



CodeFuse

CodeFuseAgent - User Guide

<http://www.codefuse.io/>

Version: 1.4

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1. Introduction

CodeFuseAgent is an application which executes CodeFuse tests which have been scheduled from CodeFuseConsole and reports back the test results.

CodeFuseAgent will execute the Steps in the StepSets you specified for the Test. It will take into account any modifications for the Application/Configuration you selected too. It will generate a Pass/Fail/Error result for each Step.

Depending on the type of test you have run, CodeFuseAgent will also generate screenshots of error steps and post the back to the CodeFuseConsole which can be then viewed.

Finally, after a completed test, CodeFuseAgent will send back any additional or corrected object data found during the test to CodeFuseConsole.

2. CodeFuseAgent Installation

Follow the steps below to install a CodeFuseAgent.

Step 01. Download the CodeFuseAgent install file by logging into CodeFuseConsole as an Administrator, clicking on the Downloads tab and then the “CodeFuseAgent” button.

Step 02. Double click on the “CodeFuseAgentInstaller.Exe” file or right click on that file and select “Install”.

Step 03. Click on Run.

Step 04. Click on the Next button and confirm that you accept the license agreement.

Step 05. The CodeFuseAgent Configuration screen will open. Enter a valid Agent Name and your Firm ID.

Please note the following:

- a) *The Agent Name cannot contain spaces.*
- b) *The Agent Name that you choose will show up in the Test Scheduler window in CodeFuseConsole. After it does, you can schedule tests for this agent to run from CodeFuseConsole.*
- c) *You will get your Firm ID after registering on www.CodeFuseconsole.com. The Firm ID is sent to your email address after registration.*

CodeFuse Agent

Company Information
Please enter your Firm Id and Agent name

Please enter the Firm Id below. This will be used to identify your company when communicating CodeFuse Cloud services for subsequent running sessions of CodeFuse Agent application:

00000000-0000-0000-0000-000000000000

Please enter the Agent Name below:

my_agent_1

Back Next Cancel

Step 06. Click on the “Next” button.

Step 07. If you want to use Sauce Connect when you execute tests, enter the path of where it is installed. Otherwise leave this field blank.

Please note the following:

- a) *Sauce Connect can be installed separately from <https://saucelabs.com/>*
- b) *If you do not want to use Sauce Connect, leave the box empty.*
- c) *Sauce Connect is only used to tunnel through firewalls when executing tests on Sauce Labs cloud environment. If you do not need this (i.e. you do not want to use Sauce Labs Cloud OR you do but your agent is not behind a firewall), leave the field blank.*
- d) *To install Sauce Connect, download the Sauce Connect Zip file from Sauce Labs. Next, unzip the installer and save the folder to a folder X of your choosing on your computer. You can then specify the path X in the CodeFuseAgent installer window.*

Info - What is Sauce Connect?

CodeFuseAgent can either run tests locally on the machine it is running on OR it can run tests on Sauce Labs cloud environment.

However, what happens if your agent tries to talk to Sauce Labs from behind a firewall? The chances are it will not be able to communicate.

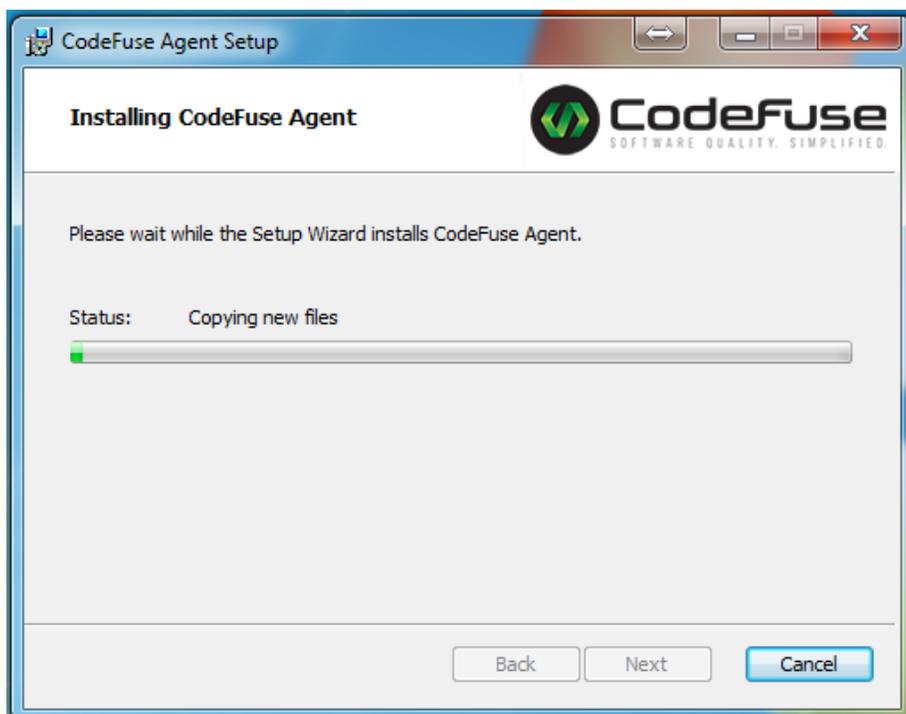
This is where Sauce Connect comes in. Sauce Connect can encrypt traffic and send it over the standard ports 80 and 443 so that your CodeFuseAgent traffic is not blocked.

When you schedule a test in CodeFuseConsole, there is an option to use Sauce Connect. You must ensure that the machine you're your selected agent is installed on also has Sauce Connect installed. Otherwise your test will error.

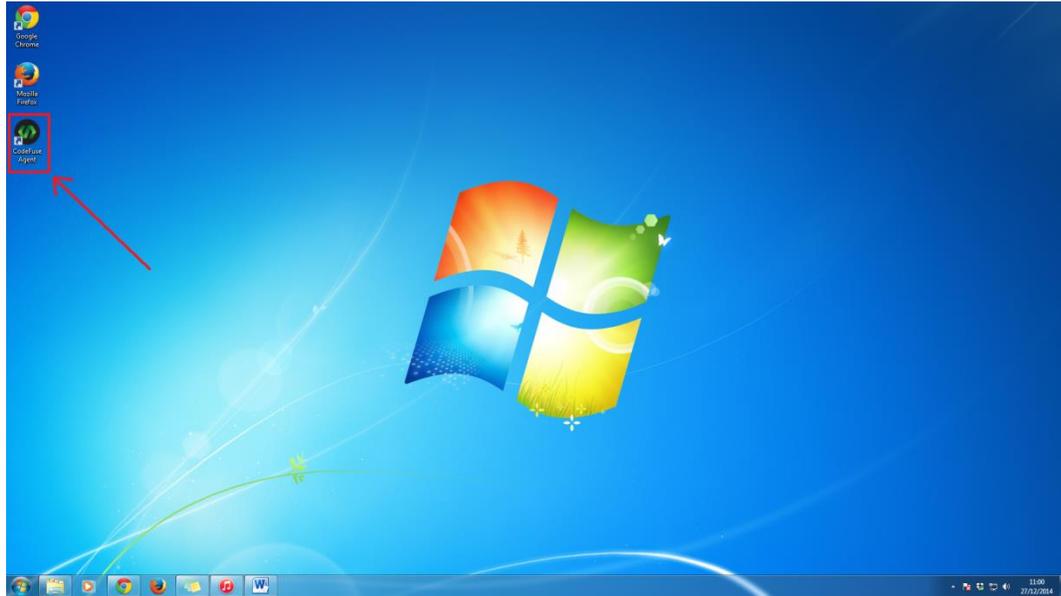


Step 08. Click on the “Next” button.

Step 09. Select available installation type (Typical/Custom/Complete).



Step 10. On successful installation, the CodeFuseAgent icon is added to your desktop.



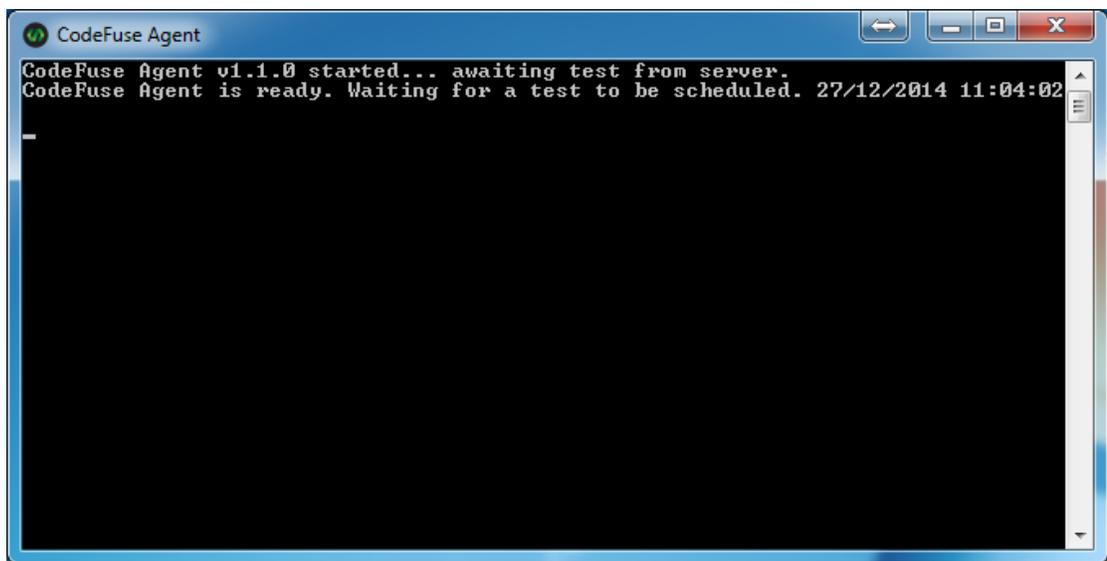
3. Starting CodeFuseAgent

You can start a CodeFuseAgent in either of the following ways:

Step 01: By double clicking on the Agent icon on the desktop OR by right clicking on the icon and selecting "Open".

Step 02: By clicking on the Windows Start button, selecting All Programs -> CodeFuse Labs Limited -> CodeFuse Agent.

You should then see a screen like the one below. If the CodeFuseAgent has not been assigned a test then the following screen will be displayed:



4. Executing Tests with CodeFuseAgent

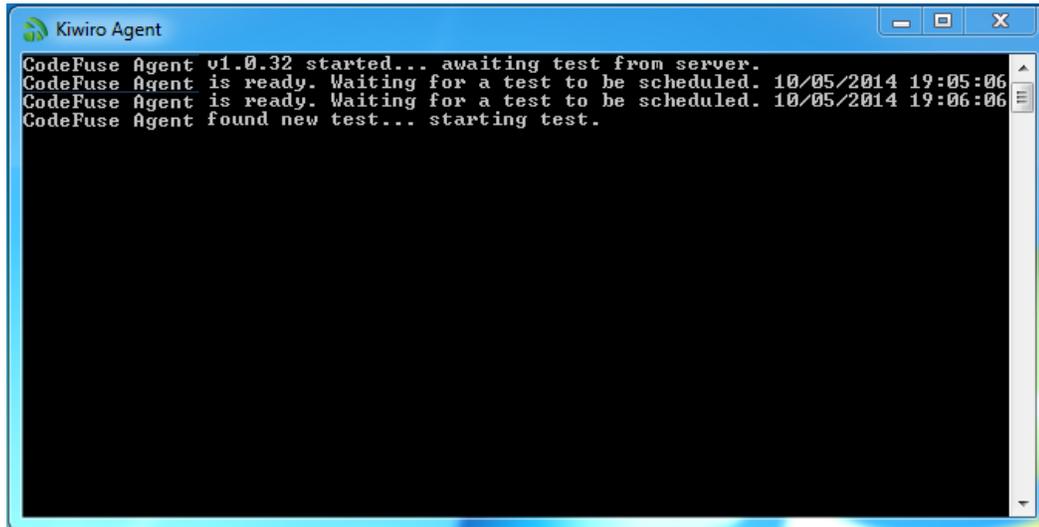
To execute a test using CodeFuseAgent, you need to tell CodeFuseConsole to schedule a test for that agent.

If an agent is running and a test is scheduled to run from CodeFuseConsole, it will run immediately. Please note that it is possible to schedule tests at a future time through CodeFuseConsole though.

If a test is scheduled for an agent that is not running, the test will be run as soon as the selected agent is started.

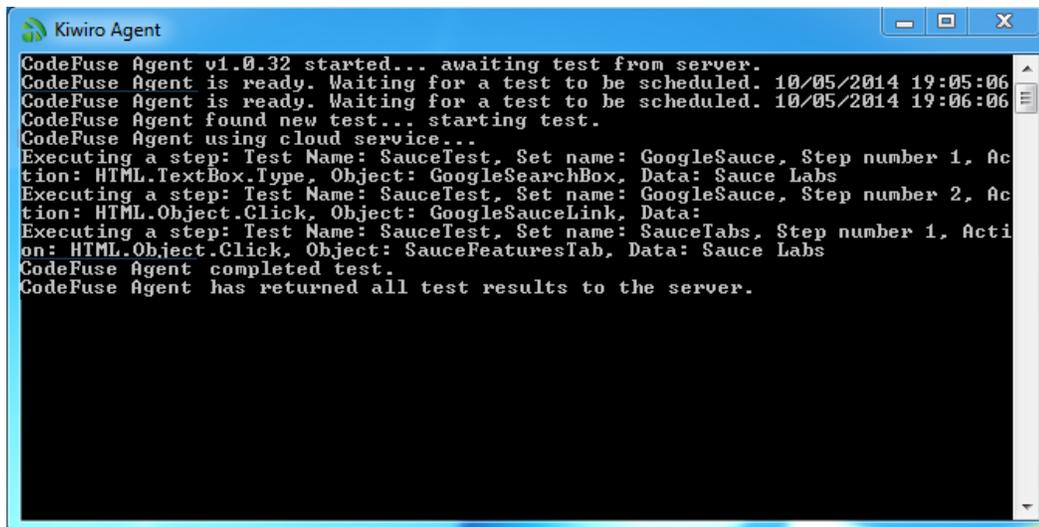
IMPORTANT: For an agent name to appear in the CodeFuseConsole scheduler window, that agent must have been "registered". To register an agent, simply start it.

If a test has been assigned to the CodeFuseAgent then the following screen gets displayed:



```
Kiwiro Agent
CodeFuse Agent v1.0.32 started... awaiting test from server.
CodeFuse Agent is ready. Waiting for a test to be scheduled. 10/05/2014 19:05:06
CodeFuse Agent is ready. Waiting for a test to be scheduled. 10/05/2014 19:06:06
CodeFuse Agent found new test... starting test.
```

After executing a scheduled test, the following status appears on screen:



```
Kiwiro Agent
CodeFuse Agent v1.0.32 started... awaiting test from server.
CodeFuse Agent is ready. Waiting for a test to be scheduled. 10/05/2014 19:05:06
CodeFuse Agent is ready. Waiting for a test to be scheduled. 10/05/2014 19:06:06
CodeFuse Agent found new test... starting test.
CodeFuse Agent using cloud service...
Executing a step: Test Name: SauceTest, Set name: GoogleSauce, Step number 1, Action: HTML.TextBox.Type, Object: GoogleSearchBox, Data: Sauce Labs
Executing a step: Test Name: SauceTest, Set name: GoogleSauce, Step number 2, Action: HTML.Object.Click, Object: GoogleSauceLink, Data:
Executing a step: Test Name: SauceTest, Set name: SauceTabs, Step number 1, Action: HTML.Object.Click, Object: SauceFeaturesTab, Data: Sauce Labs
CodeFuse Agent completed test.
CodeFuse Agent has returned all test results to the server.
```

After a test completes, you can view the test results in the Test Results tab in CodeFuseConsole.

Note: To view the results ensure that you select the same AUT/Configuration in the Console that you used when scheduling the test. The results view only shows test results for the relevant AUT/Configuration.

5. CodeFuseAgent Local Machine Configuration

CodeFuseAgent can either execute tests in the Sauce Labs cloud environment, or run them locally on a client's own hardware. If you want to run tests locally, please review the following information which applies to the machine that you are installing the Agent on.

1. **Mozilla Firefox browser** needs to be installed for CodeFuseAgent to execute tests. Firefox is the default browser for executing tests via the Agent application.
2. **Protective mode settings** must be set for Internet Explorer (IE) on 64-bit Windows Vista or Windows 7.

To enable Protected Mode settings, follow the steps below:

1. **Step 01:** Open Internet Explorer (IE) browser.
 2. **Step 02:** Click on "Tools".
 3. **Step 03:** Click on "Internet Options".
 4. **Step 04:** Click on "Security" tab.
 5. **Step 05:** Select the check box with title "Enable Protected Mode".
3. **The browser zoom level** must be set to 100% so that the native mouse events can be set to the correct coordinates.

6. Changing the CodeFuseAgent Configuration

At Installation time, CodeFuseAgent stores a number of variables. These are: Firm ID, Agent Name and Sauce Connect variables. To change these settings post-installation, follow the steps given below:

Step 01. Open the AgentConfig.xml from application folder. E.g (C:\Program Files\CodeFuse Technology Limited\CodeFuse Agent) using a tool such as MS Notepad.

Step 02. You should see lines similar to the ones below. You can edit this file and save it. Any edits should be made between the XML tags. The XML tags or structure of the XML should not be changed, otherwise the Agent will not start.

```
<AgentName>MY_AGENT_NAME</AgentName>  
<FirmID>00000000-0000-0000-0000-000000000000</FirmID>  
<SauceConnectExecString>C:\Users\John\Documents\Sauce-Connect-  
latest</SauceConnectExecString>
```

Notes: If you are unable to edit the file, it is most likely to be due to Windows security settings on the file. If this is the case, check that you have write permissions on the file.

7. Adding Custom Actions to CodeFuseAgent

CodeFuseAgent has a number of built-in “Test Actions” that a user can make use of in their tests. An example of an Action might be “HTML.Button.Click”.

Sometimes though, with highly customized applications, or applications that use technologies that CodeFuseAgent does not currently support, the user may have a need to create their own new Actions.

These custom Actions are small pieces of code written in the C# programming language which conform to the CodeFuse Test Action method signature.

Follow these steps to add a Custom Action to your CodeFuseAgent:

1. Go to: C:\Program Files (x86)\CodeFuse Technology Limited\CodeFuseAgent\CodeFuseExtensionProject
(please note that the above path may vary depending upon your Windows version and installation drive / directory).
2. **OPTIONAL** - If you need to, move the project to another location.
3. The above directory contains the CodeFuse Extension Project; open it using Visual Studio 2010 or above.
4. **OPTIONAL** - If you receive errors and warnings pertaining to dependencies, resolve them by following the steps below:
 - a. COPY the S-MetaData.DLL file from "\CodeFuse Technology Limited\CodeFuseAgent\" into the "CodeFuseExtensionProject\SharedDLLs" folder.
 - b. In Visual Studio, Right click on the project, select Properties and remove any pre- and post- build events.
 - c. Save the project.
 - d. Build the project.
5. Open the the “AncillaryTestClass” file for editing.
6. To create your new Custom Action, we suggest you copy the example method, rename it and add your code.
7. After you have created your new Custom Action, you will need to use Visual Studio to build the solution.
8. Assuming you have created a Release build, there will be a file called "AncillaryTestClass.DLL" created in the bin/Release/ folder.
9. Copy the resulting DLL to the same directory as the agent executable. (e.g. C:\Program Files (x86)\CodeFuse Technology Limited\CodeFuseAgent)

Note: To use your new Custom Action, you will need to create a reference to it in CodeFuseConsole – see the relevant section in the CodeFuseConsole User Guide.

8. Secondary Search and Test Object Updates

When executing a Test from CodeFuseConsole, CodeFuseAgent uses XPath as its primary search mechanism. If this fails it uses a secondary search mechanism to find an object. If it does, then it will return updated Test Object information back to CodeFuseConsole.

The process works as follows:

1. When the agent executes a Test, it goes through the Test step-by-step. Each Step will normally have a Test Object associated with it.
2. The agent attempts to find the on-screen object for a Step.
3. If the agent cannot find an object (for example the XPath is incorrect), the agent will use "secondary search" to try and find the object.
4. If the agent finds the object via secondary search, it will store the new Test Objects information and send this back to CodeFuseConsole with the Test results.
5. On receiving updated Test Object information, CodeFuseConsole will "archive" the old Test Object and replace it with a new Test Object created from the new Test Object information found.
6. The old Test Object will then appear in the CodeFuseConsole Maintenance screen as "archived".
7. If the user wants to go back to using the archived Test Object, they should select the archived Test Object in the Maintenance screen and click on the "Restore Archived Object" button and CodeFuse will revert the Test Object.

Further information on this is available in the relevant section of the CodeFuseConsole User Guide.

9. Why is CodeFuseAgent Repeating My Test?

CodeFuseAgent works in the following way:

- a. Retrieve the scheduled test details from CodeFuseConsole.
- b. Execute the Test.
- c. Send the results to the server and mark test as complete.

If CodeFuseAgent fails to complete any one of the above specified steps a-c then it will attempt to re-execute the same test. This will continue until the agent marks the test as complete. The agent will mark the test as “Complete” only when it successfully completes all of the steps a-c specified above.

To terminate a test that is repeating too many times, login to CodeFuseConsole, navigate to Test Results / Pending Scheduled Tests, select the relevant test and click on the “Remove Test From Schedule” button.