Edge Gateway
Getting Started Guide

AG10

AG20

IM AMD03A03-01EN 8th Edition

Table of Contents

Table of Contents 2
Introduction 4
Safety Precautions 5
About Edge Gateway 6
Note on Edge Gateway 6
About This Book 7
Notes on this document 7
Manual List 7
Icons and symbols used in this manual 8
Confirmation of Packaged Goods 9
Edge Gateway Set 9
What you need to prepare 10
Accessories we sell (sold separately) 10
What you need to prepare 10
Overall system diagram 11
Step 1 Activate/connect 12
For Indoor Type Edge Gateway 12
For Outdoor Type Edge Gateway 14
Step 2 Sign in to the Edge Gateway 17
Change the IP address of the PC 17
First sign in 22
Sign in 22
Step 3 Configure the Edge Gateway settings 24
Configure simple settings 24
Set the time 32
Set the time zone 32
Set the time 33
Configure SSH settings 37
Configure PPP settings. 40
Configure storage settings 42
Save settings in the gateway 44

Frequently Asked Questions 46
Option Setting Guide 48
Connecting to a network camera 49
Configure VMS settings 50
Install the desktop client 50
Connecting to a Media Server 52
Configure initial system settings 52
Connect to the configured system 54
Check the device 56
Save VMS settings 59
Save Nx Witness password and settings 59
Configure the integrated video management system 61
Enable Edge Gateway 62
Configure authentication information for VMS 64
Detecting cameras 65
Configure the device management system 67
Enable Edge Gateway 68
Configure remote.it settings 70
Create a remote.it account 71
Configure remote.it settings 72
Connecting to services using remote.it 79
Licenses and Trademarks 82
License 82
trademark 82
Revision History 83

Introduction

Thank you very much for adopting our amnimo Edge Gateway ("Edge Gateway").

The Edge Gateway Startup Guide ("this document") describes how to set up the Edge Gateway. Please be sure to read it before using the Edge Gateway.

After completing the setup, keep this manual in a place where it can be found at all times.

Safety Precautions

Before using the Edge Gateway, please read the "Before Using" document included with the Edge Gateway to ensure safe and proper handling.

About Edge Gateway

Note on Edge Gateway

- Edge Gateway does not guarantee backward compatibility of product versions with respect to configuration data.

About This Book

Notes on this document

- The contents of this document are subject to change without notice.
- Reproduction or reprinting of the contents of this document, in whole or in part, without permission is prohibited.
- While every effort has been made to ensure the accuracy of the information contained in this document, if you have any questions or find any errors, please contact our customer support.

  Contact: amnimo Customer Support

  E-mail: support@amnimo.com

  URL: https://support.amnimo.com/
- Please note that revisions may not be made for specification changes, structural changes, or changes in parts used that are not considered to be particularly detrimental to functionality/performance.

Manual List

- amnimo G series Edge Gateway user's manual
  https://amnimo.com/manual/edge_gw/ja/edge_gw_users_manual.pdf
- amnimo Gateway series GUI User's Manual
  https://amnimo.com/manual/edge_gw/gui/en/gui_users_manual.pdf
- amnimo Gateway series CLI User's Manual
  https://amnimo.com/manual/edge_gw/cli/en/cli_users_manual.pdf
- Nx Witness VMS Guide
  https://amnimo.com/manual/edge_gw/vms/ja/index.htm
- Device Management System Manual
  https://amnimo.com/manual/edge_gw/alpine/dms/en/index.htm
- Enhanced Video Management System Manual
  https://amnimo.com/manual/edge_gw/evms/en/index.htm
- Edge Gateway Startup Guide (this document)
  https://amnimo.com/manual/edge_gw/sg/en/edge_gw_sg.pdf

Icons and symbols used in this manual

Icons and symbols in this manual have the following meanings

	Information of special note regarding functions and operation.
	Supplemental information regarding functions and operation is provided.
	This section contains references to information within this document and to other documents.
	Indicates that the command can be operated in general user mode.
	Indicates that the command can be operated in administrator mode.
	Indicates that the command can be operated in setting mode.

Confirmation of Packaged Goods

First, please make sure that all packing materials are present.

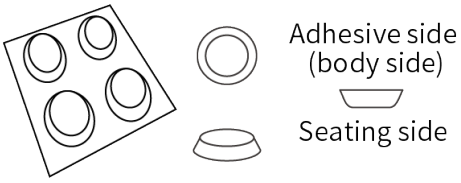
Edge Gateway Set

Indoor Type Edge Gateway

- Indoor type Edge Gateway main unit x 1

- Before use x 1

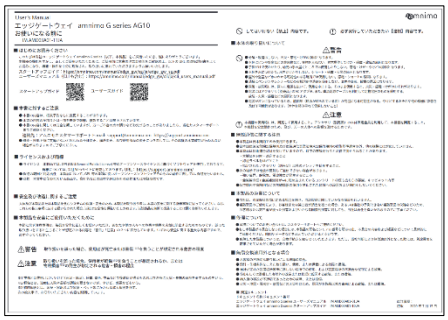
- Rubber feet x 4



Indoor Type Edge Gateway

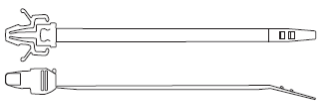
- Outdoor type Edge Gateway main unit x 1

- Before use x 1



- Grommet (main unit device) x 2

- Cable ties (for fixing cables) x 2



What you need to prepare

When configured as described in this manual, the following optional accessories must be provided.

Optional items are not included in the Edge Gateway's warranty coverage.

Accessories we sell (sold separately)

➔ Please refer to "amnimo G Series Edge Gateway User's Manual" for specifications and standards.

Indoor Type Edge Gateway	Indoor Type Edge Gateway
● AC adapter (DC12V/1A) ● Rod antenna x 2 ● External antenna x 2 External antennas may be required if the sensitivity of the rod antenna is poor. ● GPS Antenna ● Main body fixing metal fittings ● Console conversion (RJ-45 - D-Sub 9-pin) ● DC power cable	● Rainproof AC Cable 3P-5m, with round crimp terminals. Outer diameter 9.15mm ● Cable Glands (for Ethernet cable) Applicable wire diameter 6 to 10mm ● Cable gland (for power supply only) Applicable wire diameter 9 to 14mm ● Wall mounting brackets (stainless steel, 4 sets) ● Pole mounting brackets (stainless steel, 2 sets) ● Pole mounting bands (stainless steel, 2 sets)

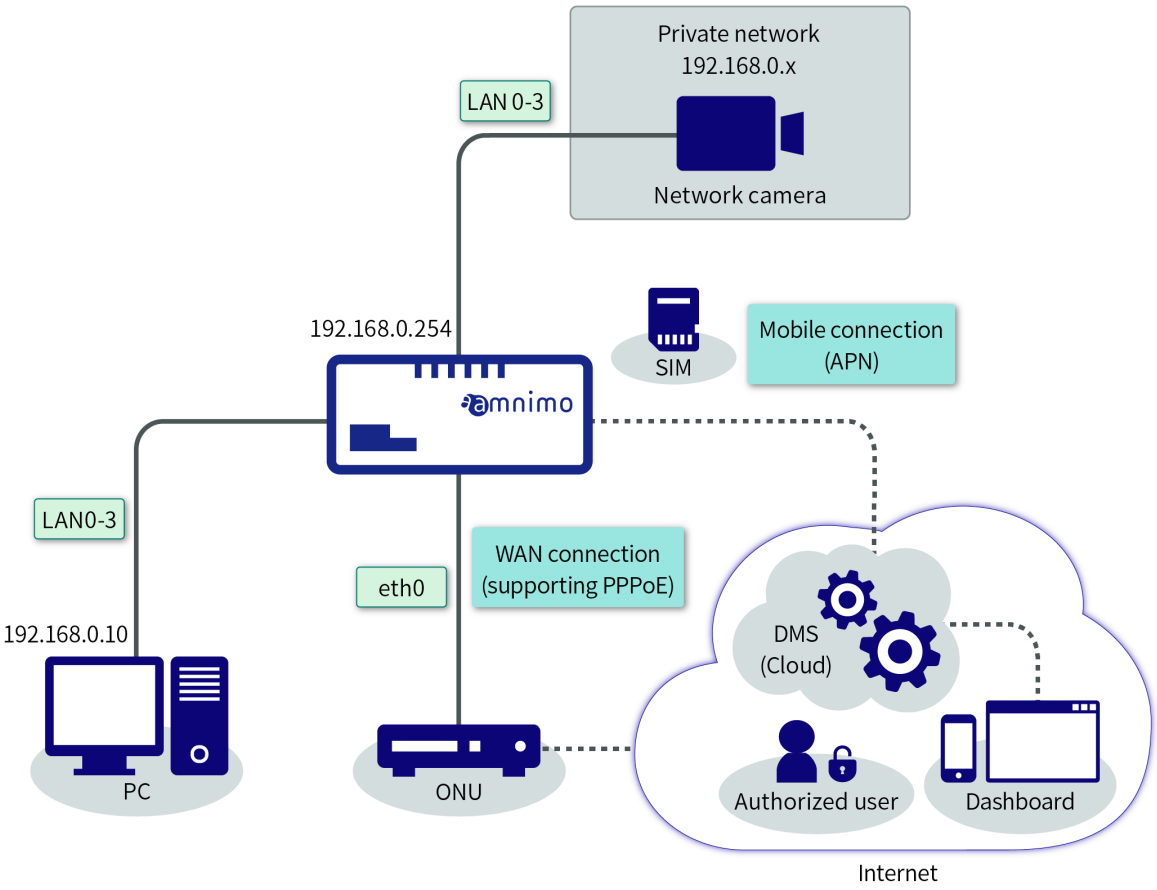
What you need to prepare

- SIM Card
  Please prepare for mobile connection.
  ➔ Please refer to "amnimo G Series Edge Gateway User's Manual" for specifications and standards.
- PC for configuration
  Required for various settings of the Edge Gateway.
  This manual uses Windows 10.
- LAN cable (recommended category: CAT5e or higher)
  Required for connecting Edge Gateway to a PC.

Overall system diagram

This manual describes how to set up a network using the following configuration as an example.

- Mobile Connection
  Connect to the Internet using a SIM.
- WAN connection
  Connects to the Internet using the eth0 interface.
- LAN Connection
  LAN connection to a private network using LAN0-3 interfaces.



Factory network settings

```
eth0:  dhcpv4
lan0:.
lan1:.
lan2:.
lan3:.
br0:  192.168.0.254/24
  -  lan0/lan1/lan2/lan3
```

Step 1 Activate/connect

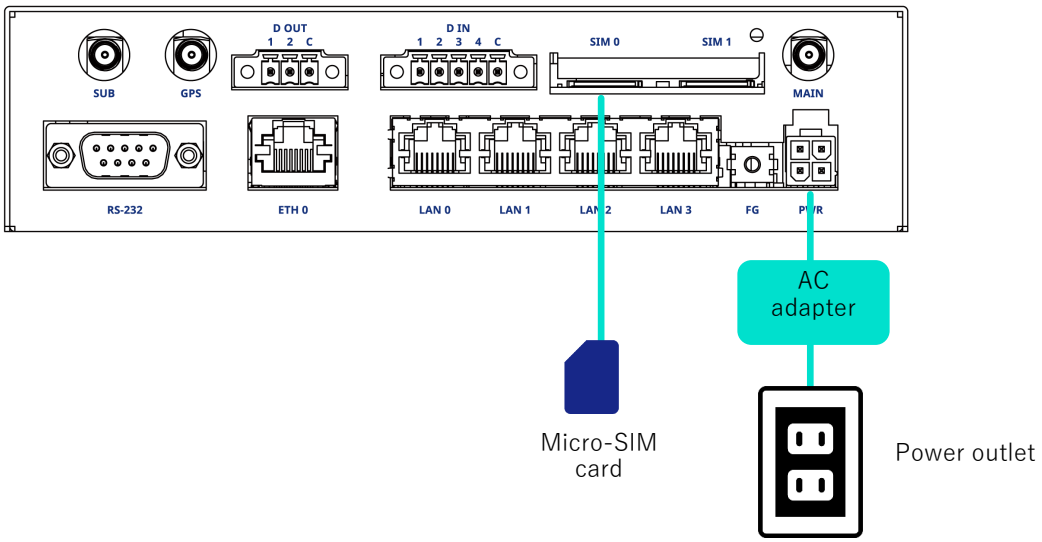
This step describes how to activate the Edge Gateway.

For Indoor Type Edge Gateway

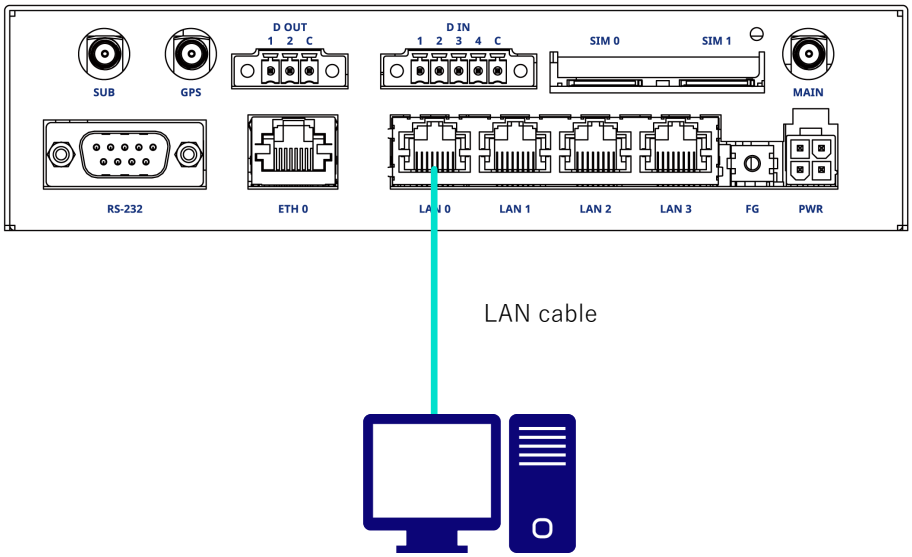
操作手順

1 Insert the SIM card to be used into the back of the Edge Gateway.

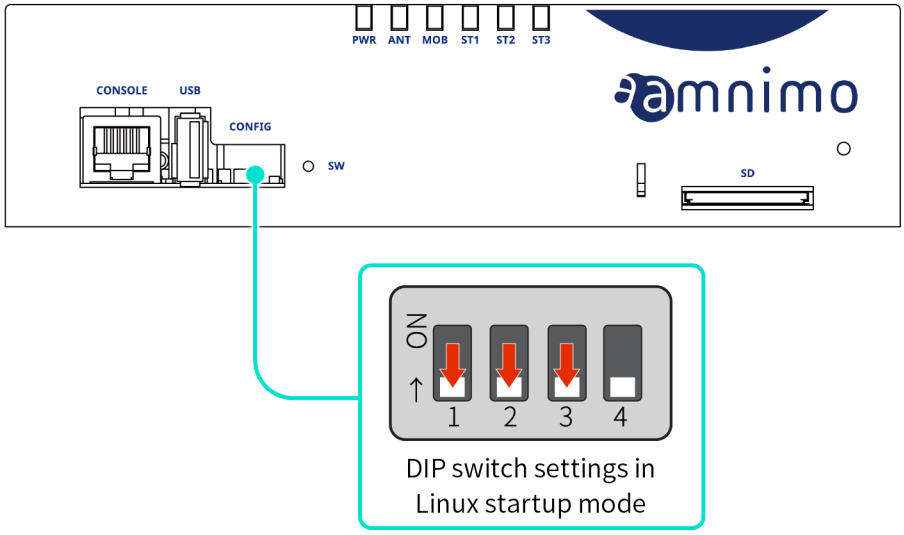
Insert the SIM card so that its contacts are on the far side.



2 Connect the LAN0 port of the Edge Gateway to the PC using a LAN cable.



3 Set the configuration DIP switch on the front of the Edge Gateway to Linux boot mode.



Explanation of DIP switch icons

DIP switch	Description.
	ON state
	OFF state

The No. 4 DIP switch can be ON or OFF. It is not referenced by the boot loader (used only on the application side).

4 Connect the AC adapter to the Edge Gateway.

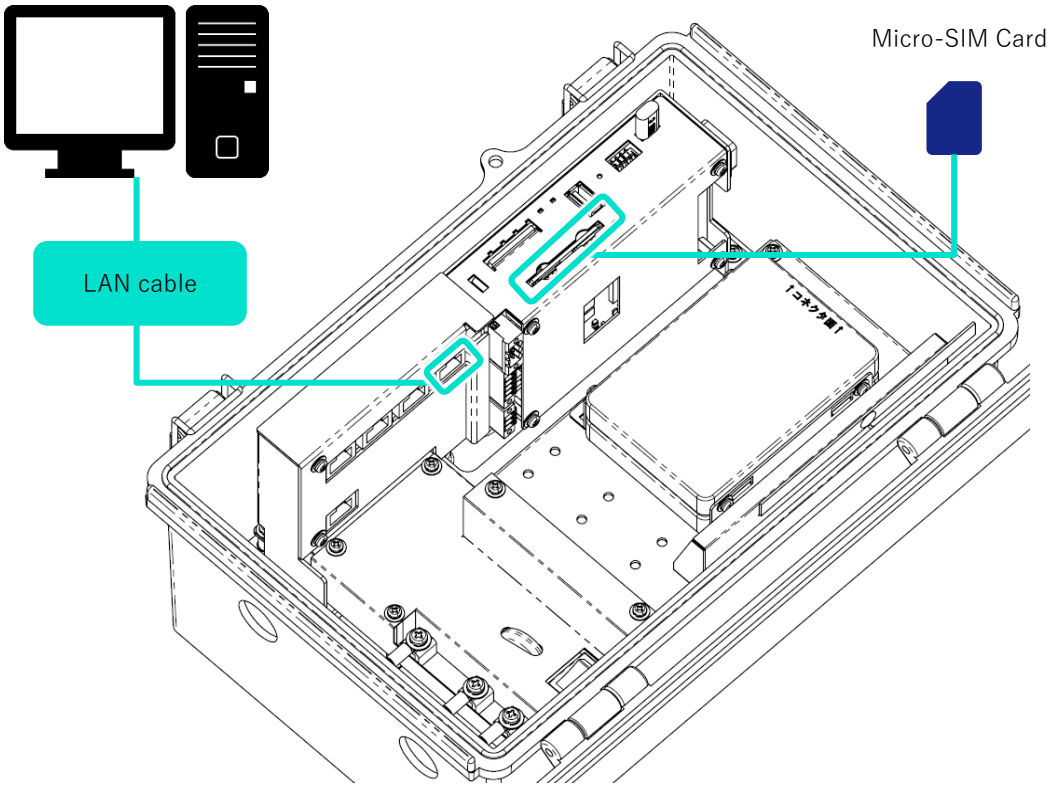
Power is automatically turned on and the Edge Gateway is activated.

For Outdoor Type Edge Gateway

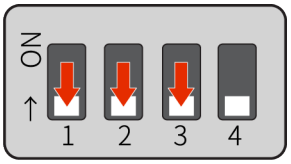
操作手順

1 Insert the SIM card to be used in the Edge Gateway and connect the PC to the LAN0 port of the Edge Gateway with a LAN cable as shown in the figure below.

Insert the SIM card so that its contacts are on the far side.



2 Set the configuration DIP switch on the top of the Edge Gateway to Linux boot mode.



DIP switch settings in Linux startup mode

Explanation of DIP switch icons

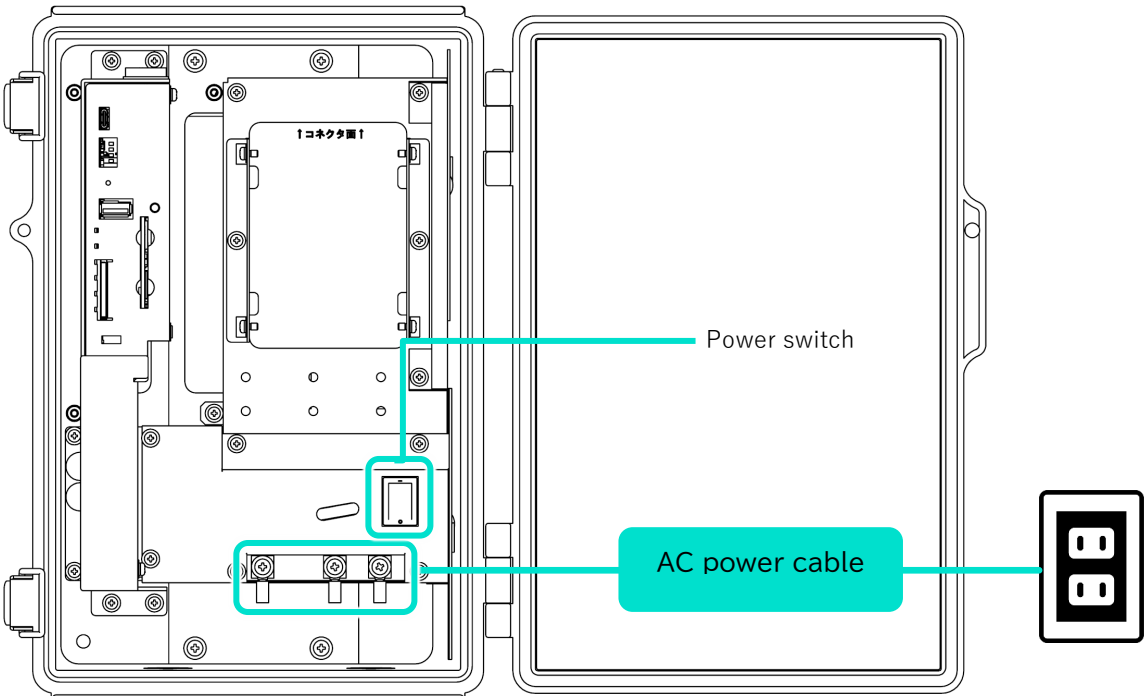
DIP switch	Description.
	ON state
	OFF state

The No. 4 DIP switch can be ON or OFF. It is not referenced by the boot loader (used only on the application side).

3 Connect the AC power cable to the Edge Gateway.

Turn on the power switch to activate the Edge Gateway.

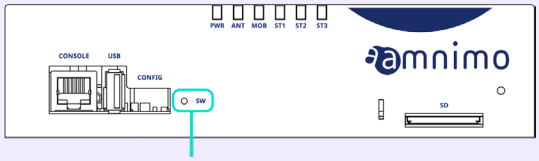
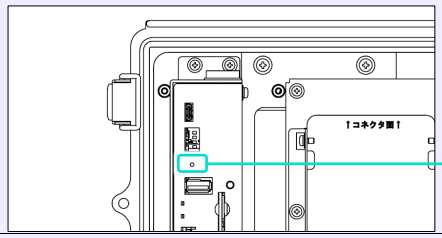
➔ For details, please refer to the "Outdoor Type Installation Guide (Edge Gateway/IoT Router Outdoor Type)" included with the product.



Tips To shut down the Edge Gateway

Shutdown can be accomplished in one of the following ways During shutdown, the LED PWR will flash; when the LED PWR turns red, the shutdown is complete.

- Turn off the power by pressing down the PUSH switch on the main unit with a thin, pointed tip for at least 3 seconds during startup.

Indoor Type Edge Gateway	Indoor Type Edge Gateway
	

- Shut down with the following command

➔ Refer to the Edge Gateway Series CLI User's Manual for command usage.

```
admin@amnimo:~$ sudo systemctl poweroff ↵
sudo password for admin:                ← Enter root password and press Enter
          Stopping Docomo of user admin.
          Stopping Unpack initramfs on shutdown...
(Omitted.)
          Starting Power-Off
NOTICE: You can turn off the power.
```

LED indication during shutdown process

Items	PWR	ANT	MOB	ST1	ST2	ST3	remarks
Shutdown process in progress							500ms interval
Power disconnected							

Notes on the automatic startup function

- **Since the Edge Gateway is intended to operate 24 hours a day, it has the ability to automatically recover in the event of a shutdown, such as in the event of a failure.**
- **Therefore, if the Edge Gateway is shut down in the manner described in this section, but power is still supplied by the power connector, it will restart.**
- **If you wish to put the Edge Gateway in a power-off state, shut it down and wait until the LEDs are in a power-off ready state (power LED lit red) before pulling the power plug.**

Step 2 Sign in to the Edge Gateway

This step describes the procedure for signing in to the Edge Gateway.

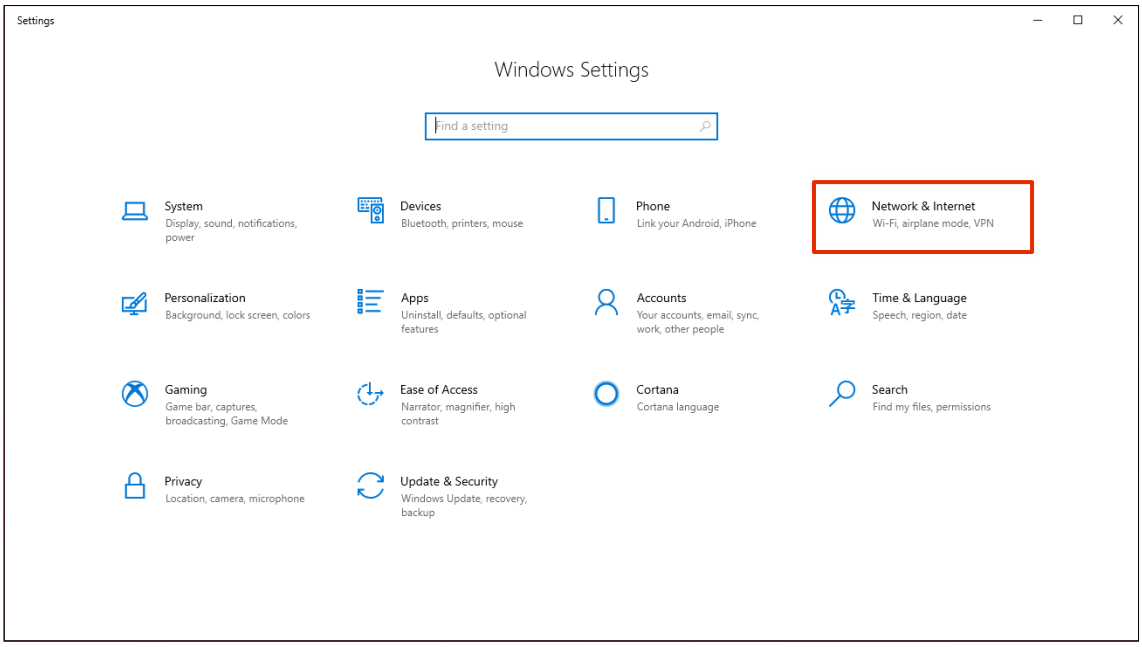
Change the IP address of the PC

To sign in to the GUI configuration screen, the Edge Gateway and PC must belong to the same network. Change the IP address of your PC to match the IP address of the Edge Gateway "192.168.0.254".

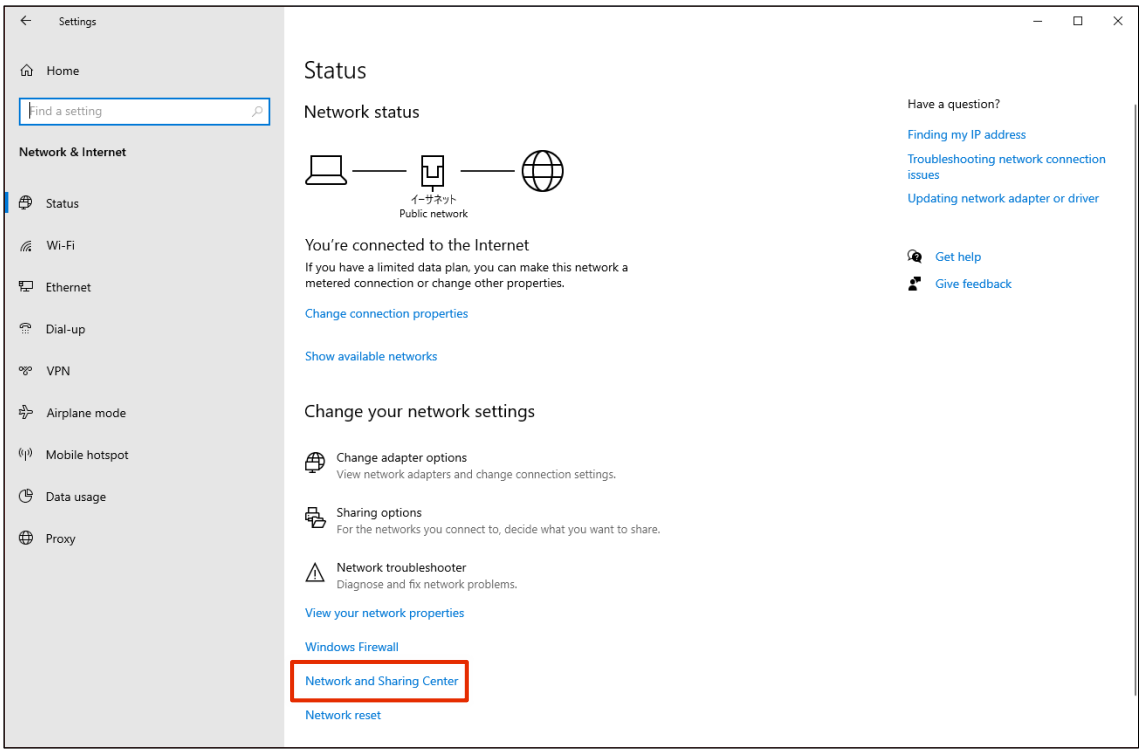
- This manual is explained using Windows 10.
- In this document, the IP address of your PC is changed to "192.168.0.10" to match the IP address of the Edge Gateway "192.168.0.254".

操作手順

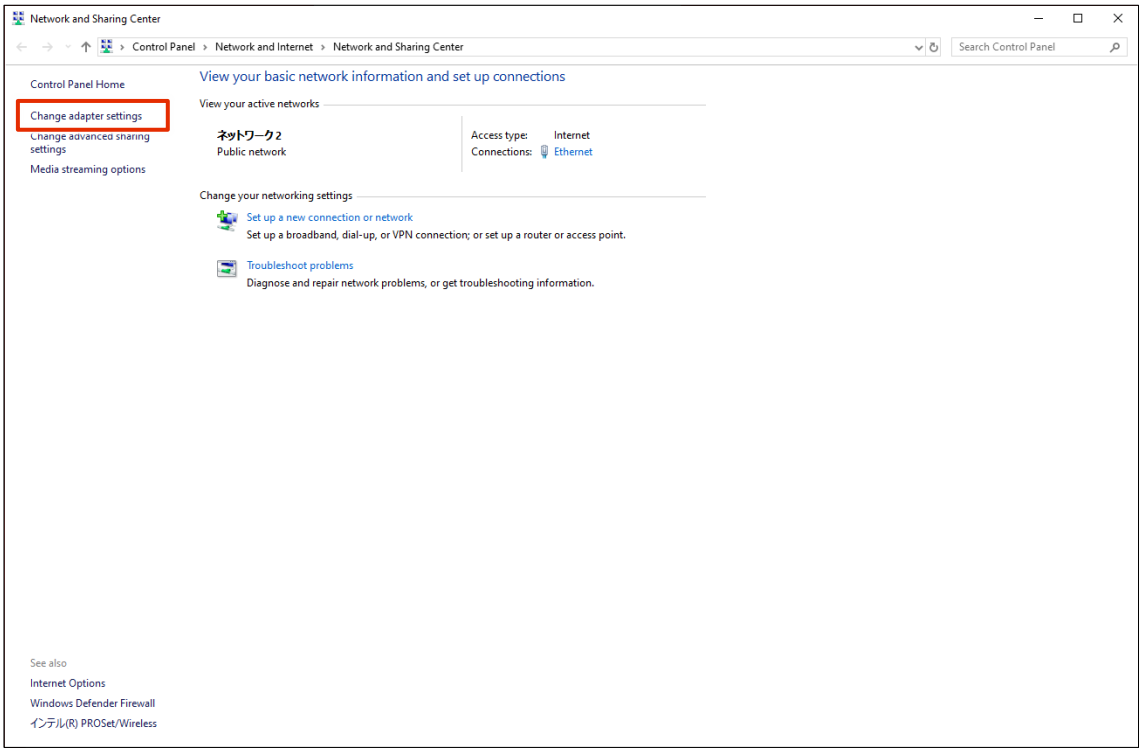
1 Under Windows Settings, click **Network & Internet**.



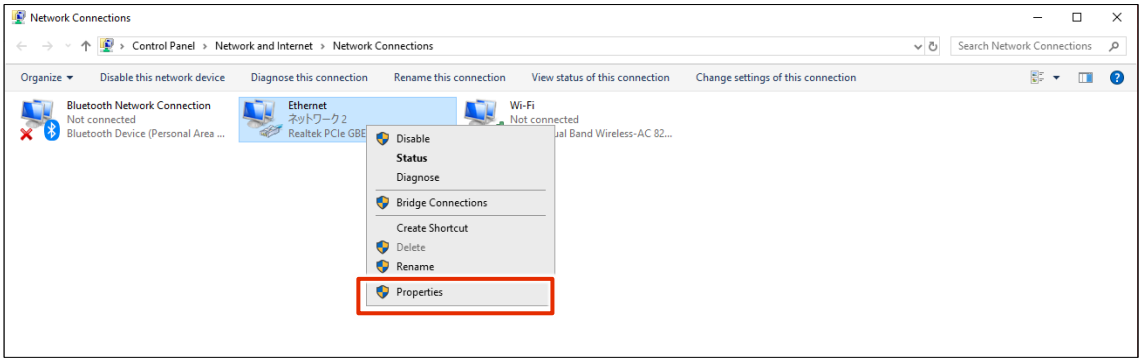
2 Click **Network and Sharing Center**.



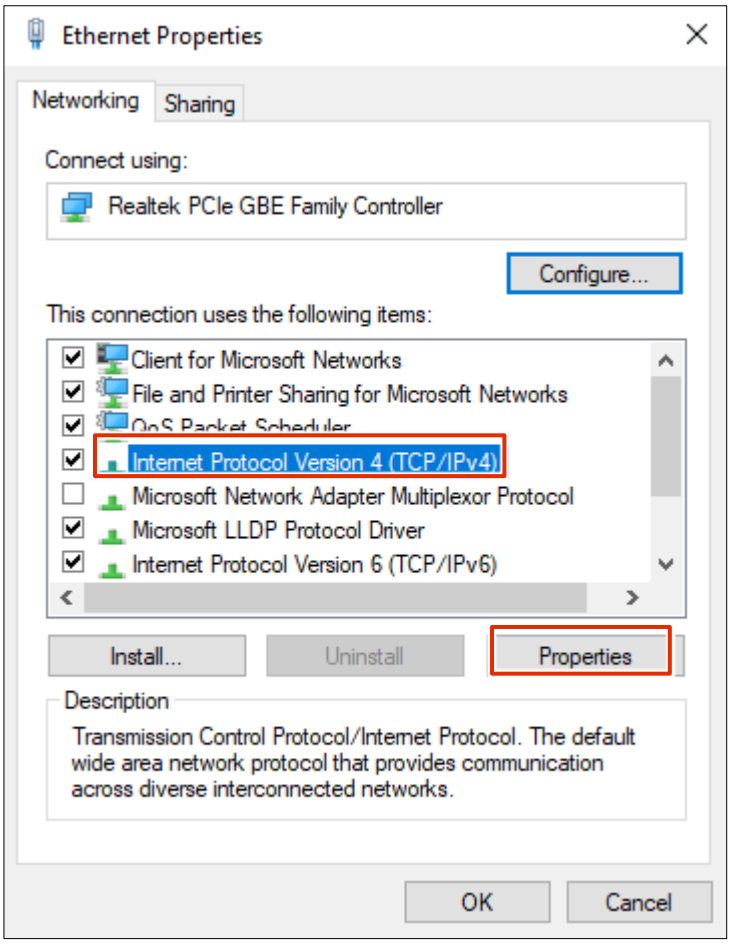
3 Click **Change adapter settings**.



4 Right-click on "Ethernet" and select **Properties** from the menu that appears.

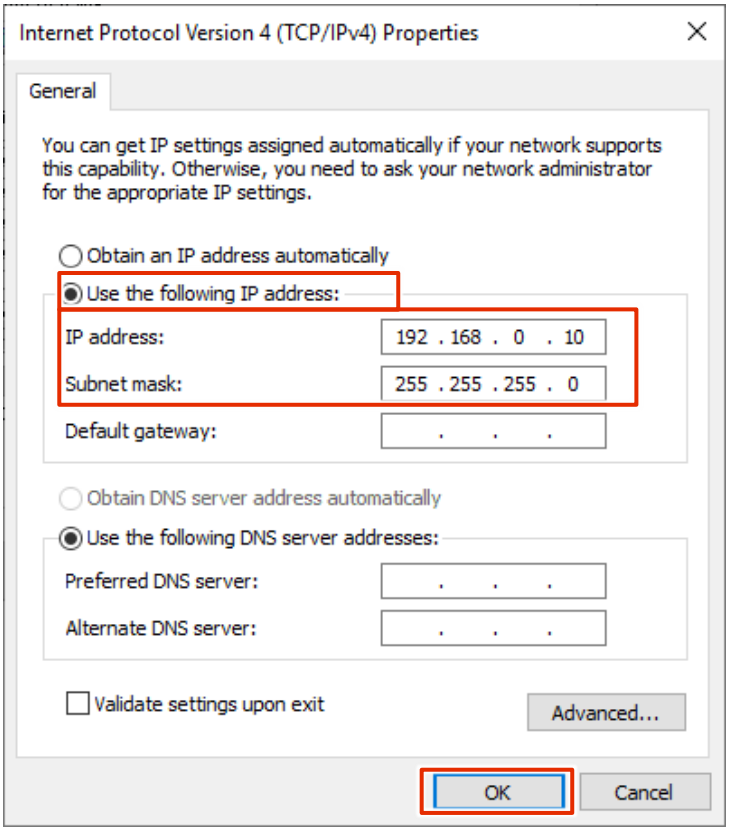


5 Select "Internet Protocol Version 4 (TCP/IPv4)" and click **Properties**.

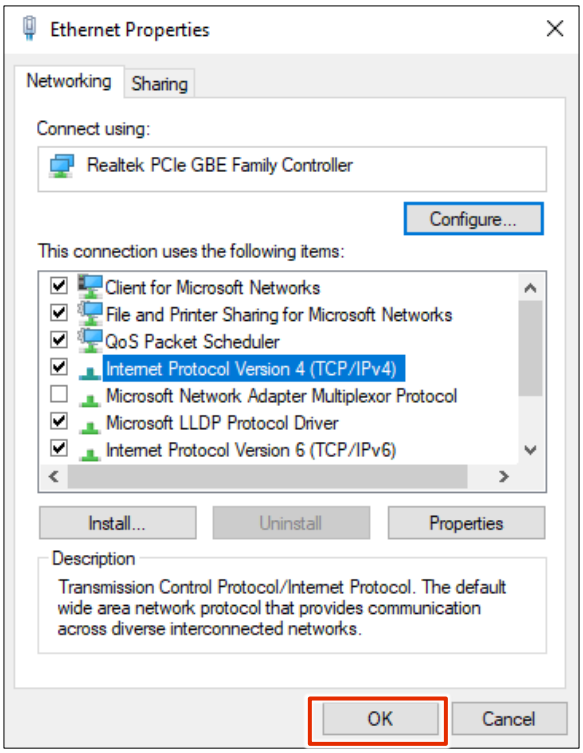


6 Set the IP address.

1. Select Use the following IP address.
2. Enter "192.168.0.10" for "IP Address" and "255.255.255.0" for "Subnet Mask".
3. Click **OK**.


Internet Protocol Version 4 (TCP/IPv4) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 0 . 10
Subnet mask: 255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Validate settings upon exit
Advanced...
OK
Cancel

7 Click **OK**.



An IP address will be set.

First sign in

This section describes the sign-in procedure via the Graphic User Interface (GUI).

GUI allows easy configuration of the Edge Gateway from a browser.

Sign in

If this is the first time signing in with the GUI, sign in after setting the password for the administrator account (admin).

The following environments have been tested for GUI functionality.

OS	Browser	Verified Version
Windows 10 Pro2004（64bit)	Google Chrome	92.0.4515.131 (64bit)
	Microsoft Edge	-*
	Firefox	-*
mac OS big Sur 11.2.3	Safari	14.0.3 (16610.4.3.1.7)
	Google Chrome	-*
	Firefox	-*

*To be supported in future releases.

操作手順

1 Start a browser and access the URL of the GUI configuration screen of this product.

http://192.168.0.254

The "Password Registration" screen appears.

2 Enter the password you wish to set for admin in the "Password" and "Password (Confirm)" fields and click "**Register**".

The password must be a string that meets the following conditions. The string can be "password" as defined in RFC1738.

- **8 characters or more**
- **Includes at least two types of uppercase and lowercase letters, numbers, and symbols**
- **Even if a password satisfies the above conditions, it cannot be set if any of the following conditions apply**
  - Words in the dictionary (e.g., test)
  - Words with regularity, such as number or alphabet keyboard sequences (e.g., 1234, abcde, qwert)
  - Combination of the above (e.g., test1234)

The admin password will be set, and the "Sign In" screen will appear.

3 Enter "admin" in "User Name" and the password set in step 2 in "Password", and click "**Sign In**".

After signing in to the product, the "Device Information" screen will appear.

Step 3 Configure the Edge Gateway settings

The configuration of the Edge Gateway can be operated using the Graphical User Interface (GUI). This step describes a simple configuration using the GUI.

Configure simple settings

The following settings can be made on the "Simple Settings" screen.

- Mobile Communication Settings
- Interface Settings
- Package Repository Credentials
- Enable/Disable DNS
- Filter
- Enable/Disable DMS (Device Management System)
- Enable/Disable Nx Witness

Note that the DNS and filtering settings are automatically applied when the simple settings are made. The DNS and filtering settings that are automatically applied are as follows

For detailed settings, please refer to the following manuals.

➔ "2.9 Configuring Filter Settings" and "2.11 Configuring DNS Settings" in the Edge Gateway Series GUI User's Manual.

- DNS
  Enable/Disable setting: Enabled
- filtering
  - Input Settings
    Input default policy: Drop
    related: Allow
    established: Allow
    invalid: Drop
    Input interface: Allow
  - Forwarding Settings
    Forwarding default policy: Allow
  - Output Settings
    Output default policy: Allow

If your Edge Gateway version is V1.1.2 or earlier, the default DNS server settings are invalid. Also, there is no GUI function.

If you update from V1.1.2 to V1.2.1 or later, DNS will be disabled if it has not been configured. Also, GUI will be disabled.

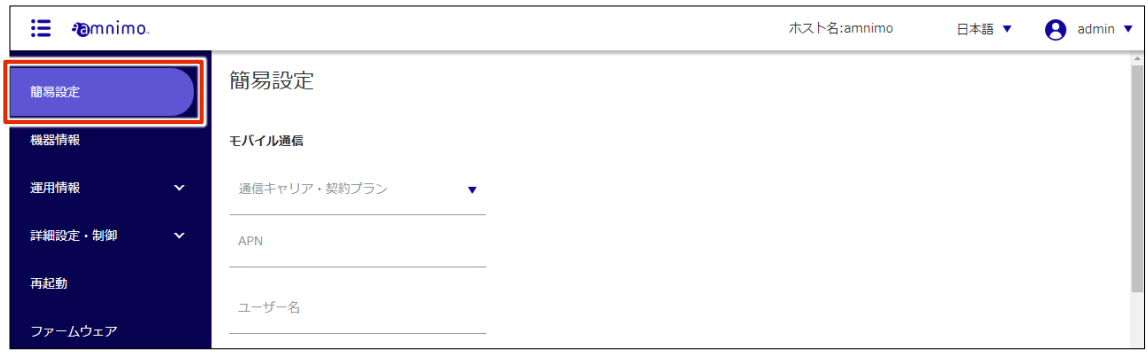
For information on how to check the version, please refer to the following manual

➔ "1.5 Checking Device Information" in the Edge Gateway Series GUI User's Manual.

操作手順

1 Click on "**Simple Settings**" on the side menu.

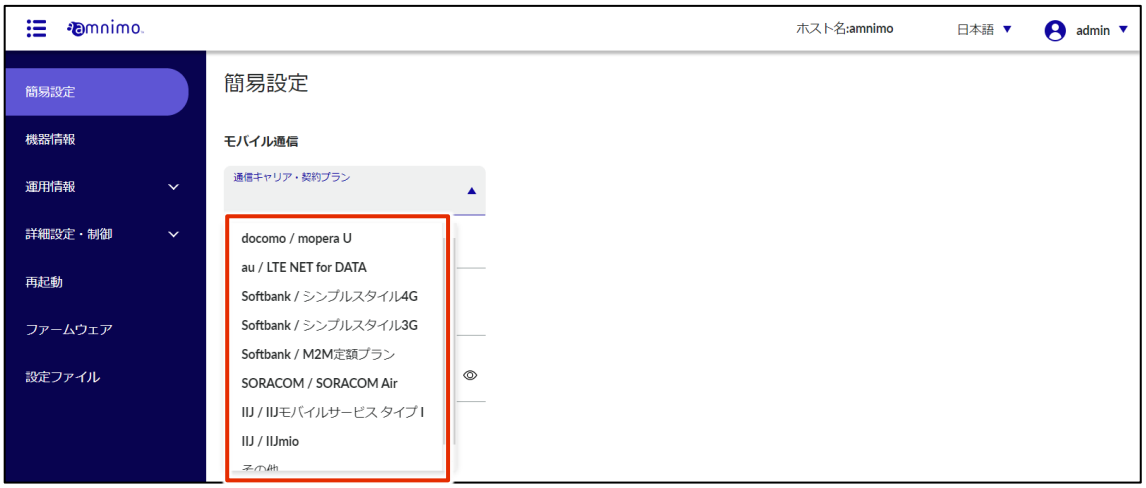
The "Simple Settings" screen appears.



2 If you are using a mobile connection, select a registered carrier or subscription plan from "Carrier / Subscription Plan" in the Mobile Communications Settings.

The "APN Name", "Account", "Password", and "Authentication Method" will be automatically set according to the selected carrier or subscription plan.

- If the carrier/contract plan to be used is not registered in "Carrier/Contract Plan", select "Other".
- When using a SIM that does not require authentication, uncheck both "PAP" and "CHAP" in "Authentication Method".



Incorrectly configured mobile settings may cause the compact router to reboot due to the failsafe feature.

- **When setting up, be sure to set the correct user name and password.**
- **If the compact router repeatedly reboots, see the following page.**

→ The "What is the Frequently Asked Questions FAQs"

Mobile connection settings are also explained in a video on the following page.

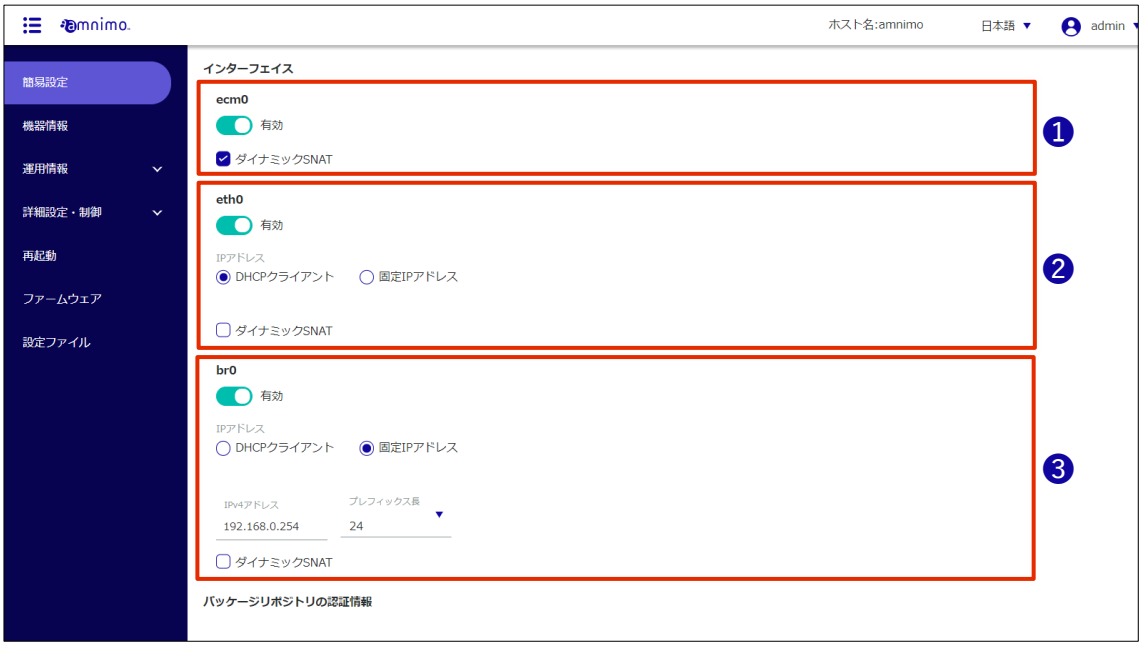
→ Connecting Amnemo devices to the Internet."

3 Configure the interface settings according to the environment.

1 Set the "ecm0" setting required for mobile communication.
Click the toggle to enable or disable.
Also check "dynamic SNAT" if necessary.

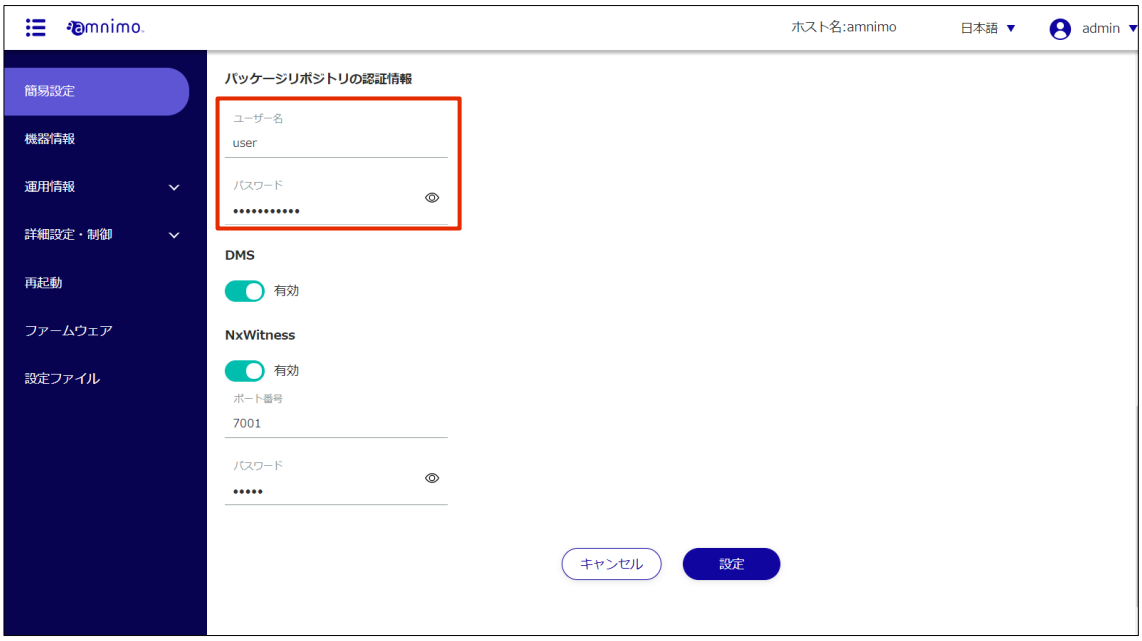
2 Configure the "eth0" settings required for WAN connection.
Click the toggle to enable or disable.
Select "DHCP Client" or "Fixed IP Address" as the method for assigning "IP Address". If you choose "Fixed IP Address," you will need to enter the "IP Address" and "Netmask".
Also, check "Dynamic SNAT" if necessary.

3 Set the "br0" setting required for LAN connection.
Click the toggle to enable or disable.
Select "DHCP Client" or "Fixed IP Address" as the method for assigning the "IP Address". If you select "Fixed IP Address", you will need to enter the "IP Address" and "Netmask".
Also, check "Dynamic SNAT" if necessary.

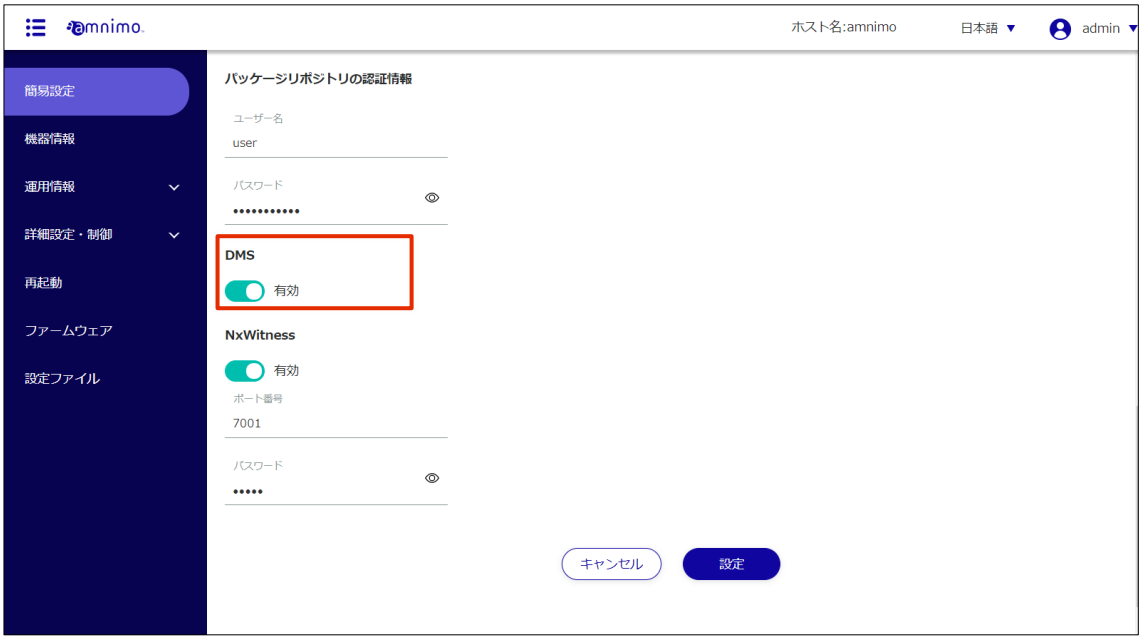


4 Enter "User Name" and "Password" as credentials for the package repository.

Package repository credentials should only be set if a firmware update is required.
Please contact our support for authentication information (user name and password).

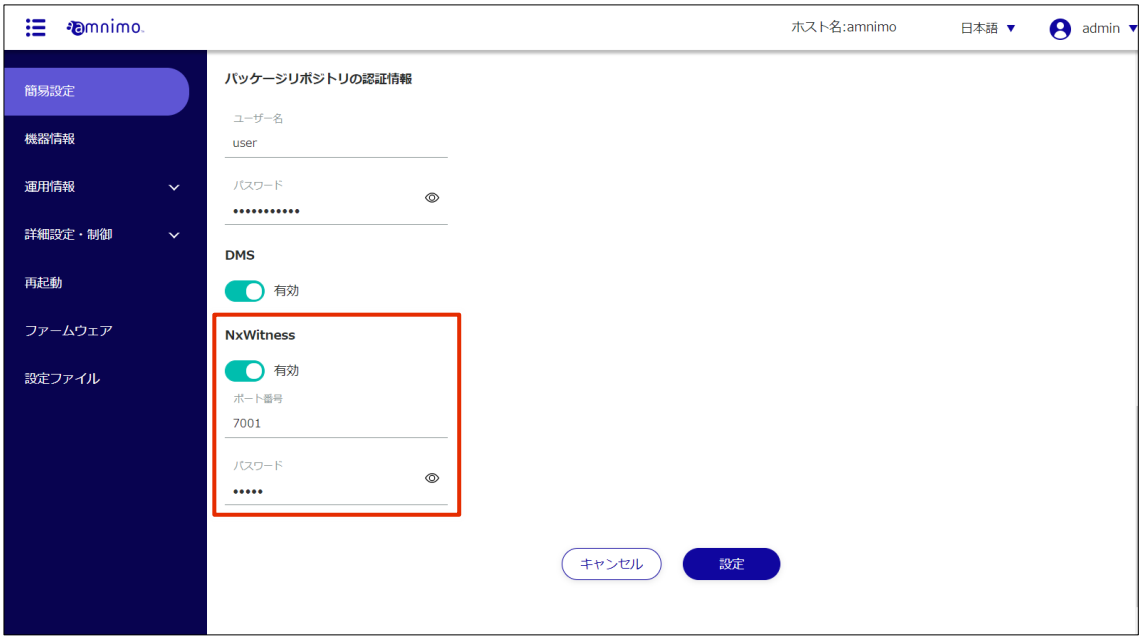


5 DMS Settings. Slide the toggle to enable or disable DMS.

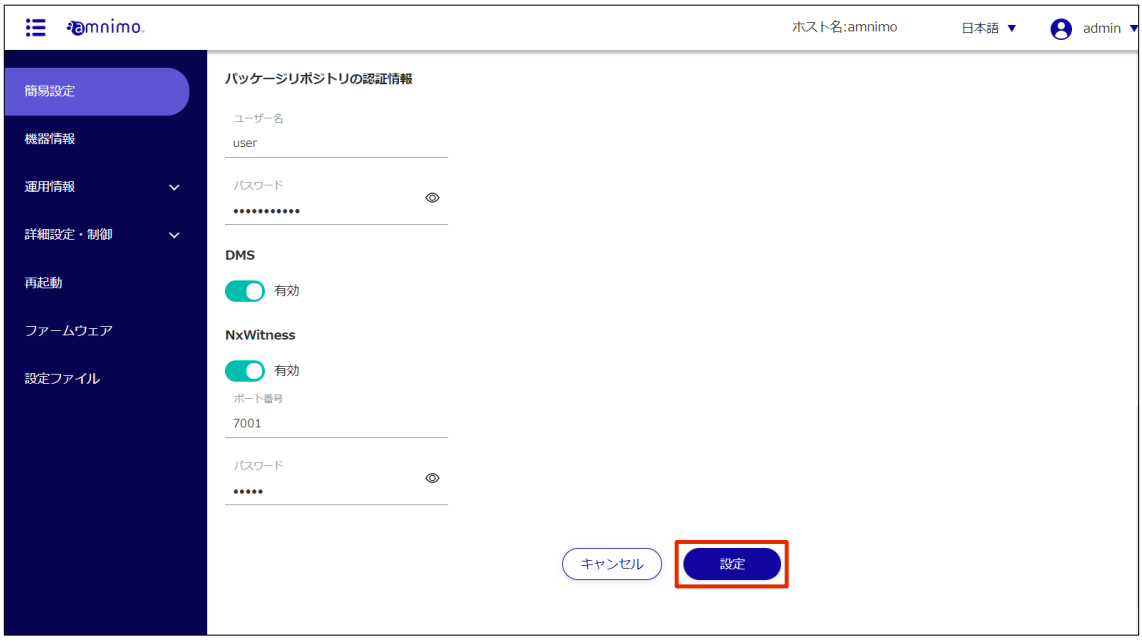


6 Nx Witness Settings. Slide the toggle to enable or disable Nx Witness.

If Nx Witness is set to enabled, set the "port number" and "password" as needed.



7 Scroll to the bottom of the screen and click **Set**.



A confirmation screen for the settings will appear.

8 Click **Set**.

Settings are saved.

9 Click **Operational Information** > **Mobile Communications** on the side menu to check the status of mobile communications.

Communication module status	Meaning
dialing	during the connection process
connected	state of connectivity
disconnected	disconnected state

If the connection is not correct, such as if there is an error in the mobile settings, the device may automatically reboot due to the fail-safe feature. Please be aware of this.

Tips To change the protocol and port number of the GUI

Select **Advanced/Control > GUI Settings** from the GUI side menu to change the protocol and port number used in the GUI settings.

➔ Refer to the Edge Gateway Series GUI User's Manual for details.

Set the time

Set the time zone and time of day for the Edge Gateway.

This document describes an example of synchronizing the time with a PC.
For time settings, we recommend using NTP settings to synchronize the time, but manual entry is also possible.

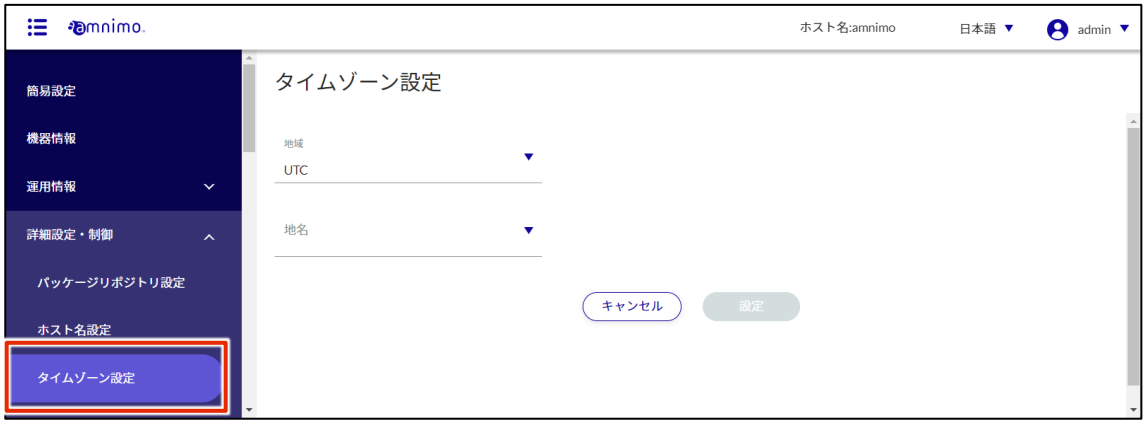
For more information, see the Edge Gateway Series GUI User's Manual.

Set the time zone

操作手順

1 Click **Advanced Settings/Controls** > **Time Zone Settings** on the side menu.

The "Time Zone Settings" screen will appear.



2 Set the time zone.

1. Select "Region."
2. Select "Place Name."
3. Click **Set**.

The time zone is set.

Set the time

操作手順

1 Click **Advanced Settings/Controls** > **Time Settings** on the side menu.

The "Time Setting" screen appears.

2 On the "Time Settings" screen, click "**NTP Settings**.

3 Slide the toggle to enable.

4 Change the settings.

Regarding NTP servers, amnimo recommends Google Public NTP (time.google.com) and NICT public NTP service (ntp.nict.jp).

Please see below for terms of use and precautions for each service.

- Google Public NTP: https://developers.google.com/terms/)
- NICT public NTP service: https://jjy.nict.go.jp/tsp/PubNtp/qa.html)

If this procedure is used, NTP time synchronization will be performed at the following intervals (these values can be changed from the CLI).

- Immediately after network connection starts: 64s interval
- After that, time synchronization is continuously performed with gradually increasing intervals
- Final, periodic synchronization interval: 1024s

1. Select the interface on which Internet communication is performed for NTP synchronization. For mobile communication, select "ecm0".
2. URL of the server to be synchronized.
3. Specifies the port number. If there are no problems with the default value, there is no need to change it.

amnimo
ホスト名:amnimo
日本語
admin
NAT設定
DNS設定
DHCPサーバー設定
時刻設定
SSH設定
ストレージ設定
スケジュール設定
PoE設定
SYSLOG設定
時刻設定
手動設定
NTP設定
有効
同期
ecm0
1
サーバー
time.google.com
2
ポート番号
123
3
キャンセル
設定

5 Click **Set**.

The time setting is saved.

Configure SSH settings

Configure SSH to log in to the Edge Gateway using SSH.

操作手順

1 Click **Advanced Settings/Controls > SSH Settings** on the side menu.

The "SSH Settings" screen appears.

2 Slide the toggle to set SSH as enabled.

3 Configure the port settings.

1. Change the port number, if necessary.

- The port number can be set in the range of 1 to 65535.
- SSH uses port 22 as standard.
  Note that if the port number is changed, the client must specify that port number to connect.

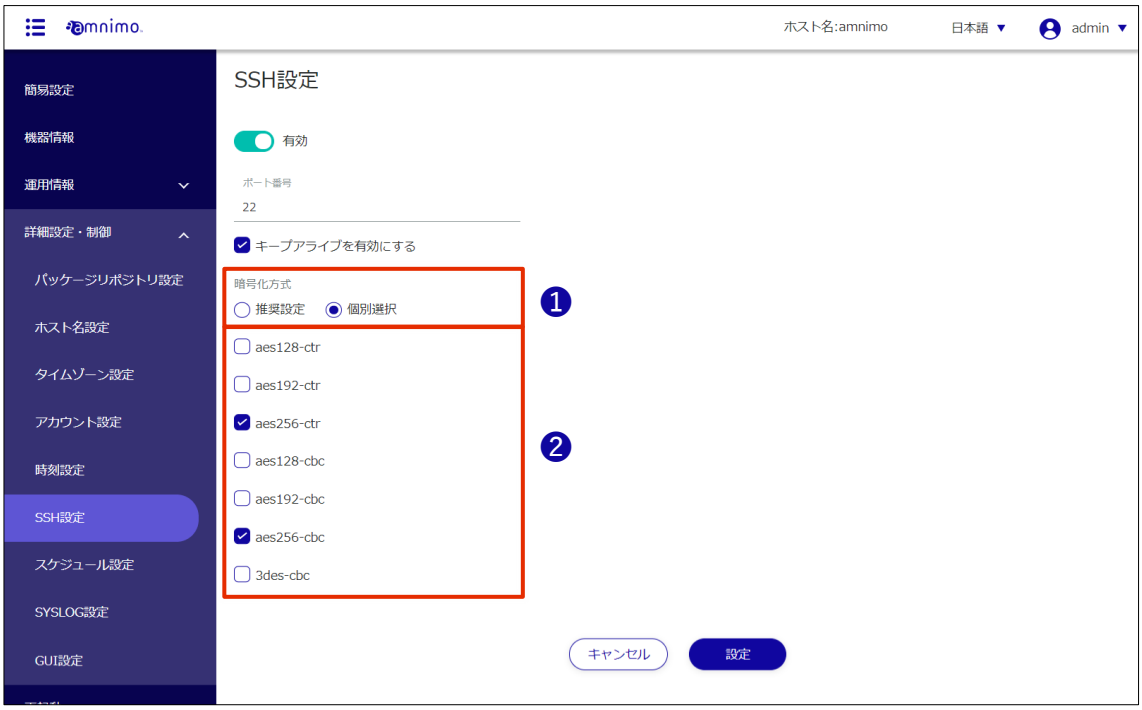
2. Check the "Enable keep-alive" checkbox to send keepalive packets periodically to prevent SSH connection timeouts.

4 Set the encryption method.

1. Select "Recommended setting" or "Individual selection" as the encryption method to be used.

➔ If you selected "Recommended Settings," go to Step 5.

2. If "Individual Selection" is selected, check the checkbox for the encryption method to be used.



5 Click **Set**.

SSH settings are saved.

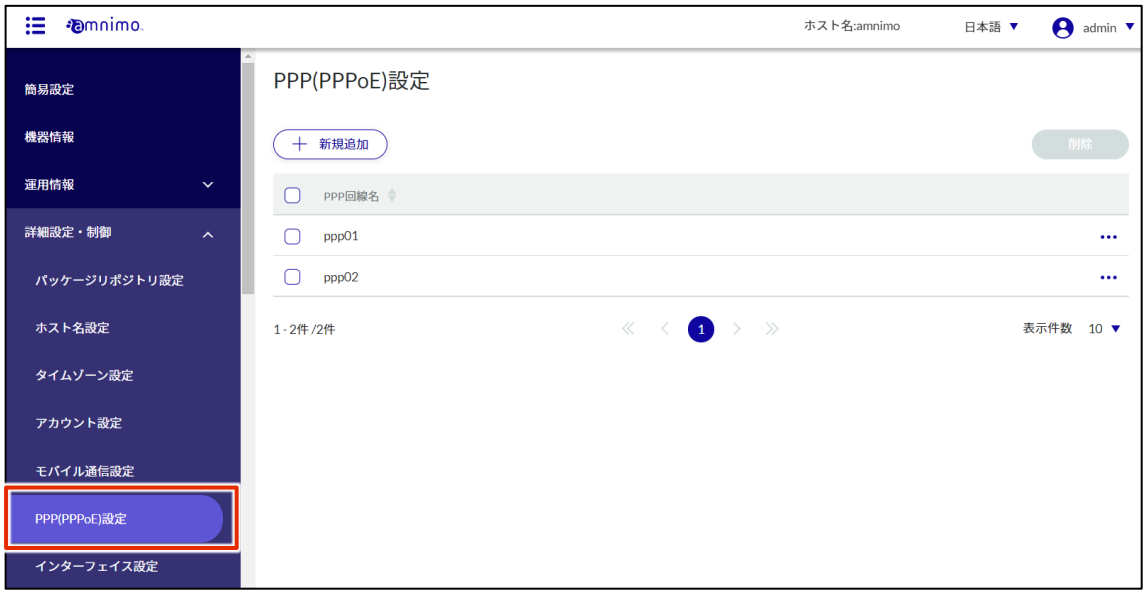
Configure PPP settings.

To connect to the Internet using PPP, configure the PPP connection settings. Please configure as necessary according to your environment.

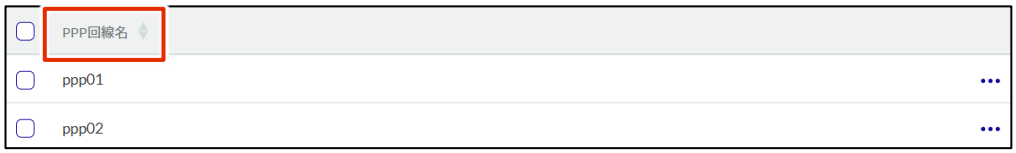
操作手順

1 Click **Advanced Settings/Controls > PPP (PPPoE) Settings** in the side menu.

The registered PPP (PPPoE) settings are listed on the "PPP (PPPoE) Settings" screen.



You can sort the registered PPP (PPPoE) in descending/ascending order of PPP line name by clicking the tab "PPP line name" in the PPP (PPPoE) list.



2 On the "PPP (PPPoE) Settings" screen, click "**Add New**".

The "Add PPP (PPPoE) Settings" window will appear.

3 Configure PPP (PPPoE) settings.

1 Enter the PPP line name.

2 Select the message output level.

3 Select the authentication method.

4 Enter the user name and password.

4 Click **Settings**.

PPP (PPPoE) settings are added.

Configure storage settings

If you are using an Edge Gateway with SSD storage, you will need to configure the storage. This step describes the procedure to mount and make the storage available.

You must be signed in as an administrator to use this feature.

操作手順

1 Click **Advanced Settings/Controls** > **Storage Settings** on the side menu.

The "Storage Settings" screen displays a list of storage settings registered with the product.

By clicking on tabs such as "Partition" or "File System" in the storage settings list, you can sort the storage settings list in descending/ascending order for each item.

2 Click **Add New.**

The "Add Storage Configuration" screen will appear.

3 Storage Settings.

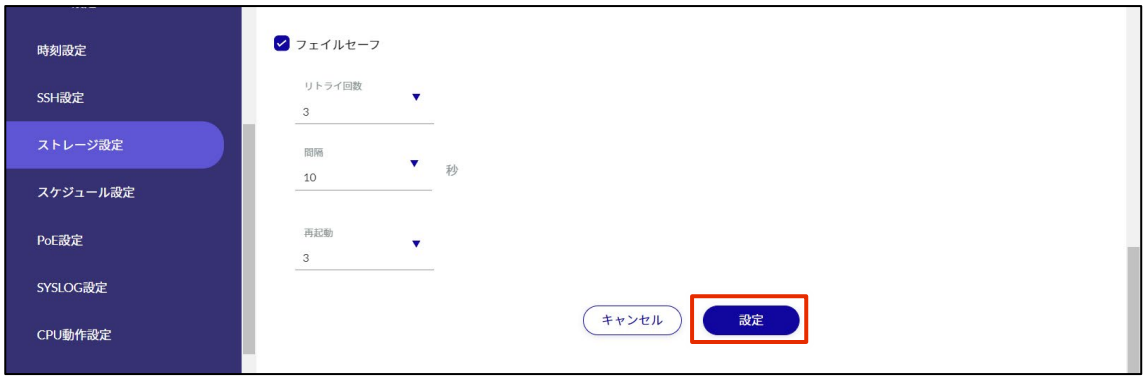
In this document, the settings are as follows

- Partition "sda1
- Mount point "/media/ssd
- File system "ext4

➔ For detailed settings, see "2.15 Configuring Storage Settings" in the Edge Gateway Series GUI User's Manual.

1. Select the partition "sda1".
2. Specify "/media/ssd" as the mount point name.
3. Select "ext4" in File System.
4. Select the mount option.

4 Click **Settings**.



Storage settings will be added.

Save settings in the gateway

To save the settings configured in the GUI, write the settings in the gateway's configuration file.

When the Edge Gateway is restarted, the configuration file is read and the settings are reflected.

操作手順

1 Click on "**Configuration File**" on the side menu.

The "Configuration File" screen appears.

2 Click **Save Current Settings to Device**.

The "Confirmation" screen appears.

3 Click **Save**.

The settings are saved in the gateway.

This step completes the basic configuration of the Edge Gateway.

The Options Setup Guide on the next page continues with the following

Please refer to the following table and proceed with the settings according to your usage situation.

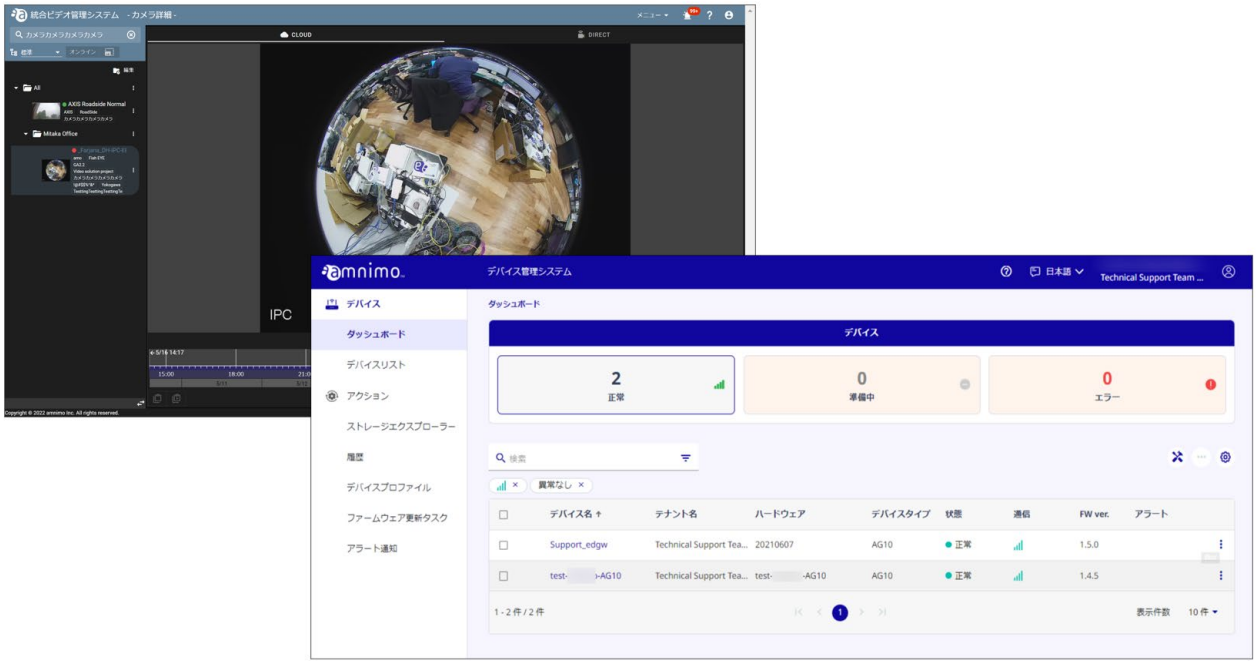
- **Connecting to a network camera**
- **Configure VMS settings**
- **Configure the device management system**
- **Configure the integrated video management system**
- **Configure remote.it settings**

Frequently Asked Questions

When is this the case?	Please check
Edge gateway repeatedly restarts	The fail-safe function may cause the Edge Gateway to repeatedly reboot if the mobile communication settings are not properly configured. Please check the following points **Disable fail-safe** Please check the following ❶-❺ in this order. ❶ Click **Advanced Settings/Controls > Mobile Communication Settings** in the side menu. ❷ Select the target mobile line name and click **... > Edit**. ❸ Uncheck Fail-safe and click **Settings**. ❹ Select the target session name in the **session list** on the same page and click **... > Edit**. ❺ Set the correct content and click "**Setting**". **Check the status of communication** Click on **Operational Information > Mobile Communications** in the side menu and verify that the "Mobile Module Status" is "connected". Click on the "Mobile Module Status" button. Once communication is confirmed, return the failsafe to active if necessary.

amnimo

Option Setting Guide

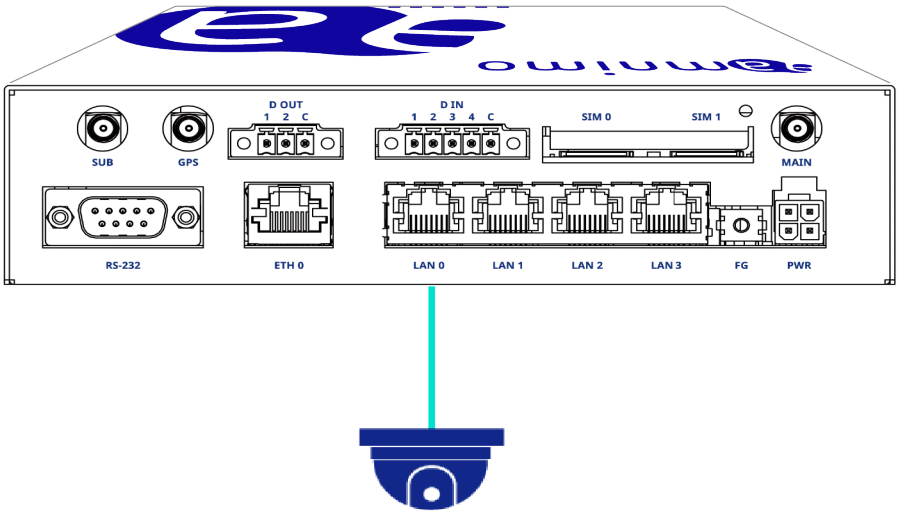


Connecting to a network camera

Connect the network camera to the Edge Gateway with a LAN cable and configure the camera settings.

Connect the network camera to the Edge Gateway with a LAN cable as shown in the figure below.

- Refer to your camera manual for information on configuring your network camera.
- Depending on your network environment and security settings, the camera may not be recognized. In this case, please check your VPN environment and PC security settings.



- If the camera supports PoE, it can be powered by the Power of Ethernet (PoE) function of the Edge Gateway.
- If PoE is used, the PoE specifications are as follows
  - Total power used by LAN 0-3 is limited to 40W
  - Maximum power used in one port is limited to 25W
- When using PoE, a LAN cable of CAT 5e (Category 5e) or higher is required.
- For information on PoE configuration, please refer to the following manuals
  - → GUI User's Manual

Configure VMS settings

This step describes the setup for using VMS, a management tool for network cameras.

amnimo as a management tool for network cameras, Network Optix, Inc. Nx Witness is a Video Management System (VMS) consisting of four main components

- Media Server
- Desktop client
- Mobile Clients
- Cloud

A media server is pre-installed in the Edge Gateway. The media server can retrieve video from cameras and configure cameras.

With a simple configuration, the media server can be accessed from a desktop client or other device to view camera images and video recordings. The client can also manage the server and cameras.

Please refer to the following manuals for detailed information on how to use and configure Nx Witness.
➔ Nx Witness VMS Guide.

Install the desktop client

This section describes how to install the Nx Witness desktop client on a Windows PC.

操作手順

1 Download the installation package for the Windows version of the Nx Witness desktop client.

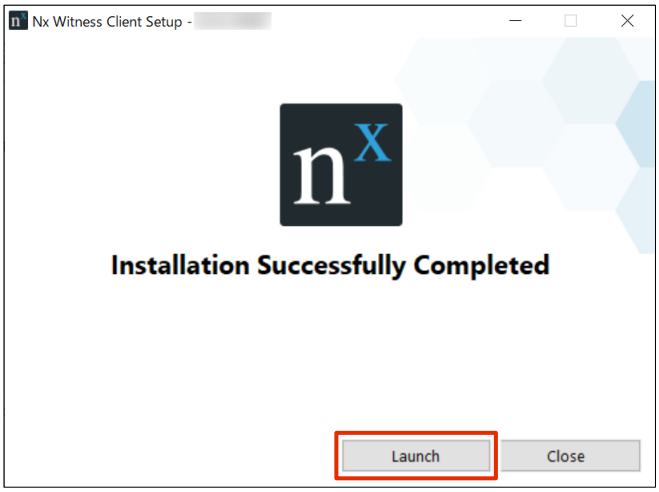
- The version of the client that is appropriate for your environment and where to download it can be found at the following page.
  https://support.amnimo.com/hc/ja/articles/360050747073
- When downloading, be sure to select Client Installer.
- The design of the installation screen may change due to manufacturer's reasons.

2 On a Windows PC, double-click the downloaded installation package (exe file).
The installer will start.

3 Agree to the license agreement and click **Install**.

Installation will begin.

4 After installation is complete, click **Launch**.



The Nx Witness desktop client starts up.

Connecting to a Media Server

Connect to the media server using a PC on the same network as the Edge Gateway.

If a connection is made from a PC on a different network than the Edge Gateway, the media server cannot be detected.

Configure initial system settings

Set the system name and administrator password.

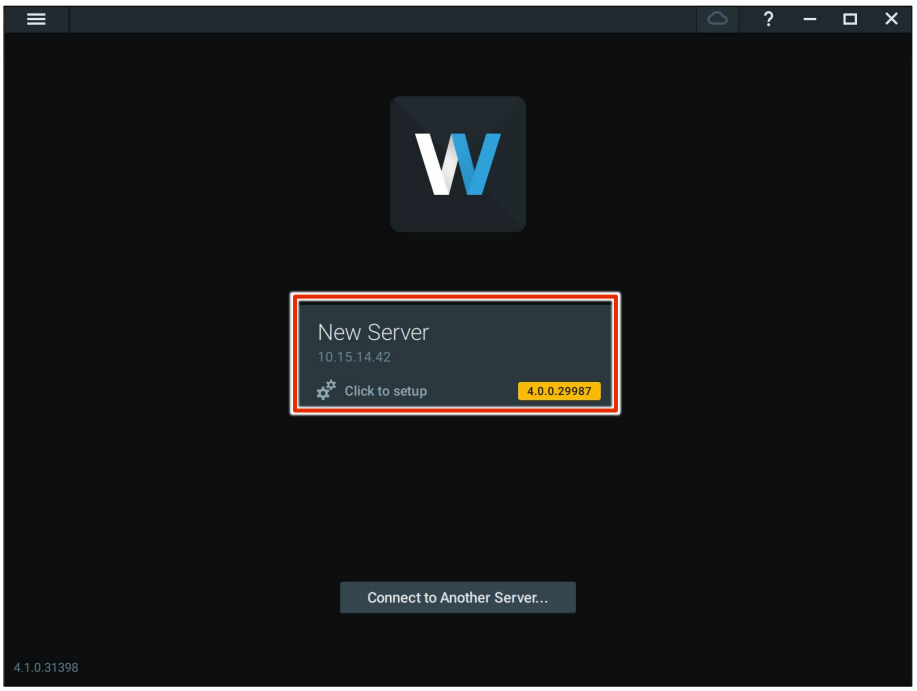
In VMS, the entire monitoring (surveillance) mechanism, including one or more cameras and servers, is called a "system".

操作手順

1 Start the Nx Witness desktop client.

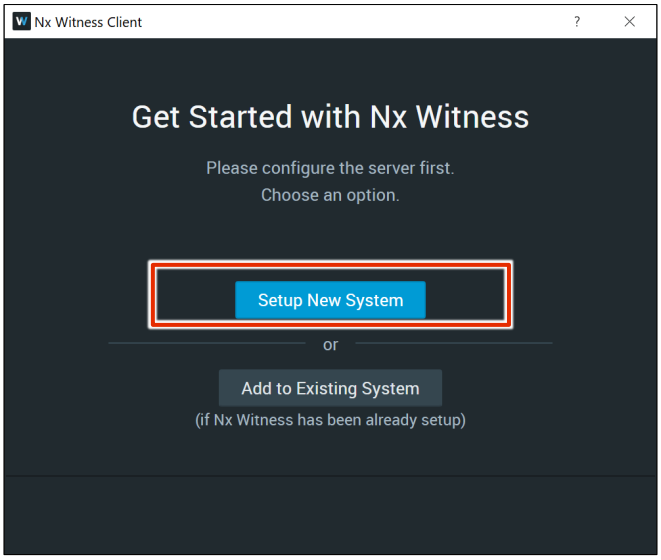
Media servers on the same network are searched and the media servers are displayed.

2 Click **New Server**.



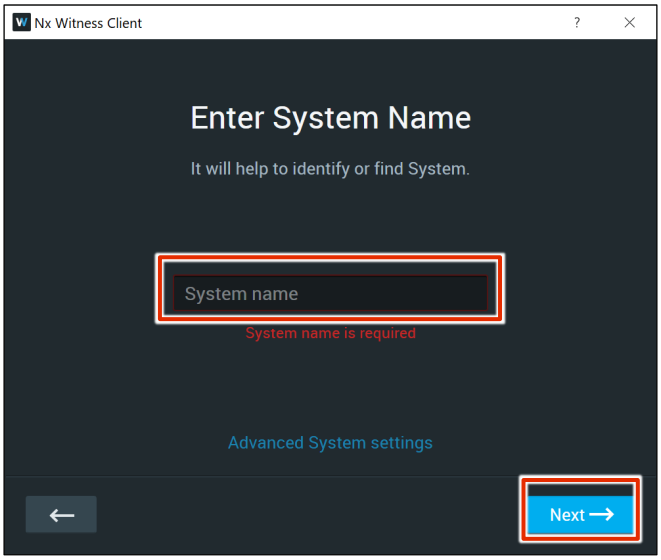
The "Start Nx Witness" screen appears.

3 Click **Setup New system**.



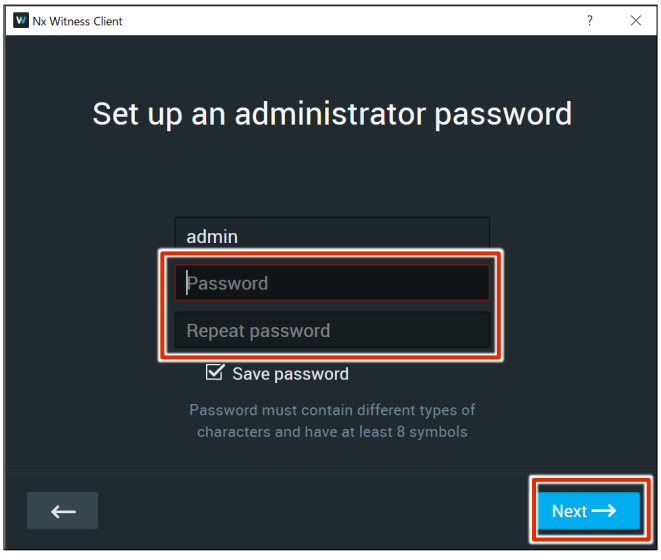
The system name setup screen appears.

4 Enter a system name in "System Name" and click **Next**→.



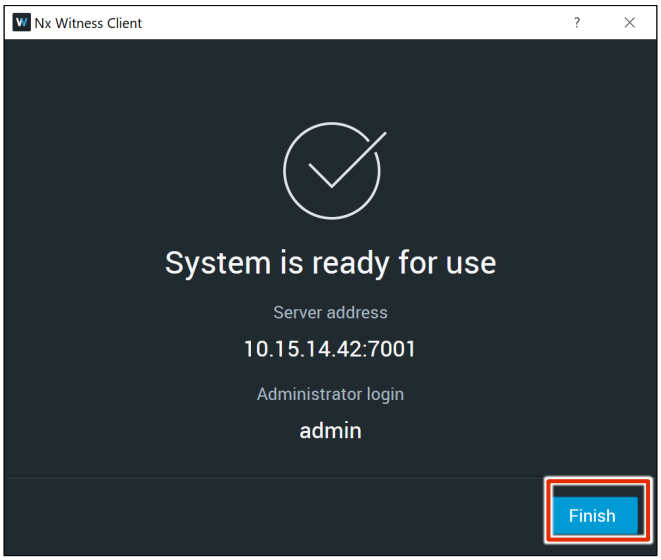
The administrator password setting screen appears.

5 Enter the administrator password in the "Password" and "Password (Confirm)" fields and click **Next**→.



system will be available.

6 Click **Finish.**



Initial system setup is completed.

Connect to the configured system

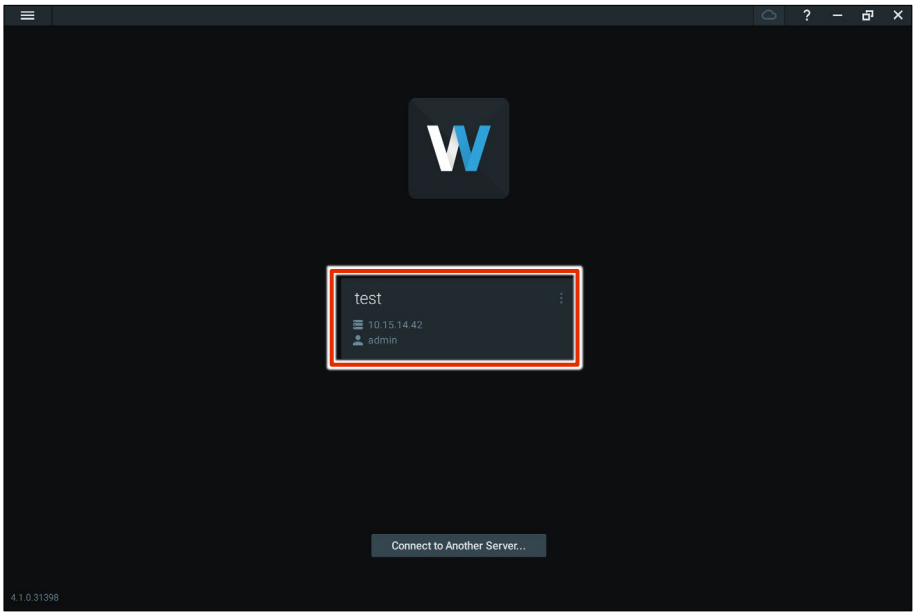
Connects to the system with the information set in the initial system setup.

操作手順

1 Start the Nx Witness desktop client.

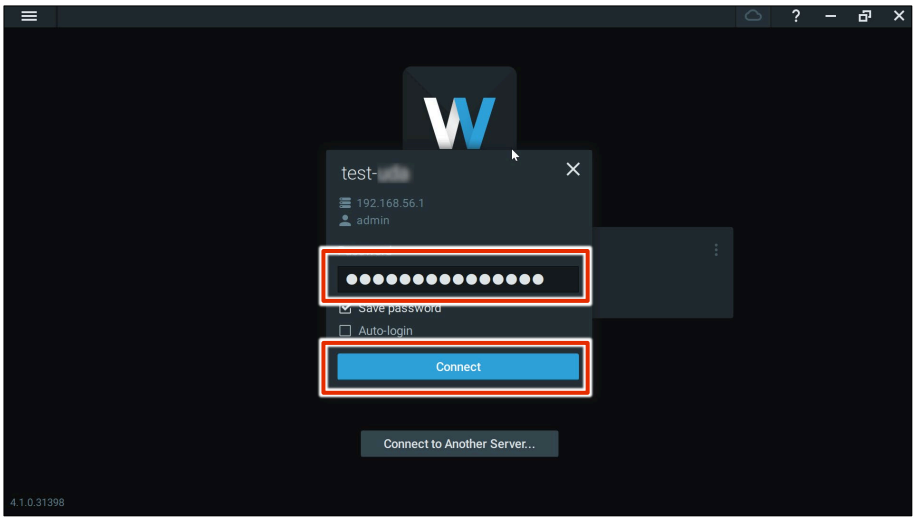
Media servers on the same network are searched and displayed.

2 Click **System**.

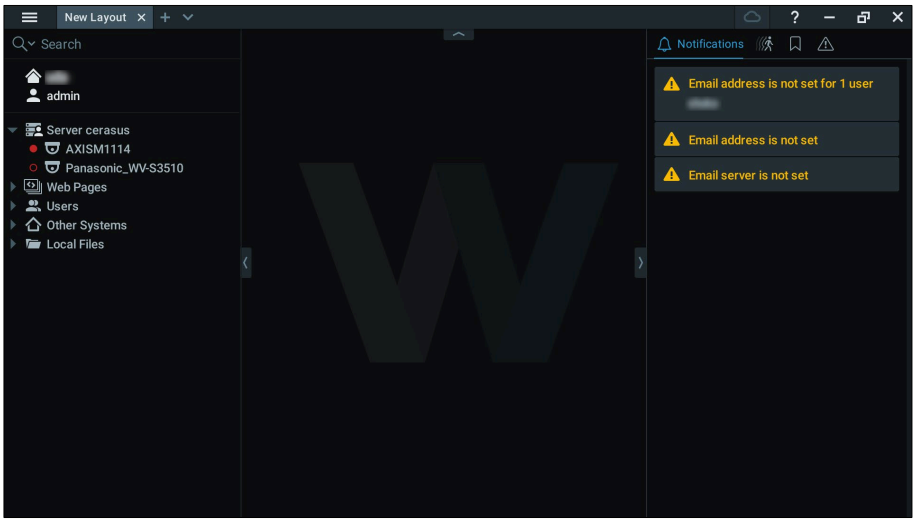


The authentication information entry screen will appear.

3 Enter the administrator password in the "Password" field and click **Connect**.



When you log in to the media server, you will see the following screen.



Check the device

The media server automatically detects accessible devices in the network. When a device is activated, it will appear in Cameras & Resources.

- If the "People Counter" feature of the Axis camera is enabled, neither automatic nor manual detection will work in Nx Witness.
- If the device belongs to a different network or can only be accessed via the Internet, the device will not be auto-detected.
- Depending on your network environment and security settings, the camera may not be recognized. In this case, please check your VPN environment and PC security settings.

操作手順

1 Start the Nx Witness desktop client and connect to the media server.

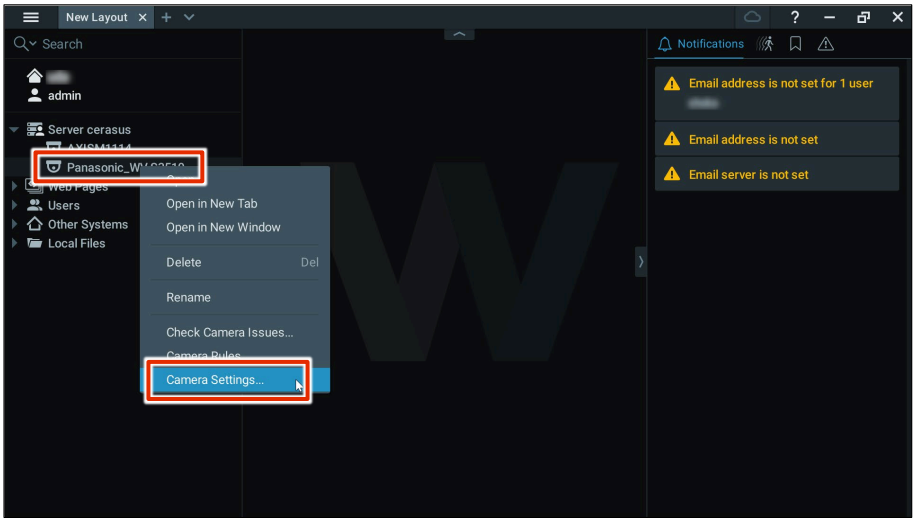
For information on how to connect to the system, see
➔ The "Connect to the configured system "

2 Click on the server.

The camera is displayed.

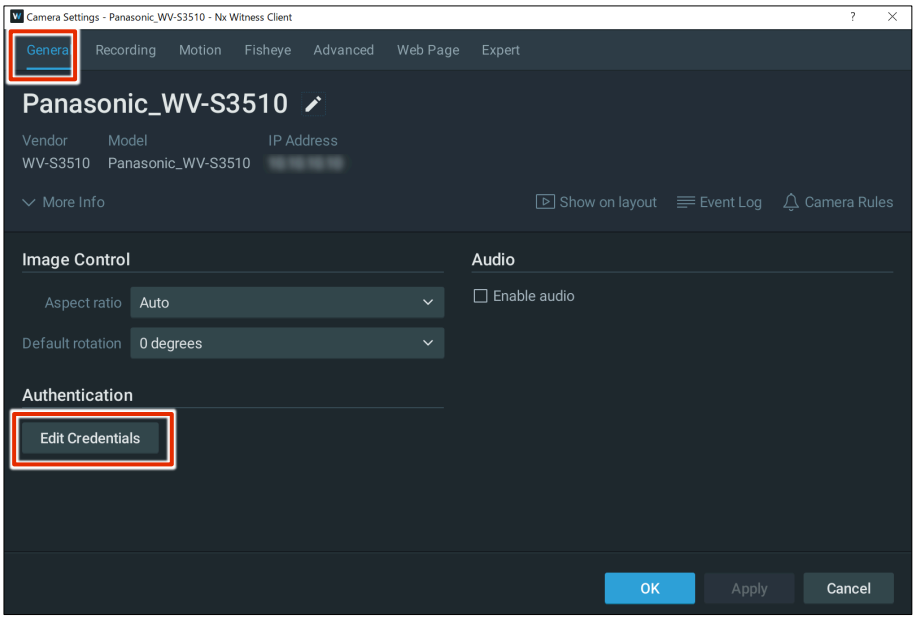
3 Authenticate the camera.

1 Right-click on the camera name and select "**Camera Settings**" from the menu that appears.



The "Camera Settings" screen appears.

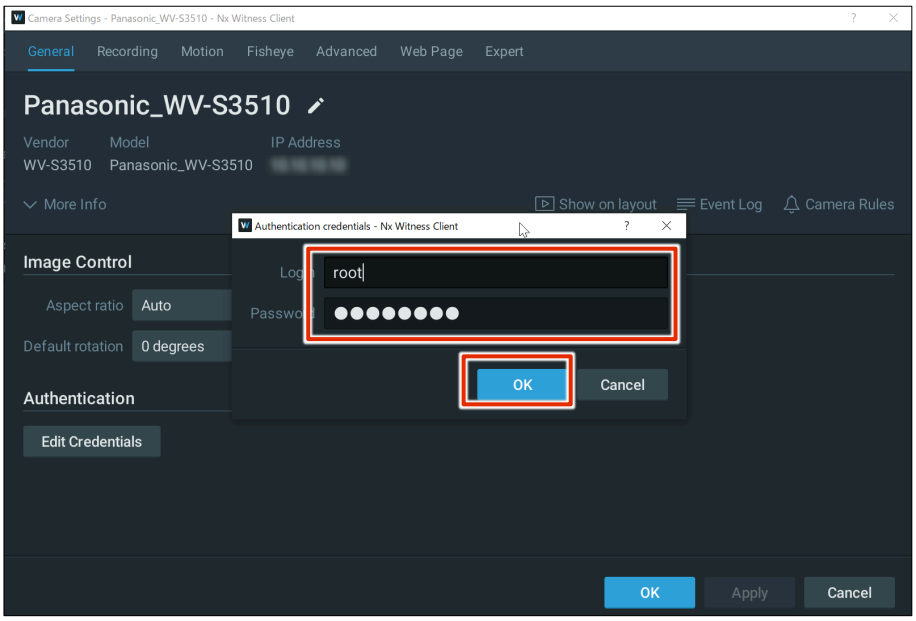
2 On the General tab, click **Edit Credentials**.



The "Certification Credentials" screen appears.

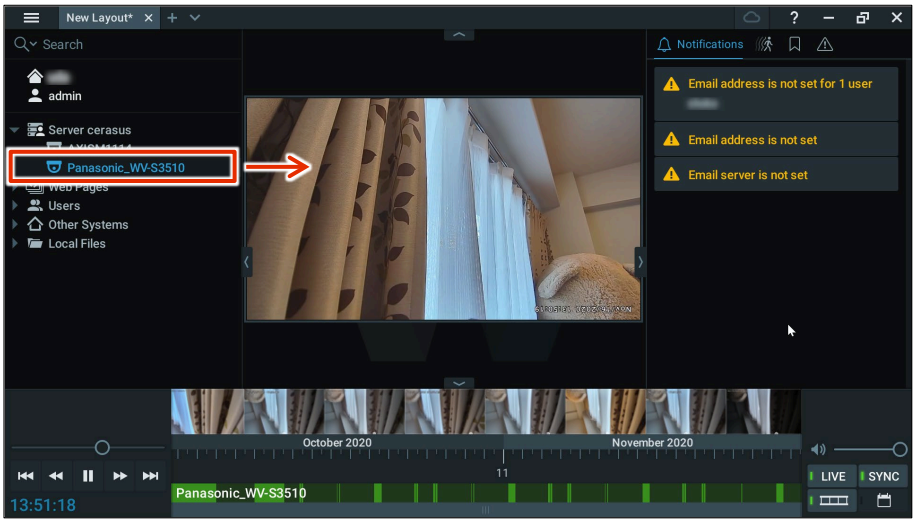
3 Enter the login information you set up when you set up the camera, and then click **OK**.

Login information varies from customer to customer. Contact your camera manufacturer for more information.



4 Double-click the camera name.

If the camera is working, the image will be displayed as shown below.



Tips For cameras that require device authentication

You may see the icon next to the connected camera. This indicates that the device has not been authenticated. In this case, the device must be authenticated. For more information, please refer to the following manuals.

➔ "Nx Witness VMS Guide"

When you start the Nx Witness desktop client, you may see a pop-up prompting you to update, but please do not do so.

For more information, please refer to the following FAQs

➔ **After launching the Nx Witness desktop client, the update screen will appear.**

Save VMS settings

設定モード

After completing the system configuration of Nx Witness, save the settings.

Be sure to save your Nx Witness settings if you change them.

If settings are not saved, camera settings and other settings may disappear and revert to their original settings.

In addition, if the settings are saved, they will be reflected correctly when the system is started in the redundant area.

Refer to “Edge Gateway Series GUI User's Manual” for information on redundant areas.

Save Nx Witness password and settings

Store the Nx Witness administrator password on the Edge Gateway to back up Nx Witness configuration data.

For information on setting the administrator password for Nx Witness, see "Configure initial system settings" for information on setting the administrator password.

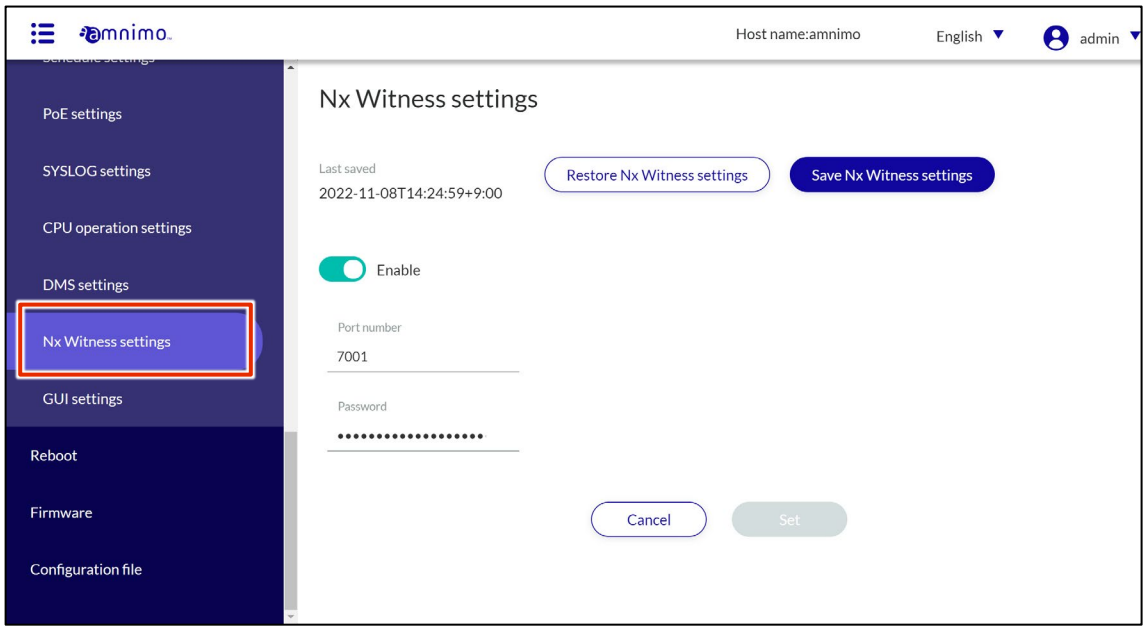
This work is performed using the Graphical User Interface (GUI).

For GUI connection instructions, see "First sign in" for instructions on how to connect using the GUI.

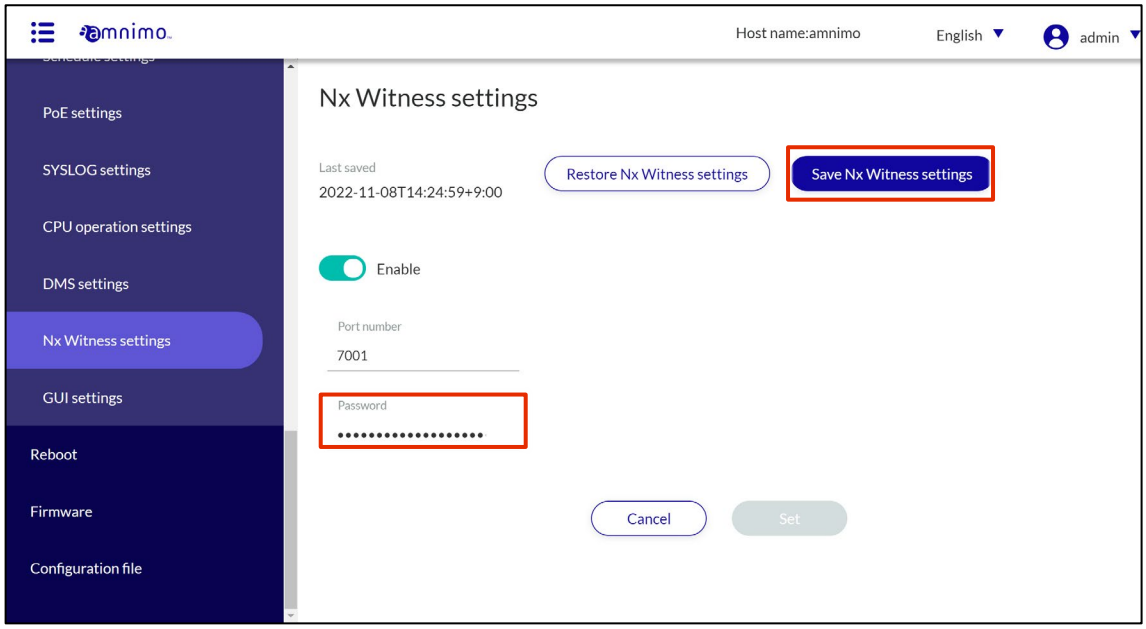
操作手順

1 From the GUI screen side menu, click **Advanced Settings/Controls** > **Nx Witness Settings**.

The "Nx Witness Settings" screen appears.

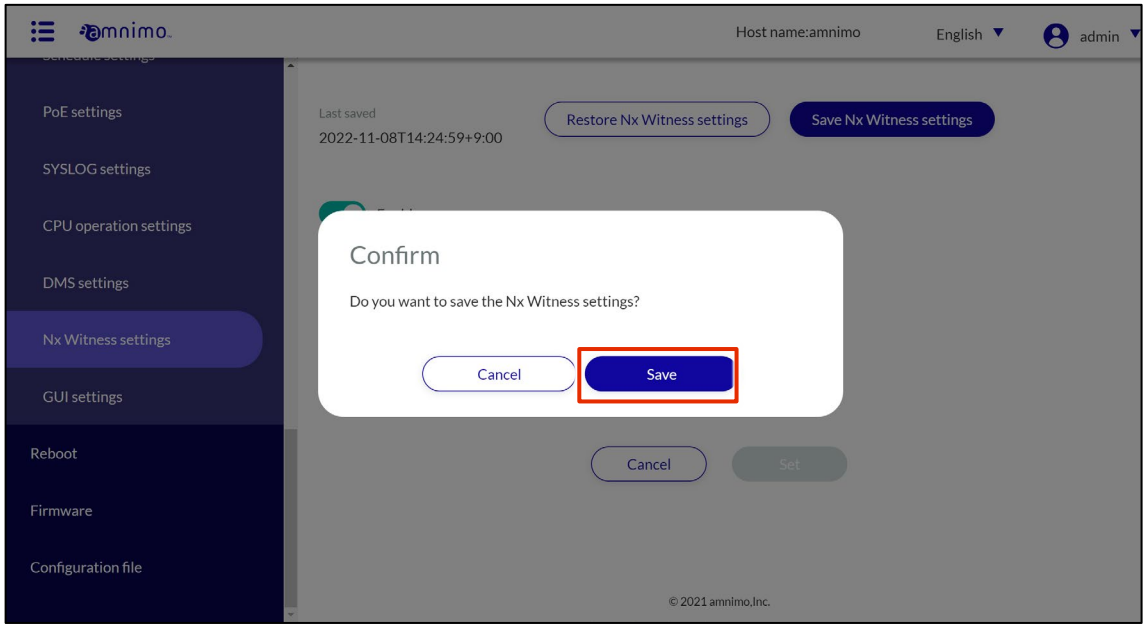


2 On the "Nx Witness Settings" screen, enter the administrator password and click "**Save Nx Witness Settings**".



3 When a confirmation dialog box appears, click **Save**.

The Nx Witness administrator password and items configured within Nx Witness (recording settings, storage settings, etc.) are saved.



Configure the integrated video management system

This step describes the setup for using the integrated video management system.

With the integrated video management system of the amnimo IoT Cloud System, the key features of the integrated video management system are

- Listing of alarms
- Retrieving and playing back video clips
- Thumbnail list view of multiple cameras with video wall
- Obtaining Snapshots

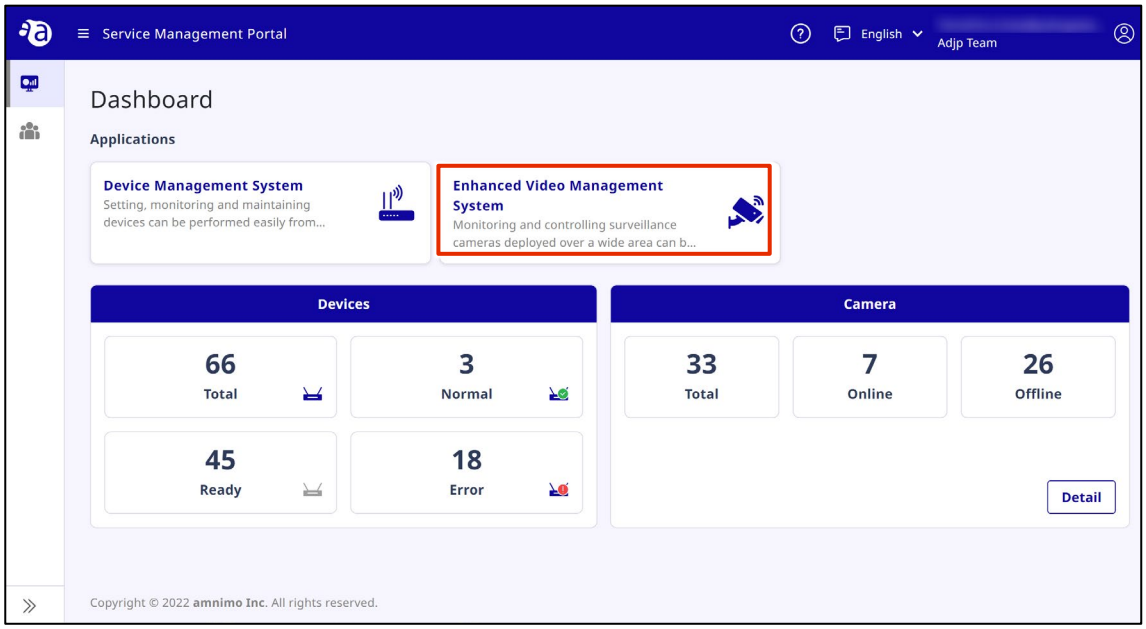
- Application is required to use the functions of the Integrated Video Management System. You must also apply for the device management system at the same time.
  Please contact your sales representative if you wish to use this service.
- The following settings in this document must be completed in order to proceed with the configuration of the integrated video management system.
  - Step 1 Activate/connect
  - Step 2 Sign in to the Edge Gateway
  - Step 3 Configure the Edge Gateway settings
  - Connecting to a network camera
  - Configure VMS settings.
- For detailed information on the use and configuration of the integrated video management system, please refer to the following manuals
  → Enhanced Video Management System Manual

Enable Edge Gateway

操作手順

1 Log in to the Service Management Portal with a web browser

2 On the dashboard, click **Enhanced Video Management System**.

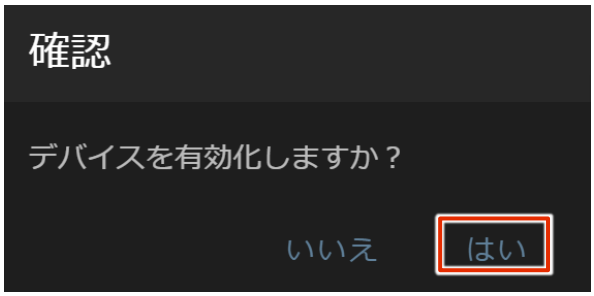


3 Click ▼ and select Devices.

4 Click on ⋮ for the device you wish to activate and click on "**Gateway Settings**".

5 Click "**Activate**" when the configuration window opens.

6 Click "**Yes**" when the confirmation window opens. (This process may take several minutes.)



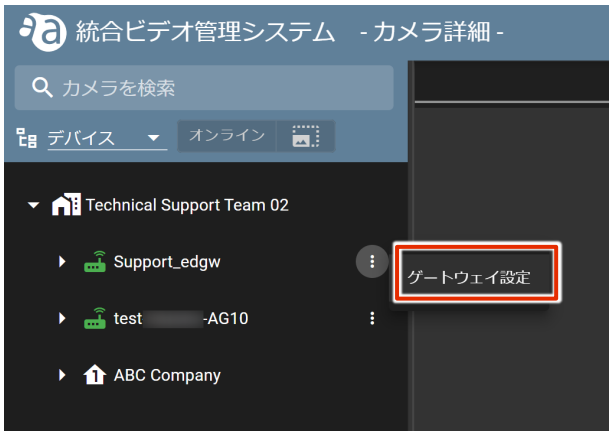
7 When activation is complete, the "Deactivate" button becomes active.

Activation is now complete.

Configure authentication information for VMS

操作手順

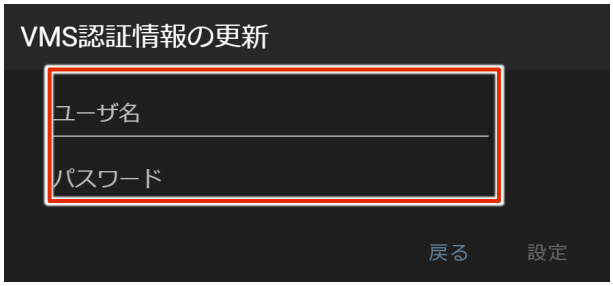
1 Click on the device ⋮ and click on "**Gateway Settings**".



2 Under "Other," click "**VMS credential**.

3 When the authentication screen appears, enter the user name and password and click on "**APPLY**".

VMS authentication requires Nx Witness administrator account information.
→ "Save Nx Witness password and settings"

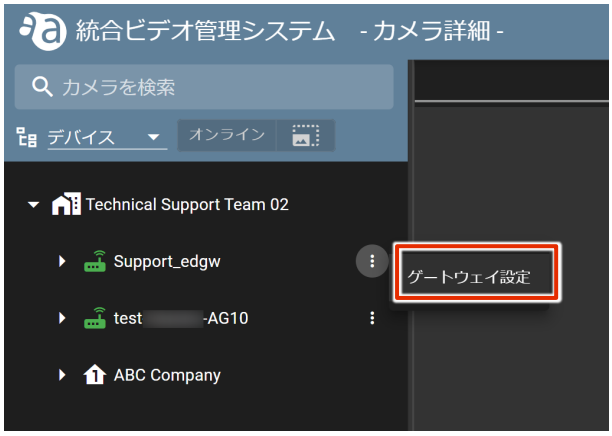


The VMS credentials are now set.

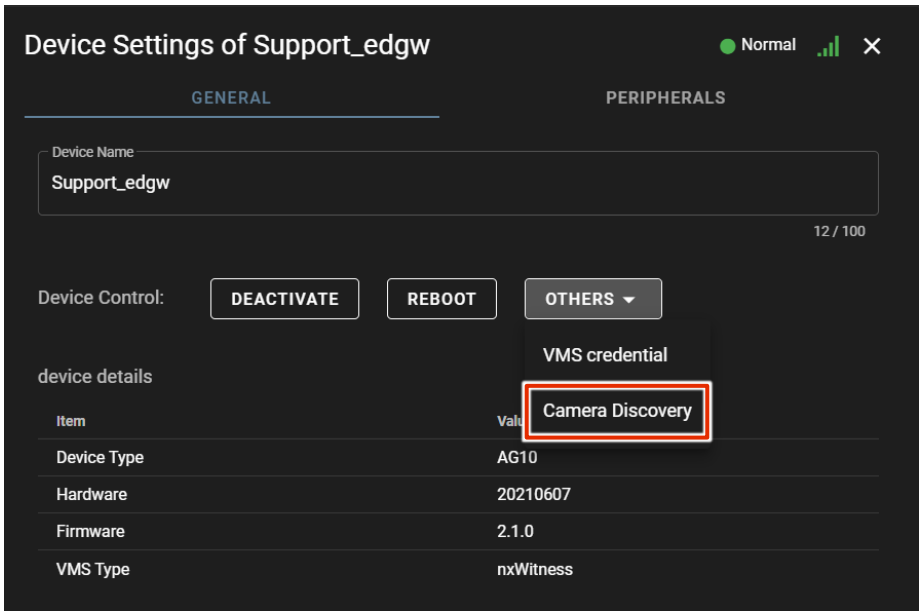
Detecting cameras

操作手順

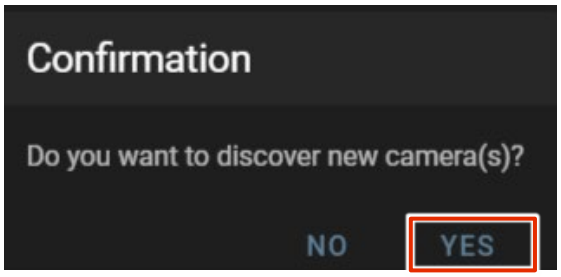
1 Click on the device ⋮ and click on "**Gateway Settings**".



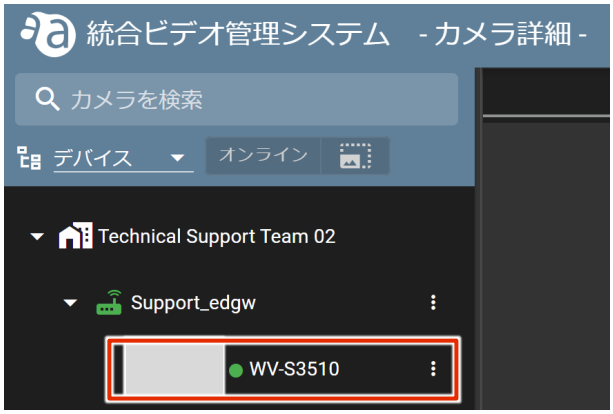
2 Under "Other," click on "**Camera Discovery**".



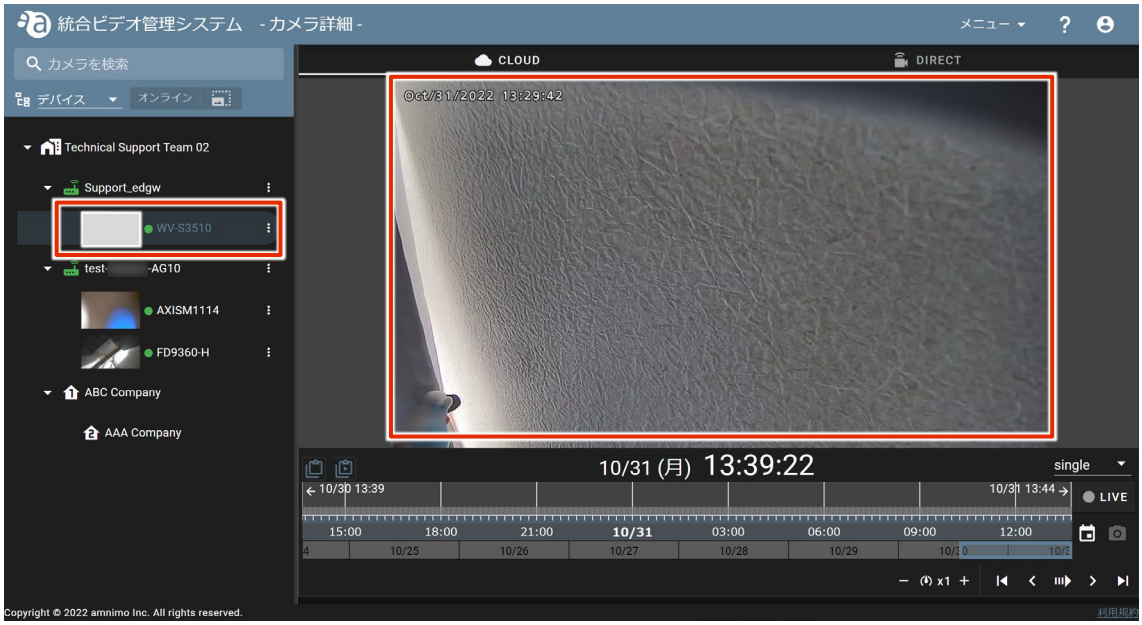
3 Click "**YES**" when the confirmation screen appears.



4 Confirm that the camera appears in the sidebar. (Thumbnails will not appear until a snapshot is taken.)



5 Select the added camera and confirm that the image is displayed.



Configure the device management system

This step describes the initial setup for using the device management system.

The device management system of the amnimo IoT Cloud System makes it easy to monitor and maintain Edge Gateways in remote locations.

The main functions of the device management system are as follows

- Remote monitoring of devices
- Remote distribution and retrieval of device configuration files
- Remote firmware updates
- Syslog file acquisition

- You must apply to use the device management system functions. Please contact your sales representative if you wish to use this service.
- The following settings in this document must be completed in order to proceed with the configuration of the device management system.
  - Step 1 Activate/connect
  - Step 2 Sign in to the Edge Gateway
  - Step 3 Configure the Edge Gateway settings
- Please refer to the following manuals for detailed information on how to use and configure the device management system.

  ➔ Device Management System Manual.

Enable Edge Gateway

Enable the target Edge Gateway from the device management system.

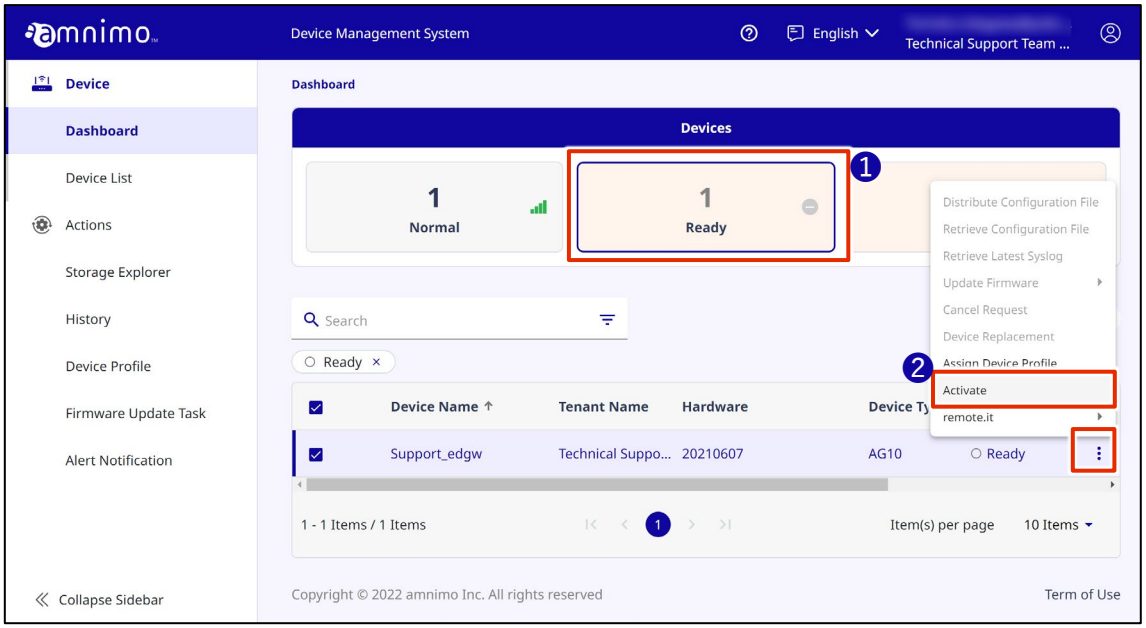
- In the previous chapter, "Configuring the Integrated Video Management System" - " Enabling the Edge Gateway If you have already enabled the Edge Gateway from "Configuring the Integrated Video Management System", this setting is not necessary.
- In order to proceed with the activation, the time setting must be completed at the Edge Gateway in advance.

  ➔ "Set the time"

操作手順

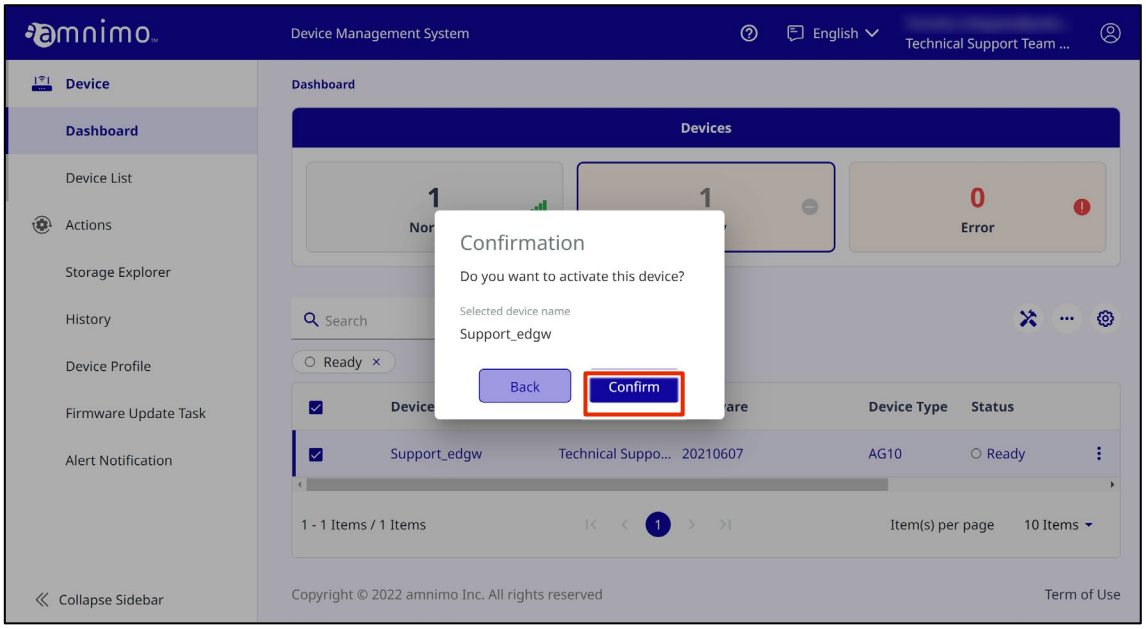
1 Enable Edge Gateway.

1. Under "Devices," select "**Unused**".
2. Click the " ⋮ " button of the target device and select **Activate** in the menu that appears.



The "Confirmation" screen appears.

2 Click **Confirm**.

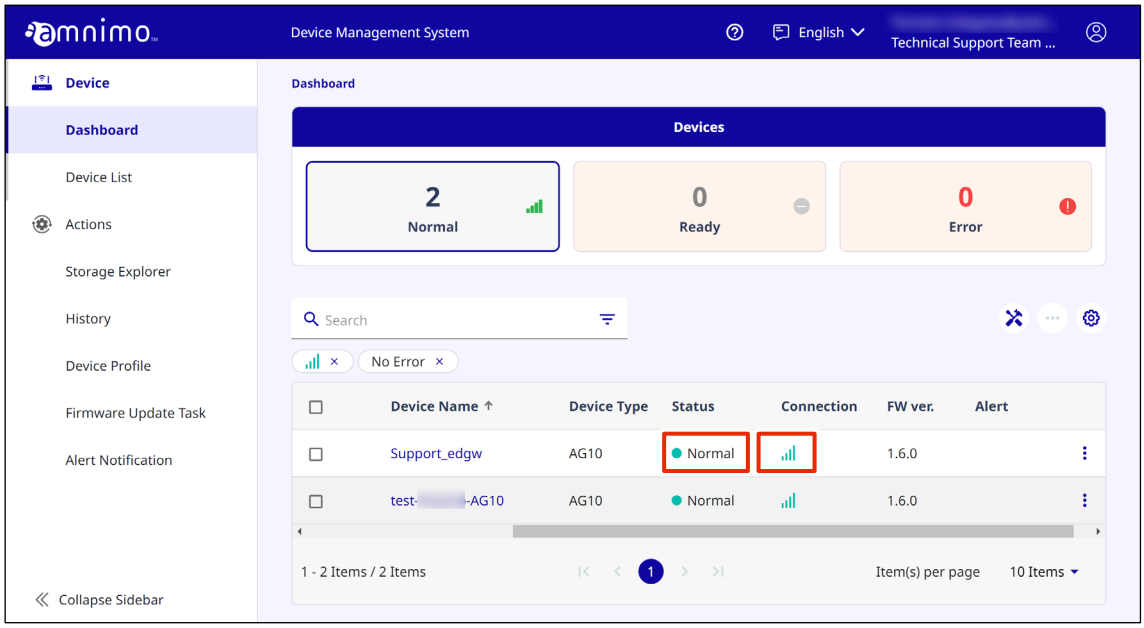


Activation is completed when the Edge Gateway connects to the Internet.

3 Verify that the Edge Gateway has a good connection to the Internet and is in good reception.

1 Confirm that the status of the target device is "normal.

2 Confirm that the radio wave icon for communication is displayed in green.

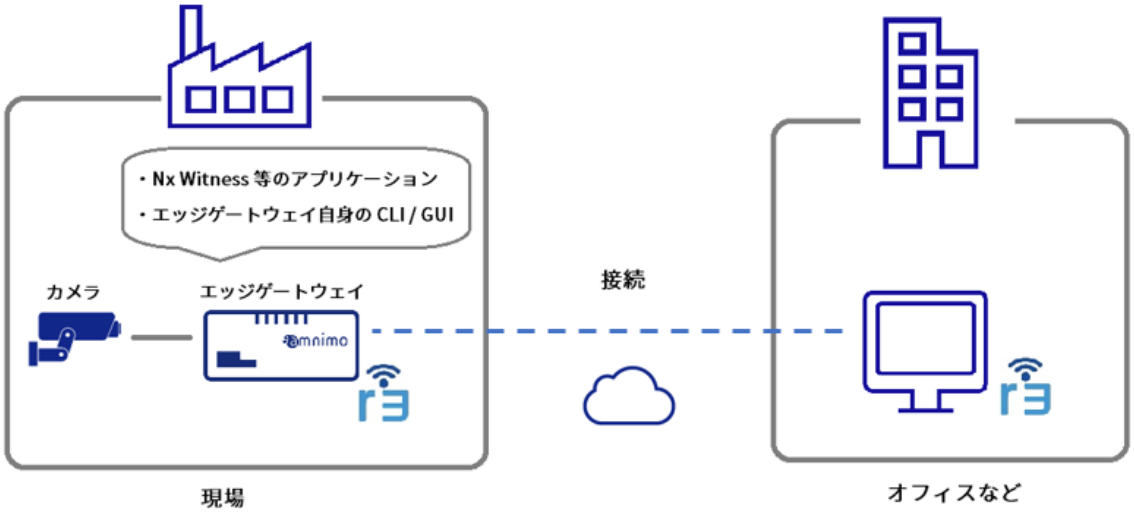


Configure remote.it settings

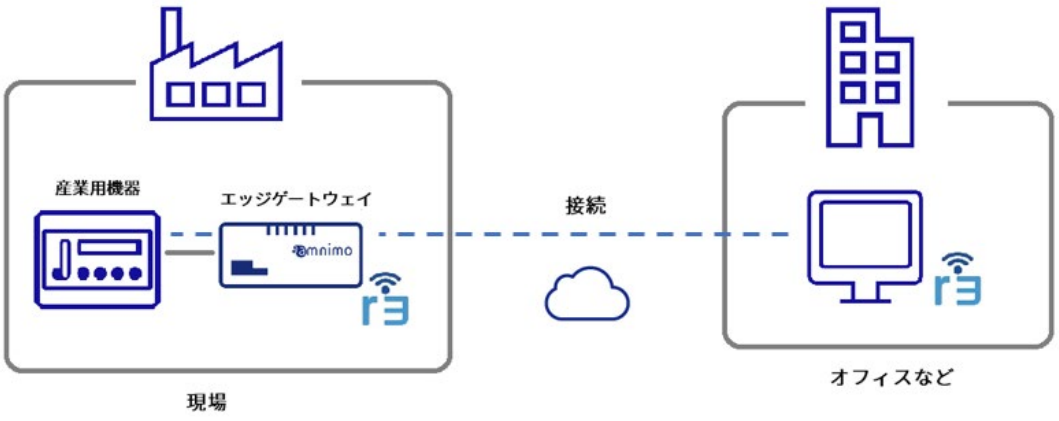
This step describes the initial configuration of an Edge Gateway that uses remote.it.

remote.it allows you to securely access an Edge Gateway in a remote location from your PC or other terminal.

- Pattern 1: Remote access to an application running on an Edge Gateway



- Pattern 2: Remote access to industrial equipment connected to the LAN port of the Edge Gateway



Create a remote.it account

To use remote.it, you need a remote.it account. If you wish to use remote.it, please contact your amnimo sales representative to sign up for a remote.it subscription.

We will send an invitation to create a remote.it account to those who have applied for the use of remote.it. Please follow the instructions to create an account.

- **When you apply for remote.it after applying for Device Management System**
  Please contact amnimo customer support with your company name, customer name, email address used in your remote.it account, device name, and the completion date of your remote.it setup after you have created your remote.it account.
  → https://support.amnimo.com/hc/ja/requests/new
- **If you wish to use Amnimo's products as samples**
  You can test and evaluate our products using a remote.it account that we have already created for you. If you wish to use our products as samples, please request this service when you apply for sample use.

操作手順

1 Create a remote.it account.

When you receive an invitation from amnimo to create a remote.it account, follow the instructions in the invitation to create a remote.it account.

Configure remote.it settings

First, activate remote.it for the device using the Command Line Interface (hereafter CLI).

After enabling remote.it, the setting method will change depending on whether the device management system is used or not. Please proceed with the remote.it settings according to your environment.

- Please refer to the following manuals for detailed information on how to use and configure the CLI.
  → CLI User's Manual
- It is also possible to connect via serial console for CLI operation. For details on how to use the Edge Gateway and its settings, please refer to the following manuals.
  → Chapter 1, "CLI Basics," in the CLI User's Manual.

Tips About CLI Operation Modes

The CLI dedicated to Edge Gateway has three modes of operation: general user mode, administrator mode, and configuration mode. The operations that can be performed in each mode and the command line prompts are shown below.

ユーザーモード

In general user mode, the user performs operations necessary for operational management.

```
amnimo$.
```

管理者モード

In addition to operations in general user mode, administrator mode allows control over such things as rebooting the Edge Gateway.

```
amnimo#
```

設定モード

In the setting mode, you can view and configure settings.

```
amnimo(cfg)#.
```

Log in to the Edge Gateway

Log in to the Edge Gateway via CLI.

Please enable SSH in the GUI beforehand.
→ “Configure SSH settings”

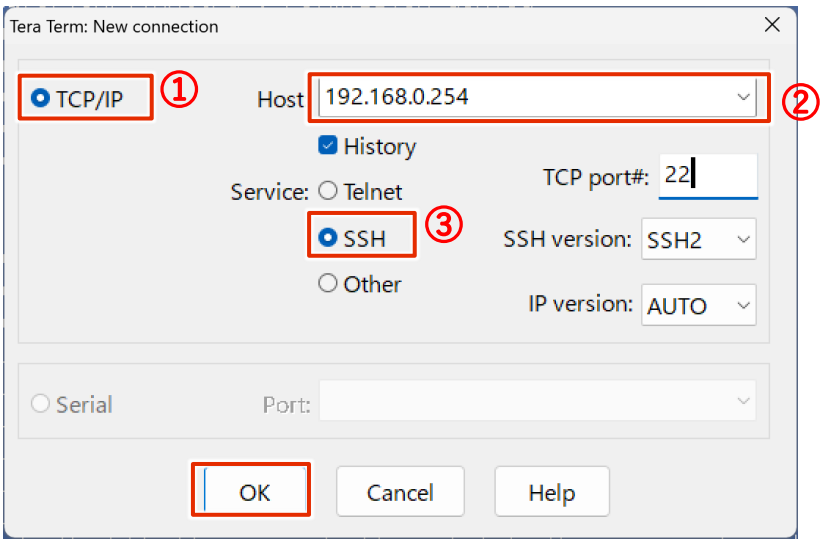
操作手順

1 Install Windows terminal emulator software such as Tera Term or Putty on your PC.

This manual uses Tera Term to provide explanations.

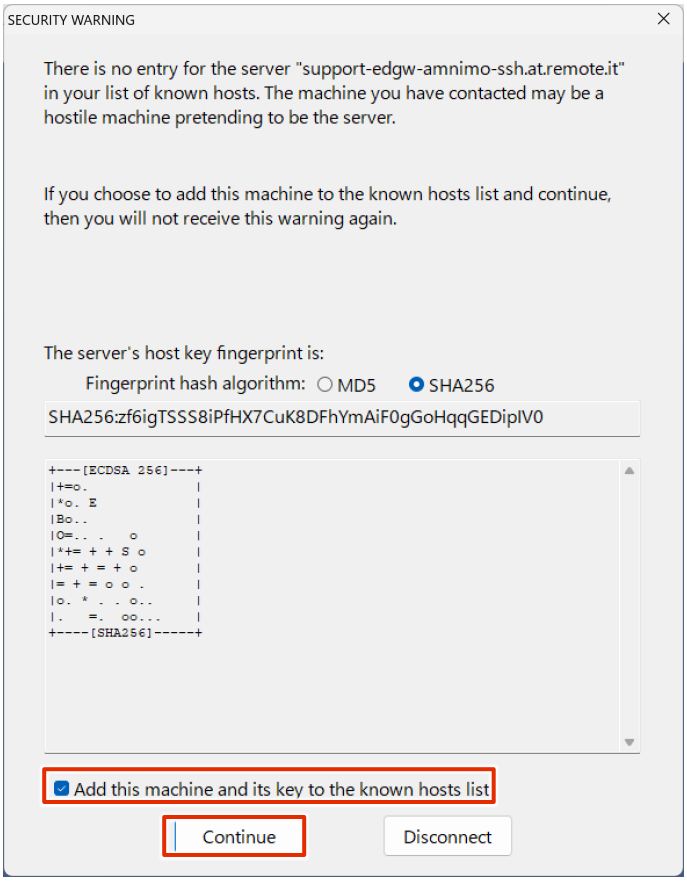
2 Start Tera Term, configure the following settings in the "Tera Term new connection" window, and click **OK**.

1. Select TCP/IP".
2. Enter the IP address "192.168.0.254" in "Host".
3. Select "SSH" under "Service".

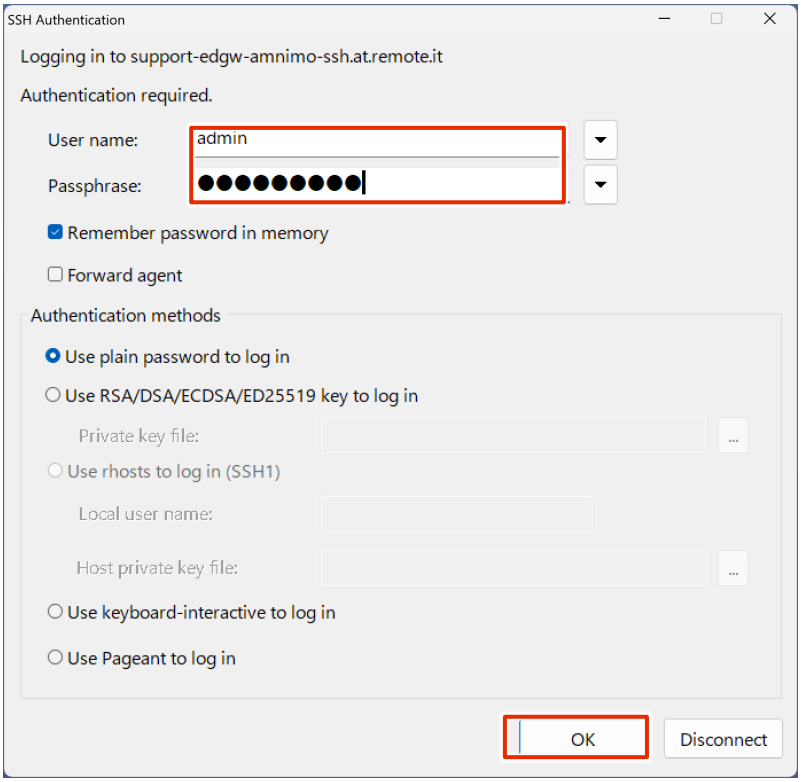


When connecting to a new host, a "Security Warning" screen will appear.

3 Check "**Add this host to the known hosts list**" and click "**Continue**".



4 Enter the login information you entered in Step 2, Initial Login, and click **OK**.



Log in to the Edge Gateway via CLI.

Register your service

設定 モード

Register the service you wish to connect to using remote.it.

This document describes example settings for Pattern 1 and Pattern 2, respectively. (For details on each pattern, see "Configure remote.it settings" page.)

- (Example) Account name: sample@amnimo.com
- (Example) Device name: test-device

Before using remote.it, please make sure that the following settings have been made

- The Edge Gateway is connected to the Internet.
- The DNS settings for the Edge Gateway have been configured.
  If simple configuration was done in Step 2, DNS settings are enabled.
- SSH is activated (configured) on the Edge Gateway.
  If SSH was configured in Step 2, SSH settings have been activated.

操作手順

1 Enable remote.it.

```
admin@amnimo:~$amsh          ← Start amsh
amnimo$ enable               ← Switch to administrator mode
password:                    ← Enter the password and press Enter
amnimo# configure            ← Go to configuration mode
amnimo(cfg)# remoteit
amnimo(cfg-remoteit)# enable
amnimo(cfg-remoteit)# exit
amnimo(cfg)#.
amnimo(cfg)# config file save ← Save the configuration file
amnimo(cfg)#.
```

If you are using a device management system, register devices from the device management system after activating remote.it.

➔ Device Management System Manual - remote.it

Do not register devices or services from the Command Line Interface (CLI) in the subsequent step 2. You will not be able to configure remote.it from the device management system.

2 Go to remote.it application command execution mode and sign in to remote.it.

```
amnimo(cfg)# execute remoteit signin ↵
Username: sample@amnimo.com↵      ← Enter your email address
Password:                         ← Enter the password and press Enter
 ? SIGNIN in progress ...
 ? Login with remote.it account
 ? Download & install dependencies
 ? NEXT-ACTION: run 'remoteit register' to register this device into your remote.it account
amnimo(cfg)#.
```

3 Confirm that you have signed in.

```
amnimo(cfg)# execute remoteit status ↵
 ? Fetching status

Username: sample@amnimo.com

Device: (1)
No device...

Services: Services

Connections:.
amnimo(cfg)#.
```

4 Register the device.

```
amnimo(cfg)# execute remoteit register ↵
Device name: test-device ↵
 ? REGISTER in progress ...
 ? Login with remote.it account
 ? Register device 'test-device' ?
 ? Applying config
 ? NEXT-ACTION: run 'remoteit add' to add services to this device
amnimo(cfg)#.
```

When device registration is completed, an email titled "Notification from remote.it (automatic transmission) Notification of completion of device registration" will be sent to the registered email address.

5 Confirm that the device has been registered.

```
amnimo(cfg)# execute remoteit status ↵
 ? Fetching status

Username: sample@amnimo.com

Device: (1)
 UID | Name | Type | Status | IP:Port
-------------------------------------------------------------------------- ----------------------------------------
-------
 80:00:00:00:01:0A:44:XX | test-device | device | connected | 127.0.0.1:65535

Services: Services

Connections:.
amnimo(cfg)#.
```

6 The following is an example of the use of the Pattern 1 or Pattern 2 settings described on page "Configure remote.it settings.

In remote.it version 1.7.60 (firmware 1.4.4 or later), the following problem occurs when executing the add command

a) The list of service types is not output correctly.

b) When I try to register a service type by name, it becomes "invalid" and cannot be registered.

To avoid the above problem, please execute "execute remoteit agent restart" once after device registration.

1 Pattern 1: Accessing applications in the Edge Gateway

Register a service (port number) to connect to with remote.it. Specify the name of the service you wish to connect to followed by the "--type" option.

```
amnimo(cfg)# execute remoteit add --type ssh ↵
Enter Port (default is '22'): 22 ↵
Enter Service Name (default is 'MyService'): amnimo-ssh ↵
 ? ADD in progress ...
 ? Login with remote.it account
 ? Creating service named 'amnimo-ssh' at '127.0.0.1:22'
 ? NEXT-ACTION: run 'remoteit add' to add more services
amnimo(cfg)#.
```

2 Pattern 2: Accessing devices connected to the LAN port of the Edge Gateway

Setting Example

```
amnimo(cfg)# execute remoteit add --name Test_01 --port 10023 --hostname 192.168.0.100 --type
 1
amnimo(cfg)#.
```

Meaning of settings

Setting Example	meaning
Test_01	service name
10023	Port number that the device is listening on
192.168.0.100	IP address of the device
1	Connection type (type 1 = TCP)

7 Confirm that the service has been registered; if the Status shows Connected, the registration was successful.

```
amnimo(cfg)# execute remoteit status ↵
 ? Fetching status

Username: sample@amnimo.com

Device: (1)
 UID | Name | Type | Status | IP:Port
------------------------------------------------------------------------------------------------------------------------
 80:00:00:00:01:0A:44:XX | test-device | device | connected | 127.0.0.1:65535

Services: Services
 UID | Name | Type | Status | IP:Port | Enabled
------------------------------------------------------------------------------------------------------------ ----------
---
 80:00:00:00:01:0A:44:XX | amnimo-ssh | SSH (28) | connected | 127.0.0.1:22 | true

Connections:.
amnimo(cfg)#.
```

8 Saves the settings.

```
amnimo(cfg)# config file save ↵
amnimo(cfg)#.
```

Connecting to services using remote.it

This chapter describes how to install the remote.it desktop application for Windows on your PC and connect to the device services configured in the previous section.

- **In this document, the "initiator connection function" of remote.it is used to connect to the Edge Gateway.**
- **Please note that you will be charged if you register a device using the "Device Registration Function".**

操作手順

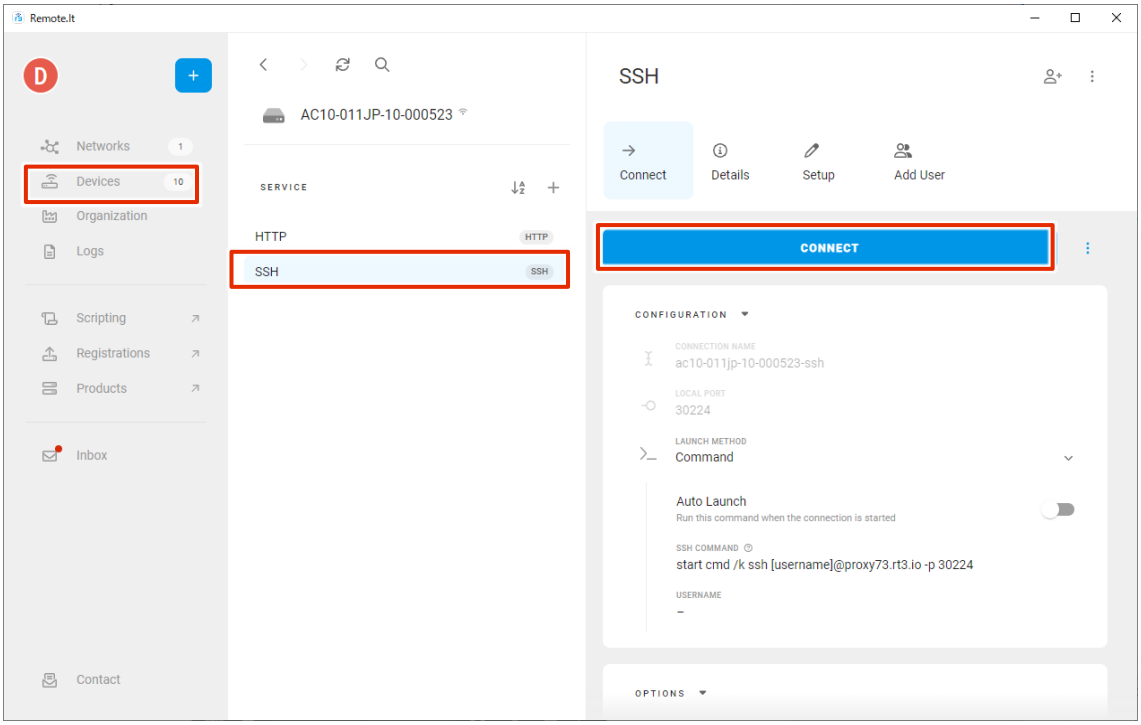
1 Install the remote.it desktop application.

Connect to the service using the remote.it desktop app.

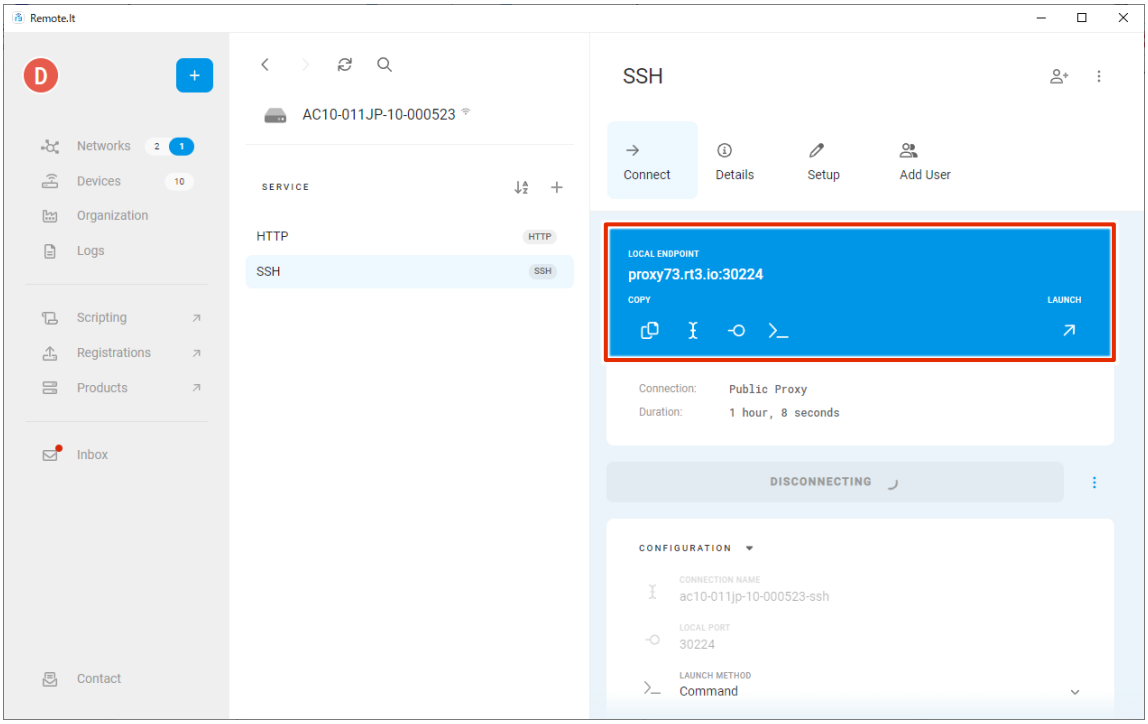
- The application can be downloaded from the following site
  → https://ja.remote.it/download
- For detailed installation instructions, please refer to the following page
  → https://support.remote.it/hc/ja/articles/4420541365773

2 Start the remote.it desktop application.

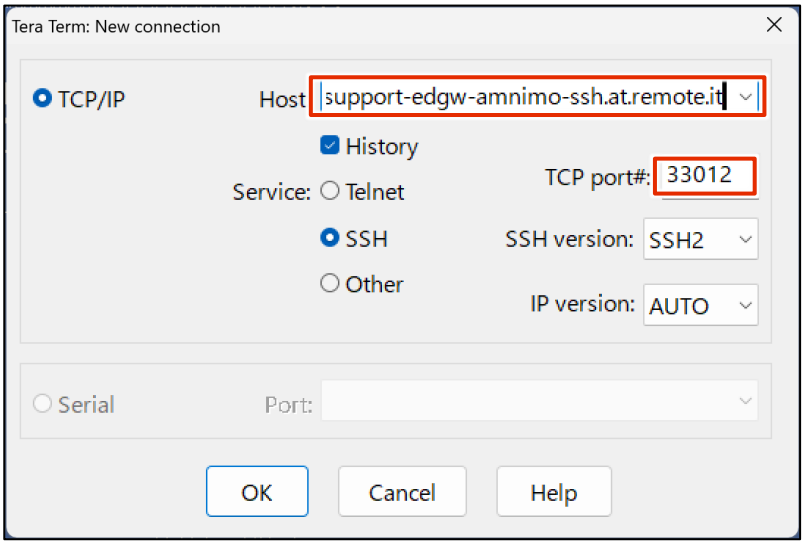
3 Click **Devices** from the sidebar to open the target device, select the service you wish to connect to (SSH in this procedure), and click **CONNECT**. (Depending on the version of the application, this may appear as **START**.



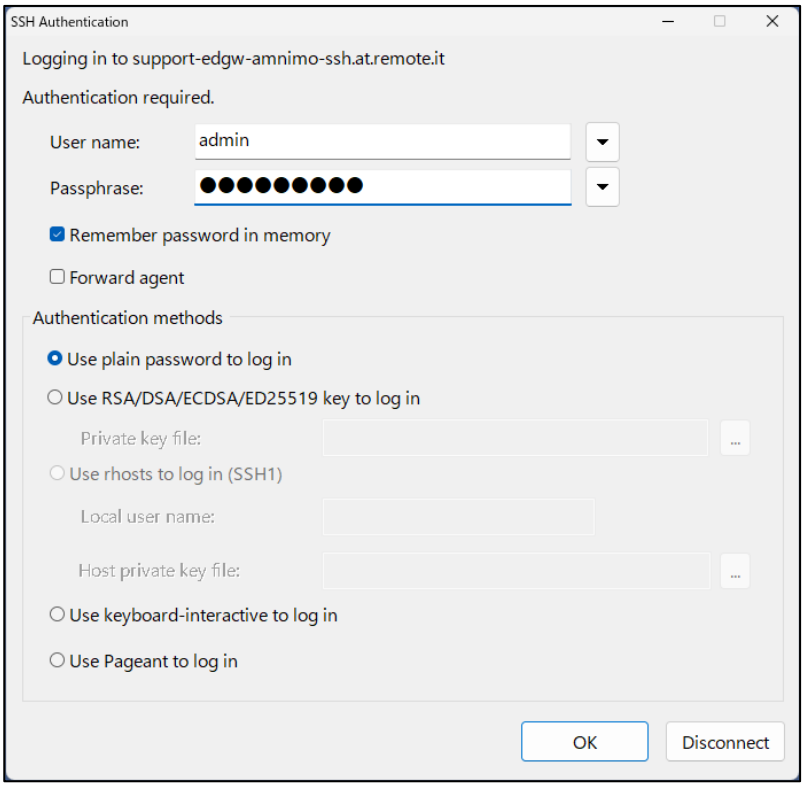
4 Once the connection is established, the connection information is displayed. Click the COPY button to copy the connection information.



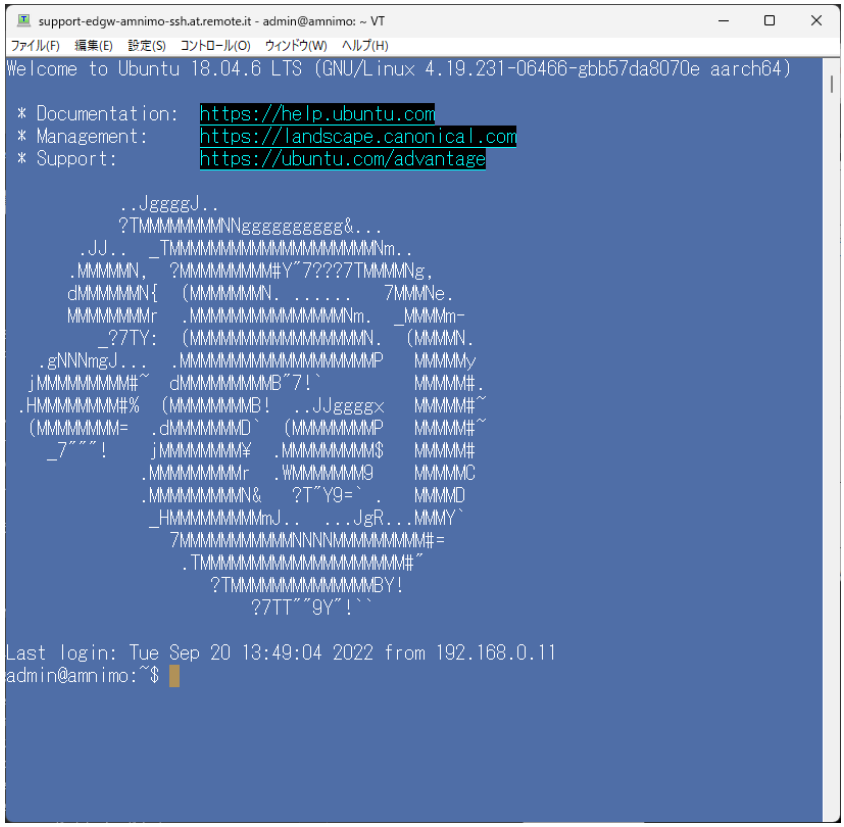
5 Start Tera term, copy the information to the host and TCP port, and click **OK**.



6 When the login screen appears, enter the Edge Gateway login information and click **OK**.



7 Verify that an SSH connection can be made.



You can find more information on how to connect to a device from the remote.it desktop app on the following page.

➔ https://support.remote.it/hc/ja/articles/4421390375565

Licenses and Trademarks

License

- This Edge Gateway uses software based on open source licenses such as GPL (GNU General Public License).
  Details are described on our Web site.
  Edge Gateway Series Open Source Software License Agreement

- Scope of Warranty and Responsibility
  No warranty is given with respect to the operation of the open-source software itself in accordance with the terms of the GPL and other applicable laws.

trademark

- Product names, company names, and other proper nouns used herein are trademarks or registered trademarks of the respective companies.

Revision History

1st ed.	Published November 2020
2nd ed.	Published May 2021
3rd ed.	Published September 2021
4thEdition	Published October 2021
5th ed.	Published November 2021
6th Edition	Published June 2022
7th Edition	Published September 2022
8th Edition	Published November 2023

Edge Gateway Startup Guide
November 8, 2023, 8th ed.

IM AMD03A01-10EN

All Rights Reserved. Copyright © 2023, amnimo Inc.