«A new loss recovery algorithm for a stateless protocol»

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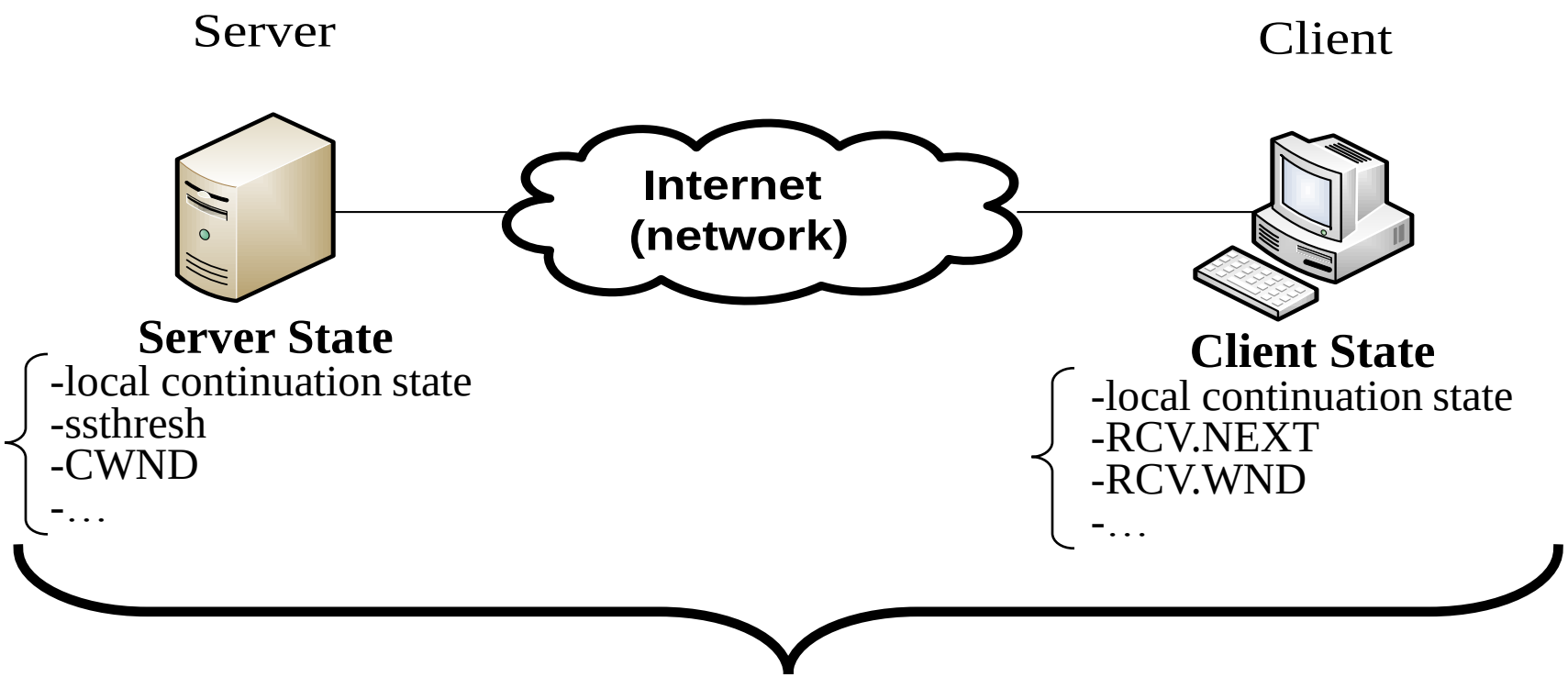
Transmission Control Protocol (TCP)

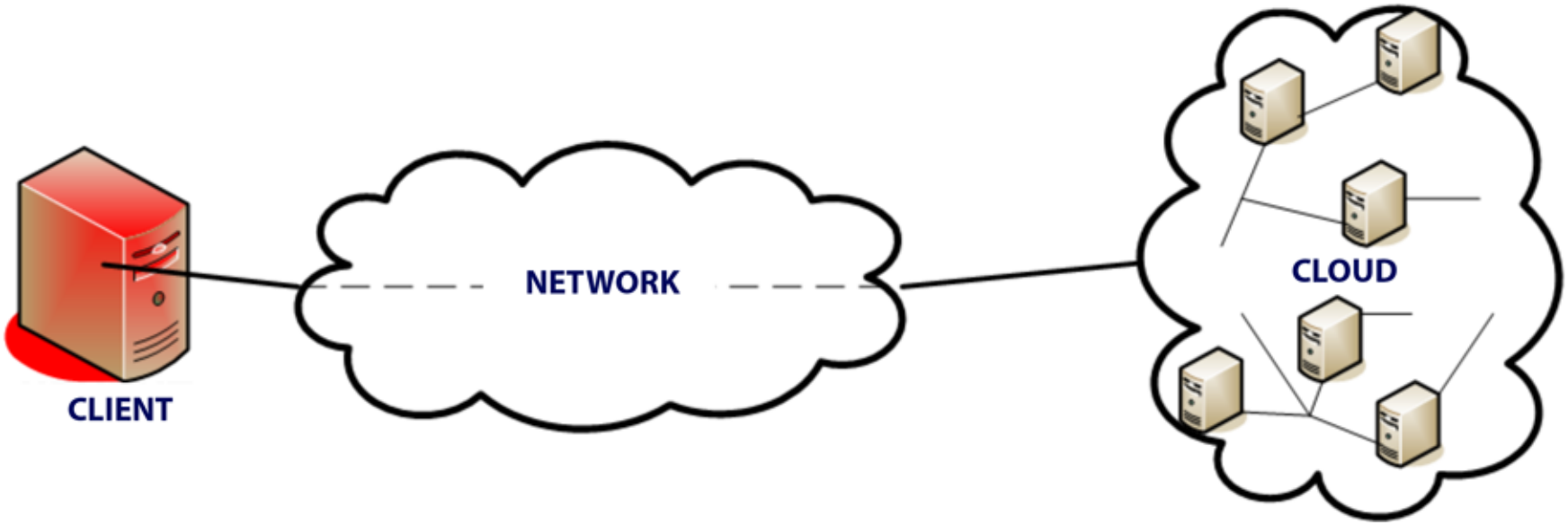


Distributed connection state

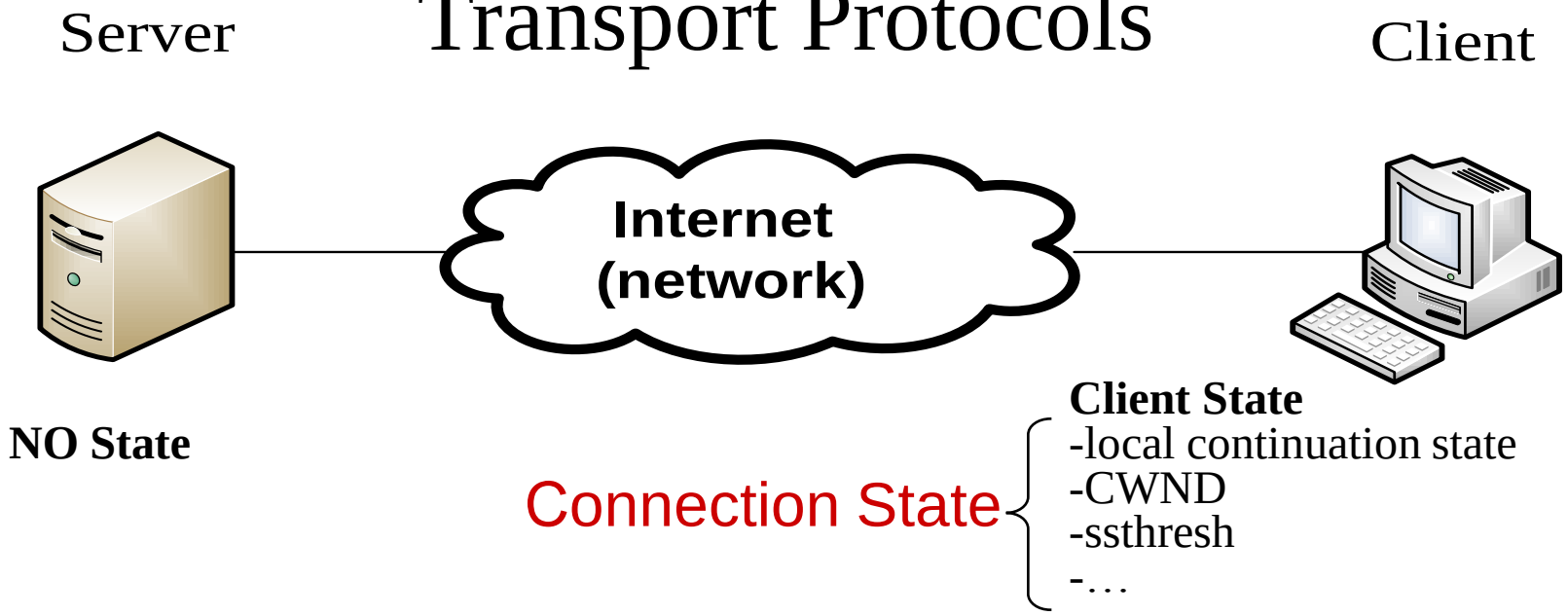
- end-to-end connection management
- reliable data transfer
- cross-platform implementation

Issues of the standard approach

- SYN attacks
- Problematic connection migration
- Limited amount of server resources
- New environments (e.g. clouds)



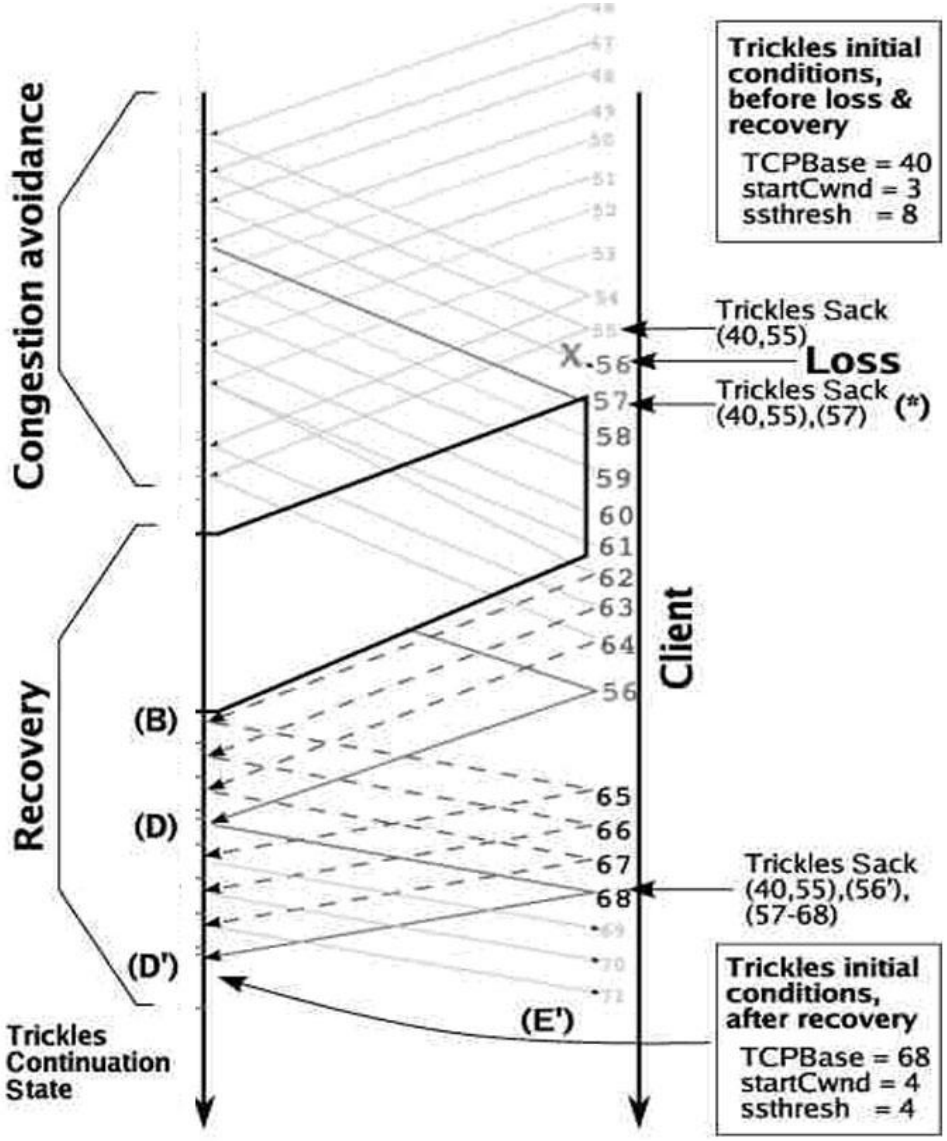
A Stateless Approach for Internet Transport Protocols



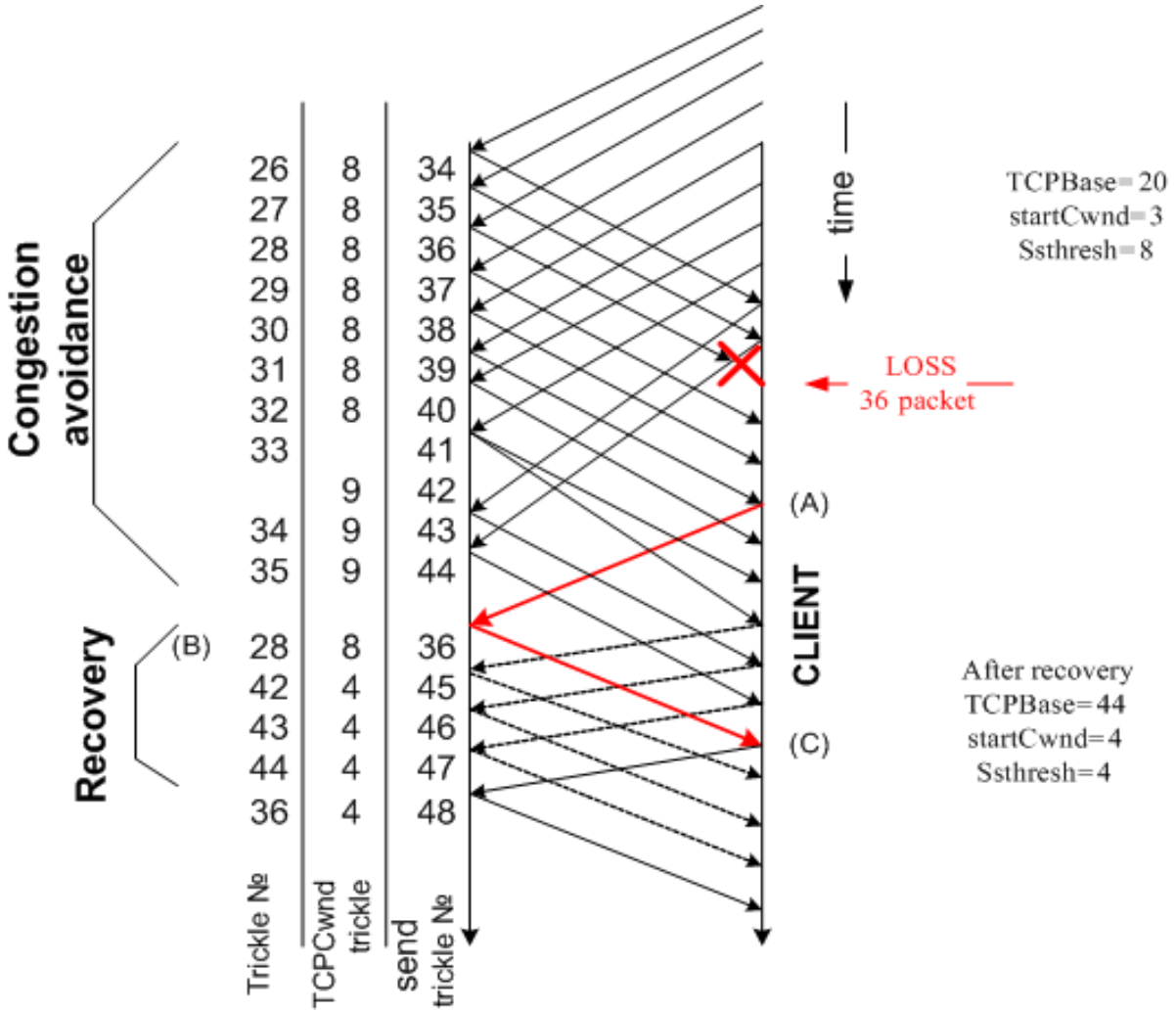
Shieh, A., Myers, A. C., and Sirer, E. G., A stateless approach to connection- oriented protocols // ACM Trans. Comput. Syst. 26, 3, Article 8 (September 2008), 50 pages.

- Full management by the client of the entire process
- Less service segments interchange
- TCP segments are modified using standard procedure to carry Trickles parameters.

Trickles functionality



Proposed algorithm



Conclusion

a) The ability to work with multiple copies of the server at the same time

b) Protection against SYN attacks

c) Increase the number of clients which can be maintained by server

Thank you for your attention!