What is a server?

A server is a computer system or a software application that provides services or resources to other computers or clients over a network. It is designed to handle and respond to requests from client devices, typically through the internet or an intranet.

What is the role of the domain name?

Domain names provide an easy way to recognize and memorize the names using the numerically addressed Internet resources. It is used to address the Internet resources placed on internet or it provides and abstraction that allows the resources to be moved from one place to another in hierarchy.

What type of DNS record www is in www.foobar.com?

The "www" in "www.foobar.com" is a subdomain, and the DNS record associated with it is typically a CNAME (Canonical Name) record.

What is the role of the web server?

The role of the web server is to handle incoming HTTP requests from clients (typically web browsers) and serve web content in response.

What is the role of the application server?

The role of the application server is to execute the server-side code and handle the business logic of a web application. It sits between the web server and the database server, processing dynamic requests from clients and generating responses based on the application's functionality and data.

What is the role of the database?

The role of the database in a web infrastructure is to store and manage the structured data used by the web application.

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

The server uses the HTTP (Hypertext Transfer Protocol) or HTTPS (HTTP Secure) to communicate with the computer of the user requesting the website.

The description of what is the issues are with this infrastructure:

Single Point of Failure (SPOF):
The infrastructure relies on a single server to host the website, which creates a single point of failure. If the server experiences hardware failure, software issues, or other problems, the entire website becomes unavailable. This lack of redundancy can lead to significant downtime and disrupt user access to the website.

Downtime when Maintenance Needed:

When maintenance tasks, such as deploying new code or updating the web server, are required, the website may experience downtime. During maintenance periods, the web server needs to be restarted or taken offline temporarily, causing interruptions in service. This downtime can be especially problematic for websites that require continuous availability.

Cannot Scale with Traffic Surge:

The infrastructure is limited to a single server, which can be insufficient to handle a sudden surge in incoming traffic. If the website experiences a spike in visitors, the server may become overwhelmed, leading to performance issues, slow response times, and potentially crashing. The lack of scalability can adversely affect user experience and may result in lost opportunities for the website owner.