



# Open Source Tools for Testing DevOps



Keynote Speaker  
**Pakistan Software Quality Conference**

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What if Dev and ops

- Worked Better together?
- Thought more alike?
- Broke down silos?
- Share responsibilities

What is Devops

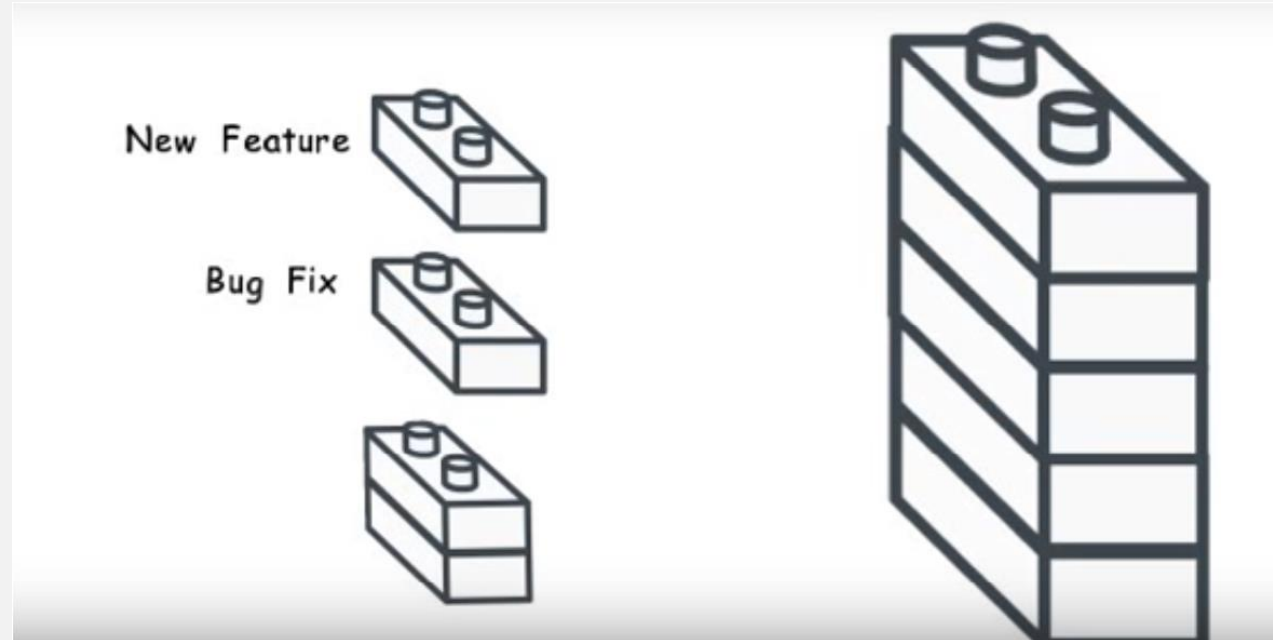


Devops Teams need to do few things differently.

### Automation

- Automate Code Testing
- Automate Workflows
- Automate Infrastructure
- Automate Everything

- Writing the code in chunks



- Development Environment = Production Environment

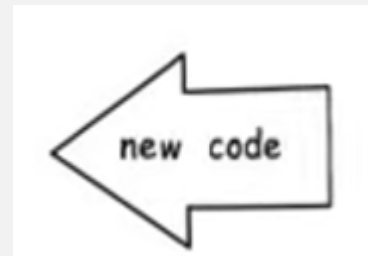
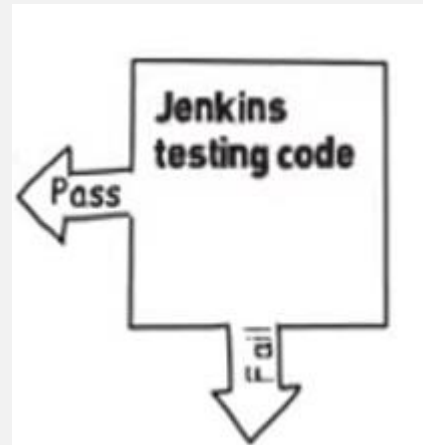


- Benefits of Devops:
- How DevOps Team accomplish this:

Change in mind set + New tools=Prepared for new fast paced world

Devops need tools which allow them to build and test code continuously

- Jenkins
- GitHub
- Configuration Management tools e.g. Chef, Puppet and SaltStack



- Devops is a new philosophy which helps the origination to innovate faster and be more responsive to business needs
  - Promotes collaboration between developers and operations which improves quality of software and more frequent software releases.
- 
- Adopting devops philosophy required

Devops= New Mind Sets + New Tools + New Skills





# Selenium

- What is Selenium?
- Four components of Selenium
  - Selenium Integrated Development Environment (IDE)
  - Selenium Remote Control (RC)
  - WebDriver
  - Selenium Grid

## Brief Introduction WebDriver

- The supported languages are the same as those in Selenium RC.
  - Java
  - C#
  - PHP
  - Python
  - Perl
  - Ruby

- Webdriver + Mobile Features= Appium
  
- Supported Platforms
  - iOS
  - Android
  - FirefoxOS
  
- Why Appium?



- Appium Concepts:
  - Client Server Architecture
  - Sessions
  - Desired Capabilities



## Desired Capabilities

```
@Test
public void test() throws MalformedURLException {
    File appDir = new File("src");
    File app = new File(appDir, "abc.apk");
    DesiredCapabilities cap=new DesiredCapabilities();
    cap.setCapability(MobileCapabilityType.PLATFORM_NAME,MobilePlatform.ANDROID);
    cap.setCapability(MobileCapabilityType.DEVICE_NAME, "Android device");
    cap.setCapability(MobileCapabilityType.NEW_COMMAND_TIMEOUT, "100");
    cap.setCapability(MobileCapabilityType.APP, app.getAbsolutePath());
    AndroidDriver driver=new AndroidDriver(newURL("http://127.0.0.1:4723/wd/hub"),cap );
```

# Test NG Library



- TestNG Advantages
- Annotations
  - @BeforeSuite
  - @AfterSuite
  - @BeforeClass
  - @AfterClass
  - @Test
- Selected or Batch execution of Testcases
- TestNG Reports

## Jenkins & Maven

- Jenkins is basically a continuous integration tool.
- Jenkins inbuild plugin for Maven
- Maven is build management tool, provide better project structure.
- What is POM.xml
- Maven Dependencies




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