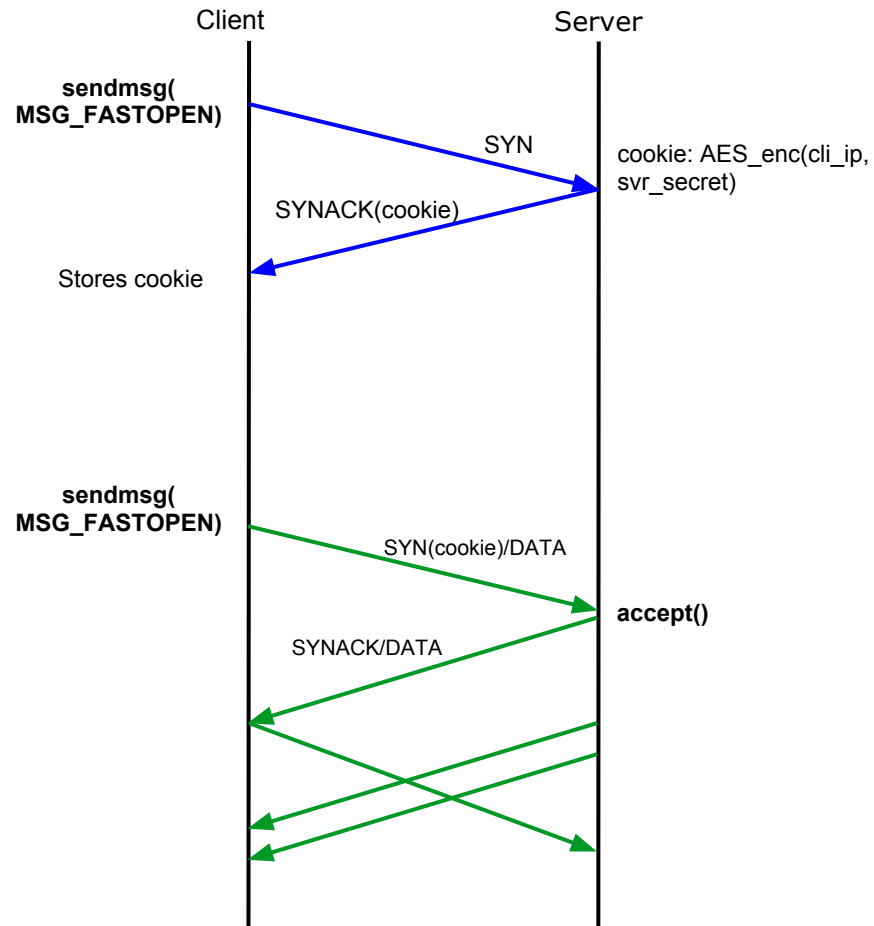




draft-ietf-tcpm-fast-open updates

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TCP Fast Open recap



sendmsg(MSG_FASTOPEN) implementation

- checked into Linux 3.5-rc5+
- sendmsg(MSG_FASTOPEN)
 - replace connect() and first write()
 - has cookie?
 - no: SYN + cookie request option
 - yes: SYN + cookie option + data
- blocking
 - blocks until handshake completes and all data buffered
e.g., sendmsg(1MB, MSG_FASTOPEN)
- non-blocking
 - returns data bytes in SYN
- on errors
 - returns errno as in connect() or write() depending on state

Detecting middleboxes dropping Fast Open SYN

- SYN retransmits do not include data
- If SYN-ACK after SYN timeout does not ack data or provide cookie
 - it's acking the SYN retransmit
 - original SYN-data or SYN-ACK is lost
- Automatically disable Fast Open on the path for 2^{**} (recurring_drops) minutes up to 1.5 days.