

INFOSOFT IT SOLUTIONS

Training | Projects | Placements

Revathi Apartments, Ameerpet, 1st Floor, Opposite Annapurna Block, Info

soft it solutions Software Training& Development 905968394,918254087

GIT LAB CI/CD

Introduction to GitLab CI/CD

- Overview of CI/CD concepts
- Introduction to GitLab and its features
- Benefits of using GitLab CI/CD
- Understanding the GitLab workflow

Setting Up GitLab CI/CD

- Creating and configuring a GitLab account
- Setting up a project repository
- Overview of GitLab runners
- Installing and configuring GitLab runners

GitLab CI/CD Pipeline Configuration

- Introduction to `.gitlab-ci.yml` file
- Stages and jobs in GitLab CI/CD
- Defining scripts and commands
- Using variables in pipelines
- Pipeline optimization techniques

Managing Jobs and Pipelines

- Running and managing jobs
- Configuring job dependencies
- Parallel and sequential execution
- Using cache and artifacts
- Understanding job logs and artifacts

Advanced Pipeline Features

- Conditional job execution
- Triggering pipelines with webhooks and schedules
- Using environments and deployment strategies
- Implementing pipeline security measures
- Integration with third-party tools

Testing and Deployment

- Writing unit and integration tests
- Automating tests in pipelines
- Continuous deployment strategies
- Deploying applications to various environments
- Rollback strategies and best practices

Monitoring and Optimization

- Monitoring pipeline performance
- Troubleshooting common CI/CD issues
- Optimizing pipelines for speed and efficiency
- Best practices for maintaining CI/CD pipelines
-

Advanced Pipeline Concepts

- Deep dive into `.gitlab-ci.yml` syntax
- Multi-project pipelines
- Parent-child pipelines

Advanced Job Configuration

- Advanced use of caching and artifacts
- Job retry strategies and conditions
- Configuring resource groups
- Using custom Docker images

Security and Compliance

- Secrets management with GitLab CI/CD
- Implementing security scanning (SAST, DAST)
- Compliance pipelines and audit logs
- Managing access control and permissions

Integration with DevOps Tools

- Integration with Kubernetes and Docker
- Using GitLab CI/CD with AWS, Azure, and GCP
- Monitoring and alerting with Prometheus and Grafana
- Integration with Jira and other project management tools

Advanced Deployment Strategies

- Canary and blue-green deployments
- Feature toggles and A/B testing
- Rollback and recovery strategies
- Implementing GitOps practices

Optimizing Pipelines

- Performance tuning for CI/CD pipelines
- Parallel execution and matrix builds
- Using GitLab CI/CD templates for reusability
- Pipeline visualization and analysis

Troubleshooting and Debugging

- Analyzing job logs and artifacts
- Debugging failed pipelines
- Common CI/CD issues and resolutions
- Best practices for maintaining healthy pipelines