# Traffic Management Benchmarking Framework

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# Traffic Management Benchmarking Overview

- Extends RFC 2544 benchmarking into traffic management functionality of network elements:

  – Classification / Prioritization

  – Policing

  – Queuing / Scheduling

  – Shaping

- The draft specifies both stateless and stateful (TCP) traffic testing to conduct these benchmarks

  – Methods to define and generate repeatable TCP application "test patterns" are specified

# Rev 3: Interaction with AQM Working Group

- Net-perf-wrapper emulates some TCP application behaviors by encapsulating the open-source "net-perf" tool
  - Reviewed with the developer, Toke Hoiland-Jorgensen
  - The tool can do some of the TCP layer benchmark tests recommended in the draft, but not complex patterns

- Discovered and tested "uperf" open source tool, which can generate complex TCP test patterns
  - Initial functional / performance results were promising
  - Uperf tool has very active author, who is open to tweaking
  - Specified uperf as another open source tool to generate the repeatable TCP test patterns in this draft

# Revisions Incorporated into WGLC 1 and 2

- Incorporated all comments from three (3) detailed working group member reviews

- Addressed repeatability in test results by adding detailed procedures, specifying the result format, and requiring multiple trials, etc.
  - Used draft-bhuvan-bmwg-of-controller-benchmarking.txt as a good reference for this area

- Metrics refinement: scrubbed units of measure and specified acceptable variation of measured metrics