Pantheon Report

Generated at 2018-04-17 21:04:01 (UTC).

Data path: China Ethernet (*remote*) →AWS Korea Ethernet (*local*).

Repeated the test of 16 congestion control schemes 10 times.

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

Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).
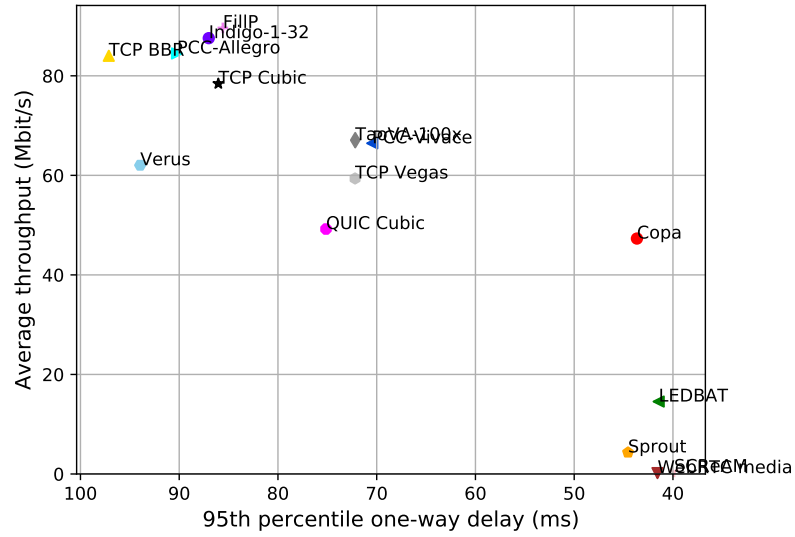
NTP offsets were measured against `ntp.nict.jp` and have been applied to correct the timestamps in logs.
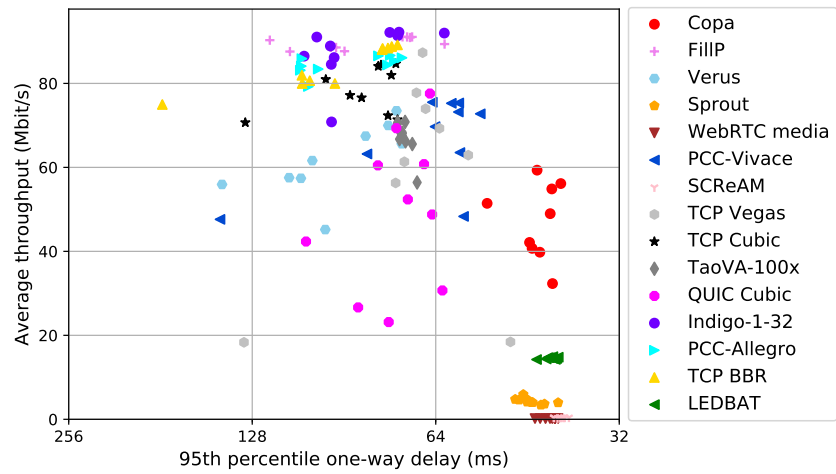
```
Git summary:
branch: master @ b3d6e7098641364fd3a292656a51aa81e316d0b4
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
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 @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 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 @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
```

third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581

test from China Ethernet to AWS Korea Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from China Ethernet to AWS Korea Ethernet, 10 runs of 30s each per scheme
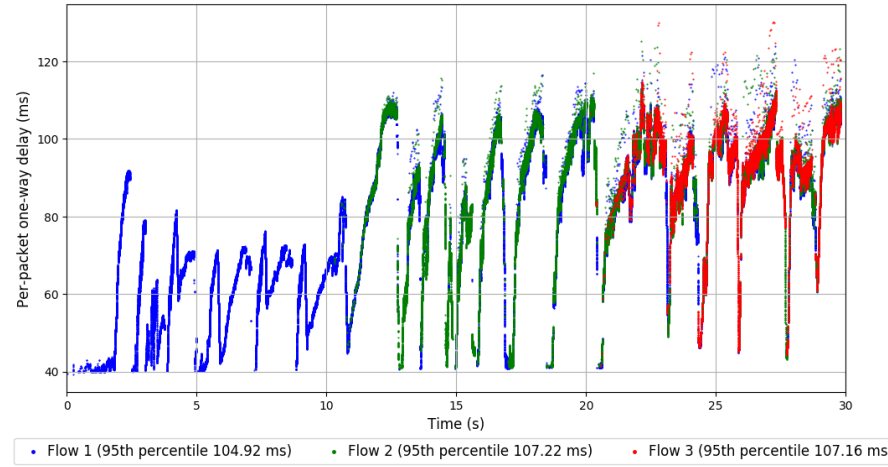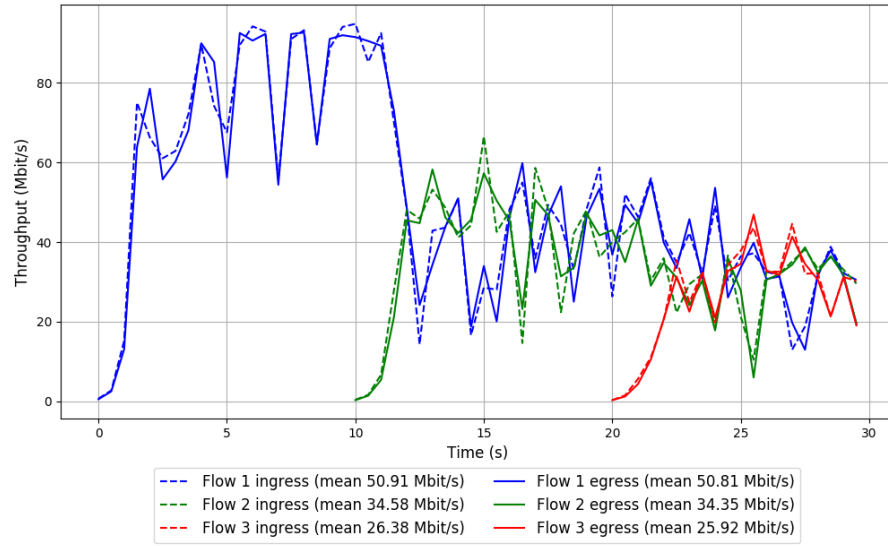3 flows with 10s interval between flows

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	51.21	36.25	26.93	94.86	98.37	101.52	0.79	1.48	3.60
TCP Cubic	10	45.67	36.01	27.14	80.55	88.43	89.29	0.51	1.16	3.32
LEDBAT	10	9.43	6.27	3.00	41.33	41.65	41.20	1.30	1.95	3.98
PCC-Allegro	10	56.69	28.51	28.92	88.21	90.74	92.34	2.20	2.44	7.04
QUIC Cubic	10	26.30	27.55	14.30	63.64	75.37	75.93	0.42	1.53	2.34
SCReAM	10	0.22	0.21	0.20	39.85	39.80	39.87	0.60	0.94	2.39
WebRTC media	10	0.07	0.06	0.06	41.71	41.53	41.38	0.00	0.00	0.16
Sprout	10	2.31	2.24	1.68	44.44	43.75	43.09	0.92	1.15	2.99
TaoVA-100x	10	40.01	31.83	18.32	70.37	73.45	74.69	2.47	4.80	5.96
TCP Vegas	10	33.02	29.73	20.28	70.30	74.48	75.53	0.54	1.07	2.52
Verus	10	33.34	33.83	19.34	93.34	88.60	94.72	1.06	1.42	4.31
Copa	9	29.24	20.68	13.28	41.96	44.44	44.00	0.42	1.12	2.40
FillP	10	46.79	46.09	37.72	84.29	86.02	86.79	0.41	2.76	7.86
Indigo-1-32	10	62.80	25.98	23.57	85.82	87.70	89.45	1.25	1.97	3.52
PCC-Vivace	10	57.75	11.20	3.90	70.21	70.86	70.16	1.10	1.85	3.13
PCC-Expr	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

```
Run 1: Statistics of TCP BBR

Start at: 2018-04-17 13:13:32
End at: 2018-04-17 13:14:02
Local clock offset: 6.367 ms
Remote clock offset: -21.711 ms


# Below is generated by plot.py at 2018-04-17 20:46:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.94 Mbit/s
95th percentile per-packet one-way delay: 106.094 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 50.81 Mbit/s
95th percentile per-packet one-way delay: 104.915 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 34.35 Mbit/s
95th percentile per-packet one-way delay: 107.216 ms
Loss rate: 1.89%
-- Flow 3:
Average throughput: 25.92 Mbit/s
95th percentile per-packet one-way delay: 107.157 ms
Loss rate: 4.38%
```
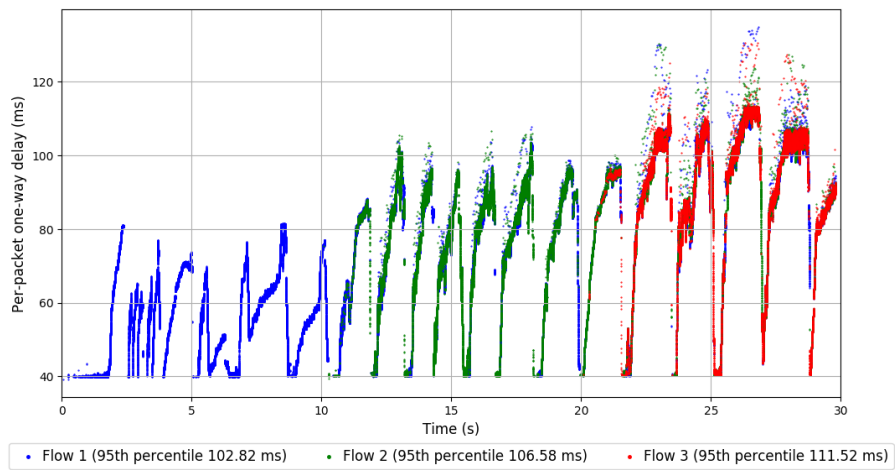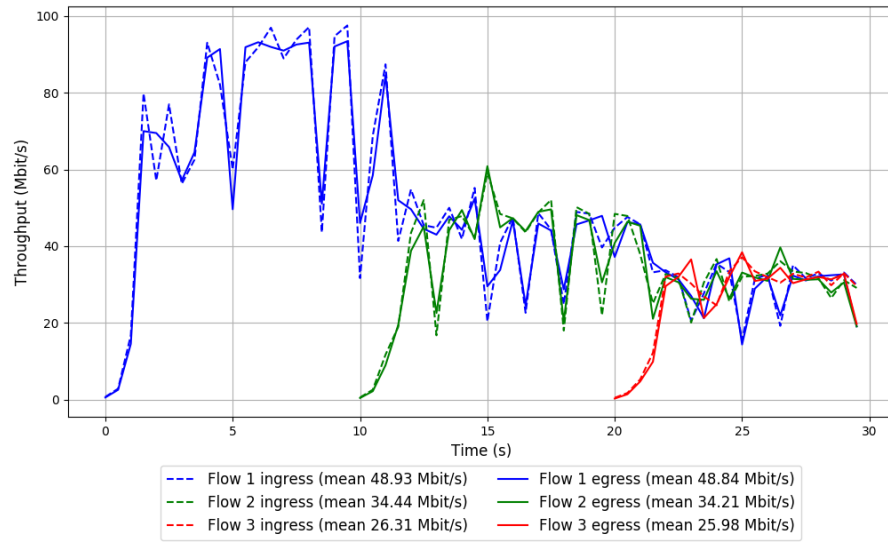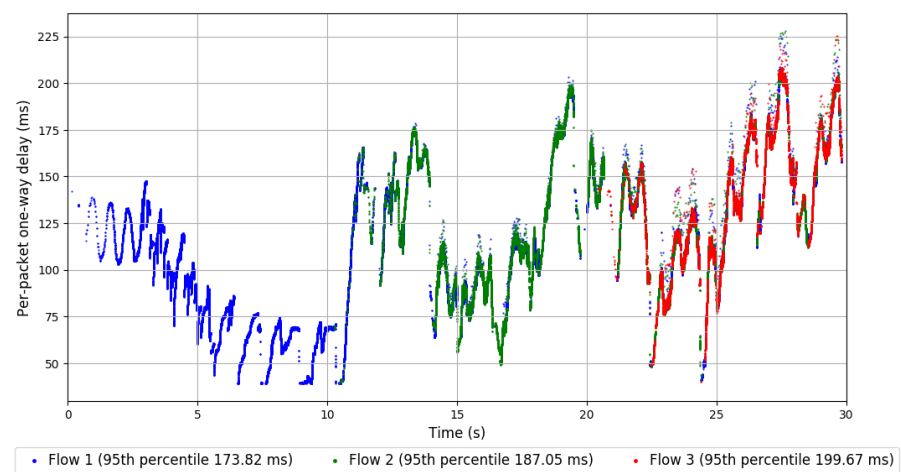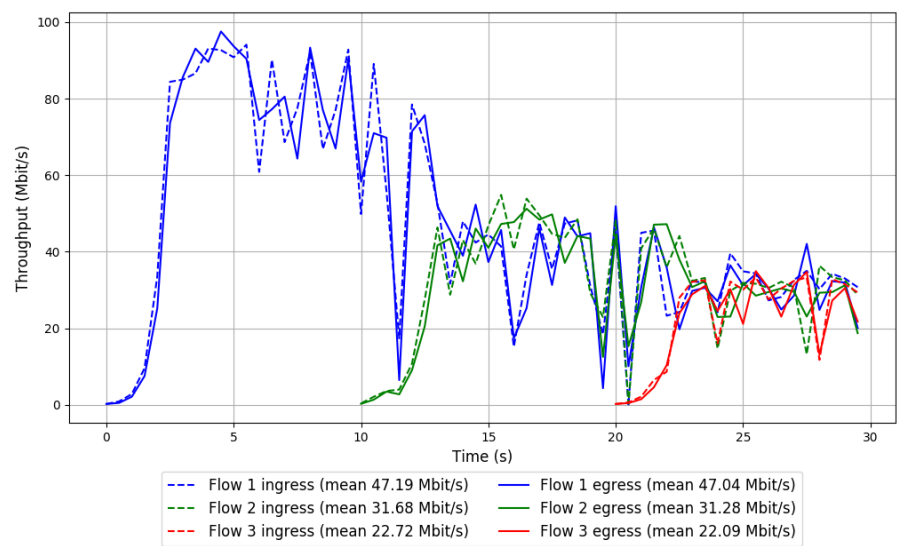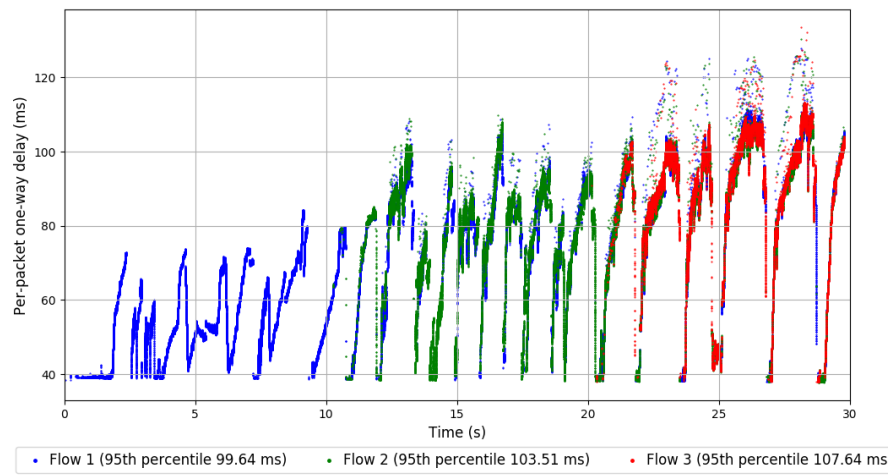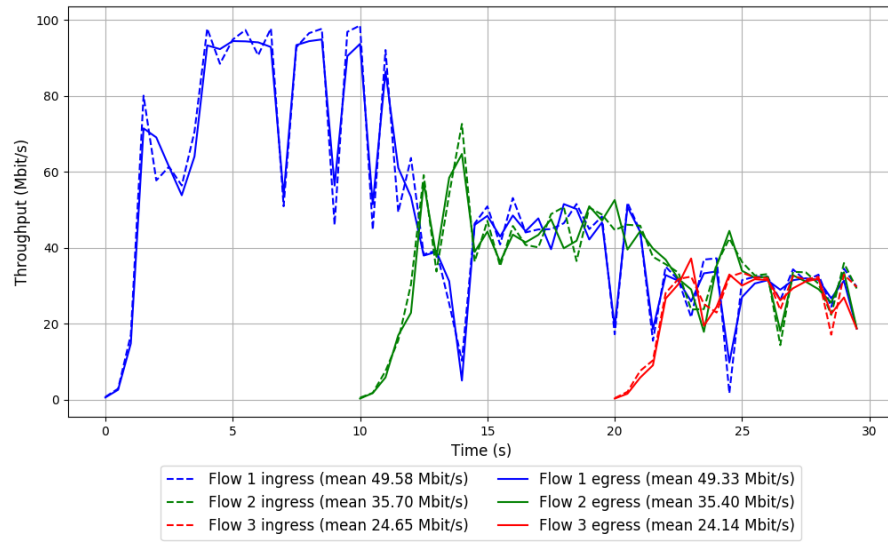
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2018-04-17 13:36:25
End at: 2018-04-17 13:36:55
Local clock offset: 7.424 ms
Remote clock offset: 21.47 ms


# Below is generated by plot.py at 2018-04-17 20:46:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.98 Mbit/s
95th percentile per-packet one-way delay: 106.002 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 48.84 Mbit/s
95th percentile per-packet one-way delay: 102.816 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 34.21 Mbit/s
95th percentile per-packet one-way delay: 106.584 ms
Loss rate: 1.86%
-- Flow 3:
Average throughput: 25.98 Mbit/s
95th percentile per-packet one-way delay: 111.520 ms
Loss rate: 3.43%
```

Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 48.93 Mbit/s) --- Flow 1 egress (mean 48.84 Mbit/s)
Flow 2 ingress (mean 34.44 Mbit/s) --- Flow 2 egress (mean 34.21 Mbit/s)
Flow 3 ingress (mean 26.31 Mbit/s) --- Flow 3 egress (mean 25.98 Mbit/s)

Flow 1 (95th percentile 102.82 ms) • Flow 2 (95th percentile 106.58 ms) • Flow 3 (95th percentile 111.52 ms)

```
Run 3: Statistics of TCP BBR

Start at: 2018-04-17 13:59:30
End at: 2018-04-17 14:00:00
Local clock offset: 9.942 ms
Remote clock offset: 18.132 ms


# Below is generated by plot.py at 2018-04-17 20:46:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.99 Mbit/s
95th percentile per-packet one-way delay: 179.749 ms
Loss rate: 2.19%
-- Flow 1:
Average throughput: 47.04 Mbit/s
95th percentile per-packet one-way delay: 173.825 ms
Loss rate: 1.42%
-- Flow 2:
Average throughput: 31.28 Mbit/s
95th percentile per-packet one-way delay: 187.053 ms
Loss rate: 2.52%
-- Flow 3:
Average throughput: 22.09 Mbit/s
95th percentile per-packet one-way delay: 199.666 ms
Loss rate: 6.08%
```
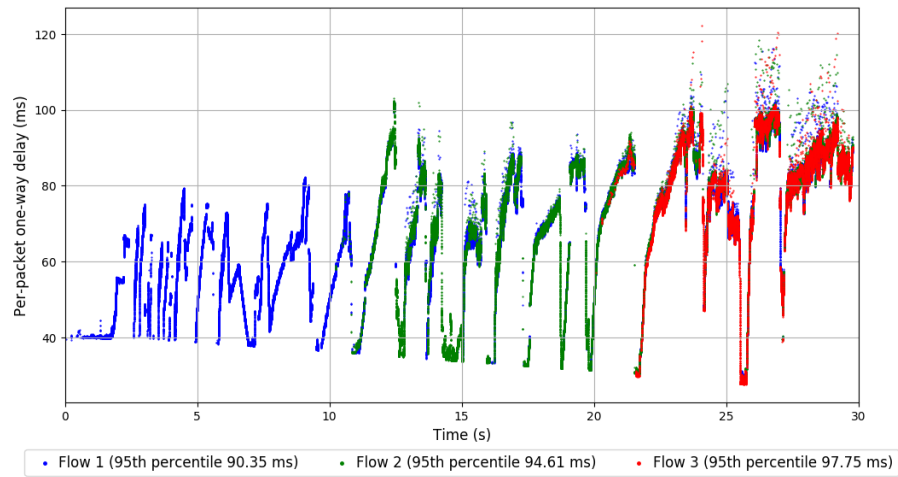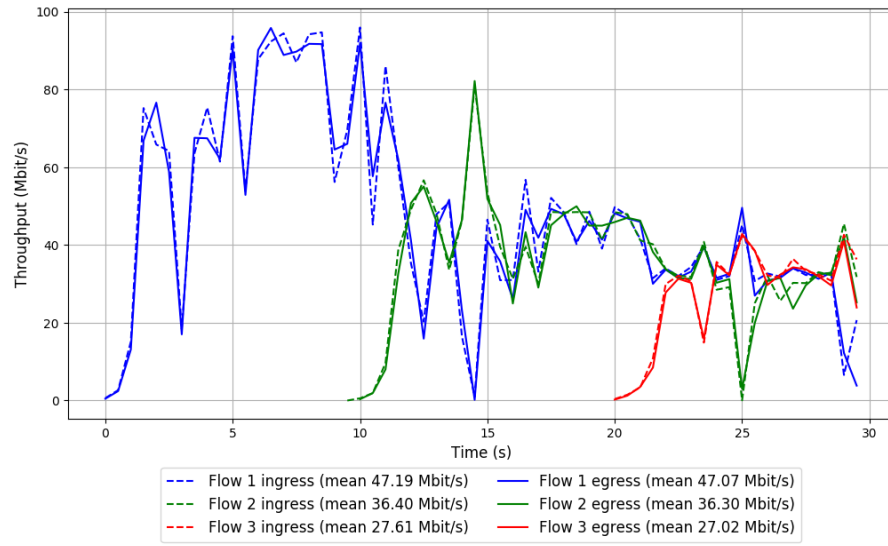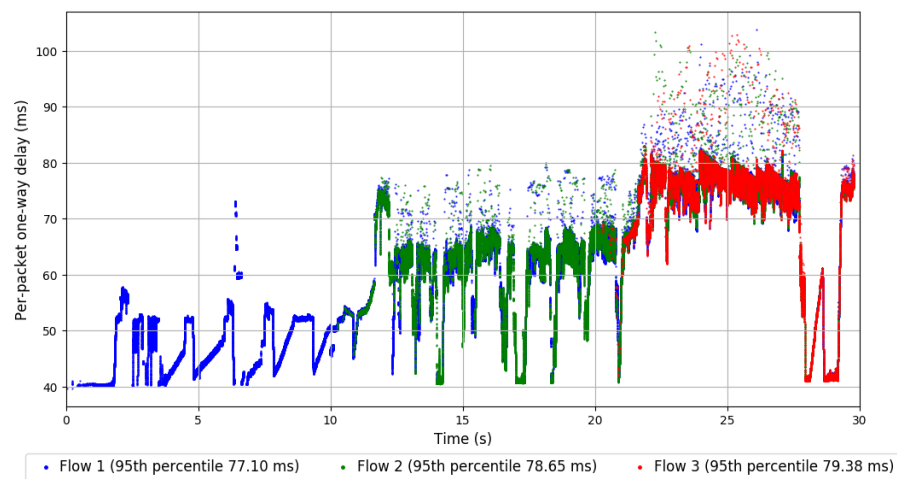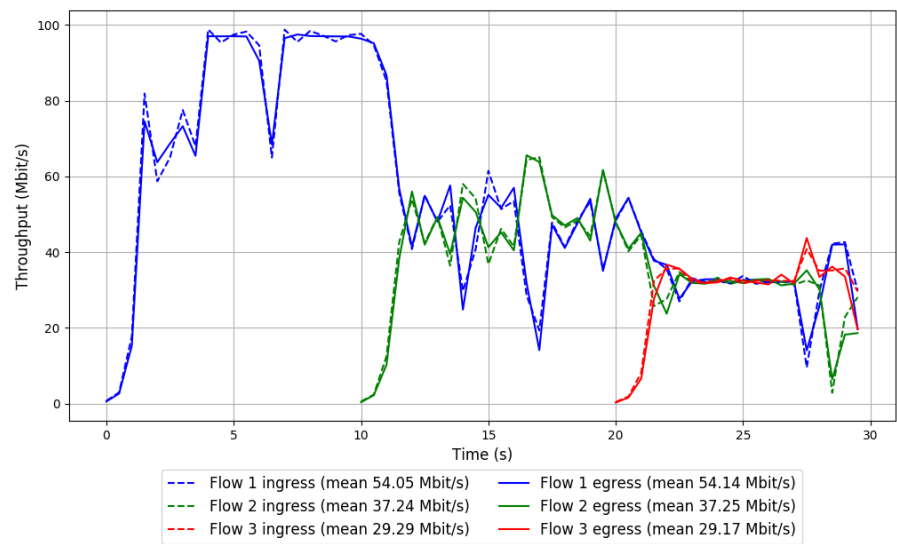
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 47.19 Mbit/s) Flow 1 egress (mean 47.04 Mbit/s)
Flow 2 ingress (mean 31.68 Mbit/s) Flow 2 egress (mean 31.28 Mbit/s)
Flow 3 ingress (mean 22.72 Mbit/s) Flow 3 egress (mean 22.09 Mbit/s)

Flow 1 (95th percentile 173.82 ms) Flow 2 (95th percentile 187.05 ms) Flow 3 (95th percentile 199.67 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2018-04-17 14:22:32
End at: 2018-04-17 14:23:02
Local clock offset: 15.423 ms
Remote clock offset: 22.163 ms


# Below is generated by plot.py at 2018-04-17 20:46:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.65 Mbit/s
95th percentile per-packet one-way delay: 103.015 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 49.33 Mbit/s
95th percentile per-packet one-way delay: 99.637 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 35.40 Mbit/s
95th percentile per-packet one-way delay: 103.510 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 24.14 Mbit/s
95th percentile per-packet one-way delay: 107.638 ms
Loss rate: 4.69%
```
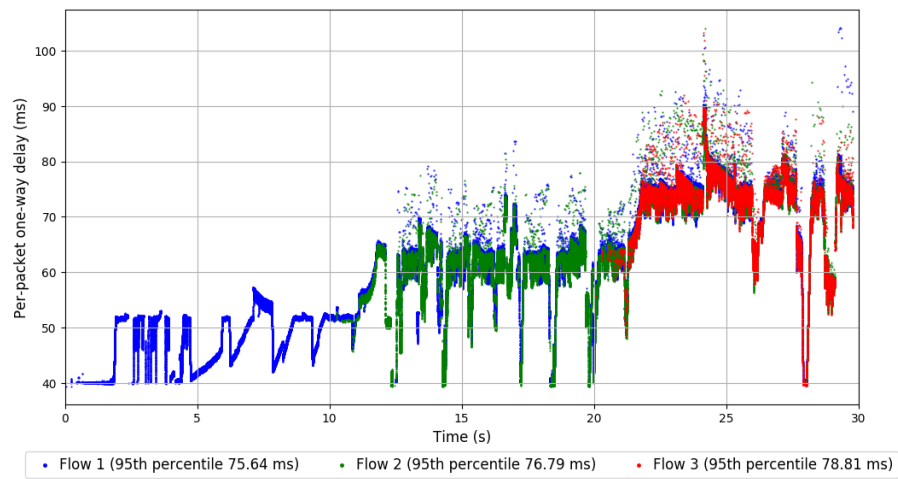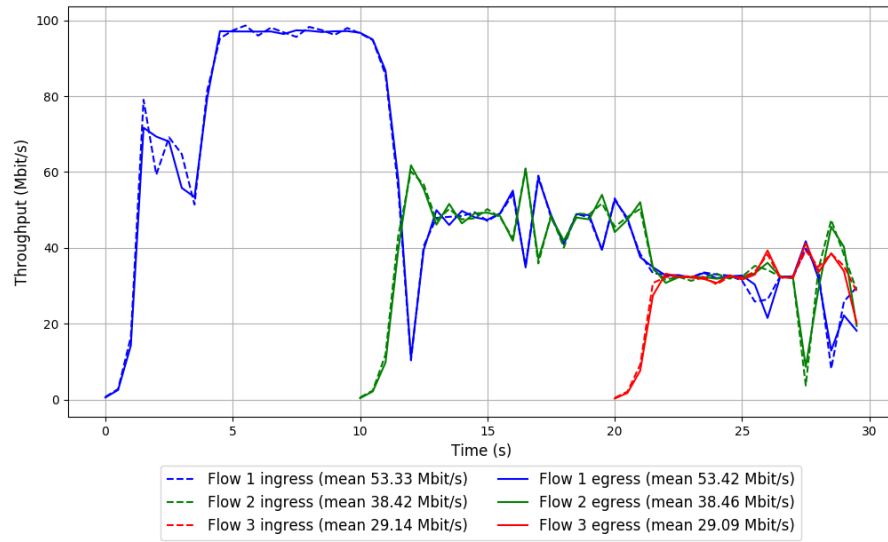
Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2018-04-17 14:45:16
End at: 2018-04-17 14:45:46
Local clock offset: 20.944 ms
Remote clock offset: 6.082 ms


# Below is generated by plot.py at 2018-04-17 20:46:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.99 Mbit/s
95th percentile per-packet one-way delay: 93.666 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 47.07 Mbit/s
95th percentile per-packet one-way delay: 90.348 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 36.30 Mbit/s
95th percentile per-packet one-way delay: 94.615 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 27.02 Mbit/s
95th percentile per-packet one-way delay: 97.746 ms
Loss rate: 4.45%
```
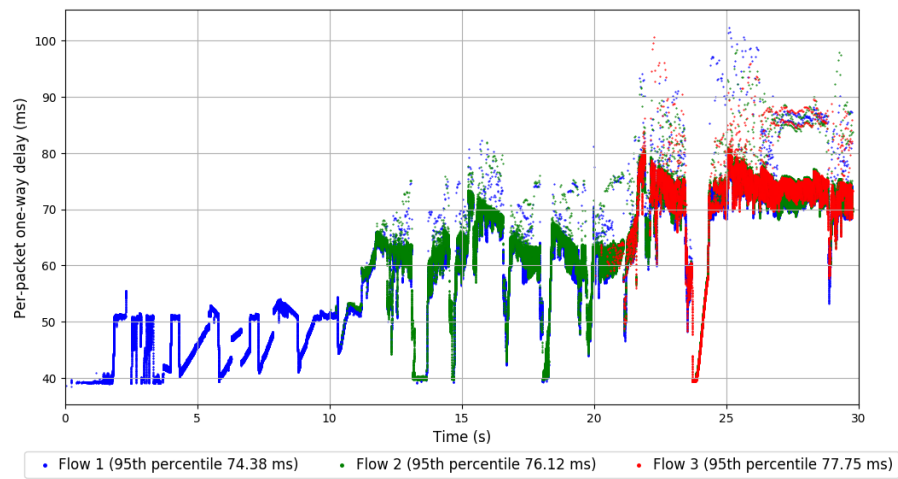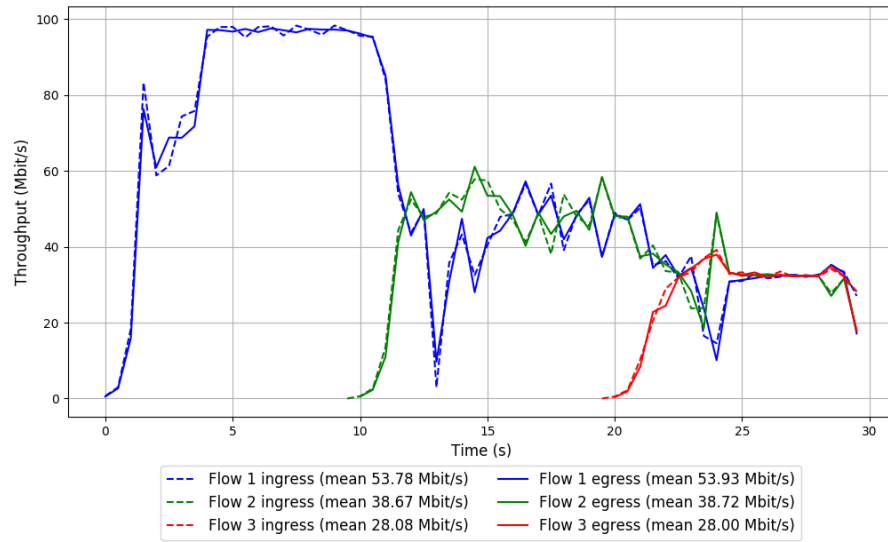
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 47.19 Mbit/s) --- Flow 1 egress (mean 47.07 Mbit/s)
Flow 2 ingress (mean 36.40 Mbit/s) --- Flow 2 egress (mean 36.30 Mbit/s)
Flow 3 ingress (mean 27.61 Mbit/s) --- Flow 3 egress (mean 27.02 Mbit/s)

Flow 1 (95th percentile 90.35 ms)   Flow 2 (95th percentile 94.61 ms)   Flow 3 (95th percentile 97.75 ms)

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```
Run 6: Statistics of TCP BBR

Start at: 2018-04-17 15:09:15
End at: 2018-04-17 15:09:45
Local clock offset: 14.548 ms
Remote clock offset: 13.033 ms


# Below is generated by plot.py at 2018-04-17 20:46:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.34 Mbit/s
95th percentile per-packet one-way delay: 78.229 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 54.14 Mbit/s
95th percentile per-packet one-way delay: 77.101 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 37.25 Mbit/s
95th percentile per-packet one-way delay: 78.652 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 29.17 Mbit/s
95th percentile per-packet one-way delay: 79.381 ms
Loss rate: 2.60%
```
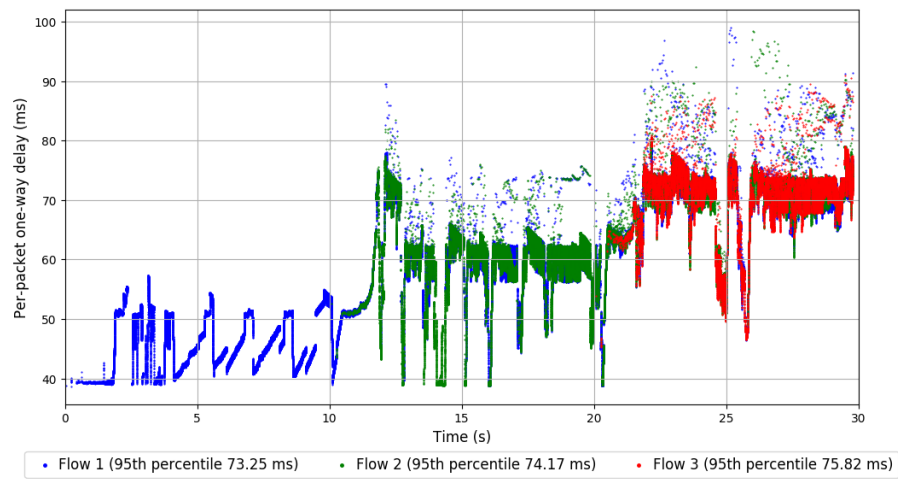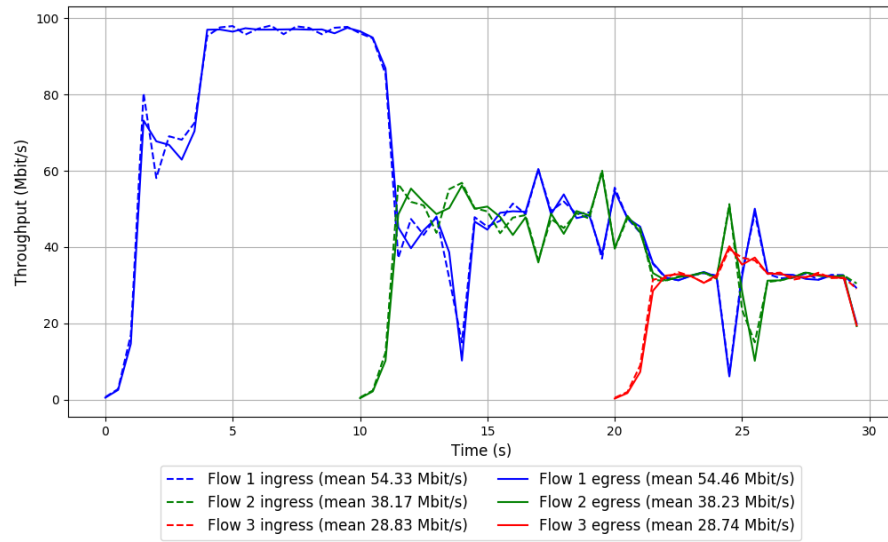
Run 6: Report of TCP BBR — Data Link

```
Run 7: Statistics of TCP BBR

Start at: 2018-04-17 15:32:10
End at: 2018-04-17 15:32:40
Local clock offset: -1.037 ms
Remote clock offset: -1.92 ms

# Below is generated by plot.py at 2018-04-17 20:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.41 Mbit/s
95th percentile per-packet one-way delay: 76.672 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 53.42 Mbit/s
95th percentile per-packet one-way delay: 75.639 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 38.46 Mbit/s
95th percentile per-packet one-way delay: 76.792 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 29.09 Mbit/s
95th percentile per-packet one-way delay: 78.805 ms
Loss rate: 2.42%
```
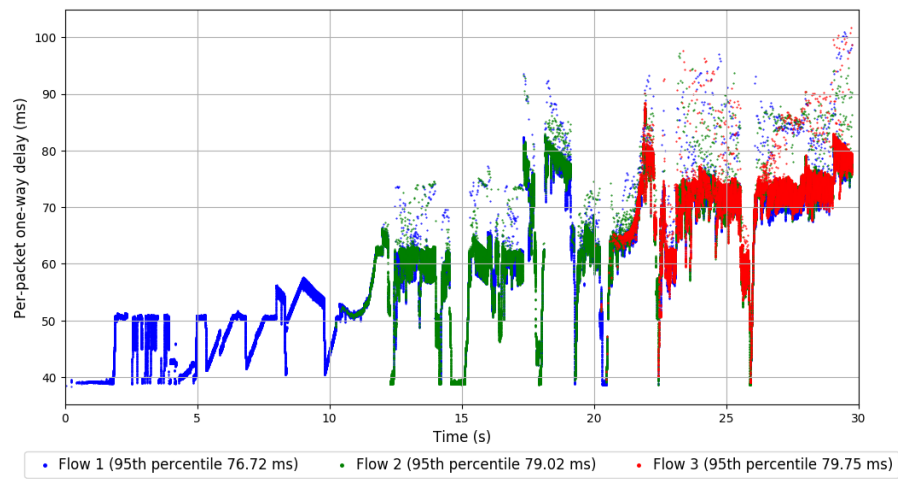
Run 7: Report of TCP BBR — Data Link

```
Run 8: Statistics of TCP BBR

Start at: 2018-04-17 15:54:59
End at: 2018-04-17 15:55:29
Local clock offset: 0.08 ms
Remote clock offset: 12.507 ms


# Below is generated by plot.py at 2018-04-17 20:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.79 Mbit/s
95th percentile per-packet one-way delay: 75.589 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 53.93 Mbit/s
95th percentile per-packet one-way delay: 74.375 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 38.72 Mbit/s
95th percentile per-packet one-way delay: 76.117 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 28.00 Mbit/s
95th percentile per-packet one-way delay: 77.754 ms
Loss rate: 2.66%
```
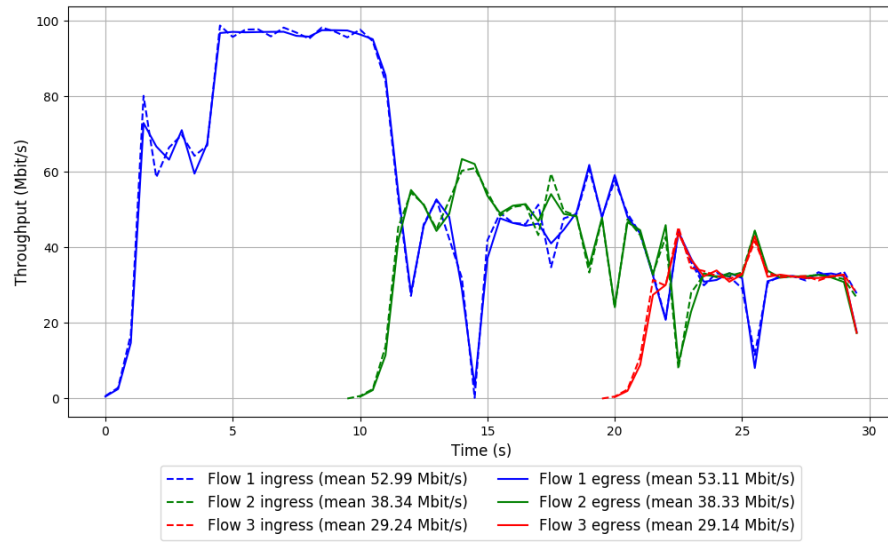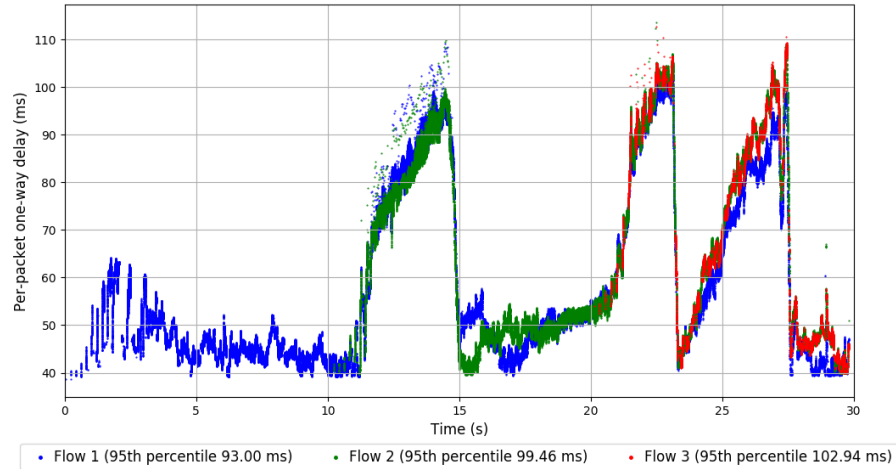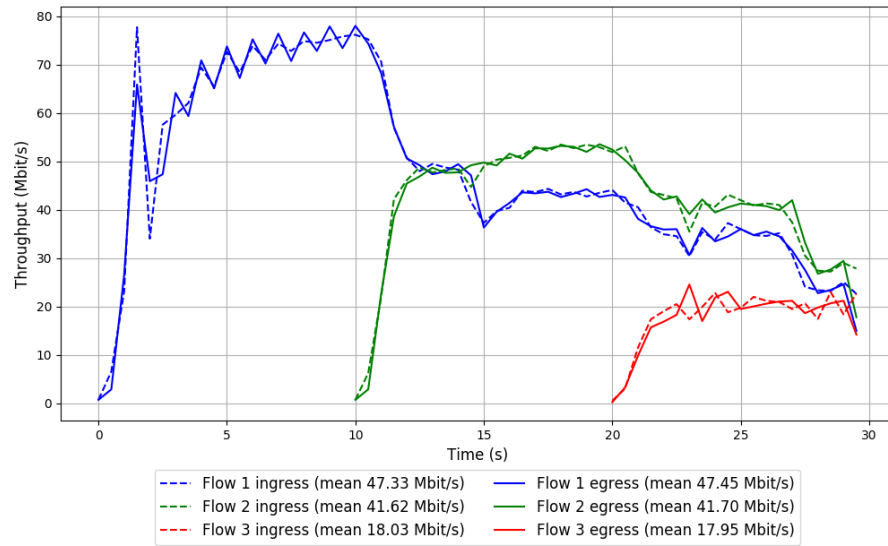
Run 8: Report of TCP BBR — Data Link

```
Run 9: Statistics of TCP BBR

Start at: 2018-04-17 16:17:48
End at: 2018-04-17 16:18:18
Local clock offset: 2.854 ms
Remote clock offset: -8.222 ms


# Below is generated by plot.py at 2018-04-17 20:48:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.18 Mbit/s
95th percentile per-packet one-way delay: 73.944 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 54.46 Mbit/s
95th percentile per-packet one-way delay: 73.255 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 38.23 Mbit/s
95th percentile per-packet one-way delay: 74.171 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 28.74 Mbit/s
95th percentile per-packet one-way delay: 75.820 ms
Loss rate: 2.49%
```
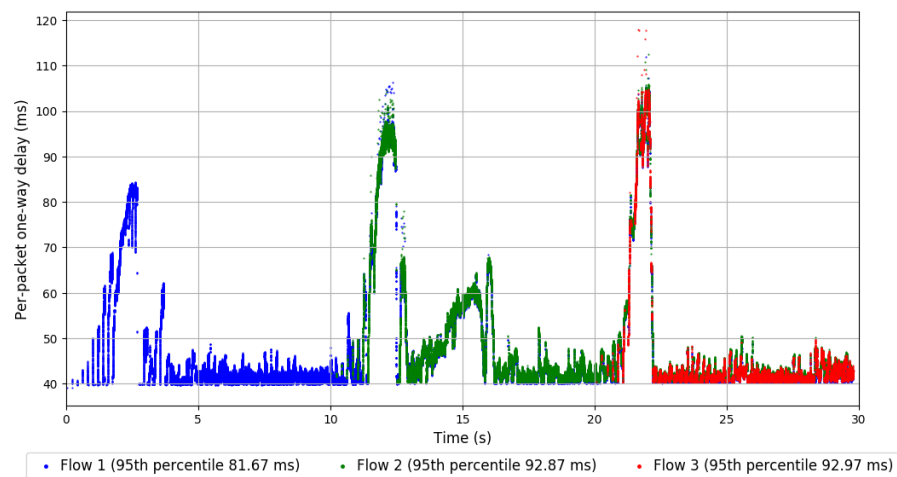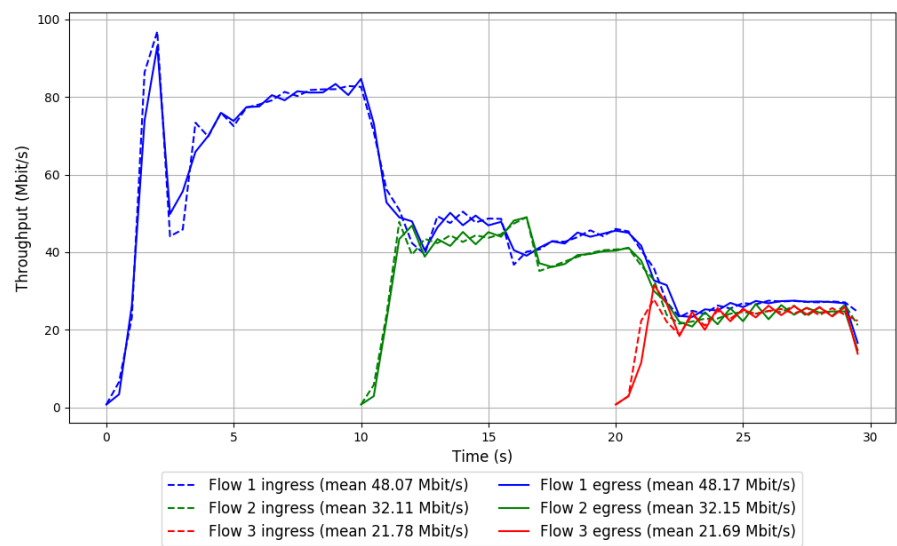
Run 9: Report of TCP BBR — Data Link

```
Run 10: Statistics of TCP BBR

Start at: 2018-04-17 16:40:50
End at: 2018-04-17 16:41:20
Local clock offset: 8.131 ms
Remote clock offset: 3.193 ms

# Below is generated by plot.py at 2018-04-17 20:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.04 Mbit/s
95th percentile per-packet one-way delay: 78.352 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 53.11 Mbit/s
95th percentile per-packet one-way delay: 76.721 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 38.33 Mbit/s
95th percentile per-packet one-way delay: 79.024 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 29.14 Mbit/s
95th percentile per-packet one-way delay: 79.747 ms
Loss rate: 2.80%
```
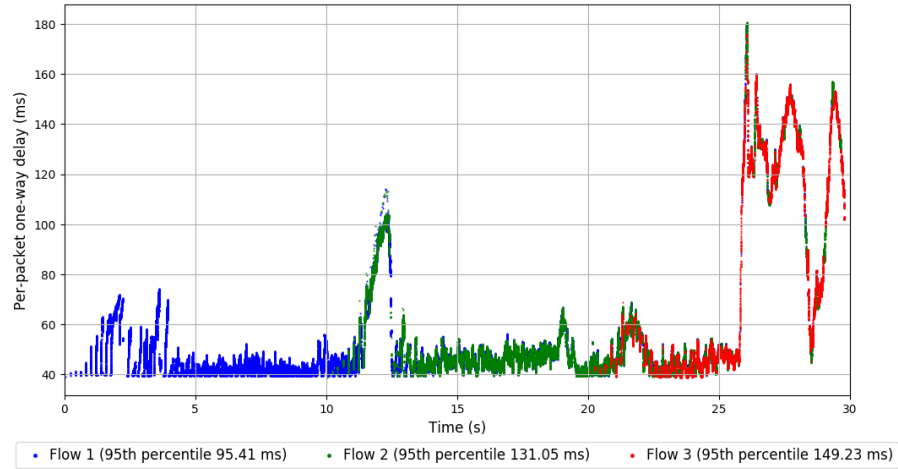
Run 10: Report of TCP BBR — Data Link

Flow 1 ingress (mean 52.99 Mbit/s) --- Flow 1 egress (mean 53.11 Mbit/s)
Flow 2 ingress (mean 38.34 Mbit/s) --- Flow 2 egress (mean 38.33 Mbit/s)
Flow 3 ingress (mean 29.24 Mbit/s) --- Flow 3 egress (mean 29.14 Mbit/s)

Flow 1 (95th percentile 76.72 ms) · Flow 2 (95th percentile 79.02 ms) · Flow 3 (95th percentile 79.75 ms)
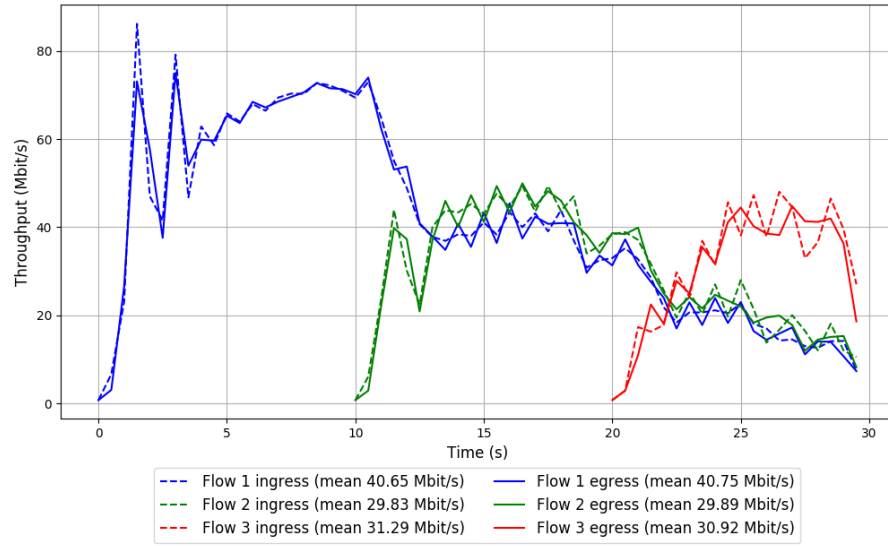
24

```
Run 1: Statistics of TCP Cubic

Start at: 2018-04-17 13:08:12
End at: 2018-04-17 13:08:42
Local clock offset: 6.416 ms
Remote clock offset: 15.446 ms


# Below is generated by plot.py at 2018-04-17 20:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.95 Mbit/s
95th percentile per-packet one-way delay: 96.952 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 47.45 Mbit/s
95th percentile per-packet one-way delay: 92.998 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 41.70 Mbit/s
95th percentile per-packet one-way delay: 99.461 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 17.95 Mbit/s
95th percentile per-packet one-way delay: 102.945 ms
Loss rate: 2.49%
```
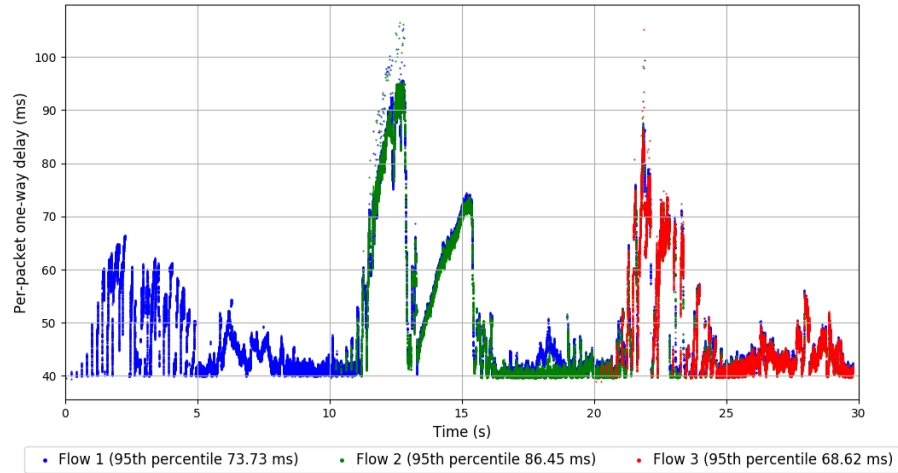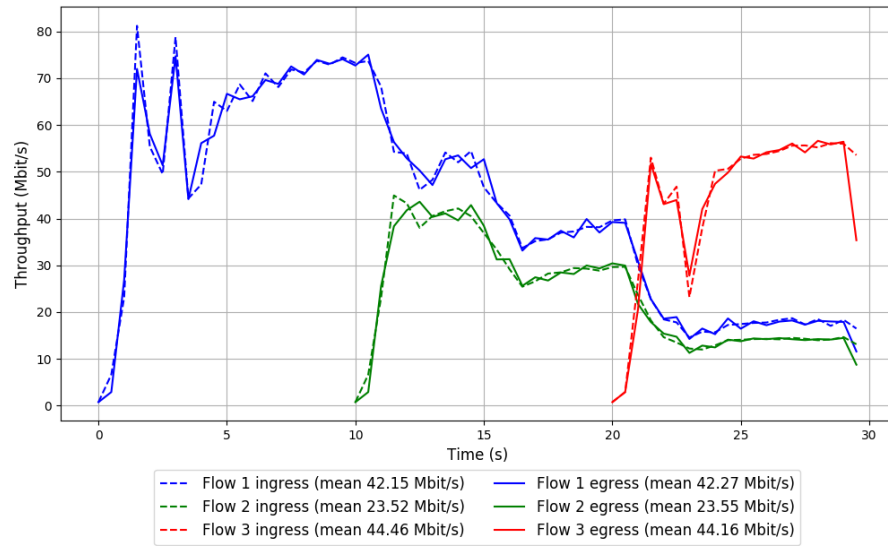
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2018-04-17 13:31:06
End at: 2018-04-17 13:31:36
Local clock offset: 7.356 ms
Remote clock offset: 14.817 ms


# Below is generated by plot.py at 2018-04-17 20:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.59 Mbit/s
95th percentile per-packet one-way delay: 84.681 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 48.17 Mbit/s
95th percentile per-packet one-way delay: 81.675 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 32.15 Mbit/s
95th percentile per-packet one-way delay: 92.867 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 21.69 Mbit/s
95th percentile per-packet one-way delay: 92.972 ms
Loss rate: 2.35%
```
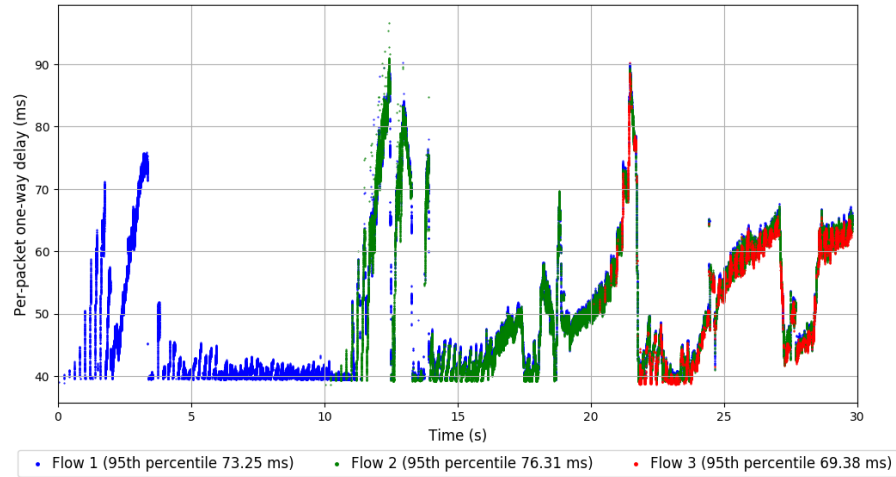
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 48.07 Mbit/s) — Flow 1 egress (mean 48.17 Mbit/s)
Flow 2 ingress (mean 32.11 Mbit/s) — Flow 2 egress (mean 32.15 Mbit/s)
Flow 3 ingress (mean 21.78 Mbit/s) — Flow 3 egress (mean 21.69 Mbit/s)

Flow 1 (95th percentile 81.67 ms) Flow 2 (95th percentile 92.87 ms) Flow 3 (95th percentile 92.97 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2018-04-17 13:53:47
End at: 2018-04-17 13:54:17
Local clock offset: 7.863 ms
Remote clock offset: 21.906 ms


# Below is generated by plot.py at 2018-04-17 20:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.68 Mbit/s
95th percentile per-packet one-way delay: 131.388 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 40.75 Mbit/s
95th percentile per-packet one-way delay: 95.405 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 29.89 Mbit/s
95th percentile per-packet one-way delay: 131.047 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 30.92 Mbit/s
95th percentile per-packet one-way delay: 149.234 ms
Loss rate: 3.16%
```
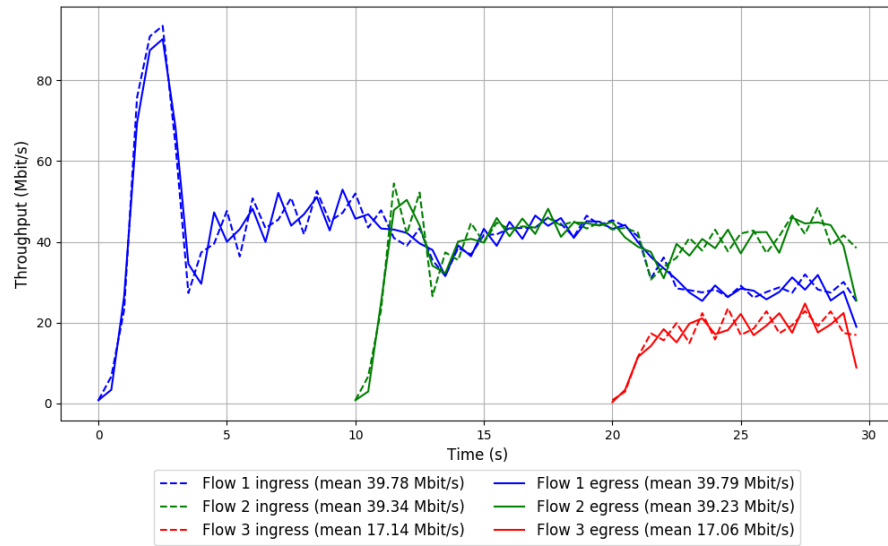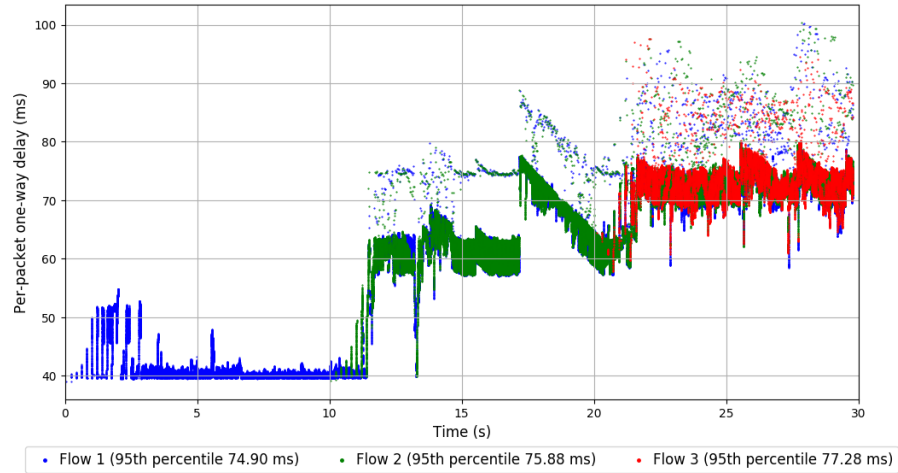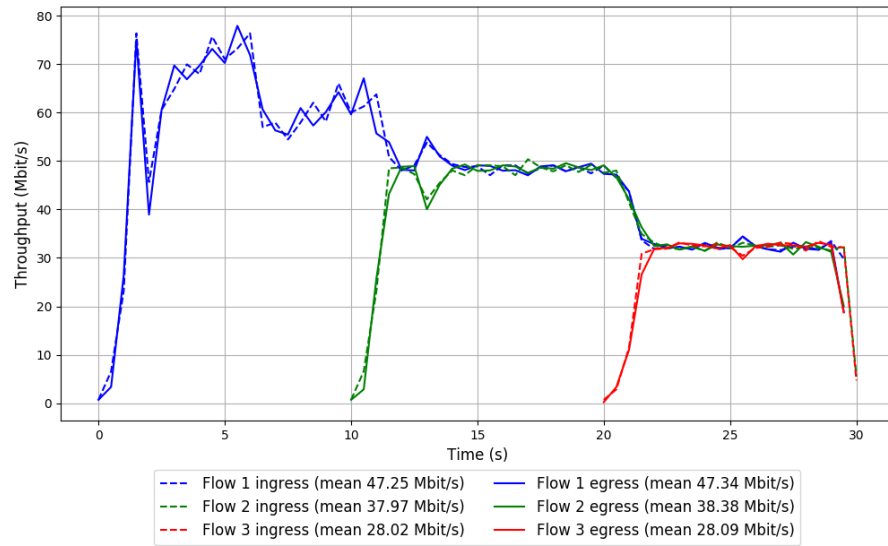
Run 3: Report of TCP Cubic — Data Link

- Flow 1 ingress (mean 40.65 Mbit/s)
- Flow 1 egress (mean 40.75 Mbit/s)
- Flow 2 ingress (mean 29.83 Mbit/s)
- Flow 2 egress (mean 29.89 Mbit/s)
- Flow 3 ingress (mean 31.29 Mbit/s)
- Flow 3 egress (mean 30.92 Mbit/s)

- Flow 1 (95th percentile 95.41 ms)
- Flow 2 (95th percentile 131.05 ms)
- Flow 3 (95th percentile 149.23 ms)

30

```
Run 4: Statistics of TCP Cubic

Start at: 2018-04-17 14:17:11
End at: 2018-04-17 14:17:41
Local clock offset: 14.783 ms
Remote clock offset: 21.899 ms


# Below is generated by plot.py at 2018-04-17 20:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.34 Mbit/s
95th percentile per-packet one-way delay: 76.642 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 42.27 Mbit/s
95th percentile per-packet one-way delay: 73.732 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 23.55 Mbit/s
95th percentile per-packet one-way delay: 86.453 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 44.16 Mbit/s
95th percentile per-packet one-way delay: 68.618 ms
Loss rate: 2.58%
```
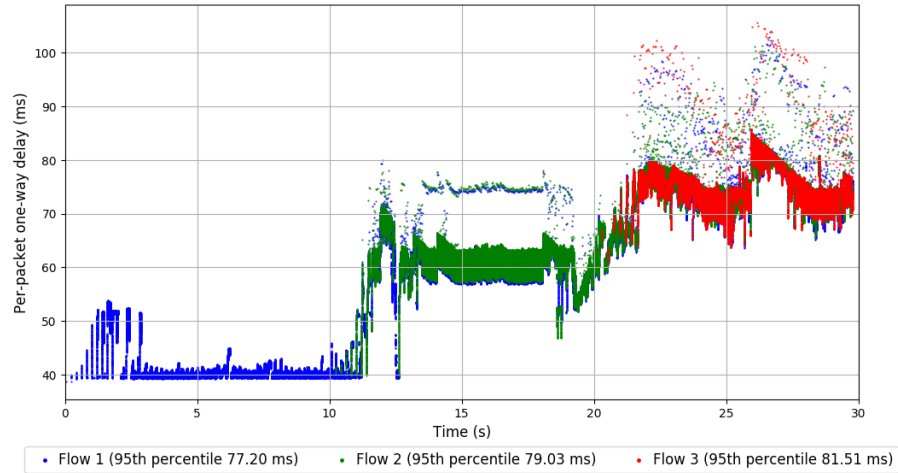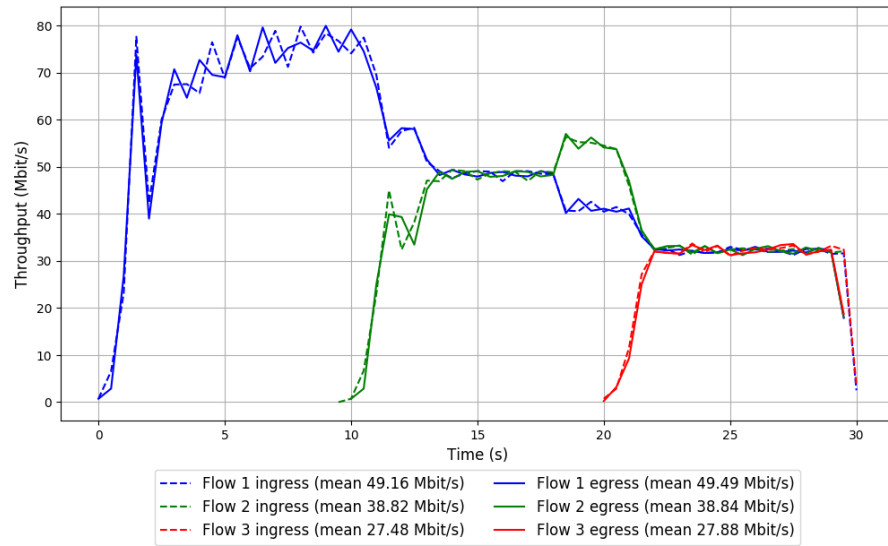
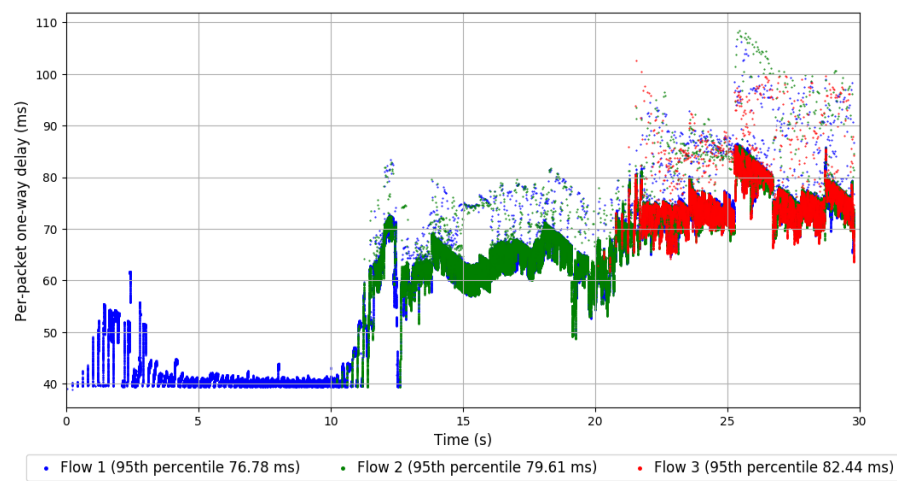Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2018-04-17 14:39:56
End at: 2018-04-17 14:40:26
Local clock offset: 19.548 ms
Remote clock offset: 6.836 ms


# Below is generated by plot.py at 2018-04-17 20:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.37 Mbit/s
95th percentile per-packet one-way delay: 73.935 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 39.79 Mbit/s
95th percentile per-packet one-way delay: 73.245 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 39.23 Mbit/s
95th percentile per-packet one-way delay: 76.314 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 17.06 Mbit/s
95th percentile per-packet one-way delay: 69.377 ms
Loss rate: 2.60%
```
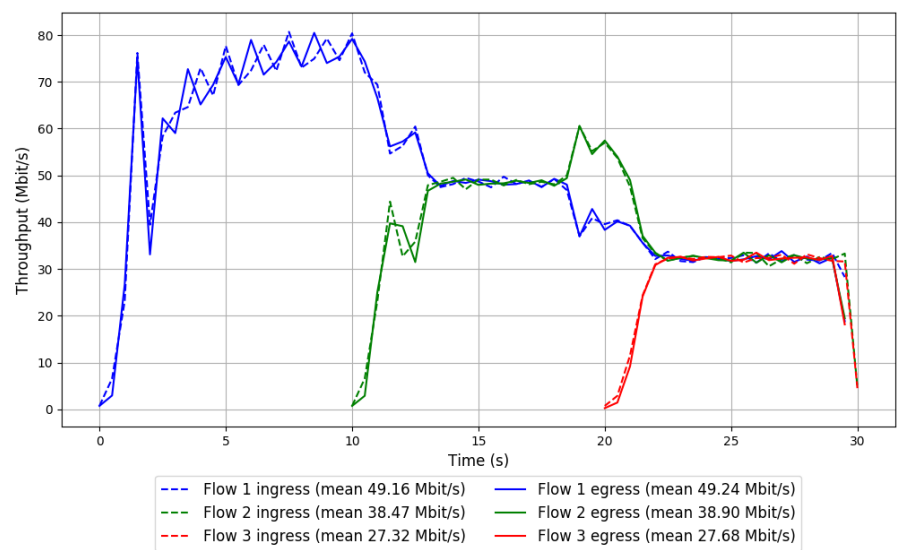
Run 5: Report of TCP Cubic — Data Link

```
Run 6: Statistics of TCP Cubic

Start at: 2018-04-17 15:03:52
End at: 2018-04-17 15:04:22
Local clock offset: 24.273 ms
Remote clock offset: 8.944 ms


# Below is generated by plot.py at 2018-04-17 20:48:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.96 Mbit/s
95th percentile per-packet one-way delay: 75.689 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 47.34 Mbit/s
95th percentile per-packet one-way delay: 74.901 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 38.38 Mbit/s
95th percentile per-packet one-way delay: 75.879 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 28.09 Mbit/s
95th percentile per-packet one-way delay: 77.275 ms
Loss rate: 3.98%
```
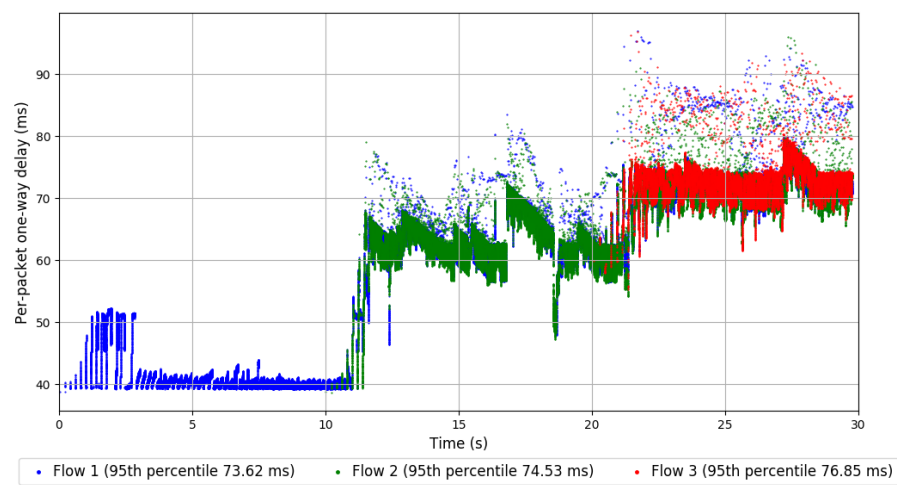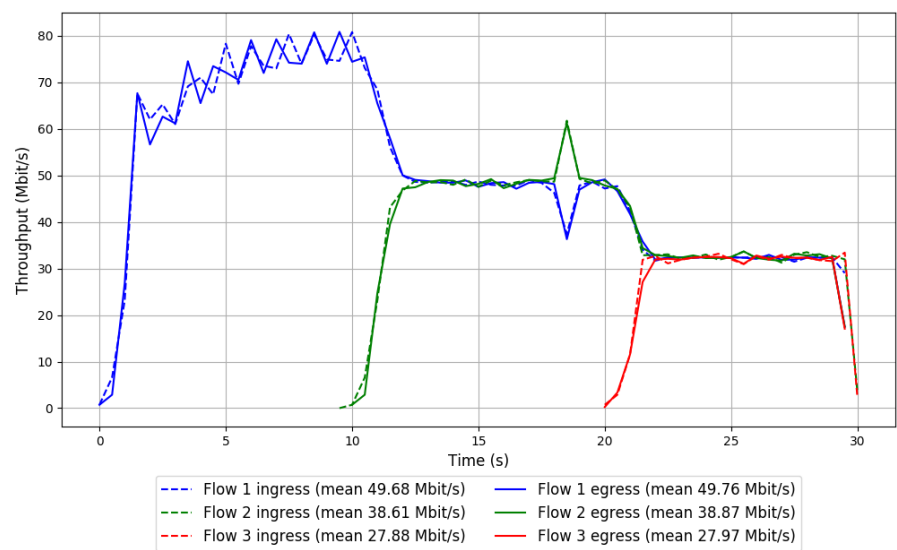
Run 6: Report of TCP Cubic — Data Link

```
Run 7: Statistics of TCP Cubic

Start at: 2018-04-17 15:26:48
End at: 2018-04-17 15:27:18
Local clock offset: 0.458 ms
Remote clock offset: -4.083 ms


# Below is generated by plot.py at 2018-04-17 20:49:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.37 Mbit/s
95th percentile per-packet one-way delay: 78.709 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 49.49 Mbit/s
95th percentile per-packet one-way delay: 77.197 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 38.84 Mbit/s
95th percentile per-packet one-way delay: 79.031 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 27.88 Mbit/s
95th percentile per-packet one-way delay: 81.510 ms
Loss rate: 4.00%
```
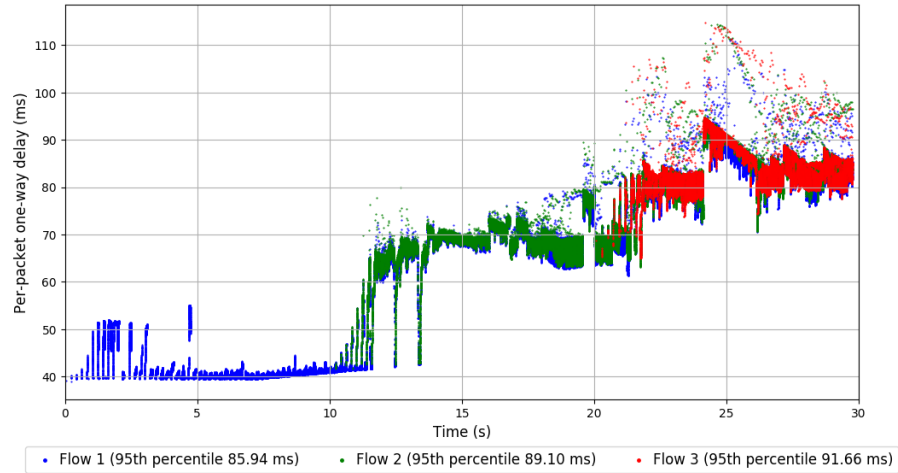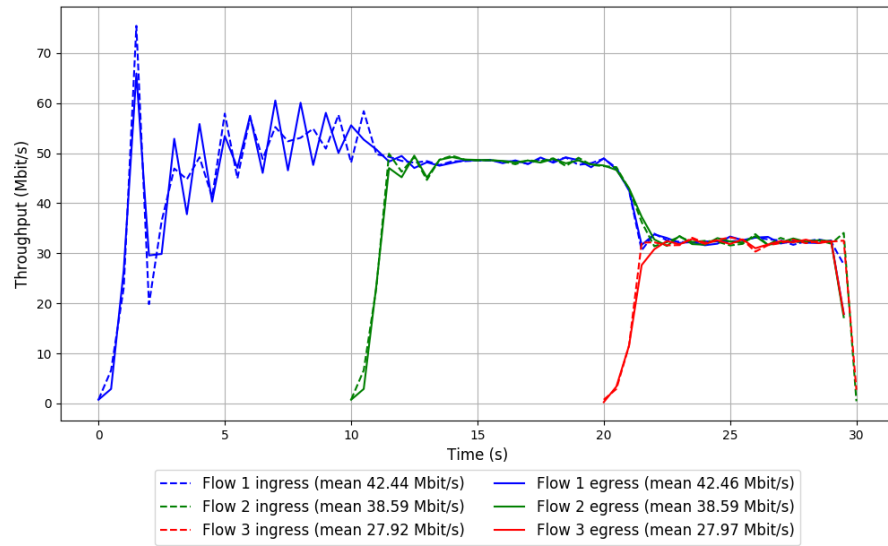
Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2018-04-17 15:49:38
End at: 2018-04-17 15:50:08
Local clock offset: -0.163 ms
Remote clock offset: 10.735 ms


# Below is generated by plot.py at 2018-04-17 20:49:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.08 Mbit/s
95th percentile per-packet one-way delay: 79.522 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 49.24 Mbit/s
95th percentile per-packet one-way delay: 76.782 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 38.90 Mbit/s
95th percentile per-packet one-way delay: 79.608 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 27.68 Mbit/s
95th percentile per-packet one-way delay: 82.439 ms
Loss rate: 4.01%
```
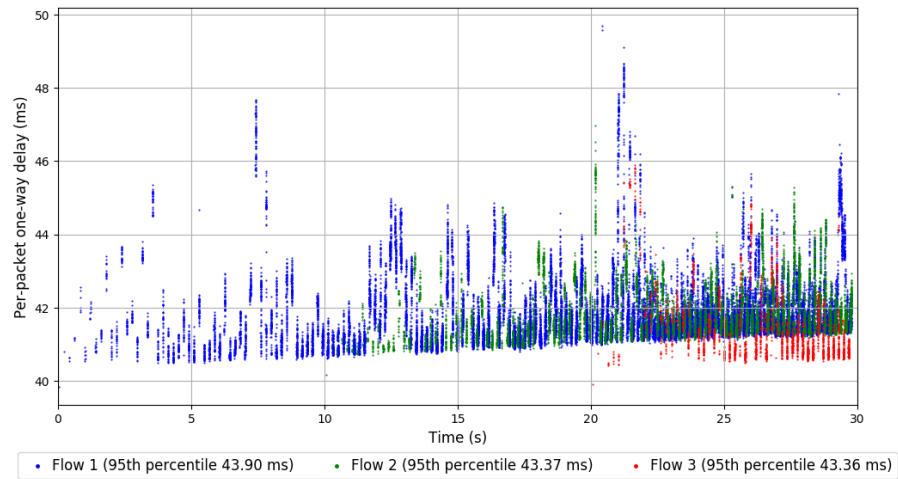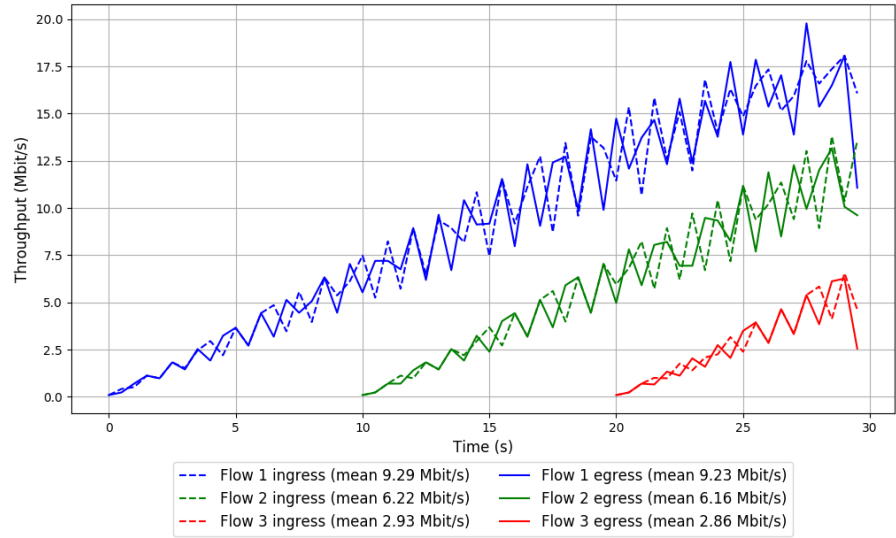
Run 8: Report of TCP Cubic — Data Link

```
Run 9: Statistics of TCP Cubic

Start at: 2018-04-17 16:12:26
End at: 2018-04-17 16:12:56
Local clock offset: -0.386 ms
Remote clock offset: -5.849 ms


# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.70 Mbit/s
95th percentile per-packet one-way delay: 74.407 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 49.76 Mbit/s
95th percentile per-packet one-way delay: 73.616 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 38.87 Mbit/s
95th percentile per-packet one-way delay: 74.532 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 27.97 Mbit/s
95th percentile per-packet one-way delay: 76.848 ms
Loss rate: 4.01%
```
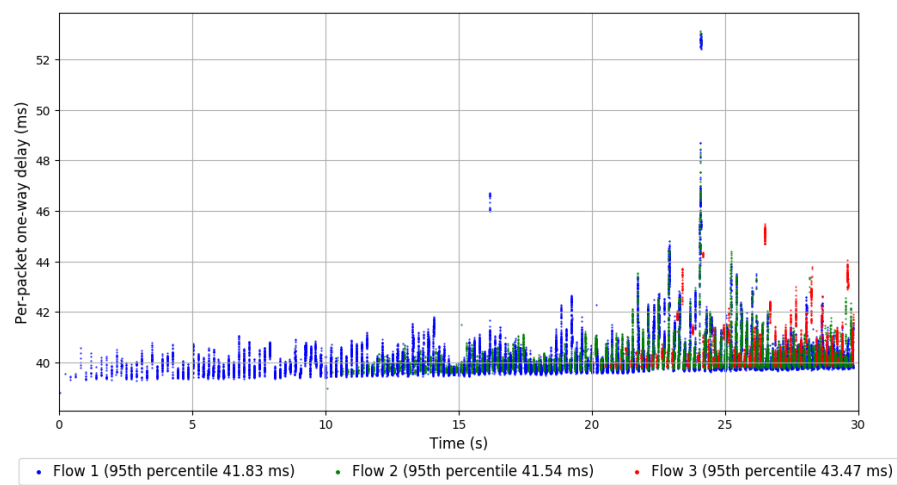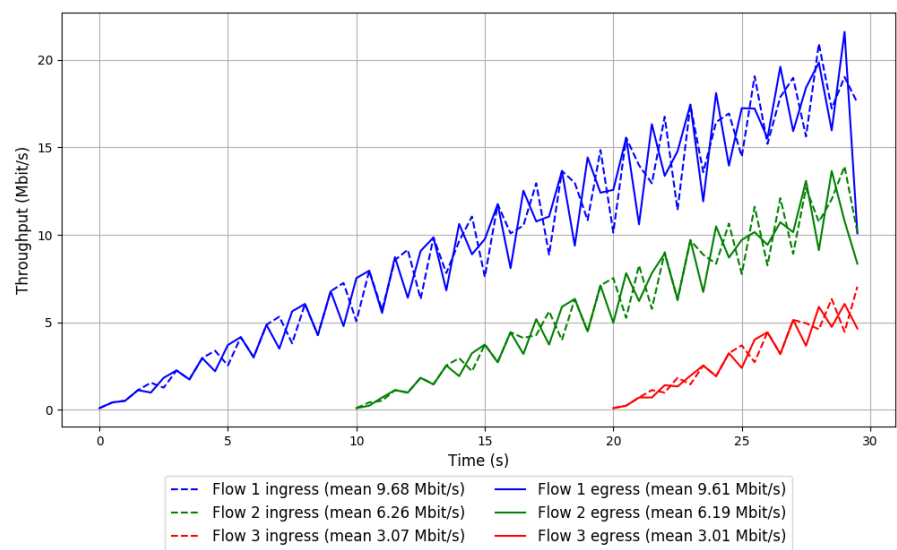
Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 49.68 Mbit/s) — Flow 1 egress (mean 49.76 Mbit/s)
Flow 2 ingress (mean 38.61 Mbit/s) — Flow 2 egress (mean 38.87 Mbit/s)
Flow 3 ingress (mean 27.88 Mbit/s) — Flow 3 egress (mean 27.97 Mbit/s)

Flow 1 (95th percentile 73.62 ms)   Flow 2 (95th percentile 74.53 ms)   Flow 3 (95th percentile 76.85 ms)

```
Run 10: Statistics of TCP Cubic

Start at: 2018-04-17 16:35:21
End at: 2018-04-17 16:35:51
Local clock offset: 7.706 ms
Remote clock offset: -9.179 ms


# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.17 Mbit/s
95th percentile per-packet one-way delay: 88.463 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 42.46 Mbit/s
95th percentile per-packet one-way delay: 85.940 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 38.59 Mbit/s
95th percentile per-packet one-way delay: 89.100 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 27.97 Mbit/s
95th percentile per-packet one-way delay: 91.660 ms
Loss rate: 4.06%
```

Run 10: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 42.44 Mbit/s) ---- Flow 1 egress (mean 42.46 Mbit/s) ——
Flow 2 ingress (mean 38.59 Mbit/s) ---- Flow 2 egress (mean 38.59 Mbit/s) ——
Flow 3 ingress (mean 27.92 Mbit/s) ---- Flow 3 egress (mean 27.97 Mbit/s) ——

• Flow 1 (95th percentile 85.94 ms)   • Flow 2 (95th percentile 89.10 ms)   • Flow 3 (95th percentile 91.66 ms)

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```
Run 1: Statistics of LEDBAT

Start at: 2018-04-17 13:21:28
End at: 2018-04-17 13:21:58
Local clock offset: 6.782 ms
Remote clock offset: -0.885 ms


# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.24 Mbit/s
95th percentile per-packet one-way delay: 43.748 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 9.23 Mbit/s
95th percentile per-packet one-way delay: 43.903 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 6.16 Mbit/s
95th percentile per-packet one-way delay: 43.369 ms
Loss rate: 1.97%
-- Flow 3:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 43.364 ms
Loss rate: 4.09%
```
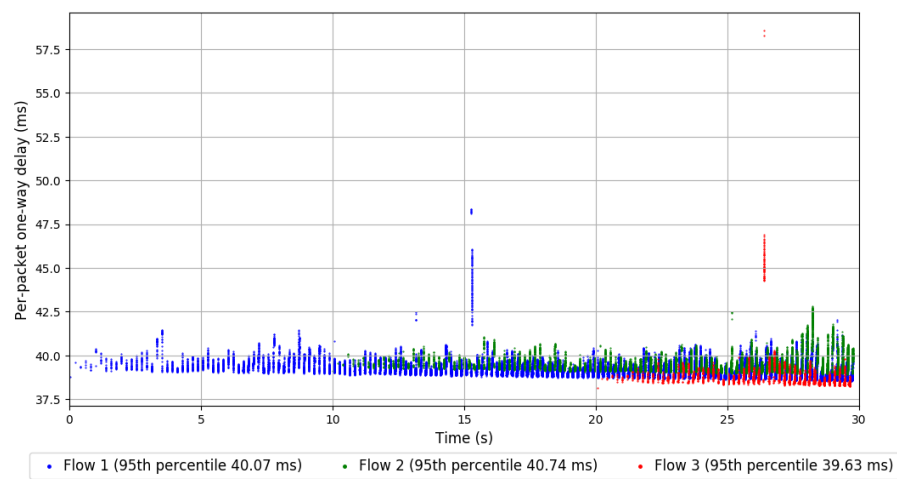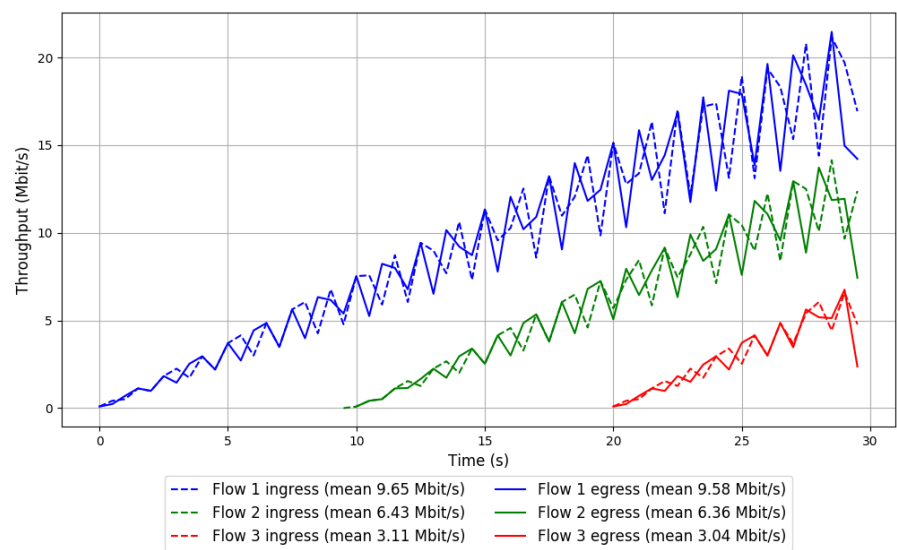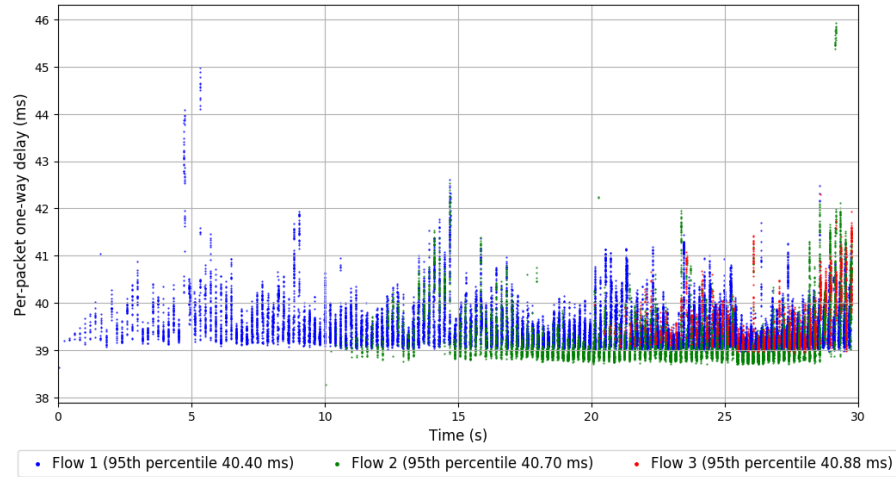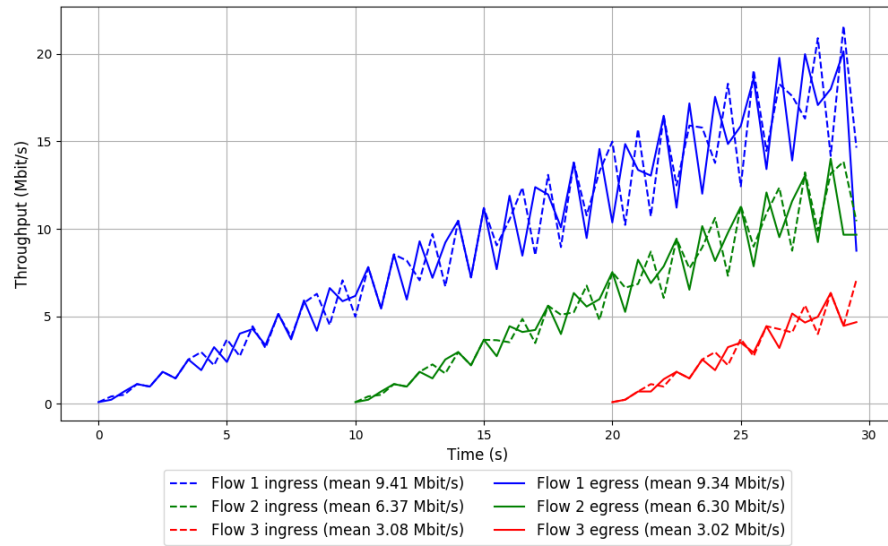
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 9.29 Mbit/s)   Flow 1 egress (mean 9.23 Mbit/s)
Flow 2 ingress (mean 6.22 Mbit/s)   Flow 2 egress (mean 6.16 Mbit/s)
Flow 3 ingress (mean 2.93 Mbit/s)   Flow 3 egress (mean 2.86 Mbit/s)

Flow 1 (95th percentile 43.90 ms)   Flow 2 (95th percentile 43.37 ms)   Flow 3 (95th percentile 43.36 ms)

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```
Run 2: Statistics of LEDBAT

Start at: 2018-04-17 13:44:21
End at: 2018-04-17 13:44:51
Local clock offset: 7.508 ms
Remote clock offset: 30.478 ms

# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.69 Mbit/s
95th percentile per-packet one-way delay: 41.919 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 9.61 Mbit/s
95th percentile per-packet one-way delay: 41.830 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 6.19 Mbit/s
95th percentile per-packet one-way delay: 41.539 ms
Loss rate: 1.97%
-- Flow 3:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 43.473 ms
Loss rate: 3.94%
```
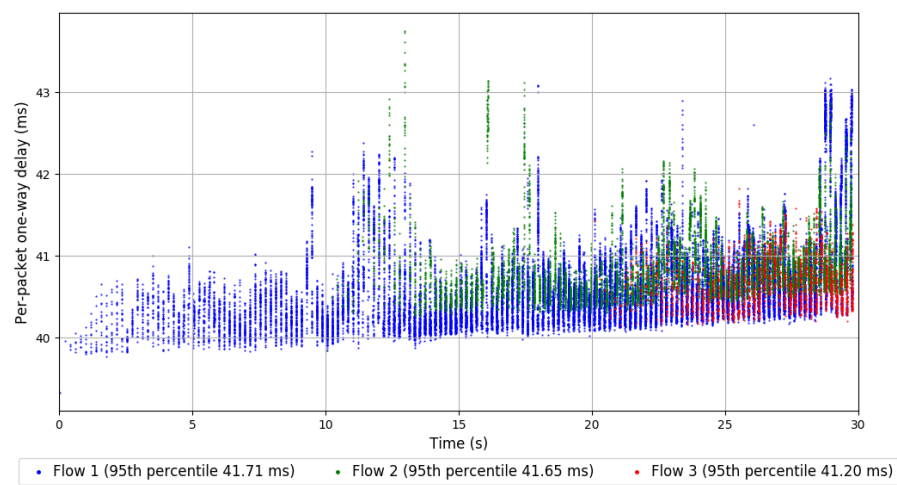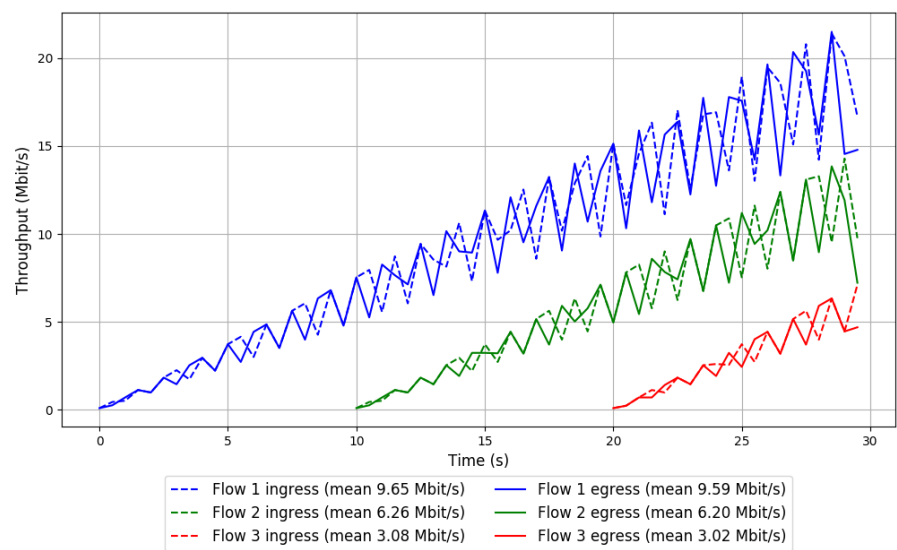
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-04-17 14:07:44
End at: 2018-04-17 14:08:14
Local clock offset: 12.915 ms
Remote clock offset: 18.267 ms


# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.37 Mbit/s
95th percentile per-packet one-way delay: 42.175 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 42.007 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 6.19 Mbit/s
95th percentile per-packet one-way delay: 42.605 ms
Loss rate: 1.96%
-- Flow 3:
Average throughput: 2.92 Mbit/s
95th percentile per-packet one-way delay: 41.351 ms
Loss rate: 4.06%
```
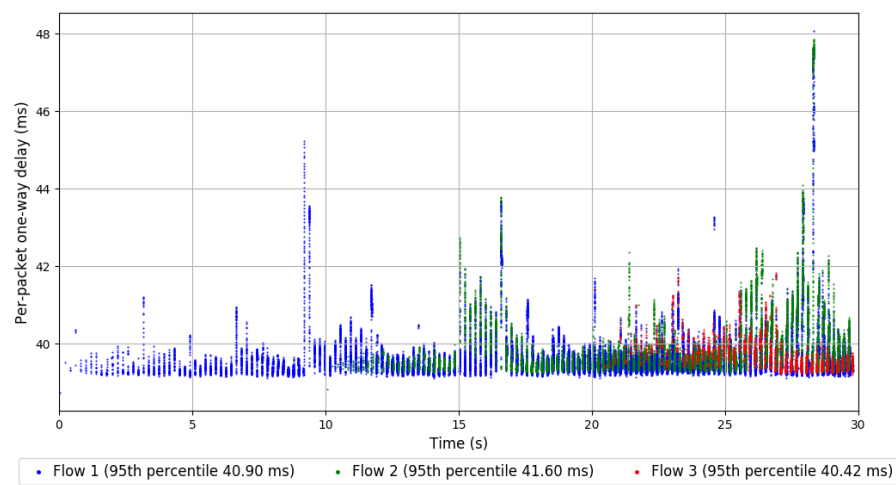
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2018-04-17 14:30:28
End at: 2018-04-17 14:30:58
Local clock offset: 16.559 ms
Remote clock offset: 11.098 ms


# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.79 Mbit/s
95th percentile per-packet one-way delay: 40.295 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 9.58 Mbit/s
95th percentile per-packet one-way delay: 40.069 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 6.36 Mbit/s
95th percentile per-packet one-way delay: 40.745 ms
Loss rate: 1.93%
-- Flow 3:
Average throughput: 3.04 Mbit/s
95th percentile per-packet one-way delay: 39.631 ms
Loss rate: 3.97%
```
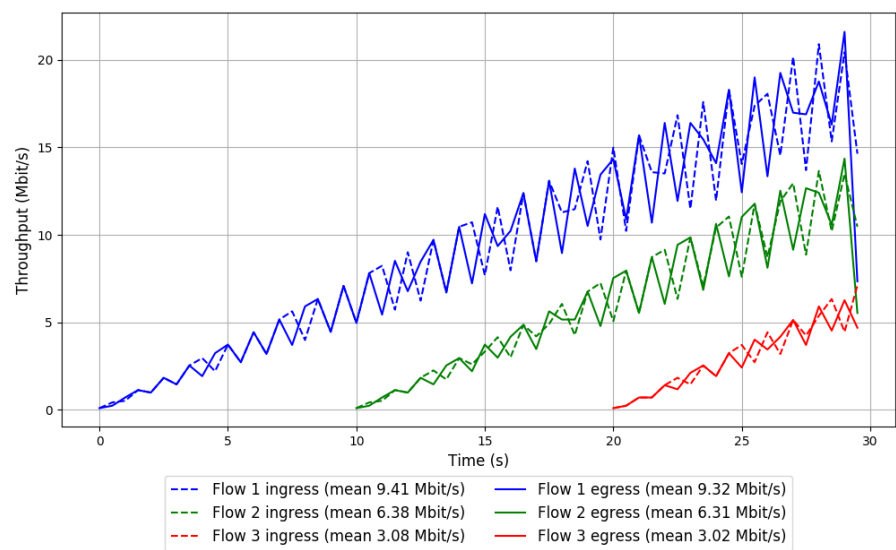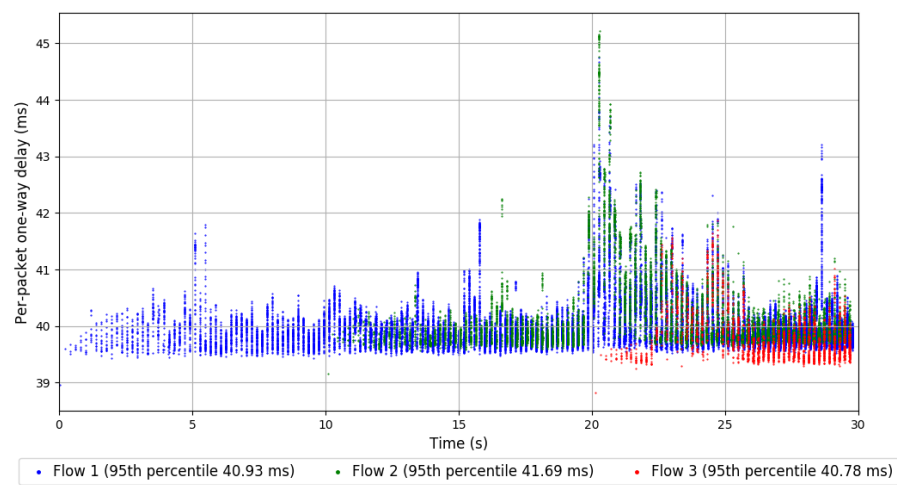
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 9.65 Mbit/s)   Flow 1 egress (mean 9.58 Mbit/s)
Flow 2 ingress (mean 6.43 Mbit/s)   Flow 2 egress (mean 6.36 Mbit/s)
Flow 3 ingress (mean 3.11 Mbit/s)   Flow 3 egress (mean 3.04 Mbit/s)

Flow 1 (95th percentile 40.07 ms)   Flow 2 (95th percentile 40.74 ms)   Flow 3 (95th percentile 39.63 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2018-04-17 14:53:17
End at: 2018-04-17 14:53:47
Local clock offset: 22.161 ms
Remote clock offset: -15.63 ms

# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.50 Mbit/s
95th percentile per-packet one-way delay: 40.521 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 40.395 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 40.702 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 40.876 ms
Loss rate: 3.97%
```
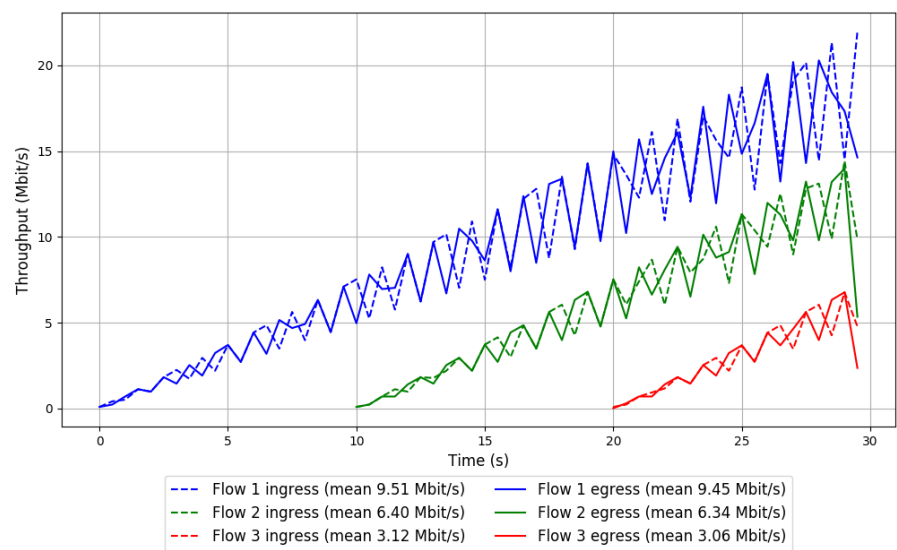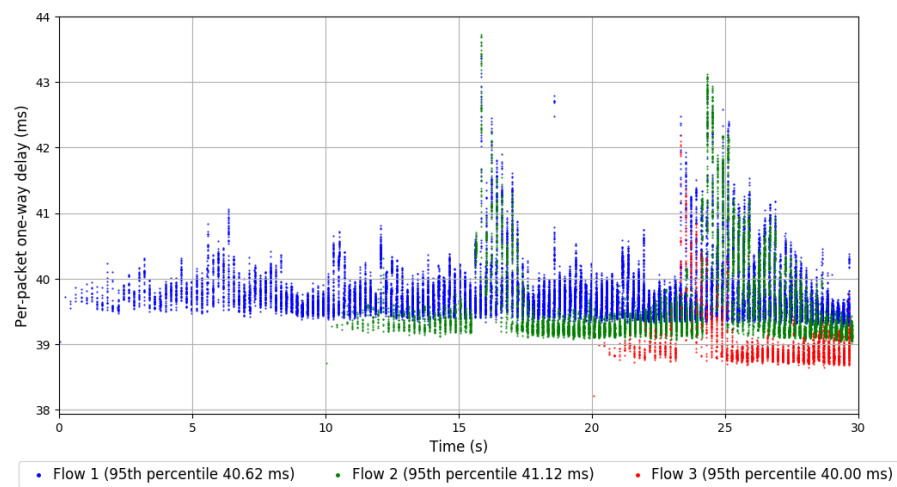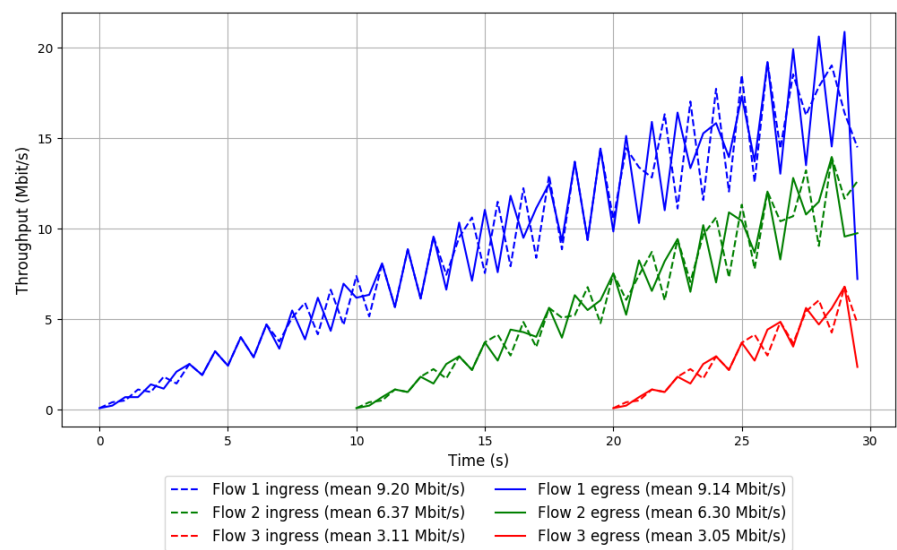
Run 5: Report of LEDBAT — Data Link

```
Run 6: Statistics of LEDBAT

Start at: 2018-04-17 15:17:16
End at: 2018-04-17 15:17:46
Local clock offset: 5.68 ms
Remote clock offset: -7.781 ms


# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.67 Mbit/s
95th percentile per-packet one-way delay: 41.646 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 9.59 Mbit/s
95th percentile per-packet one-way delay: 41.708 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 6.20 Mbit/s
95th percentile per-packet one-way delay: 41.652 ms
Loss rate: 1.97%
-- Flow 3:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 41.196 ms
Loss rate: 3.97%
```
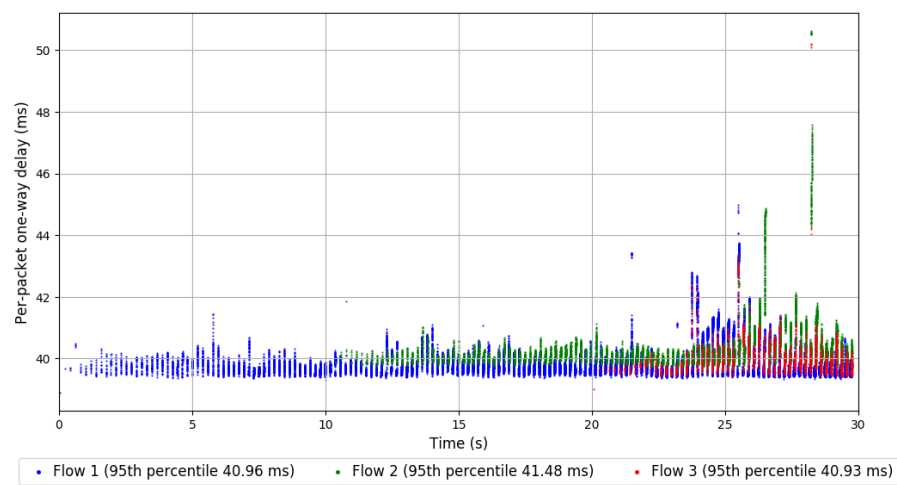
Run 6: Report of LEDBAT — Data Link

```
Run 7: Statistics of LEDBAT

Start at: 2018-04-17 15:40:09
End at: 2018-04-17 15:40:39
Local clock offset: -2.107 ms
Remote clock offset: 7.302 ms


# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.48 Mbit/s
95th percentile per-packet one-way delay: 41.132 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 9.32 Mbit/s
95th percentile per-packet one-way delay: 40.903 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 6.31 Mbit/s
95th percentile per-packet one-way delay: 41.599 ms
Loss rate: 1.94%
-- Flow 3:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 40.421 ms
Loss rate: 3.97%
```
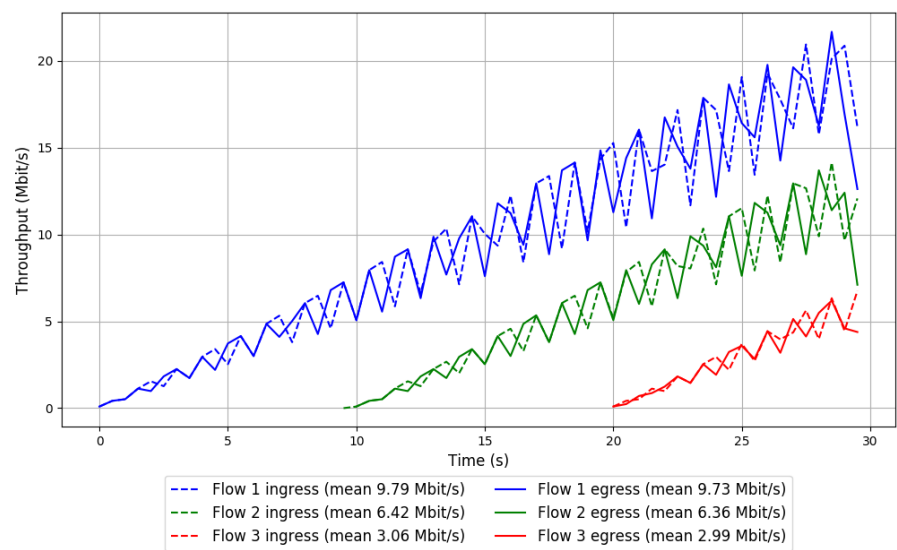
Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2018-04-17 16:02:57
End at: 2018-04-17 16:03:27
Local clock offset: 0.043 ms
Remote clock offset: 15.143 ms


# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.61 Mbit/s
95th percentile per-packet one-way delay: 41.198 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 9.45 Mbit/s
95th percentile per-packet one-way delay: 40.933 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 6.34 Mbit/s
95th percentile per-packet one-way delay: 41.692 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 3.06 Mbit/s
95th percentile per-packet one-way delay: 40.782 ms
Loss rate: 3.97%
```
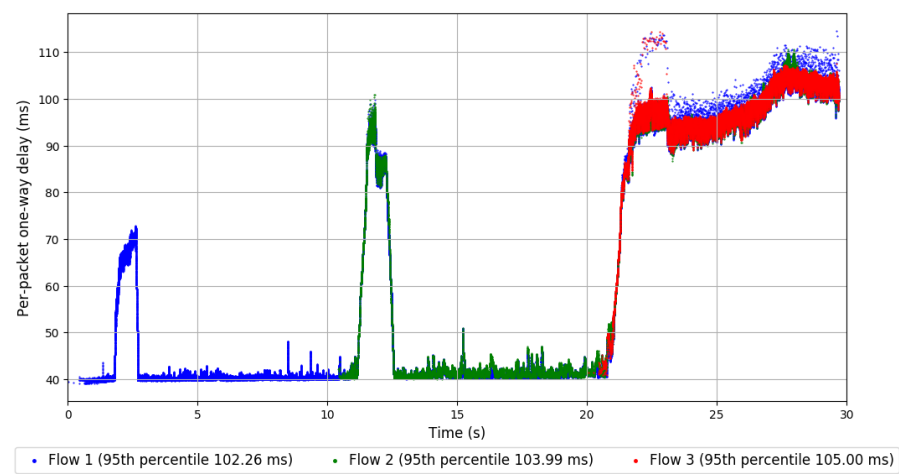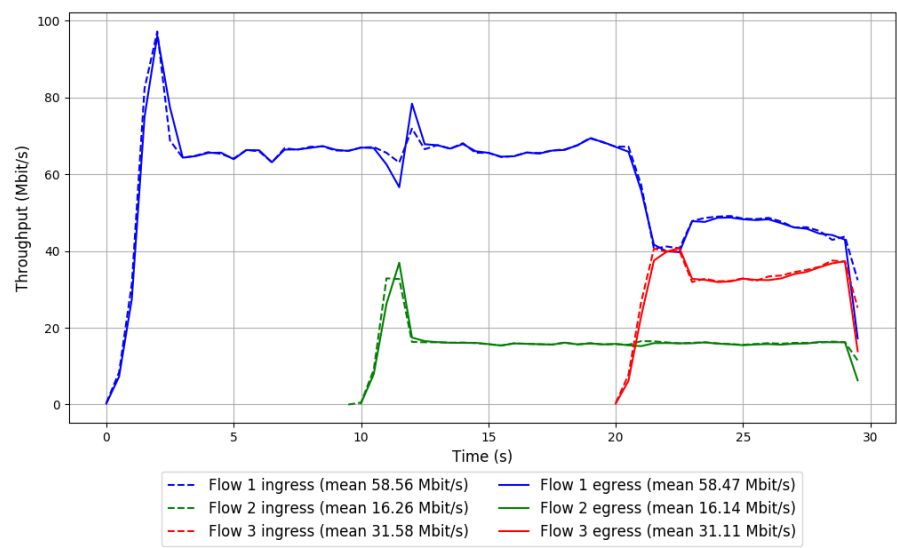
Run 8: Report of LEDBAT — Data Link

```
Run 9: Statistics of LEDBAT

Start at: 2018-04-17 16:25:47
End at: 2018-04-17 16:26:17
Local clock offset: 5.849 ms
Remote clock offset: -9.332 ms


# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.26 Mbit/s
95th percentile per-packet one-way delay: 40.736 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 9.14 Mbit/s
95th percentile per-packet one-way delay: 40.617 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 41.125 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 3.05 Mbit/s
95th percentile per-packet one-way delay: 39.999 ms
Loss rate: 3.97%
```
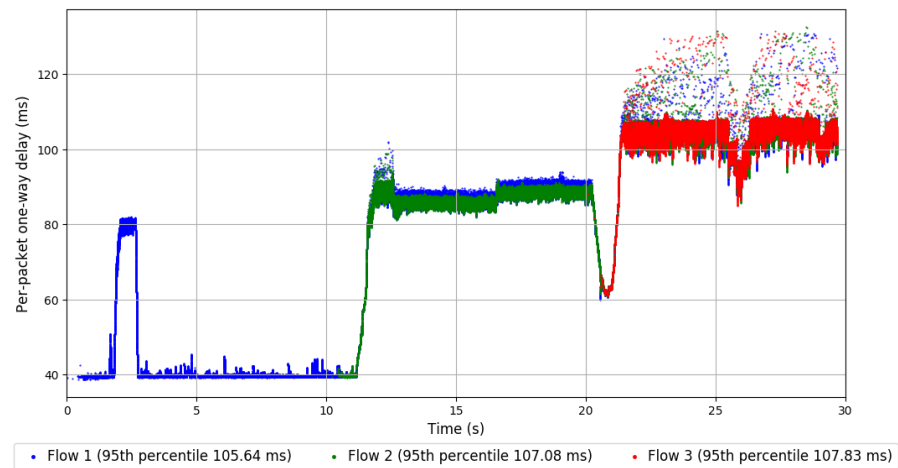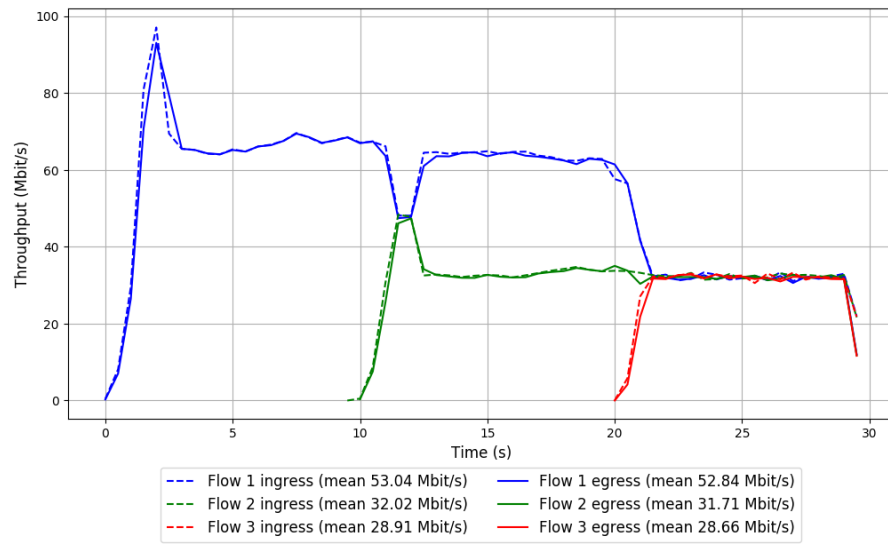
Run 9: Report of LEDBAT — Data Link

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```
Run 10: Statistics of LEDBAT

Start at: 2018-04-17 16:48:52
End at: 2018-04-17 16:49:22
Local clock offset: 8.054 ms
Remote clock offset: -0.394 ms


# Below is generated by plot.py at 2018-04-17 20:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.92 Mbit/s
95th percentile per-packet one-way delay: 41.121 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 9.73 Mbit/s
95th percentile per-packet one-way delay: 40.963 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 6.36 Mbit/s
95th percentile per-packet one-way delay: 41.476 ms
Loss rate: 1.94%
-- Flow 3:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 40.929 ms
Loss rate: 3.92%
```
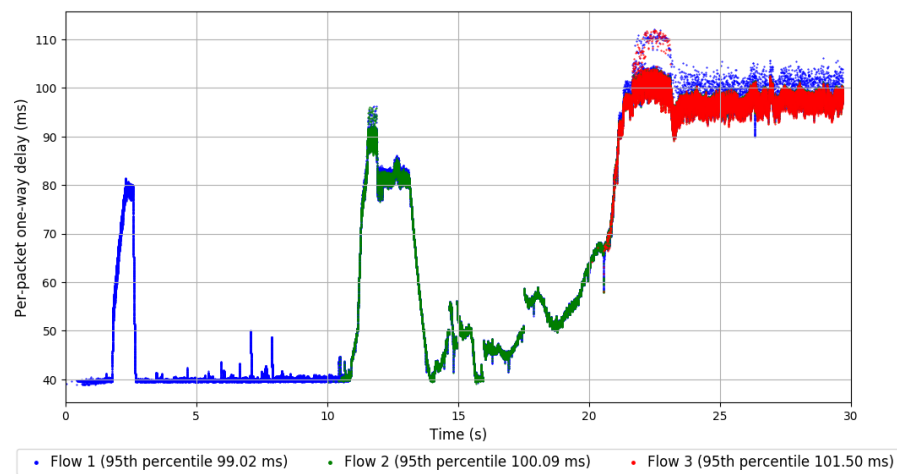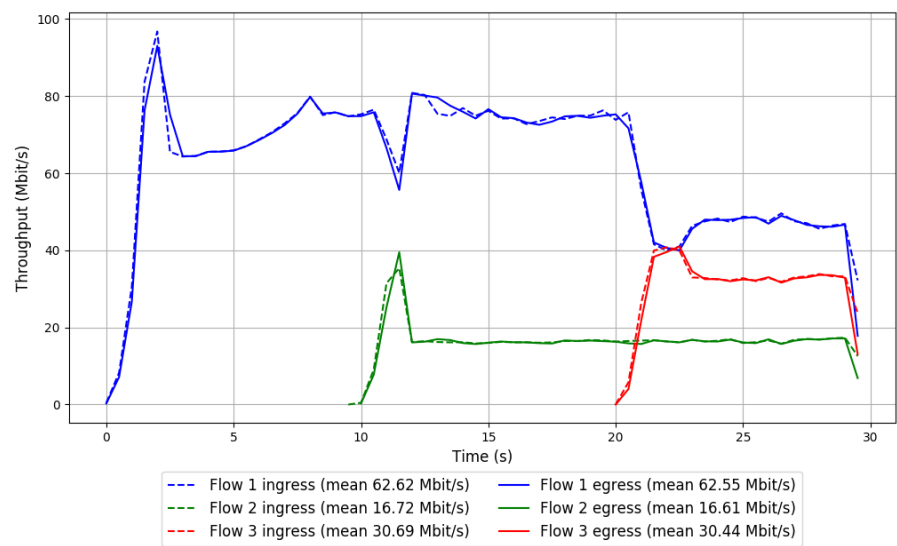
Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-17 13:20:08
End at: 2018-04-17 13:20:38
Local clock offset: 6.614 ms
Remote clock offset: -3.636 ms


# Below is generated by plot.py at 2018-04-17 20:49:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.27 Mbit/s
95th percentile per-packet one-way delay: 103.536 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 58.47 Mbit/s
95th percentile per-packet one-way delay: 102.263 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 16.14 Mbit/s
95th percentile per-packet one-way delay: 103.990 ms
Loss rate: 1.69%
-- Flow 3:
Average throughput: 31.11 Mbit/s
95th percentile per-packet one-way delay: 104.996 ms
Loss rate: 3.58%
```

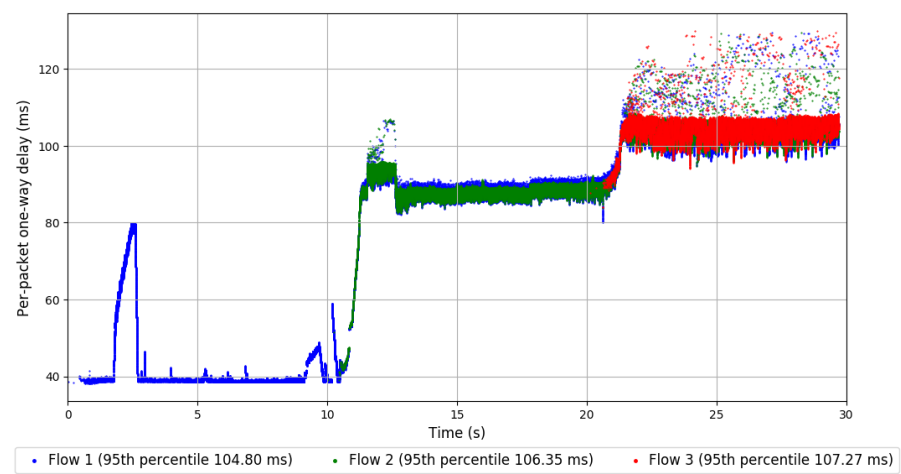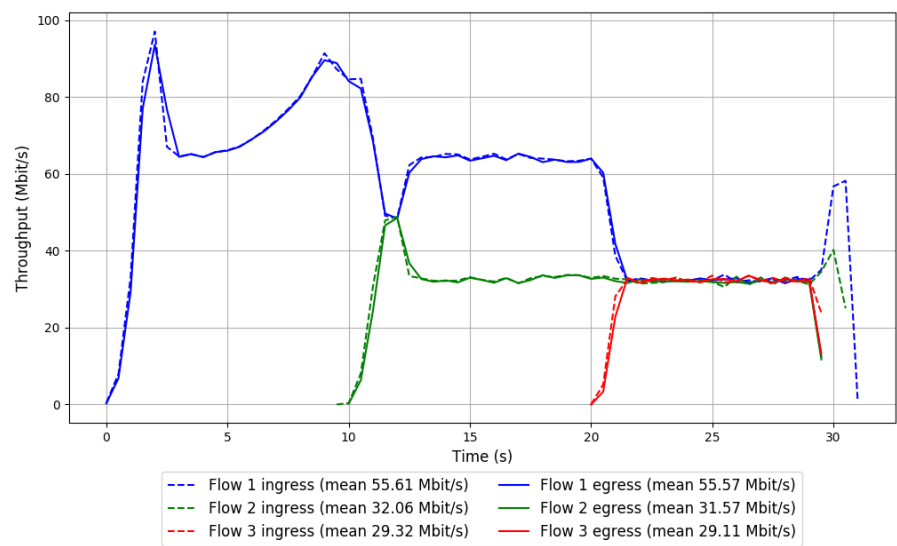Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 58.56 Mbit/s)   Flow 1 egress (mean 58.47 Mbit/s)
Flow 2 ingress (mean 16.26 Mbit/s)   Flow 2 egress (mean 16.14 Mbit/s)
Flow 3 ingress (mean 31.58 Mbit/s)   Flow 3 egress (mean 31.11 Mbit/s)

Flow 1 (95th percentile 102.26 ms)   Flow 2 (95th percentile 103.99 ms)   Flow 3 (95th percentile 105.00 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-17 13:43:01
End at: 2018-04-17 13:43:31
Local clock offset: 7.609 ms
Remote clock offset: 29.021 ms


# Below is generated by plot.py at 2018-04-17 20:49:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.13 Mbit/s
95th percentile per-packet one-way delay: 106.723 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 52.84 Mbit/s
95th percentile per-packet one-way delay: 105.644 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 107.085 ms
Loss rate: 2.09%
-- Flow 3:
Average throughput: 28.66 Mbit/s
95th percentile per-packet one-way delay: 107.825 ms
Loss rate: 3.66%
```

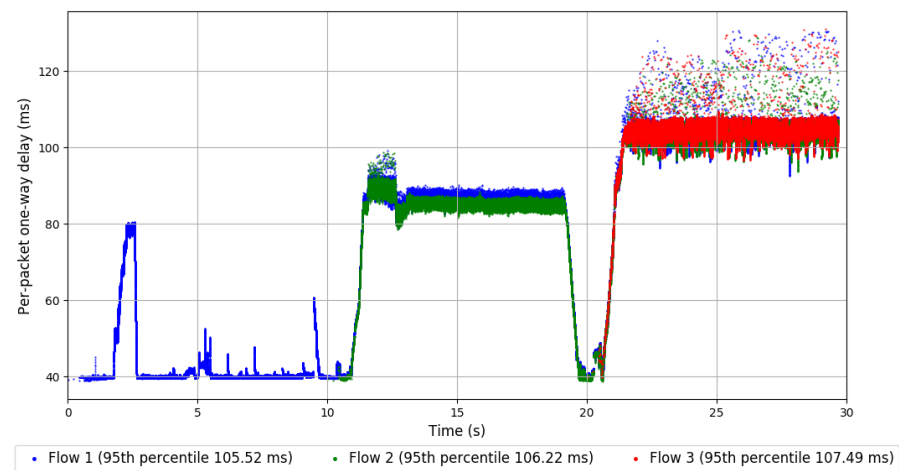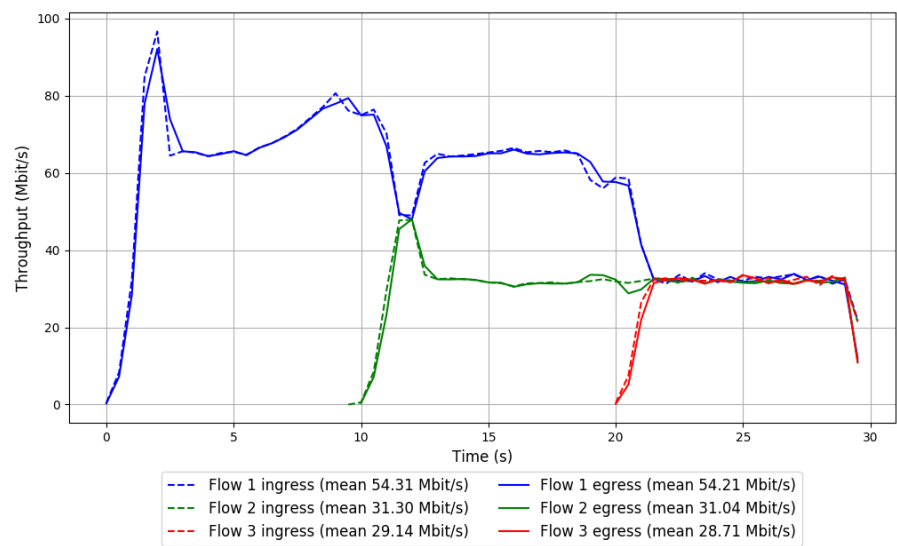Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 53.04 Mbit/s)   Flow 1 egress (mean 52.84 Mbit/s)
Flow 2 ingress (mean 32.02 Mbit/s)   Flow 2 egress (mean 31.71 Mbit/s)
Flow 3 ingress (mean 28.91 Mbit/s)   Flow 3 egress (mean 28.66 Mbit/s)

Flow 1 (95th percentile 105.64 ms)   Flow 2 (95th percentile 107.08 ms)   Flow 3 (95th percentile 107.83 ms)
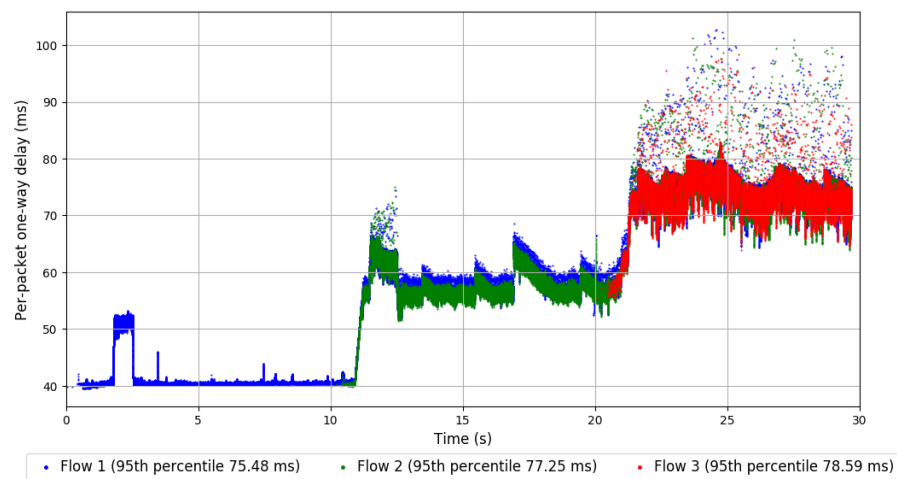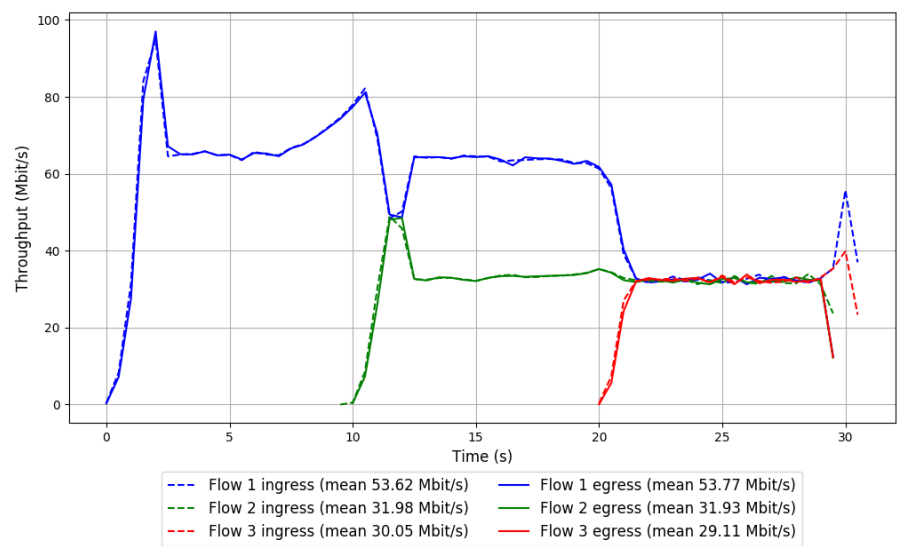
```
Run 3: Statistics of PCC-Allegro

Start at: 2018-04-17 14:06:23
End at: 2018-04-17 14:06:53
Local clock offset: 12.607 ms
Remote clock offset: 18.033 ms


# Below is generated by plot.py at 2018-04-17 20:50:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.41 Mbit/s
95th percentile per-packet one-way delay: 99.752 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 62.55 Mbit/s
95th percentile per-packet one-way delay: 99.021 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 16.61 Mbit/s
95th percentile per-packet one-way delay: 100.088 ms
Loss rate: 1.69%
-- Flow 3:
Average throughput: 30.44 Mbit/s
95th percentile per-packet one-way delay: 101.505 ms
Loss rate: 3.08%
```

Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 62.62 Mbit/s)   Flow 1 egress (mean 62.55 Mbit/s)
Flow 2 ingress (mean 16.72 Mbit/s)   Flow 2 egress (mean 16.61 Mbit/s)
Flow 3 ingress (mean 30.69 Mbit/s)   Flow 3 egress (mean 30.44 Mbit/s)

Flow 1 (95th percentile 99.02 ms)   Flow 2 (95th percentile 100.09 ms)   Flow 3 (95th percentile 101.50 ms)

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```
Run 4: Statistics of PCC-Allegro

Start at: 2018-04-17 14:29:07
End at: 2018-04-17 14:29:37
Local clock offset: 16.178 ms
Remote clock offset: 12.168 ms


# Below is generated by plot.py at 2018-04-17 20:50:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.90 Mbit/s
95th percentile per-packet one-way delay: 106.096 ms
Loss rate: 5.04%
-- Flow 1:
Average throughput: 55.57 Mbit/s
95th percentile per-packet one-way delay: 104.799 ms
Loss rate: 4.44%
-- Flow 2:
Average throughput: 31.57 Mbit/s
95th percentile per-packet one-way delay: 106.347 ms
Loss rate: 7.34%
-- Flow 3:
Average throughput: 29.11 Mbit/s
95th percentile per-packet one-way delay: 107.269 ms
Loss rate: 3.32%
```
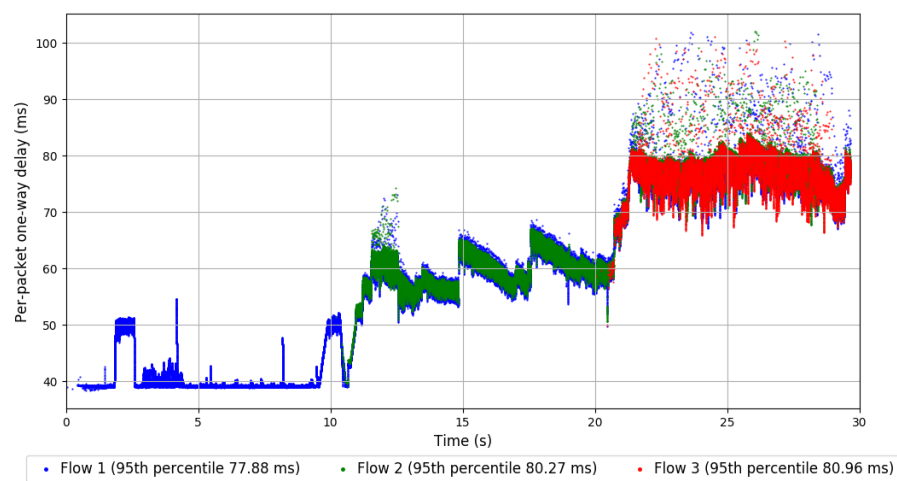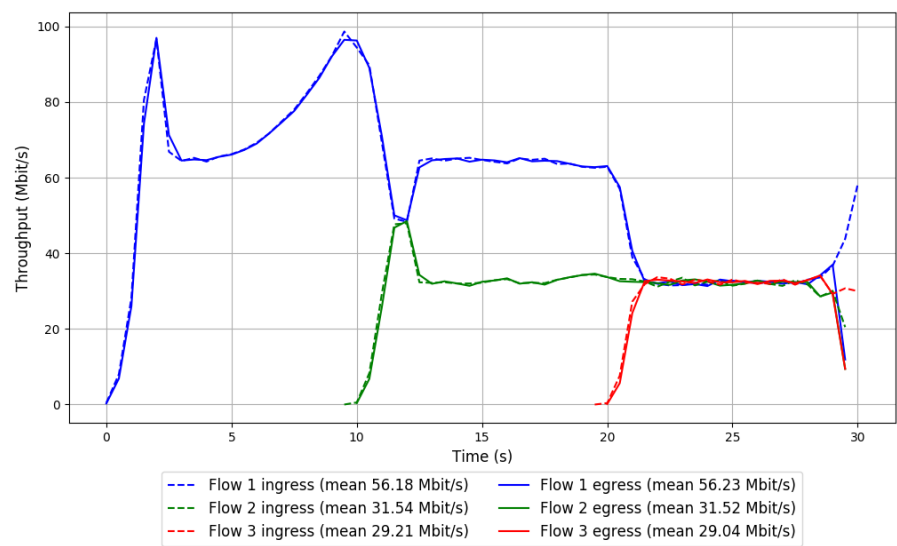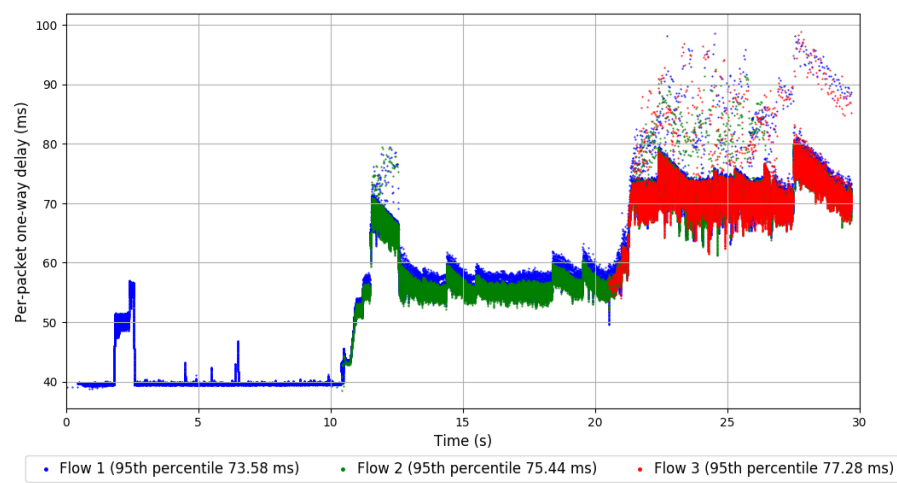
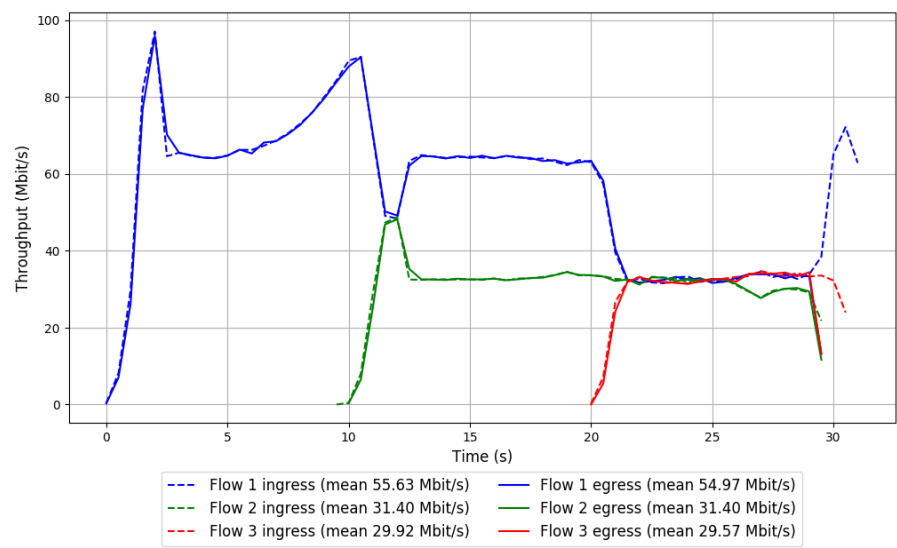Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-04-17 14:51:56
End at: 2018-04-17 14:52:26
Local clock offset: 22.078 ms
Remote clock offset: -15.711 ms


# Below is generated by plot.py at 2018-04-17 20:50:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.11 Mbit/s
95th percentile per-packet one-way delay: 106.335 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 54.21 Mbit/s
95th percentile per-packet one-way delay: 105.519 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 31.04 Mbit/s
95th percentile per-packet one-way delay: 106.224 ms
Loss rate: 1.86%
-- Flow 3:
Average throughput: 28.71 Mbit/s
95th percentile per-packet one-way delay: 107.492 ms
Loss rate: 3.43%
```
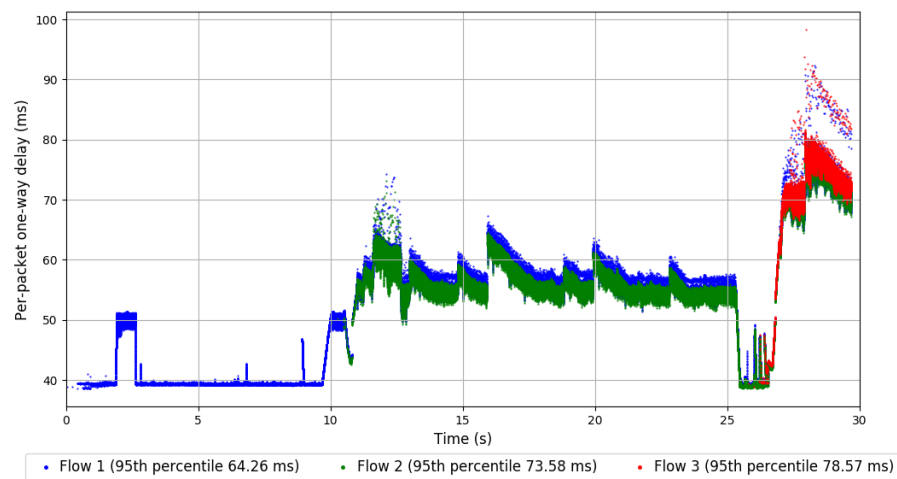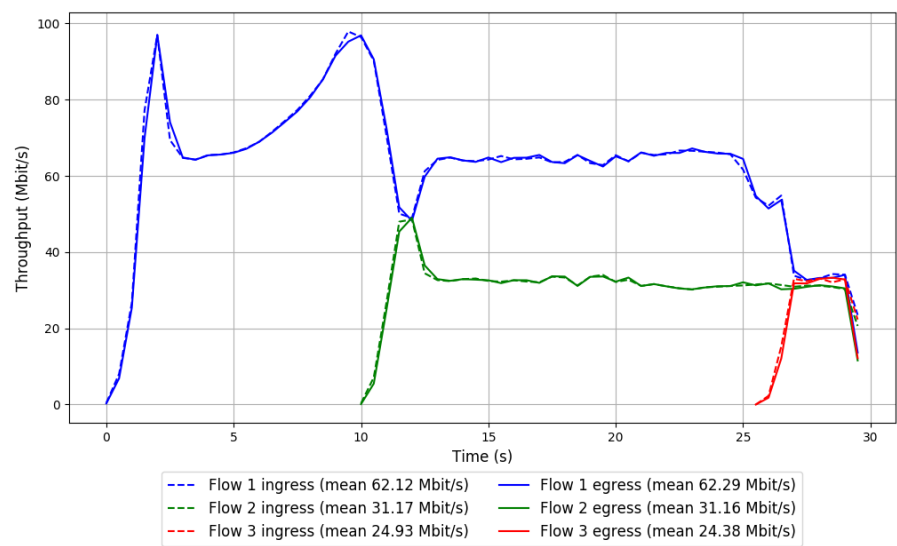
Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 54.31 Mbit/s) --- Flow 1 egress (mean 54.21 Mbit/s)
Flow 2 ingress (mean 31.30 Mbit/s) --- Flow 2 egress (mean 31.04 Mbit/s)
Flow 3 ingress (mean 29.14 Mbit/s) --- Flow 3 egress (mean 28.71 Mbit/s)

Flow 1 (95th percentile 105.52 ms)   Flow 2 (95th percentile 106.22 ms)   Flow 3 (95th percentile 107.49 ms)

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```
Run 6: Statistics of PCC-Allegro

Start at: 2018-04-17 15:15:54
End at: 2018-04-17 15:16:24
Local clock offset: 6.628 ms
Remote clock offset: -8.345 ms


# Below is generated by plot.py at 2018-04-17 20:50:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.39 Mbit/s
95th percentile per-packet one-way delay: 76.785 ms
Loss rate: 4.35%
-- Flow 1:
Average throughput: 53.77 Mbit/s
95th percentile per-packet one-way delay: 75.485 ms
Loss rate: 3.63%
-- Flow 2:
Average throughput: 31.93 Mbit/s
95th percentile per-packet one-way delay: 77.255 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 29.11 Mbit/s
95th percentile per-packet one-way delay: 78.591 ms
Loss rate: 14.01%
```

Run 6: Report of PCC-Allegro — Data Link

```
Run 7: Statistics of PCC-Allegro

Start at: 2018-04-17 15:38:48
End at: 2018-04-17 15:39:18
Local clock offset: -2.545 ms
Remote clock offset: 0.83 ms


# Below is generated by plot.py at 2018-04-17 20:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.56 Mbit/s
95th percentile per-packet one-way delay: 79.445 ms
Loss rate: 3.15%
-- Flow 1:
Average throughput: 56.23 Mbit/s
95th percentile per-packet one-way delay: 77.876 ms
Loss rate: 2.78%
-- Flow 2:
Average throughput: 31.52 Mbit/s
95th percentile per-packet one-way delay: 80.268 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 29.04 Mbit/s
95th percentile per-packet one-way delay: 80.958 ms
Loss rate: 9.07%
```
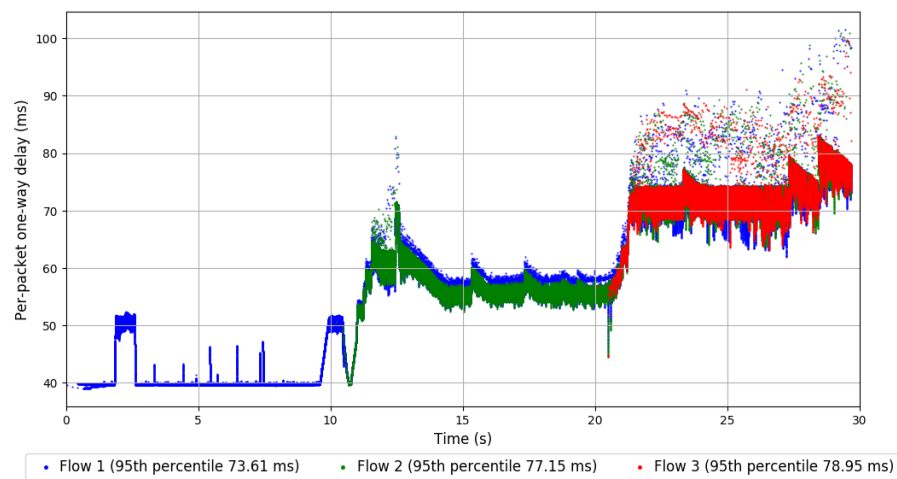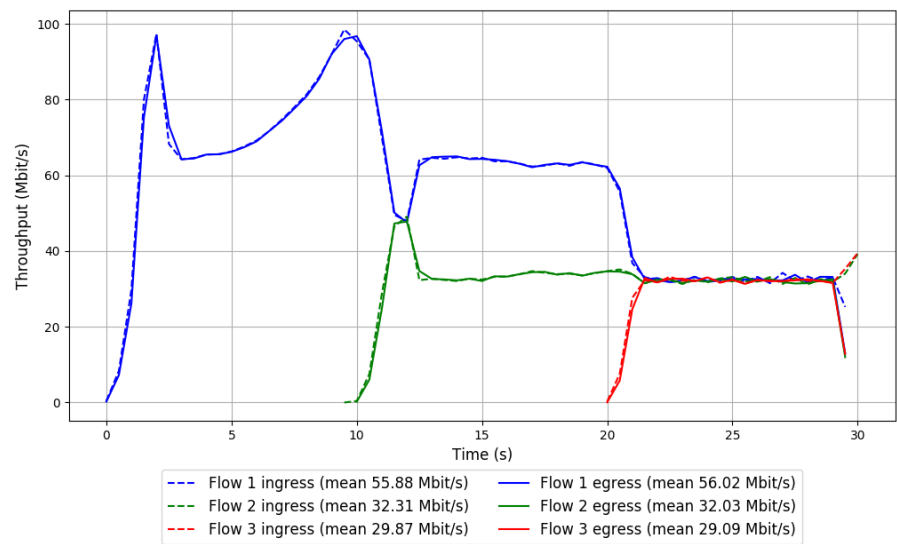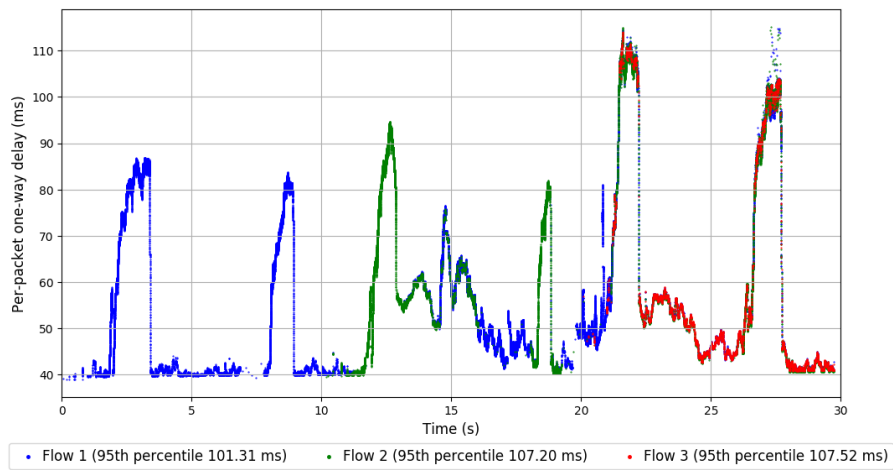
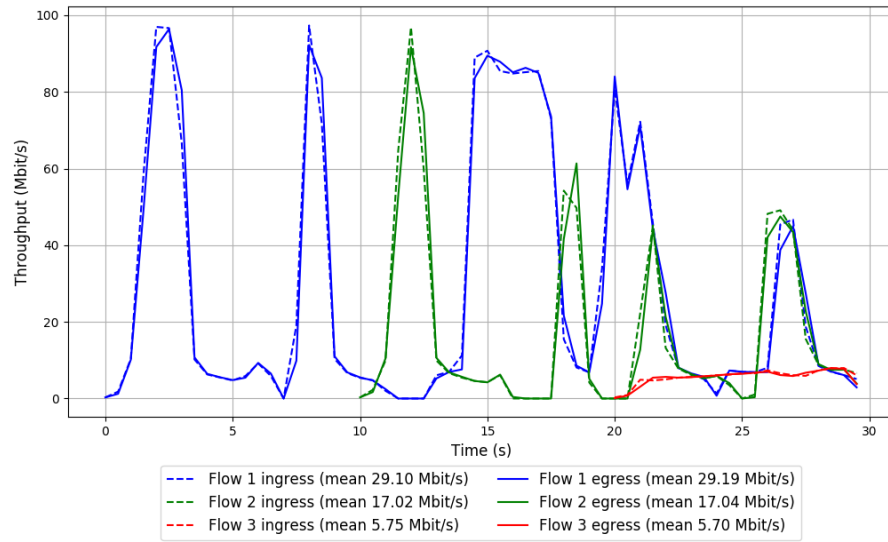# Run 7: Report of PCC-Allegro — Data Link

```
Run 8: Statistics of PCC-Allegro

Start at: 2018-04-17 16:01:35
End at: 2018-04-17 16:02:05
Local clock offset: 0.067 ms
Remote clock offset: 14.741 ms


# Below is generated by plot.py at 2018-04-17 20:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.37 Mbit/s
95th percentile per-packet one-way delay: 74.835 ms
Loss rate: 6.04%
-- Flow 1:
Average throughput: 54.97 Mbit/s
95th percentile per-packet one-way delay: 73.579 ms
Loss rate: 6.60%
-- Flow 2:
Average throughput: 31.40 Mbit/s
95th percentile per-packet one-way delay: 75.443 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 29.57 Mbit/s
95th percentile per-packet one-way delay: 77.283 ms
Loss rate: 12.48%
```

Run 8: Report of PCC-Allegro — Data Link

```
Run 9: Statistics of PCC-Allegro

Start at: 2018-04-17 16:24:27
End at: 2018-04-17 16:24:57
Local clock offset: 5.623 ms
Remote clock offset: -9.251 ms


# Below is generated by plot.py at 2018-04-17 20:51:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.11 Mbit/s
95th percentile per-packet one-way delay: 72.690 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 62.29 Mbit/s
95th percentile per-packet one-way delay: 64.264 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 31.16 Mbit/s
95th percentile per-packet one-way delay: 73.576 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 24.38 Mbit/s
95th percentile per-packet one-way delay: 78.568 ms
Loss rate: 7.18%
```

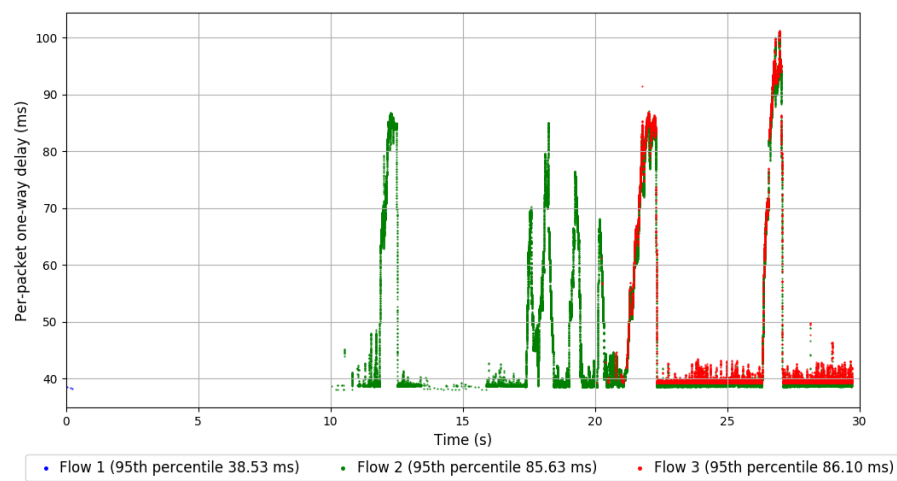Run 9: Report of PCC-Allegro — Data Link

```
Run 10: Statistics of PCC-Allegro

Start at: 2018-04-17 16:47:30
End at: 2018-04-17 16:48:00
Local clock offset: 8.447 ms
Remote clock offset: 0.085 ms


# Below is generated by plot.py at 2018-04-17 20:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.65 Mbit/s
95th percentile per-packet one-way delay: 75.992 ms
Loss rate: 2.83%
-- Flow 1:
Average throughput: 56.02 Mbit/s
95th percentile per-packet one-way delay: 73.608 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 32.03 Mbit/s
95th percentile per-packet one-way delay: 77.152 ms
Loss rate: 5.04%
-- Flow 3:
Average throughput: 29.09 Mbit/s
95th percentile per-packet one-way delay: 78.946 ms
Loss rate: 10.61%
```

Run 10: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 55.88 Mbit/s)   Flow 1 egress (mean 56.02 Mbit/s)
Flow 2 ingress (mean 32.31 Mbit/s)   Flow 2 egress (mean 32.03 Mbit/s)
Flow 3 ingress (mean 29.87 Mbit/s)   Flow 3 egress (mean 29.09 Mbit/s)

Flow 1 (95th percentile 73.61 ms)   Flow 2 (95th percentile 77.15 ms)   Flow 3 (95th percentile 78.95 ms)
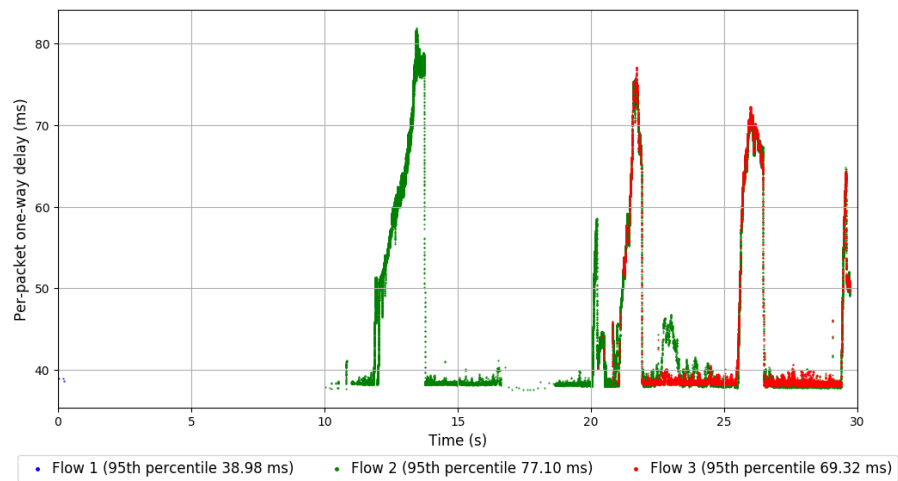
```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-17 13:16:15
End at: 2018-04-17 13:16:45
Local clock offset: 6.538 ms
Remote clock offset: -13.003 ms


# Below is generated by plot.py at 2018-04-17 20:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.34 Mbit/s
95th percentile per-packet one-way delay: 104.469 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 29.19 Mbit/s
95th percentile per-packet one-way delay: 101.307 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 17.04 Mbit/s
95th percentile per-packet one-way delay: 107.201 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 5.70 Mbit/s
95th percentile per-packet one-way delay: 107.519 ms
Loss rate: 2.99%
```

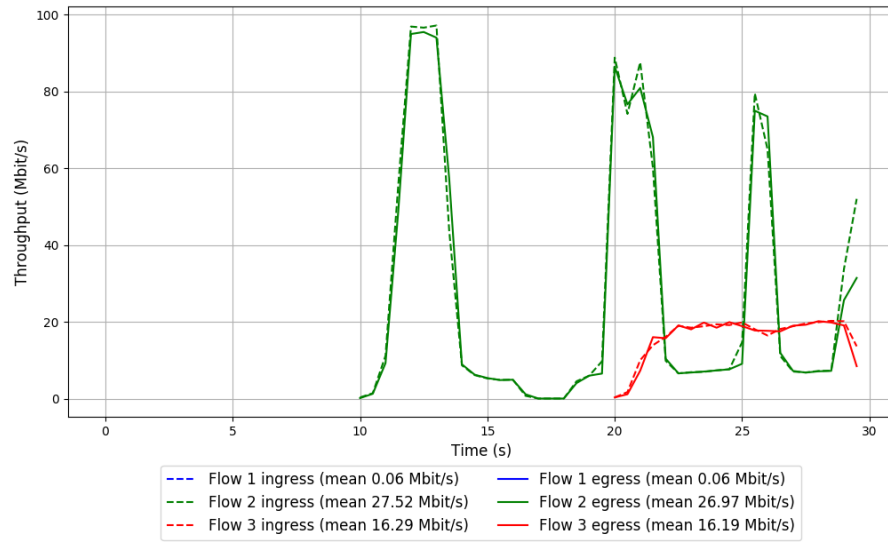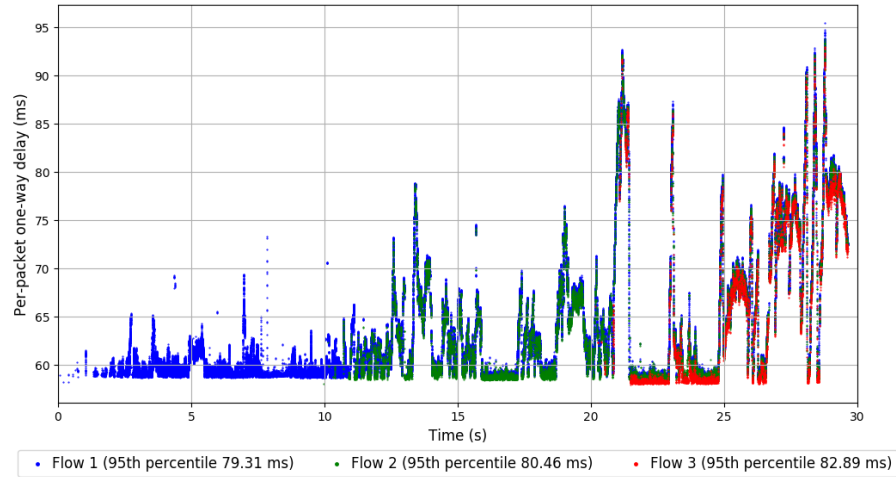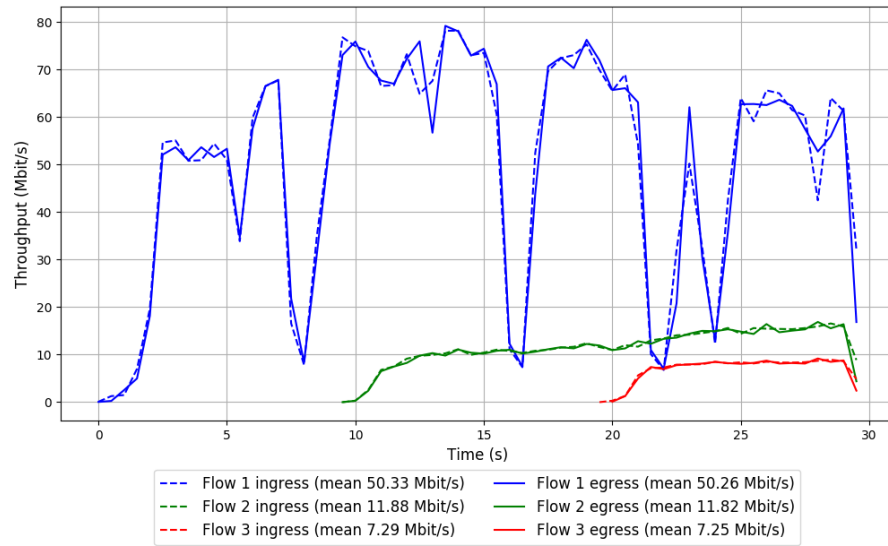Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-04-17 13:39:08
End at: 2018-04-17 13:39:38
Local clock offset: 7.637 ms
Remote clock offset: 24.421 ms


# Below is generated by plot.py at 2018-04-17 20:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.37 Mbit/s
95th percentile per-packet one-way delay: 71.113 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 35.56 Mbit/s
95th percentile per-packet one-way delay: 73.352 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 20.75 Mbit/s
95th percentile per-packet one-way delay: 68.077 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 9.38 Mbit/s
95th percentile per-packet one-way delay: 68.470 ms
Loss rate: 2.81%
```

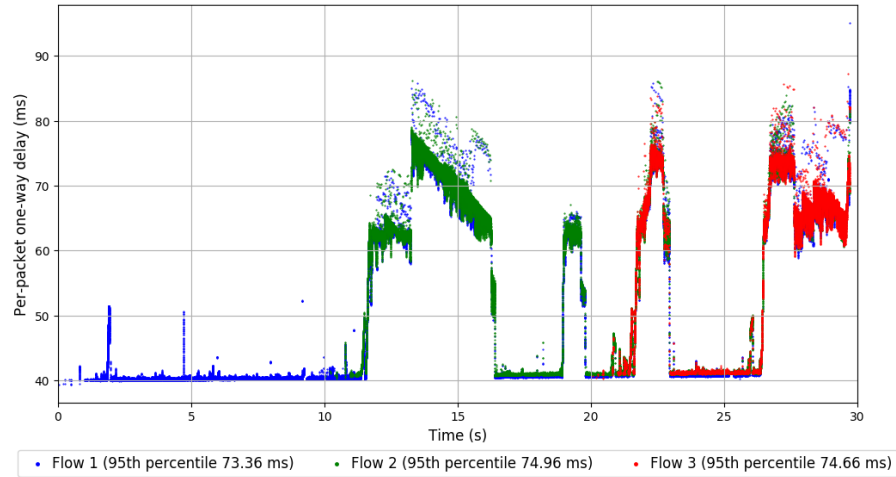Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-04-17 14:02:31
End at: 2018-04-17 14:03:01
Local clock offset: 11.132 ms
Remote clock offset: 17.672 ms


# Below is generated by plot.py at 2018-04-17 20:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.65 Mbit/s
95th percentile per-packet one-way delay: 85.799 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 38.531 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.50 Mbit/s
95th percentile per-packet one-way delay: 85.626 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 21.78 Mbit/s
95th percentile per-packet one-way delay: 86.101 ms
Loss rate: 2.47%
```
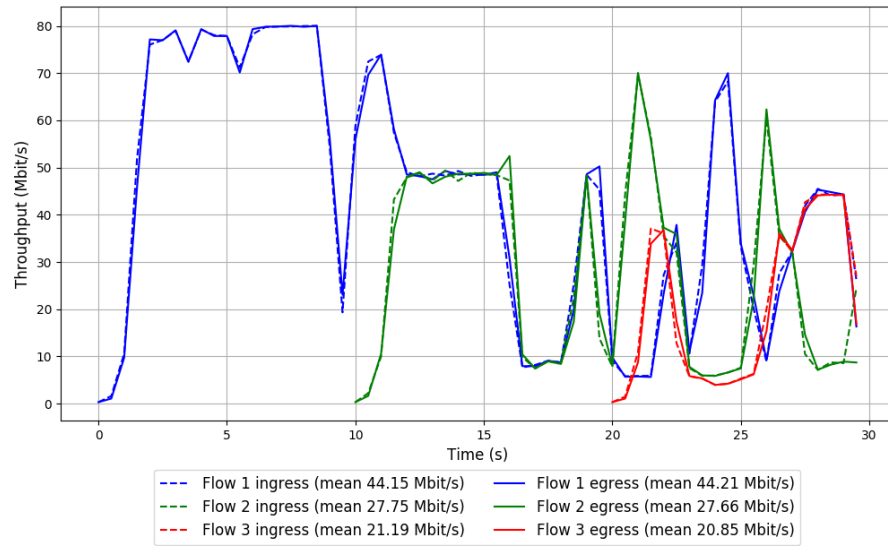
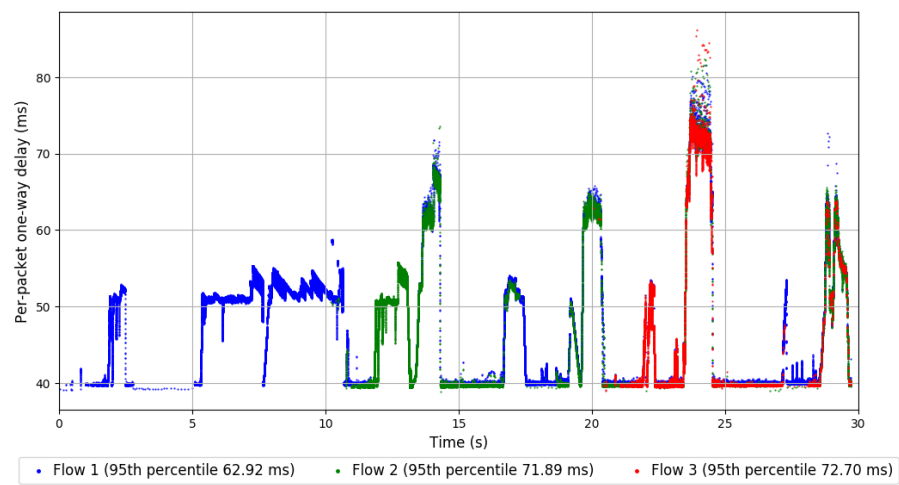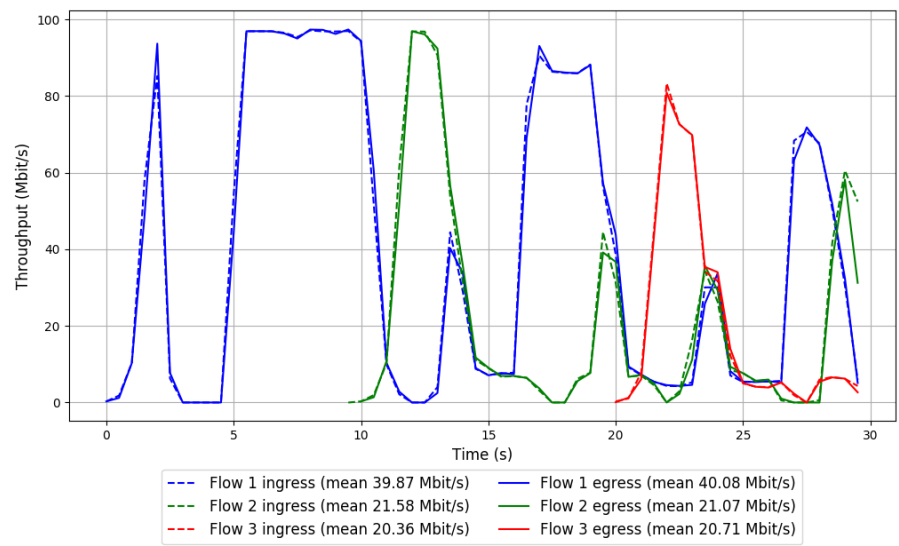Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2018-04-17 14:25:15
End at: 2018-04-17 14:25:45
Local clock offset: 15.849 ms
Remote clock offset: 17.228 ms


# Below is generated by plot.py at 2018-04-17 20:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.16 Mbit/s
95th percentile per-packet one-way delay: 76.441 ms
Loss rate: 2.85%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 38.979 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.97 Mbit/s
95th percentile per-packet one-way delay: 77.100 ms
Loss rate: 2.93%
-- Flow 3:
Average throughput: 16.19 Mbit/s
95th percentile per-packet one-way delay: 69.320 ms
Loss rate: 2.60%
```

Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 0.06 Mbit/s) --- Flow 1 egress (mean 0.06 Mbit/s)
Flow 2 ingress (mean 27.52 Mbit/s) --- Flow 2 egress (mean 26.97 Mbit/s)
Flow 3 ingress (mean 16.29 Mbit/s) --- Flow 3 egress (mean 16.19 Mbit/s)

Flow 1 (95th percentile 38.98 ms)   Flow 2 (95th percentile 77.10 ms)   Flow 3 (95th percentile 69.32 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-04-17 14:48:02
End at: 2018-04-17 14:48:32
Local clock offset: 21.244 ms
Remote clock offset: -35.008 ms


# Below is generated by plot.py at 2018-04-17 20:52:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.48 Mbit/s
95th percentile per-packet one-way delay: 79.629 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 50.26 Mbit/s
95th percentile per-packet one-way delay: 79.313 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 11.82 Mbit/s
95th percentile per-packet one-way delay: 80.461 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 7.25 Mbit/s
95th percentile per-packet one-way delay: 82.886 ms
Loss rate: 2.63%
```
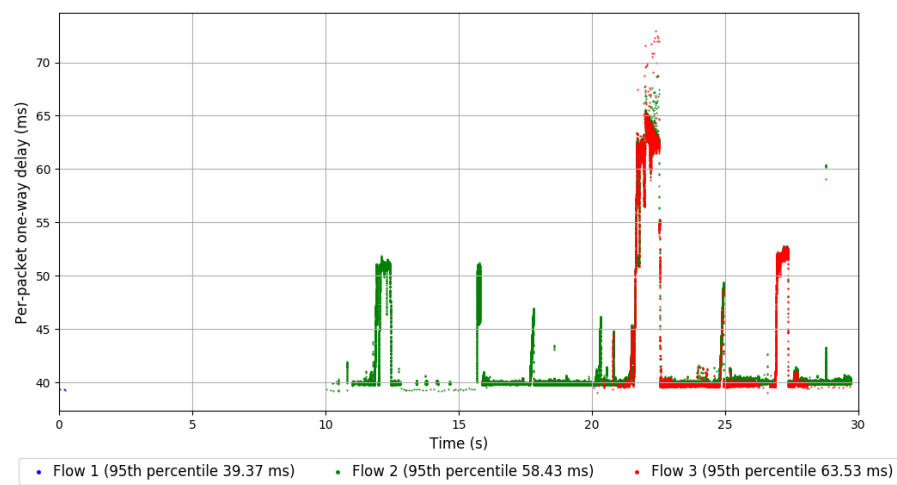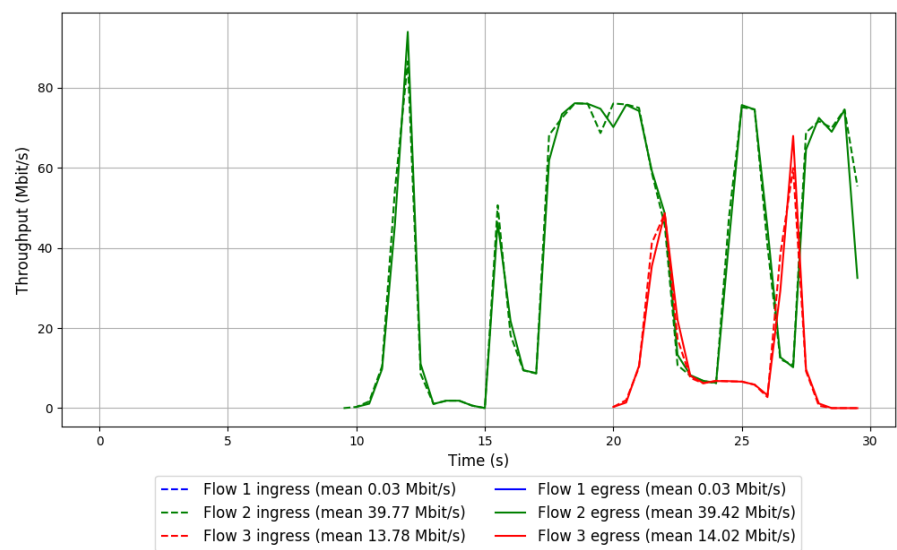
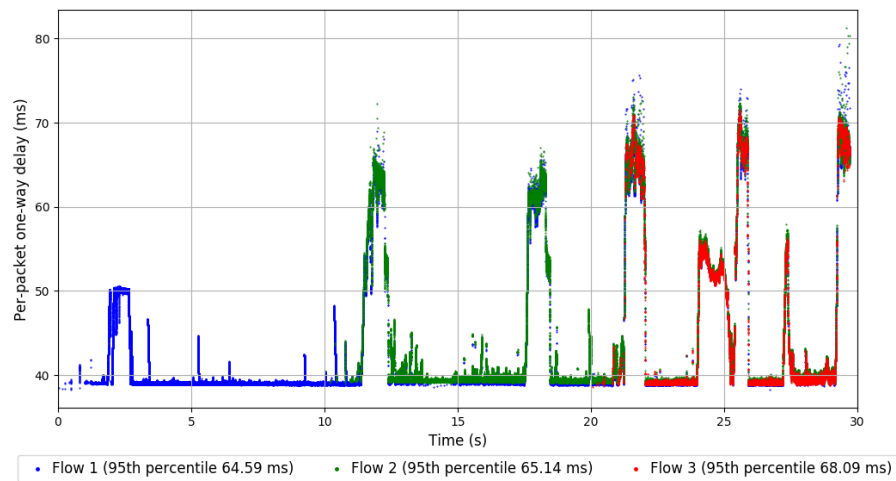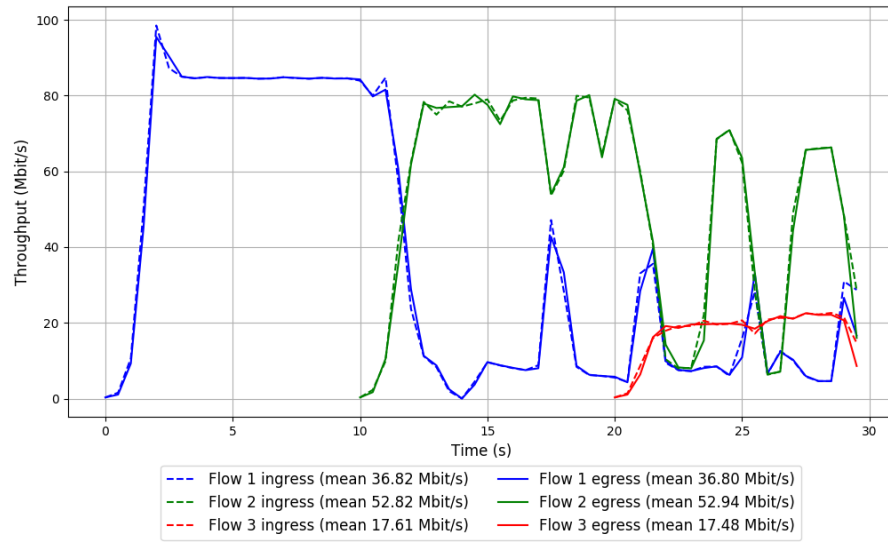Run 5: Report of QUIC Cubic — Data Link

```
Run 6: Statistics of QUIC Cubic

Start at: 2018-04-17 15:12:00
End at: 2018-04-17 15:12:30
Local clock offset: 10.722 ms
Remote clock offset: 14.711 ms


# Below is generated by plot.py at 2018-04-17 20:52:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.33 Mbit/s
95th percentile per-packet one-way delay: 74.283 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 44.21 Mbit/s
95th percentile per-packet one-way delay: 73.361 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 27.66 Mbit/s
95th percentile per-packet one-way delay: 74.959 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 20.85 Mbit/s
95th percentile per-packet one-way delay: 74.662 ms
Loss rate: 3.93%
```

Run 6: Report of QUIC Cubic — Data Link

```
Run 7: Statistics of QUIC Cubic

Start at: 2018-04-17 15:34:54
End at: 2018-04-17 15:35:24
Local clock offset: -1.811 ms
Remote clock offset: -0.729 ms


# Below is generated by plot.py at 2018-04-17 20:52:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.77 Mbit/s
95th percentile per-packet one-way delay: 66.893 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 40.08 Mbit/s
95th percentile per-packet one-way delay: 62.920 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 21.07 Mbit/s
95th percentile per-packet one-way delay: 71.891 ms
Loss rate: 3.37%
-- Flow 3:
Average throughput: 20.71 Mbit/s
95th percentile per-packet one-way delay: 72.698 ms
Loss rate: 0.56%
```
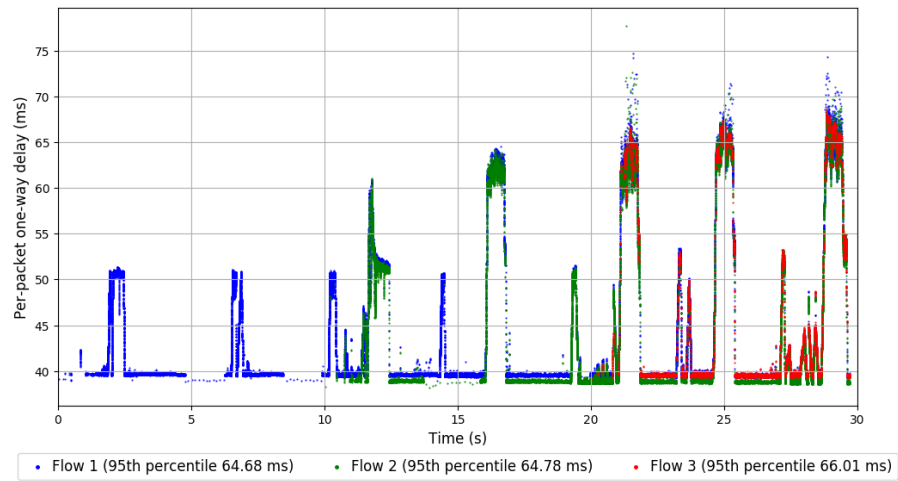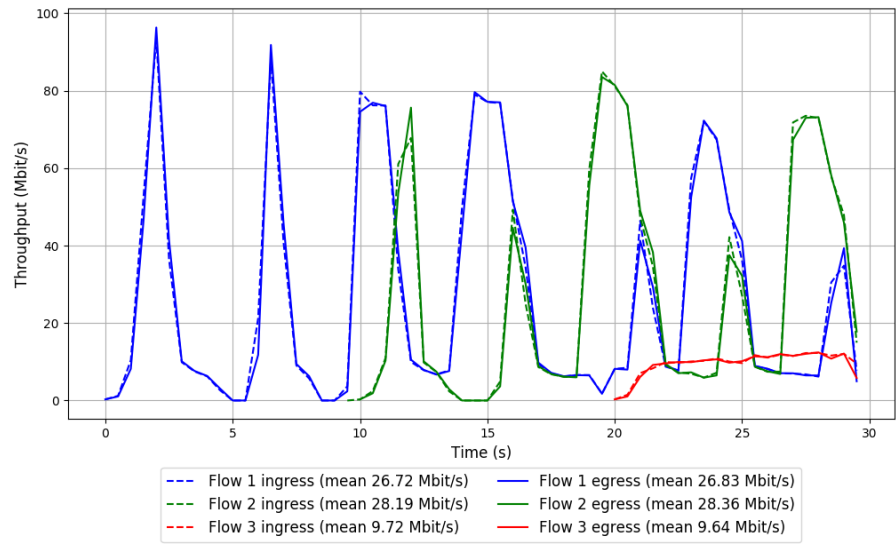
Run 7: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 39.87 Mbit/s) — Flow 1 egress (mean 40.08 Mbit/s)
Flow 2 ingress (mean 21.58 Mbit/s) — Flow 2 egress (mean 21.07 Mbit/s)
Flow 3 ingress (mean 20.36 Mbit/s) — Flow 3 egress (mean 20.71 Mbit/s)

Flow 1 (95th percentile 62.92 ms) — Flow 2 (95th percentile 71.89 ms) — Flow 3 (95th percentile 72.70 ms)

```
Run 8: Statistics of QUIC Cubic

Start at: 2018-04-17 15:57:43
End at: 2018-04-17 15:58:13
Local clock offset: 0.161 ms
Remote clock offset: 13.438 ms


# Below is generated by plot.py at 2018-04-17 20:52:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.69 Mbit/s
95th percentile per-packet one-way delay: 62.410 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 39.370 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.42 Mbit/s
95th percentile per-packet one-way delay: 58.429 ms
Loss rate: 1.83%
-- Flow 3:
Average throughput: 14.02 Mbit/s
95th percentile per-packet one-way delay: 63.532 ms
Loss rate: 0.00%
```
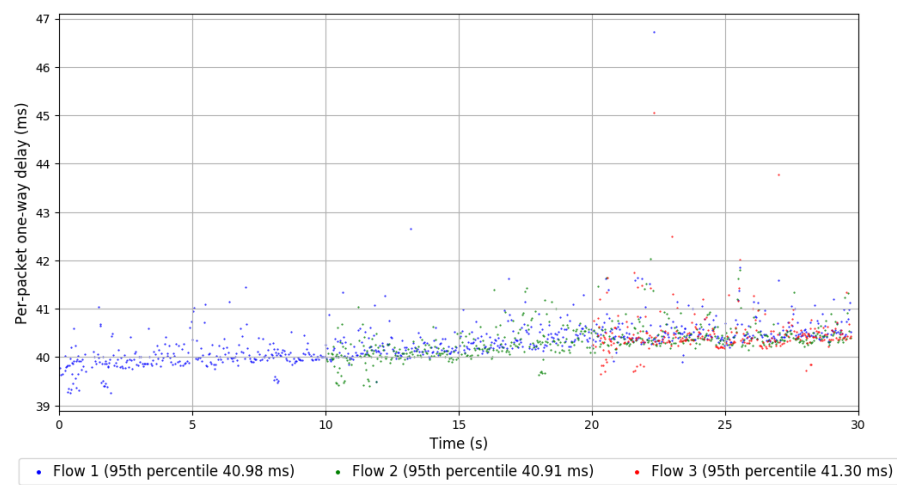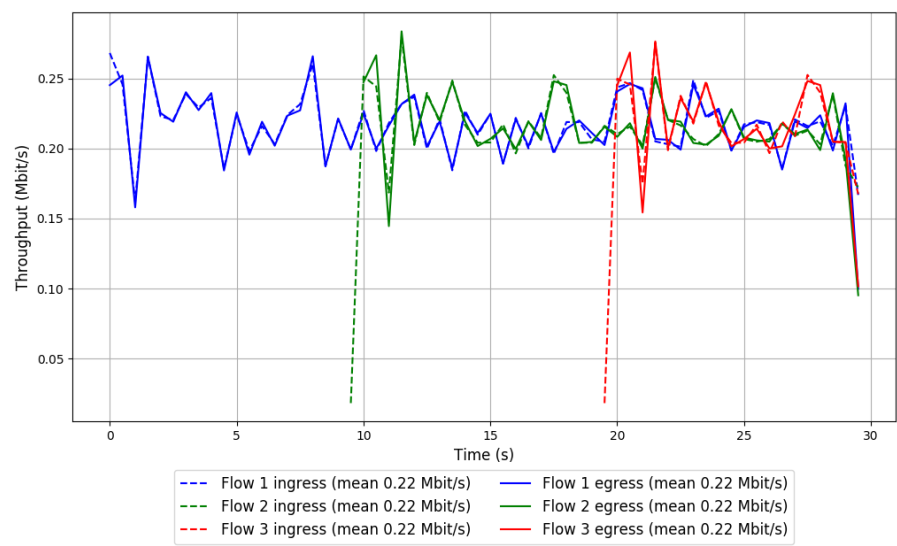
Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 0.03 Mbit/s) --- Flow 1 egress (mean 0.03 Mbit/s)
Flow 2 ingress (mean 39.77 Mbit/s) --- Flow 2 egress (mean 39.42 Mbit/s)
Flow 3 ingress (mean 13.78 Mbit/s) --- Flow 3 egress (mean 14.02 Mbit/s)

Flow 1 (95th percentile 39.37 ms) • Flow 2 (95th percentile 58.43 ms) • Flow 3 (95th percentile 63.53 ms)

```
Run 9: Statistics of QUIC Cubic

Start at: 2018-04-17 16:20:32
End at: 2018-04-17 16:21:02
Local clock offset: 4.172 ms
Remote clock offset: -8.798 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.58 Mbit/s
95th percentile per-packet one-way delay: 65.422 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 36.80 Mbit/s
95th percentile per-packet one-way delay: 64.592 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 52.94 Mbit/s
95th percentile per-packet one-way delay: 65.144 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 17.48 Mbit/s
95th percentile per-packet one-way delay: 68.087 ms
Loss rate: 2.69%
```

Run 9: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 36.82 Mbit/s)   Flow 1 egress (mean 36.80 Mbit/s)
Flow 2 ingress (mean 52.82 Mbit/s)   Flow 2 egress (mean 52.94 Mbit/s)
Flow 3 ingress (mean 17.61 Mbit/s)   Flow 3 egress (mean 17.48 Mbit/s)

Flow 1 (95th percentile 64.59 ms)   Flow 2 (95th percentile 65.14 ms)   Flow 3 (95th percentile 68.09 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-17 16:43:37
End at: 2018-04-17 16:44:07
Local clock offset: 8.432 ms
Remote clock offset: 1.616 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.78 Mbit/s
95th percentile per-packet one-way delay: 64.877 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 26.83 Mbit/s
95th percentile per-packet one-way delay: 64.679 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 28.36 Mbit/s
95th percentile per-packet one-way delay: 64.778 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 9.64 Mbit/s
95th percentile per-packet one-way delay: 66.006 ms
Loss rate: 2.74%
```

Run 10: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2018-04-17 13:25:30
End at: 2018-04-17 13:26:00
Local clock offset: 6.829 ms
Remote clock offset: 6.355 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 40.983 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.978 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.911 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 41.295 ms
Loss rate: 1.86%
```
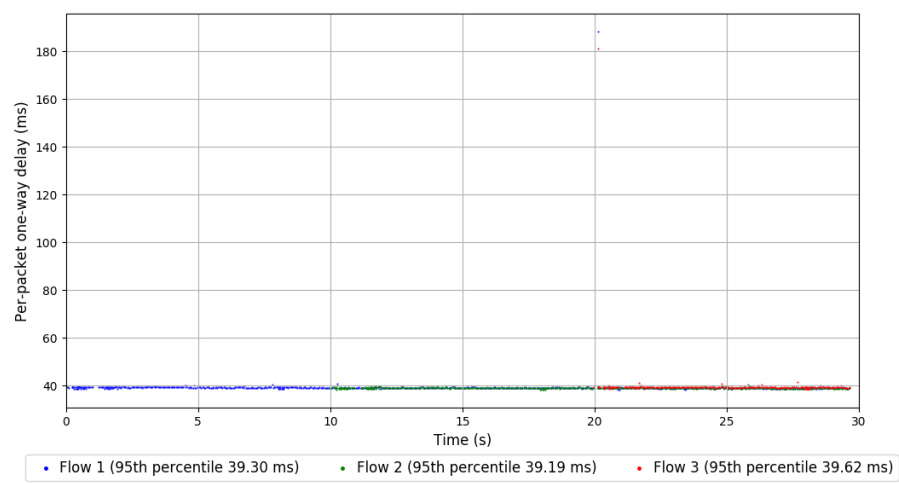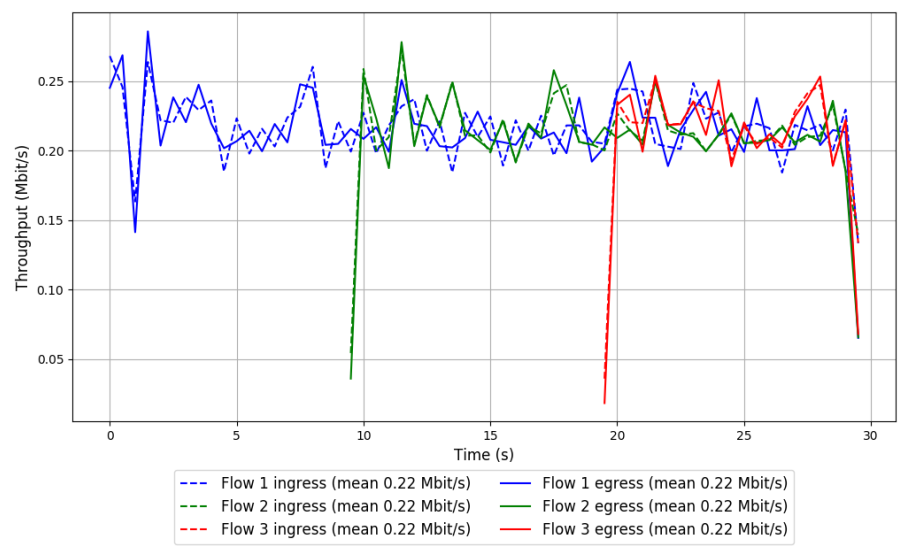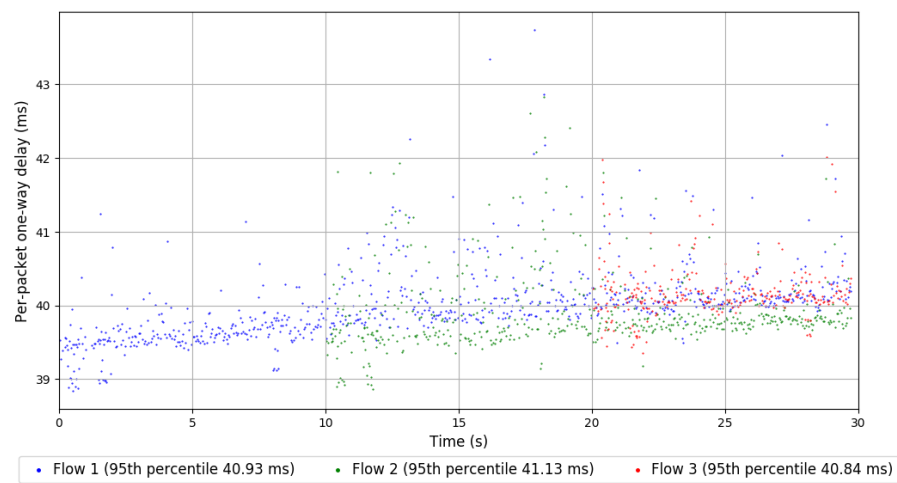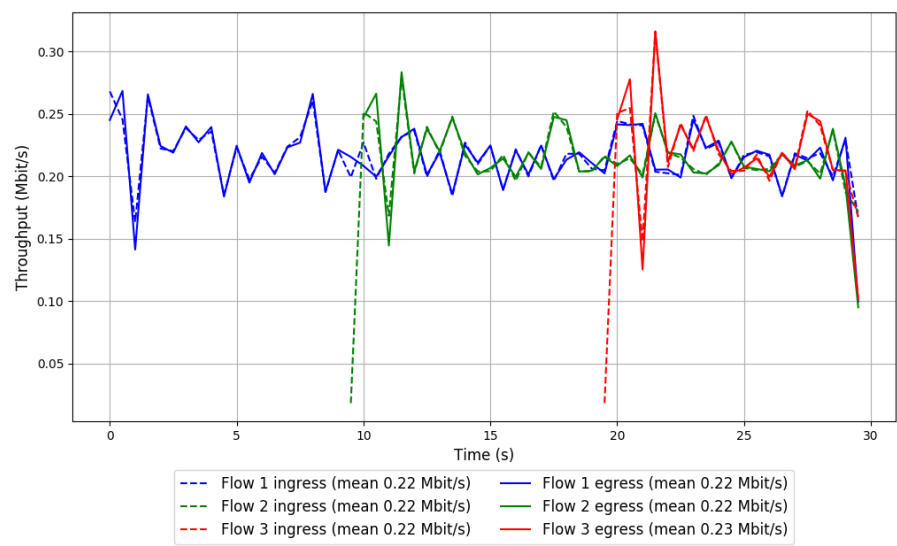
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-04-17 13:48:22
End at: 2018-04-17 13:48:52
Local clock offset: 7.699 ms
Remote clock offset: 31.403 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 38.695 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 38.679 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 38.797 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 38.141 ms
Loss rate: 1.86%
```

Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-04-17 14:11:45
End at: 2018-04-17 14:12:15
Local clock offset: 13.743 ms
Remote clock offset: 19.664 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 39.880 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.893 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.758 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.345 ms
Loss rate: 1.86%
```
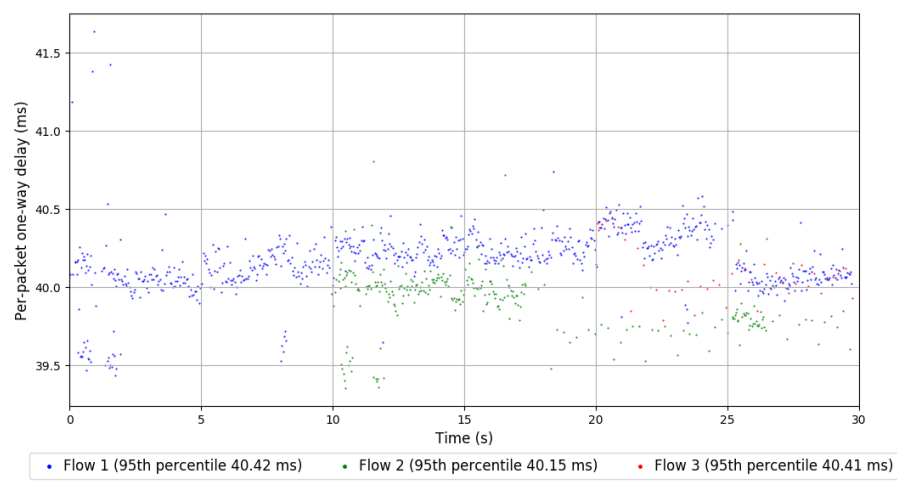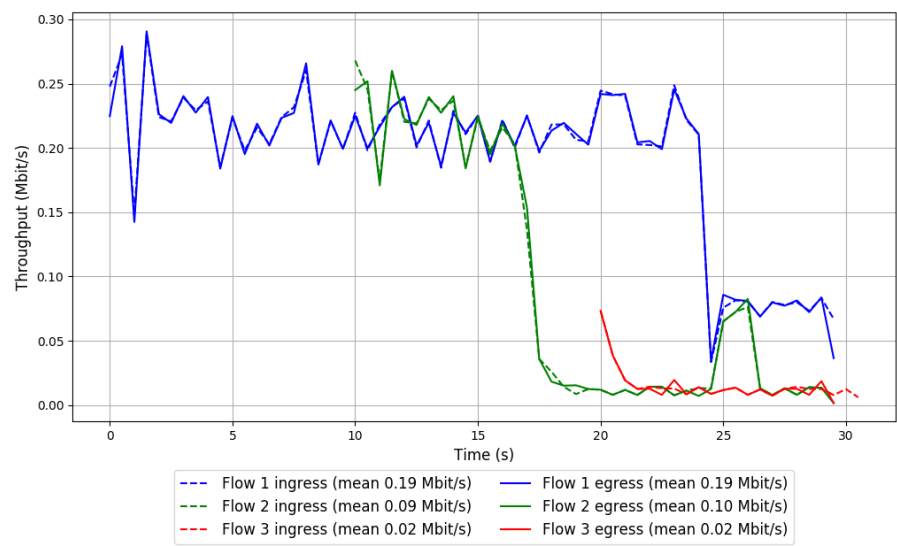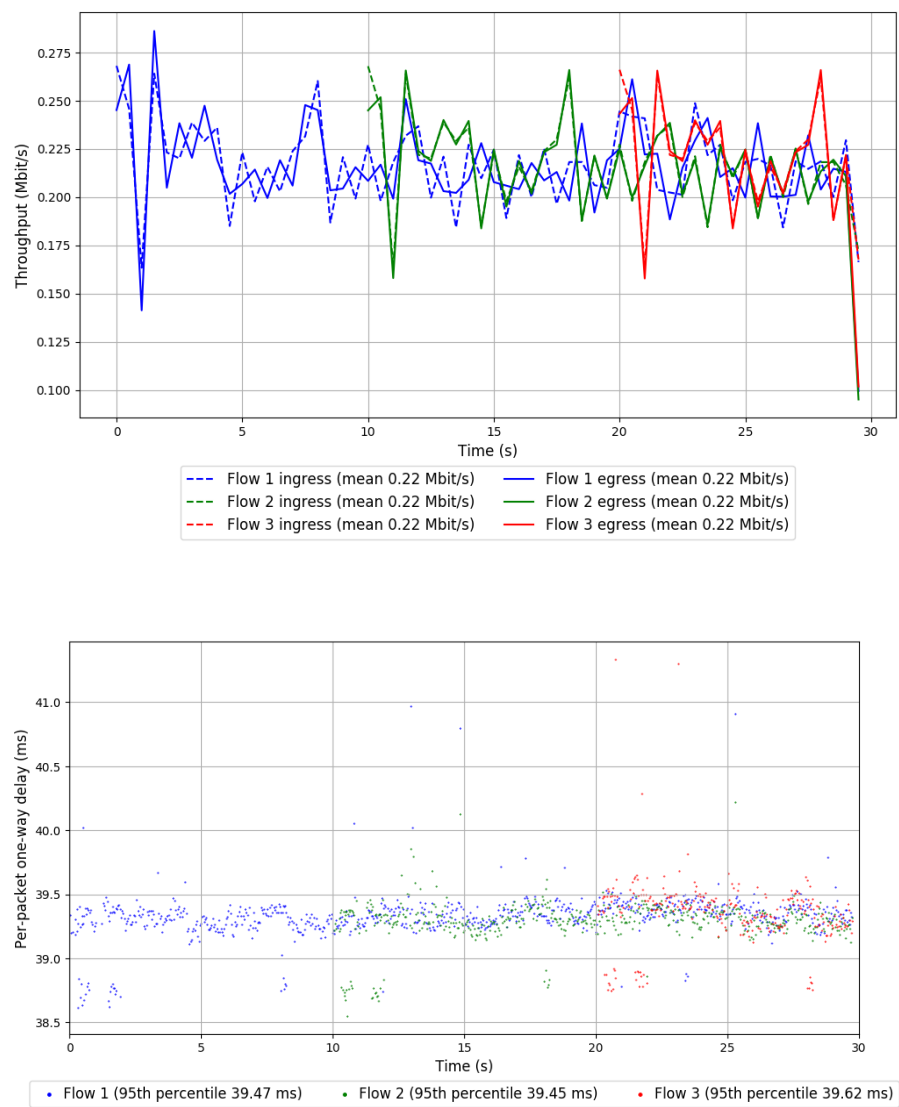
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-04-17 14:34:30
End at: 2018-04-17 14:35:00
Local clock offset: 17.837 ms
Remote clock offset: 8.532 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 39.316 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.296 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.185 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.616 ms
Loss rate: 1.87%
```
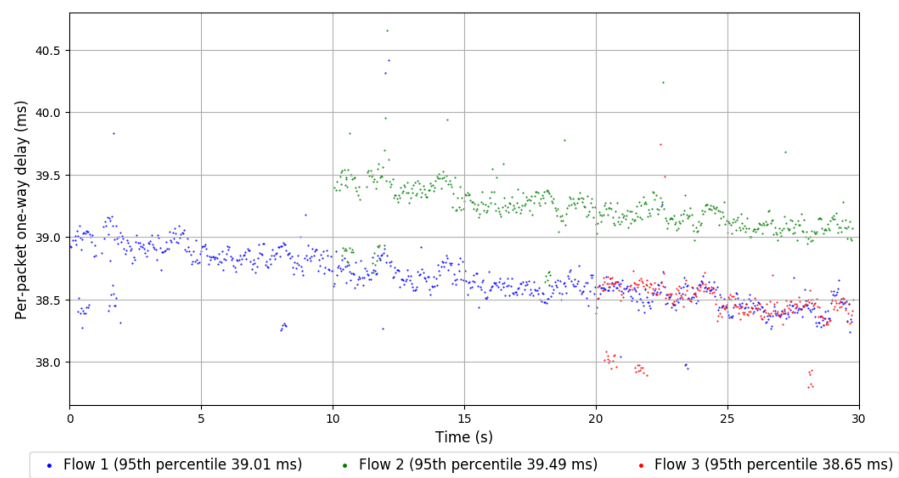
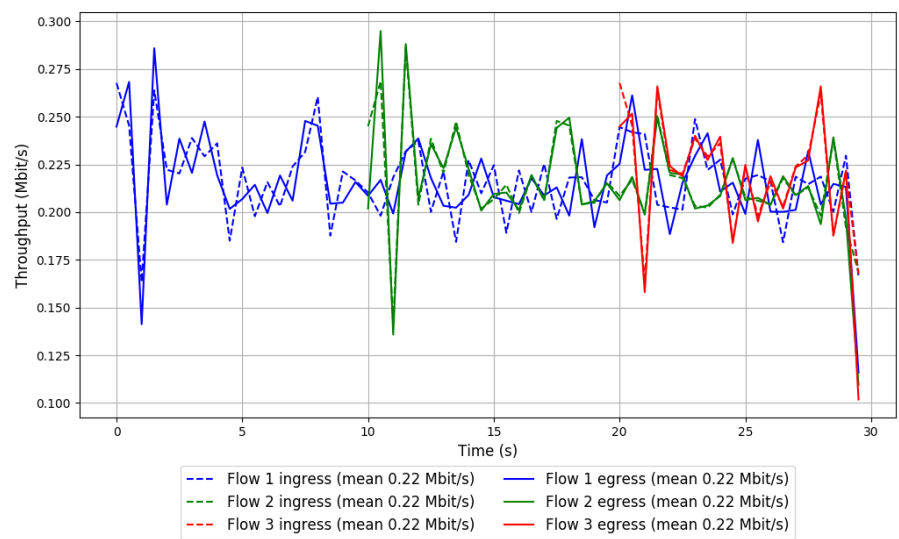# Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2018-04-17 14:57:18
End at: 2018-04-17 14:57:48
Local clock offset: 22.982 ms
Remote clock offset: -12.813 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 40.943 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.934 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 41.129 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 40.835 ms
Loss rate: 1.85%
```
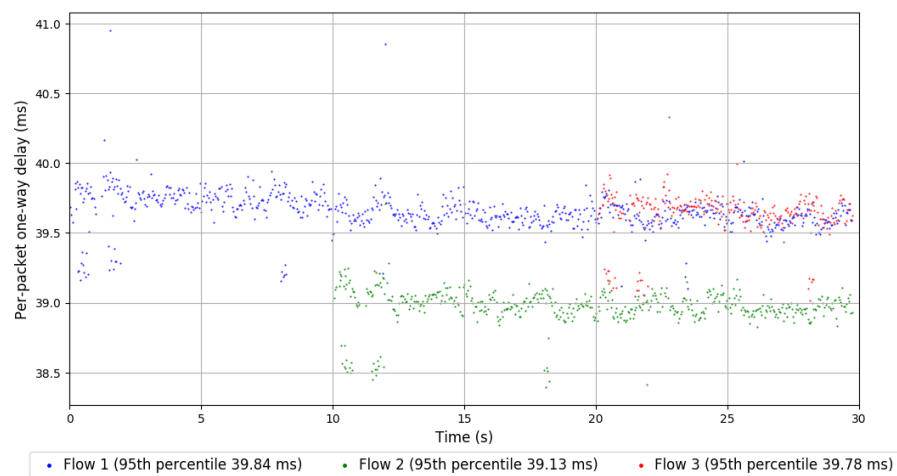
Run 5: Report of SCReAM — Data Link

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```
Run 6: Statistics of SCReAM

Start at: 2018-04-17 15:21:18
End at: 2018-04-17 15:21:48
Local clock offset: 2.833 ms
Remote clock offset: -6.14 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 40.404 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 40.421 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 40.150 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 40.408 ms
Loss rate: 7.13%
```
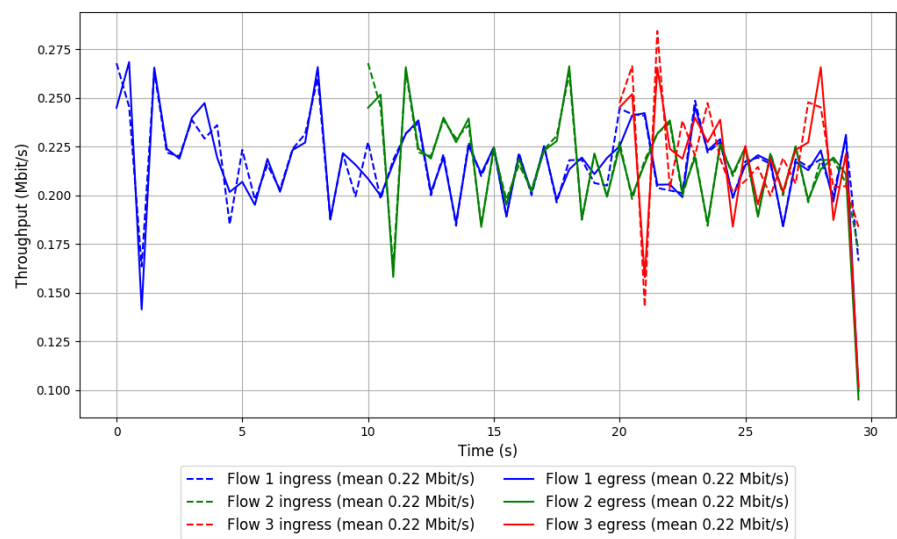
Run 6: Report of SCReAM — Data Link

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```
Run 7: Statistics of SCReAM

Start at: 2018-04-17 15:44:11
End at: 2018-04-17 15:44:41
Local clock offset: -1.088 ms
Remote clock offset: 8.725 ms

# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 39.500 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.473 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.449 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.615 ms
Loss rate: 1.87%
```
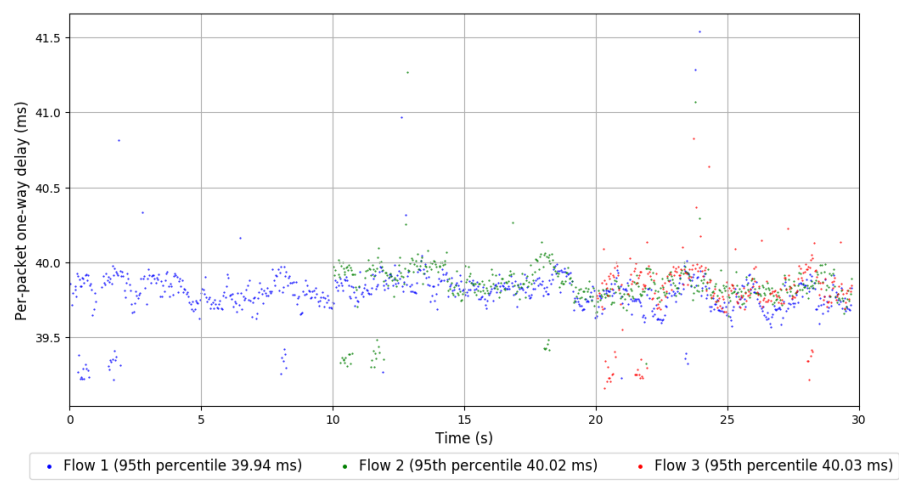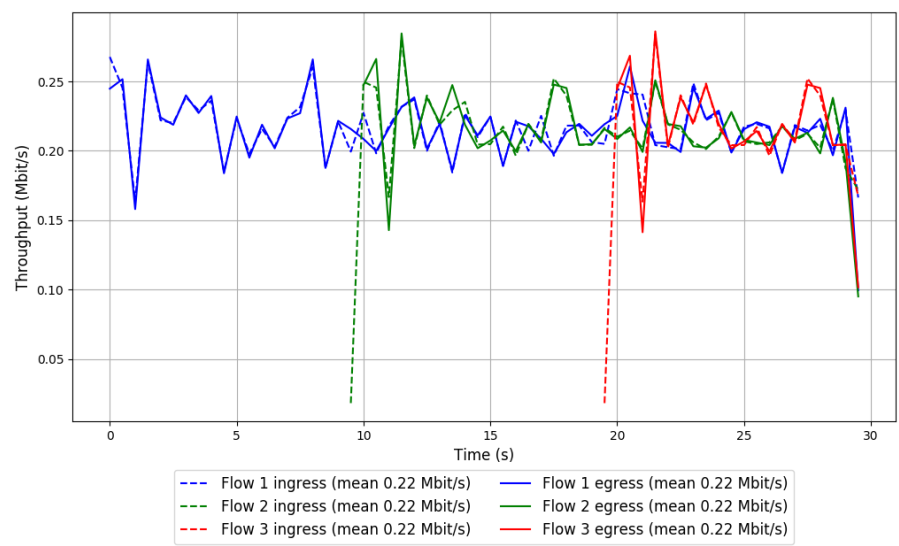
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2018-04-17 16:06:59
End at: 2018-04-17 16:07:29
Local clock offset: 0.096 ms
Remote clock offset: 11.308 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 39.404 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.011 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.493 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 38.654 ms
Loss rate: 1.86%
```
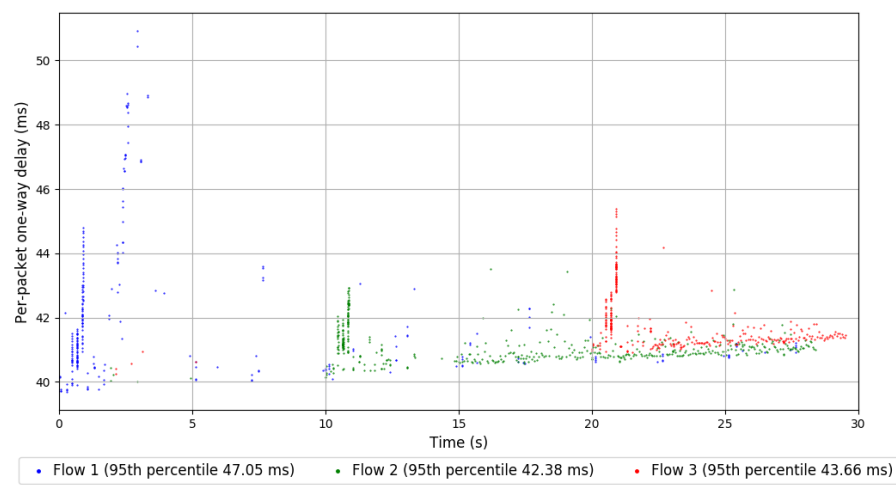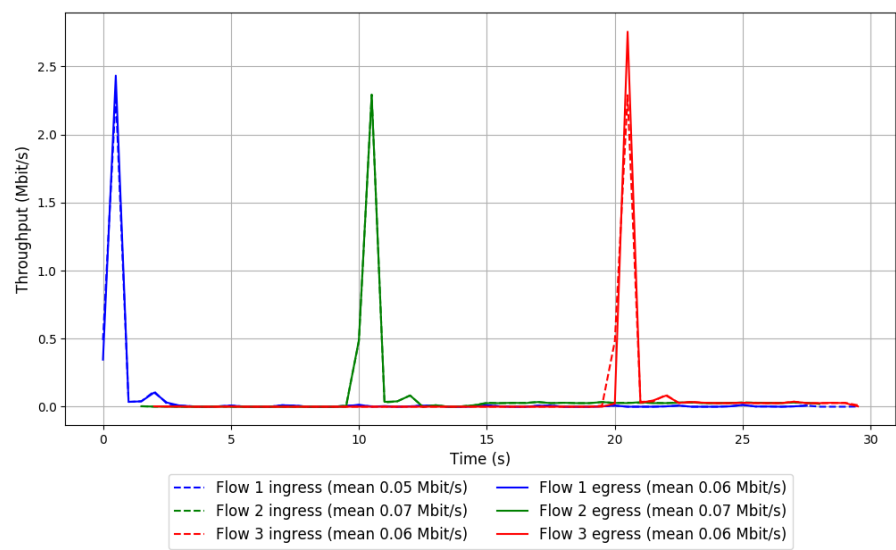
Run 8: Report of SCReAM — Data Link

```
Run 9: Statistics of SCReAM

Start at: 2018-04-17 16:29:49
End at: 2018-04-17 16:30:19
Local clock offset: 6.858 ms
Remote clock offset: -9.392 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 39.812 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.837 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.134 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.781 ms
Loss rate: 1.86%
```
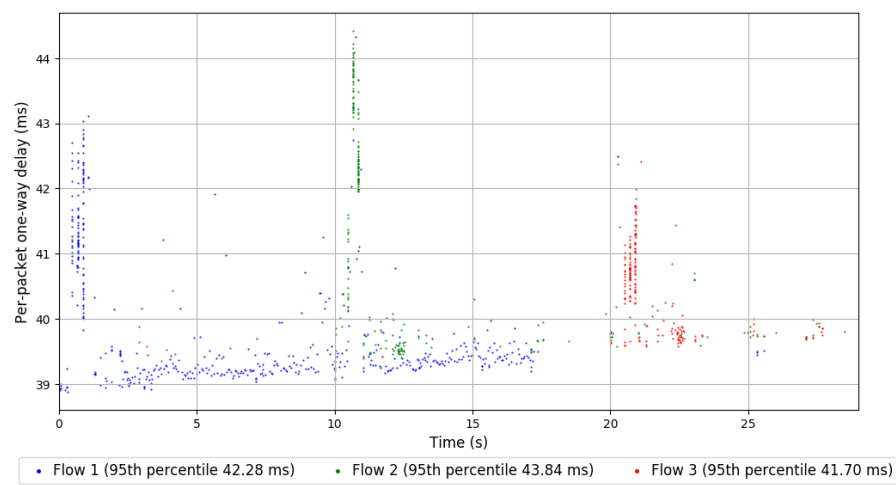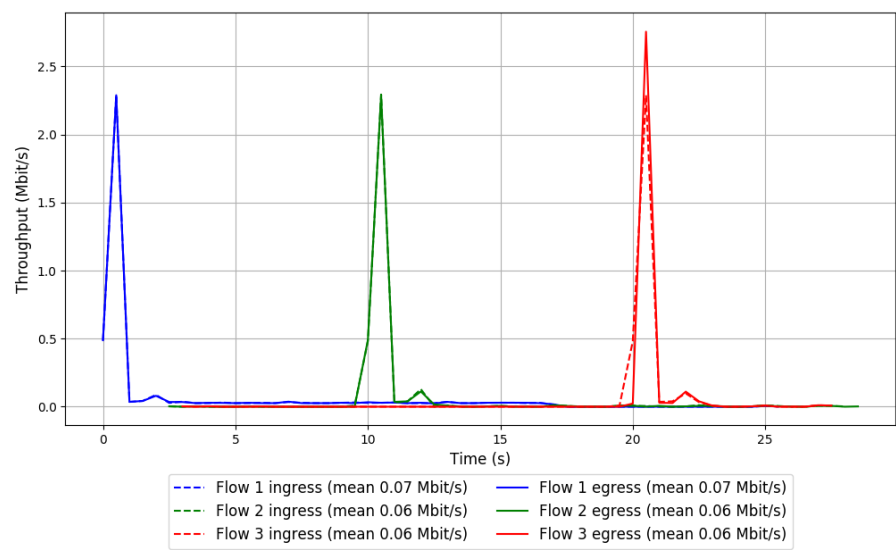
Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2018-04-17 16:52:55
End at: 2018-04-17 16:53:25
Local clock offset: 7.054 ms
Remote clock offset: -1.31 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 39.987 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.941 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.015 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.029 ms
Loss rate: 1.86%
```
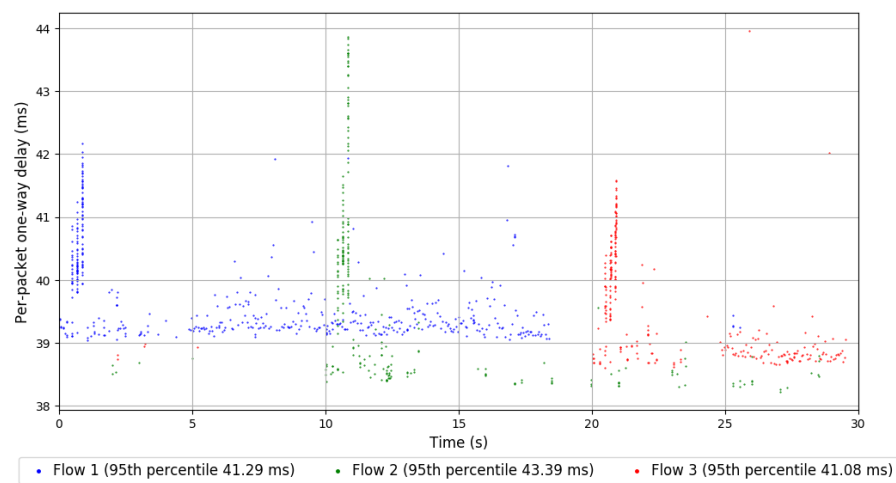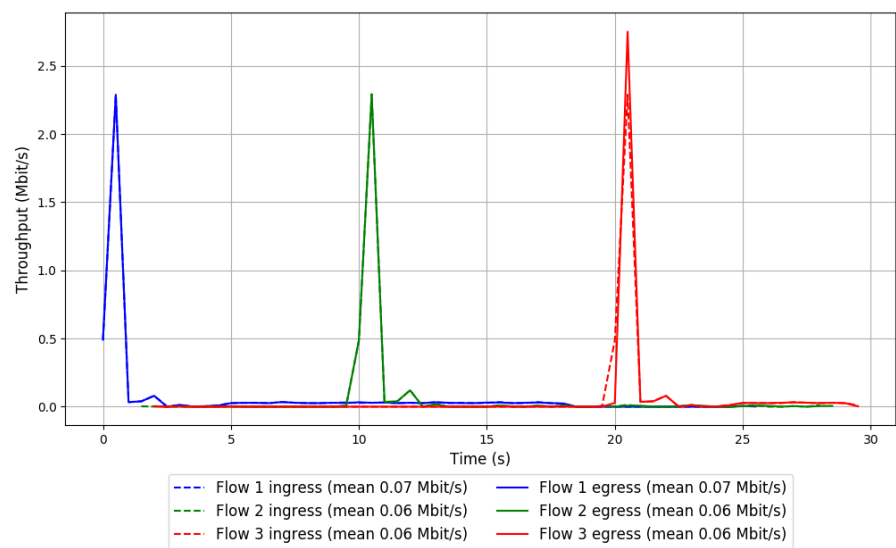
Run 10: Report of SCReAM — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-04-17 13:17:35
End at: 2018-04-17 13:18:05
Local clock offset: 6.58 ms
Remote clock offset: -10.161 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 43.989 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 47.052 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 42.375 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 43.657 ms
Loss rate: 0.31%
```
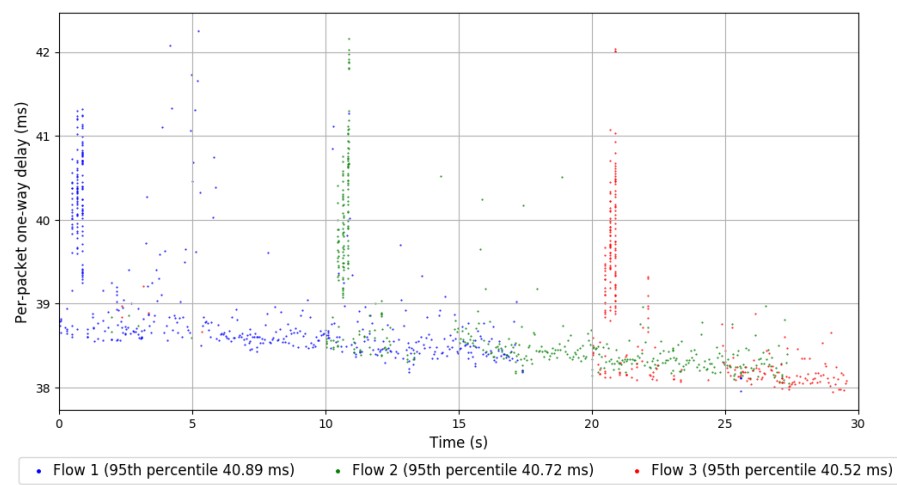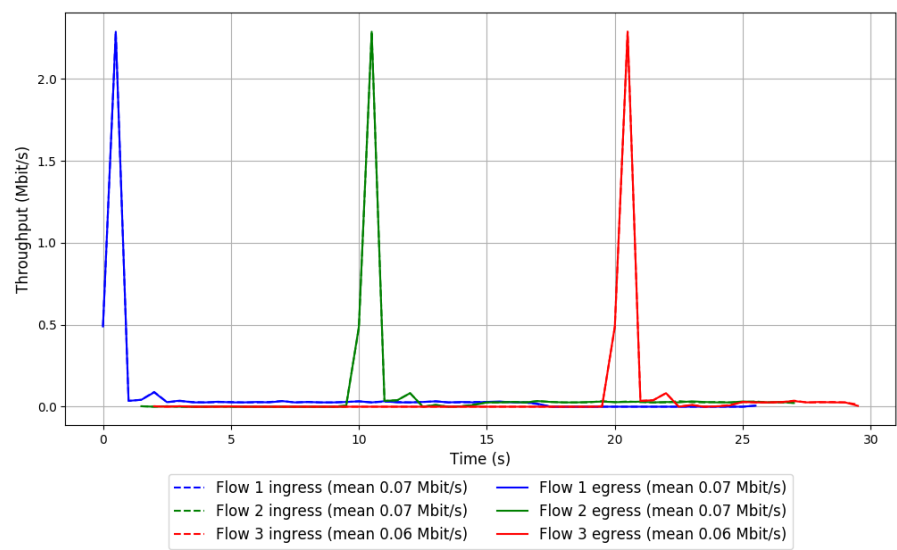
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-04-17 13:40:28
End at: 2018-04-17 13:40:58
Local clock offset: 7.553 ms
Remote clock offset: 26.064 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 43.141 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 42.278 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 43.842 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 41.697 ms
Loss rate: 0.00%
```
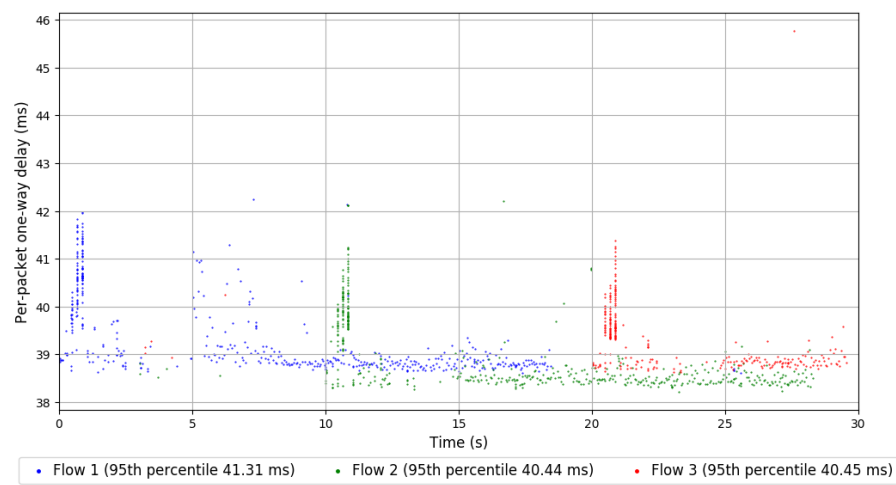
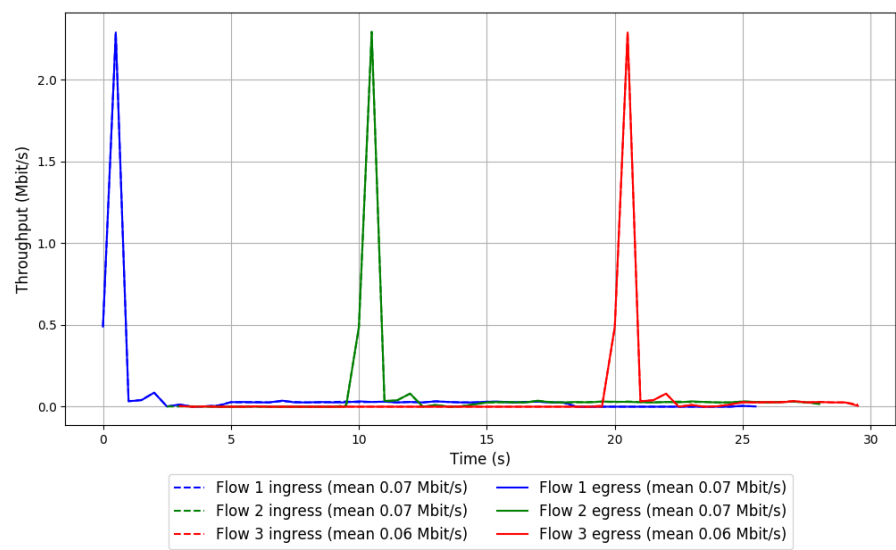Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-04-17 14:03:49
End at: 2018-04-17 14:04:19
Local clock offset: 11.842 ms
Remote clock offset: 17.675 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 41.567 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 41.291 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 43.394 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 41.084 ms
Loss rate: 0.32%
```

Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-04-17 14:26:33
End at: 2018-04-17 14:27:03
Local clock offset: 16.037 ms
Remote clock offset: 15.059 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 40.760 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 40.893 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 40.720 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.524 ms
Loss rate: 0.32%
```
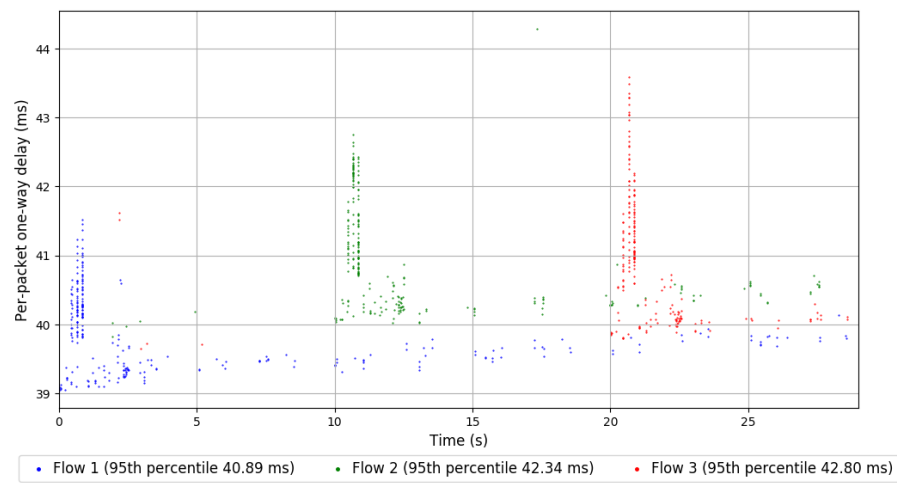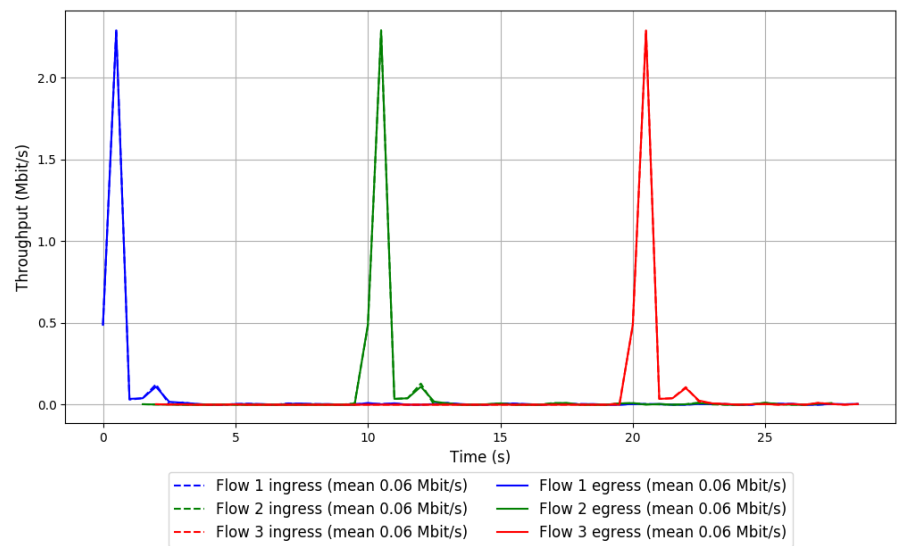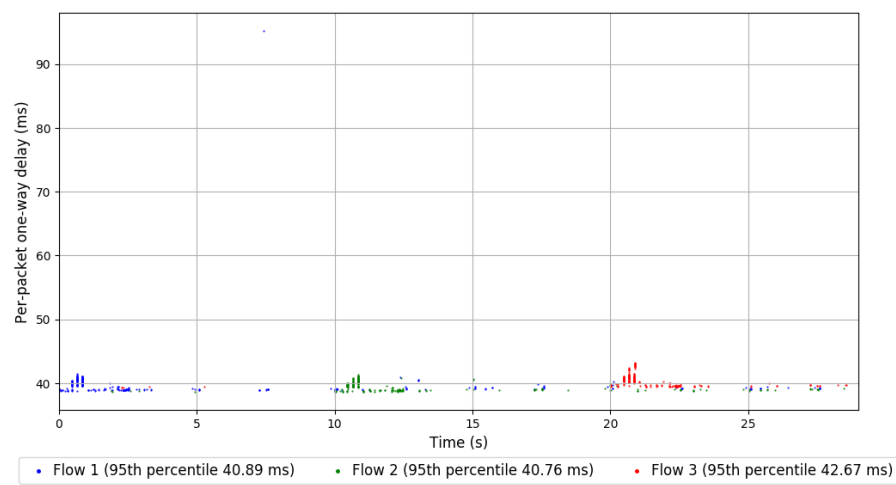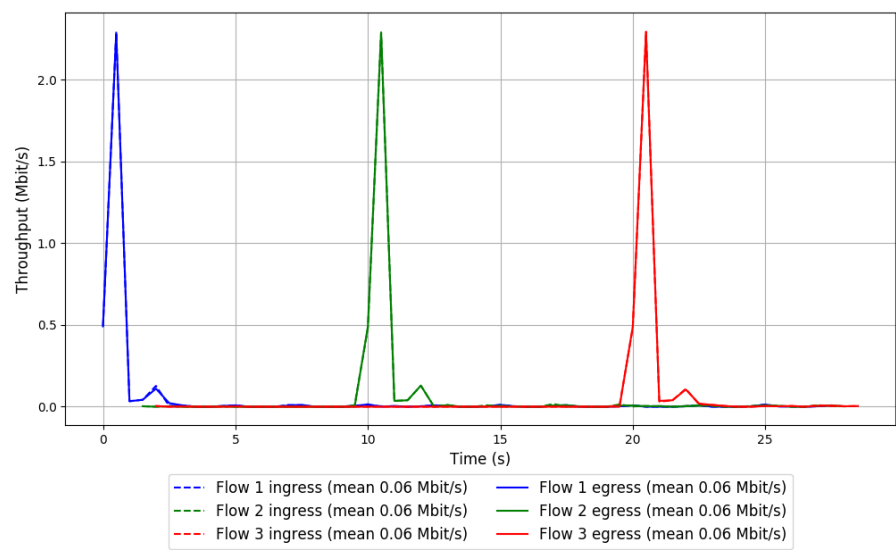
Run 4: Report of WebRTC media — Data Link

Flow 1 ingress (mean 0.07 Mbit/s)   Flow 1 egress (mean 0.07 Mbit/s)
Flow 2 ingress (mean 0.07 Mbit/s)   Flow 2 egress (mean 0.07 Mbit/s)
Flow 3 ingress (mean 0.06 Mbit/s)   Flow 3 egress (mean 0.06 Mbit/s)

Flow 1 (95th percentile 40.89 ms)   Flow 2 (95th percentile 40.72 ms)   Flow 3 (95th percentile 40.52 ms)

```
Run 5: Statistics of WebRTC media

Start at: 2018-04-17 14:49:23
End at: 2018-04-17 14:49:53
Local clock offset: 21.51 ms
Remote clock offset: -15.822 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 40.852 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 41.306 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 40.439 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.447 ms
Loss rate: 0.32%
```
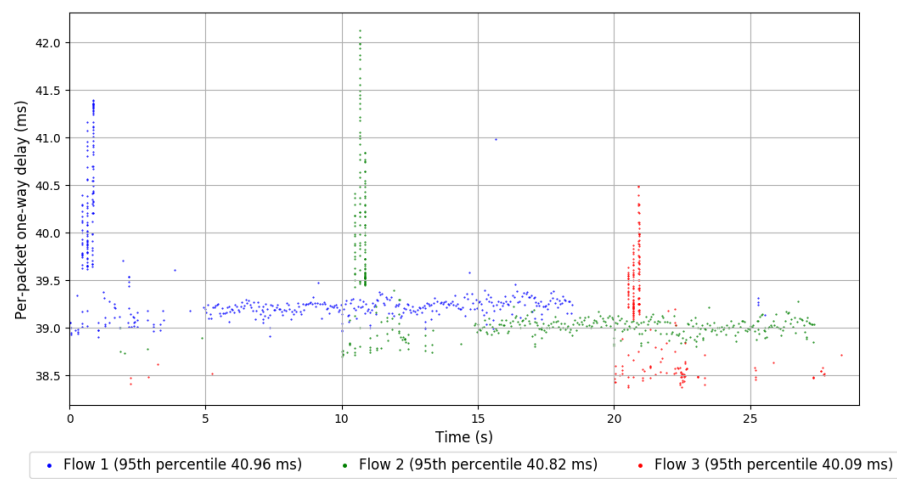
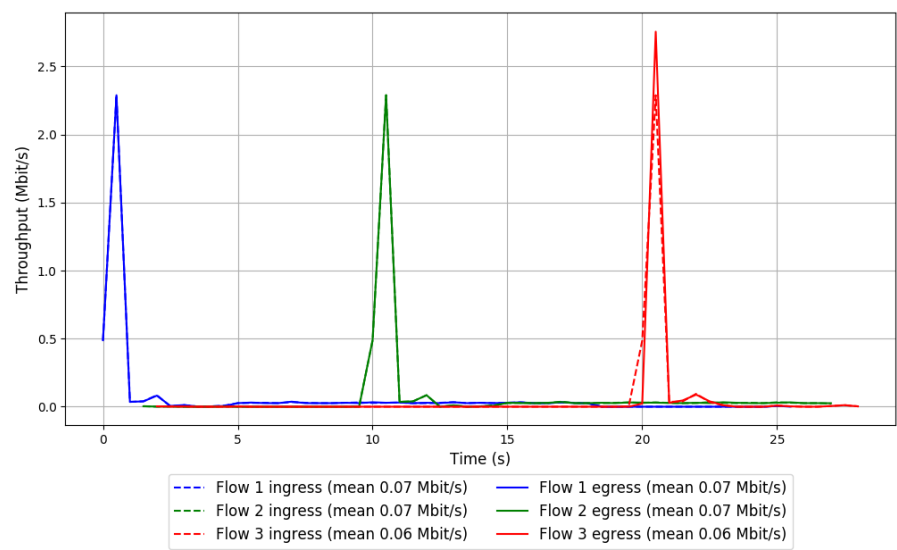Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2018-04-17 15:13:21
End at: 2018-04-17 15:13:51
Local clock offset: 9.184 ms
Remote clock offset: 15.41 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 42.279 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.890 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 42.340 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 42.804 ms
Loss rate: 0.00%
```

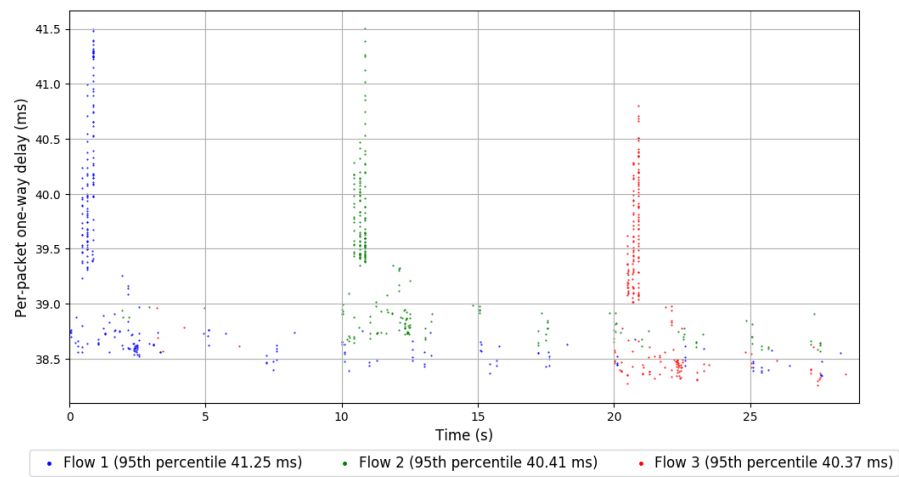Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2018-04-17 15:36:15
End at: 2018-04-17 15:36:45
Local clock offset: -2.076 ms
Remote clock offset: -0.205 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 41.212 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.886 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.757 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 42.675 ms
Loss rate: 0.00%
```
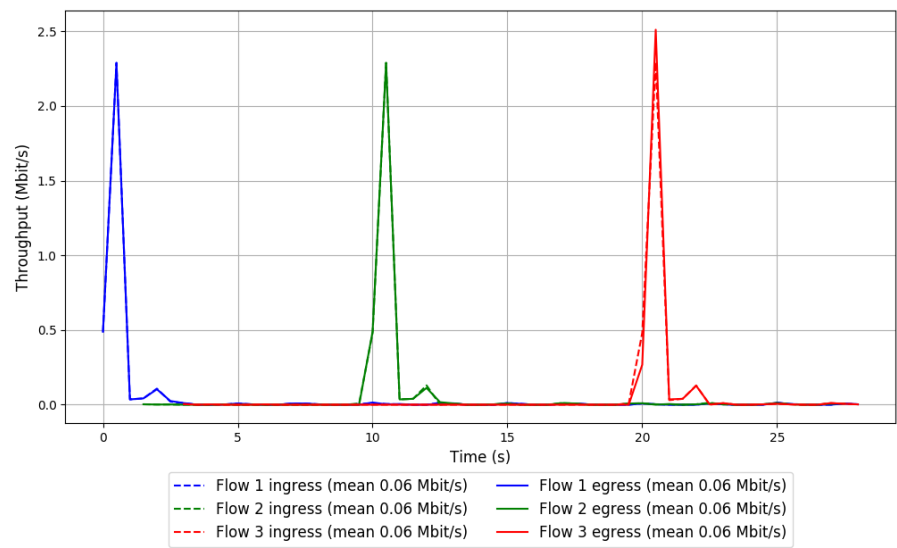
Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2018-04-17 15:59:02
End at: 2018-04-17 15:59:32
Local clock offset: -0.006 ms
Remote clock offset: 13.887 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 40.767 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 40.962 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 40.823 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.092 ms
Loss rate: 0.00%
```
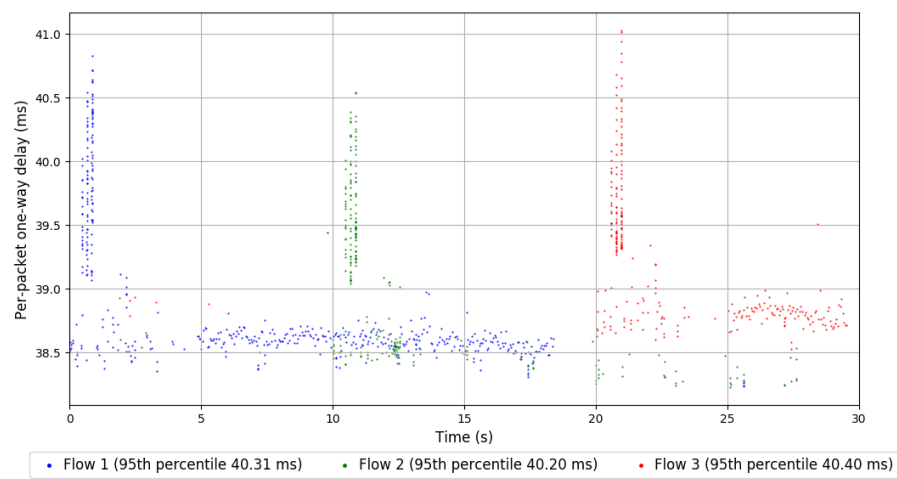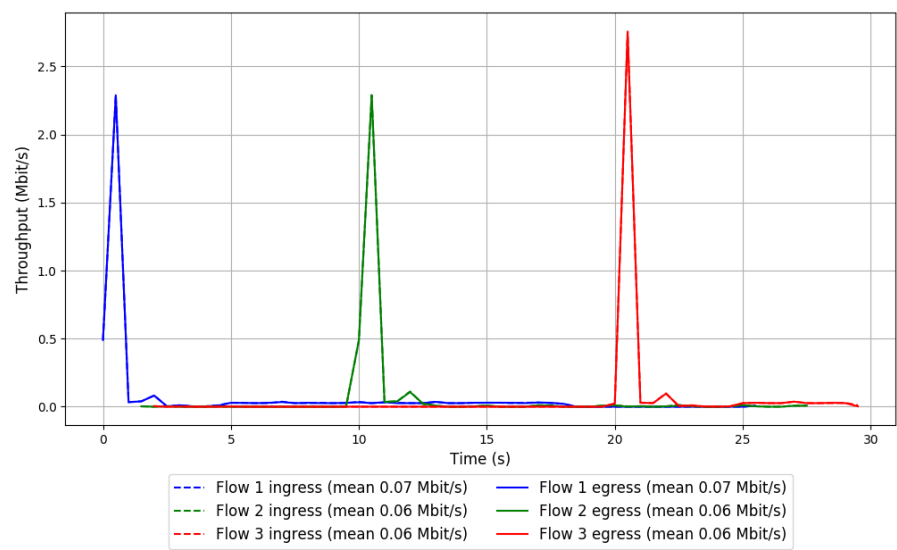
Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2018-04-17 16:21:54
End at: 2018-04-17 16:22:24
Local clock offset: 4.711 ms
Remote clock offset: -9.006 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 40.797 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 41.252 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.413 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.374 ms
Loss rate: 0.00%
```
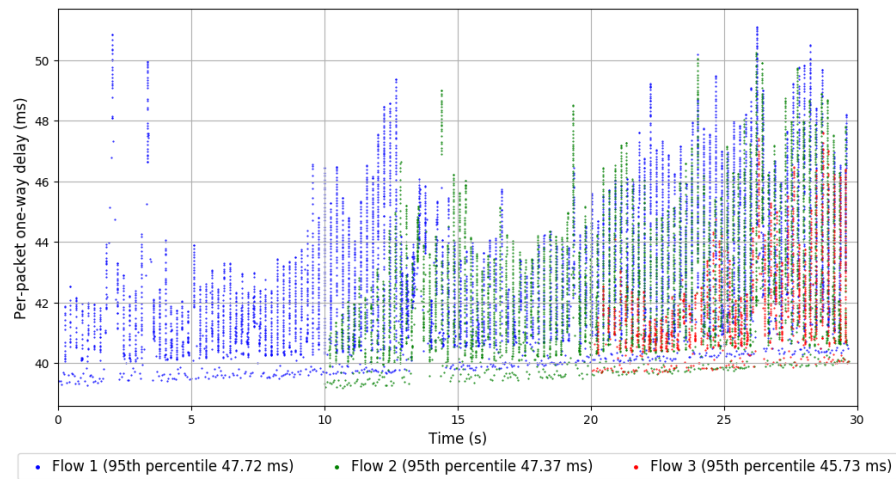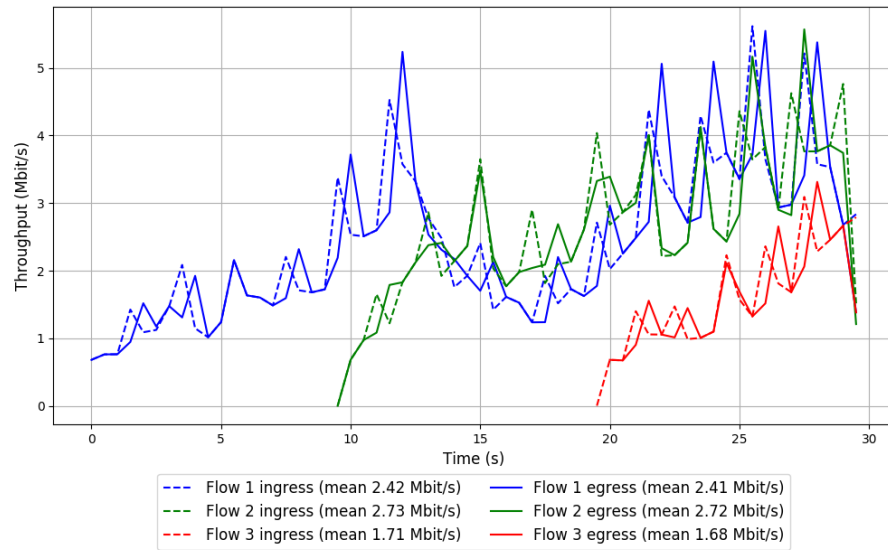
Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2018-04-17 16:44:57
End at: 2018-04-17 16:45:27
Local clock offset: 8.552 ms
Remote clock offset: 0.94 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 40.310 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 40.315 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.195 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.396 ms
Loss rate: 0.33%
```

Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-04-17 13:18:51
End at: 2018-04-17 13:19:21
Local clock offset: 6.446 ms
Remote clock offset: -6.336 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.76 Mbit/s
95th percentile per-packet one-way delay: 47.398 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 47.722 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 2.72 Mbit/s
95th percentile per-packet one-way delay: 47.366 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 45.726 ms
Loss rate: 4.18%
```
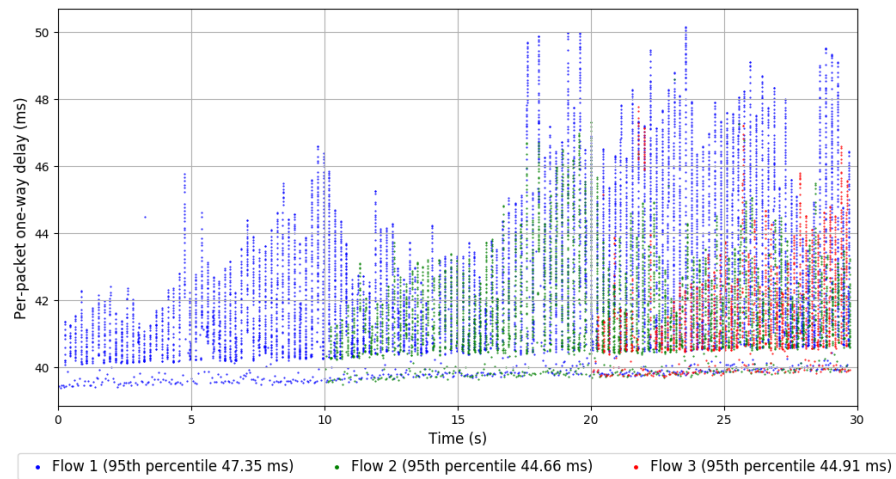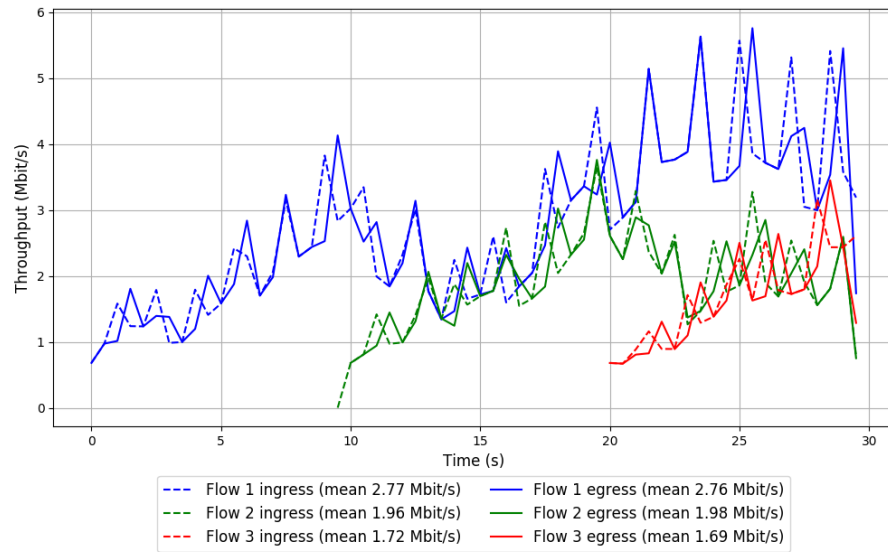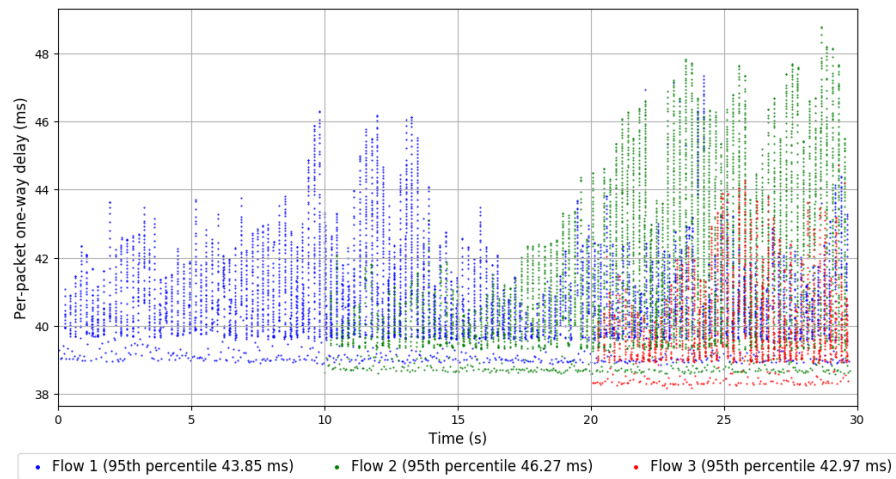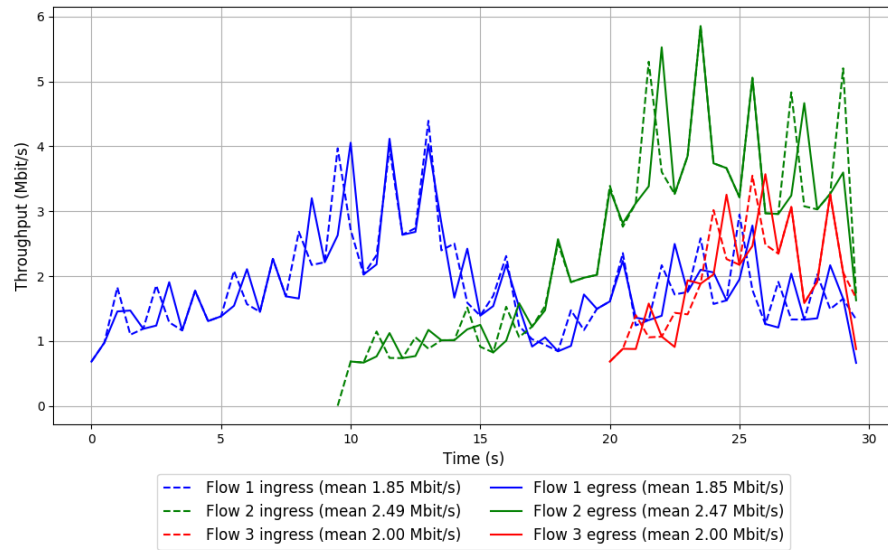
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-04-17 13:41:44
End at: 2018-04-17 13:42:14
Local clock offset: 7.702 ms
Remote clock offset: 27.5 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 46.718 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 2.76 Mbit/s
95th percentile per-packet one-way delay: 47.351 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 44.660 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 44.913 ms
Loss rate: 3.91%
```
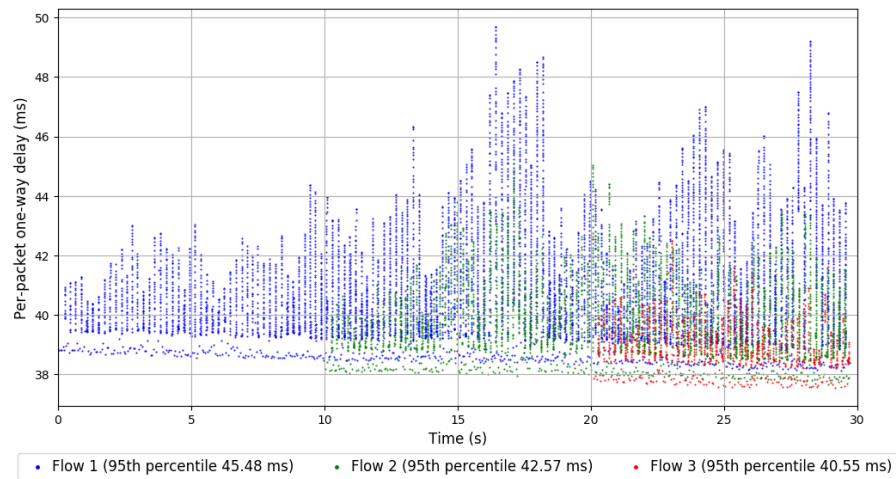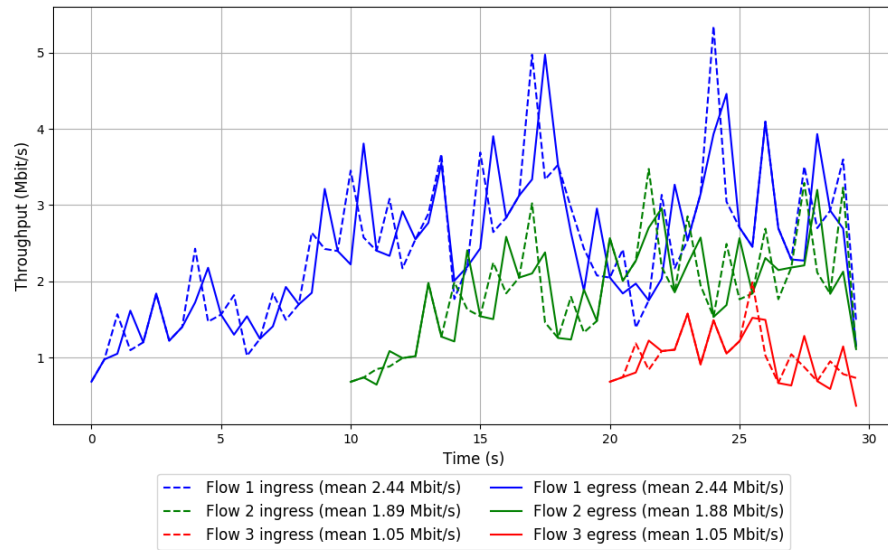
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-04-17 14:05:06
End at: 2018-04-17 14:05:36
Local clock offset: 12.165 ms
Remote clock offset: 17.804 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 45.313 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 43.855 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 46.267 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 42.969 ms
Loss rate: 2.01%
```
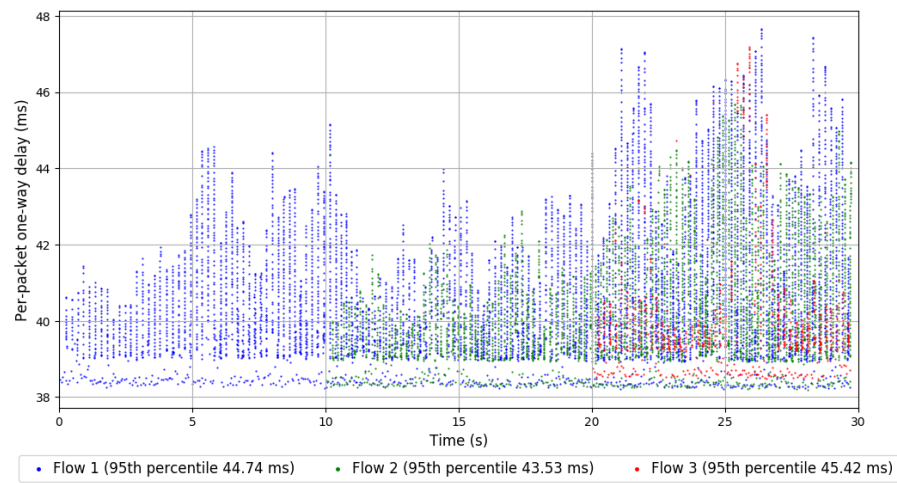
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-04-17 14:27:50
End at: 2018-04-17 14:28:20
Local clock offset: 16.08 ms
Remote clock offset: 13.682 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 44.534 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 45.480 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 42.571 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 40.554 ms
Loss rate: 1.78%
```
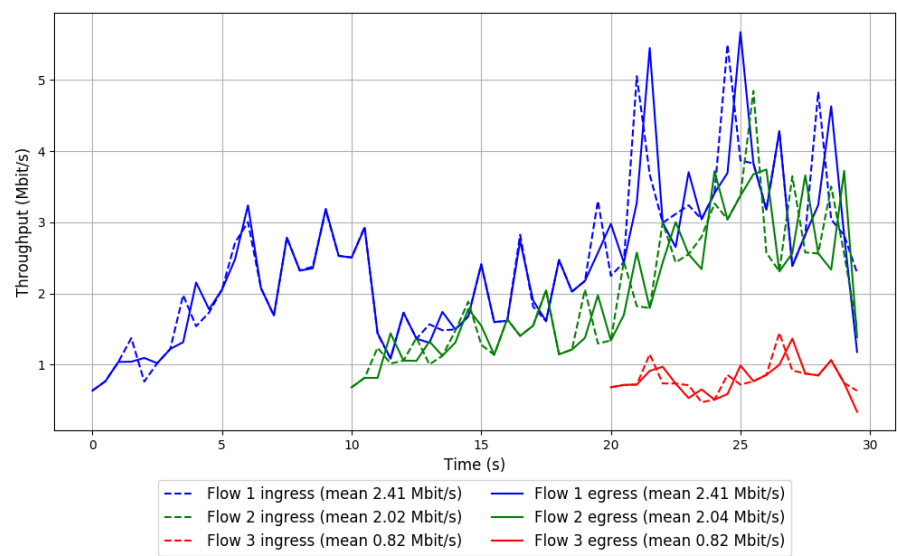
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-04-17 14:50:39
End at: 2018-04-17 14:51:09
Local clock offset: 21.74 ms
Remote clock offset: -15.724 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 44.397 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 44.736 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 43.529 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 45.417 ms
Loss rate: 1.85%
```
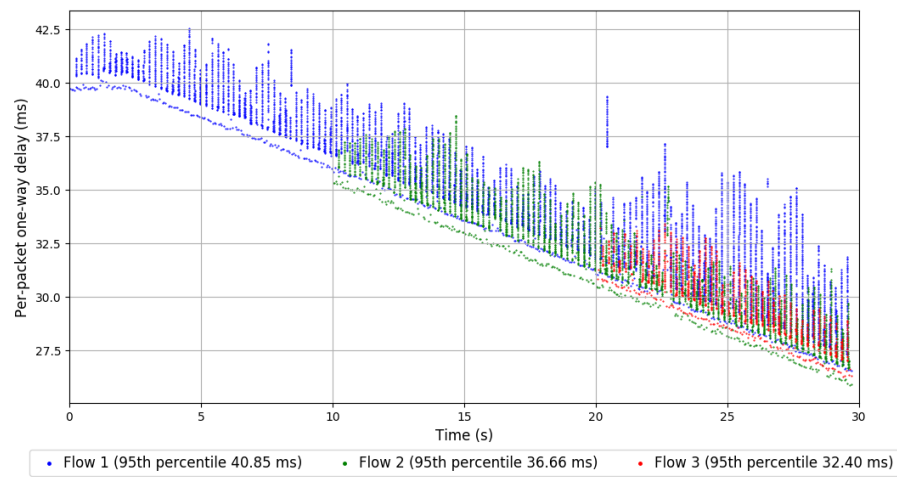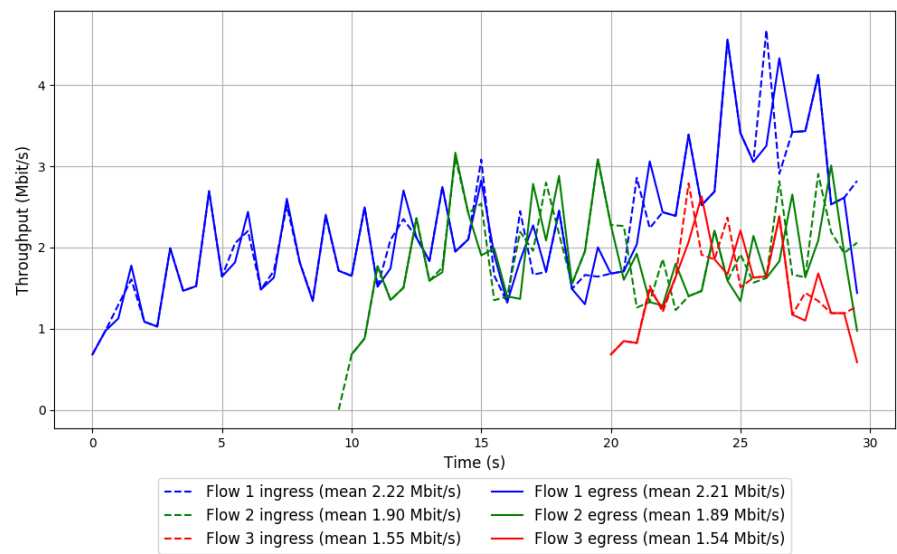
Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2018-04-17 15:14:37
End at: 2018-04-17 15:15:07
Local clock offset: 7.639 ms
Remote clock offset: 15.923 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.97 Mbit/s
95th percentile per-packet one-way delay: 40.313 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 40.848 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 36.658 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 32.403 ms
Loss rate: 2.27%
```
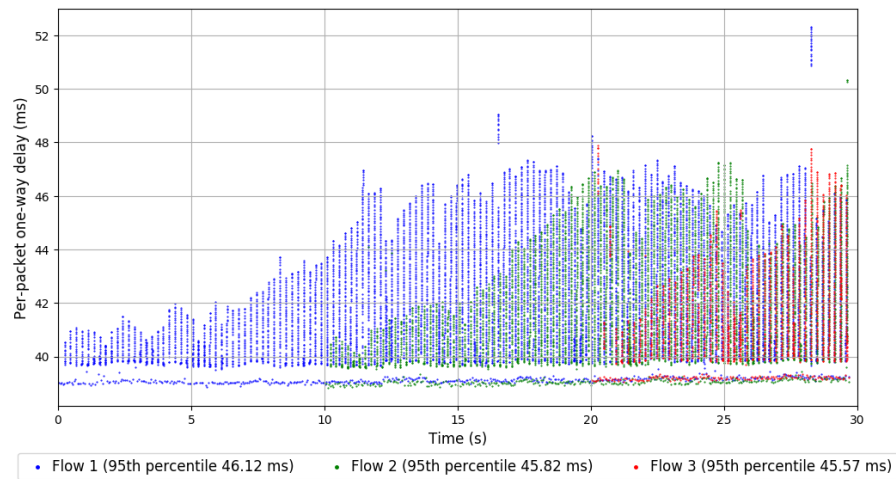
Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2018-04-17 15:37:31
End at: 2018-04-17 15:38:01
Local clock offset: -2.49 ms
Remote clock offset: 0.309 ms

# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.92 Mbit/s
95th percentile per-packet one-way delay: 45.975 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 46.119 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 45.824 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 45.568 ms
Loss rate: 3.83%
```
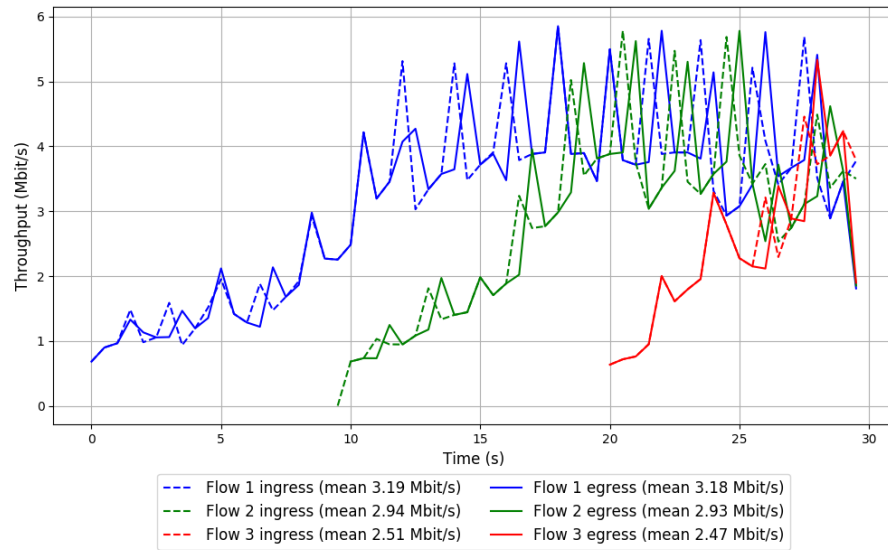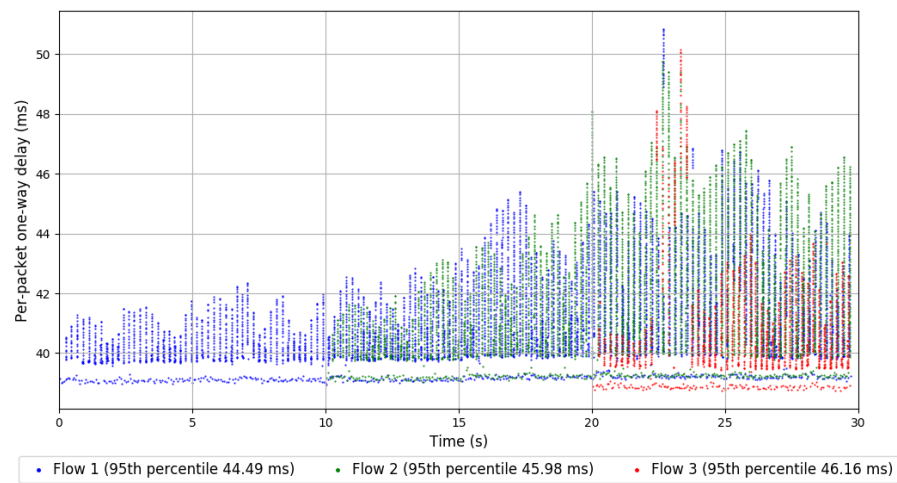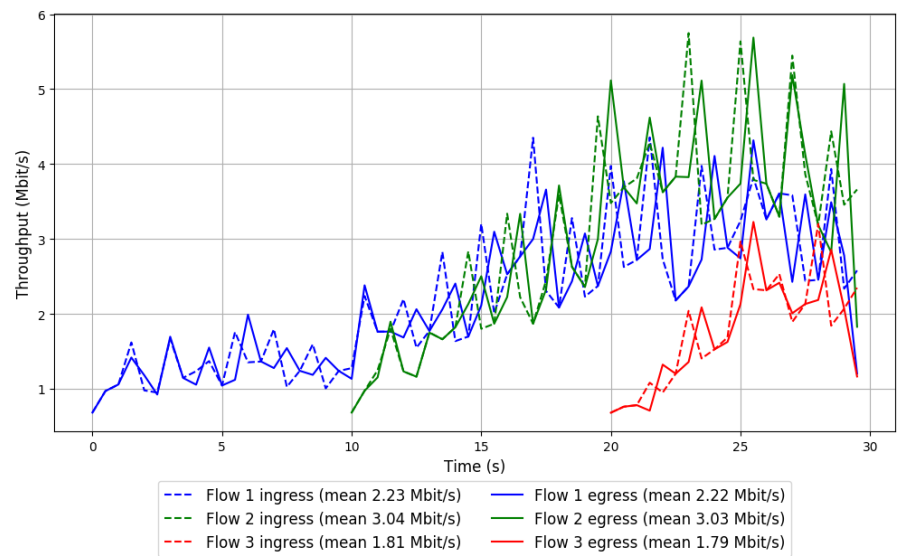
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2018-04-17 16:00:18
End at: 2018-04-17 16:00:48
Local clock offset: 0.21 ms
Remote clock offset: 14.287 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 45.403 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 44.490 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 3.03 Mbit/s
95th percentile per-packet one-way delay: 45.981 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 46.157 ms
Loss rate: 3.31%
```
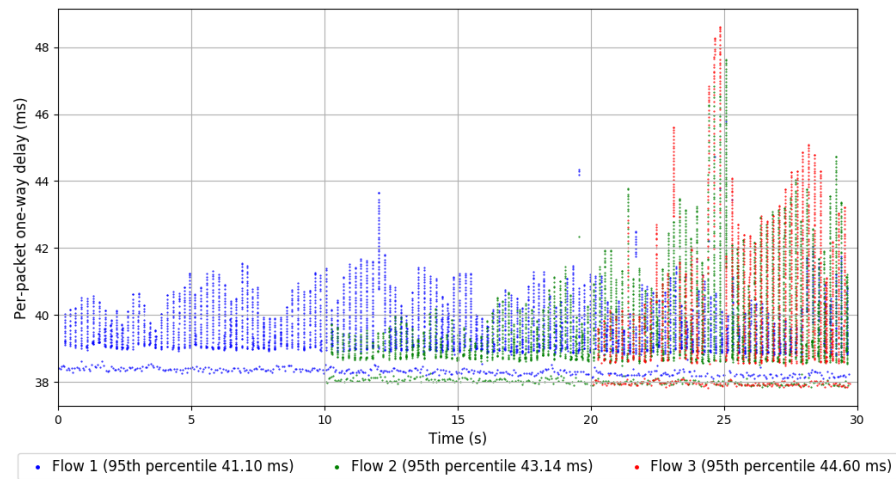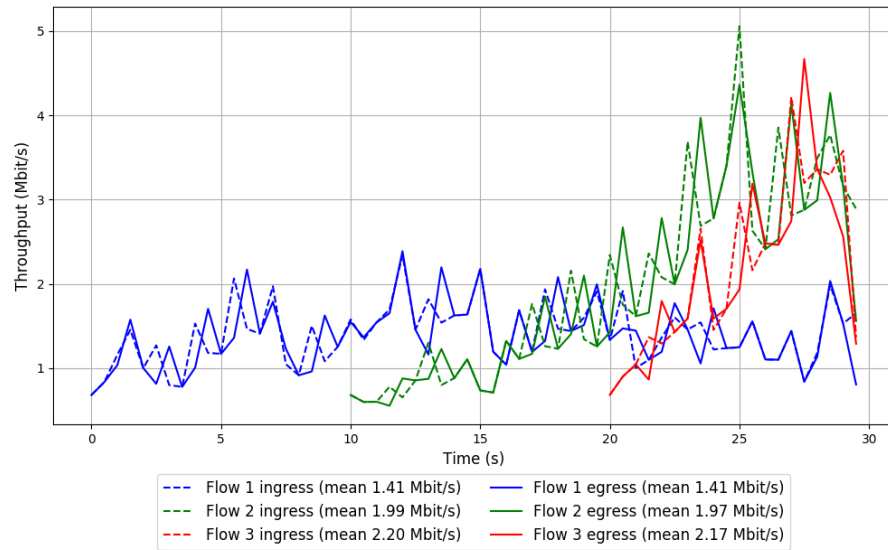
Run 8: Report of Sprout — Data Link

```
Run 9: Statistics of Sprout

Start at: 2018-04-17 16:23:10
End at: 2018-04-17 16:23:40
Local clock offset: 5.0 ms
Remote clock offset: -9.092 ms


# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 43.024 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 41.104 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 43.140 ms
Loss rate: 1.69%
-- Flow 3:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 44.600 ms
Loss rate: 3.15%
```

Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2018-04-17 16:46:13
End at: 2018-04-17 16:46:43
Local clock offset: 8.614 ms
Remote clock offset: 0.462 ms

# Below is generated by plot.py at 2018-04-17 20:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.65 Mbit/s
95th percentile per-packet one-way delay: 42.446 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 42.732 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 41.465 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 42.543 ms
Loss rate: 3.58%
```
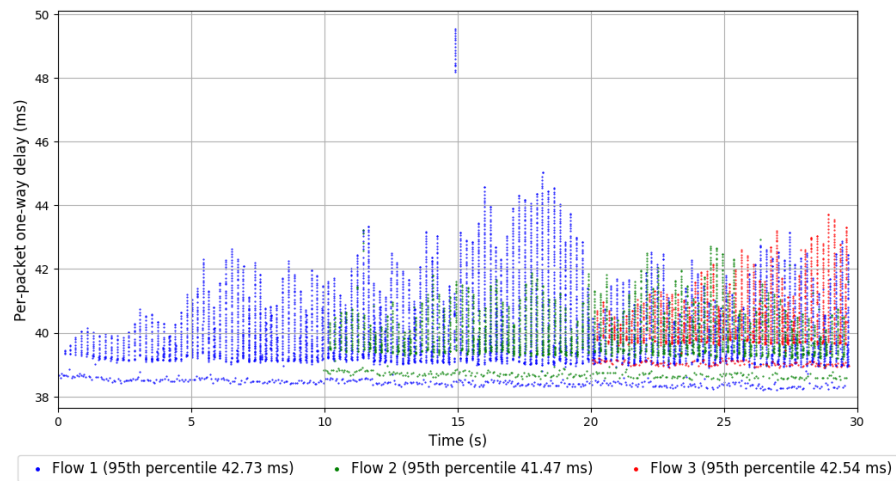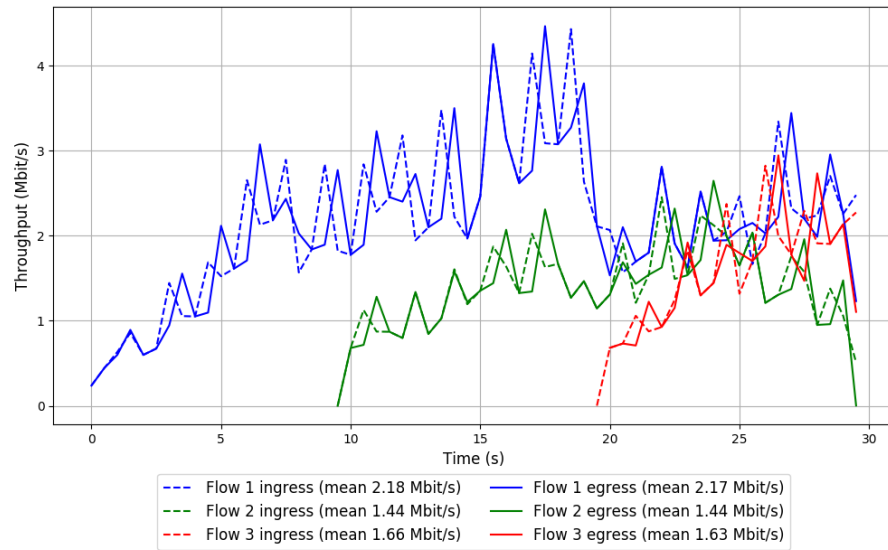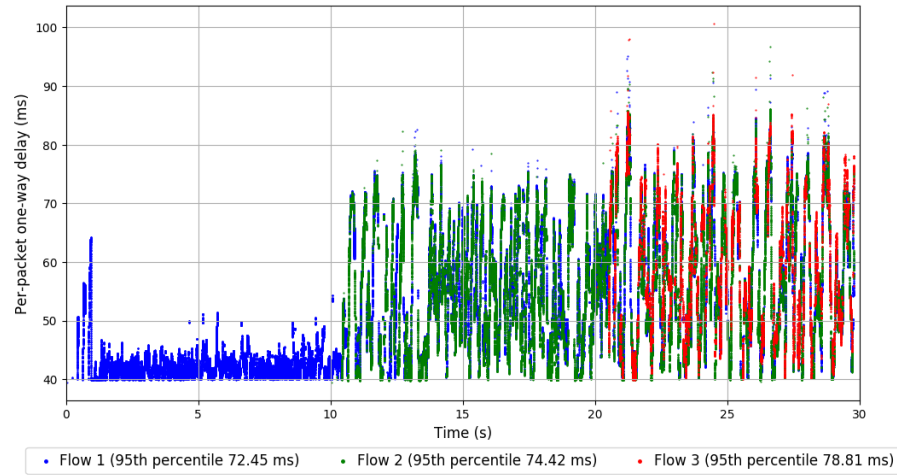
Run 10: Report of Sprout — Data Link

Flow 1 ingress (mean 2.18 Mbit/s) --- Flow 1 egress (mean 2.17 Mbit/s) ———
Flow 2 ingress (mean 1.44 Mbit/s) --- Flow 2 egress (mean 1.44 Mbit/s) ———
Flow 3 ingress (mean 1.66 Mbit/s) --- Flow 3 egress (mean 1.63 Mbit/s) ———

Flow 1 (95th percentile 42.73 ms) · Flow 2 (95th percentile 41.47 ms) · Flow 3 (95th percentile 42.54 ms)
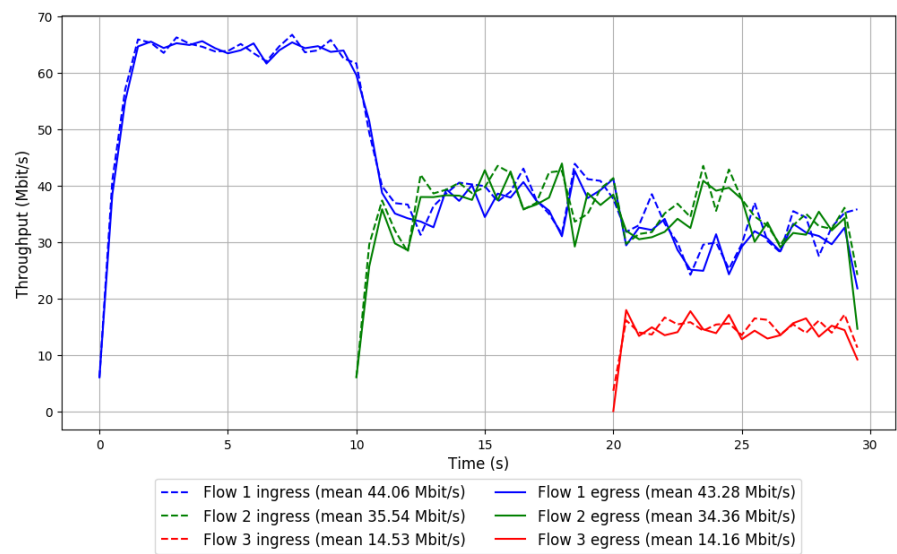
164

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

Start at: 2018-04-17 13:04:03
End at: 2018-04-17 13:04:33
Local clock offset: 6.551 ms
Remote clock offset: 12.642 ms

# Below is generated by plot.py at 2018-04-17 20:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.69 Mbit/s
95th percentile per-packet one-way delay: 73.909 ms
Loss rate: 3.12%
-- Flow 1:
Average throughput: 43.28 Mbit/s
95th percentile per-packet one-way delay: 72.447 ms
Loss rate: 2.44%
-- Flow 2:
Average throughput: 34.36 Mbit/s
95th percentile per-packet one-way delay: 74.416 ms
Loss rate: 4.06%
-- Flow 3:
Average throughput: 14.16 Mbit/s
95th percentile per-packet one-way delay: 78.812 ms
Loss rate: 4.69%
```
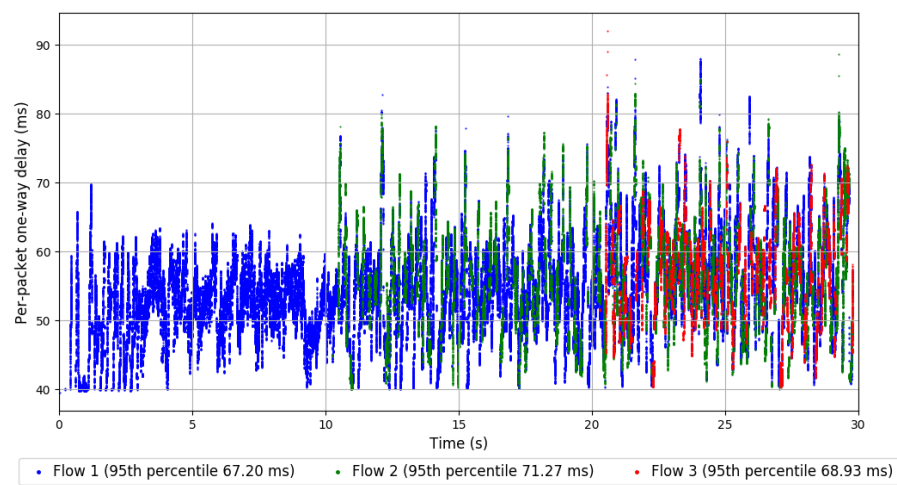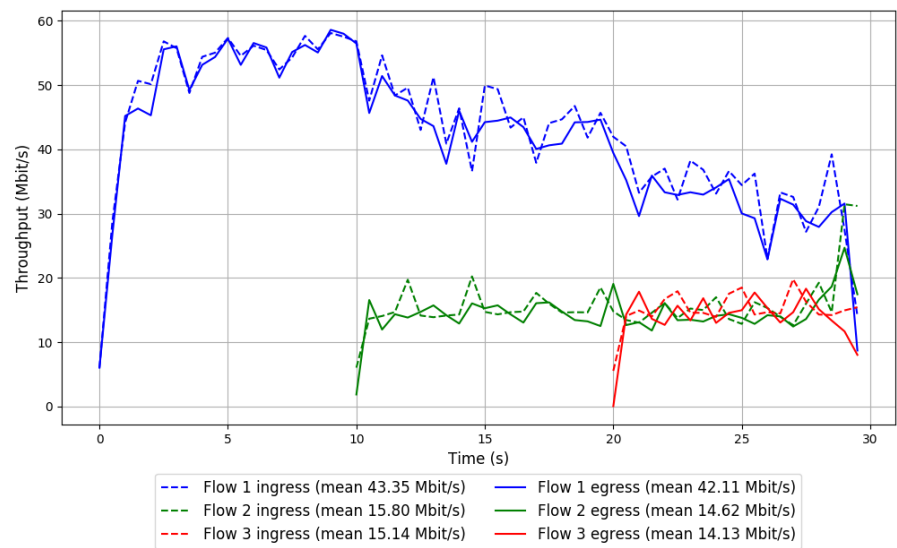
Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 44.06 Mbit/s) --- Flow 1 egress (mean 43.28 Mbit/s)
Flow 2 ingress (mean 35.54 Mbit/s) --- Flow 2 egress (mean 34.36 Mbit/s)
Flow 3 ingress (mean 14.53 Mbit/s) --- Flow 3 egress (mean 14.16 Mbit/s)

Flow 1 (95th percentile 72.45 ms) • Flow 2 (95th percentile 74.42 ms) • Flow 3 (95th percentile 78.81 ms)

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

Start at: 2018-04-17 13:26:47
End at: 2018-04-17 13:27:17
Local clock offset: 6.927 ms
Remote clock offset: 8.415 ms


# Below is generated by plot.py at 2018-04-17 20:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.41 Mbit/s
95th percentile per-packet one-way delay: 68.660 ms
Loss rate: 4.88%
-- Flow 1:
Average throughput: 42.11 Mbit/s
95th percentile per-packet one-way delay: 67.203 ms
Loss rate: 3.56%
-- Flow 2:
Average throughput: 14.62 Mbit/s
95th percentile per-packet one-way delay: 71.274 ms
Loss rate: 8.44%
-- Flow 3:
Average throughput: 14.13 Mbit/s
95th percentile per-packet one-way delay: 68.932 ms
Loss rate: 8.80%
```
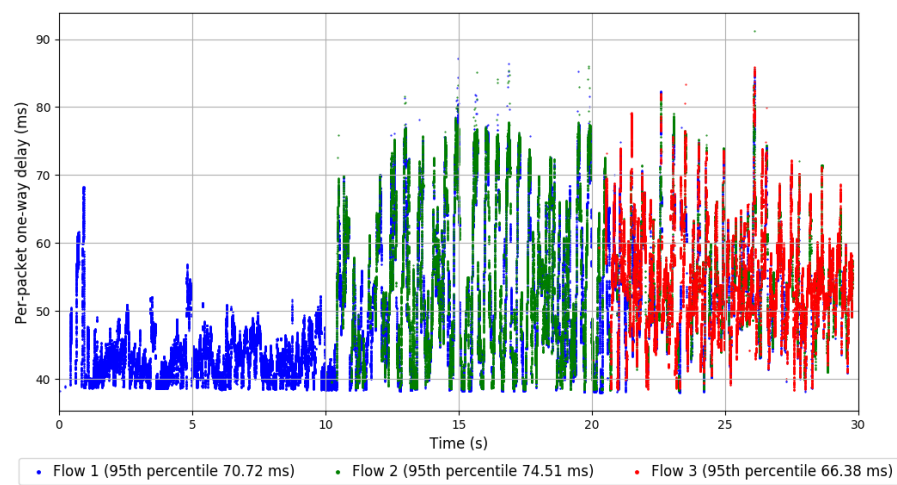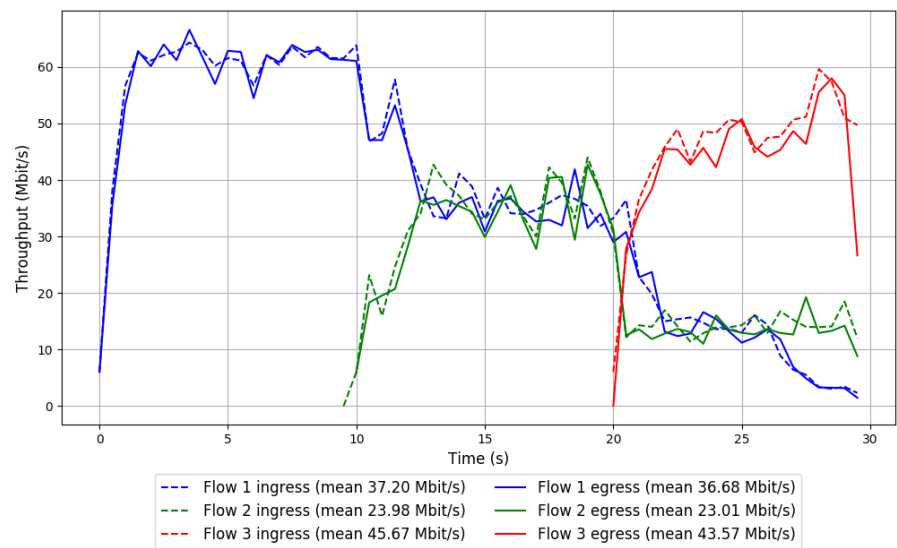
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2018-04-17 13:49:39
End at: 2018-04-17 13:50:09
Local clock offset: 7.778 ms
Remote clock offset: 28.61 ms

# Below is generated by plot.py at 2018-04-17 20:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.20 Mbit/s
95th percentile per-packet one-way delay: 71.739 ms
Loss rate: 3.75%
-- Flow 1:
Average throughput: 36.68 Mbit/s
95th percentile per-packet one-way delay: 70.718 ms
Loss rate: 2.06%
-- Flow 2:
Average throughput: 23.01 Mbit/s
95th percentile per-packet one-way delay: 74.511 ms
Loss rate: 5.03%
-- Flow 3:
Average throughput: 43.57 Mbit/s
95th percentile per-packet one-way delay: 66.382 ms
Loss rate: 6.54%
```
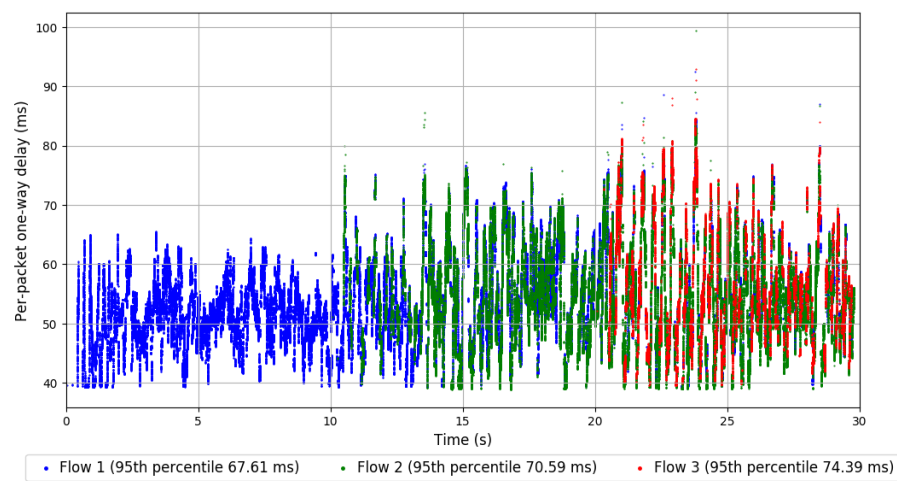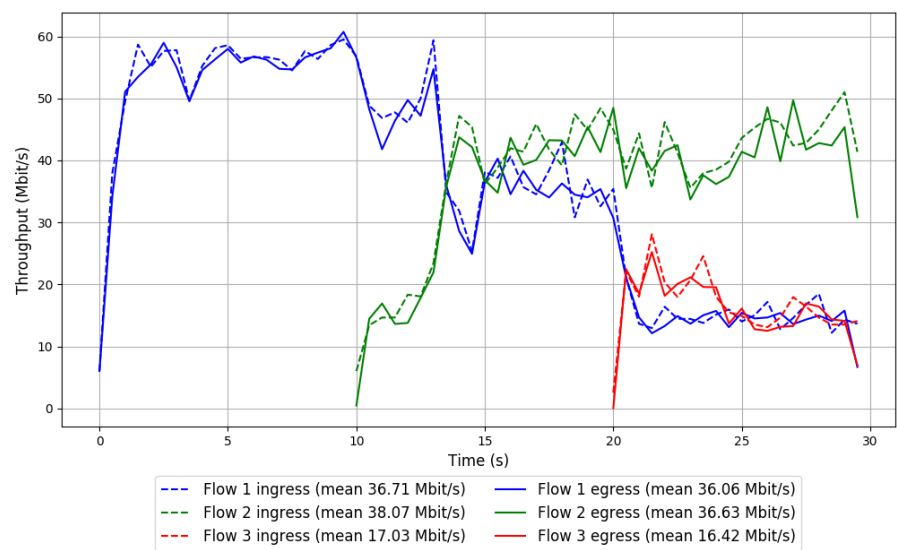
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 37.20 Mbit/s) — Flow 1 egress (mean 36.68 Mbit/s)
Flow 2 ingress (mean 23.98 Mbit/s) — Flow 2 egress (mean 23.01 Mbit/s)
Flow 3 ingress (mean 45.67 Mbit/s) — Flow 3 egress (mean 43.57 Mbit/s)

Flow 1 (95th percentile 70.72 ms)　　Flow 2 (95th percentile 74.51 ms)　　Flow 3 (95th percentile 66.38 ms)

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

Start at: 2018-04-17 14:13:02
End at: 2018-04-17 14:13:32
Local clock offset: 14.02 ms
Remote clock offset: 20.107 ms

# Below is generated by plot.py at 2018-04-17 20:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.55 Mbit/s
95th percentile per-packet one-way delay: 69.921 ms
Loss rate: 3.61%
-- Flow 1:
Average throughput: 36.06 Mbit/s
95th percentile per-packet one-way delay: 67.608 ms
Loss rate: 2.45%
-- Flow 2:
Average throughput: 36.63 Mbit/s
95th percentile per-packet one-way delay: 70.595 ms
Loss rate: 4.83%
-- Flow 3:
Average throughput: 16.42 Mbit/s
95th percentile per-packet one-way delay: 74.393 ms
Loss rate: 5.72%
```
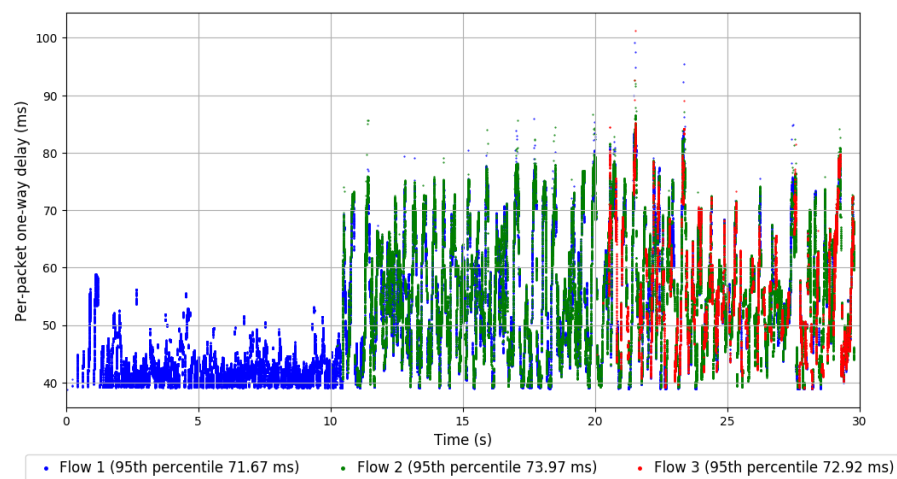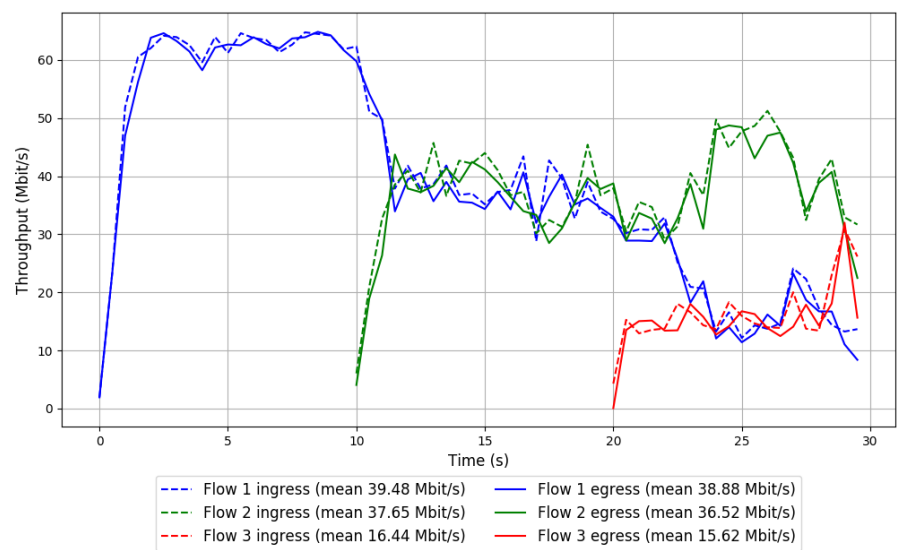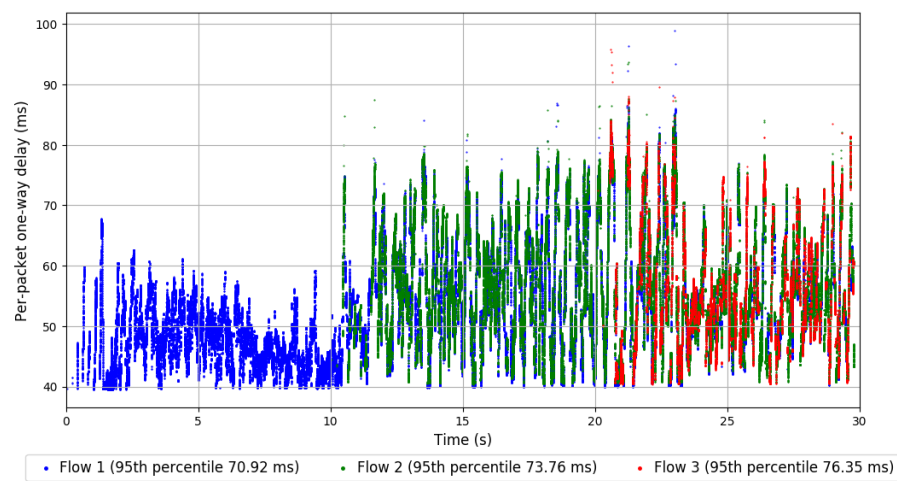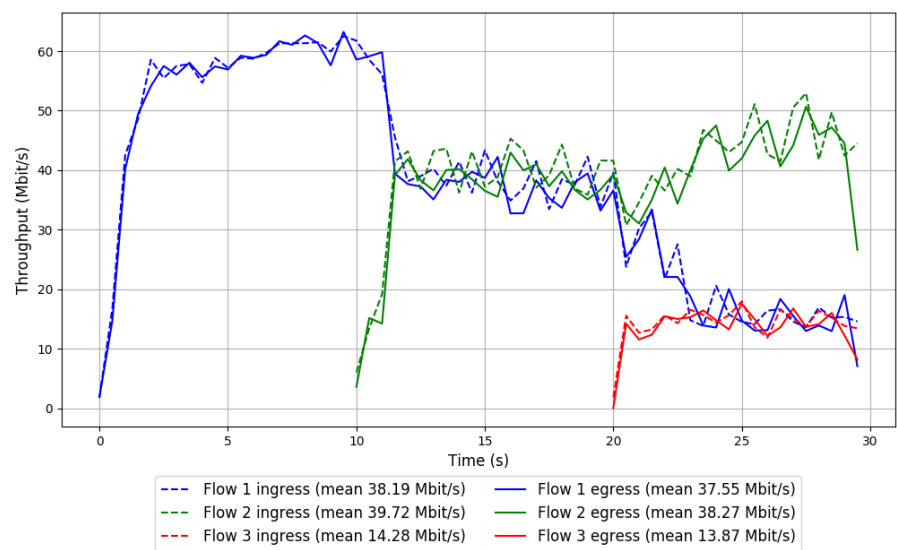
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 36.71 Mbit/s)   Flow 1 egress (mean 36.06 Mbit/s)
Flow 2 ingress (mean 38.07 Mbit/s)   Flow 2 egress (mean 36.63 Mbit/s)
Flow 3 ingress (mean 17.03 Mbit/s)   Flow 3 egress (mean 16.42 Mbit/s)

Flow 1 (95th percentile 67.61 ms)   Flow 2 (95th percentile 70.59 ms)   Flow 3 (95th percentile 74.39 ms)
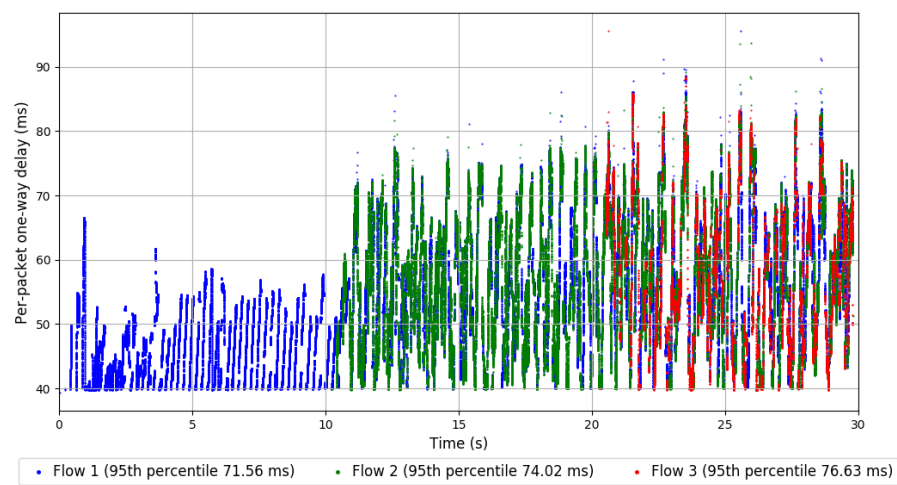
```
Run 5: Statistics of TaoVA-100x

Start at: 2018-04-17 14:35:47
End at: 2018-04-17 14:36:17
Local clock offset: 18.392 ms
Remote clock offset: 7.976 ms


# Below is generated by plot.py at 2018-04-17 20:54:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.16 Mbit/s
95th percentile per-packet one-way delay: 72.596 ms
Loss rate: 3.29%
-- Flow 1:
Average throughput: 38.88 Mbit/s
95th percentile per-packet one-way delay: 71.670 ms
Loss rate: 2.27%
-- Flow 2:
Average throughput: 36.52 Mbit/s
95th percentile per-packet one-way delay: 73.968 ms
Loss rate: 4.03%
-- Flow 3:
Average throughput: 15.62 Mbit/s
95th percentile per-packet one-way delay: 72.917 ms
Loss rate: 7.31%
```

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

Flow 1 ingress (mean 39.48 Mbit/s) --- Flow 1 egress (mean 38.88 Mbit/s)
Flow 2 ingress (mean 37.65 Mbit/s) --- Flow 2 egress (mean 36.52 Mbit/s)
Flow 3 ingress (mean 16.44 Mbit/s) --- Flow 3 egress (mean 15.62 Mbit/s)

Flow 1 (95th percentile 71.67 ms) • Flow 2 (95th percentile 73.97 ms) • Flow 3 (95th percentile 72.92 ms)
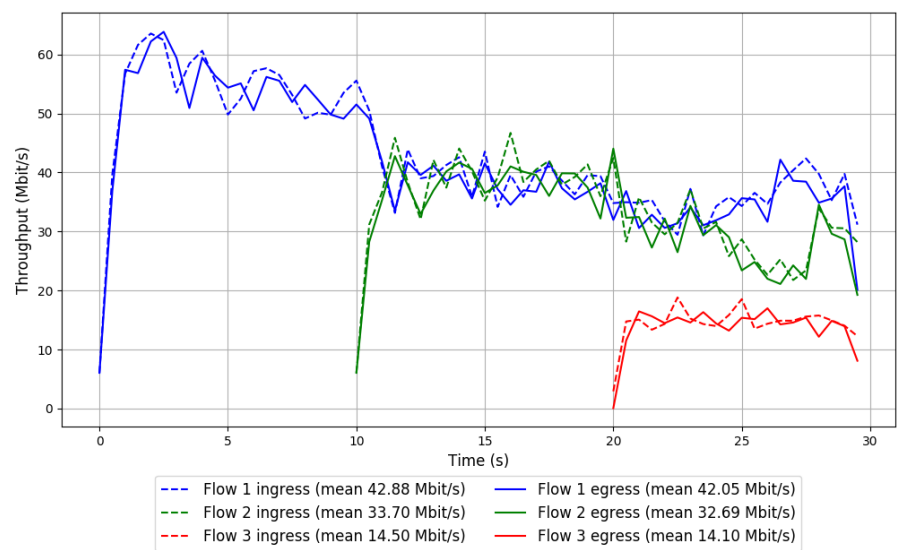
174

```
Run 6: Statistics of TaoVA-100x

Start at: 2018-04-17 14:58:35
End at: 2018-04-17 14:59:05
Local clock offset: 23.425 ms
Remote clock offset: -11.014 ms


# Below is generated by plot.py at 2018-04-17 20:54:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.38 Mbit/s
95th percentile per-packet one-way delay: 72.659 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 37.55 Mbit/s
95th percentile per-packet one-way delay: 70.920 ms
Loss rate: 2.33%
-- Flow 2:
Average throughput: 38.27 Mbit/s
95th percentile per-packet one-way delay: 73.761 ms
Loss rate: 4.65%
-- Flow 3:
Average throughput: 13.87 Mbit/s
95th percentile per-packet one-way delay: 76.347 ms
Loss rate: 5.49%
```
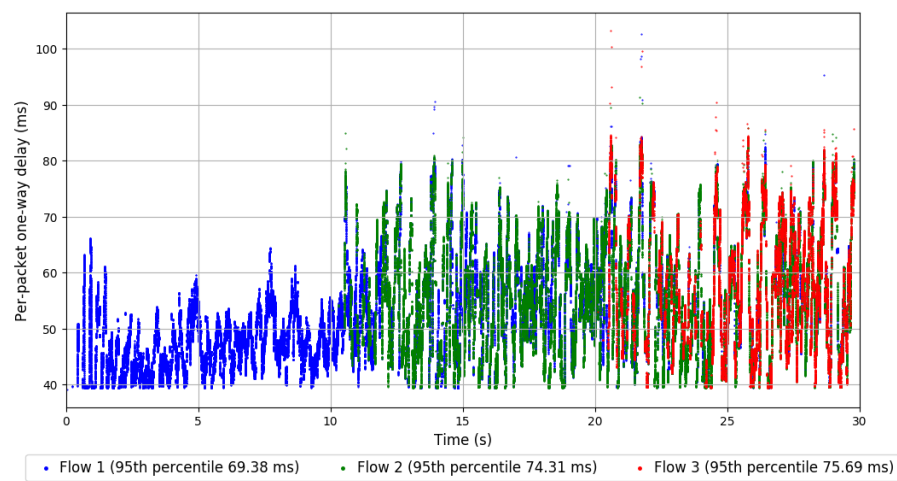
Run 6: Report of TaoVA-100x — Data Link

```
Run 7: Statistics of TaoVA-100x

Start at: 2018-04-17 15:22:36
End at: 2018-04-17 15:23:06
Local clock offset: 2.282 ms
Remote clock offset: -5.603 ms

# Below is generated by plot.py at 2018-04-17 20:54:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.33 Mbit/s
95th percentile per-packet one-way delay: 73.104 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 42.05 Mbit/s
95th percentile per-packet one-way delay: 71.556 ms
Loss rate: 2.57%
-- Flow 2:
Average throughput: 32.69 Mbit/s
95th percentile per-packet one-way delay: 74.021 ms
Loss rate: 3.98%
-- Flow 3:
Average throughput: 14.10 Mbit/s
95th percentile per-packet one-way delay: 76.631 ms
Loss rate: 5.06%
```
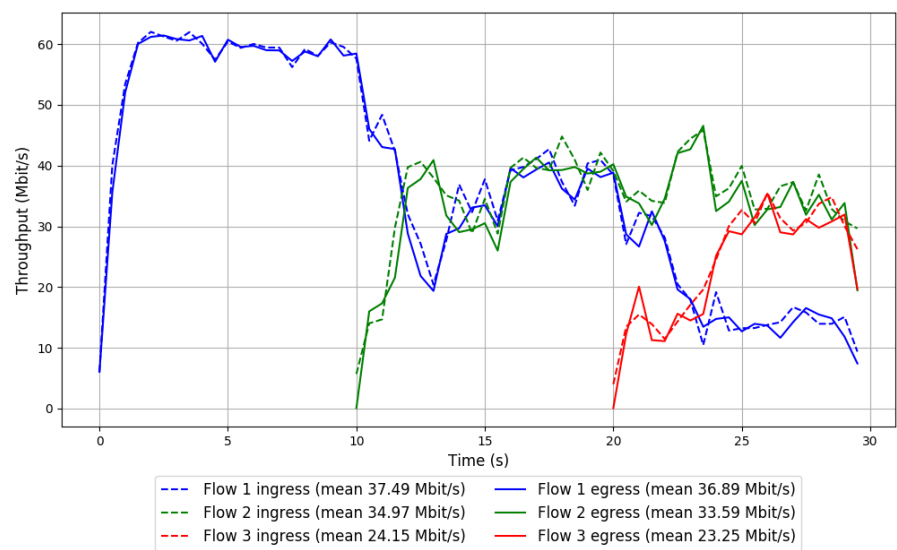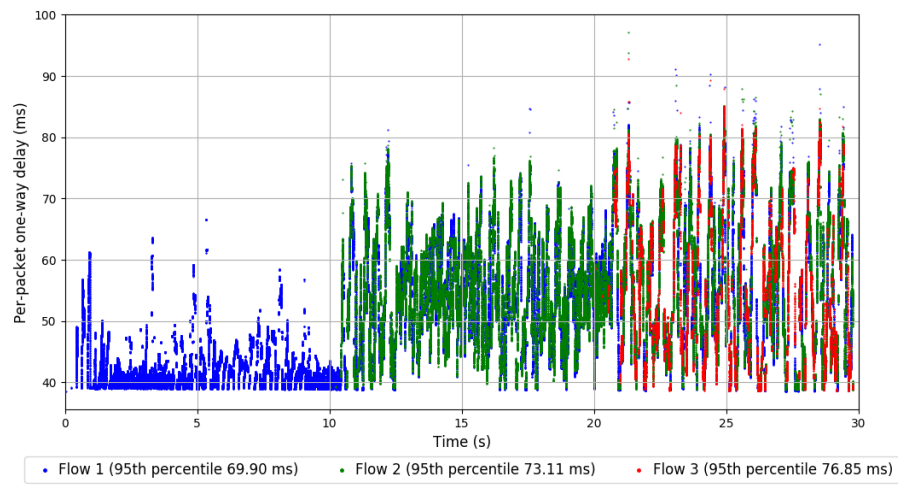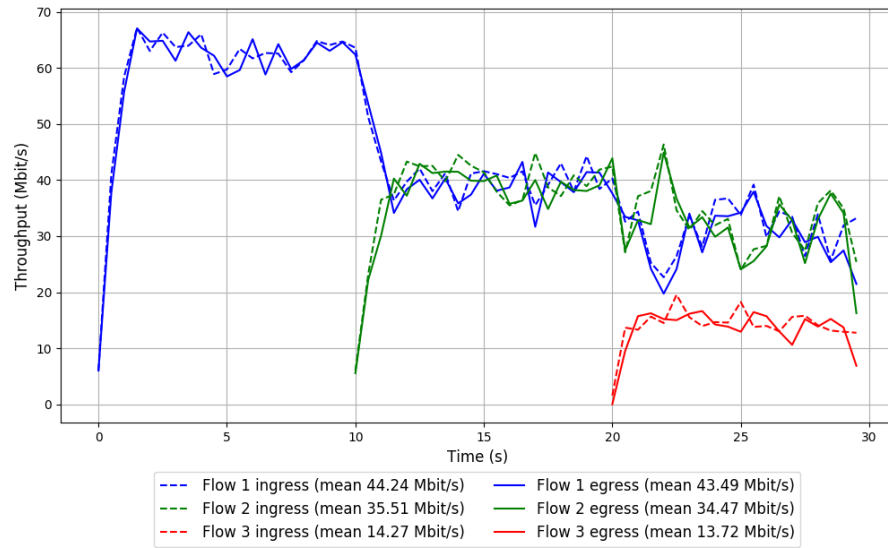
Run 7: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 42.88 Mbit/s)   Flow 1 egress (mean 42.05 Mbit/s)
Flow 2 ingress (mean 33.70 Mbit/s)   Flow 2 egress (mean 32.69 Mbit/s)
Flow 3 ingress (mean 14.50 Mbit/s)   Flow 3 egress (mean 14.10 Mbit/s)

Flow 1 (95th percentile 71.56 ms)   Flow 2 (95th percentile 74.02 ms)   Flow 3 (95th percentile 76.63 ms)

```
Run 8: Statistics of TaoVA-100x

Start at: 2018-04-17 15:45:29
End at: 2018-04-17 15:45:59
Local clock offset: -0.67 ms
Remote clock offset: 9.096 ms

# Below is generated by plot.py at 2018-04-17 20:54:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.73 Mbit/s
95th percentile per-packet one-way delay: 73.381 ms
Loss rate: 3.52%
-- Flow 1:
Average throughput: 36.89 Mbit/s
95th percentile per-packet one-way delay: 69.378 ms
Loss rate: 2.22%
-- Flow 2:
Average throughput: 33.59 Mbit/s
95th percentile per-packet one-way delay: 74.311 ms
Loss rate: 4.86%
-- Flow 3:
Average throughput: 23.25 Mbit/s
95th percentile per-packet one-way delay: 75.689 ms
Loss rate: 5.69%
```
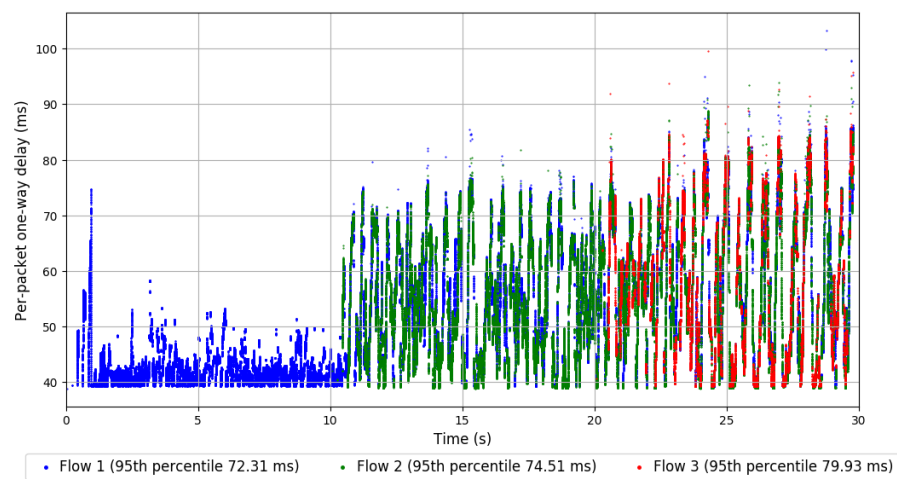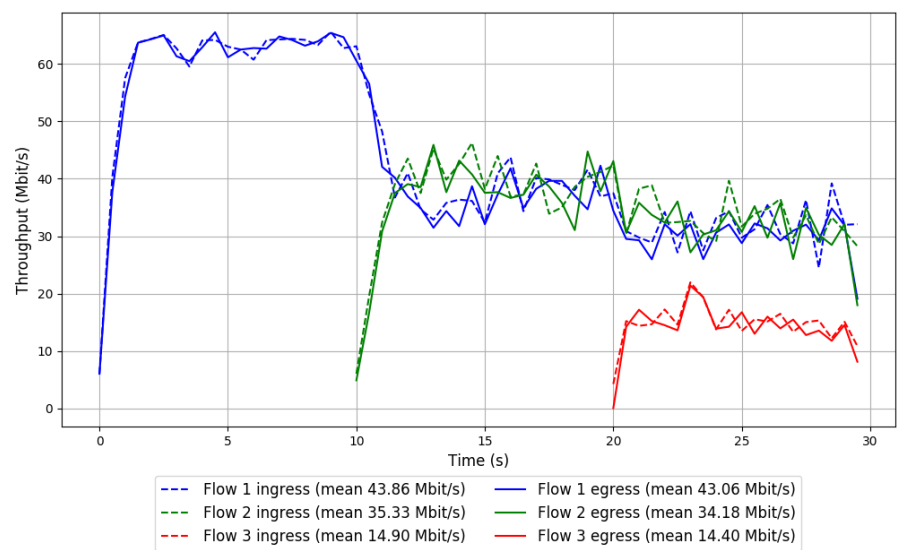
Run 8: Report of TaoVA-100x — Data Link

```
Run 9: Statistics of TaoVA-100x

Start at: 2018-04-17 16:08:16
End at: 2018-04-17 16:08:46
Local clock offset: -0.023 ms
Remote clock offset: 9.664 ms


# Below is generated by plot.py at 2018-04-17 20:56:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.83 Mbit/s
95th percentile per-packet one-way delay: 71.848 ms
Loss rate: 3.08%
-- Flow 1:
Average throughput: 43.49 Mbit/s
95th percentile per-packet one-way delay: 69.897 ms
Loss rate: 2.41%
-- Flow 2:
Average throughput: 34.47 Mbit/s
95th percentile per-packet one-way delay: 73.115 ms
Loss rate: 3.94%
-- Flow 3:
Average throughput: 13.72 Mbit/s
95th percentile per-packet one-way delay: 76.846 ms
Loss rate: 5.03%
```

Run 9: Report of TaoVA-100x — Data Link

```
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-17 16:31:06
End at: 2018-04-17 16:31:36
Local clock offset: 6.978 ms
Remote clock offset: -9.428 ms


# Below is generated by plot.py at 2018-04-17 20:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.42 Mbit/s
95th percentile per-packet one-way delay: 73.914 ms
Loss rate: 3.18%
-- Flow 1:
Average throughput: 43.06 Mbit/s
95th percentile per-packet one-way delay: 72.315 ms
Loss rate: 2.39%
-- Flow 2:
Average throughput: 34.18 Mbit/s
95th percentile per-packet one-way delay: 74.507 ms
Loss rate: 4.21%
-- Flow 3:
Average throughput: 14.40 Mbit/s
95th percentile per-packet one-way delay: 79.930 ms
Loss rate: 5.26%
```
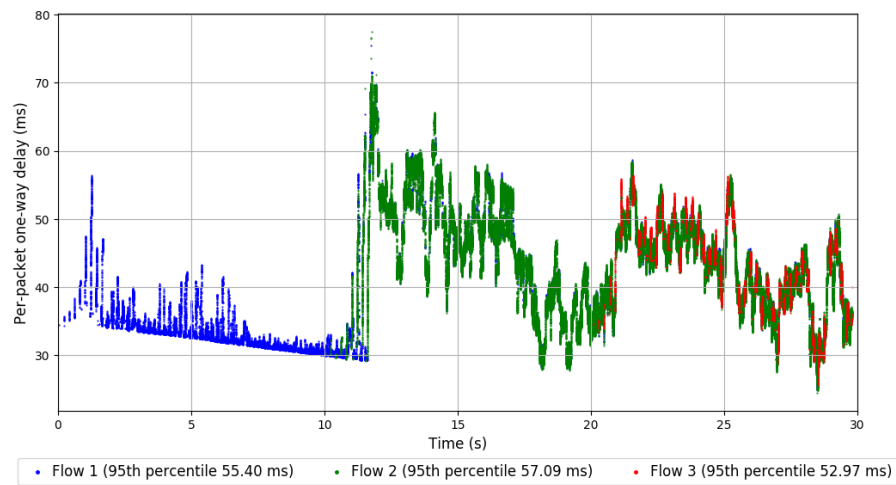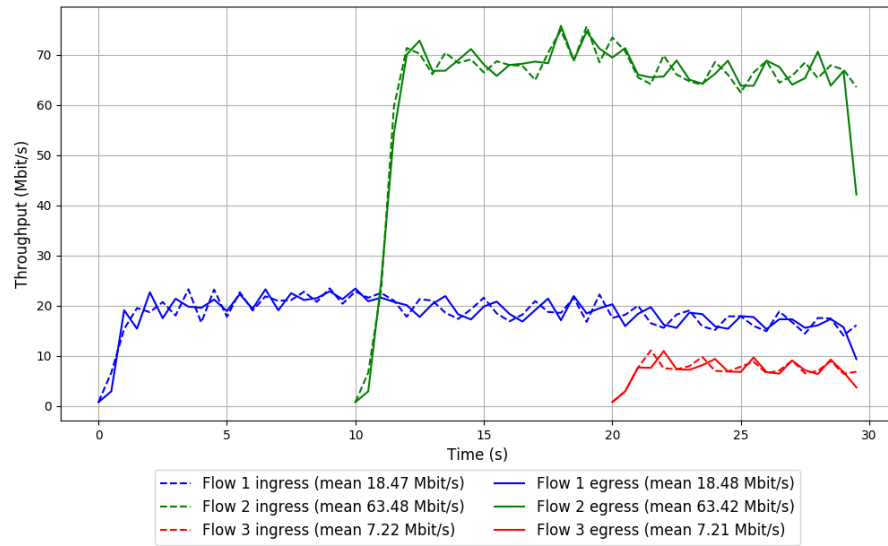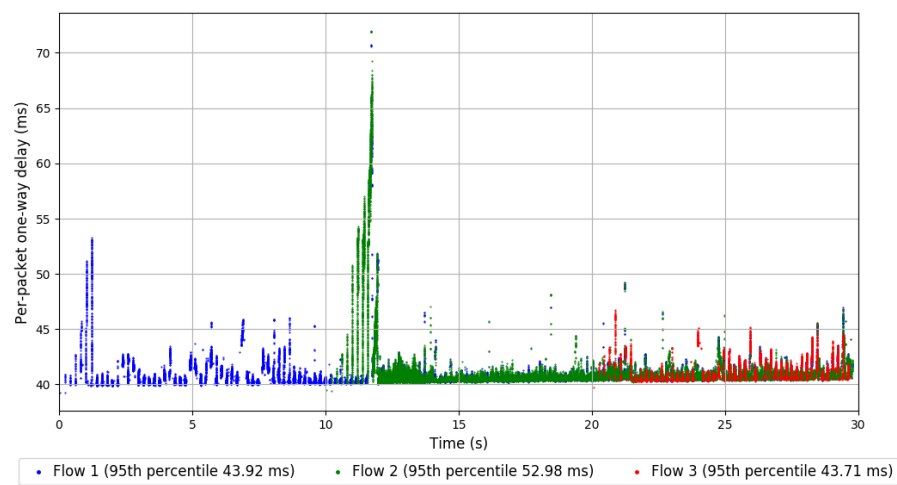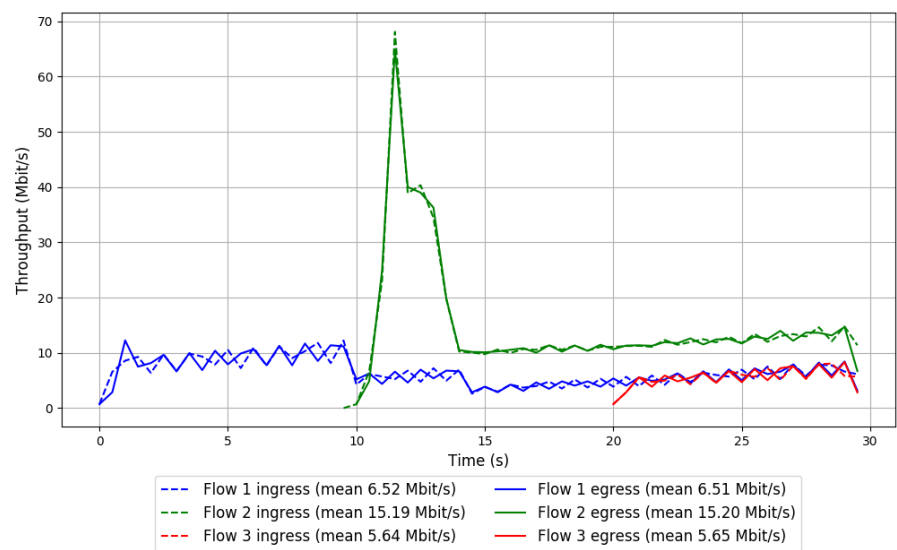
Run 10: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2018-04-17 13:10:49
End at: 2018-04-17 13:11:19
Local clock offset: 6.675 ms
Remote clock offset: 5.746 ms


# Below is generated by plot.py at 2018-04-17 20:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.91 Mbit/s
95th percentile per-packet one-way delay: 56.601 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 18.48 Mbit/s
95th percentile per-packet one-way delay: 55.397 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 63.42 Mbit/s
95th percentile per-packet one-way delay: 57.093 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 52.966 ms
Loss rate: 2.18%
```

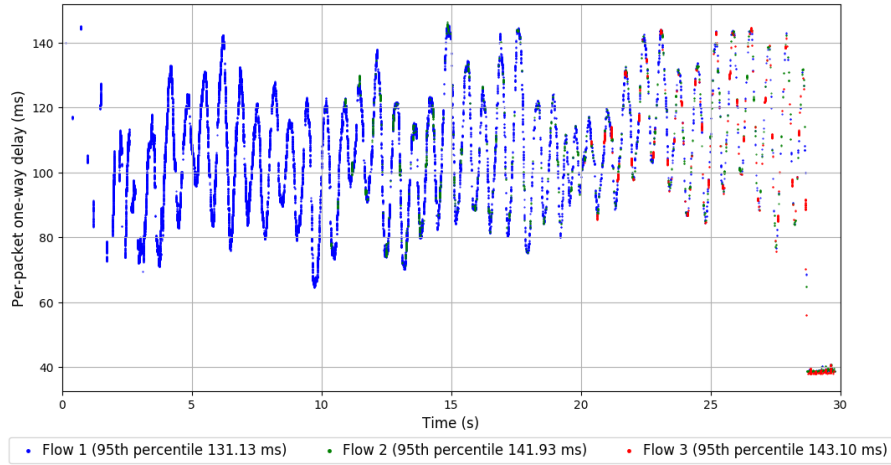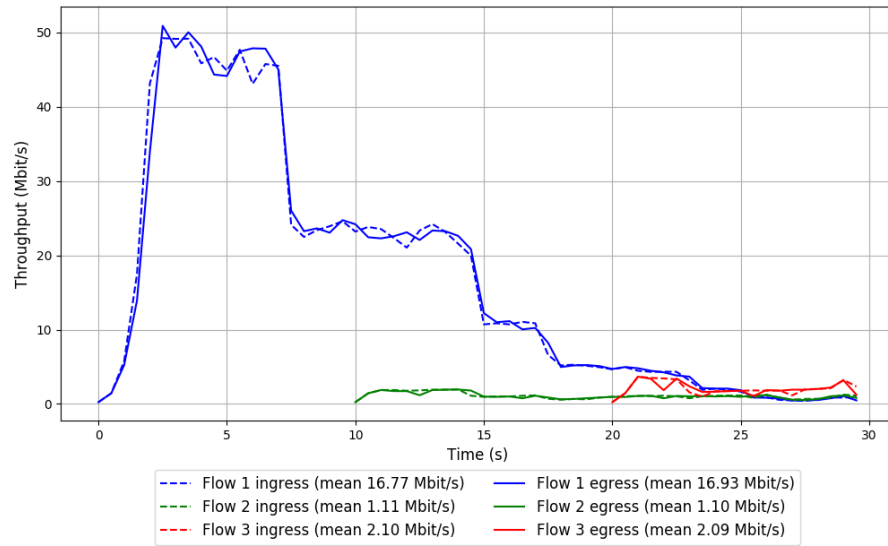Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-04-17 13:33:44
End at: 2018-04-17 13:34:14
Local clock offset: 7.288 ms
Remote clock offset: 18.202 ms


# Below is generated by plot.py at 2018-04-17 20:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.44 Mbit/s
95th percentile per-packet one-way delay: 48.263 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 6.51 Mbit/s
95th percentile per-packet one-way delay: 43.923 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 15.20 Mbit/s
95th percentile per-packet one-way delay: 52.976 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 5.65 Mbit/s
95th percentile per-packet one-way delay: 43.713 ms
Loss rate: 2.58%
```

Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-04-17 13:56:47
End at: 2018-04-17 13:57:17
Local clock offset: 7.98 ms
Remote clock offset: 19.374 ms


# Below is generated by plot.py at 2018-04-17 20:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.33 Mbit/s
95th percentile per-packet one-way delay: 132.055 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 16.93 Mbit/s
95th percentile per-packet one-way delay: 131.131 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 141.933 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 143.101 ms
Loss rate: 3.11%
```
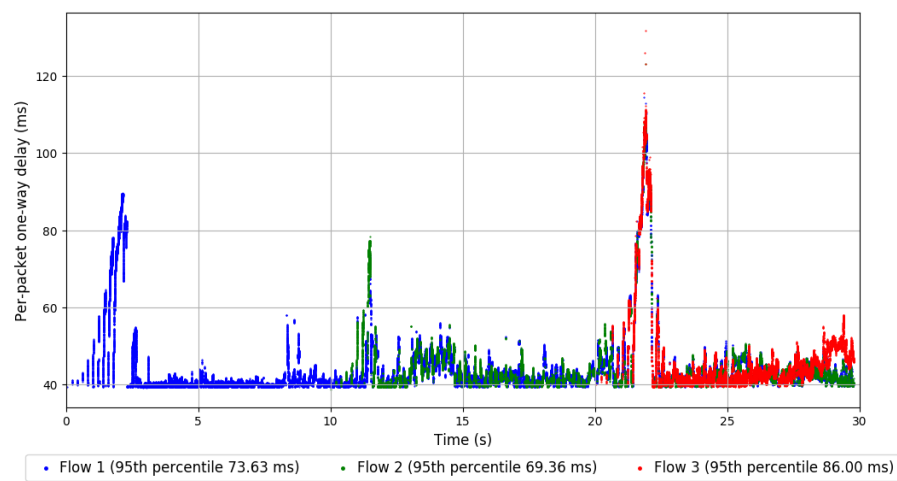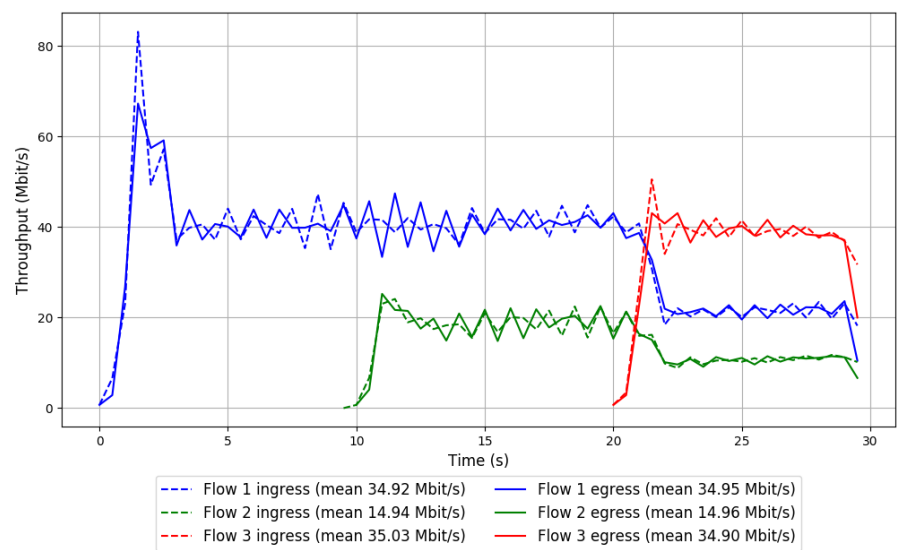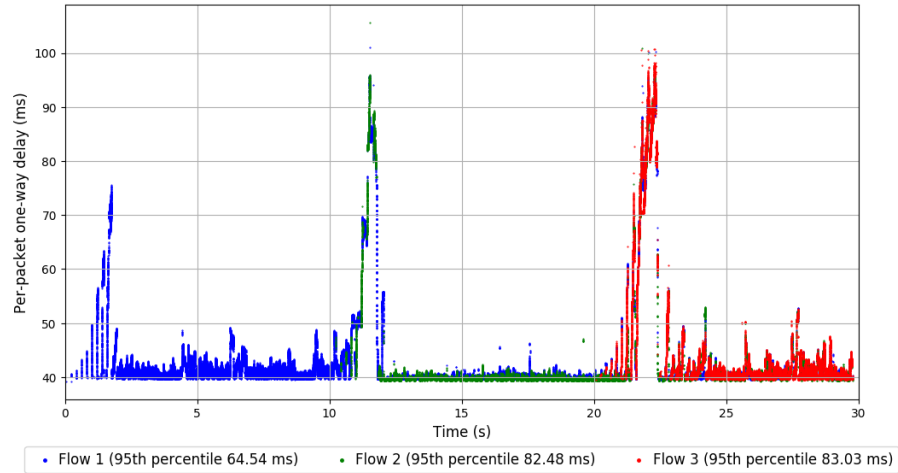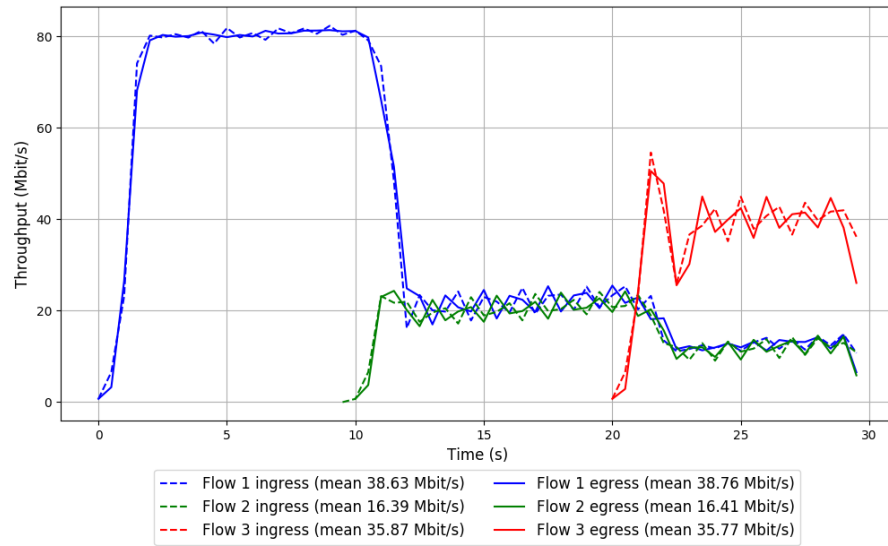
Run 3: Report of TCP Vegas — Data Link

- Flow 1 ingress (mean 16.77 Mbit/s)
- Flow 1 egress (mean 16.93 Mbit/s)
- Flow 2 ingress (mean 1.11 Mbit/s)
- Flow 2 egress (mean 1.10 Mbit/s)
- Flow 3 ingress (mean 2.10 Mbit/s)
- Flow 3 egress (mean 2.09 Mbit/s)

- Flow 1 (95th percentile 131.13 ms)
- Flow 2 (95th percentile 141.93 ms)
- Flow 3 (95th percentile 143.10 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2018-04-17 14:19:49
End at: 2018-04-17 14:20:19
Local clock offset: 15.087 ms
Remote clock offset: 23.27 ms


# Below is generated by plot.py at 2018-04-17 20:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.30 Mbit/s
95th percentile per-packet one-way delay: 74.468 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 34.95 Mbit/s
95th percentile per-packet one-way delay: 73.633 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 14.96 Mbit/s
95th percentile per-packet one-way delay: 69.360 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 34.90 Mbit/s
95th percentile per-packet one-way delay: 86.000 ms
Loss rate: 2.28%
```
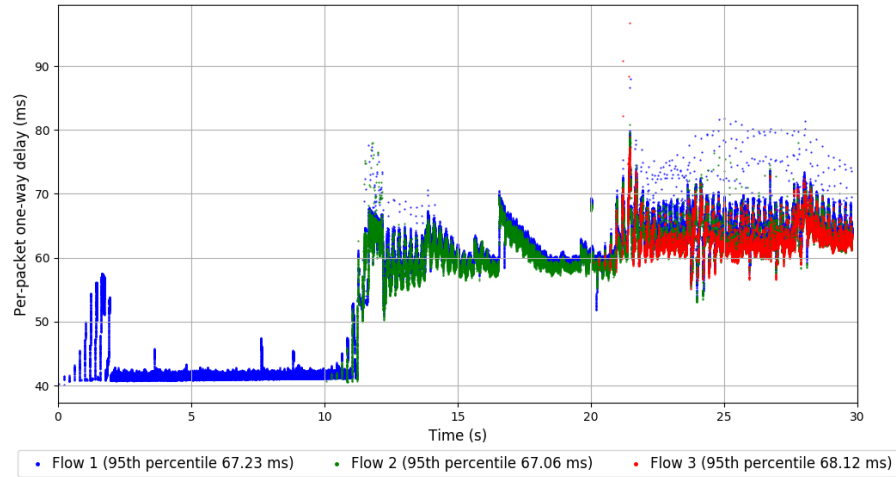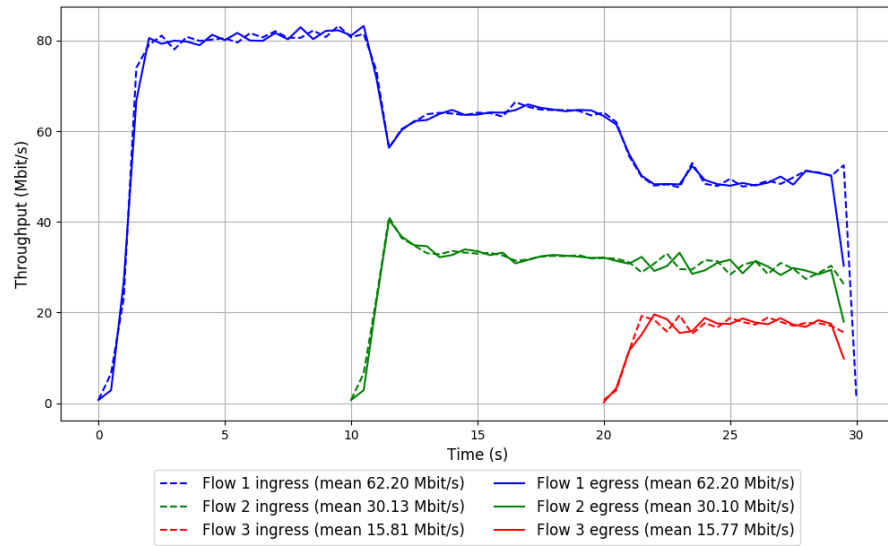
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-04-17 14:42:33
End at: 2018-04-17 14:43:03
Local clock offset: 20.266 ms
Remote clock offset: 6.386 ms


# Below is generated by plot.py at 2018-04-17 20:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.34 Mbit/s
95th percentile per-packet one-way delay: 72.046 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 38.76 Mbit/s
95th percentile per-packet one-way delay: 64.537 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 16.41 Mbit/s
95th percentile per-packet one-way delay: 82.477 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 35.77 Mbit/s
95th percentile per-packet one-way delay: 83.025 ms
Loss rate: 2.35%
```
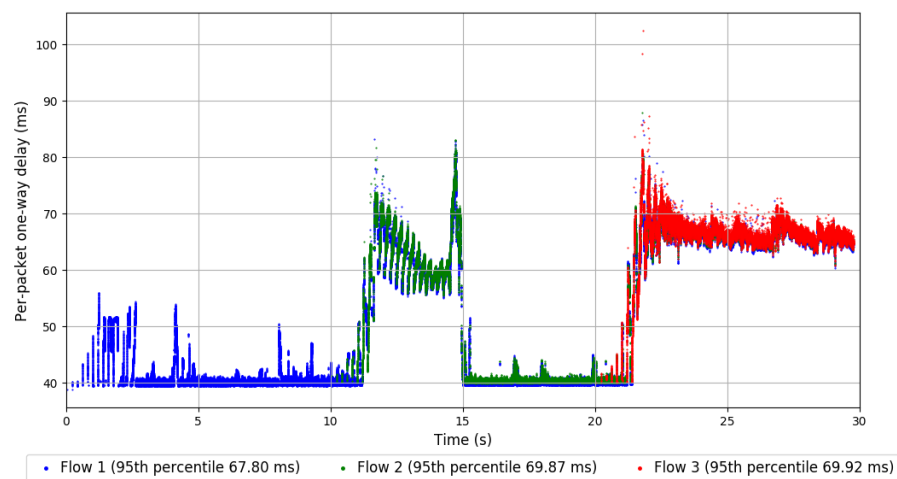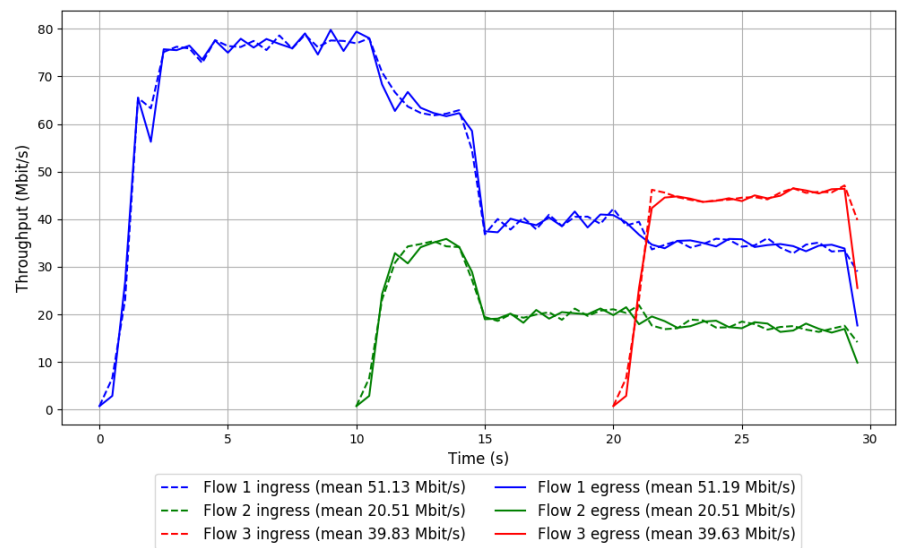
Run 5: Report of TCP Vegas — Data Link

```
Run 6: Statistics of TCP Vegas

Start at: 2018-04-17 15:06:30
End at: 2018-04-17 15:07:00
Local clock offset: 19.872 ms
Remote clock offset: 11.143 ms


# Below is generated by plot.py at 2018-04-17 20:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.32 Mbit/s
95th percentile per-packet one-way delay: 67.253 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 62.20 Mbit/s
95th percentile per-packet one-way delay: 67.233 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 30.10 Mbit/s
95th percentile per-packet one-way delay: 67.055 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 15.77 Mbit/s
95th percentile per-packet one-way delay: 68.119 ms
Loss rate: 2.39%
```
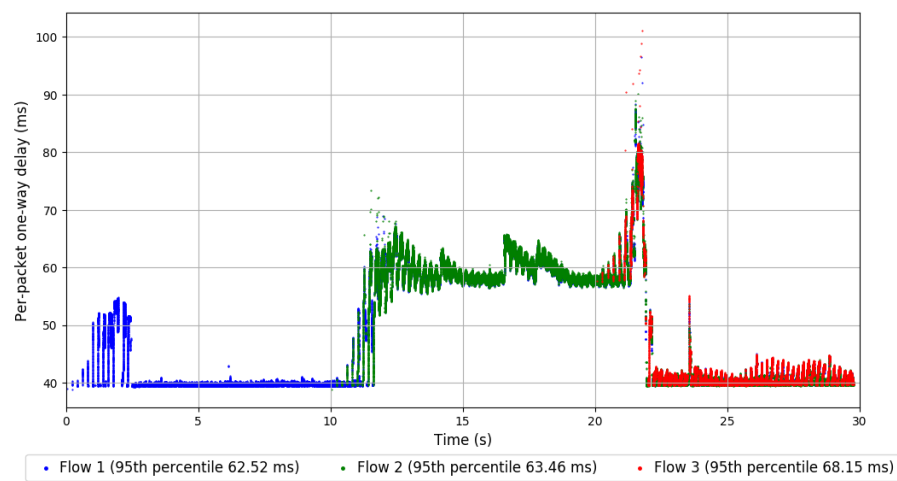
Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2018-04-17 15:29:25
End at: 2018-04-17 15:29:55
Local clock offset: -0.327 ms
Remote clock offset: -3.221 ms


# Below is generated by plot.py at 2018-04-17 20:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.77 Mbit/s
95th percentile per-packet one-way delay: 68.842 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 51.19 Mbit/s
95th percentile per-packet one-way delay: 67.802 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 20.51 Mbit/s
95th percentile per-packet one-way delay: 69.868 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 39.63 Mbit/s
95th percentile per-packet one-way delay: 69.925 ms
Loss rate: 2.59%
```

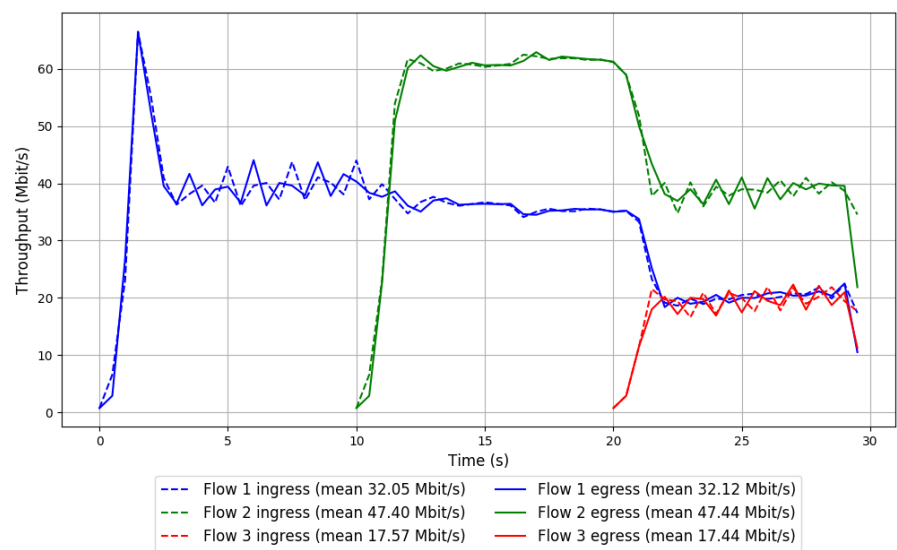Run 7: Report of TCP Vegas — Data Link

```
Run 8: Statistics of TCP Vegas

Start at: 2018-04-17 15:52:15
End at: 2018-04-17 15:52:45
Local clock offset: 0.118 ms
Remote clock offset: 11.597 ms


# Below is generated by plot.py at 2018-04-17 20:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.30 Mbit/s
95th percentile per-packet one-way delay: 63.107 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 32.12 Mbit/s
95th percentile per-packet one-way delay: 62.525 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 47.44 Mbit/s
95th percentile per-packet one-way delay: 63.463 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 17.44 Mbit/s
95th percentile per-packet one-way delay: 68.153 ms
Loss rate: 2.86%
```
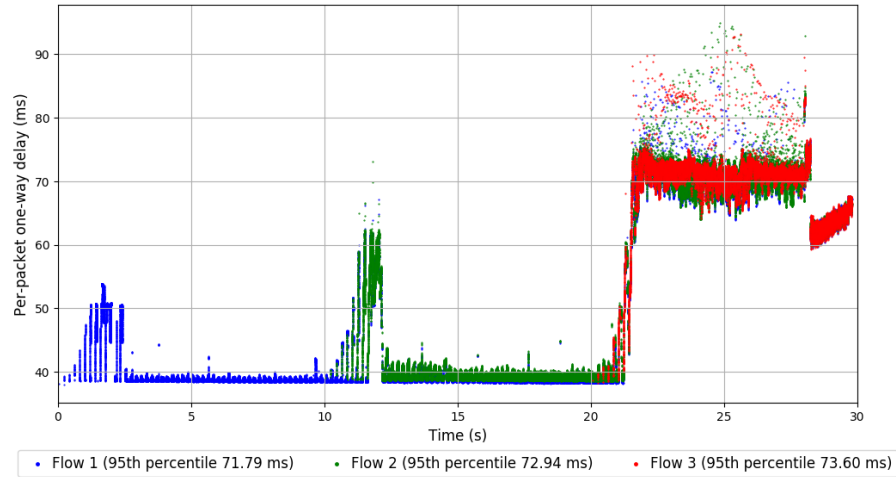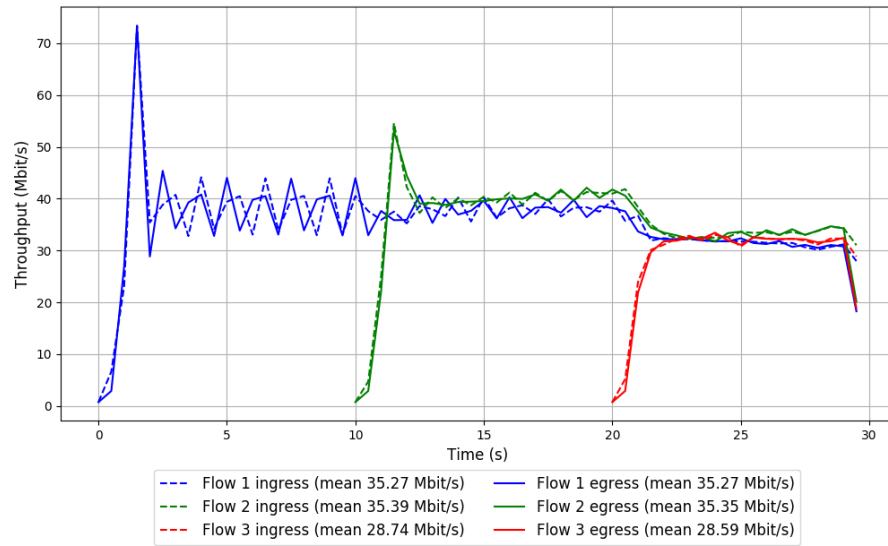
Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2018-04-17 16:15:04
End at: 2018-04-17 16:15:34
Local clock offset: 1.117 ms
Remote clock offset: -7.19 ms


# Below is generated by plot.py at 2018-04-17 20:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.07 Mbit/s
95th percentile per-packet one-way delay: 72.770 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 35.27 Mbit/s
95th percentile per-packet one-way delay: 71.786 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 35.35 Mbit/s
95th percentile per-packet one-way delay: 72.945 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 28.59 Mbit/s
95th percentile per-packet one-way delay: 73.600 ms
Loss rate: 2.50%
```
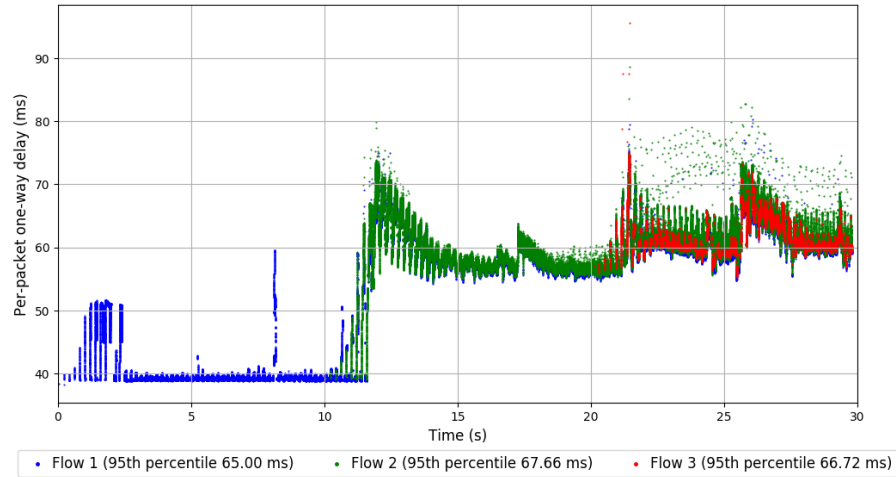
Run 9: Report of TCP Vegas — Data Link

```
Run 10: Statistics of TCP Vegas

Start at: 2018-04-17 16:38:00
End at: 2018-04-17 16:38:30
Local clock offset: 7.747 ms
Remote clock offset: 5.207 ms


# Below is generated by plot.py at 2018-04-17 20:56:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.96 Mbit/s
95th percentile per-packet one-way delay: 66.498 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 33.77 Mbit/s
95th percentile per-packet one-way delay: 65.005 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 52.82 Mbit/s
95th percentile per-packet one-way delay: 67.661 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 15.76 Mbit/s
95th percentile per-packet one-way delay: 66.723 ms
Loss rate: 2.35%
```
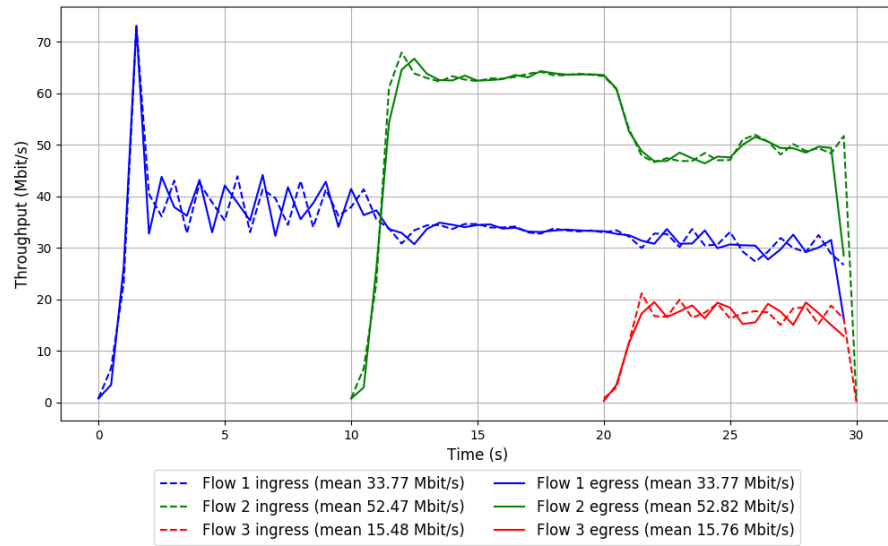
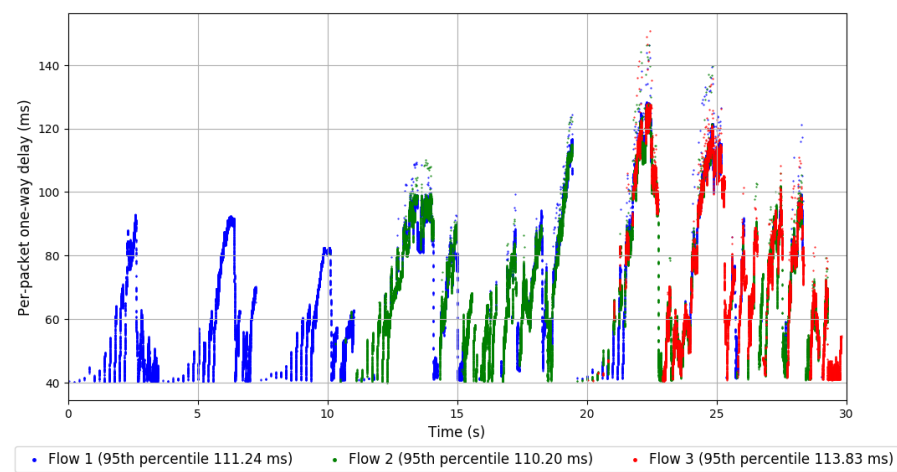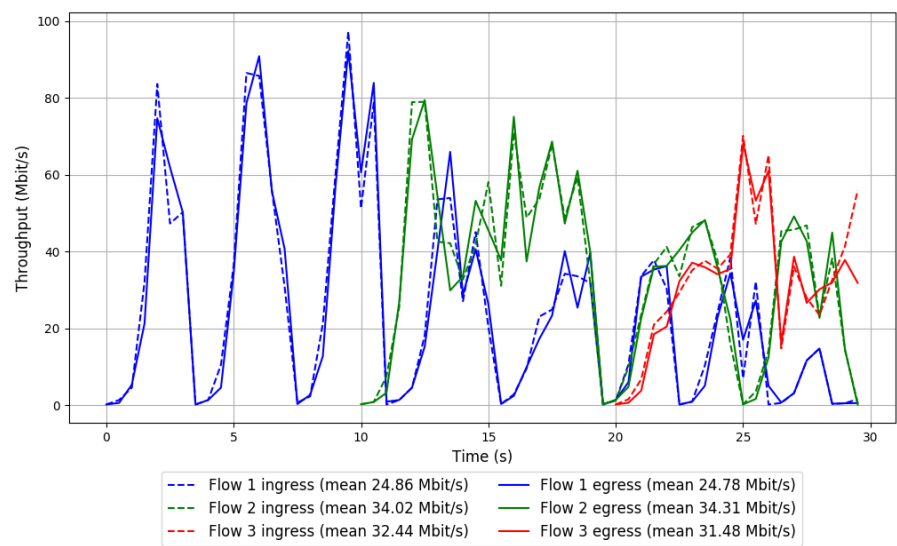Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-04-17 13:14:54
End at: 2018-04-17 13:15:24
Local clock offset: 6.538 ms
Remote clock offset: -17.178 ms


# Below is generated by plot.py at 2018-04-17 20:56:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.55 Mbit/s
95th percentile per-packet one-way delay: 111.342 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 24.78 Mbit/s
95th percentile per-packet one-way delay: 111.236 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 34.31 Mbit/s
95th percentile per-packet one-way delay: 110.202 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 31.48 Mbit/s
95th percentile per-packet one-way delay: 113.829 ms
Loss rate: 4.84%
```

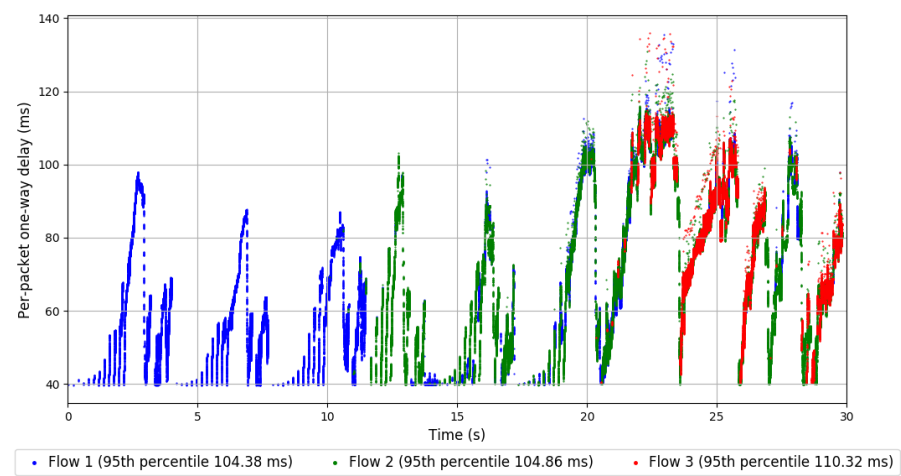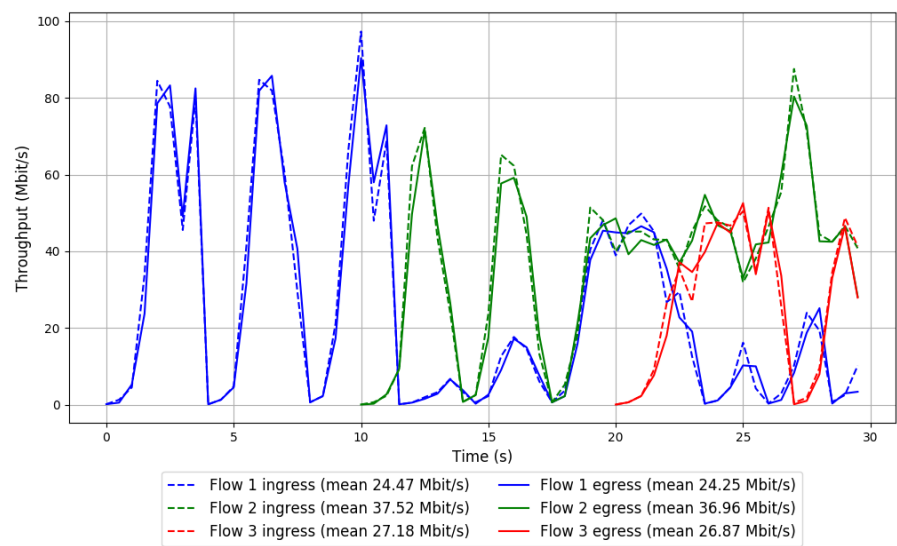Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-04-17 13:37:46
End at: 2018-04-17 13:38:16
Local clock offset: 7.373 ms
Remote clock offset: 23.069 ms


# Below is generated by plot.py at 2018-04-17 20:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.40 Mbit/s
95th percentile per-packet one-way delay: 106.496 ms
Loss rate: 2.45%
-- Flow 1:
Average throughput: 24.25 Mbit/s
95th percentile per-packet one-way delay: 104.378 ms
Loss rate: 1.71%
-- Flow 2:
Average throughput: 36.96 Mbit/s
95th percentile per-packet one-way delay: 104.863 ms
Loss rate: 2.66%
-- Flow 3:
Average throughput: 26.87 Mbit/s
95th percentile per-packet one-way delay: 110.321 ms
Loss rate: 3.87%
```
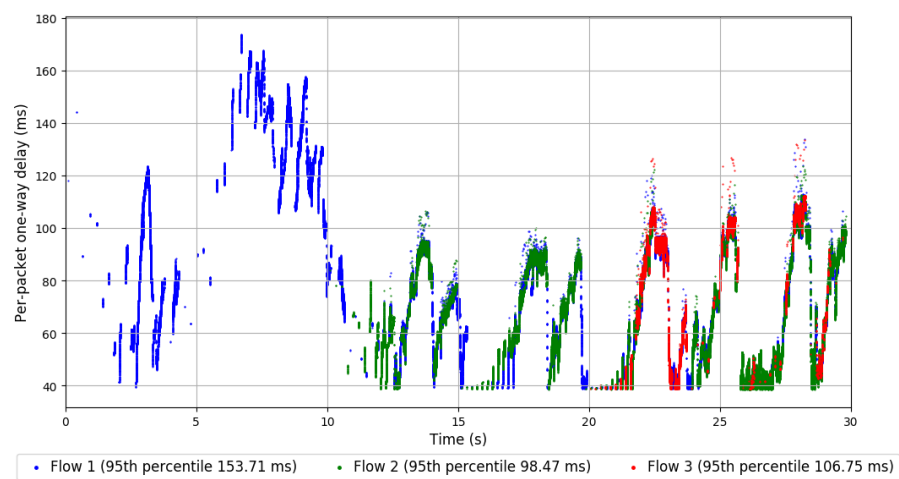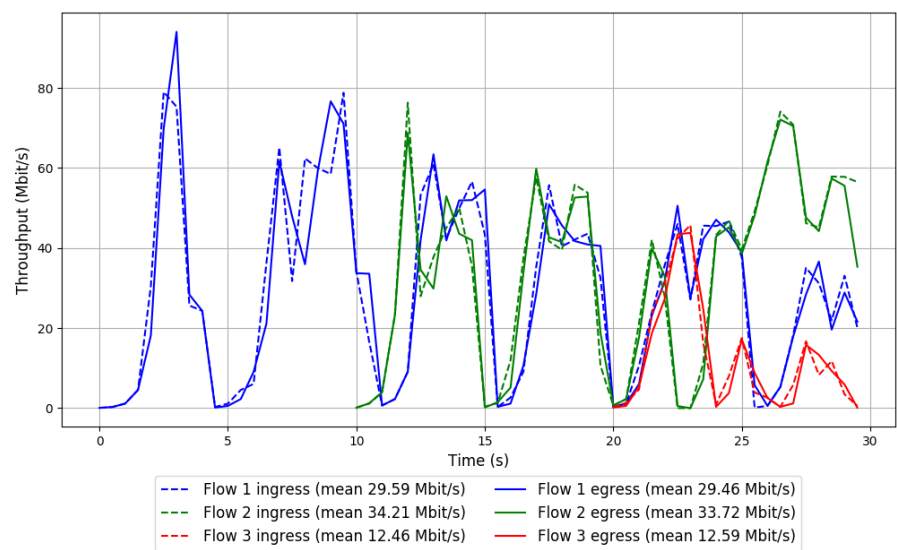
Run 2: Report of Verus — Data Link

Flow 1 ingress (mean 24.47 Mbit/s) --- Flow 1 egress (mean 24.25 Mbit/s)
Flow 2 ingress (mean 37.52 Mbit/s) --- Flow 2 egress (mean 36.96 Mbit/s)
Flow 3 ingress (mean 27.18 Mbit/s) --- Flow 3 egress (mean 26.87 Mbit/s)

Flow 1 (95th percentile 104.38 ms)   Flow 2 (95th percentile 104.86 ms)   Flow 3 (95th percentile 110.32 ms)

208

```
Run 3: Statistics of Verus

Start at: 2018-04-17 14:01:09
End at: 2018-04-17 14:01:39
Local clock offset: 10.637 ms
Remote clock offset: 17.734 ms


# Below is generated by plot.py at 2018-04-17 20:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.94 Mbit/s
95th percentile per-packet one-way delay: 143.453 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 29.46 Mbit/s
95th percentile per-packet one-way delay: 153.709 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 33.72 Mbit/s
95th percentile per-packet one-way delay: 98.472 ms
Loss rate: 2.58%
-- Flow 3:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 106.754 ms
Loss rate: 1.01%
```
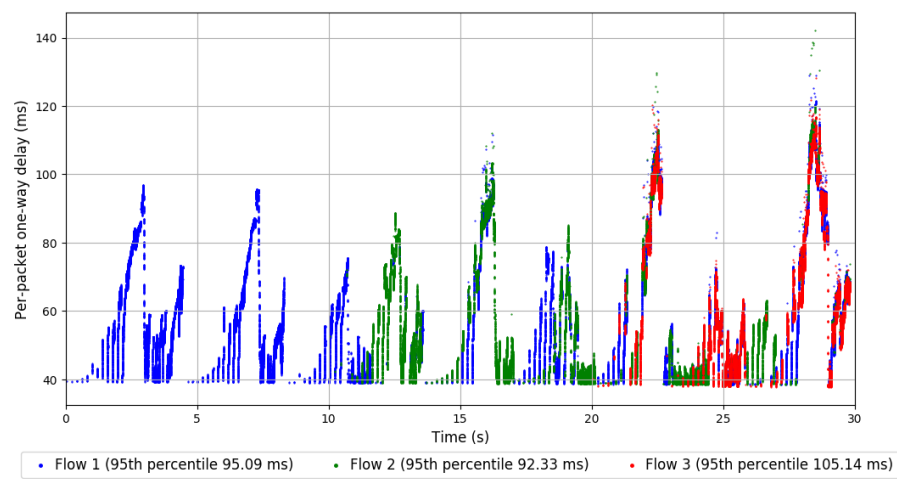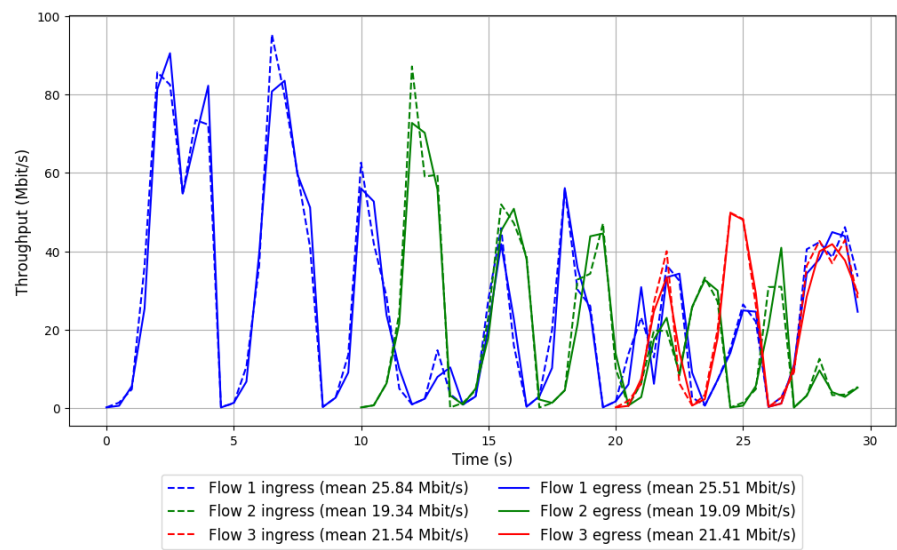
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2018-04-17 14:23:55
End at: 2018-04-17 14:24:25
Local clock offset: 15.61 ms
Remote clock offset: 19.364 ms


# Below is generated by plot.py at 2018-04-17 20:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.19 Mbit/s
95th percentile per-packet one-way delay: 97.138 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 25.51 Mbit/s
95th percentile per-packet one-way delay: 95.093 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 19.09 Mbit/s
95th percentile per-packet one-way delay: 92.326 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 21.41 Mbit/s
95th percentile per-packet one-way delay: 105.144 ms
Loss rate: 2.54%
```
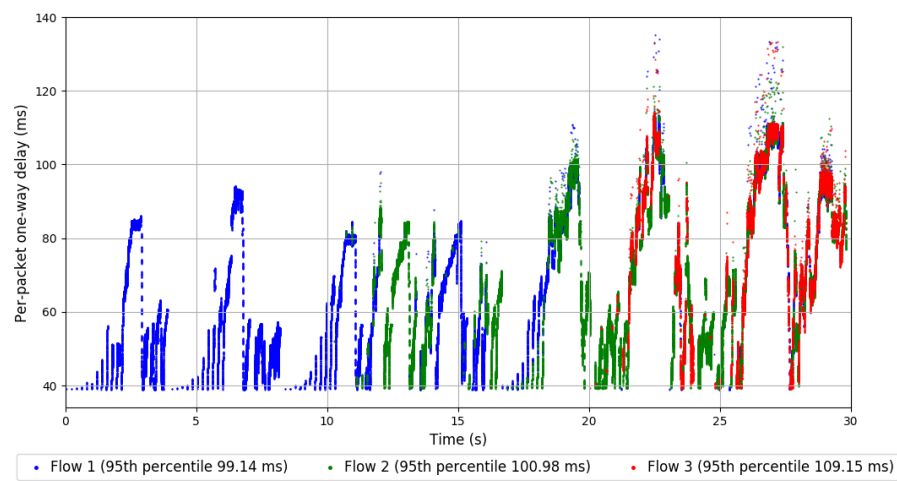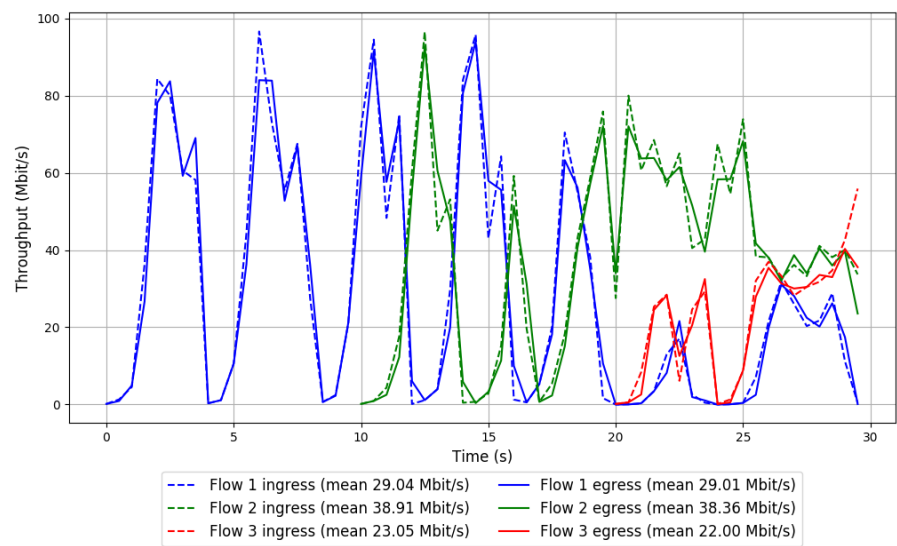
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-04-17 14:46:38
End at: 2018-04-17 14:47:08
Local clock offset: 20.992 ms
Remote clock offset: -15.657 ms


# Below is generated by plot.py at 2018-04-17 20:57:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.62 Mbit/s
95th percentile per-packet one-way delay: 102.003 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 29.01 Mbit/s
95th percentile per-packet one-way delay: 99.143 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 38.36 Mbit/s
95th percentile per-packet one-way delay: 100.982 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 22.00 Mbit/s
95th percentile per-packet one-way delay: 109.146 ms
Loss rate: 6.61%
```

Run 5: Report of Verus — Data Link

```
Run 6: Statistics of Verus

Start at: 2018-04-17 15:10:38
End at: 2018-04-17 15:11:08
Local clock offset: 12.334 ms
Remote clock offset: 13.826 ms


# Below is generated by plot.py at 2018-04-17 20:57:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.62 Mbit/s
95th percentile per-packet one-way delay: 72.768 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 39.74 Mbit/s
95th percentile per-packet one-way delay: 71.535 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 30.22 Mbit/s
95th percentile per-packet one-way delay: 73.068 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 17.86 Mbit/s
95th percentile per-packet one-way delay: 75.541 ms
Loss rate: 4.03%
```
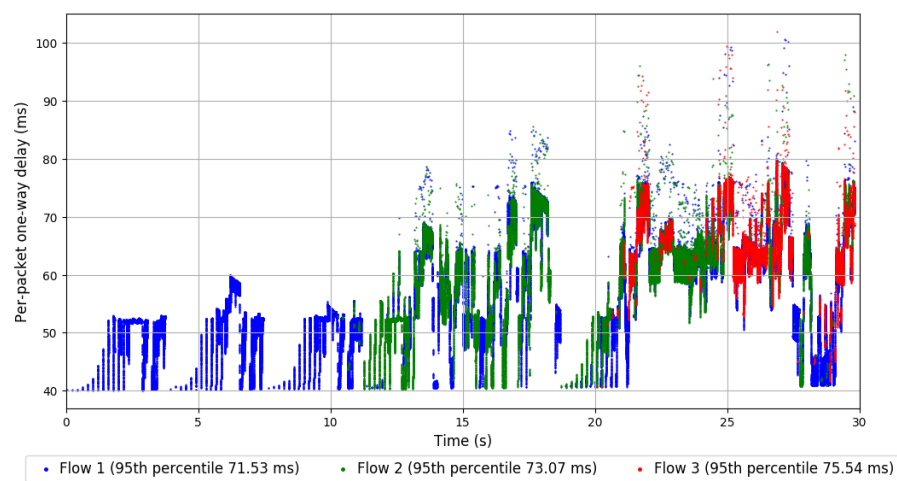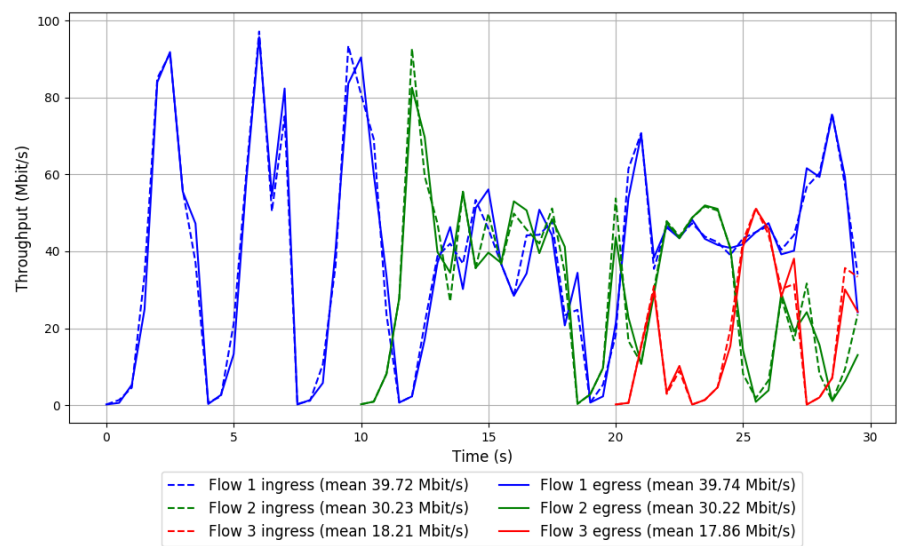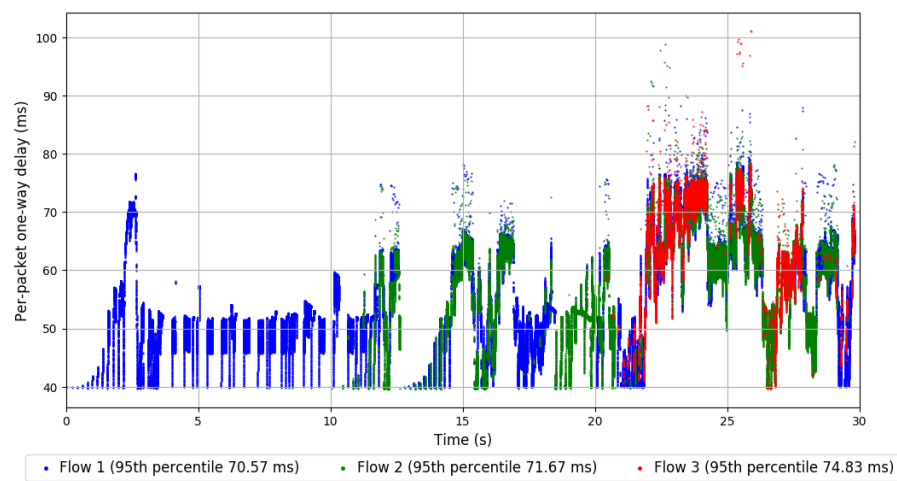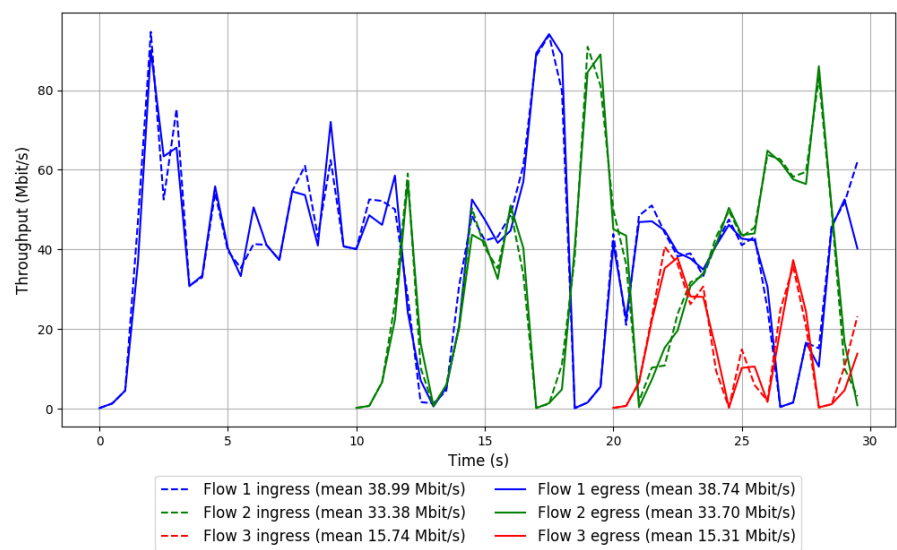
Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2018-04-17 15:33:33
End at: 2018-04-17 15:34:03
Local clock offset: -1.383 ms
Remote clock offset: -1.484 ms


# Below is generated by plot.py at 2018-04-17 20:57:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.10 Mbit/s
95th percentile per-packet one-way delay: 72.126 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 38.74 Mbit/s
95th percentile per-packet one-way delay: 70.571 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 33.70 Mbit/s
95th percentile per-packet one-way delay: 71.671 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 15.31 Mbit/s
95th percentile per-packet one-way delay: 74.833 ms
Loss rate: 4.89%
```
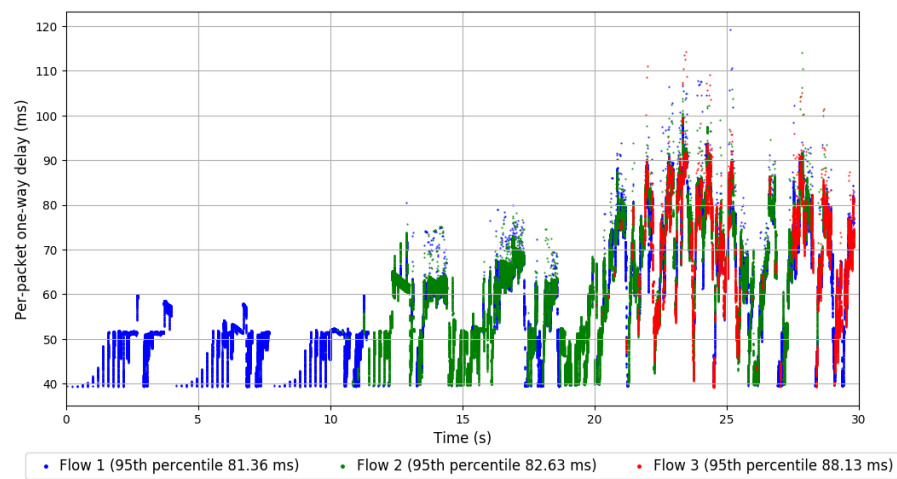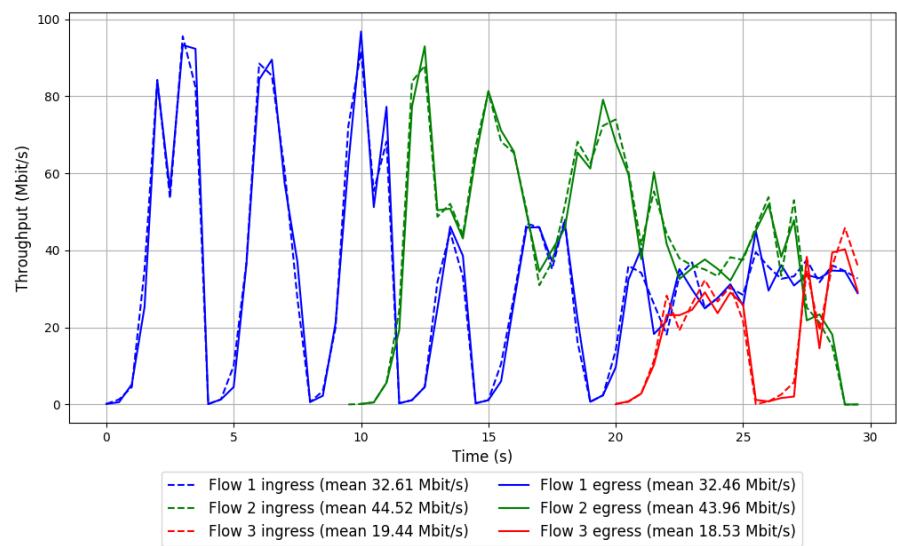
Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2018-04-17 15:56:21
End at: 2018-04-17 15:56:51
Local clock offset: 0.03 ms
Remote clock offset: 12.988 ms


# Below is generated by plot.py at 2018-04-17 20:57:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.45 Mbit/s
95th percentile per-packet one-way delay: 83.399 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 32.46 Mbit/s
95th percentile per-packet one-way delay: 81.357 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 43.96 Mbit/s
95th percentile per-packet one-way delay: 82.630 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 18.53 Mbit/s
95th percentile per-packet one-way delay: 88.129 ms
Loss rate: 5.42%
```

Run 8: Report of Verus — Data Link

Flow 1 ingress (mean 32.61 Mbit/s) Flow 1 egress (mean 32.46 Mbit/s)
Flow 2 ingress (mean 44.52 Mbit/s) Flow 2 egress (mean 43.96 Mbit/s)
Flow 3 ingress (mean 19.44 Mbit/s) Flow 3 egress (mean 18.53 Mbit/s)

Flow 1 (95th percentile 81.36 ms) Flow 2 (95th percentile 82.63 ms) Flow 3 (95th percentile 88.13 ms)
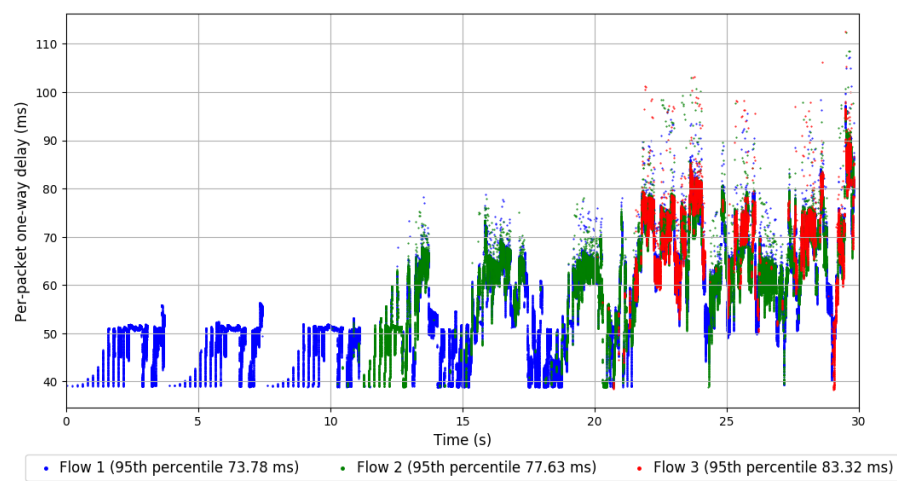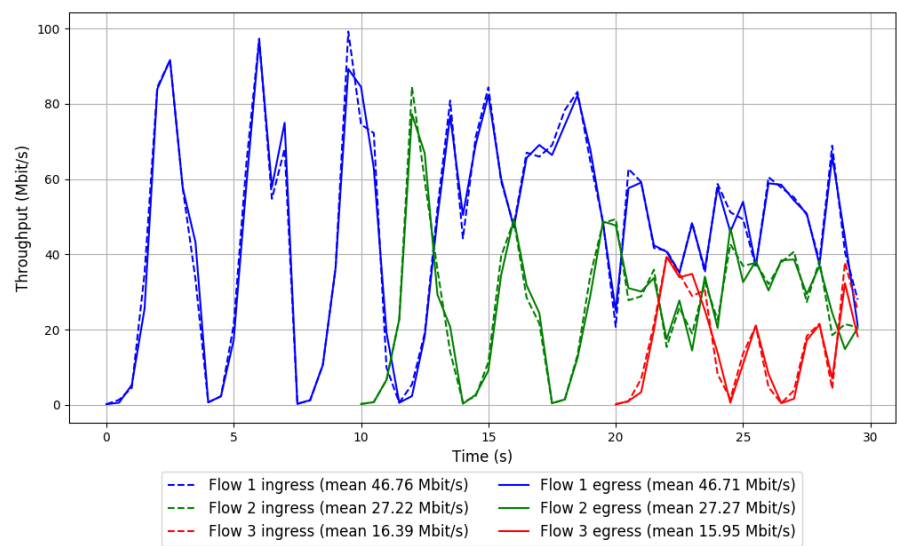
220

```
Run 9: Statistics of Verus

Start at: 2018-04-17 16:19:10
End at: 2018-04-17 16:19:40
Local clock offset: 3.599 ms
Remote clock offset: -8.522 ms


# Below is generated by plot.py at 2018-04-17 20:57:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.99 Mbit/s
95th percentile per-packet one-way delay: 76.580 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 46.71 Mbit/s
95th percentile per-packet one-way delay: 73.777 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 27.27 Mbit/s
95th percentile per-packet one-way delay: 77.626 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 15.95 Mbit/s
95th percentile per-packet one-way delay: 83.322 ms
Loss rate: 4.13%
```

Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2018-04-17 16:42:13
End at: 2018-04-17 16:42:43
Local clock offset: 8.439 ms
Remote clock offset: 2.338 ms

# Below is generated by plot.py at 2018-04-17 20:57:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.48 Mbit/s
95th percentile per-packet one-way delay: 74.230 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 42.77 Mbit/s
95th percentile per-packet one-way delay: 72.554 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 40.68 Mbit/s
95th percentile per-packet one-way delay: 74.132 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 11.42 Mbit/s
95th percentile per-packet one-way delay: 80.179 ms
Loss rate: 5.73%
```
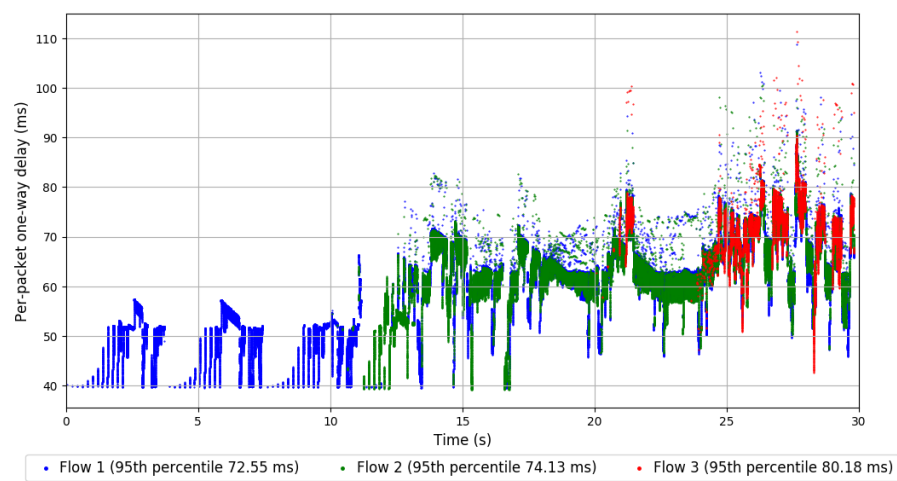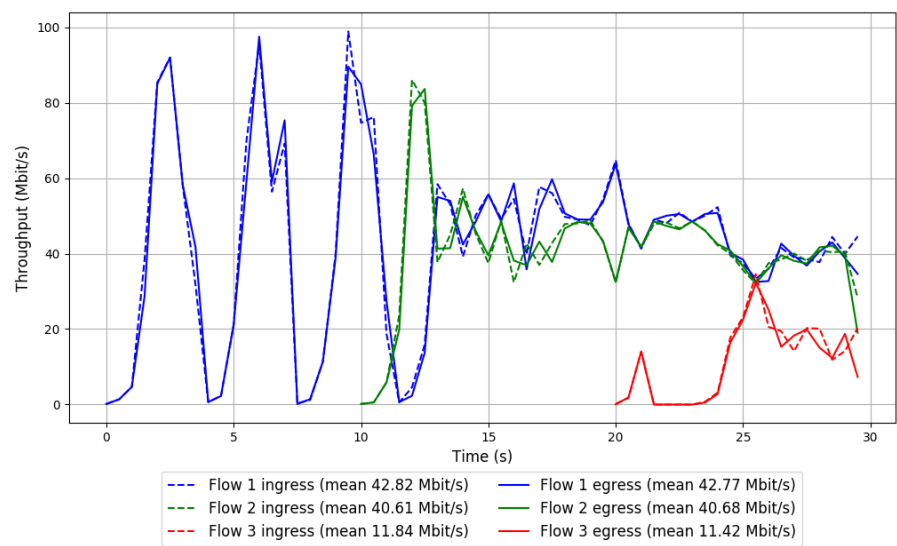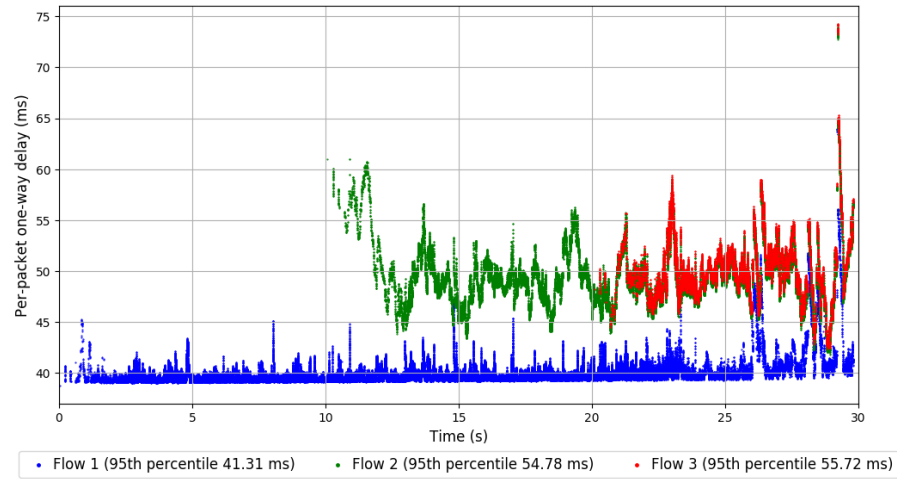
Run 10: Report of Verus — Data Link

Flow 1 ingress (mean 42.82 Mbit/s)
Flow 2 ingress (mean 40.61 Mbit/s)
Flow 3 ingress (mean 11.84 Mbit/s)
Flow 1 egress (mean 42.77 Mbit/s)
Flow 2 egress (mean 40.68 Mbit/s)
Flow 3 egress (mean 11.42 Mbit/s)

Flow 1 (95th percentile 72.55 ms)
Flow 2 (95th percentile 74.13 ms)
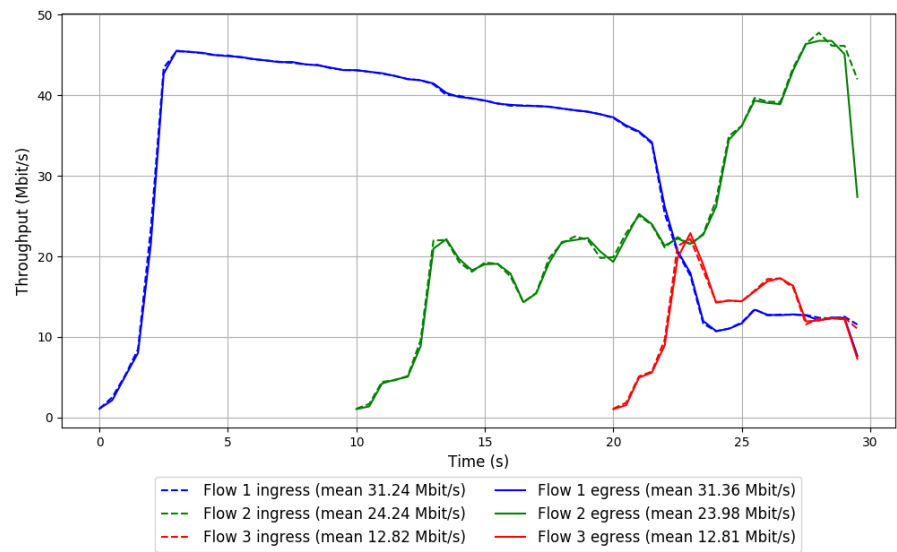Flow 3 (95th percentile 80.18 ms)

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```
Run 1: Statistics of Copa

Start at: 2018-04-17 13:05:27
End at: 2018-04-17 13:05:57
Local clock offset: 6.447 ms
Remote clock offset: 13.681 ms


# Below is generated by plot.py at 2018-04-17 20:58:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.43 Mbit/s
95th percentile per-packet one-way delay: 52.709 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 31.36 Mbit/s
95th percentile per-packet one-way delay: 41.306 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 23.98 Mbit/s
95th percentile per-packet one-way delay: 54.784 ms
Loss rate: 2.14%
-- Flow 3:
Average throughput: 12.81 Mbit/s
95th percentile per-packet one-way delay: 55.720 ms
Loss rate: 2.10%
```
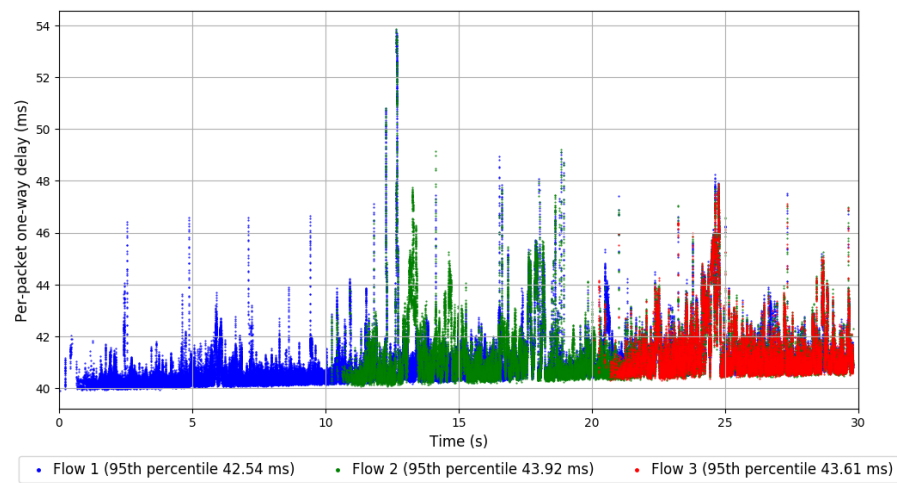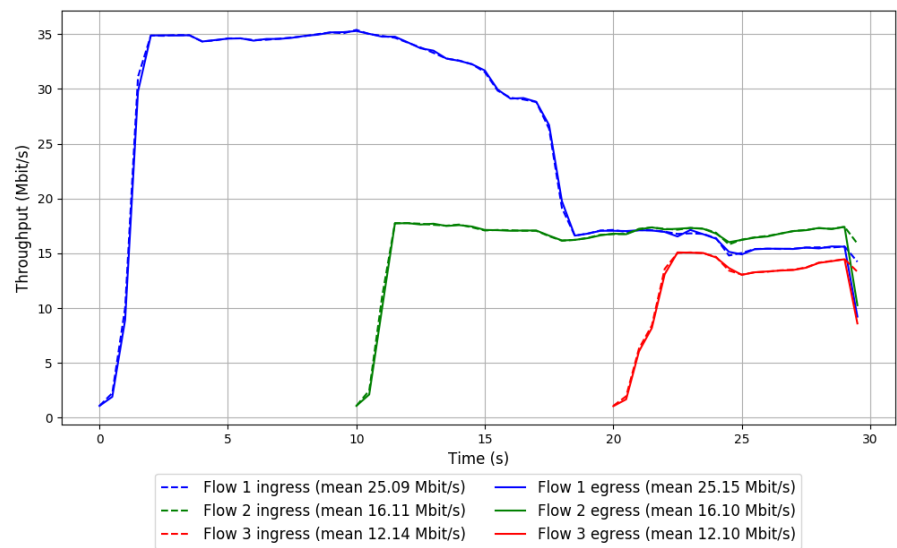
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 31.24 Mbit/s) --- Flow 1 egress (mean 31.36 Mbit/s)
Flow 2 ingress (mean 24.24 Mbit/s) --- Flow 2 egress (mean 23.98 Mbit/s)
Flow 3 ingress (mean 12.82 Mbit/s) --- Flow 3 egress (mean 12.81 Mbit/s)

Flow 1 (95th percentile 41.31 ms)   Flow 2 (95th percentile 54.78 ms)   Flow 3 (95th percentile 55.72 ms)

```
Run 2: Statistics of Copa

Start at: 2018-04-17 13:28:21
End at: 2018-04-17 13:28:51
Local clock offset: 6.989 ms
Remote clock offset: 10.422 ms


# Below is generated by plot.py at 2018-04-17 20:58:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 39.80 Mbit/s
95th percentile per-packet one-way delay: 43.195 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 25.15 Mbit/s
95th percentile per-packet one-way delay: 42.536 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 16.10 Mbit/s
95th percentile per-packet one-way delay: 43.921 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 12.10 Mbit/s
95th percentile per-packet one-way delay: 43.611 ms
Loss rate: 2.45%
```
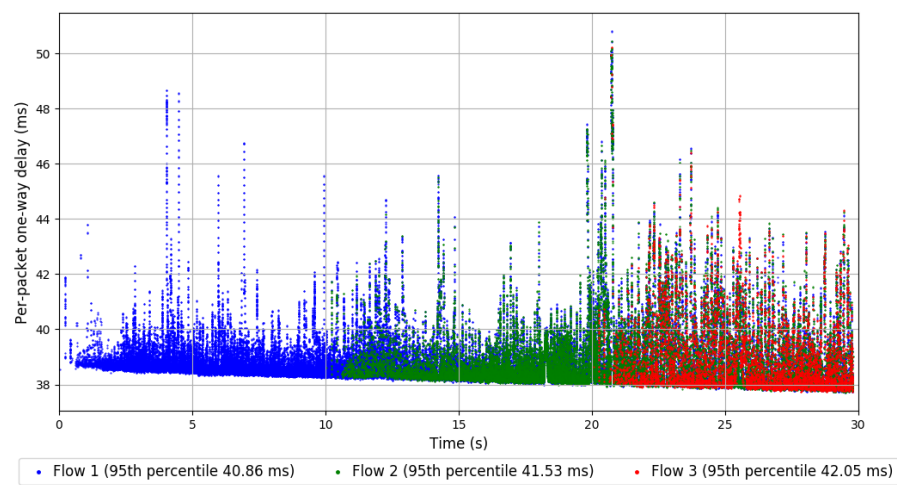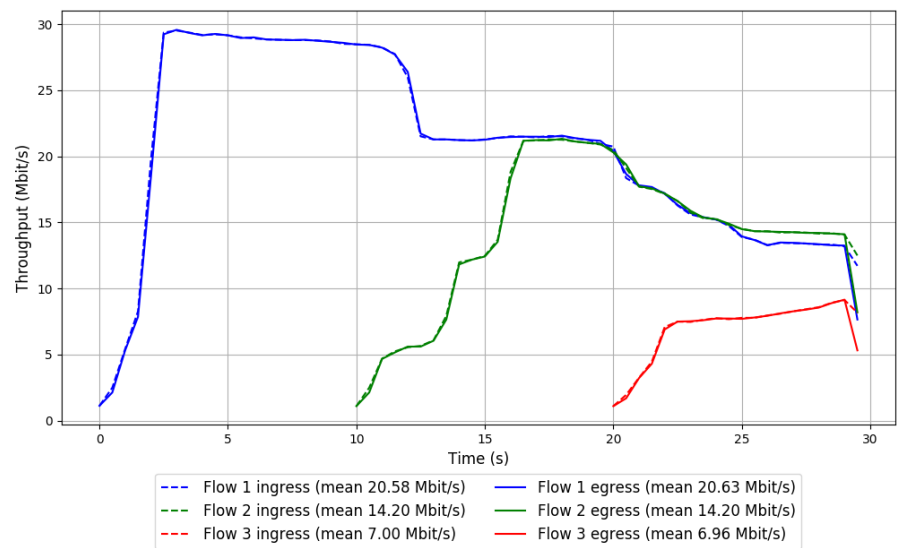
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2018-04-17 13:51:03
End at: 2018-04-17 13:51:33
Local clock offset: 7.813 ms
Remote clock offset: 25.908 ms


# Below is generated by plot.py at 2018-04-17 20:58:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.33 Mbit/s
95th percentile per-packet one-way delay: 41.175 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 20.63 Mbit/s
95th percentile per-packet one-way delay: 40.858 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 14.20 Mbit/s
95th percentile per-packet one-way delay: 41.528 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 42.048 ms
Loss rate: 2.54%
```
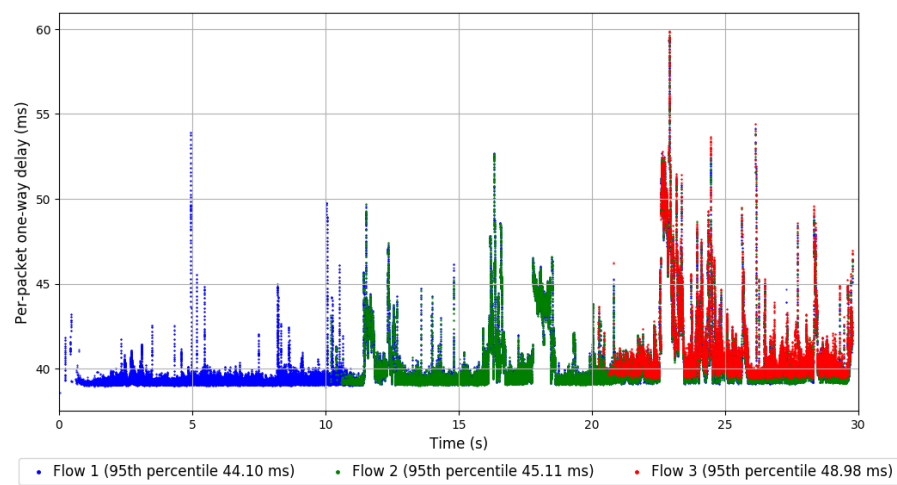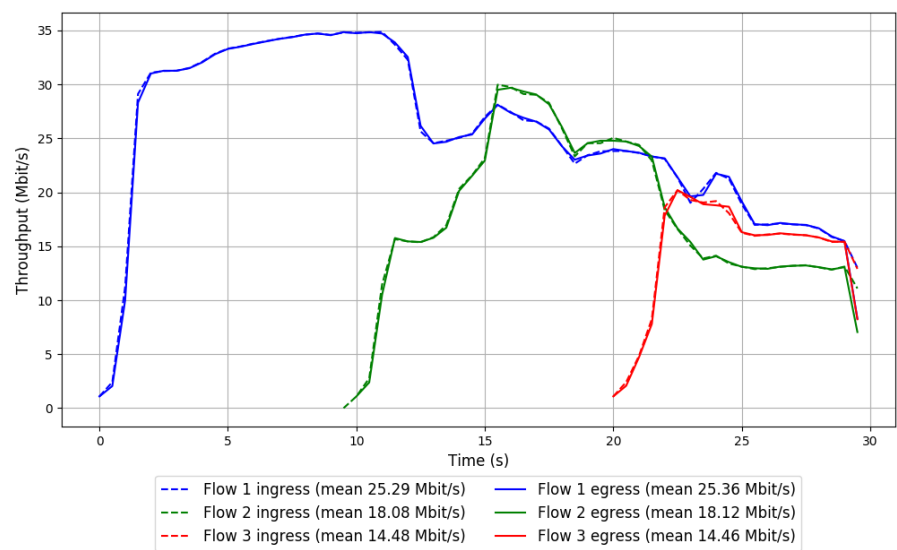
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2018-04-17 14:14:25
End at: 2018-04-17 14:14:55
Local clock offset: 14.422 ms
Remote clock offset: 20.708 ms


# Below is generated by plot.py at 2018-04-17 20:58:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.12 Mbit/s
95th percentile per-packet one-way delay: 44.908 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 25.36 Mbit/s
95th percentile per-packet one-way delay: 44.102 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 18.12 Mbit/s
95th percentile per-packet one-way delay: 45.113 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 14.46 Mbit/s
95th percentile per-packet one-way delay: 48.985 ms
Loss rate: 2.06%
```

Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2018-04-17 14:37:11
End at: 2018-04-17 14:37:41
Local clock offset: 18.778 ms
Remote clock offset: 7.424 ms


# Below is generated by plot.py at 2018-04-17 20:58:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 40.71 Mbit/s
95th percentile per-packet one-way delay: 44.473 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 26.12 Mbit/s
95th percentile per-packet one-way delay: 44.368 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 15.05 Mbit/s
95th percentile per-packet one-way delay: 45.514 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 14.09 Mbit/s
95th percentile per-packet one-way delay: 41.727 ms
Loss rate: 1.63%
```
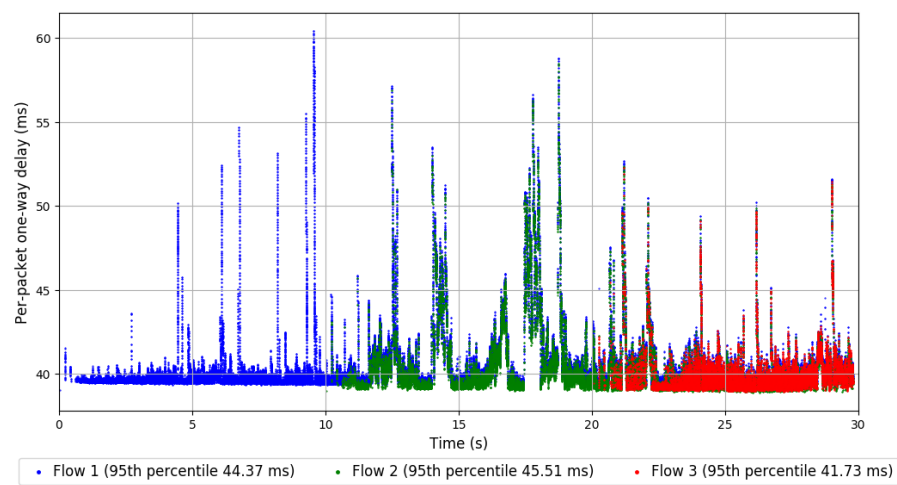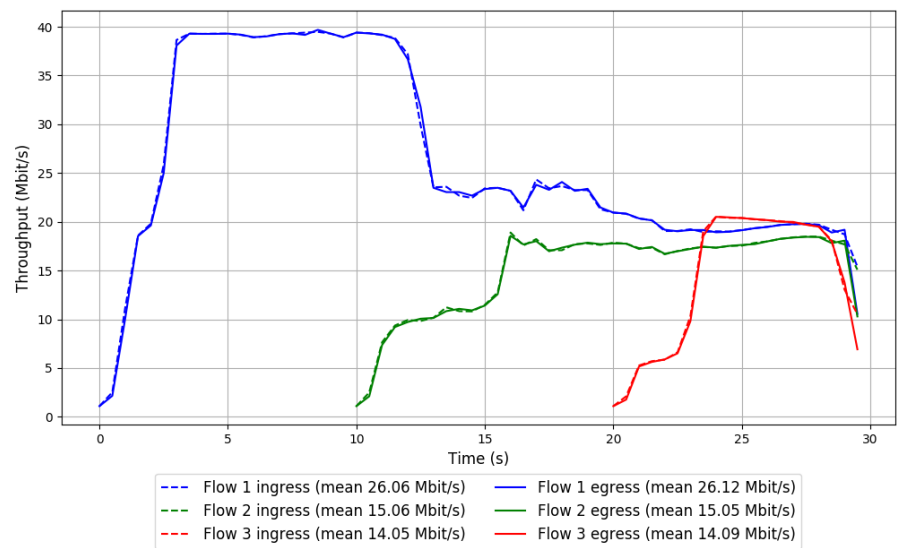
Run 5: Report of Copa — Data Link

Run 6: Statistics of Copa

/home/ubuntu/pantheon_data/2018-04-17T13-03-China-to-AWS-Korea-10-runs-3-flows/copa_stats_r

Run 6: Report of Copa — Data Link

Figure is missing
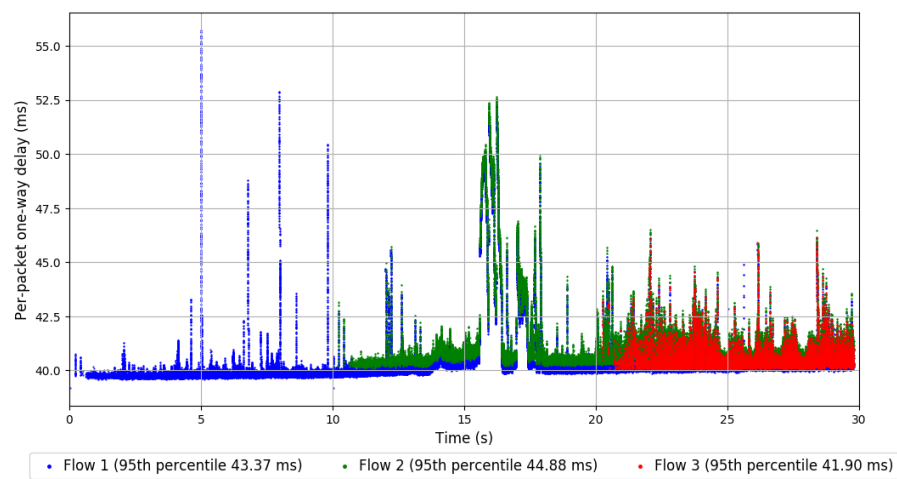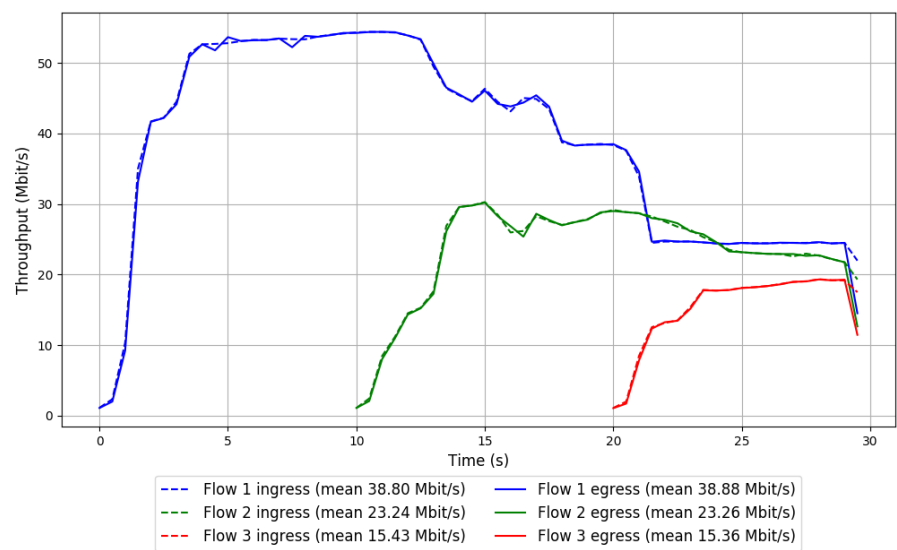
Figure is missing

```
Run 7: Statistics of Copa

Start at: 2018-04-17 15:24:01
End at: 2018-04-17 15:24:31
Local clock offset: 1.694 ms
Remote clock offset: -5.069 ms


# Below is generated by plot.py at 2018-04-17 20:59:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.34 Mbit/s
95th percentile per-packet one-way delay: 43.645 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 38.88 Mbit/s
95th percentile per-packet one-way delay: 43.371 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 23.26 Mbit/s
95th percentile per-packet one-way delay: 44.881 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 15.36 Mbit/s
95th percentile per-packet one-way delay: 41.899 ms
Loss rate: 2.45%
```

Run 7: Report of Copa — Data Link

```
Run 8: Statistics of Copa

Start at: 2018-04-17 15:46:52
End at: 2018-04-17 15:47:22
Local clock offset: -0.225 ms
Remote clock offset: 9.637 ms


# Below is generated by plot.py at 2018-04-17 20:59:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.98 Mbit/s
95th percentile per-packet one-way delay: 41.534 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 24.97 Mbit/s
95th percentile per-packet one-way delay: 40.597 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 29.08 Mbit/s
95th percentile per-packet one-way delay: 42.016 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 14.42 Mbit/s
95th percentile per-packet one-way delay: 43.753 ms
Loss rate: 2.78%
```
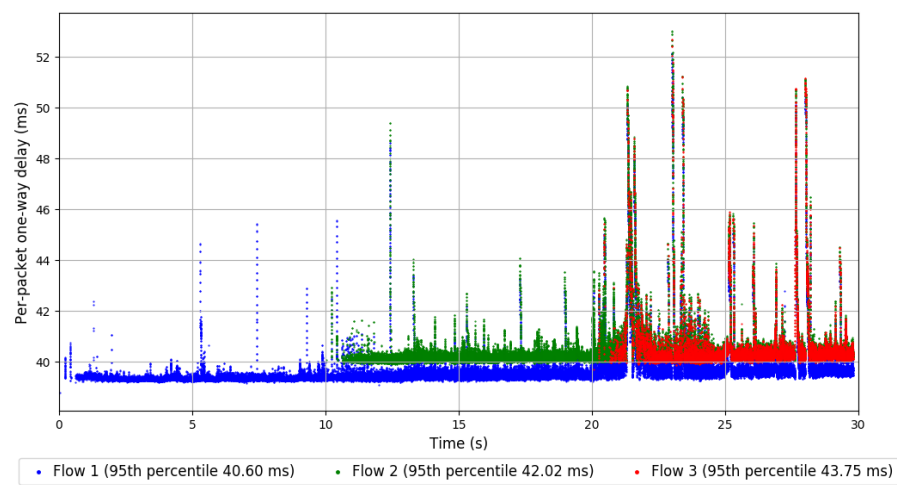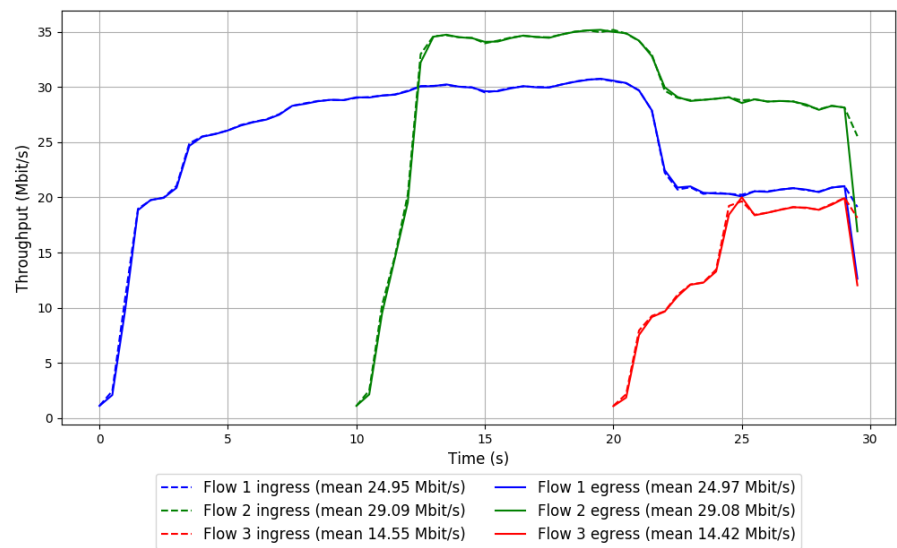
Run 8: Report of Copa — Data Link

Flow 1 ingress (mean 24.95 Mbit/s) --- Flow 1 egress (mean 24.97 Mbit/s) ---
Flow 2 ingress (mean 29.09 Mbit/s) --- Flow 2 egress (mean 29.08 Mbit/s) ---
Flow 3 ingress (mean 14.55 Mbit/s) --- Flow 3 egress (mean 14.42 Mbit/s) ---

Flow 1 (95th percentile 40.60 ms)   Flow 2 (95th percentile 42.02 ms)   Flow 3 (95th percentile 43.75 ms)
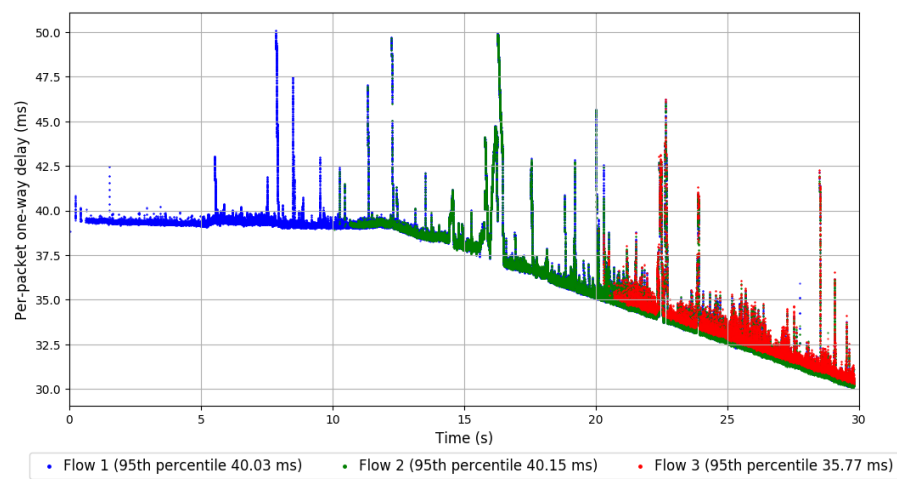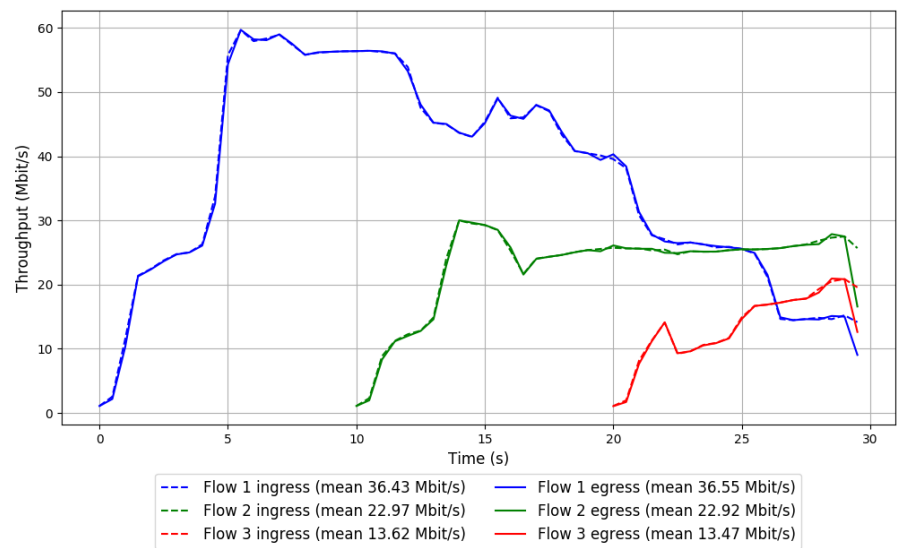
240

```
Run 9: Statistics of Copa

Start at: 2018-04-17 16:09:40
End at: 2018-04-17 16:10:10
Local clock offset: -0.333 ms
Remote clock offset: 8.287 ms


# Below is generated by plot.py at 2018-04-17 20:59:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.15 Mbit/s
95th percentile per-packet one-way delay: 39.905 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 36.55 Mbit/s
95th percentile per-packet one-way delay: 40.030 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 22.92 Mbit/s
95th percentile per-packet one-way delay: 40.152 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 13.47 Mbit/s
95th percentile per-packet one-way delay: 35.768 ms
Loss rate: 3.10%
```
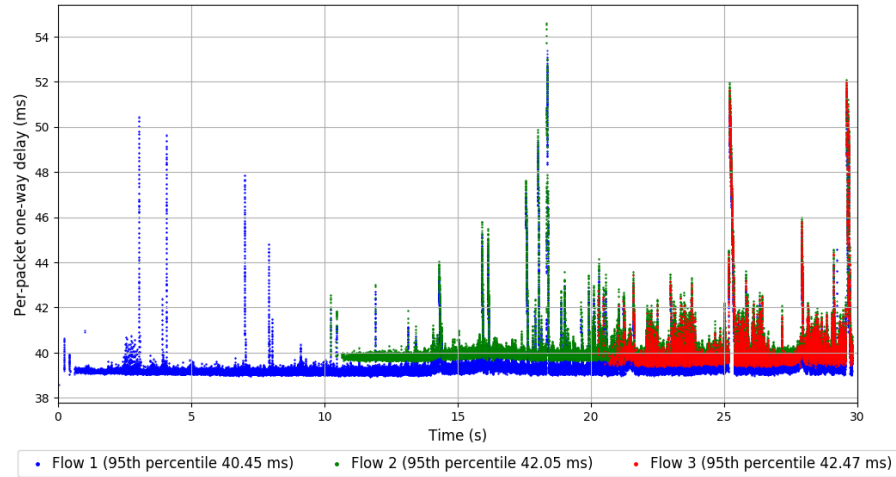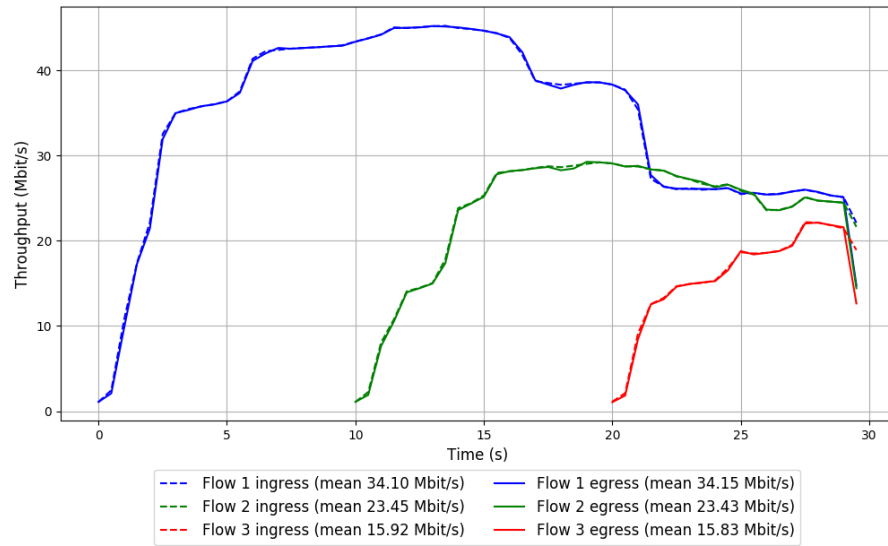
Run 9: Report of Copa — Data Link

```
Run 10: Statistics of Copa

Start at: 2018-04-17 16:32:30
End at: 2018-04-17 16:33:00
Local clock offset: 7.244 ms
Remote clock offset: -9.412 ms


# Below is generated by plot.py at 2018-04-17 20:59:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.87 Mbit/s
95th percentile per-packet one-way delay: 41.285 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 34.15 Mbit/s
95th percentile per-packet one-way delay: 40.453 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 23.43 Mbit/s
95th percentile per-packet one-way delay: 42.048 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 15.83 Mbit/s
95th percentile per-packet one-way delay: 42.472 ms
Loss rate: 2.50%
```

Run 10: Report of Copa — Data Link

```
Run 1: Statistics of FillP

Start at: 2018-04-17 13:22:46
End at: 2018-04-17 13:23:16
Local clock offset: 6.591 ms
Remote clock offset: 1.443 ms


# Below is generated by plot.py at 2018-04-17 20:59:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.59 Mbit/s
95th percentile per-packet one-way delay: 111.012 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 40.59 Mbit/s
95th percentile per-packet one-way delay: 110.156 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 41.61 Mbit/s
95th percentile per-packet one-way delay: 112.128 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 59.85 Mbit/s
95th percentile per-packet one-way delay: 109.792 ms
Loss rate: 3.47%
```
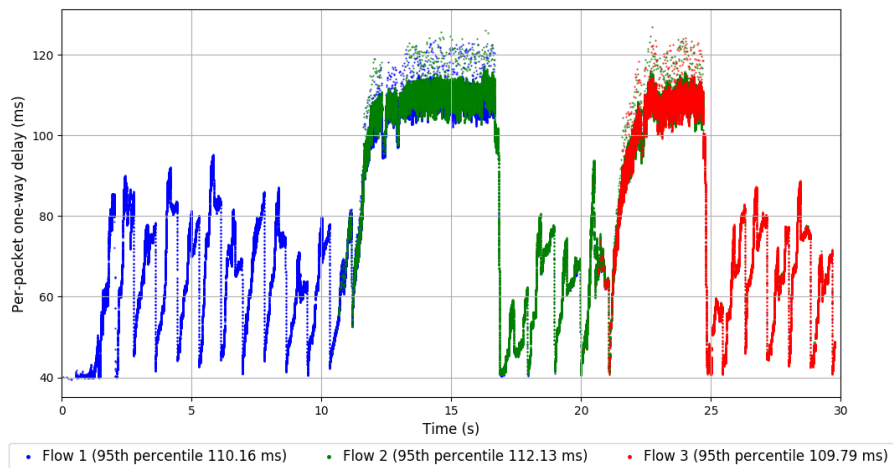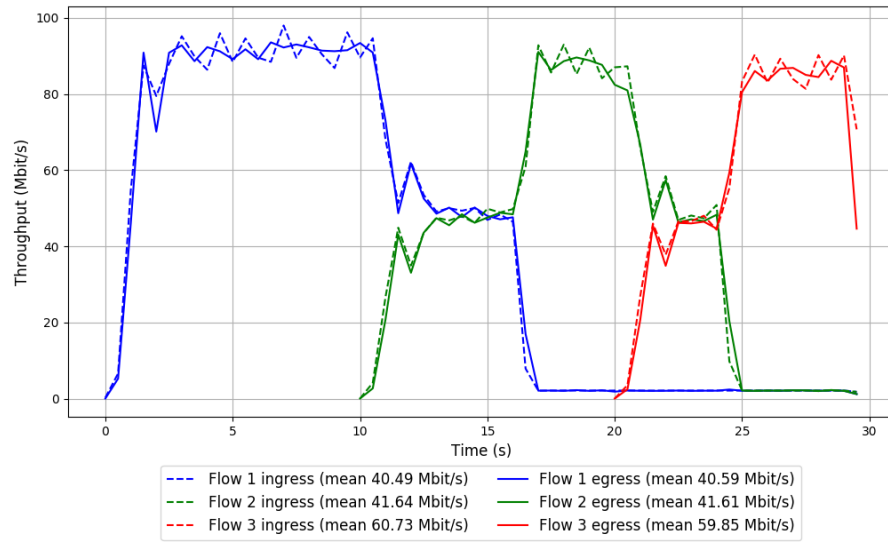
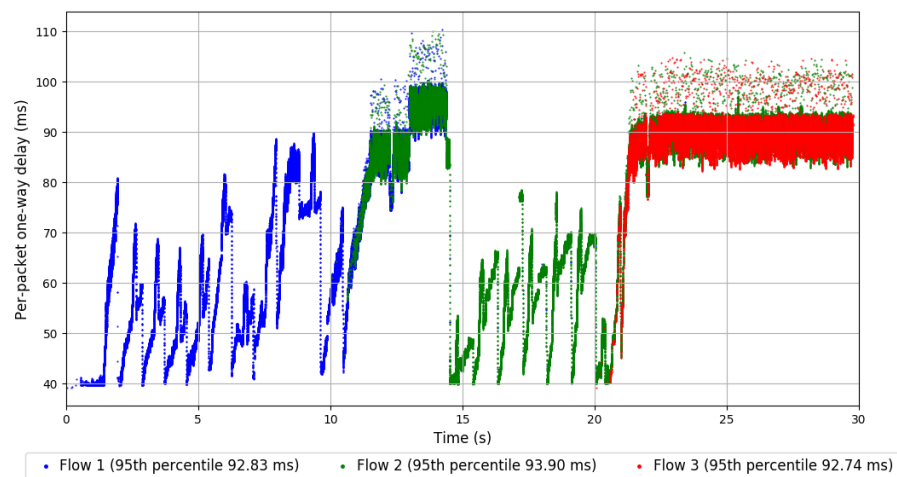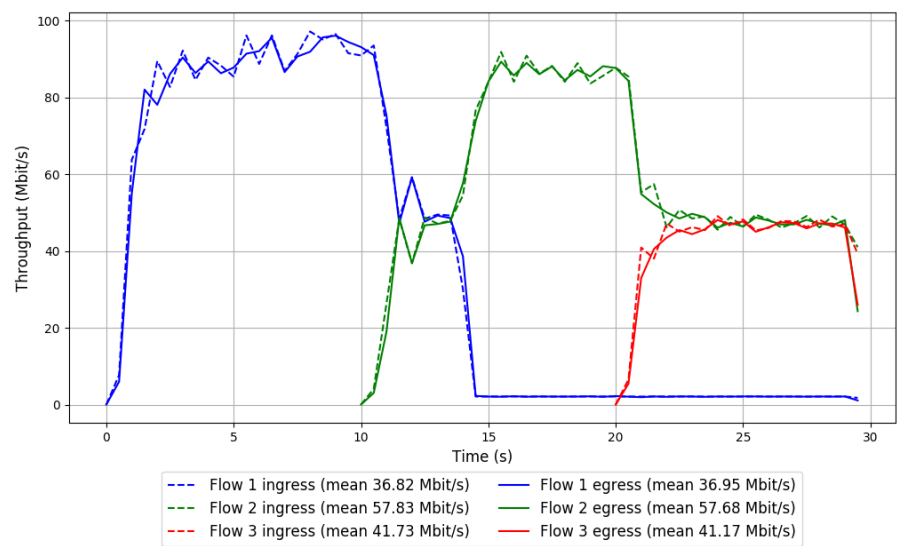# Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-04-17 13:45:40
End at: 2018-04-17 13:46:10
Local clock offset: 7.575 ms
Remote clock offset: 31.832 ms


# Below is generated by plot.py at 2018-04-17 20:59:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.56 Mbit/s
95th percentile per-packet one-way delay: 93.263 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 36.95 Mbit/s
95th percentile per-packet one-way delay: 92.828 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 57.68 Mbit/s
95th percentile per-packet one-way delay: 93.900 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 41.17 Mbit/s
95th percentile per-packet one-way delay: 92.739 ms
Loss rate: 3.41%
```

Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 36.82 Mbit/s) — — — Flow 1 egress (mean 36.95 Mbit/s)
Flow 2 ingress (mean 57.83 Mbit/s) — — — Flow 2 egress (mean 57.68 Mbit/s)
Flow 3 ingress (mean 41.73 Mbit/s) — — — Flow 3 egress (mean 41.17 Mbit/s)

Flow 1 (95th percentile 92.83 ms)   Flow 2 (95th percentile 93.90 ms)   Flow 3 (95th percentile 92.74 ms)
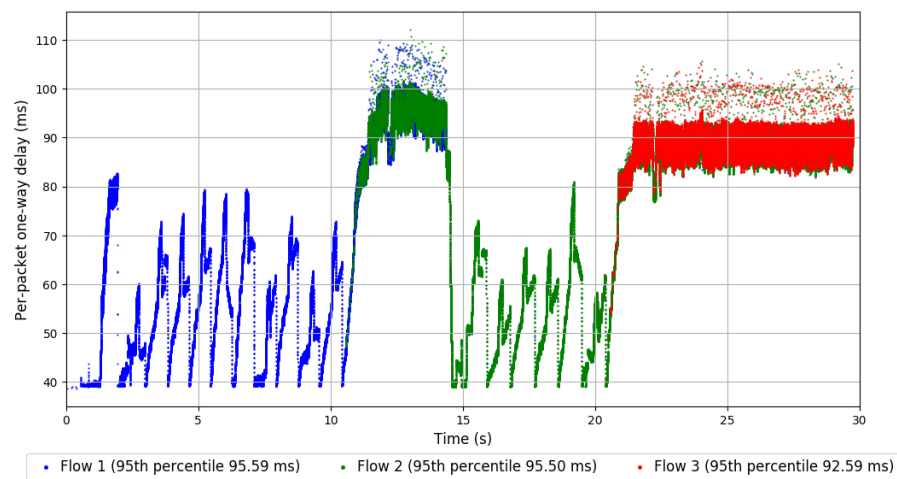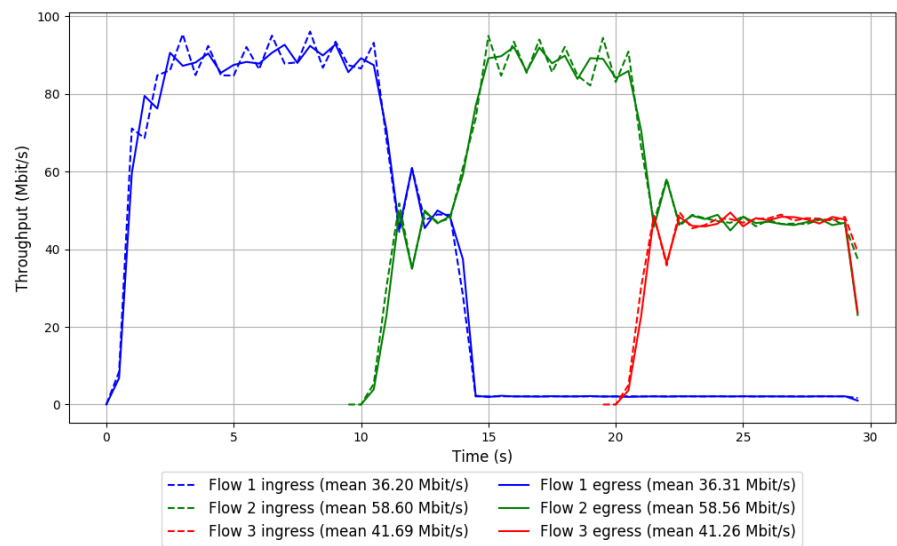
```
Run 3: Statistics of FillP

Start at: 2018-04-17 14:09:02
End at: 2018-04-17 14:09:32
Local clock offset: 13.288 ms
Remote clock offset: 18.679 ms


# Below is generated by plot.py at 2018-04-17 21:00:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.58 Mbit/s
95th percentile per-packet one-way delay: 95.132 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 36.31 Mbit/s
95th percentile per-packet one-way delay: 95.589 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 58.56 Mbit/s
95th percentile per-packet one-way delay: 95.504 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 41.26 Mbit/s
95th percentile per-packet one-way delay: 92.594 ms
Loss rate: 3.22%
```
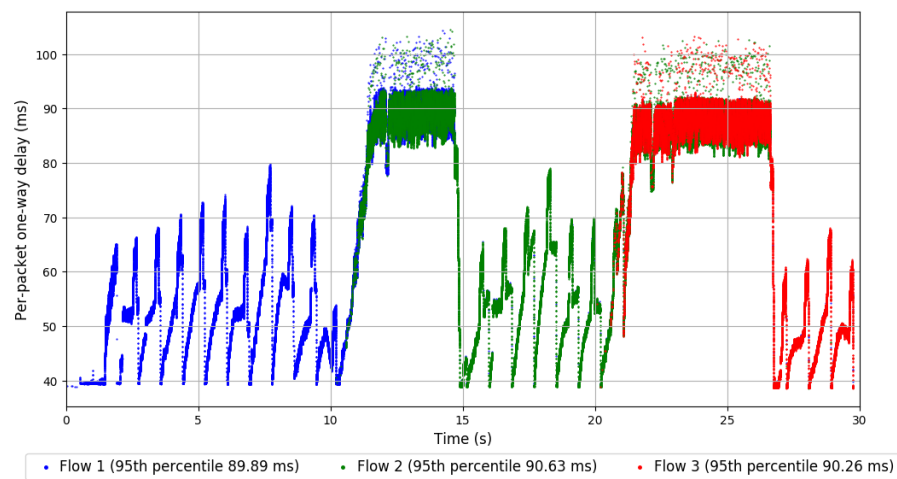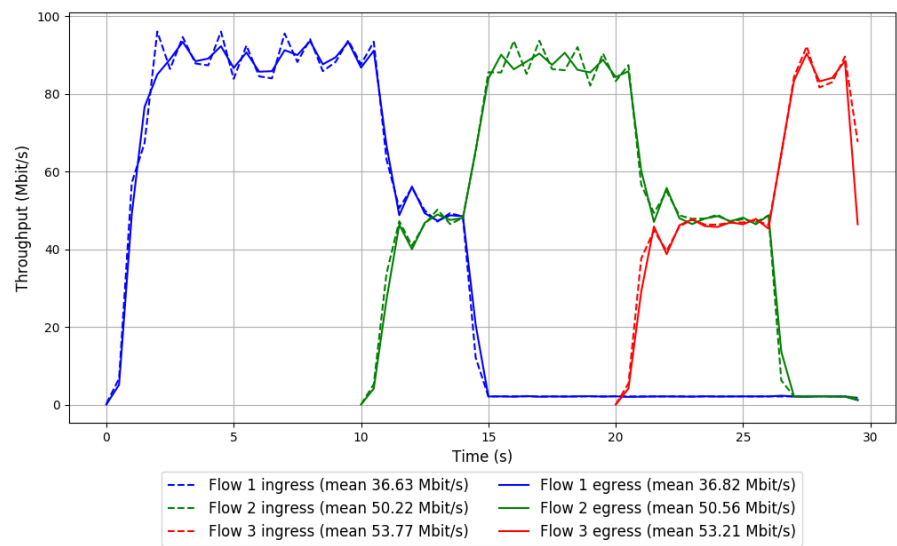
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2018-04-17 14:31:46
End at: 2018-04-17 14:32:16
Local clock offset: 16.938 ms
Remote clock offset: 10.039 ms


# Below is generated by plot.py at 2018-04-17 21:00:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.67 Mbit/s
95th percentile per-packet one-way delay: 90.324 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 36.82 Mbit/s
95th percentile per-packet one-way delay: 89.894 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 50.56 Mbit/s
95th percentile per-packet one-way delay: 90.630 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 53.21 Mbit/s
95th percentile per-packet one-way delay: 90.261 ms
Loss rate: 3.12%
```

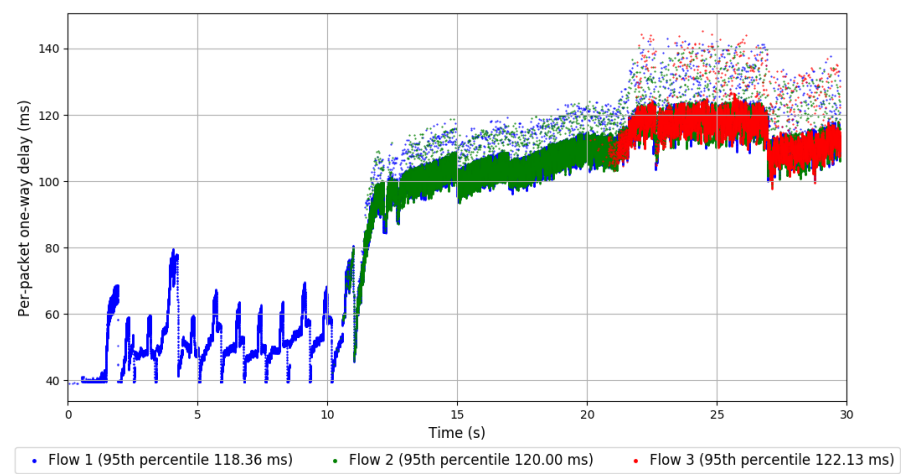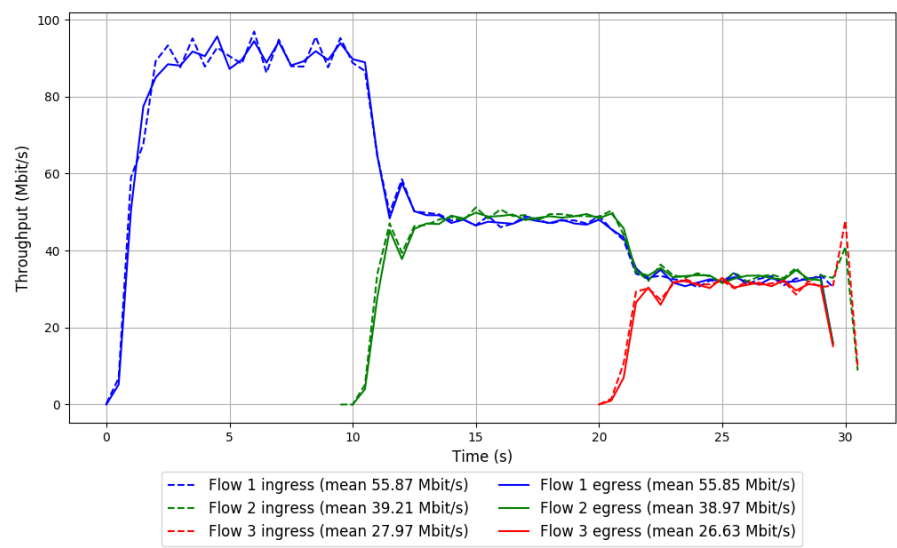Run 4: Report of FillP — Data Link

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```
Run 5: Statistics of FillP

Start at: 2018-04-17 14:54:35
End at: 2018-04-17 14:55:05
Local clock offset: 22.598 ms
Remote clock offset: -15.562 ms


# Below is generated by plot.py at 2018-04-17 21:00:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.30 Mbit/s
95th percentile per-packet one-way delay: 119.780 ms
Loss rate: 3.51%
-- Flow 1:
Average throughput: 55.85 Mbit/s
95th percentile per-packet one-way delay: 118.357 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 38.97 Mbit/s
95th percentile per-packet one-way delay: 119.995 ms
Loss rate: 5.19%
-- Flow 3:
Average throughput: 26.63 Mbit/s
95th percentile per-packet one-way delay: 122.127 ms
Loss rate: 13.78%
```

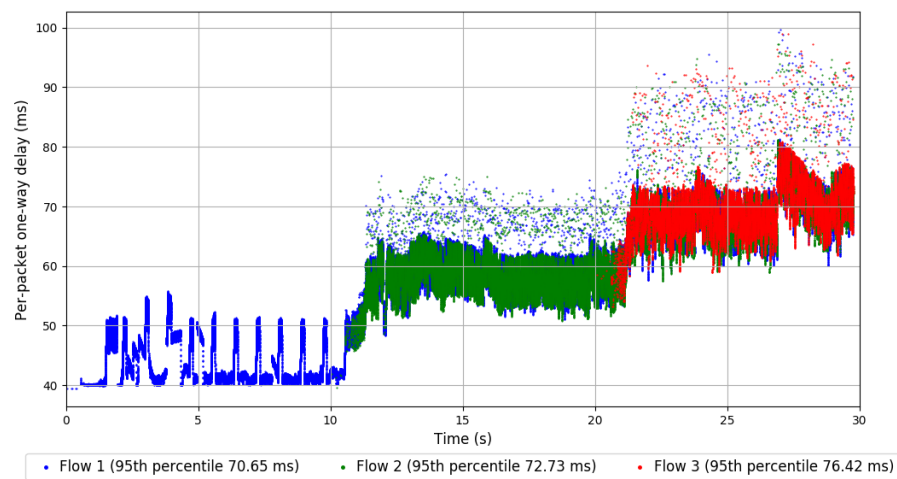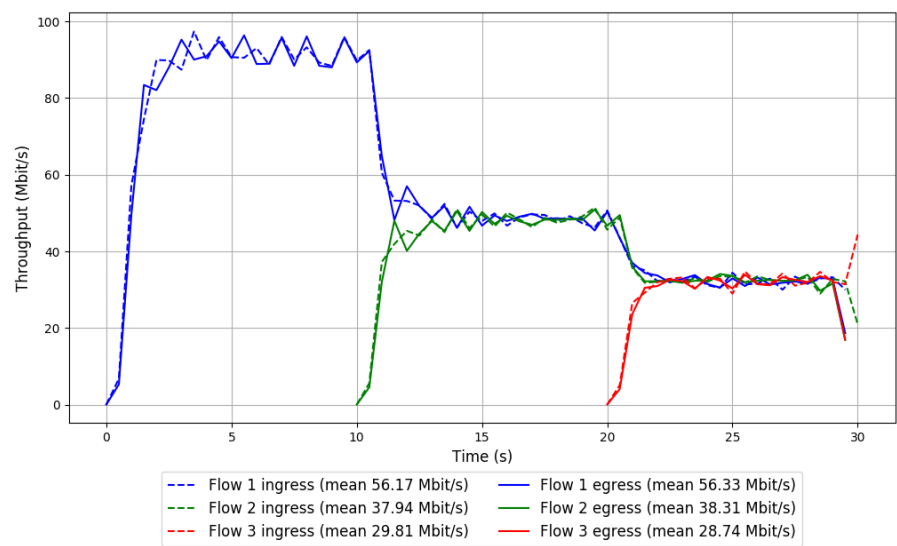## Run 5: Report of FillP — Data Link

254

```
Run 6: Statistics of FillP

Start at: 2018-04-17 15:18:34
End at: 2018-04-17 15:19:04
Local clock offset: 4.673 ms
Remote clock offset: -7.204 ms


# Below is generated by plot.py at 2018-04-17 21:00:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.09 Mbit/s
95th percentile per-packet one-way delay: 72.563 ms
Loss rate: 2.19%
-- Flow 1:
Average throughput: 56.33 Mbit/s
95th percentile per-packet one-way delay: 70.651 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 38.31 Mbit/s
95th percentile per-packet one-way delay: 72.731 ms
Loss rate: 2.63%
-- Flow 3:
Average throughput: 28.74 Mbit/s
95th percentile per-packet one-way delay: 76.419 ms
Loss rate: 10.26%
```

Run 6: Report of FillP — Data Link

Flow 1 ingress (mean 56.17 Mbit/s) --- Flow 1 egress (mean 56.33 Mbit/s)
Flow 2 ingress (mean 37.94 Mbit/s) --- Flow 2 egress (mean 38.31 Mbit/s)
Flow 3 ingress (mean 29.81 Mbit/s) --- Flow 3 egress (mean 28.74 Mbit/s)

Flow 1 (95th percentile 70.65 ms) • Flow 2 (95th percentile 72.73 ms) • Flow 3 (95th percentile 76.42 ms)

```
Run 7: Statistics of FillP

Start at: 2018-04-17 15:41:27
End at: 2018-04-17 15:41:57
Local clock offset: -1.496 ms
Remote clock offset: 7.771 ms


# Below is generated by plot.py at 2018-04-17 21:01:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.07 Mbit/s
95th percentile per-packet one-way delay: 71.313 ms
Loss rate: 2.93%
-- Flow 1:
Average throughput: 56.13 Mbit/s
95th percentile per-packet one-way delay: 69.977 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 38.84 Mbit/s
95th percentile per-packet one-way delay: 71.579 ms
Loss rate: 4.25%
-- Flow 3:
Average throughput: 28.22 Mbit/s
95th percentile per-packet one-way delay: 74.525 ms
Loss rate: 12.60%
```
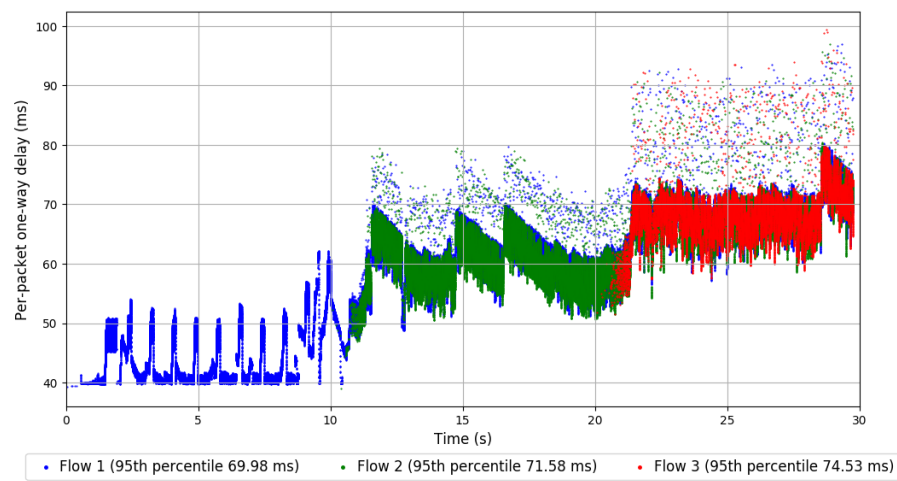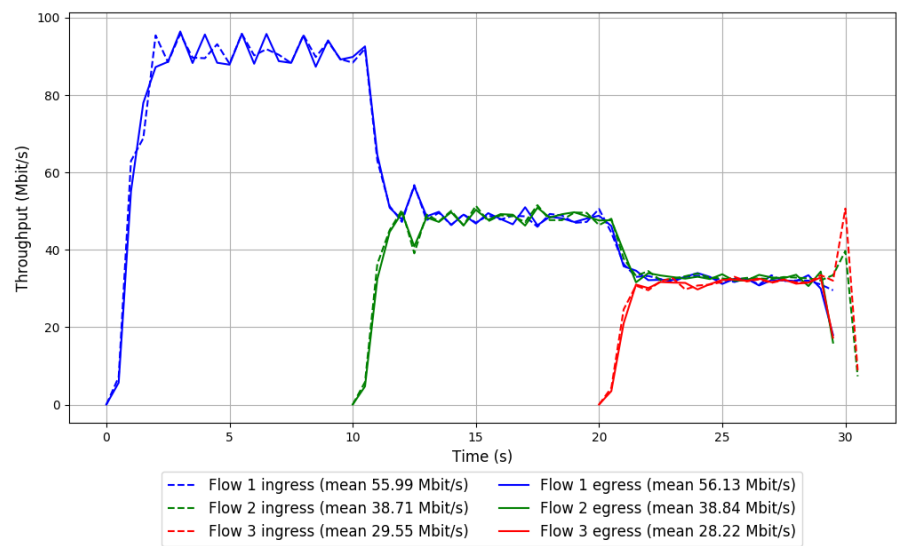
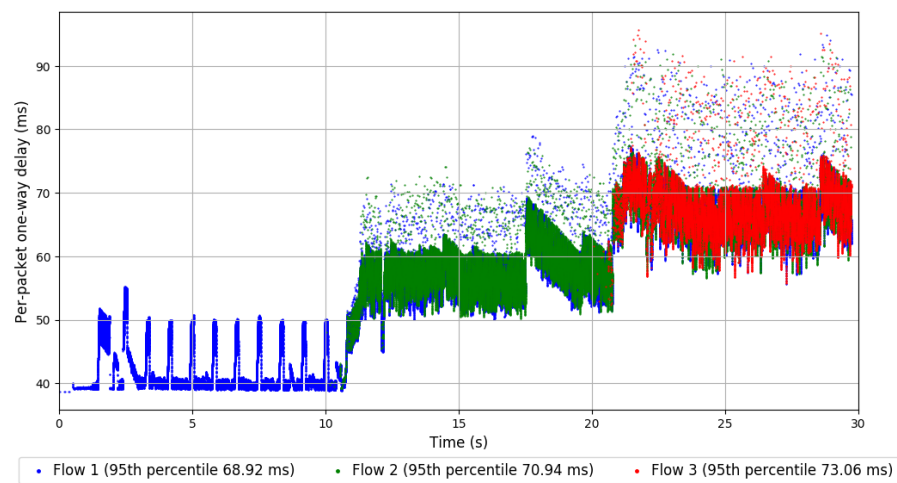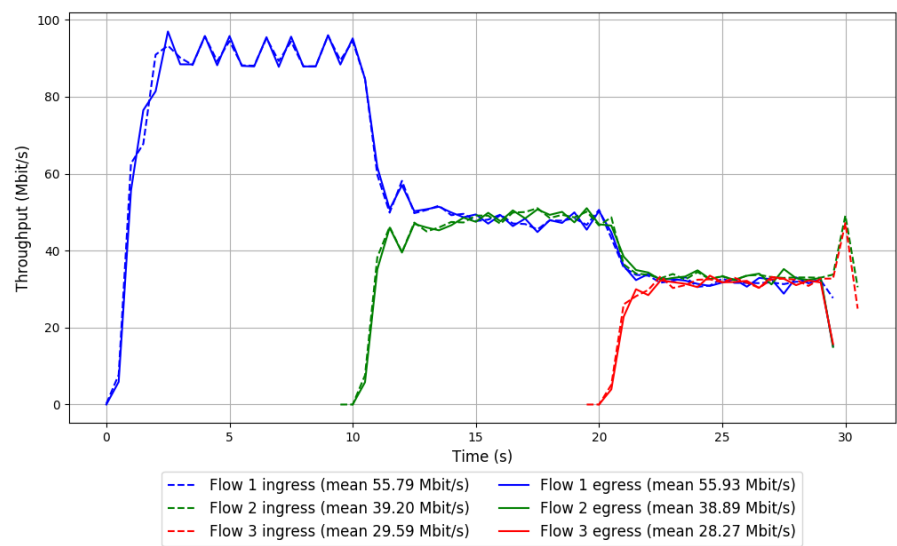Run 7: Report of FillP — Data Link

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```
Run 8: Statistics of FillP

Start at: 2018-04-17 16:04:15
End at: 2018-04-17 16:04:45
Local clock offset: 0.089 ms
Remote clock offset: 15.366 ms


# Below is generated by plot.py at 2018-04-17 21:01:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.94 Mbit/s
95th percentile per-packet one-way delay: 70.530 ms
Loss rate: 3.81%
-- Flow 1:
Average throughput: 55.93 Mbit/s
95th percentile per-packet one-way delay: 68.921 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 38.89 Mbit/s
95th percentile per-packet one-way delay: 70.942 ms
Loss rate: 6.27%
-- Flow 3:
Average throughput: 28.27 Mbit/s
95th percentile per-packet one-way delay: 73.059 ms
Loss rate: 14.69%
```
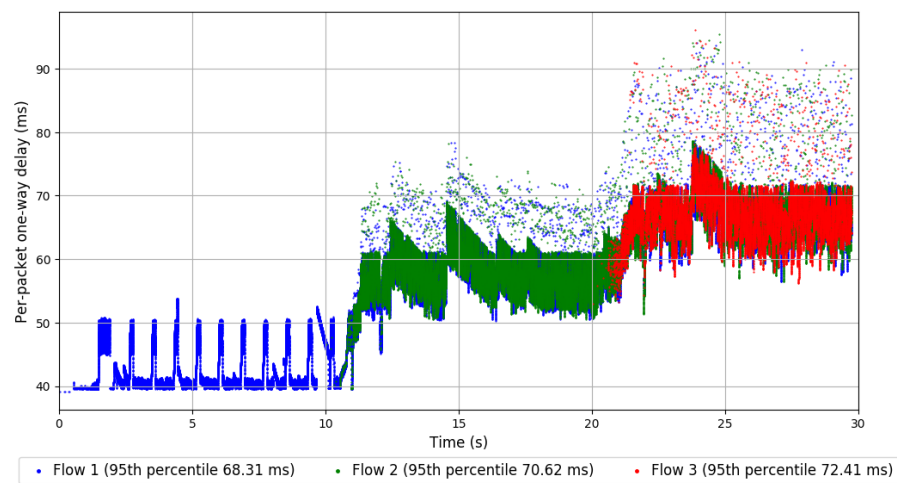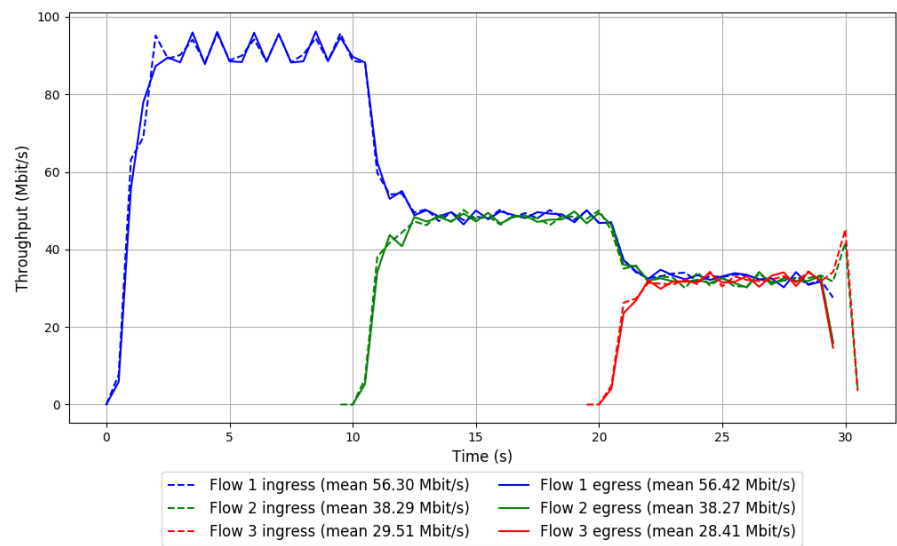
Run 8: Report of FillP — Data Link

```
Run 9: Statistics of FillP

Start at: 2018-04-17 16:27:05
End at: 2018-04-17 16:27:35
Local clock offset: 6.18 ms
Remote clock offset: -9.445 ms


# Below is generated by plot.py at 2018-04-17 21:01:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.07 Mbit/s
95th percentile per-packet one-way delay: 69.974 ms
Loss rate: 2.78%
-- Flow 1:
Average throughput: 56.42 Mbit/s
95th percentile per-packet one-way delay: 68.312 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 38.27 Mbit/s
95th percentile per-packet one-way delay: 70.619 ms
Loss rate: 4.22%
-- Flow 3:
Average throughput: 28.41 Mbit/s
95th percentile per-packet one-way delay: 72.410 ms
Loss rate: 11.64%
```
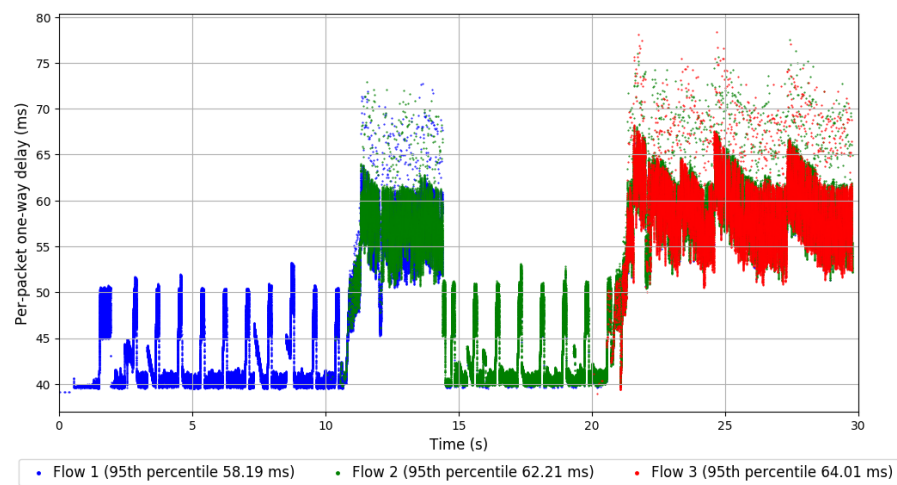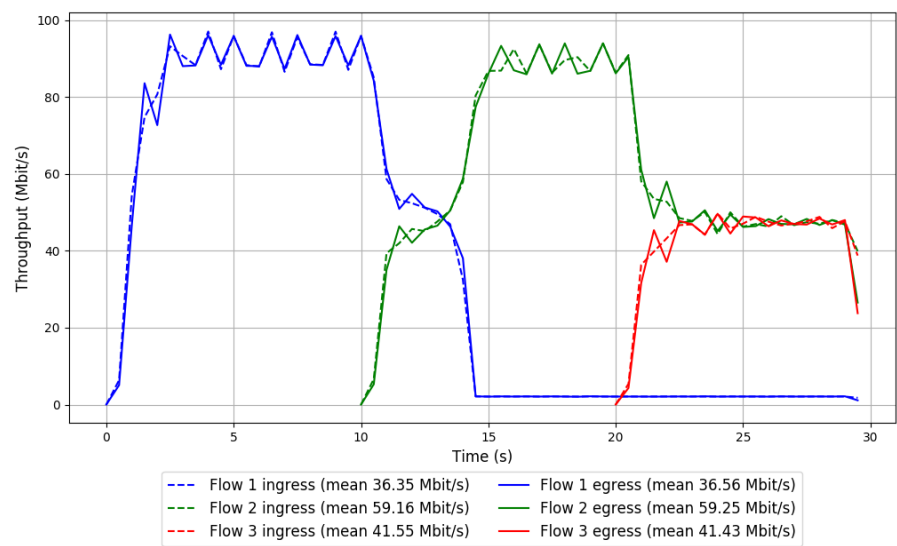
Run 9: Report of FillP — Data Link

```
Run 10: Statistics of FillP

Start at: 2018-04-17 16:50:10
End at: 2018-04-17 16:50:40
Local clock offset: 7.675 ms
Remote clock offset: -0.731 ms


# Below is generated by plot.py at 2018-04-17 21:01:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.37 Mbit/s
95th percentile per-packet one-way delay: 61.899 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 36.56 Mbit/s
95th percentile per-packet one-way delay: 58.194 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 59.25 Mbit/s
95th percentile per-packet one-way delay: 62.214 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 41.43 Mbit/s
95th percentile per-packet one-way delay: 64.012 ms
Loss rate: 2.42%
```

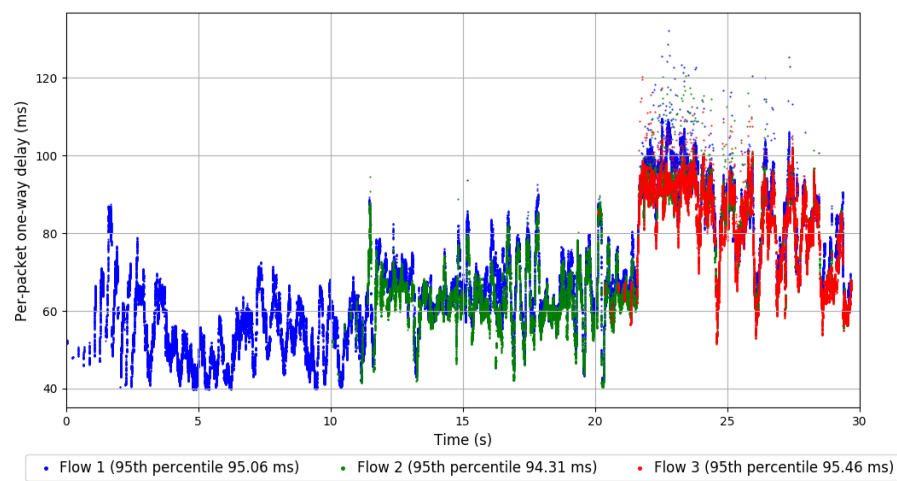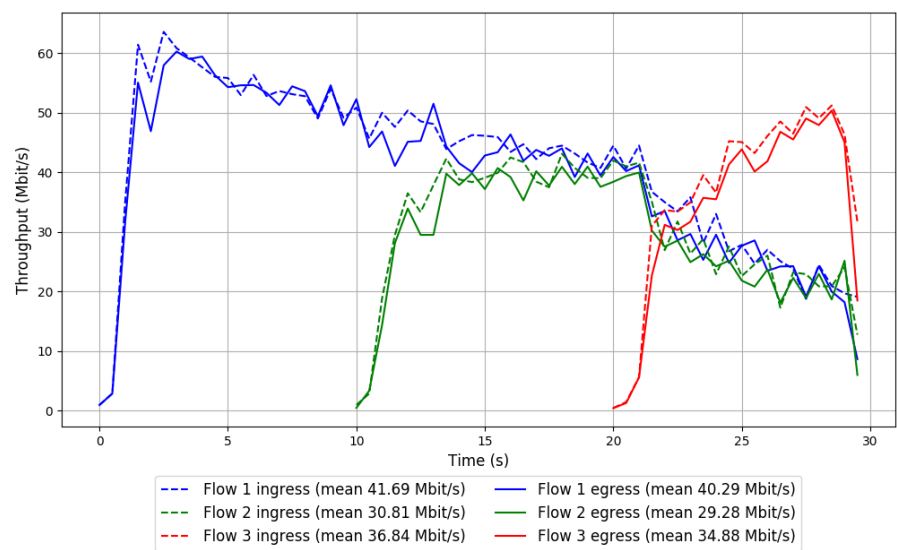Run 10: Report of FillP — Data Link

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```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-17 13:06:50
End at: 2018-04-17 13:07:20
Local clock offset: 6.564 ms
Remote clock offset: 14.526 ms


# Below is generated by plot.py at 2018-04-17 21:01:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.83 Mbit/s
95th percentile per-packet one-way delay: 94.867 ms
Loss rate: 5.18%
-- Flow 1:
Average throughput: 40.29 Mbit/s
95th percentile per-packet one-way delay: 95.057 ms
Loss rate: 4.08%
-- Flow 2:
Average throughput: 29.28 Mbit/s
95th percentile per-packet one-way delay: 94.310 ms
Loss rate: 5.90%
-- Flow 3:
Average throughput: 34.88 Mbit/s
95th percentile per-packet one-way delay: 95.461 ms
Loss rate: 7.76%
```

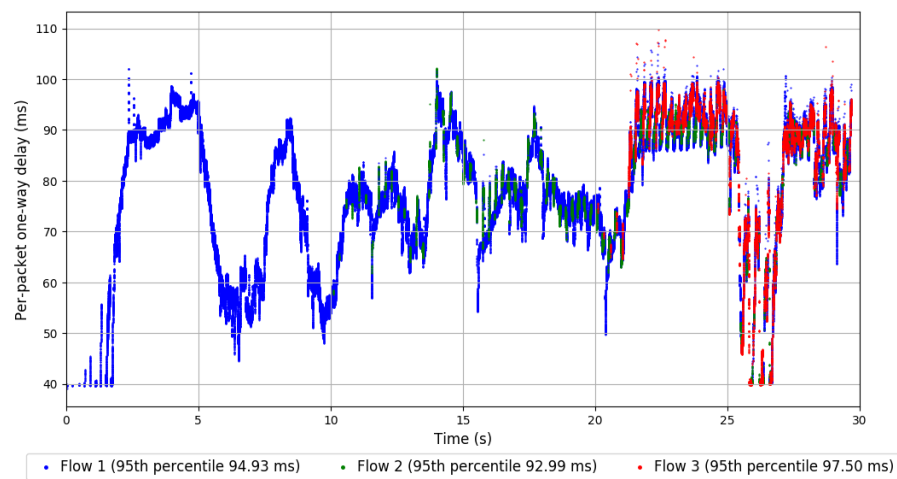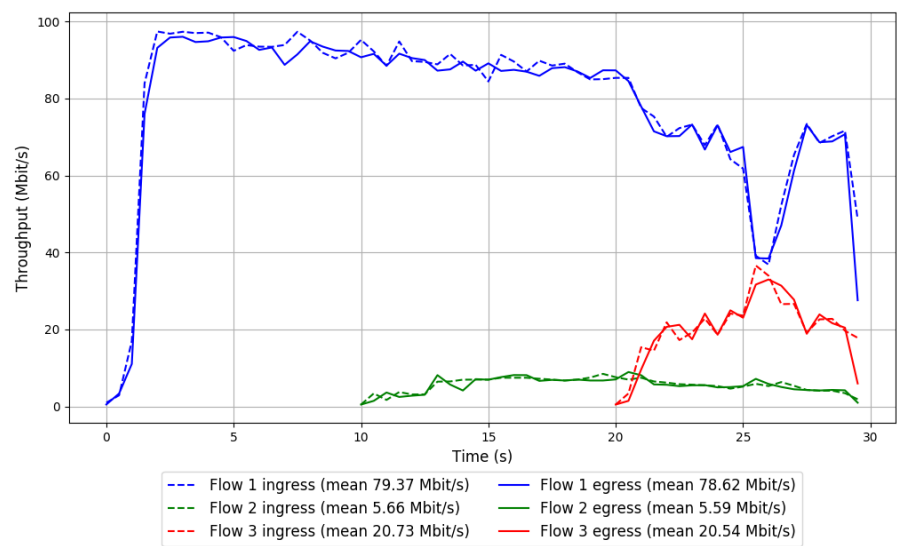Run 1: Report of Indigo-1-32 — Data Link

```
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-17 13:29:42
End at: 2018-04-17 13:30:12
Local clock offset: 6.943 ms
Remote clock offset: 12.731 ms


# Below is generated by plot.py at 2018-04-17 21:01:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.91 Mbit/s
95th percentile per-packet one-way delay: 95.296 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 78.62 Mbit/s
95th percentile per-packet one-way delay: 94.932 ms
Loss rate: 1.61%
-- Flow 2:
Average throughput: 5.59 Mbit/s
95th percentile per-packet one-way delay: 92.992 ms
Loss rate: 2.29%
-- Flow 3:
Average throughput: 20.54 Mbit/s
95th percentile per-packet one-way delay: 97.501 ms
Loss rate: 3.37%
```

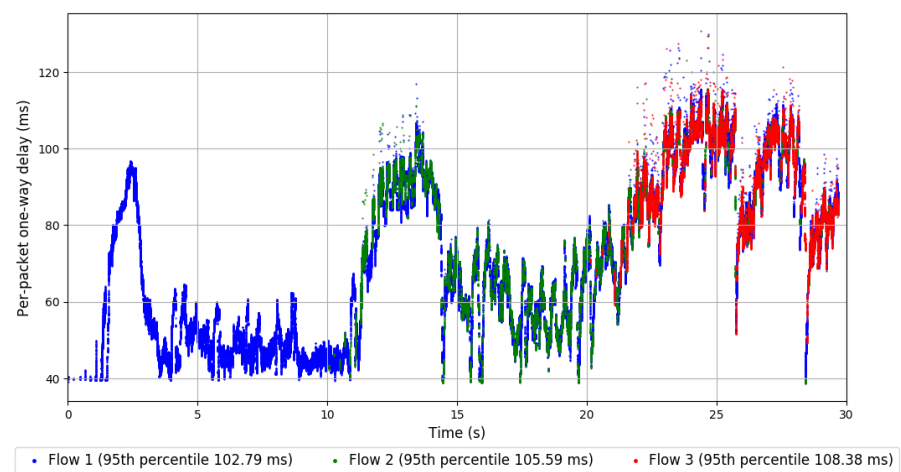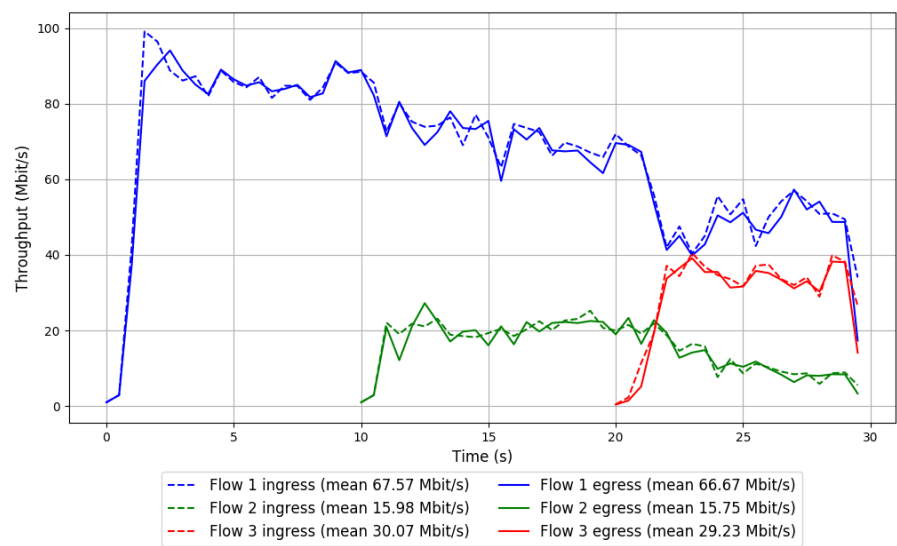Run 2: Report of Indigo-1-32 — Data Link

```
Run 3: Statistics of Indigo-1-32

Start at: 2018-04-17 13:52:23
End at: 2018-04-17 13:52:53
Local clock offset: 7.867 ms
Remote clock offset: 23.624 ms


# Below is generated by plot.py at 2018-04-17 21:01:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.49 Mbit/s
95th percentile per-packet one-way delay: 105.204 ms
Loss rate: 2.40%
-- Flow 1:
Average throughput: 66.67 Mbit/s
95th percentile per-packet one-way delay: 102.793 ms
Loss rate: 1.99%
-- Flow 2:
Average throughput: 15.75 Mbit/s
95th percentile per-packet one-way delay: 105.590 ms
Loss rate: 2.42%
-- Flow 3:
Average throughput: 29.23 Mbit/s
95th percentile per-packet one-way delay: 108.378 ms
Loss rate: 5.24%
```

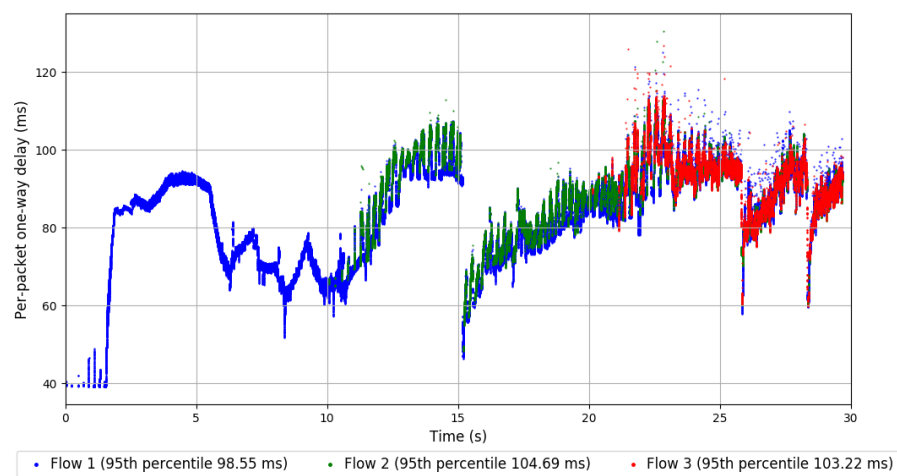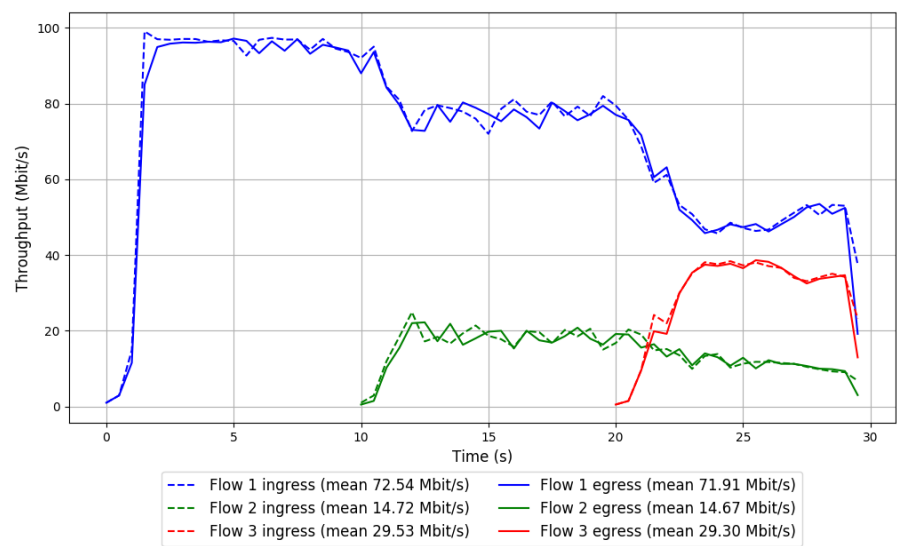Run 3: Report of Indigo-1-32 — Data Link

```
Run 4: Statistics of Indigo-1-32

Start at: 2018-04-17 14:15:47
End at: 2018-04-17 14:16:17
Local clock offset: 14.63 ms
Remote clock offset: 21.165 ms


# Below is generated by plot.py at 2018-04-17 21:02:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.04 Mbit/s
95th percentile per-packet one-way delay: 100.307 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 71.91 Mbit/s
95th percentile per-packet one-way delay: 98.546 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 14.67 Mbit/s
95th percentile per-packet one-way delay: 104.695 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 29.30 Mbit/s
95th percentile per-packet one-way delay: 103.220 ms
Loss rate: 3.29%
```

Run 4: Report of Indigo-1-32 — Data Link

Flow 1 ingress (mean 72.54 Mbit/s) --- Flow 1 egress (mean 71.91 Mbit/s)
Flow 2 ingress (mean 14.72 Mbit/s) --- Flow 2 egress (mean 14.67 Mbit/s)
Flow 3 ingress (mean 29.53 Mbit/s) --- Flow 3 egress (mean 29.30 Mbit/s)

Flow 1 (95th percentile 98.55 ms) Flow 2 (95th percentile 104.69 ms) Flow 3 (95th percentile 103.22 ms)

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```
Run 5: Statistics of Indigo-1-32

Start at: 2018-04-17 14:38:32
End at: 2018-04-17 14:39:02
Local clock offset: 19.14 ms
Remote clock offset: 7.1 ms


# Below is generated by plot.py at 2018-04-17 21:02:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.53 Mbit/s
95th percentile per-packet one-way delay: 94.958 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 50.65 Mbit/s
95th percentile per-packet one-way delay: 94.371 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 42.51 Mbit/s
95th percentile per-packet one-way delay: 95.375 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 17.91 Mbit/s
95th percentile per-packet one-way delay: 98.722 ms
Loss rate: 2.12%
```
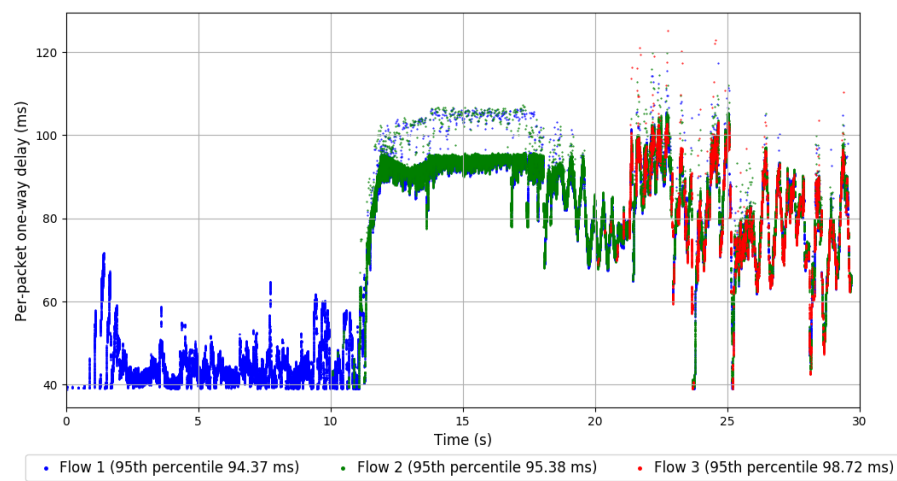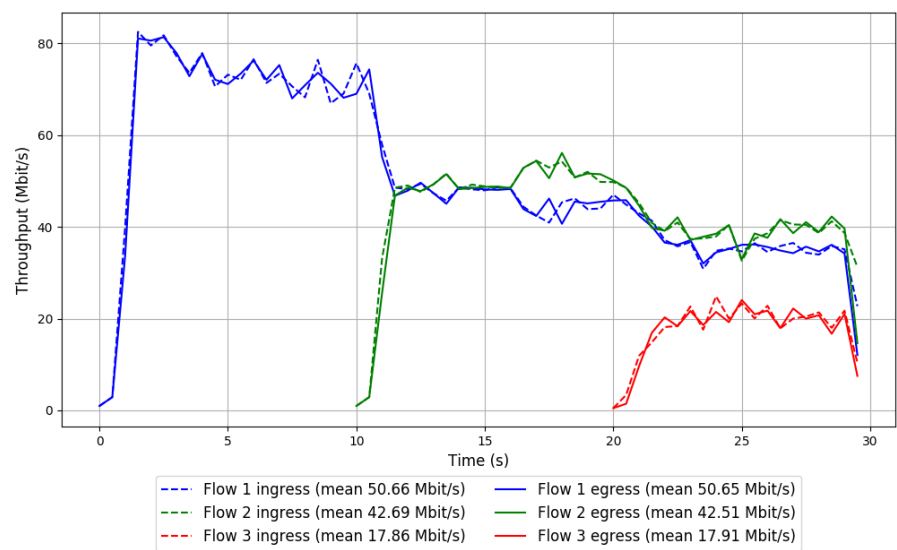
Run 5: Report of Indigo-1-32 — Data Link

```
Run 6: Statistics of Indigo-1-32

Start at: 2018-04-17 15:02:29
End at: 2018-04-17 15:02:59
Local clock offset: 23.833 ms
Remote clock offset: 6.498 ms


# Below is generated by plot.py at 2018-04-17 21:02:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.15 Mbit/s
95th percentile per-packet one-way delay: 93.935 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 59.91 Mbit/s
95th percentile per-packet one-way delay: 91.253 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 30.92 Mbit/s
95th percentile per-packet one-way delay: 95.904 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 18.07 Mbit/s
95th percentile per-packet one-way delay: 97.659 ms
Loss rate: 2.91%
```
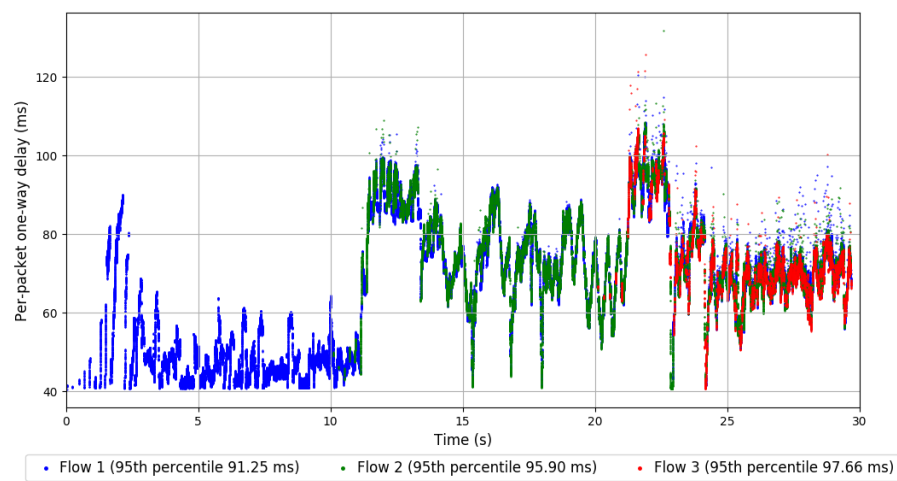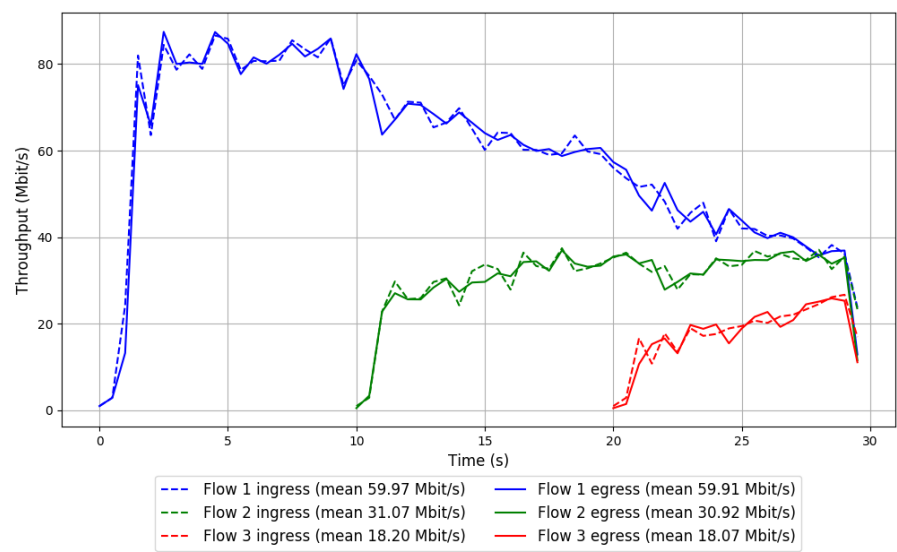
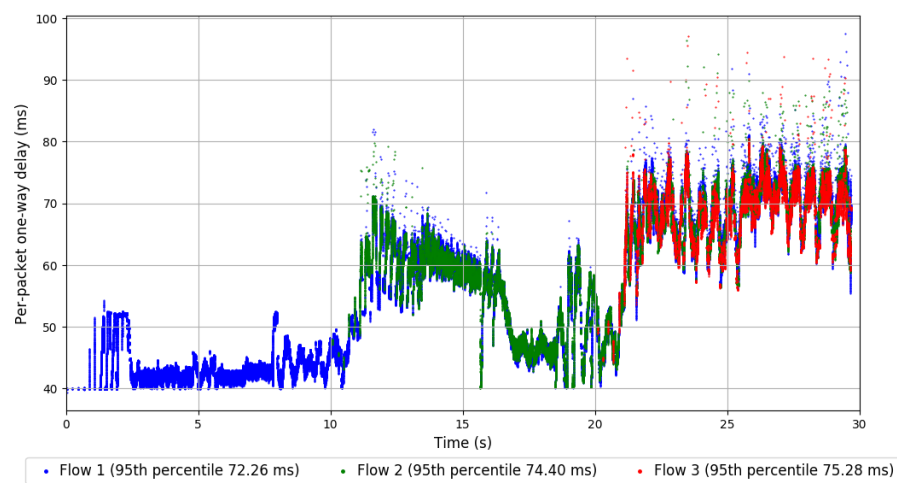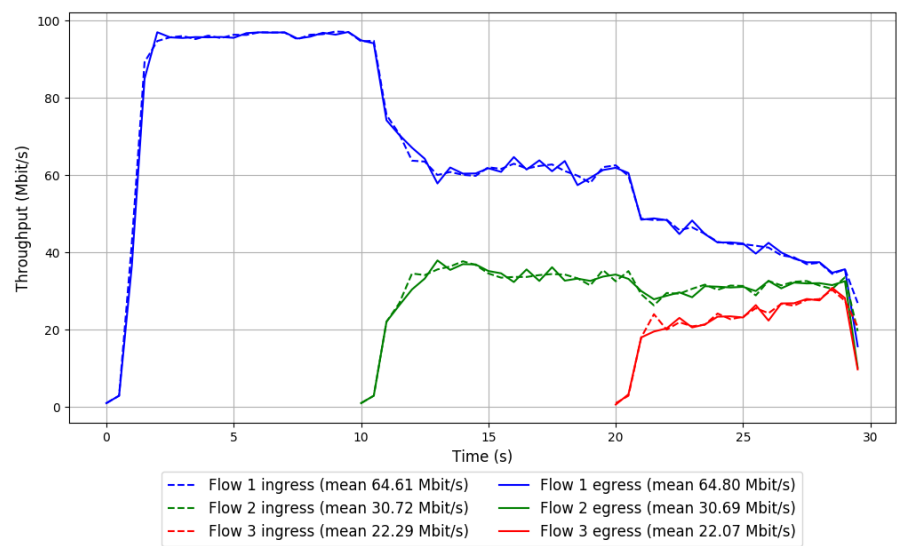Run 6: Report of Indigo-1-32 — Data Link

```
Run 7: Statistics of Indigo-1-32

Start at: 2018-04-17 15:25:24
End at: 2018-04-17 15:25:54
Local clock offset: 1.202 ms
Remote clock offset: -4.614 ms

# Below is generated by plot.py at 2018-04-17 21:02:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.20 Mbit/s
95th percentile per-packet one-way delay: 73.533 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 64.80 Mbit/s
95th percentile per-packet one-way delay: 72.259 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 30.69 Mbit/s
95th percentile per-packet one-way delay: 74.404 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 22.07 Mbit/s
95th percentile per-packet one-way delay: 75.281 ms
Loss rate: 3.17%
```

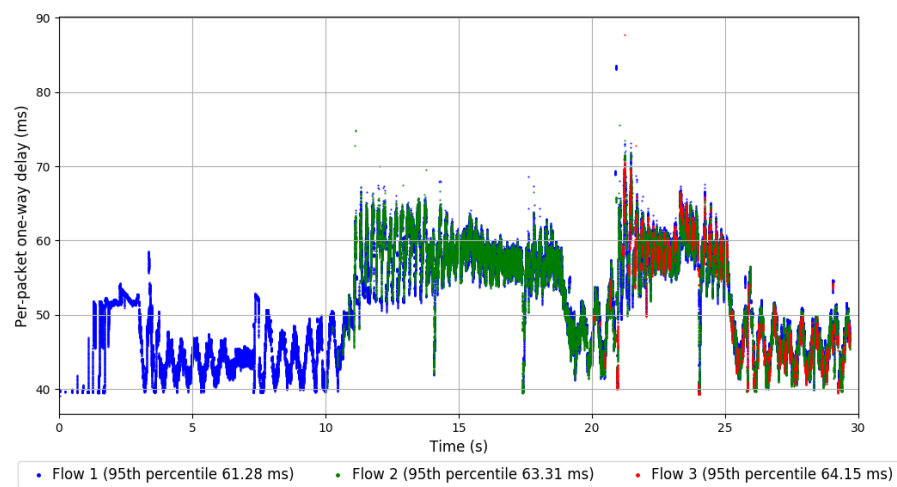# Run 7: Report of Indigo-1-32 — Data Link

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```
Run 8: Statistics of Indigo-1-32

Start at: 2018-04-17 15:48:14
End at: 2018-04-17 15:48:44
Local clock offset: -0.227 ms
Remote clock offset: 10.137 ms


# Below is generated by plot.py at 2018-04-17 21:02:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.99 Mbit/s
95th percentile per-packet one-way delay: 61.960 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 71.57 Mbit/s
95th percentile per-packet one-way delay: 61.277 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 27.25 Mbit/s
95th percentile per-packet one-way delay: 63.307 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 7.36 Mbit/s
95th percentile per-packet one-way delay: 64.151 ms
Loss rate: 2.16%
```

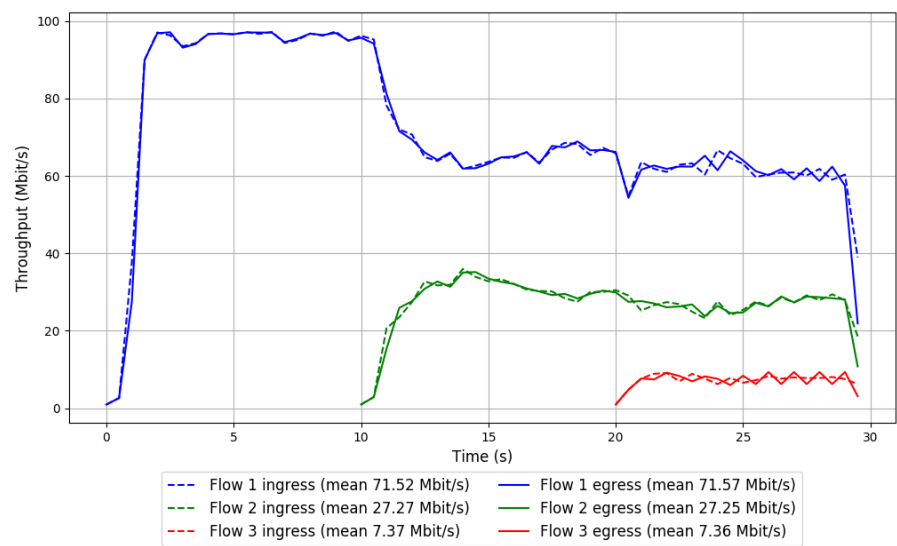Run 8: Report of Indigo-1-32 — Data Link

```
Run 9: Statistics of Indigo-1-32

Start at: 2018-04-17 16:11:03
End at: 2018-04-17 16:11:33
Local clock offset: -0.328 ms
Remote clock offset: -4.969 ms


# Below is generated by plot.py at 2018-04-17 21:02:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.36 Mbit/s
95th percentile per-packet one-way delay: 73.885 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 62.51 Mbit/s
95th percentile per-packet one-way delay: 72.790 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 29.75 Mbit/s
95th percentile per-packet one-way delay: 73.879 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 28.43 Mbit/s
95th percentile per-packet one-way delay: 75.573 ms
Loss rate: 2.43%
```

Run 9: Report of Indigo-1-32 — Data Link

- Flow 1 ingress (mean 62.31 Mbit/s) — Flow 1 egress (mean 62.51 Mbit/s)
- Flow 2 ingress (mean 29.81 Mbit/s) — Flow 2 egress (mean 29.75 Mbit/s)
- Flow 3 ingress (mean 28.46 Mbit/s) — Flow 3 egress (mean 28.43 Mbit/s)

- Flow 1 (95th percentile 72.79 ms)
- Flow 2 (95th percentile 73.88 ms)
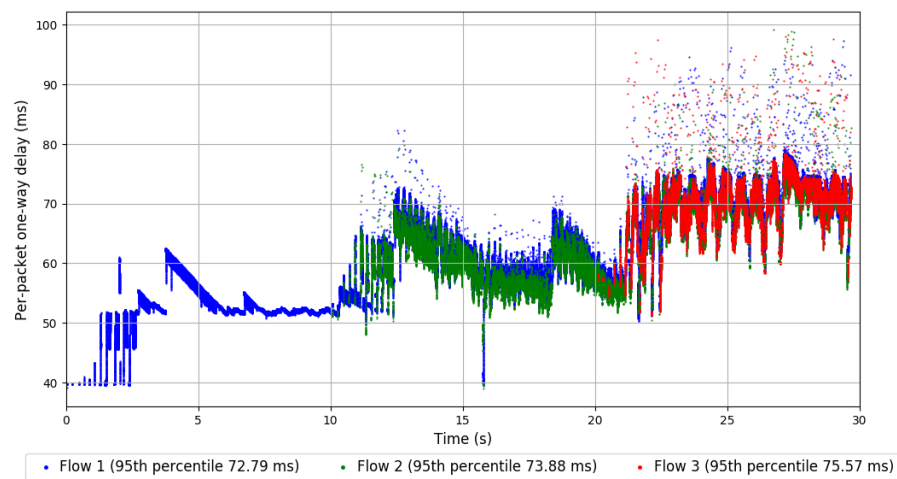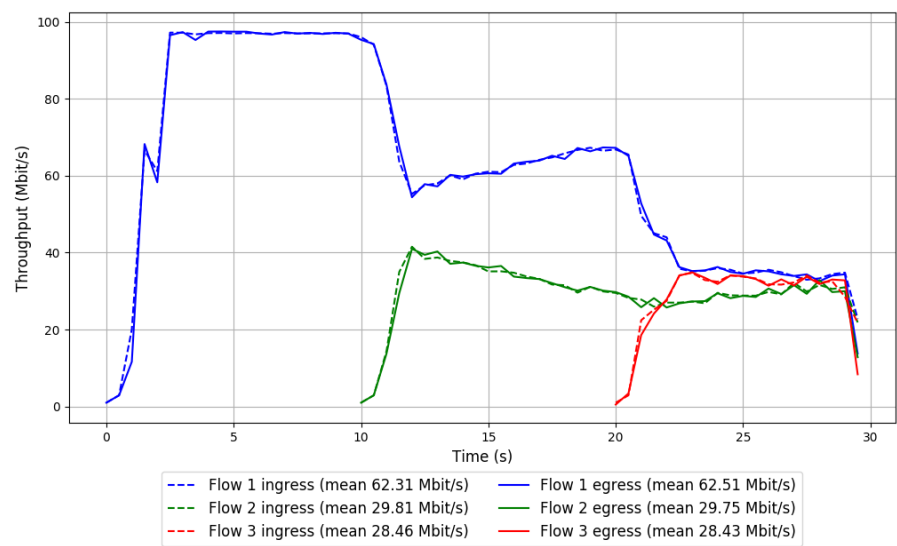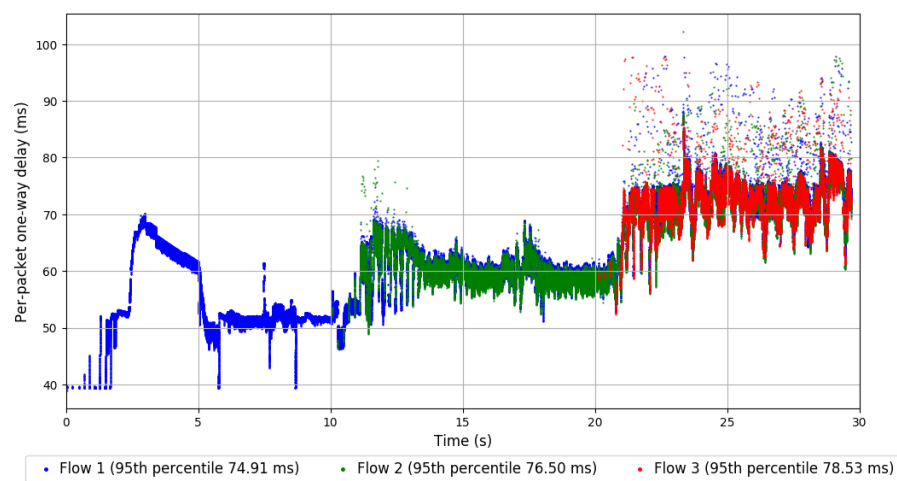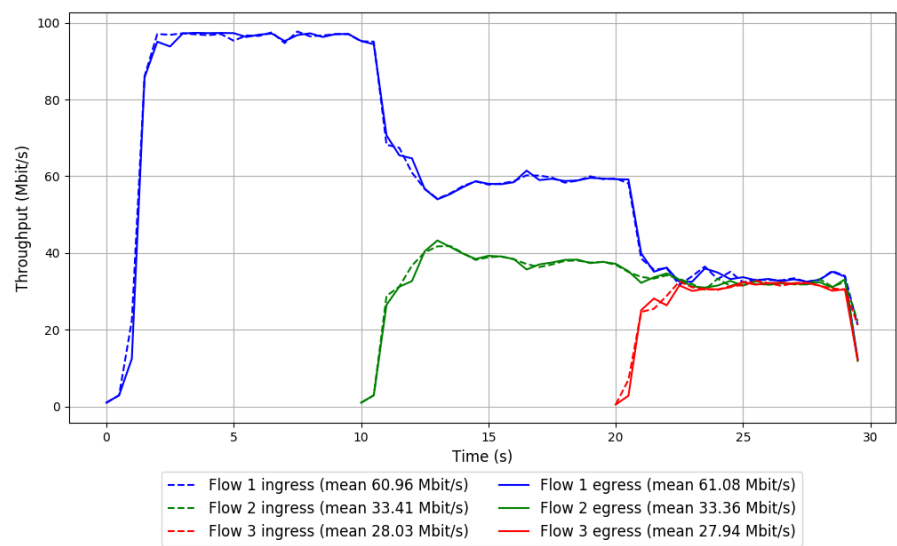- Flow 3 (95th percentile 75.57 ms)

```
Run 10: Statistics of Indigo-1-32

Start at: 2018-04-17 16:33:53
End at: 2018-04-17 16:34:23
Local clock offset: 7.196 ms
Remote clock offset: -9.206 ms


# Below is generated by plot.py at 2018-04-17 21:02:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.14 Mbit/s
95th percentile per-packet one-way delay: 76.135 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 61.08 Mbit/s
95th percentile per-packet one-way delay: 74.906 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 33.36 Mbit/s
95th percentile per-packet one-way delay: 76.505 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 27.94 Mbit/s
95th percentile per-packet one-way delay: 78.527 ms
Loss rate: 2.70%
```

Run 10: Report of Indigo-1-32 — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-04-17 13:24:07
End at: 2018-04-17 13:24:37
Local clock offset: 6.835 ms
Remote clock offset: 4.243 ms


# Below is generated by plot.py at 2018-04-17 21:02:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.62 Mbit/s
95th percentile per-packet one-way delay: 144.588 ms
Loss rate: 2.20%
-- Flow 1:
Average throughput: 45.17 Mbit/s
95th percentile per-packet one-way delay: 144.560 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 145.386 ms
Loss rate: 2.39%
-- Flow 3:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 144.712 ms
Loss rate: 3.57%
```

Run 1: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 45.85 Mbit/s) --- Flow 1 egress (mean 45.17 Mbit/s)
Flow 2 ingress (mean 2.26 Mbit/s) --- Flow 2 egress (mean 2.24 Mbit/s)
Flow 3 ingress (mean 3.04 Mbit/s) --- Flow 3 egress (mean 3.00 Mbit/s)

Flow 1 (95th percentile 144.56 ms) · Flow 2 (95th percentile 145.39 ms) · Flow 3 (95th percentile 144.71 ms)

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```
Run 2: Statistics of PCC-Vivace

Start at: 2018-04-17 13:47:00
End at: 2018-04-17 13:47:30
Local clock offset: 7.702 ms
Remote clock offset: 33.167 ms


# Below is generated by plot.py at 2018-04-17 21:03:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.53 Mbit/s
95th percentile per-packet one-way delay: 58.423 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 53.03 Mbit/s
95th percentile per-packet one-way delay: 58.912 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 14.63 Mbit/s
95th percentile per-packet one-way delay: 57.434 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 2.50 Mbit/s
95th percentile per-packet one-way delay: 58.003 ms
Loss rate: 1.57%
```
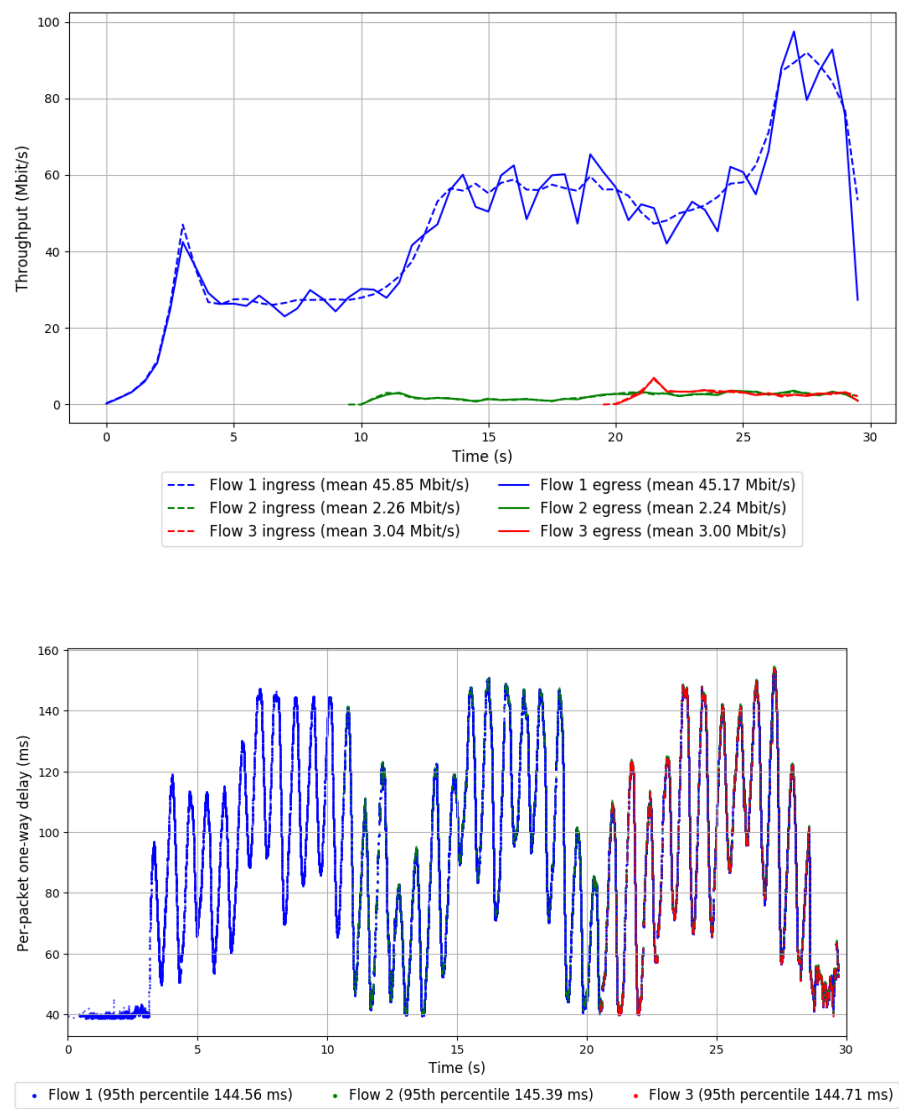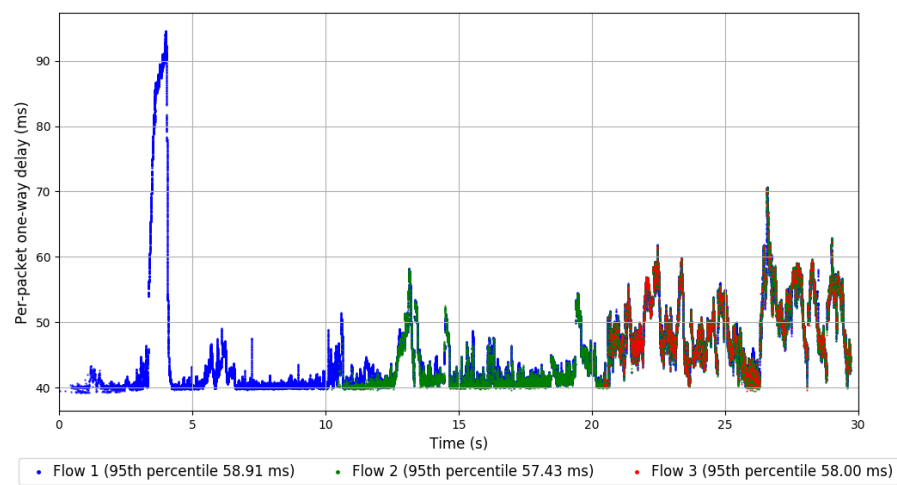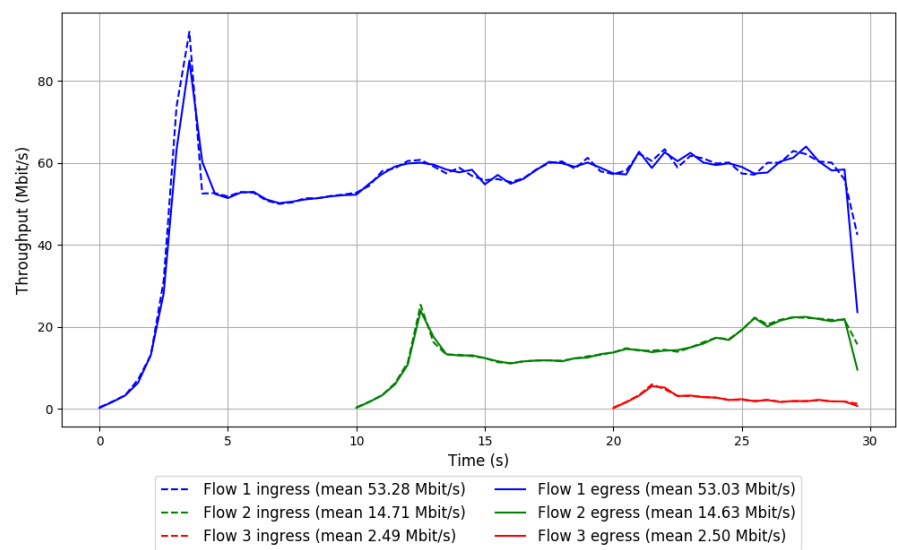
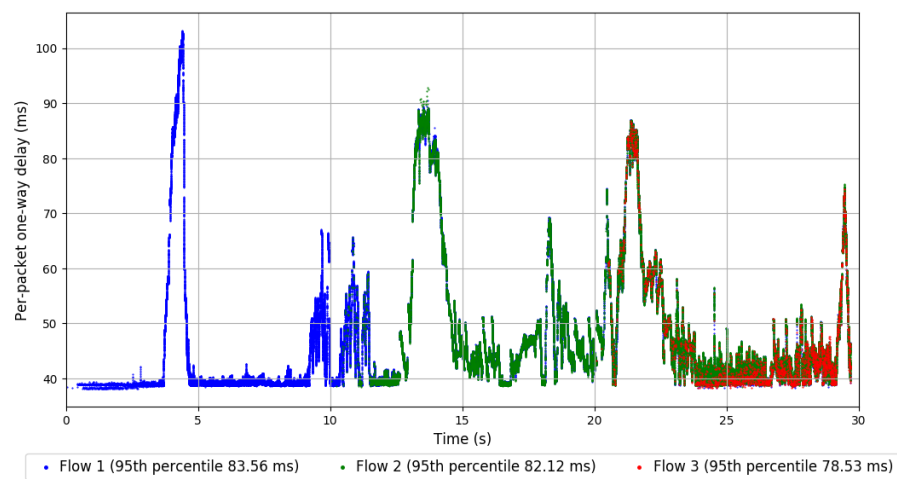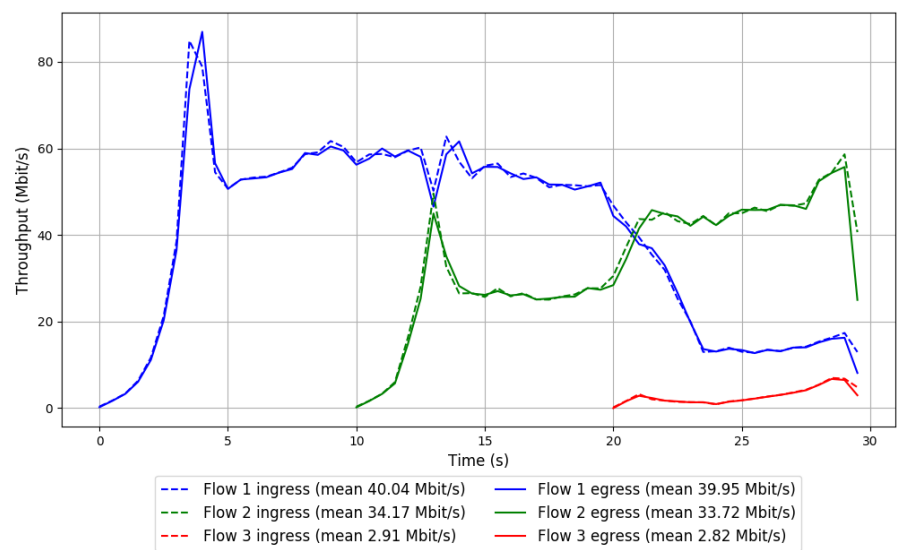Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2018-04-17 14:10:23
End at: 2018-04-17 14:10:53
Local clock offset: 13.424 ms
Remote clock offset: 19.082 ms


# Below is generated by plot.py at 2018-04-17 21:03:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.20 Mbit/s
95th percentile per-packet one-way delay: 82.990 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 39.95 Mbit/s
95th percentile per-packet one-way delay: 83.556 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 33.72 Mbit/s
95th percentile per-packet one-way delay: 82.122 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 2.82 Mbit/s
95th percentile per-packet one-way delay: 78.527 ms
Loss rate: 5.17%
```

Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2018-04-17 14:33:07
End at: 2018-04-17 14:33:37
Local clock offset: 17.196 ms
Remote clock offset: 9.204 ms


# Below is generated by plot.py at 2018-04-17 21:03:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.71 Mbit/s
95th percentile per-packet one-way delay: 64.175 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 65.71 Mbit/s
95th percentile per-packet one-way delay: 64.454 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 61.604 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 64.377 ms
Loss rate: 1.77%
```
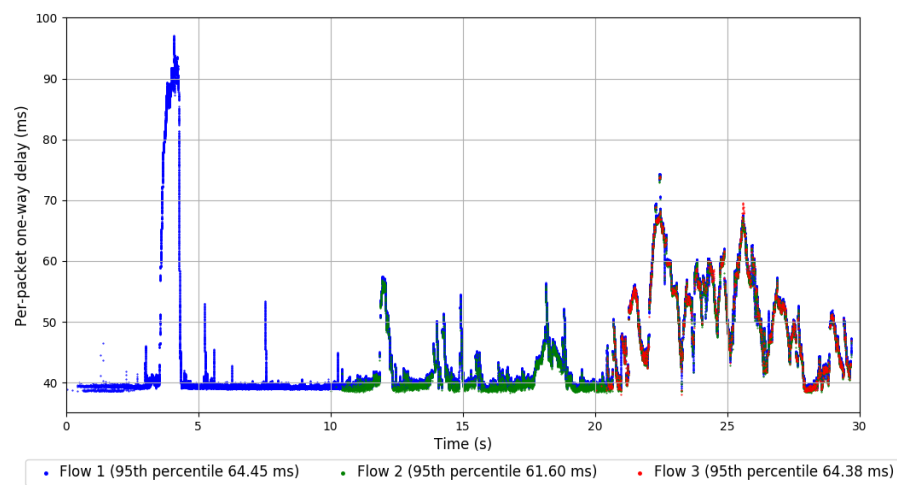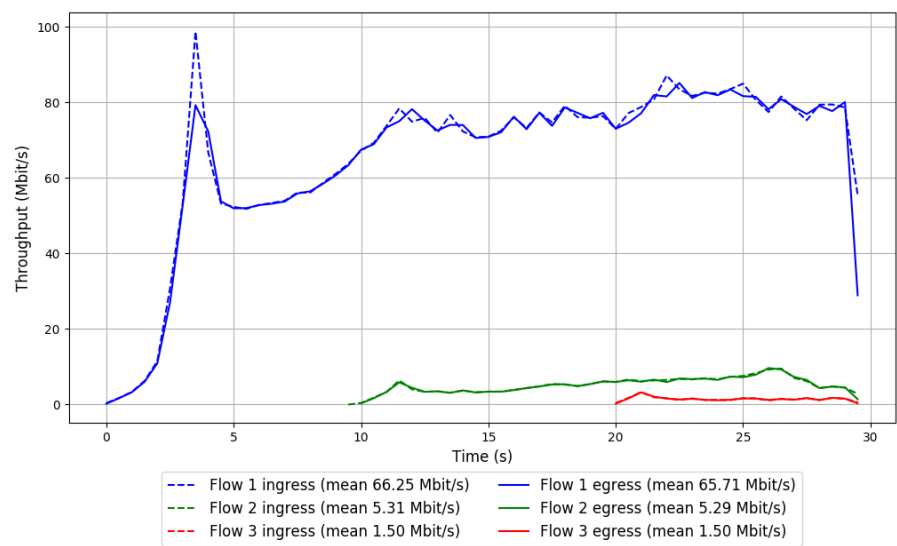
Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 66.25 Mbit/s) — — Flow 1 egress (mean 65.71 Mbit/s)
Flow 2 ingress (mean 5.31 Mbit/s) — — Flow 2 egress (mean 5.29 Mbit/s)
Flow 3 ingress (mean 1.50 Mbit/s) — — Flow 3 egress (mean 1.50 Mbit/s)

Flow 1 (95th percentile 64.45 ms) • Flow 2 (95th percentile 61.60 ms) • Flow 3 (95th percentile 64.38 ms)
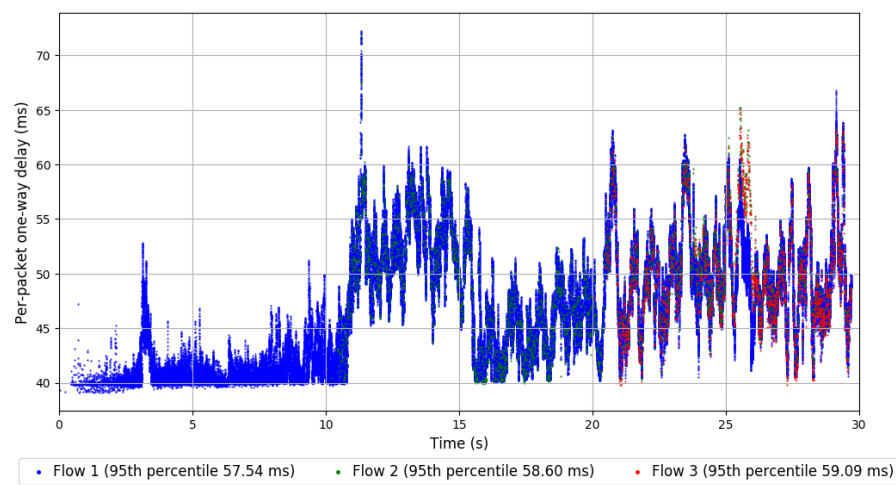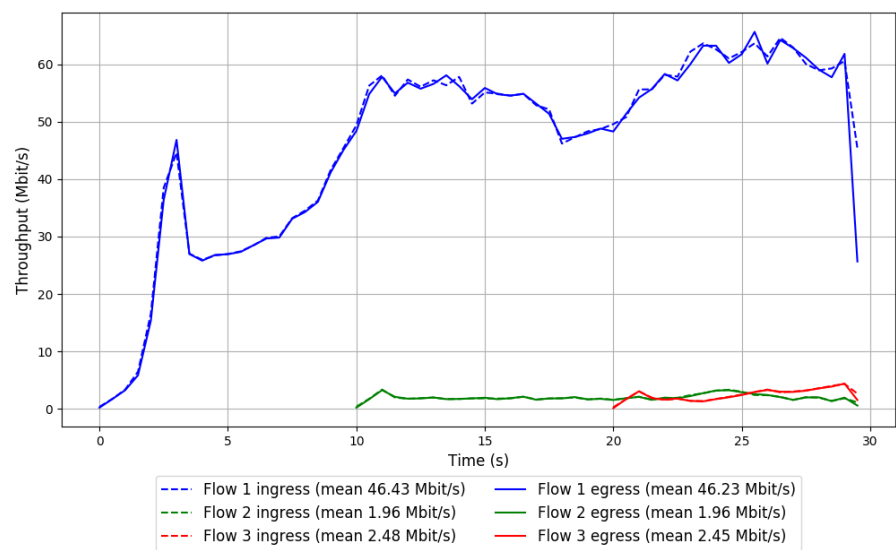
```
Run 5: Statistics of PCC-Vivace

Start at: 2018-04-17 14:55:57
End at: 2018-04-17 14:56:27
Local clock offset: 22.748 ms
Remote clock offset: -15.126 ms


# Below is generated by plot.py at 2018-04-17 21:03:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.32 Mbit/s
95th percentile per-packet one-way delay: 57.628 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 46.23 Mbit/s
95th percentile per-packet one-way delay: 57.542 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 58.601 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 59.092 ms
Loss rate: 3.27%
```

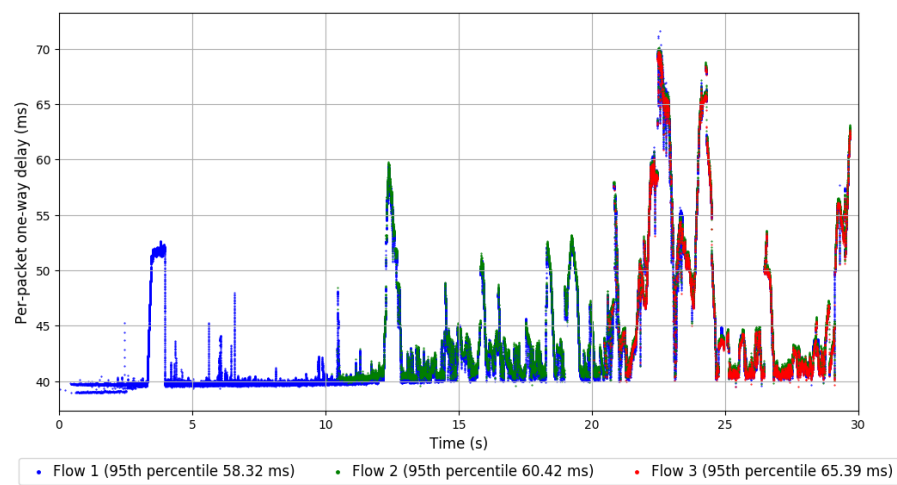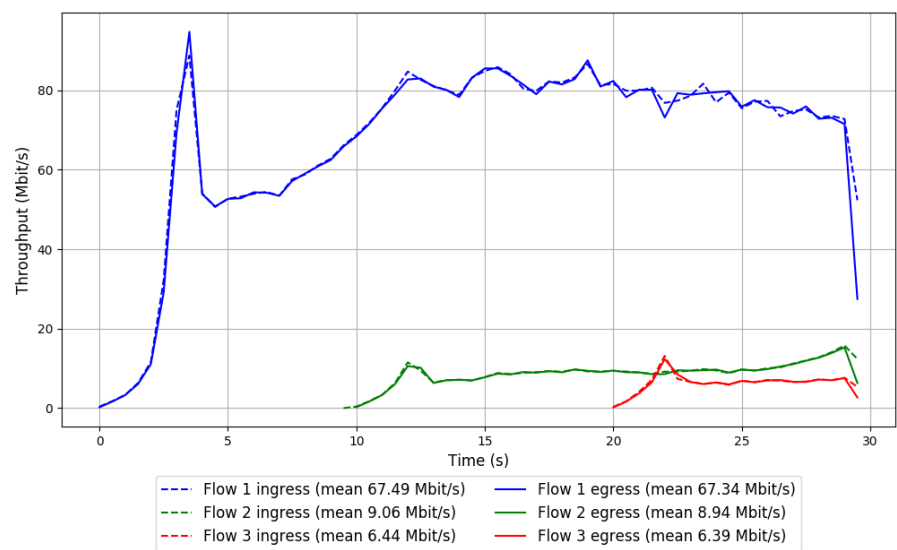# Run 5: Report of PCC-Vivace — Data Link

```
Run 6: Statistics of PCC-Vivace

Start at: 2018-04-17 15:19:55
End at: 2018-04-17 15:20:25
Local clock offset: 3.75 ms
Remote clock offset: -6.557 ms


# Below is generated by plot.py at 2018-04-17 21:03:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.34 Mbit/s
95th percentile per-packet one-way delay: 58.673 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 67.34 Mbit/s
95th percentile per-packet one-way delay: 58.319 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 8.94 Mbit/s
95th percentile per-packet one-way delay: 60.424 ms
Loss rate: 2.36%
-- Flow 3:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 65.395 ms
Loss rate: 2.88%
```

Run 6: Report of PCC-Vivace — Data Link

Run 7: Statistics of PCC-Vivace

Start at: 2018-04-17 15:42:48
End at: 2018-04-17 15:43:18
Local clock offset: -1.305 ms
Remote clock offset: 8.217 ms

Below is generated by plot.py at 2018-04-17 21:03:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 75.26 Mbit/s
95th percentile per-packet one-way delay: 60.353 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 67.20 Mbit/s
95th percentile per-packet one-way delay: 60.227 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 9.06 Mbit/s
95th percentile per-packet one-way delay: 61.408 ms
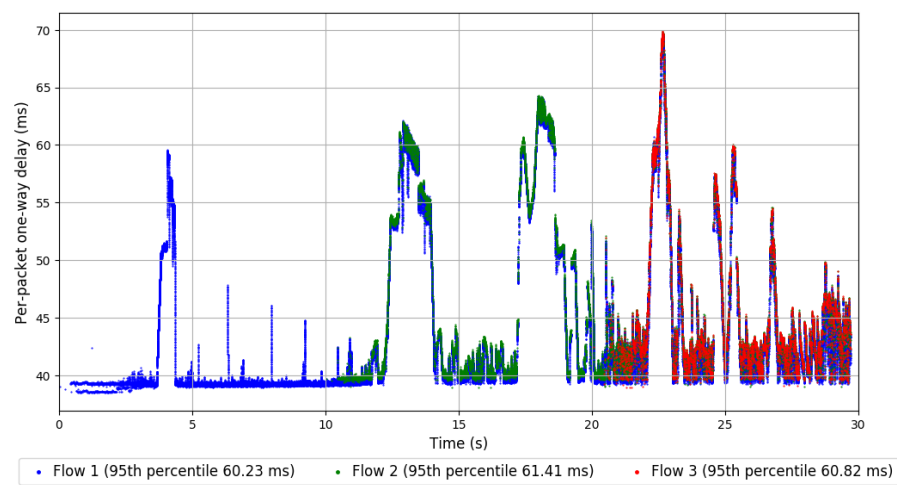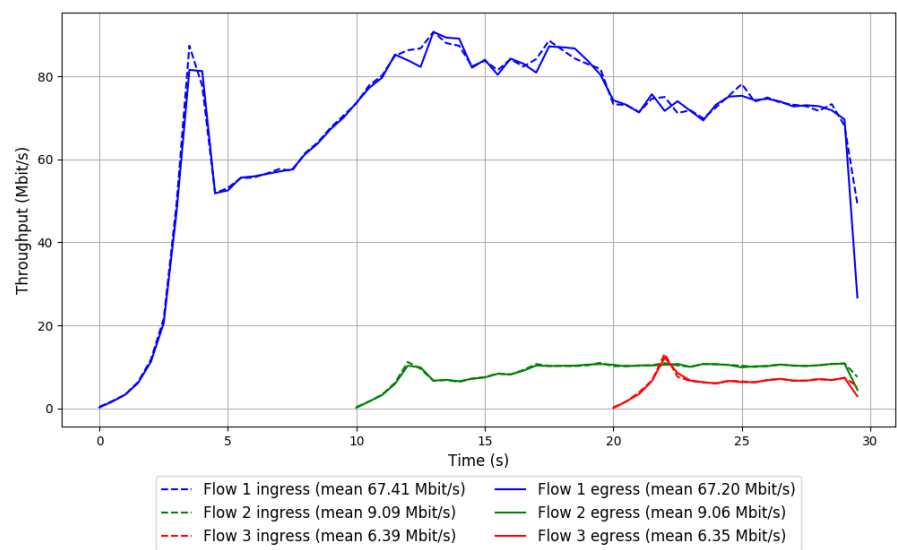Loss rate: 1.34%
-- Flow 3:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 60.816 ms
Loss rate: 2.61%

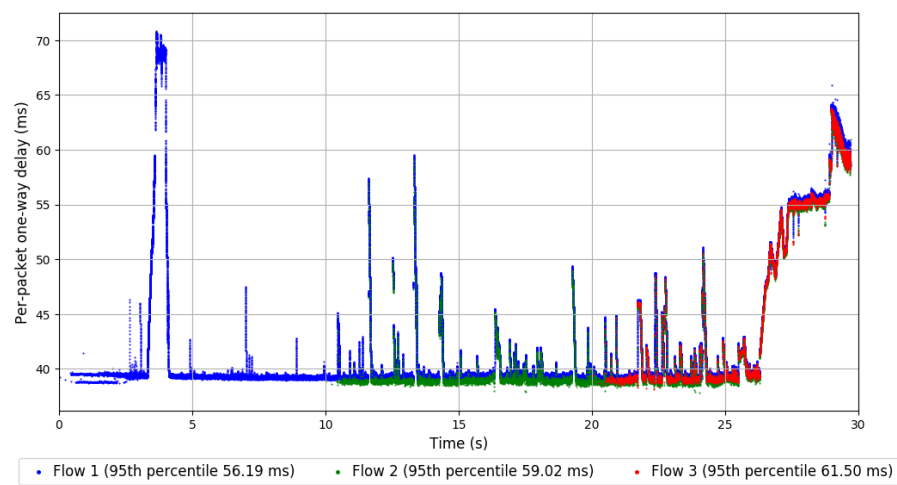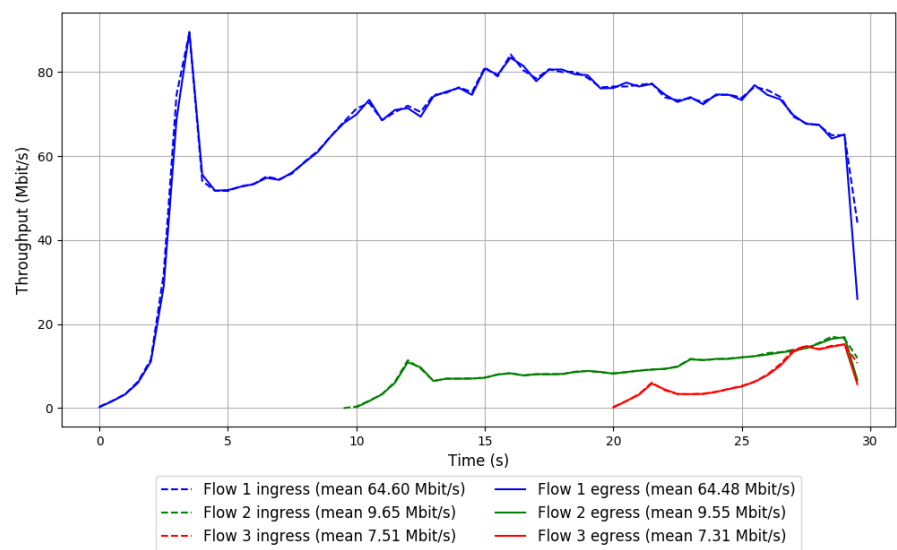Run 7: Report of PCC-Vivace — Data Link

```
Run 8: Statistics of PCC-Vivace

Start at: 2018-04-17 16:05:37
End at: 2018-04-17 16:06:07
Local clock offset: 0.048 ms
Remote clock offset: 12.953 ms


# Below is generated by plot.py at 2018-04-17 21:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.19 Mbit/s
95th percentile per-packet one-way delay: 58.769 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 64.48 Mbit/s
95th percentile per-packet one-way delay: 56.188 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 9.55 Mbit/s
95th percentile per-packet one-way delay: 59.025 ms
Loss rate: 1.93%
-- Flow 3:
Average throughput: 7.31 Mbit/s
95th percentile per-packet one-way delay: 61.496 ms
Loss rate: 4.58%
```

Run 8: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 64.60 Mbit/s) — Flow 1 egress (mean 64.48 Mbit/s)
Flow 2 ingress (mean 9.65 Mbit/s) — Flow 2 egress (mean 9.55 Mbit/s)
Flow 3 ingress (mean 7.51 Mbit/s) — Flow 3 egress (mean 7.31 Mbit/s)

Flow 1 (95th percentile 56.19 ms) • Flow 2 (95th percentile 59.02 ms) • Flow 3 (95th percentile 61.50 ms)
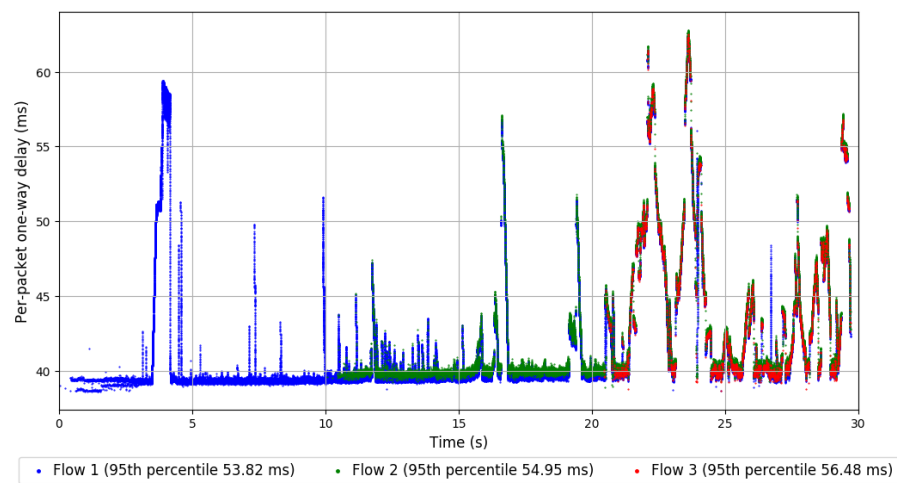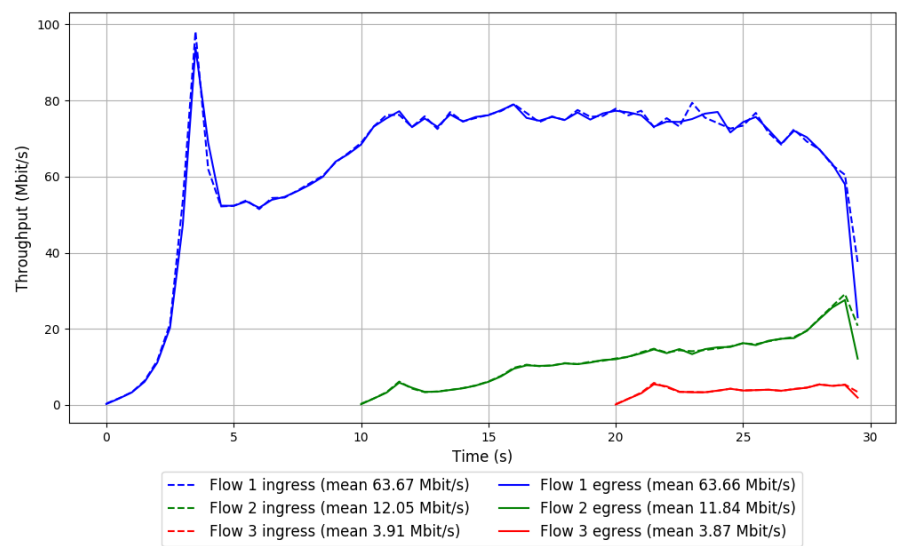
```
Run 9: Statistics of PCC-Vivace

Start at: 2018-04-17 16:28:26
End at: 2018-04-17 16:28:56
Local clock offset: 6.618 ms
Remote clock offset: -9.308 ms


# Below is generated by plot.py at 2018-04-17 21:03:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.75 Mbit/s
95th percentile per-packet one-way delay: 54.101 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 63.66 Mbit/s
95th percentile per-packet one-way delay: 53.823 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 11.84 Mbit/s
95th percentile per-packet one-way delay: 54.952 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 56.476 ms
Loss rate: 2.75%
```

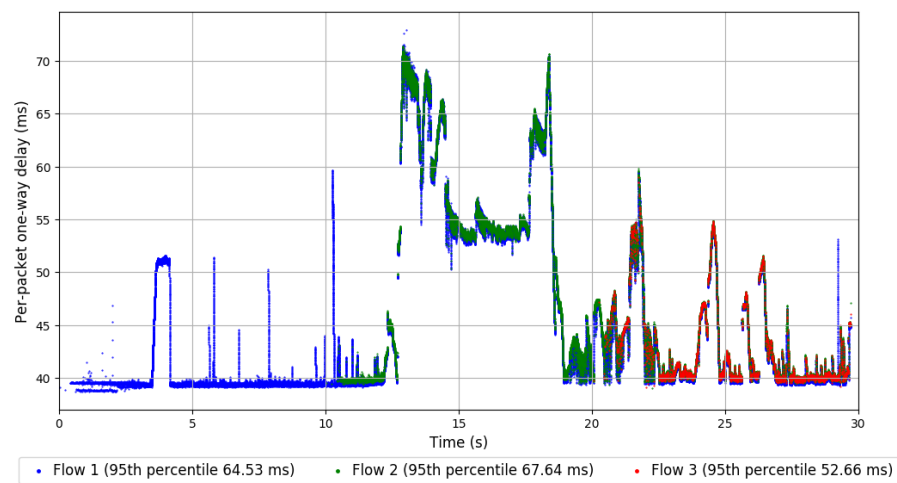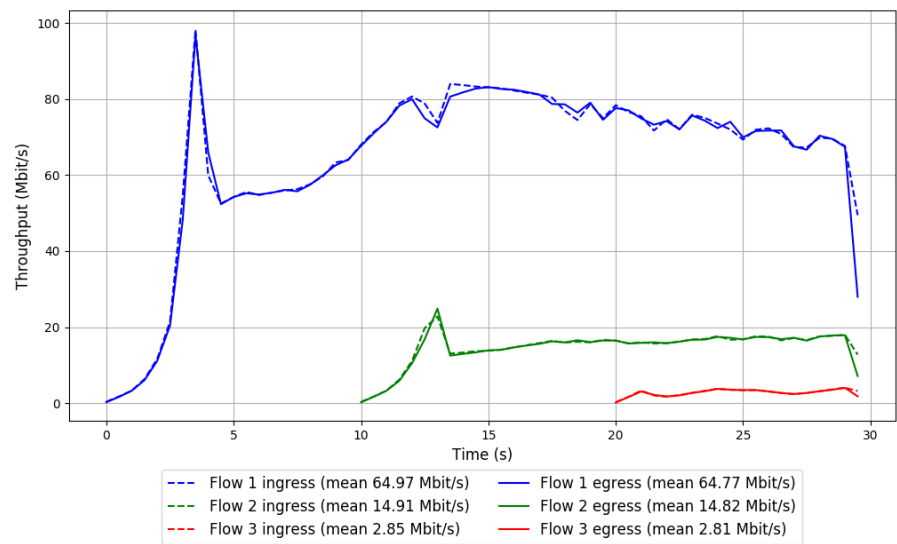Run 9: Report of PCC-Vivace — Data Link

```
Run 10: Statistics of PCC-Vivace

Start at: 2018-04-17 16:51:32
End at: 2018-04-17 16:52:02
Local clock offset: 7.187 ms
Remote clock offset: -1.054 ms


# Below is generated by plot.py at 2018-04-17 21:03:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.51 Mbit/s
95th percentile per-packet one-way delay: 64.841 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 64.77 Mbit/s
95th percentile per-packet one-way delay: 64.529 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 14.82 Mbit/s
95th percentile per-packet one-way delay: 67.636 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 52.662 ms
Loss rate: 3.15%
```

Run 10: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2018-04-17 13:09:33
End at: 2018-04-17 13:10:03
Local clock offset: 6.514 ms
Remote clock offset: 16.301 ms
```

Run 1: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 2: Statistics of PCC-Expr

Start at: 2018-04-17 13:32:27
End at: 2018-04-17 13:32:57
Local clock offset: 7.24 ms
Remote clock offset: 16.493 ms
```

Run 2: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 3: Statistics of PCC-Expr

Start at: 2018-04-17 13:55:29
End at: 2018-04-17 13:55:59
Local clock offset: 7.791 ms
Remote clock offset: 20.591 ms
```

Run 3: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 4: Statistics of PCC-Expr

Start at: 2018-04-17 14:18:33
End at: 2018-04-17 14:19:03
Local clock offset: 14.92 ms
Remote clock offset: 22.681 ms
```

Run 4: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 5: Statistics of PCC-Expr

Start at: 2018-04-17 14:41:17
End at: 2018-04-17 14:41:47
Local clock offset: 19.774 ms
Remote clock offset: 6.548 ms
```

Run 5: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 6: Statistics of PCC-Expr

Start at: 2018-04-17 15:05:14
End at: 2018-04-17 15:05:44
Local clock offset: 23.377 ms
Remote clock offset: 9.984 ms
```

Run 6: Report of PCC-Expr — Data Link

Figure is missing

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```
Run 7: Statistics of PCC-Expr

Start at: 2018-04-17 15:28:09
End at: 2018-04-17 15:28:39
Local clock offset: 0.117 ms
Remote clock offset: -3.609 ms
```

Run 7: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 8: Statistics of PCC-Expr

Start at: 2018-04-17 15:50:59
End at: 2018-04-17 15:51:29
Local clock offset: 0.107 ms
Remote clock offset: 11.085 ms
```

Run 8: Report of PCC-Expr — Data Link

Figure is missing

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```
Run 9: Statistics of PCC-Expr

Start at: 2018-04-17 16:13:48
End at: 2018-04-17 16:14:18
Local clock offset: 0.346 ms
Remote clock offset: -6.604 ms
```

Run 9: Report of PCC-Expr — Data Link

Figure is missing

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```
Run 10: Statistics of PCC-Expr

Start at: 2018-04-17 16:36:44
End at: 2018-04-17 16:37:14
Local clock offset: 7.656 ms
Remote clock offset: 5.078 ms
```

Run 10: Report of PCC-Expr — Data Link

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