

50 000 single region users does not explain the following:  
Active monthly/daily users?  
Are the 50k concurrent users?

For the FE application i would not use EC2 for the application but use docker containers and scale up/down based on the rulling. One EC2 per AZ which can have multiple dockers. Also there is a need to know if the web application will be server side rendered or not? But since we are using servers I would assume it is SSR application. For that purposes will use T instance type for general purpose.

Regarding the application servers we do not have the requirement if the business logic requires more CPU or more memory or big throughput. Here will also use general purpose T instances.

Also in the task as asked to use NAT Gateway (singular), but if we use only one and one AZ is down the users will not be able to access the Application servers.

