Preventing DNS spoofing

DNSSEC - Domain Name System Security Extensions provides authentication (but not encryption) between DNS servers

Not widely deployed

DNS over HTTPS (since 2018) provides authentication and encryption between client/server and server/server

Pushed by Google and Mozilla

Preventing route hijacking (BGP)

Bogon Filtering

Best Current Practice to limit fake route advertisement

Deny route advertised by hosts with spoofed addresses

→ Implemented by ISPs (Internet Service Providers)