



INTOACCESS  
THE INTEGRATORS



# Net2AFASyncServer

Manual 1.5

(March 27, 2024)

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## Principle

The principle of the synchronization software is as follows:

In AFAS a 'connector' is defined, which exposes user information for external use. Which user attributes will be available, can be freely defined, but the following set of attributes are useful within the context of an access control system: First name, Surname, Start validity, End validity, card/fob number. If needed this can be extended with Department, Access level, PIN and flags that indicate if someone must be (temporarily) blocked, if this person is allowed to switch the alarm and if this person falls under the anti-passback rules.

The Net2AFASSyncServer software will (after configuration) fetch the user data periodically from AFAS and make sure that when needed, these users will also be created in Net2. Also any changes that take place in AFAS (like an employment that has ended) will be written to Net2 during the next cycle. This takes away the need to maintain users in both AFAS and Net2, but have Net2 follow automatically.



## Installation

The application can be installed using a single setup file: Net2AFASSyncServer.msi

It is not mandatory to install the software on the Net2 server, but we advise you to do so in order to have the most robust configuration.

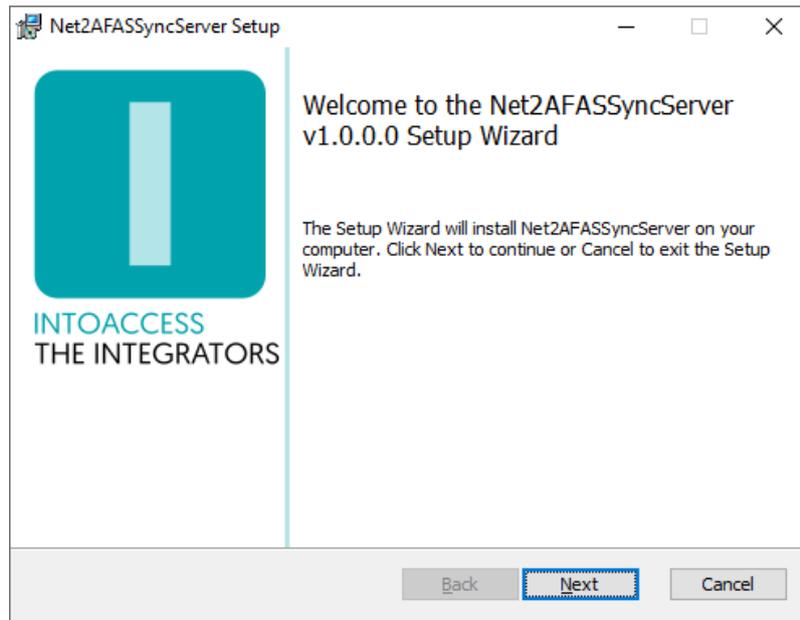


Image 1

The first dialog window will display what application version you will install. Note: the version number you see will most likely be different from the one displayed in Image 1.

### Updates

Although a newer version should automatically replace any older version that may be present, you can choose to uninstall the existing version first. The configuration settings are not removed during this process, so after installing the new version, you do not have to configure everything all over again.



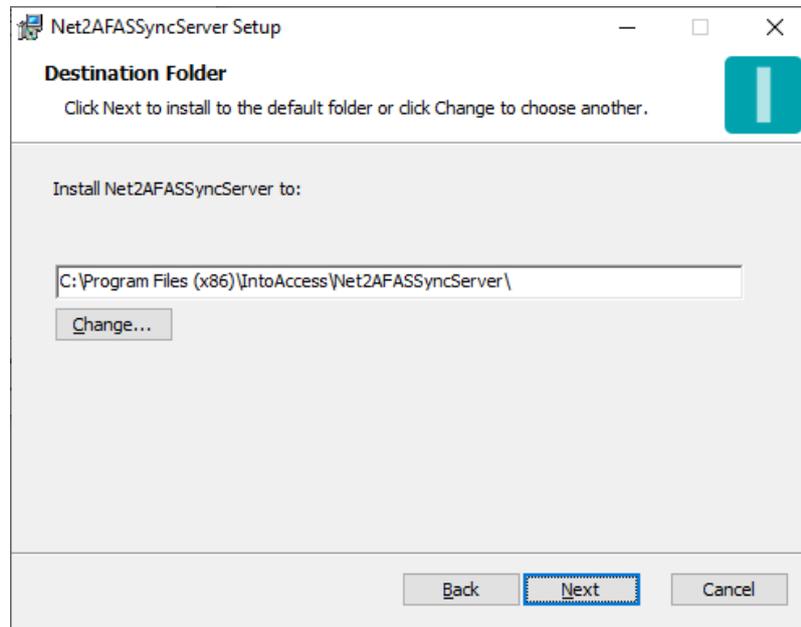


Image 2

The second dialog window shows where the application will be installed. The default value is typically fine.

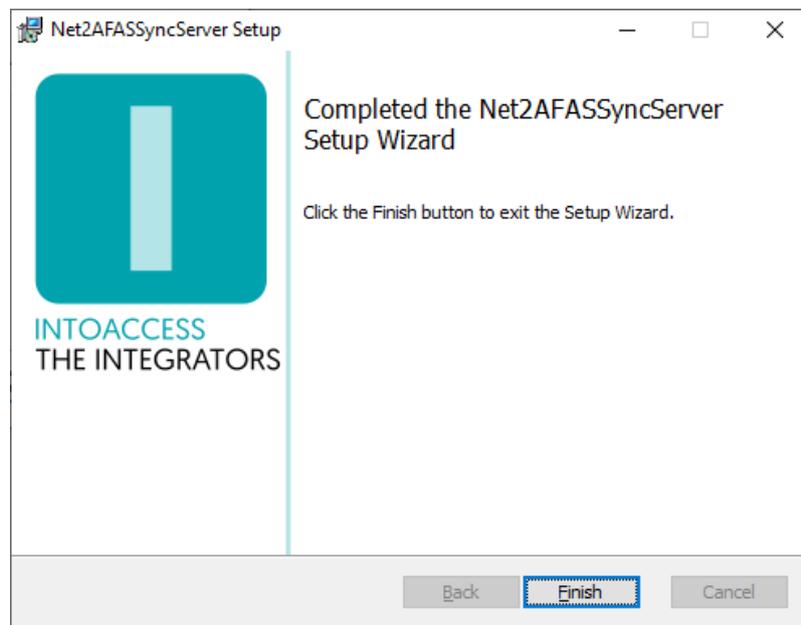


Image 3

The final dialog window will indicate whether the installation was successful.



## Configuration

To help with the configuration, the *Net2AFASSyncServer Manager* application is available and allows you to configure how the application should connect to Net2 and AFAS. You can also use it to (among others) to define the relation between AFAS and Net2 user attributes and what the default values need to be if any attributes are not supplied.

When the manager application is started, a splash screen is displayed for a short period. After that, the application will minimize to a 'tray icon' in the bottom right corner of the screen.



Image 4

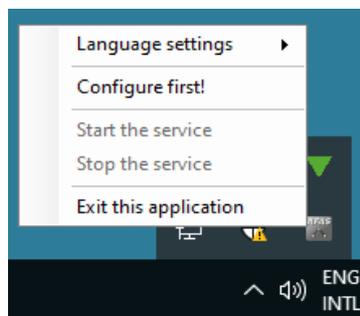


Image 5



Image 6

By right clicking on the tray icon, the following pop-up menu will appear (providing it is not opened already):

- Language settings: Pick your language;
- Configure (first): Start application configuration;
- Start the service: Start the service (allowed after configuration);
- Stop the service: Stop the service (allowed after configuration);
- Exit this application: Exit/stop the manager application;



The color of the tray icon is indicative of the service state. When the service is not running, its color is gray. The icon gets colored when the service is running.



## Net2 connection

The first configuration page is for configuring the Net2 connection. When you start the configuration for the first time, this will require a few steps, but after the settings are saved, the next time it will connect automatically.

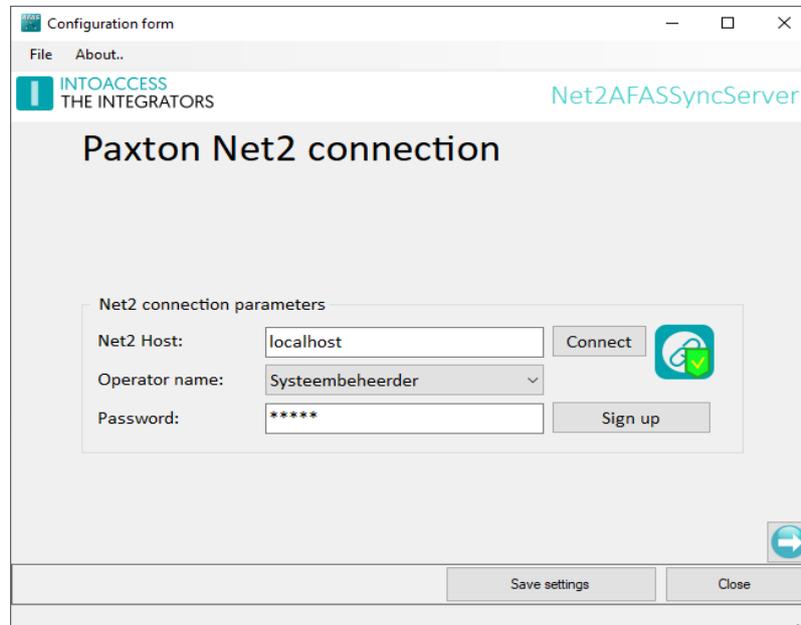


Image 7

- Enter the (ip)address of the Net2 server. If you have installed the attendance tool on the Net2 server, you can use the default 'localhost' value. Do not use an external adapter ip address in this case!!;
- Click the Connect button; the application now tries to fetch the Net2 operators.(these users you can find under “Net2 operators” of the standard Net2 application);
- Select an operator with which the application should log on. It is required that this user has the “System Engineer” role;
- Enter the proper password;
- Click the Sign up button.

If all goes well, a message will appear that the connection was successful and the right hand arrow will change from gray to colored.



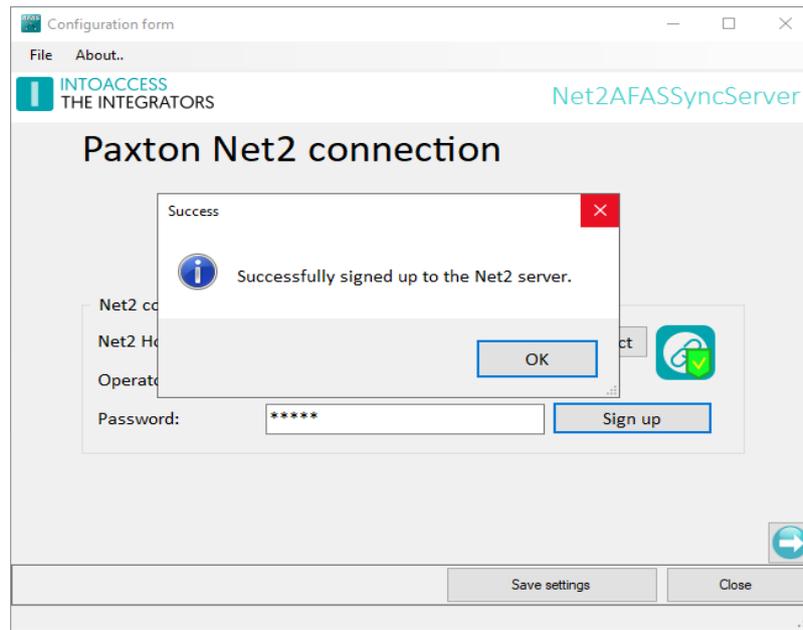


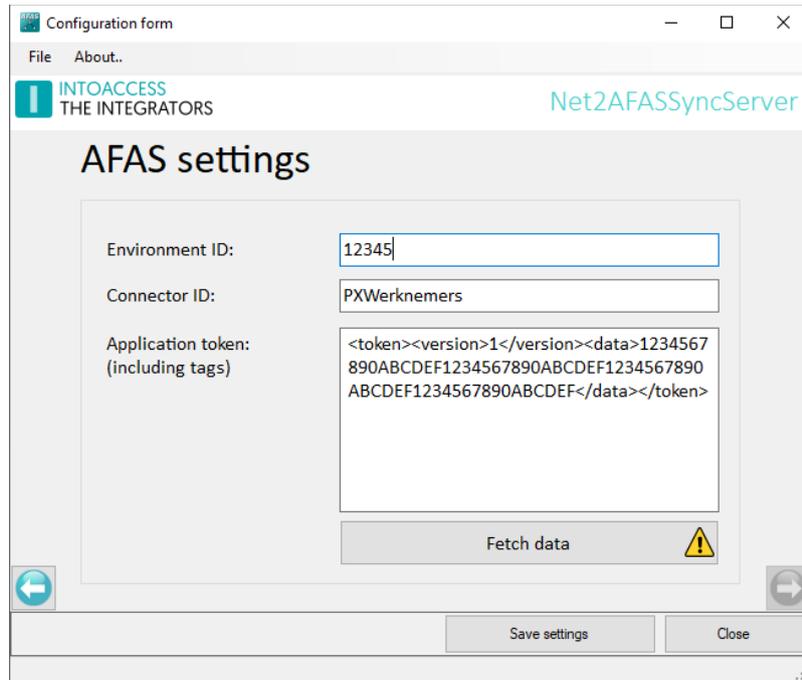
Image 8

After closing the success message, you can proceed to the next configuration window, by clicking on the right hand arrow.



## AFAS settings

This configuration page allows you to define how must be connected to AFAS. For that you will need an environment ID, a connector ID and an application token.



The screenshot shows a window titled 'Configuration form' with a menu bar containing 'File' and 'About..'. The window header includes the INTOACCESS logo and 'THE INTEGRATORS' on the left, and 'Net2AFASSyncServer' on the right. The main content area is titled 'AFAS settings' and contains three input fields: 'Environment ID' with the value '12345', 'Connector ID' with the value 'PXWerknemers', and 'Application token: (including tags)' with a multi-line XML-style token: '<token><version>1</version><data>1234567890ABCDEF1234567890ABCDEF1234567890ABCDEF</data></token>'. Below these fields is a 'Fetch data' button with a yellow warning icon. At the bottom of the window are 'Save settings' and 'Close' buttons.

Image 9

When all values have been entered, you can press the “Fetch data” button to test if it actually works. With a positive result, a pop-up dialog will show how many users were found with how many different user field properties.

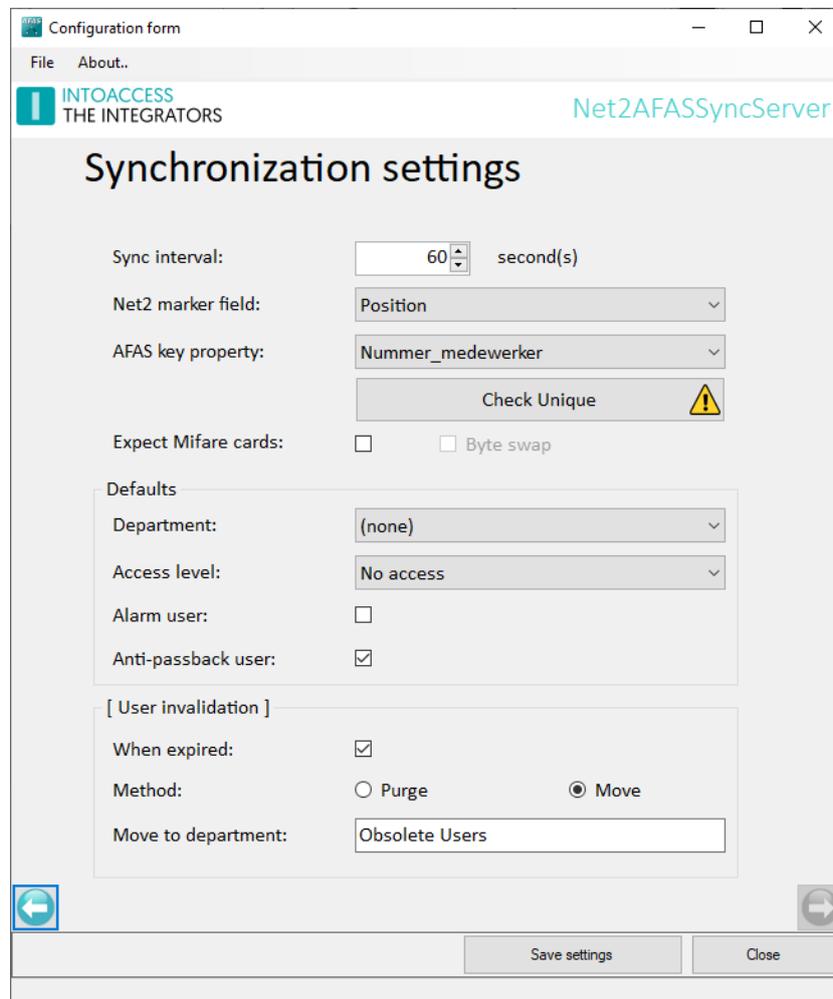
These AFAS user fields (properties/attributes) will be visible in one of the next configuration pages, where they can be linked to Net2 user fields. That is the reason why it is mandatory to fetch the data first, before being allowed to continue to the next page.

Note that since V1.5, it is possible to configure multiple connector IDs, by separating them with a comma. Beware however, that that the data format for each connector must be identical (or at least have the same mandatory attributes).



## Synchronization settings

On this configuration page you can define, besides the special field definitions, the behavior of the synchronization application.



The screenshot shows a window titled "Configuration form" for "Net2AFASSyncServer". The window contains the following settings:

- Sync interval:** 60 second(s)
- Net2 marker field:** Position
- AFAS key property:** Nummer\_medewerker
- Check Unique:** A button with a warning icon.
- Expect Mifare cards:**   Byte swap
- Defaults:**
  - Department:** (none)
  - Access level:** No access
  - Alarm user:**
  - Anti-passback user:**
- [ User invalidation ]:**
  - When expired:**
  - Method:**  Purge  Move
  - Move to department:** Obsolete Users

At the bottom of the window are buttons for "Save settings" and "Close".

Image 10

- **Sync interval:** the minimum interval in seconds, between two subsequent synchronization cycles. Note that this (also) defines how often data is read from AFAS, on which AFAS has possibly placed some limitations to prevent overloading their servers.
- **Net2 marker field:** The Net2 marker field is user to write the special value "AFAS\_SYNC" to, which is used to keep synchronized users apart from any other Net2 users (that may or may not exist).
- **AFAS key property:** The AFAS user field/property that holds a value that uniquely identifies users. By clicking on the "Check Unique" button, you can (must) verify this.





- **Expect Mifare cards:** When this option is selected, the application will expect AFAS card numbers in the form of a hexadecimal card UID value. For the Mifare Classic, that is an 8 character (4 byte) string and for Desfire 14 characters (7 bytes). By selecting the **Byte swap** option, you can furthermore configure that the AFAS UID bytes sequence is in the reverse order of how Net2 will read it. *Beware: the use of Mifare cards in combination with Net2, requires a conversion at which some information is lost. This introduces the possibility that different Mifare cards end up as the same Net2 card number. This will cause a conflict (card already issued) which can only be resolved by changing the conflicting card for another one..*
- **Department:** The default Net2 department in which AFAS users will be placed, in case this value is not provided from AFAS as a user field. *Note: if the department is provided by AFAS, you have to create it yourself in Net2.*
- **Access level:** The default Net2 access level to assign to AFAS users, if this value is not provided by AFAS in a user field. *Note: if the access level is provided by AFAS, you will have to create it yourself in Net2.*
- **Alarm user:** The default flag value if a synchronized AFAS user is allowed to switch the alarm system in Net2, if this is not provided by AFAS in a user field.
- **Anti-passback user:** The default flag value if a synchronized AFAS user falls under the anti-passback rules in Net2, if this is not provided by AFAS in a user field.
- **Invalidate when expired:** Whether an AFAS user must be invalidated in Net2 (explanation will follow), when its end of validity date has passed.
- **Invalidation method:** Whether an invalidated AFAS user must be removed from Net2 or moved to a special department (user folder). If removal is chosen, these users will disappear completely from Net2, including their historical logs. If you opt to move them, the user logs will remain.
- **Move to department:** When you choose to move invalidated users, this is the Net2 department where they be moved to. If this department does not exist (yet), it will be automatically created.



## AFAS-Net2 field mapping

On this configuration page, you can define which AFAS user field will map onto which Net2 user field. There are two mandatory mappings (before you can continue to the next page): A mapping to the Net2 surname and a mapping from the AFAS key field (as selected on the previous page).

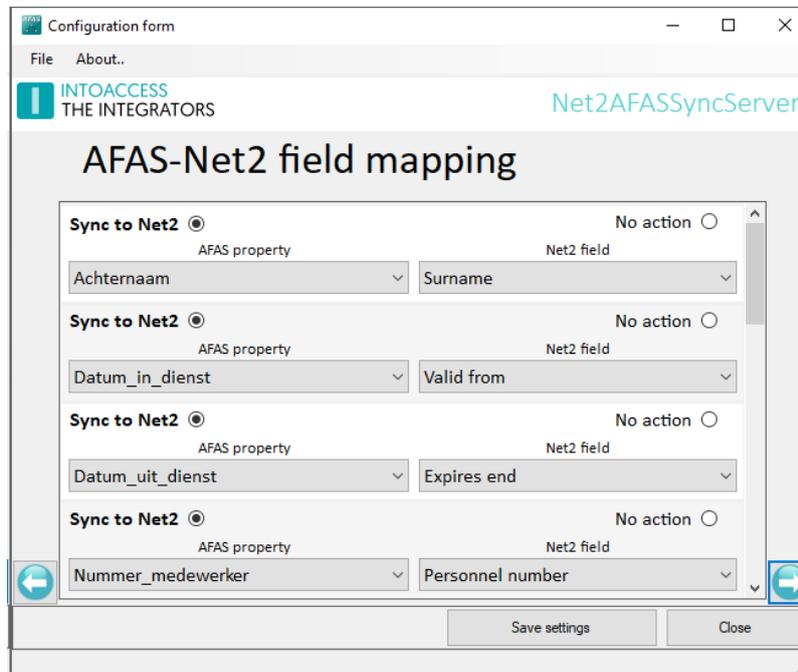


Image 11

To create a mapping, first select 'Sync to Net2'. After that you can pick an unmapped AFAS and Net2 field.

To remove a mapping, select 'No action'.

If you map an AFAS field to a Net2 licence plate, it is possible to synchronize multiple plate numbers from that same field, by using a comma, a semi-colon or pipe character as a separator. Beware of the fact that plate numbers must be between 2 and 8 characters in length.

## Evaluation of mapping

Since it is possible to make 'weird' mappings on the mapping page (like mapping a boolean AFAS field to a Net2 surname), this page offers an evaluation of mappings that may be somewhat dubious.

The application forces you to perform the evaluation (before you can continue), but you are allowed to ignore any issues that it displays and continue regardless (at your own risk).

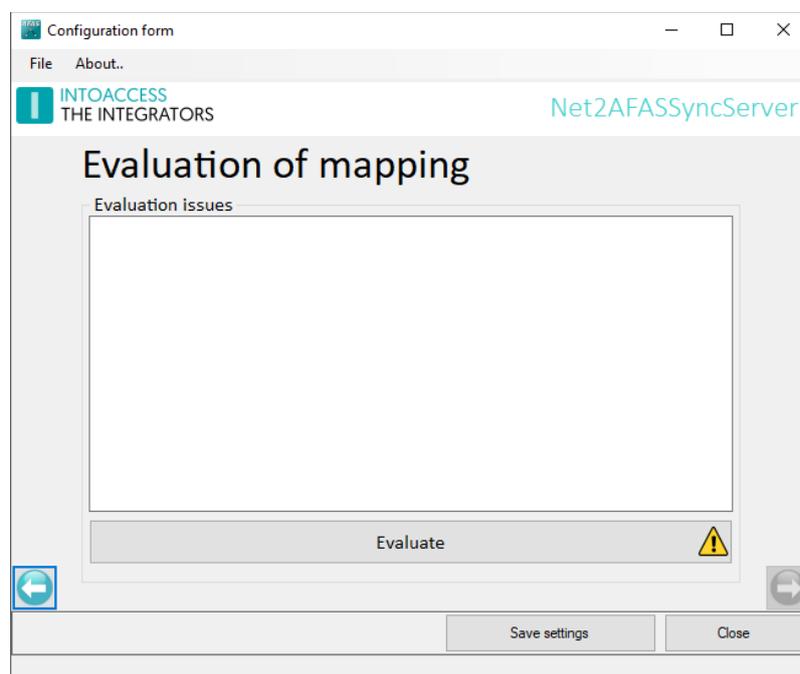


Image 12



## Email settings

The email configuration is optional and offers the possibility to send application messages to anyone that needs to take action if the system malfunctions.

### Webmail

To use web mail providers (like Gmail), it may be required to lower the security settings of the mail account.

### SMTP

The SMTP settings offer optional encryption/authentication. To use this, select port 587 first.

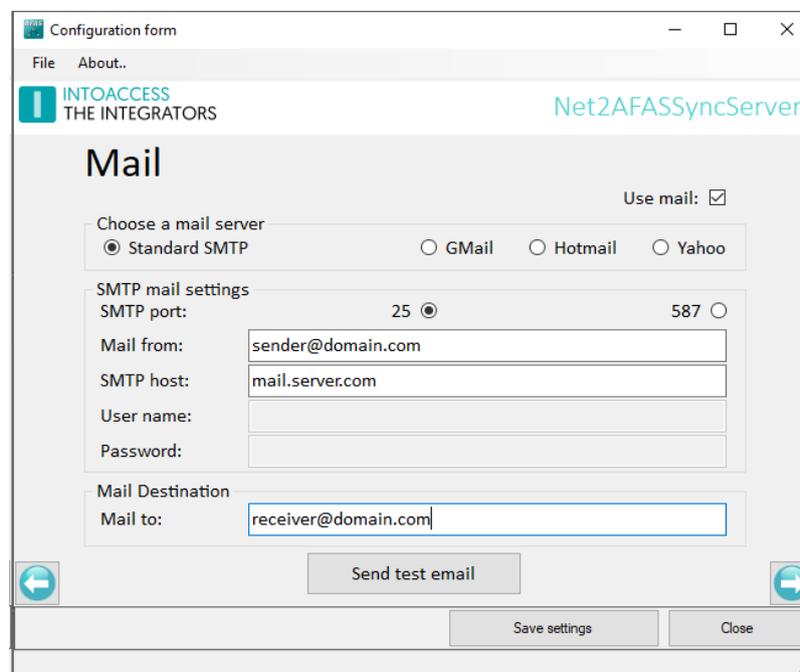


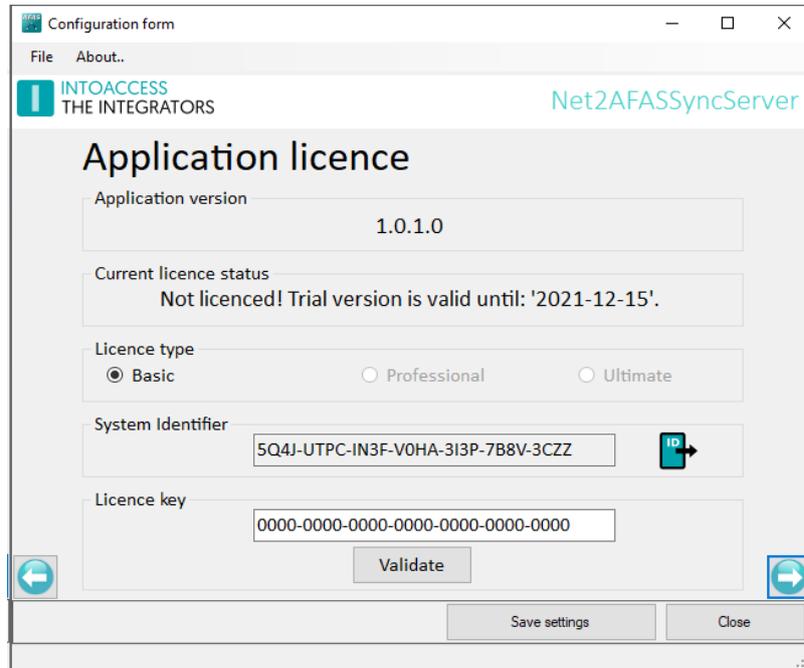
Image 13

To address multiple persons, additional email addresses can be added separated by a semi-colon (;).



## Application licence

The trial/test version as it can be downloaded from the IntoAccess website, is fully functional but will stop working after a certain date when it is not licensed.



The screenshot shows a window titled "Configuration form" for "Net2AFASyncServer". The window contains the following fields and controls:

- Application version:** 1.0.1.0
- Current licence status:** Not licenced! Trial version is valid until: '2021-12-15'.
- Licence type:** Radio buttons for  Basic,  Professional, and  Ultimate.
- System Identifier:** 5Q4J-UTPC-IN3F-V0HA-3I3P-7B8V-3CZZ. A small icon with "ID" and an arrow is to the right of the field.
- Licence key:** 0000-0000-0000-0000-0000-0000-0000. A "Validate" button is below the field.
- Navigation arrows (back and forward) are on the left and right sides of the form.
- Buttons for "Save settings" and "Close" are at the bottom right.

Image 14

After buying a license, you can export the "System identifier" file (click on the icon), email it to IntoAccess ([info@intoaccess.com](mailto:info@intoaccess.com)) and receive your license code.

*Note: the System identifier differs per PC and therefore also the required license code.*



## Service control

The service control window offers a way to stop and start the background service.

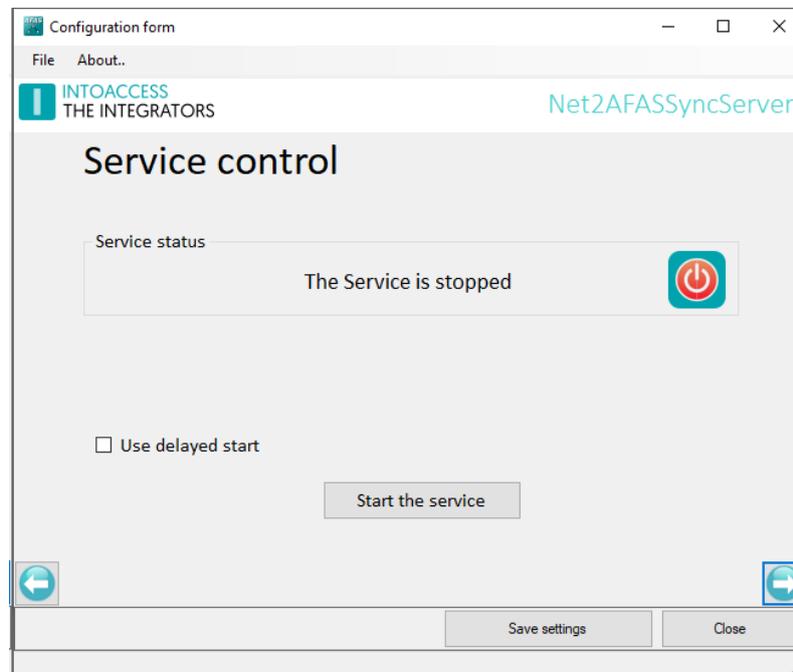


Image 15

Other ways to start and stop the service are:

- Using the tray icon pop-up menu;
- Using the Windows service manager (look for “Net2 AFAS Sync Server”);

By default, the Net2AFASSyncServer has a service dependency on Net2, in order to make sure that it will only start after Net2 is up and running. This dependency can cause problems with some Net2 configuration tools, that attempt to restart the Net2 service. Temporarily switching off the Net2JsonRestServer is typically enough to use the tools without issues. If this is inconvenient for you, you can select the Use delayed start option, which will remove the Net2 dependency and replace it by a ‘delayed’ service start. Note that you have to reboot the PC in order to have the service show up with a ‘delayed’ startup type in the Windows service manager.

Also note that this setting is only relevant when the service is running on the same PC as Net2.



## Logging settings

This page, see Error: Reference source not found, offers the possibility to review the last (max. 500) lines of the log file. The application will log its activity with a high level of detail. Especially when the application encounters an unexpected problem this log file might contain invaluable information, even for you as an end user

**Please have a look at the last lines of this file if the application refuses to start or otherwise behaves unexpectedly.**

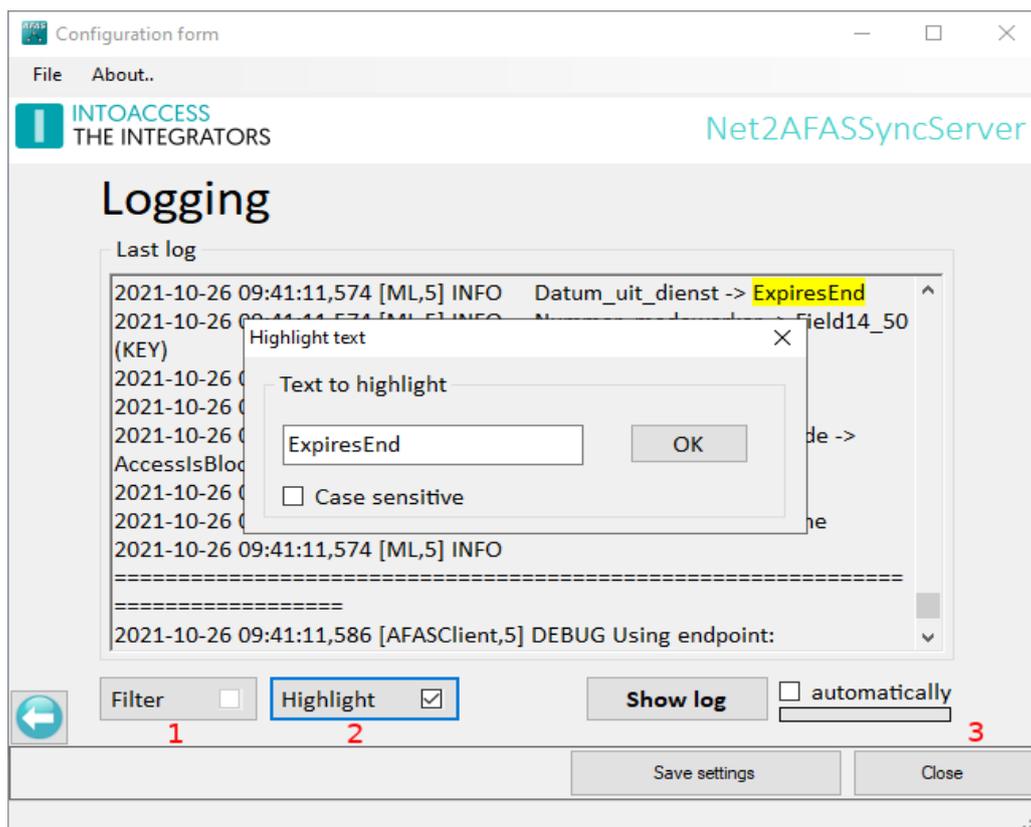


Image 16

You can resize the window in order to get a better overview of the content. This page also offers the possibility to filter the log file on certain terms (1) and/or to mark certain terms (2). An obvious 'filter term' could be the word 'ERROR' or 'WARN'. If the application works properly, both terms should not appear in the log file.

Option (3) offers the possibility to automatically reload the log file at a fixed interval.

The log files are located in the folder:

*c:\IntoAccess\Logging\Net2AFASSyncServer*





# Manual Net2AFASSyncServer

Version 1.5

