
*Auto Tracking Server Software
Installation Procedures*

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Introduction

Auto Tracking Server Software is application software that runs on Windows.

By operating this software on a Windows Server PC to which a Panasonic remote camera is connected, tracking of persons shot by the remote camera can be performed simultaneously by multiple remote cameras.

This manual describes the installation procedures and setting methods of this software.

Operating Environment

The below-mentioned environment is necessary for using this software:

* For the latest operating environment, please refer to the website at the time of software download.

A server PC is a PC for installing this software, and a Client PC is a PC for accessing the server and displaying the GUIs.

- Server PC

- CPU

- When up to 4 cameras can be connected simultaneously

- 4 Cores or more, Pass Mark 7000 or more

- Confirmed CPU

- Intel Core i7-4770K (3.50GHz)

- Intel Core i7-8750H (2.20GHz)

- Intel Core i7-11800H (2.30GHz)

- Intel Xeon Silver 4108 (1.80GHz)

- Intel Xeon Gold 5222 (3.80GHz)

- When up to 8 cameras can be connected simultaneously

- 2 x CPU, 4 Cores or more/CPU, Pass Mark 7000 or more/CPU

- Confirmed CPU

- 2 x Intel Xeon Gold 5222 (3.80GHz)

- Memory: 16 GB or above

- OS: Windows Server 2016

- Windows Server 2019

- Windows Server 2022

- Windows 10 64bit

- Windows 11

- GPU:

- When 1 camera can be connected simultaneously

- Pascal architecture

- NVIDIA GeForce GTX 1050i or later

- NVIDIA Quadro P2200 or later

- Turing architecture

- NVIDIA GeForce RTX 2060 or later

- NVIDIA Quadro RTX 4000 or later

- Ampere architecture

- NVIDIA RTX 3060 or later

- NVIDIA RTX A2000 or later

- When up to 2 cameras can be connected simultaneously

Pascal architecture

NVIDIA GeForce GTX 1080 or later

NVIDIA Quadro P2200 or later

Turing architecture

NVIDIA GeForce RTX 2060 or later

NVIDIA Quadro RTX 4000 or later

Ampere architecture

NVIDIA RTX 3060 or later

NVIDIA RTX A2000 or later

When up to 4 cameras can be connected simultaneously

Pascal architecture

NVIDIA GeForce GTX 1080 or later

NVIDIA Quadro P4000 or later

Turing architecture

NVIDIA GeForce RTX 2060 or later

NVIDIA Quadro RTX 4000 or later

Ampere architecture

NVIDIA RTX 3060 or later

NVIDIA RTX A2000 or later

When up to 8 cameras can be connected simultaneously

*When connecting 5 or more cameras, the same 2 GPUs are required

Turing architecture

Pascal architecture

NVIDIA GeForce GTX 1080 or later

NVIDIA Quadro P4000 or later

Turing architecture

NVIDIA GeForce RTX 2060 or later

NVIDIA Quadro RTX 4000 or later

Ampere architecture

NVIDIA RTX 3060 or later

NVIDIA RTX A2000 or later

● Client PC

CPU: Core i5-2520M 2.50 GHz or above

Memory: 4GB or above

Display: 1920 x 1080 or above

Web browser: Google Chrome

● Panasonic remote camera

AW-UE100

AW-UE150

AW-UE80

AW-UE70

AW-UE50

AW-UE40

AW-HE130

AW-HE40
AW-HE42
AW-UE4
(As of 07.2022)

Please check the AW-SF200 product page on the following website for the latest compatible models.

<https://pro-av.panasonic.net/en/>

<Notes>

- If you are using this software, you must install Google Chrome.

You may download and install it from the Google site.

- Use the latest version of the remote camera firmware. You can download the firmware from the following Website:

<http://pro-av.panasonic.net/en/>

- Panasonic recommends a wired connection between the server and remote camera. In the case of a wireless connection, sufficient tracking performance may not be achieved.

- Install Windows Server OS to the C drive.

- In addition, it is necessary to install the NVIDIA CUDA Toolkit in order to start this software. Please refer to the following procedure manual to install CUDA Toolkit 11.4.1.

https://www.pass.panasonic.co.jp/pro-av/support/content/download/DEF/soft/man/CUDA_Toolkit_11.4.1_InstallationProcedures_eng.pdf

* Please restart your PC once after installing CUDA.

- If you want to update from the older version, please uninstall the old version before installing the latest software.

Network

The network environment for using this software must satisfy the following conditions.

- The Server PC, Client PC, and remote camera must exist on the same network.

<Notes>

- If there are several network adapters in the Server PC or Client PC, set the fixed local IP address in the first adapter.

If you set the fixed local IP address in the second or a subsequent network adapter, operation may not be performed normally.

About the Descriptions in this File

- The illustrations and screen displays in this file may be different from those in reality.
- In this file, a personal computer is mentioned as a “PC”.

About Registration and Registered Trademarks

- Microsoft, Windows, and Internet Explorer are registered trademarks of Microsoft Corporation in the United States.
- Intel, Intel Core i7, and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.
- All other names, company names, and product names are trademarks or registered trademarks of each company. TM and the ® mark are not specified in this manual.

About the Server Configuration

Although this software can operate on a single-server configuration too, the number of remote cameras that can be controlled simultaneously can be increased by configuring the software with multiple servers. Up to four remote cameras can be controlled per one server.

If this software is configured by a single server, the server is set as the Main server. When this software is configured by multiple servers, one of the servers configuring the software is set as the Main server for centralized management, and the remaining are set as the Sub servers for expansion.

The roles of each server are described below.

- Main server

The Main server performs the following processing:

- Controls up to four remote cameras
- Performs GUI control
- Performs license control

All operations such as accessing the GUIs for using this software, and registering the license, etc. are performed on the Main server.

- Sub server

The Sub server performs the following processing:

- Performs remote camera control when more than four remote cameras are connected

The Main server controls the remote cameras when up to four remote cameras have been connected, however, if the number of connected remote cameras is more than four, the Sub server controls the fifth and subsequent remote cameras. The control allocation is performed automatically.

Remote Camera Settings

Before using this software, make the settings in the remote camera.

The methods of capturing images from the remote camera include capturing images as JPEG images, and capturing images as an H.264 stream.

When capturing images as JPEG images, set “Image capture type” to JPEG at the time of registering the camera from Settings - Camera screen of this software.

When capturing images as an H.264 stream, set “Image capture type” to H.264 at the time of registering the camera from Settings - Camera screen of this software.

■ AW-UE100 settings

The tracking performance is higher when images are captured as JPEG images.

- When images are captured as JPEG images

On the Web screen of the camera, make the following settings from Setup -> Video over IP -> JPEG(1):

Image capture size: 1280 x 720 or higher

Refresh interval: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

- When images are captured as an H.264 stream

On the Web screen of the camera, make the following settings from Setup -> Video over IP -> H.264(1):

H.264 transmission: On

Image capture size: 1280 x 720 or higher

Transmission priority: Frame rate

Frame rate: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

■ AW-UE150 settings

The tracking performance is higher when images are captured as JPEG images.

- When images are captured as JPEG images

On the Web screen of the camera, make the following settings from Setup -> Video over IP -> JPEG(1):

Image capture size: 1280 x 720 or higher

Refresh interval: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

- When images are captured as an H.264 stream

On the Web screen of the camera, make the following settings from Setup -> Video over IP -> H.264(1):

H.264 transmission: On

Image capture size: 1280 x 720 or higher

Transmission priority: Frame rate

Frame rate: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

■ AW-HE130 settings

The tracking performance is higher when images are captured as an H.264 stream.

- When images are captured as JPEG images

On the Web screen of the camera, make the following settings for each item:

Initial display settings for “Live” page

Stream: JPEG(1)

Refresh interval (JPEG): During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

JPEG(1)

JPEG transmission: On

Image capture size: 1280 x 720

H.264(1)

H.264 transmission: Off

H.264(2)

H.264 transmission: Off

H.264(3)

H.264 transmission: Off

H.264(4)

H.264 transmission: Off

- When images are captured as an H.264 stream

On the Web screen of the camera, make the following settings from Setup -> Image/Audio -> H.264(1):

H.264 transmission: On

Image capture size: 1280 x 720 or higher

Transmission priority: Frame rate

■ AW-UE70 / AW-HE42 settings

The tracking performance is higher when images are captured as JPEG images.

- When images are captured as JPEG images

On the Web screen of the camera, make the following settings from Setup -> Image/Audio -> JPEG(1):

Image capture size: When the Priority Mode is IP: 1280 x 720

When the Priority Mode is other than IP: 640 x 360

- This software cannot be used in USB mode.

Refresh interval: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

Image quality: Normal

- When images are captured as an H.264 stream

On the Web screen of the camera, make the following settings from Setup -> Image/Audio -> H.264(1):

H.264 transmission: On

Image capture size: 1280 x 720 or higher

Transmission priority: Frame rate

Frame rate: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

■ AW-HE40 settings

The tracking performance is higher when images are captured as JPEG images.

- When images are captured as JPEG images

On the Web screen of the camera, make the following settings from Setup -> Image/Audio -> JPEG(1):

Image capture size: When the Priority Mode is IP: 1280 x 720

When the Priority Mode is other than IP: 640 x 360

- This software cannot be used in USB mode.

Refresh interval: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

Image quality: Normal

- When images are captured as an H.264 stream

On the Web screen of the camera, make the following settings from Setup -> Image/Audio -> H.264(1):

H.264 transmission: On

Image capture size: 1280 x 720 or higher

Transmission priority: Frame rate

Frame rate: During NTSC: 15 fps or higher, During PAL: 12.5 fps or higher

■ AW-UE4 settings

The tracking performance is higher when images are captured as JPEG images.

- When images are captured as JPEG images

On the Web screen of the camera, set Setup-> Basic-> Priority mode to IP.

Make the following settings from Setup -> Image/Audio -> JPEG

Image capture size: 1280 x 720

Frame rate: During NTSC: 10, During PAL: 10

- When images are captured as an H.264 stream

On the Web screen of the camera, set Setup-> Basic-> Priority mode to IP.

Make the following settings from Setup -> Image/Audio -> H.264/H.265

Stream transmission: On

Codec: H.264

Image capture size: 1280 x 720

Frame rate: During NTSC: 15, During PAL: 10

(As of 06.2021)

<Note>

The zoom frame of AW-UE4 has a restriction that the accuracy of movement is lower than that of other remote cameras.

Therefore, the image may shake during tracking under the following conditions.

- When the subject occupies a large proportion of the screen

The size and position of the detection frame will change significantly due to changes in the movement and angle of the subject, making the image more likely to shake.

- When the subject is near the edge of the AW-UE4's shooting range

If the image is distorted due to lens restrictions, the size and position of the detection frame will change significantly, making the image more likely to shake.

If the image shakes during tracking, the shake may be reduced by taking the following measures.

- Reduce the proportion of the subject on the screen by increasing the distance between the subject and the AW-UE4, tilting the zoom of the AW-UE4 to the W side, etc.

- Enter the Tracking Setting screen from the [Setting] button on the MAIN screen of this software and reduce the Sensitivity Level value.

Installation of the Software

Install this software according to the operation described below.

Downloading the Software

1. Download this software.

For details on the URL of the software, contact your local distributor.

2. Decompress the downloaded file to an appropriate folder.

<Notes>

- To install the software, log in as a user having the Administrator authority.
- Please continue with the process by clicking [Yes] when the confirmation of the user account control is displayed during installation.
- Decompress the downloaded file in a location that does not contain double-byte characters.

License

About the License

When using this software, you will require one license for connecting to one camera. Therefore, the number of cameras that can be connected simultaneously is restricted to the number of registered licenses.

The conditions of license consumption and return are as described below.

License consumption:

- One license is consumed during connection to a remote camera.

License return:

- One license is returned during disconnection from a remote camera.
- One license is returned when the state of communication disconnection from the remote camera continues for five minutes or more.

<Notes>

- The license usage status is displayed as “License (used/total)” at the top of the View screen or Main screen.

About the Trial Use Period

The trial use period of this software is 90 days during which the license of 16 remote cameras can be used free of charge.

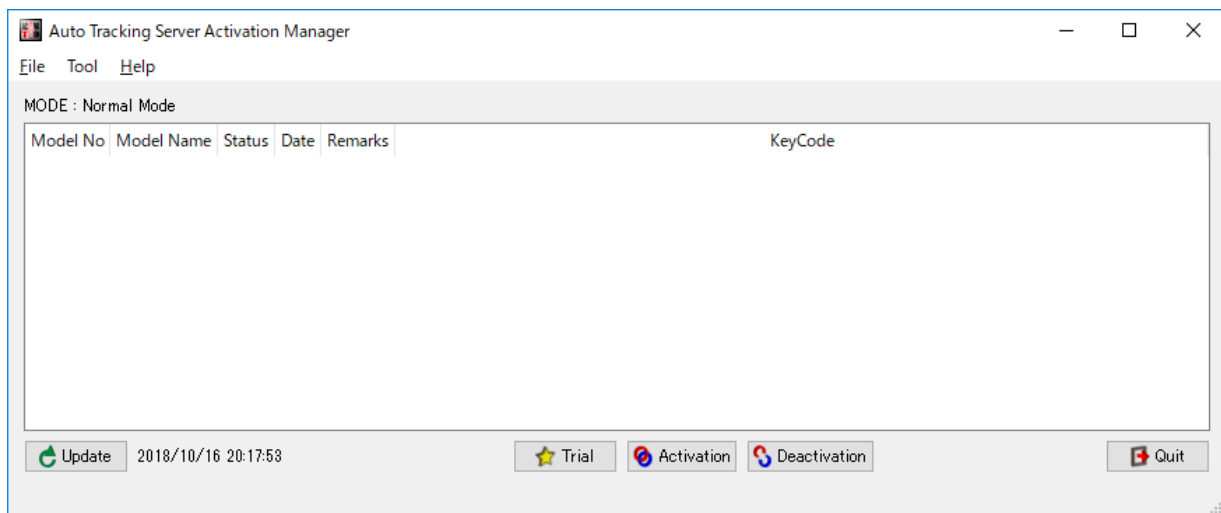
The procedure for starting trial use is as described below.

1. Log in to the Main server Windows.
2. Run
PActivationManager.exe

from the “12_Activation” folder of the downloaded file.

- When you start the activation program for the first time, a screen for registering user information appears. Enter the information in each item, and then click the [Apply] button.

- The window of the activation program is displayed.



- Click the [Trial] button.
- You can start using this software for the trial period.

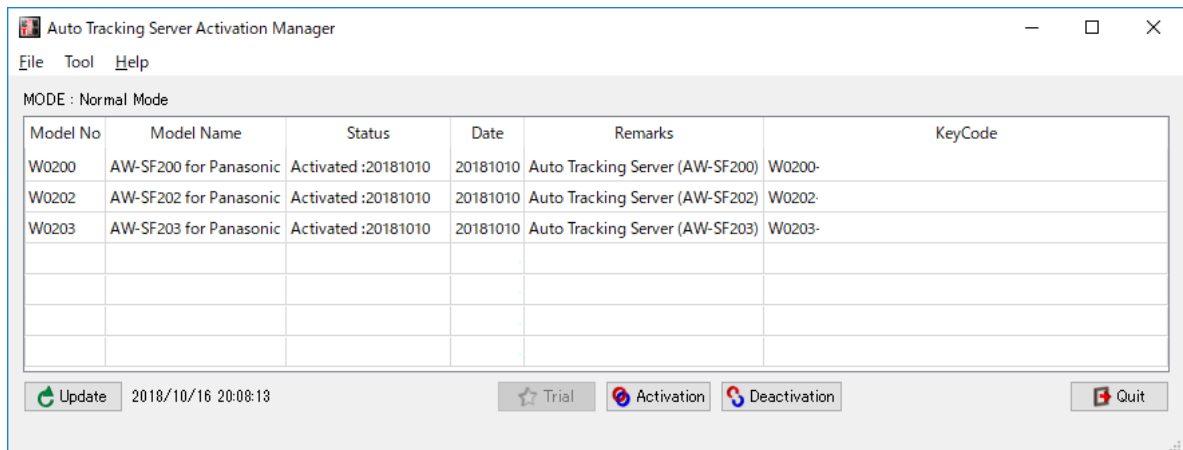
Activation Registration

The free-of-charge license becomes invalid after the end of the trial use period, and you can no longer establish a connection to the remote camera.

To continue using the software, you must purchase a key code, and add the license by performing activation registration according to the procedure described below.

Procedure of activation registration

- Connect the Main server to the Internet.
- Log in to the Main server Windows.
- Run
PActivationManager.exe
from the “12_Activation” folder of the downloaded file.
- The window of the activation program is displayed.



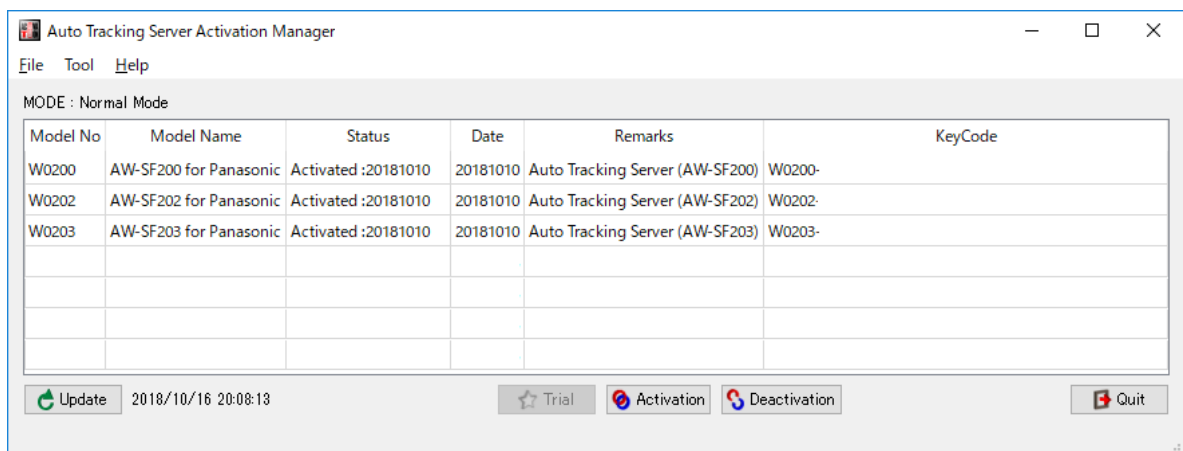
5. Click the [Activation] button.
6. The key code input screen appears. Enter the key code that you have purchased in the key code input field.
7. When you click the [OK] button, activation is performed, and licenses are added according to the registered key code.
8. Open the service management window of Windows and restart the following services.
Panasonic Tracking Control (SF200)

Activation Cancellation

To change the Main server on which you are using this software, perform activation cancellation according to the procedure described below, and then perform activation registration on a new Main server.

Procedure of activation cancellation

1. Connect the Main server to the Internet.
2. Log in to the Main server Windows.
3. Run
PActivationManager.exe
from the “12_Activation” folder of the downloaded file.
4. The window of the activation program is displayed.



5. Select the column of the key code you want to cancel and then click the Deactivation button.
6. The activation is canceled, and licenses are deleted according to the canceled key code.

7. Open the service management window of Windows and restart the following services.

Panasonic Tracking Control (SF200)

<Notes>

- When you perform activation cancellation, you can no longer use this software on the Main server until you perform activation registration again.

Installing the Software

1. Install the latest NVIDIA graphics drivers.

Please install the latest NVIDIA graphics driver from the following link.

If the graphics driver is not updated, the software may not operate properly.

<https://www.nvidia.co.jp/Download/index.aspx?lang=en>

2. Install the CUDA Toolkit 11.4.1

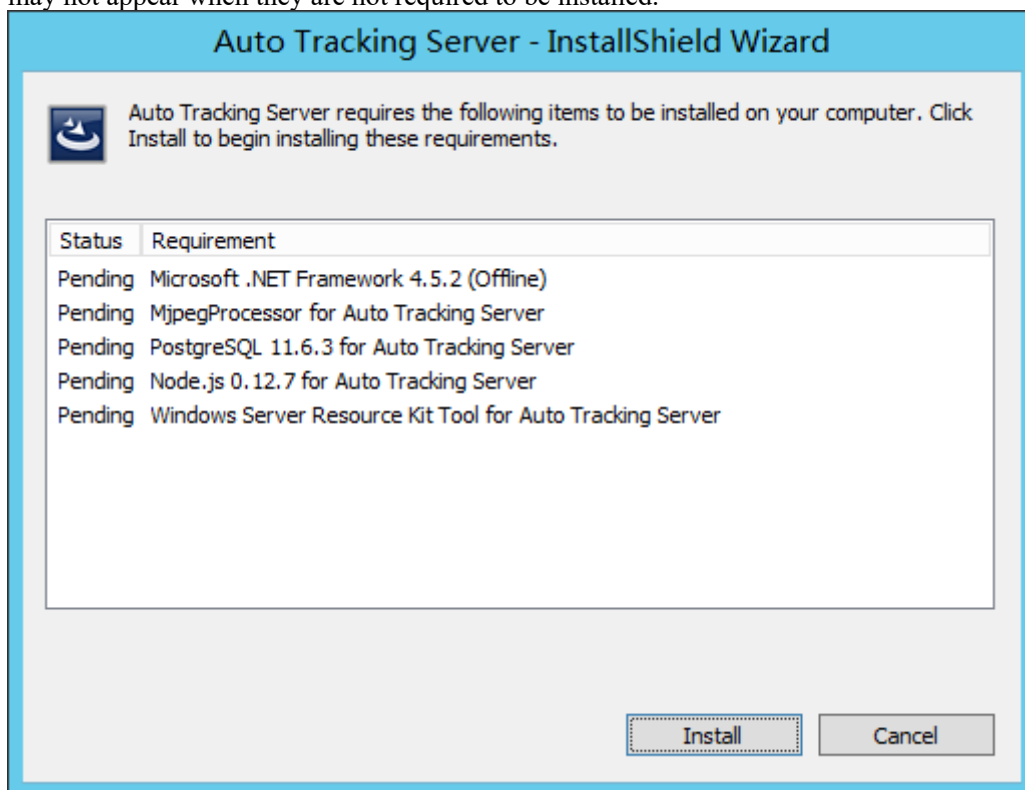
Please download the CUDA Toolkit 11.4.1 installer from the following site.

- Select [exe (local)] as the Installer Type.

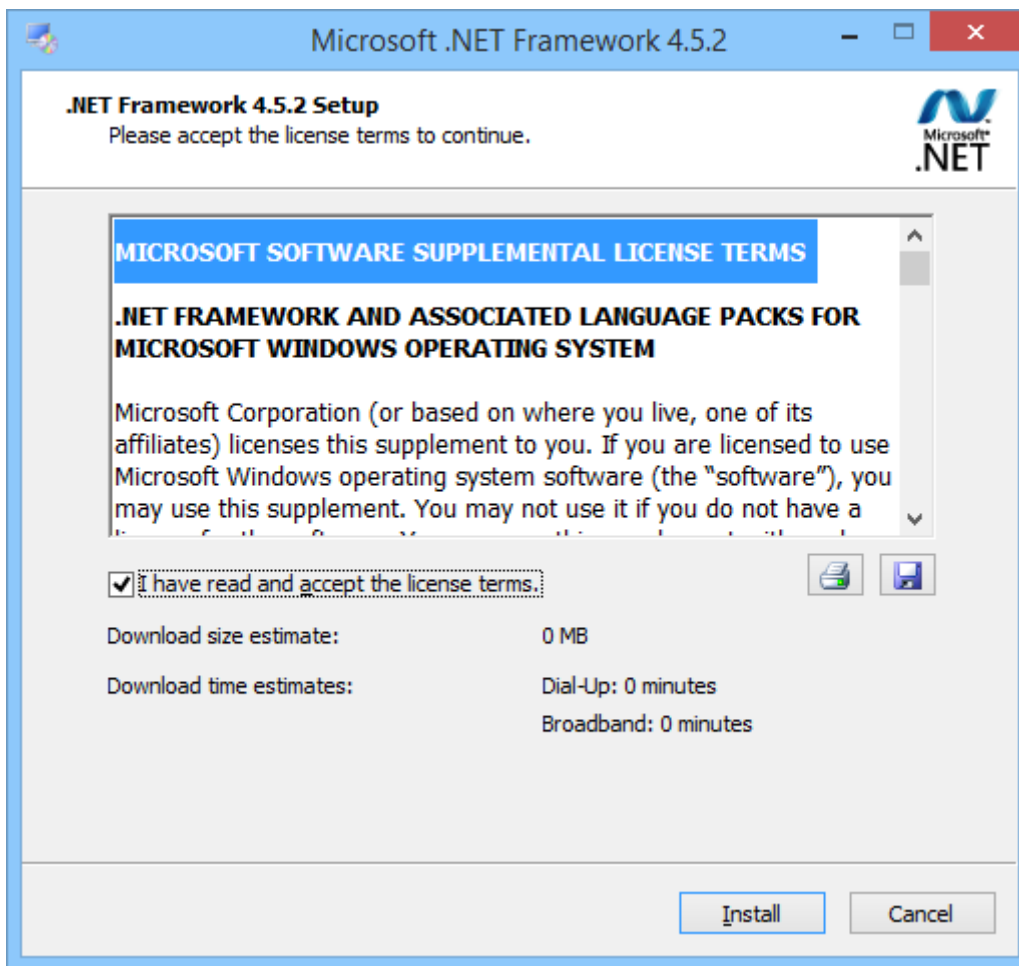
- Please download both [Base Installer] and [Patch].

<https://developer.nvidia.com/cuda-11-4-1-download-archive>

3. Open “00_Installer” folder in which you have decompressed this software. Right-click Setup.exe and select "Run as administrator".
4. A list of components to be installed appears. Depending on the OS and PC, some of the components may not appear when they are not required to be installed.



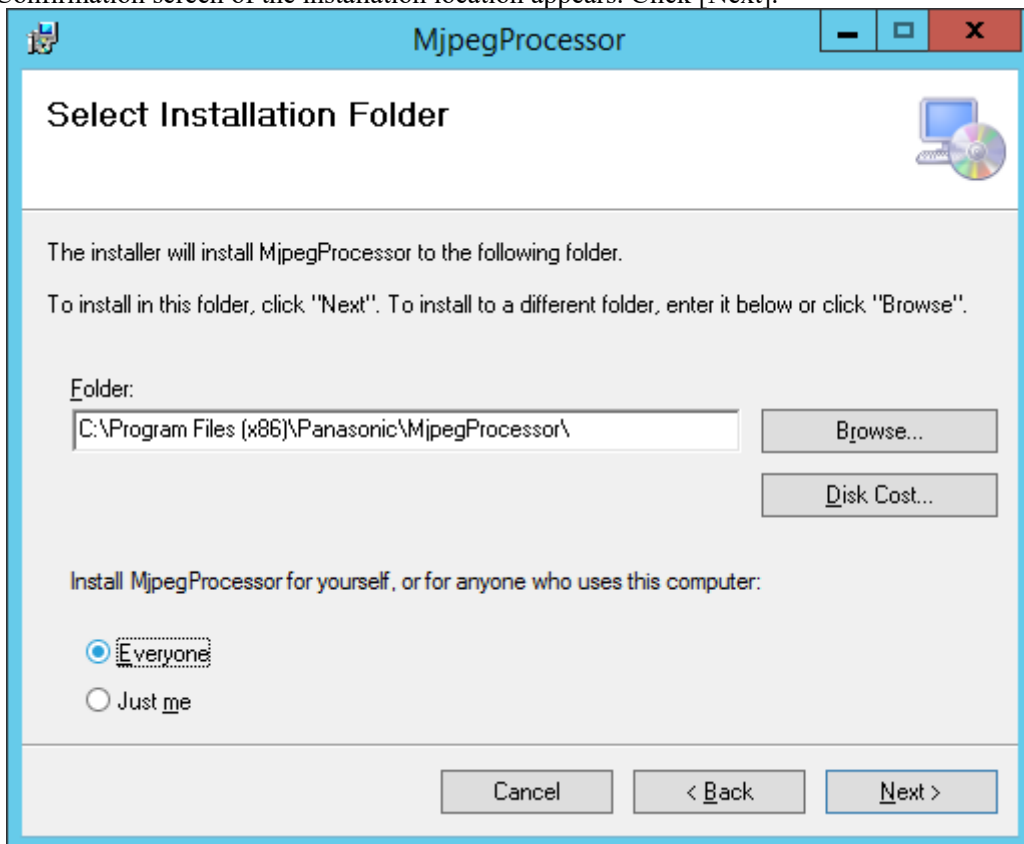
5. Click the [Install] button to continue with the process.
6. If the installation of “Microsoft .NET Framework 4.5.2” is required, the following screen will be displayed. Select [Install].



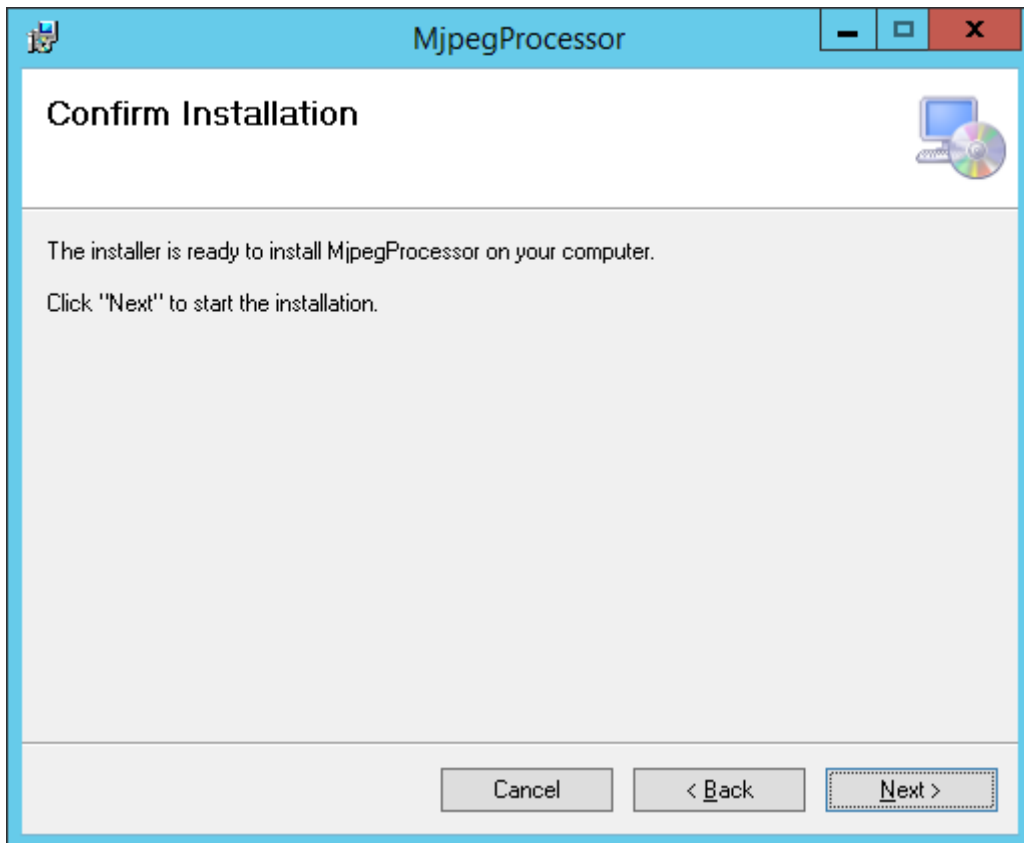
7. After installation is completed, click the "Finish" button to close the screen.
If a confirmation message of restarting the PC appears after closing the screen, click "Yes" to restart the PC. After restarting the PC, the setup will continue automatically.
8. If the installation of MjpegProcessor is required, the following screen will be displayed, click [Next].



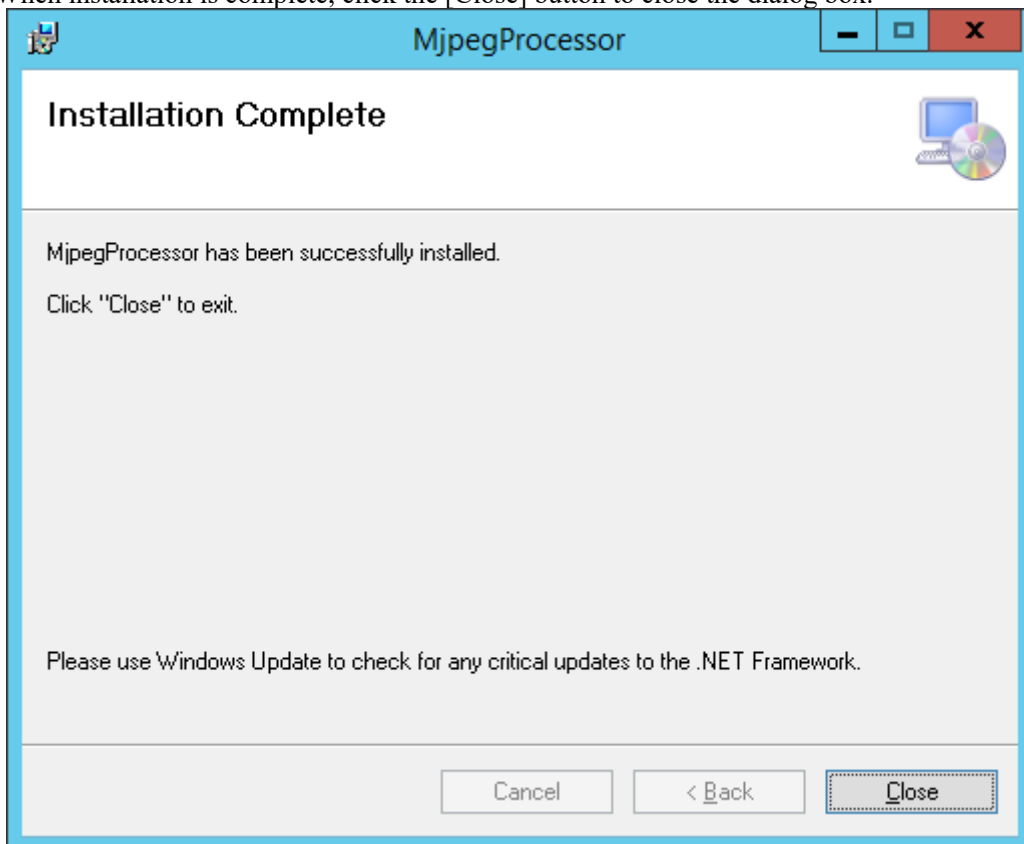
9. Confirmation screen of the installation location appears. Click [Next].



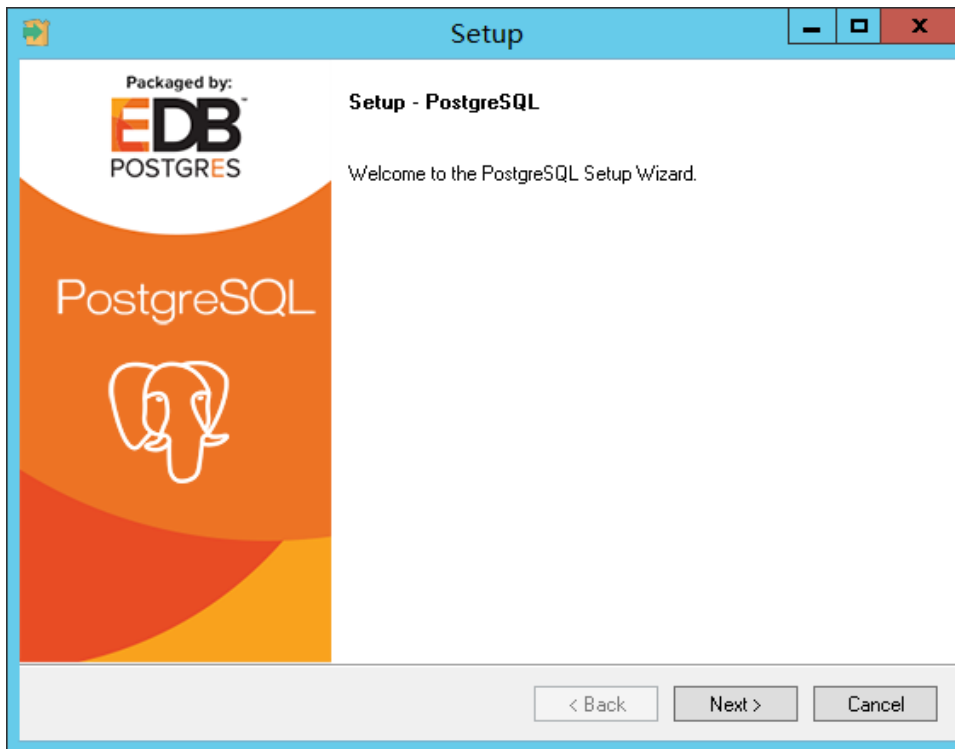
10. The screen for starting installation appears. Click [Next].



11. When installation is complete, click the [Close] button to close the dialog box.

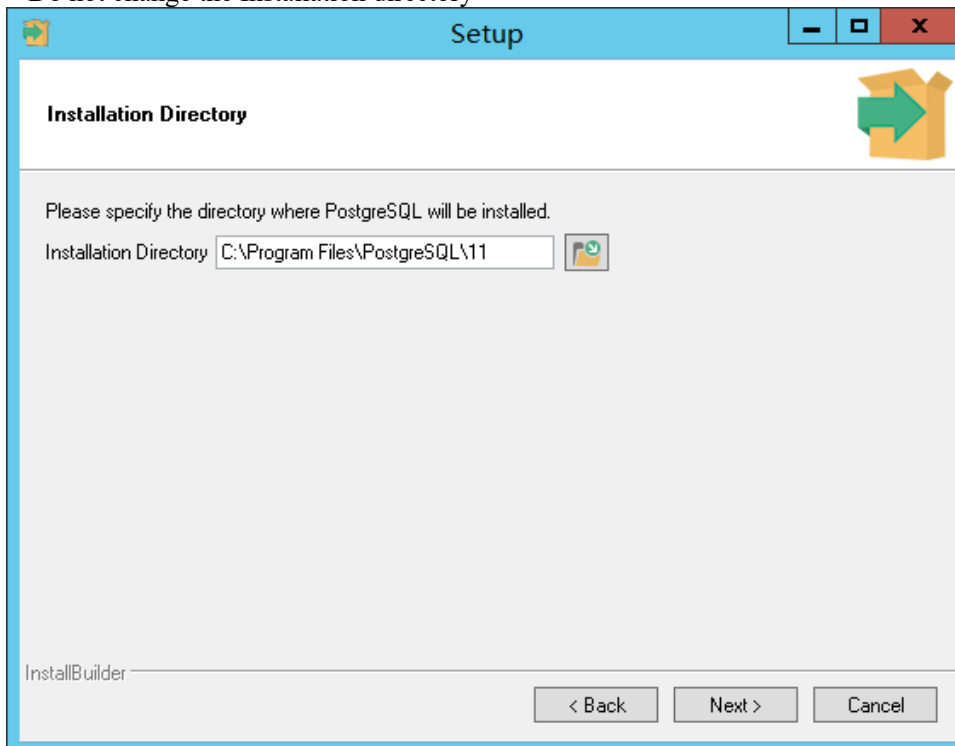


12. If the installation of PostgreSQL is required, the following screen will be displayed. Click [Next].

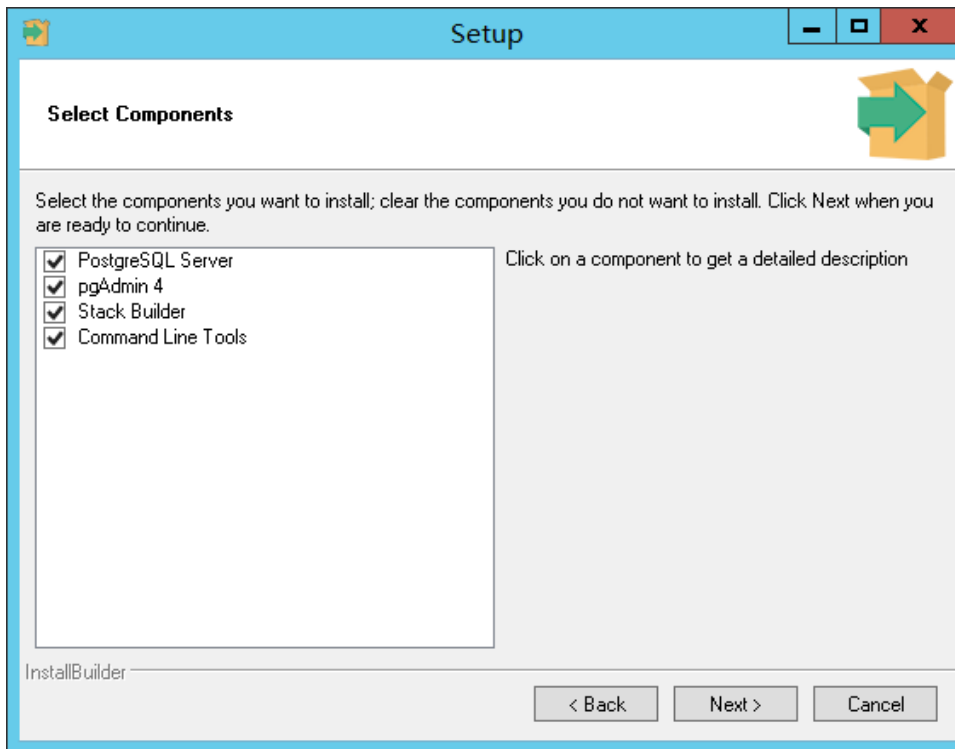


13. Click [Next].

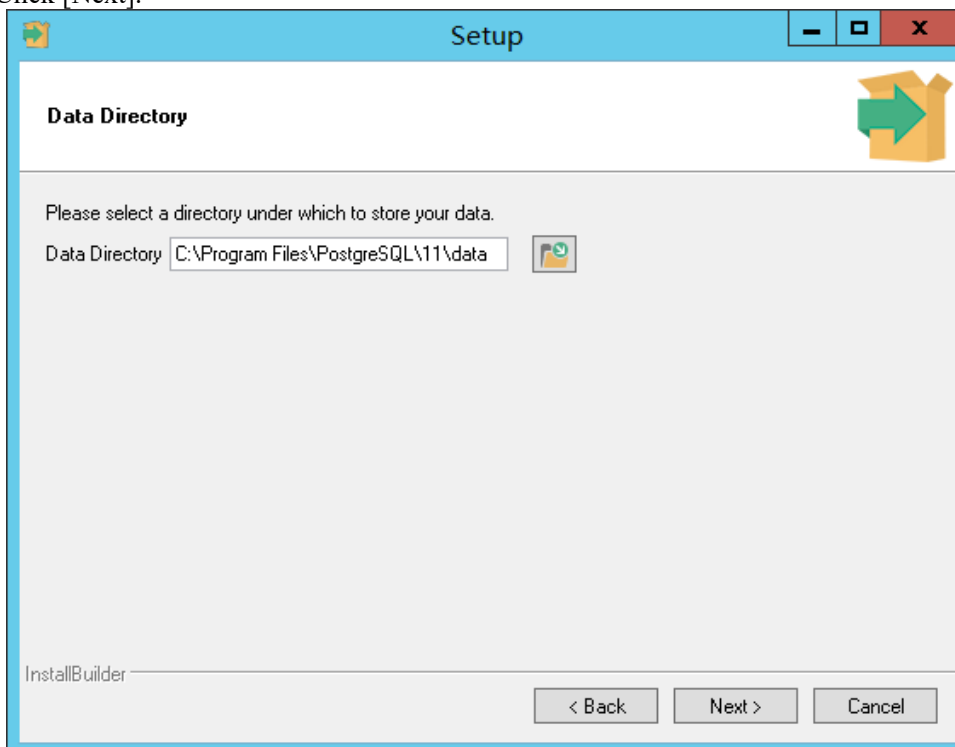
* Do not change the Installation directory



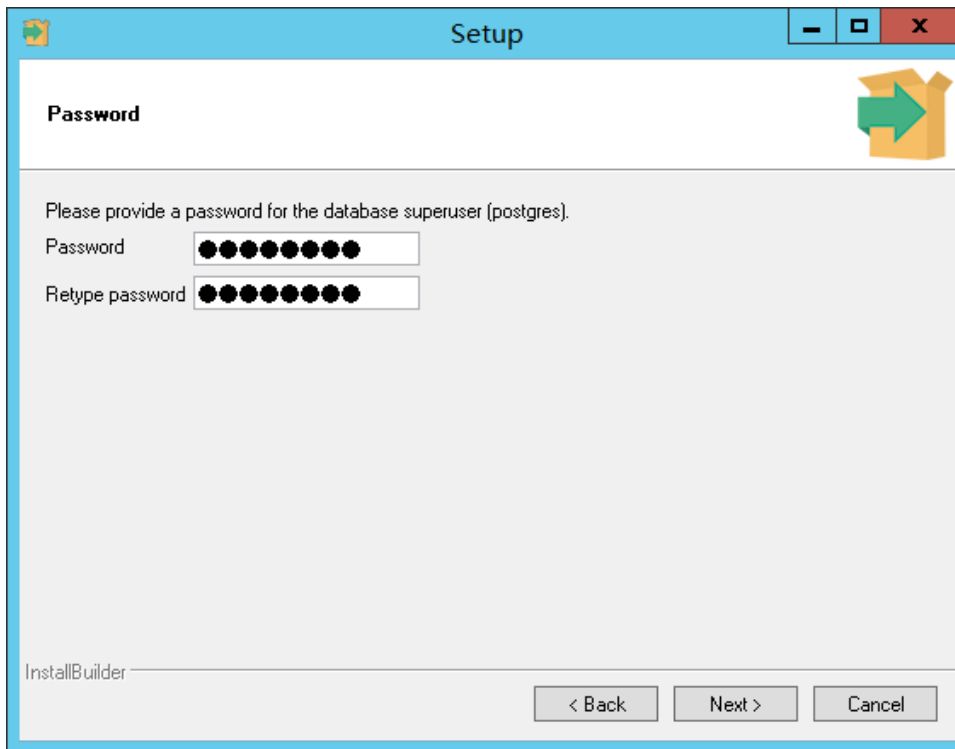
14. Click [Next].



15. Click [Next].

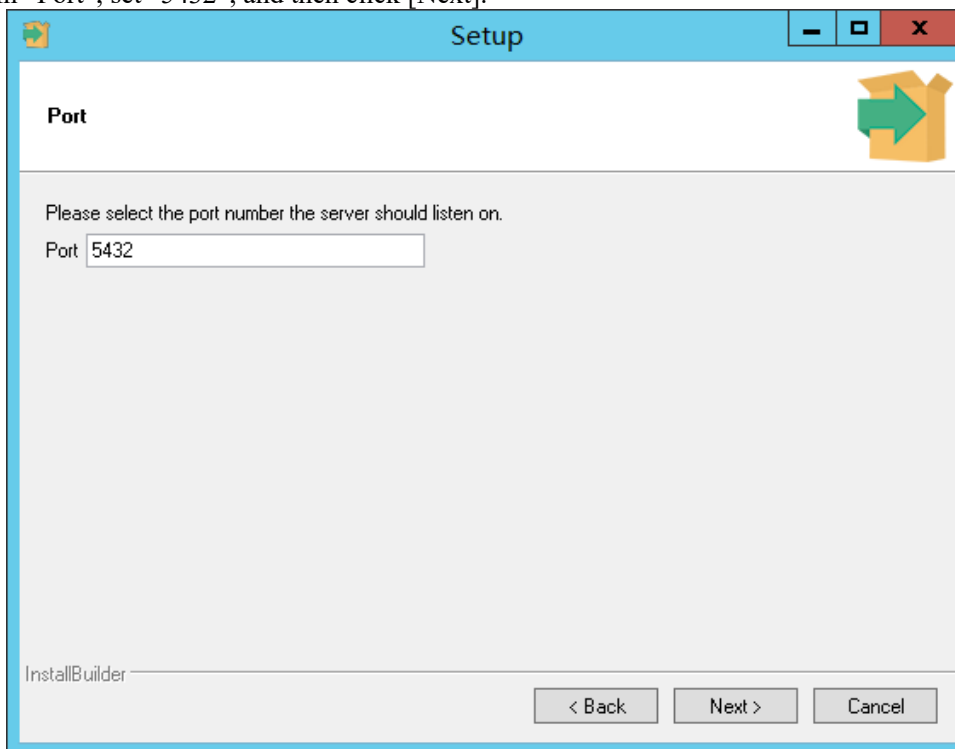


16. In "Password", set "postgres", and then click [Next].
* Do not change the password.



The screenshot shows a window titled "Setup" with a blue header bar. The main content area is titled "Password" and contains the instruction: "Please provide a password for the database superuser (postgres)." Below this, there are two input fields: "Password" and "Retype password", both containing ten black dots. At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel". The text "InstallBuilder" is visible in the bottom left corner of the window.

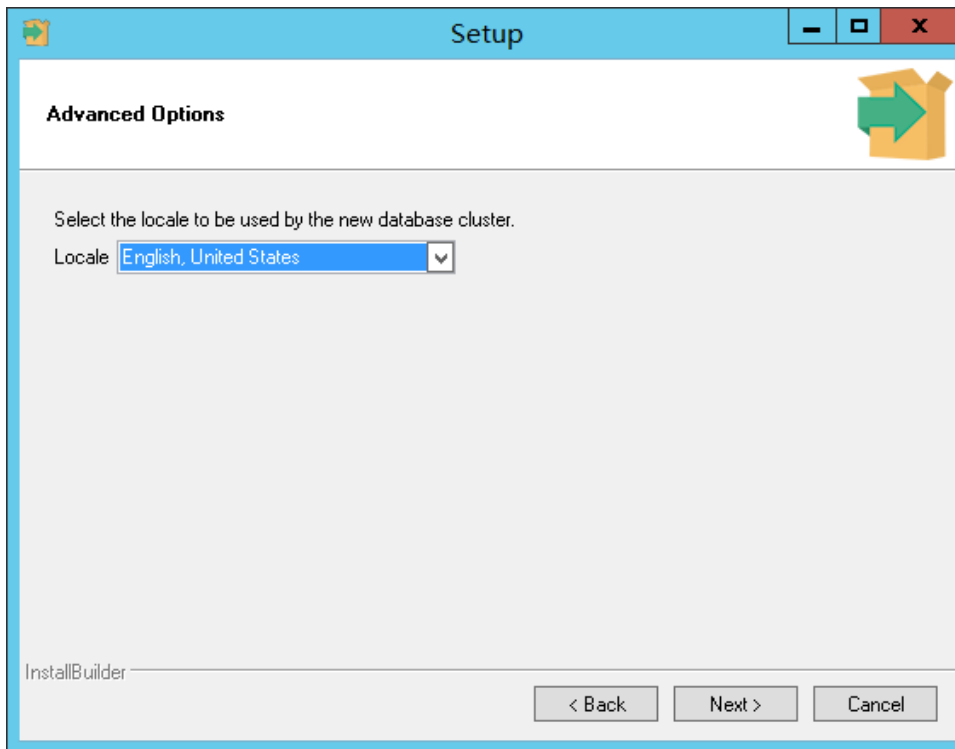
17. In "Port", set "5432", and then click [Next].



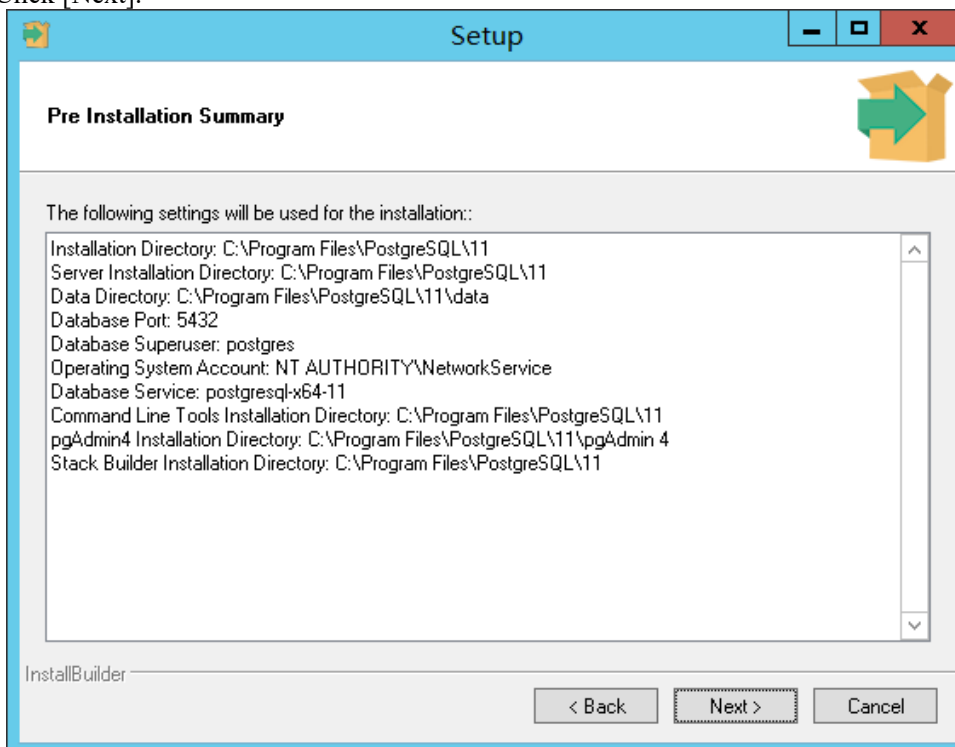
The screenshot shows a window titled "Setup" with a blue header bar. The main content area is titled "Port" and contains the instruction: "Please select the port number the server should listen on." Below this, there is a single input field labeled "Port" containing the value "5432". At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel". The text "InstallBuilder" is visible in the bottom left corner of the window.

18. In "Locale", set "English, United States", and then click [Next].

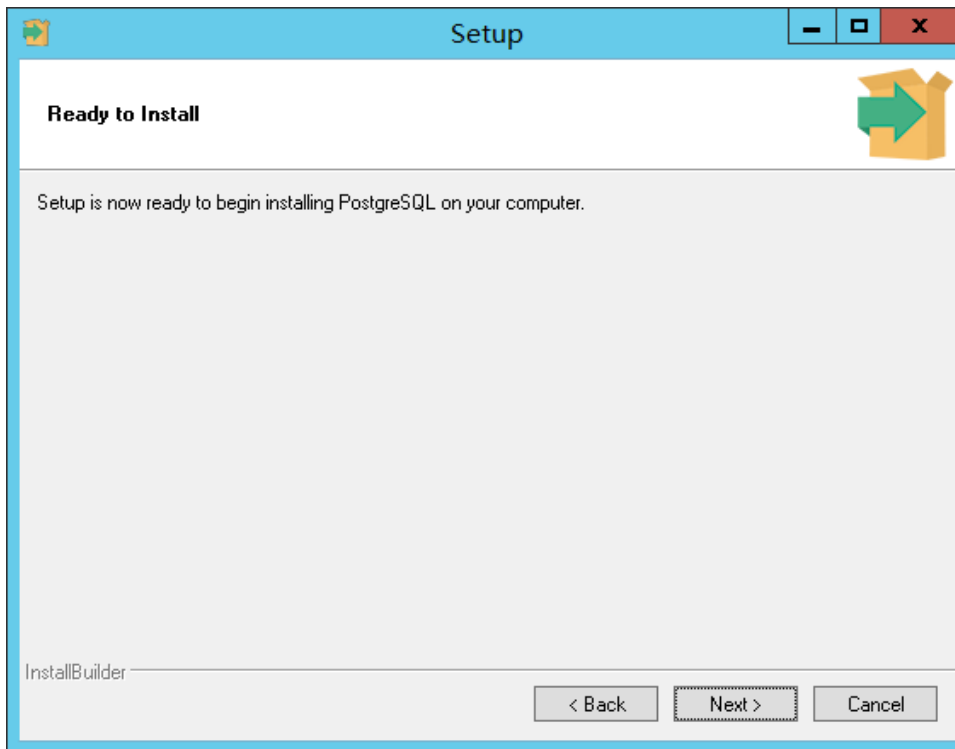
* Do not set the Locale to other than English.



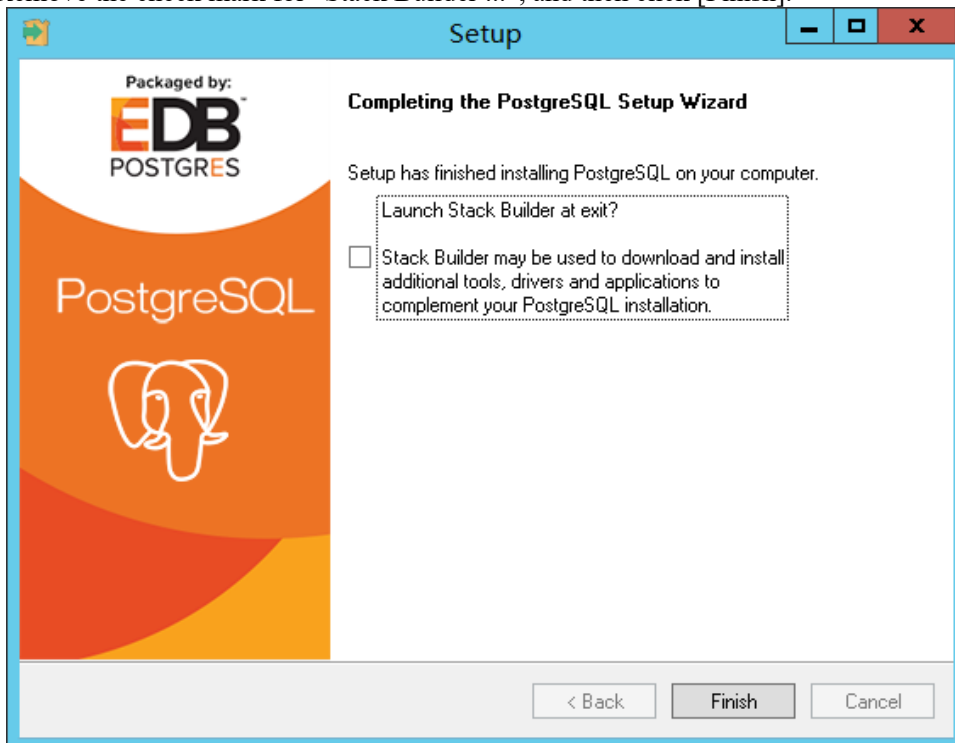
19. Click [Next].



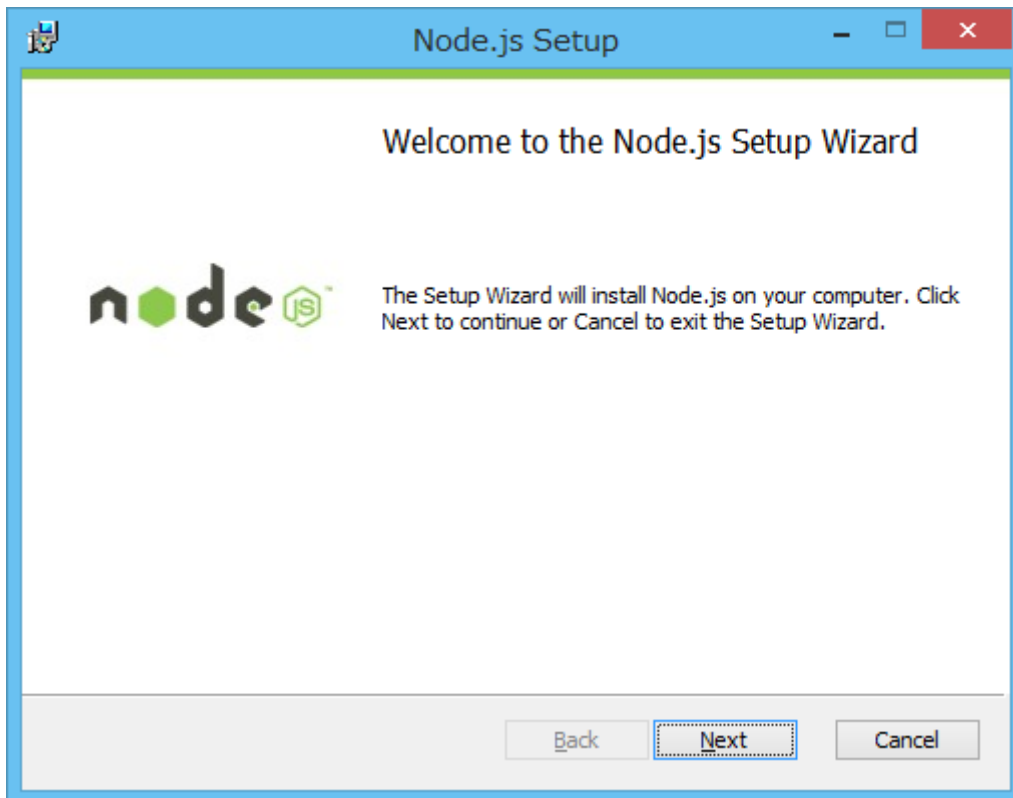
20. Click [Next].



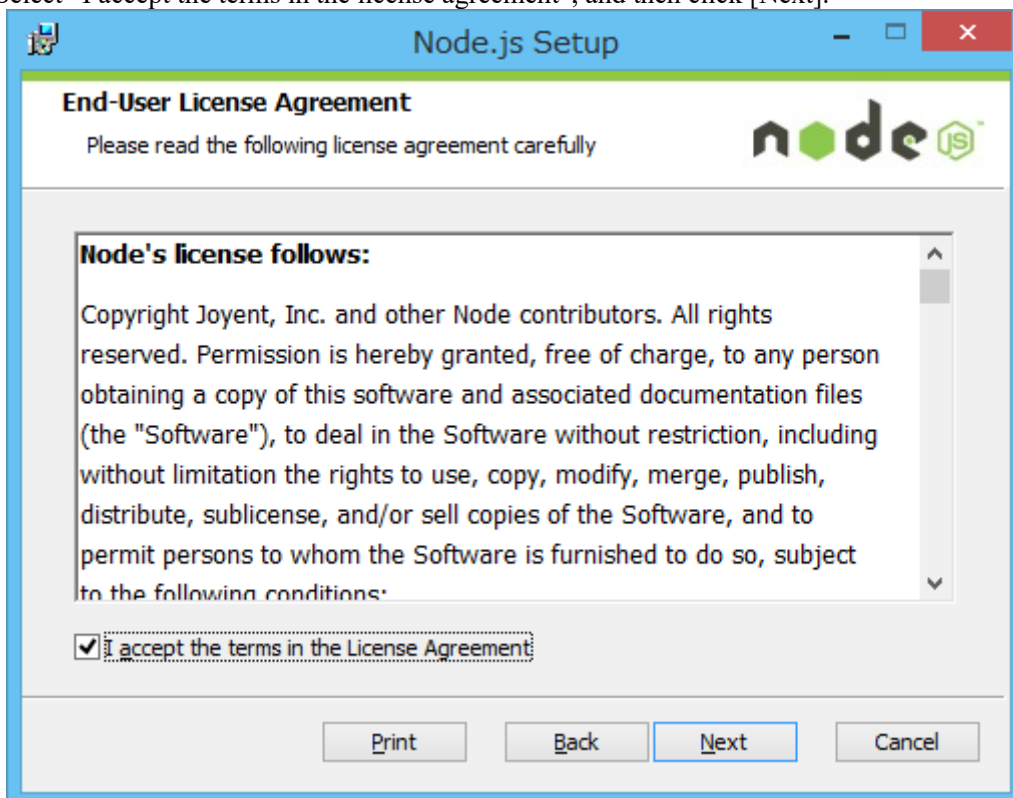
21. Remove the check mark for “Stack Builder ...”, and then click [Finish].



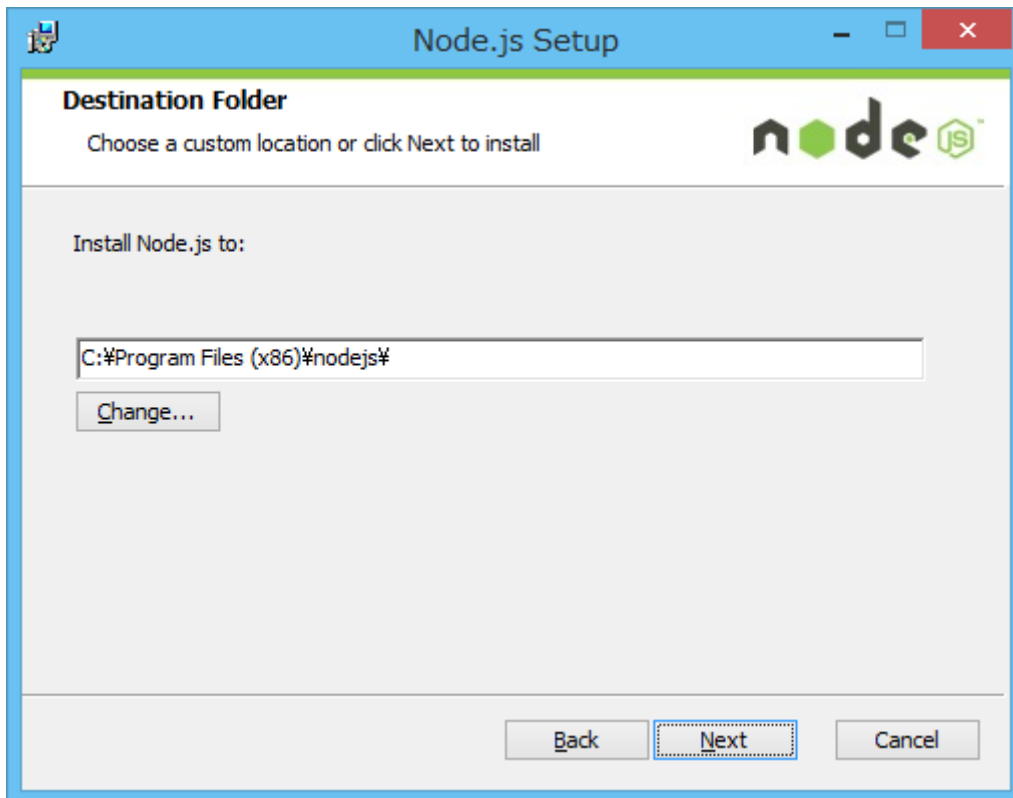
22. If a confirmation message of restarting the PC appears after closing the screen, click "Yes" to restart the PC. After restarting the PC, the setup will continue automatically.
23. If the installation of Node.js is required, the following screen will be displayed. Click [Next].



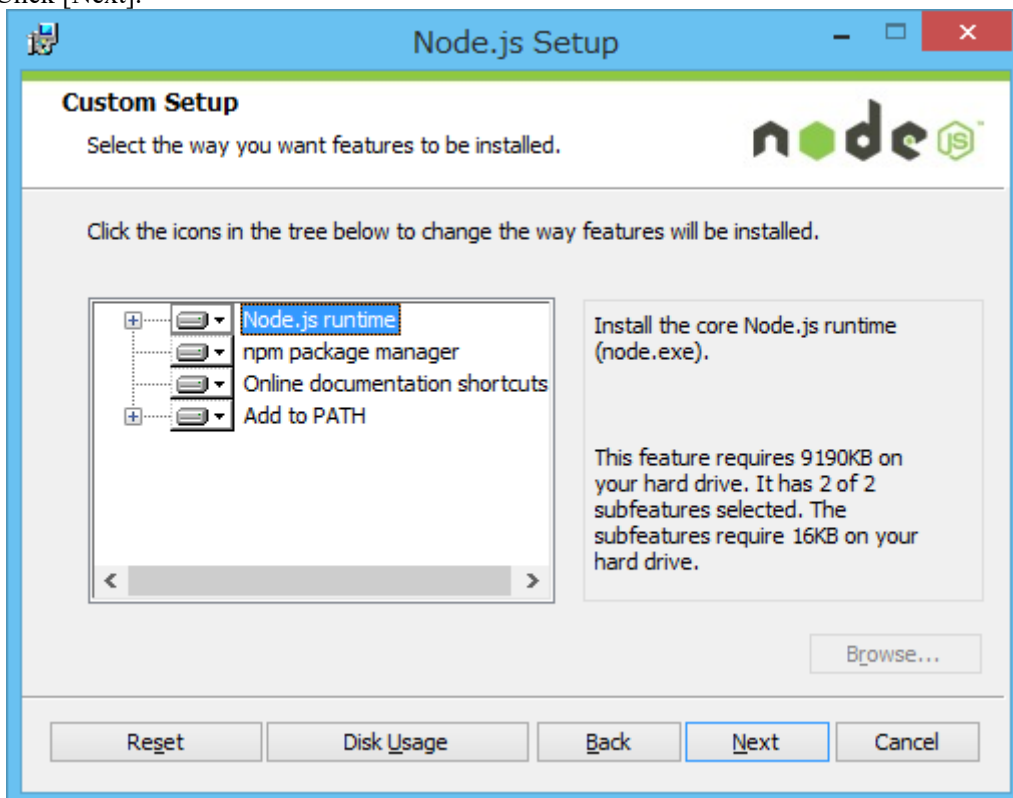
24. Select "I accept the terms in the license agreement", and then click [Next].



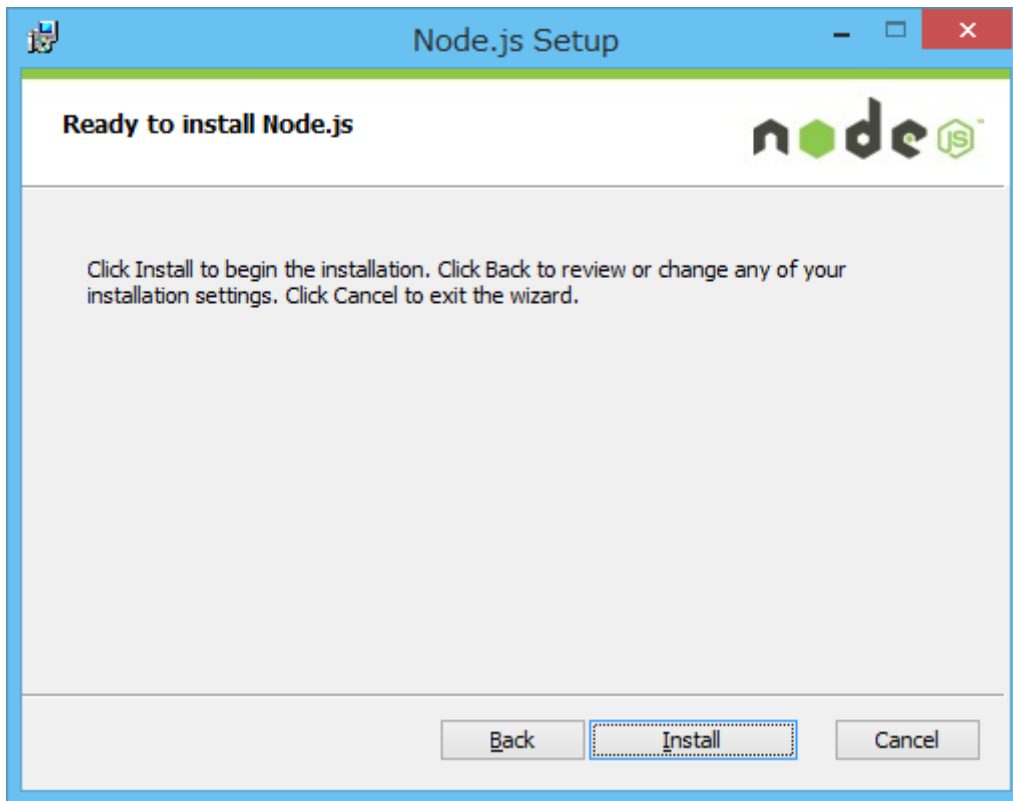
25. Click [Next].



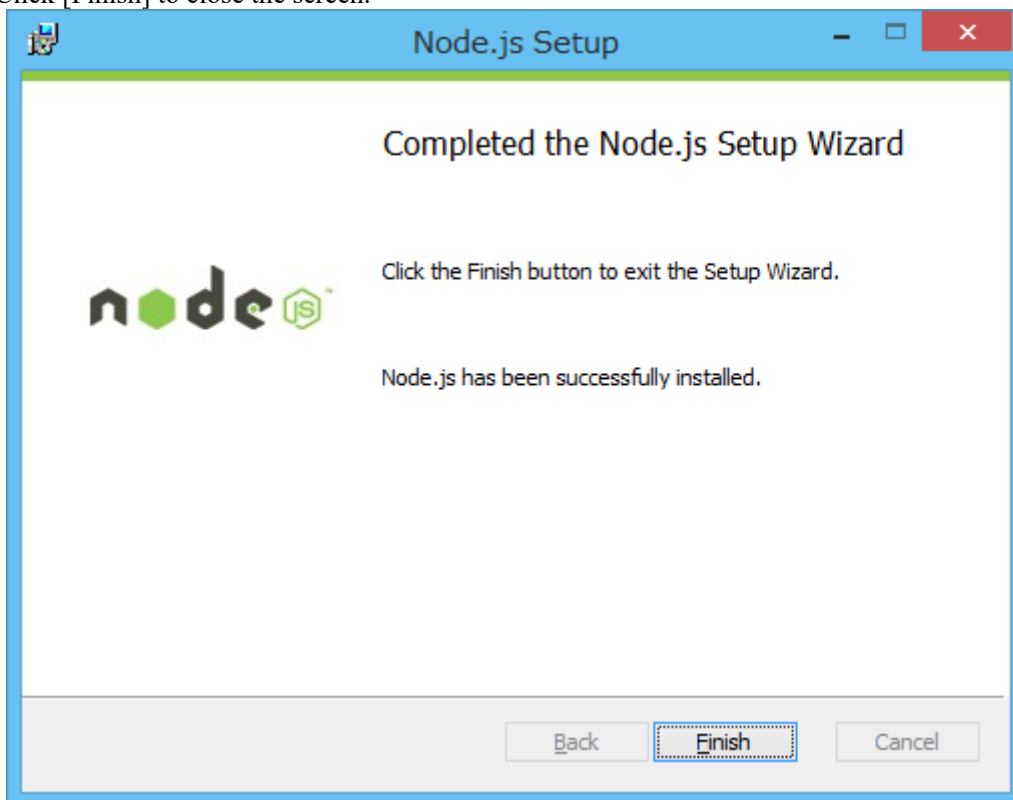
26. Click [Next].



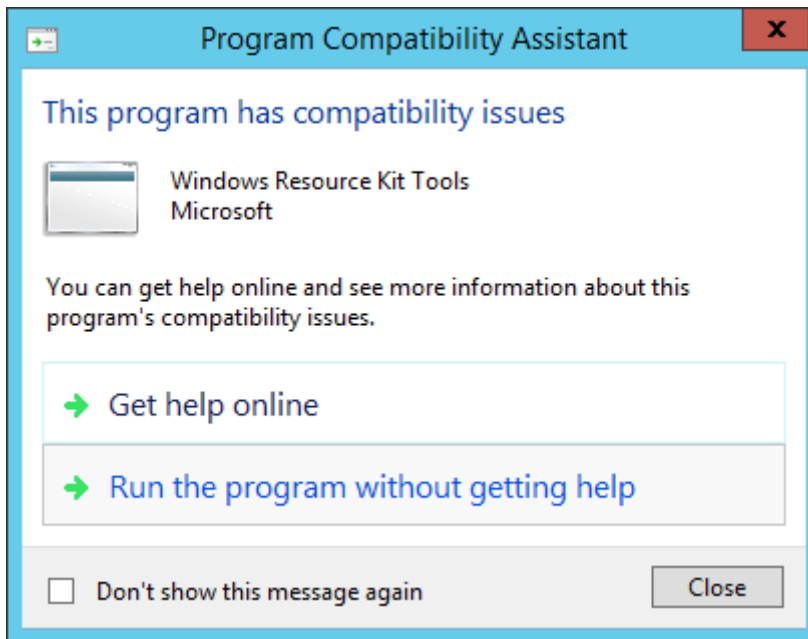
27. Click [Install].



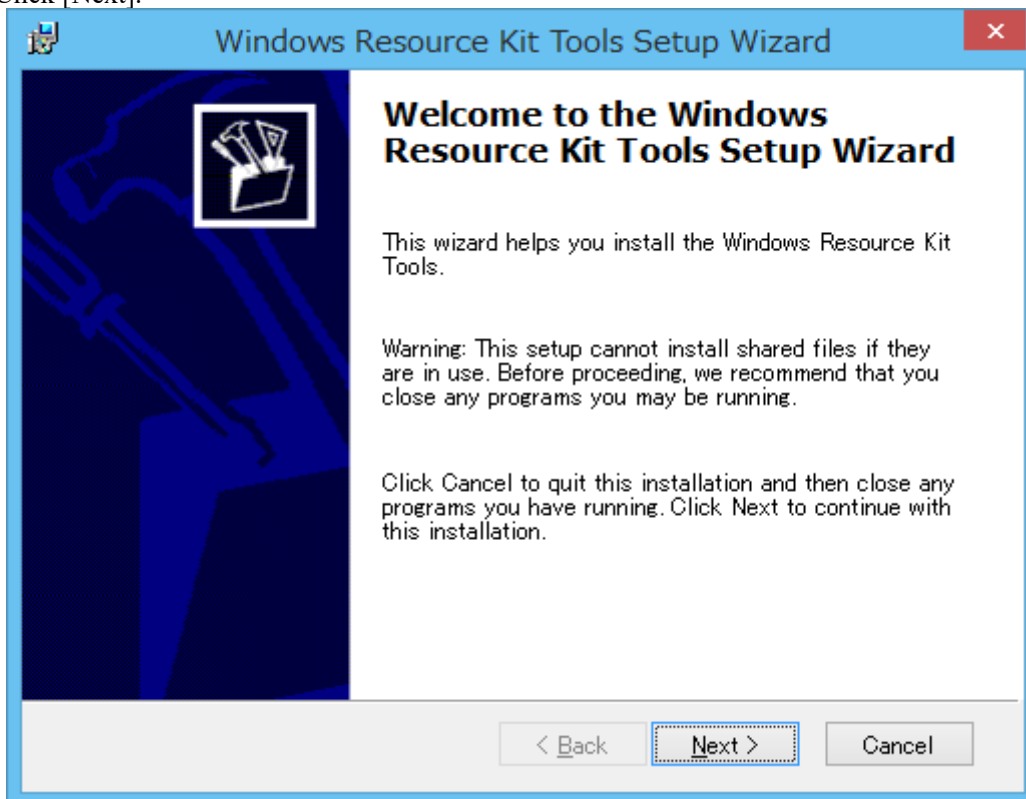
28. Click [Finish] to close the screen.



29. If the installation of "Windows Server 2003 Resource Kit Tools" is required, the following screen will be displayed. Select [Run program without getting help].



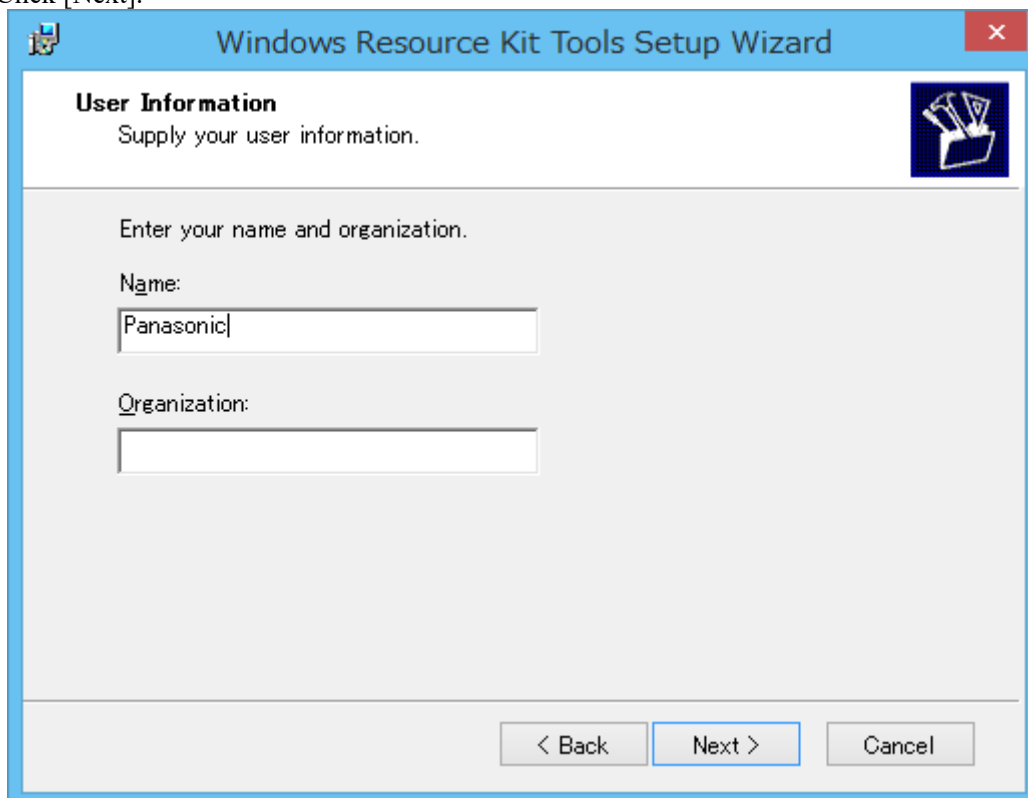
30. Click [Next].



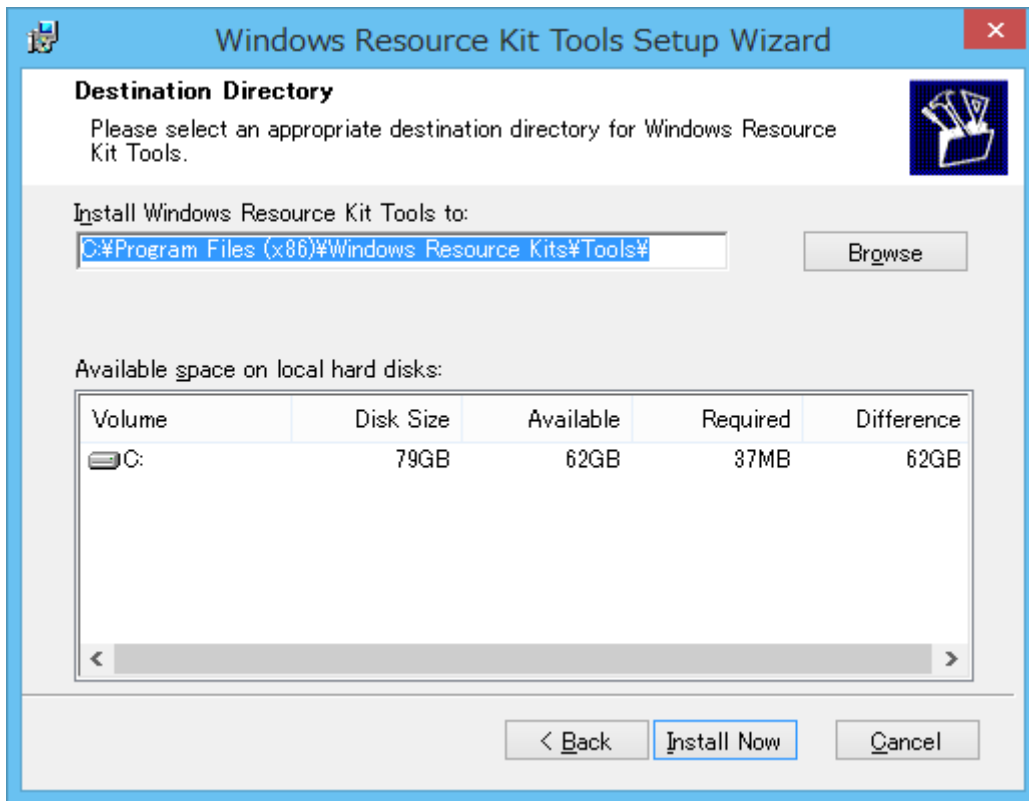
31. Select "I Agree", and then click [Next].



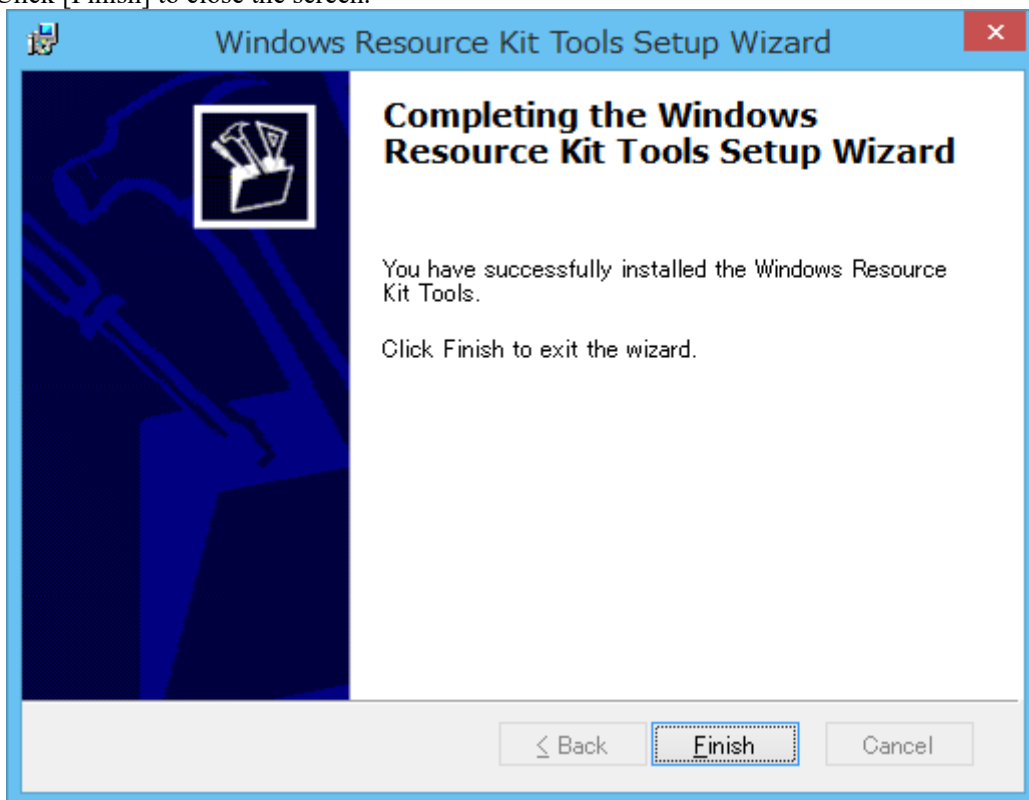
32. Click [Next].



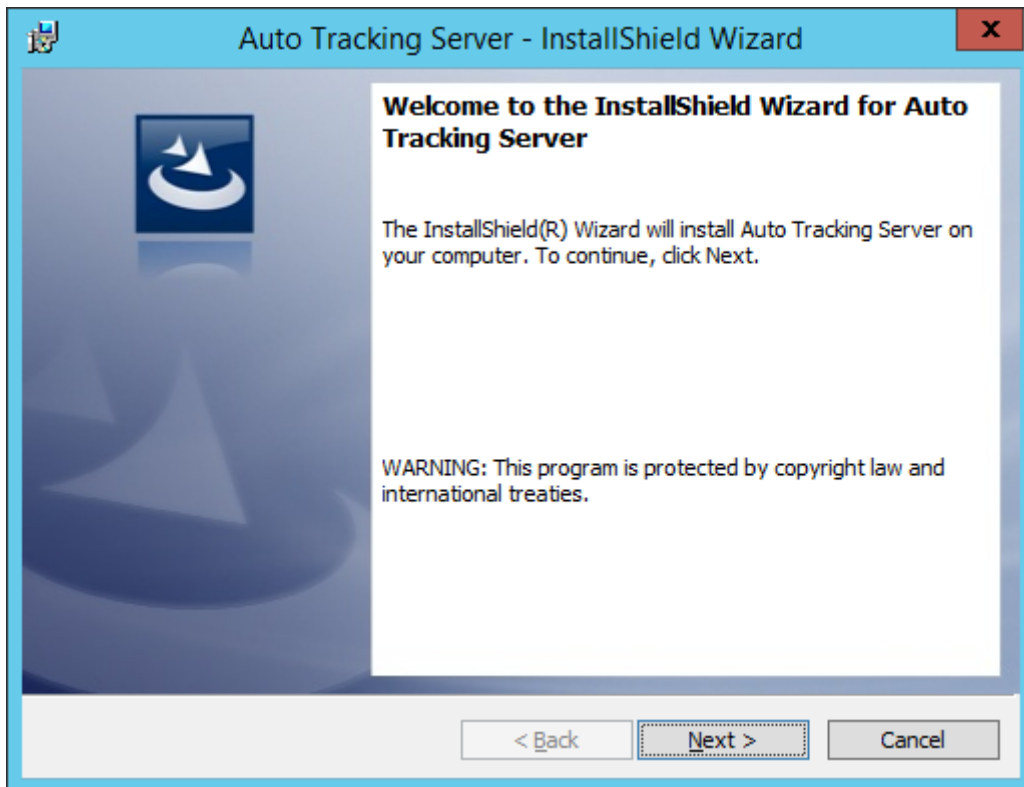
33. Click [Install Now].



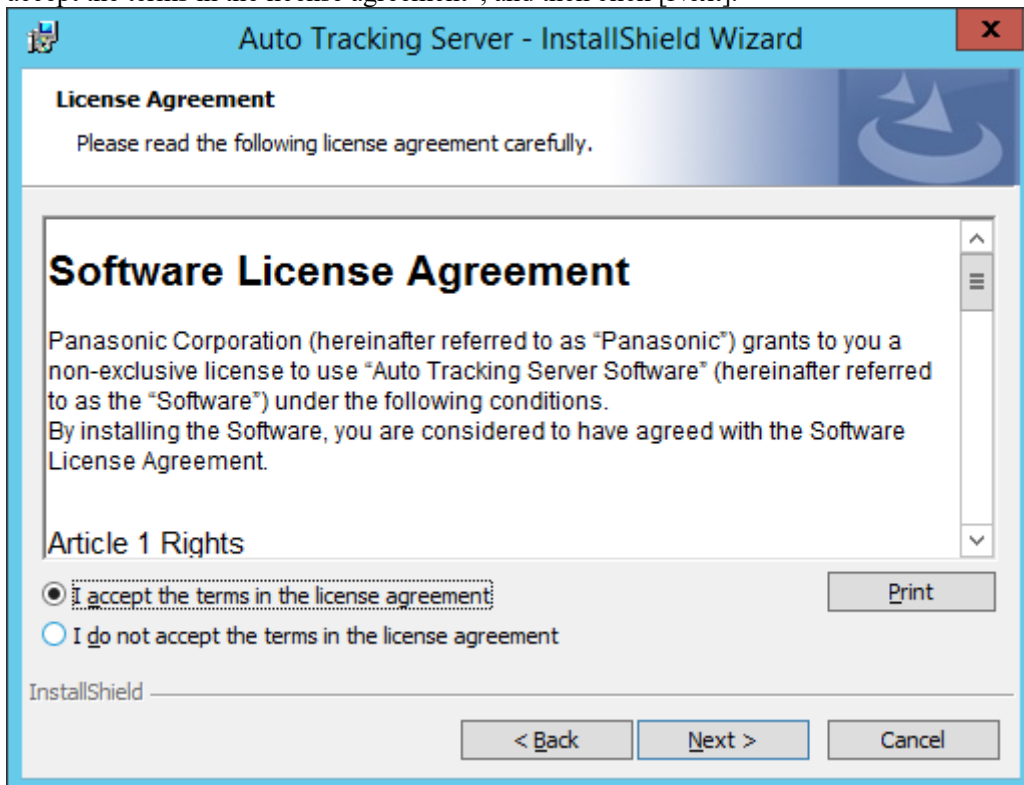
34. Click [Finish] to close the screen.



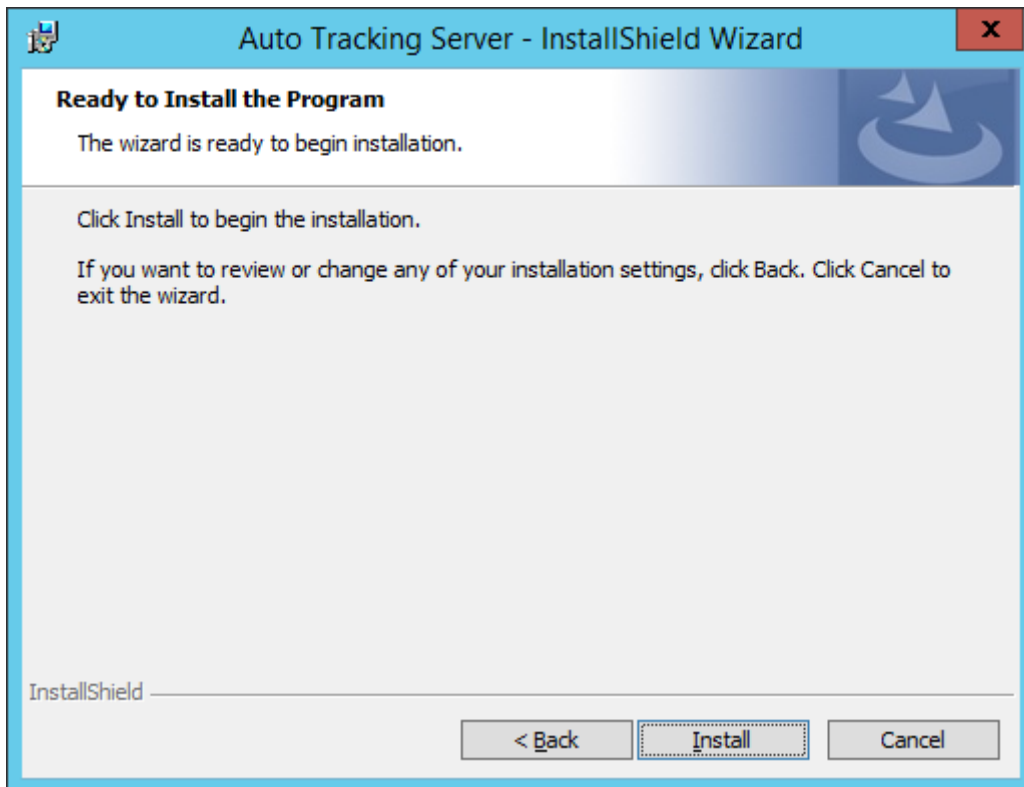
35. When the installation of the required components is completed, the installation screen appears. Click [Next].



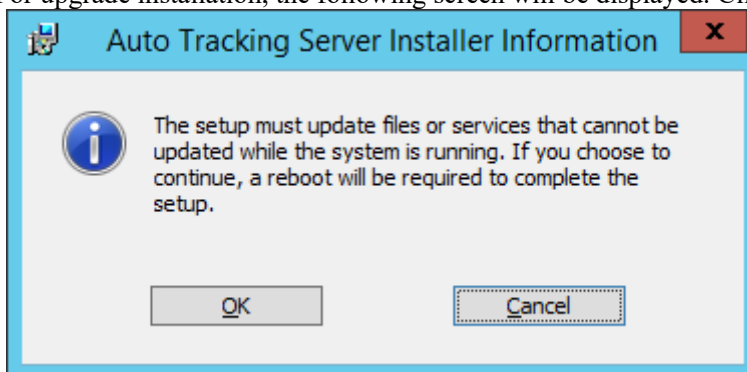
36. The Software License Agreement appears. Check the content, and if there is no problem, select “I accept the terms in the license agreement”, and then click [Next].



37. The screen for starting installation appears. Click [Install].

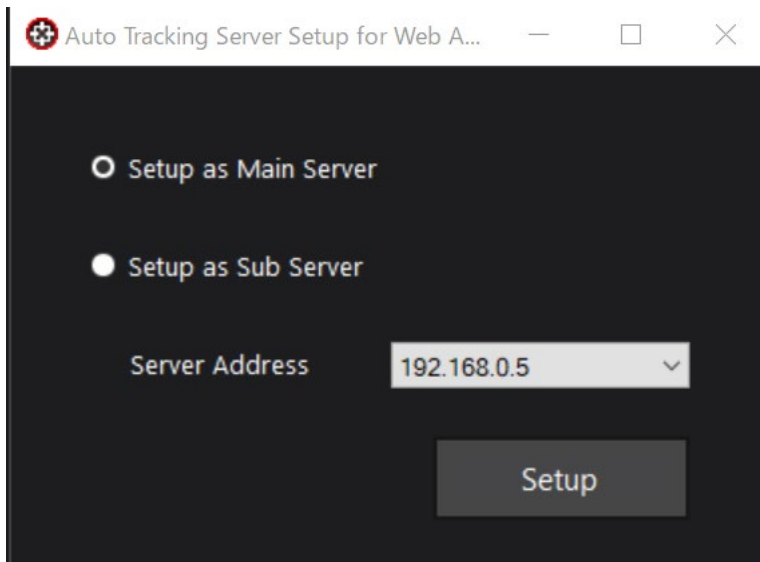


38. For upgrade installation, the following screen will be displayed. Click [OK].



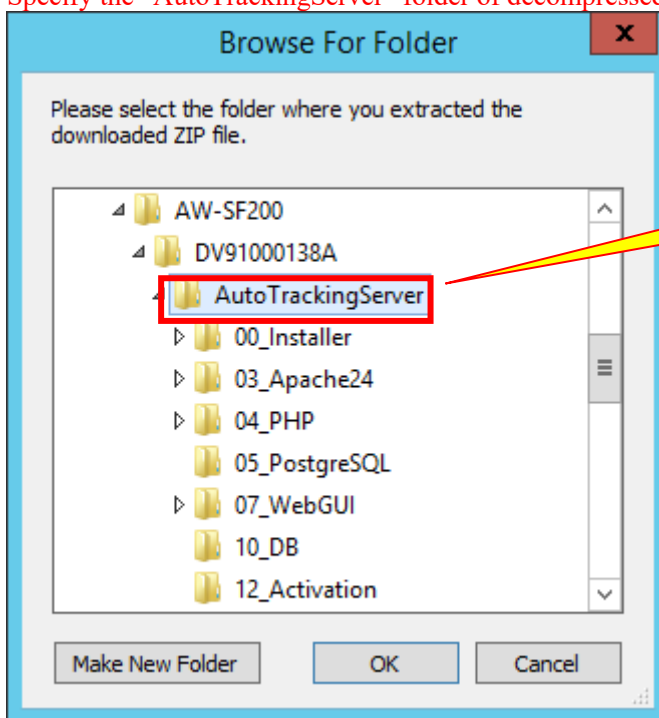
39. When the following screen appears, set each item and click [Setup].

- To install on the Main server
 1. Turn ON the check mark for “Setup as Main Server”.
 2. Enter the IP address of the Main server in “Server Address”.
- To install on the Sub server
 1. Turn ON the check mark for “Setup as Sub Server”.
 2. Enter the IP address of the Sub server in “Server Address”.



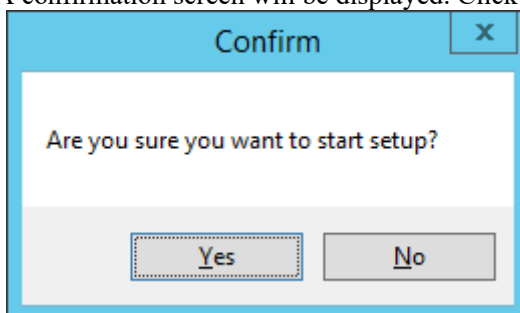
40. The following screen will be displayed.

Specify the "AutoTrackingServer" folder of decompressed this software and click [OK].

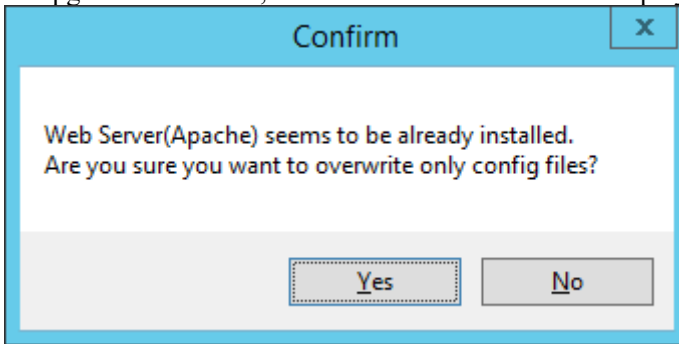


IMPORTANT!!!!
Please select "Auto TrackingSoftware"
folder

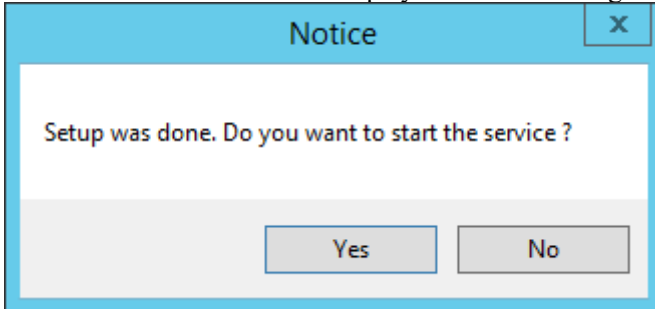
41. A confirmation screen will be displayed. Click [Yes].



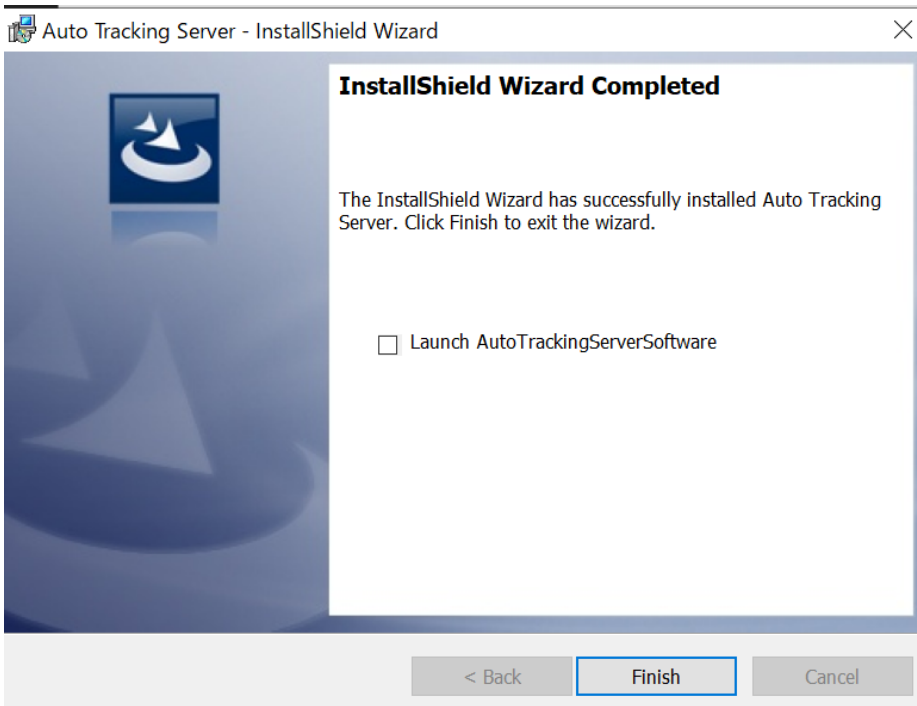
42. For upgrade installation, a confirmation screen will be displayed. Click [Yes].



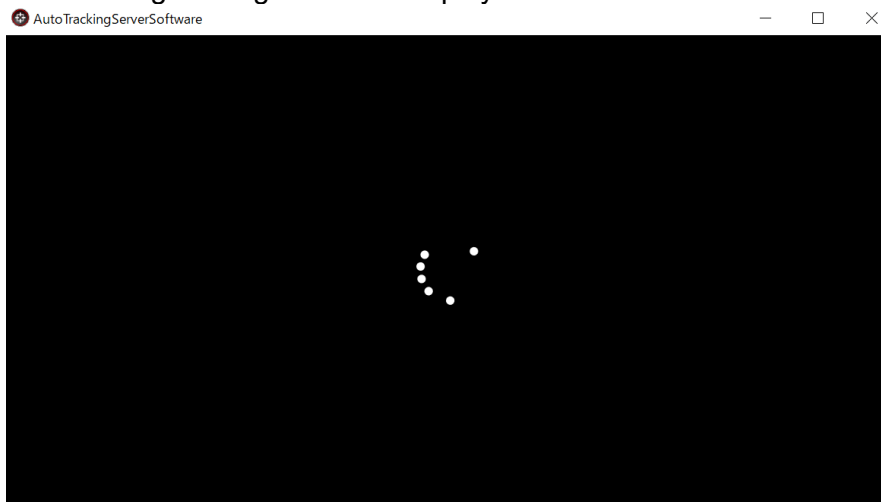
43. A confirmation screen will be displayed after the settings are complete. Click [Yes].



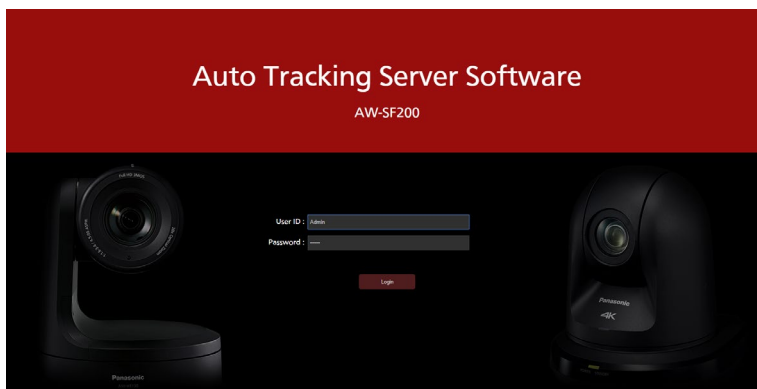
44. To launch the app, check "Launch AutoTrackingServerSoftware" and click the "Finish" button to close the dialog.



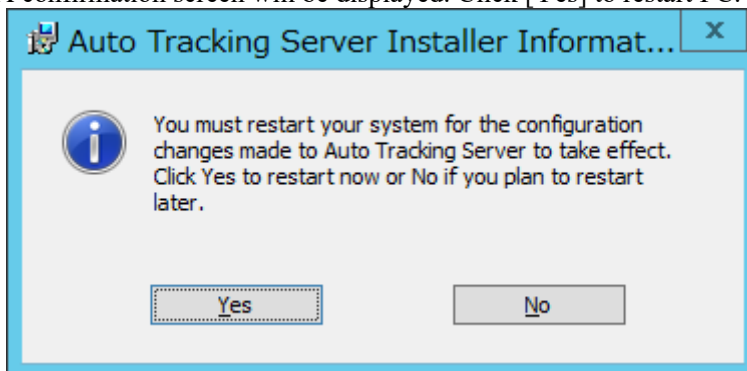
45. The following loading screen is displayed.



46. When the loading is completed normally, the GUI of this software will start.



47. A confirmation screen will be displayed. Click [Yes] to restart PC.



48. This completes the installation process.

Administrator Settings

Please make the following settings after installing this software.

User account settings

Please set the user account before using the software.

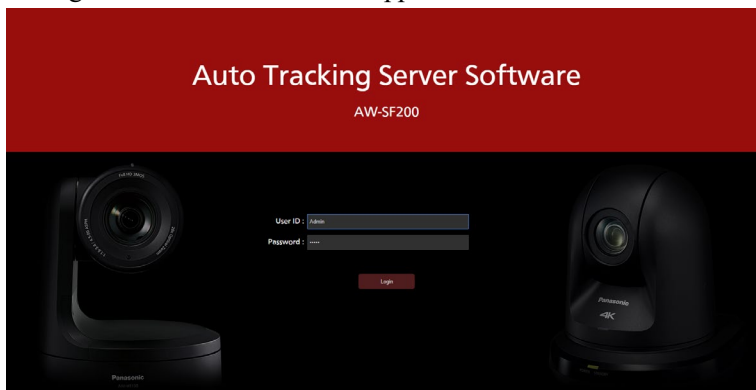
1. Click the desktop shortcut "AutoTrackingServerSoftware".
2. The PC default browser is selected to start the GUI of this software.

* When accessing manually

1. Start the Web browser (Google Chrome).
2. In the address field of the Web browser, enter "http://[IP address of the Main server]/atss/" to open the page.

(Example: http://192.168.0.201/atss/)

3. The Login screen of this software appears on the Web browser.



4. Enter the following user name and password in the Name and Password boxes, respectively, and then click the [Login] button.

User name: Admin

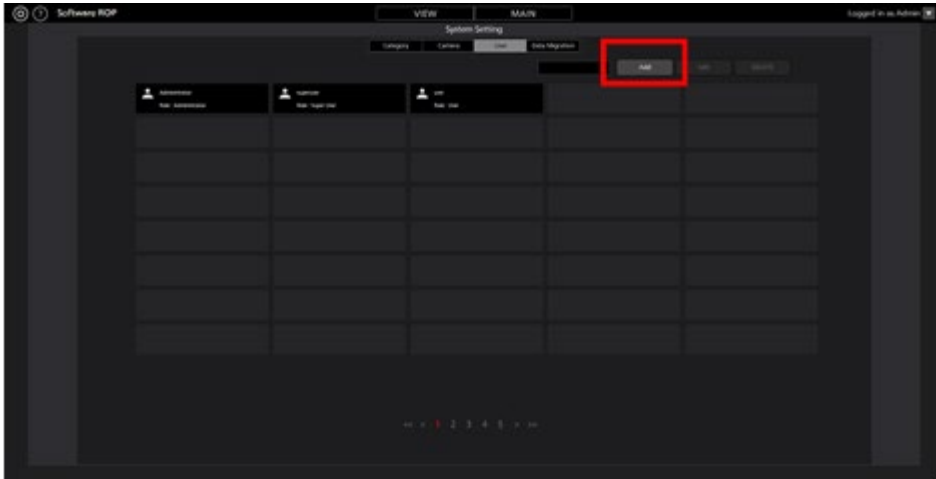
Password: Admin

- If "Connection with controller is not established." message is displayed at login, open the service management window of Windows and restart the following services.

Panasonic Auto Tracking Server (SF200)

Panasonic Tracking Control (SF200)

5. If login is successful, the user setting screen of this software will be displayed.
6. Click the Add button and go to the Register User screen.



7. On the Register User screen, enter the information of the user account to be registered.

Add User

Login:

Password:

Password(Retype):

Role:

Login: User account name

Password: Password

Password (Retype): Password (for confirmation)

Role: Account's privilege. You can select from the following three types.

Administrator: All functions can be used

Super User: Server settings (Control screen) cannot be used

User: Server settings (Control screen) and account management (User screen) cannot be used

8. Click the OK button to come out of the Register User screen.

9. With this, the setting is complete

Logging in to Applications

Since this software runs as a Web service, log in to this software when it is running on the Main server from a Web browser to perform operations.

Operations from the Web browser can also be performed from a Client PC separate from the Main server.

In that case, download the auto-tracking software client application to another client PC.

The procedure from logging in to this software until the start of operations is described below.

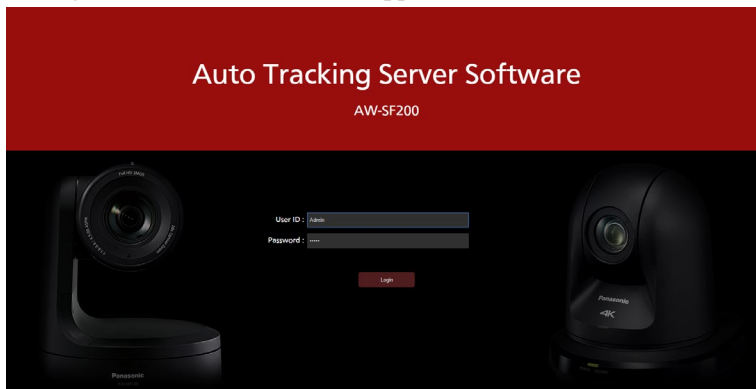
1. Click the desktop shortcut "AutoTrackingServerSoftware".
2. The PC default browser is selected to start the GUI of this software.

* When accessing manually

1. Start the Web browser (Google Chrome).
2. In the address field of the Web browser, enter "http://[IP address of the Main server]/atss/" to open the page.

(Example: http://192.168.0.201/atss/)

3. The Login screen of this software appears on the Web browser.



4. Enter the user ID and password in the User ID and Password boxes, respectively, and then click the [Login] button.

- If "Connection with controller is not established." message is displayed at login, open the service management window of Windows and restart the following services.

Panasonic Auto Tracking Server (SF200)


Panasonic Tracking Control (SF200)

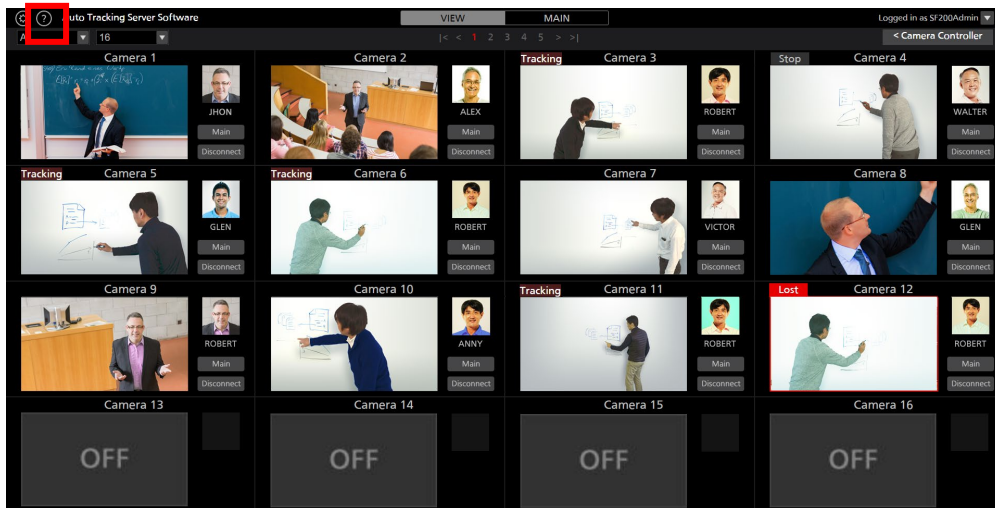
5. If login is successful, the VIEW screen of this software will be displayed.

Viewing the Operation Manual

The operation manual of this software is provided in the help file format displayed on the Web browser in the application.

The procedure of viewing the operation manual is described below.

1. Log in to this application according to the procedure described in “Logging to the Application” on the previous page.
2. Click the  button at the top left of the screen to view the operation manual of this software in a separate tab of the Web browser.



Default Settings

If necessary, make the default settings during initial startup of this software.

For details, refer to the “Default Settings” section of the operation manual.

When changing the IP address of Main server

If you change the IP address of the Main server after installing this software, click on the desktop shortcut "AutoTrackingServerSoftware" to start the GUI of this software with the new IP address. The GUI of the software will be launched with the new IP address.

If you want to start the software manually, please access [new IP address]/atss from your web browser.