LendingFront DevOps Exercise

Problem 1

LendingFront's platform is a core system for our clients. The platform needs to provide high availability and needs to be able to quickly recover from a geographical disaster. It is built on a Service Oriented Architecture using python, flask and Postgres technologies. It runs on nginx and uwsgi. Each service exposes an API that can be used internally by LendingFront's platform or directly by our clients.

Questions:

1. Provide an infrastructure diagram that shows how you would deploy the platform in a way that it provides high availability and Disaster Recovery
2. Explain how the platform will function when one of its application servers (instances) is unavailable?
3. How will the platform work when the database server is unavailable?
4. Explain the Disaster Recovery Plan. What will the process be and how long would it take to switch to the DR site?
5. What kind of security would you put in place to ensure that access to production servers is protected and only available to key users?
6. Explain the process of given ssh access to a user to the application servers?
7. How do you give access to a user to one of the databases?
8. What options do our clients have to connect to a read-only database hosted in LendingFront's VPC taking into account that our databases cannot be accessed directly from the internet?
9. What is the process to set up a VPN?

Problem 2

Build a Proof of concept (POC) infrastructure in AWS. It should include the following:

- One VPC
- One ELB
- One Application Server

In the server install nginx which will serve a simple html page via the ELB
Bonus: build uwsgi and server the page from it