset: 0.015 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 510.64 Mbit/s
95th percentile per-packet one-way delay: 88.928 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 300.05 Mbit/s
95th percentile per-packet one-way delay: 98.071 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 231.21 Mbit/s
95th percentile per-packet one-way delay: 62.033 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 174.35 Mbit/s
95th percentile per-packet one-way delay: 69.283 ms
Loss rate: 1.68%
```
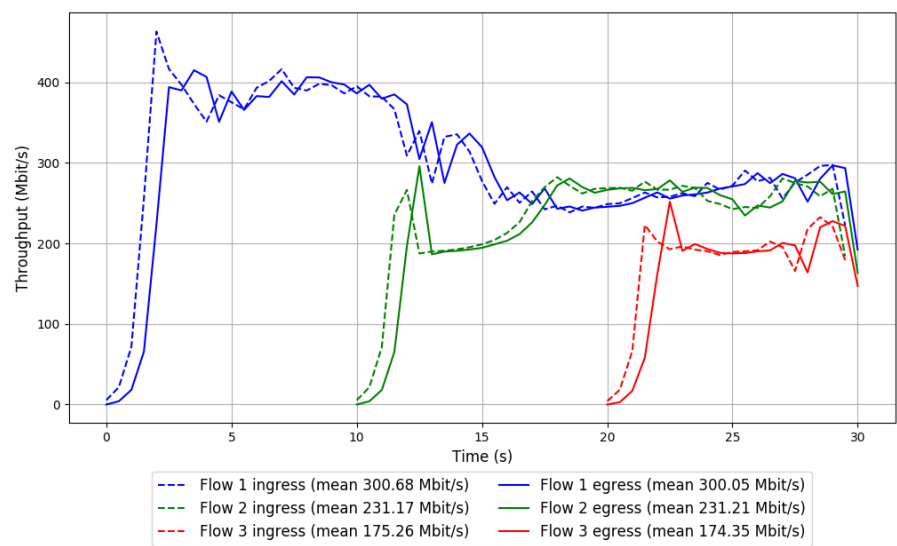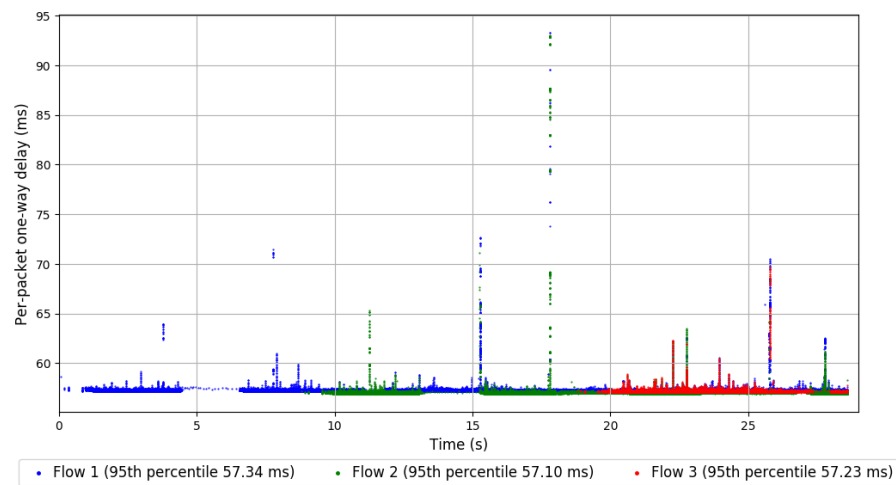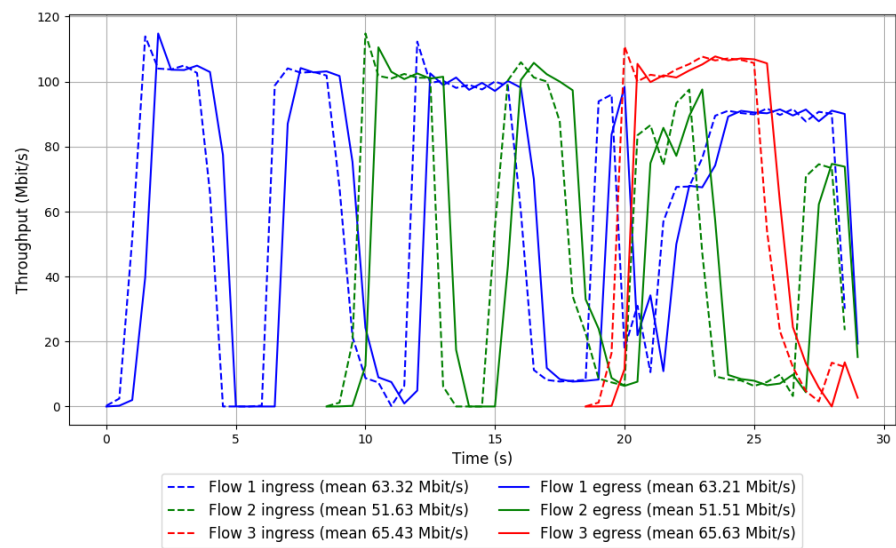
Run 5: Report of PCC-Expr — Data Link

- - - - Flow 1 ingress (mean 300.68 Mbit/s) ——— Flow 1 egress (mean 300.05 Mbit/s)
- - - - Flow 2 ingress (mean 231.17 Mbit/s) ——— Flow 2 egress (mean 231.21 Mbit/s)
- - - - Flow 3 ingress (mean 175.26 Mbit/s) ——— Flow 3 egress (mean 174.35 Mbit/s)

- Flow 1 (95th percentile 98.07 ms)   • Flow 2 (95th percentile 62.03 ms)   • Flow 3 (95th percentile 69.28 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-08-27 20:34:52
End at: 2019-08-27 20:35:22
Local clock offset: -0.187 ms
Remote clock offset: 0.079 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 121.44 Mbit/s
95th percentile per-packet one-way delay: 57.311 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 63.21 Mbit/s
95th percentile per-packet one-way delay: 57.339 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 51.51 Mbit/s
95th percentile per-packet one-way delay: 57.101 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 65.63 Mbit/s
95th percentile per-packet one-way delay: 57.227 ms
Loss rate: 0.84%
```
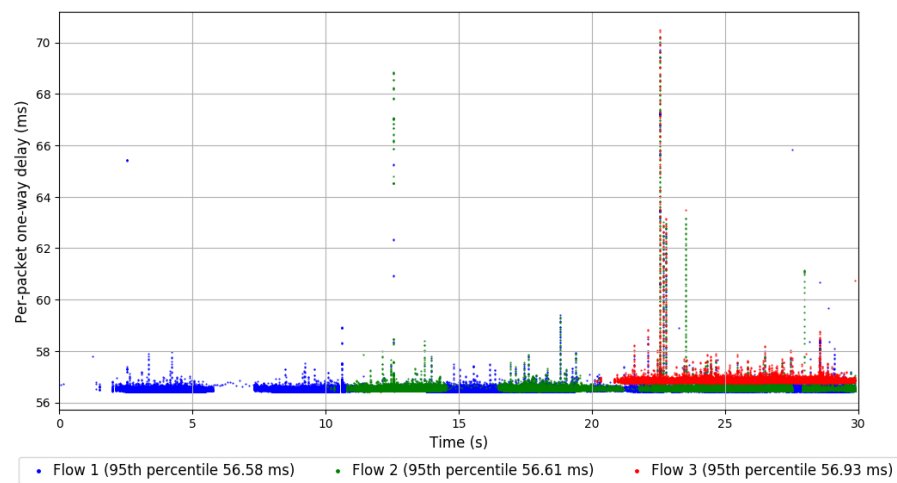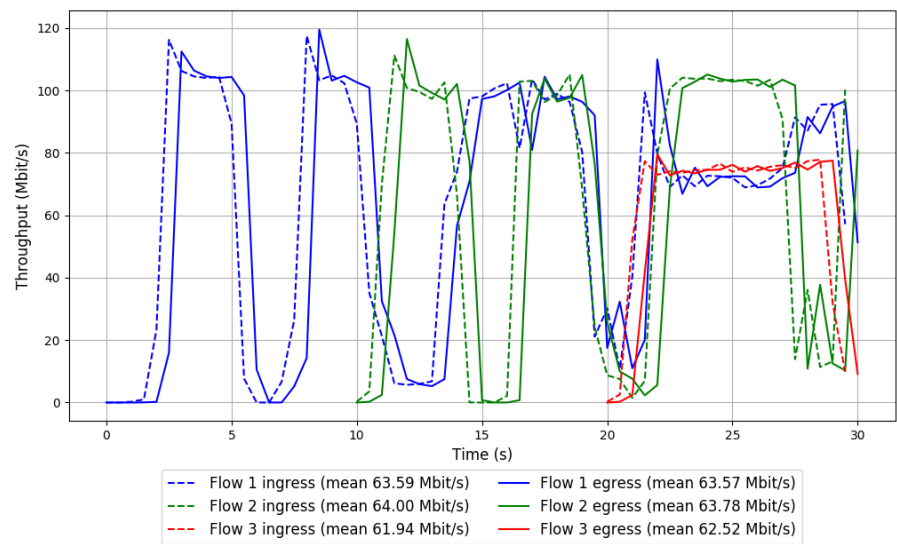
Run 1: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 63.32 Mbit/s)   Flow 1 egress (mean 63.21 Mbit/s)
Flow 2 ingress (mean 51.63 Mbit/s)   Flow 2 egress (mean 51.51 Mbit/s)
Flow 3 ingress (mean 65.43 Mbit/s)   Flow 3 egress (mean 65.63 Mbit/s)

Flow 1 (95th percentile 57.34 ms)   Flow 2 (95th percentile 57.10 ms)   Flow 3 (95th percentile 57.23 ms)
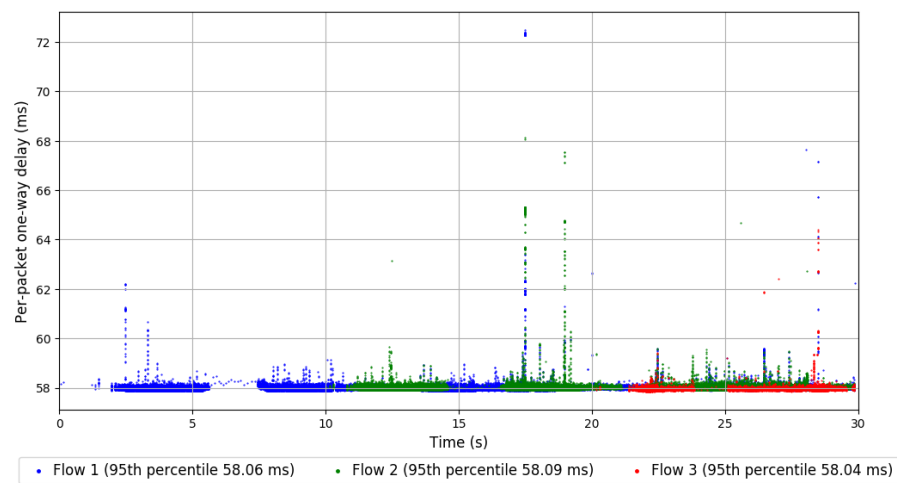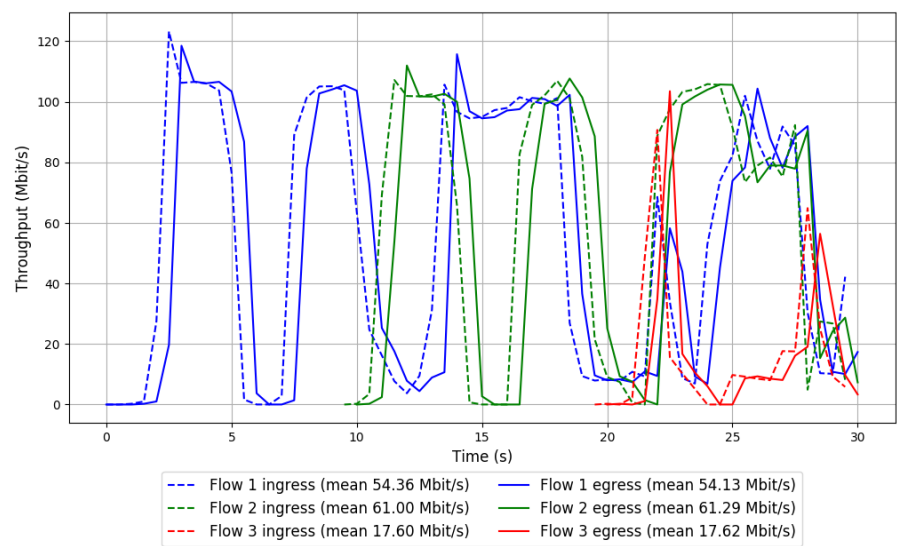
```
Run 2: Statistics of QUIC Cubic

Start at: 2019-08-27 21:14:04
End at: 2019-08-27 21:14:34
Local clock offset: -0.431 ms
Remote clock offset: -0.121 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.45 Mbit/s
95th percentile per-packet one-way delay: 56.849 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 63.57 Mbit/s
95th percentile per-packet one-way delay: 56.583 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 63.78 Mbit/s
95th percentile per-packet one-way delay: 56.606 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 62.52 Mbit/s
95th percentile per-packet one-way delay: 56.927 ms
Loss rate: 0.19%
```

Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 63.59 Mbit/s) ---- Flow 1 egress (mean 63.57 Mbit/s)
Flow 2 ingress (mean 64.00 Mbit/s) ---- Flow 2 egress (mean 63.78 Mbit/s)
Flow 3 ingress (mean 61.94 Mbit/s) ---- Flow 3 egress (mean 62.52 Mbit/s)

Flow 1 (95th percentile 56.58 ms)   Flow 2 (95th percentile 56.61 ms)   Flow 3 (95th percentile 56.93 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-08-27 21:53:14
End at: 2019-08-27 21:53:44
Local clock offset: 0.248 ms
Remote clock offset: -0.892 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.67 Mbit/s
95th percentile per-packet one-way delay: 58.074 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 54.13 Mbit/s
95th percentile per-packet one-way delay: 58.060 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 61.29 Mbit/s
95th percentile per-packet one-way delay: 58.091 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 17.62 Mbit/s
95th percentile per-packet one-way delay: 58.041 ms
Loss rate: 0.99%
```
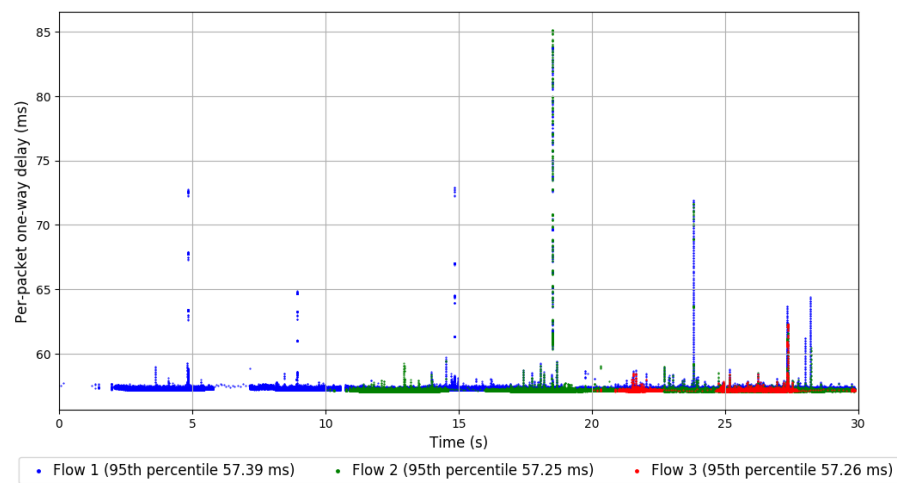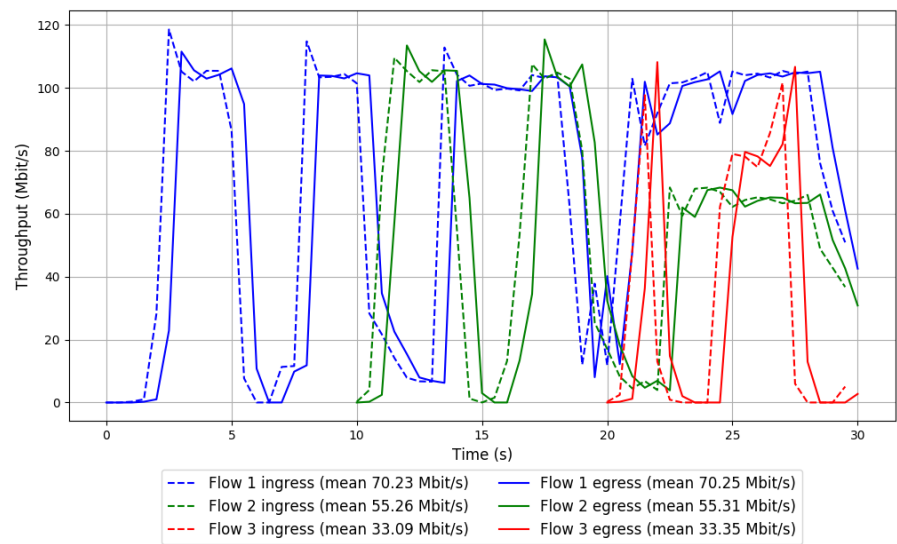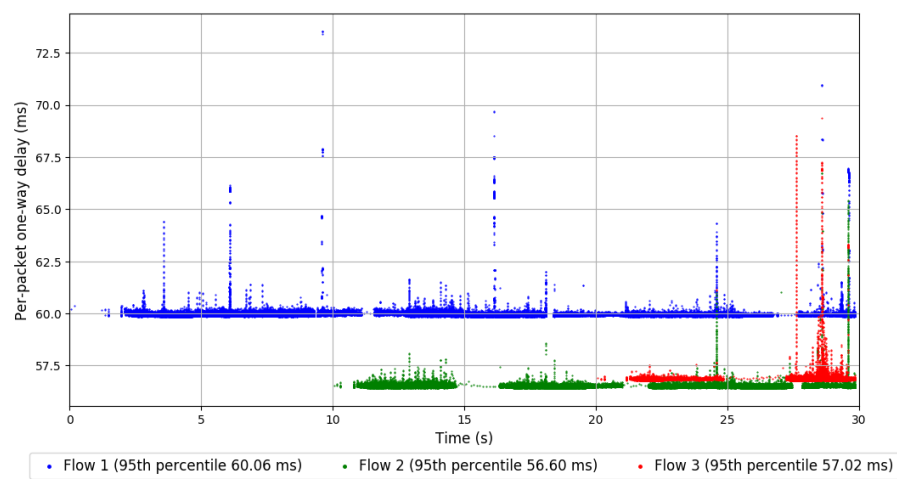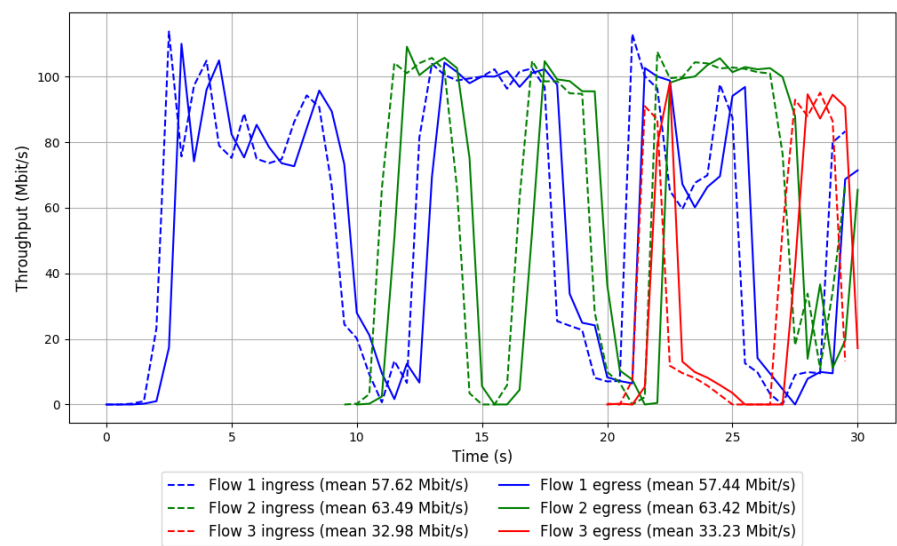
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-08-27 22:32:27
End at: 2019-08-27 22:32:57
Local clock offset: 0.342 ms
Remote clock offset: -0.01 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 117.95 Mbit/s
95th percentile per-packet one-way delay: 57.372 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 70.25 Mbit/s
95th percentile per-packet one-way delay: 57.394 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 55.31 Mbit/s
95th percentile per-packet one-way delay: 57.252 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 33.35 Mbit/s
95th percentile per-packet one-way delay: 57.256 ms
Loss rate: 0.36%
```
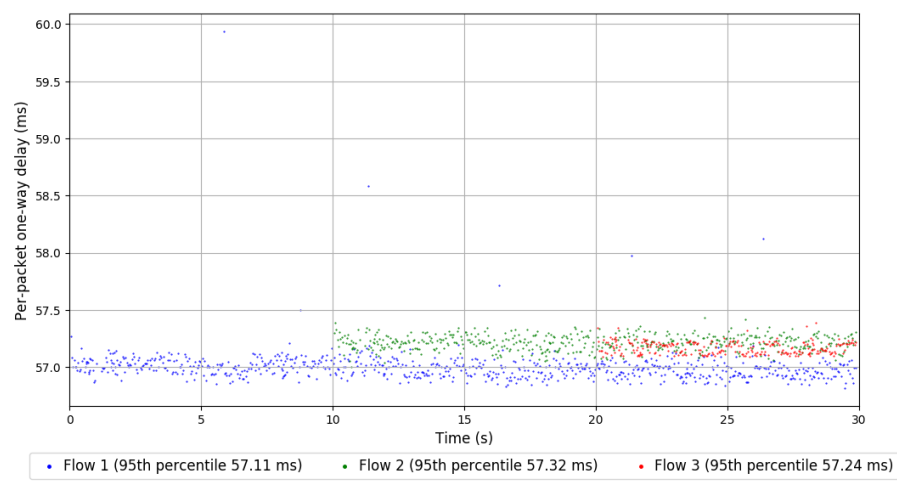
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-08-27 23:11:32
End at: 2019-08-27 23:12:02
Local clock offset: -0.348 ms
Remote clock offset: -0.007 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 110.50 Mbit/s
95th percentile per-packet one-way delay: 60.021 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 57.44 Mbit/s
95th percentile per-packet one-way delay: 60.064 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 63.42 Mbit/s
95th percentile per-packet one-way delay: 56.596 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 33.23 Mbit/s
95th percentile per-packet one-way delay: 57.018 ms
Loss rate: 0.40%
```

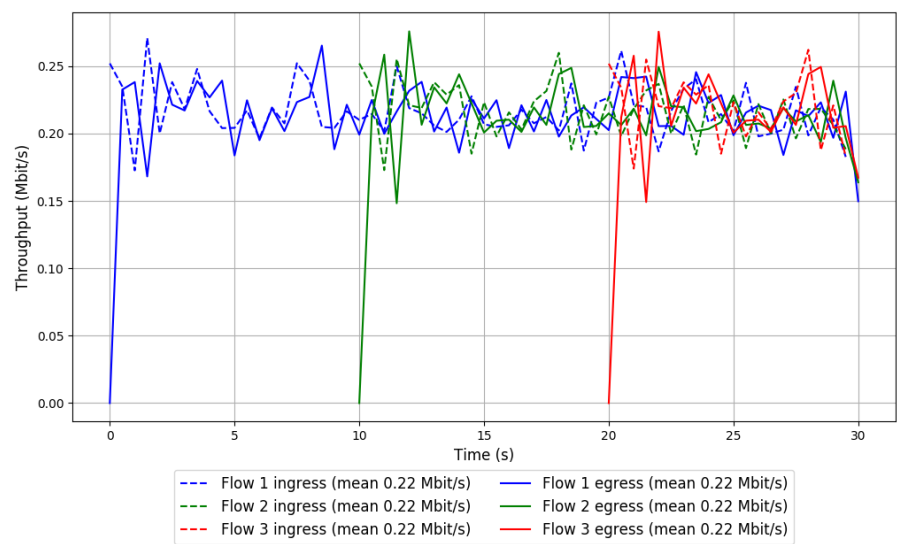Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-08-27 20:39:50
End at: 2019-08-27 20:40:20
Local clock offset: -0.255 ms
Remote clock offset: 0.027 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 57.291 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.114 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.320 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.243 ms
Loss rate: 1.08%
```
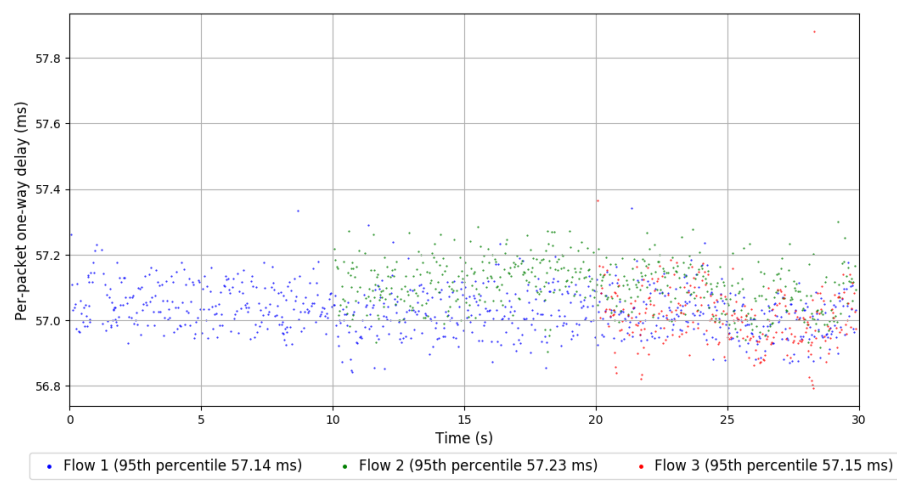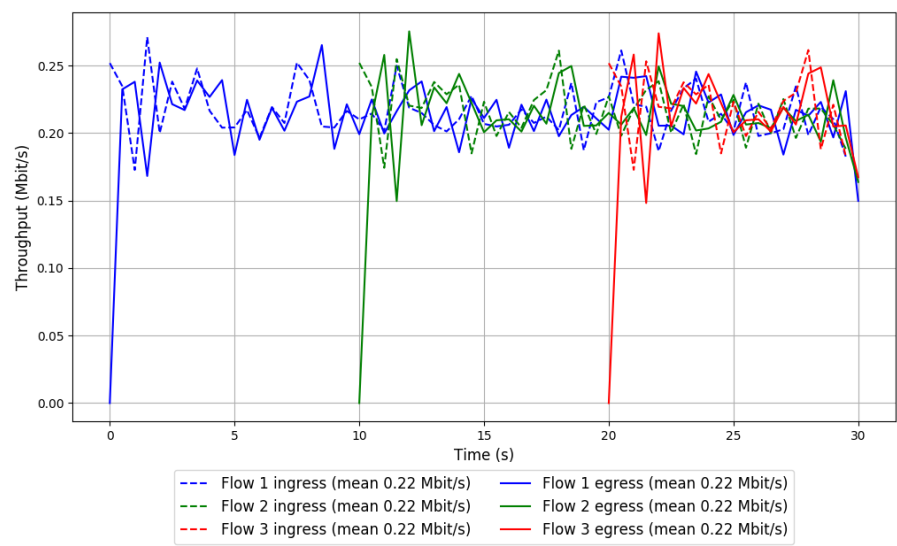
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-08-27 21:19:06
End at: 2019-08-27 21:19:36
Local clock offset: -0.03 ms
Remote clock offset: -0.091 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 57.188 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.143 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.229 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.149 ms
Loss rate: 1.09%
```
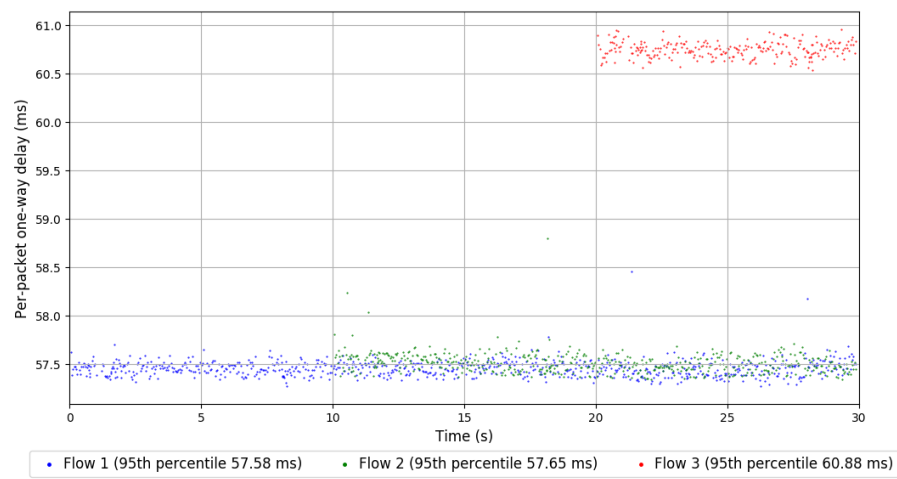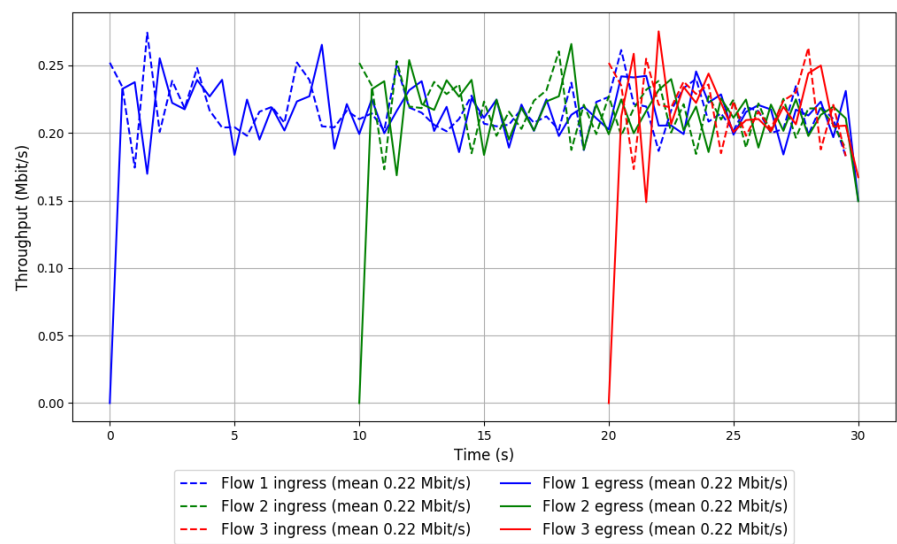
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-08-27 21:58:16
End at: 2019-08-27 21:58:46
Local clock offset: 0.196 ms
Remote clock offset: -0.202 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 60.786 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.579 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.654 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.883 ms
Loss rate: 1.08%
```
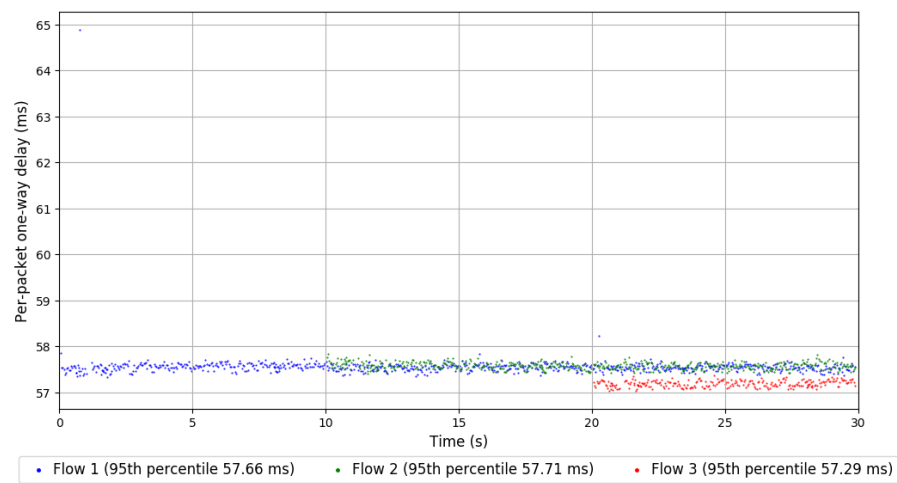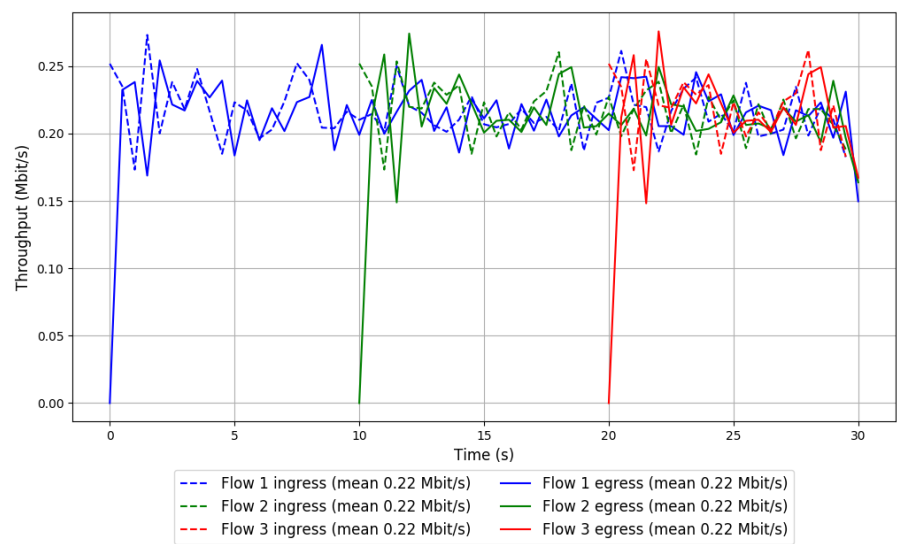
Run 3: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.22 Mbit/s) — — —   Flow 1 egress (mean 0.22 Mbit/s)
Flow 2 ingress (mean 0.22 Mbit/s) — — —   Flow 2 egress (mean 0.22 Mbit/s)
Flow 3 ingress (mean 0.22 Mbit/s) — — —   Flow 3 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 57.58 ms)   Flow 2 (95th percentile 57.65 ms)   Flow 3 (95th percentile 60.88 ms)

```
Run 4: Statistics of SCReAM

Start at: 2019-08-27 22:37:26
End at: 2019-08-27 22:37:56
Local clock offset: -0.057 ms
Remote clock offset: -0.13 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 57.675 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.662 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.706 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.292 ms
Loss rate: 1.08%
```
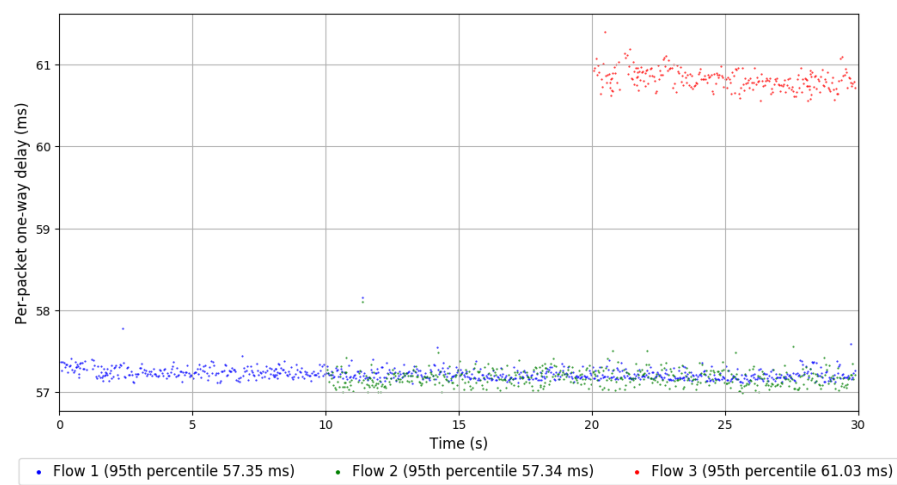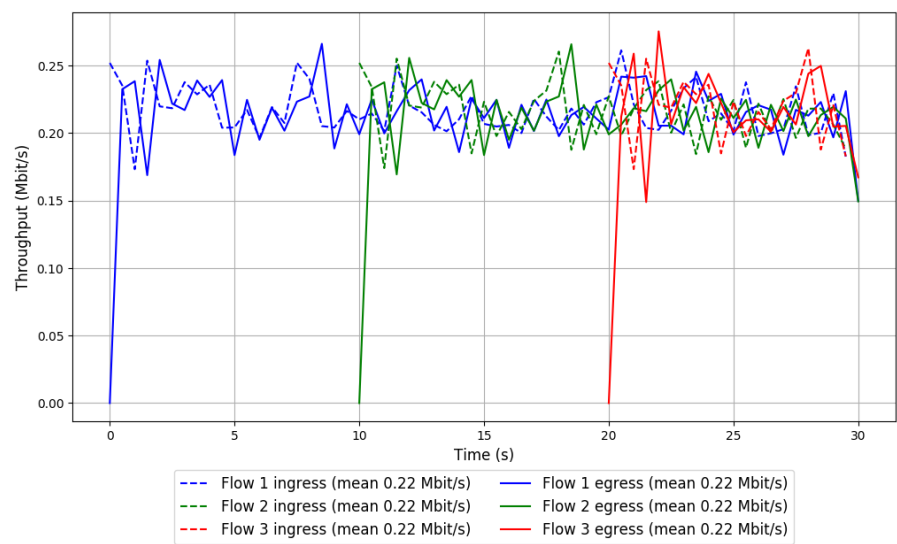
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-08-27 23:16:32
End at: 2019-08-27 23:17:02
Local clock offset: -0.053 ms
Remote clock offset: -0.029 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 60.879 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.346 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.339 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.032 ms
Loss rate: 1.08%
```
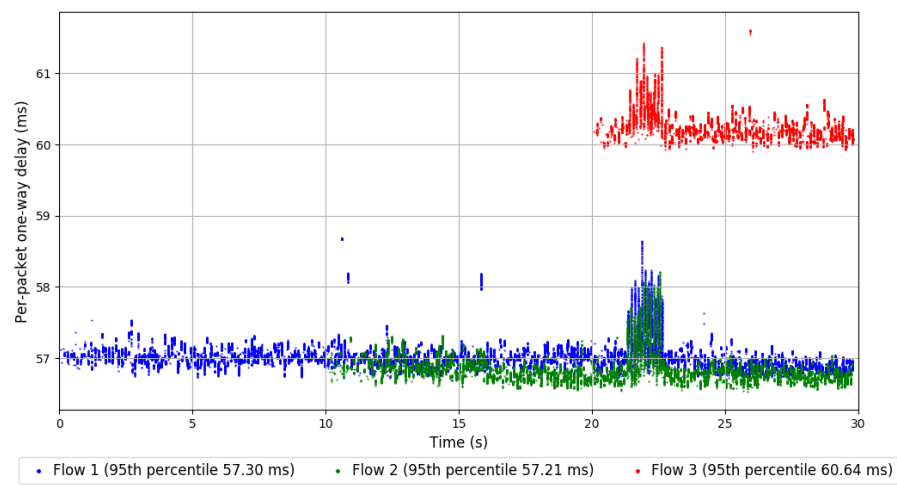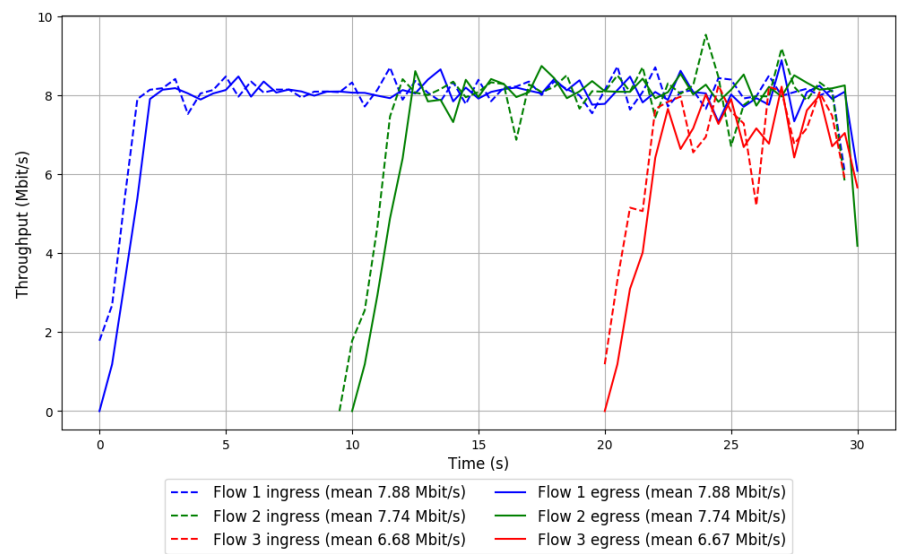
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-08-27 20:53:06
End at: 2019-08-27 20:53:36
Local clock offset: -0.474 ms
Remote clock offset: -0.196 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.19 Mbit/s
95th percentile per-packet one-way delay: 60.251 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 57.305 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 7.74 Mbit/s
95th percentile per-packet one-way delay: 57.210 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 6.67 Mbit/s
95th percentile per-packet one-way delay: 60.641 ms
Loss rate: 1.53%
```
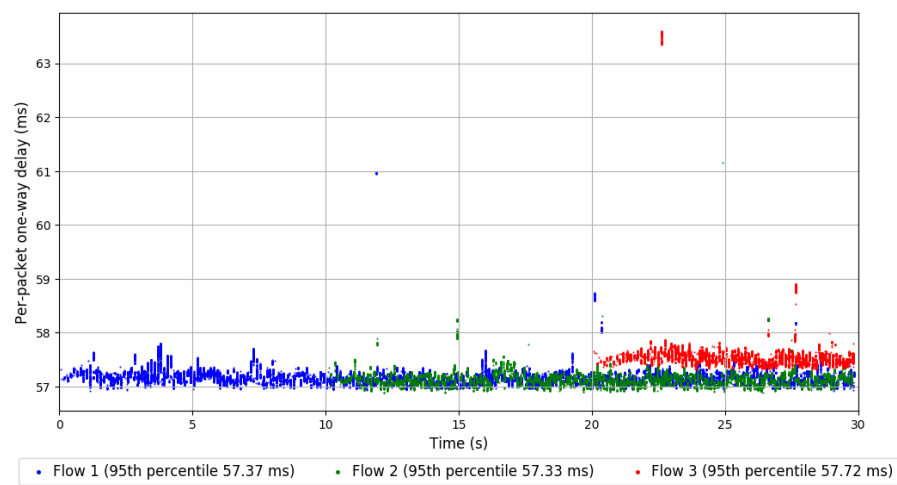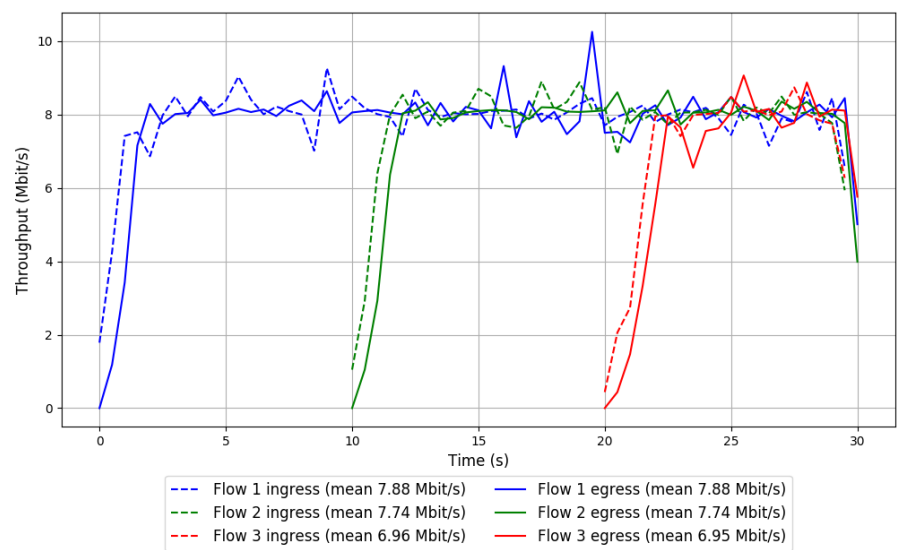
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-08-27 21:32:09
End at: 2019-08-27 21:32:39
Local clock offset: -0.014 ms
Remote clock offset: -0.285 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.30 Mbit/s
95th percentile per-packet one-way delay: 57.582 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 57.369 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 7.74 Mbit/s
95th percentile per-packet one-way delay: 57.332 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 6.95 Mbit/s
95th percentile per-packet one-way delay: 57.724 ms
Loss rate: 1.34%
```
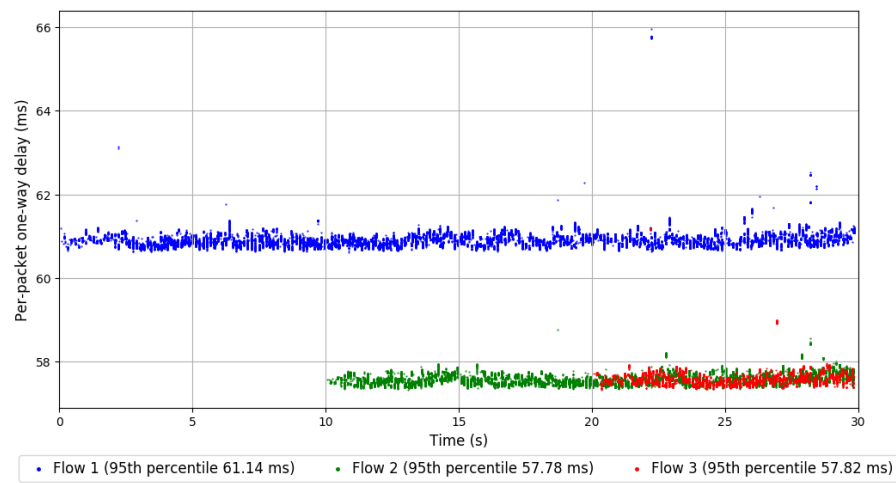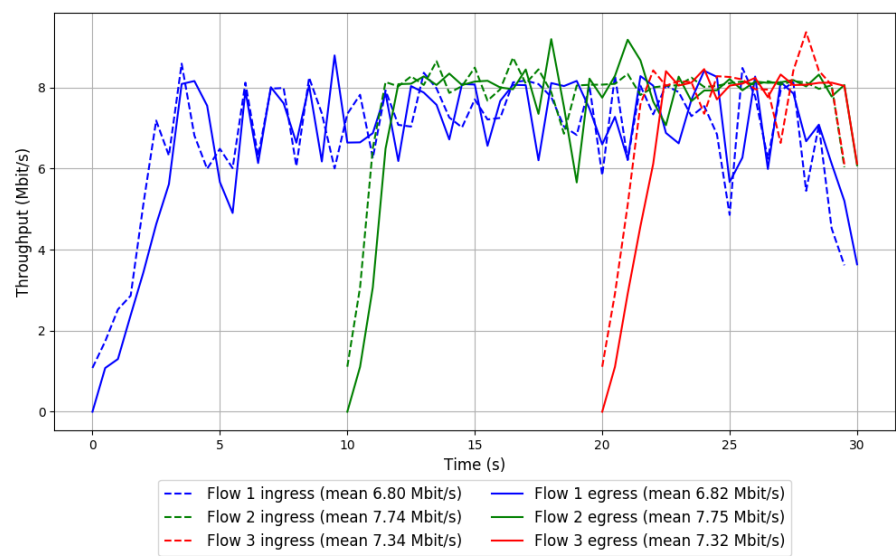
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-08-27 22:11:22
End at: 2019-08-27 22:11:52
Local clock offset: 0.29 ms
Remote clock offset: -0.239 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.35 Mbit/s
95th percentile per-packet one-way delay: 61.066 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 6.82 Mbit/s
95th percentile per-packet one-way delay: 61.141 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 57.785 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 7.32 Mbit/s
95th percentile per-packet one-way delay: 57.817 ms
Loss rate: 1.40%
```

Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-08-27 22:50:35
End at: 2019-08-27 22:51:05
Local clock offset: 0.1 ms
Remote clock offset: 0.08 ms


# Below is generated by plot.py at 2019-08-28 01:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.42 Mbit/s
95th percentile per-packet one-way delay: 57.639 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 57.396 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 57.655 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 57.780 ms
Loss rate: 1.26%
```
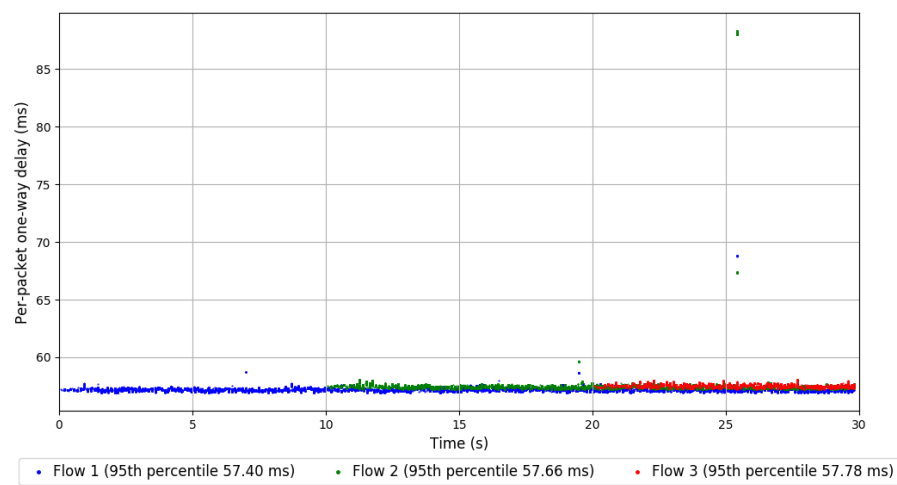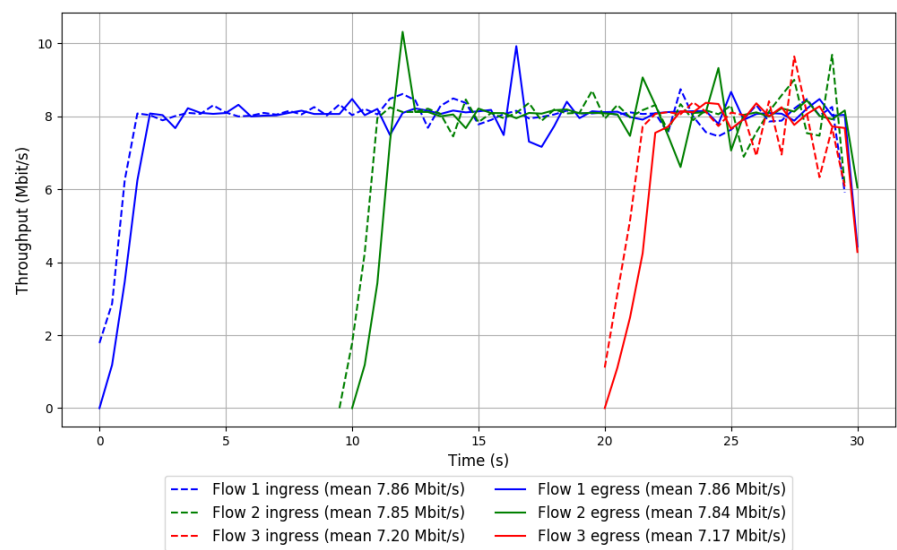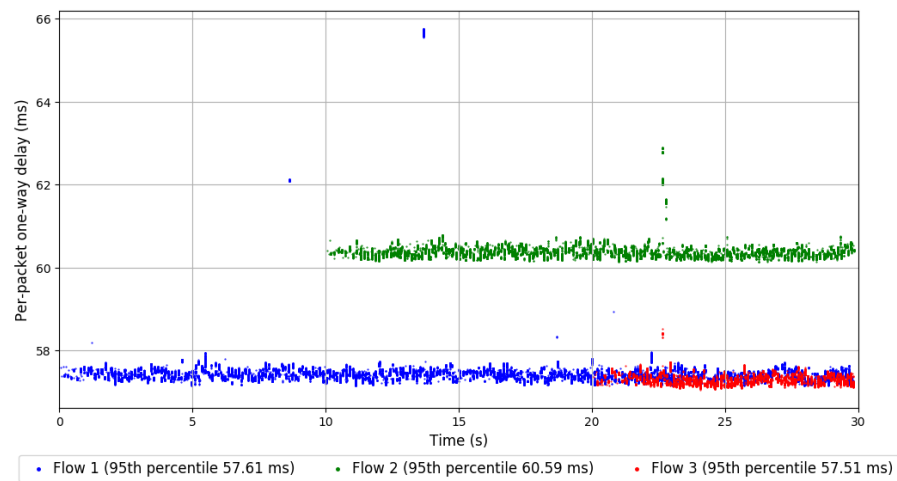
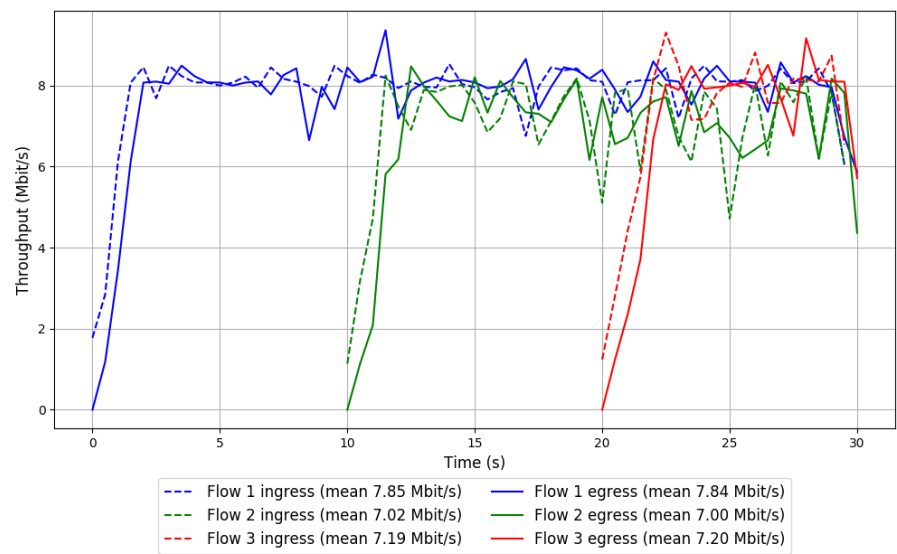## Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-08-27 23:29:38
End at: 2019-08-27 23:30:08
Local clock offset: -0.103 ms
Remote clock offset: 0.041 ms


# Below is generated by plot.py at 2019-08-28 01:57:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.85 Mbit/s
95th percentile per-packet one-way delay: 60.480 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 57.614 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 7.00 Mbit/s
95th percentile per-packet one-way delay: 60.595 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 7.20 Mbit/s
95th percentile per-packet one-way delay: 57.509 ms
Loss rate: 1.03%
```

Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 7.85 Mbit/s) --- Flow 1 egress (mean 7.84 Mbit/s)
Flow 2 ingress (mean 7.02 Mbit/s) --- Flow 2 egress (mean 7.00 Mbit/s)
Flow 3 ingress (mean 7.19 Mbit/s) --- Flow 3 egress (mean 7.20 Mbit/s)

Flow 1 (95th percentile 57.61 ms) • Flow 2 (95th percentile 60.59 ms) • Flow 3 (95th percentile 57.51 ms)

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

Start at: 2019-08-27 20:36:09
End at: 2019-08-27 20:36:39
Local clock offset: -0.68 ms
Remote clock offset: 0.145 ms


# Below is generated by plot.py at 2019-08-28 02:00:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 460.24 Mbit/s
95th percentile per-packet one-way delay: 59.779 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 232.46 Mbit/s
95th percentile per-packet one-way delay: 56.809 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 232.13 Mbit/s
95th percentile per-packet one-way delay: 56.584 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 222.96 Mbit/s
95th percentile per-packet one-way delay: 60.167 ms
Loss rate: 0.29%
```
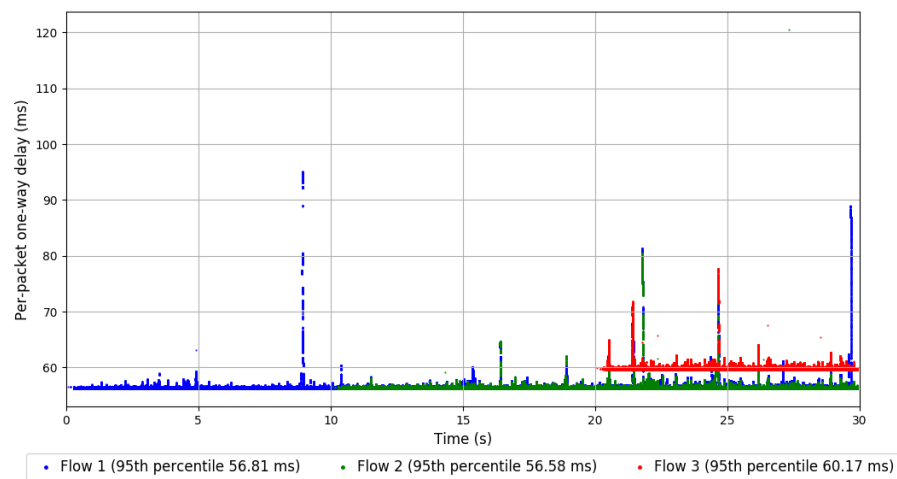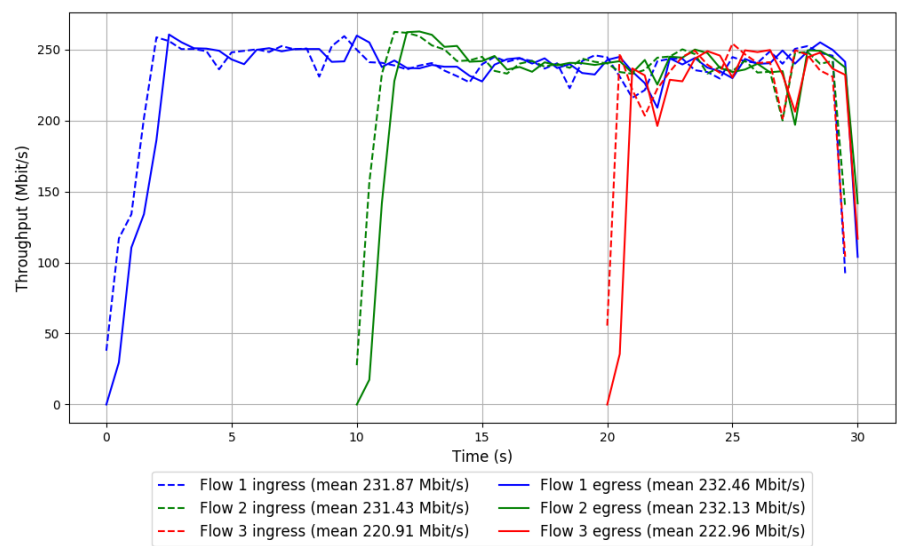
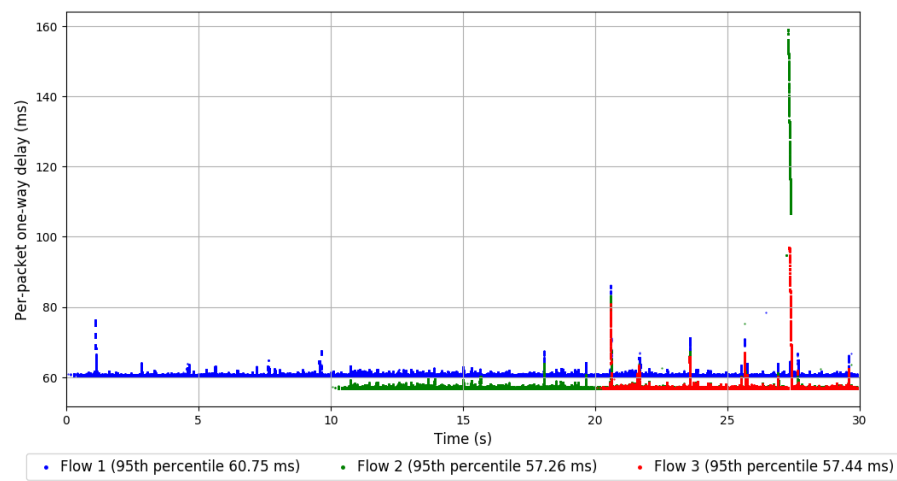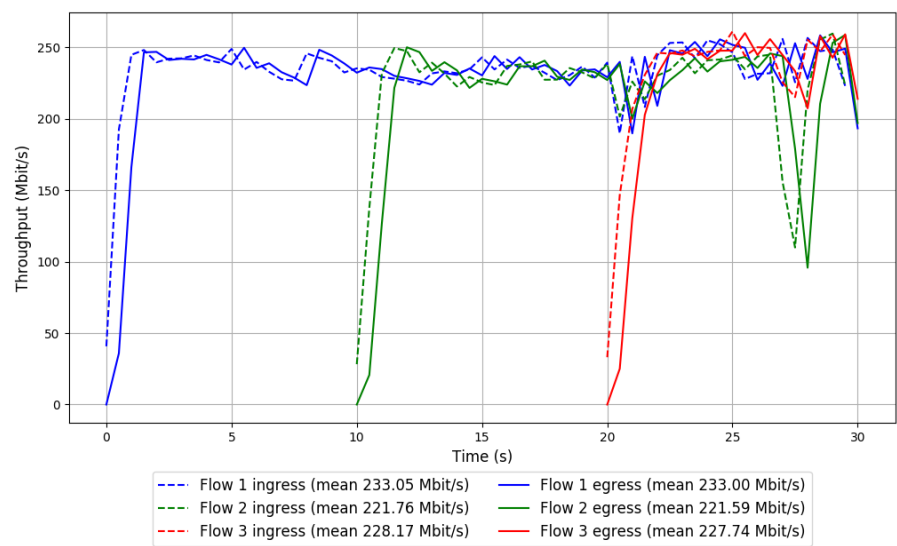Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-08-27 21:15:22
End at: 2019-08-27 21:15:52
Local clock offset: -0.136 ms
Remote clock offset: -0.222 ms


# Below is generated by plot.py at 2019-08-28 02:00:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 455.40 Mbit/s
95th percentile per-packet one-way delay: 60.660 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 233.00 Mbit/s
95th percentile per-packet one-way delay: 60.746 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 221.59 Mbit/s
95th percentile per-packet one-way delay: 57.255 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 227.74 Mbit/s
95th percentile per-packet one-way delay: 57.437 ms
Loss rate: 1.35%
```

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

Flow 1 ingress (mean 233.05 Mbit/s)   Flow 1 egress (mean 233.00 Mbit/s)
Flow 2 ingress (mean 221.76 Mbit/s)   Flow 2 egress (mean 221.59 Mbit/s)
Flow 3 ingress (mean 228.17 Mbit/s)   Flow 3 egress (mean 227.74 Mbit/s)

Flow 1 (95th percentile 60.75 ms)   Flow 2 (95th percentile 57.26 ms)   Flow 3 (95th percentile 57.44 ms)
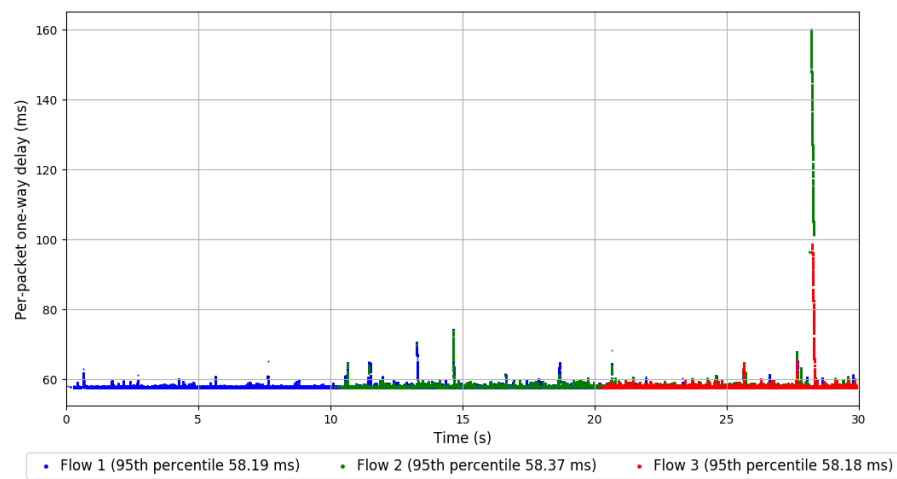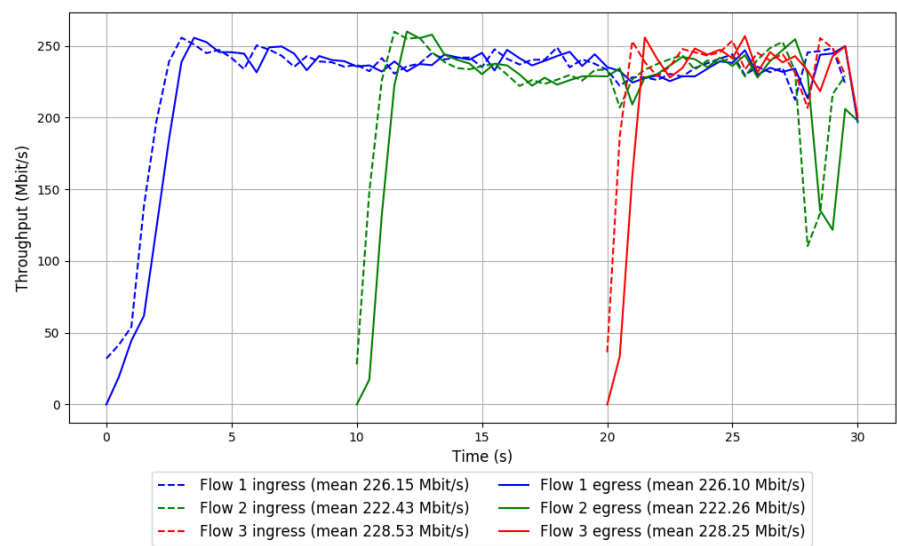
```
Run 3: Statistics of TaoVA-100x

Start at: 2019-08-27 21:54:31
End at: 2019-08-27 21:55:01
Local clock offset: 0.011 ms
Remote clock offset: -0.865 ms


# Below is generated by plot.py at 2019-08-28 02:00:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 449.07 Mbit/s
95th percentile per-packet one-way delay: 58.252 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 226.10 Mbit/s
95th percentile per-packet one-way delay: 58.185 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 222.26 Mbit/s
95th percentile per-packet one-way delay: 58.367 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 228.25 Mbit/s
95th percentile per-packet one-way delay: 58.182 ms
Loss rate: 1.27%
```
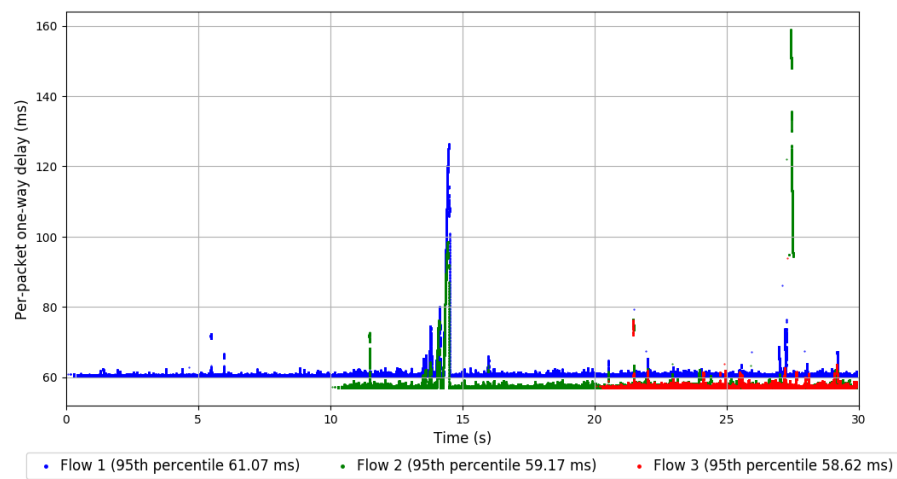
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 226.15 Mbit/s)   Flow 1 egress (mean 226.10 Mbit/s)
Flow 2 ingress (mean 222.43 Mbit/s)   Flow 2 egress (mean 222.26 Mbit/s)
Flow 3 ingress (mean 228.53 Mbit/s)   Flow 3 egress (mean 228.25 Mbit/s)

Flow 1 (95th percentile 58.19 ms)   Flow 2 (95th percentile 58.37 ms)   Flow 3 (95th percentile 58.18 ms)

```
Run 4: Statistics of TaoVA-100x

Start at: 2019-08-27 22:33:45
End at: 2019-08-27 22:34:15
Local clock offset: 0.209 ms
Remote clock offset: 0.06 ms


# Below is generated by plot.py at 2019-08-28 02:00:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.54 Mbit/s
95th percentile per-packet one-way delay: 60.862 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 223.95 Mbit/s
95th percentile per-packet one-way delay: 61.067 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 216.34 Mbit/s
95th percentile per-packet one-way delay: 59.170 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 211.70 Mbit/s
95th percentile per-packet one-way delay: 58.622 ms
Loss rate: 1.35%
```
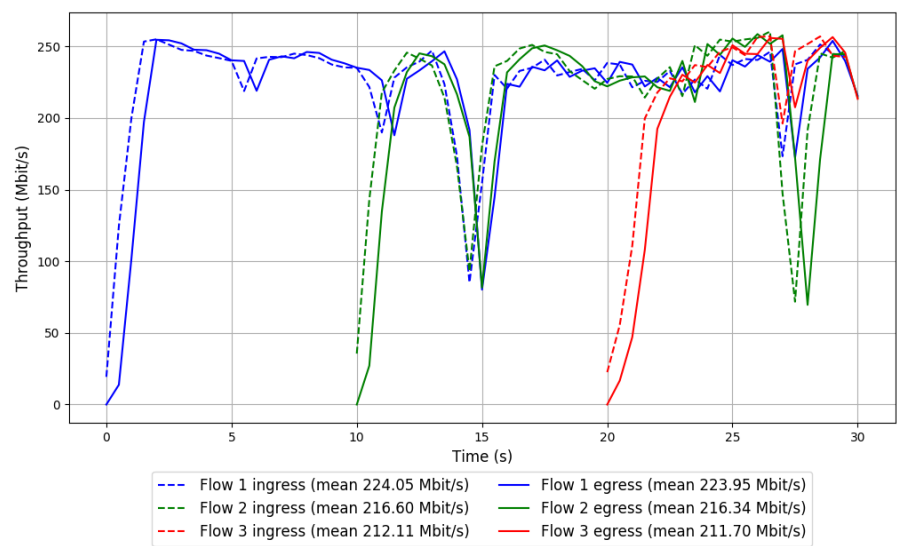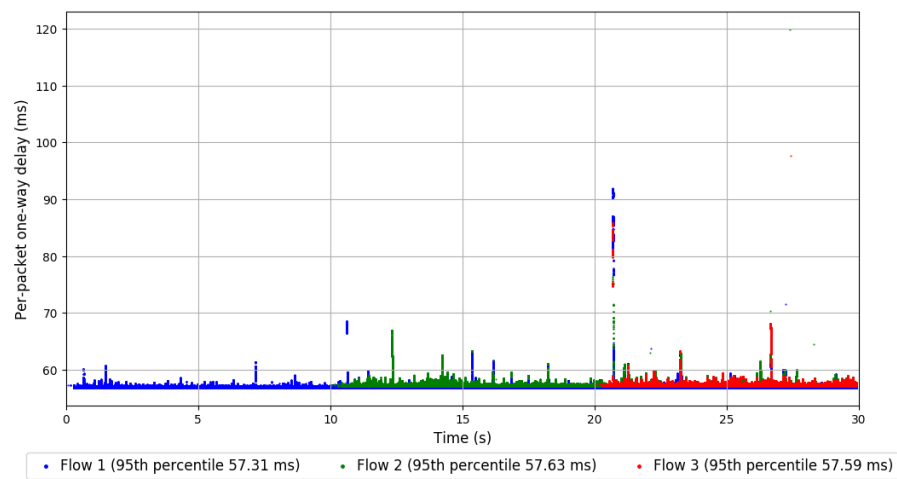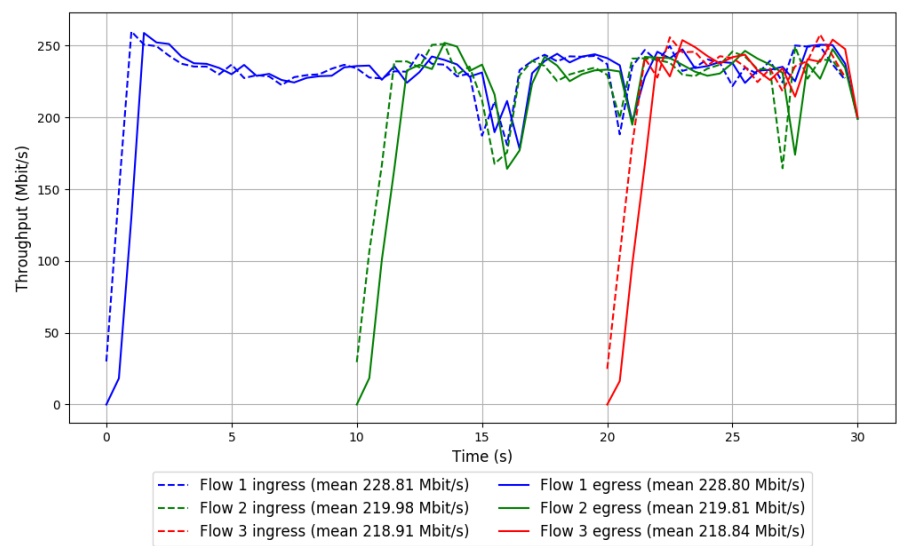
Run 4: Report of TaoVA-100x — Data Link

- - - - Flow 1 ingress (mean 224.05 Mbit/s)   —— Flow 1 egress (mean 223.95 Mbit/s)
- - - - Flow 2 ingress (mean 216.60 Mbit/s)   —— Flow 2 egress (mean 216.34 Mbit/s)
- - - - Flow 3 ingress (mean 212.11 Mbit/s)   —— Flow 3 egress (mean 211.70 Mbit/s)

- Flow 1 (95th percentile 61.07 ms)   • Flow 2 (95th percentile 59.17 ms)   • Flow 3 (95th percentile 58.62 ms)

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

Start at: 2019-08-27 23:12:50
End at: 2019-08-27 23:13:20
Local clock offset: -0.059 ms
Remote clock offset: -0.014 ms


# Below is generated by plot.py at 2019-08-28 02:00:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 447.09 Mbit/s
95th percentile per-packet one-way delay: 57.508 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 228.80 Mbit/s
95th percentile per-packet one-way delay: 57.313 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 219.81 Mbit/s
95th percentile per-packet one-way delay: 57.635 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 218.84 Mbit/s
95th percentile per-packet one-way delay: 57.594 ms
Loss rate: 1.20%
```
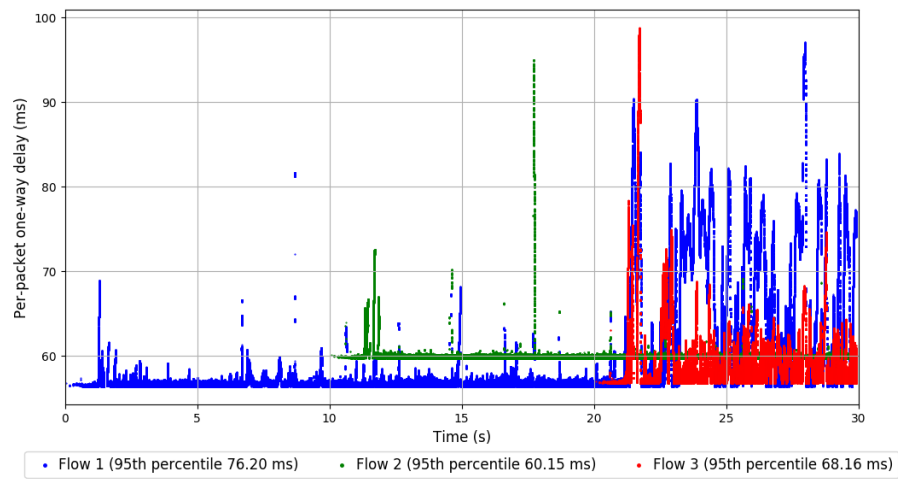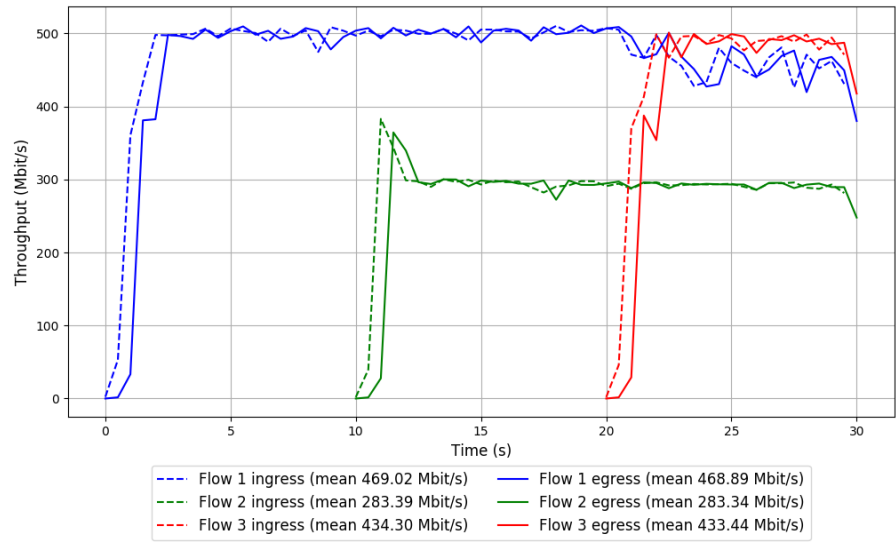
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 228.81 Mbit/s) — — — Flow 1 egress (mean 228.80 Mbit/s)
Flow 2 ingress (mean 219.98 Mbit/s) — — — Flow 2 egress (mean 219.81 Mbit/s)
Flow 3 ingress (mean 218.91 Mbit/s) — — — Flow 3 egress (mean 218.84 Mbit/s)

Flow 1 (95th percentile 57.31 ms)　　Flow 2 (95th percentile 57.63 ms)　　Flow 3 (95th percentile 57.59 ms)
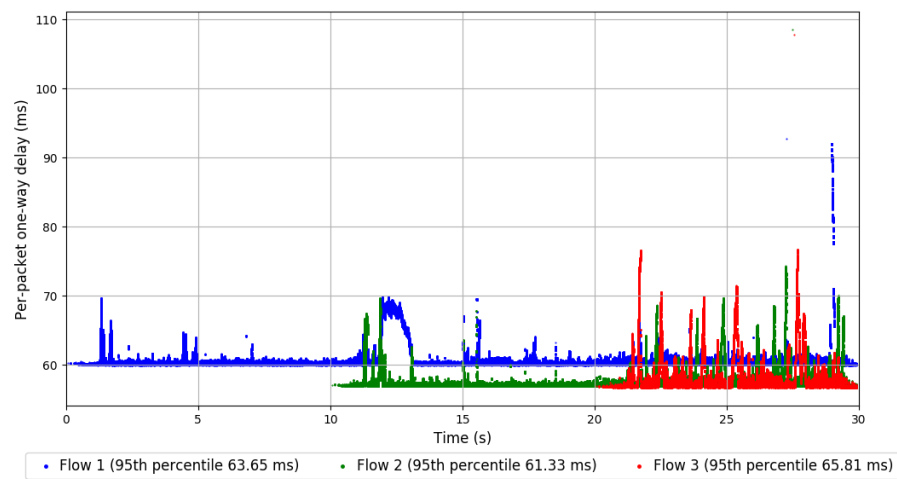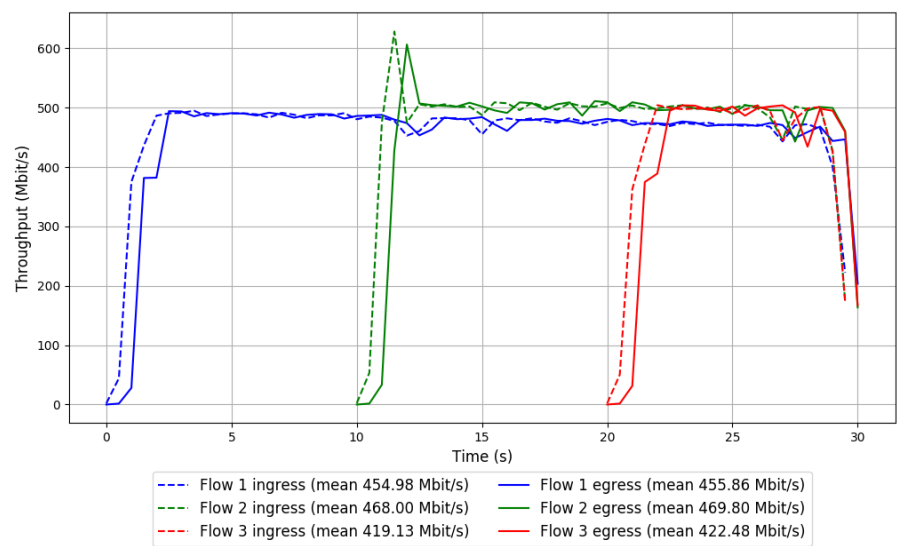
204

```
Run 1: Statistics of TCP Vegas

Start at: 2019-08-27 20:33:05
End at: 2019-08-27 20:33:35
Local clock offset: -0.69 ms
Remote clock offset: 0.102 ms


# Below is generated by plot.py at 2019-08-28 02:00:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 800.13 Mbit/s
95th percentile per-packet one-way delay: 73.564 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 468.89 Mbit/s
95th percentile per-packet one-way delay: 76.196 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 283.34 Mbit/s
95th percentile per-packet one-way delay: 60.148 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 433.44 Mbit/s
95th percentile per-packet one-way delay: 68.155 ms
Loss rate: 1.33%
```

Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-08-27 21:12:13
End at: 2019-08-27 21:12:43
Local clock offset: -0.287 ms
Remote clock offset: -0.256 ms


# Below is generated by plot.py at 2019-08-28 02:08:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 907.78 Mbit/s
95th percentile per-packet one-way delay: 63.208 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 455.86 Mbit/s
95th percentile per-packet one-way delay: 63.645 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 469.80 Mbit/s
95th percentile per-packet one-way delay: 61.326 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 422.48 Mbit/s
95th percentile per-packet one-way delay: 65.815 ms
Loss rate: 0.36%
```
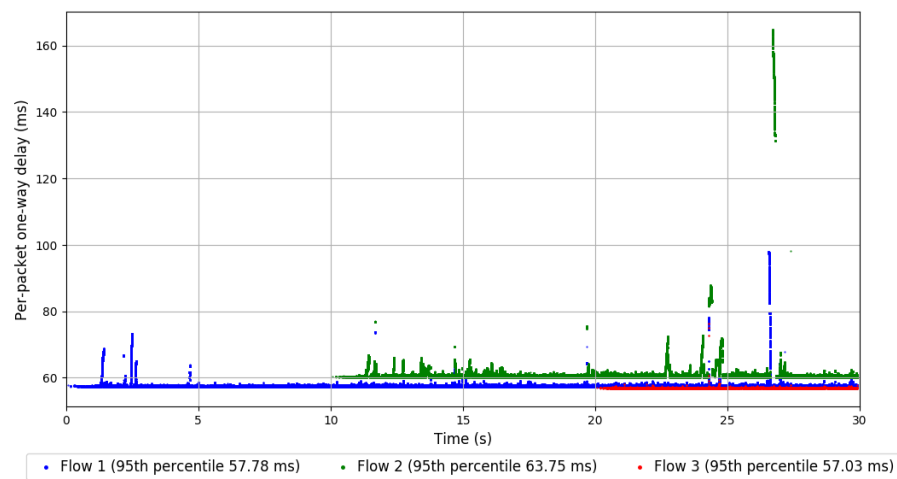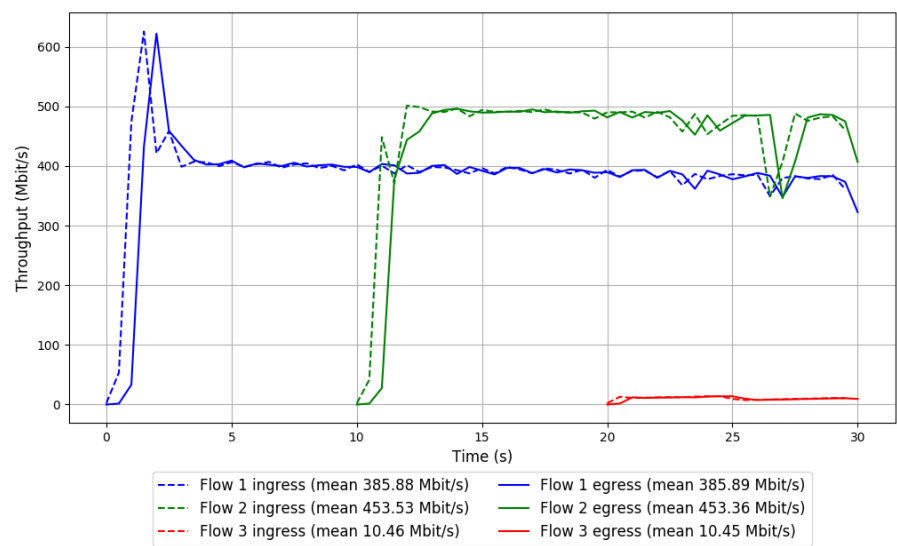
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-08-27 21:51:32
End at: 2019-08-27 21:52:02
Local clock offset: -0.125 ms
Remote clock offset: -0.24 ms


# Below is generated by plot.py at 2019-08-28 02:08:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 690.69 Mbit/s
95th percentile per-packet one-way delay: 61.631 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 385.89 Mbit/s
95th percentile per-packet one-way delay: 57.781 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 453.36 Mbit/s
95th percentile per-packet one-way delay: 63.747 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 10.45 Mbit/s
95th percentile per-packet one-way delay: 57.031 ms
Loss rate: 1.26%
```

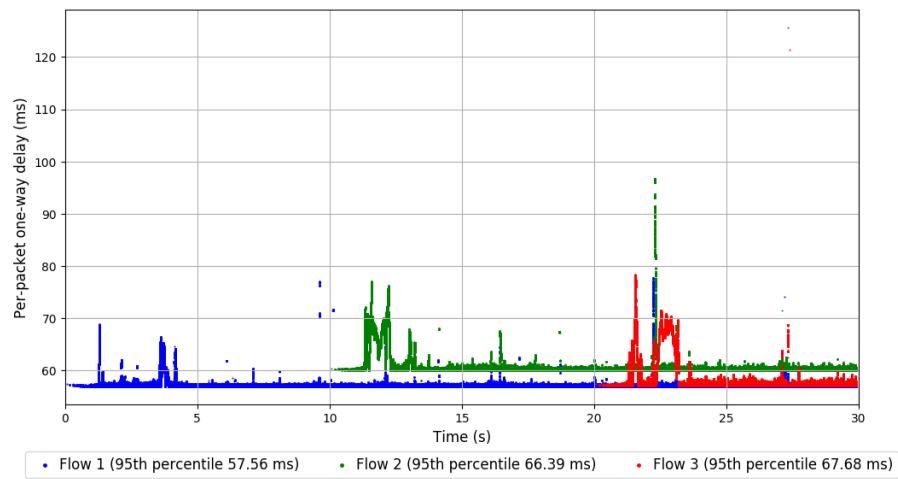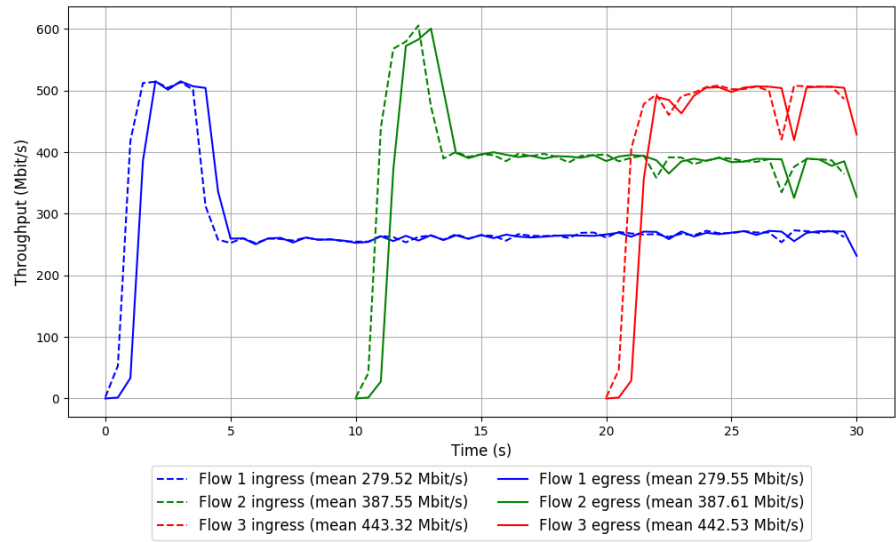Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-08-27 22:30:45
End at: 2019-08-27 22:31:15
Local clock offset: -0.06 ms
Remote clock offset: -0.022 ms


# Below is generated by plot.py at 2019-08-28 02:10:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 683.09 Mbit/s
95th percentile per-packet one-way delay: 64.053 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 279.55 Mbit/s
95th percentile per-packet one-way delay: 57.560 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 387.61 Mbit/s
95th percentile per-packet one-way delay: 66.395 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 442.53 Mbit/s
95th percentile per-packet one-way delay: 67.678 ms
Loss rate: 1.32%
```
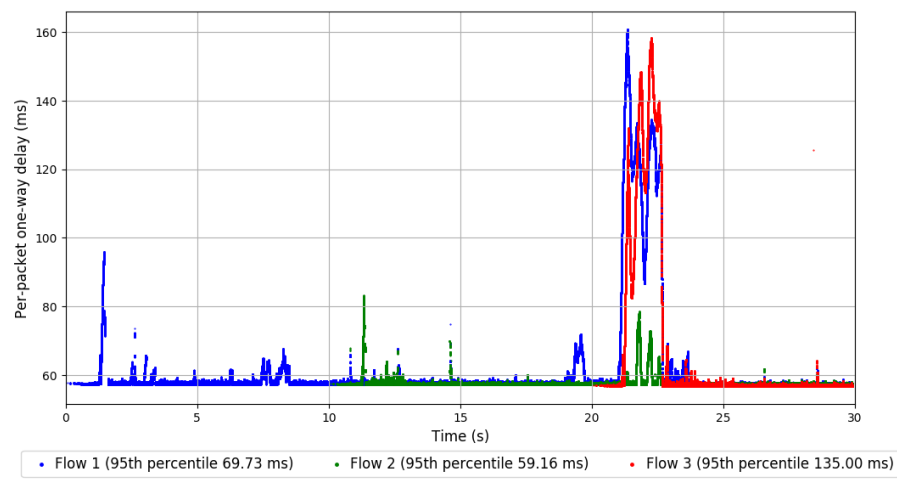
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-08-27 23:09:49
End at: 2019-08-27 23:10:19
Local clock offset: 0.133 ms
Remote clock offset: 0.11 ms


# Below is generated by plot.py at 2019-08-28 02:10:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 697.84 Mbit/s
95th percentile per-packet one-way delay: 76.992 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 420.57 Mbit/s
95th percentile per-packet one-way delay: 69.733 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 264.67 Mbit/s
95th percentile per-packet one-way delay: 59.156 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 307.23 Mbit/s
95th percentile per-packet one-way delay: 135.002 ms
Loss rate: 0.93%
```
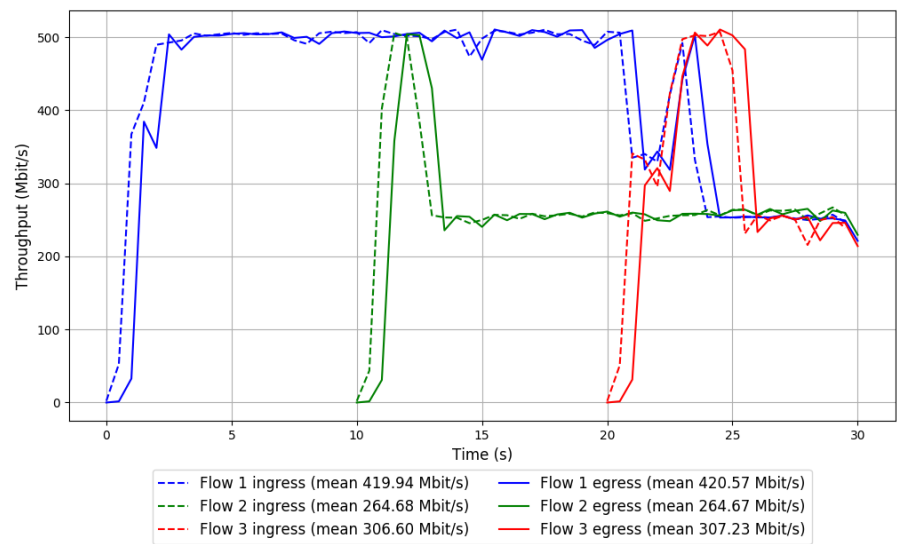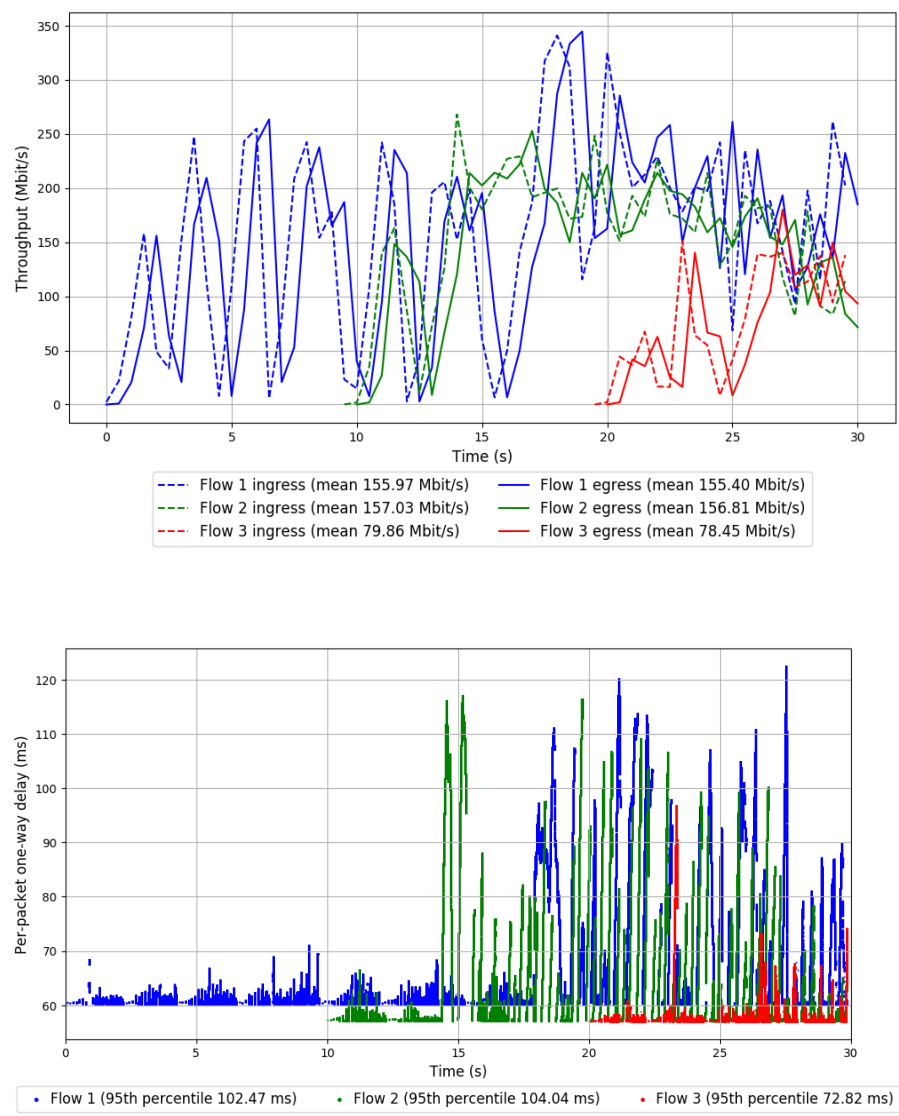
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 419.94 Mbit/s) --- Flow 1 egress (mean 420.57 Mbit/s)
Flow 2 ingress (mean 264.68 Mbit/s) --- Flow 2 egress (mean 264.67 Mbit/s)
Flow 3 ingress (mean 306.60 Mbit/s) --- Flow 3 egress (mean 307.23 Mbit/s)

Flow 1 (95th percentile 69.73 ms)　Flow 2 (95th percentile 59.16 ms)　Flow 3 (95th percentile 135.00 ms)
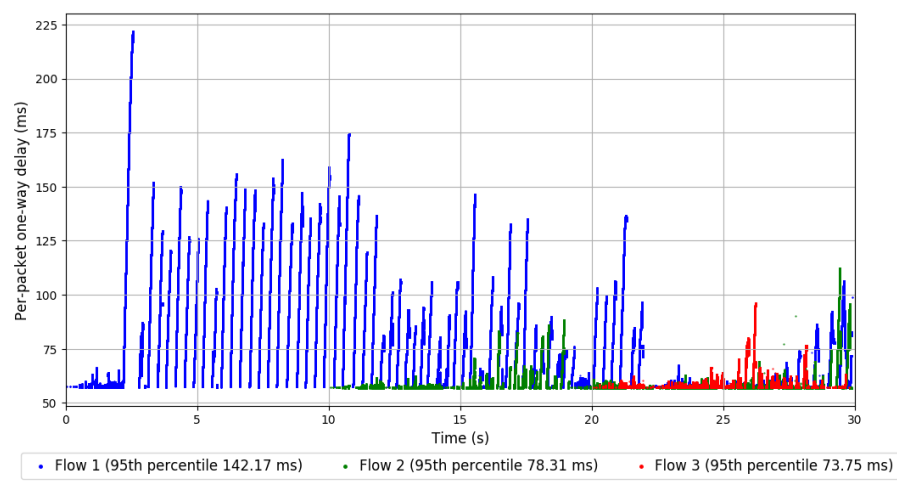
```
Run 1: Statistics of Verus

Start at: 2019-08-27 20:42:43
End at: 2019-08-27 20:43:13
Local clock offset: -0.483 ms
Remote clock offset: -0.264 ms


# Below is generated by plot.py at 2019-08-28 02:10:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 285.78 Mbit/s
95th percentile per-packet one-way delay: 102.278 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 155.40 Mbit/s
95th percentile per-packet one-way delay: 102.475 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 156.81 Mbit/s
95th percentile per-packet one-way delay: 104.040 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 78.45 Mbit/s
95th percentile per-packet one-way delay: 72.816 ms
Loss rate: 2.82%
```

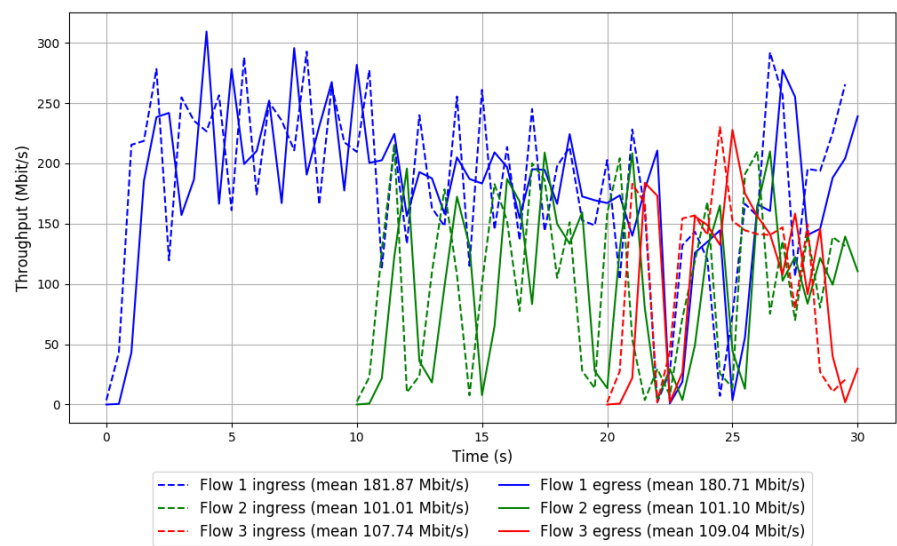Run 1: Report of Verus — Data Link

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```
Run 2: Statistics of Verus

Start at: 2019-08-27 21:21:55
End at: 2019-08-27 21:22:25
Local clock offset: -0.049 ms
Remote clock offset: -0.283 ms


# Below is generated by plot.py at 2019-08-28 02:10:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 283.39 Mbit/s
95th percentile per-packet one-way delay: 135.451 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 180.71 Mbit/s
95th percentile per-packet one-way delay: 142.171 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 101.10 Mbit/s
95th percentile per-packet one-way delay: 78.314 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 109.04 Mbit/s
95th percentile per-packet one-way delay: 73.754 ms
Loss rate: 0.00%
```

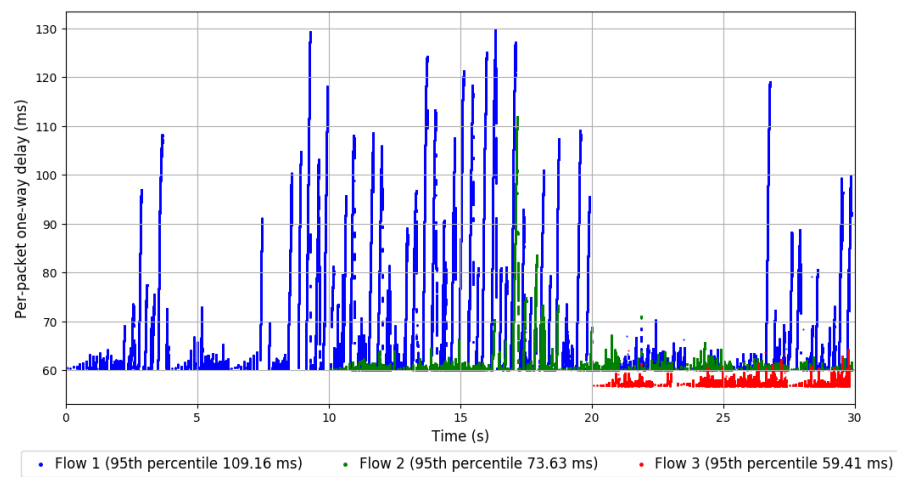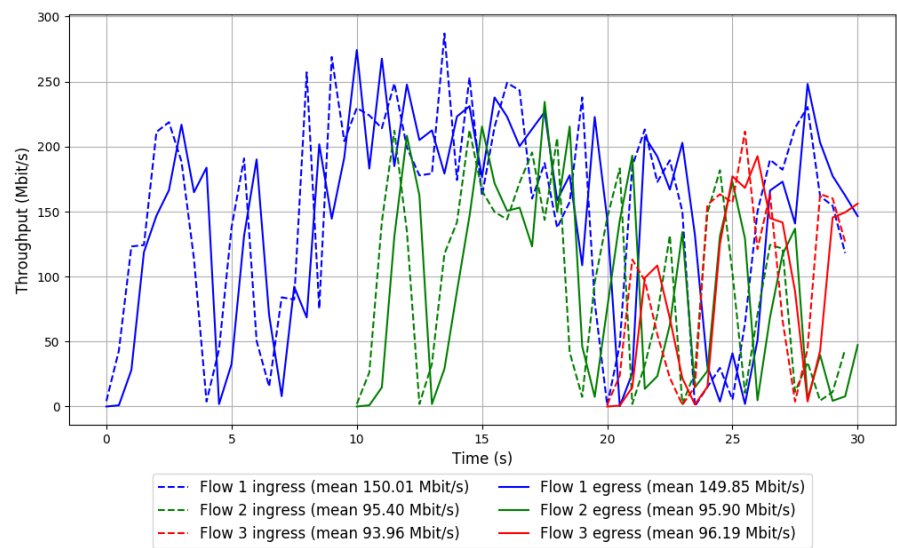Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-08-27 22:01:08
End at: 2019-08-27 22:01:38
Local clock offset: -0.213 ms
Remote clock offset: -0.264 ms


# Below is generated by plot.py at 2019-08-28 02:10:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 244.67 Mbit/s
95th percentile per-packet one-way delay: 104.345 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 149.85 Mbit/s
95th percentile per-packet one-way delay: 109.158 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 95.90 Mbit/s
95th percentile per-packet one-way delay: 73.633 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 96.19 Mbit/s
95th percentile per-packet one-way delay: 59.412 ms
Loss rate: 0.05%
```
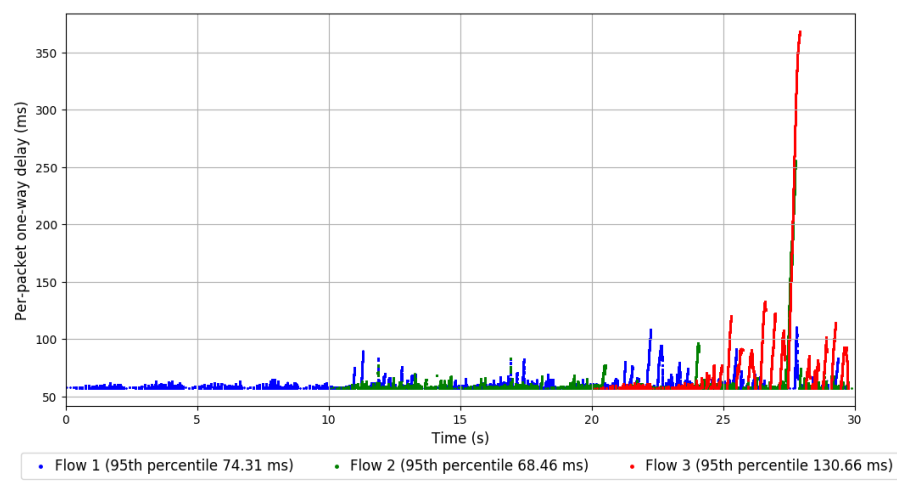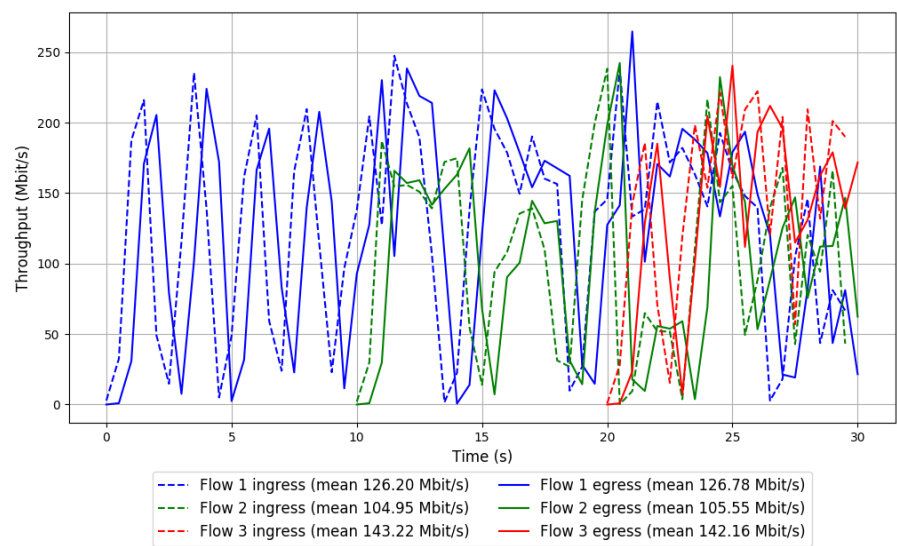
Run 3: Report of Verus — Data Link

- - - Flow 1 ingress (mean 150.01 Mbit/s)   —— Flow 1 egress (mean 149.85 Mbit/s)
- - - Flow 2 ingress (mean 95.40 Mbit/s)   —— Flow 2 egress (mean 95.90 Mbit/s)
- - - Flow 3 ingress (mean 93.96 Mbit/s)   —— Flow 3 egress (mean 96.19 Mbit/s)

- Flow 1 (95th percentile 109.16 ms)   • Flow 2 (95th percentile 73.63 ms)   • Flow 3 (95th percentile 59.41 ms)
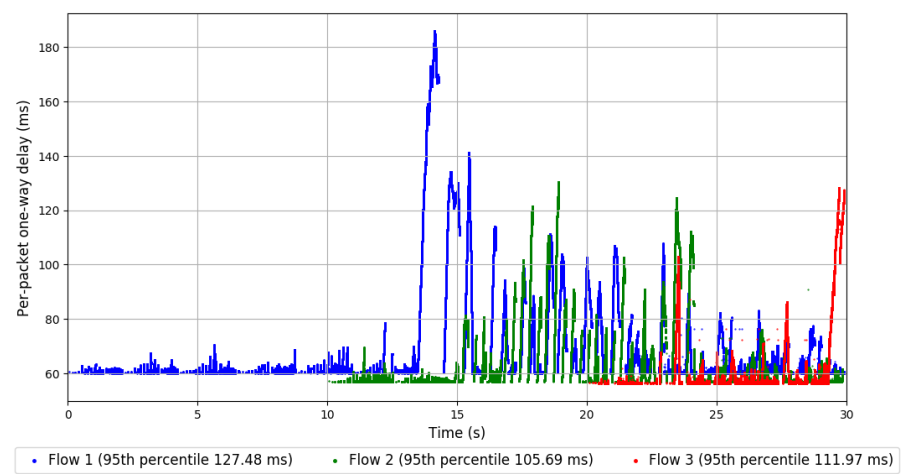
```
Run 4: Statistics of Verus

Start at: 2019-08-27 22:40:21
End at: 2019-08-27 22:40:51
Local clock offset: 0.02 ms
Remote clock offset: -0.062 ms


# Below is generated by plot.py at 2019-08-28 02:10:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 242.20 Mbit/s
95th percentile per-packet one-way delay: 90.403 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 126.78 Mbit/s
95th percentile per-packet one-way delay: 74.314 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 105.55 Mbit/s
95th percentile per-packet one-way delay: 68.463 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 142.16 Mbit/s
95th percentile per-packet one-way delay: 130.662 ms
Loss rate: 3.35%
```

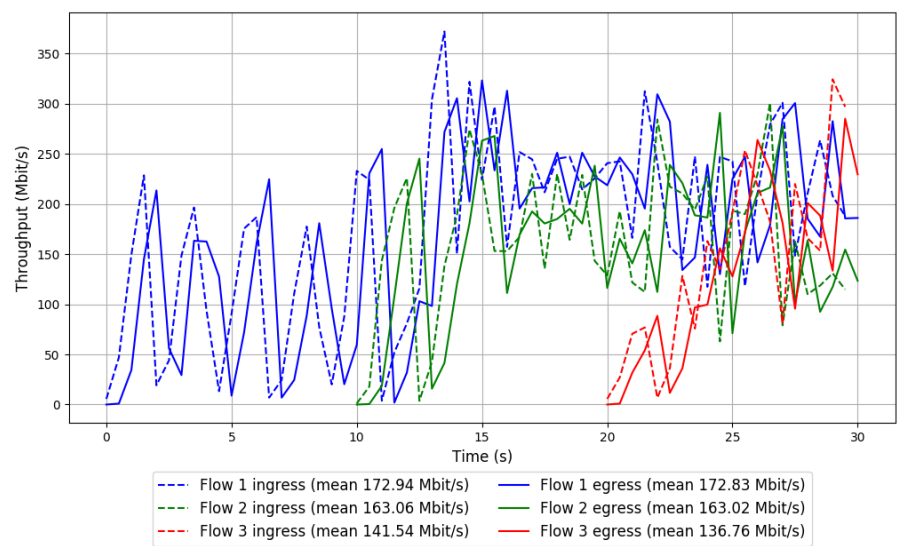Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-08-27 23:19:24
End at: 2019-08-27 23:19:54
Local clock offset: -0.401 ms
Remote clock offset: -0.011 ms


# Below is generated by plot.py at 2019-08-28 02:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.82 Mbit/s
95th percentile per-packet one-way delay: 115.934 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 172.83 Mbit/s
95th percentile per-packet one-way delay: 127.476 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 163.02 Mbit/s
95th percentile per-packet one-way delay: 105.690 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 136.76 Mbit/s
95th percentile per-packet one-way delay: 111.972 ms
Loss rate: 4.50%
```

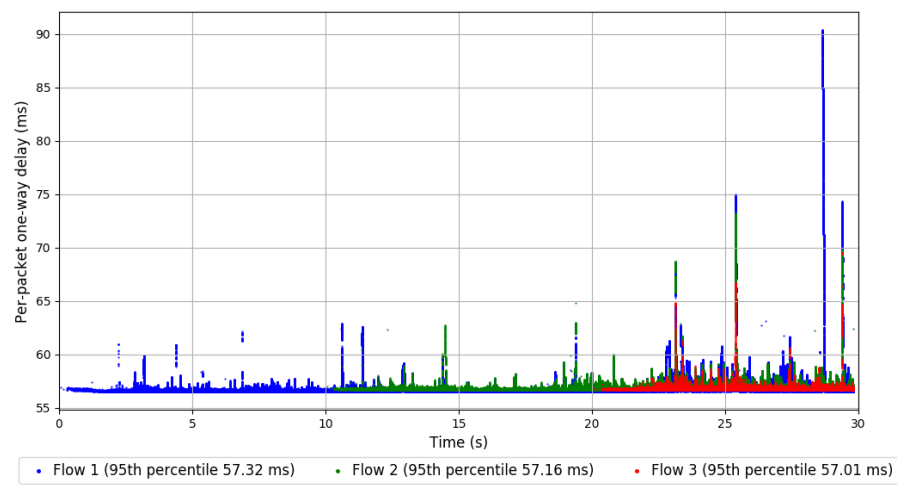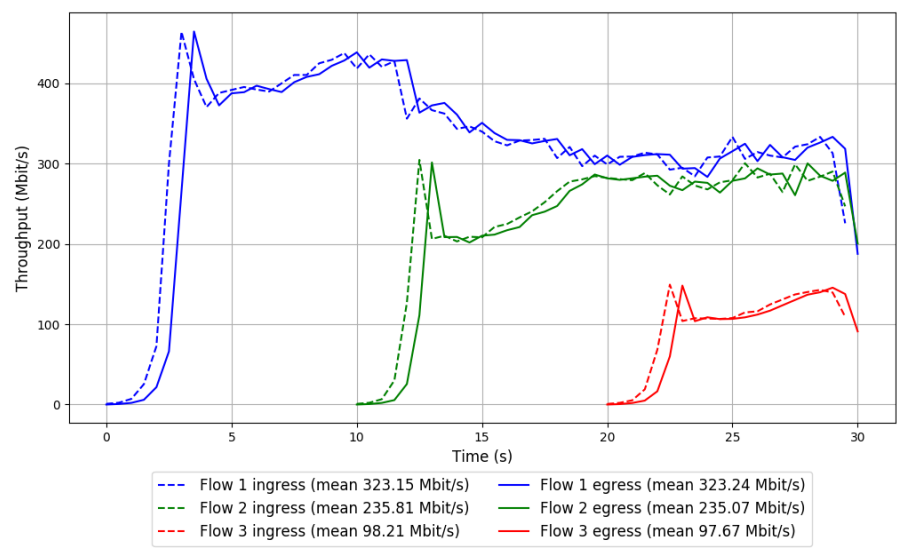Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-08-27 20:49:41
End at: 2019-08-27 20:50:11
Local clock offset: -0.298 ms
Remote clock offset: -0.034 ms


# Below is generated by plot.py at 2019-08-28 02:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 511.07 Mbit/s
95th percentile per-packet one-way delay: 57.222 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 323.24 Mbit/s
95th percentile per-packet one-way delay: 57.320 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 235.07 Mbit/s
95th percentile per-packet one-way delay: 57.155 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 97.67 Mbit/s
95th percentile per-packet one-way delay: 57.006 ms
Loss rate: 1.71%
```

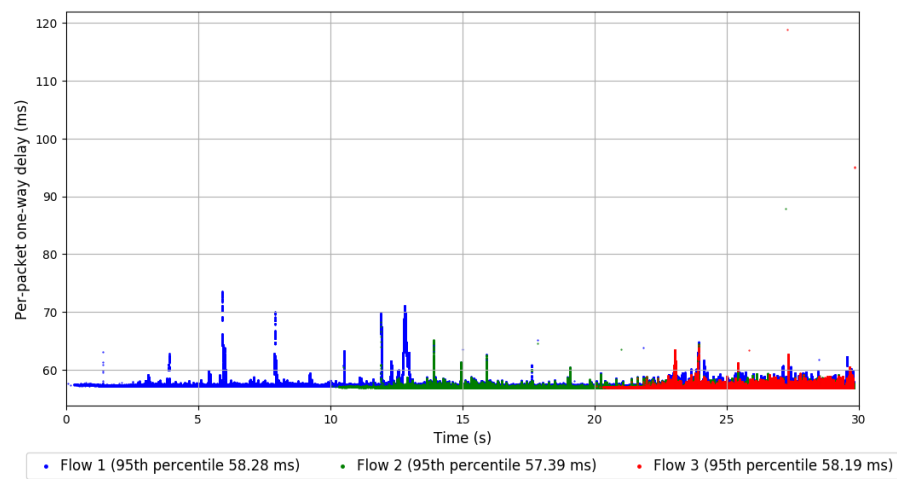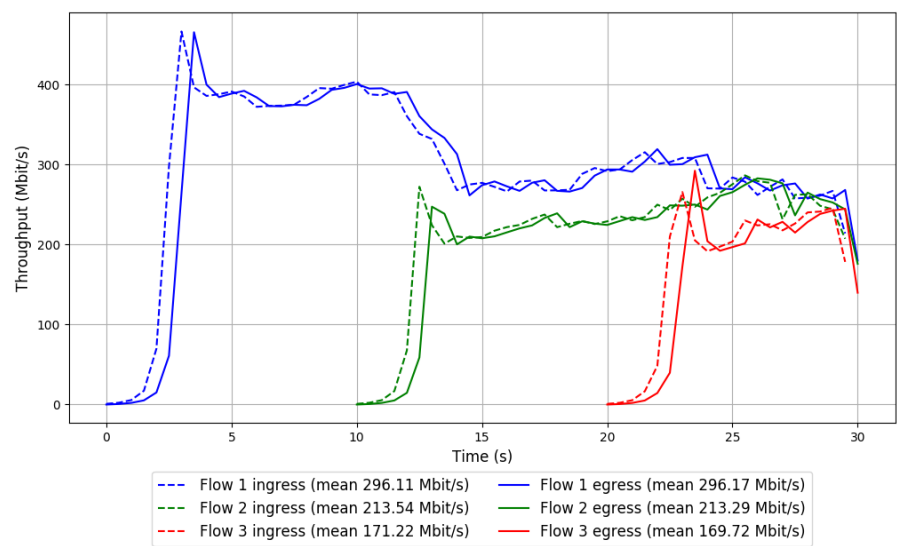Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-08-27 21:28:47
End at: 2019-08-27 21:29:17
Local clock offset: 0.081 ms
Remote clock offset: -0.174 ms


# Below is generated by plot.py at 2019-08-28 02:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 493.19 Mbit/s
95th percentile per-packet one-way delay: 58.001 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 296.17 Mbit/s
95th percentile per-packet one-way delay: 58.276 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 213.29 Mbit/s
95th percentile per-packet one-way delay: 57.387 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 169.72 Mbit/s
95th percentile per-packet one-way delay: 58.185 ms
Loss rate: 1.93%
```

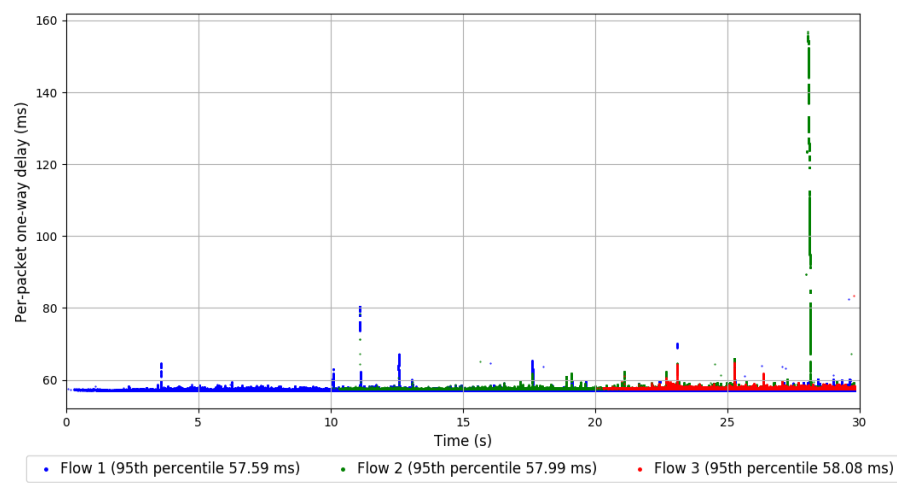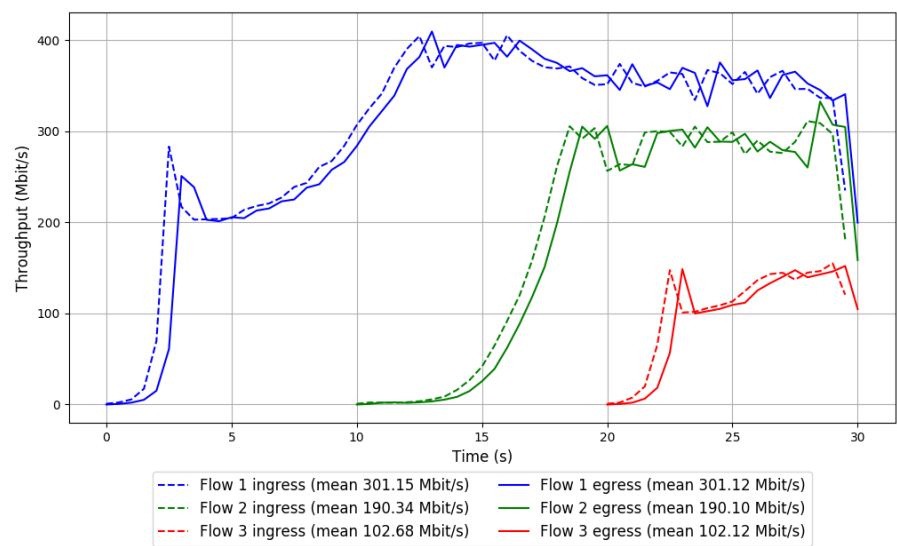Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-08-27 22:08:01
End at: 2019-08-27 22:08:31
Local clock offset: 0.168 ms
Remote clock offset: -0.225 ms


# Below is generated by plot.py at 2019-08-28 02:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 460.75 Mbit/s
95th percentile per-packet one-way delay: 57.831 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 301.12 Mbit/s
95th percentile per-packet one-way delay: 57.591 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 190.10 Mbit/s
95th percentile per-packet one-way delay: 57.991 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 102.12 Mbit/s
95th percentile per-packet one-way delay: 58.083 ms
Loss rate: 1.71%
```

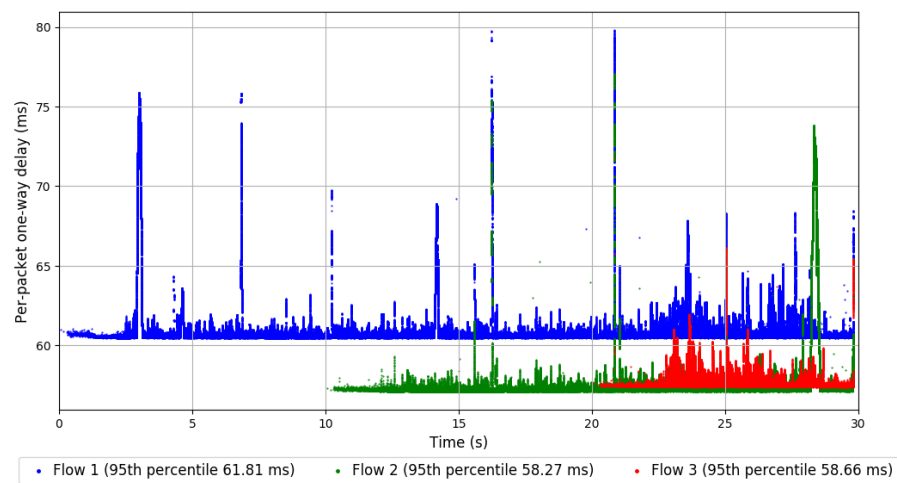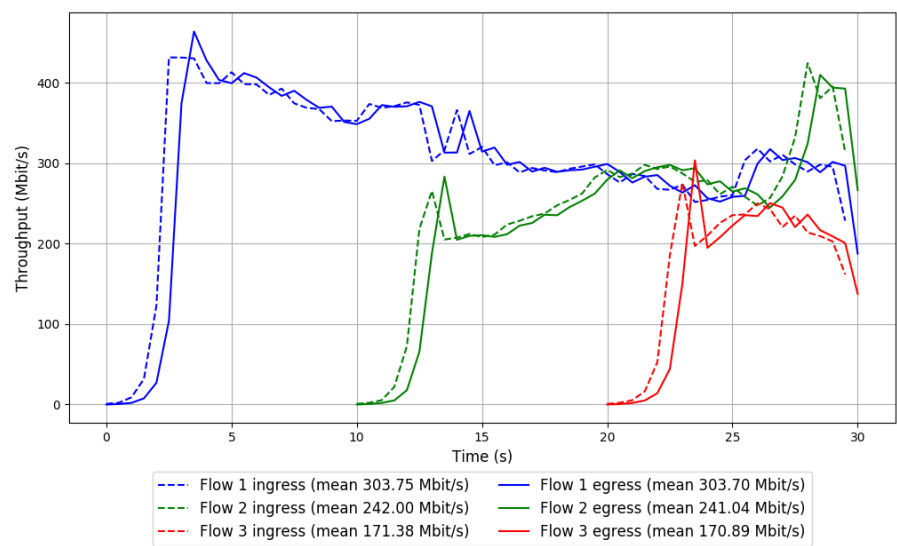Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-08-27 22:47:10
End at: 2019-08-27 22:47:40
Local clock offset: -0.022 ms
Remote clock offset: -0.288 ms


# Below is generated by plot.py at 2019-08-28 02:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 519.65 Mbit/s
95th percentile per-packet one-way delay: 61.346 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 303.70 Mbit/s
95th percentile per-packet one-way delay: 61.814 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 241.04 Mbit/s
95th percentile per-packet one-way delay: 58.266 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 170.89 Mbit/s
95th percentile per-packet one-way delay: 58.664 ms
Loss rate: 1.45%
```

Run 4: Report of PCC-Vivace — Data Link

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```
Run 5: Statistics of PCC-Vivace

Start at: 2019-08-27 23:26:20
End at: 2019-08-27 23:26:50
Local clock offset: -0.168 ms
Remote clock offset: 0.003 ms


# Below is generated by plot.py at 2019-08-28 02:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 398.40 Mbit/s
95th percentile per-packet one-way delay: 57.560 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 260.46 Mbit/s
95th percentile per-packet one-way delay: 57.727 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 181.65 Mbit/s
95th percentile per-packet one-way delay: 57.461 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 53.19 Mbit/s
95th percentile per-packet one-way delay: 57.313 ms
Loss rate: 2.86%
```
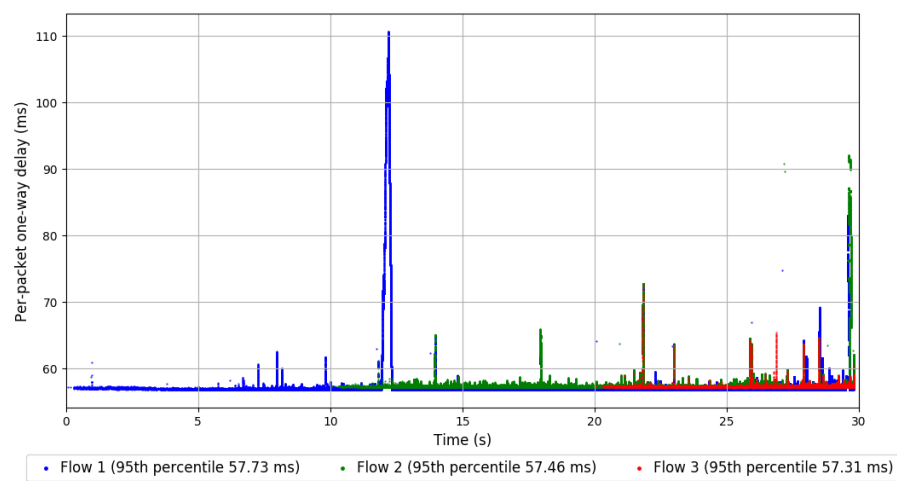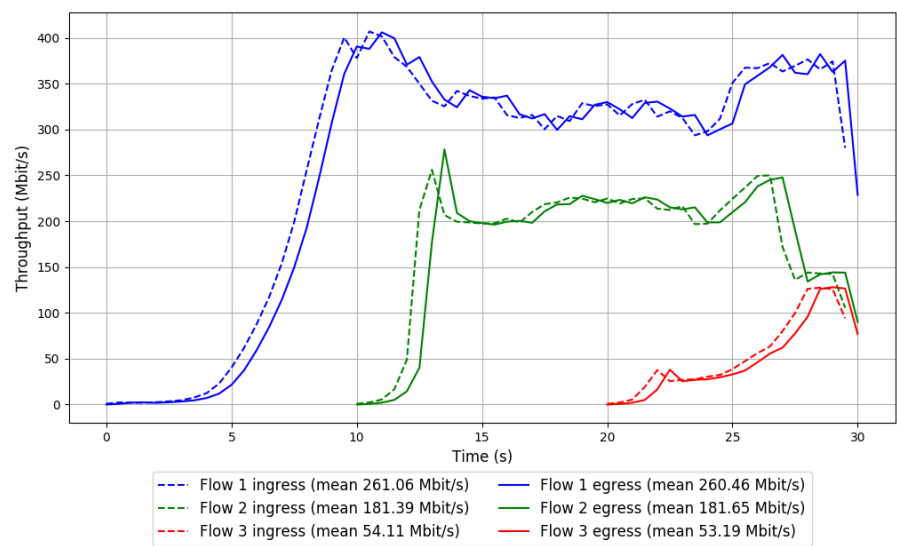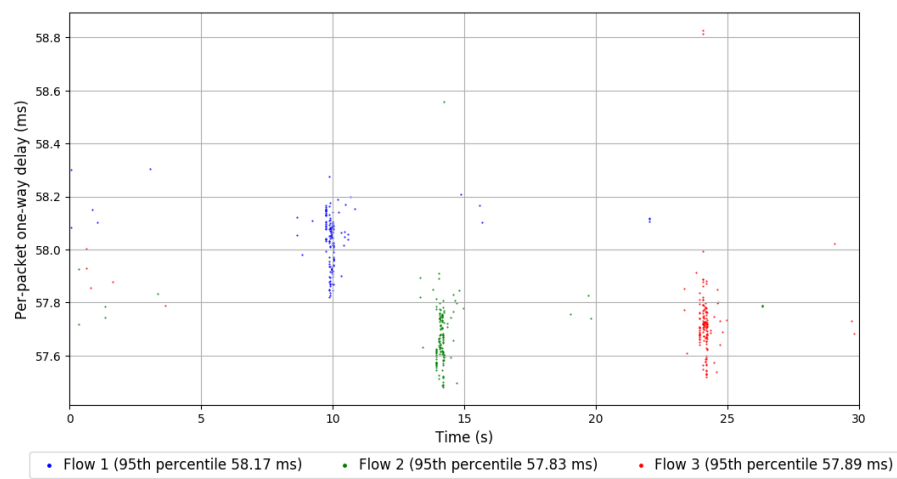
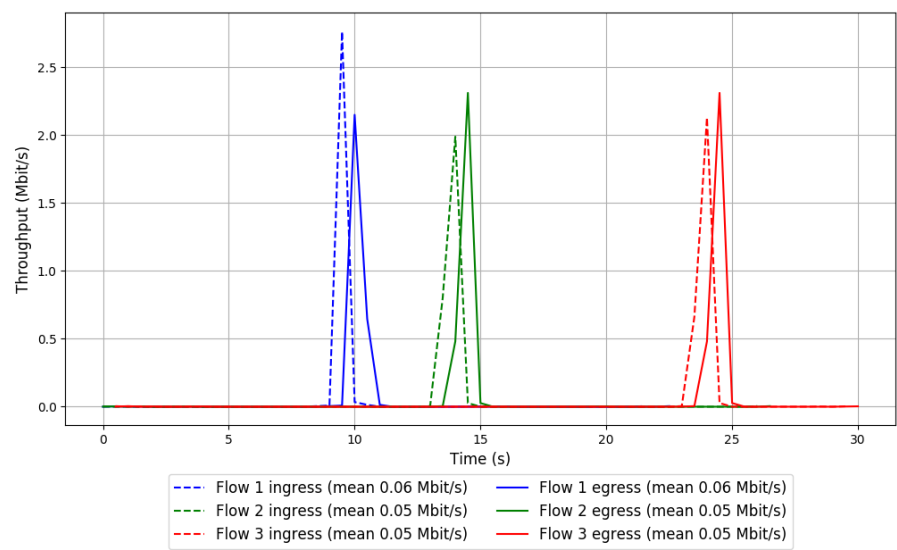# Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-08-27 20:28:22
End at: 2019-08-27 20:28:52
Local clock offset: -0.383 ms
Remote clock offset: -0.405 ms


# Below is generated by plot.py at 2019-08-28 02:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 58.142 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 58.169 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.833 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.888 ms
Loss rate: 0.00%
```

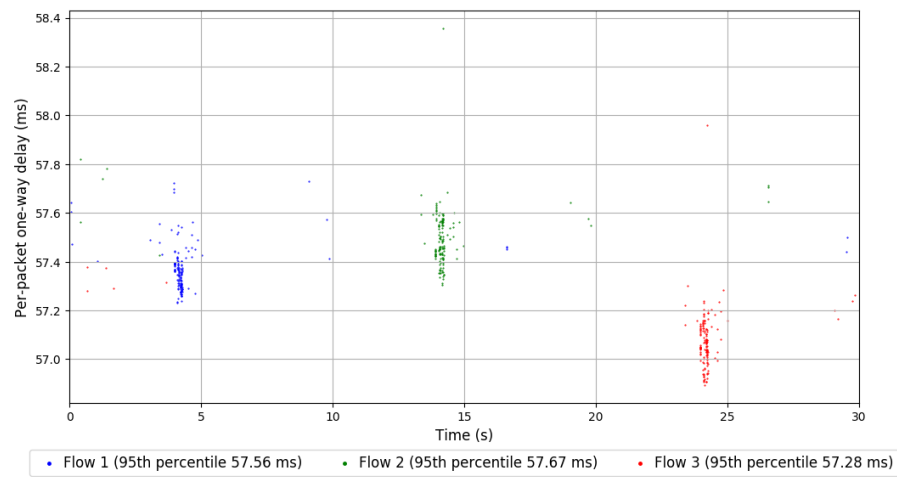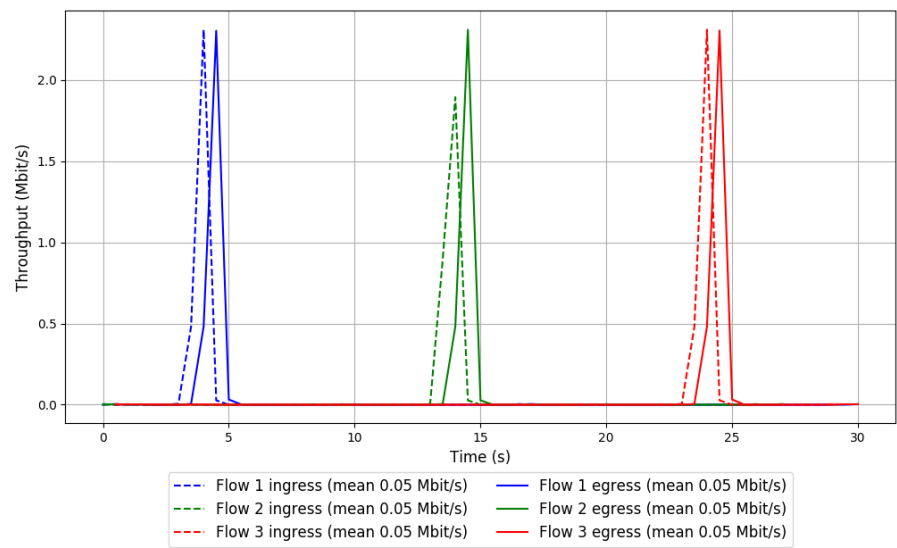Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-08-27 21:07:28
End at: 2019-08-27 21:07:58
Local clock offset: -0.046 ms
Remote clock offset: -0.191 ms


# Below is generated by plot.py at 2019-08-28 02:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 57.608 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.557 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.673 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.279 ms
Loss rate: 0.00%
```

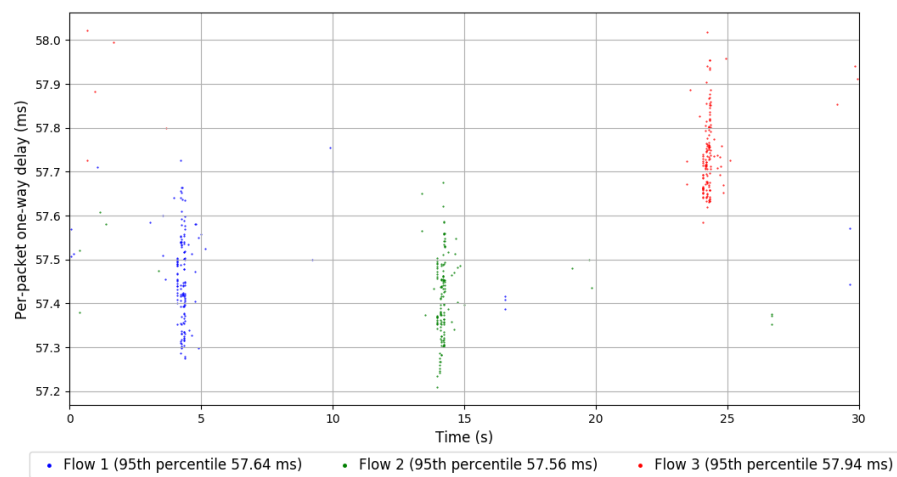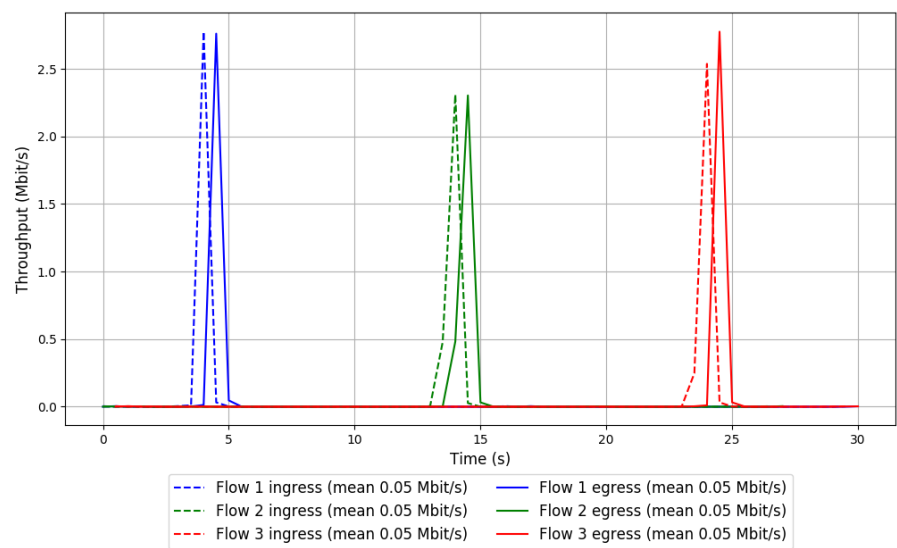Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-08-27 21:46:48
End at: 2019-08-27 21:47:18
Local clock offset: 0.247 ms
Remote clock offset: -0.242 ms


# Below is generated by plot.py at 2019-08-28 02:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 57.852 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.641 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.565 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.940 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

Flow 1 ingress (mean 0.05 Mbit/s) Flow 1 egress (mean 0.05 Mbit/s)
Flow 2 ingress (mean 0.05 Mbit/s) Flow 2 egress (mean 0.05 Mbit/s)
Flow 3 ingress (mean 0.05 Mbit/s) Flow 3 egress (mean 0.05 Mbit/s)

Flow 1 (95th percentile 57.64 ms) Flow 2 (95th percentile 57.56 ms) Flow 3 (95th percentile 57.94 ms)
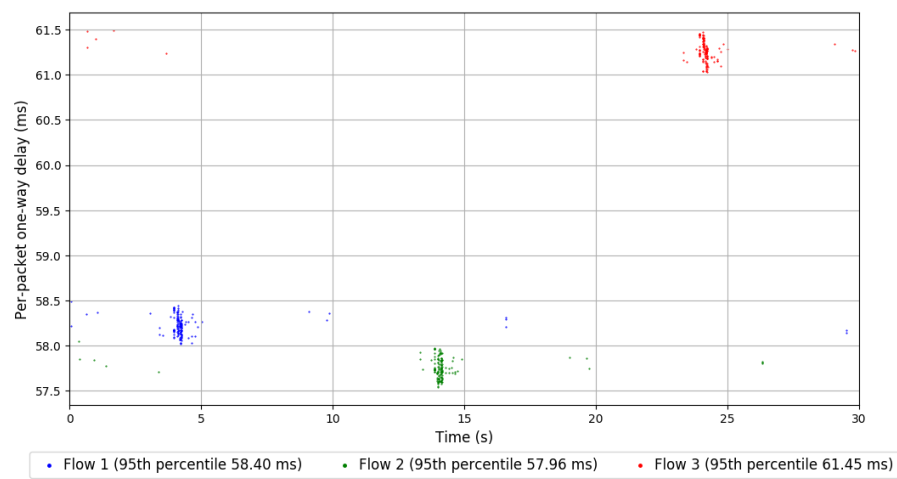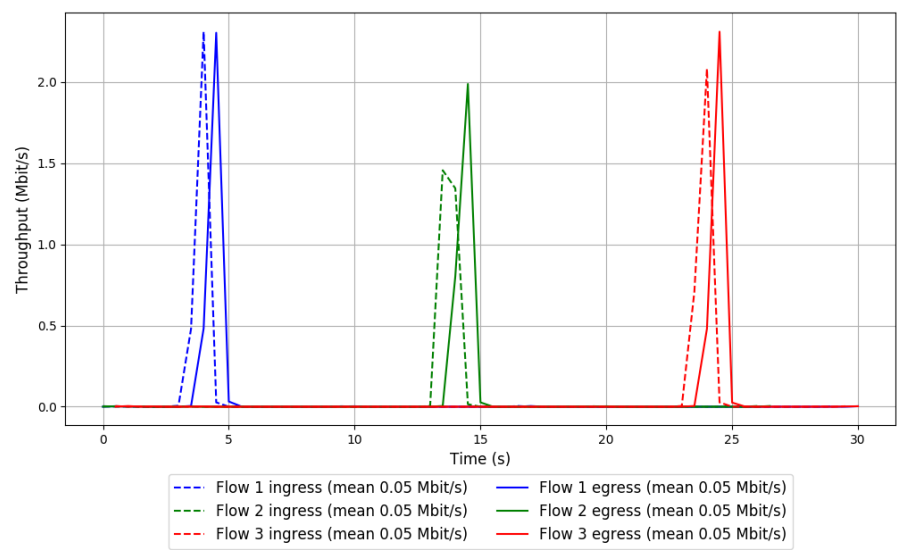
```
Run 4: Statistics of WebRTC media

Start at: 2019-08-27 22:26:02
End at: 2019-08-27 22:26:32
Local clock offset: 0.026 ms
Remote clock offset: -0.753 ms


# Below is generated by plot.py at 2019-08-28 02:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 61.400 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 58.399 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.959 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 61.446 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-08-27 23:05:04
End at: 2019-08-27 23:05:34
Local clock offset: 0.094 ms
Remote clock offset: -0.083 ms


# Below is generated by plot.py at 2019-08-28 02:14:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 60.685 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 60.766 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.756 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.829 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link