

GLOSSARY OF DEVOPS JENKINS TERMS

**A Quick Reference Guide to
DevOps Jenkins
Terminologies**



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Term	Definition
Jenkins	An open-source automation server used for continuous integration and continuous delivery (CI/CD) pipelines
Continuous Integration (CI)	The practice of frequently merging code changes into a shared repository and building and testing the code automatically
Continuous Delivery (CD)	The practice of automatically deploying code changes to a production environment after successful testing
Pipeline	A series of steps (or stages) that code changes go through in a CI/CD process
Job	A single unit of work in Jenkins, which can be executed as part of a pipeline or separately
Build	The process of compiling, packaging, and testing code changes
Artifact	A compiled and packaged code component, such as a binary or JAR file
SCM	Short for "Source Code Management," SCM tools (like Git) help manage changes to code over time
Branch	A separate copy of the codebase that allows for parallel development of new features or bug fixes
Merge	The process of combining code changes from one branch into another

Term	Definition
Pull Request	A request to merge code changes from one branch into another, typically accompanied by a review process
Test	A step in the pipeline that verifies that code changes work as intended
Unit Test	A type of test that verifies the functionality of a single code component or module
Integration Test	A type of test that verifies the functionality of multiple code components or modules working together
Acceptance Test	A type of test that verifies that a code change meets business requirements
Deployment	The process of making code changes available to users in a production environment
Server	A computer or software application that provides resources or services to other computers or applications
Agent	A software component that runs on a separate machine and is used to execute steps in a pipeline
Node	A physical or virtual machine that hosts agents
Master	The central server that coordinates pipeline execution and manages agents
Plugin	A software module that extends the functionality of Jenkins

Term	Definition
Environment	A specific configuration of a production or development environment, such as "staging" or "production"
Docker	A containerization platform used to package and deploy applications
Kubernetes	A container orchestration platform used to manage and scale containerized applications
Infrastructure as Code (IaC)	The practice of managing infrastructure using code, typically using tools like Terraform or CloudFormation
Configuration as Code (CaC)	The practice of managing Jenkins configuration using code, typically using the Jenkins Configuration as Code plugin
Blue/Green Deployment	A deployment strategy that involves running two identical environments (a "blue" and a "green" environment) and switching traffic between them to minimize downtime
Canary Deployment	A deployment strategy that involves gradually rolling out code changes to a small subset of users to verify that the changes work as intended before rolling them out to a larger audience
Rollback	The process of reverting code changes to a previous version

Term	Definition
Agentless	A pipeline execution model where no agents are required for pipeline execution
SSH	Secure Shell is a cryptographic network protocol used to establish a secure connection between two networked devices
SSH Key	A secure and private authentication method that allows users to connect to remote systems securely
Maven	A build automation tool primarily used for Java projects
Gradle	A build automation tool that supports multiple programming languages and platforms
Dockerfile	A script used to build Docker images
Docker Image	A preconfigured package used to deploy applications as containers
Kubernetes Pod	The smallest deployable unit in Kubernetes, which represents a single instance of a running process in a cluster
Kubernetes ReplicaSet	A Kubernetes object used to ensure a specified number of replicas (pods) of a specific pod template are running at all times
Kubernetes Deployment	A Kubernetes object used to declaratively manage the deployment of replica sets

Term	Definition
Jenkinsfile	A script written in Groovy that defines the steps of a Jenkins pipeline
Stage	A named section of a Jenkins pipeline that groups together related steps
Parallel	A Jenkins pipeline step used to execute multiple steps concurrently
Cron	A scheduling tool used to run jobs at specified intervals
Trigger	An event that initiates a Jenkins job, such as a code change or a scheduled time
SCM Polling	A feature in Jenkins that regularly checks for changes in a repository and triggers a pipeline if changes are detected
GitLab	A web-based Git repository manager and CI/CD tool
GitHub	A web-based Git repository hosting service
Bitbucket	A web-based Git repository management solution developed by Atlassian
Artifactory	A binary repository manager used to manage dependencies and artifacts
Nexus	A repository manager used to manage dependencies and artifacts

Term	Definition
SonarQube	A code quality management tool used to analyze code and detect bugs, vulnerabilities, and other issues
ELK Stack	A collection of three open-source software tools (Elasticsearch, Logstash, and Kibana) used for log management and analysis
Grafana	A web-based data visualization and analytics platform
Prometheus	A monitoring and alerting toolkit used to collect and store metrics from monitored targets
Nagios	A monitoring system used to monitor the status of network services, servers, and other network devices
Splunk	A software platform used to search, analyze, and visualize machine-generated data
JIRA	A project management tool developed by Atlassian
Agile	A project management methodology that emphasizes collaboration, flexibility, and iterative development
Scrum	An Agile framework used for managing and completing complex projects
Blue Ocean	A Jenkins plugin that provides a modern, intuitive user interface for creating and managing pipelines

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