



# DIFFERENCE BETWEEN HTTP AND HTTPS

IN FORM OF 'WH' QUESTIONS

## Abstract

The purpose of this document was to represent the differences of http and https in easy way in form of 'wh' questions. I hope this document will help you to grasp the difference between http and https.

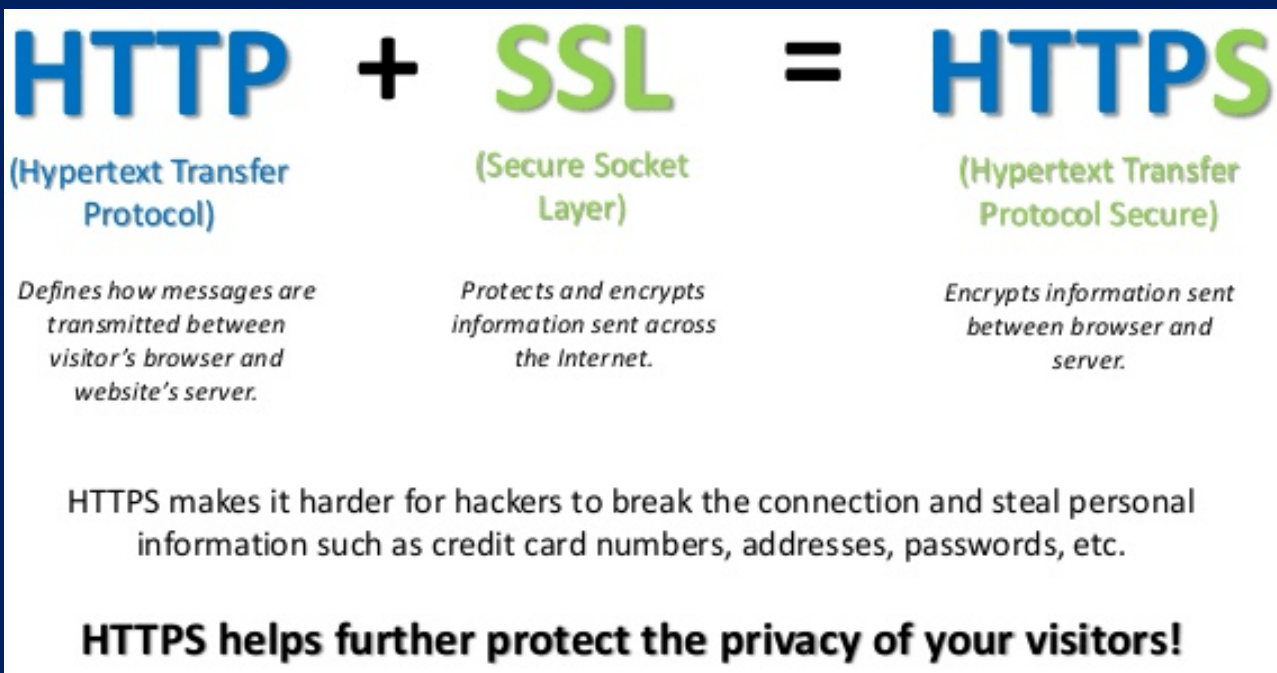
SAITEJA GUNDA  
saitejagunda@gmail.com

## DIFFERENCE BETWEEN HTTP AND HTTPS:-

### WHAT:-

Let me start with very basic full forms of both terms that is “HTTP stands for “Hyper text transfer protocol” and “HTTPS” stands for “Hyper text transfer protocol Secure”. “S” in “HTTPS” covers secure socket layer i.e. SSL so it acts as sublayer under main layer of http application layer.

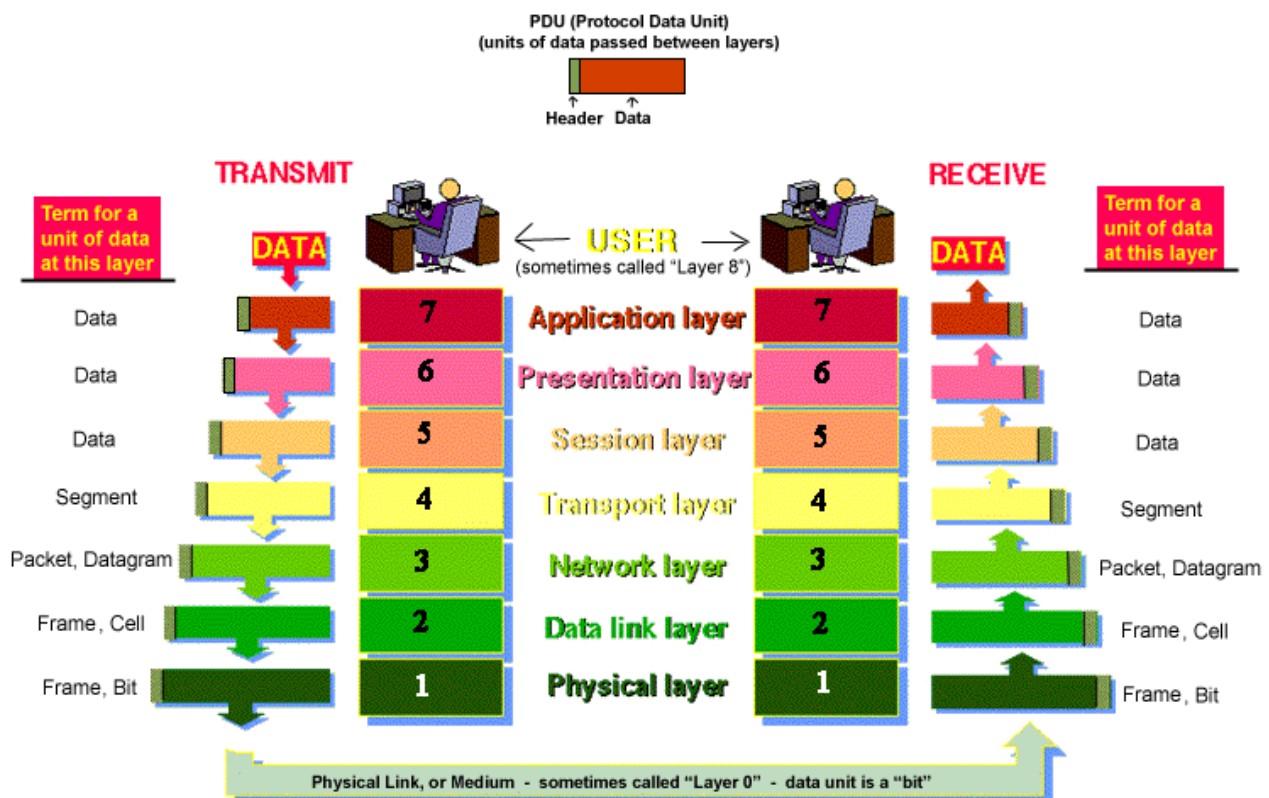
Well many people are aware that http is transfer protocol to send and receive data from one network to another network. Then also everyone is also aware of https is secured protocol and http is unsecured protocol. But in this document I’m going to dig into in depth differences between http and https.



## WHERE:-

So basic difference between these two protocols is http run in application layer and https run in transfer layer according to 7 layers of network. Http runs on 80 port number and https runs on 443 port number.

## THE 7 LAYERS OF OSI



## HOW:-

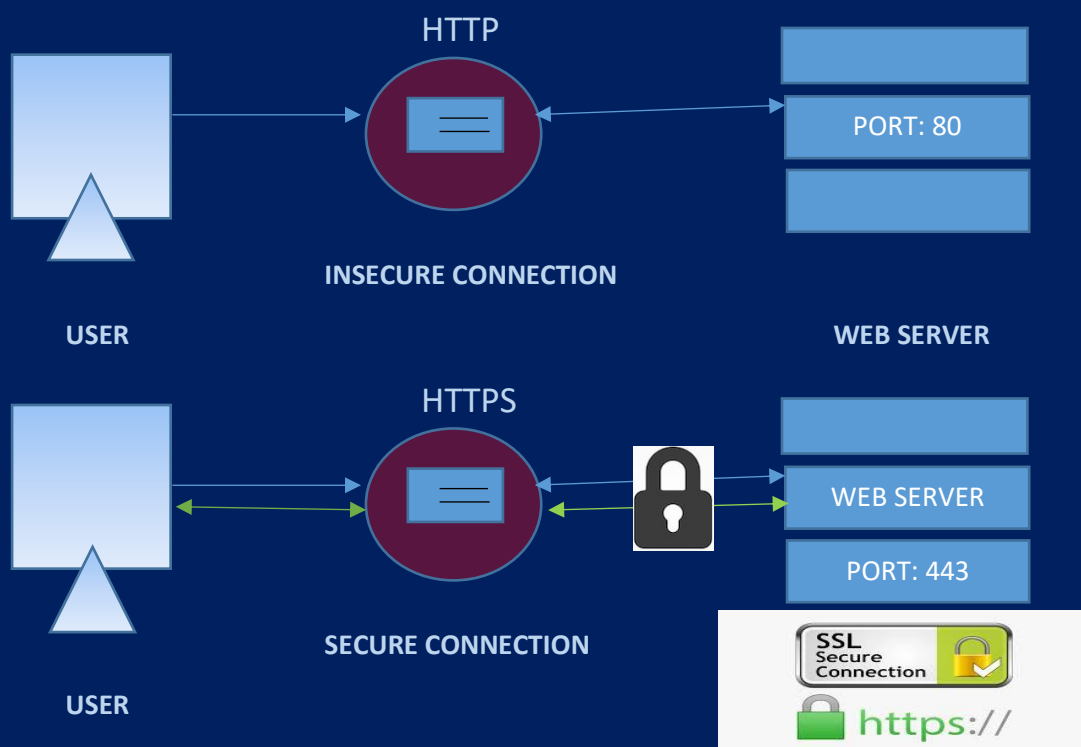
So you may have doubt how to achieve https from http or let me put in this way that how to achieve secured transfer protocol from unsecured transfer protocol. So there are certain steps to achieve this and those steps are as follows:-

- 1) Buying an SSL Certificate from a trusted Certificate Providers like Godaddy, Digicert, Geotrust etc.
- 2) Activation of SSL Certificate.
- 3) Installing Certificate on site hosting account.
- 4) Updating or changing or redirecting your site http links to https.
- 5) Creating the 301 redirect configuration according to specific web servers.
- 6) Updating and notifying in the search engines such that whenever request comes to your site it should come through https only.
- 7) If you are using CDN (content delivery network) then you need to update in that as well and follow the instructions guided by them.
- 8) If your site is integrated with any third party analytics sites or integrated with any other internal sites then you need to change from http to https there as well.

HURRAYYYY....Now your site is also secure, safe and protected if you follow these steps.

## WHY:-

So why https is needed will become a real question now so well the perfect answer for that question is for every website it is not required or for every page in website also it is not needed then It is needed only when there is confidential data is getting transferred between two nodes so for encrypting them we need SSL added to http. To illustrate you in easy way let us take an example of ecommerce website like amazon so in the critical checkout page and payment page the website will be turned into https so that transaction data should be safe and secured. And another best example for this is banking sites and ticket booking sites because those are very critical businesses incase anything is not secured ,safe and encrypted then there is way to hackers letting in and messing with the business.



### WHO:-

So In this era of agile methodology in our working models any one can turn http into https and so generally operations team will take charge of this.

Because there is no fixed position or team to do this if I tell frankly so as this is crucial part of business then I think anyone can do this under supervision of his/her superior or senior developer.

### WHEN:-

Well to this question the answer for “WHY” suits for this also. But then to clear to minds and give clarity I am going to explain this also. So as in software development lifecycle we need not to focus about this during development stage but once development is about to finish we can start focusing on this. As I already to if we have any confidential data and if we don't focus on this then we will certainly have threat from hackers. If a developer didn't focus on perfection of application then it is not “BUG” mistake to come into application because it was developer mistake who was letting bug to come into application so in the same way if we do not take care of our confidential data then it is not “HACKER” mistake to come and steal confidential data it will be developer mistake who was letting hacker to hack the confidential data. As there is a saying that “Prevention is better than cure” before happening any worse thing we need to protect and secure our data. So I think I have answered this question in a fair way.

# THANK YOU....

