The specifics of the simple web stack:

A Server:

A Server is a computer equipped with specific programs and/or hardware, that enables it to offer services to other computers (clients) on its network.

The Role of the Domain name (foobar.com):

A domain name is a name that is associated with a physical IP address on the internet.

It's the unique name that appears after the www. In web addresses. For example, in our case:- foobar.com.

The domain name enables users to access websites, without having to know their respective IP addresses.

The type of DNS record www in www.foobar.com:

www is a CNAME (Canonical Name) DNS record type in www.foobar.com since it also points to the same IP address as foobar.com

The role of the web server:

A web server is a computer that runs websites. The main role of a web server is to store, process and deliver web pages to users. This intercommunication is done using Hypertext Transfer protocol (HTTP).

The role of the application server:

The role of the application server is to act as host (or container) for the user's business logic while facilitating access to and performance of the business application.

The role of the database:

It allows the management, creation, updating and retrieval of records. The database also gives structure to the business information.

What is the server using to communicate with the computer of the user requesting the website?

Web browsers communicate with web servers using the HyperText Transfer Protocol (HTTP). When you click a link on a web page, submit a form, or run a search, the browser sends an HTTP Request to the server.

Issues with the Simple web stack infrastructure:

SPOF:

SPOF stands for Single Point of Failure. If one part of the system fails, the entire system will stop working.

The simple web stack has no redundancy that can help in avoiding SPOFs, therefore, any single failure in any part of the system will cause the entire system to stop functioning.

Downtime when maintenance needed (like deploying new code web server needs to be restarted):

The Infrastructure above, downtime will occur because we only have one server and one database, that is used to make the deployment and maintenance hence no way users will access the website in that period.

Cannot scale if too much incoming traffic:

The above infrastructure cannot scale if there's too much incoming traffic because there is no second server in the system to share the incoming load. Therefore, the system will be overloaded.

Authors:
Lawrence Siro
Ami Choudhary