SAVANCE WORKPLACE

Lenel S2 - NetBox Integration Setup Guide

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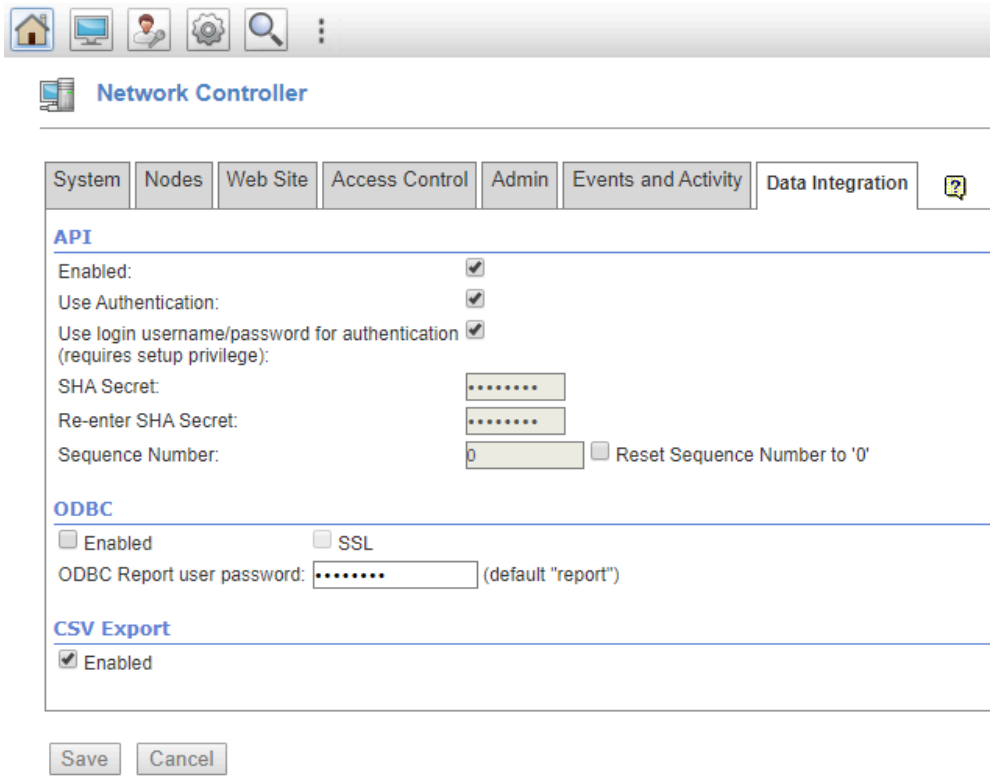
Last Updated: 12/17/2024

Overview

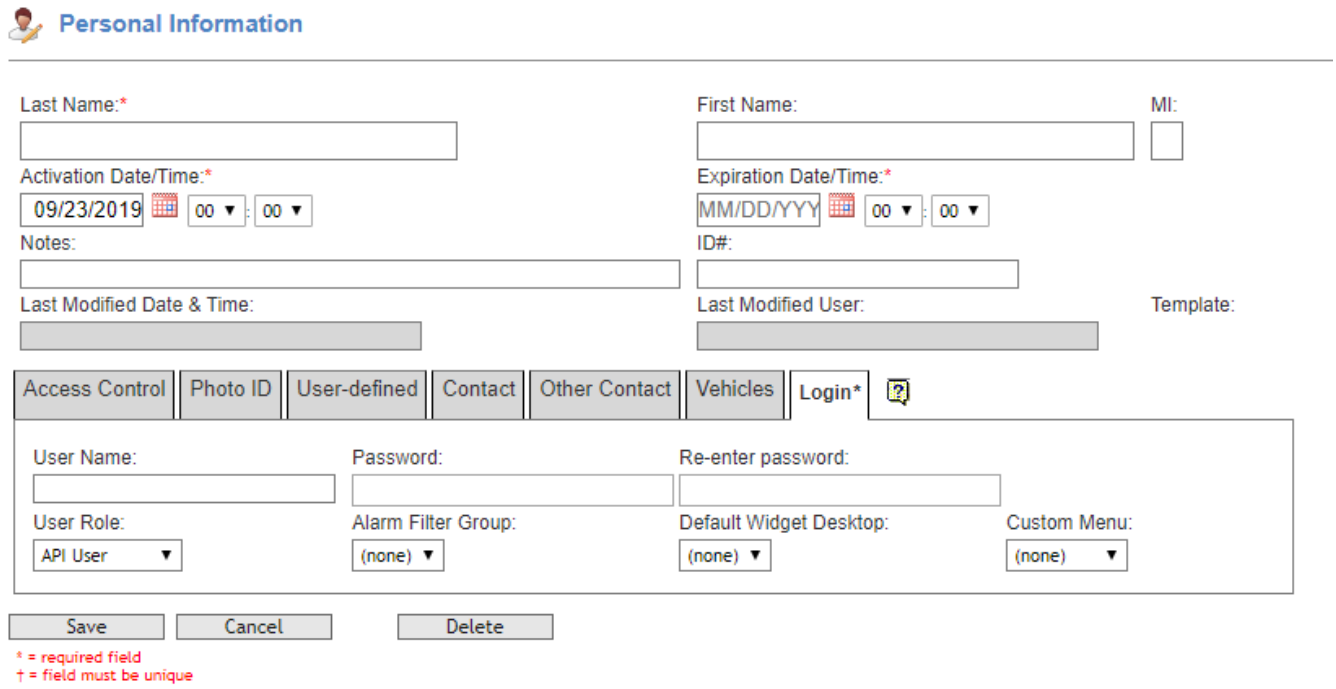
This is a basic guide to the setup and troubleshooting of setting up your S2 NetBox integration for Savance Workplace. It will show you where to get some of the information that you need to input, as well as explanations as to what each of the settings do and how you should configure them.

Making Sure NetBox API is Available

The NetBox API allows Workplace to ask NetBox for information on People, Credentials, and more. Make sure that your S2 NetBox panel is properly installed and reachable on the network, and that the API is enabled. You would typically do this by typing the IP address of the panel in a browser and logging into S2 NetBox. To make sure that the NetBox API is reachable, navigate to Site Settings → Network Controller. Navigate to the Data Integration Tab and ensure that the API is Enabled with Authentication. Workplace does not require a SHA secret to connect to NetBox.



Also, it is recommended that a User account for Workplace is configured for access to the API only. To do this, add or edit a Person and navigate to the Login tab. Create a Username and Password and select the API User Role.

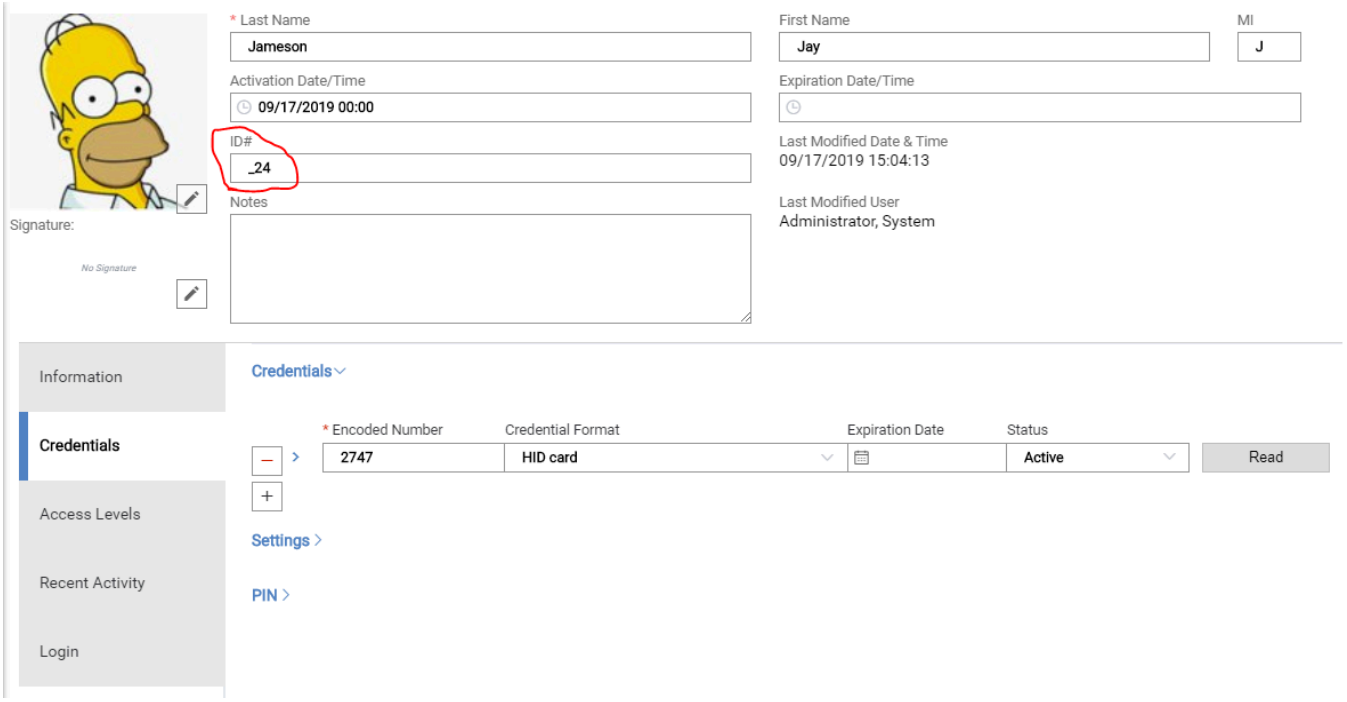


Make sure you know **all** of the following information in order to connect Workplace to the API.

- NetBox Username
- NetBox Password
- Local IPV4 Address, DNS Name, or Fully Qualified Domain Name of the NetBox panel.

Preparing NetBox People for Sync

Workplace User Sync will import First Name, Last Name, Email, Phone, ID#, Picture, and their primary Card Number. First and Last name are required and email is recommended.



Note: Some important things to know about the User Sync:

- **Names** should not contain special characters if it can be avoided. Spaces in names should be ok (needs verification).
- **First Name** is not required in S2, and while technically not required in Workplace, it is *strongly* recommended that each person have a First Name before the sync. An Initial will suffice if necessary.
- **Middle Initial** will be ignored by Workplace.
- **Identical names** should also be avoided. For example, in the case where you have a John Smith and a John Smith Jr., Consider adding "Jr" to the First or Last Name field. Since the middle initial is not used in Workplace, consider putting the initial in the First Name field. For example "Jay J" above.

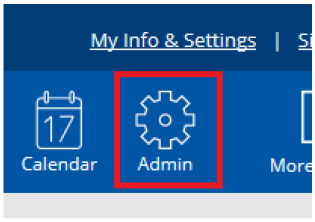
- **ID#** in S2 will map to a hidden field in Workplace that will be used to keep track of which users were imported from S2. **Warning:** It is possible to change this ID in S2, but this will disassociate the user in Workplace, so it is **strongly** recommended that ID# not be changed in S2. If this is a requirement, you can use an email address as a secondary association (see below).
- **Email** is not required for the sync but is recommended. In the event that the ID# cannot be matched in Workplace, email will be used as a secondary. Please ensure that each user's email is unique (if available).
- **Credential** Encoded Number will map to the User ID field in Workplace. If a User has multiple cards, only one can be tracked in Workplace (at the time of this writing). Make sure the card that will be used to track the Person's status in Workplace is the first card in the list of Credentials. **Note**: Workplace Status updates will first try to key off of ID# if available, so multiple card numbers are possible, but for logging purposes, keep the most frequently used card at the top of the list. The Workplace User ID is also the primary ID for Kiosk Access, so make sure that the card used for Kiosk Access is the first card in the list.
- **User-defined fields** are not currently mapped to Workplace fields (at the time of this writing).

Creating The Integration

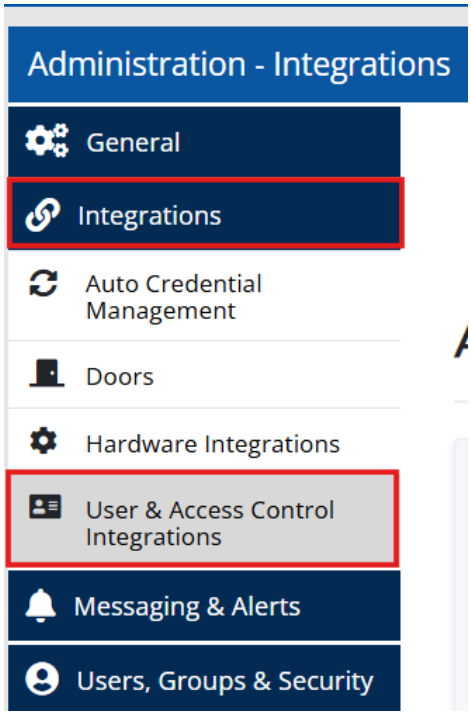
Log into your Savance Workplace In/Out Board web account, at cloud.savanceworkplace.com

IF you are using an On-Premise Version, please navigate to https://YourServerNameOrIP in any web-browser (configured during the On-Prem Installer IIS prompts).

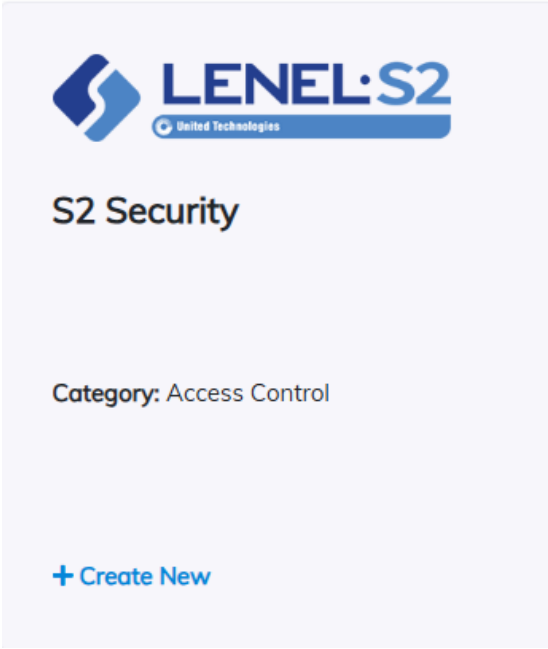
Click **Admin** in the top right of the webpage



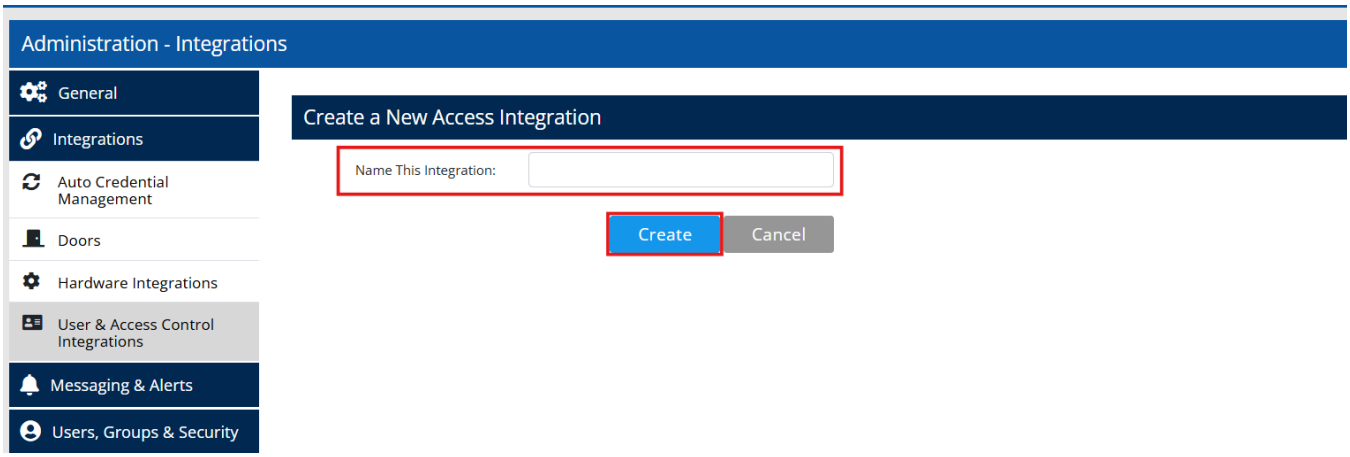
Click on **Integrations** and select **User & Access Control Integrations** from the drop down menu



Scroll down to the Lenel - S2 **Security** Integration box and click on the + Create New button



From the drop-down menu, select **S2 Security** as your provider. Give your integration a name to remember it by, then click **Create.**



Your new integration has now been created. You'll notice the integration's ID is located just beneath its name. This is the ID that you'll use to configure the connector.

Configuring the Integration

Under the "Integration Settings" header, you'll notice all the settings you can configure:

Integration Enabled:

If this is set to **No**, the connector and integration will not be active.

NetBox API Username:

The username for the API User account in NetBox. **Case Sensitive!**

NetBox API Password:

The password for the API User account in NetBox. **Case Sensitive!**

NetBox API URI:

http(s)://[IP Address]:([Port])/goforms/nbapi

IP Address: the network location of the NetBox panel.
Port (optional): the network port if necessary for the NetBox API.
Example: http://192.168.82.91/goforms/nbapi

Default User Password:

When a user is synced from NetBox into Workplace, they are assigned a username and password. This is the default password that any synced users are assigned. A user's password can be changed from the default at any time by right-clicking on a user, selecting Administer User, and then typing a new password in the password and confirm password box.

Polling Only (unavailable, ask support for development timeline if necessary):

If this setting is enabled, instead of card swipes and other events instantly being sent to Workplace, the connector will check with the NetBox API periodically to see if any new events have occurred. You can set this interval in seconds using the setting Polling Interval.

Polling Interval (seconds):

The time in between event polls, as described above.

Sync User Interval (minutes):

The time in minutes between each User Sync that the connector initiates to check for new NetBox people.

Sync Door Interval (minutes):

The time in minutes between each Door Sync that the connector initiates to check for new NetBox readers.

User Groups Sync White List, User Groups Sync Black List:

The White Lists and Black Lists will be comma-separated lists of group names that can be used to determine whether or not a person gets added to Workplace during a Sync. You can list the names of Access Levels in S2 to filter people by Access Level.

Sync User Photos:

If this option is set to Yes, users with photos assigned to their NetBox Person account will have their photo imported into Workplace, where it can be displayed on status boards and in the web client.

Sync Users on Event Activity:

When the connector is running and a Person without a Workplace account swipes a card, Workplace will try to automatically create a profile for the user in Workplace. If this setting is set to No, Workplace will ignore these events.

Sync Door on Event Activity:

When the connector is running and an access event occurs on a card reader that has not been synced with Workplace yet, Workplace will try to automatically add the reader into Workplace. If this setting is set to No, Workplace will ignore these events.

Default Door Status:

When a new card reader is synced through the integration (or by scanning a card on it), this is the status that it will assign people. You can always change the status that readers assign people through the Doors menu in the Admin page.

Default Door Location:

When a new card reader is synced through the integration (or by scanning a card on it), this is the location where it will be marked as located. You can always change the location of the reader through the Doors menu in the Admin page.

Enable Random Credential Generation:

If this option is set to Yes, then Workplace will generate credential numbers in random manner with the default credential type '26 bit Wiegand'. You can change the default credential type using the 'Random Credential Card Format' setting.

Random Credential Range Minimum:

The minimum range is used to create random credential numbers.

Random Credential Range Maximum:

The maximum range is used to create random credential numbers.

Random Credential Card Format:

The default card format is used to generate random credentials.

After you select and input all of the settings that you need, make sure to click **Save Settings**. If you forgot to input a required value, do so now.

BEFORE you set up the connector, make sure that the NetBox API is reachable and you can connect to it by clicking the "Test API Call" button.

Running the Connector

The connector is the software that forwards live events, such as badge swipes, to your installation of Workplace. This allows you to swipe a card at your S2 hardware, and see the status change in Workplace nearly instantly.

There are two ways (currently) it can be run, either as a Windows Service or in a Docker container. This document will assume you are running it in a Windows service.

Get the latest Workplace Connector from Latest Connector

You will want to make sure the zip file is Unblocked before you extract it by right clicking and viewing properties. If an Unblock checkbox is shown, check it and then Apply. Extract it into C:\EIOBoard Connector. If you plan to install it in another location, edit the InstallEbConnector.bat file and edit where it says "C:\EIOBoard Connector\EBConnectorService.exe " with your preferred file path. Later when you perform the install, you'll be able to run the installer by double-clicking this .bat file. For convenience, there is also an Uninstall bat file included.

Connector Settings

Next you'll need to edit EbConnectorService.exe.config and set the values for the following settings:

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <startup>
    <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.7.2" />
  </startup>
  <appSettings>
    <add key="pluginName" value="S2Plugin.dll" />
    <add key="pluginLocation" value="plugins\S2" />
    <add key="integrationPartner" value="S2" />
    <add key="integrationID" value="bb5e21c4-6ab8-4829-bcbc-80ed98c68c77" />
    <add key="apiPublicID" value= "a2072732-b764-40b8-ac86-640020bc8c1b" />
    <add key="apiSecretKey" value="77af9964-adeb-434f-ad99-35f61caf572b" />
    <add key="ebApiUrl" value="http://localhost/eioboard/api" />
    <add key="smtpServer" value="" />
    <add key="smtpUsername" value="" />
    <add key="smtpPassword" value="" />
    <add key="maxRetryAttempts" value="5" />
    <add key="LogLevel" value="3" />
    <add key="InternalNetBoxIP" value="http://192.168.82.91/goforms/nbapi" />
  </appSettings>
```

Here are the settings in detail, remember to remove any extra whitespace when entering them into the config:

pluginName

This needs to be set to “S2Plugin.dll”.

pluginName

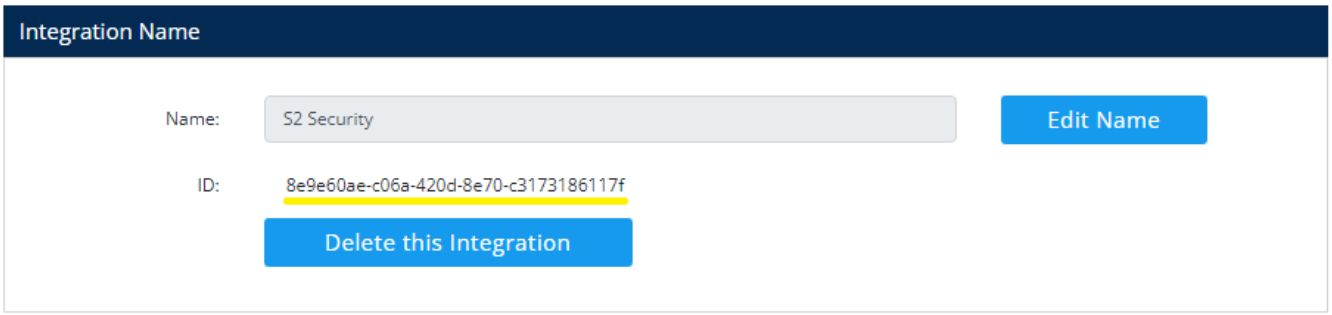
This needs to be set to “plugins\S2”.

integrationPartner

This needs to be set to “S2”. Because we support many access control systems from different companies, this lets the Connector know what type of integration you’re setting up.

integrationID

This will be the Integration ID that was generated upon creation of the integration in Workplace:



apiPublicID and apiSecretKey

These are the API Public Key and API Secret provided to you by Savance, to gain access to the Savance Workplace API. For on-premise installs you will be able to

generate these yourself by going to http(s)://[Your Local Workplace Site]/Administration/apim.aspx. You'll need to be logged in as a Master Admin to have access to the page.

ebApiUrl

This is the URL of the Workplace API. For Cloud accounts this will be: https://cloud.savanceworkplace.com/api
For on-premise installs, this will be: http(s)://[Your Local Workplace Site]/api

smtpServer, smtpUsername, and smtpPassword, smtpPort, toEmail, fromEmail

These settings are optional and if configured will be used to send email alerts when the Connector loses connection with the NetBox API. The connector is designed to recover from lost connections automatically, but these emails can be useful for checking the connection and making sure missed events are synced up.

maxRetryAttempts

If the connector detects an issue, it will attempt to reconnect to NetBox every 5 minutes until it reaches the max number of connection attempts.

LogLevel

From 1 to 3, determines how verbose the logging is. 3 is the highest amount of logging. Logs will appear in a logs folder within the connector folder.

InternalNetBoxIP

This is an optional setting that will let you configure a different address for the NetBox system, in case the one defined in integration settings is not reachable by the connector.

Installing the Connector:

Simply run InstallEbConnector.bat in the same folder where the Connector was extracted. Remember, to install it in another location, edit the InstallEbConnector.bat file and edit where it says "C:\EIOBoard Connector\EBConnectorService.exe":

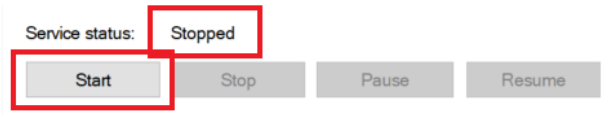
```
REM Install and start the service


"C:\Windows\Microsoft.NET\Framework\v4.0.30319\installutil.exe" "C:\EIOBoard Connector\EBConnectorService.exe"
pause
net start "EbConnectorService"
pause
```

This will also start the connector service. The service can be managed through the windows services app.

To make sure the connector is running:

- Press the windows key and R, then type “services.msc”
- Right-click on “EBConnectorService”, click “Properties”
- If “Service status” is “Stopped”, click “Start”



To make sure the connector always runs:

- Press the windows key and R, then type “services.msc”
- Right click on “EBConnectorService”, click “Properties”
- If “Startup type” is set to Manual, change it to “Automatic (Delayed Start)”

- Click “Apply”, and the “OK” in the bottom of the window.

Note: At the time of this writing there is a known issue where the Service will report errors while starting (such as “The Service did not start in a timely manner”). If this happens, but the EbConnectorService is running, check the logfile to see if there were any errors. The Log File will be in the logFilePath configured above. The service may also get stuck in the

Starting state. Verify by viewing the logs that the connector actually started and is listening for NetBox events.

We are planning and developing a utility app for managing the Connector service, settings, and viewing logs.

Troubleshooting the Connector

Check the log file for errors. The logfile will be in the logs folder in the EbConnectorService.exe.config file.

If the log file reports having trouble connecting to the Workplace API, check that the settings for IntegrationID, APIKey, and APISecret are set properly and contain no white space. Also check that the EB API is configured correctly by going to <eioboard hosted site>/EIOBoard/API/swagger. You should see a screen that looks like this:

If the EB API is unreachable, then check the Workplace Installation in IIS.

If that's working correctly, check the physical location for the API, make sure it was installed correctly.

If the connector can't connect to the NetBox API, ensure that the NetBox API is Enabled in the Network Controller. Also, make sure that the NetBox Person configured in the integration settings has the Admin or API User role.