

## Pantheon Report

Generated at 2018-07-10 20:15:11 (UTC).

Data path: Stanford ppp0 ppp0 (*remote*) → AWS California 1 Ethernet (*local*).

Repeated the test of 17 congestion control schemes 3 times.

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

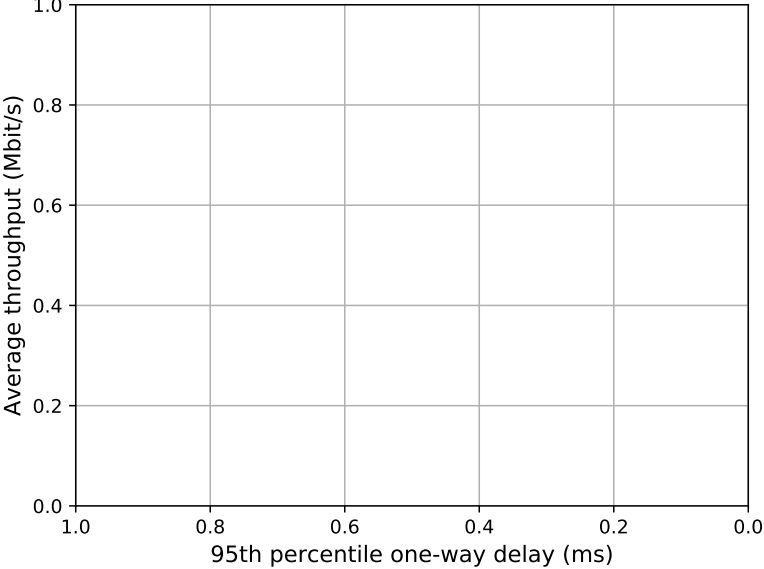
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

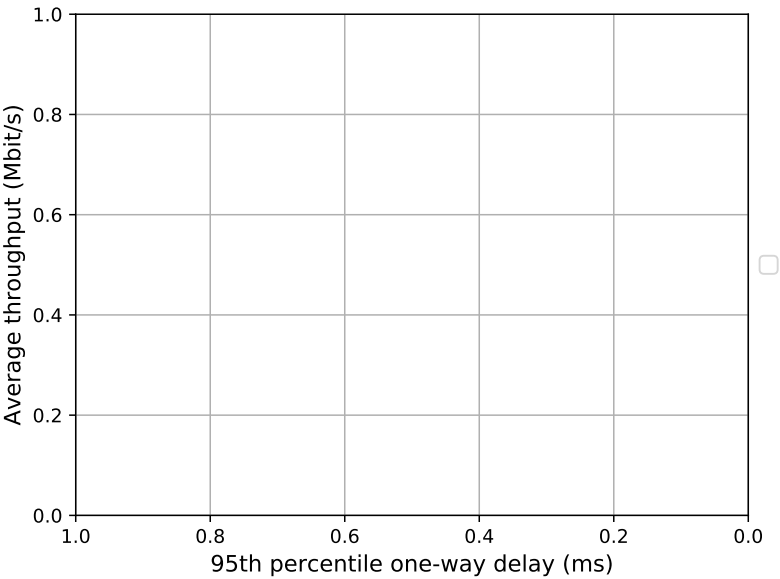
Git summary:

```
branch: master @ 9250dbeec7fb57193cdff1ba8c440b4e16ab30f0
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ 37162fe9af85249aeccac061c93e75640ef710b5
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
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-quirk @ 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 Stanford ppp0 to AWS California 1, 3 runs of 30s each per scheme  
3 flows with 10s interval between flows (mean of all runs by scheme)



test from Stanford ppp0 to AWS California 1, 3 runs of 30s each per scheme  
3 flows with 10s interval between flows





Run 1: Statistics of TCP BBR

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of TCP BBR — Data Link

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Run 2: Statistics of TCP BBR

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of TCP BBR — Data Link

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Run 3: Statistics of TCP BBR

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



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

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Run 1: Statistics of Copa

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of Copa — Data Link

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Run 2: Statistics of Copa

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of Copa — Data Link

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Run 3: Statistics of Copa

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 3: Report of Copa — Data Link

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Run 1: Statistics of TCP Cubic

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



Run 1: Report of TCP Cubic — Data Link

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Run 2: Statistics of TCP Cubic

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of TCP Cubic — Data Link

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Run 3: Statistics of TCP Cubic

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

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

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Run 1: Statistics of FillP

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of FillP — Data Link

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Run 2: Statistics of FillP

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



Run 2: Report of FillP — Data Link

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Run 3: Statistics of FillP

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

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

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Run 1: Statistics of FillP-Sheep

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of FillP-Sheep — Data Link

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Run 2: Statistics of FillP-Sheep

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of FillP-Sheep — Data Link

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Run 3: Statistics of FillP-Sheep

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



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

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Run 1: Statistics of Indigo

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of Indigo — Data Link

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Run 2: Statistics of Indigo

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of Indigo — Data Link

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Run 3: Statistics of Indigo

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 3: Report of Indigo — Data Link

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Run 1: Statistics of LEDBAT

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



Run 1: Report of LEDBAT — Data Link

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Run 2: Statistics of LEDBAT

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of LEDBAT — Data Link

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Run 3: Statistics of LEDBAT

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

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

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Run 1: Statistics of PCC-Allegro

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of PCC-Allegro — Data Link

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Run 2: Statistics of PCC-Allegro

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



Run 2: Report of PCC-Allegro — Data Link

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Run 3: Statistics of PCC-Allegro

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 3: Report of PCC-Allegro — Data Link

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Run 1: Statistics of PCC-Expr

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of PCC-Expr — Data Link

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Run 2: Statistics of PCC-Expr

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of PCC-Expr — Data Link

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Run 3: Statistics of PCC-Expr

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



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

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Run 1: Statistics of QUIC Cubic

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of QUIC Cubic — Data Link

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Run 2: Statistics of QUIC Cubic

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of QUIC Cubic — Data Link

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Run 3: Statistics of QUIC Cubic

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

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

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Run 1: Statistics of SCReAM

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



Run 1: Report of SReAM — Data Link

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Run 2: Statistics of SCReAM

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of SReAM — Data Link

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Run 3: Statistics of SCReAM

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

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

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Run 1: Statistics of Sprout

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of Sprout — Data Link

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Run 2: Statistics of Sprout

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



Run 2: Report of Sprout — Data Link

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Run 3: Statistics of Sprout

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 3: Report of Sprout — Data Link

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Run 1: Statistics of TaoVA-100x

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

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

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Run 2: Statistics of TaoVA-100x

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

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

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Run 3: Statistics of TaoVA-100x

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



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

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Run 1: Statistics of TCP Vegas

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of TCP Vegas — Data Link

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Run 2: Statistics of TCP Vegas

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of TCP Vegas — Data Link

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Run 3: Statistics of TCP Vegas

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

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

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Run 1: Statistics of Verus

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



Run 1: Report of Verus — Data Link

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Run 2: Statistics of Verus

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of Verus — Data Link

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Run 3: Statistics of Verus

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 3: Report of Verus — Data Link

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Run 1: Statistics of PCC-Vivace

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of PCC-Vivace — Data Link

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Run 2: Statistics of PCC-Vivace

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



Run 2: Report of PCC-Vivace — Data Link

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Run 3: Statistics of PCC-Vivace

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 3: Report of PCC-Vivace — Data Link

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Run 1: Statistics of WebRTC media

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 1: Report of WebRTC media — Data Link

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Run 2: Statistics of WebRTC media

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows

Run 2: Report of WebRTC media — Data Link

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Run 3: Statistics of WebRTC media

/home/ubuntu/pantheon/data/2018-07-10T18-46-Stanford-ppp0-to-AWS-California-1-3-runs-3-flows



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

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