mptcp proxies

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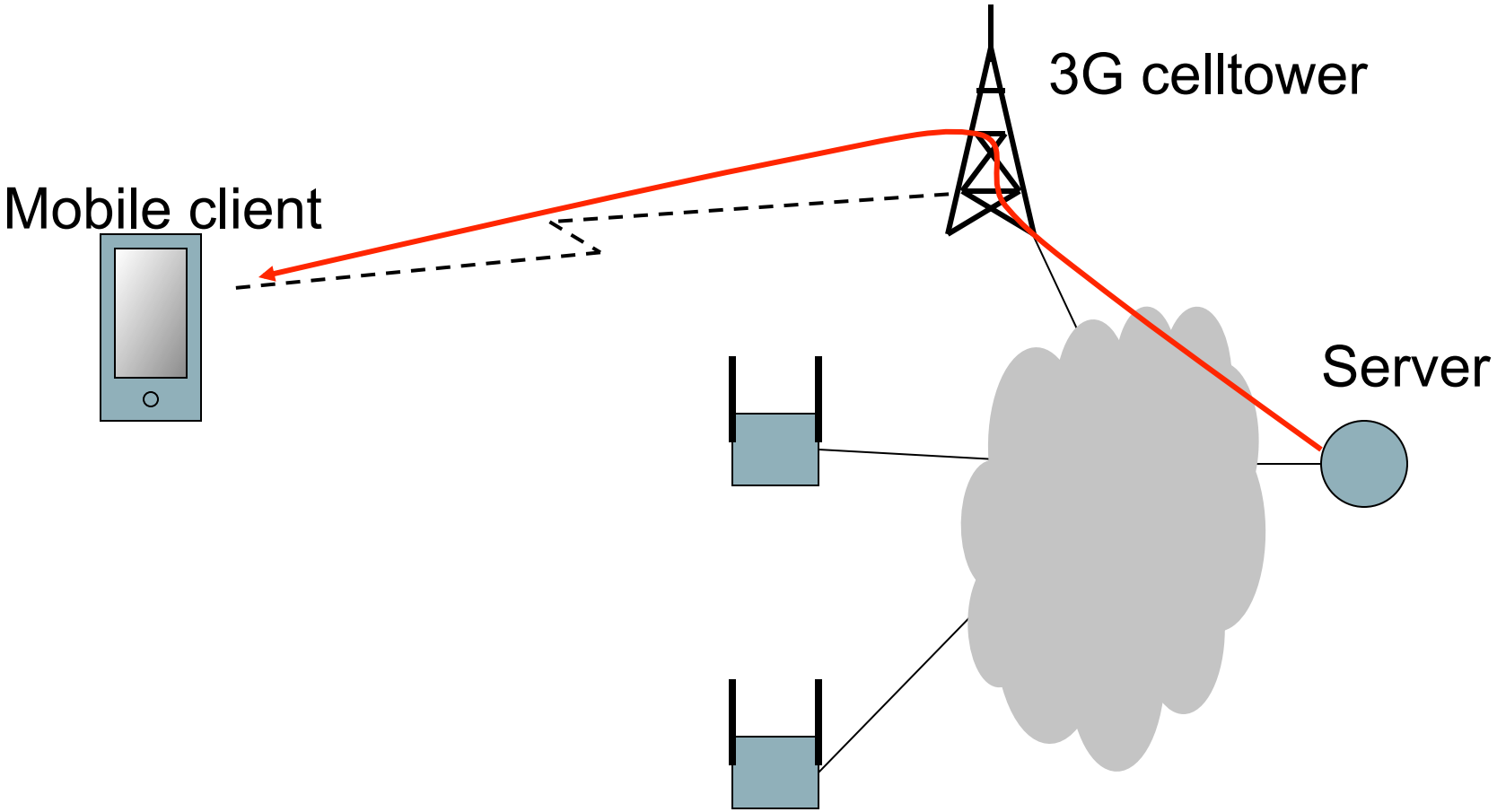
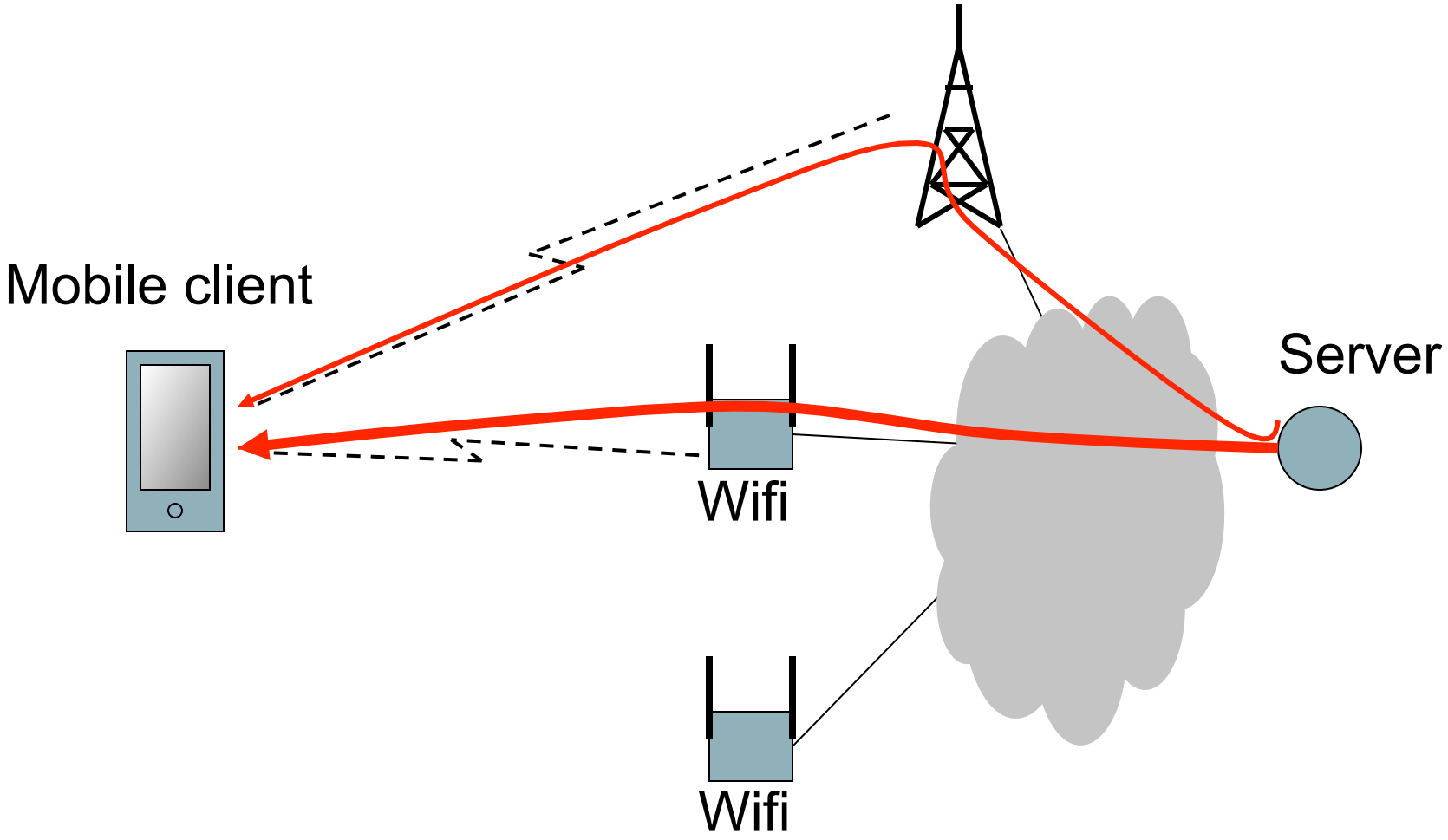
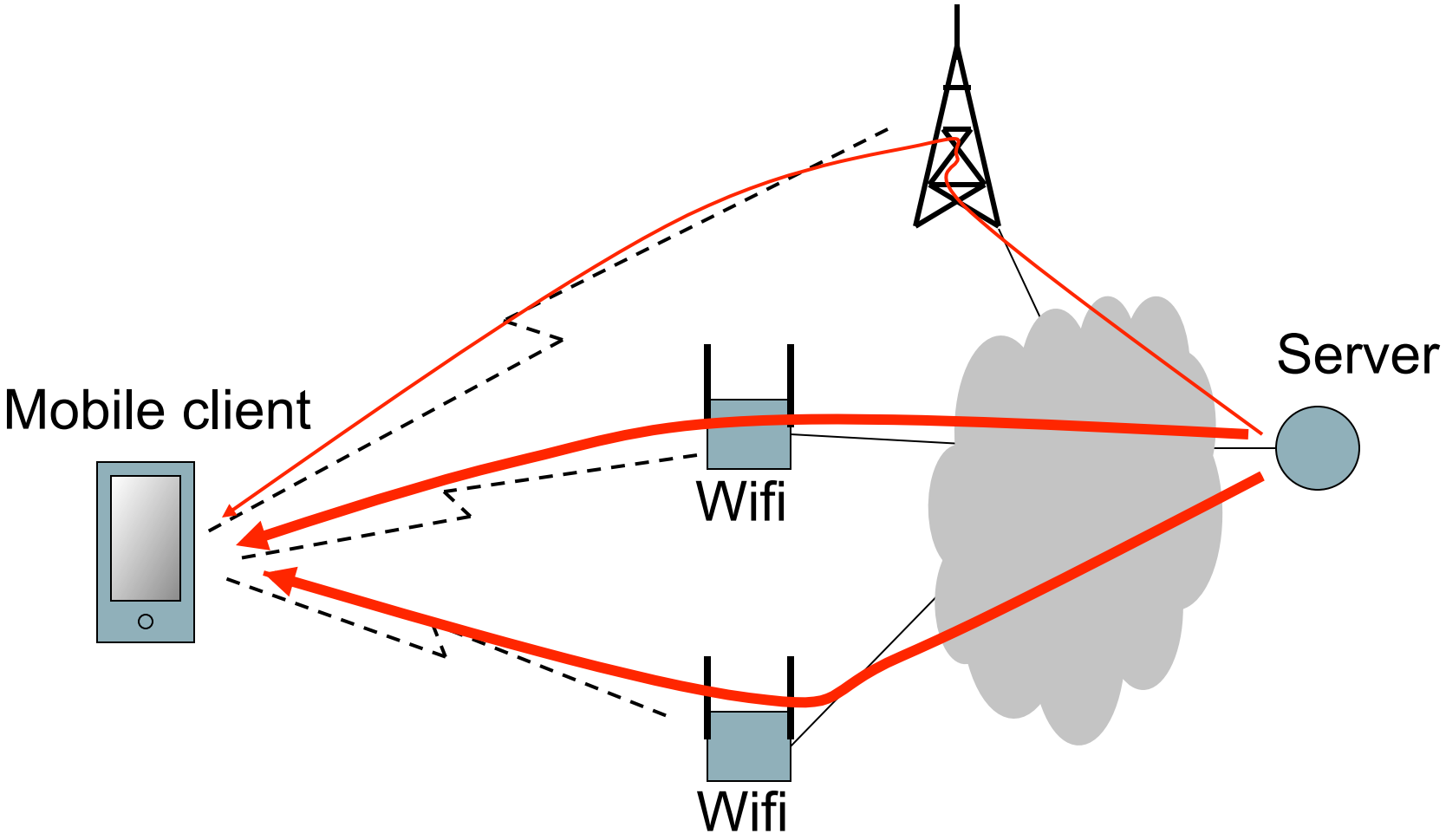
MPTCP Mobility



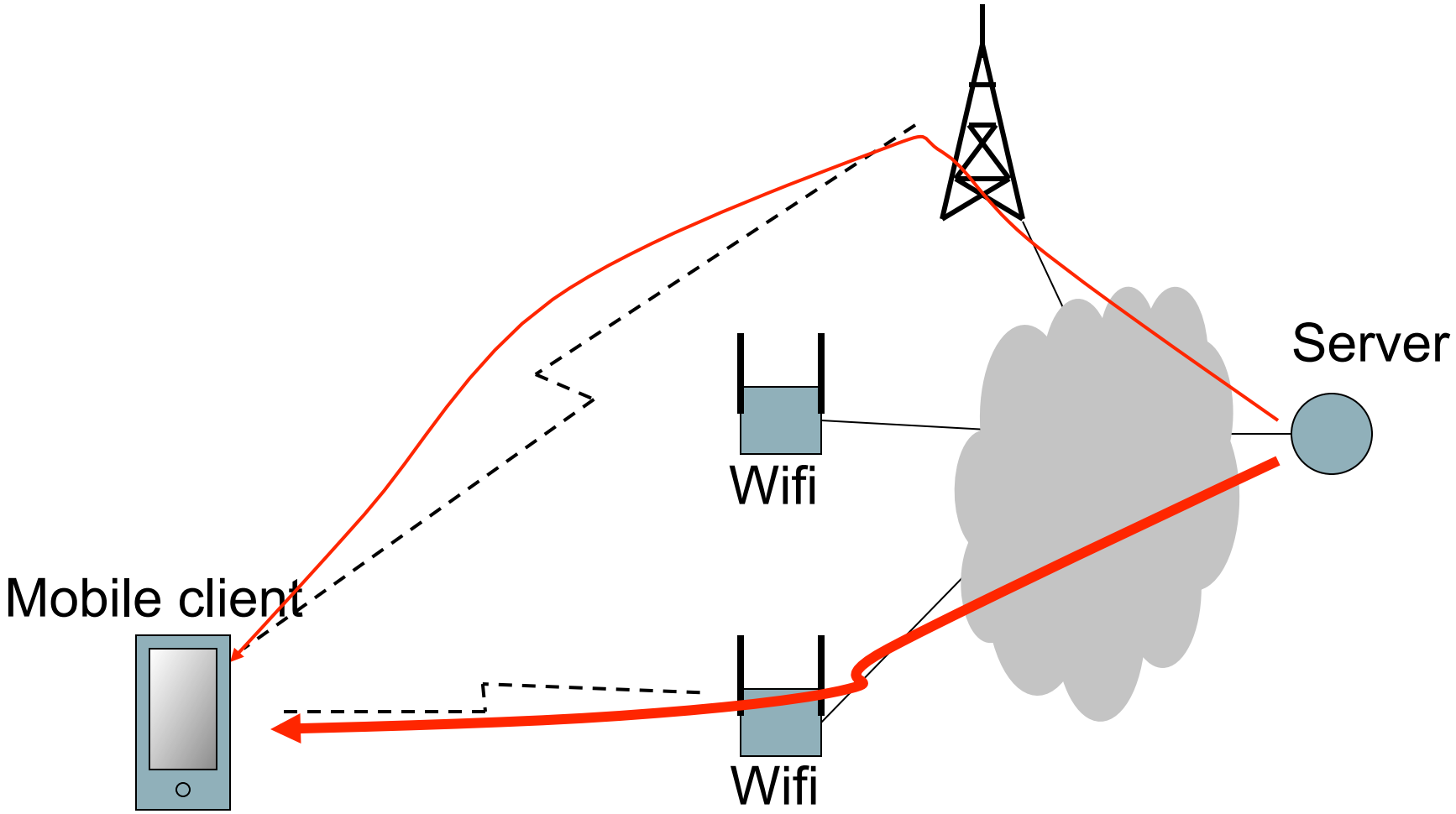
MPTCP Mobility



MPTCP Mobility



MPTCP Mobility



MPTCP as a mobility solution

Short paper: **http://nrg.cs.ucl.ac.uk/mptcp/mobility.pdf**

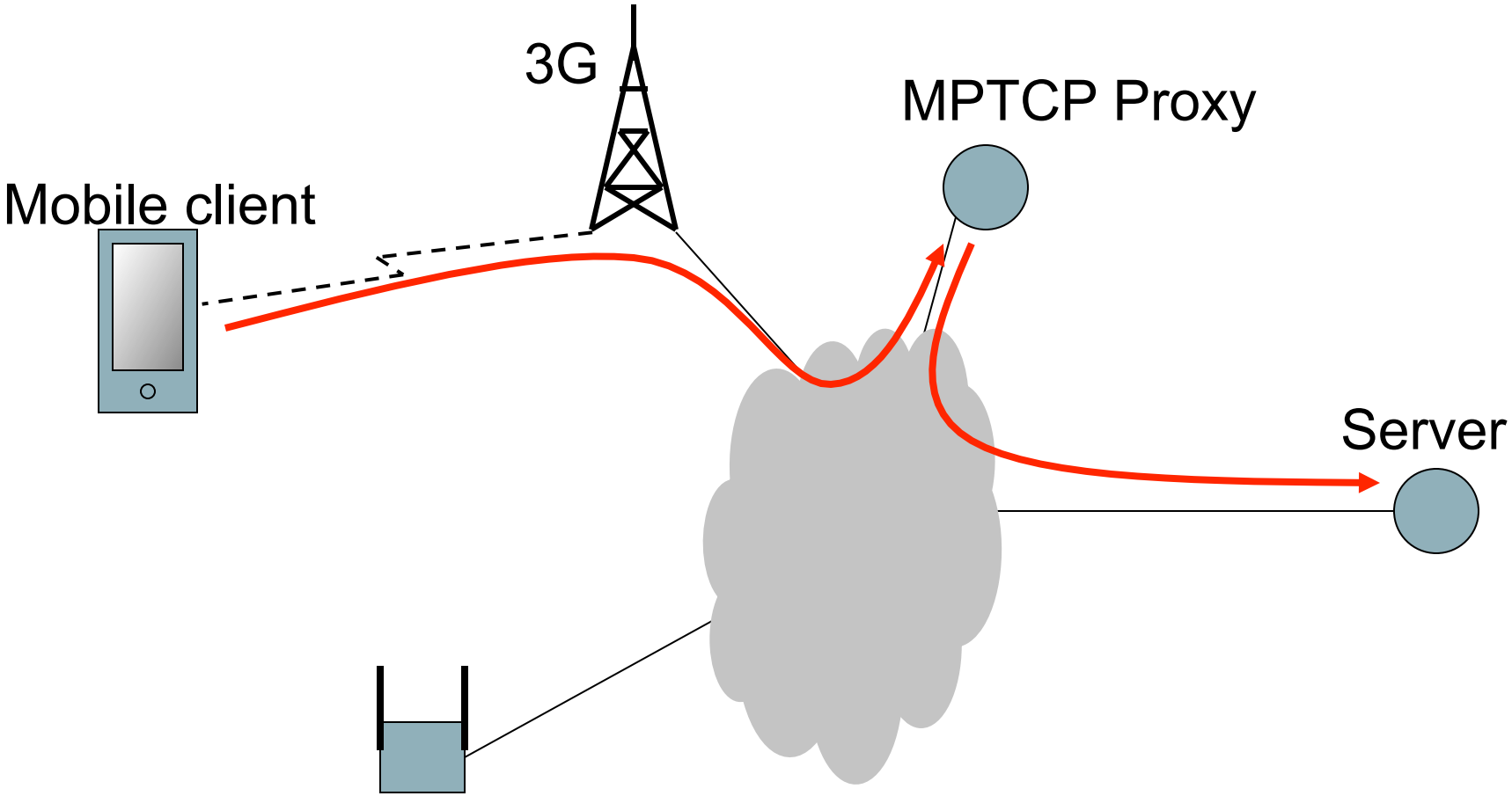
Scenario: want to use variable quality 3G and intermittently available WiFi hotspots.

- Preliminary results show we can achieve better throughput, more robustness, and save battery power.

Need to be able to depend on MPTCP availability

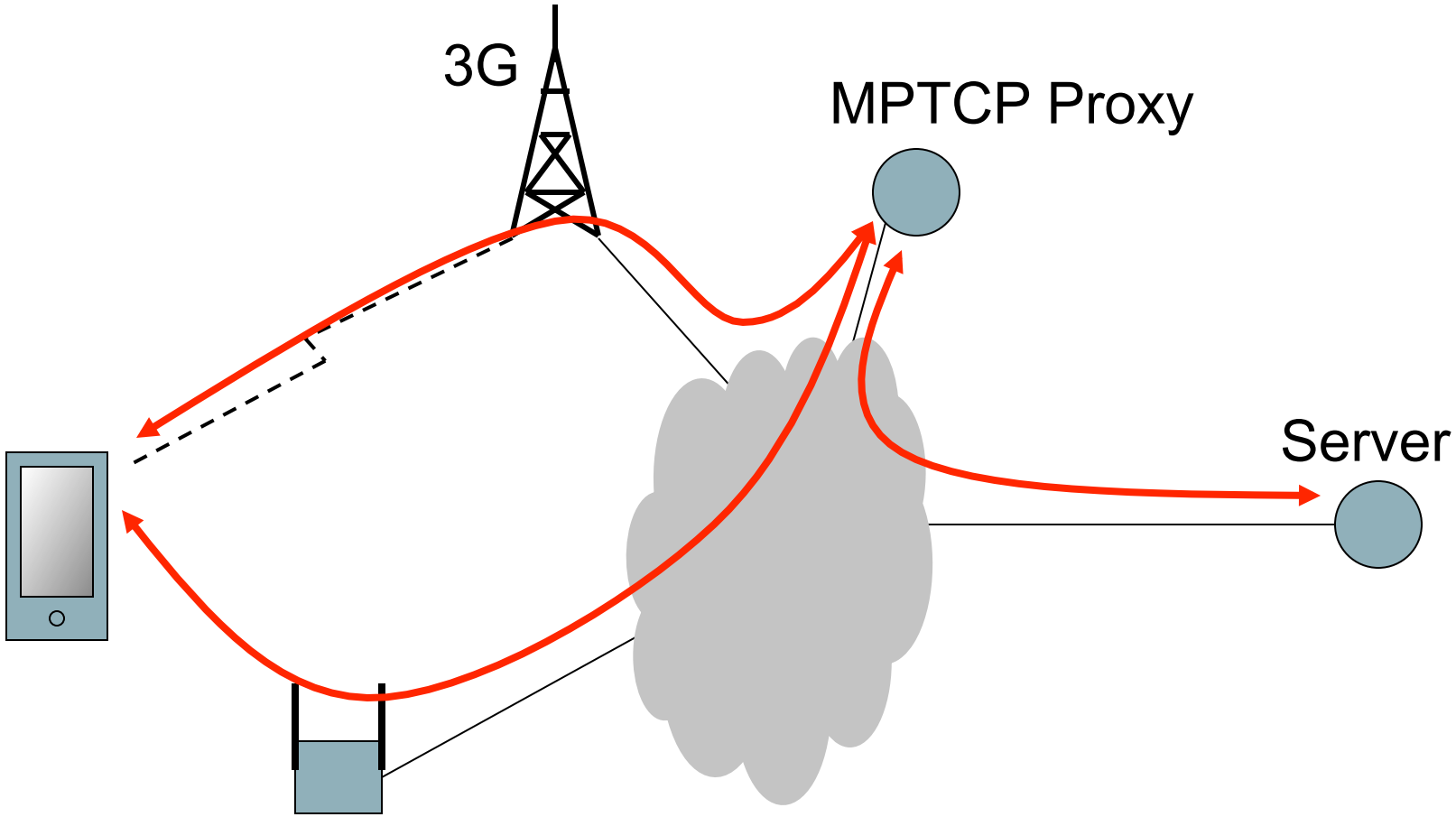
- Problem:
  - For the near future, most of the servers won't support MPTCP.
- Solution:
  - Perform MPTCP to a proxy.

MPTCP Mobility: Legacy Server



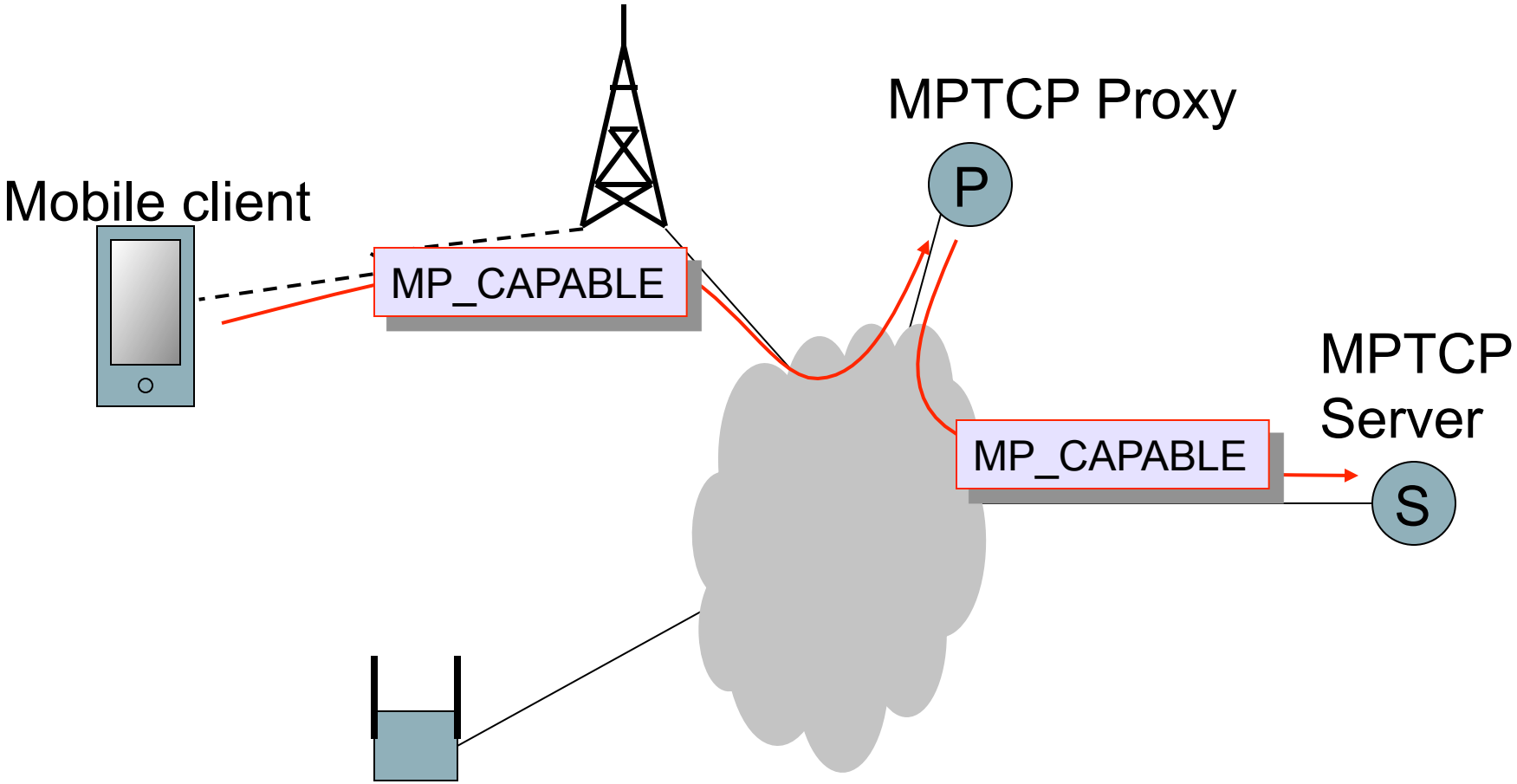
MPTCP client sends SYN to proxy, indicating address of final server. Proxy initiates connection to server.

MPTCP Mobility: Legacy Server

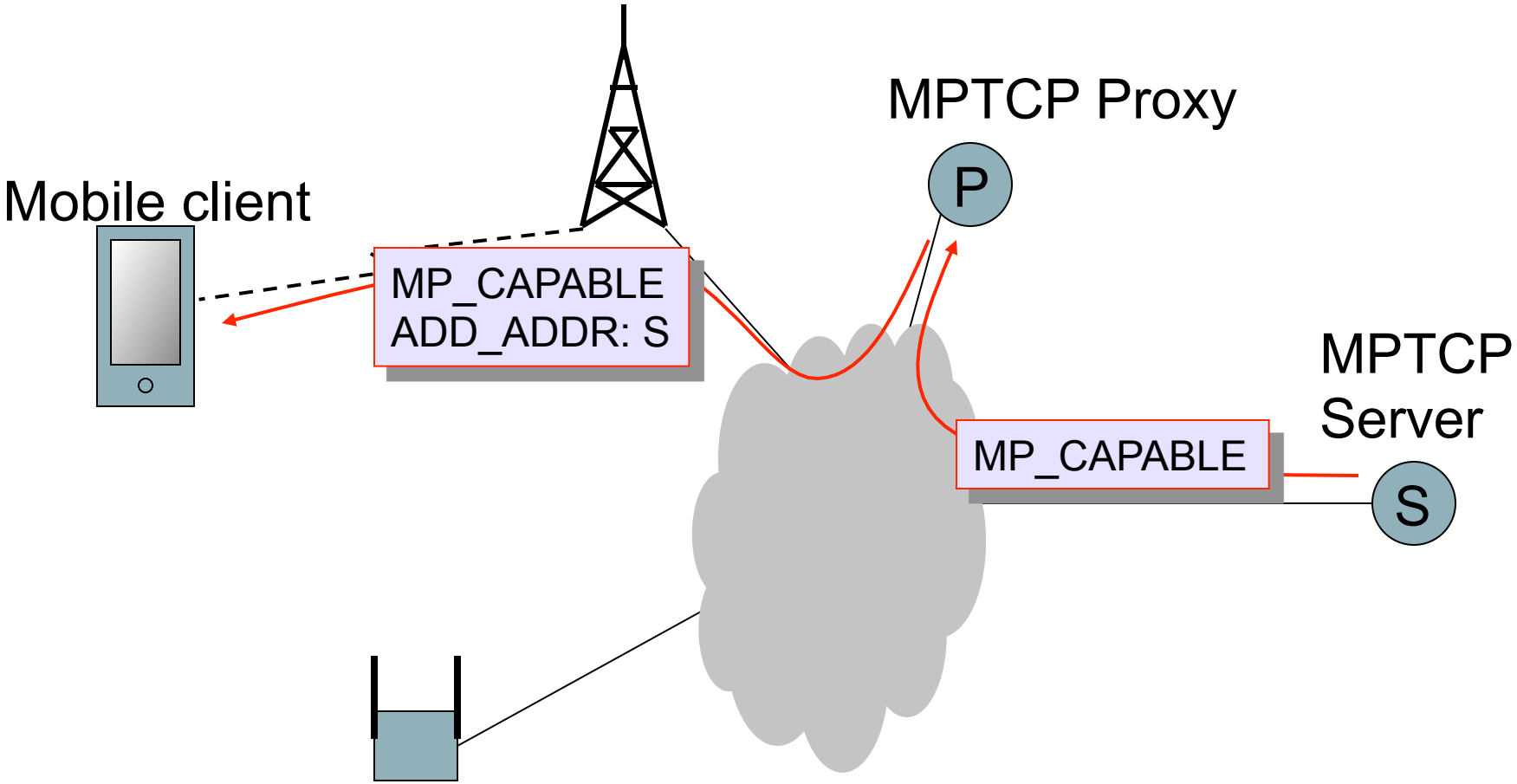


New subflows are set up to the proxy, which load-balances in the normal MPTCP manner.

MPTCP Mobility: MPTCP Server

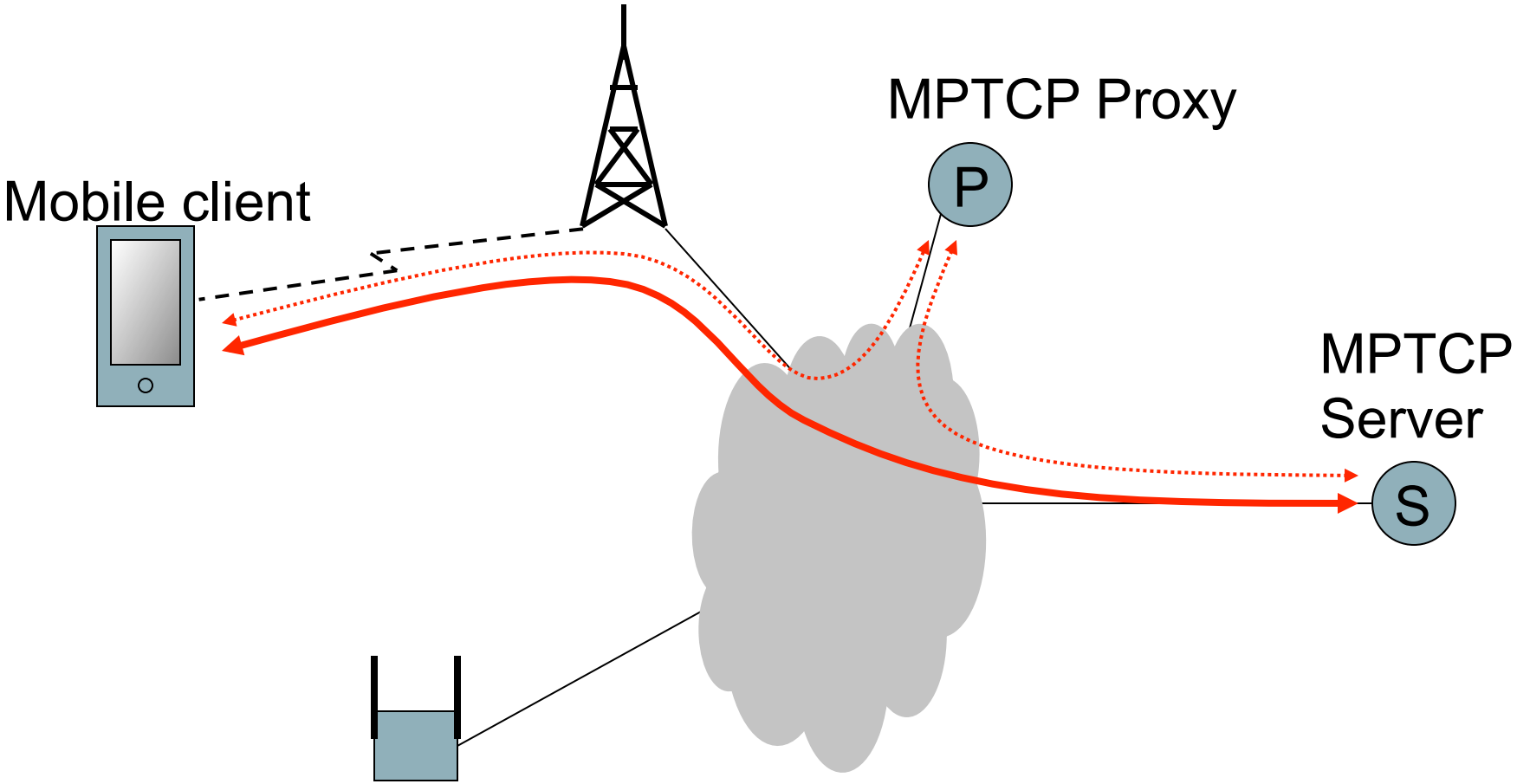


MPTCP Mobility: MPTCP Server



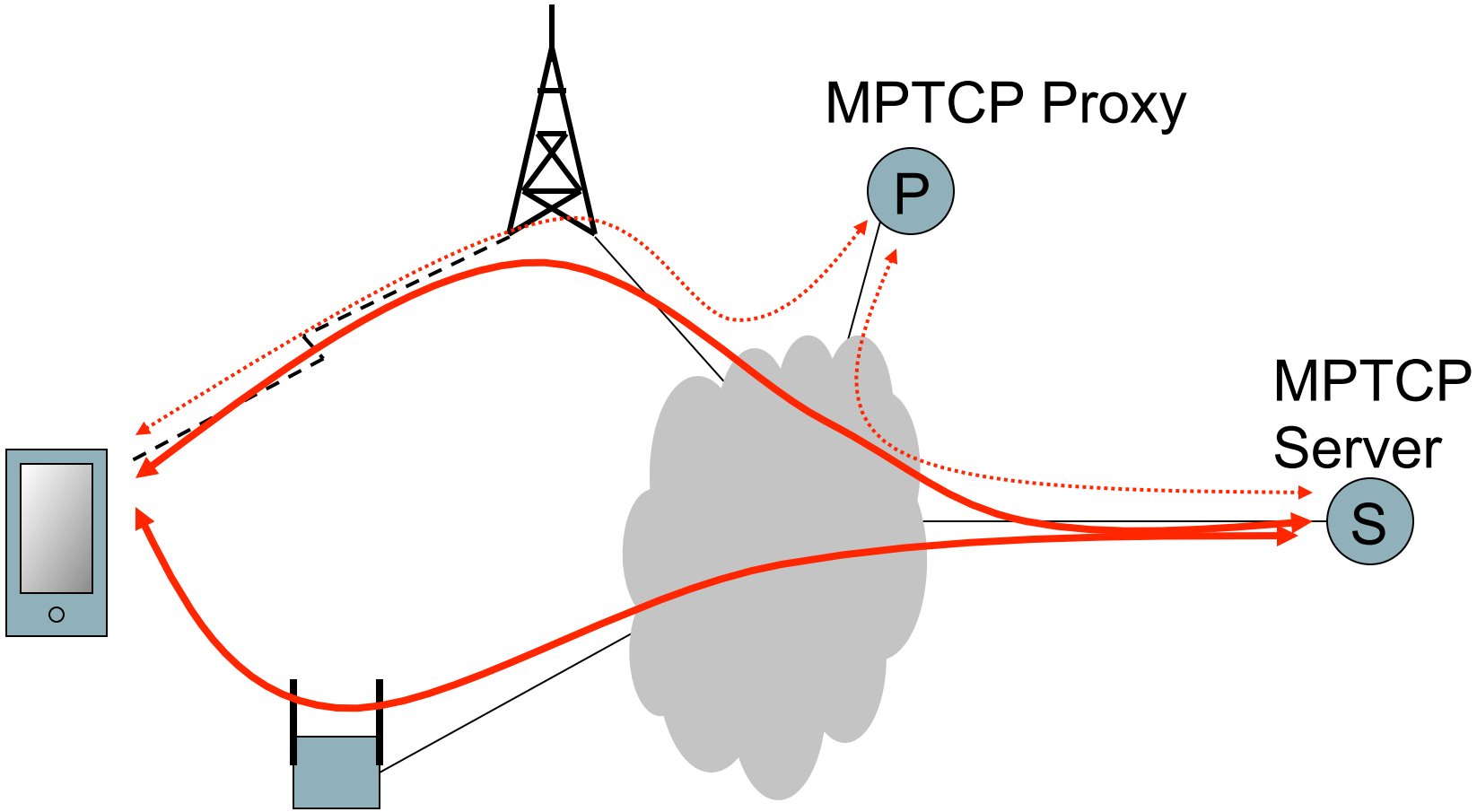
Proxy knows server is MP_CAPABLE. Sends ADD_ADDR to tell client.

MPTCP Mobility: MPTCP Server



Client sets up new subflow direct to server.
Proxied path becomes backup - not used for data traffic

MPTCP Mobility : MPTCP Server



New subflows go direct to server.

MPTCP Proxies

- Proxies are TCP-level relays - no application semantics.
- Protocol implication:
  - Need to indicate (preferably in SYN) the address of the server the proxy should connect to.
  - No other change needed.
- Issue: space in SYN.