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LOGO! – Connection to a cloud

LOGO! 8

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Table of Contents

	Legal information	2
1	Introduction and task description	4
2	Components used	6
2.1	Hardware, software and documents in this article	6
2.2	Creating an account for Amazon Web Services (AWS).....	9
2.3	Cloud – Amazon Web Services (AWS).....	12
	AWS IoT Core – Internet of Things	12
	AWS Elastic Beanstalk – Compute	12
3	Commissioning the application example	13
3.1	Opening and loading a LOGO! switching program	13
3.2	Disabling LOGO! web server for AWS web server	14
3.3	Setting the LOGO! clock time.....	14
3.4	LOGO! (Thing) – Cloud (Internet of Things).....	15
3.5	LOGO! Web editor – Load website to the cloud	19
4	Structure and function	21
4.1	LOGO! switching program (LSC)	21
4.2	LOGO! Web Editor and principle of operation of the website	23
5	Appendix	26
5.1	Service and support	26
5.2	Links and literature	27
5.3	Change documentation	27

1 Introduction and task description

This application example offers you a fully configured switching program for LOGO! V8.3 ("LOGO!" for short) for connecting with an internet cloud.

At the time this application example was created, there is currently only an option for connecting to the AMAZON cloud, or Amazon Web Services (AWS).

 <p>WARNING</p>	<p>This example demonstrates the functional implementation with LOGO!. Possible requirements regarding functional safety (e.g. EMERGENCY stop) are not part of this example.</p> <p>The user is responsible for compliance with the relevant guidelines!</p>
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The integrated functions of LOGO! offer many additional possibilities to quickly and easily solve applications in various areas.

With LOGO!, prefabricated function blocks support project creation, e.g. weekly timers, pulse generators, astro timers, seasonal timers, stopwatches and simple logic gates.

The LOGO! text display (TDE) and the integrated web server of LOGO! offer additional options for monitoring and control using function keys and message texts.

Advantages of LOGO! versus a conventional electrical installation

Using LOGO! offers you the following advantages:

- Extensibility of the software program to include further tasks.
In addition to the basic task description, additional independent subtasks can be configured depending on the application. For this purpose, LOGO! can be expanded with a wide variety of expansion modules.
- Straightforward, star-shaped arrangement of the wiring of the components.
- Use of simple switches (circuit breakers) or pushbuttons.
- Fewer components are required compared to a conventional solution.
- Communication options via Modbus/TCP, S7 connection, and KNX.
- Option of communicating with a cloud.

Target group

This application example is intended for specialists in electrical installations or automation.

Task description

This article focuses on the connection between LOGO! and a cloud, which is demonstrated using the example of a building monitoring system as shown in [Figure 1-1](#).

Here, various building parameters are displayed, while exclusively uncritical functions (such as light [on/off]) are controlled directly.

The data are written to a cloud; they will be displayed graphically on a tablet. In this context, the system accesses the cloud rather than the web server of the LOGO! basic unit.

On display are the switching states of the lighting, whether a window is open or closed, what position the door is in, and whether an alarm has been triggered.

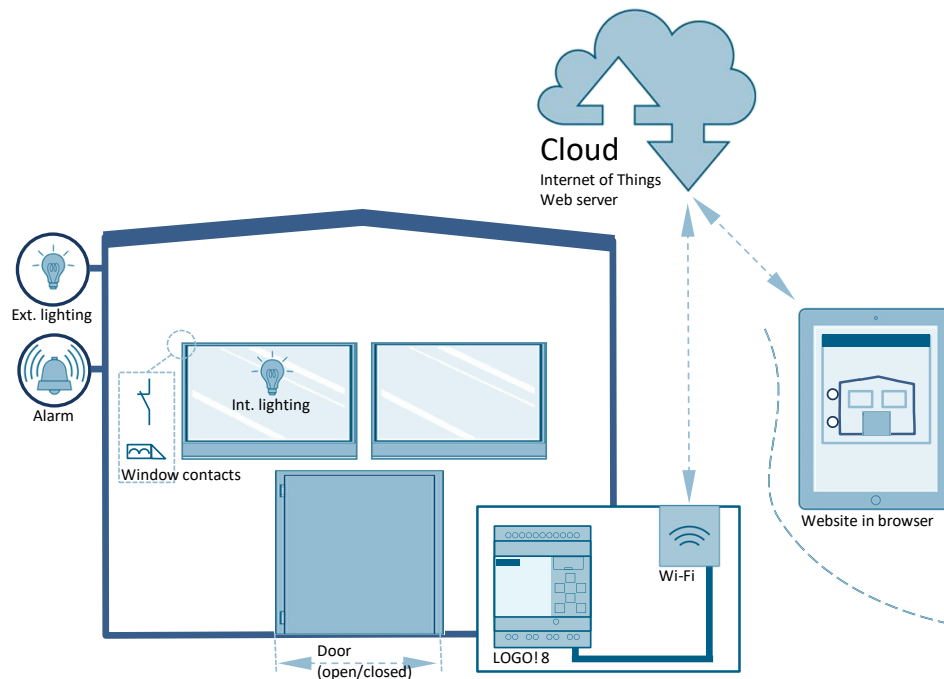
The lighting and alarm functions can be switched on and off via the website.

For a building or a machine, you must continually assess whether a hazard exists in connection with a concrete implementation, as values are first controlled in and read from the cloud and only synchronized with LOGO! after the fact.

Such a risk assessment especially relevant if it is a machine from which values are read and written back.

States must be set, and values written in this case only if doing so carries zero risk. Otherwise, this must be strictly avoided.

Figure 1-1: LOGO! connection to a cloud (AWS) – Building monitoring



Note

If you connect over the internet, you have the option to use a secure VPN connection.

However, the VPN connection is not part of this application example, and the reader is referred to the relevant technical literature or information available online.

2 Components used

2.1 Hardware, software and documents in this article

The application example uses the components listed in [Table 2-1](#).

Table 2-1: Hardware and software components for the application example

Component	Quantity	Item number	Note
LOGO!Soft Comfort V8.3 DVD	1	6ED1058-0BA08-0YA1	For upgrade to V8.3, see manual \3
LOGO! POWER 24 V / 1.3 A	1 ⁽¹⁾	6EP3331-6SB00-0AY0	-
LOGO! 12/24 RCE	1	6ED1052-1MD08-0BA1	4 relay outputs
LOGO! TDE	1 ⁽²⁾	6ED1055-4MH08-0BA1	Optional components
Internet-capable router	1	-	Absolutely required if connecting LOGO! to the internet!

⁽¹⁾ The SITOP 24V is an example of a power supply suitable for general industrial use.

⁽²⁾ LOGO! TDE is an optional component.

Note

If you want to use the application example with a LOGO! 230RCE (for 230 V), you will find additional information in the manual [\3](#) or under the article "TDE Central control for general consumers":

- <https://support.industry.siemens.com/cs/ww/en/view/109755864>

The application example consists of instructions and a ZIP archive with the LOGO! switching program created with LOGO!Soft Comfort V8.3 (LSC in future). See chapter [3.1](#). Also included is a website for graphical representation of building monitoring from the cloud (chapter [3.5](#)) and a CSV file with the input and output values between LOGO! and the cloud (see chapter [3.4](#), page [18](#)).

Table 2-2: Connectors for our application example

Component	File name	Note
Documentation	109781025_LOGO!_Cloud-connect_DOC_en.pdf	-
LOGO! switching program and website	109781025_LOGO!_Cloud-connect_CODE.ZIP <ul style="list-style-type: none"> LOGO! switching program Website for cloud <ul style="list-style-type: none"> (Configuration with LOGO! Web Editor LWE) CSV file for data transfer 	Requirement: LOGO!Soft Comfort V8.3

LOGO! – Hardware

In addition to the manuals, below you will find basic information on commissioning the LOGO! hardware used here.

[Figure 2-1](#) shows the hardware setup with LOGO!. The assignments of the digital input and output signals for LOGO! can be found in [Table 2-3](#).

Figure 2-1: Hardware setup for the application example (TDE optional)

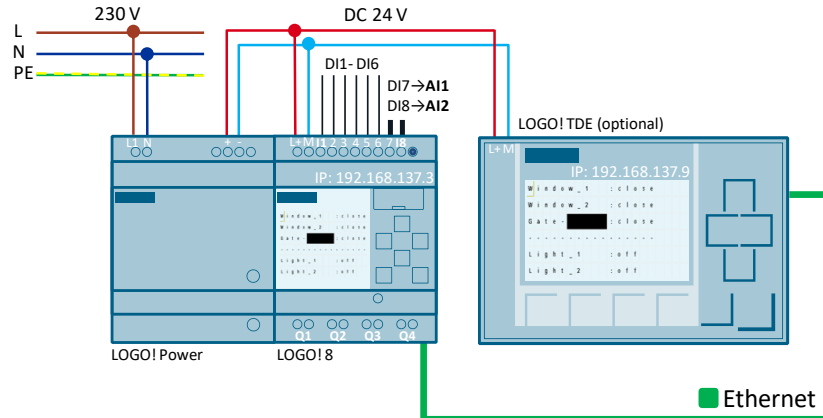


Table 2-3: Input and output signals in LOGO!

IOs	Description
Analog input [AI1] (to DI7)	Sensor - position encoder on the door (e.g. 0-10 V)
Input [DI1]	NC switch - Fensterkontakt_1 [<i>Windowcontact_1</i>]
Input [DI2]	NC switch - Fensterkontakt_2 [<i>Windowcontact_2</i>]
Input [DI3]	Button - activate nighttime alarm
Input [DI4]	Button - exterior illumination
Input [DI5]	Button - interior illumination
Output [Q1]	Alarm system (can be a siren)
Output [Q2]	Exterior illumination
Output [Q3]	Interior illumination

Note

For further information on assembly and wiring, please refer to the manual ([\3](#)), chapter: ([LOGO! installation and wiring](#)).

Follow the connection instructions in the product information supplied with your device.

LOGO! TDE

The external text display LOGO! TDE for LOGO! provides you with an inexpensive and central user interface for your applications.

You can adjust parameters and use the LOGO! TDE for troubleshooting.

The configuration of LOGO! TDE and the internal LOGO! display is done using the same function block.

The use of the TDE allows the display of all messages via the integrated web server and thus also the control of applications via a smartphone.

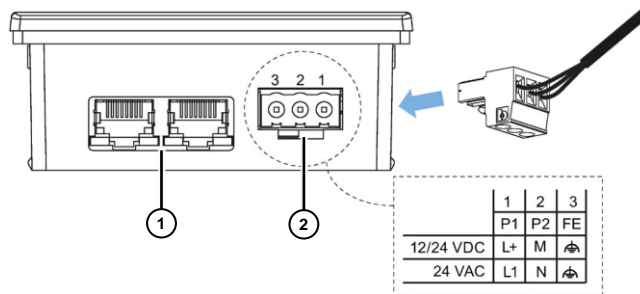
Connecting LOGO! TDE

The LOGO! TDE must be operated with a voltage of 12V DC or 24V AC/V DC and is installed separately. Siemens recommends protecting the LOGO! TDE by means of an 0.5 A fuse at the power supply.

The voltage connection is not polar. If you connect a DC power supply to the LOGO! TDE, you can connect the positive supply line or the negative supply line according to [Figure 2-2](#) (2) either to pin 1 or to pin 2. Pin 3 must be connected to the ground.

Communication with LOGO! takes place via the Ethernet interface (1).

Figure 2-2: LOGO! TDE connection



Note

The connection settings between LOGO! and LOGO! TDE can be found in this documentation in chapter [3](#), and the manual ([\3](#)), chapter: ([LOGO! TDE](#)).

You can find information on the LOGO! web server settings here:

- [Activating the web server](#)
- [Operating the virtual base module on the web server](#)

2.2 Creating an account for Amazon Web Services (AWS)

The intended communication partner for LOGO! is the cloud solution from AMAZON (AWS). At the time this document was created, AWS consists of 175 different services; two of them will be used here.

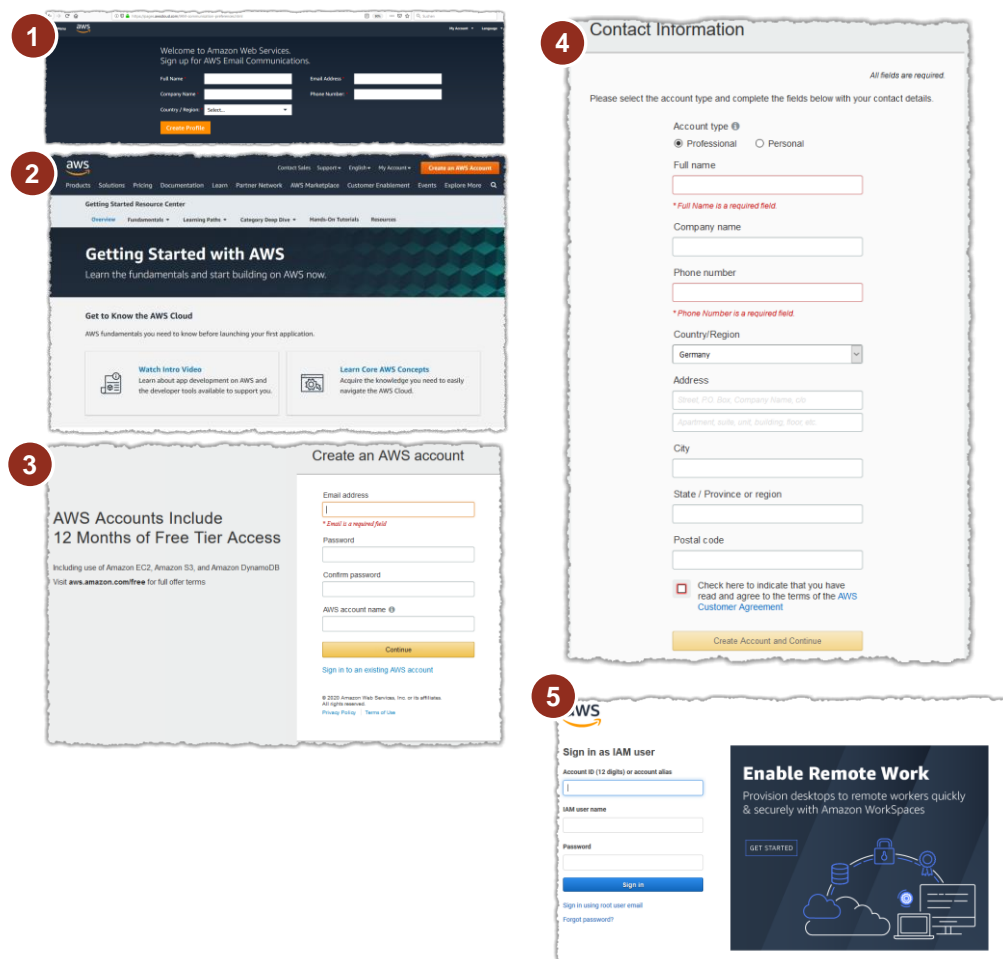
If you do not have one yet, the first step is to create a profile or account at the following website:

- <https://pages.awscloud.com/IAM-communication-preferences.html>

Follow the AWS account creation steps as per [Figure 2-3](#). You will then receive your 12-digit account number and log in with your access credentials.

To access individual services, you will also receive an "Access Key ID" and an associated "Secret Access Key".

Figure 2-3: Creating an AWS account and logging in



AWS Identity and Access Management (IAM)

After logging in, the home page of your AWS console will open.

According to [8](#), AWS "Identity and Access Management (IAM)" is a web service for administering authorized and authenticated access to AWS.

When a new AWS account is created, it has a single log-on identity that has full access to all AWS services and resources.

In order to access this account, you must log in with the email address and password that were used to create the account.

CAUTION	Using the root user for everyday tasks, including administrative tasks, is expressly discouraged.
----------------	--

[Figure 2-4](#) shows which settings are recommended for a separate IAM user.

Then store the login credentials for the root user in a safe place and only use them for account and service administration purposes.

1. Click IAM and select "Add User".
2. The "Add User" window will open with the available AWS access types.
3. Enter the new user and select the access type as shown.
4. Select full access to "AWS IoT".
5. Select full access to "Elastic Beanstalk".
6. No entry is required here.
7. You will see a summary of the selected access options.
8. You will have received an "access key" and a "secret access key" for the new user, with which you can log in as a new IAM user.

2 Components used

Figure 2-4: AWS Identity and Access Management (IAM)

1 Overview of IAM services in the AWS Management Console.

2 Add user screen. Select **Programmatic access** (Enables an access key ID and secret access key for the AWS API, CLI, SDK, and other development tools).

3 Set user details screen. User name: **LOGO_user**.

4 Set permissions screen. Filter policies: **IoT**. Selected policy: **AWSIoTFullAccess**.

5 Set permissions screen. Filter policies: **elasticbeans**. Selected policy: **AWSIoTFullAccess**.

6 Add tags (optional) screen.

7 Review screen. User name: **LOGO_user**. AWS access type: **Programmatic access - with an access key**. Permissions boundary: **Permissions boundary is not set**.

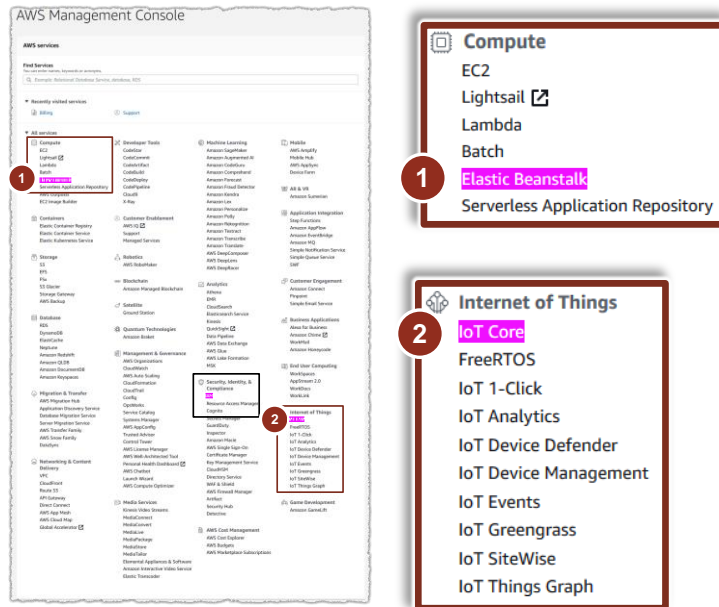
8 Success screen. Download user credentials.

User	Access key ID	Secret access key
LOGO_user	AKIAI44QH8D8DFQ130L5D268QJ3K4K3	oQc2P8... d8c...

2.3 Cloud – Amazon Web Services (AWS)

After logging in, the home page of your AWS console will open. See [Figure 2-5](#). The application example uses the AWS services "IoT Core" as well as "Elastic Beanstalk".

Figure 2-5: AWS console home page



AWS IoT Core – Internet of Things

According to [16](#), AWS IoT Core is a managed cloud service that allows connected devices such as LOGO! to easily and securely work with cloud applications and other devices.

AWS IoT Core manages the devices and supports notifications to AWS endpoints and other devices.

In this example, LOGO! is logged in as the device "LOGOtoCloud", as described in chapter [3.4](#) and realized in [Figure 3-8](#).

For additional information, refer to the AWS site "[IoT Core](#)".

AWS Elastic Beanstalk – Compute

According to [17](#), AWS Elastic Beanstalk is a service for deploying and scaling web applications and web services developed with Java, .NET, PHP, Node.js, Python, Ruby, Go and Docker on servers such as Apache, Nginx, Passenger and IIS. The code is uploaded and Elastic Beanstalk takes care of deployment.

In this application example, a ready-made website is loaded onto the provided web server in the cloud, as described in chapter [3.5](#).

For additional information, refer to the AWS site "[Elastic Beanstalk](#)".

3 Commissioning the application example

3.1 Opening and loading a LOGO! switching program



Connecting LOGO! incorrectly can lead to malfunctions and failure of the device!

Make sure you never connect electrical equipment when it is electrified.

1. Unzip the supplied .ZIP file with the LOGO! switching program.
The ZIP archive contains a folder with the website for the cloud connection. Later on, follow chapter [3.5](#).
2. Configure and connect the hardware setup in accordance with the specifications of the application example and the respective manuals.
3. Launch LOGO!Soft Comfort V8.3.x
4. Open the included LOGO! switching program (*.lsc).
5. Transfer the program to the LOGO! hardware.
6. Use the information in this documentation to review the communication functions.

LOGO! TDE – integration

If you wish to use a LOGO! TDE, perform the following steps:

1. For this application example, the LOGO! TDE connection is already set in the LSC switching program.
 - If the LSC switching program has just been created, check the box in "LSC" → "Transfer" → "Access control" in the menu item "LOGO! TD controller manual" called "Allow TDE access".
2. In the selection menu of the LOGO! TDE, select the LOGO! basic unit that you wish to connect to the LOGO! TDE.
3. Assign the LOGO! TDE its own IP address.

Note

The IP address "192.168.178.3" has been preconfigured in the application example for the LOGO! basic unit; for LOGO! TDE it is "192.168.178.2".

In order to communicate with a cloud, a router is absolutely required as a gateway, and the IP address "192.168.178.1" has been preconfigured.

The network nodes of the LOGO! basic unit, LOGO! TDE and PC must be in the same subnet: "255.255.255.0".

You will find a description of the general procedure for assigning the LOGO! IP address in the manual ([13](#)), chapter: ([Configuring network settings](#)).

The selection menu in LOGO! TDE for choosing the LOGO! basic unit:
Chapter: [LOGO! TDE selection menu](#)

For setting the IP address of the LOGO! TDE, refer to the manual:
Chapter: ([LOGO! TDE settings menu "Network menu"](#)).

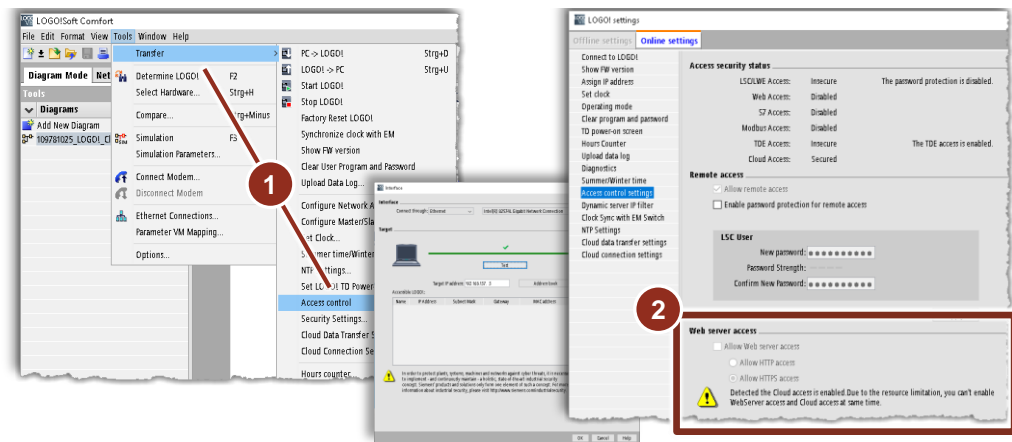
3.2 Disabling LOGO! web server for AWS web server

With LOGO! you have the choice of either using the integrated web server, or as an alternative, establishing a connection to a cloud.

1. Select from the LSC menu:
 - ⇒ "Extras",
 - ⇒ "Transfer",
 - ⇒ "Access Control".
 - ⇒ Confirm the prompt to make the LOGO! basic unit go online.
2. Uncheck the box:
 - ⇒ "Allow Webserver access".

Note that you may have to confirm the password that was set before. Then click "OK".

Figure 3-1: Requirement for cloud web server - Disabling LOGO! web server



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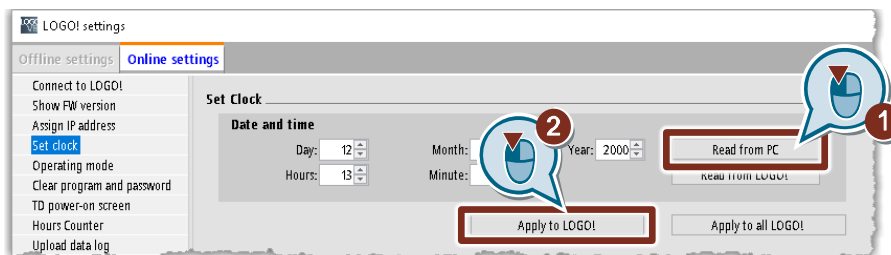
3.3 Setting the LOGO! clock time

An essential requirement for LOGO! communication over the cloud is that the date and time are properly set!

If you have a new LOGO! basic unit, the clock is set to the preconfigured time. Set the time as follows:

1. In the Online settings, open "Set clock" and press "Read from PC".
2. Click "Apply to LOGO!", then click "OK".

Figure 3-2: Requirement - setting the LOGO! clock time



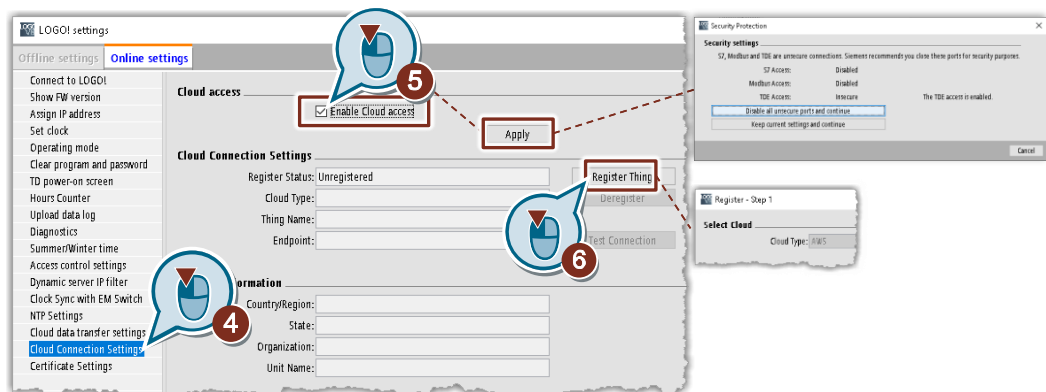
3.4 LOGO! (Thing) – Cloud (Internet of Things)

Connect LOGO! device with the cloud

In the following, you will launch the connection settings to the cloud in LSC.

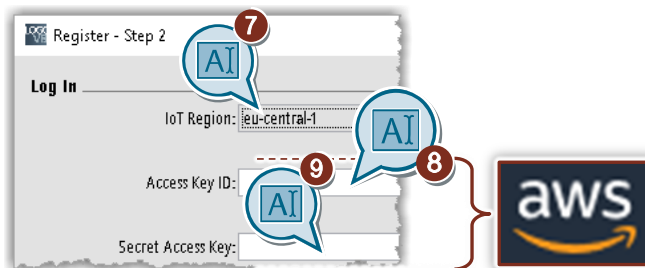
1. In LSC, open "Properties" under "File".
2. Open the "Online settings" tab.
3. Click "Connect".
 - Alternatively, you can call up the "Online settings" via: "Extras" → "Transfer", then follow step (4).
4. As shown in [Figure 3-3](#), open "Cloud connection settings" and follow the dialog in order to put LOGO! in Stop mode.
5. Check the box for "Enable Cloud access" and click the "Apply" button next to it. A window will appear with the current set of enabled communication modes. Acknowledge this window in accordance with whether (for example) you wish to use the LOGO! TDE.
6. Select "Register Thing" and then select the cloud solution provider, here [AWS], and click "Next".

Figure 3-3: Internet of Things – Step_1: Selection for "Register Thing"



7. Per [Figure 3-4](#), select the region for the IoT access, here "eu-central-1".
8. Paste your access key, "Access Key ID", from your AWS account.
9. Also paste in your "Secret Access Key" from your AWS account and click "Next".

Figure 3-4: Internet of Things – Step_2: IoT region selection



10. Select "Create a new thing"...
11. ...and assign the following name in the cloud:
 - **"LOGOtoCloud"**The name can be chosen freely, but objects in the website included here already refer to this device name, as described in chapter [4.2](#).

Figure 3-5: Internet of Things – Step_3 and Step_4: "Create a new thing"



12. In the following step, you have the option of selecting a region to create a certificate for the connection.
This step is skipped in the application example.
Select the country, in this case "Germany(DE)", and click "Next" to finish registering the LOGO! basic unit "Thing" in the cloud.

Figure 3-6: Internet of Things – Step_5 and Step_6: Finalizing the registration.

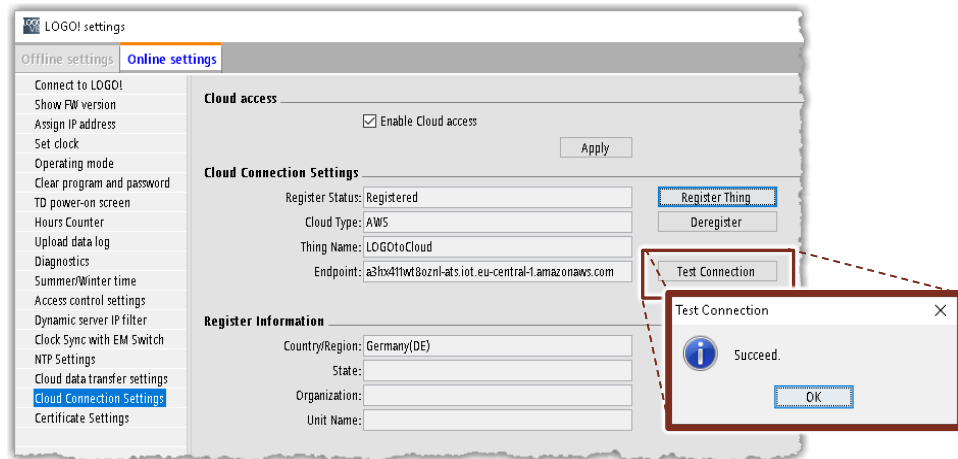


3 Commissioning the application example

Then, as shown in [Figure 3-7](#), click on "Test Connection" in order to make sure that the connection has been established successfully.

The connection between LOGO! and the cloud (IoT Core) or the AWS IoT object "LOGOtoCloud" is now created.

Figure 3-7: Internet of Things – testing the LOGO! connection to the cloud



Check the connection between LOGO! and the cloud

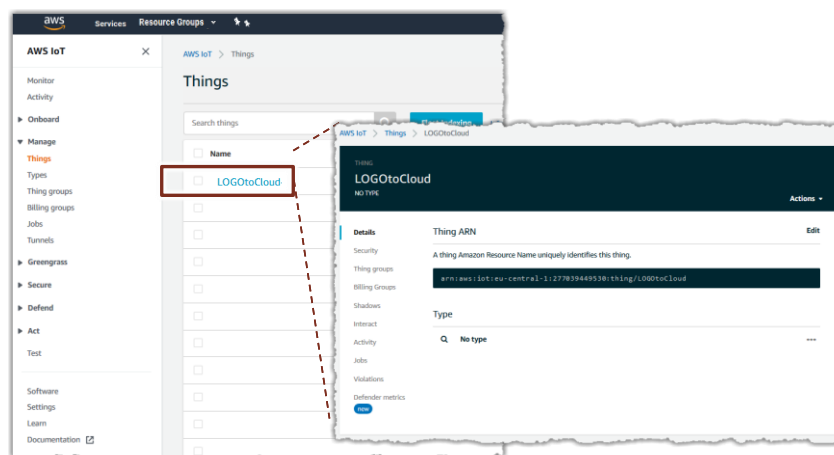
Open your AWS console as shown in [Figure 2-5](#) (1) and select "IoT Core".

In [Figure 3-8](#) you will see the functions for AWS IoT Core on the left side.

The Thing that you created earlier will be under "Things".

Under "Shadows", as shown in [Figure 3-9](#) in the next step, you will then see the values that will be exchanged between LOGO! and the cloud. However, these values must be entered beforehand in LOGO!Soft Comfort and loaded to LOGO!.

Figure 3-8: AWS – Check whether the IoT Thing was created



List - Setting for cloud data transfer

In LOGO!Soft Comfort, you will click "Cloud data transfer settings" in the "Online settings" as shown in [Figure 3-9](#) (1).

To accomplish this, LOGO! is put in "STOP" mode.

Using the list shown, define the data from the LOGO! switching program that will be synchronized between LOGO! and the cloud either cyclically or when a value changes (2).

The image highlights the LOGO! digital output [Q3] and the analog input [AI1] as an example.

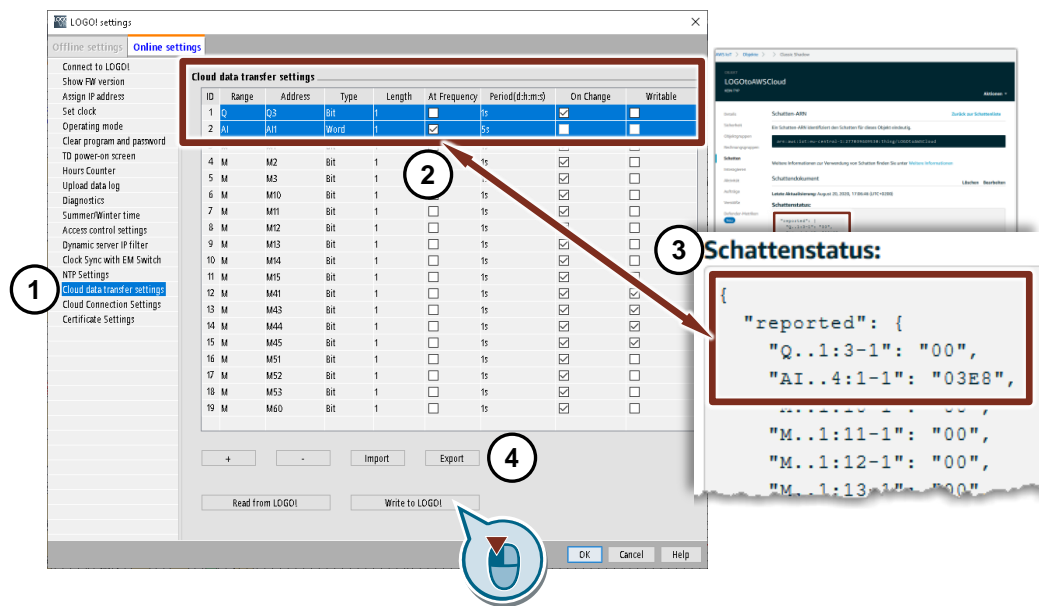
In the cloud you have the ability to display the synchronized values in cloud storage, also known as "Shadows", via the Shadow status (3).

You can export this list as a *.csv file or re-import it (4).

The CSV file for this application example is contained in the attached ZIP archive.

Click [Write to LOGO!] to save the values in the list to LOGO!.

Figure 3-9: Configuring data exchange between LOGO! and cloud



3.5 LOGO! Web editor – Load website to the cloud

In this chapter, you will upload the prepared website to the cloud.

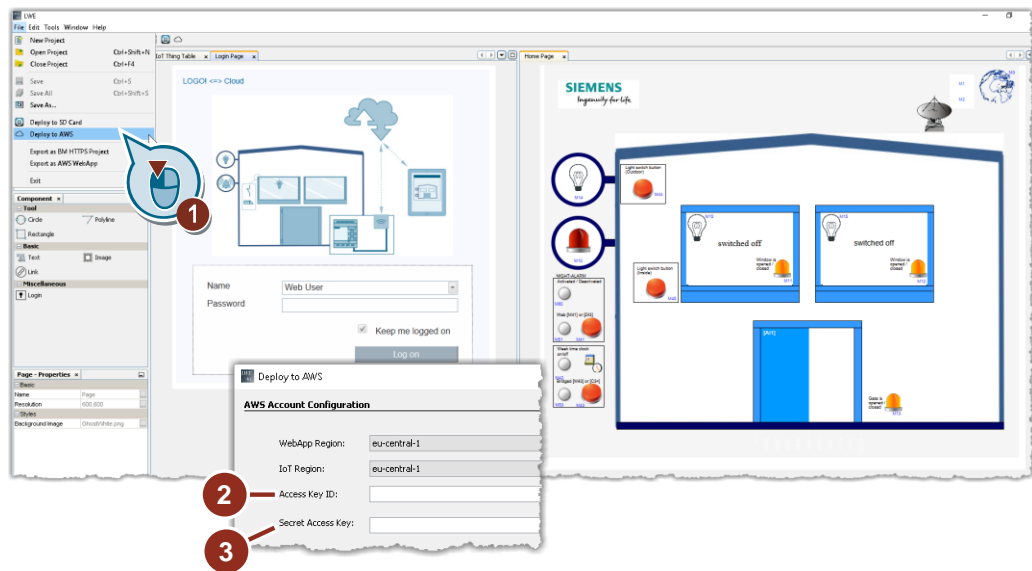
In the process, you will use the service from Amazon Web Services known as "Elastic Beanstalk", which provides you with a web server.

1. Locate the folder for the website in the included ZIP file.
2. Save the folder in a directory of your choosing.
3. Launch the LOGO! Web Editor LWE.
4. Open the supplied website using the Editor; the prepared web view will appear for building monitoring as shown in [Figure 3-10](#).

On the left-hand side you will see a user-defined website for login, and the website with status and control items on the right-hand side.

1. Click "File" and select "Deploy to AWS".
2. Select the region for the AWS "Web app" and the region that your IoT device (LOGO!) has already been connected with. This example uses "eu.central-1".
3. Copy your "Access Key ID" and your "Secret Access Key" and paste them into the respective fields. Then click "Finish".

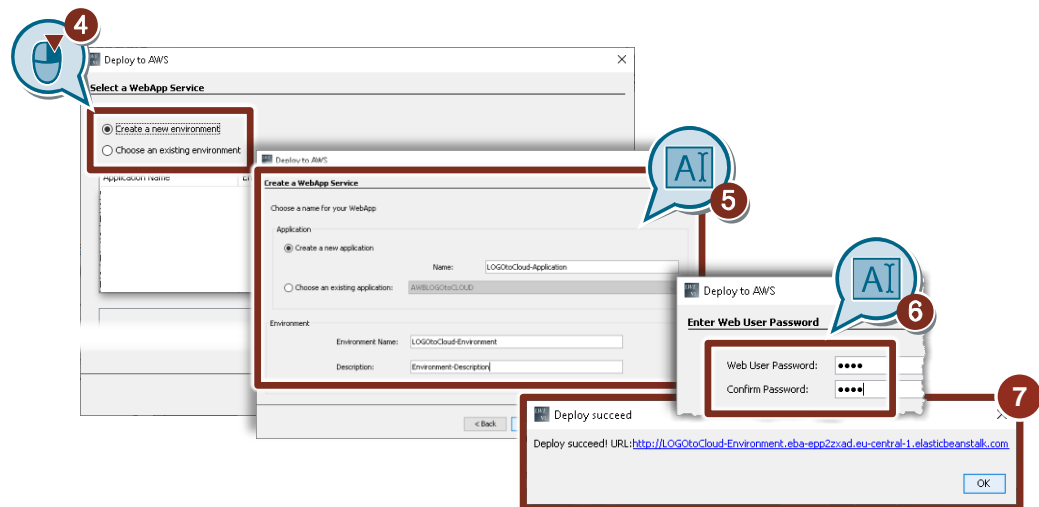
Figure 3-10: Configuring web access in the cloud



3 Commissioning the application example

4. Follow [Figure 3-11](#) to create a new environment for the website. Click "Create a new environment" and then click "Next".
5. Enter a name for the web app and the environment.
Here, as shown in the figure:
 - "LOGOtoCloud-Application"
 - "LOGOtoCloud-Environment".
6. Enter a password for access to the website in the cloud, then click "Finish".
The website will be transferred from LWE to the cloud.
7. You will then receive a link for your AWS-linked website.
Secure or copy this link, for example in a text file, and use it to log in to your website. Chapter [4.2](#) below explains the principle of operation of the website.

Figure 3-11: Internet of Things – Create new environment for web access in the cloud



4 Structure and function

When connecting LOGO! to a cloud, you should always make sure that there is a connection between LOGO! and the cloud *and* a parallel connection from the cloud to the web view (browser).

This means that no signals are being exchanged directly between LOGO! and the web view on the end user device (e.g. tablet). Refer to [Figure 1-1](#).

4.1 LOGO! switching program (LSC)

According to the task description (chapter 1), selected switching states in the house are recorded by LOGO! and sent to the cloud.

[Figure 4-1](#) on the next page shows the LOGO! switching program.

At (Position 1), in the event LOGO! is restarted, all signal states as well as the values displayed in the cloud are reset. Marker [M8] serves as a startup marker and is called in the event of a LOGO! restart.

The window contacts [I1, I2] and the door position [AI1] are queried at (2). These values are shown in the LOGO! display [B001].

(3) contains the alarm control, which is activated with Button [I3] or the website with [M41]. In the event of an open window or door contact, the alarm is triggered.

Besides physical buttons linked to digital inputs, the web display (see [Figure 4-2](#)) also contains

buttons that are linked to markers in the switching program. These buttons and markers each set the subsequent latching switches. Here it should be noted that, like a switch, a marker saves the last signal state and only switches back when it is actuated again. In order to use the marker [M41] as a button, for example, the positive [B025] and negative edge [B007] of the marker are used in alternation for the latching switch [B041]. Furthermore, at certain times the alarm is activated by the week timer [B037] or, via [M43] or [C3], bridged for continuous readiness.

The interior illumination [I5] and exterior illumination [I4] are switched in (4). For example, if the light switch [I4] is pressed for 3s, it will trigger the alarm that switches on all lights, both interior and exterior. Pressing [I4] again briefly will disable the alarm mode and switch off the interior lighting. The interior lighting will be set to the prior state.

(5a) defines that the LOGO! display (5b) is always set to have a white backlight. If the basic unit is installed in a switch cabinet, it is recommended to leave the display dark.

If a door or window contact has been unlocked, the display switches to orange or, if the alarm function is active, the display will cycle between orange and red due to the pulse generator [B038]. If the alarm function of the light switch is activated at [I5], the display switches between red and white, as the interconnection for orange is disabled by the XOR block [B009].

A switching function for monitoring the connection between LOGO! and the cloud is implemented in (6). Markers [M1] and [M2] are toggled cyclically. They represent two arrows in the web view which appear in alternation. In this way it is possible to see the connection between LOGO!, the cloud and the web view.

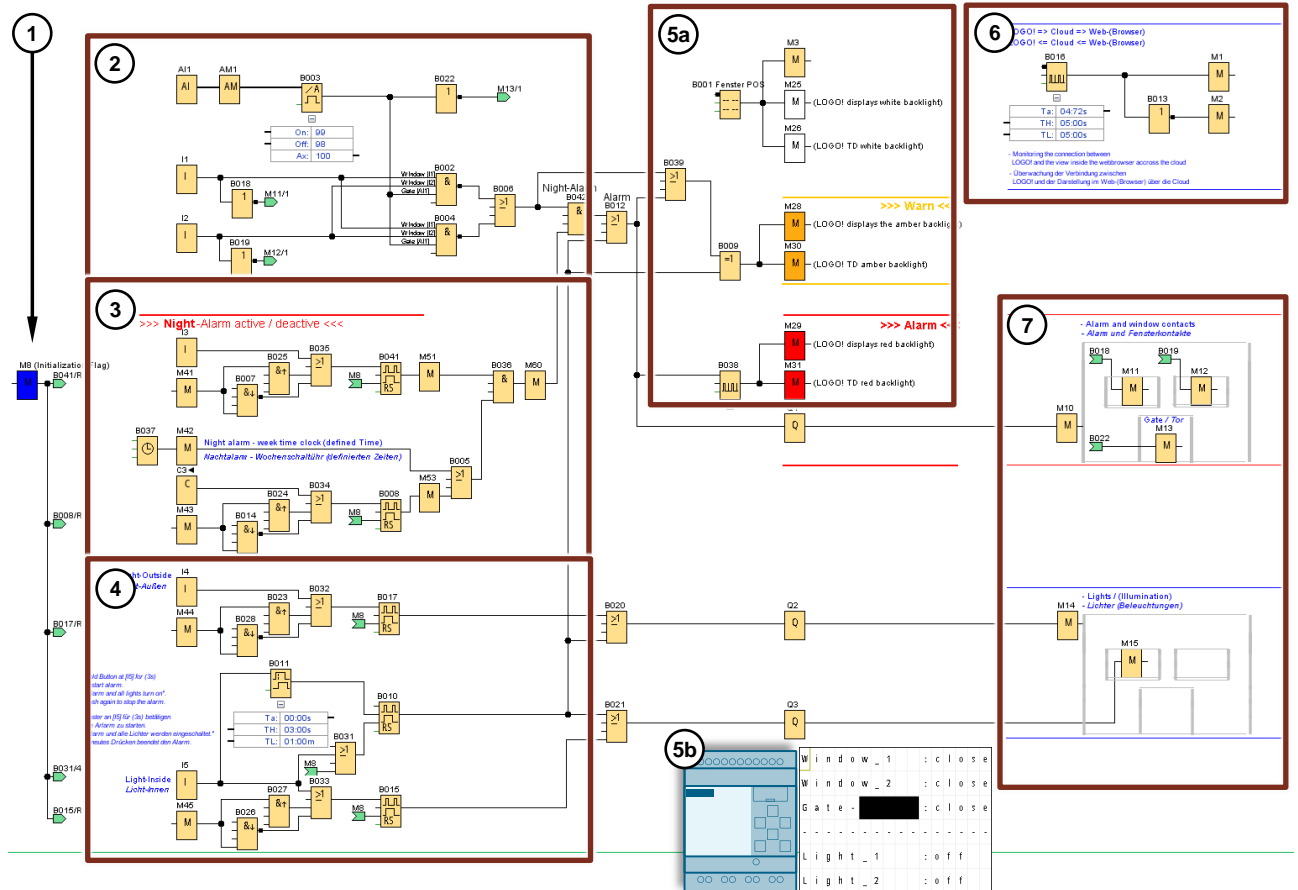
The markers representing each switching condition of the building monitoring are positioned in (7). The implications in the switching program for the building have been implemented in a text window.

Note

The simulation function is available in LSC [function key F3] for illustrating the LOGO! switching program, allowing you to test individual adjustments directly. Follow the course of the red active switching signals in the LOGO! switching program.

The online test displays the program currently running on LOGO! with the respective switching states.

Figure 4-1: Overview – LOGO! switching program in LOGO! Soft Comfort



4.2 LOGO! Web Editor and principle of operation of the website

Using the LOGO! Web Editor (LWE), you can create the web interface for LOGO!/AWS the web server.

You will connect the individual functions of the LOGO! switching program with the corresponding screen elements to produce a graphical representation of the building, a system or a machine.

In chapter [3.4](#) you created the connection between LOGO! and AWS and set up LOGO! as an IoT Thing with the name "LOGOtoCloud". Looking back, [Figure 3-9](#) shows how data from LOGO! are cyclically synchronized with the cloud storage "shadow".

The connection between website and cloud should also be configured via the IoT Thing, here "LOGOtoCloud". To do this, LWE offers the "IoT Thing Table", as shown in [Figure 4-2](#), at position (1a).

In the application example, "LOGOtoCloud" has already been added and the tags used here have been connected with it (1b).

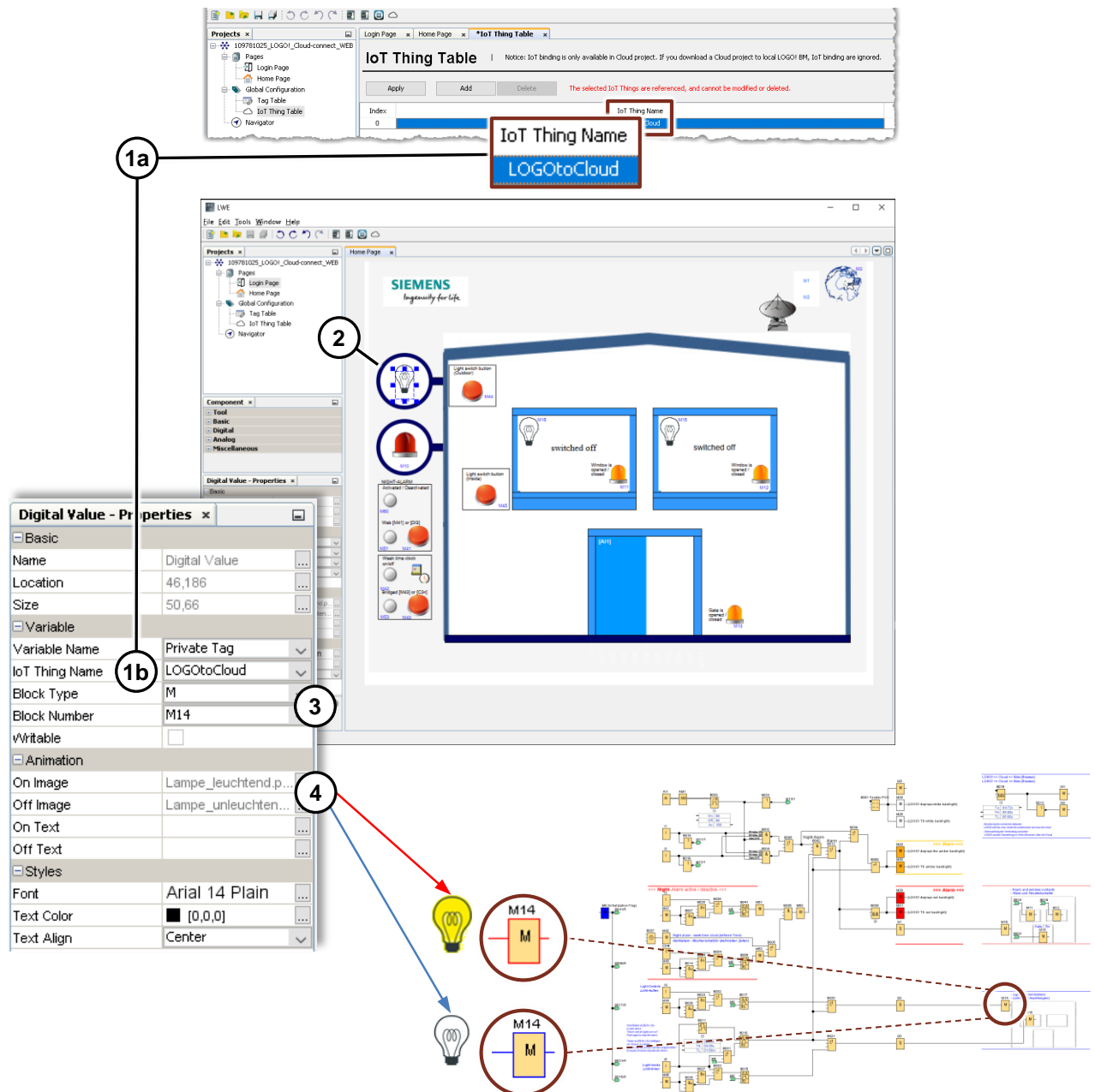
In position (2) in the figure, a screen element for the exterior lighting is connected with the marker [M14] from the switching program (3).

If there is no signal at the marker, an "off image" is shown as a screen element. Conversely, if there is a signal, an "on image" is displayed (4). A yellow illumination is used as an "on image", while the background (i.e. the window) is also toggled via the same marker.

The functions implemented in the application example can be found in [Figure 4-3](#).

4 Structure and function

Figure 4-2: LOGO! Web Editor - Linking LWE screen element with LSC block via IoT Thing Table



In LWE ([Figure 4-3](#)), you have access to screen elements which are either static, can be toggled, or displayed as moving screens.

The exterior lighting at position (1) is controlled via marker [M44] or [I4] (4), the interior lighting via marker [M45] or [I5] (2).

Because the signal state of a marker, as described in [Figure 4-1](#) (3), corresponds to a switch, two edge evaluations are switched downstream in the switching program.

To verify an open door or window contact, the alarm system (3) is available and is activated via [M60] as follows:

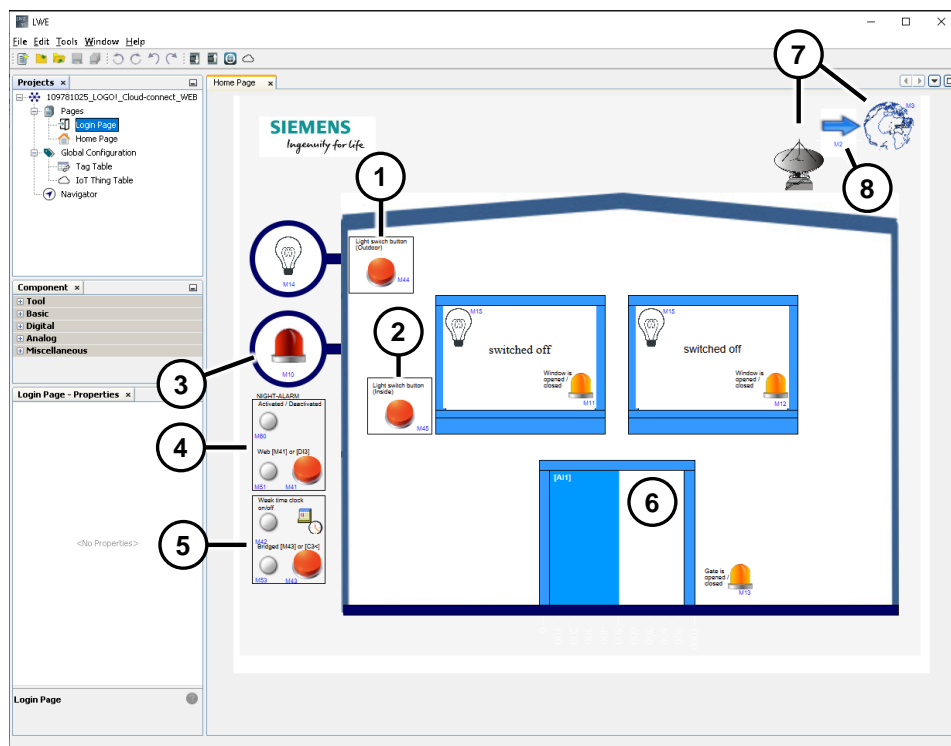
- The function of the night alarm (4) is activated via the buttons shown or via marker [M41], alternatively with the button at [I3]. The signal state at marker [M51] indicates whether the function of the night alarm is activated or deactivated.
- The week timer [M42] (5) is active, or it may be bridged with [M43] or [C3] for continuous readiness of the alarm. The result is shown by [M55].

The door (6) is implemented as a bar graph that has been rotated by 90°. It represents the door position as a function of the analog value at [AI1].

A rotating or stationary globe (7) represents a monitoring function of the connection between the web view and the cloud. The web view shows the data that are currently in the cloud, but it does not show the most up-to-date data inside LOGO!. If the connection to LOGO! is interrupted or the LOGO! basic unit is switched off, the web view will not directly reflect this.

For this reason, a solution has been implemented in (8) in order to monitor and display the connection between LOGO! and the cloud. Here, two arrows are alternatingly made visible by switching the markers [M1, M2] off and on.

Figure 4-3: LOGO! Web Editor – Representation of building monitoring in the Editor



5 Appendix

5.1 Service and support

Industry Online Support

Do you have any questions or need assistance?

Siemens Industry Online Support offers round the clock access to our entire service and support know-how and portfolio.

The Industry Online Support is the central address for information about our products, solutions and services.

Product information, manuals, downloads, FAQs, application examples and videos – all information is accessible with just a few mouse clicks:

<https://support.industry.siemens.com>

Industry Online Support app

You will receive optimum support wherever you are with the "Siemens Industry Online Support" app. The app is available for Apple iOS and Android:

<https://support.industry.siemens.com/cs/ww/en/sc/2067>

5.2 Links and literature

Table 5-1: Links and literature

No.	Subject
\1\	Siemens Industry Online Support - https://support.industry.siemens.com
\2\	This article - https://support.industry.siemens.com/cs/ww/en/view/109781025
\3\	LOGO! 8 manual - https://support.industry.siemens.com/cs/ww/en/view/109741041
\4\	LOGO! logic module (Application examples, expansion modules) - www.siemens.com/logo
\5\	LOGO! Web Based Trainings - https://support.industry.siemens.com/cs/ww/en/view/109757017
\6\	AWS IoT Core - https://aws.amazon.com/iot-core
\7\	AWS Elastic Beanstalk - https://aws.amazon.com/elasticbeanstalk
\8\	AWS - AWS Identity and Access Management (IAM) - https://docs.aws.amazon.com/en_us/IAM/latest/UserGuide/introduction.html

5.3 Change documentation

Table 5-2: Change documentation

Version	Date	Change
V1.0	09/2020	First edition