Mastering DevOps Efficiency with Jenkins Automation: Quick Setup Guide on AWS

Introduction:

In the fast-paced world of software development, DevOps is crucial for seamless collaboration between development and operations teams. Jenkins, a versatile automation tool, takes center stage in this landscape, enhancing collaboration, optimizing processes, and enabling continuous integration and deployment on platforms like AWS.

Demystifying DevOps:

DevOps is more than a methodology; it's a collaborative mindset promoting communication, integration, and automation across the software development lifecycle.

Jenkins in DevOps:

Jenkins, the open-source automation powerhouse, orchestrates coding, testing, and deployment tasks, eliminating manual bottlenecks and speeding up development cycles.

Continuous Integration and Continuous Deployment (CI/CD):

Jenkins is pivotal in achieving both CI and CD by facilitating regular code merges and automating software releases into production.

Jenkins: Orchestrating the DevOps Symphony:

Jenkins automates tasks from source code pull to testing and deployment, utilizing containerization for faster and more scalable operations.

Setting Up Jenkins on AWS: Quick Guide:

Launching an AWS Instance for Jenkins:

    Access AWS Account:

- Log in to AWS.
- Go to EC2 dashboard.

Launch Instance:
- Click "Launch Instances."
- Name OS, select AMI (e.g., Amazon Linux), choose instance type (e.g., t2.micro).

Configure Instance:
- Proceed without key pair.
- Click "Launch instance."

Connect to OS:
- Select launched OS in EC2 dashboard.
- Click "Connect" twice.

Log into OS:
- Use `sudo su –` to log in as root.
- Check Java installation with `java -version`.

Installing Java and Jenkins:

Install Java:
- Run `yum install java`.

Configure Yum for Jenkins:
- Visit [Jenkins website](#).
- Run `sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo`.

Check Software Signature:
- Run `sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key`.
- Upgrade packages with `sudo yum upgrade`.

Install Jenkins:
- Run `sudo yum install jenkins`.
- Start Jenkins with `sudo systemctl start jenkins`.
- Check status with `sudo systemctl status jenkins`.

Connect to Jenkins Web Interface:

Access Jenkins Web Interface:
- Allow HTTP traffic in AWS security groups.
- Open a browser, enter IP address with Jenkins port (default is 8080).

Retrieve Jenkins Password:

- Use the password from the terminal or find it in Jenkins home directory.

Install Plugins:
- Locate the password directory on the Jenkins homepage.
- Alternatively, access the Jenkins dashboard and install suggested plugins.

Login to Jenkins:
- Log in using provided user details.

Configure Plugins:
- Choose and install plugins based on your needs (e.g., GitHub, Docker).

Continue with Jenkins:
- You're now set up for seamless continuous integration and deployment with Jenkins on AWS.

Check_Out_Detailed_Blog:-https://medium.com/@srivastavayushmaan1347/mastering-devops-efficiency-a-comprehensive-guide-to-jenkins-automation-6fe1074d77d6