Abstract:

DevOps is the combination of practices, and tools that increases an organization’s ability to deliver applications and services at high velocity: evolving and improving products at a faster pace than organizations using traditional software development and infrastructure management processes. Basically, we can say that it is a combination of development and operations. It is a software development method that stresses communication, collaboration and integration between software developers and Information technology (IT) professionals. It aims at establishing a culture and environment, where building, testing, and releasing software can happen rapidly, frequently, and more reliably. DevOps integration targets product delivery, quality testing, feature development and maintenance releases to improve reliability, security, faster development and deployment cycles. In this project, we aim to gain knowledge on DevOps tools, Continuous integration (Some general integration tools are Jenkins, Travis CI, Build Bot, Atlassian Bamboo), Continuous delivery and Infrastructure as a Code (IAAC), the problems and solutions of code delivery with advanced software engineering techniques. In test environments, automating configuration, refreshing test data, and then deploying the software to the test environment followed by the execution of automated tests speeds feedback cycles of test results back to development.

Hence, we try to show that DevOps is the efficient mechanism for Continuous Integration and Continuous Delivery.

Our Plan of Implementation:

We plan to implement DevOps tools on Java project in which it demonstrates how to implement tools in each phase of software development. Our implementation includes following different phases:

1. Design and develop the code
2. Commit the code using version control tools
3. Compile the code using Continuous Integration tools
4. Review the code using Continuous Integration tools
5. Test the code using Continuous Integration tools
6. Deploy the code into server