

You must be able to explain some specifics about this infrastructure:

- a) **What is a server?** A server is a computer that provides services/resources to other computers (clients) in a network.
- b) **What is the role of the domain name?** It points to the server's IP.
- c) **What type of DNS record `www` is in `www.foobar.com` ?** It is a DNS A record.
- d) **What is the role of the web server?** It handles HTTP requests from clients, forwards dynamic content requests to the app server.
- e) **What is the role of the application server?** It hosts and executes the websites application code and processes the dynamic content request from the web server.
- f) **What is the role of the database?** It manages and stores website's data allowing retrieval by the app server.
- g) **What is the server using to communicate with the computer of the user requesting the website?** It is using the HTTP protocol for communication with the client's computer.

You must be able to explain what the issues are with this infrastructure:

- a) **SPOF** – if the server is down, the whole website becomes inaccessible.
- b) **Downtime when maintenance needed (like deploying new code web server needs to be restarted)** – if someone wants to deploy new code, the web server requires to be restarted which causes downtime.
- c) **Cannot scale if too much incoming traffic** – since it only has one server, scaling is challenging therefore it will struggle to handle large volumes of incoming traffic