



SCADA Software

MC Works64 Version 4 Startup Manual

-SW4DND-MCWDV-MT
-SW4DND-MCWRT-MT
-SW4DND-MCWLT-MT
-SW4DND-MCGDV-MT
-SW4DND-MCGRT-MT
-SW4DND-MCADV-MT
-SW4DND-MCART-MT
-SW4DND-MCHSD-MT
-SW4DND-MCHET-MT
-SW4DND-MCWOLDV-MT
-SW4DND-MCWOLRT-MT
-SW4DND-MCWOLLT-MT
-SW4DND-MCGOLDV-MT
-SW4DND-MCGOLRT-MT
-SW4DND-MCAOLDV-MT
-SW4DND-MCAOLRT-MT
-SW4DND-MCHOLSD-MT
-SW4DND-MCHOLET-MT
-SW4DND-MCHR-MT
-SW4DND-MCAMMLT-M
-SW4DND-AXESV-M
-SW4DND-AXFSV-M
-SW4DND-AXQSV-M

-SW4DND-MCRSV-MT
-SW4DND-MCBSV-MT
-SW4DND-MCWCLDV-MK
-SW4DND-MCWCLRT-MK
-SW4DND-MCWCLR-MK
-SW4DND-MCWCLLT-MK
-SW4DND-MCWRORT-MK
-SW4DND-MCWROR-MK
-SW4DND-MCWROLT-MK
-SW4DND-MCHC-M
-SW4DND-MCHCR-M
-SW4DND-AXEAS-MT
-SW4DND-AXFAS-MT
-SW4DND-MCMCL-MK
-SW4DND-MCMRO-MK
-SW4DND-MCWEG-MT
-SW4DND-MCWEGOL-MT
-SW4DND-MCWEGTG-MT
-SW4DND-MCWEGCL-MK
-SW4DND-MCWEGFA-MT
-SW4DND-MCWEGRP-MT
-SW4DND-MCWEGBG-MT

SAFETY PRECAUTIONS

(Read these precautions before using this product.)

Before using this product, please read this manual carefully and pay full attention to safety to handle the product correctly. The precautions given in this manual are concerned with this product only. For the safety precautions for the programmable controller system, refer to the user's manual for the module used and MELSEC iQ-R Module Configuration Manual.

In this manual, the safety precautions are classified into two levels: "⚠ WARNING" and "⚠ CAUTION".



WARNING

Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.



CAUTION

Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under "⚠ CAUTION" may lead to serious consequences.

Observe the precautions of both levels because they are important for personal and system safety.

Make sure that the end users read this manual and then keep the manual in a safe place for future reference.

[Design Precautions]



WARNING

- When data change, program change, or status control is performed from a personal computer to a running CPU module, create an interlock circuit outside the programmable controller system to ensure that the whole system always operates safely.
Furthermore, for the online operations performed from a personal computer to a CPU module, the corrective actions against a communication error due to such as a cable connection fault should be predetermined as a system.
-

[Security Precautions]



WARNING

- To maintain the security (confidentiality, integrity, and availability) of the programmable controller and the system against unauthorized access, denial-of-service (DoS) attacks, computer viruses, and other cyberattacks from external devices via the network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions.
-

[Startup and Maintenance Precautions]

CAUTION

- The online operations performed from a personal computer to a running CPU module (program change while a CPU module is in RUN state, operating status change such as RUN-STOP switching, and remote control operation) have to be executed after the manual has been carefully read and the safety has been ensured.
- When changing a program while a CPU module is in RUN (online program change), it may cause a program corruption in some operating conditions. Fully understand the precautions before use.
- The positioning test functions such as OPR, JOG, inching, or testing positioning data for positioning module must be executed with the CPU module set to STOP after the manual has been carefully read and the safety has been ensured.

Specially when executing the function on the network system, ensure the safety thoroughly since the machinery whose operation cannot be checked by an operator may be activated. The operation failure may cause the injury or machine damage.

CONDITIONS OF USE FOR THE PRODUCT

- (1) MELSEC programmable controller ("the PRODUCT") shall be used in conditions;
- i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
 - ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.
- (2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries. MITSUBISHI ELECTRIC SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY THE PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI ELECTRIC USER'S, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT.
- ("Prohibited Application")
- Prohibited Applications include, but not limited to, the use of the PRODUCT in;
- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
 - Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
 - Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.
- Notwithstanding the above restrictions, Mitsubishi Electric may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi Electric and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTS are required. For details, please contact the Mitsubishi Electric representative in your region.
- (3) Mitsubishi Electric shall have no responsibility or liability for any problems involving programmable controller trouble and system trouble caused by DoS attacks, unauthorized access, computer viruses, and other cyberattacks.

INTRODUCTION

Thank you for purchasing the Mitsubishi Electric SCADA software.

This manual describes the functions provided by MC Works64.

Before using this product, please read this manual carefully, and develop familiarity with the functions and performance of MC Works64 to handle the product correctly.

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RELEVANT MANUALS

Manual name [manual number]	Description	Available form
MC Works64 Version 4 Startup Manual [BCN-P5999-0952](this manual)	Explains the functions and operation methods of MC Works64.	e-Manual PDF



e-Manual refers to the Mitsubishi Electric FA electronic book manuals that can be browsed using a dedicated tool.

e-Manual has the following features:

- Required information can be cross-searched in multiple manuals.
- Other manuals can be accessed from the links in the manual.
- Hardware specifications of each part can be found from the product figures.
- Pages that users often browse can be bookmarked.
- Sample programs can be copied to an engineering tool.

1 OVERVIEW

1.1 MC Works64

MC Works64 is a SCADA software package that offers plant-wide monitoring function.

It provides solutions for a wide variety of needs by the high-functionality monitoring control system with variety of FA devices.

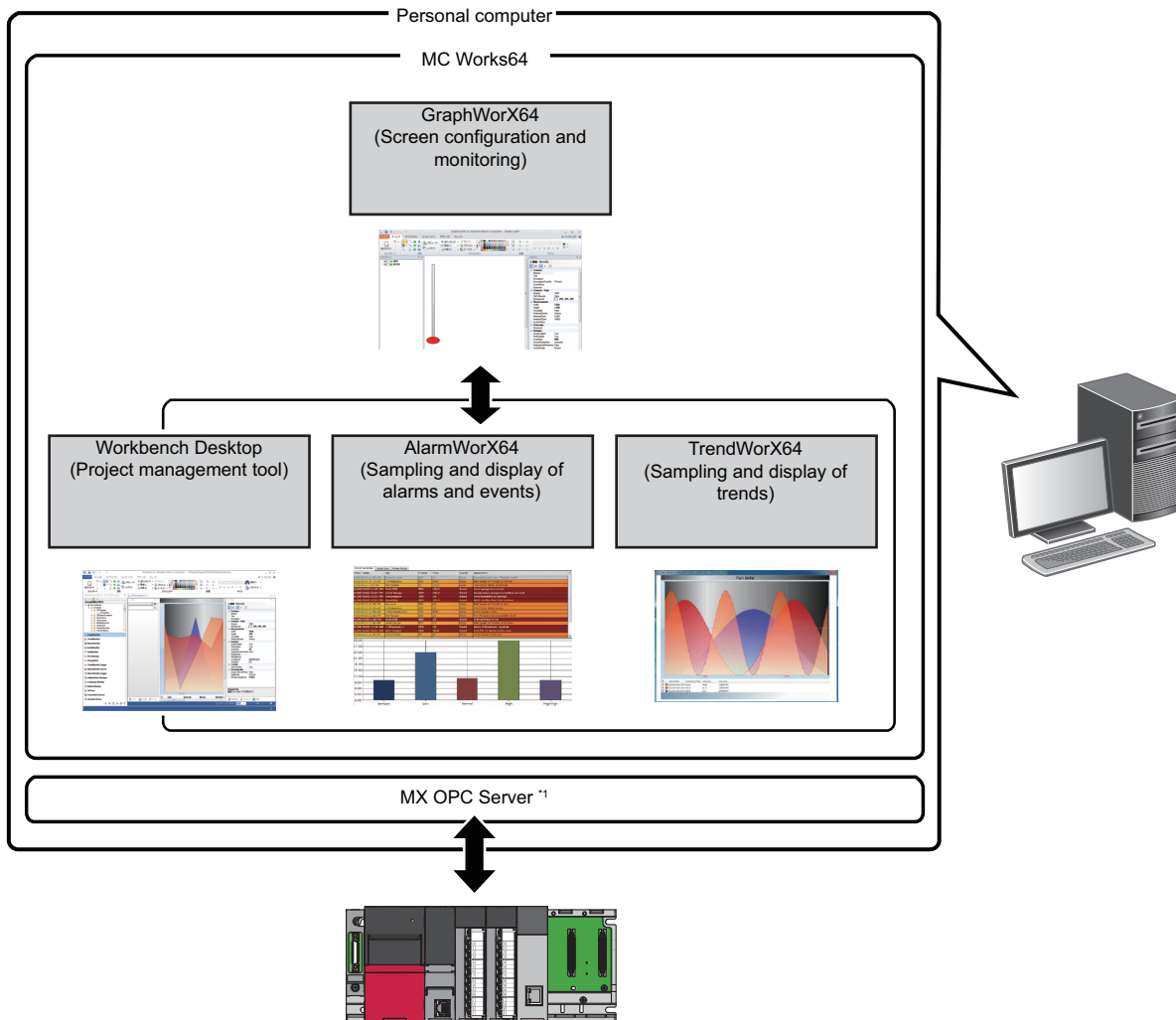
The following table shows the functions of MC Works64 described in this manual.

Application name	Function	Reference
Workbench Desktop	Project management	Page 68 SCREEN CONFIGURATION EXAMPLE
GraphWorX64	Screen configuration	
TrendWorX64	Trend display	
AlarmWorX64	Alarm and event display	

2 SYSTEM CONFIGURATION

MC Works64 contains a set of applications (functions).

2.1 Overall Configuration of MC Works64



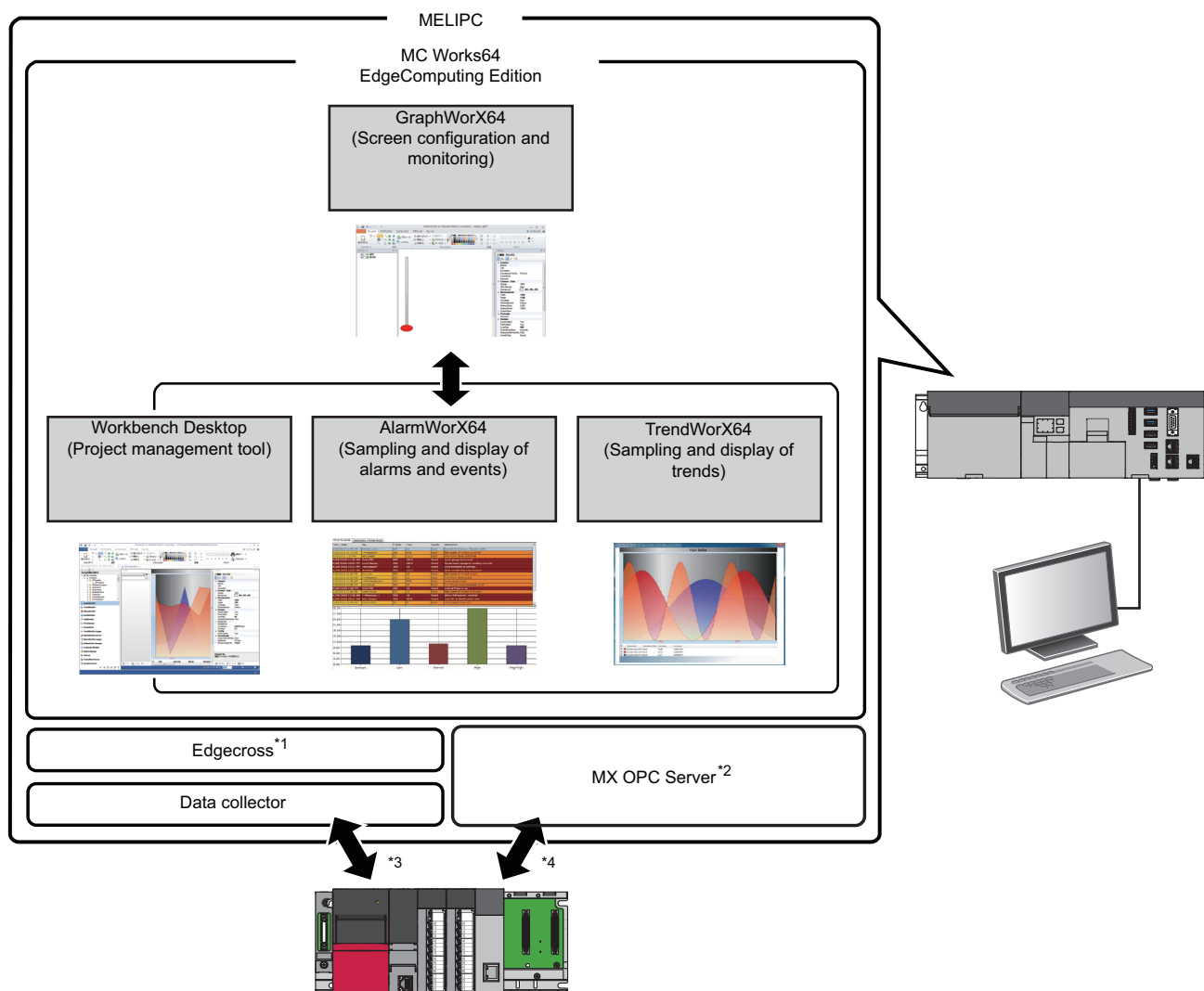
*1 A general-purpose OPC server (such as Device Explorer OPC Server manufactured by TAKEBISHI CORPORATION) is also available.

Workbench Desktop (project management tool) unifies and manages the tools in MC Works64.

By configuring a monitoring screen in GraphWorX64, devices and a system can be monitored.

In the monitoring screen, data imported by applications (such as TrendWorX64 and AlarmWorX64) can be displayed.

2.2 Overall Configuration of MC Works64 EdgeComputing Edition



*1 For the edge application I/F supported by MC Works64, refer to the following:

☞ Page 12 Supported edge application I/Fs

*2 A general-purpose OPC server (such as Device Explorer OPC Server manufactured by TAKEBISHI CORPORATION) is also available.

*3 For the communication route when using Edgecross Basic Software, refer to the manuals of a data collector to use.

*4 For the communication route when using MX OPC Server, refer to the following:

☞ Page 12 Supported communication routes

Workbench Desktop (project management tool) unifies and manages the tools in MC Works64.

By configuring a monitoring screen in GraphWorX64, devices and a system can be monitored.

In the monitoring screen, data imported by applications (such as TrendWorX64 and AlarmWorX64) can be displayed.

Supported edge application I/Fs

Edge application I/F	Edgecross Basic Software version	Edge application I/F version
Model access I/F (OPC UA)	1.20 or later	1.00 or later
Data access I/F (OPC UA)	1.20 or later	1.01 or later
Historical data access I/F (file)	1.00 or later	1.00 or later
Historical data access I/F (DB)	Not supported	Not supported
Real-time data distribution I/F (MQTT)	Not supported	Not supported
Real-time data diagnosis I/F (MQTT)	Not supported	Not supported
Real-time data diagnosis I/F (file)	Not supported	Not supported

Supported communication routes

○: Supported, —: Not supported

Communication route	MX OPC Server DA	MX OPC Server UA
USB	—	○
Ethernet	—	○
Ethernet (SLMP)	—	○
Others	—	—

3 LIST OF APPLICATIONS

MC Works64 is composed of the applications in the following table.

Depending on the product purchased, the applications included in MC Works64 differ.

○: Included, —: Not included

Category		Application name	Description	MC Works64	MC Works64 EdgeComputi ng Edition
System design, implementation		Workbench	System management	○	○
		MC AppBuilder	Linkage between screen and controller	○	—
		Bulk Asset Configurator	Bulk engineering	○	—
		MX OPC DA Configurator MX OPC UA Configurator	Communication setting for a monitoring target device	○	○*1
		Process program combination tool	Interaction with process control system	○	—
		GraphWorX	Screen design	○	○
Operation	Service	AssetWorX	Data model management	○	○
		AlarmWorX	Alarm, event	○	○
		AlarmWorX Logger	Alarm, event history	○	○
		TrendWorX	Simple data logging	○	○
		MC Historian MC Historian Express	Logging	○	○*2
		MergeWorX	Importing of logging data	○	○
		AlartWorX	Mail/SMS notification	○	○
		Workflow	Workflow	○	○
		ScheduleWorX	Advanced scheduling	○	—
		Global Aliasing	Shared variables	○	○
		Unified Data Manager	Common settings	○	○
		Language Aliasing	Language switching	○	○
		RecipeWorX	Recipe	○	—
		Security Server	User management	○	○
		AX Energy	Energy monitoring	○	—
		AX Facility	Preventive maintenance	○	○
		AX Quality	Quality control	○	—
		ReportWorX	Report outputting	○	○
		FrameWorX	MC Works64 platform	○	○
		Linkage with external databases	GridWorX	Database connection	○
	Screen display	GraphWorX Viewer	Graphic screen	○	○
		AlarmWorX Viewer	Alarm screen	○	○
		TrendWorX Viewer	Trend screen	○	○
		GridWorX Viewer	Table and graph display	○	○
		EarthWorX Viewer	Wide area (geographical) monitoring	○	—
		Camera Control (GraphWorX)	Camera monitoring	○	○
		ReportWorX Express	Simplified report outputting	○	○
		AX Portal	Analysis screen	○	—
		WebHMI	Monitoring in a web browser	○	○
		MC Mobile	Monitoring with a mobile device	○	○
		KPIWorX	Screen editing in runtime	○	○
		System Health	Information monitoring by a personal computer	○	○
Others		MC Works64 Language Pack	Multiple language support	○	○

*1 For supported communication routes, refer to the following:

☞ Page 12 Supported communication routes

*2 Only MC Historian Express is included.



There are some differences in applications included and each application function between MC Works64 and MC Works64 EdgeComputing Edition. For details, please contact Mitsubishi Electric sales office or representative.

4 INSTALLATION AND UNINSTALLATION

4.1 Installation

This section shows the installation procedure.

1. Prepare for installation.

 Page 16 Preparation for Installation

2. Install MC Works64.

 Page 19 MC Works64

 Page 25 MC Works64 EdgeComputing Edition

3. Activate the MC Works64 license.

 Page 33 License Activation

4. Install MX OPC Server.

 Page 30 Installation of MX OPC Server

5. Install Language Pack.

 Page 30 Installation of Language Pack

Preparation for Installation

Check the operating environment by referring to the specifications of the product purchased.

 MC Works64 Version 4 Installation Instructions

 MC Works64 EdgeComputing Edition Installation Instructions

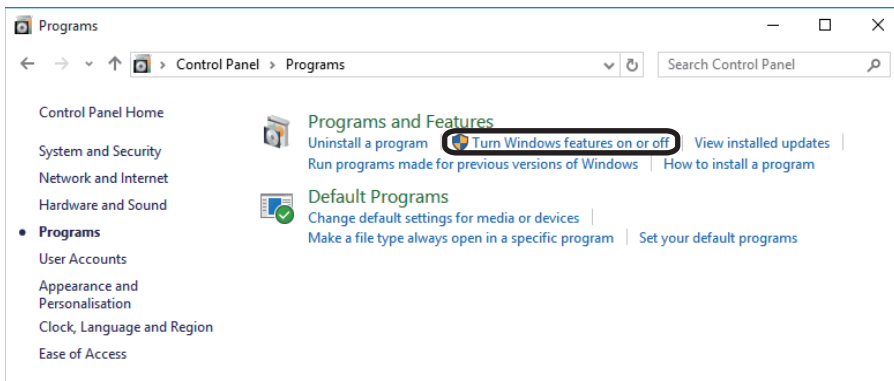
Point

- When MC Works64 is installed without installing .NET Framework4.6, then .NET Framework4.6 is installed automatically.
 - When the installation of MC Works64 is started without installing SQL Server, select whether or not to install SQL Server 2014 Express.
-

Installation procedure for Microsoft Internet Information Service (IIS)

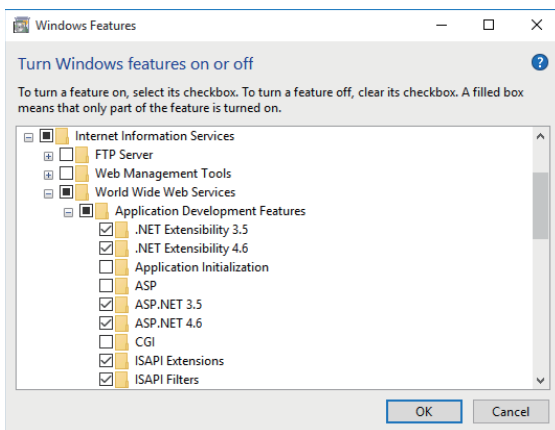
Operating procedure

1. Select [Control Panel] ⇒ [Programs] ⇒ [Turn Windows features on or off].



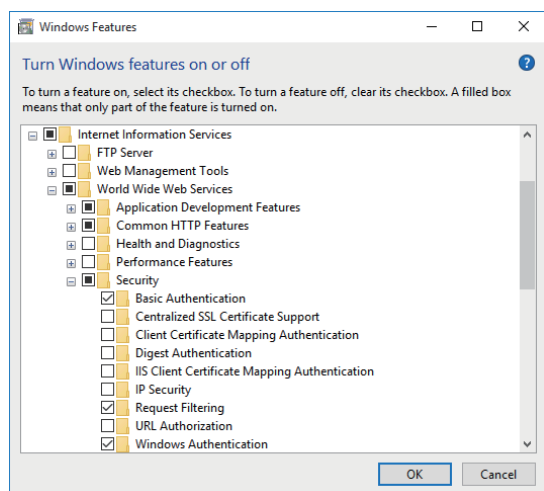
2. Select the following features under "Internet Information Services" ⇒ "World Wide Web Services" ⇒ "Application Development Features."

- .NET Extensibility
- ASP.NET
- ISAPI Filters
- ISAPI Extensions



3. Select the following features under "Internet Information Services" ⇒ "World Wide Web Services" ⇒ "Security."

- Windows Authentication
- Basic Authentication



4. Click the [OK] button.

The selected features are installed.

Installation of MC Works64

Page 19 MC Works64

Page 25 MC Works64 EdgeComputing Edition

MC Works64

This section shows the installation procedure for MC Works64.

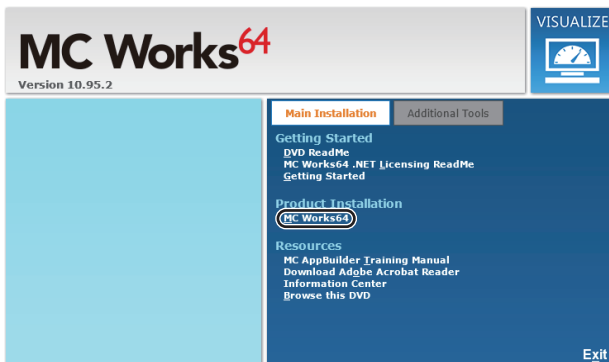
Precautions

- Log on to a personal computer as a user with an administrator authority.
- If a previous version is installed, uninstall it before the installation. When a message that makes sure to allow overwriting existing data appear at the creation of a database environment, select whether or not to overwrite data.

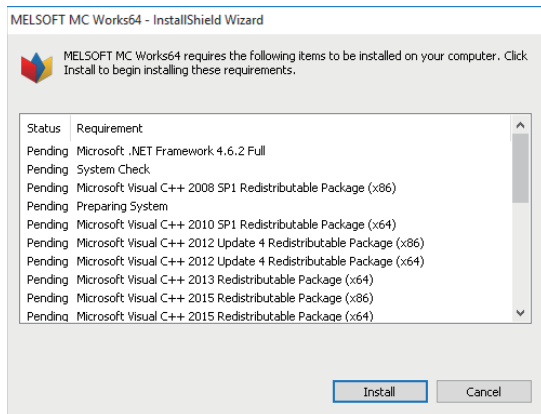
4

Operating procedure

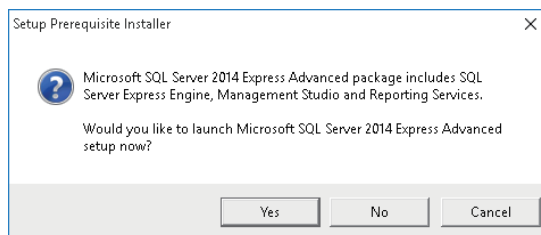
1. Insert MC Works64 DVD-ROM Disc1 to the drive.
2. Double-click the "default.hta" file in the folder where the installer is stored to run the installer.
3. Select "MC Works64" in the installation screen.



4. When the components required for operations are displayed, click the [Install] button to install the components.



During the installation of the components, a screen that confirms the installation of SQL Server 2014 Express may appear as shown below.

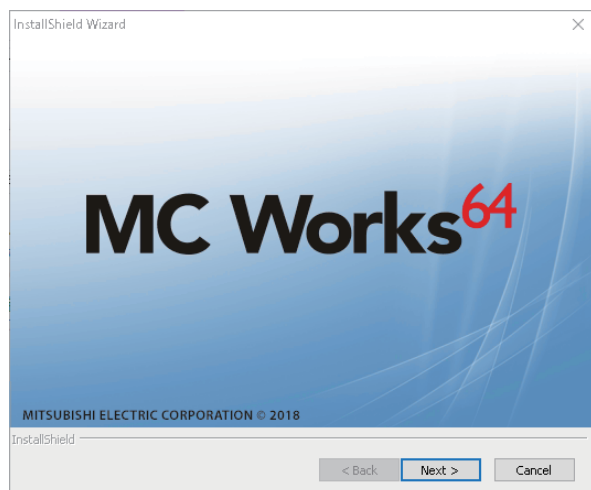


- To install SQL Server 2014 Express: Click the [Yes] button.
- SQL Server has already been installed: Click the [No] button.

After the installation of the components is complete, a screen that confirms the restart of the personal computer appears. Click the [Yes] button to restart the personal computer.

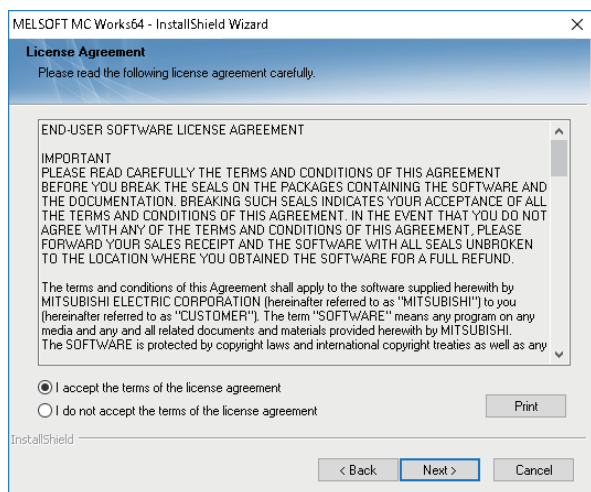
If the installer does not start automatically after the personal computer is restarted, double-click the "setup.exe" file in the folder where the installer is stored.

5. Click the [Next] button.



4

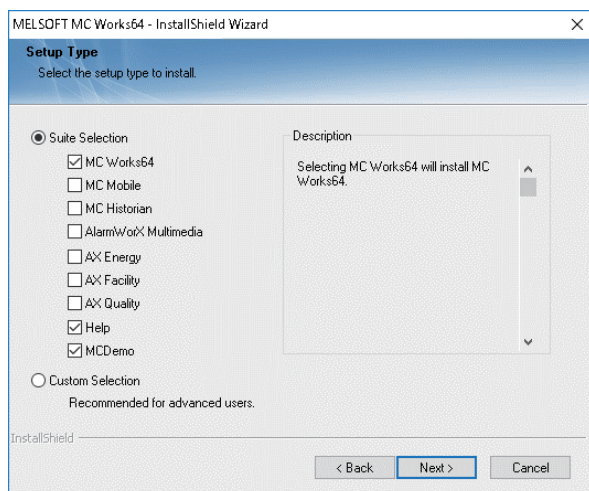
6. Read the license agreement, select "I accept the terms of the license agreement," and click the [Next] button.



7. Select "Suite Selection," select the checkbox of the application purchased, and then click the [Next] button.

The following applications are selected by the default.

- MC Works64
- Help
- MCDemo



MC Demo is a sample application for monitoring screens.

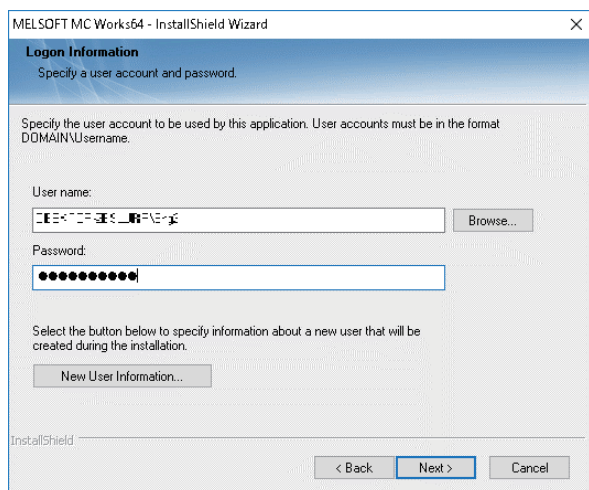
A monitoring system can be developed in MC Works64 by referring to the following settings: animations, scripts, graphics, and alarms and trends.

A sample monitoring screen is stored in the following folder.

Example: C:\Program Files\MELSOFT\MC Works64\GenDemo\

8. Enter the user name ("Domain\"User name") and the password of the personal computer, and then click the [Next] button.

For "User name," enter the name of a user with Administrator privilege.



9. Specify a database server to be used for MC Works64, select the checkbox of "Include all Samples," and click the [Next] button.

MELSOFT MC Works64 - InstallShield Wizard

Database Server
Select database server and authentication method.

Database server that you are installing to:
[local\SQLEXPRESS2014] [Browse...]

Connect Using:
☒ Windows authentication
☐ SQL Server authentication
 Login ID: [sa]
 Password: []

☒ Enable Project Reporting (Automatically)
 URL: []

Databases Creation
☐ Use Active Databases (NA)
☐ Silent Configuration
☒ Include all Samples
☐ Overwrite all Databases
☐ Use Unified Database
 Database Prefix: []

[< Back] [Next >] [Cancel]

10. Click the [Install] button to start installation.

MELSOFT MC Works64 - InstallShield Wizard

Ready to Install the Program
The wizard is ready to begin installation.

Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.

[< Back] [Install] [Cancel]

11. During the installation, a setting screen for a database and service appears. Click the [Install] button to start installation.

System Setup

Configuration Settings
☐ Install all configurations in one unified database [MCUnifiedConfig] [...]
 Database Prefix: []
☒ Include samples in all configurations
☐ Overwrite all configurations
☐ Automatically upgrade all configurations

Available Configurations

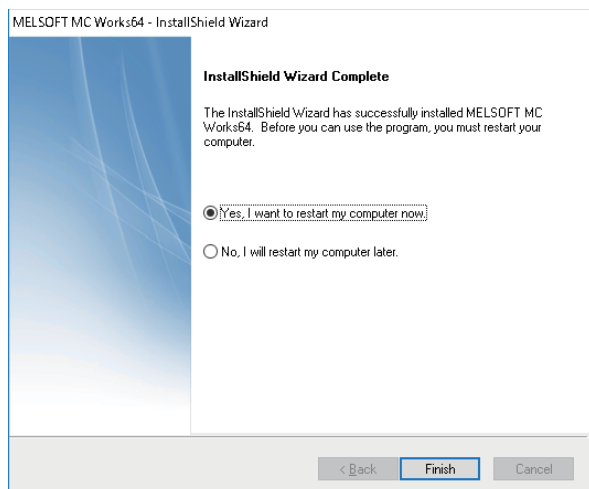
Database Name	Configuration Type	Samples	Overwrite	Upgrade	Options
AlertConfig	AlertWorX	☐	☐	☐	Initial Size: 10, M... [...]
AssetWorX	Assets	☒	☐	☐	Initial Size: 10, M... [...]
AwkLogger	AlarmWorX64 Logger	☒	☐	☐	Initial Size: 10, M... [...]
AwkServer	AlarmWorX64 Server	☒	☐	☐	Initial Size: 10, M... [...]
BACnet	BACnet	☐	☐	☐	Initial Size: 10, M... [...]
BiConfig	BI Server	☒	☐	☐	Initial Size: 10, M... [...]

[Install] [Cancel]

12. If no other MELSOFT product is installed on the personal computer, a screen that confirms the installation of the driver will appear.

Click the [Install] button.

13. Click the [Finish] button to restart the system.



MC Works64 EdgeComputing Edition

This section shows the installation procedure for MC Works64 EdgeComputing Edition.

Precautions

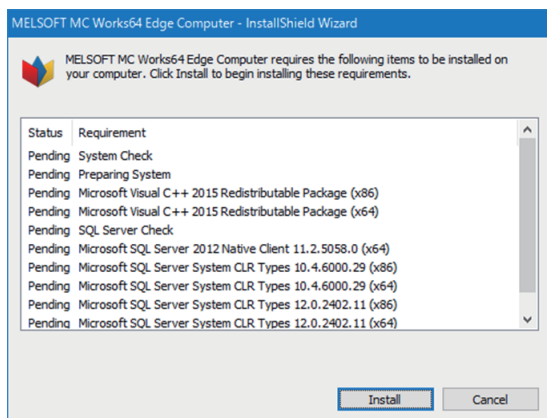
- Log on to MELIPC as a user with an administrator authority.

Operating procedure

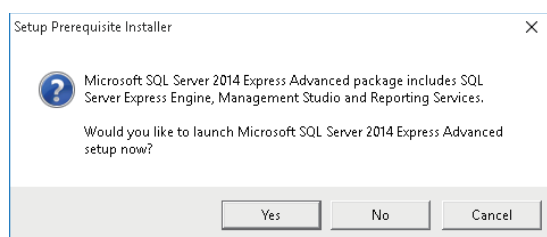
1. Double-click the "default.hta" file in the folder where the installer is stored to run the installer.
2. Select "MC Works64 Edge Computer" in the installation screen.



3. When the components required for operations are displayed, click the [Install] button to install the components.



During the installation of the components, a screen that confirms the installation of SQL Server 2014 Express may appear as shown below.

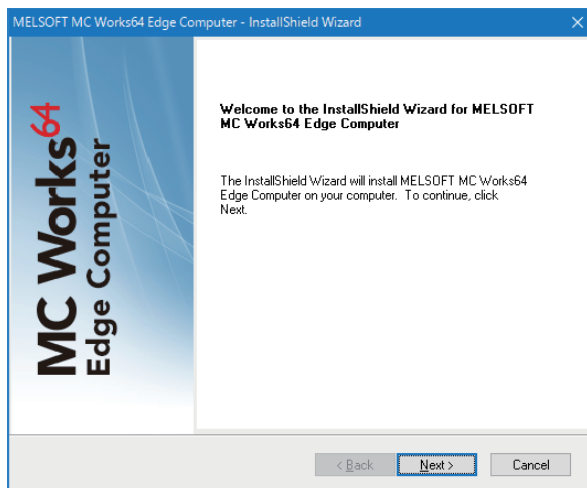


- To install SQL Server 2014 Express: Click the [Yes] button.
- SQL Server has already been installed: Click the [No] button.

After the installation of the components is complete, a screen that confirms the restart of the personal computer appears. Click the [Yes] button to restart the personal computer.

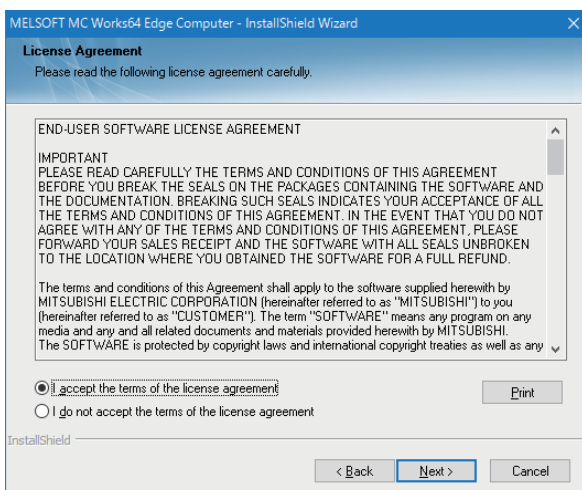
If the installer does not start automatically after the personal computer is restarted, double-click the "setup.exe" file in the folder where the installer is stored.

4. Click the [Next] button.

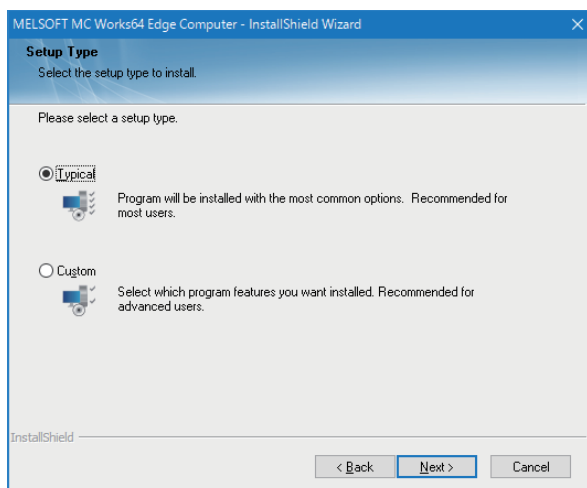


4

5. Read the license agreement. If the agreement is acceptable, select "I accept the terms of the license agreement," and click the [Next] button.

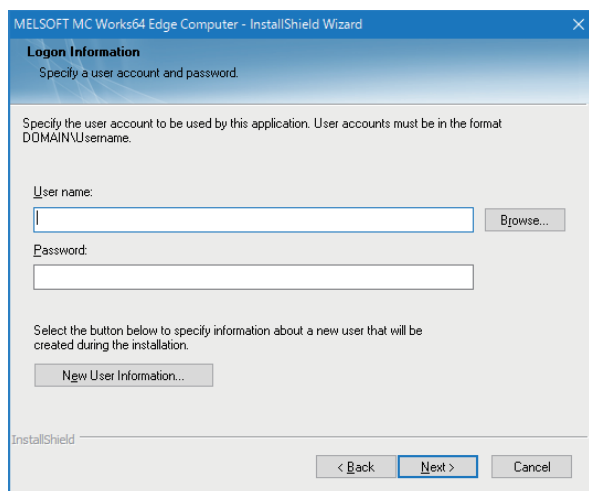


6. Select "Typical," and click the [Next] button.

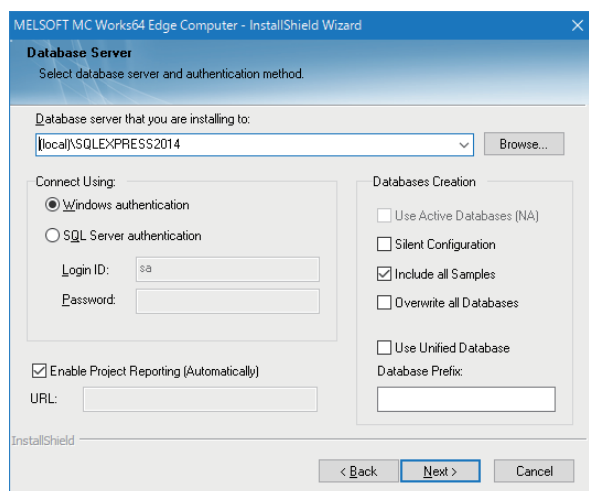


7. Enter the user name ("Domain\"User name") and the password of the personal computer, and then click the [Next] button.

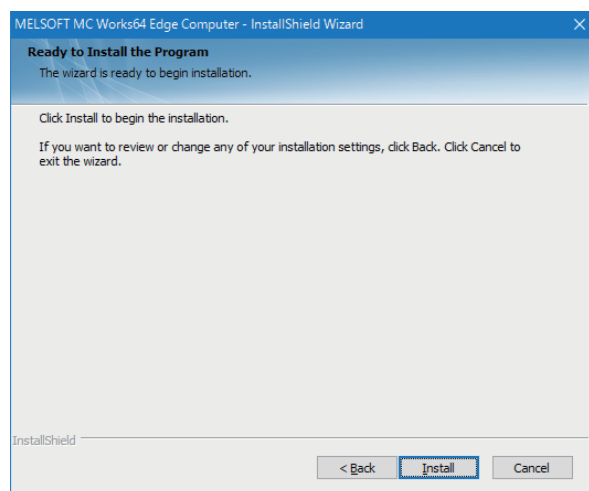
For "User name," enter the name of a user with Administrator privilege.



8. Specify a database server to be used for MC Works64, select the checkbox of "Include all Samples," and click the [Next] button.



9. Click the [Install] button to start installation.



- 10.** During the installation, a setting screen for a database and service appears.
Click the [Install] button to start installation.

Configuration Settings

☐ Install all configurations in one unified database ...

Database Prefix:

☒ Include samples in all configurations

☐ Overwrite all configurations

☐ Automatically upgrade all configurations

Available Configurations

Database Name	Configuration Type	Samples	Overwrite	Upgrade	Options
AlertConfig	AlertWorX	☐	☐	☐	Initial Size: 10, M... <input type="button" value="..."/>
AssetWorX	Assets	☒	☐	☐	Initial Size: 10, M... <input type="button" value="..."/>
AwxLogger	AlarmWorX64 Logger	☒	☐	☐	Initial Size: 10, M... <input type="button" value="..."/>
AwxServer	AlarmWorX64 Server	☒	☐	☐	Initial Size: 10, M... <input type="button" value="..."/>
BwxConfig	Bridging	☒	☐	☐	Initial Size: 10, M... <input type="button" value="..."/>
FwxServer	FrameWorX	☐	☐	☐	Initial Size: 10, M... <input type="button" value="..."/>

- 11.** If no other MELSOFT product is installed on the personal computer, a screen that confirms the installation of the driver will appear.
Click the [Install] button.
- 12.** Click the [Finish] button to restart the system.

MELSOFT MC Works64 Edge Computer - InstallShield Wizard

InstallShield Wizard Complete

The InstallShield Wizard has successfully installed MELSOFT MC Works64 Edge Computer. Before you can use the program, you must restart your computer.

☒ Yes, I want to restart my computer now.

☐ No, I will restart my computer later.

Installation of MX OPC Server

The MX OPC Server installer is stored on the installation DVD-ROM.
Double-click "autorun.exe" on the installation DVD-ROM to run the installer.

Precautions

- This manual uses MX OPC Server DA for explanation.
- Log on to the personal computer as a user with Administrator privilege in advance, and then start installation.

Installation of Language Pack

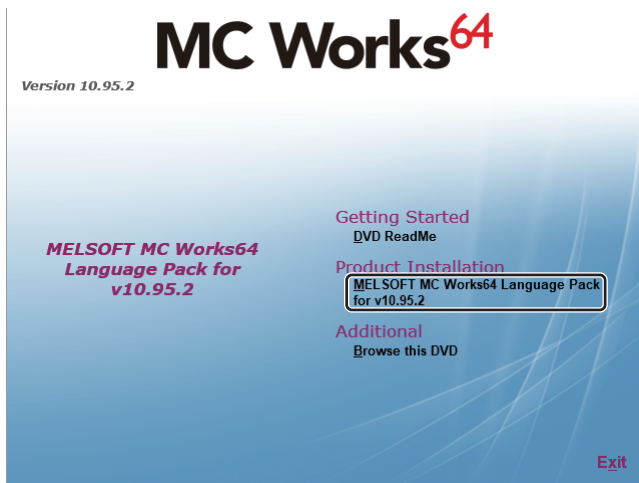
Language Pack must be installed after installing MC Works64.

Precautions

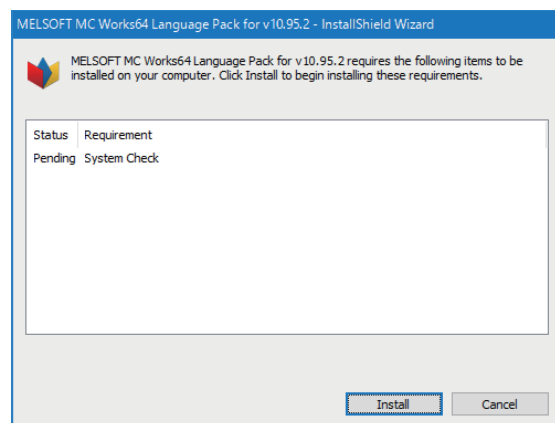
The available characters for MC Works64 are not changed even after installing Language Pack.

Operating procedure

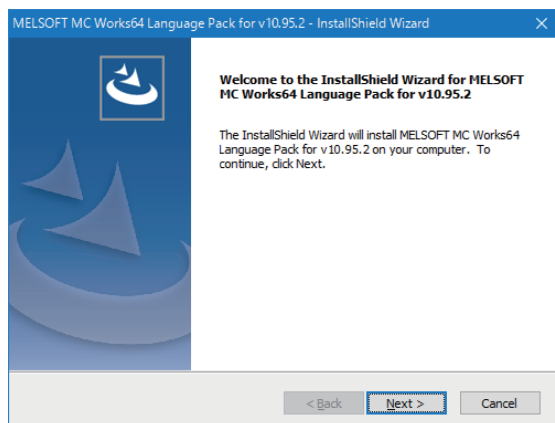
1. Insert MC Works64 Language Pack DVD-ROM to the drive.
 2. Double-click the "default.hta" file in the folder where the installer is stored to run the installer.
 3. Select "MELSOFT MC Works64 Language Pack for v□□.□□.□" *1 in the installation screen.
- *1 □□.□□.□ indicates their versions.



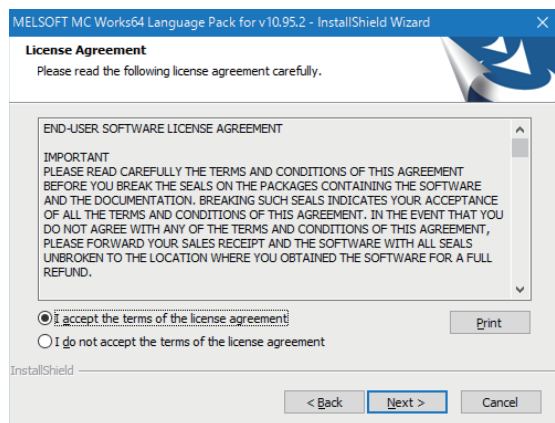
4. When the components required for operations are displayed, click the [Install] button to install the components.



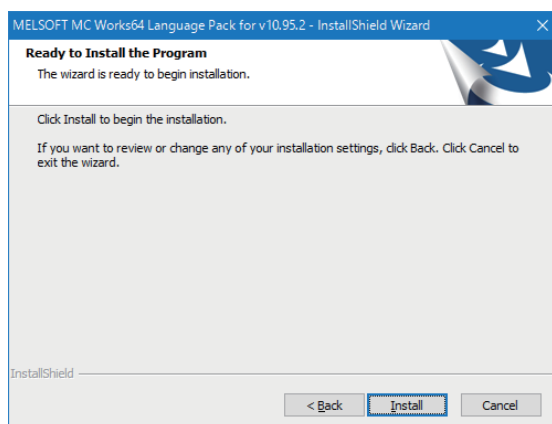
5. Click the [Next] button.



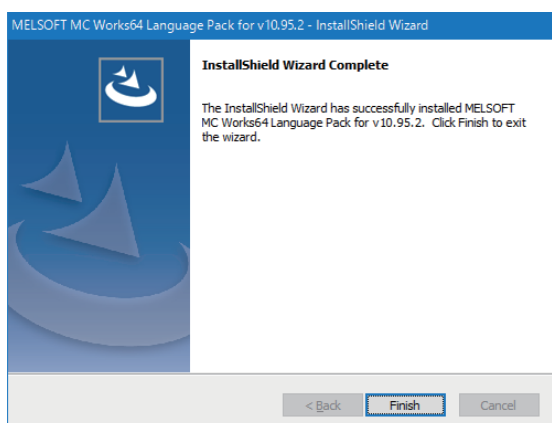
6. Read the license agreement. If the agreement is acceptable, select "I accept the terms of the license agreement," and click the [Next] button.



7. Click the [Install] button to start installation.



8. Click the [Finish] button.



4.2 License Activation

To use MC Works64, a license must be activated in advance.

License Activation Procedure

For a software license key, refer to the following:

☞ Page 33 Software license key

For a hardware license key, refer to the following:

☞ Page 46 Hardware license key

For a cloud license key, refer to the following:

☞ Page 49 Cloud license key

Software license key

Activating a new license key

Precautions

Note that if a new license is activated on the personal computer where a license has already been activated, the existing one will be overwritten and become invalid.

To add another license, activate it by the following procedure:

☞ Page 40 Activating an additional license key

To change the activated license to another one, activate a new license after deactivating the existing license (☞ Page 58 License Deactivation).

Point

The steps from 1 to 16 in this section can be performed on a personal computer which is connected to Internet. (The steps can also be performed on a personal computer where MC Works64 is not installed.) The step 17 and 18 must be performed on a personal computer where MC Works64 is installed.

Operating procedure

1. Open the website 'www.mcworkslicensing.com' for license activation on a web browser.
2. Click "Create New Account" to create a new user account.
If a user account has already been created, enter the e-mail address and password of the user account, and click the [LOGIN] button to log in. Then follow the procedure from the step 8.



3. Select "No, I am a new user" and click the [Next] button.

[Home](#) > User Management > Create Account

CREATE ACCOUNT

Step 1 of 5

Welcome to the new MITSUBISHI Web Licensing Utility!

If you have an account on the previous MITSUBISHI Web Licensing Utility site, please insert your old account credentials below. This will link your existing data to your new account. Your new account requires your email address to log in.

Do you have an existing account on the previous Web Licensing Utility?

☐ Yes

Old Login Name:

Password:

☒ No, I am a new user

Next

4. Enter the items, and click the [Next] button.

[Home](#) > User Management > Create Account

CREATE ACCOUNT

Step 2 of 5

Enter Your Personal Information

First Name:

Last Name:

Title:

Email:

Be sure to insert a valid email address. Your license information will be emailed to this email address.

Previous Next

5. Enter the items, and click the [Next] button.

[Home](#) > User Management > Create Account

CREATE ACCOUNT

Step 3 of 5

Enter Your Company Information	
Company:	<input type="text"/>
Address1:	<input type="text"/>
Address2:	<input type="text"/>
City:	<input type="text"/>
State:	<input type="text"/>
Zip Code:	<input type="text"/>
Country:	<input type="text"/>
Phone:	<input type="text"/>
Fax:	<input type="text"/>
Web Address:	<input type="text"/>
Industry:	<input type="text"/>

Previous	Next
--------------------------	----------------------

6. Enter the items, and click the [Create Account] button.

[Home](#) > User Management > Create Account

CREATE ACCOUNT

Step 4 of 5

Confirm your Account	
UserName:	<input type="text"/>
Log using your email address	
Password:	<input type="password"/>
Confirm Password:	<input type="password"/>

Previous	Create Account
--------------------------	--------------------------------

7. Click the [Login] button.

[Home](#) > User Management > Create Account

CREATE ACCOUNT

Your account has been successfully created

Login

8. Click the [Software] button in the "Home" screen.



9. To activate a new license, click "New License."



- 10.** Enter the number written in the License Certificate, which is included in MC Works64, for "Product Registration #" and "Customer Key," and then click the [Next] button.

New License	Add to License	Kill License												
Home > Software License > New License														
<h3>New License</h3>														
<p>Use this New License option if you do not currently have a permanent license on your computer. To issue a New license, do the following:</p> <ol style="list-style-type: none">1. In the Product Registration column enter the registration number(s) and the associated Customer Key on the right. Product Registration Number(s) and Customer Key(s) can be found on License Certificate.2. For multiple registrations enter each on a separate row.3. Click the Next button to continue.														
<table border="1"><thead><tr><th>Product Registration #</th><th>Customer Key</th></tr></thead><tbody><tr><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td><input type="text"/></td><td><input type="text"/></td></tr><tr><td><input type="text"/></td><td><input type="text"/></td></tr></tbody></table> <div><input type="button" value="Add Row"/> <input type="button" value="Remove Row"/></div>			Product Registration #	Customer Key	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Product Registration #	Customer Key													
<input type="text"/>	<input type="text"/>													
<input type="text"/>	<input type="text"/>													
<input type="text"/>	<input type="text"/>													
<input type="text"/>	<input type="text"/>													
<input type="text"/>	<input type="text"/>													
<div><input type="button" value="Next"/></div>														

- 11.** Click "Create New."

If end user information has already been registered to activate another license, click "Existing End Users." Select the end user information in the end user list (the list remains displayed for one minute).

New License	Add to License	Kill License
Home > Software License > New License		
<h3>New License</h3>		
<div><div>End User Information</div><p>Please identify an End User by clicking one of the options below</p><div>Existing End Users Create New</div></div>		
<div><div><input type="button" value="Previous"/></div><div><input type="button" value="Next"/></div></div>		

12. Enter the items, and click the [Save] button. Click the [Next] button.

Home > Software License > New License

New License

End User Information

Entering new End User

Contact Name:

Email:

Company:

Address1:

Address2:

City:

State:

Zip Code:

Country:

Phone:

Fax:

Web Address:

Industry:

Previous

Next

13. Select the checkbox of a license to activate in the "Select" column, and enter Site Code of a personal computer where MC Works64 is installed.

Site Code can be checked by starting License Utility.

(Windows® 10)

Windows Start ⇒ [MELSOFT] ⇒ [License Utility]

New License

Below are the product(s) that you have purchased and that have not yet been licensed.

To register product(s) to a specific system, do the following:

1. Enable the check box(es) next to the product name(s) that you would like to license.
2. Enter the Site Code into the Enter Site Code text box.
The Site Code can be found in the MITSUBISHI License Utility.
For 32-bit products: Select the Authorize License command from the Actions menu to view the Site Code.
For 64-bit products/BPA: Open the License Utility. The Site Code is listed on the main dialog.
3. Click the Next button to continue.

Select	Product Key	Product Description	P Number	G Number	Status	32-bit VersionNum	64-bit VersionNum
☒	ICO360-SIP MITSU 365DAY	12 MONTH LICENSE FOR ICO360-SIP - MITSUBISHI			Available	9.4	10.9

Enter Site Code of the PC:

License Utility

Software License Activation

File License Help

Software Licensing

Information

Site Code:

Site Key:

PNumbers:

License File

14. Click the [Next] button.

15. Check that the information in the screen is correct, and click the [Generate Key] button.

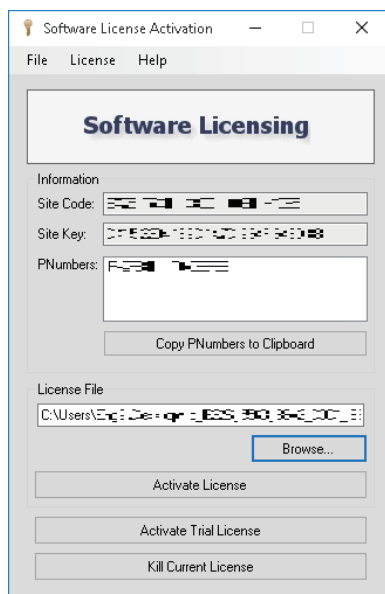
New License	Add to License	Kill License			
Home > Software License > New License					
New License					
You requested to have the products below be registered to the following Site Code:					
4B E03A F0EE 92F7 FA X1095					
Product Key	Product Description	P Number	G Number	32-bit VersionNum	64-bit VersionNum
ICO360-SIP MITSU 365DAY	12 MONTH LICENSE FOR ICO360-SIP - MITSUBISHI			9.4	10.9
Mobile Users :52 Total BizViz/MC Works Point Count: 128000 Total MC Works64 Point Count: 1000000 Total MC Historian Point Count: 1000000 License Days:148					
		<div> <div>Previous</div> <div>Generate Key</div> </div>			

16. Click "Click here to download" to download the license file to the personal computer.

New License	Add to License	Kill License						
Home > Software License > New License								
New License								
The following License File has been assigned to your system for use in license activation. Use the License File inside the MITSUBISHI Software Licensing Utility. Please keep the Site Key for future reference purposes.								
Site Code: BB4D E03A F0EE 92F7 FA X1095 Site Key: A035 5CAD AA0E 29DE B6F3 E9C1 92								
Download the following LICENSE FILE to authorize your license <div>Click here to download</div>								
Registered Products								
Product Key	Product Description	Order Date	Order #	P Number	G Number	Customer Key	32-bit VersionNum	64-bit VersionNum
ICO360-SIP MITSU 365DAY	12 MONTH LICENSE FOR ICO360-SIP - MITSUBISHI	16/Sep/2016	64526HQ				9.4	10.9
We recommend that you print this screen for your records. Use the print friendly button on the left. An email has been sent to your email account with the above information. Thank you for choosing MITSUBISHI.								

17. Start License Utility.

Click the [Browse] button and specify the downloaded license file.



18. Click the [Activate License] button.

Activating an additional license key

Point

The steps from 1 to 9 in this section can be performed on a personal computer which is connected to Internet. (These can also be performed on a personal computer where MC Works64 is not installed.)
The step 10 and 11 must be performed on a personal computer where MC Works64 is installed.

Operating procedure

1. Open the website 'www.mcworkslicensing.com' for license activation on a web browser.
2. Enter an e-mail address and password of a user account, and click the [LOGIN] button to log in.



3. Click the [Software] button.



4. To activate additional licenses, click "Add to License."



5. Enter the Site Key of a personal computer where MC Works64 is installed.
 Site Key can be checked by starting License Utility.
 (Windows 10)
 Windows Start ⇒ [MELSOFT] ⇒ [License Utility]
 Enter the number written in the License Certificate, which is included in MC Works64, for "Product Registration #" and
 "Customer Key," and then click the [Next] button.

Add To License

Use the Add To License option below to modify an existing license to include products you have purchased.
 To add to a license, do the following:

1. Enter your assigned Software Site Key into the Existing Site Key text box.
 The Site Key should be identical to the one found in the MITSUBISHI License Utility on your system.
For 32-bit product licensing: Use the View License command on the Actions menu to display this information.
For 64-bit/BPA licensing: Click on the 'View Current Site Key' button.
2. In the Product Registration column enter the registration number(s) and the associated Customer Key on the right.
 Product Registration Number(s) and Customer Key(s) can be found on License Certificate.
3. For multiple registrations enter each on a separate row..
4. Click the Next button to continue.

Existing Site Key:

Product Registration #	Customer Key
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

Software License Activation

File License Help

Software Licensing

Information

Site Code:

Site Key:

PNumbers:

License File

6. Enter the items, and click the [Next] button.

Add To License

Home > Software License > Add To License

End User Information

[Existing End Users](#) [Create New](#) [Edit](#)

B17032CCD4DD11E09548000C29D326AB

Contact Name:

Email:

Company:

Address1:

Address2:

City:

State:

Zip Code:

Country:

Phone:

Fax:

Web Address:

Industry:

7. Select the checkbox of a license to activate in the "Select" column, and enter the Site Code of a personal computer where MC Works64 is installed.
(Windows 10)
Windows Start ⇒ [MELSOFT] ⇒ [License Utility]
Click the [Next] button.

Add To License

Current License Summary

Site Key: A7A6 0525 C538 B2DC 4164 6D33 16

Product Key	Product Description	P Number	G Number	32-bit VersionNum	64-bit VersionNum
ICO360-SIP 365DAY	12 MONTH LICENSE FOR ICO360-SIP			9.5	10.95

Product(s) to Add

Below are the product(s) you have purchased that have not yet been licensed.
You may register these products to the PC(s) of your choice. Please select products that you would like to assign to your PC.

Temporary License

Select	Product Key	Product Description	P Number	G Number	Status	32-bit VersionNum	64-bit VersionNum
☒	ICO360-SIP 365DAY	12 MONTH LICENSE FOR ICO360-SIP			Available	9.5	10.95

Enter Site Code of the PC : BB4D E03A F0EE 92F7 FA X1095

To find your Site Code, select MITSUBISHI License Utility from Windows Programs menu and click on Actions, Authorize License.

Software License Activation

Information

Site Code: BB4D E03A F0EE 92F7 FA X1095

Site Key: A7A6 0525 C538 B2DC 4164 6D33 16

PNumbers:

Copy PNumbers to Clipboard

License File

Browse...

Activate License

Activate Trial License

Kill Current License

Previous Next

8. Check that the information in the screen is correct, and click the [Generate Key] button.

Product Key	Product Description	P Number	G Number	32-bit VersionNum	64-bit VersionNum
ICO360-SIP 365DAY	12 MONTH LICENSE FOR ICO360-SIP			9.5	10.95

Total BizViz/MC Works Point Count: 128000
Total MC Works64 Point Count: 100000
Total MC Historian Point Count: 100000

Product(s) to Add

You requested to have the products below registered to the following Site Code:

BB4D E03A F0EE 92F7 FA X1095

Product Key	Product Description	P Number	G Number	32-bit VersionNum	64-bit VersionNum
ICO360-SIP 365DAY	12 MONTH LICENSE FOR ICO360-SIP			9.5	10.95

Total BizViz/MC Works Point Count: 128000
Total MC Works64 Point Count: 200000
Total MC Historian Point Count: 200000

Total Values

Mobile Users :107
Total BizViz/MC Works Point Count: 128000
Total MC Works64 Point Count: 200000
Total MC Historian Point Count: 200000

Previous Generate Key

9. Click "Click here to download" to download the license file to the personal computer.

New License	Add to License	Kill License
-------------	----------------	--------------

[Home](#) > [Software License](#) > Add To License

Add To License

The following License File has been assigned to your system for use in license activation.
Use the License File inside the MITSUBISHI Software Licensing Utility.
Please keep the Site Key for future reference purposes.

Site Code: BB4D E03A F0EE 92F7 FA X1095

Site Key: A035 5CAD AA0E 29DE B6F3 E9C1 92

Download the following **LICENSE FILE** to authorize your license

[Click here to download](#)

Registered Products

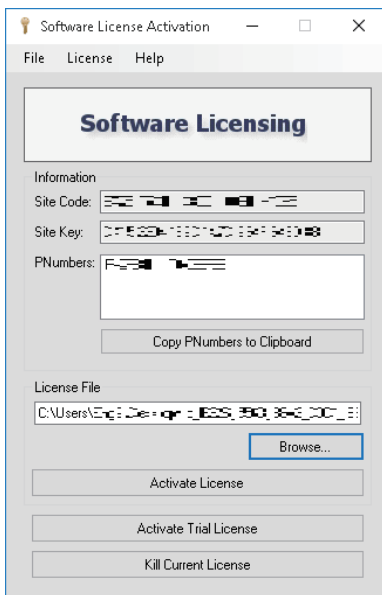
Product Key	Product Description	Order Date	Order #	P Number	G Number	Customer Key	32-bit VersionNum	64-bit VersionNum
ICO360-SIP 365DAY	12 MONTH LICENSE FOR ICO360-SIP	16/November/2019	79205HQ				9.5	10.95
ICO360-SIP 365DAY	12 MONTH LICENSE FOR ICO360-SIP	16/November/2019	79205HQ				9.5	10.95

We recommend that you print this screen for your records. Use the print friendly button on the left.
An email has been sent to your email account with the above information.

Thank you for choosing MITSUBISHI.

10. Start License Utility.

Click the [Browse] button and specify the downloaded license file.



11. Click the [Activate License] button.

Hardware license key

Operating procedure

1. Open the website 'www.mcworkslicensing.com' for license activation on Internet Explorer.
2. Perform the step 2 to 7 of the procedure for activating a new software license key to create a new user account.
(☞ Page 33 Activating a new license key)
If a user account has already been created, enter the e-mail address and the predetermined password of the user account, and click the [LOGIN] button to log in.

The screenshot shows the login interface of the Mitsubishi Electric Web Licensing Utility. At the top, there is a navigation bar with 'Home > User Management > Login'. The main heading is 'Mitsubishi Electric Web Licensing Utility' with 'MITSUBISHI ELECTRIC CORPORATION' underneath. A welcome message reads: 'Welcome to the new MITSUBISHI Web Licensing Utility!'. Below this, it says 'If you have already created an account on this new site please log in below.' The login form is a blue box with the instruction 'Use your email address to log in.' It contains two input fields: 'Email Address:' with the value 'jotham@iconics.com' and 'Password:' with masked characters. There is a checkbox for 'Remember me next time.' and a 'LOGIN' button. At the bottom of the form, there are two links: 'Create New Account' and 'Forgot your Password?'.

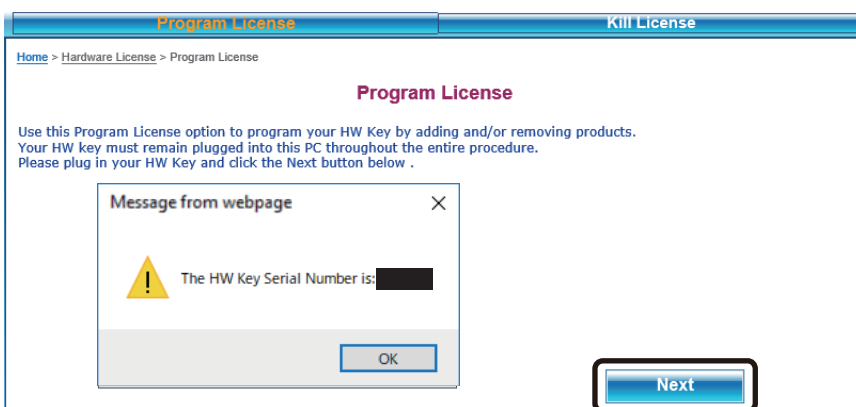
3. Click the [Hardware] button.



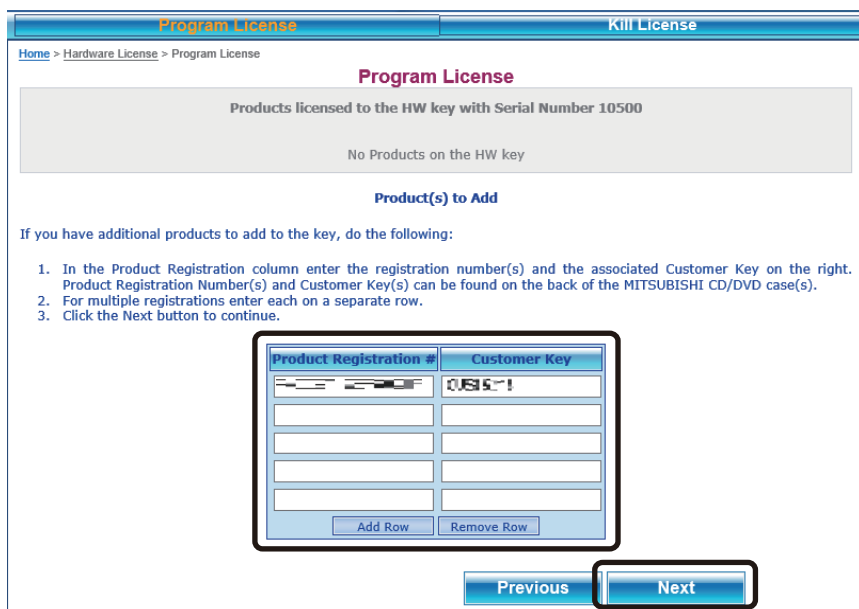
4. Select "Program License" in the top banner.



5. Check that a hardware key is connected to the USB port of the personal computer and the LED turns ON. Click the [Next] button.
6. A recognized hardware serial number is displayed in the message. Check that the number is correct and click the [Next] button.
When a confirmation message bar for installing 'LicenseUpdate.cab' appears, click the [Install] button.



7. Enter the number written in the License Certificate, which is included in MC Works64, for "Product Registration #" and "Customer Key," and then click the [Next] button.



8. Click the [Next] button.

9. Click "Create New."

If another license is activated in MC Works64 and end user information has already been registered, click "Existing End Users." Select the end-user information in the end-user list (the list remains displayed for one minute).

Program License

Home > Hardware License > Program License

Program License

End User Information

Please identify an End User by clicking one of the options below

Existing End Users Create New

Previous Next

10. Click the [Next] button.

11. Select the checkbox of a license to activate in the "Select" column, and click the [Next] button.

Program License

Home > Hardware License > Program License

Program License

Please select the products that you would like to assign to the HW Key.

Products licensed to the HW key with Serial Number [redacted]

No Products on the HW key

Temporary License

Select	Product Key	Product Description	P Number	G Number	Status
☒	IC0360-SIP V10 C12	12 MONTH LICENSE FOR IC0360-SIP V10	[redacted]	[redacted]	Available

Previous Next

12. Click the [Complete] button in the confirmation screen to complete the license activation.

Cloud license key

Activating a new license key

Operating procedure

1. Open the website 'www.mcworkslicensing.com' for license activation on a web browser.
2. Perform the step 2 to 7 of the procedure for activating a new software license key to create a new user account.
(☞ Page 33 Activating a new license key)

If a user account has already been created, enter an e-mail address and password of a user account, and click the [LOGIN] button to log in.

The screenshot shows the 'Mitsubishi Electric Web Licensing Utility' login page. The header features the Mitsubishi Electric logo and 'MC Works 64'. The main content area has a login form with fields for 'Email Address' and 'Password', a 'Remember me next time.' checkbox, and a 'LOGIN' button. A sidebar on the left lists navigation options: Home, View License, Upgrade License, Key Replacement, and Print Friendly. At the bottom of the login form, there are links for 'Create New Account' and 'Forgot your Password?'. The page also includes a 'Site Map' link in the top right corner.

3. Click the [Cloud] button.



4. Click "New License."



5. Enter the number written in the License Certificate, which is included in MC Works64, for "Product Registration #" and "Customer Key," and then click the [Next] button.



[Home](#) > [Cloud License](#) > [New License](#)

New License

Use this New License option if you do not currently have a permanent license on your computer.

Cloud licensing is only applicable to product versions 10.87 and above.

To issue a New license, do the following:

1. In the Product Registration column enter the registration number(s) and the associated Customer Key on the right. Product Registration Number(s) and Customer Key(s) can be found on License Certificate.
2. For multiple registrations enter each on a separate row.
3. Click the Next button to continue.

4

Product Registration #	Customer Key
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>



6. Click "Create New."
- If another license is activated in MC Works64 and end user information has already been registered, click "Existing End Users." Select the end-user information in the end-user list (the list remains displayed for one minute).



[Home](#) > [Cloud License](#) > [New License](#)

New License

End User Information

Please identify an End User by clicking one of the options below

[Existing End Users](#) [Create New](#)



7. Enter the items, and click the [Save] button. Click the [Next] button.

[Home](#) > [Software License](#) > [New License](#)

New License

End User Information

Entering new End User

Contact Name:

Email:

Company:

Address1:

Address2:

City:

State:

Zip Code:

Country:

Phone:

Fax:

Web Address:

Industry:

Save

Cancel

Previous

Next

8. Select the checkbox of a license to activate in the "Select" column, and click the [Next] button.

New License	Add to License	Kill License	Free Quota
-------------	----------------	--------------	------------

[Home](#) > [Cloud License](#) > [New License](#)

New License

Below are the product(s) that you have purchased and that have not yet been licensed.

To register product(s) to a specific system, do the following:

1. Enable the check box(es) next to the product name(s) that you would like to license.
2. Click the Next button to continue.

Temporary License

Select	Product Key	Product Description	P Number	G Number	Status	32-bit VersionNum	64-bit VersionNum
☒	ICO360-SIP 365DAY	12 MONTH LICENSE FOR ICO360-SIP			Available	9.5	10.95

Previous

Next

9. Check that the information in the screen is correct, and click the [Generate Key] button.

New License	Add to License	Kill License	Free Quota
-------------	----------------	--------------	------------

Home > Cloud License > New License

New License

You requested to have the products below be registered:

Product Key	Product Description	P Number	G Number	32-bit VersionNum	64-bit VersionNum
ICO360-SIP 365DAY	12 MONTH LICENSE FOR ICO360-SIP			9.5	10.95

Mobile Users :52
Total BizViz/MC Works Point Count: 128000
Total MC Works64 Point Count: 100000
Total MC Historian Point Count: 100000
License Days:242

4

Previous

Generate Key

10. Start "Platform Services Configuration" and open the [License] tab.
After selecting "Cloud License," enter the number in "License Pool" and click the [OK] button.

New License

Add to License

Kill License

Free Quota

Home > Cloud License > New License

New License

The following License Pool has been assigned to your system for use in license activation.
Use the License Pool inside MITSUBISHI Platform Services Configuration.
Please keep the License Pool for future reference purposes.

License Pool: 1560E81E-3466-4818-B6A2-CDEFA132841C

Product Key	Product Description	Order Date	Order #	P Number	G Number	Customer Key	32-bit VersionNum	64-bit VersionNum
ICO360-SIP 365DAY	12 MONTH LICENSE FOR ICO360-SIP	16/Nov/2019	79205HQ				9.5	10.95

We recommend that you print this screen for your records. Use the print friendly button on the left.
An email has been sent to your email account with the above information.

Thank you for choosing MITSUBISHI.

Platform Services Configuration

Allowed ClientsUnrestricted ServersSettingsReserve LicenseDiagnostics

BasicAdvancedLicensePoint ManagersPasswords

Local License Key

Remote License

Primary Licensing Server:

Secondary Licensing Server:

Cloud License

License Pool: 1560E81E-3466-4818-B6A2-CDEFA132841C

Password: *****

Change...

License Exception Rules:

Client Computer Name

License Server Name

Click here to add new item

Allow License Sharing (work as License Server)

Allow Grace Period

Grace Period: 120 minutes

ApplyOkCancel

Activating an additional license key

Operating procedure

1. Open the website 'www.mcworkslicensing.com' for license activation on a web browser.
2. Enter an e-mail address and password of a user account, and click the [LOGIN] button to log in.
Click the [Cloud] button.



3. Click "Add to License."



4. Start "Platform Services Configuration" and open the [License] tab.
Enter the existing license pool number.
Enter the number written in the License Certificate, which is included in MC Works64, for "Product Registration #" and "Customer Key," and then click the [Next] button.

New License
Add to License
Kill License
Free Quota

Home > Cloud License > Add To License

Add To License

Use the Add To License option below to modify an existing license to include products you have purchased. To add to a license, do the following:

- Enter your assigned License Pool into the Existing License Pool text box.
The License Pool should be identical to the one found in the MITSUBISHI Platform Services Configuration on your system.

For Cloud licensing: Click on the License tab in the Platform Services Configuration.

- In the Product Registration column enter the registration number(s) and the associated Customer Key on the right. Product Registration Number(s) and Customer Key(s) can be found on License Certificate.
- For multiple registrations enter each on a separate row..
- Click the Next button to continue.

Existing License Pool: 1560E81E-3466-4818-B6A2-CDEFA132841C

Product Registration #	Customer Key

Add Row
Remove Row

Next

Platform Services Configuration

Basic | Advanced | **License** | Settings | Renew License | Diagnostics

☐ Local License Key
☐ Remote License

Primary Licensing Server:

Secondary Licensing Server:

☒ Cloud License

License Pool: 1560E81E-3466-4818-B6A2-CDEFA132841C

License Expiration Date:

☐ Allow License Sharing (work as License Server)
☒ Allow Grace Period
 Grace Period: minutes

Apply Ok Cancel

4

5. Check each item, and click the [Next] button.

New License	Add to License	Kill License	Free Quota
-------------	-----------------------	--------------	------------

Home > [Cloud License](#) > Add To License

Add To License

End User Information

[Existing End Users](#)
[Create New](#)
[Edit](#)

B17032CCD4DD11E09548000C29D326AB

Contact Name:

Email:

Company:

Address1:

Address2:

City:

State:

Zip Code:

Country:

Phone:

Fax:

Web Address:

Industry:

Previous
Next

6. Select the checkbox of a license to activate in the "Select" column, and click the [Next] button.

New License	Add to License	Kill License	Free Quota
-------------	-----------------------	--------------	------------

Home > [Cloud License](#) > Add To License

Add To License

Current License Summary

License Pool: C52D992E-4961-44E0-A45F-3CD92CDCEB2E

Product Key	Product Description	P Number	G Number	32-bit VersionNum	64-bit VersionNum
ICO360-SIP MITSU 365DAY	12 MONTH LICENSE FOR ICO360-SIP - MITSUBISHI			9.5	10.9

Product(s) to Add

Below are the product(s) you have purchased that have not yet been licensed.
You may register these products to the PC(s) of your choice. Please select products that you would like to assign to your PC.

Select	Product Key	Product Description	P Number	G Number	Status	32-bit VersionNum	64-bit VersionNum
☒	ICO360-SIP MITSU 365DAY	12 MONTH LICENSE FOR ICO360-SIP - MITSUBISHI			Available	9.5	10.95

Previous
Next

7. Check that the information in the screen is correct, and click the [Generate Key] button.

New License
Add to License
Kill License
Free Quota

Home > Cloud License > Add To License

Add To License

Current License Summary

License Pool: C52D992E-4961-44E0-A45F-3CD92CDCEB2E

Product Key	Product Description	P Number	G Number	32-bit VersionNum	64-bit VersionNum
ICO360-SIP MITSU 365DAY	12 MONTH LICENSE FOR ICO360-SIP - MITSUBISHI			9.5	10.9

Total BizViz/MC Works Point Count: 128000
 Total MC Works64 Point Count: 1000000
 Total MC Historian Point Count: 1000000

Product(s) to Add

You requested to have the products below registered:

Product Key	Product Description	P Number	G Number	32-bit VersionNum	64-bit VersionNum
ICO360-SIP MITSU 365DAY	12 MONTH LICENSE FOR ICO360-SIP - MITSUBISHI			9.5	10.95

Total BizViz/MC Works Count: 128000
 Total MC Works64 Point Count: 1000000
 Total MC Historian Point Count: 1000000

Total Values

Mobile Users :92
 Total BizViz/MC Works Point Count: 128000
 Total MC Works64 Point Count: 2000000
 Total MC Historian Point Count: 2000000

Previous
Generate Key

8. Start "Platform Services Configuration" and open the [License] tab. After selecting "Cloud License," enter new numbers in "License Pool" and click the [OK] button.

New License
Add to License
Kill License
Free Quota

Home > Cloud License > Add To License

Add To License

The following License Pool has been assigned to your system for use in license activation.
 Use the License Pool inside MITSUBISHI Platform Services Configuration.
 Please keep the License Pool for future reference purposes.

License Pool: 1560E81E-3466-4818-B6A2-CDEFA132841C

Registered Products

Product Key	Product Description	Order Date	Order #	P Number	G Number	Customer Key	32-bit VersionNum	64-bit VersionNum
ICO360-SIP MITSU 365DAY	12 MONTH LICENSE FOR ICO360-SIP - MITSUBISHI	16/September/2018	74513HQ				9.5	10.9
ICO360-SIP MITSU 365DAY	12 MONTH LICENSE FOR ICO360-SIP - MITSUBISHI	16/September/2018	74513HQ				9.5	10.95

We recommend that you print this screen for your records. Use the print friendly button on the left.
 An email has been sent to your email account with the above information.

Thank you for choosing MITSUBISHI.

Platform Services Configuration

Allowed Clients | Unrestricted Servers | Settings | Reserve License | Diagnostics

Basic | Advanced | License | Point Managers | Passwords

☐ Local License Key
☐ Remote License

Primary Licensing Server:
 Secondary Licensing Server:

☒ Cloud License

License Pool: 1560E81E-3466-4818-B6A2-CDEFA132841C
 Password:

License Exception Rule:

☒ Allow License Sharing (work as License Server)
☒ Allow Grace Period
 Grace Period: minutes

Apply OK Cancel

4.3 License Deactivation

This section shows the procedure for deactivating a license.

Software license key

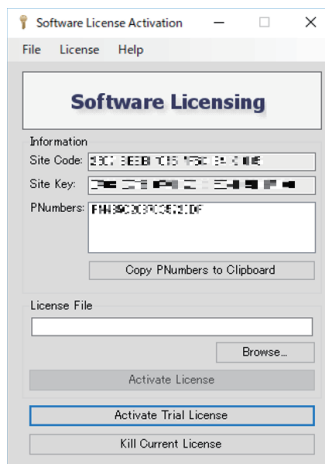
Operating procedure

1. Start License Utility.

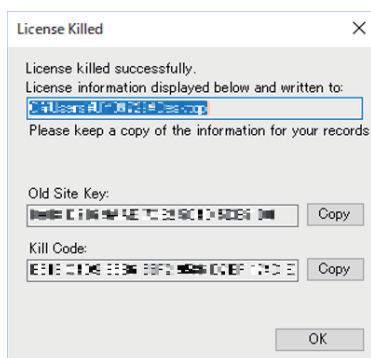
(For Windows® 10)

Windows Start ⇒ [MELSOFT] ⇒ [License Utility]

2. Click the [Kill Current License] button.



3. Click [Yes] on the confirmation message indicating whether or not to deactivate the license.
4. Keep the following screen, which is displayed by disabling the license, open.



5. Open 'www.mcworkslicensing.com' on a web browser.
Enter an e-mail address and password of a user account, and click the [LOGIN] button to log in.
6. Click the [Software] button.



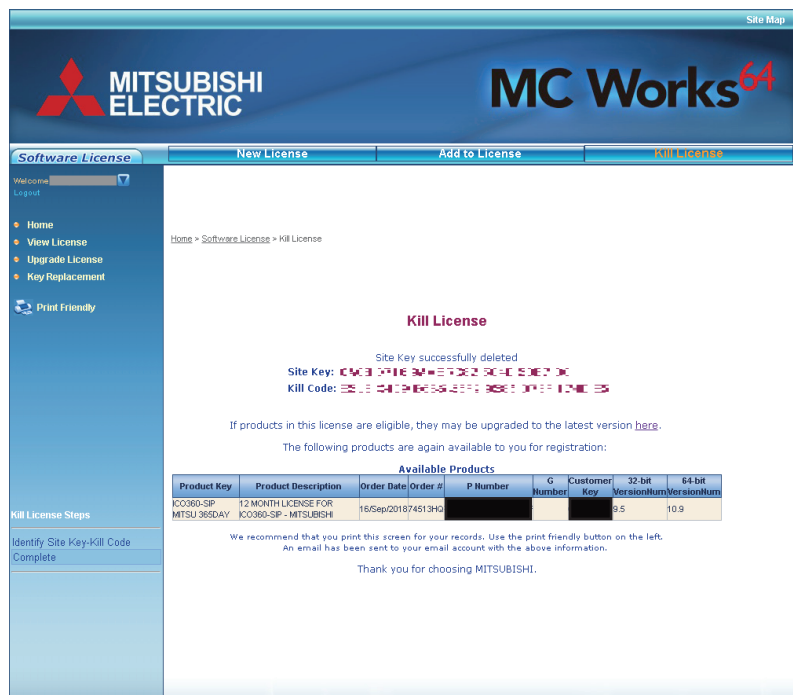
7. Click the [Kill License] button.



8. Enter the numbers displayed in License Utility, and click the [Remove Key] button.



When the license is removed successfully, the following screen will be displayed.



Hardware license key

Operating procedure

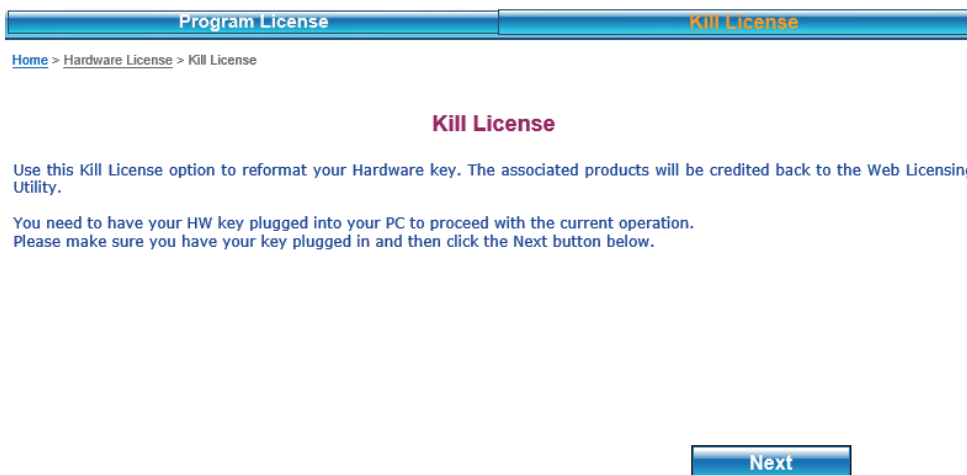
1. Open 'www.mcworkslicensing.com' on Internet Explorer.
Enter an e-mail address and password of a user account, and click the [LOGIN] button to log in.
2. Click the [Hardware] button.



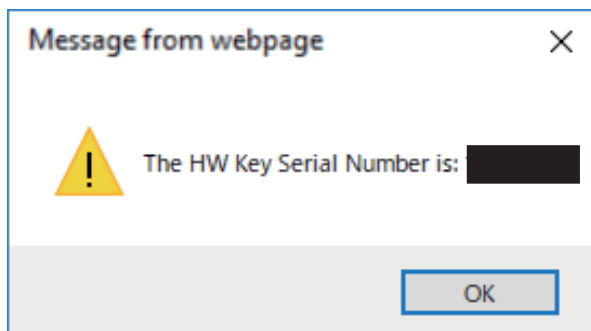
3. Click the [Kill License] button.



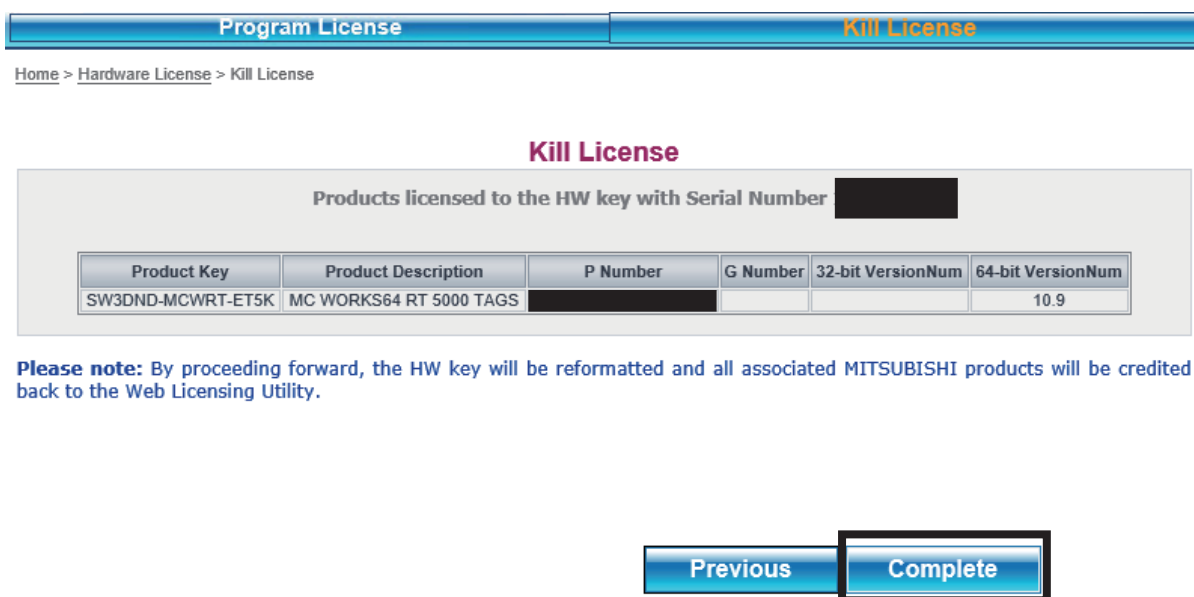
4. Check that a hardware key is connected to the USB port of the personal computer and the LED turns ON. Click the [Next] button.



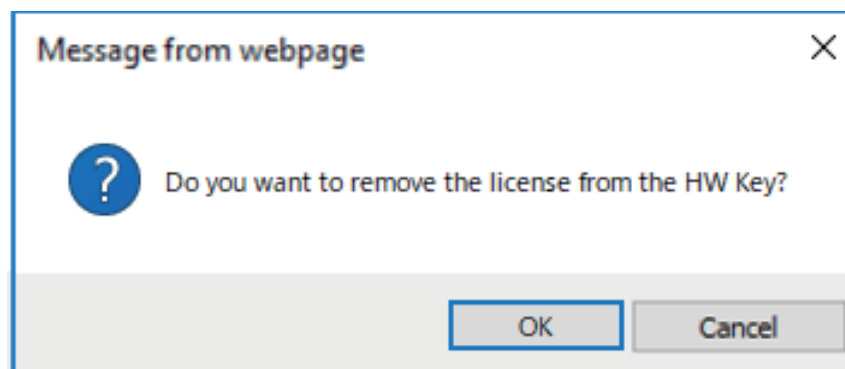
5. A recognized hardware serial number is displayed in the message. Check that the number is correct.



6. Check the license to deactivate, and click the [Complete] button.



7. Click the [OK] button.



8. When the license is removed successfully, the following screen will be displayed.

Program License

Kill License

Home > Hardware License > Kill License

Kill License

HW Key successfully formatted.

HW Key Serial Number: [REDACTED]

If products in this license are eligible, they may be upgraded to the latest version [here](#).

The following products are again available to you for registration:

Available Products

Product Key	Product Description	Order Date	Order #	P Number	G Number	Customer Key	32-bit VersionNum	64-bit VersionNum
SW3DND-MCWRT-ETSK	MC WORKS64 RT 5000 TAGS	09/Feb/2017	66752qHQ	[REDACTED]		[REDACTED]		10.9

We recommend that you print this screen for your records. Use the print friendly button on the left.

An email has been sent to your email account with the above information.

Thank you for choosing MITSUBISHI!

Cloud license key

Operating procedure

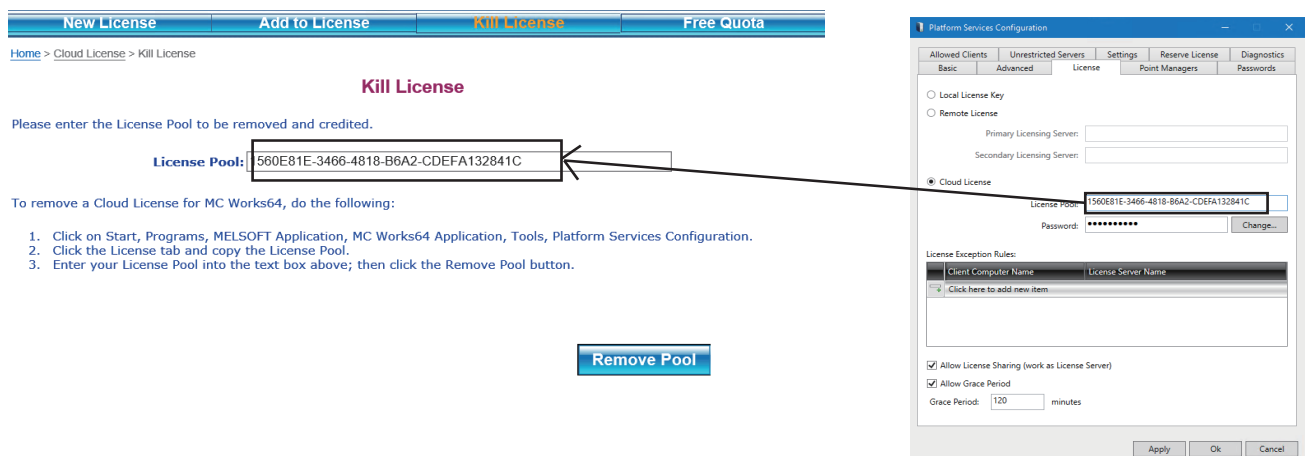
1. Open 'www.mcworkslicensing.com' on a web browser.
Enter an e-mail address and password of a user account, and click the [LOGIN] button to log in.
2. Click the [Cloud] button.



3. Click the [Kill License] button.



4. Enter the number in "License Pool" and click the [Remove Pool] button.



5. When the license is removed successfully, the following screen will be displayed.

Program License

Kill License

Home > Hardware License > Kill License

Kill License

HW Key successfully formatted.

HW Key Serial Number: [REDACTED]

If products in this license are eligible, they may be upgraded to the latest version [here](#).

The following products are again available to you for registration:

Available Products

Product Key	Product Description	Order Date	Order #	P Number	G Number	Customer Key	32-bit VersionNum	64-bit VersionNum
SW3DND-MCWRT-ETSK	MC WORKS64 RT 5000 TAGS	09/Feb/2017	66752qHQ	[REDACTED]		[REDACTED]		10.9

We recommend that you print this screen for your records. Use the print friendly button on the left.

An email has been sent to your email account with the above information.

Thank you for choosing MITSUBISHI!

4.4 Uninstallation

This section shows the uninstallation procedure.

Precautions

Make sure to uninstall MC Works64 after disabling a license.

Otherwise, the license cannot be reused as it cannot be disabled after uninstalling MC Works64.

Operating procedure

1. Disable a MC Works64 license.

 Page 58 License Deactivation

2. Uninstall MC Works64.

 Page 67 Uninstallation of MC Works64

Uninstallation of MC Works64

Uninstall the following from the Control Panel of Windows.

- MC Works64

Uninstallation target	Remarks
MELSOFT Help	—
MELSOFT MC Works64	—
MELSOFT MCDemo	—
MELSOFT MC Works64 Language Pack for v10.95.□*1	Uninstall the language pack if it is installed.

*1 □ indicates its version.

- MC Works64 EdgeComputing Edition

Uninstallation target	Remarks
MELSOFT Help	—
MELSOFT MC Works64 Edge Computer	—
MELSOFT MC Works64 Language Pack for v10.95.□*2	Uninstall the language pack if it is installed.

*2 □ indicates its version.

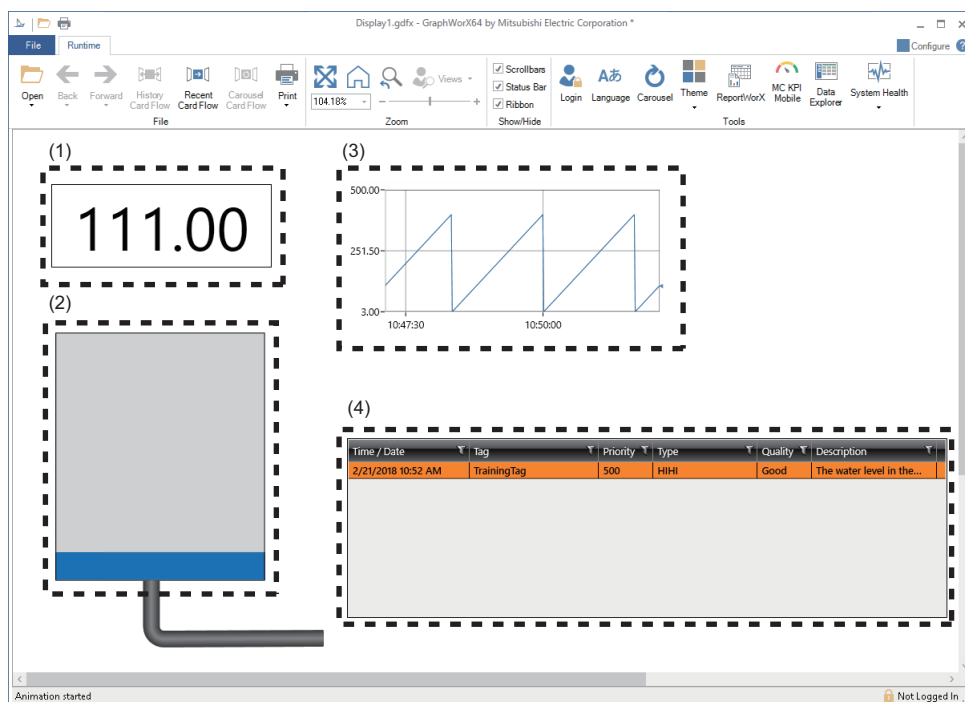
Uninstall MX OPC Server if it is unnecessary.

5 SCREEN CONFIGURATION EXAMPLE

5.1 Overview

Screen configuration example

Configure a screen to monitor water volume.



- (1) The value of water volume is displayed.
- (2) The water volume is displayed in the illustration of a water tank, which can be visually checked.
- (3) The water volume is displayed in a graph format in a chronological order.
- (4) An alarm that corresponds to a threshold value is displayed.

Required software

Software

MX OPC Server

GX Simulator2^{*1}

GraphWorX64

TrendWorX64 Viewer

AlarmWorX64 Viewer

AlarmWorX64 Server

^{*1} It is the simulation function of GX Works2. GX Works2 is sold separately.

5.2 Procedure for Creating a Screen

The following shows the configuration procedure for the screen.

1. Set a tag.

☞ Page 70 Tag Setting

2. Create some screen elements.

☞ Page 82 Water Volume Display

☞ Page 92 Graph Display

☞ Page 94 Alarm Display

5.3 Tag Setting

This section shows the procedure for setting a tag. (The following explains with an example using MX OPC Server DA.)

Point

When using Management Shell of MX OPC Server UA or Edgecross Basic Software, the following settings are required after setting a tag.

➞ Page 76 Registering OPC UA Server to Workbench

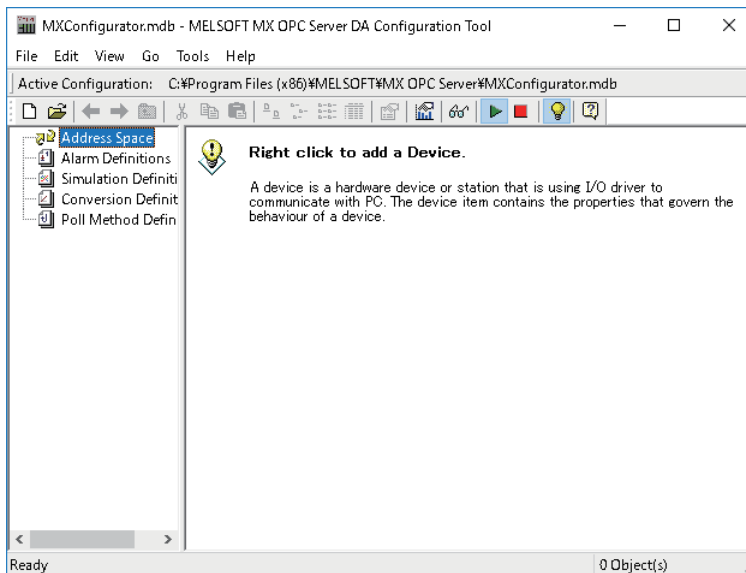
Starting MX OPC Server

The following shows the startup method for MX OPC Server.

Operating procedure

(For Windows10)

Select [MELSOFT] ⇒ [MELSOFT MX OPC Server DA Configuration Tool] from Windows Start.

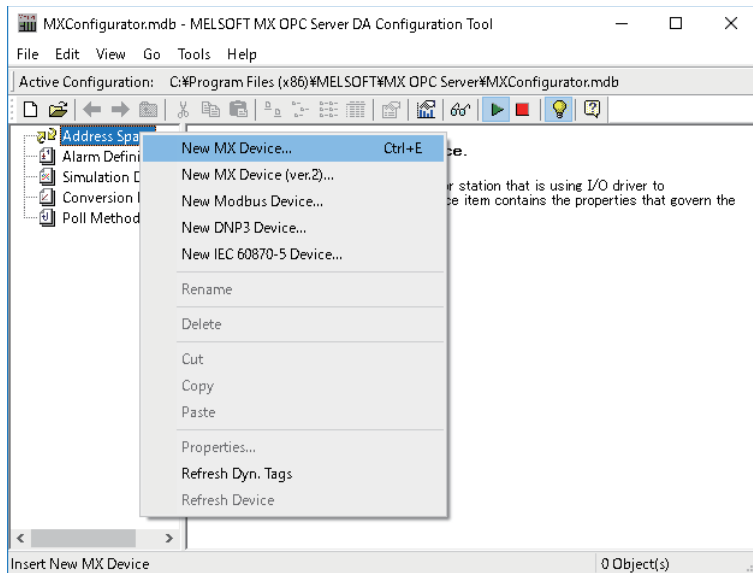


Setting a device

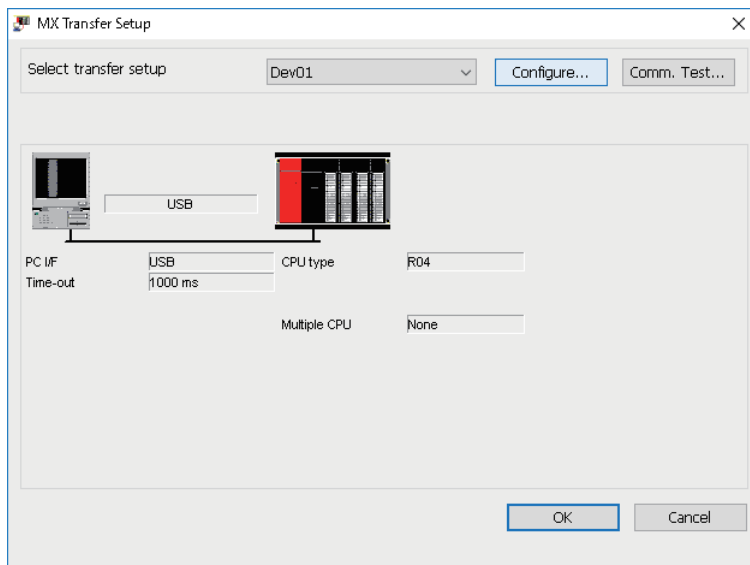
Set device information (on the actual device) for connecting MX OPC Server and the device (actual device).

Operating procedure

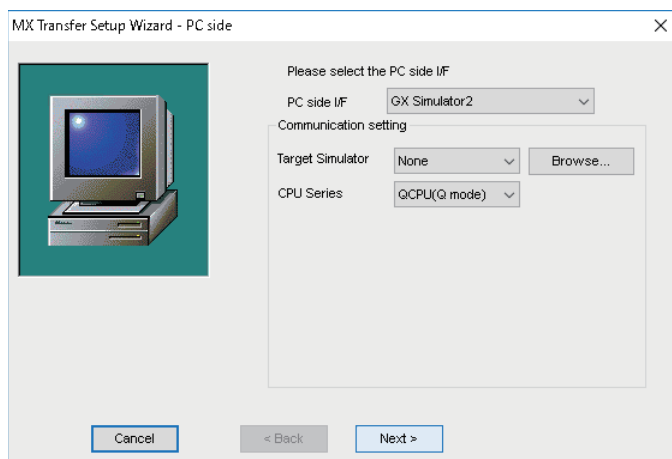
1. Right-click "Address Space," and select [New MX Device] from the shortcut menu.



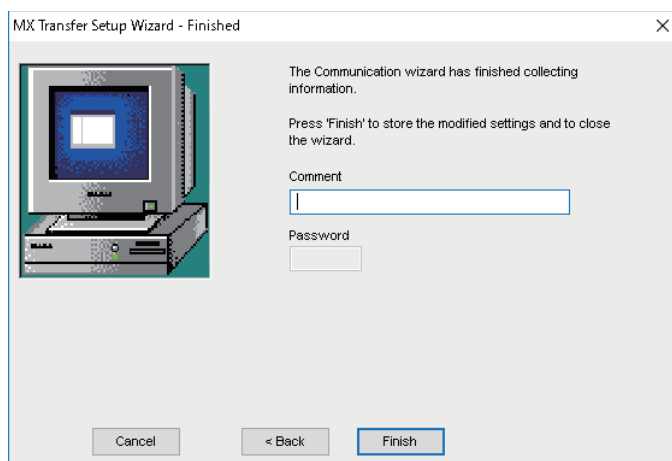
2. In the "MX Transfer Setup" screen, click the [Configure] button.



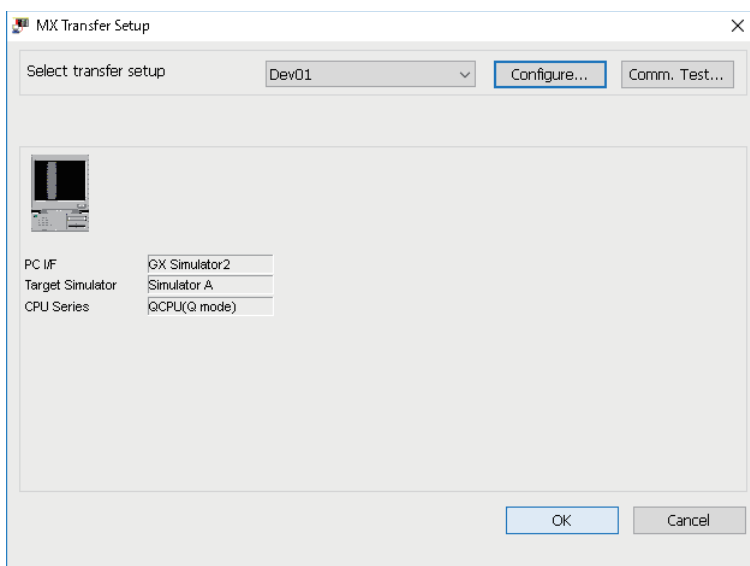
3. Set "GX Simulator2" for "PC side I/F," and select a simulator to be connected or a target CPU series for simulation from "Communication setting."
Click the [Next] button.



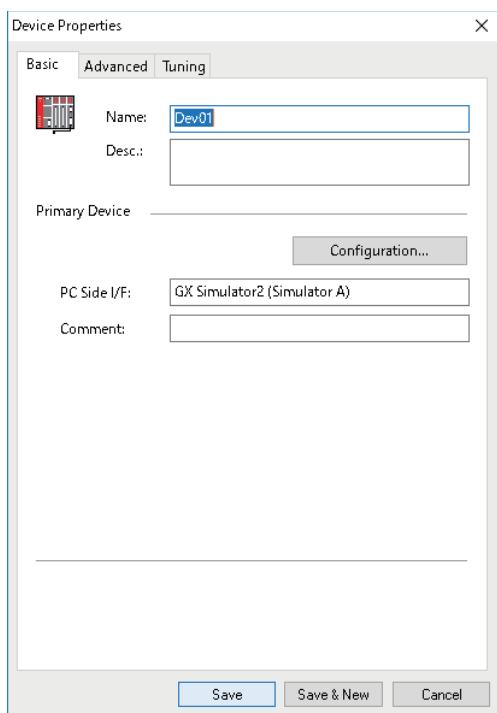
4. Click the [Finish] button.



5. In the "MX Transfer Setup" screen, click the [OK] button.



6. In the "Device Properties" screen, click the [Save] button.



The screenshot shows a 'Device Properties' dialog box with three tabs: 'Basic', 'Advanced', and 'Tuning'. The 'Basic' tab is selected. It contains a small icon of a circuit board, a 'Name' field with 'Dev01', a 'Desc.' field, a 'Primary Device' section with a 'Configuration...' button, a 'PC Side I/F' field with 'GX Simulator2 (Simulator A)', and a 'Comment' field. At the bottom are 'Save', 'Save & New', and 'Cancel' buttons.

Device Properties

Basic Advanced Tuning

Name: Dev01

Desc.:

Primary Device

Configuration...

PC Side I/F: GX Simulator2 (Simulator A)

Comment:

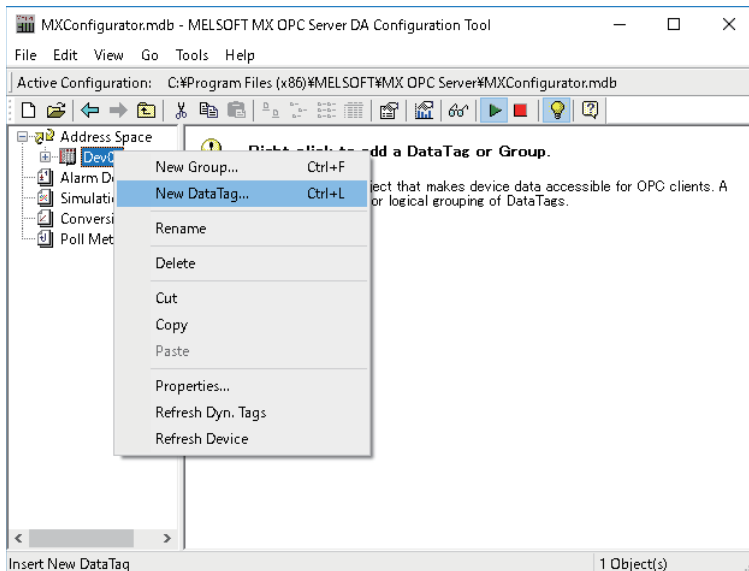
Save Save & New Cancel

Creating a tag

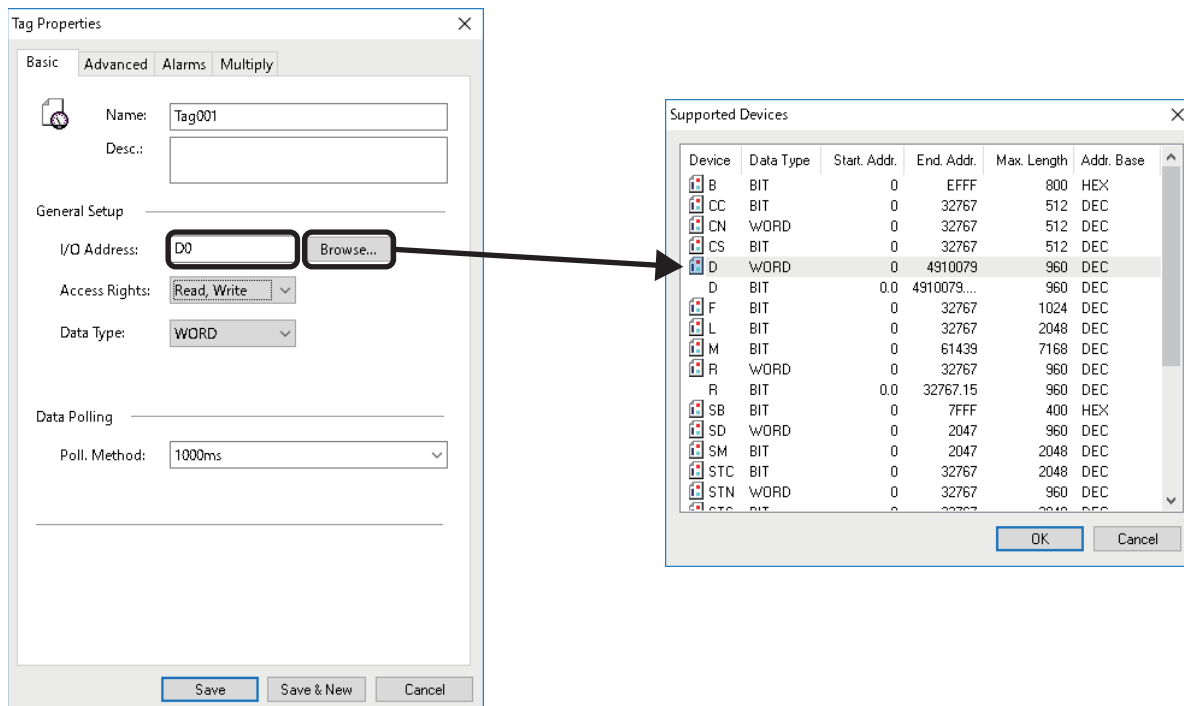
Set a device to a tag for sending and receiving data with MX OPC Server.

Operating procedure

1. Right-click the created device, and select [New DataTag] from the shortcut menu.

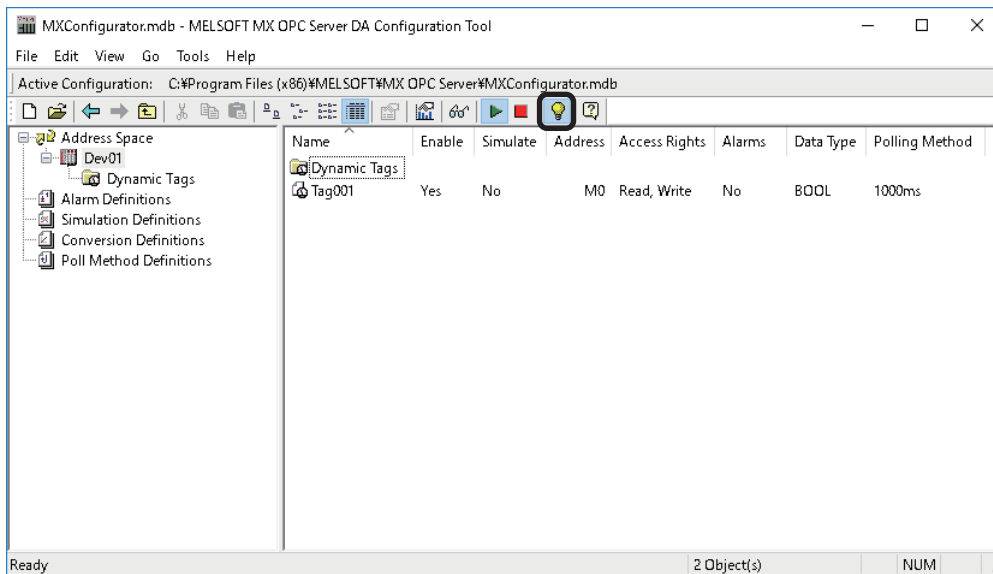


2. In the "Tag Properties" screen, set a device for "I/O Address."
Enter a device directly, or select a device in the "Supported Devices" screen displayed by clicking the [Browse] button.



3. In the "Tag Properties" screen, click the [Save] button.

4. Click the light bulb icon to ready MX OPC Server.
When the icon has already been clicked, clicking it is unnecessary.



Point

Description of icons in the screen

- Light bulb icon: To make MX OPC Server ready to run (by applying an MX OPC project file to a server).
- Triangle icon: To start communication.
- Glasses icon: To check current values.

Registering OPC UA Server to Workbench

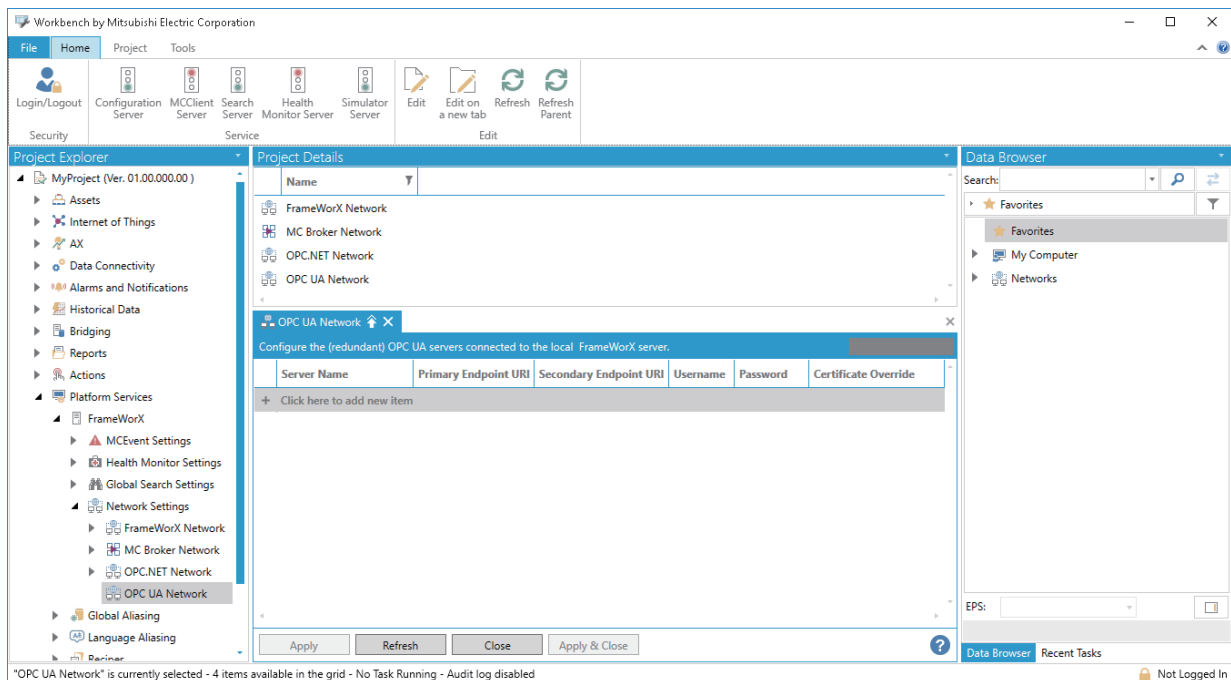
This section shows the procedures for registering OPC UA Server to be referenced by Workbench.

1. Register OPC UA Server to Workbench. ( Page 76 Registering OPC UA Server to Workbench)
2. Move a client certificate. ( Page 77 Moving a client certificate)

Registering OPC UA Server to Workbench

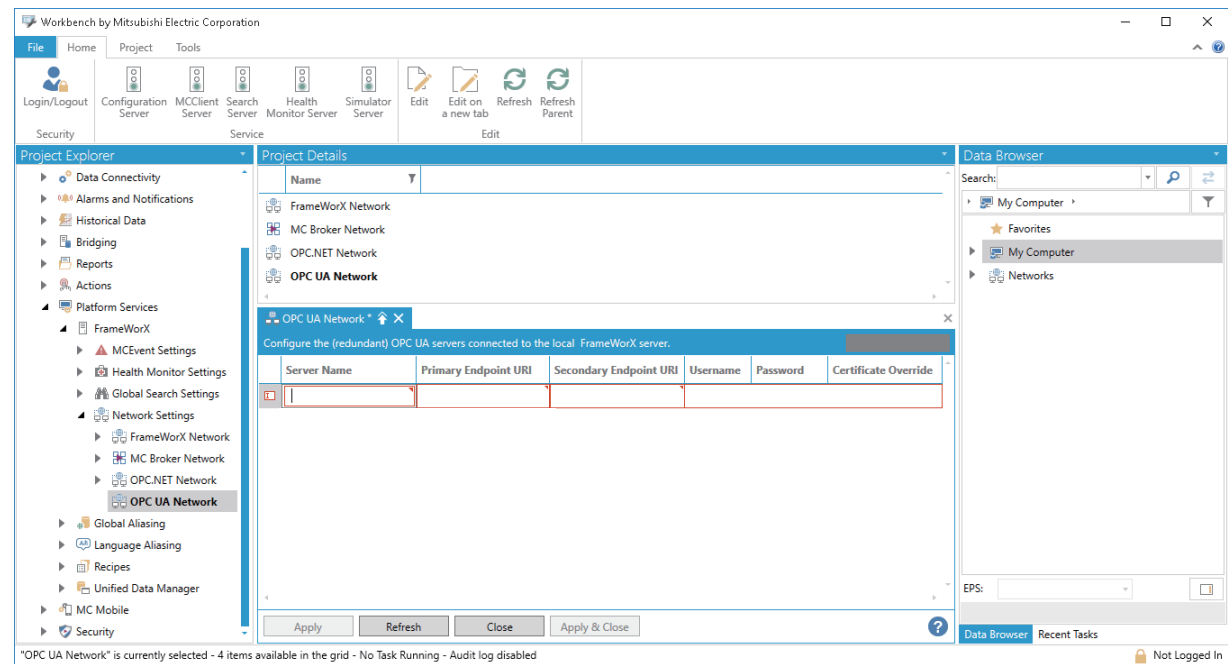
Operating procedure

1. Start Workbench.
(For Windows10)
Select [MELSOFT] ⇒ [Workbench]*¹ from Windows Start.
*1 Select [Workbench]() in the application.
2. Select "Project Explorer" ⇒ (created project) ⇒ [Platform Services] ⇒ [FrameWorX] ⇒ [Network Settings], and double-click [OPC UA Network].
3. Click "Click here to add new item."



4. Set the following items*1.

*1 Setting the items other than the following is optional. It works properly in the default setting.



Item	Description
Server Name	Enter a server name.
Primary Endpoint URI	Enter an endpoint URI.*2

*2 For the endpoint URI (URL), check the settings or manuals of OPC UA Server.

(Example for MX OPC Server UA: opc.tcp://localhost:4841

Example for Management Shell of Edgecross Basic Software: opc.tcp://localhost:48010

However, when MC Works64 and MX OPC Server UA or Edgecross Basic Software are installed on different personal computers, set the computer name of the personal computer where MX OPC Server UA or Edgecross Basic Software is installed, instead of setting 'localhost' as an endpoint URI.)

5. Click the [Apply] button.

Moving a client certificate

When the node of OPC UA Server which is registered to Workbench in the MC Works64 data browser is opened for the first time, a client certificate of MC Works64 is registered in the "rejected" directory or the reject list. Therefore, moving the client certificate is required.

■ MX OPC Server UA

Move the client certificate of MC Works64 (client name: FrameWorX Server), which is stored in the "rejected" directory in MX OPC UA Server, to the "certs" directory.

For details, refer to the following.

MELSOFT MX OPC Server UA Version 3 Operating Manual

■ Management Shell of Edgecross Basic Software

Move the client certificate of MC Works64 (client name: FrameWorX Server) from the reject list to the trust list in the OPC UA settings in Management Shell Explorer.

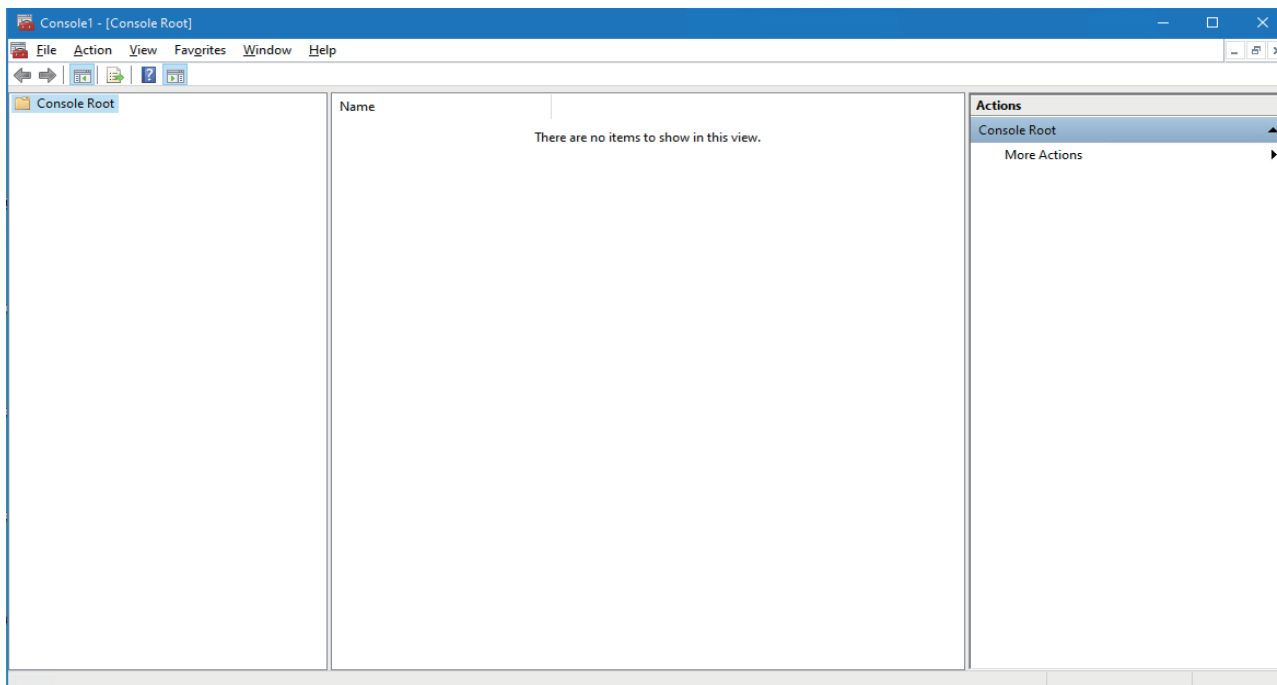
For details, refer to the manual for Edgecross Basic Software.

Checking or updating a client certificate

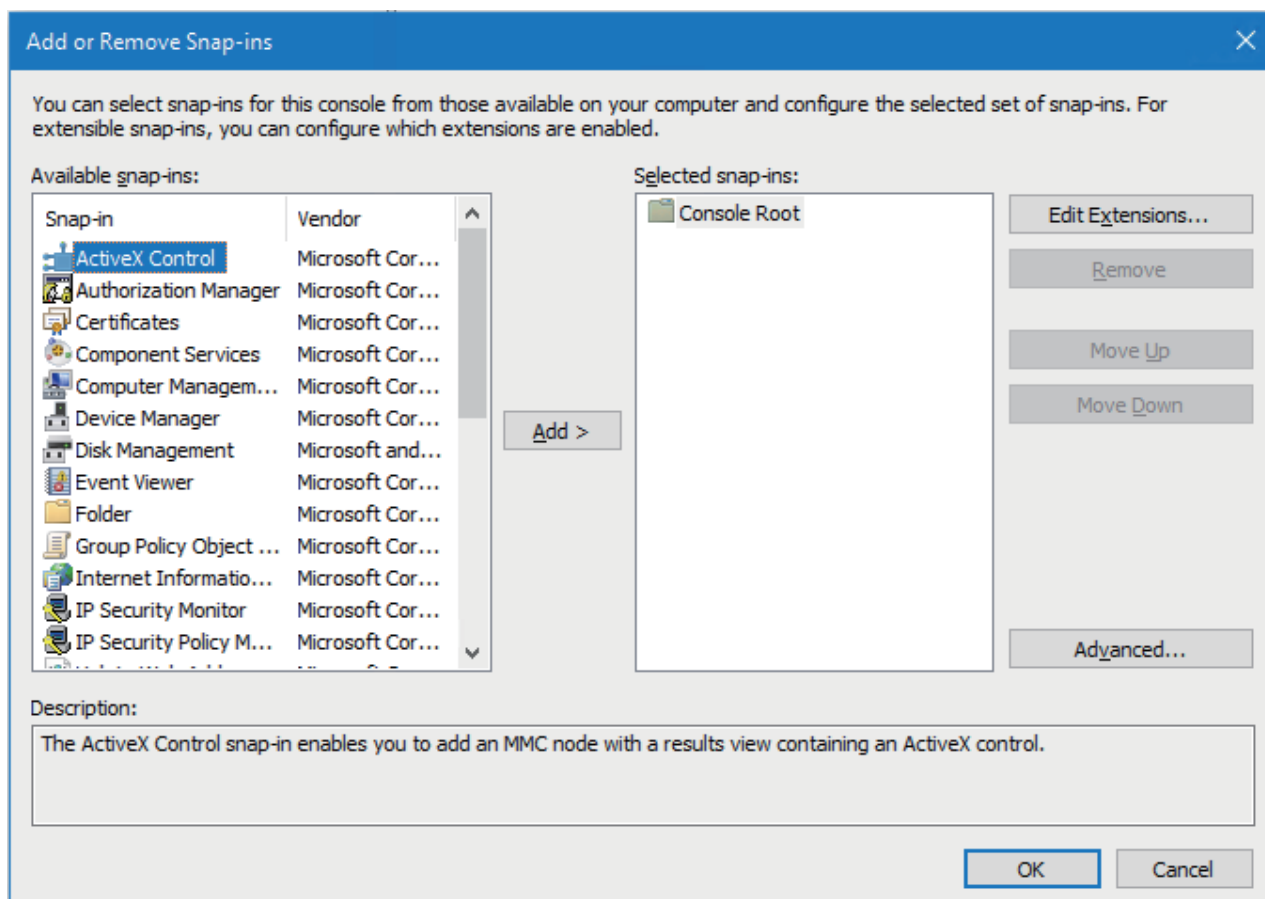
■ Checking a client certificate of MC Works64

Operating procedure

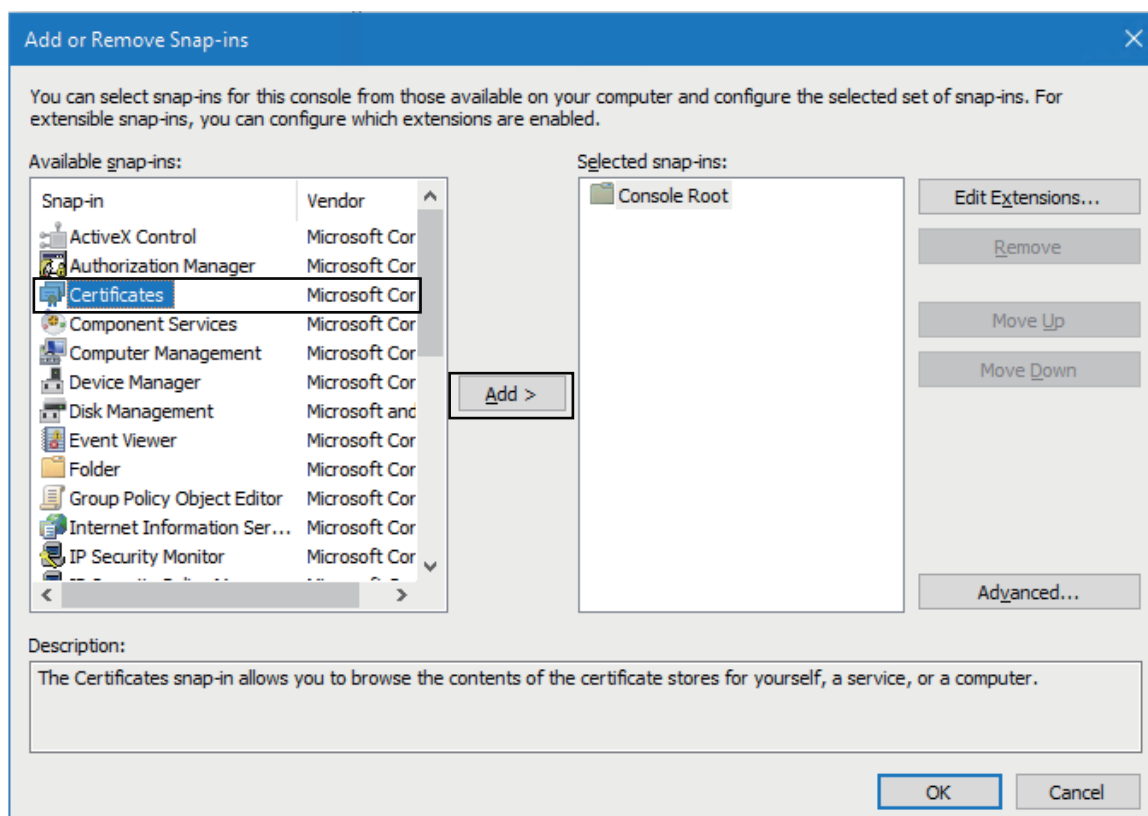
1. Enter 'mmc' from Windows Start to start the Microsoft Management Console.



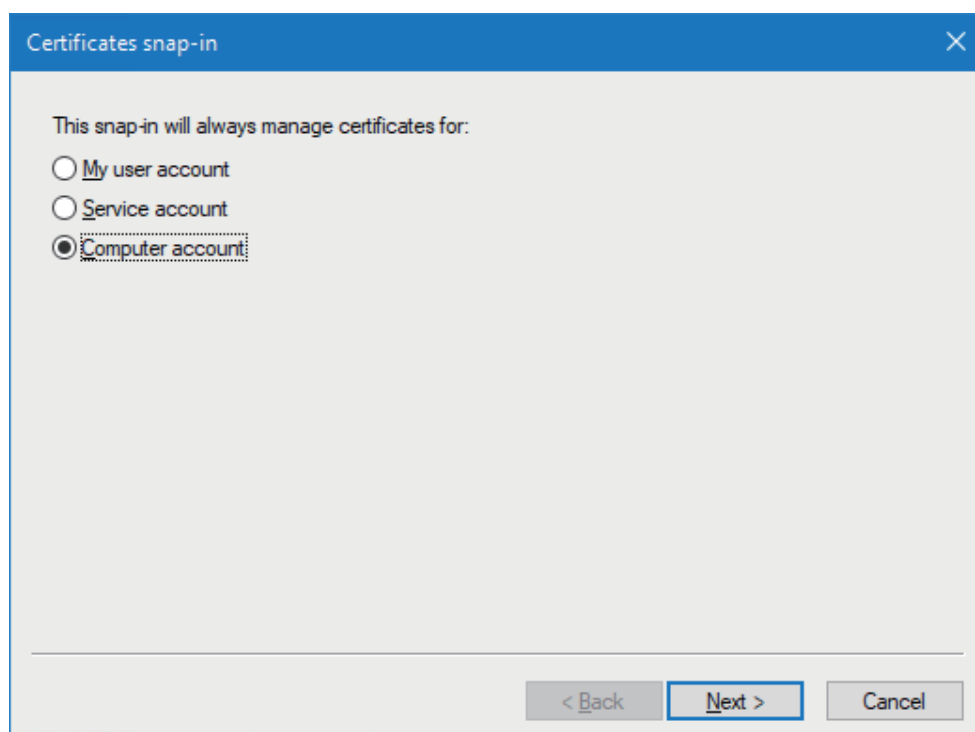
2. Select [File] ⇒ [Add/Remove Snap-in].



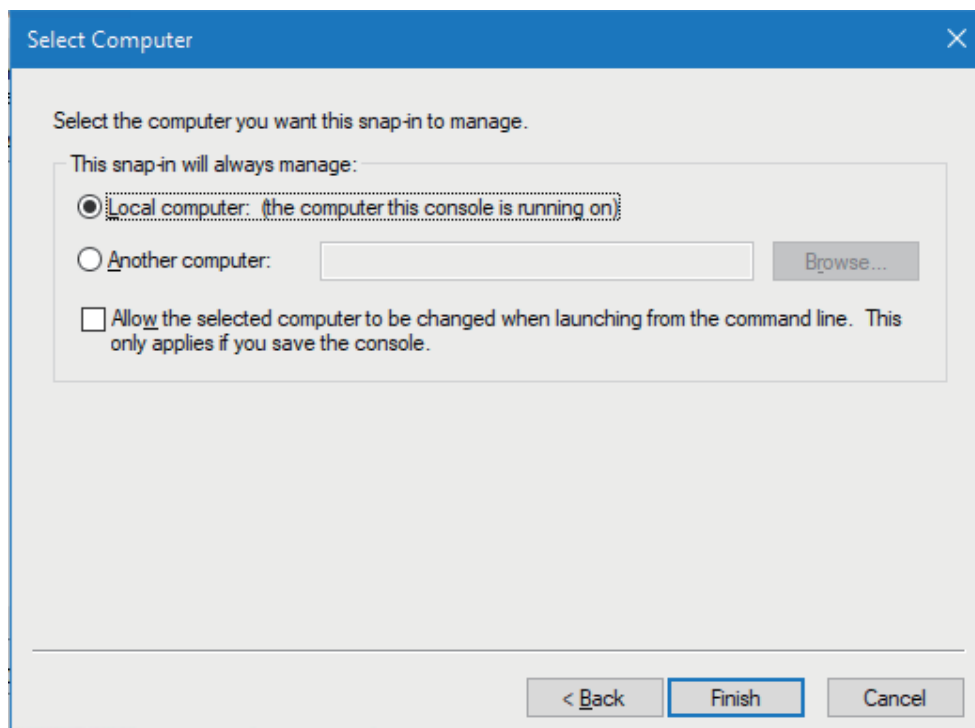
3. Select "Certificates" from "Available snap-ins," and click the [Add] button.



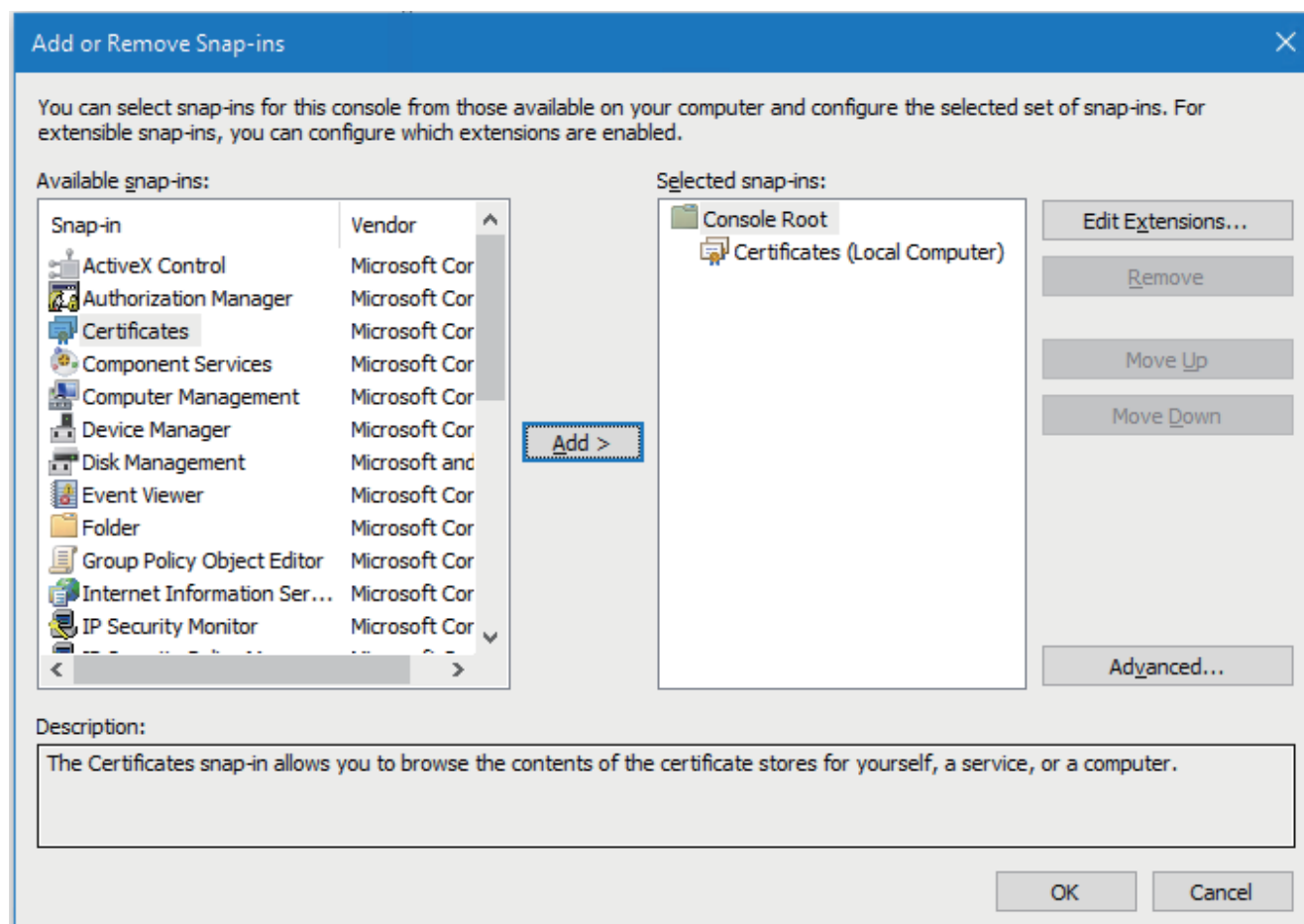
4. Select "Computer account" and click the [Next] button.



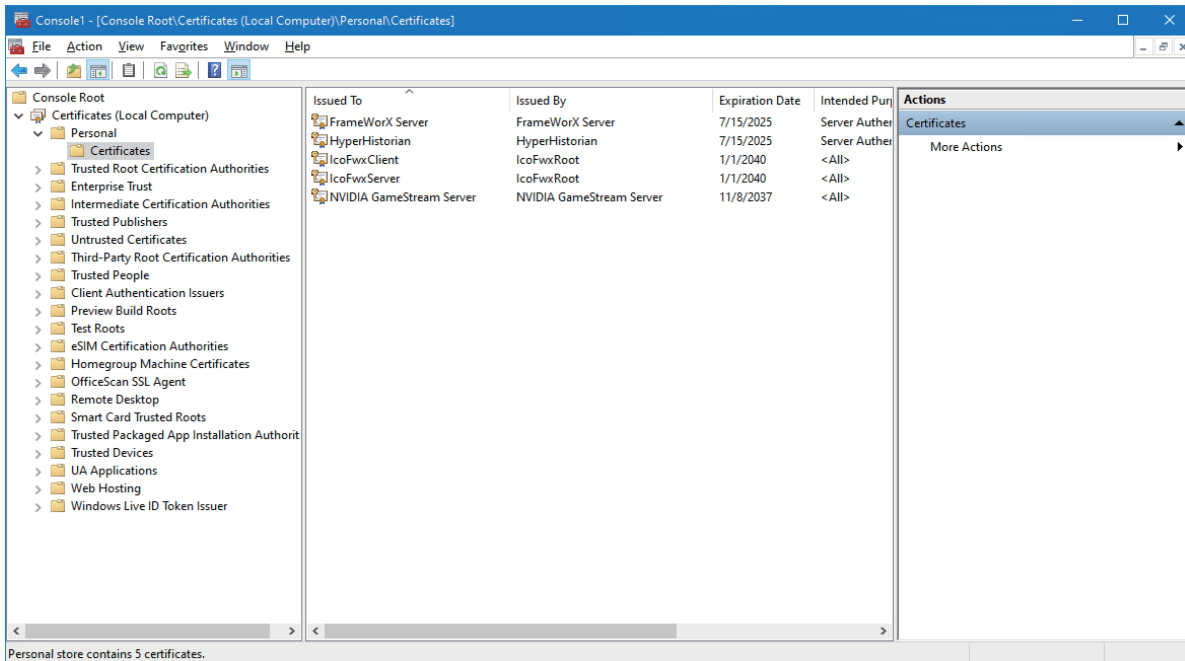
5. Select "Local computer" and click the [Finish] button.



6. "Certificates (Local Computer)" is displayed in "Selected snap-ins."



7. Select "Console Root" ⇒ "Certificate (Local Computer)" ⇒ "Personal" ⇒ "Certificates"



5

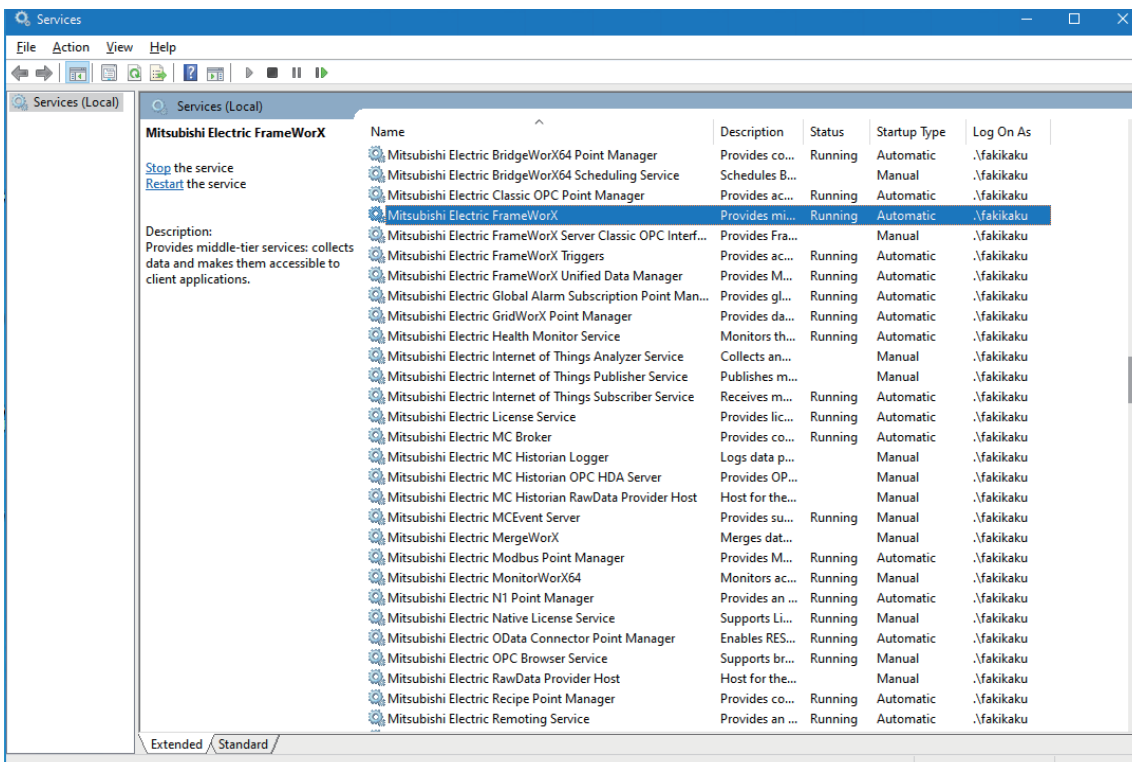
■ Updating a client certificate of MC Works64

Operating procedure

1. Remove certificates (FrameWorX Server and HyperHistorian) displayed in the step 7 of the following procedure, and restart the services. (The certificates are regenerated by restarting the services.)

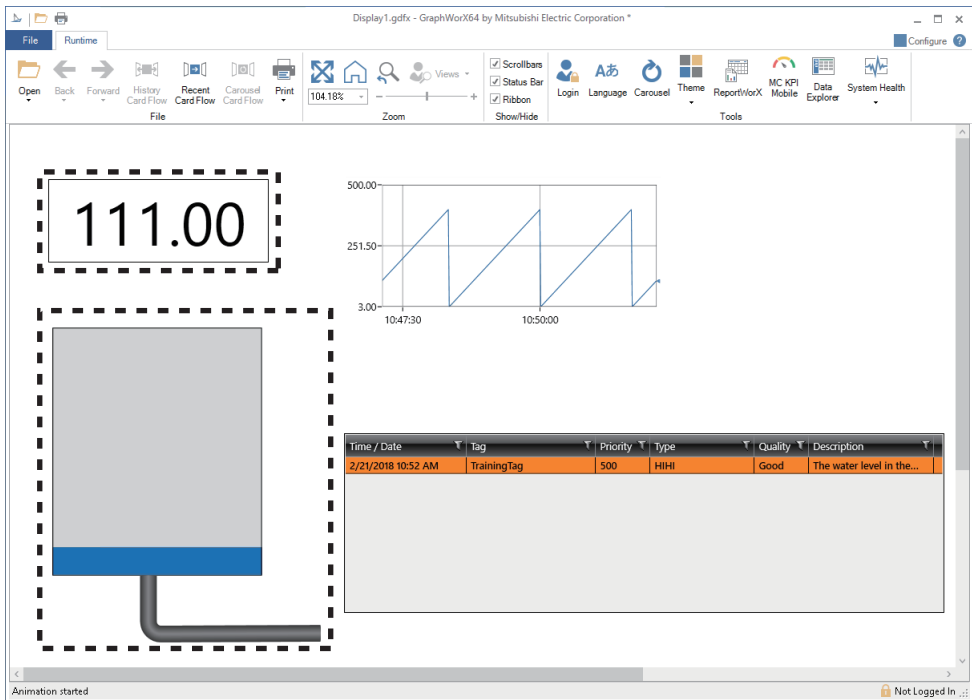
☞ Page 78 Checking a client certificate of MC Works64

2. Enter 'Services' from Windows Start to start the service.
Restart 'Mitsubishi Electric FrameWorX' and 'Mitsubishi Electric MC Historian Logger.'



5.4 Water Volume Display

Configure the following screen elements in GraphWorX64.



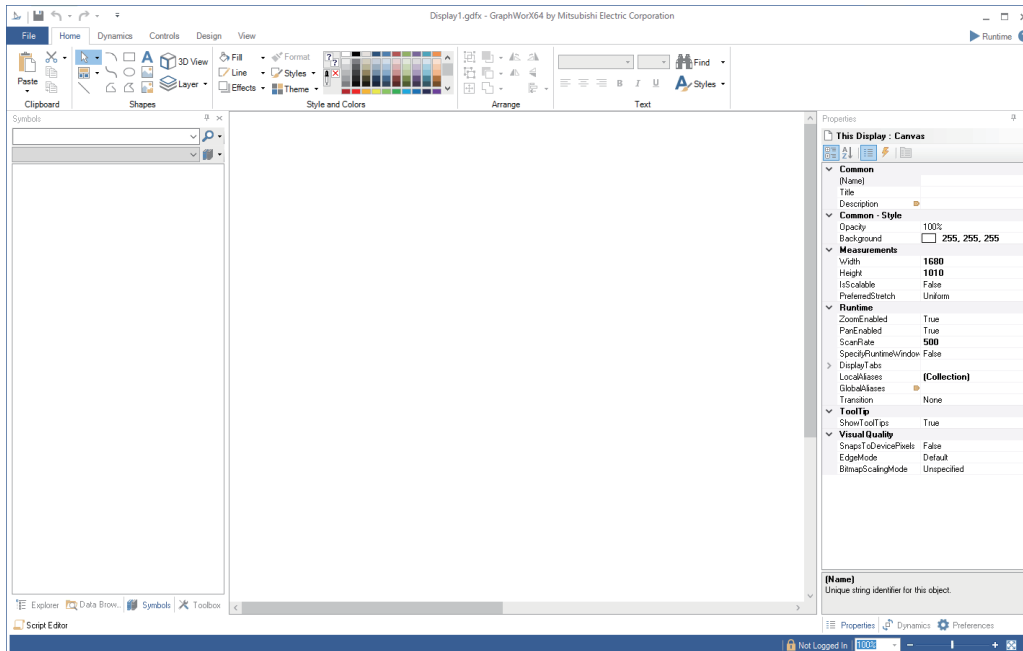
Starting GraphWorX64

The following shows the startup procedure of GraphWorX64.

Operating procedure

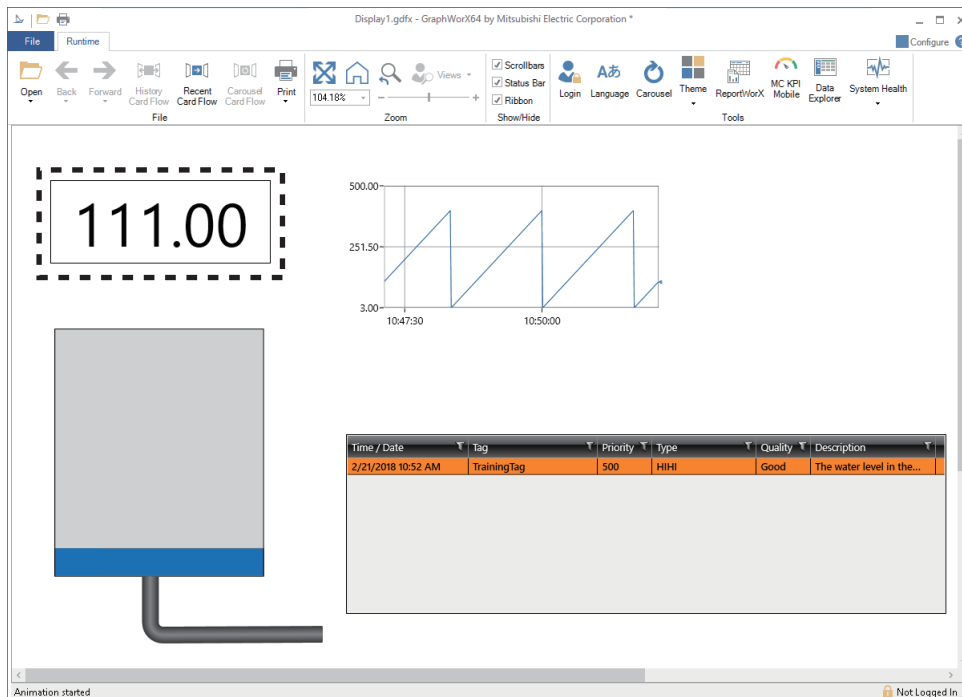
(For Windows10)

Select [MELSOFT] ⇒ [GraphWorX64] from Windows Start.



Placing a data entry area

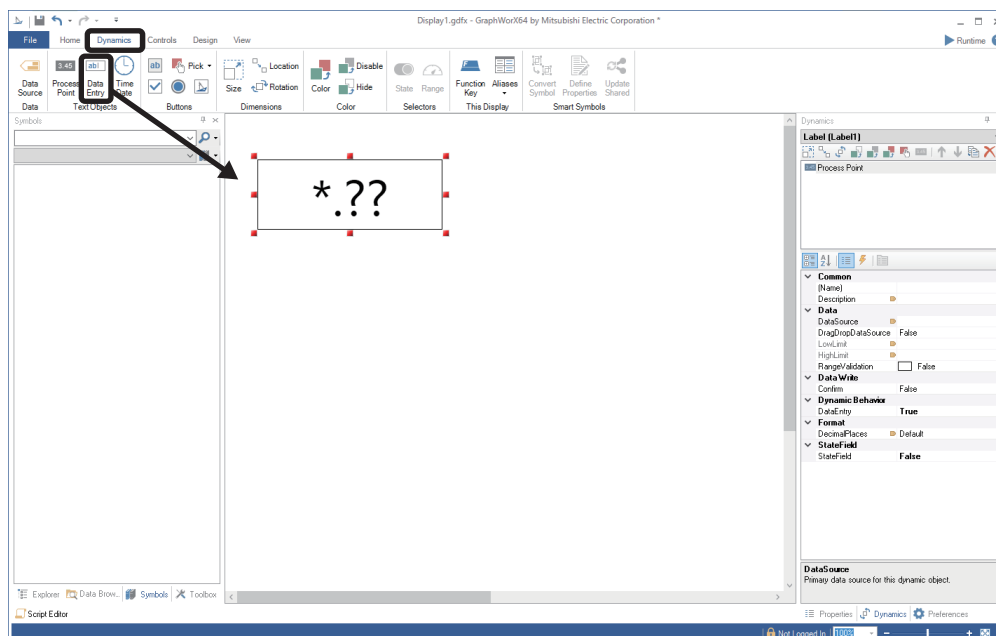
The following shows the screen element where a value can be directly entered to a tag, called 'data entry.'



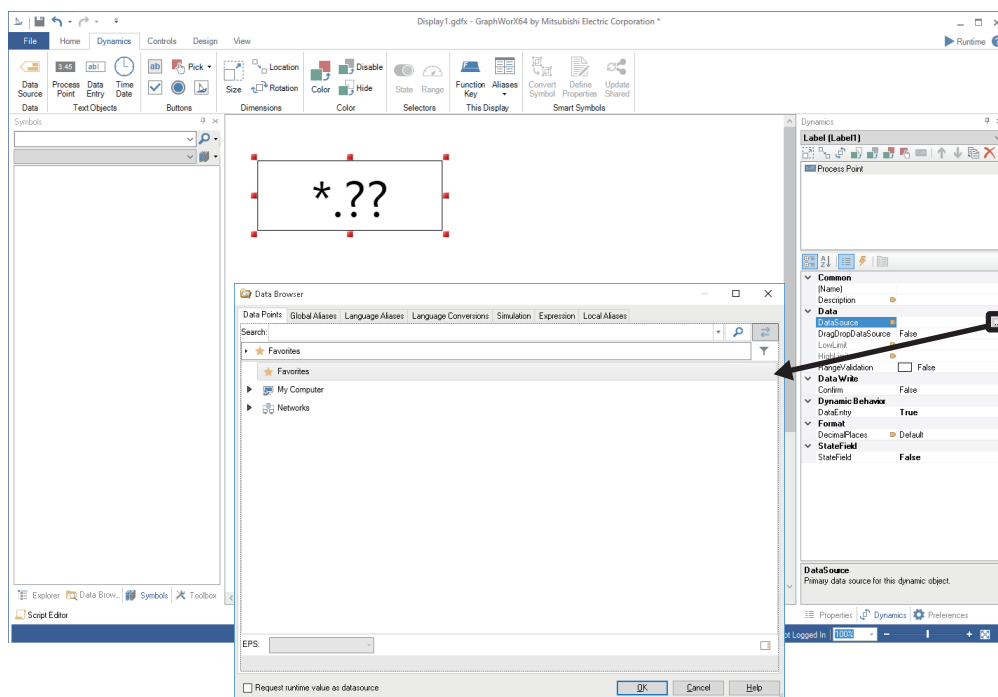
Placement procedure for a data entry area

Operating procedure

1. Click "Data Entry" in the [Dynamics] tab in the ribbon, and drag the cross cursor to expand the data entry area on the screen.

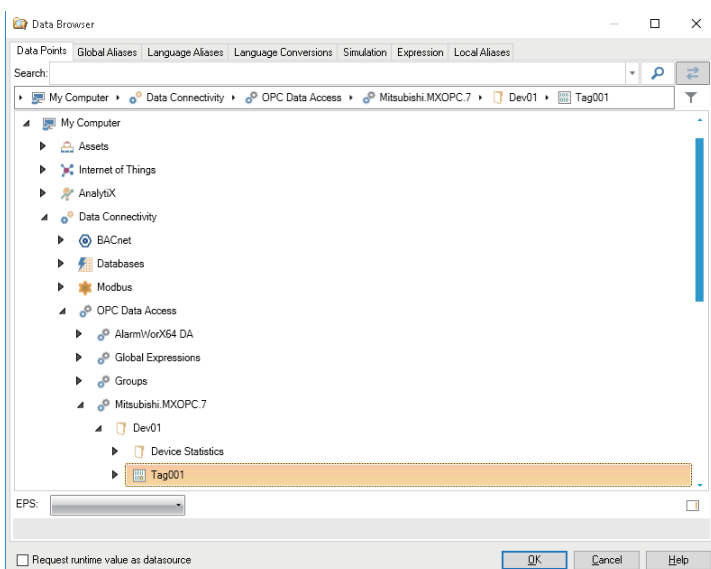


2. Click the [...] button in the column of "DataSource" to open the "Data Browser" screen.



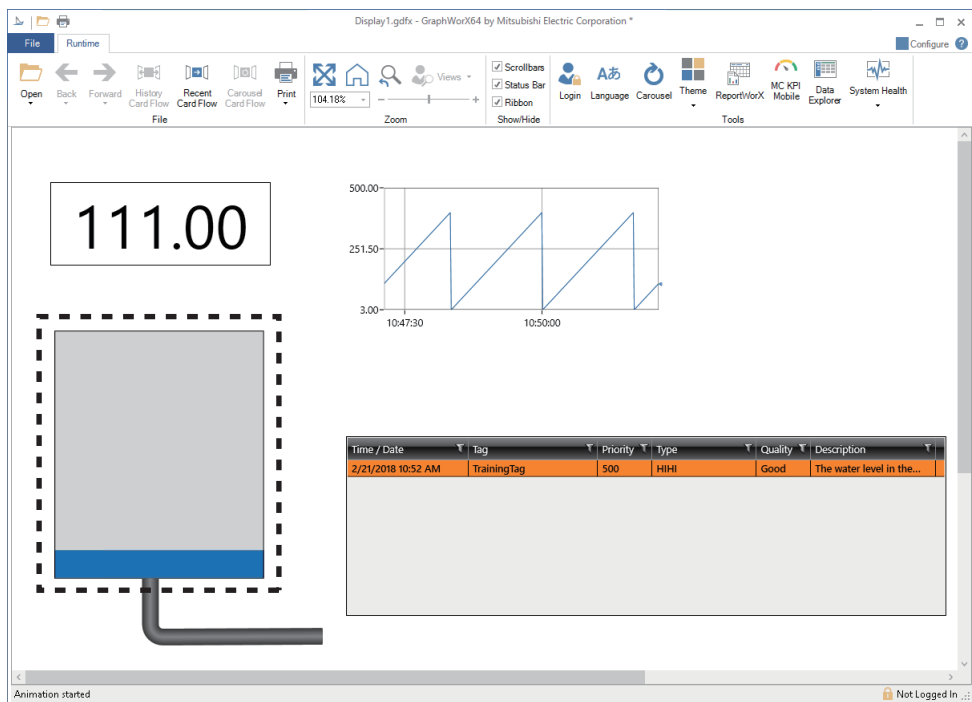
3. Assign a tag.

In the "Data Browser" screen, select [My Computer] ⇒ [Data Connectivity] ⇒ [OPC Data Access] ⇒ [Mitsubishi.MXOPC.7] ⇒ [Dev01] ⇒ [Tag001], and click the [OK] button.



Creating a tank

The following screen element shows water volume by overlaying two illustrations and changing the size of the one in the front.



Illustrations can be created as described in the following section.

Page 87 Creating illustrations

A size of an illustration can be changed as described in the following section.

Page 91 Setting dynamics parameters

Creating illustrations

The illustration of a tank can be created by any of the methods described in the following sections.

☞ Page 87 Creating a tank illustration using rectangles

☞ Page 89 Creating a tank illustration using a symbol

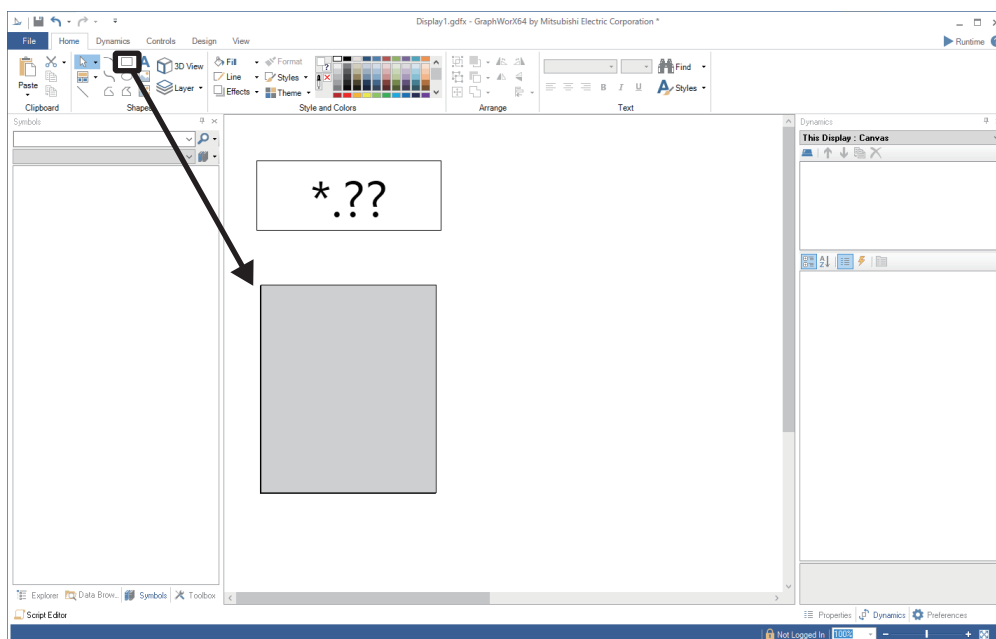
The illustration of a pipe can be created by the method described in the following section.

☞ Page 90 Creating a pipe

■ Creating a tank illustration using rectangles

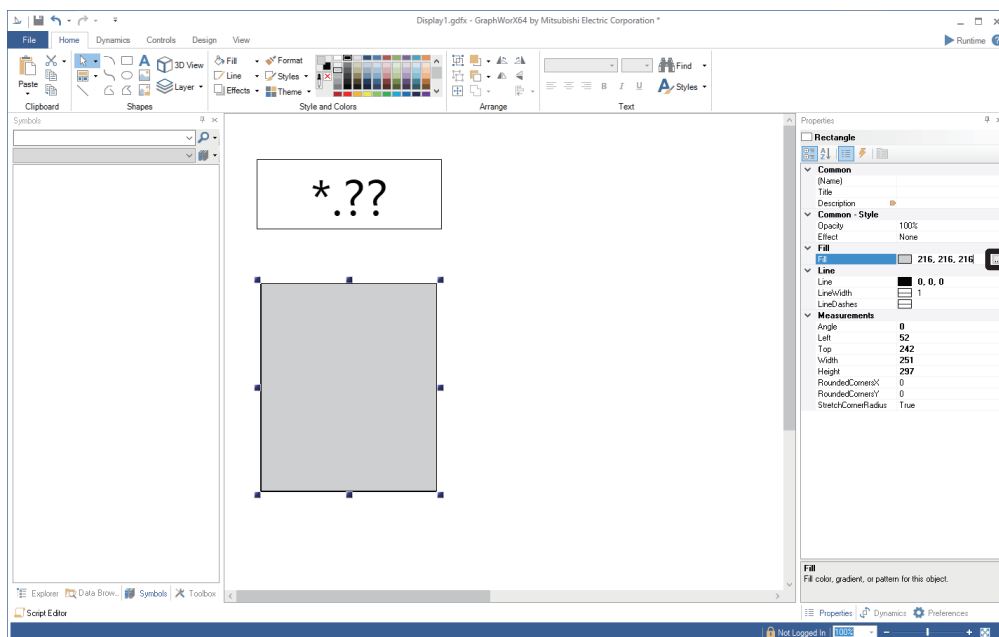
Operating procedure

1. Select the rectangle icon in the [Home] tab in the ribbon, and drag the cross cursor to expand the rectangle on the screen.

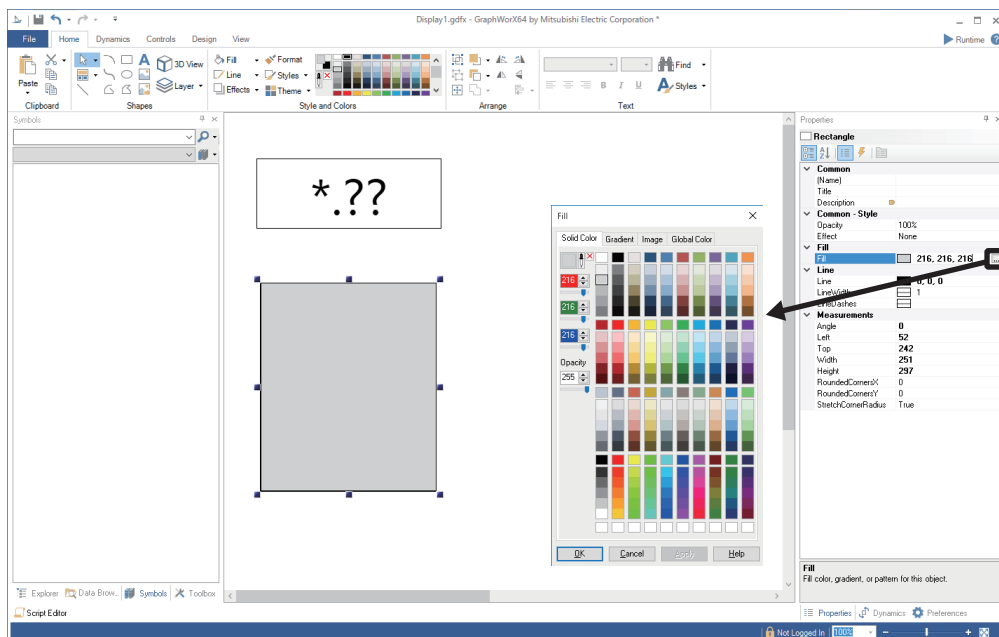


2. Create two same-sized rectangles and overlay each other.

- Set a color to one of the two rectangles.
Select the rectangle in the front layer.
Click the [...] button in the "Fill" column.



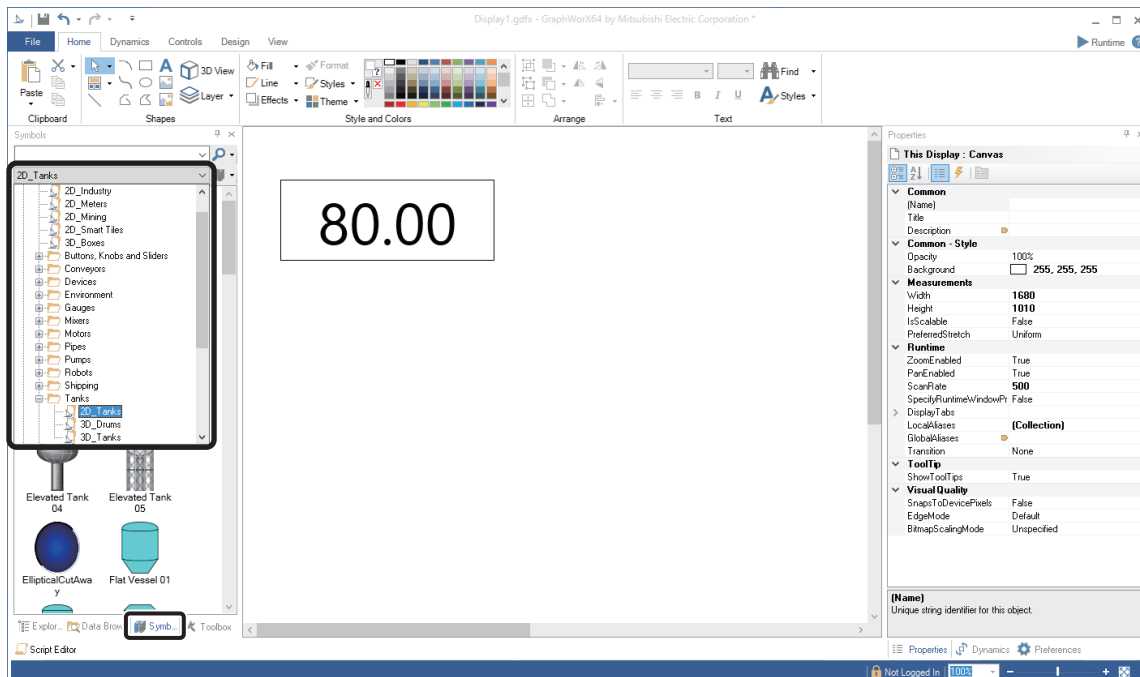
Select a color in the displayed screen, and click the [OK] button.



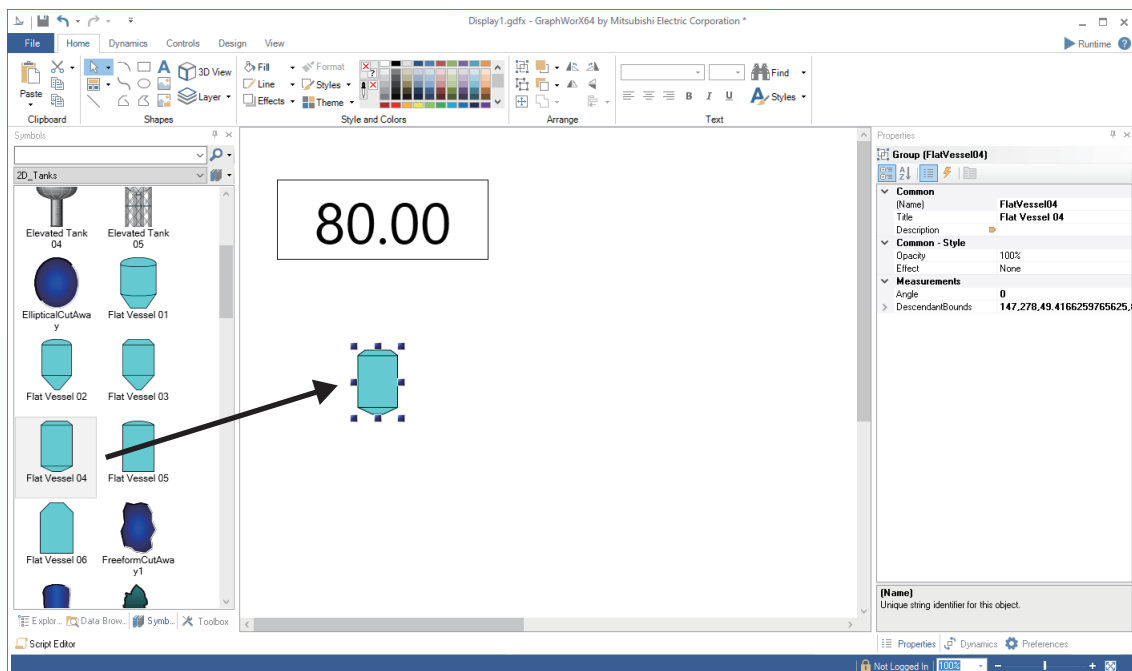
■ Creating a tank illustration using a symbol

Operating procedure

1. Select the [Symbols] tab, and select "General" ⇒ "Tanks" ⇒ "2D_Tanks."



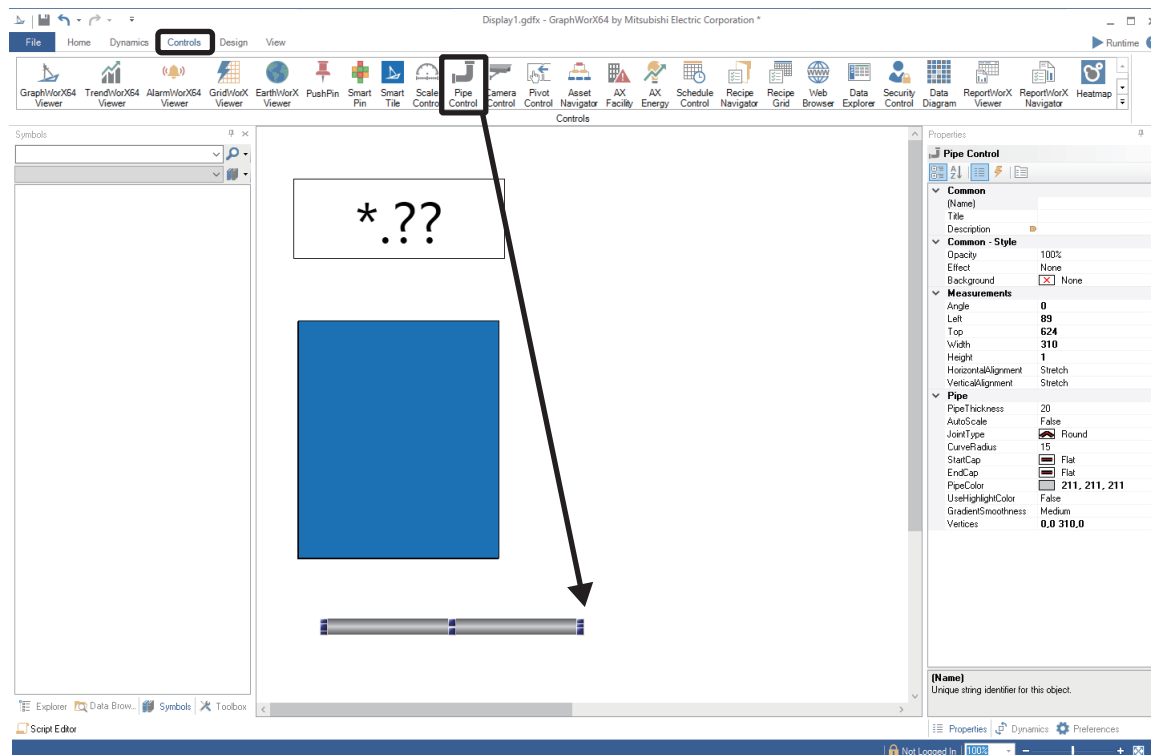
2. Drag and drop a tank onto the screen.



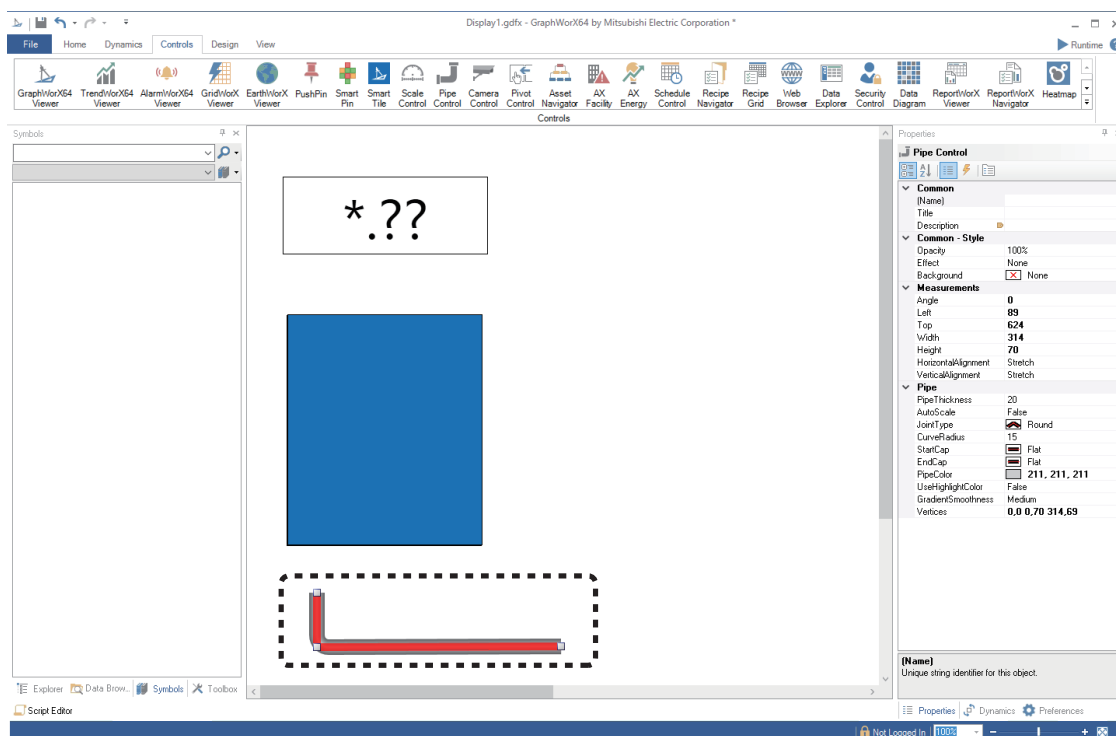
■ Creating a pipe

Operating procedure

1. Select "Pipe Control" in the [Controls] tab in the ribbon, and drag the cross cursor to extend the pipe on the screen.



2. Modify the shape of the pipe.
A red line appears on the pipe by double-clicking the pipe.
Drag the pipe to modify the shape.



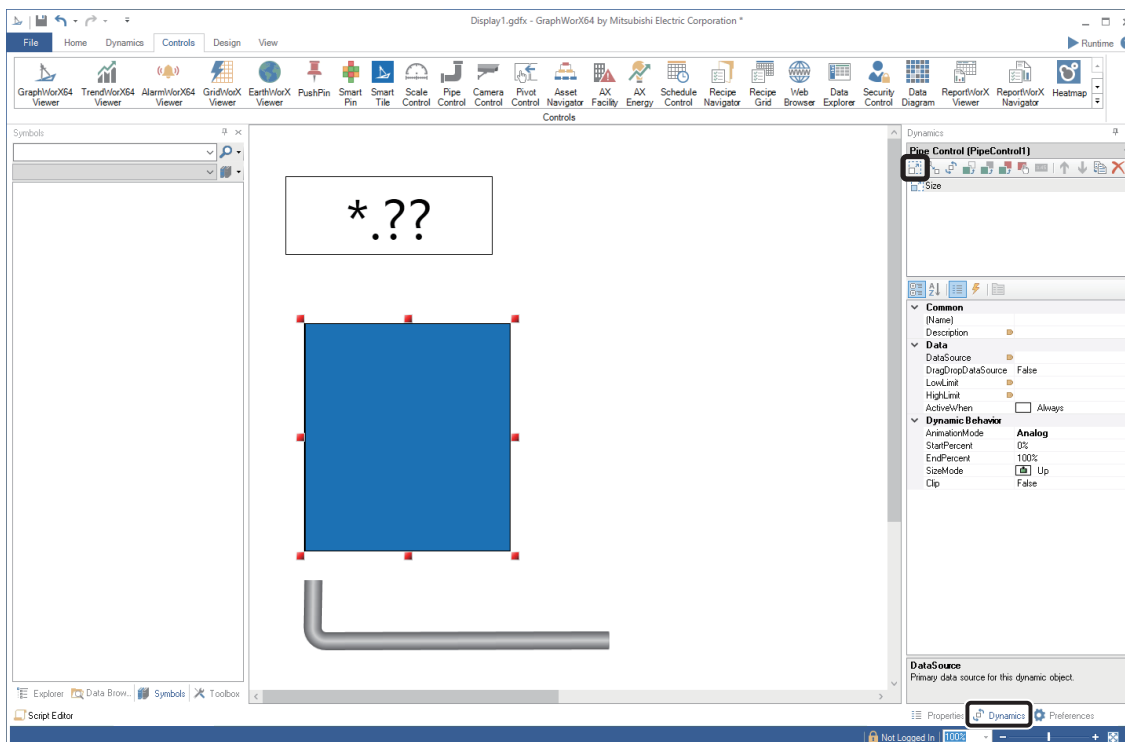
Setting dynamics parameters

'Dynamics' is a setting that makes screen elements work by linking with each tag.

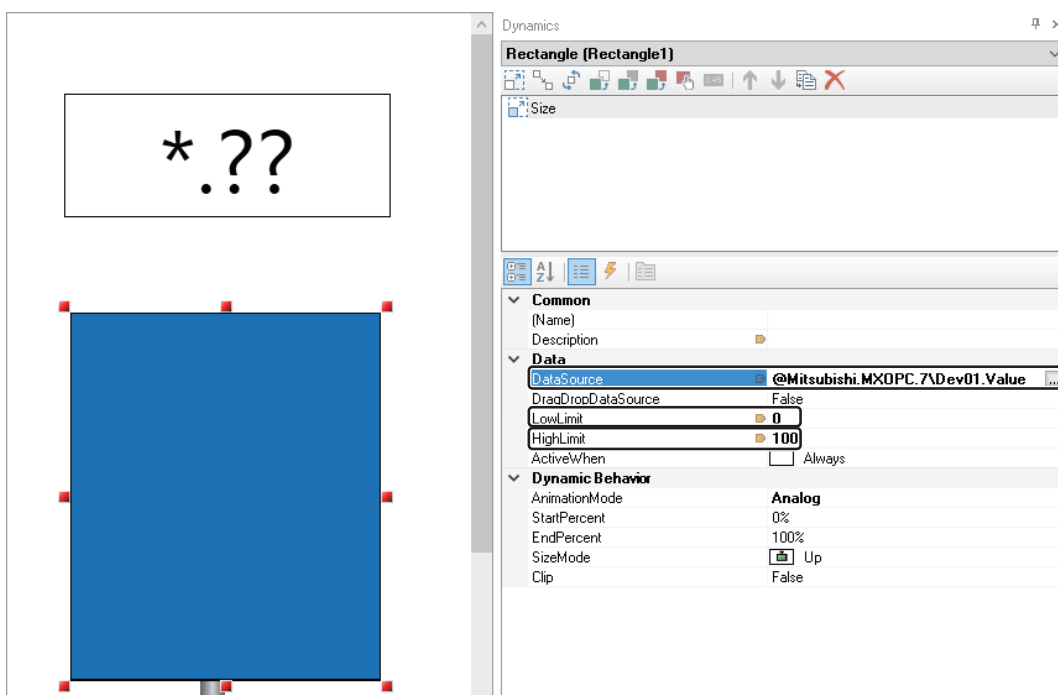
In the following procedure, set the 'Size' dynamics parameter to show the change of water volume.

Operating procedure

1. Select a rectangle in the front layer.
2. Select the [Dynamics] tab, and click the size icon.



3. Set the same tag as the one set for the data entry (see Page 84 Placement procedure for a data entry area) in the "DataSource" column, and enter '0' to the "LowLimit" column and enter '100' to the "HighLimit" column.



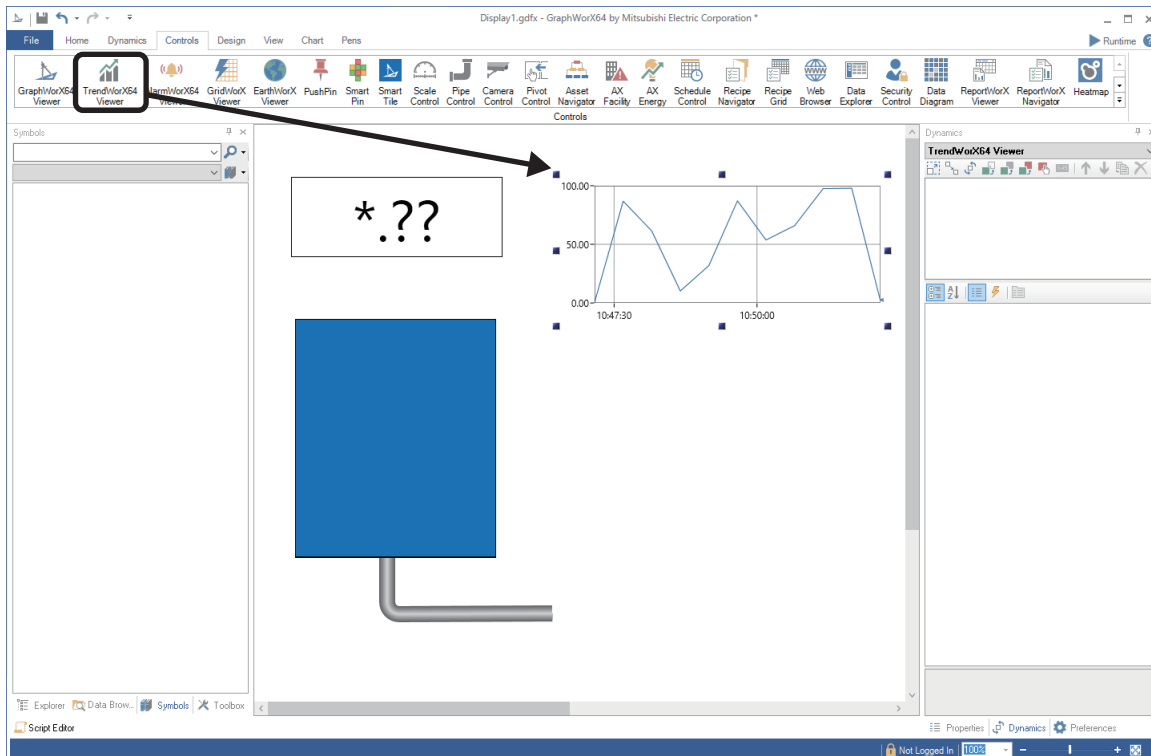
5.5 Graph Display

Place a TrendWorX64 Viewer area to display a graph.

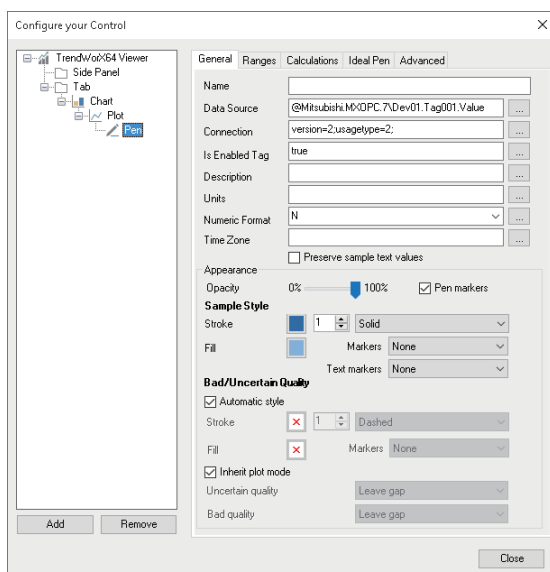
Placement procedure for a TrendWorX64 Viewer area

Operating procedure

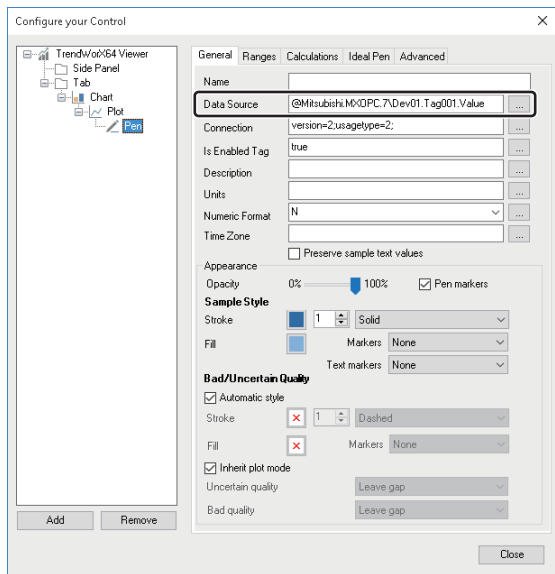
1. Place a TrendWorX64 Viewer area.
Select "TrendWorX64 Viewer" in the [Controls] tab in the ribbon, and drag the cross cursor to expand the TrendWorX64 Viewer area on the screen.



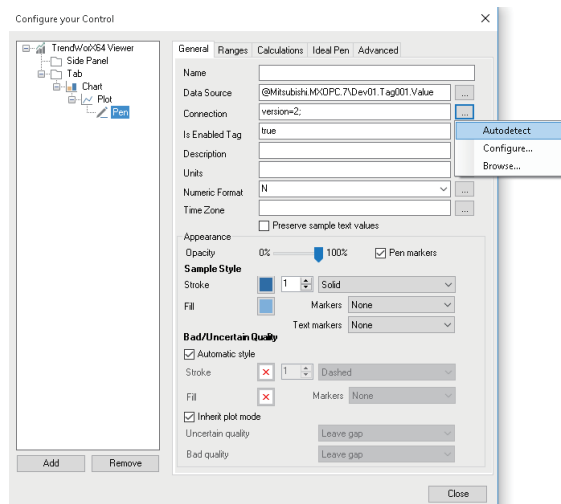
2. Double-click the placed "TrendWorX64 Viewer" to open the TrendWorX64 Viewer setting screen.
In the tree on the left side of the screen, select [TrendWorX64 Viewer] ⇒ [Tab] ⇒ [Chart] ⇒ [Plot] ⇒ [Pen].



3. Set the same tag as the one set for the data entry ( Page 84 Placement procedure for a data entry area) for "Data Source."



4. Select "Autodetect" in "Connection."



5.6 Alarm Display

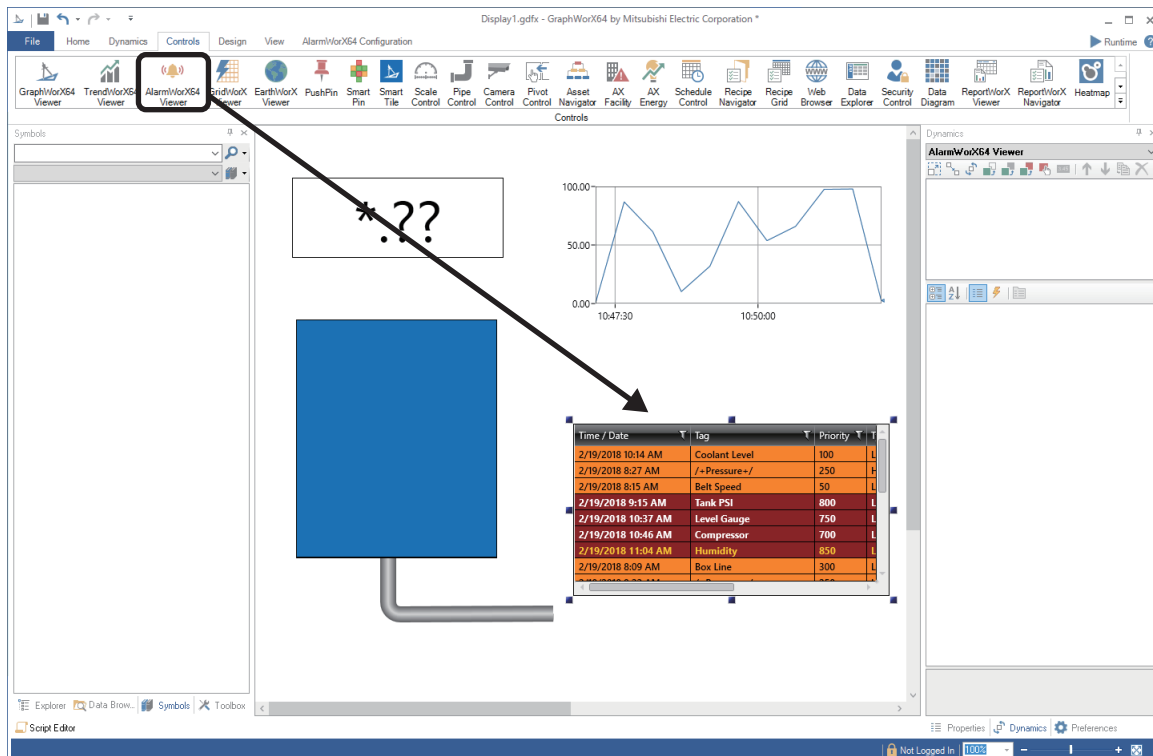
Place an AlarmWorX64 Viewer area to display alarms.

Placement procedure for an AlarmWorX64 Viewer area

Operating procedure

1. Place an AlarmWorX64 Viewer area.

Select "AlarmWorX64 Viewer" in the [Controls] tab in the ribbon, and drag the cross cursor to expand the AlarmWorX64 Viewer area on the screen.



Setting an alarm tag

An alarm to be displayed in an AlarmWorX64 Viewer area can be set as an alarm tag in AlarmWorX64 Server. AlarmWorX64 Server is a software application included in Workbench. Start Workbench to use AlarmWorX64 Server.

- 1. Start Workbench. (📖 Page 95 Starting Workbench)
- 2. Create a configuration database to save settings. (📖 Page 96 Creating a configuration database)
- 3. Set an alarm tag. (📖 Page 98 Setting an alarm tag)
- 4. Set AlarmWorX64 Server. (📖 Page 103 Setting AlarmWorX64 Server)

Starting Workbench

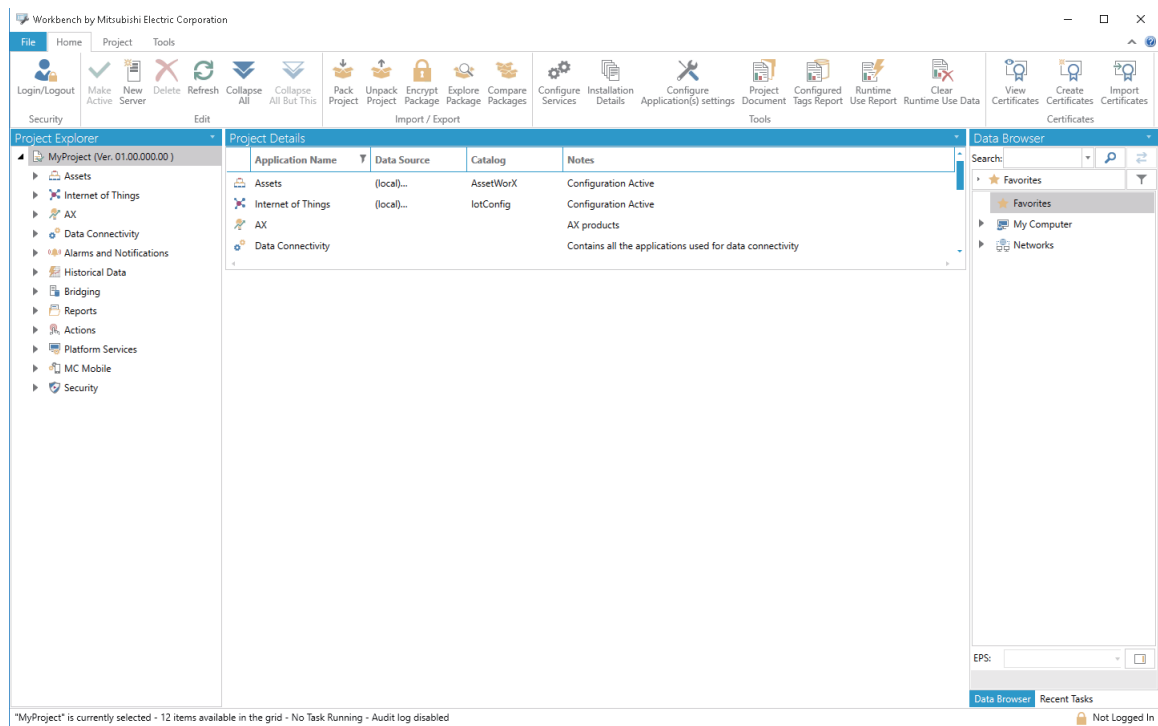
The following shows the startup method of Workbench.

Operating procedure

(For Windows10)

Select [MELSOFT] ⇒ [Workbench]^{*1} from Windows Start.

^{*1} Select [Workbench](📁) in the application.



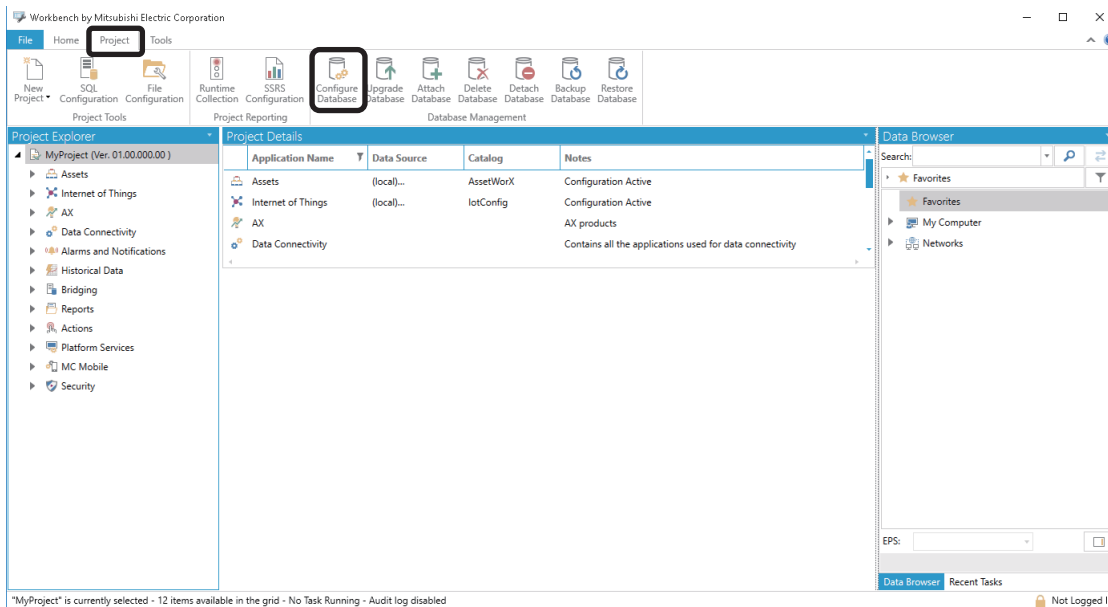
Creating a configuration database

All the settings created in MC Works64 are saved in a Microsoft SQL Server database.

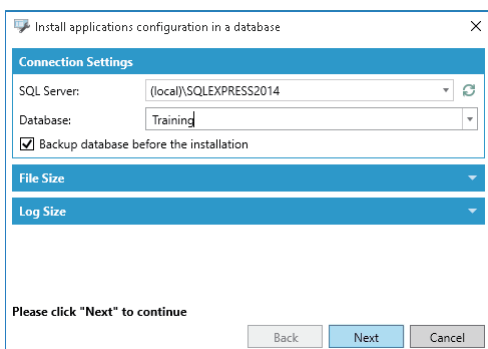
A configuration database for saving the settings can be created in Workbench.

Operating procedure

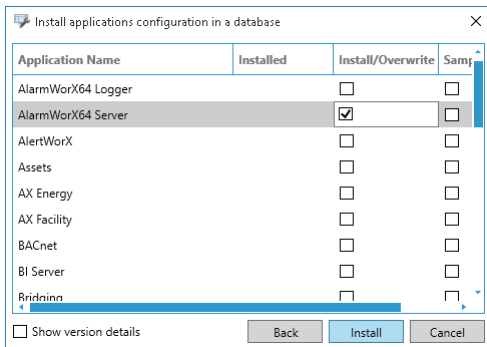
1. Select "Configure Database" in the [Project] tab in the ribbon.



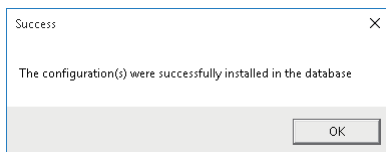
2. Enter an arbitrary configuration database name for "Database" in the displayed screen, and click the [Next] button.



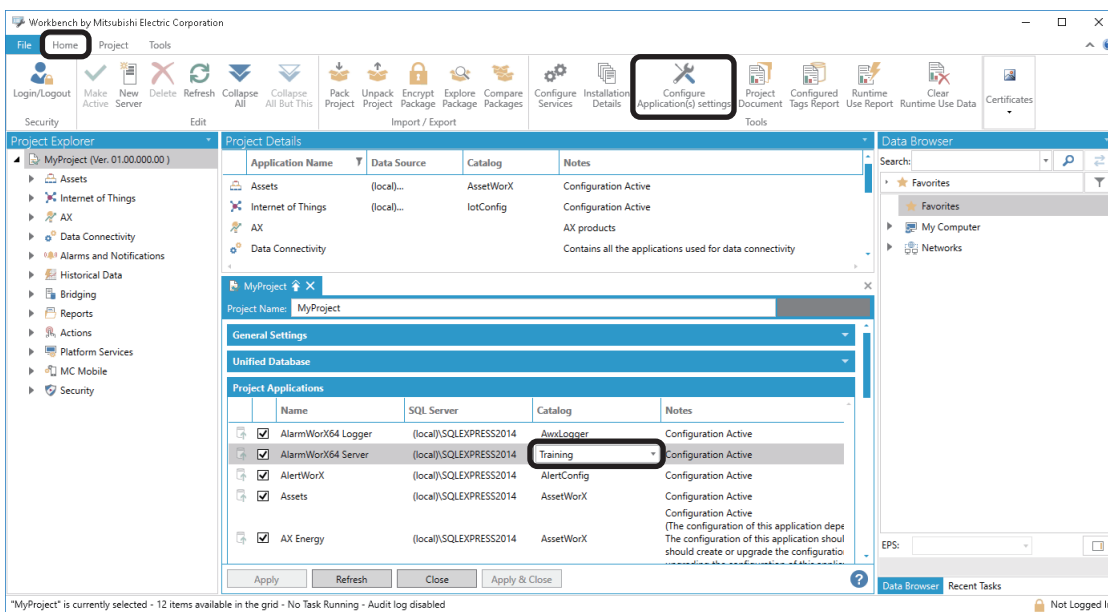
3. Select the checkbox of software (AlarmWorX64 Server) where the created configuration database is used, and click the [Install] button.



When the installation is successfully completed, the following screen appears.



4. Select "Configure Application(s) settings" in the [Home] tab in the ribbon, and set the configuration database which was created in AlarmWorX64 Server.

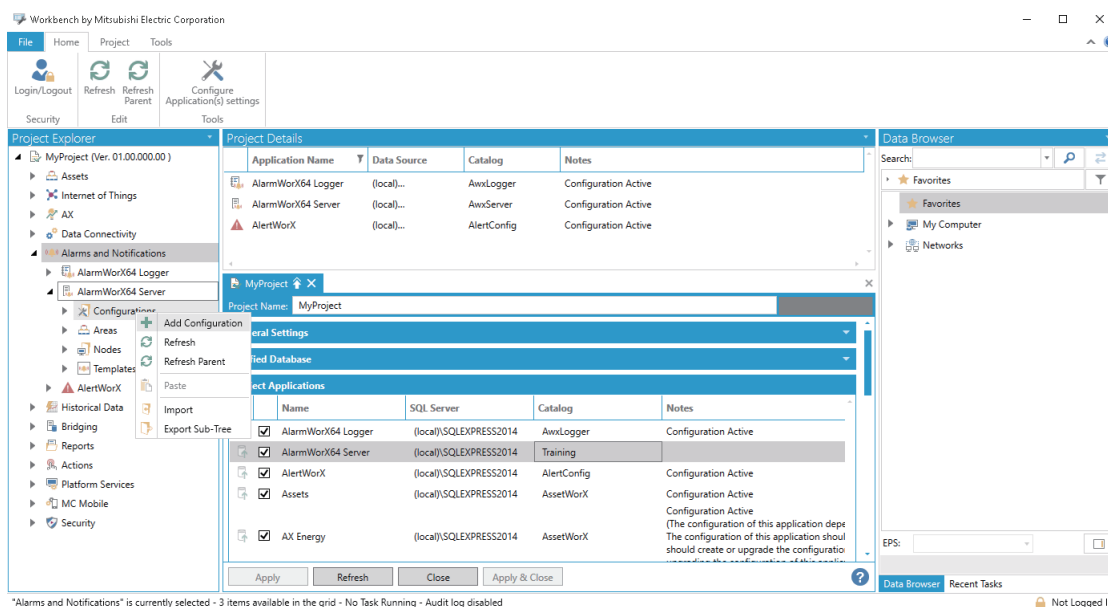


5. Click the [Apply] button.

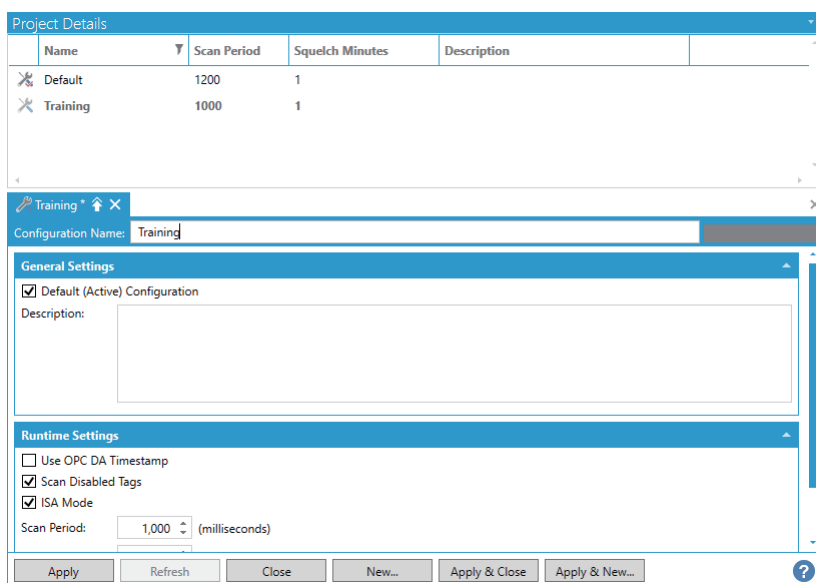
Setting an alarm tag

Operating procedure

1. Select the [Home] tab in the ribbon ⇒ "Project Explorer" ⇒ (created project) ⇒ [Alarms and Notifications] ⇒ [AlarmWorX64 Server] ⇒ select and right-click [Configurations] ⇒ [Add Configuration] from the shortcut menu.



2. Enter an arbitrary alarm setting name for "Configuration Name," and select the checkbox of "Default (Active) Configuration."



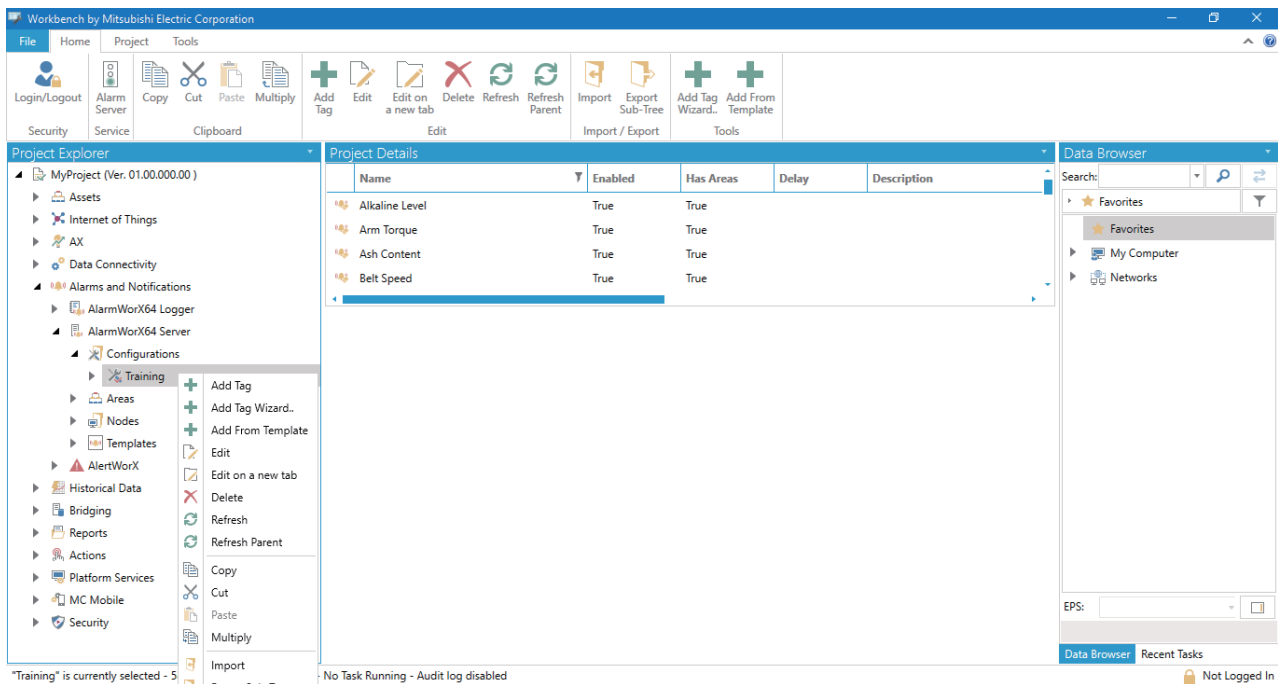
3. Click the [Apply] button.

Point

By selecting the checkbox of "Default (Active) Configuration," the setting can be displayed only by pasting AlarmWorX64 Viewer area on the GraphWorX64 screen.

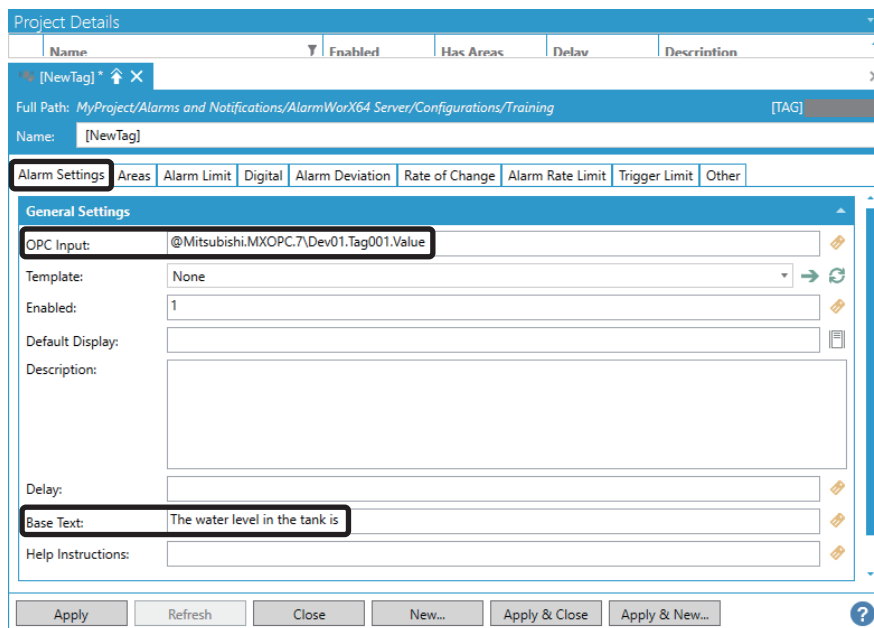
When more than one setting is present, select the setting to display on a pasted AlarmWorX64 Viewer area instead of selecting the checkbox.

4. Select the [Home] tab in the ribbon ⇒ "Project Explorer" ⇒ (created project) ⇒ [Alarms and Notifications] ⇒ [AlarmWorX64 Server] ⇒ [Configurations] ⇒ select and right-click the setting created in the step 2 ⇒ [Add Tags] from the shortcut menu.



5. Set an alarm tag.
 - Enter an arbitrary alarm setting name for "Name."
 - Click the icon to set the tag ( Page 84 Placement procedure for a data entry area), which was set in GraphWorX64, for "OPC Input."
 - Enter the first part of an alarm text in "Base Text."

(Example) Enter 'The water level in the tank is' to show the alarm text 'The water level in the tank is upper level.' or 'The water level in the tank is upper-upper level..'



6. For "LoLo Condition," "Lo Condition," "Hi Condition," and "HiHi Condition" in the [Alarms Limit] tab, enter a threshold value for each alarm for "Value." For "Message Text," enter a text for each threshold value.

The following shows an example for "Hi Condition."

The screenshot shows a software interface for configuring alarm limits. At the top, there's a 'Project Details' header with a dropdown menu. Below it is a table with columns: Name, Enabled, Has Areas, Delay, and Description. A new tag '[NewTag]' is being added. The full path is 'MyProject/Alarms and Notifications/AlarmWorX64 Server/Configurations/Training'. The name is '[NewTag]'. The 'Alarms Limit' tab is selected, showing various alarm settings. The 'Hi Condition' section is expanded, showing fields for 'Value' (60), 'Message Text' (upper level), 'Severity' (500), and 'Requires Ack' (1). The 'HiHi Condition' section is also visible below it. At the bottom, there are buttons for 'Apply', 'Refresh', 'Close', 'New...', and 'Apply & Close', along with a help icon.

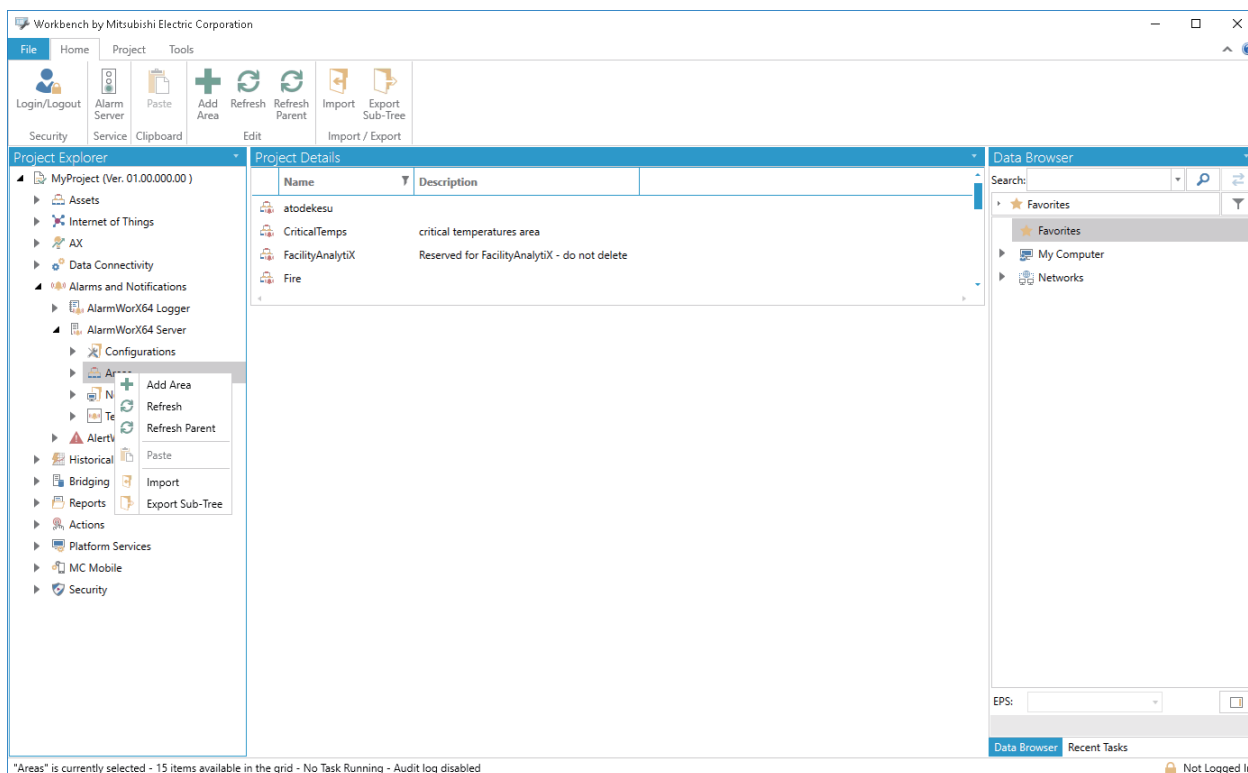
Point

Description of items in the screen

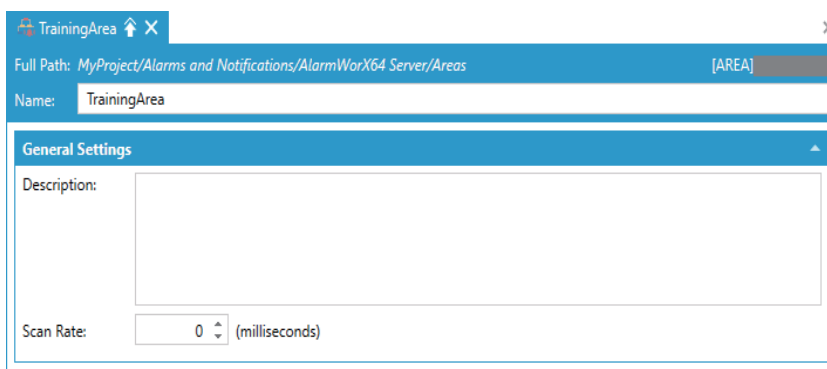
- Severity: Set a degree of the alarm.
- Requires Ack: Set if an alarm acknowledgement is required.
 - 0: When an alarm is cleared, the alarm is not displayed. (Automatic Ack.)
 - 1: Even when an alarm is cleared, the alarm is kept displaying until an acknowledgement is issued. (Manual Ack.)

7. Click the [Apply] button.

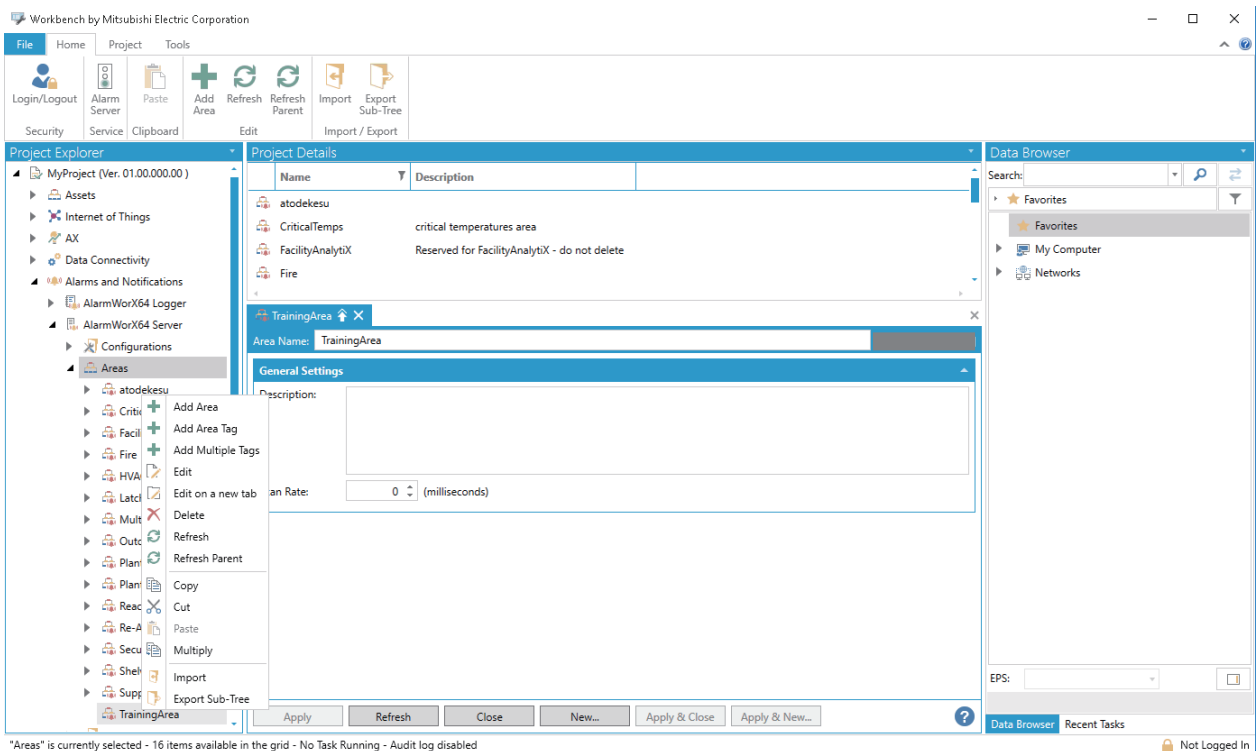
8. Select the [Home] tab in the ribbon ⇒ "Project Explorer" ⇒ (created project) ⇒ [Alarms and Notifications] ⇒ [AlarmWorX64 Server] ⇒ select and right-click [Areas] ⇒ [Add Area] from the shortcut menu.



9. Configure the settings for the area.
Enter an arbitrary area name for "Name," and click the [Apply] button.

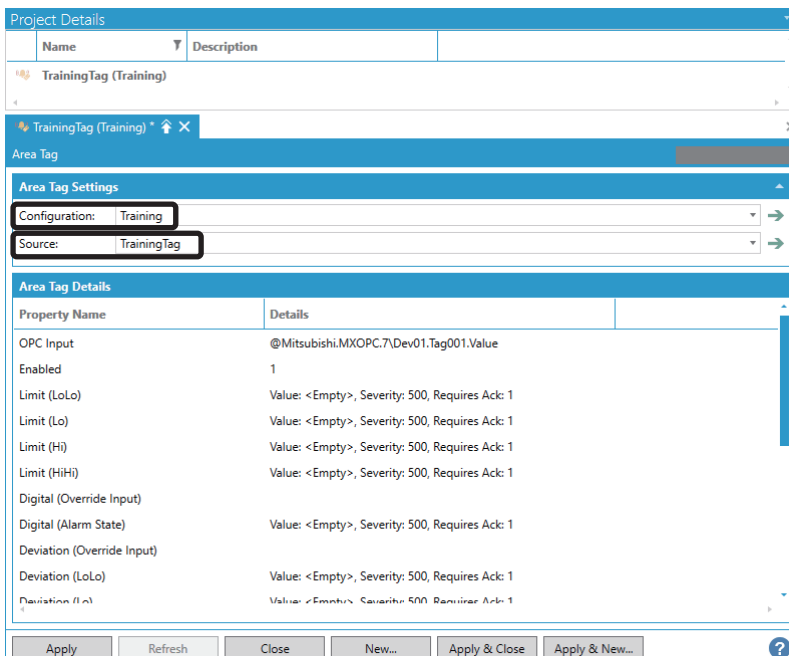


- 10.** Select the [Home] tab in the ribbon ⇒ "Project Explorer" ⇒ (created project) ⇒ [Alarms and Notifications] ⇒ [AlarmWorX64 Server] ⇒ [Areas] ⇒ select and right-click the area set in the step 9 ⇒ [Add Area Tag] from the shortcut menu.



11. Set an area tag.

- Select the created alarm setting from "Configuration."
- Select the created alarm tag from "Source."
- Click the [Apply] button.



Multiple alarm tags can be grouped into one group by adding these alarm tags in the area.

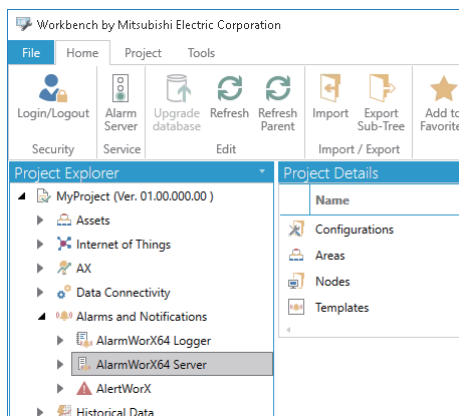
Setting AlarmWorX64 Server

MC Works64 runs in the background of the personal computer.

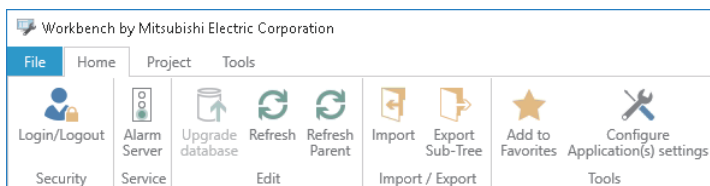
The following shows the procedure to run AlarmWorX64 Server in the background.

Operating procedure

1. Select the [Home] tab in the ribbon ⇒ "Project Explorer" ⇒ (created project) ⇒ [Alarms and Notifications] ⇒ [AlarmWorX64 Server].



2. Check that the "Alarm Server" icon in the [Home] tab in the ribbon is green (this indicates the service is started). If the icon is red (the service is stopped), click the icon to start the service.



6 TROUBLESHOOTING

6.1 Troubleshooting on Installation

The following table shows the troubleshooting on installation.

Symptom	Corrective action
IIS cannot be installed.	Log on to the personal computer as a user with Administrator privilege in advance, and then start installation.
A message that demands installation of '.NET Framework3.5' appears at the installation of SQL Server.	Install '.NET Framework3.5.'
Error1935 occurred at installation.	An error which depends on the environment of the personal computer. Refer to the Microsoft website, and perform the following actions. <ul style="list-style-type: none"> • Update the operating system to the latest version. • Run "Microsoft easy fix."
An error related to SPI (Sentinel Protection Installer) occurred at installation.	Search "Sentinel Protection Installer □.□.□.exe" ^{*1} in the following folder on the installation DVD-ROM of MC Works64, and double-click the exe file. MC Works64\MCWorks64\ISSetupPrerequisites
An error 'It was not possible to create the user '(user name)' in the SQL Server....' occurred at installation.	Associate the MC Works64 user and SQL Server user. <ol style="list-style-type: none"> 1 Start 'Configure System.' Windows Start ⇒ [MELSOFT] ⇒ [Configure System] 2 Register a new user with the User Configuration. 3 Select an SQL Server to be used. 4 When initializing the configuration database, select "Overwrite" and start installation.
An error 'The installation of OPC UA Local Discovery Server □.□.□ ^{*1} appears to have failed....' occurred at installation.	Click the [Yes] button and continue installation. The installation of OPC UA Local Discovery Server is skipped because the different version from OPC UA Local Discovery Server ^{*2} included in MC Works64 has already been installed.
The services for MC Works64 do not work after installation.	Grant the Administrator privilege to the user using the service. <ol style="list-style-type: none"> 1 Select [Control Panel] ⇒ [System and Security] ⇒ [Administrative Tools], and double-click "Services." 2 Select and right-click a service for MC Works64, and select [Properties] in the shortcut menu. 3 Select the [Log On] tab in the displayed screen, and check the user authority in "This account." 4 If the user does not have Administrator privilege, grant Administrator authority to the user. Check if the TCP port 80 is used in other applications. When the TCP port 80 is used, change the port number. If the TCP port number cannot be changed, terminate other applications as follows. <ol style="list-style-type: none"> 1 Run the following command in the command prompt. netstat -nao 2 Check the PID that uses TCP port 80. 3 Start a task manager to display the PID. Select the [Processes] tab, and select the checkbox of "PID (Process Identifier)" under [View] ⇒ [Select Columns] menu. 4 Check the process which uses the PID checked in 2.
Services are not installed.	Set the services again. ^{*3} <ol style="list-style-type: none"> 1 Start 'Configure System.' Windows Start ⇒ [MELSOFT] ⇒ [Configure System] 2 Follow the same procedure as the one for installation.

*1 □.□.□ and □.□.□ indicates their versions.

*2 OPC UA Local Discovery Server can be used by an OPC UA client to search for OPC UA Server.

*3 For the operating system with the user account control (UAC) enabled, disable the UAC first, then install the service.
(User Account Control (UAC) helps prevent the execution of programs, which will execute an unintended operation, from damaging a system. This setting affects the security function provided by the UAC, consider the risk for the system.)

1 Select [Control Panel] ⇒ [System and Security] ⇒ [Change User Account Control settings].

2 Move the slider bar to "Never notify," and click the [OK] button.

3 Restart the personal computer.

After the services are installed successfully, the change must be returned to the previous one.

6.2 Troubleshooting on Settings

The following table shows the troubleshooting on settings.

Symptom	Check point	Corrective action
Unable to communicate with OPC UA Server (such as MX OPC Server UA and Management Shell of Edgecross Basic Software). (Example: An OPC tag is not displayed in the "Data Browser" screen.)	Is the client certificate of MC Works64 permitted on the OPC UA Server side? <ul style="list-style-type: none"> MX OPC Server UA Is a client certificate of MC Works64 stored in the 'rejected' directory of the MX OPC Server UA installation folder? Management Shell of Edgecross Basic Software Is a client certificate of MC Works64 stored in the reject list of Management Shell of Edgecross Basic Software? For the management (save destination) of the client certificate, refer to the manuals of each OPC UA Server.	Allow the client certificate on the OPC UA Server side. <ul style="list-style-type: none"> MX OPC Server UA Move the client certificate to the "certs" directory. For details, refer to the following: (MELSOFT MX OPC Server UA Version 3 Operating Manual) Management Shell of Edgecross Basic Software Move the client certificate to the trust list.
	Do the following computer names or IP addresses match between MC Works64 and OPC UA Server when they are installed on different personal computers? <ul style="list-style-type: none"> Endpoint URI which is set in Workbench Subject Alternative Name in a server certificate of OPC UA Server For the server certificate, refer to the manuals of each OPC UA Server.	Set the computer name or IP address which is described in the server certificate as an endpoint URI. For MX OPC Server UA or Edgecross Basic Software, set the computer name of the personal computer where MX OPC Server UA or Edgecross Basic Software is installed as an endpoint URI.
	Is a client certificate in the following status? <ul style="list-style-type: none"> A client certificate of MC Works64 is expired. A client certificate of MC Works64 is not stored in the OPC UA Server side at the first communication. 	Update the client certificate by referring to the following:  Page 81 Updating a client certificate of MC Works64
An error occurred when running MC Works64 and other edge applications simultaneously.	Is the load on the industrial PC increased? *1	Close the services and applications which are not used.
		An error may occur if the load on MC Works64 services is high. Stop the services which are not used in Workbench to reduce the load. (Select "Project Explorer" ⇒ (created project), and select "Configure Services" in the [Home] tab in the ribbon. Change "Status" from "Running" to "Stopped" for unused services in the "Available Services" section.
		An error may occur if the drawing load is high. Review the settings on the monitoring screen of GraphWorX64 to reduce the load. <ul style="list-style-type: none"> Delete 3D View and Layer. Reduce the number of placed elements. Display only one monitoring screen. (Do not activate multiple monitoring screens simultaneously.) Lengthen the data update interval. (Click the background of the canvas, and review the settings in "ScanRate" under the [Property] tab.) Reduce the animation speed of the placed Viewer. (Double-click the placed Viewer and open the "Configure your Control" screen. For AlarmWorX64 Viewer: In the tree on the left side of the screen, select [AlarmWorX64 Viewer] ⇒ [Tab] ⇒ [Grid], and review the settings of "Animation Speed" and "Detail Duration" in the "Timing" section. For TrendWorX64 Viewer: In the tree on the left side of the screen, select [TrendWorX64 Viewer] ⇒ [Tab] ⇒ [Chart], and review the settings of "Animation Speed" and "History Read Rate" in the "Realtime Mode" section.) Review the settings in other edge applications to reduce the CPU usage rate.

Symptom	Check point	Corrective action
A service does not start.	Has a user password which is set at the installation been changed?	<ul style="list-style-type: none"> • Set the services again. ^{*2} ❶ Start 'Configure System.' Windows Start ⇒ [MELSOFT] ⇒ [Configure System] ❷ Register the user again.

- *1 When the load on an industrial PC is increased, it may affect the operation of an edge application.
Perform the following maintenance when a line is not operated because they may increase the load on an industrial PC.
- Windows Update
 - Optimize drives
 - Disk cleanup
- *2 For the operating system with the user account control (UAC) enabled, disable the UAC first, then install the service.
(User Account Control (UAC) helps prevent the execution of programs, which will execute an unintended operation, from damaging a system. This setting affects the security function provided by the UAC, consider the risk for the system.)
- ❶ Select [Control Panel] ⇒ [System and Security] ⇒ [Change User Account Control settings].
 - ❷ Move the slider bar to "Never notify," and click the [OK] button.
 - ❸ Restart the personal computer.
- After the services are installed successfully, the change must be returned to the previous one.

7 CONSIDERATIONS

Depending on the application settings, the following symptoms occur and the operations of the application may be unstable. Configure the settings properly to prevent the following situations.

- CPU utilization reaches its limit.
- Memory is consumed up to the limit assigned by the operating system.

MEMO

APPENDIX

Appendix 1 System Configuration and Application Setting for MC Works64 Operation

When operating MC Works64 simultaneously with other Edge applications, loads on an industrial PC may increase depending on settings; an error or data corruption may occur in each application.

It is recommended to set each application to limit the CPU and memory usage rate of the whole industrial PC to average 60% so that each application can be operated stably.

This section shows the examples of system configurations and application settings to stabilize operation.



When the load on an industrial PC is high, refer to the following to lower the load.

☞ Page 105 Troubleshooting on Settings

System configuration

Diagnose and monitor the operation status of one production line that consists of ten devices simultaneously in a MELIPC.

Item	Description
Industrial PC	MELIPC MI5122-VW
Access target route	QCPU×10 (via QJ71E71-100)
Data collector	SLMP data collector
Edge application	MC Works64 EdgeComputing Edition
	Real-time Data Analyzer

Application settings

Purpose	Application	Description
Diagnostic	<ul style="list-style-type: none"> Real-time Data Analyzer Edgecross Basic Software (Data diagnosis flow) GX LogViewer 	■Data diagnosis flow setting No.1
		Collection interval 500 milliseconds
		Number of collection points 100
		Diagnostic method Real-time Statistic Diagnosis Tool (MT method)
		Setting or not setting for an extended section Not set
		Reading target variable 100 variables
		Statistic extraction Multi trace statistic (Calculate from 6 variables in each section)
		Criterion matrix size 6 columns×105 rows
		Number of pieces of feedback 1
		■Data diagnosis flow setting No.2
		Collection interval 500 milliseconds
		Number of collection points 100
		Diagnostic method Similar Waveform Recognition Tool
		Data type of diagnosis target data REAL Number of diagnoses 1
		Monitoring or not monitoring the result of a similar waveform recognition in GX LogViewer Not monitoring
		Number of pieces of feedback 1
Monitor	<ul style="list-style-type: none"> MC Works64 EdgeComputing Edition Edgecross Basic Software (Management Shell) 	Number of monitoring items 1400 Details Data display (GraphWorX) 200 Alarm monitoring (AlarmWorX Server) 300 Logging (MC Historian) 900 (Data collection rate: 1 second)
		Number of display screens 1 Screen display and setting content Data display (Process Point) 200 Alarm list display (AlarmWorX64 Viewer) Real Time Alarm display Animation Speed (1000 milliseconds) Graph display (TrendWorX64 Viewer) four line graphs (using logging data) Trend Range and Period: 5 minutes Animation Speed: 1 second History Read Rate: 5 seconds Screen Update Interval (Scan Rate) 1000 milliseconds 3D View None
Data storing	<ul style="list-style-type: none"> Edgecross Basic Software (data logging flow) 	■Data logging flow setting No.1 to No.2
		Collection interval 500 milliseconds
		Number of collection points 100
		Data storing format File

REVISIONS

*The manual number is given on the bottom left of the back cover.

Revision date	*Manual number	Description
May 2018	BCN-P5999-0952-A	First edition
October 2018	BCN-P5999-0952-B	■Added or modified parts Section 2.1, Section 2.2, Chapter 3, Section 4.3, Section 4.4, Section 6.1, Section 6.3, Section 6.4
June 2019	BCN-P5999-0952-C	■Added or modified parts Section 2.2, Chapter 3, Section 6.3, Section 7.1, Section 7.2, Appendix 1
November 2019	BCN-P5999-0952-D	■Added or modified parts Chapter 3, Section 4.2, Appendix 1
September 2020	BCN-P5999-0952-E	■Added or modified parts SAFETY PRECAUTIONS, CONDITIONS OF USE FOR THE PRODUCT, Chapter 3, Chapter 4, Section 5.4, Section 6.2
January 2022	BCN-P5999-0952-F	■Added or modified part Chapter 3

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