

1. What is a server?

A server is a computer program or device that provides a service to another computer program known as the client. A server program gives a response based on the client's request. Both the server and client might run either on the same computer or on different computers.

2. What is the role of the domain name?

A domain name is a string of text used to access a website from client software or web browsers. They provide unique and human readable address for any web server available on the internet. We use domain names since they are easy to remember compared to IP addresses.

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

canonical name or in short CNAME.

4. What is the role of the web server?

The web server will store HTML documents, CSS stylesheets, JavaScript files, images or other multimedia content. A web server will receive HTTP requests from clients such as web browsers, and will deliver HTTP response in the form of webpages, images or other multimedia content.

5. What is the role of the application server?

An application server provides access to business logic for use by client application programs. The application can use this logic just as it would call a method on an object. Application servers physically or virtually sit between web servers and database. Application servers are used on backend to store and process dynamic application requests.

6. What is the role of the database?

the role of a database is to store, retrieve and update data.

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

HTTP protocol, the client will send HTTP request and the server will respond in HTTP response.

What are the issues with this infrastructure?

1. SPOF (Single Point of Failure)

This design only has one server (8.8.8.8), if some problem caused the server to malfunction, the whole web infrastructure will become unstable or crash.

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

If we want to add new functionality or new user interface, or maintain a server malfunction, we have to shut down the web infrastructure for some time until the issue is resolved.

3. Since our web infrastructure only has one web server, if a lot of users tried to access the server at the same time, they will encounter a slow response.