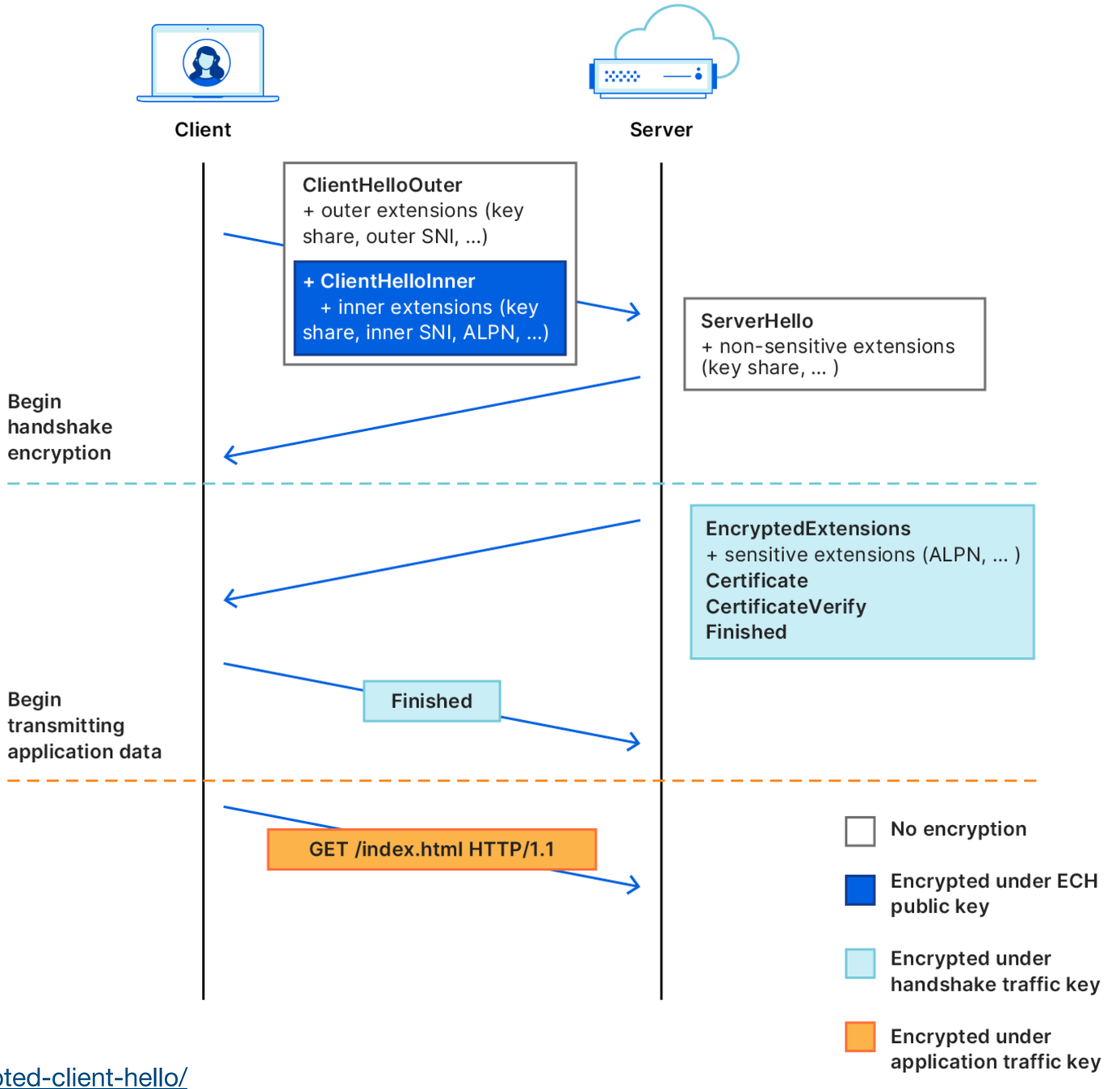
Encrypted Client Hello

draft-ietf-tls-esni

Rescorla, Oku, Sullivan, Wood — IETF 112 Online— TLS



Source: https://blog.cloudflare.com/encrypted-client-hello/

Recap

Status update

`draft-ietf-tls-esni-13` is the current interop and deployment target

Open issues parked:

- Handshake padding
- Revisiting acceptance/rejection signal and HRR GREASE
- ECHConfig extensibility

Plan: Seek resolution once we gain deployment experience

Interop
Status update

Known implementations tracked in the wiki

- BoringSSL: -13
- OpenSSL fork: -13
- NSS: -13 (nearly complete)
- Go fork: -13
- rustls: -10 (-13 underway)

Request: add your implementation to the wiki

Implementation Red Flags

Status update

Several sharp edges

- DNS dependency and plumbing can be non-trivial (who parses ECHConfig?)
- ECHConfig.public_name IP address parsing is non-trivial (WHATWG? Something else?)
- ECH split-mode and HRR is challenging on the server side
- … what else?

Request: start compiling sharp edges in the wiki

Encrypted Client Hello

draft-ietf-tls-esni

Rescorla, Oku, Sullivan, Wood — IETF 112 Online— TLS