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**Step 7: DevOps Certification training**

**Project 2: Deployment of WordPress Application on Kubernetes.**

DESCRIPTION

Use Jenkins to deploy a WordPress application on Kubernetes.

**Description:**

While developing a highly scalable application, real challenges come into picture during the deployment of that application into production or real time data scenarios. One of the biggest drawbacks for any product after development is having the application stuck while working in normal case scenarios in a real time production environment.

Your organization is adopting the DevOps methodology and in order to integrate CI into your existing developmental workflow, there’s a need to automate the deployment of a wordpress application in the production environment using a CI tool like Jenkins such that it can be load balanced and auto scaled easily depending on the traffic it can handle.

Kubernetes has become essential for standardising application components across complex development and production. With the increasing complexity of application ecosystems and the growing popularity of Kubernetes, tools that help manage resources within Kubernetes clusters have become essential.

Considering the organizational requirement, you are asked to deploy the wordpress application on a Kubernetes cluster while utilising the docker image for the wordpress application in the production environment.

**Tools required:** Git, GitHub, Jenkins, Docker and Kubernetes

**Expected Deliverables:**

Establish a connection between Jenkins and Kubernetes

The build job should compile and run the code to deploy the application on Kubernetes.

1. **Create PersistentVolumeClaims and PersistentVolumes**
2. **Create a Secret for MySQL**
3. **Deploy MySQL**
4. **Deploy WordPress**
5. **Troubleshooting**