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Ansible Case Study: #2

Using Ansible, launch 2 linux instances, configure them with nginx to server website, make the control node as a load balancer for the webservers

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# 1. Directory Structure

|  |
| --- |
| ansible-nginx/  ├── files/  │ └── …  ├── inventory/  │ ├── aws\_ec2.yml  │ └── hosts  ├── playbooks/  │ ├── launch-instances.yml  │ ├── nginx-lb.yml  │ └── nginx-servers.yml  ├── templates/  │ └── nginx-lb.conf.j2  ├── secrets/  │ └── ssh-key.pem  └── .gitignore |

# 2. Git Repository

This Git repository contains all playbooks and inventory files except ssh-key.pem  
[aryan-madhavi/ansible-nginx](https://github.com/aryan-madhavi/ansible-nginx/)

# 3. Setting up vite-react-app

$ cd files

$ npx create-vite@latest

Follow through the setup

# 4. Commands and other notes

Ansible installation and configuration refer ‘Ansible Case Study #1’

Create the template for nginx loadbalancer configuration

Run the playbooks:

1. Launch instances: ansible-playbook -i inventory/hosts playbooks/launch-instances.yml
2. Check if ec2 instances are dynamically plugged in properly: ansible-inventory -i inventory/aws\_ec2.yml --graph
3. Set up EC2 webservers by installing Nginx, Node.js, Git, clone a React app repo then build and deploy it to Nginx and ensure Nginx is running: ansible-playbook -i inventory/aws\_ec2.yml playbooks/nginx-servers.yml
4. Set up an Nginx load balancer on localhost by installing and starting Nginx, create a fallback maintenance page, deploy the load balancer config, and reload Nginx as needed: ansible-playbook -i inventory/hosts playbooks/nginx-lb.yml

Check functionality:

1. Get the DNS of the load balancer machine
2. Open browser, paste the DNS then append the port 8080 to it
3. It should show the default vite-react-app

Verify maintenance fallback page:

1. Terminate the webservers instances via the AWS console
2. Reload the Page in the browser (DNS with port 8080)
3. It should show the message “Oops, we are under maintenance”