

## Pantheon Report

Generated at 2018-09-06 07:05:55 (UTC).

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

Repeated the test of 18 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

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

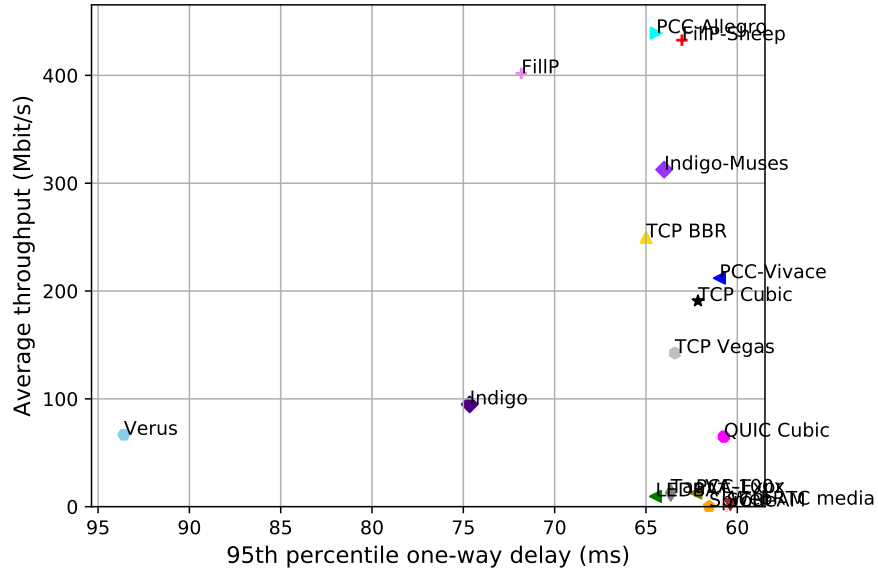
### System info:

```
Linux 4.15.0-1020-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 536870912 536870912 536870912
```

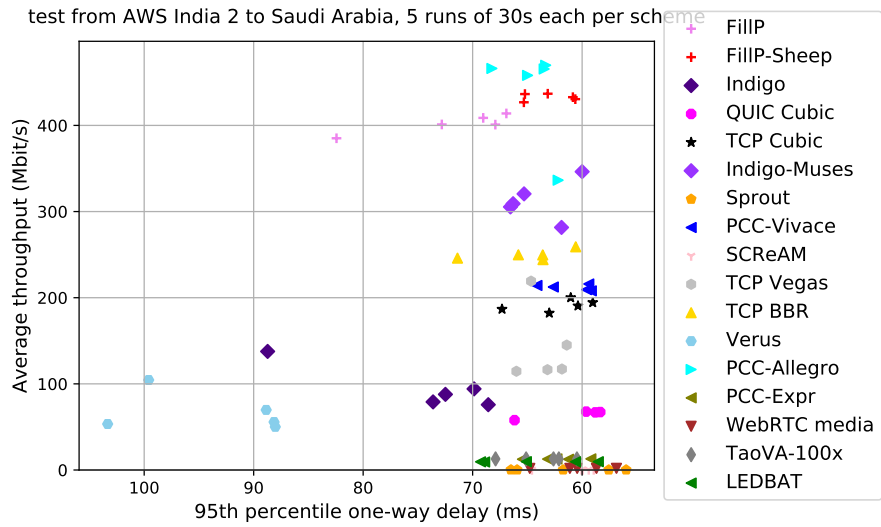
### Git summary:

```
branch: muses @ f392ce15d580343f4432c3d7e068b3290f03eb4a
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ a28d20fb82a95a965a3da65fd1eb71b8994e9b84
third_party/pantheon-tunnel @ cbfce6db5ff5740d4fe1771f813cd646339e1952
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
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from AWS India 2 to Saudi Arabia, 5 runs of 30s each per scheme  
(mean of all runs by scheme)



test from AWS India 2 to Saudi Arabia, 5 runs of 30s each per scheme



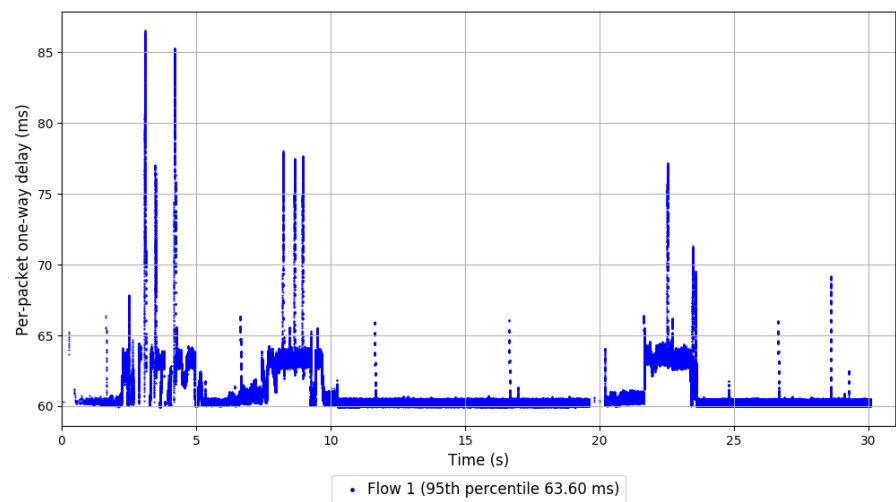
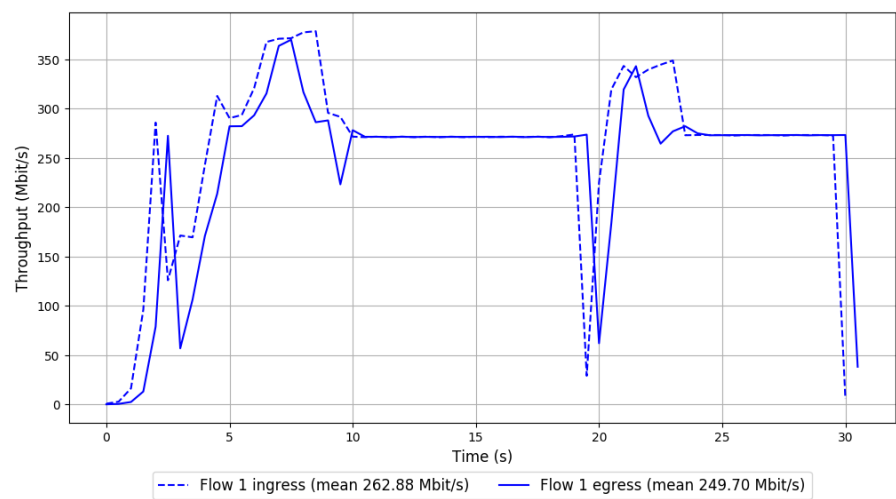
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	249.76	64.99	6.16
Copa	0	N/A	N/A	N/A
TCP Cubic	5	190.80	62.15	0.59
FillP	5	401.94	71.83	20.86
FillP-Sheep	5	432.65	63.03	10.14
Indigo	5	94.90	74.65	0.27
LEDBAT	5	9.54	64.48	0.00
Indigo-Muses	5	312.59	64.01	6.39
PCC-Allegro	5	439.18	64.44	4.15
PCC-Expr	5	12.70	62.27	29.80
QUIC Cubic	4	64.95	60.74	0.01
SCReAM	5	0.22	60.58	0.00
Sprout	5	0.25	61.54	0.00
TaoVA-100x	5	12.90	63.65	21.24
TCP Vegas	5	142.51	63.42	0.61
Verus	5	66.69	93.59	44.02
PCC-Vivace	5	211.98	60.98	0.91
WebRTC media	5	1.89	60.38	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-09-06 04:41:57  
End at: 2018-09-06 04:42:27  
Local clock offset: -0.135 ms  
Remote clock offset: -34.906 ms

# Below is generated by plot.py at 2018-09-06 06:47:10  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 249.70 Mbit/s  
95th percentile per-packet one-way delay: 63.597 ms  
Loss rate: 5.02%  
-- Flow 1:  
Average throughput: 249.70 Mbit/s  
95th percentile per-packet one-way delay: 63.597 ms  
Loss rate: 5.02%

Run 1: Report of TCP BBR — Data Link

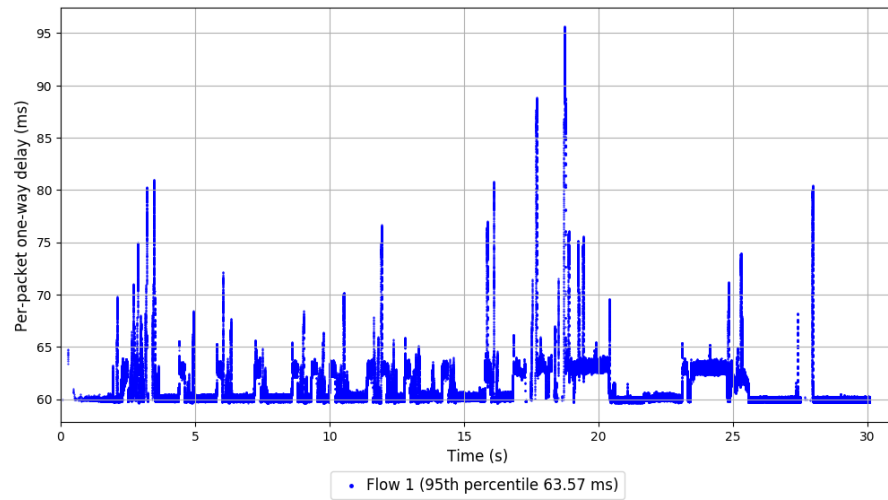
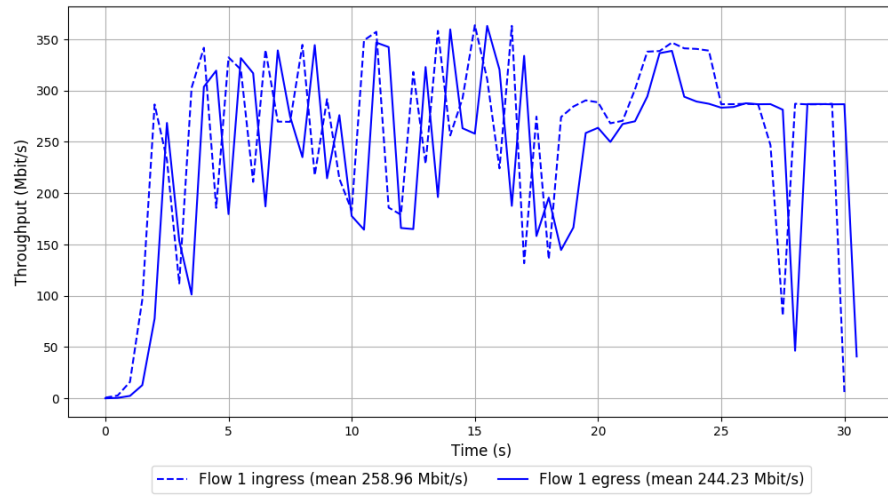


Run 2: Statistics of TCP BBR

Start at: 2018-09-06 05:05:04  
End at: 2018-09-06 05:05:34  
Local clock offset: -1.85 ms  
Remote clock offset: -37.057 ms

# Below is generated by plot.py at 2018-09-06 06:47:10  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 244.23 Mbit/s  
95th percentile per-packet one-way delay: 63.573 ms  
Loss rate: 5.69%  
-- Flow 1:  
Average throughput: 244.23 Mbit/s  
95th percentile per-packet one-way delay: 63.573 ms  
Loss rate: 5.69%

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



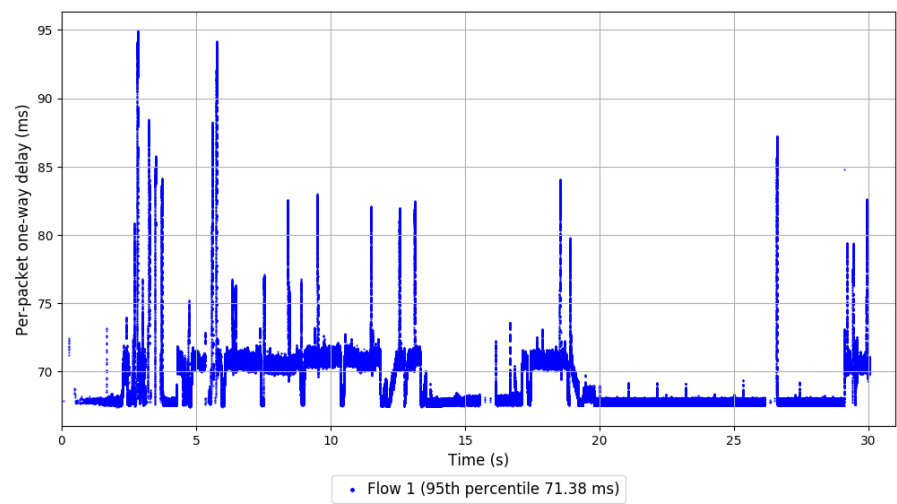
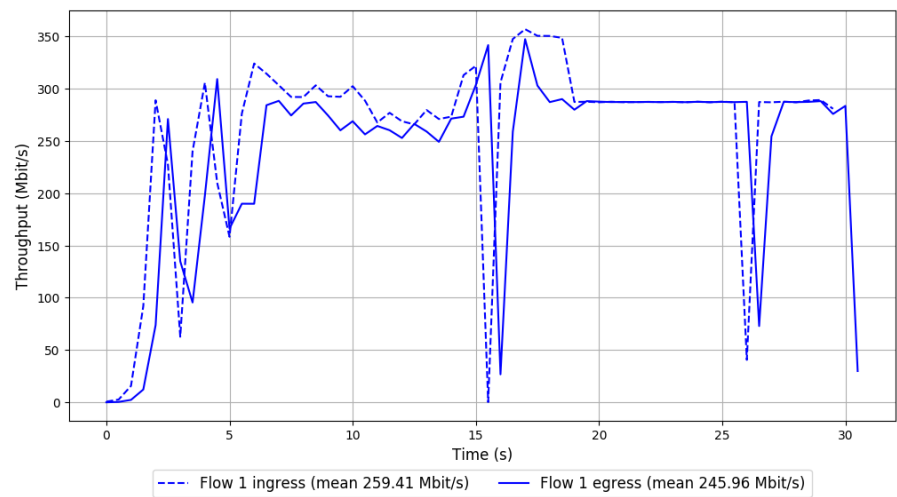
Run 3: Statistics of TCP BBR

Start at: 2018-09-06 05:28:11  
End at: 2018-09-06 05:28:41  
Local clock offset: -0.034 ms  
Remote clock offset: -31.61 ms

# Below is generated by plot.py at 2018-09-06 06:47:10  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 245.96 Mbit/s  
95th percentile per-packet one-way delay: 71.383 ms  
Loss rate: 5.18%  
-- Flow 1:  
Average throughput: 245.96 Mbit/s  
95th percentile per-packet one-way delay: 71.383 ms  
Loss rate: 5.18%



Run 3: Report of TCP BBR — Data Link

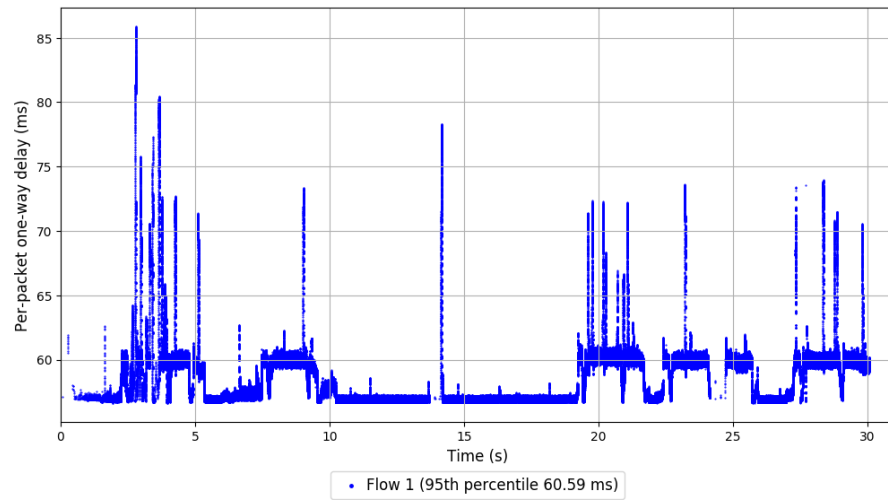
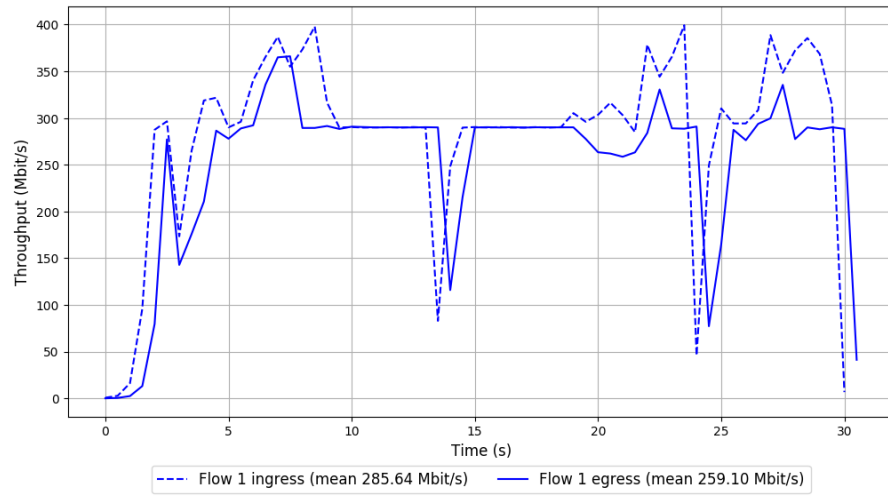


Run 4: Statistics of TCP BBR

Start at: 2018-09-06 05:51:22  
End at: 2018-09-06 05:51:53  
Local clock offset: 3.002 ms  
Remote clock offset: -36.873 ms

# Below is generated by plot.py at 2018-09-06 06:47:19  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 259.10 Mbit/s  
95th percentile per-packet one-way delay: 60.586 ms  
Loss rate: 9.28%  
-- Flow 1:  
Average throughput: 259.10 Mbit/s  
95th percentile per-packet one-way delay: 60.586 ms  
Loss rate: 9.28%

#### Run 4: Report of TCP BBR — Data Link

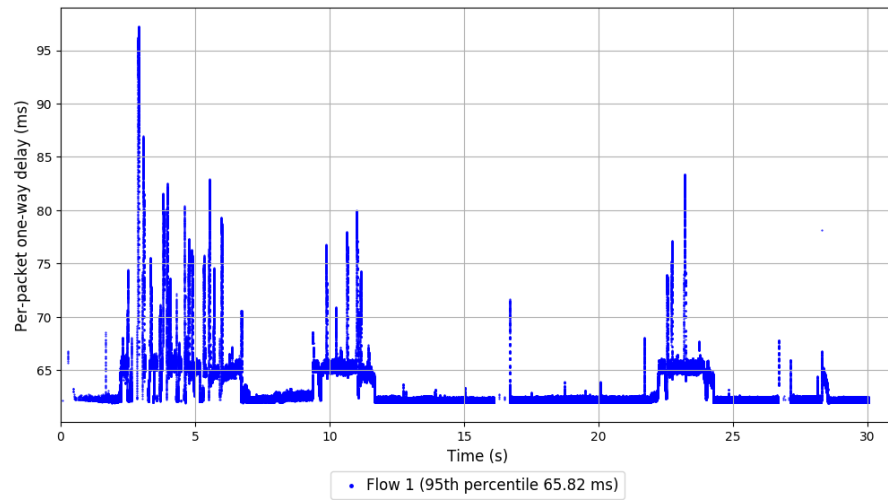
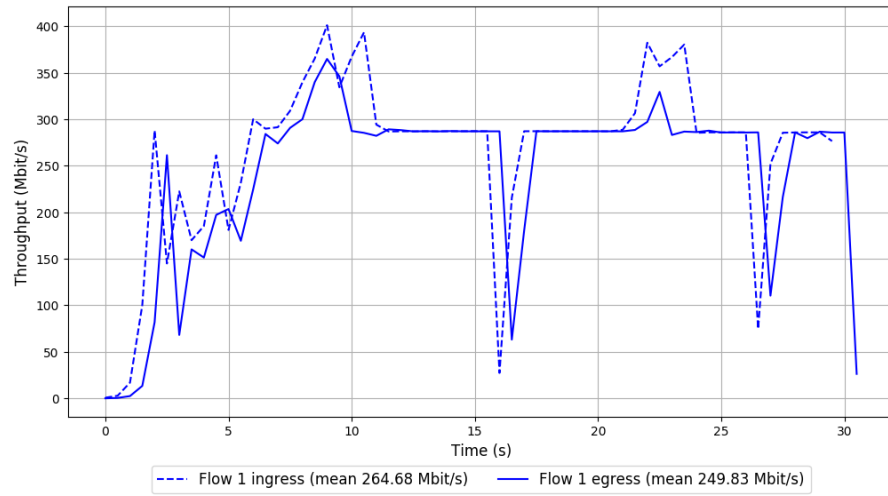


Run 5: Statistics of TCP BBR

Start at: 2018-09-06 06:20:11  
End at: 2018-09-06 06:20:41  
Local clock offset: 1.331 ms  
Remote clock offset: -32.624 ms

# Below is generated by plot.py at 2018-09-06 06:47:19  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 249.83 Mbit/s  
95th percentile per-packet one-way delay: 65.822 ms  
Loss rate: 5.61%  
-- Flow 1:  
Average throughput: 249.83 Mbit/s  
95th percentile per-packet one-way delay: 65.822 ms  
Loss rate: 5.61%

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



Run 1: Statistics of Copa

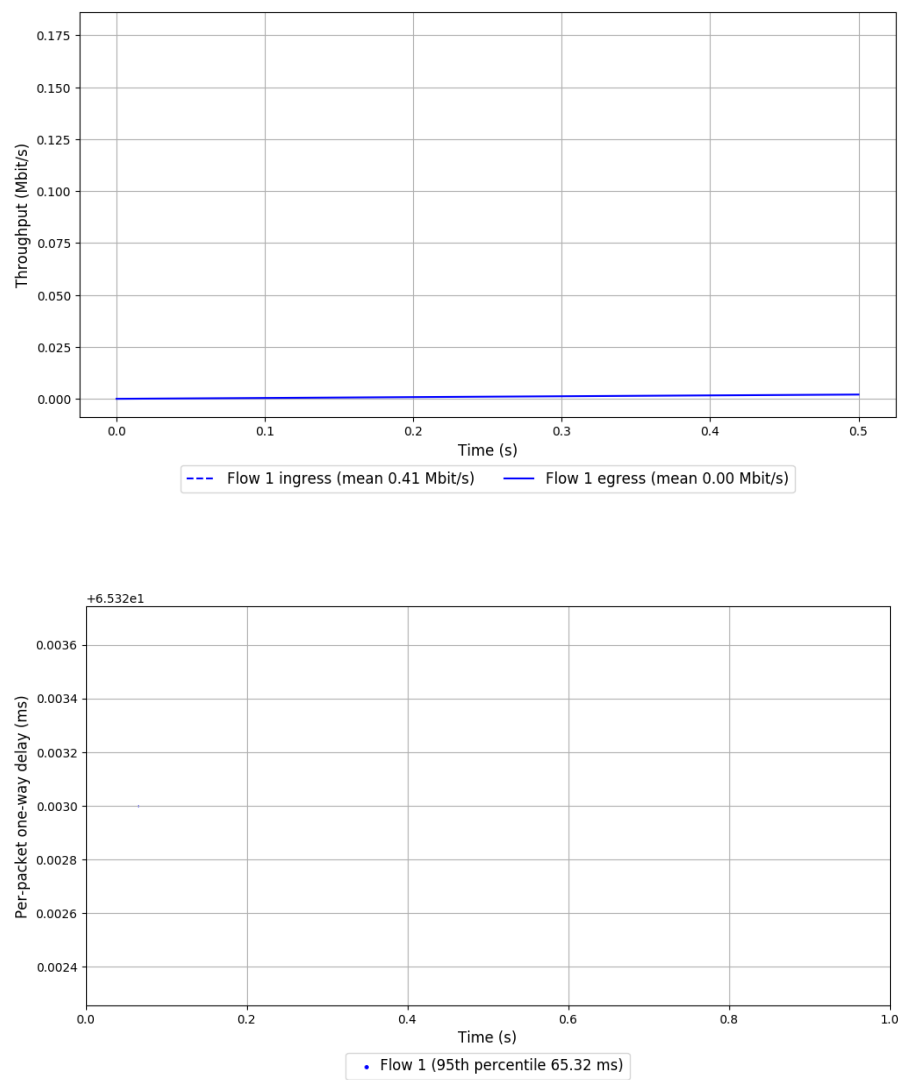
Start at: 2018-09-06 04:48:17

End at: 2018-09-06 04:48:47

Local clock offset: -1.811 ms

Remote clock offset: -34.423 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-09-06 05:11:23

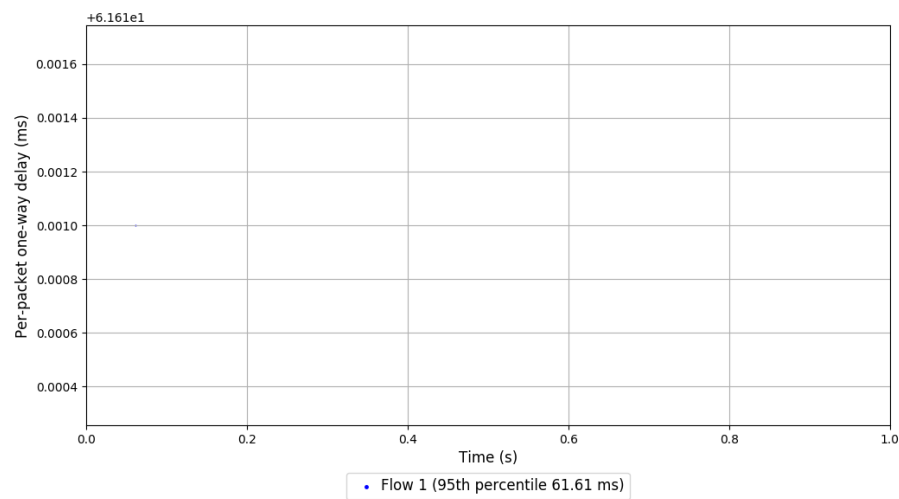
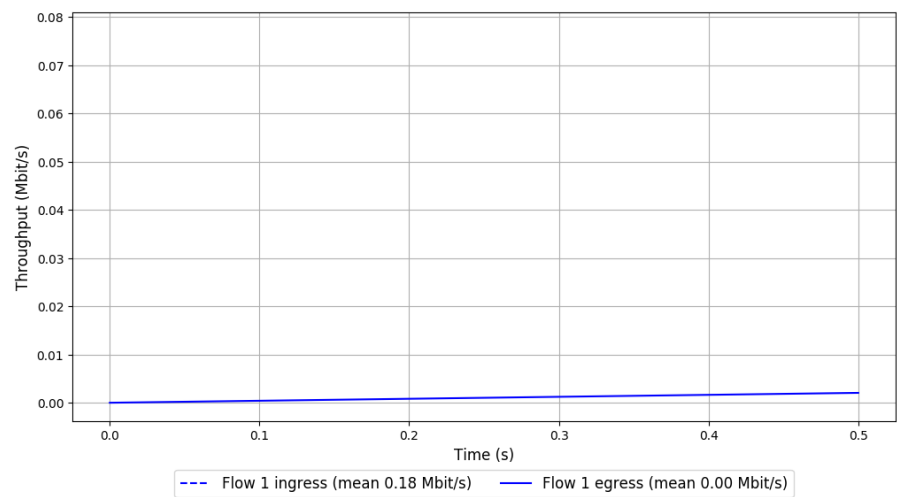
End at: 2018-09-06 05:11:53

Local clock offset: -1.166 ms

Remote clock offset: -36.792 ms



Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

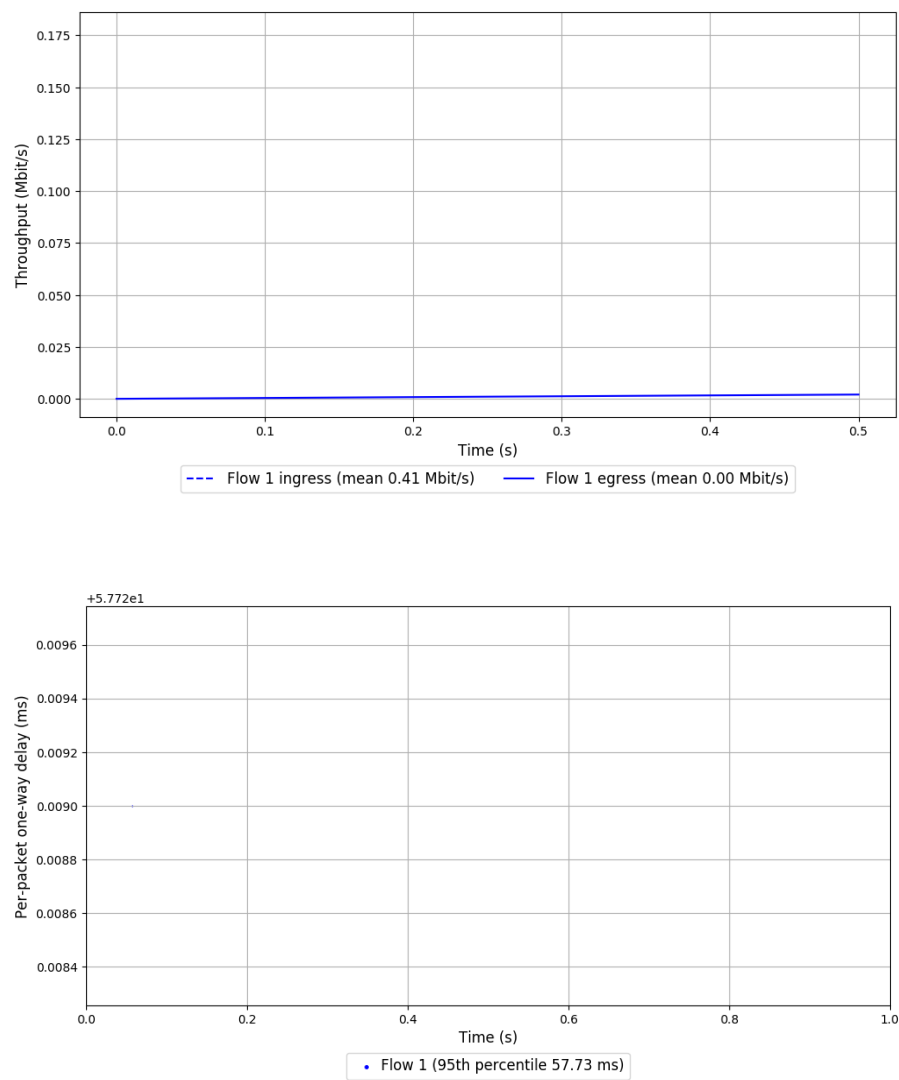
Start at: 2018-09-06 05:34:29

End at: 2018-09-06 05:34:59

Local clock offset: 3.719 ms

Remote clock offset: -35.62 ms

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

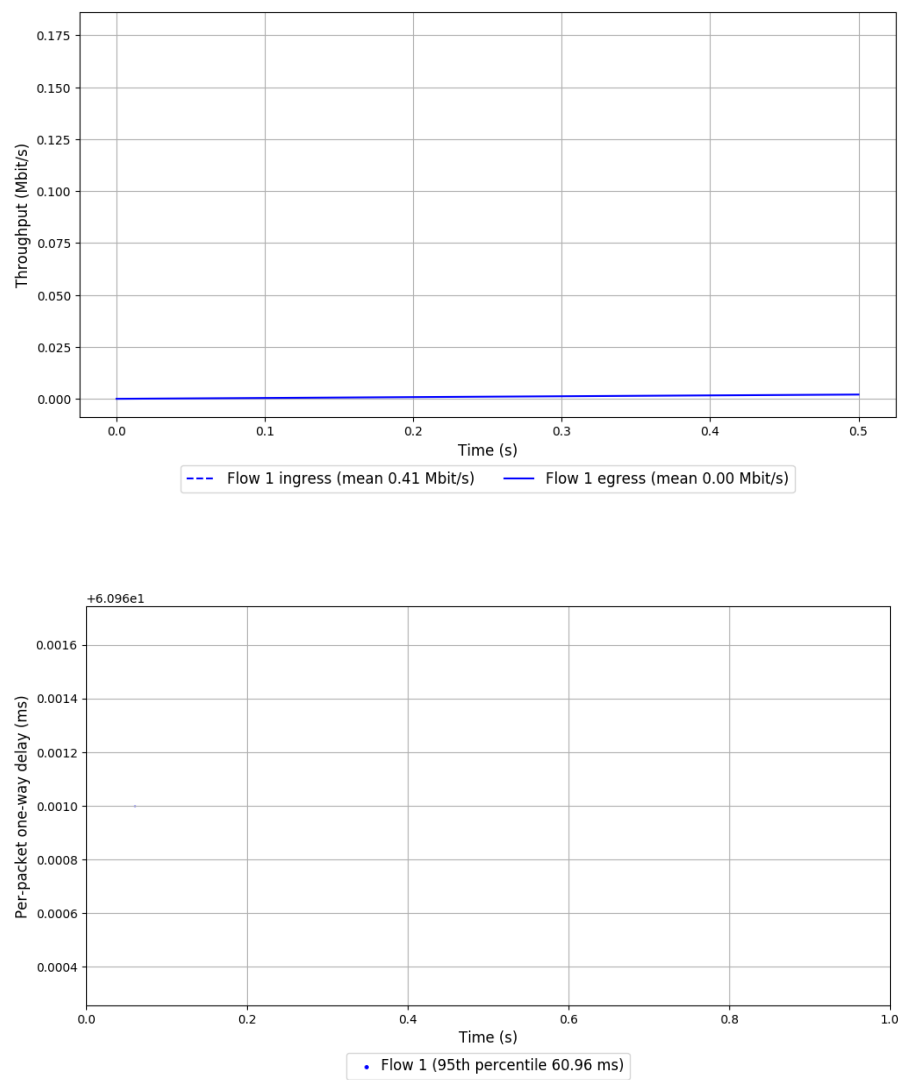
Start at: 2018-09-06 05:57:43

End at: 2018-09-06 05:58:13

Local clock offset: 2.462 ms

Remote clock offset: -36.177 ms

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

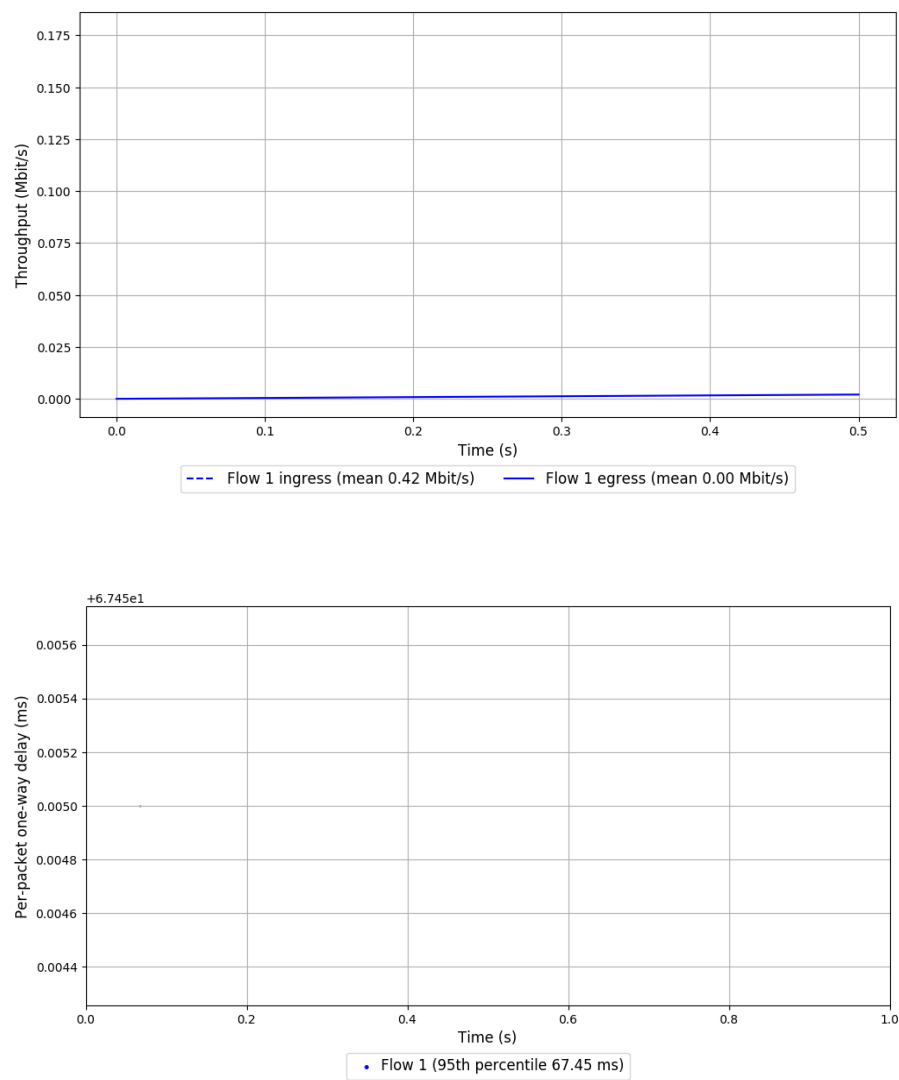
Start at: 2018-09-06 06:26:30

End at: 2018-09-06 06:27:00

Local clock offset: -3.329 ms

Remote clock offset: -32.046 ms

Run 5: Report of Copa — Data Link



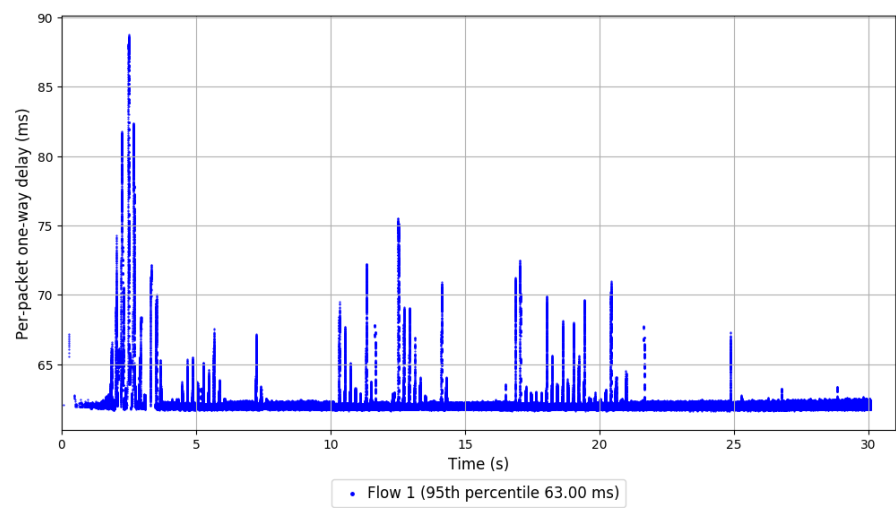
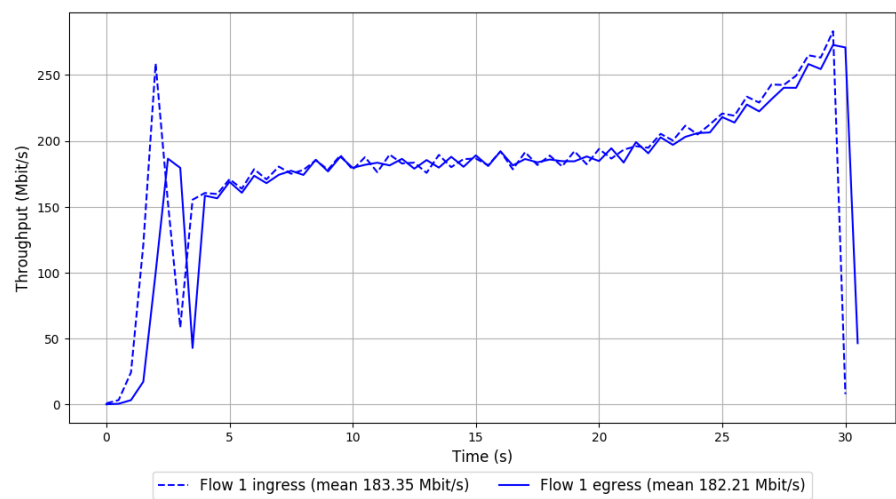
Run 1: Statistics of TCP Cubic

Start at: 2018-09-06 04:43:19  
End at: 2018-09-06 04:43:49  
Local clock offset: -2.235 ms  
Remote clock offset: -35.14 ms

# Below is generated by plot.py at 2018-09-06 06:47:19  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 182.21 Mbit/s  
95th percentile per-packet one-way delay: 62.999 ms  
Loss rate: 0.62%  
-- Flow 1:  
Average throughput: 182.21 Mbit/s  
95th percentile per-packet one-way delay: 62.999 ms  
Loss rate: 0.62%



Run 1: Report of TCP Cubic — Data Link

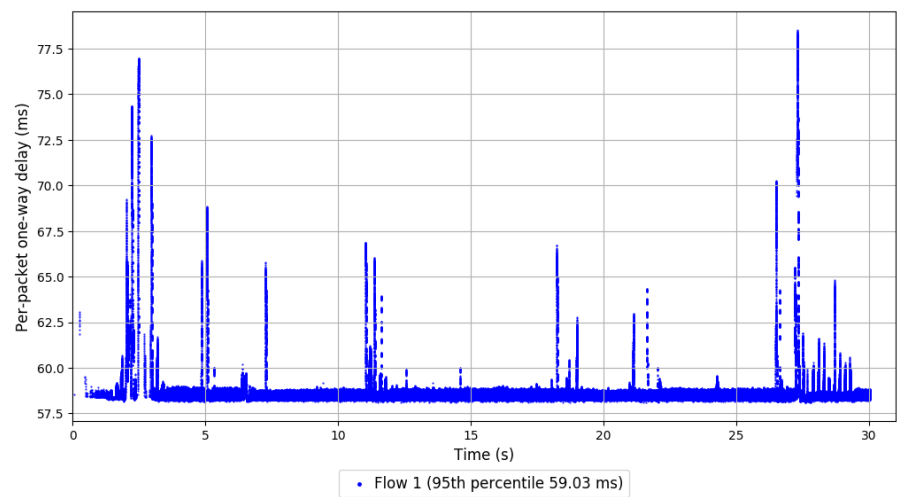
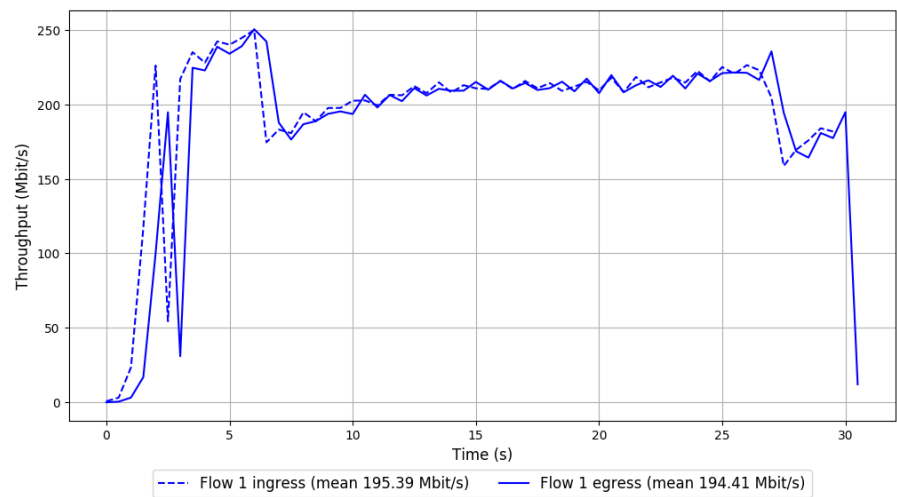


Run 2: Statistics of TCP Cubic

Start at: 2018-09-06 05:06:27  
End at: 2018-09-06 05:06:57  
Local clock offset: 0.823 ms  
Remote clock offset: -37.758 ms

# Below is generated by plot.py at 2018-09-06 06:47:19  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 194.41 Mbit/s  
95th percentile per-packet one-way delay: 59.029 ms  
Loss rate: 0.50%  
-- Flow 1:  
Average throughput: 194.41 Mbit/s  
95th percentile per-packet one-way delay: 59.029 ms  
Loss rate: 0.50%

Run 2: Report of TCP Cubic — Data Link

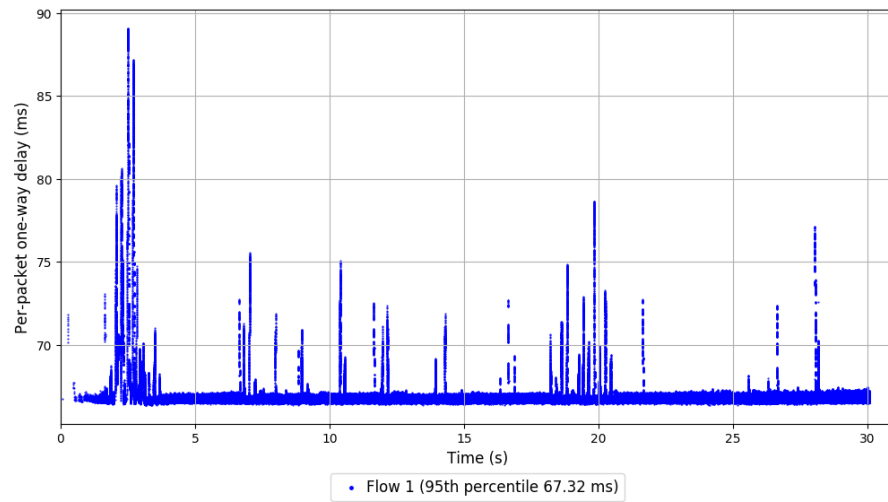
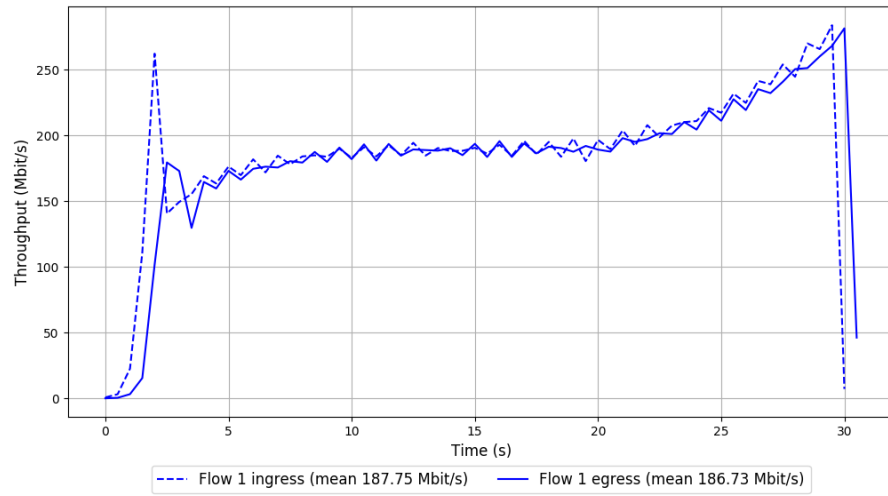


Run 3: Statistics of TCP Cubic

Start at: 2018-09-06 05:29:34  
End at: 2018-09-06 05:30:04  
Local clock offset: -0.845 ms  
Remote clock offset: -33.231 ms

# Below is generated by plot.py at 2018-09-06 06:47:19  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 186.73 Mbit/s  
95th percentile per-packet one-way delay: 67.316 ms  
Loss rate: 0.54%  
-- Flow 1:  
Average throughput: 186.73 Mbit/s  
95th percentile per-packet one-way delay: 67.316 ms  
Loss rate: 0.54%

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

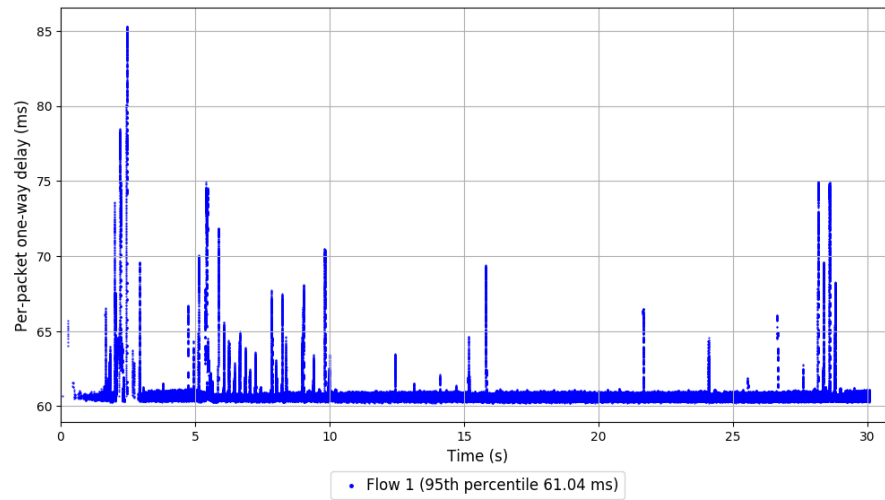
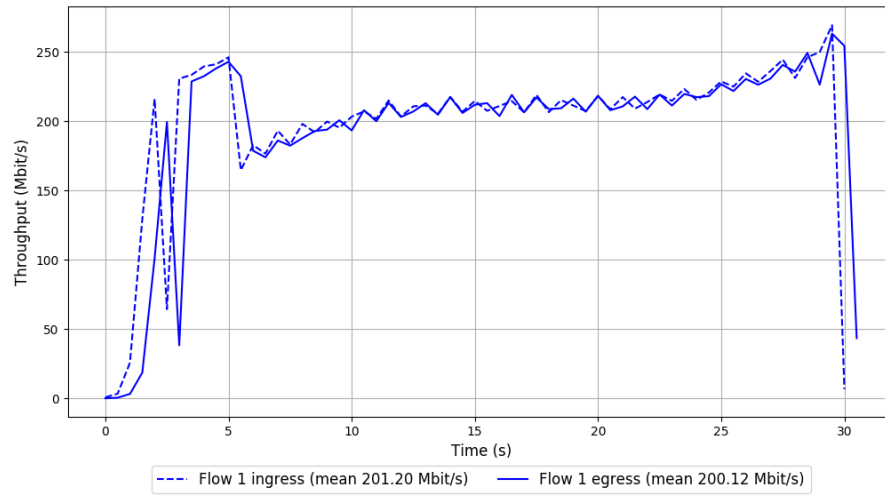


Run 4: Statistics of TCP Cubic

Start at: 2018-09-06 05:52:47  
End at: 2018-09-06 05:53:17  
Local clock offset: -0.173 ms  
Remote clock offset: -36.587 ms

# Below is generated by plot.py at 2018-09-06 06:48:28  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 200.12 Mbit/s  
95th percentile per-packet one-way delay: 61.041 ms  
Loss rate: 0.54%  
-- Flow 1:  
Average throughput: 200.12 Mbit/s  
95th percentile per-packet one-way delay: 61.041 ms  
Loss rate: 0.54%

#### Run 4: Report of TCP Cubic — Data Link



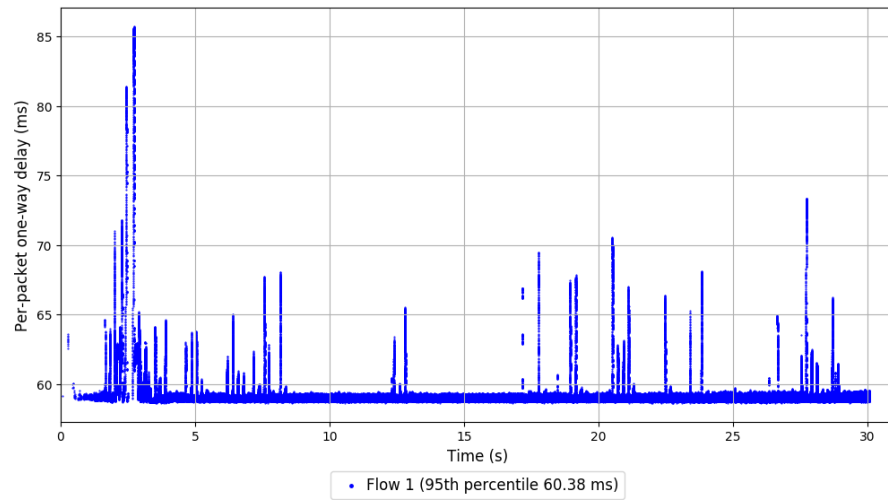
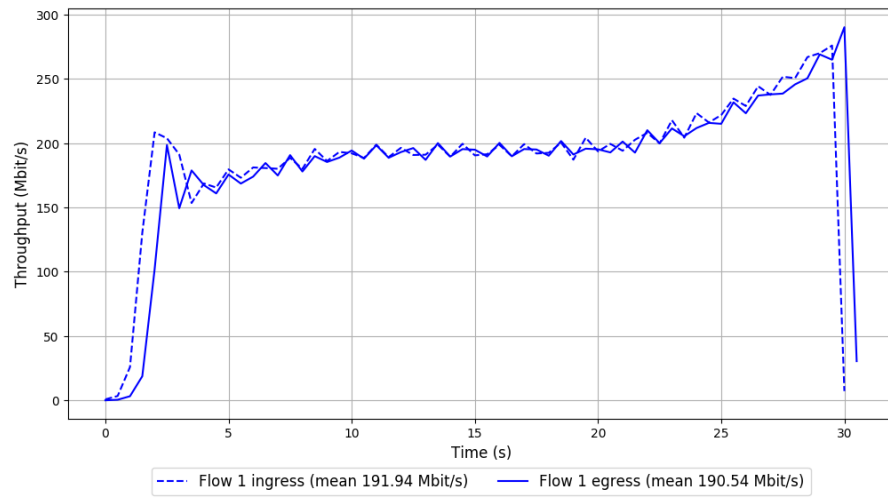
Run 5: Statistics of TCP Cubic

Start at: 2018-09-06 06:21:34  
End at: 2018-09-06 06:22:04  
Local clock offset: -0.443 ms  
Remote clock offset: -37.355 ms

# Below is generated by plot.py at 2018-09-06 06:48:28  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 190.54 Mbit/s  
95th percentile per-packet one-way delay: 60.380 ms  
Loss rate: 0.73%  
-- Flow 1:  
Average throughput: 190.54 Mbit/s  
95th percentile per-packet one-way delay: 60.380 ms  
Loss rate: 0.73%



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

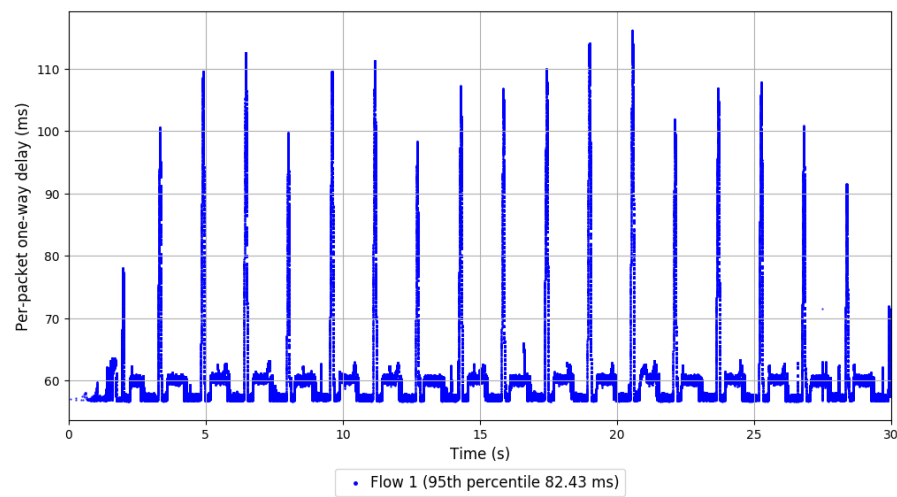
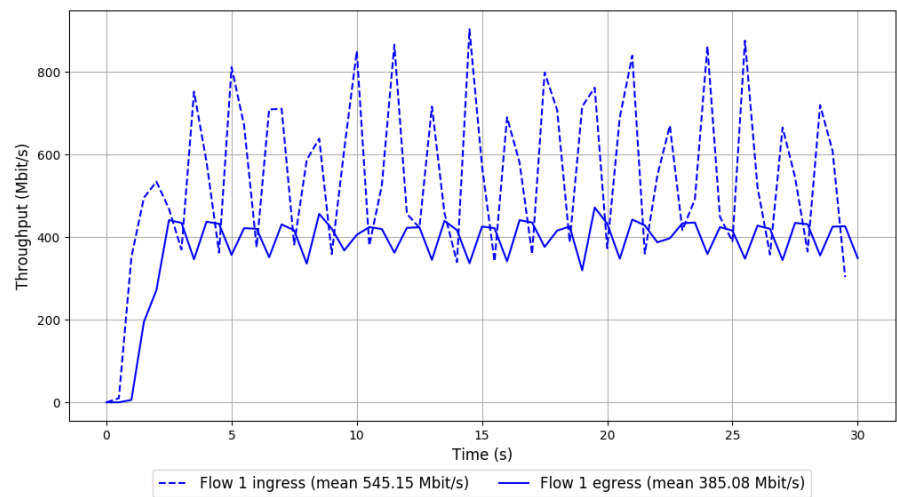


Run 1: Statistics of FillP

Start at: 2018-09-06 04:53:18  
End at: 2018-09-06 04:53:48  
Local clock offset: 0.229 ms  
Remote clock offset: -37.88 ms

# Below is generated by plot.py at 2018-09-06 06:52:30  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 385.08 Mbit/s  
95th percentile per-packet one-way delay: 82.434 ms  
Loss rate: 29.36%  
-- Flow 1:  
Average throughput: 385.08 Mbit/s  
95th percentile per-packet one-way delay: 82.434 ms  
Loss rate: 29.36%

Run 1: Report of FillP — Data Link

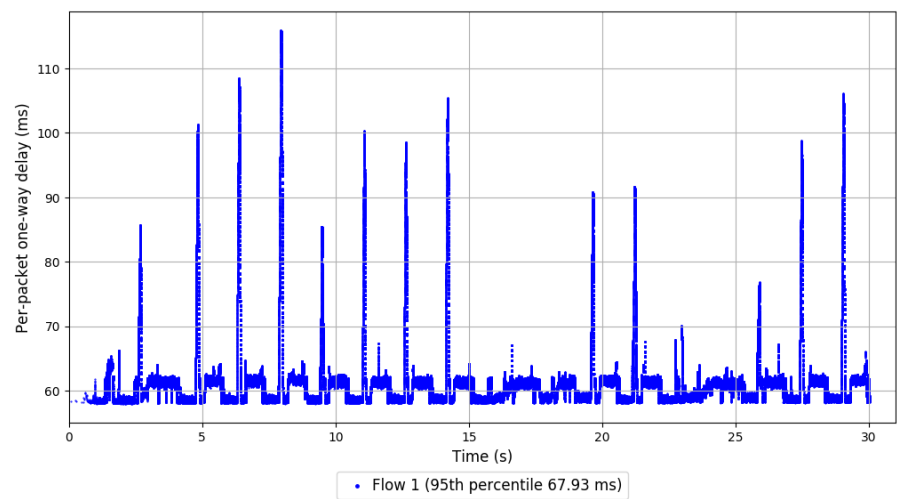
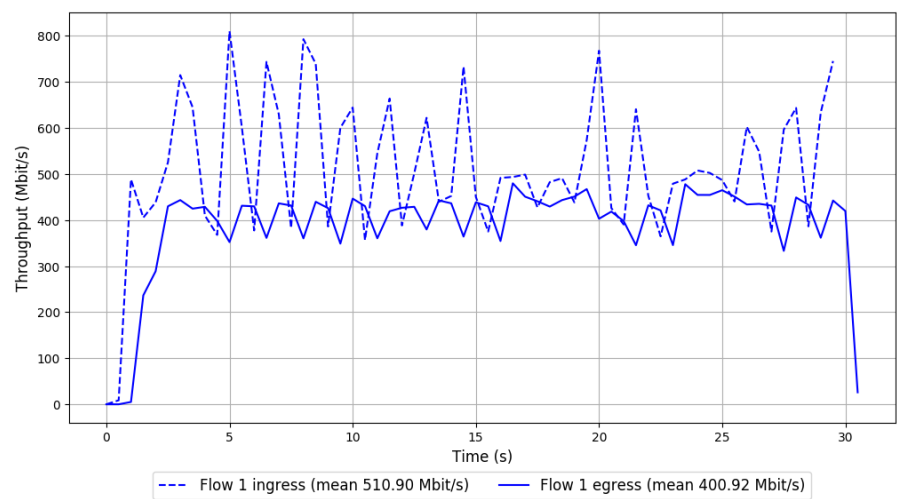


Run 2: Statistics of FillP

Start at: 2018-09-06 05:16:22  
End at: 2018-09-06 05:16:52  
Local clock offset: -1.136 ms  
Remote clock offset: -37.542 ms

# Below is generated by plot.py at 2018-09-06 06:52:53  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 400.92 Mbit/s  
95th percentile per-packet one-way delay: 67.926 ms  
Loss rate: 21.53%  
-- Flow 1:  
Average throughput: 400.92 Mbit/s  
95th percentile per-packet one-way delay: 67.926 ms  
Loss rate: 21.53%

Run 2: Report of FillP — Data Link

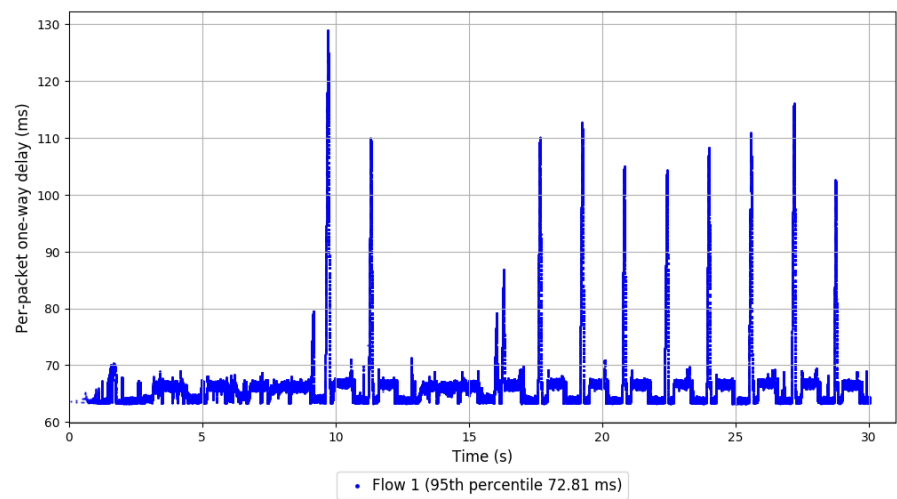
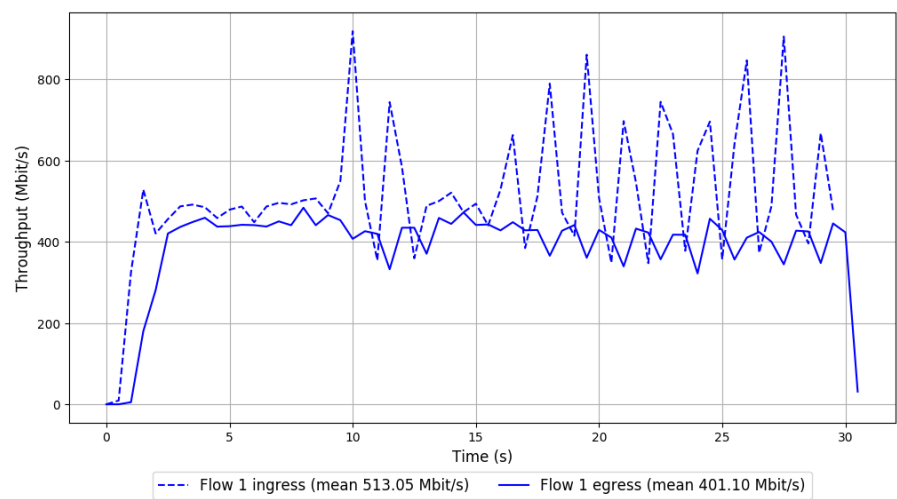


Run 3: Statistics of FillP

Start at: 2018-09-06 05:39:34  
End at: 2018-09-06 05:40:04  
Local clock offset: 0.512 ms  
Remote clock offset: -35.619 ms

# Below is generated by plot.py at 2018-09-06 06:52:53  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 401.10 Mbit/s  
95th percentile per-packet one-way delay: 72.815 ms  
Loss rate: 21.82%  
-- Flow 1:  
Average throughput: 401.10 Mbit/s  
95th percentile per-packet one-way delay: 72.815 ms  
Loss rate: 21.82%

Run 3: Report of FillP — Data Link



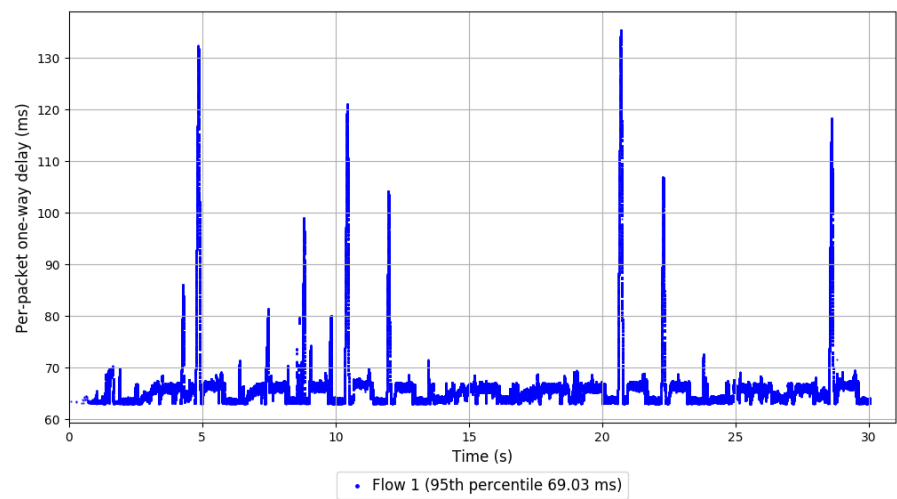
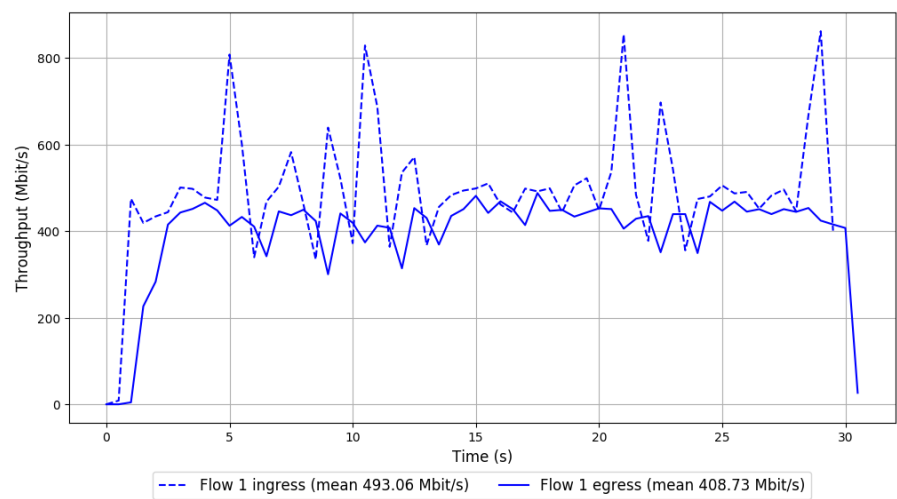
Run 4: Statistics of FillP

Start at: 2018-09-06 06:02:43  
End at: 2018-09-06 06:03:13  
Local clock offset: -0.935 ms  
Remote clock offset: -36.265 ms

# Below is generated by plot.py at 2018-09-06 06:52:55  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 408.73 Mbit/s  
95th percentile per-packet one-way delay: 69.033 ms  
Loss rate: 17.10%  
-- Flow 1:  
Average throughput: 408.73 Mbit/s  
95th percentile per-packet one-way delay: 69.033 ms  
Loss rate: 17.10%



Run 4: Report of FillP — Data Link

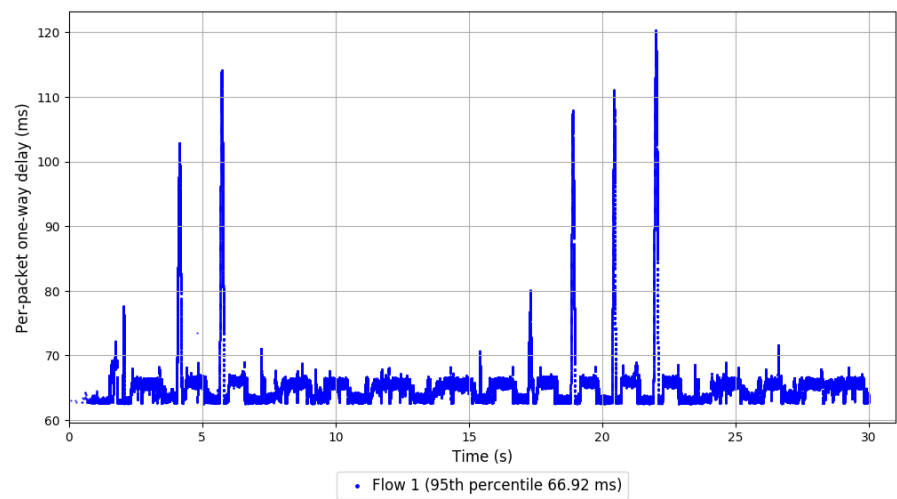
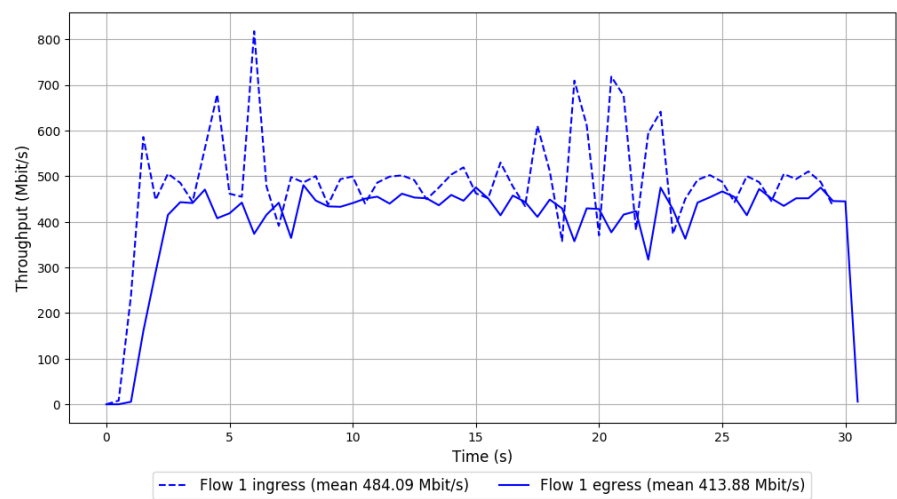


Run 5: Statistics of FillP

Start at: 2018-09-06 06:31:35  
End at: 2018-09-06 06:32:05  
Local clock offset: -0.54 ms  
Remote clock offset: -32.963 ms

# Below is generated by plot.py at 2018-09-06 06:53:12  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 413.88 Mbit/s  
95th percentile per-packet one-way delay: 66.919 ms  
Loss rate: 14.50%  
-- Flow 1:  
Average throughput: 413.88 Mbit/s  
95th percentile per-packet one-way delay: 66.919 ms  
Loss rate: 14.50%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2018-09-06 04:58:34

End at: 2018-09-06 04:59:04

Local clock offset: 0.215 ms

Remote clock offset: -37.175 ms

# Below is generated by plot.py at 2018-09-06 06:53:39

# Datalink statistics

-- Total of 1 flow:

Average throughput: 430.48 Mbit/s

95th percentile per-packet one-way delay: 60.621 ms

Loss rate: 10.56%

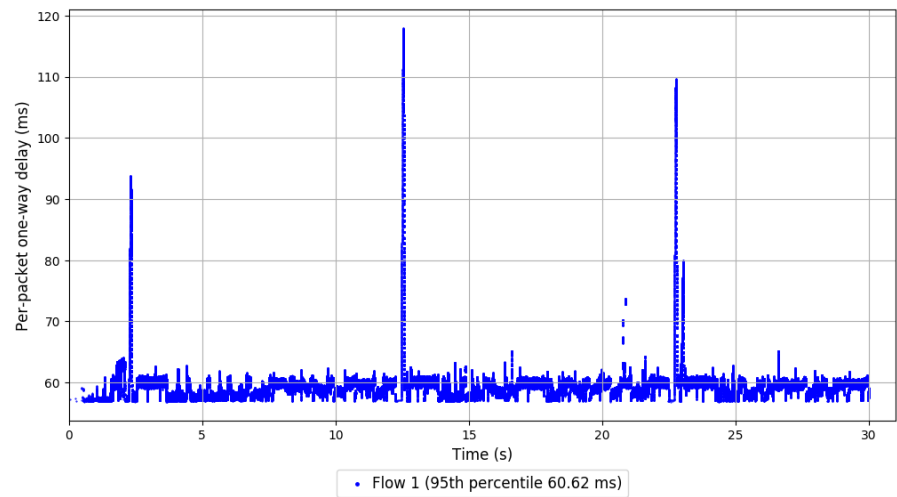
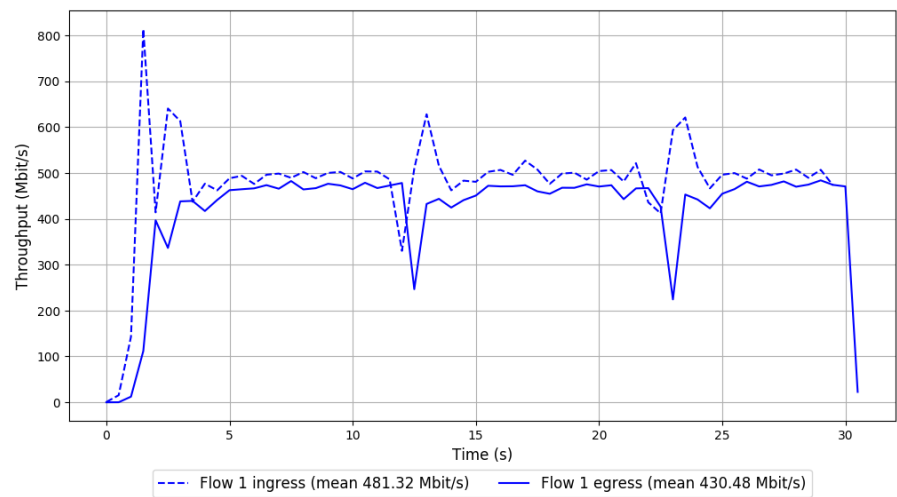
-- Flow 1:

Average throughput: 430.48 Mbit/s

95th percentile per-packet one-way delay: 60.621 ms

Loss rate: 10.56%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-09-06 05:21:37

End at: 2018-09-06 05:22:07

Local clock offset: -0.508 ms

Remote clock offset: -37.397 ms

# Below is generated by plot.py at 2018-09-06 06:54:55

# Datalink statistics

-- Total of 1 flow:

Average throughput: 426.84 Mbit/s

95th percentile per-packet one-way delay: 65.320 ms

Loss rate: 12.36%

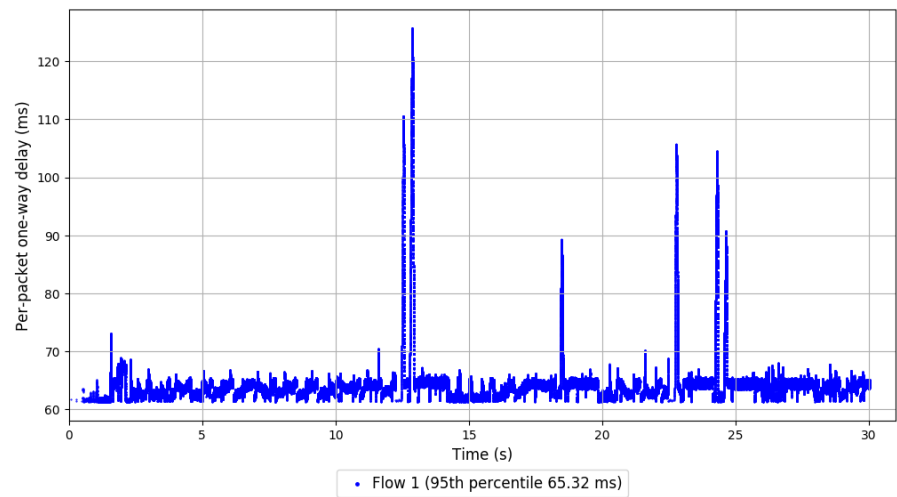
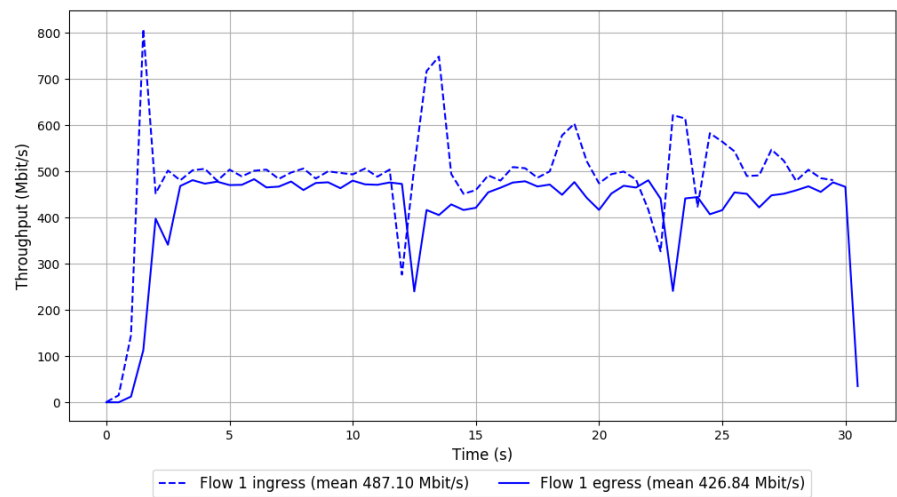
-- Flow 1:

Average throughput: 426.84 Mbit/s

95th percentile per-packet one-way delay: 65.320 ms

Loss rate: 12.36%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2018-09-06 05:44:49

End at: 2018-09-06 05:45:19

Local clock offset: 3.085 ms

Remote clock offset: -36.744 ms

# Below is generated by plot.py at 2018-09-06 06:55:01

# Datalink statistics

-- Total of 1 flow:

Average throughput: 432.77 Mbit/s

95th percentile per-packet one-way delay: 60.845 ms

Loss rate: 10.75%

-- Flow 1:

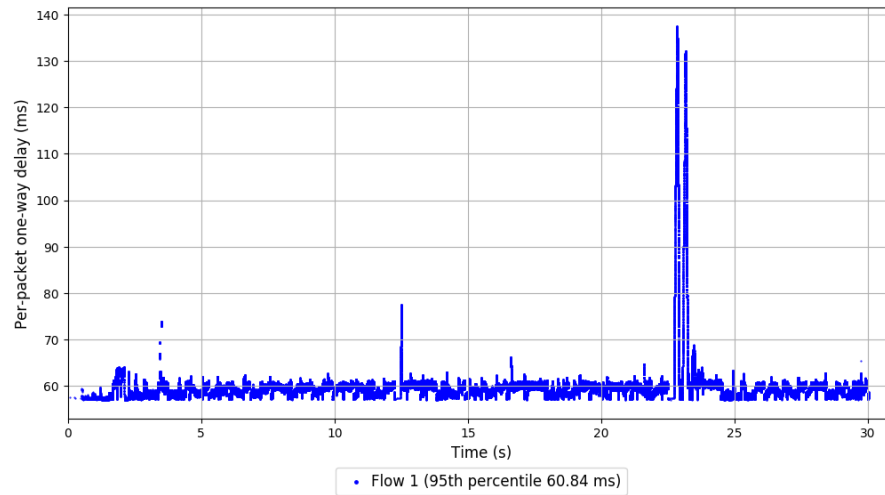
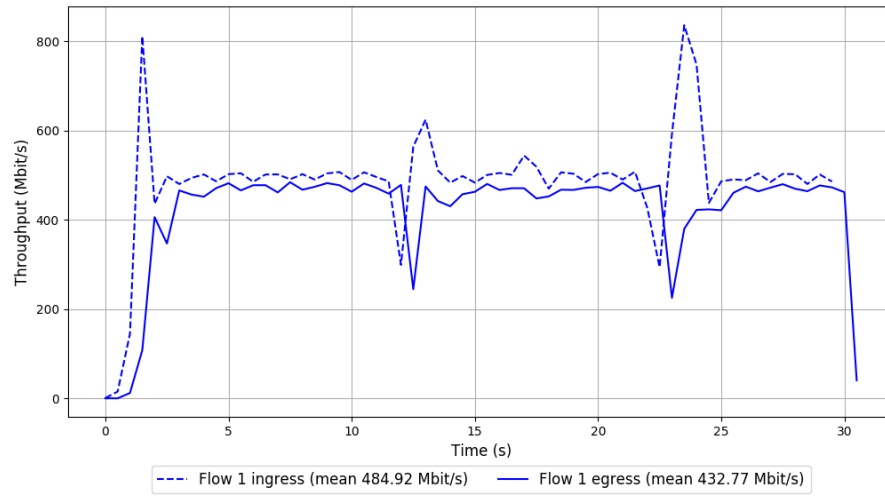
Average throughput: 432.77 Mbit/s

95th percentile per-packet one-way delay: 60.845 ms

Loss rate: 10.75%



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

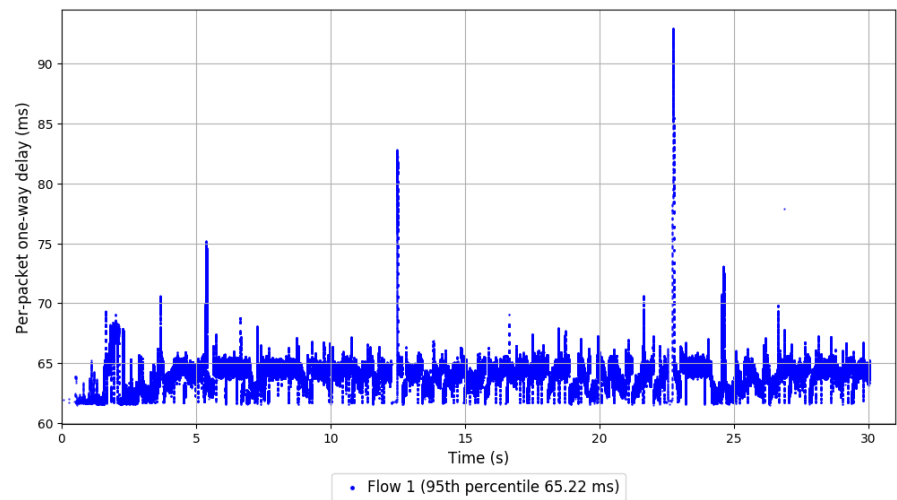
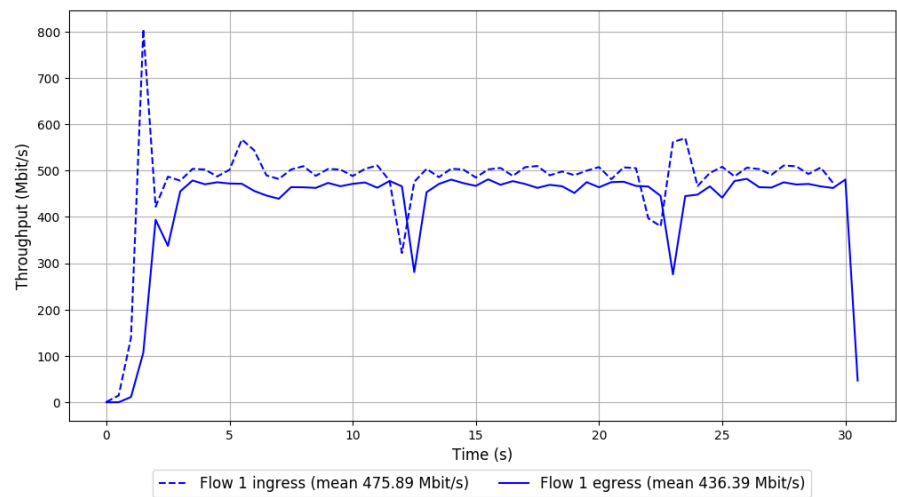


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-06 06:13:37  
End at: 2018-09-06 06:14:07  
Local clock offset: 0.251 ms  
Remote clock offset: -33.926 ms

# Below is generated by plot.py at 2018-09-06 06:58:55  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 436.39 Mbit/s  
95th percentile per-packet one-way delay: 65.222 ms  
Loss rate: 8.29%  
-- Flow 1:  
Average throughput: 436.39 Mbit/s  
95th percentile per-packet one-way delay: 65.222 ms  
Loss rate: 8.29%

Run 4: Report of FillP-Sheep — Data Link

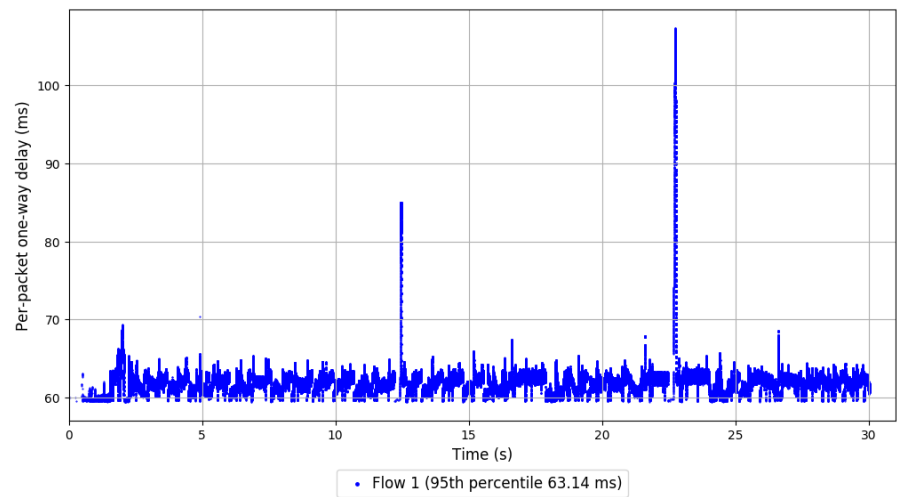
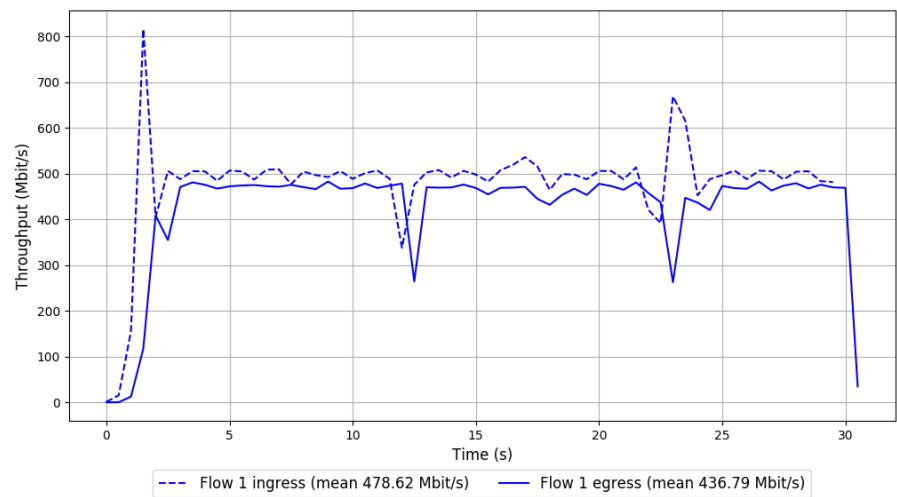


Run 5: Statistics of FillP-Sheep

Start at: 2018-09-06 06:36:50  
End at: 2018-09-06 06:37:20  
Local clock offset: -1.671 ms  
Remote clock offset: -37.286 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 436.79 Mbit/s  
95th percentile per-packet one-way delay: 63.138 ms  
Loss rate: 8.74%  
-- Flow 1:  
Average throughput: 436.79 Mbit/s  
95th percentile per-packet one-way delay: 63.138 ms  
Loss rate: 8.74%

Run 5: Report of FillP-Sheep — Data Link

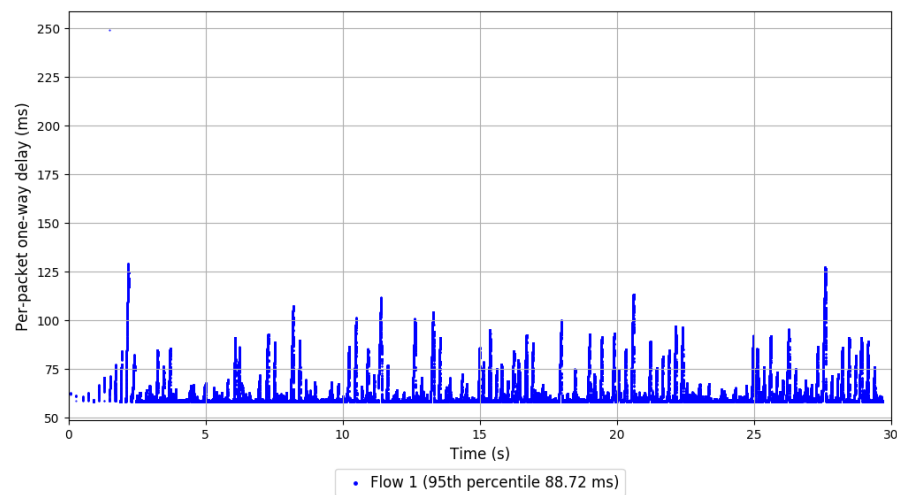
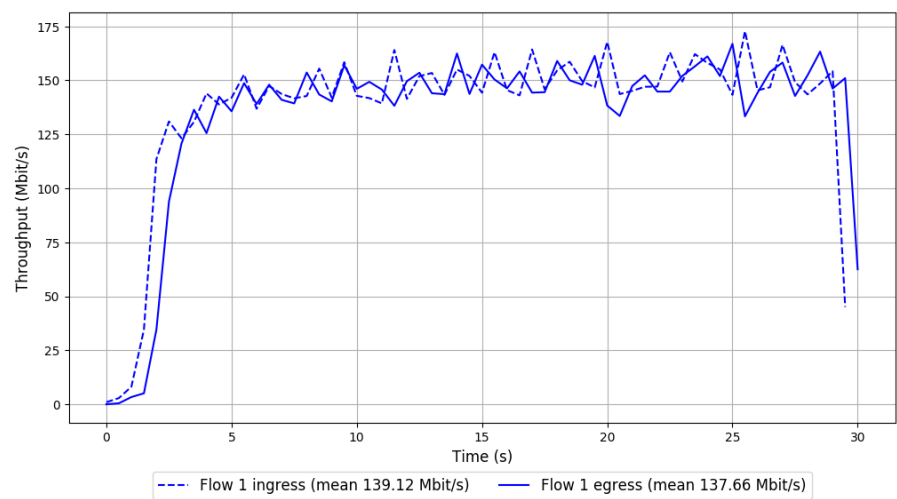


```
Run 1: Statistics of Indigo

Start at: 2018-09-06 04:46:58
End at: 2018-09-06 04:47:28
Local clock offset: -1.596 ms
Remote clock offset: -37.793 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 137.66 Mbit/s
95th percentile per-packet one-way delay: 88.725 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 137.66 Mbit/s
95th percentile per-packet one-way delay: 88.725 ms
Loss rate: 1.06%
```

Run 1: Report of Indigo — Data Link



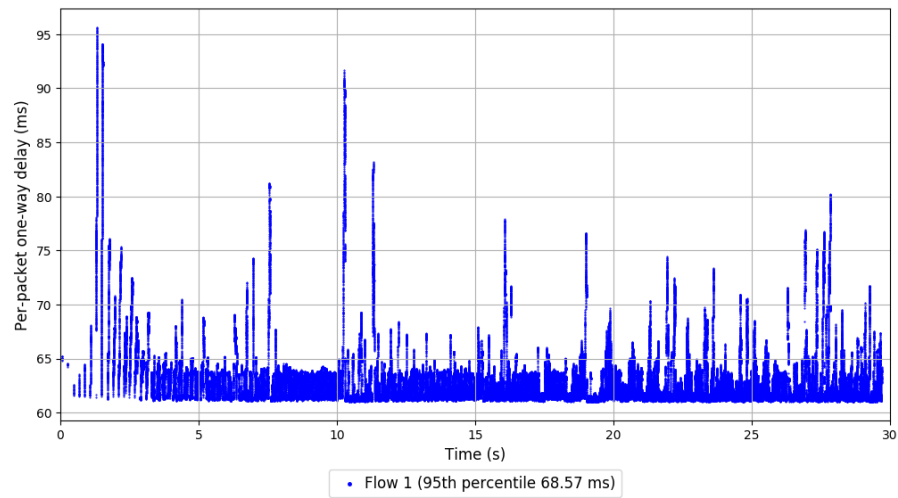
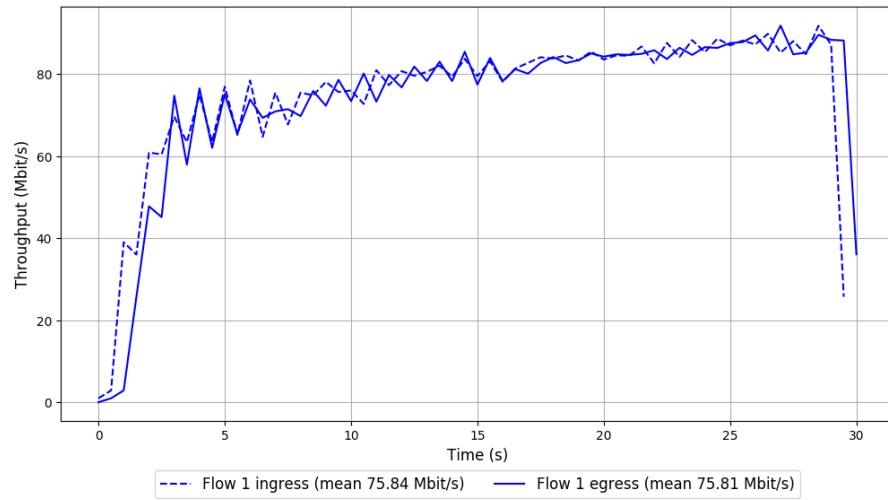
Run 2: Statistics of Indigo

Start at: 2018-09-06 05:10:07  
End at: 2018-09-06 05:10:37  
Local clock offset: -1.531 ms  
Remote clock offset: -36.923 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 75.81 Mbit/s  
95th percentile per-packet one-way delay: 68.572 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 75.81 Mbit/s  
95th percentile per-packet one-way delay: 68.572 ms  
Loss rate: 0.04%



## Run 2: Report of Indigo — Data Link

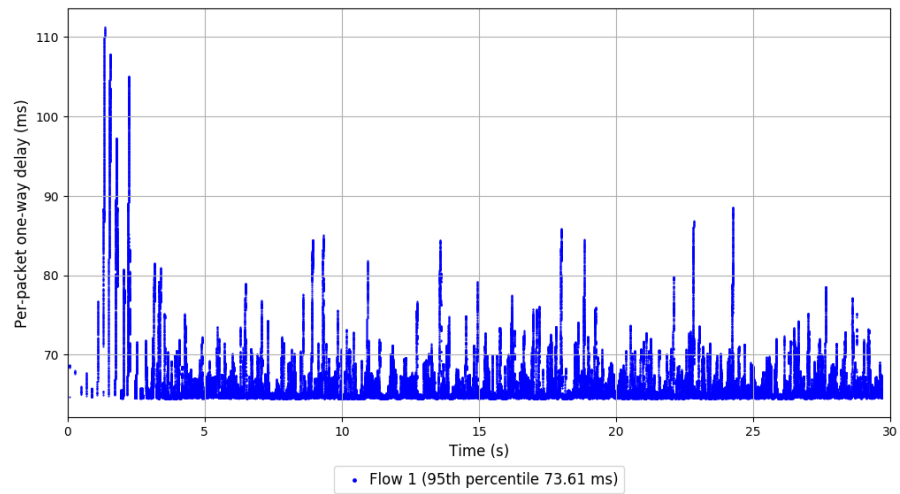
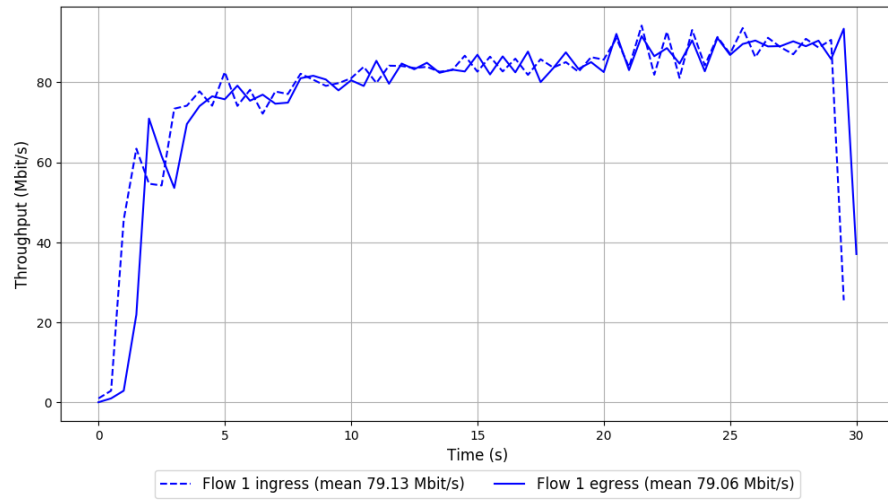


Run 3: Statistics of Indigo

Start at: 2018-09-06 05:33:14  
End at: 2018-09-06 05:33:44  
Local clock offset: -1.512 ms  
Remote clock offset: -36.139 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 79.06 Mbit/s  
95th percentile per-packet one-way delay: 73.613 ms  
Loss rate: 0.08%  
-- Flow 1:  
Average throughput: 79.06 Mbit/s  
95th percentile per-packet one-way delay: 73.613 ms  
Loss rate: 0.08%

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

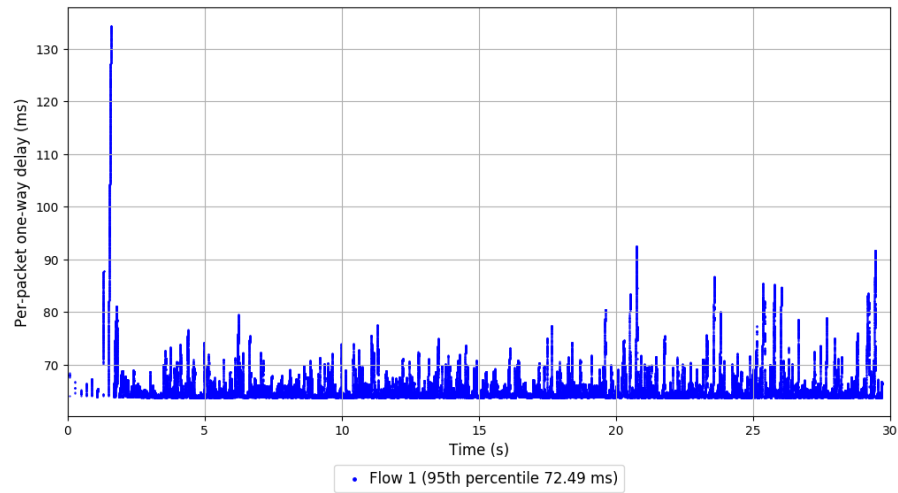
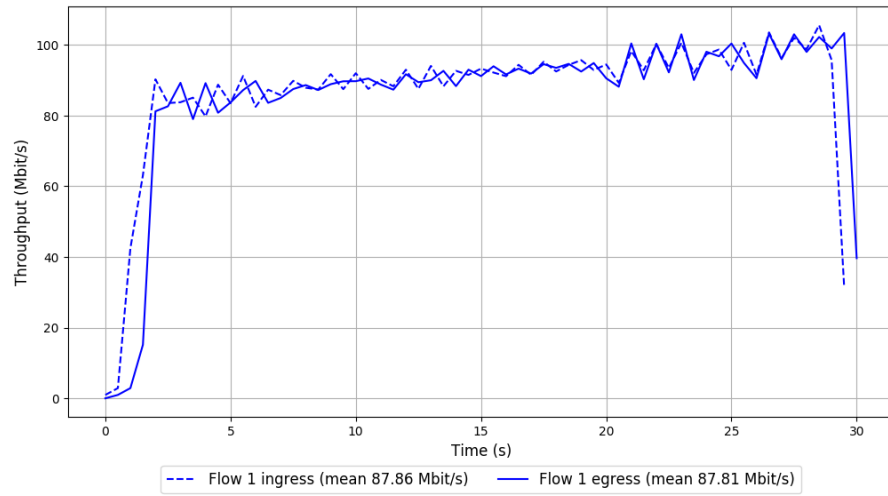


Run 4: Statistics of Indigo

Start at: 2018-09-06 05:56:27  
End at: 2018-09-06 05:56:57  
Local clock offset: 2.686 ms  
Remote clock offset: -32.169 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 87.81 Mbit/s  
95th percentile per-packet one-way delay: 72.486 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 87.81 Mbit/s  
95th percentile per-packet one-way delay: 72.486 ms  
Loss rate: 0.06%

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

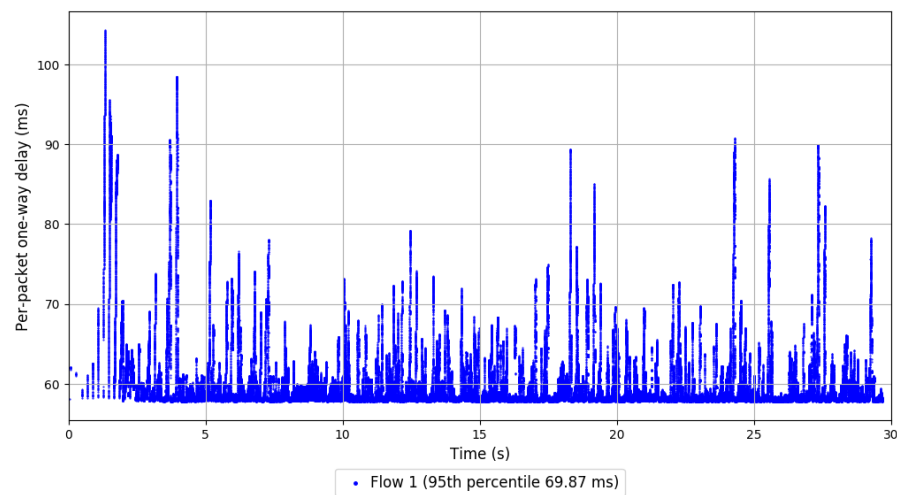
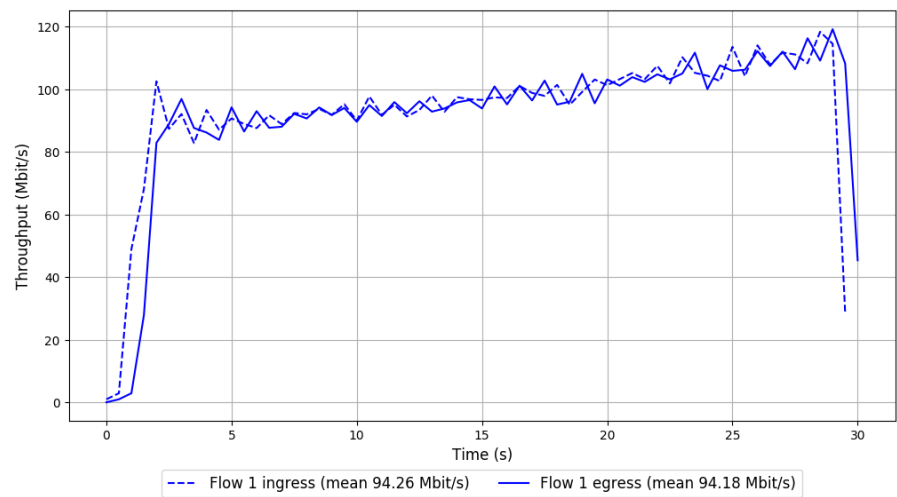


Run 5: Statistics of Indigo

Start at: 2018-09-06 06:25:13  
End at: 2018-09-06 06:25:43  
Local clock offset: 1.181 ms  
Remote clock offset: -36.795 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 94.18 Mbit/s  
95th percentile per-packet one-way delay: 69.872 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 94.18 Mbit/s  
95th percentile per-packet one-way delay: 69.872 ms  
Loss rate: 0.09%

Run 5: Report of Indigo — Data Link



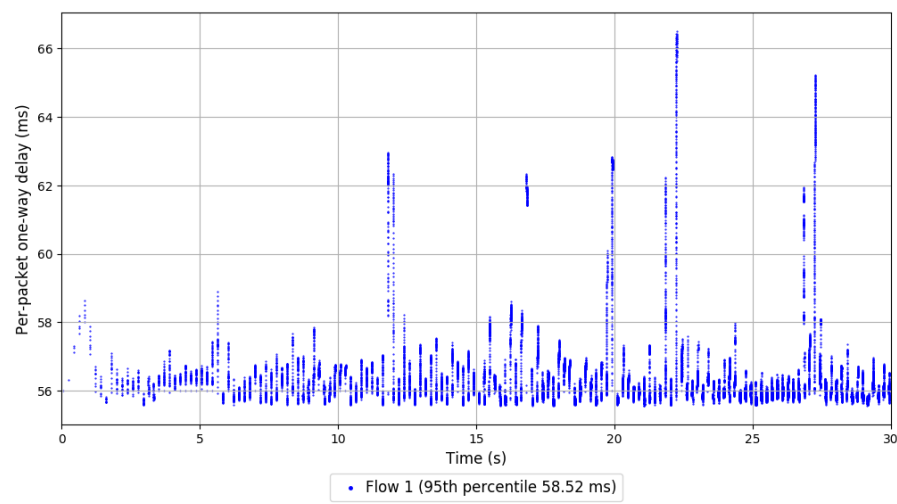
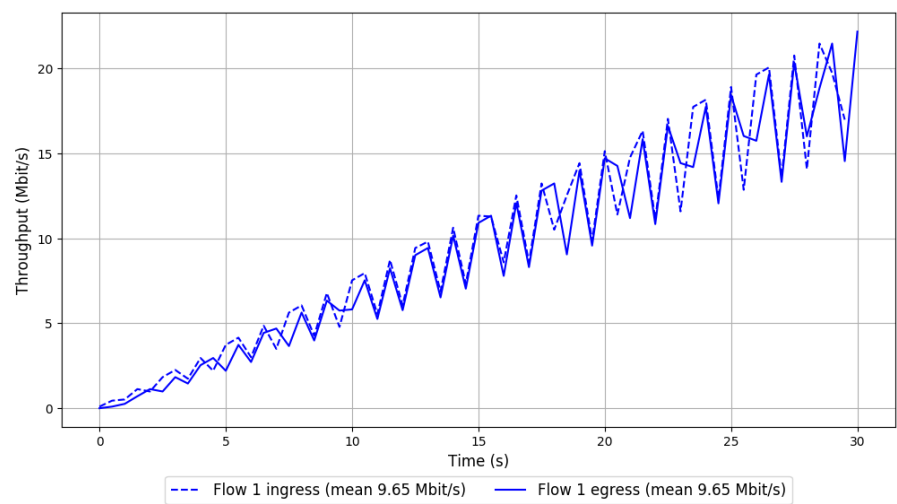
```
Run 1: Statistics of LEDBAT

Start at: 2018-09-06 04:55:58
End at: 2018-09-06 04:56:28
Local clock offset: 1.056 ms
Remote clock offset: -38.005 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 58.522 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 58.522 ms
Loss rate: 0.00%
```



Run 1: Report of LEDBAT — Data Link

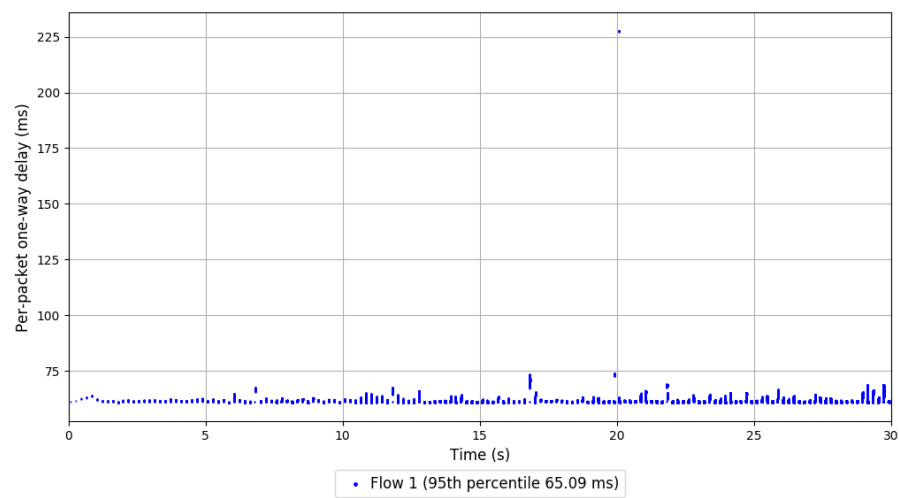
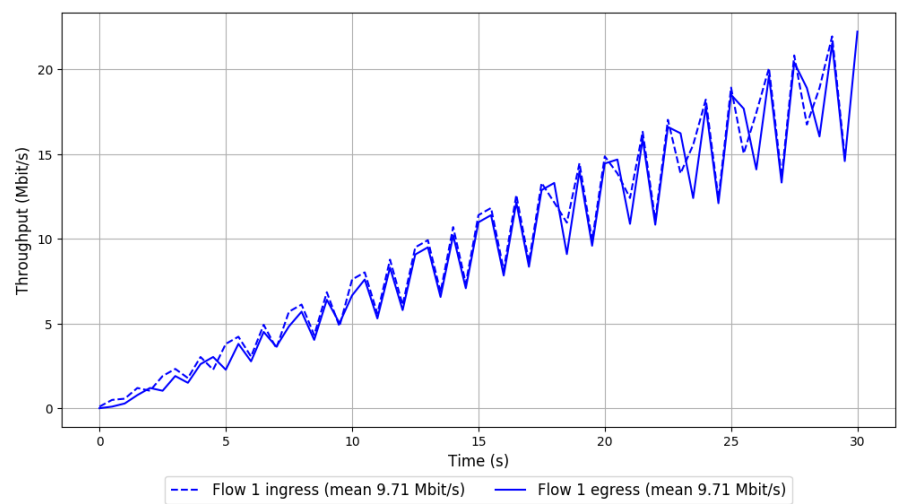


Run 2: Statistics of LEDBAT

Start at: 2018-09-06 05:19:01  
End at: 2018-09-06 05:19:31  
Local clock offset: -1.555 ms  
Remote clock offset: -35.77 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 9.71 Mbit/s  
95th percentile per-packet one-way delay: 65.093 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 9.71 Mbit/s  
95th percentile per-packet one-way delay: 65.093 ms  
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

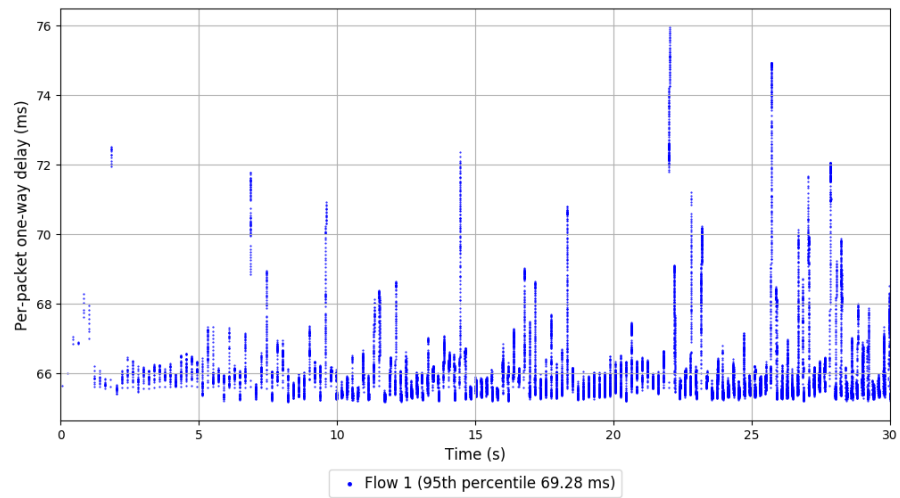
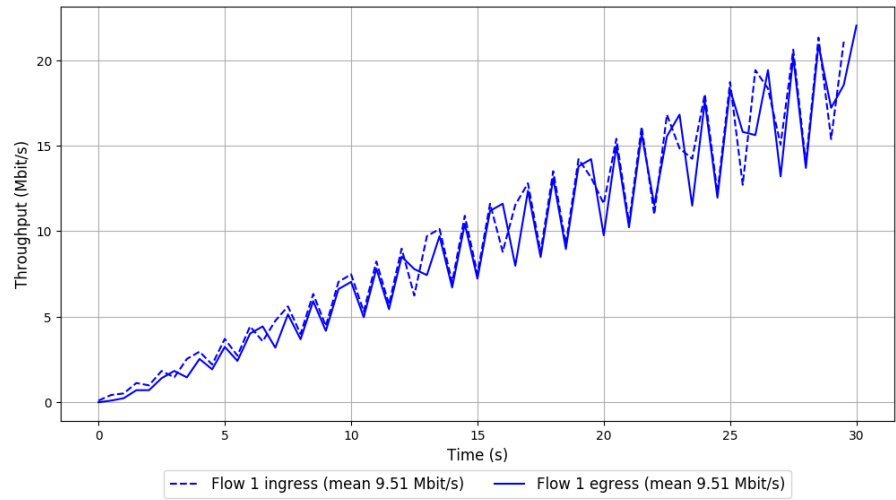


Run 3: Statistics of LEDBAT

Start at: 2018-09-06 05:42:14  
End at: 2018-09-06 05:42:44  
Local clock offset: 1.124 ms  
Remote clock offset: -30.59 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 9.51 Mbit/s  
95th percentile per-packet one-way delay: 69.280 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 9.51 Mbit/s  
95th percentile per-packet one-way delay: 69.280 ms  
Loss rate: 0.00%

### Run 3: Report of LEDBAT — Data Link

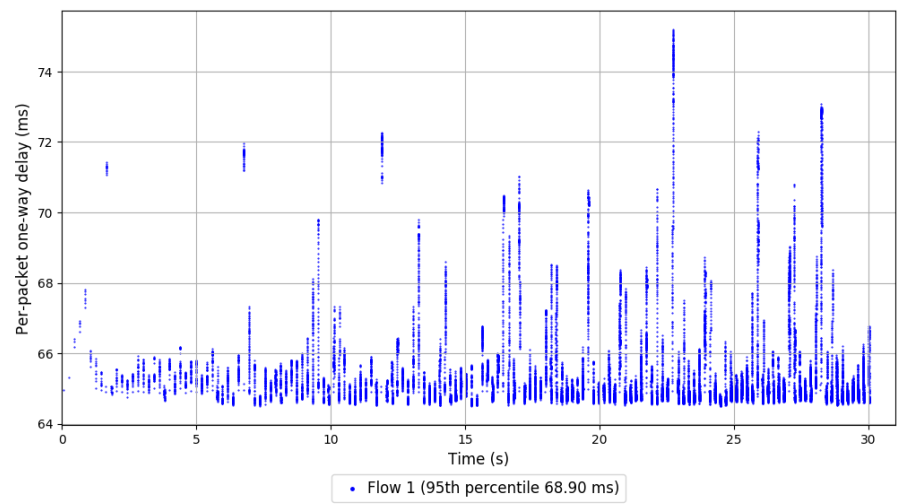
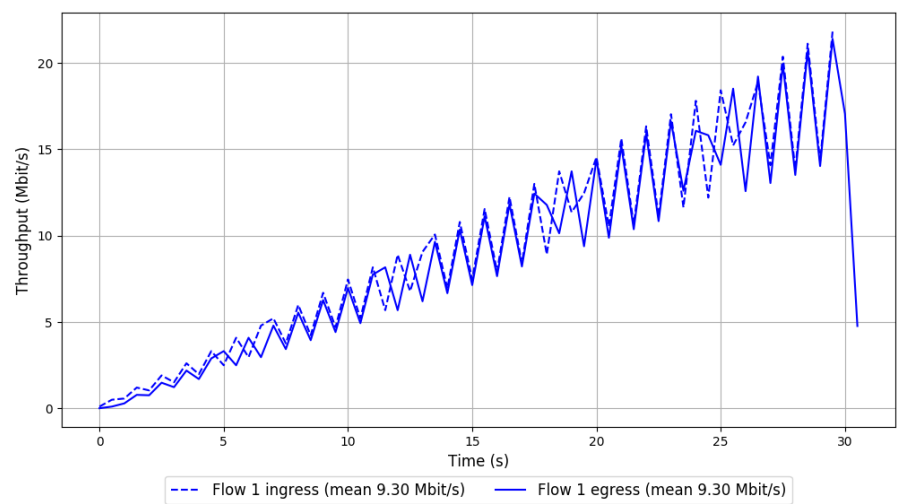


Run 4: Statistics of LEDBAT

Start at: 2018-09-06 06:10:53  
End at: 2018-09-06 06:11:24  
Local clock offset: -0.367 ms  
Remote clock offset: -34.347 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 9.30 Mbit/s  
95th percentile per-packet one-way delay: 68.904 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 9.30 Mbit/s  
95th percentile per-packet one-way delay: 68.904 ms  
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



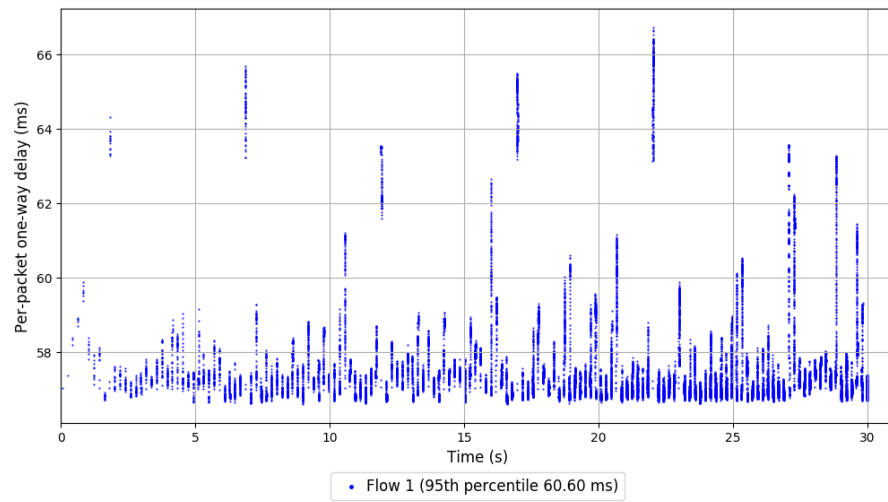
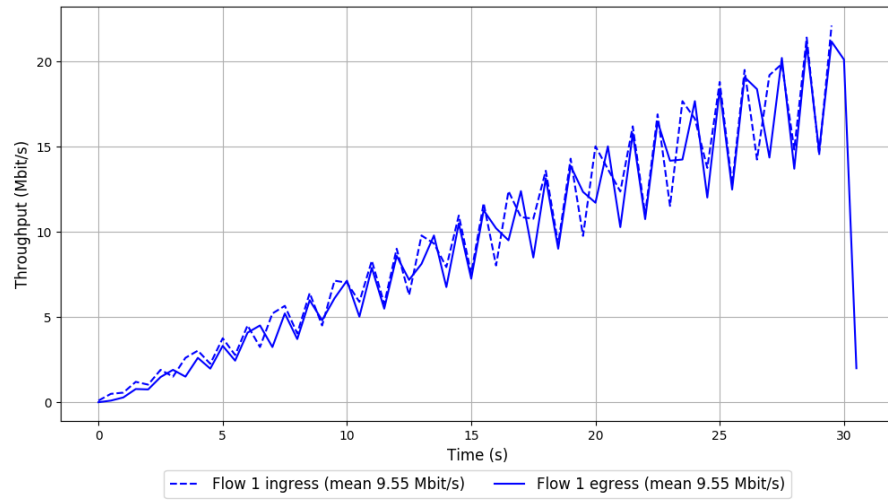
Run 5: Statistics of LEDBAT

Start at: 2018-09-06 06:34:14  
End at: 2018-09-06 06:34:44  
Local clock offset: 0.044 ms  
Remote clock offset: -38.484 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 9.55 Mbit/s  
95th percentile per-packet one-way delay: 60.597 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 9.55 Mbit/s  
95th percentile per-packet one-way delay: 60.597 ms  
Loss rate: 0.00%



### Run 5: Report of LEDBAT — Data Link

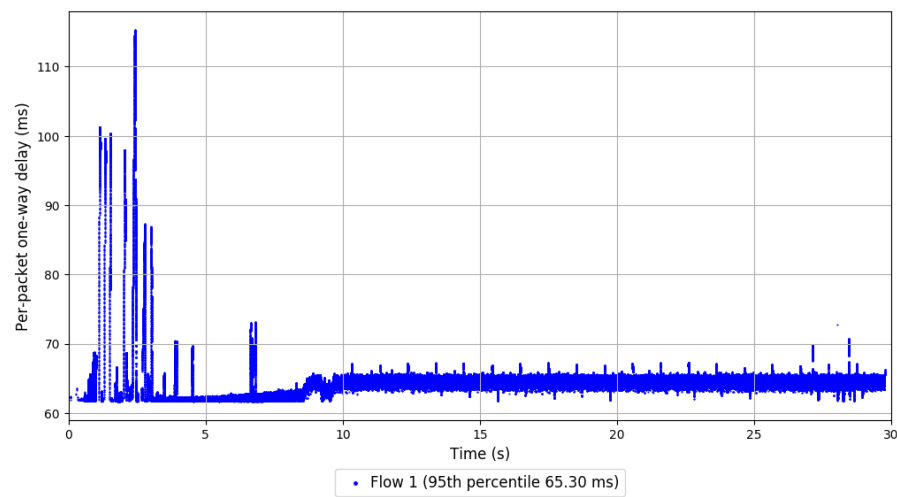
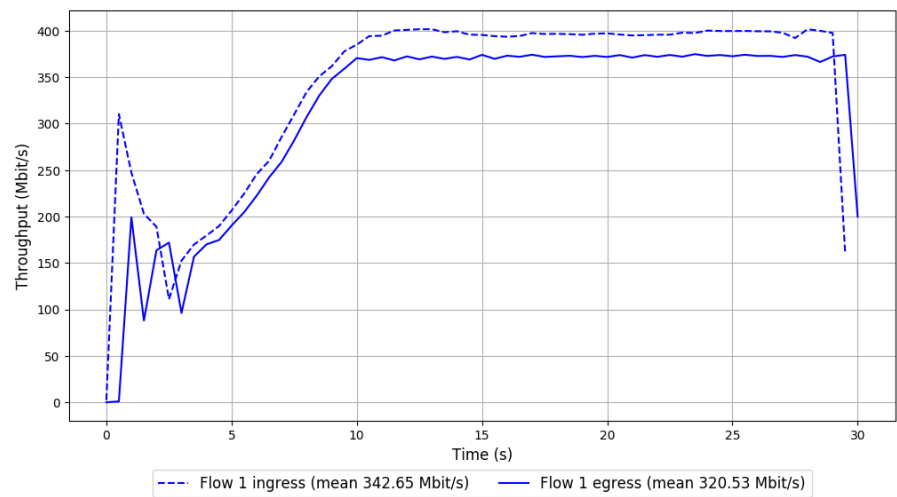


```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-06 04:49:27
End at: 2018-09-06 04:49:57
Local clock offset: 0.484 ms
Remote clock offset: -32.818 ms

# Below is generated by plot.py at 2018-09-06 06:59:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 320.53 Mbit/s
95th percentile per-packet one-way delay: 65.303 ms
Loss rate: 6.44%
-- Flow 1:
Average throughput: 320.53 Mbit/s
95th percentile per-packet one-way delay: 65.303 ms
Loss rate: 6.44%
```

Run 1: Report of Indigo-Muses — Data Link

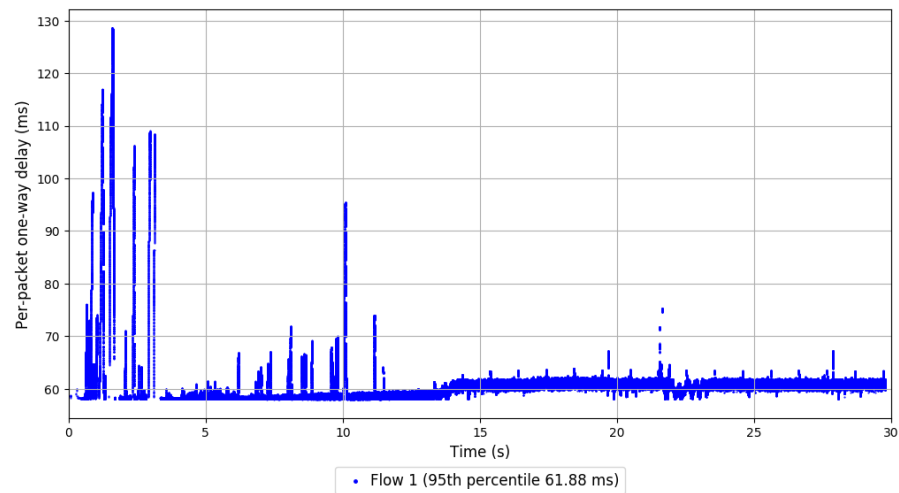
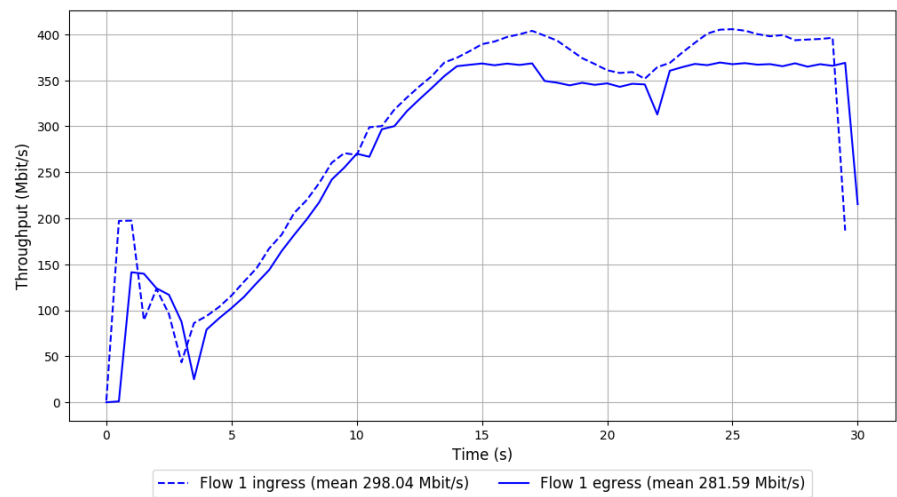


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-06 05:12:32  
End at: 2018-09-06 05:13:02  
Local clock offset: -0.621 ms  
Remote clock offset: -37.096 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 281.59 Mbit/s  
95th percentile per-packet one-way delay: 61.880 ms  
Loss rate: 5.51%  
-- Flow 1:  
Average throughput: 281.59 Mbit/s  
95th percentile per-packet one-way delay: 61.880 ms  
Loss rate: 5.51%

Run 2: Report of Indigo-Muses — Data Link

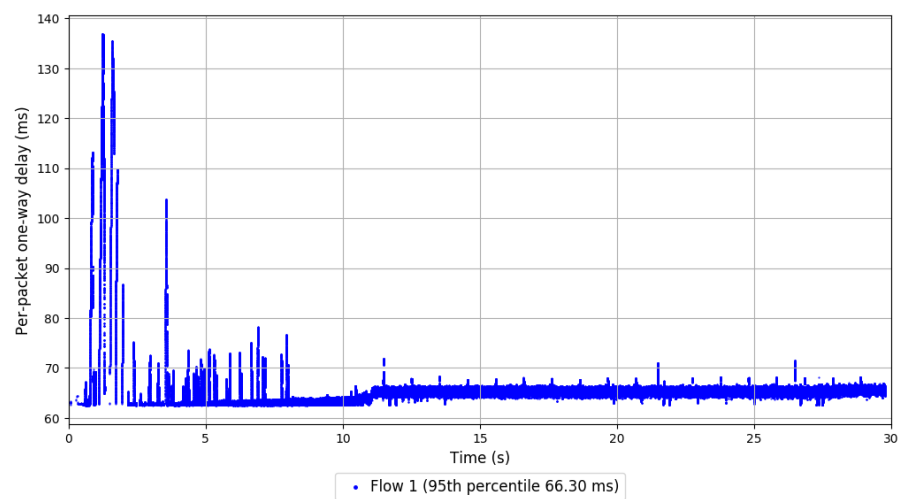
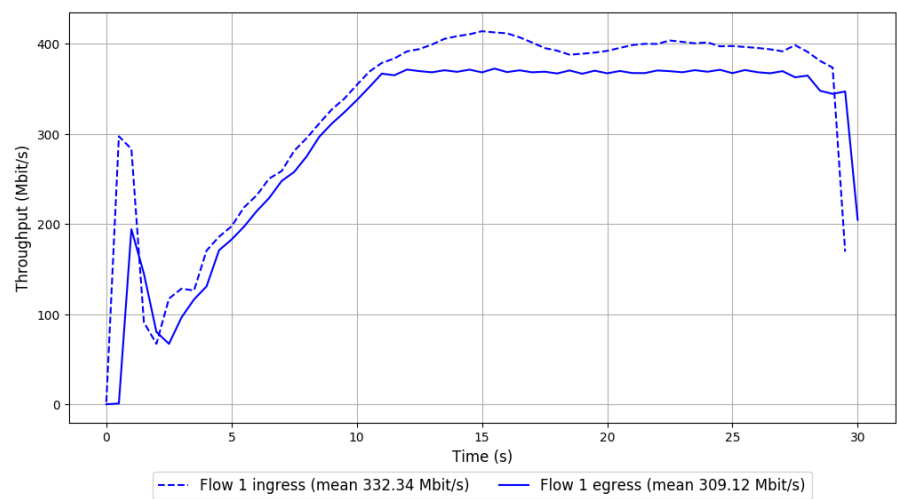


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-06 05:35:38  
End at: 2018-09-06 05:36:08  
Local clock offset: 1.505 ms  
Remote clock offset: -32.617 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 309.12 Mbit/s  
95th percentile per-packet one-way delay: 66.302 ms  
Loss rate: 6.98%  
-- Flow 1:  
Average throughput: 309.12 Mbit/s  
95th percentile per-packet one-way delay: 66.302 ms  
Loss rate: 6.98%

Run 3: Report of Indigo-Muses — Data Link



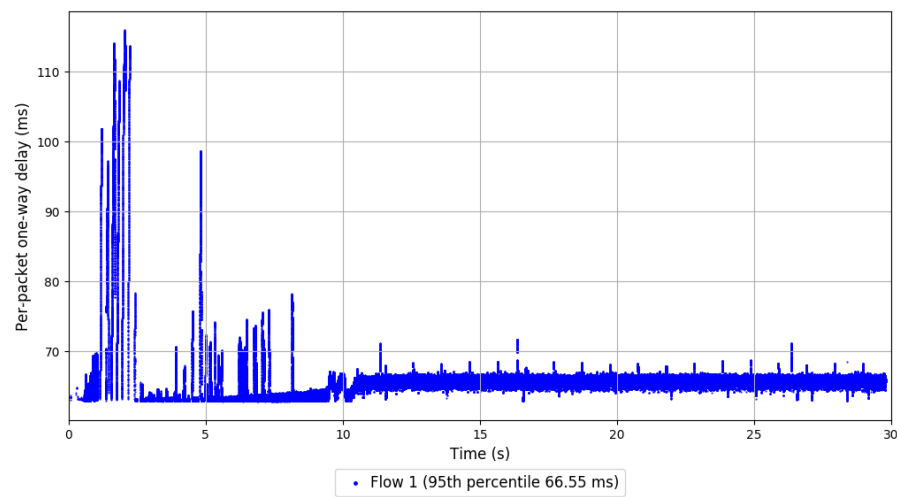
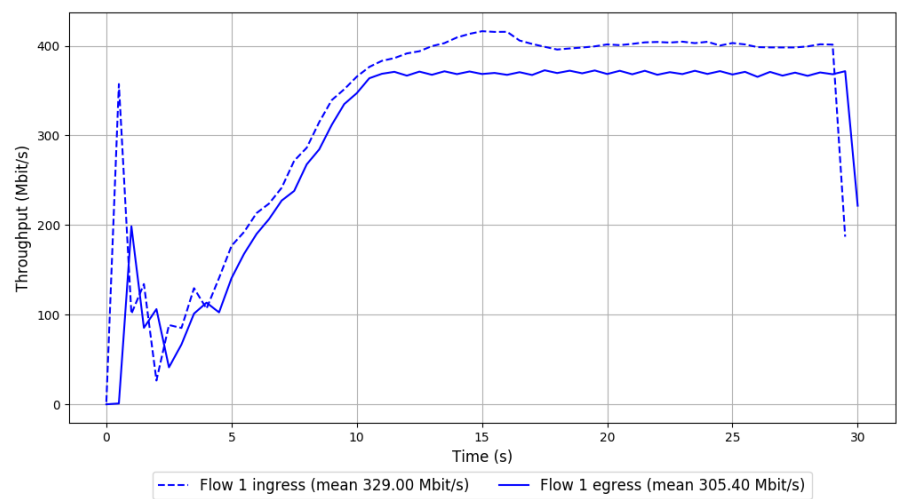
Run 4: Statistics of Indigo-Muses

Start at: 2018-09-06 05:58:53  
End at: 2018-09-06 05:59:23  
Local clock offset: -2.233 ms  
Remote clock offset: -35.372 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 305.40 Mbit/s  
95th percentile per-packet one-way delay: 66.546 ms  
Loss rate: 7.17%  
-- Flow 1:  
Average throughput: 305.40 Mbit/s  
95th percentile per-packet one-way delay: 66.546 ms  
Loss rate: 7.17%



Run 4: Report of Indigo-Muses — Data Link

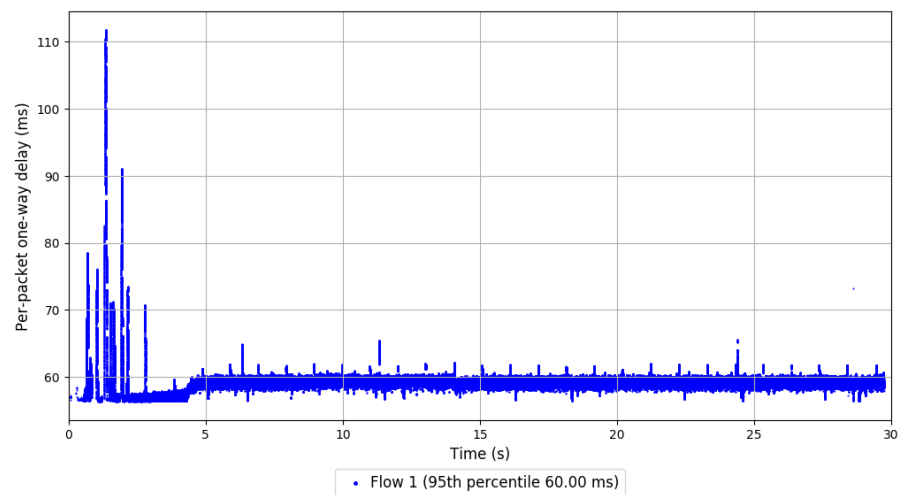
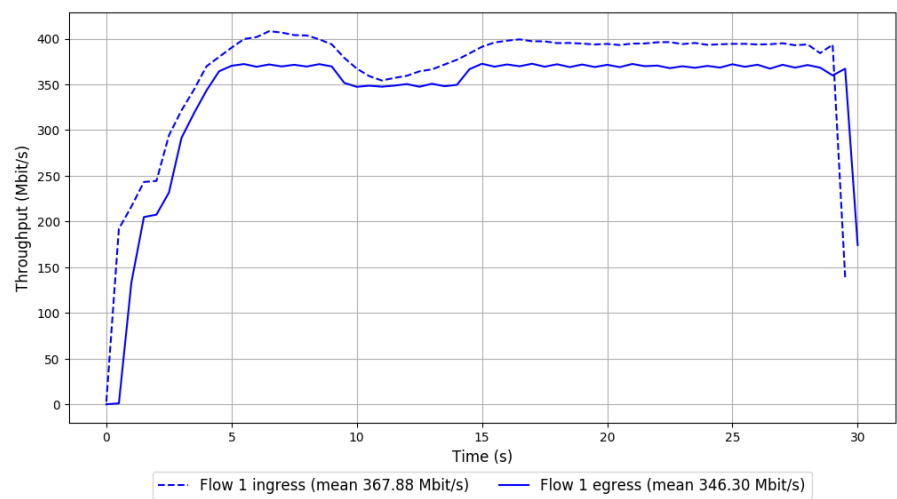


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-06 06:27:39  
End at: 2018-09-06 06:28:09  
Local clock offset: -1.037 ms  
Remote clock offset: -39.788 ms

# Below is generated by plot.py at 2018-09-06 06:59:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 346.30 Mbit/s  
95th percentile per-packet one-way delay: 59.996 ms  
Loss rate: 5.86%  
-- Flow 1:  
Average throughput: 346.30 Mbit/s  
95th percentile per-packet one-way delay: 59.996 ms  
Loss rate: 5.86%

Run 5: Report of Indigo-Muses — Data Link

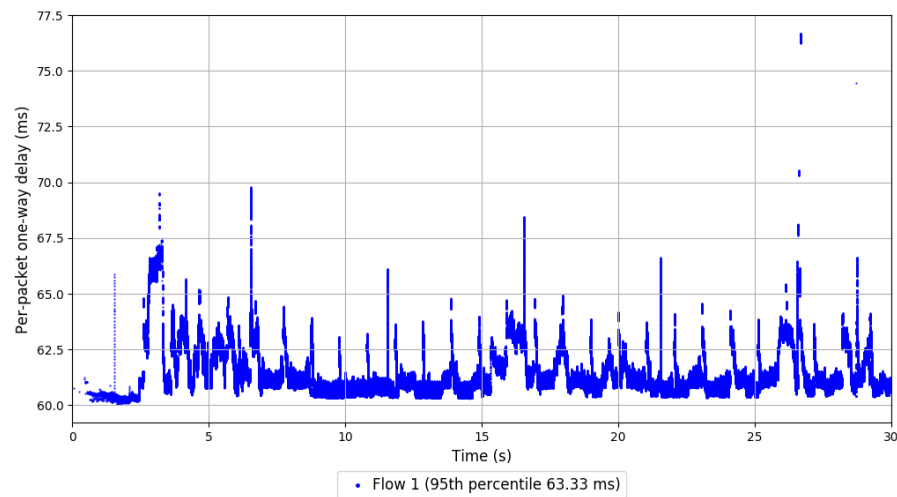
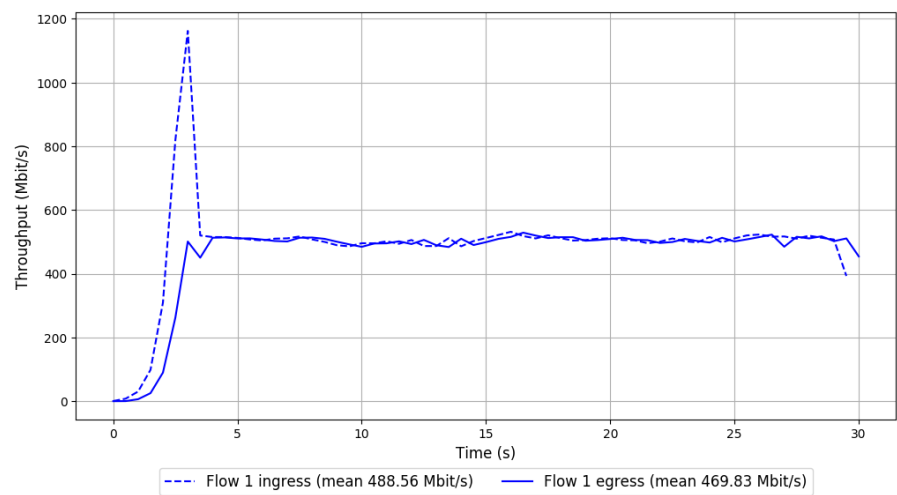


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-06 05:02:28
End at: 2018-09-06 05:02:58
Local clock offset: -2.008 ms
Remote clock offset: -36.342 ms

# Below is generated by plot.py at 2018-09-06 07:00:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 469.83 Mbit/s
95th percentile per-packet one-way delay: 63.325 ms
Loss rate: 3.83%
-- Flow 1:
Average throughput: 469.83 Mbit/s
95th percentile per-packet one-way delay: 63.325 ms
Loss rate: 3.83%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-09-06 05:25:38

End at: 2018-09-06 05:26:08

Local clock offset: 2.885 ms

Remote clock offset: -34.602 ms

# Below is generated by plot.py at 2018-09-06 07:02:03

# Datalink statistics

-- Total of 1 flow:

Average throughput: 336.39 Mbit/s

95th percentile per-packet one-way delay: 62.189 ms

Loss rate: 5.78%

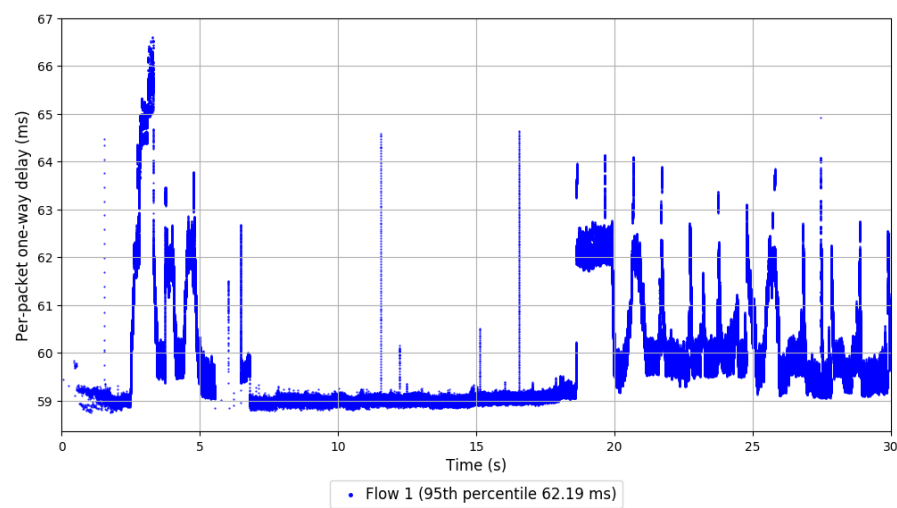
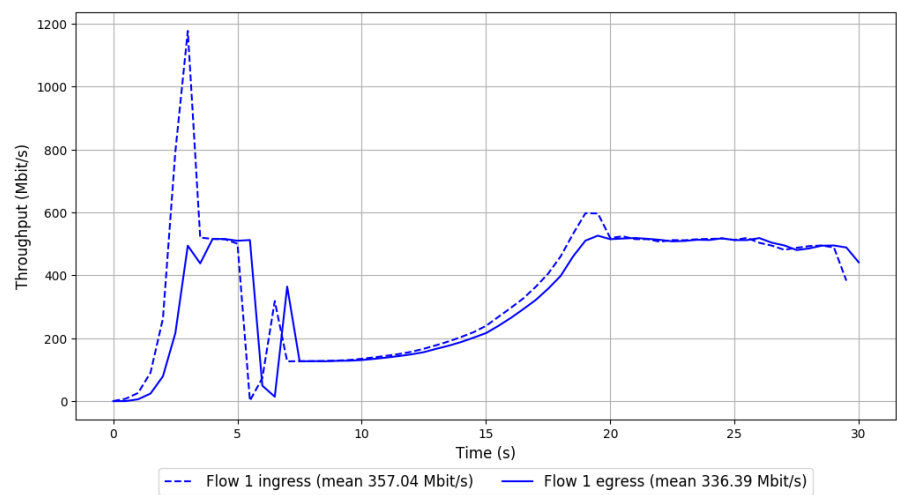
-- Flow 1:

Average throughput: 336.39 Mbit/s

95th percentile per-packet one-way delay: 62.189 ms

Loss rate: 5.78%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-09-06 05:48:47

End at: 2018-09-06 05:49:17

Local clock offset: 0.229 ms

Remote clock offset: -34.473 ms

# Below is generated by plot.py at 2018-09-06 07:04:07

# Datalink statistics

-- Total of 1 flow:

Average throughput: 458.07 Mbit/s

95th percentile per-packet one-way delay: 64.981 ms

Loss rate: 3.78%

-- Flow 1:

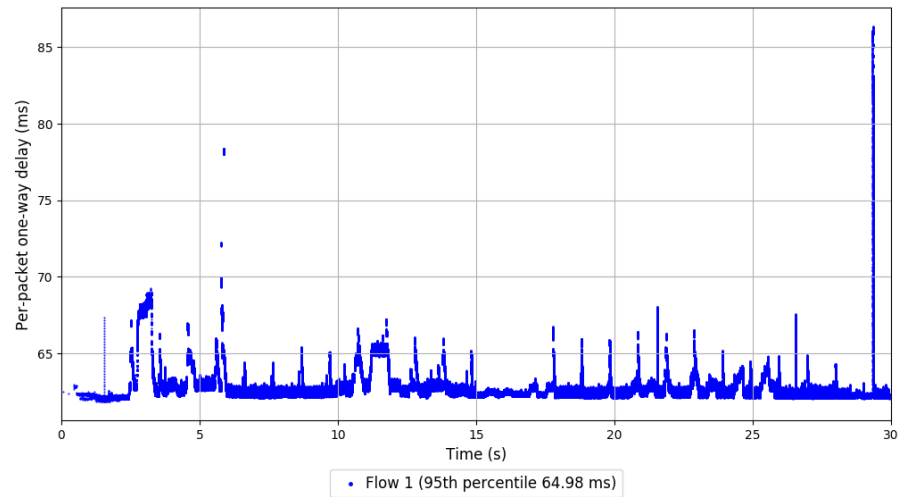
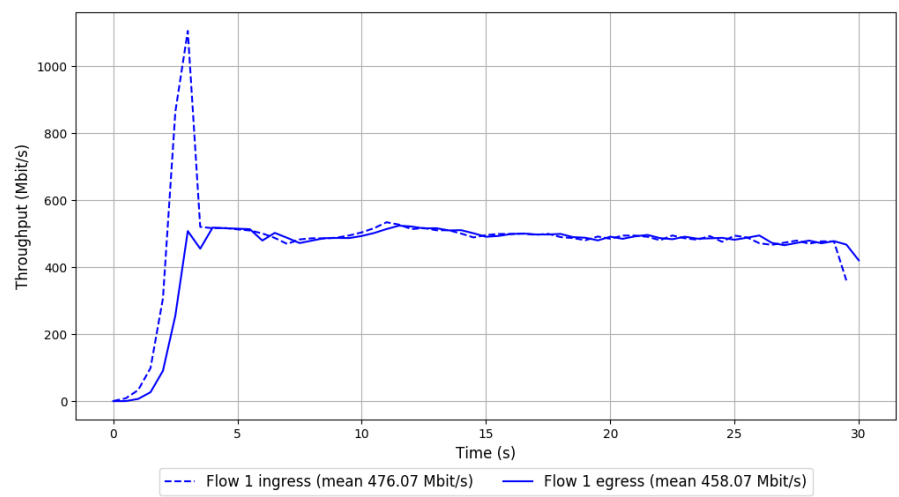
Average throughput: 458.07 Mbit/s

95th percentile per-packet one-way delay: 64.981 ms

Loss rate: 3.78%



Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2018-09-06 06:17:35

End at: 2018-09-06 06:18:05

Local clock offset: -0.706 ms

Remote clock offset: -31.309 ms

# Below is generated by plot.py at 2018-09-06 07:04:16

# Datalink statistics

-- Total of 1 flow:

Average throughput: 466.12 Mbit/s

95th percentile per-packet one-way delay: 68.239 ms

Loss rate: 3.54%

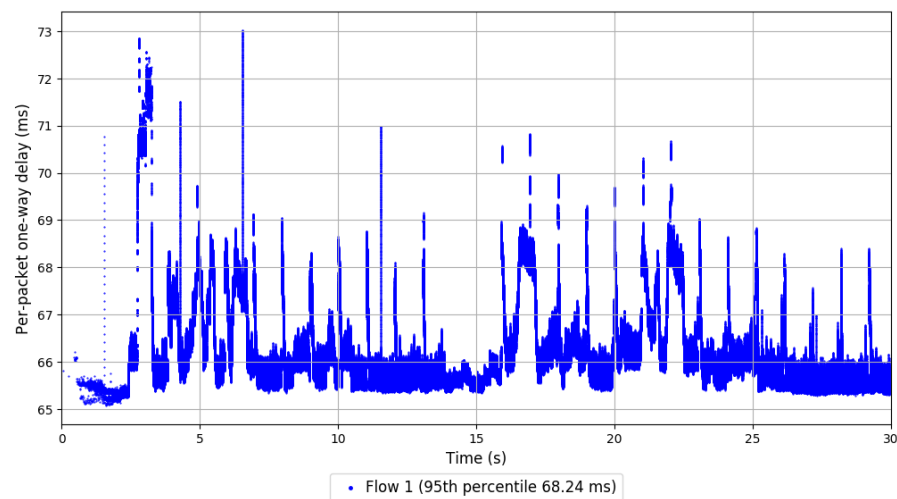
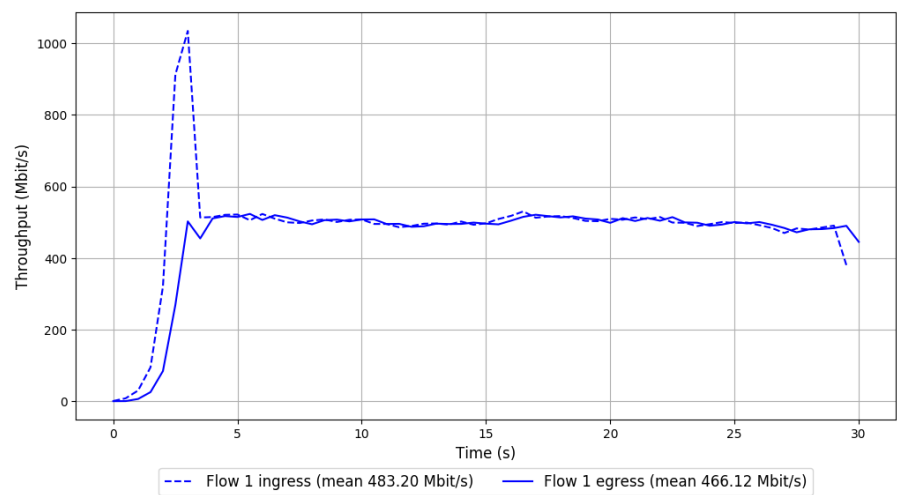
-- Flow 1:

Average throughput: 466.12 Mbit/s

95th percentile per-packet one-way delay: 68.239 ms

Loss rate: 3.54%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2018-09-06 06:40:47

End at: 2018-09-06 06:41:17

Local clock offset: -0.27 ms

Remote clock offset: -37.465 ms

# Below is generated by plot.py at 2018-09-06 07:04:24

# Datalink statistics

-- Total of 1 flow:

Average throughput: 465.51 Mbit/s

95th percentile per-packet one-way delay: 63.464 ms

Loss rate: 3.81%

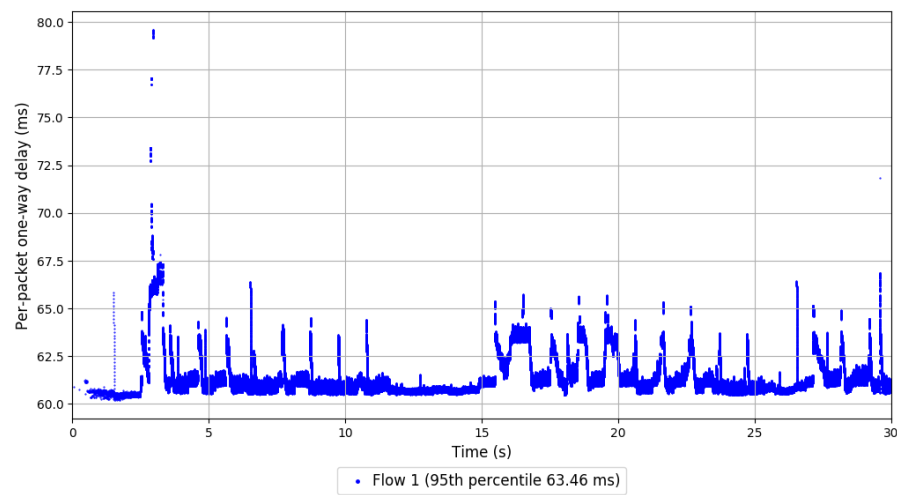
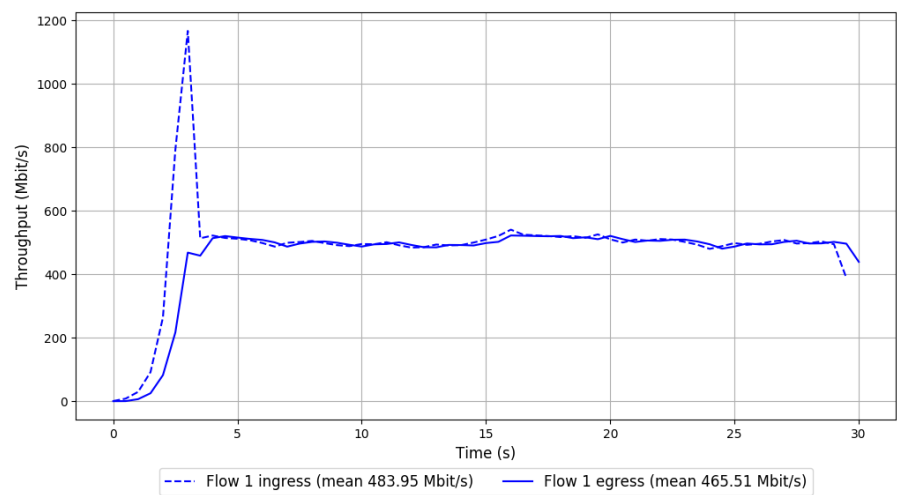
-- Flow 1:

Average throughput: 465.51 Mbit/s

95th percentile per-packet one-way delay: 63.464 ms

Loss rate: 3.81%

Run 5: Report of PCC-Allegro — Data Link

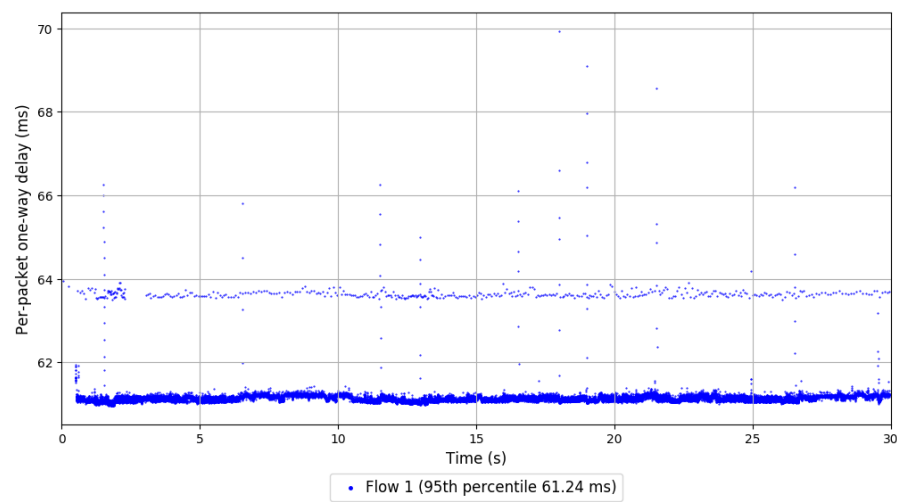
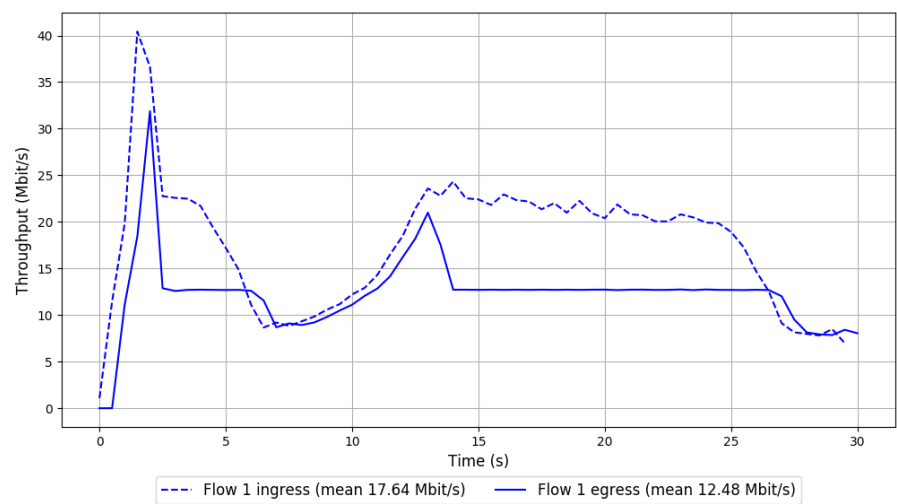


Run 1: Statistics of PCC-Expr

Start at: 2018-09-06 04:52:06  
End at: 2018-09-06 04:52:36  
Local clock offset: -0.938 ms  
Remote clock offset: -34.834 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.48 Mbit/s  
95th percentile per-packet one-way delay: 61.241 ms  
Loss rate: 29.22%  
-- Flow 1:  
Average throughput: 12.48 Mbit/s  
95th percentile per-packet one-way delay: 61.241 ms  
Loss rate: 29.22%

Run 1: Report of PCC-Expr — Data Link



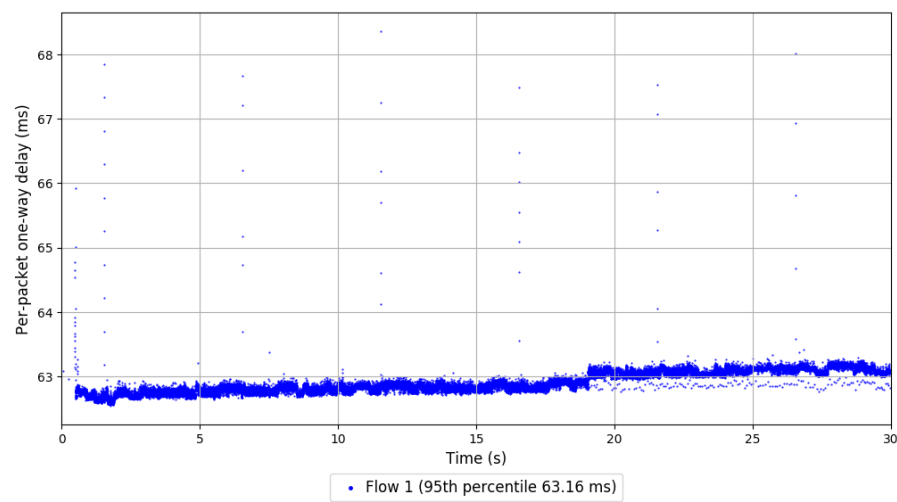
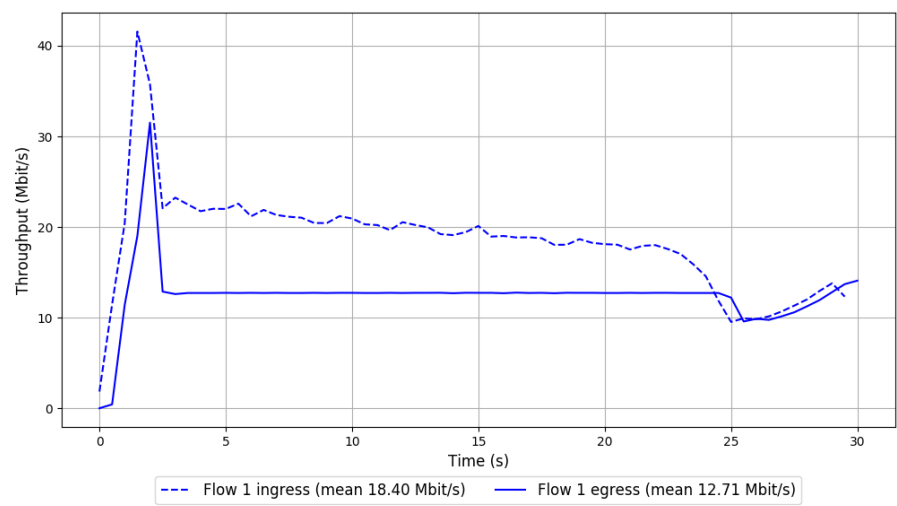
Run 2: Statistics of PCC-Expr

Start at: 2018-09-06 05:15:10  
End at: 2018-09-06 05:15:40  
Local clock offset: -1.808 ms  
Remote clock offset: -33.337 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.71 Mbit/s  
95th percentile per-packet one-way delay: 63.157 ms  
Loss rate: 30.94%  
-- Flow 1:  
Average throughput: 12.71 Mbit/s  
95th percentile per-packet one-way delay: 63.157 ms  
Loss rate: 30.94%



Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2018-09-06 05:38:22

End at: 2018-09-06 05:38:52

Local clock offset: 1.36 ms

Remote clock offset: -36.88 ms

# Below is generated by plot.py at 2018-09-06 07:04:24

# Datalink statistics

-- Total of 1 flow:

Average throughput: 12.93 Mbit/s

95th percentile per-packet one-way delay: 59.203 ms

Loss rate: 26.19%

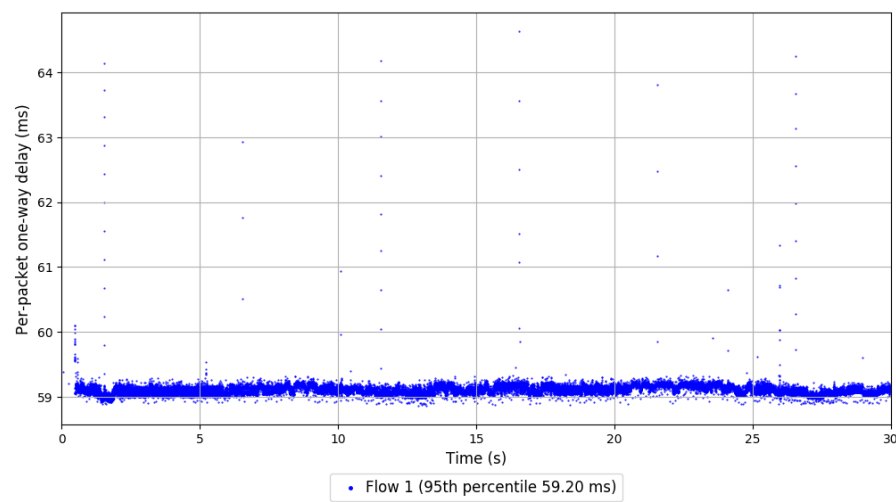
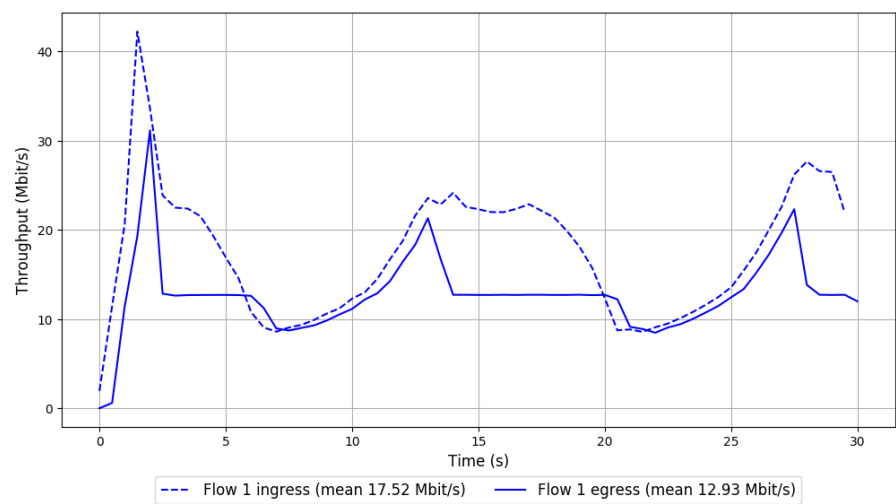
-- Flow 1:

Average throughput: 12.93 Mbit/s

95th percentile per-packet one-way delay: 59.203 ms

Loss rate: 26.19%

Run 3: Report of PCC-Expr — Data Link

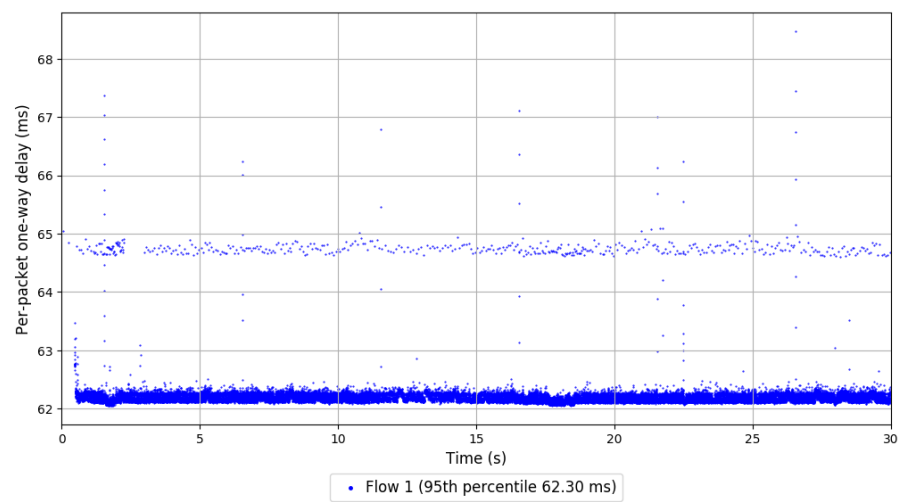
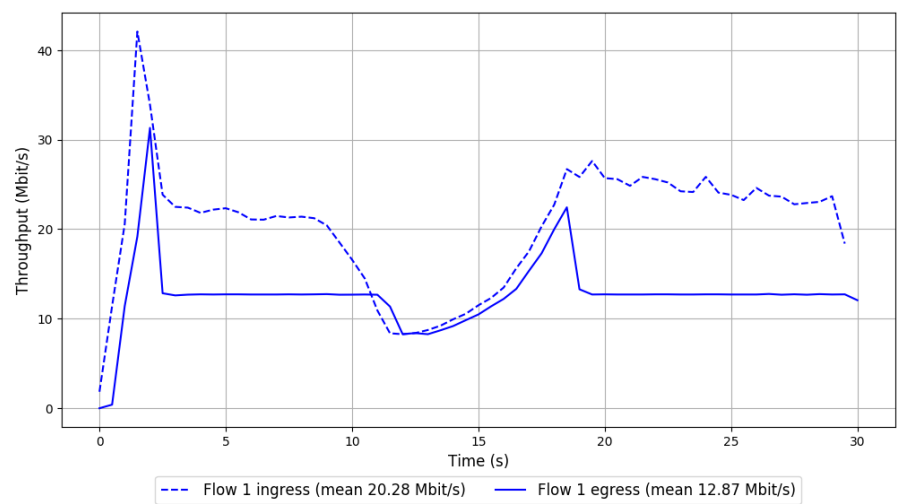


Run 4: Statistics of PCC-Expr

Start at: 2018-09-06 06:01:31  
End at: 2018-09-06 06:02:01  
Local clock offset: -0.07 ms  
Remote clock offset: -34.149 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.87 Mbit/s  
95th percentile per-packet one-way delay: 62.301 ms  
Loss rate: 36.55%  
-- Flow 1:  
Average throughput: 12.87 Mbit/s  
95th percentile per-packet one-way delay: 62.301 ms  
Loss rate: 36.55%

Run 4: Report of PCC-Expr — Data Link

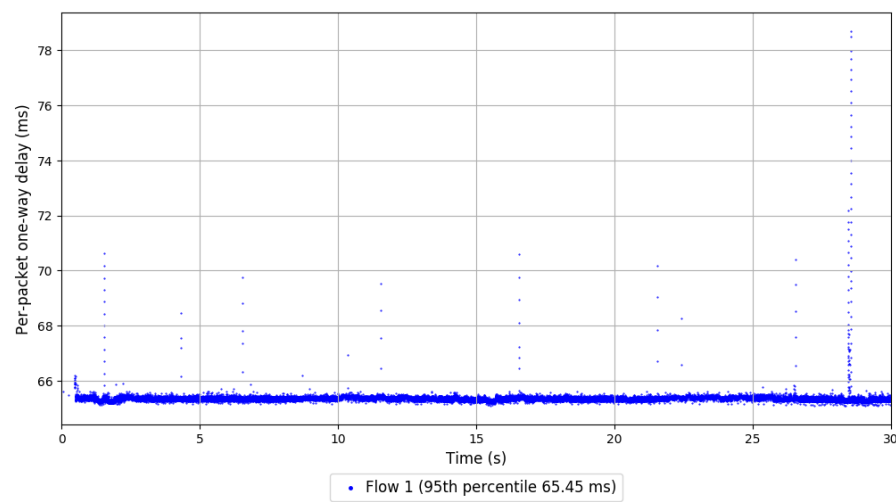
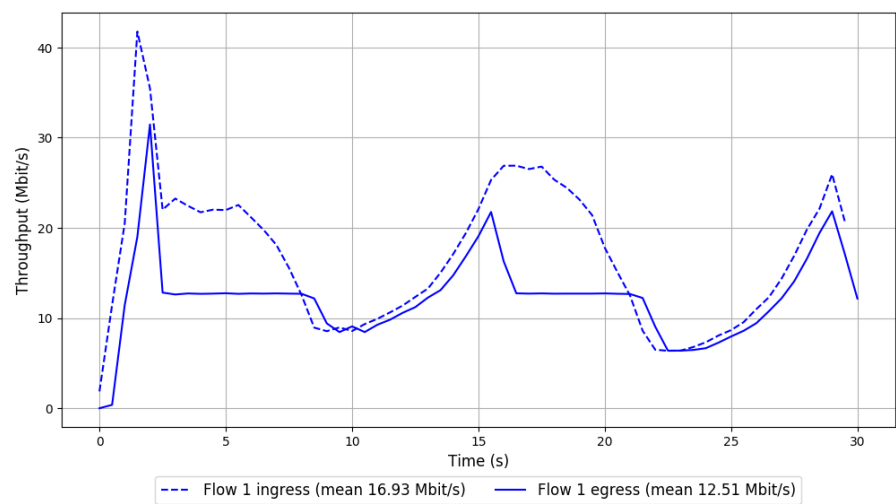


Run 5: Statistics of PCC-Expr

Start at: 2018-09-06 06:30:22  
End at: 2018-09-06 06:30:52  
Local clock offset: -2.804 ms  
Remote clock offset: -33.022 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.51 Mbit/s  
95th percentile per-packet one-way delay: 65.452 ms  
Loss rate: 26.08%  
-- Flow 1:  
Average throughput: 12.51 Mbit/s  
95th percentile per-packet one-way delay: 65.452 ms  
Loss rate: 26.08%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-09-06 05:01:18

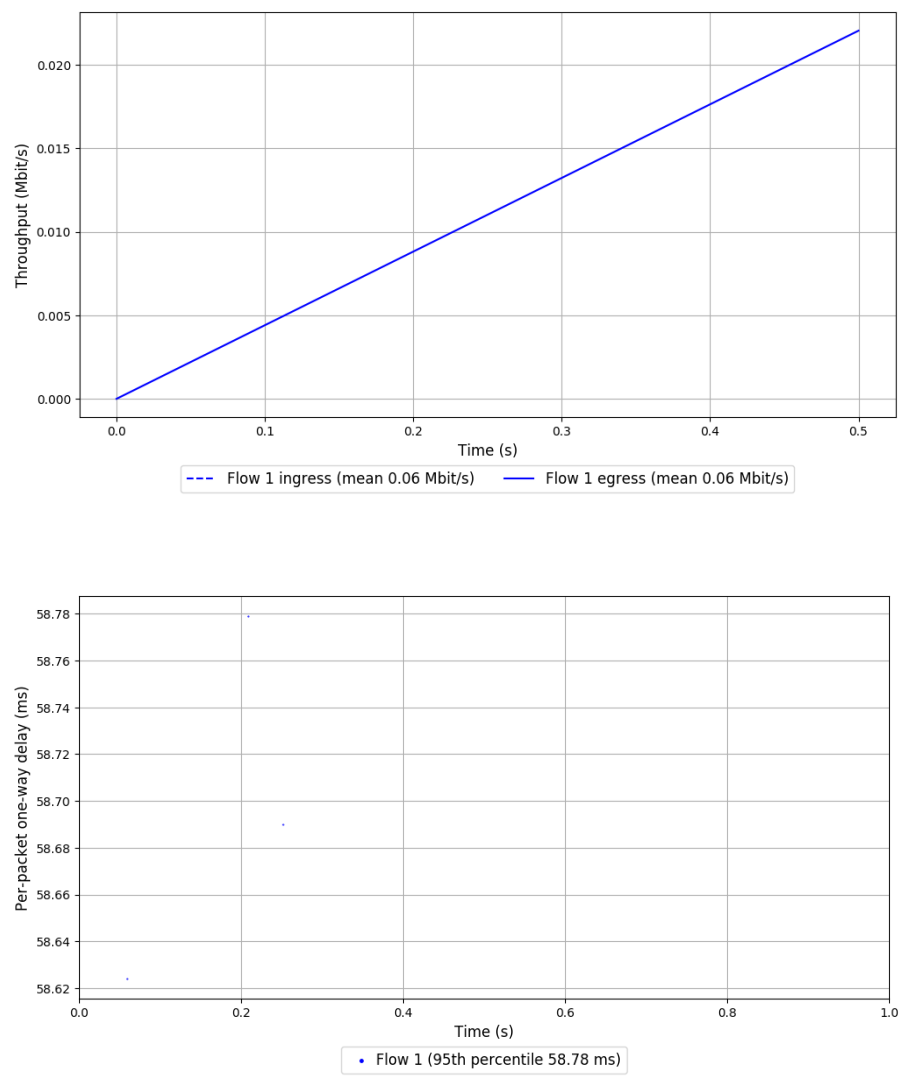
End at: 2018-09-06 05:01:48

Local clock offset: -1.572 ms

Remote clock offset: -37.95 ms



Run 1: Report of QUIC Cubic — Data Link

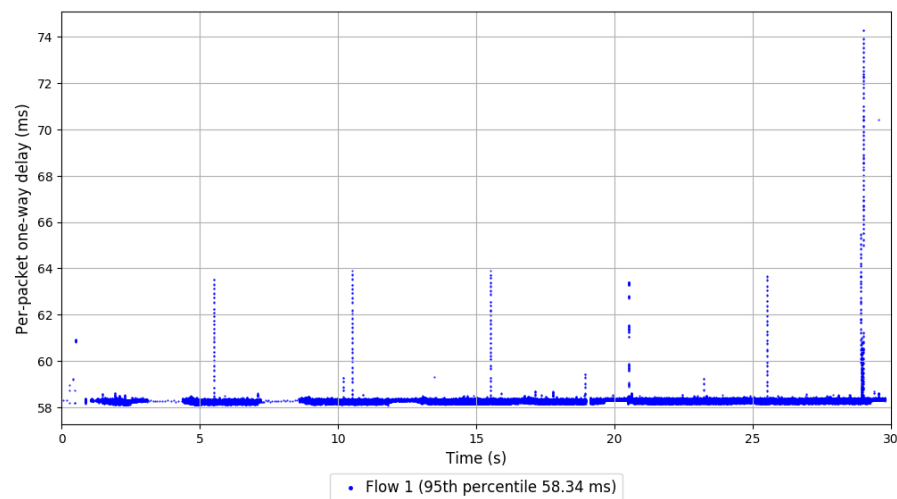
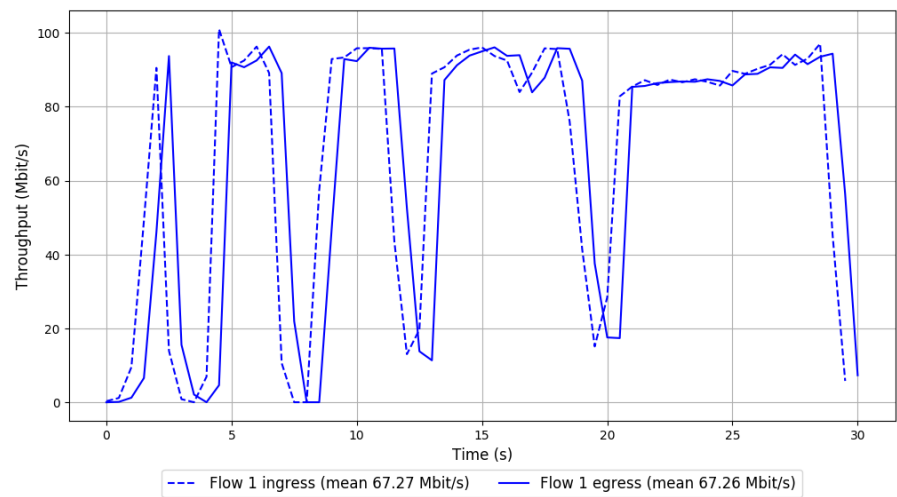


Run 2: Statistics of QUIC Cubic

Start at: 2018-09-06 05:24:24  
End at: 2018-09-06 05:24:54  
Local clock offset: 3.138 ms  
Remote clock offset: -37.414 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 67.26 Mbit/s  
95th percentile per-packet one-way delay: 58.345 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 67.26 Mbit/s  
95th percentile per-packet one-way delay: 58.345 ms  
Loss rate: 0.02%

Run 2: Report of QUIC Cubic — Data Link

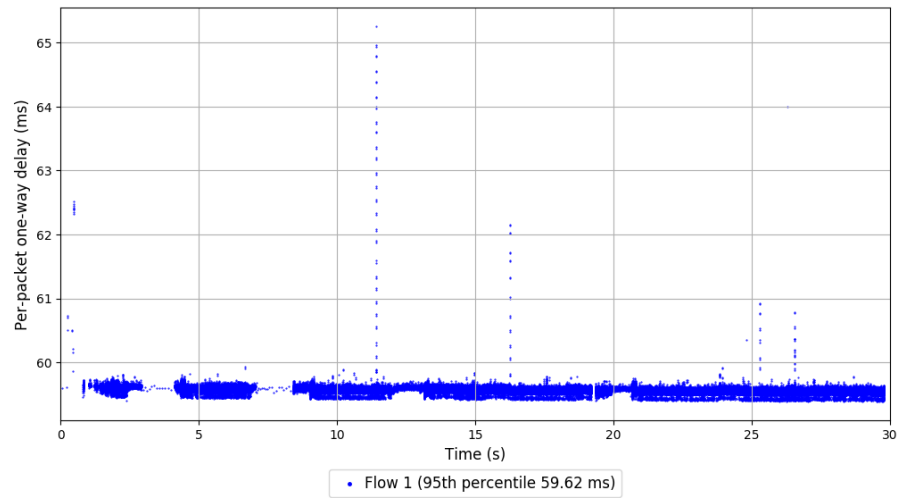
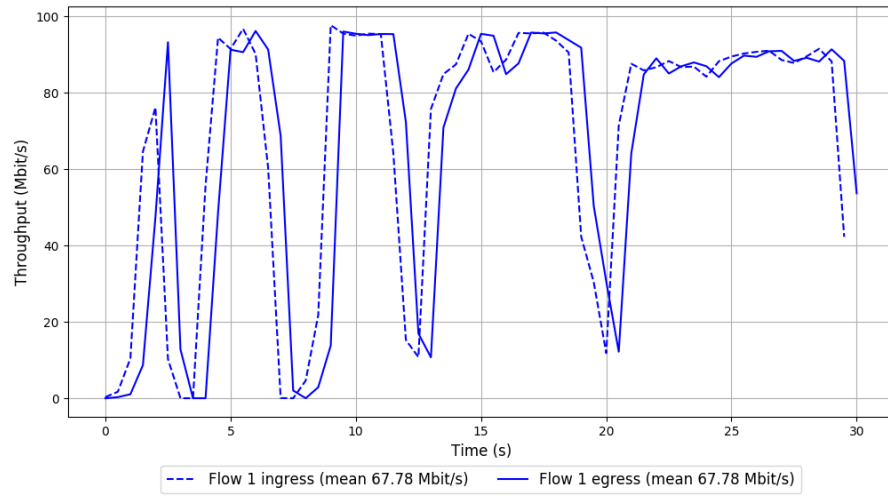


Run 3: Statistics of QUIC Cubic

Start at: 2018-09-06 05:47:33  
End at: 2018-09-06 05:48:03  
Local clock offset: 2.06 ms  
Remote clock offset: -35.271 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 67.78 Mbit/s  
95th percentile per-packet one-way delay: 59.624 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 67.78 Mbit/s  
95th percentile per-packet one-way delay: 59.624 ms  
Loss rate: 0.00%

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

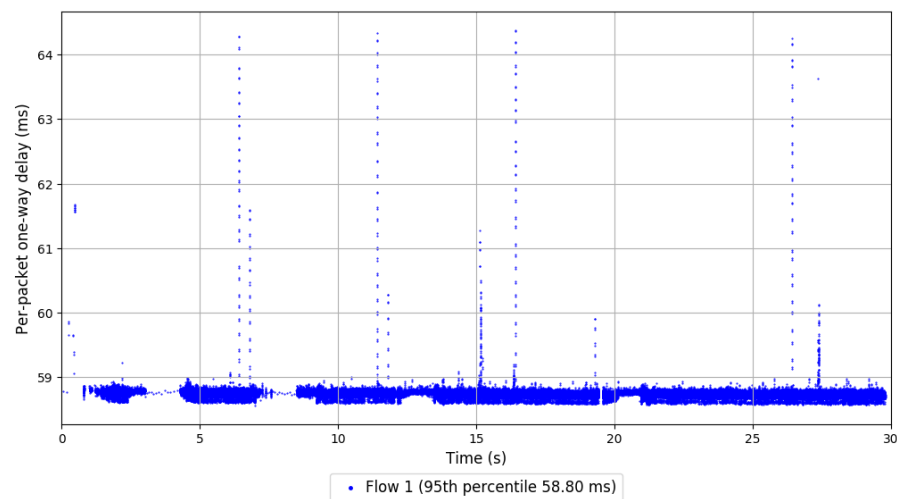
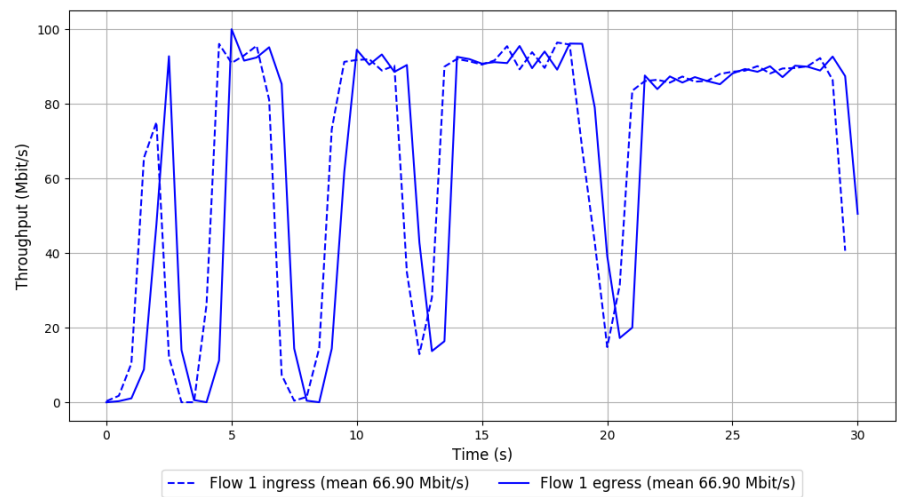


Run 4: Statistics of QUIC Cubic

Start at: 2018-09-06 06:16:21  
End at: 2018-09-06 06:16:51  
Local clock offset: -0.016 ms  
Remote clock offset: -37.525 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 66.90 Mbit/s  
95th percentile per-packet one-way delay: 58.799 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 66.90 Mbit/s  
95th percentile per-packet one-way delay: 58.799 ms  
Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



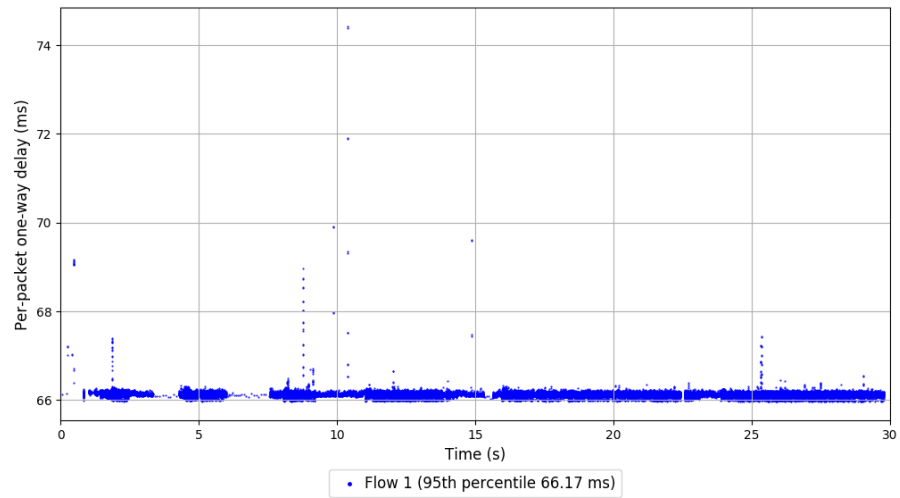
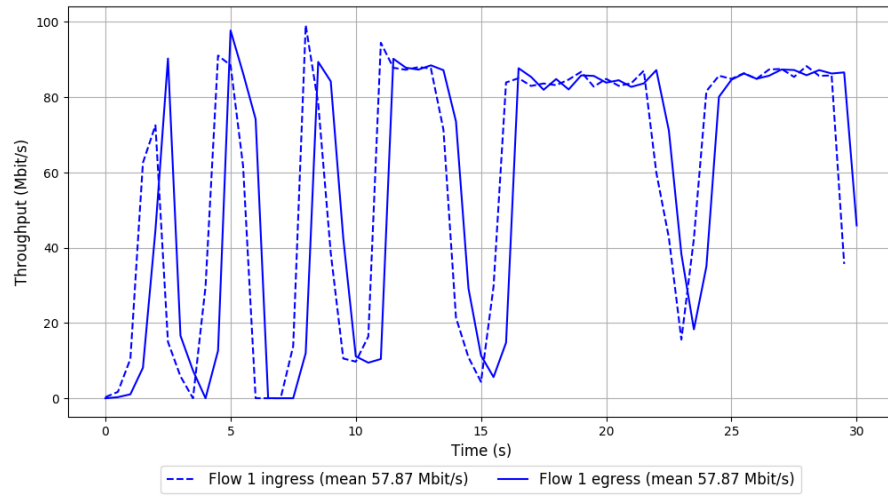
Run 5: Statistics of QUIC Cubic

Start at: 2018-09-06 06:39:34  
End at: 2018-09-06 06:40:04  
Local clock offset: -0.862 ms  
Remote clock offset: -32.629 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 57.87 Mbit/s  
95th percentile per-packet one-way delay: 66.173 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 57.87 Mbit/s  
95th percentile per-packet one-way delay: 66.173 ms  
Loss rate: 0.00%



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

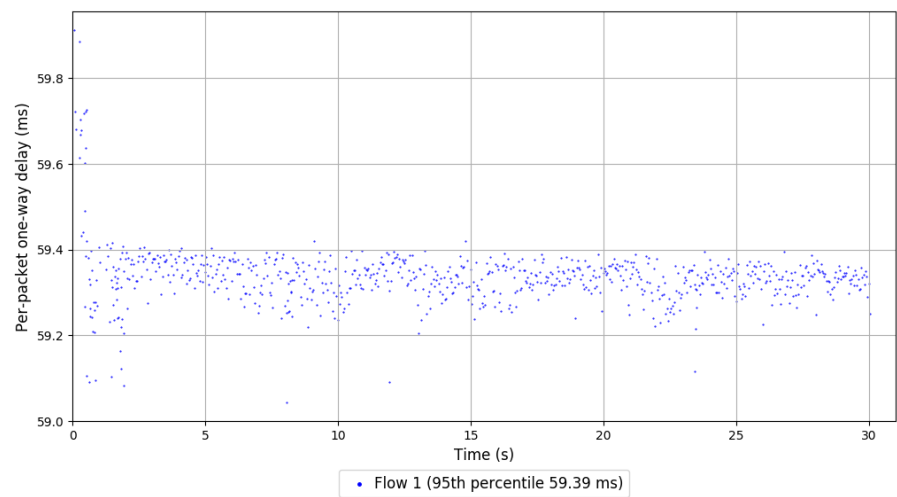
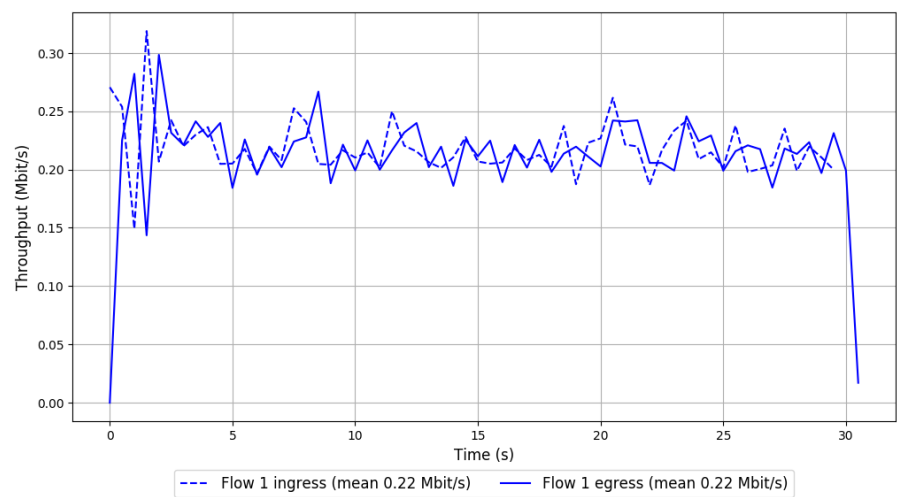


Run 1: Statistics of SCReAM

Start at: 2018-09-06 04:40:46  
End at: 2018-09-06 04:41:16  
Local clock offset: -1.058 ms  
Remote clock offset: -39.687 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 59.394 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 59.394 ms  
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

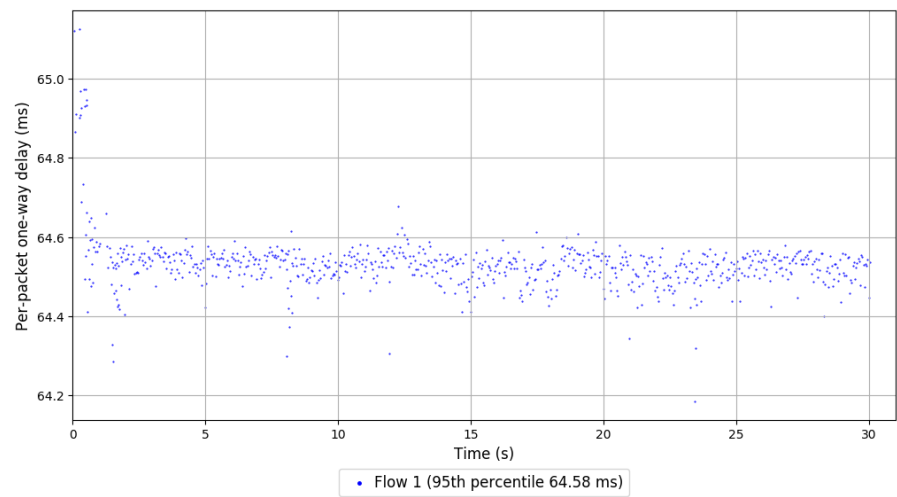
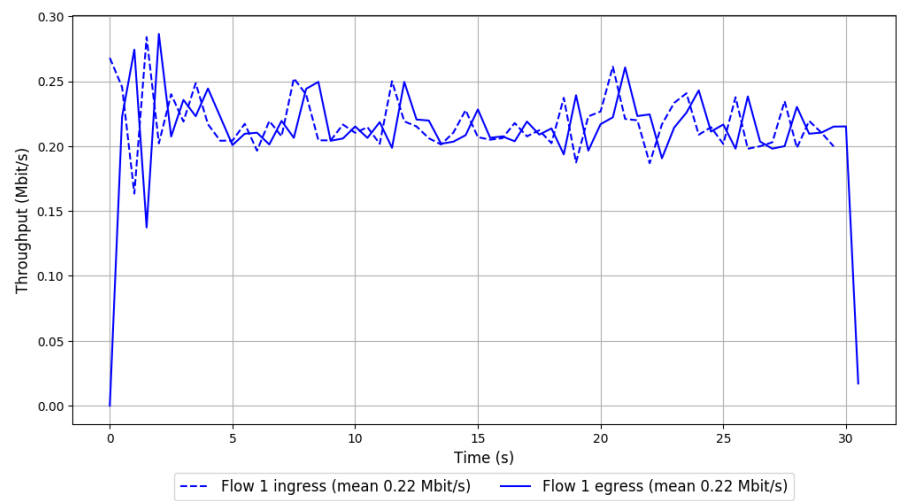


Run 2: Statistics of SCReAM

Start at: 2018-09-06 05:03:54  
End at: 2018-09-06 05:04:24  
Local clock offset: -1.288 ms  
Remote clock offset: -31.732 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 64.583 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 64.583 ms  
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

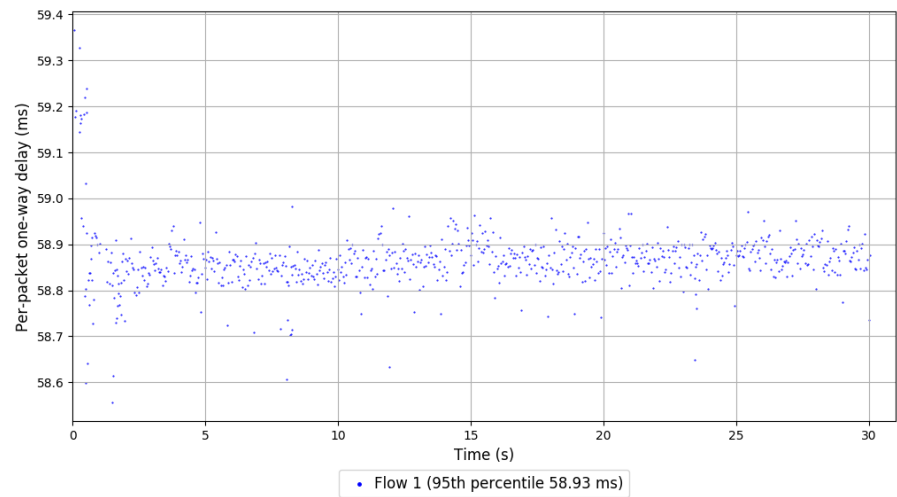
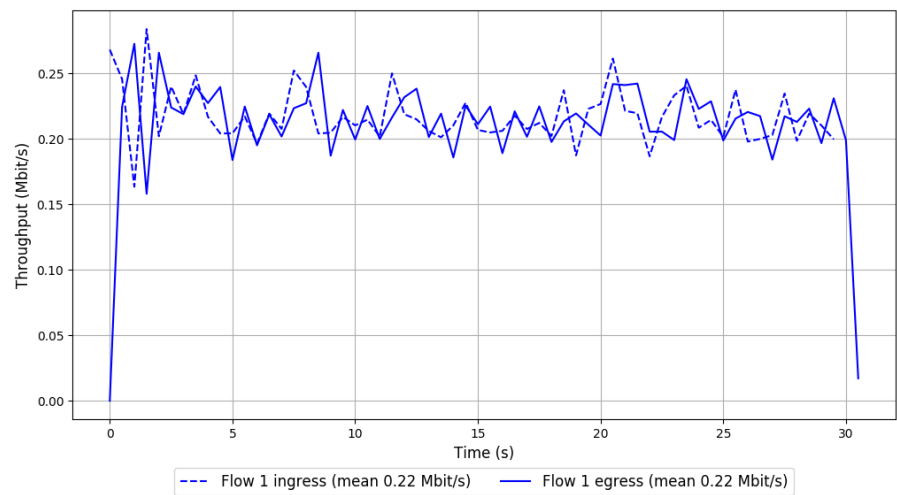


Run 3: Statistics of SCReAM

Start at: 2018-09-06 05:27:01  
End at: 2018-09-06 05:27:31  
Local clock offset: 0.965 ms  
Remote clock offset: -36.888 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 58.934 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 58.934 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



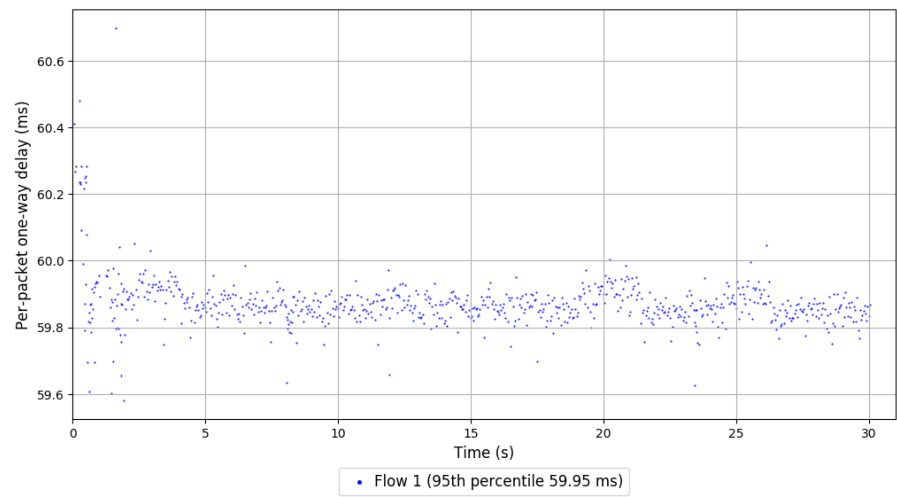
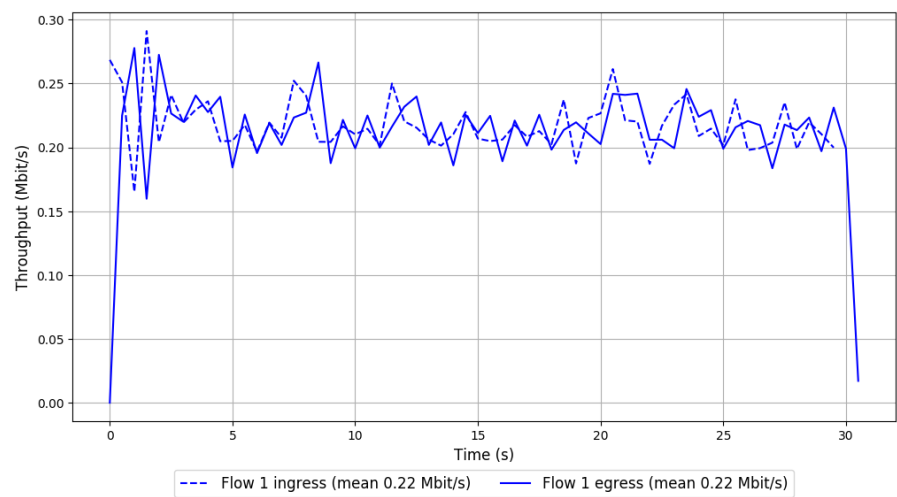
Run 4: Statistics of SCReAM

Start at: 2018-09-06 05:50:13  
End at: 2018-09-06 05:50:43  
Local clock offset: 2.884 ms  
Remote clock offset: -36.583 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 59.954 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 59.954 ms  
Loss rate: 0.00%



Run 4: Report of SReAM — Data Link

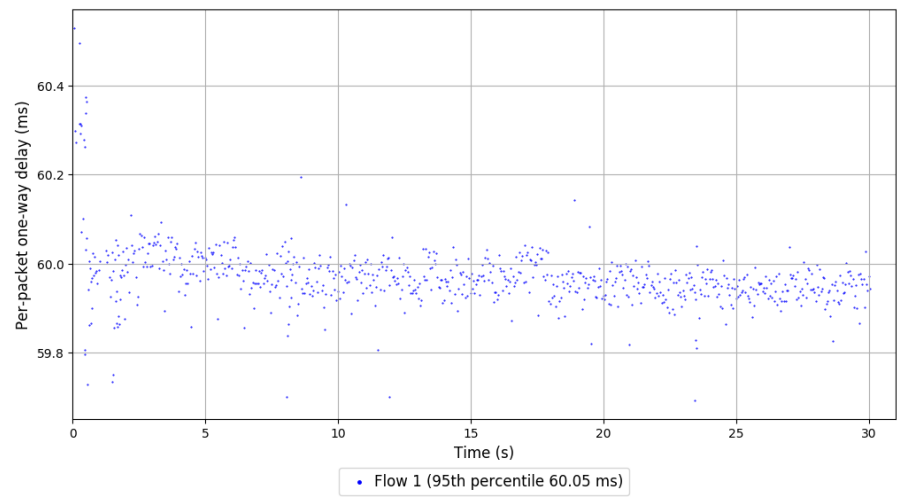
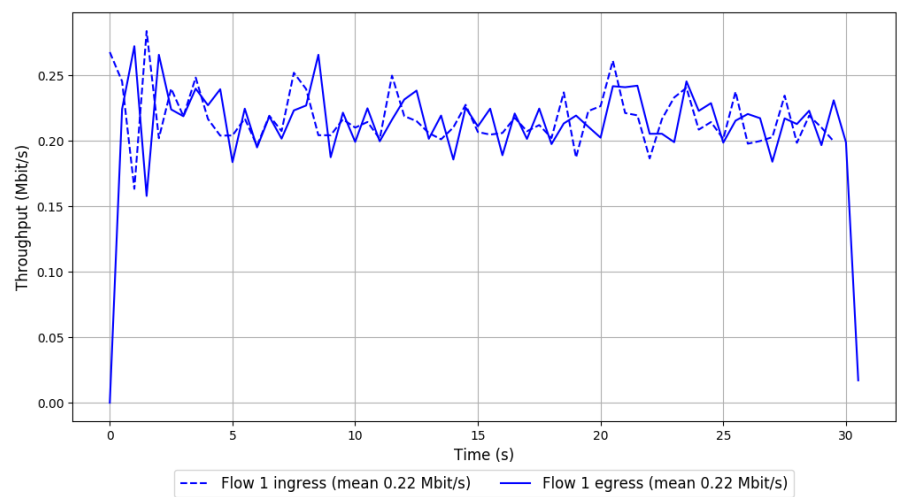


Run 5: Statistics of SCReAM

Start at: 2018-09-06 06:19:01  
End at: 2018-09-06 06:19:31  
Local clock offset: -0.512 ms  
Remote clock offset: -36.548 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 60.047 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 60.047 ms  
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

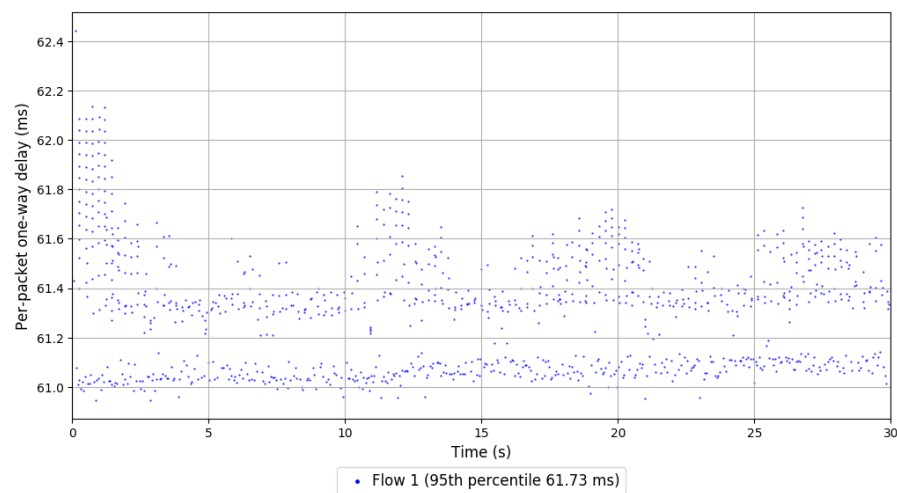
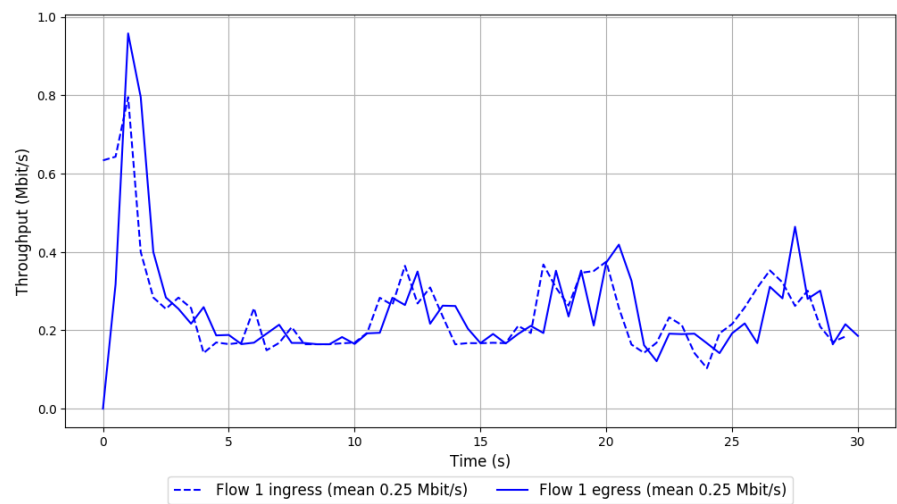


Run 1: Statistics of Sprout

Start at: 2018-09-06 04:45:48  
End at: 2018-09-06 04:46:18  
Local clock offset: -0.509 ms  
Remote clock offset: -34.185 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.25 Mbit/s  
95th percentile per-packet one-way delay: 61.732 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.25 Mbit/s  
95th percentile per-packet one-way delay: 61.732 ms  
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

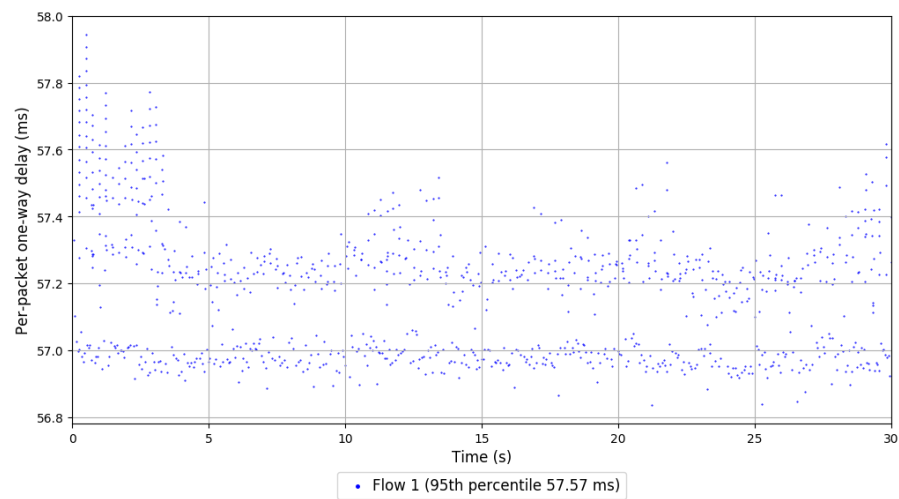
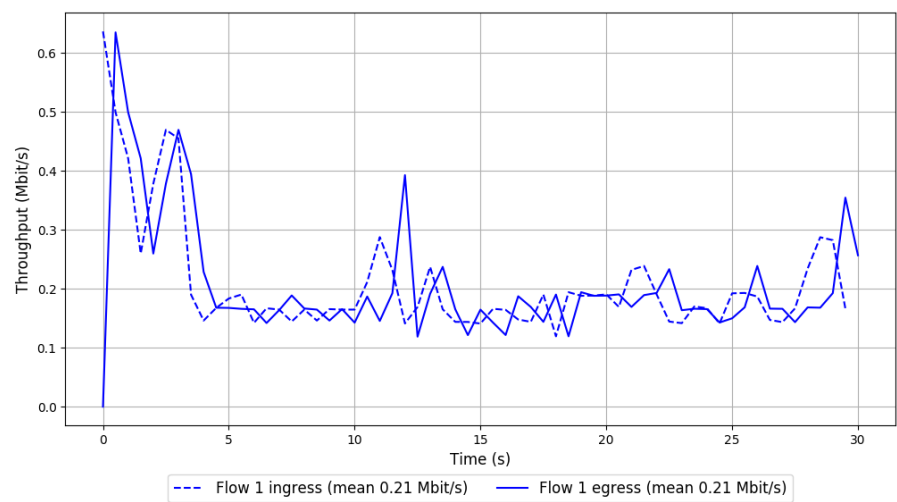


Run 2: Statistics of Sprout

Start at: 2018-09-06 05:08:57  
End at: 2018-09-06 05:09:27  
Local clock offset: 0.322 ms  
Remote clock offset: -36.992 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 57.569 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 57.569 ms  
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



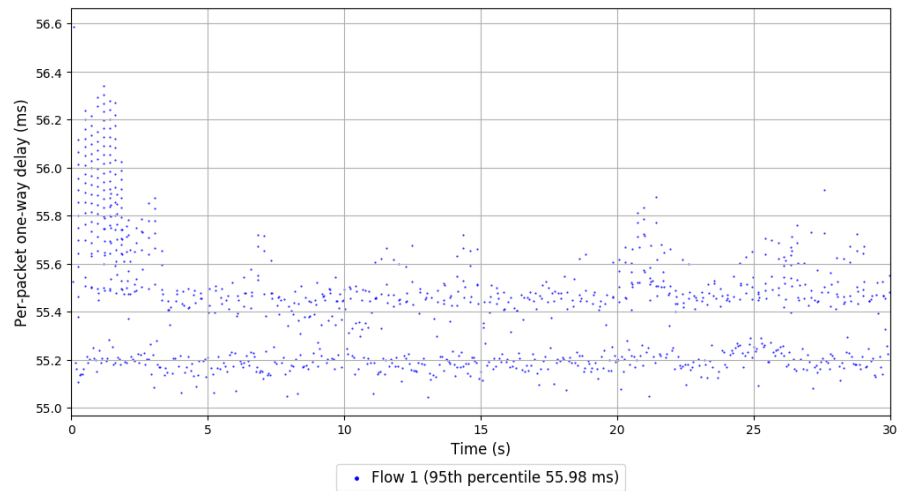
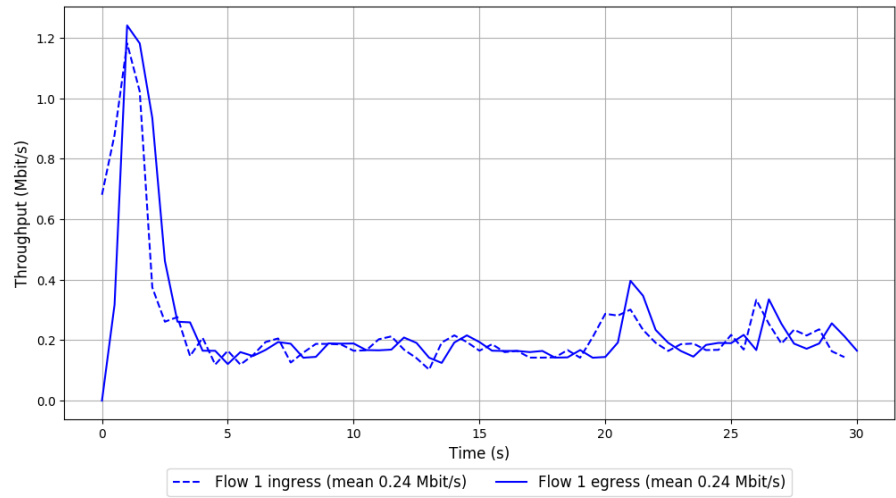
Run 3: Statistics of Sprout

Start at: 2018-09-06 05:32:03  
End at: 2018-09-06 05:32:33  
Local clock offset: 2.691 ms  
Remote clock offset: -38.918 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.24 Mbit/s  
95th percentile per-packet one-way delay: 55.979 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.24 Mbit/s  
95th percentile per-packet one-way delay: 55.979 ms  
Loss rate: 0.00%



### Run 3: Report of Sprout — Data Link

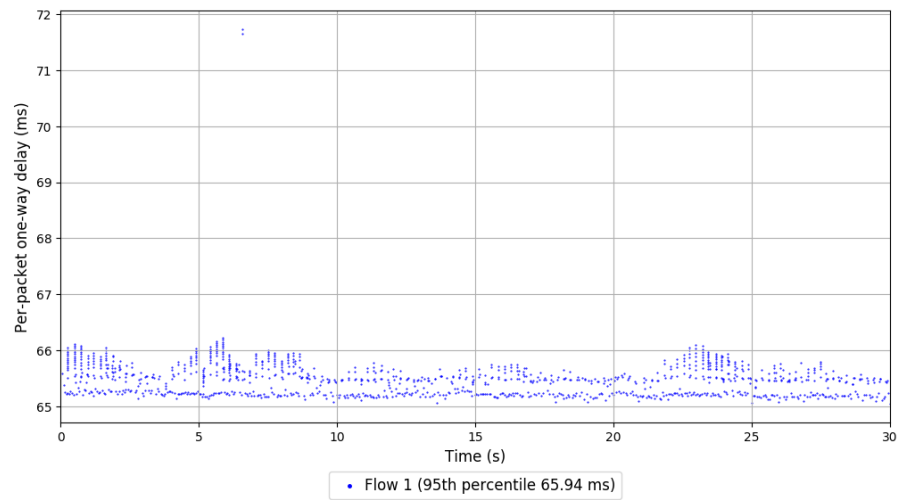
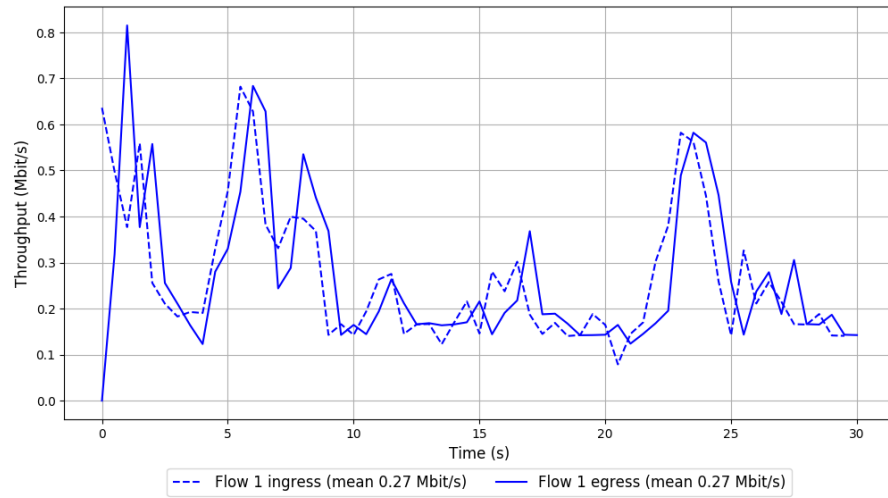


Run 4: Statistics of Sprout

Start at: 2018-09-06 05:55:17  
End at: 2018-09-06 05:55:47  
Local clock offset: -1.476 ms  
Remote clock offset: -32.972 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.27 Mbit/s  
95th percentile per-packet one-way delay: 65.937 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.27 Mbit/s  
95th percentile per-packet one-way delay: 65.937 ms  
Loss rate: 0.00%

#### Run 4: Report of Sprout — Data Link

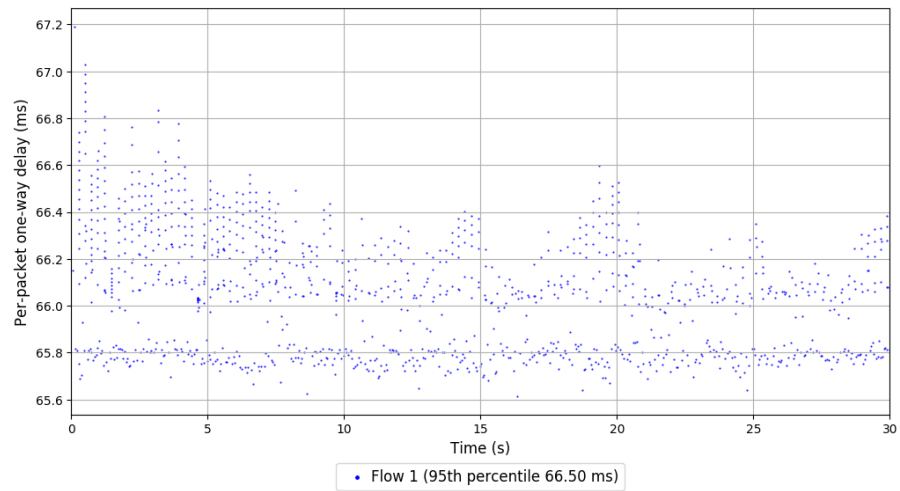
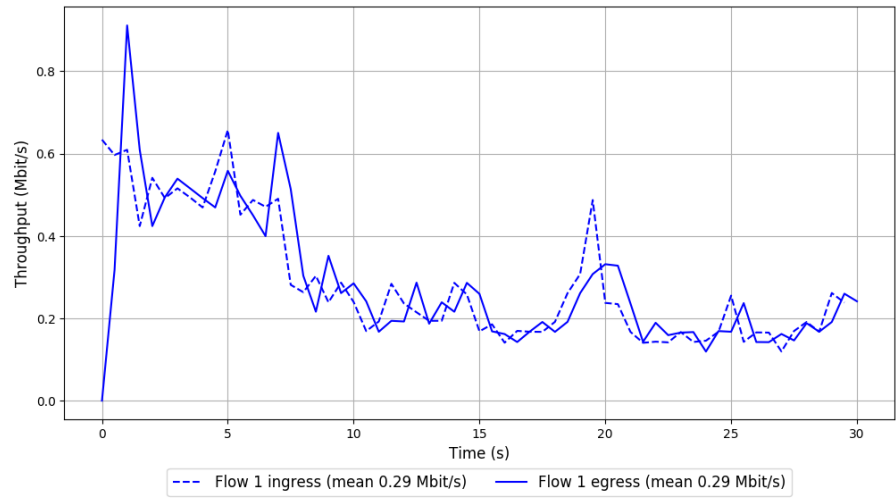


Run 5: Statistics of Sprout

Start at: 2018-09-06 06:24:04  
End at: 2018-09-06 06:24:34  
Local clock offset: -2.17 ms  
Remote clock offset: -34.436 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 0.29 Mbit/s  
95th percentile per-packet one-way delay: 66.499 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.29 Mbit/s  
95th percentile per-packet one-way delay: 66.499 ms  
Loss rate: 0.00%

## Run 5: Report of Sprout — Data Link

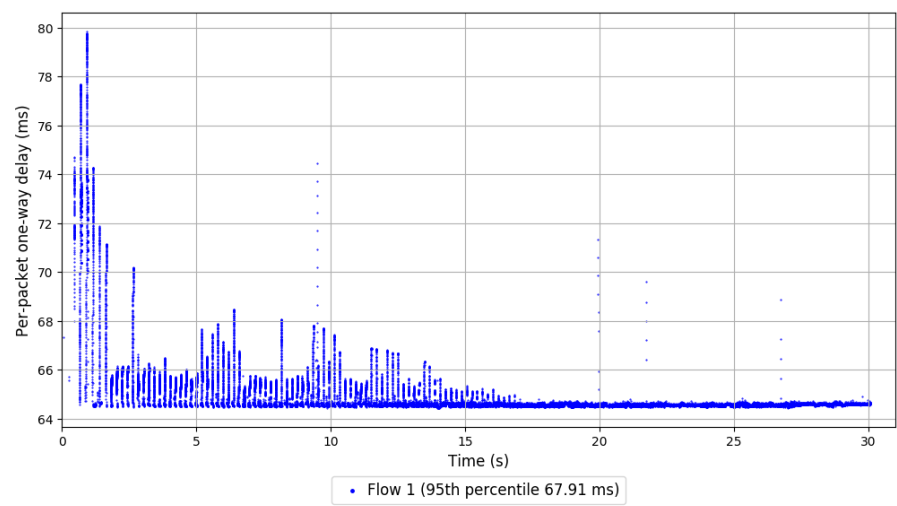
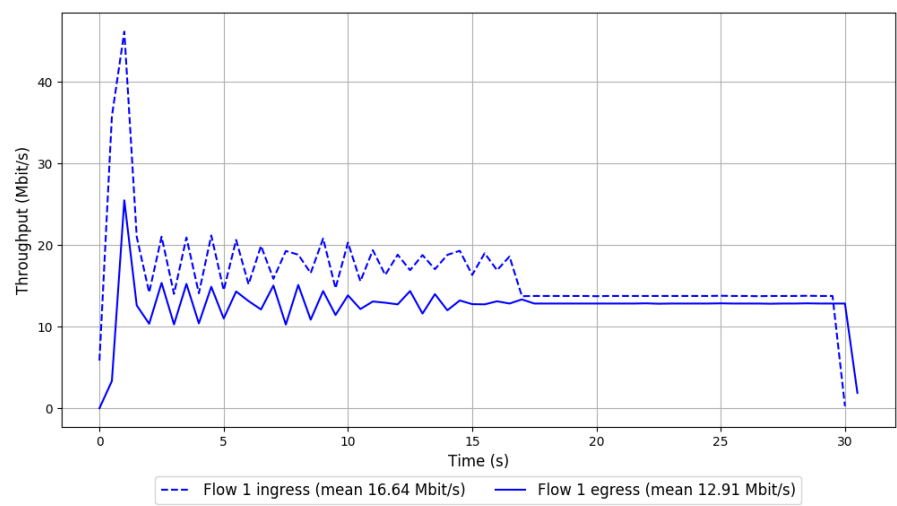


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-09-06 04:54:46
End at: 2018-09-06 04:55:16
Local clock offset: -2.203 ms
Remote clock offset: -32.645 ms

# Below is generated by plot.py at 2018-09-06 07:04:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.91 Mbit/s
95th percentile per-packet one-way delay: 67.906 ms
Loss rate: 22.46%
-- Flow 1:
Average throughput: 12.91 Mbit/s
95th percentile per-packet one-way delay: 67.906 ms
Loss rate: 22.46%
```

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



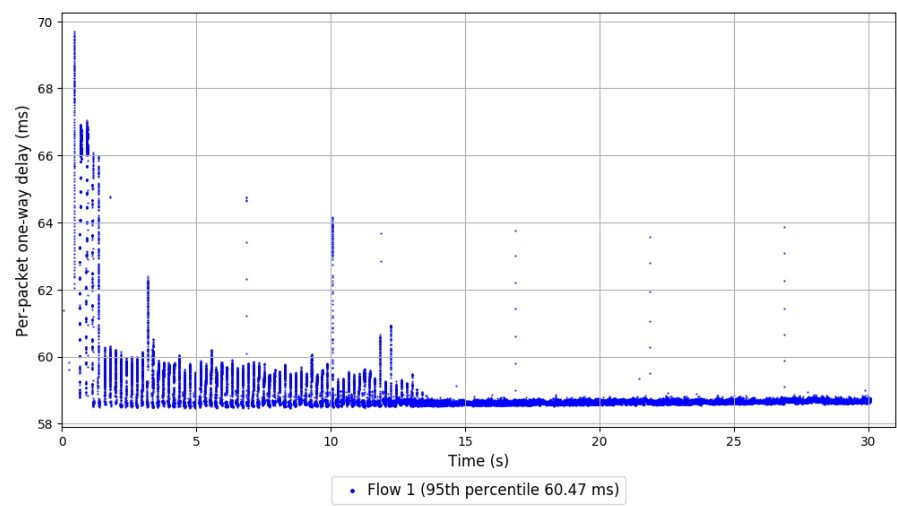
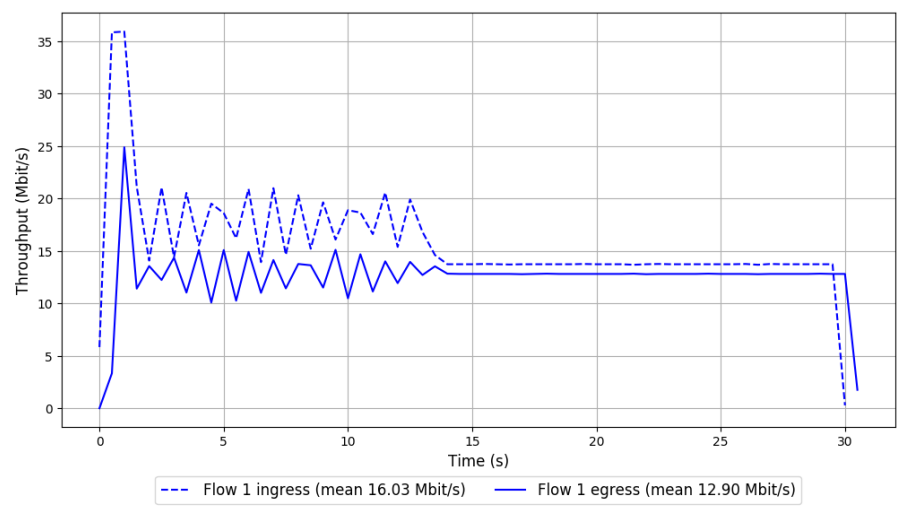
Run 2: Statistics of TaoVA-100x

Start at: 2018-09-06 05:17:49  
End at: 2018-09-06 05:18:19  
Local clock offset: -0.409 ms  
Remote clock offset: -36.983 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.90 Mbit/s  
95th percentile per-packet one-way delay: 60.474 ms  
Loss rate: 19.54%  
-- Flow 1:  
Average throughput: 12.90 Mbit/s  
95th percentile per-packet one-way delay: 60.474 ms  
Loss rate: 19.54%



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

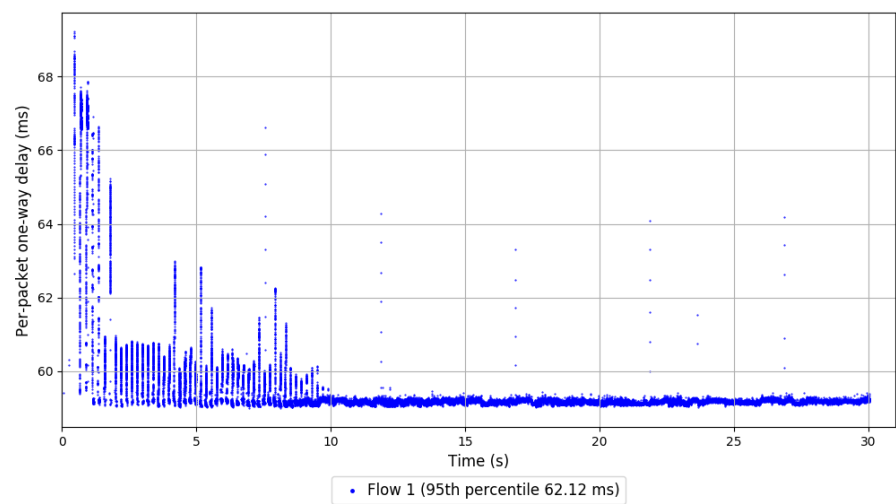
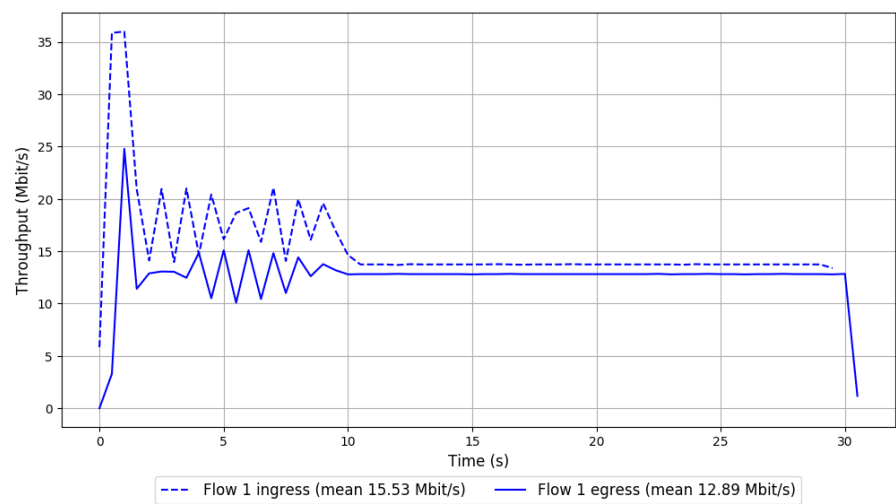


Run 3: Statistics of TaoVA-100x

Start at: 2018-09-06 05:41:01  
End at: 2018-09-06 05:41:31  
Local clock offset: 1.051 ms  
Remote clock offset: -37.207 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.89 Mbit/s  
95th percentile per-packet one-way delay: 62.125 ms  
Loss rate: 16.97%  
-- Flow 1:  
Average throughput: 12.89 Mbit/s  
95th percentile per-packet one-way delay: 62.125 ms  
Loss rate: 16.97%

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

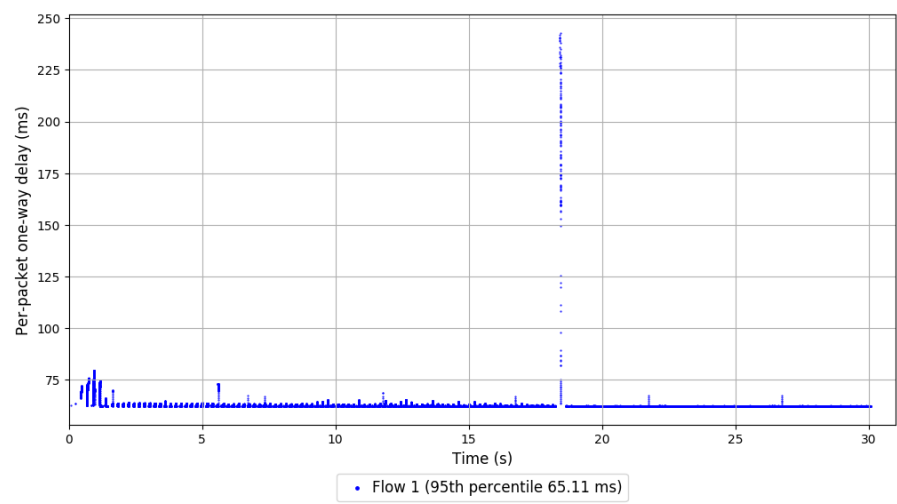
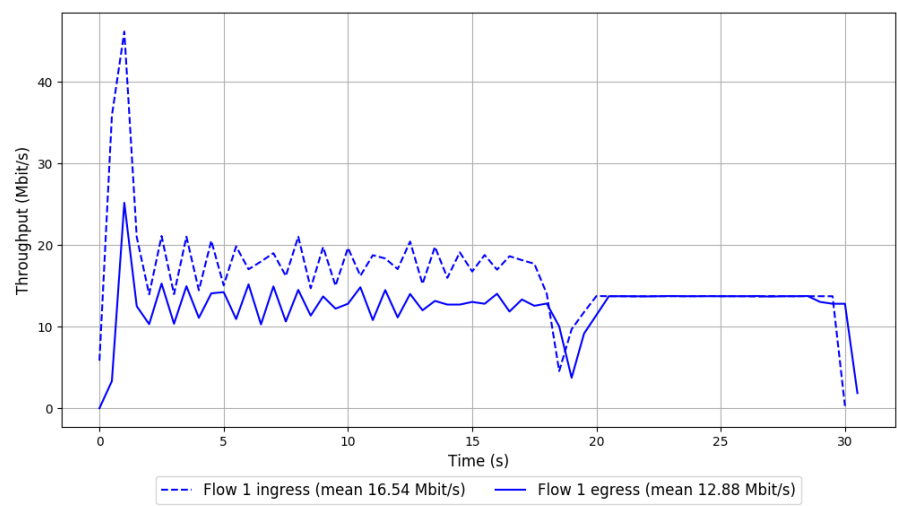


Run 4: Statistics of TaoVA-100x

Start at: 2018-09-06 06:04:10  
End at: 2018-09-06 06:04:41  
Local clock offset: -0.008 ms  
Remote clock offset: -33.971 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.88 Mbit/s  
95th percentile per-packet one-way delay: 65.114 ms  
Loss rate: 22.15%  
-- Flow 1:  
Average throughput: 12.88 Mbit/s  
95th percentile per-packet one-way delay: 65.114 ms  
Loss rate: 22.15%

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

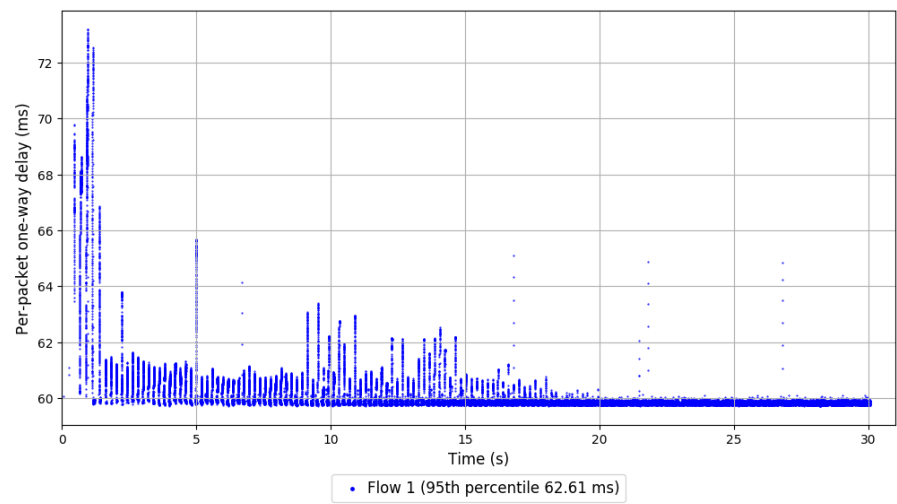
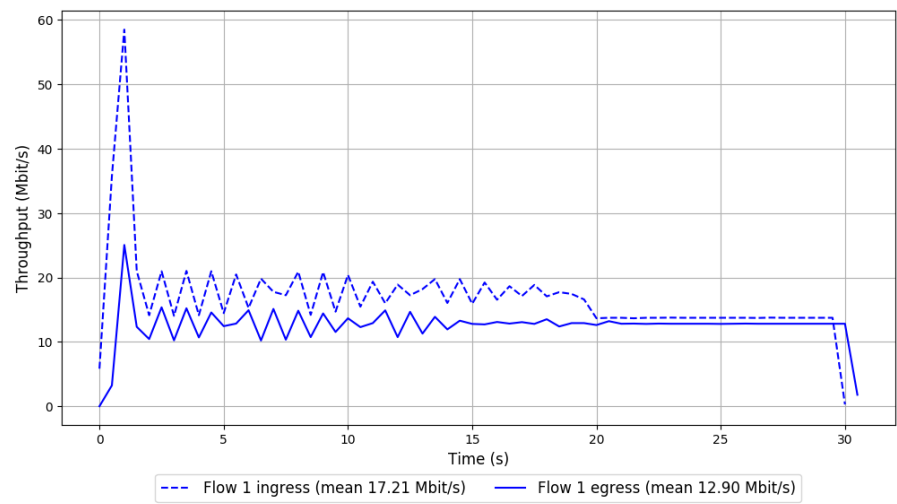


Run 5: Statistics of TaoVA-100x

Start at: 2018-09-06 06:33:03  
End at: 2018-09-06 06:33:33  
Local clock offset: -1.091 ms  
Remote clock offset: -36.72 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 12.90 Mbit/s  
95th percentile per-packet one-way delay: 62.614 ms  
Loss rate: 25.07%  
-- Flow 1:  
Average throughput: 12.90 Mbit/s  
95th percentile per-packet one-way delay: 62.614 ms  
Loss rate: 25.07%

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



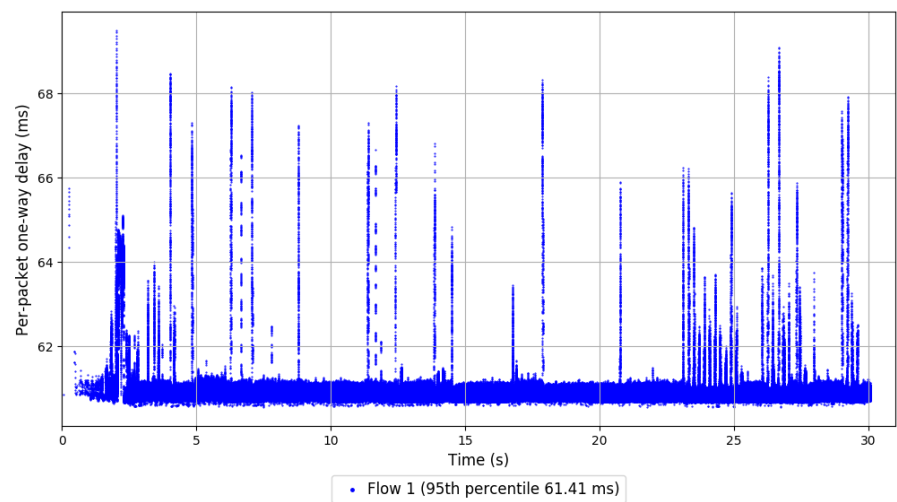
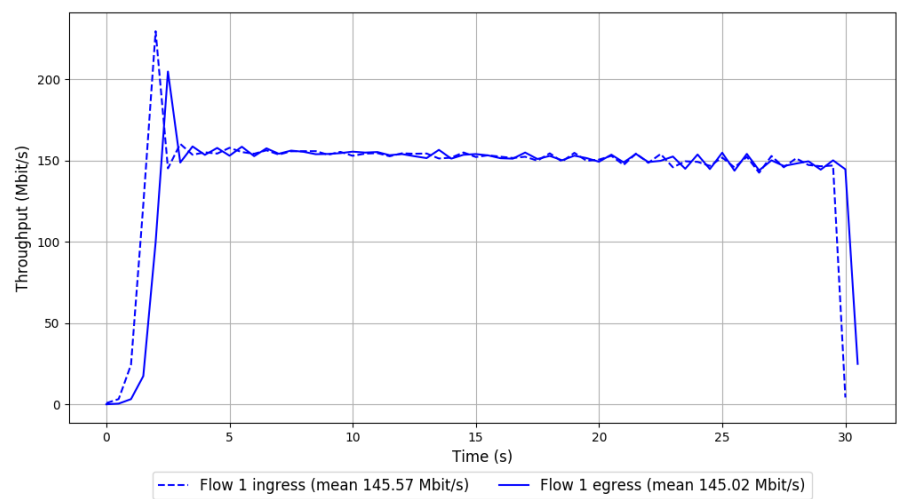
Run 1: Statistics of TCP Vegas

Start at: 2018-09-06 05:00:01  
End at: 2018-09-06 05:00:31  
Local clock offset: -2.269 ms  
Remote clock offset: -36.29 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 145.02 Mbit/s  
95th percentile per-packet one-way delay: 61.406 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 145.02 Mbit/s  
95th percentile per-packet one-way delay: 61.406 ms  
Loss rate: 0.38%



Run 1: Report of TCP Vegas — Data Link

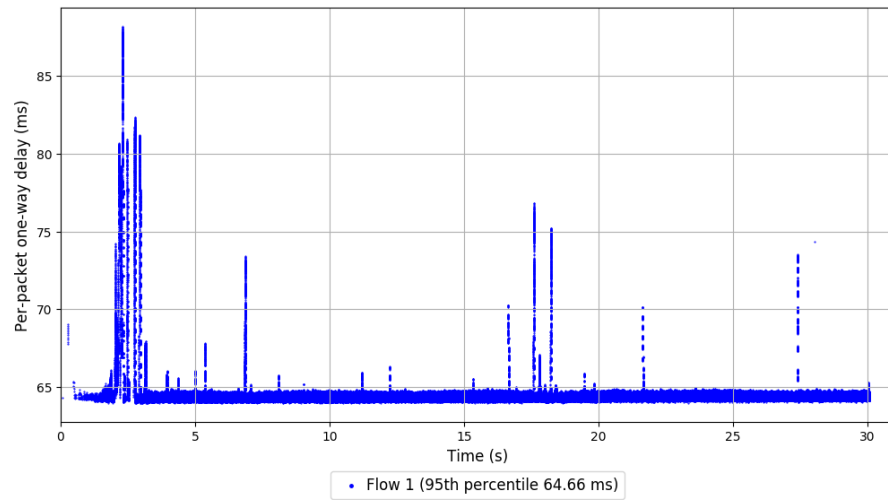
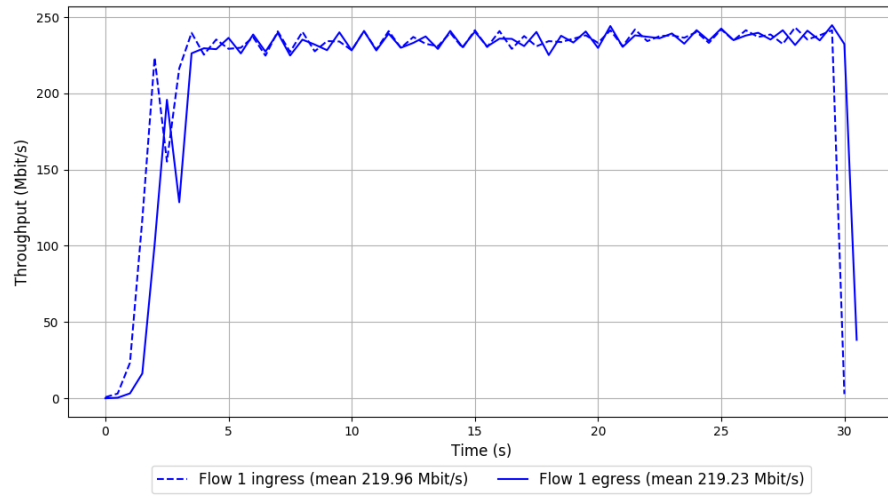


Run 2: Statistics of TCP Vegas

Start at: 2018-09-06 05:23:04  
End at: 2018-09-06 05:23:34  
Local clock offset: 2.204 ms  
Remote clock offset: -32.272 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 219.23 Mbit/s  
95th percentile per-packet one-way delay: 64.663 ms  
Loss rate: 0.33%  
-- Flow 1:  
Average throughput: 219.23 Mbit/s  
95th percentile per-packet one-way delay: 64.663 ms  
Loss rate: 0.33%

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

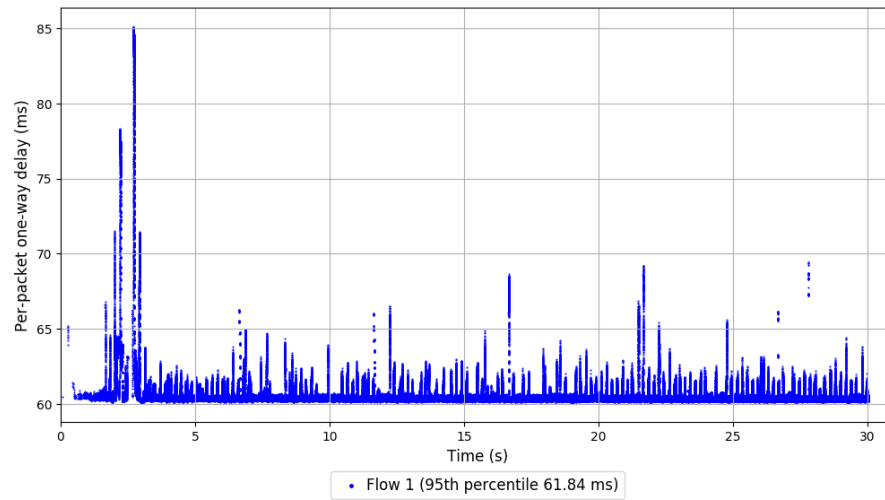
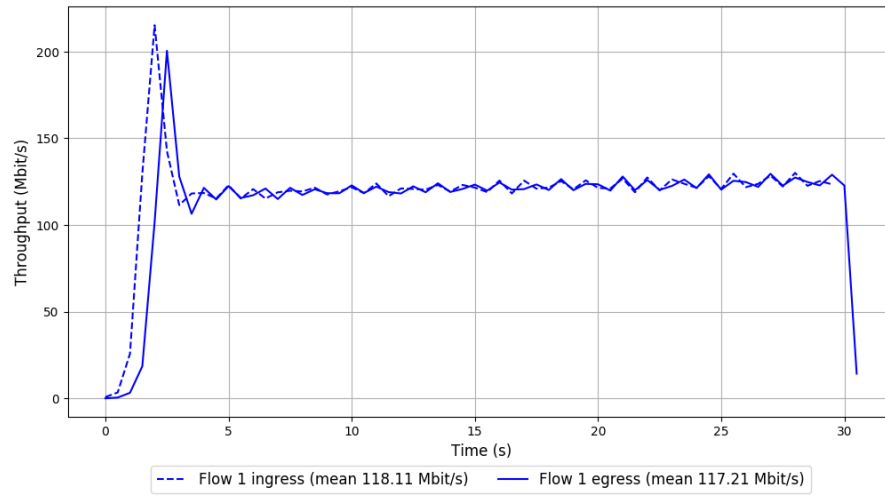


Run 3: Statistics of TCP Vegas

Start at: 2018-09-06 05:46:17  
End at: 2018-09-06 05:46:47  
Local clock offset: 3.449 ms  
Remote clock offset: -33.499 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 117.21 Mbit/s  
95th percentile per-packet one-way delay: 61.845 ms  
Loss rate: 0.76%  
-- Flow 1:  
Average throughput: 117.21 Mbit/s  
95th percentile per-packet one-way delay: 61.845 ms  
Loss rate: 0.76%

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

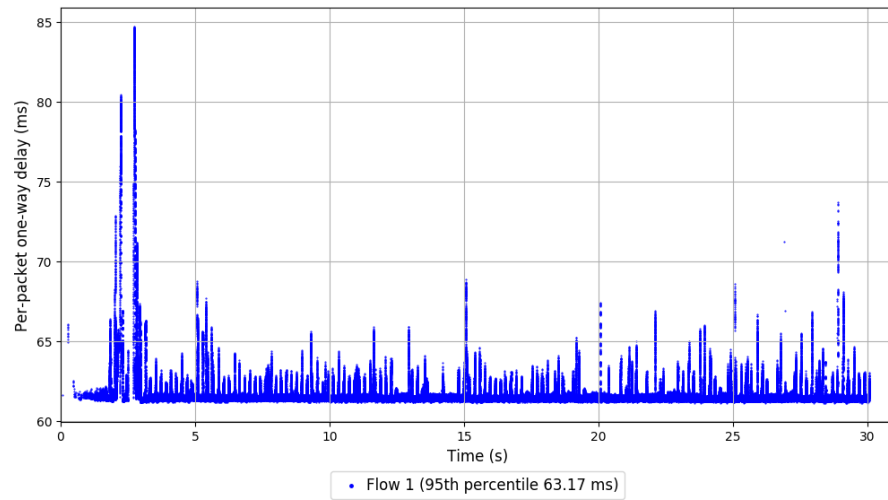
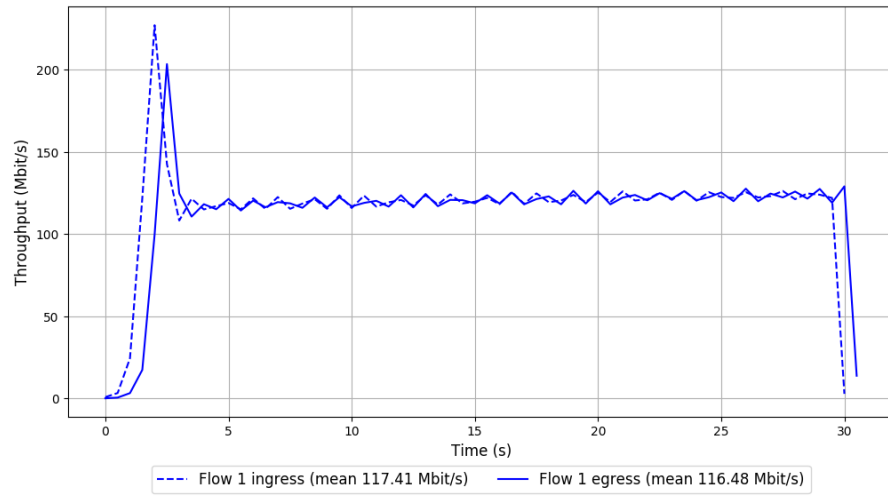


Run 4: Statistics of TCP Vegas

Start at: 2018-09-06 06:15:05  
End at: 2018-09-06 06:15:35  
Local clock offset: 0.204 ms  
Remote clock offset: -34.555 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 116.48 Mbit/s  
95th percentile per-packet one-way delay: 63.166 ms  
Loss rate: 0.79%  
-- Flow 1:  
Average throughput: 116.48 Mbit/s  
95th percentile per-packet one-way delay: 63.166 ms  
Loss rate: 0.79%

#### Run 4: Report of TCP Vegas — Data Link



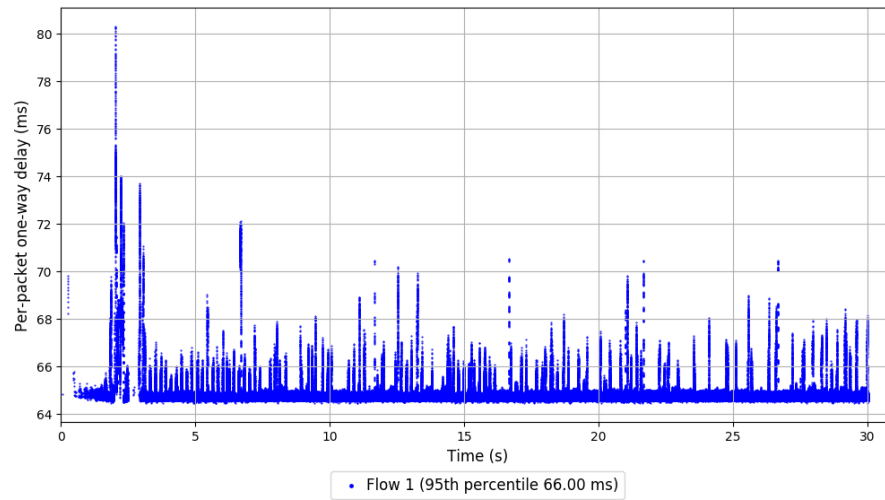
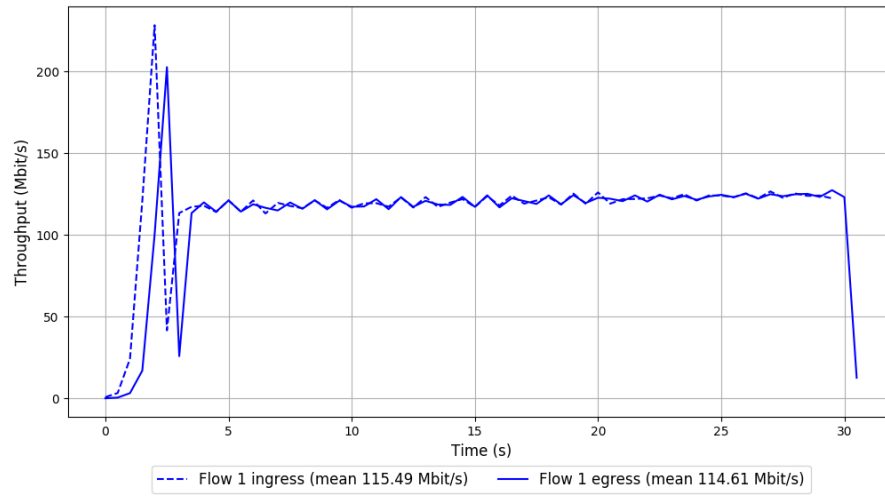
Run 5: Statistics of TCP Vegas

Start at: 2018-09-06 06:38:18  
End at: 2018-09-06 06:38:48  
Local clock offset: -0.412 ms  
Remote clock offset: -31.011 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 114.61 Mbit/s  
95th percentile per-packet one-way delay: 66.003 ms  
Loss rate: 0.77%  
-- Flow 1:  
Average throughput: 114.61 Mbit/s  
95th percentile per-packet one-way delay: 66.003 ms  
Loss rate: 0.77%



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

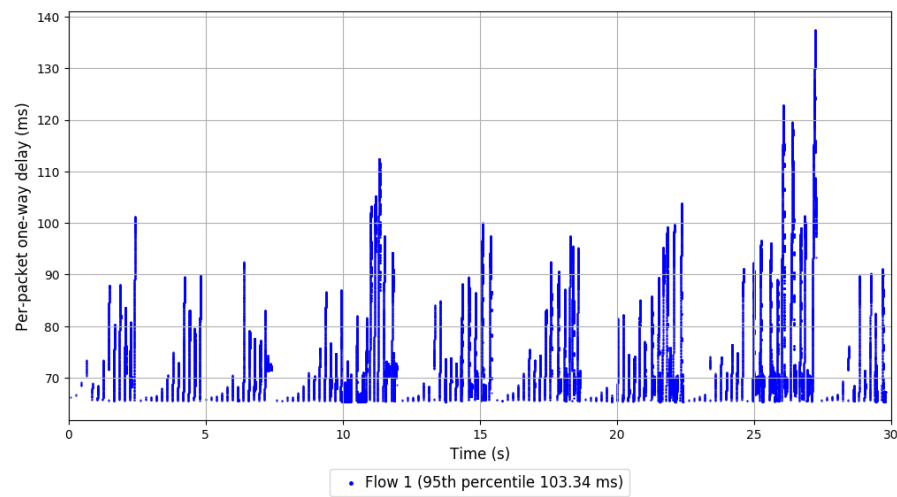
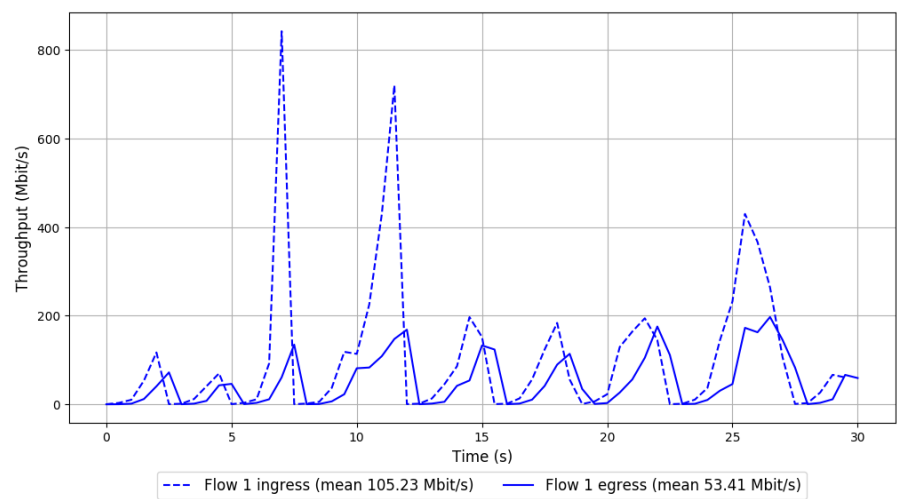


Run 1: Statistics of Verus

Start at: 2018-09-06 04:50:52  
End at: 2018-09-06 04:51:22  
Local clock offset: -1.634 ms  
Remote clock offset: -33.678 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 53.41 Mbit/s  
95th percentile per-packet one-way delay: 103.336 ms  
Loss rate: 49.25%  
-- Flow 1:  
Average throughput: 53.41 Mbit/s  
95th percentile per-packet one-way delay: 103.336 ms  
Loss rate: 49.25%

Run 1: Report of Verus — Data Link

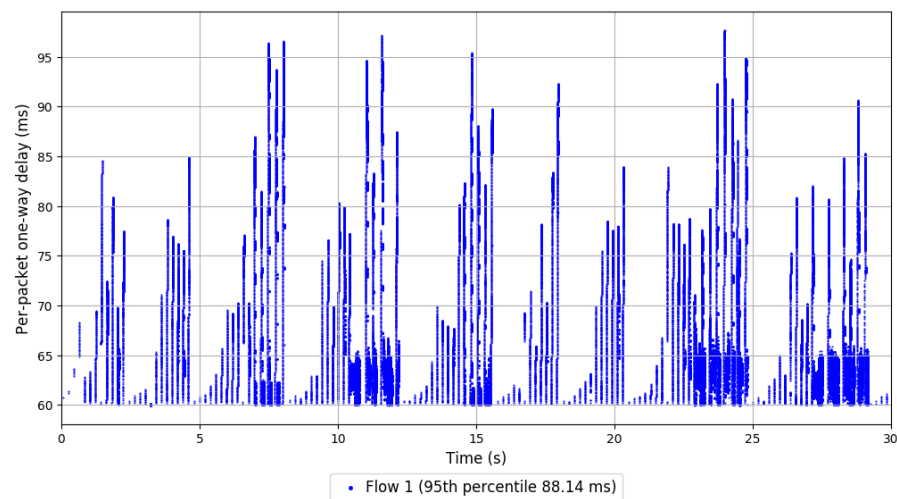
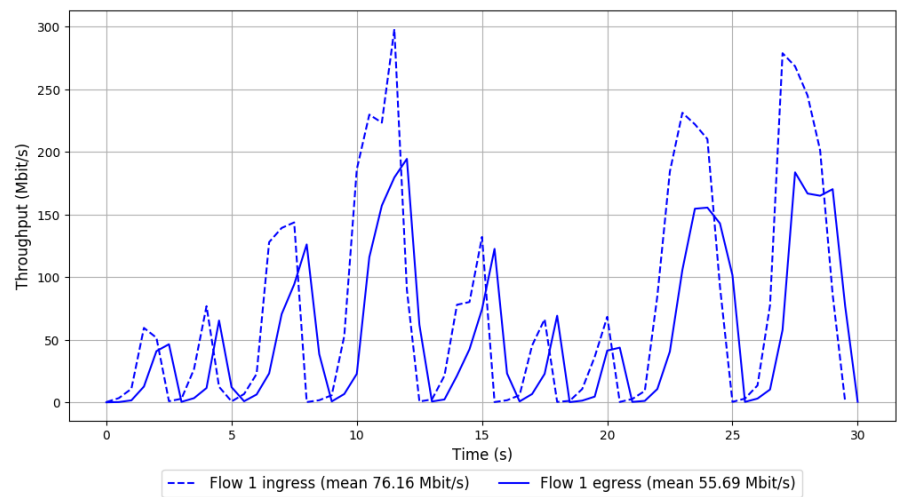


Run 2: Statistics of Verus

Start at: 2018-09-06 05:13:56  
End at: 2018-09-06 05:14:26  
Local clock offset: -0.217 ms  
Remote clock offset: -34.357 ms

# Below is generated by plot.py at 2018-09-06 07:04:24  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 55.69 Mbit/s  
95th percentile per-packet one-way delay: 88.138 ms  
Loss rate: 26.88%  
-- Flow 1:  
Average throughput: 55.69 Mbit/s  
95th percentile per-packet one-way delay: 88.138 ms  
Loss rate: 26.88%

Run 2: Report of Verus — Data Link

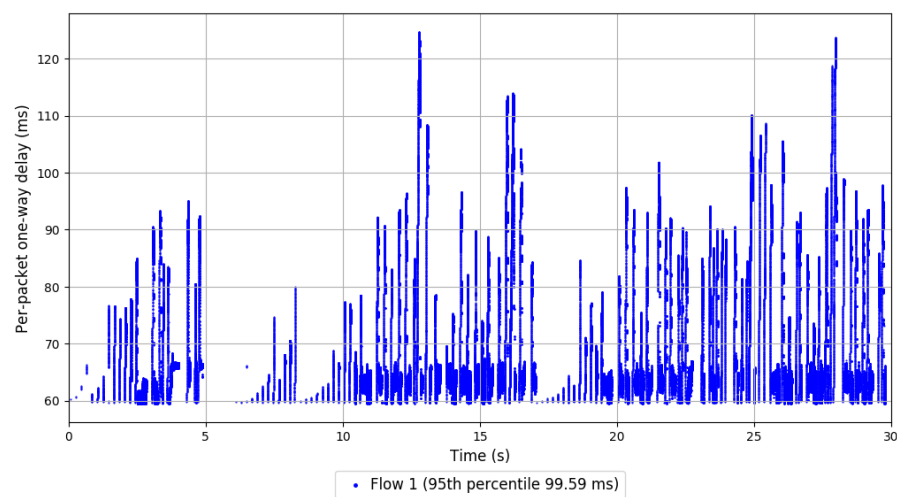
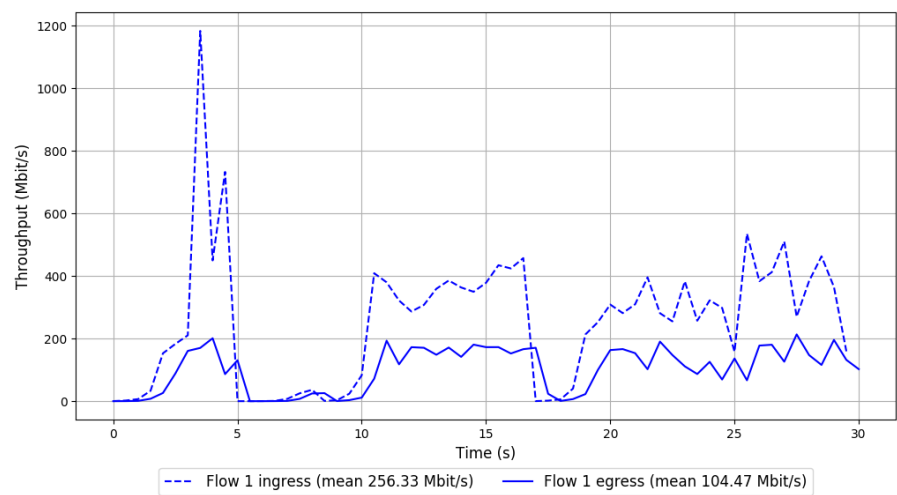


Run 3: Statistics of Verus

Start at: 2018-09-06 05:37:03  
End at: 2018-09-06 05:37:33  
Local clock offset: 2.875 ms  
Remote clock offset: -37.117 ms

# Below is generated by plot.py at 2018-09-06 07:04:36  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 104.47 Mbit/s  
95th percentile per-packet one-way delay: 99.588 ms  
Loss rate: 59.24%  
-- Flow 1:  
Average throughput: 104.47 Mbit/s  
95th percentile per-packet one-way delay: 99.588 ms  
Loss rate: 59.24%

Run 3: Report of Verus — Data Link



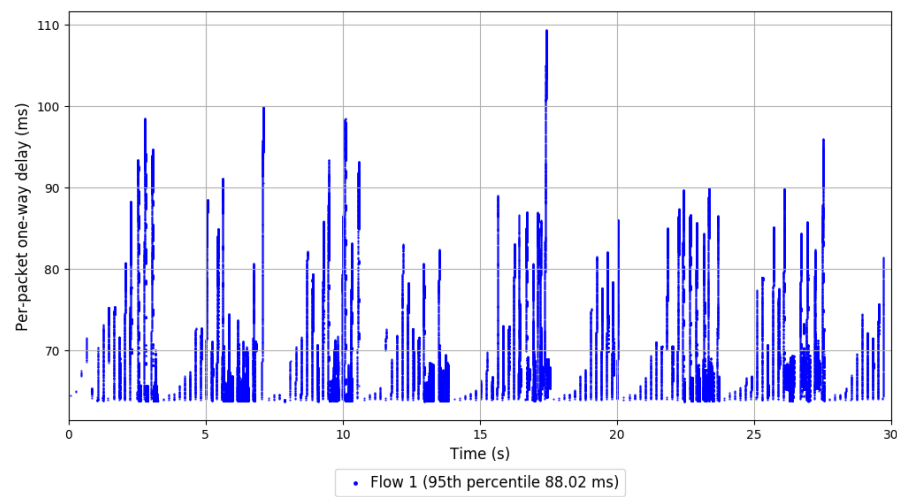
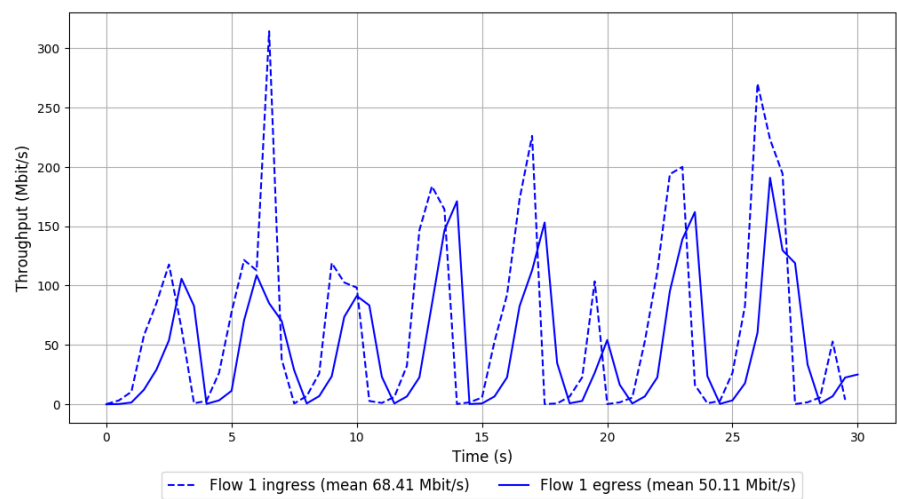
Run 4: Statistics of Verus

Start at: 2018-09-06 06:00:18  
End at: 2018-09-06 06:00:48  
Local clock offset: 2.311 ms  
Remote clock offset: -32.777 ms

# Below is generated by plot.py at 2018-09-06 07:04:36  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 50.11 Mbit/s  
95th percentile per-packet one-way delay: 88.024 ms  
Loss rate: 26.72%  
-- Flow 1:  
Average throughput: 50.11 Mbit/s  
95th percentile per-packet one-way delay: 88.024 ms  
Loss rate: 26.72%



Run 4: Report of Verus — Data Link

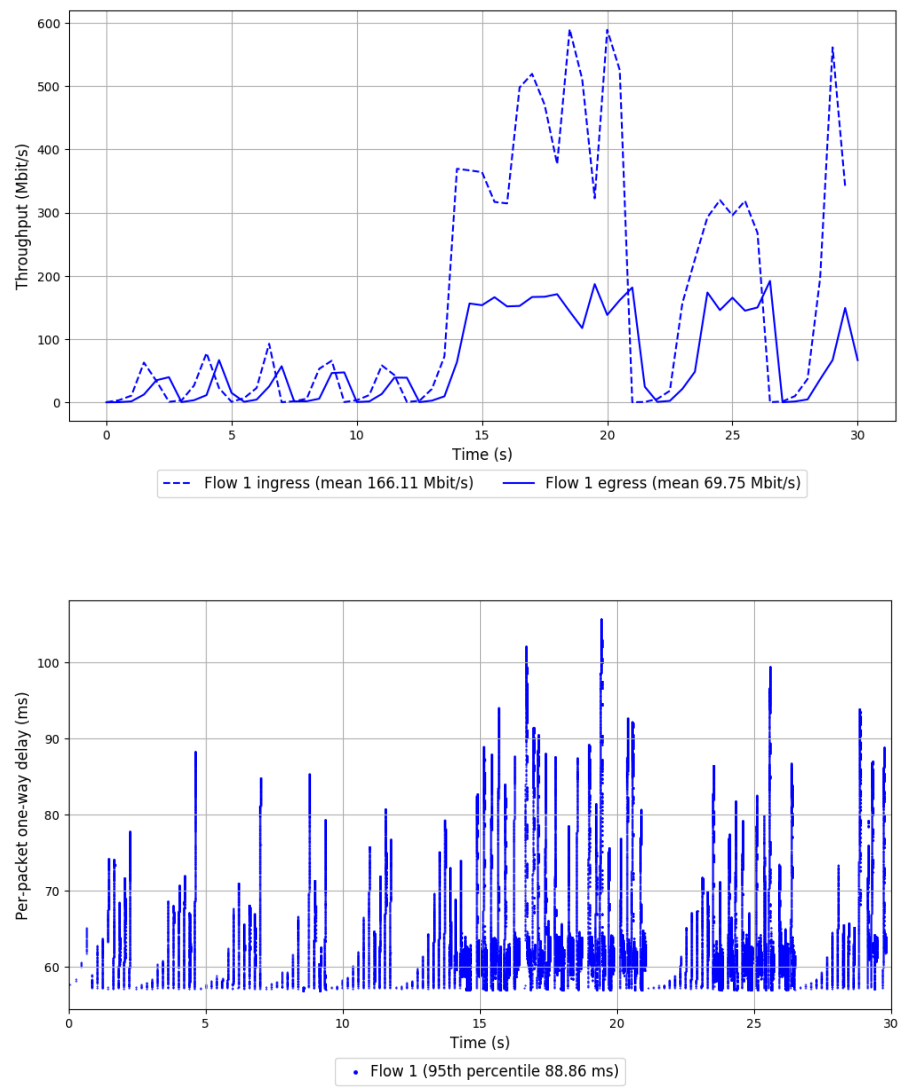


Run 5: Statistics of Verus

Start at: 2018-09-06 06:29:06  
End at: 2018-09-06 06:29:36  
Local clock offset: 1.807 ms  
Remote clock offset: -36.935 ms

# Below is generated by plot.py at 2018-09-06 07:04:38  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 69.75 Mbit/s  
95th percentile per-packet one-way delay: 88.856 ms  
Loss rate: 58.00%  
-- Flow 1:  
Average throughput: 69.75 Mbit/s  
95th percentile per-packet one-way delay: 88.856 ms  
Loss rate: 58.00%

Run 5: Report of Verus — Data Link

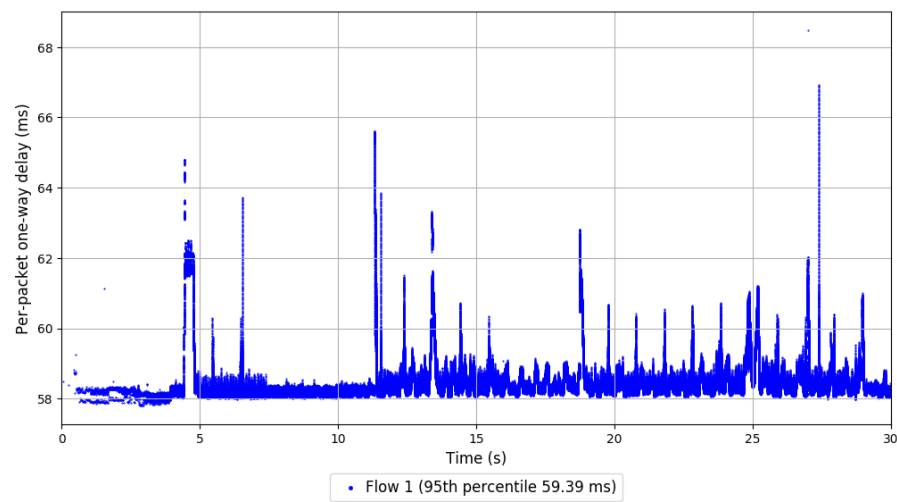
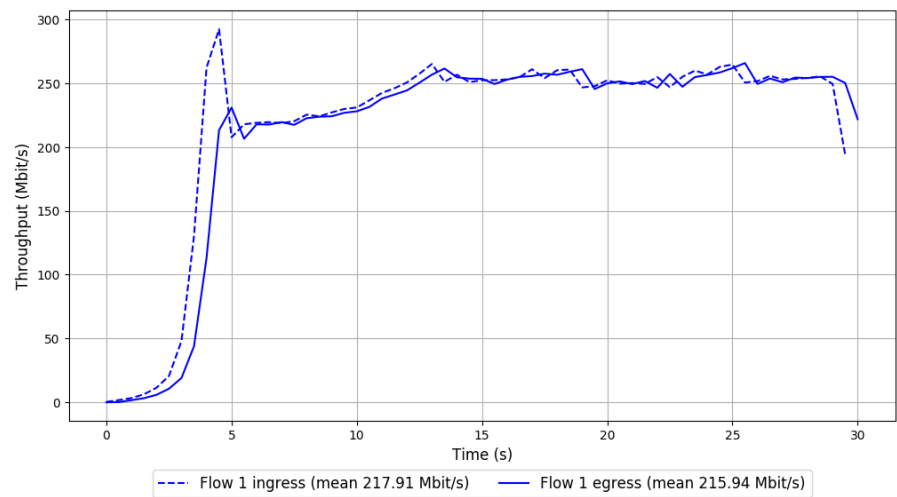


Run 1: Statistics of PCC-Vivace

Start at: 2018-09-06 04:57:10  
End at: 2018-09-06 04:57:40  
Local clock offset: 1.327 ms  
Remote clock offset: -35.262 ms

# Below is generated by plot.py at 2018-09-06 07:05:46  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 215.94 Mbit/s  
95th percentile per-packet one-way delay: 59.392 ms  
Loss rate: 0.90%  
-- Flow 1:  
Average throughput: 215.94 Mbit/s  
95th percentile per-packet one-way delay: 59.392 ms  
Loss rate: 0.90%

Run 1: Report of PCC-Vivace — Data Link

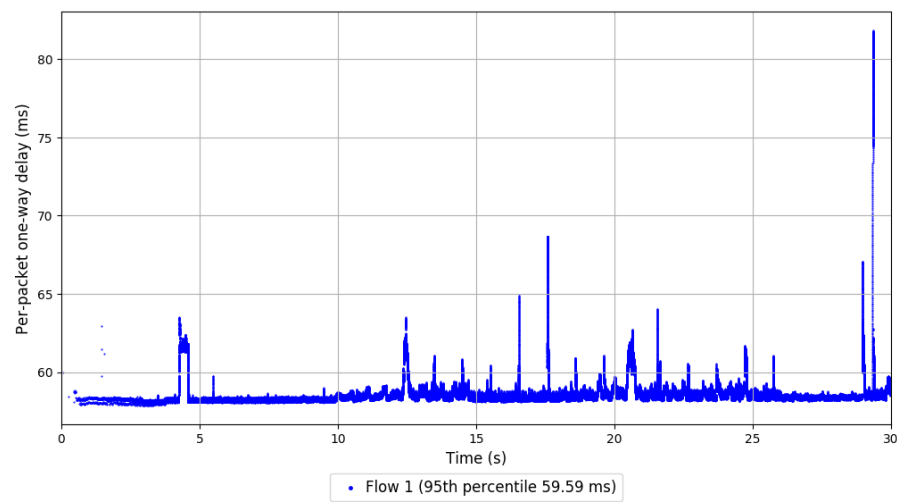
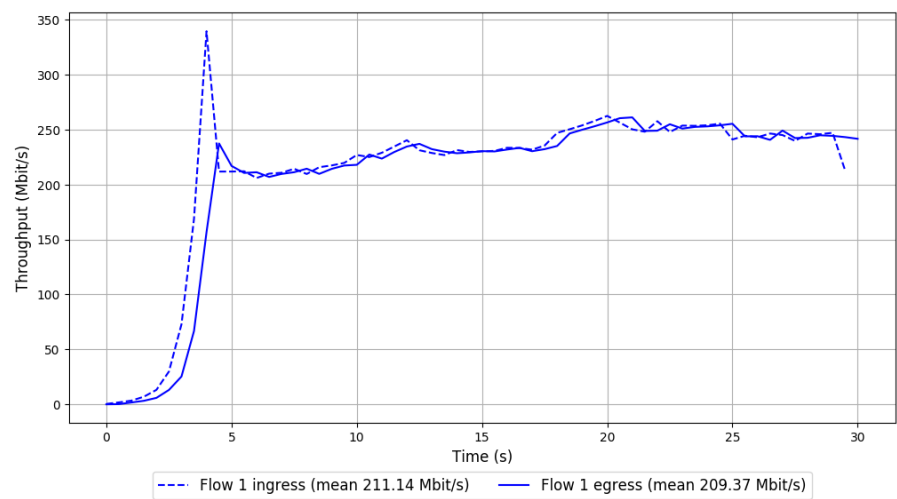


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-06 05:20:13  
End at: 2018-09-06 05:20:43  
Local clock offset: 0.722 ms  
Remote clock offset: -36.927 ms

# Below is generated by plot.py at 2018-09-06 07:05:48  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 209.37 Mbit/s  
95th percentile per-packet one-way delay: 59.587 ms  
Loss rate: 0.84%  
-- Flow 1:  
Average throughput: 209.37 Mbit/s  
95th percentile per-packet one-way delay: 59.587 ms  
Loss rate: 0.84%

Run 2: Report of PCC-Vivace — Data Link



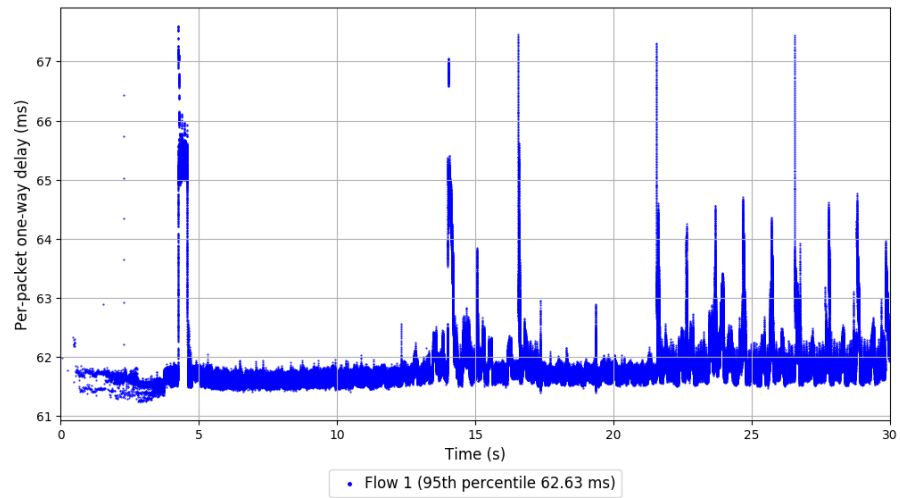
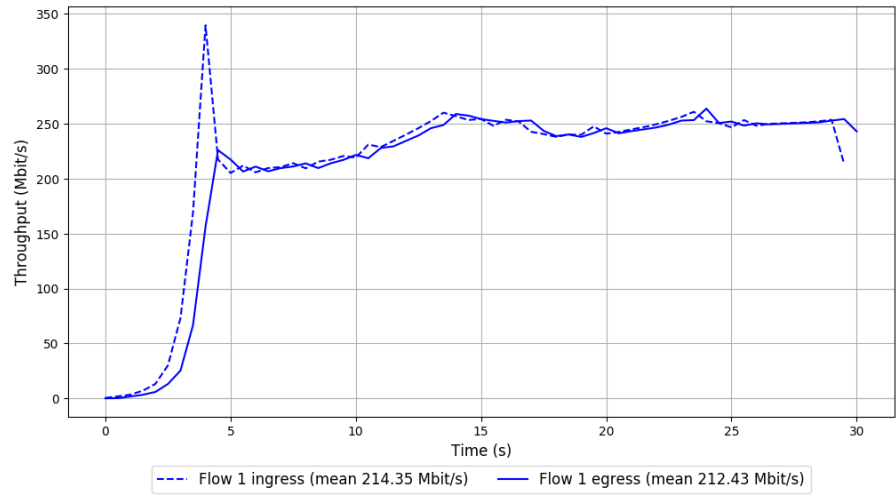
Run 3: Statistics of PCC-Vivace

Start at: 2018-09-06 05:43:25  
End at: 2018-09-06 05:43:55  
Local clock offset: 0.798 ms  
Remote clock offset: -35.098 ms

# Below is generated by plot.py at 2018-09-06 07:05:54  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 212.43 Mbit/s  
95th percentile per-packet one-way delay: 62.632 ms  
Loss rate: 0.89%  
-- Flow 1:  
Average throughput: 212.43 Mbit/s  
95th percentile per-packet one-way delay: 62.632 ms  
Loss rate: 0.89%



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

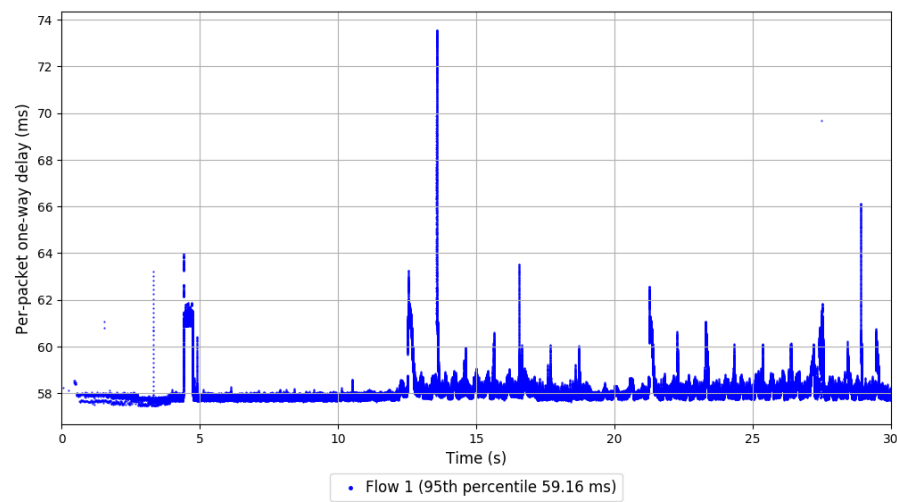
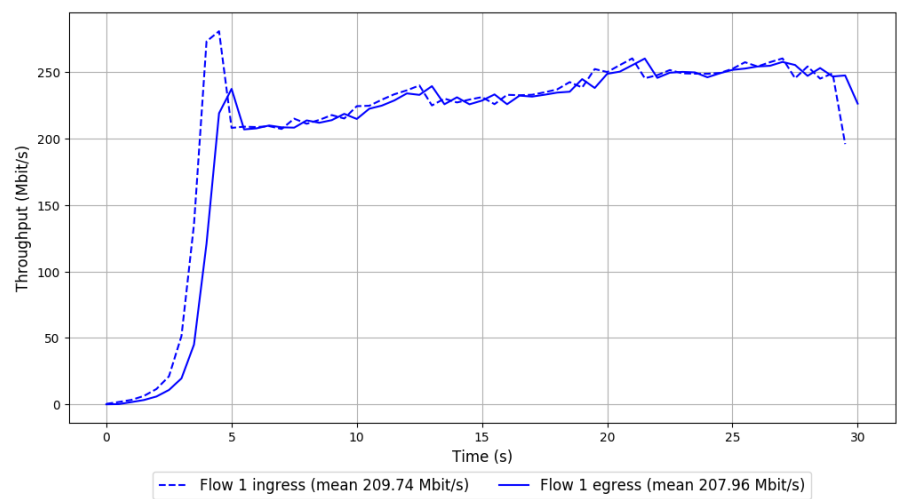


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-06 06:12:09  
End at: 2018-09-06 06:12:39  
Local clock offset: 0.524 ms  
Remote clock offset: -37.821 ms

# Below is generated by plot.py at 2018-09-06 07:05:54  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 207.96 Mbit/s  
95th percentile per-packet one-way delay: 59.161 ms  
Loss rate: 0.85%  
-- Flow 1:  
Average throughput: 207.96 Mbit/s  
95th percentile per-packet one-way delay: 59.161 ms  
Loss rate: 0.85%

Run 4: Report of PCC-Vivace — Data Link

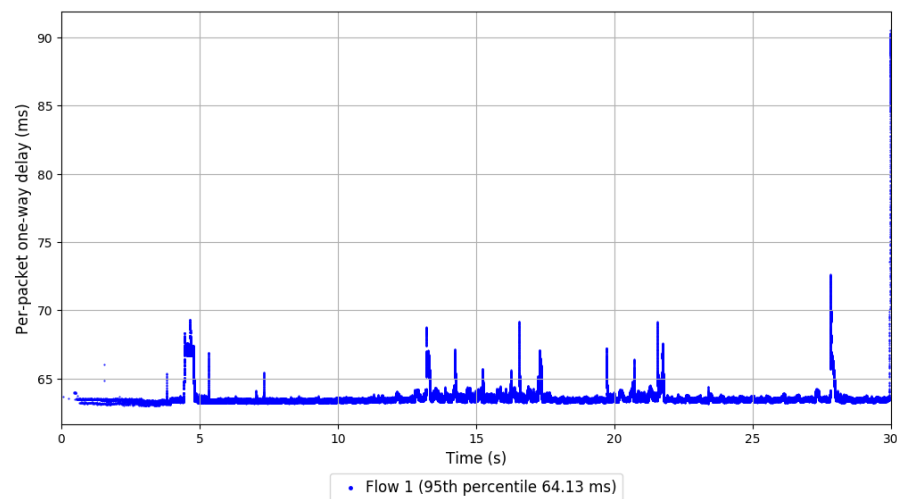
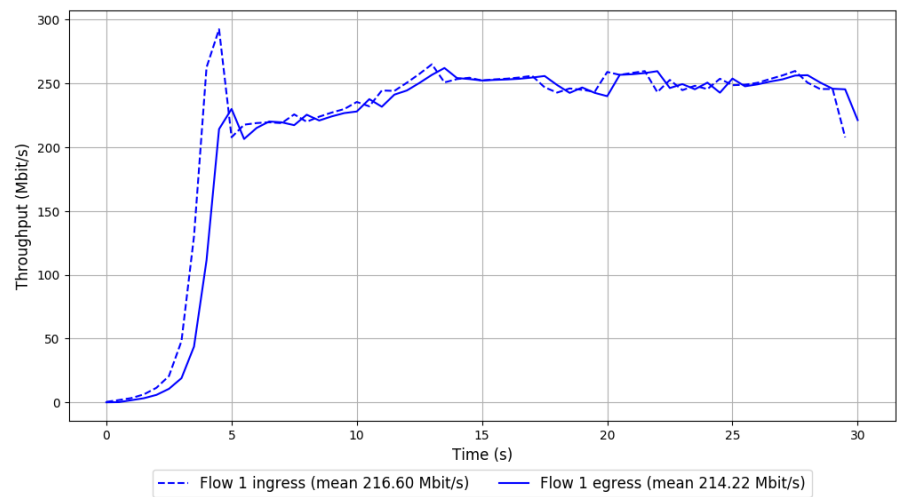


Run 5: Statistics of PCC-Vivace

Start at: 2018-09-06 06:35:26  
End at: 2018-09-06 06:35:56  
Local clock offset: -1.787 ms  
Remote clock offset: -33.808 ms

# Below is generated by plot.py at 2018-09-06 07:05:54  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 214.22 Mbit/s  
95th percentile per-packet one-way delay: 64.126 ms  
Loss rate: 1.09%  
-- Flow 1:  
Average throughput: 214.22 Mbit/s  
95th percentile per-packet one-way delay: 64.126 ms  
Loss rate: 1.09%

Run 5: Report of PCC-Vivace — Data Link

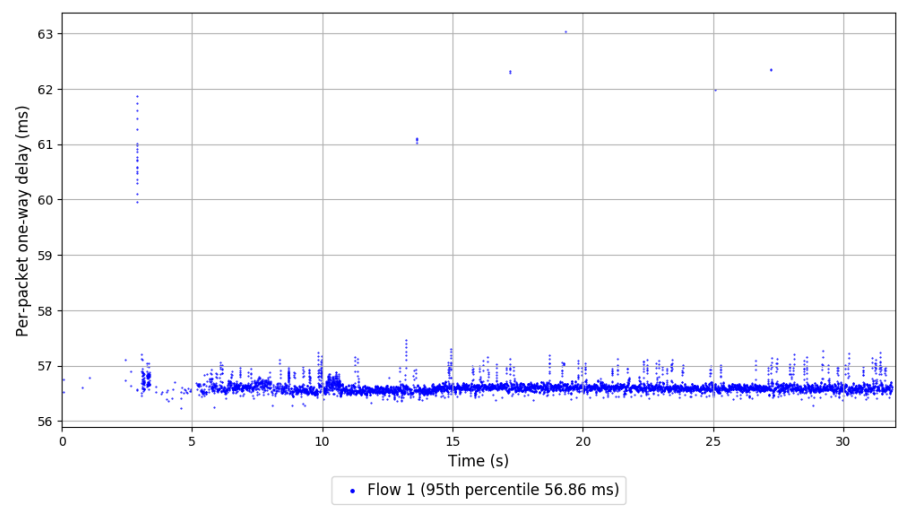
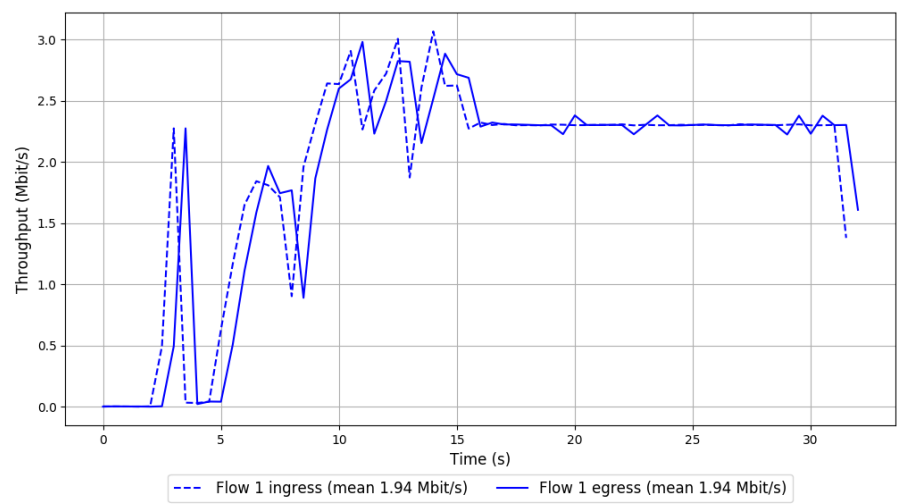


```
Run 1: Statistics of WebRTC media

Start at: 2018-09-06 04:44:38
End at: 2018-09-06 04:45:08
Local clock offset: -1.634 ms
Remote clock offset: -39.625 ms

# Below is generated by plot.py at 2018-09-06 07:05:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 56.863 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 56.863 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



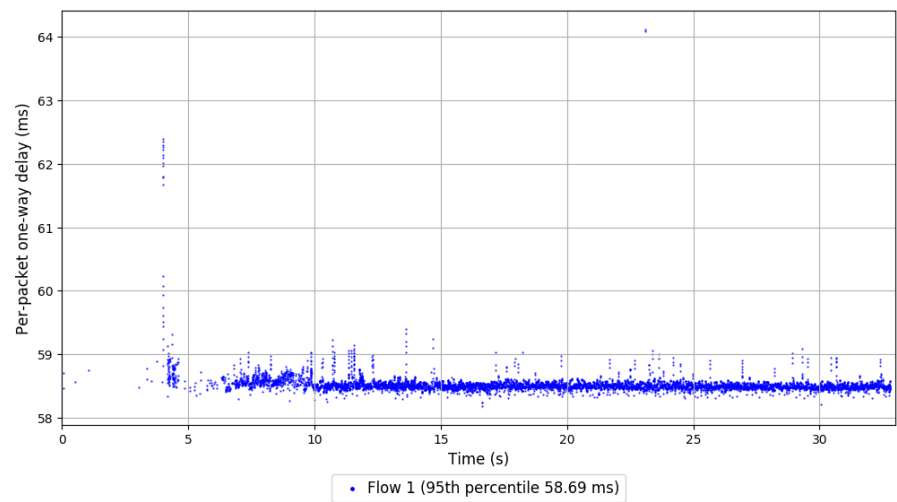
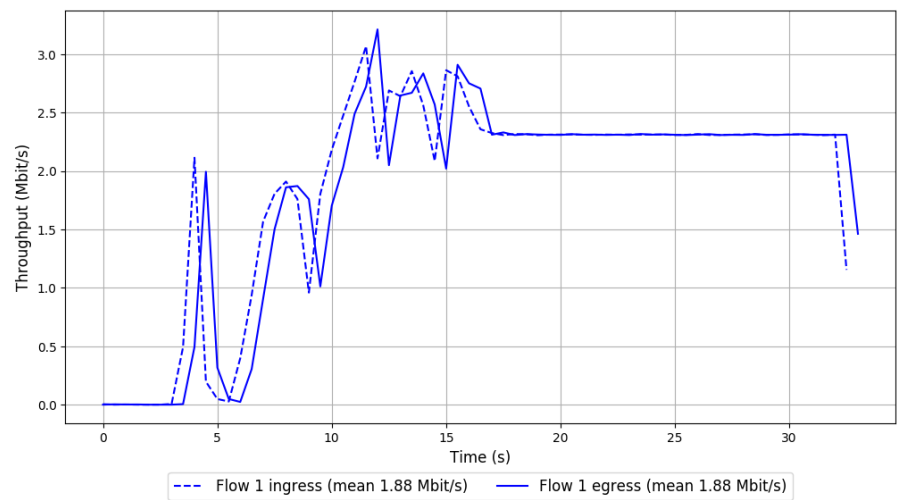
Run 2: Statistics of WebRTC media

Start at: 2018-09-06 05:07:47  
End at: 2018-09-06 05:08:17  
Local clock offset: -1.275 ms  
Remote clock offset: -37.206 ms

# Below is generated by plot.py at 2018-09-06 07:05:54  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 1.88 Mbit/s  
95th percentile per-packet one-way delay: 58.690 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.88 Mbit/s  
95th percentile per-packet one-way delay: 58.690 ms  
Loss rate: 0.00%



Run 2: Report of WebRTC media — Data Link

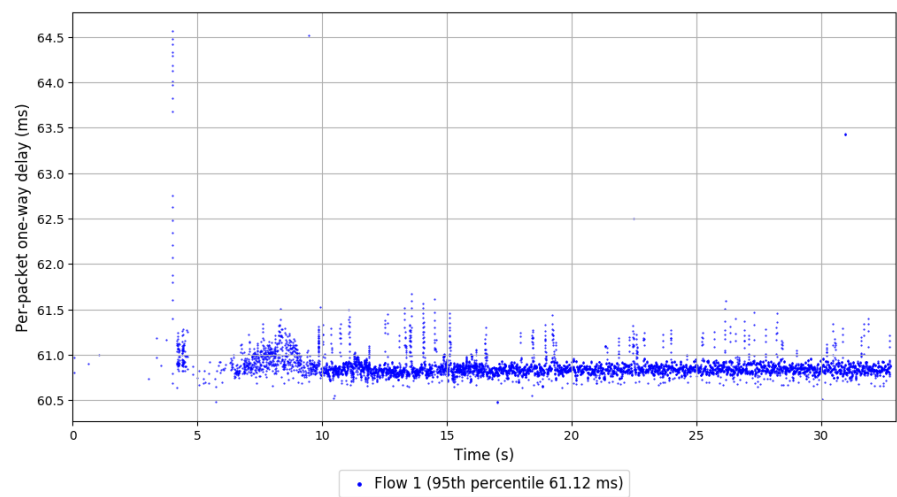
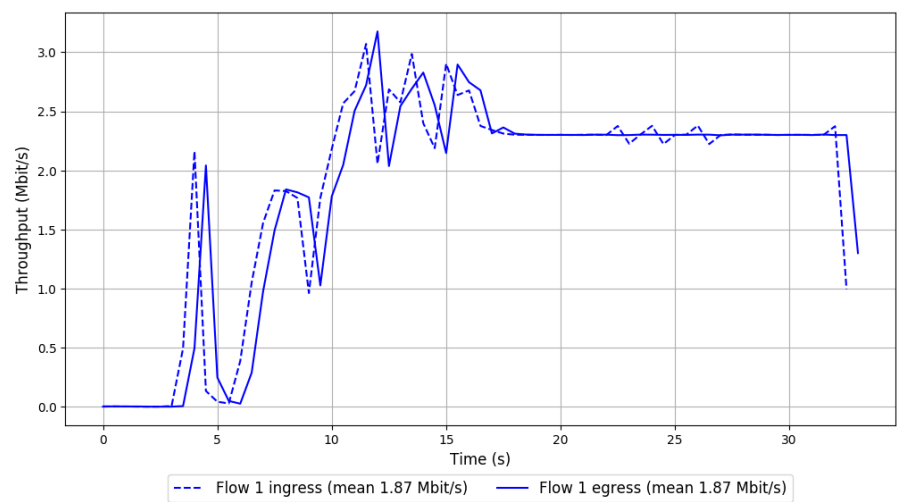


Run 3: Statistics of WebRTC media

Start at: 2018-09-06 05:30:53  
End at: 2018-09-06 05:31:23  
Local clock offset: 1.079 ms  
Remote clock offset: -35.041 ms

# Below is generated by plot.py at 2018-09-06 07:05:54  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 61.118 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 61.118 ms  
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

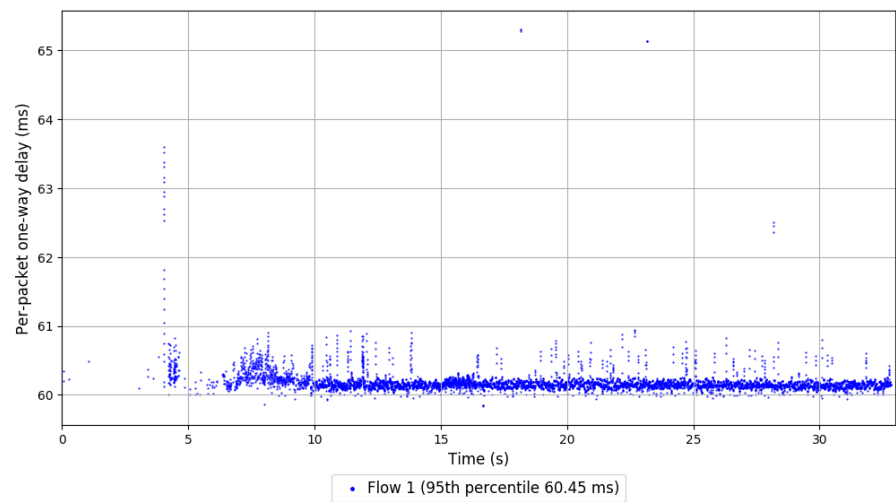
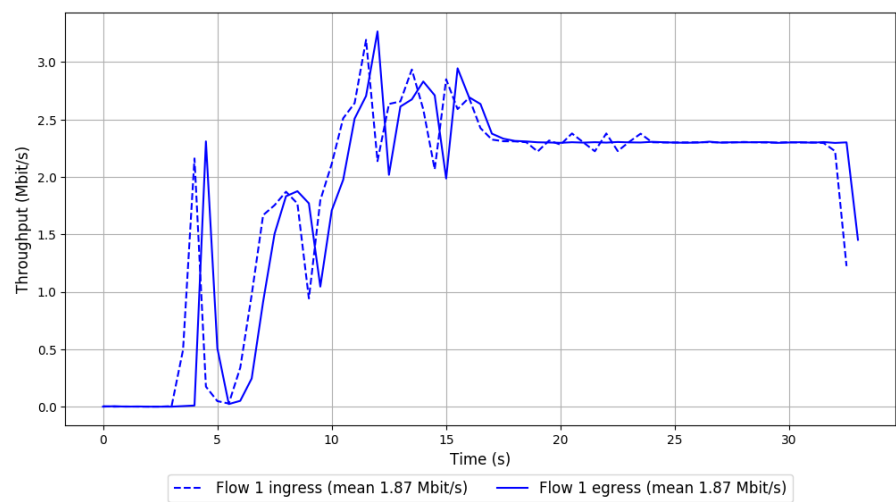


Run 4: Statistics of WebRTC media

Start at: 2018-09-06 05:54:07  
End at: 2018-09-06 05:54:37  
Local clock offset: -0.694 ms  
Remote clock offset: -37.126 ms

# Below is generated by plot.py at 2018-09-06 07:05:54  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 60.451 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 60.451 ms  
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-06 06:22:53  
End at: 2018-09-06 06:23:23  
Local clock offset: -3.147 ms  
Remote clock offset: -34.752 ms

# Below is generated by plot.py at 2018-09-06 07:05:54  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 64.780 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.87 Mbit/s  
95th percentile per-packet one-way delay: 64.780 ms  
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

