SIEMENS

Climatix IC

Remote Servicing

User Guide

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Building Technologies

Legal note

Legal note concept

This guide includes notes that must be followed to prevent damage to property.

Notes dealing only with damage to property use the signal word NOTE and an exclamation point.

It is depicted as follows:

!	*NOTICE*
	Type and source of hazard Consequences in the event the hazard occurs • Measures/prohibitions to prevent the hazard.

Qualified personnel

Only qualified personnel may commission the device/system. In this regard, qualified personnel have the training and experience necessary to recognize and avoid risks when working with this device/system.

Proper use

The device/system described here may only be used in building technical plants and for the described applications only.

The trouble-free and safe operation of the device/system described here requires proper transportation, correct warehousing, mounting, installation, commissioning, operation, and maintenance.

You must comply with permissible ambient conditions. You must comply with the information provided in the Section "Technical data" and any notes in the associated documentation.

Fuses, switches, wiring and grounding must comply with local safety regulations for electrical installations. Observe all local and currently valid laws and regulations.

Exemption from liability

The content of this document was reviewed to ensure it matches the hardware and firmware described herein. Deviations cannot be precluded, however, so that we cannot guarantee that the document matches in full the actual device/system. The information provided in this document is reviewed on a regular basis and any required corrections are added to the next edition.

Software used

All open source software components used in this product (including copyright owners and license agreements) can be viewed on the following web server:

- Go to https://www.climatixic.com in the footer on entry "OSS".
- Direct: https://www.climatixic.com/Content/OSS_ClimatixIC.htm

Cyber security disclaimer

Products, solutions and services from Siemens include security functions to ensure the secure operation of building automation and control, fire safety, security management, and physical security systems. The security functions on these products, solutions and services are important components of a comprehensive security concept.

Drafting, implementing and managing a comprehensive and up-to-date security concept, customized to individual needs, is nevertheless necessary, and may result in additional plant- or site-specific preventive measures to ensure secure operation of your site regarding building automation and control, fire safety, security management, and physical security. These measures may include, for example, separating networks, physically protecting system components, user training, multi-level defensive measures, etc.

For additional information on security as part of building technology and our product, solution and service offerings, please contact your Siemens sales representative or project department. We strongly recommend to always comply with our security advisories on the latest security threats, patches and other related measures.

http://www.siemens.com/cert/en/cert-security-advisories.htm

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1 About this document

1.1 Revision history

Version	Date	Changes	Section
f	Current version	No personal injury	Legal note [→ 2]
		Important terms explained	Glossary [→ 10]
		DMC application	Use of Data Matrix Code [→ 12]
		New opportunities for tenants and users: Completely new	Tenant-Administration and basic workflows [→ 21]
		Helps on the Climatix IC website	Help settings on the start page [→ 32]
		Registration for Climatix IC as well	Registration [→ 34]
		Token support	Operate dashboard [→ 40]
		Additional device IDs for the new controller generation	Administration [→ 55]
		Application sets "inherited"	Administration [→ 55]
		Improvements to plant assignment	Plants [→ 61]
		Improvements to tenant administration	Tenants [→ 63]
		Improvements to user roles	User roles [→ 70]
		Google Maps support	Plant settings [→ 75]
		Changes to portal roles	Overview of portal roles [→ 82]
e	2016-09-13	New: Glossary entry on firewall	Before you start [→ 8]
		New: Information on security	Climatix IC portal security [→ 79]
d	2016-06-16	Added reference to end user documentation	1.2
c	2016-06-07	Fully revised version	Complete
b	2015-11-30	New: Support of SCOPE light configuration files	8.4.3
		New: Dashboard functions	8.3
		Changed: The term "plant" replaces "Site"	Complete
a	2014-10-07	First draft	

1.2 Reference documentation

Document	Type of document	Document no.
SCOPE tool online help	Online help	-
SAPRO tool online help	Online help	-
Climatix IC data sheet	Data sheet	A6V10449189en

1.3 Before you start

Target audience

Tenant administrators of HVAC manufacturers (OEM) are the target audience for this document.

Document conventions

Text markups

Special text markups are displayed as follows in this document:

▷	Prerequisite for an instruction
⇨	Interim result of an instruction
⇨	Final result of an instruction
Text	Hyperlink, reference
"Text"	Term that has a standing definition in the program

Supplemental information and tips

The "i" symbol identifies supplemental information and tips to simplify procedures.

Trademarks

Trademarks	Legal owner
BACnet™	American National Standard (ANSI/ASHRAE 135-1995)
LON®	Echelon Corporation
Google, Google Chrome	Google Inc.
Mozilla Firefox	Mozilla Corporation
Site24x7	Zoho Corporation

We forgo the labeling (e.g. using the symbols ® and ™) of third-party trademarks for the purposes of legibility based on this list.

2 Climatix IC Remote Servicing

HVAC plants with Climatix controllers can connect to the "Climatix Remote Servicing platform, Climatix IC".

Climatix IC supports your organization with remote maintenance 24/7, available anywhere to significantly reduce maintenance costs.

2.1 Key benefits

Climatix IC web applications offer:

- Remote access to plant devices worldwide and 24/7
- Plant owners and managers can analyze:
  - Current status
  - History
  - Access to schedules and settings
- Real-time consumption data (currently available as an history export) helps identify "consumption anomalies" that often point to underlying mechanical problems. This permits preventive maintenance.
- Climatix IC web operation simplifies and modernizes operation at all access levels.

Remote maintenance – at any time from any location

HVAC systems often operate a considerable distance from OEM production centers, supplier or service organizations, resulting in high service and travel costs, especially during warranty periods.

Climatix IC Remote Servicing facilitates diagnostics, optimization of settings, or system upgrades from any location. Even if a visit to the plant does prove necessary, however, the available data enables service engineers to work more efficiently.

Connection – straightforward and effective

Today, most Climatix controllers are equipped with a built-in IP interface. The controller connects automatically to the Climatix IC via this interface. And without special programming or settings.

Web-based – always up to date

Climatix IC operates with standard web browsers (IE with restrictions). The service engineer logs on via a laptop and directly accesses the plant. No special software or cables required.

2.2 Key functions

Climatix IC includes the following key functions:

- Collects alarms and routes them to the responsible service organization
- Enables future upgrades to your installed base with application enhancements, firmware improvements, or language sets at scheduled times. Everything can be scheduled for specific times.
- Process data analysis permits systematic improvements to plant efficiency.
- The application can be used by any PC or laptop; no additional software required.

3 Glossary

Term	Explanation
Activate (plant)	The function activate (plant) is available for offline and online plants. In the program, the plant is entered on the Assigned list with "Activate".
Plant	The same as controller.
Climatix IC Remote Servicing	Climatix IC is a cloud-based application for remote service and efficient operation of Climatix controllers.
Distributor	(See also: Tenant-key). The entry Distributor (also referred to as Tenant-Key) ensures that a controller logs on at the desired tenant. There are two possible entries: • On the controller > CSL-Config > Distributor • In Climatix IC, as part of registration
Member	Data points consist of so-called members. The most important member of a data point is generally the present value.
Tenant	Tenant is the same here as company. An area can be set up for each company that individualizes the cloud-based application for the customer and closes it off to the outside world.
Main-tenant	(See also: Tenant). Main-tenant and Sub-Tenant are in a 1 : n ratio.
Sub-tenant	(See: Main-tenant).
Tenant administrator	The Tenant-Administrator manages plants and users within its tenant space.
Tenant-Key	(See also: Distributor). Tenant-Key is synonymous with distributor. As part of registration, the tenant-key is generally a Sub-Tenant-key, intended to move the plant to the desired Sub-Tenant.
Token	A token (symbolic representative) permits simple access to internal program values. For example, the plant name can be displayed in the display field with the query [SiteName].
User	User has no administrative rights, only access to the plants and their data.
Firewalls	A firewall protects networks against unauthorized access from the outside. Firewalls are hardware and/or software measures designed to control data exchange between the private network to be protected and the unsecured network (e.g. the Internet).
Assigned / unassigned	The command "Activate" assigned plants. A plant must be assigned to manage it (settings, assign users, etc.).

4 Prerequisites

4.1 Tenant functionality

Become a tenant

Tenants are available on Climatix IC Remote Servicing to use the platform in an individualized area, closed off to the outside world.

Please contact your local Siemens partner to order.

4.2 Technical requirements

The current Climatix controllers a preconfigured to automatically connect to Climatix IC as soon as they are connected to the Internet. First review the following system requirements:

Climatix controller BSP

- POL63x: 10.36 or higher
- POL68x: 10.36 or higher

Controller loaded with SAPRO application

- Climatix controllers must be loaded with a valid SAPRO application
- The BSP LED has to be green

SCOPE tool version

The SCOPE tool maps, generates, and uploads to controllers as of VVS 10.32 or higher.

Internet access

- The Ethernet cable must be connected to the controller's IP connection (T-IP).
- The controller requires a direct connection to the Internet, i.e. without proxy.
- Port 443 (https) must be open.
- Port 80 (https) must be open.
- Broadband Internet is recommended for the controller due to the program size.
- It is further important that the Internet connection is stable.

Web browser

The browser must support HTML5.

- The latest versions (as of the date of publication for this document) of Google Chrome and Mozilla Firefox have been tested.
- Internet Explorer is no longer recommended

4.3 Use of Data Matrix Code

The activation code for your Climatix controller is included in the controller's firmware and can be read there using the SCOPE tool. The activation code is also printed on the actual controller as a DMC.

You can scan the code using a code reader app. The result is a text string.

Example

1PS55396-C488-A100+**31P**POL648.80/STD+**S**160908Z0000000005+**23S**00-A0-03-EB-01-04+**3C**3WSZHI-2J7SM-ETMN7-I3LO4-VDVNX

The text string is subdivided into code letters:

- 1P: Siemens stock number (SSN); fixed
- 31P: Siemens device type (ASN); fixed
- S: Date (YYMMDD), series, serial number, variable
- 23S: MAC address (hex); variable
- **3C: Climatix IC activation code (password); variable**

Conclusion

Your Climatix supports the automation of your business processes, e.g. during sign-up or pre-registration. You no longer need to connect the controller to get its ID.

5 Preparatory work in SCOPE

5.1 Application: Watch pages

The content displayed in Climatix IC supplies watch pages (with the Cloud Service Layer) that can be loaded to the controllers with the SCOPE tool (as of VVS10).

5.1.1 Create watch pages and generate mapping

Applications loaded on Climatix include watch pages that provide setpoints, present values, and other data.

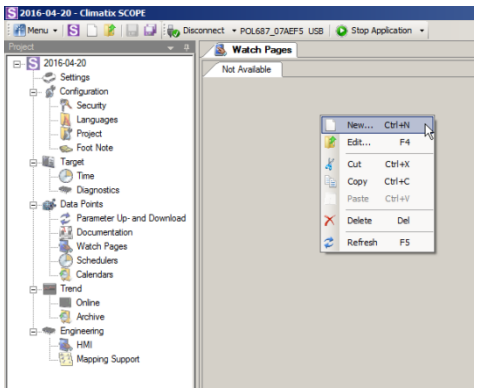
Application engineers use the Scope tool to create the watch pages and download the generated file (OBHcomp.ucf) to the controller.

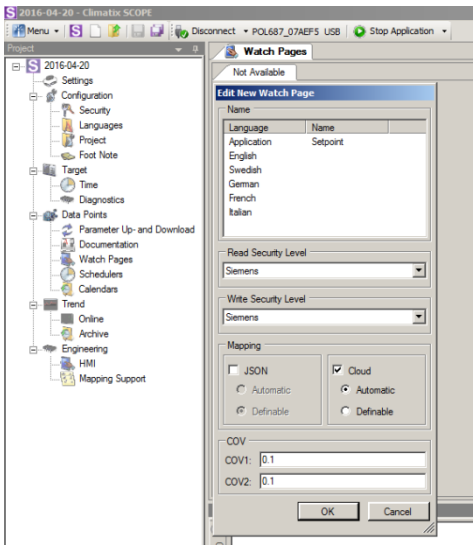
As soon as the Climatix controller is connected to Climatix IC, the controller provides the defined information, including the watch pages.

The example below demonstrates how to create a watch page in the SCOPE tool, add values to it and, finally, download it to the controller.

In the field, existing plants often already have a watch page with cloud-capable data.

Create watch pages



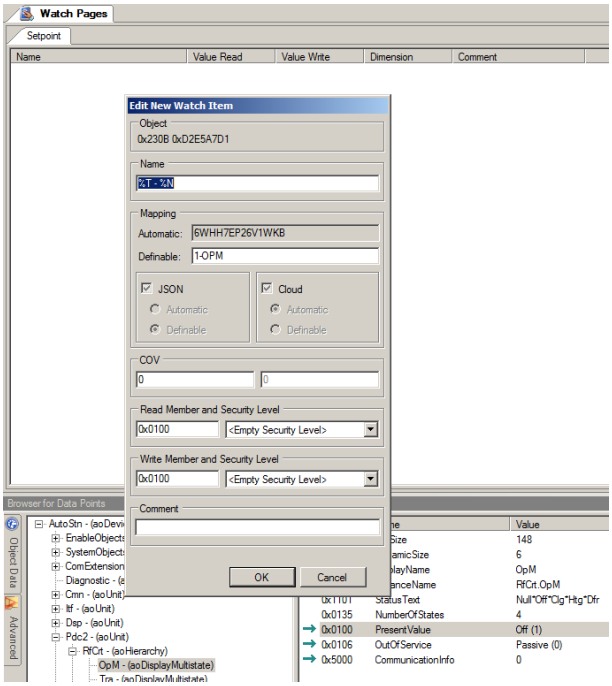


▷ SCOPE tool is open and connected to the controller.

1. In the project tree, go to Data points > Watch Pages.
2. Right-click the bar below the Watch Pages tab and select "New...".
   ⇨ The "Edit New Watch Page" dialog box opens with the standard selection application and page.
3. Change the name page to a name of your choosing by right-clicking around the page and selecting Edit.
4. Select the desired security level for the connect client, in other words, the cloud application requires certain access rights.

5. In the Mapping dialog pane, JSON is possible in addition to the selection "Cloud" (mandatory for the task described here). JSON is required for smartphone apps.
6. You can also select in the dialog pane, whether to automatically generate names or define them yourself. We recommend "Automatic".

Add values to watch pages



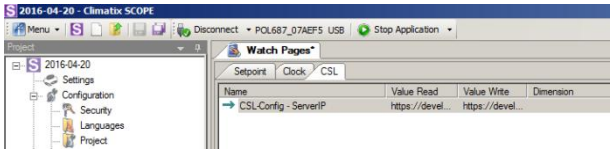
▷ A watch page is setup.

▷ In the SCOPE tool, the "Browser for Data Points" is open and displays plant data points.

1. Select the desired member (e.g. the PresentValue) for a data point can drag-and-drop the member to the watch page workspace.

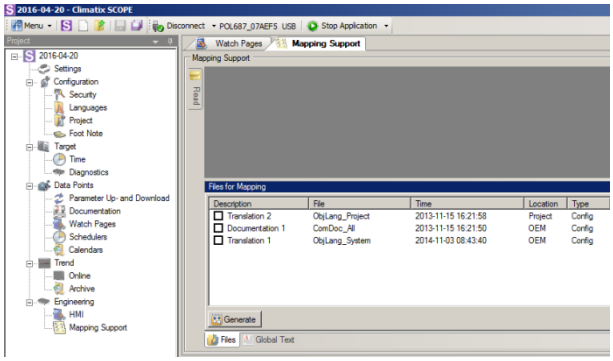
   ⇨ The "Edit New Watch Item" dialog box opens.
2. In the "Edit New Watch Item" dialog box, you can assign access rights that differ from the watch page (only recommended as an exception).
3. The settings are inherited from the watch page settings if neither JSON or Cloud is selected.
4. Complete the settings with OK.
5. You can now set up additional watch pages with data points that you would like to view at a later date on Climatix IC.
6. Save the changes to the watch pages with a save button ("Save current tab" for the current watch page or "Save all tabs" for all changes to all watch pages).

The following illustration is an example:

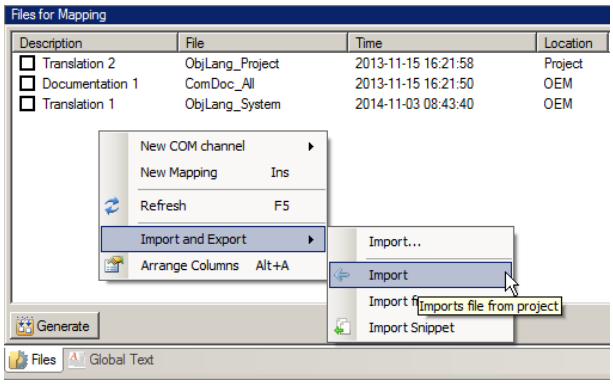


Generate cloud mapping

The next step is to generate the final mapping files (OBHcomp.ucf) from the watch pages with their data points and then download them to the controller.



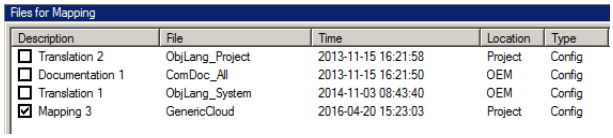
1. In the SCOPE tool, go to the project tree "Engineering > Mapping Support".
2. Right-click below the available lines in the Mapping Support workspace.



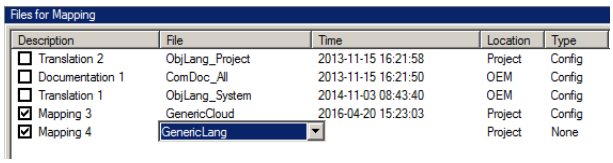
3. Select "Import and Export > ← Import"

   ⇨ Another line "Mapping x" is created.

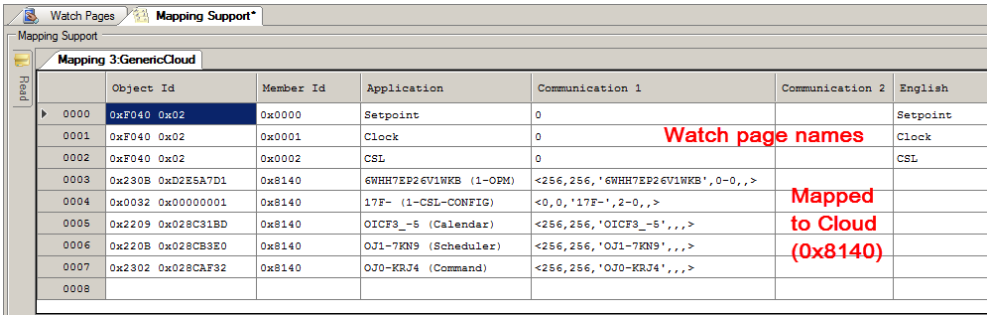
4. In the File column, select "GenericCloud" from the list box and click outside it so that the line is fully created.



5. Repeat the last step, but this time select "GenericLang".



6. Double-click "GenericCloud" to display and review mapping of the watch pages and associated data points.



Object Id	Member Id	Application	Communication 1	Communication 2	English
0000 0xF040 0x02	0x0000	Setpoint	0		Setpoint
0001 0xF040 0x02	0x0001	Clock	0		Clock
0002 0xF040 0x02	0x0002	CSL	0		CSL
0003 0x230B 0xD2E5A7D1	0x8140	6WHH7EP26V1WKB (1-OPM)	<256,256,'6WHH7EP26V1WKB',0-0,,>		
0004 0x0032 0x00000001	0x8140	17F- (1-CSL-CONFIG)	<0,0,'17F-',2-0,,>		
0005 0x2209 0x028C31BD	0x8140	OICF3_-5 (Calendar)	<256,256,'OICF3_-5',,,>		
0006 0x220B 0x028CB3E0	0x8140	OJ1-7KN9 (Scheduler)	<256,256,'OJ1-7KN9',,,>		
0007 0x2302 0x028CAF32	0x8140	OJ0-KRJ4 (Command)	<256,256,'OJ0-KRJ4',,,>		
0008					

NOTICE

No changes in mapping support

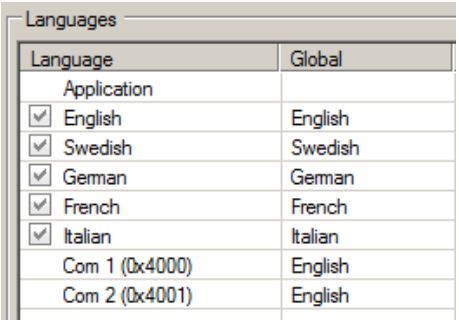
Changes and translations are made exclusively in the actual watch pages. The table view for mapping support is used solely for display and review.
You must refresh the table view (F5) before saving the mapping, if the mapping support table view is open while changes are still being made to the watch pages.

7. Click the disk symbol on the tool to save changes made to mapping.

⇨ Saving generates the mapping file OBHcompl.ucf in the background.

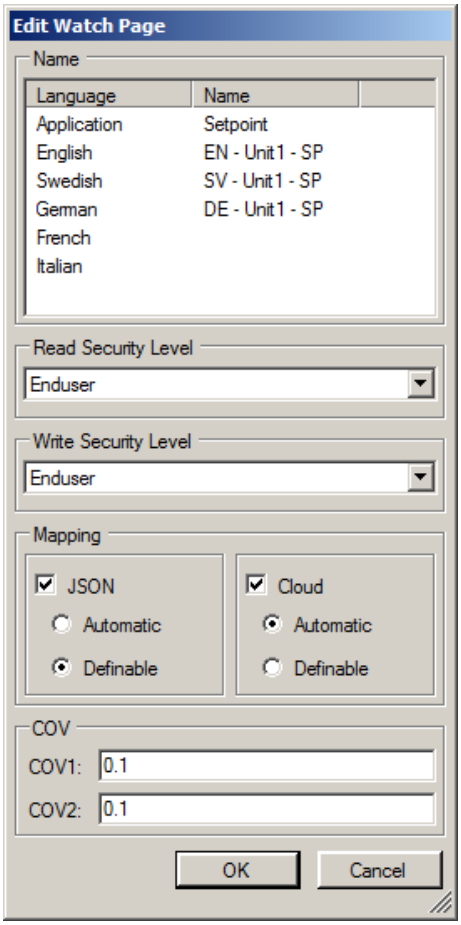
5.1.2 Translate watch pages and items

Define the base language set



1. Go to "Configuration > Languages".
   ⇨ You can see the current languages in the workspace.
2. You can clear a selected (checked) language.
3. You can also set up a new language (checked): Right-click below the available lines and select "New".
4. The new language scope takes effect once saved (disk symbol on the menu bar).

Translate watch pages



1. Go to Data Points > Watch Pages.
2. Right-click the Watch page tab and select "Edit...".
   ⇨ The "Edit Watch Page" dialog box is displayed. In the Name dialog pane, the Name column is empty on languages that are not translated.
3. Right-click the lines for translation and enter the translated term.
4. Close and save the translation with OK.
5. Save the changes to the watch pages using the "Save" buttons.

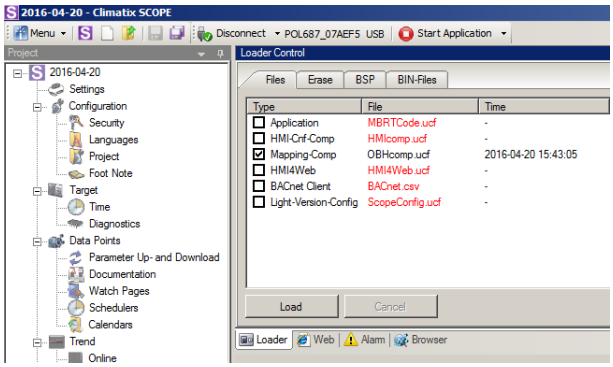
⇨ The language of the watch page title can now be changed in the Cloud.

Translate watch page items

- Item texts are already translated for standard applications (DH, AHU).
- The items must be translated in the target languages on completely new customer projects. The SCOPE online help offers help here:
  – Search for "Configure languages" or "Edit mapping" and select this topic from the topic list.

5.1.3 Download mapping file to the controller

The OBHcomp.ucf file, generated in the previous step, is not downloaded to the controller.



1. In the SCOPE tool, select "Menu > View > Loader"
2. In the menu line, click "Application stop".
3. The "Load" button is enabled once the application is stopped (BSP LED orange).
4. In the loader, highlight the Mapping-Comp (OBHcomp.ucf) line and click "Load".
5. In the menu line, click "Start Application".

⇨ The application is running once the BSP-LED is green.

⇨ The controller is now prepared to send defined data to Climatix IC.

5.2 Connect and exchange data

5.2.1 Connect to the Internet (IP)

SCOPE is connected with the target controller: In the "Browser for Data Points", go to "SystemObjects > IP-Config" and check the following member settings.

DHCP

The network configuration is taken from the DHCP server, if available.

Member ID	Member name	Setting
0x0001	DHCP	Active

The DHCP server provides the following information:

- Current controller IP address
- Correct subnet mask
- Gateway IP address, if needed
- At least one DNS server (e.g. 8.8.8.8, Public DNS Google) that can "resolve" Internet domains

Fixed IP address

Make the following settings if **no** DHCP server is available:

Member ID	Member name	Setting
0x0001	DHCP	Passive
0x0035	IP	Local controller IP address
0x0036	SubnetMask	Correct subnet mask for the local network
0x0037	Gateway	Gateway IP address or 0.0.0.0, if no Gateway is required
0x0038	PrimaryDNS	Valid DNS server address, e.g. 8.8.8.8 (Public DNS Google)
0x0039	SecondaryDNS	Backup for PrimaryDNS

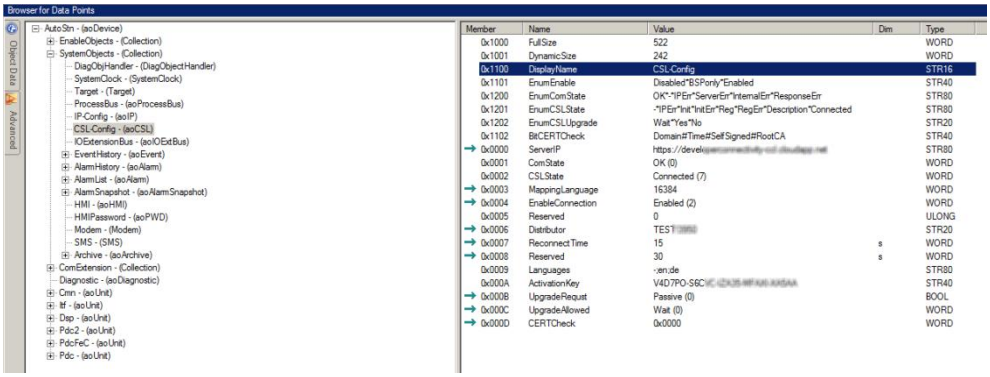
Check success

Both members provide a note on success in this step:

- 0x0003: Link: Must be set to active (1)
- 0x0004: 100MBit: Must be set to active (1)

The next step "Connect to cloud (CSL) [➙ 20]", lists all other criteria to ensure the controller communicates with Climatix IC (Cloud).

5.2.2 Connect to cloud (CSL)



Under "SystemObjects > CSL-Config", check the following member settings:

Member ID	Member name	Setting
0x0000	ServerIP	Server URL with the correct connection protocol: https://www.connectivity.ccl-siemens.com
0x0004	EnableConnection	"Switch" for connecting. Is run as the **last** step.
0x0006	Distributor	The distributor key assigns the controller to the correct tenant.
0x0007	ReconnectTime	Wait in seconds between two connection attempts

Workflow in detail and chronologically

▷ You have the distributor information (compare: "Tenants [→ 63]").

▷ SCOPE tool is open and connected to the target controller.

1. In SCOPE, in the "Browser for Data Points", go to "SystemObjects > CSL-Config".
2. Check the ServerIP: Do not change the default setting https://www.connectivity.ccl-siemens.com.
3. Enter the distributor information in Distributor.
4. The "switch" is used for connecting only at the end: Set EnableConnection to Enabled.

Check success

You can assume, according to the criterion indicated for both members, that the controller is communicating with Climatix IC (Cloud):

- 0x0001: ComState must be on OK (0)
- 0x0002: CSLState must be on Connected (7)

6 Tenant-Administration and basic workflows

6.1 Administration in tenant area

6.1.1 Set up Sub-Tenants

You can set up additional Sub-Tenants within your tenant area to improve the structure of your business workflows. A (sub) tenant-key is automatically generated when setting up a Sub-Tenant. The key can be used on specific "Climatix IC Workflows".

	NOTICE
	We recommend always using the main tenant-key as the distributor on the controller.

Conceptually, a Sub-Tenant is an independently administered area. Create a Sub-Tenant administrator there.

Standard workflow

▷ You are logged on as the Main-Tenant administrator on Climatix IC.

▷ Learn how your Sub-Tenant inherits applications in Section "Administration [→ 55]", under Basic Data.

1. Go to "Administration > Tenants".
2. Click "Create new tenant".
3. Assign a name and description of the Sub-Tenant in the "Basic Data" area.
4. Select "Active" if the Sub-Tenant is displayed in the tenant selection of the portal navigation ribbon.
5. You can optimize default data and key performance entries for the Sub-Tenant at a later date.
6. Confirm the entries with "Save".

⇨ The Sub-Tenant is set up. A tenant-key (distributor) is automatically created.

Default data and KPIs

Default data and KPIs are set up in the Sub-Tenant as per the Main-Tenant. Default data and KPIs edited in the Sub-Tenant is overwritten if something changes in the Main-Tenant.

Additional information on how Sub-Tenants inherit settings and data is available in Section "Administration [→ 55]", Basic Data.

Variants: Create a Sub-Tenant from a Main-Tenant template

As a rule, the settings, user roles, and applications for a Main-Tenant also largely work for the Sub-Tenant. The aforementioned data can be exported from the Main-Tenant and imported to the Sub-Tenant during set up.

▷ You are logged on as the Main-Tenant administrator on Climatix IC.

1. Go to "Administration > Tenants".

   ⇨ Displays the header with Main-Tenant and all Sub-Tenants.

2. Select the Main-Tenant.
3. Click "Export template".
   ⇨ The data is packed in a Zip archive.
4. Select "Save file" and save the Zip archive to a suitable location.
5. Go to "Administration > Tenants".
6. Click "Create from template".
7. Assign a name and description of the Sub-Tenant in the "Basic Data" area.
8. Select "Active" if the Sub-Tenant is displayed in the tenant selection of the portal navigation ribbon.
9. Click "Browse…" and go to the location of the Zip archive.
10. Select the Zip archive.
11. Confirm the entries and selection with "Save".

⇨ The Sub-Tenant is set up. The same basic settings, user roles, and application sets as the Main-Tenant are available.

You can also export and import templates from Sub-Tenant to Sub-Tenant. So that similar Sub-Tenants can be set up quickly.

6.1.2 Set up Sub-Tenant administrators

Conceptually, a Sub-Tenant is an independently administered area. By default, a Main-Tenant administrator cannot activate a plant in the Sub-Tenant.

▷ You are logged on as the Main-Tenant administrator on Climatix IC.

▷ A Sub-Tenant area is set up.

1. In the tenant selection (portal navigation bar), select the desired Sub-Tenant area.
2. Go to "Administration > User".
3. Click "Create new user".
4. Create a Tenant-Administrator.

	NOTICE
	• On the system side, the Main-Tenant administrator differs only in that the Sub-Tenant is unable to set up additional Sub-Tenants (maximal 2 levels).

6.2 Initial connection of plant and user

User roles with various plant access rights operated on the actual plants. All user roles have the User portal role. The goal of the workflows depicted below is to enable you to even activate plants on Climatic IC as a Tenant-Administrator on site.

Please note that in the workflow illustrations, Climatic IC has two commands available to activate plants:

- Only administrators may also use the ⇌ button.
- Normal user have the Activate Plant button available.

The menus and buttons mentioned in the workflows, are explained in detail in Section "Enter the portal [→ 31]".

6.2.1 Close cooperation between tenant-admin and user

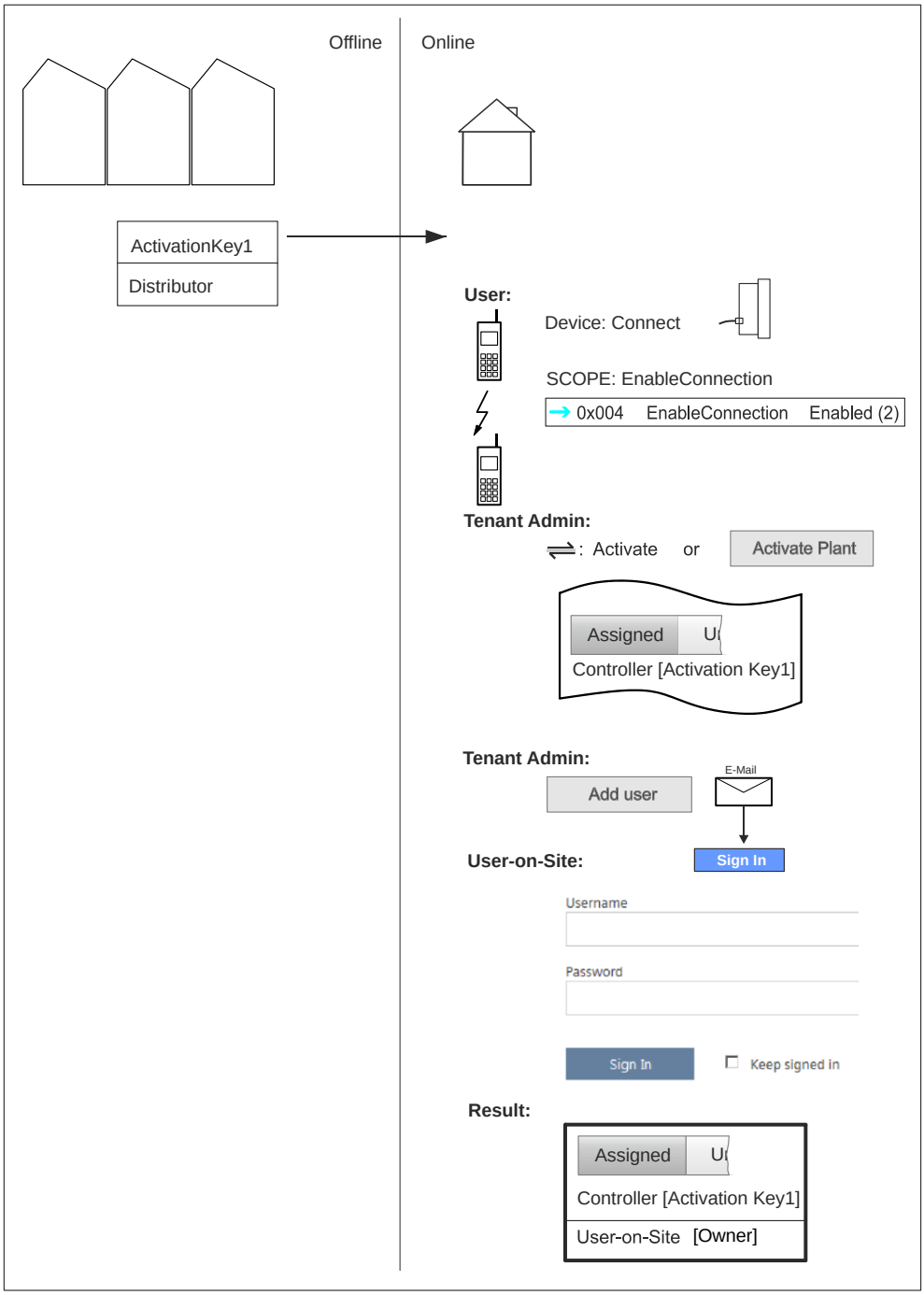


Figure 1: Close cooperation between tenant-admin and user

As indicated in the drawing, the Tenant-Administrator becomes active as of activation. He or she activates new controllers, connects the user on site with "Add user" to the plant.

The Tenant-Administrator assigns the user on site, for example, the role of owner (i.e. the right to "Administer plant settings) for the users to independently activate new plants in the future.

6.2.2 Interaction Tenant-Admin and user, with user list

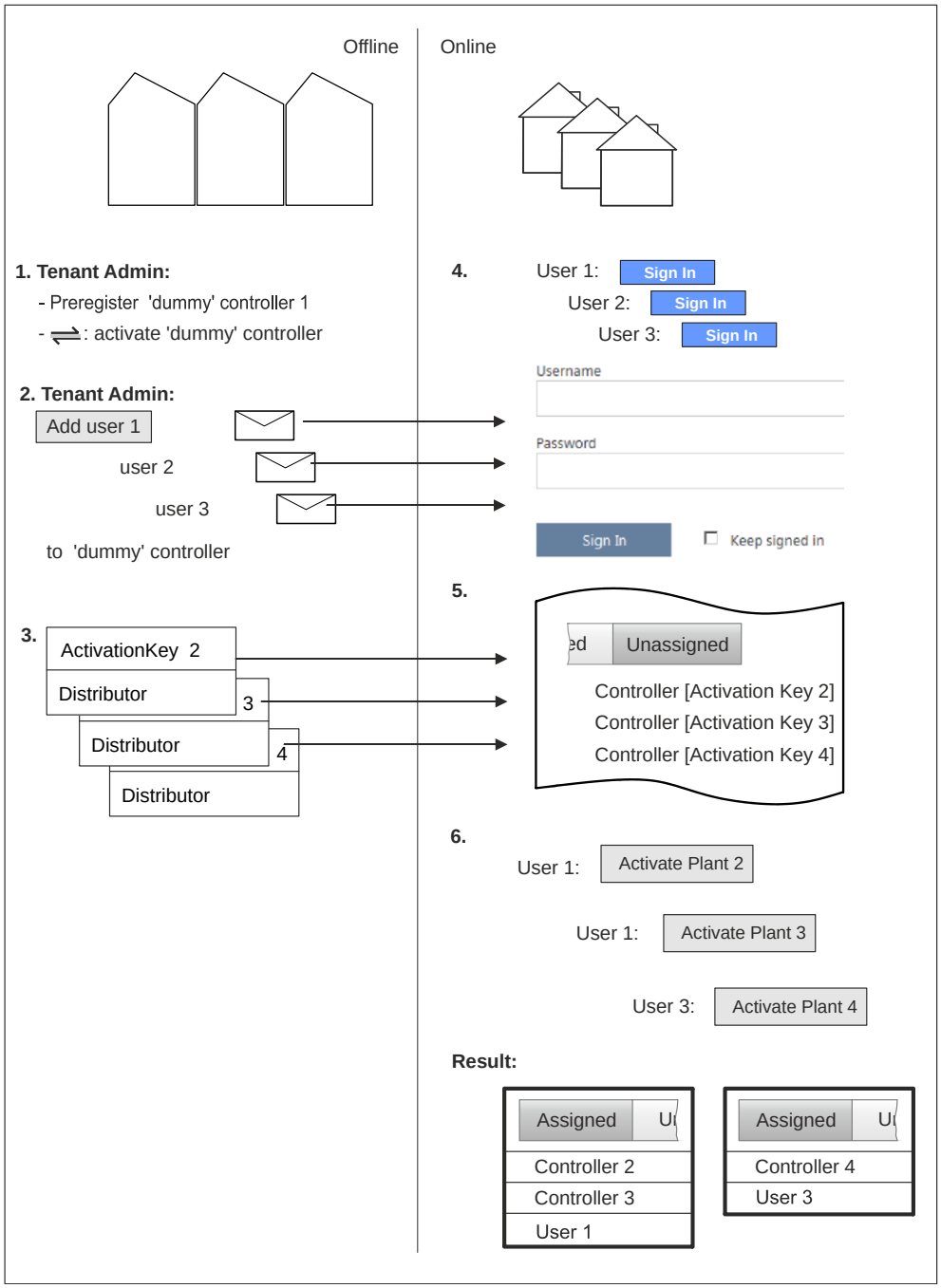


Figure 2: Interaction Tenant-Admin and user, with user list

As indicated in the drawing, the Tenant-Admin activates a dummy plant for the sole purpose of attaching the selected user (e.g. with the user role of owner) to this plant. The user can then subsequently activate the plant.

6.2.3 Autonomously acting user

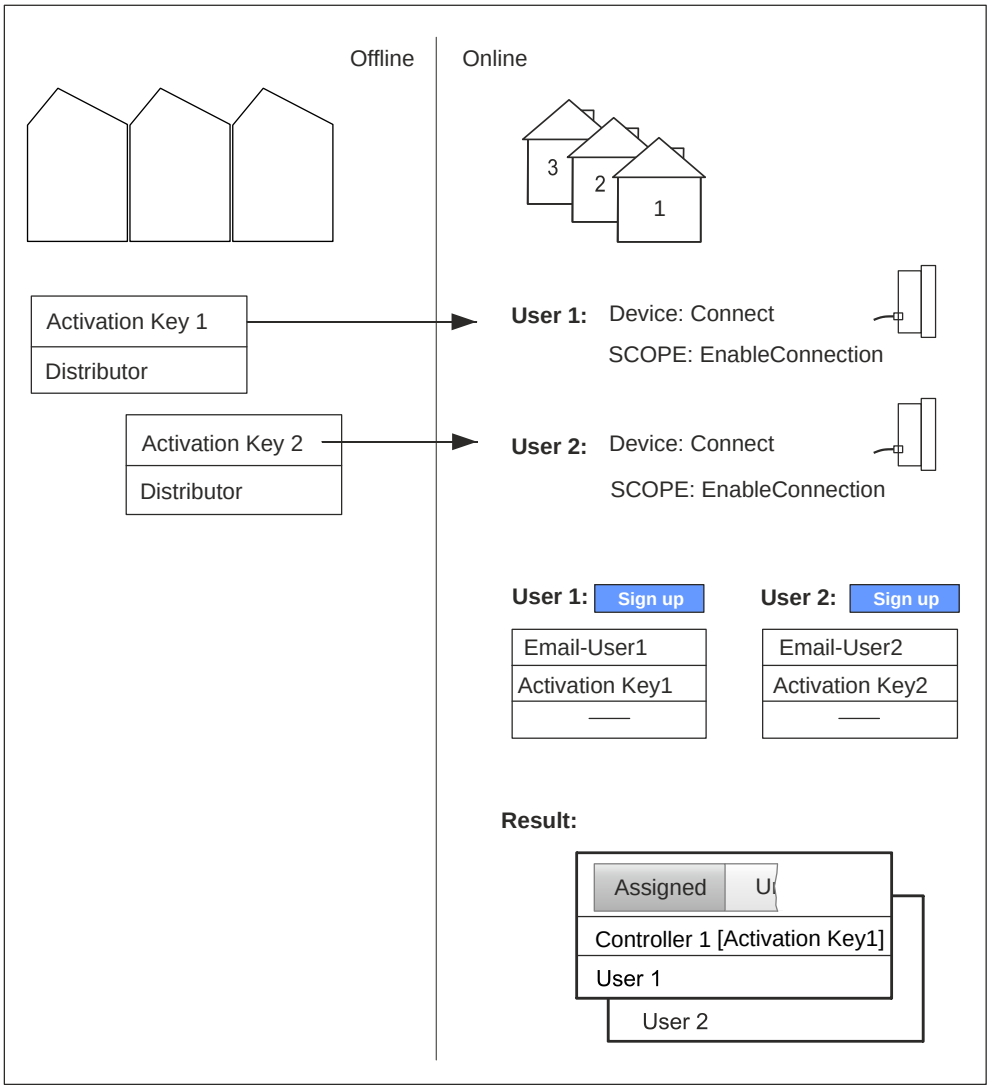


Figure 3: Autonomously acting user

As indicated in the drawing, the user can accomplish two things using the sign-up process:

- Sign up the first time on Climatix IC
- Assign the role of owner to the currently connected controller

The user can then activate other plants in one way or another.

6.3 Moving plants to Sub-Tenants

Moving plants to Sub-Tenants and back to Main-Tenants is very easy. The following compares possible timeframes for the move. Find the workflow that best fits your business activities.

The menus and buttons mentioned in the workflows, are explained in detail beginning from Section "Enter the portal [→ 31]".

While the following workflows illustrate the initial moving of plants, Section "Removing plants that were moved [→ 30]" details moving at a later date and the requirements to this end.

6.3.1 Moving in advance by the tenant-admin

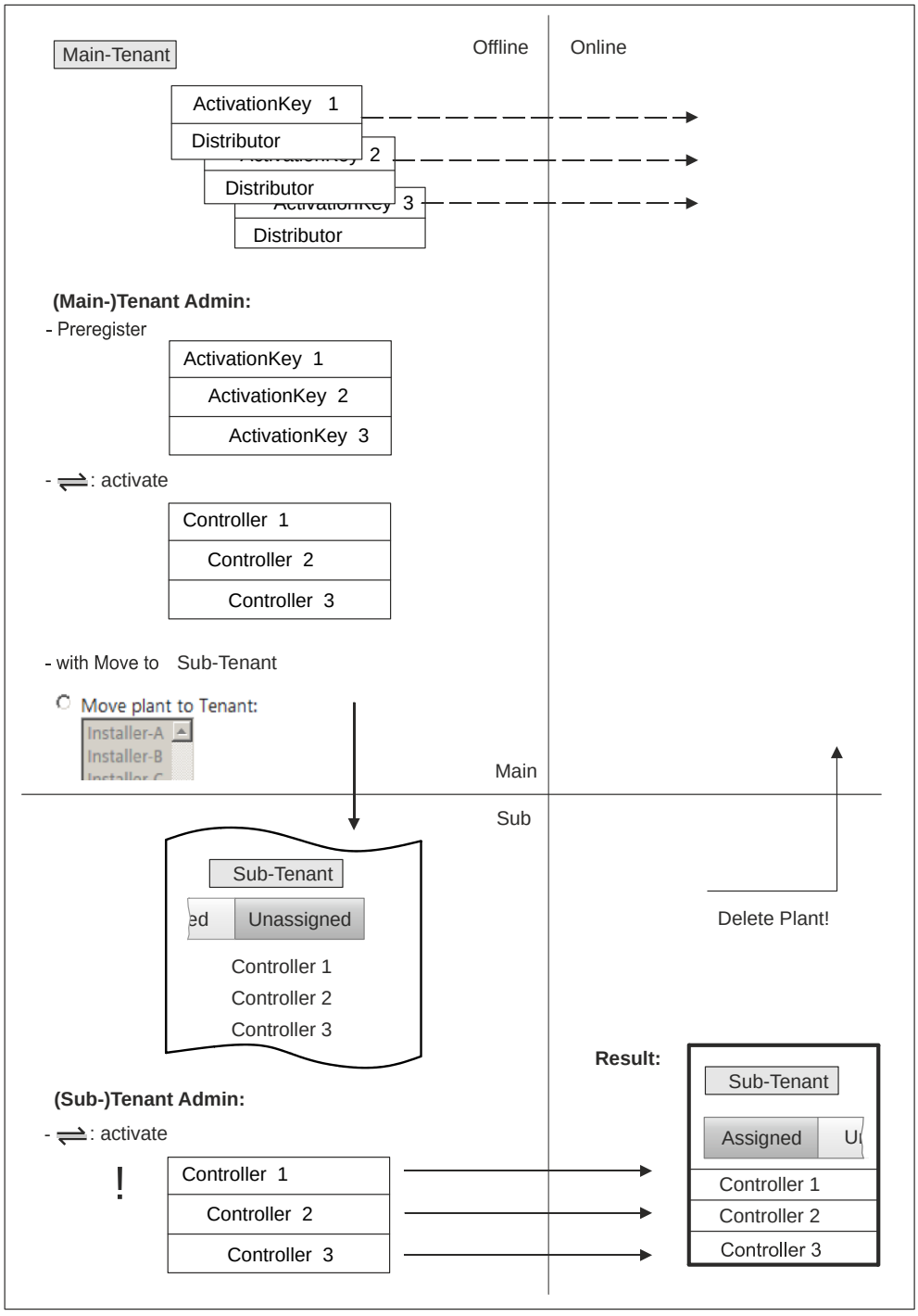


Figure 4: Moving in advance

Preregistered plants can be administered offline in Climatix IC. The ⇌ button (Activate plant) permits access to the "Move" menu. A Sub-Tenant administrator is required for final activation if the Main-Tenant administrator does not have admin rights in the Sub-Tenant.

Please note in general that the distributor is set on the Main-Tenant on the actual controller. In other words, deleted and re-connected plants are entered in the Main-Tenant area.

6.3.2 Moving after the fact by the tenant-admin

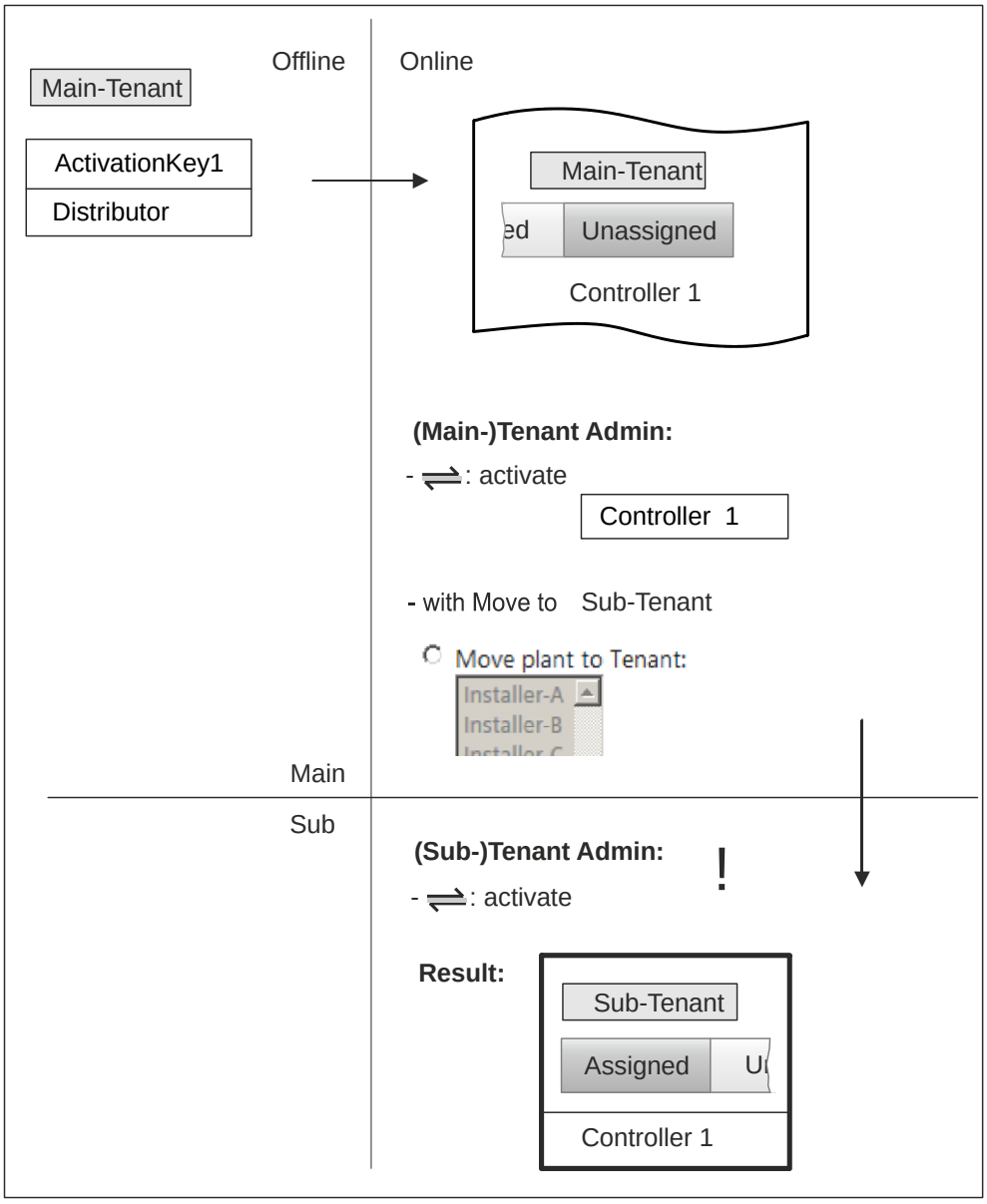


Figure 5: Moving after the fact

Plants that "go" online, register at the Main-Tenant under "unassigned" where the Main-Tenant can administer it. The ⇌ button (Activate plant) permits access to the "Move" menu. A Sub-Tenant administrator is required for final activation if the Main-Tenant administrator does not have admin rights in the Sub-Tenant.

Please note in general that the distributor is set on the Main-Tenant on the actual controller. In other words, deleted and re-connected plants are entered in the Main-Tenant area.

6.3.3 Moving in advance or after the fact by the user

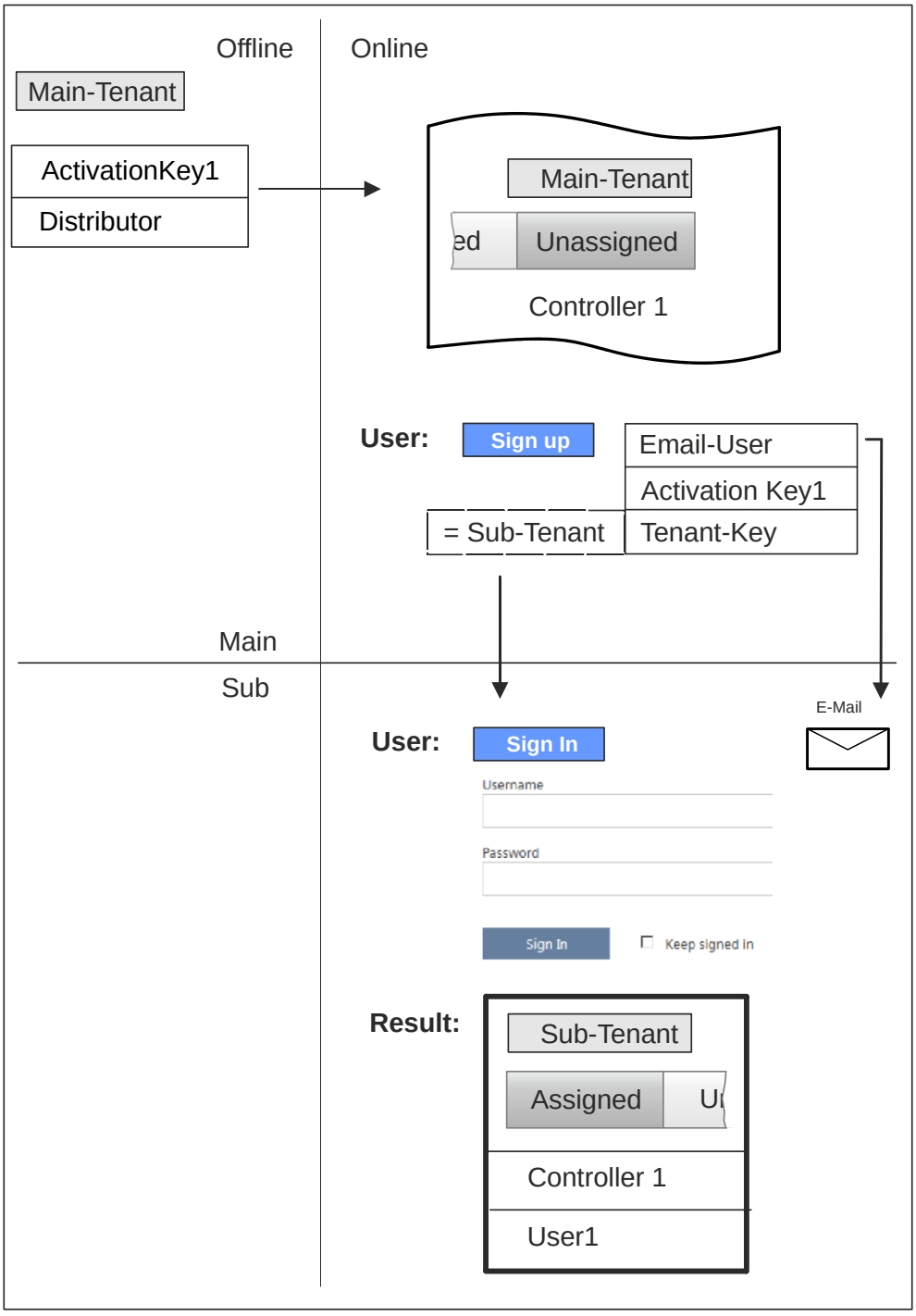


Figure 6: Moving online by the user

The sign-up procedure (registration) permits the user to move plants to Sub-Tenants after the fact. To this end, the tenant-key (distributor) of the desired Sub-Tenant is entered in the "Tenant-Key" field.

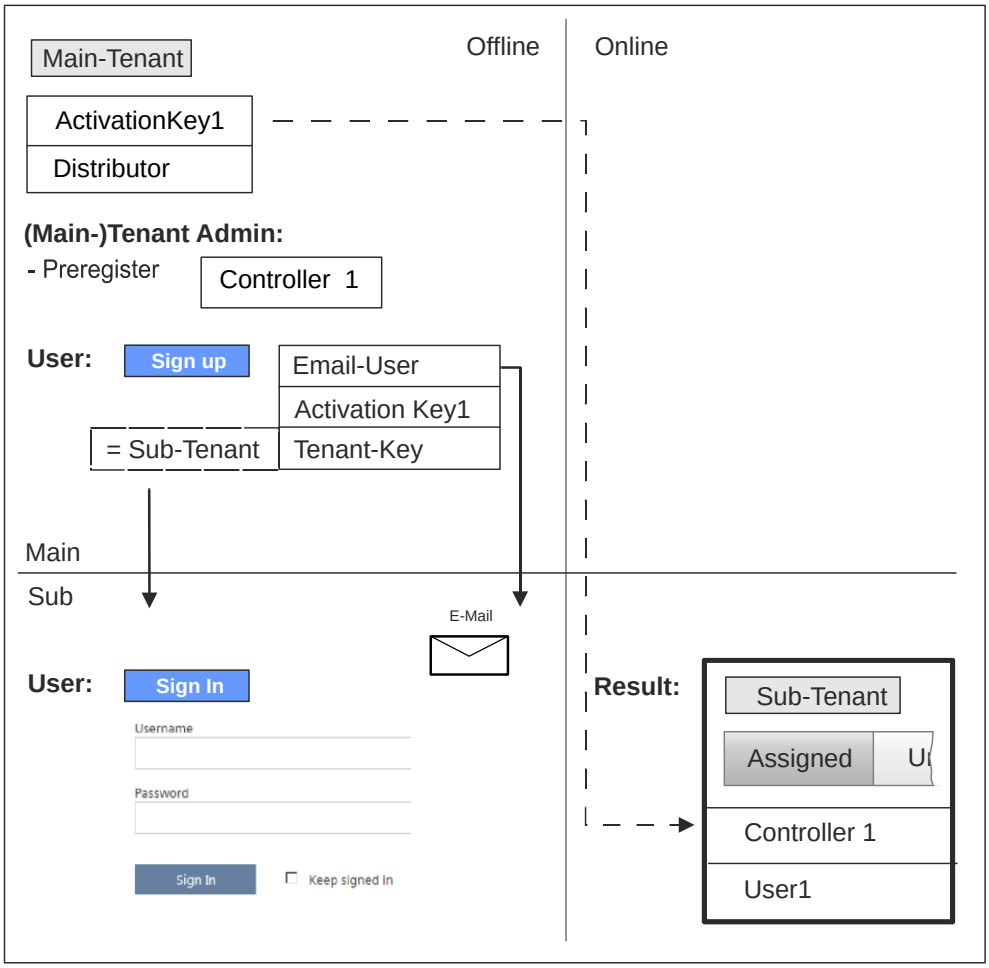


Figure 7: Moving offline by the user

Plants that are still offline, but preregistered, can by moved by the user as part of the sign-up procedure (registration) to a Sub-Tenant. To this end, the tenant-key (distributor) of the desired Sub-Tenant is entered in the "Tenant-Key" field.

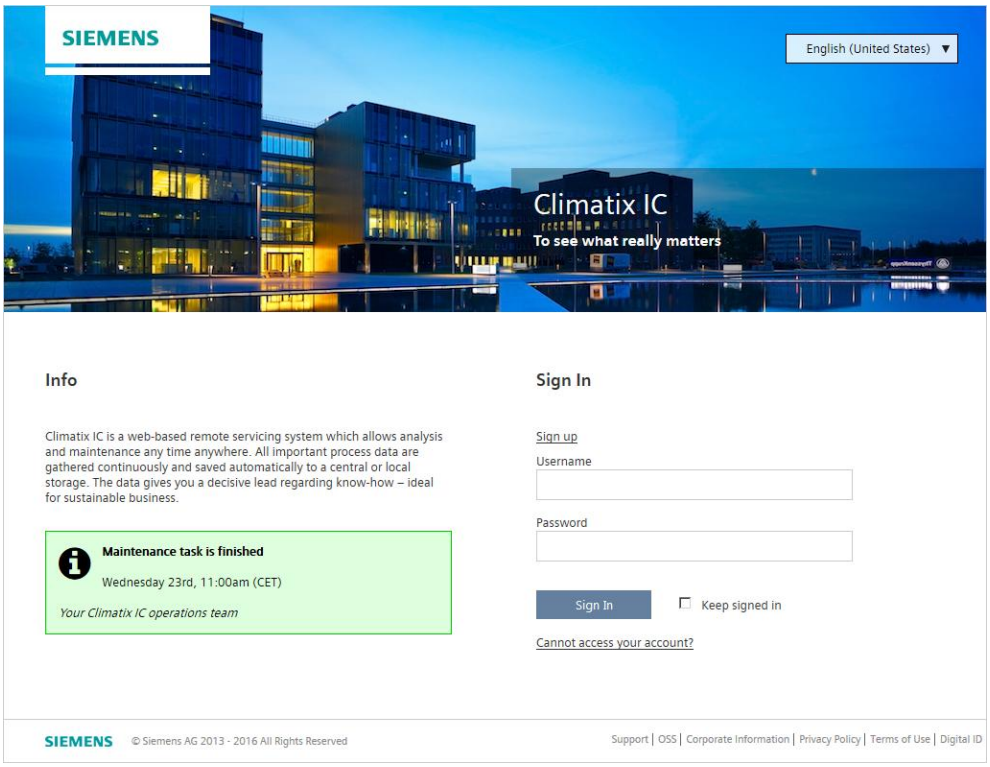
6.3.4 Removing plants that were moved

The "Hide" procedure is available if plants were moved and activated, to be able to remove the plant.

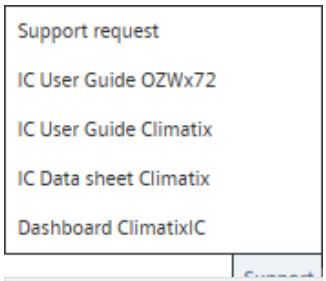
All plant settings are retained for hide. The plant switches to the "Unassigned" tab where the ⇌ button (Activate plant) opens access to the "Move" menu.

7 Enter the portal

Enter the portal at https://www.climatixic.com.

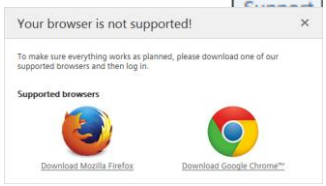


7.1 Help settings on the start page



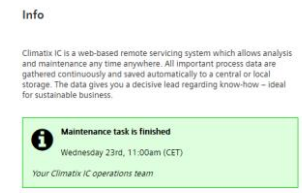
Accessible documentation

- "Support" on the start page provides an introduction.
- The comprehensive help for reading is located at the same location after log in.



Information on unsupported browsers

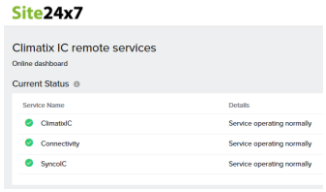
A clear information window indicates when Climatix IC is opened by an unsupported browser.



Central maintenance information from the Climatix IC Operations Team

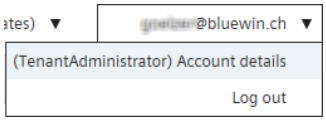
Maintenance and important product improvements are prominently displayed on the start page.

A color code (green, yellow, red) intuitively indicates the relevance of the information. Once logged in, you can access the same information at any time using the Info symbol (upper right). The Info symbol flashes when there is news.



Climatix IC Dashboard

You are investigating an event and want to know whether Climatix IC was online at a specific time? The Climatix IC Dashboard provides easy-to-understand information and objectively on what services are or were available.



Info on own portal role

The ability to find out the current portal role can be very helpful, especially when working with various portal roles in Climatix IC. They are located on the portal navigation ribbon by your log in name.

Language Selection

- Set the language in the portal navigation ribbon to the right.

7.2 Sign in

Sign in

▷ You have received an email with an invitation and temporary password.

1. Enter the User name and (temporary) password and click "Sign in".
   ⇨ You are requested to change the password.
2. **NOTICE! A secure password consists of at least 8 characters and includes at least one letter and one special character.**
   Create and confirm your secure password.
3. Click "Change password" to confirm the change.

⇨ Your individual password is active and you are now forwarded to an entry mask.

Secure sign in and out

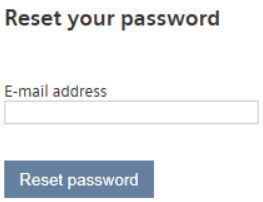
Note the following functions for sign in/out:

- The connection is ended after 30 minutes of inactivity. The web page returns to the sign-in screen.
  NOTICE! Only the activity on the first tab is registered when working in multiple browser tabs.
- The user account is locked after 5 attempts to enter the password. The user is informed of this and referred to the "Forgot password" function. The function sets a new password.
- For security reasons, a new sign in is required after 24 hours of uninterrupted user activity.

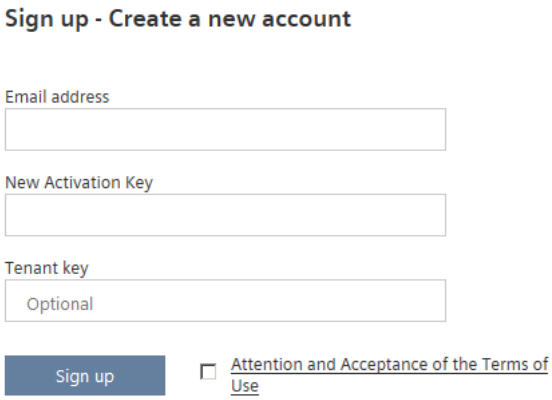
	NOTICE
	Protect passwords • Do not pass on your user name and password for Climatix IC to just any third party. • Encrypt emails that include the user name and password.

Forgotten password

Use the "Reset password" function if you have forgotten your password and follow the instructions.



7.3 Registration



As a rule, you are invited by mail the first time you contact Climatix IC, in other words, you follow the workflow as described under "Sign in".

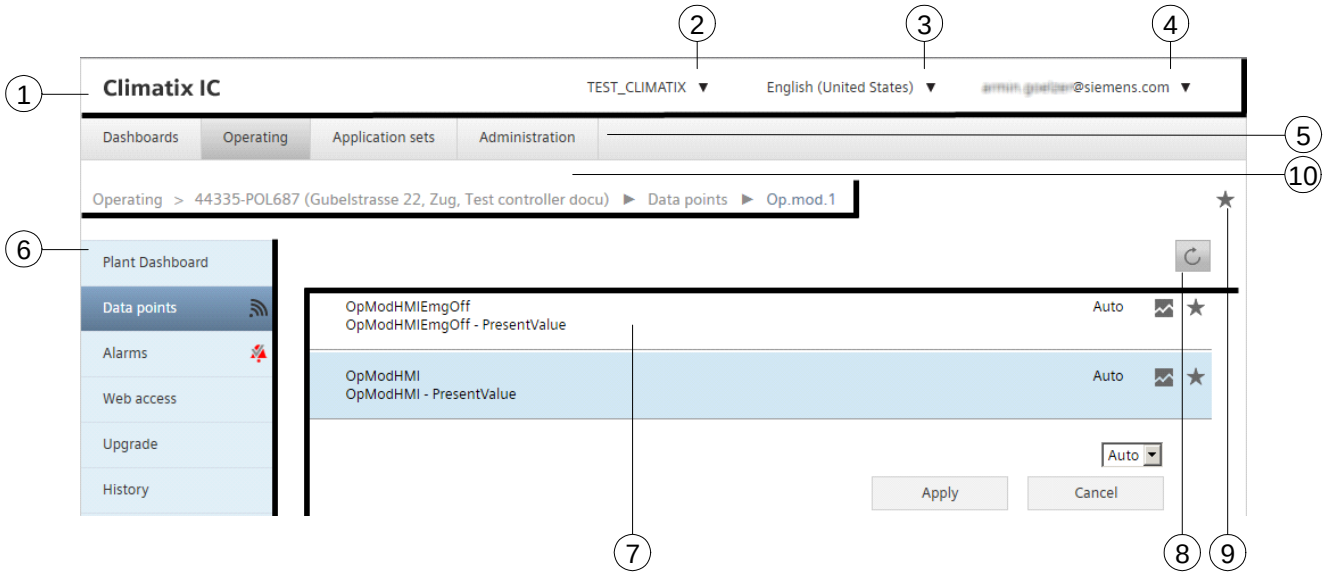
Registration is a process that combines multiple steps:

- First time log in by a user without an invitation by a higher role
- Plant activation using a valid activation key
- Adding a new user to the plant as owner (user role)
- Optional: Moving the plant to a Sub-Tenant area

The registration process is illustrated using a real scenario at "Moving in advance or after the fact by the user [→ 29]".

8 Portal page design and basic data

8.1 Webpage setup



1	Portal navigation ribbon
2	Switch tenant
3	Change language
4	Account details and log out
5	Primary navigation
6	Secondary navigation
7	Desktop
8	Refresh view
9	Add to the dashboard (here: The entire menu)
10	Menu path (enabled)

Additional information

The Climatix IC user interface offers numerous state-of-the-art intuitive operating features. Some of these features are compiled in "Search, sort, group [➙ 88]".

8.2 Change tenant space

A tenant is a closed area in the portal. You must be assigned more than one area to switch.

1. Click "Select tenant" button.
   ⇨ Opens up a dropdown list of possible tenants.
2. Select the desired tenant.

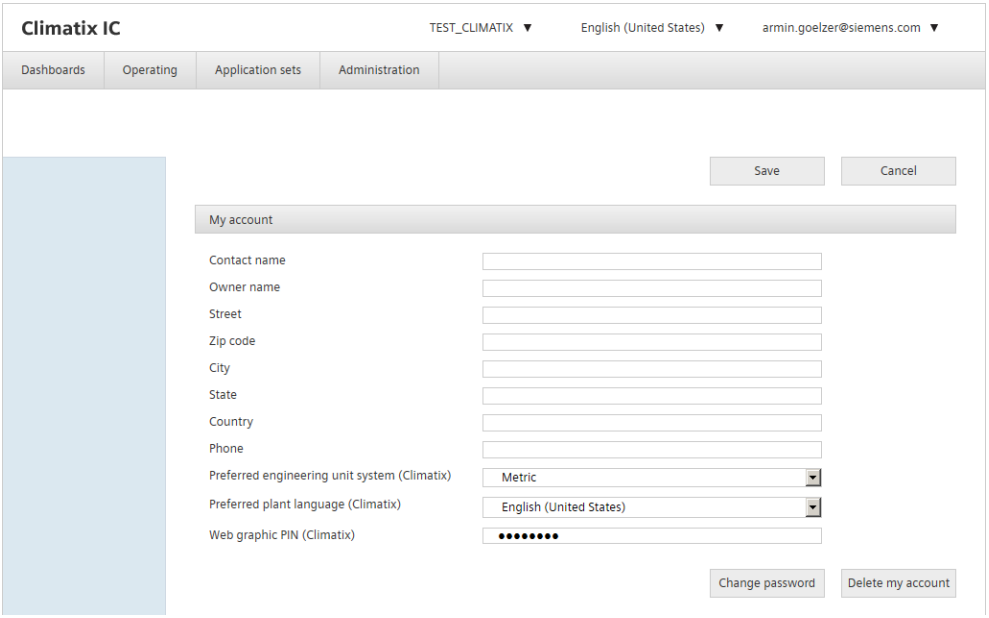
8.3 Change language

The portal is available in various languages. The settings act on the web server display language (see note below).

1. Click "Select language" button.
   ⇨ A dropdown list field opens with available portal languages.
2. Select the desired language.

8.4 Account details and log out

Account details



The entries are used for potential contact, e.g. by the plant administrator, Tenant-Administrator, or support:

Contact name	Designates the user in the event of contact.
Owner name	Recommended: Enter own name.
Address	Recommended: Enter own address.
Phone	Telephone number for contact purposes.

1. Click "Account details and log off".
2. In the dropdown list, select the "Account details".
   ⇨ Entry fields on your account are displayed. None of the data is required, but can be useful if you need to contact support.
3. Enter meaningful information on your company/person and confirm with the "Save" button.

Log off

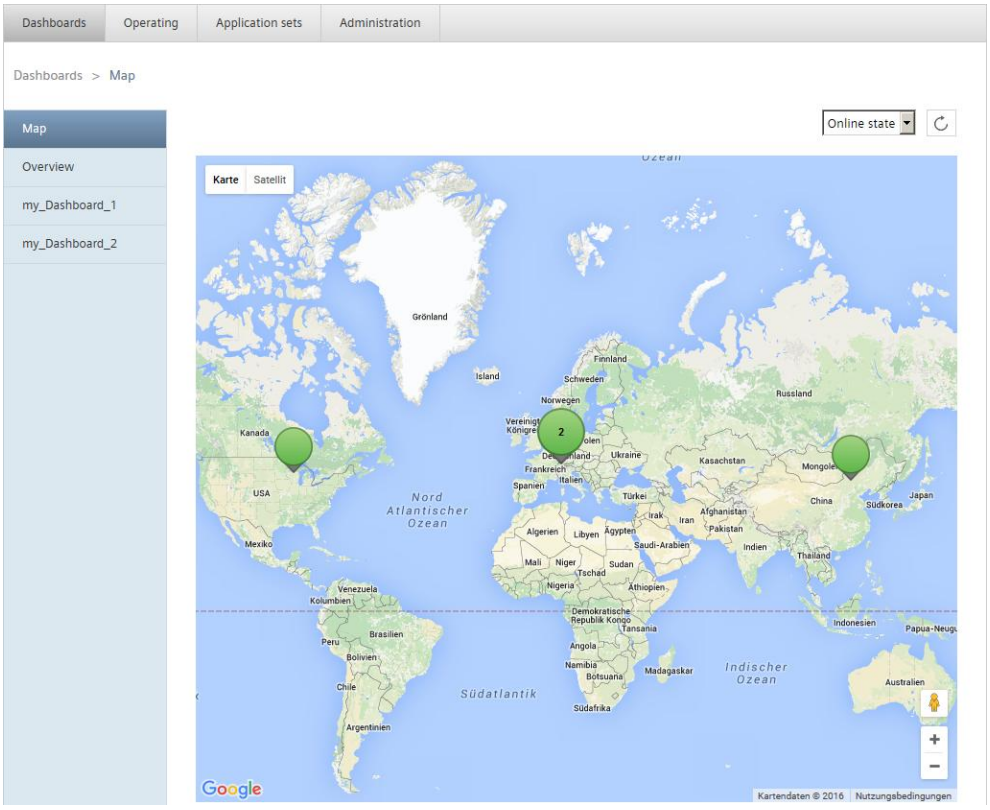
To log out of the portal, click the user profile and log out and select "Log out".

This is better than simply closing the window:

- The session is terminated.
- When you return to the portal, you are not automatically logged on, but rather have to select the user name and password.

9 Home screens "Map" and "Overview"

"Map" displays the essentials

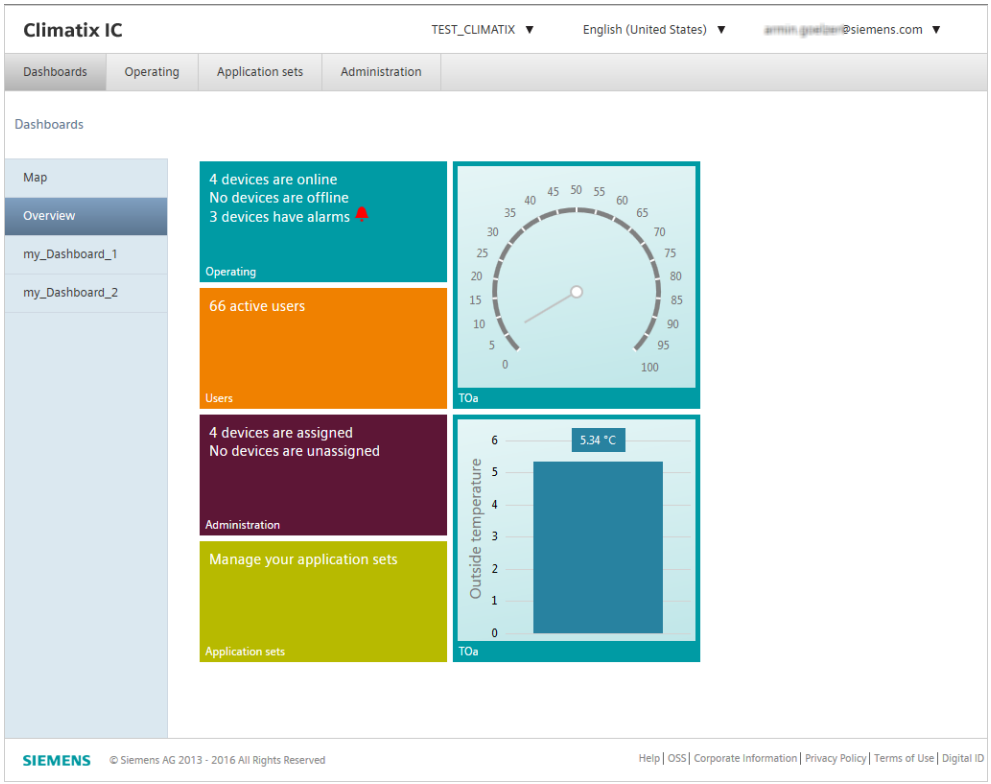


- "Map" displays the geographic location of your plant together with a configurable KPI (Key Performance Indicator).
- The essentials are compiled graphically, especially for service.
- Street and satellite information is provided by Google and offers supplemental information for service calls.
- "Map" can go directly from the map to the data points and settings.
- Your plant's online status is prepared by default as the first KPI. You can define additional KPIs with just a few clicks.

Additional information

You can learn how to create a KPI with just a few click in "Tenants [→ 63]", the sub-section on Key Performance Indicator.

"Dashboard" for your plant



- Your configurable "Dashboard" or favorites page.
- Individual data points or entire menus can be displayed as tiles. The tiles can be arranged and sized to individual needs.
- Share your own dashboard with other users or create individualized dashboard for each user role.

Default tiles

The following menus are displayed by default (but classified by privilege): Operating, application sets, administration and users.

A click (left or right) in a menu tile offers:

- Show page, data points, trend viewer
- Show page, data point, trend viewer in a new pane

Click the red alarm symbol to list plants with current alarms.

Additional information

"Operate dashboard [→ 40]" demonstrates how to operate "Dashboards".

The next Section "Create, share dashboards and assign roles [→ 41]" shows you how to create your own dashboard and share with other users, or assign dashboards for specific users as the administrator.

9.1 Operate dashboard

Normal/edit mode

Click the 3 dots [ ] displayed on the bottom right to start edit mode.

Clicking a tile highlights it (selected). You can do the following from the Edit bar: Resize, remove tile, edit tile, add a chart, download dashboard and add a dashboard.

Click the 3 dots [ ] again to return to normal mode.

Menus and data points to dashboard

Click on the star symbol of any menu with a favorite star symbol [★] to add it to the dashboard.

Click the favorite star symbol [★] for any data point to add it to the dashboard.

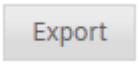
Dashboard data points to charts

Add one or more dashboard data points to a chart:

1. Start edit mode with .
2. Select "Add chart".
3. Fill in chart data and select a chart type.
4. Drag-and-drop one or several data points to the new chart.
   The data point values are processed and displayed in the chosen chart type.

Working with charts

Optimize and analyze existing charts:

1. Check mark the chart tile and click "Edit tile" to modify or optimize the chart display. For example:
   - Legend position
   - Shorten displayed data point names with "Display as".
   - Multiple axes
   - Axes legends and positions
2. Left-click a chart in normal mode to:
   - Show data points/trend viewer
   - Show data point/trend viewer in new window (recommended for detail analysis)
3. In the trend viewer: Use the time selection bar (below the chart) to zoom into details.
4. Export data points to csv format:
   - With export symbol [ ] for the complete time range.
   - With export button [

] for the selected/zoomed time range.

	NOTICE
	Token support All diagram entries, that define a display field for a tile, offer token support. Available tokens (including an explanation) are offered automatically. The following are available: • Climatix IC tokens specific to a plant, e.g. [SiteName], [SiteAddress], etc. • Data point-specific tokens of the controller (%t, %T and %N)

9.2 Create, share dashboards and assign roles

- The Dashboard "Overview" is available by default and cannot be deleted.
- You can add new or create your own dashboards below "Overview" with "Add dashboard".
- Your own dashboards (entries below "Overview") are saved in the user profile and not visible to other users.
- Own dashboards can be saved as a .json file using "Download dashboard".
- The other users use "Add dashboard" and then select the received .json file.

Create dashboards for specific applications for individual user roles

- "For specific applications" means that controllers from different application sets cannot be mixed--in contrast to the "Overview" dashboard.
- Log in using the role that is also intended for the new dashboard to further tailor it to individual user roles.
- Per "Overview of portal roles [→ 82]", the various plant user roles have the portal role of User.

Recommended procedure for creating plant dashboard

▷ You have at least the portal role of Tenant-Administrator to plan and organize plant dashboards.

▷ You have access to a controller with a typical or exemplary application set.

1. Under "Administration > Users", set up dummy email accounts using the portal role of user (according to the number of desired user roles).
2. Create the dummy email accounts under "Administration > Plants > 'typical plant' > Plant user" as various user roles.
3. Sign in with each of the dummy email accounts in Climatix IC and create a dashboard with "Add dashboard" for this user role.
4. Use only data points from the typical plant when integrating the data points.
5. For each procedure, save the created dashboard (or multiple ones, up to 10) with "Download dashboard".
6. Ensure that you assign a self-explanatory file name to the saved dashboards.
7. Sign in again as Tenant-Administrator to access the application set menu.
8. Load the dashboard file for the specific application under "Application sets > 'corresponding application set' > Plant file > Area: **Cloud files**" to the application set (additional details available in the appropriate menu description).
9. Assign the dashboard file to your user role under "Application sets > 'corresponding application set' > Administration > Area: **User access configuration**" (additional details available in the appropriate menu description).

Additional information

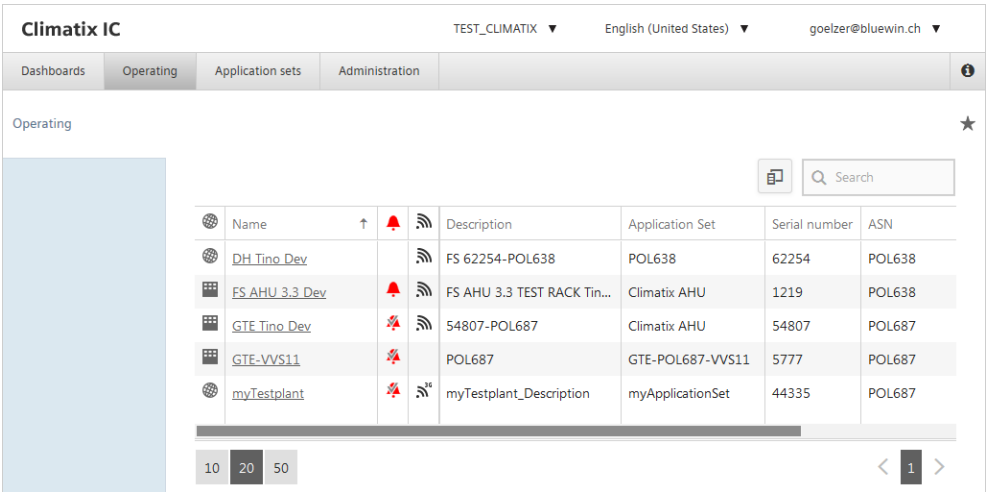
Dashboards specific to an application for individual user roles or "Plant dashboards", are the topic of the following sections:

- "Plant files [→ 58]", sub-section "Cloud files".
- "Administration [→ 55]", sub-section "User access configuration".

10 Operate Climatix IC

Plant overview

Available plants are displayed in the "Operating" menu. The plants are identified by name, description, application set, address, alarm and online status.



Additional information

"Search, sort, group [→ 88]", the Section on Tips and Tricks includes a number of operating notes that help you modify comprehensive lists to improve usability.

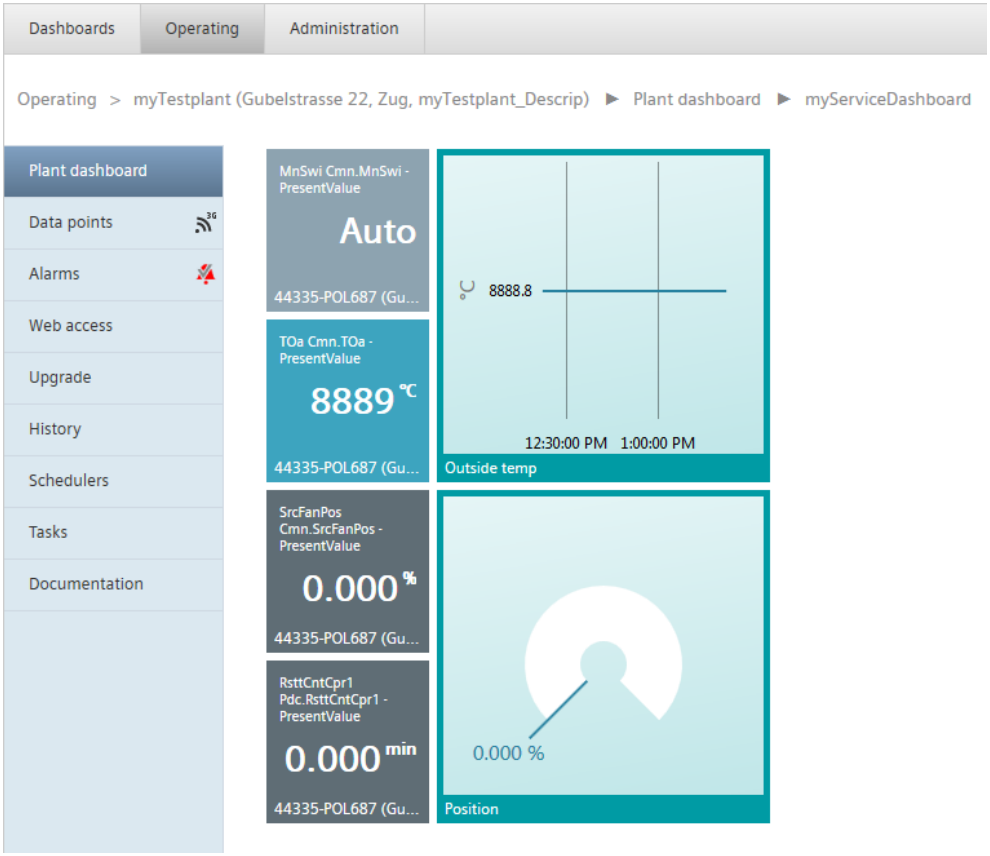
Symbol on Home page

Symbol	Description / Function
	Click: Goes to "Web access"
	• "Cursor": Web picture preview • Click: Goes to "Web picture"
	At least one alarm is active. Click: Goes to alarm list (active alarms)
	Plant is online
	Plant is online using a 3G router. "Cursor": Display of the IMSI number as a tooltip

10.1 Plant dashboard

You learned about dashboards in "Home screens "Map" and "Overview" [→ 38]".

The Home dashboard may also include plants with different application sets, but only one application set may apply to plant dashboards and may also assign specific user roles.



Design and administrative functions were intentionally left out of plant dashboards. If needed, they are made by a superposed portal role to all locations within the application set.

Additional information

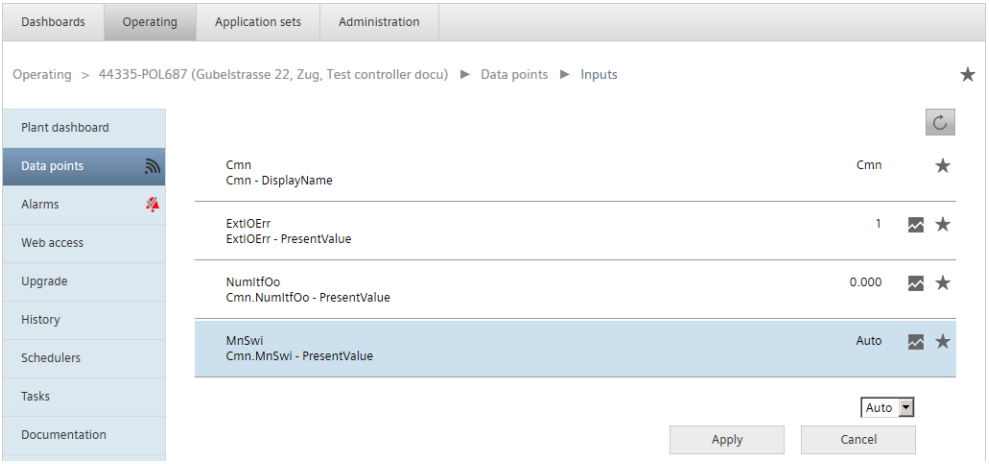
An introduction on creating plant dashboards is available at "Create, share dashboards and assign roles [→ 41]".

10.2 Data points

!	*NOTICE*
	Operator interventions via Climatix IC change the situation on the plant Make sure that you have enough information on the actual on-site situation.

Users see the plant data points as per their user role and preparations made in the SCOPE tool. Both requirements are described in:

- "User roles [➞ 70]", Section "Side note…"
- "Create watch pages and generate mapping [➞ 13]" and the following Section

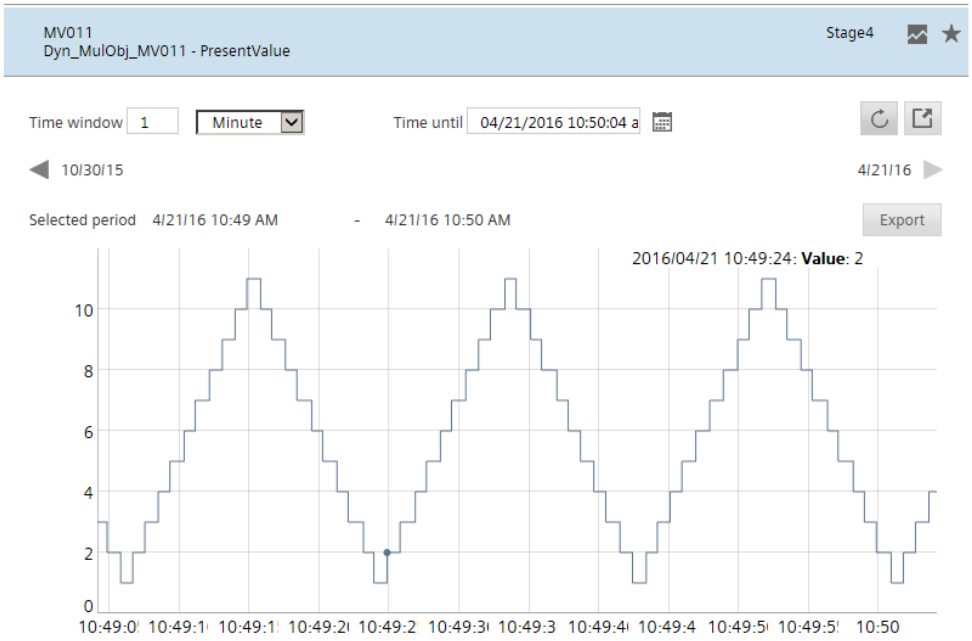


History trend data

Proceed as follows to display history trend data on a data point:

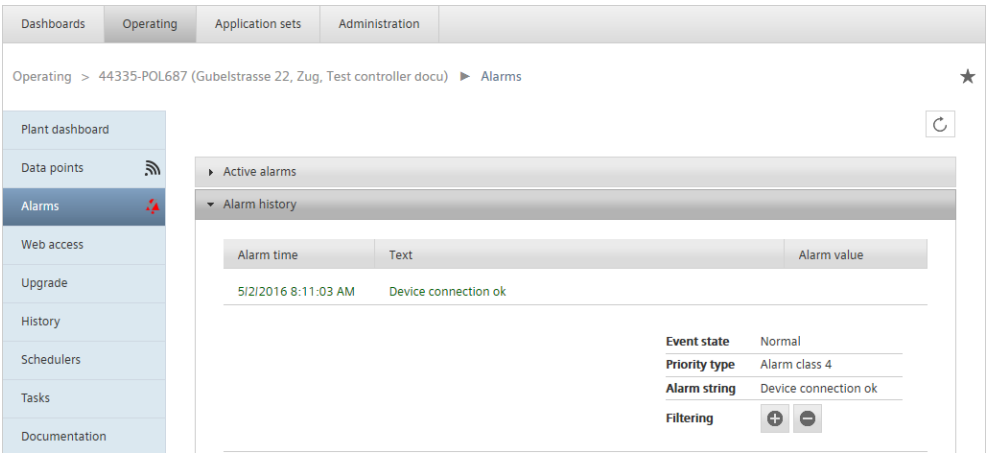
▷ In Climatix IC, "Operating > Data points" is displayed

1. Go to an individual data point through data point grouping.
2. Click the trend symbol to display the trend viewer on history data.
3. Analyze the history trend data.
4. You can export the data to your local PC as .csv.



10.3 Alarms

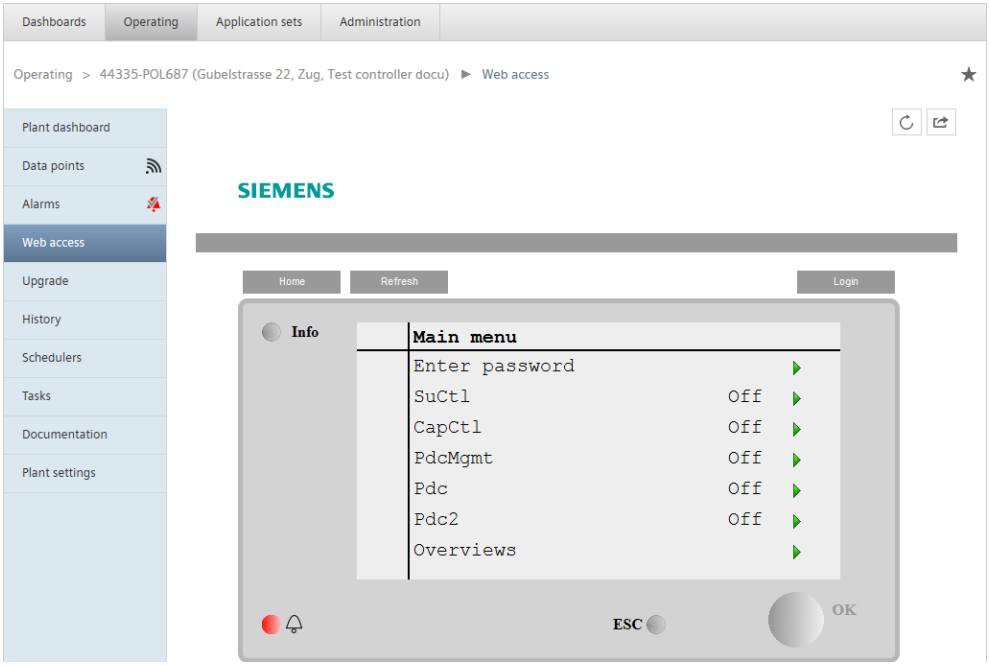
Plants enter their alarms under "Active alarms". The alarm is transferred to "Alarm history" once the source is resolved.



10.4 Web access

Users can see the controller's web server under web access, e.g. HMI@web. It is basically a full emulation of the local (physical) HMI.

The remote operator (remote maintenance) has the same menus as the local user and can provide targeted navigation help.



10.5 Web picture

Web picture

Web pictures (visualization with live data) use the already available JSON interface. Web pictures offer SVG graphic support and can be assigned, the same as dashboards, to specific user roles and enabled.

An appropriate tool support will be available as of valid version set VVS11.

Contact Climatic IC Support for additional information on web pictures and web picture PIN (see Section "Support on technical problems [➞ 80]").

The entry "Web picture" is only displayed in secondary navigation if a web picture is implemented.

10.6 Upgrade

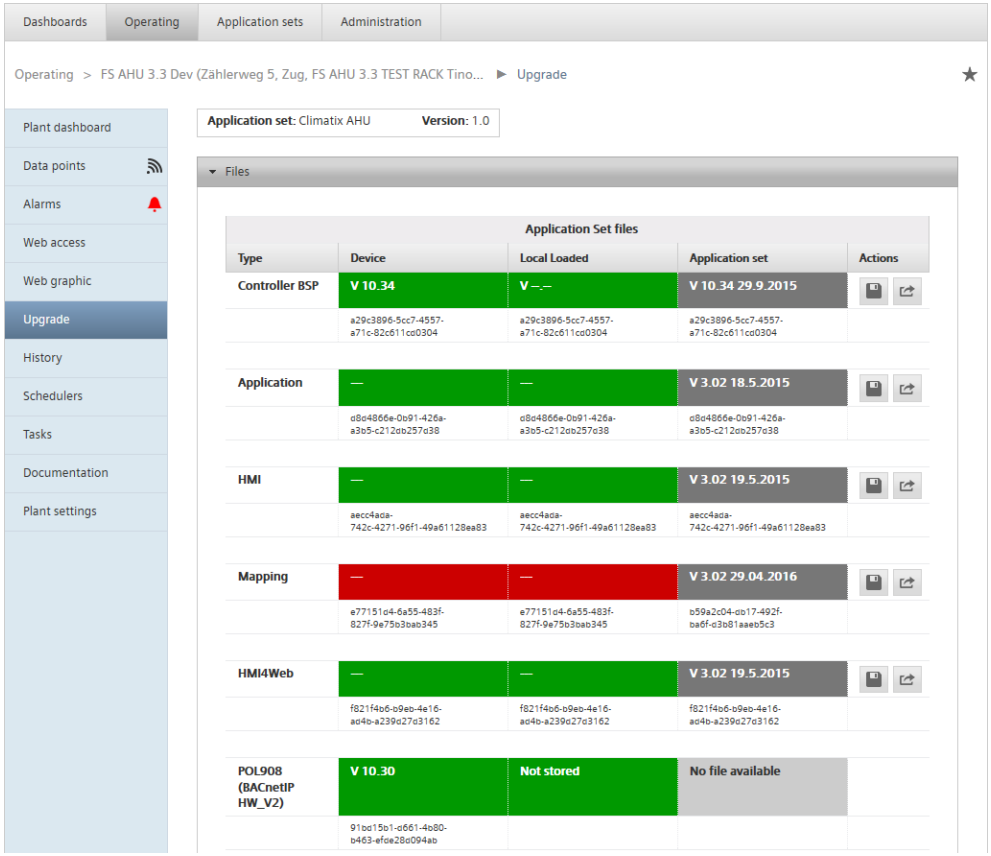
Upgrade

An authorized user can remotely upgrade a complete Climatix system (controller, connected COM modules and POL98 /96 ECV2 modules).

This includes:

- backing up parameters (commissioning data)
- upgrading firmware and applications
- restoring original parameters

"Upgrade" displays the actual situation on the controller (left side) versus the assigned application set (to the right). A dash next to the controller means no problems; the color green is decisive. Below the version, a checksum indicates that the application set and controller file are the same.



Tips and explanation

SD card

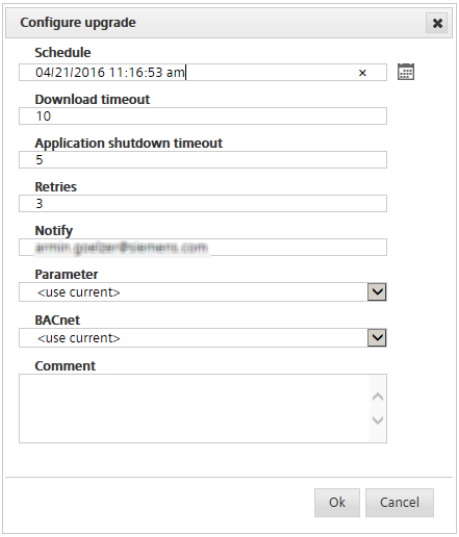
- To upgrade connected COM modules or ECV2 modules, the controller needs to have a SD card, because of the firmware size.

Status overview

- The status overview includes:
  - Current version on the device (left side)
  - Local files (middle) loaded on the controller/SD card
  - Files from the application set (right side)
- The status overview has the following color code:
  - Green: The file loaded on the controller (or SD card) matches the file in the application set.
  - Red: The file loaded on the controller (or SD card) does **not** match the file in the application set.
  - Olive green: The file saved on the controller (or SD card) matches the file in the application set, but is not loaded.
  - Gray: Source files

Automatic upgrade

You can set the upgrade to a specific date/time to start it automatically. Use the "Start upgrade process". The upgrade task is entered in "Tasks" and can be tracked there.



Possible settings

Setting	Description
Schedule	Date/time of the scheduled upgrade
Max. timeout for download	Timeout for the file download to the controller (in minutes)
Timeout for application shut down	Timeout for controller shutdown in minutes
Retries	Number of permitted update retries
Notify	Email address for the upgrade report. Use a semicolon to separate multiple recipients.
Parameter	Parameter used for the upgrade
BACnet	The BACnet file used for the upgrade
Comment	Free text comment on upgrade (displays in the task list)

Upgrade progress

#	Command	Description
1	File downloads	All necessary downloads are executed.
2	Query plant upgrade	Upgrade query to the controller. The application must be shut down during a defined time (Member 0x000C UpgradeAllowed = TRUE). "Application shutdown timeout" can be configured for each upgrade.
3	Upload parameters	The changes are saved to the Cloud. They are restored after the upgrade.
4	Upload BACnet file	The BACnet file is saved to the Cloud. The file is restored after the upgrade. Note: "Upload failed:1" displays is BACnet is not used.
5	Application stop	Stops the application.
6	Upgrade plant	The actual upgrade with the downloaded files.
7	Reset controller	Automatic controller restart.

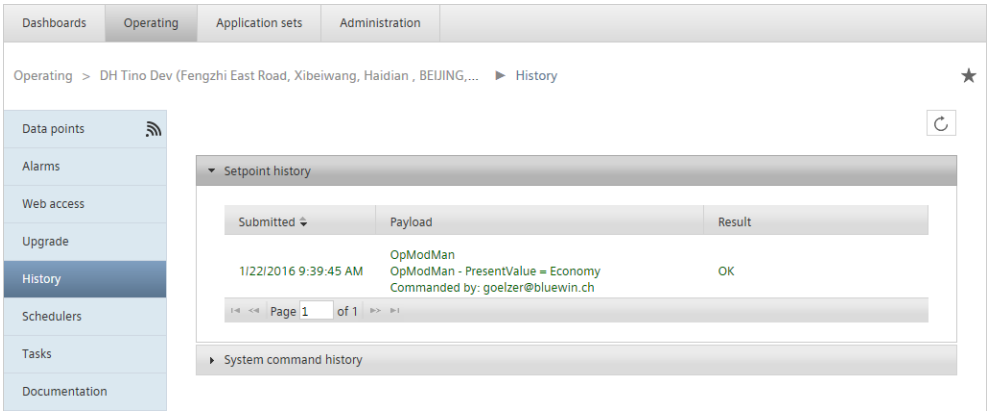
#	Command	Description
8	Start application	Starts the application.
9	Restore parameters files	Parameters are restored.
10	Reset controller	Automatic controller restart.
11	Restore parameters files	Parameters are restored.

The plant is updated after these 11 steps. The defined email recipient receives a report on the results of the upgrade. The upgrade progress can be followed in the Task history menu.

10.7 History

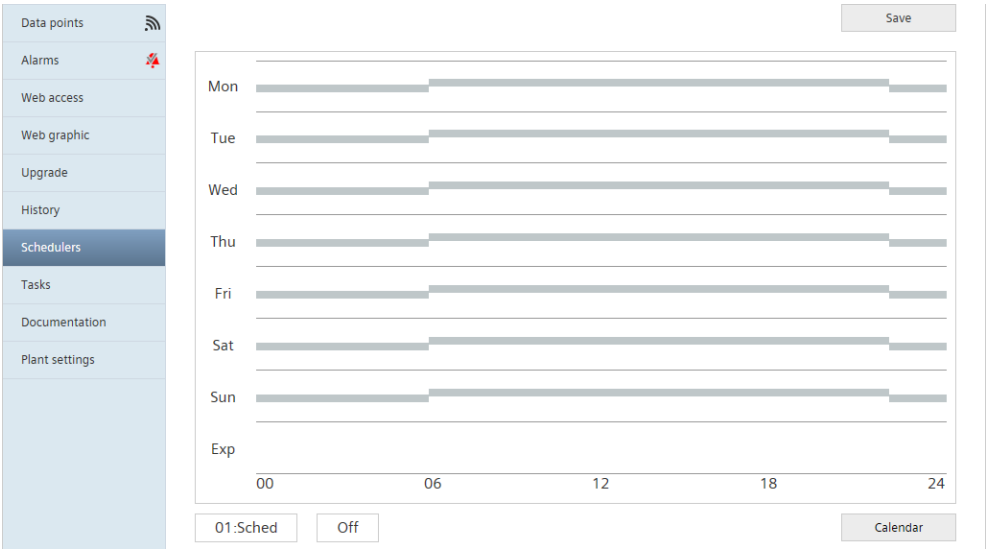
The "Plant log" (history) consists of two parts:

- Setpoint history: Who changed the setpoint remotely and when
- System command history: Who remotely changed system files and when, e.g. due to upgrades or restore parameters

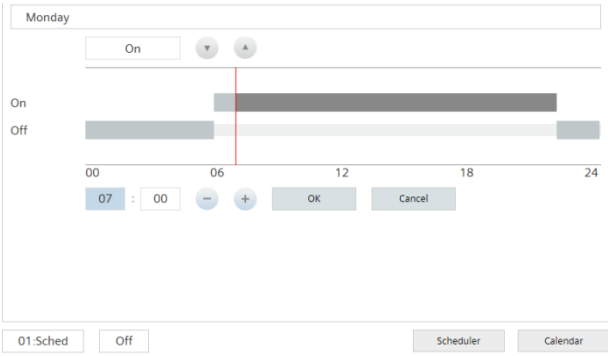


10.8 Schedules

The user can remotely edit available schedulers or calendars

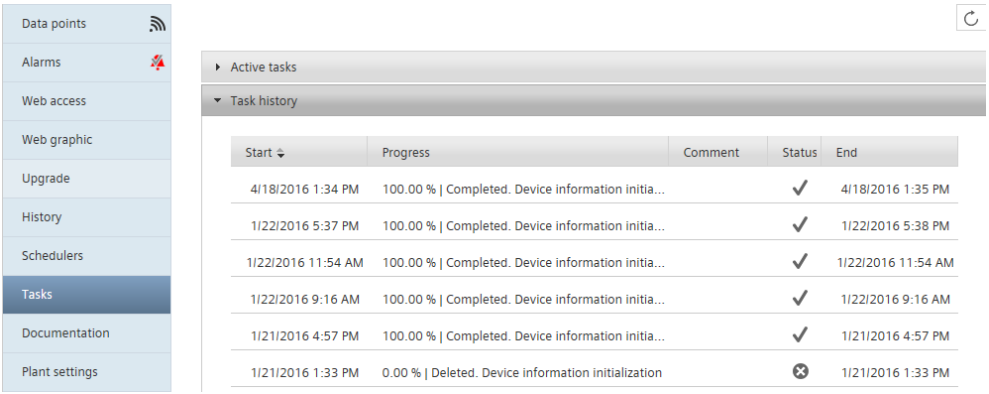


The user selects the desired day and adjusts the time scheduler accordingly.



10.9 Tasks

The "Active tasks" window displays scheduled plant updates.
The "Task history" window permits subsequent analysis.



10.10 Documentation

Previously assigned documents can be loaded in the Documentation menu ( ).

To upload document and assign to plants (via Application) see "Create application sets [→ 55]".

10.11 Settings

The Settings menu is a link here to "Administration > Plants > 'my plant' > Settings".

11 Create application sets

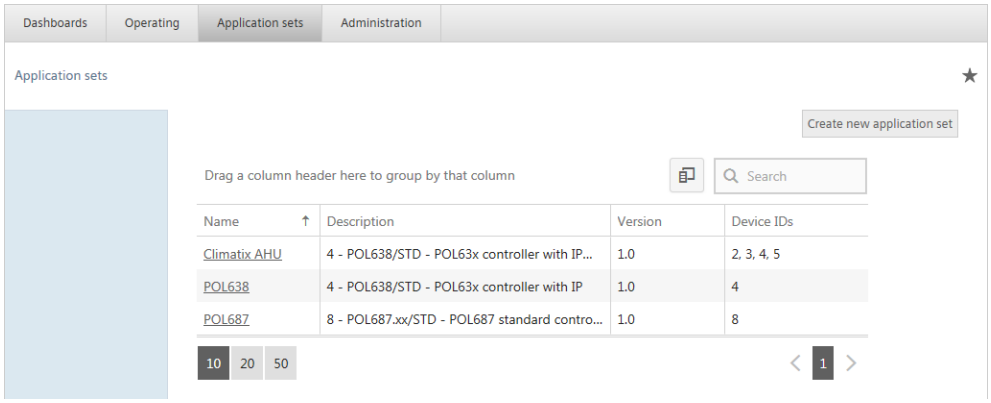
Certain menus are hidden for your access depending on the user role (e.g. application set or administration).

Application sets provide all functions an OEM application engineer needs to create complete Climatix software packages (firmware, SAPRO application, COM mappings and HMI file).

The plant administrator can select the correct application set without specific knowledge of Climatix programming.

Overview

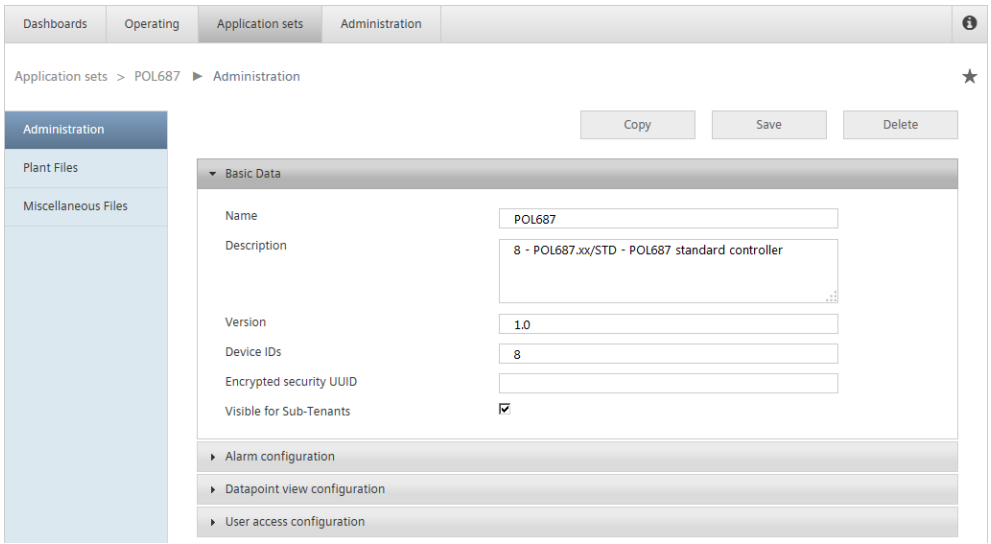
The user can view available application sets within its tenant space.



The following intuitive menus are enabled once an application set is selected or a new application set is created.

11.1 Administration

Basic Data



Device IDs

Each Climatix controller type has an unique "Device ID". It must be entered in a new application set to define application validate for controller type.

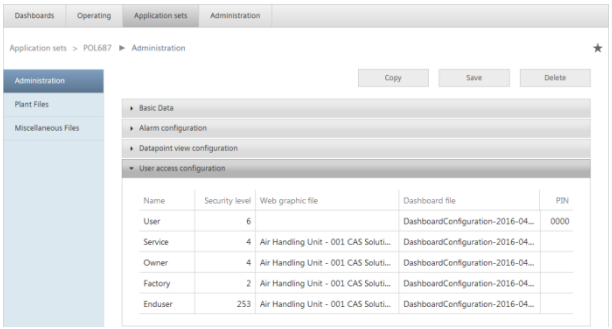
Climatix controller device IDs:

ID	ASN	Description
1	POL687.xx/MCQ	POL687 controller OEM customer McQuay
2	POL635/STD	POL63x controller with LON/HMI/I
3	POL636/STD	POL63x controller with LON
4	POL638/STD	POL63x controller with IP
8	POL687.xx/STD	POL687 standard controller
28	POL648.10/STD	POL6x8 controller, follow-on product for POL63x.00
29	POL648.80/STD	POL6x8 controller, follow-on product for POL63x.70
30	POL688.10/STD	POL6x8 controller, follow-on product for POL687.00
31	POL688.80/STD	POL6x8 controller, follow-on product for POL687.70
32	POL698.10/STD	POL6x8 controlled based on POL688.10 with EEV
33	POL698.80/STD	POL6x8 controlled based on POL688.80 with EEV
34	POL69U.10/STD	POL6x8 controlled based on POL688.10 with EEV & UPS
35	POL69U.80/STD	POL6x8 controlled based on POL688.80 with EEV & UPS

Visible for Sub-Tenants

With the selection "Visible for Sub-Tenants", all Sub-Tenants "inherit" an application set. You can use it to organize central management of application sets.

As part of "Inherit", the application set and user roles are inherited as a **packet** to the Sub-Tenant since within each **tenant**, the existing user roles are mapped to each application at the tenant. The following menu for an application illustrates the interaction:

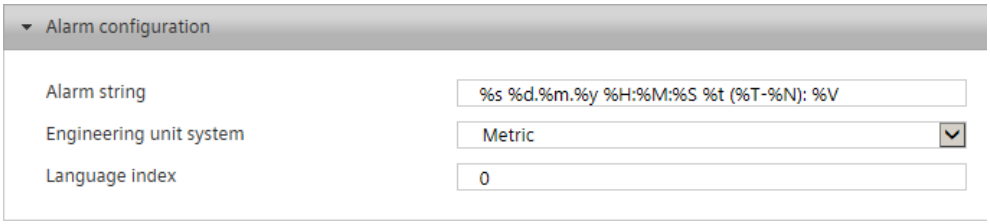


None of the settings and data links illustrated in the graphic can be changed for the Sub-Tenant. Conversely, the Sub-Tenant benefits from a central management of the "packet".

Alarm configuration

An alarm can be defined in advance for each application set.

- The characters to form the alarm text are described in the SAPRO online help, topic "Alarm handler"
- The standard text suffices for most cases



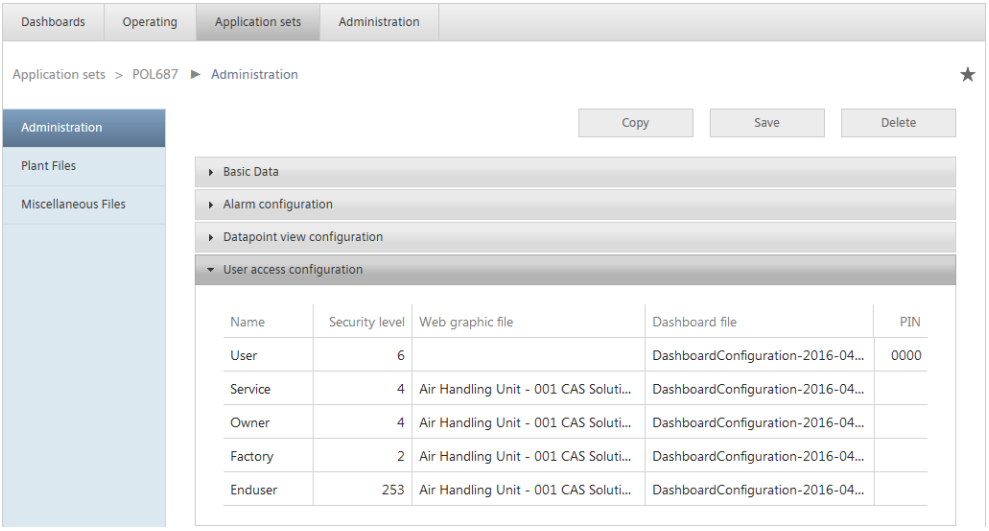
Data point view configuration

Setting the display image on plant data points. Refer here to SCOPE online help, topic "Watch Pages".

User access configuration

Note

The following figure serves as an example.



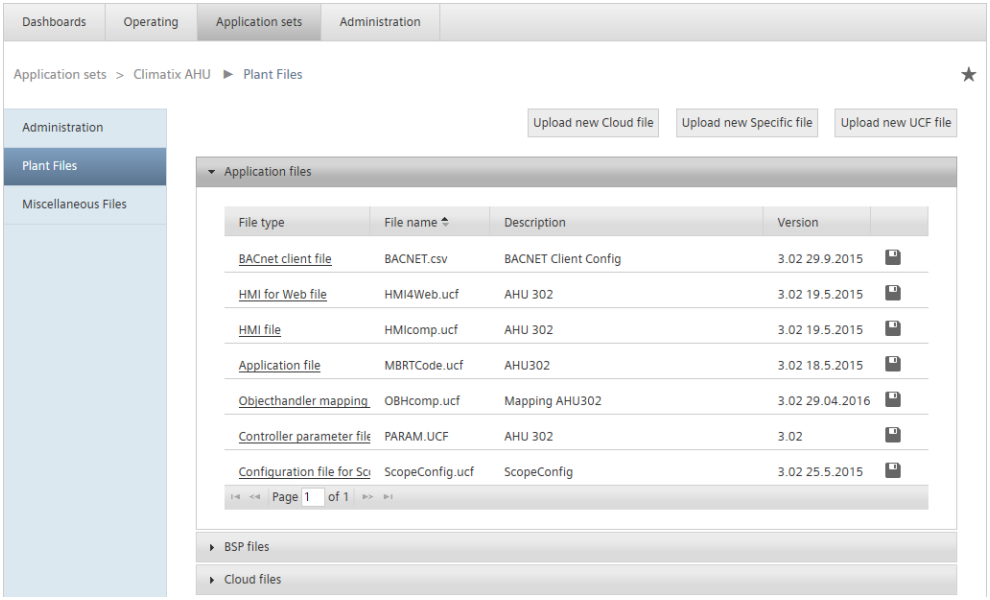
- Name: User roles on your plant. Defined in "Administration > User roles".
- Security level: Access right (data points, web picture, dashboard) in Climatix IC.
  It must be consistent with the security settings from the corresponding SCOPE projects.
- Web picture file: Selection of AVG pictures saved to the "Plant file".
- Dashboard file: Selection of JSON dashboard files saved to the "Plant file".
- Pin: Additional security key. Compare "Web picture [→ 48]". Corresponds to the SCOPE HMI password.

Additional information

"User roles [→ 70]" depicts in detail the interaction between SCOPE security settings, user roles, and security levels.

11.2 Plant files

Application files



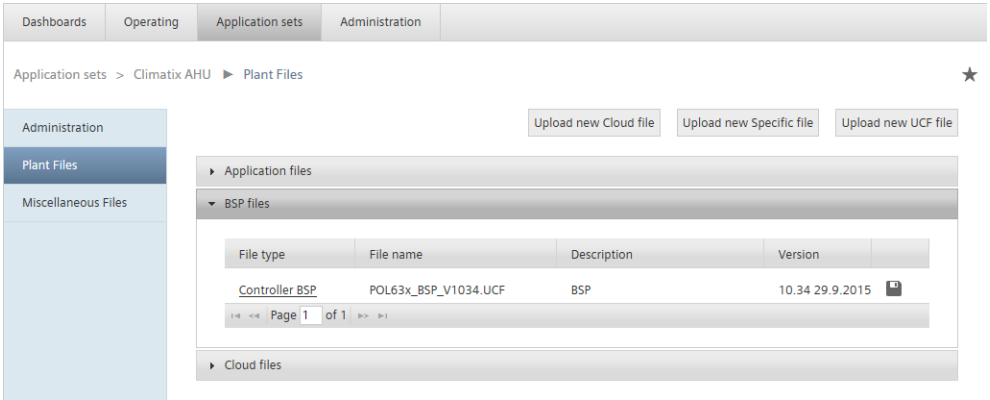
A user (with "Plant upgrade" privileges) can upload application files to the set, e.g. the SAPRO application and its HMI engineering files as well as communications mapping. Two different buttons are available to upload:

- "Upload new UCF file": Plant files in the UCF format
- "Upload new specific file": BACnet and SCOPE light files

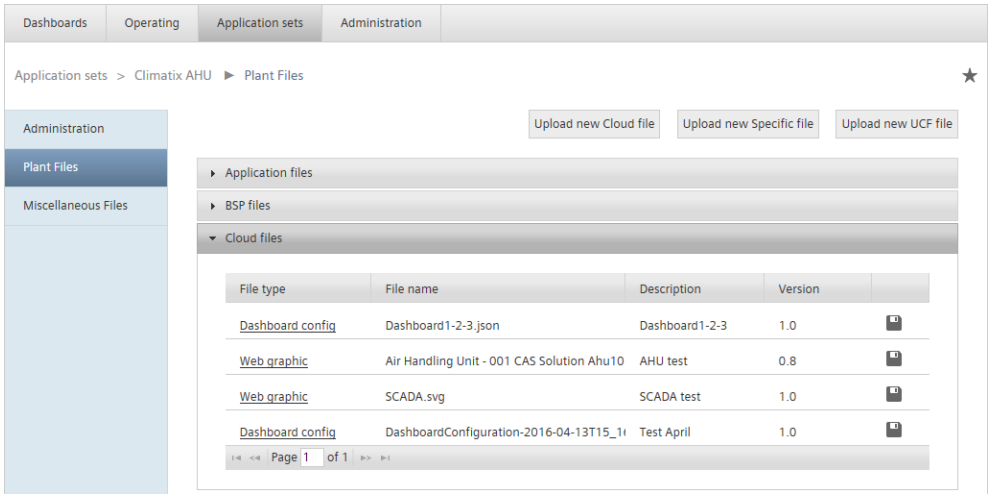
	NOTICE
	• The SCOPE light configuration can also be uploaded. • The SCOPE light configuration is automatically backed up to the cloud when upgrading remotely and restored after the upgrade.

BSP files

The user can upload the released firmware (BSP) of the controller for this application set. "Download" ( ) can also resave the file locally.



Cloud files



The following file types can be loaded using the button "Upload new cloud file":

- Dashboard config files in JSON format
- Web picture files in SVG format

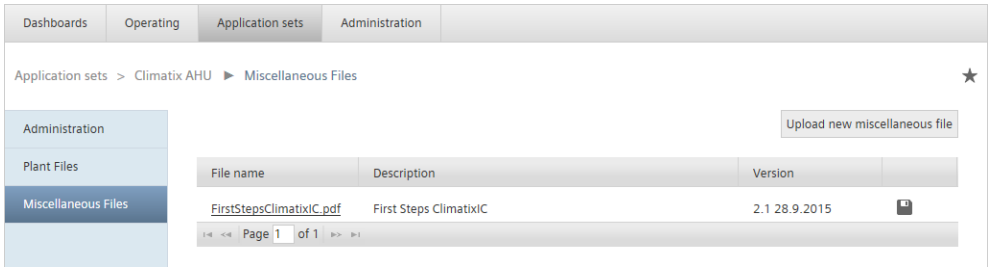
Additional information

"Create, share dashboards and assign roles [→ 41]" describes creating your own dashboards in JSON format.

11.3 Miscellaneous files

Miscellaneous files

Files of a purely informational nature (e.g. documents or diagrams), that belong to the topic of applications, are uploaded under "Miscellaneous files". The documents can then be accessed in the menu "Operating > 'my controller' > Documentation".



The Device ID is used, for example, to assign the "Miscellaneous files" of an application set to a controller, as explained in Section "Administration [→ 55]".

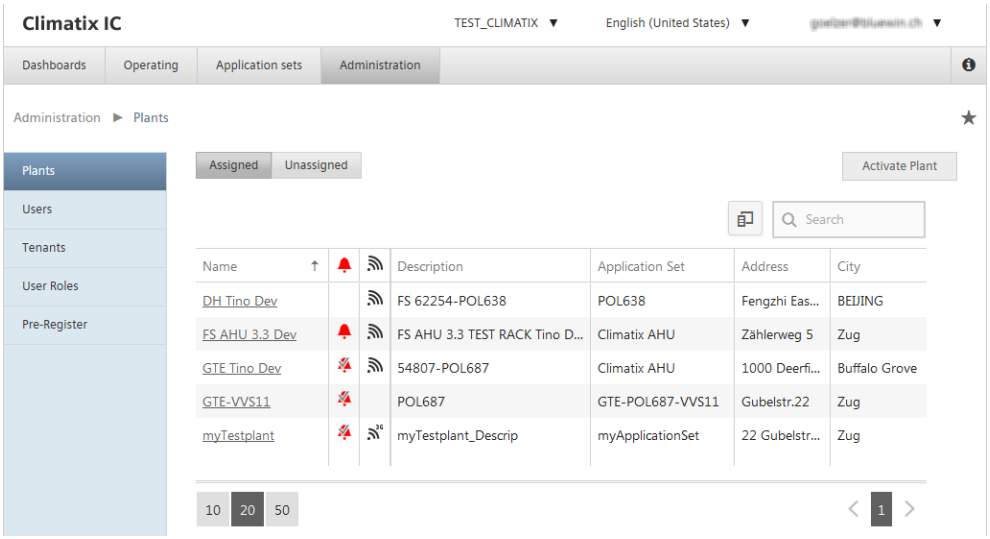
12 Climatix IC administration

Certain menus are hidden for your access depending on the user role (e.g. application set or administration).

Administration provides functions to manage plants, users, tenants, and user roles.

Overview

The overview provides access to superposed plant administrators with the menus Plants, Users, Tenants, User roles. The user has access to manage a specific plant, if selected in the overview, with the menus users, alarm notifications, settings, and operating.

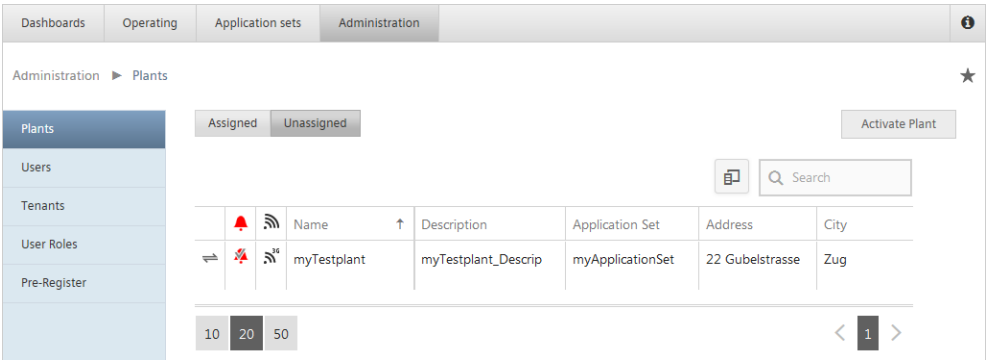


12.1 Superposed administration

12.1.1 Plants

Unassigned plants

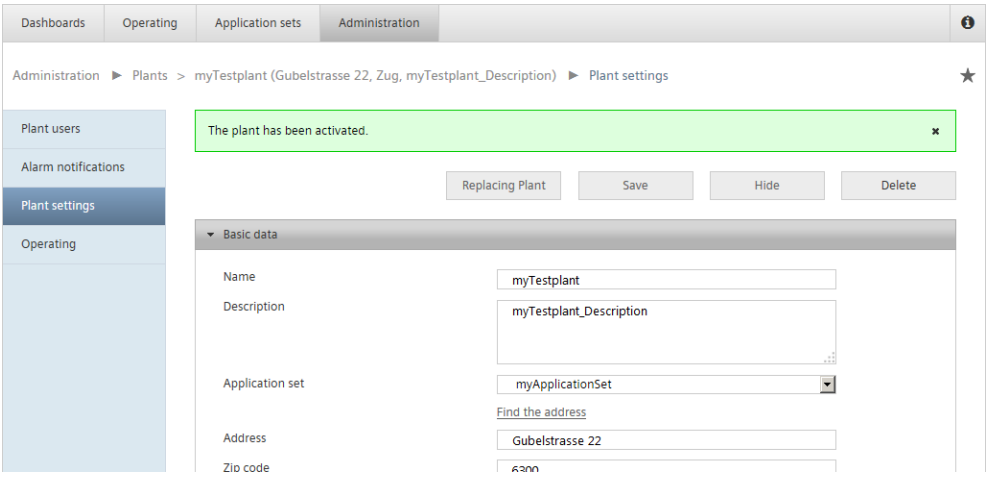
The button "Unassigned" displays new plants, yet to be assigned, as well as hidden plants (see "Delete, hide, and replace plants [➞ 77]").



Assign plants

To enable an unassigned plant, click (⇌).

The plant settings open (see "Plant settings [➞ 75]").



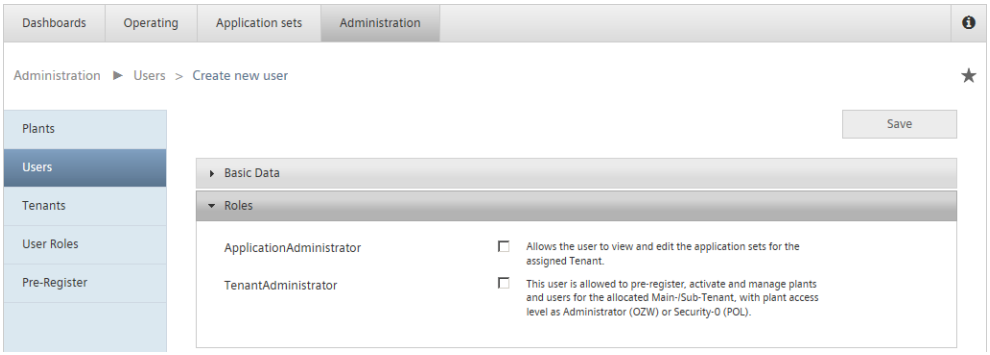
"Find the address" and "Get coordinates" are available in the Google service to locate the plant on the map.

When Sub-Tenants exist below the Main-Tenant, the system asks at which tenant the plant is to be activated prior to displaying the plant settings.

12.1.2 User

The tenant administrator creates a new user in this menu with portal rights, e.g. as another tenant administrator.

It is normally enough to set up a normal user (email account and user role) under "Administration > Plants > 'my plant' > Plant user". The user automatically receives the "User" portal role.



Additional information

- "Overview of portal roles [➝ 82]" provides an overview of portal roles
- Take note of the explanations provide directly next to the selection of roles

12.1.3 Tenants

Overview

The overview displays tenants available to you (main and Sub-Tenants).

The Tenant-Administrator can query the "Billing reports" here.

- The last monthly bill
- "All billing reports"
- In the "Invoicing" column, the individual reports for the main and Sub-Tenants

Function: Create new tenant

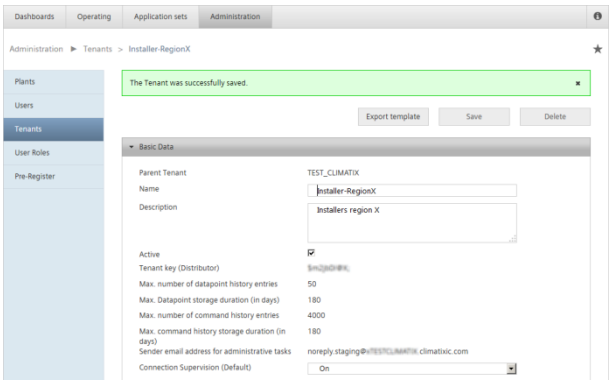
Creating tenants and available variants is described in Section "Set up Sub-Tenants [→ 21]".

Select a (your) tenant for functions described below.

Basic Data

Tenant-Key (distributor)

You can read the tenant-key (distributor) in the basic data area. "Glossary [→ 10]" has additional information on the Tenant-Key (distributor).



Connection supervision standard

The default connection supervision (triggers an email, if the plant goes offline) can be disabled.

"Tenant-key figures"

Basic Data also publishes tenant-specific key figures that are informative and useful to the tenant-administrators.

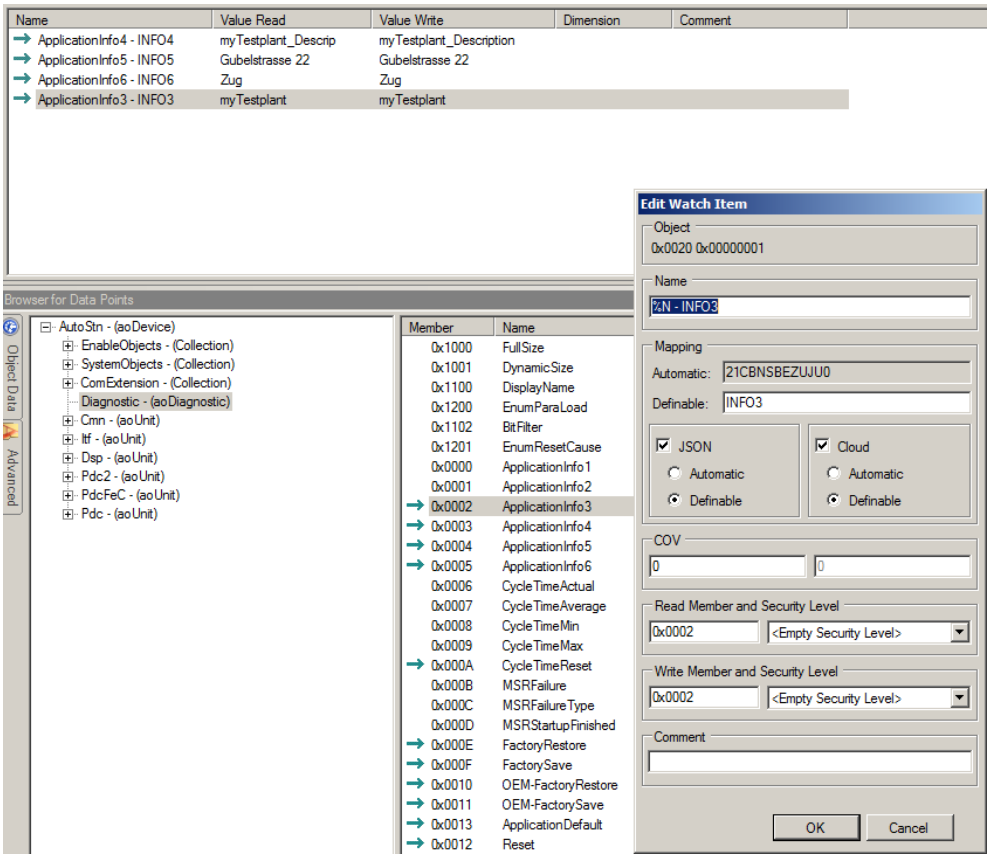
12.1.3.1 Default data for plant settings

A Tenant-Administrator can prepare default data for import. As a counterpart, the default data must be prepared and loaded using the SCOPE tool. Entries of the same name in the cloud act as keys for the mapping name prepared in SCOPE.

A result, for example, is that the entire controller series signs in to the cloud using the default information.

The mechanism described here only works at initial sign in or after completely deleting the plant and reassigning it.

Proceed as follows:



In the SCOPE tool

▷ SCOPE tool is open with a project and connected to the target controller.

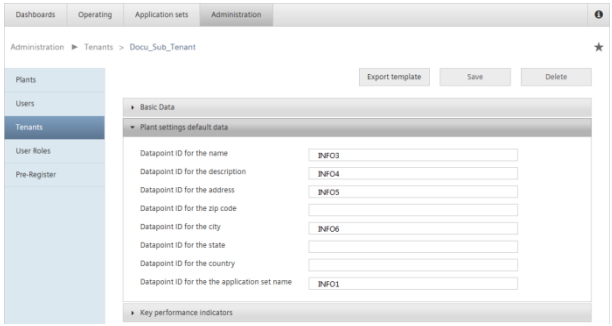
▷ "Browser for Data Points" displays

▷ Watch pages with a target watch page for the default data is displayed

1. In the browser, go to Diagnostic.
2. Enter the desired data in write access ApplicationInfo3 to ApplicationInfo6.
3. Drag-and-Drop ApplicationInfo1 to ApplicationInfo6 to the target watch page.
4. Right-click the item and select "Edit item...".
5. Ensure that cloud/definable is enabled. So that the entry is considered for definable.
6. In the Mapping pane, under "Definable" enter the cloud mapping name, e.g. INFO3.
7. Save the watch pages.

8. Under Mapping Support, generate the mapping files (double-click GenericCloud to highlight Mapping Support as changed--with a star).
9. Save Mapping Support.
10. Stop the application and load the mapping to the controller using the loader.

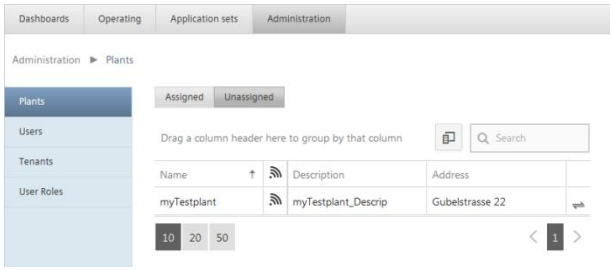
In Climatix IC



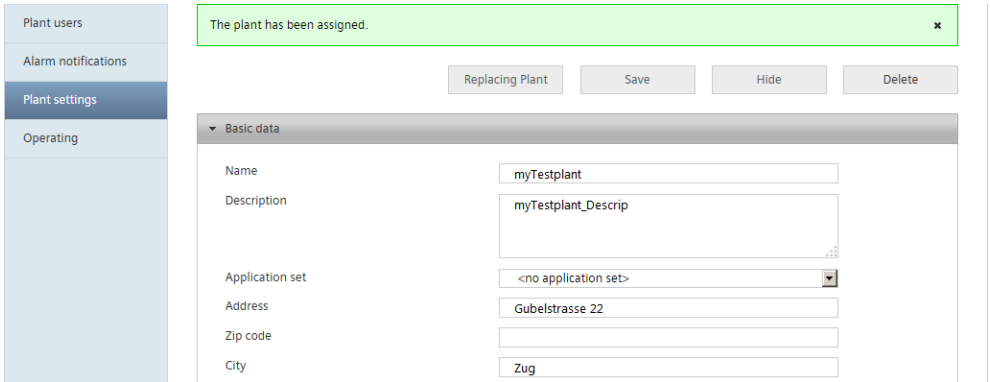
1. Go to "Administration > Tenants > 'my tenant' > Pane: Default data for plant settings".
2. Enter the suggested content in the corresponding cloud mapping name to connect to the controller data.

Result

We recommend a waiting time of 5 minutes from connecting to the Ethernet and starting the "Unassigned" menus.



The mapped default data is already visible in the "Unassigned" tab. The information on the plant is available in plant settings once assigned.



12.1.3.2 Key performance indicator

The Map home page displays the geographic position of your plant together with a color code that reflects a key performance indicator. Intuitive, the color green represents an OK state, yellow for warning, and red means the indicator is not OK.

You must define the longitude/latitude of your plant for it to appear on the map. See "Plant settings [→ 75]".

Step-by-step guide to setting up a KPI

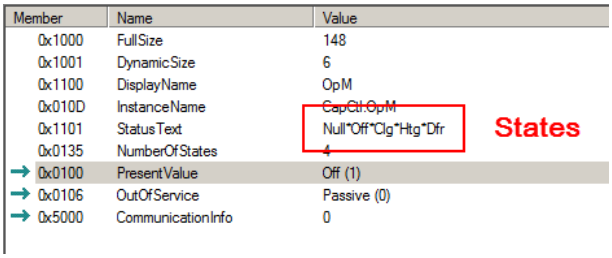
A plant data point is selected below on the SCOPE project and defined as KPI for the "Map".

In SCOPE tool

▷ SCOPE tool is open with the project loaded on the target controller.

▷ "Browser for Data Points" is open.

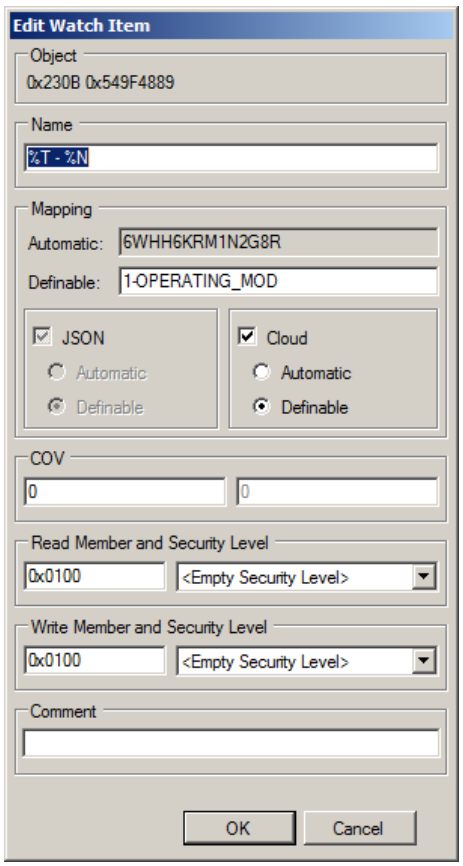
- In the "Browser for Data Points", go to a data point that can accept multiple states (multistate) and is available and typical for all plants in the tenant space.



The 5 states in the example have one-up numbers 0…4 that can be addressed in the KPI.

1. For example, drag-and-drop the PresentValue of the selected data point to a watch page prepared for the KPI.

   ⇨ "Edit Watch Item" displays.

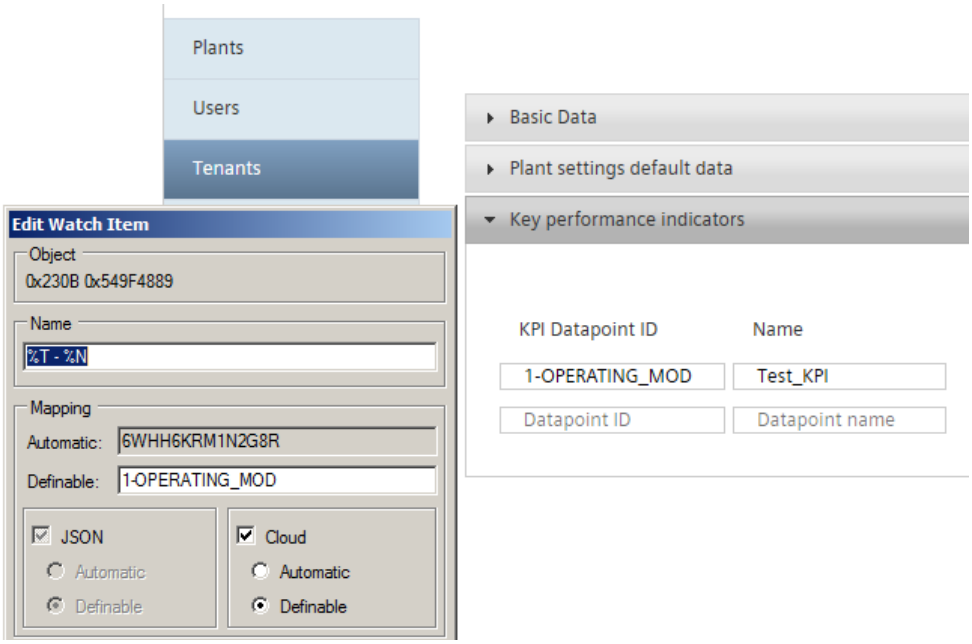


2. Ensure that "Definable" is selected under "Cloud". So that the entry is considered for definable.
3. Modify the entry under definable as needed.
4. Save the watch page.
5. Double-click GenericCloud to force a change marking in Mapping Support, indicated by a small star.
6. Save Mapping Support.
   ⇨ Check the date of the mapping file in the loader. It must be up-to-date.
7. Stop the application, load the mapping file, and restart the application.

In Climatix IC

▷ You have the portal role of Tenant-Administrator

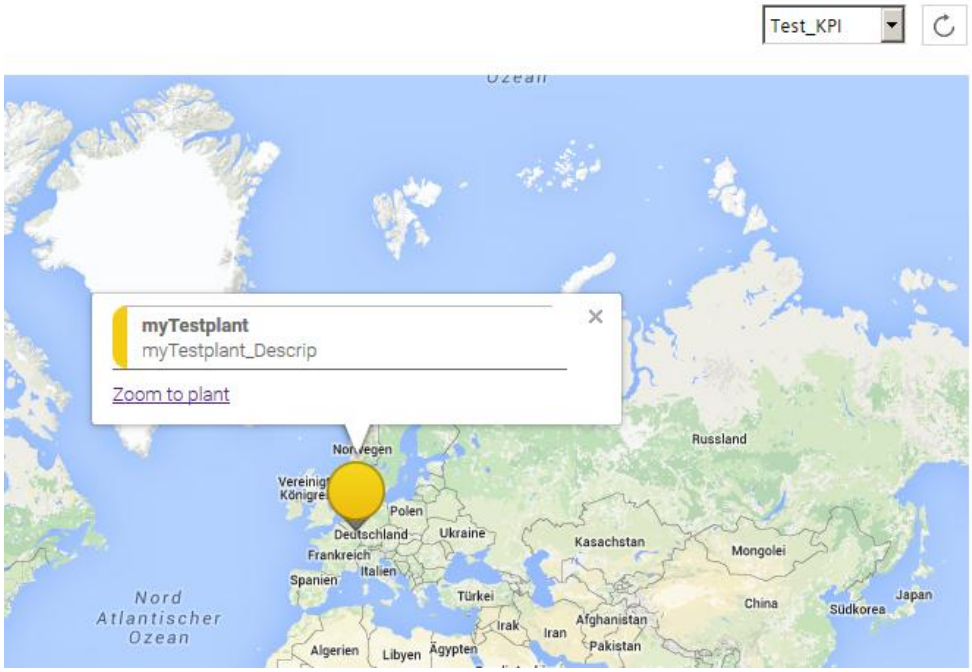
1. Go to "Administration > Tenants > 'my tenant' > Pane: Key performance indicators".



2. Transfer the definable entry from SCOPE to "KPI data point ID" in Climatix IC.
3. Name the KPI appropriately.
4. You can translate KPI names if you change the operating language in Climatix IC.
5. Assign the data point states to the KPI states (see the next Section).
6. Save the KPI entry.

Result

1. Go to "Dashboards > Map".
2. In the KPI list box (top right), select your configured KPI.

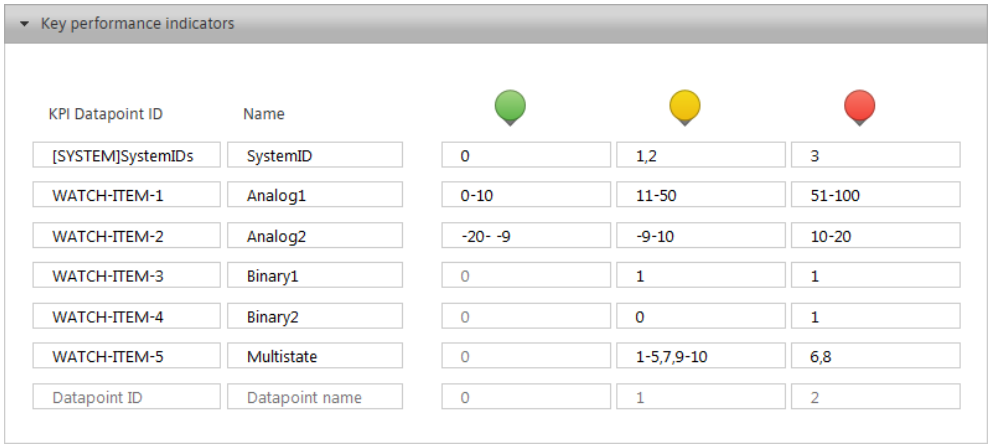


⇨ All plants with geographic coordinates are displayed on the world map showing the data points for the KPI.

Tip: Switching between various KPIs can result in an unfavorable map section. Press Ctrl + F5 to display the updated version of the world map and data.

Syntax for KPI data point ranges

The following graphic illustrates how easy and flexible it is to configure ranges for the KPI.



KPI Datapoint ID	Name			
[SYSTEM]SystemIDs	SystemID	0	1,2	3
WATCH-ITEM-1	Analog1	0-10	11-50	51-100
WATCH-ITEM-2	Analog2	-20- -9	-9-10	10-20
WATCH-ITEM-3	Binary1	0	1	1
WATCH-ITEM-4	Binary2	0	0	1
WATCH-ITEM-5	Multistate	0	1-5,7,9-10	6,8
Datapoint ID	Datapoint name	0	1	2

Address system data points

Always use the following syntax to address system data points:

System data point	KPI data point ID syntax
Target - ResetCounter	[SYSTEM]ResetCounter
Target - SD:CardIn	[SYSTEM]SDCardIn
Target - OperationalTime	[SYSTEM]OperTime
Diagnostic - MSRFailure	[SYSTEM]AppFail
Diagnostic - MSRFailureType	[SYSTEM]AppFailType
Diagnostic - ResetCause	[SYSTEM]ResetCause
CSL-Config - UpgradeAllowed	[SYSTEM]UpgradeAllowed
CSL-Config - UpgradeRequest	[SYSTEM]UpgradeRequest

12.1.4 User roles

The Tenant-Administrator defines the user roles as per the organizational requirements (e.g. service role). A user role regulates access to plant applications.

A sample user role matrix is available in the appendix at "Overview of user roles [➞ 81]".

In contrast to global portal roles, user roles relating to the plants can be freely edited.

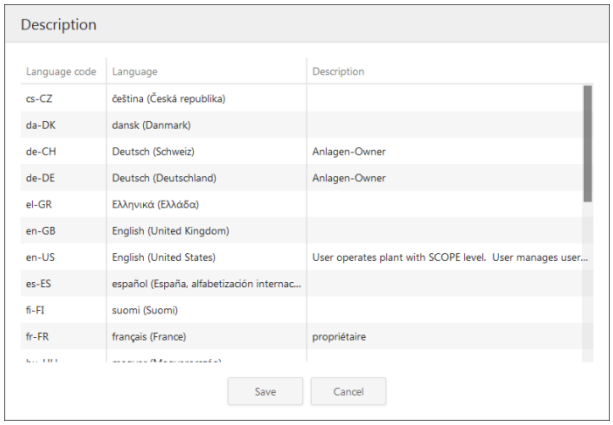
The role of "Owner" (spelled in this manner) must be available for system-technical reasons. It is backed up by the system.

Localize user roles

The description of user roles can be localized.

▷ You are a Tenant-Administrator and you want to localize the description of the user roles for a tenant area.

1. Go to "Administration > User roles".
2. Select a user role.
3. Click the button.
   ⇨ The localization dialog opens.



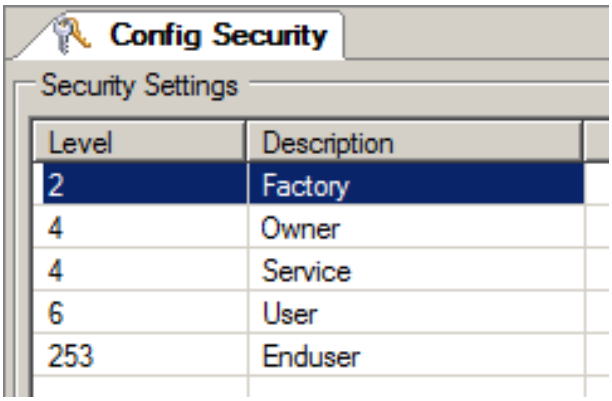
4. Enter the localized description of the user role in the corresponding language line.
5. Click "Save".

⇨ In the tenant area in question, a localized tooltip is displayed in the corresponding language for all users at all locations for the user role.

Side note: Relationship between SCOPE security level, user roles, and application security levels

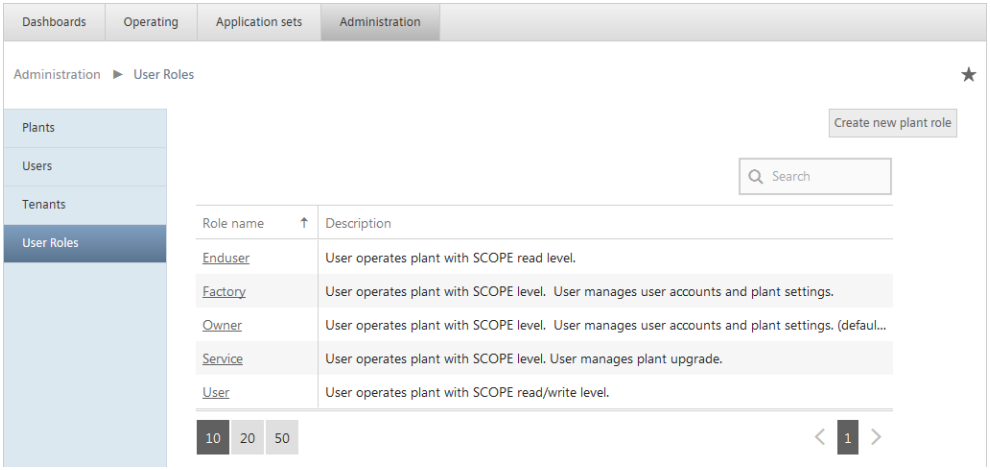
The SCOPE security levels are the starting point for access rights of a user role to data points in a plant application. The security level is located in the SCOPE tool under "Configuration > Security". Additional information on the topic of "Configure security" is available in the SCOPE online help.

SCOPE tool



User roles

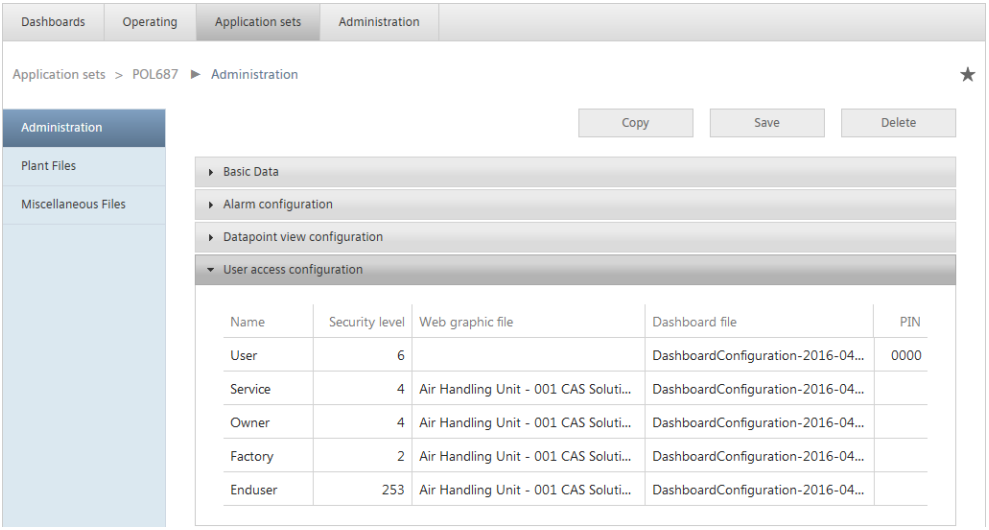
User roles can be freely designed with the exception of the limits listed above. Pay attention at this stage to consistency to the role models in SCOPE. You assign rights to each role in the cloud under the sub-menu "Privileges". The "Data access" right is kept rather generic here and is finally defined for the associated application set under the menu "Application security levels" as described below.



The higher right (i.e. smaller number) wins for application access if the user has multiple roles.

Application security levels

You define the security levels for the user roles in the menu "Application sets > 'myApplication set' > Administration". Pay attention here as well to consistency with SCOPE.

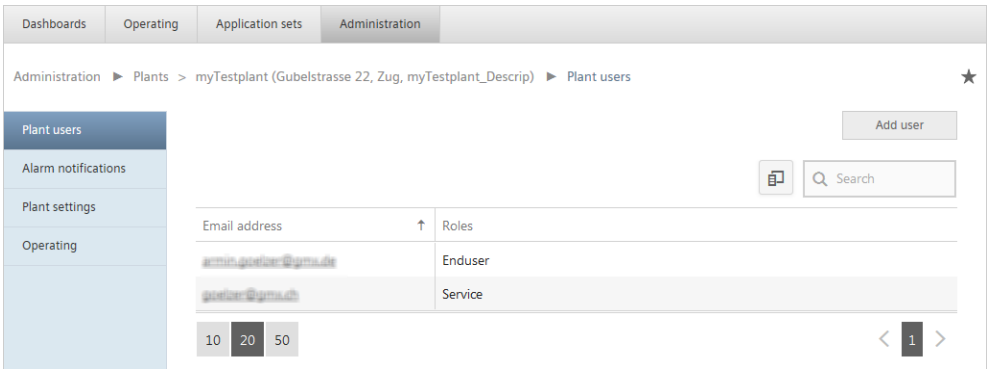


!	*NOTICE*
	Systematically design and edit user roles When creating your own user roles, pay attention to the interactions depicted here. Work systematically:

12.2 Plant administration

12.2.1 User

A tenant administrator or user with the right "Administer plant users" (e.g. Owner) adds plant users and provides them a user role for this plant.



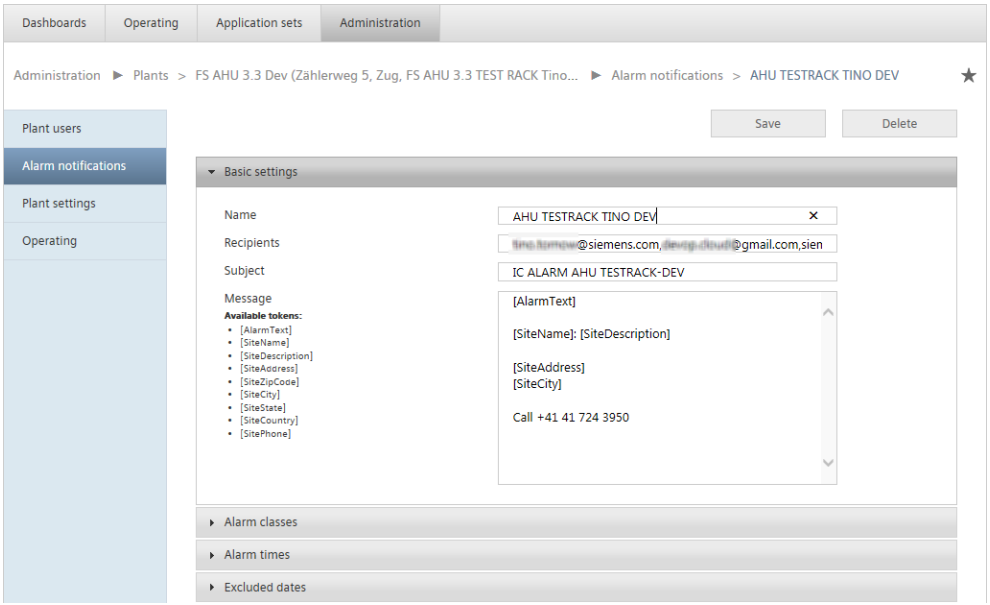
- The user receives an email on the new plant access if the email account is known in tenant.
- The new user is loaded to Climatix IC and also receives the information on the new plant access if the email account is new.

As mentioned previously in "User [→ 62]", plant users are best invited to Climatic IC in the manner described here. The user automatically receives the "User" portal role.

12.2.2 Alarm notifications

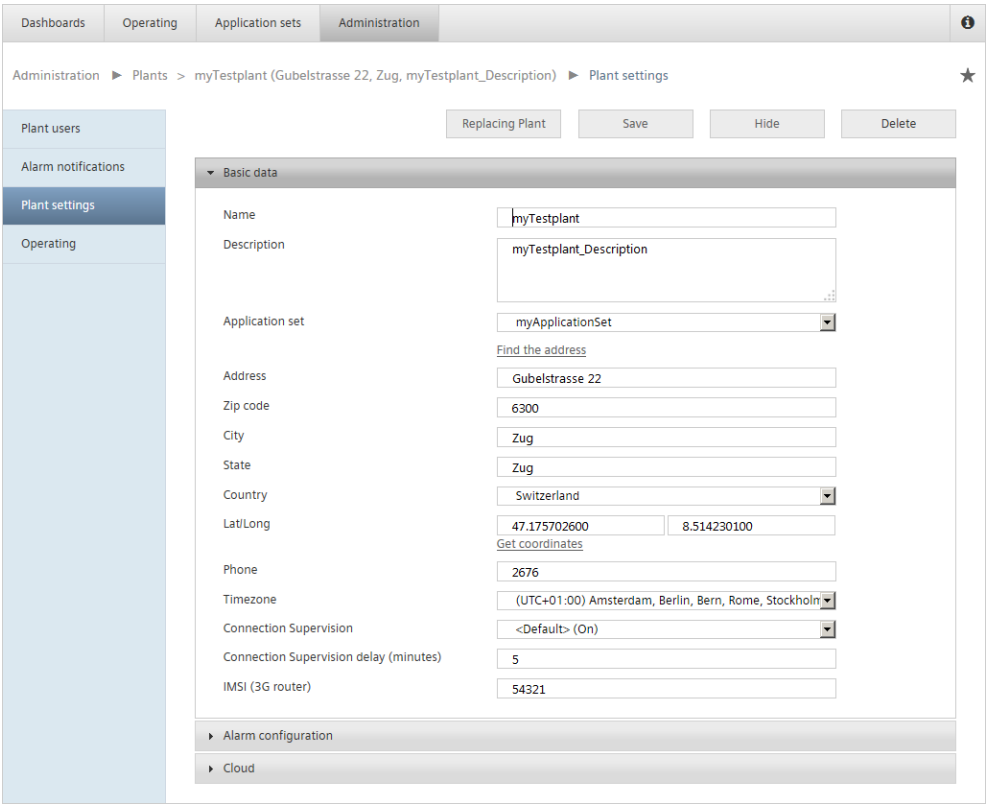
A tenant administrator or user with the right "Administer plant settings" creates an alarm notification per plant. A typical recipient (email address) is, for example, the service organization.

Click the message token directly to add it to the notification. Enter desired and unwanted times for sending a notification under "Alarm times" and "Excluded dates".



12.2.3 Plant settings

Basic data



Plant information identifies the plant and renders it easier to find.

Entries are made manually or automatically (for how to proceed, see "Default data for plant settings [→ 64]") during initial activation. Some notes on the entries:

- The plant name replaces the generically generated and used name
- The application set is important for upgrades, defining user access level, etc..
- Plant-related properties (e.g. address, time zone) are required for sorting, grouping, and searching.
- Use "Get coordinates" to find your plant's longitude/latitude. Your plant cannot be displayed on the "Map" if this information is unavailable!
- The IMSI number is a unique ID for your SIM card. The entry leads to an online symbol with 3G supplement and display of the IMSI number as a tool tip.

Connection supervision

Activate an alarm notification for a connection failure in excess of 60 seconds:

1. In the basic data, select "Connection supervision": On.
2. In secondary navigation, select the "Alarm notifications" menu.
3. Click "Add alarm notification".
4. In addition to the text, it is the recipient email address that is particularly important under Basic settings.
5. Under Alarm classes, select "Alarm class 4" (Connection Supervision) only.

The tenant administrator can change the default setting for connection supervision. This takes place at "Administration > Tenants > 'my tenant' > Basic data > Connection Supervision (default)"

Alarm configuration

Each plant can have its own alarm configuration. The settings apply:

- in general to the plant
- to each reconnect

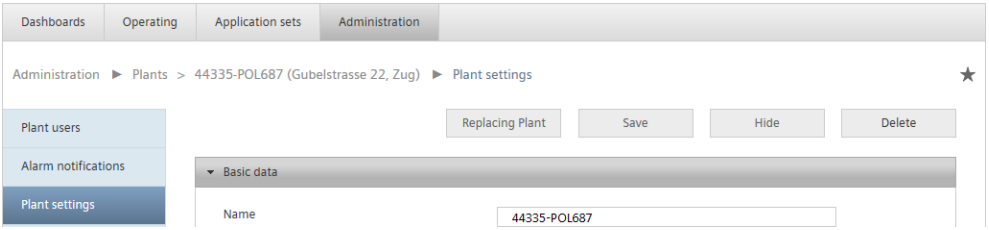
Cloud

The cloud has informative data. The activation key plays an important role for "Delete, hide, and replace plants [→ 77]".

12.2.3.1 Delete, hide, and replace plants

Delete plants

The plant is moved to the "Unassigned" tab. The user can no longer access the plant. The Tenant-Administrator must reassign it. In contrast to "Hide" plant, settings specific to the plant are also deleted.



Hide plants

In contrast to deleting a plant, the specific plant settings are retained under Hide plant and are immediately available once the plant is reassigned.

Replace plants

"Replace Plant" typically applies to a defective controller. The workflow is the same as depicted below.

Historical data remains (due to Cloud storage), with the exception of the offline time.

On the plant

▷ The new controller is prepared with the same hardware and loaded applications set.

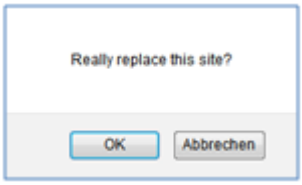
1. Uninstall the defective controller and disconnect from Ethernet.
2. Label the defective controller and NEVER reconnect it to the Ethernet.
3. Using the SCOPE tool, enter the distributor information on the new controller and enable the connection with EnableConnection (see "Connect to cloud (CSL) [→ 20]").
4. Read the ActivationKey via the SCOPE browser in "SystemObjects > CSL-Config" and provide it to your Tenant-Administrator.
5. Connect the new controller to the Internet.

In Climatix IC

▷ You have the portal role of Tenant-Administrator.

1. Check under "Administration > Plant > Unassigned" to ensure that the new plant has completed the reading of the data points.
2. Select the defective controller in the "Assigned" tab and go to plant settings via secondary navigation.
3. Click "Replace Plant".
4. Enter the key for the replacement controller under "New activation key".

⇨ Confirm with OK to replace the controller.



5. Wait about 20 seconds.
   ⇨ "Plant settings" displays with all the data from the replaced controller.
6. Confirm takeover of the data with "Save".

⇨ The new controller controls the plant the same as for the exchanged device.

12.2.4 Operating

The Operating menu is a link here to "Operating >'my plant' > Data points".

13 Climatix IC portal security

13.1 Climatix IC portal

The portal provides comprehensive security, e.g. data security, security data storage, and reliable data transportation.

- All connections are encrypted (HTTPS) to prevent tapping into the line and man-in-the-middle attacks.
- Data security as per EU Data Privacy Chapter 5
- Geo-redundant data storage from northern Europe (primary) to western Europe (secondary).

13.2 Climatix controller

The Climatix controller is not suitable for connecting directly to the Internet; it must be connected via a Firewall. This type of router typically has a firewall.

The firewall must be configured to permit only outgoing connections. Incoming connections must be suppressed.

14 Support on technical problems

Please adhere to the following sequence for support issues:

1. Contact the supplier of the device or plant.
2. If unknown, Siemens provides the following tools:

- Own information via the Download Center: http://www.downloads.siemens.com.
- Own information via the Service and Support Portal https://support.industry.siemens.com.
- Submit a support request: http://www.siemens.com/automation/support-request.

15 Appendix

15.1 Overview of user roles

The following rights matrix is the example used consistently throughout this documentation. You are free to modify role models and rights. Pay close attention to consistency, however, starting with the SCOPE security settings for your project up to the distribution of roles for your concrete situation.

Exception: The role "Owner" must remain (written in this way). It is backed up by the system.

Function	Factory	Owner	Service	User	End user
Operate plant data points at the end-user level. Typically SCOPE-Level 253, i.e. read only.	X	X	X	X	X
Operate plant data points at the user level. Typically, SCOPE level 6.	X	X	X	X	
Operate plant data points at the service level. Typically, SCOPE level 4.	X	X	X		
Operate plant data points at the Owner level. Typically, SCOPE level 4.	X	X			
Operate plant data points at the factory level. Typically, SCOPE level 2.	X				
Plant upgrade	X		X		
Administer plant users	X	X			
Administer plant settings	X	X			
Web access	X	X	X	X	X

15.2 Overview of portal roles

Portal role	User role**	Portal description	Plant description
Tenant-Administrator*		Full administrator access for plants, users, roles	Full plant access: SCOPE Security Level 0.
Tenant site viewer*		Can activate and preregister plants. Plant overview	No plant access
Operations		This role is intended for a user that has a support role. This user is allowed to activate plants, check users for the allocated Main-/Sub-Tenant on an admin level and can read application sets. He has access rights to search plants and check the status on an admin level.	Free defined plant access: SCOPE Security Level 0-255.
Application administrator *		Create and edits application sets	No plant access
User	Factory	As per user role settings	Typically, SCOPE level 2
	Owner	As per user role settings	Typically, SCOPE level 4
	Service	As per user role settings	Typically, SCOPE level 4
	User	As per user role settings	Typically, SCOPE level 6
	End user	As per user role settings	Typically, SCOPE level 253
*	Only Main-Tenant administrators are allowed to assign themselves the portal role of application administrator. This is not permitted in the Sub-Tenant area.		
**	Details on the 5 user roles in "Overview of user roles [➞ 81]".		

15.2.1 Portal roles details

Portal role	Dashboards			Operating											Administration									App.set	3rd party	
	Map	KPI	Overview	Plant Overview	Plant Dashboard	Data Points**	Alarms	Web Access	Web Graphic	Upgrade	History	Schedulers	Tasks	Documentation	Plant overview	Users	Tenants	User Roles	Pre-Register	Plant Users	Alarm Notifications	Plant Settings	Activate Plant	Application sets	Tool Access	North Bound API
Tenant-Administrator	full	full	yes	full	0/Admin*	0/Admin*	full	full	HMI-'0'/Admin*	full	full	full	full	full	full access	full access	full	full	full	full	full	full	full	no access	only as plant user	full access
Tenant site viewer	yes	Online state	Admin	as plant user	no access	no access	no	no	no access	no	no	no access	no	no	yes	no access	no	no	yes	no	no	no	yes	no access	only as plant user	only as plant user
Operations	yes	Online state	yes	full	Tenant setting**	Tenant setting**	yes	yes	Tenant setting**	no	yes	Tenant setting**	yes	yes	read***	read****	no	no	no	read+new user	read only	read only	10' active	only read	only as plant user	full access
Application administrator	no	no	App.set	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	no	full	no	no

*	Plant access level: Climatix: SCOPE Security '0', OZW: Administrator
**	Plant access level: 1. User is assigned to a plant with a plant role, 2. Tenant setting
***	see all plants, assigned & unassigned, activate plants, search via serial number or activation key
****	see all users, read settings, no changes or delete user
*****	yes, write active for 10' session based

15.3 Tips and tricks

15.3.1 Prepare and load current BSP

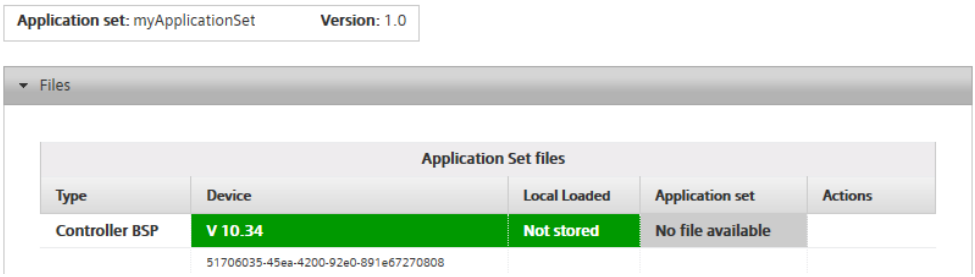
- You can register for the Siemens OEM Extranet as a Climatix IC customer and user.
- The entry point is here http://www.siemens.com/buildingtechnologies-oem. The right column on the page has a link to register for the OEM Extranet.
- On Extranet, you have access to the article "Climatix Target Download VVSxx" at the following link: https://support.industry.siemens.com/cs/ww/en/view/86192510.
- The current BSP can be downloaded from there to local storage for POL63x and POL68x.

The following does not illustrate the standard method using the SD card, but rather how to prepare the BSP in the application set within Climatix IC. This solution has the benefit of making it possible to upgrade remotely and rendering SD card unnecessary.

The procedure described here is understood as an example and works in the same manner for other application set files.

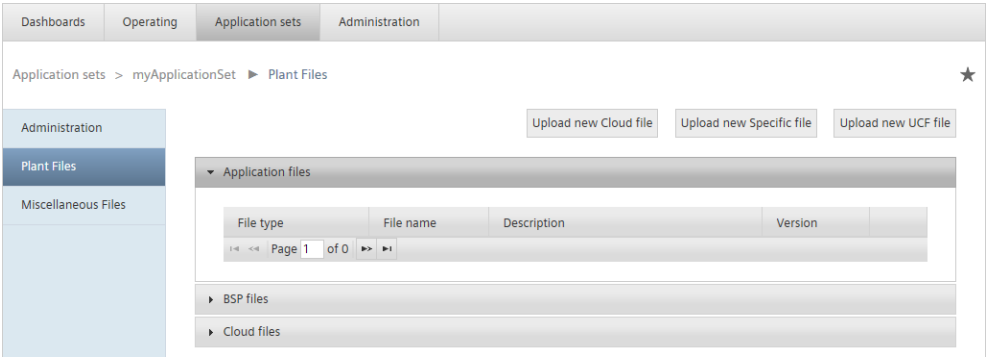
Check the starting point

The currently loaded BSP version for the controller can be found at "Operating > 'my controller' > Upgrade".

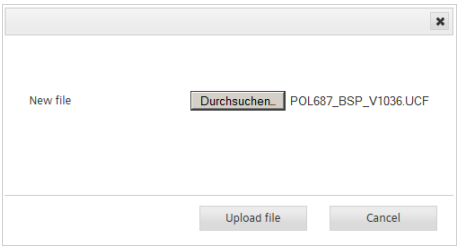


Load BSP file to the application set

Now load, for example, for your POL687, the BSP file (.UCF) saved locally to the corresponding application set.

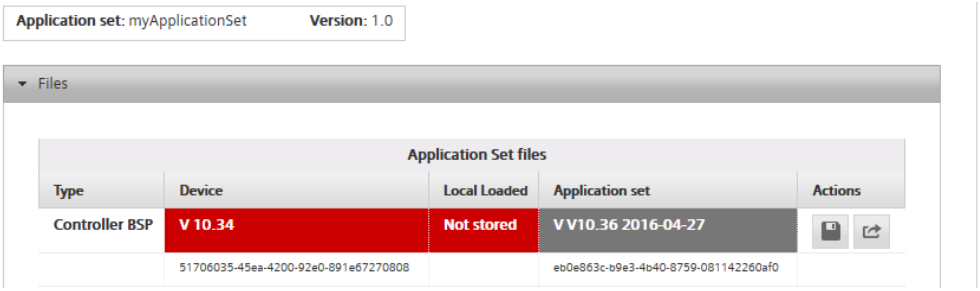


1. Go to "Application sets > Plant files > Area: BSP files".
2. Click "Upload new UCF file".
   ⇨ The upload dialog box opens.



3. Simply drag-and-drop to move the locally saved BSP file directly to the "Browse" button.
4. Select "Upload file".

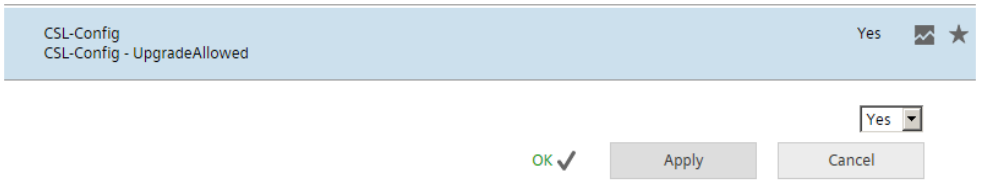
⇨ The following situation exists when returning to "Operating > 'my controller' > Upgrade".



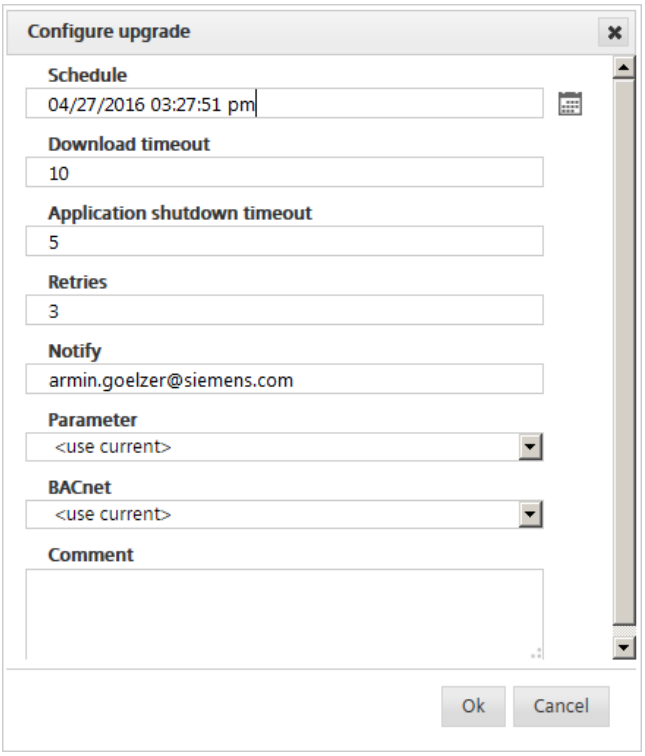
Permit controller upgrade

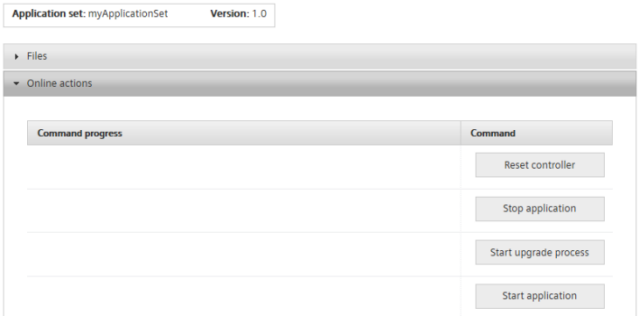
1. Go to "Operating > 'my controller' > Data points > Data point: UpgradeAllowed".

2. Change the setting from "Wait" to "Yes".

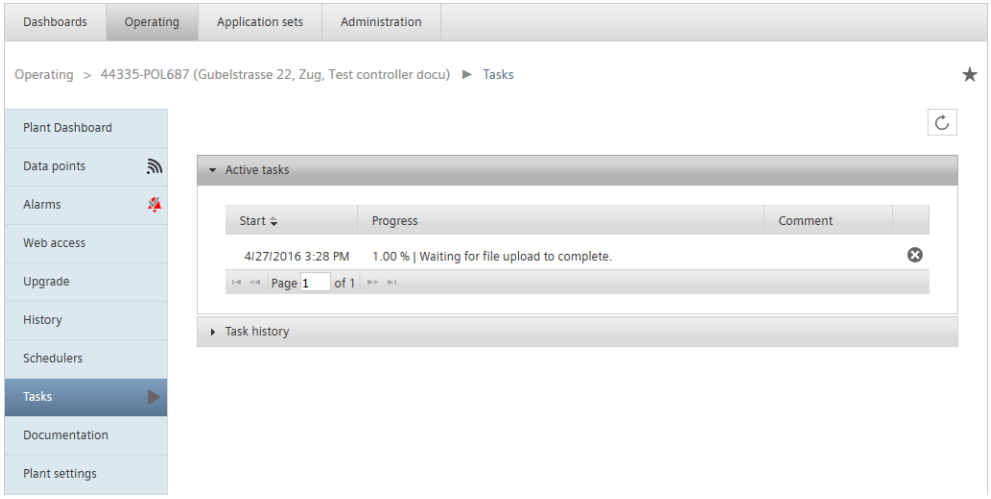


3. Return to "Upgrade" and initiate the upgrade process by going to the "Files" submenu and executing a scheduled upgrade using the button "Start upgrade process" or, in the "Online actions" submenu, executing the upgrade directly with the "Start upgrade process" button.

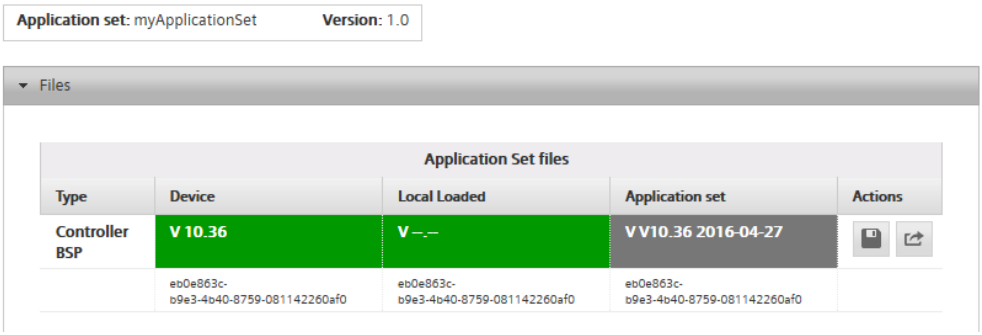




- You can watch the progress of the upgrade under "Tasks".



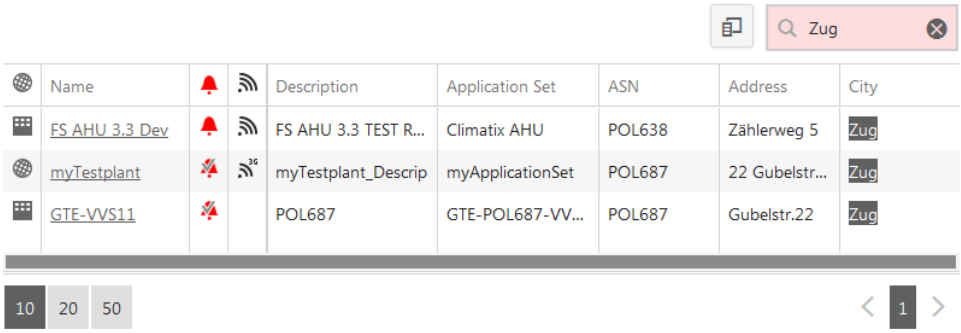
➪ The result in the example is a controlled upgraded to V10.36.



15.3.2 Search, sort, group

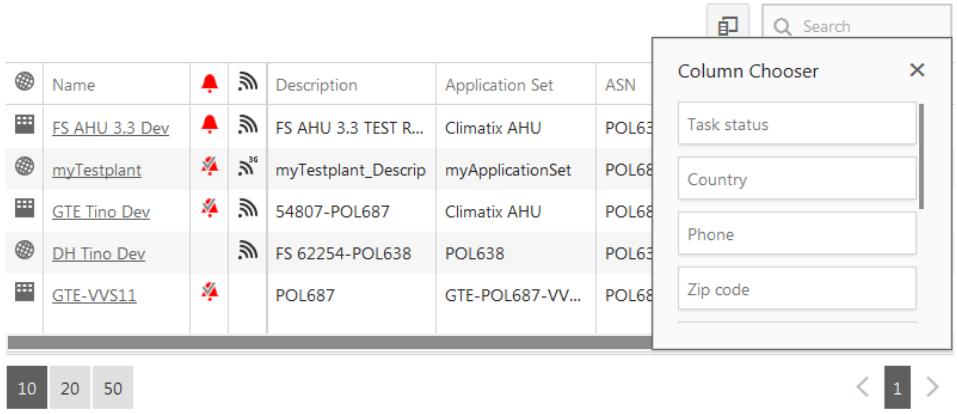
Search

Plant and user lists can quickly become confusing. Use the search function to search displayed as well as hiding columns. Delete the search term from the search field to once again view the entire list.



Column selection and sort

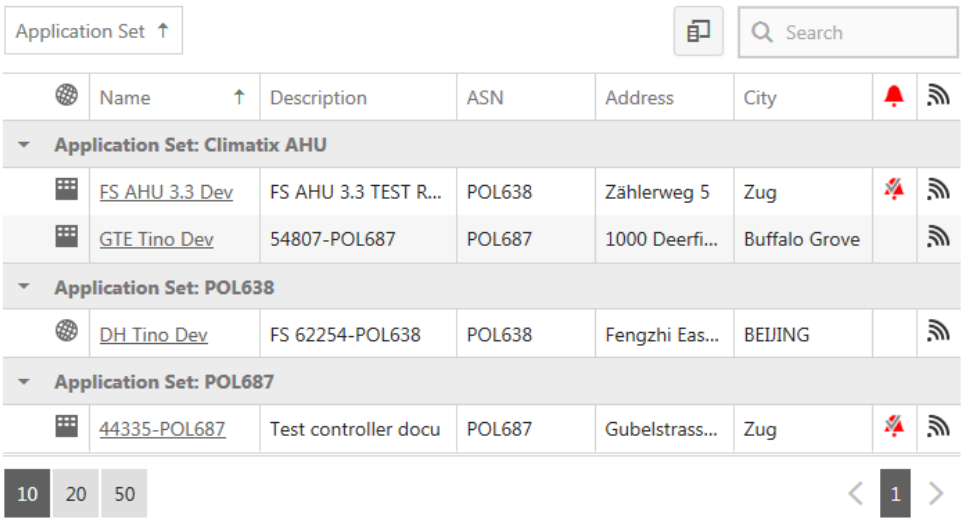
Optimize your overviews by showing and hidden columns as needed. Enable by selecting the column and drag-and-drop it from the table to the box and vice versa. These selections are saved to your user profile. Of course, lists can also be sorted. If the sort arrow is not displayed, simply click the corresponding header line.



Group

Create groups to get an even better overview. Drag a column header to the white space above the table to group. Grouping cascades are also possible for up to 4 levels.

To reset grouping, drag the grouping criterion (in the following graphic "Application set") to the table it once again reverts to the column heading.


Application Set
Search
Name
Description
ASN
Address
City
Application Set: Climatix AHU
FS AHU 3.3 Dev
FS AHU 3.3 TEST R...
POL638
Zählerweg 5
Zug
GTE Tino Dev
54807-POL687
POL687
1000 Deerfi...
Buffalo Grove
Application Set: POL638
DH Tino Dev
FS 62254-POL638
POL638
Fengzhi Eas...
BEIJING
Application Set: POL687
44335-POL687
Test controller docu
POL687
Gubelstrass...
Zug
10
20
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1

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