**What are DevOps Tools?**

DevOps tools are responsible for managing the overall SDLC and ensures that their respective teams are working in the same streamline, doing regular followups and also conducting rigorous testing, These tools become the major key factor in delivering any successful project and they tend to follow 2 major approaches i.e. open toolchain and all-in-one.

Whereas the open toolchain can easily integrate with any third-party tools for better integration, all-in-one doesn’t provide any such solution but offers a complete solution that boosts and oversee the complete DevOps software cycle.

**DevOps Automation Tool**

**1. Docker**

Docker is an open-source platform built on Linux. A group of **DevOps automation tools** called Docker builds containerized environments for apps, improving their portability, security, and test-time conflict reduction. DevOps can quickly and effectively build and execute apps thanks to Docker. Docker apps are independent of platforms and operating systems.

**2. Kubernetes**

It’s a platform for container orchestration and automation that is very well-liked by DevOps teams. It integrates effectively with Docker and manages containers on a wide scale. By automating distribution and scheduling across a cluster, Kubernetes manages hundreds of containers and can be used to deploy containerized software to clusters rather than individual workstations.

**3. Bamboo**

Atlassian’s Bamboo is a CI product. Bamboo advertises “integrations that matter” and offers a Small Teams package with a donation to charity component. Bamboo includes prebuilt features similar to Jenkins, thus managing fewer plugins is easier. Compared to open-source alternatives, the interface is more time-efficient and highly intuitive.

**4. Raygun**

Application performance monitoring (APM) tool Raygun is the best in its field and offers superior monitoring and crash reporting. By pointing to the faulty line of the function, API call, or source code, Raygun aids DevOps in finding performance issues.

**5. GitHub**

One of the best DevOps automation technologies for developer collaboration since 2000 is GitHub. Developers can quickly iterate on existing code (with notifications provided to team members instantly), and they can also perform speedy rollbacks in the event that an error or unintended consequence occurs.

**DevOps Pipeline (CI/CD) Tools**

Managing code updates requires a time-consuming manual process in the absence of CI/CD tools. Using **CI/CD tools**, software projects can automate code upgrades. Utilizing a Continuous Integration solution is primarily for automation and ensuring that the developer’s changes are consistent with the most recent code version. furthermore to all alterations and dependencies made by the other team members. Before being released, the code modification must go through the entire pipeline thanks to a Continuous Deployment tool. Below is the list of 5 CI/CD tools that can be helpful while working on DevOps methodology.

**1. BitBucket**

A DevOps CI CD tool incorporated into Bitbucket is called Pipelines. You may use it to automatically create, test, and even deploy your code based on the configuration file in the repository. On Bitbucket, cloud containers are created for each activity. These containers can be used to execute commands that have all the advantages of fresh system setups that are suitable for the task at hand.

**2. Perforce Helix**

The consistent, open, and flexible CI platform Perforce Helix supports all listed APIs. The tool has a wide range of functions, including management of open-source projects, agile planning and management, and application management. Any type and size of the file may be managed and secured by this powerful versioning engine. Additionally, it offers replication for high-performance builds and developments.

**3. IBM Urbancode**

IBM creates UrbanCode, a multi-tier application paradigm or solution. It provides self-service, rapid feedback, incremental upgrades, continuous automation of application deployments, and continuous delivery. Additionally, alterations can be spread across servers, tiers, and components, and the applications themselves can be rolled back. Versioning, audit trails, and other features are also available.

**4. Buddy**

Buddy is an innovative CI/CD tool for web developers that makes the move to DevOps simpler. It uses delivery pipelines to create, test, and deploy software. It supports all commonly used programming languages, frameworks, and project management programs.

**5. Circle CI**

Circle CI, which can be used in a cross-platform mobile app environment, a Python API server, or a Docker cluster, is another flexible CI CD tool. This tool aids in minimizing the costs associated with using a dedicated server as its cloud foundation.

For the continuous integration process, Circle CI employs the best build, test, debug, and deploy procedures. It eventually produces notifications.

**DevOps Version Control Tools**

Version control is a method to maintain track of code changes so that, in the event that something goes wrong, we can compare various versions of the code and go back as far as we’d want. Where several developers are regularly working on or altering the source code, it is absolutely necessary. Let’s find out some of the best available**version control tools** that can be used to increase the workflow.

**1. Git**

Git is a modern distributed version control technology that is free, cross-platform, and open-source. It has strong support for non-linear development and can quickly and effectively manage everything from small to extremely large projects. Git’s key features include local branching, easy staging spaces, and different workflows.

**2. SVN**

SVN is an advanced VCS that offers efficient windows support and has a perfect blend with GUI (such as TortoiseSVN) and is free and open to use without any charges. By implementing SVN, a team can easily be managed for performing multiple tracking, file locking, MIME support, etc. Besides this, it’s a client-server repository model which makes it efficient for a small or large segment team to sync their tasks so that the workflow can be managed in pace.

**3. Gitlab**

Version control is a means to maintain track of code changes so that, in the event of a problem, we may compare several code versions and roll back to any desired earlier version. It is absolutely necessary that several developers are constantly working on/changing the source code.

**4. CVS**

Another widely used version control system is CVS. It is a crucial part of Source Configuration Management (SCM), a tool that developers have relied on since the 1980s. With the aid of CVS, you may simply record the history of sources, files, and documents. It employs delta compression for effective storage use and excludes symbolic links to reduce security risks.

**5. Bazaar**

It is a version control system that makes it simple to collaborate with other developers, whether they are a single developer, a team working in the same location, or a global community. It scales and modifies to fit your requirements. It is a free, open-source, distributed version control program that is supported by Canonical and offers an excellent user experience. It is very similar to Git and Mercurial.

**DevOps Configuration Management Tools**

Changes and deployments are made quicker, repeatable, scalable, predictable, and capable of maintaining the desired state with the help of configuration management technologies, putting managed assets in the expected condition. Below are the best 5 **DevOps configuration management tools** that a team can implement within their next project.

**1. Chef**

Chef is a Ruby-coded “recipe” to maintain your infrastructure up to date and legal. The recipes list a number of resources that must be in a specific condition. Chef can operate in a client/server setup or in a standalone setting called chef-solo. It is well integrated with the main cloud service providers, allowing for the automatic provisioning and configuration of new workstations.

**2. Ansible**

Ansible is a radically straightforward IT automation tool that streamlines the deployment of your systems and applications. To deploy and update your apps, avoid creating scripts or custom code; instead, automate in a language that is similar to plain English, utilizing SSH, and without the need to install agents on distant computers.

**3. Puppet**

For your Linux, Unix, and Windows systems, Puppet, an automated administrative engine, handles administrative activities (including adding users, installing packages, and updating server configurations) based on a centralized specification.

**4. Salt**

Salt was developed to expand beyond tens of thousands of computers and collect data quickly. To manage configuration specifics and certain tasks, it makes use of [Python](https://www.geeksforgeeks.org/python-programming-language/) modules. All of Salt’s state management and remote execution behavior is controlled by these modules. The modules must be configured, which calls for some amount of technical expertise.

**5. CFEngine**

In 1993, Mark Burgess presented CFEngine as a methodological approach to automated configuration management. The objective was to deal with the entropy in the configuration of computer systems and bring it to an end-state “convergence.” Convergence describes idempotence as the ability to achieve the intended end-state and defines convergence as a desired end-state.

**DevOps Testing Tools**

Over the entire [SDLC](https://www.geeksforgeeks.org/software-development-life-cycle-sdlc/), there are tons of tasks and management involved to develop, handle and deliver the product and this requires a fast and precise solution so that the chain doesn’t break. To handle such complexity there are **DevOps testing tools** that were designed to ease management. Below are the 5 best DevOps Testing tools that you might consider using it.

**1. Jenkins**

Jenkins is among the most popular and widely used testing tools that are known for distributing tasks across multiple machines to perform the repetition. The best part about this tool is that it has over 400 supported plugins that can cater to all your project’s needs and has a very simple web-based interface.

**2. JMeter**

The Apache JMeterTM is open-source software that runs exclusively on Java and was created by*Stefano Mazzocchi* of the Apache Software Foundation to load test applications and track performance. JMeter is a tool that you may use to analyze and gauge the performance of various services, including online applications. Performance testing involves putting a web application through a rigorous load, concurrent, and multiple user traffic tests.

**3. Selenium**

It’s an open-source **software testing platform**that offers multiplatform testing for both Android and iOS and is well-known among testers for automating tests. But that’s not the best part, in fact, you can also integrate different development tools with it and manage all other tasks in a single dashboard.

**4. Appium**

Appium is an open-source tool for automating native, mobile web, and hybrid apps. The iOS, Android, and Windows SDKs are used to create native apps. Web applications that can be accessed on a mobile device are known as mobile web apps. Besides this, Appium supports Chrome, Safari, and the built-in “Browser” app on Android.

**5. SoapUI**

SoapUI supports Eclipse, NetBeans, and IDEA and is open-source, cross-platform, as well as language-independent, making it a crucial tool for testing the Web domain. It enables the testing of a variety of Web services and APIs using functional, non-functional, performance, regression, compilation, and load testing.

**DevOps Monitoring Tools**

DevOps Monitoring involves the process of planning, development, testing, deployment, and operations i.e. right from the scratch. This requires real-time monitoring of all statuses and services that are linked with product delivery. In short, they are responsible for making a smooth transition and ensuring that their team is not falling behind. Below are the 5 **best DevOps Monitoring tools** that can be considered while working.

**1. PagerDuty**

One of the highly used platforms that enable working closely within the teams to monitor dedicated apps/projects and their performance so that identified issues can be addressed. Besides this, this platform is seamless to work on and has an attractive interface which makes it easy for professionals to track and manage every dedicated phase.

**2. Librato**

Librato allows users to monitor all of their tasks in real time and understand the metrics of the businesses so that they can plan and analyze their ongoing projects and tasks. Besides this, it also provides visualization and has a clean and easy user interface and that’s what makes it among the best **DevOps monitoring tools** that exist today.

**3. Prometheus**

It’s a community-driven, open-source solution for monitoring dedicated tasks and offers a web API for customer development. Prometheus was designed in [Golang](https://www.geeksforgeeks.org/golang/) and it collects and organizes data in a symmetric way which makes an easy pathway to connect with PagerDuty.

**4. Splunk**

Splunk has been designed to generate powerful insights so that businesses can take effective decisions. It is used for searching, monitoring, and analyzing data with precise accuracy (even to the decimal points). The interface is elegant yet simple (web-based) and allows users to analyze data from networks, servers, and applications.

**5. App Dynamics**

App Dynamics is a paid monitoring platform that offers accurate data insights from networks, servers, and applications. The best part about this tool is that you can use it over multiple platforms such as IBM, AWS, Microsoft, etc.