

USER GUIDE

Syncfusion

Install and Configuration

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Essential Studio

[Syncfusion Essential Studio Installer Overview](#)

Welcome to the Syncfusion Essential Studio product documentation. The following content is to help you get started with Essential Studio.



Essential Studio User Guide



Syncfusion Essential Studio is a complete suite with 1,600+ UI components and frameworks that can be used for all your desktop, web, and mobile application development needs. Essential Studio consists of .NET libraries and UI controls that provide complete support for building modern Windows Forms, WPF, UWP, ASP.NET Web Forms, ASP.NET MVC, ASP.NET Core, Blazor, PHP, JSP, JavaScript, Angular, React, Vue, Flutter, and Xamarin applications. The packages can be used in any .NET environment including C#, VB.NET, and managed C++.

Note: The Express Editions of Visual Studio .NET do not have support for toolbox.

[Terminology of Syncfusion Essential Studio](#)

The Terminology section covers documentation conventions used in this manual.

Convention	Example	Description
Essential Studio		Essential Studio is a comprehensive library of controls targeting the .NET development platform. The packaging of the products within Essential Studio is such that the products share certain common features, such as design patterns, installation programs and several configuration utilities. The term Essential Studio is used in these sections, representing the entire package.

Bold	The Open dialog	UI elements such as names of tabs, menus, buttons, dialog boxes and windows are set to bold.
Italic	The IsEnable property	The property, method and event name and text that must be typed exactly as shown are italicized.
Plus sign	Ctrl+Click	Represents combination of keys.
Version number	x.x.x.x	Represents version number. Replace this with the version installed in the machine.
Note	Note:	Represents important information.
Example	Example	Represents an example.
Tip		Represents useful hints that help you in using the controls/features.
Additional Information		Represents additional information on the topic.

Syncfusion Version Supported OS

The tables in this topic provide the details about what are all Syncfusion versions supported for the corresponding Operating Systems.

Supported Client Operating Systems

Operating System	Syncfusion Release Version Supported From
Windows 10	13.3.0.7 and later
Windows 8.1	11.4.0.26 and later
Windows 8	10.4.0.53 and later
Windows 7 SP1	8.3.0.21 and later
Windows 7	7.4.0.20 and later
Windows Vista SP2	4.4.0.51 and later
Windows XP	1.6.1.0 and later

Supported Server Operating Systems

Operating System	Syncfusion Release Version Supported From
Windows Server 2016	14.3.0.49 and later
Windows Server 2012 R2	11.4.0.26 and later

Windows Server 2012	10.4.0.53 and later
Windows Server 2008 R2 SP1	7.4.0.20 and later
Windows Server 2008	6.2.0.40 and later

System Requirements

ASP.NET MVC

The following topic describes the system requirements required by Syncfusion ASP.NET MVC platform.

Operating Systems

- Windows 7 SP1
- Windows 8, 8.1
- Windows 10
- Android 4.1 & later
- iOS 9 & later

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Microsoft Visual Studio 2015/2017/2019
- .NET Framework 4.5 and later
- ASP.NET MVC 4 or ASP.NET MVC 5

Browser support and Required Polyfills

Browser support

Syncfusion Essential JS Component support modern browsers. This include the below versions.

Chrome	Firefox	Opera	Edge	IE	Safari	iOS	Android	Windows Mobile
Latest	Latest	Latest	13 +	11 +	9 +	9 +	4.4 +	IE 11 +

Required Polyfills

The below polyfills are required to run Essential JS components in each browser.

Browser	Polyfills
Chrome(latest), Firefox(latest), Opera(latest), Edge, Safari 9+	NONE
IE 11	ES6 Promise

ASP.NET Core

The following topic describes the system requirements required by Syncfusion ASP.NET Core platform.

Operating Systems

- Windows 7 SP1
- Windows 8, 8.1
- Windows 10
- Android 4.1 & later
- iOS 9 & later

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Microsoft Visual Studio 2015/2017/2019
- .NET Core 2.0

Browser support and Required Polyfills

Browser support

Syncfusion Essential JS Component support modern browsers. This include the below versions.

Chrome	Firefox	Opera	Edge	IE	Safari	iOS	Android	Windows Mobile
Latest	Latest	Latest	13 +	11 +	9 +	9 +	4.4 +	IE 11 +

Required Polyfills

The below polyfills are required to run Essential JS components in each browser.

Browser	Polyfills
Chrome(latest), Firefox(latest), Opera(latest), Edge, Safari 9+	NONE
IE 11	ES6 Promise

JavaScript

The following topic describes the system requirements required by Syncfusion JavaScript platform.

Operating Systems

- Windows 10
- Windows 8, 8.1
- Windows 7
- Windows vista

- Windows server 2008 and later
- Linux
- Unix
- Mac

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Any Text Editor
- NotePad
- Visual Studio Code (optional text-editor)

Blazor

The following topic describes the system requirements required by Syncfusion Blazor platform.

Operating Systems

- Windows
- Mac OS
- Linux

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Microsoft Visual Studio 2019
- .NET Core 3.1

Browser support and Required Polyfills

Browser support

Syncfusion Blazor Component support modern browsers. This include the below versions.

Blazor WebAssembly

Chrome	Firefox	Opera	Edge	Safari	iOS	Android	Microsoft Internet Explorer
Latest	Latest	Latest	Latest	Latest	Latest	Latest	Not Supported

Note: Microsoft Internet Explorer doesn't support WebAssembly. So, Blazor WebAssembly doesn't support Internet Explorer

Blazor Server

Chrome	Firefox	Opera	Edge	Safari	iOS	Android	Microsoft Internet Explorer
Latest	Latest	Latest	Latest	Latest	Latest	Latest	11+

Note: Additional polyfills are required. Refer this [documentation](#) to add the polyfills in Blazor server application.

Required Polyfills

The below polyfills are required to run Essential Blazor components in each browser.

Browser	Polyfills
Chrome(latest), Firefox(latest), Opera(latest), Edge, Safari 9+	NONE
IE 11	Blazor.Polyfills

For more information, refer the [documentation](#).

Windows Forms

The following topic describes the system requirements required by Syncfusion Windows Forms platform.

Operating Systems

- Windows XP
- Windows Vista SP2
- Windows 7 SP1
- Windows 8, 8.1
- Windows 10

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Microsoft Visual Studio 2005/2008/2010/2012/2013/2015/2017/2019
- .NET Framework 2.0/3.5/4.0/4.5/4.5.1/4.6

WPF

The following topic describes the system requirements required by Syncfusion WPF platform.

Operating Systems

- Windows XP
- Windows Vista SP2
- Windows 7 SP1
- Windows 8, 8.1
- Windows 10

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Microsoft Visual Studio 2008/2010/2012/2013/2015/2017/2019
- .NET Framework 2.0/3.5/4.0/4.5/4.5.1/4.6

Universal Windows Platform

The following topic describes the system requirements required by Syncfusion Universal Windows Platform.

Operating Systems

- Windows 10

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Microsoft Visual Studio 2015/2017/2019
- Windows 10 SDK

Xamarin

The following topic describes the system requirements required by Syncfusion Xamarin platform.

Operating Systems

- Windows XP
- Windows Vista SP2
- Windows 7 SP1
- Windows 8, 8.1
- Windows 10

- Android 4.1 & later
- iOS 9 & later

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Microsoft Visual Studio 2015/2017/2019

Flutter

The following topic describes the system requirements required by Syncfusion Flutter platform.

Operating Systems

- Windows 7 SP1
- Windows 8, 8.1
- Windows 10
- Android API level 16 & later
- iOS 8 & later

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Android SDK 16 & later
- Android studio/ VS code

ASP.NET Web Forms

The following topic describes the system requirements required by Syncfusion ASP.NET Web Forms platform.

Operating Systems

- Windows 10
- Windows 8, 8.1
- Windows 7
- Windows vista
- Windows server 2008 and later

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Microsoft Visual Studio 2010/ 2012/2013/2015/2017/2019
- .NET Framework 3.5/4.0/4.5/4.5.1/4.6

ASP.NET MVC (Essential JS1)

The following topic describes the system requirements required by Syncfusion ASP.NET MVC platform.

Operating Systems

- Windows 10
- Windows 8, 8.1
- Windows 7
- Windows vista
- Windows server 2008 and later

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Microsoft Visual Studio 2010/ 2012/2013/2015/2017/2019
- .NET Framework 3.5/4.0/4.5/4.5.1/4.6
- MVC Version: MVC3/MVC4/MVC5

ASP.NET Core (Essential JS1)

The following topic describes the system requirements required by Syncfusion ASP.NET Core platform.

Operating Systems

- Windows 7 SP1 and later
- Windows 8.1
- Windows 10 Version 1607 and later
- Windows Server 2008 R2 SP1 (Full Server or Server Core)
- Windows Server 2012 SP1 (Full Server or Server Core)
- Windows Server 2012 R2 (Full Server or Server Core)
- Windows Server 2016 (Full Server, Server Core, or Nano Server)
- Mac OS X 10.11, 10.12*
- Red Hat Enterprise Linux 7

- Ubuntu 14.04, 16.04, 17

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Microsoft Visual Studio 2015 Update 3 (minimum) , 2017 version latest (15.6.4), 2019.
- .NET Framework : Minimum .NET 4.5.1 upto .NET 4.7 .
- Command Line (Optional. Necessary for command line deployment)
- Visual Studio Code (optional text-editor)
- SQL Server 2008 Express (optional)

JavaScript (Essential JS1)

The following topic describes the system requirements required by Syncfusion JavaScript platform.

Operating Systems

- Windows 10
- Windows 8, 8.1
- Windows 7
- Windows vista
- Windows server 2008 and later
- Linux
- Unix
- Mac

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Any Text Editor
- NotePad
- Visual Studio Code (optional text-editor)

PHP

The following topic describes the system requirements required by Syncfusion PHP platform.

Operating Systems

- Windows XP SP3

- Windows Server 2003
- Windows Vista SP1
- Windows Server 2008
- Windows 7
- Windows Server 2008 R2
- Windows 8, 8.1
- Windows 10
- Linux
- Unix
- Mac

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- PHP 5.3 minimum
- Apache Tomcat
- MySQL (optional. Necessary for DataBase related functionalities)

JSP

The following topic describes the system requirements required by Syncfusion JSP platform.

Operating Systems

- Windows XP
- Windows Server 2003
- Windows Vista
- Windows 7
- Windows 8, 8.1
- Windows 10
- Linux
- Unix
- Mac

Hardware Environment

- Processor: x86 or x64
- RAM : 512 MB (minimum), 1 GB (recommended)
- Hard disk: up to 3 GB of available space may be required

Development Environment

- Java SDK
- Apache Tomcat

- Text Editor

Download Installer

You can download the installer from [Syncfusion.com](https://syncfusion.com) website.

Download the Trial Version

There are two ways to download our 30-day trial.

Free Trial Page

1. You can evaluate our 30-day free trial from [Free Trial](#) page.
2. Once you fill the required form or made the login using the your Syncfusion registered account you can download the trial installer in the confirmation page.
3. You can download the latest version trial installer.
4. You can unlock the installer using the unlock key, also you can unlock the installer using the Syncfusion registered login credential.
5. You can download the trial installer using the [Trials & Downloads](#) page under your registered account at any time before the trial expire. (Refer the below screenshot).

Trial Downloads and Unlock Keys



Start Trial Page

1. You can evaluate our 30-day free trial from [Start Trial](#) page.
2. You should login using your Syncfusion account to access this page.
3. You can start your trail by clicking on the required product.

Note: If you already using the trail products and it's not expired, you couldn't start the trial again for same product.

4. After you started the trial, you can download the latest version trial installer using the [Trials & Downloads](#) page.
5. In [Trials & Downloads](#) page, you can find your current active trial products. Trials, which you done in both Free Trial Page and Start trial pages are listed here.
6. Use the Download (element 1 in below screenshot) button to download the installer of respective product.
7. Online installer can be downloaded from this page.
8. No need of unlock key to unlock the online installer.
9. You can unlock the installer using the Syncfusion registered login credential.

License Downloads and Unlock Keys

License SKU Name

Essential Studio

Download Older Versions 2

Latest Official Release

Download 1

More Download Options 3

What's New | Generate License File | Get Unlock Key

Note: You can generate the license key for your active trial products from [Trials & Downloads](#) page. This license key will be mandatory to use our trial products in your application. To know more about License key, refer this [help topic](#).

Download the License Version

1. You can find your available licensed products which under your registered Syncfusion account in [License & Downloads](#) page.
2. You can find all the licenses (both active licenses and expired licenses) which are under your account.
3. You can find the licenses listed based on SKU names.
4. Use the Download (element 1 in below screenshot) button to download the installer of respective product.
5. Latest version installer will be downloaded from this page.
6. You can navigate to [Downloads Older Versions](#) (element 2 in below screenshot) to download older version installers.
7. From 16.2 version online installer will be downloaded by default, and earlier versions offline installer will be downloaded.

Note: Online Installer have been introduced from the release version 16.2.

8. You can navigate to More Downloads Options (element 3 in below screenshot) to download other installers.
9. EXE and Zip format available to download for Windows OS. Both are Offline Installer.
10. No need of unlock key to unlock the online installer.
11. You can unlock the installer using the unlock key for versions earlier to 16.2, also you can unlock the installer using the Syncfusion registered login credential.

License Downloads and Unlock Keys

License SKU Name

Essential Studio

Download Older Versions 2

Latest Official Release

Download 1

More Download Options 3

What's New | Generate License File | Get Unlock Key

Note: You can generate the license key for your licensed products from [License & Downloads](#) page. This license key will be required only from release version 16.2. To know more about License key, refer this [help topic](#).

Installation

Installation and deployment of Essential Studio using Web Installer

Overview

Starting with version 16.2 (2018 Vol 2), Syncfusion provides Web Installer for Essential Studio platforms. This reduces the burden of downloading the installer of larger size. You can just download and launch the web installer which will be of smaller size and it will download and install the Essential Studio products you have selected. The Essential Studio Web Installer includes the following platforms. You can download the latest version Essential Studio Web Installer [here](#).

Starting with the version 17.3 (2019 Vol 3), Syncfusion provides updated version of Web Installer which allows both installation and uninstallation of the platforms for that specific version.

Web

- ASP.NET MVC
- ASP.NET Core
- JavaScript
- Blazor

Mobile

- Xamarin
- Flutter

Desktop

- Windows Forms
- WPF
- Universal Windows Platform

FileFormats

- Read and Write Excel, Word, PDF and PowerPoint files

Web (Essential JS 1)

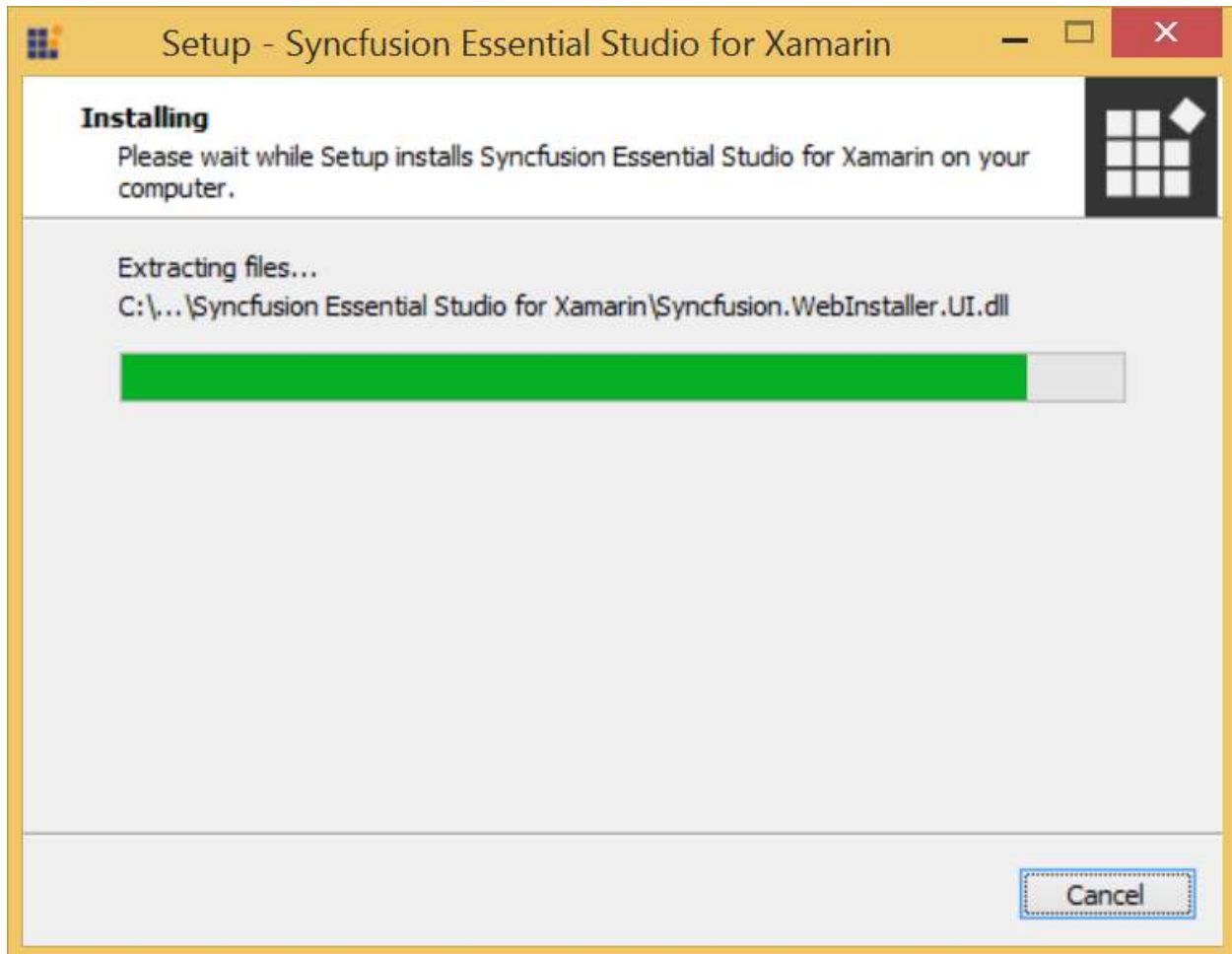
- ASP.NET Web Forms
- ASP.NET MVC
- ASP.NET Core
- JavaScript
- PHP
- JSP

Note: Universal Windows Platform will be installed in Windows 8.1 and later.

Installation

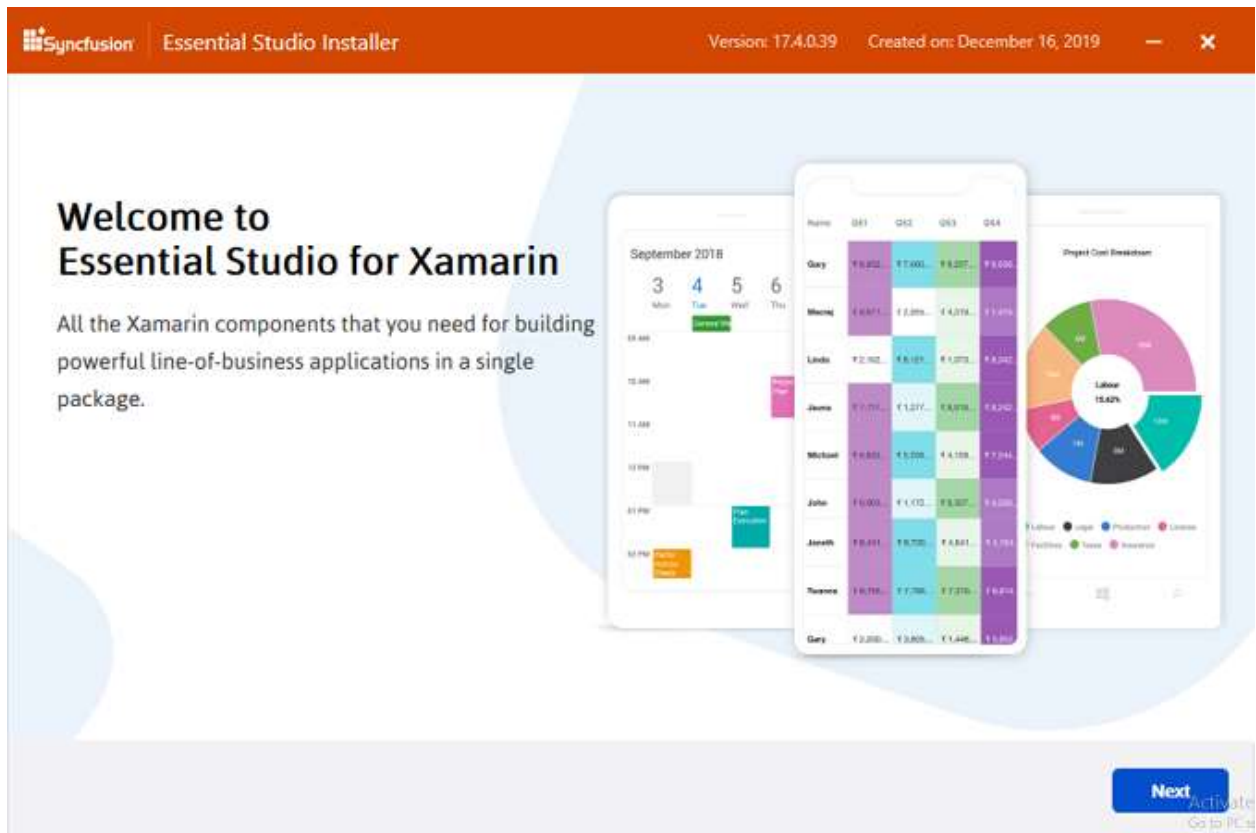
The following procedure illustrates how to install Essential Studio Platform Web installer.

1. Double-click the Syncfusion Essential Studio Platform Web Installer. The installer wizard opens and extracts the package automatically.

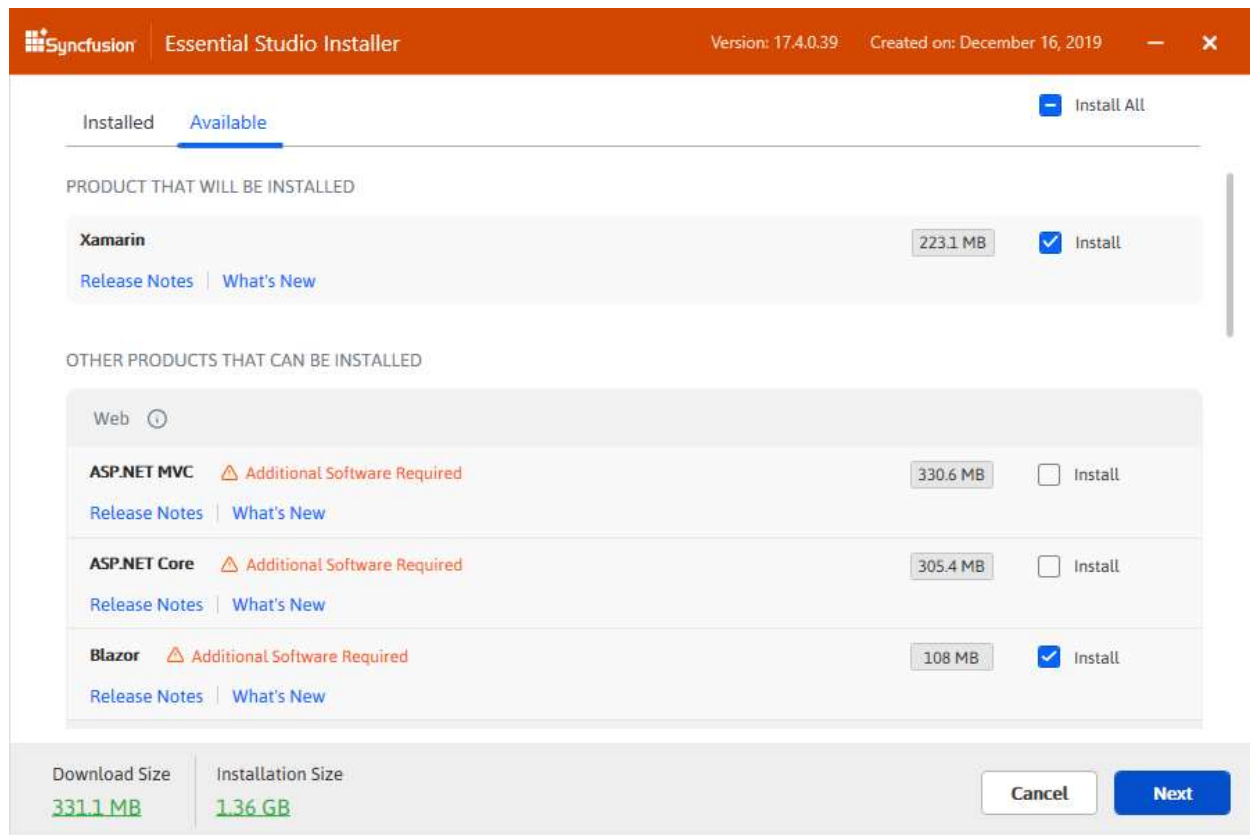


Note: The installer wizard extracts the syncfusion{platform}webinstaller_{version}.exe dialog, displaying the unzip operation of the package.

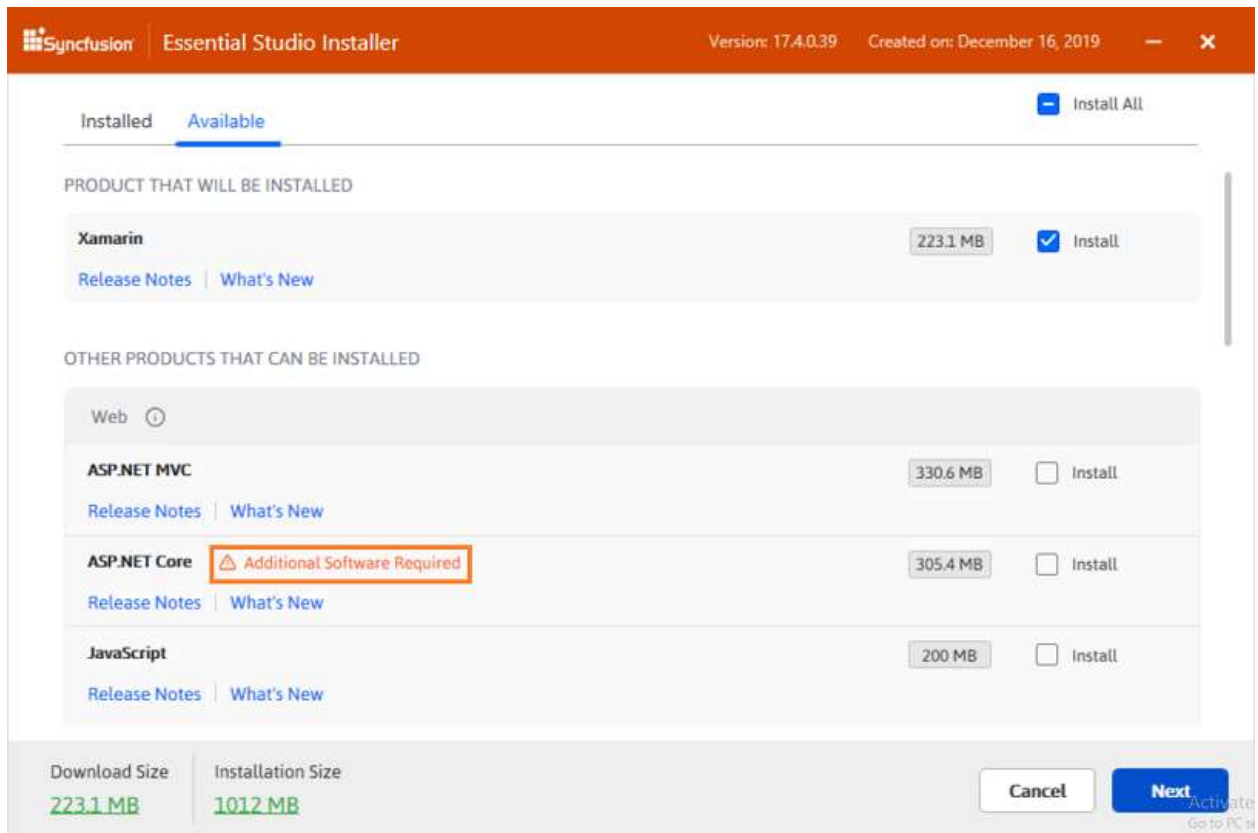
2. Welcome wizard of the Syncfusion Web Installer will be displayed. Click Next.



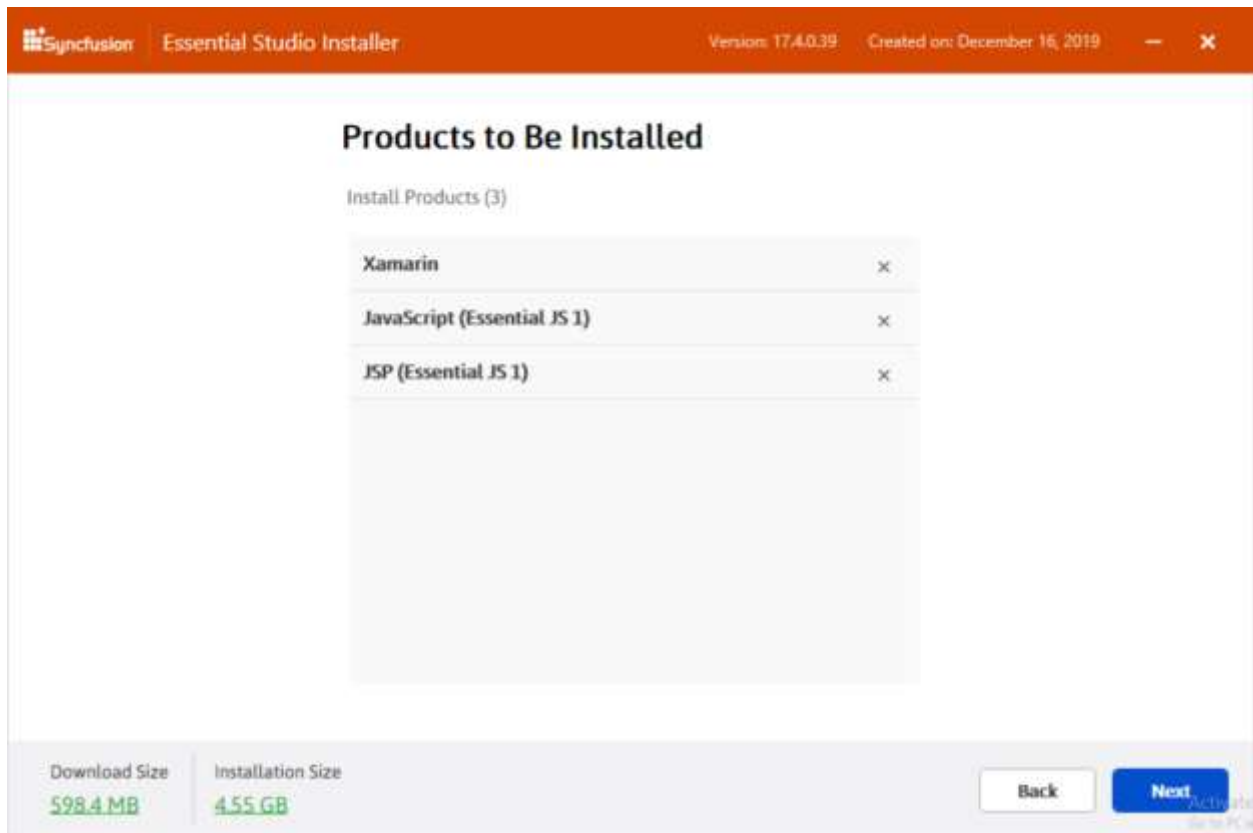
- Platform Selection wizard will be displayed. Select the platforms to be installed from the **Available** tab. Select **Install All** checkbox to select all the platforms. Click Next.



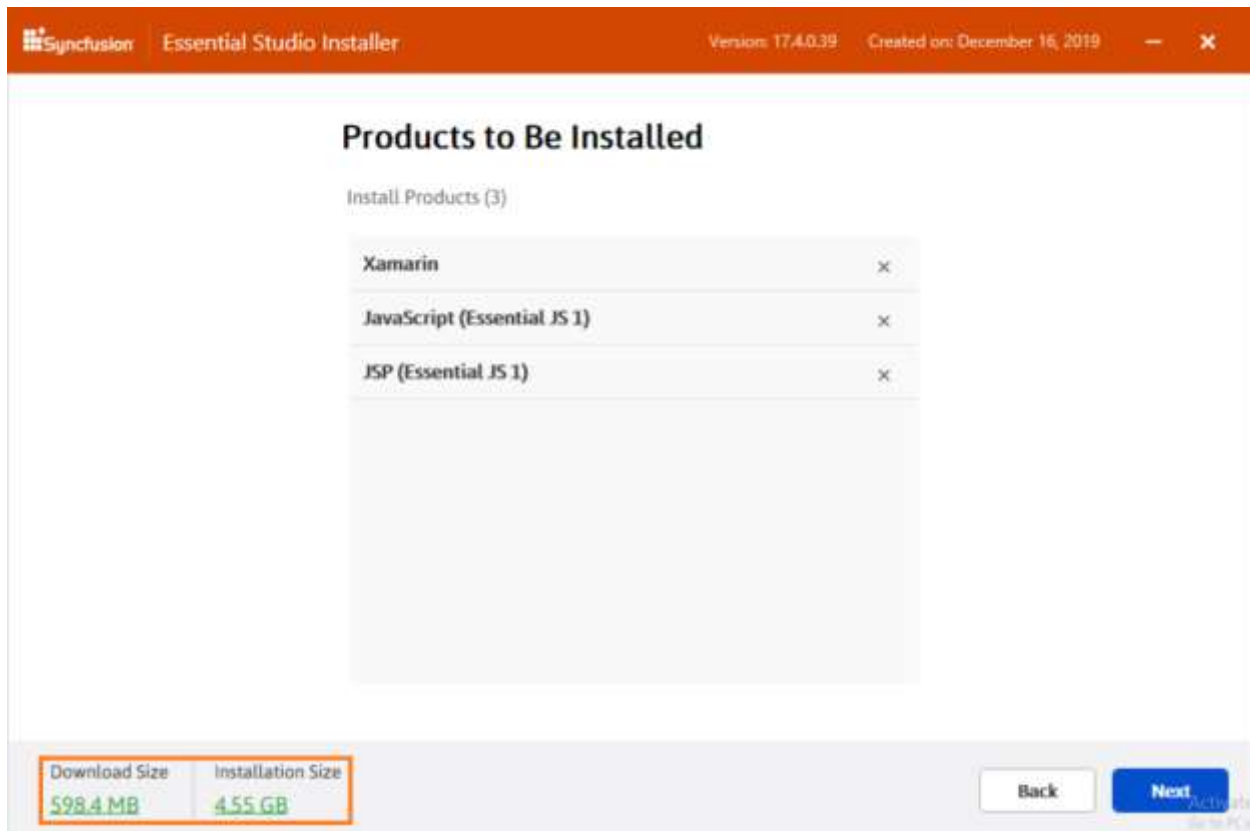
Information: If the required software of the selected platform was not already installed, **Additional Software Required** alert will be displayed. However, you can continue the installation and install the required software later.



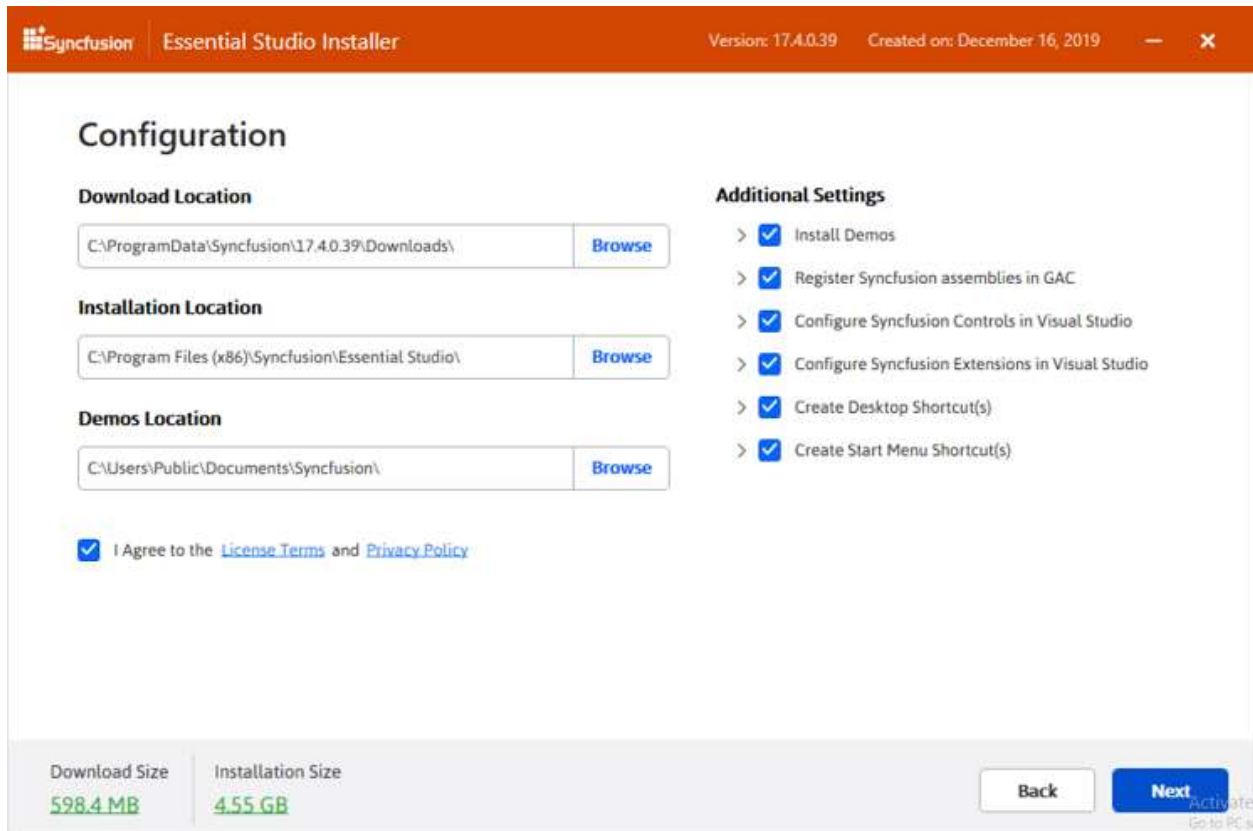
4. Confirmation wizard will be displayed. Here you can view and modify the list of platforms that will be installed.



Note: You can check the Estimated size of the Download and Installation by clicking the **Download Size** and **Installation Size** link.



5. Configuration wizard will be displayed. Here you can change the Download, Install and samples location. Also, you can change the Additional settings by platform basis. To install using the default configuration, click Next.



Information: From version 17.3 (2019 Vol 3), Syncfusion provides option to provide custom download location.

Note: From the 2018 Volume 2 release, Syncfusion has changed the install and samples location

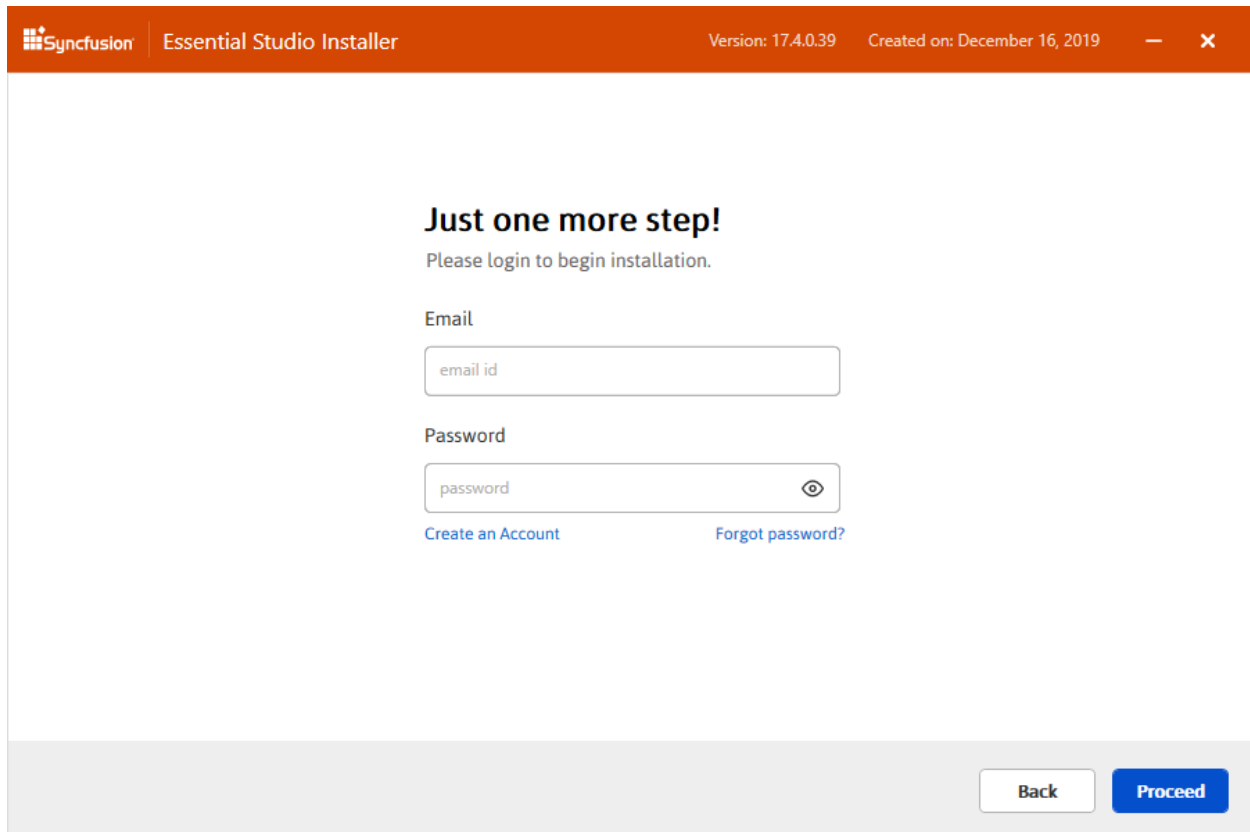
Default Install location: {ProgramFilesFolder}\Syncfusion\{Platform}\{version}

Default Samples location: C:\Users\Public\Documents\Syncfusion\{platform}\{version}

However, you can change the locations by clicking browse button.

- Select the **Install Demos** check box to install Syncfusion samples, or leave the check box clear, when you do not want to install Syncfusion samples.
- Select the **Register Syncfusion Assemblies in GAC** check box to install the latest Syncfusion assemblies in GAC, or clear this check box when you do not want to install the latest assemblies in GAC.
- Select the **Configure Syncfusion controls in Visual Studio** check box to configure the Syncfusion controls in the Visual Studio toolbox, or clear this check box when you do not want to configure the Syncfusion controls in the Visual Studio toolbox during installation. Note that you must also select the Register Syncfusion assemblies in GAC check box when you select this check box.
- Select the **Configure Syncfusion Extensions controls in Visual Studio** checkbox to configure the Syncfusion Extensions in Visual Studio or clear this check box when you do not want to configure the Syncfusion Extensions in Visual Studio.
- Select the **Create Desktop Shortcut** checkbox to create the desktop shortcut for Syncfusion Control Panel.

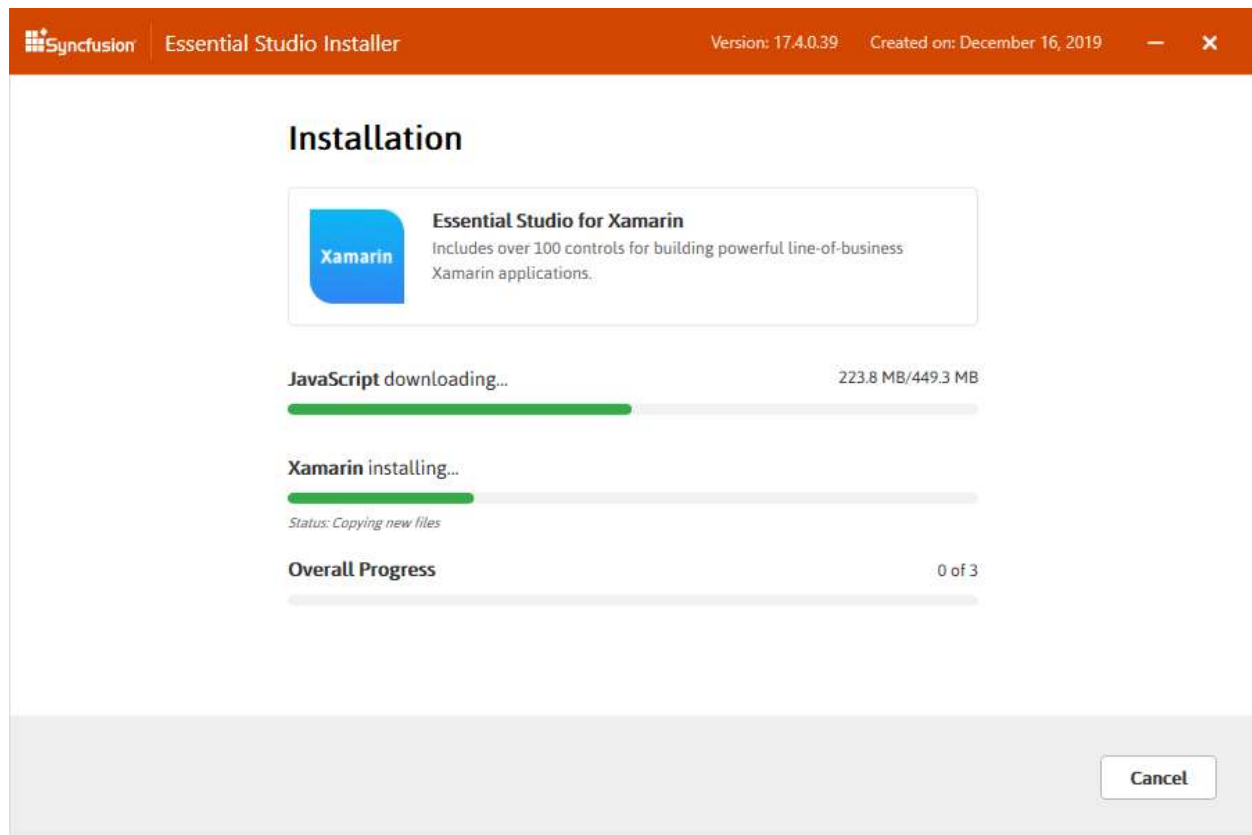
6. After reading the License Terms and Conditions, check the **I agree to the License Terms and Privacy Policy** check box. Click Next.
7. Login wizard will be displayed. You should enter your Syncfusion Direct-Trac login credentials. If you don't have Syncfusion Direct-Trac login credentials, then you can click on **Create an Account**. Else if you forgot your password, click on **Forgot Password** to create new password. Click Install.



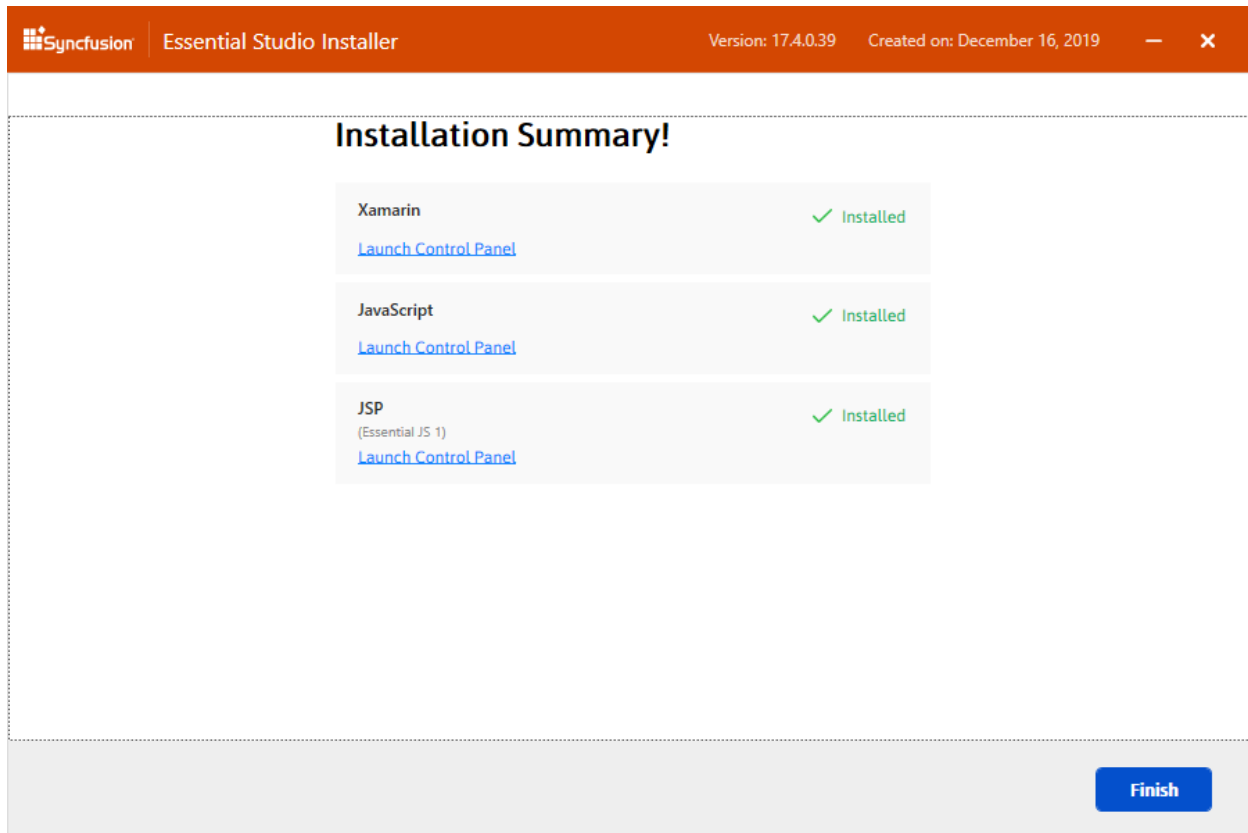
The screenshot shows the 'Essential Studio Installer' window. The title bar is orange and contains the Syncfusion logo, the text 'Essential Studio Installer', and version/creation information: 'Version: 17.4.0.39 Created on: December 16, 2019'. The main content area has a light gray background. At the top, it says 'Just one more step!' in bold, followed by 'Please login to begin installation.' Below this are two input fields: 'Email' with a placeholder 'email id' and 'Password' with a placeholder 'password' and a toggle icon. At the bottom of the input fields are two links: 'Create an Account' and 'Forgot password?'. At the bottom right of the window are two buttons: 'Back' and 'Proceed'.

Information: The selected platforms will be installed based on your Syncfusion License (Trial or Licensed).

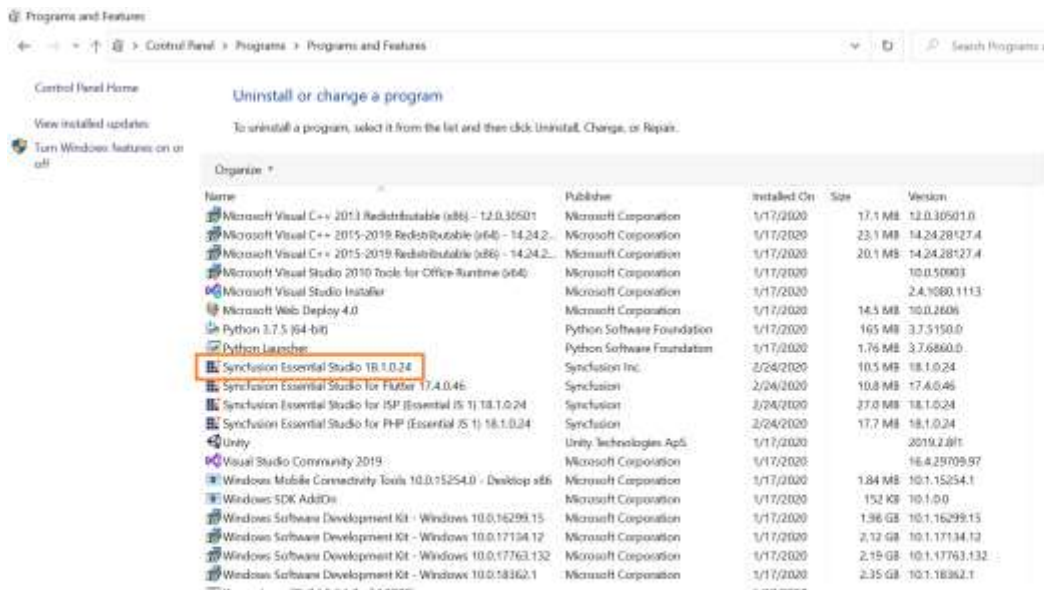
8. Download and Installation progress will be displayed.



9. Once the Installation is complete, **Summary** wizard will be displayed. Here you can check the list of platforms which are installed successfully and failed. Click Finish to exit the Summary wizard.



- Click **Launch Control Panel** to open the Syncfusion Control Panel.
10. You can find the Essential Studio installed information from the windows control panel.



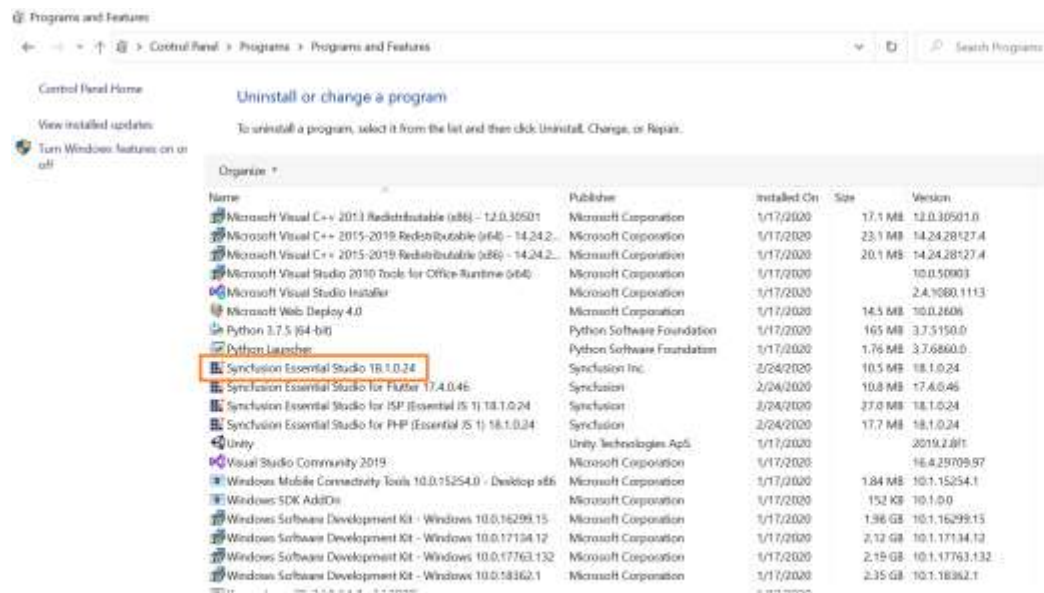
Note: Starting with the version v18.1 (2020 Volume 1 release), Syncfusion started providing separate entry in windows control panel for Essential Studio.

Uninstallation

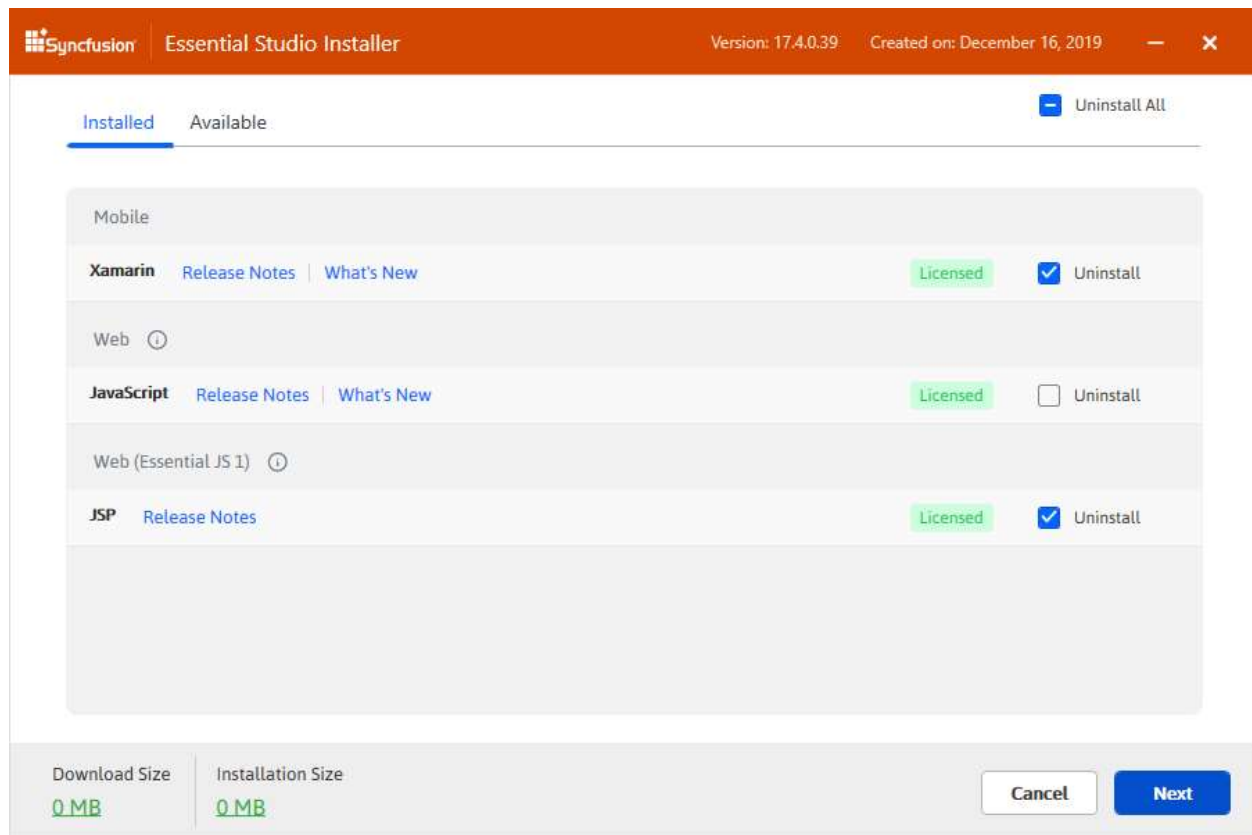
Starting from 2020 Volume 1 release (v18.1), Syncfusion provides option for uninstalling the Essential Studio from the windows control panel. So, you can uninstall the corresponding version Essential Studio from windows control panel or using the web installer application itself.

Uninstalling from Windows Control Panel

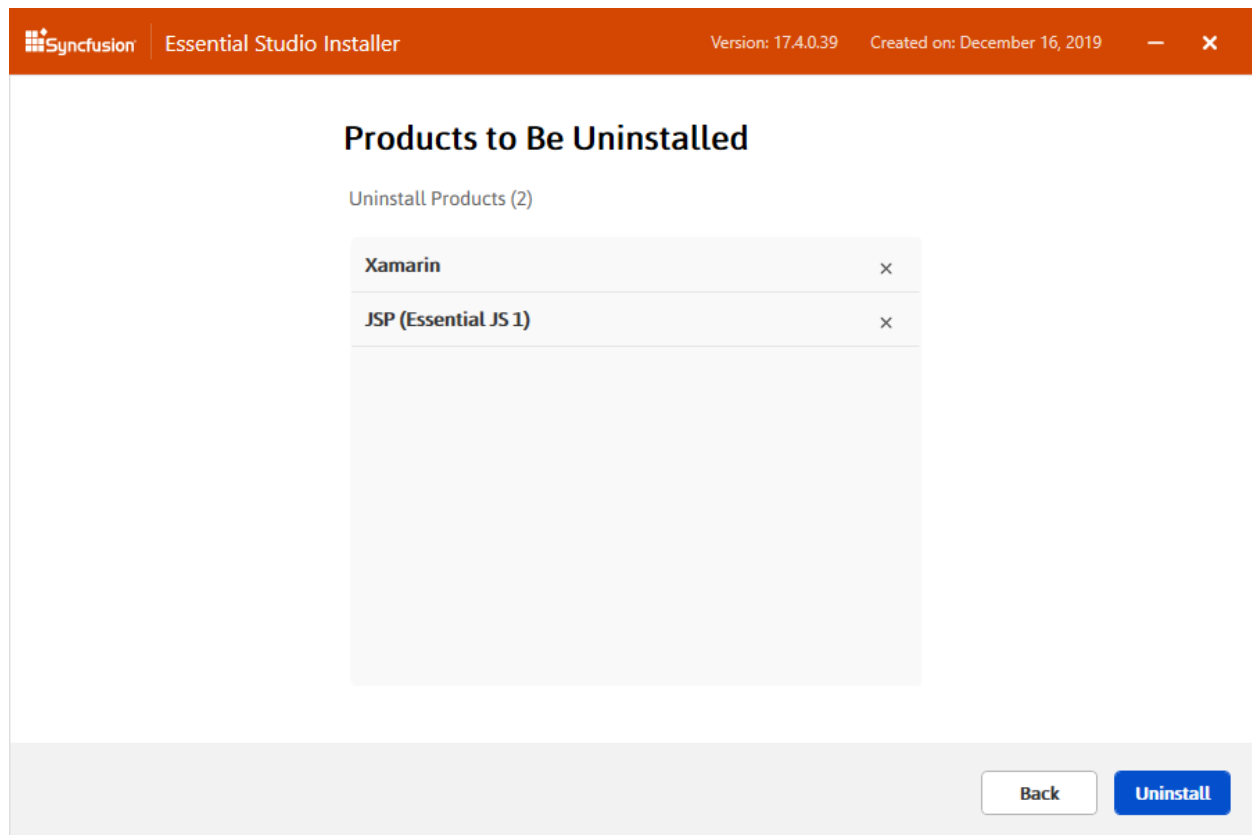
1. Open the Windows Control Panel.
2. Syncfusion Essential Studio entry will be present like **Syncfusion Essential Studio {version}**. Double click that entry.



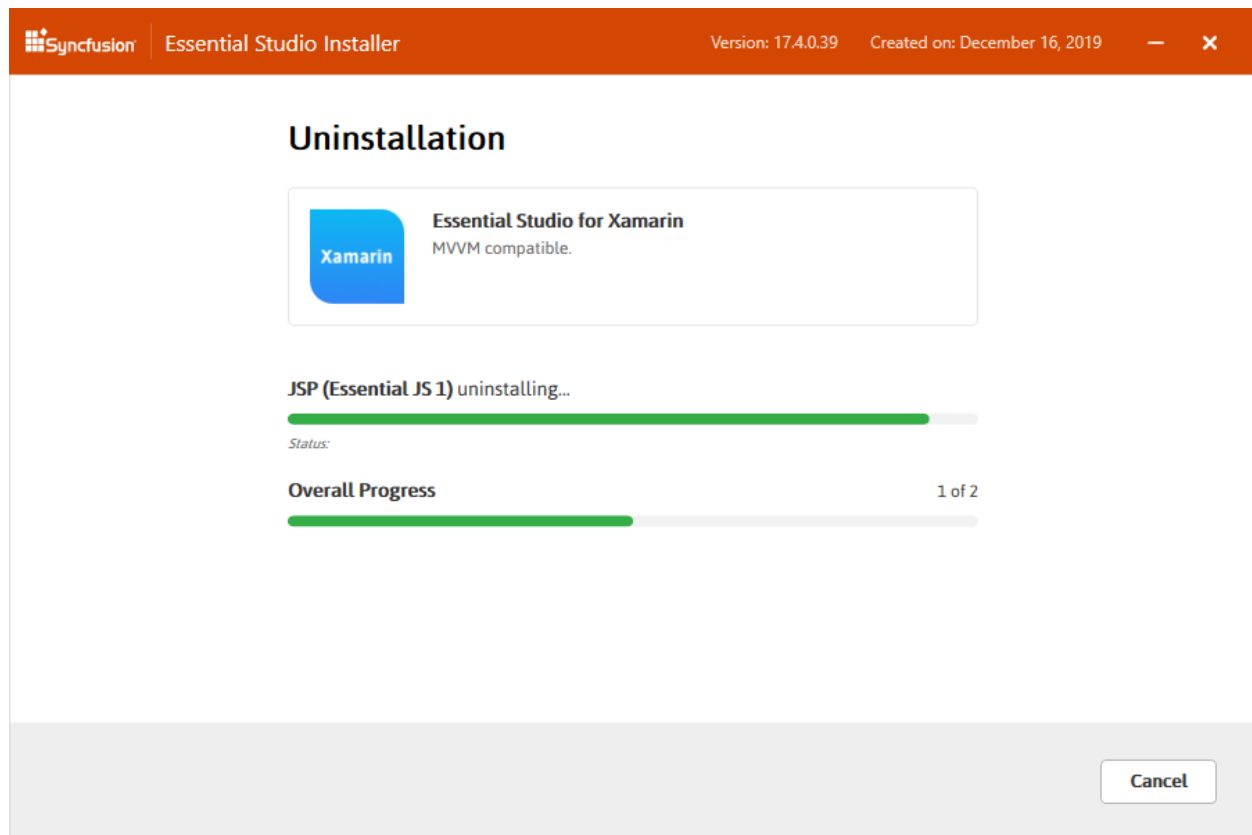
3. Web Installer will be launched and here you can select the list of platforms to be uninstalled in that version.



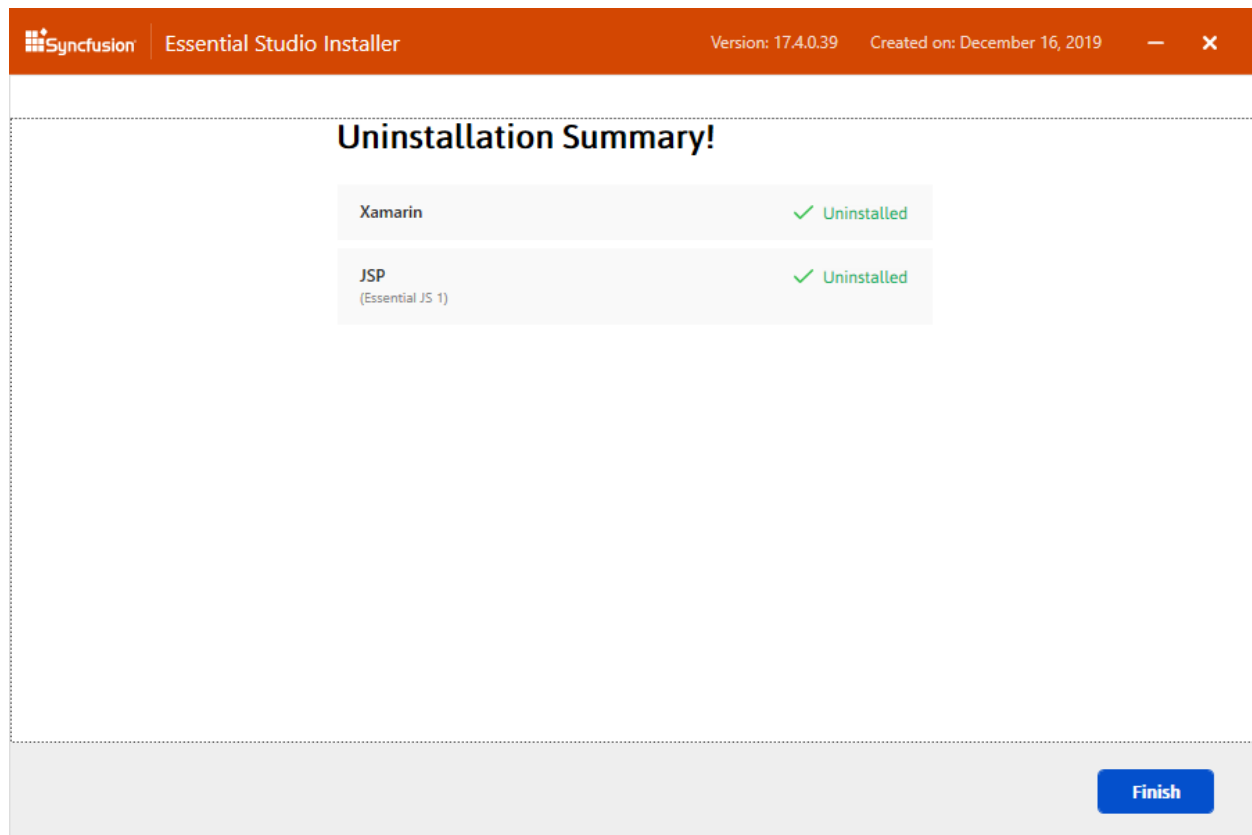
4. Confirmation wizard will be displayed. Here, you can view and modify the list of platforms that will be uninstalled. Click Uninstall.



5. Uninstallation progress will be displayed.



6. Once the Uninstallation is complete, **Summary** wizard will be displayed. Here you can check the list of platforms which are uninstalled successfully and failed. Click Finish to exit the Summary wizard.

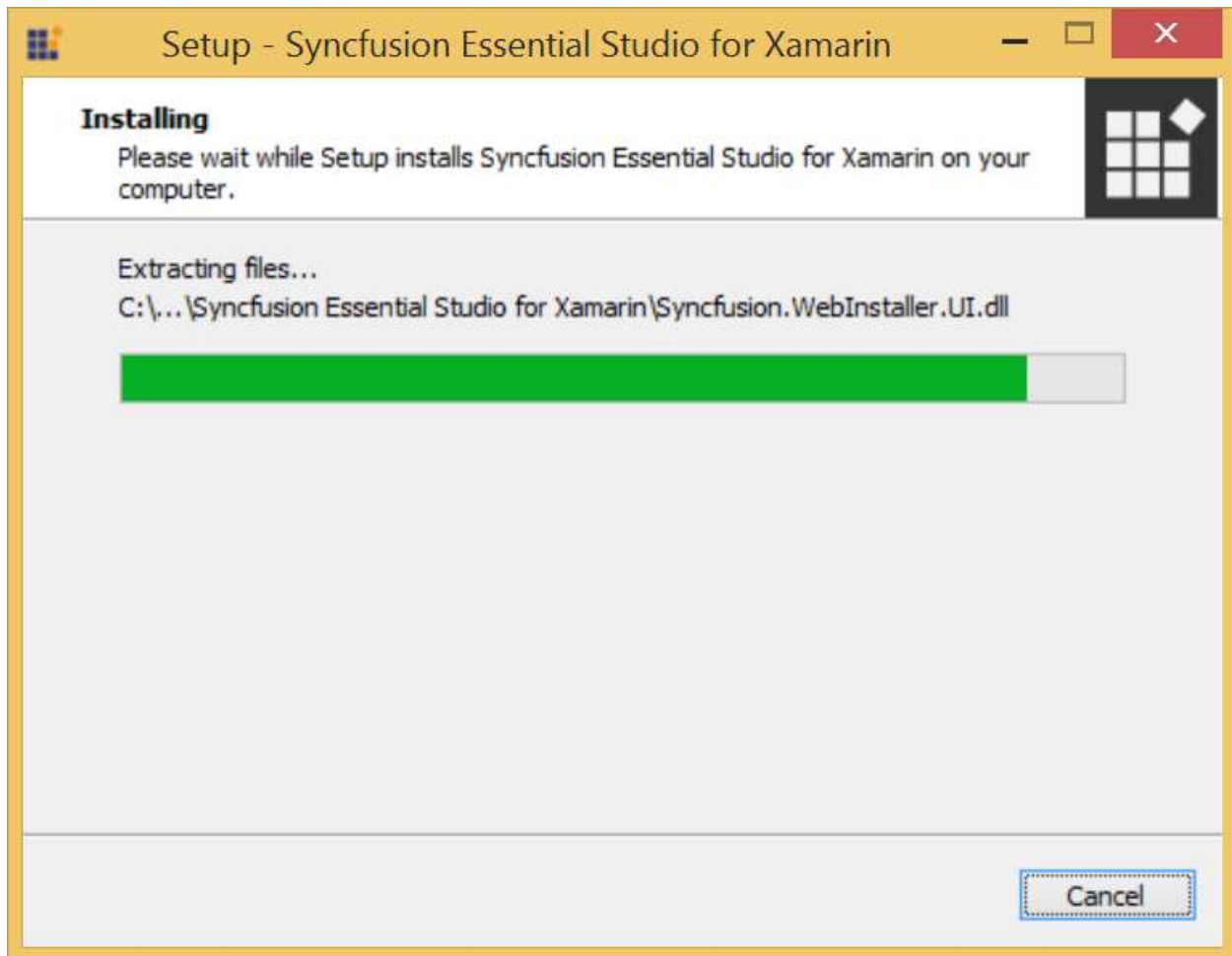


[Uninstalling from the Web installer application](#)

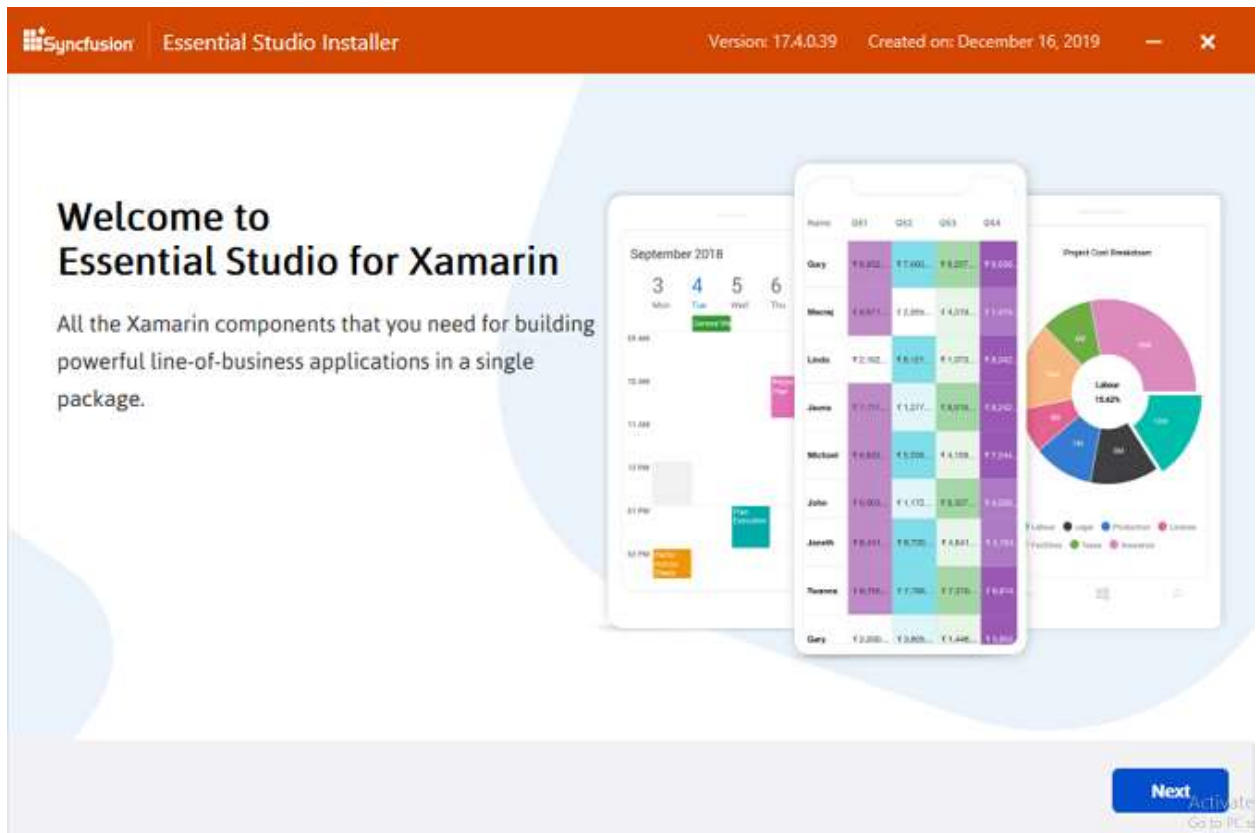
Starting with the version 17.3 (2019 Vol 3), Syncfusion provides option for uninstalling the platforms of the same version from the Web Installer application itself. Select the list of the platforms to be uninstalled and Web Installer will uninstall those platforms one by one.

The following procedure illustrates how to uninstall Essential Studio Platform from Web Installer.

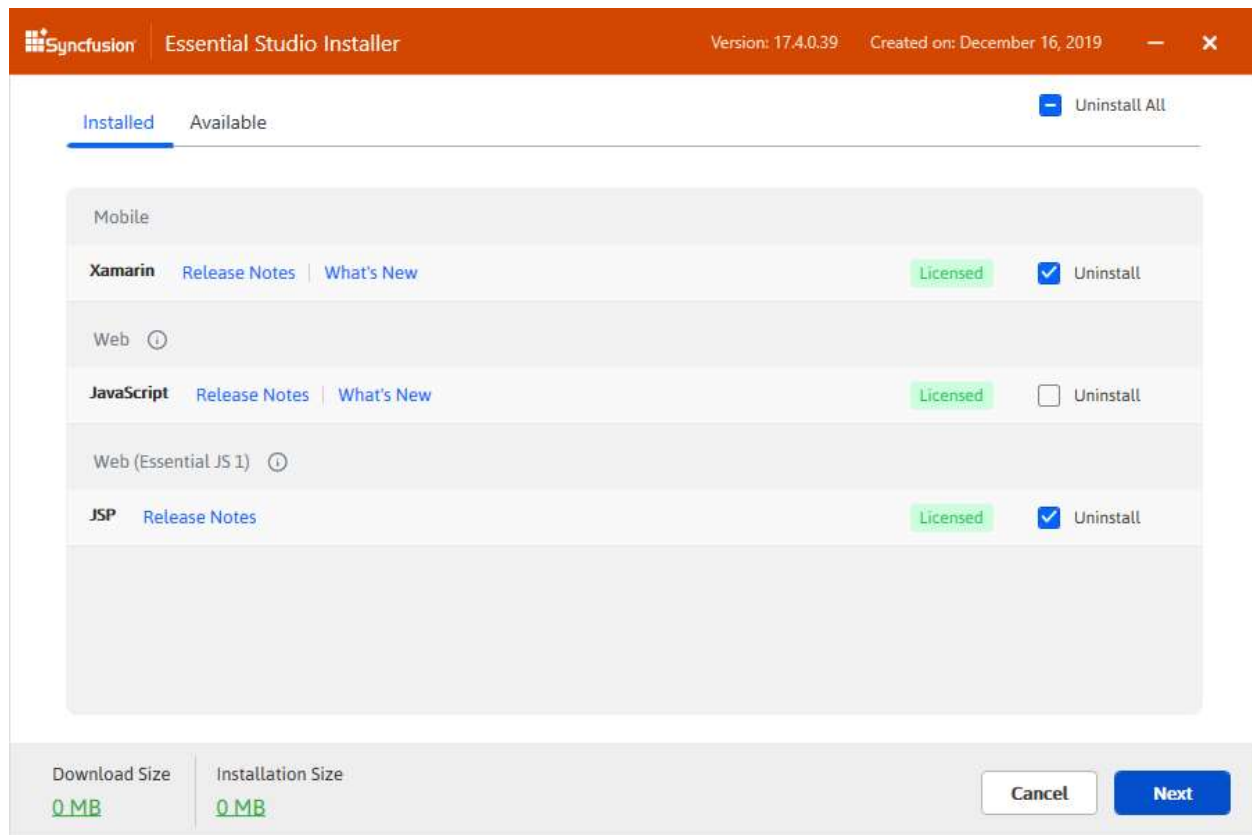
1. Double-click the Syncfusion Essential Studio Platform Web Installer. The installer Wizard opens and extracts the package automatically.



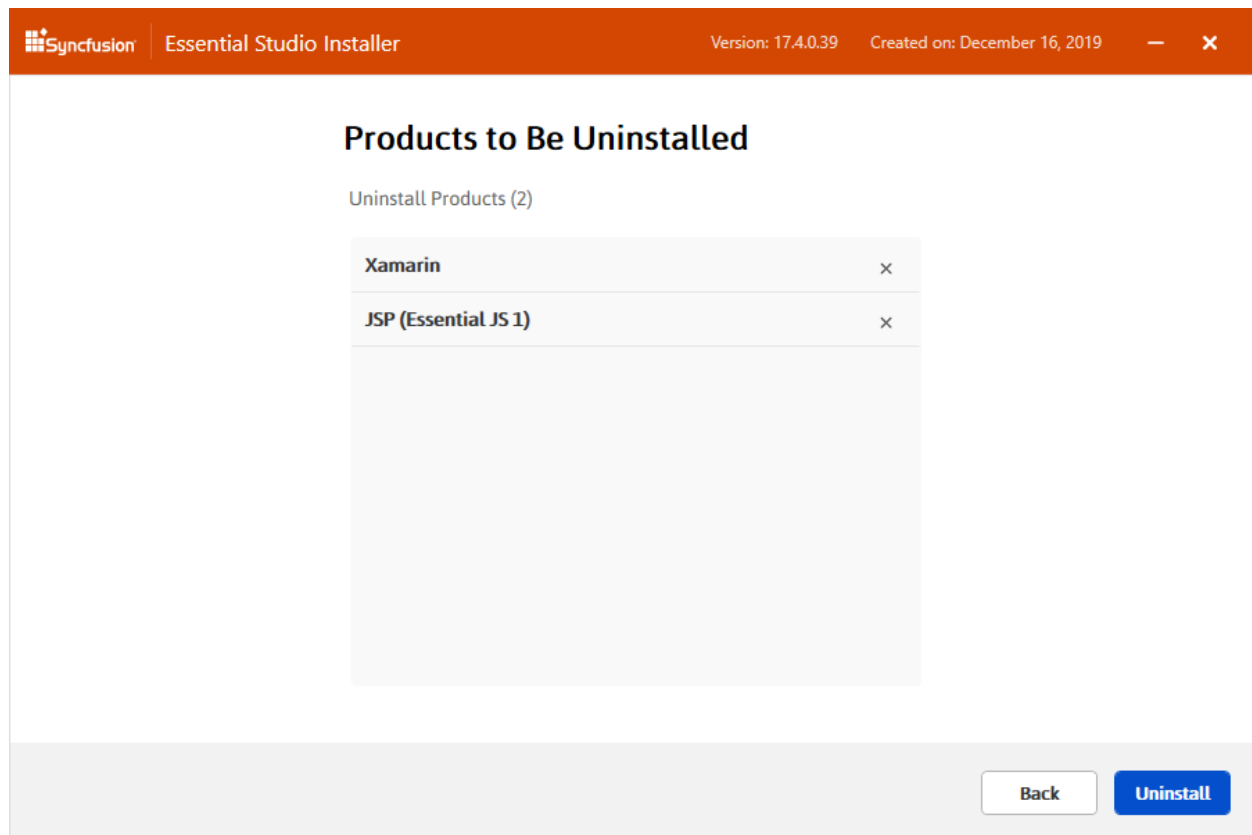
2. Welcome wizard of the Syncfusion Web Installer will be displayed. Click Next.



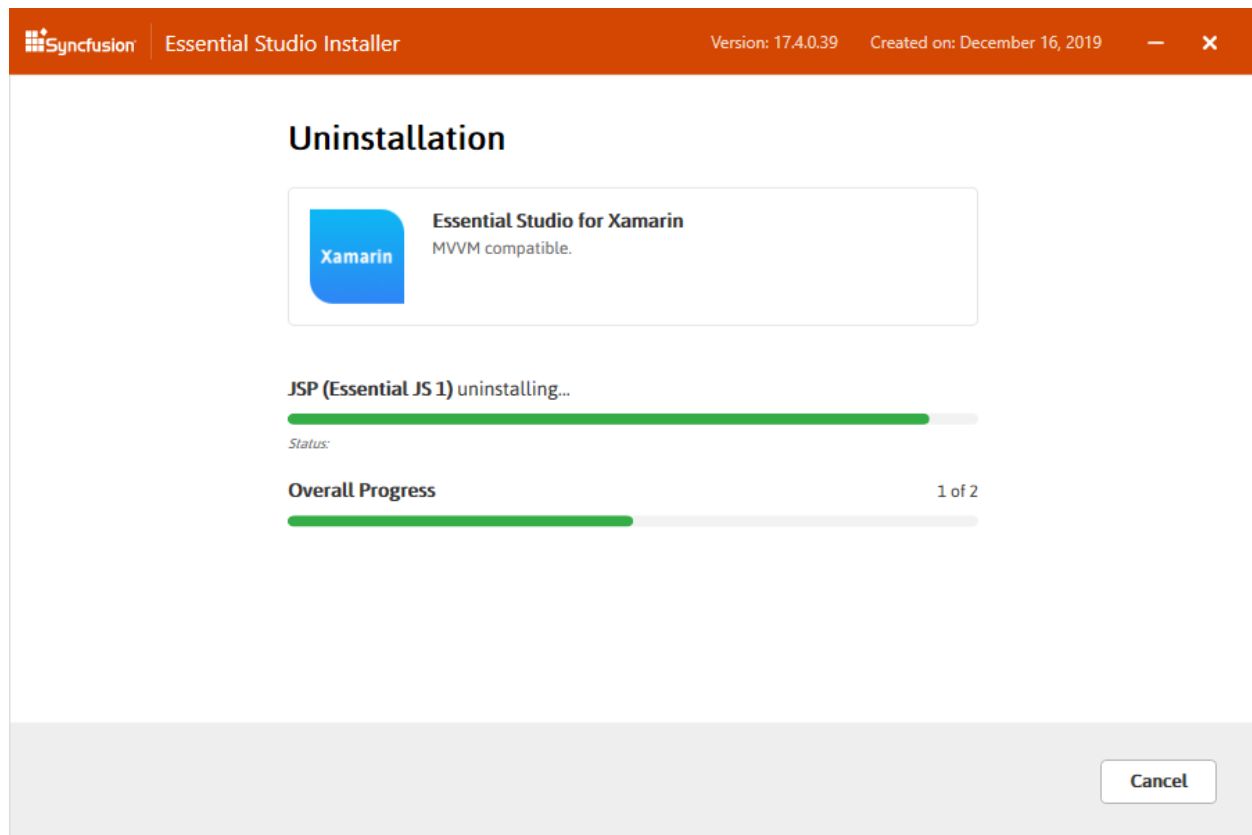
- Platform Selection wizard will be displayed. Select the platforms to be uninstalled from the **Installed** tab. Select **Uninstall All** checkbox to select all the platforms. Click Next.



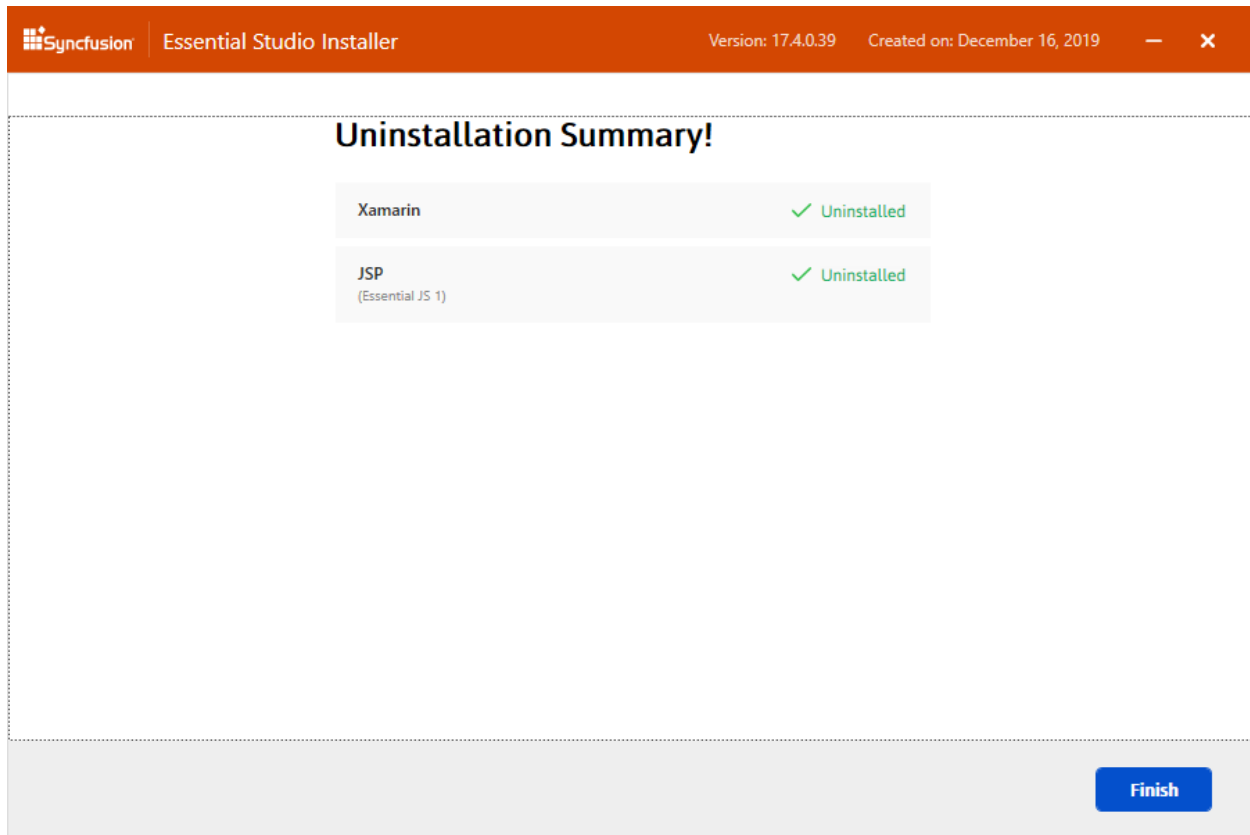
4. Confirmation wizard will be displayed. Here you can view and modify the list of platforms that will be uninstalled. Click Uninstall.



5. Uninstallation progress will be displayed.



6. Once the Uninstallation is complete, **Summary** wizard will be displayed. Here you can check the list of platforms which are uninstalled successfully and failed. Click Finish to exit the Summary wizard.

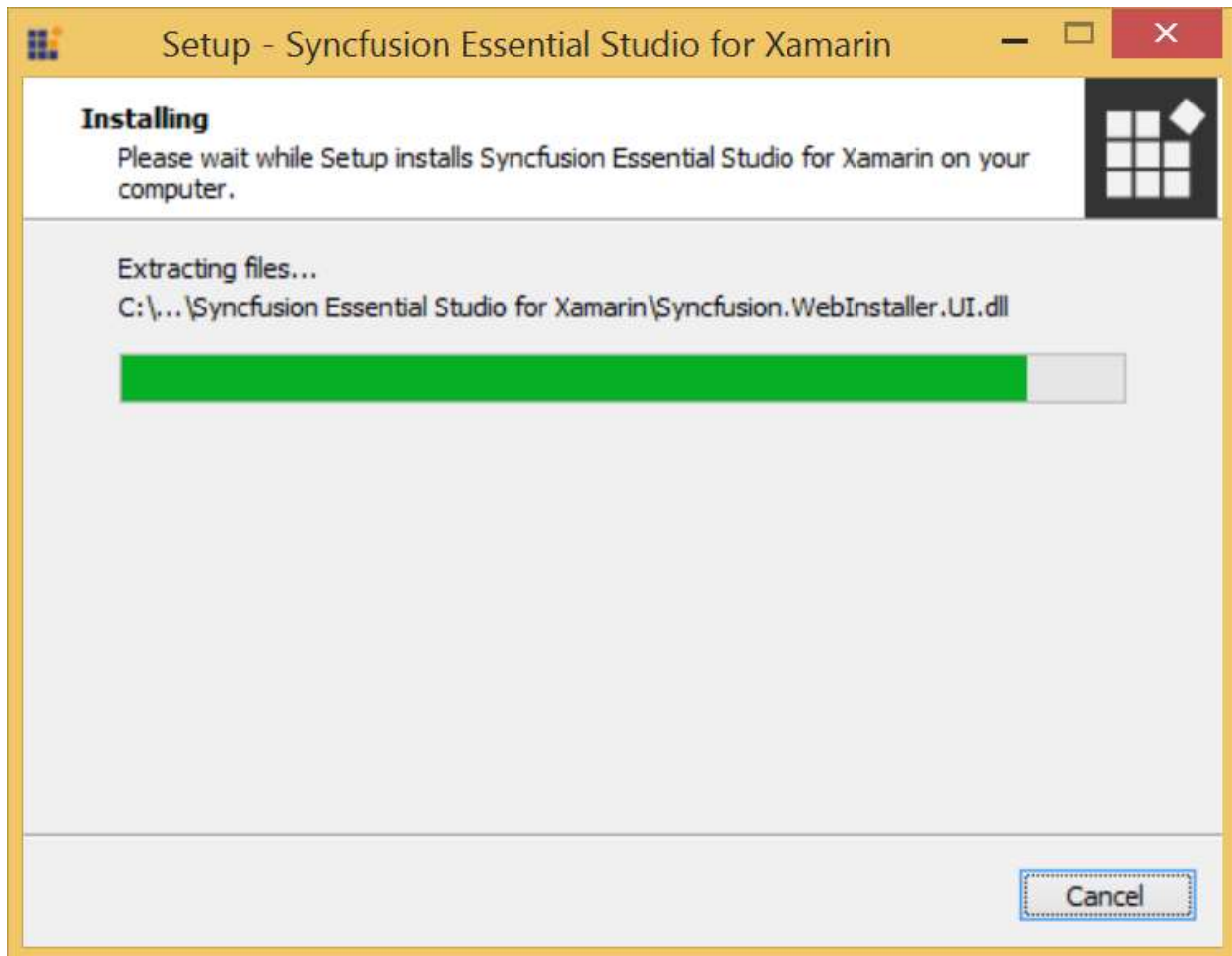


Installation and Uninstallation

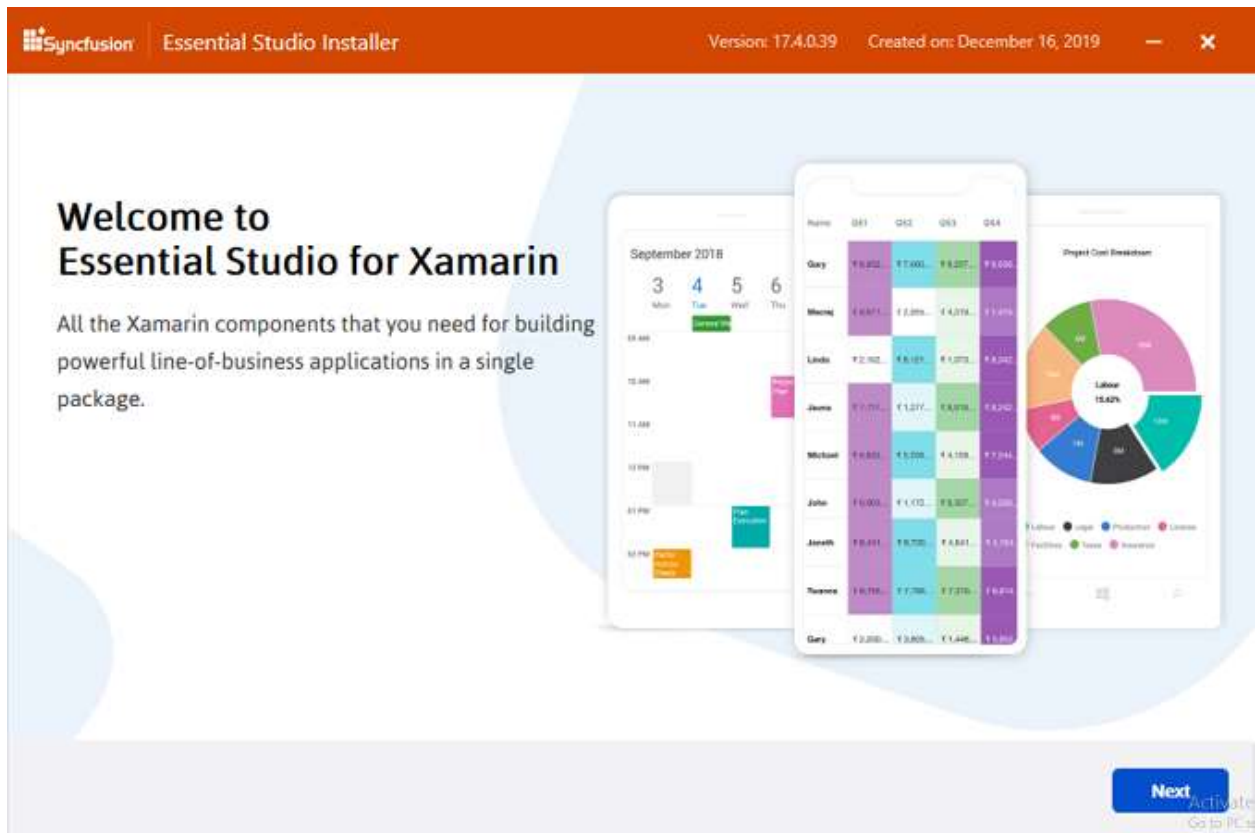
Till version 17.2, Syncfusion Web Installer had option for installation alone. Starting with the version 17.3 (2019 Vol 3), Syncfusion provides option for both installing and uninstalling the platforms of the same version from the Web Installer application itself.

The following procedure illustrates how to install/uninstall Essential Studio Platform from Web Installer.

1. Double-click the Syncfusion Essential Studio Platform Web Installer. The installer Wizard opens and extracts the package automatically.

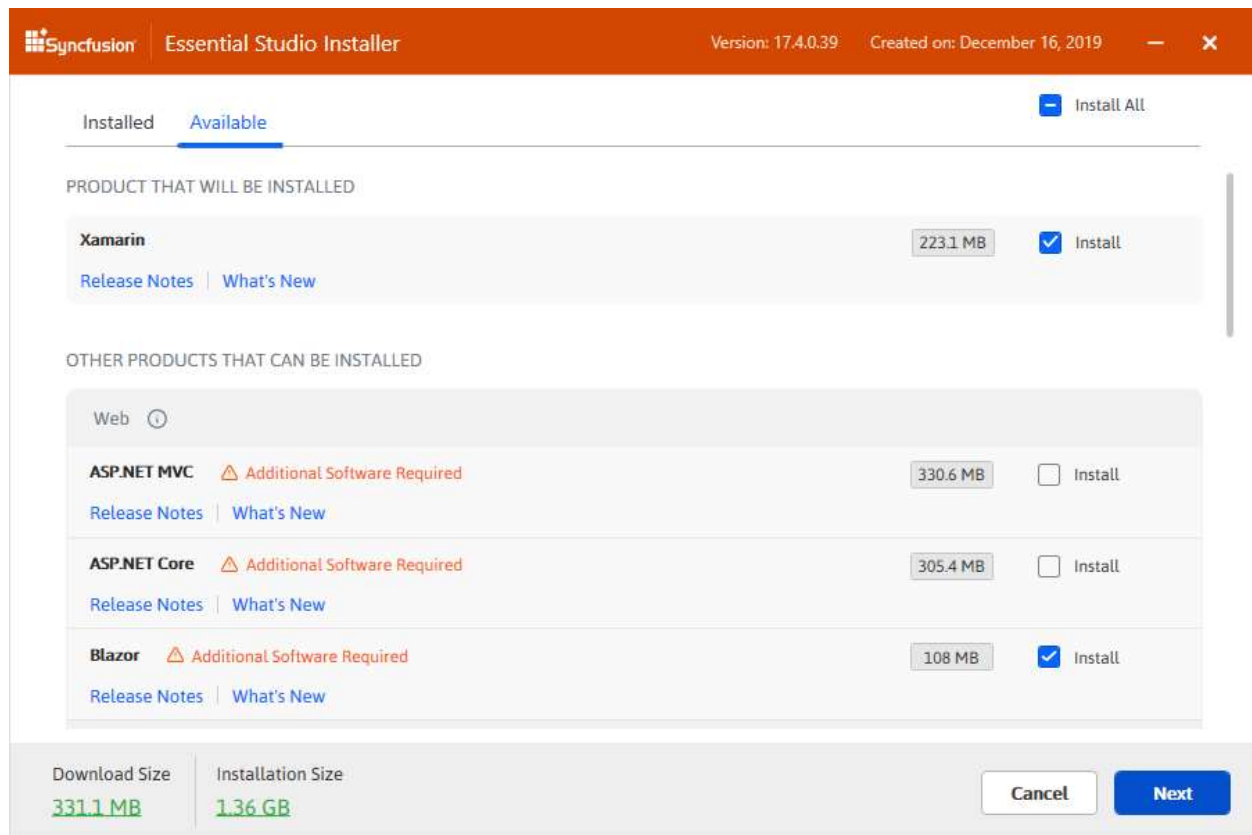


2. Welcome wizard of the Syncfusion Web Installer will be displayed. Click Next.

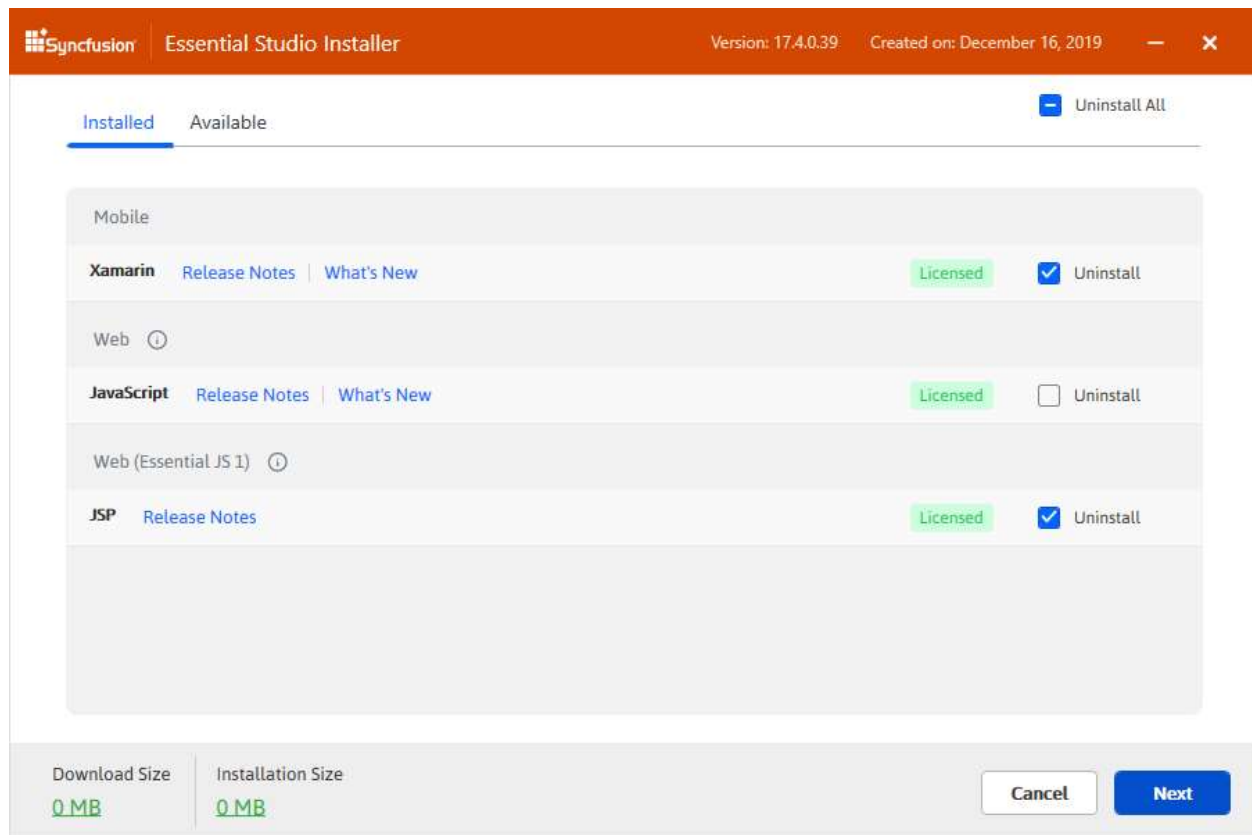


- Platform Selection wizard will be displayed. Select the platforms to be installed from the **Available** tab and platforms to be uninstalled from the **Installed** tab. Click Next.

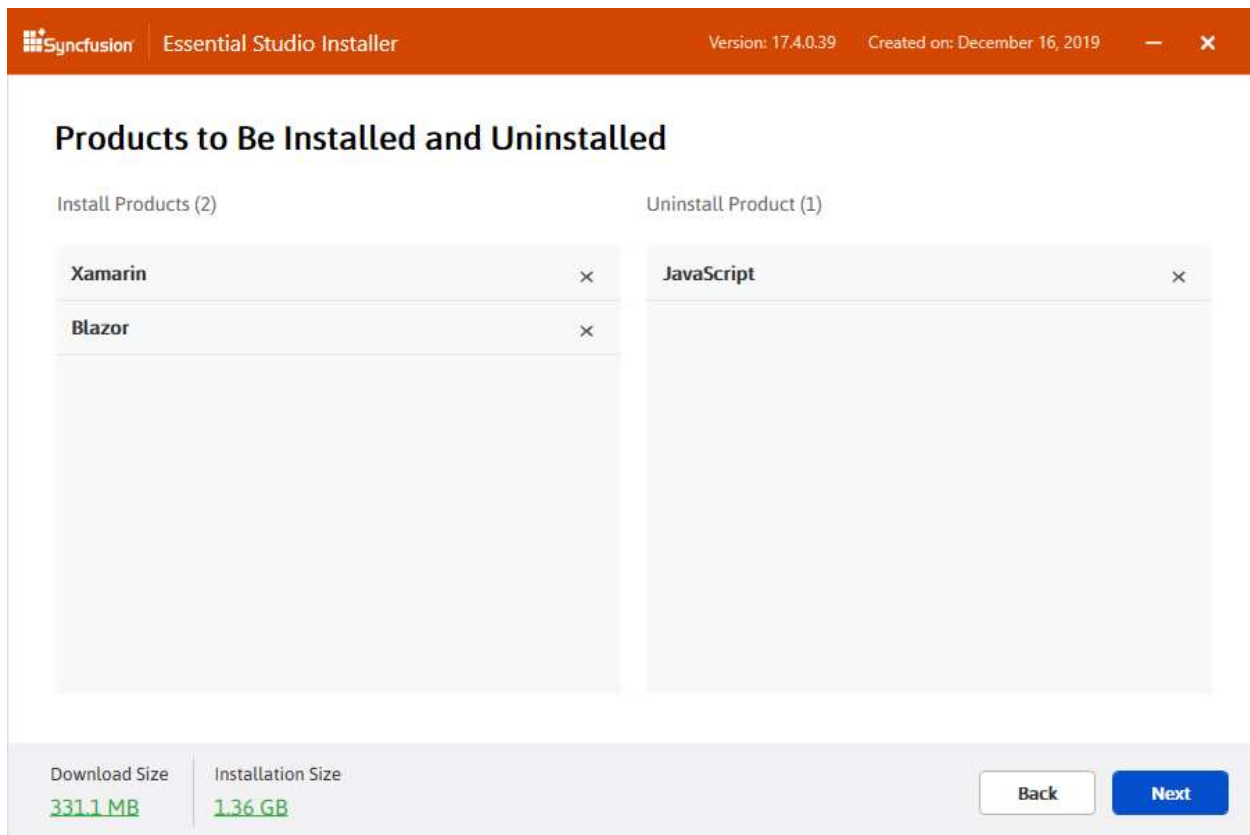
Available



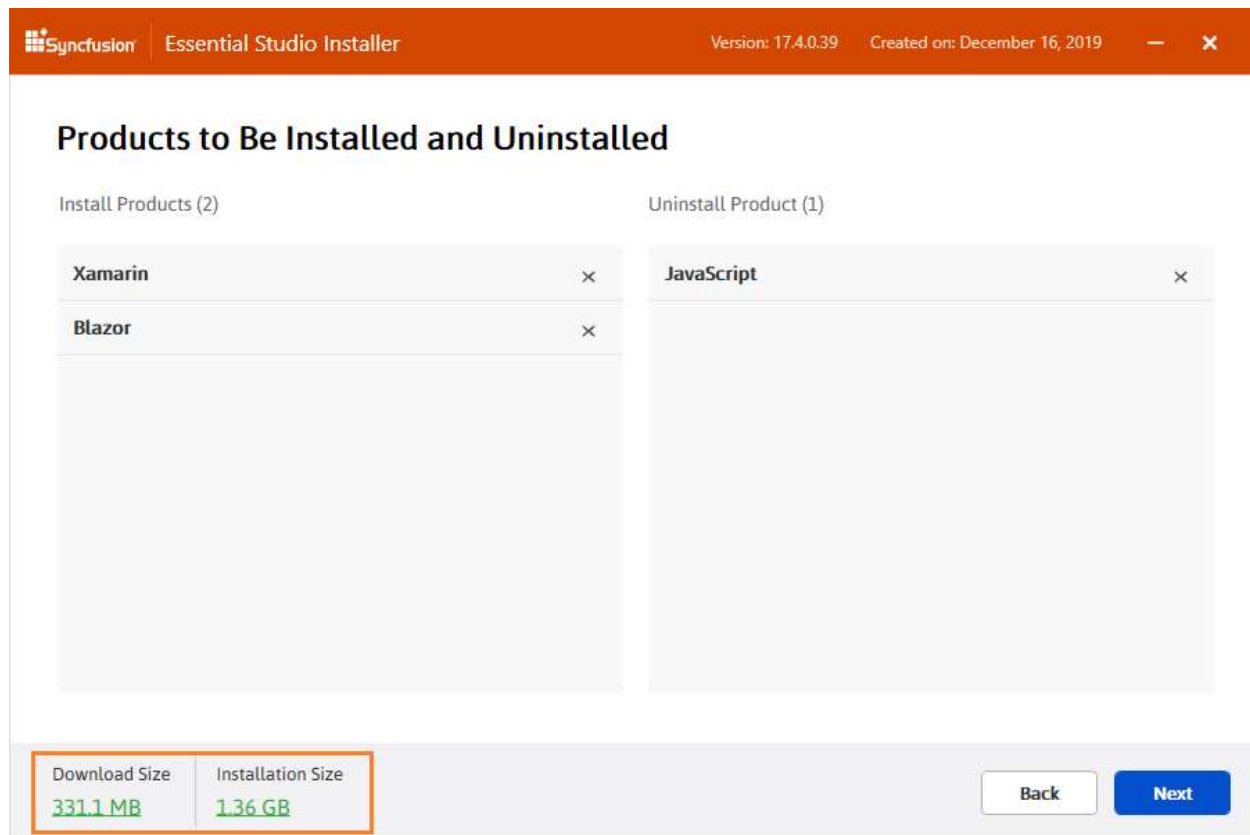
Installed



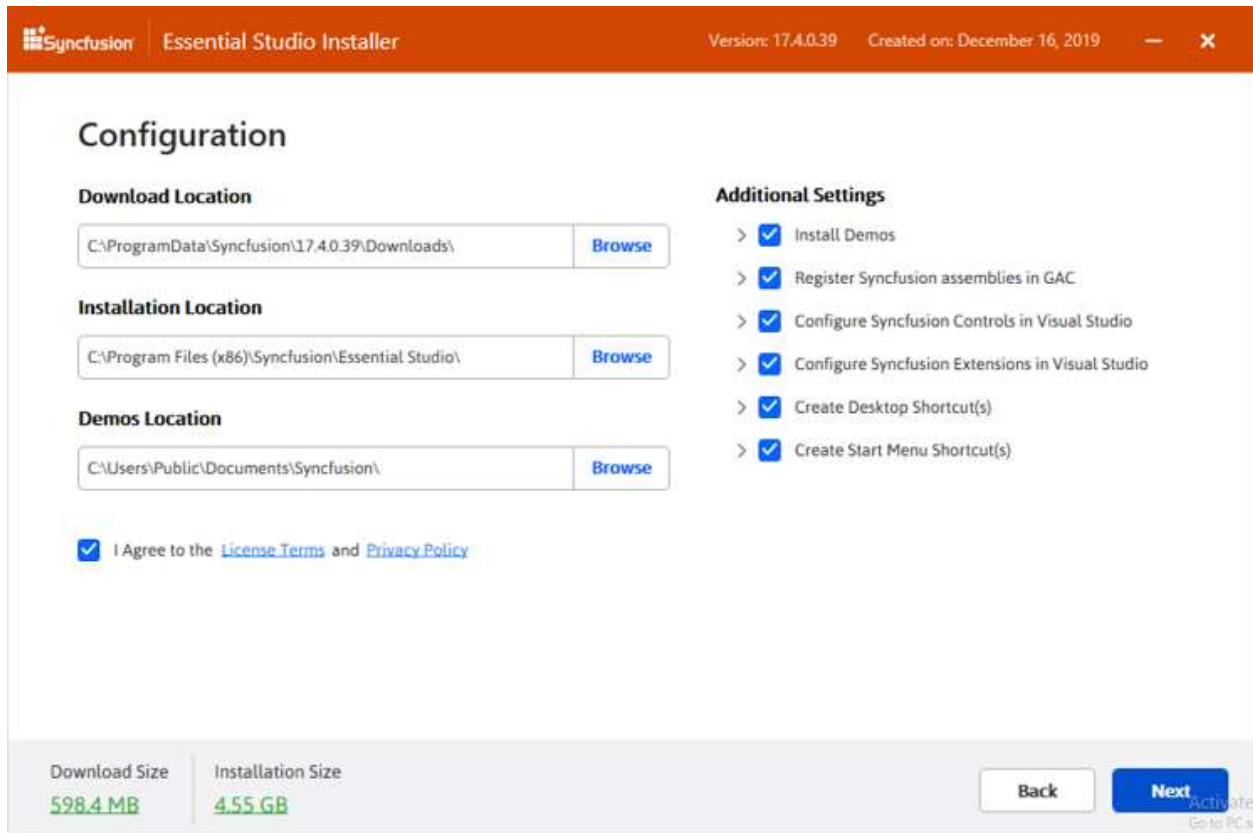
4. Confirmation wizard will be displayed. Here you can view and modify the list of platforms that will be installed/uninstalled.



Note: You can check the Estimated size of the Download and Installation by clicking the **Download Size and Installation Size** link.

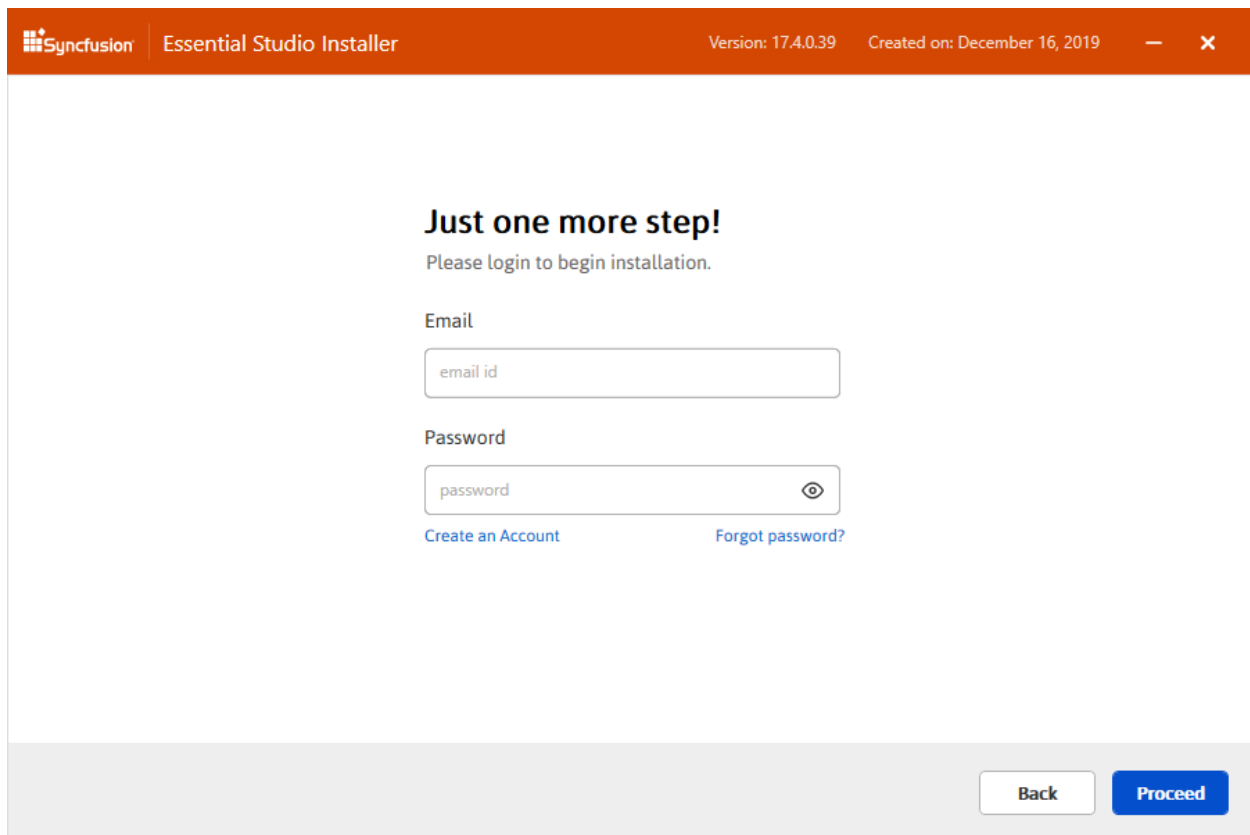


5. Configuration wizard will be displayed. Here you can change the Download, Install and samples location. Also, you can change the Additional settings by platform basis. To install using the default configuration, click Next.



Information: From version 17.3 (2019 Vol 3), Syncfusion provides option to provide custom download location.

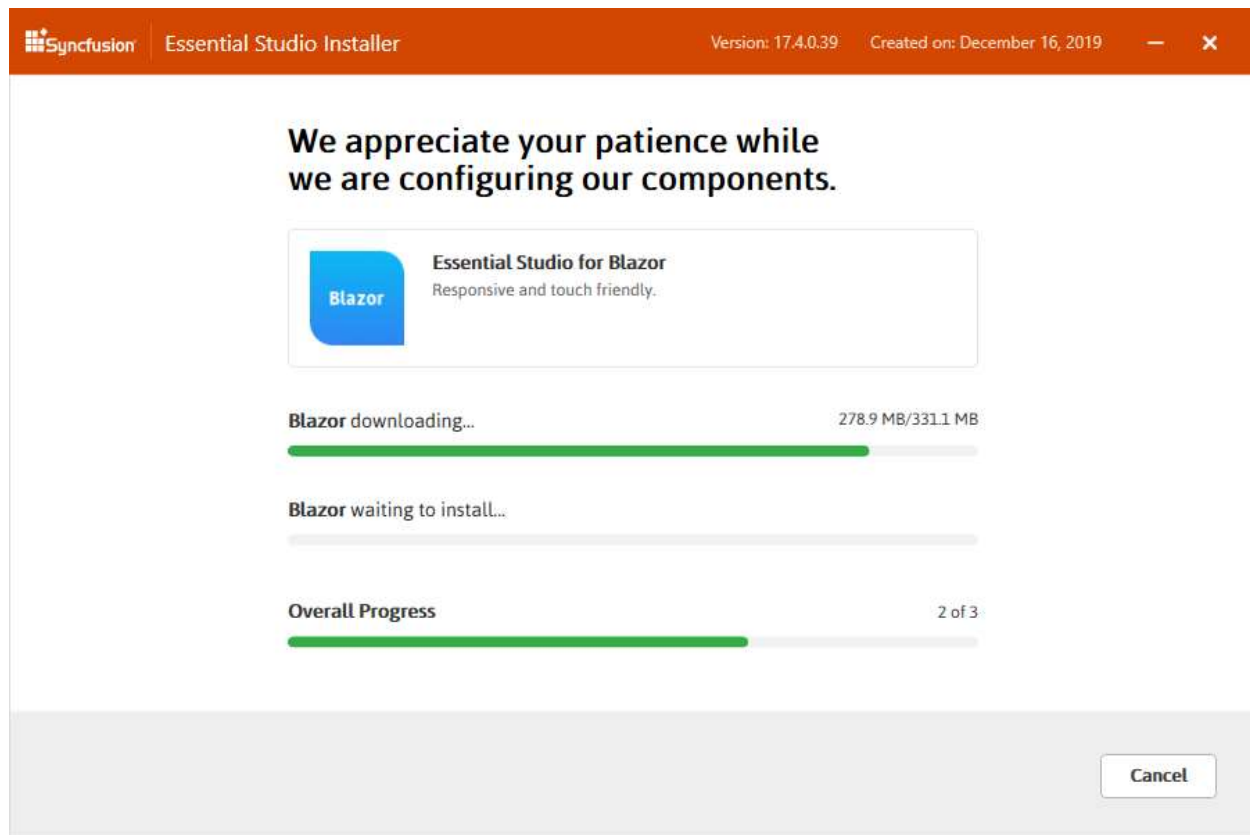
6. After reading the License Terms and Conditions, check the **I agree to the License Terms and Privacy Policy** check box. Click Next.
7. Login wizard will be displayed. You should enter your Syncfusion Direct-Trac login credentials. If you don't have Syncfusion Direct-Trac login credentials, then you can click on **Create an Account**. Else if you forgot your password, click on **Forgot Password** to create new password. Click Install.



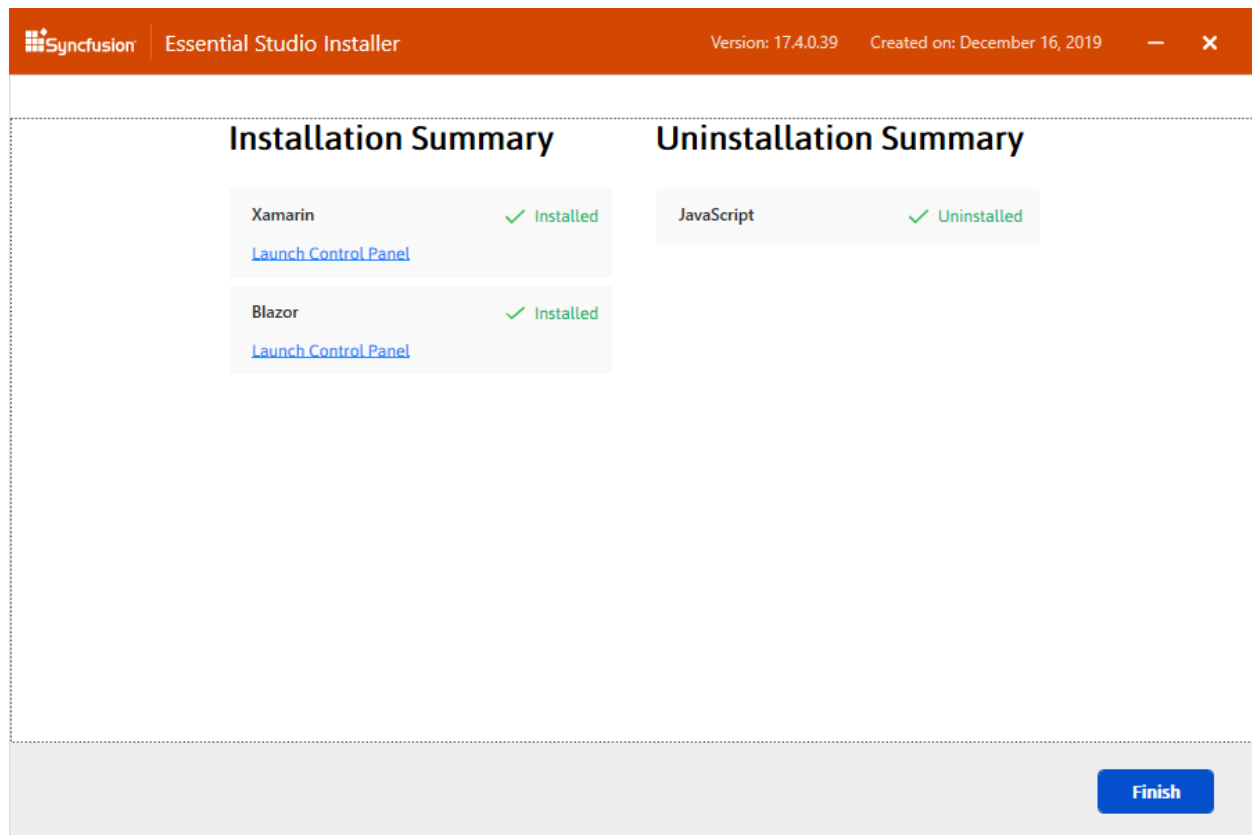
The screenshot shows the 'Essential Studio Installer' window. The title bar is orange and contains the Syncfusion logo, the text 'Essential Studio Installer', and version/creation information: 'Version: 17.4.0.39' and 'Created on: December 16, 2019'. The main content area is white and features the heading 'Just one more step!' followed by the instruction 'Please login to begin installation.' Below this are two input fields: 'Email' with a placeholder 'email id' and 'Password' with a placeholder 'password' and a toggle eye icon. At the bottom of the form are two links: 'Create an Account' and 'Forgot password?'. At the bottom right of the window are two buttons: 'Back' and 'Proceed'.

Information: The selected platforms will be installed based on your Syncfusion License (Trial or Licensed).

8. Download, Installation and Uninstallation progress will be displayed.



9. Once the Installation is complete, **Summary** wizard will be displayed. Here you can check the list of platforms which are **installed/uninstalled** successfully and failed. Click Finish to exit the Summary wizard.



- Click **Launch Control Panel** to open the Syncfusion Control Panel.

Essential Studio Platform Offline Installer for individual platforms

Overview

Syncfusion provides separate platform installers for all the Essential Studio platforms. You can download the latest version platforms Installer [here](#) .

Web

- ASP.NET MVC
- ASP.NET Core
- JavaScript
- Blazor

Mobile

- Xamarin
- Flutter

Desktop

- Windows Forms
- WPF

- Universal Windows Platform

FileFormats

- Read and Write Excel, Word, PDF and PowerPoint files

Web (Essential JS 1)

- ASP.NET Web Forms
- ASP.NET MVC
- ASP.NET Core
- JavaScript
- PHP
- JSP

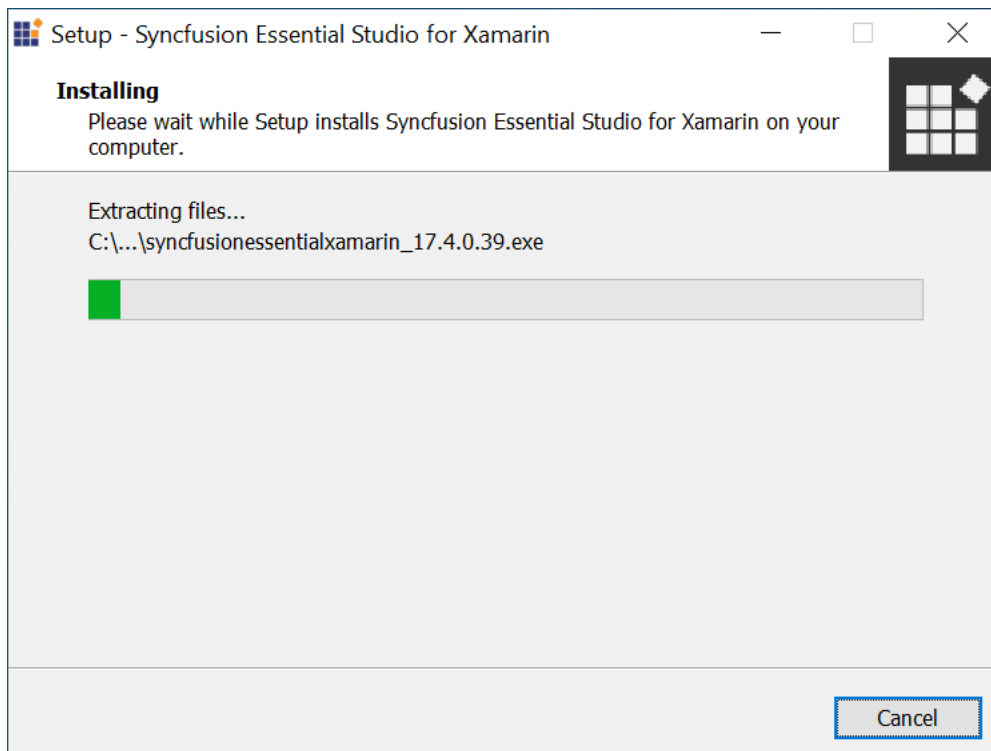
Note: From the 2018 Volume 2 release, Syncfusion provides the support for uninstalling the particular platform alone.

Note: Universal Windows Platform can be installed in Windows 8.1 and later.

Step-by-Step Installation

The following procedure illustrates how to install Essential Studio.

1. Double-click the Syncfusion Essential Studio Platform installer file. The installer Wizard opens and extracts the package automatically.



Note: The installer wizard extracts the syncfusionessentialstudio_(version).exe dialog, displaying the unzip operation of the package.

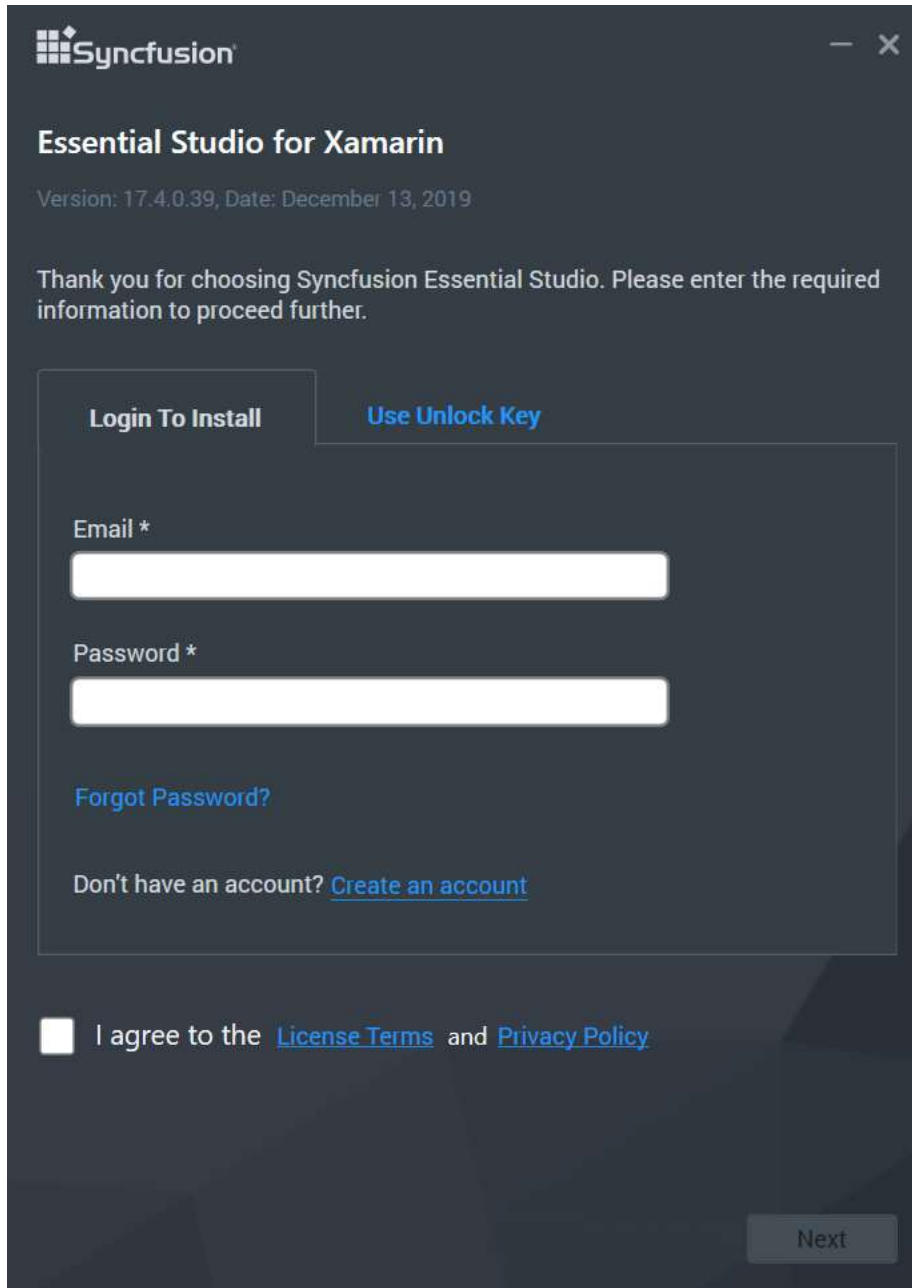
2. You are provided with two options to unlock the Syncfusion installer.

- **Login To Install**
- **Use Unlock Key**

Note: While installing the Syncfusion installer, by default **Login To Install** screen will be displayed. You can provide the email ID and password registered with Syncfusion for unlocking the Essential Studio installer and your license will be configured. TO unlock the installer with License Key, you can select the **Use Unlock Key** option in the Installer and you will be prompt to enter the license key.

Login To Install

You should enter your Syncfusion Direct-Trac login credentials. If you don't have Syncfusion Direct-Trac login credentials, then you can click on Sign Up to a create new account. Else if you forgot your password, click on Reset Password to create new password. Here Email address and Password is validated and the Platform Selection window opens.



Syncfusion

Essential Studio for Xamarin

Version: 17.4.0.39, Date: December 13, 2019

Thank you for choosing Syncfusion Essential Studio. Please enter the required information to proceed further.

Login To Install **Use Unlock Key**

Email *

Password *

[Forgot Password?](#)

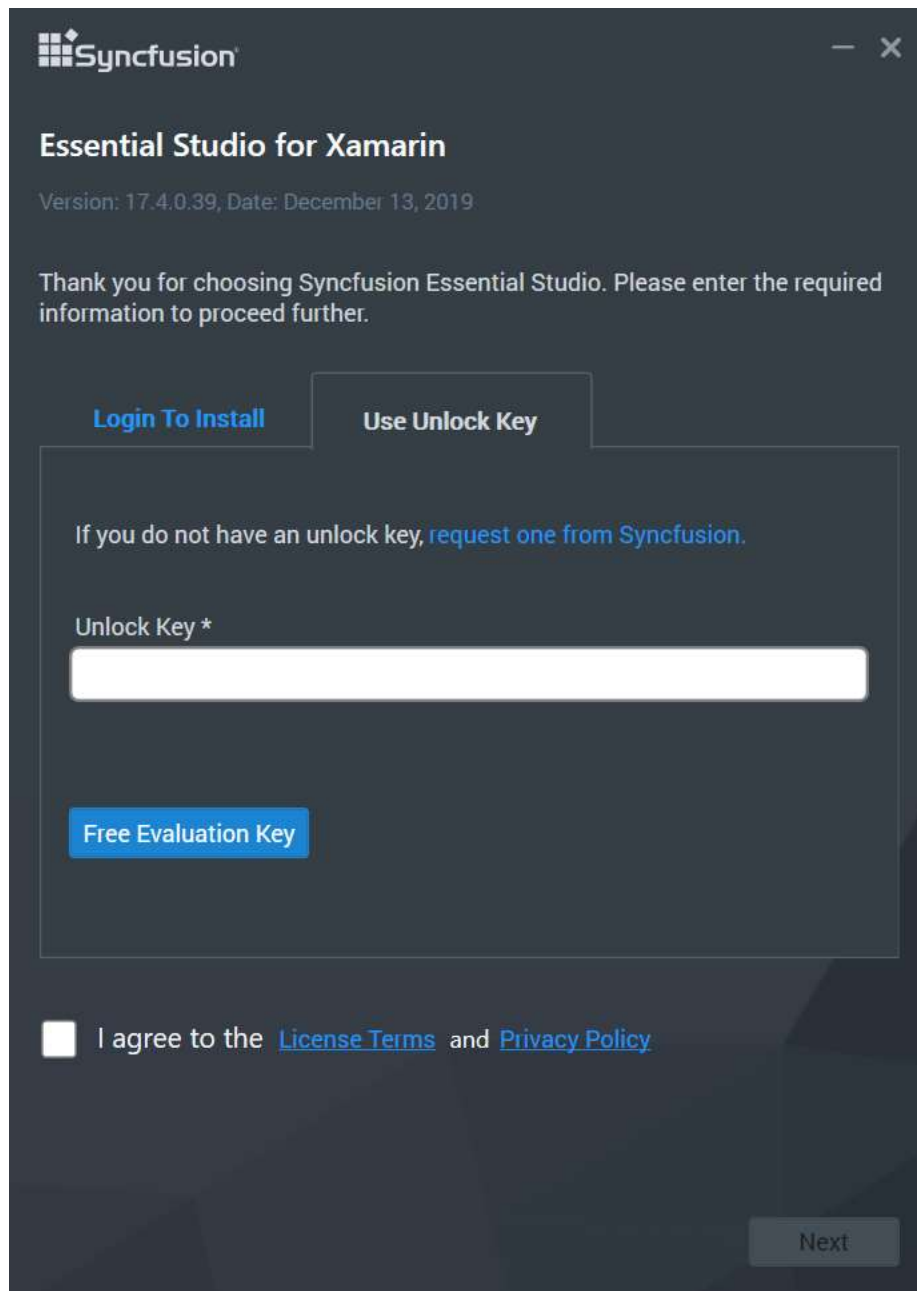
Don't have an account? [Create an account](#)

☐ I agree to the [License Terms](#) and [Privacy Policy](#)

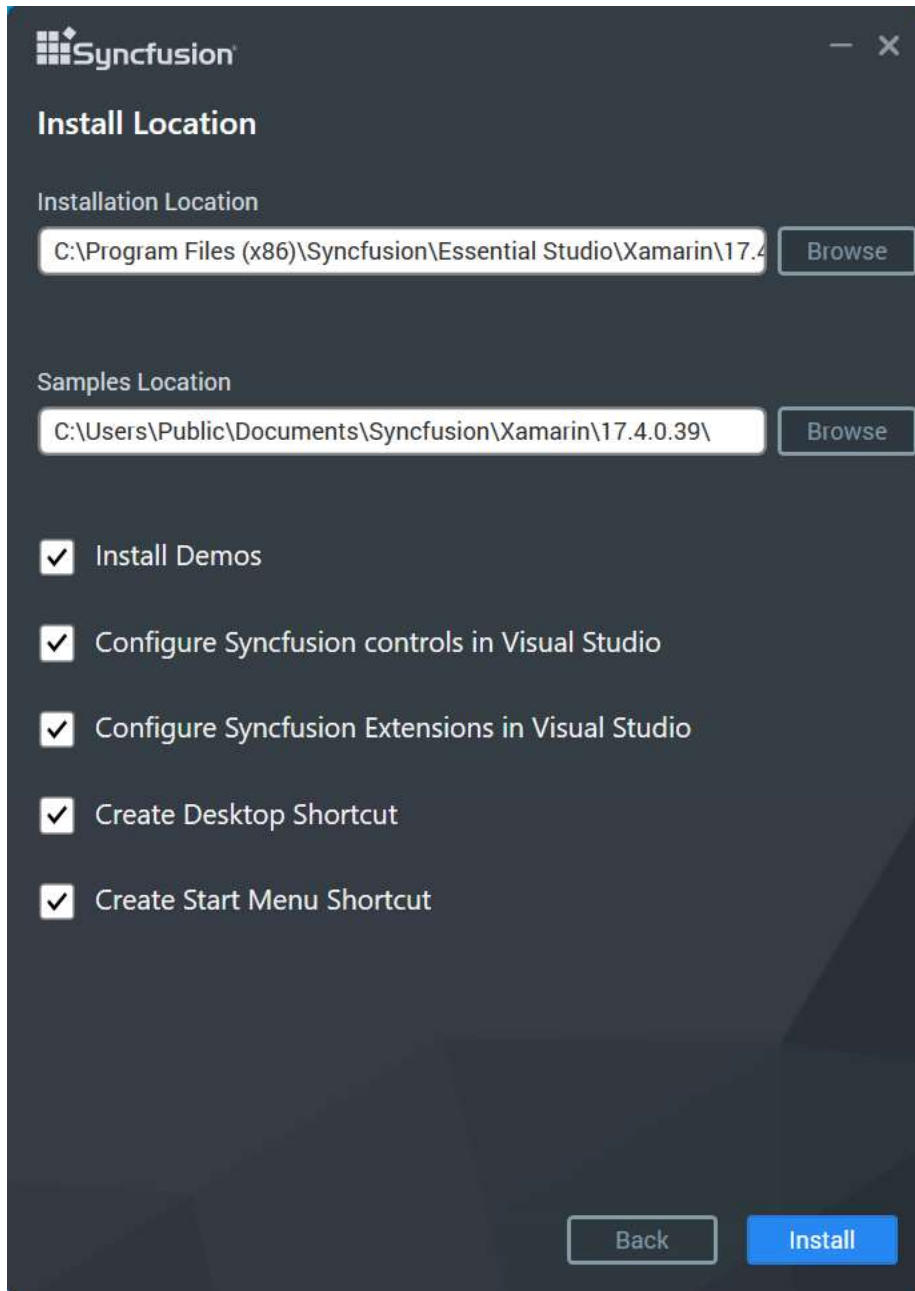
Next

Use Unlock Key

You should use the Syncfusion License/Trial key. Trial key is valid for 30 days and the installer won't accept the expired trial key. Licensed customer can generate key from [here](#).



3. After reading the License Terms and Conditions, check the **I agree to the License Terms and Conditions** check box.
4. Click Next. Select the Installation, Samples Folder and Advanced Options screen opens. To install in the displayed default location, click Install



Note: From the 2018 Volume 2 release, Syncfusion has changed the install and samples location

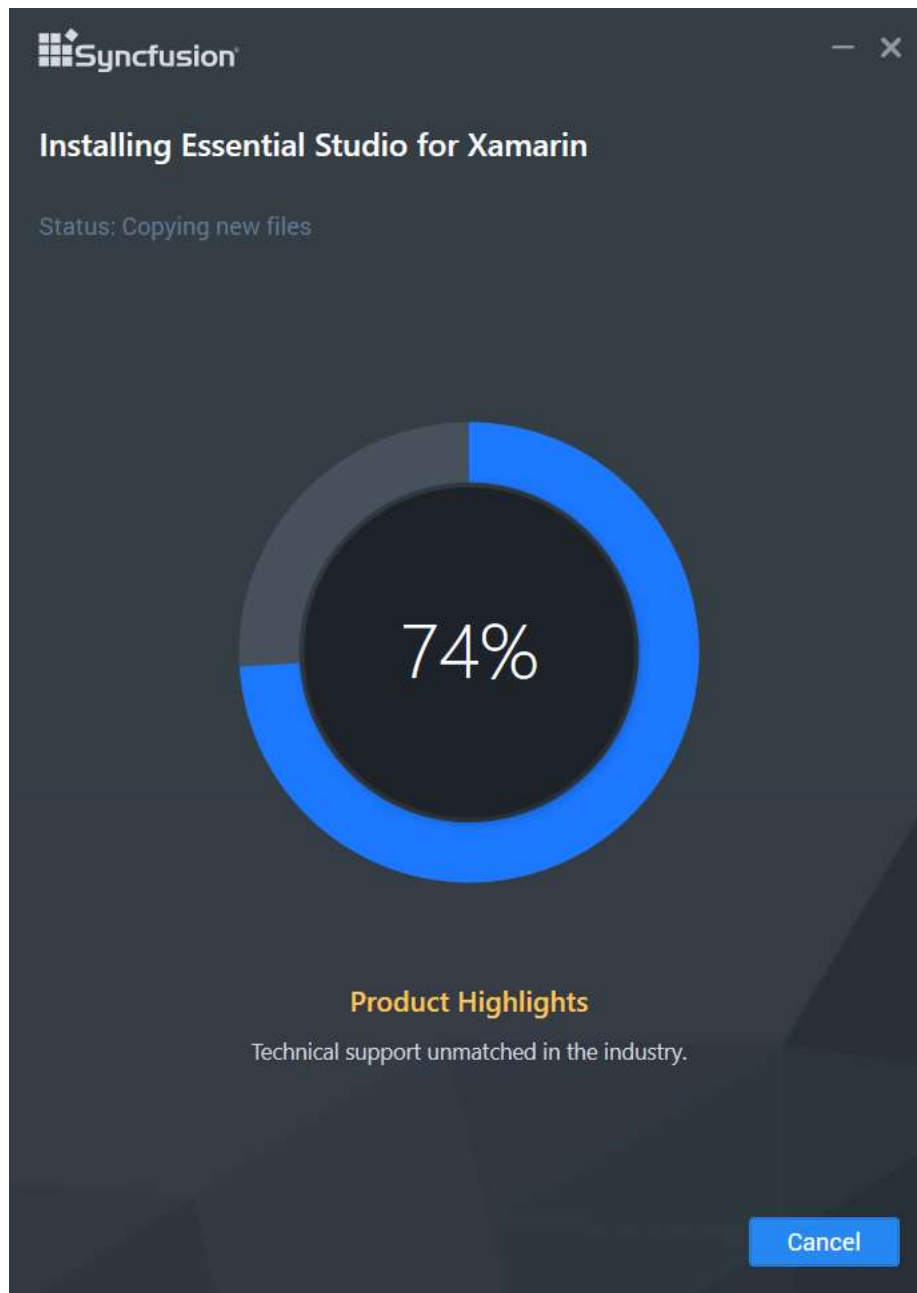
Default Install location: {ProgramFilesFolder}\Syncfusion\{Platform}\{version}

Default Samples location: C:\Users\Public\Documents\Syncfusion\{platform}\{version}

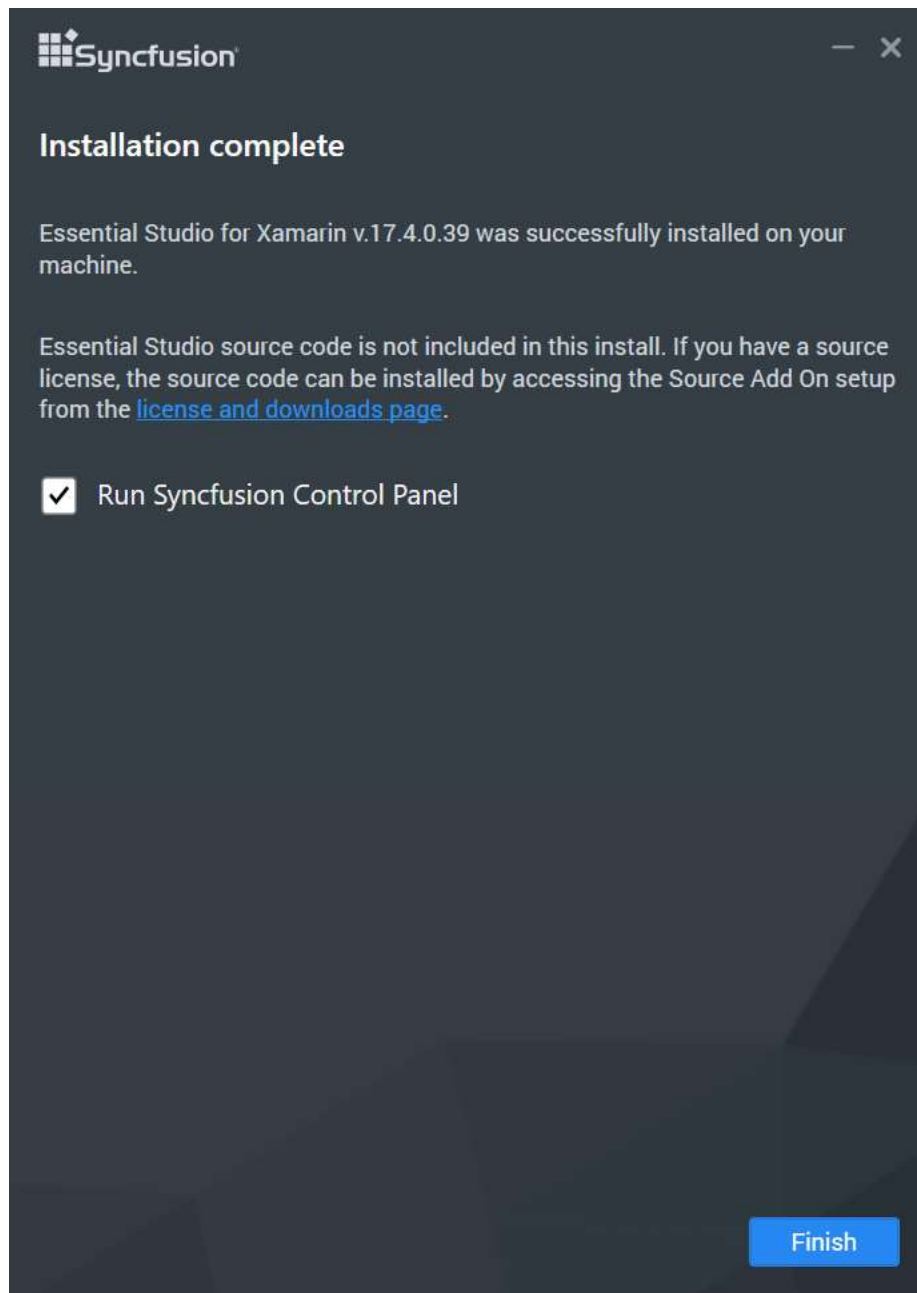
However, you can change the locations by clicking browse button.

- Select the **Install Demos** check box to install Syncfusion samples, or leave the check box clear, when you do not want to install Syncfusion samples.
- Select the **Register Syncfusion Assemblies in GAC** check box to install the latest Syncfusion assemblies in GAC, or clear this check box when you do not want to install the latest assemblies in GAC.

- Select the **Uninstall the previously installed Syncfusion assemblies from GAC** check box to uninstall the previously installed Syncfusion assemblies from GAC, or clear this check box to maintain the previously installed assemblies.
 - Select the **Configure Syncfusion controls in Visual Studio Toolbox** check box to configure the Syncfusion controls in the Visual Studio toolbox, or clear this check box when you do not want to configure the Syncfusion controls in the Visual Studio toolbox during installation. Note that you must also select the Register Syncfusion assemblies in GAC check box when you select this check box.
 - Select the **Install Syncfusion Extensions** checkbox to configure the Syncfusion Extensions in Visual Studio or clear this check box when you do not want to configure the Syncfusion Extensions in Visual Studio.
 - Select the **Create Desktop Shortcut** checkbox to create the desktop shortcut for Syncfusion Control Panel.
5. Click Install.



Note: The Completed screen is displayed once the package is installed.



6. Select the **Run Syncfusion Control Panel** check box to launch the Syncfusion Control Panel after installing.
7. Click Finish. Essential Studio is installed in your system and the Syncfusion Essential Studio [Syncfusion Control Panel](#) is launched automatically.

Command Line

The Syncfusion Essential Studio Platform Installer supports installing/uninstalling through Command Line. The following sections illustrate this ability.

Command Line Installation

Follow the steps below to install through Command Line in Silent mode.

1. Double-click the Syncfusion Essential Studio platform installer file. The installer Wizard opens and extracts the package automatically.
2. The SyncfusionEssentialStudio(platform)_(version).exe file is extracted into the Temp folder.
3. Run %temp%. The Temp folder will open.
The SyncfusionEssentialStudio(platform)_(version).exe file is available in one of the folders.
4. Copy the SyncfusionEssentialStudio_(version).exe file in local drive. Example: D:\temp
5. Cancel the Wizard.
6. Open the Command Prompt in administrator mode and pass the following arguments for corresponding version:

Essential Studio version 17.1 and later

Arguments: "Installer file path\SyncfusionEssentialStudio(platform)_(version).exe" /Install silent /UNLOCKKEY:"(product unlock key)" [/log "{Log file path}"] [/InstallPath:{Location to install}] [/InstallSamples:{true/false}] [/InstallAssemblies:{true/false}] [/UninstallExistAssemblies:{true/false}] [/InstallToolbox:{true/false}] [/InstallVsix:{true/false}] [/CreateShortcut:{true/false}]

Note: [...] – Arguments inside the square brackets are optional.

Example: "D:\Temp\SyncfusionEssentialStudio(platform)13.2.0.30.exe" /Install silent /UNLOCKKEY:"product unlock key" /log "C:\Temp\EssentialStudioPlatform.log" /InstallPath:C:\Syncfusion\x.x.x.x /InstallSamples:true /InstallAssemblies:true /UninstallExistAssemblies:true /InstallToolbox:true /InstallVsix:true /CreateShortcut:true

Refer the below table for older versions

Essential Studio Versions	Arguments	Example
16.2 to 16.4	Installer file path\SyncfusionEssentialStudio(platform)_(version).exe /Install silent /UNLOCKKEY:"(product unlock key)" [/log "{Log file path}"] [/InstallPath:{Location to install}] [/InstallSamples:{true/false}] [/InstallAssemblies:{true/false}] [/UninstallExistAssemblies:{true/false}] [/InstallToolbox:{true/false}] [/InstallVsix:{true/false}]	D:\Temp\SyncfusionEssentialStudio(platform)13.2.0.30.exe /Install silent /UNLOCKKEY:"product unlock key" /log "C:\Temp\EssentialStudioPlatform.log" /InstallPath:C:\Syncfusion\x.x.x.x /InstallSamples:true /InstallAssemblies:true /UninstallExistAssemblies:true /InstallToolbox:true /InstallVsix:true
13.2 to 16.1	Installer file path\SyncfusionEssentialStudio(platform)_(version).exe /Install silent /PIDKEY:"(product unlock key)" /log	D:\Temp\SyncfusionEssentialStudio(platform)13.2.0.30.exe /Install silent /PIDKEY:"product unlock key" /log "C:\Temp\EssentialStudioPlatform.log"

	{Log file path} [/InstallPath:{Location to install}] [/InstallSamples:{true/false}] [/InstallAssemblies:{true/false}] [/UninstallExistAssemblies:{true/false}] [/InstallToolbox:{true/false}]	/InstallPath:C:\Syncfusion\x.x.x.x /InstallSamples:true /InstallAssemblies:true /UninstallExistAssemblies:true /InstallToolbox:true
11.1 to 13.1	{Installer file path\SyncfusionEssentialStudio(platform)_(version).exe} Install /PIDKEY:{(product unlock key)} [/log {Log file path}] [/InstallPath: {Location to install}]	{D:\Temp\SyncfusionEssentialStudio(platform) 12.1.0.43.exe} Install /PIDKEY:{product unlock key} /log {C:\Temp\EssentialStudioPlatform.log} /InstallPath:C:\Syncfusion\x.x.x.x

Note: x.x.x.x needs to be replaced with the Essential Studio version installed in your machine and the Product Unlock Key needs to be replaced with the Unlock Key for that version. The platform should be replaced with ASP.NET Web Forms, ASP.NET MVC, Windows Forms, WPF, JavaScript, Xamarin, PHP, JSP or UWP.

7. Essential Studio is installed.

Command Line Uninstallation

Syncfusion Essential Studio supports uninstalling through Command Line in Silent mode. The following steps illustrate this.

1. When you do not have the extracted installer (SyncfusionEssentialStudio(platform)_(version).exe) then follow the steps from 2 to 7.
2. Double-click the Syncfusion Essential Studio platform installer file. The installer Wizard opens and extracts the package automatically.
3. The SyncfusionEssentialStudio(platform)_(version).exe file is extracted into the Temp folder.
4. Run %temp%. The Temp folder will open.
The SyncfusionEssentialStudio(platform)_(version).exe file is available in one of the folders.
5. Copy the SyncfusionEssentialStudio(platform)_(version).exe file in local drive. Example: D:\temp
6. Cancel the Wizard.
7. Open the Command Prompt in administrator mode and pass the following arguments for corresponding version:

Essential Studio version 13.2 and later

Arguments: "Installer file path\SyncfusionEssentialStudio(platform)_(version).exe" /uninstall silent

Example: "D:\Temp\SyncfusionEssentialStudio(platform)_13.2.0.30.exe" /uninstall silent

Essential Studio version from 11.1 to 13.1

Arguments: "Installer file path\SyncfusionEssentialStudio(platform)_(version).exe" /uninstall true

Example: "D:\Temp\SyncfusionEssentialStudio(platform)_12.1.0.43.exe" /uninstall true

8. Essential Studio is uninstalled.

Note: x.x.x.x needs to be replaced with the Essential Studio version installed in your machine and the Product Unlock Key needs to be replaced with the unlock key for that version. Platform should be replaced with ASP.NET Web Forms, ASP.NET MVC, Windows Forms, WPF, JavaScript, Xamarin, PHP, JSP or UWP.

Essential Studio Enterprise Offline Installer

Overview

Syncfusion started providing the Offline Essential Studio installer only for Licensed customers from 2018 Volume 2 release. The Essential Studio Enterprise Edition Installer includes the following platforms. You can download the latest version Essential Studio Installer [here](#).

Starting with the version 17.3 (2019 Vol 3), Syncfusion provides updated version of Offline Installer which allows both installation and uninstallation the platforms for that specific version.

Information: You can install the Essential Studio Offline Installer using Login and Unlock key.

Web

- ASP.NET MVC
- ASP.NET Core
- JavaScript
- Blazor

Mobile

- Xamarin
- Flutter

Desktop

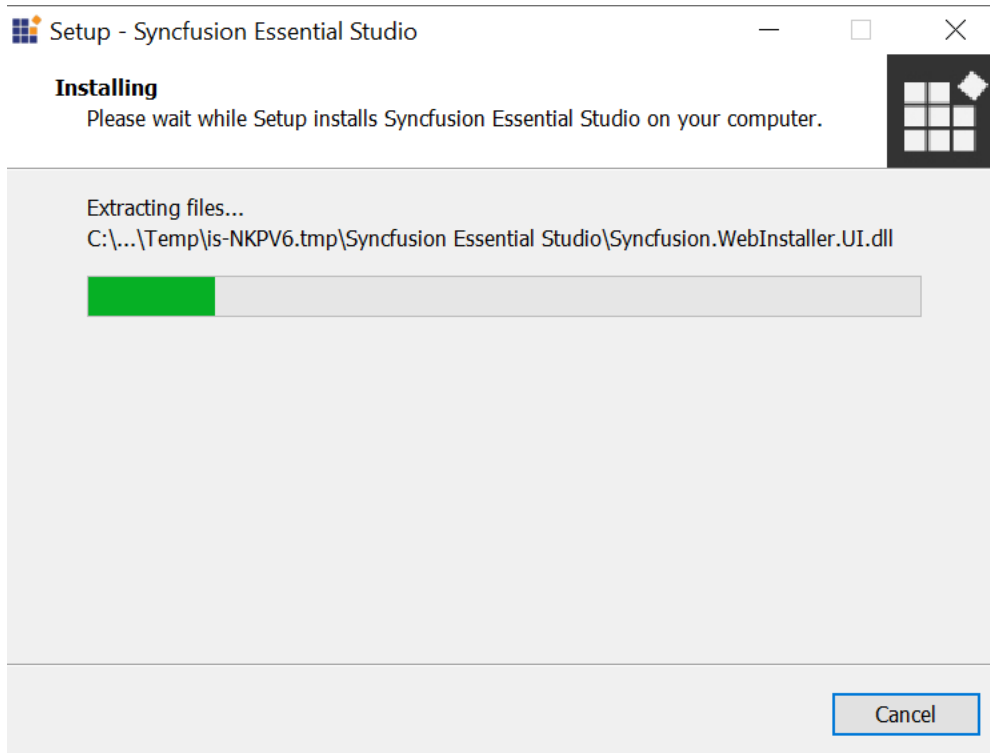
- Windows Forms
- WPF
- Universal Windows Platform

Web (Essential JS 1)

- ASP.NET Web Forms
- ASP.NET MVC
- ASP.NET Core
- JavaScript
- PHP
- JSP

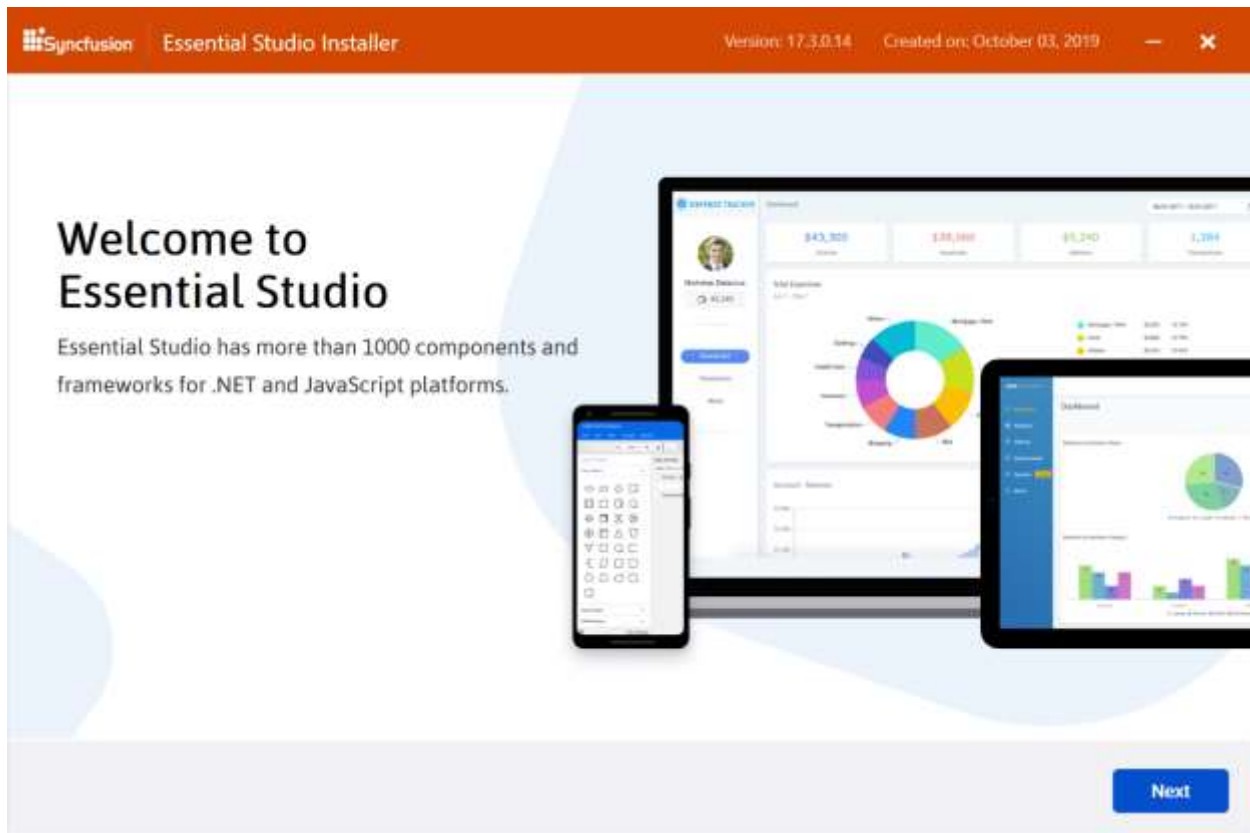
The following procedure illustrates how to install Essential Studio Offline Installer installer.

1. Double-click the Syncfusion Essential Studio Offline Installer file. The installer Wizard opens and extracts the package automatically.



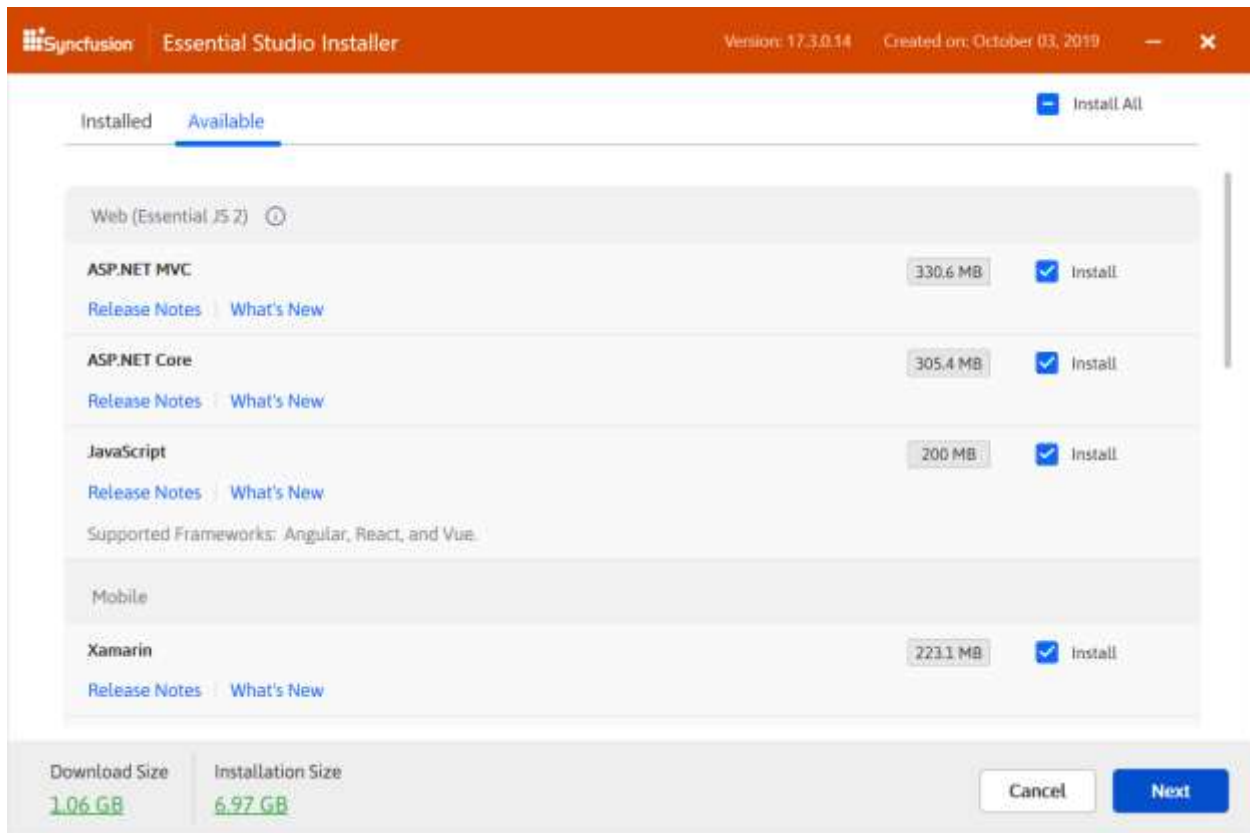
Note: The installer wizard extracts the syncfusionessentialstudiosetup_{version}.exe dialog, displaying the unzip operation of the package.

2. Welcome wizard of the Syncfusion Offline Installer will be displayed. Click Next.

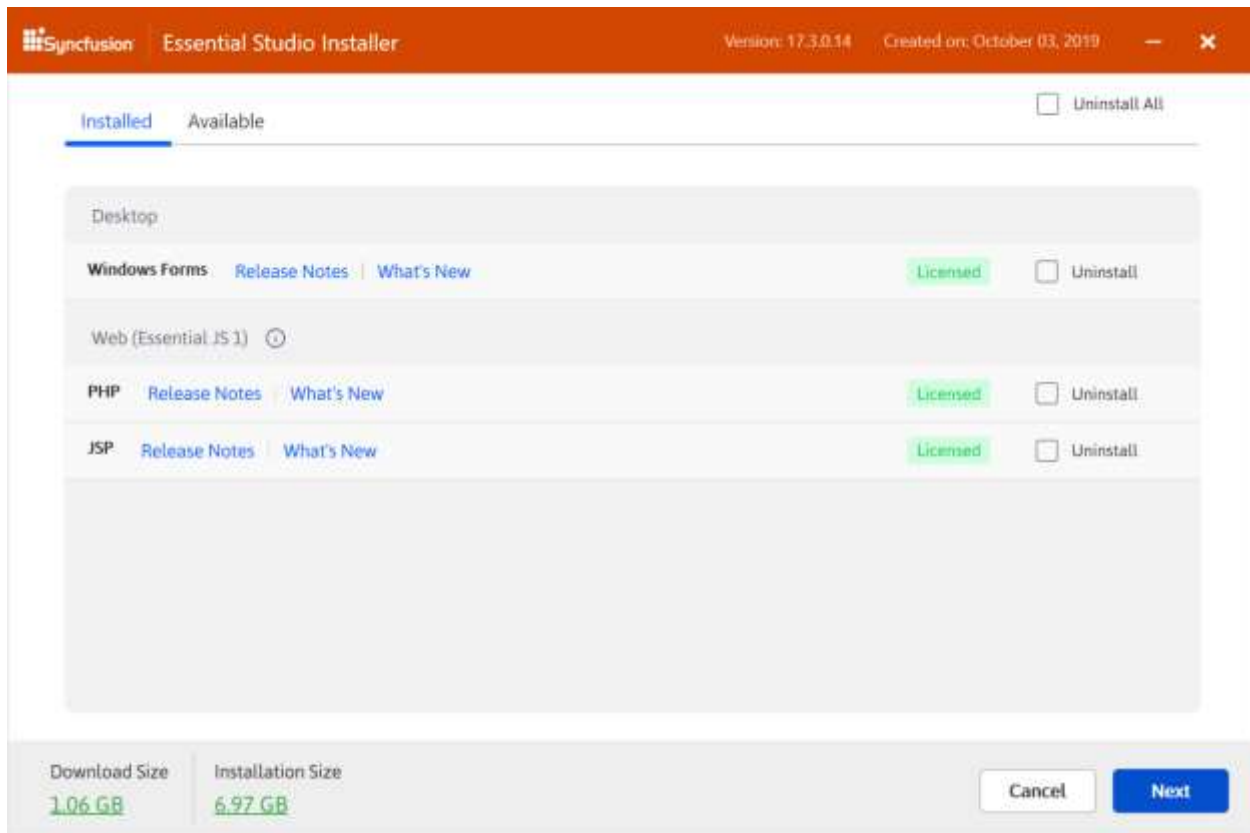


3. Platform Selection wizard will be displayed. Here you can select the required platforms to be installed/uninstalled. Select the platforms to be installed from the **Available** tab and platforms to be uninstalled from the **Installed** tab. Click Next.

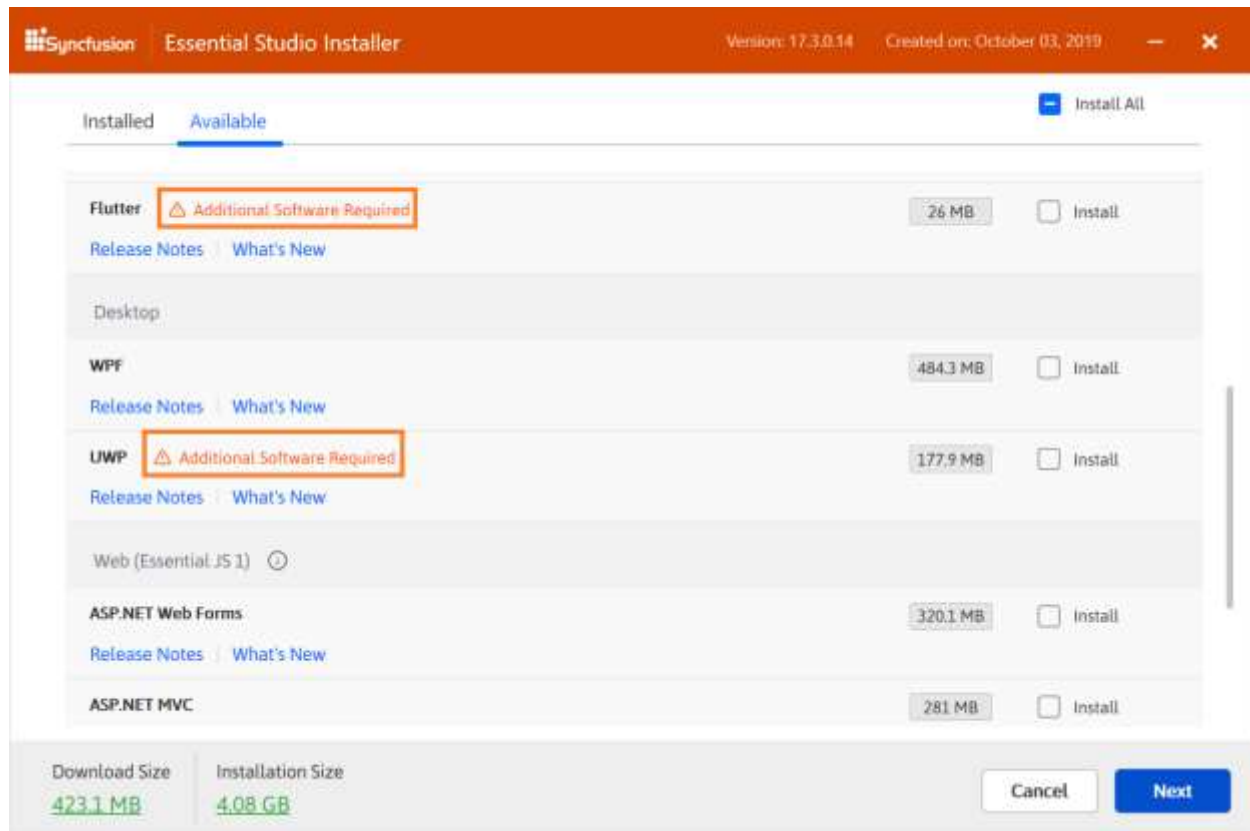
Available



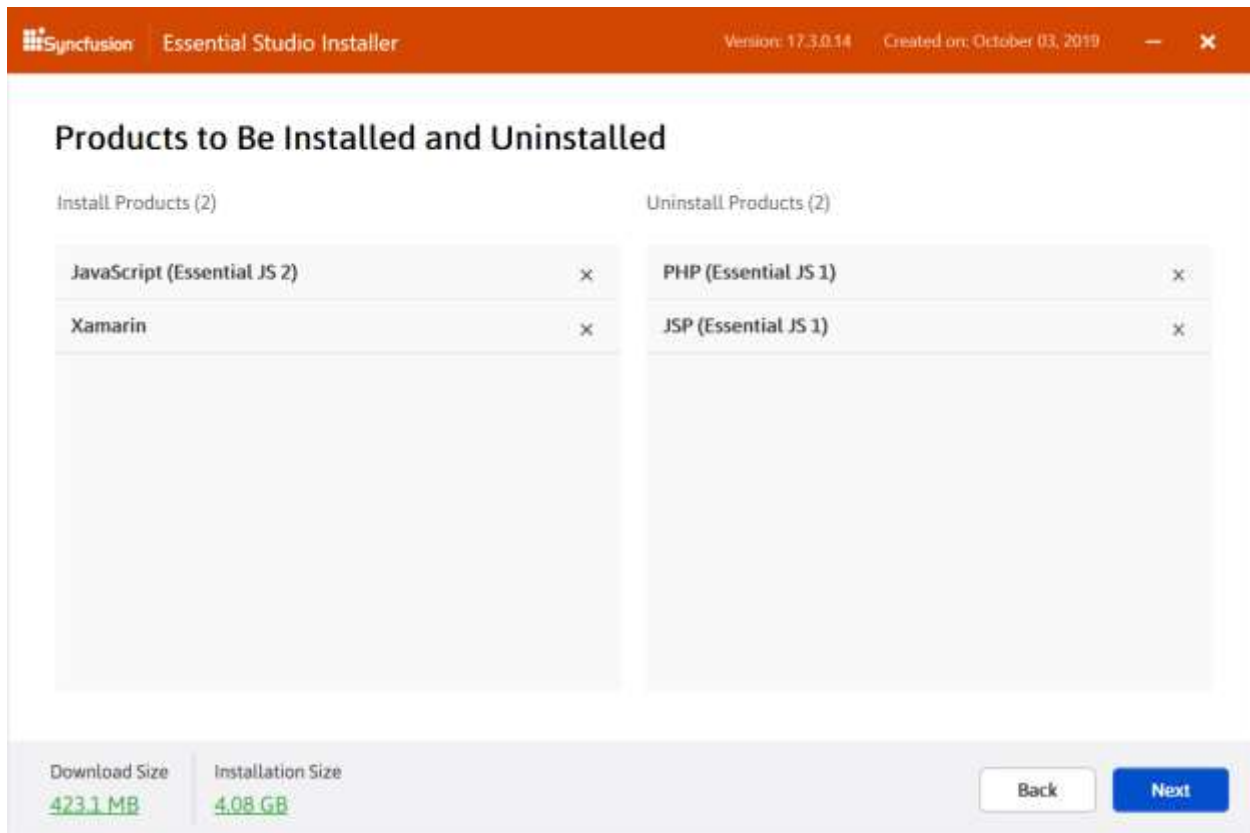
Installed



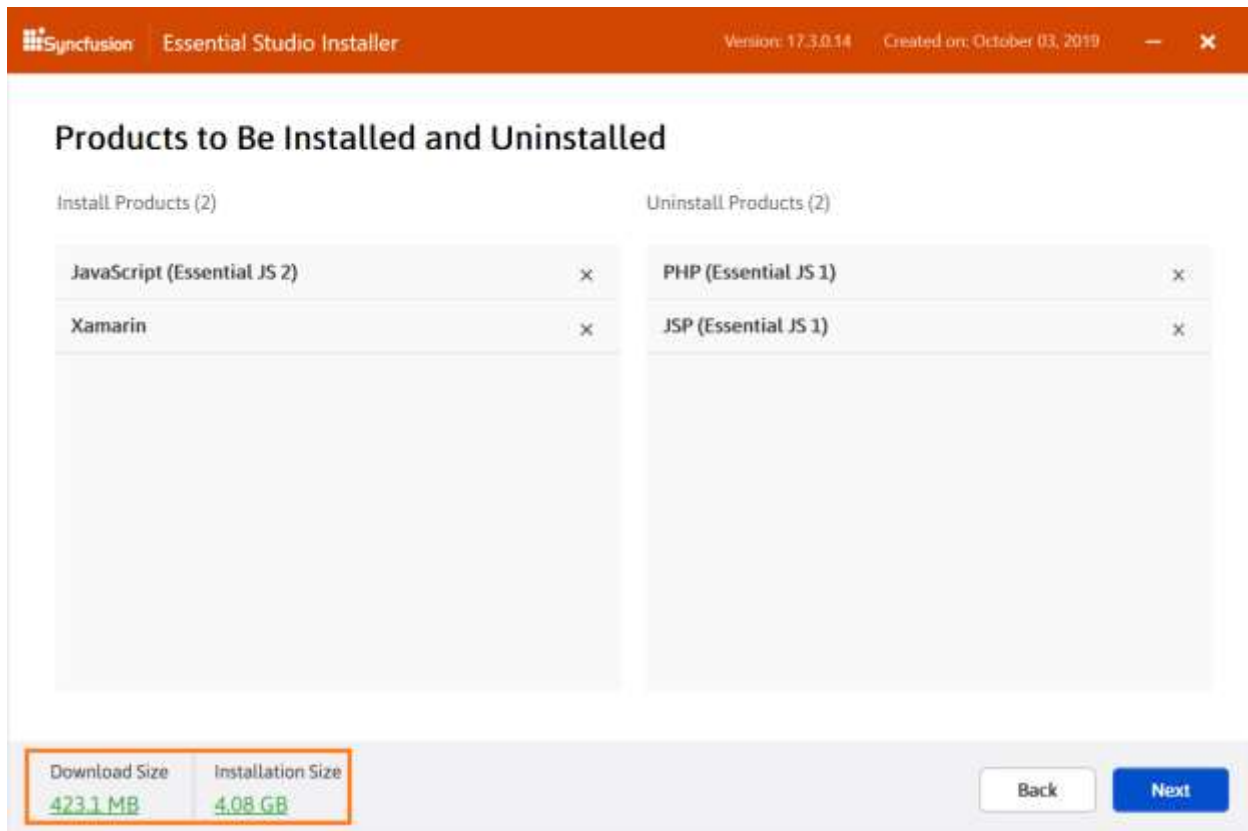
Information: If the required software of the selected platform was not already installed, **Additional Software Required** alert will be displayed.



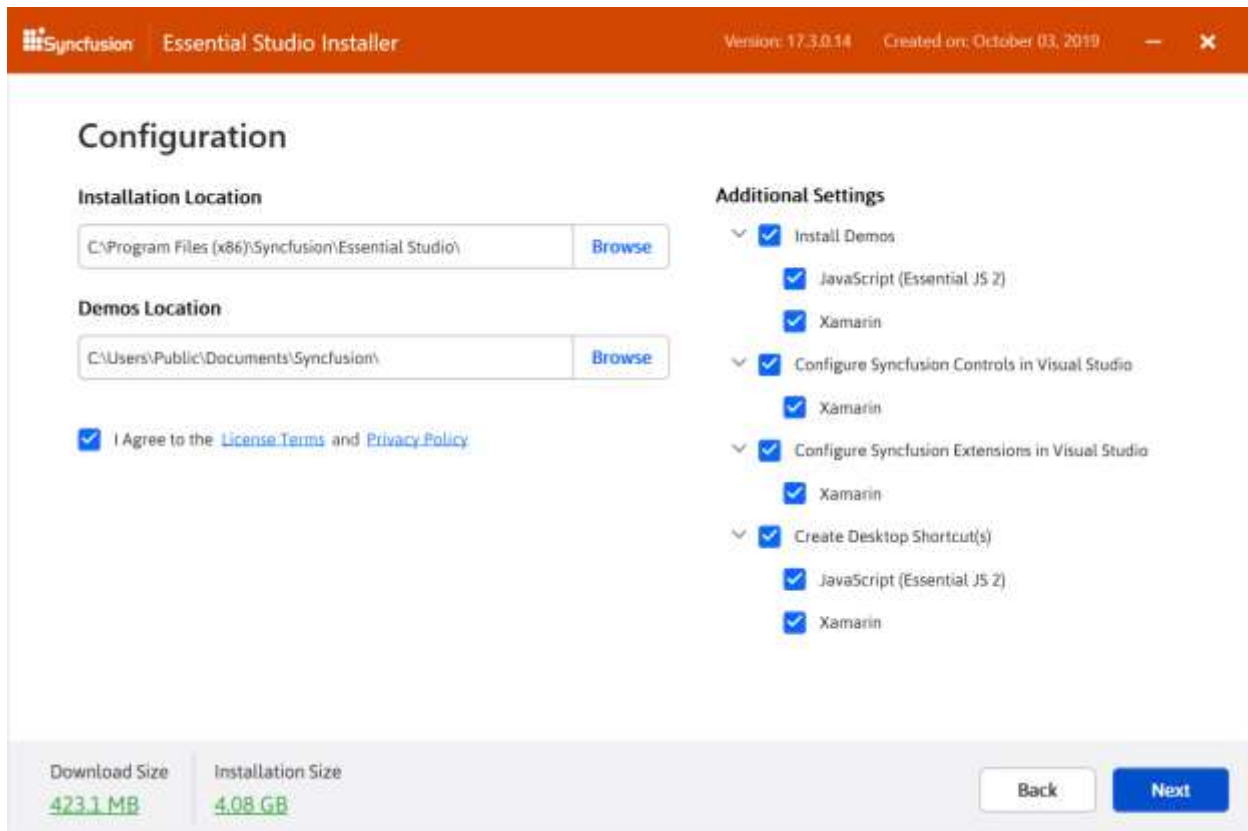
4. Confirmation wizard will be displayed. Here you can view and modify the list of platforms that will be installed/uninstalled.



Note: You can check the Estimated size of the Download and Installation by clicking the **Download Size and Installation Size** link.



5. Configuration wizard will be displayed. Here you can change the Download, Install and samples location. Also, you can change the Additional settings by platform basis. To install using the default configuration, click Next.



Information: From version 17.3 (2019 Vol 3), Syncfusion provides option to provide custom download location.

Note: From the 2018 Volume 2 release, Syncfusion has changed the install and samples location

Default Install location: {ProgramFilesFolder}\Syncfusion\{Platform}\{version}

Default Samples location: C:\Users\Public\Documents\Syncfusion\{platform}\{version}

However, you can change the locations by clicking browse button.

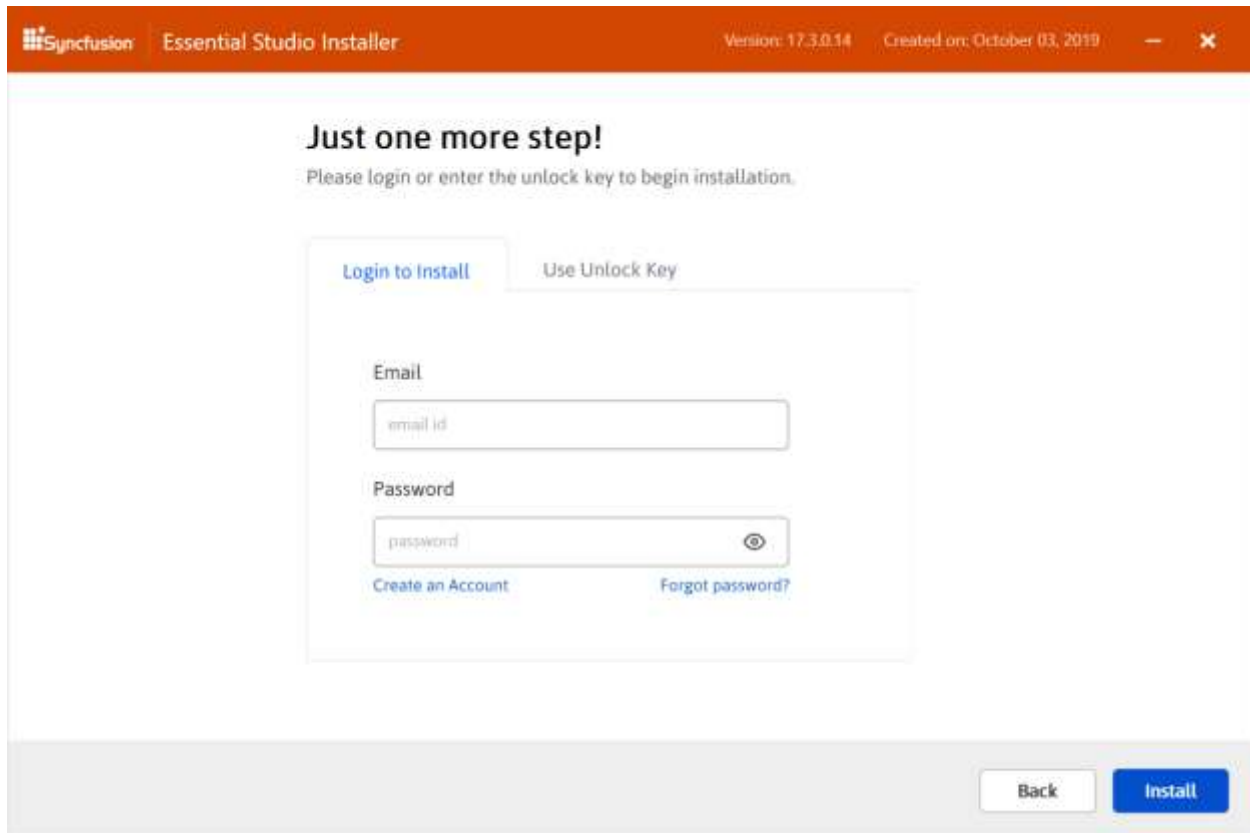
- Select the **Install Demos** check box to install Syncfusion samples, or leave the check box clear, when you do not want to install Syncfusion samples.
- Select the **Register Syncfusion Assemblies in GAC** check box to install the latest Syncfusion assemblies in GAC, or clear this check box when you do not want to install the latest assemblies in GAC.
- Select the **Configure Syncfusion controls in Visual Studio** check box to configure the Syncfusion controls in the Visual Studio toolbox, or clear this check box when you do not want to configure the Syncfusion controls in the Visual Studio toolbox during installation. Note that you must also select the Register Syncfusion assemblies in GAC check box when you select this check box.
- Select the **Configure Syncfusion Extensions in Visual Studio** checkbox to configure the Syncfusion Extensions in Visual Studio or clear this check box when you do not want to configure the Syncfusion Extensions in Visual Studio.
- Select the **Create Desktop Shortcut** checkbox to create the desktop shortcut for Syncfusion Control Panel.

6. After reading the License Terms and Conditions, check the **I agree to the License Terms and Privacy Policy** check box. Click Next. 7. Login wizard will be displayed. You are provided with two options to unlock the Syncfusion Essential Studio Offline installer.

- Login To Install
- Use Unlock Key

Login To Install

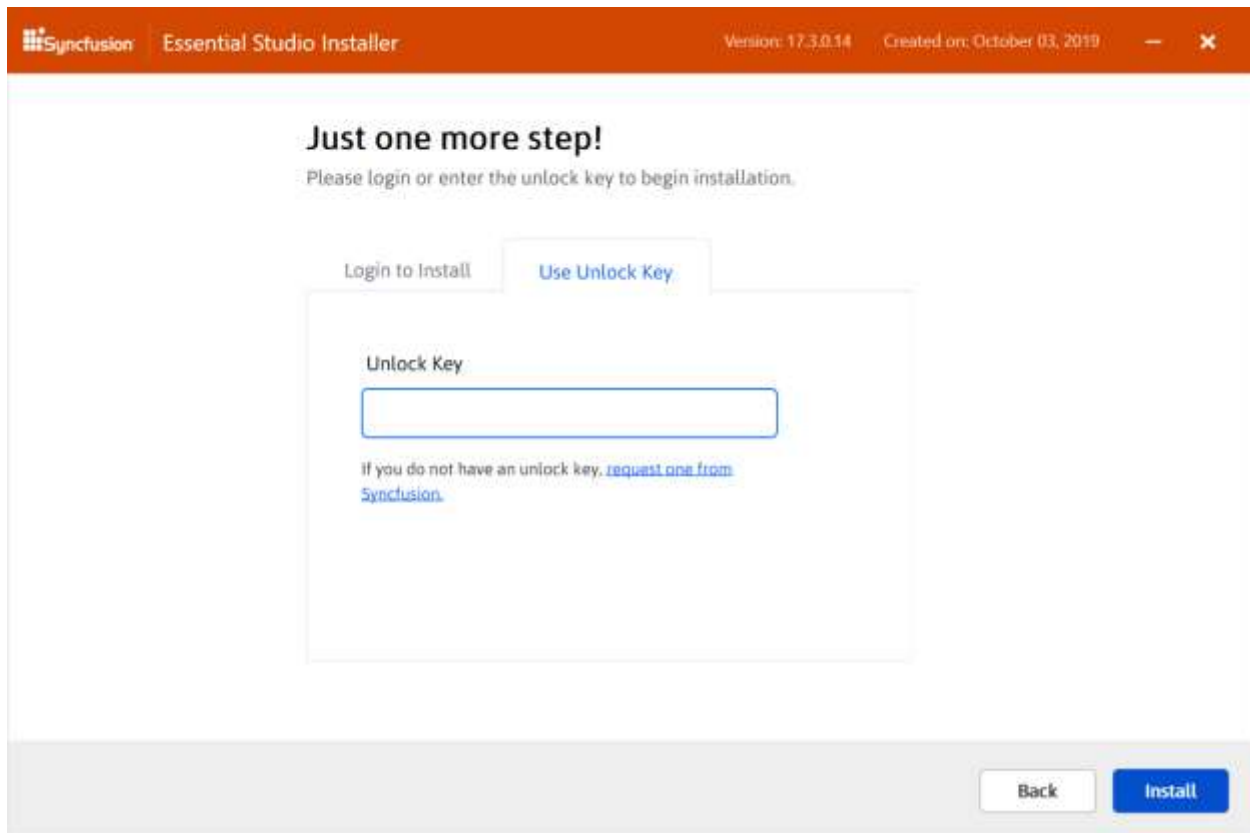
You should enter your Syncfusion Direct-Trac login credentials. If you don't have Syncfusion Direct-Trac login credentials, then you can click on **Create an Account**. Else if you forgot your password, click on **Forgot Password** to create new password. Click Install.



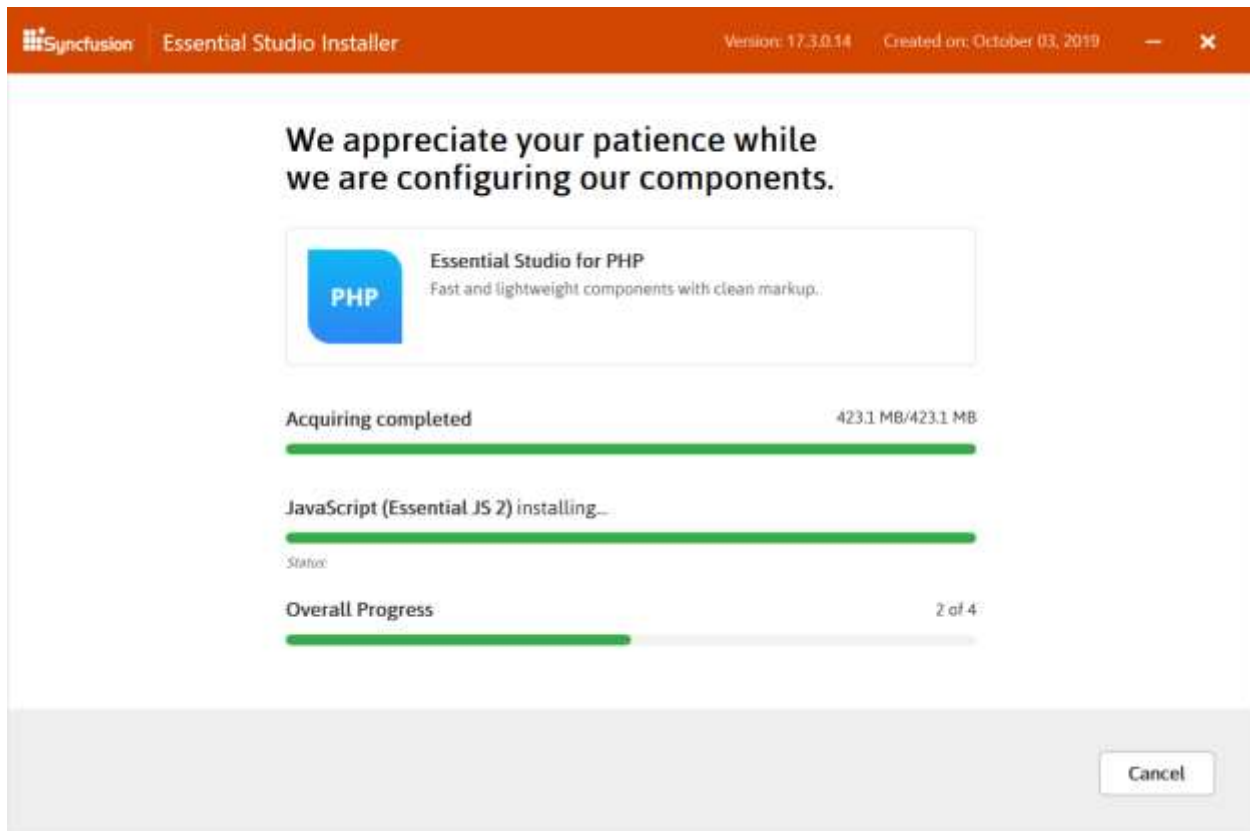
The screenshot shows the 'Syncfusion Essential Studio Installer' window. The title bar indicates 'Version: 17.3.0.14' and 'Created on: October 03, 2019'. The main content area has a heading 'Just one more step!' and a subtext 'Please login or enter the unlock key to begin installation.' Below this, there are two tabs: 'Login to Install' (selected) and 'Use Unlock Key'. The 'Login to Install' tab contains a form with two input fields: 'Email' (with placeholder 'email id') and 'Password' (with placeholder 'password' and a toggle icon). Below the password field are two links: 'Create an Account' and 'Forgot password?'. At the bottom right of the window are two buttons: 'Back' and 'Install'.

Use Unlock Key

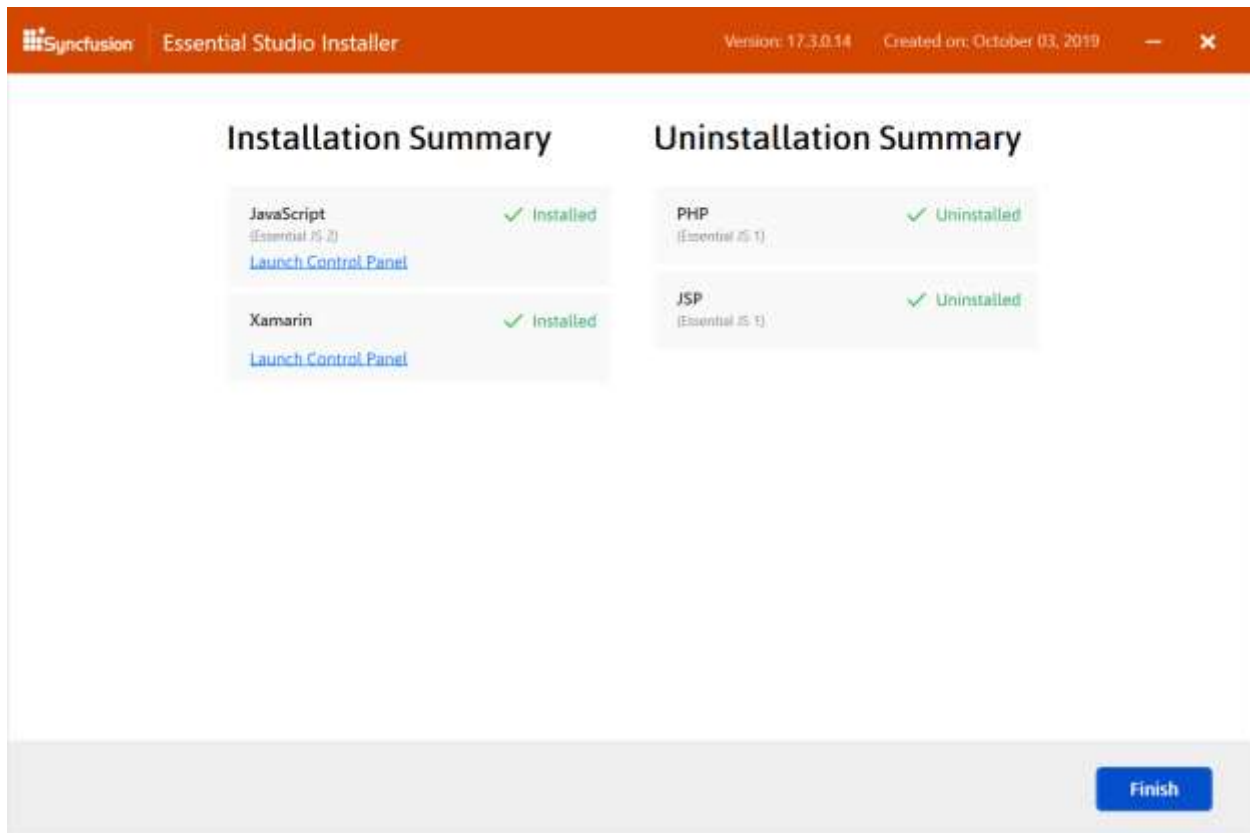
You should use the Syncfusion License key. Licensed customer can generate key from [here](#).



8.Download, Installation and Uninstallation progress will be displayed.



9. Once the Installation/Uninstallation is complete, **Summary** wizard will be displayed. Here you can check the list of platforms which are installed/uninstalled successfully and failed. Click Finish to exit the Summary wizard.



- Click **Launch Control Panel** to open the Syncfusion Control Panel.

Essential Studio Platform Framework Add-Ons

Overview

Starting with version 16.4.0.* (2018 Volume 4), Syncfusion has removed the .NET Framework 2.0, 3.5, 4.5.1 and MVC3 assemblies and provide the separate Framework Add-On installer for the following platforms. .

Note: Only customers with valid license can download and install the Framework Add-Ons

- Windows Forms
- WPF
- ASP.NET Web Forms
- ASP.NET MVC
- JavaScript

Download

1. You can download the Framework Add On installer under your registered Syncfusion account in [License and Downloads](#) page.

Note: Only customers with valid license can download and install the Framework Add-Ons

2. Navigate to the required Essential Studio version and click **More Download Options**.

Note: Syncfusion has started providing Framework Add On installer from 2018 Volume 4 release (v16.4.0.42)

Essential Studio Enterprise Edition - Community license

Essential Studio Enterprise Edition Binary with TestStudio

Latest Official Release : 17.4.0.39 (Volume 4 2019 - December 17, 2019)






[What's New](#) |
 [Release Notes](#) |
 [Get License Key](#) |
 [Get Unlock Key](#)

[Download Older Versions](#)

[Download](#)

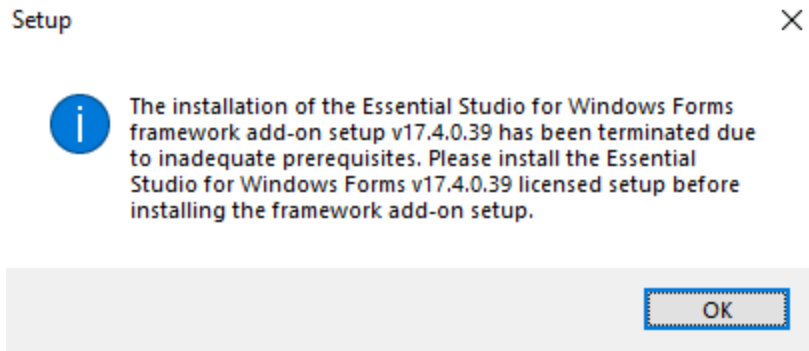
[More Download Options](#)

3. You can find the Syncfusion Framework Add On installer under the **Add-On** section.

Add-On	Offline Installer
JavaScript Framework ⓘ	 .EXE 30 MB Checksum Value
ASP.NET MVC Framework ⓘ	 .EXE 21 MB Checksum Value
ASP.NET Web Forms Framework ⓘ	 .EXE 37 MB Checksum Value
WPF Framework ⓘ	 .EXE 102 MB Checksum Value
WinForms Framework ⓘ	 .EXE 88 MB Checksum Value

Prerequisites

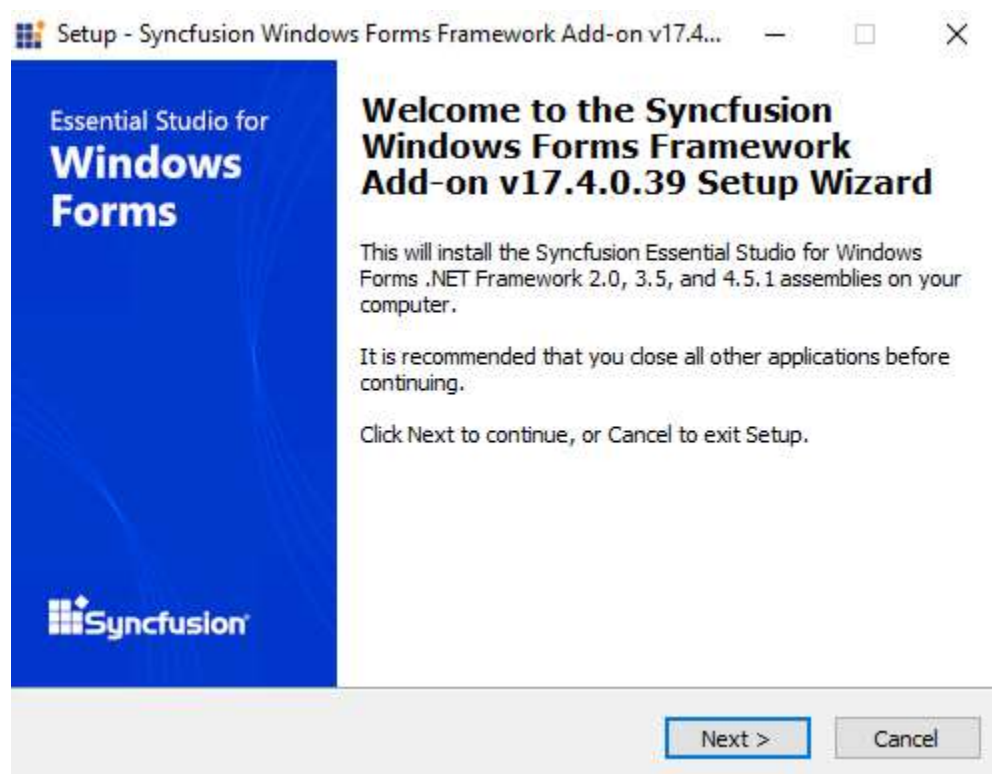
To install the above platform add-ons, corresponding Essential Studio platform should be installed in the same version. If not, prerequisite alert will be displayed.



Step-by-Step Installation

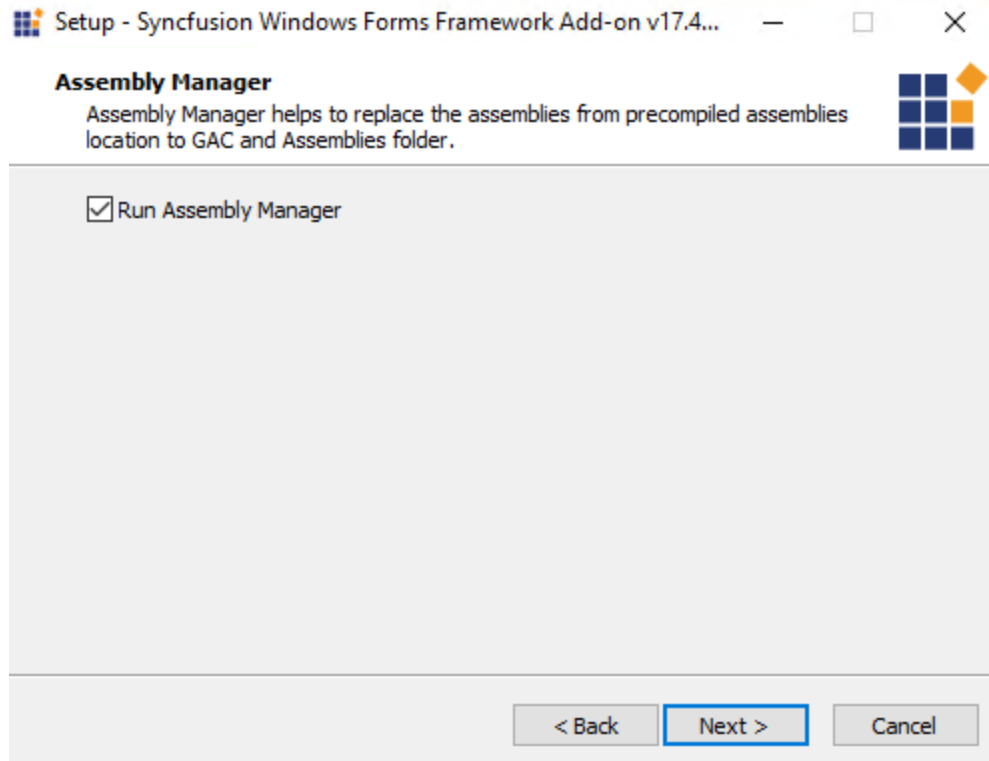
The following procedure illustrates how to install Syncfusion Platform Framework Add-On installer.

1. Double-click the Syncfusion Platform Framework Add-On installer file. Welcome wizard will be displayed. Click Next.

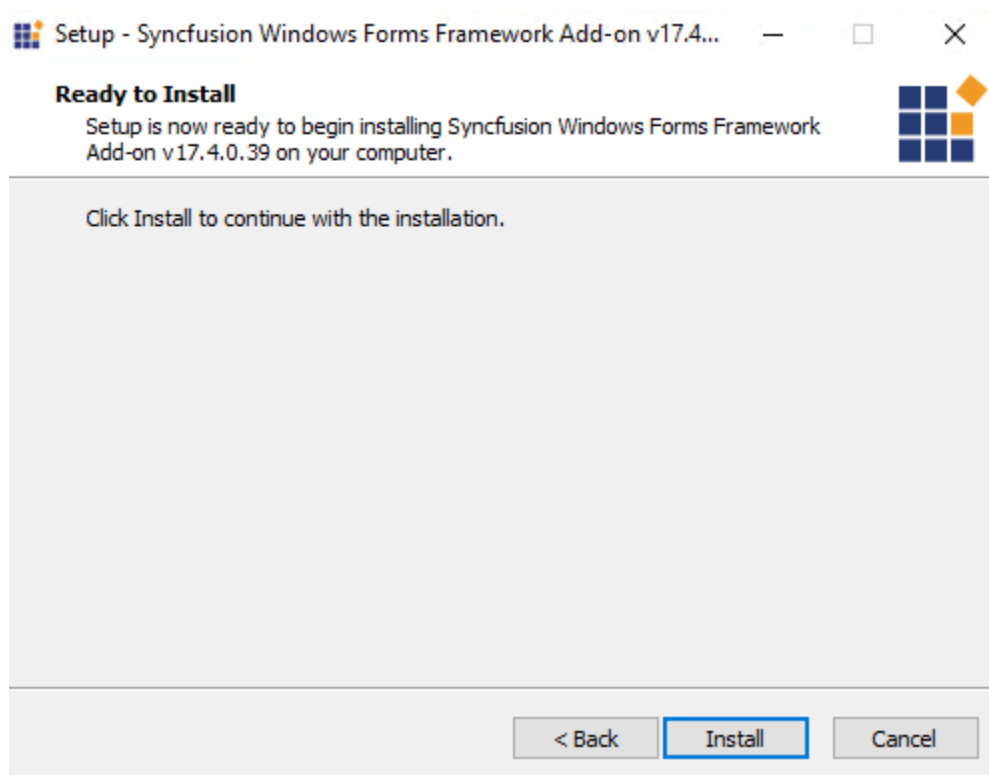


2. Confirmation to run the Assembly Manager will be displayed. Click Next.

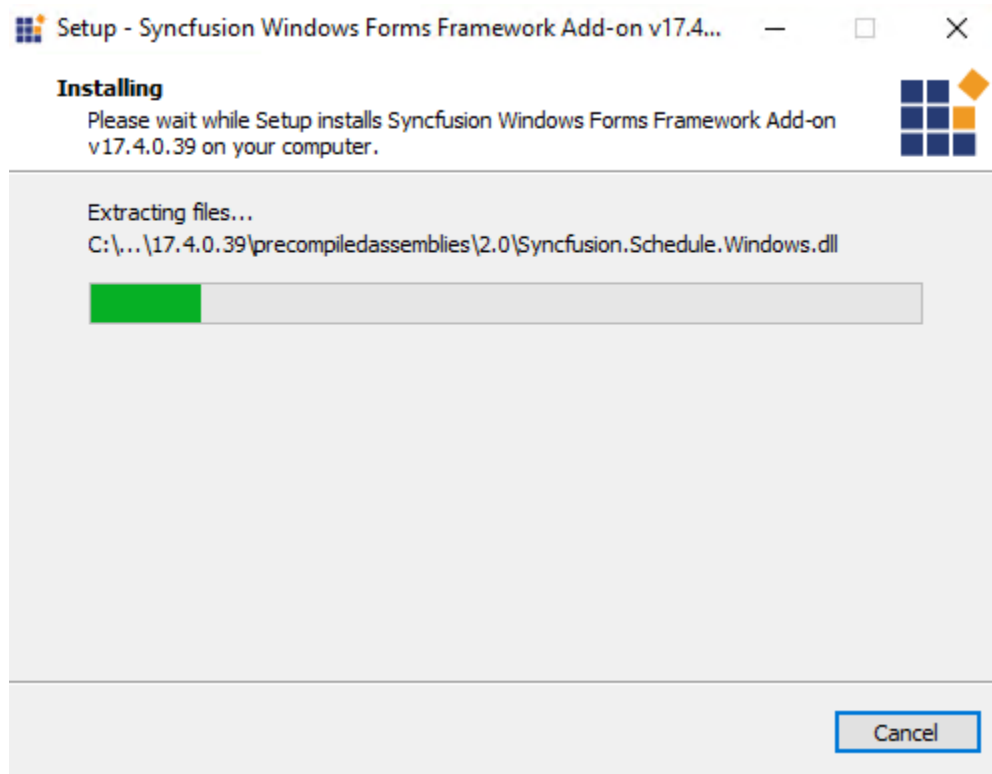
Note: If you do not need the assemblies to be installed in GAC, uncheck the **Run Assembly Manager** checkbox and click Next.



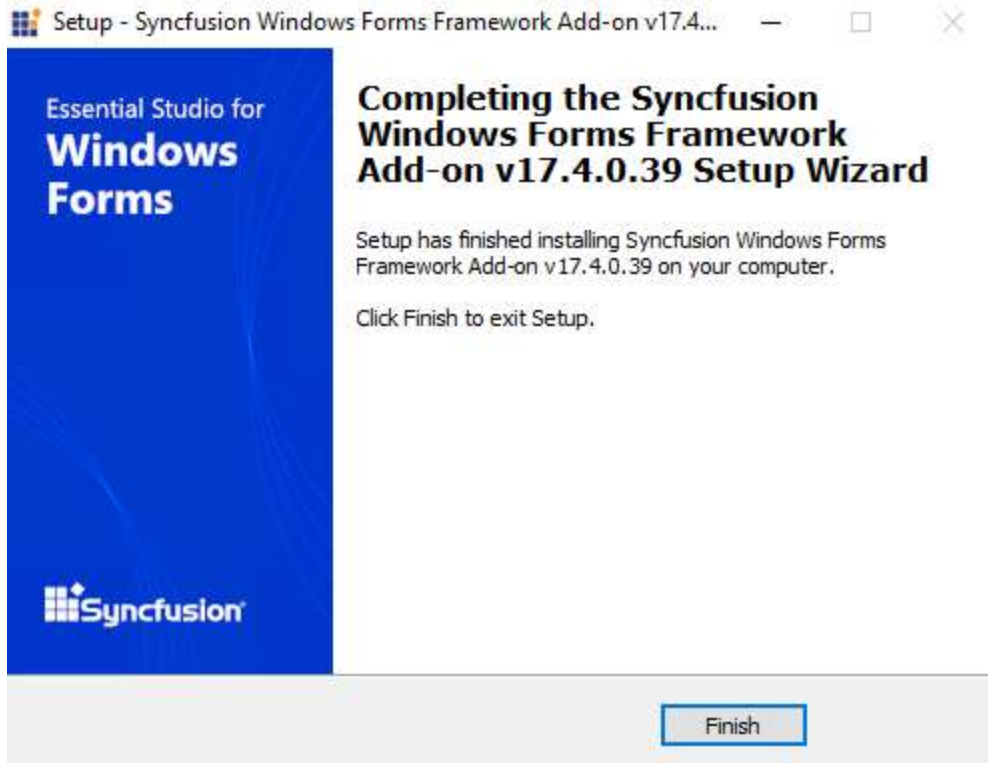
3. **Ready To Install** wizard will be displayed. Click **Install** to proceed installation of Syncfusion Platform Framework Add-On installer.



4. Syncfusion Platform Framework Add-On installation will be started.



5. Completed screen will be displayed once the installation is completed. Click Finish to exit the installer.



Now, you can find the Framework 2.0, 3.5 and 4.5.1 assemblies from the Syncfusion Essential Studio Platform installed location.

Location: {ProgramFilesFolder}\Syncfusion\Essential Studio\ {Platform}\
{version}\precompiledassemblies

Example: C:\Program Files (x86)\Syncfusion\Essential
Studio\Windows\16.4.0.40\precompiledassemblies

Toolbox Configuration

After installing the Syncfusion Platform Framework Add-On, you can configure the Framework 2.0, 3.5 and 4.5.1 controls in Visual Studio toolbox using [Syncfusion Toolbox Installer](#)

Essential Studio Mac Installer

Overview

Syncfusion provides the Mac installer for the following Essential Studio platforms.

- ASP.NET Core
- JavaScript
- Xamarin
- Flutter
- ASP.NET Core (Essential JS 1)
- JavaScript (Essential JS 1)
- PHP
- Electron
- WebKit HTML Converter

How to download Mac installer?

1. Refer [this](#) link to download trial\licensed installer based on your license.
2. In the downloads page, click the "Mac" button and download the required Mac installer.

Downloads

Version : 17.4.0.39

Released on : Dec 17, 2019



GENERAL INFORMATION

- Starting with version 16.2.0.46 (2018 Volume 2 Service Pack 1), Syncfusion components are available as NuGet packages on [NuGet.org](#).
- Starting with version 16.4 (2018 Vol 4), Syncfusion has removed the .NET Framework 2.0, 3.5, 4.5.1 and MVC3 assemblies from the Windows Forms, WPF, ASP.NET MVC (EJ 1), ASP.NET Web Forms, and JavaScript (EJ 1) installs. These assemblies are provided in a separate add-on install. Please refer to this [help topic](#) for more information.
- Starting with v17.3.0.14 (2019 Vol 3), Syncfusion has removed the reporting components (report viewer, report designer, and report writer) from Essential Studio Installer. The latest version of reporting tools installer is available in our new Bold Reports domain. Please navigate to [Bold Reports](#) to download it. You can use your Syncfusion credentials to login.

WEB - Essential JS 2

Offline Installer ⓘ

ASP.NET Core – EJ 2

[Release Notes](#) | [Readme](#)**.PKG 201 MB**[Checksum Value](#)

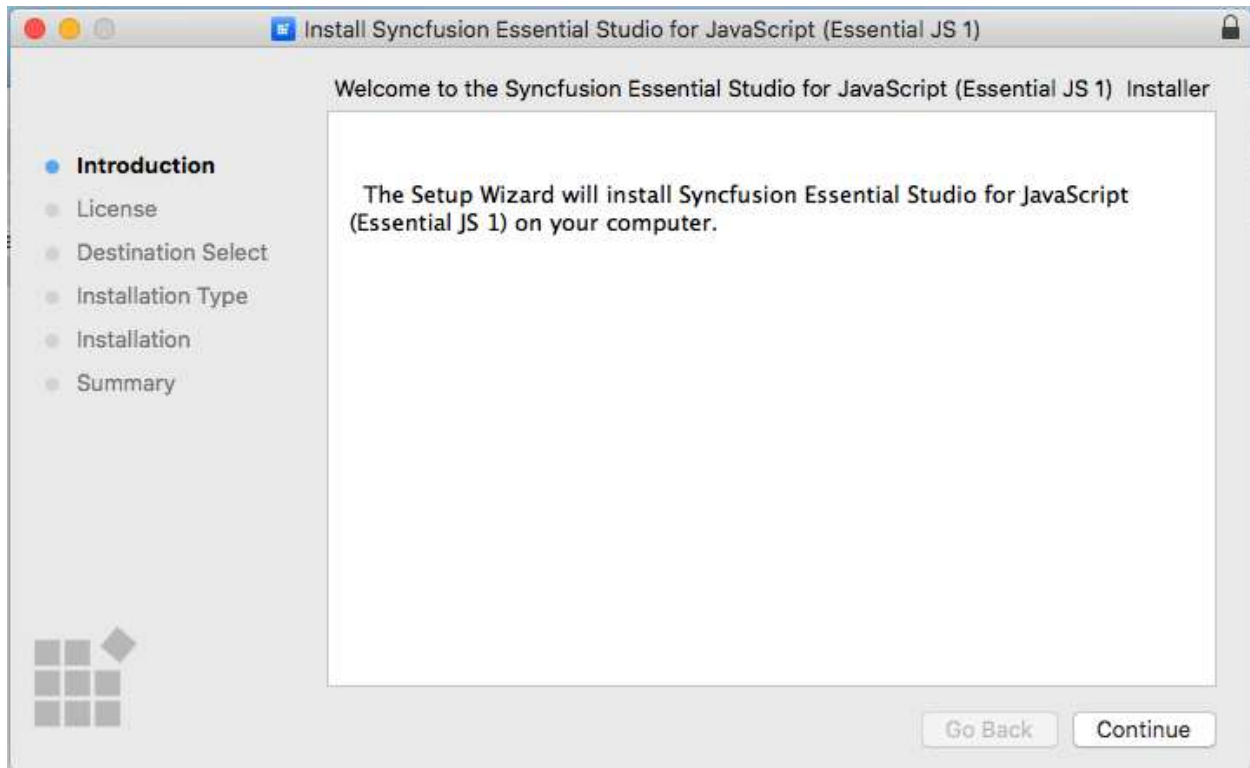
JavaScript - EJ 2 ⓘ

[Release Notes](#) | [Readme](#)**.PKG 703 MB**[Checksum Value](#)

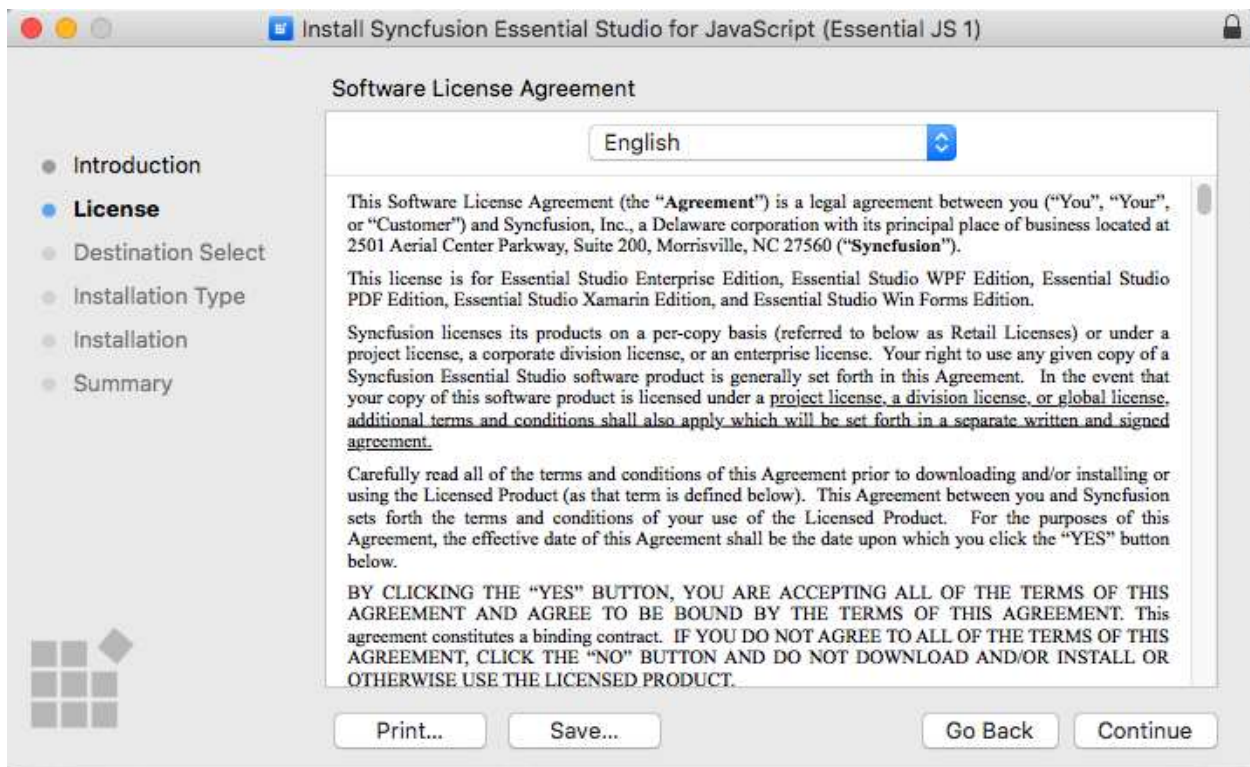
Step-by-Step Installation

The following procedure illustrates how to install Essential Studio Mac installer.

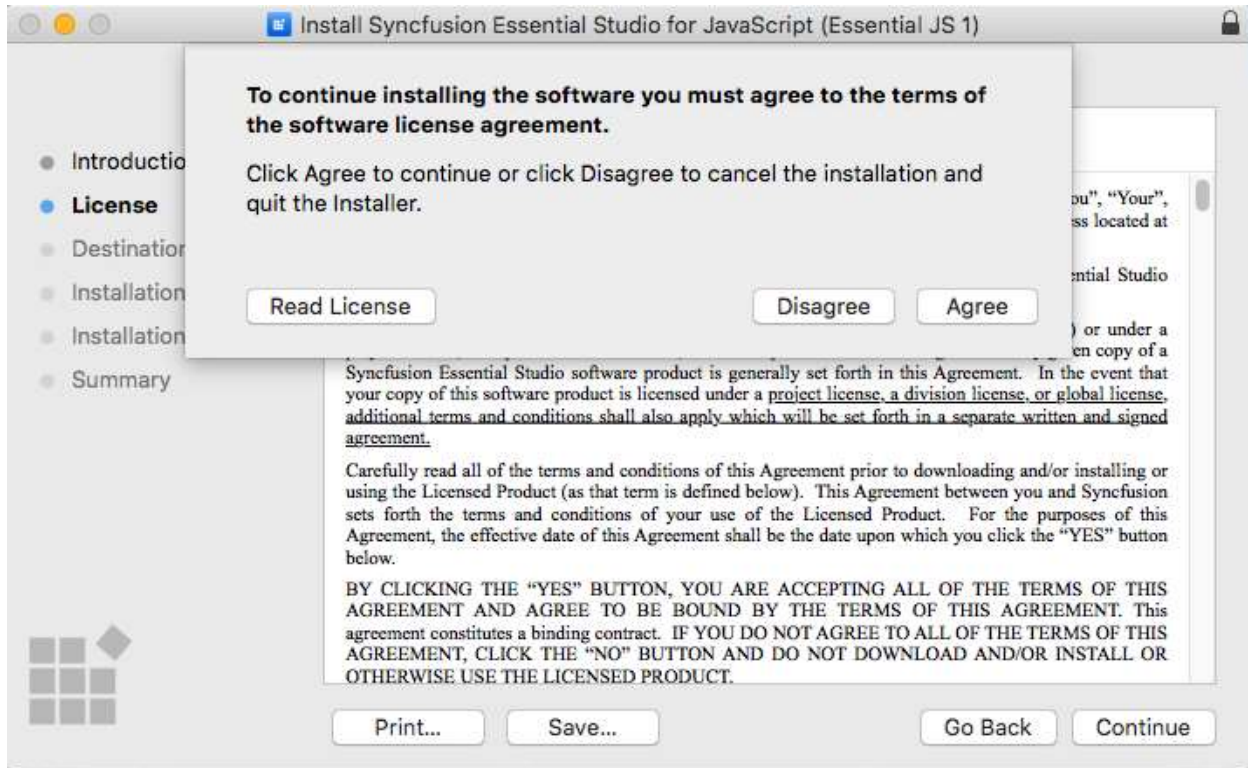
1. Double-click the Syncfusion Essential Studio Mac installer(.pkg) file. The installer Wizard opens. Click Continue.



2. Software License Agreement window opens. Click Continue.

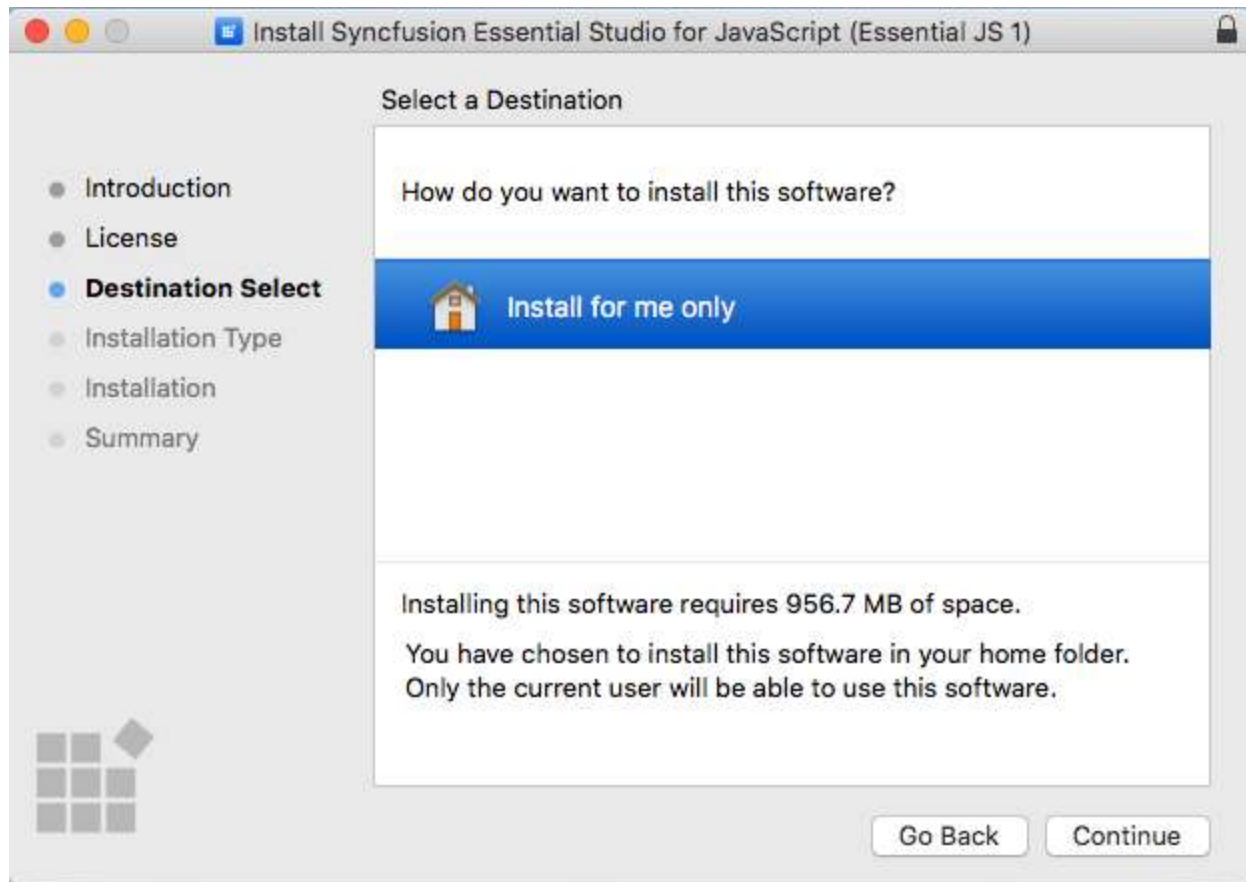


3. Confirmation window will be displayed for the License Agreement. Click **Agree**.

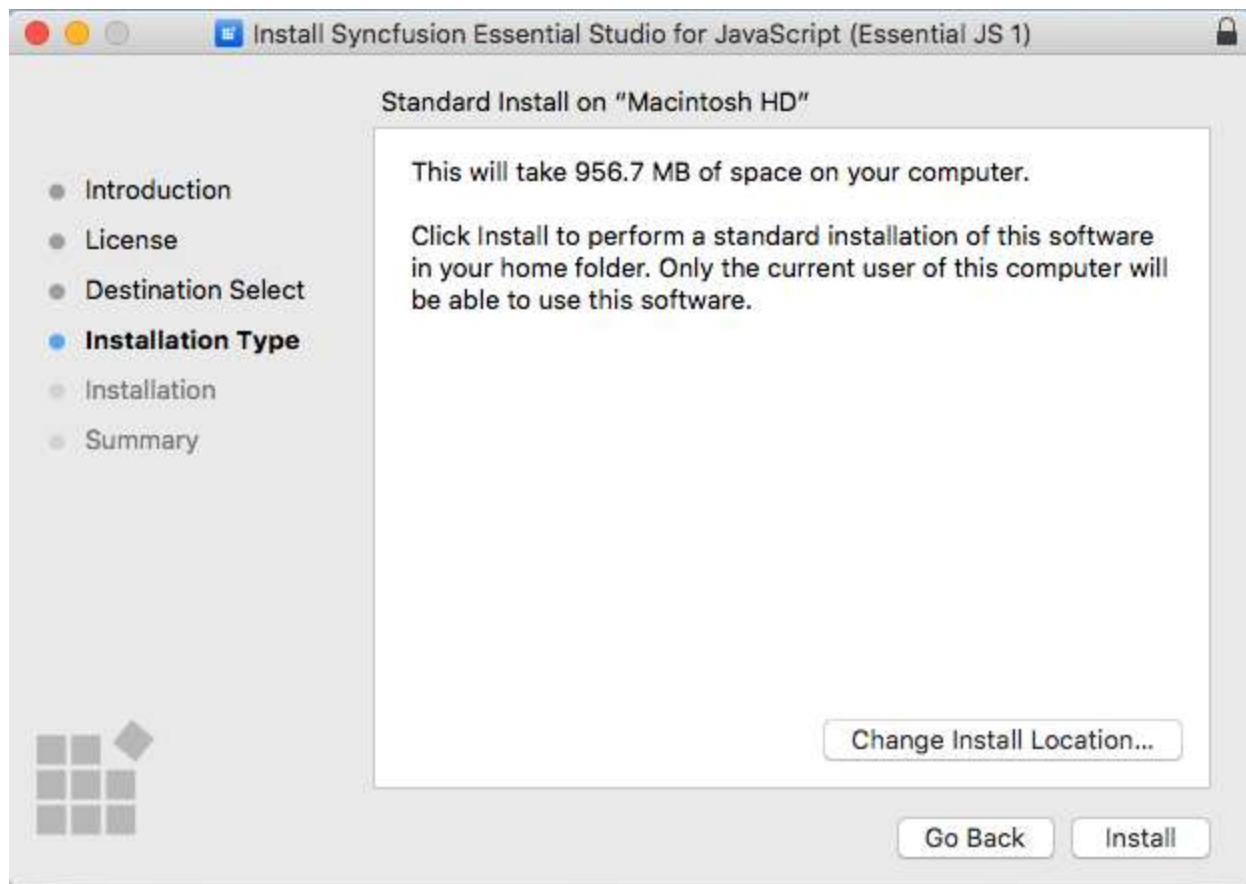


Note: Unlock key is not required for installing the Mac installer. Syncfusion Mac installer can be used for developing purposes without registering the Unlock key.

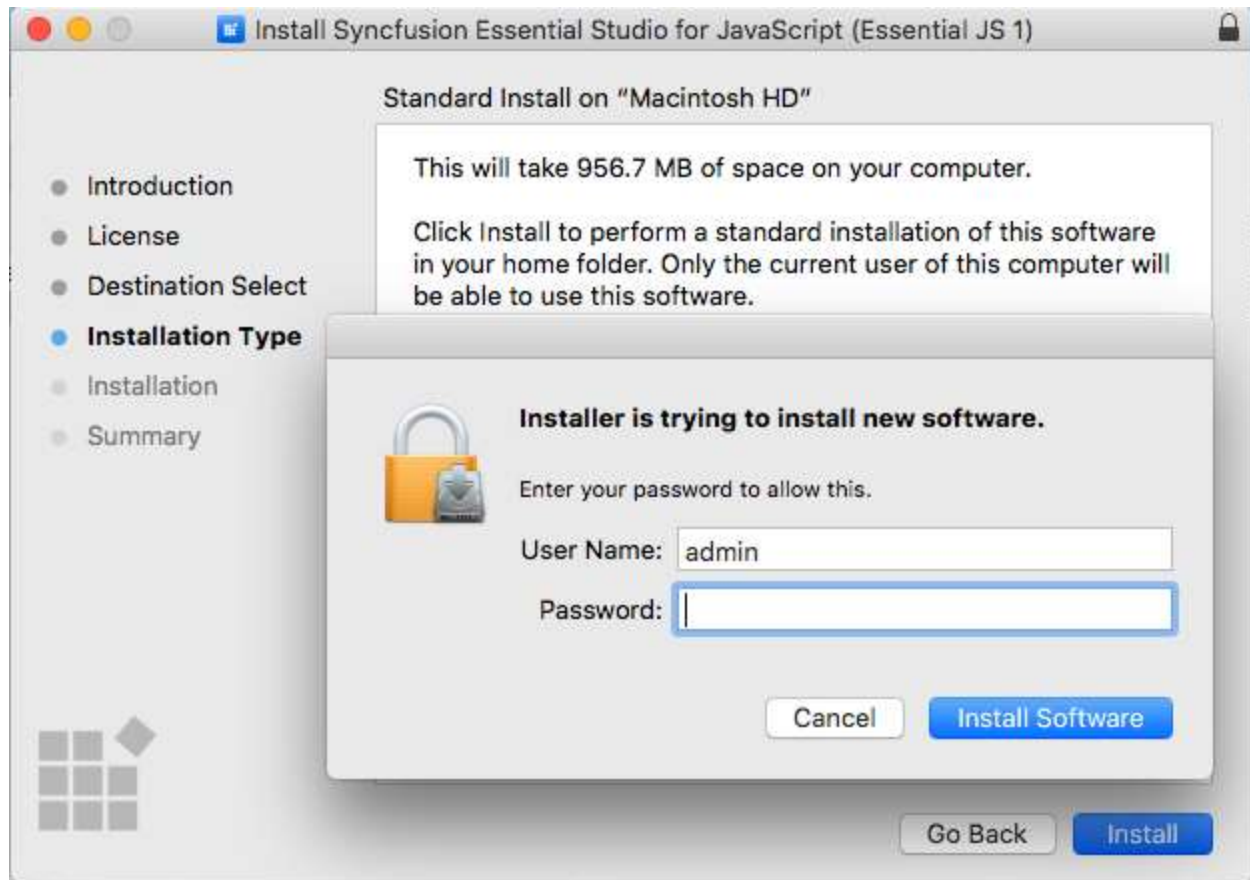
4. Destination Select windows opens. Click Continue.



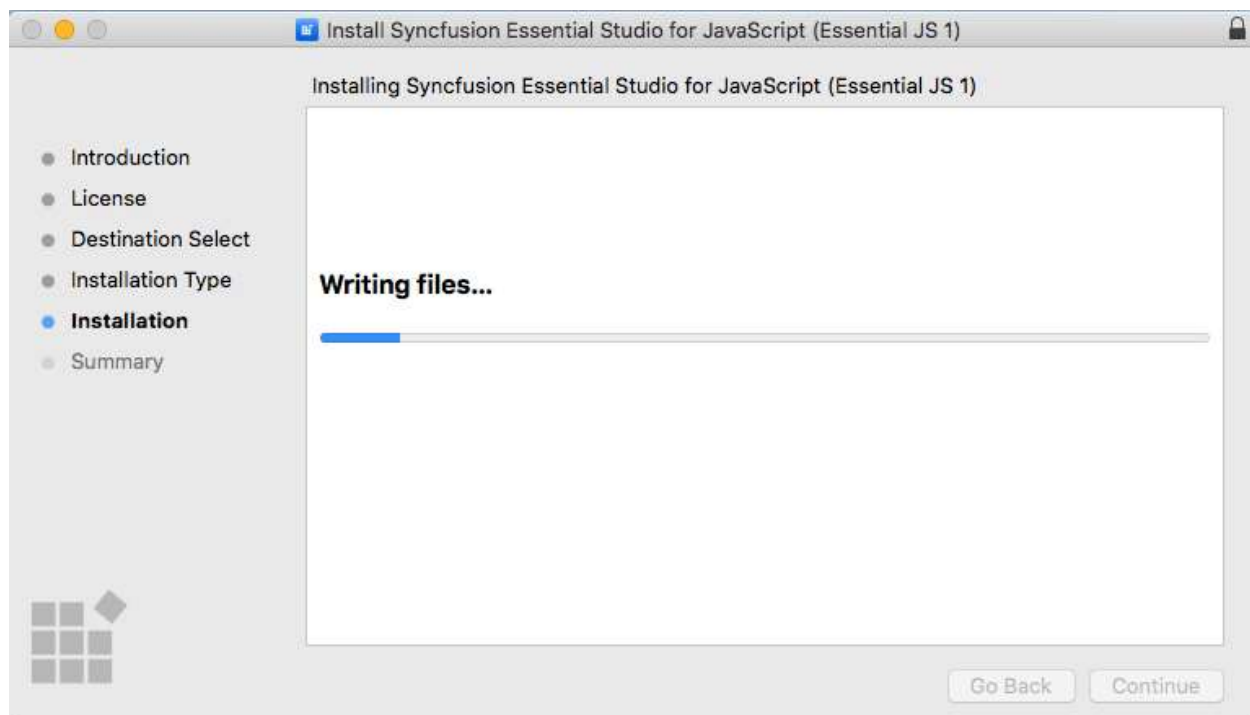
5. Installation Type window opens. Click Install.



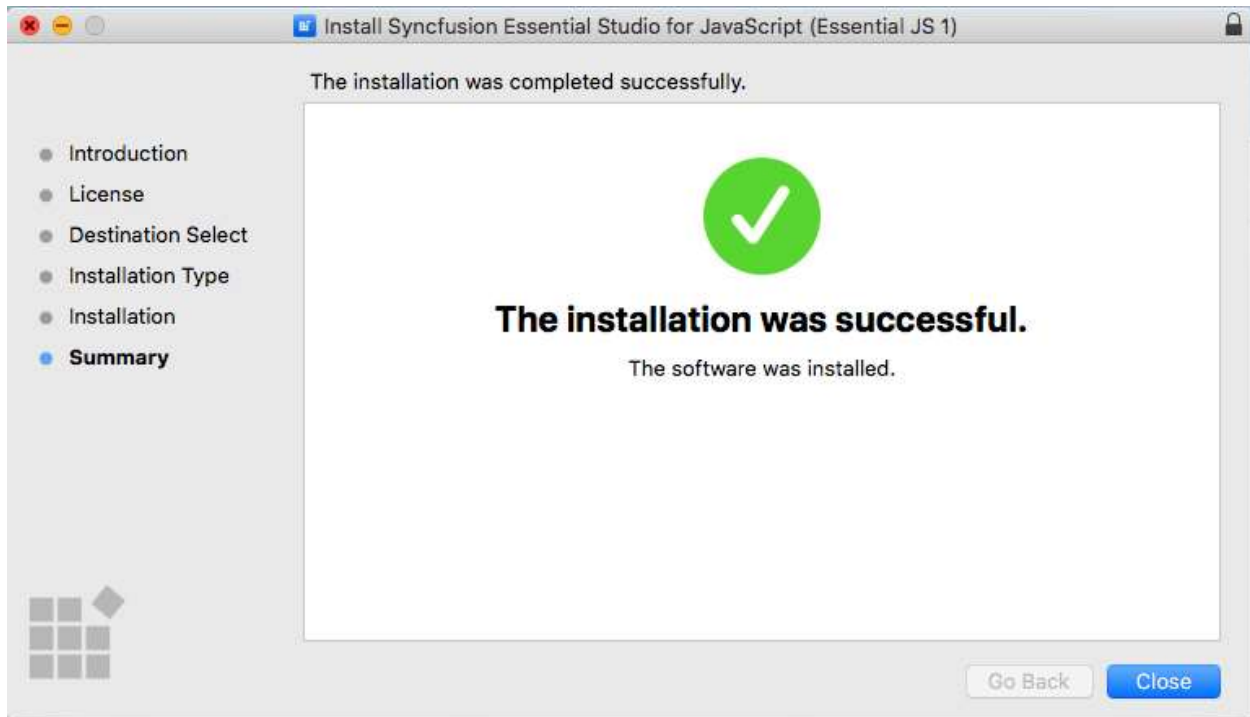
6. Authentication window opens. Provide your system's user name, password and click **Install Software**



7. Installation will be started in your machine.

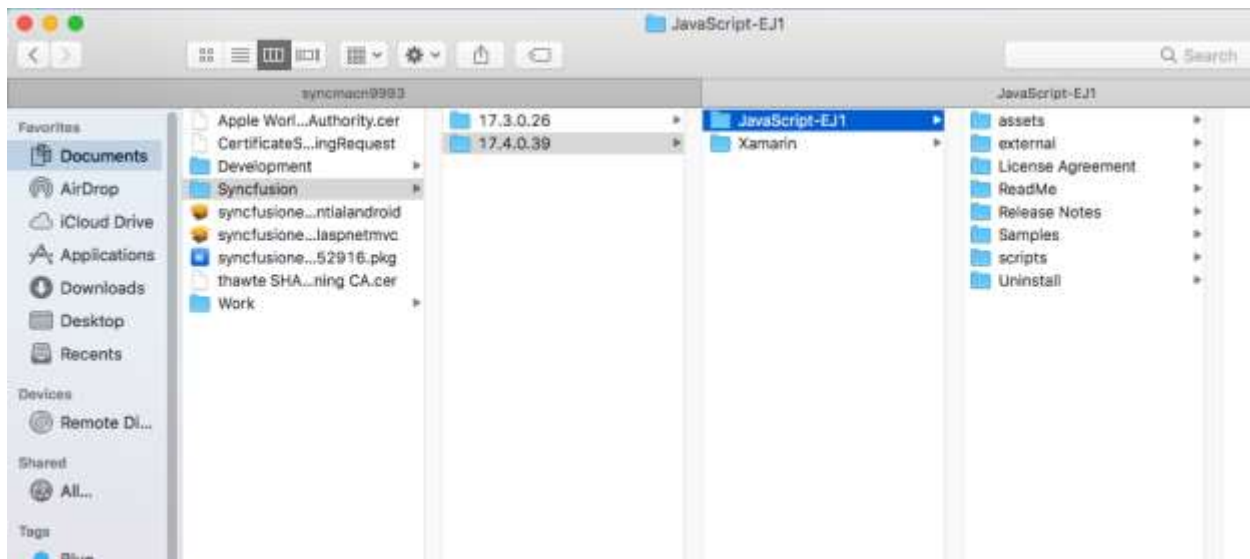


- Completed screen will be displayed once the installation is finished. Click Close to exit the installation wizard.



By default, Mac installer will install the files in following location.

Location: {Documents}\Syncfusion\ {version}\ {platform}



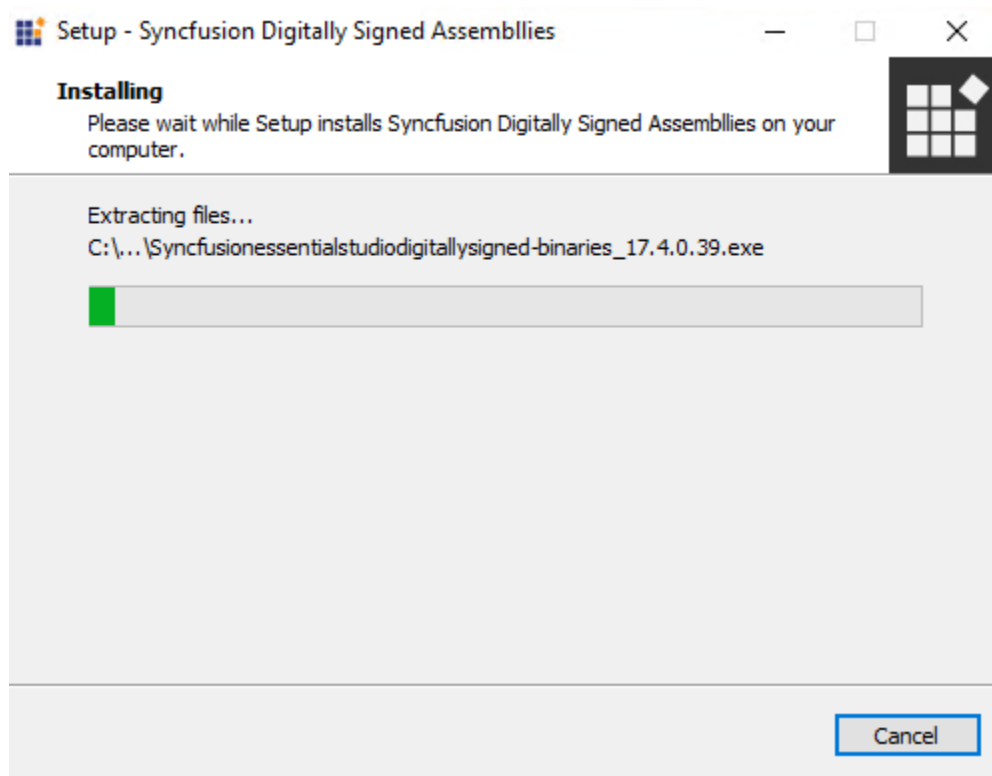
Essential Studio - Digitally Signed Binaries

Syncfusion provides Digitally Signed Binaries installer. It signs the Syncfusion assemblies with a .pfx file. For information, see [Digitally Signed Binaries](#).

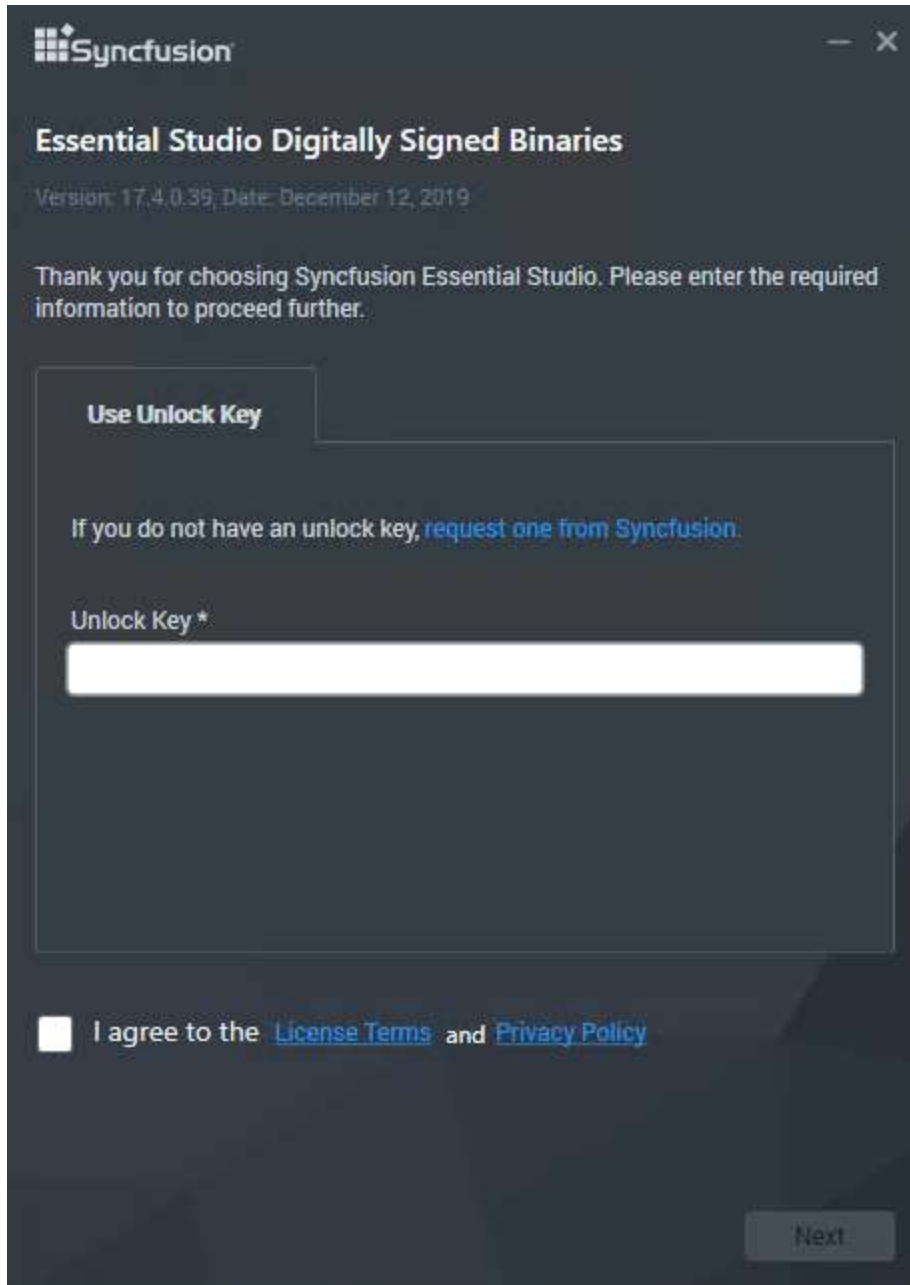
Information: Essential Studio Digitally Signed Binaries can be installed only by the customers who holds the valid license

The following steps illustrate how to install Digitally Signed Binaries installer.

1. Double-click the Syncfusion Digitally Signed Binaries installer file. The installer Wizard opens and extracts the package automatically.

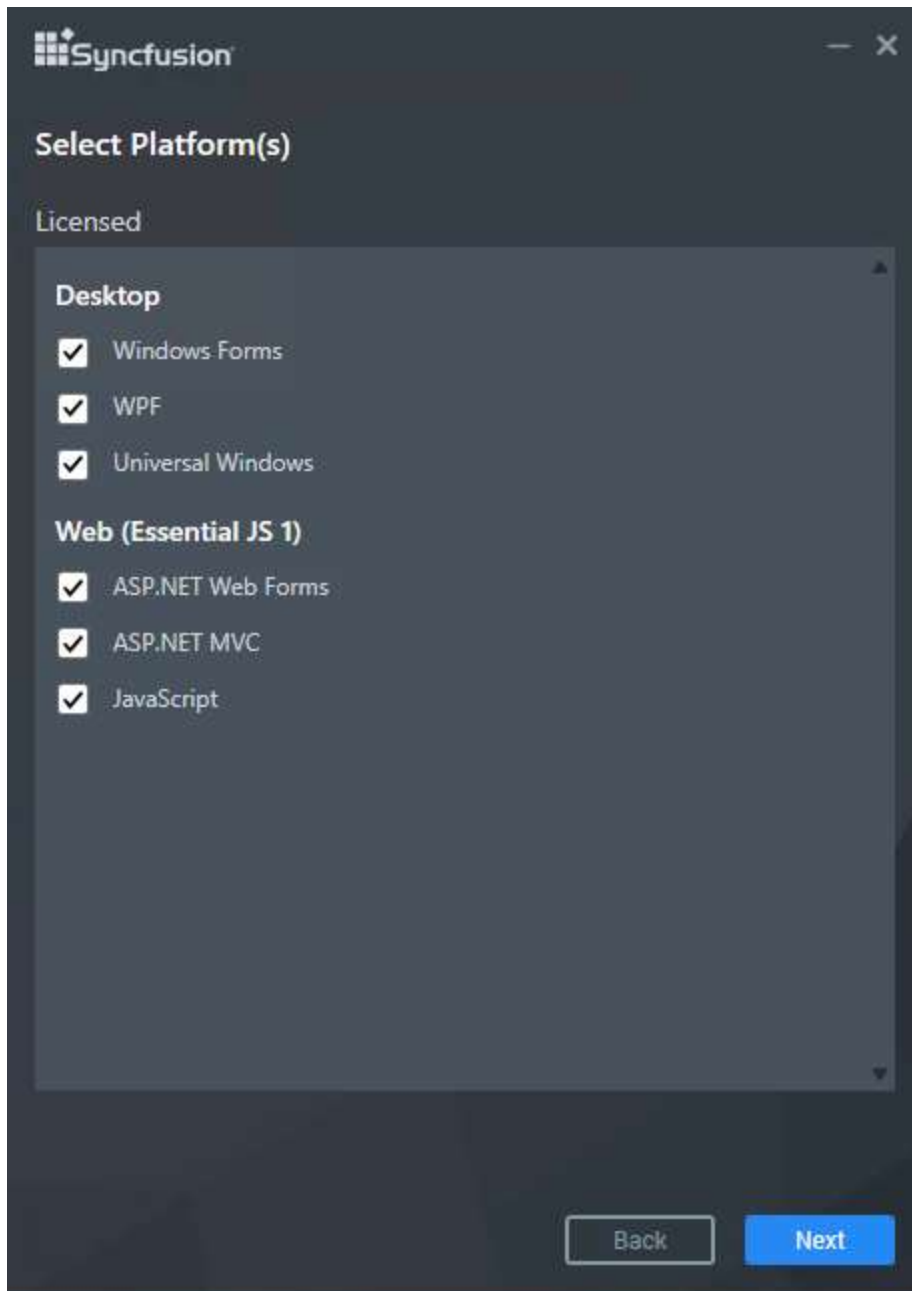


2. Once the unzip operation is complete, the License registration screen opens.



The screenshot shows a dark-themed installation window for Syncfusion Essential Studio. At the top left is the Syncfusion logo. The title bar says 'Essential Studio Digitally Signed Binaries'. Below the title, it says 'Version: 17.4.0.39, Date: December 12, 2019'. A message reads: 'Thank you for choosing Syncfusion Essential Studio. Please enter the required information to proceed further.' There are two tabs: 'Use Unlock Key' (selected) and another unlabeled tab. Under the 'Use Unlock Key' tab, there is a text input field labeled 'Unlock Key *'. Below the input field, there is a checkbox labeled 'I agree to the [License Terms](#) and [Privacy Policy](#)'. At the bottom right, there is a 'Next' button.

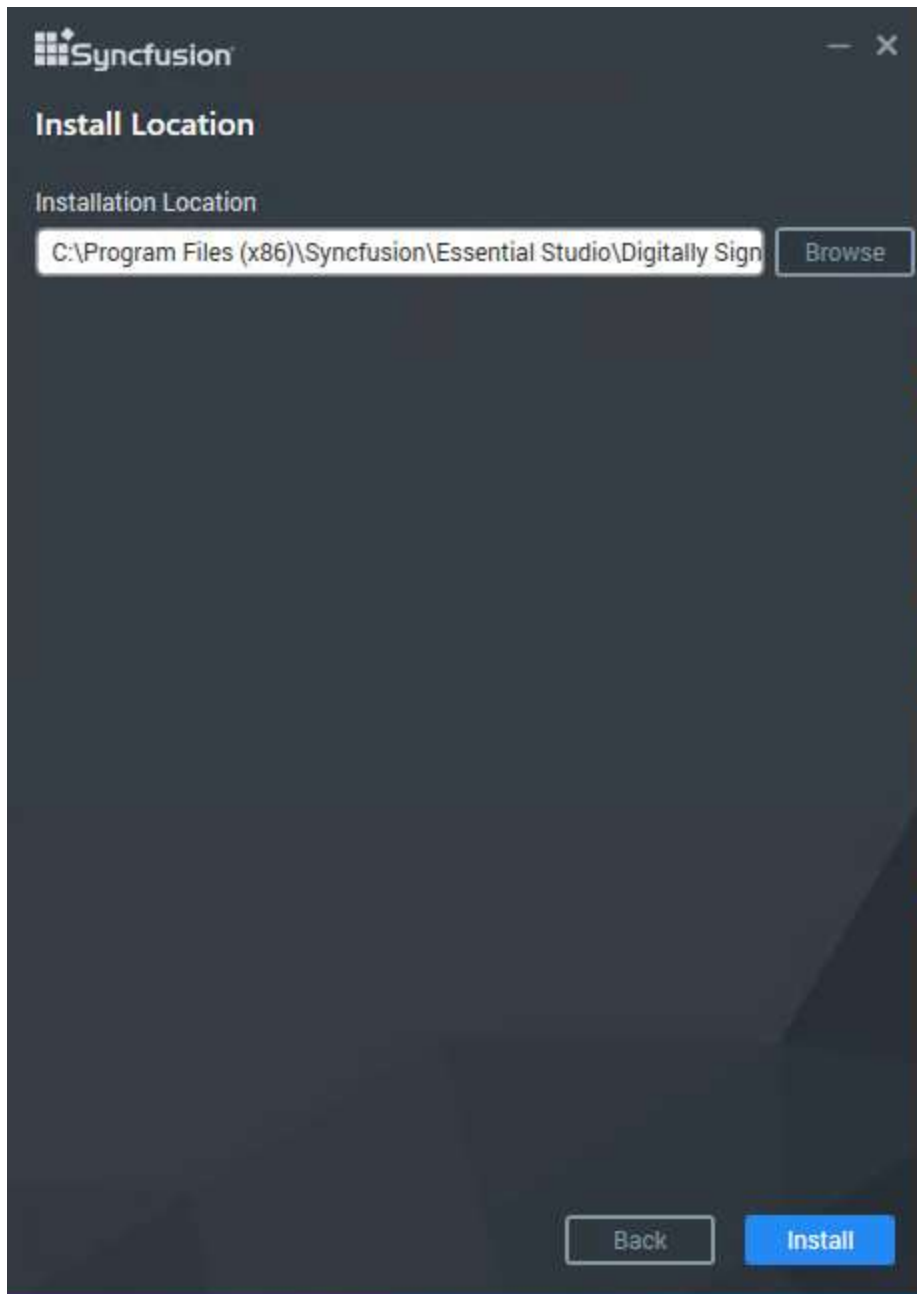
3. Enter the Unlock Key in the corresponding text box provided and select the **I agree to the License Terms and Conditions** check box after reading the License Agreement.
4. Click Next. The Select Platform screen opens. Select the required platforms to install the assemblies and click Next.



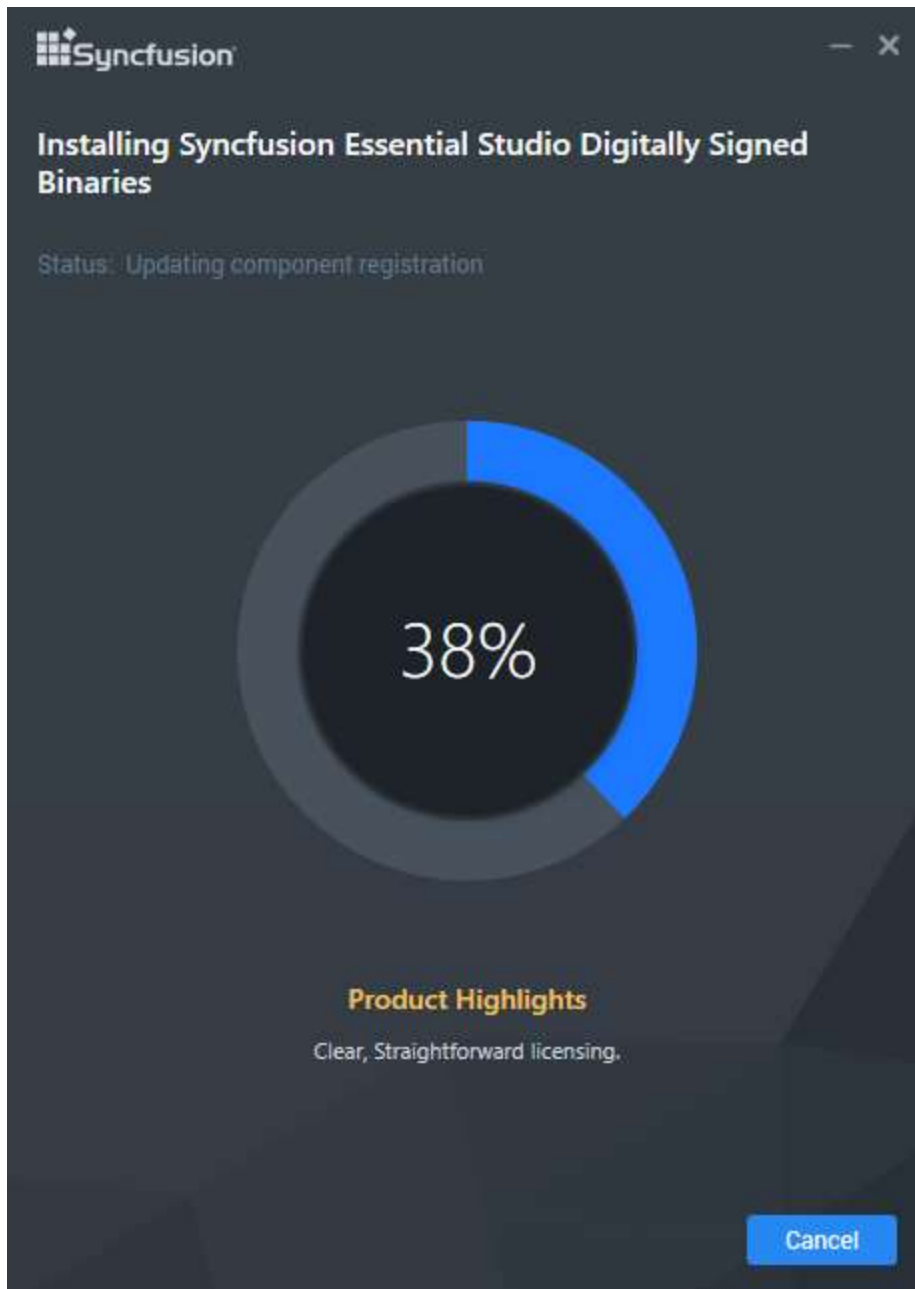
5. The Installation Location screen opens.

Note: Click Browse to choose a location for installing the Essential Studio Binaries.

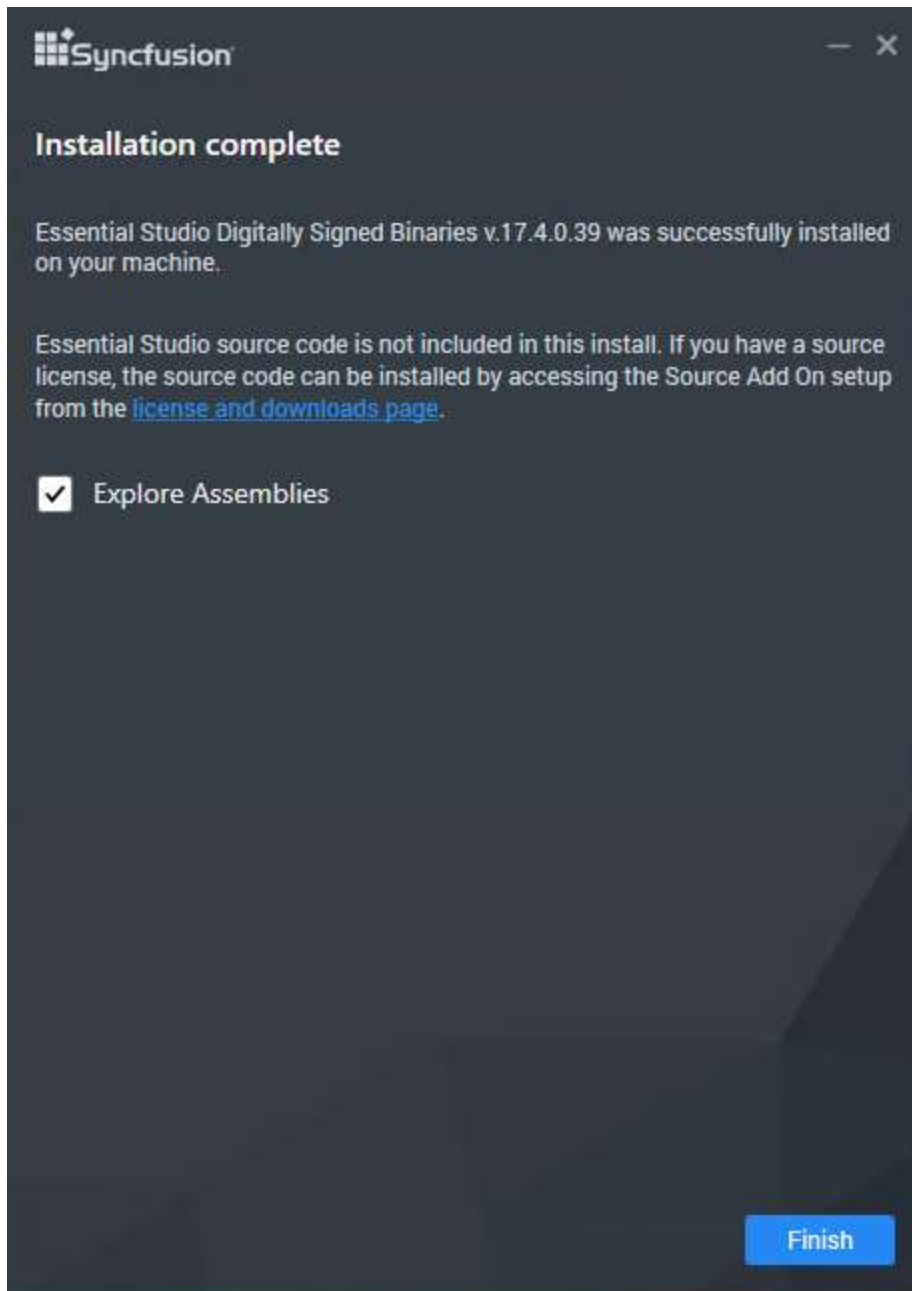
6. To install in the displayed default location, click Next.



7. Digitally Signed Binaries installation will be started.



Note: The Completed screen is displayed once the selected package is installed.



8. Select the **Run Syncfusion Control Panel** check box to launch the Syncfusion Control Panel after installing. Click Finish to exit the installer Wizard. Digitally Signed Binaries will be installed.

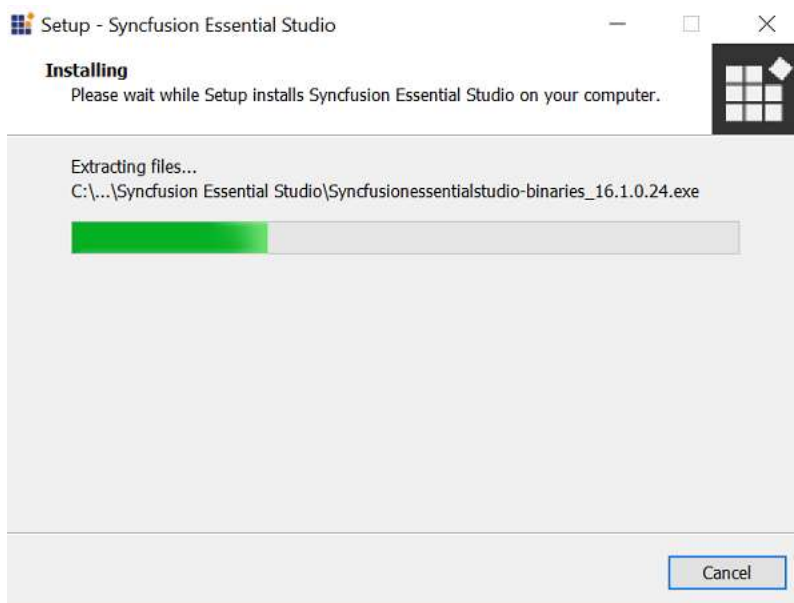
[Essential Studio Enterprise - Binaries](#)

Syncfusion provides the Essential Studio - Binaries installer to configure the Syncfusion controls in a build machine, in which Syncfusion Essential Studio is not installed. This installs Essential Studio assemblies into the target folder. For information, see [Essential Studio - Binaries](#).

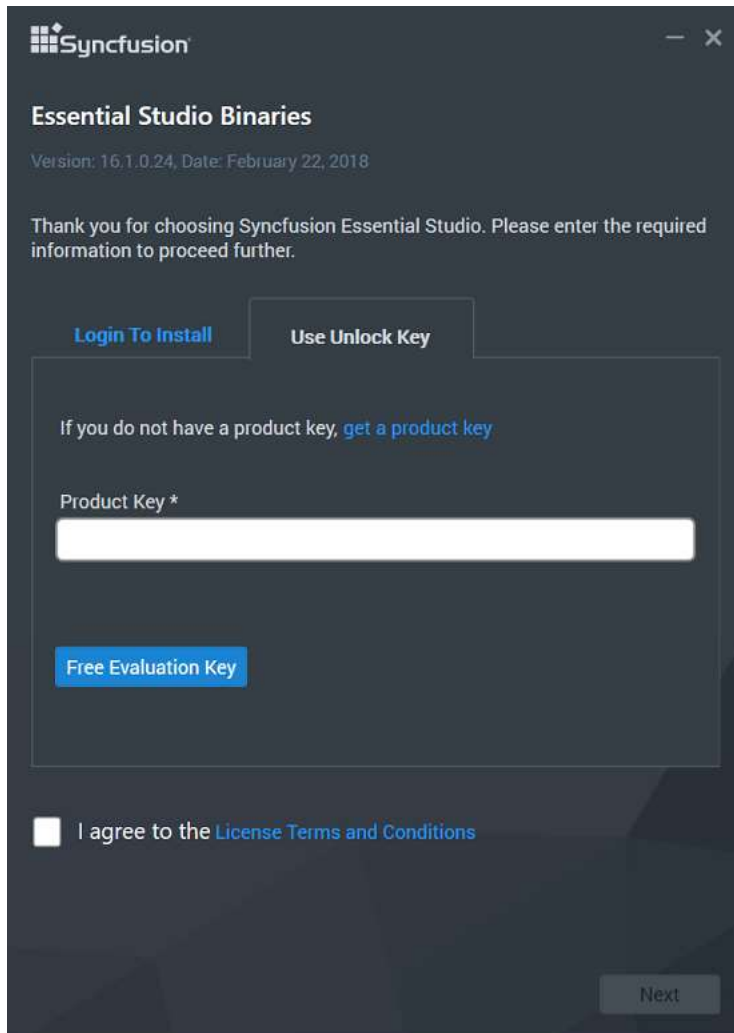
Information: Syncfusion has stopped providing the Essential Studio - Binaries installer from 2018 Volume 2 release. However, you can download and install the previous versions.

The following procedure illustrates how to install Essential Studio - Binaries installer.

1. Double-click the Syncfusion Essential Studio - Binaries installer file. The installer Wizard opens and extracts the package automatically.

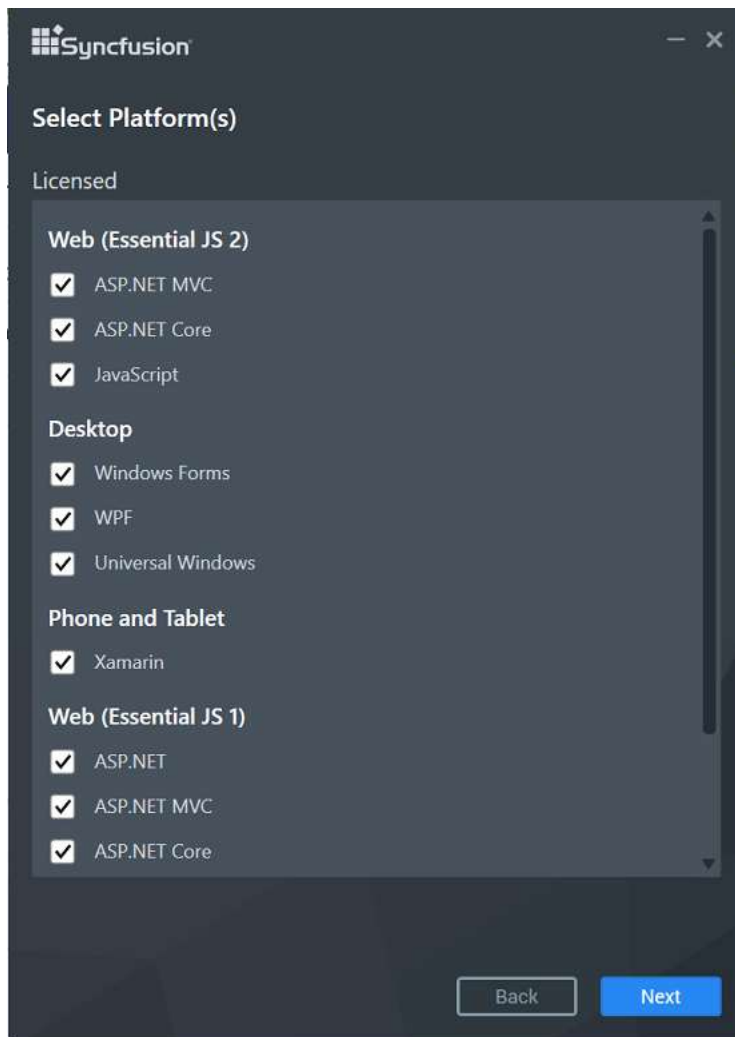


2. Once the unzip operation is complete, the License registration screen opens.



The screenshot shows the 'Essential Studio Binaries' installation window. At the top left is the Syncfusion logo. The title bar says 'Essential Studio Binaries'. Below the title, it says 'Version: 16.1.0.24, Date: February 22, 2018'. A message reads: 'Thank you for choosing Syncfusion Essential Studio. Please enter the required information to proceed further.' There are two tabs: 'Login To Install' (selected) and 'Use Unlock Key'. Under the 'Login To Install' tab, there is a text input field labeled 'Product Key *'. Below the input field is a button labeled 'Free Evaluation Key'. At the bottom, there is a checkbox labeled 'I agree to the License Terms and Conditions'. A 'Next' button is located at the bottom right.

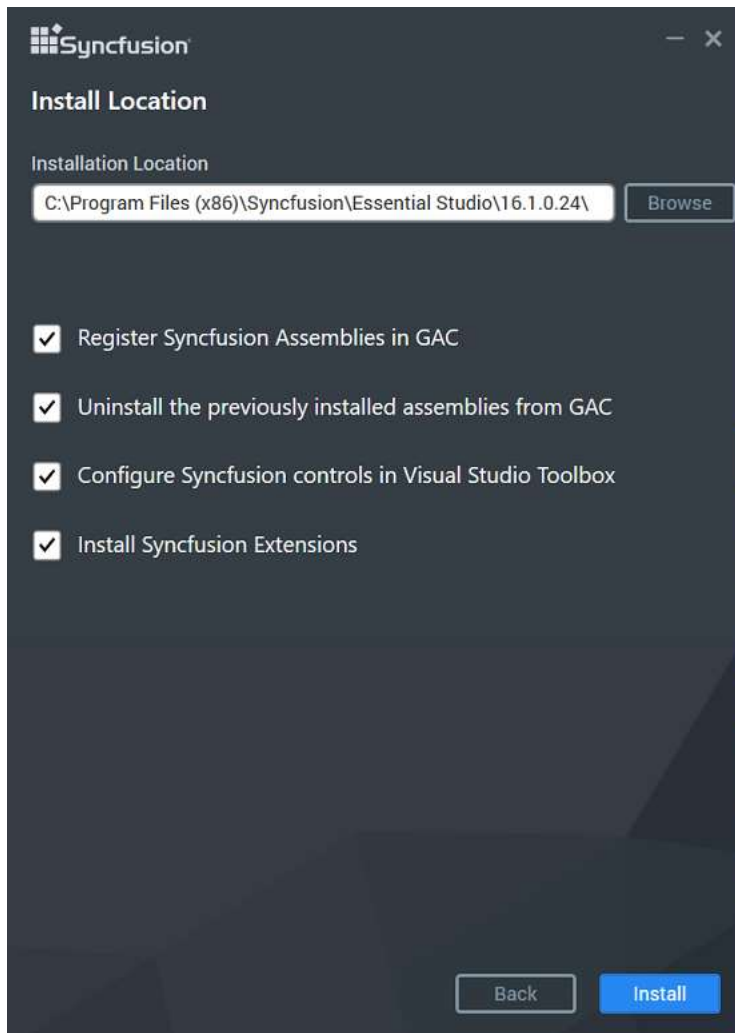
3. Enter the Unlock Key in the corresponding text box provided and select the **I agree to the License Terms and Conditions** check box after reading the License Agreement.
4. Click Next. The Select Platform screen opens. Select the required platforms to install the assemblies and click Next.



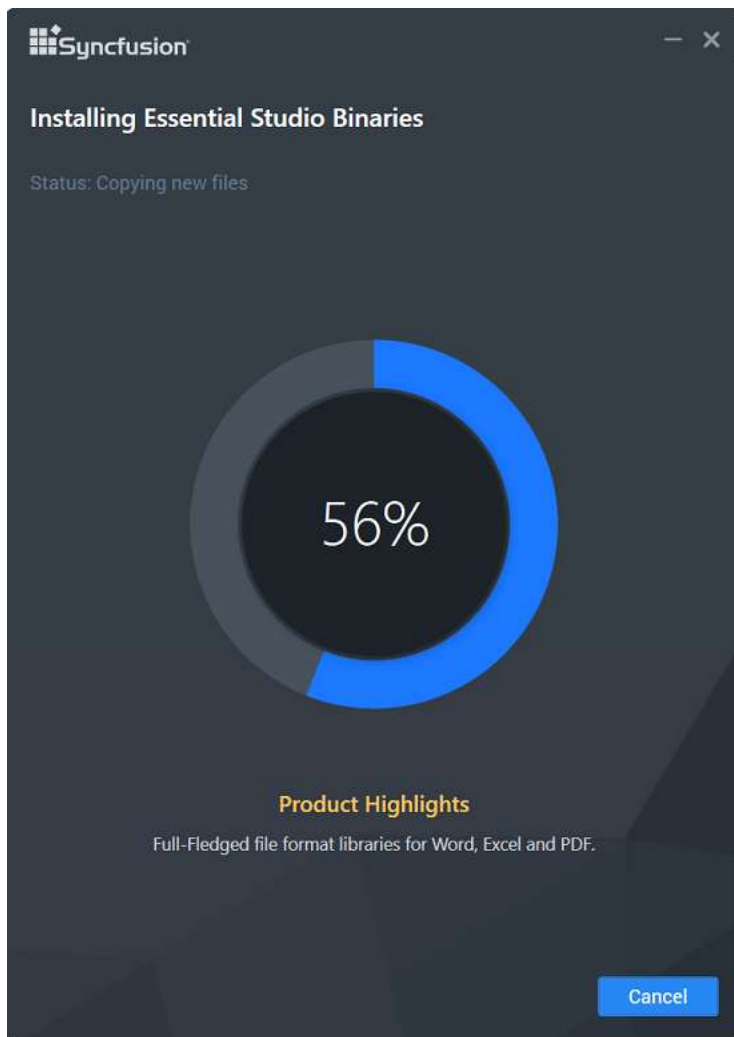
5. The Installation Location screen opens.

Note: Click Browse to choose a location for installing the Essential Studio assemblies.

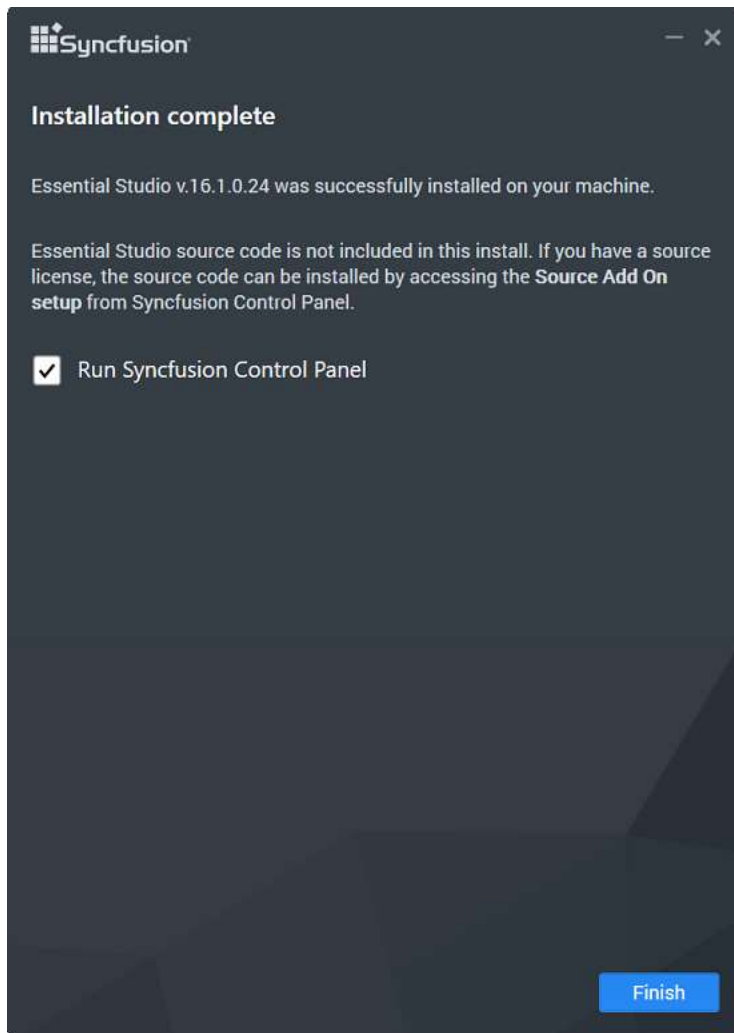
6. To install in the displayed default location, click Next.



7. Essential Studio - Binaries installation will be started.



Note: The Completed screen is displayed once the selected package is installed.



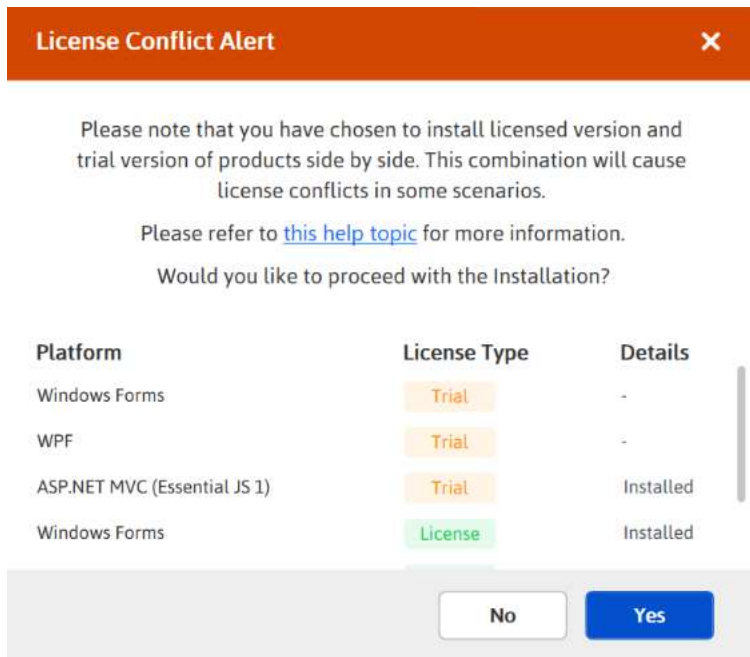
8. Select the **Run Syncfusion Control Panel** check box to launch the Syncfusion Control Panel after installing. Click Finish to exit the installer Wizard. Essential Studio - Binaries installer is installed in your machine.

How to install the Trial and Licensed installer side by side safely?

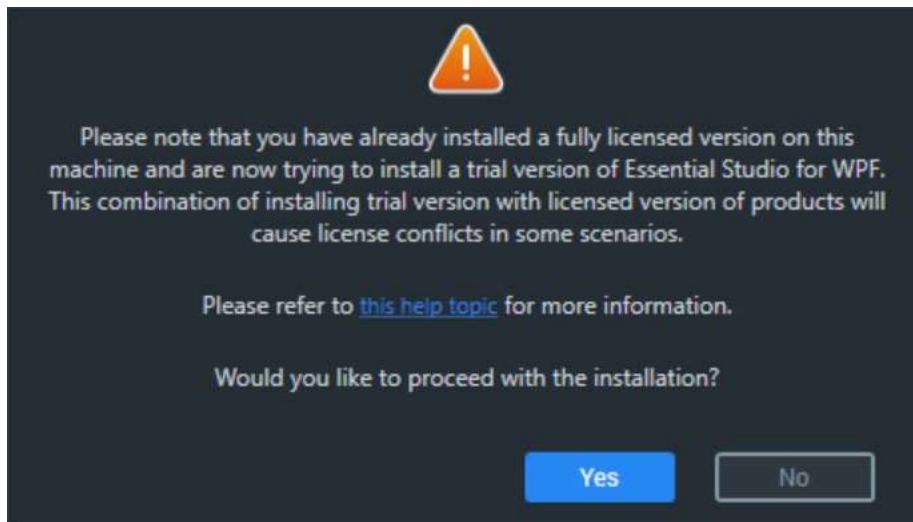
You can install both Licensed and Trial installer side by side for different Essential Studio platforms. The following alert message will be shown if you install the combination of License and Trial platform installer. However, you can continue the installation. The alert message will be shown for the following platforms.

- ASP.NET Web Forms
- ASP.NET MVC
- JavaScript
- Windows Forms
- WPF
- File Formats

Online Installer

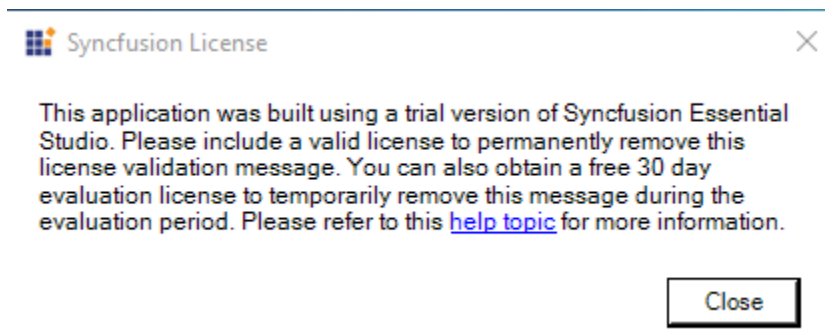


Offline Installer



Problem

If you install Licensed and Trial installer in the same machine, licensing issues will occur while development and the following licensing alert will be shown.



Reason

Assemblies will conflict as both Licensed and Trial assemblies will be present in GAC.

Suggested solution

Run the [Assembly Manager](#) for the licensed platform you are using for development to avoid licensing issues while running samples and using Syncfusion controls.

Installation Errors

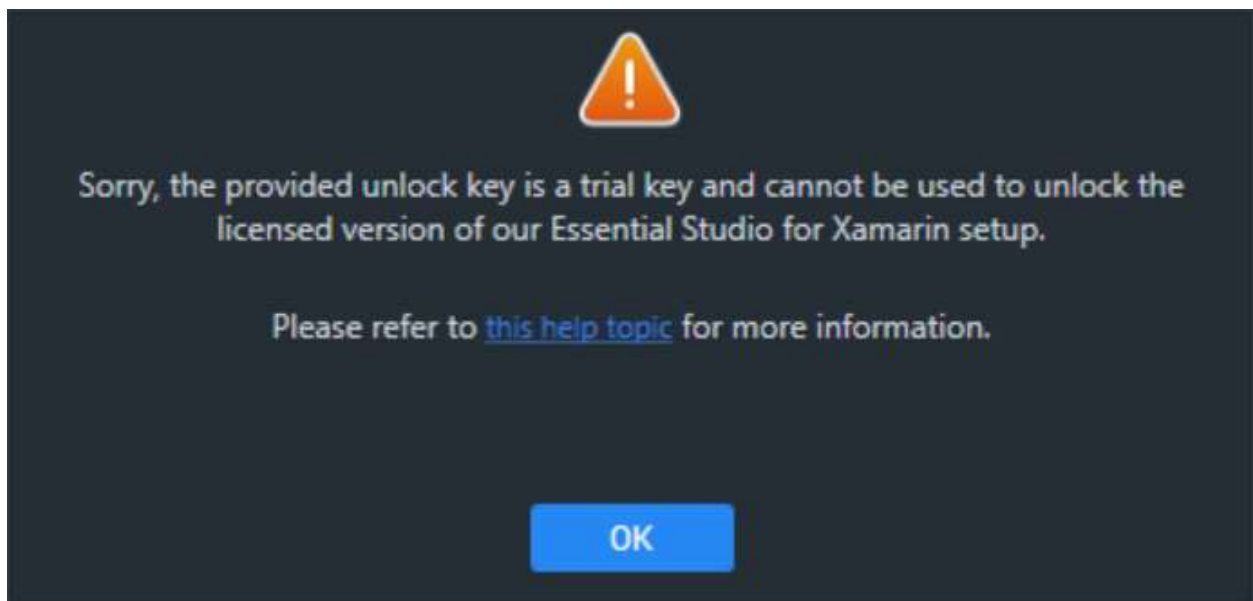
This article lists the common Installation errors, reasons and solution for those errors.

- [Could not unlock Licensed installer with Trial key?](#)
- [Licensed Expired! What to do?](#)
- [Not a Valid license holder?](#)
- [Unable to find a license or trial?](#)
- [Could not install due to another installation?](#)
- [Could not install due to controlled folder access?](#)

Could not unlock Licensed installer with Trial key?

Problem

Error Message: Sorry, the provided unlock key is a trial key and cannot be used to unlock the licensed version of our Essential Studio for {platform} installer



Reason

You are trying to unlock the licensed installer with a Trial key.

Suggested solution

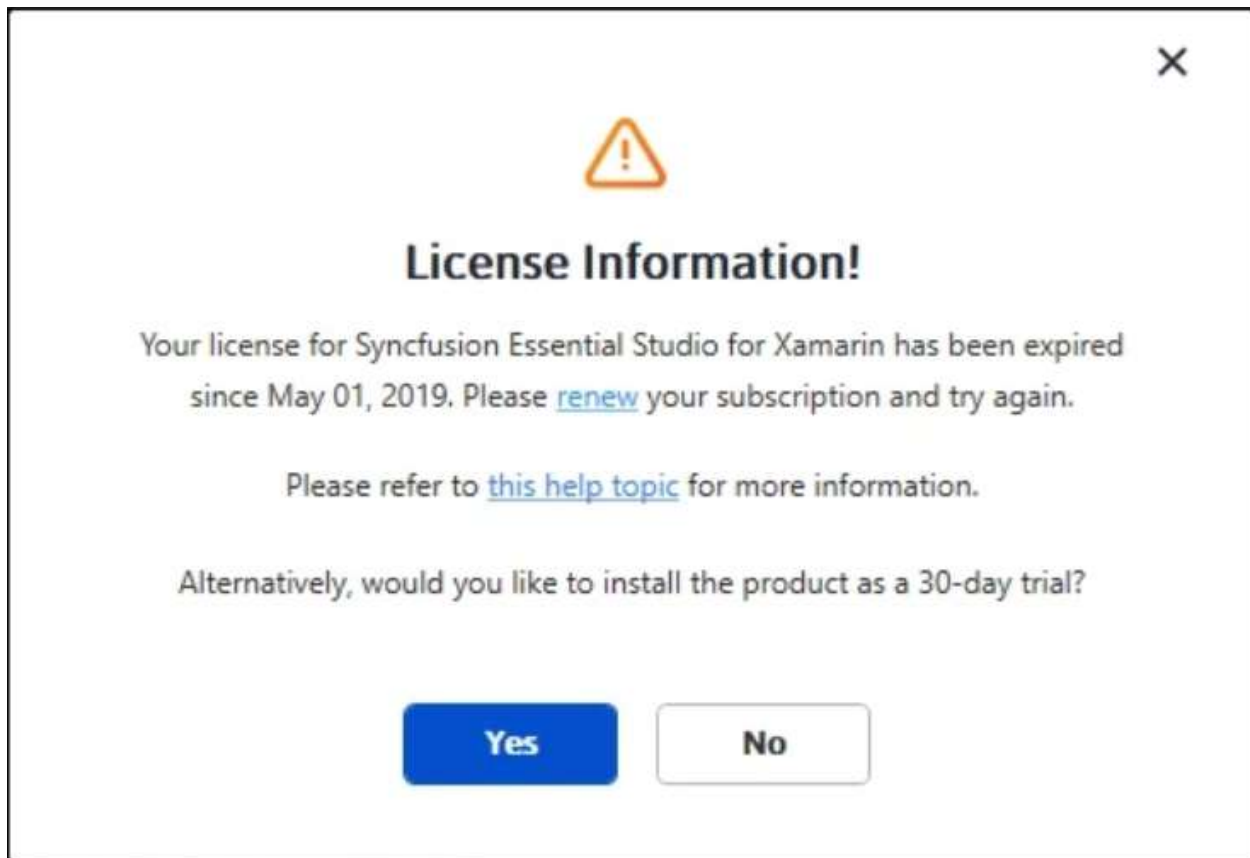
Licensed installer can be unlocked only by License key. So, use the License key to unlock the Licensed installer. Refer [this](#) topic to generate the license key.

Licensed Expired! What to do?

Problem

Error Message: Your license for Syncfusion Essential Studio for {platform} has been expired since {date}. Please renew your subscription and try again

Online Installer



Reason

This error message will be shown when your license has been expired.

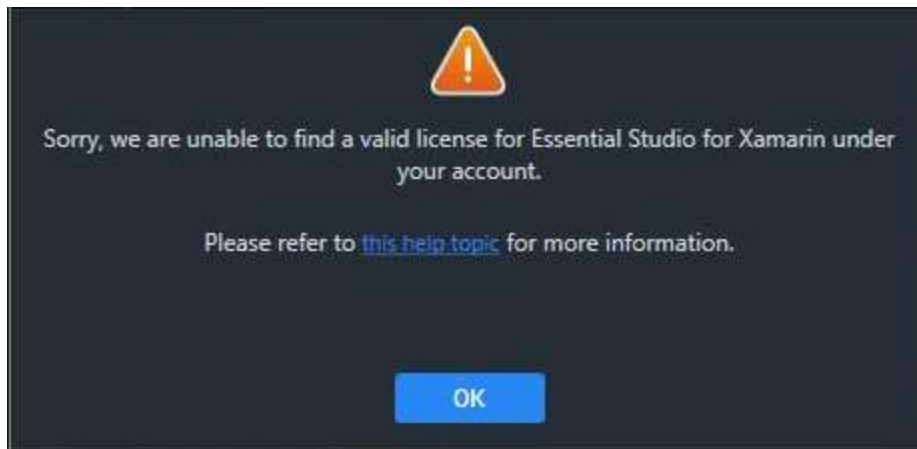
Suggested solution.

Renew the subscription [here](#) or contact our sales team at <salessupport@syncfusion.com>. Also, you can continue the 30 days trial after your license has been expired.

Not a Valid license holder?

Problem

Error Message: Sorry, we are unable to find a valid license for Essential Studio for {platform} under your account.



Reason

The possible reasons for this error are:

- When your trial expired
- When you don't have License or trial

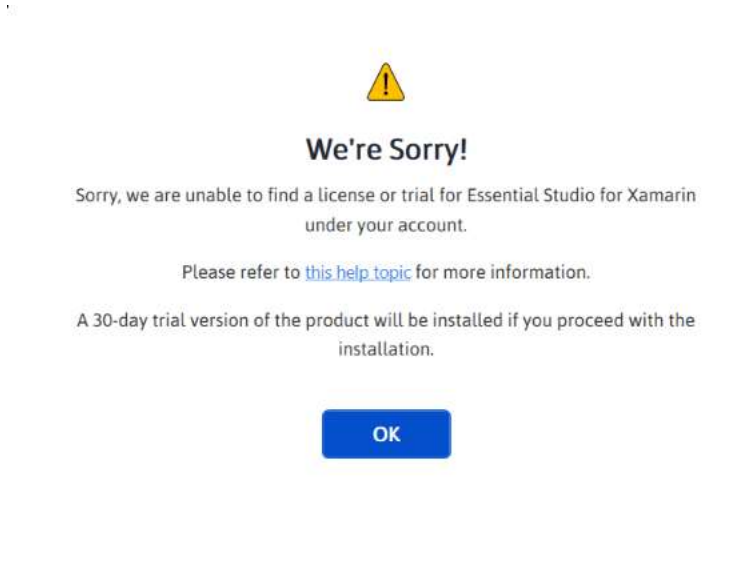
Suggested solution.

Renew the subscription [here](#) or contact our sales team at <salesupport@syncfusion.com>.

Unable to find a license or trial?

Problem

Error Message: Sorry, we are unable to find a license or trial for Essential Studio for {platform} under your account.



Reason

This is due to one of the following reasons:

- You are not the license holder of your license.

- Your account administrator has not assigned a license to your account yet. Please contact your account administrator to have a license assigned to you or contact us via email at .

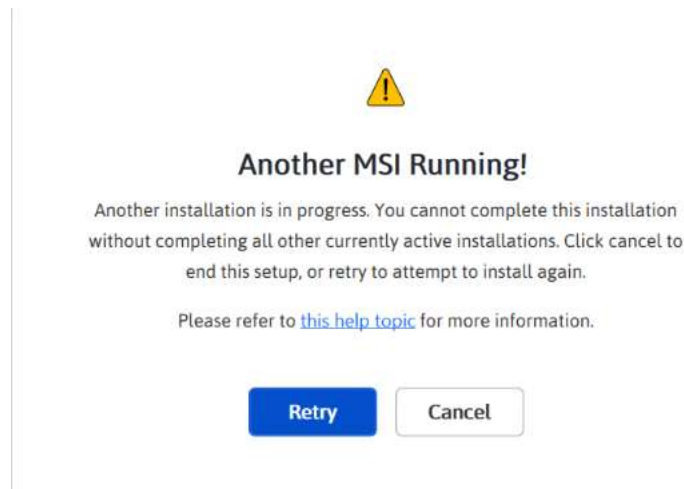
Suggested solution.

Please check your subscription [here](#) or contact our sales team at <salessupport@syncfusion.com>. Also, you can continue the 30 days trial.

Could not install the installer due to another installation?

Problem

Error Message: Another installation is in progress. You cannot complete this installation without completing all other currently active installations. Click cancel to end this installer, or retry to attempt to install again.



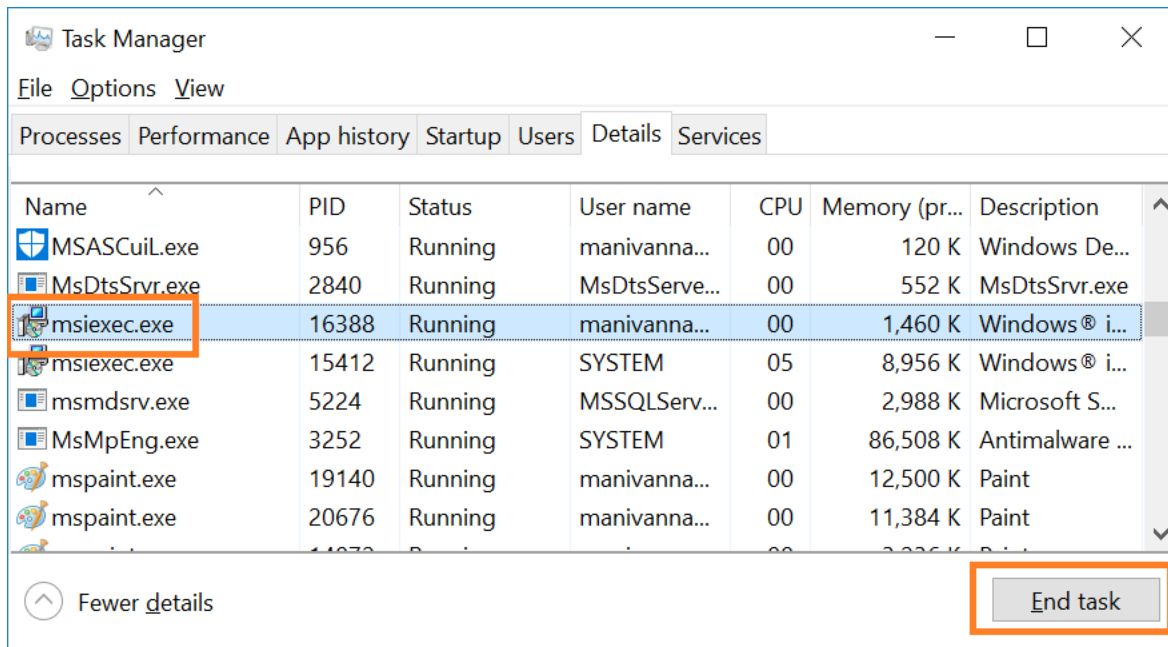
Reason

You are trying to install when another installation is already running in your machine.

Suggested solution.

Open the Task Manager and kill the msixexec process and then continue the Syncfusion installation. If still the problem persists, restart the machine and try installing Syncfusion installer.

1. Open the Windows Task Manager.
2. Navigate to the Details tab.
3. Select the msixexec.exe and click **End task**.

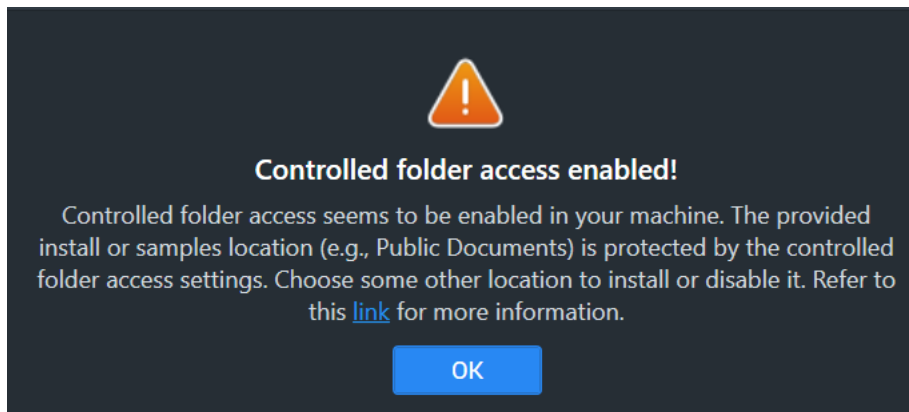


Could not install due to controlled folder access?

Problem

Offline:

Error Message: Controlled folder access seems to be enabled in your machine. The provided install or samples location (e.g., Public Documents) is protected by the controlled folder access settings.



Online:

Error Message: Controlled folder access seems to be enabled in your machine. The provided install, samples, or download location (e.g., Public Documents) is protected by the controlled folder access settings.



Controlled folder access enabled!

Controlled folder access seems to be enabled in your machine. The provided install, samples, or download location (e.g., Public Documents) is protected by the controlled folder access settings. Choose some other location to install or disable it. Refer to this [link](#) for more information.

OK

Reason

Controlled folder access settings has been enabled in your machine.

Suggested solution.

Choose some other location to install or disable the controlled folder access in your machine and then try installing.

Licensing

<style>

license {

font-size: .88em!important;

margin-top: 1.5em; margin-bottom: 1.5em;

background-color: #fbefca;

padding: 10px 17px 14px;

}

</style>

Syncfusion Essential Studio Licensing Overview

We have introduced a new licensing system starting with version 16.2.0.x release of Essential Studio. These changes apply to all evaluators and only to paid customers who use NuGet packages from nuget.org. Starting with v16.2.0.x, if you reference Syncfusion assemblies from evaluation installer or from the NuGet feed, you also have to include a license key in your projects. Please note that this license key is different from the installer unlock key that you might have used in the past, and needs to be separately generated from Syncfusion website. A below licensing error will show if this license key is missing,

<div id="license">

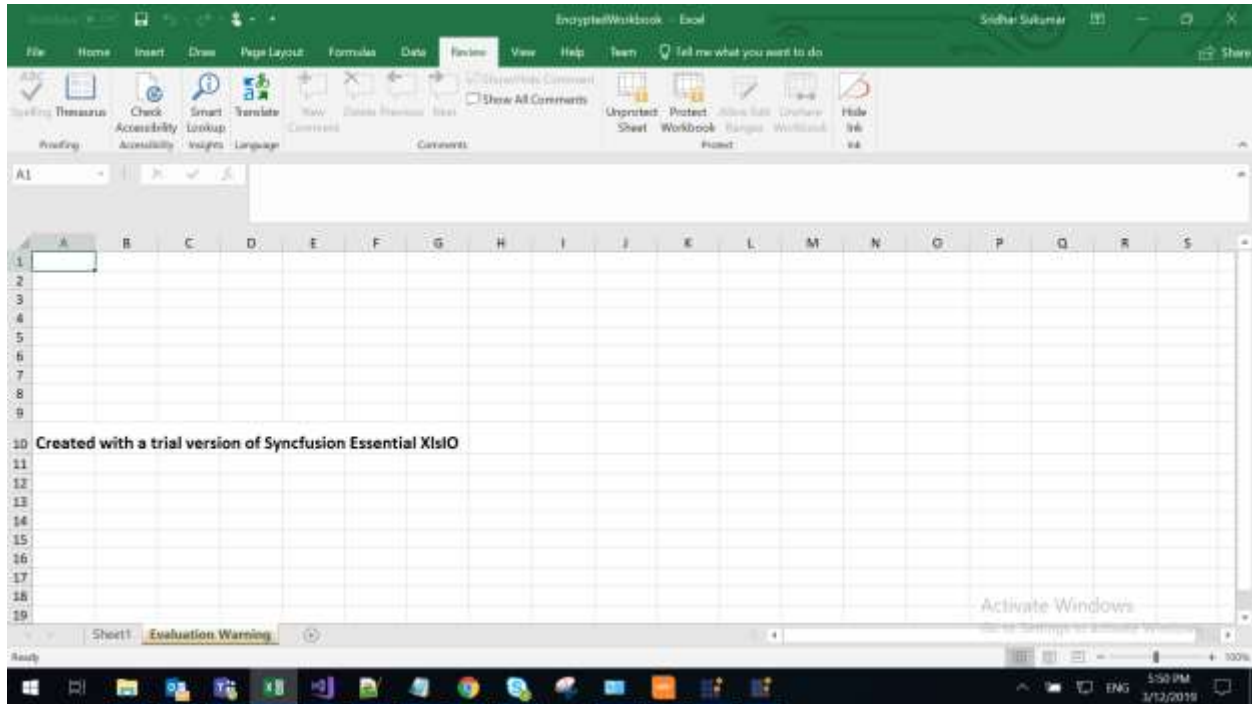
This application was built using a trial version of Syncfusion Essential Studio. Please include a valid license to permanently remove this license validation message. You can also obtain a free 30 day

evaluation license to temporarily remove this message during the evaluation period. Please refer to this [help topic](/common/essential-studio/licensing/license-key) for more information

</div>

If you are using File-Format libraries, trial message will be displayed as watermark in the generated documents.

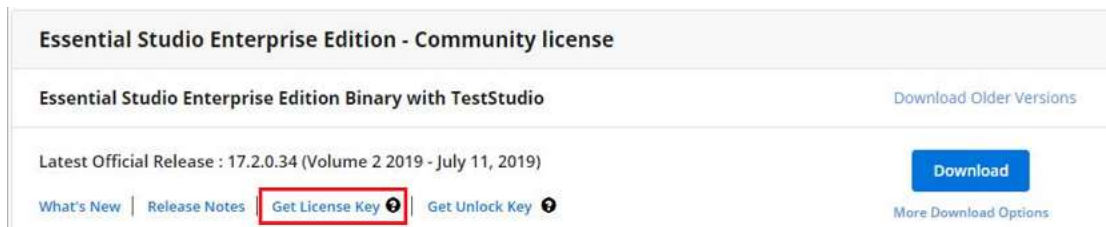
Example



Note: This licensing system is not applicable for JavaScript (Essential JS 1 & Essential JS 2) script files (.js files). So, there is no need to apply license key anywhere in scripts or themes.

How to generate Syncfusion license key

License keys can be generated from the [License & Downloads](#) or [Trail & Downloads](#) section of the Syncfusion website.



As Syncfusion license key is **version and platform specific**, kindly follow the [KB](#) to generate the license key for required version and platform. Also, refer to the [KB](#) to know which version Syncfusion license key should use in the application.

How to register the Syncfusion license key

The generated license key is just a string that needs to be registered before any Syncfusion control is initiated. The following code is used to register the license.

C#

```
Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY");
```

Note: Place the license key between double quotes. Also, ensure that Syncfusion.Licensing.dll is referenced in your project where the license key is being registered.

Recommended place to register the license in the various platforms (ASP.NET Core, Xamarin, etc.) is covered in the following section.

[Windows Forms](#)

Register the licensing code in static void main method before calling **Application.Run()** method in C#. In Visual Basic, register the licensing code in **Application.designer.vb** file constructor.

C#

```
static void Main()
{
    //Register Syncfusion license
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY");
    Application.EnableVisualStyles();
    Application.SetCompatibleTextRenderingDefault(false);
    Application.Run(new Form1());
}
```

VB.NET

```
Public Sub New()
    MyBase.New(Global.Microsoft.VisualBasic.ApplicationServices.AuthenticationMode.Windows)
    'Register Syncfusion License
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY")
    Me.IsSingleInstance = False
    Me.EnableVisualStyles = True
    Me.SaveMySettingsOnExit = True
    Me.ShutdownStyle =
    Global.Microsoft.VisualBasic.ApplicationServices.ShutdownMode.AfterMainFormCloses
End Sub
```

[WPF](#)

Register the license key in App constructor of **App.xaml.cs** in C#. If App constructor not available in **App.xaml.cs**, create the "App()" constructor in **App.xaml.cs** and register the license key inside the constructor. In Visual Basic, register the license code in **App.xaml.vb**.

C#

```
public partial class App : Application
{
    public App()
    {
        //Register Syncfusion license
    }
}
```

```
Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR_LICENSE_KEY");
}
```

VB.NET

```
Private Sub New()
    'Register Syncfusion License
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR_LICENSE_KEY")
End Sub
```

ASP.NET

Register the license key in Application_Start method of **Global.asax.cs/Global.asax**

C#

```
void Application_Start(object sender, EventArgs e)
{
    //Register Syncfusion license
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR_LICENSE_KEY");
    // Code that runs on application startup
    RouteConfig.RegisterRoutes(RouteTable.Routes);
    BundleConfig.RegisterBundles(BundleTable.Bundles);
}
```

VB.NET

```
Sub Application_Start(ByVal sender As Object, ByVal e As EventArgs)
    'Syncfusion Licensing Register
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR_LICENSE_KEY")
    'Code that runs on application startup
    AuthConfig.RegisterOpenAuth()
    RouteConfig.RegisterRoutes(RouteTable.Routes)
    System.Web.Http.GlobalConfiguration.Configuration.Routes.MapHttpRoute(name:=
    "DefaultApi", routeTemplate:="api/{controller}/{action}/{id}", defaults:=New
    With {.id = System.Web.Http.RouteParameter.Optional}
    })
End Sub
```

ASP.NET MVC

Register the license key in Application_Start method of **Global.asax.cs/Global.asax.vb**

C#

```
void Application_Start(object sender, EventArgs e)
{
    //Register Syncfusion license
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR_LICENSE_KEY");
    // Code that runs on application startup
    RouteConfig.RegisterRoutes(RouteTable.Routes);
}
```

```
BundleConfig.RegisterBundles(BundleTable.Bundles);
}
```

VB.NET

```
Protected Sub Application_Start()
    'Syncfusion Licensing Register
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY")
    AreaRegistration.RegisterAllAreas()
    Register(GlobalConfiguration.Configuration)
    FilterConfig.RegisterGlobalFilters(GlobalFilters.Filters)
    RouteConfig.RegisterRoutes(RouteTable.Routes)
    BundleConfig.RegisterBundles(BundleTable.Bundles)
End Sub
```

ASP.NET Core

Register the license key in Configure method of **Startup.cs**

C#

```
// This method gets called by the runtime. Use this method to configure the HTTP request pipeline.
public void Configure(IApplicationBuilder app, IHostingEnvironment env, ILoggerFactory loggerFactory)
{
    //Register Syncfusion license
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY");
    loggerFactory.AddConsole(Configuration.GetSection("Logging"));
    loggerFactory.AddDebug();
    ...
}
```

Blazor

****For Server side application****

Register the license key in Configure method of **Startup.cs**

C#

```
// This method gets called by the runtime. Use this method to configure the HTTP request pipeline.
public void Configure(IApplicationBuilder app, IWebHostEnvironment env)
{
    //Register Syncfusion license
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY");
    if (env.IsDevelopment())
    {
        app.UseDeveloperExceptionPage();
    }
    else
    {
        app.UseExceptionHandler("/Error");
    }
}
```

```
// The default HSTS value is 30 days. You may want to change this for
// production scenarios, see https://aka.ms/aspnetcore-hsts.
app.UseHsts();
}
app.UseHttpsRedirection();
app.UseStaticFiles();
app.UseRouting();
app.UseEndpoints(endpoints =>
{
    endpoints.MapBlazorHub();
    endpoints.MapFallbackToPage("/_Host");
});
}
```

****For Client side application****

Register the license key in main method of **Program.cs**

C#

```
using Syncfusion.EJ2.Blazor;
public static async Task Main(string[] args)
{
    //Register Syncfusion license
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY");
    var builder = WebAssemblyHostBuilder.CreateDefault(args);
    builder.RootComponents.Add<App>("app");
    builder.Services.AddSyncfusionBlazor();
    await builder.Build().RunAsync();
}
```

UWP

Register the license key in **App.xaml.cs** constructor before `InitializeComponent()` in C#. If App constructor not available in **App.xaml.cs**, create the "App()" constructor in **App.xaml.cs** and register the license key inside the constructor. In Visual Basic, register the licensing code in **App.xaml.vb** file before `OnLaunched` event.

C#

```
public App()
{
    //Register Syncfusion license
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY");
    this.InitializeComponent();
    this.Suspending += OnSuspending;
}
```

VB.NET

```
Public Sub New()
    'Register Syncfusion License
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY")
End Sub
```

```

Protected Overrides Sub OnLaunched(e As
Windows.ApplicationModel.Activation.LaunchActivatedEventArgs)
...
End Sub

```

Xamarin.Forms

Register the license key in **App.xaml.cs** constructor before `InitializeComponent()`. If App constructor not available in **App.xaml.cs**, create the "App()" constructor in **App.xaml.cs** and register the license key inside the constructor.

C#

```

public App()
{
    //Register Syncfusion license
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY");
    InitializeComponent();
    MainPage = new Appl.MainPage();
}

```

Note: If you are developing an application using Prism or Gorilla Player SDK, it is must to register the Syncfusion license key in Xamarin.Forms.Android, Xamarin.Forms.iOS, and Xamarin.Forms.UWP.

Refer [this link](#) to register Syncfusion license key in Xamarin.Forms.Android

Refer [this link](#) to register Syncfusion license key in Xamarin.Forms.iOS

Refer [this link](#) to register Syncfusion license key in Xamarin.Forms.UWP

If you are using **Prism Framework** in your application, register the license key before `InitializeComponent` in `OnInitialized` method of **App.Xaml.cs**

C#

```

protected override async void OnInitialized()
{
    //Register Syncfusion license
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY");
    InitializeComponent();
    await NavigationService.NavigateAsync("NavigationPage/MainPage");
}

```

Xamarin.Android

Register the license key in **OnCreate** override method of your main activity class before initializing any Syncfusion control.

C#

```

protected override void OnCreate(Bundle savedInstanceState)
{
    //Register Syncfusion license
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY");
    base.OnCreate(savedInstanceState);
}

```

```
// Set our view from the "main" layout resource
SetContentView(Resource.Layout.Main);
}
```

Xamarin.iOS

Register the license key in **FinishedLaunching** override method of **AppDelegate.cs**

C#

```
public override bool FinishedLaunching(UIApplication application,
NSDictionary launchOptions)
{
    //Register Syncfusion license
    Syncfusion.Licensing.SyncfusionLicenseProvider.RegisterLicense("YOUR LICENSE KEY");
    // create a new window instance based on the screen size
    Window = new UIWindow(UIScreen.MainScreen.Bounds);
    // If you have defined a root view controller, set it here:
    // Window.RootViewController = myViewController;
    // make the window visible
    Window.MakeKeyAndVisible();
    return true;
}
```

Flutter

Register the license key in the **main method** of your example and import the 'syncfusionfluttercore/core.dart' library.

DART

```
// Refer the core package
import 'package:syncfusion_flutter_core/core.dart';
void main() {
    // Register Syncfusion license
    SyncfusionLicense.registerLicense("YOUR LICENSE KEY");
    return runApp(MyApp());
}
```

JavaScript (Essential JS 1 and Essential JS 2)

Syncfusion License keys are not required for script files (.js files). For the following platforms, you can use the script files without registering the license keys.

JavaScript (Essential JS 2)

- Angular
- React
- Vue
- JavaScript (ES5)
- TypeScript & JavaScript (ES6)

JavaScript (Essential JS 1)

- AngularJS

- Angular
- Aurelia
- ReactJS
- TypeScript
- EmberJS

Registering key in a User control that contains Syncfusion controls

We recommend registering the license key at application level as shown in the previous sections

NuGet.org users without a Syncfusion account

If you have directly obtained Syncfusion assemblies from NuGet.org and do not have a Syncfusion account, follow the steps to obtain a free 30-day license key:

- Register for a free Syncfusion account [here](#)
- Go to the start trials [page](#) and start a trial
- Finally proceed to the [Trail & Downloads section](#) to obtain the license key

Licensing Errors

Licensing error popup is displayed with various messages under different circumstances. Here are some ways to resolve different issues.

License key not registered

The following error message will be shown if a Syncfusion license key has not been registered in your application.

Error message: This application was built using a trial version of Syncfusion Essential Studio. Please include a valid license to permanently remove this license validation message. You can also obtain a free 30 day evaluation license to temporarily remove this message during the evaluation period. Please refer to this help topic(<https://help.syncfusion.com/es/licensing/>) for more information.

Solution: Generate a valid license key from here [Licensed users](#) or [Trial users](#) for a specific version and platform.

Invalid key

If the application is registered with an invalid key, another version of license key, or another platform's license key, the following error message will pop up when launching the application.

This error message will be shown if the license key is invalid. It is possible that the key is for another platform or for an older version.

Error Message: The included Syncfusion license is invalid. Please refer to this help topic(<https://help.syncfusion.com/es/licensing/invalid/>) for more information.

Solution: Generate a valid license key from here [Licensed users](#) or [Trial users](#) for a specific version and platform.

Trial Expired

The following error message will be shown if the trial key has expired after 30 days.

Error Message: Your Syncfusion trial license has expired. Please refer to this help topic(<https://help.syncfusion.com/es/licensing/expired/>) for more information.

Solution: Purchase from [here](#) to get a valid Syncfusion license.

Platform Mismatch

If the application is registered with another platform's license key, the following error message will pop up when launching the application.

Error Message:The included Syncfusion license is invalid (Platform mismatch). Please refer to this help topic(<https://help.syncfusion.com/es/licensing/platform-mismatch/>) for more information.

Solution: Generate a valid license key from here [Licensed users](#) or [Trial users](#) for a specific version and platform.

Version Mismatch

If the application is registered with another version's license key, the following error message will pop up when launching the application.

Error Message:The included Syncfusion license ({Registered Version}) is invalid for version {Required version}. Please refer to this help topic(<https://help.syncfusion.com/es/licensing/version-mismatch/>) for more information.

Solution: Generate a valid license key from here [Licensed users](#) or [Trial users](#) for a specific version and platform. Kindly follow the [KB](#) to generate license key.

Could not load Syncfusion.Licensing.dll assembly version...?

Make sure that all the referenced Syncfusion assemblies are of the same version. Try cleaning and rebuilding the application to resolve assembly conflict issues.

Licensing FAQ

How to upgrade from Trial version after purchasing a license?

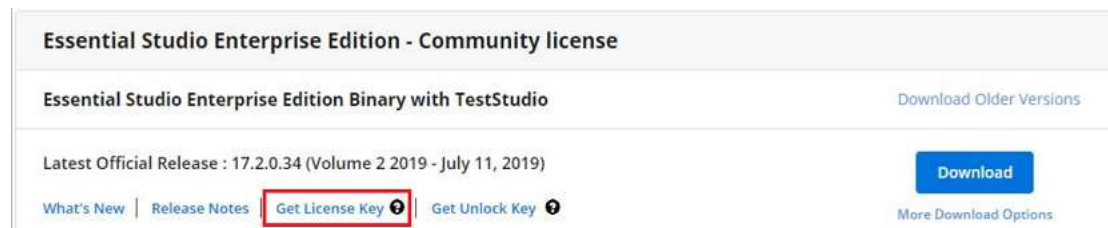
To upgrade from trial version, there are two possible solutions.

- Uninstall the trial version and install the fully licensed build from the [License & Downloads](#) section of our website.
- Replace the currently used trial license key with a paid license key that can be generated from the [License & Downloads](#) section of our website. Refer to [this](#) topic for more information regarding registering the license in the application.

Note: License registration is not required if you reference Syncfusion assemblies from Licensed installer. These licensing changes applicable to all evaluators who refers the Syncfusion assemblies from evaluation installer and those who use Syncfusion NuGet packages from [nuget.org](https://www.nuget.org).

Where can I get a license key?

License keys can be generated from the [License & Downloads](#) or [Trail & Downloads](#) section of the Syncfusion website.



As Syncfusion license key is **version and platform specific**, kindly follow the [KB](#) to generate the license key for required version and platform. Also, refer to the [KB](#) to know which version Syncfusion license key should use in the application.

Upgrade from one version to another version.

You can upgrade to the latest version by downloading and installing the platforms you require from [this](#) link. After upgrading to the latest version, instead of upgrading your projects manually, you can use the Syncfusion Project Migration for migrating your projects.

Platform	Project Migration link
ASP.NET Web Forms	https://help.syncfusion.com/extension/aspnet-extension/project-migration
ASP.NET MVC	https://help.syncfusion.com/extension/aspnet-mvc-extension/project-migration
ASP.NET Core	https://help.syncfusion.com/extension/aspnetcore-extension/project-migration
WPF, Windows Forms and UWP	https://help.syncfusion.com/common/essential-studio/utilities#project-migration

Upgrade from major version to service pack version

Syncfusion provides a new Volume release once in every three months which has exciting new features. For that Volume release, there may be one or two Service Pack releases. The issues in the Volume release will be addressed in the Service Pack releases. You can download and install the latest Service Pack installer [here](#).

It is not required to install the Volume release before installing the Service Pack release. As Volume and Service Packs releases works independently, you can directly install the latest Service Pack which contains major issue fixes.

Apply the Patch for Major or Service Pack Version

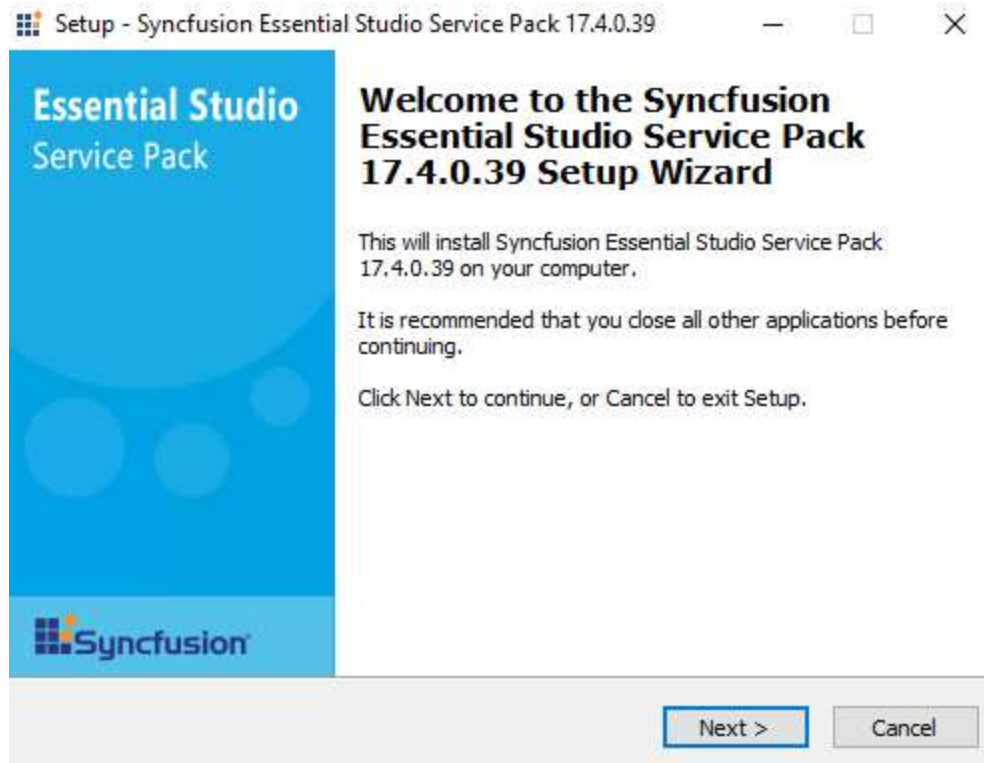
Syncfusion provides patch installer for major version or service pack version, either to add new features or to fix issues. You have to install the patches in the order you have received.

Installing the Patch installer

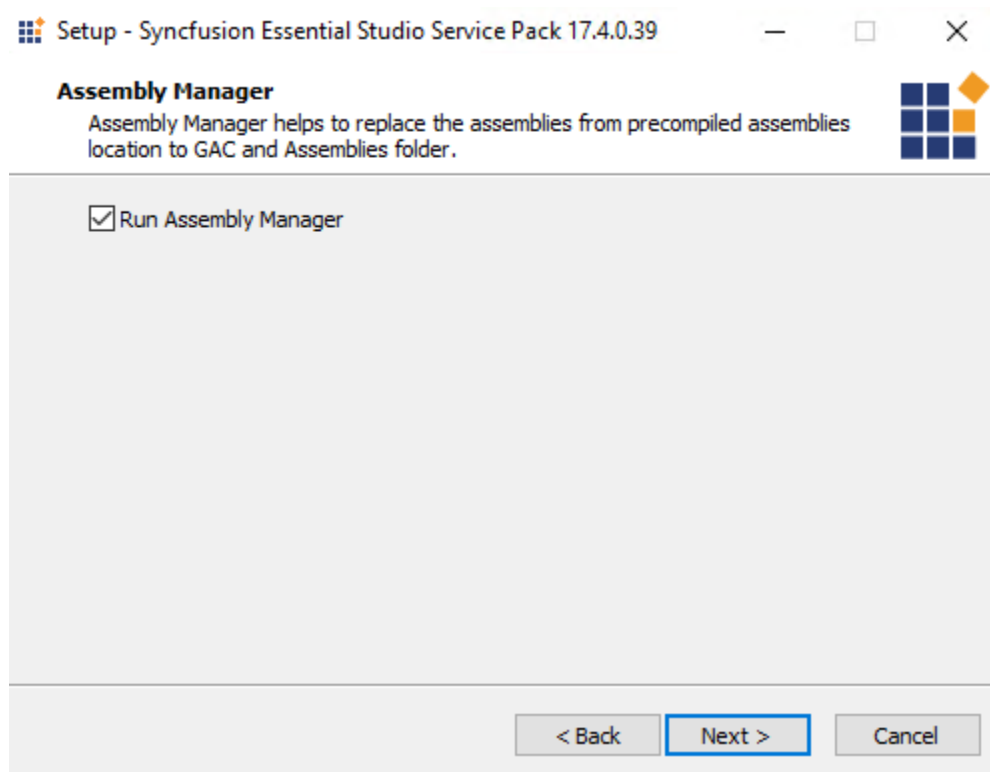
The following procedure illustrates how to install a patch.

Information: Before installing the patch, ensure that corresponding Essential Studio version platform has been installed in your machine.

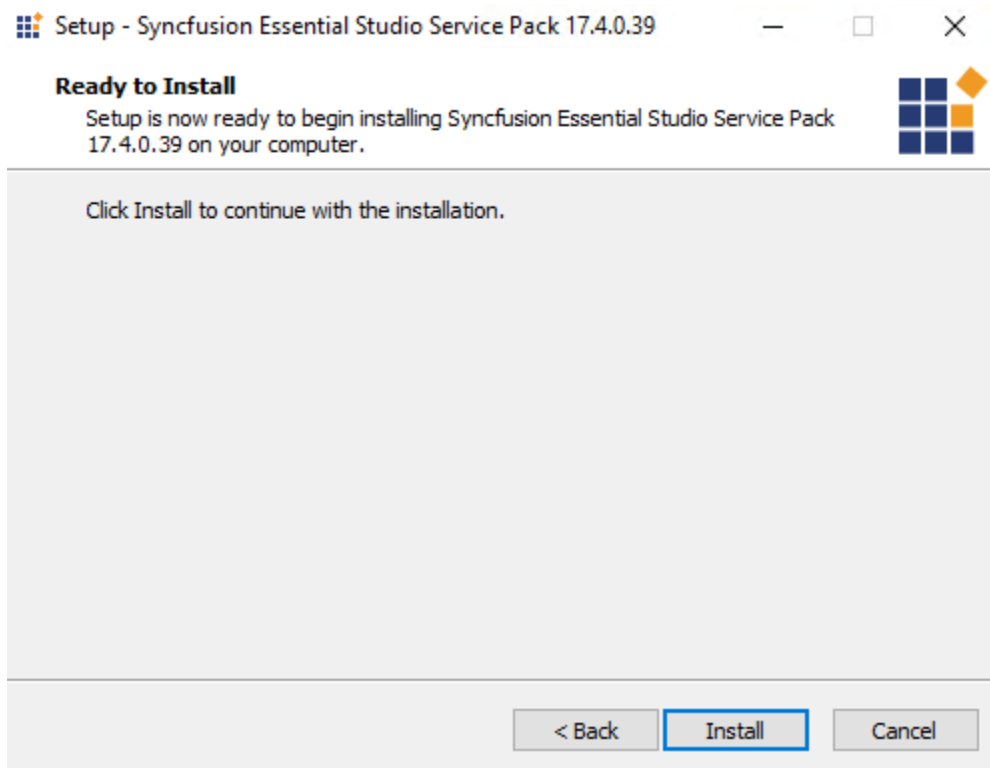
1. Double-click the Syncfusion Essential Studio patch installer. The Syncfusion Essential Studio Service Pack opens.



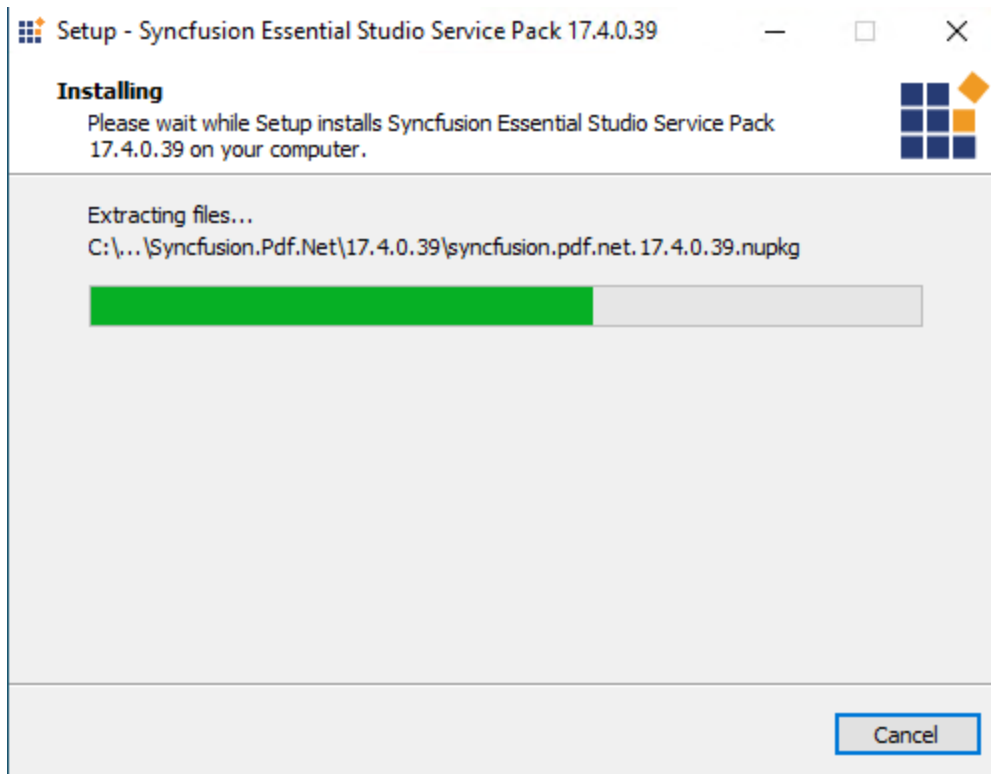
2. Click Next. The Assembly Manager screen opens.



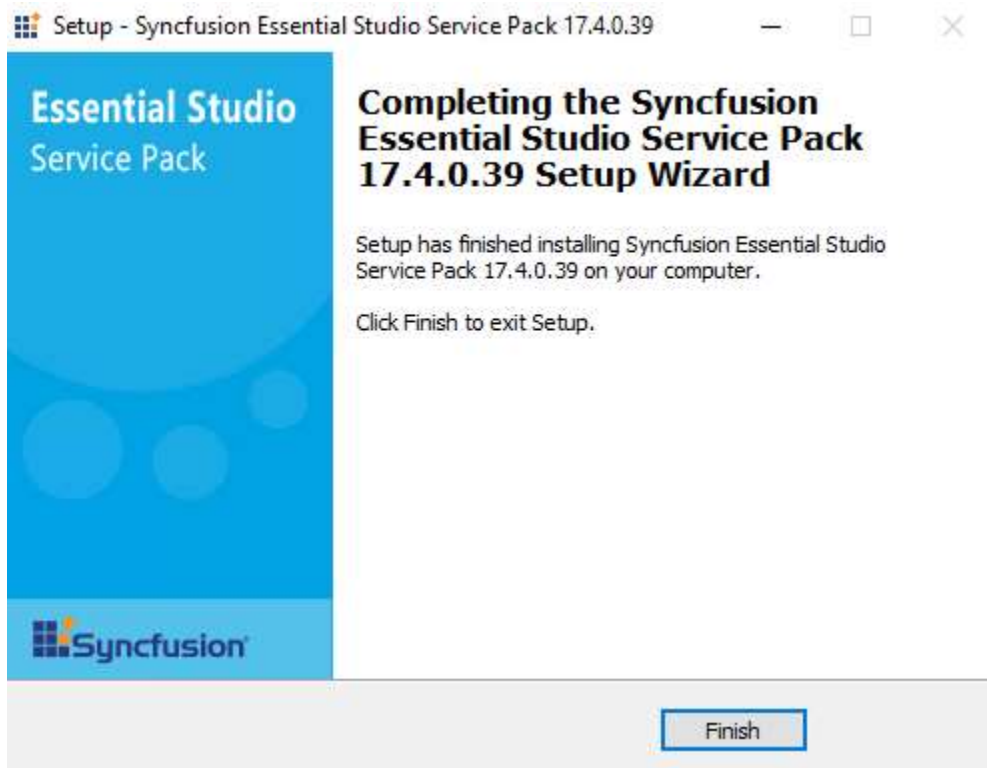
3. Select the Run Assembly Manager check box to install the assemblies in GAC.
4. Click Next. The Ready To Install screen opens.



5. Click Install to continue installing.



Note: The patch is installed on your computer, and a dialog box appears when the installation is complete.



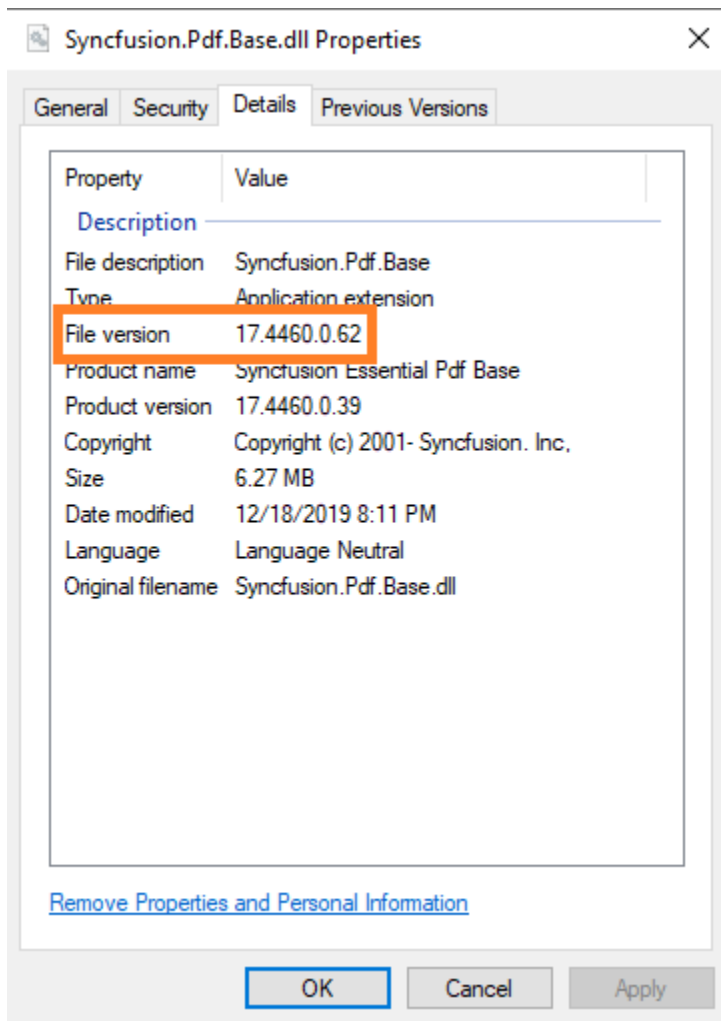
6. Click Finish.

The new assemblies are placed in the Pre-Compiled Assemblies folder. These new assemblies can be referenced in your project.

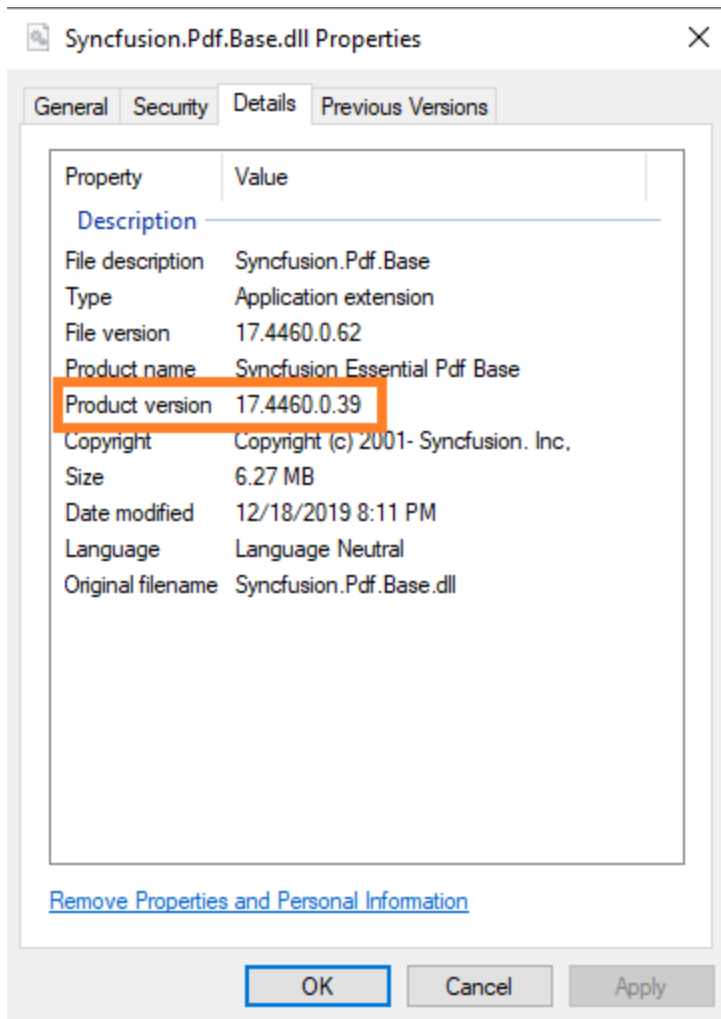
Patch Assembly Version Format

In the patch assembly, the **File Version** and **Product Version** will be different. Product Version will be the release version and File Version will be the increment of the release version's **revision** number. For each patch, the File Version will be a different one. You can differentiate between the build and patch assemblies by File Version.

File Version of the assembly shipped in build:



Product Version of the assembly shipped in patch:



Command Line Installation

The patch can also be installed through Command Line. Follow the given steps to run the Patch Installer via Command Line.

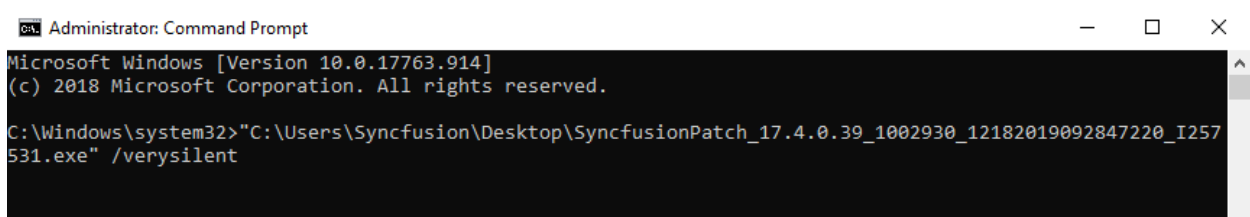
1. Open Command Prompt with administrative privileges, that is, in the Admin mode.
2. Navigate to the patch file's location and pass the following argument:

Argument: {patch installer.exe} [/silent or /verysilent]

Example:

SyncfusionPatch12.4.0.242346405192015083205629139538.exe /verysilent

SyncfusionPatch12.4.0.242346405192015083205629139538.exe /silent



Note: /silent – Displays the progress dialog alone during the patch installation.

/verysilent – It will be installed in background.

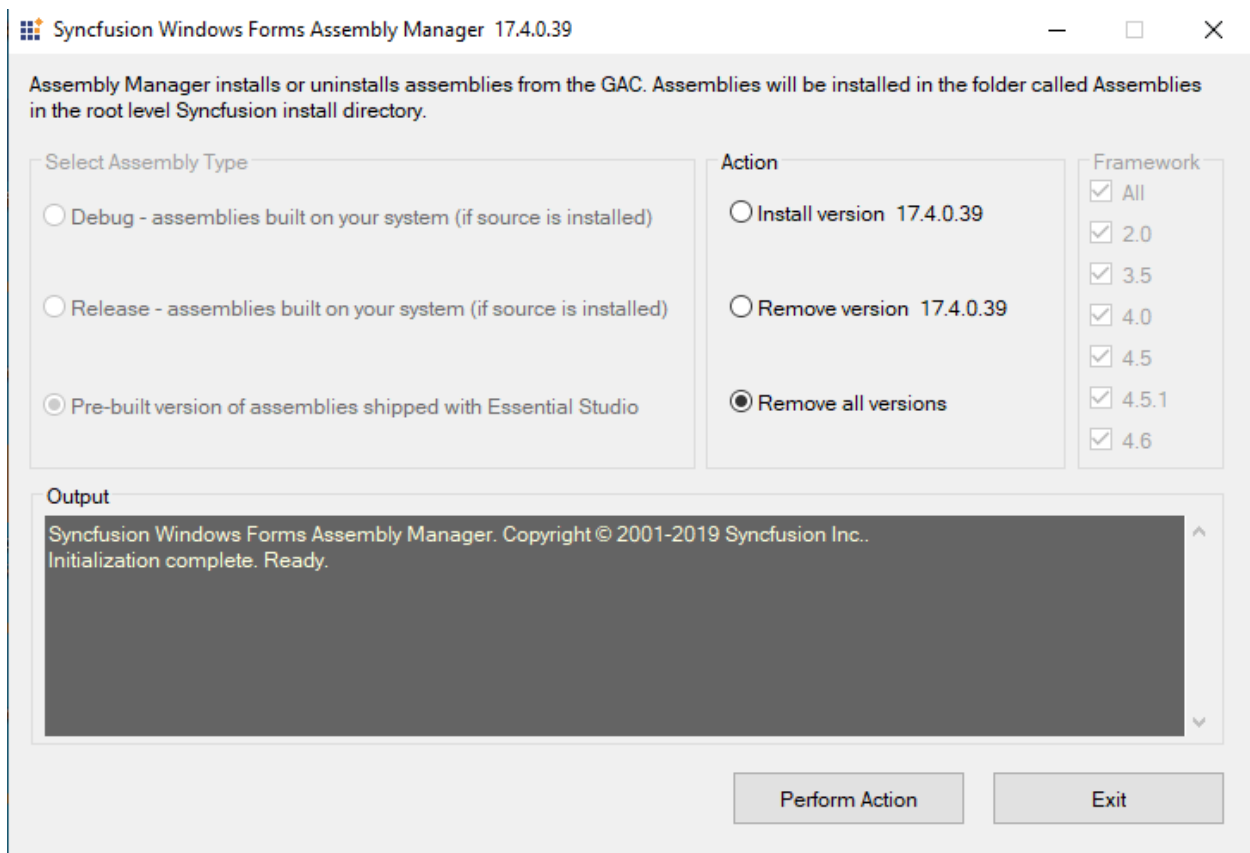
Reverting a Patch

The Patch installation takes a backup of the Release Assemblies and stores them in the Backup Assemblies folder. The patch assemblies are also stored in the Patch folder. You can revert back when needed.

Reverting back to Release Assemblies:

The following steps help you revert to the Release Assemblies.

1. Copy the Release Assemblies from the Backup Assemblies folder.
2. Paste them in the precompiledassemblies folder.
3. Open Syncfusion Control Panel > Utilities > Assembly Manager.



4. Select the Remove allversions radio button.
5. Click Perform Action. All versions are removed.
6. Select Install version x.x.x.x.

Note: x.x.x.x has to be replaced with the corresponding Essential Studio Version.

7. Click Perform Action. The assemblies for that specific version are configured in your machine.

Note: You can also revert to specific patch assemblies by copying the patch assemblies from the Patch folder and adding them in the precompiledassemblies folder.

Utilities

SynCFusion Control Panel

This section provides details on the structure and composition of the Syncfusion Control Panel. It also elaborates on navigating the Syncfusion Control Panel to access various utilities, add ons and product samples.

<style>

```
license {
```

```
font-size: .88em!important;
```

```
margin-top: 1.5em; margin-bottom: 1.5em;
```

```
background-color: #def8ff;
```

padding: 10px 17px 14px;

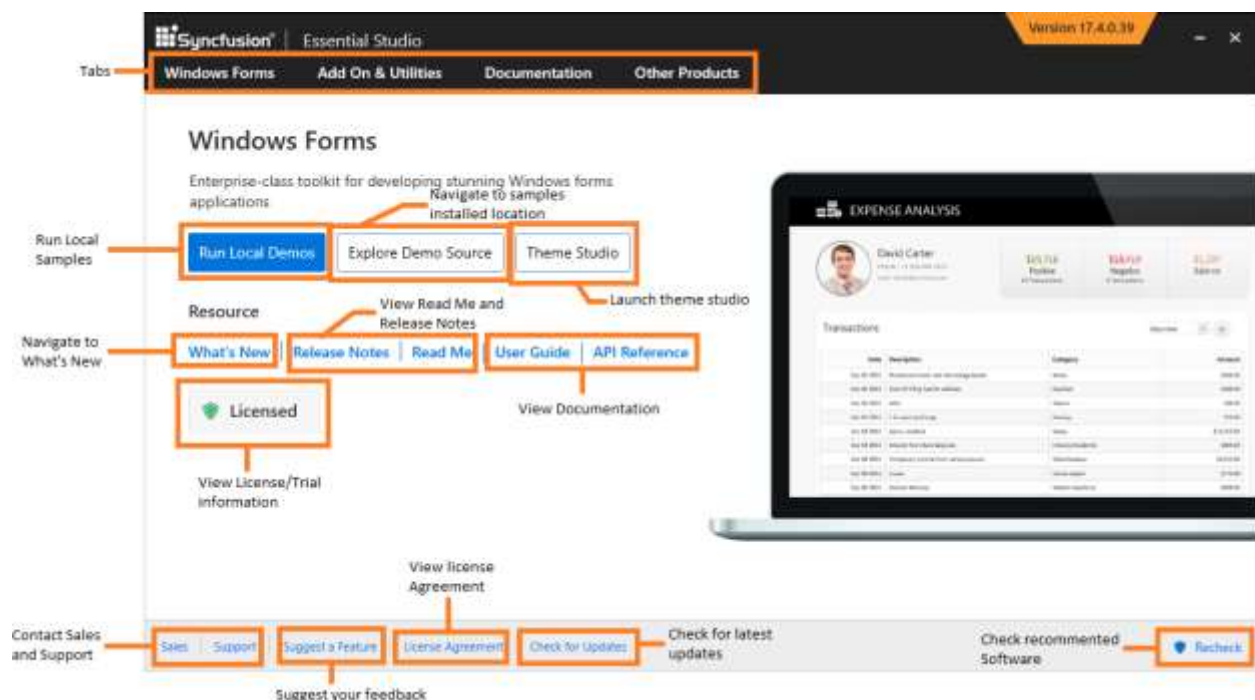
}

</style>

<div id="license">

From the 2018 Volume 2 release, each Essential Studio platform has separate Syncfusion Control Panel. You can launch the Syncfusion Control Panel either from **Desktop Shortcut** or **Start Menu->Syncfusion Control Panel {version}**

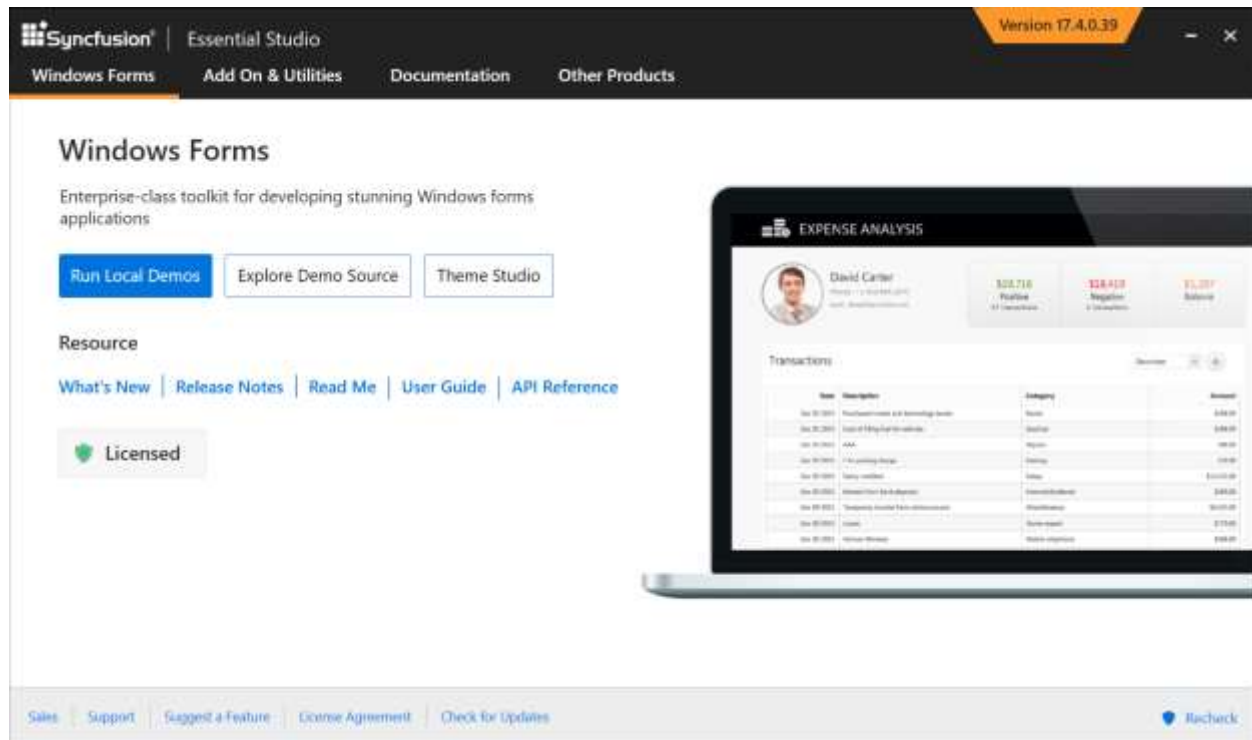
</div>



Accessing Product Samples

Syncfusion provides lots of online and local samples for better understanding of the controls. You can access them using the following steps.

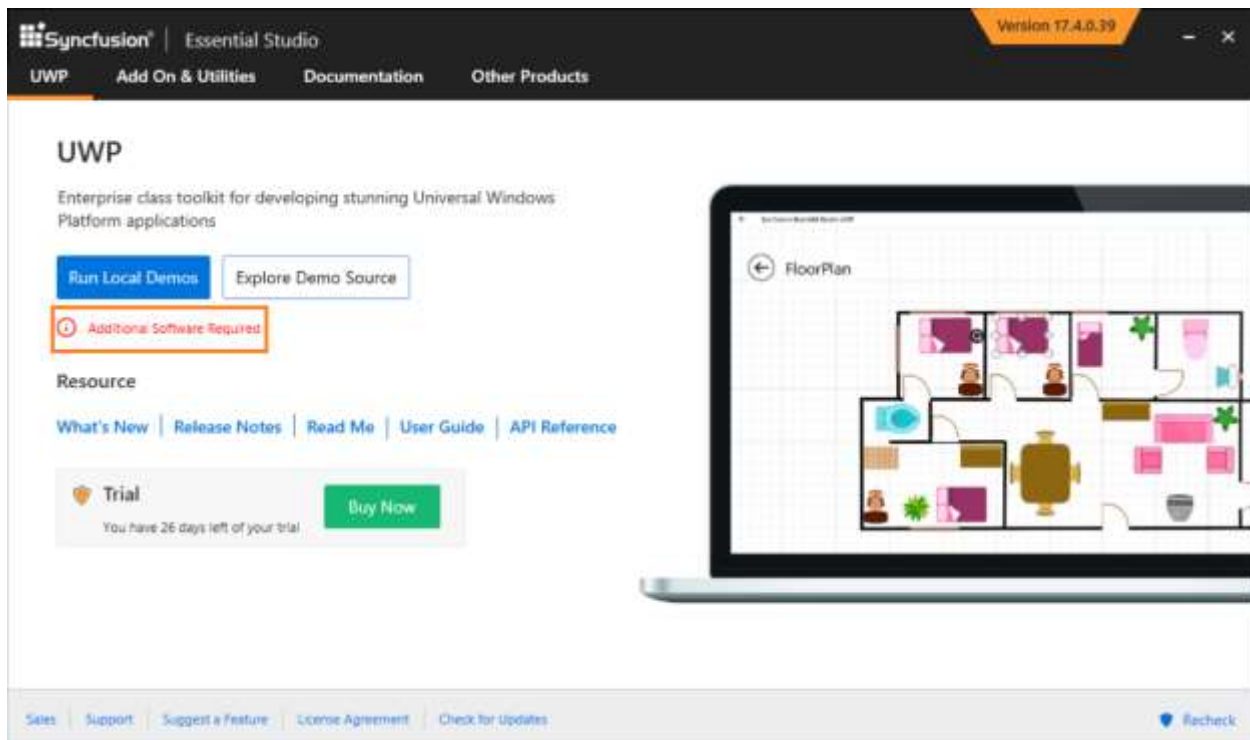
1. Open the Syncfusion Control Panel.




2. Click any of the following to know more about the selected product.
 - **Run Local Demos** - To run the locally installed samples.
 - **Run Online Demos** - To view online samples.
 - **Explore Demos** - To open local installed location.
 - **Explore Source** - To view the source, when you have installed the source add-on.
 - **User Guide** - To view the user guide documentation for the respective products.
 - **API Reference** - To view the online documentation help contents for the respective products.
 - **Release Notes** - To view the “Release Notes” content.
 - **Read Me** - To view the “Read Me” content.
 - **What’s New** - To view the “What’s New” content.

Checking Prerequisites

You need to install a list of prerequisites, for all of the products to work successfully. When some of the software is not installed, the Syncfusion Control Panel displays an alert. Click Additional Software Required, and a Missing Software dialog box opens.



Missing Software

Missing Software lists the prerequisites for all platforms. A  **Additional Software Required** symbol appears when any recommended software for a platform is not installed in your system.

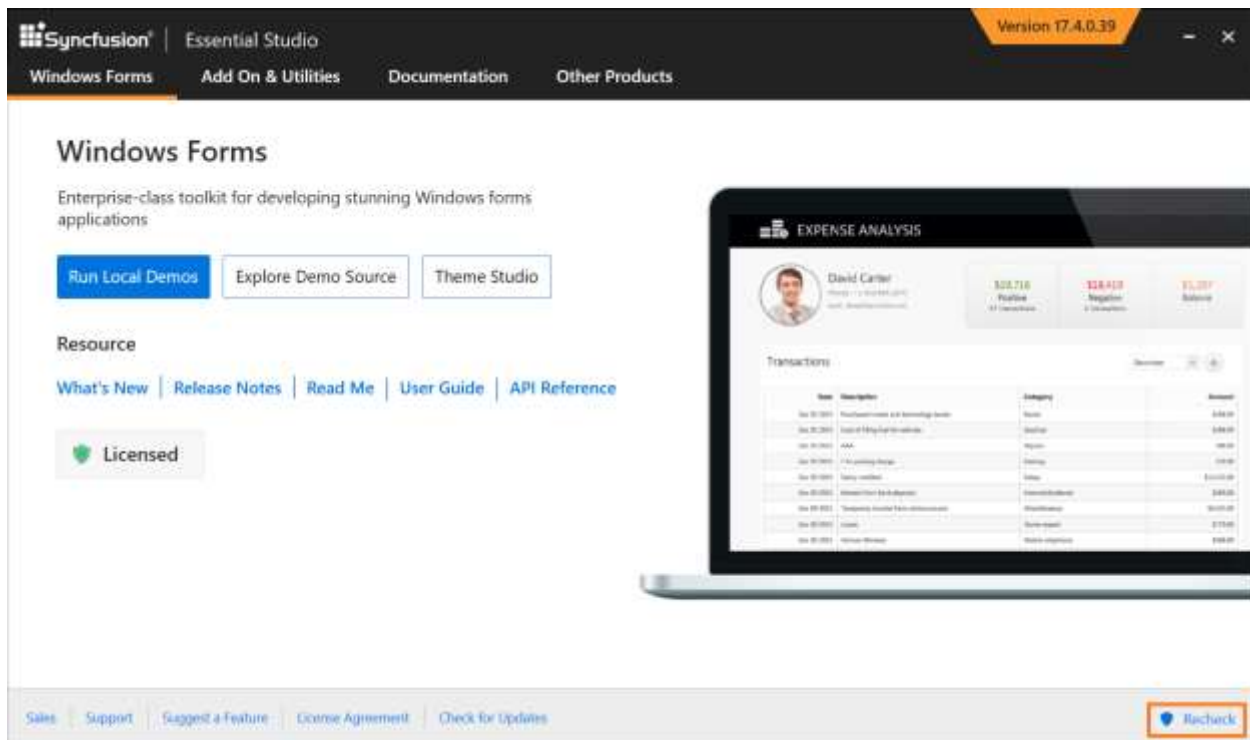
The **Recheck** option rechecks the prerequisites list and refreshes the currently installed software list.



Purpose of Recheck button

Recheck option in Syncfusion Control Panel is used to update the recently installed software information in your machine. If you have installed any required software for Essential Studio platforms after installing the Syncfusion installer, those software information will not be updated in the Syncfusion

Control Panel. In this case, you can just click the Recheck button in Syncfusion Control Panel which will update the recently installed software in your machine.



Other Utilities

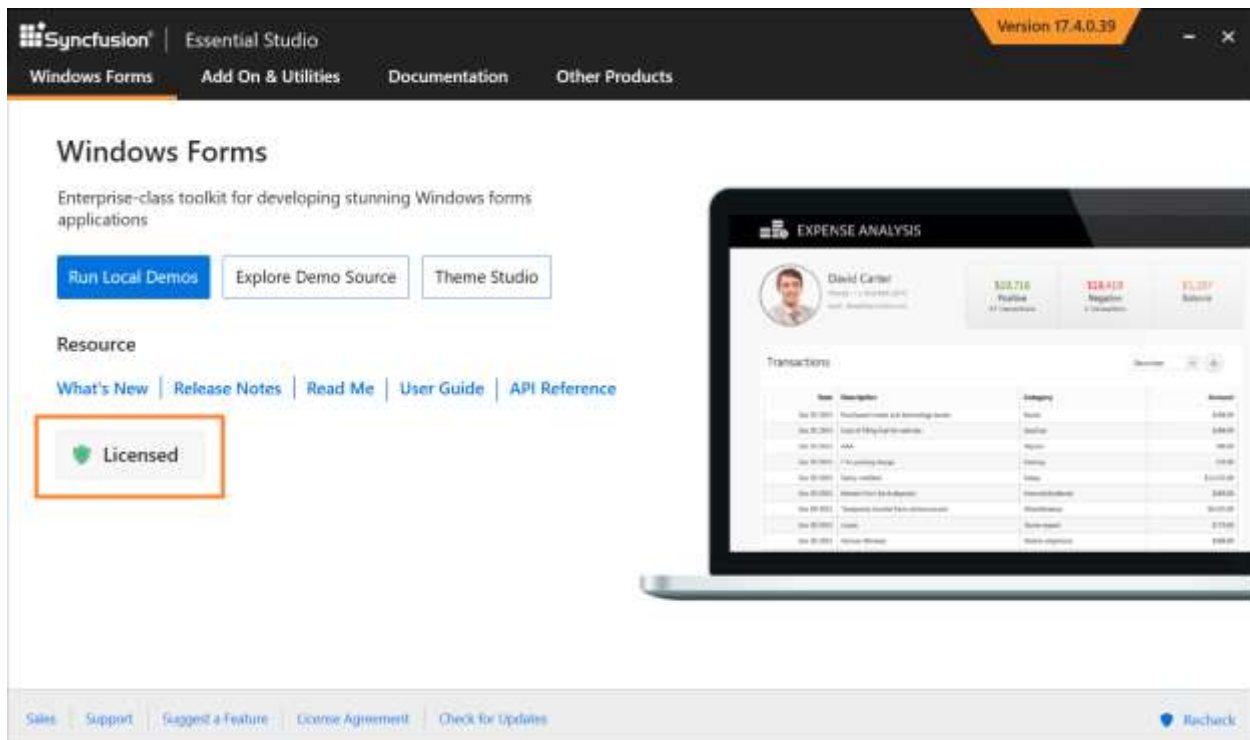
This section allows you to access the following.

1. **Add-ons** - This lists the add-on utilities that help you to utilize the additional product services from Syncfusion.
2. **Utilities** - This accordion set displays the common utilities.
 - [Toolbox Configuration](#)- This installer allows you to configure Syncfusion controls for various .NET Frameworks in combination with compatible Visual Studio versions.
 - [Assembly Manager](#)- This utility allows you to manage installing or uninstalling Syncfusion Essential Studio assemblies in the GAC and in the Assemblies folders.
 - [License Manager](#)- This allows you to manage the license information, such as the validity of license key and products that are licensed with this key.
 - [Project Migration](#)- This allows to migrate the project references to the given Essential Studio version.
 - [Extension Installer](#)- This allows to configure the Syncfusion Visual Studio extensions in Visual Studio.

Other Information

Other information available in the Syncfusion Control Panel includes:

- **Messages**- This section allows you to view the License information, like whether the user is Licensed or Trial. Syncfusion Trial expires in 30 days.



- [Sales FAQ](#) - Clicking this link directs you to the FAQ page that lists common sales-related queries and other sales contact information.
- [Contact Support](#) - Clicking this link directs you to the Direct-Trac Login page to contact the Support Team.
- Check for updates - Shows the latest version of Syncfusion Essential Studio if available.
- License Agreement - Shows the License Agreement for the current version of Essential Studio.

Assembly Manager

The Assembly Manager is used to install and uninstall the assemblies, to and from the GAC and Public Assemblies folder under the installed location.

Supported Platforms

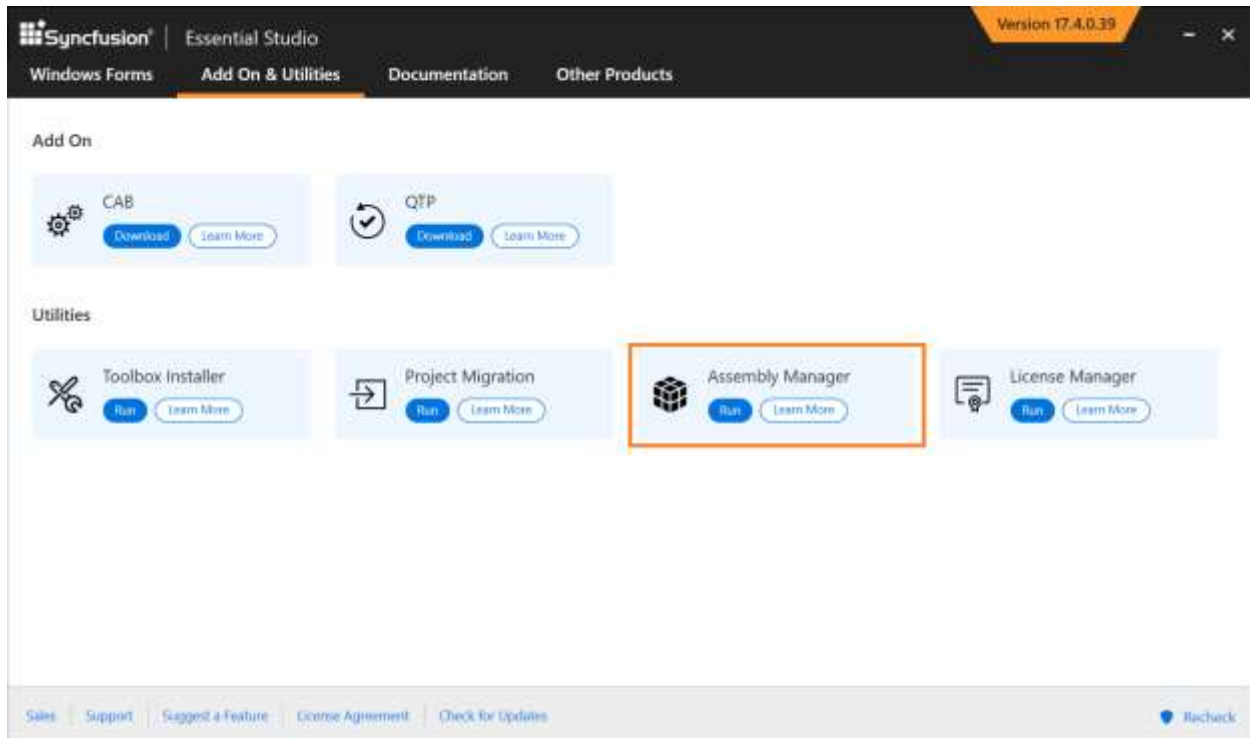
Assembly Manager will be shipped for the following platforms as these platforms alone have the GAC support. Other Syncfusion platform assemblies will not be installed in GAC and the Assembly Manager will not be shipped.

- ASP.NET Web Forms
- ASP.NET MVC
- JavaScript(Essential JS 1)
- WPF
- Windows Forms
- FileFormats

Launching the Assembly Manager

Use the following steps to run the Assembly Manager.

1. Open Syncfusion Control Panel.
2. Click Add On and Utilities > Assembly Manager.

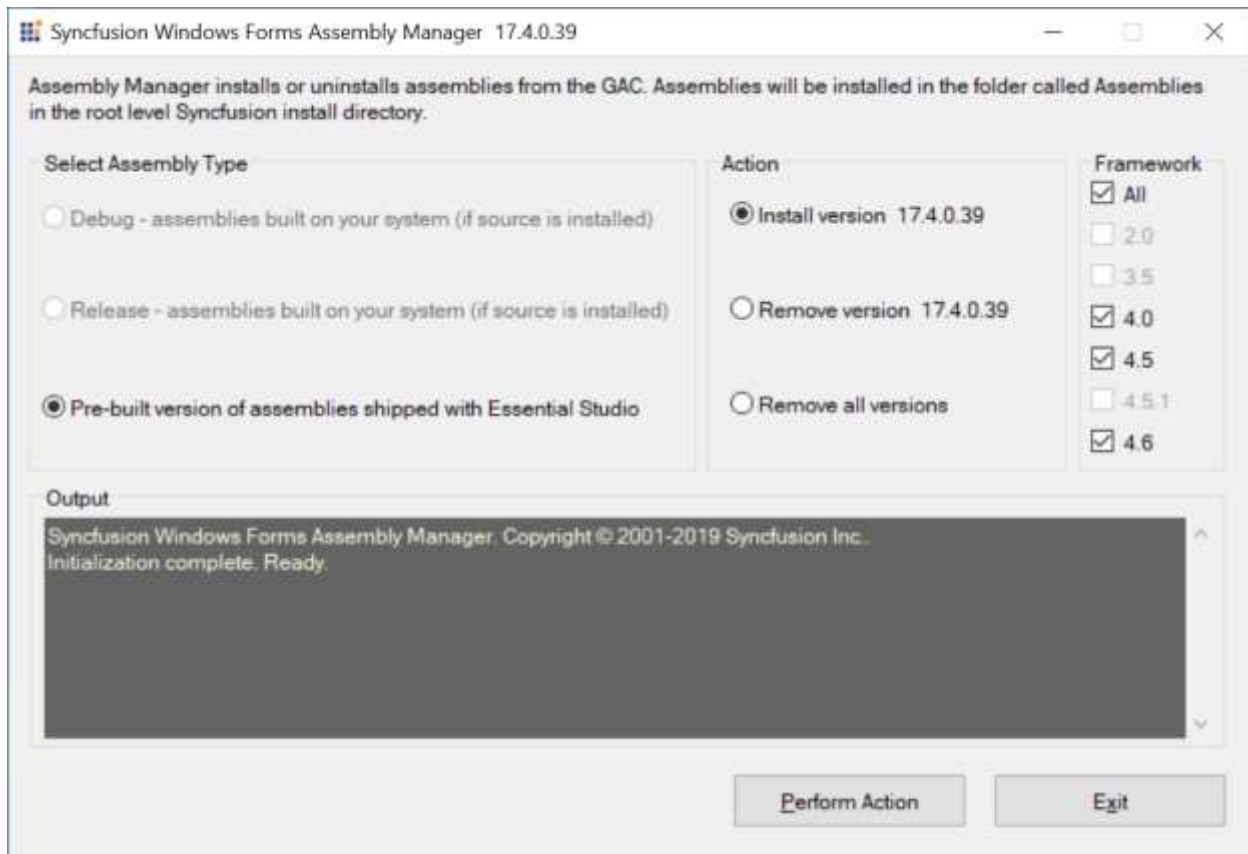


3. The Syncfusion {platform} Assembly Manager x.x.x.x window opens.

<div id="license">

You can also open the Assembly Manager from {Installed location}\Syncfusion\Essential Studio\{Platform}\x.x.x.x\Utilities\Assembly Manager\AssemblyManagerWindows.exe

</div>



4. Select the required option from Select Assembly Type.
 - **Pre-built Assemblies** - These are the assemblies shipped with Essential Studio. Selecting this mode triggers the Assembly Manager to install the pre-built assemblies.

5. Select the required option for the Action sections.

Action

The Assembly Manager can install or uninstall assemblies. To perform this action, select the **Install version x.x.x.x** or **Remove version x.x.x.x** radio button. To remove all, select the **Remove all versions** radio button.

Note: Remove All Versions must be used with caution in scenarios when one has applications depending on certain versions of the Syncfusion assemblies installed in the GAC. They may cease to function.

6. Select the required option for Framework sections.

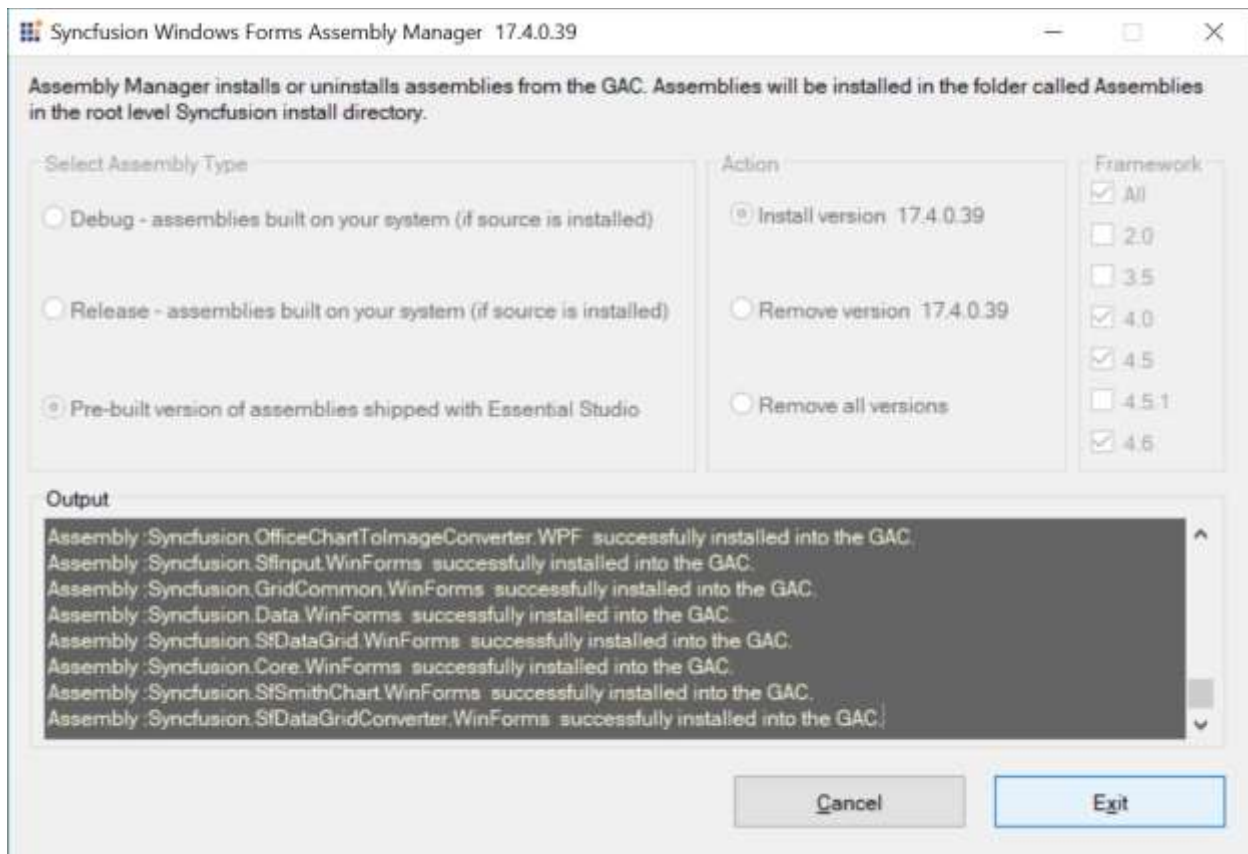
Framework

The Framework group box comprises of check boxes for the .NET Framework versions based on the Visual Studio SDK installed in the machine. The following check boxes are available:

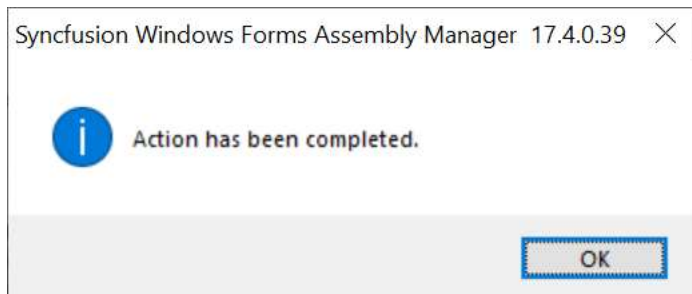
- 4.6 - Selecting **4.6** ensures installation of 4.6 assemblies into the GAC and assemblies folder. In cases where only Visual Studio 2015 SDK is installed, the 4.6 assemblies have to be deployed.
- 4.5.1 - Selecting **4.5.1** ensures installation of 4.5.1 assemblies into the GAC and assemblies folder. In cases where only Visual Studio 2013 SDK is installed, the 4.5.1 assemblies have to be deployed.
- 4.5 - Selecting **4.5** ensures installation of 4.5 assemblies into the GAC and assemblies folder. In cases where only Visual Studio 2012 SDK is installed, the 4.5 assemblies have to be deployed.
- 4.0 - Selecting **4.0** ensures installation of 4.0 assemblies into the GAC and assemblies folder. In cases where only Visual Studio 2010 SDK is installed, the 4.0 assemblies have to be deployed.
- 3.5 - Selecting **3.5** ensures installation of 3.5 assemblies into the GAC and assemblies folder. In cases where only Visual Studio 2008 SDK is installed, the 3.5, 2.0 assemblies can be deployed.
- 2.0 - Selecting **2.0** ensures installation of 2.0 assemblies into the GAC and assemblies folder. In cases where only Visual Studio 2005 SDK is installed, the 2.0 assemblies have to be deployed.
- All – Selecting **All** ensures installation of all Frameworks installed in the machine, and assemblies into the GAC and assemblies folder.

Note: By default 2.0 is enabled in a system where Visual Studio 2008 SDK is installed.

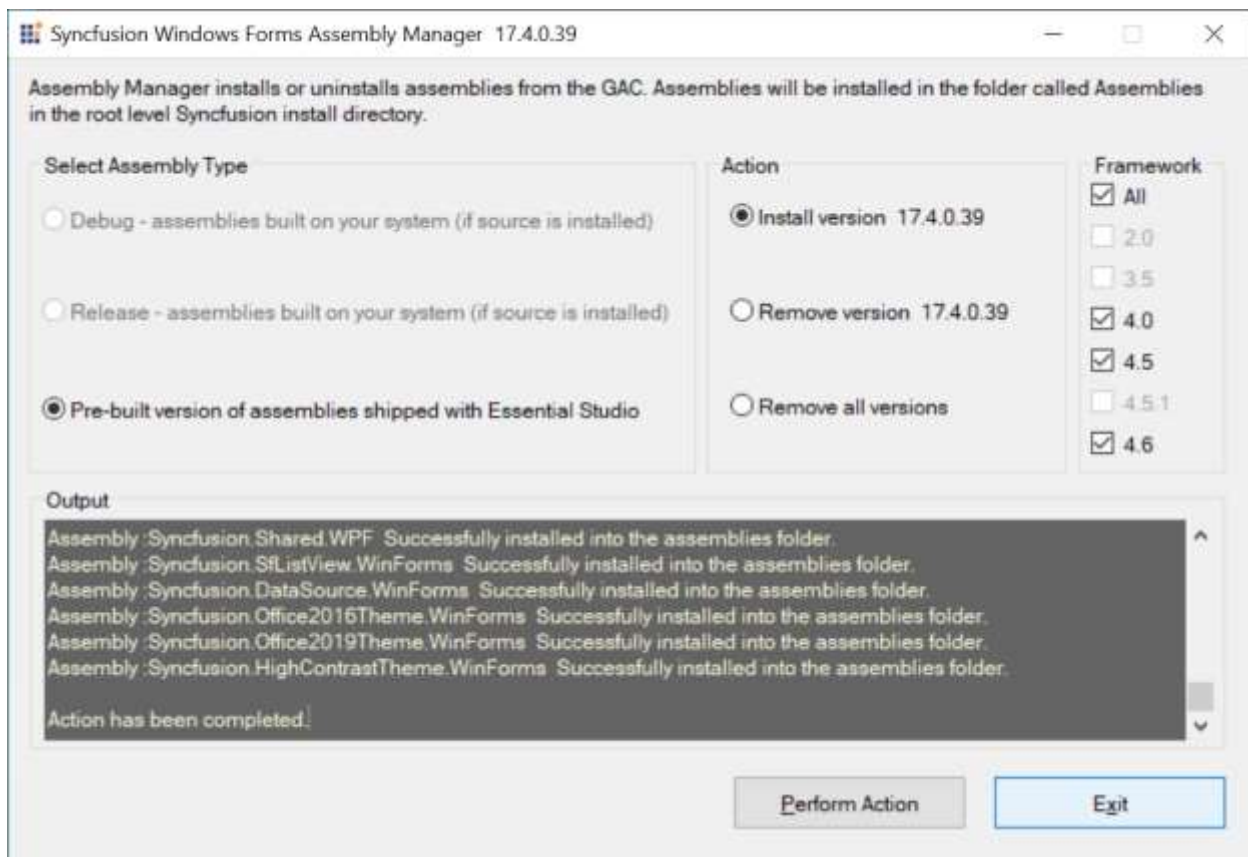
7. Click Perform Action. It starts processing.



8. Once the action is completed, a confirmation message is displayed.



9. Click OK.



Assembly Manager Console usage

You can also install the Syncfusion assemblies in GAC using the console version of Assembly Manager by passing the arguments. In order to do so, follow the below steps.

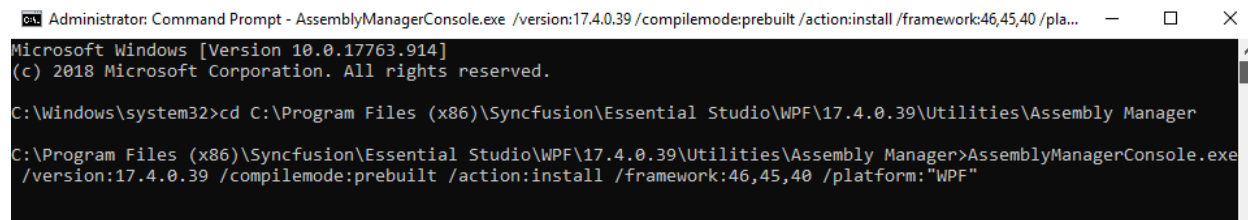
1. Open the command prompt in admin mode.
2. Navigate to the Assembly Manager location and pass the following arguments for AssemblyManagerConsole.exe.

1. Installing particular version

```
/version:{version} /compilemode:prebuilt /action:{action} /framework:{frameworkversions}
/platform:"{platform}"
```


Example

```
/version:14.4.0.15 /compilemode:prebuilt /action:install /framework:46,451,45,40,35,20
/platform:"WPF"
```



```
Administrator: Command Prompt - AssemblyManagerConsole.exe /version:17.4.0.39 /compilemode:prebuilt /action:install /framework:46,45,40 /pla...
Microsoft Windows [Version 10.0.17763.914]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Windows\system32>cd C:\Program Files (x86)\Syncfusion\Essential Studio\WPF\17.4.0.39\Utilities\Assembly Manager
C:\Program Files (x86)\Syncfusion\Essential Studio\WPF\17.4.0.39\Utilities\Assembly Manager>AssemblyManagerConsole.exe
/version:17.4.0.39 /compilemode:prebuilt /action:install /framework:46,45,40 /platform:"WPF"
```

2. Removing particular version

```
/version:{version} /compilemode:prebuilt /action:{action} /framework:{frameworkversions}
/platform:"{platform}"
```

Example

```
/version:14.4.0.15 /compilemode:prebuilt /action:remove /framework:46,451,45,40 /platform:"WPF"
```

3. Removing all versions

```
/version:{version} /compilemode:prebuilt /action:{action} /framework:{frameworkversions}
/platform:"{platform}"
```

Example

```
/version:14.4.0.15 /compilemode:prebuilt /action:removeall /framework:46,451,45,40 /platform:"WPF"
```

Syncfusion Assemblies

The Syncfusion assemblies are installed in the following two locations:

- Assemblies folder
- Global Assembly Cache (GAC)

The Assemblies folder

In the Assemblies folder, the assemblies are available in the following installation location:

Location: {ProgramFilesFolder}\Syncfusion\Essential Studio\{Platform}\x.x.x.x\Assemblies

Note: * The sub-folder 3.5 is used with .NET 3.5 and the sub-folder 2.0 is used with .NET 2.0. In most cases, [System Drive]:\ is C:\.

- In 2.0 and 3.5 GAC, the assemblies are available in {System Drive:}\WINDOWS\assembly.
- In 4.0, 4.5, 4.5.1 and 4.6 GAC, the assemblies are available in {System Drive:}\WINDOWS\Microsoft.NET\assembly\GAC_MSIL.

Essential Studio ships the pre-built 2.0, 3.5, 4.0, 4.5, 4.5.1 and 4.6 .NET Framework versions of the Syncfusion assemblies. These assemblies are located in the PreCompiledAssemblies location.

Location: {ProgramFilesFolder}\Syncfusion\Essential Studio\{Platform}\x.x.x.x\PreCompiledAssemblies\x.x.x.x\{Framework}

When you work with multiple target environments, you can see that each appropriate version is installed in the GAC, for side-by-side usage.

Working with Syncfusion assemblies that have been built and tested with specific .NET Framework versions, greatly increases the overall reliability. It also allows Syncfusion controls to take advantage of features that may be available in specific environments. For instance .NET 2.0 variants of the control offer features specific to the .NET 2.0 environment.

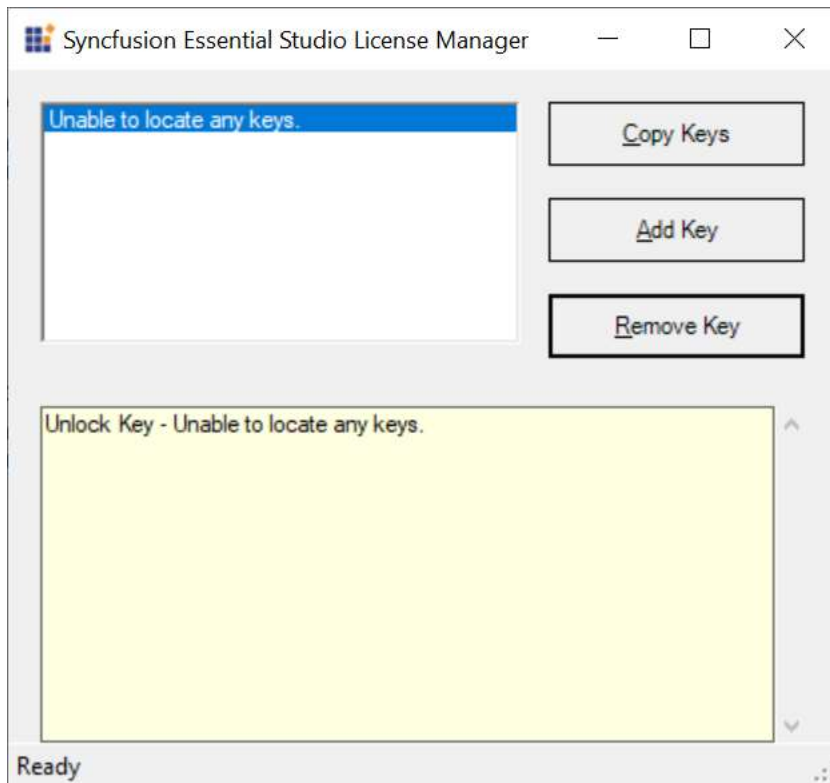
License Manager

The License Manager helps to manage license key information, such as the validity of a Syncfusion key used on your system.

Launching License Manager

Follow the steps provided to launch the License Manager from the Dashboard.

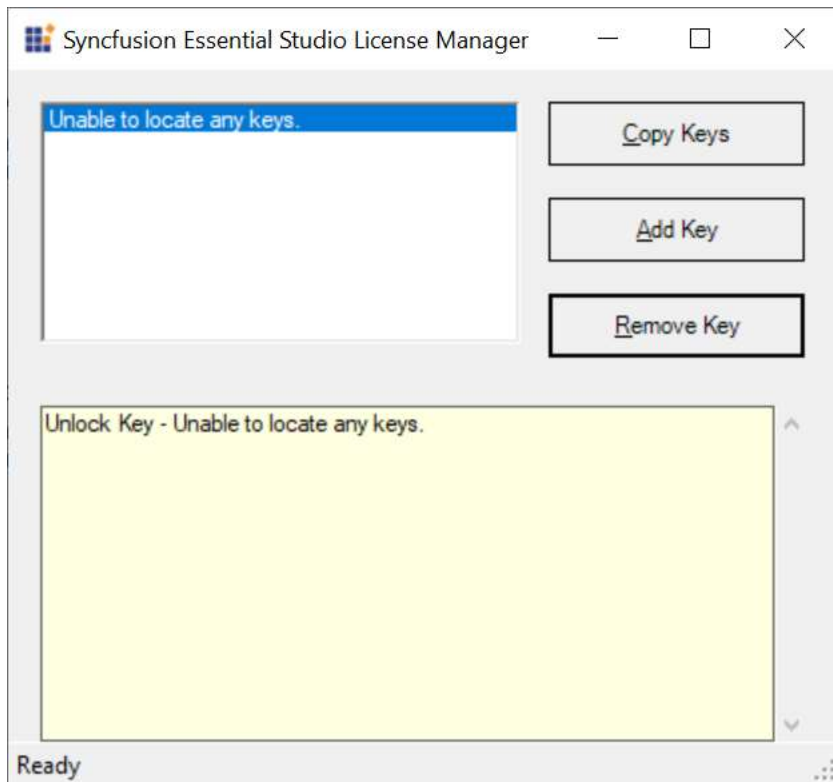
1. Open the Syncfusion Control Panel.
2. Click Add On and Utilities->License Manager.
3. The Syncfusion License Manager dialog box opens.



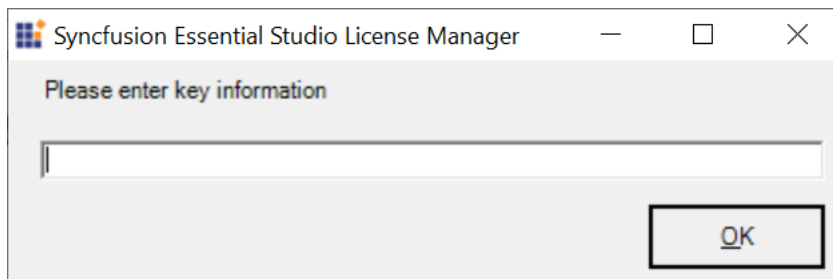
Adding a Product Key

The following are the steps to add a product key.

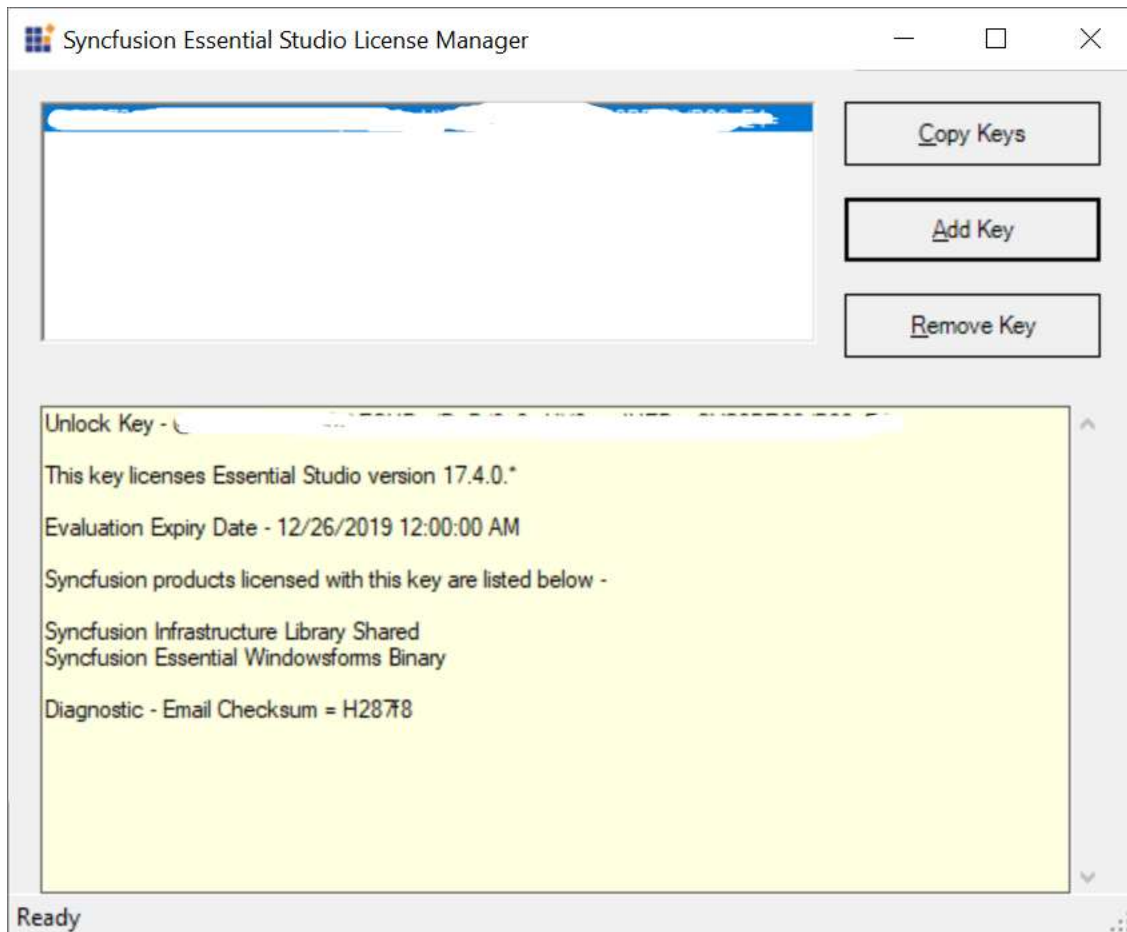
1. Open the Syncfusion License Manager Dialog box.



2. Click Add Key. The following dialog box opens.



3. Enter the license key of the product in the space provided.
4. Click OK. The entered key is displayed in the log.



By adding an additional product key, you can also:

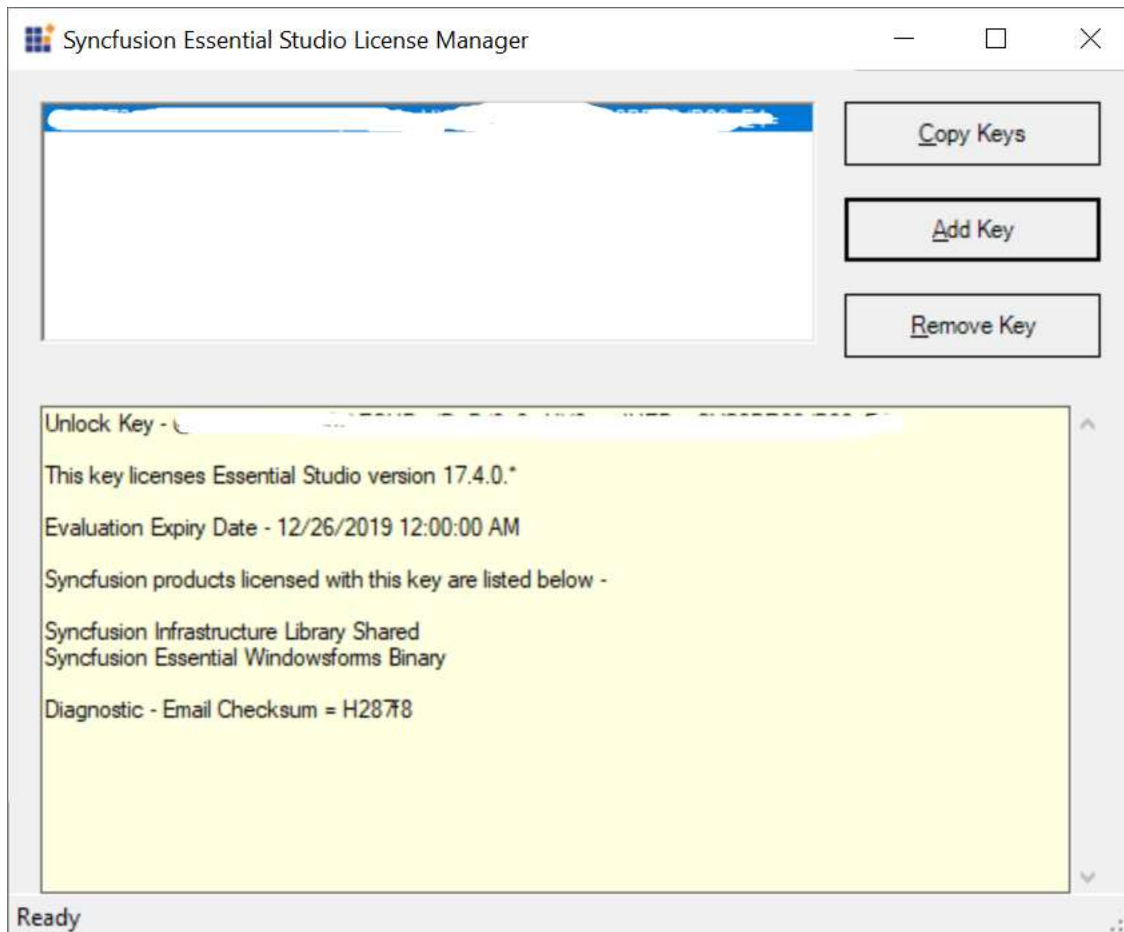
- Extend evaluation period. This is applicable for evaluation versions of EssentialStudio.
- Unlock additional products.

Removing a Product Key

This option allows you to remove a product key from the License Manager window. It allows you to remove an incorrectly added or old license key.

The following are the steps to remove a license key:

1. Open the Syncfusion License Manager dialog box.
2. Select the key to be removed. The selected key is highlighted.



3. Click Remove Key. The selected key is removed.

Note: The removal is reflected in the log, when the product key has already been added.

Copying a Product Key

You can copy the product key from the License Manager window to the clipboard. The following are the steps to copy the license key.

1. Open the Syncfusion License Manager Dialog box.
2. Select the required key to be copied. The selected key is highlighted.
3. Click Copy Key. The selected key is copied. You can paste the key in the required place.

Toolbox Configuration

Syncfusion provides toolbox support for WPF, Windows Forms, ASP.NET Web Forms, UWP and Xamarin platforms. The Syncfusion Toolbox Installer utility adds the Syncfusion controls into the Visual Studio .NET toolbox.

Note: Toolbox configuration support is not available for the Visual Studio Express Edition. However, you can manually configure the Syncfusion controls into the Visual Studio Express Toolbox. To do so, refer the [Manual Toolbox Configuration](#).

Configuring Toolbox

For Xamarin:

To configure the Syncfusion Xamarin controls to the Visual Studio toolbox, refer [this](#) link.

Information: Syncfusion has started providing Toolbox support for Xamarin platform from v16.2.0.41

For UWP:

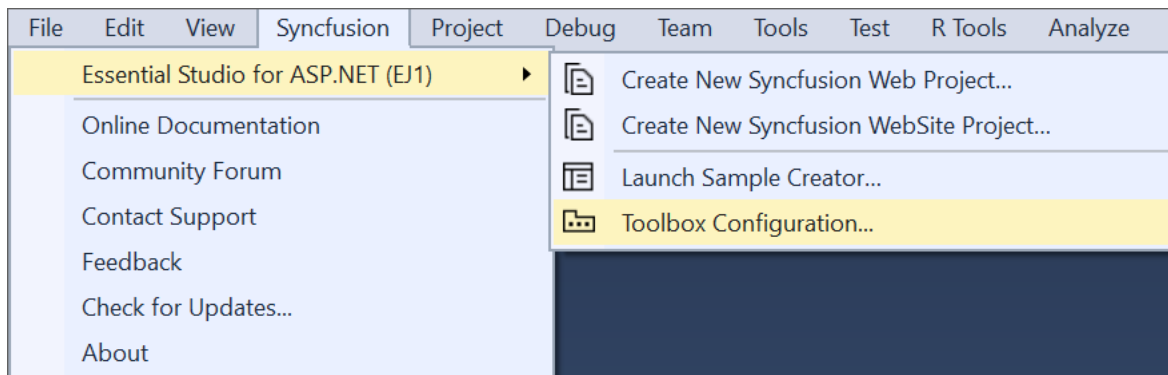
Syncfusion UWP controls will be automatically configured in Visual Studio toolbox while installing the Syncfusion UWP installer.

For WPF, Windows Forms and ASP.NET Web Forms platforms:

1. To launch Toolbox configuration utility, follow either one of the options below:

Option 1:

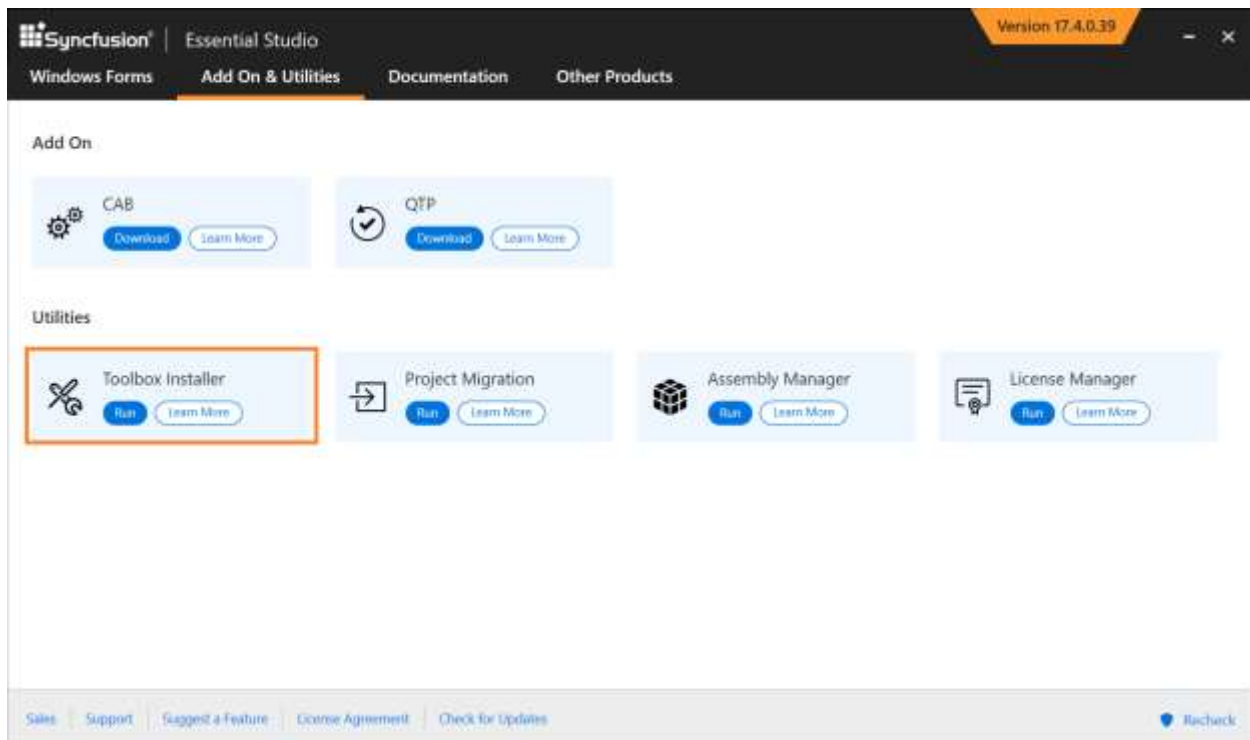
Choose **Syncfusion menu** in **Visual Studio**. Then, select corresponding platform menu and click **Toolbox Configuration...**



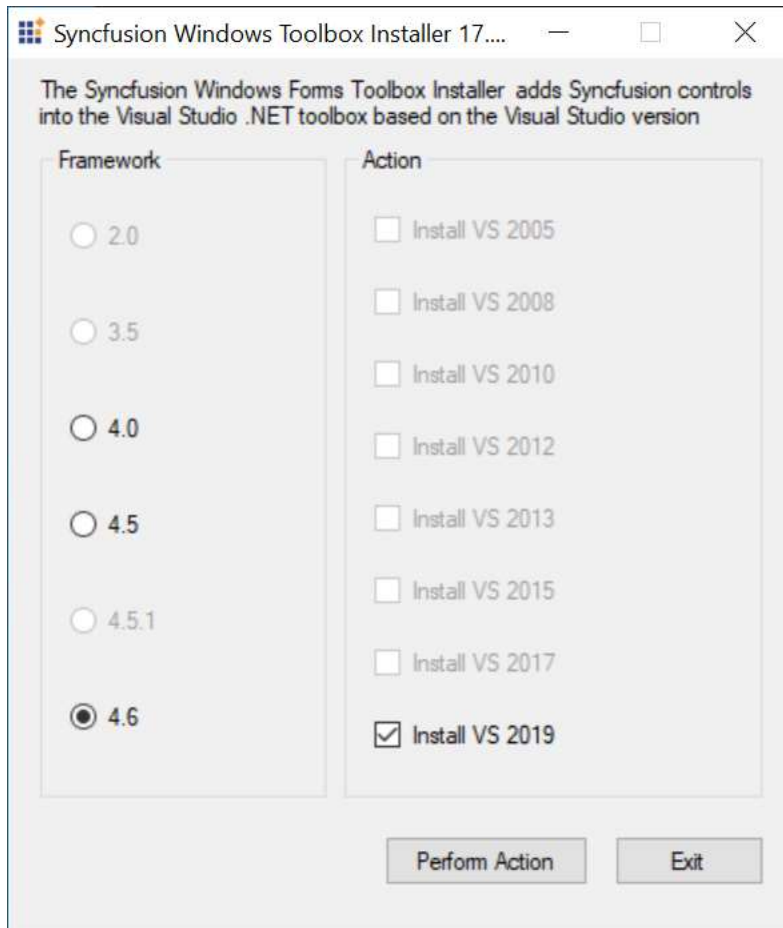
Note: In Visual Studio 2019, Syncfusion menu available under Extension in Visual Studio menu.

Option 2:

To open the Syncfusion Control Panel, click **Add On and Utilities > Toolbox Installer**.



2. Toolbox Installer will be opened.

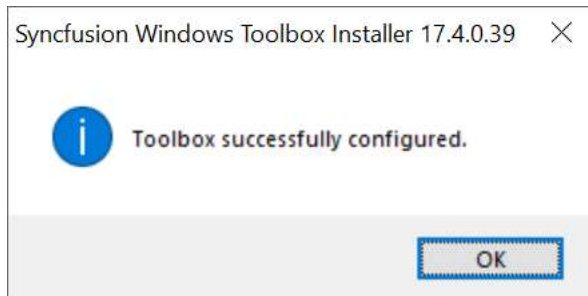


The following options are available in Toolbox Configuration:

- Install VS2005 – Configures Framework 2.0 Syncfusion controls in VS 2005 toolbox.
- Install VS2008 – Configures Framework 3.5 Syncfusion controls in VS 2008 toolbox.
- Install VS2010 – Configures Framework 4.0 Syncfusion controls in VS 2010 toolbox.
- Install VS2012 – Configures Framework 4.5 Syncfusion controls in VS 2012 toolbox.
- Install VS2013 – Configures Framework 4.5.1 Syncfusion controls in VS 2013 toolbox.
- Install VS2015 – Configures Framework 4.6 Syncfusion controls in VS 2015 toolbox.
- Install VS2017 – Configures Framework 4.6 Syncfusion controls in VS 2017 toolbox.
- Install VS2019 – Configures Framework 4.6 Syncfusion controls in VS 2019 toolbox

Note: You can also configure Syncfusion controls from a lower version Framework assembly to higher version of Visual Studio.

3. An Information message is displayed indicating the successful configuration of Toolbox. Click OK.



Note: You must reset the toolbox, when the installed controls are not reflected properly in the Toolbox. This tool configures only the controls that are located under {Installed Location}\Assemblies\{Framework version}.

Multi-Target Manager

Multi-Target Manager helps to manage multiple .NET Frameworks in your Visual Studio 2008 project that is, switching between multiple Frameworks.

Note: This is not essential for VS 2010 because Common Language Runtime (CLR) differs for both 3.5 and 4.0 Frameworks. VS 2010 selects the required .NET Framework assembly for the corresponding projects. 3.5 and 4.0 are the only Frameworks configured; the MultiTarget Manager utility allows you to work on Framework 2.0 with VS 2010.

When to Use Multi-Target Manager?

When Essential Studio is installed in a machine comprising both 2.0 and 3.5 Frameworks, then, by default, the target Framework is set to 3.5, and the following registry entry AssemblyFoldersEx is also set to 3.5 assembly. You can use the Multi-Target Manager to change the target Framework to 2.0.

Registry Location: HKLM\Software\Microsoft\.NetFramework\v3.5\AssemblyFoldersEx\Syncfusion Essential {platform} 3.5

Launching MultiTarget Manager

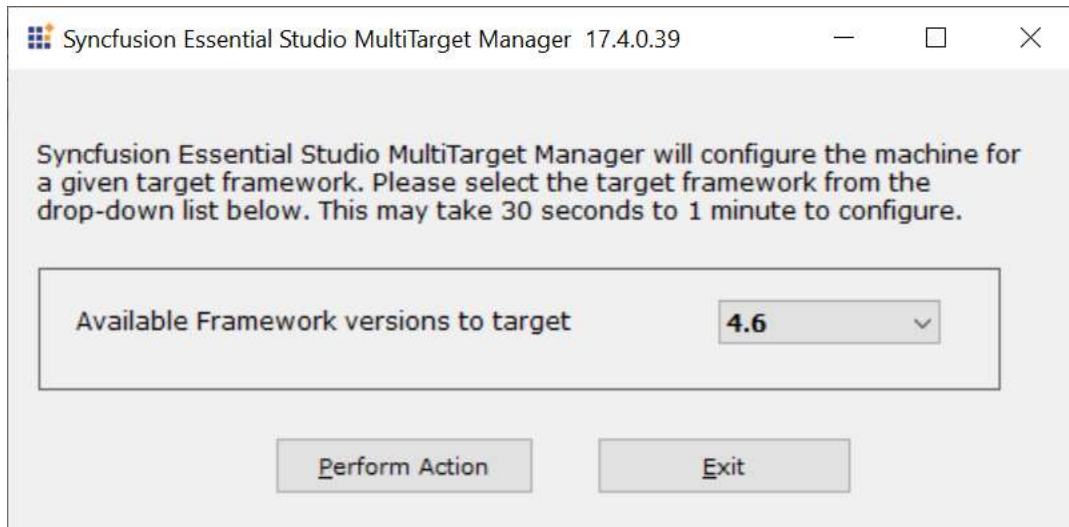
1. Open the Multi-Target Manager from below location

```
<div id="license">
```

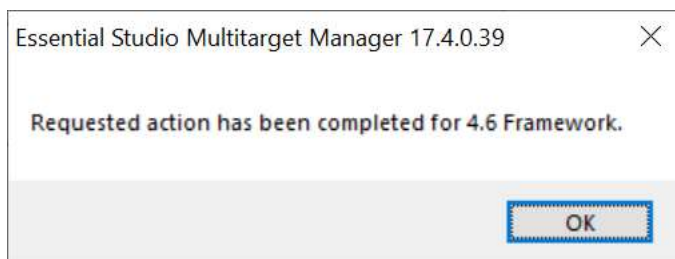
```
<b>Location:</b>{Installed location}\Syncfusion\Essential  
Studio\{platform}\x.x.x.x\Utilities\MultiTargetManager\MultiTargetManager.exe
```

```
</div>
```

2. The Essential Studio Multi-Target Manager x.x.x.x dialog box opens.



3. Select the required version from the drop-down list. The Multi-Target Manager dialog box opens.



4. Click OK.
5. Open an application.
6. Refresh the application before building.

Note: The target value and the registry value change according to the selected Framework version.

Project Migration

The Project Migration tool helps to upgrade the projects to the given Syncfusion Essential Studio Version.

Syncfusion Project Migration tool supports from, Syncfusion Essential Studio Version 3.2.1.0 to the latest version and the supported platforms are Windows Forms, WPF and Universal Windows Platform.

Note: Project Migration utility will change the Visual Studio Target Framework version and Syncfusion assembly version alone in the .csproj files.

The following steps illustrate how to migrate a project.

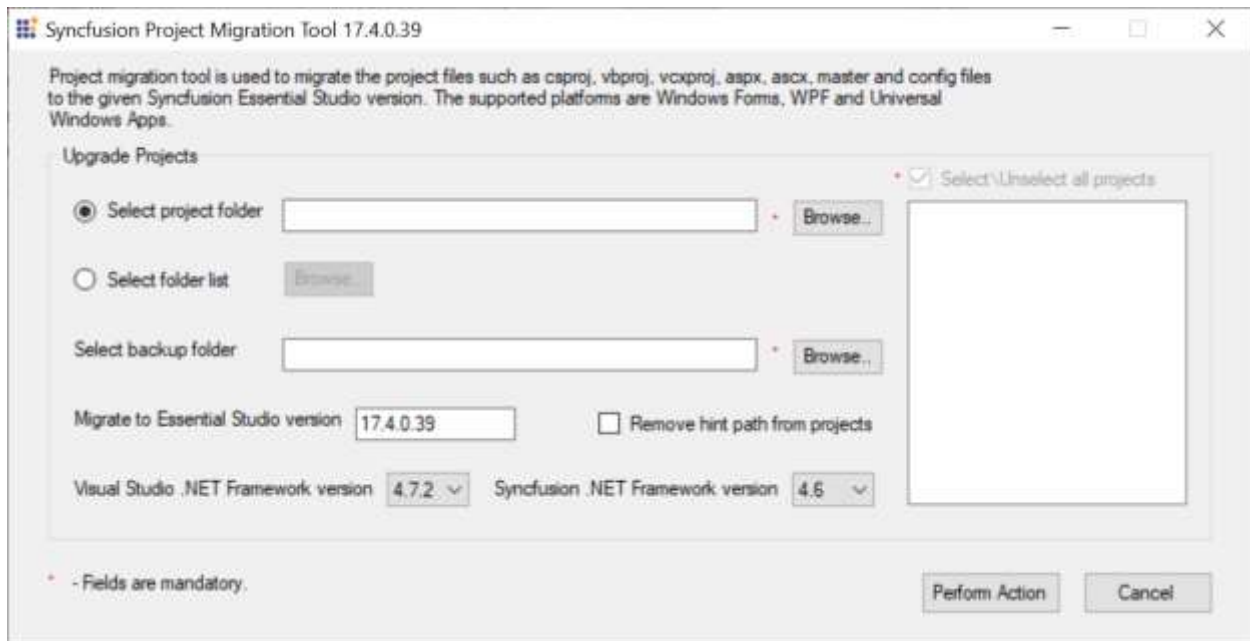
Windows Forms, WPF and Universal Windows Platform

1. Open the Project Migration Tool from the following location.

<div id="license">

Location: {Installed location}\Syncfusion\Essential Studio\{Platform}\x.x.x.x\Utilities\Project Migration\ProjectMigrationWindows.exe.

</div>



2. Select the project to be upgraded in the **Select Project Folder** field.

Note: If you have multiple projects in the same folder, you can select/deselect the projects of your choice. You can also select multiple projects location by using the **Select Folder List** option.

3. Select a folder to store a backup in the **Select backup folder** field.
4. By default, corresponding Essential Studio version will be displayed in the **Migrate to Essential Studio Version** field.
5. Select the required **Visual Studio .NET Framework version** and **Syncfusion .NET Framework version** from the respective drop-down list.
6. When you refer the Syncfusion assemblies from Hint path instead of GAC location then, copy the latest assemblies to that location manually or select the Remove hint path from projects check box, to remove the hint from the project. If you are migrating UWP project and you are using the UWP assemblies in your projects instead of SDK, don't enable the **Remove hint path from projects** option.

Note: If you have referred the Syncfusion assemblies to your project from hint path and you have selected the Remove hint path from projects check box in Project Migration utility, Syncfusion assemblies will be referred from GAC for Windows Forms and WPF platforms if the assemblies are installed in GAC

7. Click Perform Action. The utility upgrades the selected projects to the newer version.

For Web platforms.

For Web platforms, follow the steps suggested in the following documentation link to migrate the projects to the latest version.

ASP.NET Web Forms - [ASP.NET Migration](#)

ASP.NET MVC - [ASP.NET MVC Migration](#)

ASP.NET Core - [ASP.NET Core Migration](#)

Command Line

The following steps illustrate how to run the Project Migration tool through command line.

1. Open the Command Prompt in administrator mode and navigate to the following location.

```
<div id="license">
```

```
<b>Location:</b> {Installed Drive}\{ProgramFiles Folder}\Syncfusion\Essential
Studio\{version}\Utilities\Project Migration\
```

```
<b>Example:</b> C:\Program Files (x86)\Syncfusion\Essential
Studio\{Platform}\16.1.0.24\Utilities\Project Migration\
```

```
</div>
```

2. Run "ProjectMigrationConsole.exe" with the following arguments.

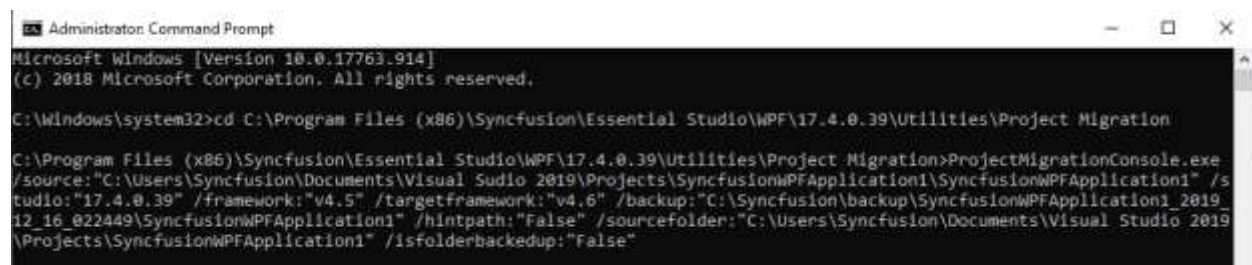
```
<div id="license">
```

```
<b>Arguments:</b> /source:"sourcepath" /studio:"Essential Studio version" /framework:"[v3.5] / [v2.0]
/ [v4.0] / [v4.5] / [v4.5.1] / [v4.6]" /targetframework:"[v3.5] / [v2.0] / [v4.0] / [v4.5] / [v4.5.1] / [v4.6]"
/backup:"Backupfolderpath" /hintpath:"[False] / [True]" /sourcefolder:"sourcefolderpath"
/isfolderbackedup:"[False] / [True]"
```

```
<b>Example:</b> /source:"C:\Users\syncfusion\Documents\Visual Studio
2017\Projects\SyncfusionWindowsFormsApplication1\SyncfusionWindowsFormsApplication1"
/studio:"16.1.0.24" /framework:"v4.6" /targetframework:"v4.7"
/backup:"C:\Syncfusion\backup\SyncfusionWindowsFormsApplication120180227022449\SyncfusionWin
dowsFormsApplication1" /hintpath:"False" /sourcefolder:"C:\Users\syncfusion\Documents\Visual
Studio 2017\Projects\SyncfusionWindowsFormsApplication1" /isfolderbackedup:"False"
```

```
</div>
```

The following screenshot illustrates this.



VSIX Installer

Syncfusion provides VSIX Installer for configuring the Syncfusion extensions in Visual Studio.

The following steps illustrate how to configure Syncfusion extensions in Visual Studio.

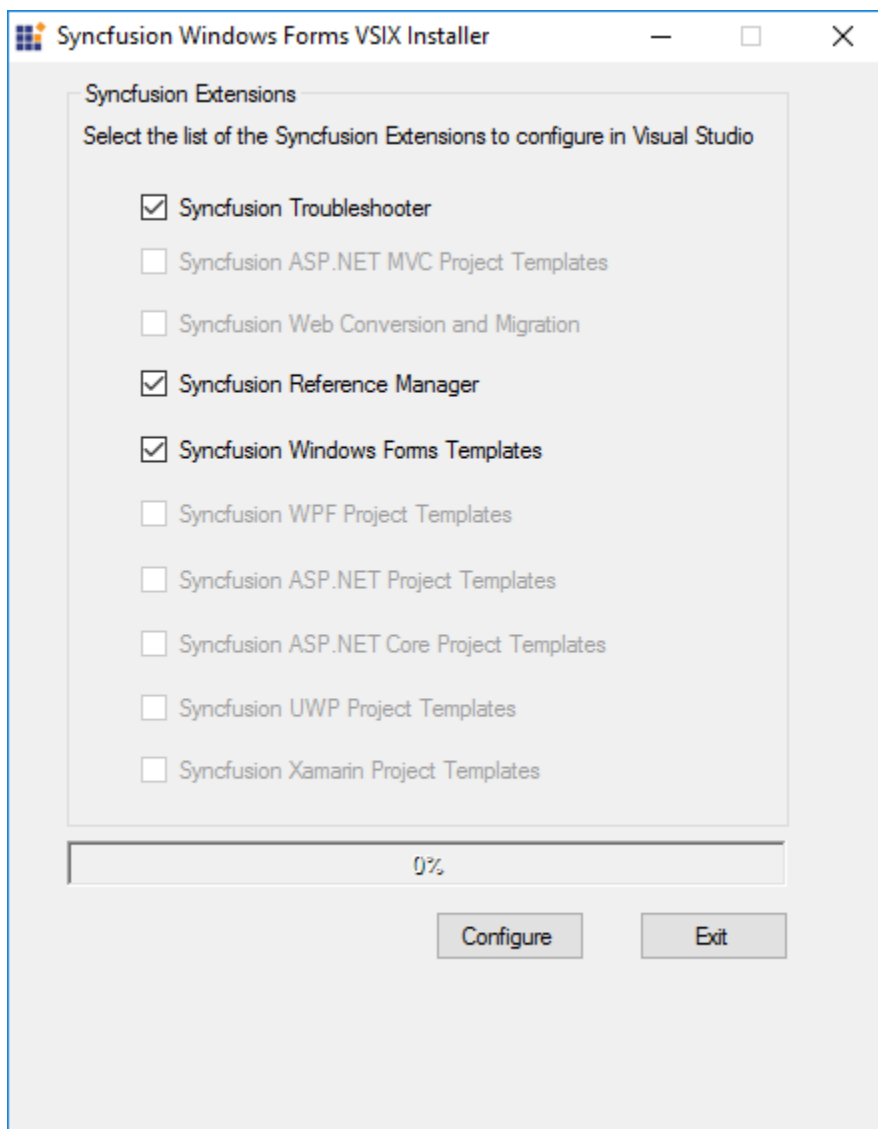
1. Open the SyncfusionVSIXInstallerWindows.exe from the following location.

<div id="license">

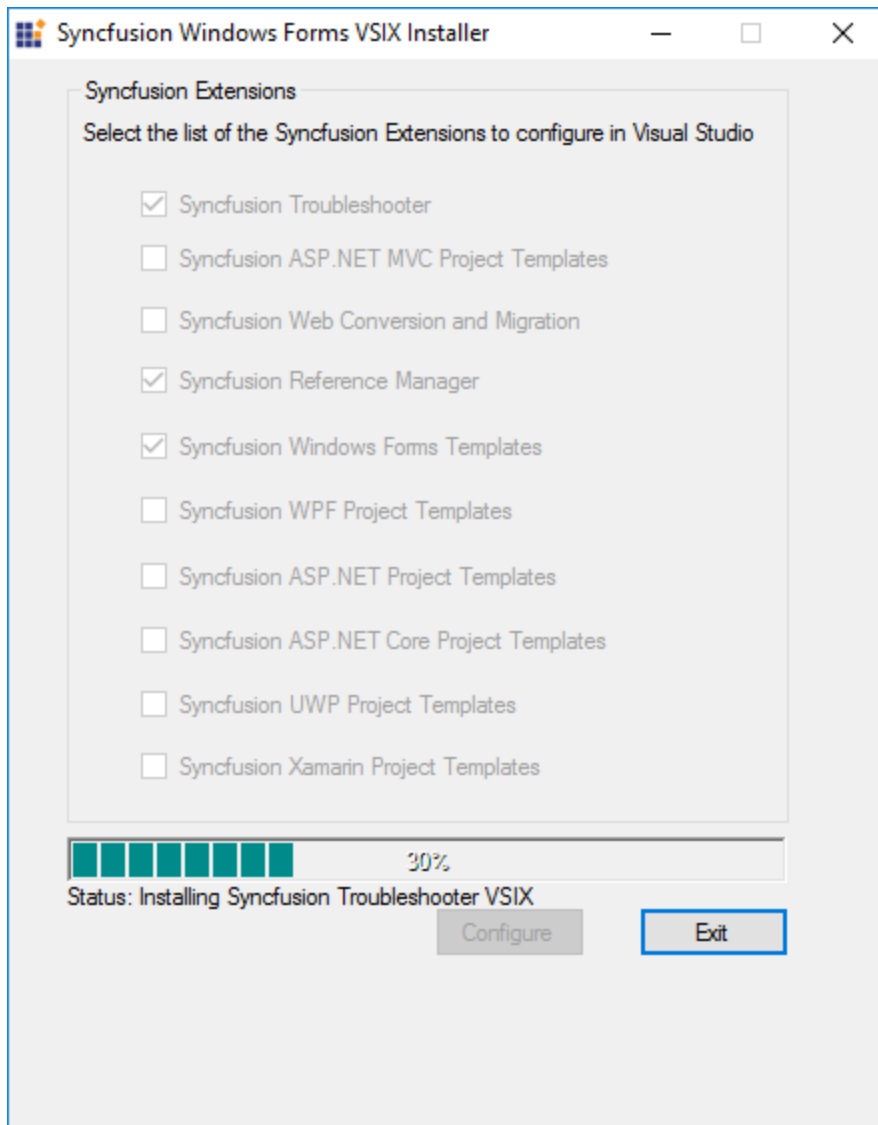
Location: {Installed Drive}\{ProgramFiles Folder}\Syncfusion\Essential Studio\{Platform}\{version}\Utilities\Extensions\VSIX Installer\

Example: C:\Program Files (x86)\Syncfusion\Essential Studio\WPF\15.2.0.40\Utilities\Extensions\VSIX Installer

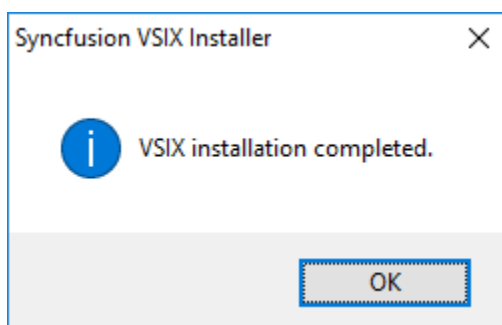
</div>



2. Select the Syncfusion extensions to configure in Visual Studio and click the Configure button.



3. Now, the selected Syncfusion extensions will be configured in Visual Studio.
4. Once the action is completed, a confirmation message is displayed. Click OK.

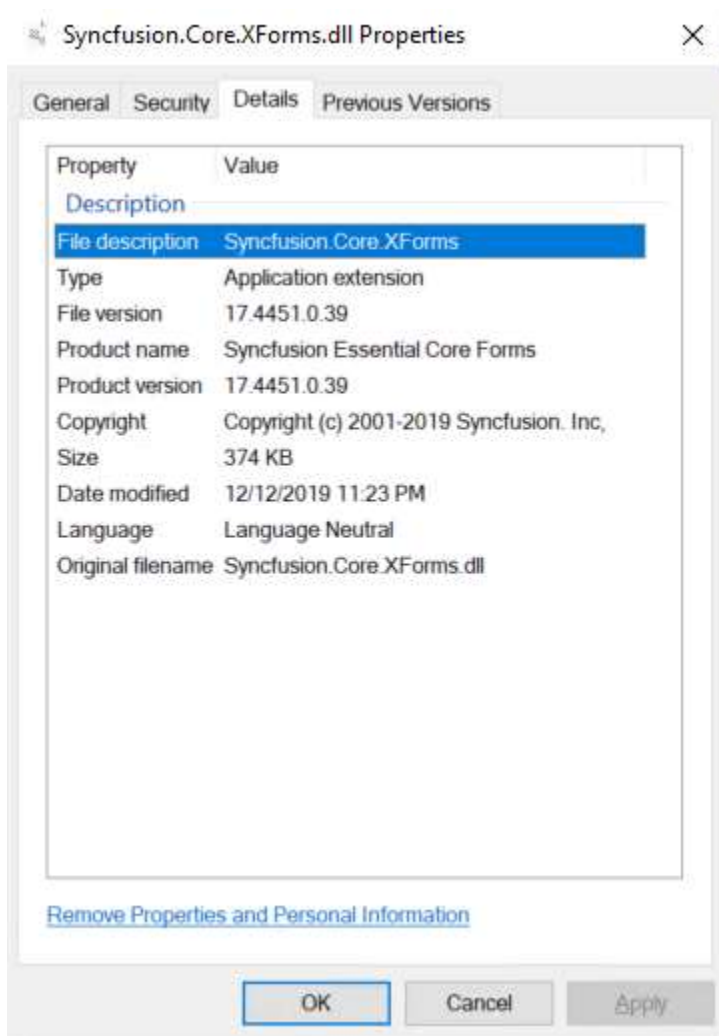


Assembly Information

Assembly Description

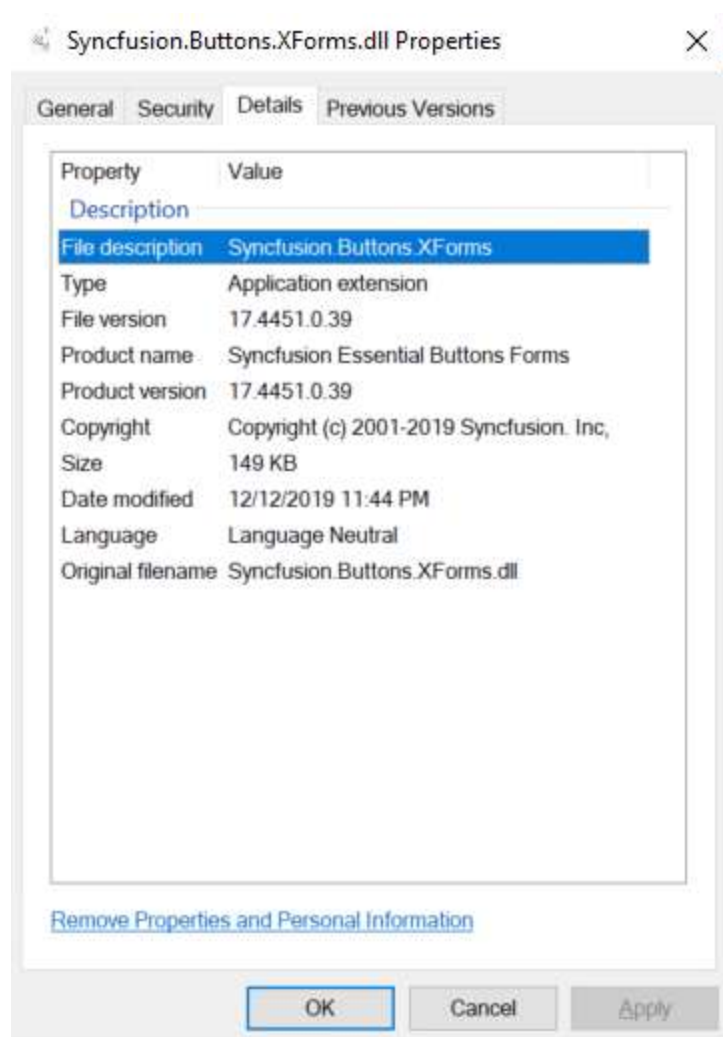
Starting with version 16.2.0.41 (2018 Vol 2), Syncfusion provides separate installer for Paying (Licensed installer) and Evaluation (Trial installer) customers. In the trial installer, License Enforced Syncfusion assemblies will be shipped and this information will be present in the File Description as **License Required (LR)**.

Example: Syncfusion.SfBarcode.XForms (LR)



In the License installer, licensed Syncfusion assemblies will be shipped and **LR** information will not be shown in the File description.

Example: Syncfusion.SfBarcode.XForms



Assembly Version Format

The assembly version format differs for each platform. Refer the following table for the assembly version's format for ASP.NET Web Forms, ASP.NET MVC (Essential JS 1), ASP.NET MVC (Essential JS 2), JavaScript (Essential JS 1), WPF, Windows Forms, UWP and Xamarin platforms.

| Platforms/Frameworks | 2.0 | 3.5 | 4.0 | 4.5 | 4.5.1 | 4.6 | netcoreapp3.0 |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| Windows Forms | 17.1200.0.x | 17.1350.0.x | 17.1400.0.x | 17.1450.0.x | 17.1451.0.x | 17.1460.0.x | 17.1300.0.x |
| WPF | NA | 17.1350.0.x | 17.1400.0.X | 17.1450.0.X | 17.1451.0.X | 17.1460.0.x | 17.1300.0.x |
| UWP | NA | NA | NA | NA | NA | 17.1460.0.x | NA |
| Xamarin | NA | NA | NA | NA | 17.1451.0.x | NA | NA |

| | | | | | | | |
|------------------------------------|----|-------------|--|---------------------|-------------|-------------|----|
| ASP.NET MVC (Essential JS 2) | NA | NA | MVC 4 - 17.1400.0.x | MVC 5 - 17.1500.0.x | NA | NA | NA |
| ASP.NET Web Forms (Essential JS 1) | NA | 17.1350.0.x | 17.1400.0.x | 17.1450.0.x | 17.1451.0.x | 17.1460.0.x | NA |
| ASP.NET MVC (Essential JS 1) | NA | NA | <ul style="list-style-type: none"> • MVC 3 - 17.1300.0.x • MVC 4 - 17.1400.0.x | MVC 5 - 17.1500.0.x | NA | NA | NA |
| JavaScript (Essential JS 1) | NA | 17.1350.0.x | 17.1400.0.X | 17.1450.0.X | 17.1451.0.X | 17.1460.0.X | NA |

For .NET Standard Frameworks:

| | | |
|-----------------|-----------------|-----------------|
| netstandard 1.2 | netstandard 1.4 | netstandard 2.0 |
| 17.1120.0.x | 17.1140.0.x | 17.1200.0.x |

The following Essential Studio platforms do not have assembly support.

- JavaScript (Essential JS 2)
- PHP (Essential JS 1)
- JSP (Essential JS 1)

Supported Framework version for Essential Studio Assemblies

Following are the supported Framework versions of the Essential Studio assemblies

| Essential Studio platform | Supported Framework version |
|-------------------------------|--|
| Xamarin | netstandard 2.0. Find the platform specific version here |
| UWP | Target Platform version UAP 10.0.16299 and above |
| WPF | .NET Framework 3.5 to 4.6 and .NET Core 3.0 |
| Windows Forms | .NET Framework 2.0 to 4.6 and .NET Core 3.0 |
| ASP.NET MVC (Essential JS 2) | MVC 4 and MVC 5 |
| ASP.NET Web Forms | .NET Framework 3.5 to 4.6 |
| ASP.NET MVC (Essential JS 1) | MVC 3, MVC 4 and MVC 5 |
| ASP.NET Core (Essential JS 1) | netstandard 1.2 to 2.0 and netcoreapp 2.1 to 3.1 |

| | |
|-----------------------------|---------------------------|
| JavaScript (Essential JS 1) | .NET Framework 3.5 to 4.6 |
|-----------------------------|---------------------------|

Add-On Installer of Syncfusion Essential Studio

QTP Add-on

Syncfusion supports Quick Test Professional software with the help of Essential Test Studio, termed as QTP add-on, specially designed to meet the requirements of professionals who need to test your controls. Essential Test Studio contains Custom Libraries that helps Quick Test Professional record and replay the scripts of the application containing the Syncfusion controls. These custom libraries are built with the help of Quick Test Professional .NET Add-in extensibility. For more details, refer to Mercury Quick Test Professional Help.

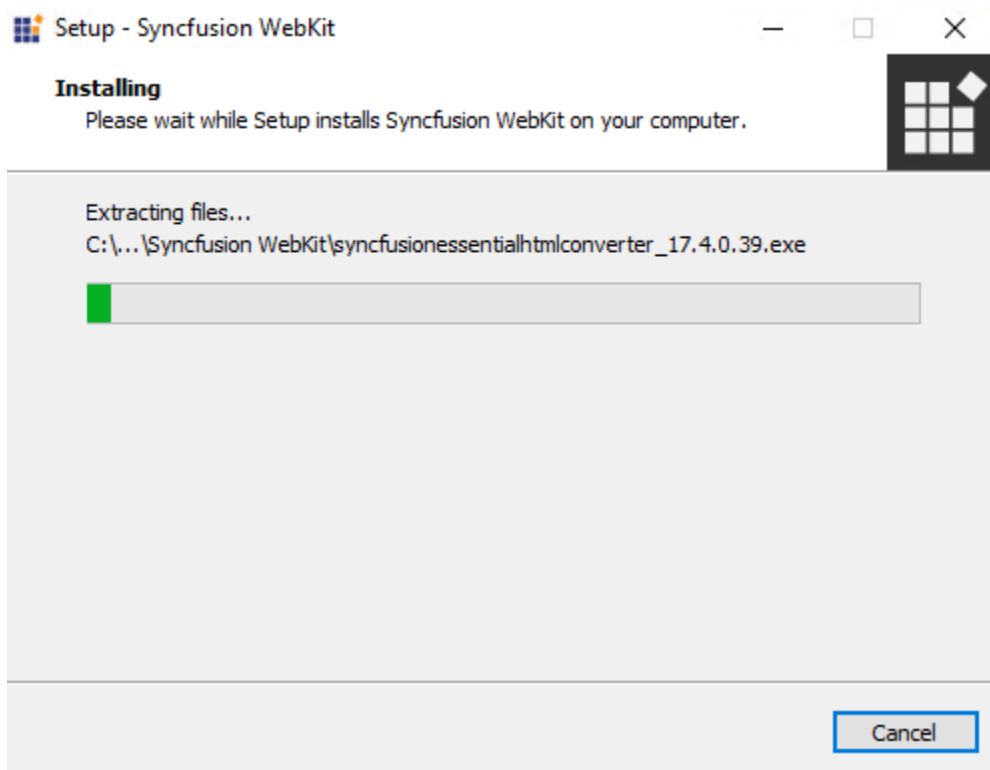
Essential Test Studio supports the following Windows-based controls.

Essential Grid

- Grid control
- Grid Grouping control
- GridDataBoundGrid control
- Grid List control
- TabBar Splitter control

Essential Tools

- Docking Package
- Menus Package
- Command Bars Package
- Tree Package
- Editors Package
- Tabs Package
- Navigation Package
- Notification Package



Note: You need to install Syncfusion Essential Studio of the same version and Mercury QuickTestProfessional, before installing this add-on.

CAB Add-on

The Syncfusion Essential CAB Enabling Kit provides extensible support for working with CAB easily. It helps developers enhance the look and feel of their applications, as well as speed up the development process with customizable UI's. The workspaces are components or controls that encapsulate visual effects and layout strategies without affecting the business logic.

The Essential CAB Enabling Kit offers the following workspaces and UI Elements.

Workspaces

- Dockable Workspace
- DockingClientPanel Workspace
- GroupBar Workspace
- PopupControlContainer Workspace
- SplashPanel Workspace
- SplitContainerAdv Workspace
- TabControlAdv Workspace
- TabbedMDIManagerWorkspace
- XPTaskPane workspace

UIElements

- XP Menus
- TreeViewAdv

- StatusBarAdv
- StatusStripEx
- ContextMenuStripEx
- RibbonControlAdv
- XPTaskBar

Pre-Requisites

- Visual Studio 2005/2008
- Microsoft Composite UI Application Block Framework
- Syncfusion Essential Studio (Essential Tools – Windows Forms)

Framework Support

Essential CAB supports Visual Studio Framework versions V2.0, V3.5, V4.0, V4.5, and V4.5.1.

WebKit HTML converter

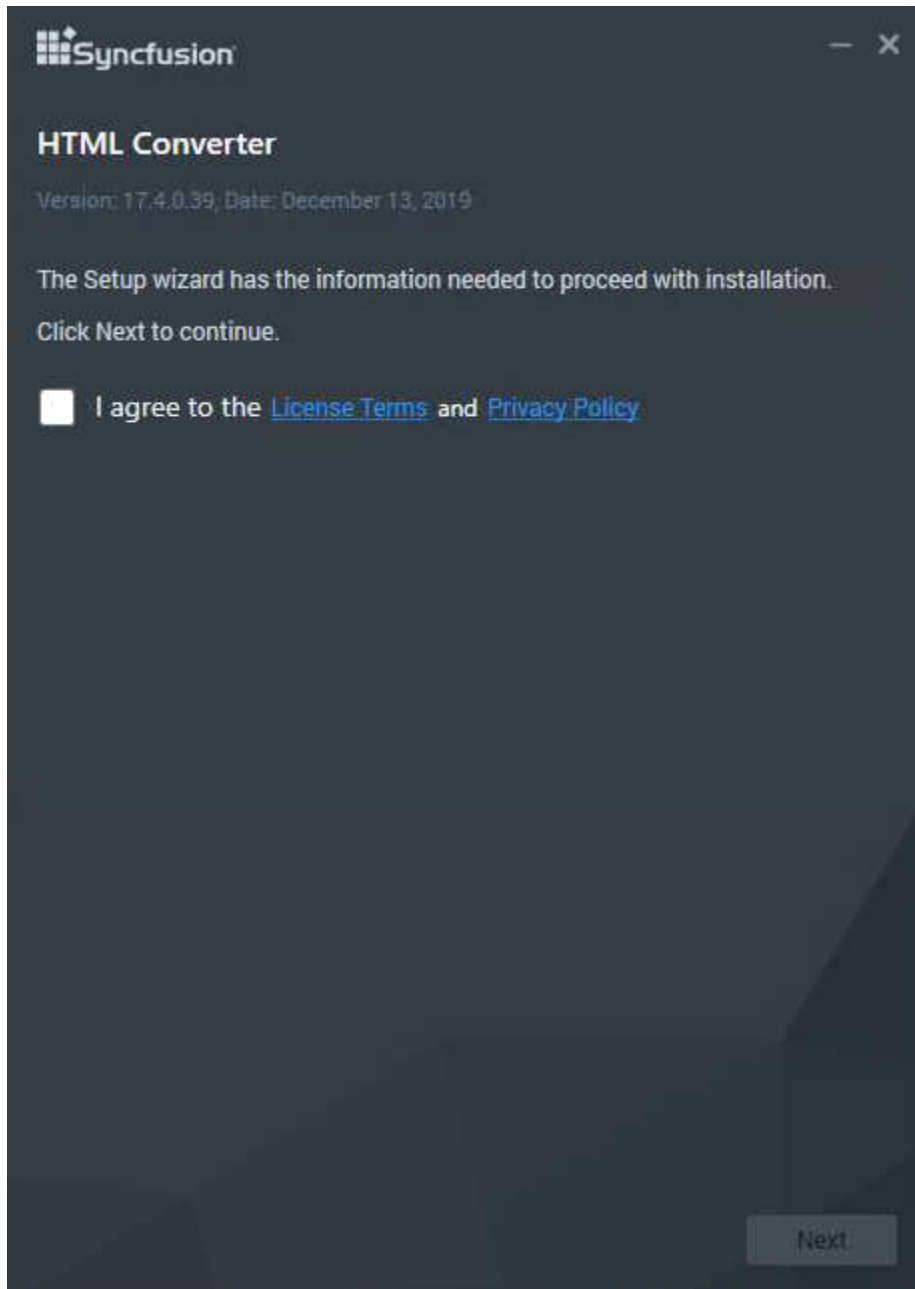
Syncfusion introduces WebKit HTML converter from the version 13.1.0.21 of Essential Studio that supports HTML to PDF conversion by using the WebKit rendering engine. This converter works on both x86 and x64 environments and can be easily integrated into any application on .NET platforms such as Windows Forms, WPF, ASP.NET Web Forms, and ASP. NET MVC to convert URLs, HTML string, images, and SVG to PDF.

Step-by-Step Installation

The following are the steps to install the WebKit installer.

1. Double-click the Syncfusion WebKit Installer. The installer Wizard opens and extracts the package automatically.

![(Installer Extraction Wizard)(Add-onimages/Step-by-Step-Installationimg1.png)]

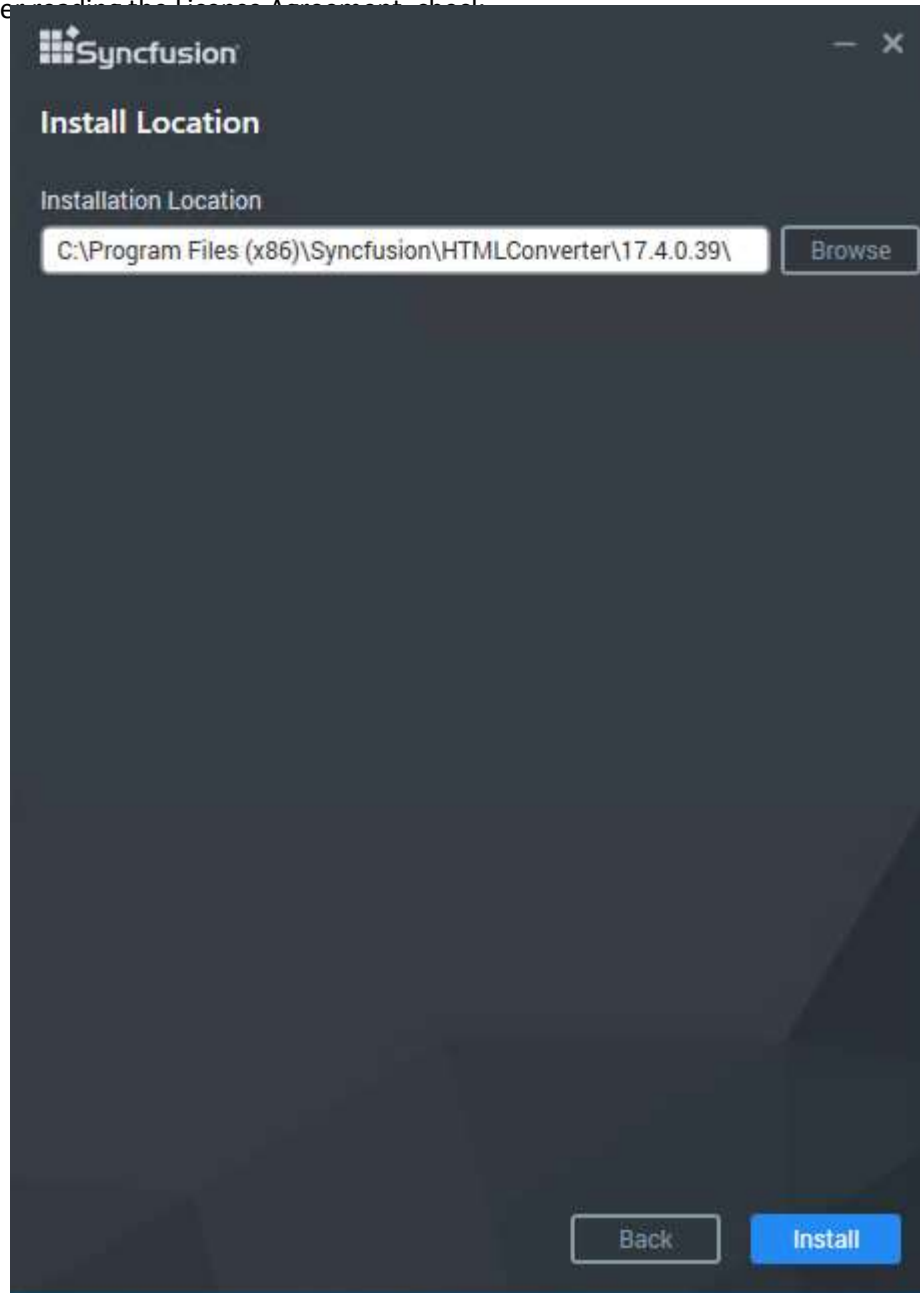


Note: No key is required for Syncfusion WebKit HTML Converter.

2. Once the unzip operation is complete, License Agreement screen opens.

![[License Agreement]](Add-onimages/Step-by-Step-Installationimg5.png)

3. After reading the License Agreement, check



the

License Terms and Conditions check box.

I agree to the

4. Click Next. Installation location will be displayed.

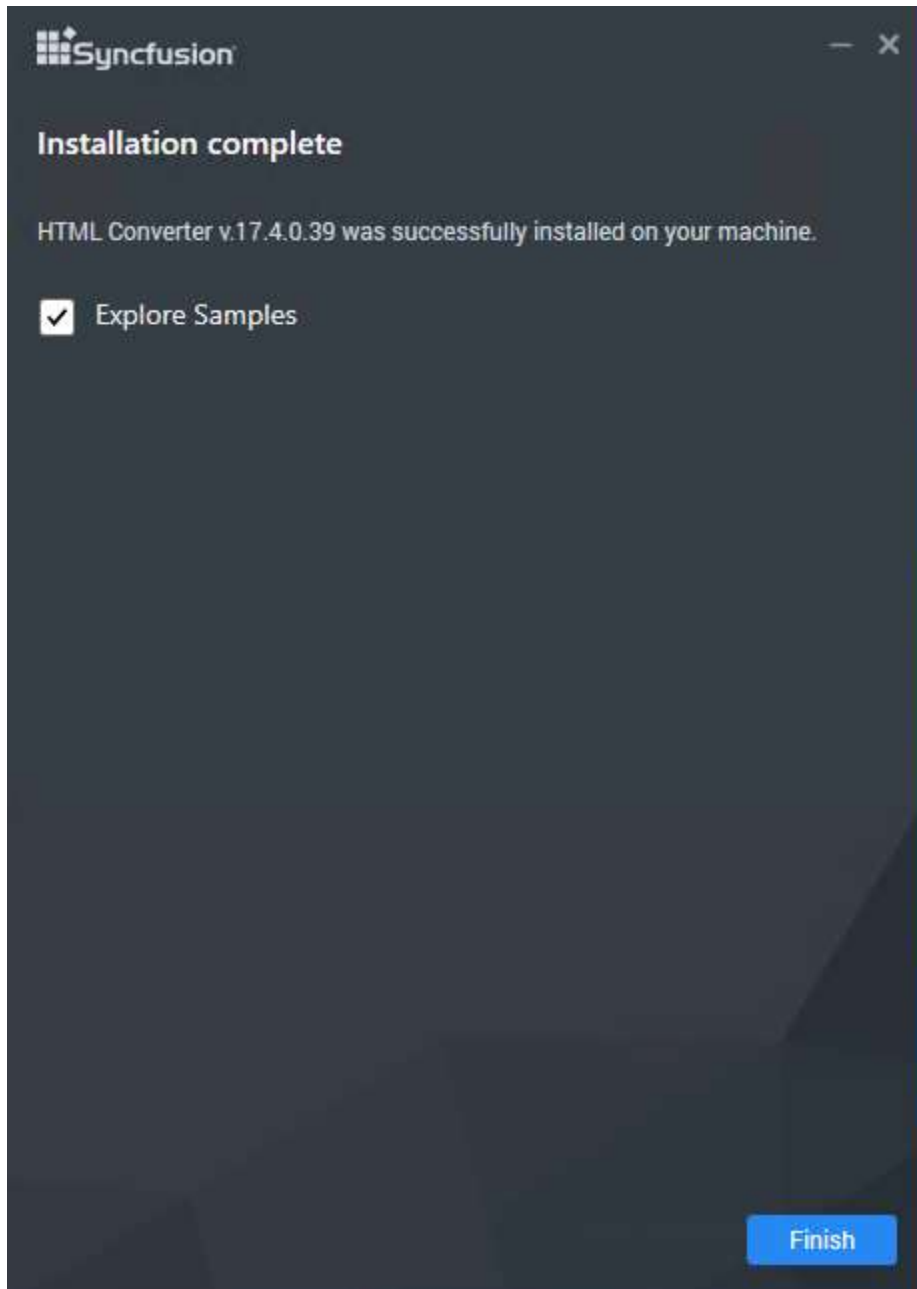
![Installation location](Add-onimages/Step-by-Step-Installationimg6.png)



Note: You can also browse and choose a location by clicking Browse.

5. To install in the displayed default location, click Install.

![Installation progress](Add-onimages/Step-by-Step-Installationimg8.png)



Note: The Completed

screen is displayed once the WebKit is installed.

![[Installation Complete]](Add-onimages/Step-by-Step-Installationimg10.png)

6. Click Finish. WebKit is installed in your system.

Command Line

The Syncfusion WebKit Installer supports Command Line Install and Uninstall. The following sections illustrate this ability.

Command Line Installation

Follow the given steps to install through Command Line in Silent mode.

1. Double-click the Syncfusion WebKit Installer. The Self-Extractor Wizard opens and extracts the package automatically.
2. The syncfusionessentialwebkit _(version).exe file is extracted into the Temp folder.
3. Run %temp%. The Temp folder opens. The syncfusionessentialwebkit _(version).exe file is available in one of the folders.
4. Copy the syncfusionessentialwebkit _(version).exe file in local drive. Example: D:\temp
5. Cancel the wizard.
6. Open Command Prompt in administrator mode and pass the following arguments:

Arguments: "Installer file path\syncfusionessentialwebkit _(version).exe" /Install silent [/log "{Log file path}"] [/InstallPath:{Location to install}]

Note: [...] – Arguments inside the square brackets are optional.

Example: "D:\Temp\syncfusionessentialwebkit_13.2.0.30.exe" /Install silent /log
"C:\Temp\EssentialWebkit.log" /InstallPath:C:\Syncfusion\x.x.x.x

7. WebKit is installed.

Note: *x.x.x.x needs to be replaced with the WebKit version installed on your machine.* Above steps applicable from the version 13.2.0.x.

Command Line Uninstallation

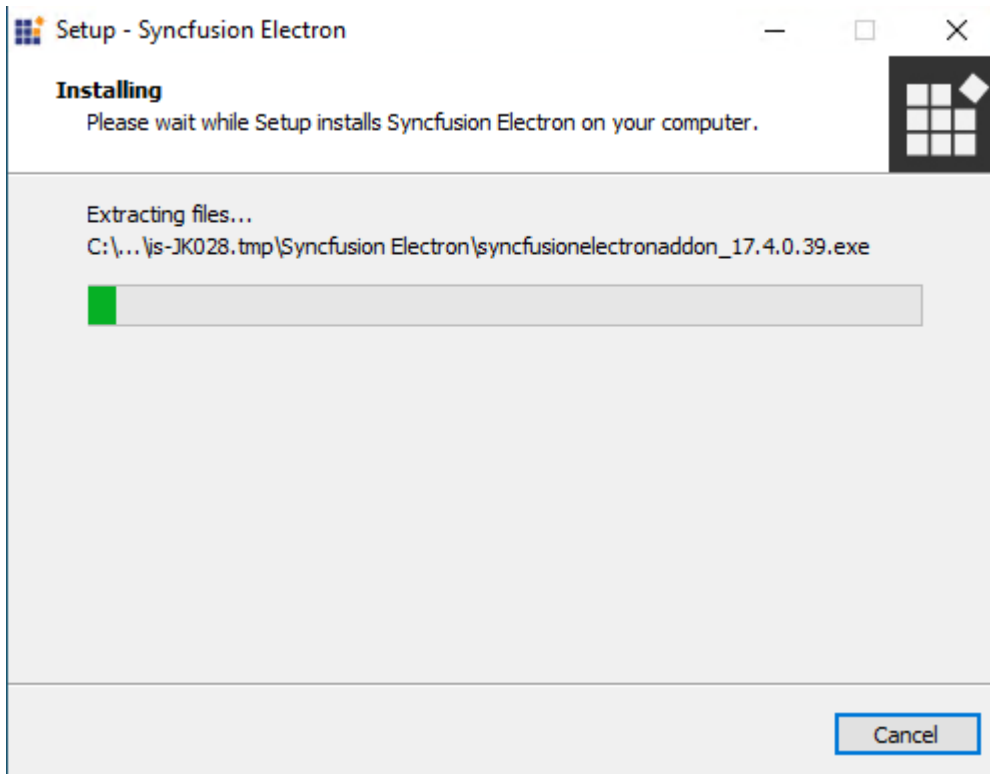
Syncfusion WebKit Installer supports uninstalling through Command Line in Silent mode. The following steps help you uninstall the Webkit.

1. When you do not have the extracted installer (syncfusionessentialwebkit _(version).exe) then follow the steps from 2 to 7.
2. Double-click the Syncfusion Essential Studio installer. The Self-ExtractorWizard opens and extracts the package automatically.
3. The syncfusionessentialwebkit _(version).exe file gets extracted into the Temp folder.
4. Run %temp%. The Temp folder opens. The syncfusionessentialwebkit _(version).exe file is available in one of the folders.
5. Copy the syncfusionessentialwebkit _(version).exe file in local drive. Example: D:\temp
6. Cancel the wizard.
7. Open the Command Prompt in administrator mode and pass the following arguments:

Arguments: "Installer file path\ syncfusionessentialwebkit _(version).exe" /uninstall silent

Example: "D:\Temp\ syncfusionessentialwebkit _13.2.0.30.exe" /uninstall silent

8. WebKit is uninstalled.



Note: *x.x.x.x need to be replaced with the WebKit version installed in your machine. Above steps applicable from the version 13.2.0.x.*

Electron

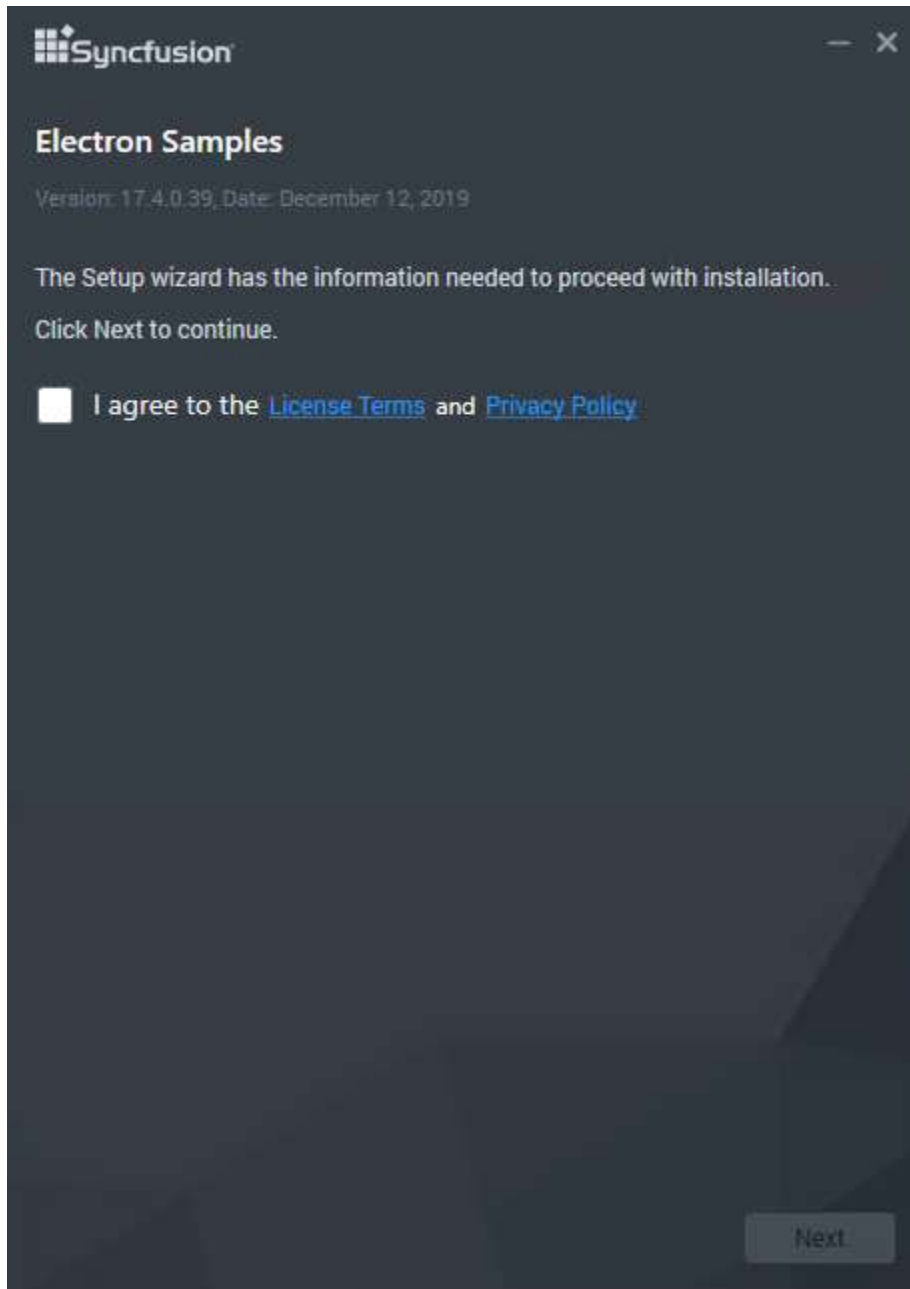
Electron (Previously known as Atom Shell) is used create a cross platform desktop application for different OS like Linux, Windows and OS X by using JavaScript and able to access platform specific native API's.

Step-by-Step Installation

The following are the steps to install the Electron installer.

1. Double-click the Syncfusion Electron installer. The installer Wizard opens and extracts the package automatically.

![Setup Extraction Wizard](Add-onimages/Electron-Setupimg1.png)



Note: No key is required for Syncfusion Electron.

2. Once the unzip operation is complete, License Agreement screen opens.

![[License Agreement]](Add-onimages/Electron-Setupimg2.png)

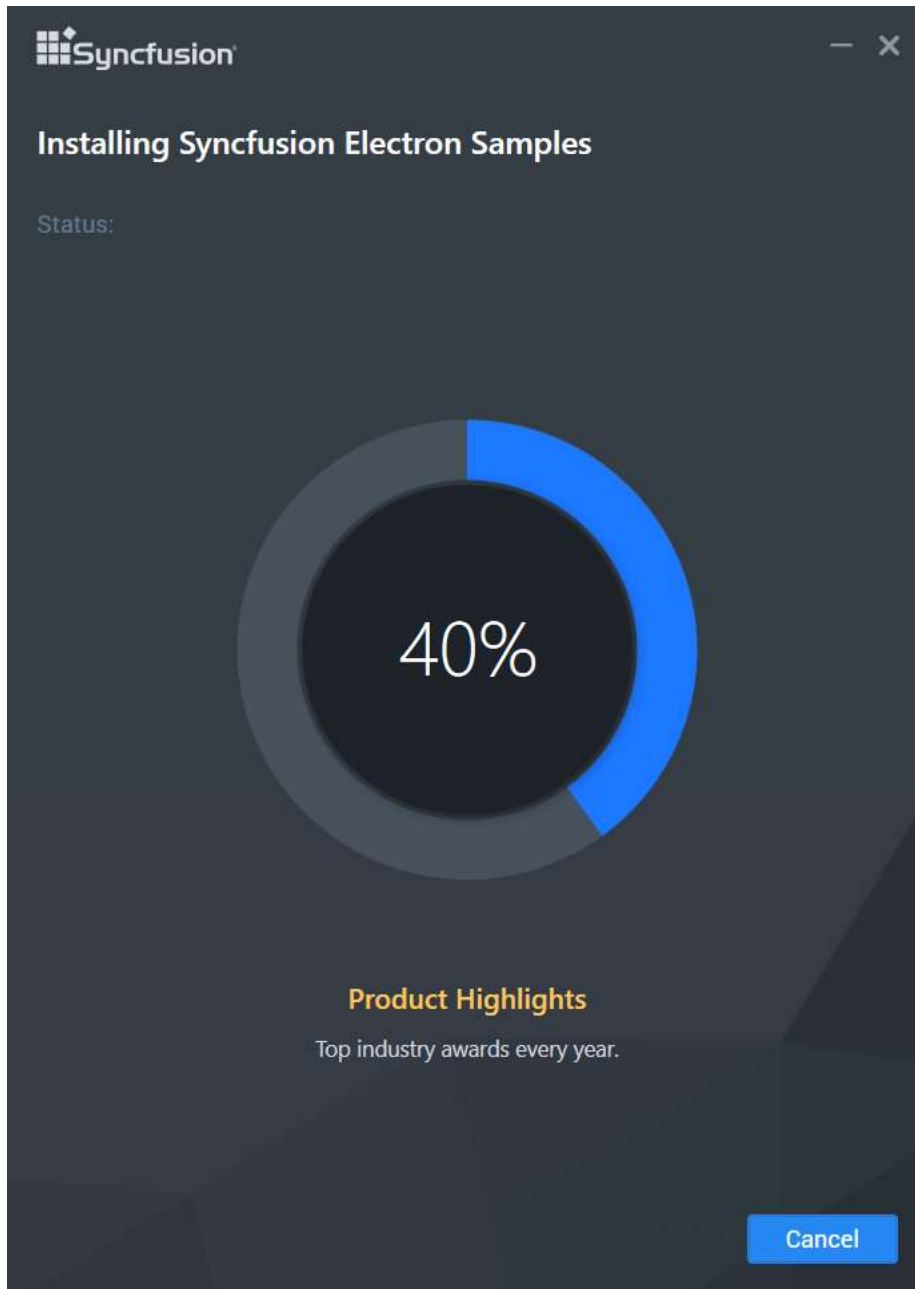
3. After reading the License Agreement, check



the **I agree to the License Terms and Conditions** check box.

4. Click Next. Installation location will be displayed.

![Installation location](Add-onimages/Electron-Setupimg3.png)

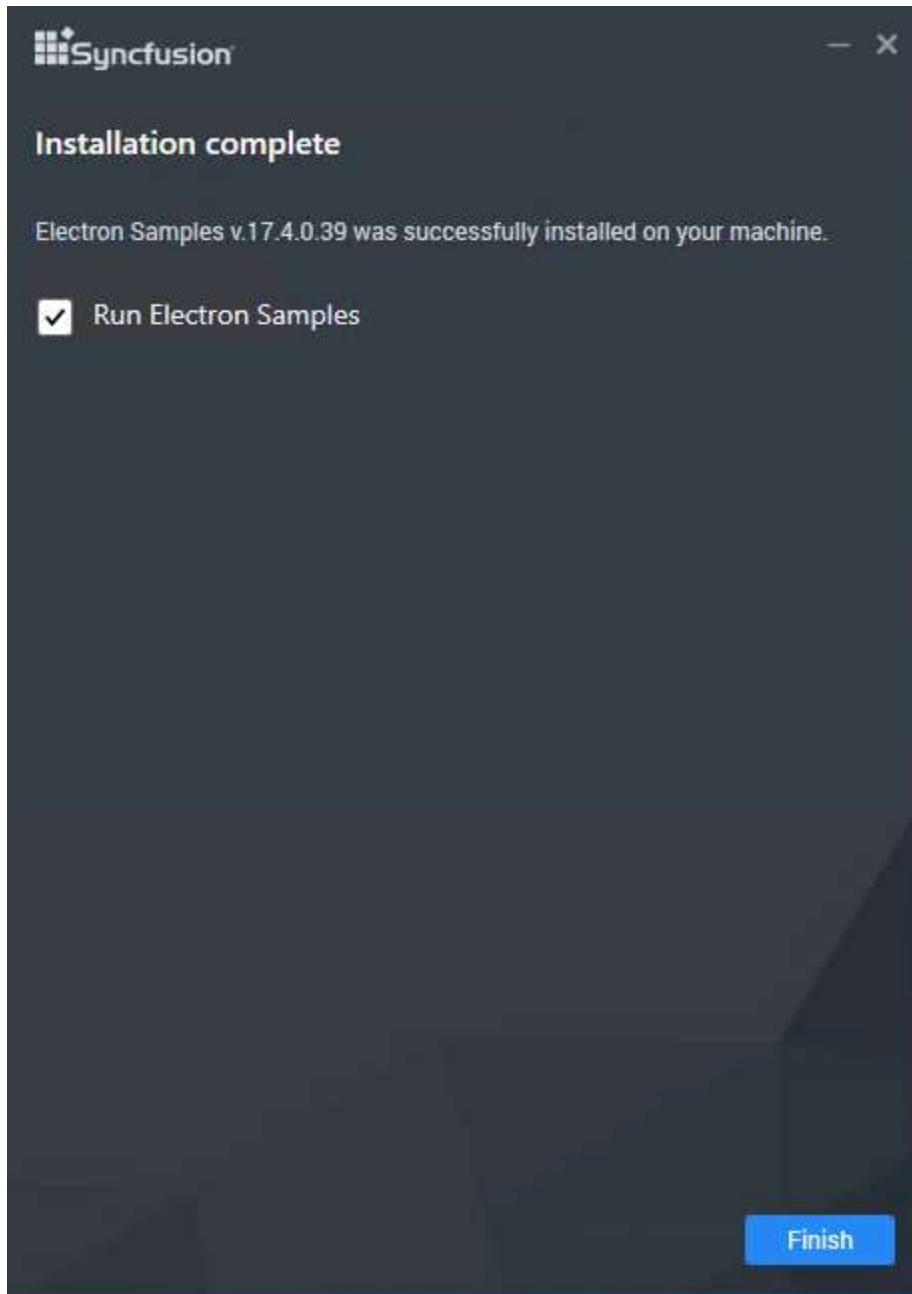


Note: You can also

browse and choose a location by clicking Browse.

5. To install in the displayed default location, click Install.

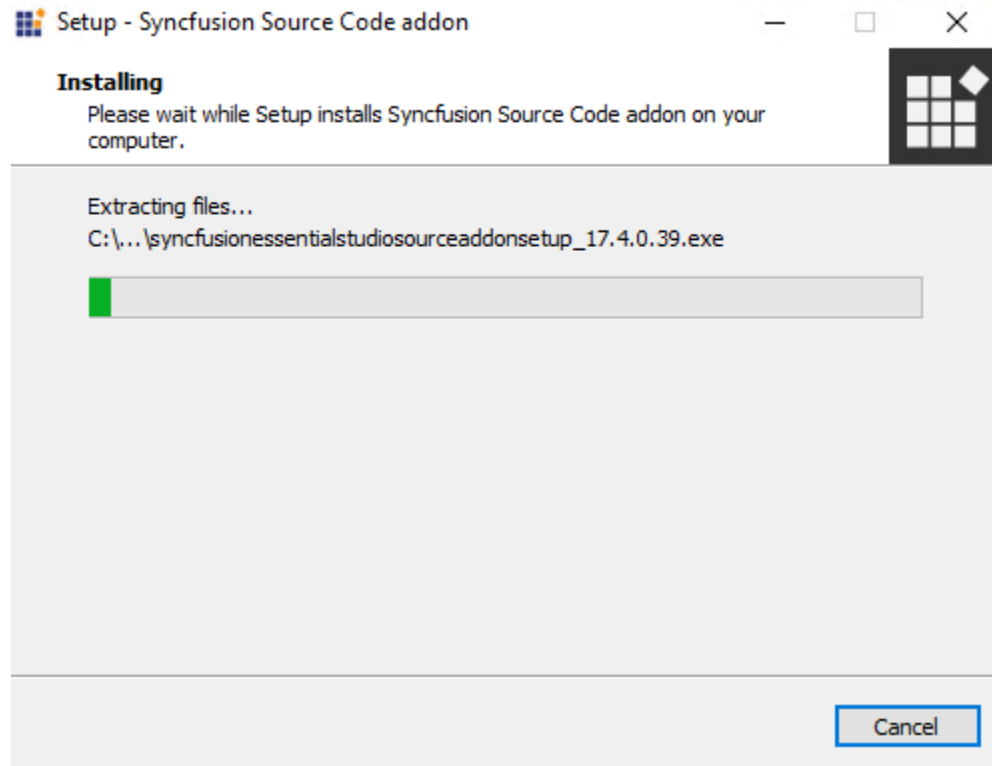
![Installation progress](Add-onimages/Electron-Setupimg4.png)



Note: The Completed

screen is displayed once the Electron is installed.

![[Installation Complete]](Add-on



Setupimg5.png)

images/Electron-

6. Click Finish. Electron is installed in your system.

Source Code Add-on installer

Overview

Syncfusion provides Source Code Add On installer in which you can modify the Syncfusion source and make use of the customized assemblies. All the Essential Studio sources will be packed in this installer and you can easily build the customized source. Source License is required for downloading and installing the Source Code Add-on installer.

Step-by-Step Installation

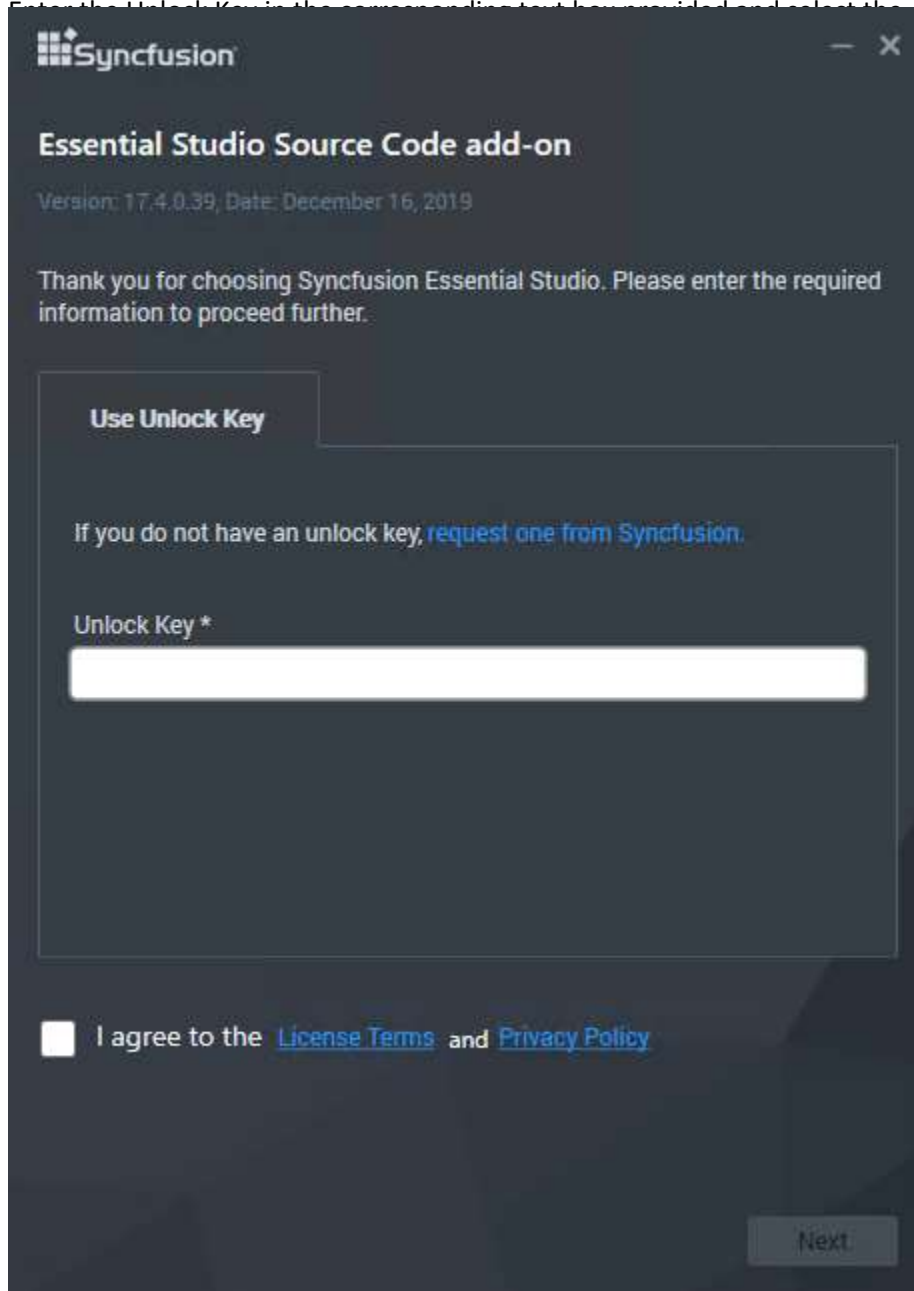
The following steps show how you can install the Essential Studio Source Code Add-on installer.

1. Double-click the Syncfusion Essential Studio Source code add-on installer. The installer Wizard opens and extracts the package automatically..

![[Installer Extraction Wizard]](Source-codeimages/Step-by-Step-Installationimg1.png)

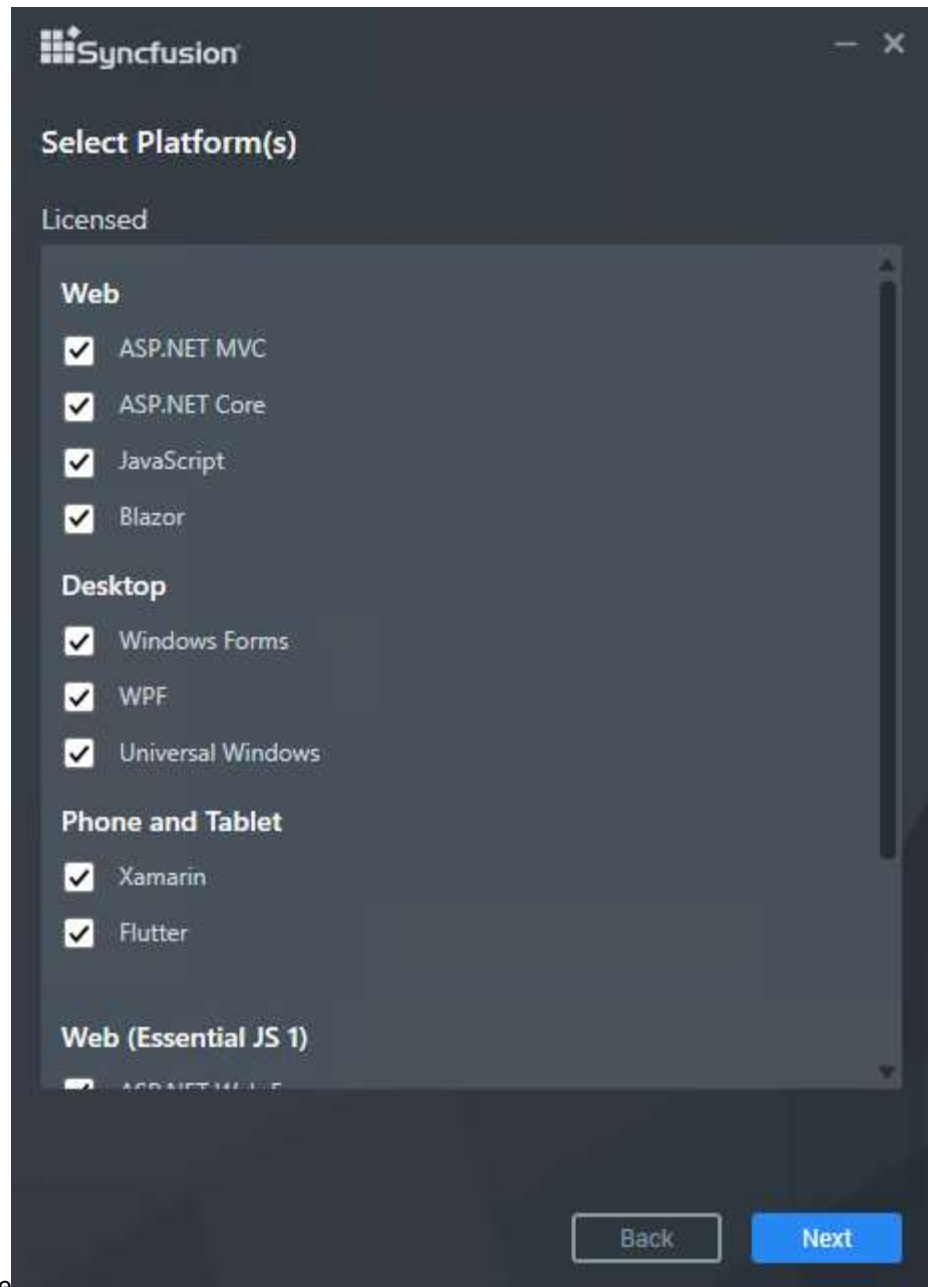
Note: The installer extracts the syncfusionessentialsourcecodeaddon(version).exe dialog, displaying the unzip operation of the package.

2.



The screenshot shows a dark-themed installer window for the Syncfusion Essential Studio Source Code add-on. The window has a title bar with the Syncfusion logo and standard window controls. The main content area is titled "Essential Studio Source Code add-on" and includes the version "17.4.0.39" and date "December 16, 2019". A message states: "Thank you for choosing Syncfusion Essential Studio. Please enter the required information to proceed further." Below this, there is a tabbed interface with the "Use Unlock Key" tab selected. Inside this tab, there is a text prompt: "If you do not have an unlock key, [request one from Syncfusion.](#)" followed by a label "Unlock Key *" and a text input field. At the bottom of the window, there is a checkbox labeled "I agree to the [License Terms](#) and [Privacy Policy](#)" and a "Next" button.

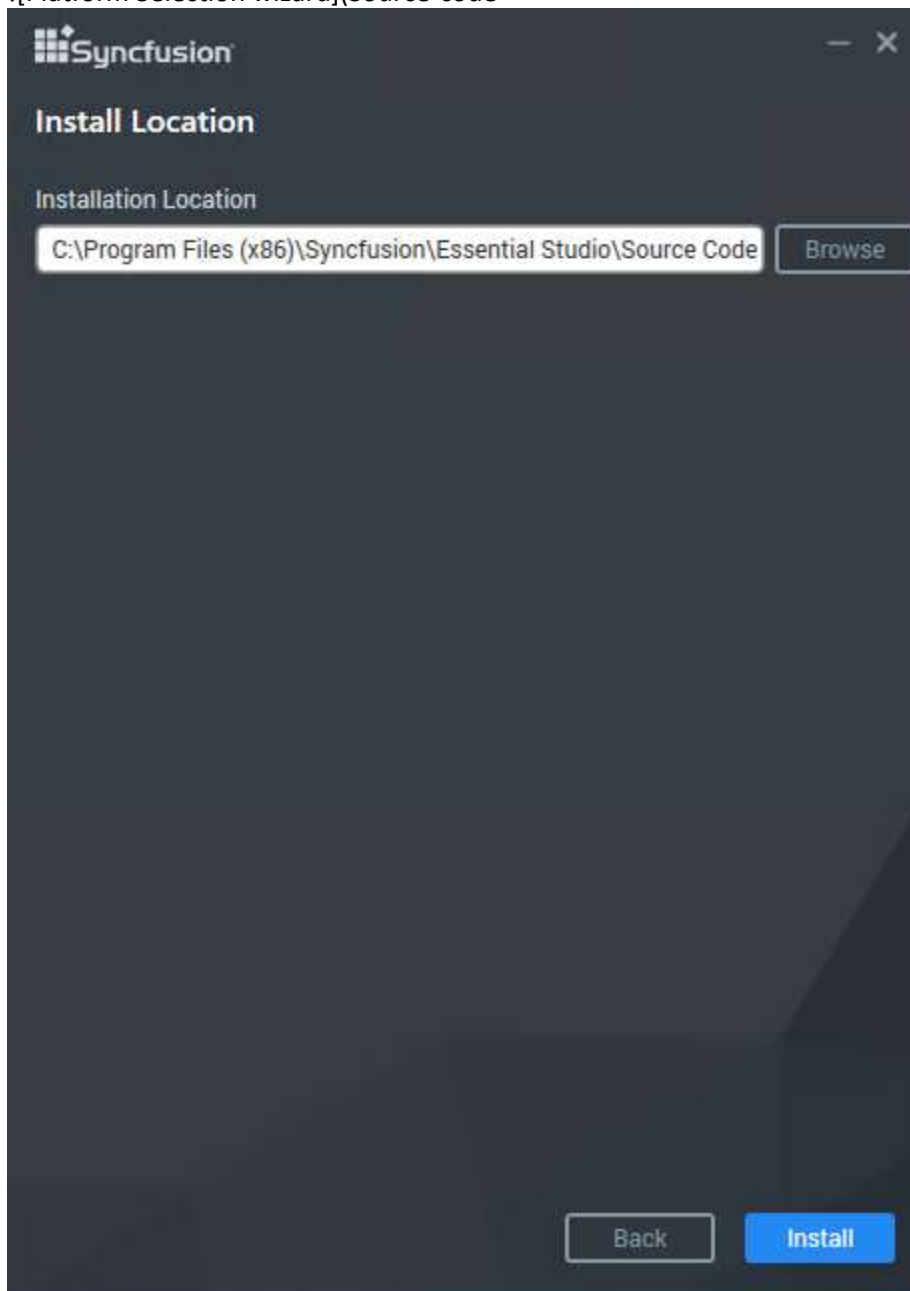
I agree to the
License Terms and Conditions check box after reading the License Agreement.



![Product key](Source-code
images/Step-by-Step-Installationimg2.png)

3. Click Next. Select the platforms to be installed.

![[Platform Selection wizard]](Source-code



Installationimg4.png)

images/Step-by-Step-

4. Click Next. The Source Code Add On installation location will be displayed

![[Install Location]](Source-codeimages/Step-by-Step-Installationimg5.png)

Note: From the 2018 Volume 2 release, Source Code Add On will be installed in below location.



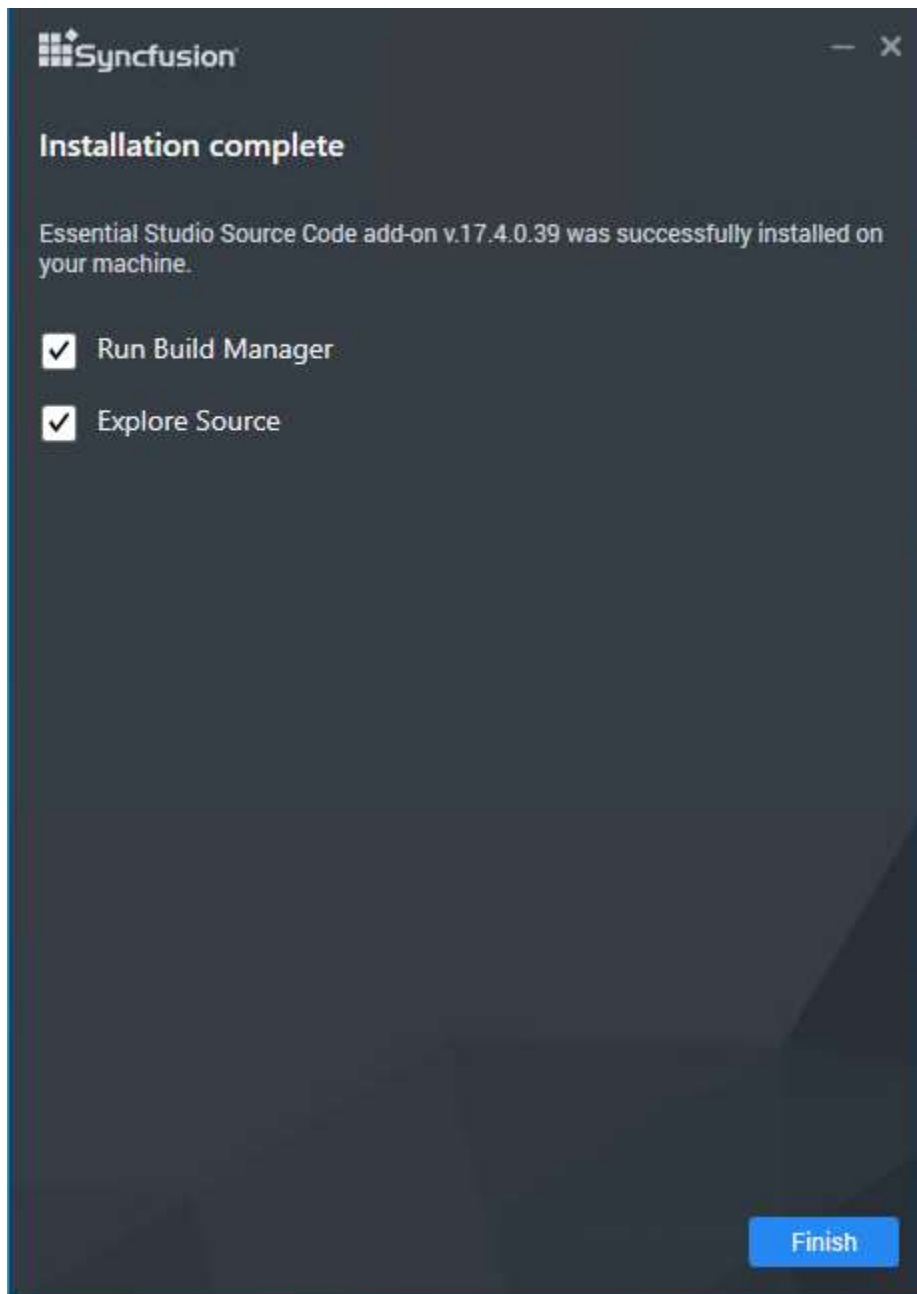
Location:

{ProgramFilesFolder}\Syncfusion\Essential Studio\Source Code Add On\ {version}

You can change the install location by clicking the Browse button.

5. Click Install.

![Install Progress](Source-codeimages/Step-by-Step-Installationimg6.png)



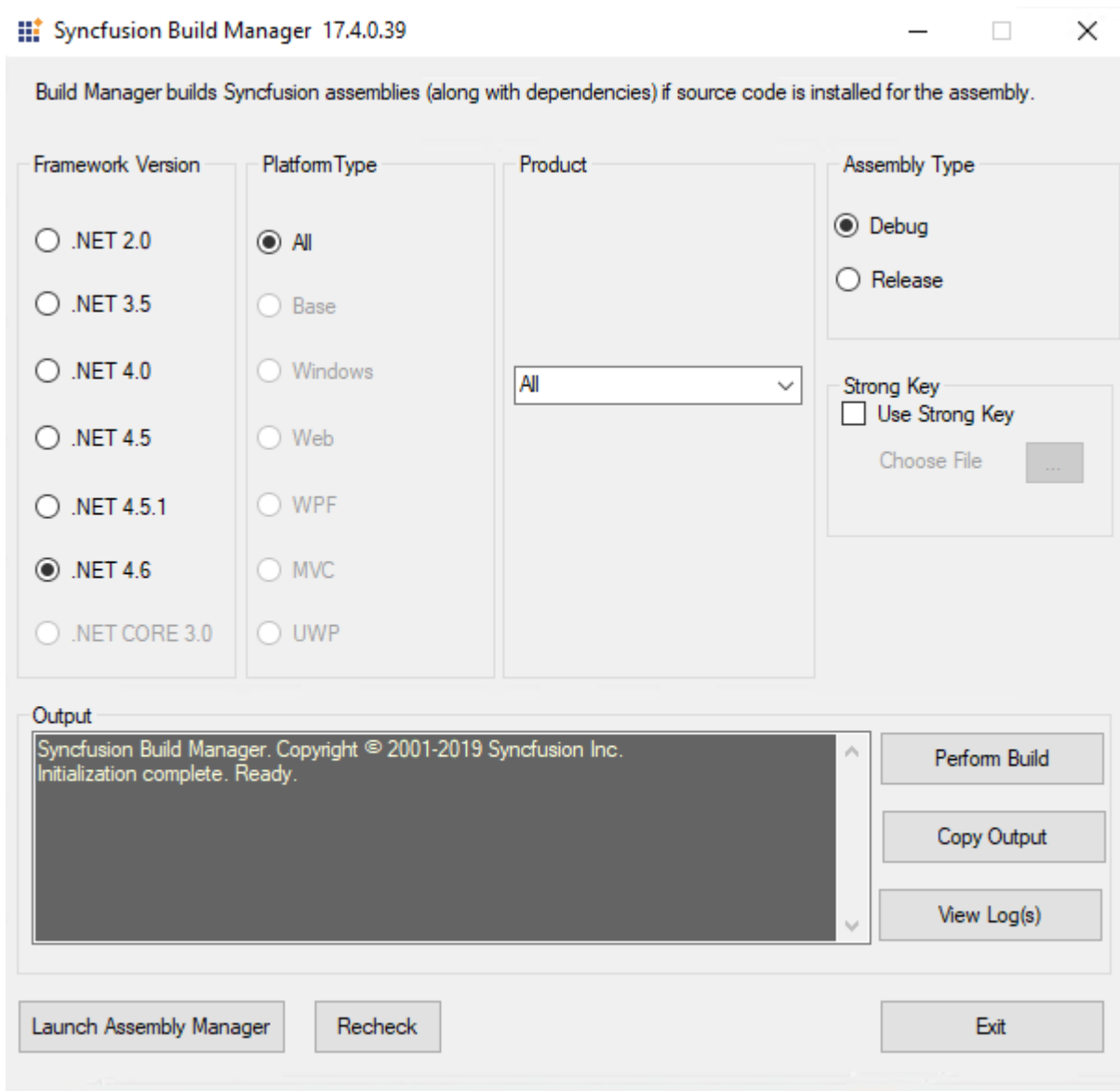
Note: The Completed screen is displayed once the selected platform is installed.

6. Select the Run Build Manager check box to launch the Build Manager after installing.
7. Click Finish. Essential Studio Source Code Add On is installed in your system.

![Installation Complete](Source-codeimages/Step-by-Step-Installationimg7.png)

Build Manager

Build Manager allows you to build or debug the assemblies using Syncfusion source code. You can launch the Build Manager from the following location.



Location:{ProgramFilesFolder}\Syncfusion\Essential Studio\Source Code Add On\{version}\Utilities\Build Manager\Buildmanagerwindows.exe

!{Build Manager}(Utilitiesimages/Build-Managerimg2.png)

The output assemblies of the Build Manager will be placed in the below location.

Output Location: {ProgramFilesFolder}\Syncfusion\Essential Studio\Source Code Add On\{version}\UserAssemblies\{version}\{framework}\{Debug\Release}

You can select the required setting in the Syncfusion Build Manager x.x.x.x window.

[Build Manager Settings](#)

This window contains several sections.

1. Framework Version

The Framework Version group box has six options: .NET 2.0, .NET 3.5, .NET 4.0, .NET 4.5, .NET 4.5.1 and .NET 4.6.

- When Visual Studio 2015 is not installed in your system, the .NET 4.5.1 option is selected by default.
- When Visual Studio 2013 is not installed in your system, the .NET 4.5 option is selected by default.
- When Visual Studio 2012 is not installed in your system, the .NET 4.0 option is selected by default.
- When Visual Studio 2010 is not installed in your system, .NET 3.5 option is selected by default.
- When Visual Studio 2008 is not installed in your system, .NET 2.0 option is selected by default.

You can change the default option by clicking the other button. The version of the .NET Framework that the assemblies should be built with is specified here and is used automatically to rebuild the assemblies.

2. Product

The Product group box has a drop-down list box. By default, All is selected. You can change the default option by selecting one of the products from the drop-down list box.

3. Platform Type

Syncfusion products typically have a common base library that forms the basis for the Windows and Web variants. The library category to be built is specified using the Product Type. This frame has eight options. All is selected by default. You can click the required product's button to perform the build operation.

Note: For assemblies that are not built and pre-compiled, assemblies that shipped with the product is automatically used.

4. Assembly Type

This frame has two options: Debug and Release. Debug is selected by default. To choose the Release mode for assembly, select Release.

You can switch between the Debug and Release mode of product configurations. Building the Debug version of the assemblies allows you to step into the Syncfusion assemblies when debugging applications.

5. Strong Key

This enables you to install the compiled assemblies in GAC. Select the **Use Strong Key** check box and choose a .snk file to achieve this. You can debug the assembly only when it is compiled with the Strong Key.

6. Output

This frame shows the output, that is, the status of the build operation, in a text area.

After selecting the required options in the above-mentioned frames, click Perform Build inside the output frame.

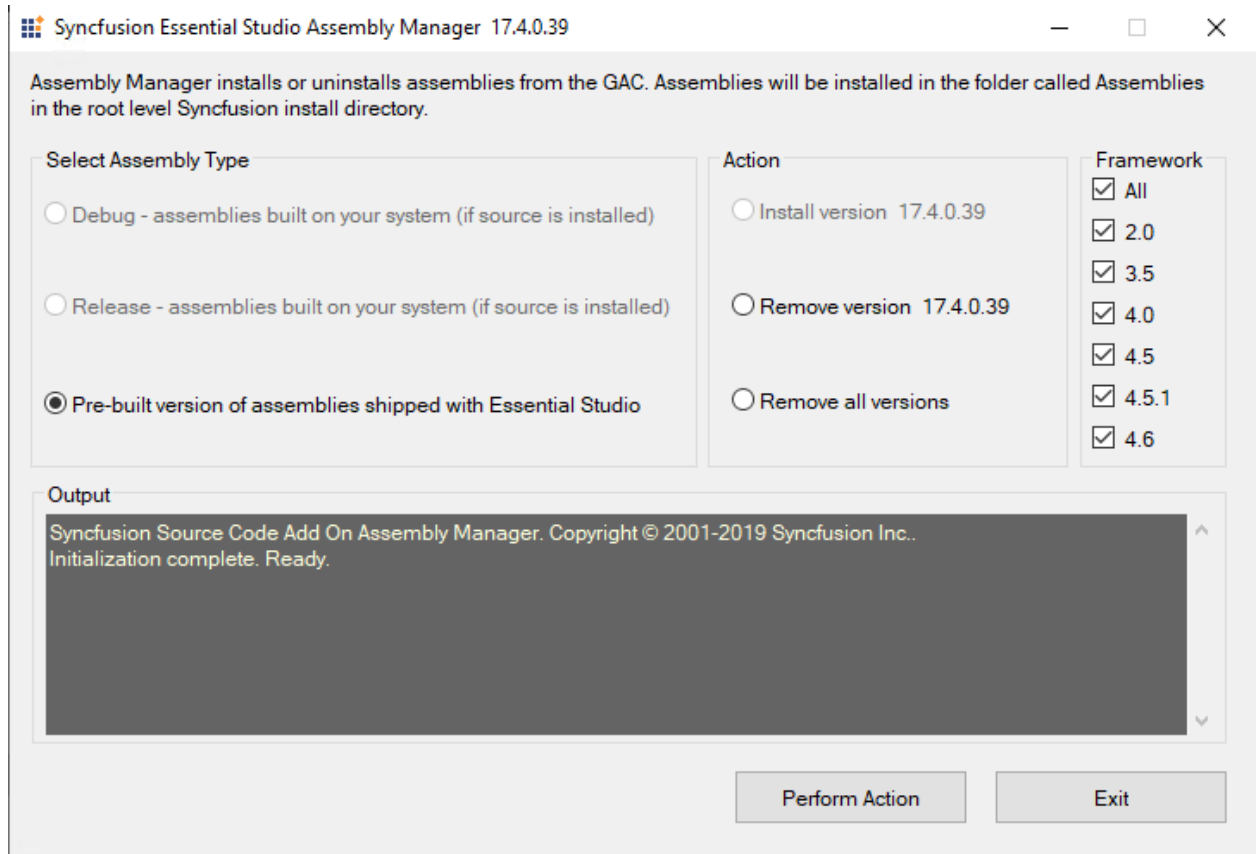
Note: The Build operation is performed and the status is updated in the text area, inside the output frame. On completion of the Build operation, an information message is displayed stating that the Build operation has been completed. It also asks you to review the Build output and log files for additional information.

Assembly Manager

Assembly Manager shipped in the Source Code Add On is used to **Install\Remove** the **Debug\Release** assemblies from GAC location and has its unique features. You can launch the Assembly Manager from the below Source Code Add On installed location.

Location:{ProgramFilesFolder}\Syncfusion\Essential Studio\Source Code Add On\{version}\Utilities\Assembly Manager\AssemblyManagerWindows.exe

- Pre-built Assemblies - These are the assemblies shipped with Essential Studio. You can **only remove** the pre-built assemblies from the Assembly Manager shipped in Source Code Add-on.
- Debug and Release Assemblies - This mode triggers the Assembly Manager to install custom assemblies built from the source code using Build Manager. The Debug\Release option will be enabled based on the



Assembly Type selected in Build Manager during compilation.

![[Assembly Manager](Utilitiesimages/Build-Managerimg3.png)]

Refer [this](#) link for the detailed information regarding the functionalities of Assembly Manager.

Documentation Installer

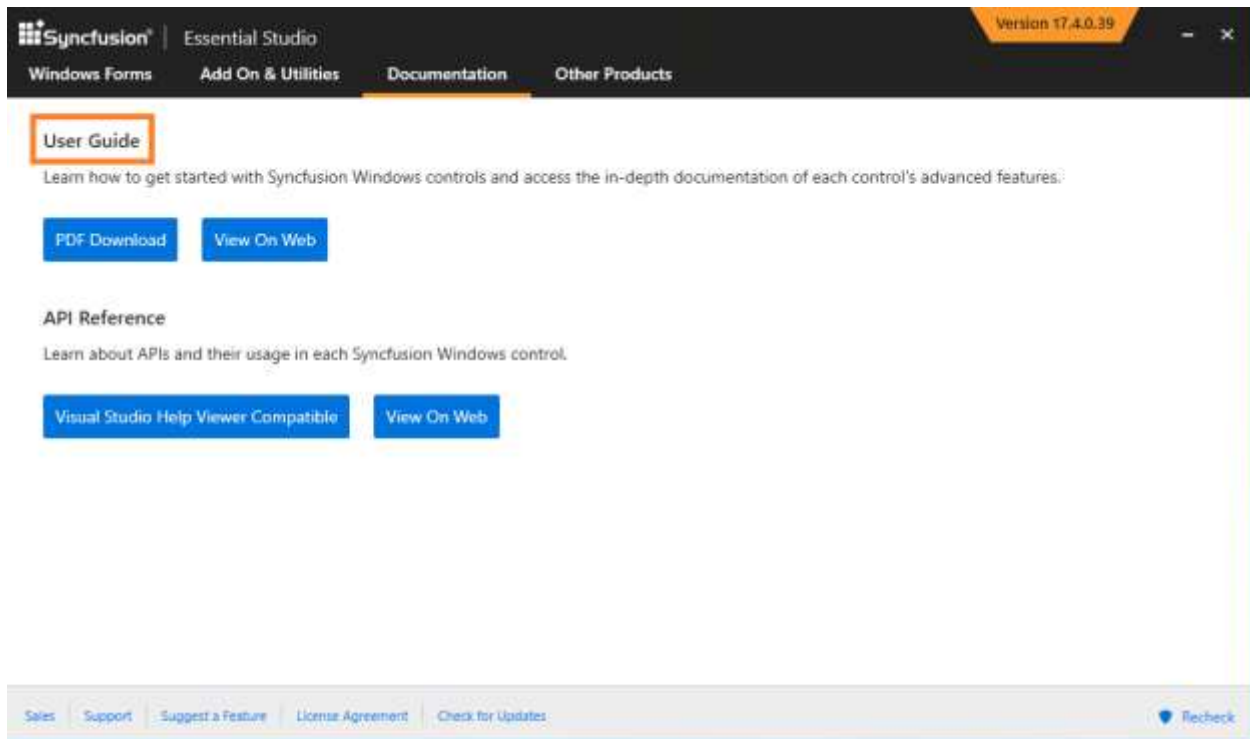
Documentation is provided for both User Guide and Class Reference.

User Guide

- User Guide PDF

Syncfusion User Guide has step-by-step procedure so that users can clearly understand the usage of the Syncfusion controls from it.

User Guide can be accessed from the Syncfusion Control Panel > Documentation.



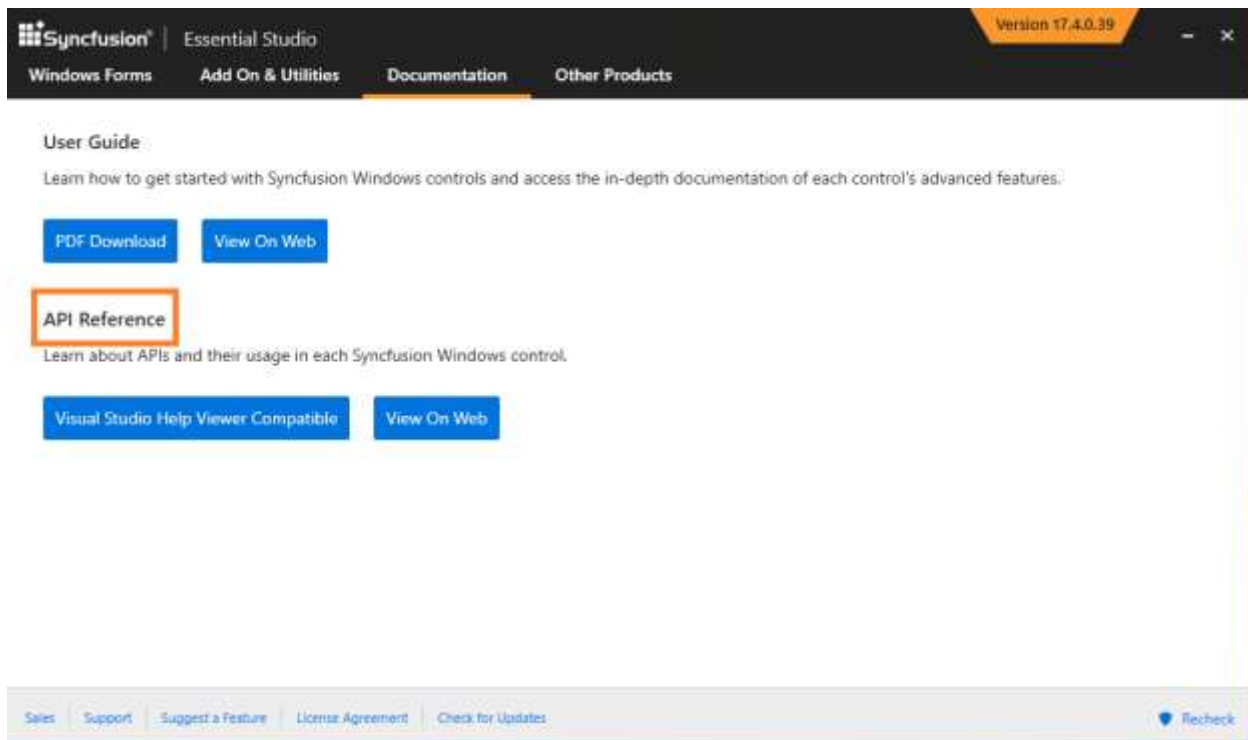
You can access the User Guide documentation in any of the below two ways.

- **PDF Download** - You can download the User Guide as a PDF and access it in offline
- **View On Web** - You can view the User Guide for the corresponding platform online.

API Reference

Syncfusion API reference provides a clear understanding to the users for accessing the classes, methods, properties etc... from the Syncfusion assemblies

API Reference can be accessed from the Syncfusion Control Panel > Documentation >



You can access the API reference documentation in any of the below two ways.

- **Visual Studio Help Viewer Compatible** - You can download the API reference installer and install it in Offline.

<style>

license {

font-size: .88em!important;

margin-top: 1.5em; margin-bottom: 1.5em;

background-color: #def8ff;

padding: 10px 17px 14px;

}

</style>

<div id="license">

Visual Studio Help Viewer Compatible is available for the following platforms

ASP.NET Web Forms

ASP.NET MVC

Windows Forms

WPF

ASP.NET Core

UWP

Xamarin

</div>

- **View On Web** - You can view the API reference for the corresponding platform online.

Information: For accessing the API Reference offline, you need to install the **Help Viewer** for the corresponding version Visual Studio.

Essential Studio Retired Products

Syncfusion has stopped providing the following platforms. Find the below Syncfusion version for each platform from which we have stopped.

Platforms	Stopped from version
LightSwitch HTML	14.4.0.20
LightSwitch Silverlight	14.4.0.20
Silverlight	14.4.0.20
WinRT	14.4.0.20
Windows Phone	14.4.0.20
Android	15.3.0.26
iOS	15.3.0.26
ASP.NET Classic	16.2.0.41
ASP.NET MVC Classic	16.2.0.41

Note: If you are using the above platforms, use the earlier versions. WinRT and Windows Phone platform installer can be installed in Windows version 8 and later.

Frequently Asked Questions

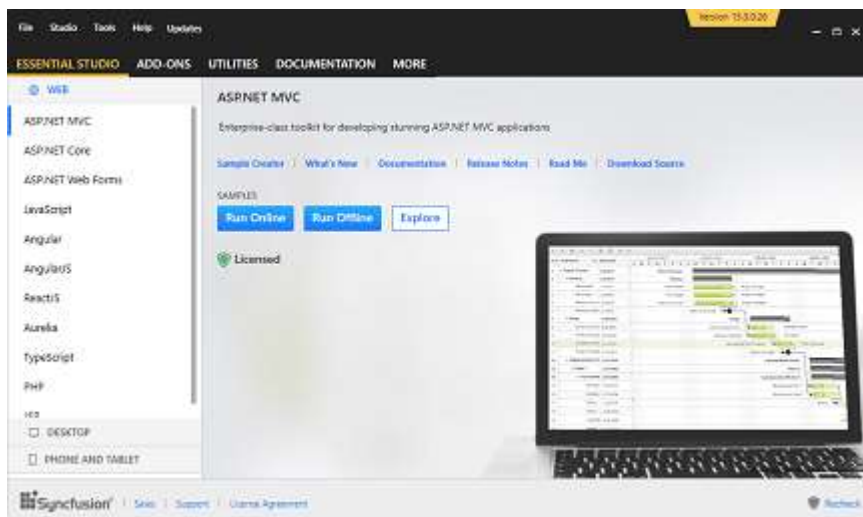
What is the role of Essential Studio in Visual Studio?

Syncfusion Essential Studio is not a plug-in for Visual Studio or an IDE like Visual Studio. Syncfusion Essential Studio is a .NET based product which offers 800+ controls and frameworks which can be used in Visual Studio for developing stunning applications. The Essential Studio includes the samples for all the controls which provides an overview of how Syncfusion controls looks like and how it works. The platforms that comes with Syncfusion Essential Studio are as follows.

- ASP.NET
- ASP.NET Core (Essential JS 1)
- ASP.NET MVC (Essential JS 1)
- JavaScript (Essential JS 1)
- JSP

- PHP
- Universal Windows Platform
- Windows Forms
- WPF
- Xamarin
- FileFormats
- ASP.NET Core (Essential JS 2)
- ASP.NET MVC (Essential JS 2)
- JavaScript (Essential JS 2)

Syncfusion Essential Studio offers Syncfusion Control Panel from which both the online and offline samples can be viewed for all the controls. Documentation, Read Me and Release Notes can also be viewed from the dashboard itself which reduces the burden of searching over the web.



Apart from the installer for Windows, Syncfusion also provides the installer for Mac for the following Essential Studio platforms.

1. ASP.NET Core (Essential JS 1)
2. JavaScript (Essential JS 1)
3. Xamarin
4. PHP
5. Electron
6. WebKit HTML Converter
7. ASP.NET Core (Essential JS 2)
8. JavaScript (Essential JS 2)

Download and install the latest Essential Studio from [here](#).

Refer [this](#) link for the step by step installation of Syncfusion Essential Studio.

After installing the Essential Studio, refer [this](#) link for using the Syncfusion controls in Visual Studio for various platforms.

Also, refer [this](#) document for the general questions which pop ups to your mind while installing the Syncfusion Essential Studio.

How to configure the Toolbox of Visual Studio Manually?

The following are the steps to load the Syncfusion controls in toolbox of Visual Studio by configuring the toolbox.

Toolbox Configuration Utility

To configure the toolbox using Toolbox Configuration Utility, refer to [Toolbox Configuration](#).

Manually Configuring VS Toolbox

The following are the steps to configure VS Toolbox manually for Syncfusion tools:

1. Close all Visual Studio running instances.
2. Remove the *.tbd files except the toolbox.tbd from the following location:

Windows XP:

C:\Documents and Settings\{user name}\Local Settings\Application Data\Microsoft\VisualStudio\10.0

Vista/Windows 7 and later:

C:\Users\{user name}\AppData\Local\Microsoft\VisualStudio\10.0

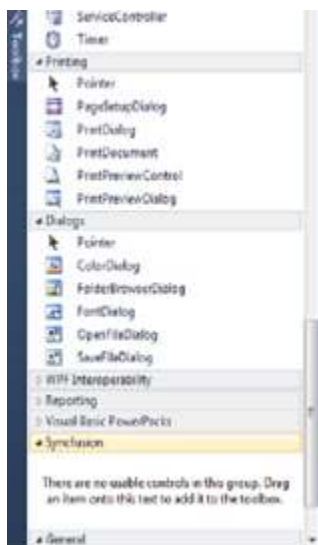
Note: It takes some time to configure the toolbox and create tbd files when you load the toolbox in VS2010 initially.

3. Re-open the Visual Studio environment. The VSToolbox is configured.

Adding Syncfusion controls in the Customized Toolbox:

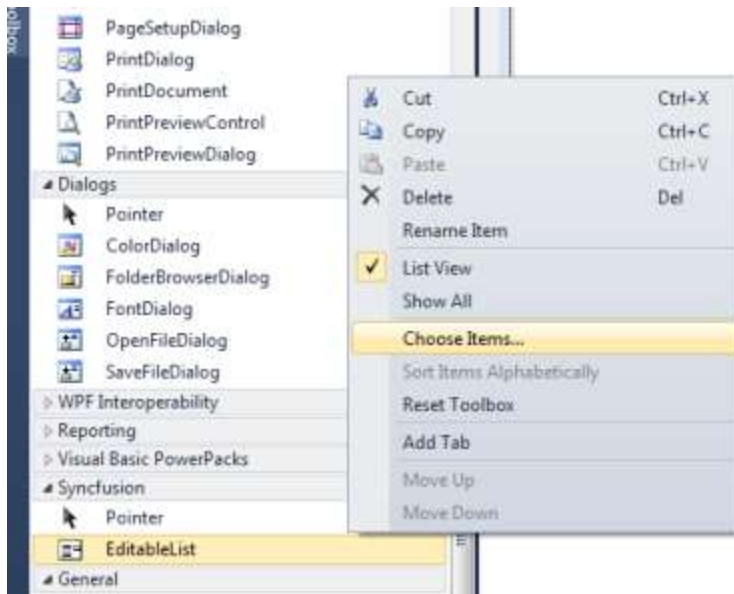
The following are the steps to add the Syncfusion controls in the user-customized toolbox:

1. Open Visual Studio and create a new tab named Syncfusion in the toolbox.

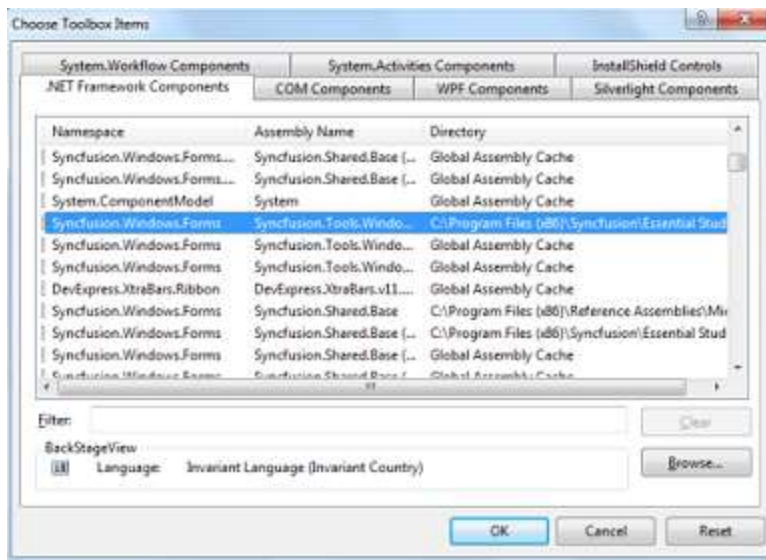


2. Right-click and select Choose Items.

Frequently Asked Questions How to remove the licensing error that pops up each time the application is run?



3. The Choose Toolbox Items window opens.



4. Select all the Syncfusion assemblies and then click OK. Assemblies are copied to the newly created Syncfusion Toolbox tab.

[How to remove the licensing error that pops up each time the application is run?](#)

[Resolving the licensing issues for the Syncfusion versions before 8.2.0.x](#)

When your project has been referred with older Syncfusion version assemblies before v8.2, follow the given steps to resolve the licensing error.

The following information provides troubleshooting tips that help you configure the system for a specific version of Syncfusion Essential Studio, and to avoid common licensing issues due to version conflicts.

Frequently Asked Questions How to remove the licensing error that pops up each time the application is run?

1. Open the project in any text editor and ensure that only one Syncfusion.Core entry is referenced. When more than one entry is available, remove it.
2. Reload the application and then remove the bin and obj folders.
3. Ensure that the assemblies referred in the project belong to the same version.
4. Recompile your project and run it.
5. In the Solution Explorer, click Show All Files.
6. A file called licenses.licx with the following entry is available in the project tree.
 - Syncfusion.Core.Licensing.LicensedComponent
 - Syncfusion.Core.
7. Add the file to the project.
8. Open the Properties of this file.
9. Set the BuildAction property to Embedded Resource.
10. Run the project.

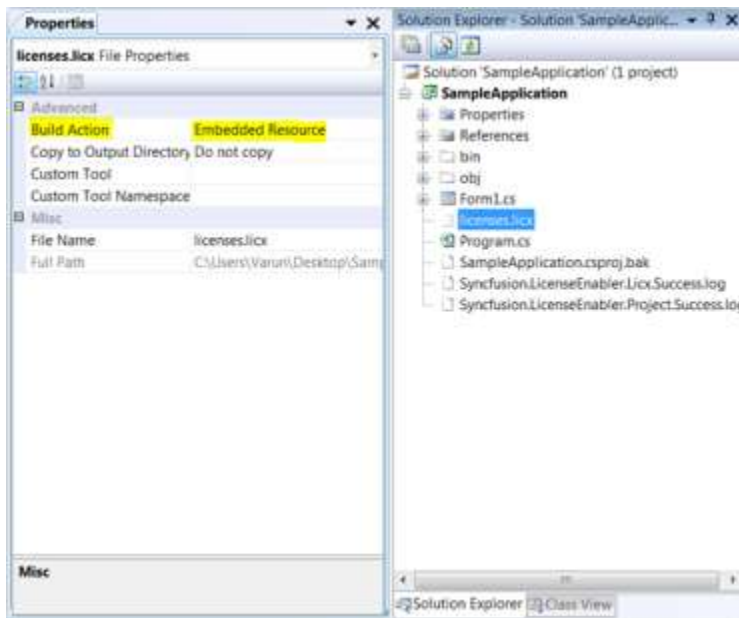
Embedding the License.licx file

The following steps help you to embed the License.licx file as an embedded resource in the project.

1. Open the project.
2. In the Solution Explorer, right-click on the Project node and then select Add New Item.
3. Choose the License.licx file from the following location:

Location: {ProgramFilesFolder}\Syncfusion\Essential Studio\{(version)}\Templates\licenses.licx file.

4. The file is added.
5. In the Solution Explorer, click the License file node and then open the Properties window.
6. Set the Build Action property to Embedded Resource.



7. A Licensing Error message opens.

Frequently Asked Questions How to remove the licensing error that pops up each time the application is run?



8. Click Fix It.
9. The Syncfusion Licensing Enabler dialog box opens.



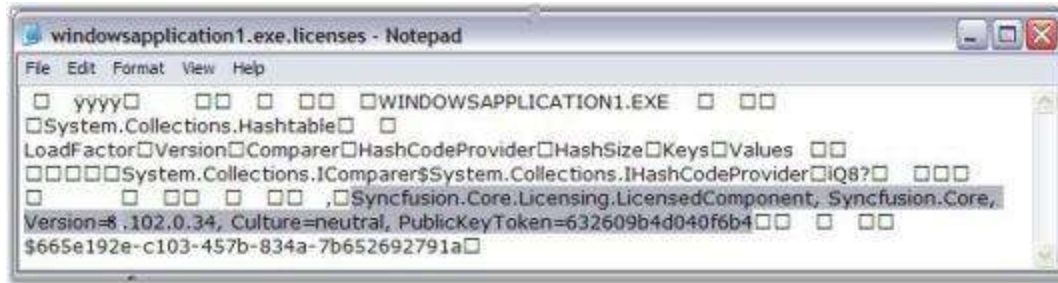
10. Click OK.
11. The File Modification Detected dialog box opens.



12. Click Reload.

This message appears because the .exe.licenses file shown in the following screenshot has been modified to include the Syncfusion licensing information. To embed this information into the output EXE, you must rebuild the application. Verify whether this file has the Syncfusion version information you have the license to. If the file has information for any other version, every time you run the application, the Licensing Error message will appear.

Frequently Asked Questions How to remove the licensing error that pops up each time the application is run?



13. Rebuild and run the application again. The above mentioned messages are no longer displayed.

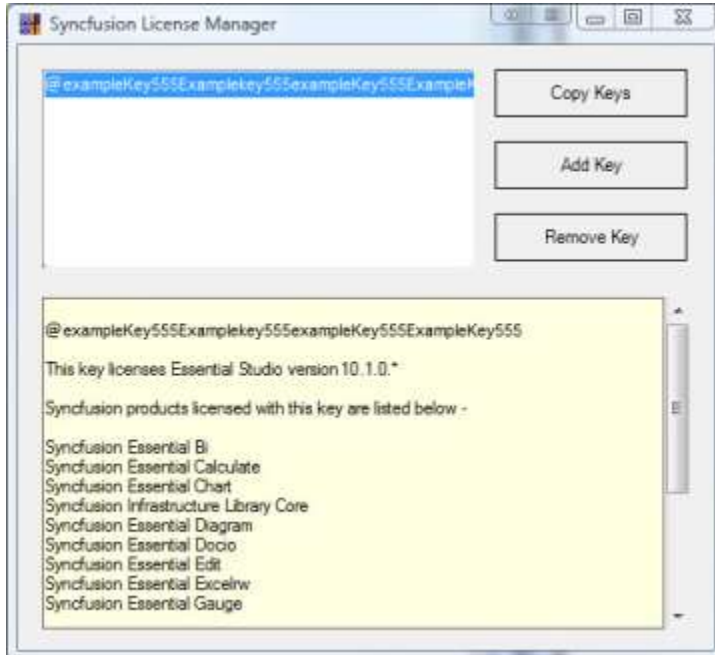
Resolving the licensing issues for the Syncfusion versions from 8.2.0.x to 13.1.0.x

When your project has been referred with Syncfusion version assemblies from v8.2 to 13.1, follow the given steps to resolve the licensing error.

Syncfusion removed run-time licensing, for all Essential Studio products, from the version 8.2.0.x. So it is not required to embed the license.licx file in your project. Remove the license.licx file from the project, when it has already been added.

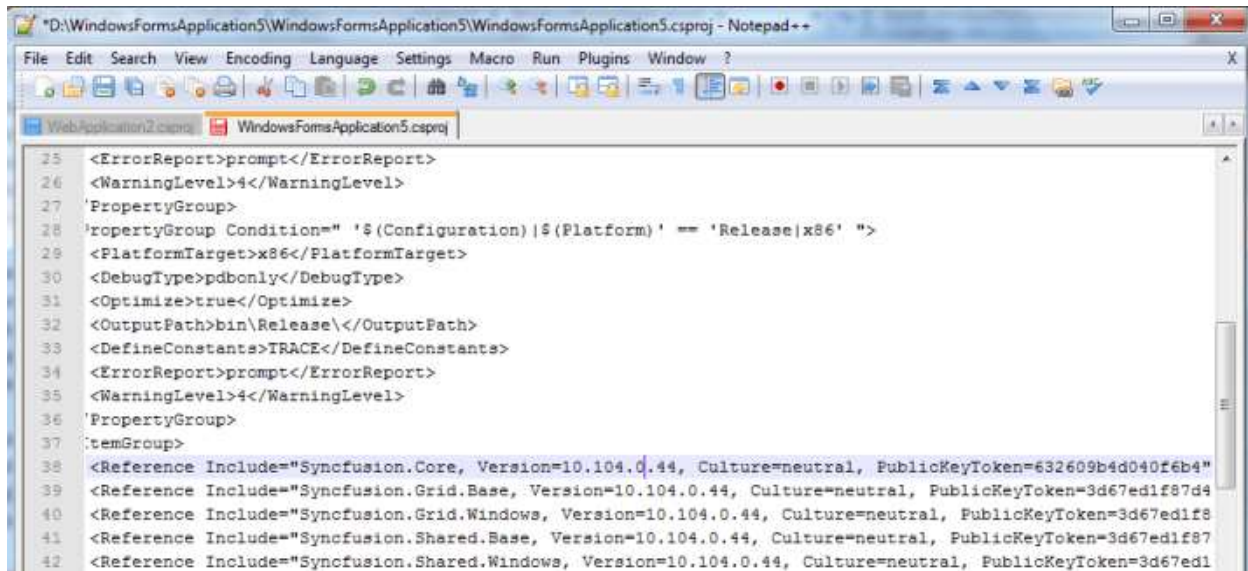
The following steps are provided to resolve the licensing issues for the Syncfusion versions from **8.2 to 13.1**:

1. Ensure that the Unlock Key for the respective version, has been installed properly in the registry using the License Manager utility from the Dashboard.



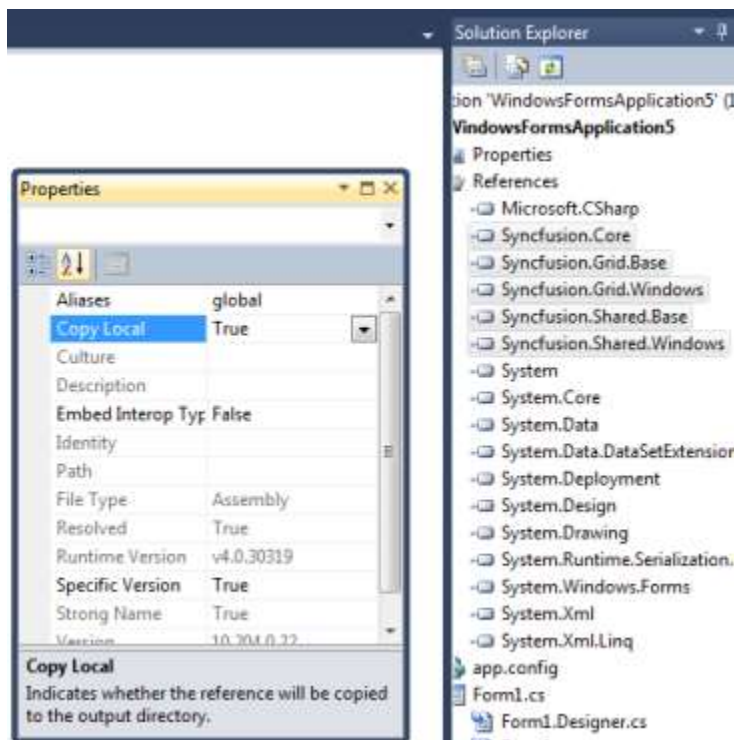
2. Open your Visual Studio Project file in a text editor and ensure that only one Syncfusion.Core reference entry exists in your project.

Frequently Asked Questions How to remove the licensing error that pops up each time the application is run?



```
25 <ErrorReport>prompt</ErrorReport>
26 <WarningLevel>4</WarningLevel>
27 <PropertyGroup>
28 <PropertyGroup Condition=" '$(Configuration)|$(Platform)' == 'Release|x86' ">
29 <PlatformTarget>x86</PlatformTarget>
30 <DebugType>pdbonly</DebugType>
31 <Optimize>true</Optimize>
32 <OutputPath>bin\Release\</OutputPath>
33 <DefineConstants>TRACE</DefineConstants>
34 <ErrorReport>prompt</ErrorReport>
35 <WarningLevel>4</WarningLevel>
36 </PropertyGroup>
37 </PropertyGroup>
38 <Reference Include="Syncfusion.Core, Version=10.104.0.44, Culture=neutral, PublicKeyToken=632609b4d040f6b4"
39 <Reference Include="Syncfusion.Grid.Base, Version=10.104.0.44, Culture=neutral, PublicKeyToken=3d67ed1f87d4
40 <Reference Include="Syncfusion.Grid.Windows, Version=10.104.0.44, Culture=neutral, PublicKeyToken=3d67ed1f8
41 <Reference Include="Syncfusion.Shared.Base, Version=10.104.0.44, Culture=neutral, PublicKeyToken=3d67ed1f87
42 <Reference Include="Syncfusion.Shared.Windows, Version=10.104.0.44, Culture=neutral, PublicKeyToken=3d67ed1
```

3. When more than one Syncfusion.Core entry exists in your project, remove those entries.
4. Reload your project in Visual Studio.
5. Set the Copy as Local and set the Specific Version property to True for all Syncfusion referenced assemblies.



6. Rebuild your application.

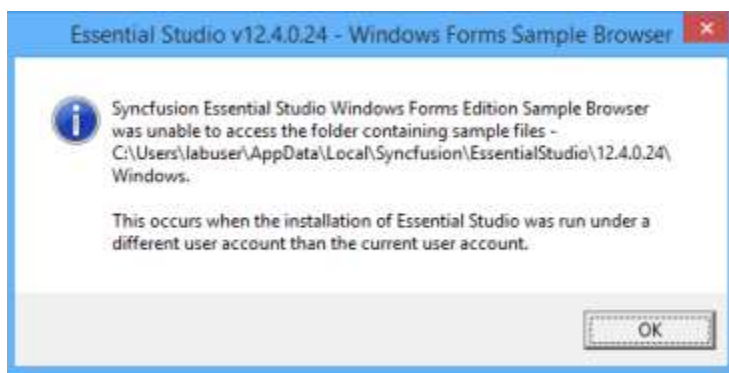
Licensing information for the Syncfusion versions from v13.2.0.29 and later

Syncfusion has removed the Syncfusion.Core dependency for all the Essential Studio products from v13.2.0.29. So, it is not required to refer the Syncfusion.Core assembly in your project, when you are using Syncfusion v13.2.0.29 or later versions. If Syncfusion.Core assembly already added in your projects, then it should be removed.

Also, Syncfusion has removed run-time licensing for all Essential Studio products from the version 8.2.0.x. So, it is not required to embed the license.licx file in your project, if you are using v8.2 or later. Remove the license.licx file from your project, if it has been already added.

How to overcome Sample Browser Access Denied error for Non-Admin User?

When an Administrator installs Essential Studio in a machine, a non-admin user cannot run the Sample Browser from the Dashboard, as this action tries to access the Admin folder where the samples are installed. The following message box is displayed.

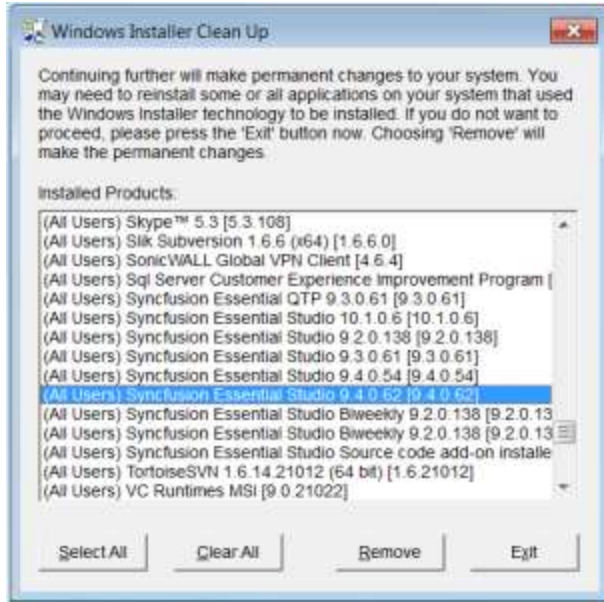


To overcome this error, the Administrator should give access privileges to the folder path, for the non-admin user.

How to uninstall the Syncfusion Installer manually?

Sometimes, installation may crash due to the machine getting switched off during installation or for other reasons. In such cases, the Uninstall utility is not available. The following are the steps to uninstall manually:

1. Download and install the **Windows Installer Cleanup** utility from the following link: [Windows Installer Cleanup](#).
2. Remove Syncfusion's product-related installers, for the version you are trying to uninstall, using the Windows Installer Cleanup utility.



3. Manually remove or delete the installed Syncfusion files from the following location.

Source (Windows XP, Windows Vista, Windows 7): (Installed location)\ Syncfusion\Essential Studio\
(version)

Example: C:\Program Files\Syncfusion\Essential Studio\9.4.0.62

Samples (Windows XP): C:\Syncfusion\ (version)

Example: C:\Syncfusion\9.4.0.62

Samples (Windows Vista, Windows 7): C:\Users\ (user name)\AppData\Local\Syncfusion\EssentialStudio\ (version)

Example: C:\Users\ (user name)\AppData\Local\Syncfusion\EssentialStudio\9.4.0.62

Note: Sample locations mentioned above is default for corresponding OS. When you have installed samples in any other location, remove it from that location.

4. Essential Studio is uninstalled. You can install it again.

How to Upgrade the Project into a New Syncfusion Version?

Upgrade the Project Using Project Migration Utility

To upgrade the project using the Project Migration Utility, refer to [Project Migration](#).

Upgrading the Projects Manually

You can upgrade the project in two methods, based on the procedure used in your project, to reference the Syncfusion assemblies. They are:

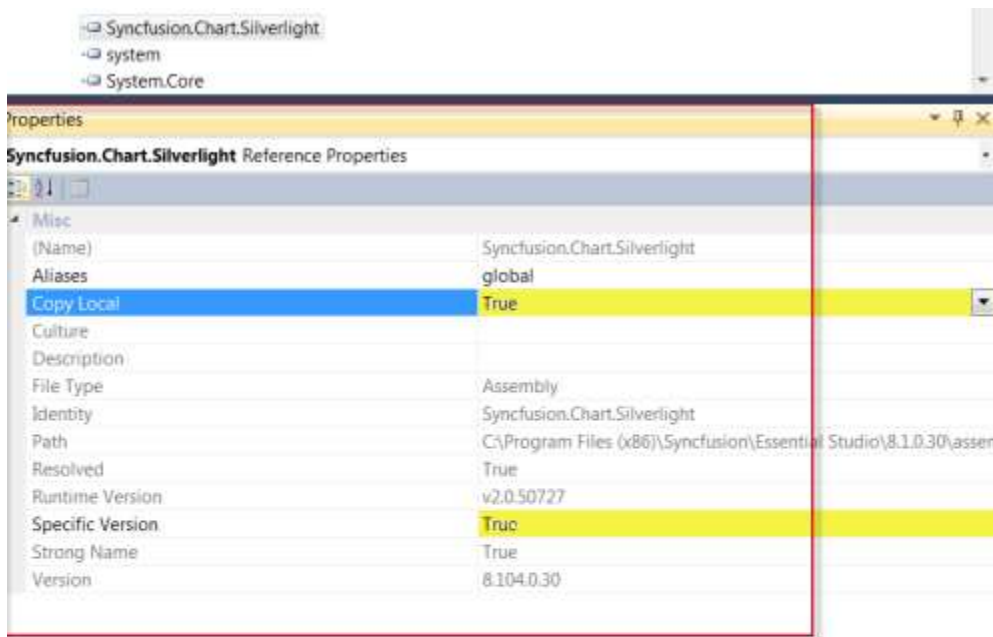
CopyLocal=True

1. Set the SpecificVersion to False.
2. Remove the bin and obj folders in your local project directory.

3. Replace the latest assemblies with the upgraded assemblies in the local folder of your project.
4. Recompile the project.

CopyLocal=False

1. Ensure that the old Syncfusion assemblies are removed from GAC.
 - For 2.0 and 3.5 assemblies: (C:\windows\assembly)
 - For 4.0, 4.5, and 4.5.1 assemblies: (C:\Windows\Microsoft.NET\assembly\GAC_MSIL)
2. Install the latest Syncfusion assemblies on your machine using the Syncfusion Assembly Manager.
3. Set the SpecificVersion to False.
4. Recompile your project; the latest assemblies from GAC refer to your project automatically.



Switching the Framework Version While Upgrading the Project

When you want to switch the Framework version while upgrading the project, use the Multi-Target Manager from the Syncfusion Dashboard.

After switching the Framework version using Multi-Target Manager, remove the bin and obj folders from your local project directory, and then recompile your project.

For more details about Multi-Target Manager, refer to [Multi-Target Manager](#).

Migrating the Resource Files

Follow the given steps to move the resource files (.resx) of your project to the newer version:

1. Open Start > Syncfusion > Essential Studio x.x.x.x > Utilities > Migration > ConvertResx(Framework 2.0,3.5 or 4.0).
2. Click the Choose ResX Files to convert.
3. Select the Resx files you want to convert.
4. Click Start Converting Files.
5. After the conversion, the new Resx files should have the same name as the original files. Copies of the original files have the old suffix added to their names.

How to implement Localization Support?

Syncfusion Essential Studio products enable you to customize the application, specific to the language and culture of a particular country or region.

WPF

You can use this satellite assembly to utilize the localization support for your culture. The following steps help you extract the resource strings to a .csv file using the LocBaml.exe file, as a major part of enabling localization.

The Syncfusion.Tools.WPF.Resources.dll is sufficient to generate the localization support for the Syncfusion controls. This assembly is available in the following installation location:

Location: {Installed_location}\Syncfusion\Essential Studio\<Version Number>\Assemblies\3.5

1. Download the LocBaml.exe file from the following location:

<http://files.syncfusion.com/support/Tools.WPF/UG/LocBaml.zip>

2. Copy the EXE file and the Syncfusion.Tools.WPF.Resources.dll to the following location:

<Your Application>\bin\Debug\en-US

3. Open the Command Prompt and navigate to the same directory.
4. Use the following command to generate the .csv file from the existing Syncfusion.Tools.WPF.Resources.dll:

```
(Your Application)\bin\Debug\en-US \LocBaml /parse Syncfusion.Tools.WPF.Resources.dll  
/out:resourceStrings.csv
```

Note: The .csv files can be edited via Microsoft Excel or Notepad. This file contains string resources with the default text in the English language.

5. Open the .csv file using Microsoft Excel or Notepad, and change the texts based on your culture.

The following illustrates customization from English to French.

Syncfusion.Tools.system:String_1 None	TRUE	TRUE	S_how Quick Access Toolbar below the Ribbon
Syncfusion.Tools.system:String_1 None	TRUE	TRUE	_Add >>
Syncfusion.Tools.system:String_1 None	TRUE	TRUE	_Remove
Syncfusion.Tools.system:String_1 None	TRUE	TRUE	Re_set
Syncfusion.Tools.system:String_1 None	TRUE	TRUE	_Modify...
Syncfusion.Tools.system:String_1 None	TRUE	TRUE	_Choose commands from
Syncfusion.Tools.system:String_1 None	TRUE	TRUE	Quic_k Access Toolbar
Syncfusion.Tools.system:String_2 None	TRUE	TRUE	Remove from Quick Access ToolBar
Syncfusion.Tools.system:String_2 None	TRUE	TRUE	Calendrier
Syncfusion.Tools.system:String_2 None	TRUE	TRUE	Regarder
Syncfusion.Tools.system:String_2 None	TRUE	TRUE	aucun
Syncfusion.Tools.system:String_2 None	TRUE	TRUE	aujourd'hui
Syncfusion.Tools.AccessTodayTex Button	TRUE	TRUE	
Syncfusion.Tools.AccessTodayTex None	FALSE	TRUE	0
Syncfusion.Tools.AccessTodayTex None	FALSE	TRUE	40
Syncfusion.Tools.CustomizeQATT Text	TRUE	TRUE	
Syncfusion.Tools.CustomizeQATT None	FALSE	TRUE	3,0,0,0
Syncfusion.Tools.CustomizeQATT None	TRUE	TRUE	Bold
Syncfusion.Tools.CustomizeQATT None	FALSE	TRUE	Center

We have changed the language from English to French for Calendar control related texts alone.

6. Generate the localized satellite assembly using the modified .csv file and install in the application.
7. Open Command Prompt, and navigate to the en-US directory.
8. Create another directory fr-CH under Bin\Debug folder using the fr-CH command.

Note: The Directory name should follow a proper culture name.

9. Generate your own culture-specific assembly using the following command from en-US folder:

```
LocBaml /generate /tran: resourceStrings.csv /out:../fr-CH /cul:fr-CH Syncfusion.Tools.WPF.Resources.dll
```

Now you can see the generated satellite assembly under the fr-CH folder.

10. Run your application with the CurrentUICulture as fr-CH in the App.xaml files as shown in the following code:

C#

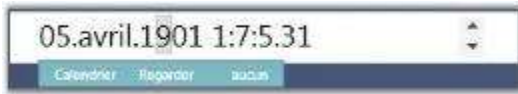
```
public App()
{
    Thread.CurrentThread.CurrentUICulture = new
    System.Globalization.CultureInfo("fr-FR");
    Thread.CurrentThread.CurrentCulture = new
    System.Globalization.CultureInfo("fr-FR");
}
```

At the end of this process, the application should contain the following to achieve localization:

- Your Application.exe file
- The en-US directory with Resources.dll
- The fr-CH directory with corresponding Resources.dll and Syncfusion Assemblies, when you have set CopyLocal to True.

Calendar control in French language

The following image illustrates Calendar control in the French language.



Note: * Localized strings are not displayed in your application until the created satellite assembly is signed. Send in your newly created assemblies for signing. Your assemblies are signed and sent immediately.

- It is not required to install satellite assemblies in the GAC or Assemblies folder.
- Your en-US directory should contain the default satellite assembly, available in the Precompiled Assemblies or Assemblies folder.
- Application culture change should be included before the InitializeComponent() method call in the application. It is better to include culture change in the App.xaml file.

Silverlight

In Silverlight, the easiest way to accomplish localization is to use a Resource (.resx) file. For each culture you want to target, you need a separate set of resources that match that specific culture.

The following are the primary steps for localizing the Syncfusion Ribbon Control.

- Add Resources for different cultures.
- Add supported cultures.
- Assign a Current UI Culture to the application.

Add Resources

To localize Syncfusion Silverlight controls, you need to create resource files for each culture.

The following steps illustrate this:

1. Add Resource (.resx) files in the Resources folder for different cultures. Here, .resx files in a different culture or invariant culture should be placed in the Resources folder of your project.
2. Resource files should be named as AssemblyName.CultureName.resx and AssemblyName.resx for the invariant culture, where
 - **AssemblyName** – Syncfusion Silverlight Control Assembly Name.
 - **CultureName** – Culture Code of the resource that you want to show in the UI.

When your conversion is only for the invariant culture, the .resx file does not have to contain a culture suffix.

Example:

- Syncfusion.Ribbon.Silverlight.fr-FR.resx – French resource for Syncfusion.Ribbon.Silverlight assembly.
- Syncfusion.Ribbon.Silverlight.resx – Invariant Culture resource for Syncfusion.Ribbon.Silverlight assembly.

Add Supported Cultures

It is very important to add supported cultures in the sample application project before you run the application.

Follow the steps provided to localize strings for your culture:

1. In the Solution Explorer, right-click your sample application project and choose Unload Project. The project is unavailable.
2. Right-click the project again, and select the Edit_SampleProjectName.csproj option.
3. In the .csproj file, find the <SupportedCultures> </SupportedCultures> tags. By default, the tags are empty. So, add the cultures that you want to be supported, separated by a semicolon.

Example: <SupportedCultures>fr-FR </SupportedCultures>

4. Save the project and reload it by right-clicking the SampleProjectName.csproj and choosing Reload SampleProjectName.csproj.

Assign Current UI Culture to the Application

By default, the Current Culture is en-US. You can change the CurrentUICulture. Here, CurrentUICulture should be set before the InitializeComponent in your StartUp page, here, MainPage.xaml.cs, or you can do it in App.xaml.cs in the Application Startup event.

C#

```
public MainPage ()
{
    System.Threading.Thread.CurrentThread.CurrentUICulture = new
    System.Globalization.CultureInfo("fr-FR");
    InitializeComponent();
}
```

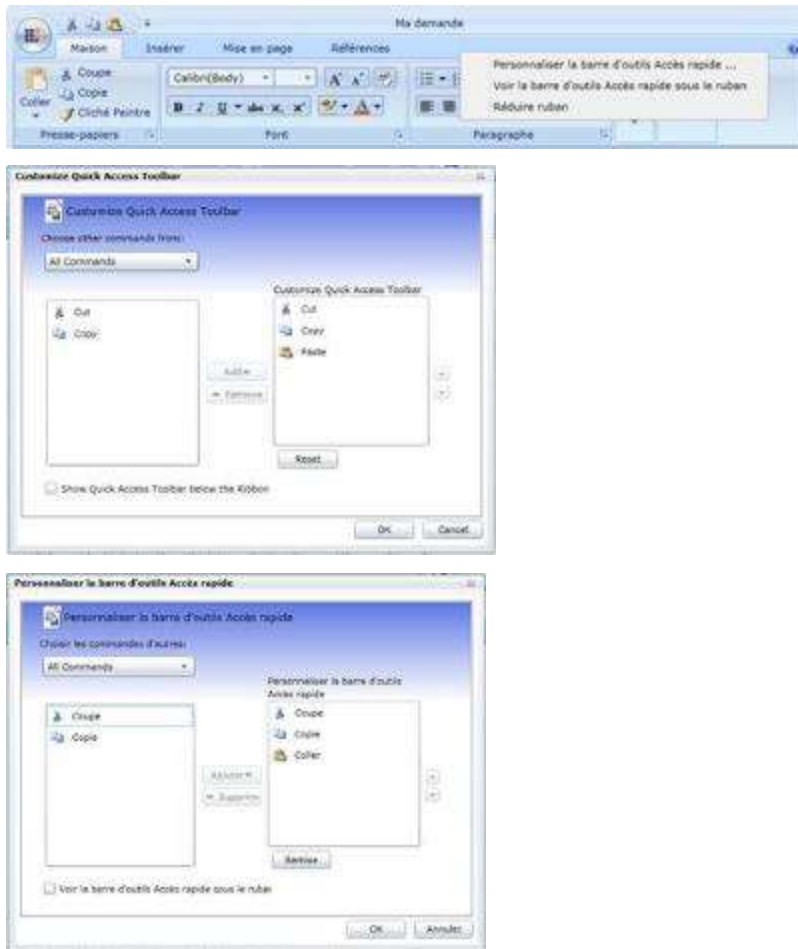
Alternatively,

C#

```
private void Application_Startup(object sender, StartupEventArgs e)
{
    System.Threading.Thread.CurrentThread.CurrentUICulture = new
    System.Globalization.CultureInfo("fr-FR");
    this.RootVisual = new MainPage();
}
```

The following screenshots illustrate the Ribbon Control with various culture options:





Windows and ASP.NET

The Windows and ASP.NET products have extended support for Localization. Samples and description is available in the following locations.

Extended Support for Windows and ASP.NET

Product	Sample location
Tools[ASP.NET]	RichTextEditor spellchecker
Chart[Windows]	{Installed Drive}:\Syncfusion\EssentialStudio\{version}\Windows\Chart.Windows\Samples\2.0\C ulture Localization\Localization Demo\cs
Diagram [Windows]	{Installed Drive}:\Syncfusion\EssentialStudio\{version}\Windows\Diagram.Windows\Samples\2.0 \Localizing Dialogs\Localization Demo\cs
Chart[ASP.NET]	Does not support localization currently.
Diagram[ASP.N ET]	Does not support localization currently.

Windows Forms [Grid,Tools]	Samples are available in the machine installed with Essential Studio. {Installed Drive}:\Syncfusion\EssentialStudio\8.4.0.8\Windows\Tools.Windows\Samples\2.0\Localization Demo\Localization Demo
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How to redistribute an application on the client machine?

Syncfusion provides support to redistribute an application that uses Syncfusion assemblies. For information on deploying an application on a client machine that uses Syncfusion controls, see [Application Deployment](#).

Note: You can ignore the licenses.licx file information provided in the shared link when you are using Syncfusion Essential Studio v.8.4.x.x and later.

How to resolve the "Preparing to Install" issue that occurs during Essential Studio installation?

This issue may arise when the Essential Studio installation has not been started in your machine. For more information on resolving this, see [Preparing to Install](#).

Most provided answers to the customers

Following KB's contains the answers to the questions which has been asked by many customers.

Question	KB link
Is it necessary to install the Syncfusion Volume release before installing the Service Pack release?	https://www.syncfusion.com/kb/8729
How to resolve Assembly manager issue in Framework 4.7 installed machine?	https://www.syncfusion.com/kb/7989
Should we uninstall previous Essential Studio versions before installing the latest version?	https://www.syncfusion.com/kb/7513
How to resolve the toolbox configuration issue in Visual Studio 2017 update 15.4.x for Syncfusion version 15.4.0.17 and later?	https://www.syncfusion.com/kb/8067
How to resolve the toolbox configuration issue in Visual Studio 2017 update 15.4.X for Syncfusion versions 15.3.0.33 and earlier?	https://www.syncfusion.com/kb/8066
How to install and remove Syncfusion Essential Studio assemblies from GAC ?	https://www.syncfusion.com/kb/7509
How to configure Syncfusion controls in Visual Studio toolbox?	https://www.syncfusion.com/kb/7508