Installation and Activation Instructions for Container Version of EdgeLink

Revision History

Date	Version	Author	Reviewer	Description
Mar. 07,2025	1.0	Lili.Zheng	Greta Lieske-Dumelle	Initial Release

catalogue

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1 When do I need to install EdgeLink

1 The customer's hardware is not Advantech hardware and requires the use of EdgeLink

2 The customer's hardware is Advantech hardware, and EdgeLink was not installed at the factory

2 EdgeLink purchasing method

We offer two methods for purchasing EdgeLink components. The components that may need to be purchased include: EdgeLink basic functions or the addition of IEC-61850 on top of the EdgeLink basic functions.

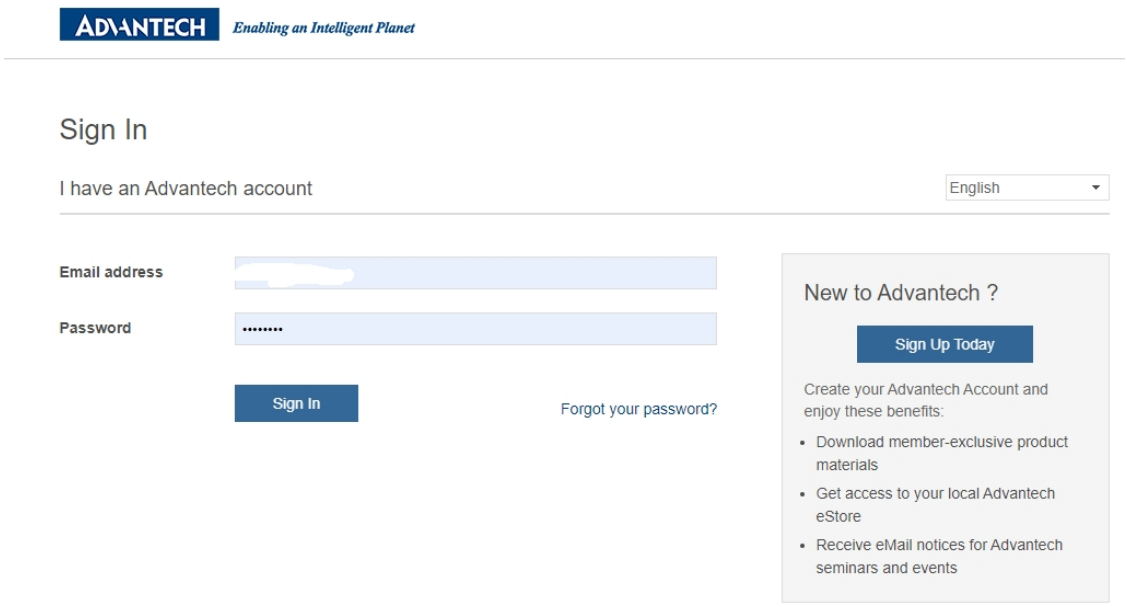
1) Method One: Purchase through the Marketplace.

2) Method Two: Purchase through Advantech's business channels.

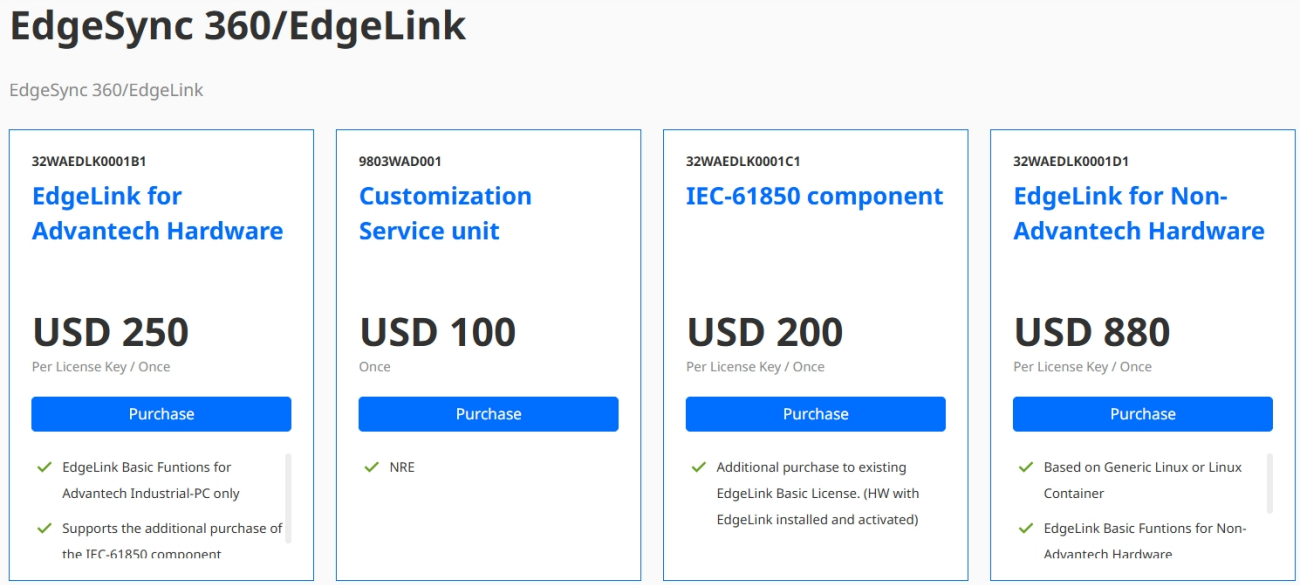
2.1 Purchase through Marketplace

https://wise-iot.advantech.com/en-us/marketplace

1 Log in to Marketplace



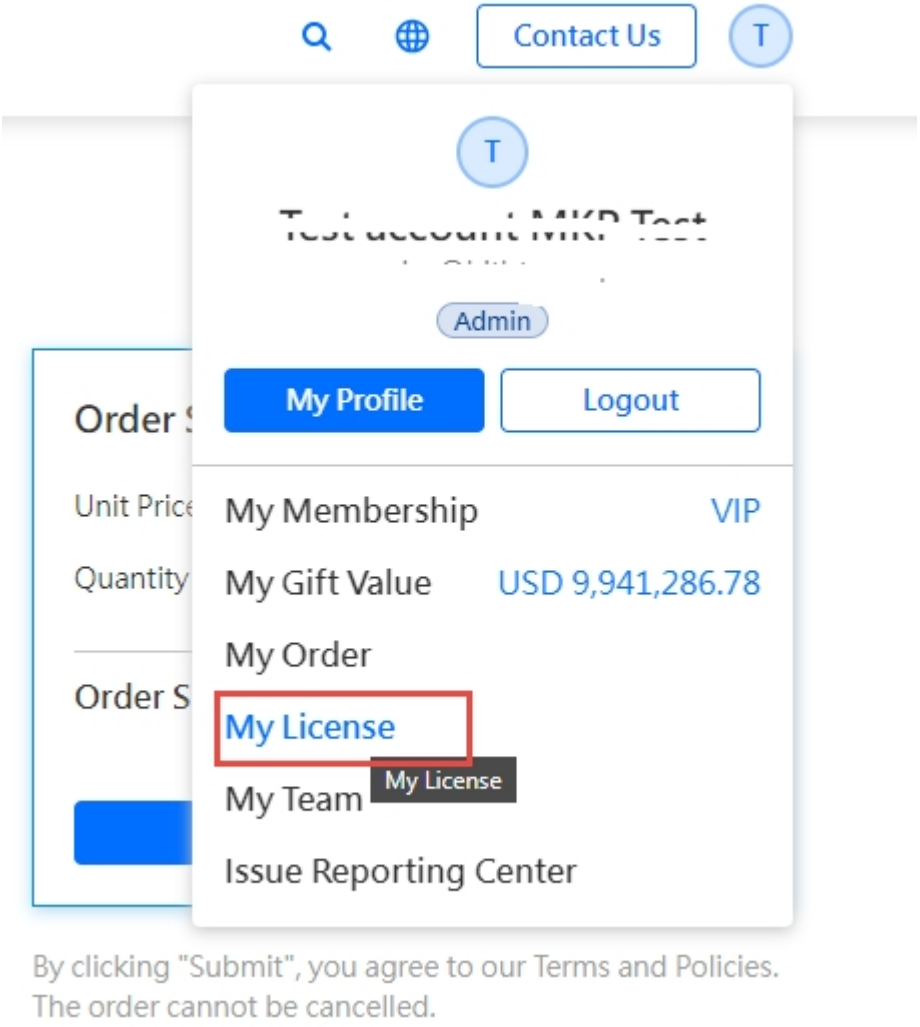
2 Search for EdgeLink, find the pricing plan, and place an order based on your needs



Item number	describe	describe
32WAEDLK0001B1	EdgeLink for Advantech Hardware	When a customer has purchased Advantech hardware, the hardware needs to be deployed with the EdgeLink application. To purchase this part number (Advantech devices with NO EdgeLink preloaded in initial shipment/order, please confirm your PN; IEC61850 NOT included)
32WAEDLK0001C1	IEC-61850 component	Additional purchase to devices with basic functions already installed.
32WAEDLK0001D1	EdgeLink for Non-Advantch Hardware	When customers need to deploy EdgeLink applications on non-Advantech hardware, they can purchase this part number (they can choose whether to add IEC-61850 when purchasing. If they do not add IEC-61850 at the time of purchase, they can add it later in My Orders)
9803WAD001	NRE cost	For customized requirements, it is necessary to assess the NRE (Non-Recurring Engineering) cost. The purchase of this material number should be based on the price assessed by the product department

3 After the purchase is completed, you can view the pending activation orders on the "My Software Licenses" page of your account (you can purchase multiple sets of EdgeLink at once, but you

need to activate them individually)



2.2 Purchase through business personnel

Contact Advantech: [Advantech Sales]

3 EdgeLink installation method

We offer two methods for installing EdgeLink. You can choose one according to your specific needs

1 EdgeLink for GENERIC LINUX version

2 Container version of EdgeLink

This article introduces the installation, purchase, and activation process of Container version of EdgeLink

Reference link for EdgeLink-related files for the GENERIC LINUX version: [EdgeLink for the]

GENERIC version

4 Install Container version of EdgeLink

4.1 Components

Installation package name	content	role
CONTAINER-edgelink-docker-2.8.x-xxxxxxxx-amd64.deb (Obtained from Advantech's official website)	Agent	Responsible for downloading the EdgeLink Studio project and launching the EdgeLink Container version
edgelink_container_2.8.x_Release _xxxxxxxx.tar.gz (obtained from Docker Hub)	EdgeLink Runtime	Responsible for the operation of EdgeLink Runtime

Suggested usage environment: Docker environment (supporting Ubuntu 18.04 i386 version)
Description: By default, the Container version of EdgeLink can add up to 100 points, with a trial period of 2 hours
Activation method: Online activation

4.2 Description of host machine port occupation

port type	Port number	application program	state
UDP	6513	Agent	After installing the Agent deb package, it will occupy by default
TCP	6001	Agent	After installing the Agent deb package, it will occupy by default
TCP	502	Modbus Server	This port is occupied by default when Modbus Server is enabled in the project
TCP	2404	IEC104 Channel 1	When enabling IEC104 Server (channel 1) in the project, this port is occupied

			by default
UDP	47808	BACnet Server	This port is occupied by default when BACnet Server is enabled in the project
TCP	504	WASCADA	This port is occupied by default when WASCADA is enabled in the project
TCP	51210	OPC UA	This port is occupied by default when OPC UA Server is enabled in the project
TCP	443	WebService	HTTPS occupies this port
TCP	41100	eclr	When eclr is enabled in the project, this port is occupied by default

4.3 Installation steps

4.3.1 Set up Docker environment for EdgeLink Runtime

apt update

apt install docker.io

4.3.2 Install the EdgeLink Runtime Docker image

Step 1: Download the edgelink-docker Agent (download the latest version)

https://www.advantech.com.cn/zh-cn/support/details/firmware?id=1-28S1J4D



Step 2: Install the Agent installation package

apt install ./CONTAINER-edgelink-docker-2.8.0-202112290544-amd64.deb

Note: Replace CONTAINER-edgelink-docker-2.8.0-202112290544-amd64.deb with the *actual downloaded version name*

```
fuyu@ubuntu:~$ sudo dpkg -i CONTAINER-edgelink-docker-2.8.0-202112290544-amd64.
deb
(Reading database ... 128766 files and directories currently installed.)
Preparing to unpack CONTAINER-edgelink-docker-2.8.0-202112290544-amd64.deb ...
Unpacking edgelink-docker (2.8.0) over (2.8.0) ...
Setting up edgelink-docker (2.8.0) ...
```

Special note:

If you encounter any errors, please install the dependent packages according to the prompts, and then execute `sudo apt --fix-broken install` to repair and install the deb package

Step 3: Set up a soft link for the serial port

In EdgeLink, COM1 corresponds to /dev/ttyAP0, COM2 corresponds to /dev/ttyAP1, and so on

Users need to create corresponding soft links based on the device files of the serial port on their local system to correctly use the serial port acquisition function

Example: The actual serial port of the device is /dev/ttyS0, which corresponds to EdgeLink COM1. You need to execute "*sudo ln -s /dev/ttyS0 /dev/ttyAP0*" to set up a soft link. Note that before binding, please confirm that /dev/ttyAP0 is not already bound to another port

4.4 Upgrade EdgeLink

Step 1: Remove the old version of container edgelink

systemctl stop edgelink-docker

docker stop edgelink

docker images

docker rmi 091546ccb63d (the IMAGE ID from the previous step)

Step 2: Uninstall the deb

dpkg –P edgelink-docker

Step 3: Reinstall the new version

1 Install deb

apt install ./ CONTAINER-edgelink-docker-2.9.0-202306270214-linux-arm64.deb

Special note:

a) Generally, the Agent program in the deb package is responsible for pulling the latest version of container edgelink from the Docker Hub server to the local system and installing it. However, sometimes there may be situations where Docker Hub cannot be connected, in which case manual installation of container edgelink is required

b) After upgrading container edgelink, you need to re-download the project using the latest EdgeLink Studio before it can be used

2 Manually install container edgelink

sudo gunzip -c edgelink_container_arm32v7_2.9.0_Beta_20230627_b2068.tar.gz | docker load

4.5 Common commands for Container versions

1 Stop edgelink-docker

systemctl stop edgelink-docker

2 Start edgelink-docker

systemctl start edgelink-docker

3 Restart edgelink-docker

systemctl restart edgelink-docker

4 Disable edgelink-docker upon startup

systemctl disable edgelink-docker

5 Power on and enable edgelink-docker

systemctl enable edgelink-docker

6 Check the status of the Container

docker ps

7 Entering a Container from the host machine

docker exec -it edgelink /bin/bash

```
fuyu@ubuntu:~$ docker exec -it edgelink /bin/bash
root@ubuntu:/#
```

8 Return from Container to the host machine

```
fuyu@ubuntu:~$ docker exec -it edgelink /bin/bash
root@ubuntu:/# exit
exit
fuyu@ubuntu:~$
```

9 View Container log information (you need to log in to the Container from the host machine first)

tail -F /var/log/syslog

```
root@ubuntu:/# tail -F /var/log/syslog
Jan  6 05:58:23 ubuntu DataCenter: [elic_mgr_sdk.c:339:elic_mgr_entity_validate
] no validate_result field
Jan  6 05:58:30 ubuntu DataCollector: DevWebAccess comm_stop: StopDriver on MOD
_DEV
Jan  6 05:58:31 ubuntu DataCollector: DevWebAccess comm_start: StartDriver on M
OD_DEV
Jan  6 05:58:33 ubuntu DataCenter: [elic_mgr_sdk.c:339:elic_mgr_entity_validate
] no validate_result field
Jan  6 05:58:40 ubuntu DataCollector: DevWebAccess comm_stop: StopDriver on MOD
_DEV
```

5. Activate

5.1 When is activation required?

1 The hardware purchased by the customer does not come pre-installed with EdgeLink, and the customer needs to install EdgeLink themselves (by default, only basic functions are included)

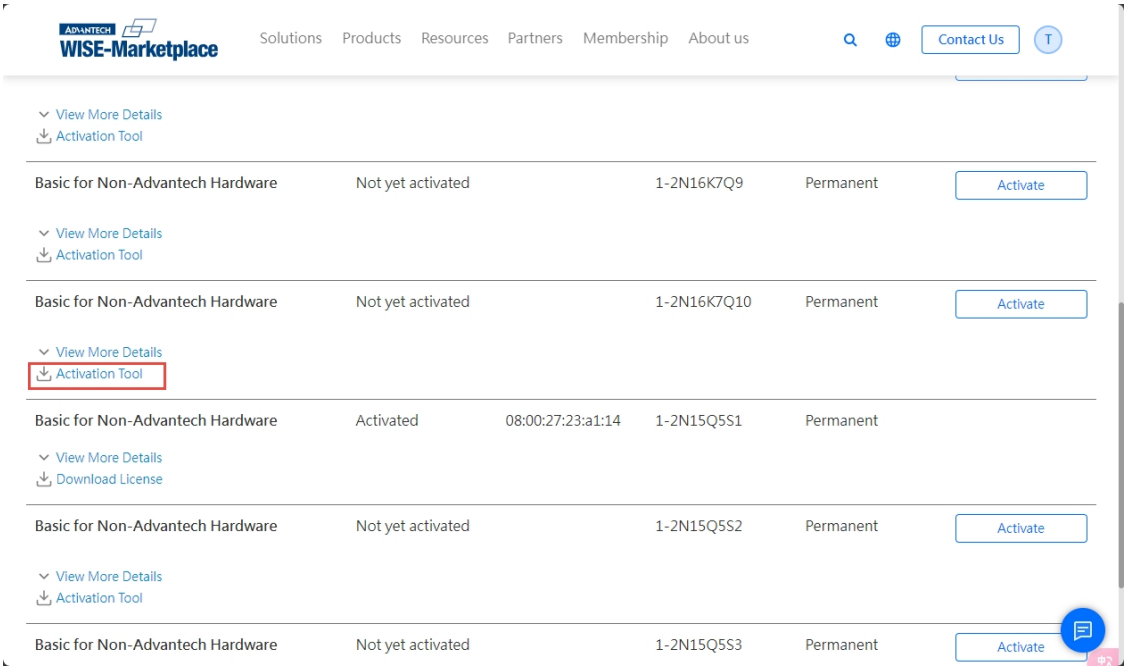
2 If the hardware purchased by the customer has already installed the basic function EdgeLink and is in an activated state, if the paid components are needed, they need to be purchased and activated separately. For details, please refer to the component instructions

3 The hardware purchased by the customer already includes the basic functions of EdgeLink (which will be activated during production by Advantech), so there is no need to activate it again. (Customers can consult with the salesperson when purchasing the hardware.) They can directly check the activation status of the basic functions online

5.2 Activation steps

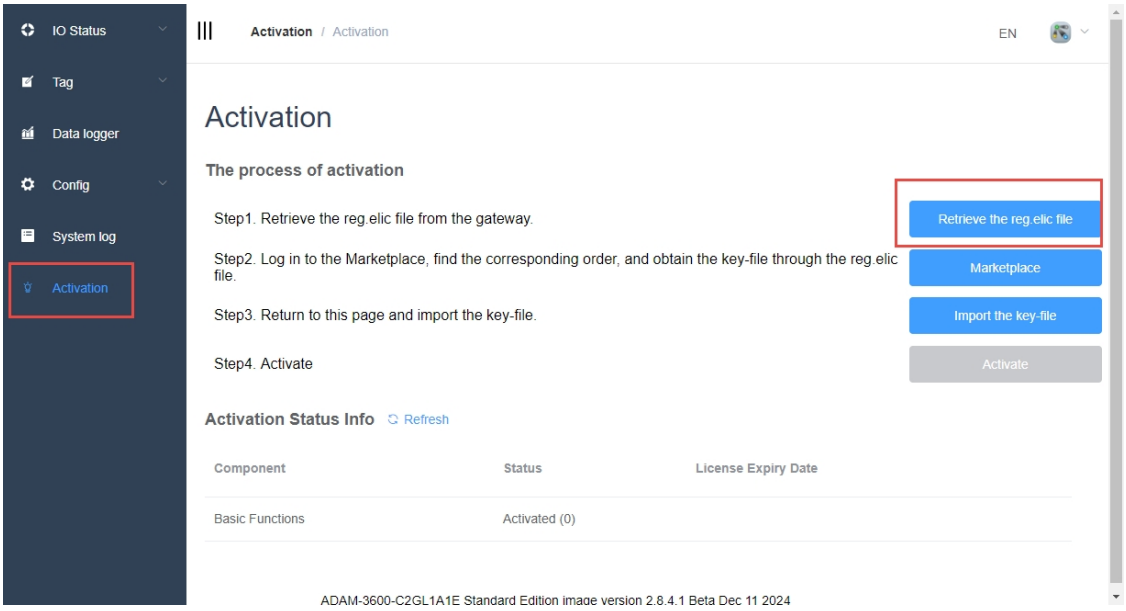
5.2.1 Install EdgeLink Studio

If purchased from the Marketplace, download the "Activation Tool" (EdgeLink Studio) on the "My Software License" page, You can also download and install EdgeLink Studio from the official website. If you have already downloaded and installed it through other channels, you can skip this installation step.



5.2.2 Obtain the reg.elic of the device to be activated and save it locally

Open EdgeLink Studio on the PC, and place the PC and the EdgeLink device to be activated on the same network. Find the device to be activated in the online devices of the Studio, log in to the device, and then enter the Activation page

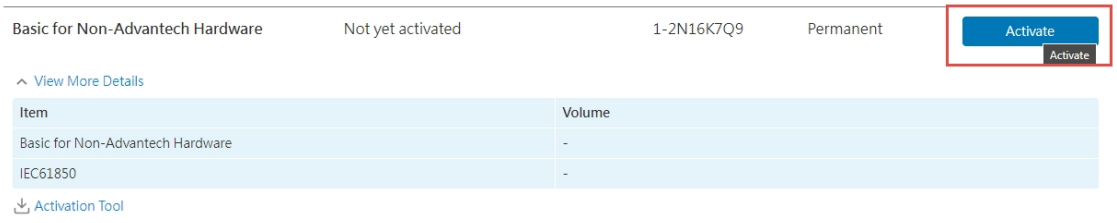


5.2.3 Obtain authorization document

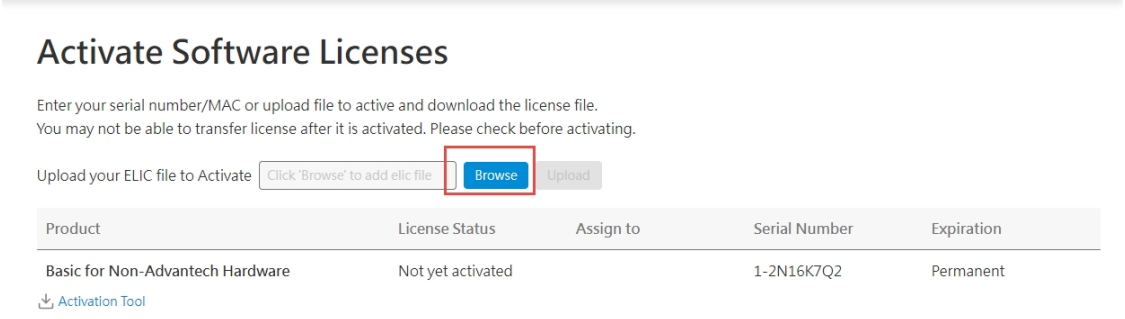
5.2.3.1 Obtain the authorization file for EdgeLink purchased through Marketplace

Go to the "My Software Licenses" page in Marketplace

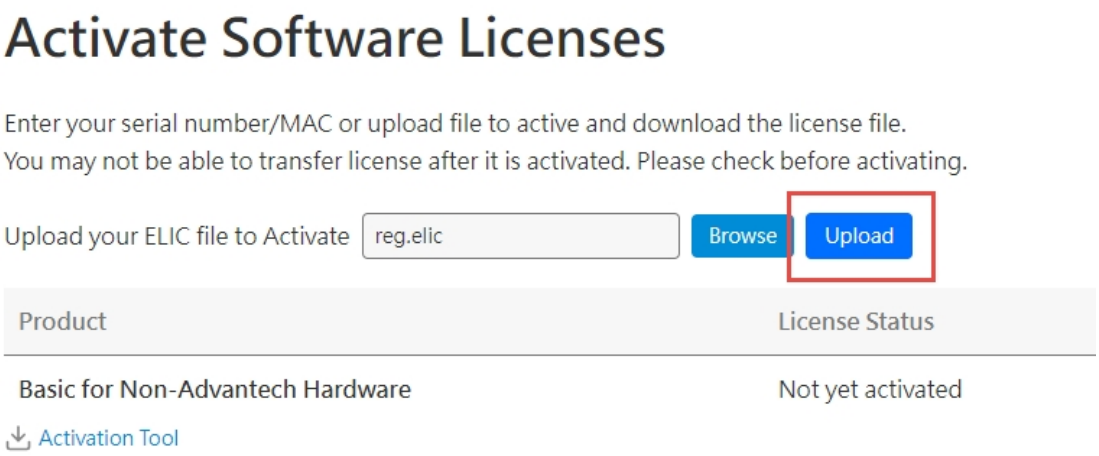
1 Click the "Activate" button



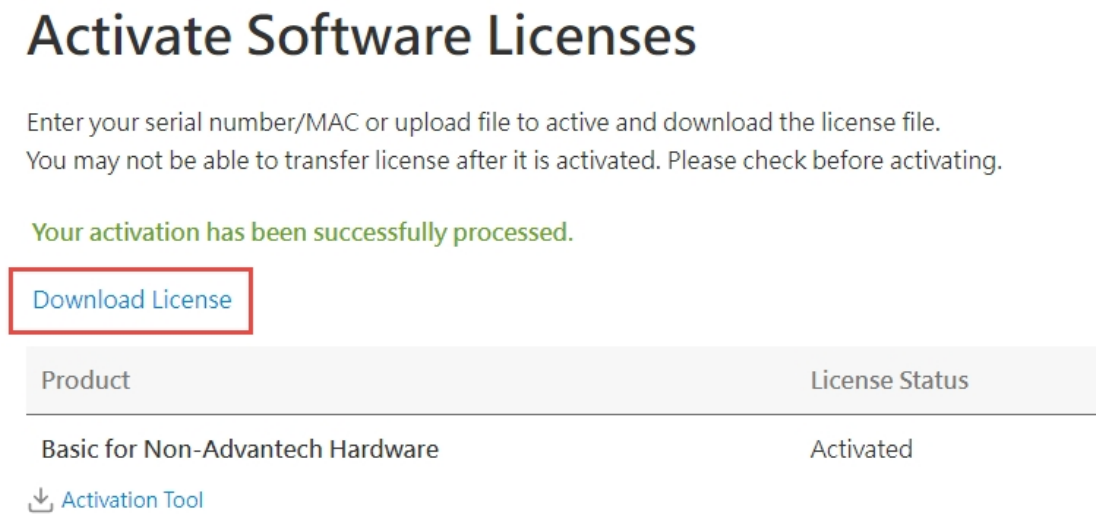
2 Click the "Browse" button to import the reg.elic file you just obtained



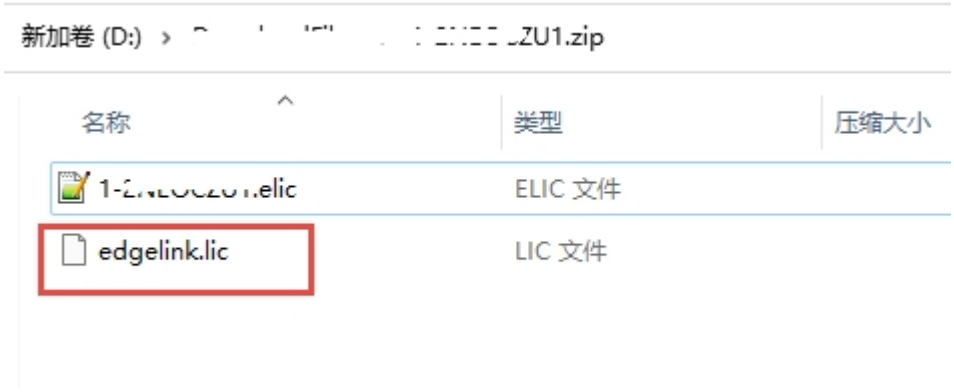
3 Click the "Upload" button to complete the authorization operation



4 After the authorization process is completed, you can download the License key (authorization file)



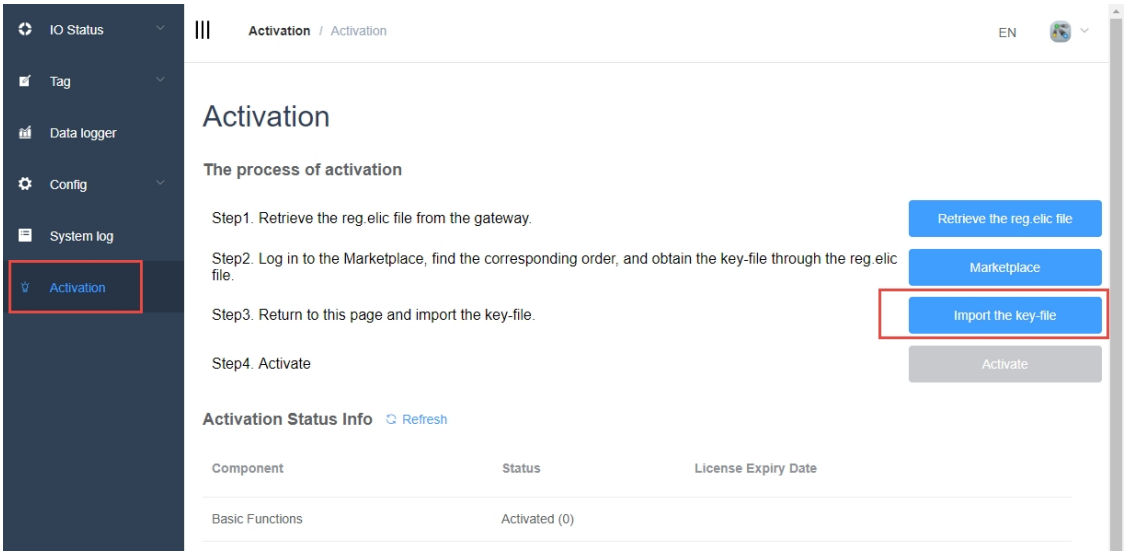
5 After the download is complete, a zip package will be generated, which needs to be unzipped to obtain the edgelink.lic file



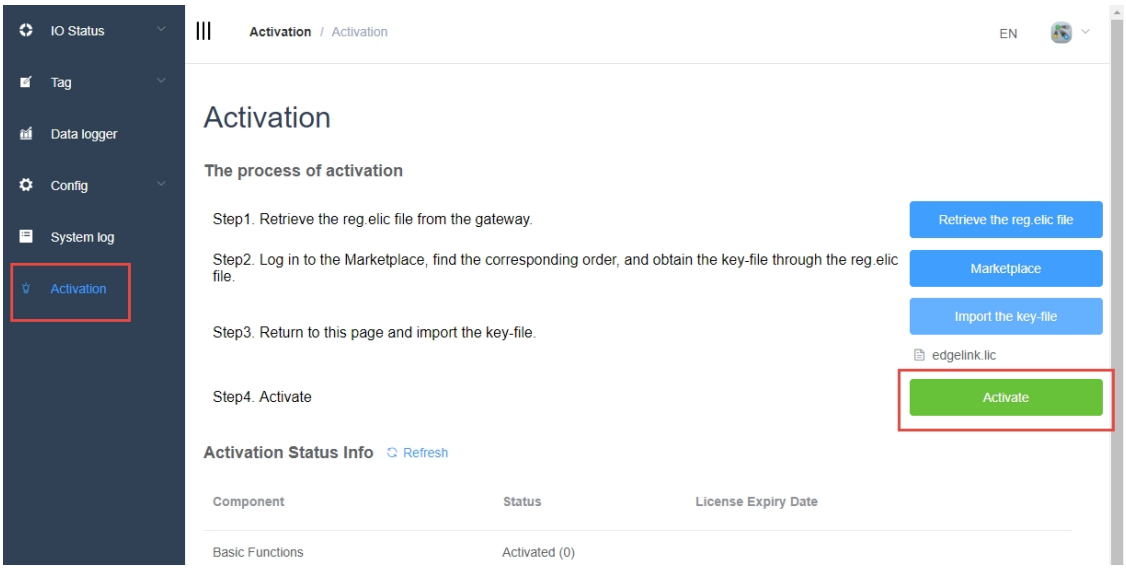
5.2.3.2 Obtain the authorization file through EdgeLink purchased for business purposes

Send the reg.elic file obtained in **Error! Reference source not found.** to the business department, and the business personnel will contact the product department to obtain the authorization file

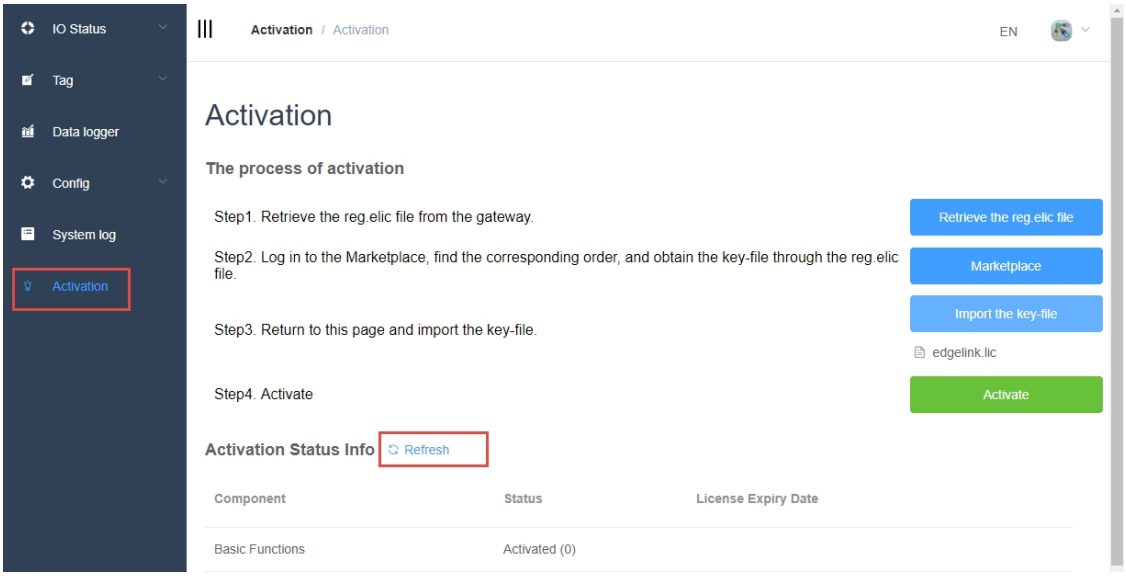
5.2.4 Navigate to the Activation page of EdgeLink Studio online and import the edgelink.lic (or .elic file)



5.2.5 activation



5.2.6 Click the "refresh" button to check the activation status



Activation status code description

status	describe
0	Active
1	on trial
2	Trial expires
-1	not active
-2	ElicMgr connection failed
-3	There is no such component

Component Description

component	describe
Basic Functions	EdgeLink basic system
IEC61850	IEC61850 components, including driver and server
Mitsubishi CNC	Mitsubishi CNC components
FANUC CNC	FANUC CNC components
Haas CNC	Haas CNC components
Brother CNC	Brother CNC components
KND CNC	KND CNC components

remarks:

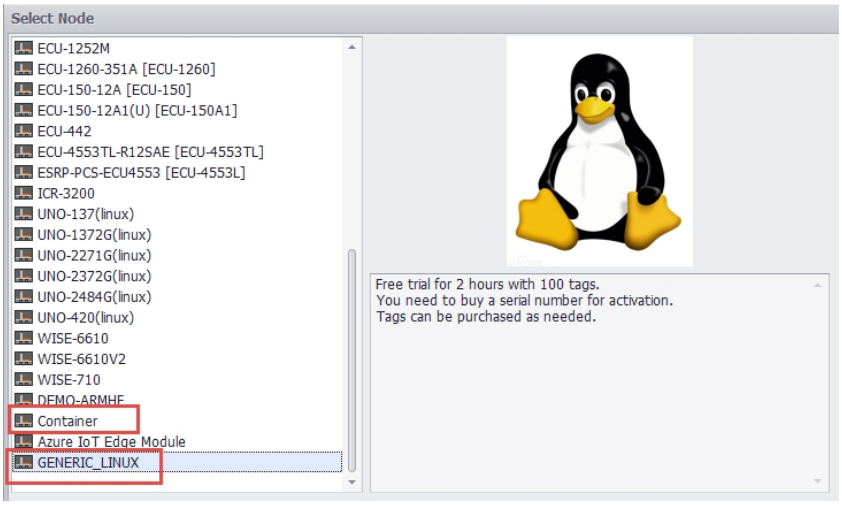
1 Basic functions refer to all functions other than the charging components listed in the aforementioned table. For details, please refer to the [EdgeLink feature list description: EdgeLink Feature List]

2 The CNC series is not yet available for purchase. You can contact our sales team for more information

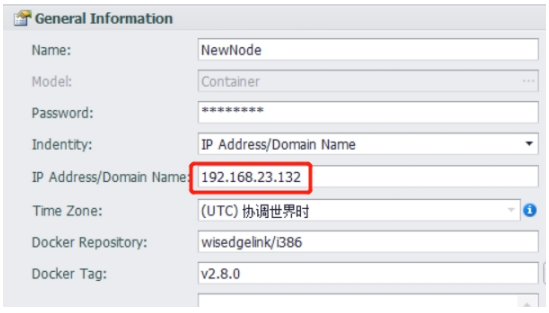
6 Download project files through EdgeLink Studio

EdgeLink Studio [download link], install on PC and you're ready to go

1 Based on your EdgeLink deployment, the project node type should be GENERIC_LINUX or Container when creating a project

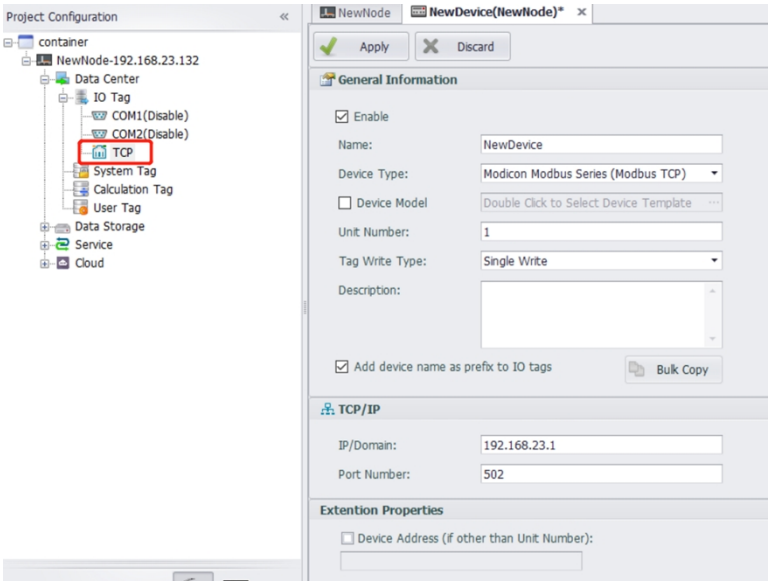


The IP address is the IP of the Ubuntu operating system

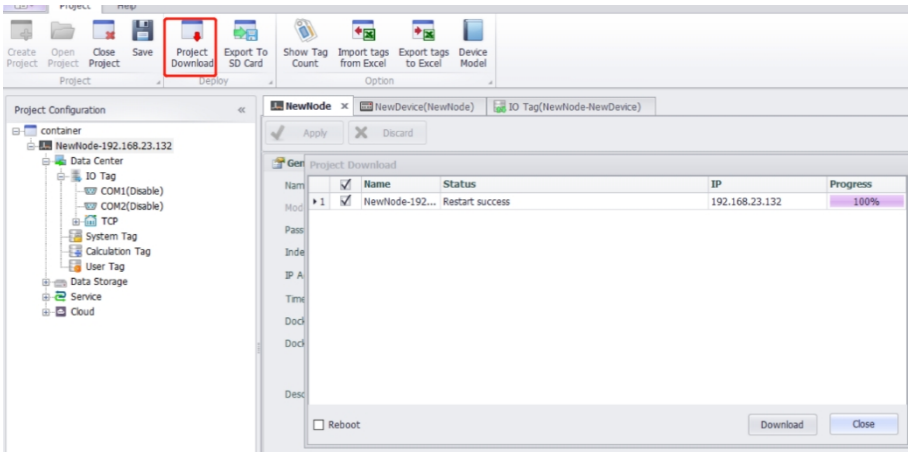


2 Configure any required functions in the project, taking the example of collecting data from Modbus TCP devices.

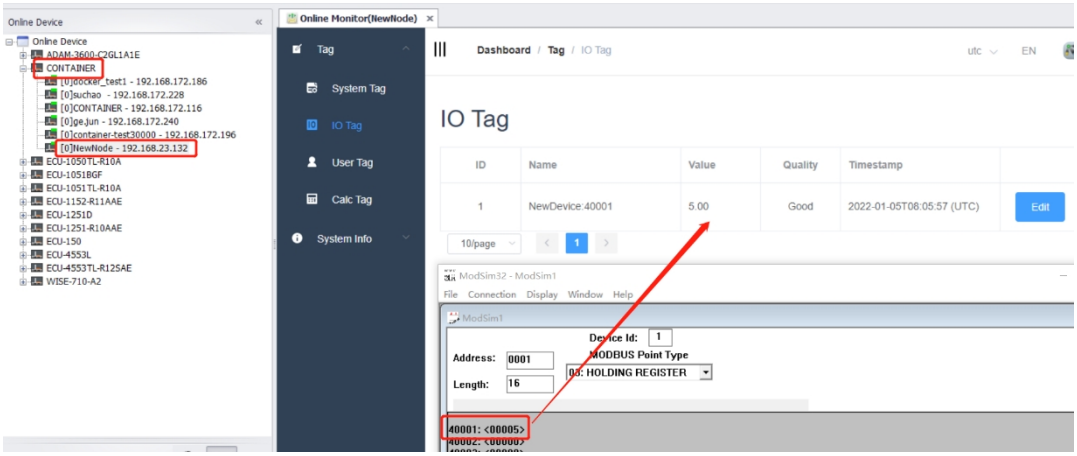
Simulate a Modbus TCP device on a PC using Modsim, and perform data acquisition through EdgeLink



3 After the project configuration is completed, download the project



4 View Results



7 Introduction to EdgeLink

For a preliminary understanding of EdgeLink's functions, please visit the link: Quick Start
For more technical information, please visit the official website: EdgeLink - Advantech