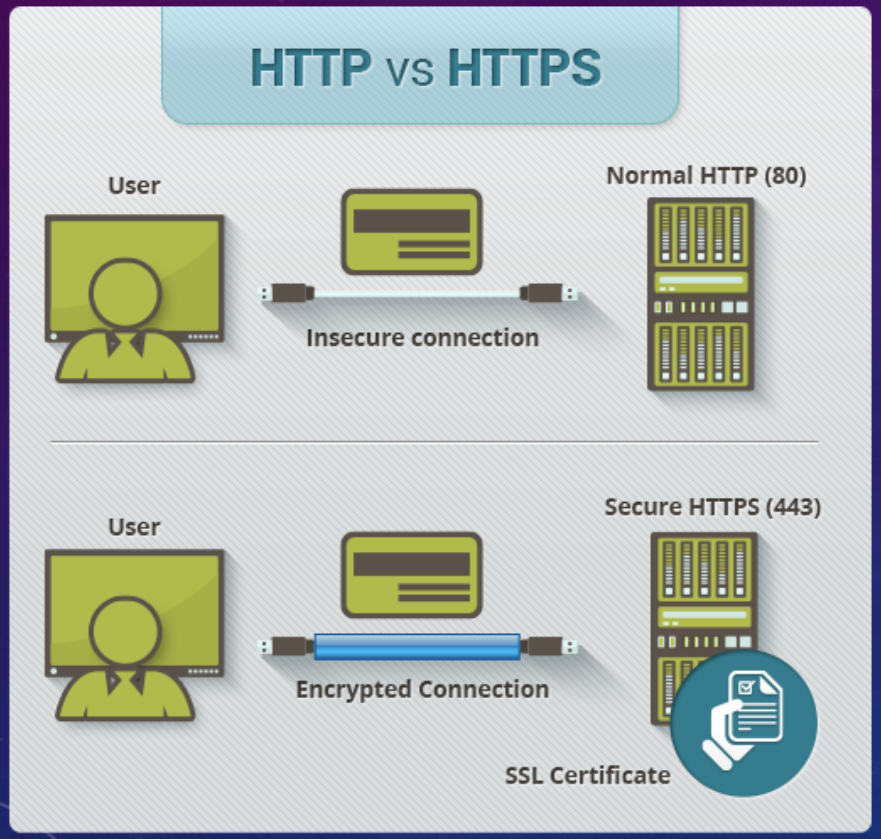
SECURE V.S. UNSECURE WEB PROTOCOLS

2.2.4 DIFFERENTIATE BETWEEN SECURE AND UNSECURE WEB PROTOCOLS

HTTP V.S. HTTPS



Hyper Text Transfer Protocol Secure (HTTPS) is the secure version of HTTP, the protocol over which data is sent between your browser and the website that you are connected to. The 'S' at the end of HTTPS stands for 'Secure'. It means all communications between your browser and the website are encrypted.

HOW DOES HTTPS WORK?

HTTPS takes the well-known and understood HTTP protocol, and simply layers a SSL/TLS (hereafter referred to simply as “SSL”) encryption layer on top of it. Servers and clients still speak exactly the same HTTP to each other, but over a secure SSL connection that encrypts and decrypts their requests and responses.

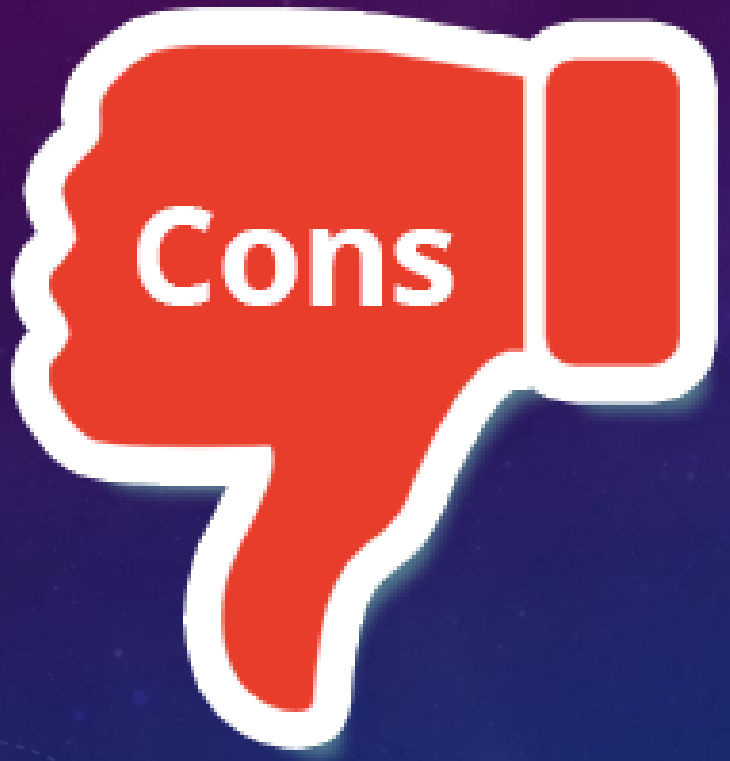
HOW CAN YOU SEE AN HTTPS CERTIFICATE?

When you request a HTTPS connection to a webpage, the website will initially send its SSL certificate to your browser. This certificate contains the public key needed to begin the secure session. When a trusted SSL Digital Certificate is used during a HTTPS connection, users will see a padlock icon in the browser address bar. When an Extended Validation Certificate is installed on a web site, the address bar will turn green.

PROS OF HYPERTEXT TRANSFER PROTOCOL SECURE

-Customer information, like credit card numbers, is encrypted and cannot be intercepted
-Visitors can verify you are a registered business and that you own the domain
-Customers are more likely to trust and complete purchases from sites that use HTTPS

CONS OF HYPERTEXT TRANSFER PROTOCOL SECURE



-You'll need to buy an SSL certificate. The prices vary as depending on how many domains or subdomains the cert will cover, and also on the level of identity verification.

-The SSL certificate can send warning messages for non-harmful, but unencrypted, things like social media widgets or videos etc.

-Any caching that might have happened between the points at which data is encrypted and decrypted is blocked if content is encrypted. Many major web hosting companies handle this issue though.

VIDEO

RESOURCES

- https://www.instantssl.com/ssl-certificate-products/https.html
- https://en.wikipedia.org/wiki/HTTPS
- https://robertheaton.com/2014/03/27/how-does-https-actually-work/
- https://blog.nexcess.net/2014/09/03/the-pros-and-cons-of-implementing-ssl-https/