

Difference Between HTTP and HTTPS

The main difference between the two protocols is that HTTPS encrypts HTTP requests and answers with TLS (SSL). As a result, HTTPS is far safer than HTTP. Here, we have provided the difference between HTTP and HTTPS in the table given below.

HTTP vs HTTPS	
HTTP	HTTPS
In HTTP, the URL begins with "http://".	In HTTPS, the URL starts with "https://".
Data is sent in clear text and is not encrypted before being sent.	Data is jumbled before being sent and is exchanged in cypher or encrypted text.
Doesn't help with search engine optimization.	It aids in the improvement of search engine rankings.
HTTP is quicker than HTTPS.	HTTPS uses a lot of processing power to encrypt the communication channel, so it's slow.
Encryption is absent in HTTP.	Encryption is present in HTTPS.
It does not require any certificate.	It requires SSL certificates.
It works on the Application Layer.	It works on Transport Layer.

What is HTTP?

HTTP stands for Hypertext Transfer Protocol, and it is a protocol – or a set of rules for presenting data – that is used to send data over the internet. The HTTP protocol is used to send most data across the Internet, including website content and API calls. HTTP messages are divided into two categories: requests and responses.

HTTP is an application layer network protocol that uses TCP as its foundation. HTTP makes use of hypertext structured text to create a logical relationship between text nodes. It's also known as the "stateless protocol" since each command is conducted separately, without using the last run command as a reference.

What is HTTPS?

HyperText Transfer Protocol Secure is the full form of HTTPS. It is a highly advanced and secure HTTP version. For data communication, it uses port 443. Encrypting all communication using SSL, provides for secure transactions. It combines the SSL/TLS protocol with HTTP. It identifies a network server in an encrypted and secure manner.

Both HTTP and HTTPS protocols are marked differently in current browsers such as Chrome. HTTPS uses the Transport Layer Security encryption technology, which is also known as a Secure Sockets Layer (SSL).

Key Difference Between HTTP and HTTPS

The key differences between HTTP and HTTPS are given below.

- HTTPS offers security, making it preferred to HTTP.
- While HTTPS runs at the Transport Layer, HTTP functions at the Application Layer.
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- The default port for HTTP is 80, while the default port for HTTPS is 443.
- When compared to HTTPS, which uses cypher text, HTTP transfers data in plain text (encrypt text).
- Because HTTPS requires processing power to secure the communication route, HTTP is faster than HTTPS.