DevOps Project

1. Create and deploy a running instance of a web server using a configuration management tool of your choice. The web server should serve one page with the following content.

Exp: We can establish the connection in between AWS console and our physical machine by using AWS configure and maintaining the credentials in boto file along with the .pem file

I have used AWS configure and .pem file to establish the connection with AWS console.

Written the play book to play the following tasks:

1. To create a Security group.
2. To create an EC2 Instance in AWS with the help of .pem file, AMI ID, Machine type, Security group and Region.
3. Executed update command with the help of yum update
4. Installed apache web server package.
5. Copy the html file from my local directory to EC2 instance in the path /var/www/html/index.html
6. Started the httpd service
7. Secure this application and host such that only appropriate ports are publicly exposed and any http requests are redirected to https. This should be automated using a configuration management tool of your choice and you should feel free to use a self-signed certificate for the web server.

Exp: To secure the host with appropriate ports, I have given the clear instruction in Security group like rules and rules\_egress. you can install the firewalls to secure the application. I have done the port forwarding for http port 8080 --> https 443 with the help of IP tables to redirect http request to https.

1. Develop and apply automated tests to validate the correctness of the server configuration.

Exp: To test the deployed application in the EC2 Instance I have executed the curl command along with echo to return the exit code value. If we get the exit code '0' then the application is deployed successfully. I executed the script and got the exit code 0 as a end result.

1. Express everything in code and provide your code via a Git repository in Git Hub.

Exp: I have committed all the code along with this file to my GIT hub repository. you can view the below link to get more details.

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