What is DevOps?

DevOps: It is related to a combo of tools, practices, and cultural philosophies that hold responsible for increasing the ability of an organization when it comes to delivering services and applications at a higher pace. Here can improve and evolve the products more swiftly in contrast to the organizations. That makes use of the traditional infrastructure management and software development processes.

DevOps is where the software development and operations meet to ensure continuous integration (CI) and continuous delivery (CD).

Popular DevOps Automation tools

Tool name	DevOps stage	Description
Puppet	Automation	**Puppet is a configuration management technology to manage the infrastructure on physical or virtual machines. It is an open-source software configuration management tool developed using Ruby that helps in managing complex infrastructure on the fly.**
Docker	Automation, build, Integration, Deployment	**Docker is a container management service. The keywords of Docker are developed, ship, and run anywhere. The entire idea of Docker is for developers to easily develop applications, ship them into containers, which can then be, deployed anywhere.**
Jenkins	Integrate, deploy, test	Jenkins is a powerful application that allows continuous integration and continuous delivery of projects, regardless of the platform you are working on. A free source can handle any kind of build or continuous integration. You can integrate Jenkins with a number of testing and deployment technologies.
Ansible	Code, deploy, operate	Ansible is a simple open-source IT engine that automates application deployment, intra service orchestration, cloud provisioning, and many other IT tools. Ansible uses playbook to describe automation jobs, and playbook uses very simple language i.e. YAML (It is a human-readable data serialization language & is commonly used for configuration files, but could be used in many applications where data is being stored) which is very easy for humans to understand, read and write.

Nagios	monitoring	Nagios is an open-source continuous monitoring tool, which monitors networks, applications, and servers. It can identify and repair problems detected in the infrastructure and stop future issues before they affect the end-users. It gives the complete status of your IT infrastructure and its performance.
GitHub	Code, integrate	Launched in the year 2000, GitHub remains one of the top DevOps tools for easy collaboration. Using this tool, developers can make rapid iterations to the code, the notification of which is sent instantaneously to other team members. In case of any error or fallout, immediate rollbacks can be done to the previous version within seconds, thanks to the branched history of changes that remain stored contiguously within the tool.
GIT	Code, integrate	Git is a distributed revision control and source code management system with an emphasis on speed. Git was initially designed and developed by Linus Torvalds for Linux kernel development. Git is free software distributed under the terms of the GNU General Public License version 2.
Bugzilla	testing	Bugzilla is an open-source tool used for issues and bug tracking systems. It is used world wild as a bug-reporting tool for all types of testing functions. This tutorial introduces the readers to the basic features and usage of Bugzilla.
GitLab	Code, integrate	Gitlab is a service that provides remote access to Git repositories. In addition to hosting your code, the services contribute additional features designed to help manage the software development lifecycle. These additional features are managing the sharing of code between different people, bug tracking, wiki space, and other tools for 'social coding';
BitBucket	Code, integrate	BitBucket is also a tool, which helps manage project code throughout the software development cycle.
Slack	Planning, design	Launched in the year 2013, Slack is still one of the top communication tools adopted for effective collaboration on projects. This tool in the DevOps arsenal is used by technical organizations across the globe to tear down barriers and offer all team members a clear insight into the workflow. One exciting feature about Slack is that it allows developers to collaborate using toolchains in the same environment they are communicating with other maintenance and service members.
Chef	Code	Chef is a configuration management technology developed by OpsCode to manage infrastructure on physical or virtual machines. It is an open source developed using Ruby, which helps in managing complex infrastructure on the fly.

Splunk	monitoring	That is a powerful tool that has a significant role in monitoring and exploring machine-generated data. Its specialty lies in indexing data of any type which makes it unique among other DevOps tools besides its effective information-sharing mechanism.
Graphite	monitoring	This tool is specialized in converting machine-generated data into graphical representations such as on-demand graphs. It renders chunks of available data into dashboards and diagrams, which can further be deployed easily onto other applications or webpages.
Selenium	Testing	Selenium is an open-source automated testing tool that supports multiple operating systems (Windows, MAC, Linux) and browsers (Chrome, Firefox, IE, and Headless browsers). It supports various languages for test script writing like Java, Python, Groovy, C#, Ruby, PHP, and Perl. Robot Framework is the most popular framework used with Selenium for Continuous Testing.
Testsigma	Testing	Testsigma is a cloud-based automation testing tool that supports the testing of Web applications, Mobile Web applications, Android and iOS apps, and APIs. It uses simple, natural English language to compose tests and requires no complicated programming, reducing the learning curve for manual testers to quickly adopt automation skills. Testsigma allows multiple open-source and third-party integrations and supports numerous test environments to match the dynamic testing requirements continuously.
IBM Rational Functional Tester	Testing	Rational Functional Tester (RFT) can perform functional testing, regression testing, data-driven testing, GUI testing, API testing, and performance testing. It supports a host of applications, including web-based, .Net, Java, Siebel, and PowerBuilder.
Tricentis Tosca	Testing	Tricentis Tosca is a continuous testing platform that can be combined with open-source testing tools and more than 150 technologies. It supports model-based test automation, which is a scriptless approach and will reduce the maintenance overhead. It performs functional testing, load testing, BI testing, and risk-based testing.