

A Survey of Lower-than-Best-Effort Transport Protocols (draft-ietf-ledbat-survey-01)

Michael Welzl and David Ros
IETF-79 Beijing
November 9, 2010

About the draft

- Survey of LBE mechanisms involving the transport layer
- Current classification (more on this later):
 - delay-based — react early to queue growth
 - non-delay-based — different CA behavior
 - application layer — may be delay-based or not
 - orthogonal — other stuff worth mentioning

Changes from version -00

- Relatively minor update
 - Several additional references added to:
 - delay-based
 - app-layer
 - orthogonal
- Got detailed reviews from Mayutan Arumaithurai & Mirja Kühlewind — thanks to both!

Summary of major comments

- [Mayutan, Mirja] State pros and cons of the approaches
 - There's already some text, though probably not done in a systematic, consistent manner
 - => Will do it on a per-category basis
 - => Will better explain common points and differences between proposals

Summary of major comments

- [Mirja] Clarify classification / taxonomy
 - => We'll make the focus clearer — it's end-to-end approaches for attaining LBE-ness
 - => Some clean-up may be needed
 - => E.g., remove REALLY orthogonal stuff (e.g., DiffServ-based LBE)

Summary of major comments

- [Mirja] Clarify classification / taxonomy
 - => Proposal:
 - Delay-based approaches
 - Non-delay-based approaches
 - Upper-layer approaches
 - i.e., approaches that don't require modifying transport protocol standards
 - e.g., approaches that run on top of an existing transport, leveraging existing transport features
 - Network-assisted approaches

Summary of major comments

- Q:About the «upper-layer» stuff
 - This is «A Survey of LBE Transport Protocols»
 - => Do we also want to cover approaches that use, but do not change, existing transports?
 - => Do we also want to cover truly app-layer stuff?

Summary of major comments

- [Mayutan, Mirja] Improve the explanation of some proposals
 - E.g., TCP-LP, Vegas
 - => Will do it (but have to avoid going into too much detail)
- [Mayutan, Mirja] Re-organize the section on delay-based proposals
 - => Will do it (yes, it is a little messy now)

Other comments

- [Mayutan] Wording: change « low-priority background traffic» to either «LBE background traffic» or «delay-insensitive»
 - => Any will do for us; any particular preferences?
- [Mirja] Issue with Sync-TCP
 - Non-issue — same name, two different «Sync-TCP» protocols...

Other comments

- [Mirja] Mention all protocols by name
 - => Will do it in a more-consistent manner
- [Mirja] Cite Vegas's ancestors explicitly
 - => Will do it

Reviews & feedback

- The chairs have asked for three reviews
 - => We'd need a 3rd reviewer — any volunteers?
- Are there any other major issues that need to be addressed?

Thank you!