

INFOSOFT IT SOLUTIONS

Training | Projects | Placements

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Atlassian Bamboo

Introduction to Atlassian Bamboo

- Overview of Bamboo: History, purpose, and benefits
- Bamboo Architecture: Server, Agents, Build Plans, and Jobs
- Comparison with other CI/CD tools (e.g., Jenkins, GitLab CI)

Setting Up Bamboo Environment

- Installing Bamboo: Requirements, installation steps (Server and Agents)
- Configuring Bamboo Server: Initial setup, configuring database, security settings
- Setting up Bamboo Agents: Configuring remote and local agents

Bamboo Concepts and Fundamentals

- Understanding Bamboo Projects, Plans, and Jobs
- Build Triggers: Manual, Scheduled, Repository changes (Polling, Webhooks)
- Artifacts and Dependencies: Managing build artifacts and dependencies between Jobs

Creating and Configuring Build Plans

- Creating Build Plans: Configuring Source Code Repositories (Git, SVN, Mercurial)

- Configuring Build Tasks: Script tasks (Shell, Batch), Maven, Ant, Gradle tasks
- Environment Variables and Secrets: Managing sensitive information securely

Bamboo Build Strategies

- Single-Stage vs. Multi-Stage Builds
- Parallel Builds: Configuring parallel Jobs and Stages
- Conditional Builds: Setting conditions based on variables and triggers

Testing and Quality Assurance

- Integration with Testing Frameworks: JUnit, TestNG, NUnit
- Code Quality Tools Integration: SonarQube, Code Climate
- Running Tests and Generating Reports: Configuring Test tasks in Bamboo

Continuous Deployment with Bamboo

- Deployment Environments: Configuring deployment environments (Dev, QA, Production)
- Deploying to Different Platforms: Cloud (AWS, Azure), On-premises servers
- Using Deployment Projects and Release Management in Bamboo

Advanced Bamboo Features

- Branching Strategies: Branch Plans, Merging Strategies
- Customizing Bamboo with Plugins and Extensions: Marketplace plugins
- Bamboo Specs (Bamboo as Code): Defining builds and deployments using YAML or Java

Monitoring and Performance Optimization

- Monitoring Build Performance: Metrics, Logs, and Build Statistics

- Diagnosing Build Failures: Analyzing logs, troubleshooting common issues
- Optimizing Build Times: Caching dependencies, Parallel Execution

Security and Access Control

- User Management: Creating users, assigning roles and permissions
- Configuring Authentication: LDAP, Active Directory integration
- Securing Bamboo: HTTPS, Firewall configurations, Best practices for security

Bamboo Integration with Other Tools

- Integration with Version Control Systems (VCS): GitHub, Bitbucket, GitLab
- Integration with Issue Tracking Systems: Jira, Trello
- Integrating Notifications: Slack, Email notifications

Backup and Recovery Strategies

- Backup Configuration: Setting up regular backups of Bamboo data
- Disaster Recovery Planning: Steps for restoring Bamboo in case of failure

Module 13: Best Practices and CI/CD Pipelines

- CI/CD Best Practices: Versioning, Automated Testing, Code Reviews
- Designing Effective CI/CD Pipelines: Pipeline as Code, Orchestration of Jobs
- Continuous Improvement: Iterative improvements in CI/CD processes

Real-world Projects and Case Studies

- Implementing CI/CD Pipelines: Case studies and success stories
- Best Practices and Lessons Learned from Real-world Bamboo Implementations

Career Development and Job Preparation

- Building a Career in CI/CD: Skills and certifications
- Interview Preparation: CI/CD-related interview questions and scenarios
- Freelancing and Consulting Opportunities in CI/CD and DevOps