**Selenium Grid**

Download Selenium Standalone Server

**To Run the Hub:**

command prompt > **java -jar selenium-server-standalone-3.14.0.jar -role hub**

> then Grid console should up and running

>open browser enter URL : **localhost:4444/grid/console**

Next > to connect Node to Hub we need to provide BrowserWebDriver and port number.

**To Create a Node:**

for chrome browser >

open another command prompt > **java -Dwebdriver.chrome.driver=C:\Users\sball\Downloads\chromedriver\_win32\chromedriver.exe -jar selenium-server-standalone-3.14.0.jar -role node -hub** [**http://localhost:4444/grid/register**](http://localhost:4444/grid/register)

for ie browser >

open another command prompt > **java -Dwebdriver.ie.driver=C:\Users\sball\Downloads\MicrosoftWebDriver.exe -jar selenium-server-standalone-3.14.0.jar -role node -hub** [**http://localhost:4444/grid/register**](http://localhost:4444/grid/register) **-port 4549**

similar commands to other browsers as well

**To create Node: we can use below command**

> **java -jar selenium-server-standalone-3.14.0.jar -role node -hub** [**http://localhost:4444:4444/grid/register**](http://localhost:4444:4444/grid/register) **-port 4547**

**For other machines:** we need to change remote url ( http:// different ip address )

**Note : whenever we want to run test cases in Selenium Grid**

we have to set Desired Capabilities

and use RemoteWebDriver

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coding in the test script

>>>to set Desiredcapabilities

**dcap.setPlatform(Platform.WINDOWS);**

>>>to use RemoteWebDriver

**URL url =new URL ( "** [**http://192.168.0.13:4444/wd/hub**](http://192.168.0.13:4444/wd/hub) **" );**

**WebDriver driver=new RemoteWebDriver( remoteaddress , dcap);**

To run test cases on another machine :

> install selenium-standalone-server from Seleniumhq

> install relevant browserDrivers.

> on remote machine to run hub > command prompt

**> java -Dwebdriver.ie.driver=C:\Users\sball\Downloads\microsoftwebdriver.exe -jar selenium-server-standalone-3.14.0.jar -role node -hub** [**http://ipaddress**](http://ipaddress) **of hub :4444/grid/register**

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**To find ip address > ipconfig > then IPv4 is ip address.**

**BrowserStack and Saucelab > cloud based company that provides multiple test environments. ( provide virtual machines to tests )**

**Browserstack**

**to use browserstack we need to create an account.**

**> dashboard > docs > browser and platform**

**we need API key > to obtain the key**

we need to change URL in our test script

and set DesiredCapabilities