WebDriver will execute your test cases on a single machine.

Few other problems with such a standalone execution:

No ability to execute your test cases with different Operating Systems?

Run your test cases in the different version of the same browser?

Run your test cases in multiple browsers?

Start Hub

java -jar selenium-server-standalone-3.141.59.jar -role hub -port 2234

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| C:\SRTemp\softwares\selenium>java -jar selenium-server-standalone-3.141.59.jar -role hub -port 2234  08:48:08.705 INFO [GridLauncherV3.parse] - Selenium server version: 3.141.59, revision: e82be7d358  08:48:08.822 INFO [GridLauncherV3.lambda$buildLaunchers$5] - Launching Selenium Grid hub on port 2234  2022-01-11 08:48:09.187:INFO::main: Logging initialized @754ms to org.seleniumhq.jetty9.util.log.StdErrLog  08:48:09.472 INFO [Hub.start] - Selenium Grid hub is up and running  08:48:09.479 INFO [Hub.start] - Nodes should register to http://10.0.18.18:2234/grid/register/  08:48:09.479 INFO [Hub.start] - Clients should connect to http://10.0.18.18:2234/wd/hub |

Register Node

C:\SRTemp\softwares\selenium>java -Dwebdriver.chrome.driver="C:\Users\sheetalrastogi\eclipse-workspace\project\src\test\resources\chromedriver.exe" -jar selenium-server-standalone-3.141.59.jar -role webdriver -hub http://10.0.18.18:2234/grid/register/ -port 5557

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| C:\SRTemp\softwares\selenium>java -Dwebdriver.chrome.driver="C:\Users\sheetalrastogi\eclipse-workspace\project\src\test\resources\chromedriver.exe" -jar selenium-server-standalone-3.141.59.jar -role webdriver -hub http://10.0.18.18:2234/grid/register/ -port 5557  08:58:16.829 INFO [GridLauncherV3.parse] - Selenium server version: 3.141.59, revision: e82be7d358  08:58:16.933 INFO [GridLauncherV3.lambda$buildLaunchers$7] - Launching a Selenium Grid node on port 5557  2022-01-11 08:58:17.124:INFO::main: Logging initialized @534ms to org.seleniumhq.jetty9.util.log.StdErrLog  08:58:17.359 INFO [WebDriverServlet.<init>] - Initialising WebDriverServlet  08:58:17.490 INFO [SeleniumServer.boot] - Selenium Server is up and running on port 5557  08:58:17.490 INFO [GridLauncherV3.lambda$buildLaunchers$7] - Selenium Grid node is up and ready to register to the hub  08:58:17.560 INFO [SelfRegisteringRemote$1.run] - Starting auto registration thread. Will try to register every 5000 ms.  08:58:18.095 INFO [SelfRegisteringRemote.registerToHub] - Registering the node to the hub: http://10.0.18.18:2234/grid/register  08:58:18.163 INFO [SelfRegisteringRemote.registerToHub] - The node is registered to the hub and ready to use |

Code to launch Selenium browser:

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| **package** selenium;  **import** java.io.File;  **import** java.net.MalformedURLException;  **import** java.net.URL;  **import** org.openqa.selenium.Platform;  **import** org.openqa.selenium.WebDriver;  **import** org.openqa.selenium.remote.DesiredCapabilities;  **import** org.openqa.selenium.remote.RemoteWebDriver;  **public** **class** ExampleSeleniumGrid {  **public** **static** **void** main(String[] args) **throws** MalformedURLException {  String NodeURL = "http://10.0.18.18:2234/wd/hub";  File file = **new** File("src/test/resources/chromedriver.exe");  System.*setProperty*("webdriver.chrome.driver", file.getAbsolutePath());  DesiredCapabilities capa = DesiredCapabilities.*chrome*();  capa.setBrowserName("chrome");  capa.setPlatform(Platform.***ANY***);  WebDriver driver = **new** RemoteWebDriver(**new** URL(NodeURL), capa);  driver.get("http://www.amazon.co.in");  driver.quit();  }  } |