



Elysium  
**3DxSUITE™**

**Elysium 3DxSUITE**  
*SmartController Pro Manual*

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Elysium Co. Ltd.

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## About Module Packages

All module packages for 3DxSUITE can be found on the 3DxSUITE Customer Page. Below is a list of available module packages.

- 3DxSUITE Base Package
- 3DxSUITE Components Package
- 3DxSUITE Viewer Package
- 3DxSUITE Editor Package
- 3DxSUITE SmartController Package
- 3DxSUITE SmartController Pro Package
- 3DxSUITE TransServer Package
- 3DxSUITE WorkerNode Package
- 3DxSUITE Daimler Bundle Package
- 3DxSUITE Honda Bundle Package
- 3DxSUITE Module for CADmeister Package
- 3DxSUITE ScenarioEditor Package
- 3DxSUITE Data Package Studio Package
- 3DxSUITE Validation Configurator Package
- 3DxSUITE PDQ Checker Configurator Package



When referring to each package in this document, it will be enclosed in `<>`.

(e.g., Sample scripts are included in the `<3DxSUITE Base Package>`.)

## About 3DxSUITE Setting Utility

Commonly used settings in the 3DxSUITE products, such as license server information or Scenario folder paths, can be set in "3DxSUITE User Common Setting" or "3DxSUITE Local User Setting". Please refer to "Elysium 3DxSUITE Setting Utility Manual" for details on the available items.

In this document, "3DxSUITE User Common Setting" and "3DxSUITE Local User Setting" will be collectively referred to as "3DxSUITE Setting".

## Shortened Names for 3DxSUITE Products

In this document, the 3DxSUITE product names are referred to as follows:

- 3DxSUITE Components → Components
- 3DxSUITE Viewer → Viewer
- 3DxSUITE Editor → Editor
- 3DxSUITE SmartLauncher (Standalone) → SmartLauncher (Standalone)
- 3DxSUITE SmartLauncher (Plug-in) → SmartLauncher (Plug-in)
- 3DxSUITE SmartController → SmartController
- 3DxSUITE SmartController Pro → SmartController Pro
- 3DxSUITE TransServer → TransServer
- 3DxSUITE WorkerNode → WorkerNode
- 3DxSUITE ScenarioEditor → ScenarioEditor
- 3DxSUITE Data Package Studio → Data Package Studio
- 3DxSUITE Validation Configurator → Validation Configurator
- 3DxSUITE PDQ Checker Configurator → PDQ Checker Configurator
- 3DxSUITE Setting Utility → Setting Utility

# 1. Introduction

## 1.1. What is SmartController Pro?

With this application, the user can process multiple 3D model data together based on a specified Scenario. SmartController Pro is a high-end product of SmartController, and processing can be distributed and executed on multiple computers. Please ensure that WorkerNode is installed in the computer where the actual operation will be performed.

Starting SmartController Pro requires a license for SmartController Pro. In addition, Component licenses are required depending on the process you want to execute.

## 1.2. System Requirement

OS	Microsoft Windows 10 Pro 64-bit (21H1, 21H2) Microsoft Windows 11 Pro (21H2)
Supported Language	Japanese, English
Other requirements	<ul style="list-style-type: none"><li>• Requirements for translation depends on the requirements of the Components being used.</li><li>• .NET Framework 4.5.2 is required.</li></ul>

## 2. Installation

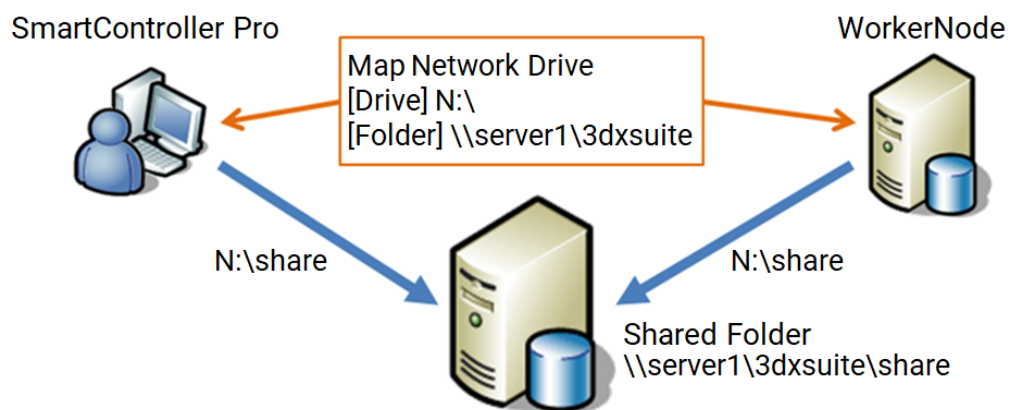
You need Administrator privileges to install Elysium products.

### 2.1. Prerequisite: Setup of Shared Folder

The computer on which 3DxSUITE SmartController Pro will be installed and the computer on which 3DxSUITE WorkerNode will be installed must share a single folder with the same file path (i.e., N:\share). This section will explain how to set up a folder (hereinafter referred to as "shared folder") that will be shared across the network on each computer.

Please note the following when you set a shared folder.

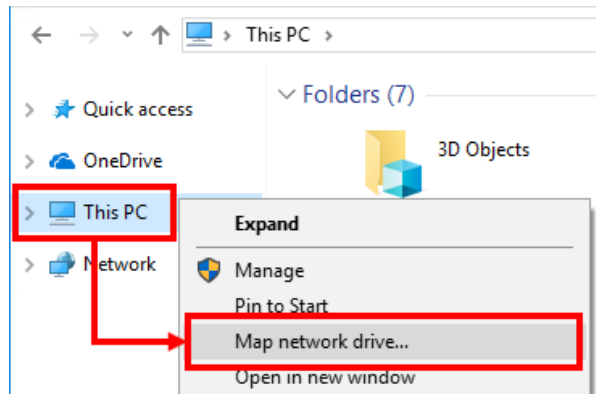
- A shared folder **needs to be assigned in a large-capacity drive** because the output folder and the work folder of data processing are created under the shared folder.
- **UNC path (path which starts with "\\") cannot be used** as the shared folder.



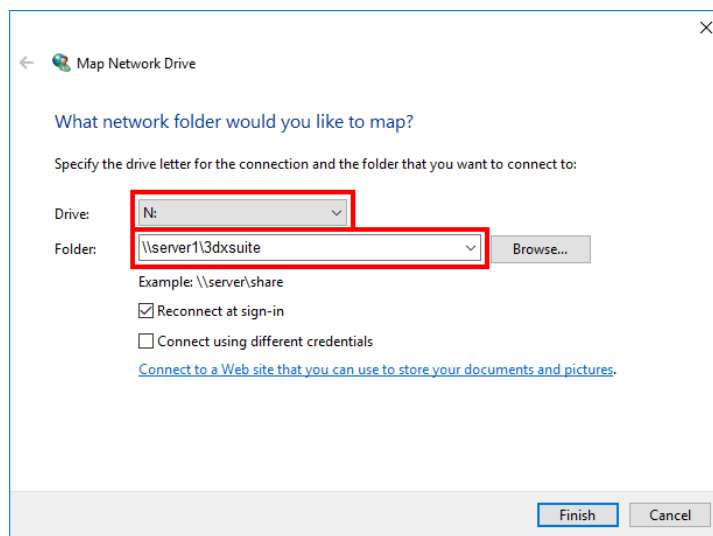
The folder "\\server1\3dxsuite\share" in the computer named "server1" is used as the shared folder in the above example. In this regard, change the path "\\server1\3dxsuite\share" to "N:\share" with assigning the folder "\\server1\3dxsuite" to N drive ("N:\") and use the path "N:\share" as the shared folder, because UNC paths cannot be used as the shared folder.

## How to assign a drive letter to UNC path

1. Right-click on "This PC" and select "Map network drive."



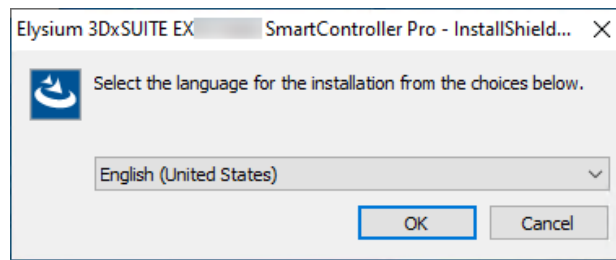
2. Select a drive letter from the pull-down menu, then enter UNC path in the Folder field and click [Finish].



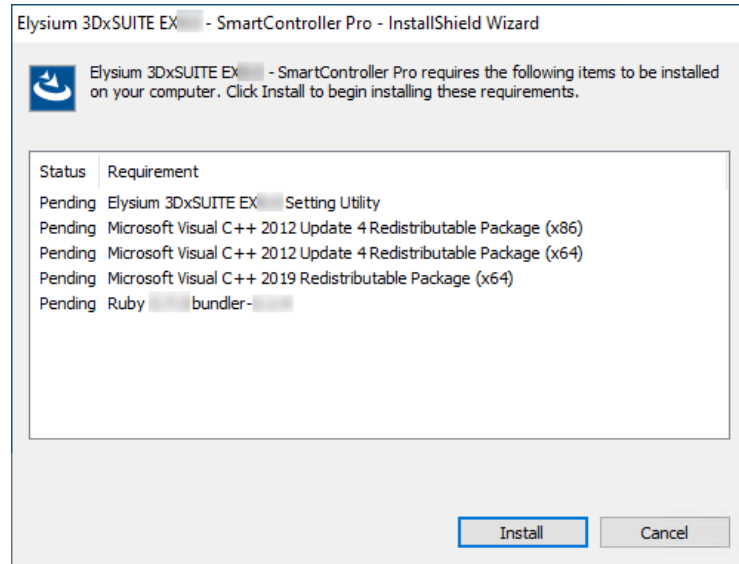
Above settings should be performed on both computers where 3DxSUITE SmartController Pro and 3DxSUITE WorkerNode are installed.

## 2.2. Manual Installation

1. Run the installer for SmartController Pro.
  - Folder containing the installer: <3DxSUITE SmartController Pro Package>\
  - Installer: Elysium\_3DxSUITE\_EX9.1\_SmartController\_Pro.exe
2. Select the language for the installation and click [OK]. Japanese and English are available.

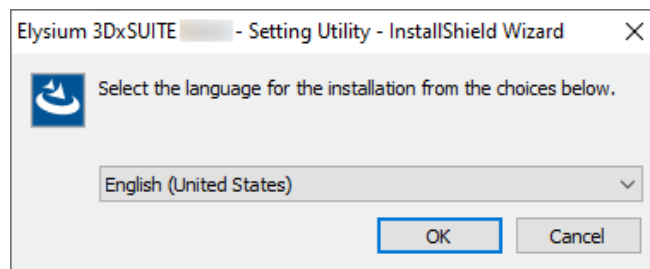


3. When this dialog appears, click [Install].



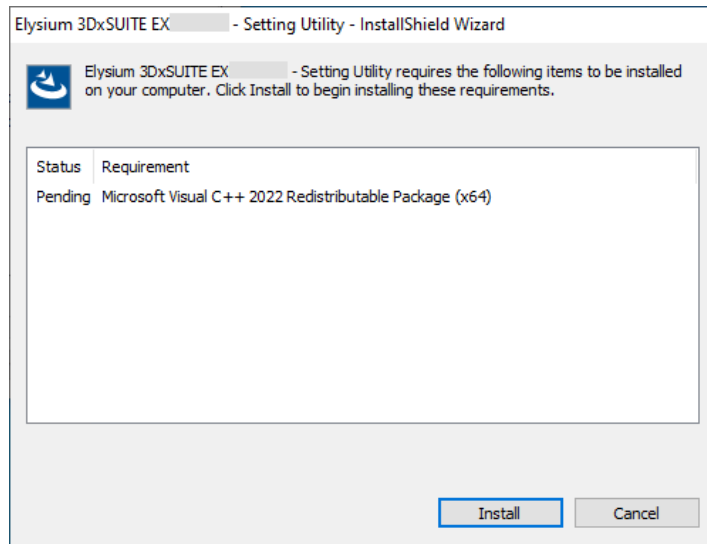
4. If Setting Utility is not installed, the Setting Utility installer will start. Follow the steps below to perform the installation. If Setting Utility is already installed, skip to the step after installing Setting Utility.

a. Select which language to use when installing, and click [OK].

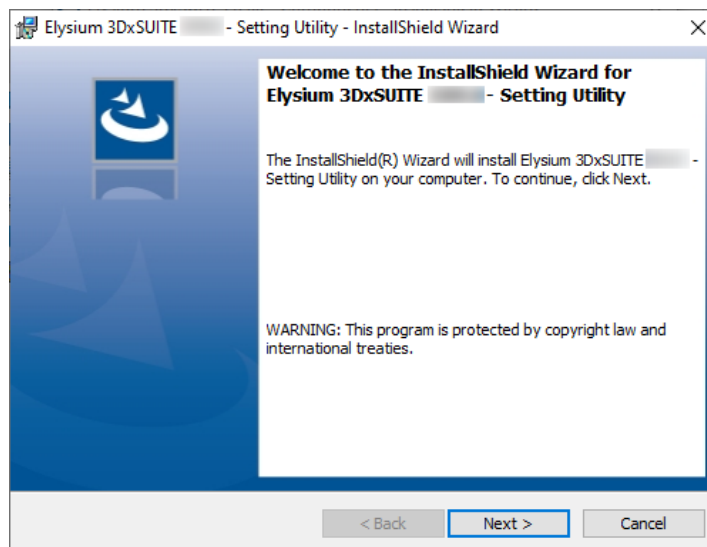


b. If above dialog is displayed, click [Install] to start the installation. If 3DxSUITE Setting Utility is already installed, this dialog will not appear.





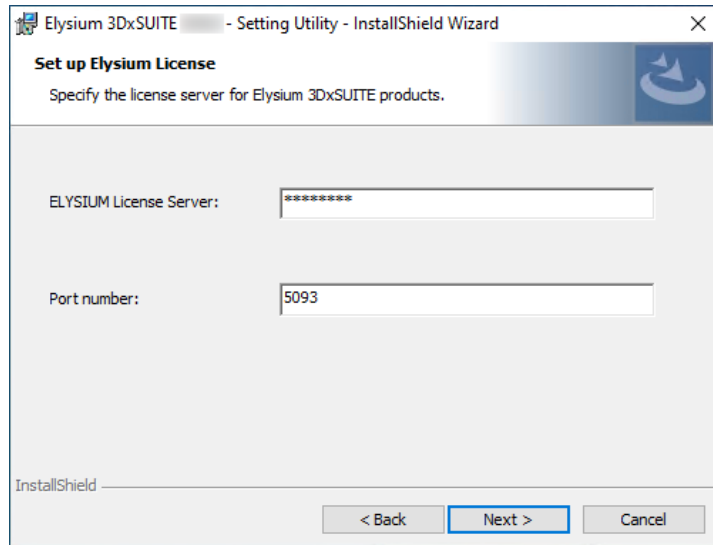
c. Installation Wizard starts. Click [Next].



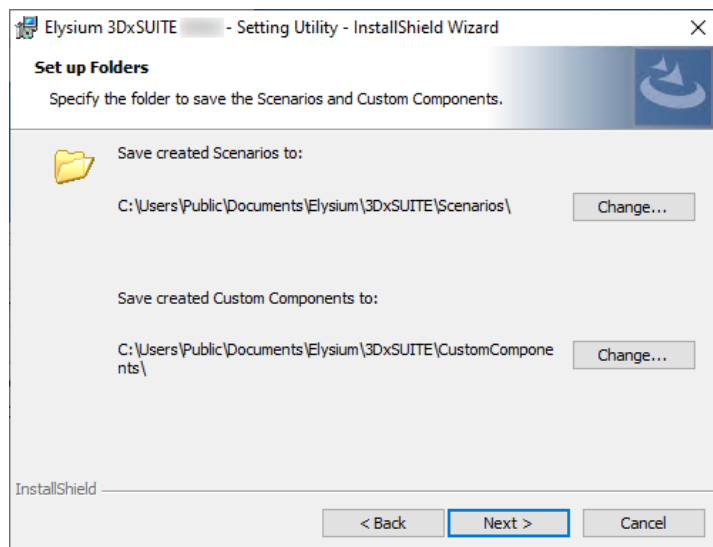
d. Select "I accept the terms in the license agreement" if you accept the license agreement and click [Next]. If you don't accept, you cannot continue the installation.



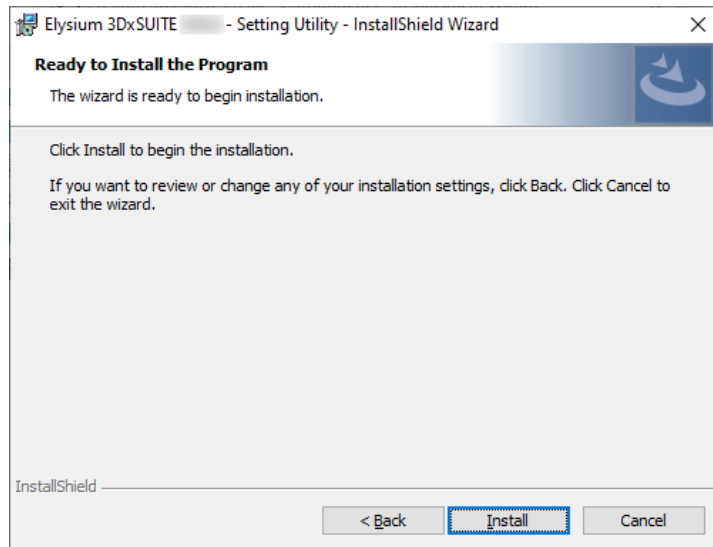
- e. "Set up Elysium License" dialog will appear. Enter Host name of the computer where you installed Sentinel RMS License Manager, and if necessary, change Port number. And then click [Next].



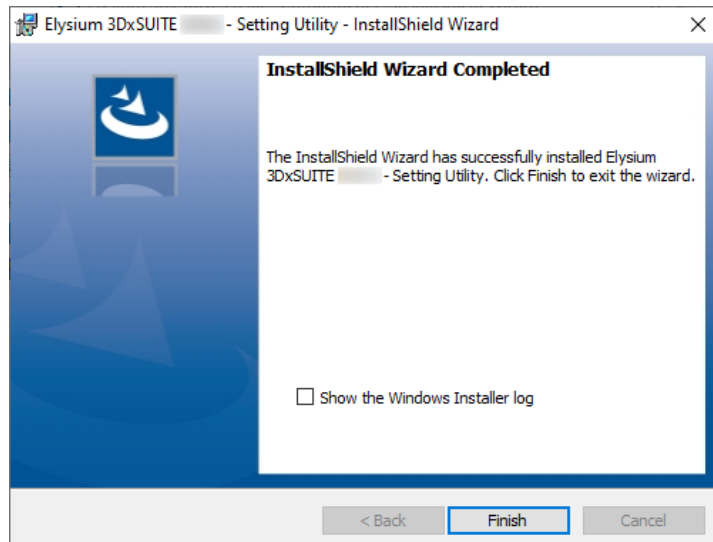
- f. "Set up Folders" dialog will appear. Change the folder path if necessary, and then click [Next].



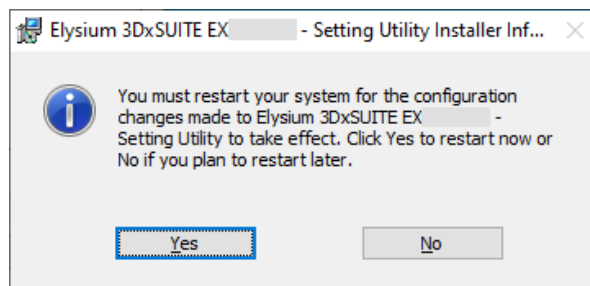
- g. Click [Install] to start the installation.



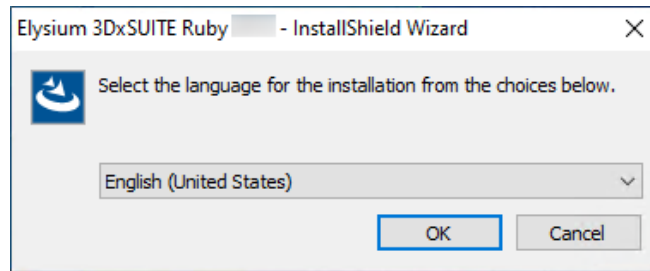
- h. When the installation of Setting Utility is completed, the following dialog will appear. Click [Finish] to close the installer.



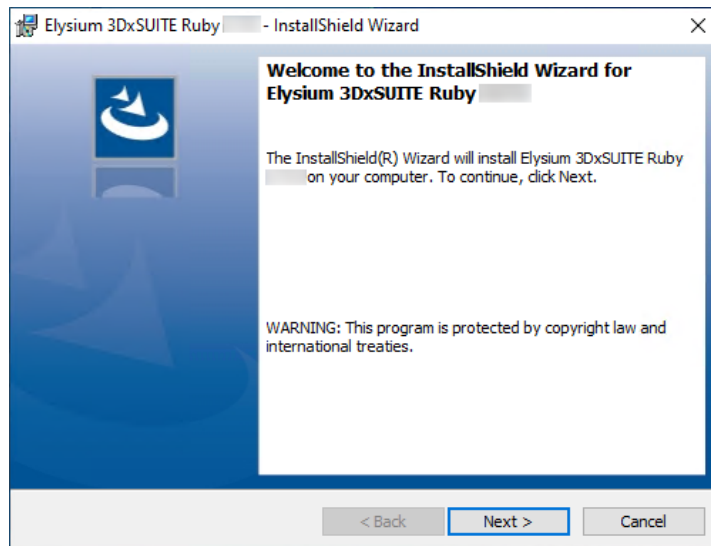
- i. When a dialog appears prompting you to reboot, then reboot the OS. After the OS has rebooted, continue with the next step.



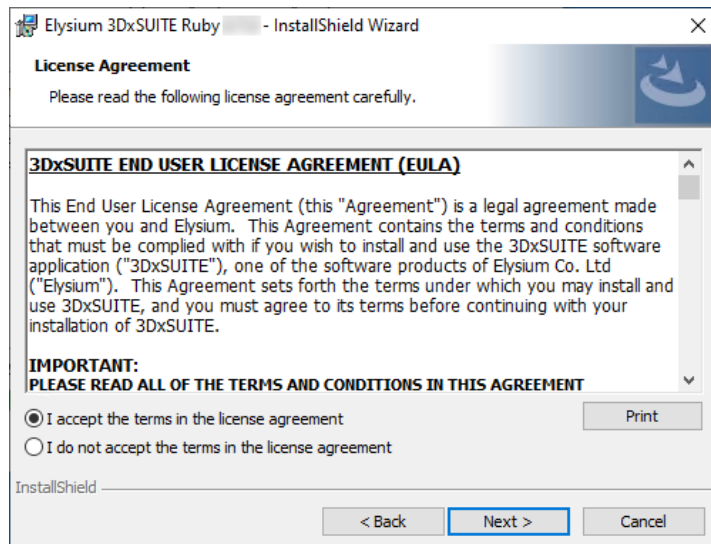
5. If Elysium 3DxSUITE Ruby is not installed in the environment, Elysium 3DxSUITE Ruby installer will start. Follow the steps below to perform the installation. If Elysium 3DxSUITE Ruby is already installed, skip to the step after installing Elysium 3DxSUITE Ruby.
- a. Select which language to use when installing, and click [OK].



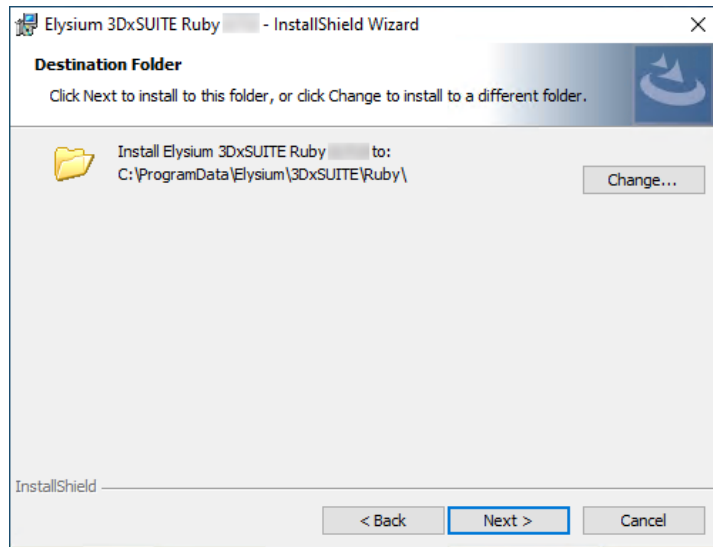
- b. Installation Wizard starts. Click [Next].



- c. Select "I accept the terms in the license agreement" if you accept the license agreement and click [Next]. If you don't accept, you cannot continue the installation.

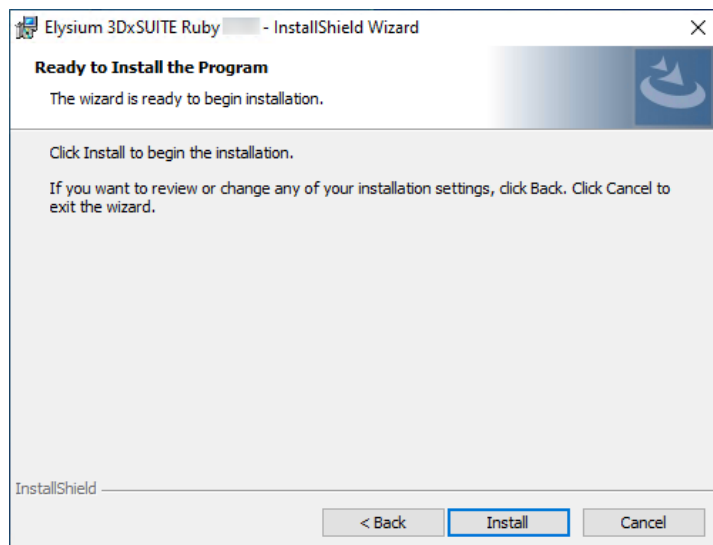


- d. "Destination Folder" dialog will appear. To change the destination folder from default setting, click [Change] and specify the new destination folder. When the setting is finished, click [Next].

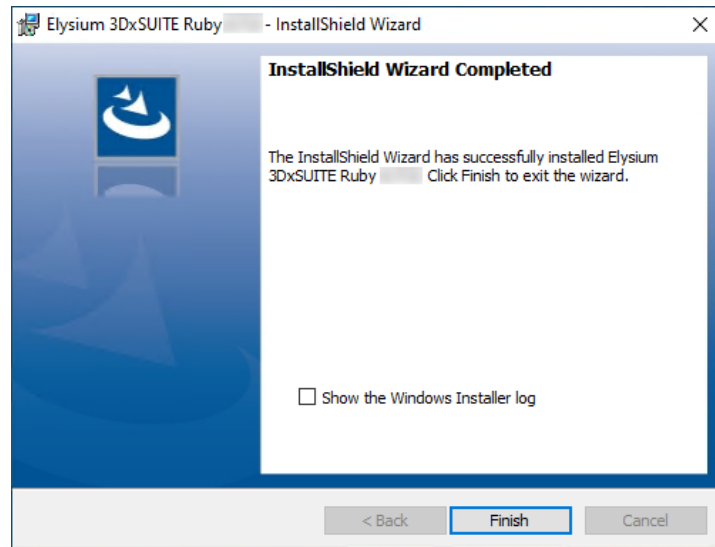


Please ensure that the destination folder path consists only of one-byte alphanumeric characters and several one-byte symbols ("#", "+", "-", "\_", ".", "\$", "/", ":"). If characters other than these are included in the path, an error will occur.

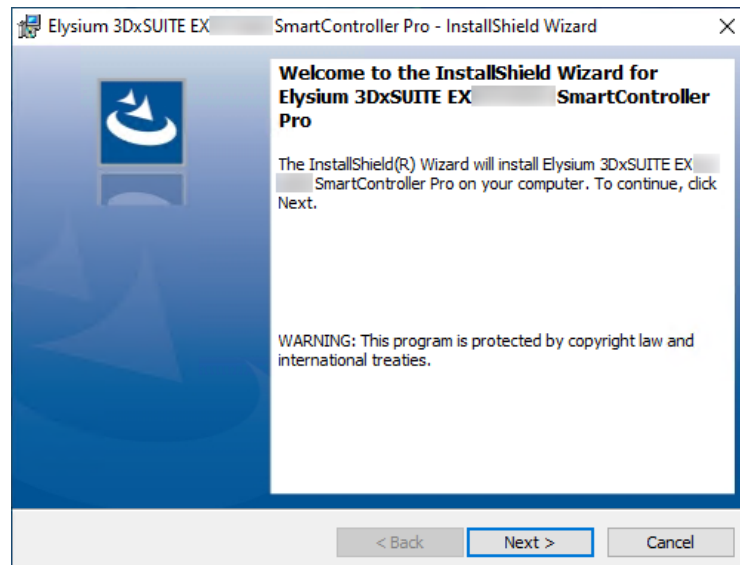
- e. Click [Install] to start the installation.



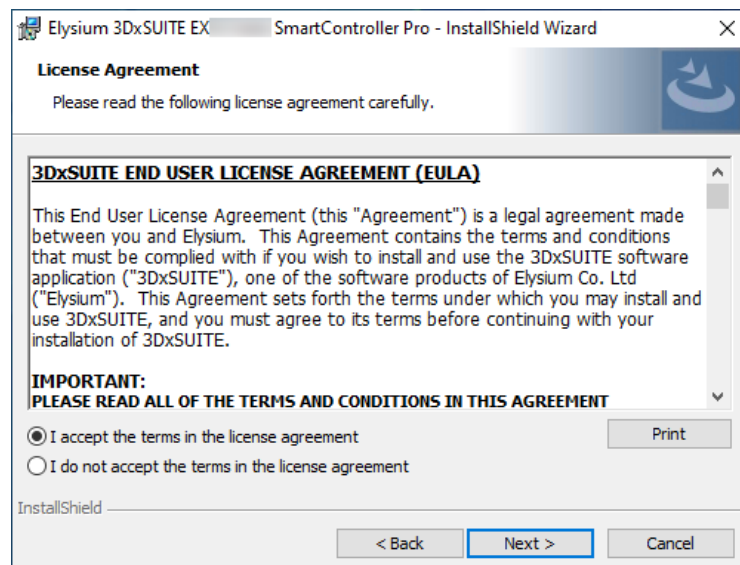
- f. When installation is completed, the following dialog will appear. Click [Finish] to end the installer.



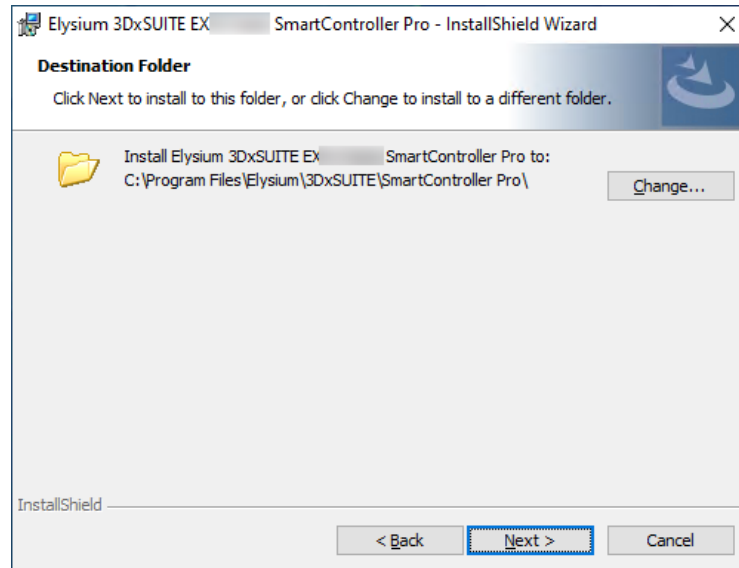
6. Install Wizard starts. Click [Next].



7. Select "I accept the terms of the license agreement" if you agree, and then click [Next]. If you disagree, you cannot continue the installation.

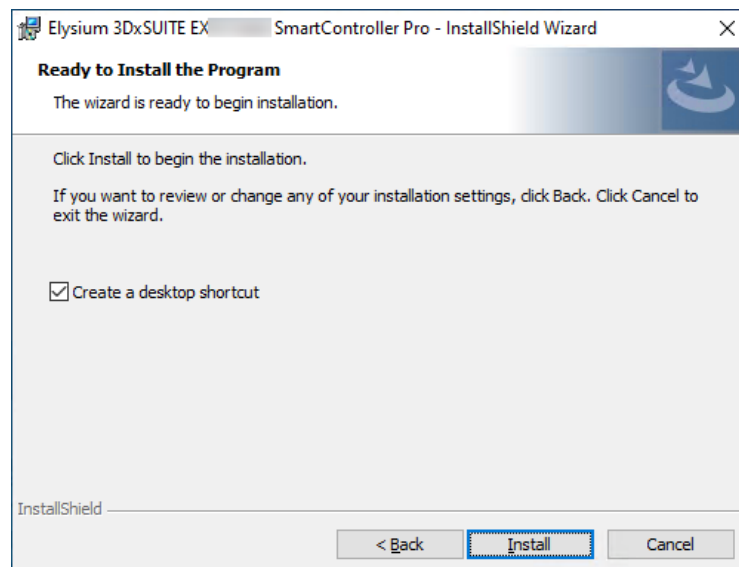


8. "Destination Folder" dialog will appear. To change the destination folder from default setting, click [Change] and specify the new destination folder. When the setting is finished, click [Next].

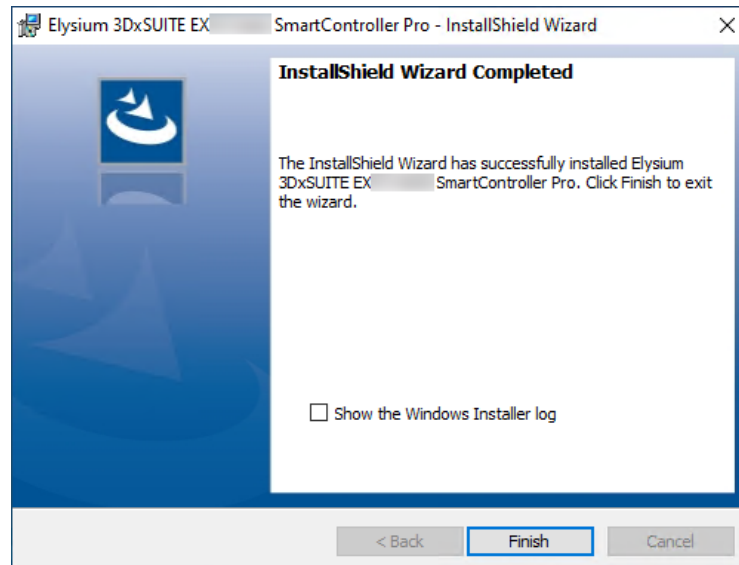


Please ensure that the destination folder path consists of ASCII characters only. If the folder path contains non-ASCII characters, the application may not work as expected.

9. Disable "Create a desktop shortcut" if you do not want to create a desktop shortcut. Click [Install] to start the installation.



10. The following dialog will appear when installation is completed. Click [Finish] to close the installer.



## 2.3. Silent Installation

By using the command, you can install or upgrade SmartController Pro without GUI operations.

- Example of command

```
Elysium_3DxSUITE_EX9.1_SmartController_Pro.exe /s /v"/l* \"C:\temp\install.log\"
INSTALLDIR=\"C:\Program Files\Elysium\3DxSUITE\EX9.1\SmartController_Pro\" /qn"
```

This is a list of command arguments to pass to the installer when executing silent installation.

Command Argument	Description	Mandatory / Optional
/s	Execute installation or uninstallation in silent mode.	Mandatory
/v	<p>Specify the following arguments in the form of /v"arg1 arg2 ...":</p> <ul style="list-style-type: none"> <li>• /l* "&lt;Log file&gt;" : Specify the log file path. A space is required between "/l *" and the filename.</li> <li>• INSTALLDIR="&lt;Installation Folder&gt;" : Specify the folder where you want to install. This can be specified only when installing.</li> <li>• /qn : Install or uninstall without displaying the dialog.</li> <li>• /qn+ : Dialog is displayed when installation or uninstallation is completed.</li> </ul>	Optional



## 3. How to Use

### 3.1. Launch

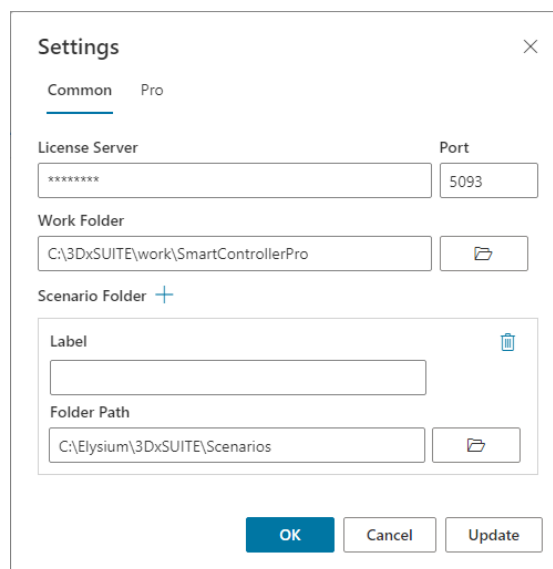
In Windows start menu, select [Elysium 3DxSUITE SmartController Pro] > [3DxSUITE SmartController Pro] to launch. Or, double-click [3DxSUITE SmartController Pro] shortcut on your desktop.

### 3.2. Settings

Follow the steps below to set the information required to run the process.

1. Select [File] > [SmartController Pro Setting] from the menu.
2. Set the appropriate values for the following items.

[Common] tab



The screenshot shows the 'Settings' dialog box with the 'Common' tab selected. It contains the following fields and controls:

- License Server:** A text field with masked characters (\*\*\*\*\*).
- Port:** A text field containing the value '5093'.
- Work Folder:** A text field containing 'C:\3DxSUITE\work\SmartControllerPro' with a folder selection icon to its right.
- Scenario Folder:** A section with a '+' icon, containing:
  - Label:** A text field with a trash icon to its right.
  - Folder Path:** A text field containing 'C:\Elysium\3DxSUITE\Scenarios' with a folder selection icon to its right.
- Buttons:** 'OK' (blue), 'Cancel', and 'Update' at the bottom right.

- License Server:

Enter the host name of the computer on which the license server is running.



The license server information you set here is only used for the operation of SmartController Pro itself. Actual translation or optimization process performed based on the command from SmartController Pro will refer to the license server configured in the WorkerNode Setting of 3DxSUITE WorkerNode.

- Port:

Enter the port number of the license server. Default port number set when installing the license server is 5093.

- Work Folder:

Enter the work folder which will be used by SmartController Pro and WorkerNode to perform the process. Set the shared folder (Example: N:\share) configured in 2.1, [“Prerequisite: Setup of Shared Folder”](#).

- Scenario Folder:

Enter the folder where you want to place the definition files for the Scenarios to be executed from SmartController Pro. By pressing [+] button, you can specify multiple Scenario folders. Also, you can set a label for each Scenario folder. When setting a label for the Scenario folder, it will appear with the Scenario name when you select a Scenario.



Please note that if no settings have not been implemented on [Common] tab, SmartController Pro will use the settings configured in Setting Utility. Otherwise, settings made on [Common] tab will take precedence over the contents set in Setting Utility.

## [Pro] tab

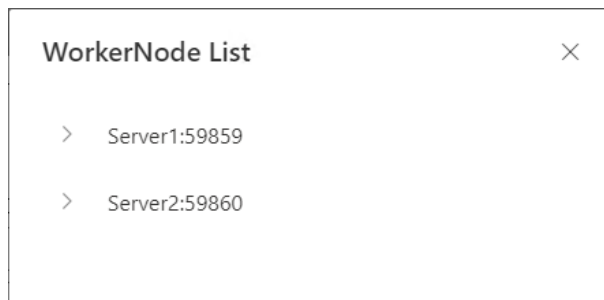
- Worker Node:

Enter the host name of the computer on which the WorkerNode running the Job is running. Click "+" button to add WorkerNode. And to delete the WorkerNode, click Trash bin icon.



Please ensure to click [Update] in this dialog when a WorkerNode has been added or deleted, or when a Component which has been set on the WorkerNode side has been added or deleted.

Click [Open WorkerNode List] (  ) to display the list of WorkerNodes.

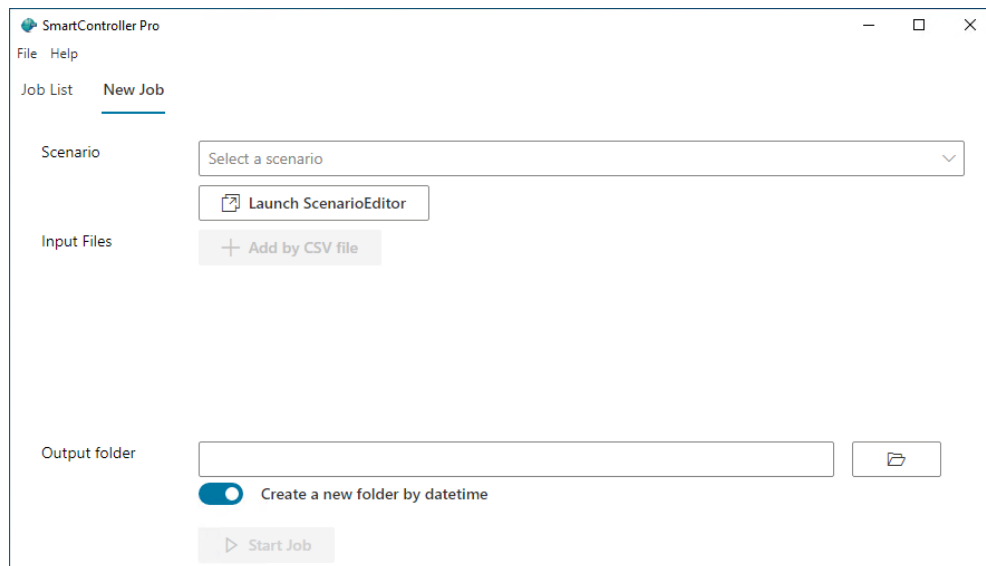


- Port:  
Enter the WorkerNode port number.
- Component timeout (minutes):  
Set the timeout period for each Component included in the Scenario. The unit is minutes.

3. Click [OK] to save the settings.

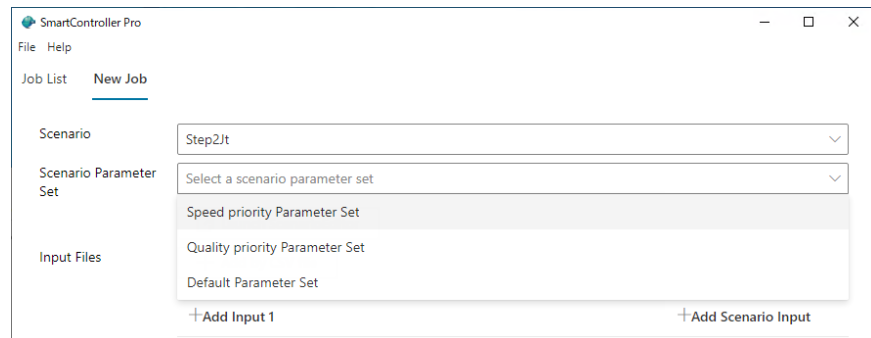
## 3.3. Start Jobs

1. Switch the tab to [New Job].



2. Select a Scenario. Scenarios under a Scenario folder configured on Settings are displayed.

- If the selected Scenario contains more than one Scenario Parameter Set, "Scenario Parameter Set" is displayed. Select the appropriate Scenario Parameter Set from the pull-down menu.



- After selecting a Scenario, click [Launch ScenarioEditor] to launch ScenarioEditor and open the selected Scenario. You can edit the Scenario here if necessary.

### 3. Select Input files.

- By clicking [Add by CSV file], the input file list in CSV format can be imported.

When running a Scenario which accepts only one model as the input, the input file list should contain the absolute path of the file, one model per line, as shown in the following example. Please note that even if you enter the absolute paths of multiple files separated by commas, only the first model will be imported.

Example of input file list 1:



```
C:\data\1.igs
D:\temp\target_data\2.igs
C:\Users\user\Desktop\3.igs
```

When running a Scenario which accepts two models as the input, the input file list should contain the absolute file paths, two models per line separated by a comma, as shown in the following example.

Example of input file list 2:

```
C:\validation\1.igs,C:\validation\2.igs
D:\temp\target_data\3.igs,D:\temp\target_data\4.igs
```



Please note that if multiple versions of a particular CAD product are installed and the CAD version used for translation is not specified, the latest version of CAD available will be used.

- b. [Add Input {N}] shows a file dialog to specify Nth input file.  
When the Scenario requires multiple inputs, multiple buttons are displayed.
  - c. You can also add a file by dragging and dropping the file near the input file list area.
  - d. By pressing Trash bin icon, the target file can be removed from the input file lists.
4. Specify Output folder. When [Create a new folder by datetime] is enabled, the subfolder name based on the execution datetime will be created.

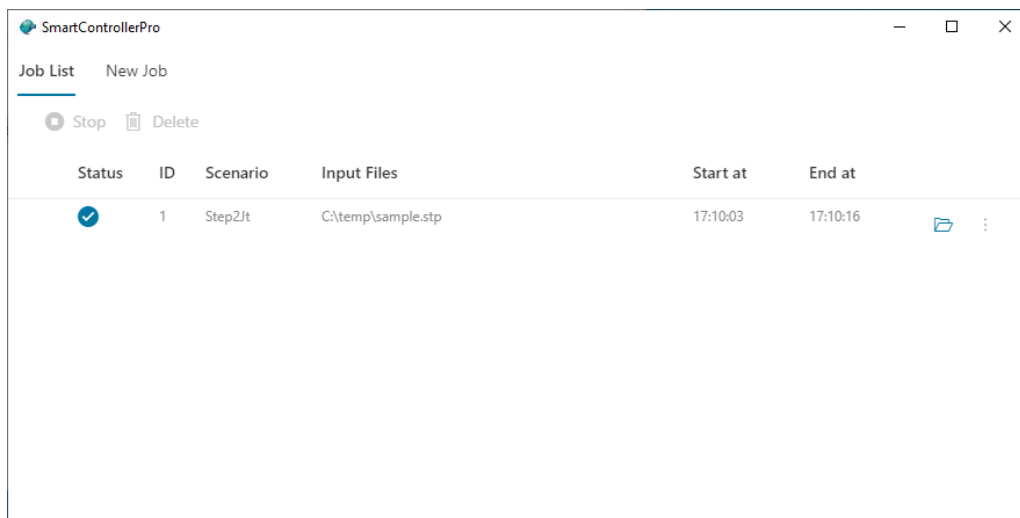


When using WorkerNodes on other computers to execute the job, specify the shared folder not only to the Work folder, but also to the Output Folder. Please refer to [2.1, “Prerequisite: Setup of Shared Folder”](#) for more details about the shared folder.

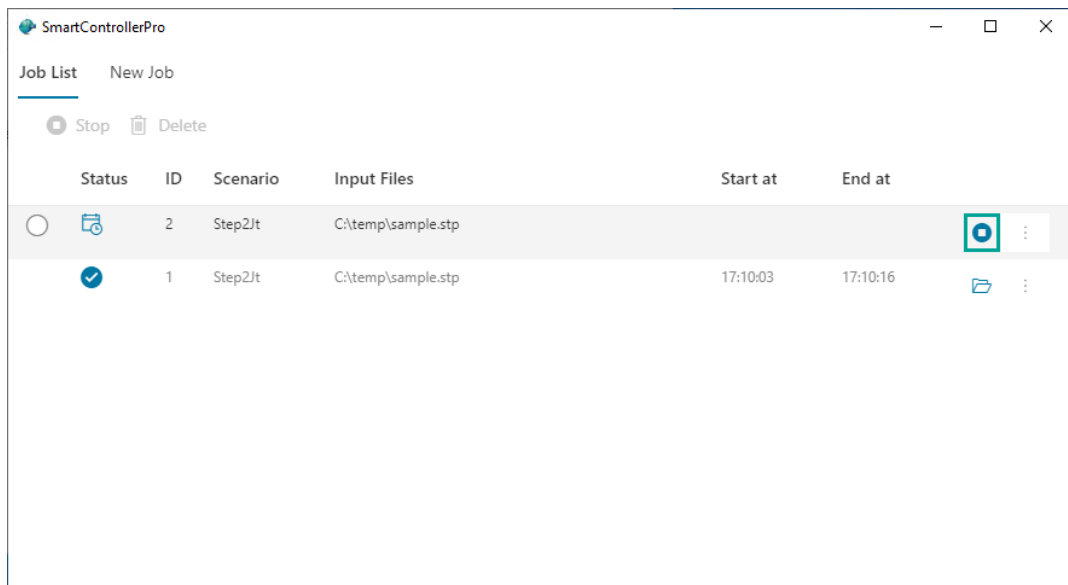
5. Click [Start Job].  
Jobs are enqueued and processed one by one in the enqueued order.

## 3.4. Check Jobs

In [Job List] tab, following operations can be performed.

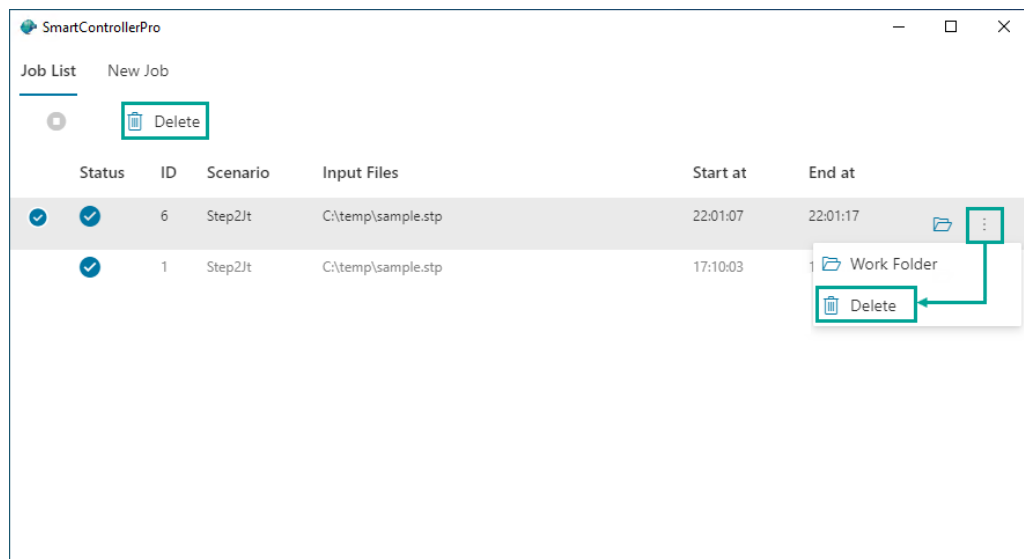


- a. Open Output folder
  - Click folder icon to open Output folder by Explorer.
- b. Open Work folder
  - Click [Other actions] > [Work Folder] to open Work folder by Explorer.
- c. Cancel Jobs
  - Select Jobs which are before execution / under processing and press [Stop] to cancel Jobs.



#### d. Delete Jobs

- Deleting Jobs from Job List can be done in one of the following ways:
  - Select Jobs and press [Delete].
  - Click [Other actions] > [Delete].



## 3.5. Run Jobs from Command Line

With SmartController Pro, Jobs can be executed from the command line. The command format is as follows.

```
SmartControllerProCLI.exe -i<JobListFile> -l<LogFile>
```

- The executable file "SmartControllerProCLI.exe" is located in the following folder:
  - <3DxSUITE Installation Folder>\EX9.1\SmartController Pro\bin

- <JobListFile> is a CSV file that contains the information necessary to execute a Job. Describe the following contents by using commas to separate.
  - Absolute path of the Scenario file
  - Absolute path of the folder to output the execution result
  - Flag indicating whether to create a subfolder for output (0: Do not create subfolder / 1: Create subfolder)
  - Input file 1, Input file 2, ...  
If a Scenario has only one input file, Input file 2 and beyond are ignored.

The following is a sample of <JobListFile>.

```
"C:\Scenarios\V5toJT.esa","C:\work\output",1,"C:\work\input\model1.prt"
"C:\Scenarios\SimplifyNX.esa","D:\models\simplified",0,"D:\models\source\model2.prt"
"C:\Scenarios\Validation.esa","D:\models\Validation",1,"D:\models\source\model3.prt","D:\models\source\model4.prt"
```

- Save <JobListFile> in UTF-8 encoding (without BOM).
- <LogFile> is a log file which shows the Job execution status.

## How to cancel Jobs

By executing the following command, a running Job can be canceled.

```
SmartControllerProCLI.exe -c<JobId>
```

- For <JobId>, specify the Job ID. Multiple Job IDs can be specified by separating them with commas.
- Job ID can be confirmed from either the content output when the Job is executed or the log file. In the below example, you can see that the Job IDs are 10 and 11.

```
> SmartControllerProCLI.exe -i C:\SCP_files\CLI_input\test.csv -l
C:\SCP_files\log\test.log
[INFO]          : Job: 10 is added
[INFO]          : Job: 11 is added
```

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