Comments on the Usefulness of Simple Best-Effort Traffic

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On simple best-effort traffic:

- “Simple best-effort traffic serves a useful role in the Internet, and is worth keeping.”

- “While traffic with Quality of Service mechanisms, congestion-based pricing, or the like can also be useful, we believe that they are useful as **adjuncts** to simple best-effort traffic, not as **replacements** of simple best-effort traffic.”

On flow-based fairness for simple best-effort traffic:

- “For simple best-effort traffic, some form of rough flow rate fairness is a useful goal for resource allocation.”

The Usefulness of Simple Best-Effort Traffic

- Minimal technical demands on the network infrastructure.
- Minimal demands in terms of economic infrastructure.
- Usefulness in the real world.

The Limitations of Simple Best-Effort Traffic

- QoS
- The enforcement of fairness.

The Usefulness of Flow-Based Fairness for Simple Best-Effort Traffic

- Minimal technical demands on the network infrastructure.
- Minimal demands in terms of economic infrastructure.
- Usefulness in the real world.
- Getting a share of the available bandwidth.

The Limitations of Flow-based Fairness for Simple Best-Effort Traffic

- The difficulties of enforcement.
- How is flow-based fairness defined?
  - Granularity?
  - RTT-fairness?
  - Multiple congested routers?
  - Bursty vs. smooth traffic?
  - Packets vs. bytes?
  - Unicast vs. multicast?
  - …
- Fairness over time?