suprema

BioStar Integration for Nedap

SETUP GUIDE

Version 1.10
English

Contents

Target Audience

This document describes the integration between Suprema biometric devices and Nedap AEOS using BioStar Integration for Nedap.

This document is intended for system operators as well as system administrators. The system operators/administrators require basic knowledge of the Nedap AEOS system and Suprema biometric devices.

Introduction

Features

BioStar Integration for Nedap is a programming interface that allows the Nedap AEOS platform to communicate with the Biometric Management System, which is able to generate user biometric templates with Suprema biometric devices and manages user information from the AEOS on the devices. With BioStar Integration for Nedap, you can easily setup and build the Biometric Management System for the AEOS using Suprema biometric devices.

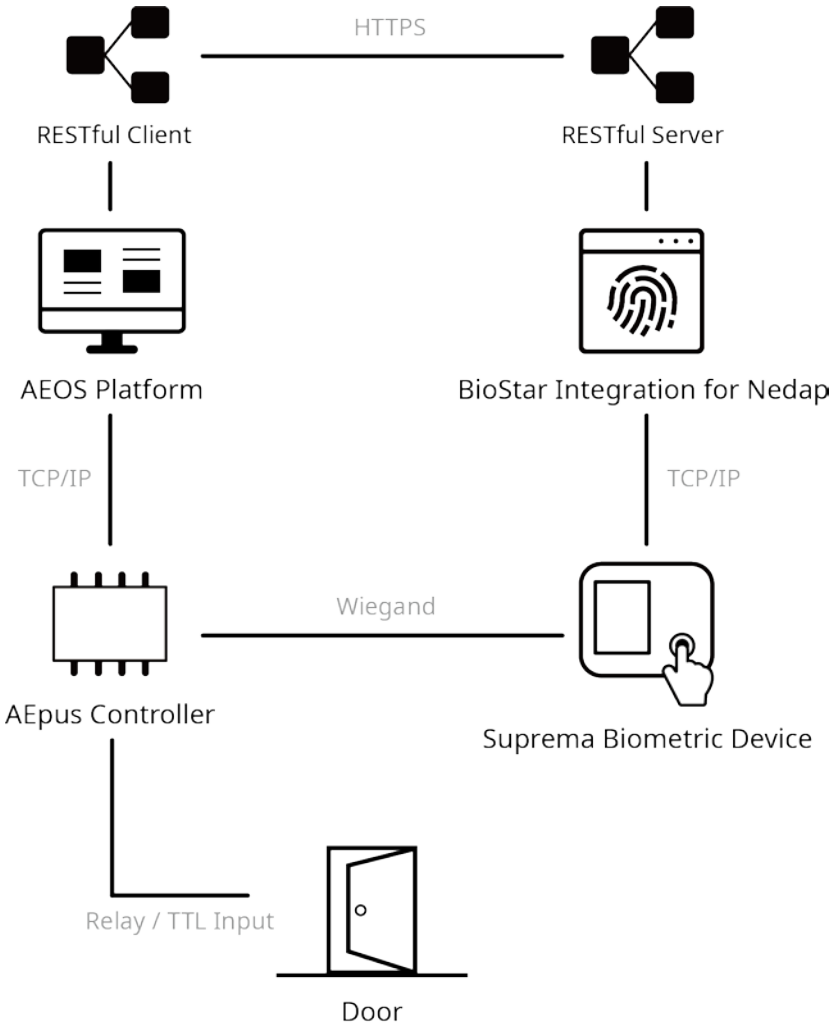
BioStar Integration for Nedap provides the following features:

- Allows to add, update and delete users and Wiegand cards, as well as register each user's fingerprint templates.
- Offers a web page for enrolling fingerprint. It is able to add or delete 10 fingerprint templates for a user.
- Without installing an independent web server.
- Provides a service for user information synchronization among the devices connecting to the server of BioStar Integration for Nedap.
- Allows to connect and manage up to 1,000 Biometric Devices.

NOTE

- For more details on the functionality of AEOS platform, see the user manuals for Nedap AEOS.

System diagram



Installation

Prerequisites

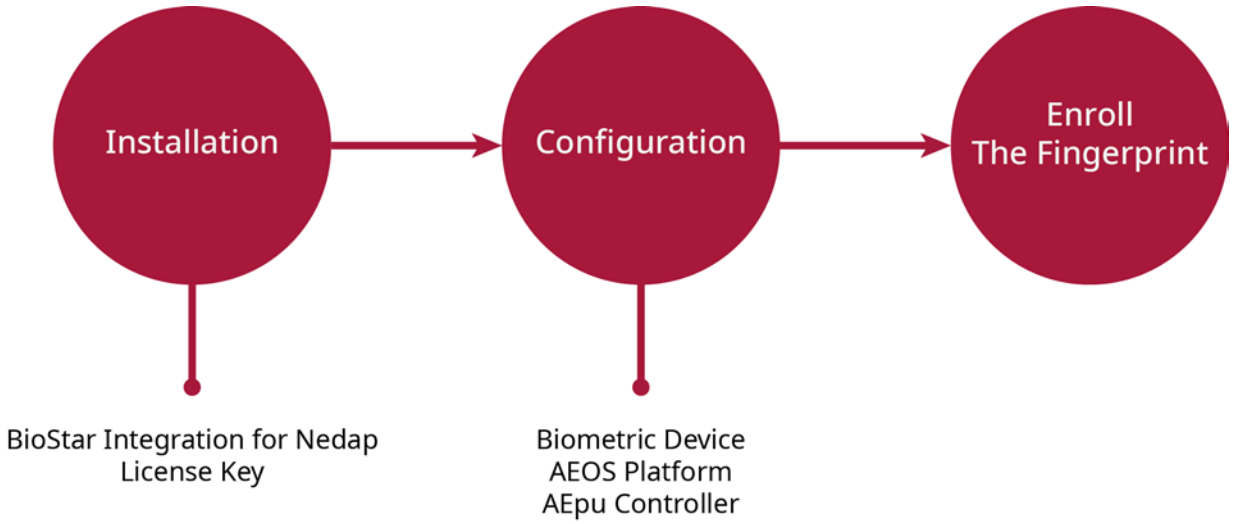
The following prerequisites are required to use BioStar integration for Nedap. Check the support conditions before installing the BioStar integration for Nedap.

- Operating system
  - Microsoft Windows 7(x86 / x64), Microsoft Windows 10(x64), Microsoft Windows Server 2012
- Web browsers
  - Chrome 6x, IE10 / IE11
- AEOS
  - AEOS 3.2.x, AEOS 3.3.1, AEOS 3.3.2
- Biometric Device
  - BioStation 2, BioStation A2, BioStation L2, BioEntry W2
- BS_SDK_V2
  - 2.5.0

NOTE

- BS_SDK_V2 is included in BioStar Integration for Nedap installation file.

Configuration procedure

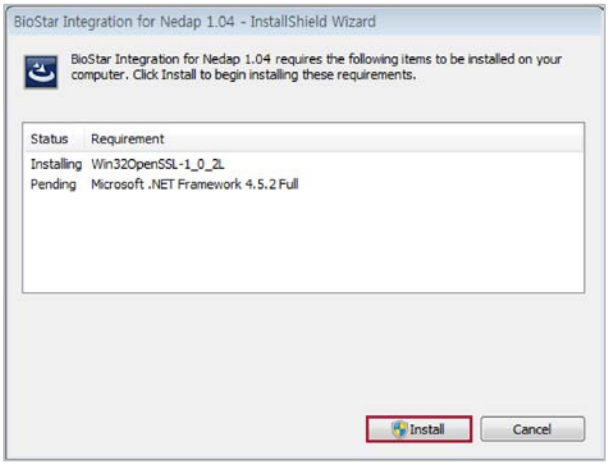


Installing BioStar Integration for Nedap

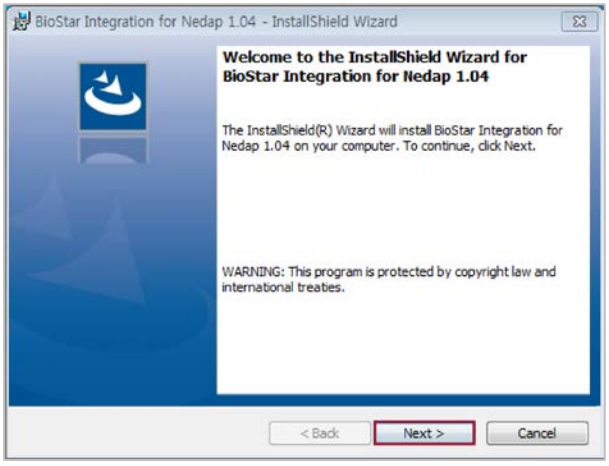
Installing BioStar Integration for Nedap Setup file

1 Run the **BioStar Integration for Nedap 1.04 setup** file.

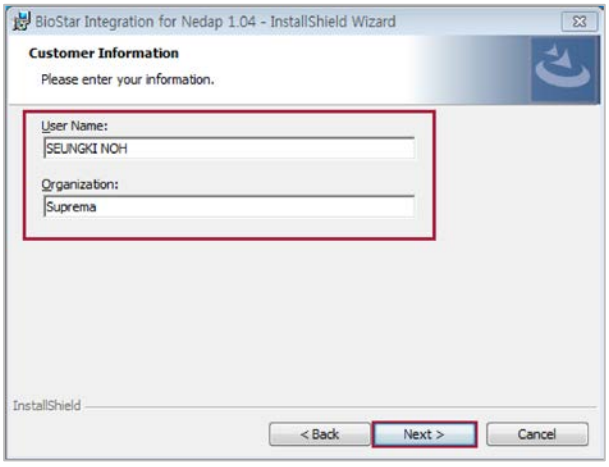
2 Click **Install** to continue. BioStar Integration for Nedap requires some items to be installed.



3 To continue the installation, click **Next**.



4 Enter the customer information and then click **Next**.



5 If ready to install, click **Install**.

6 Click **Finish** to complete installing BioStar Integration for Nedap.

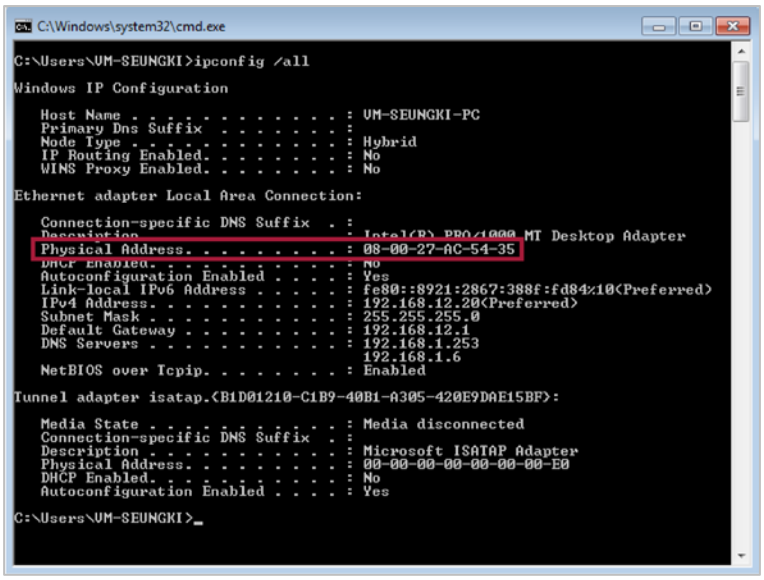
Installing the license key

1 Run the command prompt (cmd) on the PC where BioStar Integration for Nedap is installed.

NOTE

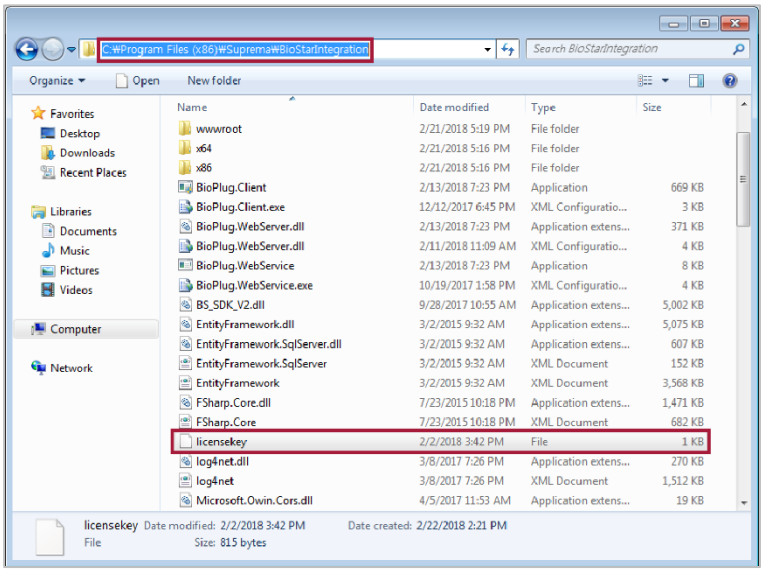
- You can run the command prompt in the following ways: Click the Windows Start button and enter **cmd** in **Search programs and files** text box.

2 Enter **ipconfig/all** in the Command Prompt window and press **Enter** key. When you see the results, check the Mac address.



3 Send the Mac address and period of use to your place of purchase via email and request a license key.

4 Save the license key in the BioStar Integration for Nedap installation folder.



NOTE

- The path of the BioStar Integration for Nedap installation folder is as follows: **C:\Program Files (x86)\Suprema\BioStarIntegration**

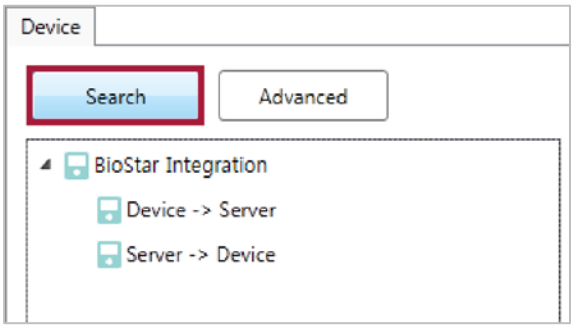
Configuration

Biometric Device

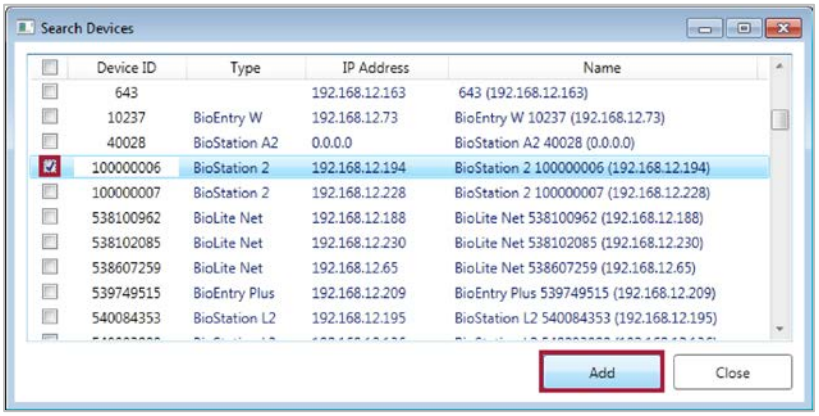
Setting the biometric device network

Biometric devices must be connected on the server of BioStar Integration for Nedap.

1 Run **BioStar Integration Manager** and click **Search**.



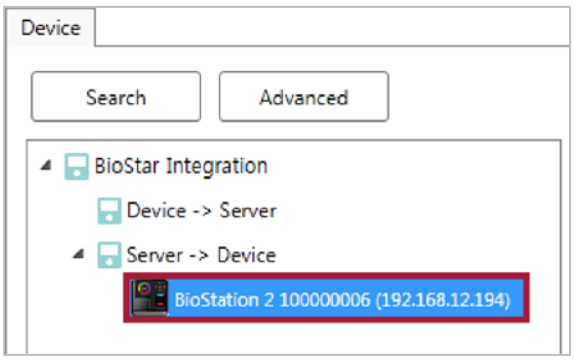
2 Select the device for connecting to BioStar Integration Manager and then click **Add**.



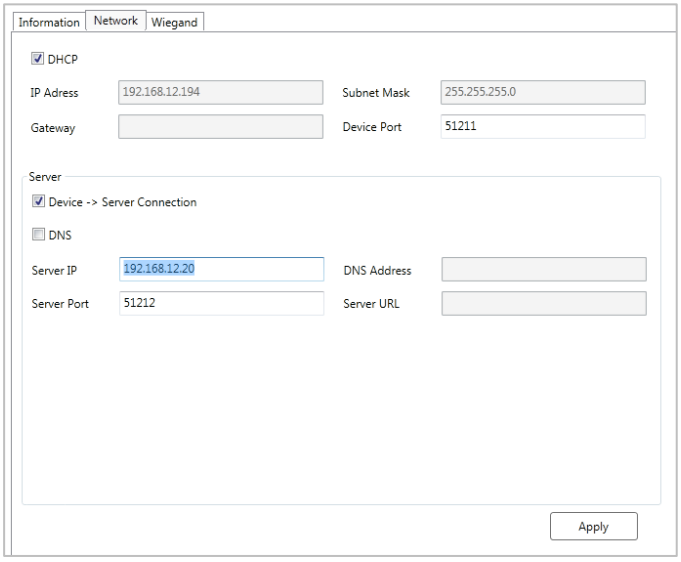
NOTE

- This document explains BioStation 2 as an example, and it is possible to connect with BioStation A2, BioStation L2, and BioEntry W2.

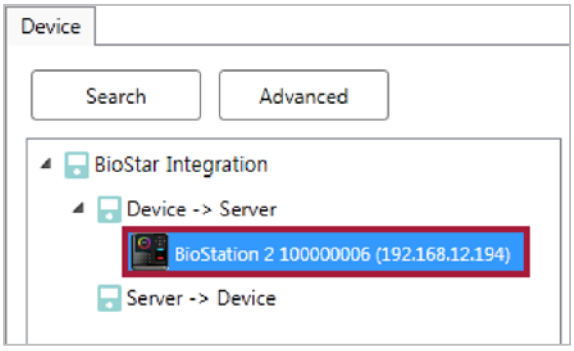
3 Select a device on BioStar Integration panel.



4 In Network tab, click **Device -> Server Connection** and then fill in **Server IP** and **Server Port**.



5 The connected device will be displayed on **Device -> Server**.



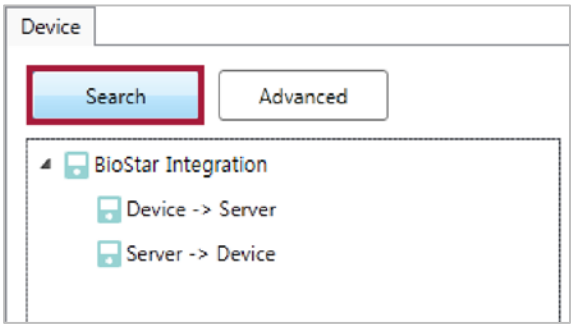
NOTE

- If the connected device is not displayed on the panel, reboot **BioStar Integration Manager**.

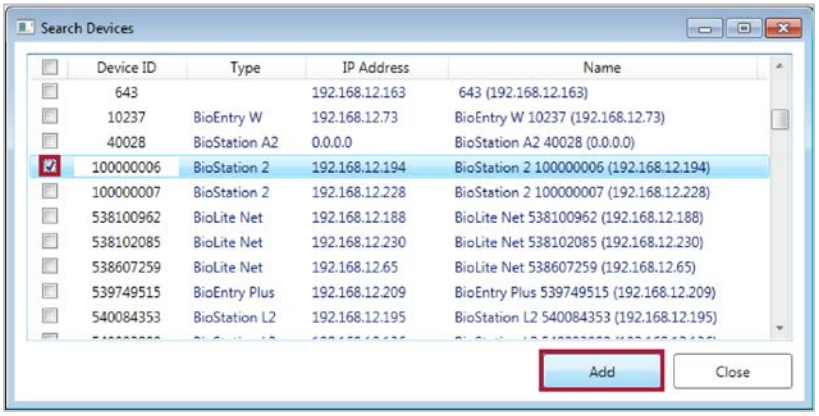
Setting the biometric device Wiegand Out

Biometric devices and AEpus Controller are connected by a Wiegand protocol.

1 Run **BioStar Integration Manager** and click **Search**.



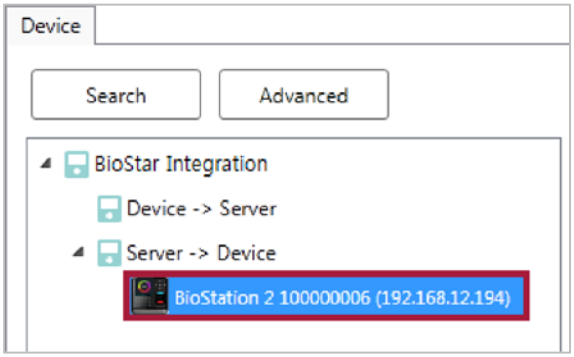
2 Select the device for connecting to BioStar Integration Manager and then click **Add**.



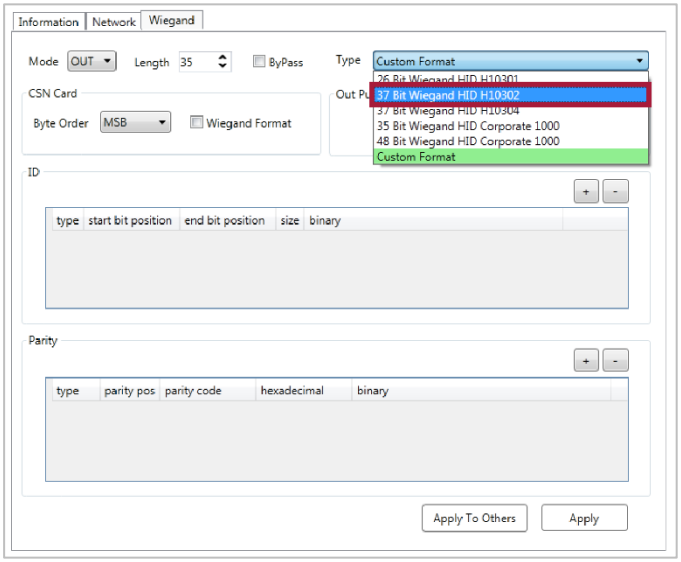
NOTE

- This document explains BioStation 2 as an example, and it is possible to connect with BioStation A2, BioStation L2, and BioEntry W2.

3 Select a device on BioStar Integration panel.



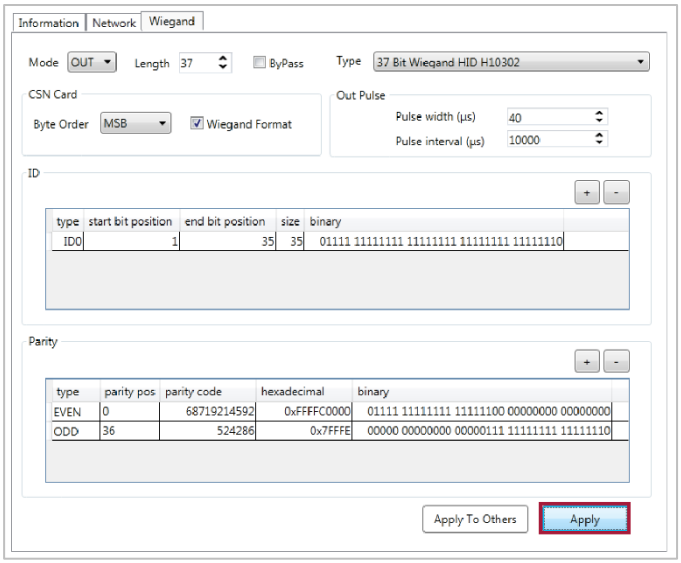
4 In Wiegand tab, select a Wiegand format of the default list or create a new custom Wiegand format.



NOTE

- Set the Wiegand format according to the Wiegand type you want to use. This document provides an example with 37 Bit Wiegand.
- If you want to use CSN Card to Wiegand Type, click the **Wiegand Format** checkbox at CSN Card frame.

5 Click **Apply**.



AEOS

Generating a new certificate

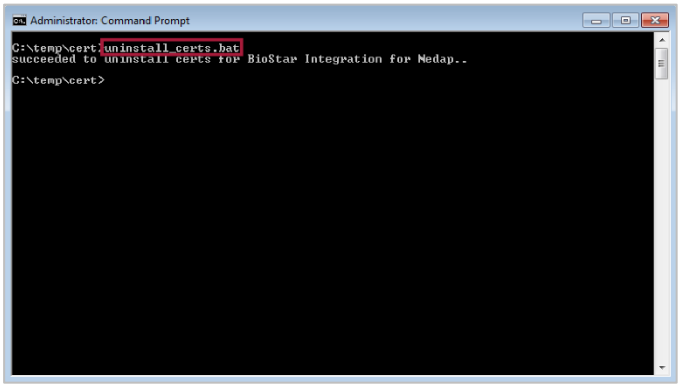
AEOS and BioStar Integration for Nedap require a certificate because they are linked in HTTPS protocol. You can use the certificate provided by BioStar Integration for Nedap, or you can generate a new certificate using the desired domain name and IP address. This section describes how to generate a new certificate.

1 Move the entire certificate script files to the desired working directory.

NOTE

- The path of the BioStar Integration certificate script files is as follows: **C:\Program Files (x86)\Suprema\BioStarIntegration\cert**

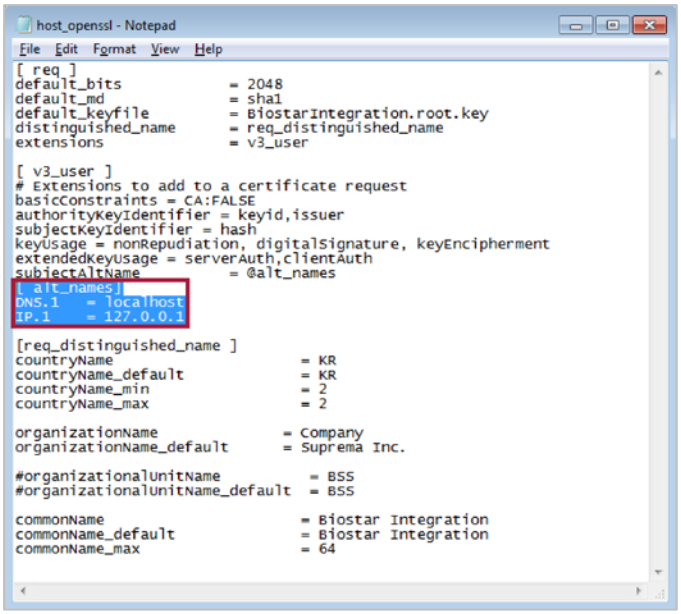
2 Run the command prompt (cmd) and then enter **uninstall_certs.bat**.



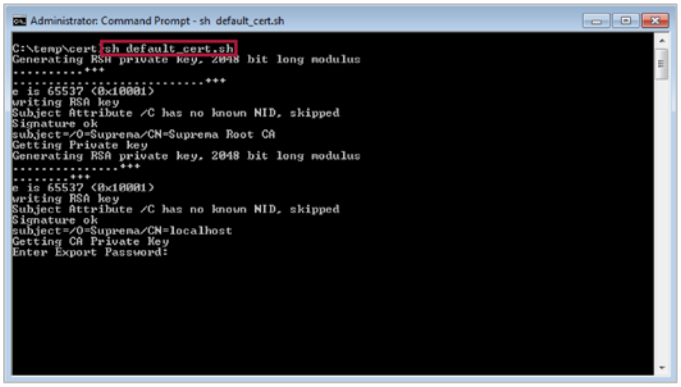
3 Delete the default certificate files (BioStarIntegration.root, BioStarIntegration.user) from the working directory.

4 Open the **host_openssl** file.

5 Modify the domain name and IP address, and then save the file.



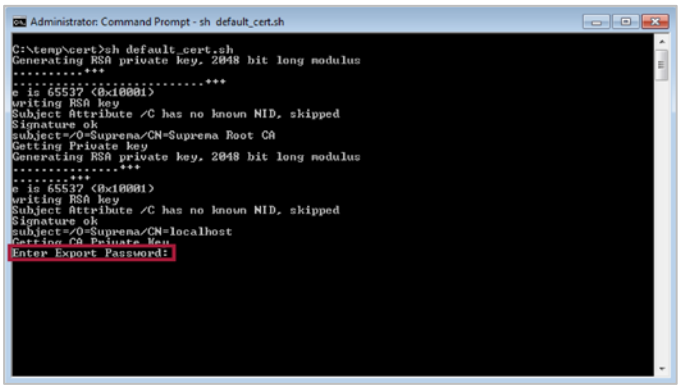
6 Run the command prompt and then enter **default_cert.sh**.



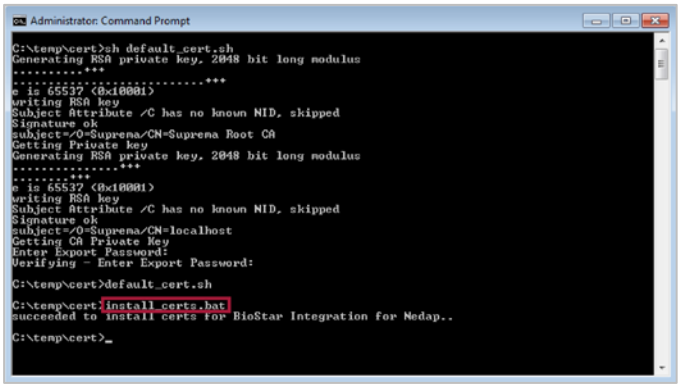
NOTE

- **default_cert.sh** is a script that can be run without any extra parameters.
- **default_cert.sh** is a bash shell script. To run this script, **win-bash** must be installed on your PC. Install **win-bash** and then add the install path to the System PATH variable in Windows.

7 Set the export password for the new certificate to **suprema123**. The new certificate file will be generated at the working directory.



8 Enter **Install_cert.bat** at the command prompt to install the new certificate.

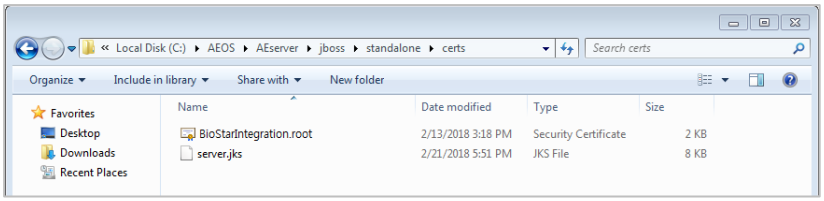


9 Move the new certificate file (BioStarIntegration.root) to the AEOS certificate directory.

Importing the trustCAcert to AEOS keystore

AEOS and BioStar Integration for Nedap require a certificate because they are linked in HTTPS protocol. You can use the certificate provided by BioStar Integration for Nedap, or you can generate a new certificate using the desired domain name and IP address. This section describes how to import the certificate provided by BioStar Integration for Nedap.

1 Move the BioStar Integration root certificate file (BioStarIntegration.root) to the AEOS certificate directory.



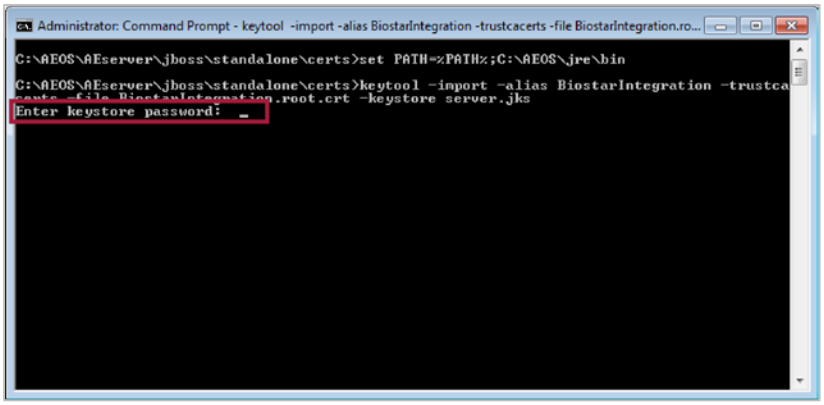
NOTE

- The path of the BioStar Integration root certificate file is as follows: **C:\Program Files (x86)\Suprema\BioStarIntegration\cert**

2 Open **server.jks** file in the AEOS certificate directory.

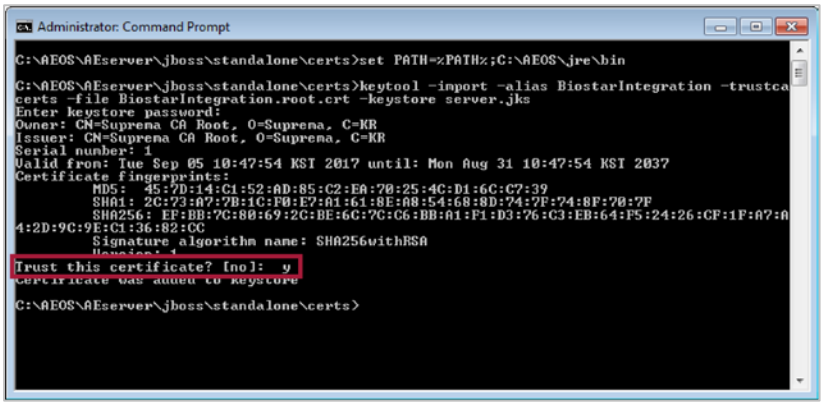
3 Enter the password as shown below.

- Keystore password: **nedap123**



4 Answer the following a question.

- Trust this certificate? [no]: **y**

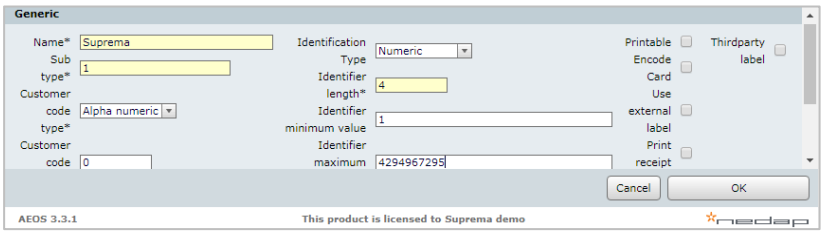


Enrolling Identifier Type to AEOS

1 Run **AEOS** and click **Administration** > **Maintenance** > **Identifiers** > **Identifier types**.

2 Select the identifier type **Generic** and then click **New**.

3 Enter the identifier type information and then **OK**.



Setting AEOS for BioStar Integration

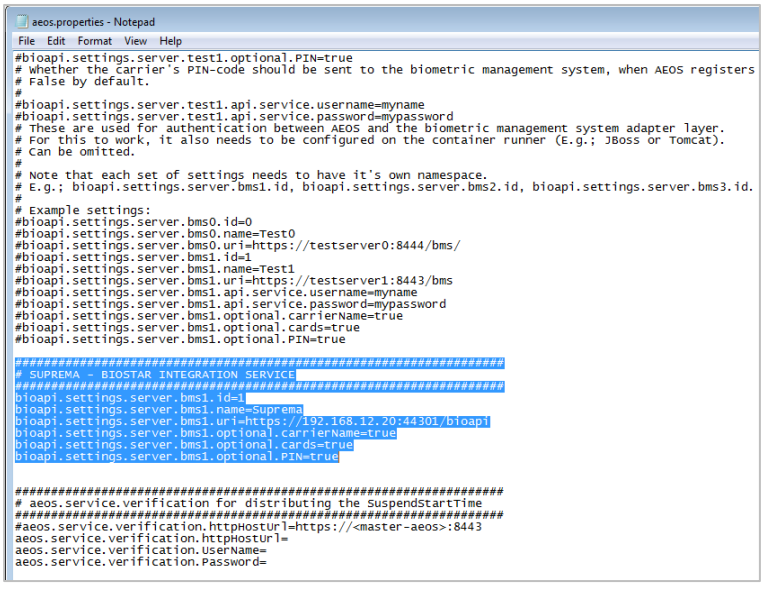
To launch the fingerprint enrollment page in AEOS platform, you must configure BioStar Integration for Nedap in AEOS.

1 Open the **AEOS** folder and click **AEserver** > **jboss** > **standalone** > **configuration**.

2 Open **aeos.properties** file.

3 Set the Suprema Identifier type and the BioStar Integration web server URL as shown below.

- bioapi.settings.server.bms1.id = 1
- bioapi.settings.server.bms1.name=Suprema
- bioapi.settings.server.bms1.uri=https://192.168.12.20:44301/bioapi
- bioapi.settings.server.bms1.optional.carrierName = true
- bioapi.settings.server.bms1.optional.cards=true
- bioapi.settings.server.bms1.optional.PIN=true



NOTE

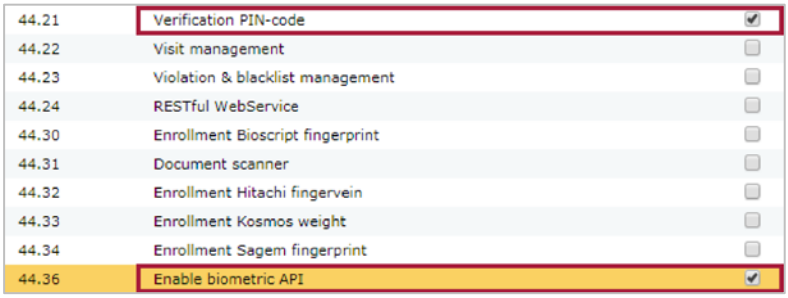
- If you are using AEOS 3.3.2 or later, please make the following additional settings for added security:
  - bioapi.settings.server.bms1.Content-Security-Policy=default-src 'self' **https://127.0.0.1:44301 https://127.0.0.1:44301/WECClient** 'unsafe-inline' 'unsafe-eval'; script-src 'self' **https://127.0.0.1:44301 https://127.0.0.1:44301/WECClient https://127.0.0.1:44301/bioapi/cmdfingers/scan** 'unsafe-inline' 'unsafe-eval'; object-src 'self' **https://127.0.0.1:44301 https://127.0.0.1:44301/WECClient** 'unsafe-inline' 'unsafe-eval'; img-src 'self' data

Configuring AEOS for BioStar Integration

You can configure BioStar Integration on the Administration menu.

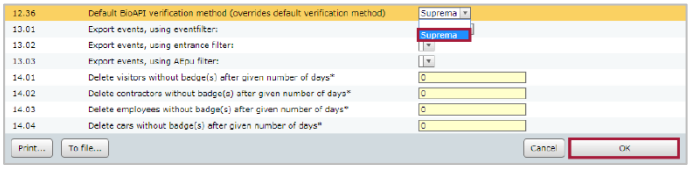
1 Run **AEOS** and click **Administration** > **Maintenance** > **Settings** > **System Properties**.

2 Click **Verification PIN-code** and **Enable biometric API**.



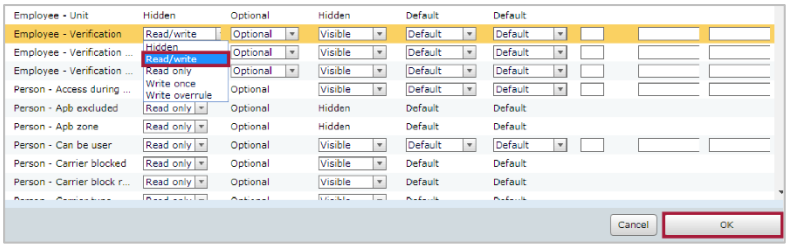
3 Select the biometric server name for the default identifier type.

4 Select the biometric server name for the default verification type, then click **OK**.

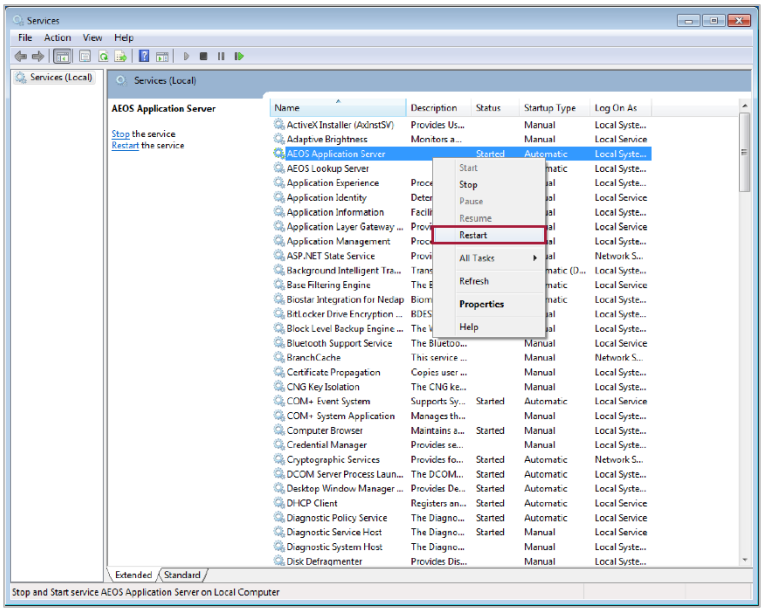


5 Click **Management** > **Maintain user role** and select **Administrator**.

6 Set **Employee - Verification** to **Read / Write** and click **OK**.



7 Restart AEOS Application Server.

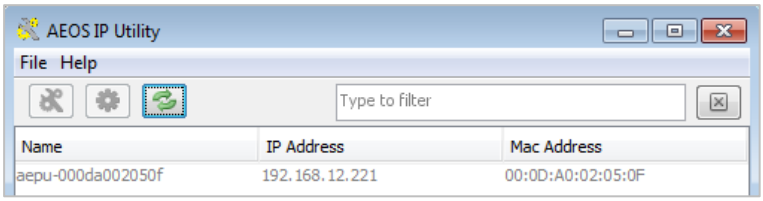


AEpus Controller

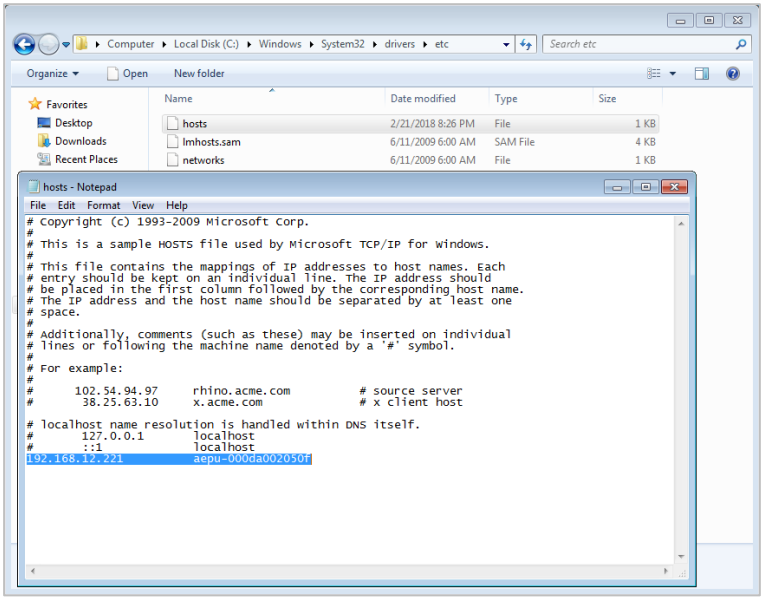
The AEpus Controller matches information that read from the device with user information and controls the door. This section describes how to connect the AEpus Controller to the AEOS and set the Identifier type.

Detecting AEpus on AEOS

1 Open **AEOS IP Utility** on AEOS folder and check the AEpu host name.



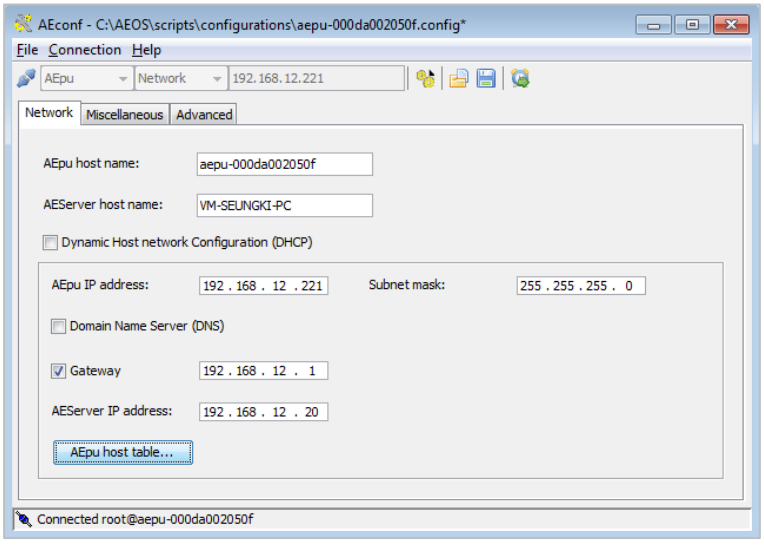
2 Enroll AEpu host name on hosts for IP mapping.



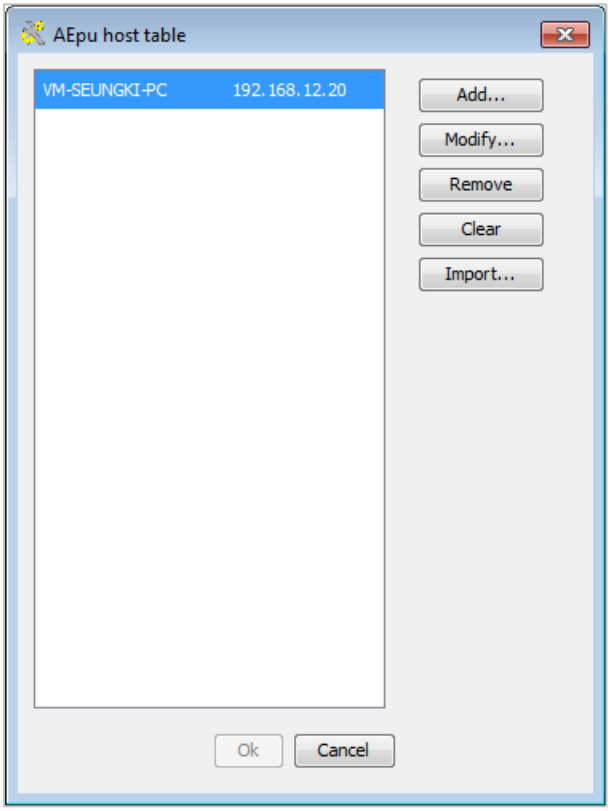
NOTE

- The path of the **hosts** file is as follows: **C:\Windows\System32\drivers\etc**.

3 Run **AEconf** and click **AEpu host table...**.



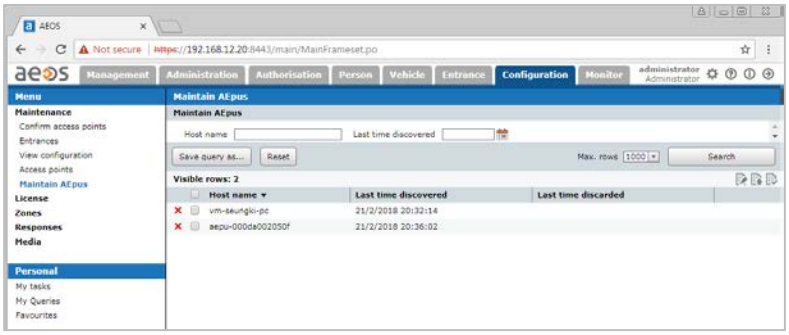
4 Select the host and click **OK**.



5 Click and to save and set AEpu IP settings.

6 Click to synchronize the time of the AEpu from NTP server.

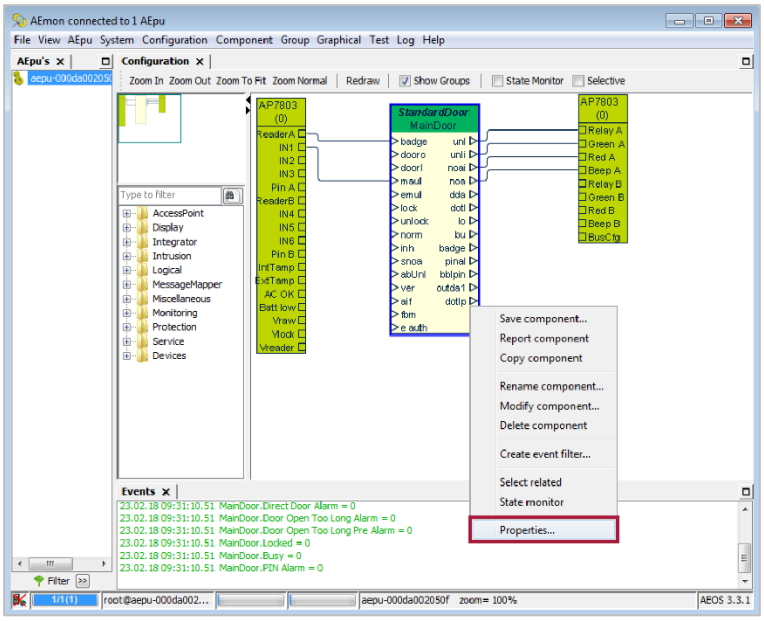
7 Connect to AEOS and check if AEpus is connected.



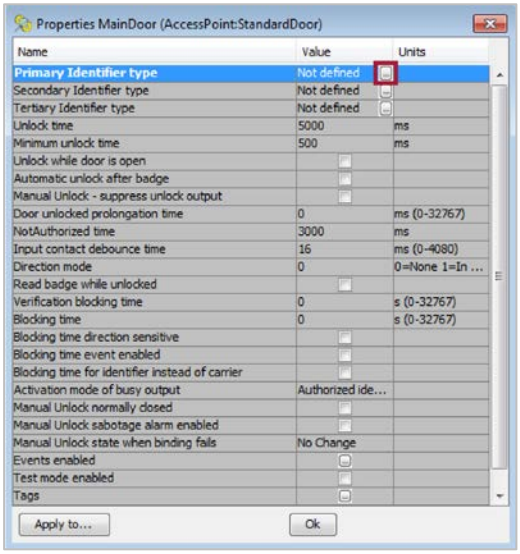
Setting Identifier Type on AEpu Controller

1 Run **AEmon connected to 1 AEpu** and select aepu controller.

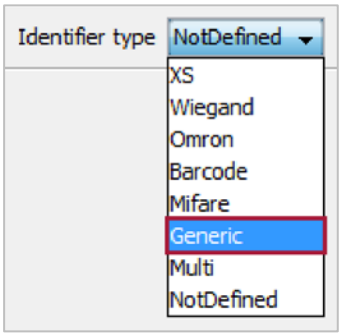
2 Right-click on **MainDoor** and then select **Properties...**.



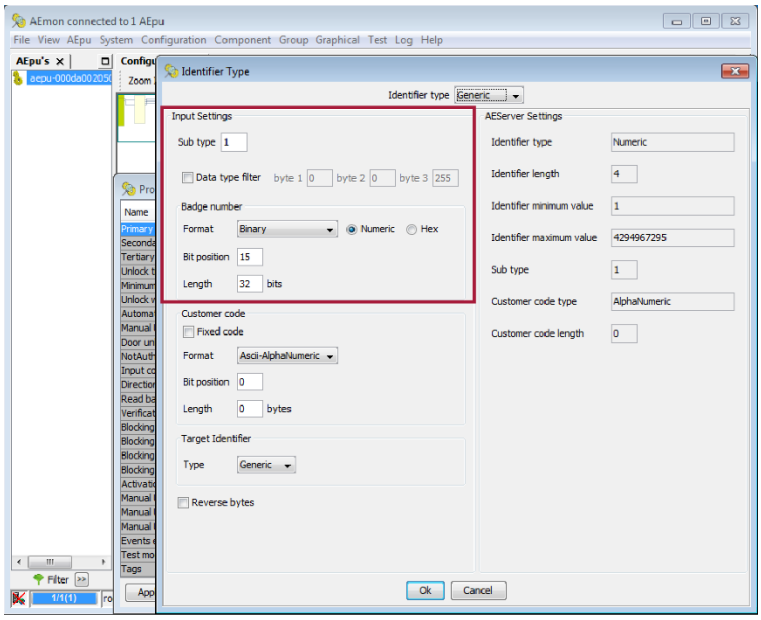
3 Click Icon to open the property editor for **Primary Identifier type**.



4 Select the identifier type **Generic** and then click **OK**.



5 Enter the **Sub type**, **Format**, **Bit position** and **Length** information and click **OK**.



NOTE

- The Identifier Type of the AEpu controller must be set the same as the Suprema Identifier Type set in AEOS.
  - Set **Sub type** to **1**.
  - Set **Length** to **32** bits (4 bytes).
  - Set **Bit position** to **15**.
- Contact Nedap for details on setting up AEpus Controller.

Fingerprint Enrollment

NOTE

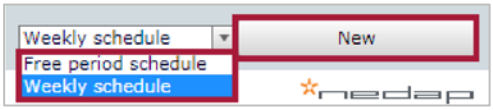
- In order to enroll fingerprints on AEOS, users to enroll fingerprints, entrances and time schedules must be set in AEOS. This document describes how to set these conditions. For more information, refer to the AEOS manual.

Adding a day and time schedule

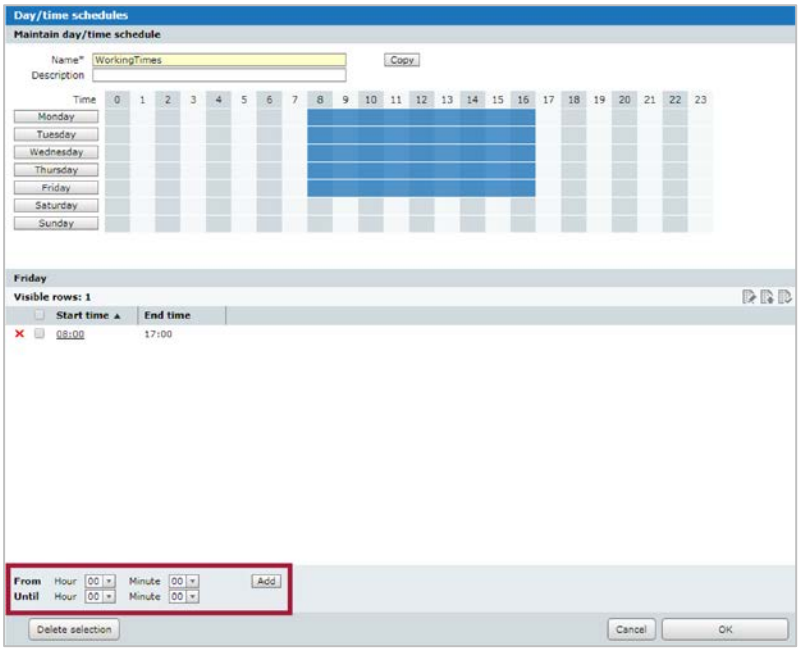
You can set the day and time schedule in AEOS. Schedules can be set by specifying **Weekly schedule** or **Free period schedule**. This section describes based on Weekly schedule.

1 Run **AEOS** and click **Authorization** > **Day/time schedules**.

2 Select **Weekly schedule** or **Free period schedule** and click **New**.



3 Enter information of the schedule then select days of the week to be set, specify the start time and end time, and click **Add**.



4 Click **OK** to complete the schedule creation.

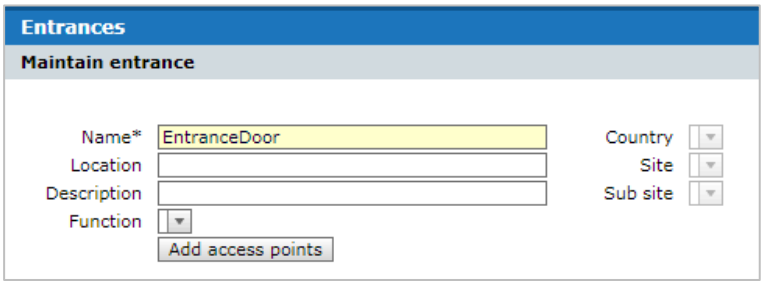
Adding a new entrance

You can add new entrances on the configuration menu.

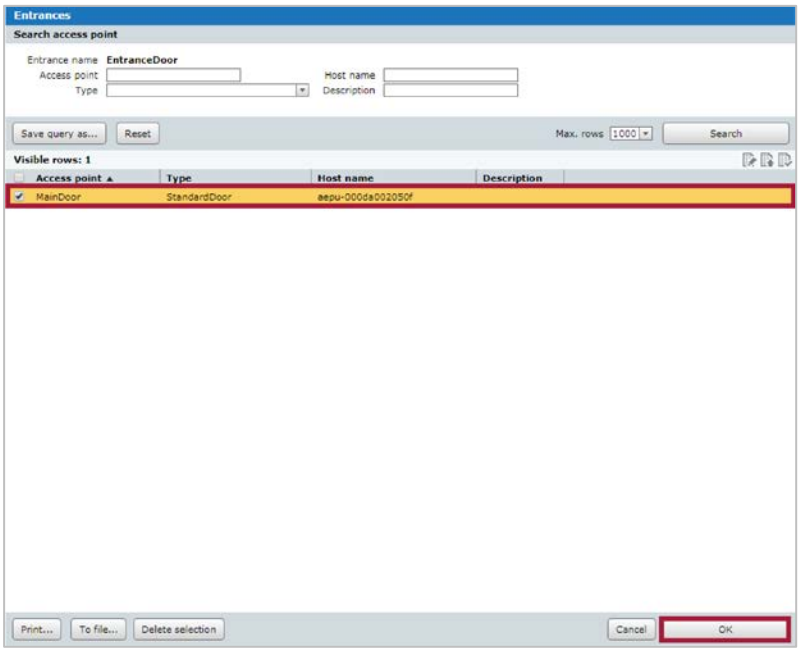
1 Run **AEOS** and click **Configuration** > **Entrance**.

2 Click **New** to add a new Entrance.

3 Enter information of the entrance then click **Add access points**.



4 Select the access point and click **OK**.



5 Click **OK** to complete adding entrance.

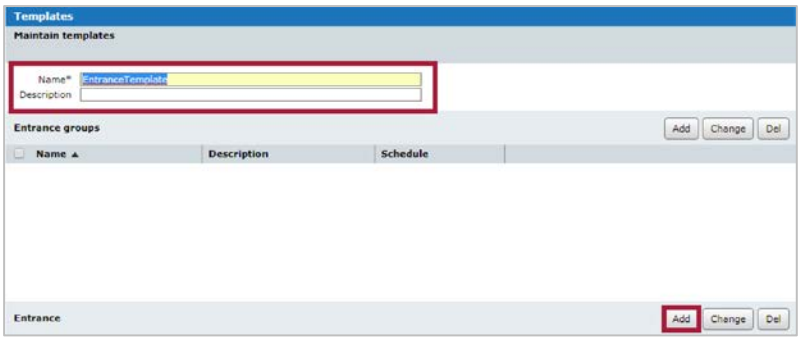
Adding an entrance template

You can manage the entrance template on the Authorization menu. This section describes how to add an entrance.

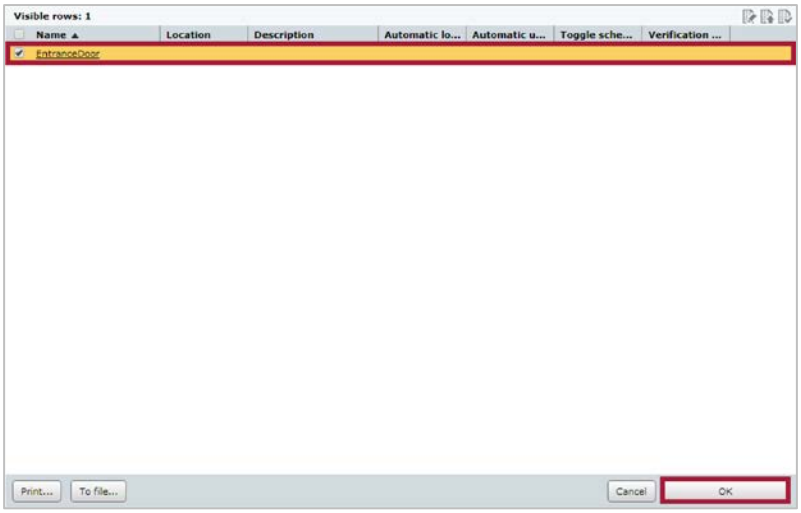
1 Run **AEOS** and click **Authorization** > **Templates**.

2 Click **New** to create an entrance template.

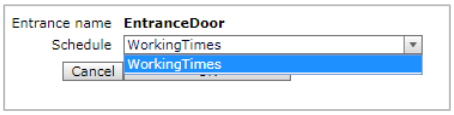
3 Enter information of the entrance template then click **Add** in **Entrance** part.



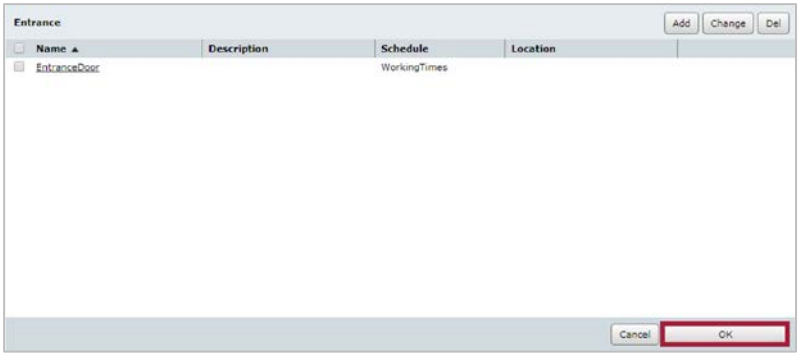
4 Select the entrance and click **OK**.



5 Select the schedule for entrance template and click **OK**.



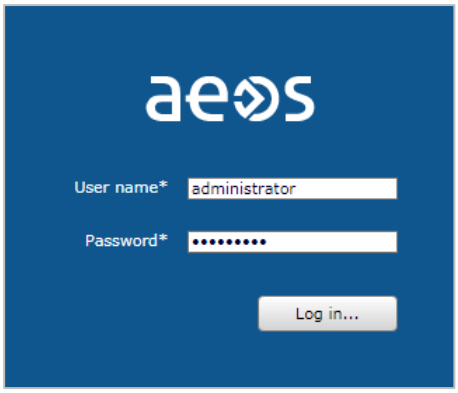
6 Click **OK** to complete creating an entrance template.



Enrolling a fingerprint

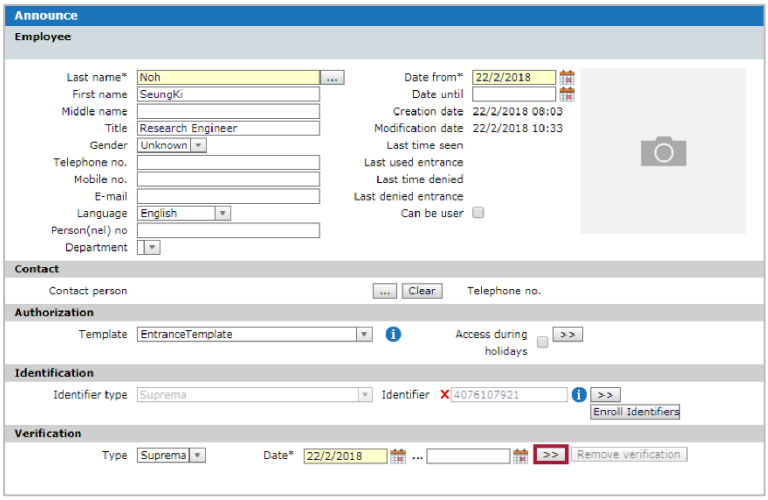
Once you have configured BioStar Integration for Nedap, you can enroll and manage fingerprints of user on the AEOS platform.

1 Run **AEOS** and then log in as an administrator account.

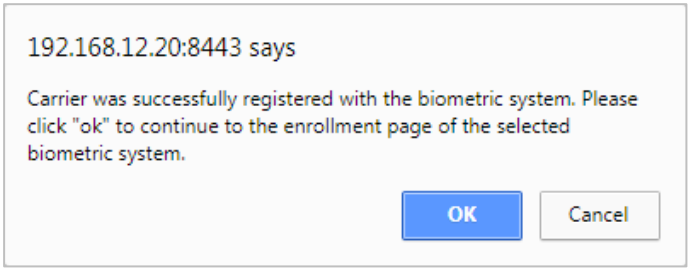


2 Click **Person** > **Announce**.

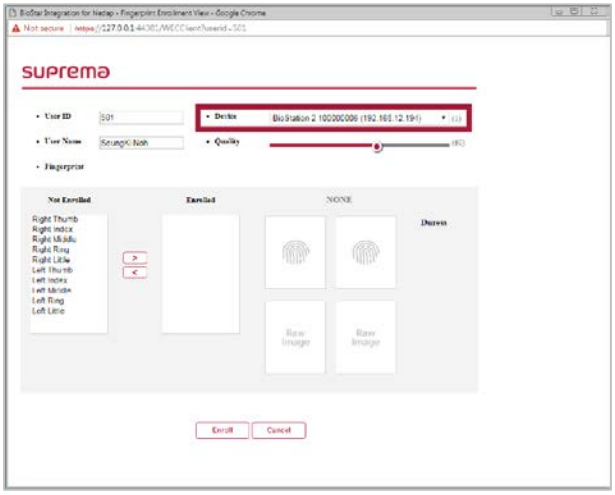
3 Enter the information of the employee to enroll the fingerprint and set **Contact**, **Authorization**, **Identification** and **Verification**, then click >>.



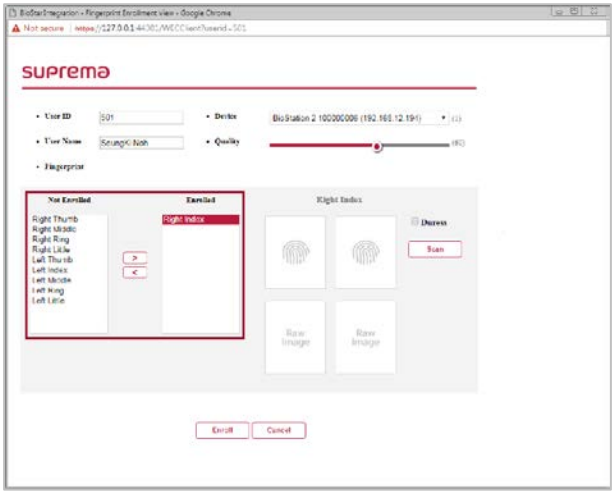
4 When the pop up window appears, read the notice and click **OK**.



5 Select the device to enroll the fingerprint.



6 Select the finger to enroll the fingerprint in the **Not Enrolled** list and click [>]. When the selected item appears in the **Enrolled** list, press **Scan**.



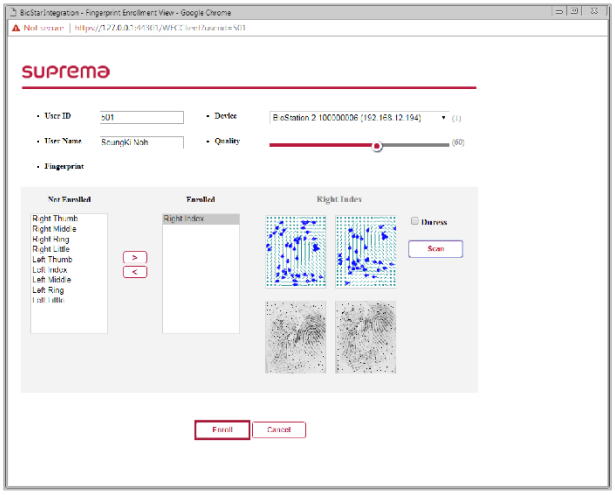
7 When a message saying "Please place the finger on the sensor." is displayed on the page, place the finger with the fingerprint you wish to enroll on the fingerprint authentication unit of the device and press the finger gently for better authentication.

8 When the re-input screen is displayed on the device after a beep sound, scan the fingerprint of the enrolled finger again (scan the fingerprint of a finger to be enrolled twice).

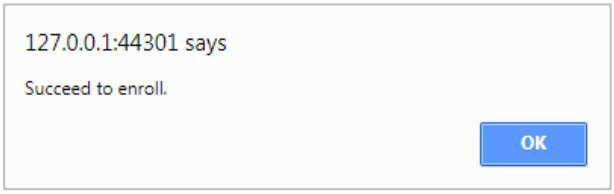
NOTE

- For more information on fingerprint enrollment, refer to the manual for the Suprema biometric device.

9 When the scan is complete, click **Enroll**.



10 When the pop up window appears, read the notice and click **OK**.



NOTE

- To delete an enrolled fingerprint: In the **Enrolled** frame, select the fingerprint you want to delete and click < . When you click the **Enroll**, the fingerprint will be deleted.

Troubleshooting

When BioStar Integration for Nedap web service does not work normally

- Make sure the database (BioStarIntegration.sqlite) is in the correct path. If the database has been deleted, delete **BioStarIntegration.DbServerConfig.ini** file and rerun the server to create a new database.
- Check the version of OpenSSL installed. OpenSSL version 1.0.2l or later that supports the TLS 1.2 protocol must be installed.

When the device can not connected to BioStar Integration for Nedap web service

- If you have BioStar 2 installed on your PC, make sure the BioStar 2 server is running. The device can be connected to the BioStar 2 server first when the window is restarted. If possible, use BioStar 2 and BioStar Integration for Nedap on different PCs.

Appendices

- Identifier type of Identification is supported only for NedapTest, test type, Suprema, CSN, Secure, Access, and Wiegand. Supported Identifier types can be updated at a later date.

- If you delete the **BioStar Integration.DbServerConfig.ini** configuration file, a new database will be created.

- The path of the configuration file is shown below.
  - Configuration file: (C:\Windows\ BioStar Integration.DbServerConfig.ini, BioStar Integration.WebServerConfig.ini)
  - Database: (C:\ProgramData\Suprema\BioStarIntegration\db\BioStarIntegration.sqlite)

- Configuration files and databases are not deleted through the Uninstaller of BioStar Integration for Nedap.

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