# Pantheon Report

Generated at 2019-12-12 02:45:52 (UTC).

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

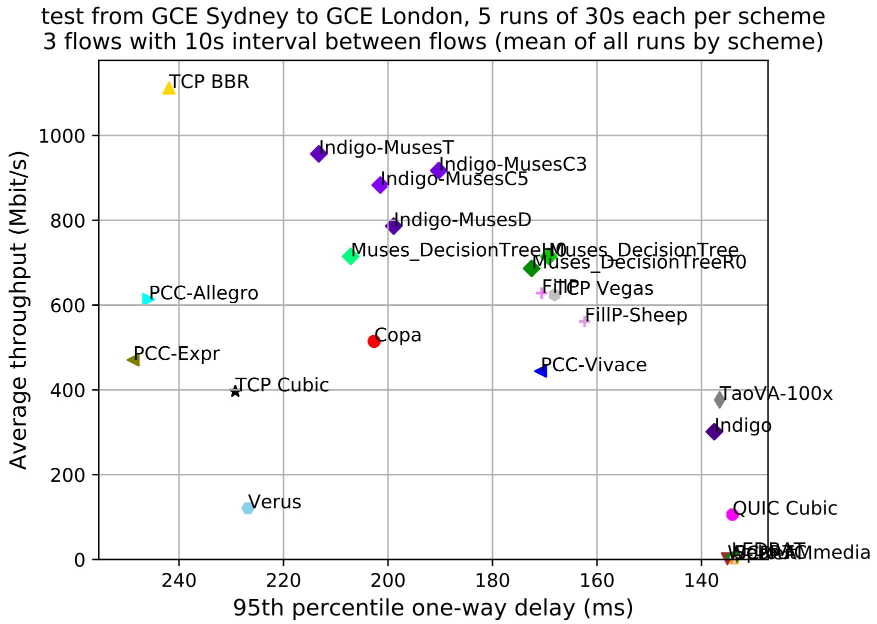
Repeated the test of 24 congestion control schemes 5 times.

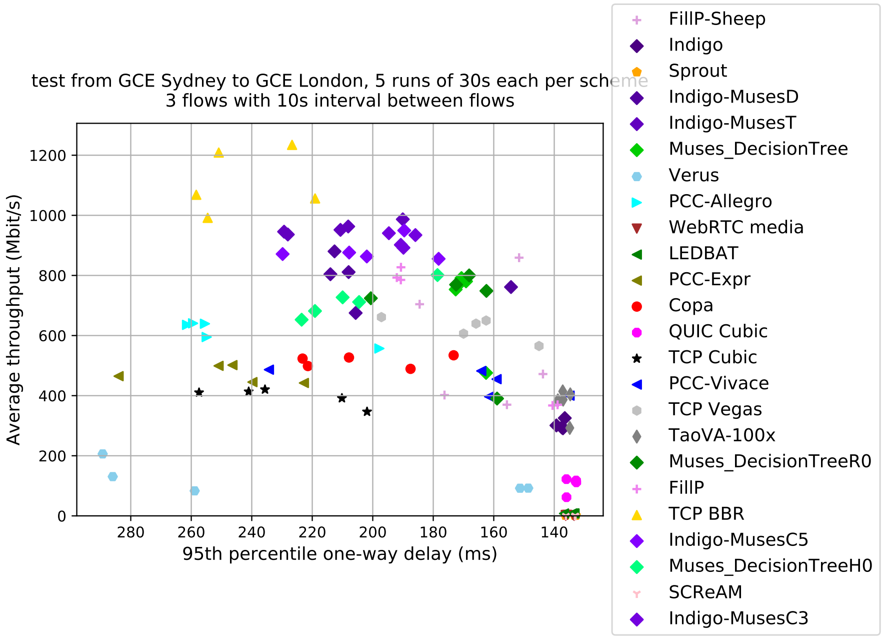
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.

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

```
Git summary:
branch: muses @ de42328552b3776a75a932a94dfafd722537b0ec
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 387225f7b5f61ddbe92d708a8869ffbb84eb3200
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

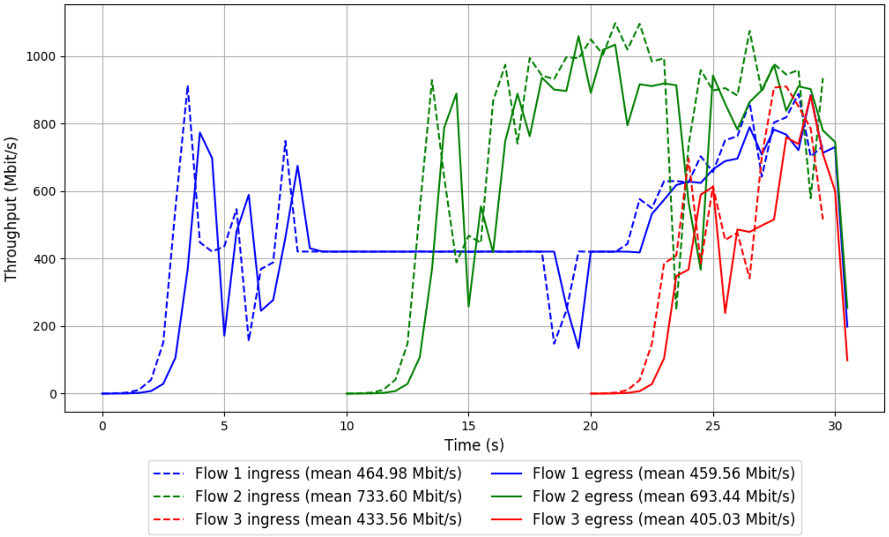

test from GCE Sydney to GCE London, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
0
200
400
600
800
1000
240
220
200
180
160
140
TCP BBR
Indigo-MusesT
Indigo-MusesC3
Indigo-MusesC5
Indigo-MusesD
Muses_DecisionTreeH0
Muses_DecisionTree
Muses_DecisionTreeR0
PCC-Allegro
FillP
TCP Vegas
FillP-Sheep
Copa
PCC-Expr
PCC-Vivace
TCP Cubic
TaoVA-100x
Indigo
Verus
QUIC Cubic
LEDBAT
WebRTC media

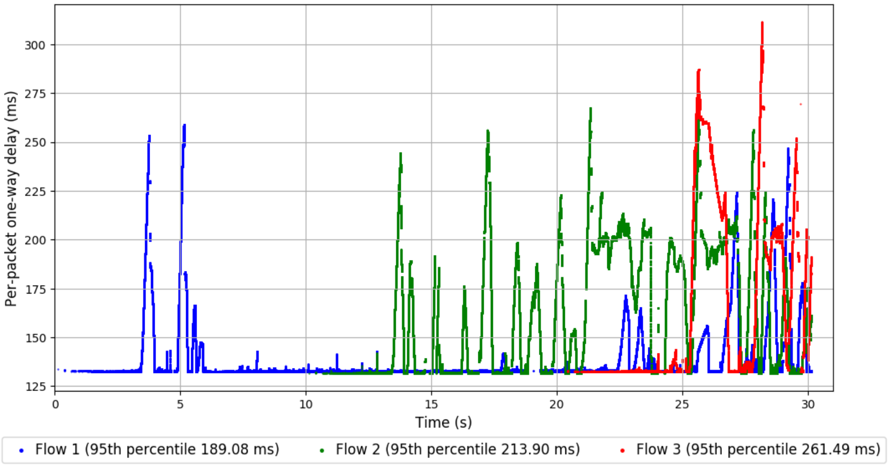

test from GCE Sydney to GCE London, 5 runs of 30s each per scheme
3 flows with 10s interval between flows
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
0
200
400
600
800
1000
1200
280
260
240
220
200
180
160
140
FillP-Sheep
Indigo
Sprout
Indigo-MusesD
Indigo-MusesT
Muses_DecisionTree
Verus
PCC-Allegro
WebRTC media
LEDBAT
PCC-Expr
Copa
QUIC Cubic
TCP Cubic
PCC-Vivace
TCP Vegas
TaoVA-100x
Muses_DecisionTreeR0
FillP
TCP BBR
Indigo-MusesC5
Muses_DecisionTreeH0
SCReAM
Indigo-MusesC3

|  |  | mean avg tput (Mbit/s) |  |  | mean 95th-%ile delay (ms) |  |  | mean loss rate (%) |  |  |
|---|---|---|---|---|---|---|---|---|---|---|
| scheme | # runs | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 |
| TCP BBR | 5 | 571.95 | 616.49 | 390.33 | 236.41 | 238.34 | 259.59 | 4.76 | 6.46 | 6.32 |
| Copa | 5 | 276.95 | 257.77 | 197.85 | 189.43 | 216.94 | 178.64 | 0.08 | 0.10 | 0.17 |
| TCP Cubic | 5 | 249.35 | 164.03 | 113.66 | 221.87 | 154.02 | 150.60 | 0.33 | 0.39 | 0.23 |
| FillP | 5 | 322.30 | 336.46 | 247.39 | 179.96 | 137.78 | 136.81 | 1.40 | 0.00 | 0.00 |
| FillP-Sheep | 5 | 268.44 | 316.64 | 248.72 | 176.85 | 138.04 | 137.80 | 0.83 | 0.00 | 0.00 |
| Indigo | 5 | 149.30 | 162.93 | 138.89 | 135.87 | 137.97 | 138.48 | 0.00 | 0.00 | 0.00 |
| Indigo-MusesC3 | 4 | 540.25 | 448.23 | 337.09 | 192.27 | 174.93 | 195.67 | 0.10 | 0.08 | 0.56 |
| Indigo-MusesC5 | 5 | 530.35 | 443.57 | 248.25 | 200.24 | 195.10 | 181.77 | 0.24 | 0.23 | 0.64 |
| Indigo-MusesD | 5 | 440.28 | 426.97 | 273.99 | 197.50 | 195.40 | 154.20 | 0.14 | 0.11 | 0.21 |
| Indigo-MusesT | 5 | 552.01 | 504.13 | 312.85 | 217.96 | 200.79 | 160.55 | 0.66 | 0.09 | 0.22 |
| LEDBAT | 5 | 5.27 | 3.50 | 1.70 | 133.99 | 134.28 | 133.88 | 0.00 | 0.00 | 0.00 |
| Muses_DecisionTree | 5 | 375.31 | 392.14 | 214.33 | 164.89 | 175.75 | 138.96 | 0.06 | 0.15 | 0.03 |
| Muses_DecisionTreeH0 | 5 | 400.12 | 360.89 | 238.89 | 213.11 | 192.50 | 176.79 | 1.46 | 0.65 | 0.44 |
| Muses_DecisionTreeR0 | 5 | 360.18 | 382.19 | 226.53 | 173.02 | 166.96 | 137.84 | 0.34 | 0.16 | 0.02 |
| PCC-Allegro | 5 | 360.80 | 265.70 | 230.54 | 248.46 | 229.64 | 250.21 | 4.86 | 3.05 | 2.26 |
| PCC-Expr | 5 | 251.01 | 255.26 | 150.82 | 244.34 | 242.39 | 207.92 | 2.26 | 5.01 | 0.94 |
| QUIC Cubic | 5 | 48.18 | 60.68 | 53.75 | 134.06 | 133.68 | 132.52 | 0.00 | 0.00 | 0.00 |
| SCReAM | 5 | 0.14 | 0.18 | 0.18 | 132.57 | 133.69 | 133.49 | 0.00 | 0.00 | 0.00 |
| Sprout | 5 | 0.70 | 0.61 | 0.61 | 133.47 | 133.00 | 133.81 | 0.00 | 0.00 | 0.00 |
| TaoVA-100x | 5 | 214.12 | 163.27 | 161.55 | 135.36 | 136.46 | 138.17 | 0.00 | 0.00 | 0.00 |
| TCP Vegas | 5 | 332.12 | 332.30 | 214.01 | 161.99 | 162.34 | 182.47 | 0.20 | 0.55 | 0.60 |
| Verus | 5 | 72.21 | 52.23 | 44.61 | 208.46 | 209.22 | 164.09 | 2.77 | 2.59 | 0.09 |
| PCC-Vivace | 5 | 264.99 | 203.33 | 132.31 | 168.97 | 185.33 | 143.39 | 0.25 | 0.22 | 0.00 |
| WebRTC media | 5 | 1.17 | 0.58 | 0.14 | 133.38 | 133.88 | 134.13 | 0.01 | 0.00 | 0.00 |

```
Run 1: Statistics of TCP BBR

Start at: 2019-12-11 20:29:24
End at: 2019-12-11 20:29:54
Local clock offset: 0.045 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2019-12-12 00:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1056.16 Mbit/s
95th percentile per-packet one-way delay: 219.065 ms
Loss rate: 3.79%
-- Flow 1:
Average throughput: 459.56 Mbit/s
95th percentile per-packet one-way delay: 189.080 ms
Loss rate: 1.17%
-- Flow 2:
Average throughput: 693.44 Mbit/s
95th percentile per-packet one-way delay: 213.899 ms
Loss rate: 5.47%
-- Flow 3:
Average throughput: 405.03 Mbit/s
95th percentile per-packet one-way delay: 261.494 ms
Loss rate: 6.58%
```

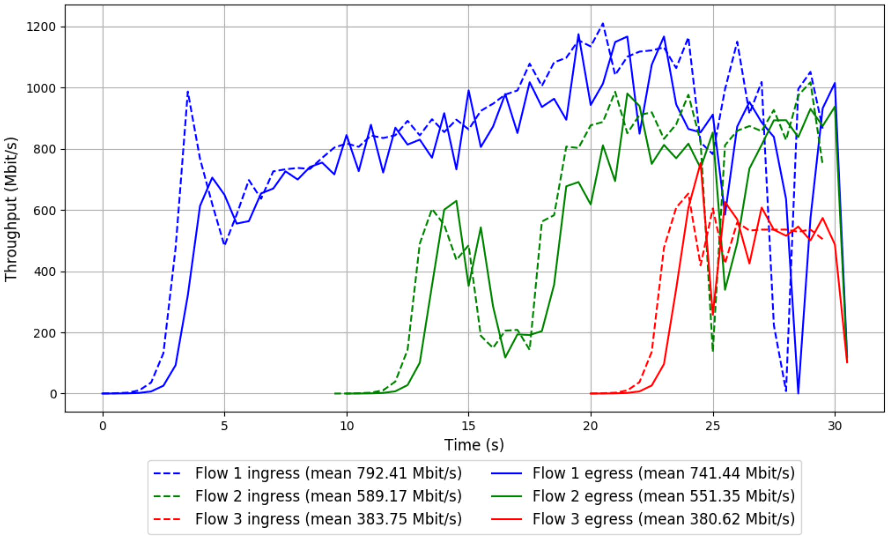
# Run 1: Report of TCP BBR — Data Link

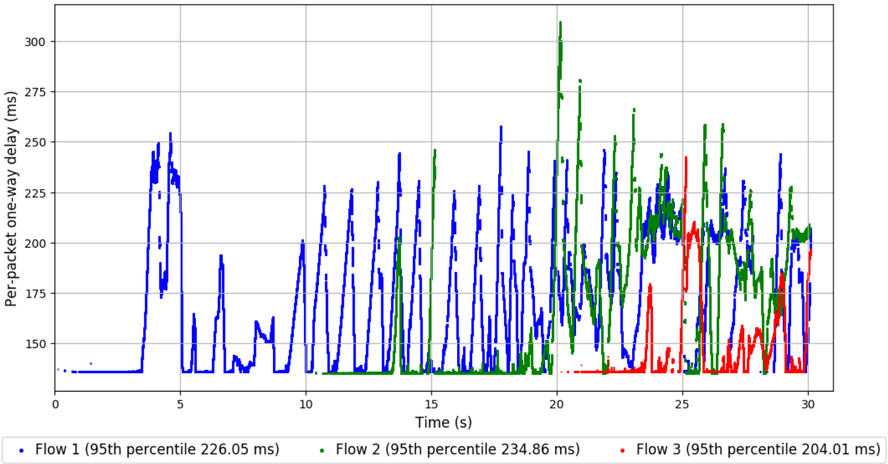




```
Run 2: Statistics of TCP BBR

Start at: 2019-12-11 21:13:03
End at: 2019-12-11 21:13:33
Local clock offset: -0.235 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2019-12-12 00:22:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1234.44 Mbit/s
95th percentile per-packet one-way delay: 226.672 ms
Loss rate: 5.78%
-- Flow 1:
Average throughput: 741.44 Mbit/s
95th percentile per-packet one-way delay: 226.054 ms
Loss rate: 6.44%
-- Flow 2:
Average throughput: 551.35 Mbit/s
95th percentile per-packet one-way delay: 234.857 ms
Loss rate: 6.08%
-- Flow 3:
Average throughput: 380.62 Mbit/s
95th percentile per-packet one-way delay: 204.008 ms
Loss rate: 0.81%
```

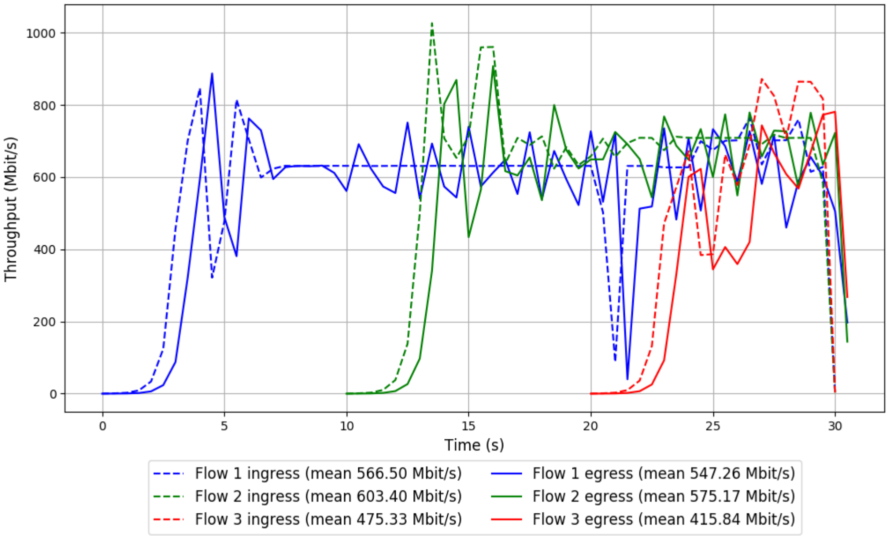
## Run 2: Report of TCP BBR — Data Link

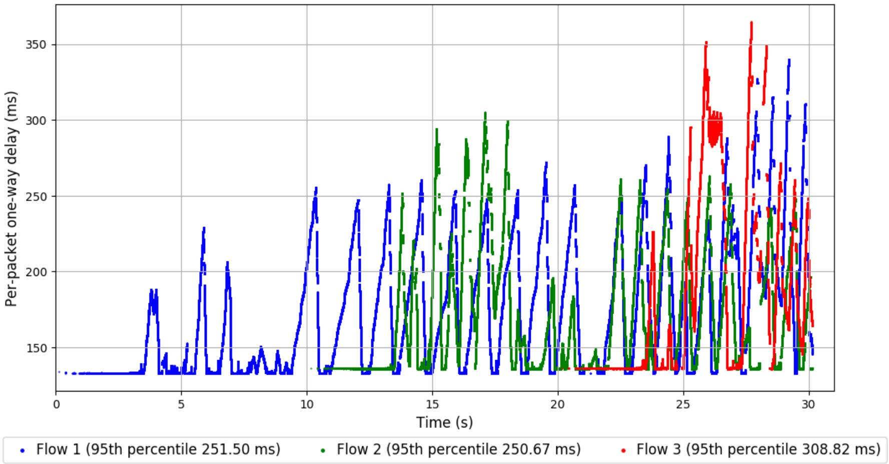




```
Run 3: Statistics of TCP BBR

Start at: 2019-12-11 21:56:19
End at: 2019-12-11 21:56:49
Local clock offset: -0.074 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-12-12 00:22:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1068.40 Mbit/s
95th percentile per-packet one-way delay: 258.350 ms
Loss rate: 5.62%
-- Flow 1:
Average throughput: 547.26 Mbit/s
95th percentile per-packet one-way delay: 251.505 ms
Loss rate: 3.64%
-- Flow 2:
Average throughput: 575.17 Mbit/s
95th percentile per-packet one-way delay: 250.666 ms
Loss rate: 5.42%
-- Flow 3:
Average throughput: 415.84 Mbit/s
95th percentile per-packet one-way delay: 308.817 ms
Loss rate: 13.20%
```

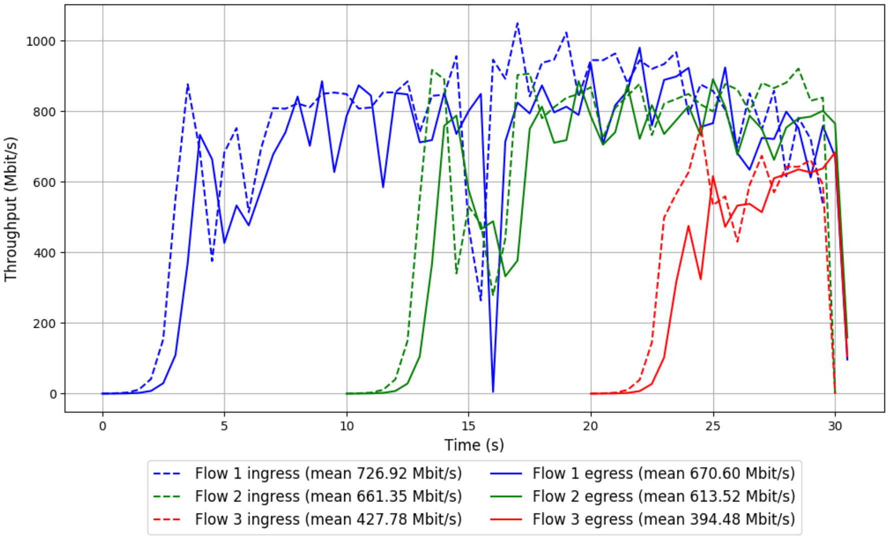
Run 3: Report of TCP BBR — Data Link

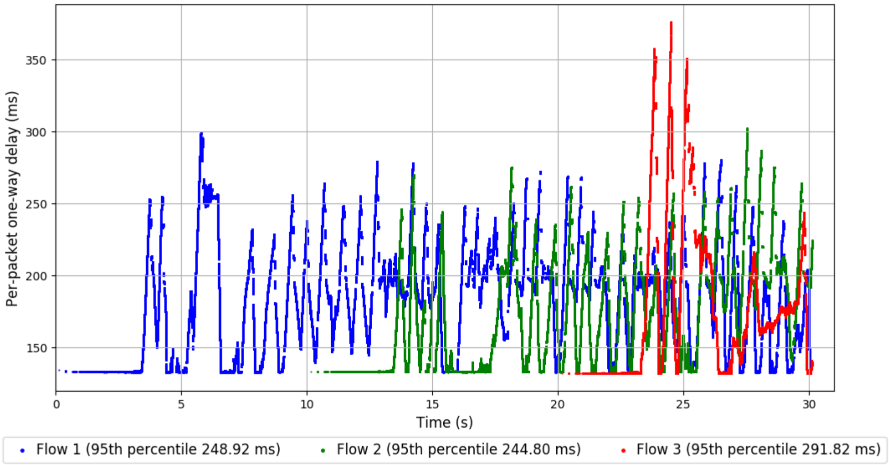




```
Run 4: Statistics of TCP BBR

Start at: 2019-12-11 22:39:37
End at: 2019-12-11 22:40:07
Local clock offset: -0.324 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-12-12 00:22:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1208.83 Mbit/s
95th percentile per-packet one-way delay: 250.914 ms
Loss rate: 7.78%
-- Flow 1:
Average throughput: 670.60 Mbit/s
95th percentile per-packet one-way delay: 248.922 ms
Loss rate: 7.95%
-- Flow 2:
Average throughput: 613.52 Mbit/s
95th percentile per-packet one-way delay: 244.801 ms
Loss rate: 7.38%
-- Flow 3:
Average throughput: 394.48 Mbit/s
95th percentile per-packet one-way delay: 291.824 ms
Loss rate: 8.13%
```

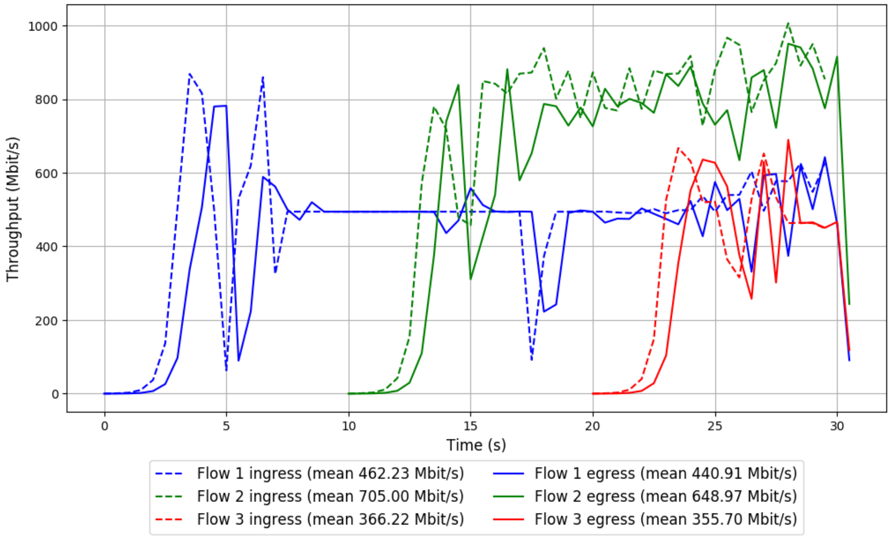
Run 4: Report of TCP BBR — Data Link

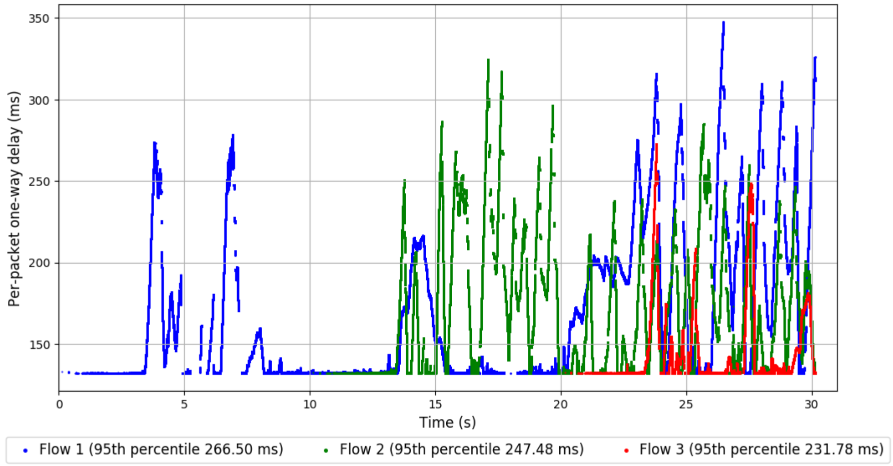




```
Run 5: Statistics of TCP BBR

Start at: 2019-12-11 23:23:12
End at: 2019-12-11 23:23:42
Local clock offset: -0.267 ms
Remote clock offset: -0.813 ms

# Below is generated by plot.py at 2019-12-12 00:22:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 991.66 Mbit/s
95th percentile per-packet one-way delay: 254.569 ms
Loss rate: 5.90%
-- Flow 1:
Average throughput: 440.91 Mbit/s
95th percentile per-packet one-way delay: 266.502 ms
Loss rate: 4.61%
-- Flow 2:
Average throughput: 648.97 Mbit/s
95th percentile per-packet one-way delay: 247.483 ms
Loss rate: 7.95%
-- Flow 3:
Average throughput: 355.70 Mbit/s
95th percentile per-packet one-way delay: 231.785 ms
Loss rate: 2.87%
```

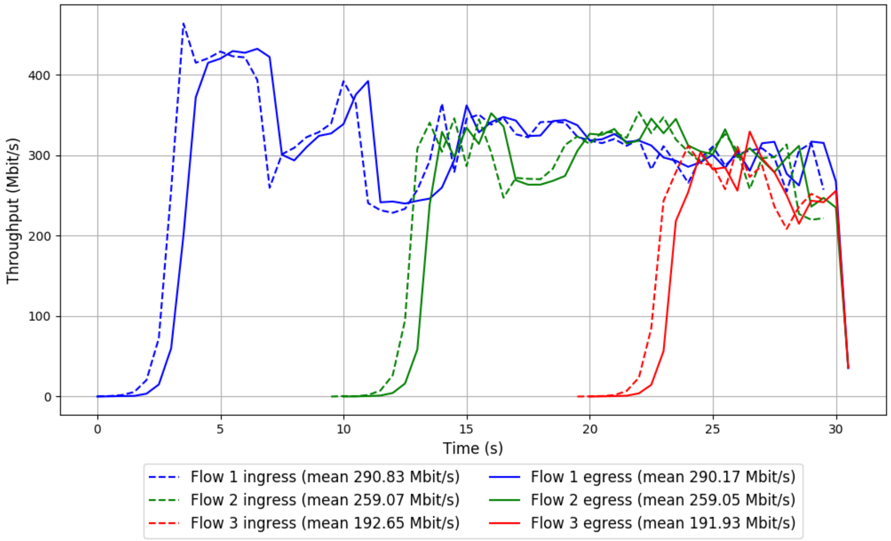
## Run 5: Report of TCP BBR — Data Link

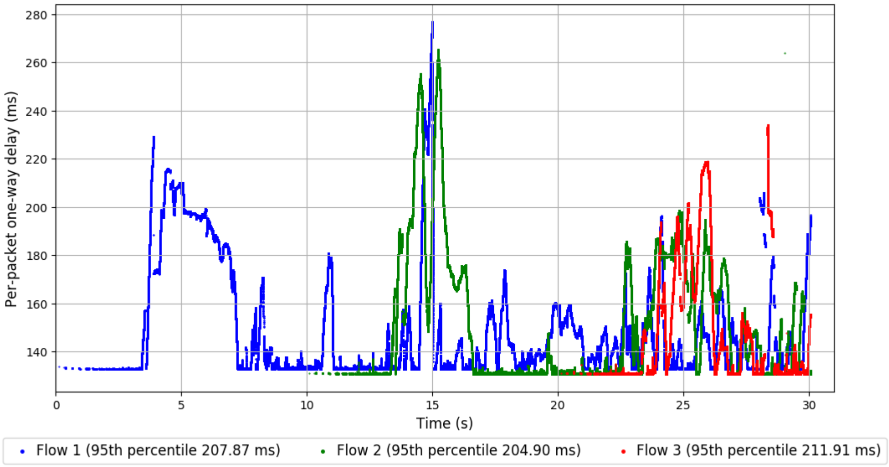




```
Run 1: Statistics of Copa

Start at: 2019-12-11 20:14:41
End at: 2019-12-11 20:15:11
Local clock offset: -0.425 ms
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2019-12-12 00:22:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 526.89 Mbit/s
95th percentile per-packet one-way delay: 207.854 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 290.17 Mbit/s
95th percentile per-packet one-way delay: 207.867 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 259.05 Mbit/s
95th percentile per-packet one-way delay: 204.895 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 191.93 Mbit/s
95th percentile per-packet one-way delay: 211.912 ms
Loss rate: 0.34%
```

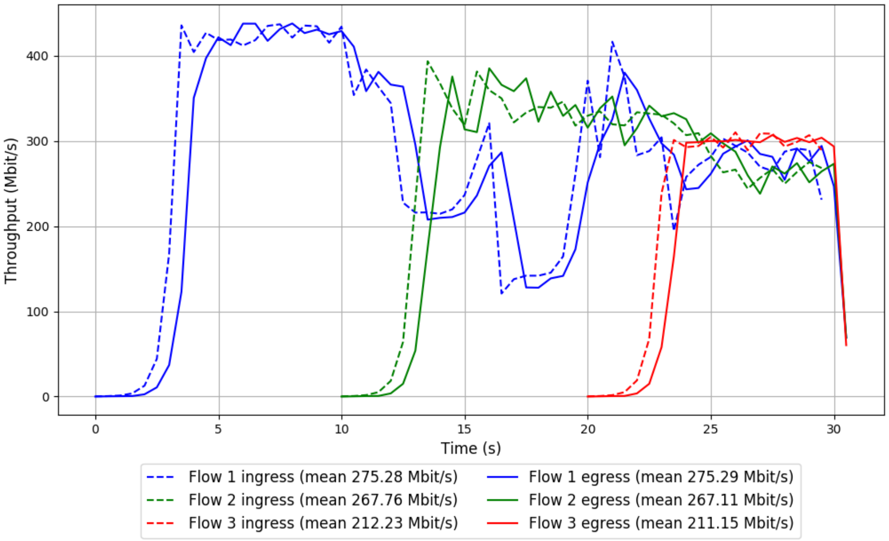
## Run 1: Report of Copa — Data Link

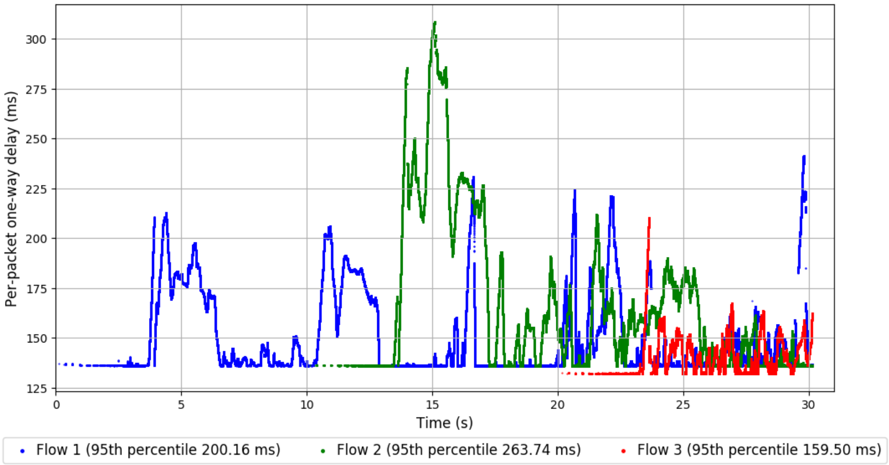




```
Run 2: Statistics of Copa

Start at: 2019-12-11 20:57:46
End at: 2019-12-11 20:58:16
Local clock offset: -0.267 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-12-12 00:22:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 523.35 Mbit/s
95th percentile per-packet one-way delay: 223.202 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 275.29 Mbit/s
95th percentile per-packet one-way delay: 200.157 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 267.11 Mbit/s
95th percentile per-packet one-way delay: 263.743 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 211.15 Mbit/s
95th percentile per-packet one-way delay: 159.500 ms
Loss rate: 0.46%
```

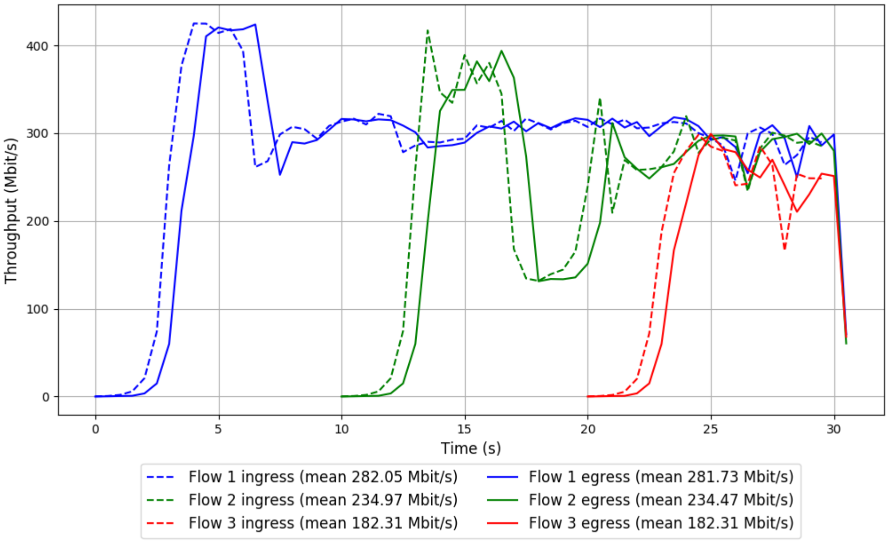
## Run 2: Report of Copa — Data Link

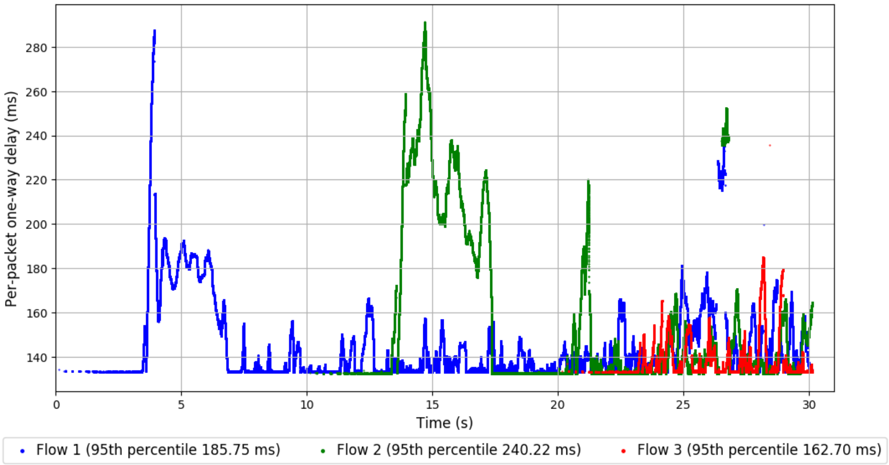




```
Run 3: Statistics of Copa

Start at: 2019-12-11 21:41:22
End at: 2019-12-11 21:41:52
Local clock offset: -0.575 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2019-12-12 00:22:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 498.54 Mbit/s
95th percentile per-packet one-way delay: 221.439 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 281.73 Mbit/s
95th percentile per-packet one-way delay: 185.747 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 234.47 Mbit/s
95th percentile per-packet one-way delay: 240.216 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 182.31 Mbit/s
95th percentile per-packet one-way delay: 162.696 ms
Loss rate: 0.00%
```

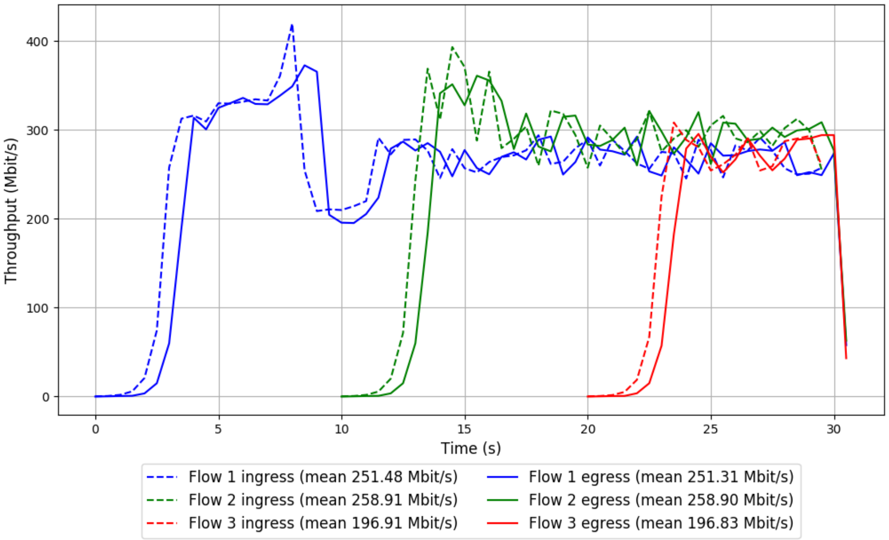
Run 3: Report of Copa — Data Link

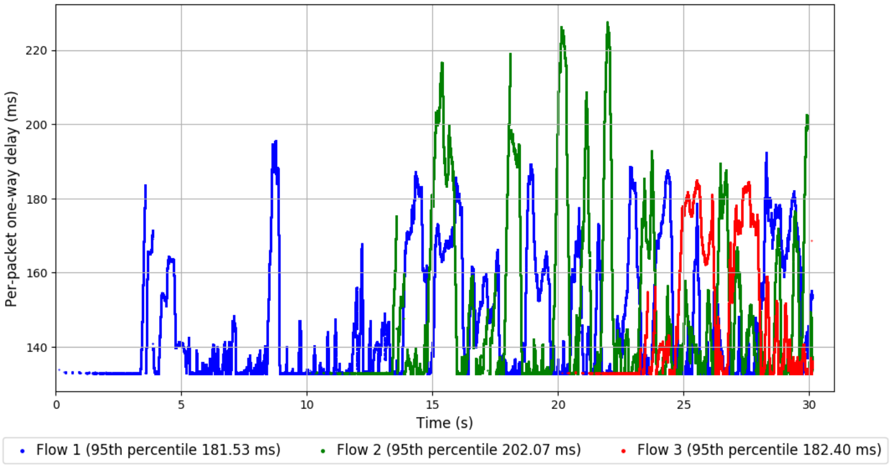




```
Run 4: Statistics of Copa

Start at: 2019-12-11 22:24:46
End at: 2019-12-11 22:25:16
Local clock offset: -0.319 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2019-12-12 00:33:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 489.17 Mbit/s
95th percentile per-packet one-way delay: 187.509 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 251.31 Mbit/s
95th percentile per-packet one-way delay: 181.529 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 258.90 Mbit/s
95th percentile per-packet one-way delay: 202.071 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 196.83 Mbit/s
95th percentile per-packet one-way delay: 182.397 ms
Loss rate: 0.03%
```

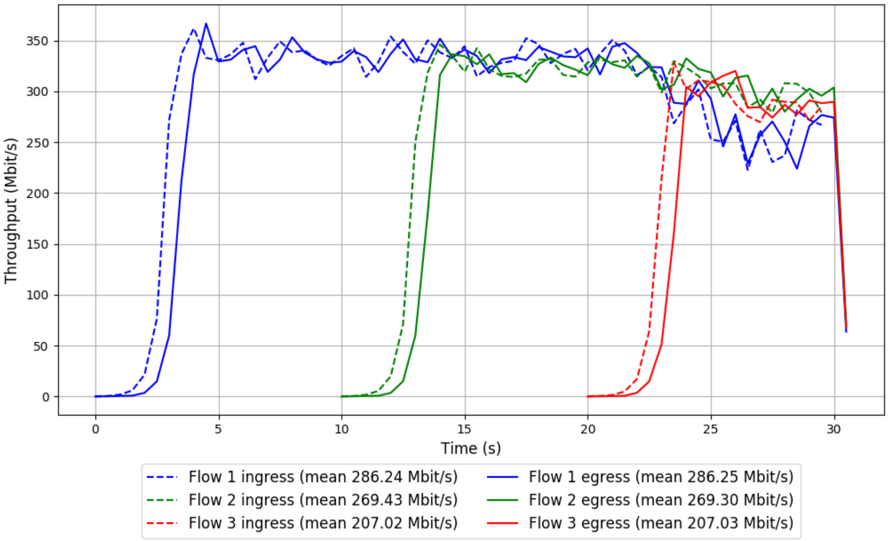
## Run 4: Report of Copa — Data Link

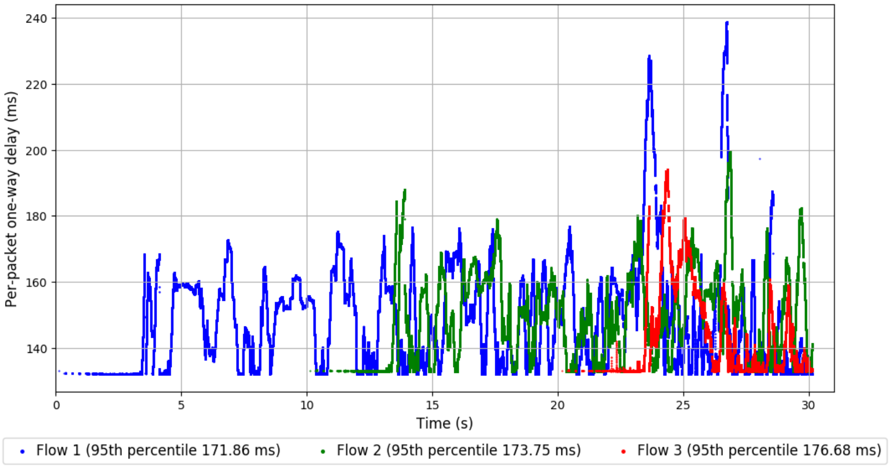




```
Run 5: Statistics of Copa

Start at: 2019-12-11 23:08:15
End at: 2019-12-11 23:08:45
Local clock offset: -0.209 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2019-12-12 00:35:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 534.32 Mbit/s
95th percentile per-packet one-way delay: 173.260 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 286.25 Mbit/s
95th percentile per-packet one-way delay: 171.858 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 269.30 Mbit/s
95th percentile per-packet one-way delay: 173.753 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 207.03 Mbit/s
95th percentile per-packet one-way delay: 176.678 ms
Loss rate: 0.00%
```

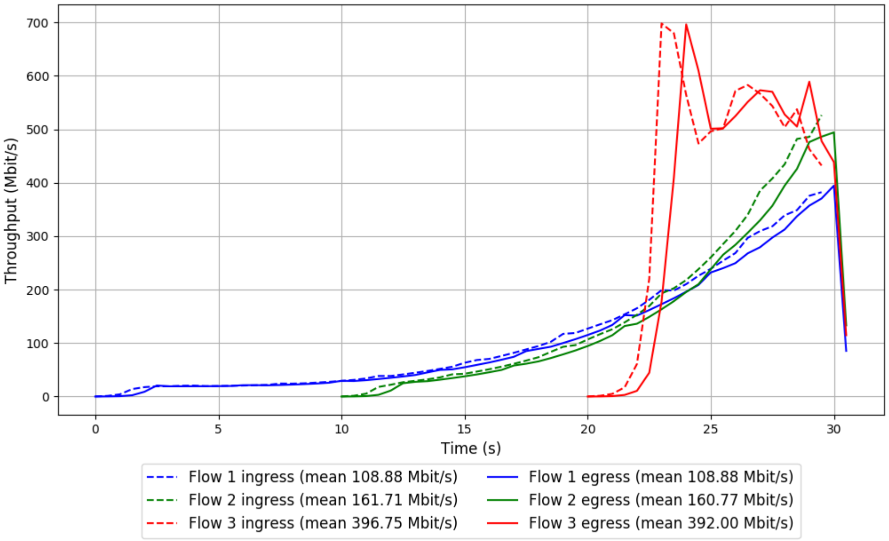
Run 5: Report of Copa — Data Link

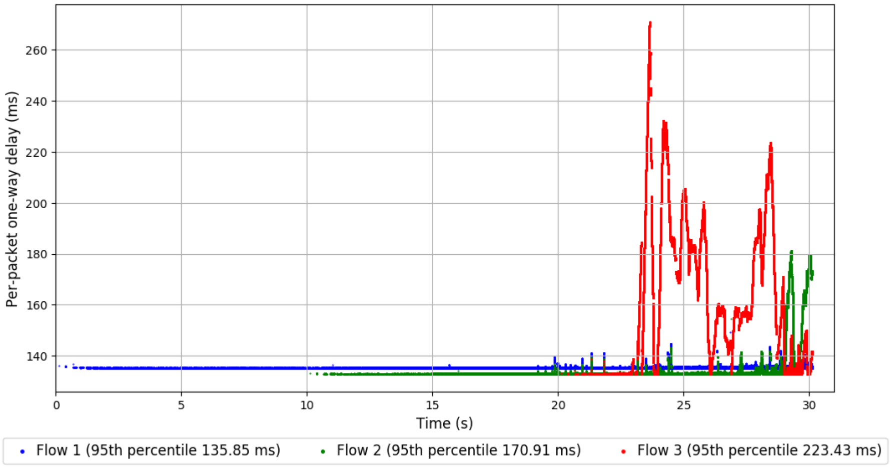




```
Run 1: Statistics of TCP Cubic

Start at: 2019-12-11 20:33:21
End at: 2019-12-11 20:33:51
Local clock offset: -0.185 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-12-12 00:35:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 346.57 Mbit/s
95th percentile per-packet one-way delay: 201.888 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 108.88 Mbit/s
95th percentile per-packet one-way delay: 135.852 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 160.77 Mbit/s
95th percentile per-packet one-way delay: 170.912 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 392.00 Mbit/s
95th percentile per-packet one-way delay: 223.431 ms
Loss rate: 1.17%
```

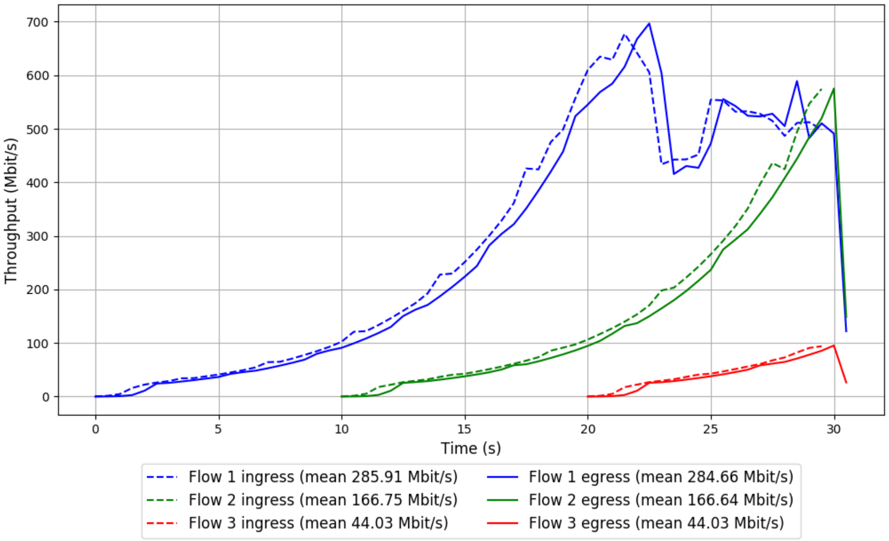
# Run 1: Report of TCP Cubic — Data Link

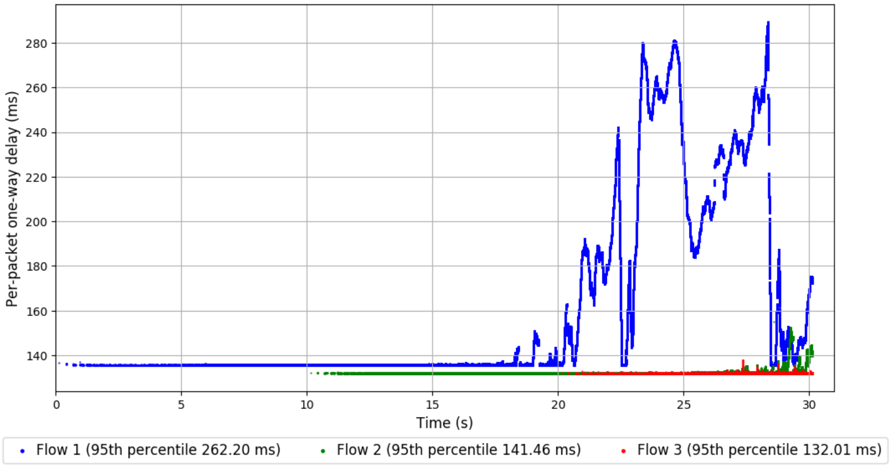




```
Run 2: Statistics of TCP Cubic

Start at: 2019-12-11 21:17:05
End at: 2019-12-11 21:17:35
Local clock offset: -0.256 ms
Remote clock offset: -0.415 ms

# Below is generated by plot.py at 2019-12-12 00:35:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 410.33 Mbit/s
95th percentile per-packet one-way delay: 257.424 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 284.66 Mbit/s
95th percentile per-packet one-way delay: 262.200 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 166.64 Mbit/s
95th percentile per-packet one-way delay: 141.461 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 44.03 Mbit/s
95th percentile per-packet one-way delay: 132.009 ms
Loss rate: 0.00%
```

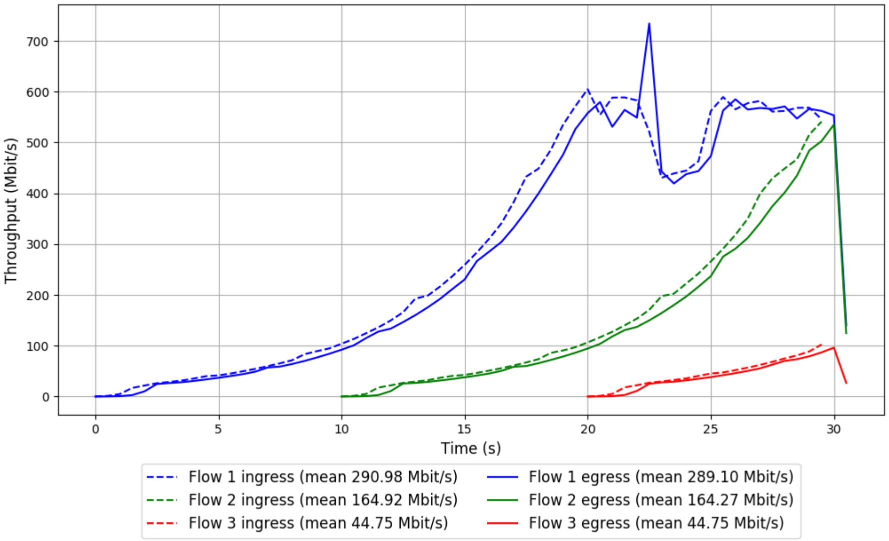
Run 2: Report of TCP Cubic — Data Link

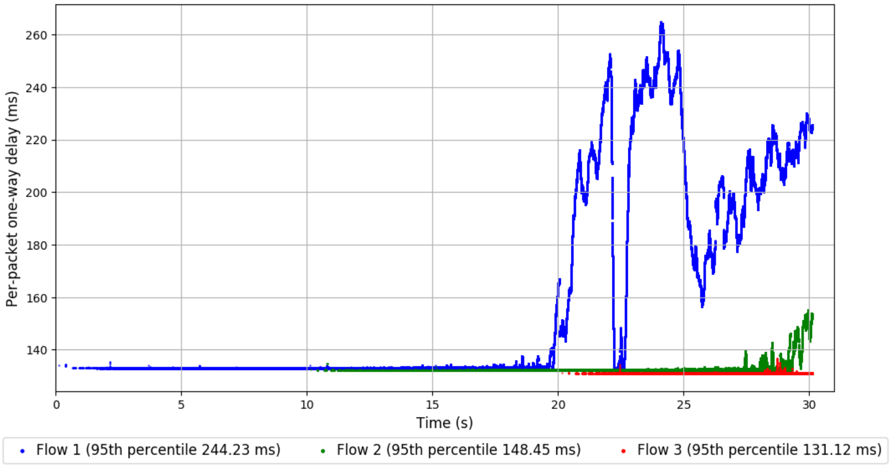




```
Run 3: Statistics of TCP Cubic

Start at: 2019-12-11 22:00:17
End at: 2019-12-11 22:00:47
Local clock offset: -0.094 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2019-12-12 00:35:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 413.42 Mbit/s
95th percentile per-packet one-way delay: 241.015 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 289.10 Mbit/s
95th percentile per-packet one-way delay: 244.234 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 164.27 Mbit/s
95th percentile per-packet one-way delay: 148.447 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 44.75 Mbit/s
95th percentile per-packet one-way delay: 131.118 ms
Loss rate: 0.00%
```

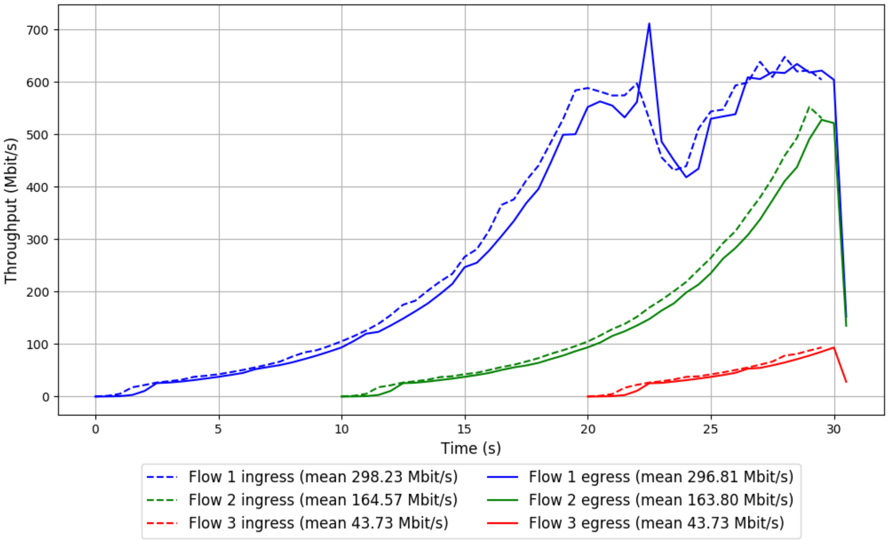
## Run 3: Report of TCP Cubic — Data Link

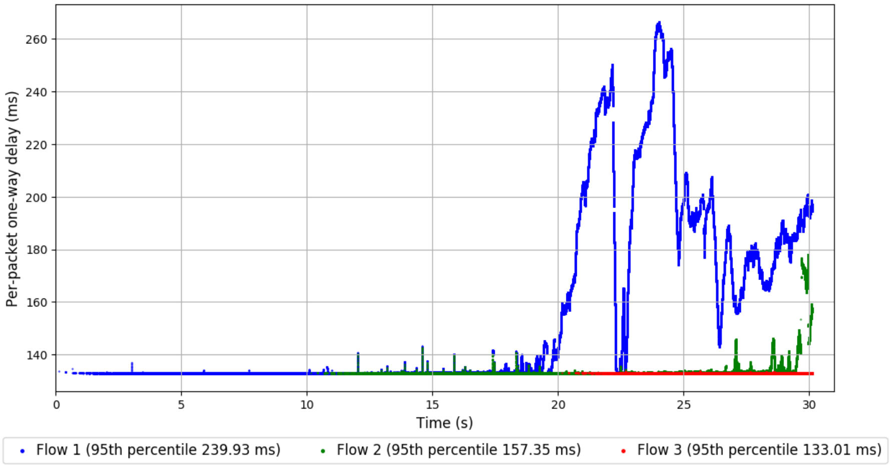




```
Run 4: Statistics of TCP Cubic

Start at: 2019-12-11 22:43:40
End at: 2019-12-11 22:44:10
Local clock offset: -0.204 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2019-12-12 00:35:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 420.47 Mbit/s
95th percentile per-packet one-way delay: 235.626 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 296.81 Mbit/s
95th percentile per-packet one-way delay: 239.932 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 163.80 Mbit/s
95th percentile per-packet one-way delay: 157.352 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 43.73 Mbit/s
95th percentile per-packet one-way delay: 133.008 ms
Loss rate: 0.00%
```

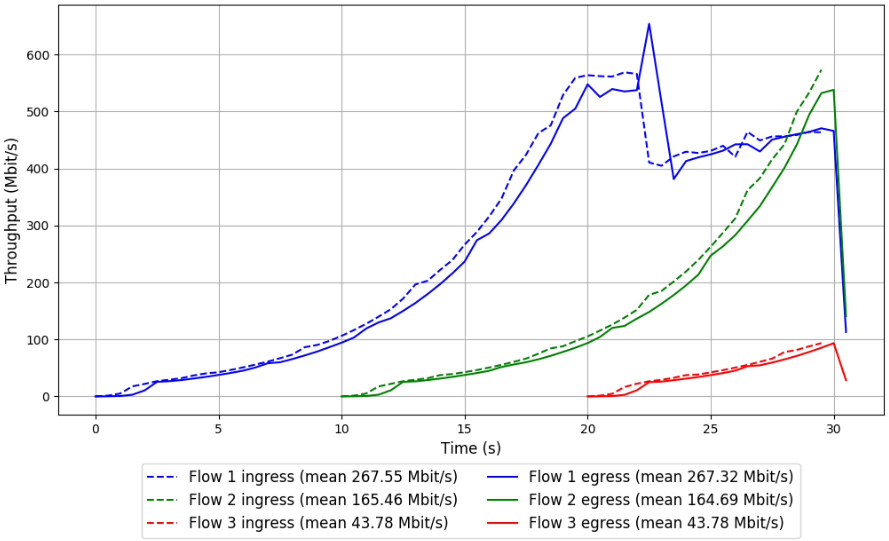
Run 4: Report of TCP Cubic — Data Link

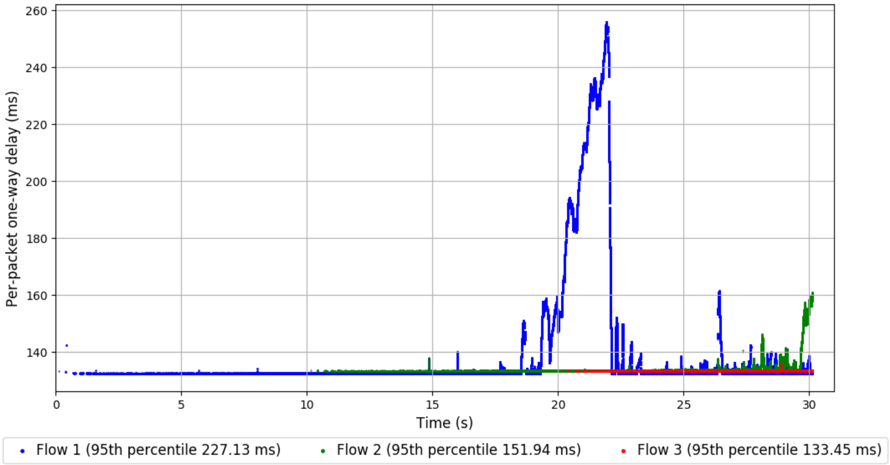




```
Run 5: Statistics of TCP Cubic

Start at: 2019-12-11 23:27:09
End at: 2019-12-11 23:27:39
Local clock offset: -0.224 ms
Remote clock offset: 0.333 ms

# Below is generated by plot.py at 2019-12-12 00:35:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 391.57 Mbit/s
95th percentile per-packet one-way delay: 210.195 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 267.32 Mbit/s
95th percentile per-packet one-way delay: 227.134 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 164.69 Mbit/s
95th percentile per-packet one-way delay: 151.938 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 43.78 Mbit/s
95th percentile per-packet one-way delay: 133.451 ms
Loss rate: 0.00%
```

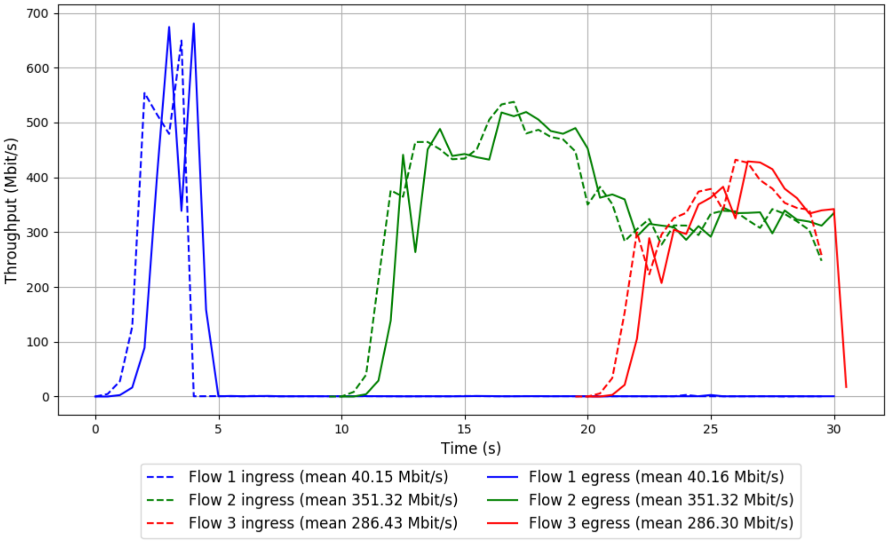
## Run 5: Report of TCP Cubic — Data Link

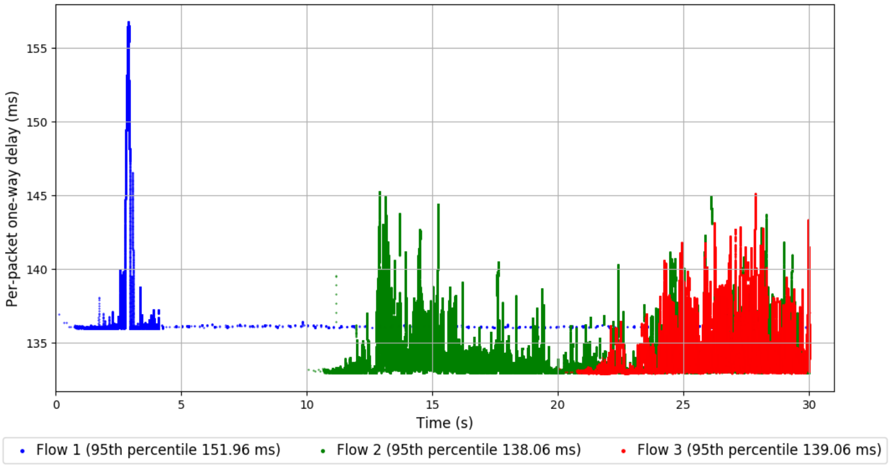




```
Run 1: Statistics of FillP

Start at: 2019-12-11 20:34:59
End at: 2019-12-11 20:35:29
Local clock offset: -0.271 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-12-12 00:35:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.65 Mbit/s
95th percentile per-packet one-way delay: 138.899 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.16 Mbit/s
95th percentile per-packet one-way delay: 151.961 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 351.32 Mbit/s
95th percentile per-packet one-way delay: 138.056 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 286.30 Mbit/s
95th percentile per-packet one-way delay: 139.057 ms
Loss rate: 0.01%
```

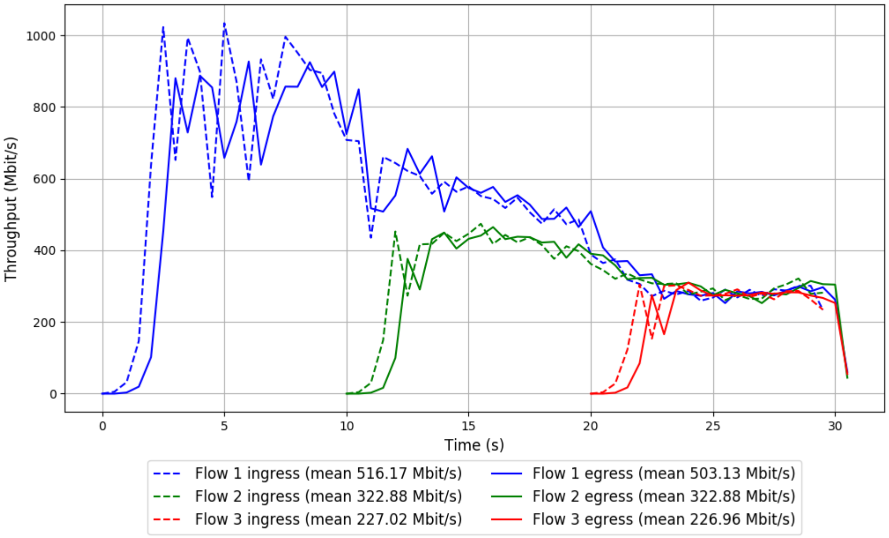
## Run 1: Report of FillP — Data Link

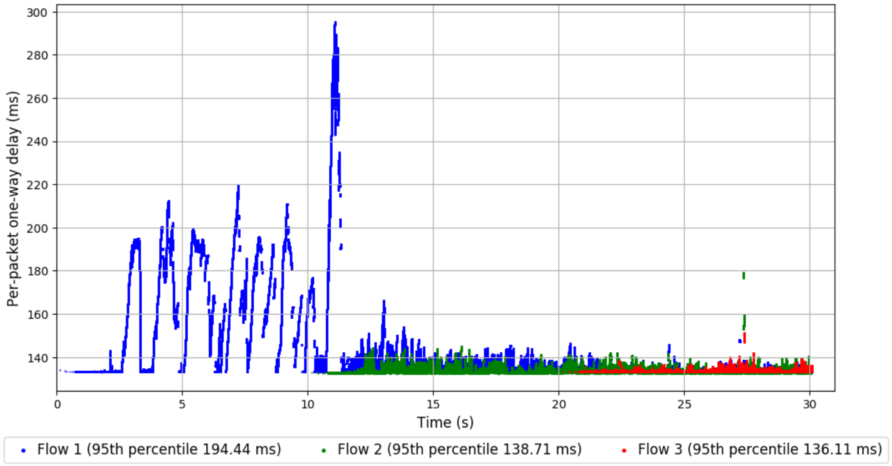




```
Run 2: Statistics of FillP

Start at: 2019-12-11 21:18:46
End at: 2019-12-11 21:19:16
Local clock offset: -0.594 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2019-12-12 00:41:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 792.86 Mbit/s
95th percentile per-packet one-way delay: 192.046 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 503.13 Mbit/s
95th percentile per-packet one-way delay: 194.445 ms
Loss rate: 2.53%
-- Flow 2:
Average throughput: 322.88 Mbit/s
95th percentile per-packet one-way delay: 138.705 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 226.96 Mbit/s
95th percentile per-packet one-way delay: 136.111 ms
Loss rate: 0.00%
```

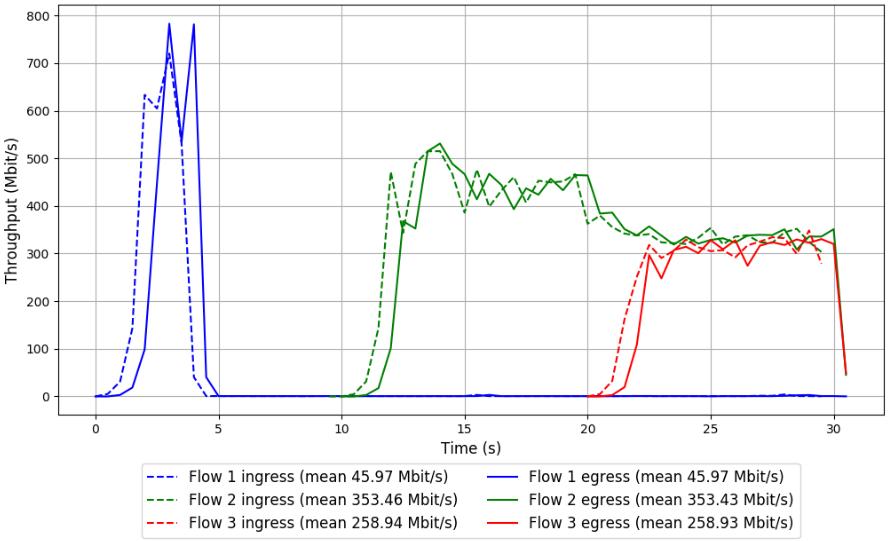
Run 2: Report of FillP — Data Link

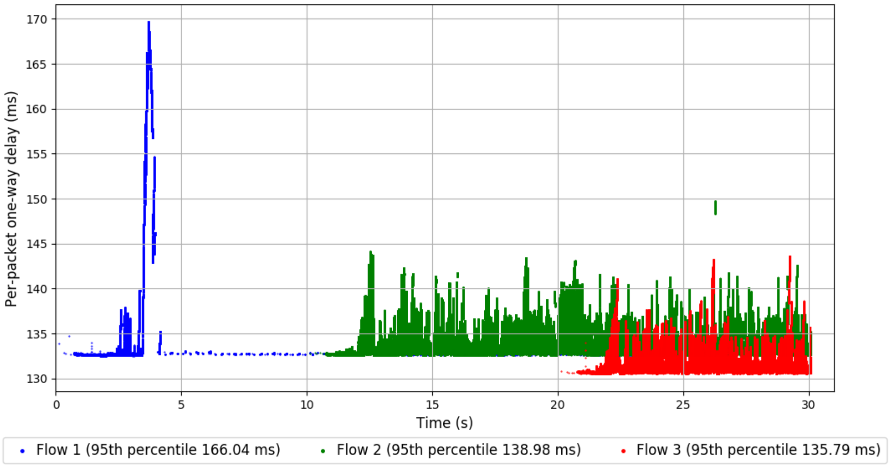




```
Run 3: Statistics of FillP

Start at: 2019-12-11 22:01:59
End at: 2019-12-11 22:02:29
Local clock offset: 0.26 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2019-12-12 00:41:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.35 Mbit/s
95th percentile per-packet one-way delay: 140.559 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.97 Mbit/s
95th percentile per-packet one-way delay: 166.036 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 353.43 Mbit/s
95th percentile per-packet one-way delay: 138.984 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 258.93 Mbit/s
95th percentile per-packet one-way delay: 135.789 ms
Loss rate: 0.00%
```

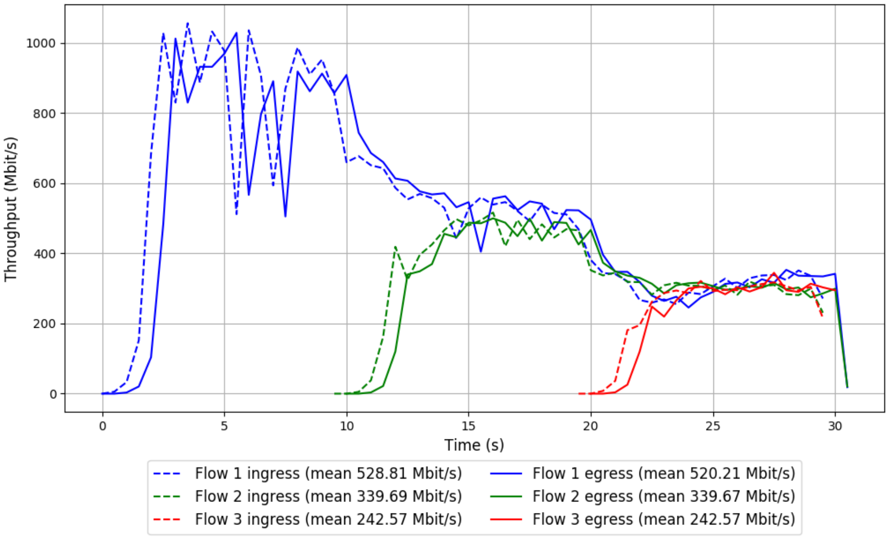
# Run 3: Report of FillP — Data Link

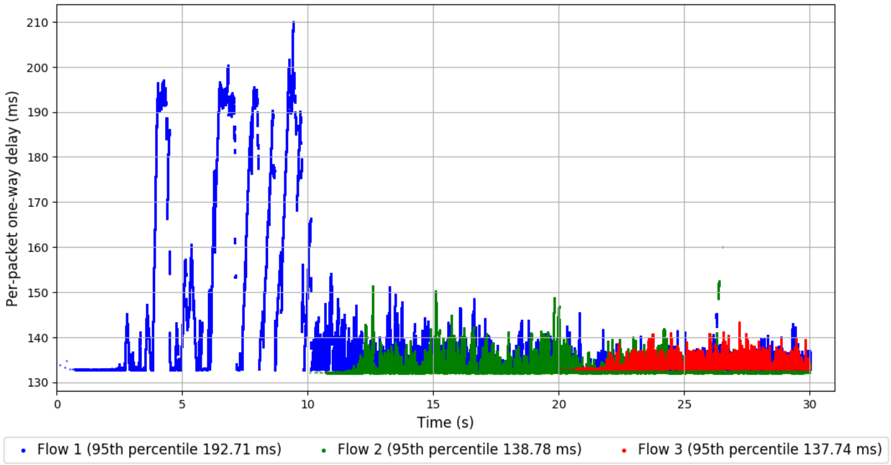




```
Run 4: Statistics of FillP

Start at: 2019-12-11 22:45:22
End at: 2019-12-11 22:45:52
Local clock offset: -0.265 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2019-12-12 00:45:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 827.18 Mbit/s
95th percentile per-packet one-way delay: 190.673 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 520.21 Mbit/s
95th percentile per-packet one-way delay: 192.714 ms
Loss rate: 1.63%
-- Flow 2:
Average throughput: 339.67 Mbit/s
95th percentile per-packet one-way delay: 138.779 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 242.57 Mbit/s
95th percentile per-packet one-way delay: 137.743 ms
Loss rate: 0.00%
```

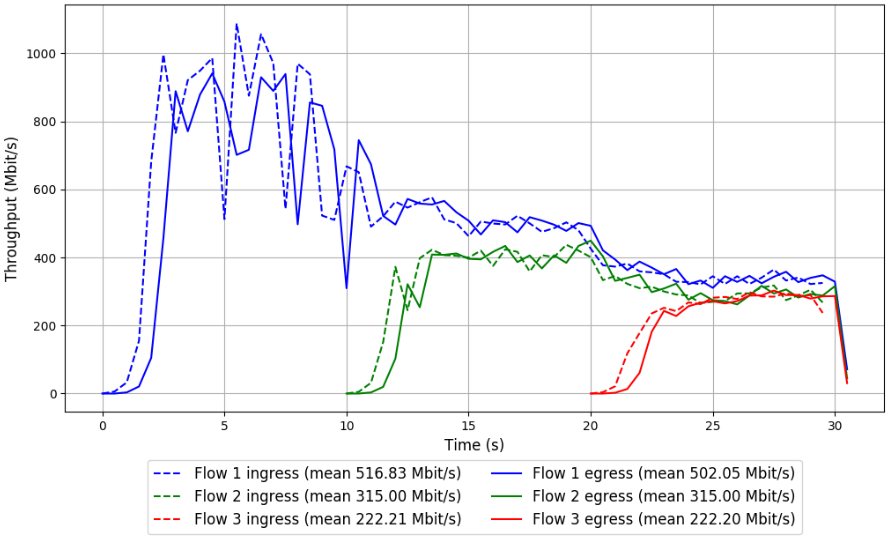
## Run 4: Report of FillP — Data Link

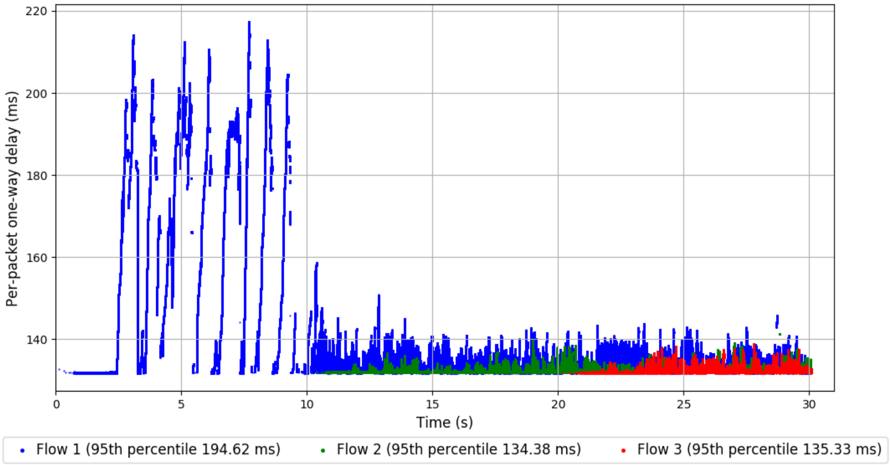




```
Run 5: Statistics of FillP

Start at: 2019-12-11 23:28:49
End at: 2019-12-11 23:29:19
Local clock offset: 0.05 ms
Remote clock offset: -0.83 ms

# Below is generated by plot.py at 2019-12-12 00:45:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 785.14 Mbit/s
95th percentile per-packet one-way delay: 190.718 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 502.05 Mbit/s
95th percentile per-packet one-way delay: 194.623 ms
Loss rate: 2.86%
-- Flow 2:
Average throughput: 315.00 Mbit/s
95th percentile per-packet one-way delay: 134.378 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 222.20 Mbit/s
95th percentile per-packet one-way delay: 135.333 ms
Loss rate: 0.00%
```

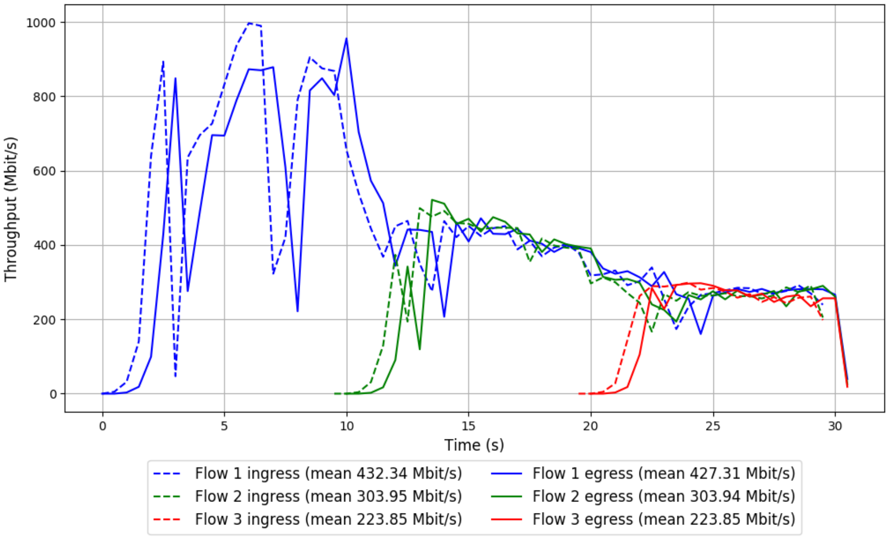
## Run 5: Report of FillP — Data Link

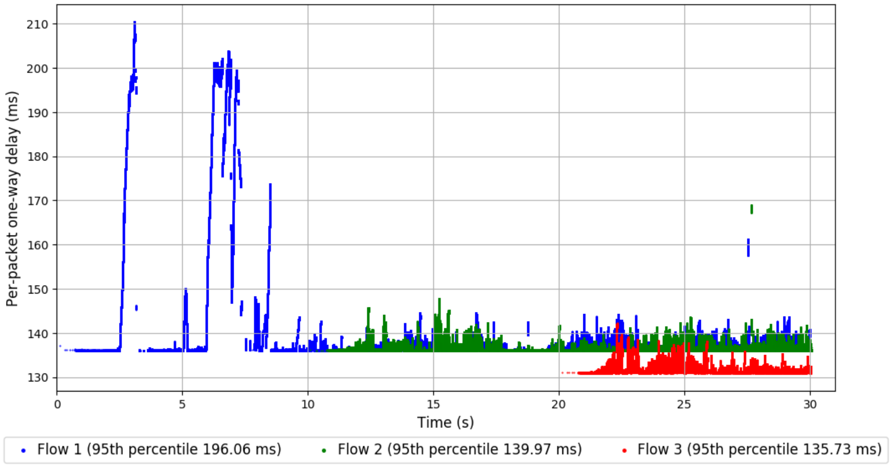




```
Run 1: Statistics of FillP-Sheep

Start at: 2019-12-11 20:44:09
End at: 2019-12-11 20:44:39
Local clock offset: -0.228 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2019-12-12 00:45:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 704.24 Mbit/s
95th percentile per-packet one-way delay: 184.506 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 427.31 Mbit/s
95th percentile per-packet one-way delay: 196.057 ms
Loss rate: 1.17%
-- Flow 2:
Average throughput: 303.94 Mbit/s
95th percentile per-packet one-way delay: 139.973 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 223.85 Mbit/s
95th percentile per-packet one-way delay: 135.734 ms
Loss rate: 0.00%
```

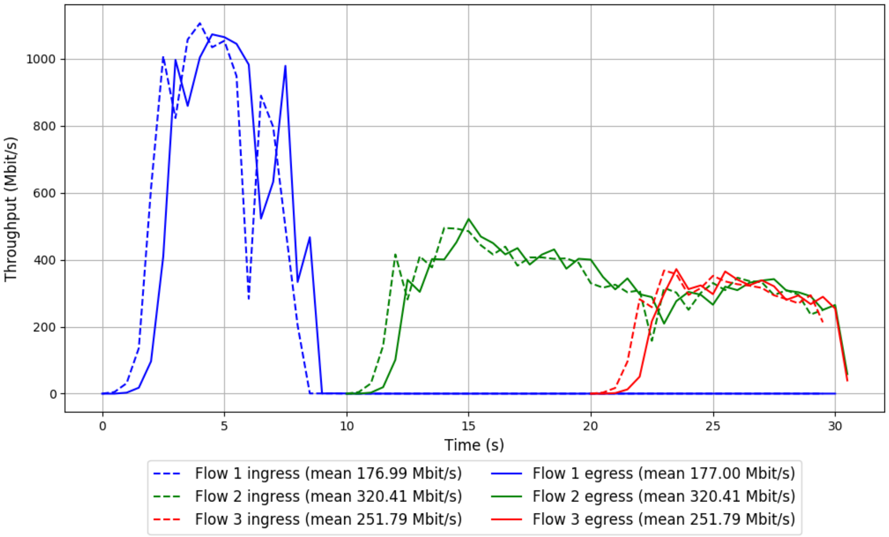
Run 1: Report of FillP-Sheep — Data Link

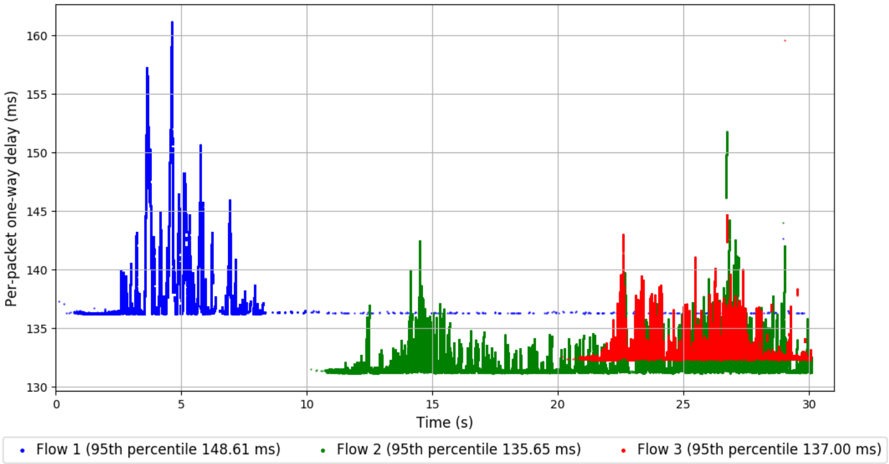




```
Run 2: Statistics of FillP-Sheep

Start at: 2019-12-11 21:27:55
End at: 2019-12-11 21:28:25
Local clock offset: -0.573 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-12-12 00:45:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 471.95 Mbit/s
95th percentile per-packet one-way delay: 143.729 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 177.00 Mbit/s
95th percentile per-packet one-way delay: 148.611 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 320.41 Mbit/s
95th percentile per-packet one-way delay: 135.651 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 251.79 Mbit/s
95th percentile per-packet one-way delay: 137.005 ms
Loss rate: 0.00%
```

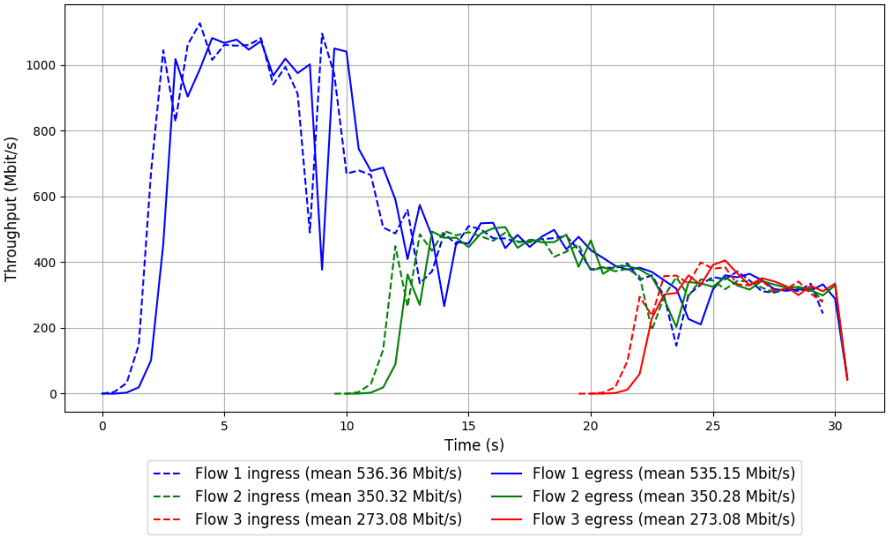
## Run 2: Report of FillP-Sheep — Data Link

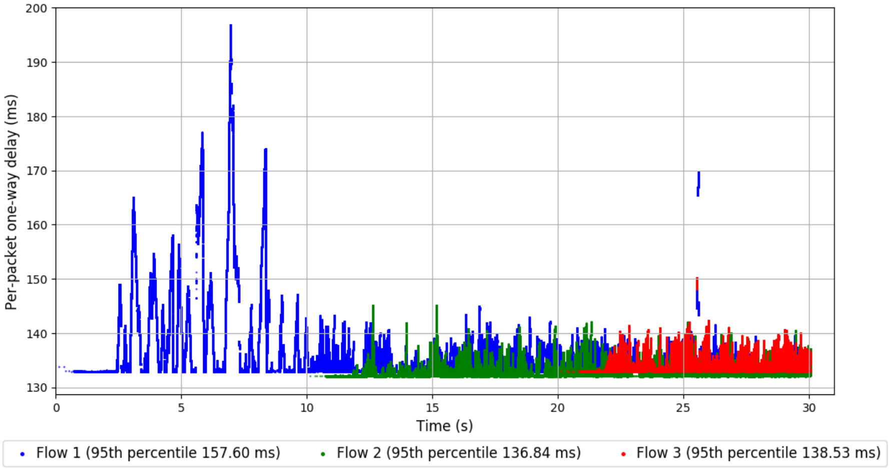




```
Run 3: Statistics of FillP-Sheep

Start at: 2019-12-11 22:11:02
End at: 2019-12-11 22:11:32
Local clock offset: -0.235 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-12-12 00:52:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 859.06 Mbit/s
95th percentile per-packet one-way delay: 151.619 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 535.15 Mbit/s
95th percentile per-packet one-way delay: 157.596 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 350.28 Mbit/s
95th percentile per-packet one-way delay: 136.840 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 273.08 Mbit/s
95th percentile per-packet one-way delay: 138.535 ms
Loss rate: 0.00%
```

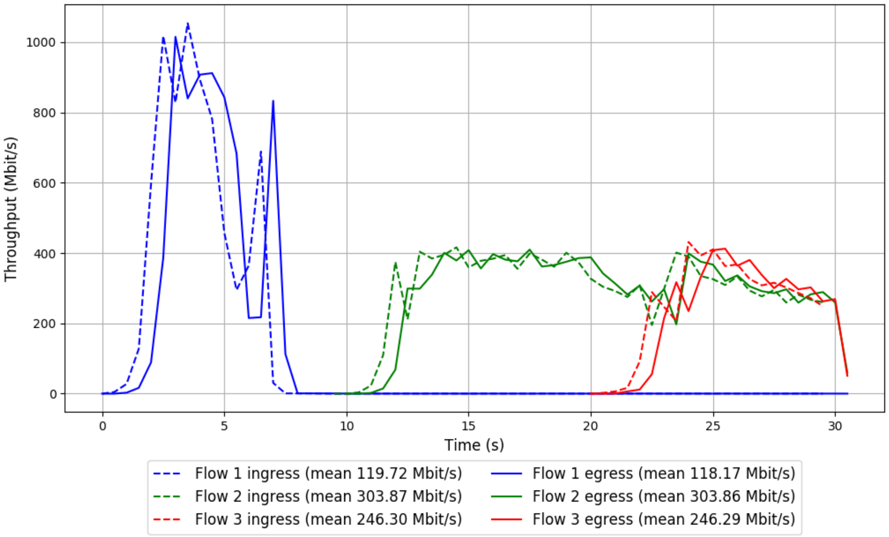
## Run 3: Report of FillP-Sheep — Data Link

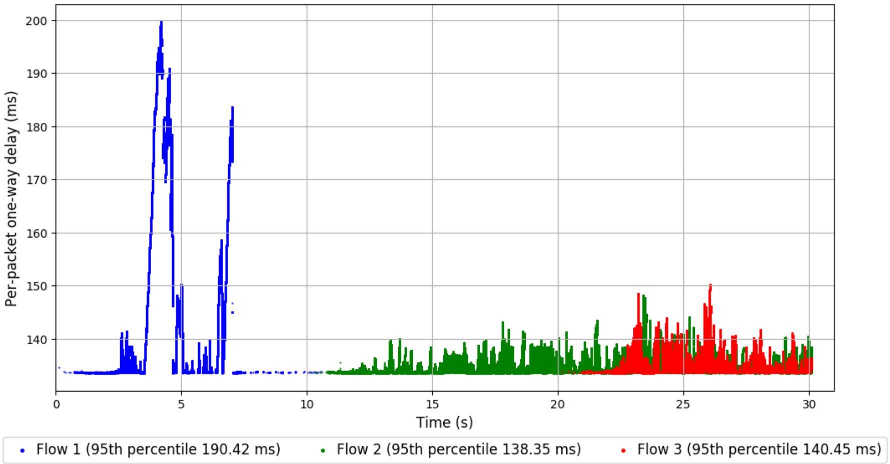




```
Run 4: Statistics of FillP-Sheep

Start at: 2019-12-11 22:54:57
End at: 2019-12-11 22:55:27
Local clock offset: -0.133 ms
Remote clock offset: 0.787 ms

# Below is generated by plot.py at 2019-12-12 00:52:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.09 Mbit/s
95th percentile per-packet one-way delay: 176.279 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 118.17 Mbit/s
95th percentile per-packet one-way delay: 190.422 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 303.86 Mbit/s
95th percentile per-packet one-way delay: 138.349 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 246.29 Mbit/s
95th percentile per-packet one-way delay: 140.449 ms
Loss rate: 0.00%
```

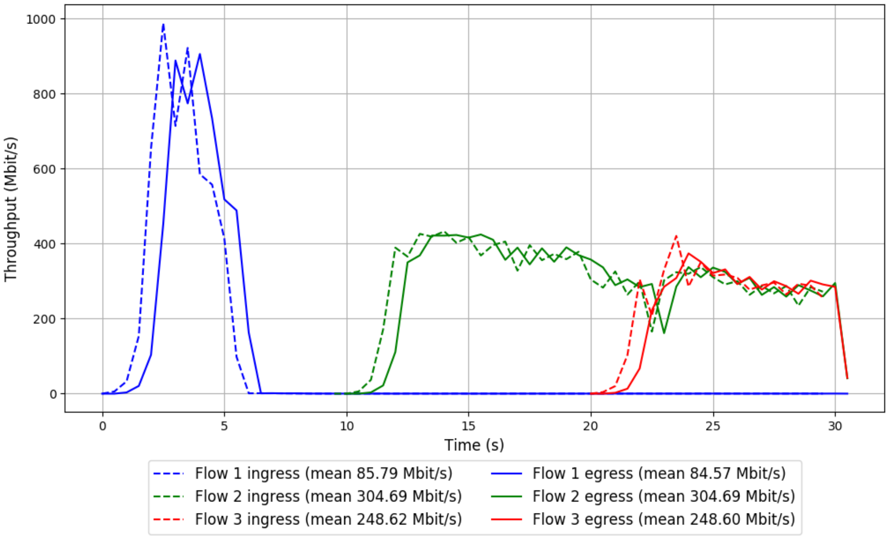
## Run 4: Report of FillP-Sheep — Data Link

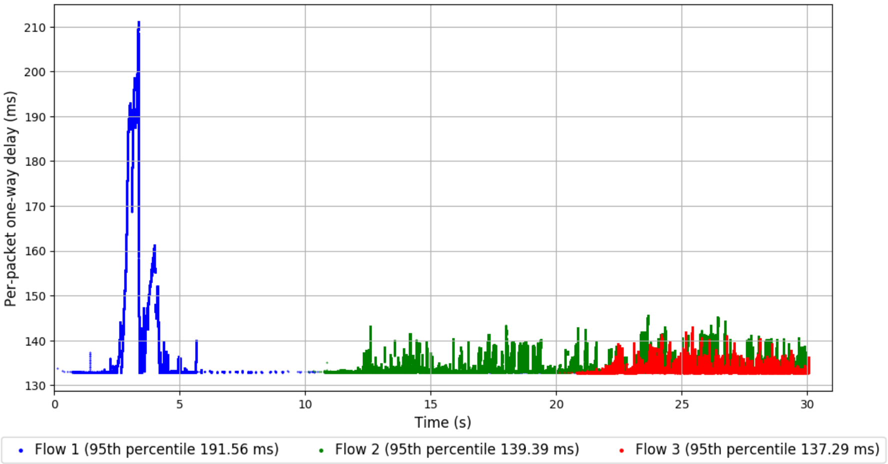




```
Run 5: Statistics of FillP-Sheep

Start at: 2019-12-11 23:38:14
End at: 2019-12-11 23:38:44
Local clock offset: -0.155 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2019-12-12 00:52:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.92 Mbit/s
95th percentile per-packet one-way delay: 155.646 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 84.57 Mbit/s
95th percentile per-packet one-way delay: 191.562 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 304.69 Mbit/s
95th percentile per-packet one-way delay: 139.393 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 248.60 Mbit/s
95th percentile per-packet one-way delay: 137.295 ms
Loss rate: 0.00%
```

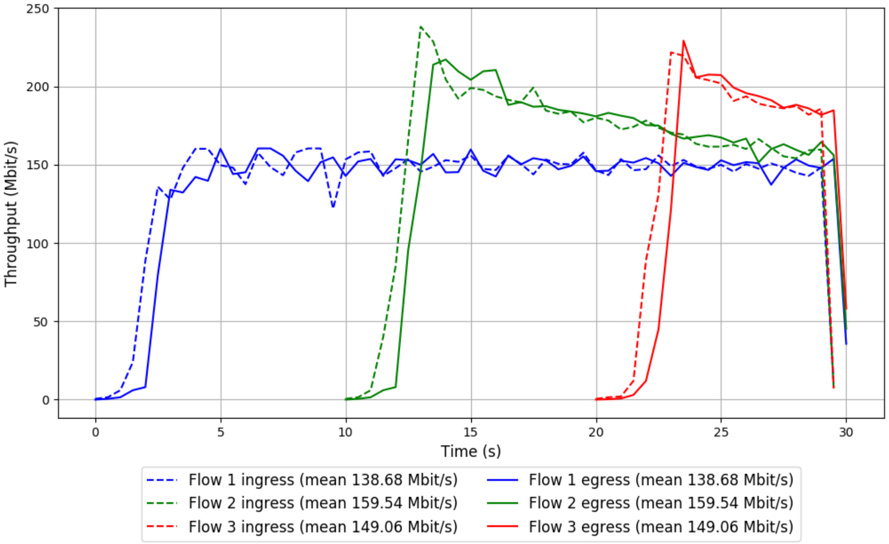
Run 5: Report of FillP-Sheep — Data Link

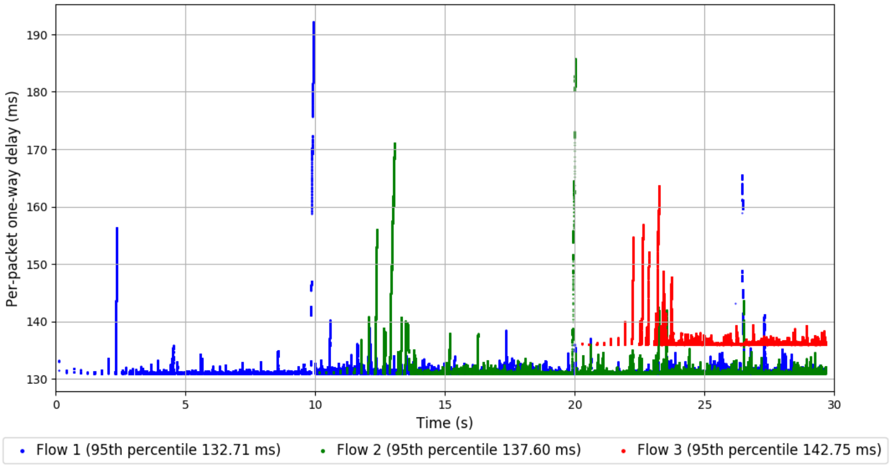




```
Run 1: Statistics of Indigo

Start at: 2019-12-11 20:31:32
End at: 2019-12-11 20:32:02
Local clock offset: -0.304 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-12-12 00:52:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 291.44 Mbit/s
95th percentile per-packet one-way delay: 137.114 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 138.68 Mbit/s
95th percentile per-packet one-way delay: 132.713 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 159.54 Mbit/s
95th percentile per-packet one-way delay: 137.596 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 149.06 Mbit/s
95th percentile per-packet one-way delay: 142.753 ms
Loss rate: 0.00%
```

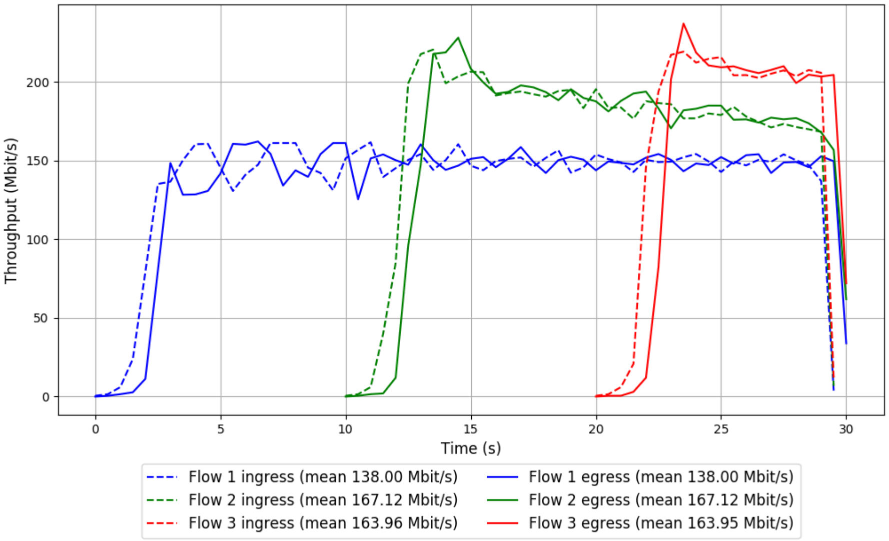
Run 1: Report of Indigo — Data Link

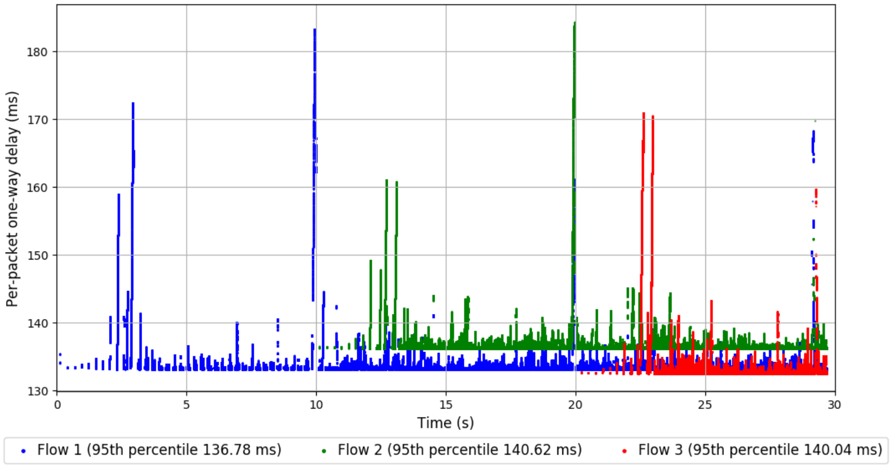




```
Run 2: Statistics of Indigo

Start at: 2019-12-11 21:15:16
End at: 2019-12-11 21:15:46
Local clock offset: -0.575 ms
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2019-12-12 00:52:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.94 Mbit/s
95th percentile per-packet one-way delay: 139.278 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 138.00 Mbit/s
95th percentile per-packet one-way delay: 136.783 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 167.12 Mbit/s
95th percentile per-packet one-way delay: 140.624 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 163.95 Mbit/s
95th percentile per-packet one-way delay: 140.041 ms
Loss rate: 0.00%
```

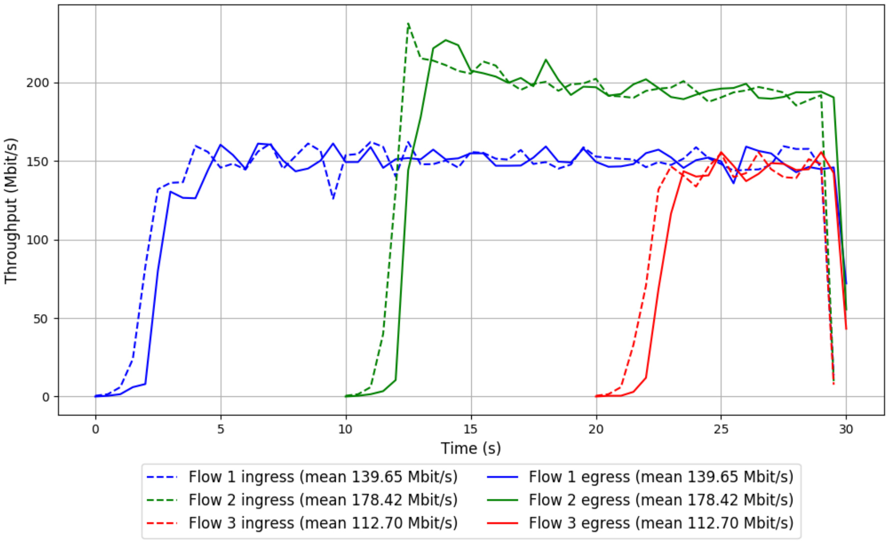
Run 2: Report of Indigo — Data Link

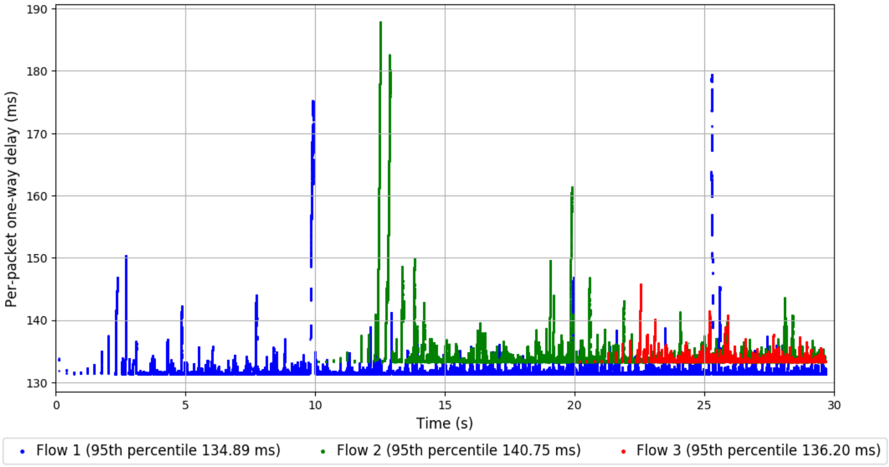




```
Run 3: Statistics of Indigo

Start at: 2019-12-11 21:58:29
End at: 2019-12-11 21:58:59
Local clock offset: -0.554 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2019-12-12 00:53:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.73 Mbit/s
95th percentile per-packet one-way delay: 137.454 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 139.65 Mbit/s
95th percentile per-packet one-way delay: 134.888 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 178.42 Mbit/s
95th percentile per-packet one-way delay: 140.753 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 112.70 Mbit/s
95th percentile per-packet one-way delay: 136.201 ms
Loss rate: 0.00%
```

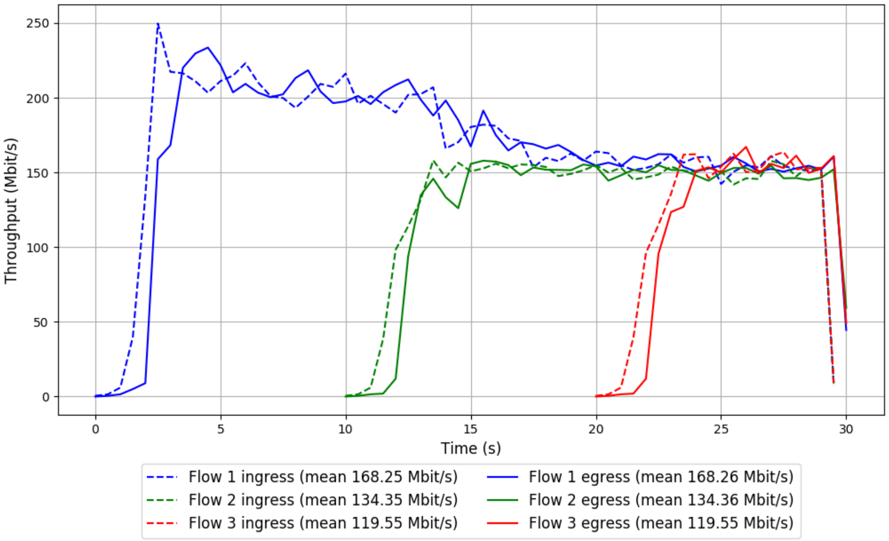
Run 3: Report of Indigo — Data Link

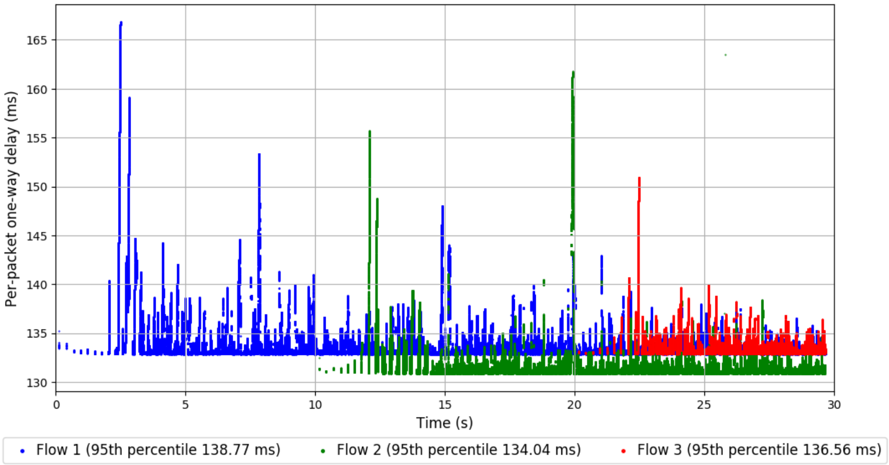




```
Run 4: Statistics of Indigo

Start at: 2019-12-11 22:41:51
End at: 2019-12-11 22:42:21
Local clock offset: -0.269 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-12-12 00:54:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 295.51 Mbit/s
95th percentile per-packet one-way delay: 137.372 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 168.26 Mbit/s
95th percentile per-packet one-way delay: 138.770 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 134.36 Mbit/s
95th percentile per-packet one-way delay: 134.043 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 119.55 Mbit/s
95th percentile per-packet one-way delay: 136.555 ms
Loss rate: 0.00%
```

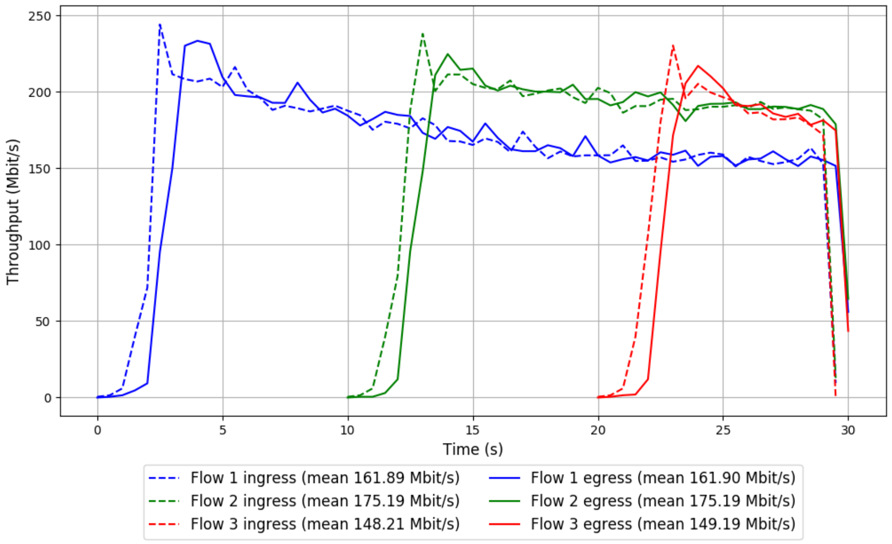
Run 4: Report of Indigo — Data Link

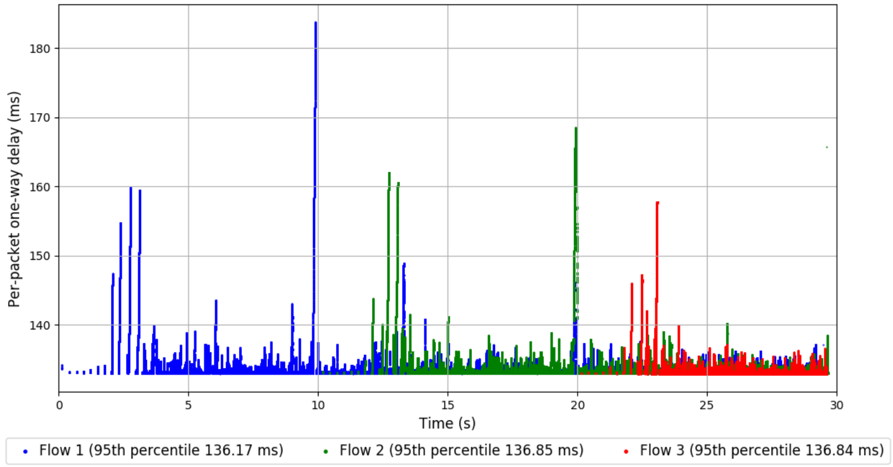




```
Run 5: Statistics of Indigo

Start at: 2019-12-11 23:25:18
End at: 2019-12-11 23:25:48
Local clock offset: -0.261 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2019-12-12 00:56:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.37 Mbit/s
95th percentile per-packet one-way delay: 136.515 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 161.90 Mbit/s
95th percentile per-packet one-way delay: 136.174 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 175.19 Mbit/s
95th percentile per-packet one-way delay: 136.847 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 149.19 Mbit/s
95th percentile per-packet one-way delay: 136.841 ms
Loss rate: 0.00%
```

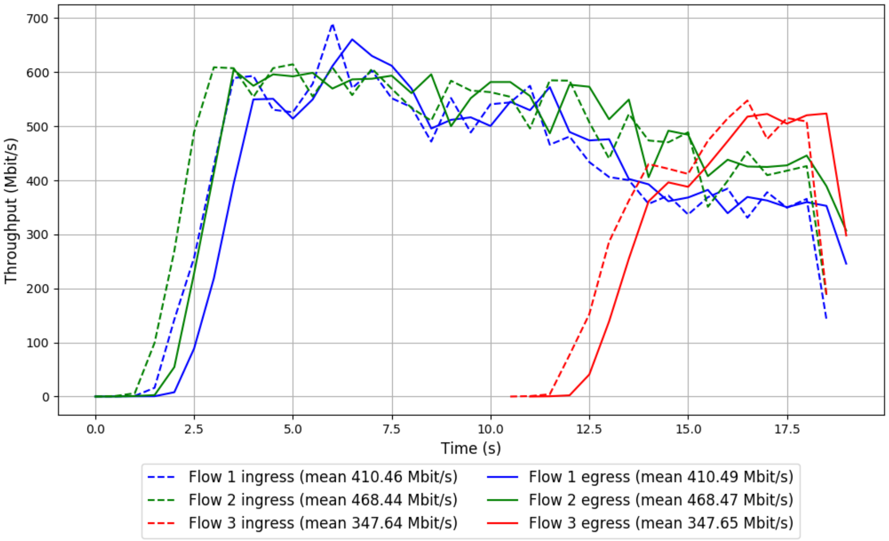
## Run 5: Report of Indigo — Data Link

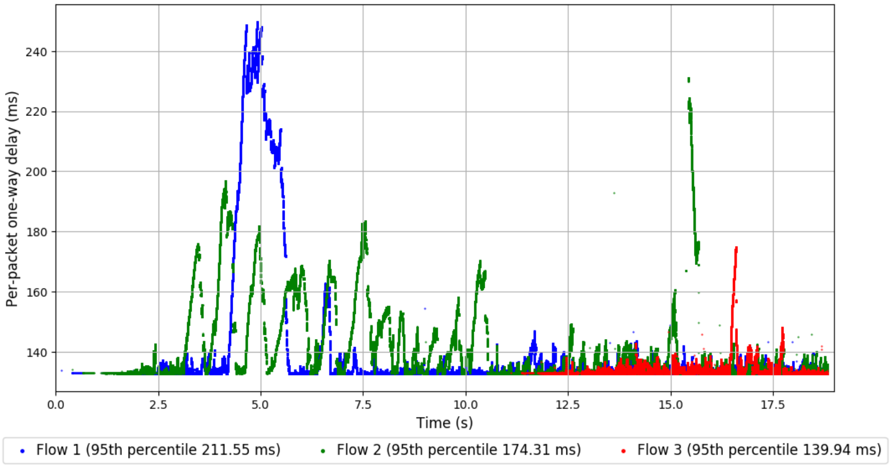




```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-12-11 20:18:49
End at: 2019-12-11 20:19:19
Local clock offset: -0.37 ms
Remote clock offset: -0.039 ms
```

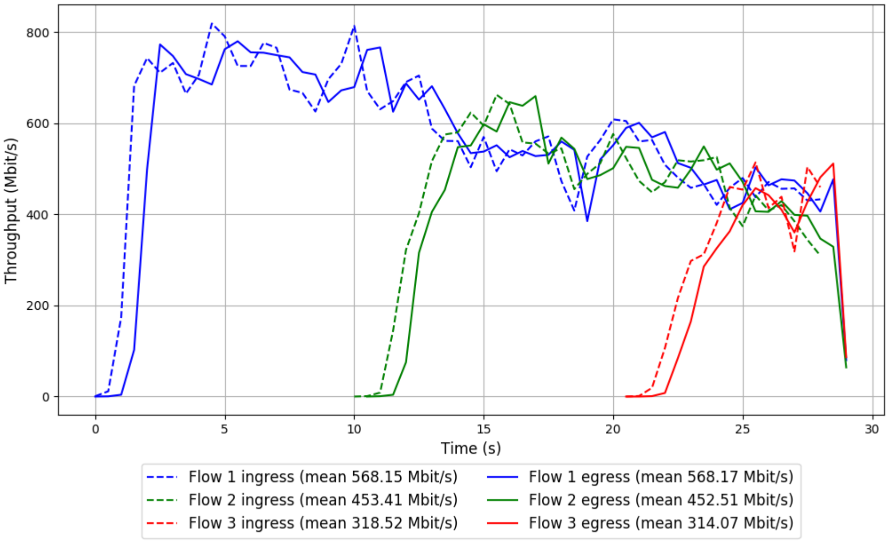
Run 1: Report of Indigo-MusesC3 — Data Link

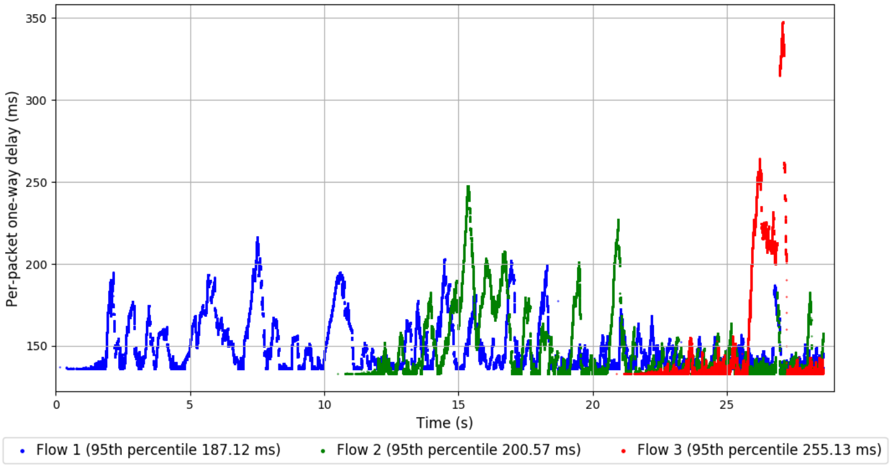




```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-12-11 21:01:57
End at: 2019-12-11 21:02:27
Local clock offset: -0.226 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-12-12 01:01:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 940.57 Mbit/s
95th percentile per-packet one-way delay: 194.669 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 568.17 Mbit/s
95th percentile per-packet one-way delay: 187.120 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 452.51 Mbit/s
95th percentile per-packet one-way delay: 200.569 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 314.07 Mbit/s
95th percentile per-packet one-way delay: 255.135 ms
Loss rate: 1.40%
```

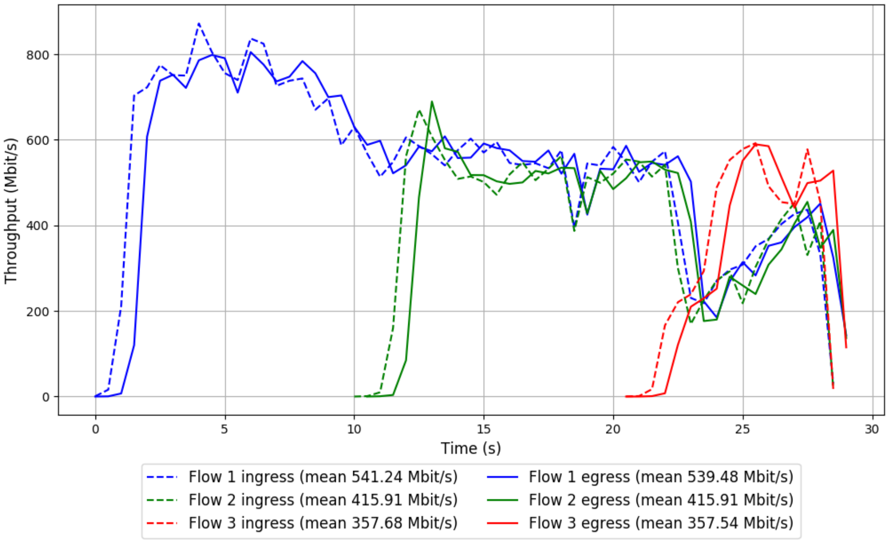
## Run 2: Report of Indigo-MusesC3 — Data Link

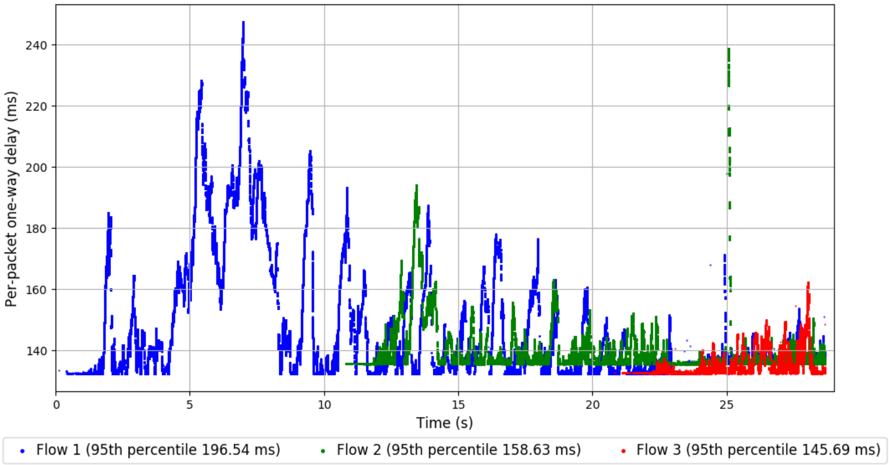




```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-12-11 21:45:22
End at: 2019-12-11 21:45:52
Local clock offset: 0.205 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-12-12 01:07:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 901.77 Mbit/s
95th percentile per-packet one-way delay: 190.723 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 539.48 Mbit/s
95th percentile per-packet one-way delay: 196.542 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 415.91 Mbit/s
95th percentile per-packet one-way delay: 158.626 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 357.54 Mbit/s
95th percentile per-packet one-way delay: 145.694 ms
Loss rate: 0.03%
```

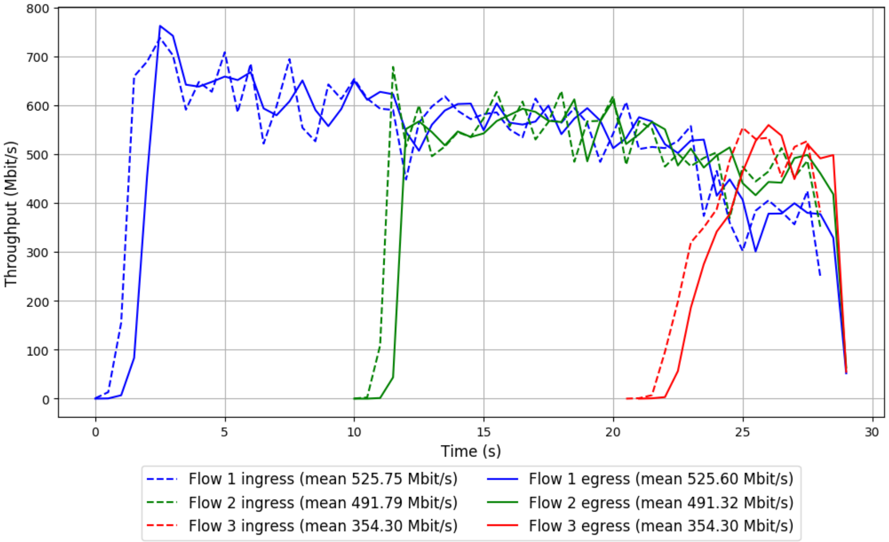
Run 3: Report of Indigo-MusesC3 — Data Link

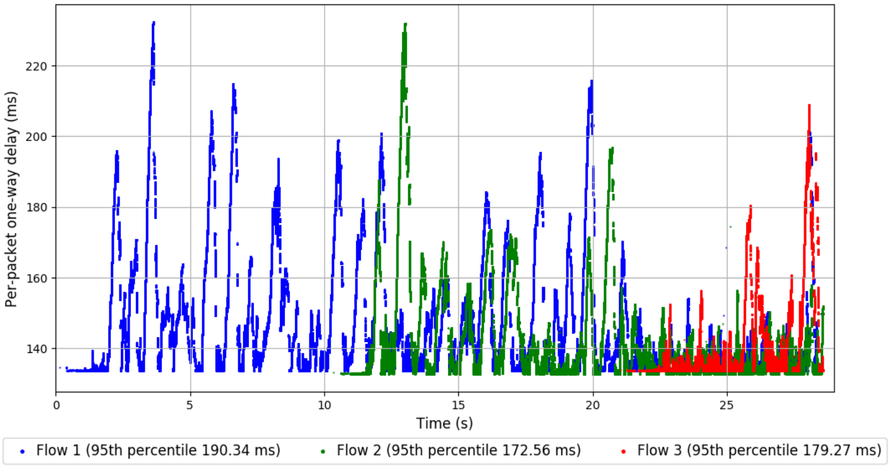




```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-12-11 22:28:48
End at: 2019-12-11 22:29:18
Local clock offset: -0.376 ms
Remote clock offset: 0.689 ms

# Below is generated by plot.py at 2019-12-12 01:09:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 934.30 Mbit/s
95th percentile per-packet one-way delay: 185.902 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 525.60 Mbit/s
95th percentile per-packet one-way delay: 190.344 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 491.32 Mbit/s
95th percentile per-packet one-way delay: 172.555 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 354.30 Mbit/s
95th percentile per-packet one-way delay: 179.273 ms
Loss rate: 0.00%
```

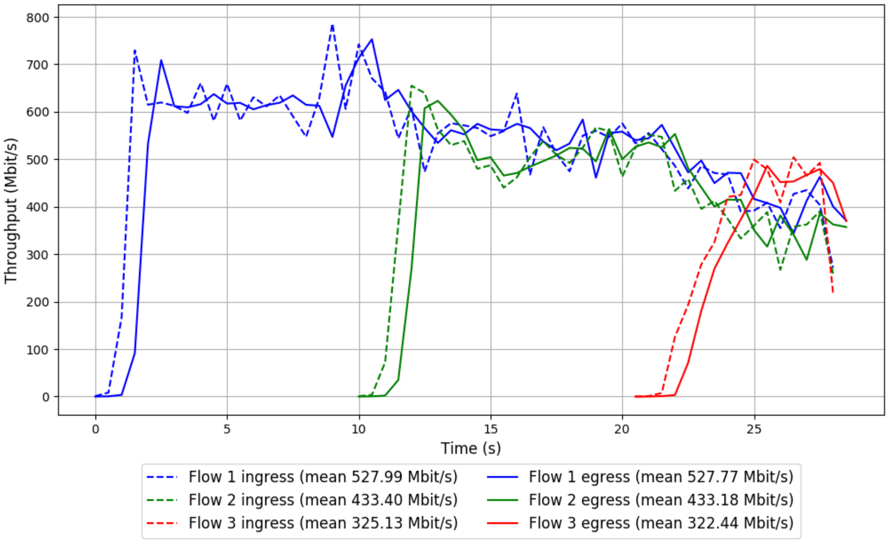
Run 4: Report of Indigo-MusesC3 — Data Link

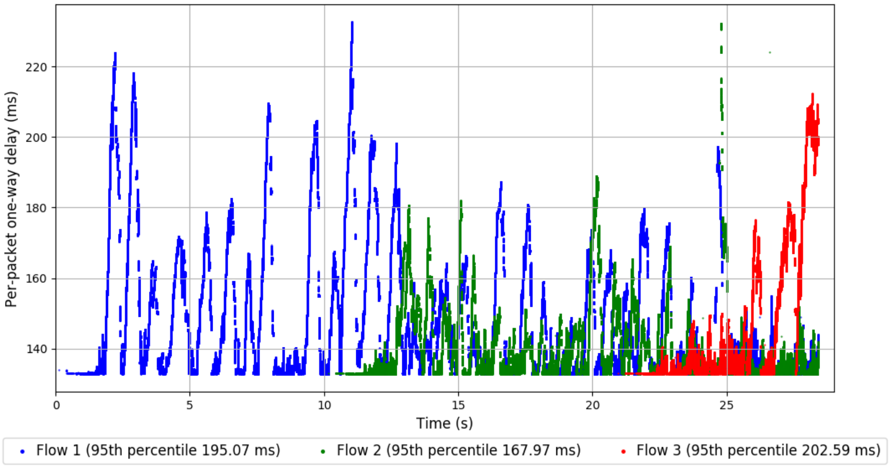




```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-12-11 23:12:23
End at: 2019-12-11 23:12:53
Local clock offset: -0.104 ms
Remote clock offset: 0.024 ms

# Below is generated by plot.py at 2019-12-12 01:09:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 892.11 Mbit/s
95th percentile per-packet one-way delay: 189.852 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 527.77 Mbit/s
95th percentile per-packet one-way delay: 195.068 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 433.18 Mbit/s
95th percentile per-packet one-way delay: 167.971 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 322.44 Mbit/s
95th percentile per-packet one-way delay: 202.594 ms
Loss rate: 0.83%
```

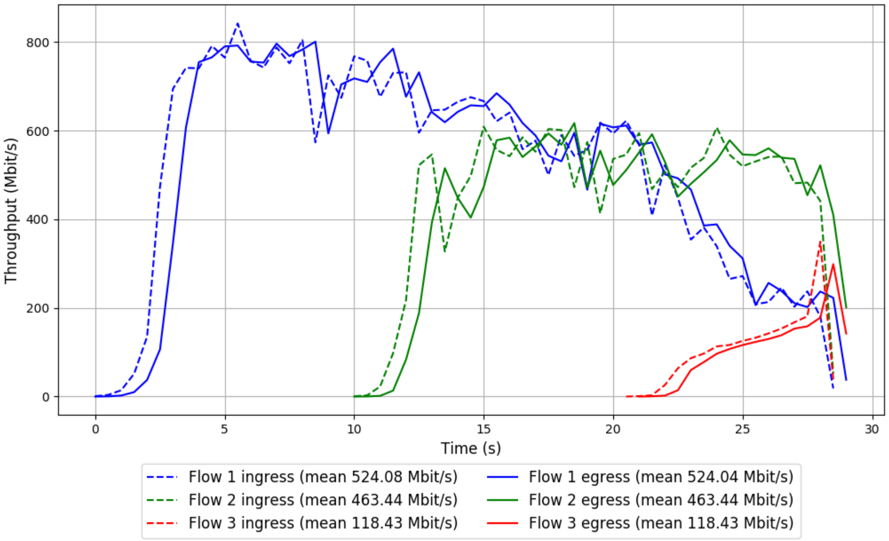
## Run 5: Report of Indigo-MusesC3 — Data Link

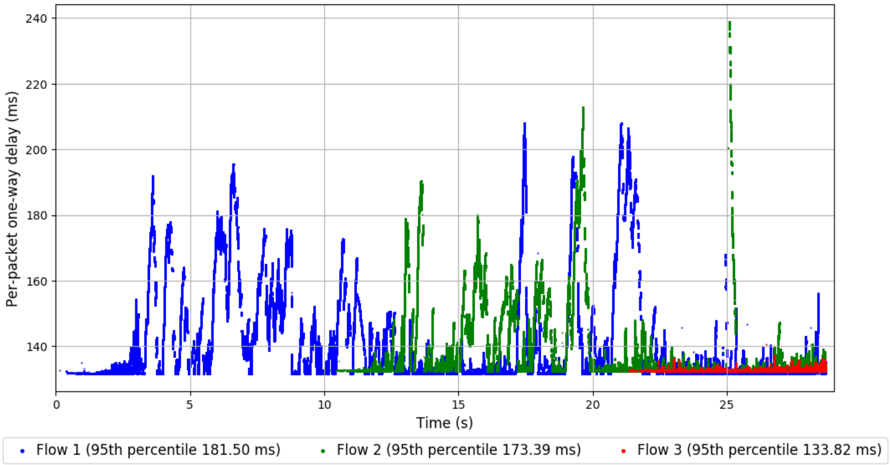




```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-12-11 20:24:41
End at: 2019-12-11 20:25:11
Local clock offset: 0.03 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2019-12-12 01:09:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 855.30 Mbit/s
95th percentile per-packet one-way delay: 178.221 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 524.04 Mbit/s
95th percentile per-packet one-way delay: 181.498 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 463.44 Mbit/s
95th percentile per-packet one-way delay: 173.388 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 118.43 Mbit/s
95th percentile per-packet one-way delay: 133.819 ms
Loss rate: 0.00%
```

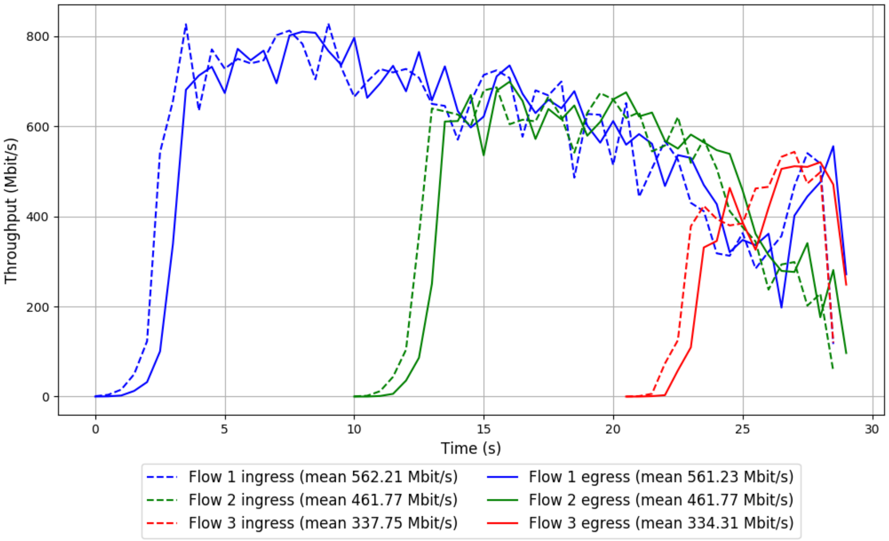
# Run 1: Report of Indigo-MusesC5 — Data Link

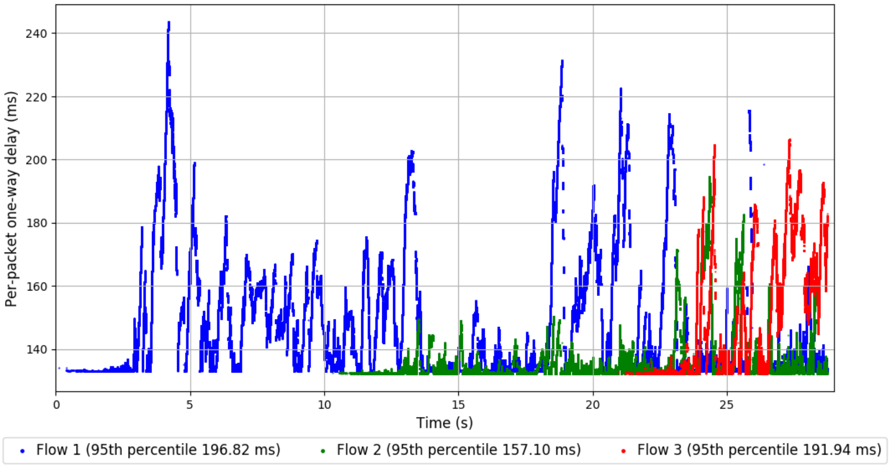




```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-12-11 21:08:13
End at: 2019-12-11 21:08:43
Local clock offset: -0.233 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2019-12-12 01:11:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 949.62 Mbit/s
95th percentile per-packet one-way delay: 189.589 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 561.23 Mbit/s
95th percentile per-packet one-way delay: 196.823 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 461.77 Mbit/s
95th percentile per-packet one-way delay: 157.103 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 334.31 Mbit/s
95th percentile per-packet one-way delay: 191.942 ms
Loss rate: 0.98%
```

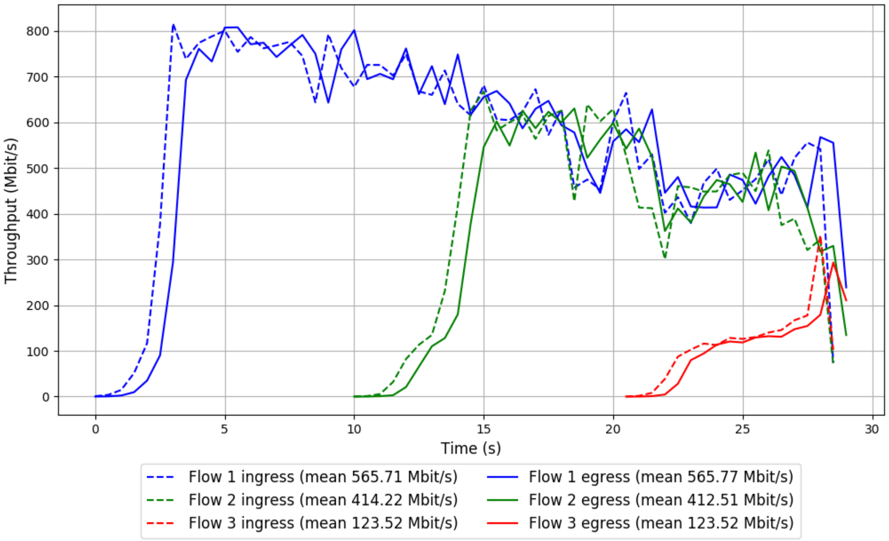
Run 2: Report of Indigo-MusesC5 — Data Link

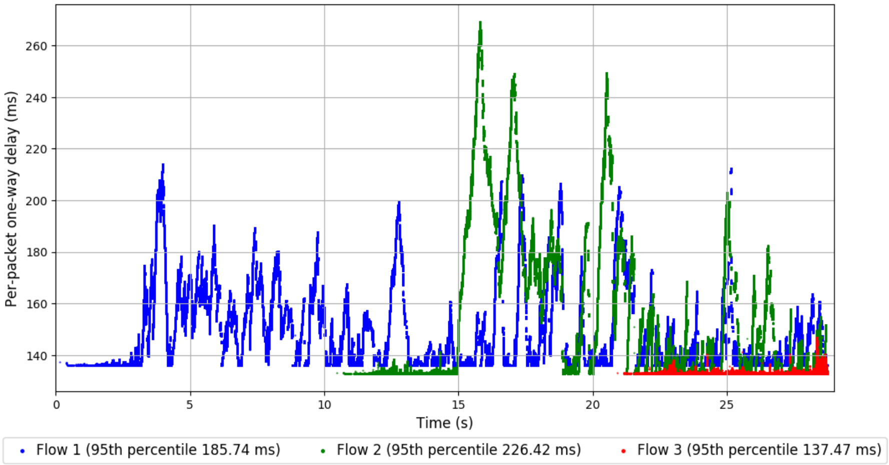




```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-12-11 21:51:33
End at: 2019-12-11 21:52:03
Local clock offset: -0.042 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-12-12 01:11:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 863.11 Mbit/s
95th percentile per-packet one-way delay: 201.962 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 565.77 Mbit/s
95th percentile per-packet one-way delay: 185.736 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 412.51 Mbit/s
95th percentile per-packet one-way delay: 226.416 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 123.52 Mbit/s
95th percentile per-packet one-way delay: 137.468 ms
Loss rate: 0.00%
```

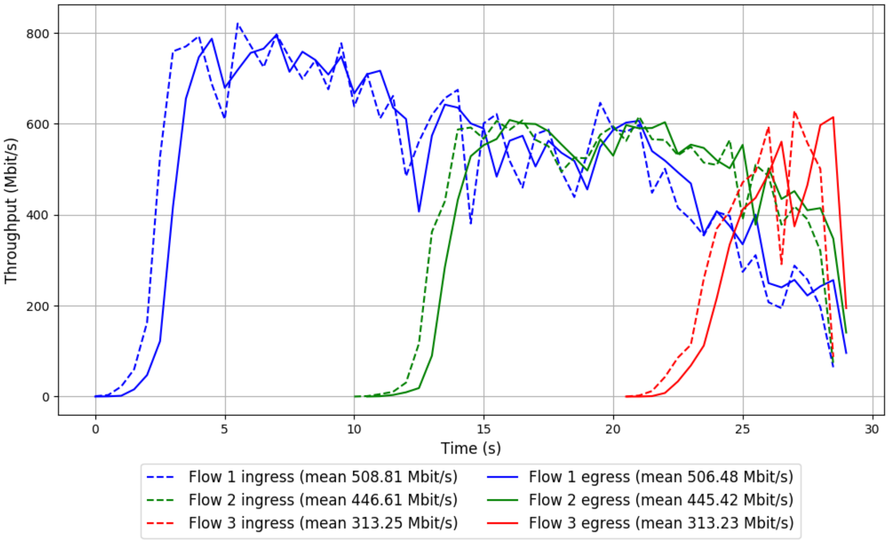
Run 3: Report of Indigo-MusesC5 — Data Link

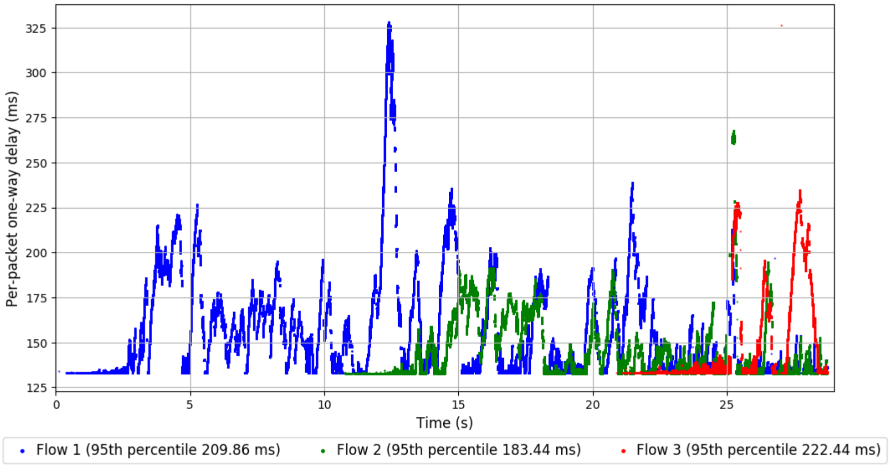




```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-12-11 22:34:50
End at: 2019-12-11 22:35:20
Local clock offset: -0.403 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-12-12 01:13:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 876.14 Mbit/s
95th percentile per-packet one-way delay: 207.799 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 506.48 Mbit/s
95th percentile per-packet one-way delay: 209.859 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 445.42 Mbit/s
95th percentile per-packet one-way delay: 183.441 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 313.23 Mbit/s
95th percentile per-packet one-way delay: 222.439 ms
Loss rate: 0.02%
```

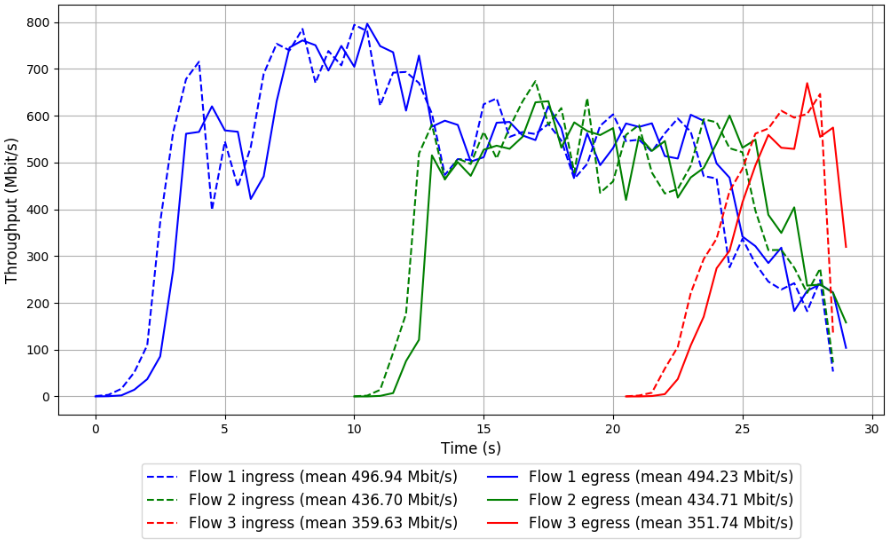
Run 4: Report of Indigo-MusesC5 — Data Link

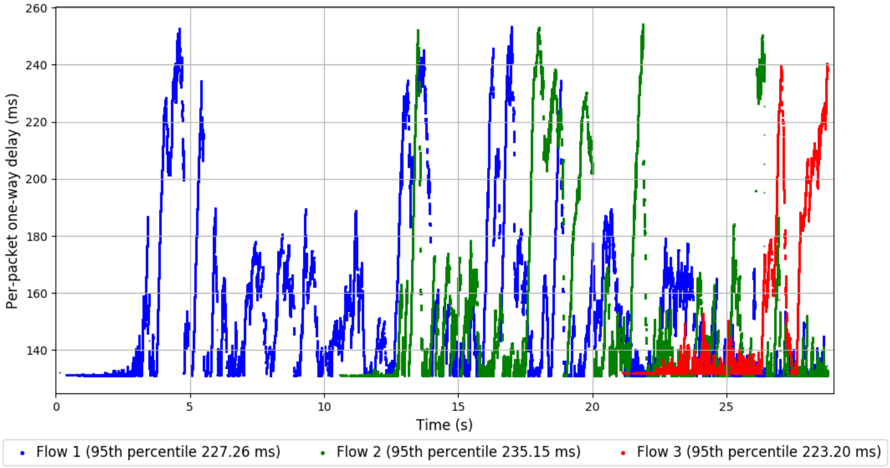




```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-12-11 23:18:27
End at: 2019-12-11 23:18:57
Local clock offset: 0.059 ms
Remote clock offset: -0.796 ms

# Below is generated by plot.py at 2019-12-12 01:17:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 871.18 Mbit/s
95th percentile per-packet one-way delay: 229.795 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 494.23 Mbit/s
95th percentile per-packet one-way delay: 227.264 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 434.71 Mbit/s
95th percentile per-packet one-way delay: 235.152 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 351.74 Mbit/s
95th percentile per-packet one-way delay: 223.196 ms
Loss rate: 2.18%
```

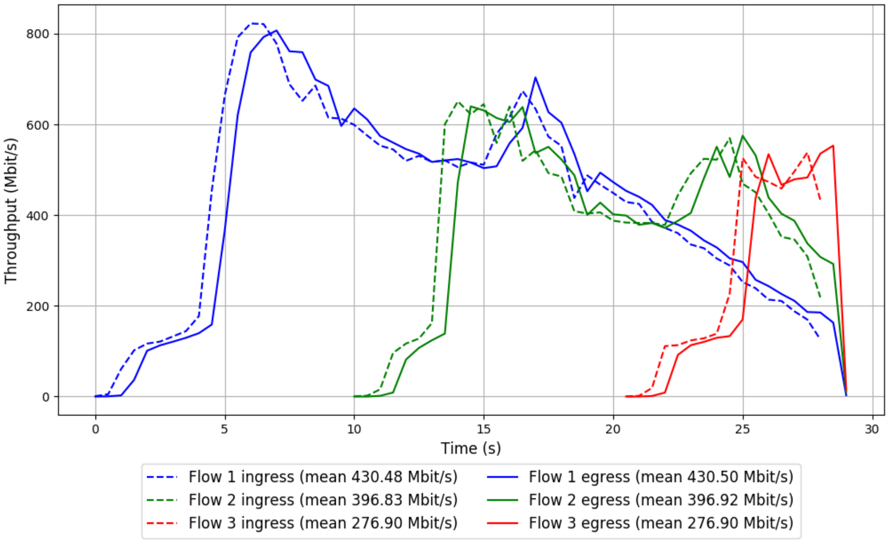
Run 5: Report of Indigo-MusesC5 — Data Link

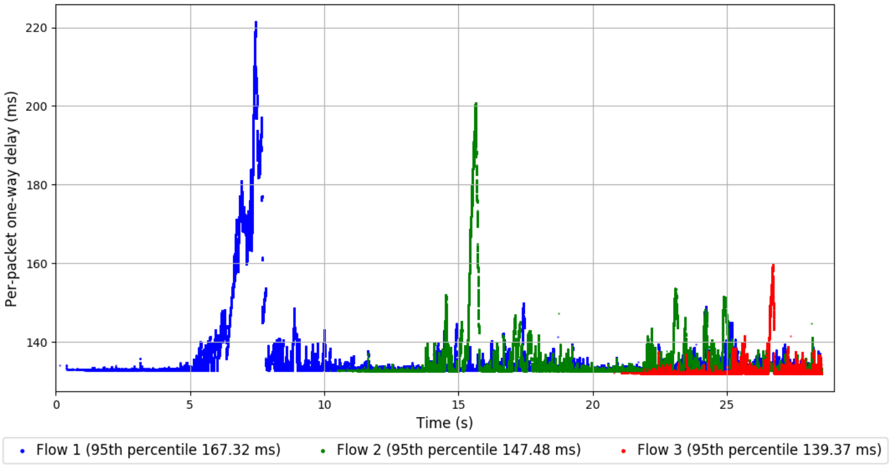




```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-12-11 20:20:42
End at: 2019-12-11 20:21:12
Local clock offset: -0.435 ms
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2019-12-12 01:20:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 761.40 Mbit/s
95th percentile per-packet one-way delay: 154.295 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 430.50 Mbit/s
95th percentile per-packet one-way delay: 167.317 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 396.92 Mbit/s
95th percentile per-packet one-way delay: 147.484 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 276.90 Mbit/s
95th percentile per-packet one-way delay: 139.366 ms
Loss rate: 0.00%
```

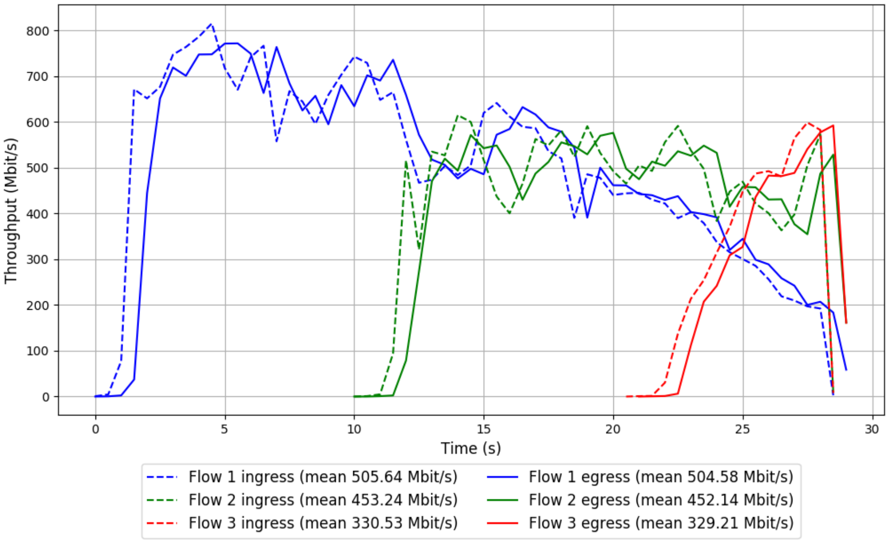
Run 1: Report of Indigo-MusesD — Data Link

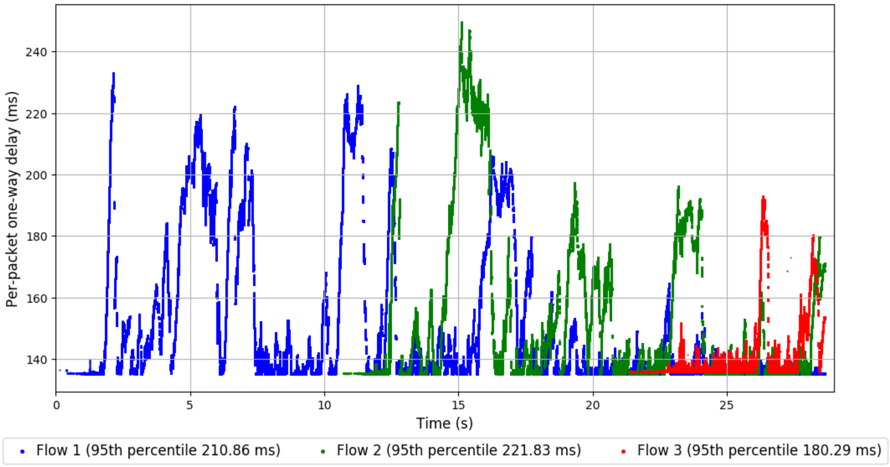




```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-12-11 21:04:03
End at: 2019-12-11 21:04:33
Local clock offset: -0.223 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-12-12 01:24:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 880.08 Mbit/s
95th percentile per-packet one-way delay: 212.632 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 504.58 Mbit/s
95th percentile per-packet one-way delay: 210.863 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 452.14 Mbit/s
95th percentile per-packet one-way delay: 221.833 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 329.21 Mbit/s
95th percentile per-packet one-way delay: 180.288 ms
Loss rate: 0.39%
```

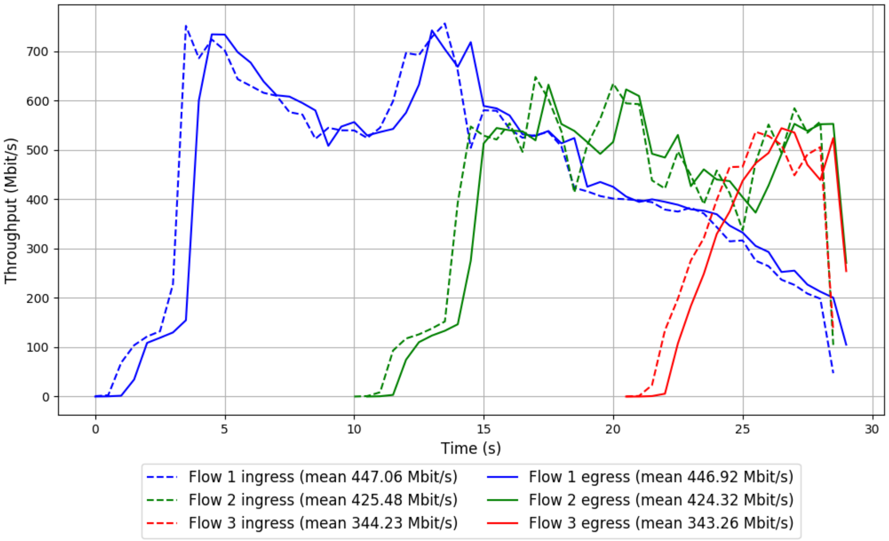
# Run 2: Report of Indigo-MusesD — Data Link

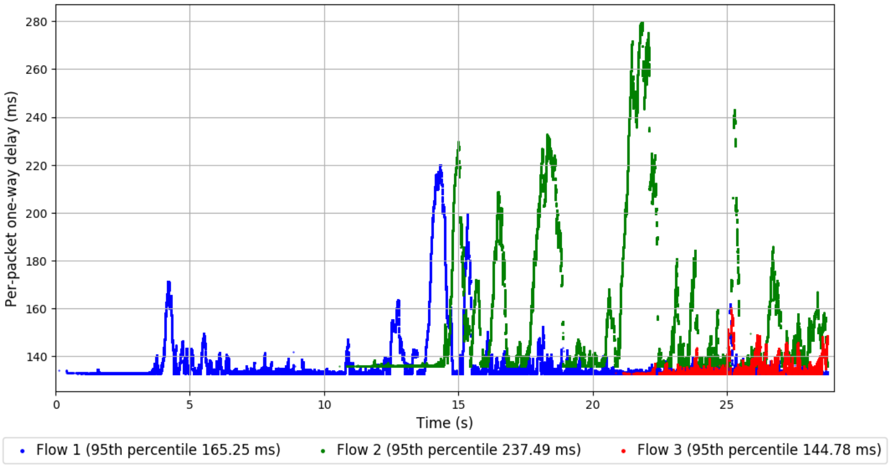




```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-12-11 21:47:26
End at: 2019-12-11 21:47:56
Local clock offset: -0.037 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2019-12-12 01:24:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 811.13 Mbit/s
95th percentile per-packet one-way delay: 207.980 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 446.92 Mbit/s
95th percentile per-packet one-way delay: 165.248 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 424.32 Mbit/s
95th percentile per-packet one-way delay: 237.485 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 343.26 Mbit/s
95th percentile per-packet one-way delay: 144.785 ms
Loss rate: 0.27%
```

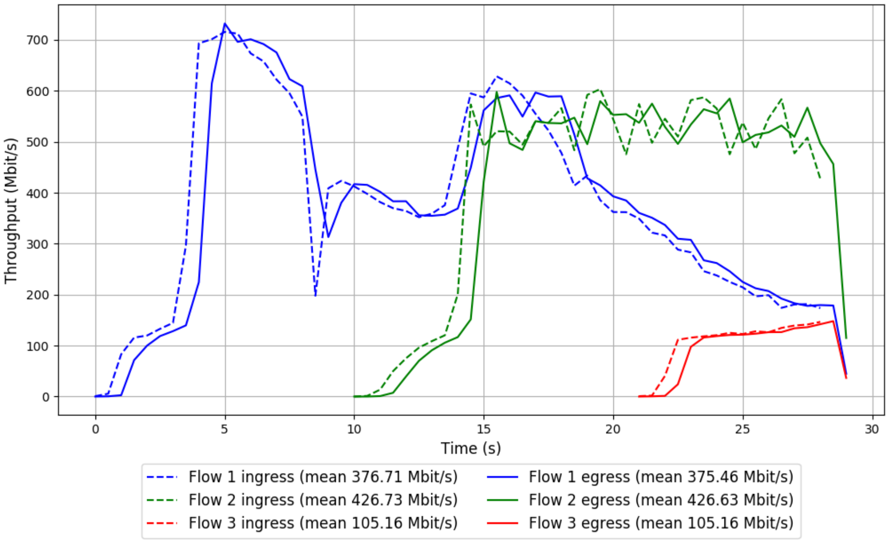
## Run 3: Report of Indigo-MusesD — Data Link

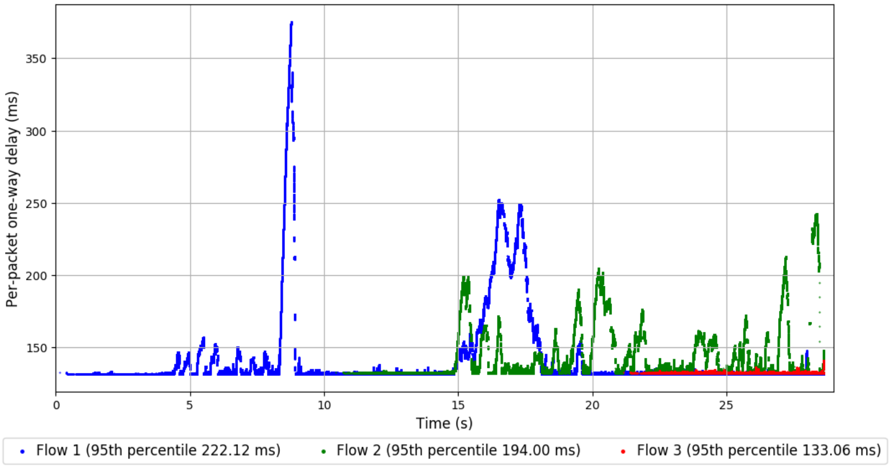




```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-12-11 22:30:54
End at: 2019-12-11 22:31:24
Local clock offset: -0.292 ms
Remote clock offset: -0.483 ms

# Below is generated by plot.py at 2019-12-12 01:24:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 675.14 Mbit/s
95th percentile per-packet one-way delay: 205.651 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 375.46 Mbit/s
95th percentile per-packet one-way delay: 222.115 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 426.63 Mbit/s
95th percentile per-packet one-way delay: 194.004 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 105.16 Mbit/s
95th percentile per-packet one-way delay: 133.063 ms
Loss rate: 0.00%
```

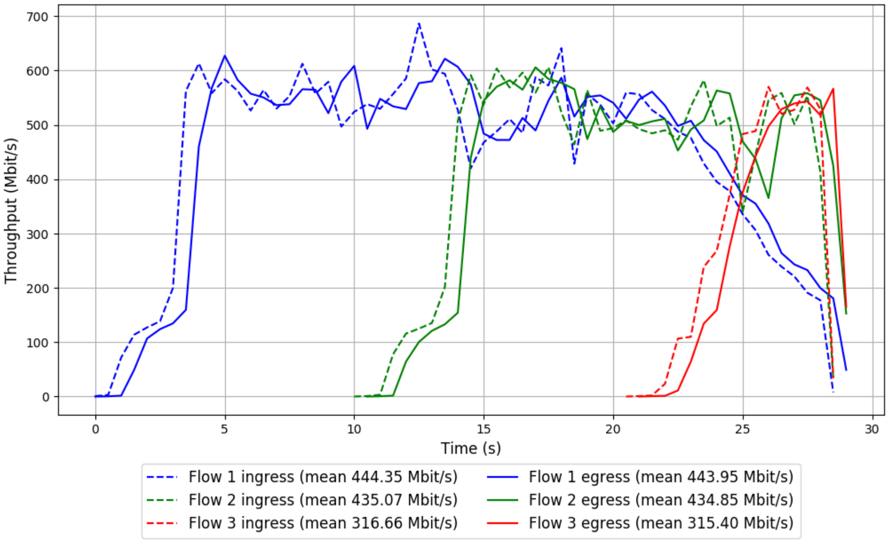
# Run 4: Report of Indigo-MusesD — Data Link

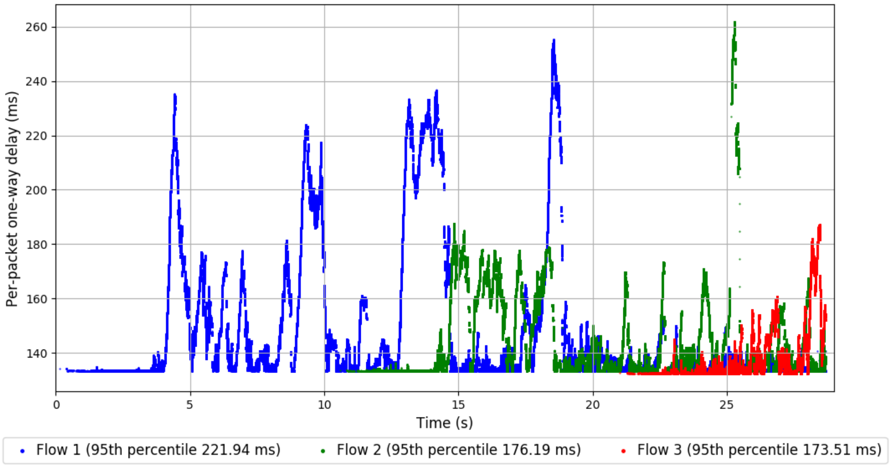




```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-12-11 23:14:26
End at: 2019-12-11 23:14:56
Local clock offset: -0.261 ms
Remote clock offset: 0.367 ms

# Below is generated by plot.py at 2019-12-12 01:26:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 804.01 Mbit/s
95th percentile per-packet one-way delay: 214.000 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 443.95 Mbit/s
95th percentile per-packet one-way delay: 221.943 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 434.85 Mbit/s
95th percentile per-packet one-way delay: 176.191 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 315.40 Mbit/s
95th percentile per-packet one-way delay: 173.508 ms
Loss rate: 0.39%
```

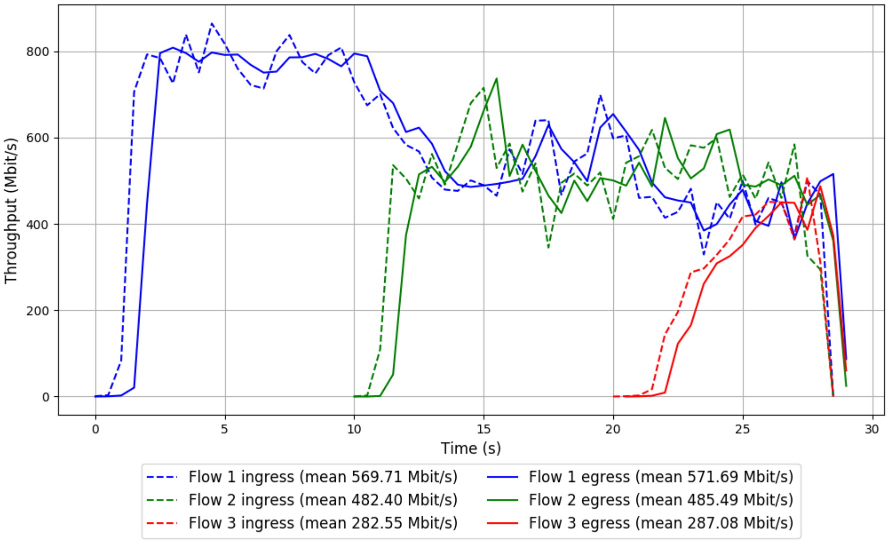
Run 5: Report of Indigo-MusesD — Data Link

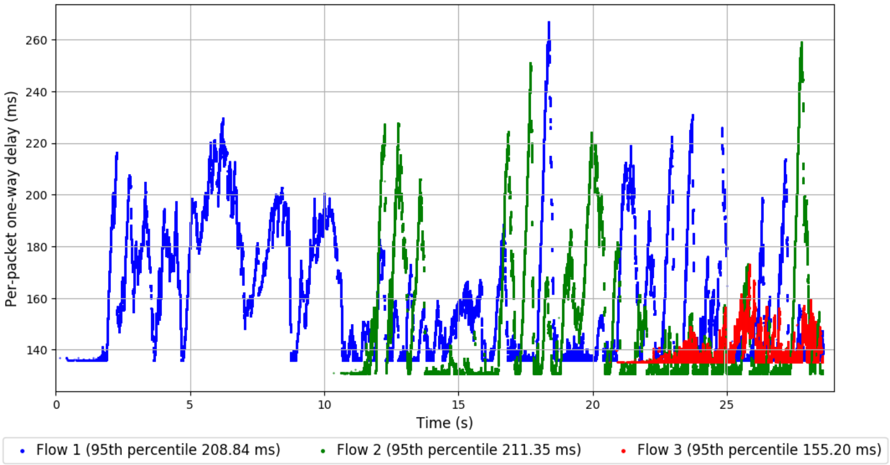




```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-12-11 20:40:05
End at: 2019-12-11 20:40:35
Local clock offset: -0.127 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-12-12 01:28:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 962.87 Mbit/s
95th percentile per-packet one-way delay: 208.109 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 571.69 Mbit/s
95th percentile per-packet one-way delay: 208.841 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 485.49 Mbit/s
95th percentile per-packet one-way delay: 211.349 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 287.08 Mbit/s
95th percentile per-packet one-way delay: 155.198 ms
Loss rate: 0.00%
```

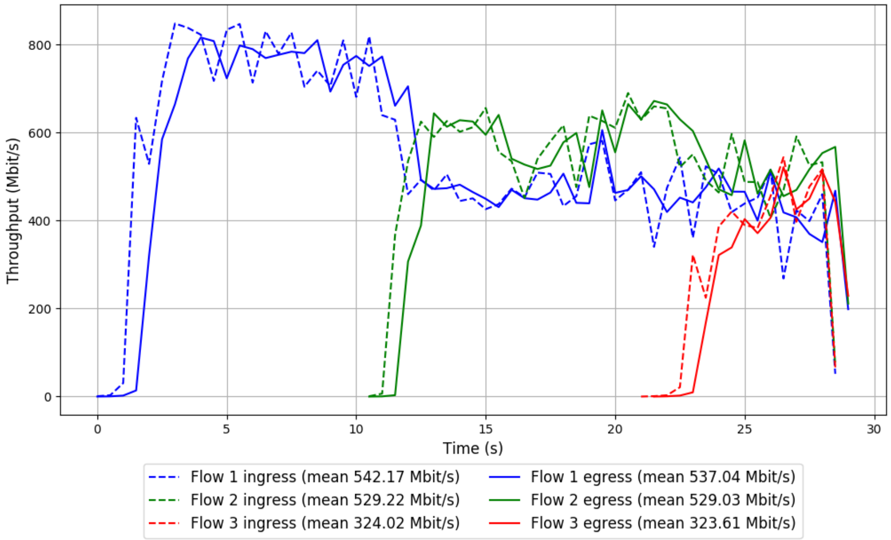
Run 1: Report of Indigo-MusesT — Data Link

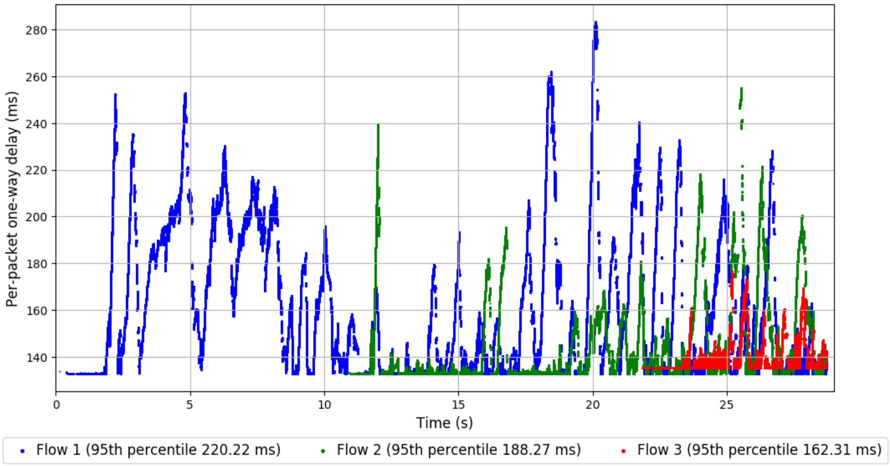




```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-12-11 21:23:50
End at: 2019-12-11 21:24:20
Local clock offset: -0.258 ms
Remote clock offset: 0.013 ms

# Below is generated by plot.py at 2019-12-12 01:30:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 951.60 Mbit/s
95th percentile per-packet one-way delay: 210.669 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 537.04 Mbit/s
95th percentile per-packet one-way delay: 220.222 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 529.03 Mbit/s
95th percentile per-packet one-way delay: 188.266 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 323.61 Mbit/s
95th percentile per-packet one-way delay: 162.310 ms
Loss rate: 0.12%
```

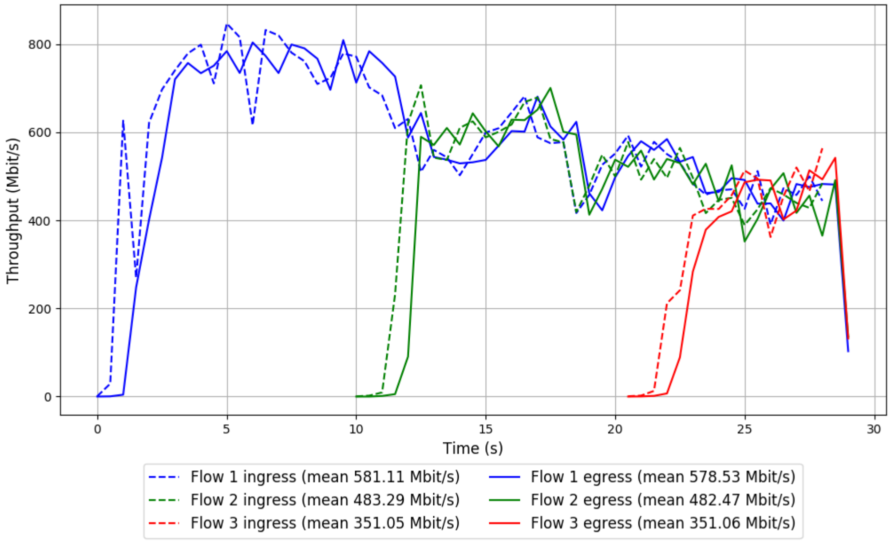
Run 2: Report of Indigo-MusesT — Data Link

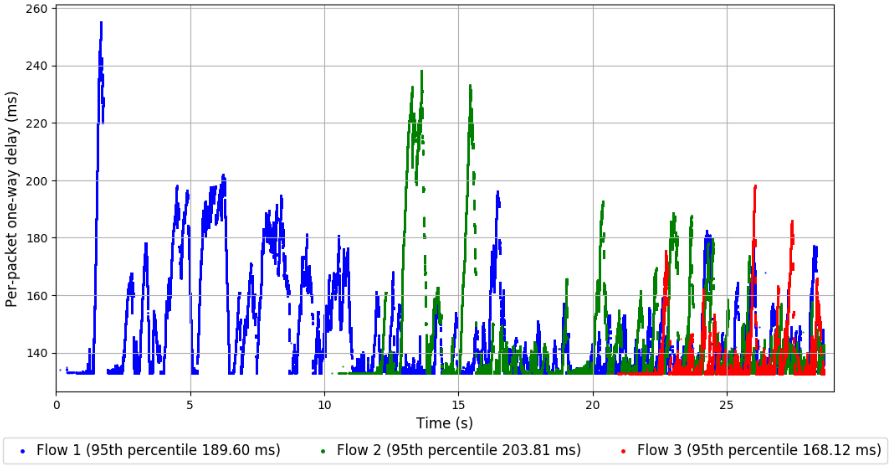




```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-12-11 22:07:06
End at: 2019-12-11 22:07:36
Local clock offset: -0.135 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-12-12 01:35:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 986.79 Mbit/s
95th percentile per-packet one-way delay: 190.072 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 578.53 Mbit/s
95th percentile per-packet one-way delay: 189.596 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 482.47 Mbit/s
95th percentile per-packet one-way delay: 203.813 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 351.06 Mbit/s
95th percentile per-packet one-way delay: 168.122 ms
Loss rate: 0.00%
```

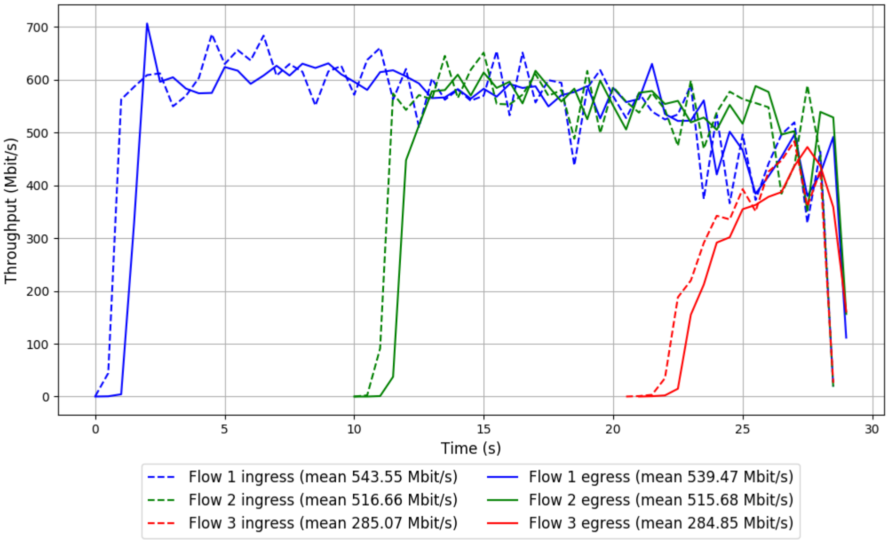
Run 3: Report of Indigo-MusesT — Data Link

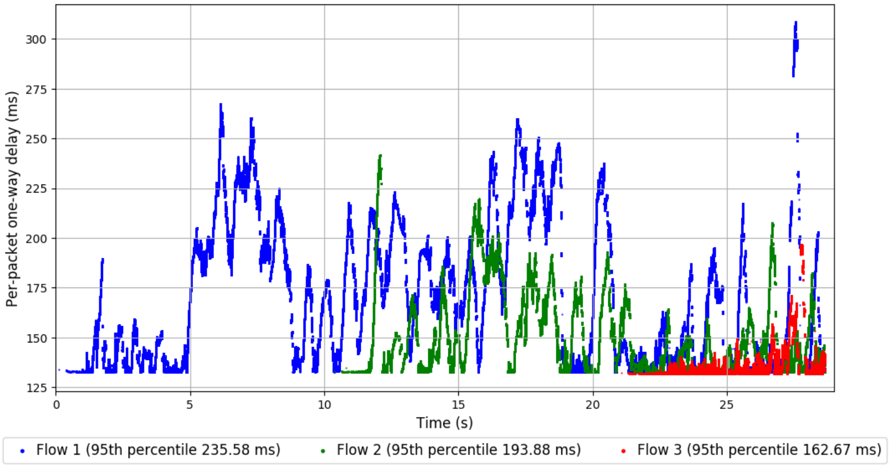




```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-12-11 22:50:55
End at: 2019-12-11 22:51:25
Local clock offset: -0.13 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2019-12-12 01:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 945.58 Mbit/s
95th percentile per-packet one-way delay: 229.315 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 539.47 Mbit/s
95th percentile per-packet one-way delay: 235.578 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 515.68 Mbit/s
95th percentile per-packet one-way delay: 193.882 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 284.85 Mbit/s
95th percentile per-packet one-way delay: 162.666 ms
Loss rate: 0.08%
```

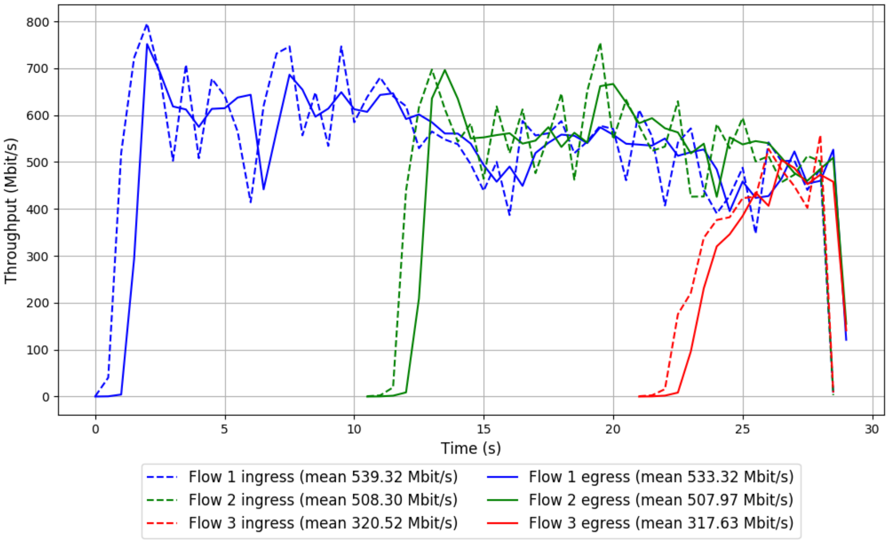
Run 4: Report of Indigo-MusesT — Data Link

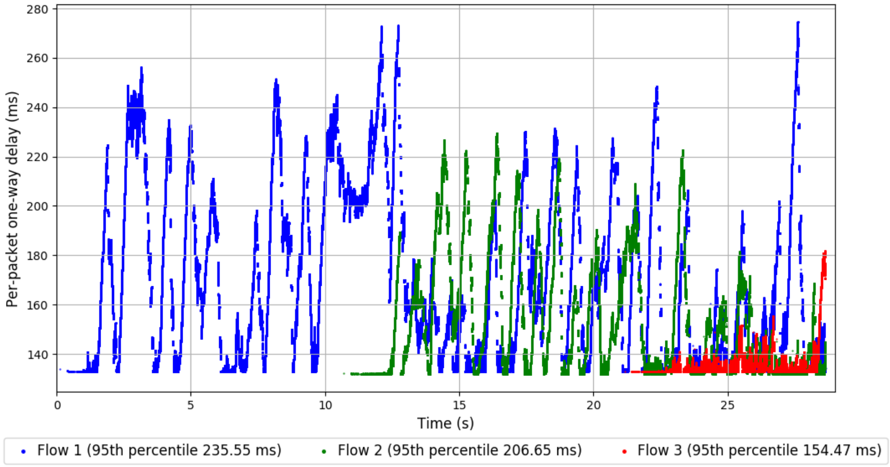




```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-12-11 23:34:10
End at: 2019-12-11 23:34:40
Local clock offset: -0.247 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2019-12-12 01:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 936.19 Mbit/s
95th percentile per-packet one-way delay: 228.070 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 533.32 Mbit/s
95th percentile per-packet one-way delay: 235.546 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 507.97 Mbit/s
95th percentile per-packet one-way delay: 206.646 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 317.63 Mbit/s
95th percentile per-packet one-way delay: 154.471 ms
Loss rate: 0.91%
```

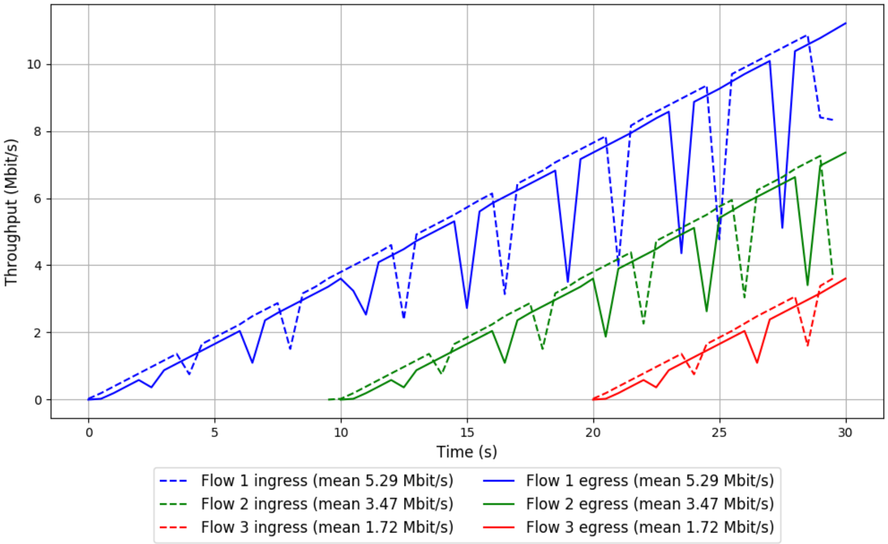
Run 5: Report of Indigo-MusesT — Data Link

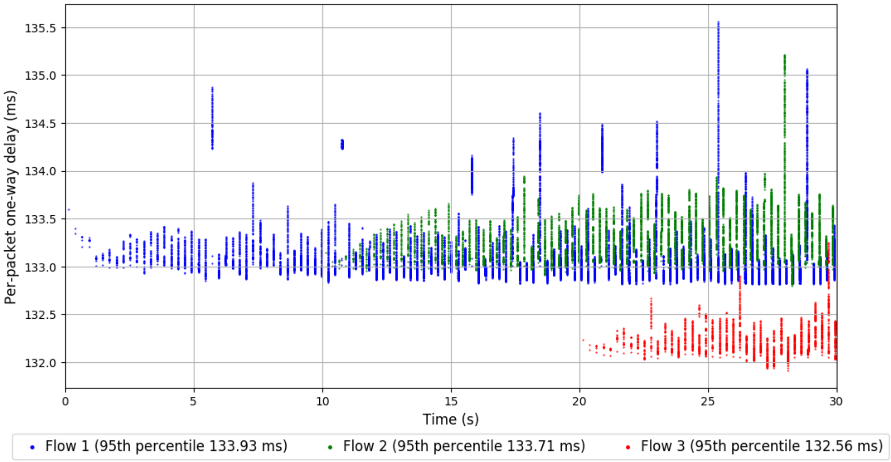




```
Run 1: Statistics of LEDBAT

Start at: 2019-12-11 20:08:34
End at: 2019-12-11 20:09:04
Local clock offset: -0.349 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-12-12 01:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 133.759 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 133.929 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.47 Mbit/s
95th percentile per-packet one-way delay: 133.714 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 132.557 ms
Loss rate: 0.00%
```

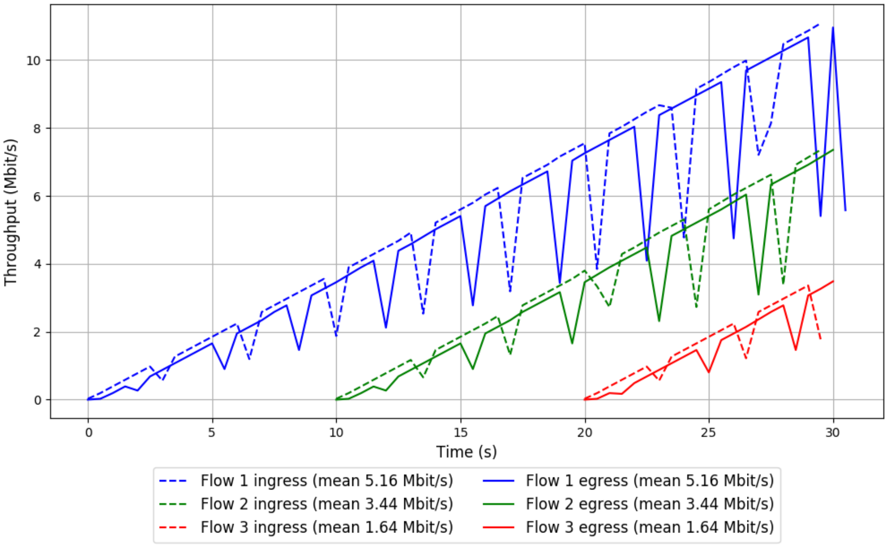
## Run 1: Report of LEDBAT — Data Link

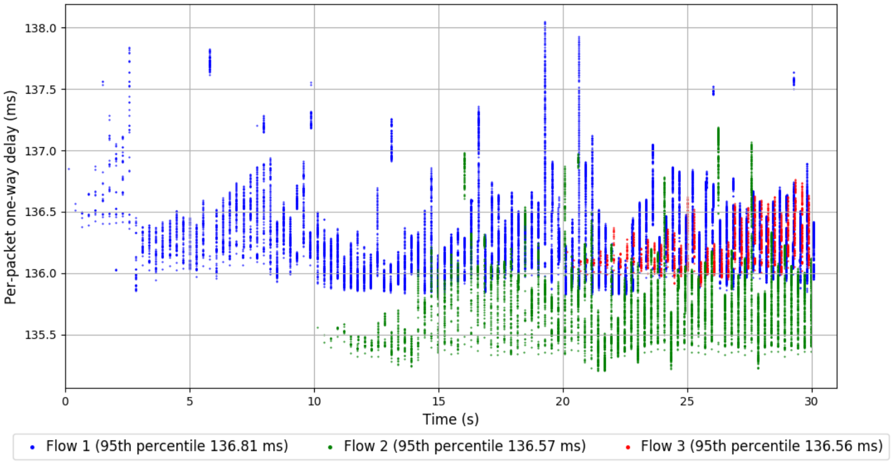




```
Run 2: Statistics of LEDBAT

Start at: 2019-12-11 20:51:14
End at: 2019-12-11 20:51:44
Local clock offset: -0.172 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2019-12-12 01:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.97 Mbit/s
95th percentile per-packet one-way delay: 136.767 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.16 Mbit/s
95th percentile per-packet one-way delay: 136.814 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 136.570 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 136.557 ms
Loss rate: 0.00%
```

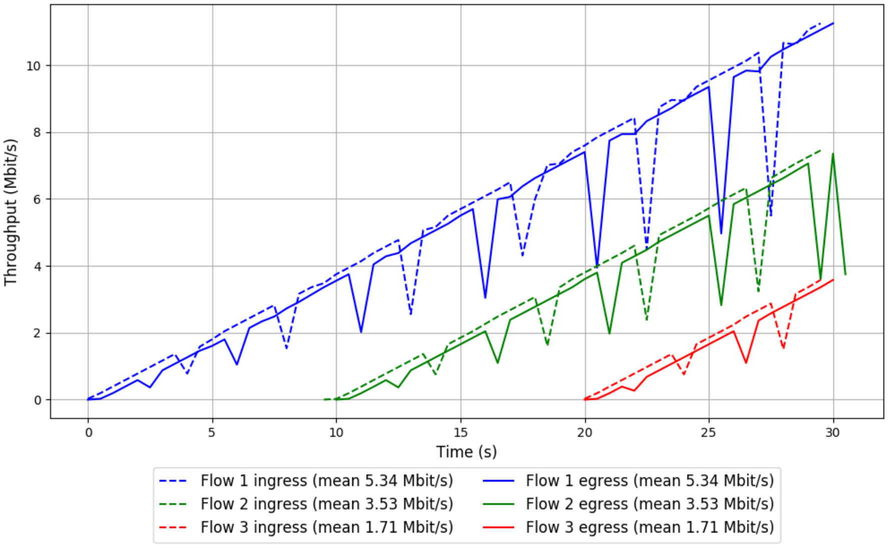
## Run 2: Report of LEDBAT — Data Link

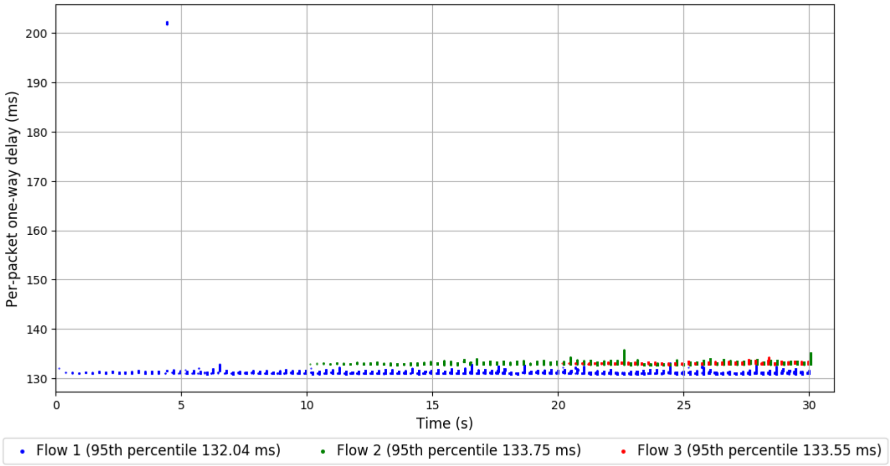




```
Run 3: Statistics of LEDBAT

Start at: 2019-12-11 21:34:52
End at: 2019-12-11 21:35:22
Local clock offset: -0.111 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2019-12-12 01:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 133.485 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.34 Mbit/s
95th percentile per-packet one-way delay: 132.037 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 133.751 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 133.546 ms
Loss rate: 0.00%
```

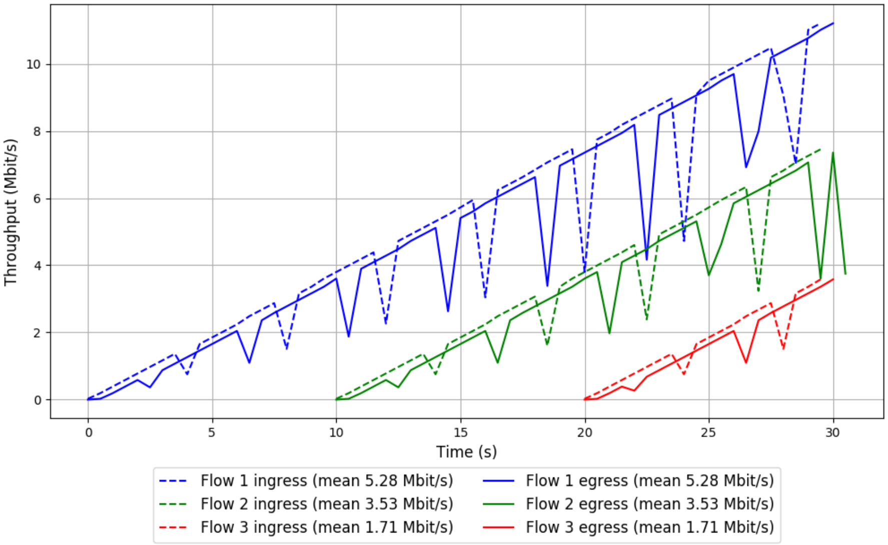
Run 3: Report of LEDBAT — Data Link

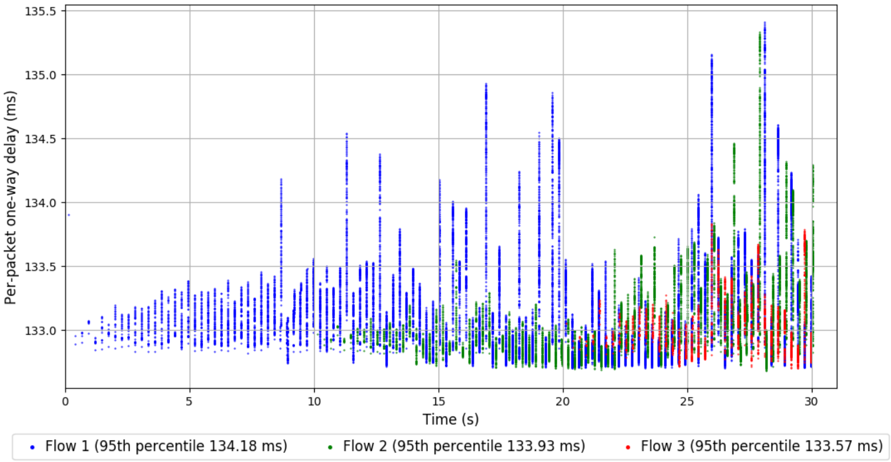




```
Run 4: Statistics of LEDBAT

Start at: 2019-12-11 22:18:14
End at: 2019-12-11 22:18:44
Local clock offset: -0.303 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2019-12-12 01:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 134.050 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 134.179 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 133.926 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 133.574 ms
Loss rate: 0.00%
```

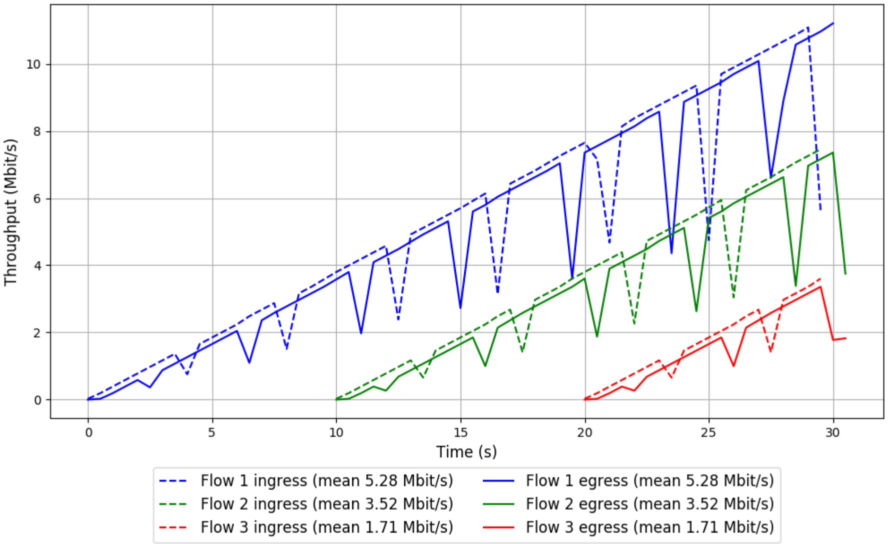
## Run 4: Report of LEDBAT — Data Link

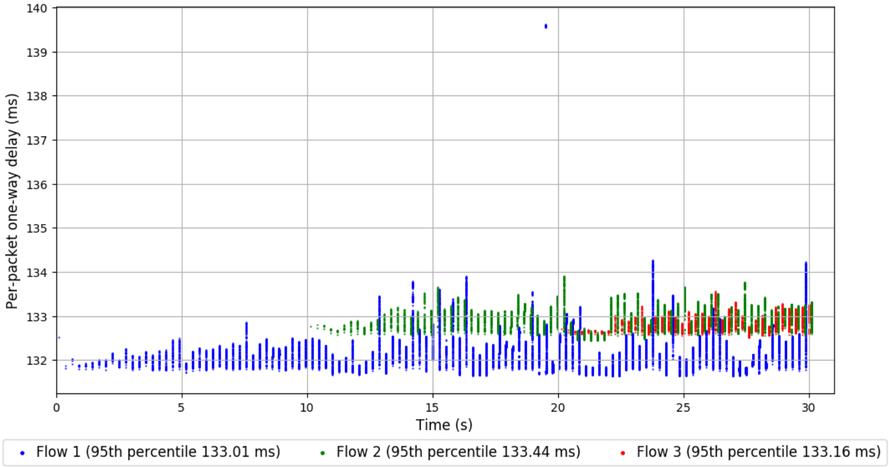




```
Run 5: Statistics of LEDBAT

Start at: 2019-12-11 23:01:50
End at: 2019-12-11 23:02:20
Local clock offset: 0.183 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2019-12-12 01:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 133.305 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 133.008 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 133.438 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 133.157 ms
Loss rate: 0.00%
```

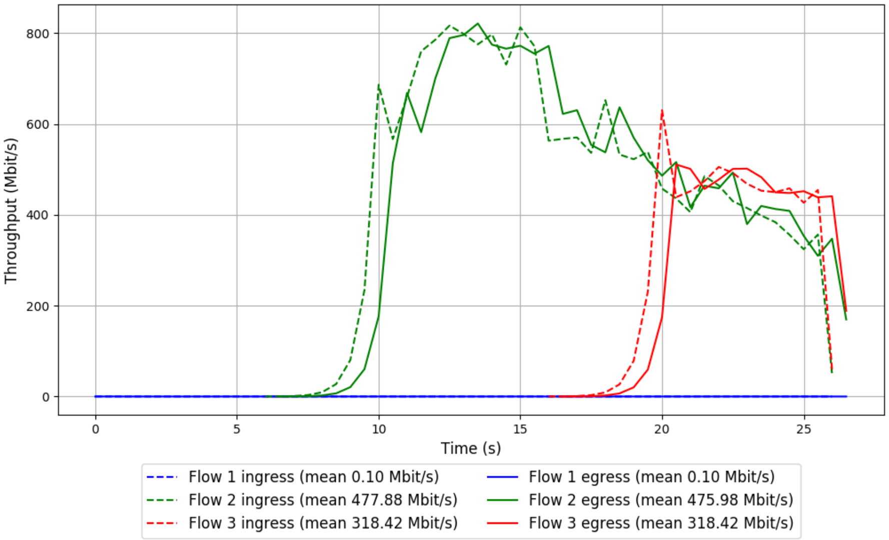
Run 5: Report of LEDBAT — Data Link

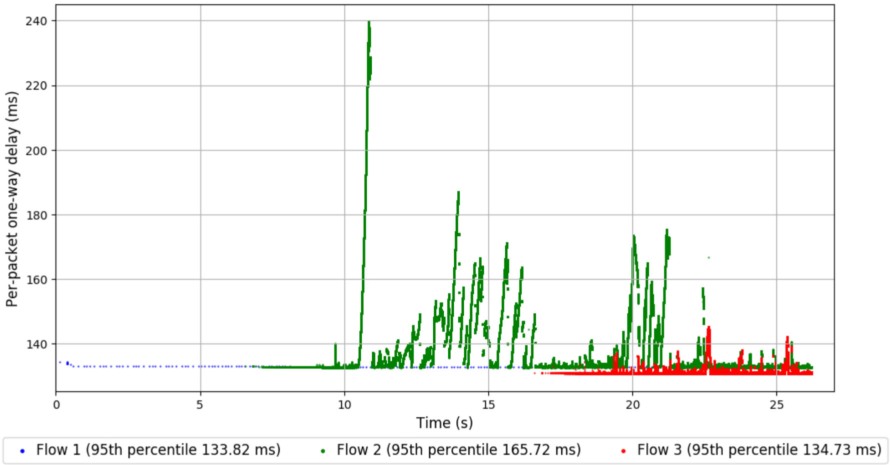




```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 20:13:00
End at: 2019-12-11 20:13:30
Local clock offset: -0.348 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2019-12-12 01:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 475.73 Mbit/s
95th percentile per-packet one-way delay: 162.540 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 133.825 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 475.98 Mbit/s
95th percentile per-packet one-way delay: 165.725 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 318.42 Mbit/s
95th percentile per-packet one-way delay: 134.730 ms
Loss rate: 0.00%
```

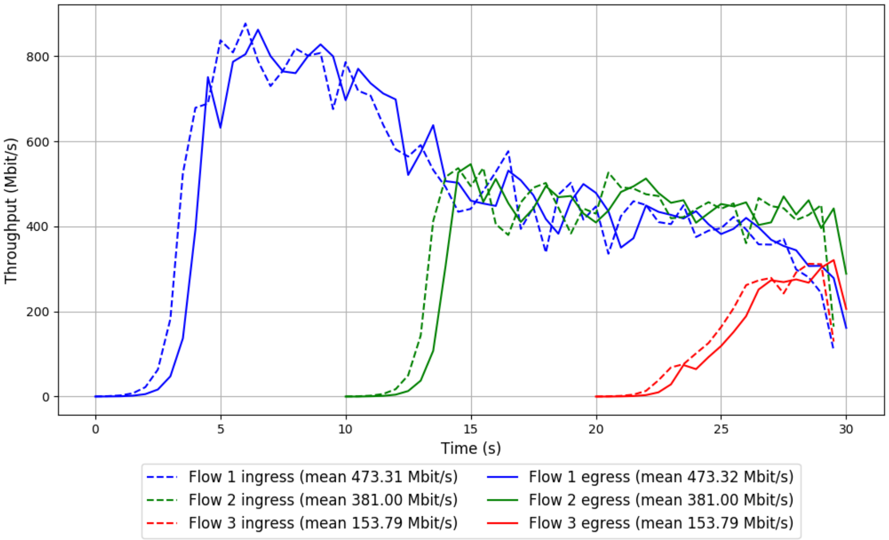
Run 1: Report of Muses_DecisionTree — Data Link

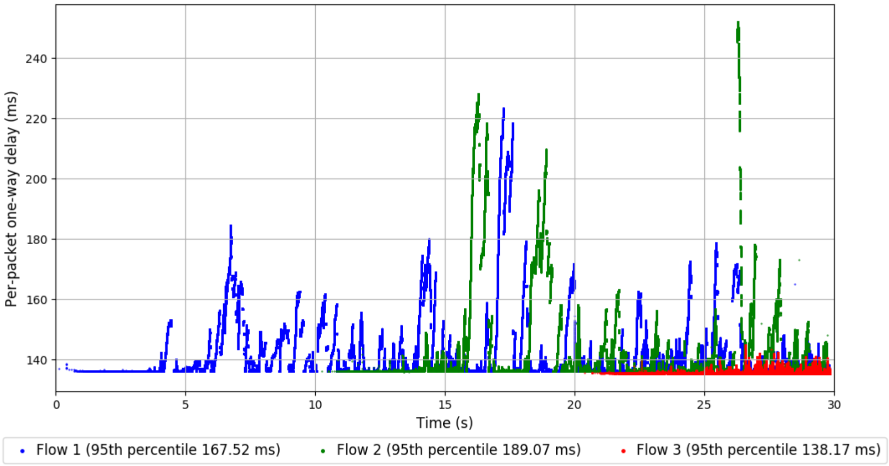




```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 20:55:46
End at: 2019-12-11 20:56:16
Local clock offset: -0.233 ms
Remote clock offset: -0.063 ms

# Below is generated by plot.py at 2019-12-12 01:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 773.36 Mbit/s
95th percentile per-packet one-way delay: 171.237 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 473.32 Mbit/s
95th percentile per-packet one-way delay: 167.517 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 381.00 Mbit/s
95th percentile per-packet one-way delay: 189.069 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 153.79 Mbit/s
95th percentile per-packet one-way delay: 138.166 ms
Loss rate: 0.00%
```

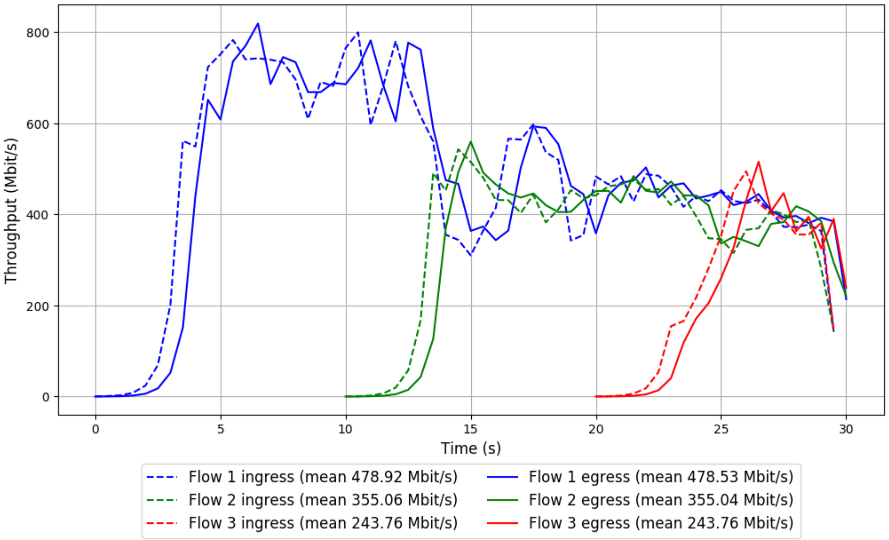
Run 2: Report of Muses_DecisionTree — Data Link

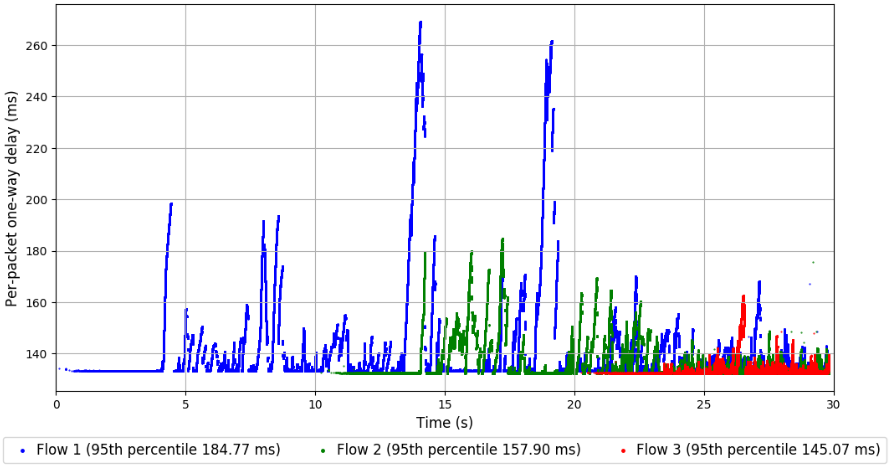




```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 21:39:22
End at: 2019-12-11 21:39:52
Local clock offset: -0.459 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2019-12-12 01:41:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 791.13 Mbit/s
95th percentile per-packet one-way delay: 170.667 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 478.53 Mbit/s
95th percentile per-packet one-way delay: 184.771 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 355.04 Mbit/s
95th percentile per-packet one-way delay: 157.901 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 243.76 Mbit/s
95th percentile per-packet one-way delay: 145.070 ms
Loss rate: 0.00%
```

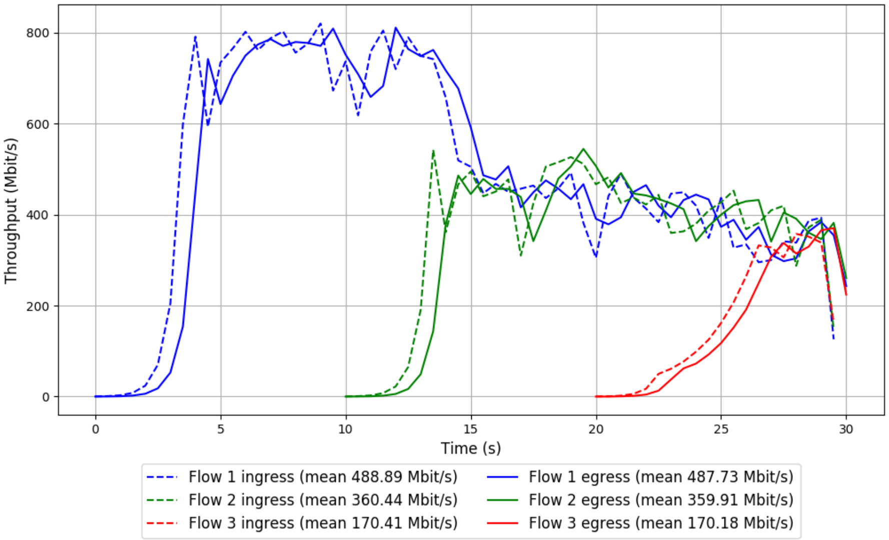
Run 3: Report of Muses_DecisionTree — Data Link

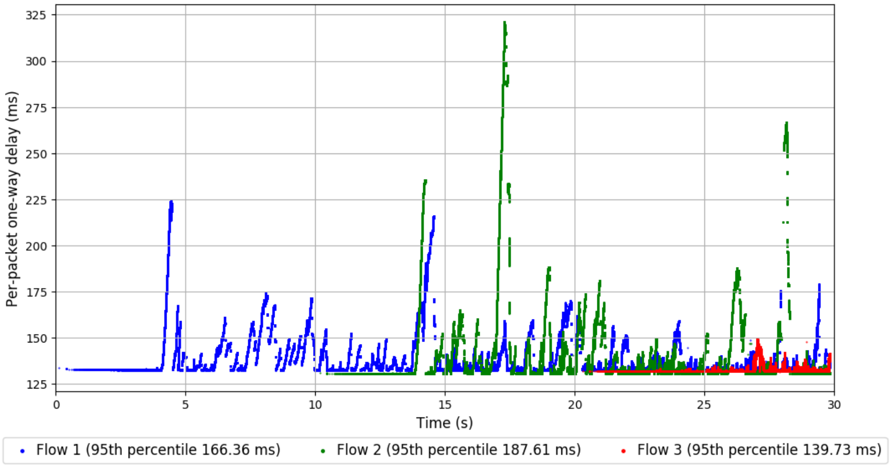




```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 22:22:45
End at: 2019-12-11 22:23:15
Local clock offset: 0.006 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-12-12 01:43:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 780.30 Mbit/s
95th percentile per-packet one-way delay: 169.161 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 487.73 Mbit/s
95th percentile per-packet one-way delay: 166.363 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 359.91 Mbit/s
95th percentile per-packet one-way delay: 187.611 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 170.18 Mbit/s
95th percentile per-packet one-way delay: 139.726 ms
Loss rate: 0.11%
```

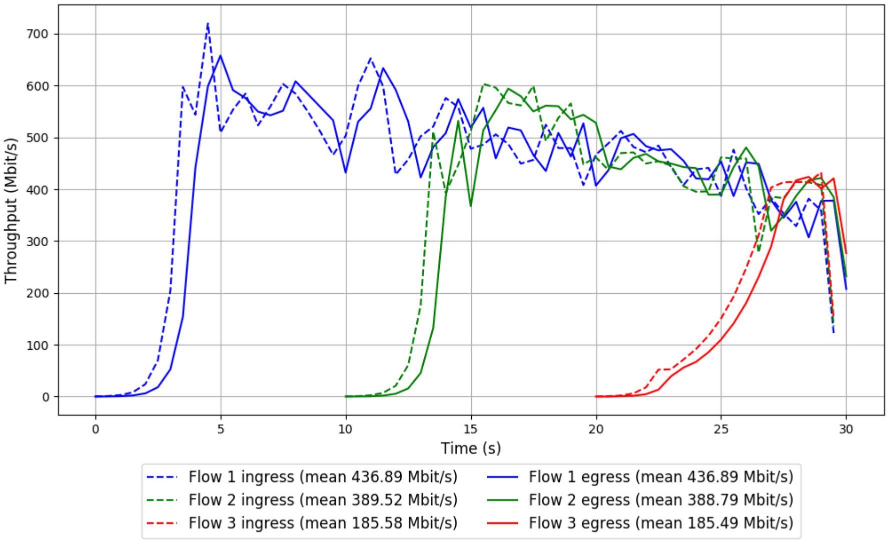
Run 4: Report of Muses_DecisionTree — Data Link

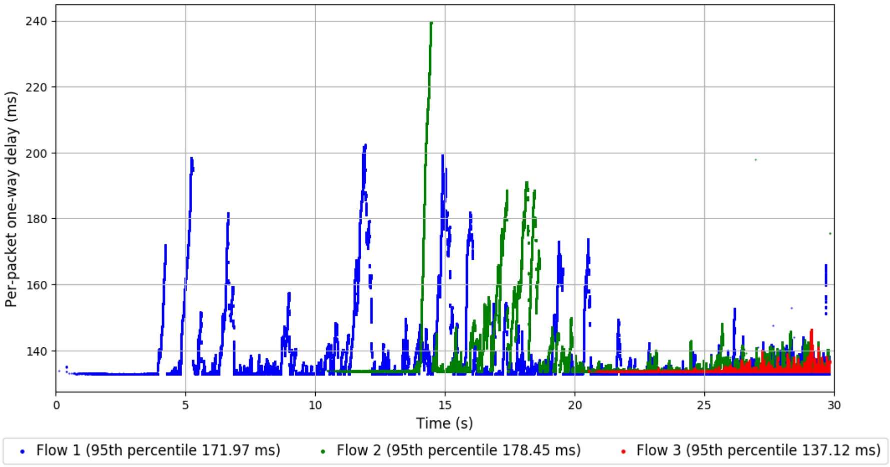




```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 23:06:16
End at: 2019-12-11 23:06:46
Local clock offset: -0.191 ms
Remote clock offset: 0.762 ms

# Below is generated by plot.py at 2019-12-12 01:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 753.36 Mbit/s
95th percentile per-packet one-way delay: 172.585 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 436.89 Mbit/s
95th percentile per-packet one-way delay: 171.967 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 388.79 Mbit/s
95th percentile per-packet one-way delay: 178.453 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 185.49 Mbit/s
95th percentile per-packet one-way delay: 137.121 ms
Loss rate: 0.02%
```

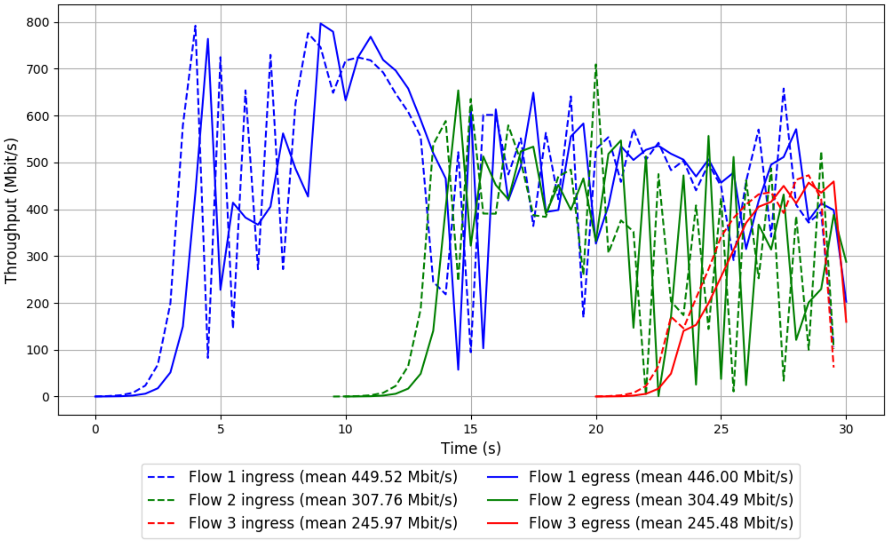
Run 5: Report of Muses_DecisionTree — Data Link

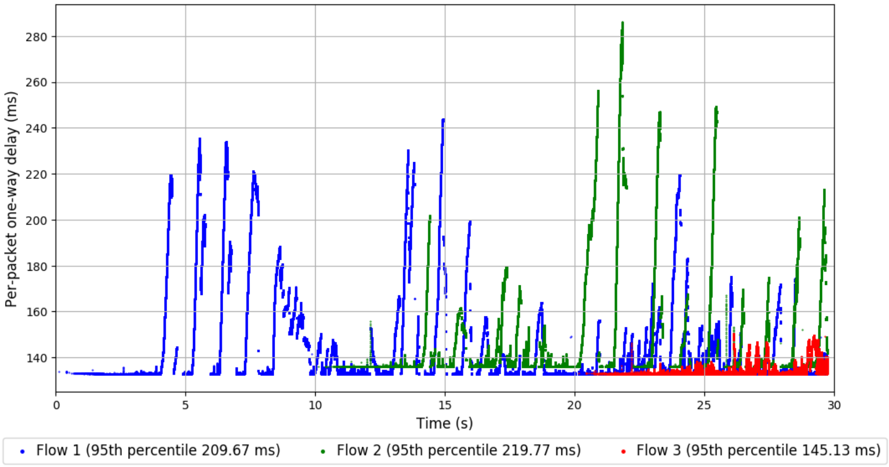




```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 20:16:51
End at: 2019-12-11 20:17:21
Local clock offset: -0.414 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-12-12 01:45:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 727.09 Mbit/s
95th percentile per-packet one-way delay: 209.956 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 446.00 Mbit/s
95th percentile per-packet one-way delay: 209.666 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 304.49 Mbit/s
95th percentile per-packet one-way delay: 219.769 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 245.48 Mbit/s
95th percentile per-packet one-way delay: 145.126 ms
Loss rate: 0.17%
```

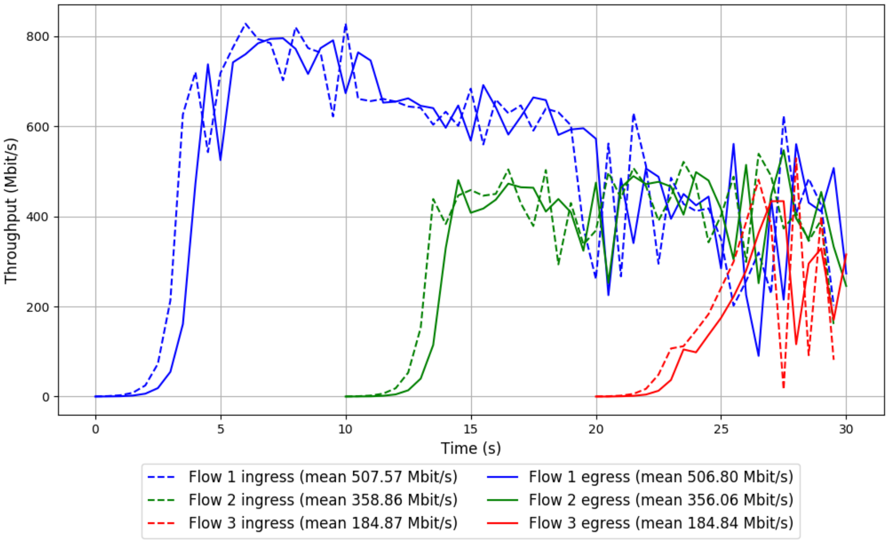
Run 1: Report of Muses_DecisionTreeH0 — Data Link

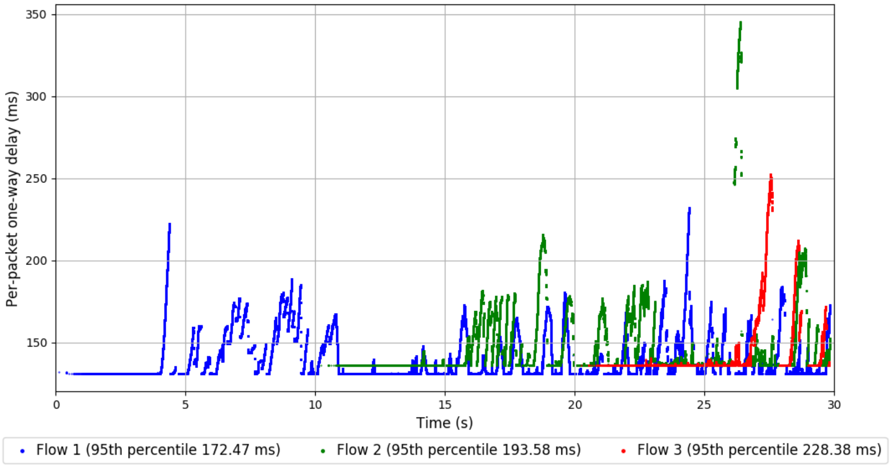




```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 20:59:56
End at: 2019-12-11 21:00:26
Local clock offset: -0.19 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-12-12 01:51:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 801.23 Mbit/s
95th percentile per-packet one-way delay: 178.601 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 506.80 Mbit/s
95th percentile per-packet one-way delay: 172.466 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 356.06 Mbit/s
95th percentile per-packet one-way delay: 193.576 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 184.84 Mbit/s
95th percentile per-packet one-way delay: 228.381 ms
Loss rate: 0.00%
```

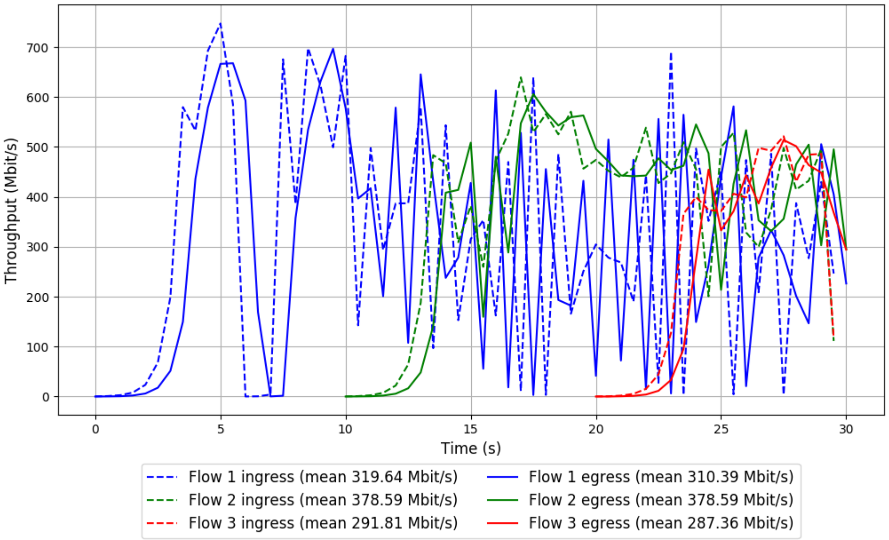
Run 2: Report of Muses_DecisionTreeH0 — Data Link

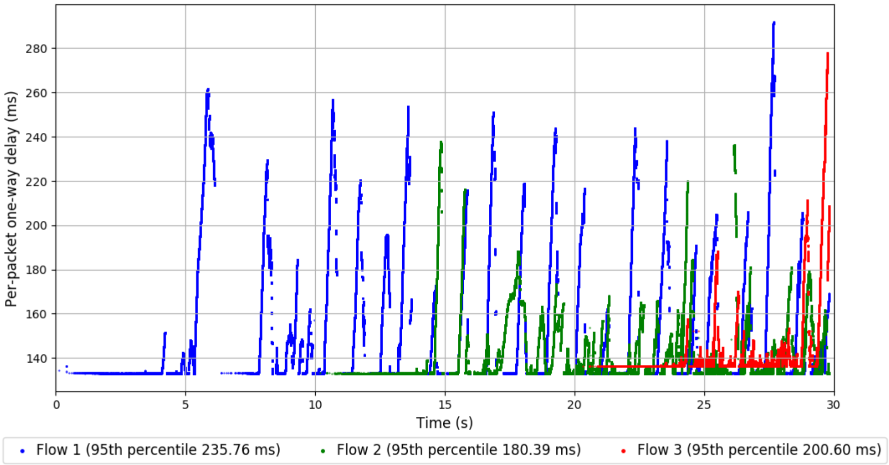




```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 21:43:29
End at: 2019-12-11 21:43:59
Local clock offset: -0.466 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-12-12 01:51:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 652.72 Mbit/s
95th percentile per-packet one-way delay: 223.509 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 310.39 Mbit/s
95th percentile per-packet one-way delay: 235.759 ms
Loss rate: 2.89%
-- Flow 2:
Average throughput: 378.59 Mbit/s
95th percentile per-packet one-way delay: 180.392 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 287.36 Mbit/s
95th percentile per-packet one-way delay: 200.604 ms
Loss rate: 1.49%
```

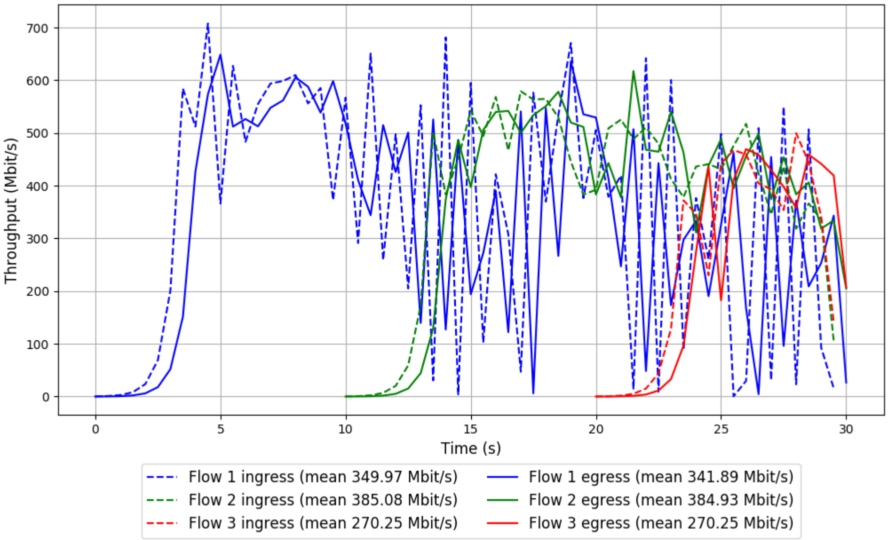
Run 3: Report of Muses_DecisionTreeH0 — Data Link

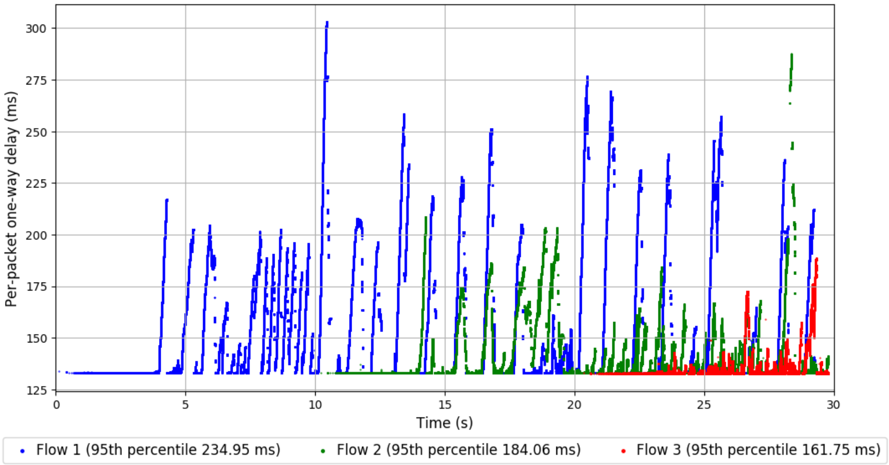




```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 22:26:53
End at: 2019-12-11 22:27:23
Local clock offset: -0.363 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2019-12-12 01:51:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 681.67 Mbit/s
95th percentile per-packet one-way delay: 219.096 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 341.89 Mbit/s
95th percentile per-packet one-way delay: 234.946 ms
Loss rate: 2.31%
-- Flow 2:
Average throughput: 384.93 Mbit/s
95th percentile per-packet one-way delay: 184.064 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 270.25 Mbit/s
95th percentile per-packet one-way delay: 161.752 ms
Loss rate: 0.00%
```

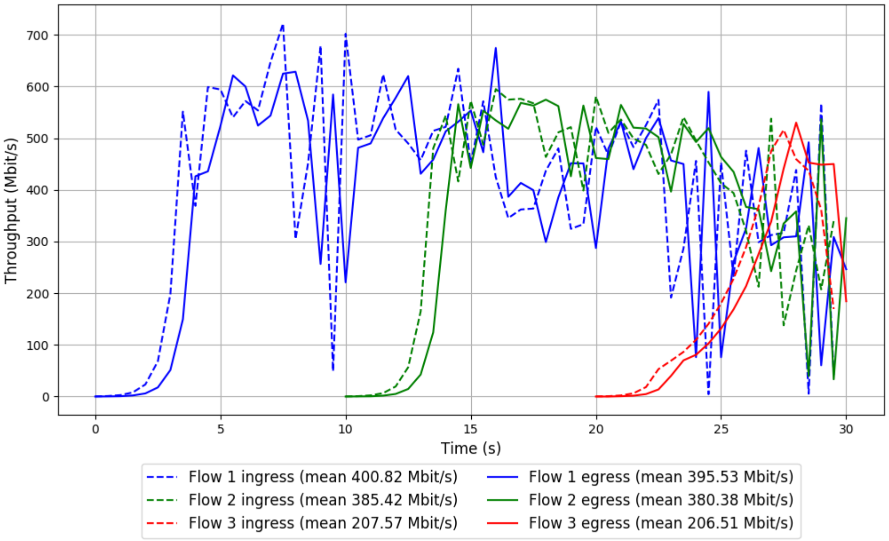
Run 4: Report of Muses_DecisionTreeH0 — Data Link

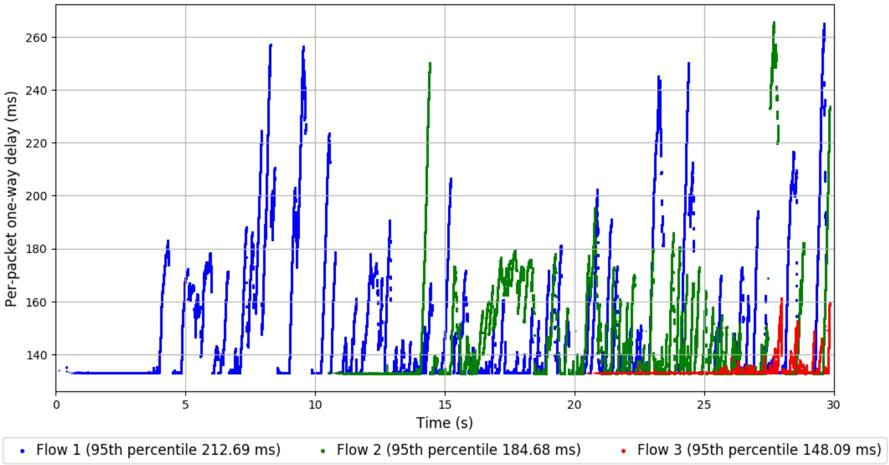




```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 23:10:27
End at: 2019-12-11 23:10:57
Local clock offset: -0.214 ms
Remote clock offset: -0.0 ms

# Below is generated by plot.py at 2019-12-12 01:52:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 711.59 Mbit/s
95th percentile per-packet one-way delay: 204.512 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 395.53 Mbit/s
95th percentile per-packet one-way delay: 212.694 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 380.38 Mbit/s
95th percentile per-packet one-way delay: 184.678 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 206.51 Mbit/s
95th percentile per-packet one-way delay: 148.091 ms
Loss rate: 0.53%
```

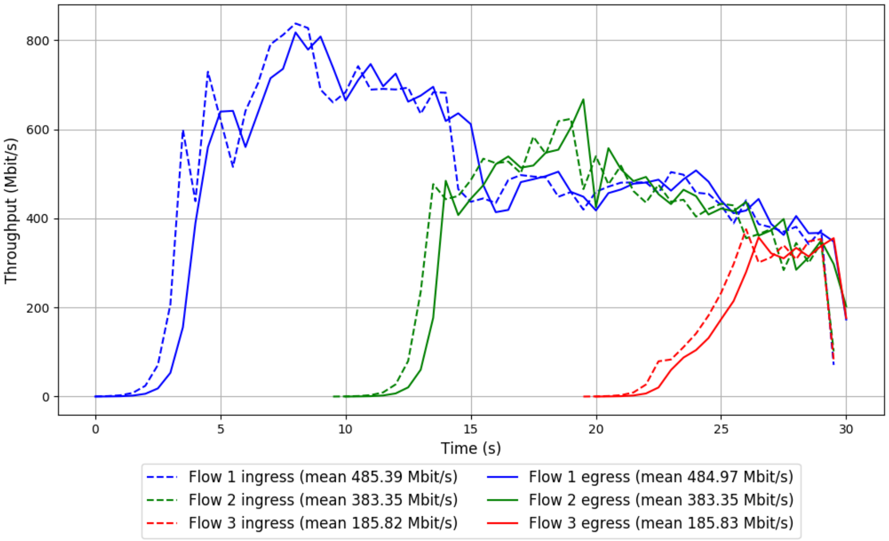
Run 5: Report of Muses_DecisionTreeH0 — Data Link

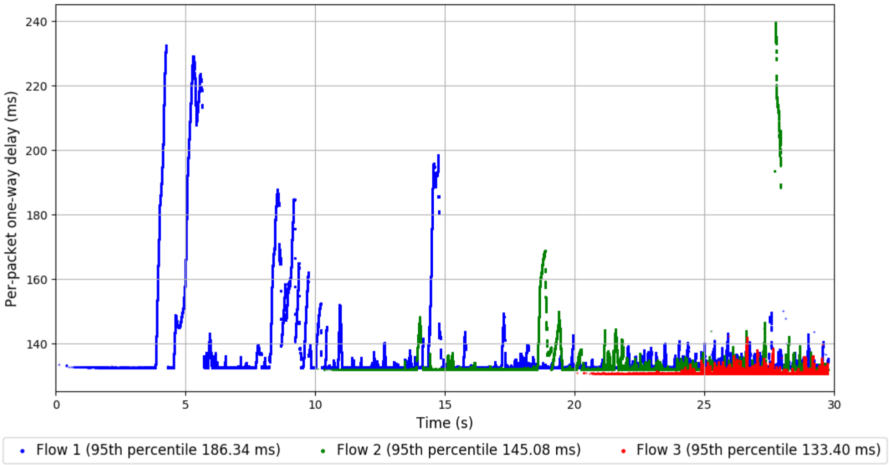




```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 20:36:34
End at: 2019-12-11 20:37:04
Local clock offset: -0.148 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-12-12 01:56:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 800.07 Mbit/s
95th percentile per-packet one-way delay: 168.126 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 484.97 Mbit/s
95th percentile per-packet one-way delay: 186.338 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 383.35 Mbit/s
95th percentile per-packet one-way delay: 145.076 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 185.83 Mbit/s
95th percentile per-packet one-way delay: 133.404 ms
Loss rate: 0.00%
```

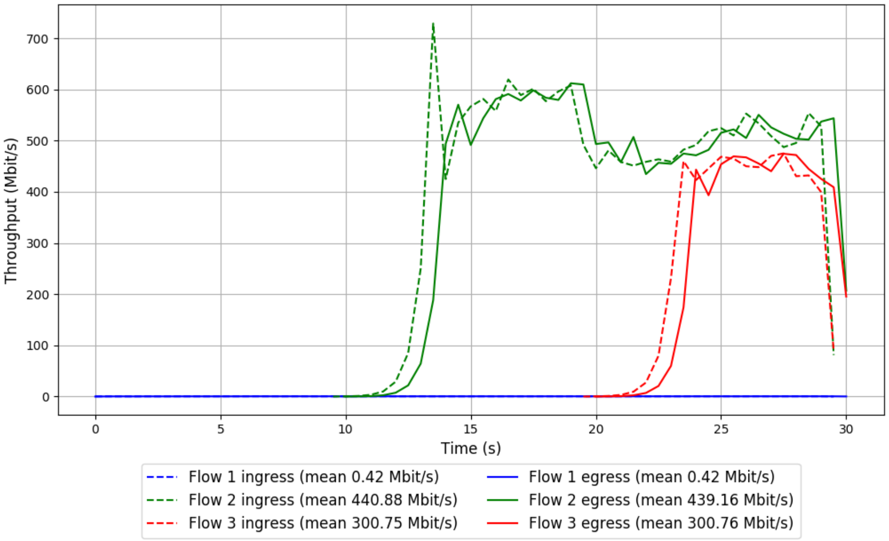
Run 1: Report of Muses_DecisionTreeR0 — Data Link

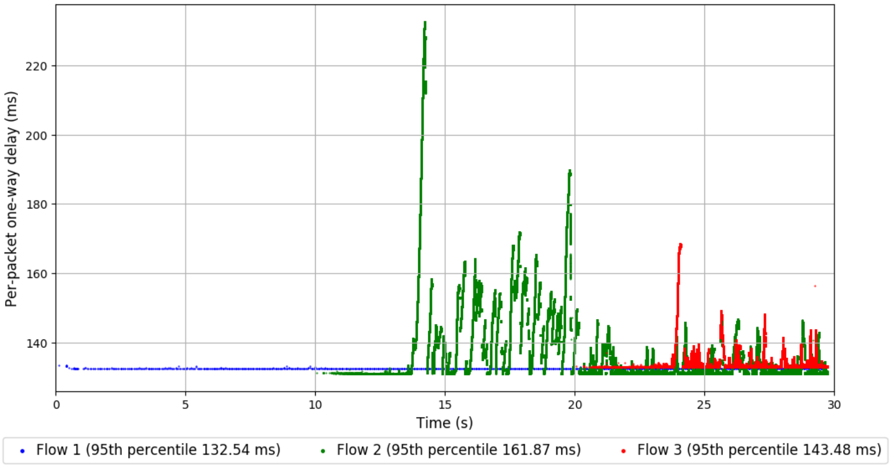




```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 21:20:41
End at: 2019-12-11 21:21:11
Local clock offset: -0.273 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2019-12-12 01:56:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.35 Mbit/s
95th percentile per-packet one-way delay: 158.906 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 132.540 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 439.16 Mbit/s
95th percentile per-packet one-way delay: 161.868 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 300.76 Mbit/s
95th percentile per-packet one-way delay: 143.477 ms
Loss rate: 0.00%
```

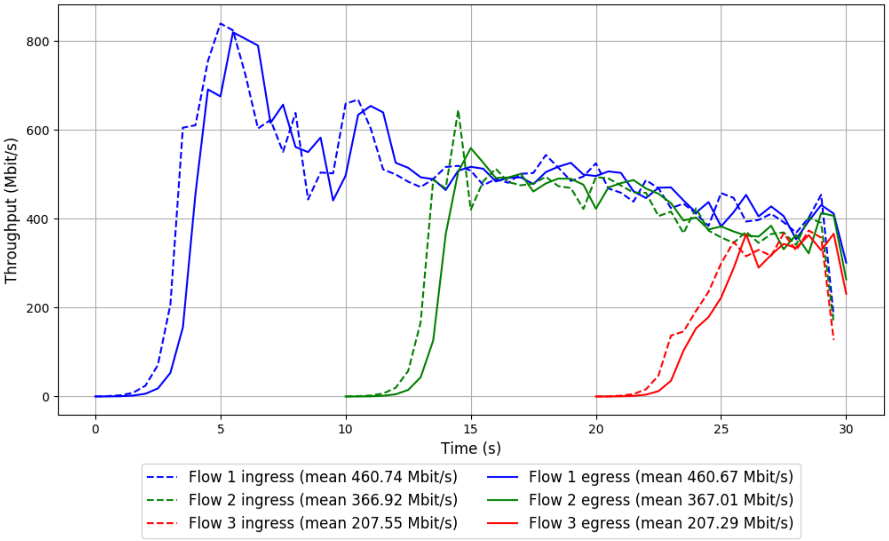
Run 2: Report of Muses_DecisionTreeR0 — Data Link

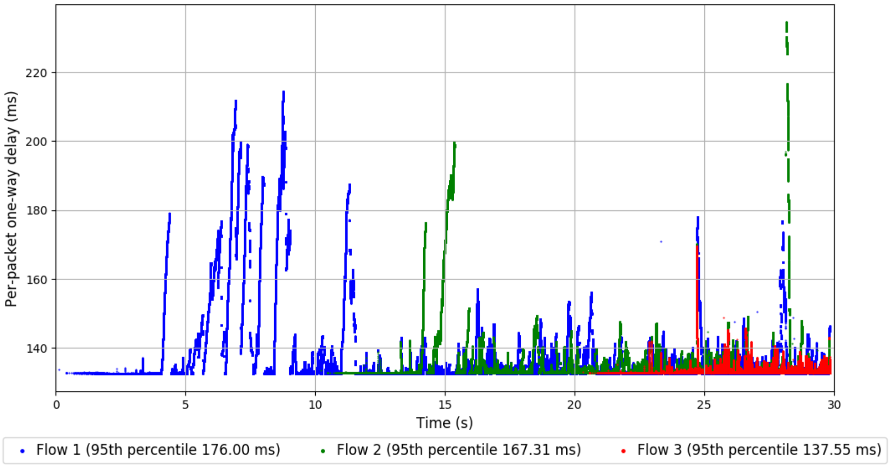




```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 22:03:34
End at: 2019-12-11 22:04:04
Local clock offset: 0.025 ms
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2019-12-12 01:58:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 769.35 Mbit/s
95th percentile per-packet one-way delay: 172.450 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 460.67 Mbit/s
95th percentile per-packet one-way delay: 176.002 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 367.01 Mbit/s
95th percentile per-packet one-way delay: 167.312 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 207.29 Mbit/s
95th percentile per-packet one-way delay: 137.553 ms
Loss rate: 0.10%
```

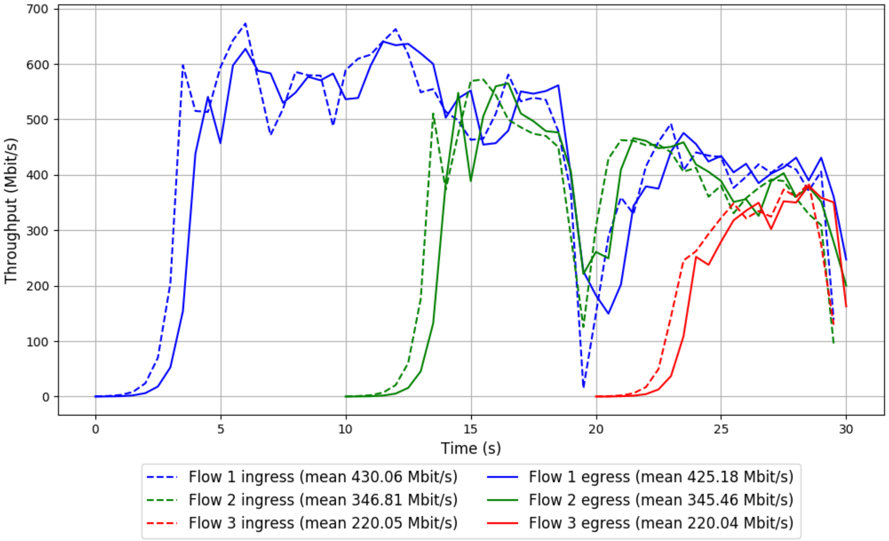
Run 3: Report of Muses_DecisionTreeR0 — Data Link

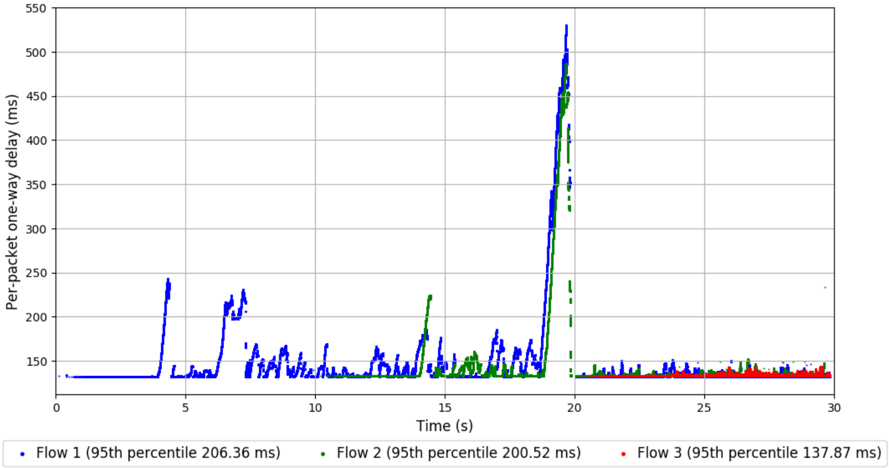




```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 22:47:18
End at: 2019-12-11 22:47:48
Local clock offset: -0.193 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-12-12 01:59:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 724.10 Mbit/s
95th percentile per-packet one-way delay: 200.632 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 425.18 Mbit/s
95th percentile per-packet one-way delay: 206.357 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 345.46 Mbit/s
95th percentile per-packet one-way delay: 200.519 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 220.04 Mbit/s
95th percentile per-packet one-way delay: 137.869 ms
Loss rate: 0.00%
```

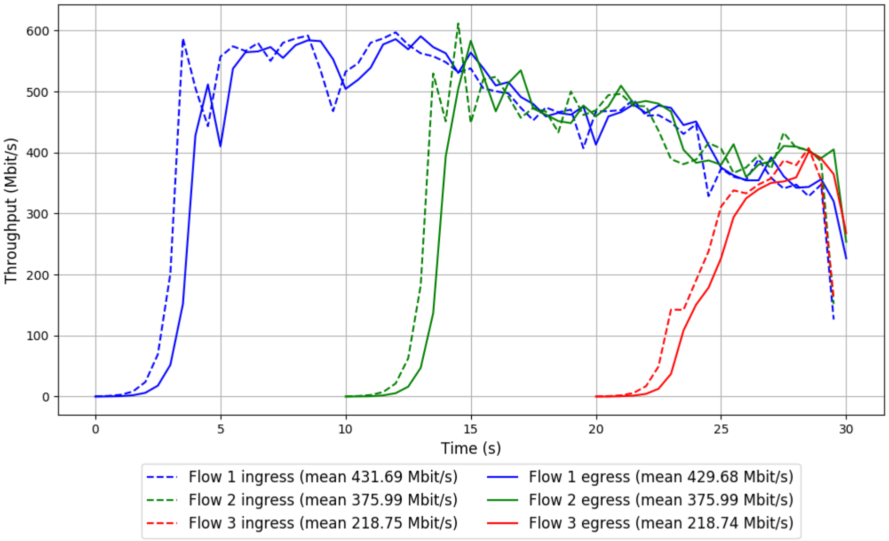
Run 4: Report of Muses_DecisionTreeR0 — Data Link

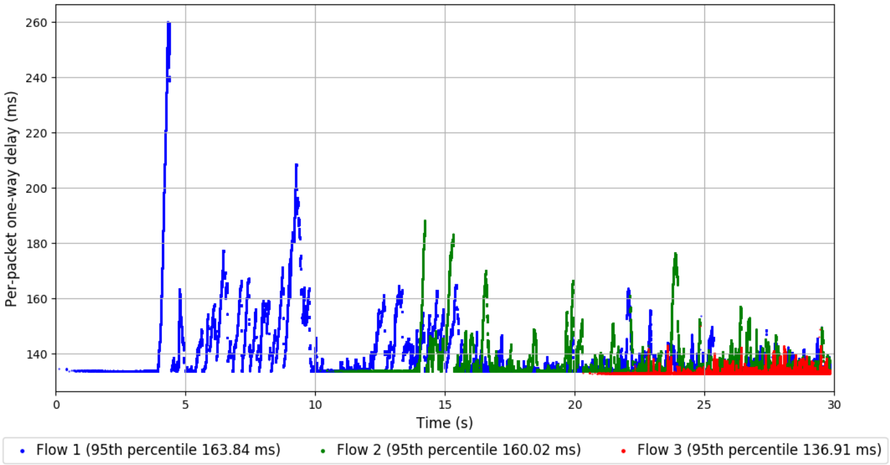




```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 23:30:43
End at: 2019-12-11 23:31:13
Local clock offset: -0.179 ms
Remote clock offset: 0.731 ms

# Below is generated by plot.py at 2019-12-12 02:03:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 748.54 Mbit/s
95th percentile per-packet one-way delay: 162.423 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 429.68 Mbit/s
95th percentile per-packet one-way delay: 163.839 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 375.99 Mbit/s
95th percentile per-packet one-way delay: 160.023 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 218.74 Mbit/s
95th percentile per-packet one-way delay: 136.914 ms
Loss rate: 0.00%
```

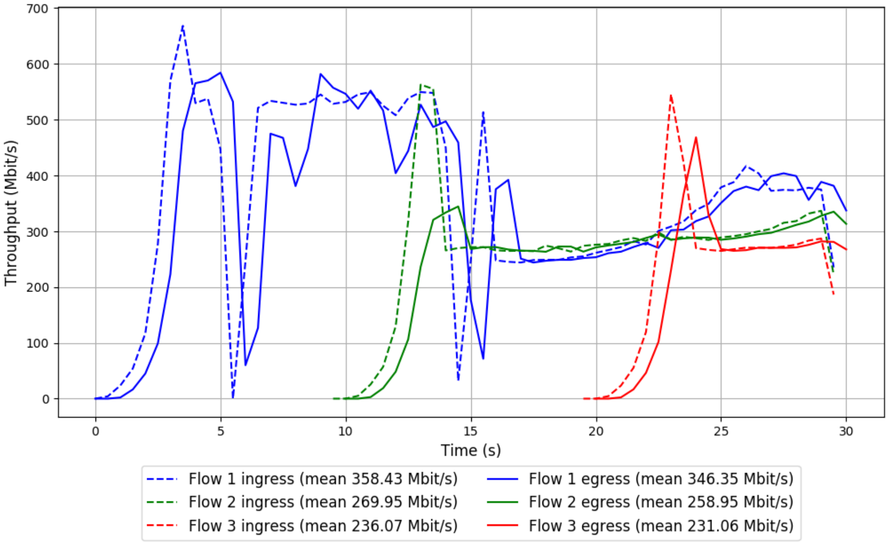
Run 5: Report of Muses_DecisionTreeR0 — Data Link

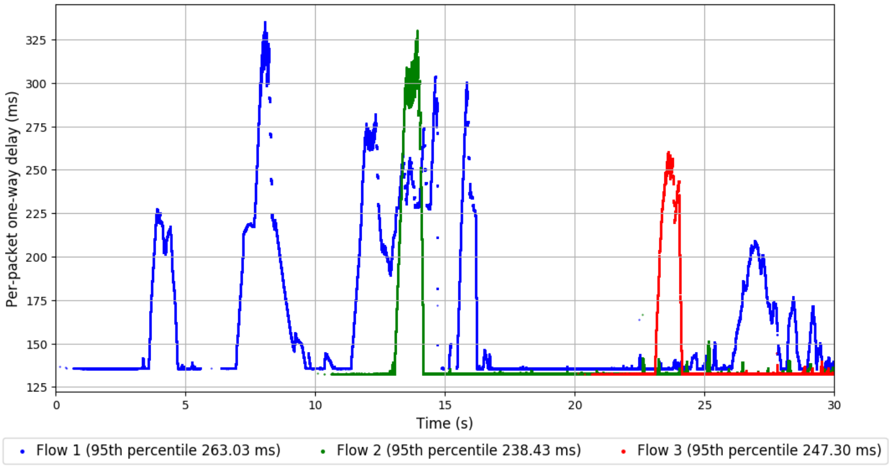




```
Run 1: Statistics of PCC-Allegro

Start at: 2019-12-11 20:45:59
End at: 2019-12-11 20:46:29
Local clock offset: 0.154 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-12-12 02:12:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 595.06 Mbit/s
95th percentile per-packet one-way delay: 254.899 ms
Loss rate: 3.42%
-- Flow 1:
Average throughput: 346.35 Mbit/s
95th percentile per-packet one-way delay: 263.034 ms
Loss rate: 3.37%
-- Flow 2:
Average throughput: 258.95 Mbit/s
95th percentile per-packet one-way delay: 238.428 ms
Loss rate: 4.08%
-- Flow 3:
Average throughput: 231.06 Mbit/s
95th percentile per-packet one-way delay: 247.298 ms
Loss rate: 2.12%
```

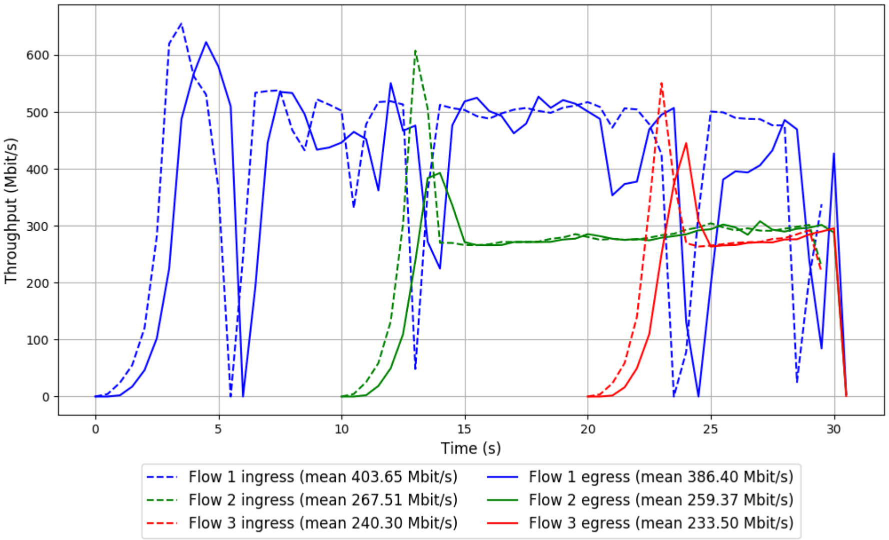
Run 1: Report of PCC-Allegro — Data Link

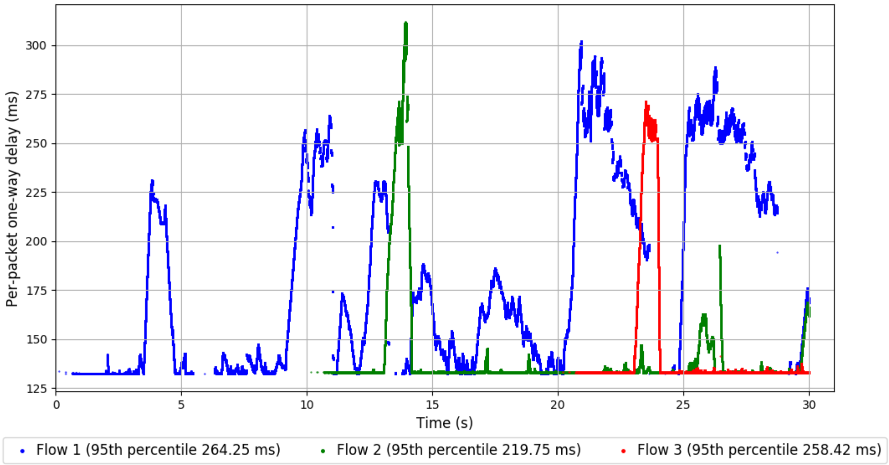




```
Run 2: Statistics of PCC-Allegro

Start at: 2019-12-11 21:29:35
End at: 2019-12-11 21:30:05
Local clock offset: -0.204 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2019-12-12 02:14:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 635.56 Mbit/s
95th percentile per-packet one-way delay: 261.387 ms
Loss rate: 3.76%
-- Flow 1:
Average throughput: 386.40 Mbit/s
95th percentile per-packet one-way delay: 264.250 ms
Loss rate: 4.26%
-- Flow 2:
Average throughput: 259.37 Mbit/s
95th percentile per-packet one-way delay: 219.747 ms
Loss rate: 3.02%
-- Flow 3:
Average throughput: 233.50 Mbit/s
95th percentile per-packet one-way delay: 258.421 ms
Loss rate: 2.83%
```

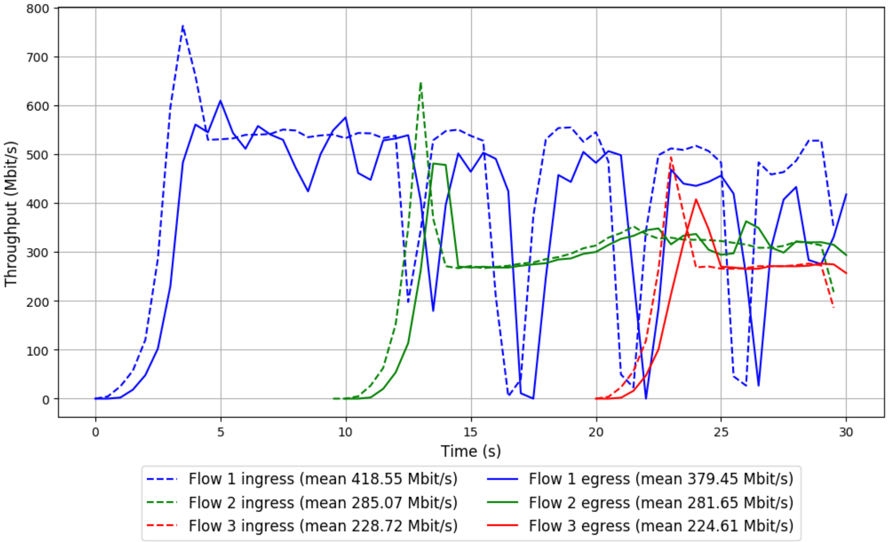
Run 2: Report of PCC-Allegro — Data Link

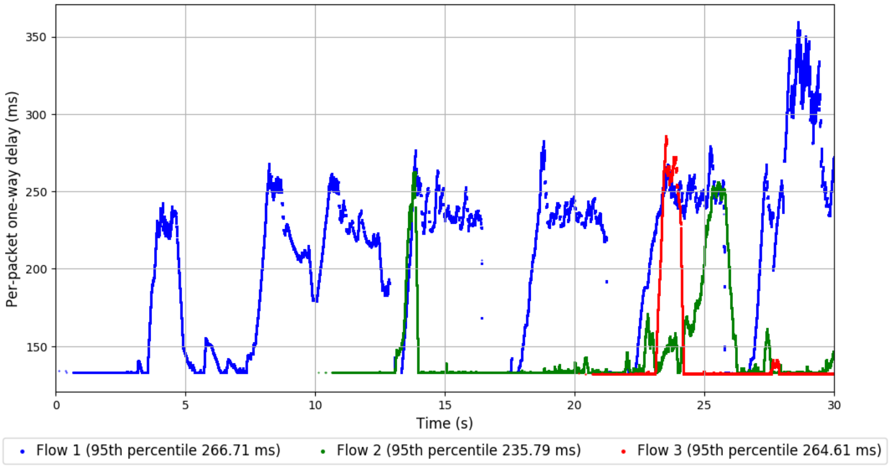




```
Run 3: Statistics of PCC-Allegro

Start at: 2019-12-11 22:12:58
End at: 2019-12-11 22:13:28
Local clock offset: -0.321 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-12-12 02:14:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 640.67 Mbit/s
95th percentile per-packet one-way delay: 259.393 ms
Loss rate: 6.25%
-- Flow 1:
Average throughput: 379.45 Mbit/s
95th percentile per-packet one-way delay: 266.714 ms
Loss rate: 9.35%
-- Flow 2:
Average throughput: 281.65 Mbit/s
95th percentile per-packet one-way delay: 235.793 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 224.61 Mbit/s
95th percentile per-packet one-way delay: 264.607 ms
Loss rate: 1.80%
```

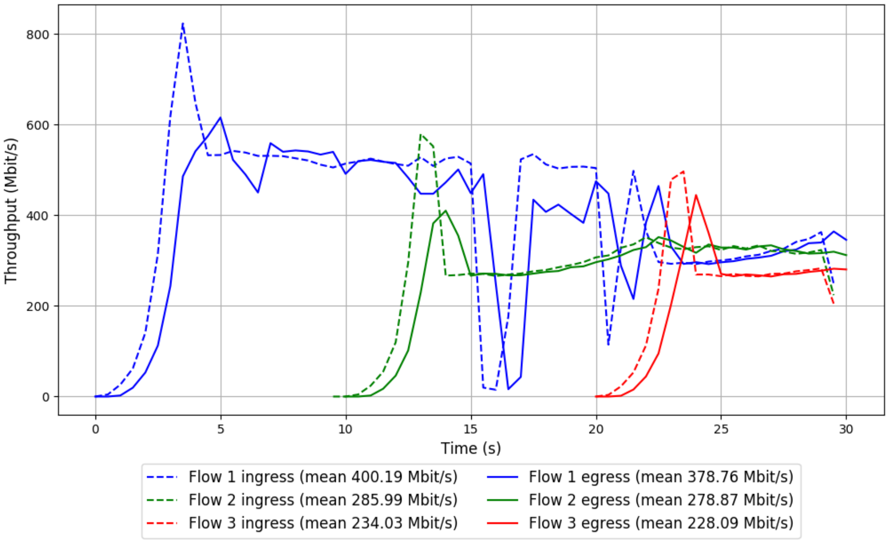
Run 3: Report of PCC-Allegro — Data Link

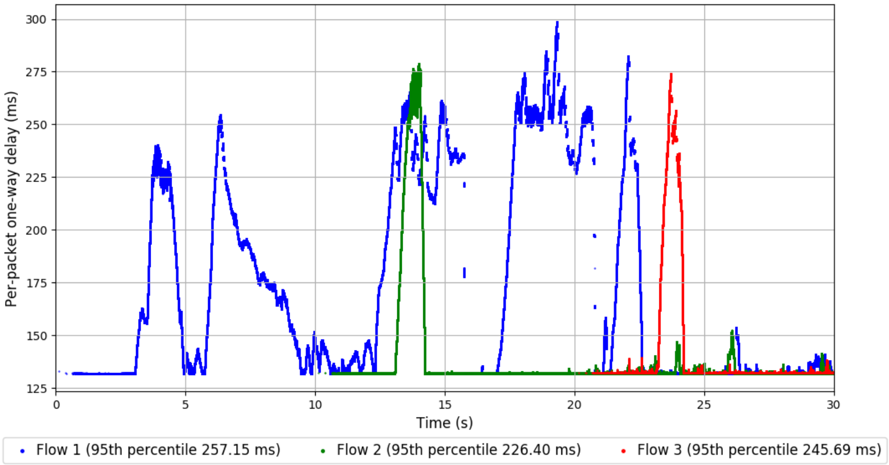




```
Run 4: Statistics of PCC-Allegro

Start at: 2019-12-11 22:56:35
End at: 2019-12-11 22:57:05
Local clock offset: -0.178 ms
Remote clock offset: -0.781 ms

# Below is generated by plot.py at 2019-12-12 02:16:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 639.29 Mbit/s
95th percentile per-packet one-way delay: 255.474 ms
Loss rate: 4.22%
-- Flow 1:
Average throughput: 378.76 Mbit/s
95th percentile per-packet one-way delay: 257.152 ms
Loss rate: 5.36%
-- Flow 2:
Average throughput: 278.87 Mbit/s
95th percentile per-packet one-way delay: 226.400 ms
Loss rate: 2.49%
-- Flow 3:
Average throughput: 228.09 Mbit/s
95th percentile per-packet one-way delay: 245.695 ms
Loss rate: 2.54%
```

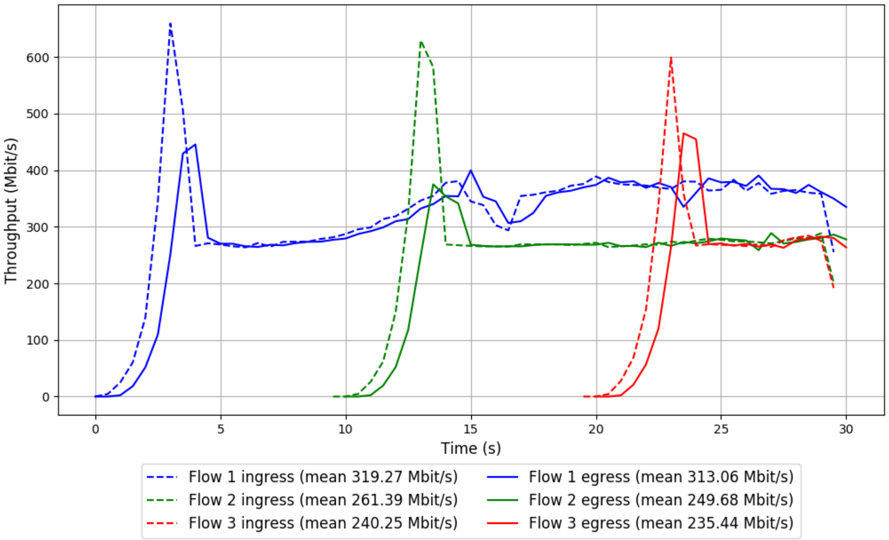
Run 4: Report of PCC-Allegro — Data Link

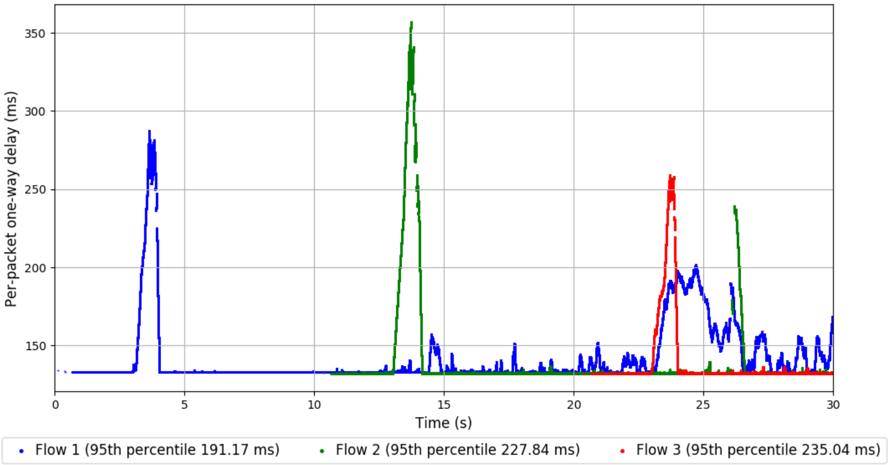




```
Run 5: Statistics of PCC-Allegro

Start at: 2019-12-11 23:39:50
End at: 2019-12-11 23:40:20
Local clock offset: -0.187 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-12-12 02:16:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 556.91 Mbit/s
95th percentile per-packet one-way delay: 197.803 ms
Loss rate: 2.72%
-- Flow 1:
Average throughput: 313.06 Mbit/s
95th percentile per-packet one-way delay: 191.172 ms
Loss rate: 1.95%
-- Flow 2:
Average throughput: 249.68 Mbit/s
95th percentile per-packet one-way delay: 227.838 ms
Loss rate: 4.48%
-- Flow 3:
Average throughput: 235.44 Mbit/s
95th percentile per-packet one-way delay: 235.039 ms
Loss rate: 2.00%
```

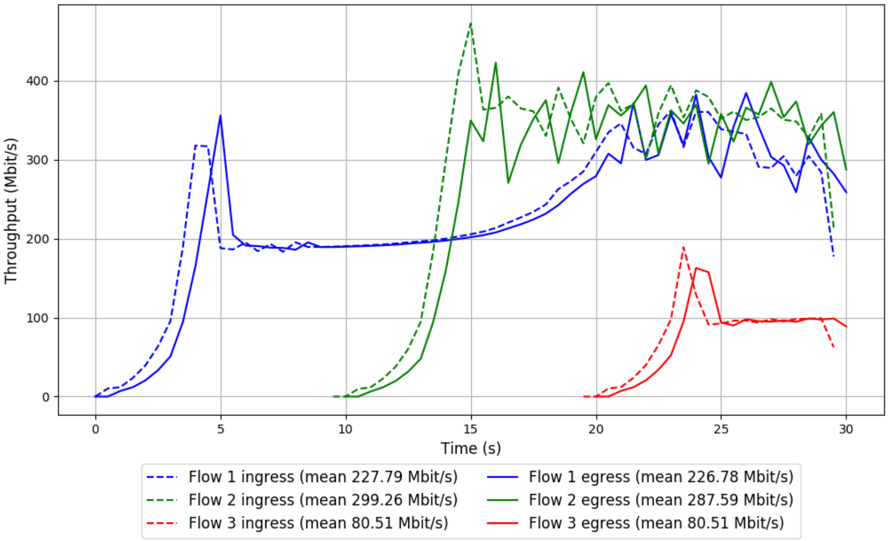
Run 5: Report of PCC-Allegro — Data Link

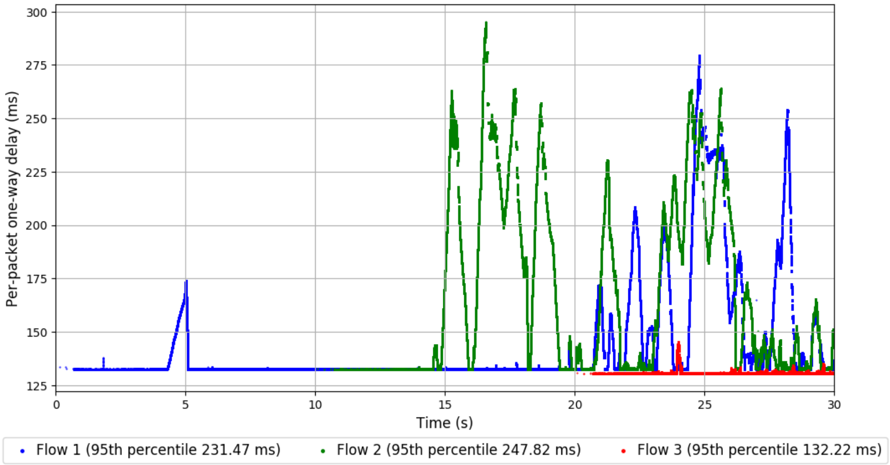




```
Run 1: Statistics of PCC-Expr

Start at: 2019-12-11 20:22:40
End at: 2019-12-11 20:23:10
Local clock offset: -0.028 ms
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2019-12-12 02:16:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.12 Mbit/s
95th percentile per-packet one-way delay: 239.780 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 226.78 Mbit/s
95th percentile per-packet one-way delay: 231.471 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 287.59 Mbit/s
95th percentile per-packet one-way delay: 247.821 ms
Loss rate: 3.90%
-- Flow 3:
Average throughput: 80.51 Mbit/s
95th percentile per-packet one-way delay: 132.219 ms
Loss rate: 0.00%
```

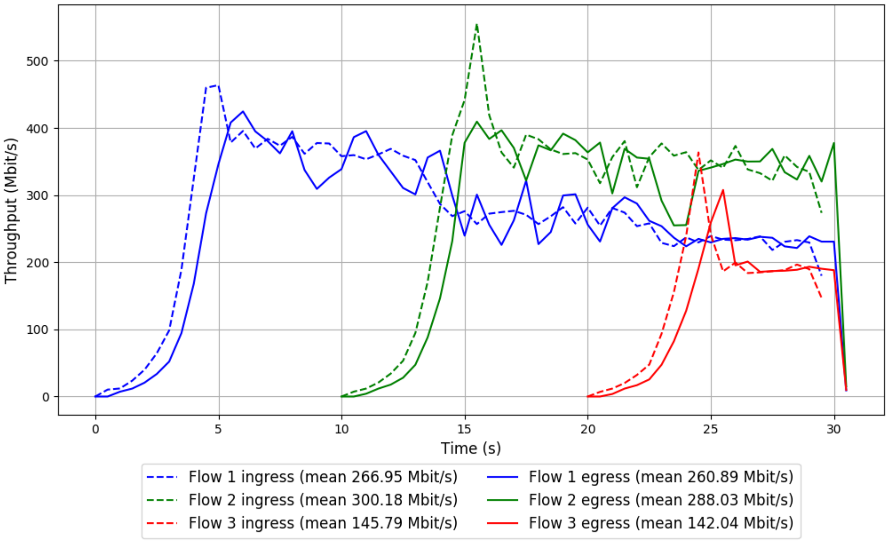
Run 1: Report of PCC-Expr — Data Link

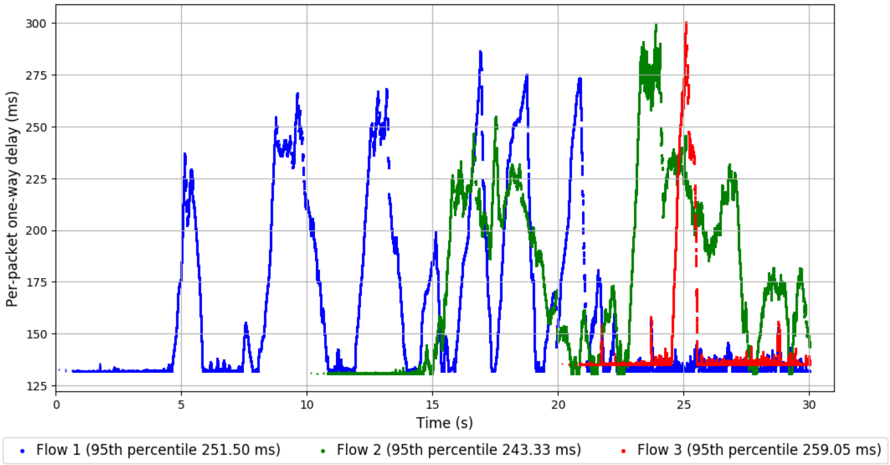




```
Run 2: Statistics of PCC-Expr

Start at: 2019-12-11 21:06:06
End at: 2019-12-11 21:06:36
Local clock offset: -0.167 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2019-12-12 02:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 499.18 Mbit/s
95th percentile per-packet one-way delay: 250.972 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 260.89 Mbit/s
95th percentile per-packet one-way delay: 251.496 ms
Loss rate: 2.27%
-- Flow 2:
Average throughput: 288.03 Mbit/s
95th percentile per-packet one-way delay: 243.327 ms
Loss rate: 4.03%
-- Flow 3:
Average throughput: 142.04 Mbit/s
95th percentile per-packet one-way delay: 259.046 ms
Loss rate: 2.59%
```

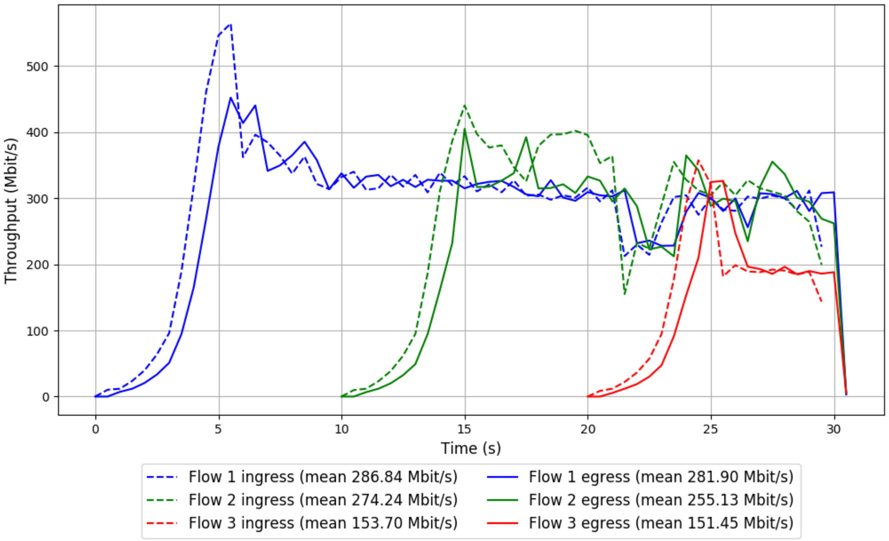
## Run 2: Report of PCC-Expr — Data Link

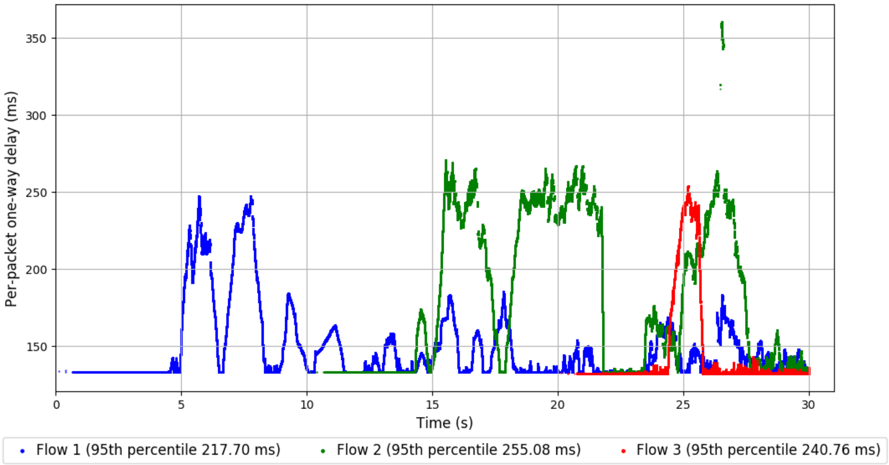




```
Run 3: Statistics of PCC-Expr

Start at: 2019-12-11 21:49:26
End at: 2019-12-11 21:49:56
Local clock offset: -0.099 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2019-12-12 02:22:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 501.65 Mbit/s
95th percentile per-packet one-way delay: 246.390 ms
Loss rate: 3.54%
-- Flow 1:
Average throughput: 281.90 Mbit/s
95th percentile per-packet one-way delay: 217.696 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 255.13 Mbit/s
95th percentile per-packet one-way delay: 255.079 ms
Loss rate: 6.97%
-- Flow 3:
Average throughput: 151.45 Mbit/s
95th percentile per-packet one-way delay: 240.756 ms
Loss rate: 1.47%
```

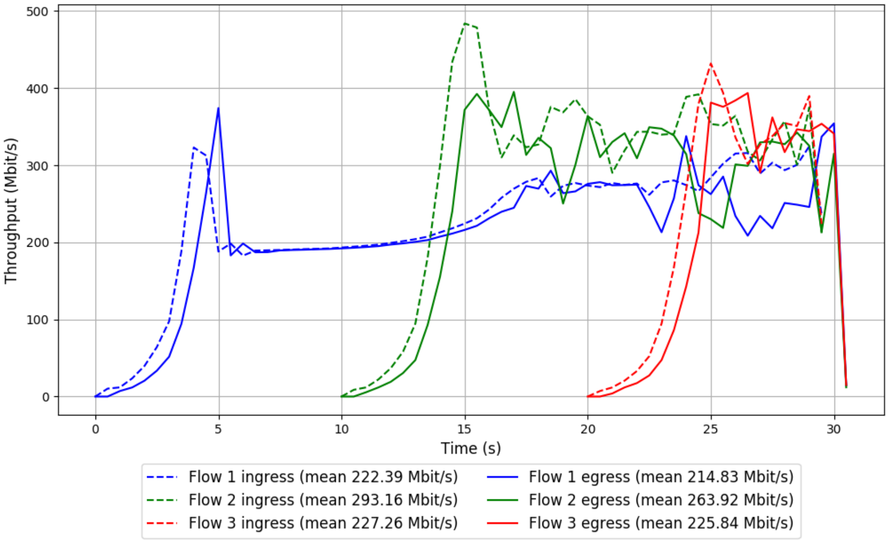
Run 3: Report of PCC-Expr — Data Link

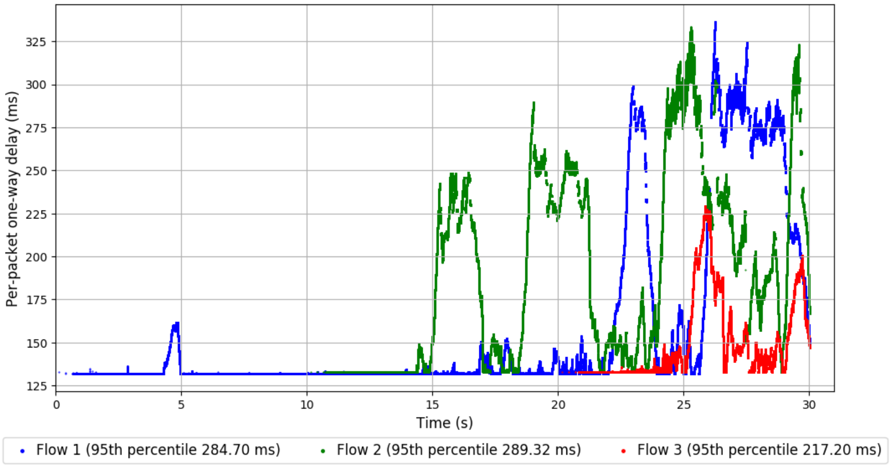




```
Run 4: Statistics of PCC-Expr

Start at: 2019-12-11 22:32:47
End at: 2019-12-11 22:33:17
Local clock offset: -0.298 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2019-12-12 02:29:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 464.84 Mbit/s
95th percentile per-packet one-way delay: 284.026 ms
Loss rate: 5.58%
-- Flow 1:
Average throughput: 214.83 Mbit/s
95th percentile per-packet one-way delay: 284.696 ms
Loss rate: 3.40%
-- Flow 2:
Average throughput: 263.92 Mbit/s
95th percentile per-packet one-way delay: 289.320 ms
Loss rate: 9.97%
-- Flow 3:
Average throughput: 225.84 Mbit/s
95th percentile per-packet one-way delay: 217.198 ms
Loss rate: 0.62%
```

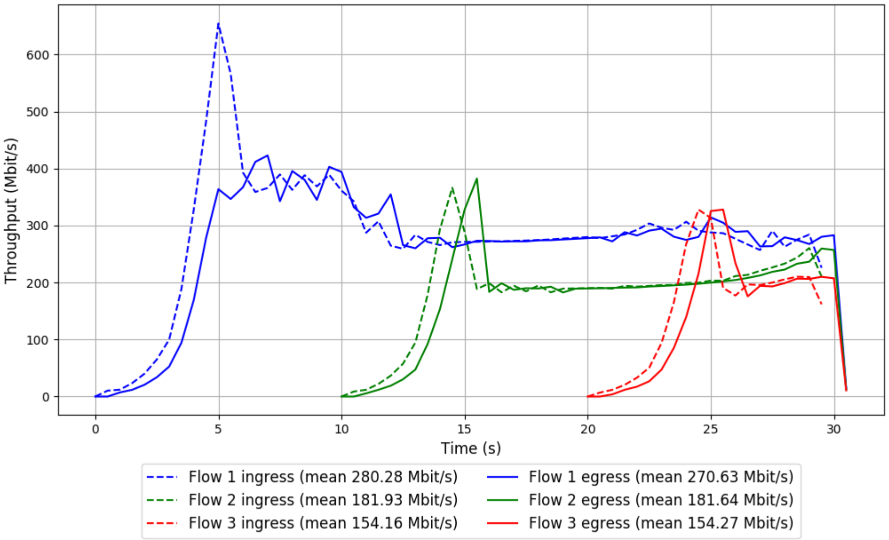
Run 4: Report of PCC-Expr — Data Link

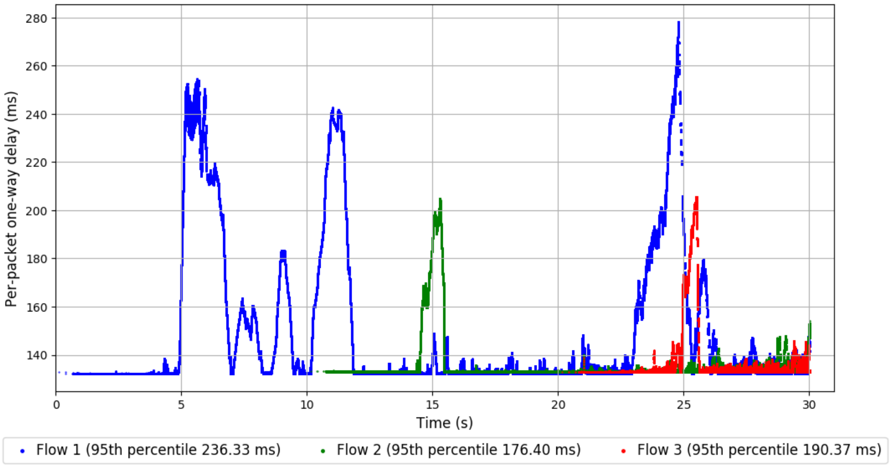




```
Run 5: Statistics of PCC-Expr

Start at: 2019-12-11 23:16:25
End at: 2019-12-11 23:16:55
Local clock offset: -0.29 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 442.20 Mbit/s
95th percentile per-packet one-way delay: 222.768 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 270.63 Mbit/s
95th percentile per-packet one-way delay: 236.334 ms
Loss rate: 3.45%
-- Flow 2:
Average throughput: 181.64 Mbit/s
95th percentile per-packet one-way delay: 176.395 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 154.27 Mbit/s
95th percentile per-packet one-way delay: 190.367 ms
Loss rate: 0.00%
```

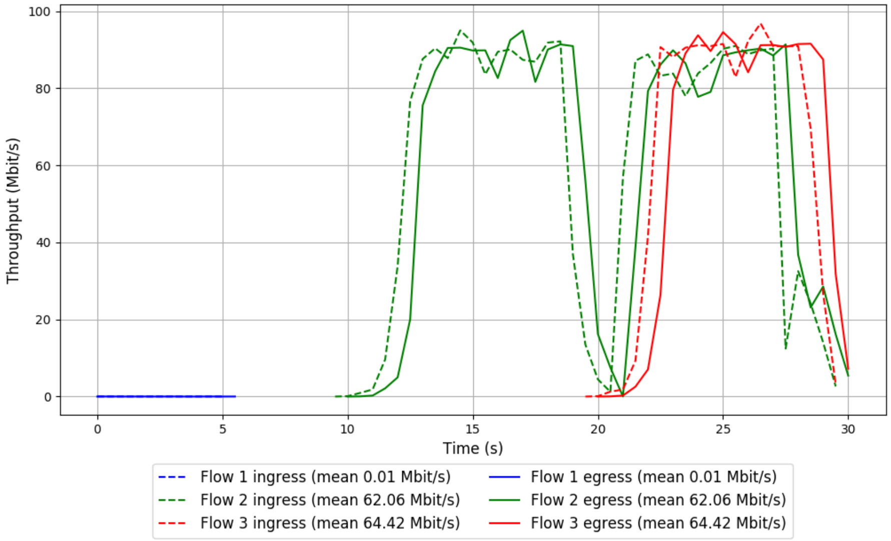
## Run 5: Report of PCC-Expr — Data Link

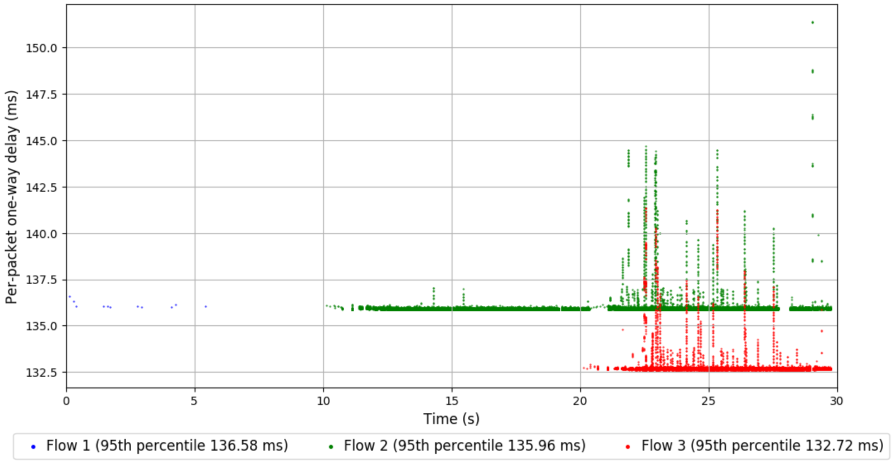




```
Run 1: Statistics of QUIC Cubic

Start at: 2019-12-11 20:28:02
End at: 2019-12-11 20:28:32
Local clock offset: -0.205 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.09 Mbit/s
95th percentile per-packet one-way delay: 135.945 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 136.581 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 62.06 Mbit/s
95th percentile per-packet one-way delay: 135.955 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 64.42 Mbit/s
95th percentile per-packet one-way delay: 132.716 ms
Loss rate: 0.00%
```

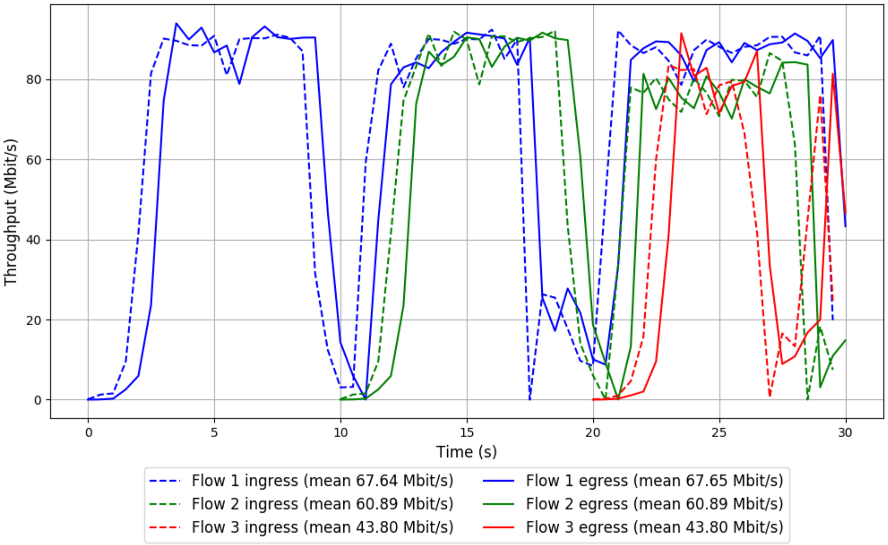
## Run 1: Report of QUIC Cubic — Data Link

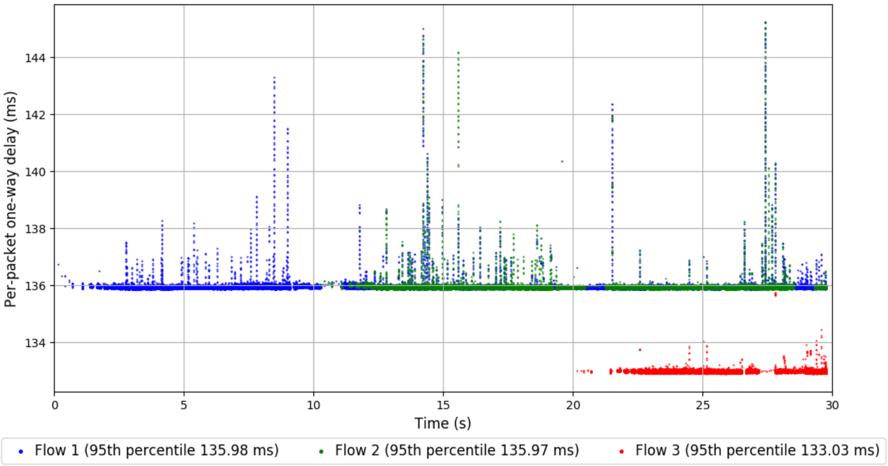




```
Run 2: Statistics of QUIC Cubic

Start at: 2019-12-11 21:11:37
End at: 2019-12-11 21:12:07
Local clock offset: -0.157 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 122.21 Mbit/s
95th percentile per-packet one-way delay: 135.972 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 67.65 Mbit/s
95th percentile per-packet one-way delay: 135.977 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 60.89 Mbit/s
95th percentile per-packet one-way delay: 135.975 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 43.80 Mbit/s
95th percentile per-packet one-way delay: 133.032 ms
Loss rate: 0.00%
```

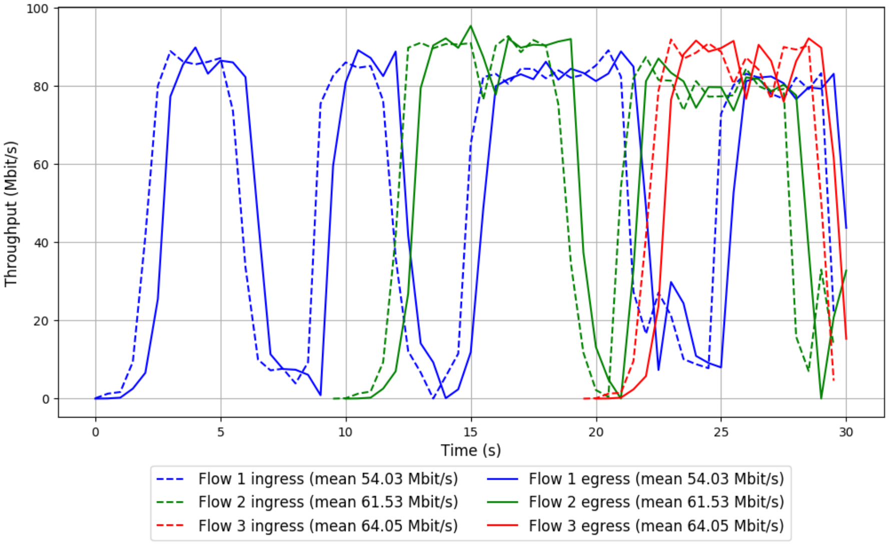
## Run 2: Report of QUIC Cubic — Data Link

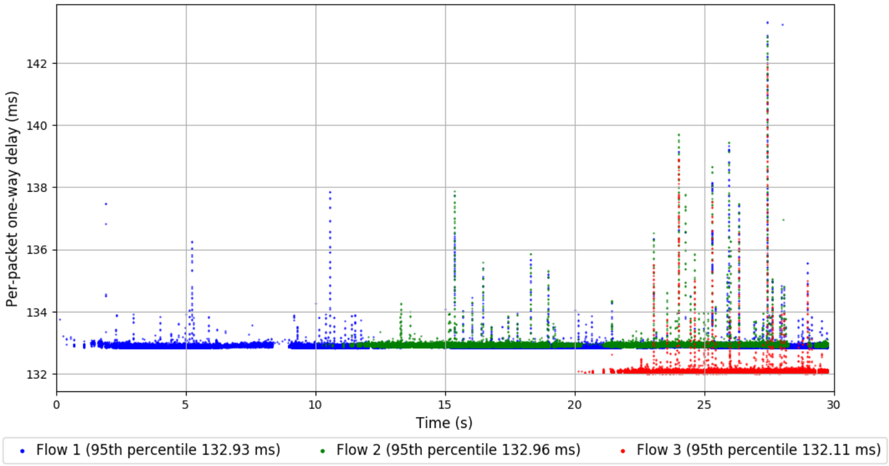




```
Run 3: Statistics of QUIC Cubic

Start at: 2019-12-11 21:54:54
End at: 2019-12-11 21:55:24
Local clock offset: -0.088 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 115.64 Mbit/s
95th percentile per-packet one-way delay: 132.948 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.03 Mbit/s
95th percentile per-packet one-way delay: 132.930 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 61.53 Mbit/s
95th percentile per-packet one-way delay: 132.963 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 64.05 Mbit/s
95th percentile per-packet one-way delay: 132.112 ms
Loss rate: 0.00%
```

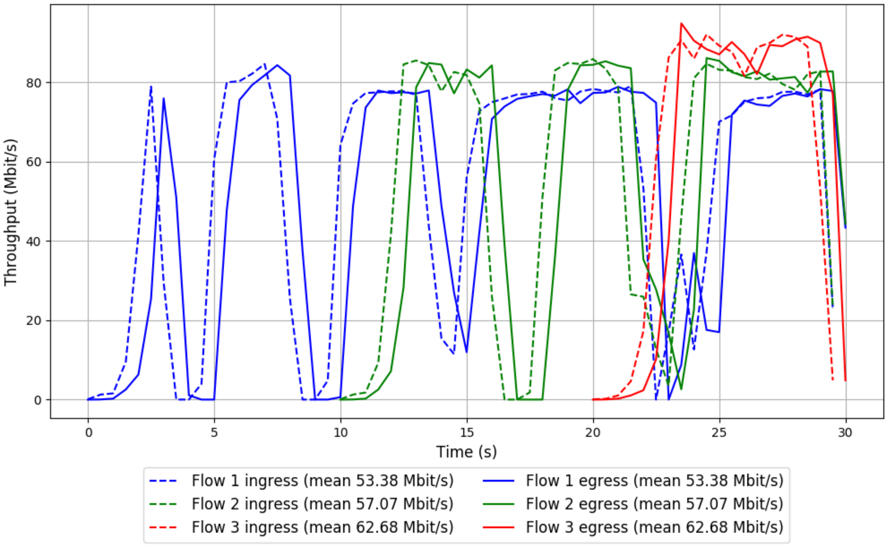
## Run 3: Report of QUIC Cubic — Data Link

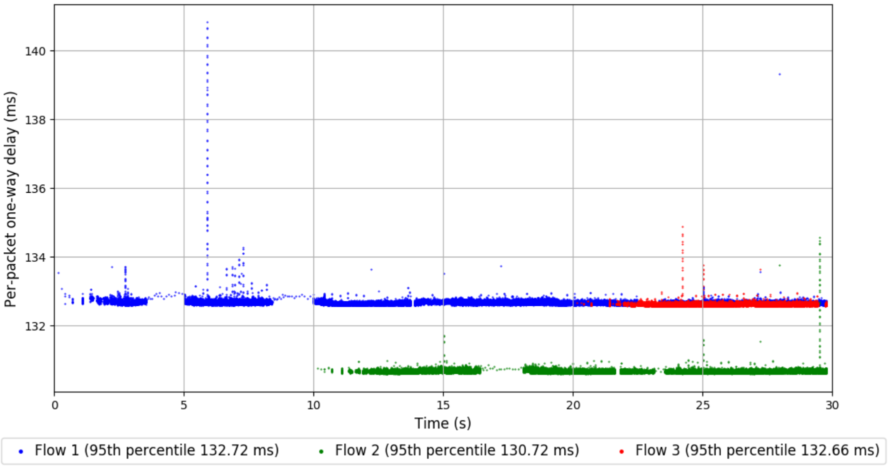




```
Run 4: Statistics of QUIC Cubic

Start at: 2019-12-11 22:38:12
End at: 2019-12-11 22:38:42
Local clock offset: -0.02 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 111.55 Mbit/s
95th percentile per-packet one-way delay: 132.699 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.38 Mbit/s
95th percentile per-packet one-way delay: 132.718 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 57.07 Mbit/s
95th percentile per-packet one-way delay: 130.719 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.68 Mbit/s
95th percentile per-packet one-way delay: 132.657 ms
Loss rate: 0.00%
```

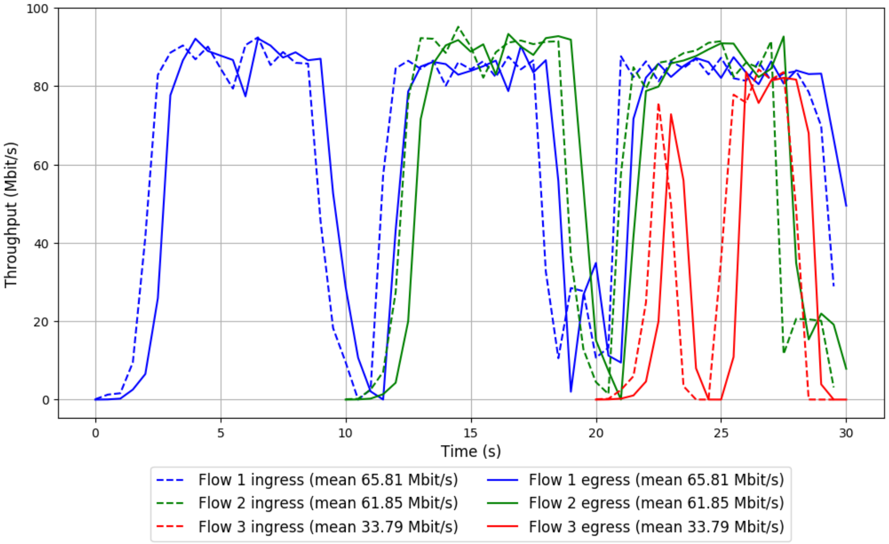
Run 4: Report of QUIC Cubic — Data Link

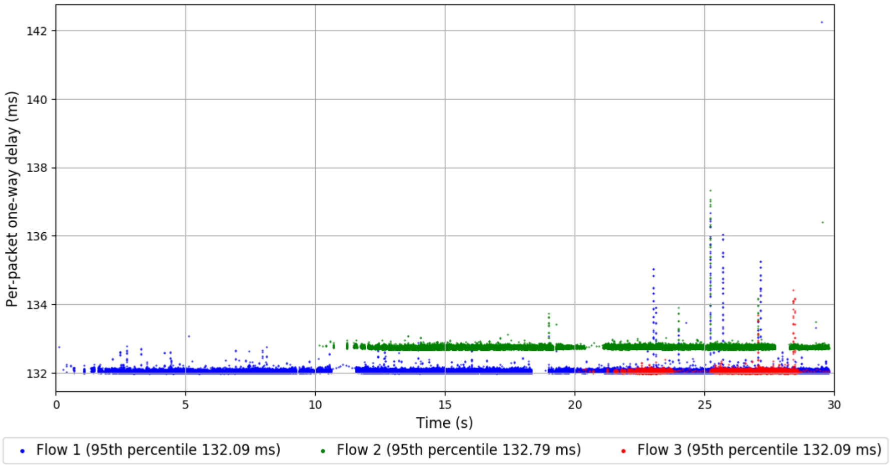




```
Run 5: Statistics of QUIC Cubic

Start at: 2019-12-11 23:21:46
End at: 2019-12-11 23:22:16
Local clock offset: 0.175 ms
Remote clock offset: 0.324 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 117.74 Mbit/s
95th percentile per-packet one-way delay: 132.769 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.81 Mbit/s
95th percentile per-packet one-way delay: 132.093 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 61.85 Mbit/s
95th percentile per-packet one-way delay: 132.790 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.79 Mbit/s
95th percentile per-packet one-way delay: 132.092 ms
Loss rate: 0.00%
```

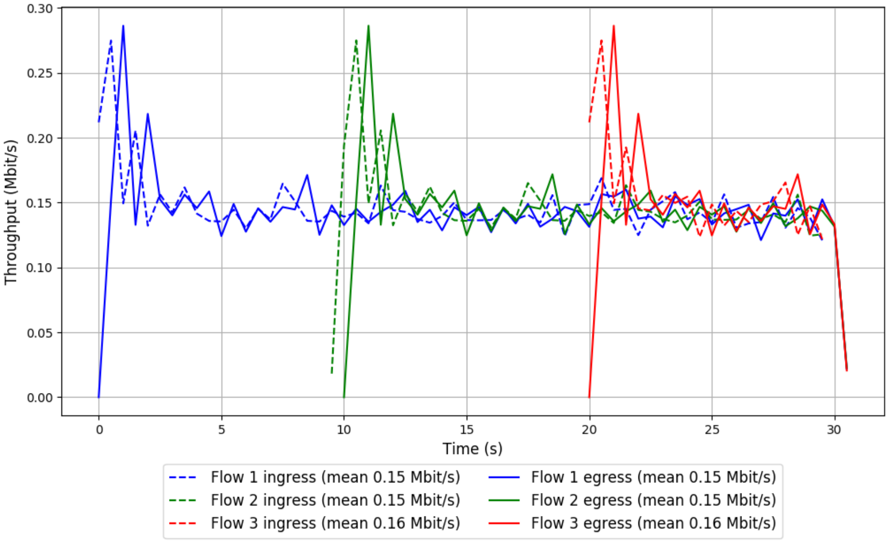
Run 5: Report of QUIC Cubic — Data Link

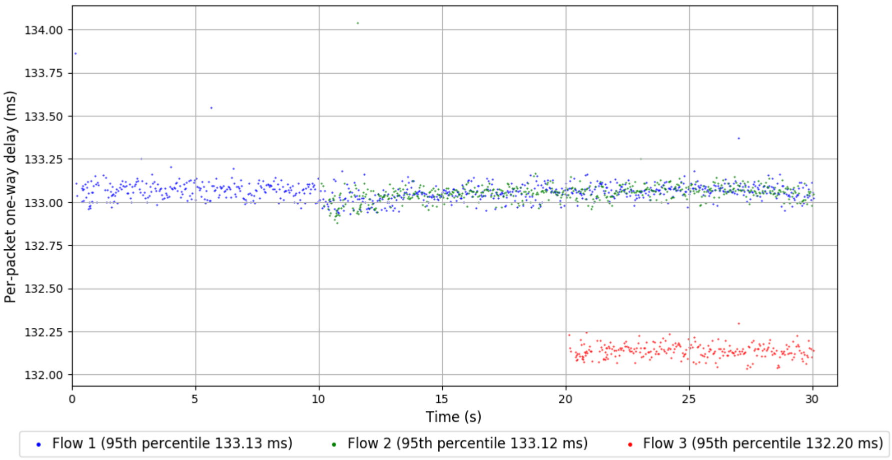




```
Run 1: Statistics of SCReAM

Start at: 2019-12-11 20:11:42
End at: 2019-12-11 20:12:12
Local clock offset: -0.392 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 133.121 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.129 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.115 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 132.197 ms
Loss rate: 0.00%
```

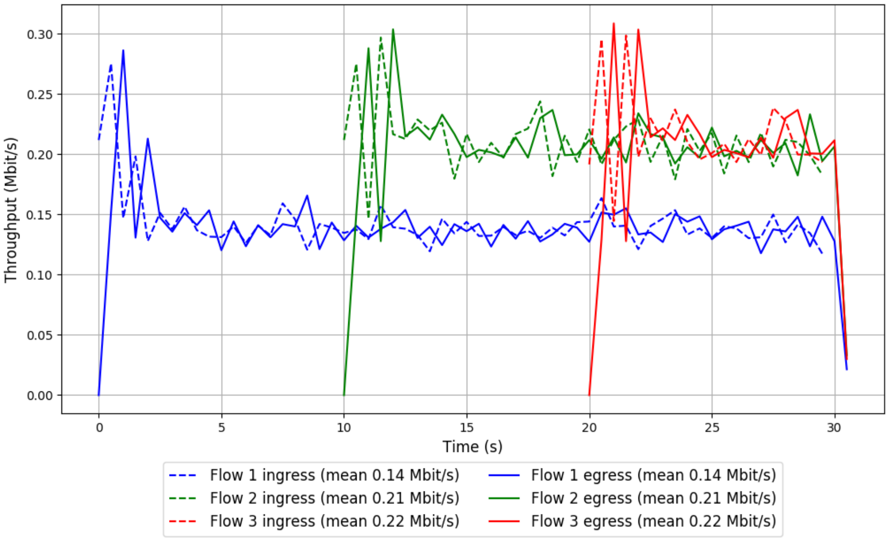
Run 1: Report of SCReAM — Data Link

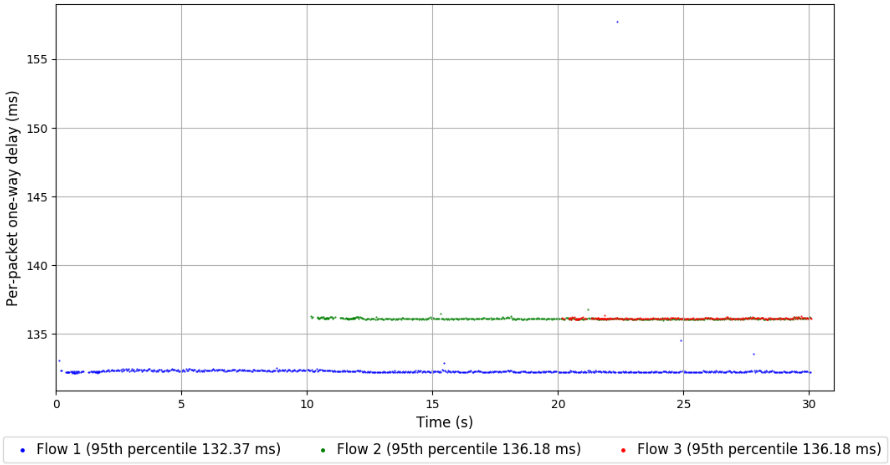




```
Run 2: Statistics of SCReAM

Start at: 2019-12-11 20:54:28
End at: 2019-12-11 20:54:58
Local clock offset: 0.09 ms
Remote clock offset: 0.301 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 136.158 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 132.373 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 136.183 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.180 ms
Loss rate: 0.00%
```

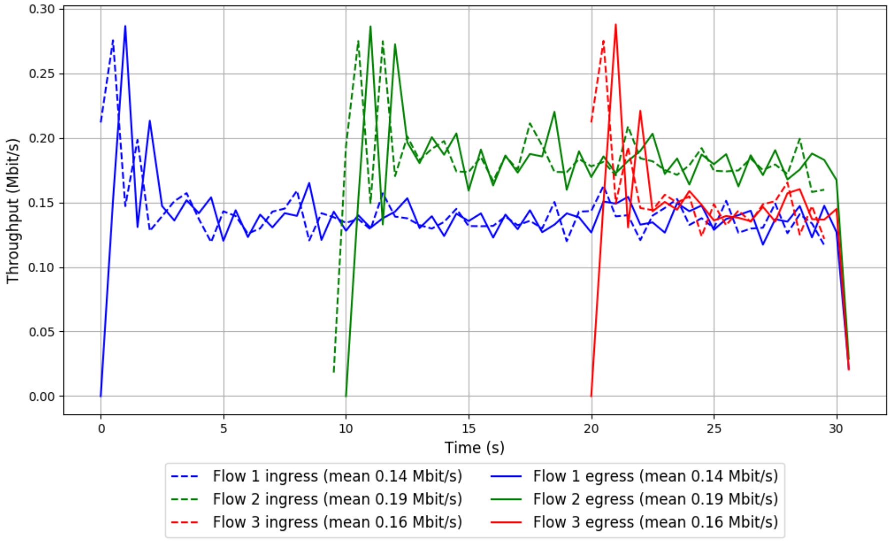
Run 2: Report of SCReAM — Data Link

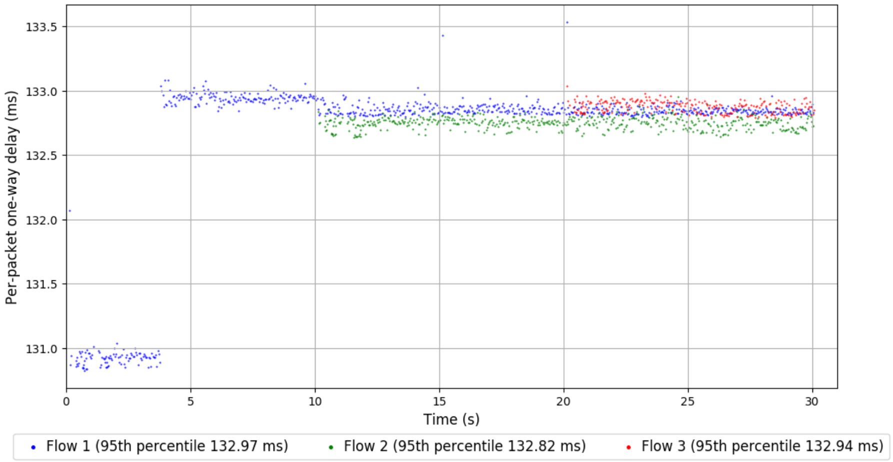




```
Run 3: Statistics of SCReAM

Start at: 2019-12-11 21:38:04
End at: 2019-12-11 21:38:34
Local clock offset: -0.048 ms
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 132.952 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 132.971 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 132.823 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 132.943 ms
Loss rate: 0.00%
```

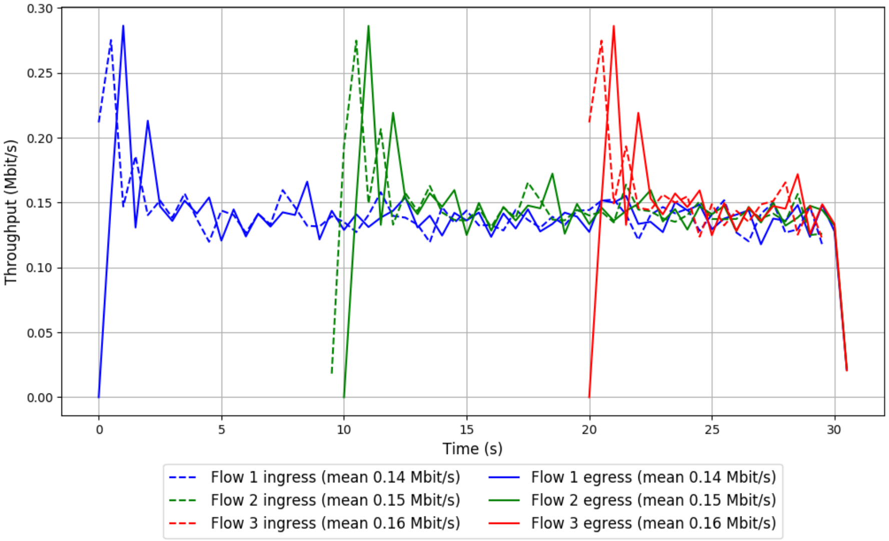
## Run 3: Report of SCReAM — Data Link

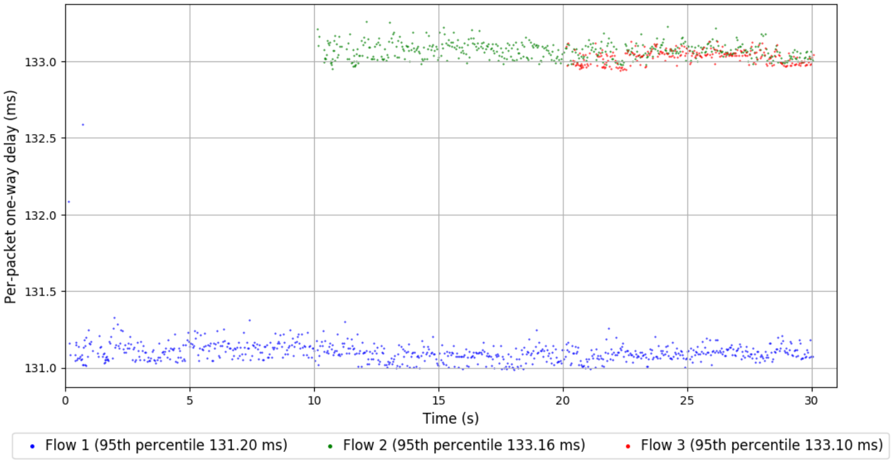




```
Run 4: Statistics of SCReAM

Start at: 2019-12-11 22:21:28
End at: 2019-12-11 22:21:58
Local clock offset: -0.386 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 133.120 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 131.197 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.159 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 133.102 ms
Loss rate: 0.00%
```

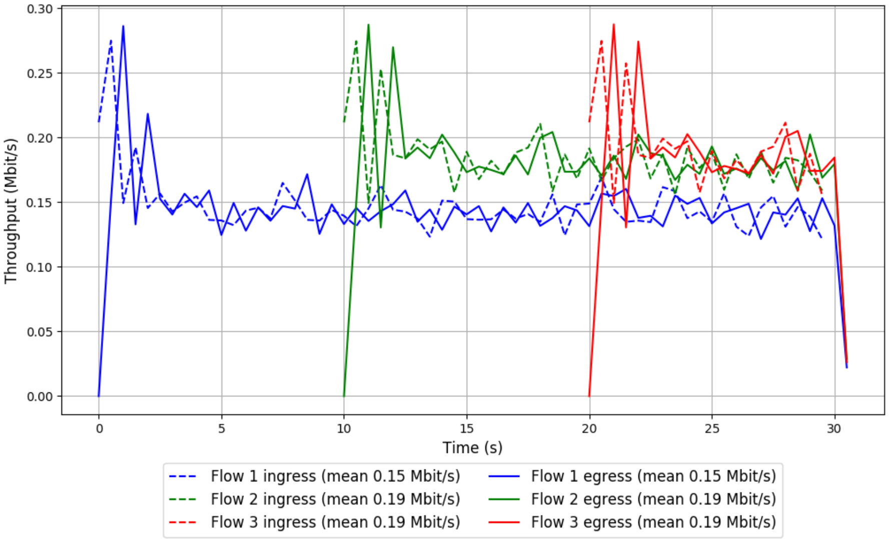
## Run 4: Report of SCReAM — Data Link

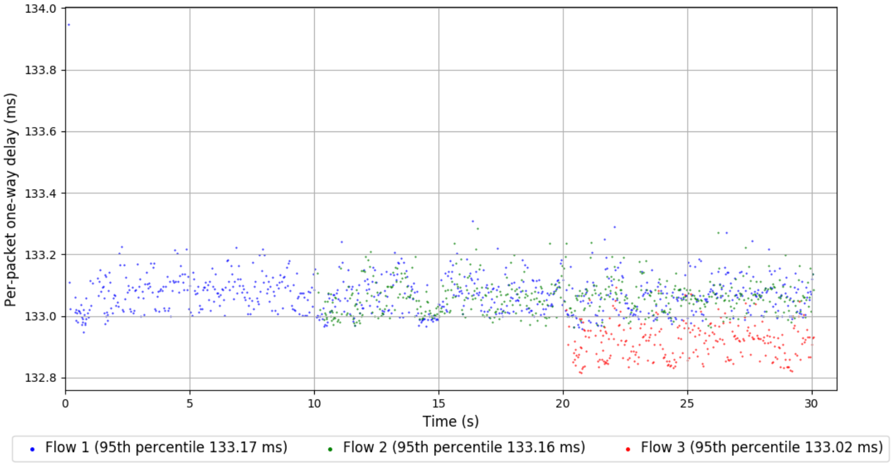




```
Run 5: Statistics of SCReAM

Start at: 2019-12-11 23:04:59
End at: 2019-12-11 23:05:29
Local clock offset: -0.173 ms
Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 133.163 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.172 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 133.164 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 133.016 ms
Loss rate: 0.00%
```

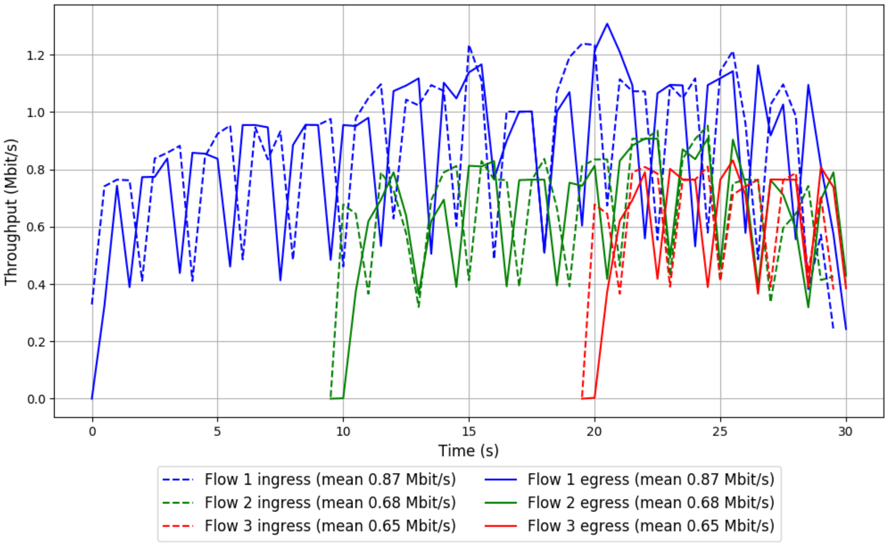
Run 5: Report of SCReAM — Data Link

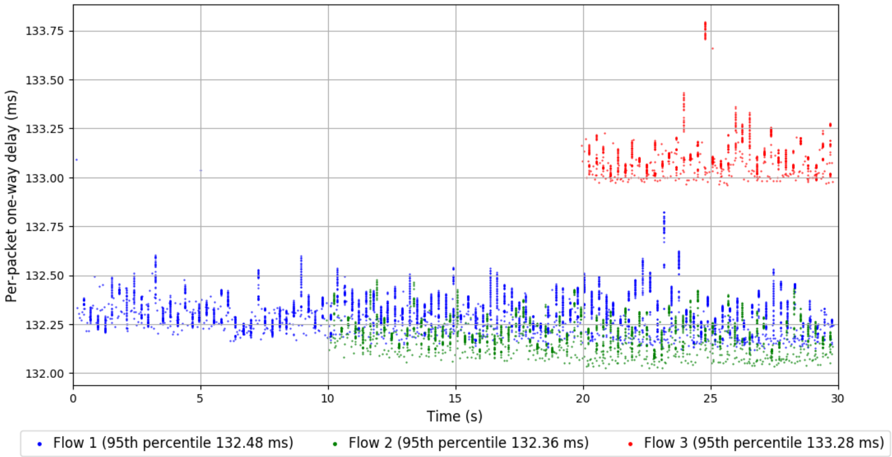




```
Run 1: Statistics of Sprout

Start at: 2019-12-11 20:05:24
End at: 2019-12-11 20:05:54
Local clock offset: -0.392 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 133.120 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 132.481 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 132.364 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 133.284 ms
Loss rate: 0.00%
```

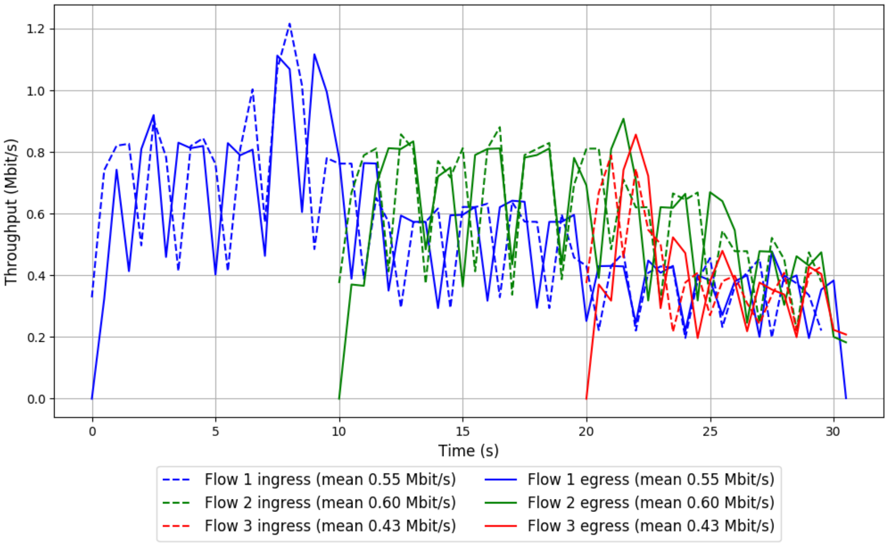
## Run 1: Report of Sprout — Data Link

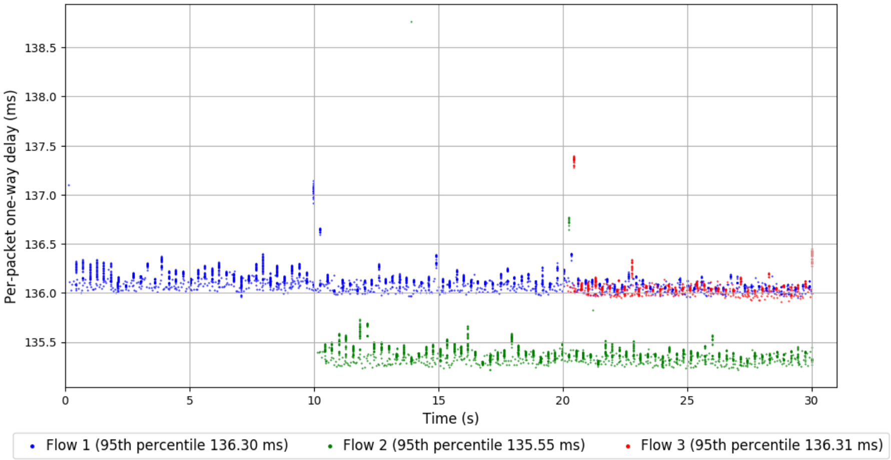




```
Run 2: Statistics of Sprout

Start at: 2019-12-11 20:48:00
End at: 2019-12-11 20:48:30
Local clock offset: -0.214 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 136.272 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 136.296 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 135.550 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.308 ms
Loss rate: 0.00%
```

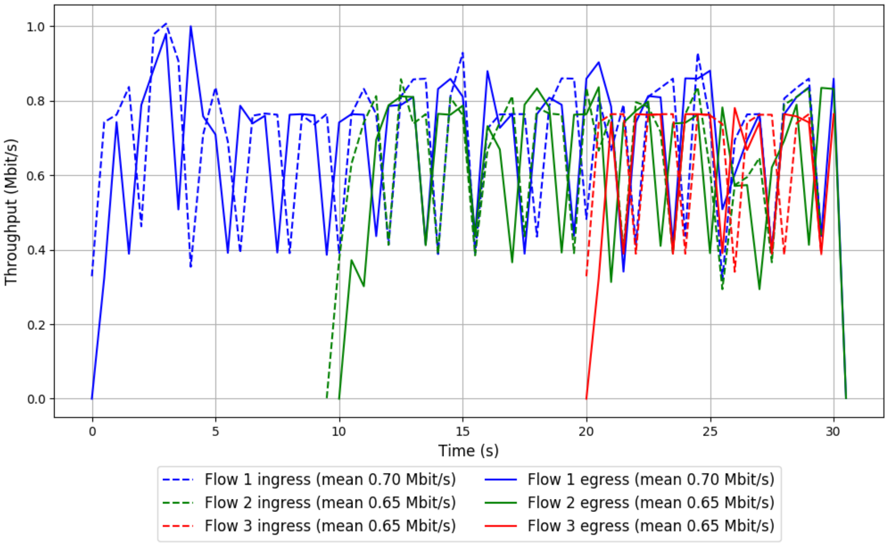
## Run 2: Report of Sprout — Data Link

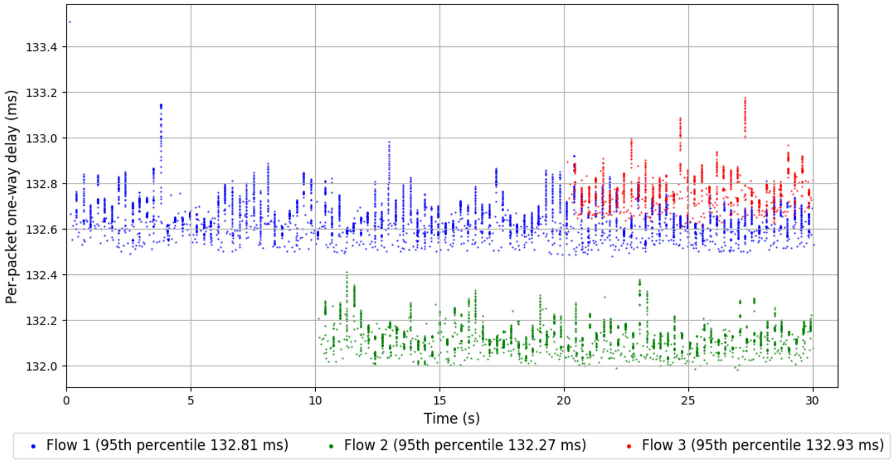




```
Run 3: Statistics of Sprout

Start at: 2019-12-11 21:31:39
End at: 2019-12-11 21:32:09
Local clock offset: 0.045 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 132.832 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 132.808 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 132.266 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 132.934 ms
Loss rate: 0.00%
```

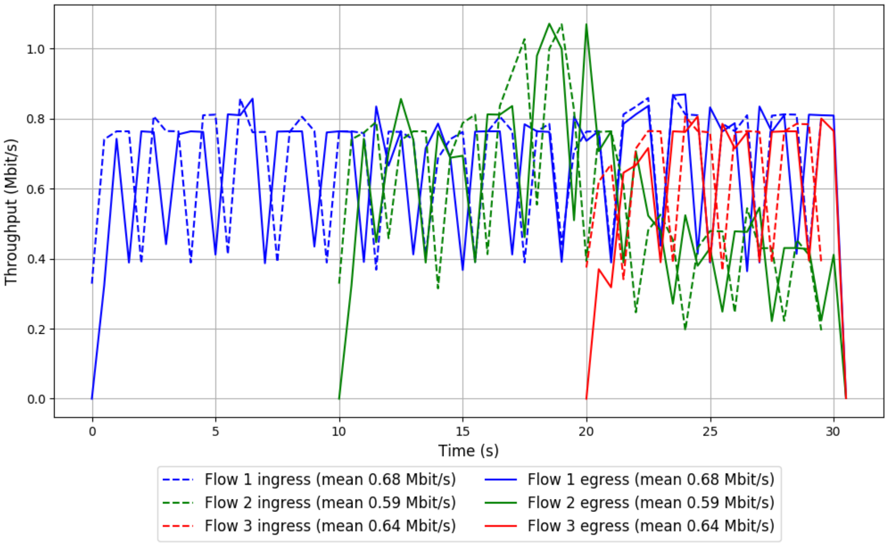
## Run 3: Report of Sprout — Data Link

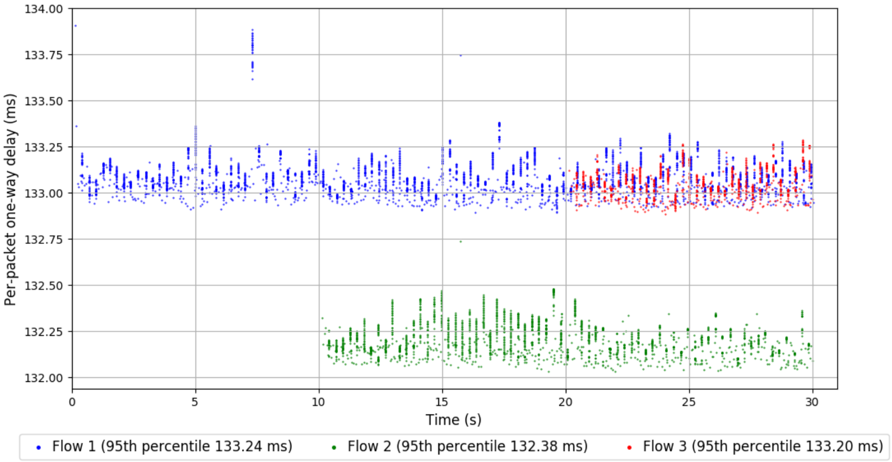




```
Run 4: Statistics of Sprout

Start at: 2019-12-11 22:15:02
End at: 2019-12-11 22:15:32
Local clock offset: -0.305 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 133.211 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 133.235 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 132.381 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 133.198 ms
Loss rate: 0.00%
```

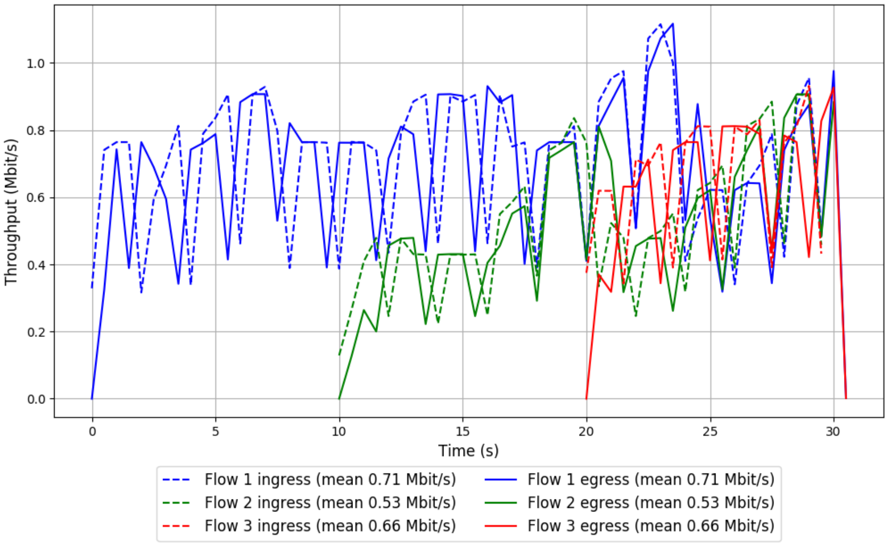
Run 4: Report of Sprout — Data Link

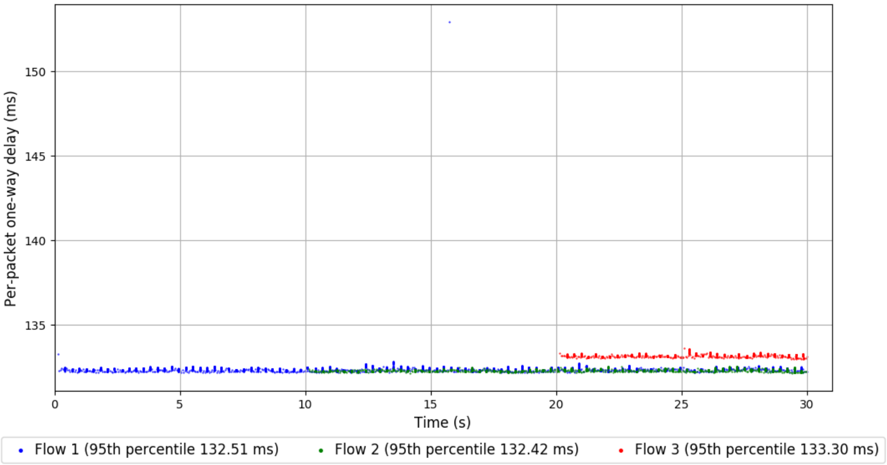




```
Run 5: Statistics of Sprout

Start at: 2019-12-11 22:58:38
End at: 2019-12-11 22:59:08
Local clock offset: -0.214 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2019-12-12 02:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 133.210 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 132.506 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 132.423 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 133.302 ms
Loss rate: 0.00%
```

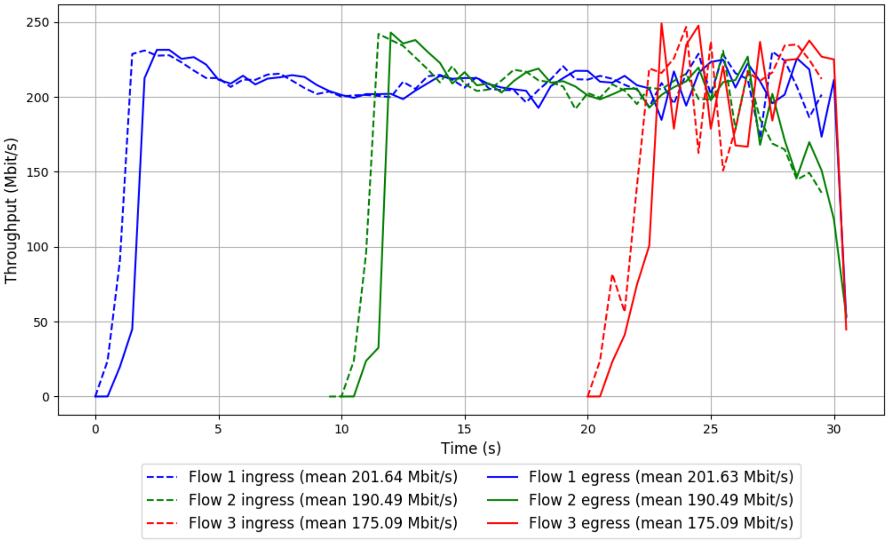
Run 5: Report of Sprout — Data Link

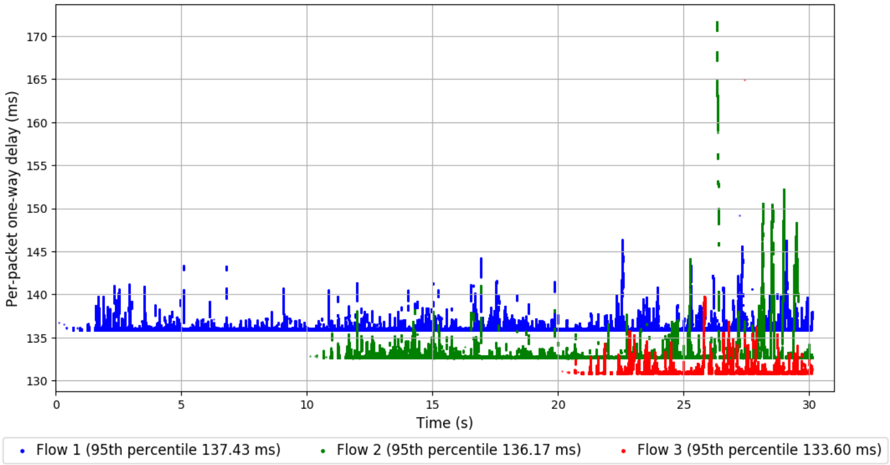




```
Run 1: Statistics of TaoVA-100x

Start at: 2019-12-11 20:42:12
End at: 2019-12-11 20:42:42
Local clock offset: -0.155 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2019-12-12 02:32:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 386.81 Mbit/s
95th percentile per-packet one-way delay: 137.051 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 201.63 Mbit/s
95th percentile per-packet one-way delay: 137.426 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 190.49 Mbit/s
95th percentile per-packet one-way delay: 136.166 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 175.09 Mbit/s
95th percentile per-packet one-way delay: 133.603 ms
Loss rate: 0.00%
```

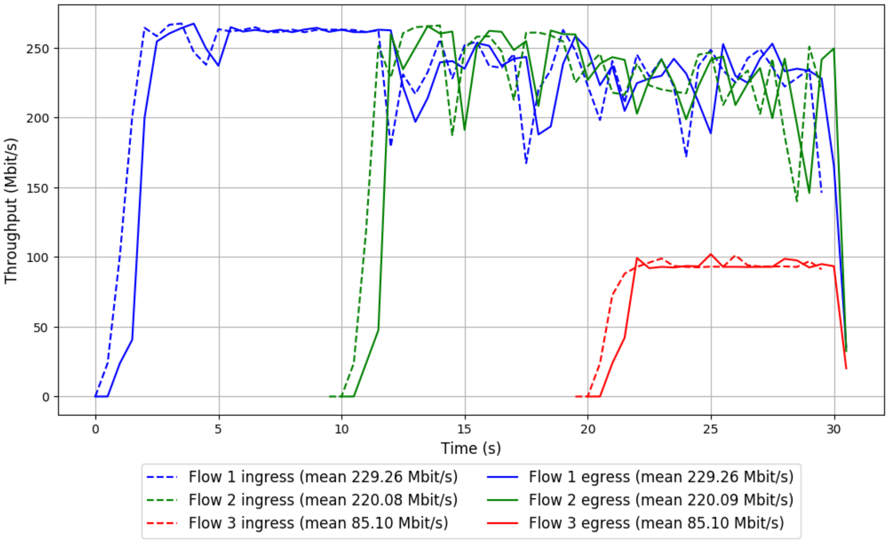
Run 1: Report of TaoVA-100x — Data Link

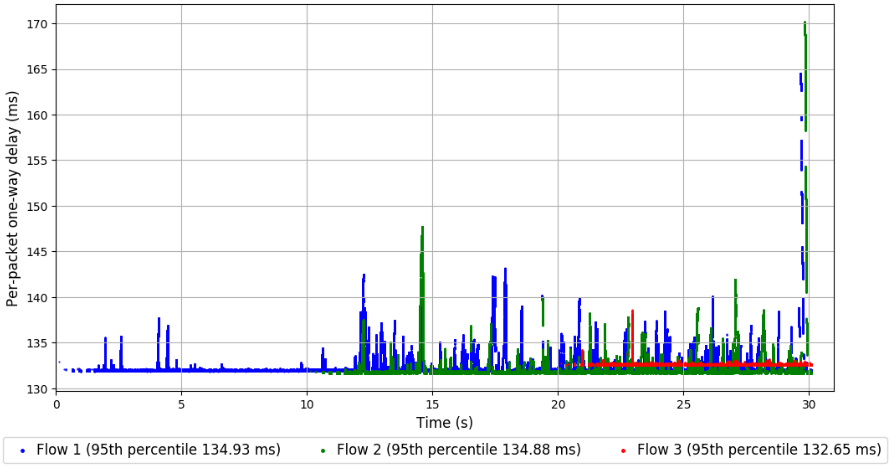




```
Run 2: Statistics of TaoVA-100x

Start at: 2019-12-11 21:25:56
End at: 2019-12-11 21:26:26
Local clock offset: 0.105 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-12-12 02:33:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 404.32 Mbit/s
95th percentile per-packet one-way delay: 134.705 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 229.26 Mbit/s
95th percentile per-packet one-way delay: 134.925 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 220.09 Mbit/s
95th percentile per-packet one-way delay: 134.875 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 85.10 Mbit/s
95th percentile per-packet one-way delay: 132.646 ms
Loss rate: 0.00%
```

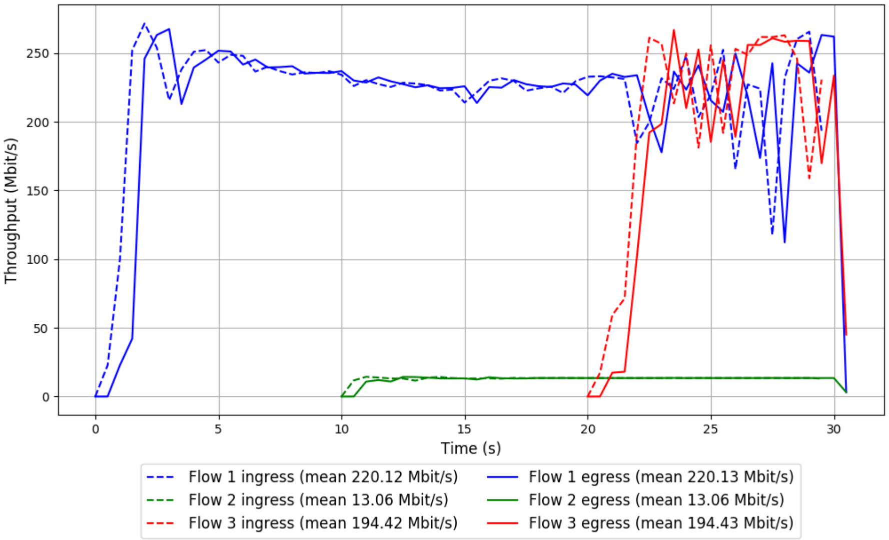
Run 2: Report of TaoVA-100x — Data Link

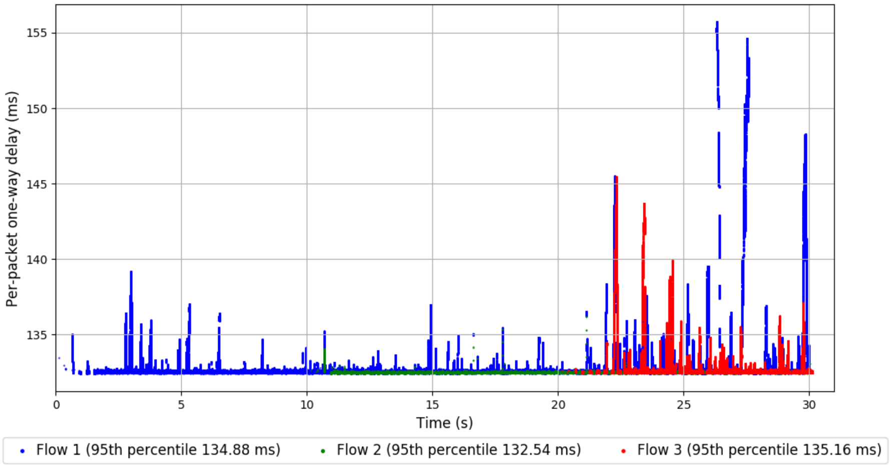




```
Run 3: Statistics of TaoVA-100x

Start at: 2019-12-11 22:09:14
End at: 2019-12-11 22:09:44
Local clock offset: 0.161 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2019-12-12 02:33:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.60 Mbit/s
95th percentile per-packet one-way delay: 134.869 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 220.13 Mbit/s
95th percentile per-packet one-way delay: 134.875 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 132.541 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 194.43 Mbit/s
95th percentile per-packet one-way delay: 135.158 ms
Loss rate: 0.00%
```

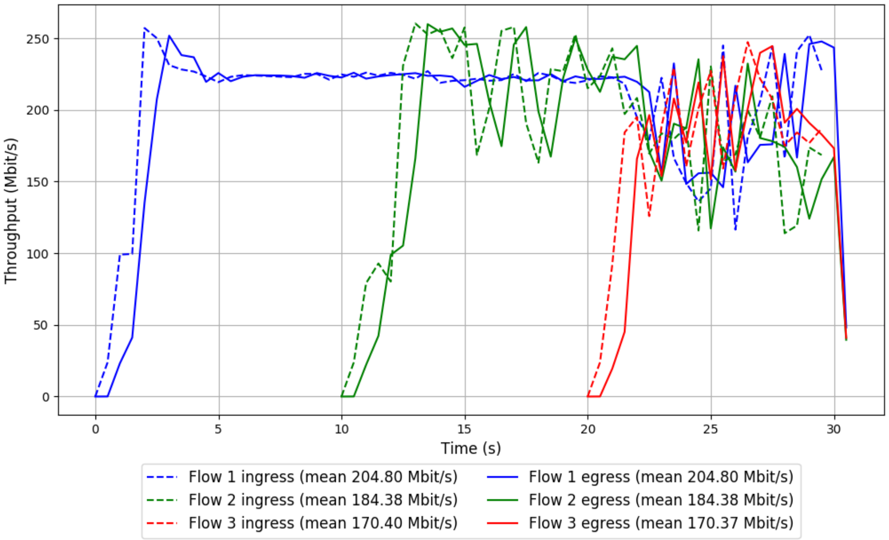
Run 3: Report of TaoVA-100x — Data Link

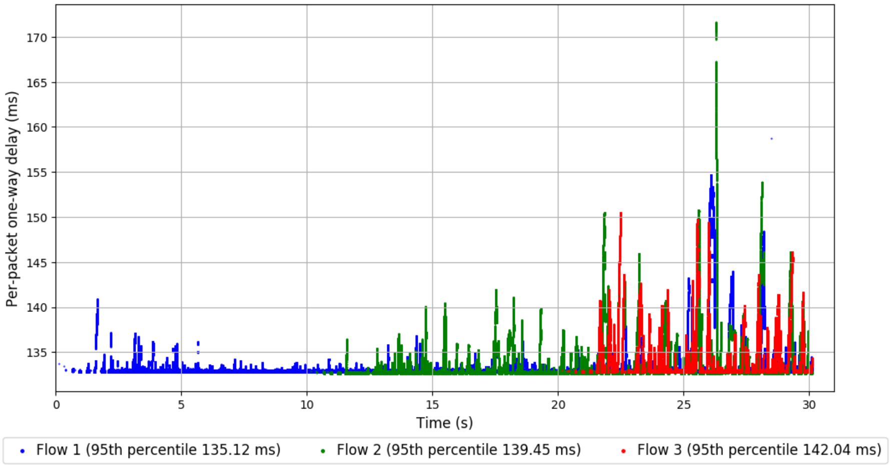




```
Run 4: Statistics of TaoVA-100x

Start at: 2019-12-11 22:53:01
End at: 2019-12-11 22:53:31
Local clock offset: -0.147 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2019-12-12 02:33:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.30 Mbit/s
95th percentile per-packet one-way delay: 138.806 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 204.80 Mbit/s
95th percentile per-packet one-way delay: 135.117 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 184.38 Mbit/s
95th percentile per-packet one-way delay: 139.452 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 170.37 Mbit/s
95th percentile per-packet one-way delay: 142.045 ms
Loss rate: 0.00%
```

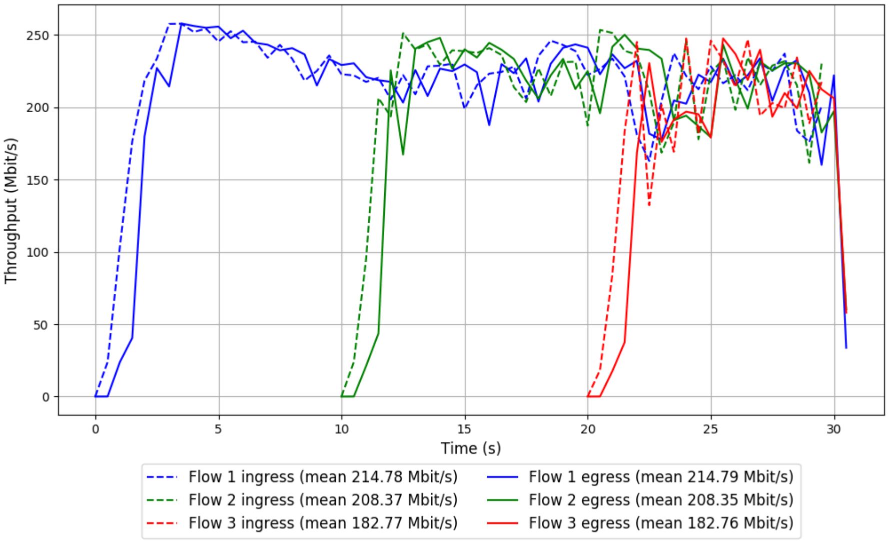
Run 4: Report of TaoVA-100x — Data Link

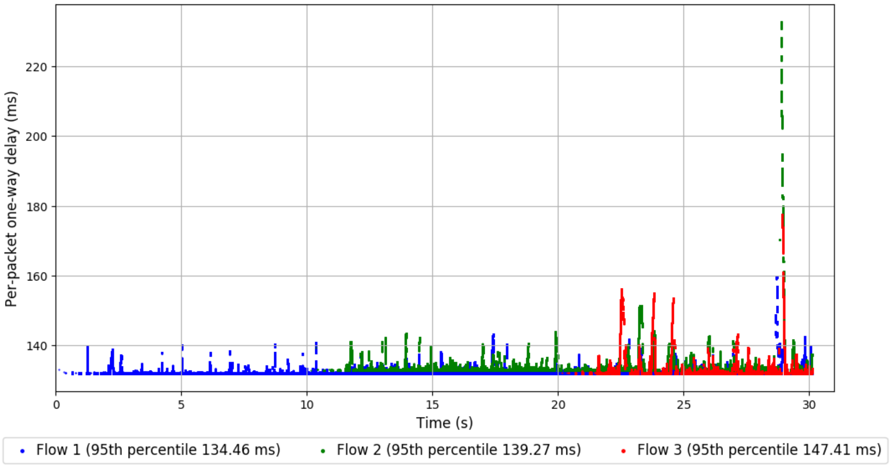




```
Run 5: Statistics of TaoVA-100x

Start at: 2019-12-11 23:36:15
End at: 2019-12-11 23:36:45
Local clock offset: -0.213 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2019-12-12 02:34:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 414.27 Mbit/s
95th percentile per-packet one-way delay: 137.188 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 214.79 Mbit/s
95th percentile per-packet one-way delay: 134.456 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 208.35 Mbit/s
95th percentile per-packet one-way delay: 139.274 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 182.76 Mbit/s
95th percentile per-packet one-way delay: 147.414 ms
Loss rate: 0.00%
```

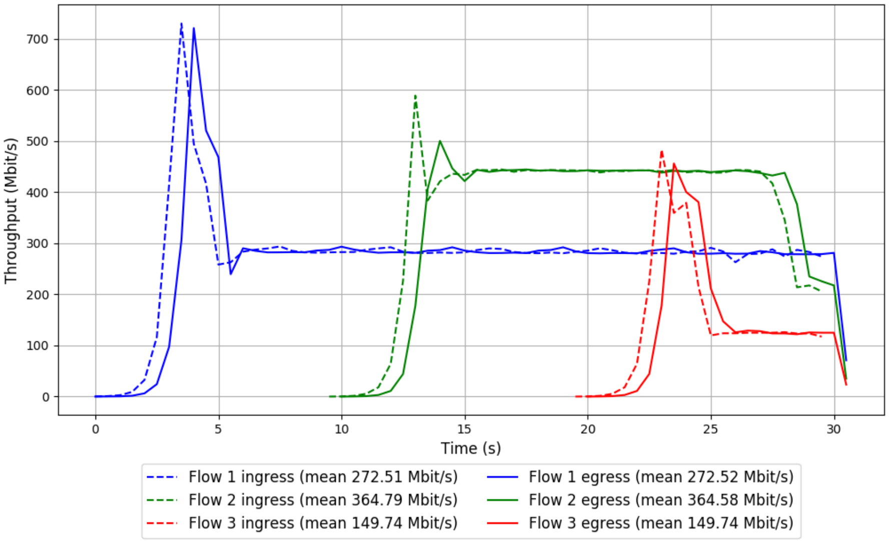
Run 5: Report of TaoVA-100x — Data Link

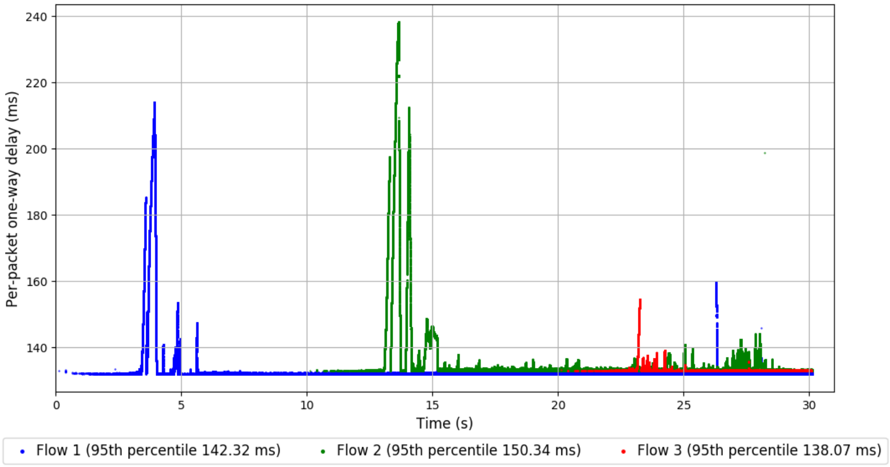




```
Run 1: Statistics of TCP Vegas

Start at: 2019-12-11 20:06:43
End at: 2019-12-11 20:07:13
Local clock offset: -0.401 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2019-12-12 02:34:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 565.21 Mbit/s
95th percentile per-packet one-way delay: 145.034 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 272.52 Mbit/s
95th percentile per-packet one-way delay: 142.318 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 364.58 Mbit/s
95th percentile per-packet one-way delay: 150.344 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 149.74 Mbit/s
95th percentile per-packet one-way delay: 138.075 ms
Loss rate: 0.00%
```

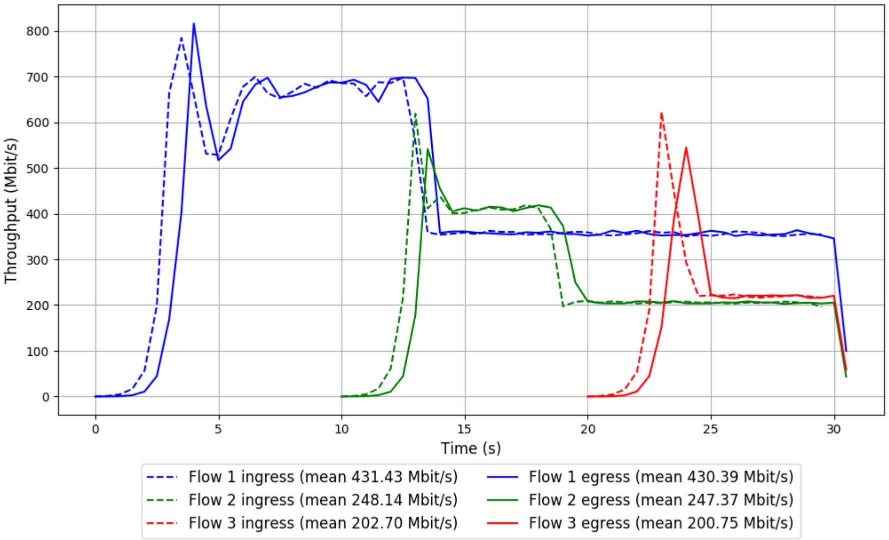
Run 1: Report of TCP Vegas — Data Link

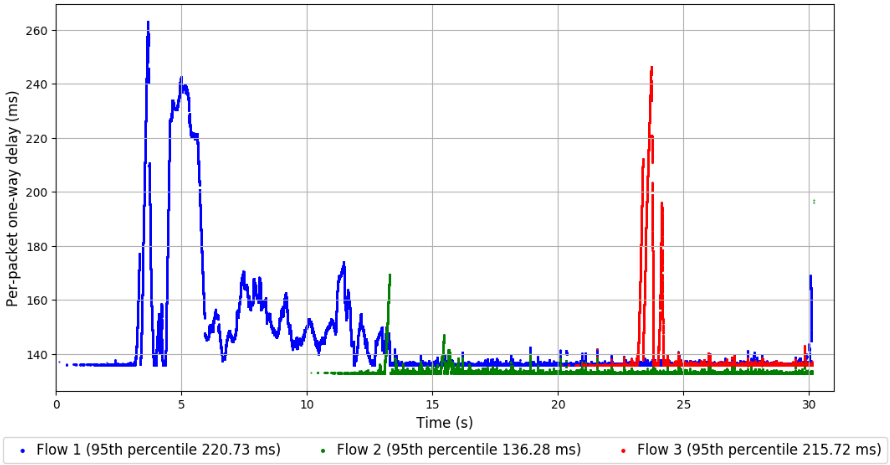




```
Run 2: Statistics of TCP Vegas

Start at: 2019-12-11 20:49:18
End at: 2019-12-11 20:49:48
Local clock offset: -0.202 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2019-12-12 02:41:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 661.28 Mbit/s
95th percentile per-packet one-way delay: 197.136 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 430.39 Mbit/s
95th percentile per-packet one-way delay: 220.730 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 247.37 Mbit/s
95th percentile per-packet one-way delay: 136.285 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 200.75 Mbit/s
95th percentile per-packet one-way delay: 215.719 ms
Loss rate: 0.96%
```

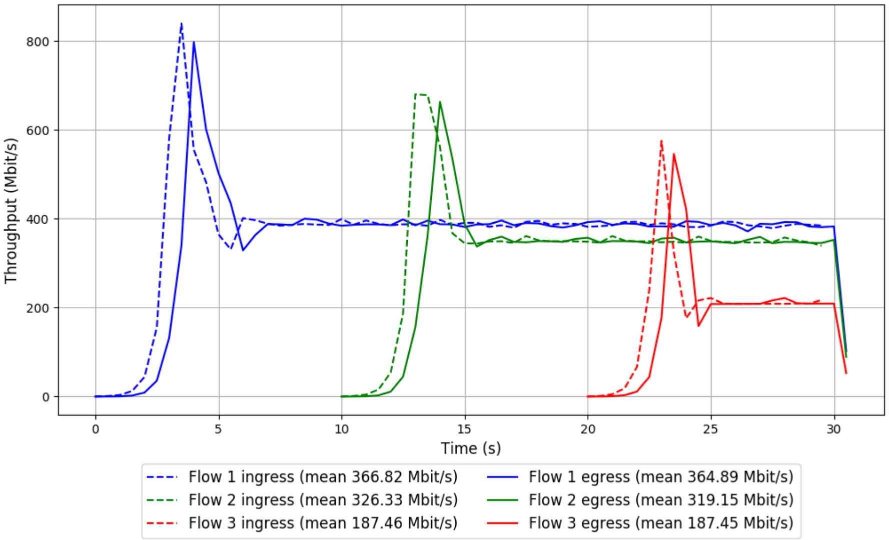
Run 2: Report of TCP Vegas — Data Link

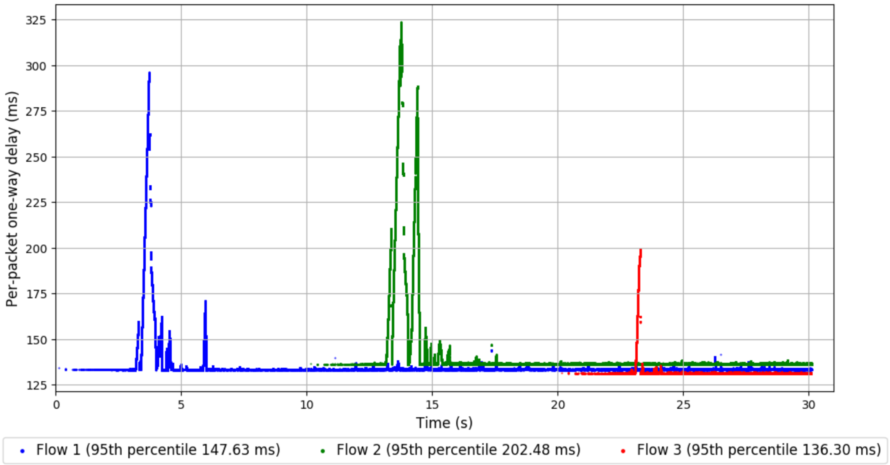




```
Run 3: Statistics of TCP Vegas

Start at: 2019-12-11 21:32:57
End at: 2019-12-11 21:33:27
Local clock offset: -0.499 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2019-12-12 02:42:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 639.64 Mbit/s
95th percentile per-packet one-way delay: 165.865 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 364.89 Mbit/s
95th percentile per-packet one-way delay: 147.632 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 319.15 Mbit/s
95th percentile per-packet one-way delay: 202.481 ms
Loss rate: 2.21%
-- Flow 3:
Average throughput: 187.45 Mbit/s
95th percentile per-packet one-way delay: 136.303 ms
Loss rate: 0.00%
```

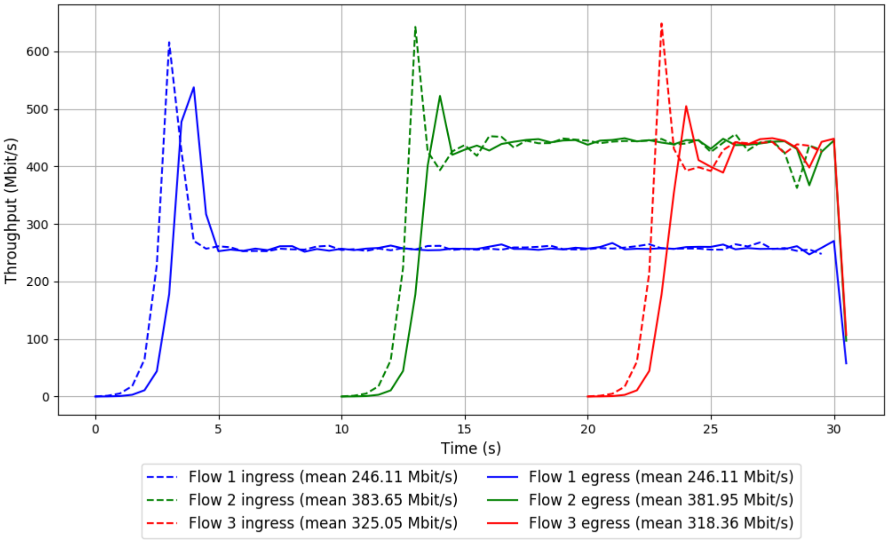
Run 3: Report of TCP Vegas — Data Link

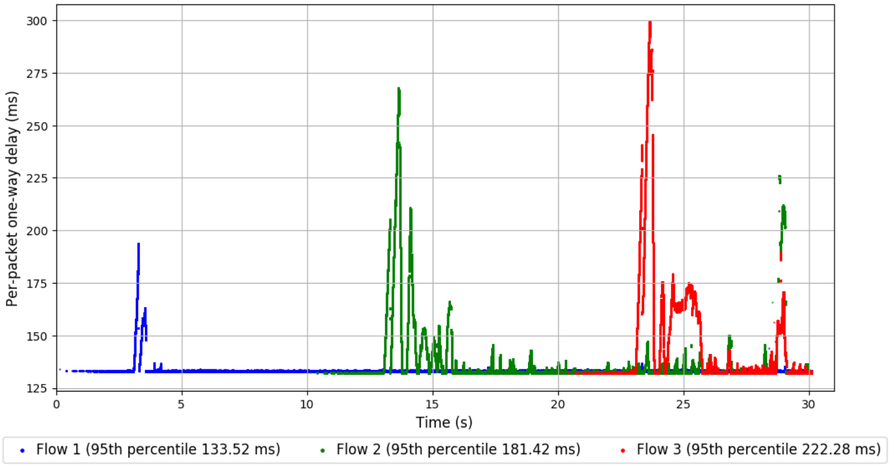




```
Run 4: Statistics of TCP Vegas

Start at: 2019-12-11 22:16:21
End at: 2019-12-11 22:16:51
Local clock offset: -0.352 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2019-12-12 02:42:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 606.32 Mbit/s
95th percentile per-packet one-way delay: 169.983 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 246.11 Mbit/s
95th percentile per-packet one-way delay: 133.522 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 381.95 Mbit/s
95th percentile per-packet one-way delay: 181.416 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 318.36 Mbit/s
95th percentile per-packet one-way delay: 222.275 ms
Loss rate: 2.06%
```

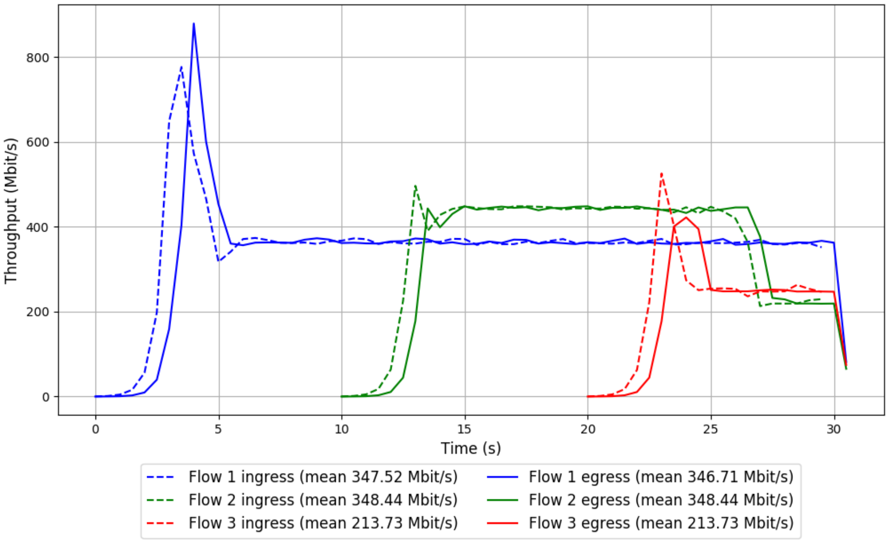
Run 4: Report of TCP Vegas — Data Link

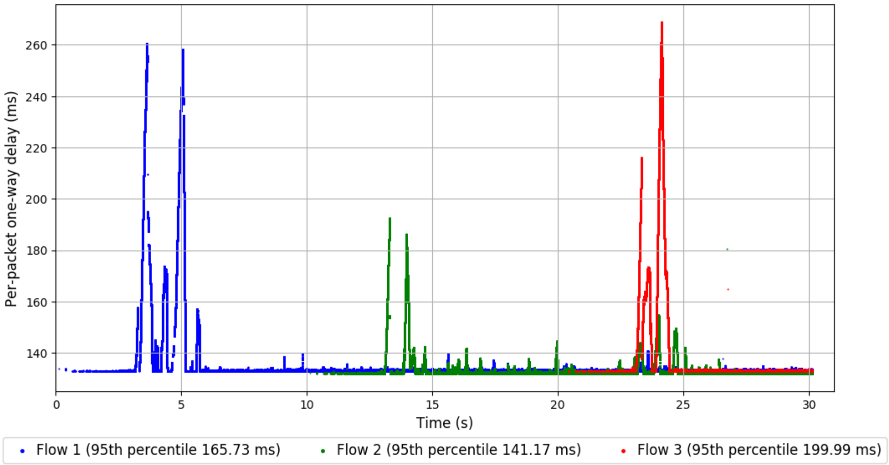




```
Run 5: Statistics of TCP Vegas

Start at: 2019-12-11 22:59:56
End at: 2019-12-11 23:00:26
Local clock offset: -0.155 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2019-12-12 02:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 649.94 Mbit/s
95th percentile per-packet one-way delay: 162.516 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 346.71 Mbit/s
95th percentile per-packet one-way delay: 165.728 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 348.44 Mbit/s
95th percentile per-packet one-way delay: 141.166 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 213.73 Mbit/s
95th percentile per-packet one-way delay: 199.992 ms
Loss rate: 0.00%
```

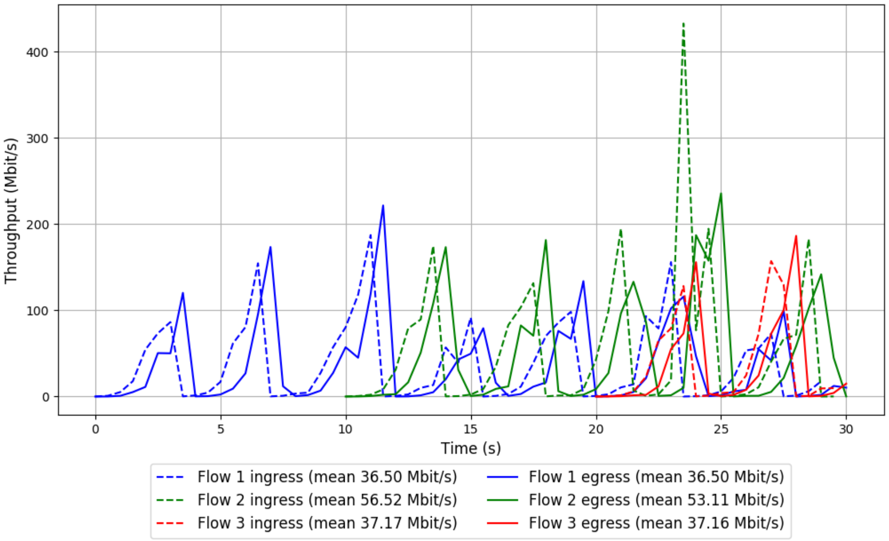
Run 5: Report of TCP Vegas — Data Link

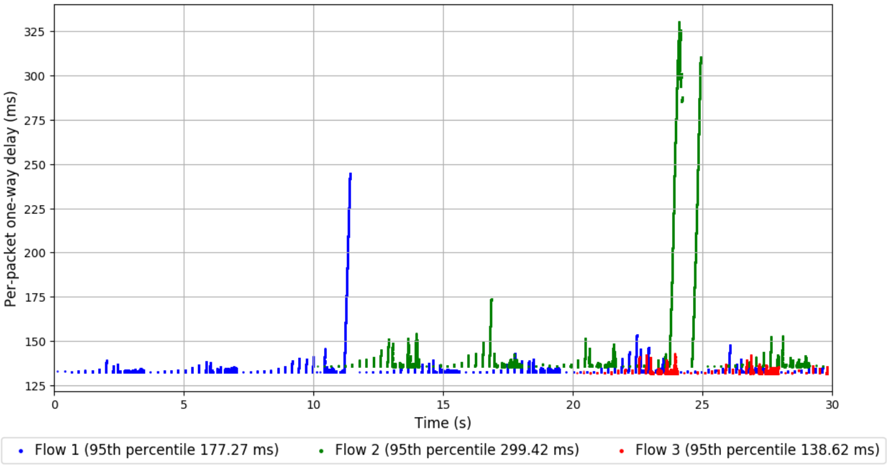




```
Run 1: Statistics of Verus

Start at: 2019-12-11 20:38:38
End at: 2019-12-11 20:39:08
Local clock offset: 0.098 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2019-12-12 02:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.30 Mbit/s
95th percentile per-packet one-way delay: 258.869 ms
Loss rate: 2.63%
-- Flow 1:
Average throughput: 36.50 Mbit/s
95th percentile per-packet one-way delay: 177.271 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 53.11 Mbit/s
95th percentile per-packet one-way delay: 299.421 ms
Loss rate: 6.05%
-- Flow 3:
Average throughput: 37.16 Mbit/s
95th percentile per-packet one-way delay: 138.616 ms
Loss rate: 0.00%
```

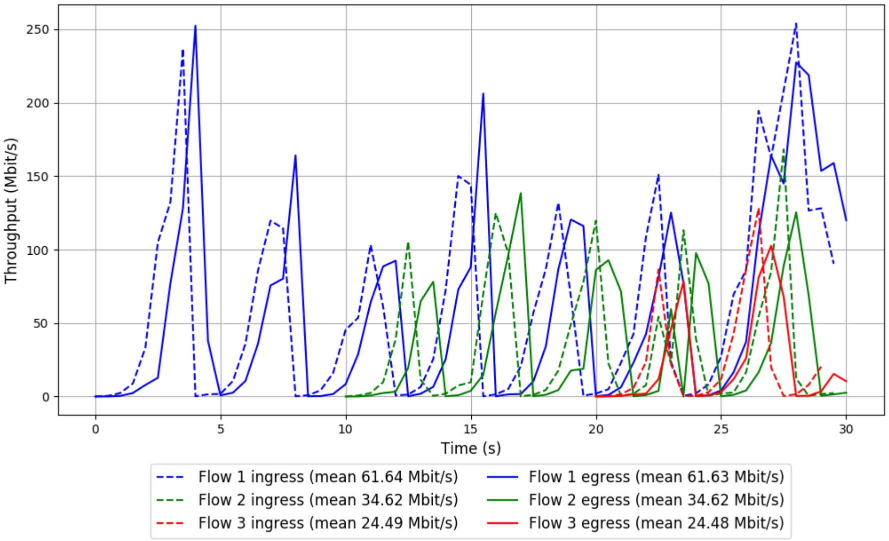
## Run 1: Report of Verus — Data Link

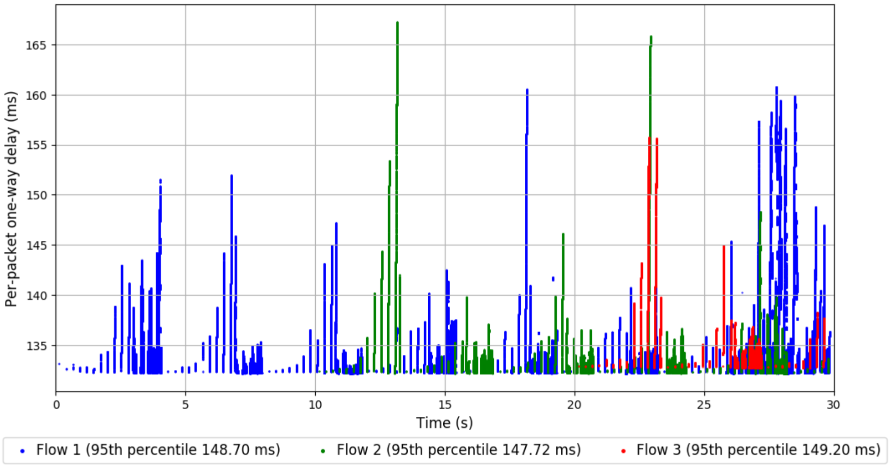




```
Run 2: Statistics of Verus

Start at: 2019-12-11 21:22:21
End at: 2019-12-11 21:22:51
Local clock offset: -0.247 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-12-12 02:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.32 Mbit/s
95th percentile per-packet one-way delay: 148.596 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 61.63 Mbit/s
95th percentile per-packet one-way delay: 148.699 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 34.62 Mbit/s
95th percentile per-packet one-way delay: 147.725 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.48 Mbit/s
95th percentile per-packet one-way delay: 149.196 ms
Loss rate: 0.00%
```

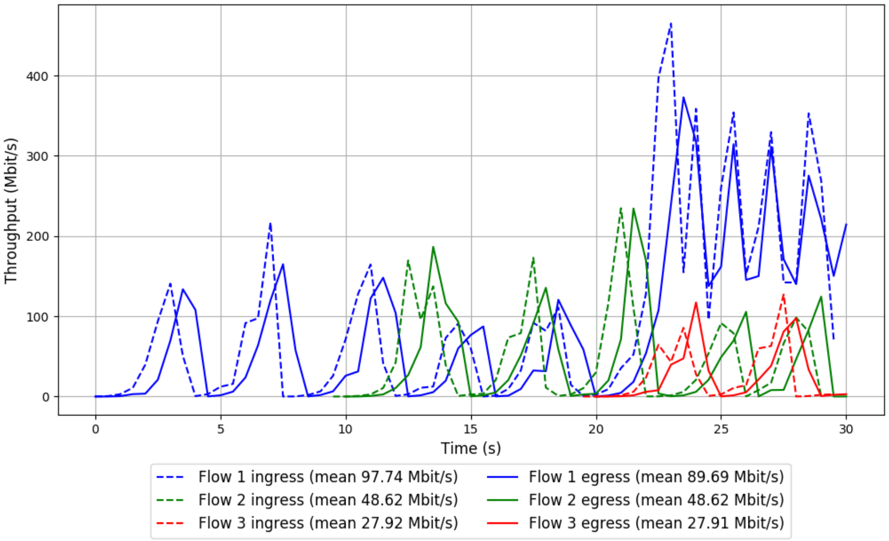
Run 2: Report of Verus — Data Link

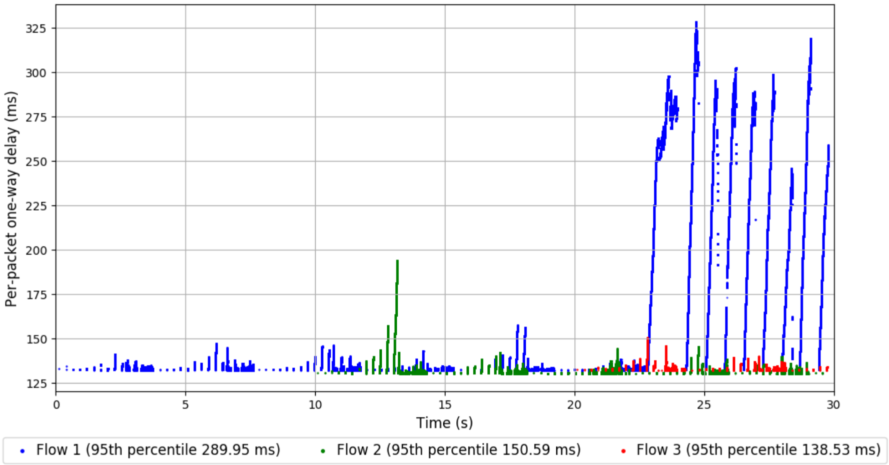




```
Run 3: Statistics of Verus

Start at: 2019-12-11 22:05:33
End at: 2019-12-11 22:06:03
Local clock offset: -0.211 ms
Remote clock offset: -0.453 ms

# Below is generated by plot.py at 2019-12-12 02:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.64 Mbit/s
95th percentile per-packet one-way delay: 285.953 ms
Loss rate: 5.78%
-- Flow 1:
Average throughput: 89.69 Mbit/s
95th percentile per-packet one-way delay: 289.953 ms
Loss rate: 8.20%
-- Flow 2:
Average throughput: 48.62 Mbit/s
95th percentile per-packet one-way delay: 150.593 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.91 Mbit/s
95th percentile per-packet one-way delay: 138.526 ms
Loss rate: 0.00%
```

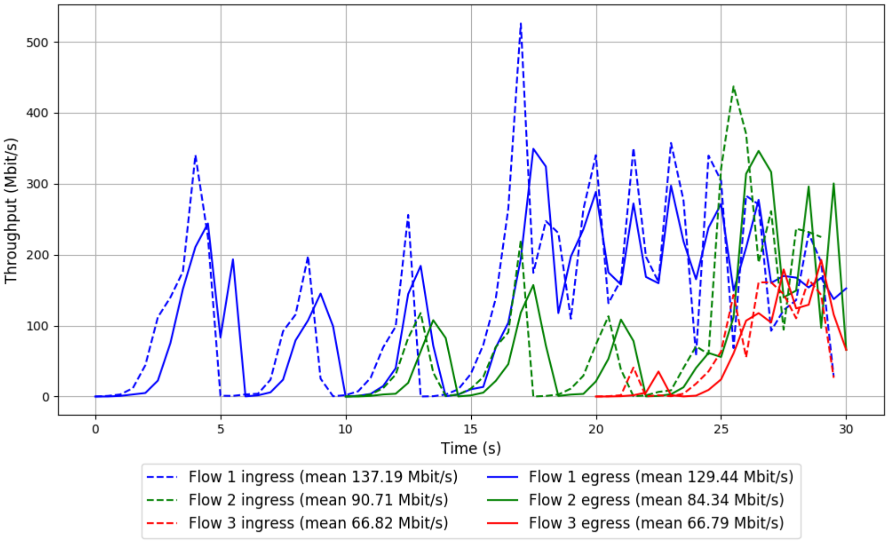
## Run 3: Report of Verus — Data Link

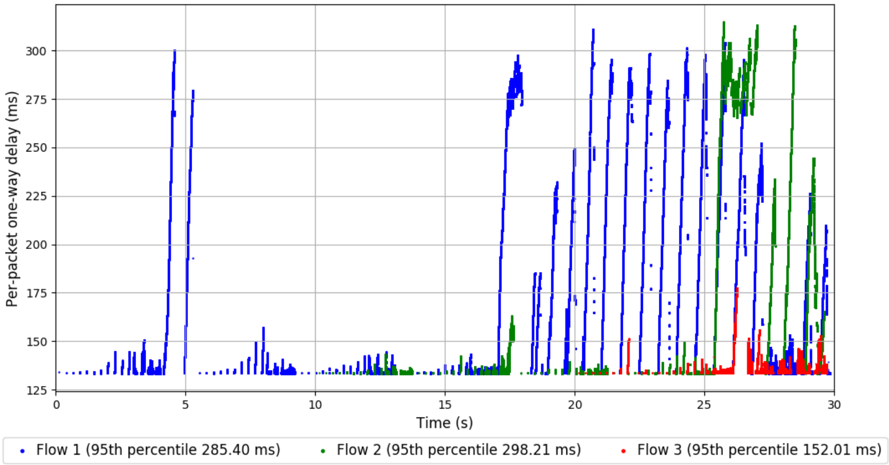




```
Run 4: Statistics of Verus

Start at: 2019-12-11 22:49:15
End at: 2019-12-11 22:49:45
Local clock offset: -0.207 ms
Remote clock offset: 0.739 ms

# Below is generated by plot.py at 2019-12-12 02:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 206.22 Mbit/s
95th percentile per-packet one-way delay: 289.285 ms
Loss rate: 5.43%
-- Flow 1:
Average throughput: 129.44 Mbit/s
95th percentile per-packet one-way delay: 285.404 ms
Loss rate: 5.66%
-- Flow 2:
Average throughput: 84.34 Mbit/s
95th percentile per-packet one-way delay: 298.212 ms
Loss rate: 6.88%
-- Flow 3:
Average throughput: 66.79 Mbit/s
95th percentile per-packet one-way delay: 152.008 ms
Loss rate: 0.00%
```

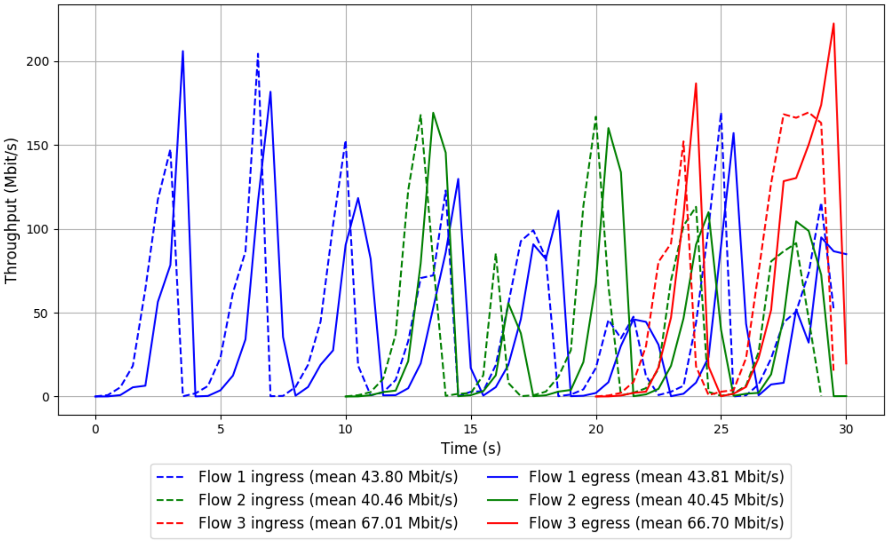
Run 4: Report of Verus — Data Link

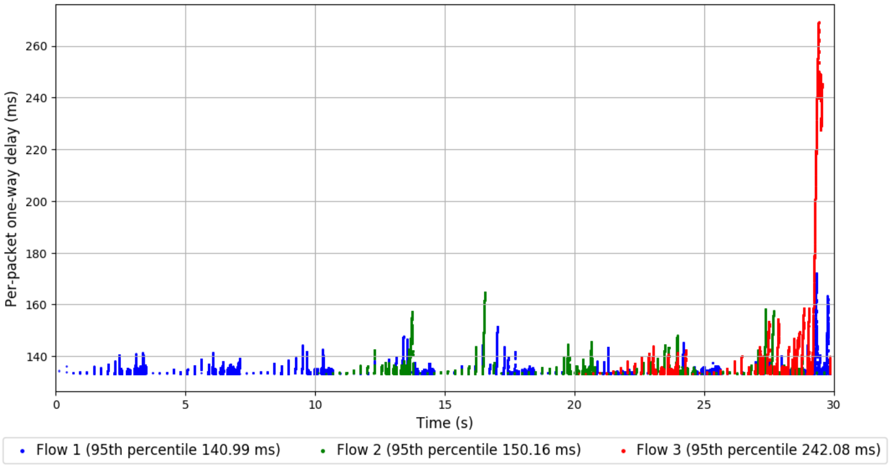




```
Run 5: Statistics of Verus

Start at: 2019-12-11 23:32:42
End at: 2019-12-11 23:33:12
Local clock offset: -0.289 ms
Remote clock offset: 0.272 ms

# Below is generated by plot.py at 2019-12-12 02:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.03 Mbit/s
95th percentile per-packet one-way delay: 151.310 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 43.81 Mbit/s
95th percentile per-packet one-way delay: 140.990 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.45 Mbit/s
95th percentile per-packet one-way delay: 150.157 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 66.70 Mbit/s
95th percentile per-packet one-way delay: 242.083 ms
Loss rate: 0.44%
```

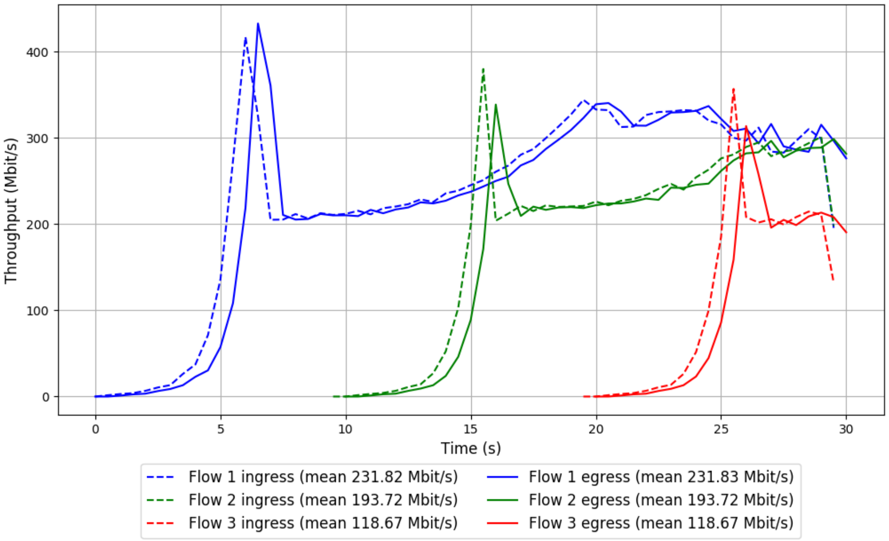
## Run 5: Report of Verus — Data Link

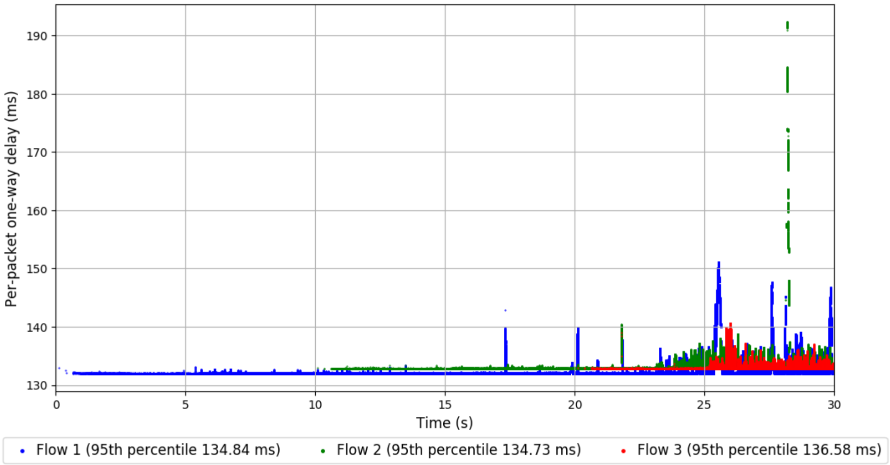




```
Run 1: Statistics of PCC-Vivace

Start at: 2019-12-11 20:09:54
End at: 2019-12-11 20:10:24
Local clock offset: -0.294 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2019-12-12 02:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 400.08 Mbit/s
95th percentile per-packet one-way delay: 134.944 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 231.83 Mbit/s
95th percentile per-packet one-way delay: 134.837 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 193.72 Mbit/s
95th percentile per-packet one-way delay: 134.734 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 118.67 Mbit/s
95th percentile per-packet one-way delay: 136.584 ms
Loss rate: 0.00%
```

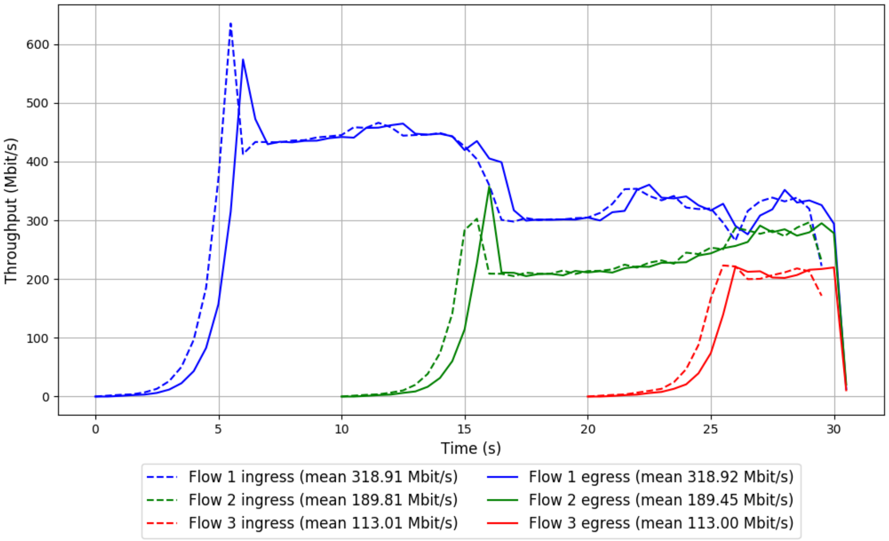
## Run 1: Report of PCC-Vivace — Data Link

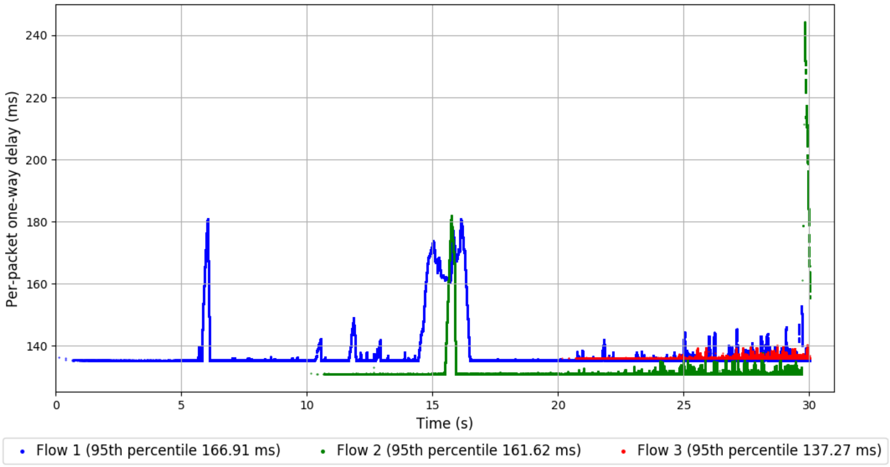




```
Run 2: Statistics of PCC-Vivace

Start at: 2019-12-11 20:52:34
End at: 2019-12-11 20:53:04
Local clock offset: -0.153 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2019-12-12 02:45:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 482.19 Mbit/s
95th percentile per-packet one-way delay: 164.131 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 318.92 Mbit/s
95th percentile per-packet one-way delay: 166.915 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 189.45 Mbit/s
95th percentile per-packet one-way delay: 161.622 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 113.00 Mbit/s
95th percentile per-packet one-way delay: 137.273 ms
Loss rate: 0.00%
```

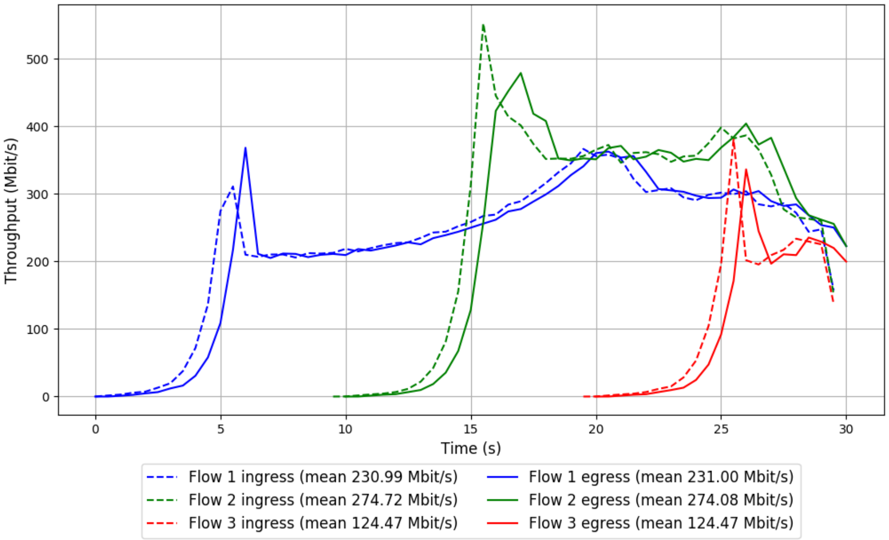
Run 2: Report of PCC-Vivace — Data Link

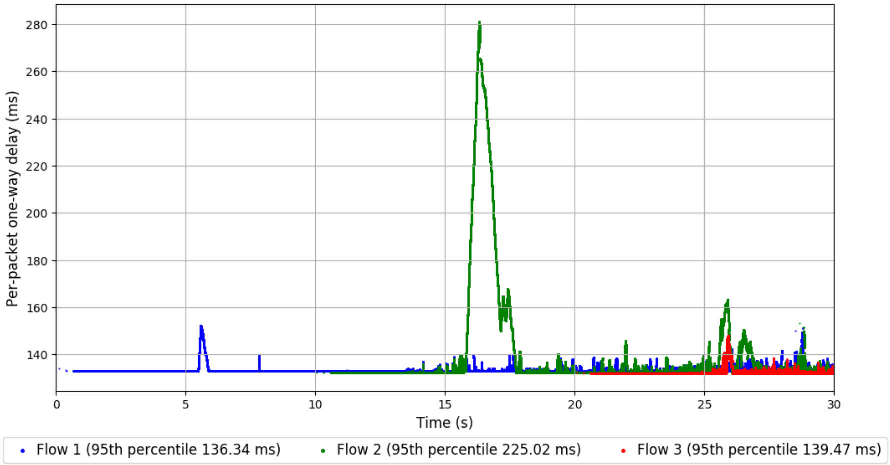




```
Run 3: Statistics of PCC-Vivace

Start at: 2019-12-11 21:36:12
End at: 2019-12-11 21:36:42
Local clock offset: -0.126 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2019-12-12 02:45:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 454.95 Mbit/s
95th percentile per-packet one-way delay: 159.064 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 231.00 Mbit/s
95th percentile per-packet one-way delay: 136.337 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 274.08 Mbit/s
95th percentile per-packet one-way delay: 225.019 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 124.47 Mbit/s
95th percentile per-packet one-way delay: 139.467 ms
Loss rate: 0.00%
```

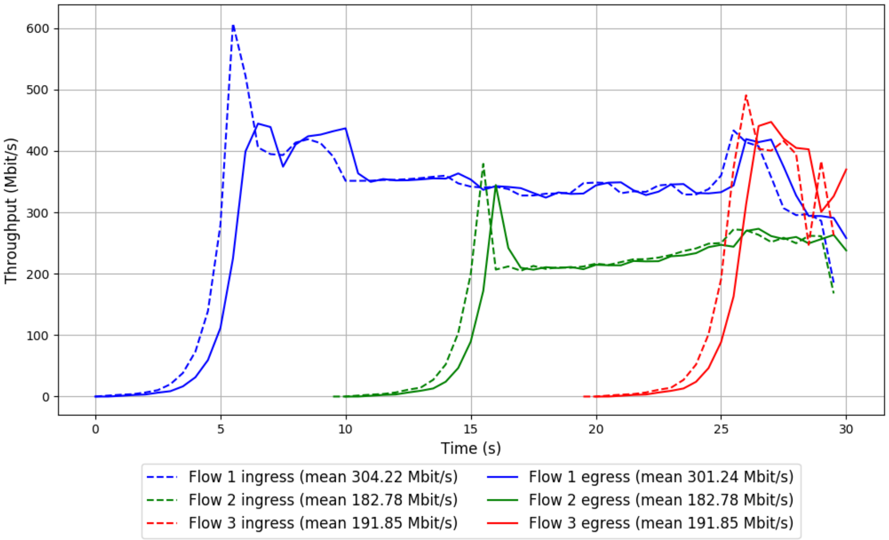
# Run 3: Report of PCC-Vivace — Data Link

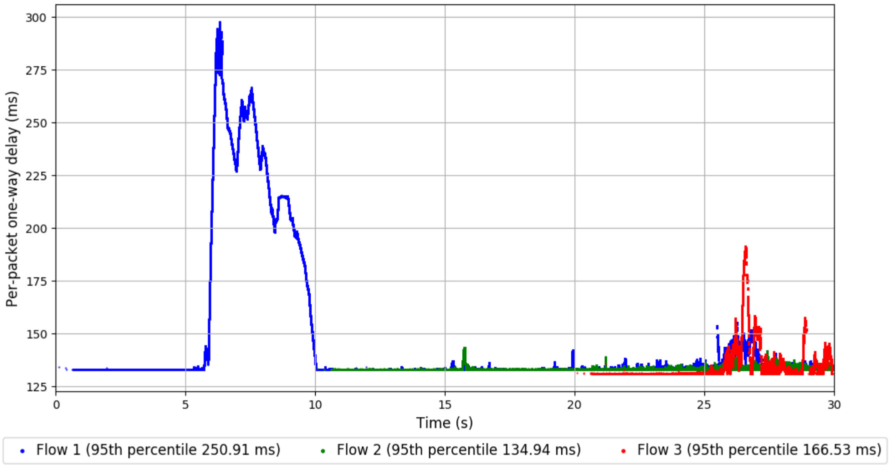




```
Run 4: Statistics of PCC-Vivace

Start at: 2019-12-11 22:19:33
End at: 2019-12-11 22:20:03
Local clock offset: -0.325 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-12-12 02:45:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 486.45 Mbit/s
95th percentile per-packet one-way delay: 234.329 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 301.24 Mbit/s
95th percentile per-packet one-way delay: 250.915 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 182.78 Mbit/s
95th percentile per-packet one-way delay: 134.941 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 191.85 Mbit/s
95th percentile per-packet one-way delay: 166.529 ms
Loss rate: 0.00%
```

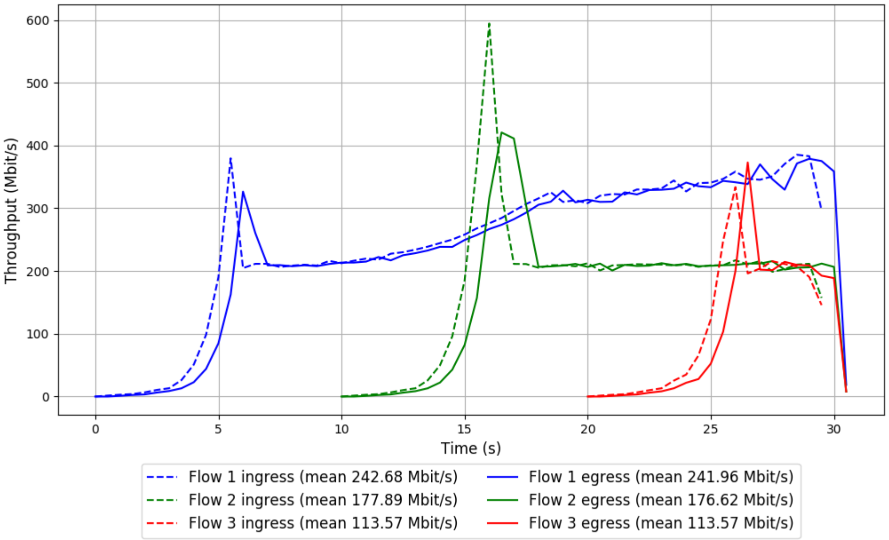
## Run 4: Report of PCC-Vivace — Data Link

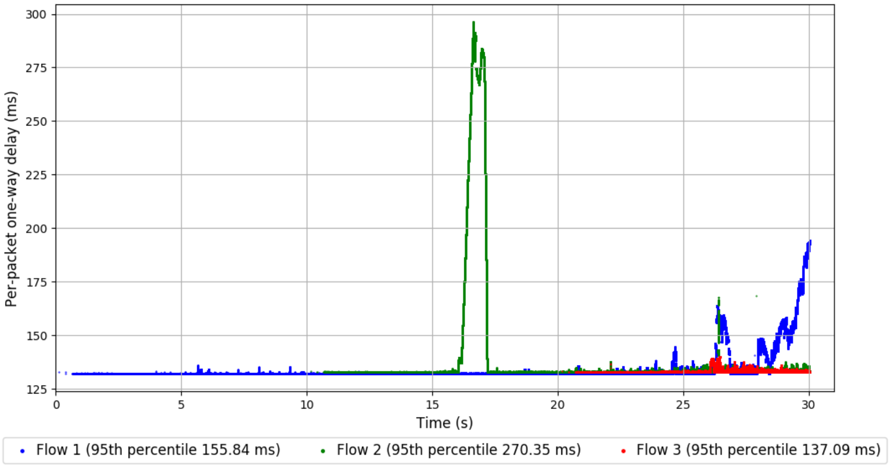




```
Run 5: Statistics of PCC-Vivace

Start at: 2019-12-11 23:03:10
End at: 2019-12-11 23:03:40
Local clock offset: -0.117 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2019-12-12 02:45:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 396.81 Mbit/s
95th percentile per-packet one-way delay: 161.530 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 241.96 Mbit/s
95th percentile per-packet one-way delay: 155.835 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 176.62 Mbit/s
95th percentile per-packet one-way delay: 270.352 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 113.57 Mbit/s
95th percentile per-packet one-way delay: 137.094 ms
Loss rate: 0.00%
```

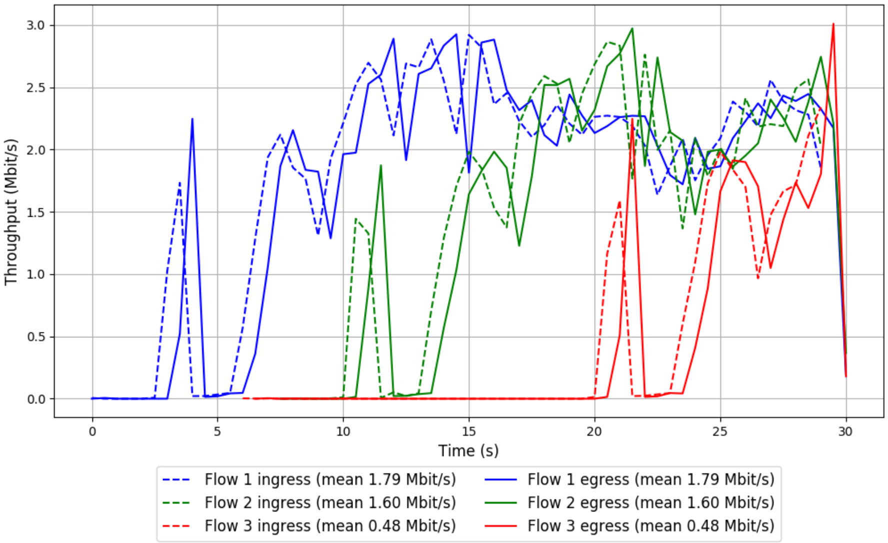
## Run 5: Report of PCC-Vivace — Data Link

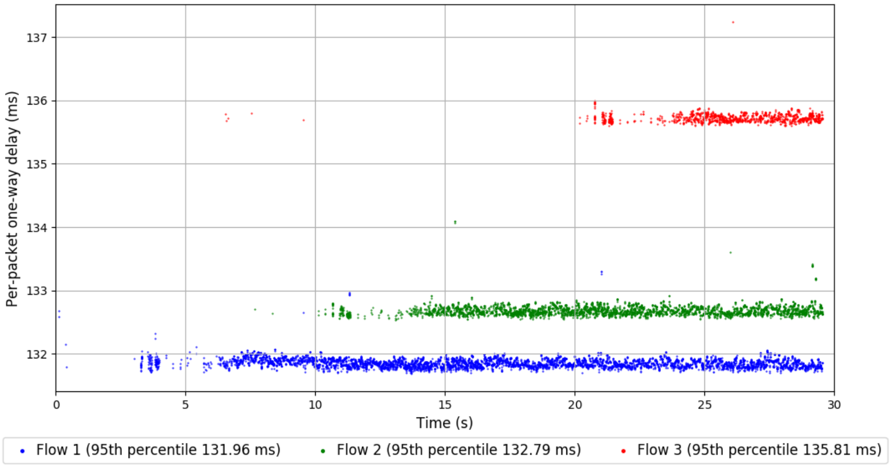




```
Run 1: Statistics of WebRTC media

Start at: 2019-12-11 20:26:43
End at: 2019-12-11 20:27:13
Local clock offset: 0.05 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-12-12 02:45:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.35 Mbit/s
95th percentile per-packet one-way delay: 135.720 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 131.958 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 132.788 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 135.812 ms
Loss rate: 0.00%
```

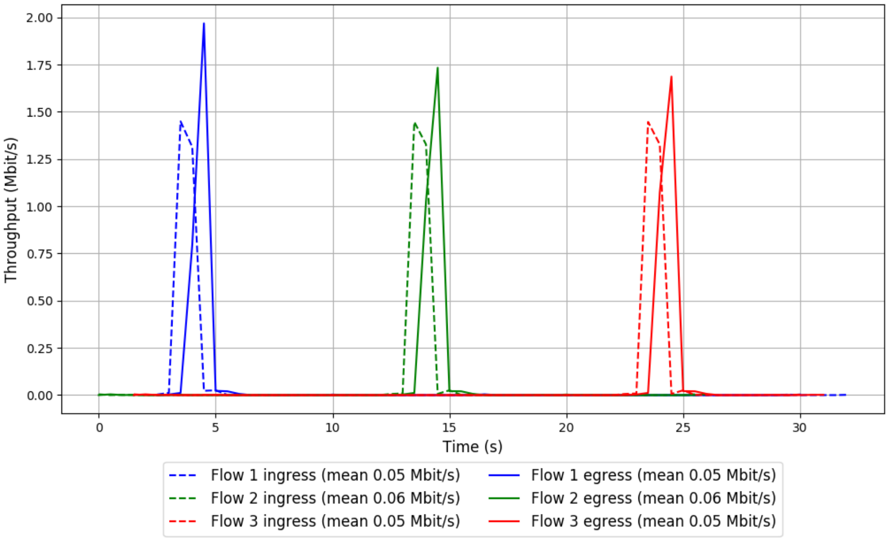
Run 1: Report of WebRTC media — Data Link

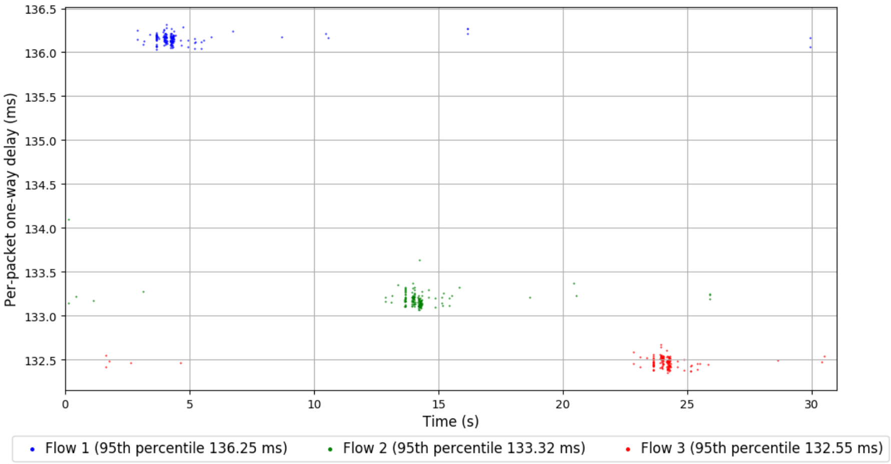




```
Run 2: Statistics of WebRTC media

Start at: 2019-12-11 21:10:20
End at: 2019-12-11 21:10:50
Local clock offset: -0.301 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2019-12-12 02:45:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 136.205 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 136.246 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 133.321 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.547 ms
Loss rate: 0.00%
```

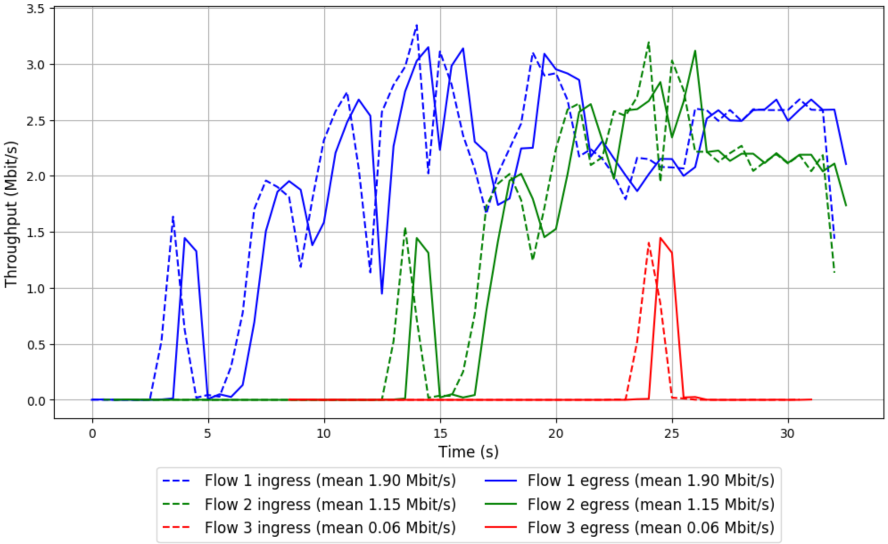
## Run 2: Report of WebRTC media — Data Link

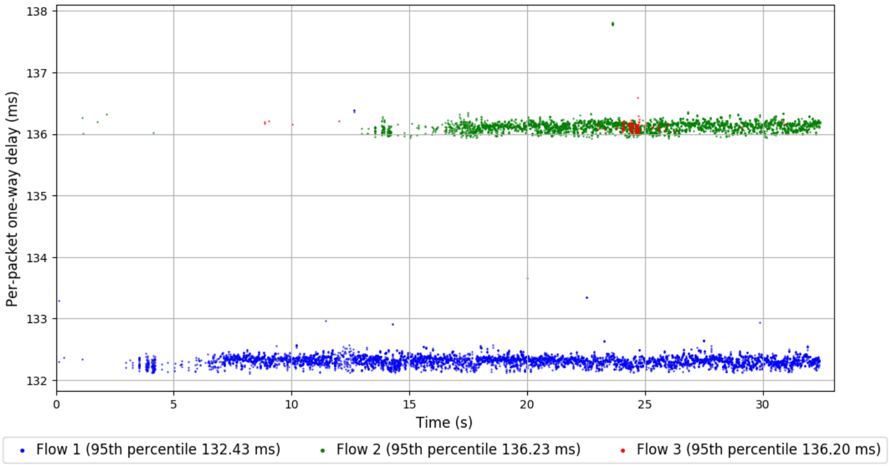




```
Run 3: Statistics of WebRTC media

Start at: 2019-12-11 21:53:35
End at: 2019-12-11 21:54:05
Local clock offset: -0.125 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-12-12 02:45:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.06 Mbit/s
95th percentile per-packet one-way delay: 136.191 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 132.427 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 136.226 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.201 ms
Loss rate: 0.00%
```

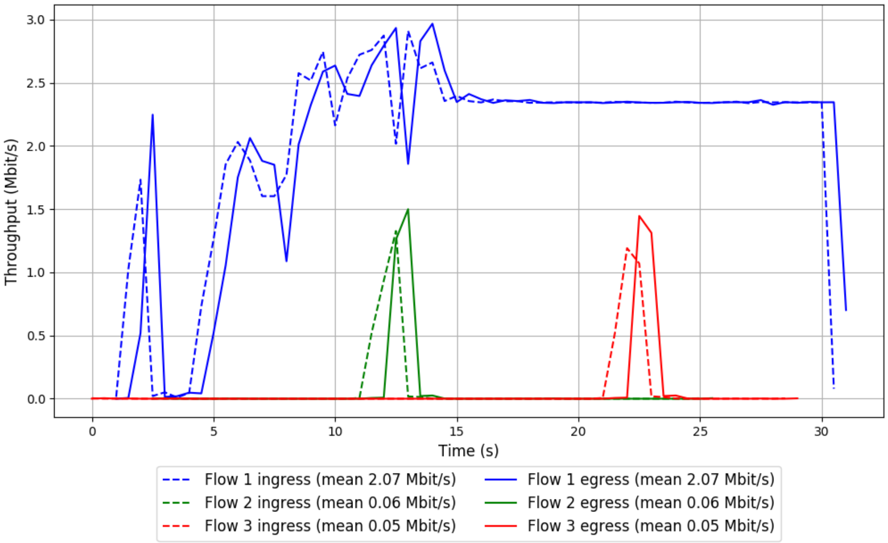
## Run 3: Report of WebRTC media — Data Link

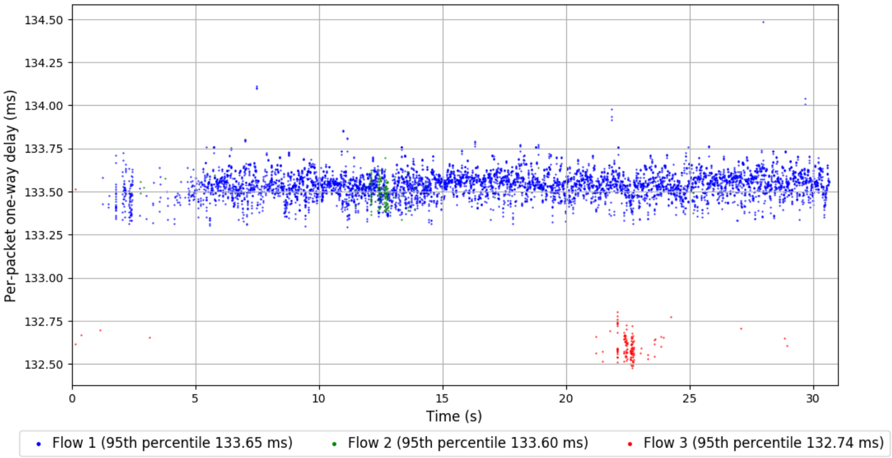




```
Run 4: Statistics of WebRTC media

Start at: 2019-12-11 22:36:53
End at: 2019-12-11 22:37:23
Local clock offset: -0.398 ms
Remote clock offset: 0.351 ms

# Below is generated by plot.py at 2019-12-12 02:45:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 133.651 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 133.652 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 133.601 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.739 ms
Loss rate: 0.00%
```

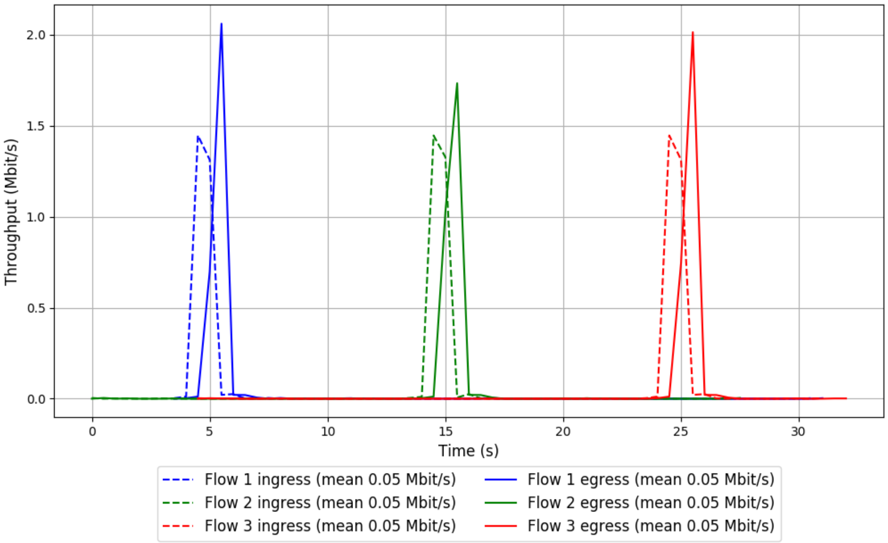
Run 4: Report of WebRTC media — Data Link



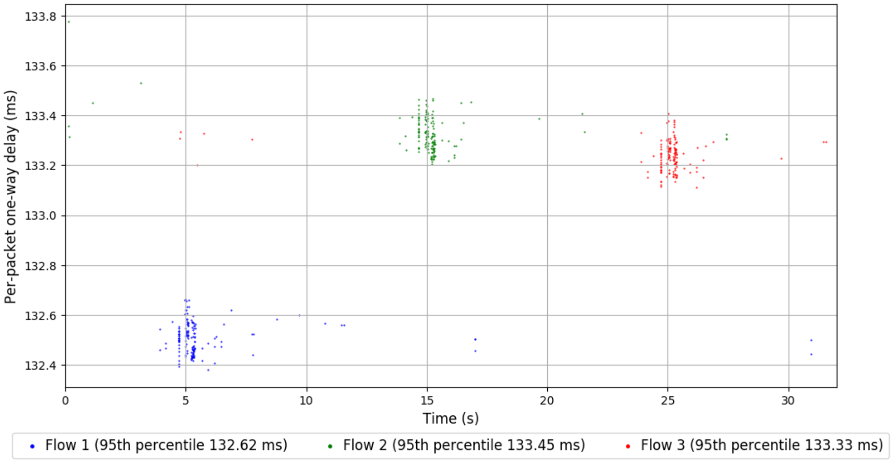


```
Run 5: Statistics of WebRTC media

Start at: 2019-12-11 23:20:29
End at: 2019-12-11 23:20:59
Local clock offset: -0.151 ms
Remote clock offset: 0.361 ms

# Below is generated by plot.py at 2019-12-12 02:45:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 133.403 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.618 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.452 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.333 ms
Loss rate: 0.00%
```

## Run 5: Report of WebRTC media — Data Link



Throughput (Mbit/s)
2.0
1.5
1.0
0.5
0.0
0
5
10
15
20
25
30
Time (s)
Flow 1 ingress (mean 0.05 Mbit/s)
Flow 2 ingress (mean 0.05 Mbit/s)
Flow 3 ingress (mean 0.05 Mbit/s)
Flow 1 egress (mean 0.05 Mbit/s)
Flow 2 egress (mean 0.05 Mbit/s)
Flow 3 egress (mean 0.05 Mbit/s)



Per-packet one-way delay (ms)
133.8
133.6
133.4
133.2
133.0
132.8
132.6
132.4
0
5
10
15
20
25
30
Time (s)
Flow 1 (95th percentile 132.62 ms)
Flow 2 (95th percentile 133.45 ms)
Flow 3 (95th percentile 133.33 ms)