

Challenge: Create a Simple Backend API with Port 80 and Set Up GitHub Actions for Deployment

Objective:

The candidate is tasked with creating a basic backend API that includes a single route `/sayHello`. This route should return a JSON response with the message "Hello User." Additionally, the API should run on Port 80. After creating the API, the candidate needs to push the code to a GitHub repository and set up a GitHub Actions pipeline to automatically deploy the code to a virtual machine using provided secrets.

Instructions:

Step 1: Create the Backend API

Choose a programming language and framework of your choice to create a simple backend API. Configure the API to run on Port 80.

Implement the API with a single route: `/sayHello`.

When a GET request is made to `/sayHello`, the API should respond with a JSON object containing the message "Hello User."

Step 2: Push Code to GitHub

Create a new Private GitHub repository or use an existing one.

Push the code for your backend API to the GitHub repository.

Step 3: Set Up GitHub Actions for Deployment

Create a GitHub Actions workflow YAML file in your repository (e.g., `.github/workflows/deploy.yml`).

Configure the workflow to trigger when code is pushed to the repository.

Use GitHub Actions secrets to securely store any sensitive information, such as SSH keys or API tokens required for deployment.

Define the workflow steps to:

Check out the code.

Install any necessary dependencies.

Deploy the code to the specified virtual machine using SSH or any preferred method.

Ensure that the workflow includes appropriate error handling and notifications.

Step 4: Test the Deployment

- ✓ Confirm that the GitHub Actions workflow successfully deploys your backend API to the virtual machine.
- ✓ Verify that the API is running on Port 80 and that the `/sayHello` route functions as expected by making a GET request to it.
- ✓ Kindly ensure we are not using any secrets on the VM.
- ✓ The repo should be private.
- ✓ Share your solution in zip file along with link to private repository.
- ✓ Make sure there is no secret in your repo.
- ✓ There should NOT be any git pull on VM.
- ✓ We should not put any code manually inside VM.

Submission:

Provide the link to your GitHub repository containing the backend API code and GitHub Actions workflow.

Include any relevant instructions or documentation for running and testing the API.

Mention any challenges you encountered during the process and how you overcame them.

Good luck with the challenge!

Virtual Machine Details

Host : 74.235.122.168

Username: azureuser

SSH Key: [attached]