

# **Aras Test Automation Framework (TAF) 1.52 Installation Guide**

*Document #: D-008084*

*Last Modified: 5/15/2025*

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# 1 Introduction

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This document provides detailed instructions on installing a Visual Studio extension with the Aras Test Automation Framework (TAF) templates. A novice engineer can install the Aras TAF templates following the described procedures.

## 2 Aras TAF Overview

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The Aras Test Automation Framework (TAF) is a framework for writing and executing automated tests for the Aras Innovator platform. TAF supports both AML integration and Selenium web UI tests. The product also includes a Visual Studio extension that provides project templates to help users create and execute automated tests using TAF libraries.

The Aras TAF 1.52 release includes an API to simplify test automation for the applications listed in the following table.

Application	Application Release	Aras Innovator Release
Aras Component Engineering	<ul style="list-style-type: none"> <li>12.0R1 – 12.0R3</li> <li>14</li> </ul>	<ul style="list-style-type: none"> <li>12.0 SP18</li> <li>17 – 32</li> </ul>
Aras Program Management	<ul style="list-style-type: none"> <li>12.0R1</li> <li>14</li> </ul>	<ul style="list-style-type: none"> <li>12.0 SP18</li> <li>17 – 32</li> </ul>
Aras Technical Documentation	<ul style="list-style-type: none"> <li>12.0R1</li> <li>14</li> </ul>	<ul style="list-style-type: none"> <li>12.0 SP18</li> <li>17 – 35</li> </ul>

## 3 Software and Hardware Requirements

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The following table lists the minimum software requirements for the Aras TAF 1.52.

Software	Version / Release
Visual Studio	<ul style="list-style-type: none"> <li>Community 2019</li> <li>Enterprise 2019</li> <li>Professional 2019</li> </ul>
.NET	<ul style="list-style-type: none"> <li>4.7.2</li> </ul>
C#	<ul style="list-style-type: none"> <li>7.1</li> </ul>
Aras Innovator	<ul style="list-style-type: none"> <li>12.0 SP18</li> <li>17 – 35</li> </ul>

## 4 Aras Feature License Requirements

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The Aras Test Automation Framework requires an Aras TAF or Platinum-level subscription.

A target Aras Innovator instance must have a valid Aras license to execute automated tests using the Aras TAF.**TestAutomationFramework** Feature License.

## 5 Downloading TAF Templates

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The Aras TAF project templates are delivered as a zipped package, which subscribers can download from the [Aras FTP](#) site. The FTP content and folder structure are specific for a given logged-in user. The package should be downloaded and extracted to a machine where a supported Visual Studio is installed.

## 6 Installing Aras TAF Templates

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### 6.1 Installing Aras TAF Templates in Visual Studio 2019

1. Unzip the Aras TAF package on a machine with installed Visual Studio 2019.
2. Go to the **Templates** folder in the unzipped package.
3. Double-click the **Aras.TAF.Templates.Installer.vsix** file to start the installer. The **User Account Control** dialog appears.



Figure 1. The **User Account Control** dialog

4. Click **Yes**. The **VSIX Installer** dialog appears.

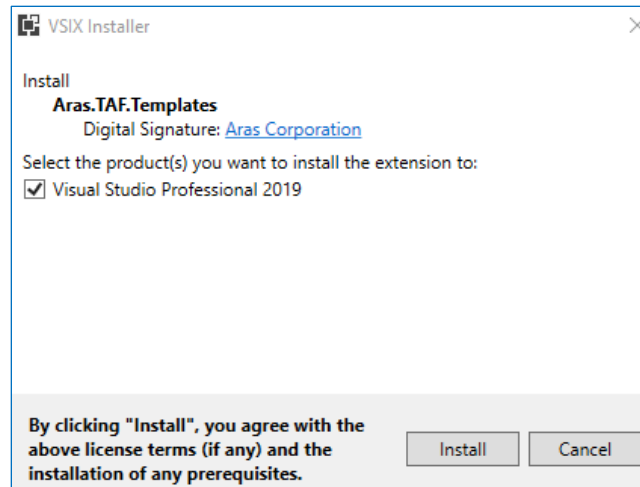


Figure 2. The **VSIX Installer** dialog

5. Ensure that the Visual Studio 2019 option is selected.
6. Click the **Install** button. The installation process begins.

**Note:** If you have open Visual Studio processes, the installer will ask you to end them (see Fig. 2). If so, save the open Visual Studio projects, and click the **End Tasks** button to stop the processes and continue the installation.

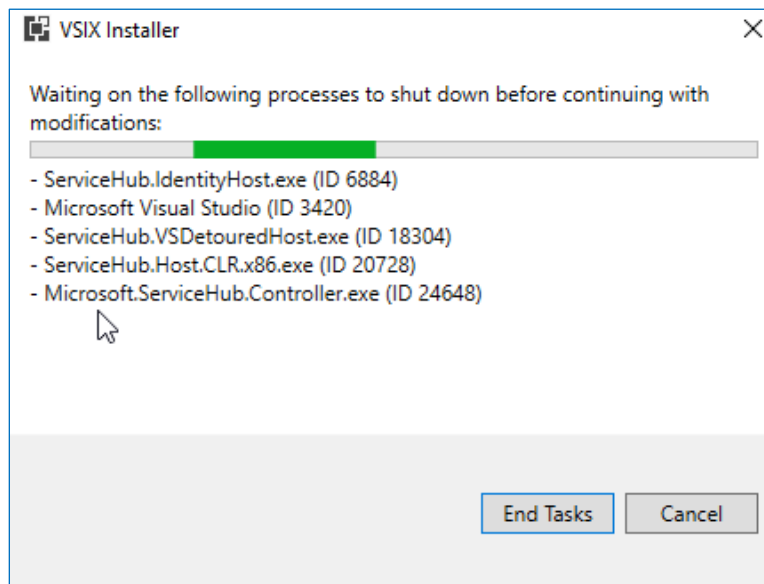


Figure 3. The installer dialog asks to end all running Visual Studio processes

Once the extension with the TAF template is installed, the dialog informs you about the successful installation.

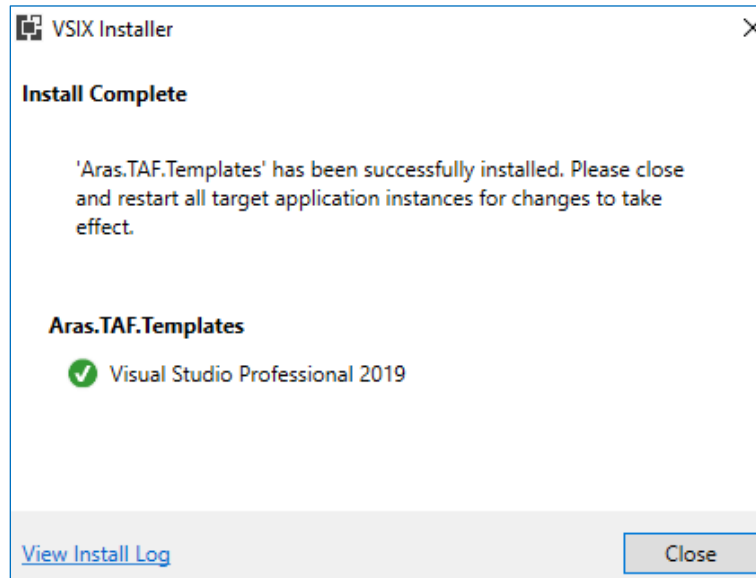


Figure 4. The installer dialog informs about a successful installation

7. Click the **Close** button.
8. Open Visual Studio 2019 and begin using the Aras TAF project templates.

## 6.2 Installing Aras TAF Templates in Visual Studio 2022

1. Unzip the Aras TAF package on a machine with installed Visual Studio 2022.
2. Go to the Templates folder in the unzipped package.
3. Open PowerShell console and navigate to the Templates folder in the unzipped package.
4. Fill `.\InstallTemplate.ps1` to the PowerShell console.

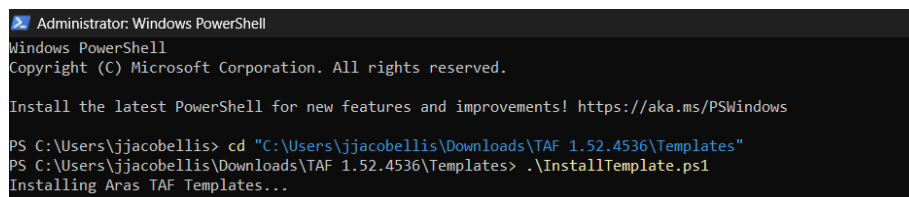


Figure 5. The PowerShell Console with Installation command.

5. Click Enter.

Once the extension with TAF templates is installed, the PowerShell Console informs about the successful installation.

```

Select Administrator: Windows PowerShell

The following template packages will be installed:
C:\Users\jjacobellis\Downloads\TAF_1.52.4536\Templates\Aras.TAF.Templates.1.52.4536.nupkg

Warning:
The following templates use the same identity 'ITAF.Template':
• 'Aras Integration Tests Template' from 'Aras.TAF.Templates::1.45.4162'
• 'Aras Integration Tests Template' from 'Aras.TAF.Templates::1.46.4202'
• 'Aras Integration Tests Template' from 'Aras.TAF.Templates::1.47.4233'
• 'Aras Integration Tests Template' from 'Aras.TAF.Templates::1.48.4256'
• 'Aras Integration Tests Template' from 'Aras.TAF.Templates::1.49.4295'
• 'Aras Integration Tests Template' from 'Aras.TAF.Templates::1.50.4323'
• 'Aras Integration Tests Template' from 'Aras.TAF.Templates::1.51.4330'
• 'Aras Integration Tests Template' from 'Aras.TAF.Templates::1.51.4433'
• 'Aras Integration Tests Template' from 'Aras.TAF.Templates::1.52.4536'
The template from 'Aras Integration Tests Template' will be used. To resolve this conflict, uninstall the conflicting template packages.

Warning:
The following templates use the same identity 'TAF.I14Template':
• 'Aras Innovator 14+ Selenium Tests Template' from 'Aras.TAF.Templates::1.45.4162'
• 'Aras Innovator 14+ Selenium Tests Template' from 'Aras.TAF.Templates::1.46.4202'
• 'Aras Innovator 14+ Selenium Tests Template' from 'Aras.TAF.Templates::1.47.4233'
• 'Aras Innovator 14+ Selenium Tests Template' from 'Aras.TAF.Templates::1.48.4256'
• 'Aras Innovator 14+ Selenium Tests Template' from 'Aras.TAF.Templates::1.49.4295'
• 'Aras Innovator 14+ Selenium Tests Template' from 'Aras.TAF.Templates::1.50.4323'
• 'Aras Innovator 14+ Selenium Tests Template' from 'Aras.TAF.Templates::1.51.4330'
• 'Aras Innovator 14+ Selenium Tests Template' from 'Aras.TAF.Templates::1.51.4433'
• 'Aras Innovator 14+ Selenium Tests Template' from 'Aras.TAF.Templates::1.52.4536'
The template from 'Aras Innovator 14+ Selenium Tests Template' will be used. To resolve this conflict, uninstall the conflicting template packages.

Warning:
The following templates use the same identity 'TAF.I12Template':
• 'Aras Innovator 12 Selenium Tests Template' from 'Aras.TAF.Templates::1.45.4162'
• 'Aras Innovator 12 Selenium Tests Template' from 'Aras.TAF.Templates::1.46.4202'
• 'Aras Innovator 12 Selenium Tests Template' from 'Aras.TAF.Templates::1.47.4233'
• 'Aras Innovator 12 Selenium Tests Template' from 'Aras.TAF.Templates::1.48.4256'
• 'Aras Innovator 12 Selenium Tests Template' from 'Aras.TAF.Templates::1.49.4295'
• 'Aras Innovator 12 Selenium Tests Template' from 'Aras.TAF.Templates::1.50.4323'
• 'Aras Innovator 12 Selenium Tests Template' from 'Aras.TAF.Templates::1.51.4330'
• 'Aras Innovator 12 Selenium Tests Template' from 'Aras.TAF.Templates::1.51.4433'
• 'Aras Innovator 12 Selenium Tests Template' from 'Aras.TAF.Templates::1.52.4536'
The template from 'Aras Innovator 12 Selenium Tests Template' will be used. To resolve this conflict, uninstall the conflicting template packages.

Success: Aras.TAF.Templates::1.52.4536 installed the following templates:
-----
Template Name                               Short Name   Language  Tags
-----
Aras Innovator 12 Selenium Tests Template   I12Template [C#]     Test/WUnit/Selenium
Aras Innovator 14+ Selenium Tests Template  I14+Template [C#]     Test/WUnit/Selenium
Aras Integration Tests Template             ItafTemplate [C#]     Test/WUnit/Integration
    
```

Figure 6. The PowerShell console informs about a successful installation.

6. Open Visual Studio 2022 and use the Aras TAF project templates.

# 7 Getting Started with Aras TAF Project Templates

## 7.1 Creating a New Project from a Template

1. Open Visual Studio and click **Create a New Project**.
2. Select the template for the type of automated tests you need to create:
  - a. **Aras Innovator 12 Selenium Tests Template**: web UI tests for the Aras Innovator 12 client.
  - b. **Aras Innovator 14+ Selenium Tests Template**: web UI tests for the Aras Innovator 14 or higher client.
  - c. **Aras Integration Tests Template**: AML integration tests for all supported Aras Innovator releases.

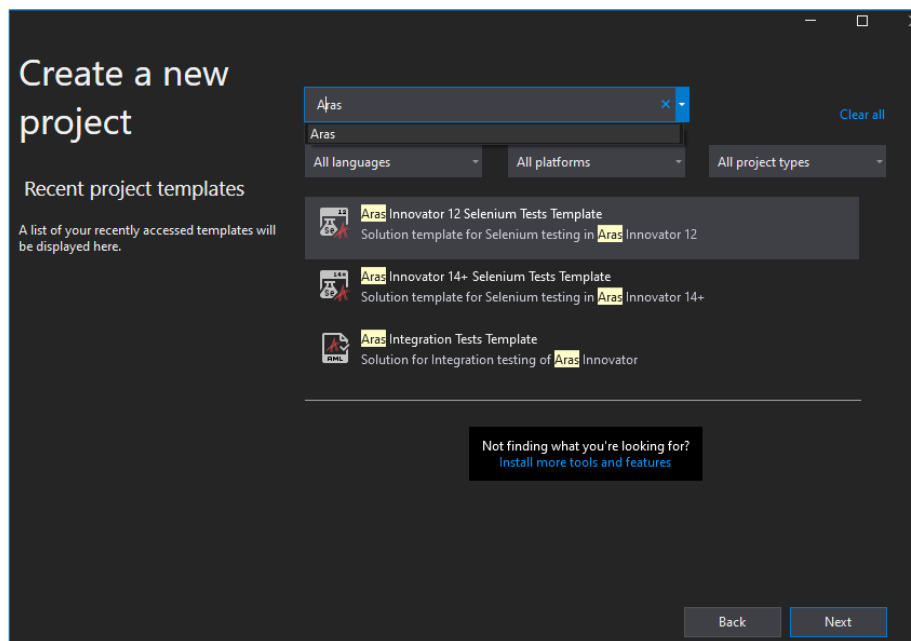


Figure 7. The **Create a new project** Visual Studio dialog with the TAF templates

3. Click the **Next** button. The **Configure your new project** Visual Studio dialog appears.

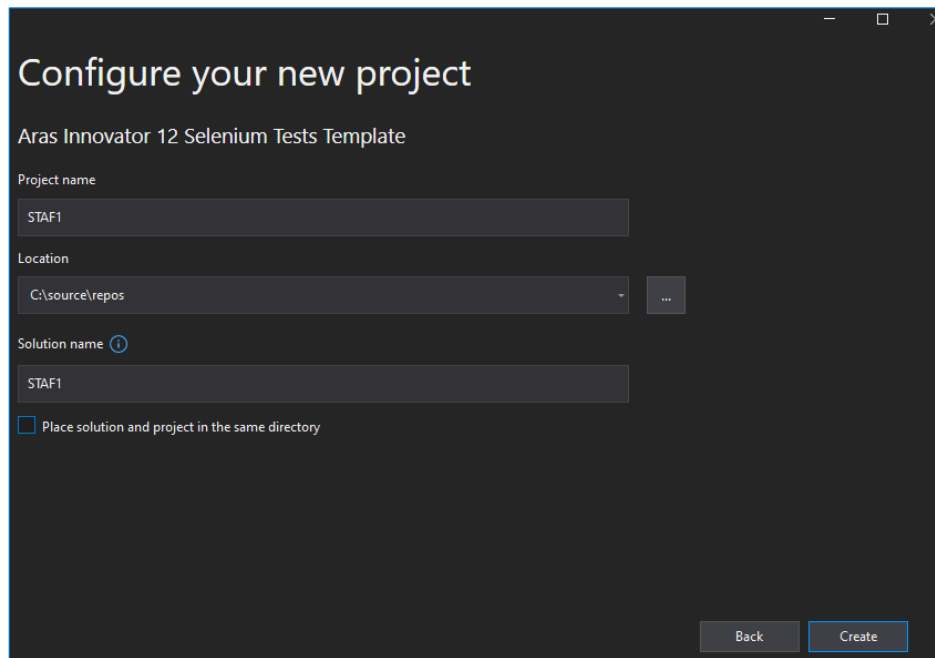


Figure 8. The **Configure your new project** Visual Studio dialog

4. Fill in the **Project name**, **Location**, and **Solution name** project properties.
5. Deselect **Place solution and project in the same directory**.
6. Click the **Create** button. The new TAF project has been created.
7. Configure the project according to the given type of automated tests. For the configuring details, see the matching subsection.

## 7.2 Configuring Aras Selenium Test Solutions

1. In the Visual Studio Solution Explorer, expand the **Aras.ProjectName.Tests** project and double-click the **TestCredentials.json** file to open it.

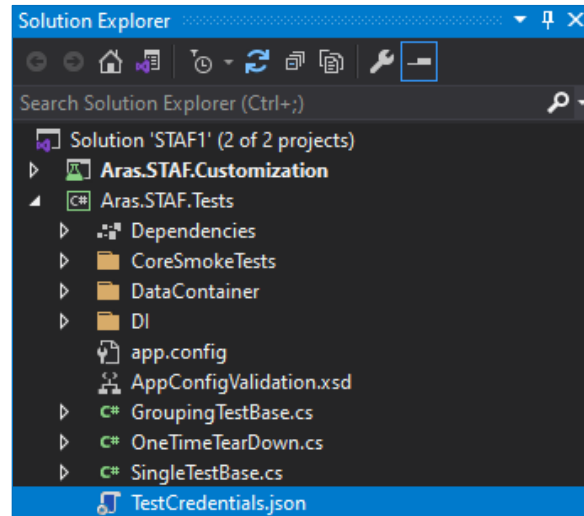


Figure 9. The **TestCredentials.json** file

2. In the `Users` array, add an object with the `LoginName` and `Password` properties for each user you want to use in your tests.

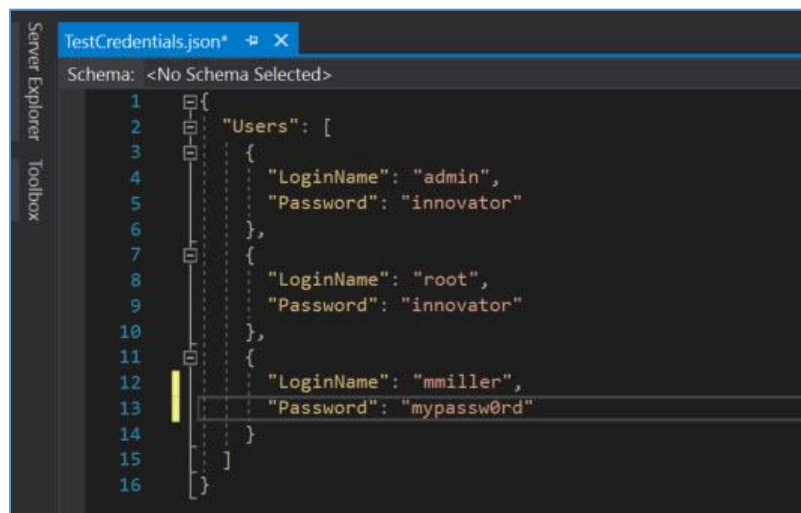


Figure 10. A custom `Users` array

3. In the Visual Studio Solution Explorer, double-click the **app.config** file to open it.

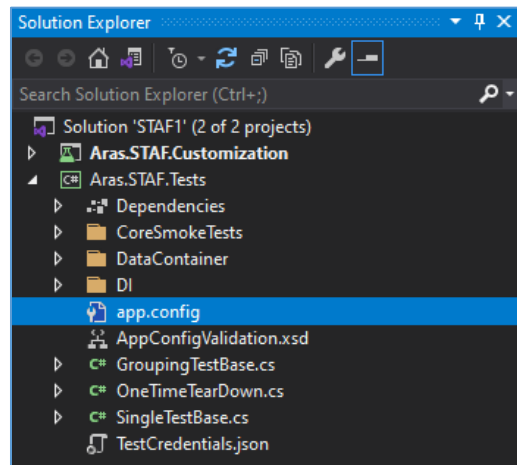


Figure 11. The **app.config** file

4. In the `InnovatorApp` tag, set the following attributes to the values appropriate for your test environment:
  - a. `ClientUrl`: a URL for logging in with a browser, for example:
    - `http://server/web_alias/Client`
  - b. `ServerUrl`: a URL for sending AML requests, for example:
    - `http://server/web_alias`
  - c. `Database`: a name of your test database.
  - d. `Version`: a major release and service pack of your Aras Innovator instance, for example:
    - 12.0 SP6
  - e. `BuildNumber`: a build number of your Aras Innovator instance, optional.
5. In the `Browser` tag, set the `Name` attribute to the name of a browser you want to use for your web UI tests. The default value is `Chrome`.
6. Save your changes.

For details on the optional **app.config** settings, refer to the *Aras Test Automation Framework - User Guide* in the **Documentation** folder in the TAF package.

## 7.3 Configuring AML Integration Test Solutions

1. In the Visual Studio Solution Explorer, expand the **Aras.ProjectName.Tests** project and double-click the **App.config** file to open it.

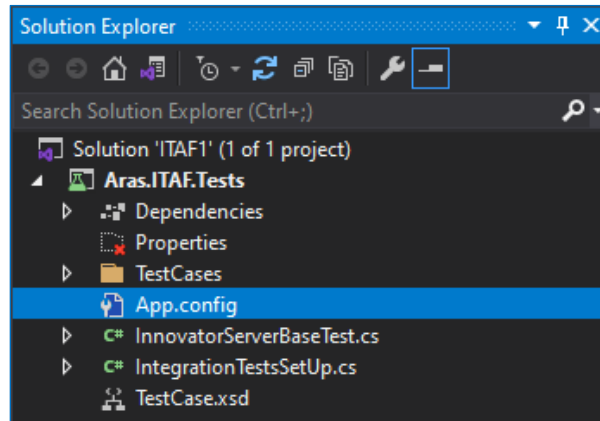


Figure 12. The **App.config** file

2. Set the following the `setting` tags to the values appropriate for your test environment:
  - a. `admin_login_name`: a login name of your database admin user. The default value is `admin`.
  - b. `admin_pwd`: a password for your database admin user. The default value is `innovator`.
  - c. `innovator_server_url`: a URL of your Aras Innovator server, for example:
    - `http://server/web_alias/Server/InnovatorServer.aspx`
  - d. `oauth_server_url`: a URL of your OAuth server, for example:
    - `http://server/web_alias/OAuthServer/`
  - e. `database`: an id of your test database.
  - f. `database_name`: the name of your test database.
3. Save your changes.

For details on the optional **App.config** settings, refer to the *Aras Test Automation Framework - User Guide* in the **Documentation** folder in the TAF package.

## 7.4 Writing TAF Tests

For details on writing automated tests with the Aras TAF APIs for Selenium web UI and AML integration tests, refer to the *Aras Test Automation Framework - User Guide* in the **Documentation** folder in the TAF package.