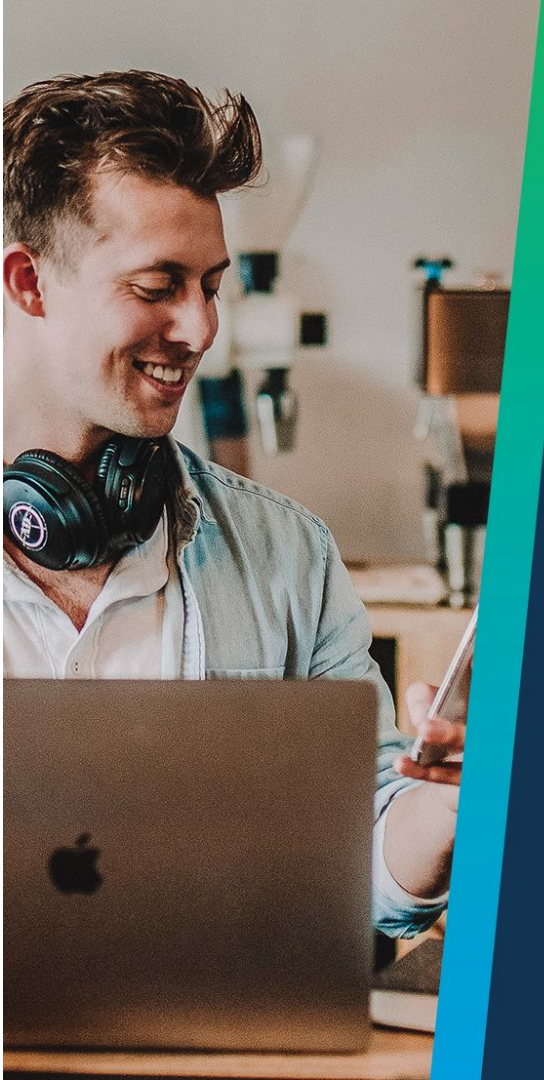


Cyber Security Bootcamp

Hyperiondev

The Web, HTML & CSS

Lecture - Housekeeping

- The use of disrespectful language is prohibited in the questions, this is a supportive, learning environment for all - please engage accordingly.
- No question is daft or silly - ask them!
- There are Q/A sessions at the end of the session, should you wish to ask any follow-up questions.
- For all non-academic questions, please submit a query: www.hyperiondev.com/support
- Report a safeguarding incident: http://hyperiondev.com/safeguardreporting

Objectives

1. Define Client-Server Architecture and explain its role in modern networking.
2. Define Client-Server Architecture and its characteristics.
3. Understand the HTTP protocol and its significance in the World Wide Web.
4. Create simple HTML documents using appropriate tags.
5. Differentiate between HTML tags and attributes.

Previously:

Explored Bash as a scripting language and briefly covered Linux-based operating systems.

We exercised creating Shell scripts and covered a variety of syntax and functionality.

Poll

What is the difference between HTTP and HTTPS?

Poll

What does HTML stand for?

Client-Server Architecture

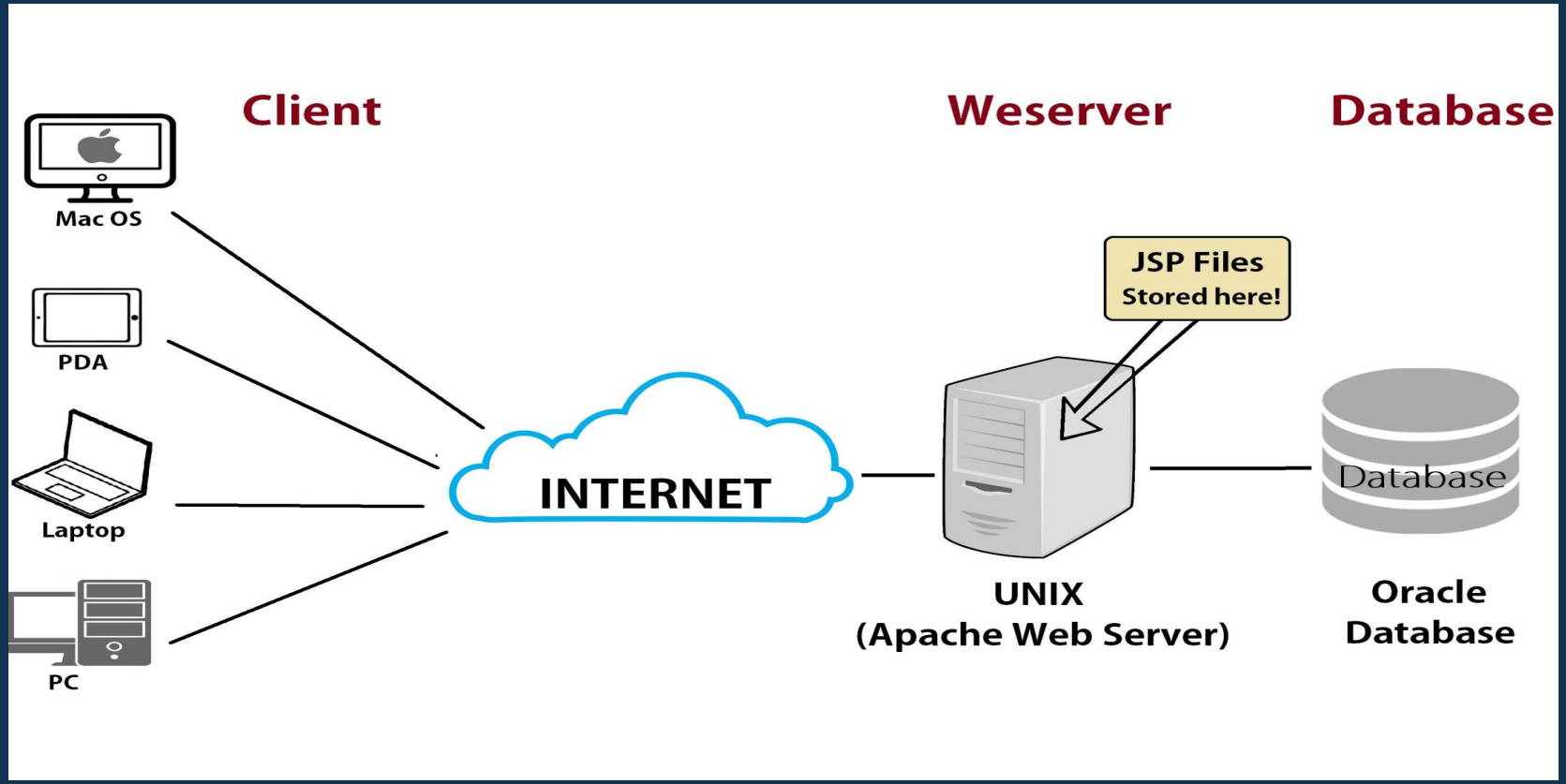
Client-Server Architecture

- A network application (sometimes known as a client-server model), that divides workloads and tasks between clients and servers that are housed on the same system or are connected via a computer network.

- Workstations, PCs, and other devices belonging to several users are frequently connected to a central server through the Internet or another network using client-server architecture.

- The server responds to the client's request for data by accommodating it and returning the requested data packets to the user.

Client-Server Relationship



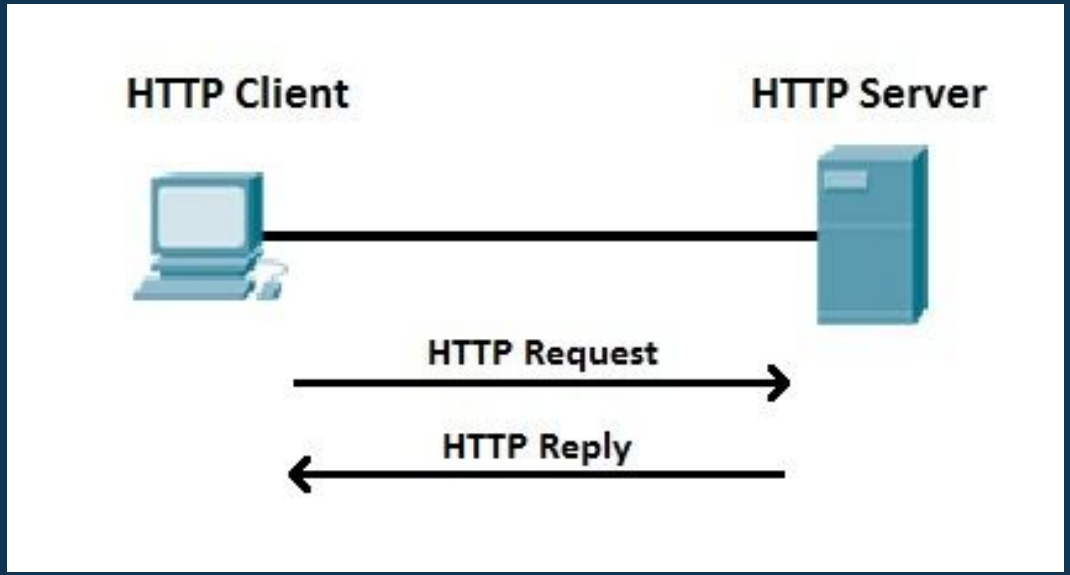
Protocol

"A standard procedure for regulating data transmission between computers."

- A protocol is a set of instructions for formatting and processing data in networking.
- Computers have a common language known as network protocols.
- Even though the software and hardware used by the computers in a network may be very dissimilar, the use of protocols allows them to communicate with one another.

HTTP PROTOCOL

- HTTP, or Hypertext Transfer Protocol, is the protocol that web browsers and servers use to interact with one another.
- HTTP is a stateless protocol, which means it does not keep track of prior transactions between the client and the server.
- Because of this absence of state, web servers can manage a huge number of concurrent client requests.
- HTTP is critical to the World Wide Web because it is the protocol that allows users to browse and interact with web pages.



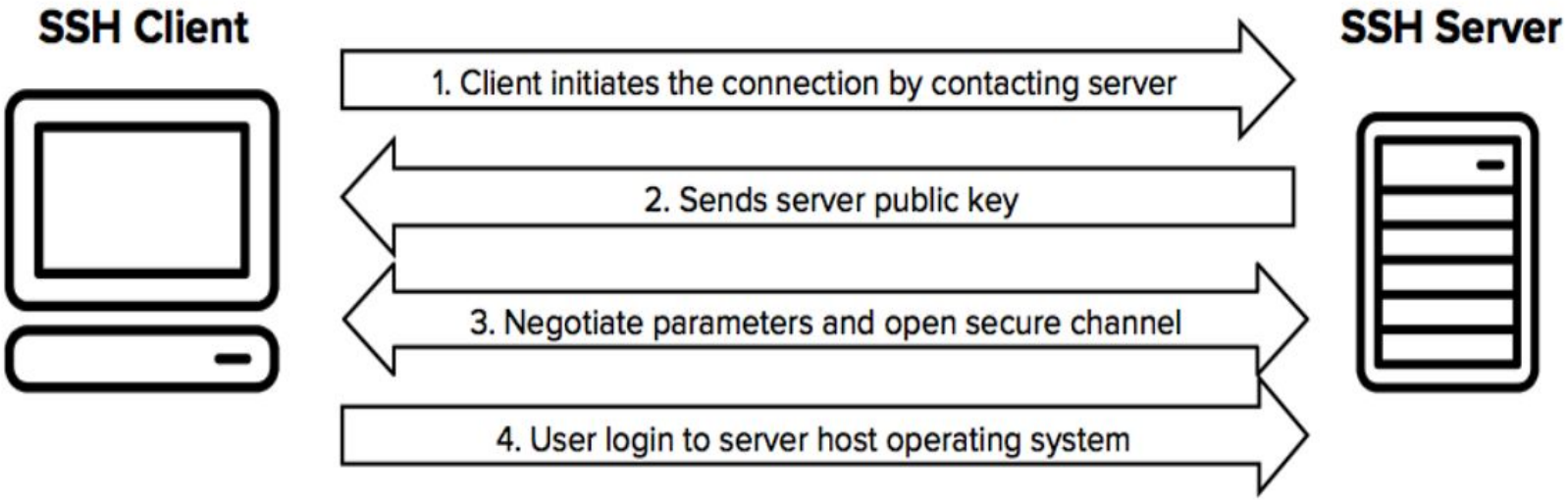
https://study-ccna.com/http-https/

SSH

SSH Protocol

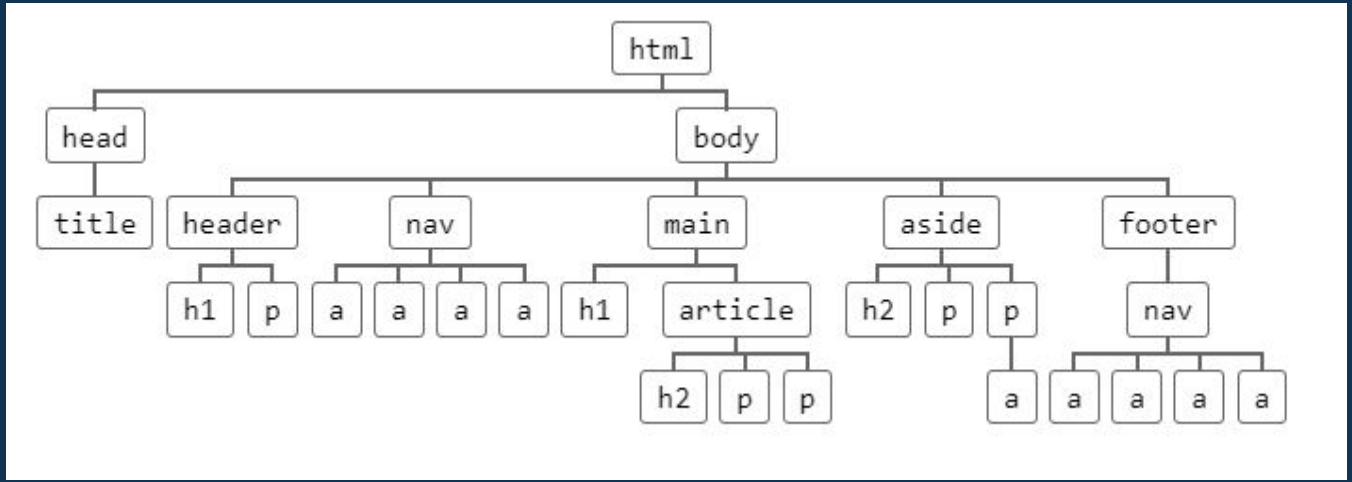
- SSH, or Secure Shell, is a protocol that allows for secure remote access to a computer or server.
- To prevent network assaults, all user authentication, commands, output, and file transfers are encrypted.
- SSH enables users to remotely access and control a device as if they were physically present.
- SSH is a secure protocol, which means that all communication between the client and the server is encrypted, protecting important information.

SSH Protocol



HTTP & SSH

HTTP	SSH
Largely utilized for communication between web browsers and servers.	SSH is used for remote device access and control.
Susceptible to eavesdropping and man-in-the-middle attacks.	Establishes a secure, encrypted connection between the client and the server.
(Can be extended to HTTPS. A more secure version that uses an encryption protocol to encrypt communications.)	This is the ‘S’ in HTTPS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Lesson Conclusion and Recap

- Client-Server and Application Layer Architectures are critical components of contemporary networking.
- Knowing how these components interact is critical for anybody working with networking.
- HTTP and SSH are two protocols that are important in modern networking, each fulfilling a specific function.
- It is critical to evaluate the security implications of each protocol when determining which to utilize.
- As technology advances, new protocols and architectures will emerge that will further revolutionize the way we communicate and engage with one another across the network.

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Q & A Section

Please use this time to ask any questions relating to the topic explained, should you have any

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Thank you for joining us

Take regular breaks.
Stay hydrated.
Avoid prolonged screen time.
Remember to have fun :)