

WEB INFRASTRUCTURE DESIGN PROJECT

0-SIMPLE_WEB_STACK

1. What is a server?

A server is a computer that does not have a screen or a mouse or a keyboard, that can be physical or virtual, that provides data or services to other computers, and is accessible only over a network.

2. What is the role of a domain name?

A domain name is a human readable, textual identification for Internet resources and devices, for example computers and networks, which is easier to remember compared to a numerical Internet Protocol Address.

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

It is a CNAME DNS Record type.

4. Role of a web server

A webserver, the hardware part, stores a website's content files, which is the codebase, and the web server's software part(the HTTP Server). It stores, manages, processes and displays the contents of hosted websites exclusively over the HTTP protocol.

5. Role of the Application Server

The application server serves business logic to application programs through a variety of protocols. Its job is to execute server side code and generate content dynamically based on users' requests.

6. Role of the database.

The database enables the organization of structured data in a systematic way so it can be easily stored, accessed, updated, deleted and managed.

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

The HTTP Protocol

ISSUES WITH THIS INFRASTRUCTURE

1. Cannot scale if too much incoming traffic

There is no load balancer. The domain name points to the server directly. This causes problems in handling increased loads due to the absence of a load balancer. So you might need to set a limit on the number of users that the website can accommodate, if not increase in traffic to that website will leave the users with a bad experience.

2. SPOF

SPOF is a flaw in the design, implementation or configuration of a system or a circuit, or a component of a system, which if dysfunctional or faulty may cause the failure of the entire system.

In this scenario, we have just 1 server, 1 web server, 1 Codebase, 1 application server and 1 database. There is a need to increase redundancy to avoid SPOF.

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

A lot of downtime because the server relies on only one codebase, so if maintenance is required then it means the website and its contents will not be available to end users. This could lead to subsequent loss of traffic.