# SIEMENS

# Edge

## Edge app
## SIMATIC Notifier on Edge

Application Manual

## 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

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

### 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.

# Table of contents

# Introduction

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## 1.1 Security information

**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 constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit:

https://www.siemens.com/industrialsecurity (https://new.siemens.com/global/en/company/topic-areas/future-of-manufacturing/industrial-security.html)

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. 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:

https://www.siemens.com/industrialsecurity (https://new.siemens.com/global/en/company/topic-areas/future-of-manufacturing/industrial-security.html)

## 1.2 Note on EU General Data Protection Regulation (GDPR)

**Data protection**

Siemens observes the principles of data protection, in particular the principle of data minimization (privacy by design). For the SIMATIC Notifier on Edge product, this means: the product processes/stores the following personal data: User Name (first name and last name), email address, user role, language and app data (message filter).

No private or intimate data is processed or stored.

The above data are required for the login, the billing function and for the internal user administration (administrator can see the role and the status of other users). The storage of data is appropriate and limited to what is necessary, as it is essential to identify the authorized

operators. The data needs to be maintained manually by you and if necessary, these can also be deleted. If you need support, please contact customer support.

The above data will not be stored anonymously or pseudonymized, because the purpose (identification of the operating personnel) cannot be achieved otherwise.

The above data is protected against loss of integrity and confidentiality by state-of-the-art security measures.

## 1.3    Security Information for Industrial Edge Apps

Security information (assumptions/constraints) for Industrial Edge Apps is as follows:

- Only authorized internal operators will have access to Industrial Edge Device within a secure network using VPN connection.
- Perimeter firewall configuration responsibility lies with the end customer.
- The security guidelines for usage of USB Flash Drives in the shop floor area are applied accordingly.
- Creating users with appropriate access rights upon commissioning is the responsibility of the operator.
- The customer is responsible for configuring the application on the basis of the system requirements and technical capabilities of the documented App according to the Installation / User Manual such that the automation system performance is not impacted.
- The system is installed in an environment ensuring that physical access is limited to authorized maintenance personnel only. Managing unauthorized attachment of removable devices is the responsibility of the operator.
- The platform including hardware, firmware and operating system is securely configured and maintained by the operator.
- The operator is capable of protecting the environment from malware infection.
- Centralized IT security components (Active Directory, Centralized IT Logging Server) are provided and well secured by the operator and are trustworthy.
- The operator personnel accessing the system is well trained in the usage of the system and general information security aspects like password handling, removable media, etc.
- The operator is responsible for the CIA (Confidentiality, Integrity and Availability) of data stored outside the Industrial Edge Device.
- The operator is responsible for configuring the CPUs with appropriate read/write access levels (legitimization), and for configuring the Industrial Edge Apps using appropriate passwords for data collection from CPUs.
- The customer takes care about the time synchronization of Industrial Edge Management and Industrial Edge Device.

## 1.4　　　　Function overview

### Introduction

The SIMATIC Notifier on Edge offers you globally accessible notifications that are generated in case of an event. For this purpose, the app monitors the variables stored in the Data Service Configurator according to the notification rules you have configured.

### Browser recommendation

We recommend the Google Chrome web browser. You should preferably use 1920x1080 resolution.

## 1.5　　　　Basic information about notifications

### Notifications

There are three types of notifications which can be created:

| Symbol | Notification type | Description |
|---|---|---|
|  | Alert | Alerts are critical notifications with the highest priority, for example requiring immediate action. Alerts can be accepted by a user. This means that this user will take care of the underlying problem that triggered the alert, e.g. by lowering the temperature in a boiler. |
|  | Warning | Warnings are medium-priority notifications that inform the user of an important status or problem in the plant. Similar to alerts, users can also accept incoming warnings. |
|  | Information | Informative notifications give users a tip or information about low-priority events, such as upcoming maintenance. Information notifications can also be accepted. |

# Installation

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## 2.1 Overview of additional documentation

### Overview

The following table lists additional documents that supplement this description, some of which are available on the Internet.

| Documentation | Main contents |
|---|---|
| Industrial Edge Hub (https://iehub.eu1.edge.siemens.cloud) | This page describes the functions of the Siemens Industrial Edge platform and the functionalities of the Edge management system. |
| System overview (https://new.siemens.com/global/en/products/automation/topic-areas/industrial-edge/simatic-edge.html) | This page provides an overview of all Edge solutions. |

## 2.2 System requirements

Note the following system requirements for the installation of the Edge Apps.

### Software requirements

The following Internet browsers are required:

- Google Chrome, Version ≥ 72

- Firefox Version ≥ 62

- Edge App Data Service Configurator
  You need to install the Edge App Data Service Configurator. The app is available in the "Library" area of the Industrial Edge Hub. From there, you can transfer the app to your Industrial Edge Management (IEM) and then install it on your Industrial Edge Device (IED). With the Data Service Configurator app, you model the structure of your industrial process using assets and aspects that you then need for the plant structure of the Edge apps.

**Hardware requirements**

- A device on which the Edge Management System (IEM) is running (VM - ISO: Version 1.0.8)
- An Edge Management system that is compatible with an Edge device (IED):
  - IED Model: SIMATIC IPC 227E Nanobox
  - IED Version: ied-os-1.0.0-34-amd64
  - Hard disk: At least 10 GB available
  - RAM: 2 GB available RAM
- The Edge device must be onboard the Edge Management system

IEM, IED, and web browsers must be synchronous in the UTC time zone.

## 2.3  Copying an app from the library into the IEM catalog

**Procedure**

An IEM instance and an Internet connection are required to copy an app into the IEM catalog. With this functionality, you can send the app directly into a catalog of one of your IEM instances.

To copy an app into the IEM catalog, follow these steps:

1. Click the ⧉ icon to open the "Copy Application to IEM catalog" screen. The layout of the screen depends on whether the app contains links for open source software (OSS) and for the readme. The relevant file is downloaded when you click on one of the links. If the app does not support these links, the screen is shown without links.

2. In the drop-down list, select the IEM instance to which you want to send the app.

3. Click "Copy".
   A corresponding job is created. You can follow the status of the job in the corresponding screen of the IEM instance.

## 2.4  Installing the app via the Industry Mall in the IEM catalog (APP files)

You can install and start the Notifier app by procuring the APP files in the Industry Mall, downloading them and adding them to the catalog.

**Note**

**Industrial Edge Device (IED)**

The Notifier app and the Data Service Configurator app must be made available on the same Industrial Edge Device (IED).
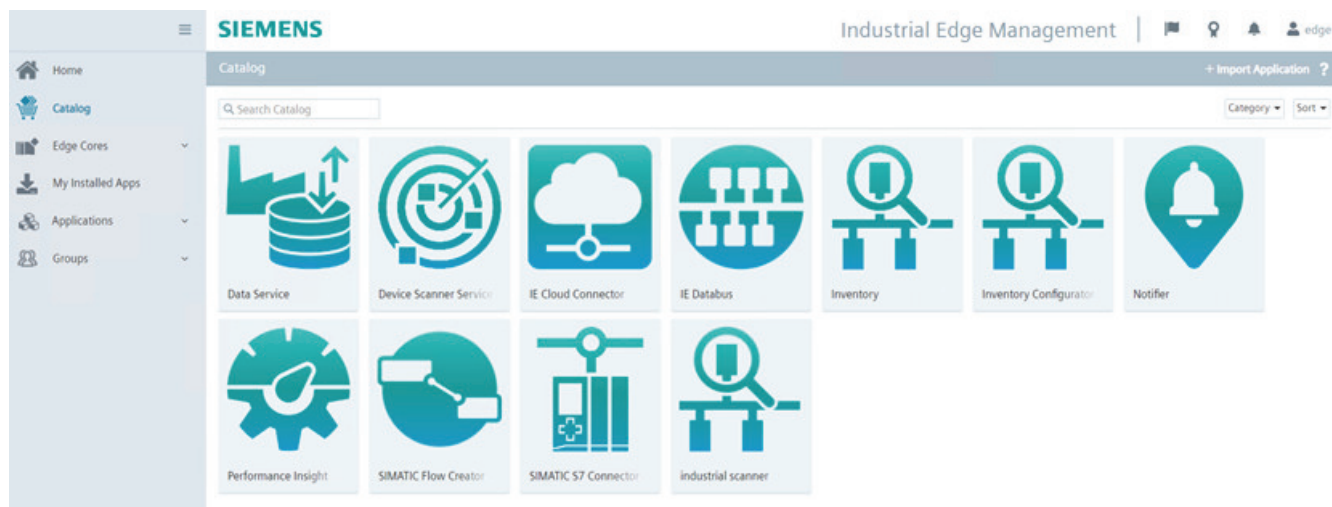
**Requirements**

- You must be logged in to the Industrial Edge Management (IEM).
- You need to have installed the Data Service Configurator app.
- You need the APP files of the Notifier app from the Siemens Industry Mall.
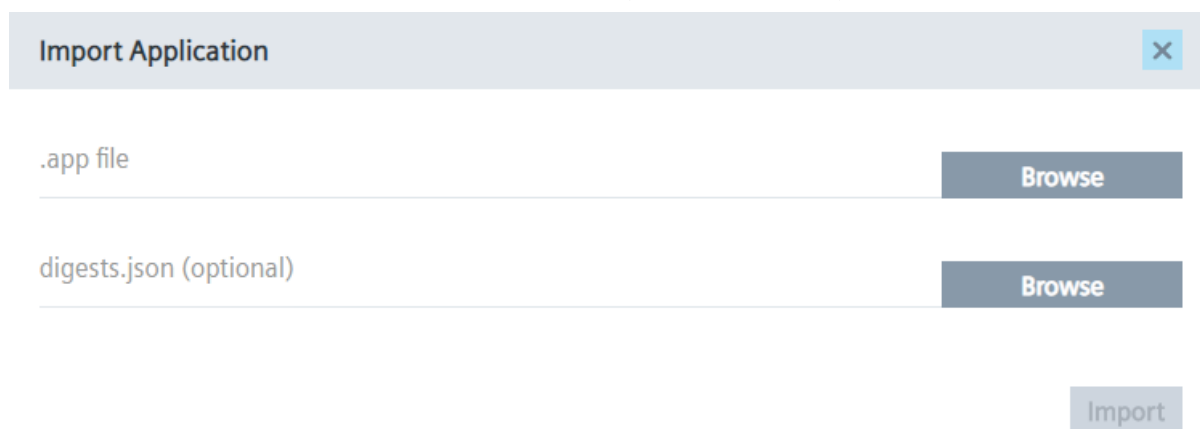
**Procedure**

To install the Notifier app, follow these steps:

1. In the Industrial Edge Management, go to the menu command "Catalog".



2. Click "+ Import Application" in the top right-hand corner.
   The "Import Application" dialog window is displayed.



3. Click "Browse" and import the required .app files for the Notifier app.
   The file is imported and displayed under "Catalog > SIMATIC Notifier Details":

4. Click "Install".
   The "Install App" dialog window is displayed.

5. You can see a table with all connected Edge devices. Select one or more Edge devices on which you want to install the app.

6. You have two options to continue:

   – Click "Install Later" to schedule the date and time of the installation.

   – Click "Install Now" to install the app immediately.
     When you click "Install Now", you will receive a message.

7. Click "Allow".
   The installation of the apps is started on the corresponding IEDs.

**Result**

The installation is started automatically.

## 2.5      Starting the app

After you have installed the Notifier app, the app is displayed in the "My Installed Apps" view of the "Industrial Edge Management". You can start the app by using the user interface of the Industrial Edge Device (IED).

**Requirement**

All apps must be made installed on the same Industrial Edge Device (IED).

**Procedure**

To start the Notifier app, follow these steps:

1. Open the start page of the Edge device (IED) by entering the following URL address:
   "https:\\[IP address of the Edge device]"

2. Log in with "E-Mail" and "Password".

3. Go to the "Apps" tab.
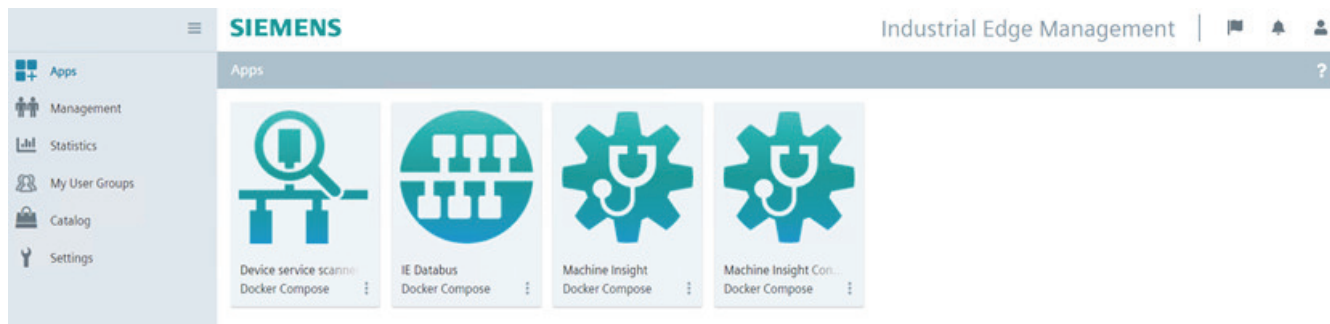


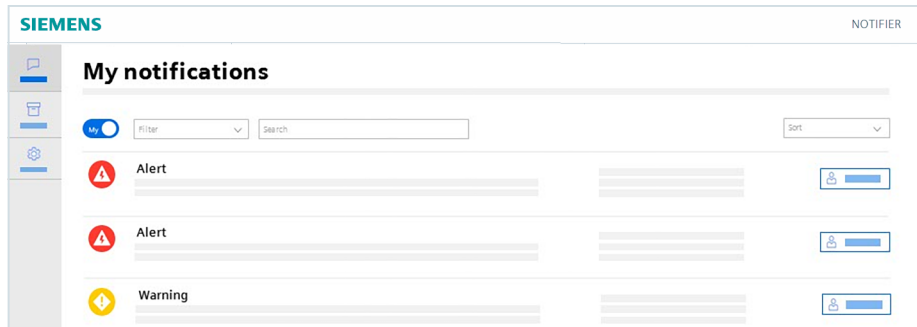4. Click the desired tile to open the app in a new tab.

**Result**

The Notifier app is opened in the "Home" tab.

# Structure of the app

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**Views in the app**

The Notifier has the following tabs:



| Register | | Description |
|---|---|---|
|  | Notifications | You can view notifications in the "Notifications" tab:<br>• All notifications<br>• "My notifications" based on a configured filter |
|  | Archive | You can view all resolved notifications in the "Archive" tab. |
|  | Settings | You have the following options in the "Settings" tab:<br>• Manage notification rules<br>• Manage "My notifications"<br>• User information<br>• Usage information<br>You can find more information on user and usage information here: User profile (Page 15) |

# User profile

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**User information**

Here, you can see your user information and set the interface language of the app.

**Usage information**

Here you can see how many notification rules have been used on a monthly basis.

# Showing my notifications

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In the Notifier, you can show notifications in the following ways:

* All notifications: You will see all notifications that have been created.

* My notifications: If you have not set any filter criteria, you will see all notifications.

* My notifications: If you have set filter criteria, such as notification type = "Alert", then only the alerts are shown. In "My notifications", you can also link multiple filter criteria using and/or interconnections, such as notifications of type "Alert" OR "Warning". This will show all alerts and warnings.

**Configure filter**

The following filter criteria are available:

* Notification type
* Location

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**Note**

**Autocomplete for locations**

To create notification rules, you can use autocomplete to easily access existing locations. Autocomplete means that you get a contextual list from which you can select the locations you want.
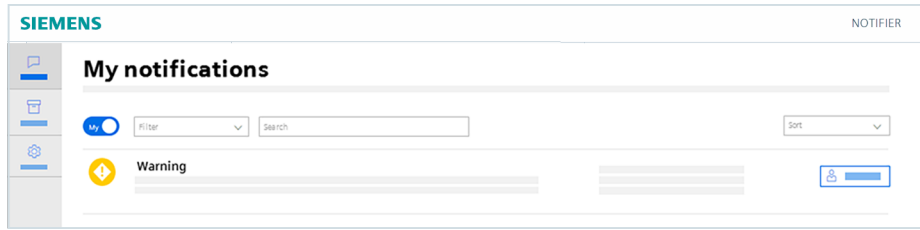
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To configure the filter, follow these steps:

1. Under "Settings", click "Manage my notifications".

2. For example, select Notification type as the variable and Warning as the value.



3. Save the filter.

**Result**

All warnings are shown.

# Creating notifications

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**Creating notification rules**

Notification rules must be created to trigger notifications when a specific event occurs:

1. Under "Settings", click "Manage notification rules".
   All created notification rules are listed here.

2. Click "Add notification rule".

3. Select a notification type, for example Information.

4. Write a notification text.

5. Select a location to which the notification belongs.

6. Define when the notification is to be generated by specifying at least one variable to be monitored and a corresponding comparison value.
   For example, if you use an INT variable, you can enter an integer as the value. You create a condition using the operands >, =, <, and <>.



**Note**

**Autocomplete for locations and tags**

To create notification rules, you can use autocomplete to easily access existing locations and tags. Autocomplete means that you get a contextual list from which you can select the locations and tags you want.

**Error display in notification rules**

Incorrect notification rules appear in the overview "Manage notification rules" with a red error icon. For example, incorrect notification rules can occur when a location or tag to which a notification rule refers has been deleted.



The red error icon is also displayed directly in the navigation on the (Settings) icon:
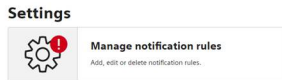
# Accepting notifications

**Description**

You can accept each notification individually by clicking the "Accept" button.

By accepting a notification, you signal to other users that you will take care of the underlying problem. The acceptance of a notification cannot be undone.

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**Note**

**Notification automatically resolved**

A notification is marked as "Automatically resolved" and displayed in the "Archive" tab if the following conditions apply:

- The notification has not been accepted by any user.
- The reason for triggering the notification no longer exists, for example the value of the variable no longer corresponds to the value in the notification rule.

---
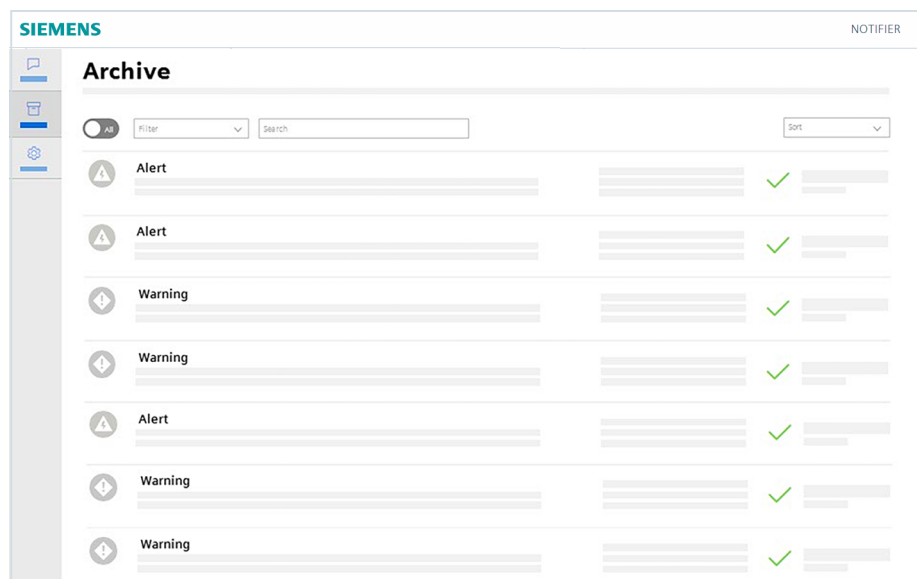
# Notification triggered by other app

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**Description**

Notifications can also be triggered by other apps, such as SIMATIC Performance Insight or SIMATIC Energy Manager.

To allow you to identify where the notification originated, the detail text of the respective notification contains the Operating App area. This information is available for both active and archived notifications:



You need to define limits in the respective app so that a notification can be triggered. The corresponding notification is then triggered when the high or low limit is violated and is displayed in the Notifier.