Kubernetes and Selenium

What is Kubernetes?

KUBERNETES is a container management system developed in the Google platform. The purpose of kubernetes is to manage a containerized application in various types of Physical, virtual, and cloud environments. Google Kubernetes is a highly flexible container tool to deliver even complex applications, consistently. Applications run on clusters of hundreds to thousands of individual servers.

What task are performed by Kubernetes?

Kubernetes is the Linux kernel which is used for distributed systems. It helps you to be abstract the underlying hardware of the nodes(servers) and offers a consistent interface for applications that consume the shared pool of resources.

Why use Kubernetes?

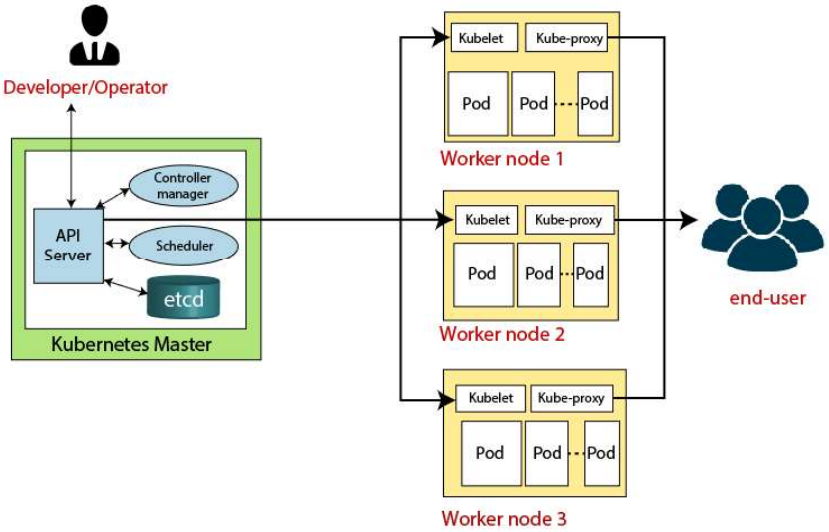
Kubernetes can run on-premises bare metal, OpenStack, public clouds Google, Azure, AWS, etc.

Helps you to avoid vendor lock issues as it can use any vendor-specific APIs or services except where Kubernetes provides an abstraction, e.g., load balancer and storage.

Containerization using kubernetes allows package software to serve these goals. It will enable applications that need to be released and updated without any downtime.

Kubernetes allows you to assure those containerized applications run where and when you want and helps you to find resources and tools which you want to work.

Kubernetes Architecture



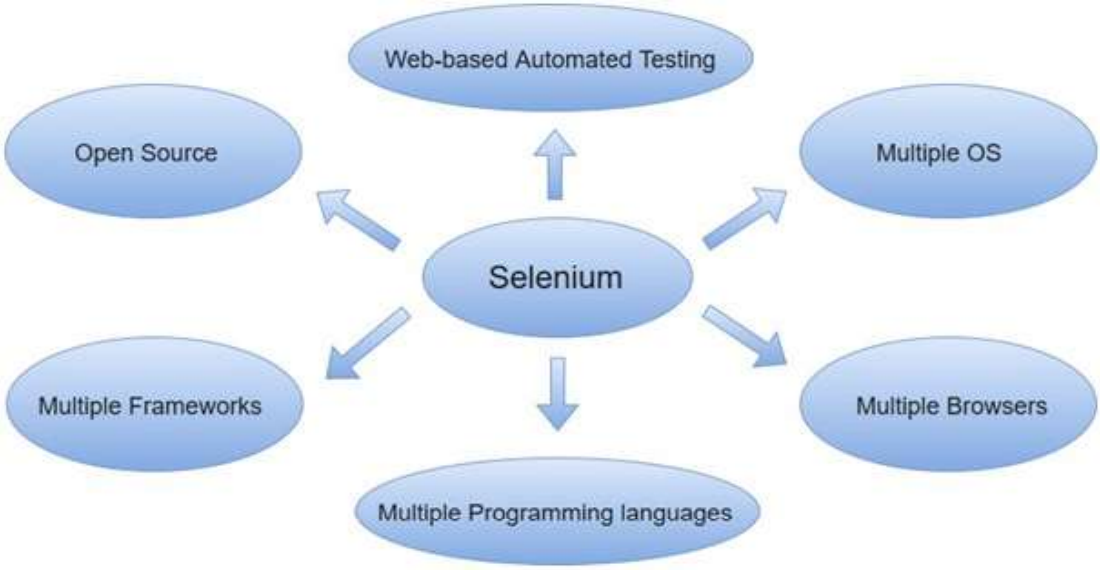
Kubernets Architecture

What is Selenium

Selenium is one of the most widely used open source Web UI (User Interface) automation testing suite.It was originally developed by Jason Huggins in 2004 as an internal tool at Thought Works. Selenium supports automation across different browsers, platforms and programming languages.

Selenium can be easily deployed on platforms such as Windows, Linux, Solaris and Macintosh. Moreover, it supports OS (Operating System) for mobile applications like iOS, windows mobile and android.

Selenium supports a variety of programming languages through the use of drivers specific to each language.Languages supported by Selenium include C#, Java, Perl, PHP, Python and Ruby.Currently, Selenium Web driver is most popular with Java and C#. Selenium test scripts can be coded in any of the supported programming languages and can be run directly in most modern web browsers. Browsers supported by Selenium include Internet Explorer, Mozilla Firefox, Google Chrome and Safari.


Web-based Automated Testing
Open Source
Multiple OS
Selenium
Multiple Frameworks
Multiple Browsers
Multiple Programming languages

Manual testing, a vital part of the application development process, unfortunately, has many shortcomings, chief of them being that the process is monotonous and repetitive. To overcome these obstacles, Jason Huggins, an engineer at Thoughtworks, decided to automate the testing process. He developed a JavaScript program called the JavaScriptTestRunner that automated web application testing. This program was renamed Selenium in 2004.

Selenium is a set of different software tools. Each tool has a different approach in supporting web based automation testing.

It has four components namely,

i. Selenium IDE (Integrated Development Environment)

ii. Selenium RC (Remote Control)

iii. Selenium WebDriver

iv. Selenium Grid