

# rLEDBAT: receiver-driven Low Extra Delay Background Transport for TCP draft-bagnulo-iccr-g-rledbat-01

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# rLEDBAT overview

Defines a set of mechanisms to enable a receiver to run an LBE congestion control algorithm to control the sender's rate

In particular rLEDBAT defines

How the receiver uses the RCVWND safely to control the sender's rate

- Avoid window shrinking, WS option, etc

Provides input to the LBE congestion control algorithm running at the receiver

- RTT measurements for estimating the queuing delay

- Detection of retransmissions

# Changes since 00 version

Removed the congestion control algorithm

rLEDBAT is compatible with any LBE congestion control as long as it uses the RTT and/or packet losses

Currently it refers to LEDBAT++ or any other LBE that uses RTT/pkt loss

Could point to LEDBAT if it is used with the RTT

# rLEDBAT implementation

We are working on updating our rLEDBAT implementation to be aligned with the latest LEDBAT++ draft

We expect to perform experiments in this month

Apple's receiver based LBE

[https://opensource.apple.com/source/xnu/xnu-4570.41.2/bsd/netinet/tcp\\_output.c.auto.html](https://opensource.apple.com/source/xnu/xnu-4570.41.2/bsd/netinet/tcp_output.c.auto.html)

Seems aligned with rLEDBAT, uses the RTT, the TS and the Receive Window

Would be nice to have input from Apple on rLEDBAT, working on it.

# Reviews and comments solicited

Feel free to contact me if you have further questions

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