Pantheon Report

Generated at 2019-12-11 09:56:41 (UTC).

Data path: AWS India 2 on `ens5` (*local*) →Saudi Arabia on `enp2s0` (*remote*).

Repeated the test of 24 congestion control schemes 5 times.

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

NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

```
System info:
Linux 4.15.0-1054-aws
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 @ 11c9498ecb1596b02ccd896791a02d03172af7ed
 M helpers/__init__.pyc
 M helpers/context.pyc
 M helpers/utils.pyc
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
```
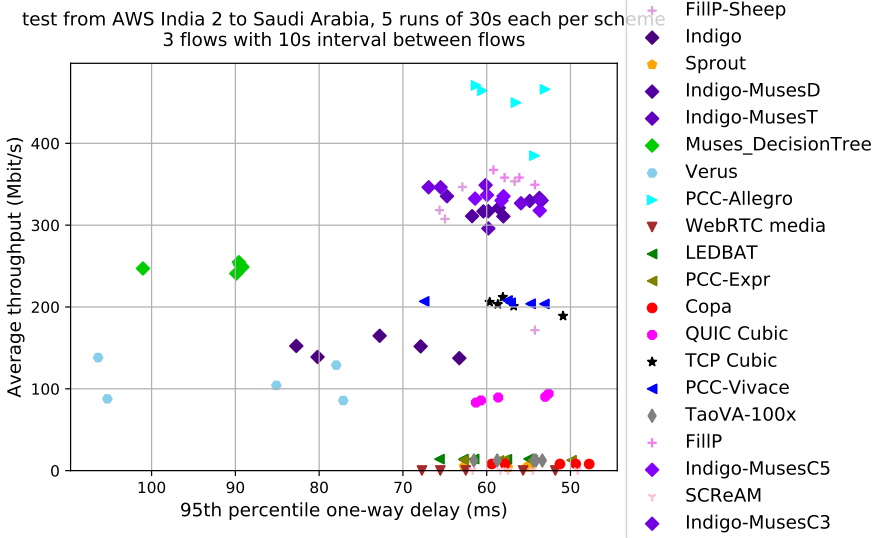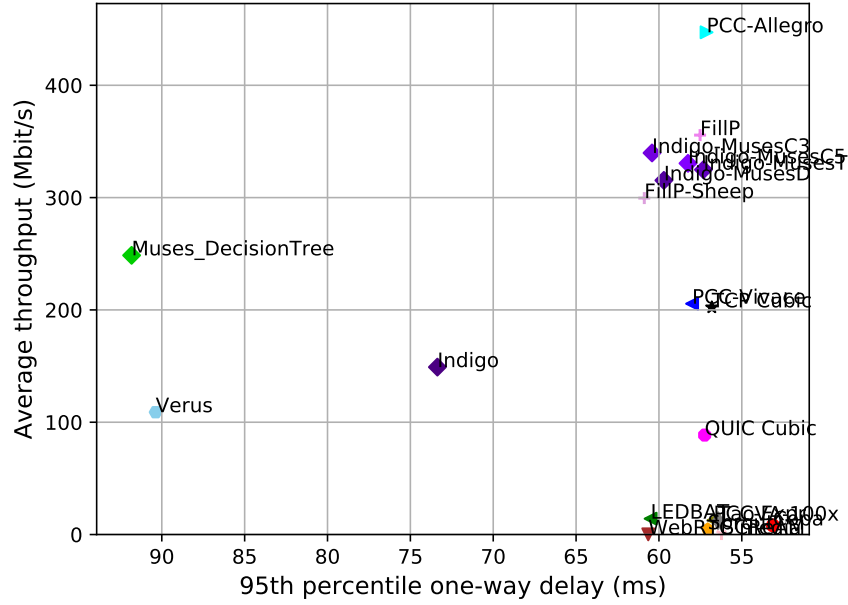
```
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from AWS India 2 to Saudi Arabia, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from AWS India 2 to Saudi Arabia, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

3

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Copa	5	0.01	9.47	5.46	53.66	53.31	52.49	97.04	64.00	71.23
TCP Cubic	5	117.76	85.16	83.47	57.01	55.77	55.57	1.42	1.63	1.93
FillP	5	238.56	123.59	105.38	56.15	58.00	56.77	22.53	21.48	24.43
FillP-Sheep	5	190.25	114.39	100.26	60.84	60.60	59.50	15.59	12.69	14.30
Indigo	5	74.83	79.14	68.63	73.51	76.96	68.49	9.21	15.32	25.43
Indigo-MusesC3	5	331.75	8.95	8.14	60.41	59.54	58.96	13.57	10.05	10.17
Indigo-MusesC5	5	329.56	1.00	1.09	58.25	59.03	57.85	26.65	28.03	26.11
Indigo-MusesD	5	292.75	23.86	24.81	59.60	59.42	58.48	12.37	9.17	9.68
Indigo-MusesT	5	288.19	45.33	26.68	56.93	56.20	55.62	11.25	9.99	9.68
LEDBAT	5	9.17	5.98	2.97	60.07	60.80	58.29	0.00	0.00	0.00
Muses_DecisionTree	5	143.58	120.16	82.34	93.71	94.85	68.37	60.23	59.74	56.68
Muses_DecisionTreeH0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Muses_DecisionTreeR0	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCC-Allegro	5	389.76	72.06	28.86	57.19	56.50	56.71	5.32	2.16	2.59
PCC-Expr	5	7.90	6.05	2.63	56.67	56.67	56.74	34.03	34.61	40.14
QUIC Cubic	5	53.21	40.21	26.85	56.64	57.97	56.06	0.00	0.00	0.00
SCReAM	5	0.22	0.22	0.22	56.21	54.68	54.76	0.00	0.00	0.00
Sprout	5	2.46	2.47	1.80	55.97	56.94	57.29	0.00	0.00	0.00
TaoVA-100x	5	7.06	5.56	4.92	60.21	53.45	53.35	39.68	58.93	73.45
TCP Vegas	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Verus	5	54.71	70.65	28.29	87.42	95.44	63.30	62.36	57.35	43.67
PCC-Vivace	5	179.74	32.78	12.10	57.95	58.21	58.45	1.45	0.71	0.90
WebRTC media	5	0.05	0.07	0.06	61.40	60.26	61.14	0.01	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-12-11 06:55:15
End at: 2019-12-11 06:55:45
Local clock offset: 6.713 ms
Remote clock offset: -47.515 ms
```

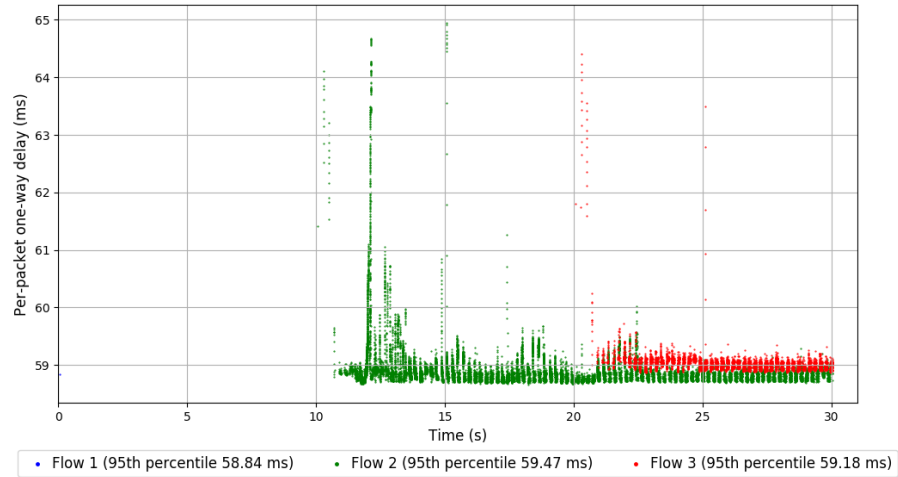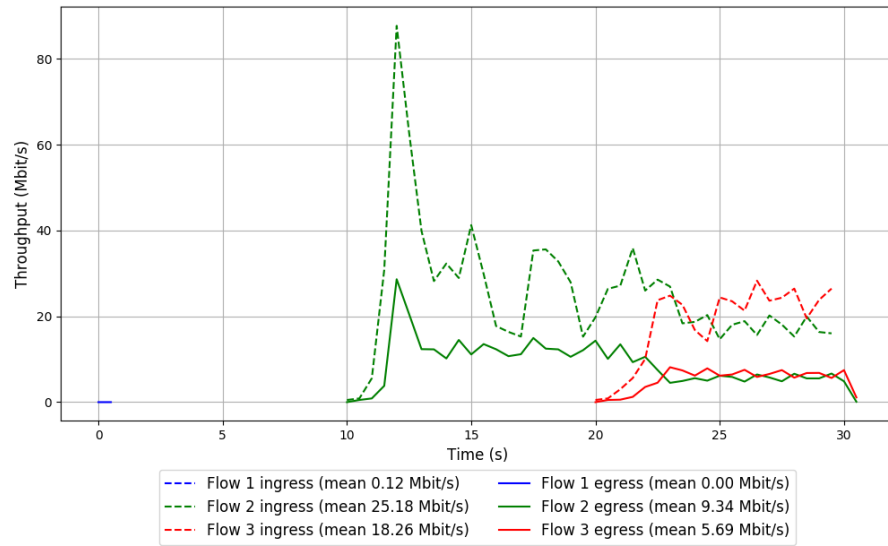Run 1: Report of TCP BBR — Data Link

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Run 2: Statistics of TCP BBR

Start at: 2019-12-11 07:29:58
End at: 2019-12-11 07:30:28
Local clock offset: 2.737 ms
Remote clock offset: -40.448 ms

Run 2: Report of TCP BBR — Data Link
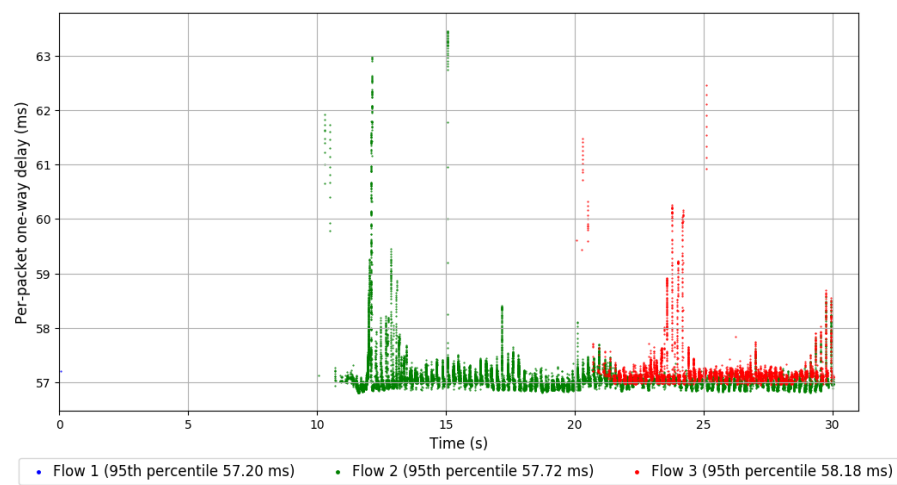
Figure is missing

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Run 3: Statistics of TCP BBR

Start at: 2019-12-11 08:04:27
End at: 2019-12-11 08:04:57
Local clock offset: 6.271 ms
Remote clock offset: -37.918 ms

Run 3: Report of TCP BBR — Data Link

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```
Run 4: Statistics of TCP BBR

Start at: 2019-12-11 08:38:38
End at: 2019-12-11 08:39:08
Local clock offset: 5.622 ms
Remote clock offset: -39.697 ms
```

Run 4: Report of TCP BBR — Data Link

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```
Run 5: Statistics of TCP BBR

Start at: 2019-12-11 09:13:00
End at: 2019-12-11 09:13:30
Local clock offset: 5.302 ms
Remote clock offset: -36.703 ms
```

Run 5: Report of TCP BBR — Data Link

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```
Run 1: Statistics of Copa

Start at: 2019-12-11 06:43:41
End at: 2019-12-11 06:44:11
Local clock offset: 6.39 ms
Remote clock offset: -37.618 ms


# Below is generated by plot.py at 2019-12-11 09:26:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.12 Mbit/s
95th percentile per-packet one-way delay: 59.391 ms
Loss rate: 64.47%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 58.844 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 59.474 ms
Loss rate: 62.89%
-- Flow 3:
Average throughput: 5.69 Mbit/s
95th percentile per-packet one-way delay: 59.180 ms
Loss rate: 68.82%
```
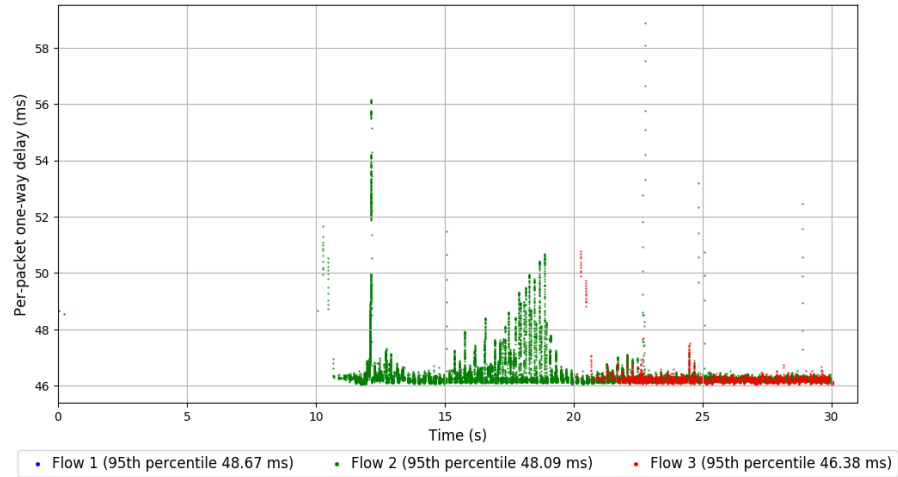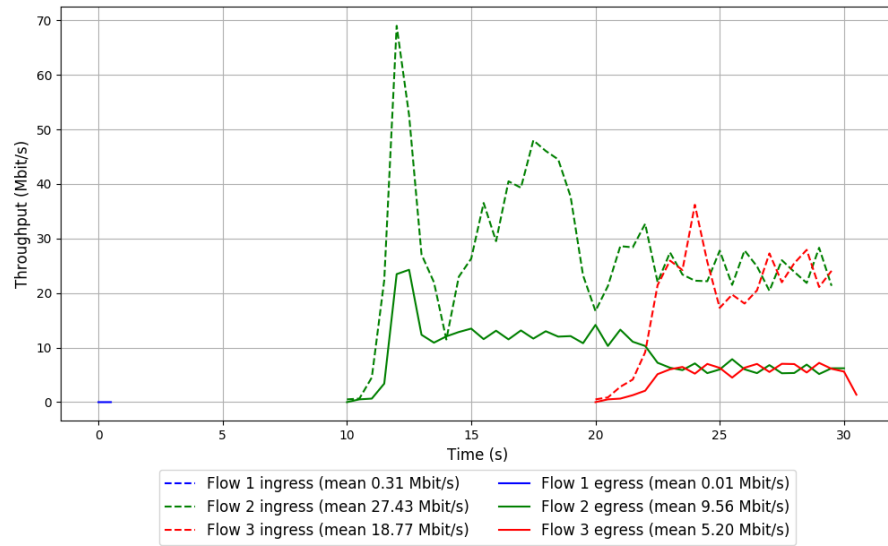
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-12-11 07:18:25
End at: 2019-12-11 07:18:55
Local clock offset: 2.913 ms
Remote clock offset: -41.41 ms


# Below is generated by plot.py at 2019-12-11 09:26:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.11 Mbit/s
95th percentile per-packet one-way delay: 57.814 ms
Loss rate: 67.31%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 57.205 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.26 Mbit/s
95th percentile per-packet one-way delay: 57.719 ms
Loss rate: 64.60%
-- Flow 3:
Average throughput: 5.87 Mbit/s
95th percentile per-packet one-way delay: 58.183 ms
Loss rate: 73.70%
```
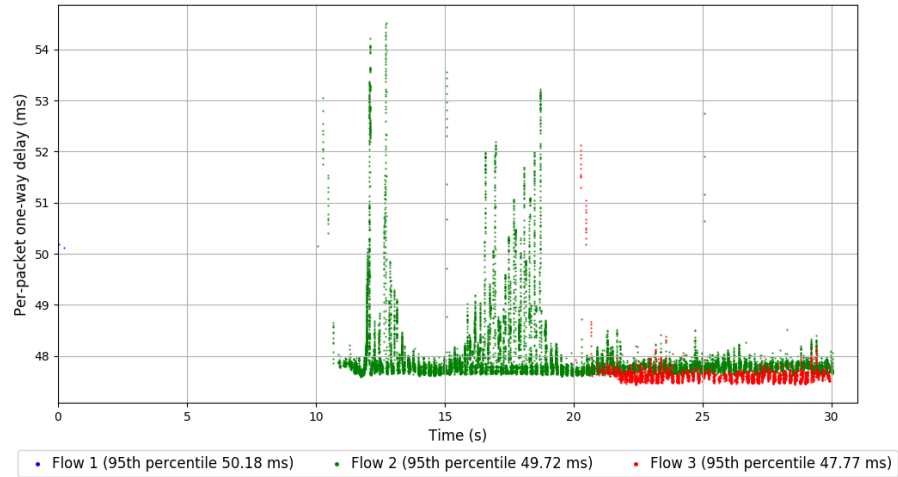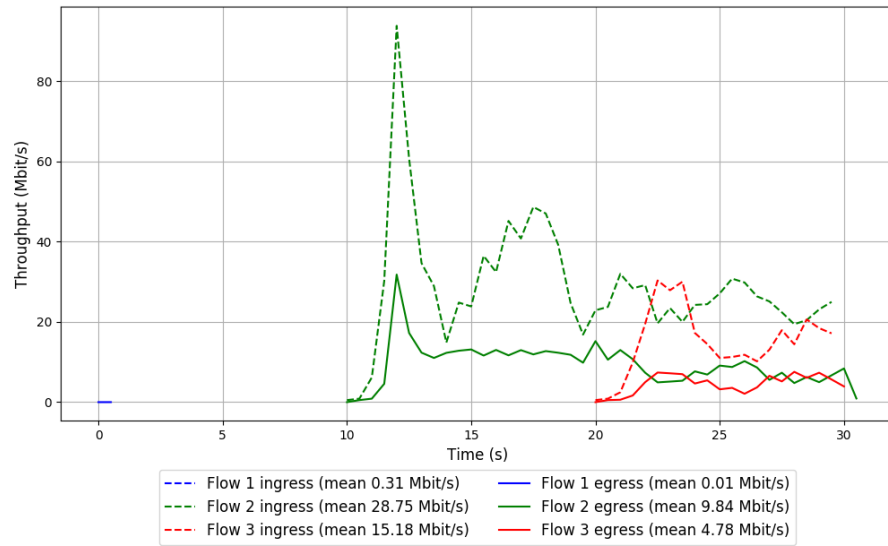
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 0.34 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 26.16 Mbit/s) --- Flow 2 egress (mean 9.26 Mbit/s)
Flow 3 ingress (mean 22.29 Mbit/s) --- Flow 3 egress (mean 5.87 Mbit/s)

Flow 1 (95th percentile 57.20 ms)   Flow 2 (95th percentile 57.72 ms)   Flow 3 (95th percentile 58.18 ms)

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```
Run 3: Statistics of Copa

Start at: 2019-12-11 07:52:52
End at: 2019-12-11 07:53:22
Local clock offset: 6.402 ms
Remote clock offset: -49.217 ms


# Below is generated by plot.py at 2019-12-11 09:26:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 47.767 ms
Loss rate: 66.99%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 48.670 ms
Loss rate: 96.71%
-- Flow 2:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 48.091 ms
Loss rate: 65.17%
-- Flow 3:
Average throughput: 5.20 Mbit/s
95th percentile per-packet one-way delay: 46.378 ms
Loss rate: 72.29%
```
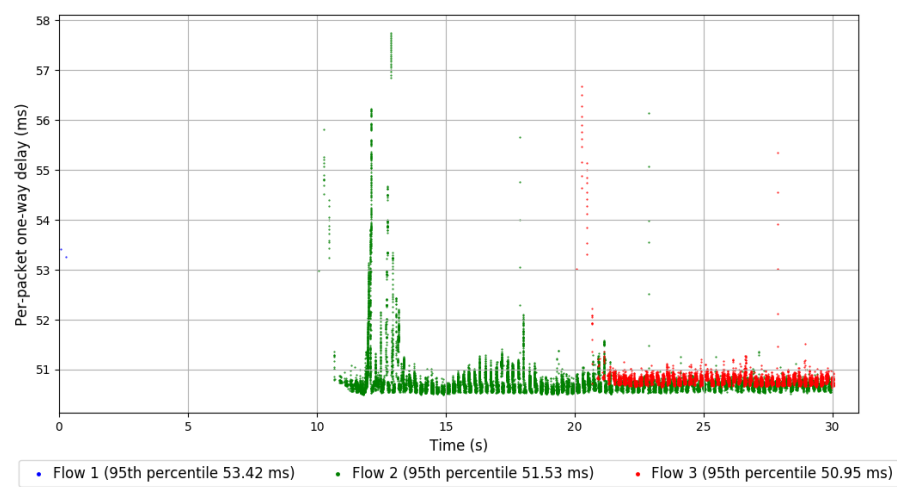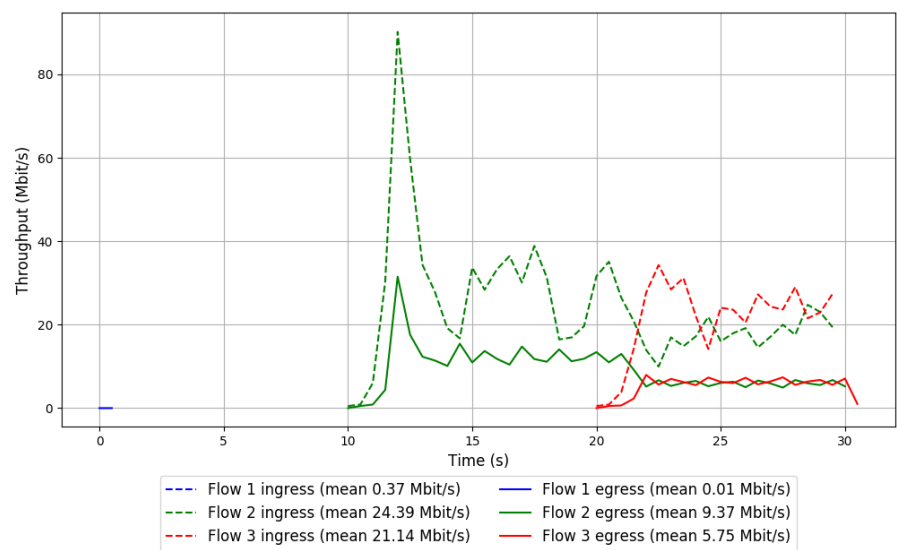
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-12-11 08:27:04
End at: 2019-12-11 08:27:34
Local clock offset: 6.445 ms
Remote clock offset: -47.386 ms


# Below is generated by plot.py at 2019-12-11 09:26:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.12 Mbit/s
95th percentile per-packet one-way delay: 49.376 ms
Loss rate: 66.36%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 50.181 ms
Loss rate: 96.71%
-- Flow 2:
Average throughput: 9.84 Mbit/s
95th percentile per-packet one-way delay: 49.719 ms
Loss rate: 65.79%
-- Flow 3:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 47.769 ms
Loss rate: 68.52%
```
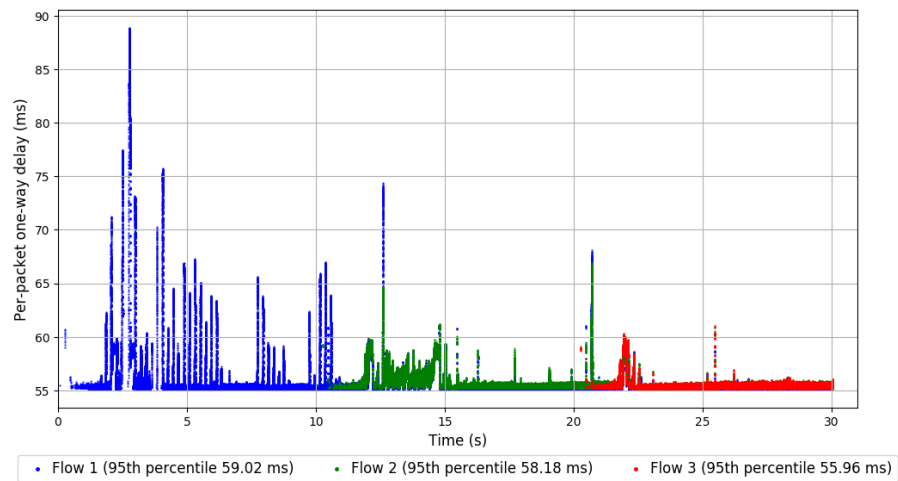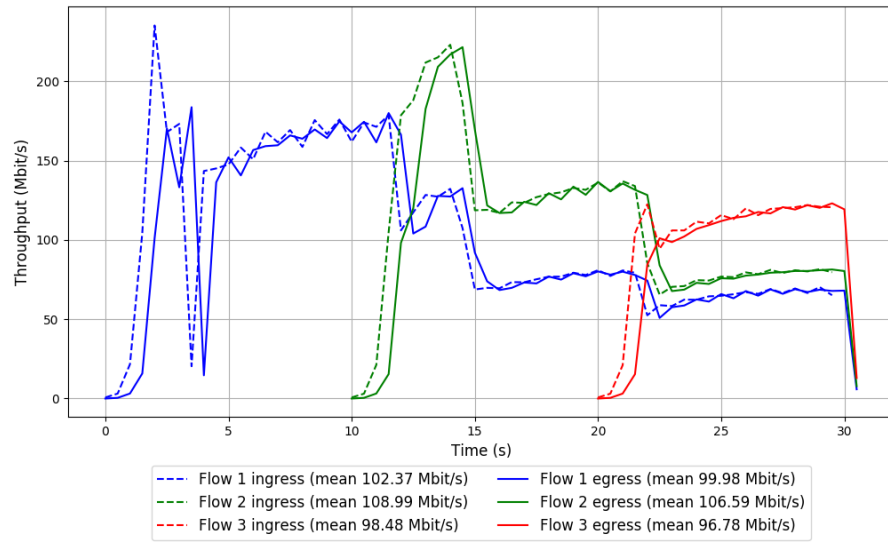
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2019-12-11 09:01:29
End at: 2019-12-11 09:01:59
Local clock offset: 4.803 ms
Remote clock offset: -44.628 ms


# Below is generated by plot.py at 2019-12-11 09:26:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.12 Mbit/s
95th percentile per-packet one-way delay: 51.257 ms
Loss rate: 64.98%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 53.419 ms
Loss rate: 97.24%
-- Flow 2:
Average throughput: 9.37 Mbit/s
95th percentile per-packet one-way delay: 51.526 ms
Loss rate: 61.57%
-- Flow 3:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 50.946 ms
Loss rate: 72.80%
```
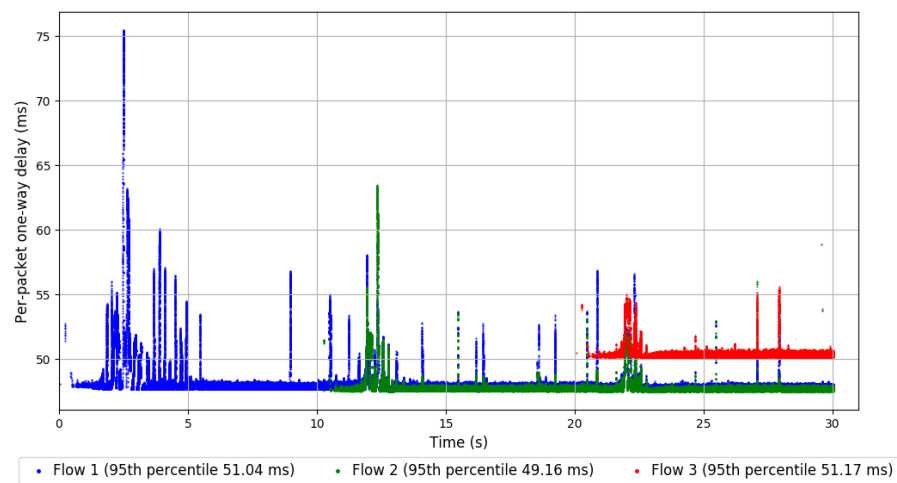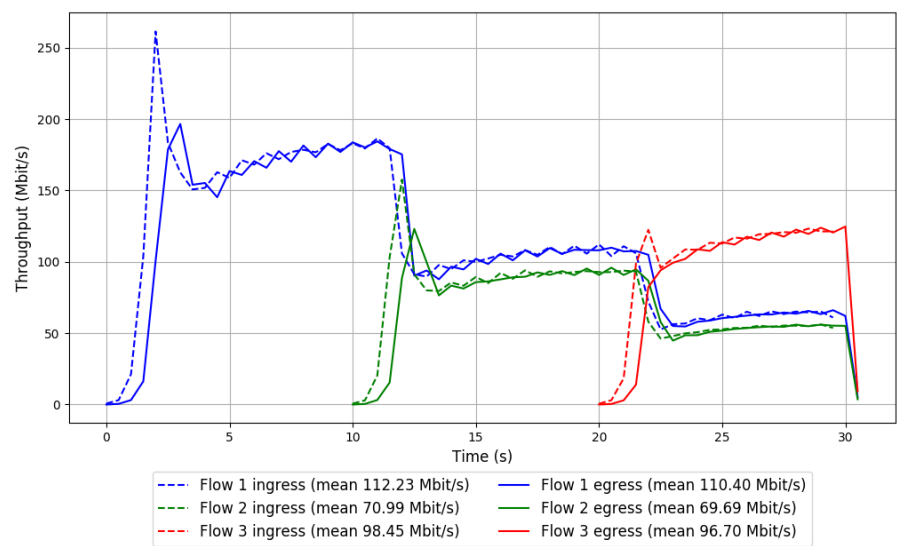
Run 5: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2019-12-11 06:53:45
End at: 2019-12-11 06:54:15
Local clock offset: 2.51 ms
Remote clock offset: -44.735 ms


# Below is generated by plot.py at 2019-12-11 09:28:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 203.26 Mbit/s
95th percentile per-packet one-way delay: 58.672 ms
Loss rate: 2.19%
-- Flow 1:
Average throughput: 99.98 Mbit/s
95th percentile per-packet one-way delay: 59.018 ms
Loss rate: 2.33%
-- Flow 2:
Average throughput: 106.59 Mbit/s
95th percentile per-packet one-way delay: 58.176 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 96.78 Mbit/s
95th percentile per-packet one-way delay: 55.963 ms
Loss rate: 1.73%
```
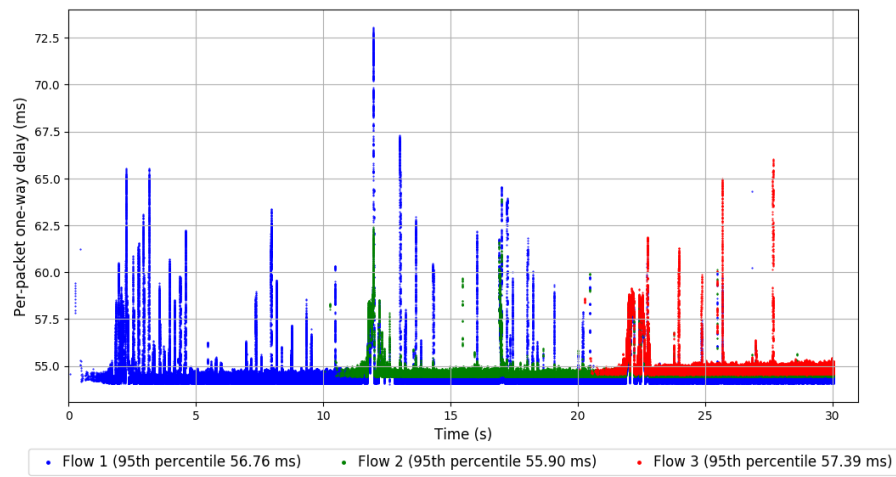
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-12-11 07:28:29
End at: 2019-12-11 07:28:59
Local clock offset: 4.626 ms
Remote clock offset: -47.84 ms


# Below is generated by plot.py at 2019-12-11 09:28:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 188.98 Mbit/s
95th percentile per-packet one-way delay: 50.885 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 110.40 Mbit/s
95th percentile per-packet one-way delay: 51.039 ms
Loss rate: 1.63%
-- Flow 2:
Average throughput: 69.69 Mbit/s
95th percentile per-packet one-way delay: 49.160 ms
Loss rate: 1.83%
-- Flow 3:
Average throughput: 96.70 Mbit/s
95th percentile per-packet one-way delay: 51.174 ms
Loss rate: 1.78%
```

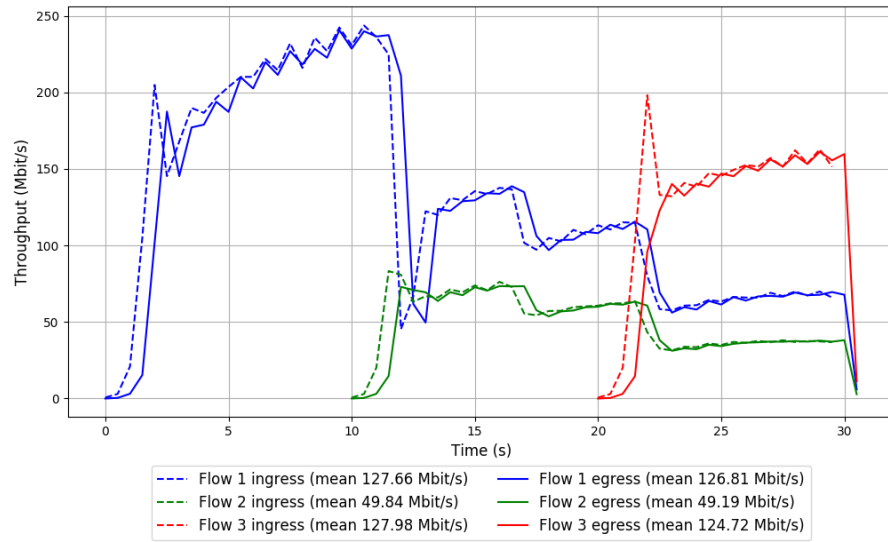Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-12-11 08:02:57
End at: 2019-12-11 08:03:27
Local clock offset: 6.789 ms
Remote clock offset: -40.553 ms

# Below is generated by plot.py at 2019-12-11 09:28:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 201.07 Mbit/s
95th percentile per-packet one-way delay: 56.774 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 126.81 Mbit/s
95th percentile per-packet one-way delay: 56.760 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 49.19 Mbit/s
95th percentile per-packet one-way delay: 55.895 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 124.72 Mbit/s
95th percentile per-packet one-way delay: 57.386 ms
Loss rate: 2.55%
```
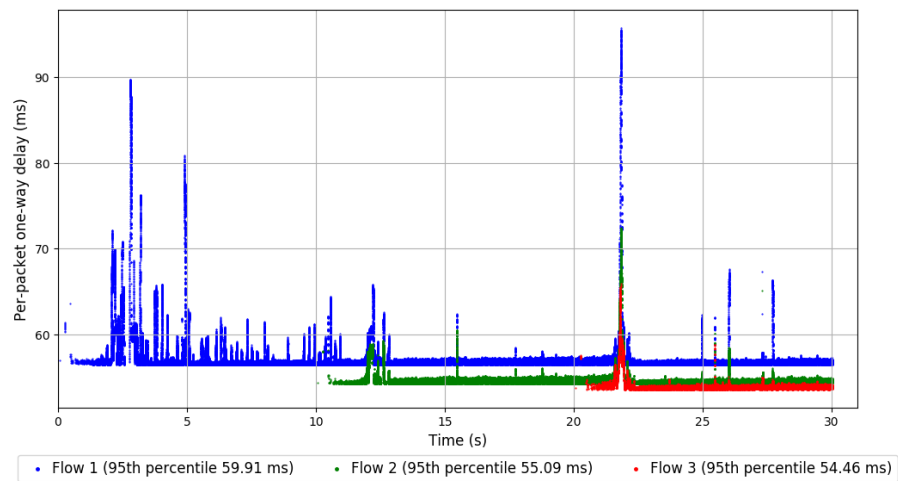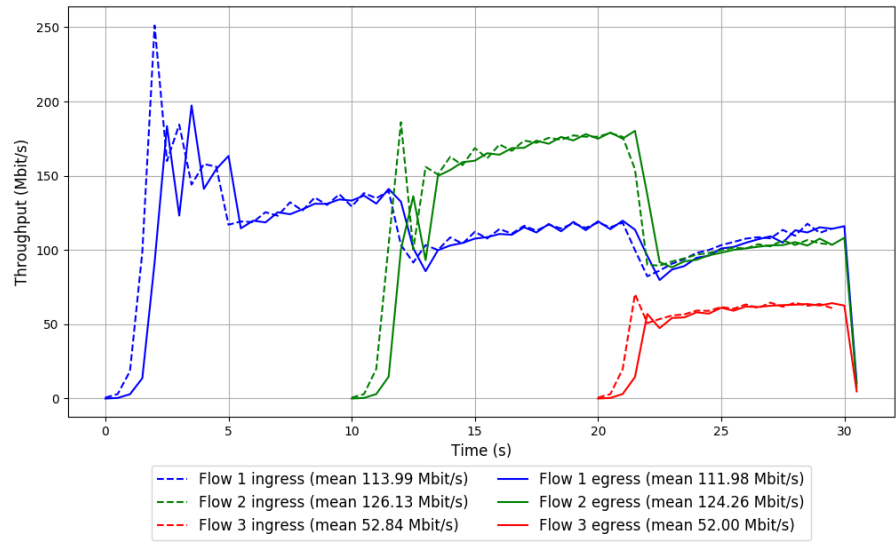
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2019-12-11 08:37:08
End at: 2019-12-11 08:37:38
Local clock offset: 6.548 ms
Remote clock offset: -40.5 ms


# Below is generated by plot.py at 2019-12-11 09:29:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 212.05 Mbit/s
95th percentile per-packet one-way delay: 58.070 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 111.98 Mbit/s
95th percentile per-packet one-way delay: 59.909 ms
Loss rate: 1.76%
-- Flow 2:
Average throughput: 124.26 Mbit/s
95th percentile per-packet one-way delay: 55.090 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 52.00 Mbit/s
95th percentile per-packet one-way delay: 54.456 ms
Loss rate: 1.57%
```
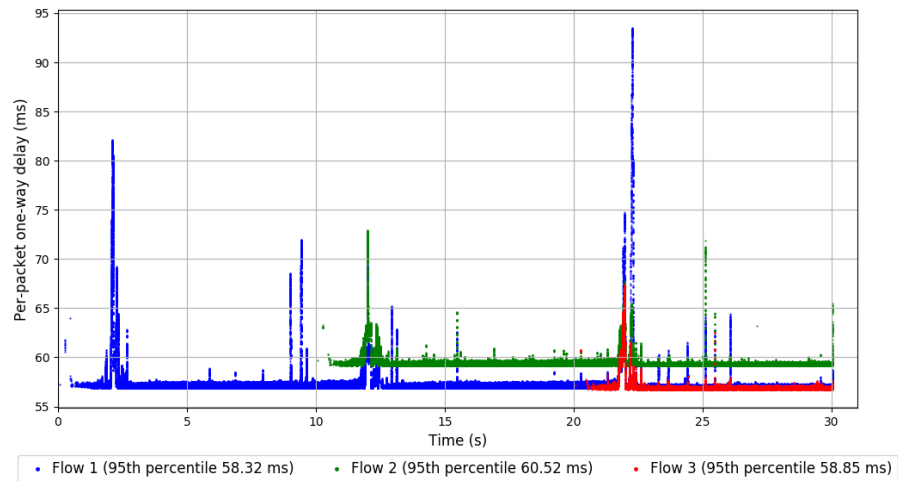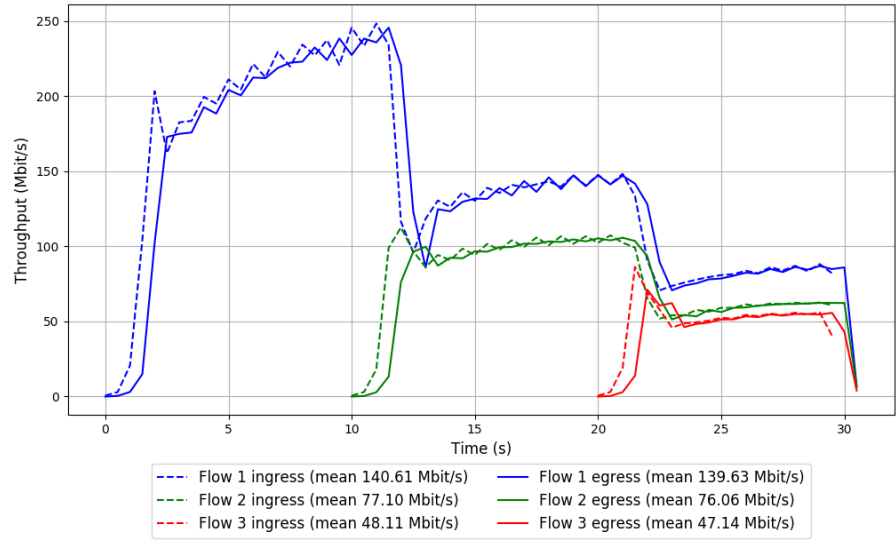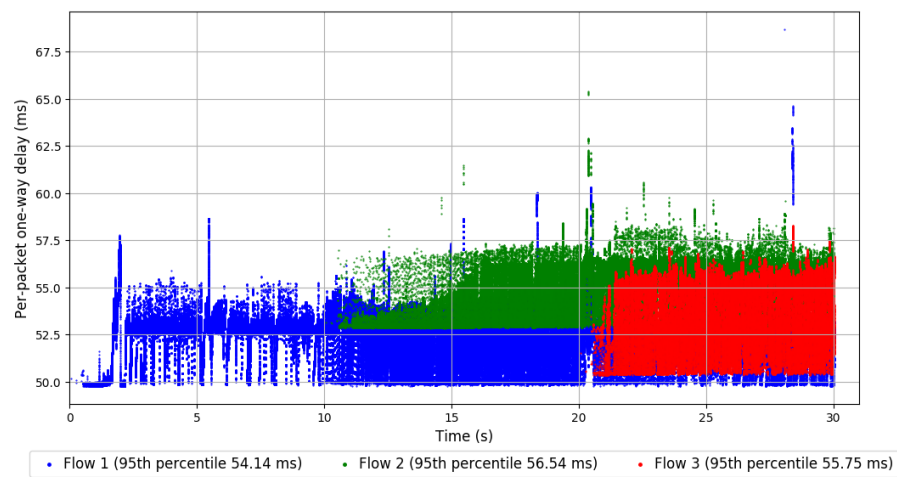
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 113.99 Mbit/s) — — —   Flow 1 egress (mean 111.98 Mbit/s) ——
Flow 2 ingress (mean 126.13 Mbit/s) — — —   Flow 2 egress (mean 124.26 Mbit/s) ——
Flow 3 ingress (mean 52.84 Mbit/s) — — —   Flow 3 egress (mean 52.00 Mbit/s) ——

Flow 1 (95th percentile 59.91 ms)   Flow 2 (95th percentile 55.09 ms)   Flow 3 (95th percentile 54.46 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-12-11 09:11:31
End at: 2019-12-11 09:12:01
Local clock offset: 3.636 ms
Remote clock offset: -39.279 ms

# Below is generated by plot.py at 2019-12-11 09:29:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 205.96 Mbit/s
95th percentile per-packet one-way delay: 59.648 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 139.63 Mbit/s
95th percentile per-packet one-way delay: 58.317 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 76.06 Mbit/s
95th percentile per-packet one-way delay: 60.517 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 47.14 Mbit/s
95th percentile per-packet one-way delay: 58.854 ms
Loss rate: 2.02%
```
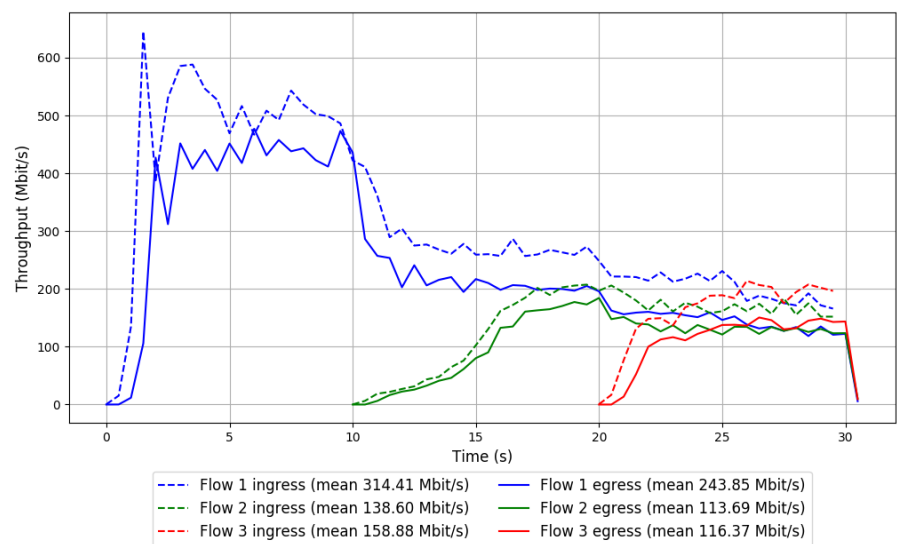
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 140.61 Mbit/s) — Flow 1 egress (mean 139.63 Mbit/s)
Flow 2 ingress (mean 77.10 Mbit/s) — Flow 2 egress (mean 76.06 Mbit/s)
Flow 3 ingress (mean 48.11 Mbit/s) — Flow 3 egress (mean 47.14 Mbit/s)

Flow 1 (95th percentile 58.32 ms)   Flow 2 (95th percentile 60.52 ms)   Flow 3 (95th percentile 58.85 ms)
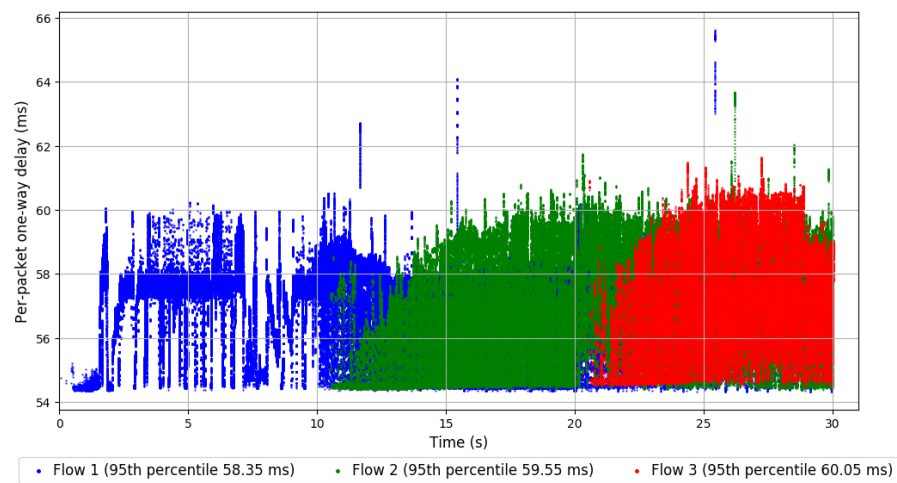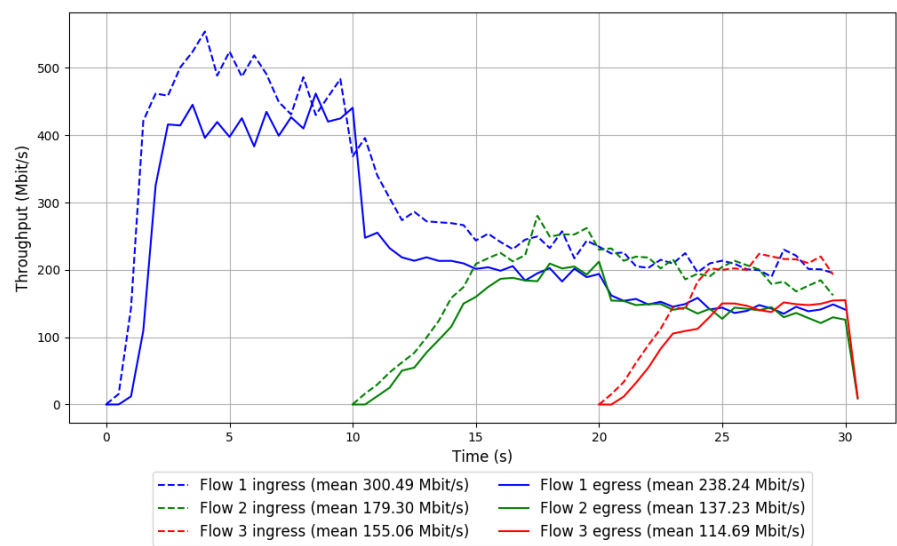
```
Run 1: Statistics of FillP

Start at: 2019-12-11 06:46:37
End at: 2019-12-11 06:47:07
Local clock offset: 6.429 ms
Remote clock offset: -45.831 ms


# Below is generated by plot.py at 2019-12-11 09:32:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.17 Mbit/s
95th percentile per-packet one-way delay: 56.108 ms
Loss rate: 22.03%
-- Flow 1:
Average throughput: 243.85 Mbit/s
95th percentile per-packet one-way delay: 54.138 ms
Loss rate: 22.44%
-- Flow 2:
Average throughput: 113.69 Mbit/s
95th percentile per-packet one-way delay: 56.540 ms
Loss rate: 17.95%
-- Flow 3:
Average throughput: 116.37 Mbit/s
95th percentile per-packet one-way delay: 55.753 ms
Loss rate: 26.75%
```
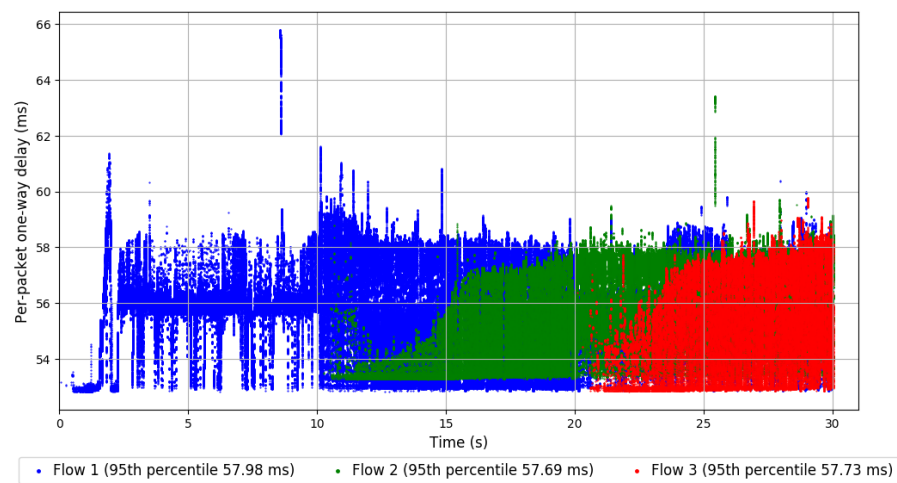
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2019-12-11 07:21:21
End at: 2019-12-11 07:21:51
Local clock offset: 4.91 ms
Remote clock offset: -40.991 ms


# Below is generated by plot.py at 2019-12-11 09:32:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.43 Mbit/s
95th percentile per-packet one-way delay: 59.195 ms
Loss rate: 21.99%
-- Flow 1:
Average throughput: 238.24 Mbit/s
95th percentile per-packet one-way delay: 58.353 ms
Loss rate: 20.72%
-- Flow 2:
Average throughput: 137.23 Mbit/s
95th percentile per-packet one-way delay: 59.549 ms
Loss rate: 23.47%
-- Flow 3:
Average throughput: 114.69 Mbit/s
95th percentile per-packet one-way delay: 60.048 ms
Loss rate: 26.02%
```
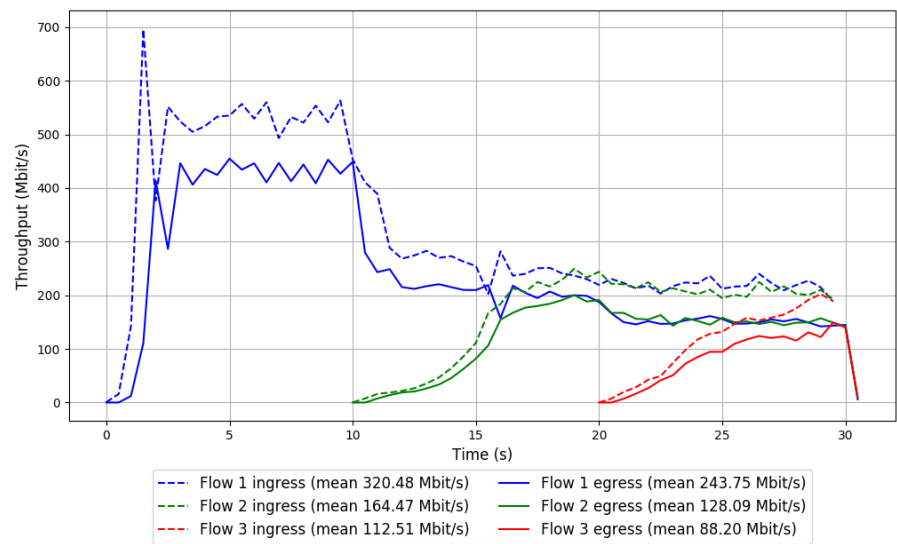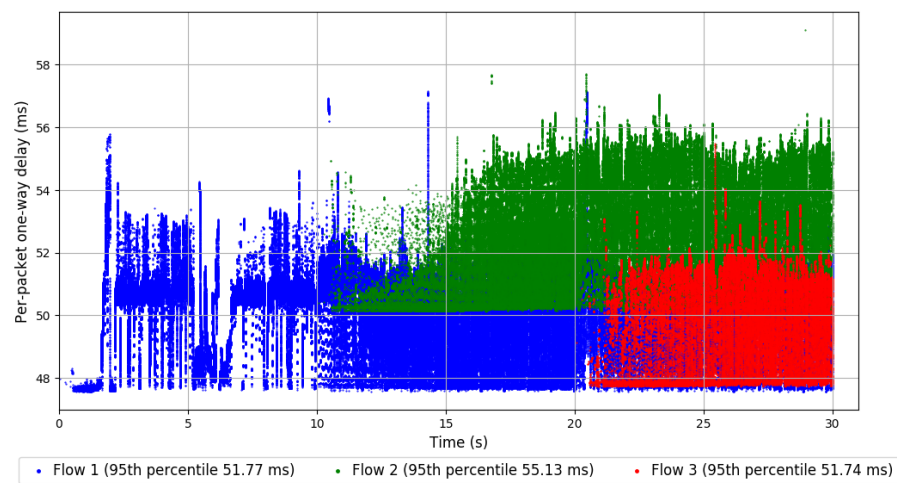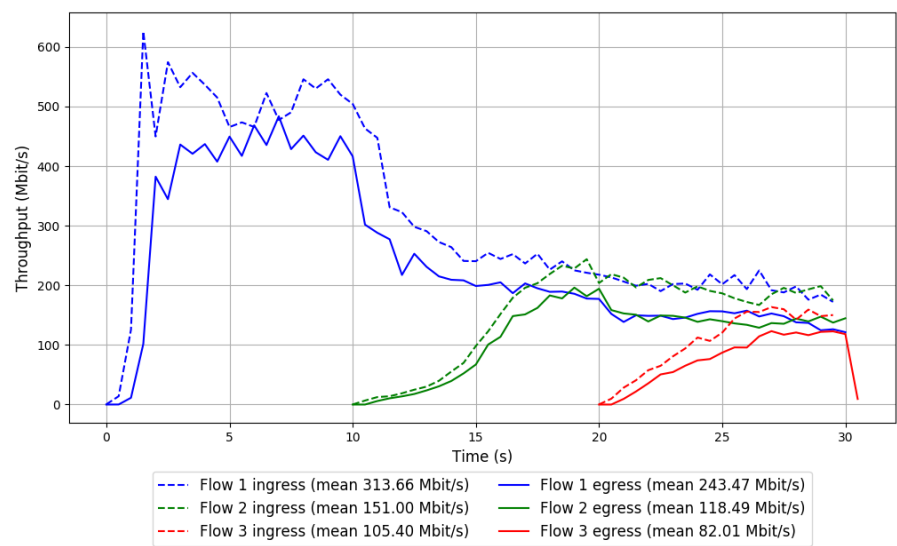
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 300.49 Mbit/s) --- Flow 1 egress (mean 238.24 Mbit/s)
Flow 2 ingress (mean 179.30 Mbit/s) --- Flow 2 egress (mean 137.23 Mbit/s)
Flow 3 ingress (mean 155.06 Mbit/s) --- Flow 3 egress (mean 114.69 Mbit/s)

Flow 1 (95th percentile 58.35 ms)   Flow 2 (95th percentile 59.55 ms)   Flow 3 (95th percentile 60.05 ms)

```
Run 3: Statistics of FillP

Start at: 2019-12-11 07:55:47
End at: 2019-12-11 07:56:17
Local clock offset: 6.763 ms
Remote clock offset: -41.513 ms


# Below is generated by plot.py at 2019-12-11 09:32:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.07 Mbit/s
95th percentile per-packet one-way delay: 57.863 ms
Loss rate: 23.33%
-- Flow 1:
Average throughput: 243.75 Mbit/s
95th percentile per-packet one-way delay: 57.979 ms
Loss rate: 23.94%
-- Flow 2:
Average throughput: 128.09 Mbit/s
95th percentile per-packet one-way delay: 57.692 ms
Loss rate: 22.12%
-- Flow 3:
Average throughput: 88.20 Mbit/s
95th percentile per-packet one-way delay: 57.731 ms
Loss rate: 21.63%
```
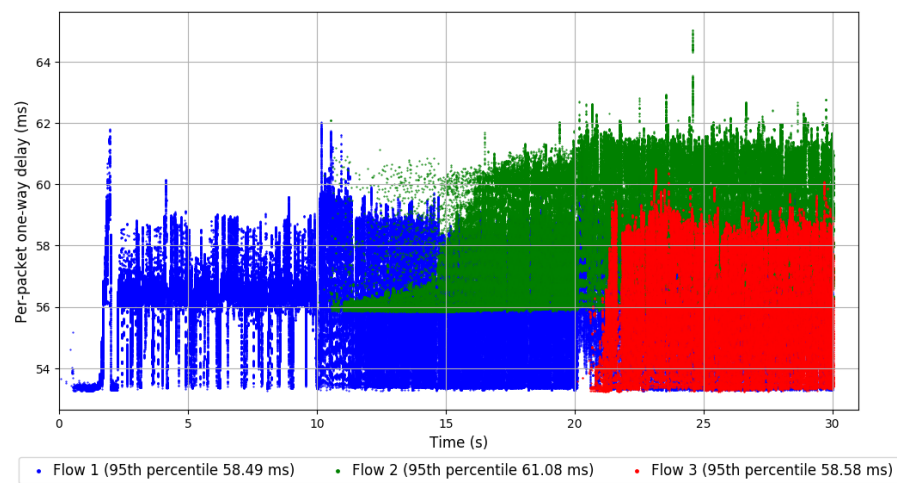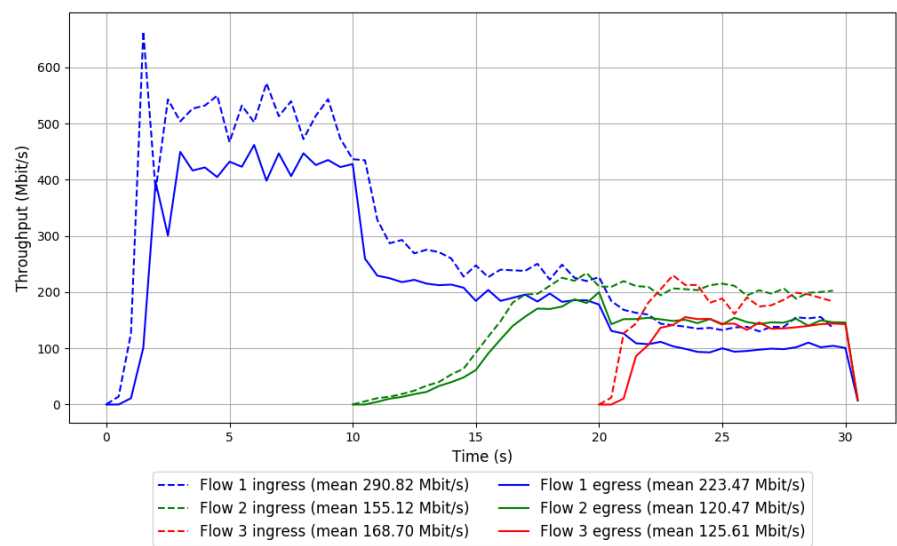
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 320.48 Mbit/s) --- Flow 1 egress (mean 243.75 Mbit/s)
Flow 2 ingress (mean 164.47 Mbit/s) --- Flow 2 egress (mean 128.09 Mbit/s)
Flow 3 ingress (mean 112.51 Mbit/s) --- Flow 3 egress (mean 88.20 Mbit/s)

Flow 1 (95th percentile 57.98 ms)   Flow 2 (95th percentile 57.69 ms)   Flow 3 (95th percentile 57.73 ms)

40

```
Run 4: Statistics of FillP

Start at: 2019-12-11 08:29:58
End at: 2019-12-11 08:30:28
Local clock offset: 6.23 ms
Remote clock offset: -46.777 ms


# Below is generated by plot.py at 2019-12-11 09:34:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 349.37 Mbit/s
95th percentile per-packet one-way delay: 54.241 ms
Loss rate: 22.17%
-- Flow 1:
Average throughput: 243.47 Mbit/s
95th percentile per-packet one-way delay: 51.772 ms
Loss rate: 22.38%
-- Flow 2:
Average throughput: 118.49 Mbit/s
95th percentile per-packet one-way delay: 55.131 ms
Loss rate: 21.52%
-- Flow 3:
Average throughput: 82.01 Mbit/s
95th percentile per-packet one-way delay: 51.744 ms
Loss rate: 22.20%
```
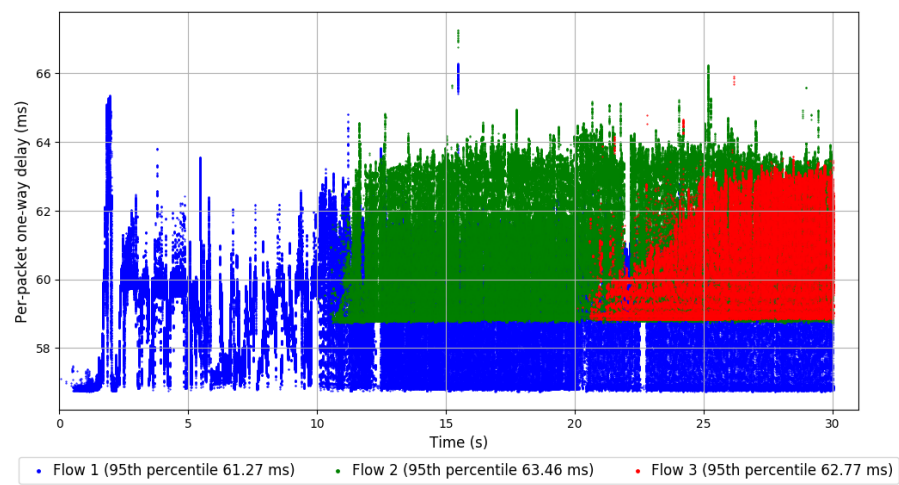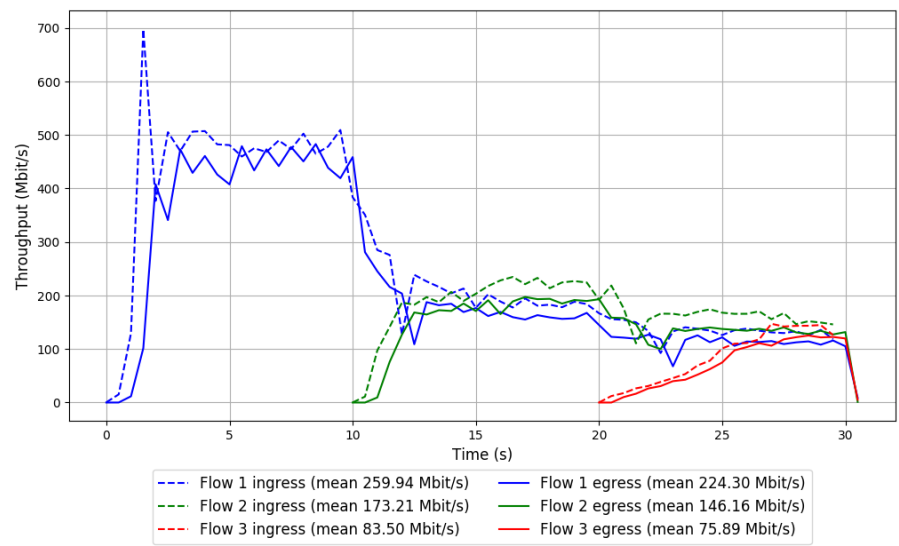
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2019-12-11 09:04:23
End at: 2019-12-11 09:04:53
Local clock offset: 4.322 ms
Remote clock offset: -41.744 ms


# Below is generated by plot.py at 2019-12-11 09:34:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.13 Mbit/s
95th percentile per-packet one-way delay: 60.182 ms
Loss rate: 23.26%
-- Flow 1:
Average throughput: 223.47 Mbit/s
95th percentile per-packet one-way delay: 58.494 ms
Loss rate: 23.16%
-- Flow 2:
Average throughput: 120.47 Mbit/s
95th percentile per-packet one-way delay: 61.082 ms
Loss rate: 22.32%
-- Flow 3:
Average throughput: 125.61 Mbit/s
95th percentile per-packet one-way delay: 58.584 ms
Loss rate: 25.55%
```
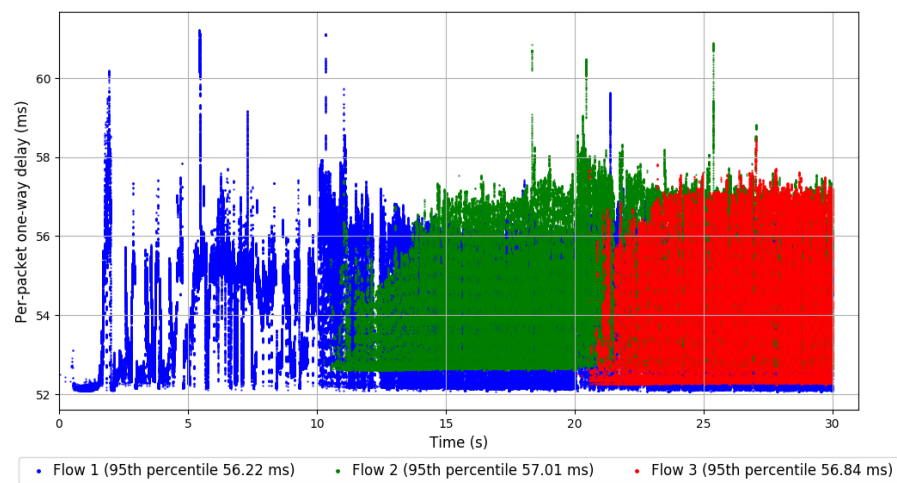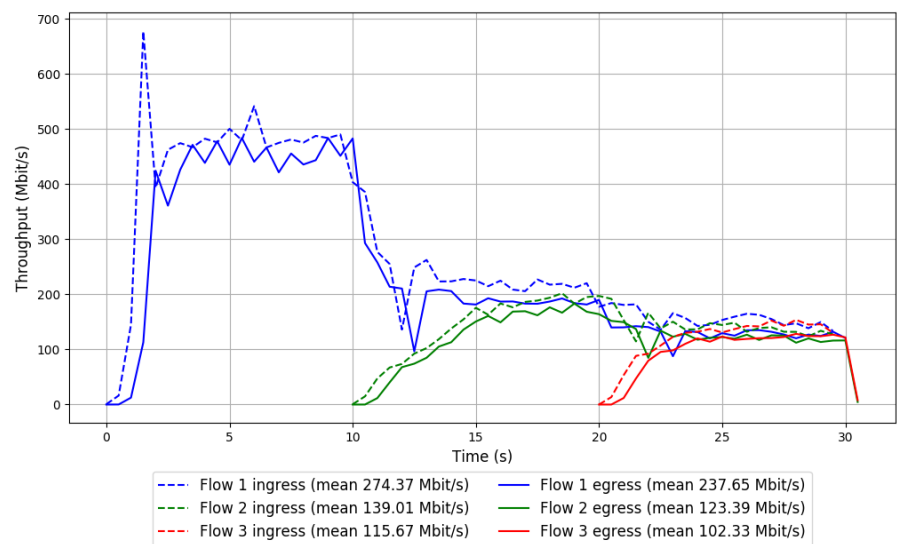
Run 5: Report of FillP — Data Link

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```
Run 1: Statistics of FillP-Sheep

Start at: 2019-12-11 06:58:11
End at: 2019-12-11 06:58:41
Local clock offset: 4.629 ms
Remote clock offset: -41.402 ms


# Below is generated by plot.py at 2019-12-11 09:34:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 346.66 Mbit/s
95th percentile per-packet one-way delay: 62.900 ms
Loss rate: 13.94%
-- Flow 1:
Average throughput: 224.30 Mbit/s
95th percentile per-packet one-way delay: 61.271 ms
Loss rate: 13.71%
-- Flow 2:
Average throughput: 146.16 Mbit/s
95th percentile per-packet one-way delay: 63.458 ms
Loss rate: 15.61%
-- Flow 3:
Average throughput: 75.89 Mbit/s
95th percentile per-packet one-way delay: 62.774 ms
Loss rate: 9.09%
```

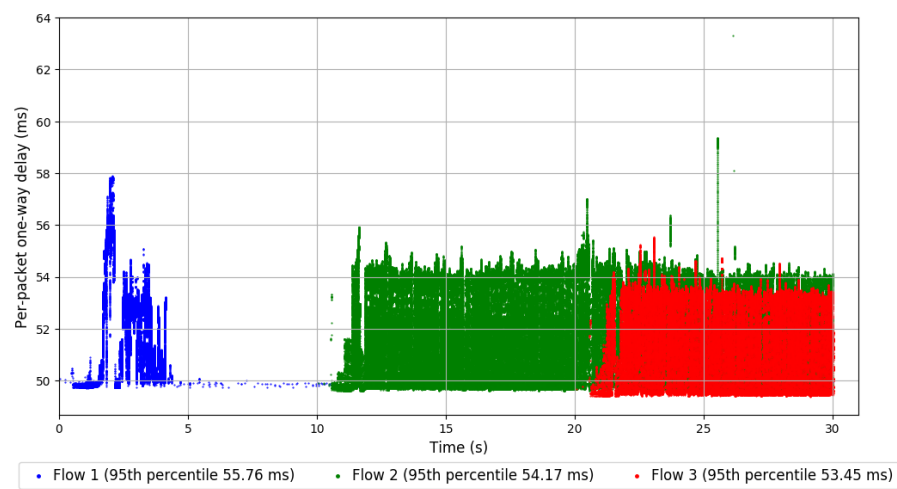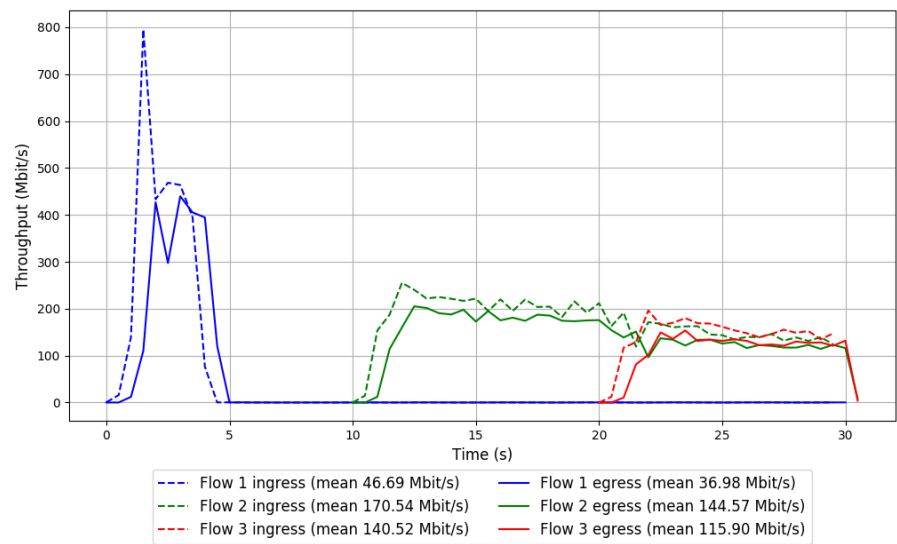Run 1: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 259.94 Mbit/s) --- Flow 1 egress (mean 224.30 Mbit/s)
Flow 2 ingress (mean 173.21 Mbit/s) --- Flow 2 egress (mean 146.16 Mbit/s)
Flow 3 ingress (mean 83.50 Mbit/s) --- Flow 3 egress (mean 75.89 Mbit/s)

Flow 1 (95th percentile 61.27 ms)   Flow 2 (95th percentile 63.46 ms)   Flow 3 (95th percentile 62.77 ms)

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```
Run 2: Statistics of FillP-Sheep

Start at: 2019-12-11 07:32:43
End at: 2019-12-11 07:33:13
Local clock offset: 0.43 ms
Remote clock offset: -47.137 ms


# Below is generated by plot.py at 2019-12-11 09:34:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 353.56 Mbit/s
95th percentile per-packet one-way delay: 56.666 ms
Loss rate: 12.72%
-- Flow 1:
Average throughput: 237.65 Mbit/s
95th percentile per-packet one-way delay: 56.217 ms
Loss rate: 13.38%
-- Flow 2:
Average throughput: 123.39 Mbit/s
95th percentile per-packet one-way delay: 57.014 ms
Loss rate: 11.24%
-- Flow 3:
Average throughput: 102.33 Mbit/s
95th percentile per-packet one-way delay: 56.841 ms
Loss rate: 11.54%
```

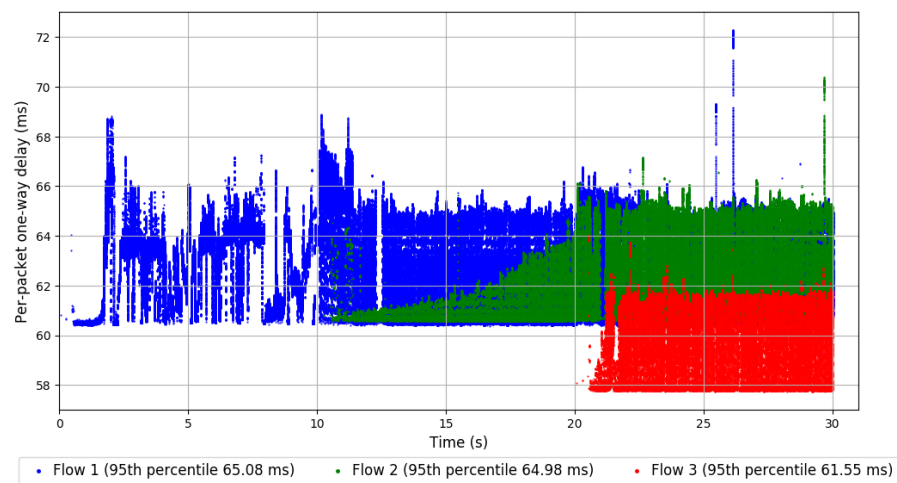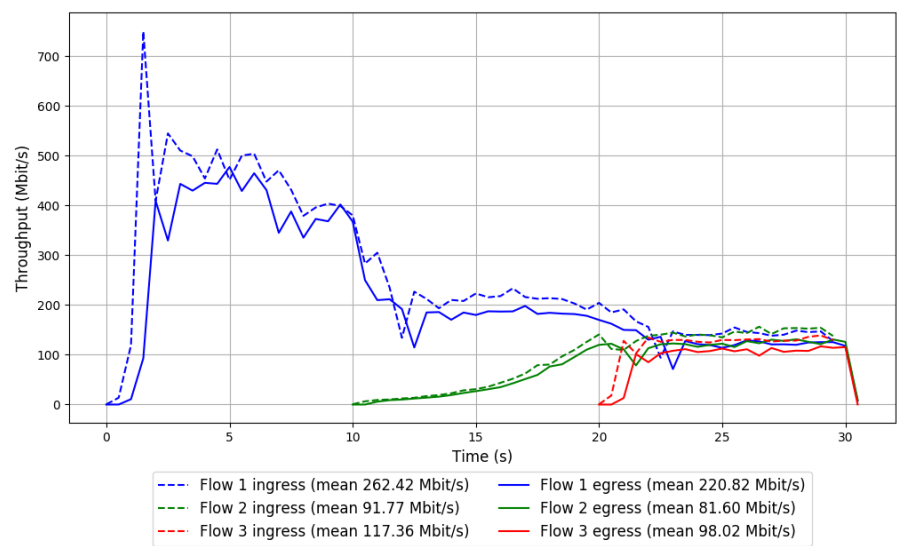Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-12-11 08:07:09
End at: 2019-12-11 08:07:39
Local clock offset: 7.459 ms
Remote clock offset: -44.672 ms


# Below is generated by plot.py at 2019-12-11 09:34:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 171.65 Mbit/s
95th percentile per-packet one-way delay: 54.240 ms
Loss rate: 17.00%
-- Flow 1:
Average throughput: 36.98 Mbit/s
95th percentile per-packet one-way delay: 55.762 ms
Loss rate: 20.79%
-- Flow 2:
Average throughput: 144.57 Mbit/s
95th percentile per-packet one-way delay: 54.166 ms
Loss rate: 15.23%
-- Flow 3:
Average throughput: 115.90 Mbit/s
95th percentile per-packet one-way delay: 53.448 ms
Loss rate: 17.51%
```

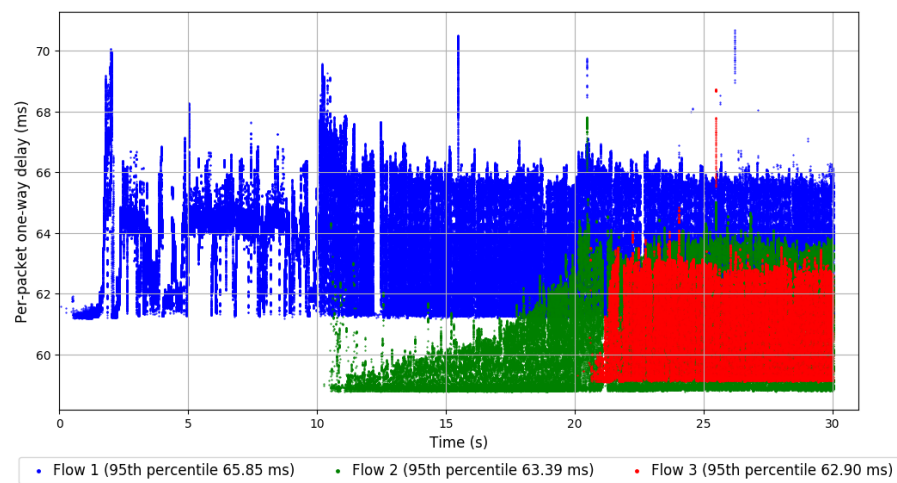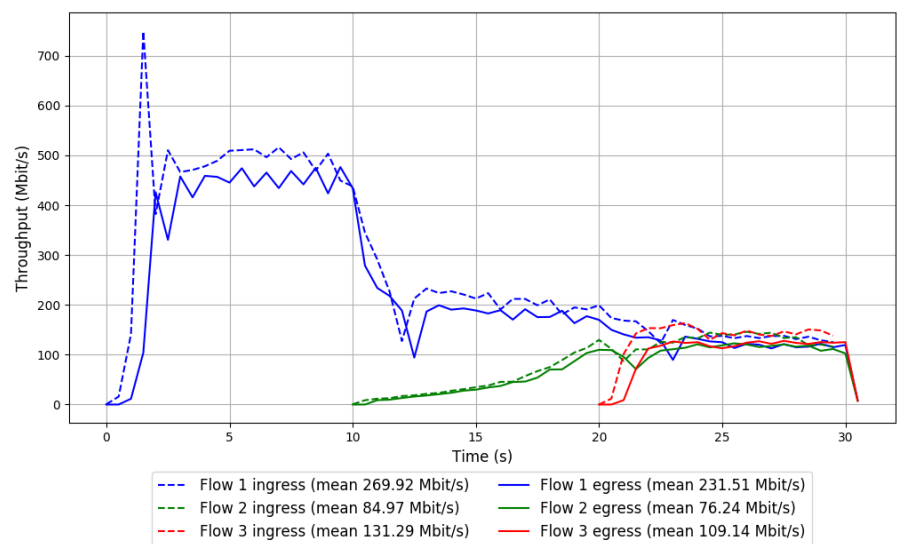Run 3: Report of FillP-Sheep — Data Link

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-12-11 08:41:26
End at: 2019-12-11 08:41:56
Local clock offset: 5.313 ms
Remote clock offset: -37.115 ms


# Below is generated by plot.py at 2019-12-11 09:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 307.61 Mbit/s
95th percentile per-packet one-way delay: 64.980 ms
Loss rate: 15.12%
-- Flow 1:
Average throughput: 220.82 Mbit/s
95th percentile per-packet one-way delay: 65.084 ms
Loss rate: 15.85%
-- Flow 2:
Average throughput: 81.60 Mbit/s
95th percentile per-packet one-way delay: 64.983 ms
Loss rate: 11.09%
-- Flow 3:
Average throughput: 98.02 Mbit/s
95th percentile per-packet one-way delay: 61.546 ms
Loss rate: 16.48%
```

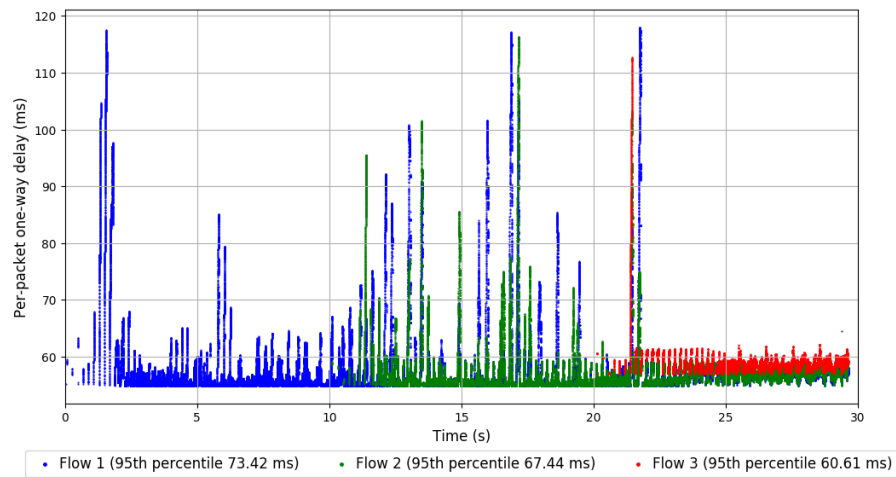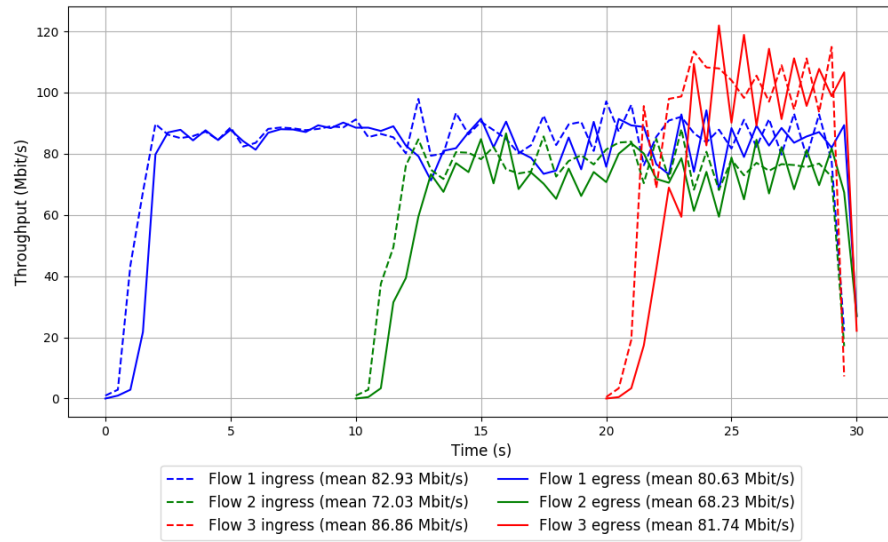Run 4: Report of FillP-Sheep — Data Link

- - - Flow 1 ingress (mean 262.42 Mbit/s) —— Flow 1 egress (mean 220.82 Mbit/s)
- - - Flow 2 ingress (mean 91.77 Mbit/s) —— Flow 2 egress (mean 81.60 Mbit/s)
- - - Flow 3 ingress (mean 117.36 Mbit/s) —— Flow 3 egress (mean 98.02 Mbit/s)

• Flow 1 (95th percentile 65.08 ms)   • Flow 2 (95th percentile 64.98 ms)   • Flow 3 (95th percentile 61.55 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-12-11 09:15:59
End at: 2019-12-11 09:16:29
Local clock offset: 3.851 ms
Remote clock offset: -36.713 ms


# Below is generated by plot.py at 2019-12-11 09:37:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.33 Mbit/s
95th percentile per-packet one-way delay: 65.633 ms
Loss rate: 13.93%
-- Flow 1:
Average throughput: 231.51 Mbit/s
95th percentile per-packet one-way delay: 65.847 ms
Loss rate: 14.22%
-- Flow 2:
Average throughput: 76.24 Mbit/s
95th percentile per-packet one-way delay: 63.388 ms
Loss rate: 10.28%
-- Flow 3:
Average throughput: 109.14 Mbit/s
95th percentile per-packet one-way delay: 62.904 ms
Loss rate: 16.87%
```

Run 5: Report of FillP-Sheep — Data Link
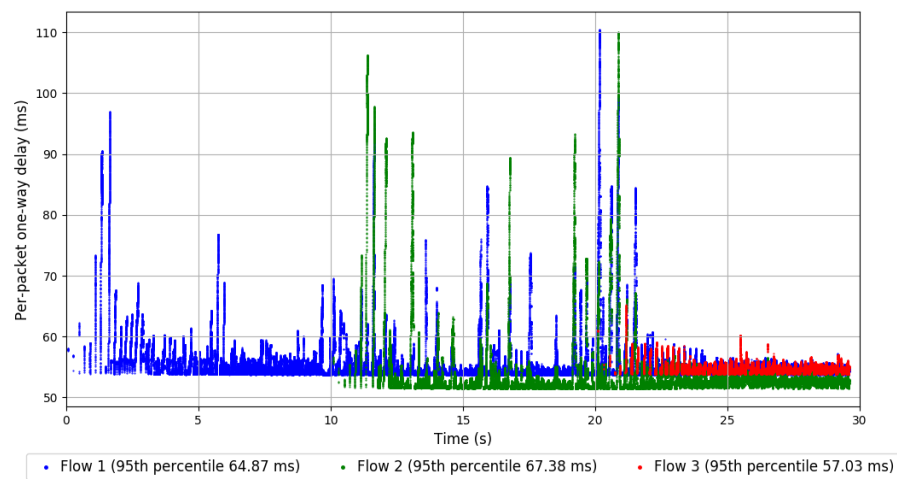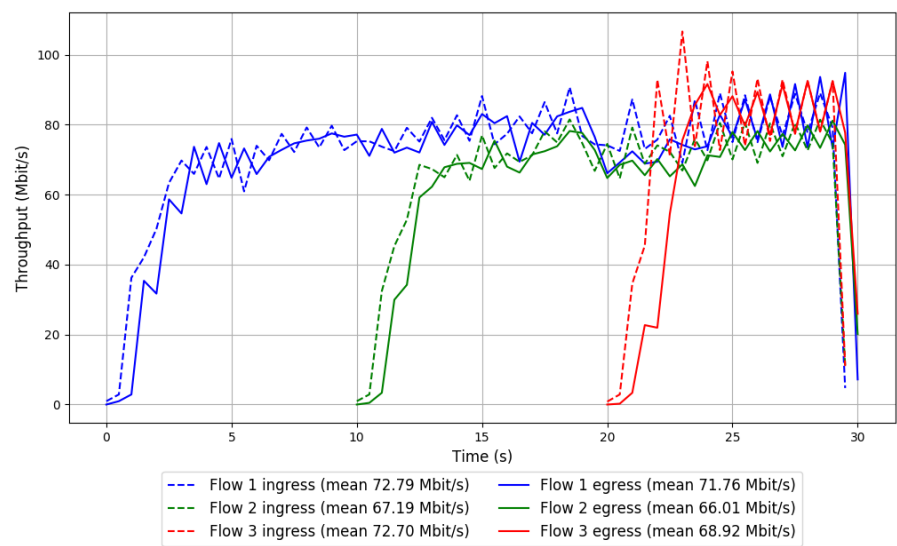

- - - Flow 1 ingress (mean 269.92 Mbit/s) ——— Flow 1 egress (mean 231.51 Mbit/s)
- - - Flow 2 ingress (mean 84.97 Mbit/s) ——— Flow 2 egress (mean 76.24 Mbit/s)
- - - Flow 3 ingress (mean 131.29 Mbit/s) ——— Flow 3 egress (mean 109.14 Mbit/s)

• Flow 1 (95th percentile 65.85 ms)   • Flow 2 (95th percentile 63.39 ms)   • Flow 3 (95th percentile 62.90 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-12-11 06:35:25
End at: 2019-12-11 06:35:55
Local clock offset: 2.574 ms
Remote clock offset: -45.171 ms


# Below is generated by plot.py at 2019-12-11 09:37:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 151.86 Mbit/s
95th percentile per-packet one-way delay: 67.883 ms
Loss rate: 4.07%
-- Flow 1:
Average throughput: 80.63 Mbit/s
95th percentile per-packet one-way delay: 73.419 ms
Loss rate: 2.76%
-- Flow 2:
Average throughput: 68.23 Mbit/s
95th percentile per-packet one-way delay: 67.444 ms
Loss rate: 5.29%
-- Flow 3:
Average throughput: 81.74 Mbit/s
95th percentile per-packet one-way delay: 60.610 ms
Loss rate: 5.87%
```
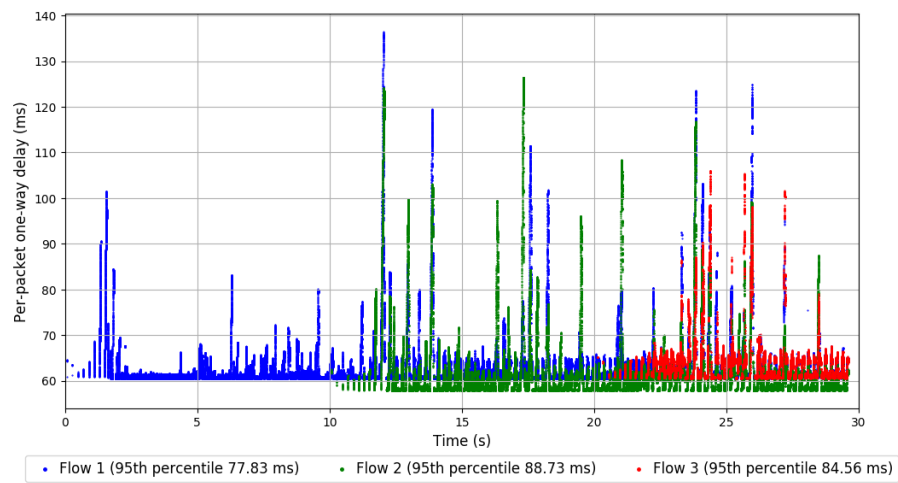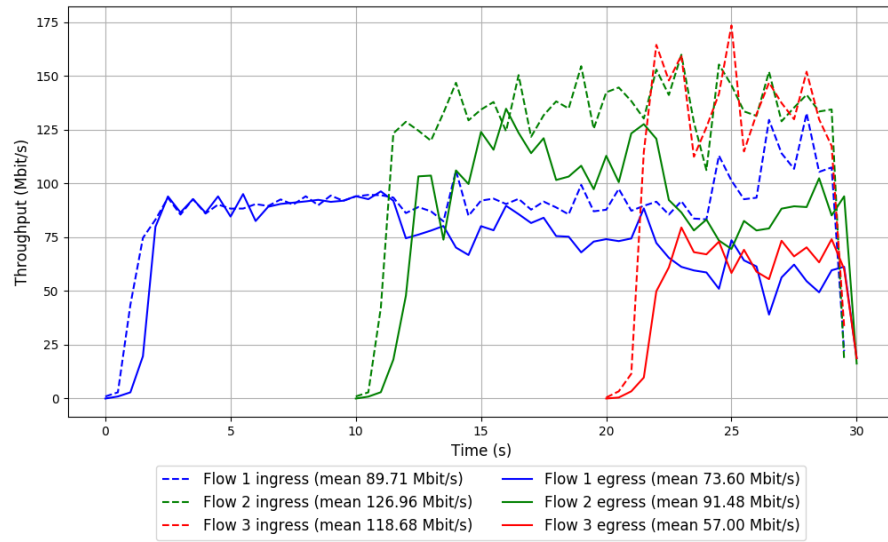
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-12-11 07:09:57
End at: 2019-12-11 07:10:27
Local clock offset: 5.908 ms
Remote clock offset: -44.715 ms


# Below is generated by plot.py at 2019-12-11 09:37:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 137.47 Mbit/s
95th percentile per-packet one-way delay: 63.268 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 71.76 Mbit/s
95th percentile per-packet one-way delay: 64.871 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 66.01 Mbit/s
95th percentile per-packet one-way delay: 67.379 ms
Loss rate: 1.76%
-- Flow 3:
Average throughput: 68.92 Mbit/s
95th percentile per-packet one-way delay: 57.034 ms
Loss rate: 5.26%
```
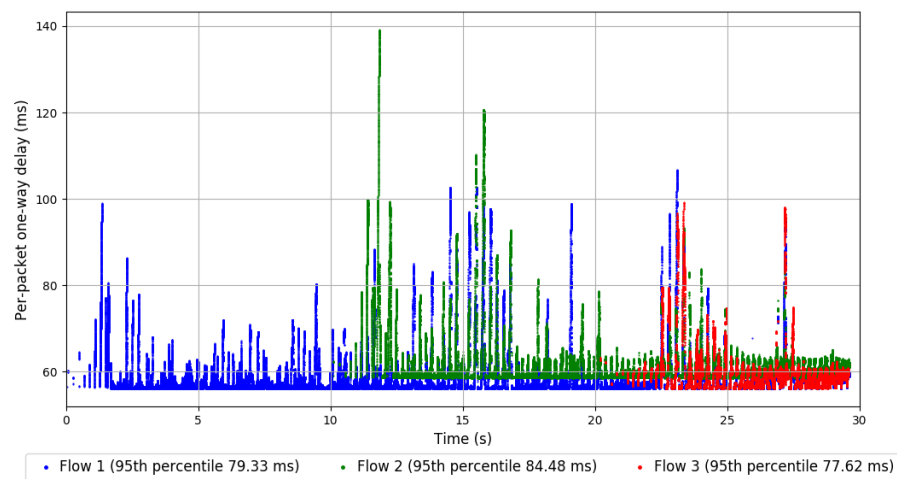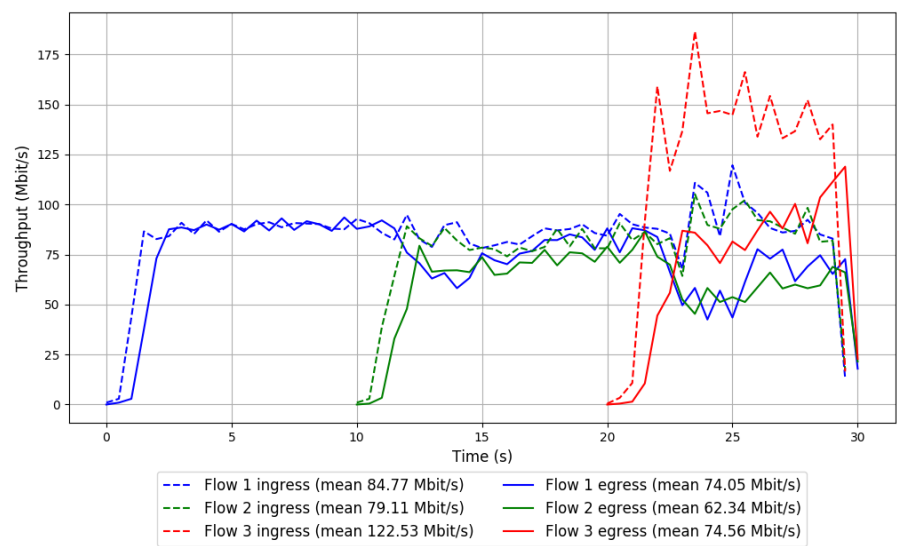
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-12-11 07:44:31
End at: 2019-12-11 07:45:01
Local clock offset: 2.833 ms
Remote clock offset: -39.964 ms

# Below is generated by plot.py at 2019-12-11 09:37:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 152.35 Mbit/s
95th percentile per-packet one-way delay: 82.726 ms
Loss rate: 28.03%
-- Flow 1:
Average throughput: 73.60 Mbit/s
95th percentile per-packet one-way delay: 77.826 ms
Loss rate: 17.95%
-- Flow 2:
Average throughput: 91.48 Mbit/s
95th percentile per-packet one-way delay: 88.727 ms
Loss rate: 27.94%
-- Flow 3:
Average throughput: 57.00 Mbit/s
95th percentile per-packet one-way delay: 84.556 ms
Loss rate: 51.98%
```
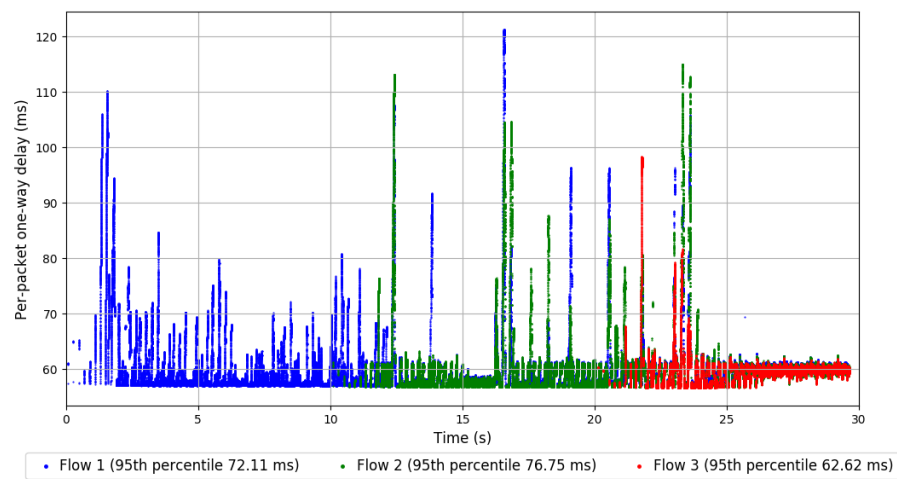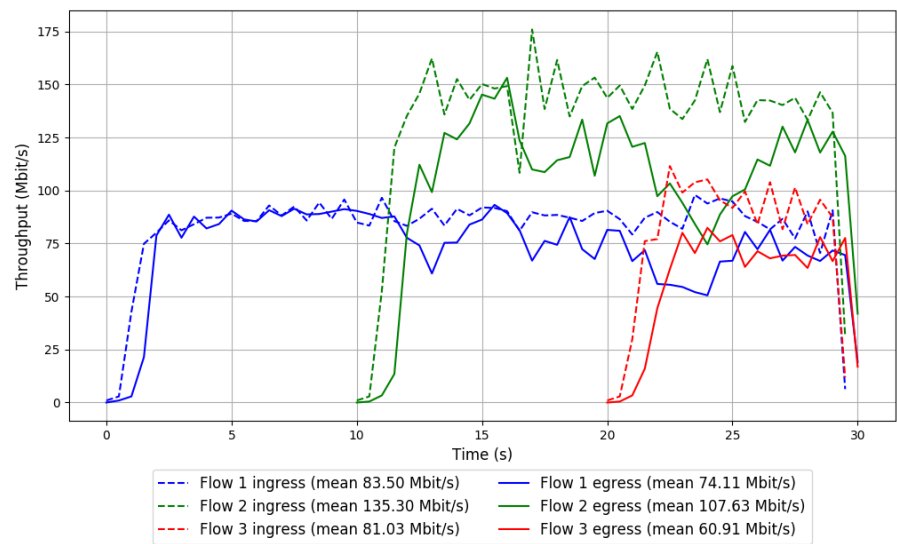
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-12-11 08:18:46
End at: 2019-12-11 08:19:16
Local clock offset: 1.25 ms
Remote clock offset: -43.942 ms


# Below is generated by plot.py at 2019-12-11 09:37:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.92 Mbit/s
95th percentile per-packet one-way delay: 80.191 ms
Loss rate: 21.06%
-- Flow 1:
Average throughput: 74.05 Mbit/s
95th percentile per-packet one-way delay: 79.329 ms
Loss rate: 12.65%
-- Flow 2:
Average throughput: 62.34 Mbit/s
95th percentile per-packet one-way delay: 84.484 ms
Loss rate: 21.19%
-- Flow 3:
Average throughput: 74.56 Mbit/s
95th percentile per-packet one-way delay: 77.623 ms
Loss rate: 39.18%
```
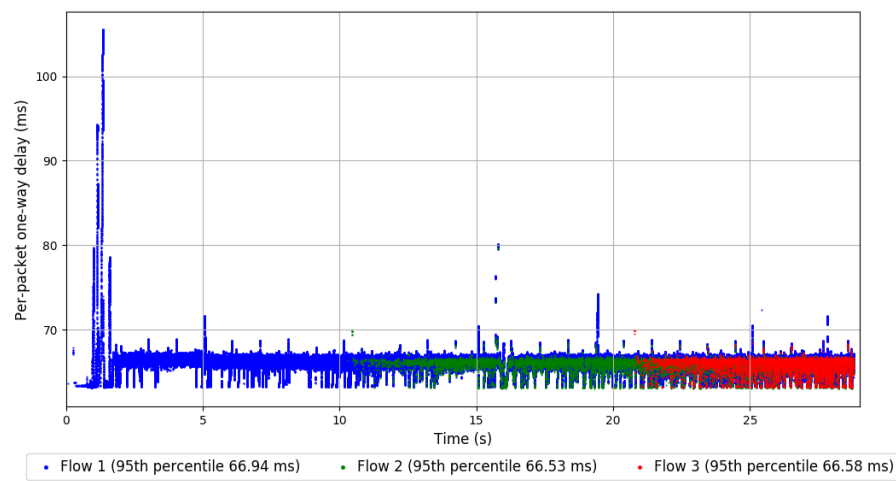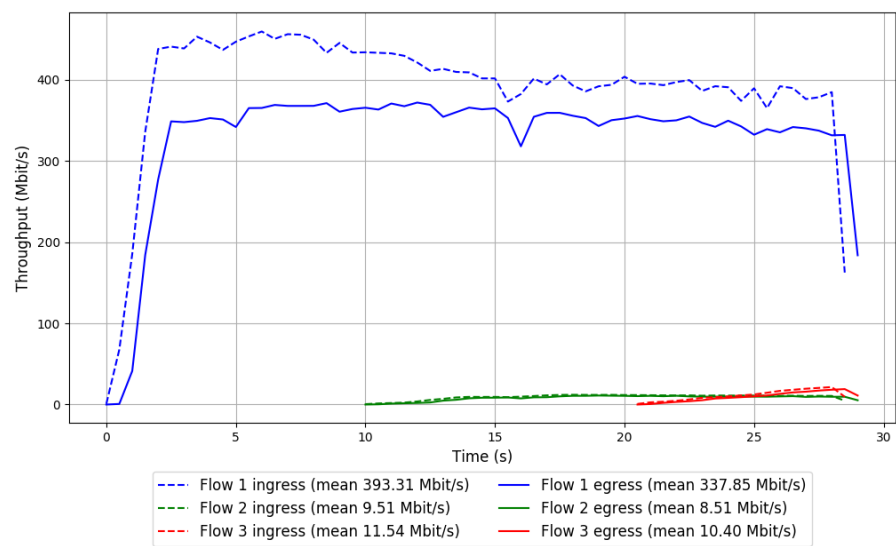
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-12-11 08:53:09
End at: 2019-12-11 08:53:39
Local clock offset: 2.486 ms
Remote clock offset: -40.447 ms


# Below is generated by plot.py at 2019-12-11 09:37:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 164.78 Mbit/s
95th percentile per-packet one-way delay: 72.778 ms
Loss rate: 17.16%
-- Flow 1:
Average throughput: 74.11 Mbit/s
95th percentile per-packet one-way delay: 72.112 ms
Loss rate: 11.25%
-- Flow 2:
Average throughput: 107.63 Mbit/s
95th percentile per-packet one-way delay: 76.752 ms
Loss rate: 20.44%
-- Flow 3:
Average throughput: 60.91 Mbit/s
95th percentile per-packet one-way delay: 62.622 ms
Loss rate: 24.84%
```
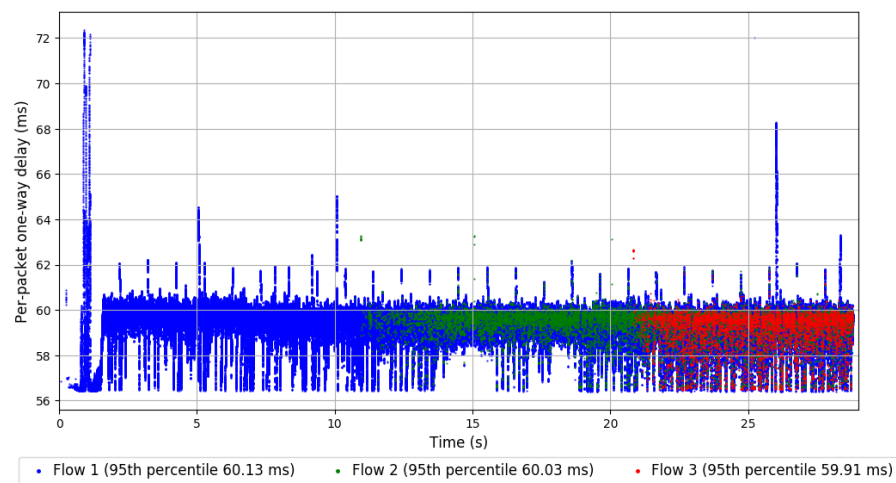
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-12-11 06:45:01
End at: 2019-12-11 06:45:31
Local clock offset: 1.14 ms
Remote clock offset: -38.068 ms


# Below is generated by plot.py at 2019-12-11 09:38:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 346.30 Mbit/s
95th percentile per-packet one-way delay: 66.931 ms
Loss rate: 14.01%
-- Flow 1:
Average throughput: 337.85 Mbit/s
95th percentile per-packet one-way delay: 66.935 ms
Loss rate: 14.10%
-- Flow 2:
Average throughput: 8.51 Mbit/s
95th percentile per-packet one-way delay: 66.529 ms
Loss rate: 10.56%
-- Flow 3:
Average throughput: 10.40 Mbit/s
95th percentile per-packet one-way delay: 66.583 ms
Loss rate: 9.91%
```

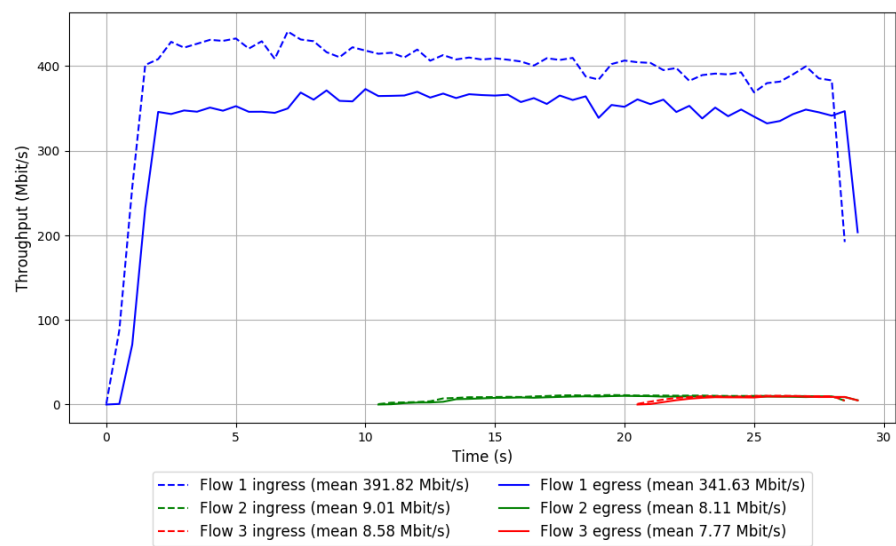# Run 1: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 393.31 Mbit/s)   Flow 1 egress (mean 337.85 Mbit/s)
Flow 2 ingress (mean 9.51 Mbit/s)   Flow 2 egress (mean 8.51 Mbit/s)
Flow 3 ingress (mean 11.54 Mbit/s)   Flow 3 egress (mean 10.40 Mbit/s)

Flow 1 (95th percentile 66.94 ms)   Flow 2 (95th percentile 66.53 ms)   Flow 3 (95th percentile 66.58 ms)

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-12-11 07:19:44
End at: 2019-12-11 07:20:14
Local clock offset: 3.135 ms
Remote clock offset: -41.197 ms


# Below is generated by plot.py at 2019-12-11 09:38:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 348.94 Mbit/s
95th percentile per-packet one-way delay: 60.127 ms
Loss rate: 12.74%
-- Flow 1:
Average throughput: 341.63 Mbit/s
95th percentile per-packet one-way delay: 60.128 ms
Loss rate: 12.80%
-- Flow 2:
Average throughput: 8.11 Mbit/s
95th percentile per-packet one-way delay: 60.027 ms
Loss rate: 9.98%
-- Flow 3:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 59.912 ms
Loss rate: 9.48%
```
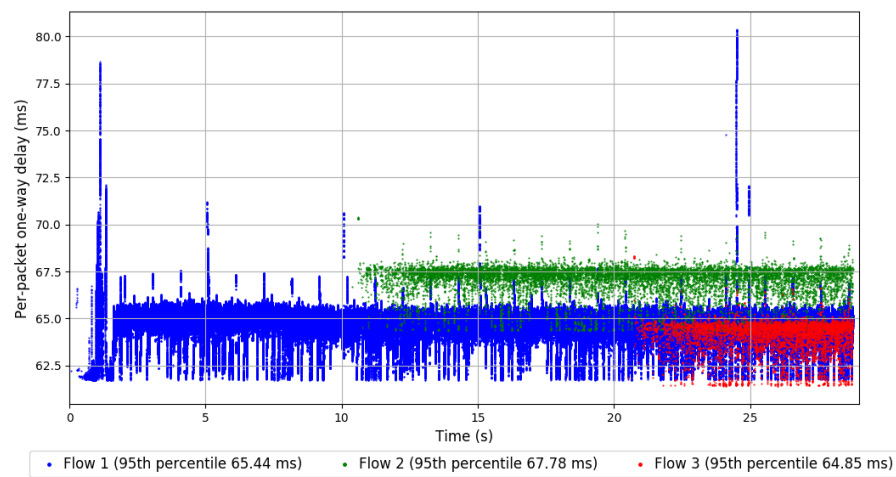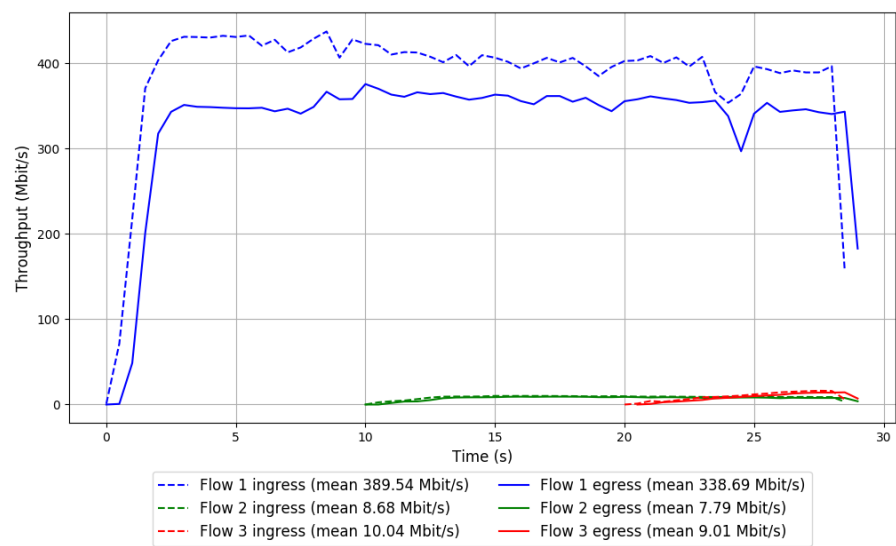
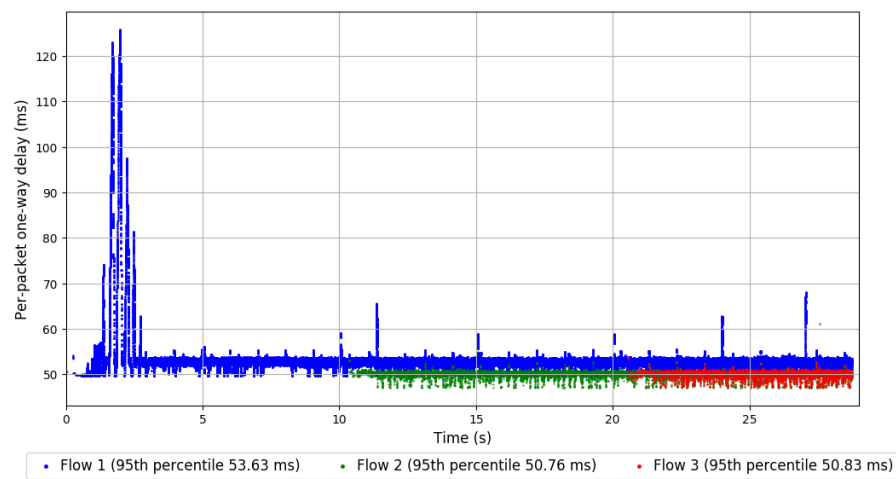Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-12-11 07:54:11
End at: 2019-12-11 07:54:41
Local clock offset: 1.859 ms
Remote clock offset: -37.901 ms


# Below is generated by plot.py at 2019-12-11 09:38:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 346.26 Mbit/s
95th percentile per-packet one-way delay: 65.501 ms
Loss rate: 12.99%
-- Flow 1:
Average throughput: 338.69 Mbit/s
95th percentile per-packet one-way delay: 65.443 ms
Loss rate: 13.05%
-- Flow 2:
Average throughput: 7.79 Mbit/s
95th percentile per-packet one-way delay: 67.775 ms
Loss rate: 10.28%
-- Flow 3:
Average throughput: 9.01 Mbit/s
95th percentile per-packet one-way delay: 64.851 ms
Loss rate: 10.23%
```

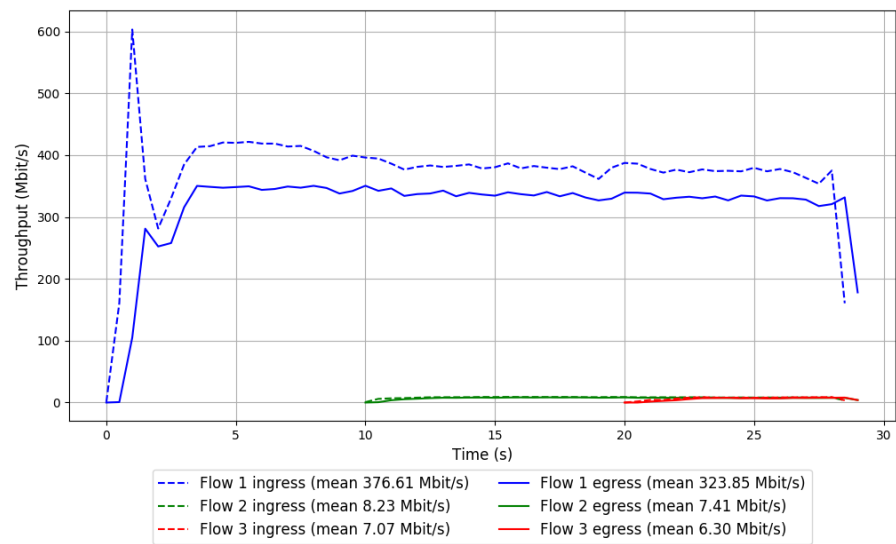# Run 3: Report of Indigo-MusesC3 — Data Link

- - - Flow 1 ingress (mean 389.54 Mbit/s)　——— Flow 1 egress (mean 338.69 Mbit/s)
- - - Flow 2 ingress (mean 8.68 Mbit/s)　——— Flow 2 egress (mean 7.79 Mbit/s)
- - - Flow 3 ingress (mean 10.04 Mbit/s)　——— Flow 3 egress (mean 9.01 Mbit/s)

- Flow 1 (95th percentile 65.44 ms)　• Flow 2 (95th percentile 67.78 ms)　• Flow 3 (95th percentile 64.85 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-12-11 08:28:23
End at: 2019-12-11 08:28:53
Local clock offset: 6.324 ms
Remote clock offset: -47.45 ms


# Below is generated by plot.py at 2019-12-11 09:40:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.49 Mbit/s
95th percentile per-packet one-way delay: 53.620 ms
Loss rate: 13.93%
-- Flow 1:
Average throughput: 323.85 Mbit/s
95th percentile per-packet one-way delay: 53.634 ms
Loss rate: 14.00%
-- Flow 2:
Average throughput: 7.41 Mbit/s
95th percentile per-packet one-way delay: 50.760 ms
Loss rate: 9.95%
-- Flow 3:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 50.828 ms
Loss rate: 10.87%
```
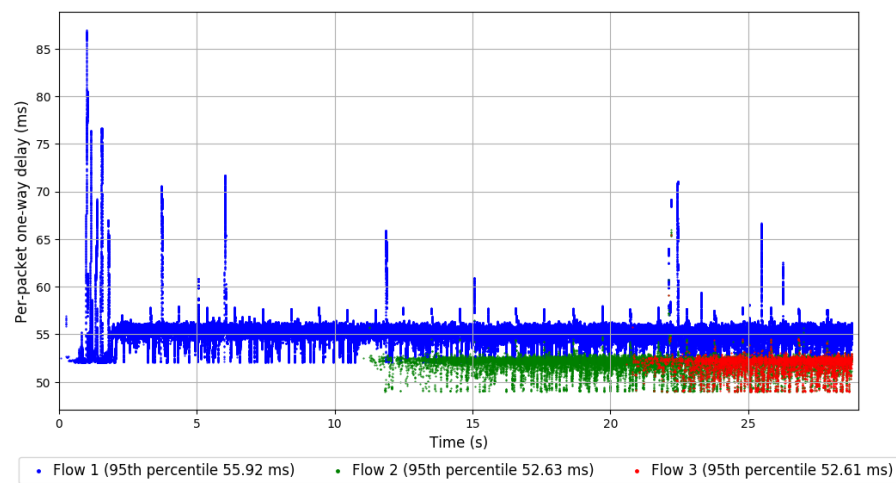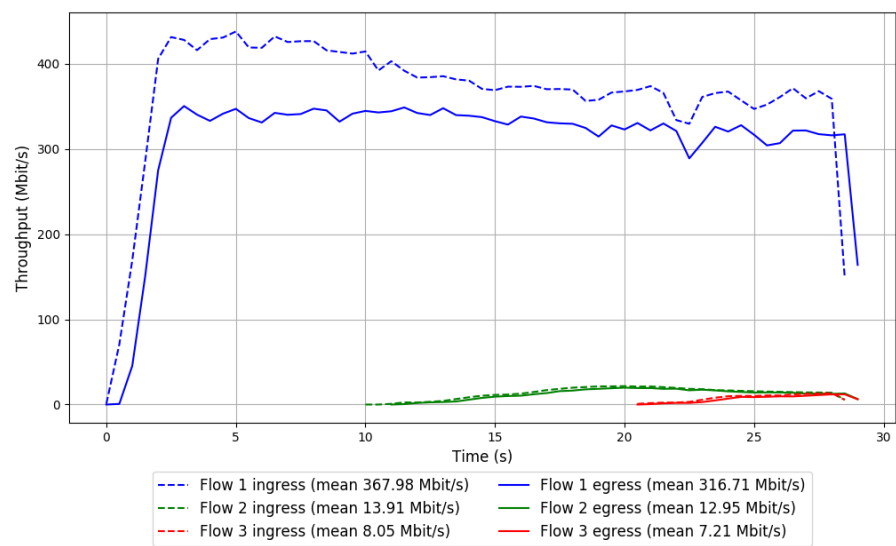
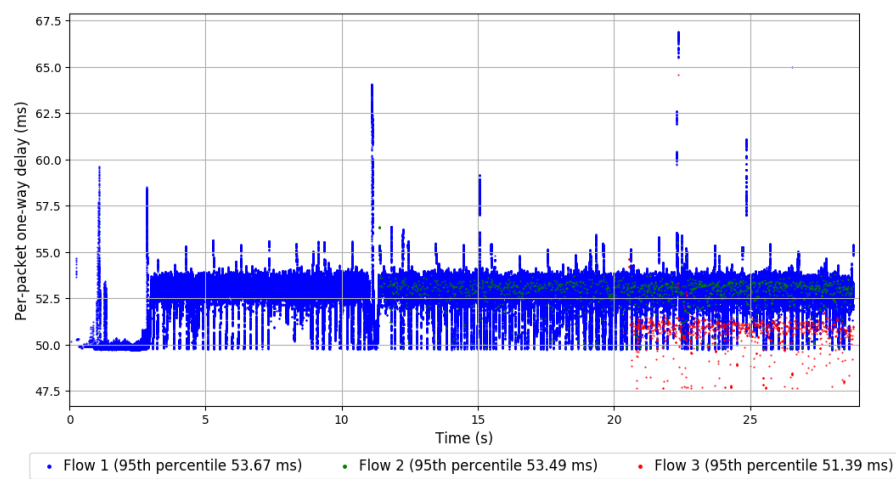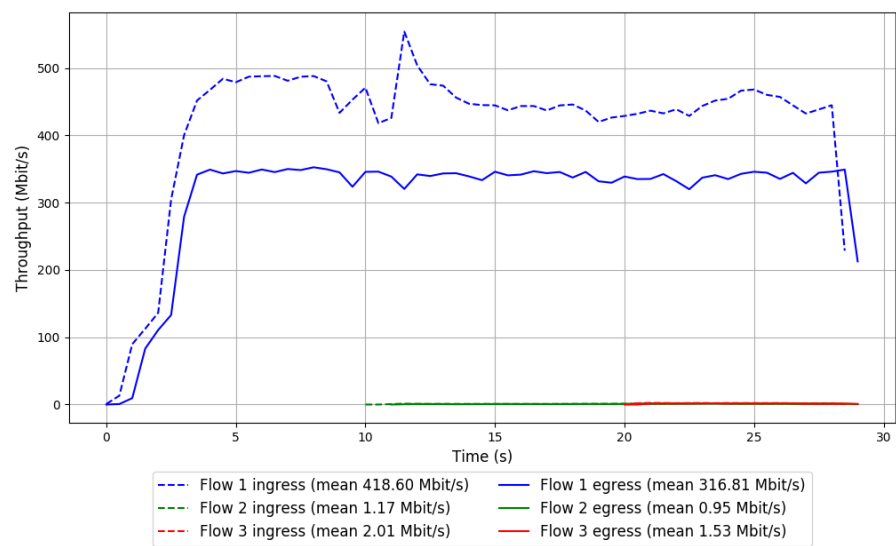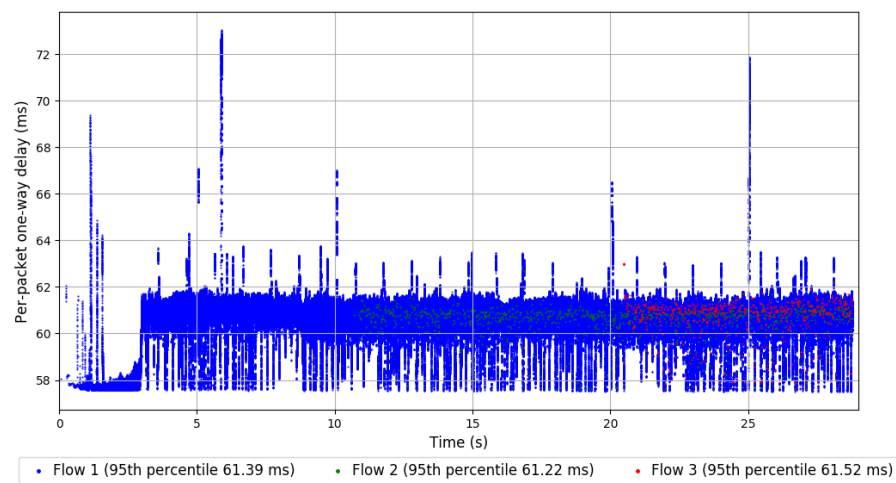Run 4: Report of Indigo-MusesC3 — Data Link

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-12-11 09:02:48
End at: 2019-12-11 09:03:18
Local clock offset: 2.504 ms
Remote clock offset: -47.8 ms


# Below is generated by plot.py at 2019-12-11 09:40:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.75 Mbit/s
95th percentile per-packet one-way delay: 55.908 ms
Loss rate: 13.80%
-- Flow 1:
Average throughput: 316.71 Mbit/s
95th percentile per-packet one-way delay: 55.918 ms
Loss rate: 13.92%
-- Flow 2:
Average throughput: 12.95 Mbit/s
95th percentile per-packet one-way delay: 52.626 ms
Loss rate: 9.48%
-- Flow 3:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 52.611 ms
Loss rate: 10.37%
```

Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 367.98 Mbit/s)   Flow 1 egress (mean 316.71 Mbit/s)
Flow 2 ingress (mean 13.91 Mbit/s)   Flow 2 egress (mean 12.95 Mbit/s)
Flow 3 ingress (mean 8.05 Mbit/s)   Flow 3 egress (mean 7.21 Mbit/s)

Flow 1 (95th percentile 55.92 ms)   Flow 2 (95th percentile 52.63 ms)   Flow 3 (95th percentile 52.61 ms)
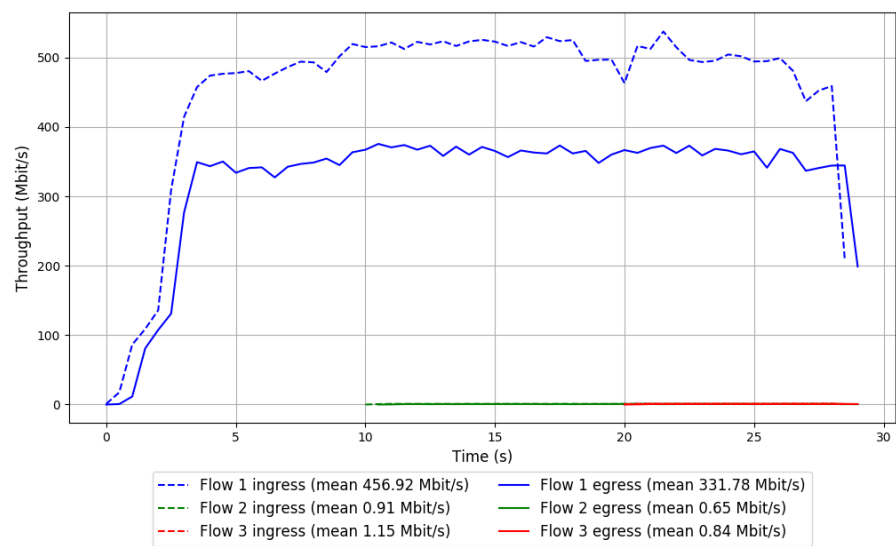
74

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-12-11 06:36:54
End at: 2019-12-11 06:37:24
Local clock offset: 6.255 ms
Remote clock offset: -48.653 ms


# Below is generated by plot.py at 2019-12-11 09:40:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.84 Mbit/s
95th percentile per-packet one-way delay: 53.666 ms
Loss rate: 24.30%
-- Flow 1:
Average throughput: 316.81 Mbit/s
95th percentile per-packet one-way delay: 53.666 ms
Loss rate: 24.30%
-- Flow 2:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 53.491 ms
Loss rate: 23.87%
-- Flow 3:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 51.387 ms
Loss rate: 23.86%
```

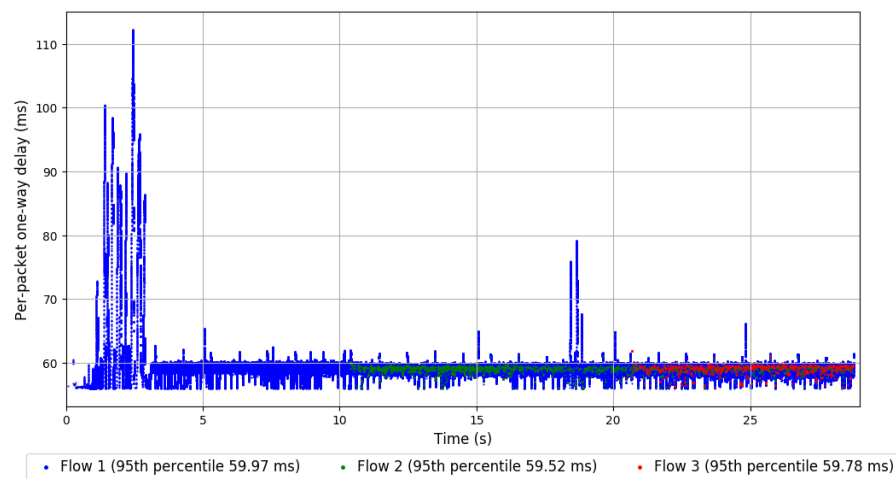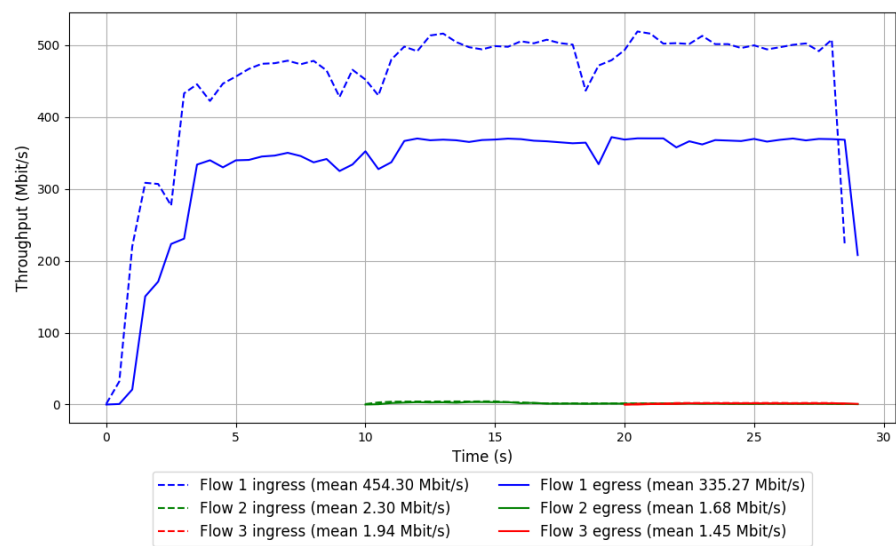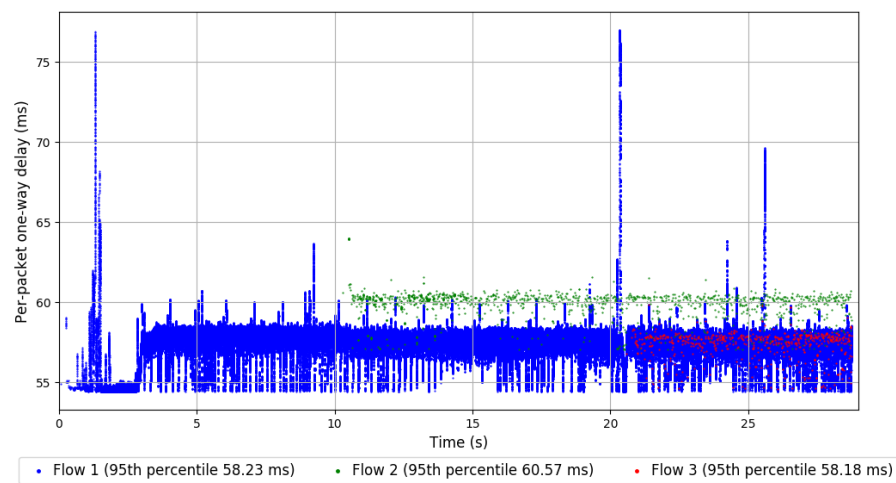Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-12-11 07:11:25
End at: 2019-12-11 07:11:55
Local clock offset: 6.375 ms
Remote clock offset: -37.752 ms


# Below is generated by plot.py at 2019-12-11 09:40:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.44 Mbit/s
95th percentile per-packet one-way delay: 61.386 ms
Loss rate: 27.38%
-- Flow 1:
Average throughput: 331.78 Mbit/s
95th percentile per-packet one-way delay: 61.386 ms
Loss rate: 27.38%
-- Flow 2:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 61.215 ms
Loss rate: 30.04%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 61.524 ms
Loss rate: 26.82%
```
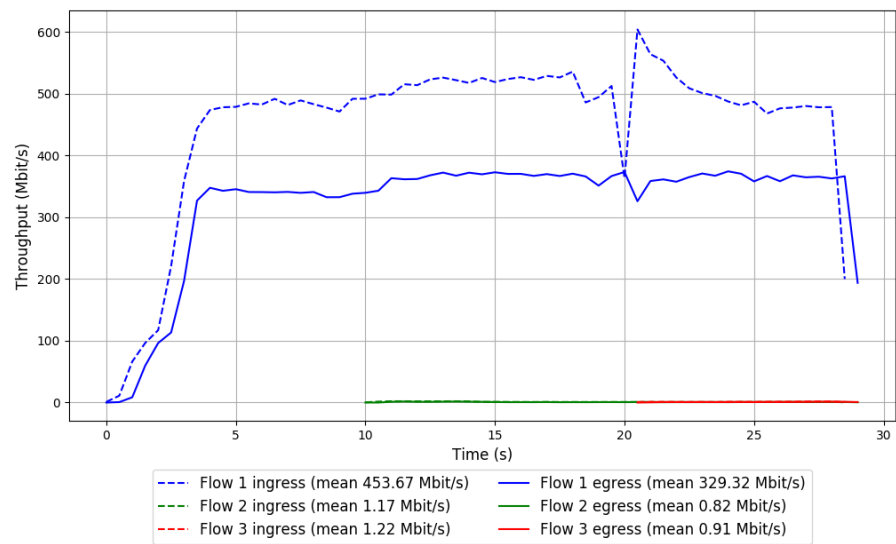
Run 2: Report of Indigo-MusesC5 — Data Link

- - - Flow 1 ingress (mean 456.92 Mbit/s)   —— Flow 1 egress (mean 331.78 Mbit/s)
- - - Flow 2 ingress (mean 0.91 Mbit/s)   —— Flow 2 egress (mean 0.65 Mbit/s)
- - - Flow 3 ingress (mean 1.15 Mbit/s)   —— Flow 3 egress (mean 0.84 Mbit/s)

- Flow 1 (95th percentile 61.39 ms)   • Flow 2 (95th percentile 61.22 ms)   • Flow 3 (95th percentile 61.52 ms)

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-12-11 07:46:02
End at: 2019-12-11 07:46:32
Local clock offset: 5.114 ms
Remote clock offset: -39.624 ms


# Below is generated by plot.py at 2019-12-11 09:41:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 336.78 Mbit/s
95th percentile per-packet one-way delay: 59.965 ms
Loss rate: 26.19%
-- Flow 1:
Average throughput: 335.27 Mbit/s
95th percentile per-packet one-way delay: 59.967 ms
Loss rate: 26.19%
-- Flow 2:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 59.517 ms
Loss rate: 26.87%
-- Flow 3:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 59.784 ms
Loss rate: 25.45%
```

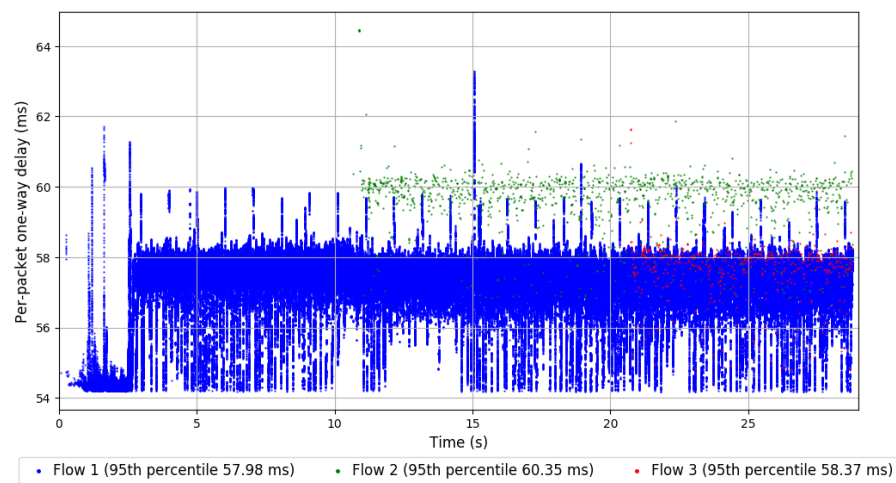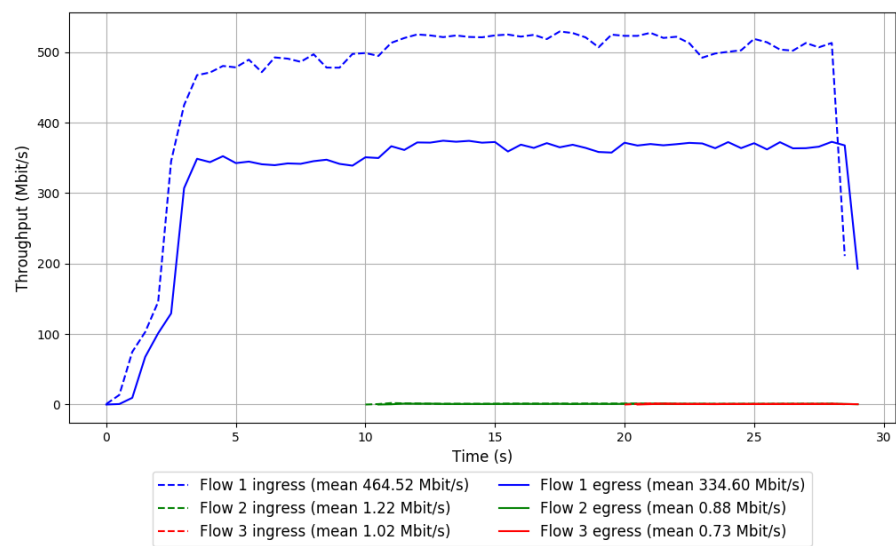Run 3: Report of Indigo-MusesC5 — Data Link

- - - Flow 1 ingress (mean 454.30 Mbit/s) —— Flow 1 egress (mean 335.27 Mbit/s)
- - - Flow 2 ingress (mean 2.30 Mbit/s) —— Flow 2 egress (mean 1.68 Mbit/s)
- - - Flow 3 ingress (mean 1.94 Mbit/s) —— Flow 3 egress (mean 1.45 Mbit/s)

• Flow 1 (95th percentile 59.97 ms)   • Flow 2 (95th percentile 59.52 ms)   • Flow 3 (95th percentile 59.78 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-12-11 08:20:15
End at: 2019-12-11 08:20:45
Local clock offset: 6.055 ms
Remote clock offset: -40.535 ms

# Below is generated by plot.py at 2019-12-11 09:42:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.12 Mbit/s
95th percentile per-packet one-way delay: 58.231 ms
Loss rate: 27.41%
-- Flow 1:
Average throughput: 329.32 Mbit/s
95th percentile per-packet one-way delay: 58.225 ms
Loss rate: 27.40%
-- Flow 2:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 60.566 ms
Loss rate: 29.74%
-- Flow 3:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 58.184 ms
Loss rate: 25.49%
```

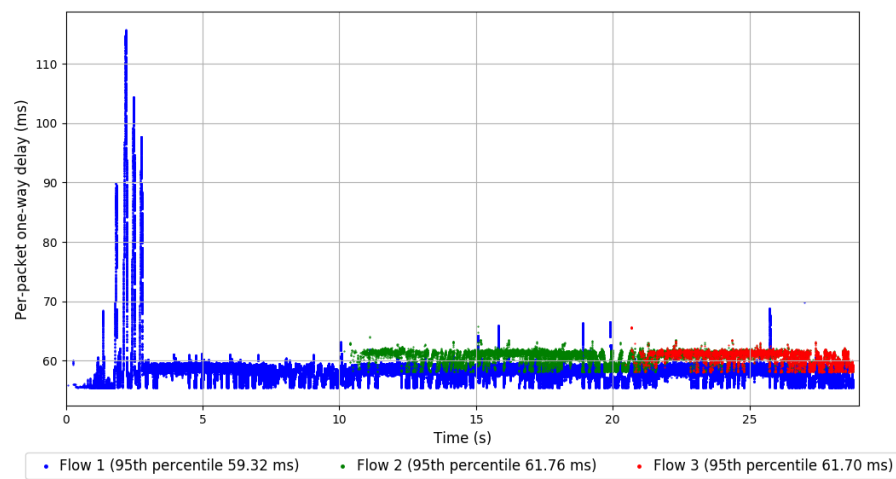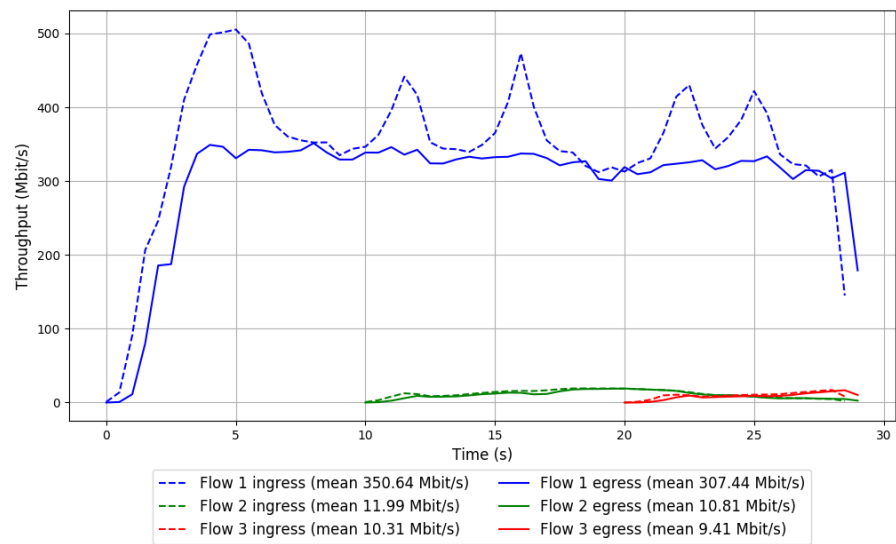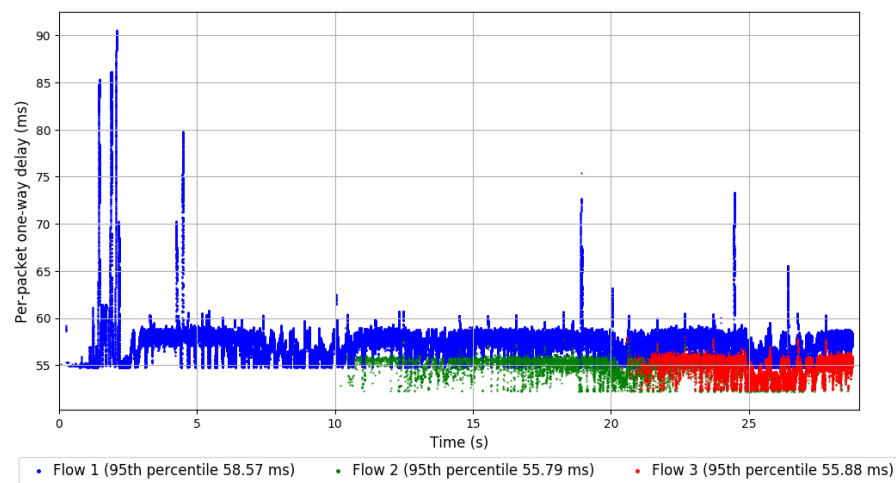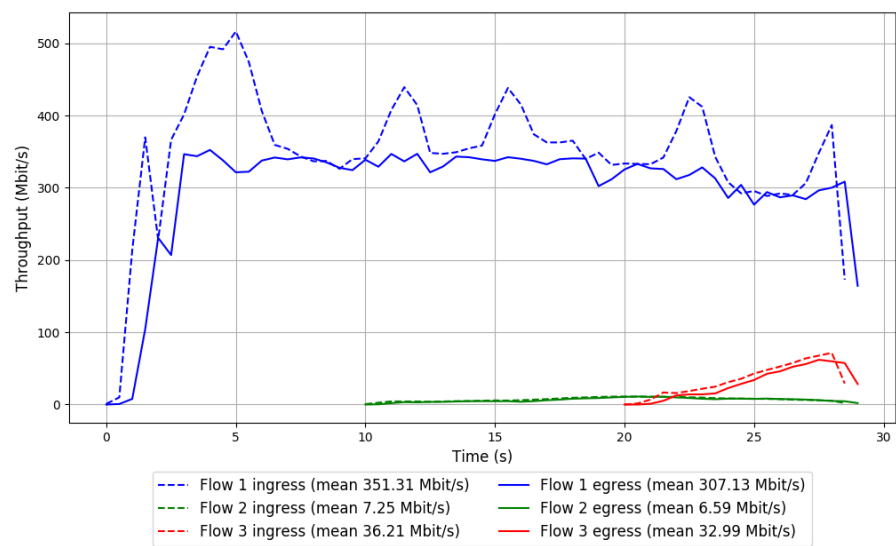Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-12-11 08:54:40
End at: 2019-12-11 08:55:10
Local clock offset: 1.126 ms
Remote clock offset: -44.153 ms


# Below is generated by plot.py at 2019-12-11 09:43:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.36 Mbit/s
95th percentile per-packet one-way delay: 57.991 ms
Loss rate: 27.96%
-- Flow 1:
Average throughput: 334.60 Mbit/s
95th percentile per-packet one-way delay: 57.984 ms
Loss rate: 27.96%
-- Flow 2:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 60.355 ms
Loss rate: 29.62%
-- Flow 3:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 58.368 ms
Loss rate: 28.95%
```

Run 5: Report of Indigo-MusesC5 — Data Link

- - - Flow 1 ingress (mean 464.52 Mbit/s) ——— Flow 1 egress (mean 334.60 Mbit/s)
- - - Flow 2 ingress (mean 1.22 Mbit/s) ——— Flow 2 egress (mean 0.88 Mbit/s)
- - - Flow 3 ingress (mean 1.02 Mbit/s) ——— Flow 3 egress (mean 0.73 Mbit/s)

• Flow 1 (95th percentile 57.98 ms)   • Flow 2 (95th percentile 60.35 ms)   • Flow 3 (95th percentile 58.37 ms)
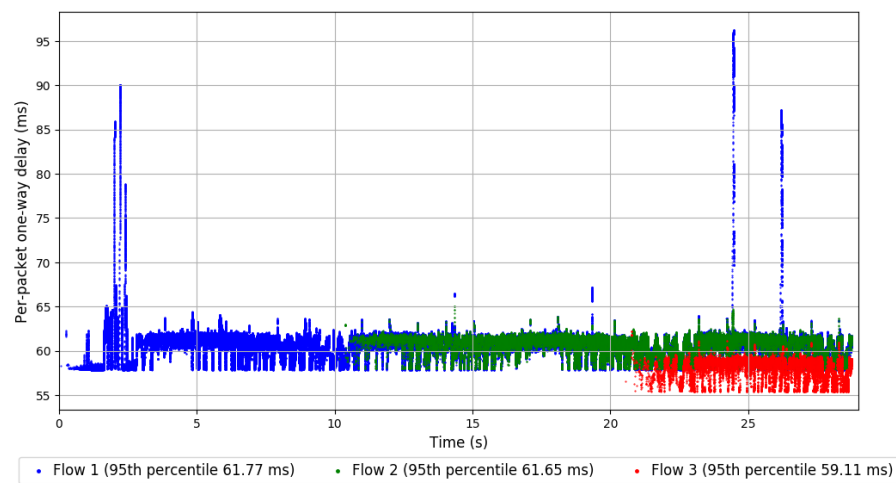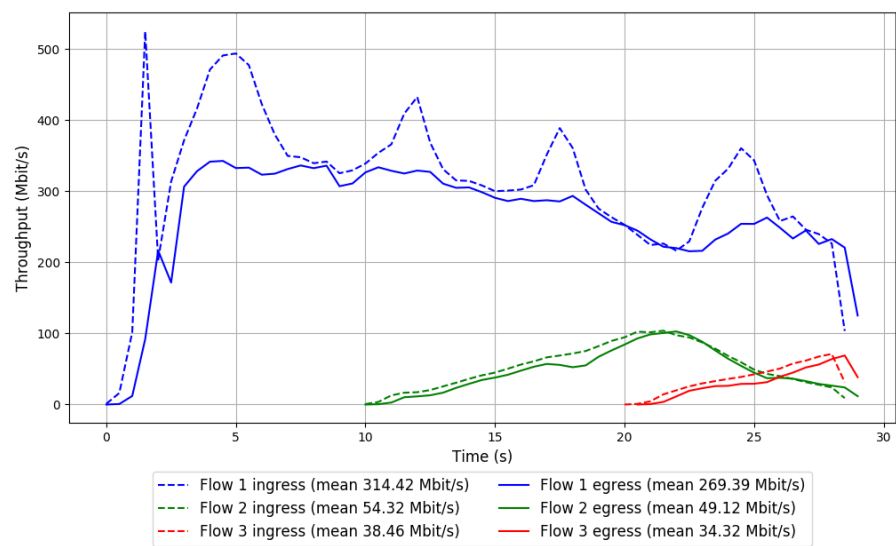
```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-12-11 06:59:46
End at: 2019-12-11 07:00:16
Local clock offset: 5.737 ms
Remote clock offset: -41.041 ms

# Below is generated by plot.py at 2019-12-11 09:43:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.14 Mbit/s
95th percentile per-packet one-way delay: 59.809 ms
Loss rate: 12.24%
-- Flow 1:
Average throughput: 307.44 Mbit/s
95th percentile per-packet one-way delay: 59.319 ms
Loss rate: 12.32%
-- Flow 2:
Average throughput: 10.81 Mbit/s
95th percentile per-packet one-way delay: 61.757 ms
Loss rate: 9.88%
-- Flow 3:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 61.697 ms
Loss rate: 8.70%
```
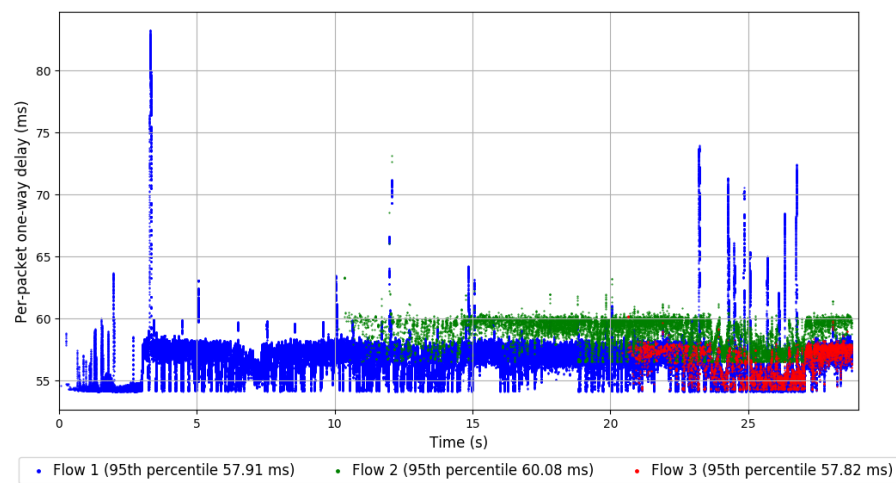
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-12-11 07:34:18
End at: 2019-12-11 07:34:48
Local clock offset: -0.414 ms
Remote clock offset: -48.043 ms


# Below is generated by plot.py at 2019-12-11 09:44:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 321.01 Mbit/s
95th percentile per-packet one-way delay: 58.557 ms
Loss rate: 12.41%
-- Flow 1:
Average throughput: 307.13 Mbit/s
95th percentile per-packet one-way delay: 58.572 ms
Loss rate: 12.57%
-- Flow 2:
Average throughput: 6.59 Mbit/s
95th percentile per-packet one-way delay: 55.786 ms
Loss rate: 9.07%
-- Flow 3:
Average throughput: 32.99 Mbit/s
95th percentile per-packet one-way delay: 55.881 ms
Loss rate: 8.89%
```

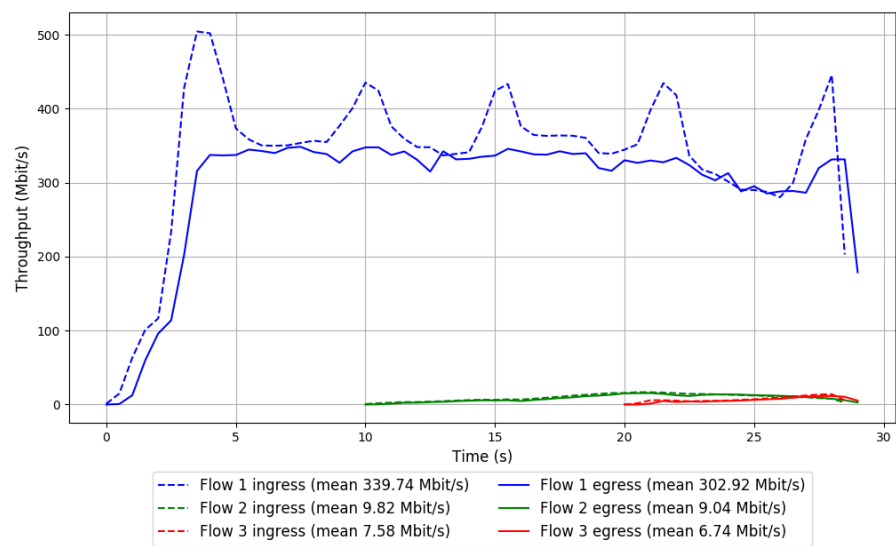Run 2: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 351.31 Mbit/s) — — — Flow 1 egress (mean 307.13 Mbit/s) ———
Flow 2 ingress (mean 7.25 Mbit/s) — — — Flow 2 egress (mean 6.59 Mbit/s) ———
Flow 3 ingress (mean 36.21 Mbit/s) — — — Flow 3 egress (mean 32.99 Mbit/s) ———

• Flow 1 (95th percentile 58.57 ms)   • Flow 2 (95th percentile 55.79 ms)   • Flow 3 (95th percentile 55.88 ms)

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```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-12-11 08:08:36
End at: 2019-12-11 08:09:06
Local clock offset: 1.472 ms
Remote clock offset: -44.858 ms


# Below is generated by plot.py at 2019-12-11 09:44:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 311.01 Mbit/s
95th percentile per-packet one-way delay: 61.745 ms
Loss rate: 13.74%
-- Flow 1:
Average throughput: 269.39 Mbit/s
95th percentile per-packet one-way delay: 61.773 ms
Loss rate: 14.31%
-- Flow 2:
Average throughput: 49.12 Mbit/s
95th percentile per-packet one-way delay: 61.648 ms
Loss rate: 9.57%
-- Flow 3:
Average throughput: 34.32 Mbit/s
95th percentile per-packet one-way delay: 59.113 ms
Loss rate: 10.75%
```
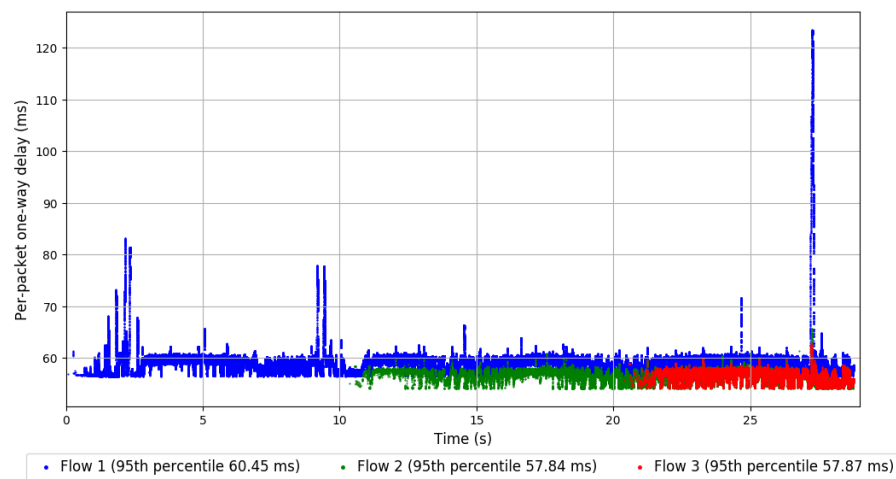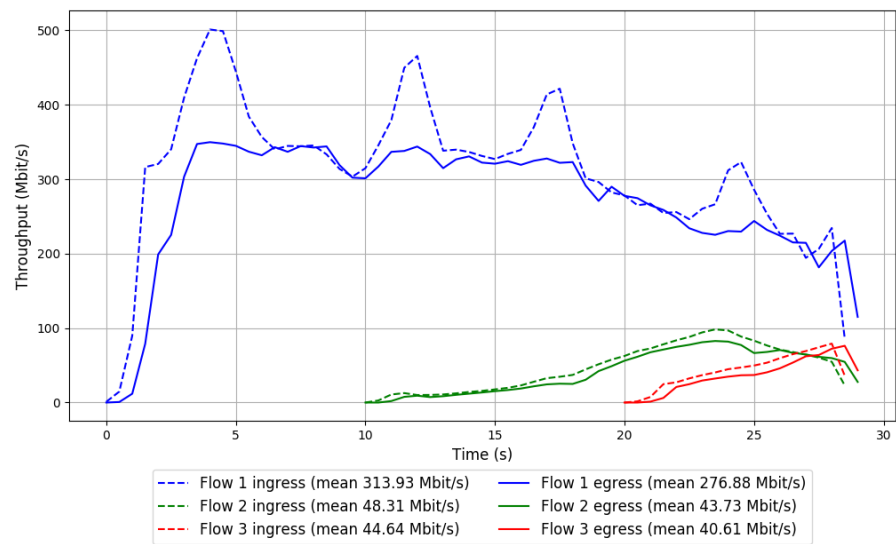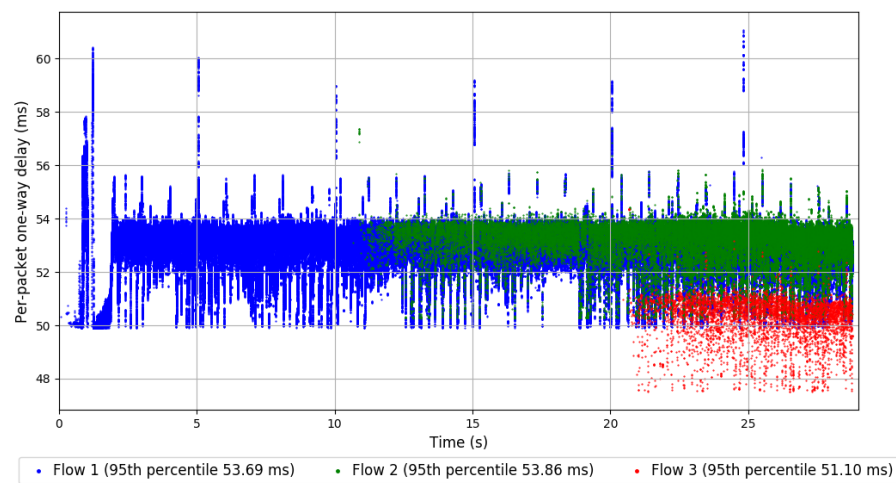
Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-12-11 08:42:59
End at: 2019-12-11 08:43:29
Local clock offset: 6.138 ms
Remote clock offset: -40.063 ms


# Below is generated by plot.py at 2019-12-11 09:44:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 310.74 Mbit/s
95th percentile per-packet one-way delay: 58.012 ms
Loss rate: 10.78%
-- Flow 1:
Average throughput: 302.92 Mbit/s
95th percentile per-packet one-way delay: 57.909 ms
Loss rate: 10.83%
-- Flow 2:
Average throughput: 9.04 Mbit/s
95th percentile per-packet one-way delay: 60.079 ms
Loss rate: 7.88%
-- Flow 3:
Average throughput: 6.74 Mbit/s
95th percentile per-packet one-way delay: 57.820 ms
Loss rate: 11.01%
```

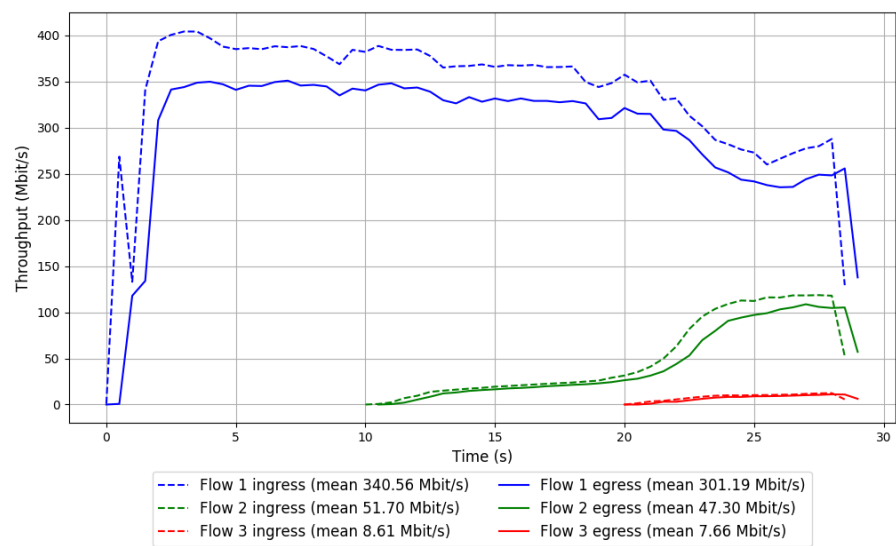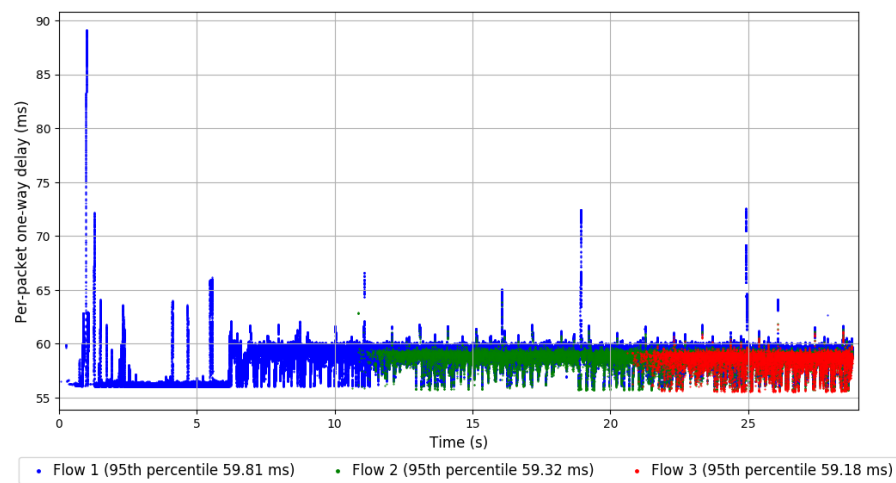Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 339.74 Mbit/s) — Flow 1 egress (mean 302.92 Mbit/s)
Flow 2 ingress (mean 9.82 Mbit/s) — Flow 2 egress (mean 9.04 Mbit/s)
Flow 3 ingress (mean 7.58 Mbit/s) — Flow 3 egress (mean 6.74 Mbit/s)

Flow 1 (95th percentile 57.91 ms) • Flow 2 (95th percentile 60.08 ms) • Flow 3 (95th percentile 57.82 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-12-11 09:17:31
End at: 2019-12-11 09:18:01
Local clock offset: 5.117 ms
Remote clock offset: -40.207 ms


# Below is generated by plot.py at 2019-12-11 09:44:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.78 Mbit/s
95th percentile per-packet one-way delay: 60.390 ms
Loss rate: 11.51%
-- Flow 1:
Average throughput: 276.88 Mbit/s
95th percentile per-packet one-way delay: 60.448 ms
Loss rate: 11.81%
-- Flow 2:
Average throughput: 43.73 Mbit/s
95th percentile per-packet one-way delay: 57.841 ms
Loss rate: 9.47%
-- Flow 3:
Average throughput: 40.61 Mbit/s
95th percentile per-packet one-way delay: 57.874 ms
Loss rate: 9.04%
```

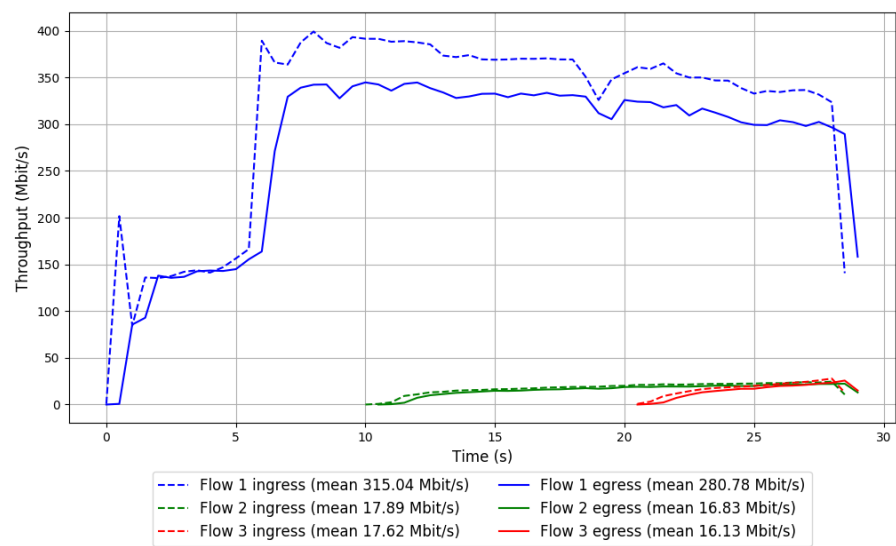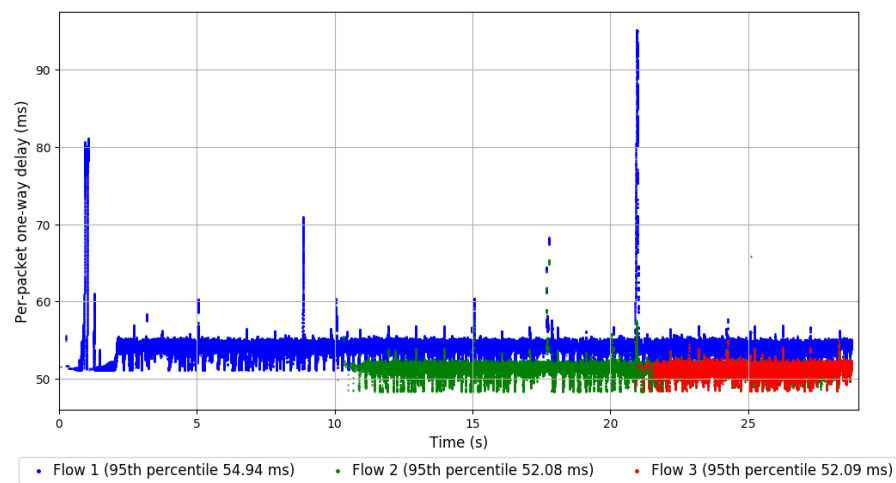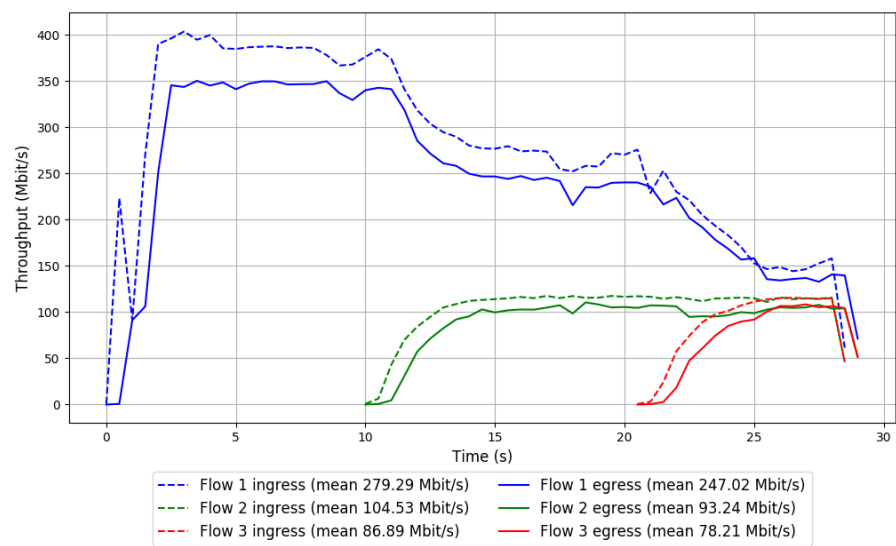Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-12-11 06:33:51
End at: 2019-12-11 06:34:21
Local clock offset: 6.561 ms
Remote clock offset: -48.247 ms

# Below is generated by plot.py at 2019-12-11 09:45:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.22 Mbit/s
95th percentile per-packet one-way delay: 53.715 ms
Loss rate: 11.50%
-- Flow 1:
Average throughput: 301.19 Mbit/s
95th percentile per-packet one-way delay: 53.686 ms
Loss rate: 11.55%
-- Flow 2:
Average throughput: 47.30 Mbit/s
95th percentile per-packet one-way delay: 53.859 ms
Loss rate: 10.97%
-- Flow 3:
Average throughput: 7.66 Mbit/s
95th percentile per-packet one-way delay: 51.104 ms
Loss rate: 11.03%
```

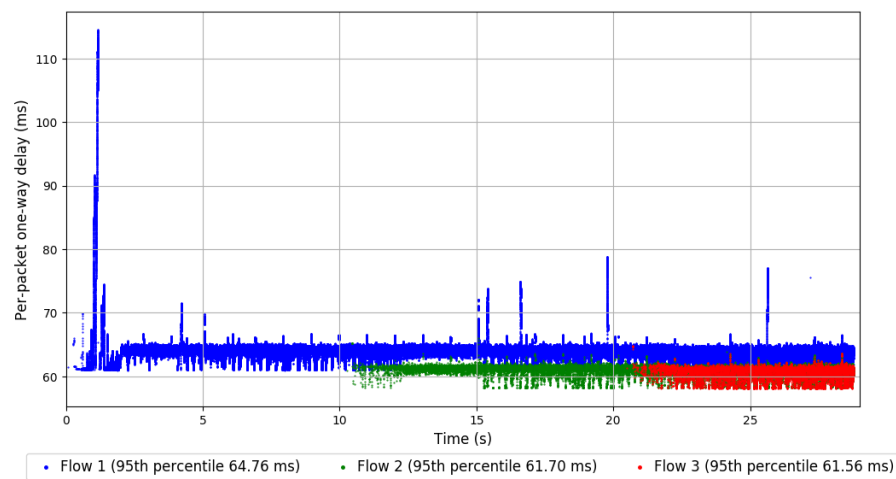Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-12-11 07:08:24
End at: 2019-12-11 07:08:54
Local clock offset: 6.869 ms
Remote clock offset: -42.108 ms


# Below is generated by plot.py at 2019-12-11 09:46:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 296.00 Mbit/s
95th percentile per-packet one-way delay: 59.804 ms
Loss rate: 10.74%
-- Flow 1:
Average throughput: 280.78 Mbit/s
95th percentile per-packet one-way delay: 59.814 ms
Loss rate: 10.86%
-- Flow 2:
Average throughput: 16.83 Mbit/s
95th percentile per-packet one-way delay: 59.317 ms
Loss rate: 8.42%
-- Flow 3:
Average throughput: 16.13 Mbit/s
95th percentile per-packet one-way delay: 59.180 ms
Loss rate: 8.46%
```

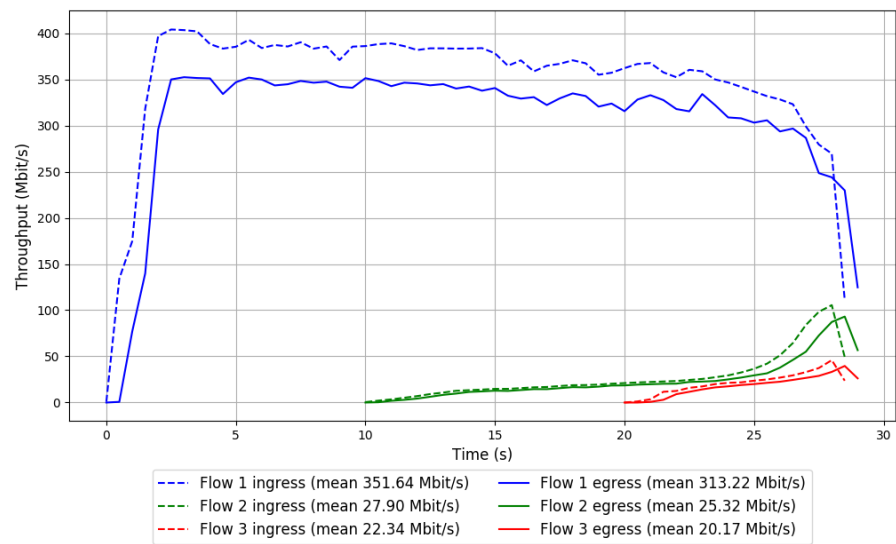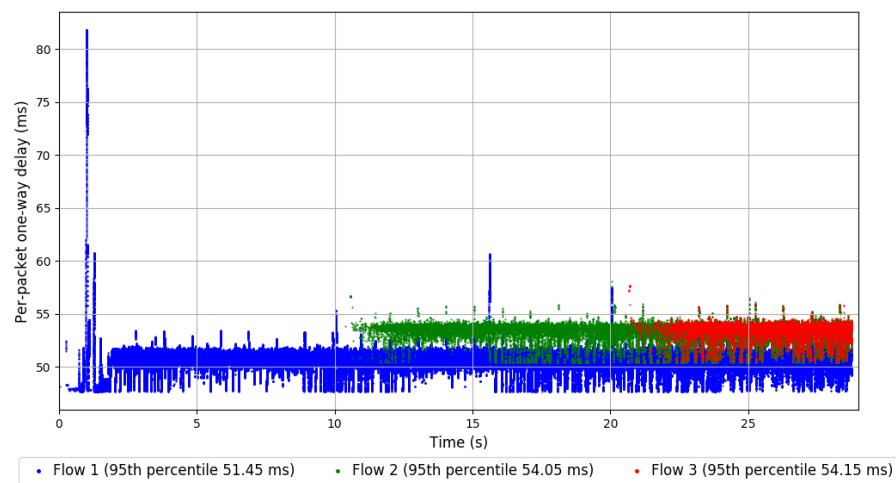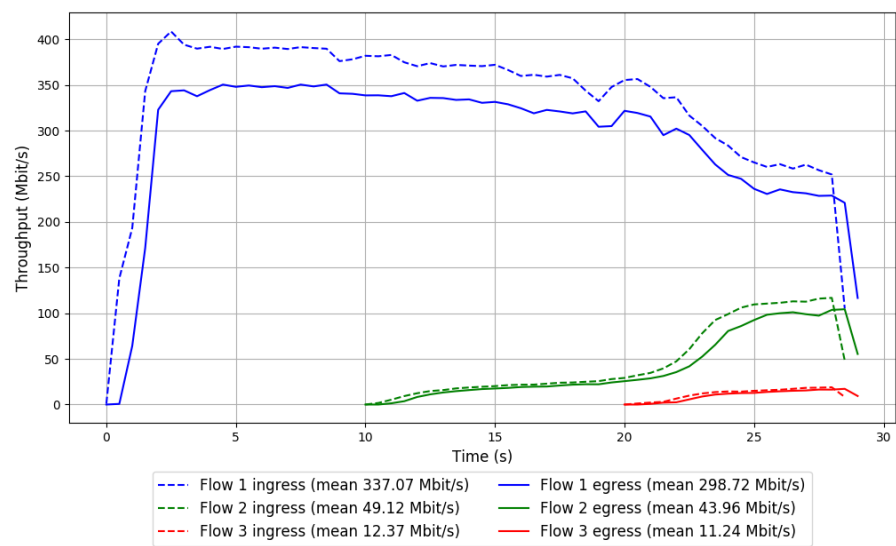Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-12-11 07:42:56
End at: 2019-12-11 07:43:26
Local clock offset: 5.053 ms
Remote clock offset: -47.114 ms


# Below is generated by plot.py at 2019-12-11 09:47:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 329.56 Mbit/s
95th percentile per-packet one-way delay: 54.869 ms
Loss rate: 11.32%
-- Flow 1:
Average throughput: 247.02 Mbit/s
95th percentile per-packet one-way delay: 54.941 ms
Loss rate: 11.56%
-- Flow 2:
Average throughput: 93.24 Mbit/s
95th percentile per-packet one-way delay: 52.079 ms
Loss rate: 10.79%
-- Flow 3:
Average throughput: 78.21 Mbit/s
95th percentile per-packet one-way delay: 52.090 ms
Loss rate: 9.98%
```

Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 279.29 Mbit/s) Flow 1 egress (mean 247.02 Mbit/s)
Flow 2 ingress (mean 104.53 Mbit/s) Flow 2 egress (mean 93.24 Mbit/s)
Flow 3 ingress (mean 86.89 Mbit/s) Flow 3 egress (mean 78.21 Mbit/s)

Flow 1 (95th percentile 54.94 ms) Flow 2 (95th percentile 52.08 ms) Flow 3 (95th percentile 52.09 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-12-11 08:17:12
End at: 2019-12-11 08:17:42
Local clock offset: 1.057 ms
Remote clock offset: -41.883 ms


# Below is generated by plot.py at 2019-12-11 09:47:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.38 Mbit/s
95th percentile per-packet one-way delay: 64.741 ms
Loss rate: 10.82%
-- Flow 1:
Average throughput: 313.22 Mbit/s
95th percentile per-packet one-way delay: 64.758 ms
Loss rate: 10.92%
-- Flow 2:
Average throughput: 25.32 Mbit/s
95th percentile per-packet one-way delay: 61.703 ms
Loss rate: 9.25%
-- Flow 3:
Average throughput: 20.17 Mbit/s
95th percentile per-packet one-way delay: 61.561 ms
Loss rate: 9.70%
```

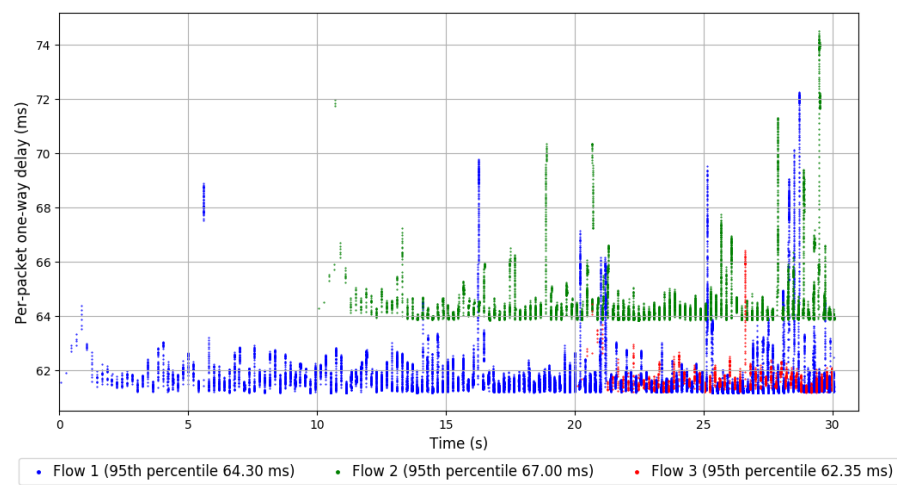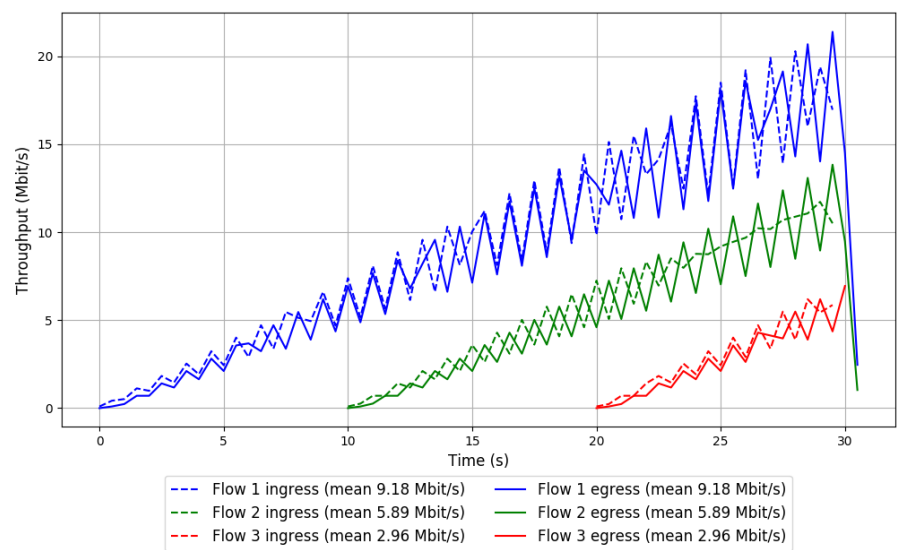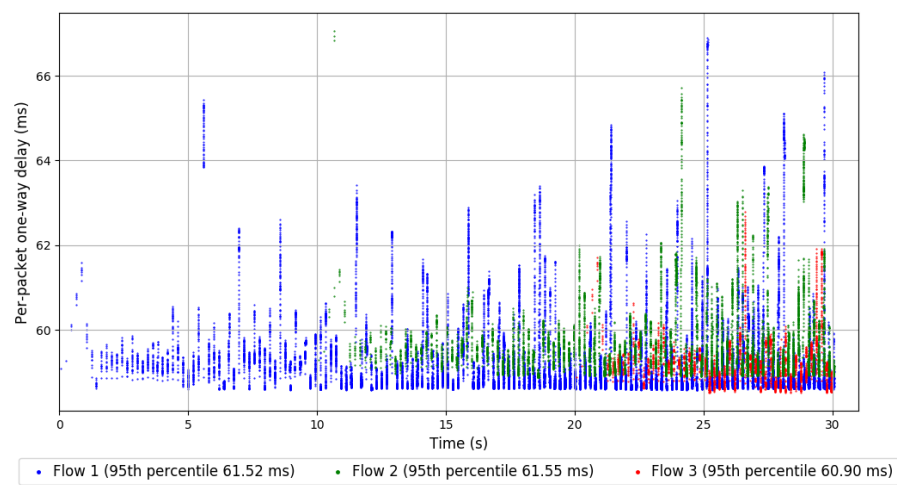## Run 4: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 351.64 Mbit/s) --- Flow 1 egress (mean 313.22 Mbit/s)
Flow 2 ingress (mean 27.90 Mbit/s) --- Flow 2 egress (mean 25.32 Mbit/s)
Flow 3 ingress (mean 22.34 Mbit/s) --- Flow 3 egress (mean 20.17 Mbit/s)

Flow 1 (95th percentile 64.76 ms) • Flow 2 (95th percentile 61.70 ms) • Flow 3 (95th percentile 61.56 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-12-11 08:51:35
End at: 2019-12-11 08:52:05
Local clock offset: 5.348 ms
Remote clock offset: -46.625 ms


# Below is generated by plot.py at 2019-12-11 09:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.09 Mbit/s
95th percentile per-packet one-way delay: 53.448 ms
Loss rate: 11.28%
-- Flow 1:
Average throughput: 298.72 Mbit/s
95th percentile per-packet one-way delay: 51.455 ms
Loss rate: 11.37%
-- Flow 2:
Average throughput: 43.96 Mbit/s
95th percentile per-packet one-way delay: 54.052 ms
Loss rate: 10.53%
-- Flow 3:
Average throughput: 11.24 Mbit/s
95th percentile per-packet one-way delay: 54.154 ms
Loss rate: 9.22%
```

Run 5: Report of Indigo-MusesT — Data Link
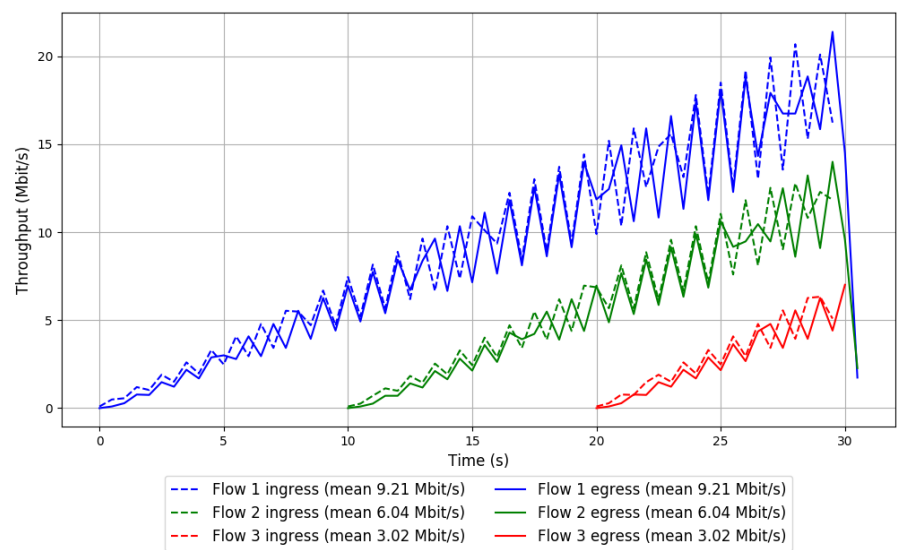

Flow 1 ingress (mean 337.07 Mbit/s) --- Flow 1 egress (mean 298.72 Mbit/s)
Flow 2 ingress (mean 49.12 Mbit/s) --- Flow 2 egress (mean 43.96 Mbit/s)
Flow 3 ingress (mean 12.37 Mbit/s) --- Flow 3 egress (mean 11.24 Mbit/s)

Flow 1 (95th percentile 51.45 ms)   Flow 2 (95th percentile 54.05 ms)   Flow 3 (95th percentile 54.15 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2019-12-11 07:01:20
End at: 2019-12-11 07:01:50
Local clock offset: 2.875 ms
Remote clock offset: -38.248 ms


# Below is generated by plot.py at 2019-12-11 09:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.08 Mbit/s
95th percentile per-packet one-way delay: 65.638 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.18 Mbit/s
95th percentile per-packet one-way delay: 64.299 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 5.89 Mbit/s
95th percentile per-packet one-way delay: 66.996 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 62.346 ms
Loss rate: 0.00%
```
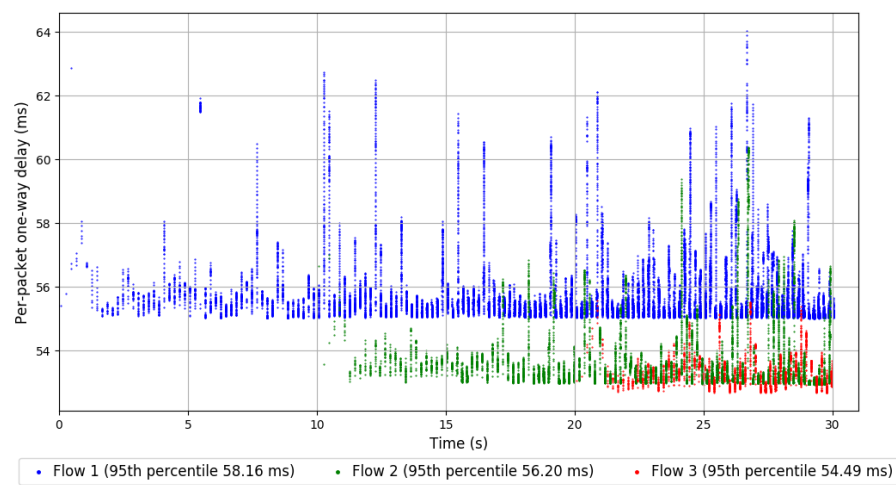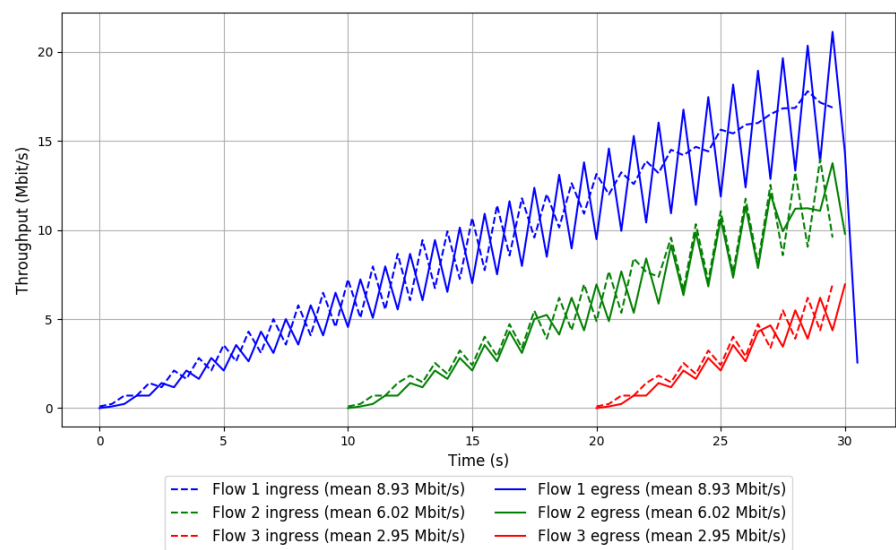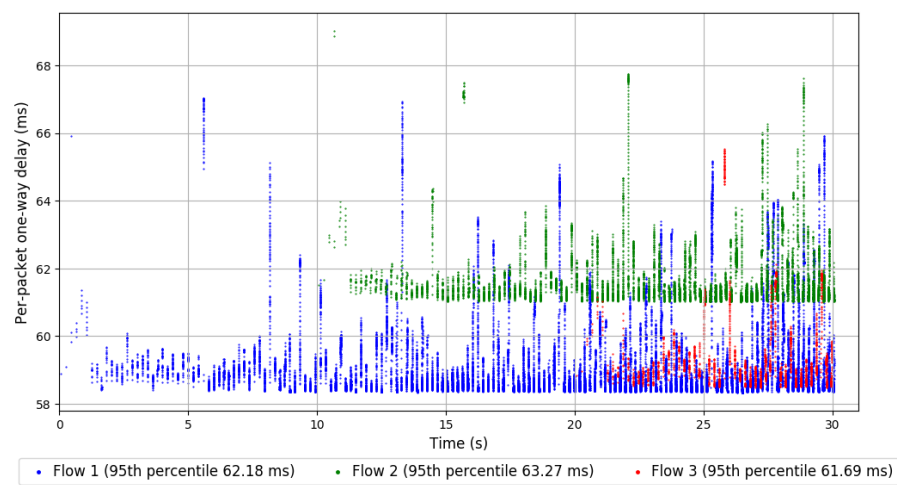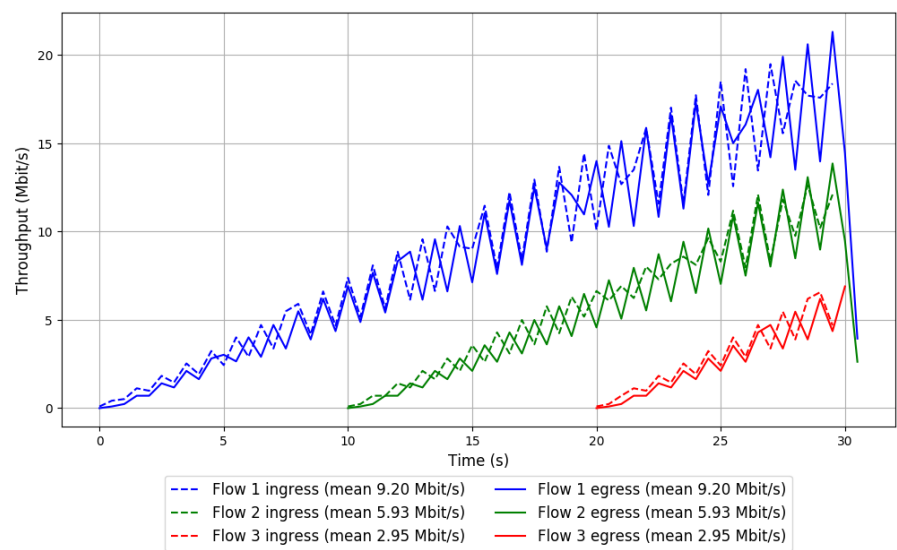
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-12-11 07:35:53
End at: 2019-12-11 07:36:23
Local clock offset: 3.111 ms
Remote clock offset: -37.906 ms

# Below is generated by plot.py at 2019-12-11 09:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.23 Mbit/s
95th percentile per-packet one-way delay: 61.500 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.21 Mbit/s
95th percentile per-packet one-way delay: 61.521 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.04 Mbit/s
95th percentile per-packet one-way delay: 61.550 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 60.901 ms
Loss rate: 0.00%
```
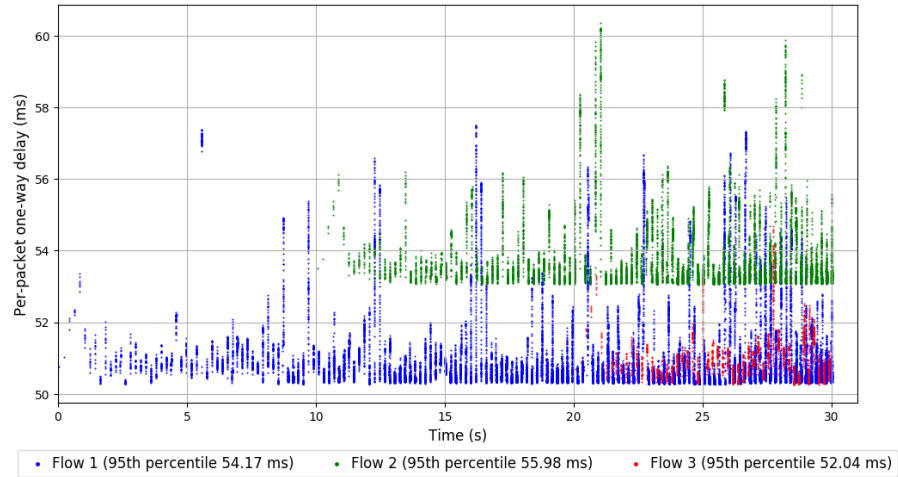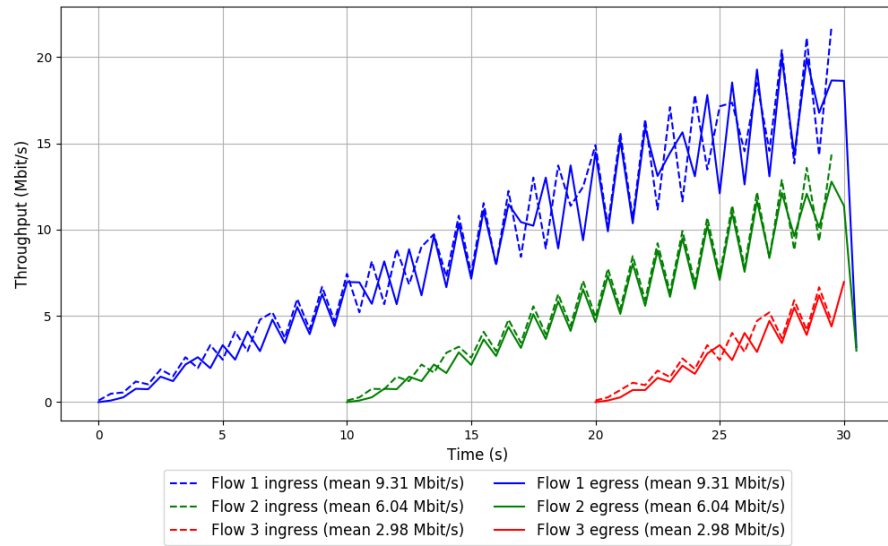
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-12-11 08:10:11
End at: 2019-12-11 08:10:41
Local clock offset: 4.342 ms
Remote clock offset: -44.498 ms


# Below is generated by plot.py at 2019-12-11 09:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.89 Mbit/s
95th percentile per-packet one-way delay: 57.591 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.93 Mbit/s
95th percentile per-packet one-way delay: 58.164 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.02 Mbit/s
95th percentile per-packet one-way delay: 56.195 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.95 Mbit/s
95th percentile per-packet one-way delay: 54.493 ms
Loss rate: 0.00%
```
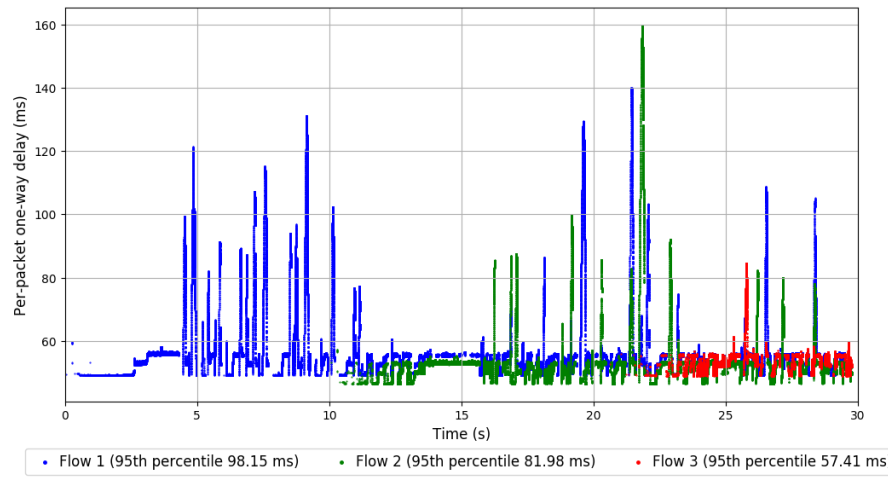
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-12-11 08:44:32
End at: 2019-12-11 08:45:02
Local clock offset: 4.896 ms
Remote clock offset: -36.616 ms


# Below is generated by plot.py at 2019-12-11 09:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.12 Mbit/s
95th percentile per-packet one-way delay: 62.777 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.20 Mbit/s
95th percentile per-packet one-way delay: 62.182 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 5.93 Mbit/s
95th percentile per-packet one-way delay: 63.265 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.95 Mbit/s
95th percentile per-packet one-way delay: 61.691 ms
Loss rate: 0.00%
```
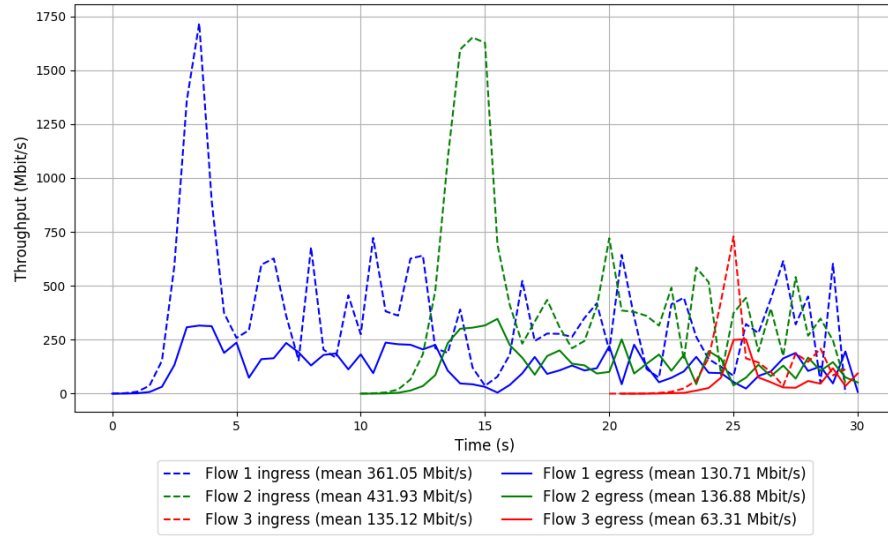
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-12-11 09:19:06
End at: 2019-12-11 09:19:36
Local clock offset: 4.986 ms
Remote clock offset: -44.131 ms


# Below is generated by plot.py at 2019-12-11 09:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.31 Mbit/s
95th percentile per-packet one-way delay: 55.015 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.31 Mbit/s
95th percentile per-packet one-way delay: 54.168 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.04 Mbit/s
95th percentile per-packet one-way delay: 55.977 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 52.043 ms
Loss rate: 0.00%
```
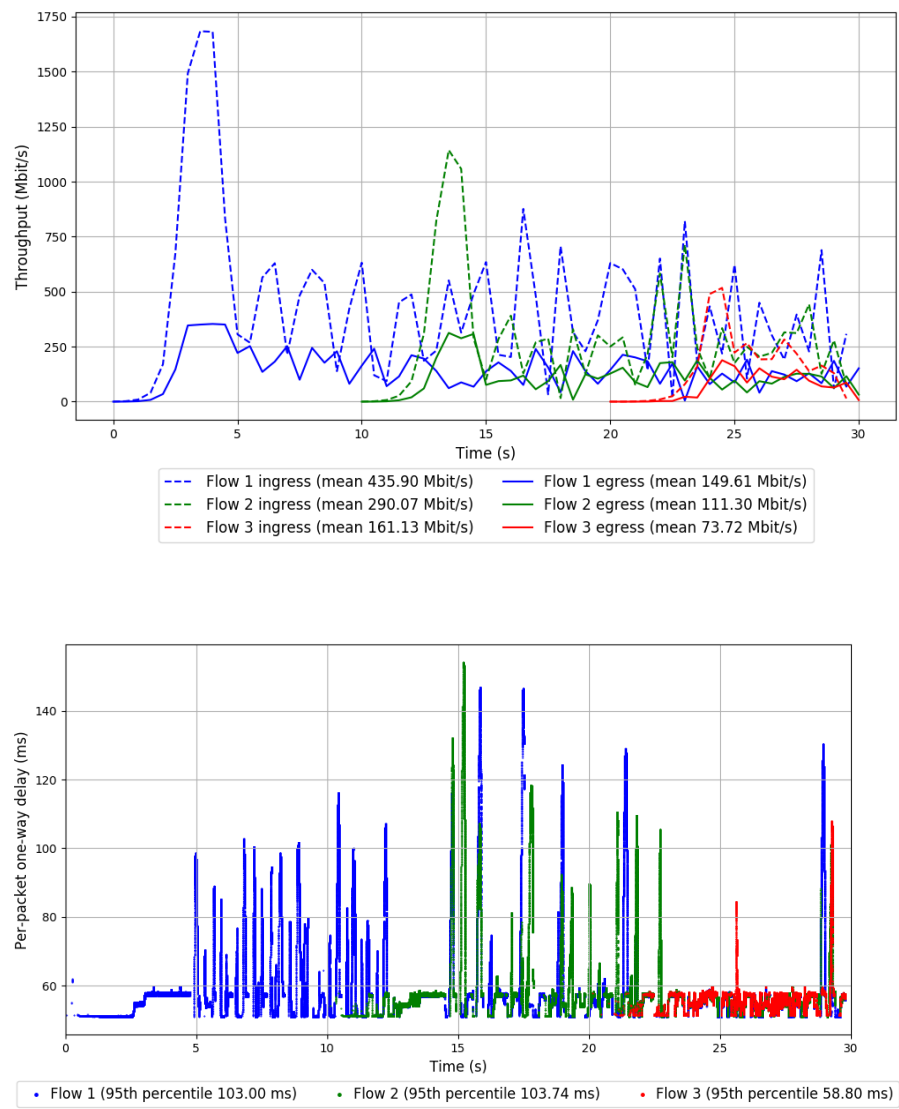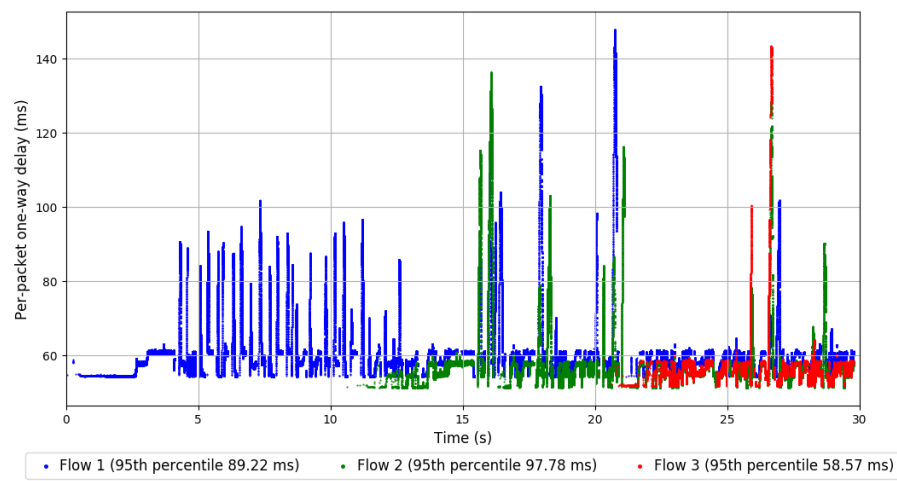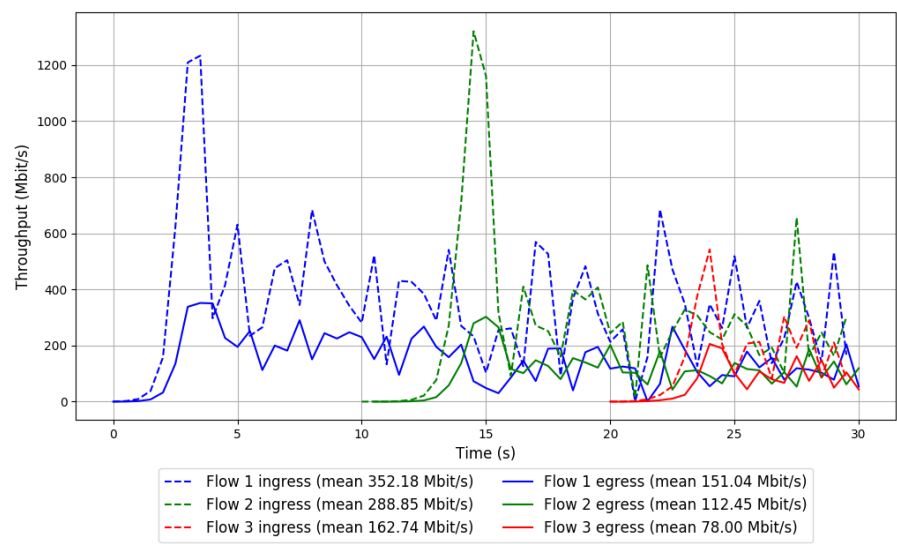
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 06:49:32
End at: 2019-12-11 06:50:02
Local clock offset: 7.167 ms
Remote clock offset: -48.791 ms


# Below is generated by plot.py at 2019-12-11 09:49:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 240.89 Mbit/s
95th percentile per-packet one-way delay: 89.891 ms
Loss rate: 65.14%
-- Flow 1:
Average throughput: 130.71 Mbit/s
95th percentile per-packet one-way delay: 98.146 ms
Loss rate: 63.79%
-- Flow 2:
Average throughput: 136.88 Mbit/s
95th percentile per-packet one-way delay: 81.982 ms
Loss rate: 68.32%
-- Flow 3:
Average throughput: 63.31 Mbit/s
95th percentile per-packet one-way delay: 57.412 ms
Loss rate: 55.58%
```

Run 1: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 361.05 Mbit/s)   Flow 1 egress (mean 130.71 Mbit/s)
Flow 2 ingress (mean 431.93 Mbit/s)   Flow 2 egress (mean 136.88 Mbit/s)
Flow 3 ingress (mean 135.12 Mbit/s)   Flow 3 egress (mean 63.31 Mbit/s)

Flow 1 (95th percentile 98.15 ms)   Flow 2 (95th percentile 81.98 ms)   Flow 3 (95th percentile 57.41 ms)
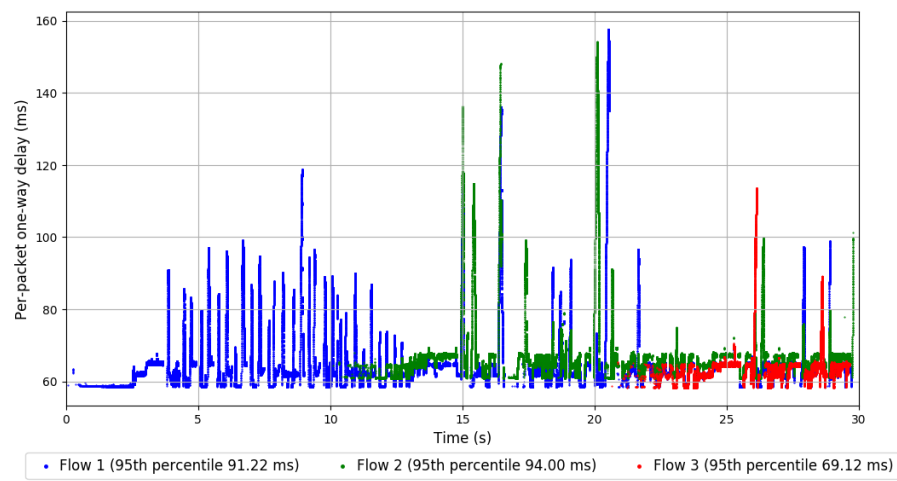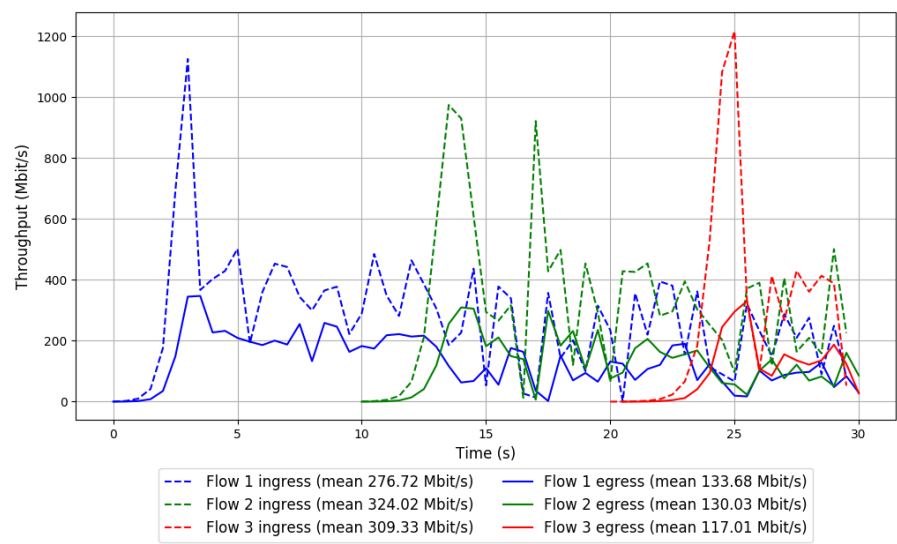
```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 07:24:16
End at: 2019-12-11 07:24:46
Local clock offset: 4.629 ms
Remote clock offset: -44.679 ms


# Below is generated by plot.py at 2019-12-11 09:49:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 247.06 Mbit/s
95th percentile per-packet one-way delay: 101.031 ms
Loss rate: 63.65%
-- Flow 1:
Average throughput: 149.61 Mbit/s
95th percentile per-packet one-way delay: 102.997 ms
Loss rate: 65.67%
-- Flow 2:
Average throughput: 111.30 Mbit/s
95th percentile per-packet one-way delay: 103.737 ms
Loss rate: 61.63%
-- Flow 3:
Average throughput: 73.72 Mbit/s
95th percentile per-packet one-way delay: 58.797 ms
Loss rate: 54.25%
```

Run 2: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 435.90 Mbit/s) — — — Flow 1 egress (mean 149.61 Mbit/s)
Flow 2 ingress (mean 290.07 Mbit/s) — — — Flow 2 egress (mean 111.30 Mbit/s)
Flow 3 ingress (mean 161.13 Mbit/s) — — — Flow 3 egress (mean 73.72 Mbit/s)

Flow 1 (95th percentile 103.00 ms)   Flow 2 (95th percentile 103.74 ms)   Flow 3 (95th percentile 58.80 ms)
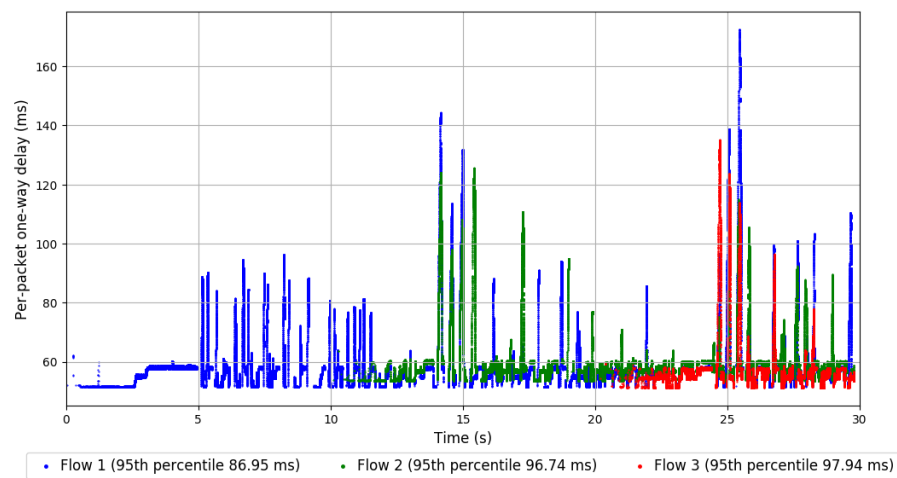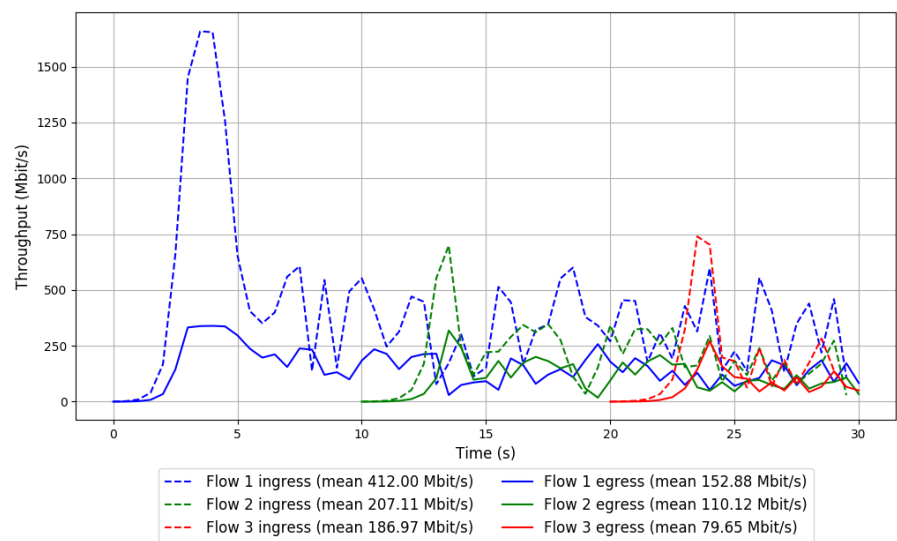
118

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 07:58:43
End at: 2019-12-11 07:59:13
Local clock offset: 2.931 ms
Remote clock offset: -47.065 ms


# Below is generated by plot.py at 2019-12-11 09:49:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 248.81 Mbit/s
95th percentile per-packet one-way delay: 89.159 ms
Loss rate: 58.24%
-- Flow 1:
Average throughput: 151.04 Mbit/s
95th percentile per-packet one-way delay: 89.222 ms
Loss rate: 57.11%
-- Flow 2:
Average throughput: 112.45 Mbit/s
95th percentile per-packet one-way delay: 97.785 ms
Loss rate: 62.05%
-- Flow 3:
Average throughput: 78.00 Mbit/s
95th percentile per-packet one-way delay: 58.570 ms
Loss rate: 52.05%
```

Run 3: Report of Muses_DecisionTree — Data Link

Run 4: Statistics of Muses_DecisionTree

Start at: 2019-12-11 08:32:54
End at: 2019-12-11 08:33:24
Local clock offset: 5.952 ms
Remote clock offset: -36.437 ms

Below is generated by plot.py at 2019-12-11 09:50:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 254.75 Mbit/s
95th percentile per-packet one-way delay: 89.584 ms
Loss rate: 56.75%
-- Flow 1:
Average throughput: 133.68 Mbit/s
95th percentile per-packet one-way delay: 91.215 ms
Loss rate: 51.68%
-- Flow 2:
Average throughput: 130.03 Mbit/s
95th percentile per-packet one-way delay: 94.004 ms
Loss rate: 59.87%
-- Flow 3:
Average throughput: 117.01 Mbit/s
95th percentile per-packet one-way delay: 69.123 ms
Loss rate: 64.14%

Run 4: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 276.72 Mbit/s) --- Flow 1 egress (mean 133.68 Mbit/s)
Flow 2 ingress (mean 324.02 Mbit/s) --- Flow 2 egress (mean 130.03 Mbit/s)
Flow 3 ingress (mean 309.33 Mbit/s) --- Flow 3 egress (mean 117.01 Mbit/s)

Flow 1 (95th percentile 91.22 ms) • Flow 2 (95th percentile 94.00 ms) • Flow 3 (95th percentile 69.12 ms)

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 09:07:19
End at: 2019-12-11 09:07:49
Local clock offset: 4.675 ms
Remote clock offset: -43.531 ms


# Below is generated by plot.py at 2019-12-11 09:50:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 251.47 Mbit/s
95th percentile per-packet one-way delay: 89.444 ms
Loss rate: 58.73%
-- Flow 1:
Average throughput: 152.88 Mbit/s
95th percentile per-packet one-way delay: 86.947 ms
Loss rate: 62.89%
-- Flow 2:
Average throughput: 110.12 Mbit/s
95th percentile per-packet one-way delay: 96.740 ms
Loss rate: 46.83%
-- Flow 3:
Average throughput: 79.65 Mbit/s
95th percentile per-packet one-way delay: 97.941 ms
Loss rate: 57.40%
```

Run 5: Report of Muses_DecisionTree — Data Link

Run 1: Statistics of Muses_DecisionTreeH0

Start at: 2019-12-11 06:41:07
End at: 2019-12-11 06:41:37
Local clock offset: 2.225 ms
Remote clock offset: -49.887 ms

Run 1: Report of Muses_DecisionTreeH0 — Data Link
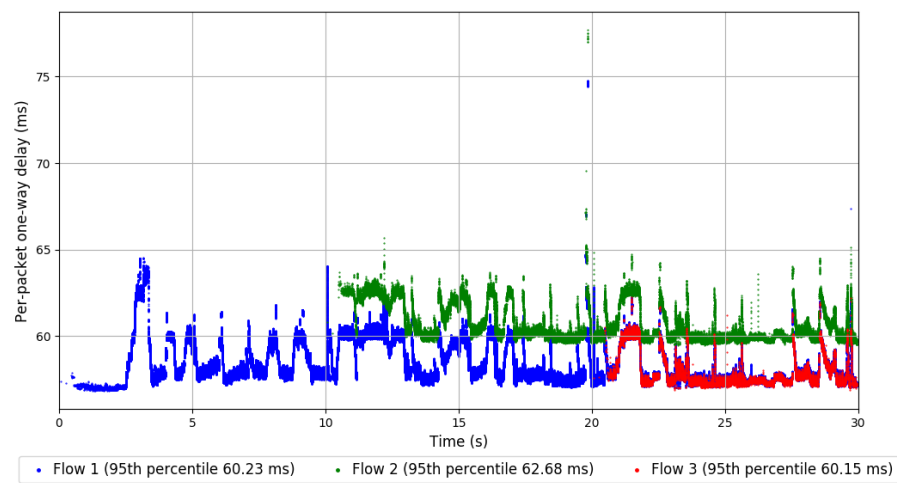
Figure is missing

Figure is missing

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 07:15:51
End at: 2019-12-11 07:16:21
Local clock offset: 1.55 ms
Remote clock offset: -40.899 ms
```

Run 2: Report of Muses_DecisionTreeH0 — Data Link
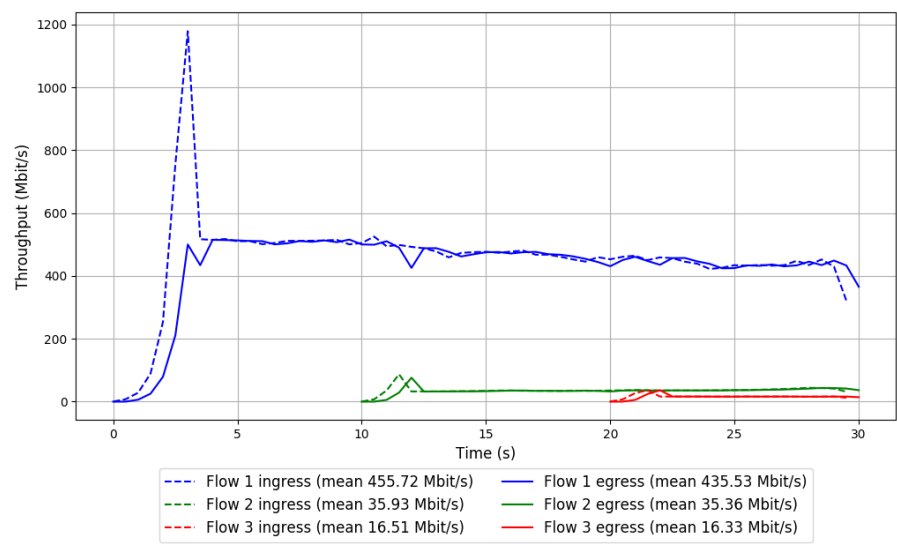
Figure is missing

Figure is missing

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 07:50:17
End at: 2019-12-11 07:50:47
Local clock offset: 0.804 ms
Remote clock offset: -45.089 ms
```

Run 3: Report of Muses_DecisionTreeH0 — Data Link

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Figure is missing

Run 4: Statistics of Muses_DecisionTreeH0

Start at: 2019-12-11 08:24:29
End at: 2019-12-11 08:24:59
Local clock offset: 5.428 ms
Remote clock offset: -44.888 ms

Run 4: Report of Muses_DecisionTreeH0 — Data Link

Figure is missing

Figure is missing

Run 5: Statistics of Muses_DecisionTreeH0

Start at: 2019-12-11 08:58:55
End at: 2019-12-11 08:59:25
Local clock offset: 5.344 ms
Remote clock offset: -46.362 ms

Run 5: Report of Muses_DecisionTreeH0 — Data Link

Figure is missing

Figure is missing

Run 1: Statistics of Muses_DecisionTreeR0

Start at: 2019-12-11 06:38:28
End at: 2019-12-11 06:38:58
Local clock offset: 6.774 ms
Remote clock offset: -37.89 ms

Run 1: Report of Muses_DecisionTreeR0 — Data Link

Figure is missing

Figure is missing

Run 2: Statistics of Muses_DecisionTreeR0

Start at: 2019-12-11 07:13:00
End at: 2019-12-11 07:13:30
Local clock offset: 3.667 ms
Remote clock offset: -44.704 ms

Run 2: Report of Muses_DecisionTreeR0 — Data Link

Figure is missing

Figure is missing

Run 3: Statistics of Muses_DecisionTreeR0

Start at: 2019-12-11 07:47:37
End at: 2019-12-11 07:48:07
Local clock offset: 5.055 ms
Remote clock offset: -37.494 ms

Run 3: Report of Muses_DecisionTreeR0 — Data Link

Figure is missing

Figure is missing

Run 4: Statistics of Muses_DecisionTreeR0

Start at: 2019-12-11 08:21:49
End at: 2019-12-11 08:22:19
Local clock offset: 6.771 ms
Remote clock offset: -37.403 ms

Run 4: Report of Muses_DecisionTreeR0 — Data Link

Figure is missing

Figure is missing

Run 5: Statistics of Muses_DecisionTreeR0

Start at: 2019-12-11 08:56:15
End at: 2019-12-11 08:56:45
Local clock offset: 0.164 ms
Remote clock offset: -44.443 ms

Run 5: Report of Muses_DecisionTreeR0 — Data Link

Figure is missing

Figure is missing

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-12-11 06:30:58
End at: 2019-12-11 06:31:28
Local clock offset: 3.886 ms
Remote clock offset: -41.376 ms


# Below is generated by plot.py at 2019-12-11 09:52:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 464.39 Mbit/s
95th percentile per-packet one-way delay: 60.504 ms
Loss rate: 4.25%
-- Flow 1:
Average throughput: 435.53 Mbit/s
95th percentile per-packet one-way delay: 60.235 ms
Loss rate: 4.43%
-- Flow 2:
Average throughput: 35.36 Mbit/s
95th percentile per-packet one-way delay: 62.682 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 16.33 Mbit/s
95th percentile per-packet one-way delay: 60.148 ms
Loss rate: 1.09%
```
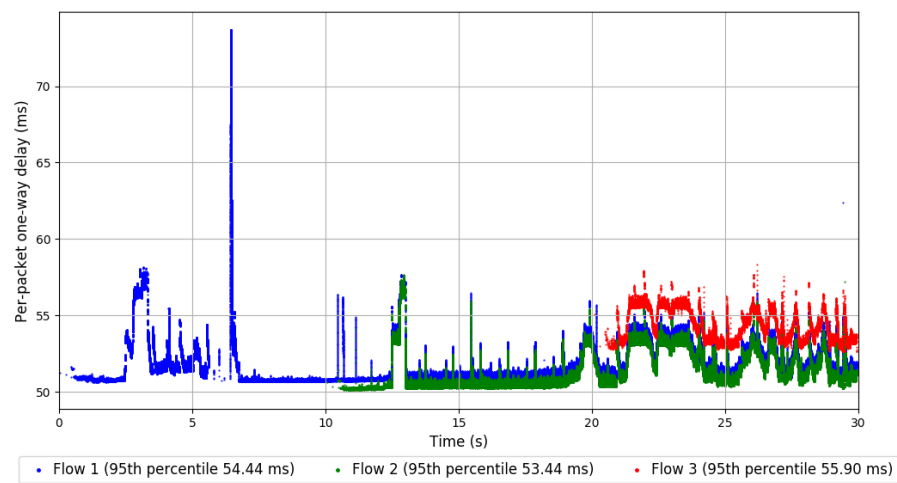
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-12-11 07:05:31
End at: 2019-12-11 07:06:01
Local clock offset: 1.608 ms
Remote clock offset: -48.443 ms


# Below is generated by plot.py at 2019-12-11 09:53:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 449.75 Mbit/s
95th percentile per-packet one-way delay: 56.500 ms
Loss rate: 4.05%
-- Flow 1:
Average throughput: 427.43 Mbit/s
95th percentile per-packet one-way delay: 56.930 ms
Loss rate: 4.18%
-- Flow 2:
Average throughput: 17.58 Mbit/s
95th percentile per-packet one-way delay: 55.373 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 32.24 Mbit/s
95th percentile per-packet one-way delay: 55.897 ms
Loss rate: 2.05%
```
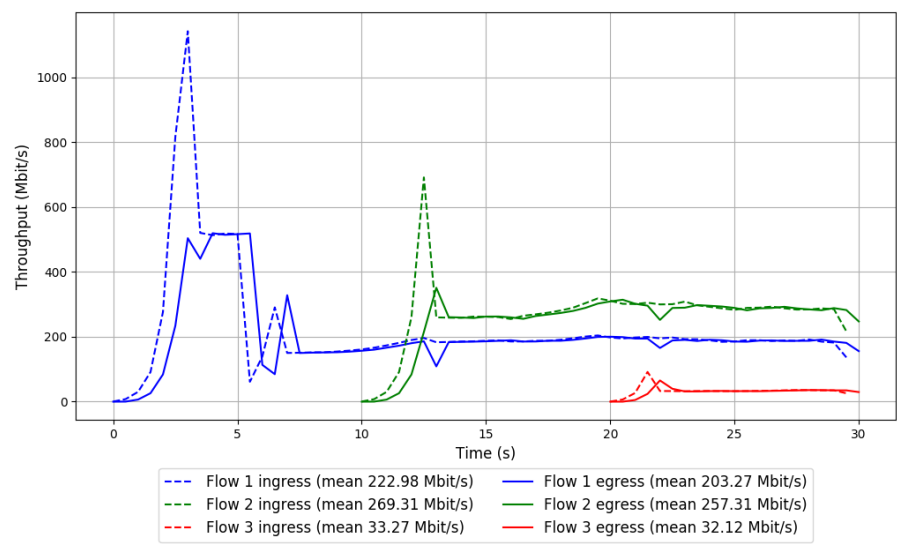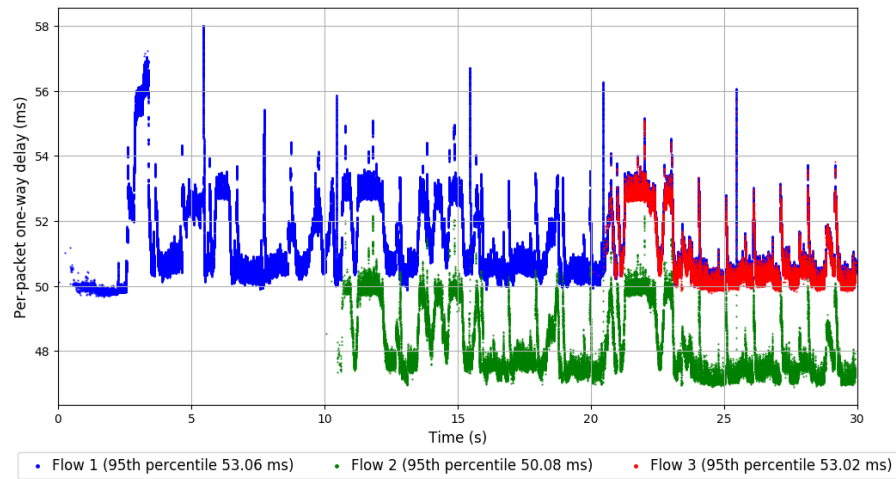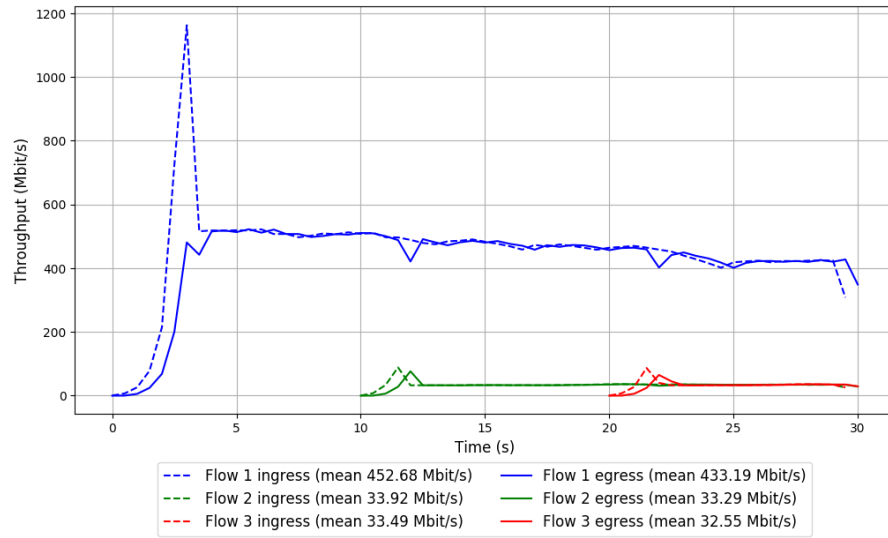
Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 446.05 Mbit/s) --- Flow 1 egress (mean 427.43 Mbit/s)
Flow 2 ingress (mean 17.76 Mbit/s) --- Flow 2 egress (mean 17.58 Mbit/s)
Flow 3 ingress (mean 32.91 Mbit/s) --- Flow 3 egress (mean 32.24 Mbit/s)

Flow 1 (95th percentile 56.93 ms) · Flow 2 (95th percentile 55.37 ms) · Flow 3 (95th percentile 55.90 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-12-11 07:40:03
End at: 2019-12-11 07:40:33
Local clock offset: 0.97 ms
Remote clock offset: -44.087 ms


# Below is generated by plot.py at 2019-12-11 09:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 470.76 Mbit/s
95th percentile per-packet one-way delay: 61.274 ms
Loss rate: 4.73%
-- Flow 1:
Average throughput: 449.39 Mbit/s
95th percentile per-packet one-way delay: 61.296 ms
Loss rate: 4.83%
-- Flow 2:
Average throughput: 16.74 Mbit/s
95th percentile per-packet one-way delay: 60.943 ms
Loss rate: 1.88%
-- Flow 3:
Average throughput: 31.05 Mbit/s
95th percentile per-packet one-way delay: 58.577 ms
Loss rate: 3.48%
```

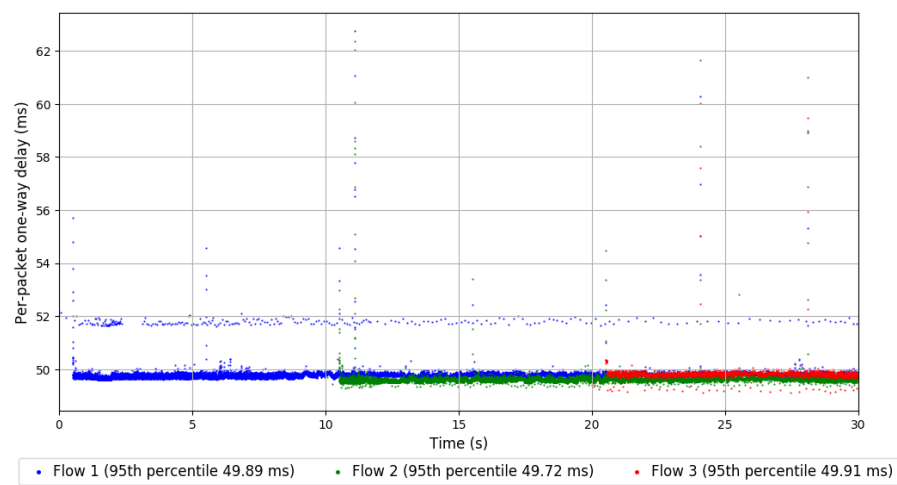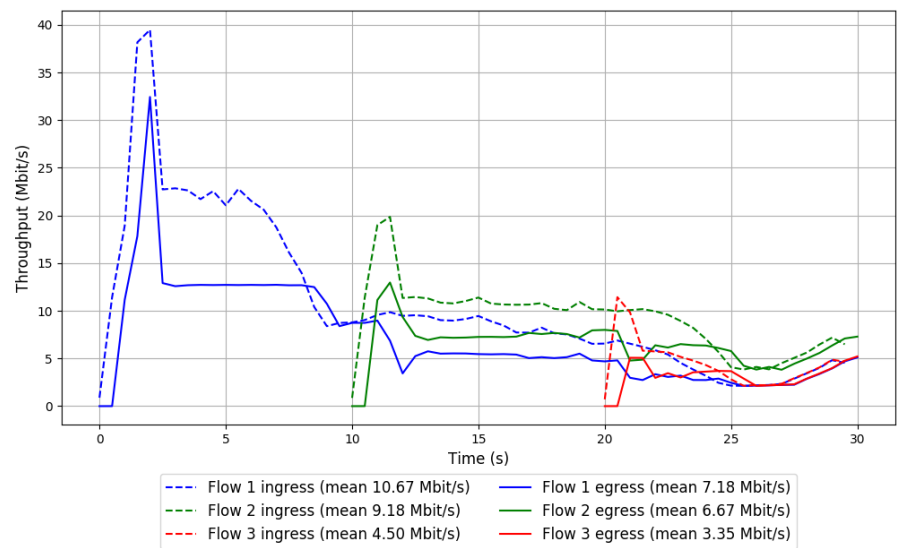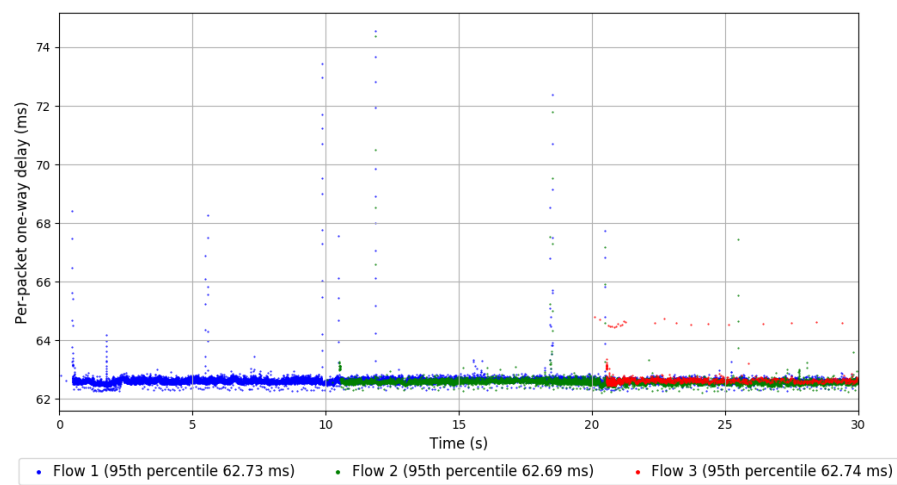Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 472.20 Mbit/s) — Flow 1 egress (mean 449.39 Mbit/s)
Flow 2 ingress (mean 17.06 Mbit/s) — Flow 2 egress (mean 16.74 Mbit/s)
Flow 3 ingress (mean 32.16 Mbit/s) — Flow 3 egress (mean 31.05 Mbit/s)

Flow 1 (95th percentile 61.30 ms) • Flow 2 (95th percentile 60.94 ms) • Flow 3 (95th percentile 58.58 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-12-11 08:14:21
End at: 2019-12-11 08:14:51
Local clock offset: 6.72 ms
Remote clock offset: -44.454 ms


# Below is generated by plot.py at 2019-12-11 09:54:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.93 Mbit/s
95th percentile per-packet one-way delay: 54.303 ms
Loss rate: 6.79%
-- Flow 1:
Average throughput: 203.27 Mbit/s
95th percentile per-packet one-way delay: 54.444 ms
Loss rate: 8.84%
-- Flow 2:
Average throughput: 257.31 Mbit/s
95th percentile per-packet one-way delay: 53.441 ms
Loss rate: 4.45%
-- Flow 3:
Average throughput: 32.12 Mbit/s
95th percentile per-packet one-way delay: 55.899 ms
Loss rate: 3.51%
```
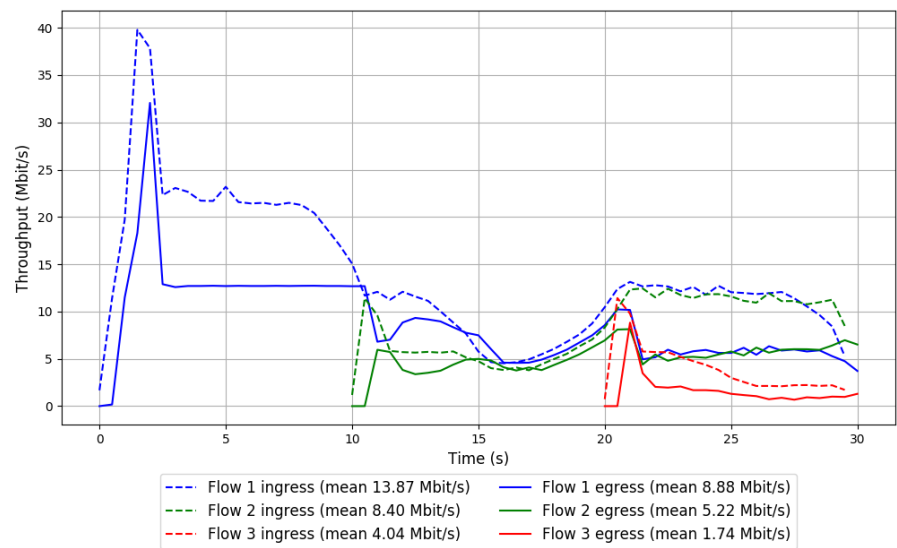
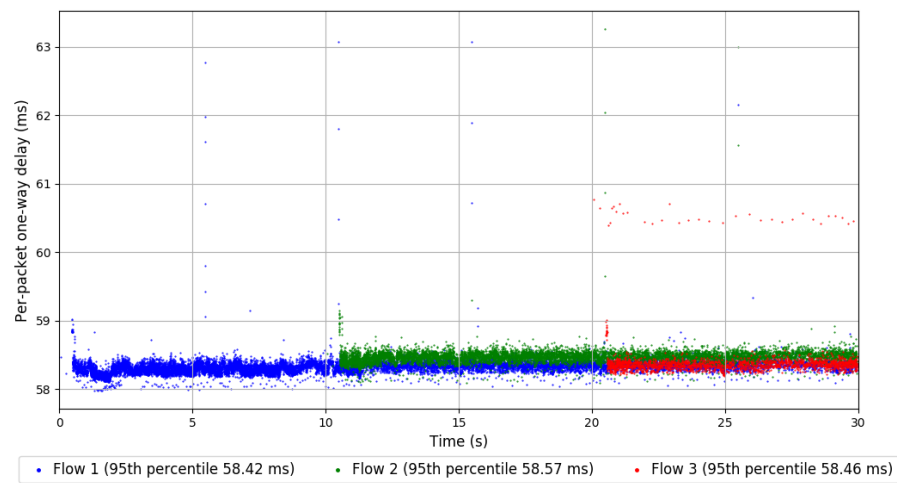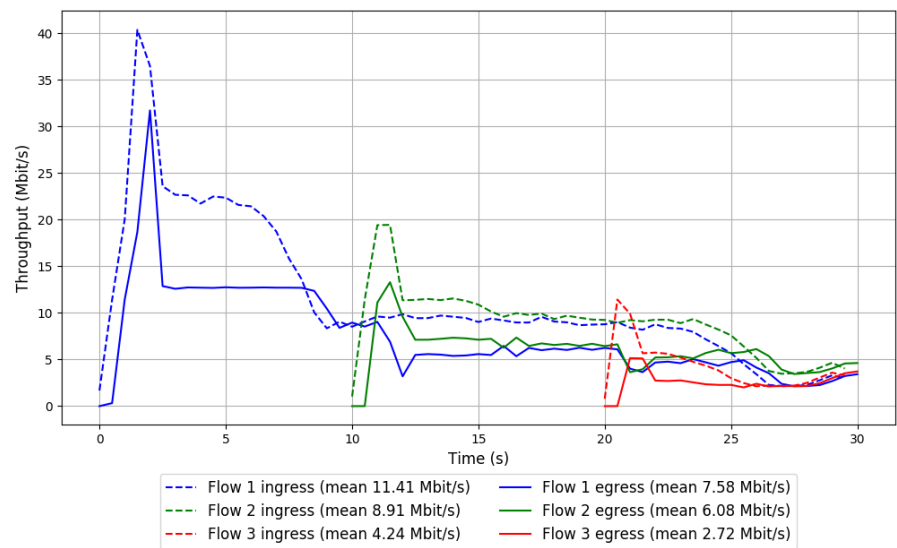Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-12-11 08:48:41
End at: 2019-12-11 08:49:11
Local clock offset: 5.527 ms
Remote clock offset: -47.297 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 466.05 Mbit/s
95th percentile per-packet one-way delay: 53.045 ms
Loss rate: 4.16%
-- Flow 1:
Average throughput: 433.19 Mbit/s
95th percentile per-packet one-way delay: 53.057 ms
Loss rate: 4.30%
-- Flow 2:
Average throughput: 33.29 Mbit/s
95th percentile per-packet one-way delay: 50.083 ms
Loss rate: 1.85%
-- Flow 3:
Average throughput: 32.55 Mbit/s
95th percentile per-packet one-way delay: 53.017 ms
Loss rate: 2.82%
```

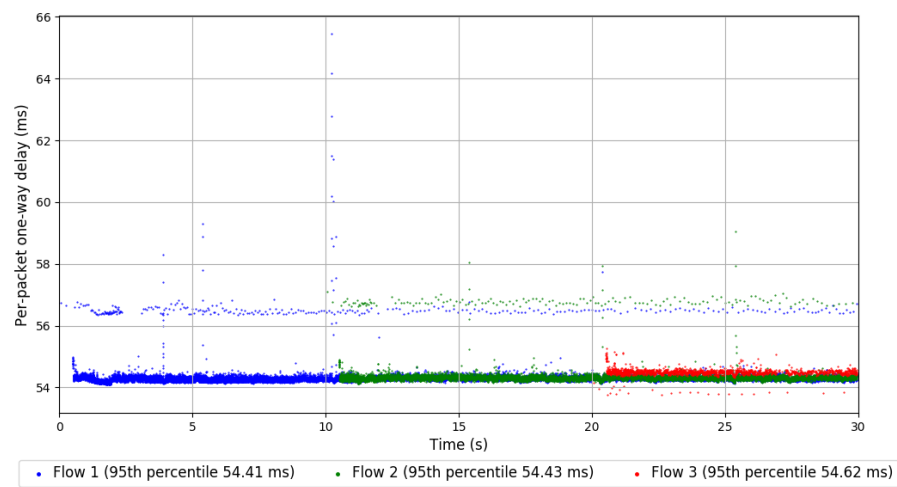Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2019-12-11 06:48:13
End at: 2019-12-11 06:48:43
Local clock offset: 7.13 ms
Remote clock offset: -46.14 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 49.873 ms
Loss rate: 30.40%
-- Flow 1:
Average throughput: 7.18 Mbit/s
95th percentile per-packet one-way delay: 49.887 ms
Loss rate: 32.78%
-- Flow 2:
Average throughput: 6.67 Mbit/s
95th percentile per-packet one-way delay: 49.715 ms
Loss rate: 27.41%
-- Flow 3:
Average throughput: 3.35 Mbit/s
95th percentile per-packet one-way delay: 49.911 ms
Loss rate: 25.59%
```

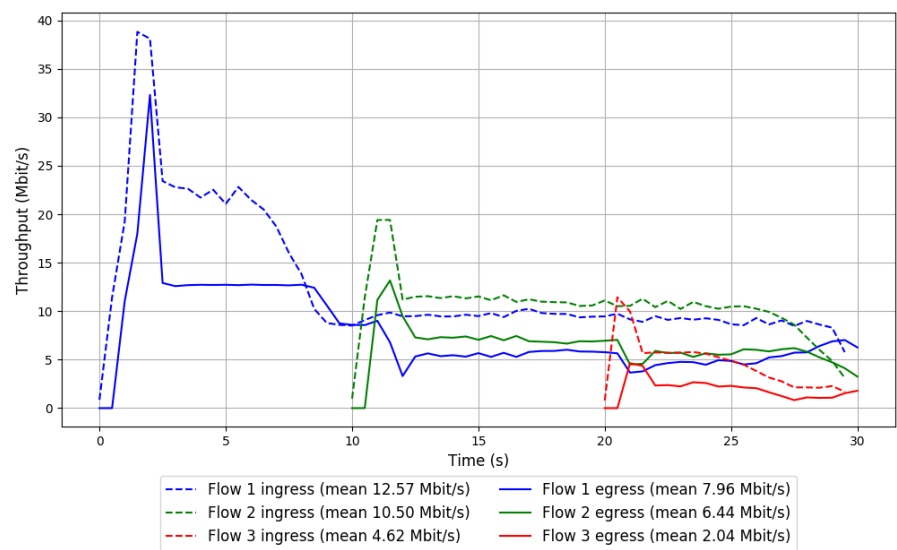## Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-12-11 07:22:57
End at: 2019-12-11 07:23:27
Local clock offset: 0.273 ms
Remote clock offset: -38.067 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.93 Mbit/s
95th percentile per-packet one-way delay: 62.723 ms
Loss rate: 37.81%
-- Flow 1:
Average throughput: 8.88 Mbit/s
95th percentile per-packet one-way delay: 62.728 ms
Loss rate: 35.96%
-- Flow 2:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 62.687 ms
Loss rate: 37.83%
-- Flow 3:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 62.743 ms
Loss rate: 57.00%
```
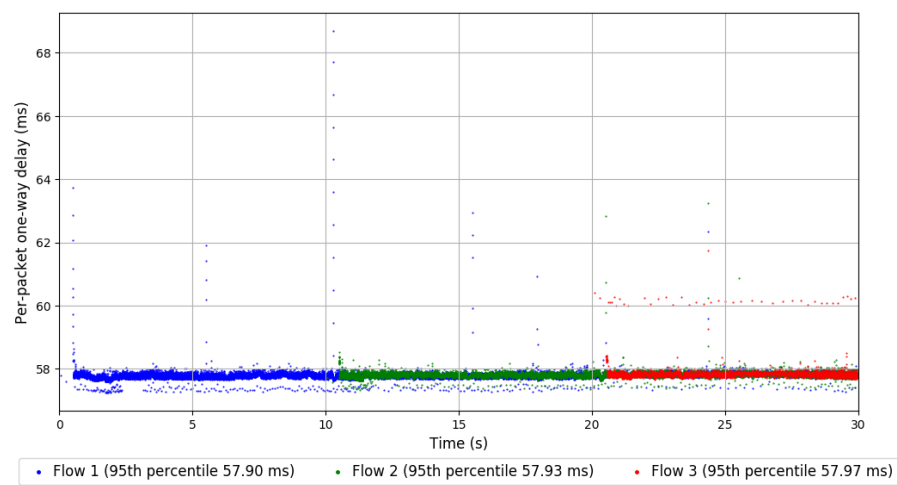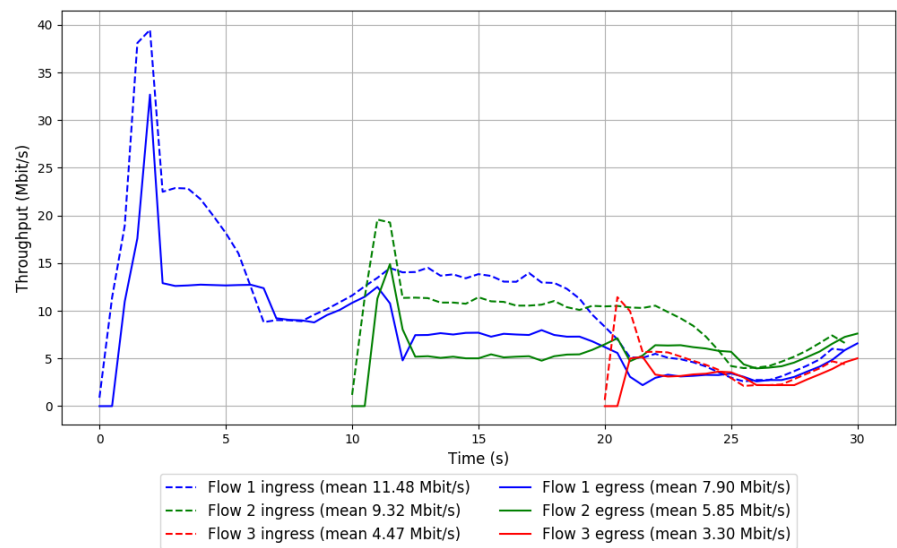
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-12-11 07:57:23
End at: 2019-12-11 07:57:53
Local clock offset: 5.924 ms
Remote clock offset: -37.739 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 58.532 ms
Loss rate: 33.19%
-- Flow 1:
Average throughput: 7.58 Mbit/s
95th percentile per-packet one-way delay: 58.423 ms
Loss rate: 33.55%
-- Flow 2:
Average throughput: 6.08 Mbit/s
95th percentile per-packet one-way delay: 58.570 ms
Loss rate: 31.83%
-- Flow 3:
Average throughput: 2.72 Mbit/s
95th percentile per-packet one-way delay: 58.459 ms
Loss rate: 36.02%
```
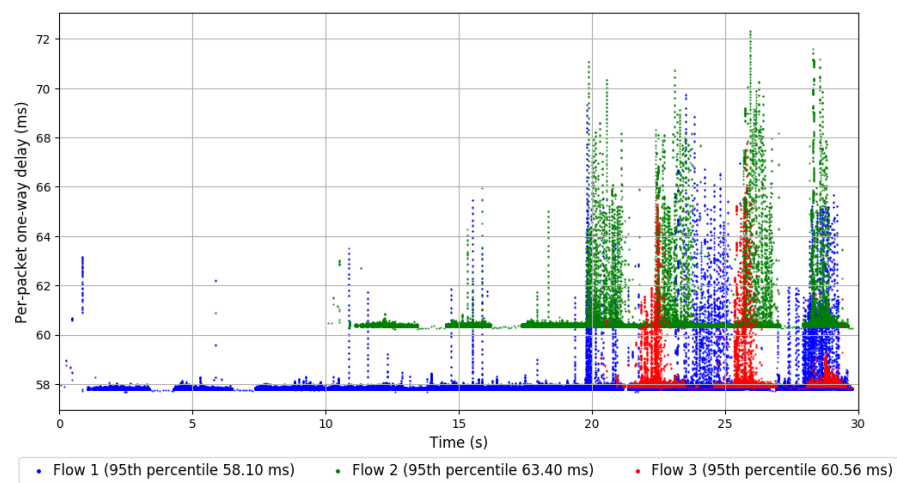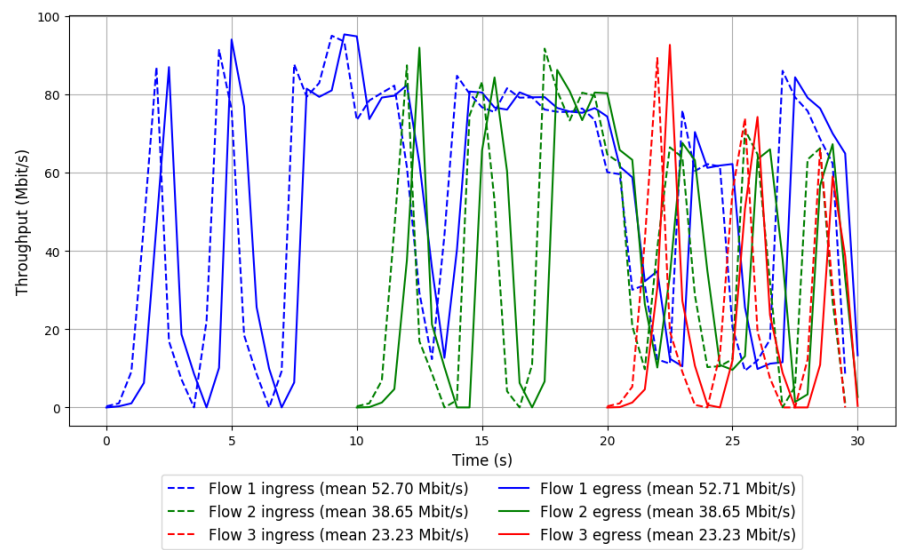
Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 11.41 Mbit/s)   Flow 1 egress (mean 7.58 Mbit/s)
Flow 2 ingress (mean 8.91 Mbit/s)   Flow 2 egress (mean 6.08 Mbit/s)
Flow 3 ingress (mean 4.24 Mbit/s)   Flow 3 egress (mean 2.72 Mbit/s)

Flow 1 (95th percentile 58.42 ms)   Flow 2 (95th percentile 58.57 ms)   Flow 3 (95th percentile 58.46 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-12-11 08:31:34
End at: 2019-12-11 08:32:04
Local clock offset: 6.663 ms
Remote clock offset: -40.381 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.91 Mbit/s
95th percentile per-packet one-way delay: 54.493 ms
Loss rate: 38.75%
-- Flow 1:
Average throughput: 7.96 Mbit/s
95th percentile per-packet one-way delay: 54.413 ms
Loss rate: 36.70%
-- Flow 2:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 54.429 ms
Loss rate: 38.70%
-- Flow 3:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 54.617 ms
Loss rate: 55.90%
```
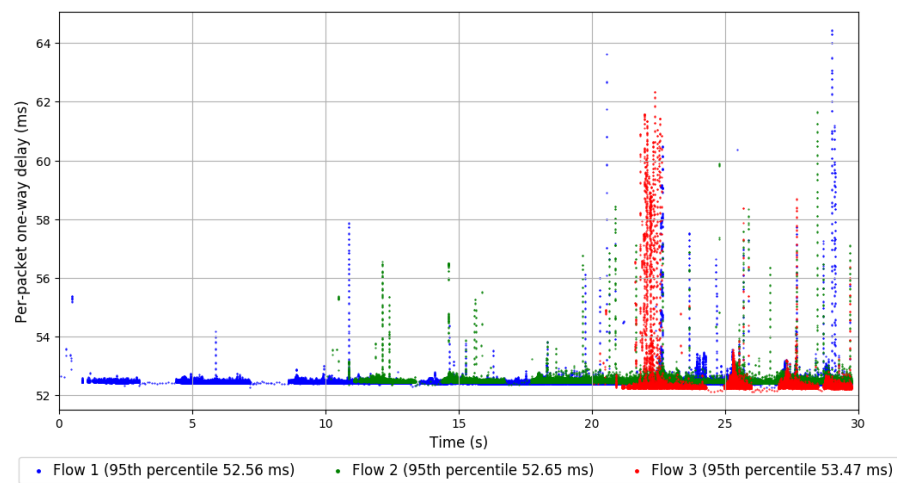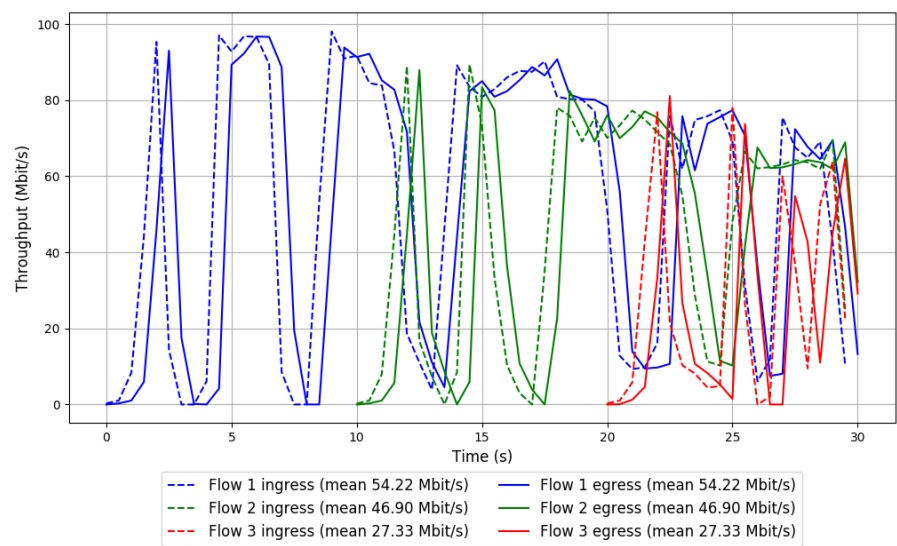
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-12-11 09:05:59
End at: 2019-12-11 09:06:29
Local clock offset: 4.704 ms
Remote clock offset: -37.504 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.88 Mbit/s
95th percentile per-packet one-way delay: 57.916 ms
Loss rate: 32.75%
-- Flow 1:
Average throughput: 7.90 Mbit/s
95th percentile per-packet one-way delay: 57.902 ms
Loss rate: 31.16%
-- Flow 2:
Average throughput: 5.85 Mbit/s
95th percentile per-packet one-way delay: 57.927 ms
Loss rate: 37.26%
-- Flow 3:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 57.967 ms
Loss rate: 26.19%
```

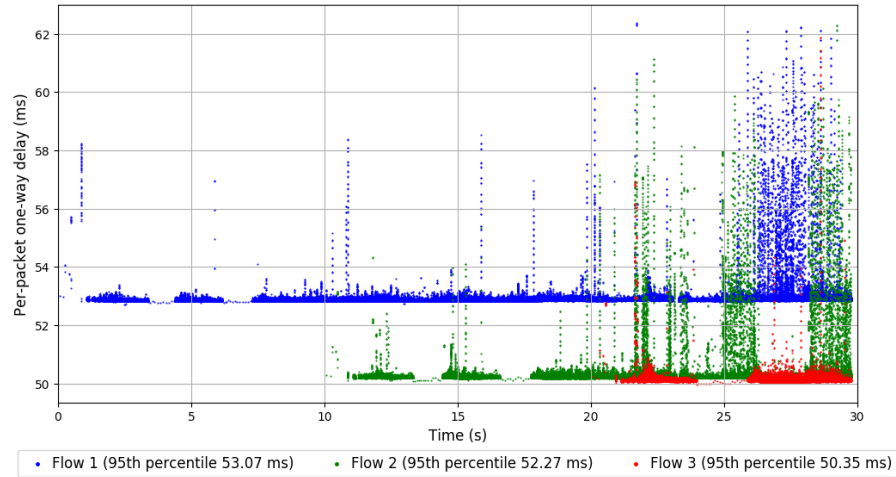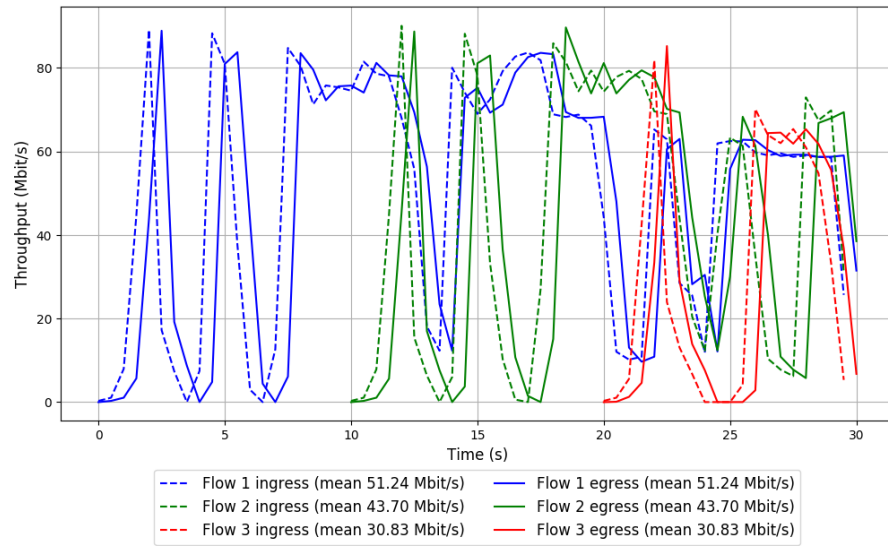Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-12-11 06:39:44
End at: 2019-12-11 06:40:14
Local clock offset: 6.372 ms
Remote clock offset: -38.176 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.82 Mbit/s
95th percentile per-packet one-way delay: 60.686 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 52.71 Mbit/s
95th percentile per-packet one-way delay: 58.100 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.65 Mbit/s
95th percentile per-packet one-way delay: 63.403 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.23 Mbit/s
95th percentile per-packet one-way delay: 60.561 ms
Loss rate: 0.00%
```
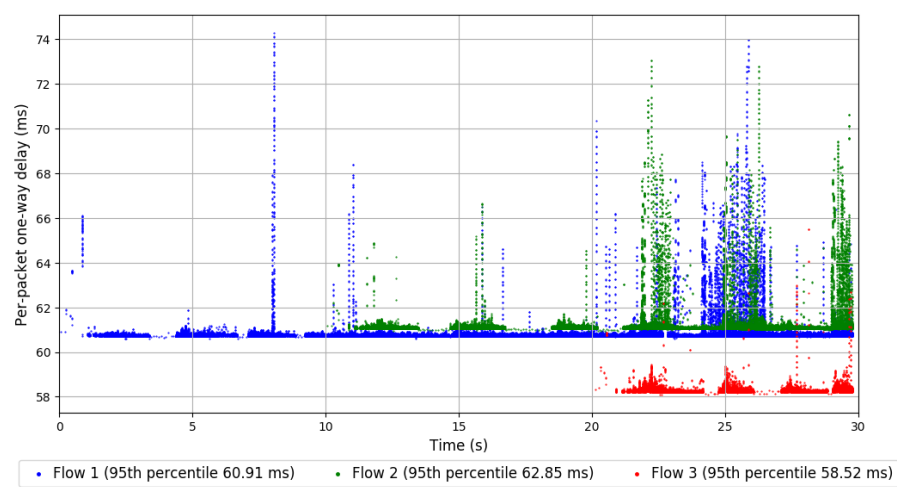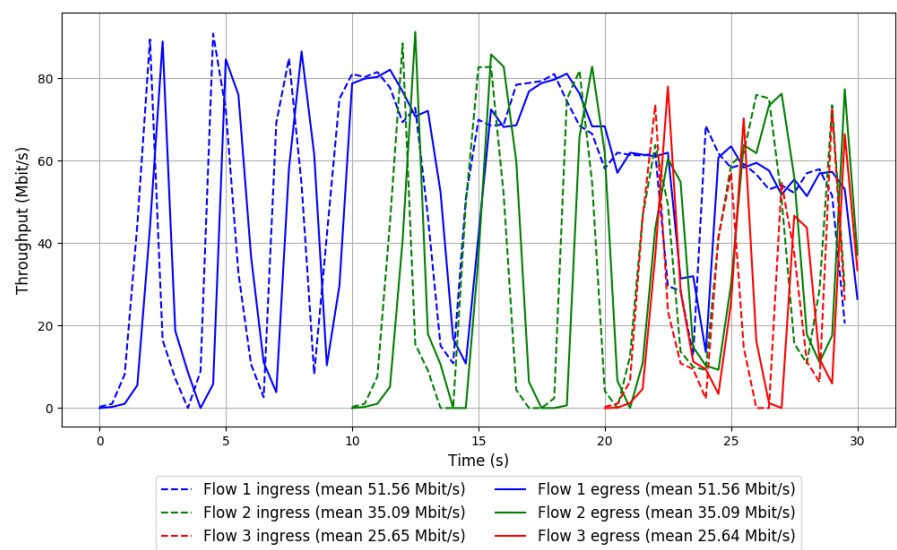
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-12-11 07:14:16
End at: 2019-12-11 07:14:46
Local clock offset: 5.864 ms
Remote clock offset: -45.482 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.21 Mbit/s
95th percentile per-packet one-way delay: 52.608 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.22 Mbit/s
95th percentile per-packet one-way delay: 52.556 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.90 Mbit/s
95th percentile per-packet one-way delay: 52.647 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.33 Mbit/s
95th percentile per-packet one-way delay: 53.470 ms
Loss rate: 0.00%
```
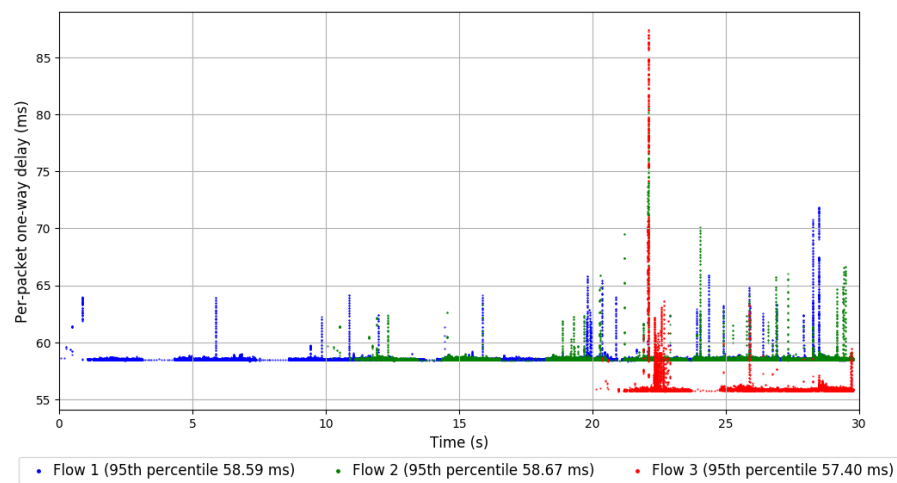
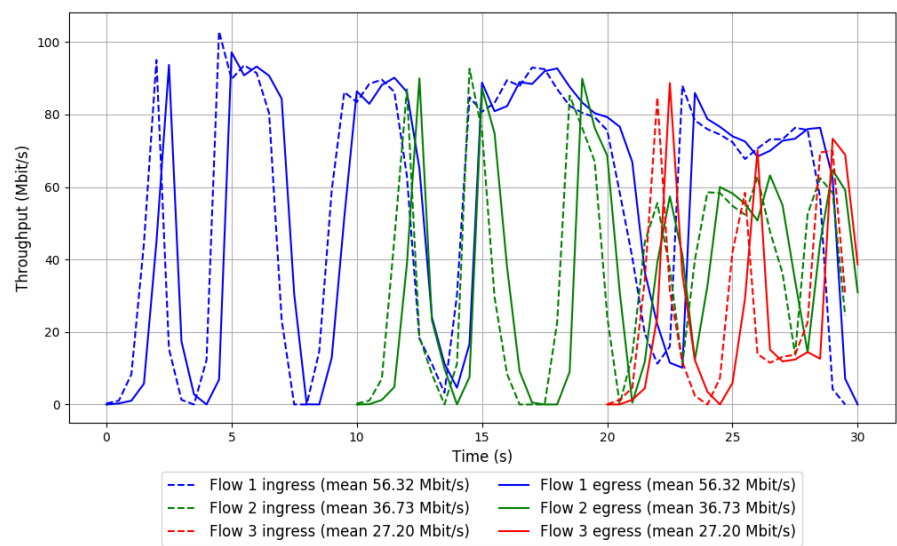Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-12-11 07:48:53
End at: 2019-12-11 07:49:23
Local clock offset: 6.116 ms
Remote clock offset: -44.993 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.21 Mbit/s
95th percentile per-packet one-way delay: 53.011 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.24 Mbit/s
95th percentile per-packet one-way delay: 53.067 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.70 Mbit/s
95th percentile per-packet one-way delay: 52.267 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.83 Mbit/s
95th percentile per-packet one-way delay: 50.355 ms
Loss rate: 0.00%
```
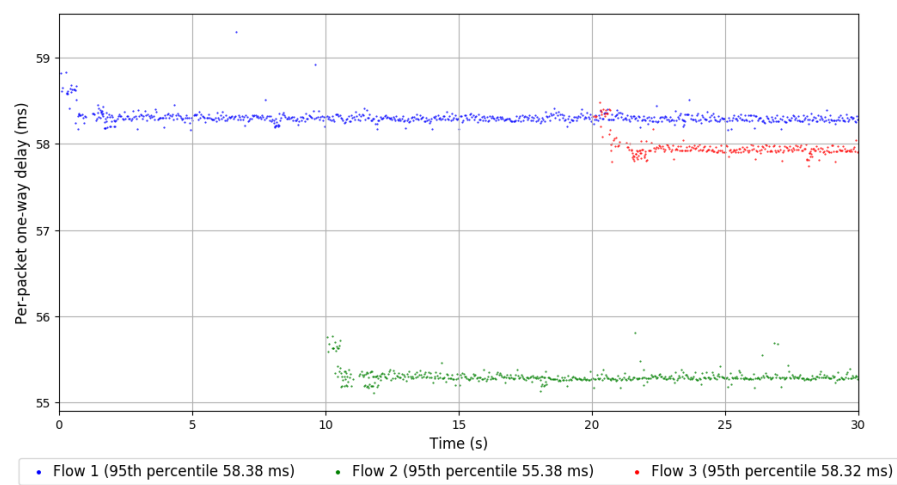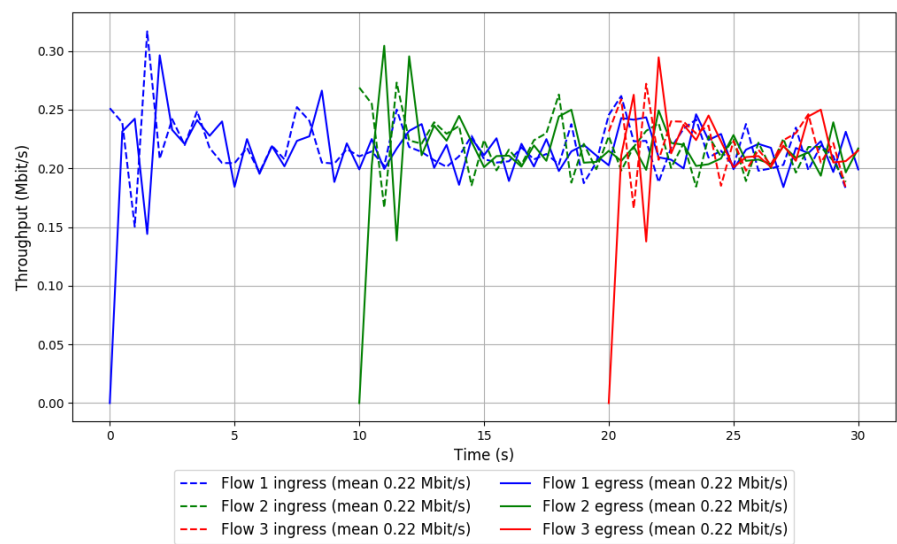
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 51.24 Mbit/s) — Flow 1 egress (mean 51.24 Mbit/s)
Flow 2 ingress (mean 43.70 Mbit/s) — Flow 2 egress (mean 43.70 Mbit/s)
Flow 3 ingress (mean 30.83 Mbit/s) — Flow 3 egress (mean 30.83 Mbit/s)

Flow 1 (95th percentile 53.07 ms) • Flow 2 (95th percentile 52.27 ms) • Flow 3 (95th percentile 50.35 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-12-11 08:23:05
End at: 2019-12-11 08:23:35
Local clock offset: 5.84 ms
Remote clock offset: -36.793 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.16 Mbit/s
95th percentile per-packet one-way delay: 61.282 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.56 Mbit/s
95th percentile per-packet one-way delay: 60.908 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.09 Mbit/s
95th percentile per-packet one-way delay: 62.846 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.64 Mbit/s
95th percentile per-packet one-way delay: 58.521 ms
Loss rate: 0.00%
```
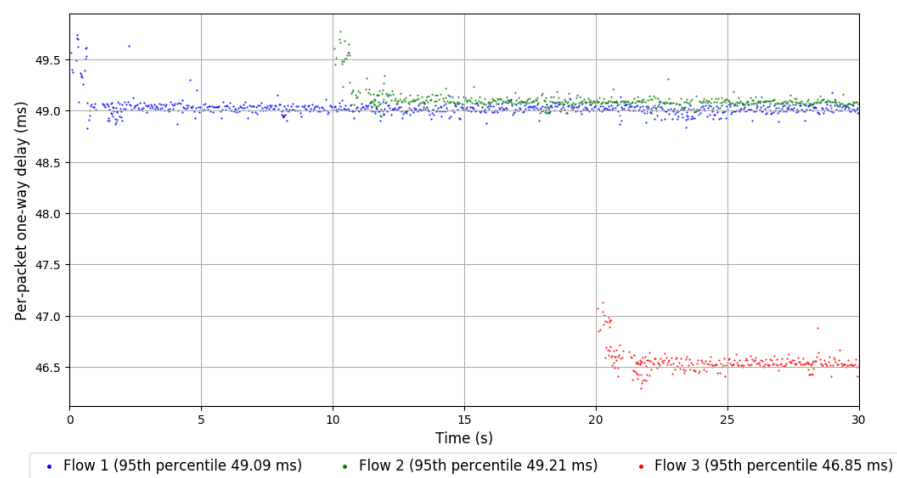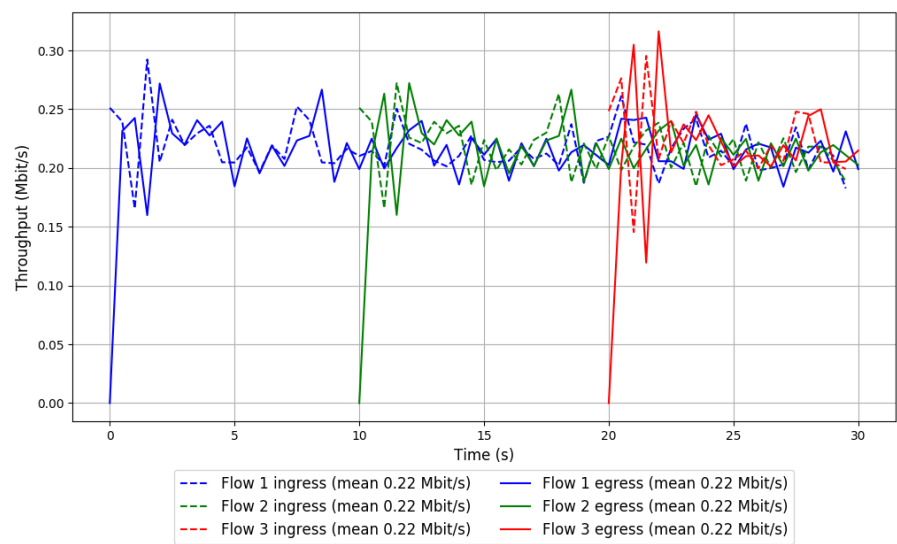
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-12-11 08:57:31
End at: 2019-12-11 08:58:01
Local clock offset: 4.382 ms
Remote clock offset: -39.328 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.40 Mbit/s
95th percentile per-packet one-way delay: 58.622 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.32 Mbit/s
95th percentile per-packet one-way delay: 58.588 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.73 Mbit/s
95th percentile per-packet one-way delay: 58.673 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.20 Mbit/s
95th percentile per-packet one-way delay: 57.402 ms
Loss rate: 0.00%
```

Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 56.32 Mbit/s) — Flow 1 egress (mean 56.32 Mbit/s)
Flow 2 ingress (mean 36.73 Mbit/s) — Flow 2 egress (mean 36.73 Mbit/s)
Flow 3 ingress (mean 27.20 Mbit/s) — Flow 3 egress (mean 27.20 Mbit/s)

Flow 1 (95th percentile 58.59 ms) • Flow 2 (95th percentile 58.67 ms) • Flow 3 (95th percentile 57.40 ms)
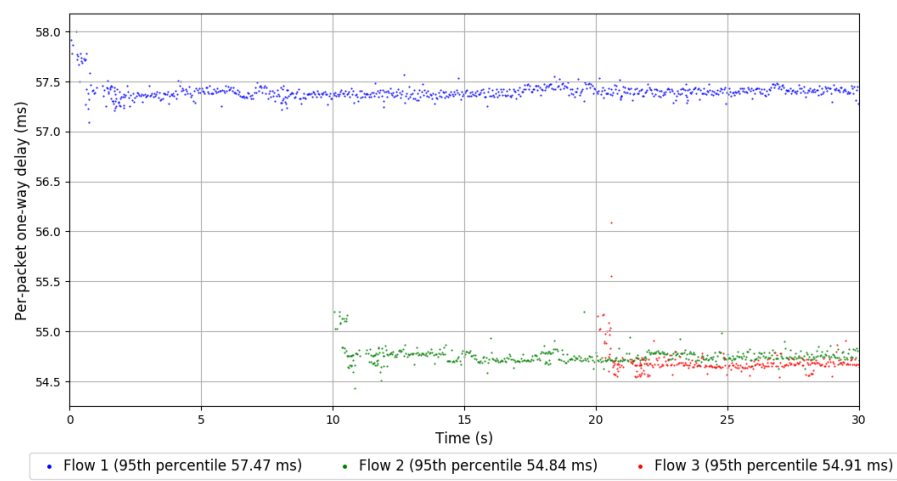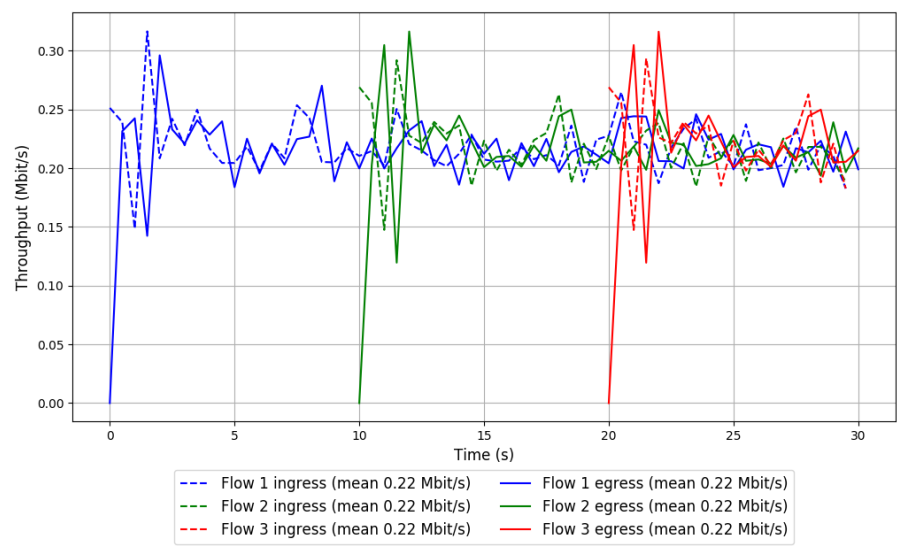
```
Run 1: Statistics of SCReAM

Start at: 2019-12-11 06:32:34
End at: 2019-12-11 06:33:04
Local clock offset: 2.204 ms
Remote clock offset: -44.943 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 58.353 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.383 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.382 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.320 ms
Loss rate: 0.00%
```
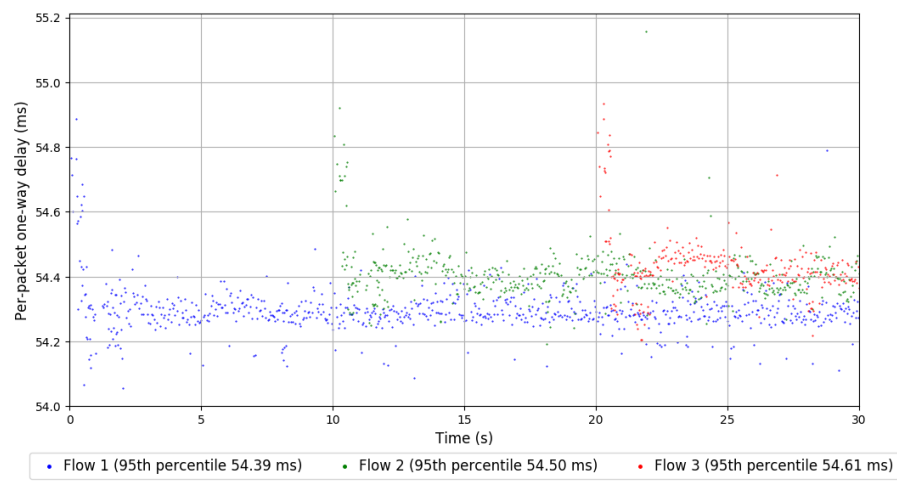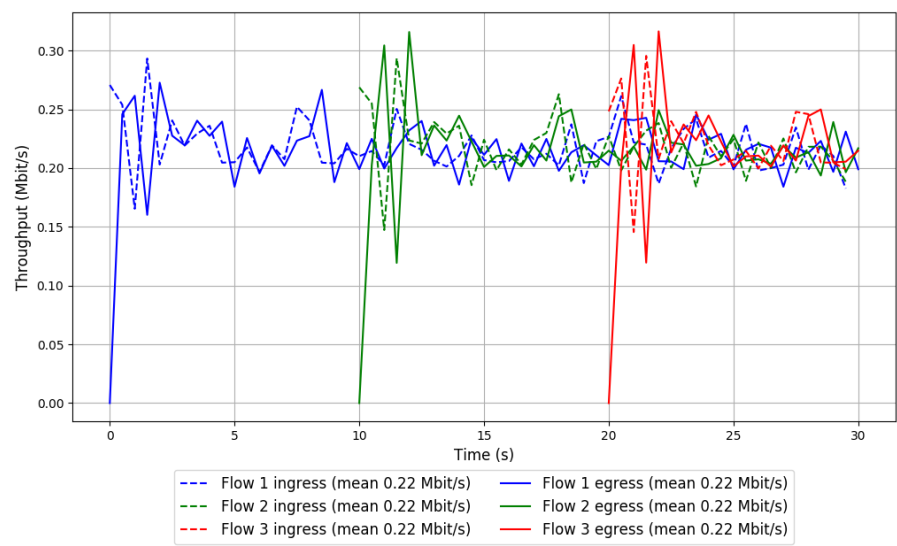
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-12-11 07:07:07
End at: 2019-12-11 07:07:37
Local clock offset: 7.188 ms
Remote clock offset: -48.842 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 49.152 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.086 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.209 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.852 ms
Loss rate: 0.00%
```
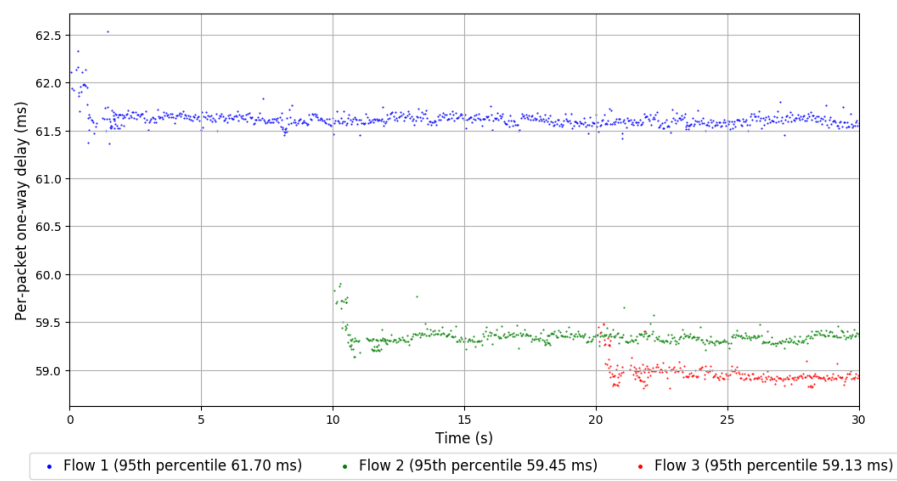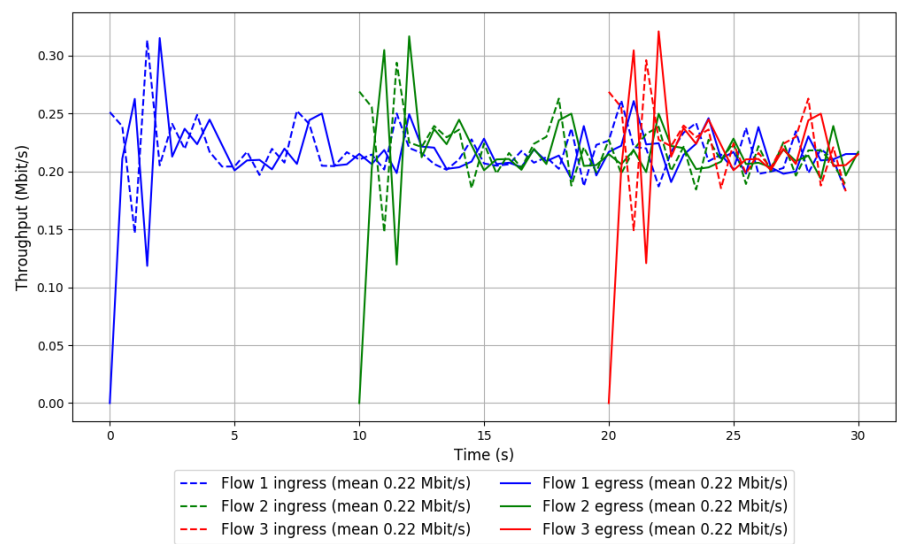
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-12-11 07:41:39
End at: 2019-12-11 07:42:09
Local clock offset: 4.971 ms
Remote clock offset: -40.942 ms

# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 57.452 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.473 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.845 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.911 ms
Loss rate: 0.00%
```
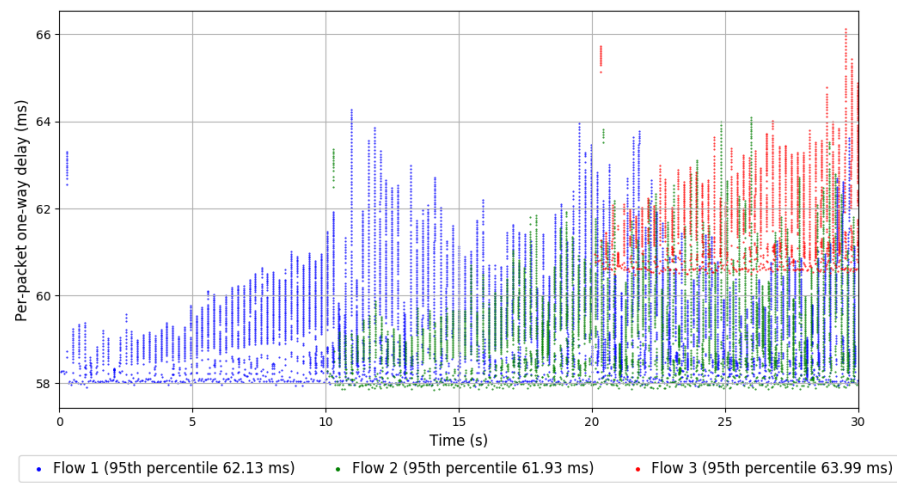
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-12-11 08:15:55
End at: 2019-12-11 08:16:25
Local clock offset: 3.572 ms
Remote clock offset: -43.467 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 54.486 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.386 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.496 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.606 ms
Loss rate: 0.00%
```
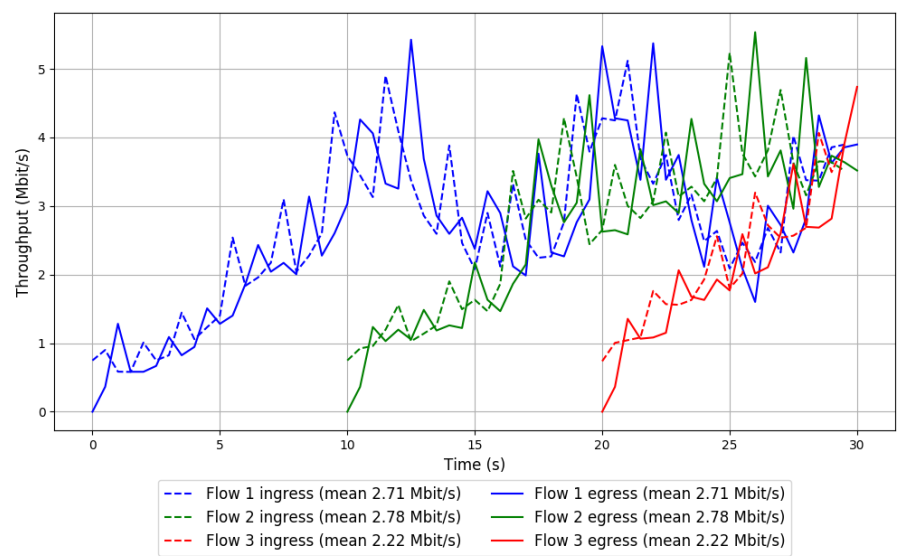
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-12-11 08:50:18
End at: 2019-12-11 08:50:48
Local clock offset: 4.609 ms
Remote clock offset: -36.303 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.677 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.704 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.454 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.131 ms
Loss rate: 0.00%
```
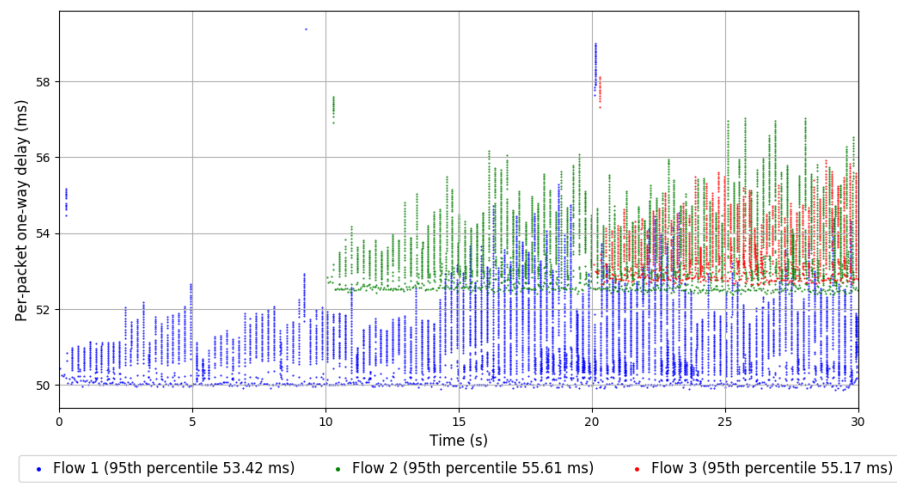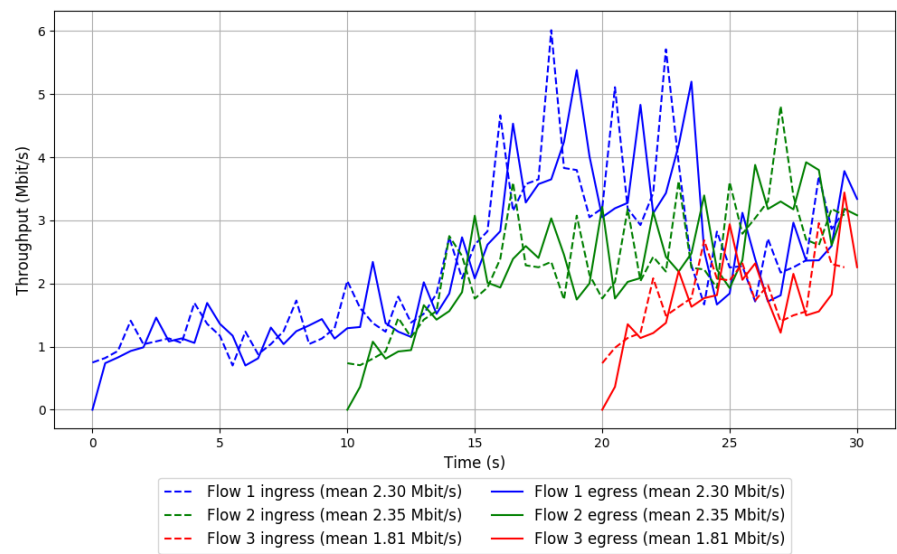
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-12-11 06:42:23
End at: 2019-12-11 06:42:53
Local clock offset: 6.299 ms
Remote clock offset: -38.147 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 62.716 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 62.131 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.78 Mbit/s
95th percentile per-packet one-way delay: 61.929 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 63.995 ms
Loss rate: 0.00%
```
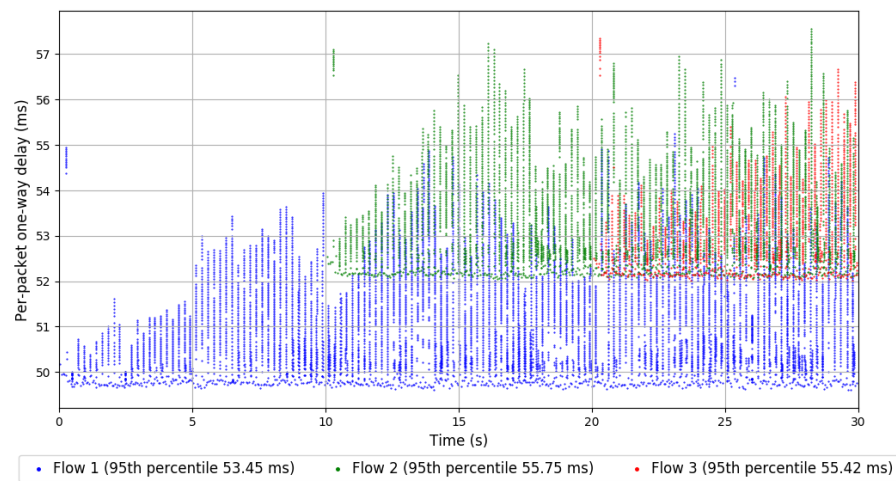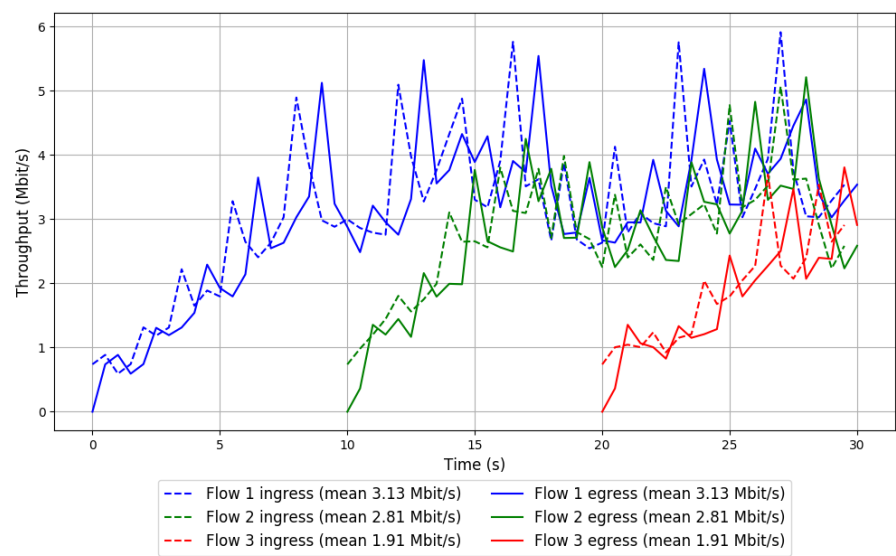
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-12-11 07:17:07
End at: 2019-12-11 07:17:37
Local clock offset: 2.703 ms
Remote clock offset: -48.328 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 55.113 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 53.420 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 55.608 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 55.172 ms
Loss rate: 0.00%
```
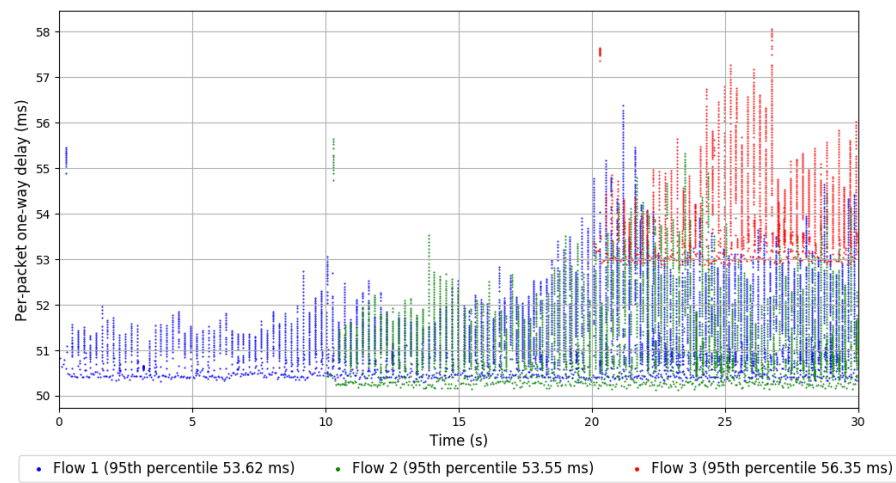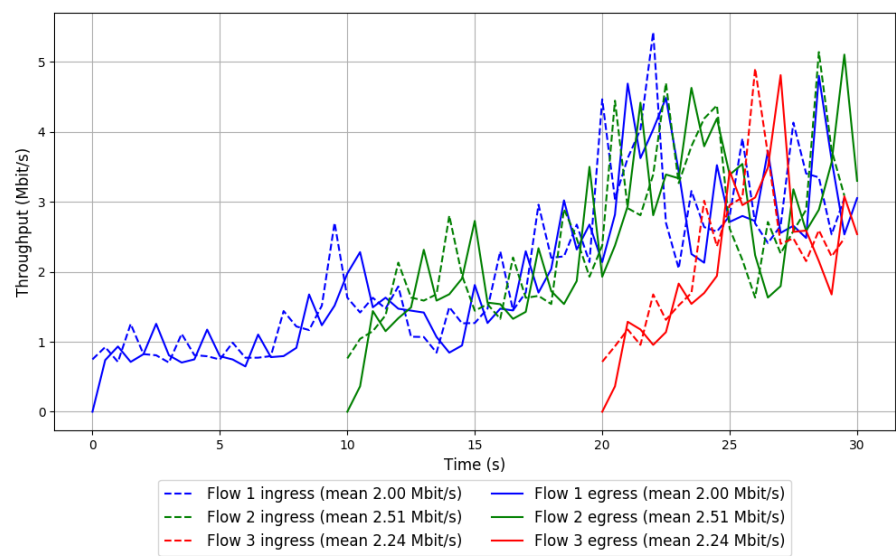
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-12-11 07:51:33
End at: 2019-12-11 07:52:03
Local clock offset: 3.725 ms
Remote clock offset: -48.025 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.63 Mbit/s
95th percentile per-packet one-way delay: 55.119 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 53.450 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 55.753 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 55.419 ms
Loss rate: 0.00%
```
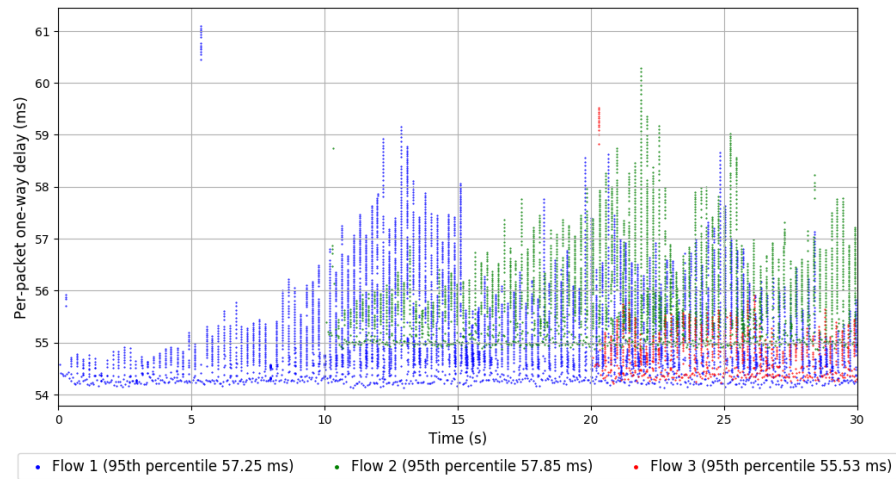
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-12-11 08:25:46
End at: 2019-12-11 08:26:16
Local clock offset: 6.604 ms
Remote clock offset: -44.012 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.41 Mbit/s
95th percentile per-packet one-way delay: 54.856 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 53.622 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 53.553 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 56.346 ms
Loss rate: 0.00%
```
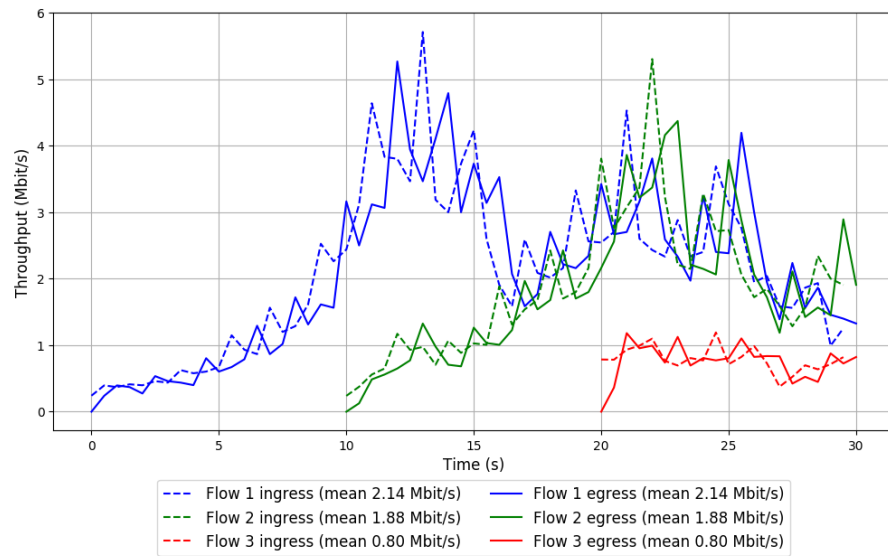
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-12-11 09:00:11
End at: 2019-12-11 09:00:41
Local clock offset: 4.725 ms
Remote clock offset: -40.544 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.66 Mbit/s
95th percentile per-packet one-way delay: 57.470 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 57.247 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 57.849 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 55.530 ms
Loss rate: 0.00%
```
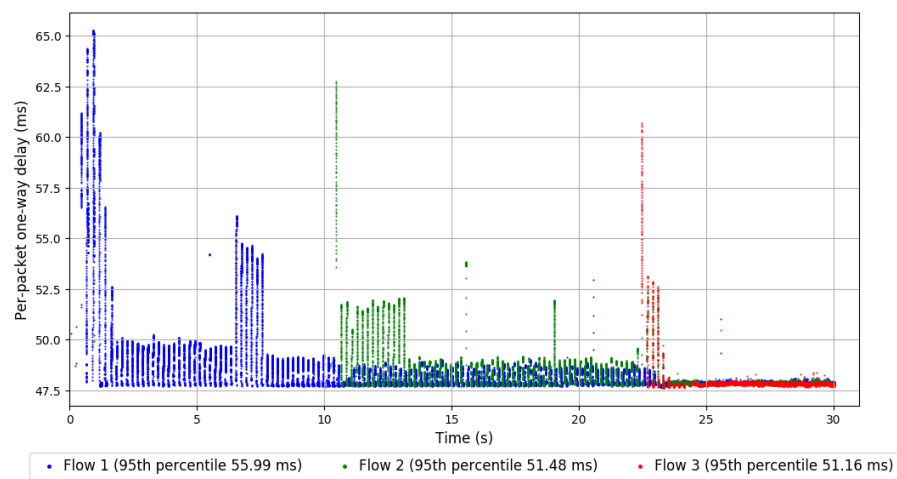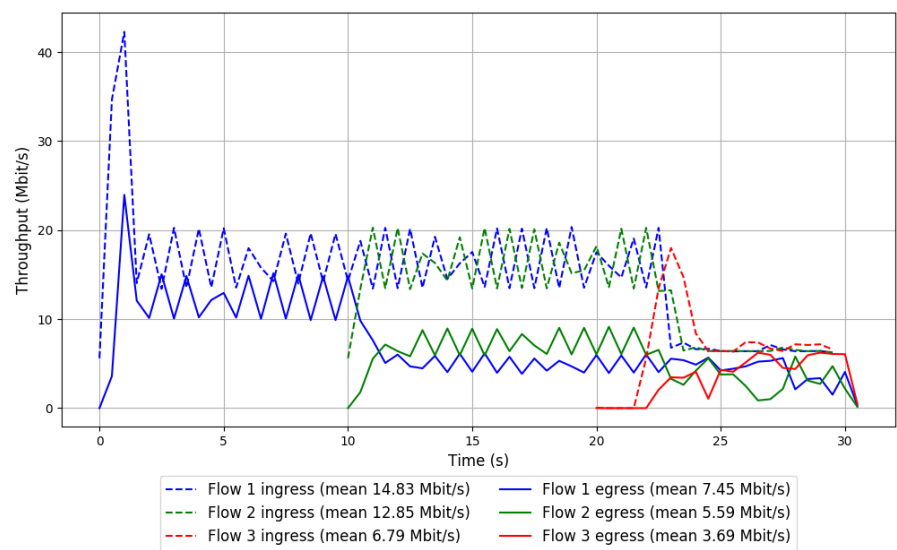
Run 5: Report of Sprout — Data Link

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

Start at: 2019-12-11 06:52:25
End at: 2019-12-11 06:52:55
Local clock offset: 6.708 ms
Remote clock offset: -48.439 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 54.148 ms
Loss rate: 51.65%
-- Flow 1:
Average throughput: 7.45 Mbit/s
95th percentile per-packet one-way delay: 55.988 ms
Loss rate: 49.77%
-- Flow 2:
Average throughput: 5.59 Mbit/s
95th percentile per-packet one-way delay: 51.478 ms
Loss rate: 56.50%
-- Flow 3:
Average throughput: 3.69 Mbit/s
95th percentile per-packet one-way delay: 51.159 ms
Loss rate: 45.63%
```

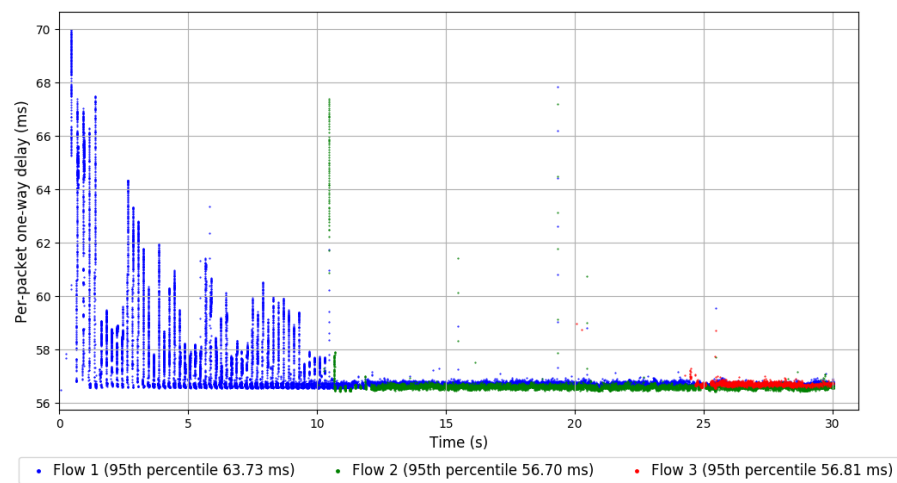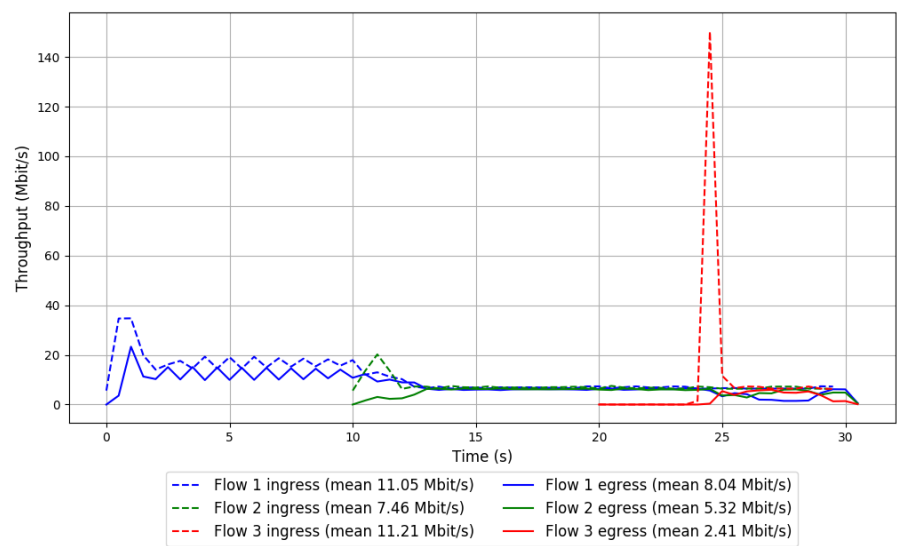Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-12-11 07:27:10
End at: 2019-12-11 07:27:40
Local clock offset: 0.244 ms
Remote clock offset: -43.88 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 61.528 ms
Loss rate: 37.27%
-- Flow 1:
Average throughput: 8.04 Mbit/s
95th percentile per-packet one-way delay: 63.725 ms
Loss rate: 27.25%
-- Flow 2:
Average throughput: 5.32 Mbit/s
95th percentile per-packet one-way delay: 56.703 ms
Loss rate: 28.61%
-- Flow 3:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 56.809 ms
Loss rate: 78.52%
```

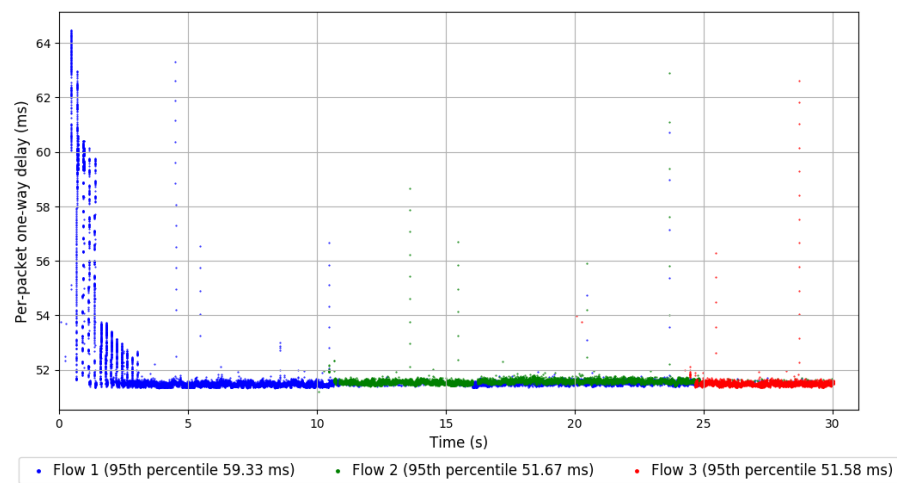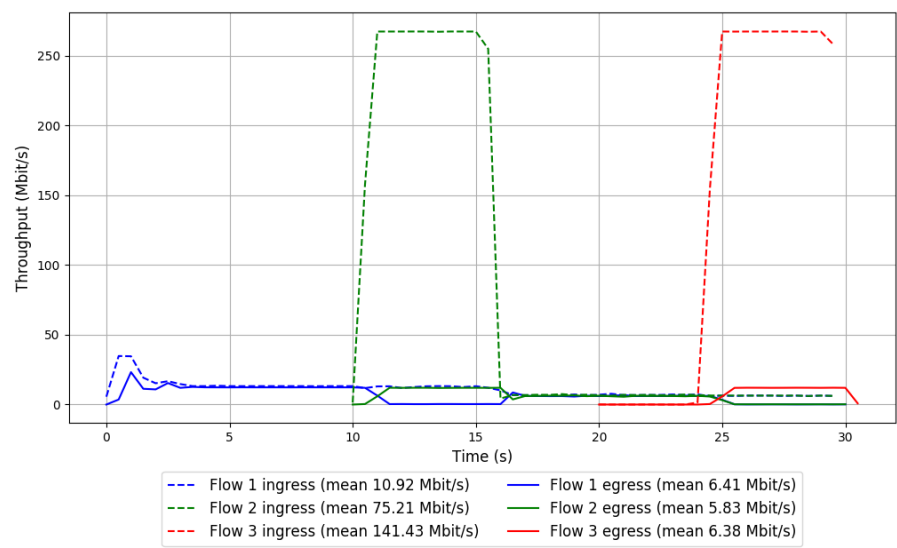Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2019-12-11 08:01:36
End at: 2019-12-11 08:02:06
Local clock offset: 6.306 ms
Remote clock offset: -44.285 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 53.356 ms
Loss rate: 88.54%
-- Flow 1:
Average throughput: 6.41 Mbit/s
95th percentile per-packet one-way delay: 59.326 ms
Loss rate: 41.51%
-- Flow 2:
Average throughput: 5.83 Mbit/s
95th percentile per-packet one-way delay: 51.667 ms
Loss rate: 92.26%
-- Flow 3:
Average throughput: 6.38 Mbit/s
95th percentile per-packet one-way delay: 51.583 ms
Loss rate: 95.49%
```
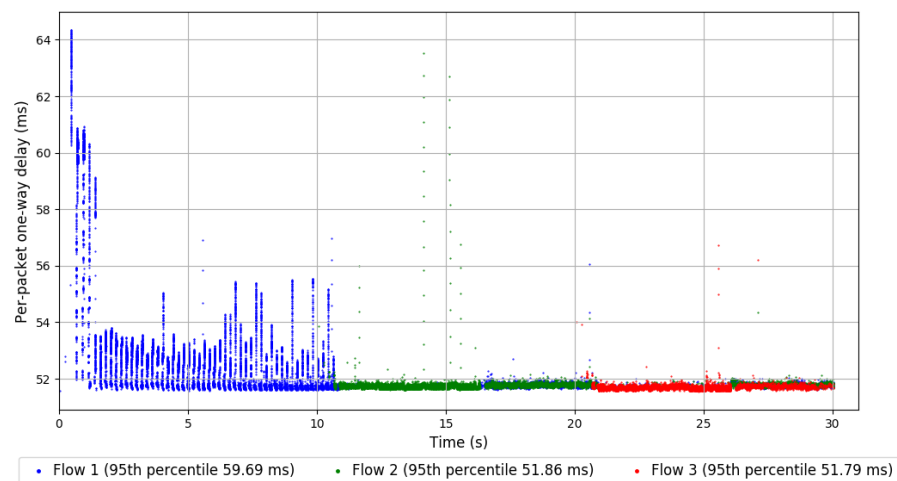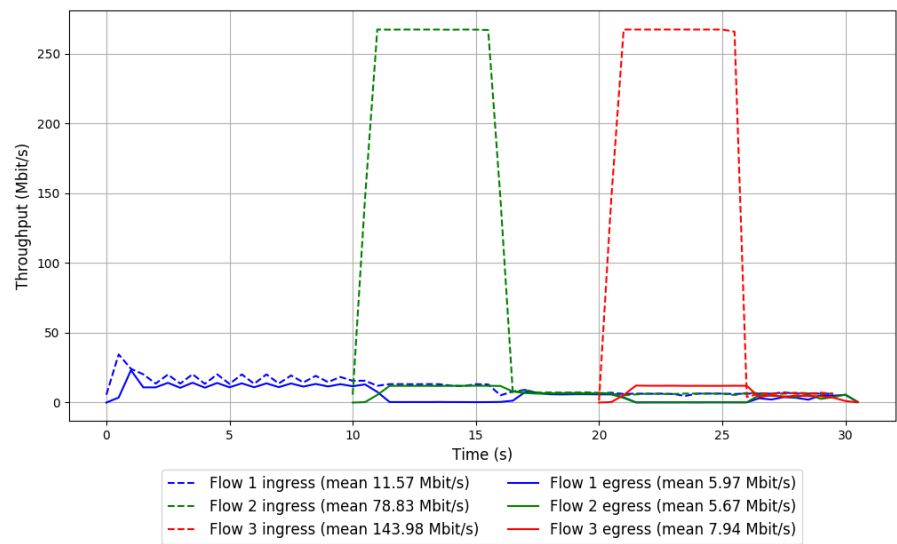
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 10.92 Mbit/s) --- Flow 1 egress (mean 6.41 Mbit/s)
Flow 2 ingress (mean 75.21 Mbit/s) --- Flow 2 egress (mean 5.83 Mbit/s)
Flow 3 ingress (mean 141.43 Mbit/s) --- Flow 3 egress (mean 6.38 Mbit/s)

Flow 1 (95th percentile 59.33 ms)   Flow 2 (95th percentile 51.67 ms)   Flow 3 (95th percentile 51.58 ms)

200

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

Start at: 2019-12-11 08:35:46
End at: 2019-12-11 08:36:16
Local clock offset: 6.371 ms
Remote clock offset: -43.368 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.38 Mbit/s
95th percentile per-packet one-way delay: 54.393 ms
Loss rate: 88.94%
-- Flow 1:
Average throughput: 5.97 Mbit/s
95th percentile per-packet one-way delay: 59.689 ms
Loss rate: 48.38%
-- Flow 2:
Average throughput: 5.67 Mbit/s
95th percentile per-packet one-way delay: 51.860 ms
Loss rate: 92.81%
-- Flow 3:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 51.789 ms
Loss rate: 94.49%
```

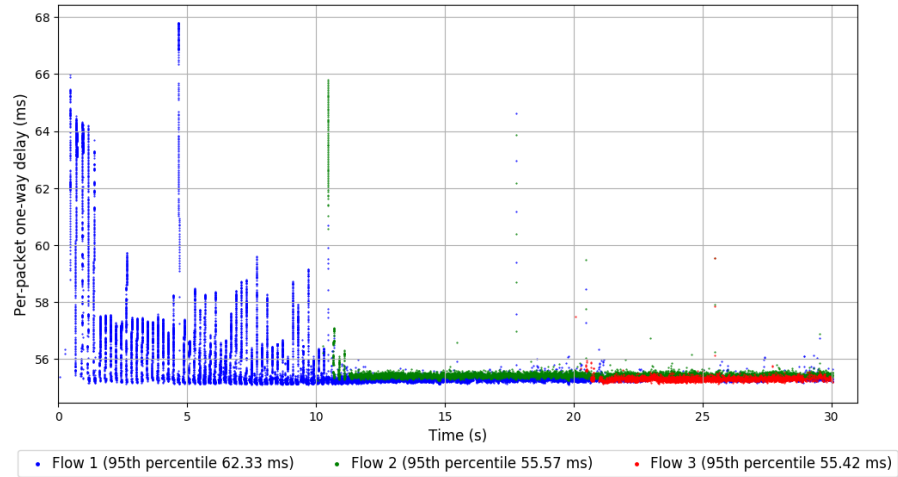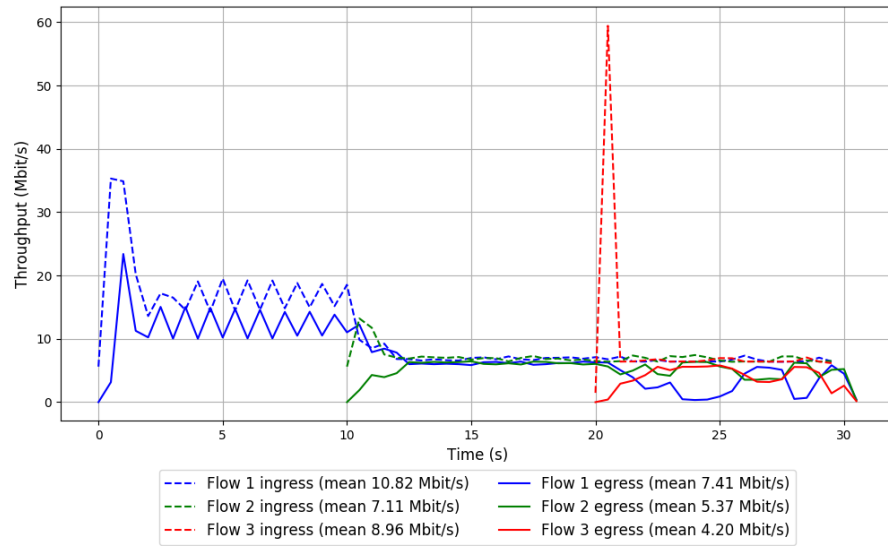Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2019-12-11 09:10:12
End at: 2019-12-11 09:10:42
Local clock offset: 0.034 ms
Remote clock offset: -44.797 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.38 Mbit/s
95th percentile per-packet one-way delay: 58.740 ms
Loss rate: 33.16%
-- Flow 1:
Average throughput: 7.41 Mbit/s
95th percentile per-packet one-way delay: 62.325 ms
Loss rate: 31.48%
-- Flow 2:
Average throughput: 5.37 Mbit/s
95th percentile per-packet one-way delay: 55.566 ms
Loss rate: 24.46%
-- Flow 3:
Average throughput: 4.20 Mbit/s
95th percentile per-packet one-way delay: 55.420 ms
Loss rate: 53.11%
```

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

```
Run 1: Statistics of TCP Vegas

Start at: 2019-12-11 07:02:41
End at: 2019-12-11 07:03:11
Local clock offset: 3.878 ms
Remote clock offset: -45.869 ms
```

Run 1: Report of TCP Vegas — Data Link

Figure is missing

Figure is missing

Run 2: Statistics of TCP Vegas

Start at: 2019-12-11 07:37:13
End at: 2019-12-11 07:37:43
Local clock offset: 2.269 ms
Remote clock offset: -40.946 ms

Run 2: Report of TCP Vegas — Data Link

Figure is missing

Figure is missing

```
Run 3: Statistics of TCP Vegas

Start at: 2019-12-11 08:11:31
End at: 2019-12-11 08:12:01
Local clock offset: 6.492 ms
Remote clock offset: -37.36 ms
```
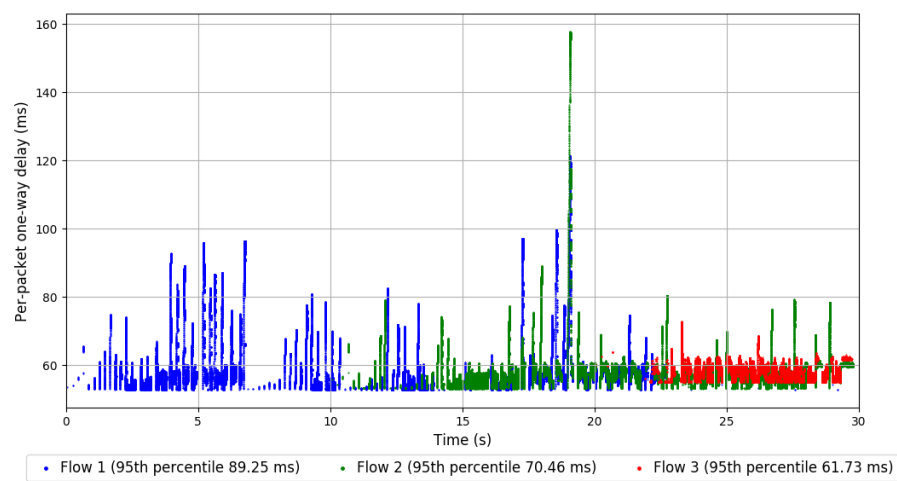
Run 3: Report of TCP Vegas — Data Link

Figure is missing

Figure is missing

```
Run 4: Statistics of TCP Vegas

Start at: 2019-12-11 08:45:52
End at: 2019-12-11 08:46:22
Local clock offset: 5.095 ms
Remote clock offset: -48.188 ms
```

Run 4: Report of TCP Vegas — Data Link

Figure is missing

Figure is missing

```
Run 5: Statistics of TCP Vegas

Start at: 2019-12-11 09:20:26
End at: 2019-12-11 09:20:56
Local clock offset: 4.605 ms
Remote clock offset: -40.453 ms
```
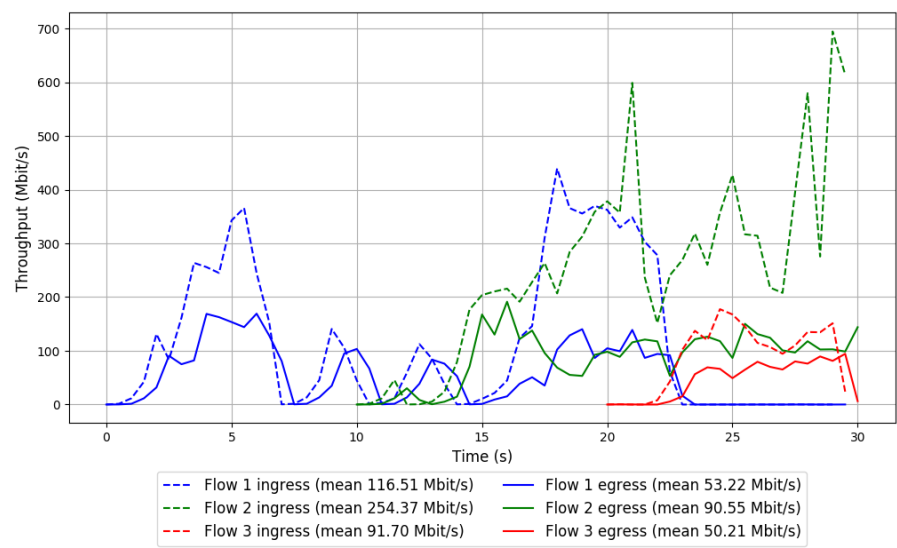
Run 5: Report of TCP Vegas — Data Link

Figure is missing

Figure is missing

```
Run 1: Statistics of Verus

Start at: 2019-12-11 06:56:31
End at: 2019-12-11 06:57:01
Local clock offset: 1.499 ms
Remote clock offset: -48.308 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 128.91 Mbit/s
95th percentile per-packet one-way delay: 77.965 ms
Loss rate: 58.87%
-- Flow 1:
Average throughput: 53.22 Mbit/s
95th percentile per-packet one-way delay: 89.254 ms
Loss rate: 54.31%
-- Flow 2:
Average throughput: 90.55 Mbit/s
95th percentile per-packet one-way delay: 70.460 ms
Loss rate: 64.39%
-- Flow 3:
Average throughput: 50.21 Mbit/s
95th percentile per-packet one-way delay: 61.732 ms
Loss rate: 45.23%
```

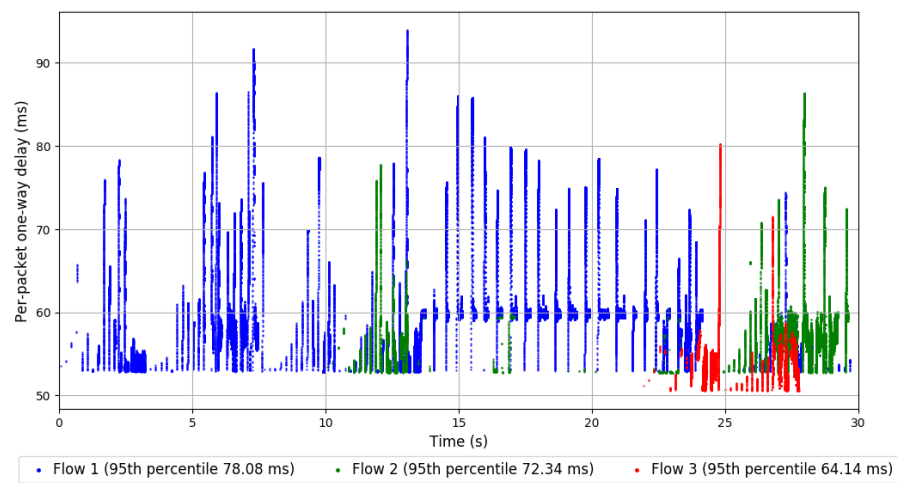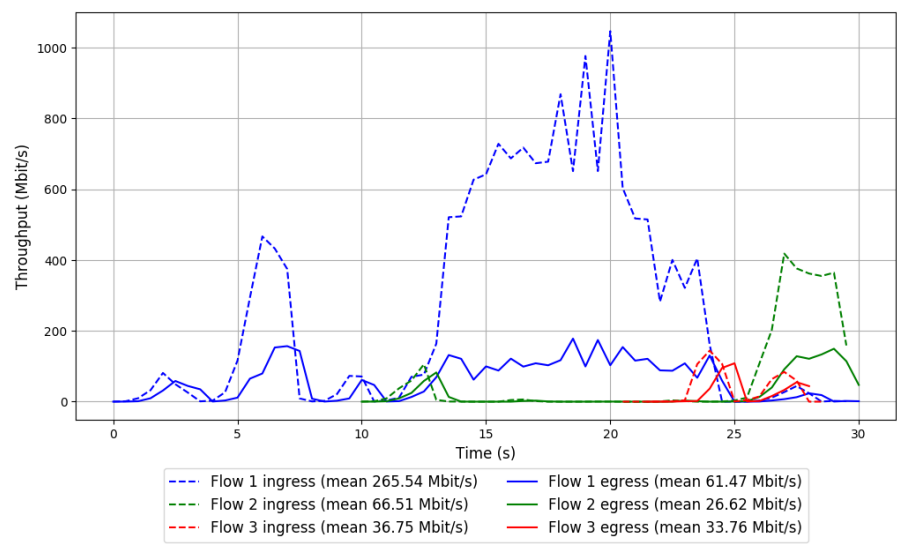Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-12-11 07:31:14
End at: 2019-12-11 07:31:44
Local clock offset: 4.039 ms
Remote clock offset: -45.682 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.68 Mbit/s
95th percentile per-packet one-way delay: 77.128 ms
Loss rate: 73.17%
-- Flow 1:
Average throughput: 61.47 Mbit/s
95th percentile per-packet one-way delay: 78.079 ms
Loss rate: 76.85%
-- Flow 2:
Average throughput: 26.62 Mbit/s
95th percentile per-packet one-way delay: 72.339 ms
Loss rate: 59.96%
-- Flow 3:
Average throughput: 33.76 Mbit/s
95th percentile per-packet one-way delay: 64.136 ms
Loss rate: 33.15%
```
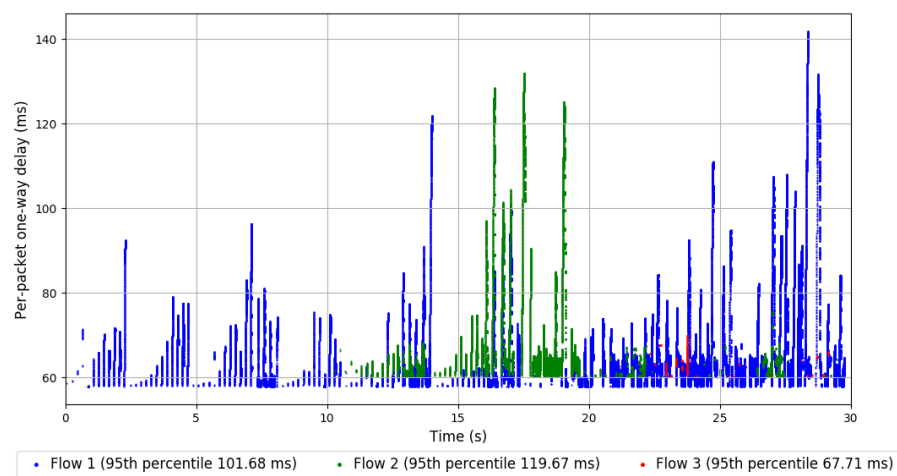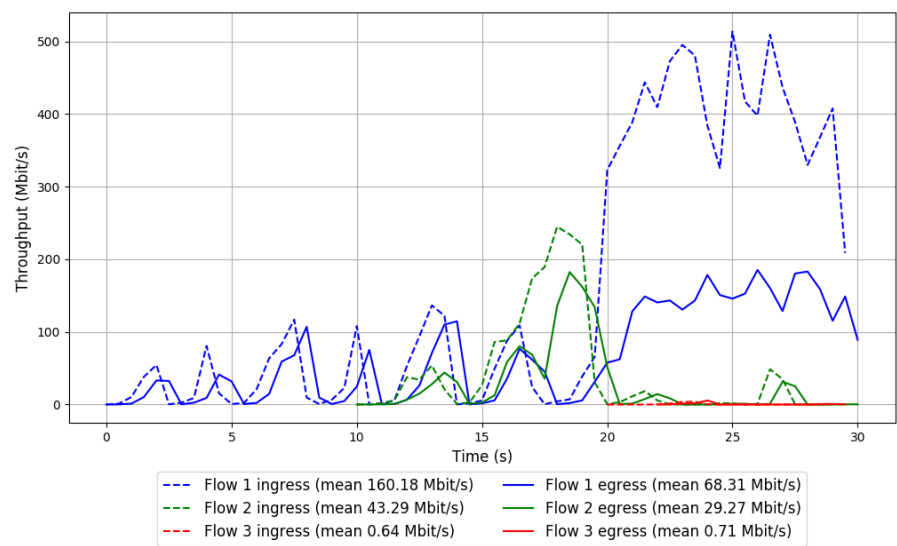
Run 2: Report of Verus — Data Link

- Flow 1 ingress (mean 265.54 Mbit/s)
- Flow 1 egress (mean 61.47 Mbit/s)
- Flow 2 ingress (mean 66.51 Mbit/s)
- Flow 2 egress (mean 26.62 Mbit/s)
- Flow 3 ingress (mean 36.75 Mbit/s)
- Flow 3 egress (mean 33.76 Mbit/s)

- Flow 1 (95th percentile 78.08 ms)
- Flow 2 (95th percentile 72.34 ms)
- Flow 3 (95th percentile 64.14 ms)

```
Run 3: Statistics of Verus

Start at: 2019-12-11 08:05:43
End at: 2019-12-11 08:06:13
Local clock offset: 6.699 ms
Remote clock offset: -37.256 ms


# Below is generated by plot.py at 2019-12-11 09:55:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.75 Mbit/s
95th percentile per-packet one-way delay: 105.277 ms
Loss rate: 53.53%
-- Flow 1:
Average throughput: 68.31 Mbit/s
95th percentile per-packet one-way delay: 101.680 ms
Loss rate: 57.34%
-- Flow 2:
Average throughput: 29.27 Mbit/s
95th percentile per-packet one-way delay: 119.672 ms
Loss rate: 32.39%
-- Flow 3:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 67.712 ms
Loss rate: 13.79%
```

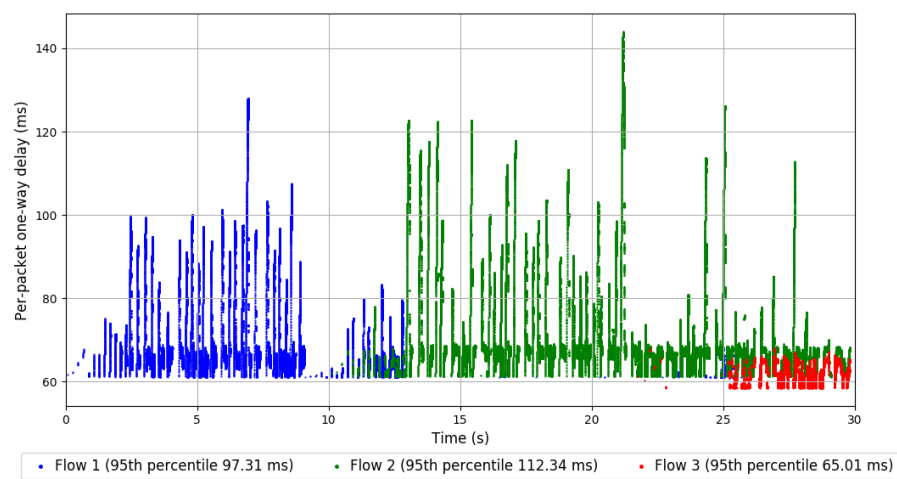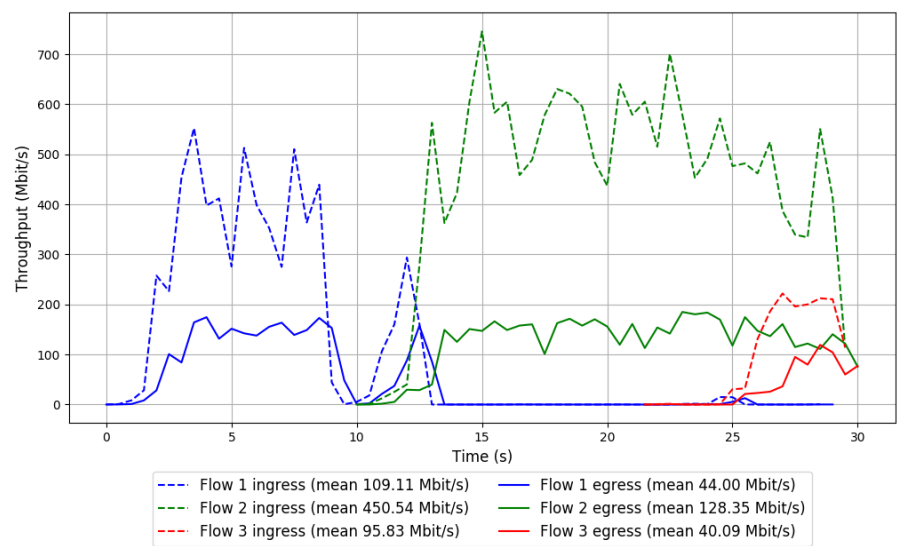## Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-12-11 08:39:54
End at: 2019-12-11 08:40:24
Local clock offset: 5.152 ms
Remote clock offset: -36.775 ms


# Below is generated by plot.py at 2019-12-11 09:55:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.19 Mbit/s
95th percentile per-packet one-way delay: 106.382 ms
Loss rate: 67.86%
-- Flow 1:
Average throughput: 44.00 Mbit/s
95th percentile per-packet one-way delay: 97.307 ms
Loss rate: 59.95%
-- Flow 2:
Average throughput: 128.35 Mbit/s
95th percentile per-packet one-way delay: 112.340 ms
Loss rate: 71.50%
-- Flow 3:
Average throughput: 40.09 Mbit/s
95th percentile per-packet one-way delay: 65.014 ms
Loss rate: 58.16%
```

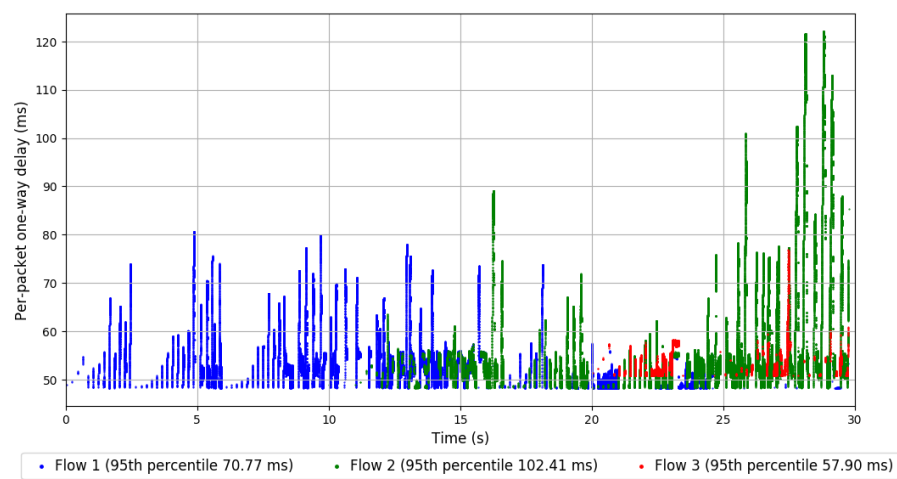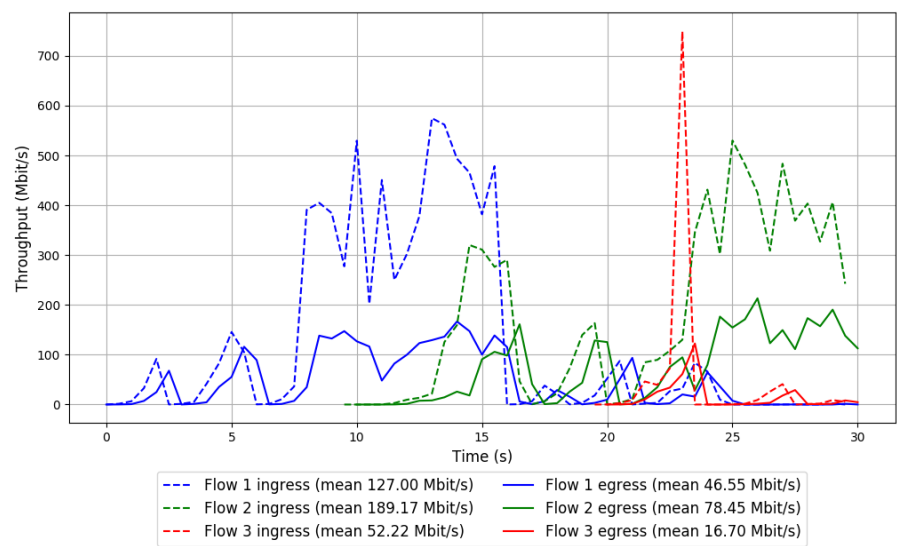Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-12-11 09:14:16
End at: 2019-12-11 09:14:46
Local clock offset: 3.953 ms
Remote clock offset: -47.449 ms


# Below is generated by plot.py at 2019-12-11 09:55:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 104.13 Mbit/s
95th percentile per-packet one-way delay: 85.107 ms
Loss rate: 61.38%
-- Flow 1:
Average throughput: 46.55 Mbit/s
95th percentile per-packet one-way delay: 70.768 ms
Loss rate: 63.34%
-- Flow 2:
Average throughput: 78.45 Mbit/s
95th percentile per-packet one-way delay: 102.410 ms
Loss rate: 58.50%
-- Flow 3:
Average throughput: 16.70 Mbit/s
95th percentile per-packet one-way delay: 57.899 ms
Loss rate: 68.02%
```

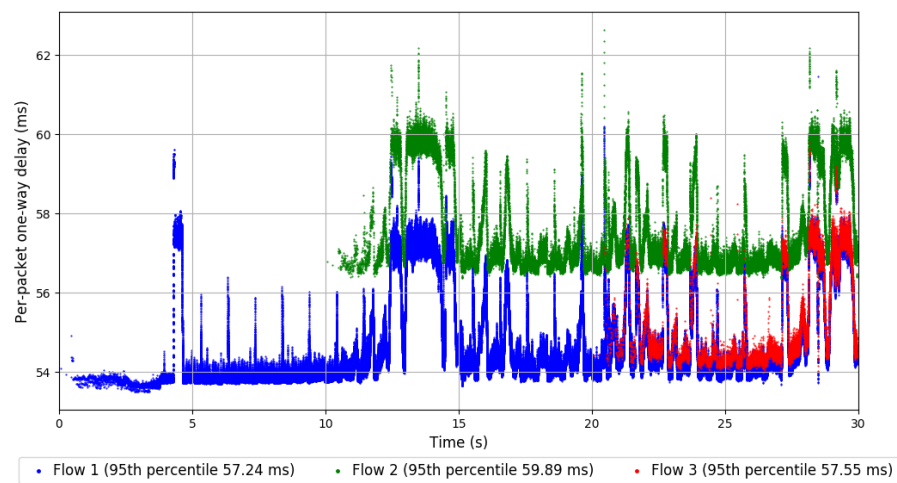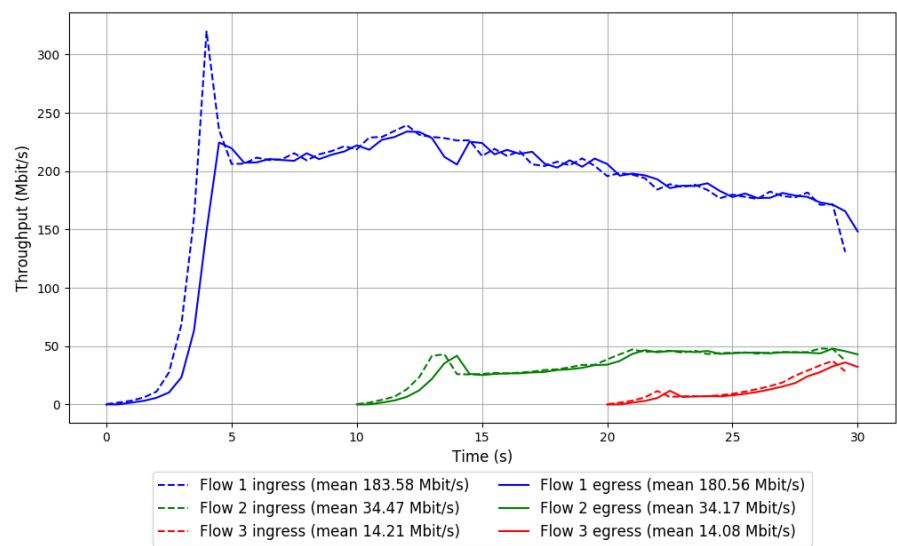Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-12-11 07:03:57
End at: 2019-12-11 07:04:27
Local clock offset: 3.643 ms
Remote clock offset: -45.038 ms


# Below is generated by plot.py at 2019-12-11 09:56:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 207.92 Mbit/s
95th percentile per-packet one-way delay: 57.516 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 180.56 Mbit/s
95th percentile per-packet one-way delay: 57.244 ms
Loss rate: 1.64%
-- Flow 2:
Average throughput: 34.17 Mbit/s
95th percentile per-packet one-way delay: 59.889 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 14.08 Mbit/s
95th percentile per-packet one-way delay: 57.554 ms
Loss rate: 0.95%
```
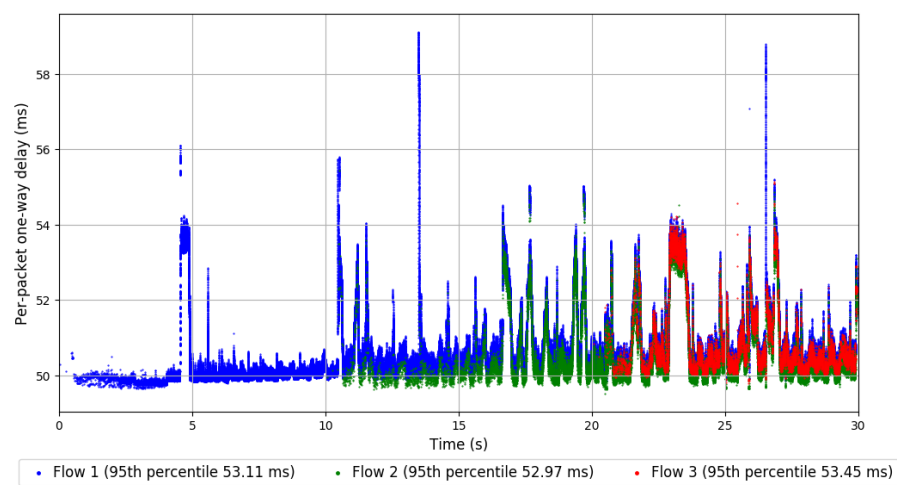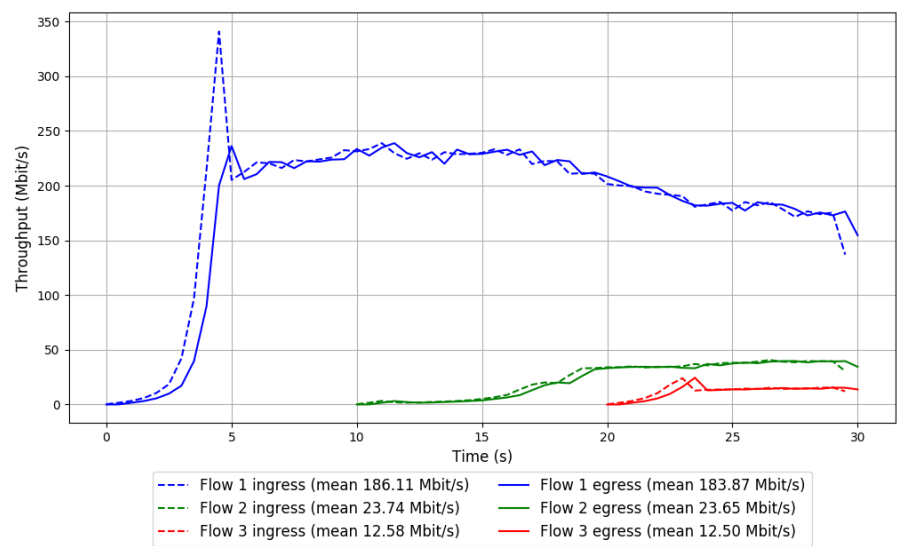
Run 1: Report of PCC-Vivace — Data Link

- - - - Flow 1 ingress (mean 183.58 Mbit/s) ——— Flow 1 egress (mean 180.56 Mbit/s)
- - - - Flow 2 ingress (mean 34.47 Mbit/s) ——— Flow 2 egress (mean 34.17 Mbit/s)
- - - - Flow 3 ingress (mean 14.21 Mbit/s) ——— Flow 3 egress (mean 14.08 Mbit/s)

• Flow 1 (95th percentile 57.24 ms)   • Flow 2 (95th percentile 59.89 ms)   • Flow 3 (95th percentile 57.55 ms)

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-12-11 07:38:29
End at: 2019-12-11 07:38:59
Local clock offset: 4.914 ms
Remote clock offset: -47.822 ms


# Below is generated by plot.py at 2019-12-11 09:56:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 203.72 Mbit/s
95th percentile per-packet one-way delay: 53.113 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 183.87 Mbit/s
95th percentile per-packet one-way delay: 53.107 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 23.65 Mbit/s
95th percentile per-packet one-way delay: 52.972 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 12.50 Mbit/s
95th percentile per-packet one-way delay: 53.451 ms
Loss rate: 0.59%
```

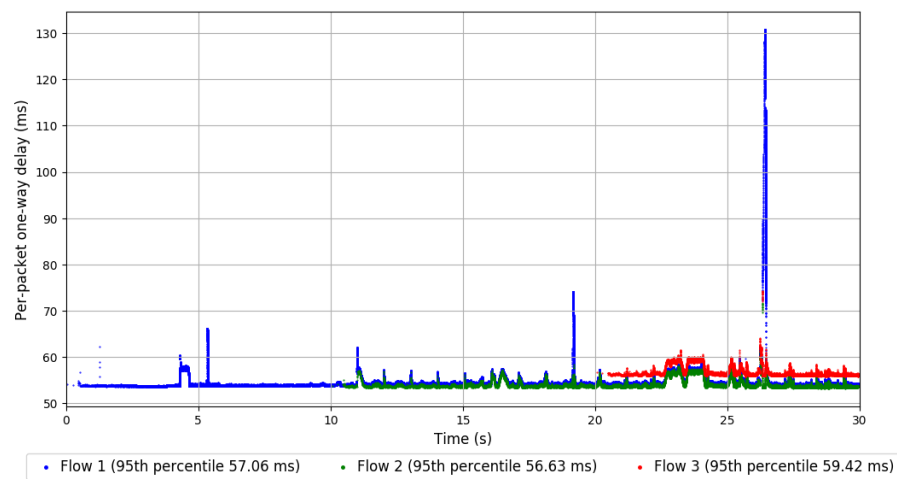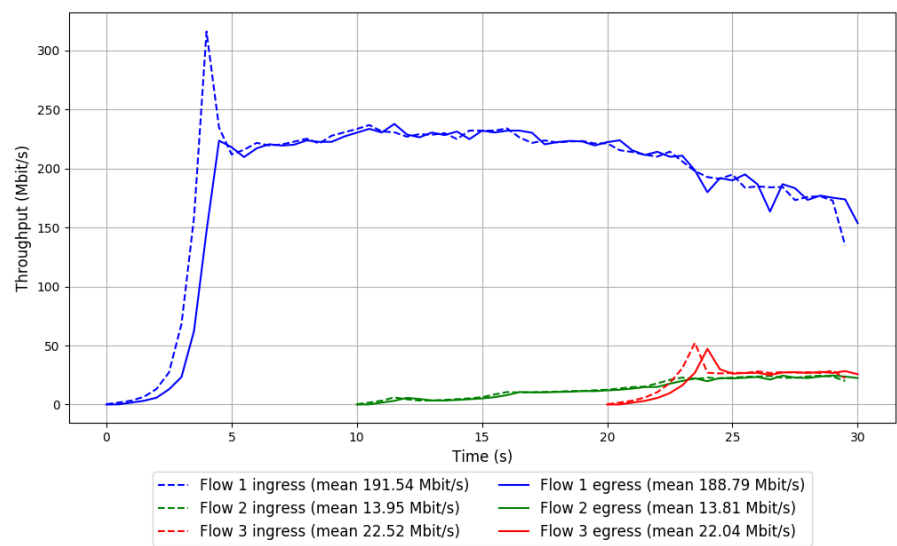Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-12-11 08:12:47
End at: 2019-12-11 08:13:17
Local clock offset: 4.379 ms
Remote clock offset: -43.635 ms


# Below is generated by plot.py at 2019-12-11 09:56:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 205.24 Mbit/s
95th percentile per-packet one-way delay: 57.147 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 188.79 Mbit/s
95th percentile per-packet one-way delay: 57.064 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 13.81 Mbit/s
95th percentile per-packet one-way delay: 56.635 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 22.04 Mbit/s
95th percentile per-packet one-way delay: 59.420 ms
Loss rate: 2.13%
```

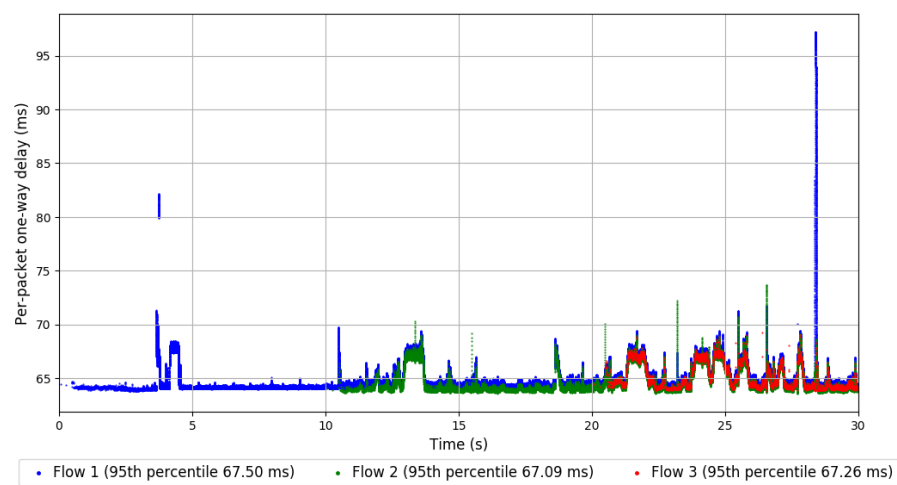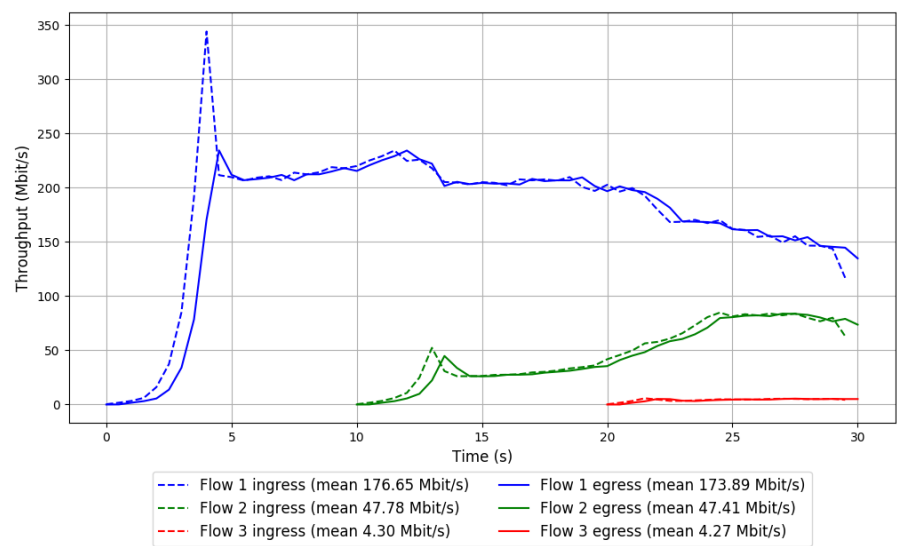Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-12-11 08:47:08
End at: 2019-12-11 08:47:38
Local clock offset: -0.876 ms
Remote clock offset: -39.611 ms


# Below is generated by plot.py at 2019-12-11 09:56:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 206.83 Mbit/s
95th percentile per-packet one-way delay: 67.463 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 173.89 Mbit/s
95th percentile per-packet one-way delay: 67.505 ms
Loss rate: 1.56%
-- Flow 2:
Average throughput: 47.41 Mbit/s
95th percentile per-packet one-way delay: 67.095 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 67.256 ms
Loss rate: 0.65%
```
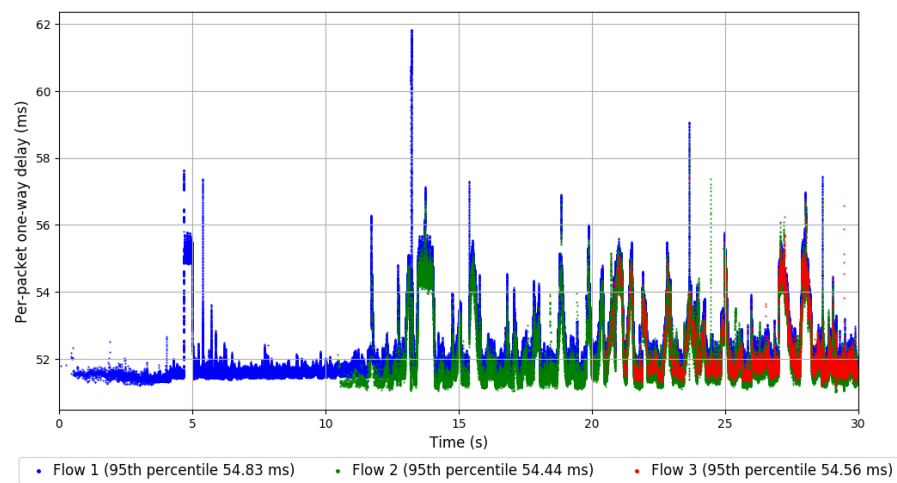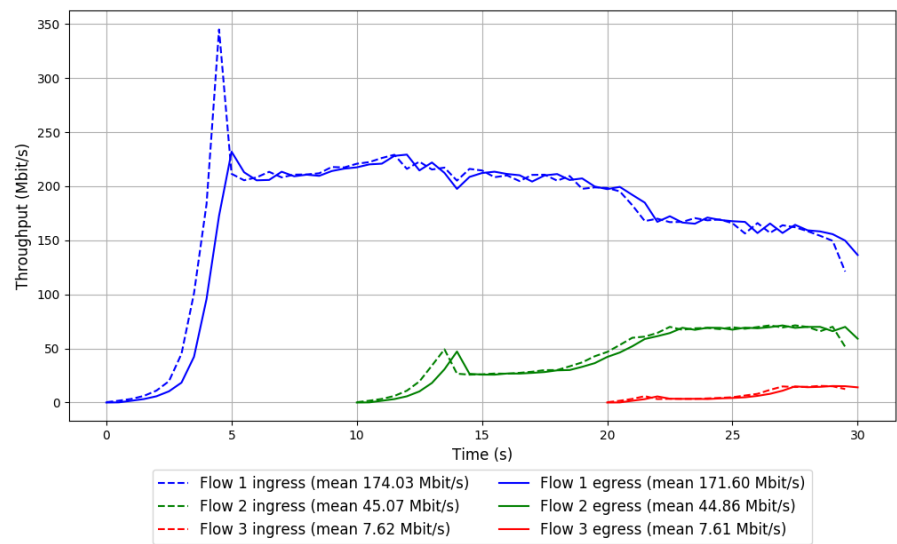
Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 176.65 Mbit/s)   Flow 1 egress (mean 173.89 Mbit/s)
Flow 2 ingress (mean 47.78 Mbit/s)   Flow 2 egress (mean 47.41 Mbit/s)
Flow 3 ingress (mean 4.30 Mbit/s)   Flow 3 egress (mean 4.27 Mbit/s)

Flow 1 (95th percentile 67.50 ms)   Flow 2 (95th percentile 67.09 ms)   Flow 3 (95th percentile 67.26 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-12-11 09:21:43
End at: 2019-12-11 09:22:13
Local clock offset: 4.608 ms
Remote clock offset: -43.741 ms


# Below is generated by plot.py at 2019-12-11 09:56:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 203.94 Mbit/s
95th percentile per-packet one-way delay: 54.763 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 171.60 Mbit/s
95th percentile per-packet one-way delay: 54.829 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 44.86 Mbit/s
95th percentile per-packet one-way delay: 54.435 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 54.559 ms
Loss rate: 0.16%
```

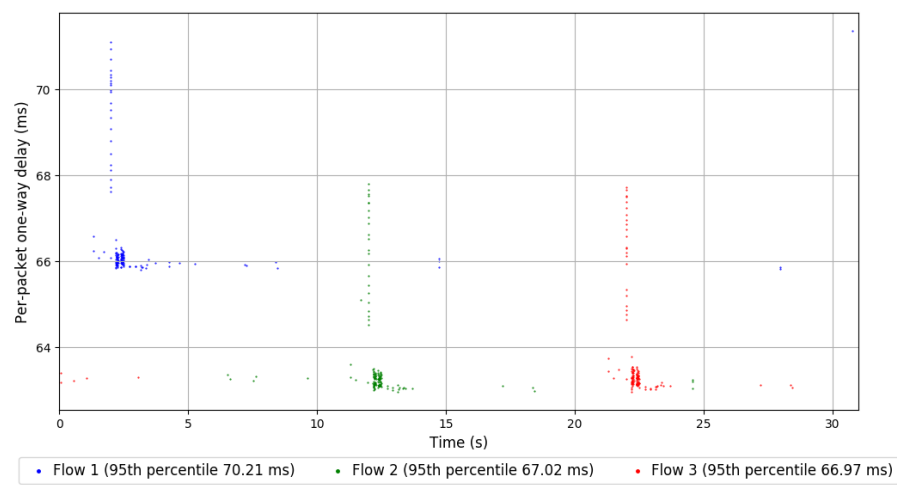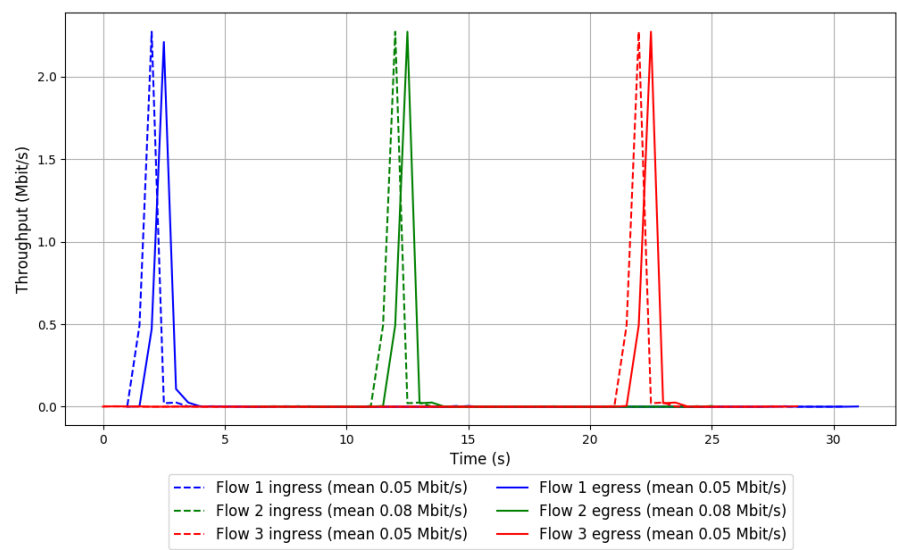Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-12-11 06:51:09
End at: 2019-12-11 06:51:39
Local clock offset: 1.699 ms
Remote clock offset: -37.726 ms


# Below is generated by plot.py at 2019-12-11 09:56:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 67.730 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 70.212 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 67.015 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 66.965 ms
Loss rate: 0.00%
```

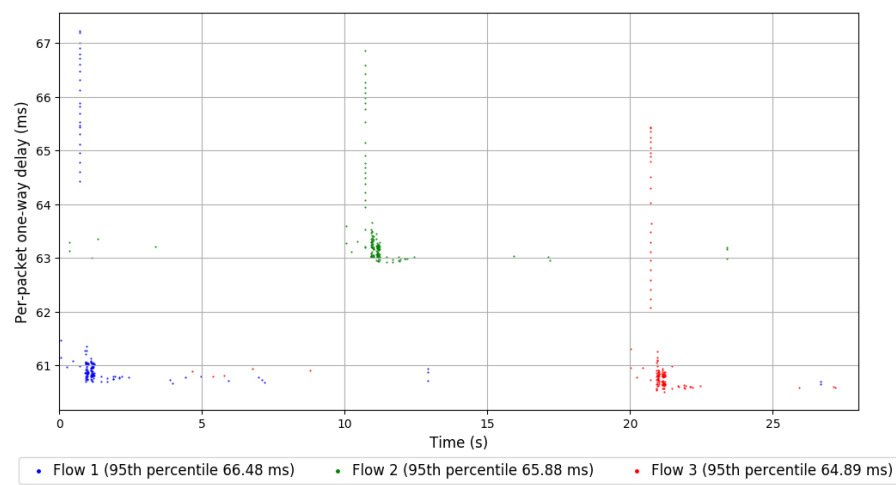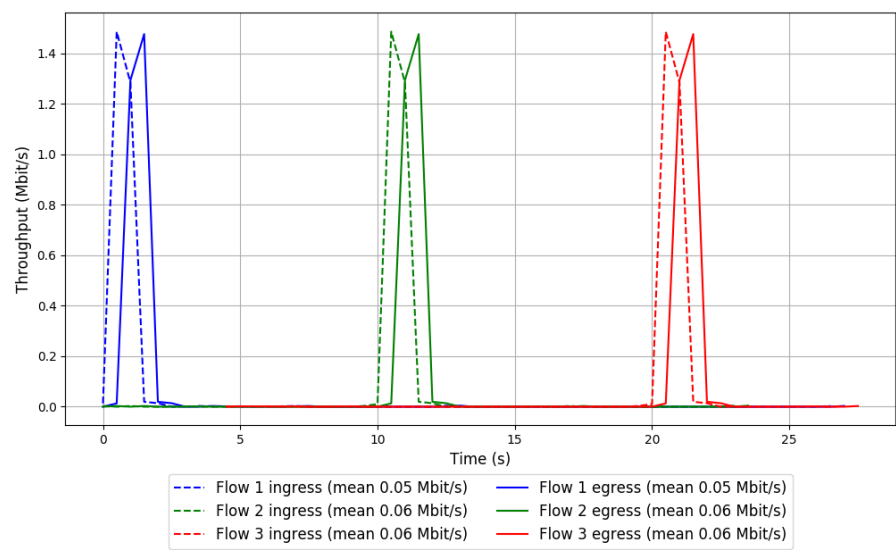Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-12-11 07:25:54
End at: 2019-12-11 07:26:24
Local clock offset: 2.736 ms
Remote clock offset: -37.14 ms


# Below is generated by plot.py at 2019-12-11 09:56:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 65.534 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 66.479 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 65.878 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.893 ms
Loss rate: 0.00%
```

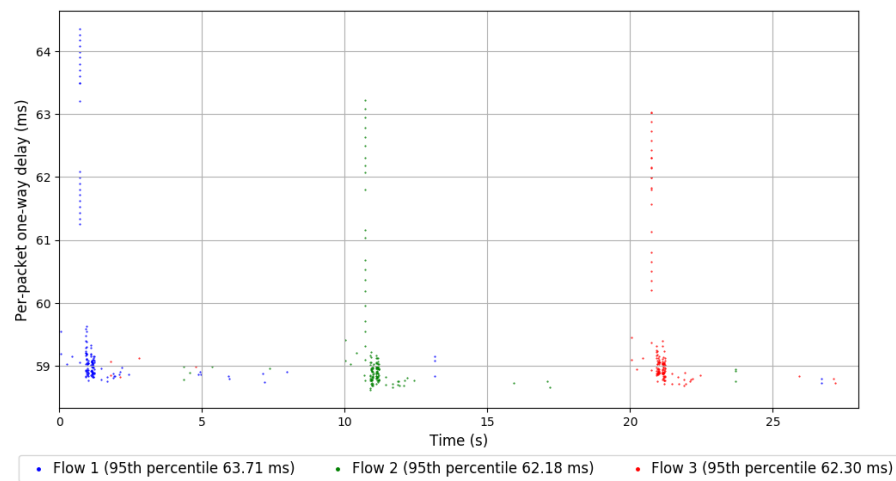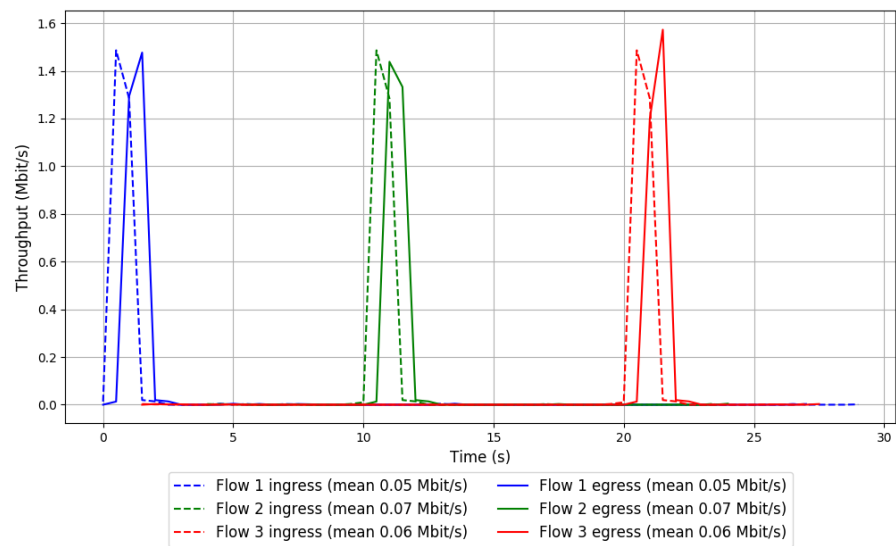Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-12-11 08:00:19
End at: 2019-12-11 08:00:49
Local clock offset: 5.938 ms
Remote clock offset: -37.009 ms


# Below is generated by plot.py at 2019-12-11 09:56:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 62.498 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.708 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 62.184 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 62.301 ms
Loss rate: 0.00%
```

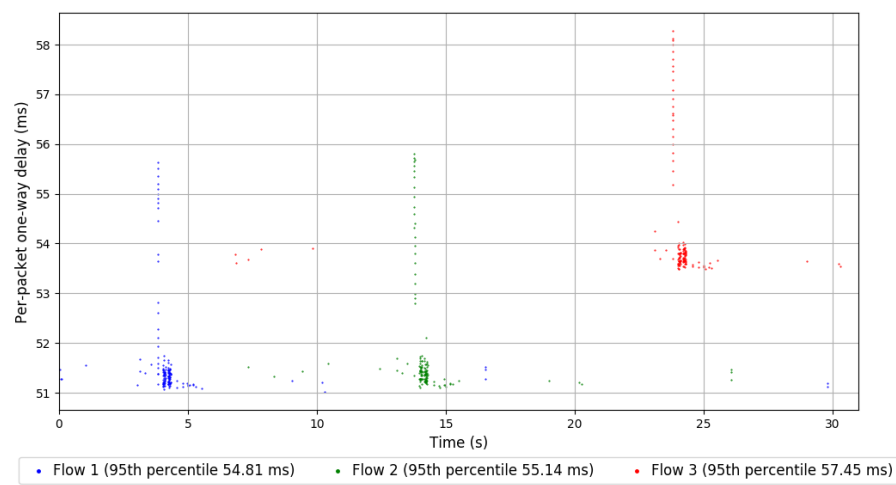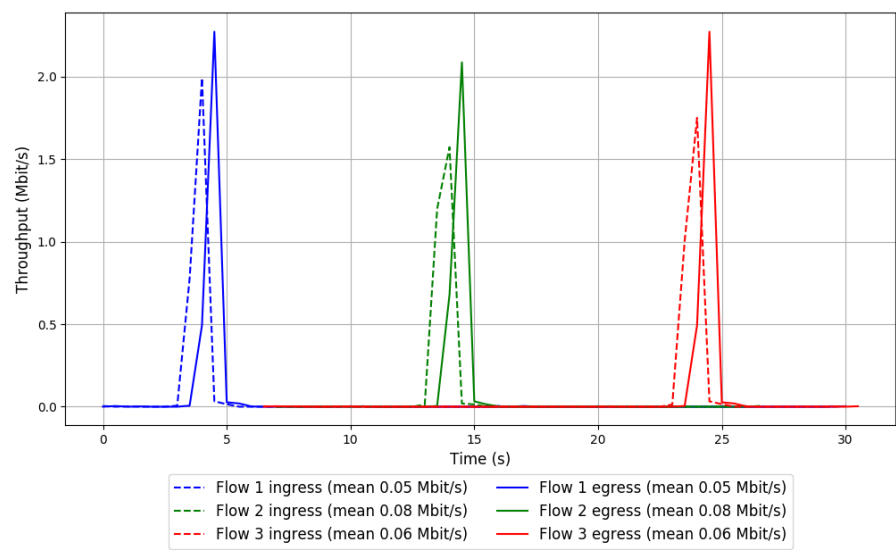Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-12-11 08:34:30
End at: 2019-12-11 08:35:00
Local clock offset: 6.075 ms
Remote clock offset: -43.991 ms


# Below is generated by plot.py at 2019-12-11 09:56:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 55.656 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 54.811 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 55.137 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 57.454 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-12-11 09:08:55
End at: 2019-12-11 09:09:25
Local clock offset: 4.655 ms
Remote clock offset: -47.151 ms


# Below is generated by plot.py at 2019-12-11 09:56:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 51.811 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.811 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 51.063 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 54.070 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link