InduSoft Web Studio 2020 (v20.0) Release Notes

Last revision: 2020-06-01

New Features and Other Enhancements

This is a summary of important features and enhancements that have been introduced in InduSoft Web Studio 2020.

This is not a comprehensive list of all enhancements.

Standardized Names for Software Components

We have standardized the names of several of the components that make up our software:

Software Component	Name
Project Development Environment	Studio
Runtime for Windows and Windows Server	SCADA
Runtime for Windows Embedded Standard	Embedded HMI
Runtime for Windows Embedded Compact	Compact HMI
Runtime for Linux	IoT View

Updated UI with Customizable Styles

We updated the user interface (UI) for the entire project development environment, with all-new icons and improved window designs, to make it more consistent and to bring it in line with the latest versions of Windows 10 and Microsoft Office. We also implemented customizable styles, which lets you change the colors of the UI and the general appearance of some controls. You can even select a color-inverted "dark" theme, if you prefer.

Industrial Graphics

We added the Industrial Graphics editor and symbol library, which works as a companion to our native graphics tools. It provides new features and options that were not previously available in InduSoft Web Studio, it lets you reuse symbols that you created in other applications, and it increases interoperability across your entire automation solution.

Improved Support for Mobile Access

We continued to improve support for our Mobile Access feature, which lets you use any HTML5-compatible browser to view project screens. More screen objects and built-in functions now work with Mobile Access, and the objects and functions that worked before work even better now — for example, the Esign option now works on all objects, and you can now adjust the X-axis (i.e., the period) in the Trend Control object just like you can in our traditional thin clients. We also updated the Mobile Access logon screen.

Please note that Mobile Access is intended to be the next-generation replacement for our traditional, ActiveX-based thin clients. We recommend you update your projects to take advantage of Mobile Access, if you have not already done so.

Improved Support for OPC Unified Architecture (OPC UA)

We updated the libraries that we use in our OPC UA Client and OPC UA Server features, and that in turn improved support for additional security policies and increased the stability of client/server connections.

Please note that OPC UA is intended to be the next-generation replacement for OPC Data Access (OPC DA, a.k.a. "OPC Classic"). In fact, we have deprecated our OPC DA Client feature and we will remove it entirely in an upcoming release of InduSoft Web Studio. We recommend you update your projects to take advantage of OPC UA, if you have not already done so.

Added Support for Sparkplug B in MQTT Driver

We updated our communication driver for MQ Telemetry Transport (MQTT) in order to add support for the Sparkplug B specification. MQTT is an open OASIS and ISO standard (ISO/IEC PRF 20922) network protocol that is used by many popular web services, and the Sparkplug B specification defines how to use MQTT in a real-time environment.

Improved Version of IoT View

We continued to improve the IoT View runtime edition, which lets you run your projects on Linux-based embedded devices. In particular, we implemented support for the Time Slice and Period settings that let you control processor usage on so-called "small footprint" devices (i.e., devices with extemely limited system resources).

Deprecated or Removed Features

This is a summary of features that have been deprecated or removed in InduSoft Web Studio 2020.

Support for Windows 7

On January 14, 2020, Microsoft ended its extended support for Windows 7 Service Pack 1. Consequently, we no longer support running InduSoft Web Studio 2020 on any version of Windows 7. (This includes Windows Embedded Standard 7 and Windows Server 2008 R2.) We recommend you upgrade your computers and

devices to Windows 10, which is more stable and secure. If you cannot do that, you should not use this version of InduSoft Web Studio.

For more information, go to: https://support.microsoft.com/en-us/help/13853/windows-lifecycle-fact-sheet

Support for Internet Explorer 11 in Mobile Access

We no longer support using Internet Explorer 11 to view project screens in Mobile Access. To ensure the best possible performance of Mobile Access, we have implemented a browser test that determines if the browser you are using supports certain features, and unfortunately Internet Explorer 11 does not pass the test. Instead of Internet Explorer 11, we recommend you use either Microsoft Edge or Google Chrome.

It is important to note this because Internet Explorer is still required if you want to use the ActiveX-based Web Thin Client to view project screens.

For more information, see the Mobile Access section of *InduSoft Web Studio 2020 Help Manual*.

Collaboration and Source Control

We have removed the Collaboration feature, which means it is no longer possible for you to connect directly to Team Foundation Server (a.k.a. Visual Studio source control) from within the project development environment. You can still use source control to manage your project files, but you must do it as you normally would outside of the project development environment.

Mobile Access Tabular

We have removed the Mobile Access Tabular feature. This feature provided a way to view process values on feature phones (a.k.a. "flip phones") and other devices with simple web browsers and limited access the Internet. Most devices now have full access to the Internet, however, so Mobile Access Tabular is no longer needed. We recommend you update your projects to take advantage of the full version of Mobile Access, if you have not already done so.

Legacy Connection Options for Remote Management

We have removed the options to use serial communication or Microsoft ActiveSync to connect from the Remote Management tool (in the project development environment) to the Remote Agent program running a target station. The only remaining option is to use Ethernet communication (TCP).

Please note this change applies only to the remote management of project runtimes. It does not apply to any of our direct communication drivers that use serial communication to connect to PLCs and other devices.

OPC Data Access (OPC DA, a.k.a. "OPC Classic")

We have deprecated the legacy OPC DA 2.05 Client feature and will remove it entirely in an upcoming release, because the OPC DA specification has been superseded by OPC Unified Architecture (OPC UA). If you still need to use OPC DA in your project, you should use the OPC XML/DA Client feature instead; it provides the same functionality as the legacy OPC DA 2.05 Client feature, but it is based on a newer and more compatible library. In the long term, we recommend you update your projects to take advantage of OPC UA.

Open Database Connectivity (ODBC)

We have deprecated the ODBC features in this software and will remove them entirely in an upcoming release, because support for the ODBC standard has decreased over time. This includes both the ODBC Client worksheet and the built-in ODBC functions. If you open an existing project that uses these features, you will still be able to view and edit them in the project development environment, but they will be hidden and unavailable when you create a new project. We recommend you update your projects to use the Database/ERP features instead.

Dynamic Data Exchange (DDE)

We have deprecated the DDE Client feature and will remove it entirely in an upcoming release, because support for the DDE standard has decreased over time. If you open an existing project that includes DDE Client worksheets, you will still be able to view and edit those worksheets in the project development environment, but the feature will be hidden and unavailable when you create a new project. We recommend you update your projects to use the OPC UA Client feature instead.

Dial-up Functions

The built-in Dial-up functions were used to configure the computer's modem (if any) and then establish dial-up connections to other computers. We have removed these functions because they depended on APIs that no longer exist in any supported version of Windows. If you are trying to run an existing project that uses these functions, or if you want to create a new project that has dial-up functionality, you should not use this version of InduSoft Web Studio.

Issues Resolved in This Version

This is a list of important issues that have been resolved in this version of InduSoft Web Studio 2020. This is not a comprehensive list of all resolved issues.

Issues Reported by Our Users

These are issues that were reported by our users and then logged in our customer relationship management (CRM) system. If you reported an issue to us, you should have been given a Service Request (SR) number at that time. You can look for your SR number in the list below.

Please note that documentation changes are not counted as resolved issues, so if you reported an issue and it was resolved by a documentation change (e.g., by clarifying a step in a procedure), then it might not be included in this list.

The Work Item number is the number that was automatically assigned when the item was created in our product development system.

Service Request	Work Item	Description
60115771, 951177709	35307	Mobile Access – Implemented the capability of accessing Tag Properties, also called Tag 'fields' for indirect Tags on Mobile Access.
60115798	39801	Resolved issue with the Security System, when in LDAP Mode, to add an additional validation, checking the host name before trying to ping, resulting in increased stability.

Service Request	Work Item	Description
60116712	39407	Mobile Access – Resolved issue with some class-type tags that would stop receiving values updates in certain specific situations due to cache synchronization.
60116738	38742	Resolved issue with the PrintWindow() built-in function not working on the runtime for Windows Embedded Standard when being invoked within one of background tasks, such as scripts, math and scheduler. It was working only on the local Viewer module.
60116870	39354	Mobile Access – Resolved issue when having more than one Trend Control object on the page, and switching screens several times in a row.
60117355	42737	IoT View – Resolved issue with the IoT View runtime not being able to send data to AVEVA Historian or AVEVA Insight when using triggers that have a large interval.
60117427	50303	Resolved issue with the Security System in LDAP mode which, in certain specific situations, would cause the system to close unexpectedly.
60117440	42947	Resolved issue with buttons on screens created using the FactoryTalk Import Wizard.
60117675	51263	Modified the project security system, when running in Domain (LDAP) mode, to detect when the LDAP server unlocks a user.
60117772	52509	Resolved issue with the project runtime for Windows Embedded Standard, which would not work correctly when a project was configured with six or more different communication drivers.
60613802	42249	Resolved issue with Linked Picture having the Resize animation, which was not scaling properly when first opening the screen.
74110149	41885	Resolved issue with the built-in function Open(), when used with the optional numResizeFlag parameter, could cause the background image to not be displayed.
76310712	39762	Implemented the capability of saving screen containing dots on the names.
76310777	38800	Resolved instability issue caused by configuring the Description for a Class Member with multiple lines, that was causing the Viewer module to stop working.
76311127	51641	Resolved issue with the Studio development environment running out of resources over time after several screens are open.
80910169	41361	Resolved issue with the OPC UA Client not working properly when configured to use User Name and Password authentication, but no security policies were selected.
80910169	41872	Resolved issue with the OPC UA Server not working properly when configured to authenticate through User and Password and no additional security policies enabled.
80910237	48820	Resolved issue with the automatic email notification for alarms always sending one email per alarm message, even when configured not to do so and send one email with all the buffered messages.
80910255	49786	Resolved issue with the Recipe module when configured as plain text mode and using arrays.

Service Request	Work Item	Description
951175303	36903	Resolved issue with Linked Symbols not being able to access members from class tags when using indirect tags and tag fields associated to the same custom property.
951177368	37629	Resolved issue with the Visibility animation when applied to Control-type objects (combo-box, text-box, alarm, trend and grid controls) when they are part of a group of objects containing the Visibility animation.
951177861	38427	Resolved an issue with the screen editor that was causing an object to be resized inadvertently when editing a linked symbol and changing any of the object's colors.
951177941	38050	Improved the overall performance of the "Remove unused tags" feature.
951178999	38801	Resolved issue with the PanelBuilder Import Wizard related to rectangles not being properly imported and showing errors in their captions.
951178999	40713	Resolved issues with the PanelBuilder Import Wizard in screens that had rectangles with captions in some specific situations.
951179202	40716	Resolved issue with the Main Password configuration window that was clearing the password value if the user canceled the operation.
951179367	40859	Resolved issue with the utility SMAConverter.exe, which is used to create the Mobile Access web pages when saving screens, that would keep running even after the screens were done saving if there were any errors during the process.
951179676	39613	Mobile Access – Resolved issue with the Combo Box control resetting the values of the Tags associated with it.
951183210	42964	Resolved issue with the Viewer module for the Runtime for Windows Embedded Compact, not starting new projects due to an incompatibility related to some new parameters on the APP project file.
951184318	43241	Mobile Access – Resolved issue with the horizontal scroll bar not showing on the Mobile Access default page.
951185573	50864	IoT View – Resolved issue with the OPC UA Client task not running properly on IoT View.

Other Issues Resolved During Development

These are other issues that we identified and resolved during product development.

Again, the Work Item number is the number that was automatically assigned when the item was created in our product development system.

Type	Work Item	Description
Epic	31916	Updated third-party components related to OpenSLL to version 1.1.1d.
Feature	32598	The User Interface on the Studio environment was modernized with new themes, options and icons.
Feature	35214	Implemented support to rotate Linked Symbols on the Studio environment.

Type	Work Item	Description
Feature	49847	Mobile Access – Improved the runtime performance of all built-in objects
User Story	35202	Updated the OPC UA Client and Server modules to support the latest Security Policies.
User Story	35484	Mobile Access - Resolved instability issue caused by repeatedly closing and opening the TCP/IP Server module.
User Story	36525	Mobile Access – Improved the cache control allowing a better overall performance.
User Story	36670	Mobile Access – Implemented support for the built-in function CheckESign().
User Story	36671	Mobile Access – Implemented support for the built-in function GetLastEsignUser().
User Story	36750	Mobile Access – Overall enhancements were implemented on the Combo-box object.
User Story	36751	Mobile Access – Overall performance enhancements implemented for the Text-box object.
User Story	37666	Implemented the feature where the first screen created becomes the startup screen by default.
User Story	37668	Added the capability to rename a screen on the Project Explorer's tree view.
User Story	37669	Implemented the capability of modifying and renaming Screen Groups.
User Story	37670	Modified the Scheduler worksheet interface to grayout the fields that are not used depending on the selected Event type.
User Story	38051	Modified the "Remove unused tags" to check for the user's permission before performing to see if that user is allowed to actually edit the Tags Database and remove tags.
User Story	38527	Modified the Viewer settings to have "Built-in Dialogs Scale" set to "Auto" by default.
User Story	38732	Mobile Access – If the Mobile Access task fails to start due to invalid files format, a message is now displayed on the Output Window asking the user to perform the "Verify" command.
User Story	38799	Improved the performance of the Studio environment when refreshing the Project Explorer's tree view.
User Story	39632	Modified the label for the Output/LogWin option from "Save to disk" to "Log to File"
User Story	39634	Modified the Remote LogWin option label from "Save to Disk" to "Log to File".
User Story	39758	Implemented three new built-in functions: EncryptData, DecryptData, and RunGlobalProcedureAsyncGetCurrent. For more information, see the Help Manual.
User Story	39761	Implemented the capability of creating screen groups containing spaces on the both the screen and group names, and have them properly published for the web files.

Type	Work Item	Description
User Story	40135	Modified the Remote Management tool to show the latest Windows versions on the "Platform" field when connected to these operating systems.
User Story	40393	Implemented character validation when creating screen groups so it does not allow the user to create them with invalid names.
User Story	40559	Modified the HST2TXT.exe utility, used to convert binary trend files into text, to be able to process binary files that have inconsistent Time Stamps in certain records.
User Story	40562	Modified the Rotation animation to proportionally apply the offset when the screen is resized on open.
User Story	40605	Added the capability of right-clicking on the project name under the Project Explorer window and opening the folder that contains the project on Windows Explorer.
User Story	40963	Mobile Access – Improved the performance of the Custom Widget properties updates.
User Story	40982	Improved the Data Server (TCP/IP and Core Tasks) stability when several connections are happening simultaneously.
User Story	41235	Resolved issue with the Studio development environment no longer opening after the evaluation license is expired, on when in Demo mode, and an Ethernet card on that computer is disabled.
User Story	41269	Modified the Text Box object to increase the Mask/Count Label object size so it can fit the translated string properly when using the product in languages other than English.
User Story	41367	Resolved issue with Linked Symbols using Class Tags and Fields, associated to Indirect Tags, where the parsing operation was not being done correctly.
User Story	41599	Modified the Linked Symbol feature to support changing the Command Animation that was being lost in certain specific situations.
User Story	41601	Mobile Access screens open faster, especially under high latency networks.
User Story	41678	Modified the Project Communication Settings to make it mandatory for the user to select at least one of the two available Data Ports (Port and Encrypted).
User Story	41809	Removed legacy options for connection (Serial, Active Sync).
User Story	41835	Created a new build-in function, TaskUpdateConfig(strTask, numWorksheet), allowing users to reload Scripts, Math, Scheduler, Database/ERP worksheets that were either created or modified during run time.
User Story	41917	Mobile Access – Improved the startup time when using networks with high latency.
User Story	42251	Resolved instability issues with the Security System in LDAP mode in certain specific situations.
User Story	42711	Enabled license support for IoT Edge modules.
User Story	42923	Created a new built-in function SetUserGroup(strUserName, strGroupName, optNumAppend) which allows changing the group configurations for a specific user during run time.

Type	Work Item	Description
User Story	43077	Mobile Access – Improved the Rotation animation to have it working the same way as it does on the Viewer module.
User Story	43127	Reviewed and updated some of the texts and interfaces on the Remote Management window and on the Remote Agent to make them more consistent. Also, removed some of the outdated and unsupported features.
User Story	43567	Mobile Access – Updated the overall layout of some of the runtime dialogs and windows.
User Story	43723	Modified the error messages displayed on the output window when the user saves a screen as HTML and do not have the option to save images as separated files selected on the project settings. This will cause the project to not run properly on Mobile Access.
User Story	50371	Modified the images used in the Virtual Keyboards and Keypads.
Defect	40903	Modified the OPC XML-DA Client to have an option to accept values with empty timestamps coming from the Server side. This is possible now by configuring an entry under the [OPC] section of the project's .APP file called UseEmptyTimeStampAsCurrentTime=1.
Defect	40960	Mobile Access – Resolved issue that was causing some tags to be out of sync with the Server values
Defect	41199	Mobile Access – Resolved issue with some Mobile Access worksheet configurations not being saved in certain projects.
Defect	41535	Mobile Access – Resolved issue that would cause instability when several alarms were being generated at once and sent to the Alarm control object on a page.
Defect	41836	Mobile Access – Improved the connections management to automatically disconnect inactive sections keeping at least one open, in case all seem to be inactive.

Installation Guide

This is a brief guide to installing the full InduSoft Web Studio 2020 software.

Upgrading from a Previous Version

If you are upgrading to InduSoft Web Studio 2020 from a previous version, please note the following recommendations.

You can have more than one major version of InduSoft Web Studio installed on the same computer, because each major version is installed in its own appropriately named program folder. For example, this major version is InduSoft Web Studio 2020, so by default it is installed in the following location on your hard drive:

```
C:\Program Files (x86)\InduSoft Web Studio 2020\
```

Many users keep a previous major version installed on their computer while they become familiar with the changes in the latest major version. You can run only one version at a time, however, so you should remove the

previous version when you no longer need it.

You cannot have more than one minor version of InduSoft Web Studio installed on the same computer. A major version includes all of its minor versions — i.e., its subsequent updates, patches, and hot fixes — and they are all installed in the same location on your hard drive.

If you already have InduSoft Web Studio 2020 installed on your computer and you want to update it to its latest minor version, we actually recommend that you remove the software from your computer and then use the latest installer to perform a clean installation. Removing the software will not affect your software license, and it will not modify or remove your projects folder, so there is no risk in doing this. To remove the software, you can use the **Apps & features** control panel in Windows. You can also use the **Modify, Repair, Remove** feature in the previous installer, if you still have it on your computer.

Note: The preceding paragraph applies only to updates and patches. It does not apply to hot fixes, which are distributed with specific instructions and only under special circumstances.

When you upgrade from a previous major version to the latest major version, you also need to upgrade your software license(s). To purchase a license upgrade, contact your InduSoft Web Studio software distributor. To apply that upgrade to the software, use the Protection Manager utility that is installed with the software (**Start** > **InduSoft Web Studio 2020** > **InduSoft Web Studio 2020 Register**). For more information about licensing, see *InduSoft Web Studio 2020 Help Manual*.

If you do not upgrade your software license(s), you can still run the software in its full-featured Evaluation Mode for up to 40 hours. After that time expires, however, you can only run the software in its limited Demo Mode.

When you update a major version to its latest minor version, you do not need to update your software license(s). The license is for the major version, so it includes all of the subsequent updates, patches, and hot fixes for that major version.

Finally, when you open an existing IWS project for the first time in a new version of InduSoft Web Studio, that project is automatically and permanently updated to the new version. This is true regardless of whether you have upgraded your software license(s). Therefore, you should back up your existing projects before you open them in the new version. Each major version of the software creates a corresponding projects folder (e.g., `InduSoft Web Studio 2020 Projects`) in your user directory, so you can simply copy (not move) your projects from the old projects folder to the new projects folder.

System Requirements

This section describes the system requirements and additional considerations for installing InduSoft Web Studio 2020.

To install and run the full InduSoft Web Studio 2020 software, you must have the following:

- A Windows-compatible computer with a standard keyboard, a pointer input (i.e., a mouse, trackpad, or touchscreen), and an SVGA-minimum display;

- One of the following Windows operating systems:

    - Windows:

        - Windows 10, version 1803 or later (including LTSC/LTSB versions)

- Windows 8.1

  - Windows Server:

    - Windows Server 2019
    - Windows Server 2016
    - Windows Server 2012 R2

  - Windows Embedded Standard:

    - Windows 10 IoT Enterprise (LTSC/LTSB version only)
    - Windows Embedded 8.1 Industry Pro
- .NET Framework 3.5 and .NET Framework 4.7.2 (or later);
- Internet Explorer 11;
- Minimum 2 GB available storage (hard drive or non-volatile);
- Minimum 1 GB available memory (RAM); and
- An Ethernet or Wi-Fi network adapter.

We recommend the "Pro" and "Enterprise" editions of Windows, because they include Internet Information Services (IIS) as a pre-installed feature that can be turned on. You can use IIS to make your projects accessible to thin clients and mobile devices. We do not recommend the "Home" and "Education" editions of Windows, because they hide or disable many important features.

Only Windows 10, Windows Server 2016, and Windows Server 2019 are under what Microsoft calls "mainstream support", which means they are actively maintained and additional service packs might be released for them in the future. Windows 8.1 and Windows Server 2012 R2 are under what Microsoft calls "extended support", which means they are no longer actively maintained. For more information, go to: https://support.microsoft.com/en-us/help/13853/windows-lifecycle-fact-sheet

You can install the full InduSoft Web Studio 2020 software on a Windows Embedded Standard device, as long as it meets the system requirements listed above, but if you do not plan to develop projects on that device then you should install Embedded HMI instead. Embedded HMI is the runtime edition for Windows Embedded Standard. For more information, see *InduSoft Web Studio 2020 Help Manual*.

Regardless of which version or edition of Windows you are using, make sure it is fully updated before you install InduSoft Web Studio 2020. Updating Windows ensures that it has all of the latest security fixes and system components.

The operating system, storage, and memory requirements will necessarily increase for larger projects; the minimum requirements listed above are only for projects of up to 4,000 tags. The following table shows the complete requirements:

Project Size	Operating System	Storage	Memory
up to 4,000 tags	Windows, Windows Server, Windows Embedded Standard	2 GB available	1 GB available
up to 64,000 tags	Windows, Windows Server	4 GB available	2 GB available
up to 10 million tags	Windows Server only (multi-core)	8 GB available	4 GB available

Your computer needs to meet only the minimum requirements when you first install the software and begin to develop your project, but the requirements will increase as your project grows. Furthermore, every other Windows computer on which you plan to download and run your project must meet the same requirements.

The following items are optional but recommended:

- A USB port, to install the software from a USB flash drive.

  This item is optional because you can also download the installer over the network to your computer.

- A USB port or memory card slot, to be used for hardkey licensing of the software.

  This item is optional because softkey licensing is also available.

- Serial COM ports and adapters, to be used for direct communication with PLCs and other devices.

  This item is optional because many newer device protocols use Ethernet communication (TCP or UDP) instead of serial communication.

- Internet Information Services (IIS) installed and turned on; for more information, see the Mobile Access Runtime feature in the "Selectable Features" section.

  This item is optional because you may choose not to install the Mobile Access Runtime feature at this time, as part of the full InduSoft Web Studio 2020 software. You can install it at a later time, for either IIS or CGI.

- Either Microsoft Edge or Google Chrome, to be used for viewing project screens in Mobile Access.

  To get Google Chrome, go to: https://www.google.com/chrome/

  This item is optional because you can still use our traditional Web Thin Client to view project screens, and it requires Internet Explorer.

Finally, you must have administrator privileges on your computer in order to install any software. If you are not already signed on as a user with administrator privileges when you run the InduSoft Web Studio 2020 software installer, you can choose to run the installer as an administrator: right-click the installer program file (`setup.exe`), and then on the shortcut menu, click **Run as administrator**. You will be asked for the appropriate user name and password.

.NET Framework

You must have both .NET Framework 3.5 and .NET Framework 4.7.2 (or later) installed and turned on in order to use all of the features in InduSoft Web Studio 2020.

If Windows is fully updated on your computer, the latest versions of .NET Framework should be installed already. They might not be turned on, however — in fact, in recent versions of Windows and Windows Server, .NET Framework 3.5 is turned off by default. Use the **Windows Features** control panel to make sure they are turned on.

In some cases, it might not be possible to keep Windows fully updated through normal means. For example, if your computer is on a private network, it might not be able to contact the Windows Update service. The InduSoft Web Studio 2020 software installer will check for both versions of .NET Framework, and if it does not find them, it will attempt to install them for you. Depending on your computer's security settings, however, the

installation(s) might fail without notice. Therefore, if you experience issues later while using InduSoft Web Studio — in particular, while trying to communicate with external databases — use the **Windows Features** control panel to confirm that both versions of .NET Framework are installed and turned on.

On Windows Server 2012 R2, .NET Framework 3.5 is not pre-installed and it cannot be installed by the InduSoft Web Studio 2020 software installer. You must use the Server Manager tool to install it. For more information about how to do this, contact your InduSoft Web Studio software distributor and request the document *Install .NET Framework 3.5 on Windows Server 2012*.

For more information about .NET Framework in general, go to: https://docs.microsoft.com/en-us/dotnet/framework/index

Selectable Features

On the **Select Features** page of the InduSoft Web Studio 2020 installation wizard, you can select which features and software components to install. If you delesect features that you know you will not use, you will decrease the amount of hard drive space required for installation.

Feature	Description
Program Files	The main program files for the project development environment, the project runtime software for Windows and Windows Server, and the thin client software for viewing project screens. You cannot deselect this feature.
BDE for PanelMate™ Import Wizard	Borland Database Engine (BDE), which is required to import a PanelMate Plus or PanelMate Power Pro program into a new project. This feature is not selected by default, because it is used only in some cases.
Custom Widget Framework	Additional software that is required to develop HTML5-based widgets and then use them in project screens. You cannot deselect this feature.
Demo Projects	Pre-made projects that demonstrate the capabilities of InduSoft Web Studio.
Hardkey Support	Additional drivers that support the use of hardkey licenses.
Industrial Graphics	The Industrial Graphics editor and symbol library, which works as a companion to our native graphics tools.

Feature	Description
Mobile Access Runtime	Add-on software for Internet Information Services (IIS) that lets you use HTML5-compatible browsers to view your project screens. If you select this feature, the installer will try to confirm that IIS is installed and turned on in Windows, and if it is, the add-on software will be installed. Regardless of whether you select this feature for installation, a separate Mobile Access Runtime software installer (`MobileAccessSetup.exe`) will be copied to your InduSoft Web Studio 2020 program folder. You can run that installer at a later time.
OPC Components	Additional components that are required for communication with other OPC-compatible devices. This includes OPC DA (a.k.a. OPC Classic), OPC XML-DA, and OPC UA.
PDF Printing	Additional software that lets projects save run-time reports as PDF files.
Additional Runtimes > IoT View	This is the platform-agnostic project runtime software for Linux and other operating systems. Selecting this feature will not actually install IoT View on your computer at this time. It will only copy the installation files to your InduSoft Web Studio 2020 program folder, so that you can install IoT View on another computer at a later time.
Additional Runtimes > Windows Embedded Standard	Also called Embedded HMI, this is the project runtime software for Windows Embedded Standard computers. Selecting this feature will not actually install Embedded HMI on your computer at this time. It will only copy the installation files to your InduSoft Web Studio 2020 program folder, so that you can install Embedded HMI on a Windows Embedded Standard computer at a later time.
Additional Runtimes > Windows Embedded Compact	Also called Compact HMI, this is the project runtime software for Windows Embedded Compact devices. Check the manufacturer's documentation for your device to see which processor it uses. Selecting this feature will not actually install Compact HMI on your computer at this time. It will only copy the installation files to your InduSoft Web Studio 2020 program folder, so that you can install Compact HMI on a Windows Embedded Compact device at a later time.

Feature	Description
Security System Device Driver	An additional keyboard driver that helps to enforce security during project run time.
Symbol Library	A large library of pre-made but customizable screen objects such as pushbuttons, toggle switches, gauges, dials, indicator lights, and so on.
Historian	Additional software that is required to save historical data (e.g., from Trend worksheets) to AVEVA Historian or AVEVA Insight. If you want to use this feature in your project, you must have .NET Framework 4.7.2 (or later) installed and turned on.

Items Added to the Start Menu

This is a list of the items that are added to your Start menu during the installation of InduSoft Web Studio 2020.

Item	Description
InduSoft Web Studio 2020 Help Manual	A complete technical reference and user guide for InduSoft Web Studio 2020 and its components.
InduSoft Web Studio 2020 Quick Start Guide	A brief, printable guide to the project development environment, including a step-by-step tutorial for how to develop and deploy a simple project.
InduSoft Web Studio 2020 Register	A utility program that you can use to view and change your software license settings.
InduSoft Web Studio 2020 Release Notes	The document that you are reading now.
InduSoft Web Studio 2020 Remote Agent	A utility program that lets other stations remotely manage InduSoft Web Studio 2020 Studio when it is being used as a project runtime.
InduSoft Web Studio 2020 Startup	A shortcut that opens the project runtime and then automatically runs the most recently opened project.
InduSoft Web Studio 2020 Studio	The project development environment, project runtime and/or project viewer. Its actual capabilities are determined by your software license settings.

The software installer also creates a shortcut for **InduSoft Web Studio 2020 Studio** on your desktop.

Possible Issues During Installation

This section describes issues that might occur during the installation of InduSoft Web Studio 2020.

Not Compatible with Previous Versions of System Platform

InduSoft Web Studio 2020 is not compatible with versions of System Platform previous to AVEVA System Platform 2020, because the new Industrial Graphics feature in InduSoft Web Studio uses some of the same components that are used in System Platform. If you want to install InduSoft Web Studio 2020 on the same computer, you must either uninstall the previous version of System Platform or upgrade it to AVEVA System Platform 2020.

"Failed to complete script based install"

You might receive the following message during installation: "Error 1628: Failed to complete script based install." For more information about this issue and how to resolve it, go to: https://community.flexera.com/t5/InstallShield-Knowledge-Base/Error-1628-Failed-To-Complete-Script-Based-Install/ta-p/4014

"CodeMeter Development Kit is already installed"

If you try to install an earlier version of InduSoft Web Studio on a computer that already has a later version installed, you might receive the following message during installation: "Version x.x.x.x of CodeMeter Development Kit is already installed. Downgrading to Version x.x.x.x is not possible, installation will be aborted." CodeMeter is supplemental software used by InduSoft Web Studio to manage hardkey licenses. To resolve this issue, you must use Task Manager in Windows to stop CodeMeter Runtime Server (CodeMeter.exe) before you install the earlier version of InduSoft Web Studio.

Restore from a System Restore point

If the installation fails for any reason, you can use the System Restore feature in Windows to revert your computer to a previous restore point. For more information, go to: https://support.microsoft.com/en-us/help/12415/windows-10-recovery-options

Where To Find More Information

After you have installed InduSoft Web Studio 2020, you can find more information at the following places.

Documentation Installed with the Software

The following documentation is installed in the InduSoft Web Studio 2020 program folder, which means you do not need an Internet connection to access it:

InduSoft Web Studio 2020 Release Notes

The document that you are reading now. These notes are revised for each major release and update (e.g., v20.0), but not for each patch (e.g., v20.0.1).

To open the Release Notes from the Start menu in Windows, go to **Start** > **InduSoft Web Studio 2020** > **InduSoft Web Studio 2020 Release Notes**.

To open the Release Notes from within the project development environment, go to the **Help** tab of the ribbon and then click **Release Notes**.

Assuming InduSoft Web Studio is installed at its default location on your hard drive, the actual file for the Release Notes is located at:

```
C:\Program Files (x86)\InduSoft Web Studio 2020\ReleaseNotes.html
```

InduSoft Web Studio 2020 Help Manual

The Help Manual provides comprehensive and searchable help for the project development environment, instructions for how to develop and deploy projects, and complete descriptions of all of our built-in functions.

To open the Help Manual from the Start menu in Windows, go to **Start** > **InduSoft Web Studio 2020** > **InduSoft Web Studio 2020 Help Manual**.

To open the Help Manual from within the project development environment, go to the **Help** tab of the ribbon and then click **Help**.

Assuming InduSoft Web Studio is installed at its default location on your hard drive, the actual file for the Help Manual is located at:

```
C:\Program Files (x86)\InduSoft Web Studio 2020\Bin\TechRef.chm
```

InduSoft Web Studio 2020 Quick Start Guide

The Quick Start Guide provides a tour of the project development environment, descriptions of essential concepts, and a tutorial for how to develop a simple project. All of this information is included in the Help Manual, but it is organized and presented differently in the Quick Start Guide in order to make it easier for you to access.

To open the Quick Start Guide from the Start menu in Windows, go to **Start** > **InduSoft Web Studio 2020** > **InduSoft Web Studio 2020 Quick Start Guide**.

Assuming InduSoft Web Studio is installed at its default location on your hard drive, the actual file for the Quick Start Guide is located at:

```
C:\Program Files (x86)\InduSoft Web Studio2020\Bin\QuickStart.pdf
```

Driver documents

Each communication driver has its own document that describes the protocol used by the driver, how to configure the communication settings for the driver, how to format station IDs and I/O addresses in driver worksheets, and any other technical requirements for connected devices.

To open a specific driver document from within the project development environment, go to the **Help** tab of the ribbon and then click **Communication Drivers**.

Assuming InduSoft Web Studio is installed at its default location on your hard drive, the actual files for the driver documents are located at:

```
C:\Program Files (x86)\InduSoft Web Studio 2020\Drv\<driver name>.pdf
```

For example, the driver document for our basic Modbus driver (MODBU) is `MODBU.pdf`.

If you download an updated driver package from our website, that package should include an updated driver document.

License

The License document provides legal information regarding your license to use InduSoft Web Studio. You are asked to agree to this document when you install the software.

Assuming InduSoft Web Studio is installed at its default location on your hard drive, the license document is located at:

`C:\Program Files (x86)\InduSoft Web Studio 2020\License.pdf`

Copyright

The Copyright document provides legal information regarding the copyrights on all of the third-party software that is incorporated into InduSoft Web Studio. You are asked to agree to this document when you install the software.

Assuming InduSoft Web Studio is installed at its default location on your hard drive, the copyright document is located at:

`C:\Program Files (x86)\InduSoft Web Studio 2020\Copyright.pdf`

Demo Projects Installed with the Software

When you install the InduSoft Web Studio 2020 software, several demo projects are also installed at the following location:

`C:\Users\Public\InduSoft Web Studio 2020 Demo`

These projects demonstrate many of the features in InduSoft Web Studio 2020. You can open any of them to see how objects are used in screens, how functions are used in scripts, and so on.

Resources Available on Our Website

The following resources are available on our website:

Library

A library of product documentation (including previous versions), technical notes, marketing literature, and case studies.

Go to http://www.indusoft.com/Resources/Library

Video Library

A library of tutorial videos that cover many common tasks in developing, deploying, and troubleshooting IWS projects.

Go to http://www.indusoft.com/Support/Video-Library

Blog

A regularly updated blog that highlights new and useful features in InduSoft Web Studio.

Go to http://www.indusoft.com/blog

Applications

A collection of sample applications that show in detail how specific features in InduSoft Web Studio are used.

Go to http://www.indusoft.com/Downloads/Sample-Applications