DevOps Pair Programming

Automate the creation of a web server and provide a healthcheck script to verify the server is up and respond correctly.

You can use any scripting languages you like. You'll have to justify your decision. We use Bash, Python, Groovy and JavaScript internally. Please pick something you're familiar with, as you'll need to be able to discuss it.

You will be graded based on scripting skills, elegance, understanding of the technologies you use, security, documentation.

Hopefully this will emerge as we pair and converse. But feel free to comment your code with explanation.

The Task

You are required to provision and deploy a new service in AWS or service provider of your choice, even locally. It must:

- Be publicly accessible, but only on port 80.
- Run Nginx.
- Serve a /monitorcheck file, containing only static text "ALL OK".

Mandatory Work

- Provide instructions on how to create the server.
- Bootstrap and provision the server however you wish. Use user-data or a configuration management tool (such as Puppet, Chef or Ansible). Be prepared to justify your decision!
- Provide a heatlhcheck script that can be run externally to periodically check if the server is up and serving the expected version number.

Feel free to ask questions as you go if anything is unclear, confusing, or just plain missing.

Extra Credit

This exercise is time-boxed, but if any of the following shortcut the process by making it easier in the long-run they might be worth considering up front. We won't mark you down for not doing the extra credits, but if you want to give them a go...

- Make the service resilient in 2 availability zones.
- Run Nginx inside a Docker container.
- Use the healthcheck script to start Nginx if it is not running.

  For example, you might decide to modify the script to SSH into the instance and start if needed. Alternatively, you might configure a process manager to use the script on the hosts themselves such as supervisord or plain old systemd.