

Read Me IoT Client v3.1**Build Nr. of IoT Client: 3.1.0.326****Table of Contents**

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1. Introduction

The IoT Client is a versatile tool designed for cross-platform use. It securely transmits system configurations, software, and hardware information, as well as instrument real-time data to the cloud for Introspect and future Tecan cloud applications. Additionally, it includes the ability to download and execute updates.

This document describes the main functionality of the **IoT Client 3.1**.

2. Compatibility

- Windows 10 LTSC 2021 (64 Bit) and Windows 10 LTSC 2019
- Windows 11 IOT LTSC 2024 (64Bit)
- vControl v1.0 and higher
- FluentControl v3.7 and higher

3. IoT Client

3.1. Supported Features

3.1.1. Sending Data Events

The following data is sent:

- Instrument State
- Name of the current run
- Expected end time of run
- Messages
- Logged in user
- Usage data (DiTi, labware consumption)
- Environmental data

3.1.2. Tray Icon Context Menu

- The tray icon context menu of the IoT Client can be found in the windows notification area (next to the current time in the task bar). It indicates the IoT Client status with a green icon if it is running without errors () or a red dot icon if the IoT Client is not running or is in an error state ()
- Right clicking the tray icon offers the following functionality:
 - Start & Stop IoT Client service.
 - Open the IoT Client configuration tool to view the system status, configuration, and instrument registration information.

3.1.3. IoT Client Configuration Tool

- The user can view the various system statuses:
 - Internet connection status
 - Instrument registration status
 - Cloud connection status
 - IoT Client status
 - Remote Update Packages
- The user can edit the following configuration settings:
 - Alias
 - Proxy server incl. Proxy Address and Port
 - Proxy authentication incl. Username and Password
 - Select a custom SSL certificate
- The user can register the instrument
- The user can view and install Remote Update Packages

3.2. Changes

With the release of IoT Client 3.1 the following Changes were implemented:

- Implement full MAPlinx compatibility
- Update to .NET 8.0
- Configuration tool shows errors for the ping of the URLs, but communication works fine
- Handle the case when .NET not preinstalled
- Rename label of registration button

The following Bugs were fixed:

- IoT Client doesn't start automatically when anything updated on Configuration tool
- Remote update notification should be available all the time until it is installed in IoT Client
- Web Cam Url not sent to IoT hub as a property update
- Changes in configuration tab shall be logged
- IoT Client crashes when Alias changed in OM and IoT config tool is being used when the change is in progress

- Upload the system config and qc data, instrument info file
- Update only "Proxy Host" and "Port" without "Alias"

3.3. Installation

The installation instructions described below are valid for **IoT Client v3.1** and higher.

Important!

To install the IoT Client, a local Windows administrator account is required to log in locally during the installation process.

3.3.1. Installation Instruction

The installation process consists of the following steps:

- IoT Client Installation
- Instrument Registration

3.3.2. Prerequisites

- WebSockets must be enabled
- MQTT protocol must be supported
- Port 443 must be open
- Following URLs must be reachable by the IoT Client:
 - <https://login.tecan.com/>*
 - <https://digital.tecan.com/>*
 - <https://tecan-iot-hub-prod.azure-devices.net/>*
 - <https://cdn.auth0.com/js/lock/>*

3.3.3. IoT Client Installation

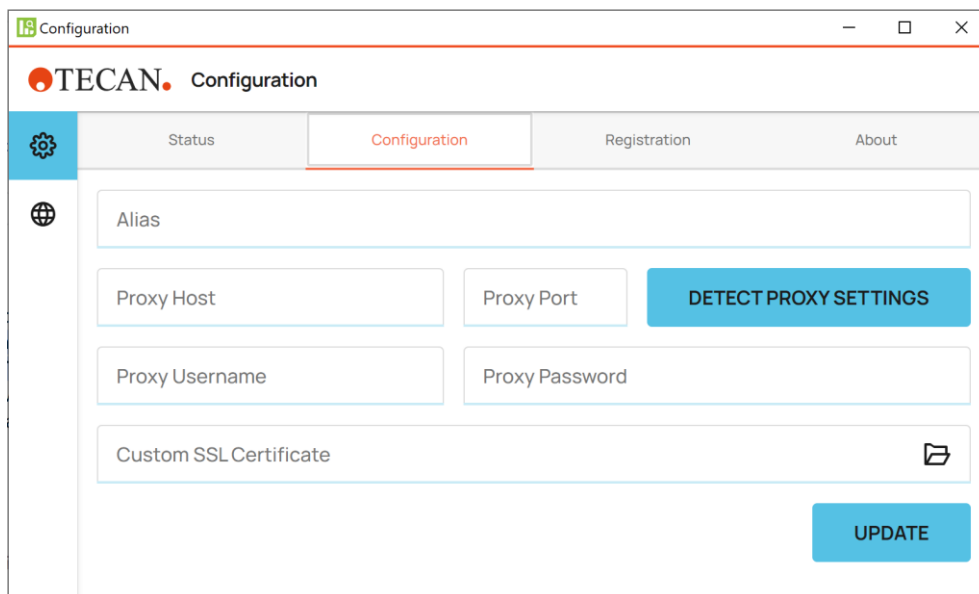
- Launch the installation file "**IoT Client 3.1**" with local windows administrator privileges.
- Accept the license terms by agreeing to them and then click on install.
- Allow the installation process to complete.
- Click **Close** to finish and exit the installation process.

3.3.4. Instrument Registration

Note: Network drives are not supported.

Note: The IoT Client supports connections to the internet via proxy server. Ask your system administrator to assist you with the proxy set-up and authentication.

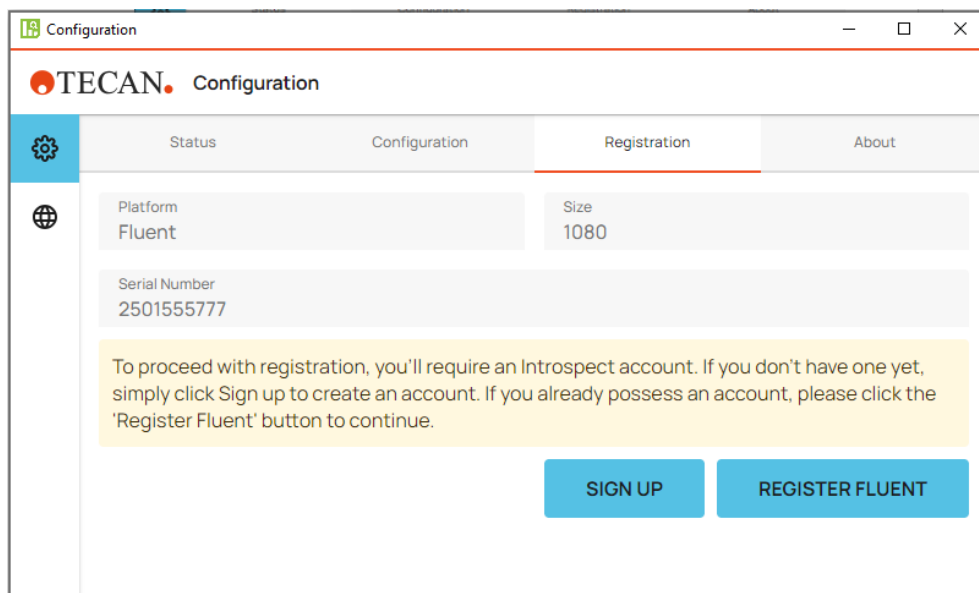
1. To begin IoT Client registration, right-click on the red IoT Client icon () located in the taskbar.
2. Select “**Settings**”, to open the **Configuration Tool**.
3. Navigate to the configuration tab and enter the Alias if required, the proxy and certificate details can be added.
4. If the instrument PC connects to the internet through a proxy server, click on **DETECT PROXY SETTINGS**. If the proxy server requires authentication, enter username and password.



The screenshot shows the 'Configuration' window of the TECAN IoT Client. The window has a title bar with the TECAN logo and the text 'Configuration'. Below the title bar is a navigation bar with four tabs: 'Status', 'Configuration' (which is selected and highlighted in red), 'Registration', and 'About'. On the left side of the 'Configuration' tab, there is a sidebar with a gear icon and a globe icon. The main area of the 'Configuration' tab contains several input fields and buttons:

- An 'Alias' input field.
- 'Proxy Host' and 'Proxy Port' input fields, followed by a blue button labeled 'DETECT PROXY SETTINGS'.
- 'Proxy Username' and 'Proxy Password' input fields.
- A 'Custom SSL Certificate' input field with a folder icon on the right.
- A blue 'UPDATE' button at the bottom right.

5. Once you entered the necessary details in the configuration tab, navigate to the “Registration” tab and click on **REGISTER FLUENT**. (Note: “FLUENT” is replaced with the proper device type)



The screenshot shows the 'Registration' tab of the TECAN Configuration window. The window has a sidebar with a gear icon and a globe icon. The main content area has tabs for 'Status', 'Configuration', 'Registration', and 'About'. The 'Registration' tab is active. It displays the following information:

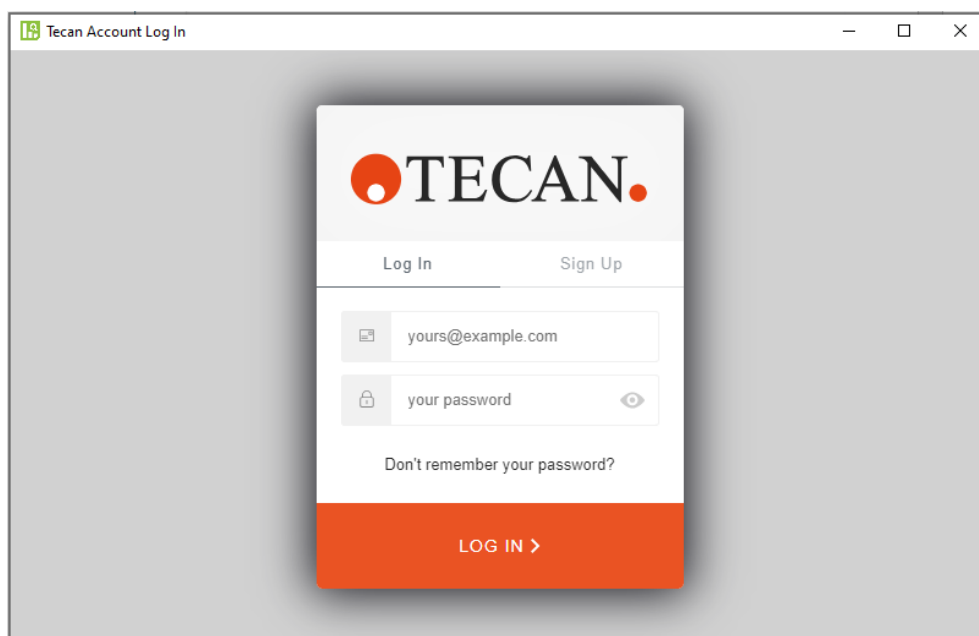
- Platform: Fluent
- Size: 1080
- Serial Number: 2501555777

Below this information is a yellow box with the following text:

To proceed with registration, you'll require an Introspect account. If you don't have one yet, simply click Sign up to create an account. If you already possess an account, please click the 'Register Fluent' button to continue.

At the bottom right, there are two buttons: **SIGN UP** and **REGISTER FLUENT**.

6. You will be asked to login with your Tecan Account credentials (email-address and password).



The screenshot shows the 'Tecan Account Log In' window. It features the TECAN logo at the top. Below the logo are two tabs: 'Log In' and 'Sign Up'. The 'Log In' tab is active. It contains the following fields:

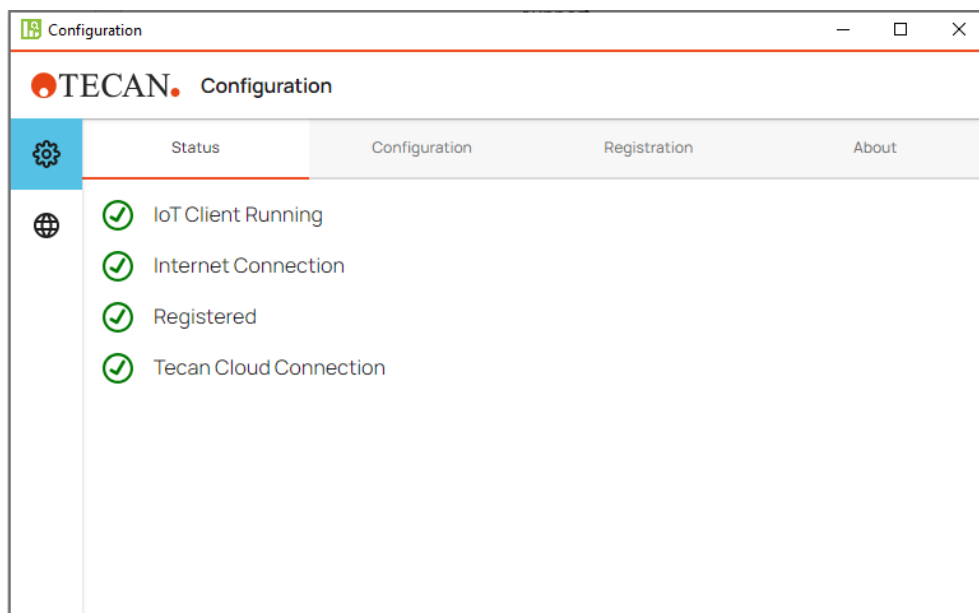
- Email: yours@example.com
- Password: your password (with a toggle icon to show/hide the password)

Below the password field is a link: [Don't remember your password?](#)

At the bottom, there is a large orange button labeled **LOG IN >**.

If you don't have a Tecan Account, click **Sign Up** and fill out the sign-up form. You will get an email to activate your account and after the activation was successful your account is ready for the registration.

7. After successful registration, start IoT Client service.
8. Once the IoT Client service is started successfully, navigate to the “Status” tab to verify the system status and it should all be green and running.

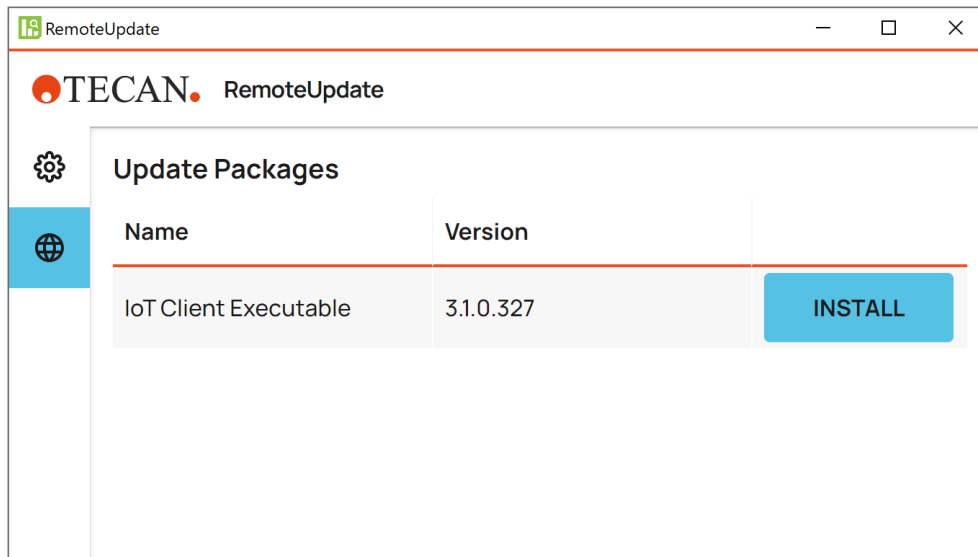


In case some of the states are not green, check the following:

- **IoT Client not running:**
 - Try to start the IoT Client from the tray icon or contact your local Tecan support.
- **Internet Connection:**
 - Confirm you are connected to the internet
 - Check that port 443 is open and https://tecan-iot-hub-prod.azure-devices.net/* domain is whitelisted.
- **Not Registered:**
 - Initiate the registration process. See Step 5 of chapter 3.3.4.
- **Tecan Cloud Connection:**
 - Confirm the IoT Client is running
 - Ensure your instrument is registered
 - Make sure that port 443 is open and https://tecan-iot-hub-prod.azure-devices.net/* domain is whitelisted.

3.3.5. Remote Update

IoT Client 3.0 and higher provides the user the possibility to update to the newest version using the configuration tool of the IoT Client. If a new version is provided remotely the software receives the notification from Tecan Cloud.



3.3.6. Upgrade Restriction

Upgrading directly from version 2.x to 3.0 or higher is not possible.

Version 3.0 and above introduces significant architectural changes, so a clean installation is required. You must completely uninstall version 2.x before installing version 3.0 or higher. Upgrade from 3.0 to later versions is possible without uninstallation.

3.3.7. Deinstallation

Please note that the databases under “C:\ProgramData\Tecan\IoT-Client\Data” are not deleted during uninstallation to maintain the configuration settings and history.

3.3.8. Troubleshooting

Logfiles useful for troubleshooting IoT Client issues can be found at:
C:\ProgramData\Tecan\DataStore\IoT-Client\MAP.Services.Logging.Service\LogFile

3.4. Known Issues: IoT Client

PWI	Title	Severity
43994	[IoT Client] Deinstall error message	Low

4 Revision History

Version	Description	Date
1.0	Initial version	2025-06-16