SIEMENS

SIMATIC Notifier

System Manual

11/2018

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠ DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠ WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠ CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

⚠ WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

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Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Security Information

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Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions only form one element of such a concept.

You are responsible for preventing unauthorized access to its plants, systems, machines and networks. Systems, machines and components should only be connected to the enterprise network or the internet if and to the extent necessary and with appropriate security measures (e.g. use of firewalls and network segmentation) in place.

Additionally, Siemens' guidance on appropriate security measures should be taken into account. For more information about industrial security, visit

http://www.siemens.com/industrialsecurity (https://www.siemens.com/industrialsecurity)

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends to apply product updates as soon as available and to always use the latest product versions. Use of product versions that are no longer supported, and failure to apply latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under

http://www.siemens.com/industrialsecurity (https://www.siemens.com/industrialsecurity)

Function overview

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Direct notifications with SIMATIC Notifier

With SIMATIC Notifier you can monitor your plant, production line or machine using your mobile device in combination with OPC-UA-DA server or via S7+ or Classic communication. You configure alerts, warnings and informative tips on the server, which are triggered by events in your plant and sent to the users in your network in form of mobile notifications. The users can quickly identify the importance of the notification by looking at their mobile device anywhere in the plant within the specified WiFi network.

Once setup is configured the server sends notifications directly to the connected mobile devices. The users set up for the same notifications have the possibility to collaborate on incoming issues together in the same notification network.

You specify the user roles, allocate devices and configure messages on the server using a simple and efficient web-engineering tool. In order to set up the communication with the smart watch, you install the SIMATIC Notifier app on the device. The app lets you setup the communication with the server and work with incoming notifications.

Functions

- Direct notifications on smart devices
- User and role administration
- Different notification categories
- "Take over" function
- Encrypted communication via WiFi

Benefits

- Easy integration in plants, production lines and machines
- User-friendly and fast configuration
- Less downtime, significant saving of time and costs

Licensing and supported devices

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Licensing

The licensing concept of the Notifier service includes two types of licenses:

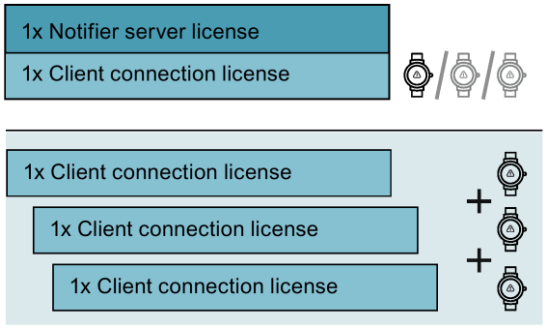
- Unlimited product license for Notifier server

  Unlimited product license allows you to start the Notifier server and establish one client connection. This license does not affect the Notifier configurator. Notifier configurator can be started without a license. Product license in use cannot be transferred to another Windows device.

  The Notifier server download includes one client connection license.

- Countable client licenses for Notifier mobile app users

  Countable client connection license allows one additional client to be connected to the Notifier server. One countable client connection is included with the Notifier server download. You can use this license several times, but always on one device at a time. If you want to connect more than one client with the Notifier service at the same time, additional client licenses are required. You increase the amount of client connections anytime by obtaining and adding the single licences for further participants using Siemens Automatic License Manager (ALM).



  Allocated client count connections in use cannot be transferred.

A client license is made available as follows:

- By closing the app on the mobile device via menu;
- By disconnecting the app from the Notifier server via menu;
- By disconnecting the mobile device from Wi-Fi connection;
- By turning the mobile device off.

The license will be free to use again in ALM in 2 minutes after disconnecting.

Supported devices

The following SIMATIC S7 controllers are supported:

- SIMATIC S7-1500
- SIMATIC S7-1200
- SIMATIC S7-300
- SIMATIC S7-400
- SIMATIC OPC UA

Supported smart devices

You can view the currently supported smart watches in the Google Play Store entry for SIMATIC Notifier.

Configuration concept

4

Introduction

While using the notification service you are working with user roles and respective devices. You define the roles according to the tasks and functions of the respective users, for example operators. When you plan the notification service you specify the user roles and tailor the respective notifications according to the users' needs.

Requirements

- SIMATIC Notifier Server Application has been installed
- SIMATIC Notifier App has been installed on a smart watch
- Products are licensed
- Notifier Configuration has been opened

Configuration workflow

The starting point for the configuration of notifications is the existing plant structure.

- Configure the connections and tags on the Notifier server.
- Specify the notification texts and types.
- Identify and specify the user roles in the plant, for example, line operator.
- Register the smart devices.
- Specify which notifications specific roles will receive.
- Connect and register the smart watch on the server and assign them to a role.

As a result of a successful configuration, the notifications sent from the server to the user are tailored to the situation and plant section. The users can read and react to incoming notifications by taking them or deferring them.

Configuration on the server

Configuring the notification service on the server can be described in following steps:

- Create a project in web engineering tool.
- Create a target in this project for the dedicated device.
- Specify the connections and tags.
- Specify the notifications you want to receive.
- Choose notifications from shared resources or specify your own new notification texts.
- Specify the conditions which trigger the notifications.
- Specify the user roles and assign the devices.

For more detailed information on server configuration, refer to "Configuring Notifier server". (Page 29)

Configuration of clients

The final step in configuration is connecting the smart watches to the notification service from the server. The SIMATIC Notifier app allows for easy and reliable connection to the server. In case the connection is lost, the app will automatically try to reconnect to Notifier server.

See also

Configuring Notifier server (Page 29)

Basics on notifications

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Notifications

There are three types of notifications which can be displayed in the Notifier:

- Alert

  Alerts are critical notifications with the highest priority, which for example must be addressed immediately.

  Alerts can be taken over by a user which means that this user will take care of the underlying issue which triggered the alert, for example reduce the temperature in a cauldron. In this case other users in the network will be informed that the issue is being taken over by another user. Alternatively, if the user cannot take care of the issue he or she can defer this alert. A deferred alert can be taken over at a later point as long as no other user has taken it over in the meantime.

- Warning

  Warnings are notifications with medium priority which inform the user about an important state or issue in the plant.

  The users can also take over or defer the incoming warnings similar to alerts.

- Information

  Informative notifications deliver a tip or a piece of information with no active participation from the user's side.

  Information can be read and confirmed.

The incoming notifications are displayed on the top of the screen. When a user takes over an alert or a warning, this notification disappears from the top view but will still be counted in the notification stack in the main screen.

Home screen

The Notifier home screen offers you an overview of the pending notifications and allows you to access several app functions.

The home screen consists of the following areas:

① Pending notifications area shows the latest incoming notifications in the order of their priority. These notifications are neither taken over nor deferred yet.

② Clock view and launch area when in demo mode.

③ Information area shows the amount of incoming notifications of the "information" type.

④ Warning area shows the amount of incoming notifications of the "warning" type.

⑤ Alert area shows the amount of incoming notifications of the "alert" type.

Notification view

You can read the whole notification in the notification view.

Each notification consists of the following elements:

- Unique identification number
- Signifying notification icon
- Time of occurrence

- Notification text
- "Defer" button for messages of the types "Alert" and "Warning"
- "Take over" button

Three dots at the end of the notification signify that the notification text is longer than is currently displayed. You display a longer text completely by tapping the notification.

Active notifications

The notifications which you have not viewed yet and other users have not taken over are kept in the pop-up stack on the upper side of the screen. The notifications are sorted first by their priority and then in the order of their occurrence. By touching the pop-up you open and view the latest notification, which then will be removed from the stack when accepted or deferred.

Taking over/confirming and deferring messages

As soon as you have received and read a notification, you can react to it in the following ways:

- Take over/confirm a notification

  By taking over a notification you let other users know that you assume responsibility for this notification and take care of the issue, which has initially triggered the message. As soon as the message is confirmed, an icon with the corresponding device name will be displayed in the notification.

  You can take over notifications of types alert and warning. The notifications of type information can only be confirmed as read.

  The takeover is communicated to other users in the same network and can be seen in the list of notifications. Active notifications taken over by other users are displayed in gray font.

  Confirmed information does not appear in the notification home screen and is not counted as active anymore.

- Defer a notification

  By deferring a notification the user signifies that he cannot take active participation in solving the corresponding issue at the moment. The notification will be shown in the notification stack and can be taken over later. Unlike the take over, the defer action only closes the notification and marks it as read for the current smart watch user. Other users of this user group will not be informed of deferring action.

  Notifications of type "Information" cannot be deferred and can only be confirmed as read.

Note

Take over

Taking over the notification only informs other users in the system about taking the responsibility over the underlying issue. The take over will not be sent back to the plant and cannot be regarded as acknowledgment.

Note

Taking over an alert or a warning cannot be undone.

Amount of notifications

Your smart watch contains the maximum of 100 notifications. When this amount is exceeded, the oldest notification will be removed from the list in favor of the new incoming notification. The oldest notification will be removed irrespective of its state and type.

Menu

You can display the menu by sliding down from the top of the screen.

- "Overview" shows all the notification in the order of their arrival, independent of their priority.
- "Alerts" shows all the notifications of alert category in order of activity and then in chronological order.
- "Warnings" shows all the notifications of warning category in order of activity and then in chronological order.
- "Information" shows all the notifications of information category.
- "Notifier ID" shows you the individual ID of your Notifier client which is needed during setup on the server side.
- "Connection" enables the connection to the Notifier server (IP address).
- "Legal" shows the legal information for the app, such as Copyright, Privacy Policy, etc.

In the demo connection mode you receive notifications for the duration of two minutes.

Demo connection mode

In order to test the Notifier functionality without any additional hardware you can set the smart watch into the "Demo connection" mode. Demo mode can only be selected if the smart watch is not connected to the server.

You can configure the demo mode in the menu under "Demo connection".

- In "Tap mode": Random notifications are generated by tapping the center of the home screen.
- In "Timer mode": Random notifications are generated in 10 second interval time.

After two minutes all generated demo notifications will be deleted automatically.

Note

In demo connection mode the existing notifications will be deleted from the smart watch.

Establishing and managing a connection

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Introduction

To be able to connect to the server, your smart watch must be registered with the notifier server via the Notifier ID.

Once you have installed the Notifier app on your smart watch and start the app for the first time, you configure a connection to the server.

To allow easy and fast access to the notifications, the app is not password-protected. Make sure to follow all the security precautions to provide secure operation of your watch.

Note

Deactivate Bluetooth

Having Bluetooth activated on the smart device may cause Wi-Fi connection problems.

Please deactivate Bluetooth on your smart watch after installation. Make sure Bluetooth is deactivated on your smart device after restart.

Configuring secure connection to the server

1. In the Notifer smartwatch app swipe down from the top of the screen to go to the Notifier app menu.
2. Tap on "Notifier ID" menu command.

   The Notifier unique device ID is displayed. The unique ID is generated automatically.

3. Open Notifier Server on your PC.
4. Click on "Add device" in Notifier Configuration.
5. Open the configuration page of the device.

6. Enter the unique ID for the respective device.

   Note

   In case the unique ID has already been registered for another device in the server configuration, generate a new unique ID on the smart watch by clicking the "Refresh Notifier ID" button.

7. On your smart watch go to "Menu > Connection".
8. Enter the Notifier Server IP address and press "Connect".

   In order to submit a number scroll the respective field up or down.

   The server connects to the watch and shows the corresponding device in the configurator (browser). On the smart watch the "Connect" button automatically turns to "Connected" state.

Note

In case the Notifier Server is reinstalled, all the smart watches need to be registered using the device IDs once again.

Note

After you reinstall the Notifier app, a new device ID is assigned and the connection with the Notifier Server must be configured again.

Note

If no license is present in Automation License Manager (ALM), connection cannot be established and a corresponding error message appears.

Reconnecting to the server

After two minutes of being disconnected from the server, for example, by being outside of the Wi-Fi range, a message informs you about the lost connection.

You can reconnect to the server in the "Connection" menu.

1. To show the navigation list swipe from the top of the screen.
2. Tap on "Connection" menu command.

   The Notifier Server IP Address is displayed.
3. Click on "Reconnect" button.

   The connection is reestablished.

Alternatively, when no connection is available, a popup message is displayed. By tapping the message you can open the connection view.

Disconnecting from the server

1. To show the menu swipe down from the top of the screen.
2. Tap on "Connection" menu command.

   IP address of the current connection is displayed.
3. Click on "Disconnect".

   The watch is disconnected, and another registered smart device is able to connect using the same client license.

See also

User administration (Page 40)

Secure operation

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Secure operation

Please consider the following hints on server security:

- Do not disclose the smart watch device ID to unauthorized persons to prevent attempts of unauthorized access.
- In case there is a possibility of disclosure of the device ID, please ask the administrator to delete the smart watch entry and perform a factory reset on the smart watch in order to get a new device ID. Then register the smart watch as a new device once again.
- Follow the security measures to prevent any unauthorized access to the machine with the Notifier Server installed.
- Configure and use the secure credentials in the Notifier configurator.
- Store your smart watch securely on site when not wearing it to prevent unauthorized access to the watch.
- Be cautious when using Notifier with your mobile device.

Using Notifier complementary to other systems

Notifier is intended to be used alongside with other notification/alarming systems in your plant, because Wi-Fi networks can be vulnerable and inconsistencies may occur.

Please make sure to use other notification systems additionally for proper communication in your plant.

Working with notifications

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Opening a notification

To open a new incoming notification from the home screen tap the notification pop-up in the upper half of the home screen.

Notification opens in a new screen.

If the text cannot be displayed completely and three dots in the end of the third line appear, tap the notification to read the whole text.

Taking over alerts and warnings and confirming information

To take over a notification open a notification and tap  .

The notification is taken over and a green icon with the name defined in the Notifier Configuration is shown in the notification details screen. Thus other users can see who took over this notification.
The notifications which were taken over are not included in the active notification count on the home screen.

You can take over notifications of types alert and warning. The notifications of type information can only be confirmed as read.

Note

Taking over an alert or a warning cannot be undone.

Deferring a notification

To defer a notification open a notification and tap  .

The notification is closed and marked as read. The deferred notifications are not included in the stack of notifications on the home screen. However, they are included into the active notification count. After deferring a notification you return to the previous screen.

Going back

You go back from the current screen to the previous screen by swiping from left to right.

Opening the menu

You open the menu by swiping from the top of the screen.

Browsing notifications

1. Open the menu by swiping from the top of the screen.
2. Select "Overview" in the menu.

   The overview list shows all the received notifications in chronological order independent of their priority.

3. Swipe down to show the next notification. Swipe up to see the previous notification.
4. Tap on notification to go into the detail view.
5. Swipe left to go back to the list from the detail view.

Configuring Notifier server

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9.1 Requirements and initial installation

Software requirements

The following preconditions must be met on the PC before you install the SIMATIC Notifier Server:

- Microsoft .NET Framework with Version 4.6.0 must be installed
- IIS with ASP :NET 4.5 (or higher) must be installed

Note

Side-by-side usage not permitted

Side-by-side usage of other WinCC web-based applications such as SIMATIC WinCC Runtime Unified and Notifier Server is not supported.

Hardware requirement

The working memory of minimum 4 GB is required to run the Notifier Server.

Supported operating systems

The SIMATIC Notifier Server is only supported in 64-bit operating systems.

- Windows Server 2008 R2 Standard Edition
- Windows Server 2012 R2 Standard Edition
- Windows Server 2016 Standard Edition 64 Bit
- Windows 7 SP1 64x Home Premium
- Windows 7 SP1 64x Professional
- Windows 7 SP1 64x Enterprise
- Windows 7 SP1 64x Ultimate
- Windows 10 Home
- Windows 10 Pro
- Windows 10 Enterprise

Note

Keeping the operating system up to date

Keep the running operating system up to date to ensure smooth functioning of the Notifier Service.

Web browser recommendation

Google Chrome has been tested for performance and stability and is proven to be efficient in working with Notifier Server.

Network connection

For working with Notifier Configuration network connection must be available. Otherwise a blank web page might be shown in the Notifier Configuration.

Internet Information Services (IIS) activation

To be able to install Notifier Configuration, the following settings must be selected in Windows:

For Windows 10 you can make these settings in the following window: Control Panel > Programs > Programs and Features > Activate or deactivate Windows features

- HTTP error
- HTTP redirect
- Default document
- Static content
- .NET expendability 3.5
- ASP
- ASP.NET 4.5
- ISAPI extensions
- ISAPI filters
- Compression of dynamic content
- Compression of static content
- Requirement filtering

Installation

Download the Notifier Server installation package via Online Software Delivery (OSD) from the Siemens Mall.

Execute the .exe file to install the Notifier Server.

Note

User Administration Configuration on setup

During setup the application will request you to configure the administrator logon and password. This data is necessary in order to work with Notifier Configurator. Create a new domain on the machine, specify the administrator name and administrator password for User Administration and apply the settings following the dialog flow.

Logon

In order to set up the Notifier Configuration the administrator must be registered with User Administration. You define the administrator and password during setup of Notifier Server and use these credentials later on in order to work with the Notifier Server.

Starting the Configuration

Once the Notifier Server application is installed you can start the configuration in a web browser.

1. Open a web browser and type the following address in the address bar:

   ```
   https://Localhost
   ```

   The application loads.

2. Login to the server using the user name and password, which you configured with WinCC Unified Configuration during setup.

Notifier Configuration areas

Within your project there are two main configuration areas:

- User Management

  In User Management you manage the user access data for the Notifier Server configuration, for example set and change passwords for administrators.

- Notifier Configurator

  You set up a target project in which you create the connection, tags and configure notifications.

9.2 Notifier Server configuration

Getting started

You configure the notifications on the Notifier server via the web-based Notifier Configuration.

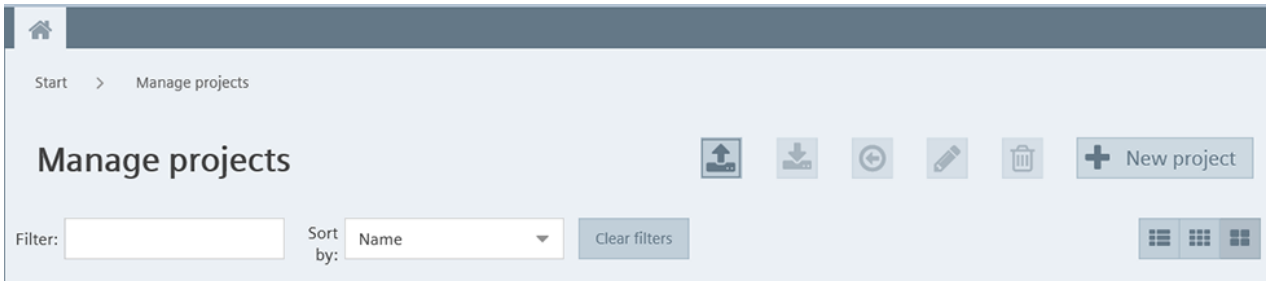
In "Notifier Configurator" you perform the following steps:

- Create a project for the configuration data, for example "MyProject"
- Configure a target for the dedicated device within your project, for example "Notifier_Plant1".

  Only one target can be configured in a project.
- Configure connection, for example OPC UA, S7 Plus or S7 Classic.
- Configure tags for process values, for example for temperature or fill level.
- Specify notifications for the configured tags including categories, notification texts and assigned users.

Creating a project

1. To open the configuration dialog click on "Notifier Configuration".
2. Click on "Administration > Manage Projects".
3. Click on "New project".



4. Enter a meaningful name and an optional description for the project.

   Note

   Subsequent renaming of projects is not supported with Notifier Server.

5. Click "Create project".

   A new project with the specified name is created and displayed in the project overview.
6. Open a created project.
7. Click on "Target manager".

   The dialog "Manage target systems" opens.

8. Click "New target system".
9. Enter a meaningful name and an optional description for the target device.

   A new target system with the specified name is created.

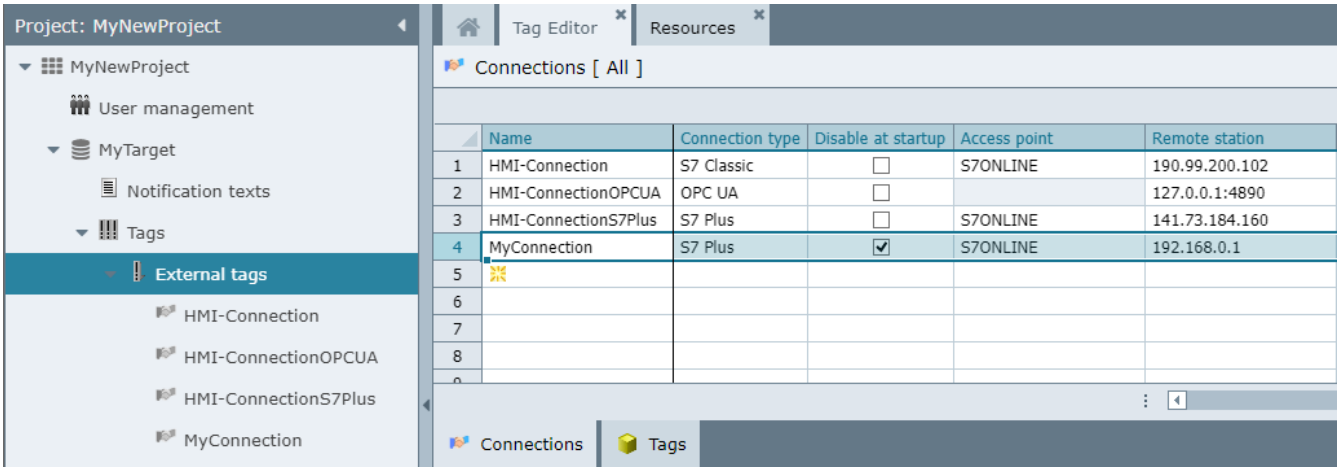
Configuring connections and tags

You configure numeric tags in Notifier server based on the configured connection.

1. Expand the target system in the project tree of your project.
2. Under "Tags" open "Connections" and specify the connection you are using.

Note

Special characters, for example, space character in connection names are not supported. Underscore can be used as a delimiter.



Note

Make sure that the check box in the column "Disable at startup" is disabled for the connection you are using.

3. Configure the connection type:
   - S7 Plus for S7-1200/1500 PLCs

     For S7 Plus connections password specification may be required.
   - S7 Classic for S7-300/400 PLCs

     Specify slots and racks for the S7 Classic connections.
   - OPC UA
4. Specify the IP address of the PLC in the network.

5. Under "Tags > External tags" create entries for the tags, which trigger the notifications.

   On how to address tags of different connection types see "Addressing tags (Page 37)".

6. Configure the tag properties according to your server specification and data type, for example acquisition mode, cycle or limits.

For supported data types see "Supported data types (Page 46)".

Note

OPC UA connection settings

In order to establish and maintain a working connection between OPC UA and Notifier Server, make sure that the time stamp in OPC UA server and Notifier Server are configured the same.

Note

Deleting connections and tags

When a connection or a tag is deleted, all the date and notifications, which were configured for this connection or tag will also deleted.

Configuring notifications

You configure notifications as tag alarms based on the configured numeric tags.

Multiple notifications can be created for each tag. You can configure conditions for each alarm class and assign the notifications the respective alarm class.

1. Select a configured tag in the tag editor in "Tags > External tags > Tags".
2. Click on the "Notification" tab.

   The alarm table for the respective tag is opened.

3. In order to create a new notification, specify the name of the alarm in the first empty row.

   A new notification is created.

4. Select the alarm class for this alarm:
   - Alert for notifications with highest priority;
   - Warning for notifications with medium priority;
   - Information for notifications with low priority.

5. Under "Condition" and "Condition value" specify the condition on which the alarm is triggered.

Note

The selectable conditions depend on the data type of the respective connection tag.

Note

Condition pattern for data type Bool

You can enter values "0" and "-0" for tags of data type Bool :

- "False" to "True": 0
- "True" to "False": -0

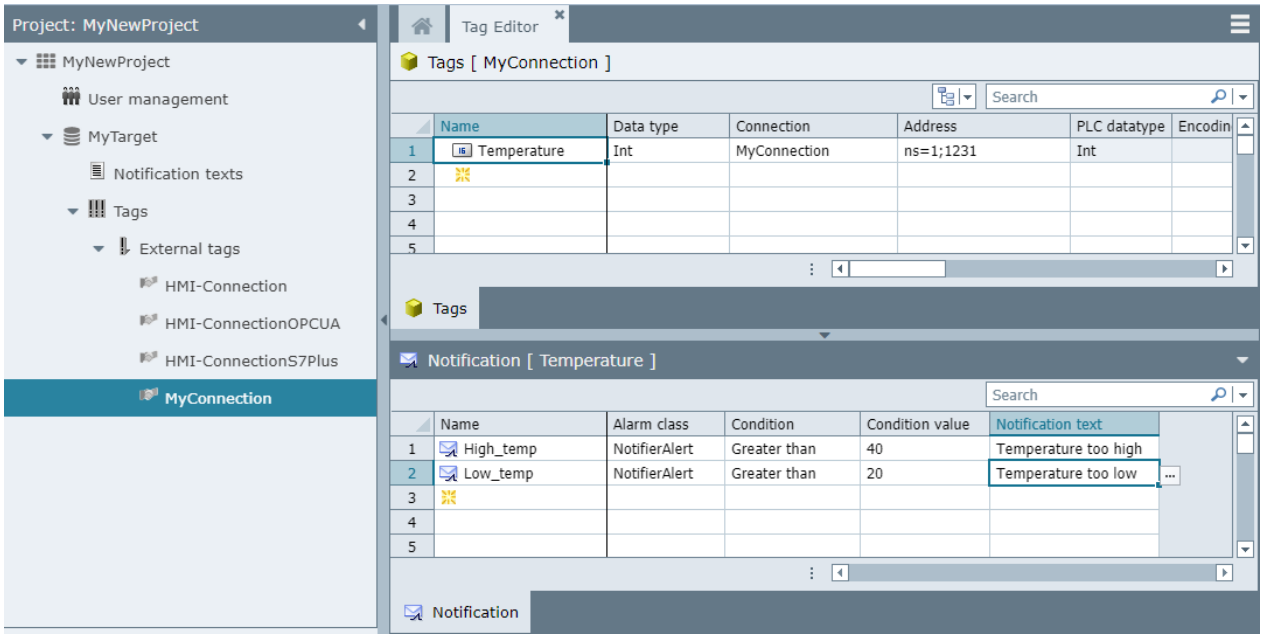
6. Under "Alarm text" specify a new alarm text.

   Alternatively select an already configured alarm text from the selection dialog by clicking on the selection button "..."

Note

Configuration languages

Entering texts in other languages, for example Chinese is also supported in this field. UTF-16 characters are supported.



Note

When you configure an alarm for a tag with a specific data type, it is not possible to change the data type of the respective tag afterwards.

Recommendations

Consider the following information when configuring notifications for the notification service:

- Make it brief and comprehensible

  Consider that the space on the smart watch screen is limited. Depending on the font style and size only about 75 characters can be displayed in the notification view at once. The remaining text will be cropped and three dots will be added at the end of the text. The complete message can be displayed by tapping on the message.

- Plan the notifications according to the plant structure

  In large plants it is advisable to plan the notifications for different plant units and lines. By designating only the relevant notifications to the respective user roles you design an efficient notification concept.

- Use standardized resources
  When creating and assigning notifications you can use ready configured notifications. By saving your custom notification texts into the project resources you ensure standardization of texts by using the same notifications with other tags.

See also

Addressing tags (Page 37)

9.3 Addressing tags

Introduction

The options for addressing external tags depend on the type of connection between Notifier Server and the PLC in question. You address the tags as follows:

- SIMATIC S7-1200/1500 PLCs

  via S7 Plus connection type using symbolic addresses from the respective data block.

- SIMATIC S7-300/400 PLCs

  via S7 Classic connection type using STEP7 tag addresses from the S7 project data block.

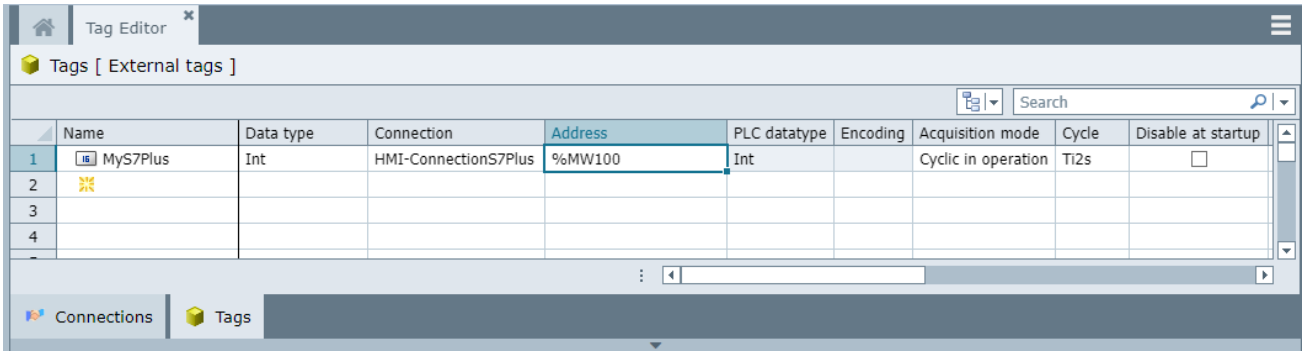
- OPC UA

  via corresponding connection type using predefined attributes and identifier values, for example "V:1DAns=1;s=1.710.1.0.0.0|36"

  For easy access to identifiers you can use the free UAExpert application (https://www.unified-automation.com/products/development-tools/uaexpert.html) from Unified Automation.

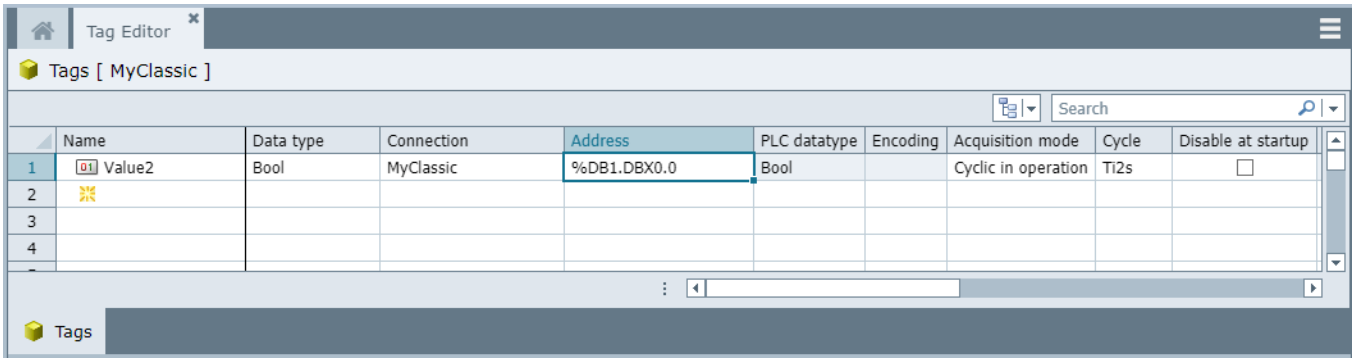
Addressing tags via S7 Plus connection

In order to address tags via S7 Plus connection, enter the symbolic address of the respective tag into the corresponding cell in the column "Address".



Addressing tags using S7 Classic connection

In order to address tags via S7 Classic connection, enter the absolute address of the tag as given in the respective data block of your S7 project into the corresponding cell in the column "Address".



Addressing tags via OPC UA connection

In order to address tags via OPC UA connection, enter the address string into the corresponding cell in the column "Address" with the following attributes:

- **V1** for the OPC UA Version
- **DA** for data access
- **ns** for namespace index
- **s** for identifier type String

Note

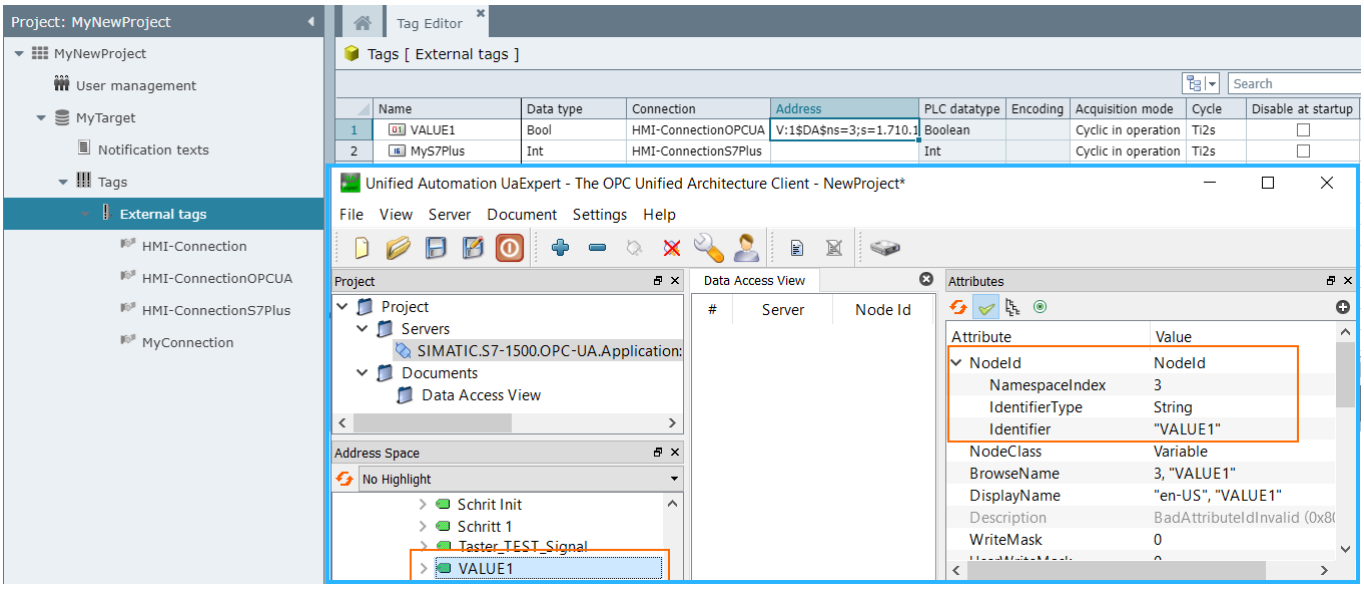
Make sure that the connection address port for OPC UA connection type is changed accordingly.

In order to easily access the OPC UA tag identifiers, it is recommended to use the free application UA Expert Server (https://www.unified-automation.com/products/development-tools/uaexpert.html).

1. Under "Project/Servers > Server Settings" add a new server with connection configured in "Endpoint Url" (localhost or computer name on VMs, Port 4890)
2. Connect to server.

   When Certificate validation dialog appears, click "Trust Server Certificate" and continue.
3. Open Tree Root/Objects/HmiRuntime/Runtime_1/Tags/ in "Address Space" window.

   A list of all created tags appears.
4. Select the first internal tag in order to make it visible on the right side.
5. Set address attribute of external tag to the identifier value of selected internal tag by typing it in the corresponding cell in Notifier Server window, for example "V:1DAns=3;s=1.710.1.0.0.0|36"


Project: MyNewProject
MyNewProject
User management
MyTarget
Notification texts
Tags
External tags
HMI-Connection
HMI-ConnectionOPCUA
HMI-ConnectionS7Plus
MyConnection
Tag Editor
Tags [External tags]
Search
Name
Data type
Connection
Address
PLC datatype
Encoding
Acquisition mode
Cycle
Disable at startup
1
VALUE1
Bool
HMI-ConnectionOPCUA
V:1DAns=3;s=1.710.1
Boolean
Cyclic in operation
Ti2s
2
MyS7Plus
Int
HMI-ConnectionS7Plus
Int
Cyclic in operation
Ti2s
Unified Automation UaExpert - The OPC Unified Architecture Client - NewProject*
File
View
Server
Document
Settings
Help
Project
Project
Servers
SIMATIC.S7-1500.OPC-UA.Application:
Documents
Data Access View
Address Space
No Highlight
Schrit Init
Schritt 1
Taster_TEST_Signal
VALUE1
Data Access View
#
Server
Node Id
Attributes
Attribute
Value
NodeId
NodeId
NamespaceIndex
3
IdentifierType
String
Identifier
"VALUE1"
NodeClass
Variable
BrowseName
3, "VALUE1"
DisplayName
"en-US", "VALUE1"
Description
WriteMask
0

9.4 User administration

Introduction

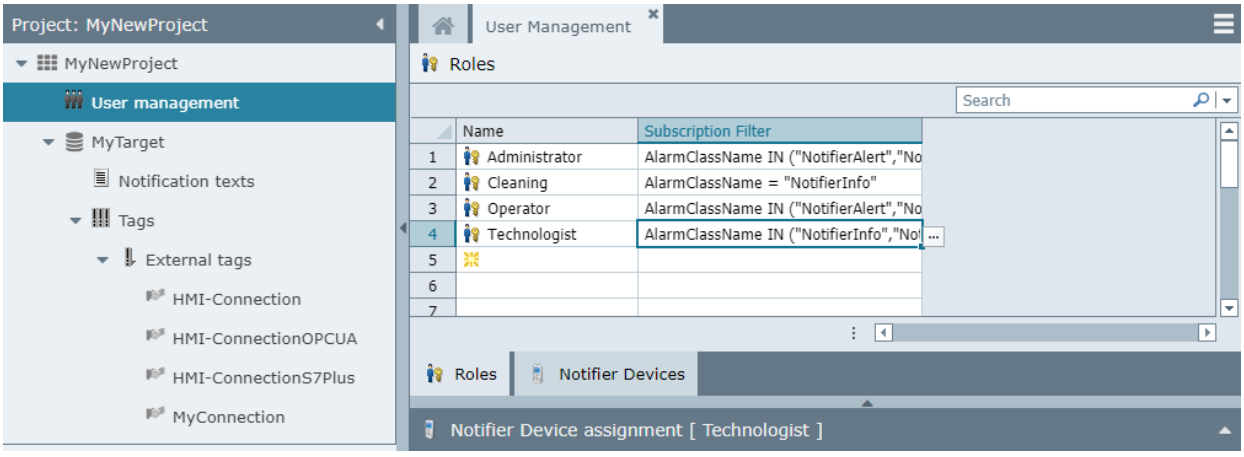
You can create different user roles in order to group users according to the role they play in the plant, for example operator, technician or administrator. You specify the smart devices which you use in the plant and assign them the configured roles. Several devices can be linked to one role. Notifications will be sent to the users depending on their role in the plant.

You define different user roles and assign the roles to the smart devices in the editor "User management" within your project. In "User management" you perform the following steps:

- Add, modify and delete user roles
- Register Notifier devices, for example mobile devices
- Assign Notifier client devices to user roles

Configuring user roles

1. Open your Notifier target project.
2. Select the option "User management" in the project navigation menu.
3. Enter unique role names in "Roles" tab, for example "Operator".
4. Configure the subscription filter based on notification classes for each role in the column "Subscription filter" by clicking on the selection button.



Registering smart devices

1. Open "User management" and expand the tab "Notifier devices" in the bottom of the screen.
2. In the column "UUID" enter the 6-digit hexadecimal smart device ID.

   The smart device ID is generated in the client device. For how to generate the smart device ID see "Establishing and managing a connection (Page 19)".

3. In the column "Name" enter a unique Name for the respective device.

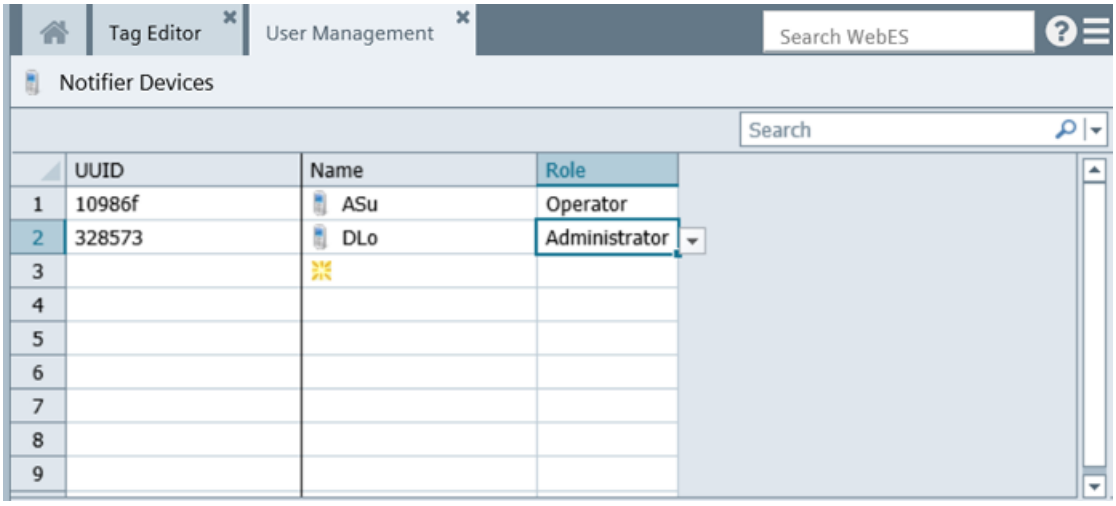
   This name serves as an easy identifier for the device, especially inside the Notifier app.

   Note

   On the smartwatch only first three characters of the device name can be displayed. Configure easily recognizable and unique initials for the respective users in order to be able to quickly identify who took over the notification. For example, you can set first three letters as initials and add the full name afterwards, as in JoS_JohnSmith.

4. In the column "Role" select one of the configured user roles for the respective device.

   Only notifications associated with this role will be received by the smart device.

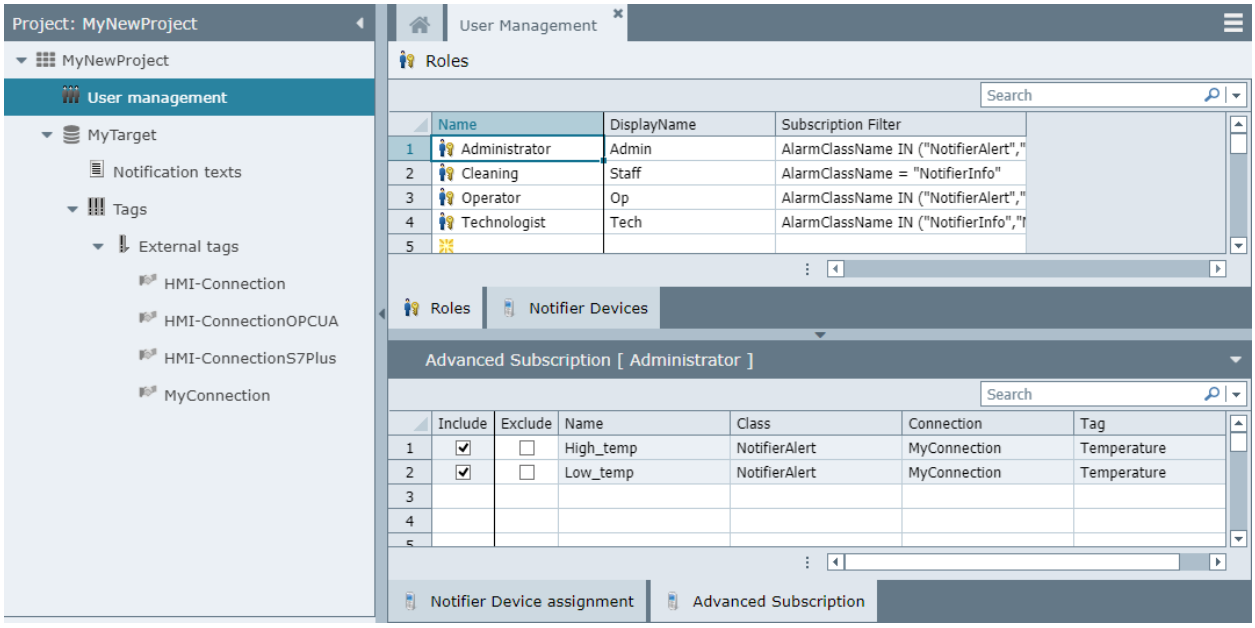


Configuring advanced subscriptions

If you want to configure customized advanced subscriptions rather than Alerts, Warnings and Information only, proceed as follows:

1. Select one of the configured user roles in "User management > Roles".
2. Expand the tab "Advanced subscription" in the bottom of the screen.

   The table "Advanced subscription" for the respective user role is displayed.
3. Include or exclude different notifications based on your requirements.
   Thus single alerts, warnings and information can be selected or deselected in addition to the main subscriptions.



See also

Establishing and managing a connection (Page 19)

9.5 Download to device

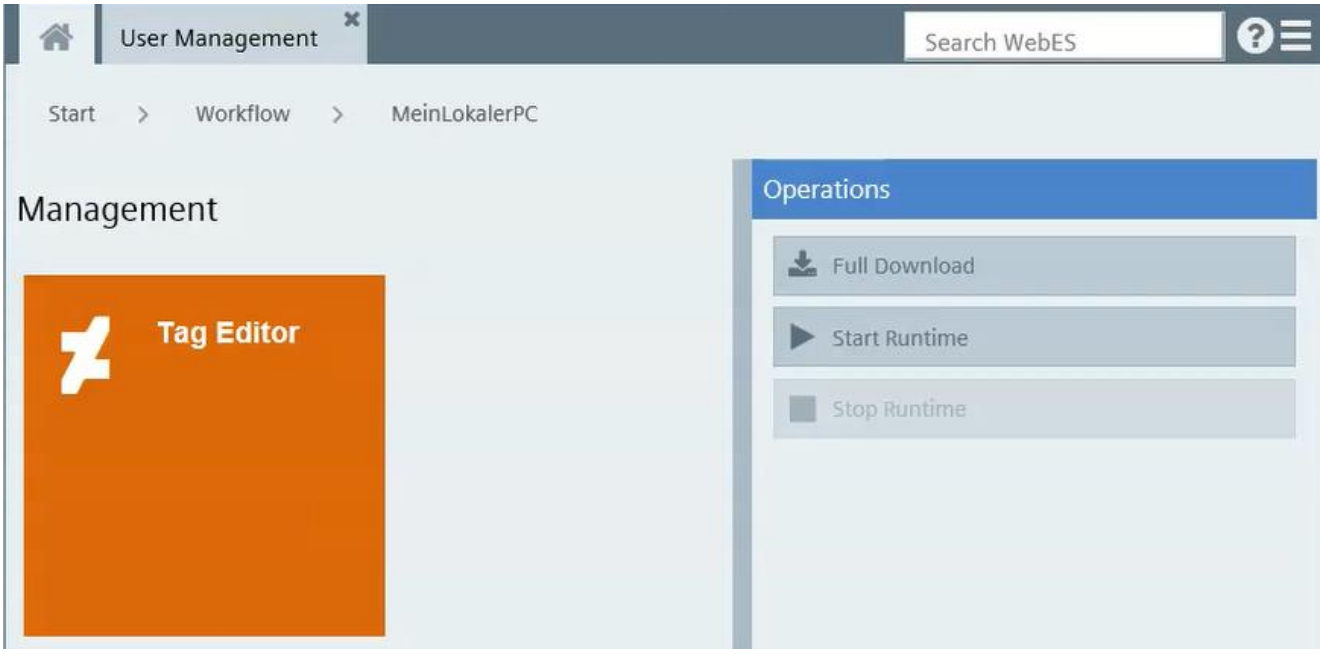
Overview

After you have finished configuring your project download the project to the target device.

Only one project can be running at a time.

Downloading a project

1. Select your target device in the project tree.
   Management overview is displayed.
2. In the menu "Operations" click on "Full download".



The download status is displayed.

Result

The project was downloaded to the respective target device.

9.6 Export and import

Overview

You can export the configuration data and then re-import the data to the same or a different device after editing:

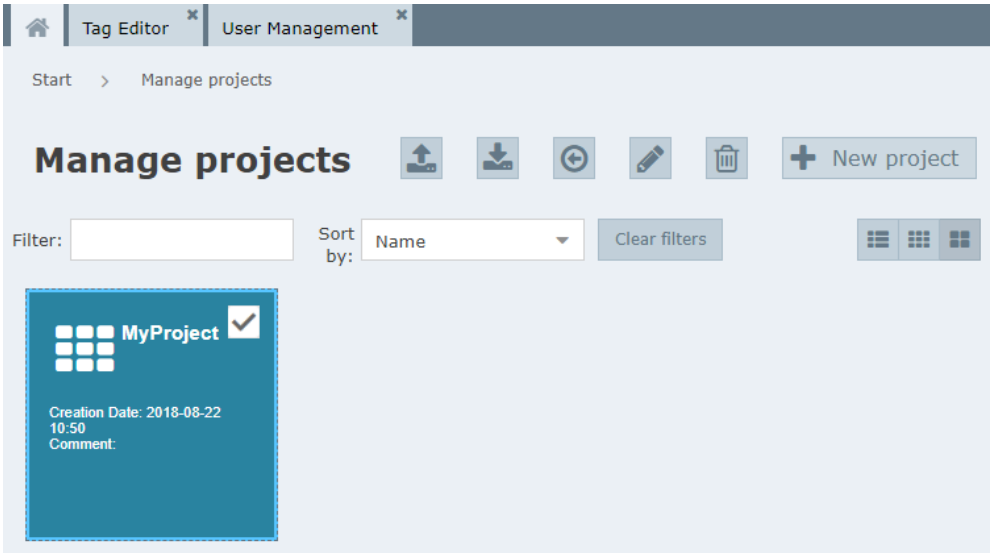
Exports a selected project.

Imports a selected project.

The export and import file format is PRJ.

Export project

1. Open "Start > Administration > Manage projects" overview.
2. Activate the check box on the project you want to export the data.



3. Click on "Export" icon.

   "Export project" dialog is displayed.
4. Click on "Start export".
5. After the project is exported, download it to the local folder.

Import project

1. Open "Start > Administration > Manage projects" overview.
2. Activate the check box on the project you want to import the data into.
3. Click on "Import" icon.
4. Select the project via "Browse" dialog.
5. Click on "Start import".

9.7 Performance features

System limits

The following table helps you assess whether your project meets the performance features of the Notification Server.

The specified maximum values are not additive. It cannot be guaranteed that configurations running on the devices at the full system limits will be functional.

	System limit
Number of projects	10
Number of targets	1
Number of connections	30
Number of tags	1500
Number of alarms	10000
Number of devices	200

9.8 Supported data types

Supported data types

The following table shows the data types supported by the Notifier server:

Data type	Value range
Bool	0 (FALSE), 1 (TRUE)
SInt	-128 ... +127
Int	-32768 ... +32767
DInt	−2147483648 … +2147483647
UInt	0 ... 65535
LInt	-9223372036854775808 ... +9223372036854775807
USInt	0 ... 255
UDInt	0 ... 4294967295
ULInt	0 ... 18446744073709551615
Real	±1.17549E-38 ... ±-3.40282E+38 and 0.0
LReal	±1.79769313486231E+308 ... ±2.22507385850720E-308 and 0.0
Byte	0 ... 255
WORD	0 … 65535
DWord	0 ... 4294967295
LWord	0 ... 18446744073709551615