Automation Framework Installation guide

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# Tools needed:

* Apache ANT:
  + Description: Command line tool that help building software.
  + [link](https://ant.apache.org/bindownload.cgi)
* Apache POI
  + Description: Open source tool used to create, modify and display Microsoft Office files using Java. The eclipse project uses it for getting information from excel files.
  + [Link](https://poi.apache.org/download.html)
  + Already included. Check: **automationTest\lib\Apache\_poi-3.13**
* Eclipse: link
  + Git plugin: link
  + TestNG plugin: [link](https://marketplace.eclipse.org/content/testng-eclipse)
* Selenium:
  + [Link](http://www.seleniumhq.org/download/)
  + Already included. Check: **automationTest\lib\selenium-2.48.2**
* Selenium IDE Firefox plugin:
  + Description: Used to record and playback user actions such as button clicks and keyboard presses. Also used to export recorded actions to Java.
  + [Link](https://addons.mozilla.org/en-us/firefox/addon/selenium-ide/)
* Browser drivers:
  + Description: Used for connecting to browsers. These are required in order to run tests on web browsers. Currently has Google Chrome, Mozilla Firefox and Internet Explorer. More browsers can be used, but this eclipse project only uses Chrome, Firefox and Internet Explorer.
  + Firefox driver is built into Selenium. External driver not required
  + [Link](http://www.seleniumhq.org/download/)
  + Already included. Check: **automationTest\lib\BrowserDrivers**
* AutoAuth Firefox plugin
  + Description: Submitting HTTP authentication dialogs when you’ve chosen to have the browser save your login information
  + This is necessary in order to automatically fill in HTTP authentication and submit them.
  + [Link](https://addons.mozilla.org/en-US/firefox/addon/autoauth/)
  + Already included. Check: **automationTest\lib\BrowserDrivers\Firefox\_plugin**
* Firebug Firefox plugin
  + Description: It’s used to analyze the structure of the web page. In order to understand how graphs work.
  + [Link](https://addons.mozilla.org/en-US/firefox/addon/firebug/)
* TestNG
  + Description: testing framework. An extension of JUnit
  + [Link](http://testng.org/doc/download.html)
  + Already included. Check: **automationTest\lib\selenium-2.48.2\libs**
* ConEmu (Optional)
  + Description: Better version of command terminal
  + Keyboard shortcuts: [link](http://conemu.github.io/en/KeyboardShortcuts.html)
  + [Link](https://conemu.github.io/)

# Installation steps:

## Installing Apache ANT

* Download Apache ANT.
* Extract the contents in the zipped file and place it in C:\Program Files\Apache Ant
* Add the Apache bin folder to the System Variables in Path
  + Open file explorer and go to Computer
  + Open System Properties (near toolbar)
  + Open Advanced system settings (left pane)
  + Open Environment Variables in the Advanced tab
  + In the System variables (bottom section) edit system variable named **Path**
  + Go to the end of Variable value
  + Add a semicolon of not added
  + Add the Apache ANT bin folder at the end of Variable values.
    - If the Apache ANT is located in C:\Program Files\Apache Ant then type **C:\Program Files\Apache Ant\<apache folder name>\bin**
  + Press OK button
  + Press OK button
  + Press OK button
* Set the ANT\_HOME environment variable for user variables
  + Open file explorer and go to Computer
  + Open System Properties (near toolbar)
  + Open Advanced system settings (left pane)
  + Open Environment Variables in the Advanced tab
  + In the User Variables for <username> (top section), click **New** button
  + Variable name: ANT\_HOME
  + Variable value: C:\Program Files\Apache Ant\apache-ant-1.9.6
  + Press OK button
  + Press OK button
  + Press OK button
* Set the JAVA\_HOME environment variable for user variables
  + Open file explorer and go to computer
  + Open System Properties (near toolbar)
  + Open Advanced system settings (left pane)
  + Open Environment Variables in Advanced tab
  + In the User Variables for <username> (top section), click **New** button
  + Variable name: JAVA\_HOME
  + Variable value: <the location of the Java JDK>
    - Ex: C:\Program Files\Java\jdk1.8.0\_66
  + Press OK button
  + Press OK button
  + Press OK button
* Testing Apache is configured correctly
  + Open command terminal
  + Type ant -version
  + The message should be the Apache ANT version
  + If the ANT version is displayed, the Apache ANT is setup correctly
  + If the ANT version is not displayed, check the steps again. If still the problem persists, read
    - [Apache ANT installation guide](https://ant.apache.org/manual/install.html#installing)
    - A [video](https://www.youtube.com/watch?v=arTLYV3_po4) that shows the steps. Note: the video puts the Apache ANT folder in C:\Program Files. This installation guide places it in C:\Program Files\Apache Ant

## Installing eclipse and its plugins.

* Open file explorer
* Go to [\\CGYBUILD1\esidev](file:///\\CGYBUILD1\esidev)
* Copy eclipse4.2.1 folder and place it in C:\eclipse
* Go to C:\eclipse\eclipse4.2.1
* Create a shortcut for eclipse.exe and place it on the Desktop for easy access
* Open eclipse.exe
* Define an eclipse workspace when the dialog box appears. This is where the eclipse projects will be located. Remember the location
* Close eclipse

### Installing TestNG on eclipse

* Option 1
  + Open eclipse
  + Go to [TestNG for eclipse](https://marketplace.eclipse.org/content/testng-eclipse)
  + **Click and drag** the Install button on the webpage to eclipse while it’s open.
  + Install TestNG
* Option 2
  + Open eclipse
  + Go to Help > Install New Software
  + Click the Add button
    - Name: TestNG
    - Location: <http://beust.com/eclipse>
  + Select TestNG
  + Install TestNG
  + Restart eclipse

### Installing Git on eclipse

* Open Eclipse
* Go to Help > Install New Software
* Click the Add button
  + Name: Egit
  + Location: <http://download.eclipse.org/egit/updates/>
* Make sure the drop down for work with is selected to Egit
* Select the Eclipse Git Team Provider
* Install EGit
* Restart eclipse.

### Getting eclipse project from Git

* Install [Git Bash](https://git-for-windows.github.io/)
* Open Git CMD
* Go to a directory where will the git repository will be. Ex: C:\gitRepository
* Type **git init**
* Go back to eclipse
* File > Import > Projects from Git
* Clone URI
* Paste the URI. Get it from github repository online.
* When defining local destination, make sure it’s the same directory as the one git repository will be. Ex: C:\gitRepository
* Import the project as an existing eclipse project
* If user authentication pops up, provide github username and password
* Finish
* Extra help: [link](https://www.youtube.com/watch?v=ptK9-CNms98),

### Setting eclipse user libraries. Important

* After installing all the plugins for eclipse, the user libraries need to be defined in order to have the framework to work.
* There are two specific open source libraries that needs to be defined.
* Go to eclipse preferences (Windows > Preferences)
* Search user libraries **user libraries**
* Select the tree node (on the left pane) that says **user libraries** under **Java**
* Adding Apache POI library
  + Press the new button
  + Name: **Apache POI**
  + Press OK
  + Select Apache POI
  + Press Add JARs button.
  + Locate all the JAR files for Apache POI
    - Located in: **lib/Apache\_poi-3.13** and **lib/Apache\_poi-3.13/ooxml-lib**
* Adding Selenium 2.0 and JUnit
  + Press the new button
  + Name: **Selenium 2.0 + JUnit 4.12 – Local**
  + Press OK
  + Select Selenium 2.0 + JUnit 4.12 – Local
  + Press Add JARs button
  + Locate all the JAR files for Selenium 2.0 + JUnit 4.12 – Local
    - Located in: **lib/selenium-2.48.2** and **lib/selenium-2.48.2/libs**
* After adding libraries, make sure their added to the project’s build path
  + Right click the project
  + Build Path > Configure Build Path
  + Go to Libraries
  + If both newly created libraries are not present
    - Press Add Library
    - User Library
    - Select the library that is missing.
    - Press Finish
    - Press OK to exit Build Path Configurations.
* Right click the project and click refresh
* Click Project > Clean
* Select the project > OK

## Installing Selenium IDE on Firefox

* Open Mozilla Firefox
* Go to [Selenium IDE on Firefox](https://addons.mozilla.org/en-us/firefox/addon/selenium-ide/)
* Install plugin
* Make sure you can open Selenium IDE on Firefox
  + Icon on the toolbar.

## Installing AutoAuth on Firefox

* Open Mozilla Firefox
* Go to [AutoAuth on Firefox](https://addons.mozilla.org/en-US/firefox/addon/autoauth/)
* Install plugin
* Make sure the plugin is installed.
  + Check installed Add-ons.
    - Tools > Add-ons
  + Go to esi.activity and enter the credentials.
  + Open a new tab and close all other tabs
  + Clear browser history
    - Clear everything
  + Go to esi.activity
  + The HTTP authentication shouldn’t be displayed.

## Installing Firebug on Firefox

* Open Mozilla Firefox
* Go to Firebug
* Install plugin
* Make sure the plugin is installed.
  + Go to any web page
  + Right click on a link or something
  + Select “Inspect Element with Firebug” option
  + If “Inspect Element with Firebug” option is available, the Add-on was installed successfully. If not, restart Firefox and try installing it again.

## Installing ConEmu (Optional)

* Go to [link](https://conemu.github.io/)
* Download ConEmu (Preview installer 32 bit, 64 bit)
* Install ConEmu
  + Select 64-bit