Integration Objects’

Seamless & Secure IT-OT-IoT Integration

Smart IoT Highway

UHMI SCADA

Version 2.4.2

INSTALLATION MANUAL

Integration Objects' Smart IoT Highway UHMI SCADA Installation Manual version 2.4.2 Rev 1
Published November 2025.

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PREFACE

About This Installation Guide

This document lists the pre-installation requirements and provides step-by-step instructions for installing Integration Objects' UHMI SCADA .

Target Audience

This document is intended for Integration Objects' UHMI SCADA users responsible for installing the UHMI SCADA . It assumes knowledge about Windows operating system and its configuration.

Document Conventions

Convention	Description
Bold	Bolded text indicates user interface elements, such as buttons, menu items, and dialog names.
(!) Note	Information to be noted

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OVERVIEW

The UHMI SCADA (Supervisory Control and Data Acquisition) software is a web-based solution designed to provide comprehensive monitoring and control of industrial processes through a user-friendly web interface. This installation guide will walk you through the steps necessary to successfully install and configure the UHMI SCADA software on your system. The guide is structured to ensure a smooth installation process, minimizing potential issues and ensuring optimal performance.

The UHMI SCADA operates on robust functional architecture, as illustrated in Figure 1.

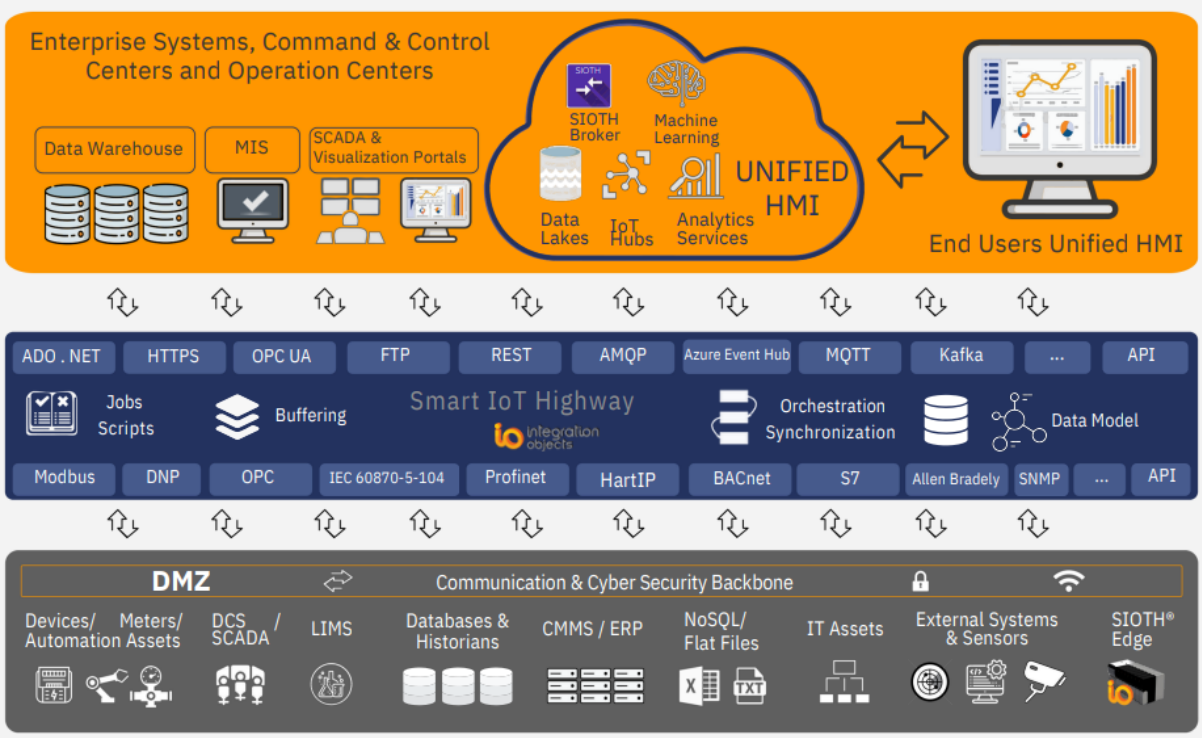


Figure 1: UHMI SCADA Overview

GETTING STARTED

1. Compatibility

For Windows based systems, Integration Objects' UHMI SCADA supports the following:

- **Operating Systems**
  - Windows 11 IoT
  - Windows 11
  - Windows 10
  - Windows Server 2022
  - Windows Server 2019
  - Windows Server 2016
  - Windows Server 2012 Standard

- **Web Browsers**
  - Chrome in its latest version
  - Firefox in its latest version
  - Edge in its latest version

- **Microsoft SQL Server (Express, Standard and Enterprise Editions)**
  - SQL Server 2022
  - SQL Server 2019
  - SQL Server 2017
  - SQL Server 2016
  - SQL Server 2014

2. Minimum Hardware Specifications

The table below outlines the minimum hardware specifications recommended for UHMI SCADA :

Hardware Component	Minimum Specification
Processor	8 cores
RAM	16 GB
Disk Space	10 GB dedicated to UHMI SCADA installation, (SSD Recommended)

Table 1: Minimum Specifications Recommended for UHMI SCADA

3. UHMI SCADA Installation Prerequisites

The following minimum prerequisites need to be met before installing Integration Objects' Smart IoT UHMI SCADA :

3.1. Web Browser

Make sure that a web browser is installed. Refer to the compatibility section for the list of supported web browsers.

3.2. Windows Features Activation

3.2.1. Online Activation

Open the Control Panel and click on "Turn windows features on or off".

3.2.1.1. For Windows Server OS

Activate the following features as illustrated in the screens below:

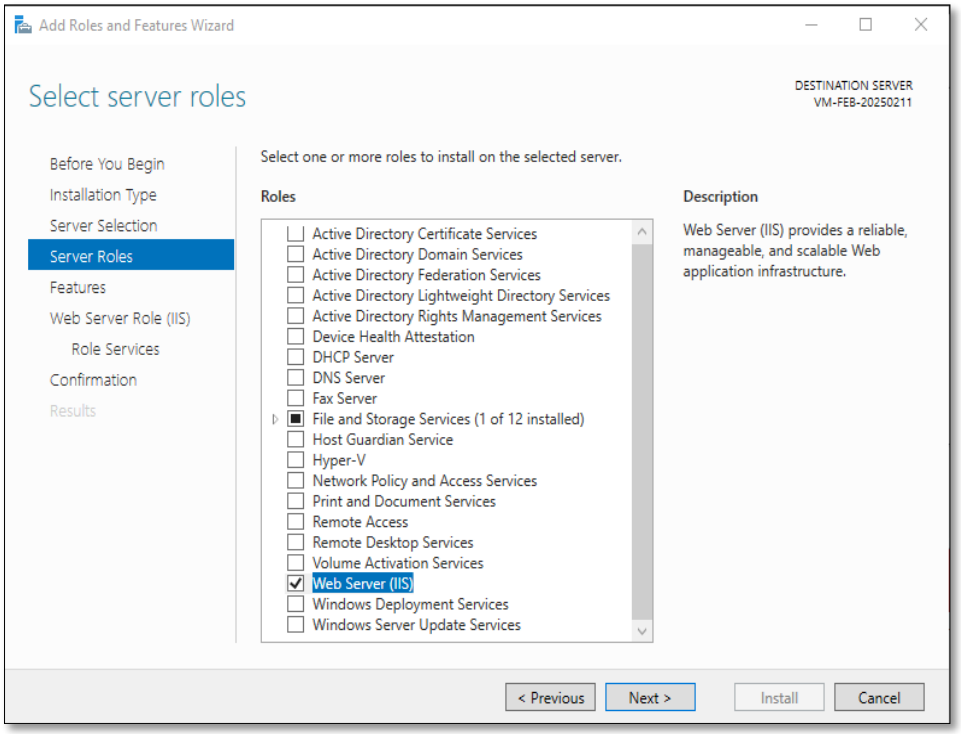


Figure 2: Server Roles Activation on Windows Server (1/3)

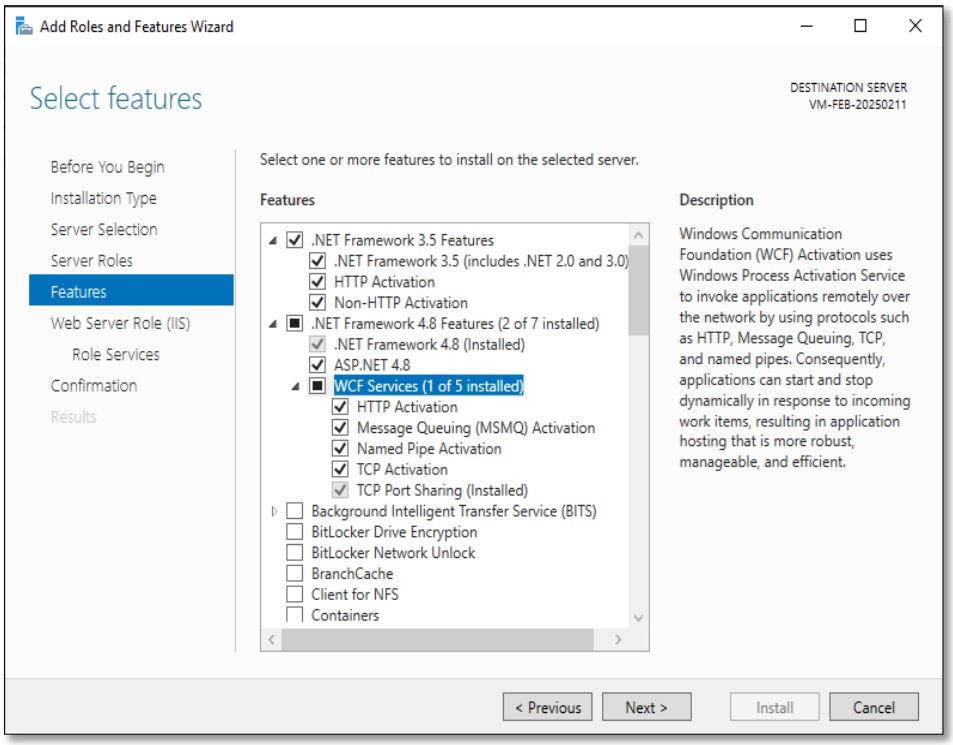


Figure 3: Server Roles Activation on Windows Server (2/3)

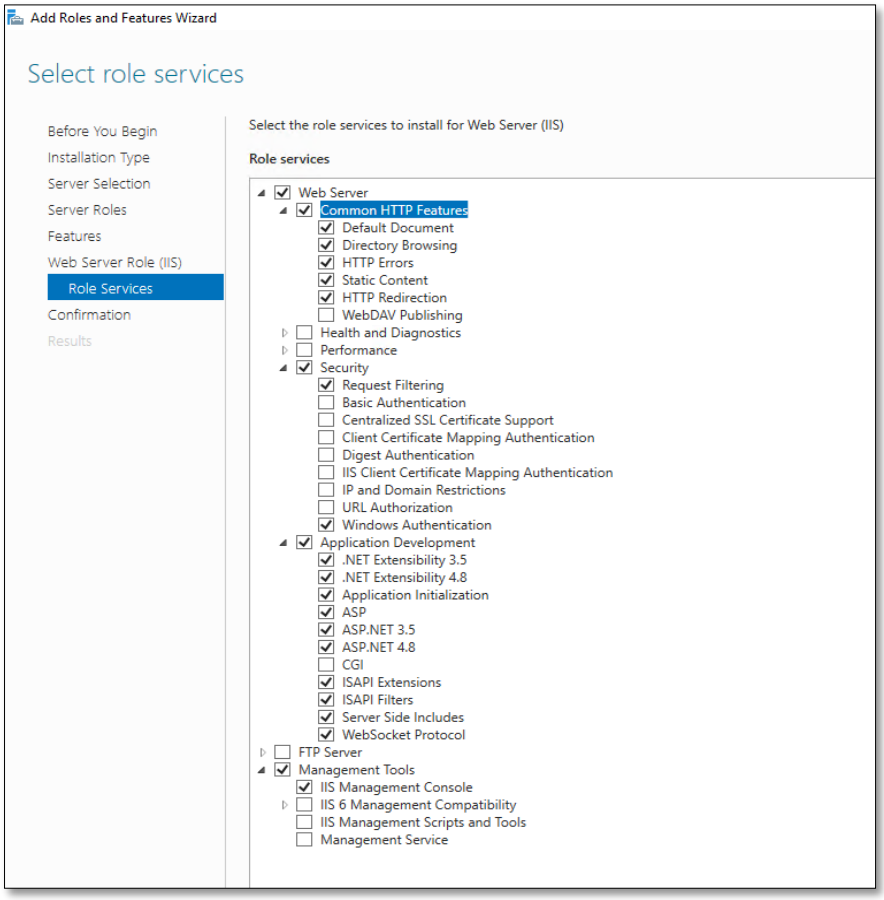


Figure 4: Role Services Activation on Windows Server (3/3)

(!) Note

For Windows Server 2012 and Windows Server 2016 operating systems, it is necessary to download and install ".NET Framework 4.8" using a separate installer.

3.2.1.2. For Windows Client OS

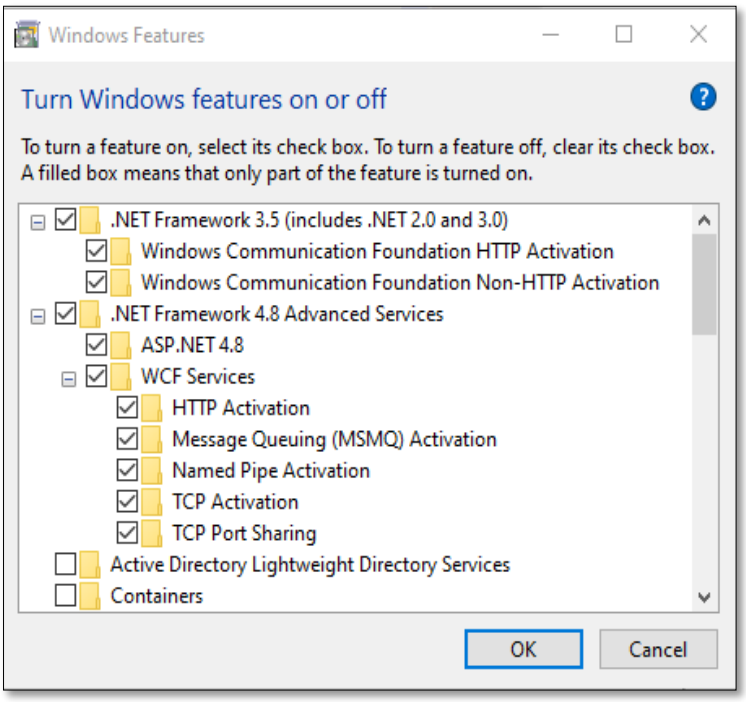


Figure 5: .NET Features Activation on Windows Client

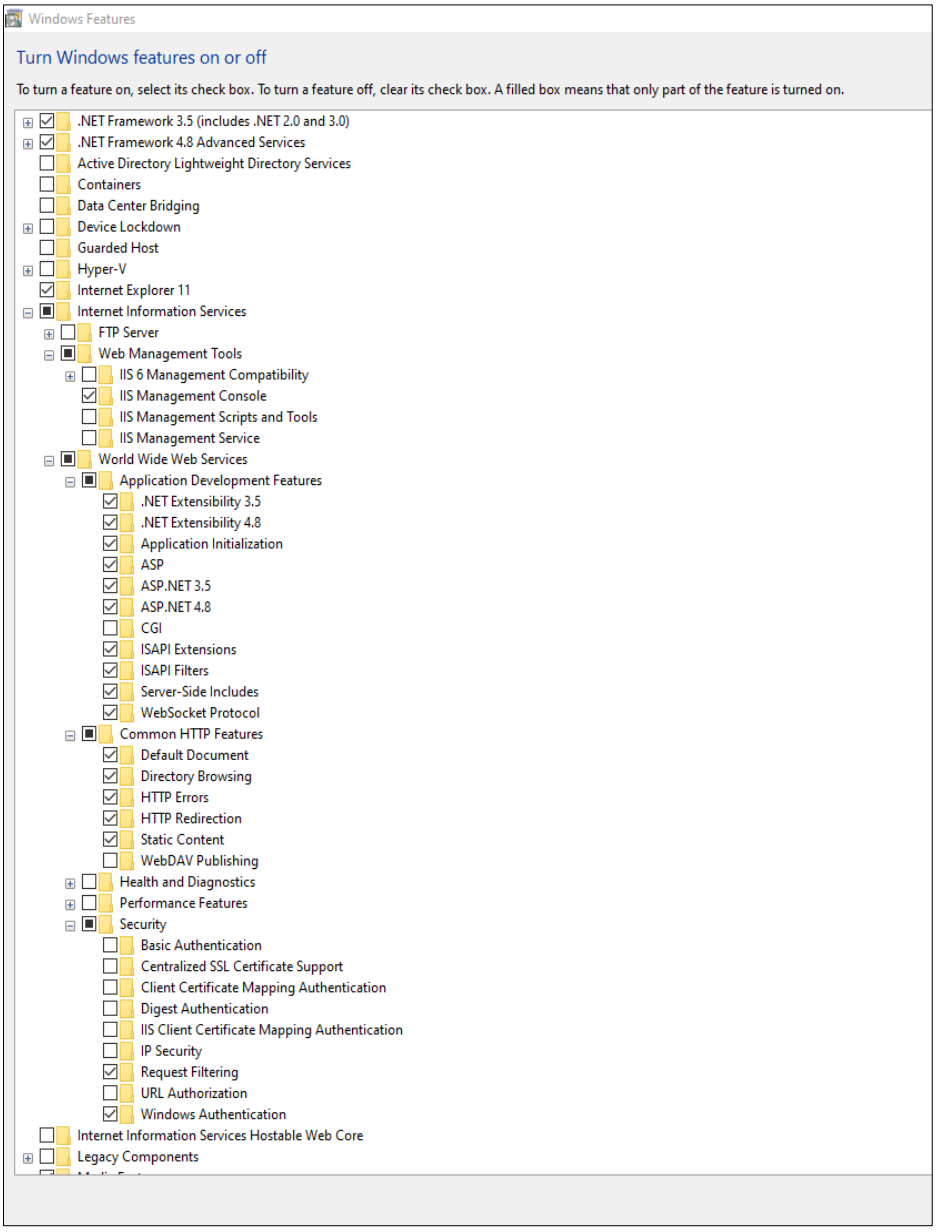


Figure 6: IIS Features Activation on Windows Client

3.2.2. Offline Activation

3.2.2.1. Windows Server OS

Follow the steps indicated in the **For Windows Server OS** section.

In the Confirmation Installation section, choose the **Specify an alternate source path** option and set the path of the source files.

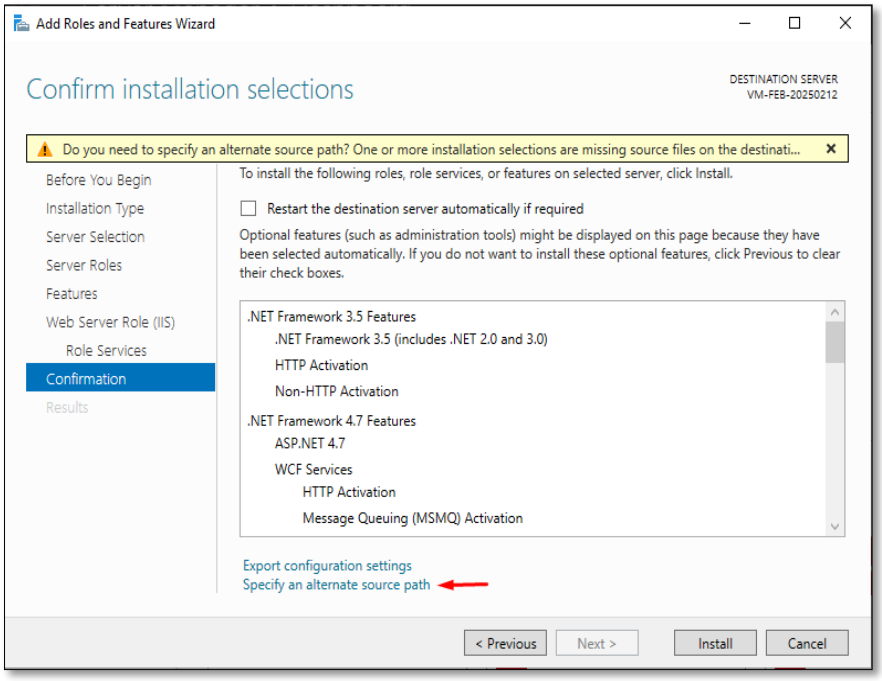


Figure 7: Confirmation Activation on Windows Server

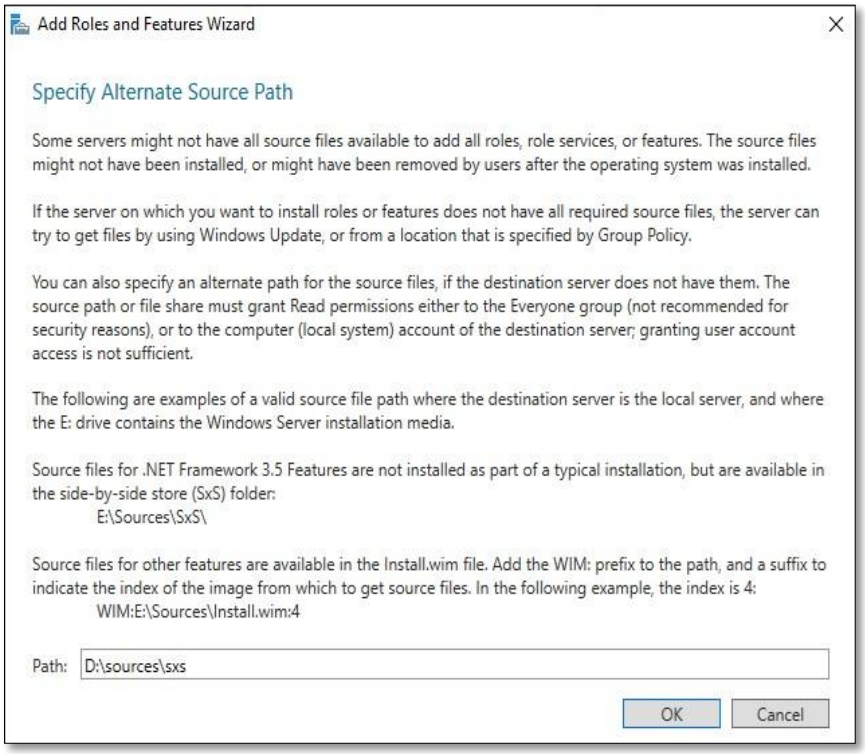


Figure 8: Alternate Source Path for Offline Installation

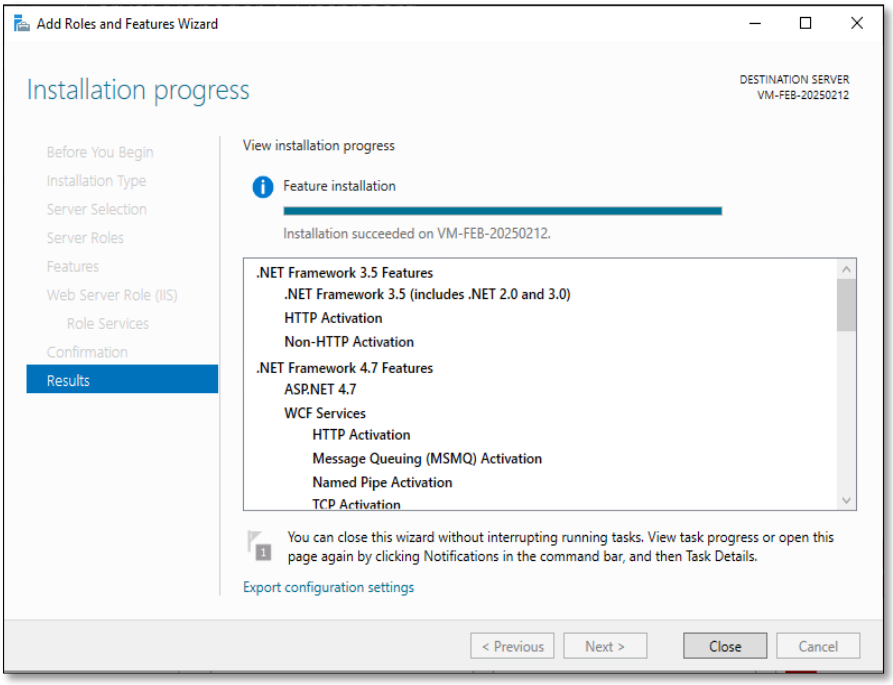


Figure 9: Offline Activation Succeeded

3.2.2.2. Windows Client OS

Mount the installation media to your computer and note down the associated drive letter.

Figure 10: Mount the Installation

Then, run the batch script 'WindowsFeatures_script.bat' with administrative privilege. You will find it located in the downloaded package under the following subfolder: "...\Integration Objects' Smart IoT Highway\Pre-Requisites\WindowsFeatures_script.bat".

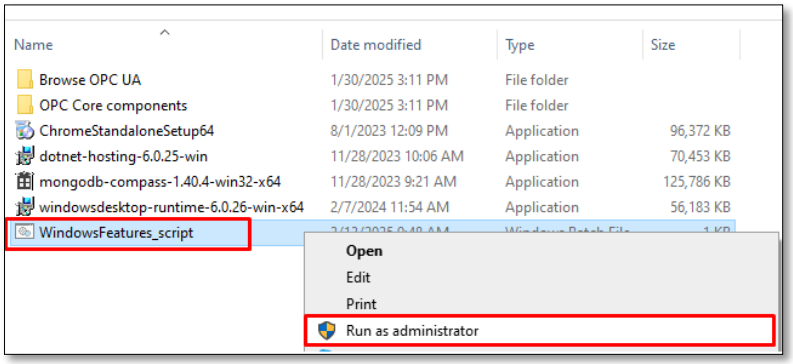


Figure 11: Windows Features Script

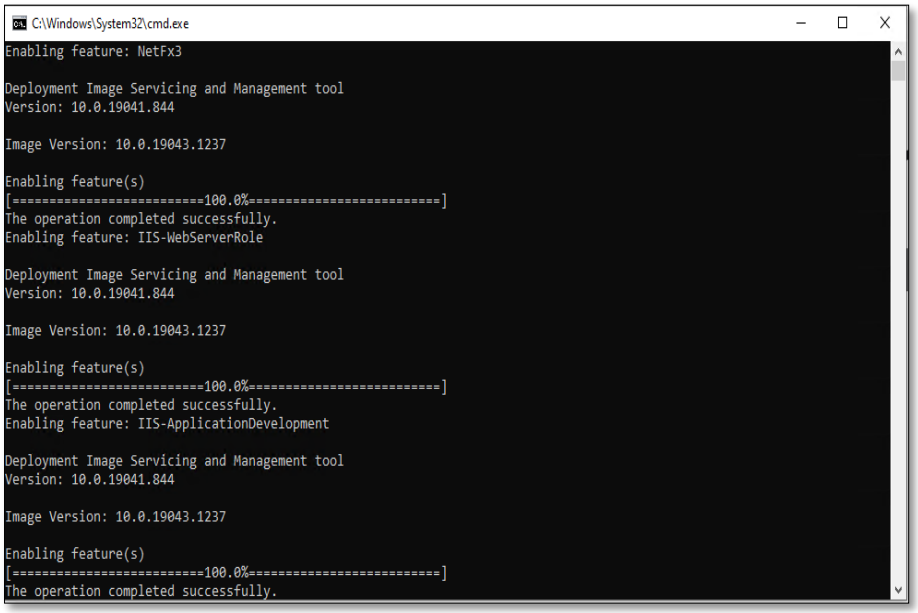


Figure 12: NET features Activation offline

3.3. .Net Hosting

Install the dotnet-hosting-6.0.25-win.

3.4. SQL Server – Optional

If SQL Server is intended to host UHMI SCADA user management or UHMI databases, refer to the "Appendix1" section for the SQL Server configuration requirements.

INSTALLING UHMI SCADA

1. Installation Process

Right-click on the downloaded executable of the UHMI SCADA installation program and select "Run as administrator". The installation will start automatically, and the setup wizard will take you through the following steps:

1. Click the **Next** button on the prompt dialog to go to the next page.

(!) Note

If SIOTH is already installed on your machine, the setup wizard will proceed to the uninstallation of the existing version as a first step. You will need remove the existing version before installing a new version.

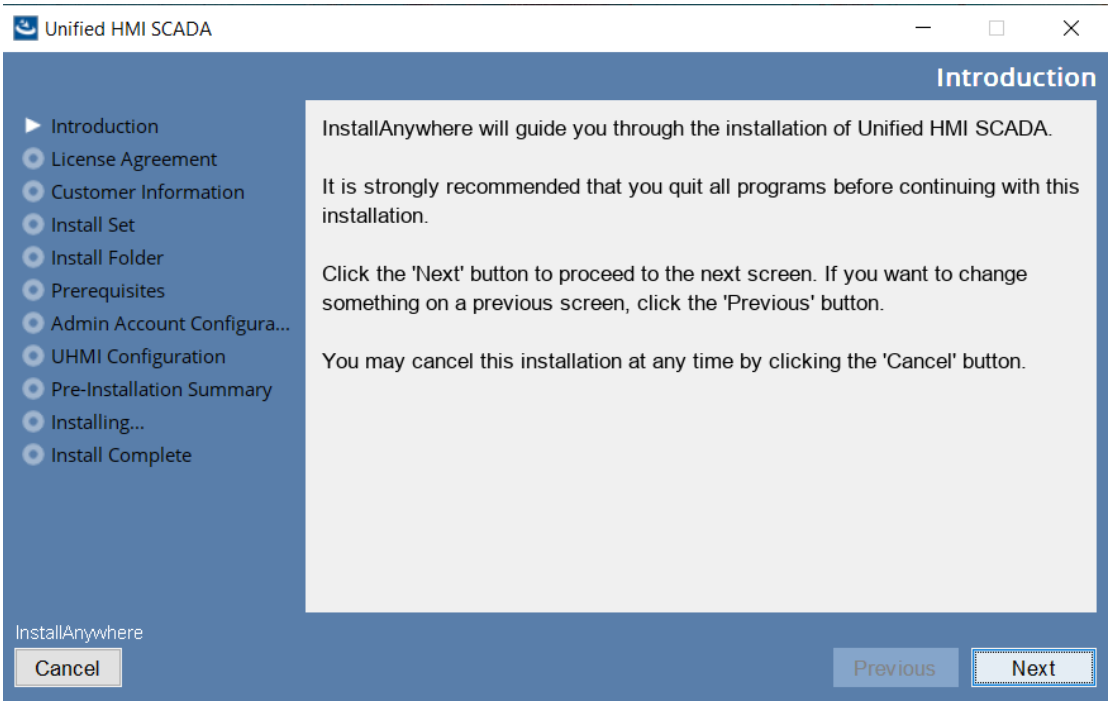


Figure 13: Welcome Dialog

2. Read and accept the license agreement by selecting **"I accept the terms of the license agreement"** and click **Next**.

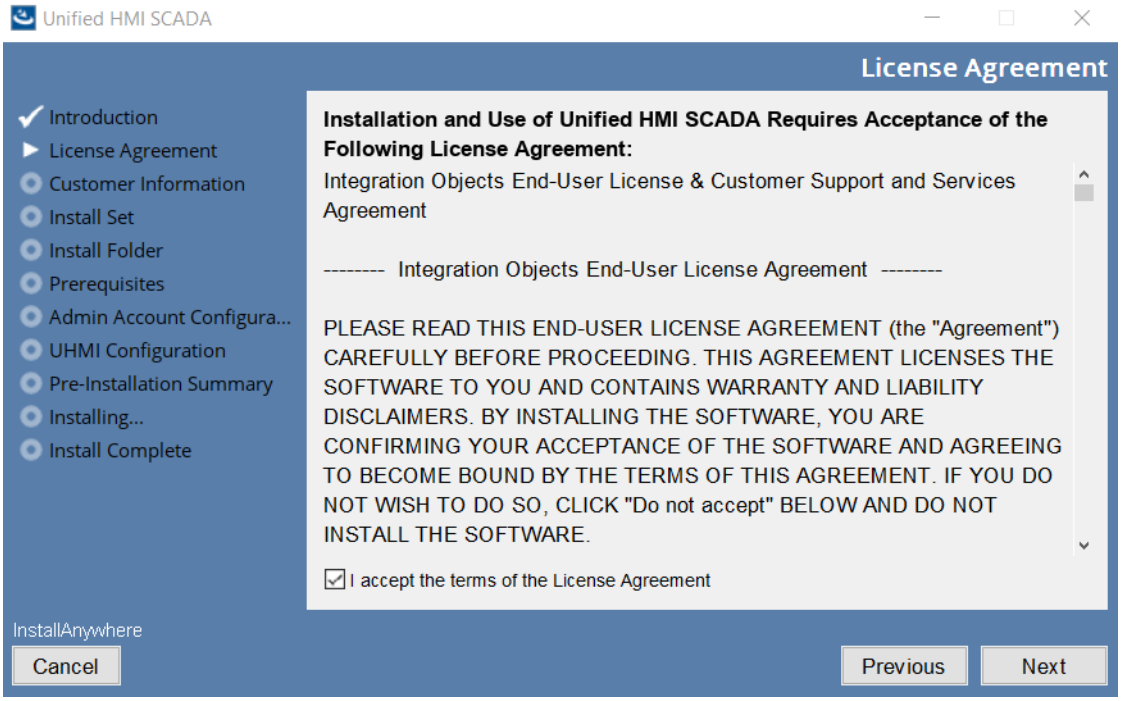


Figure 14: License Agreement Dialog

3. Provide your **Username** and **Company Name** and then click **Next**.

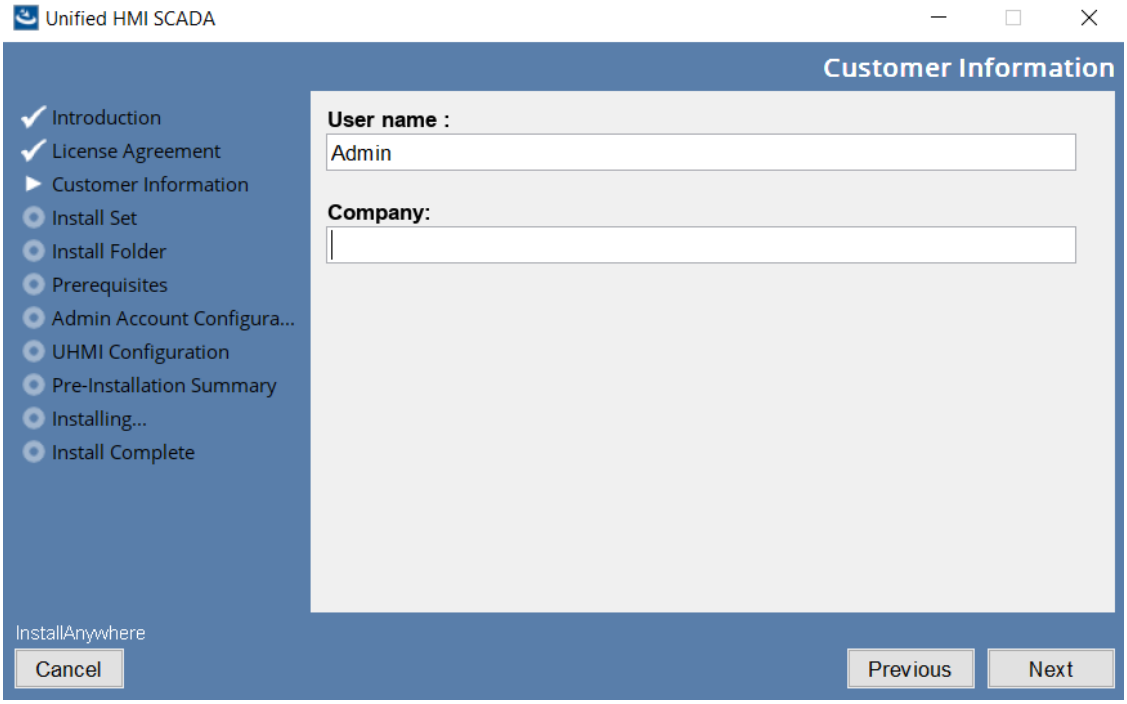


Figure 15: User and Company Information Dialog

4. To choose the installation folder path, Click **Next** to use the default path or click **Choose** to select a different destination folder.

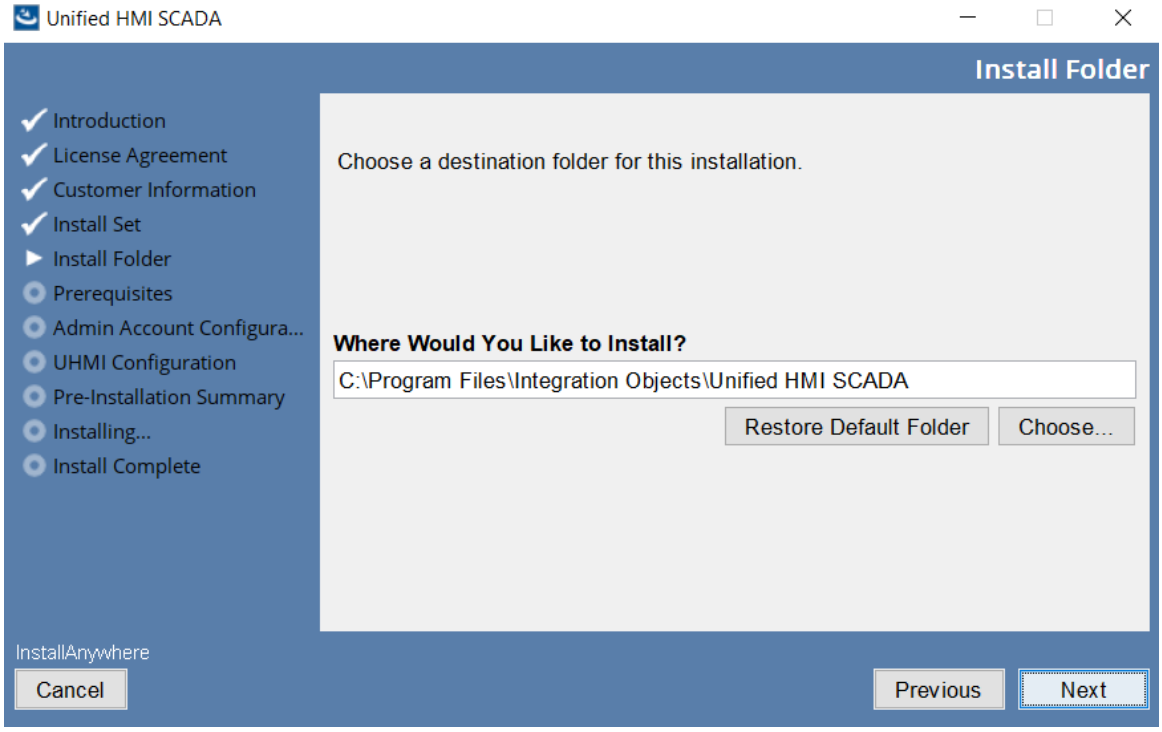


Figure 16: Selecting Install Destination Folder Dialog

5. Provide the IP address or Hostname of the target machine.

6. Select Influx DB to install it if it is not installed. Influx is used to store logging and tracing actions. The default retention is 2h.

7. Click Next to continue to the next step.

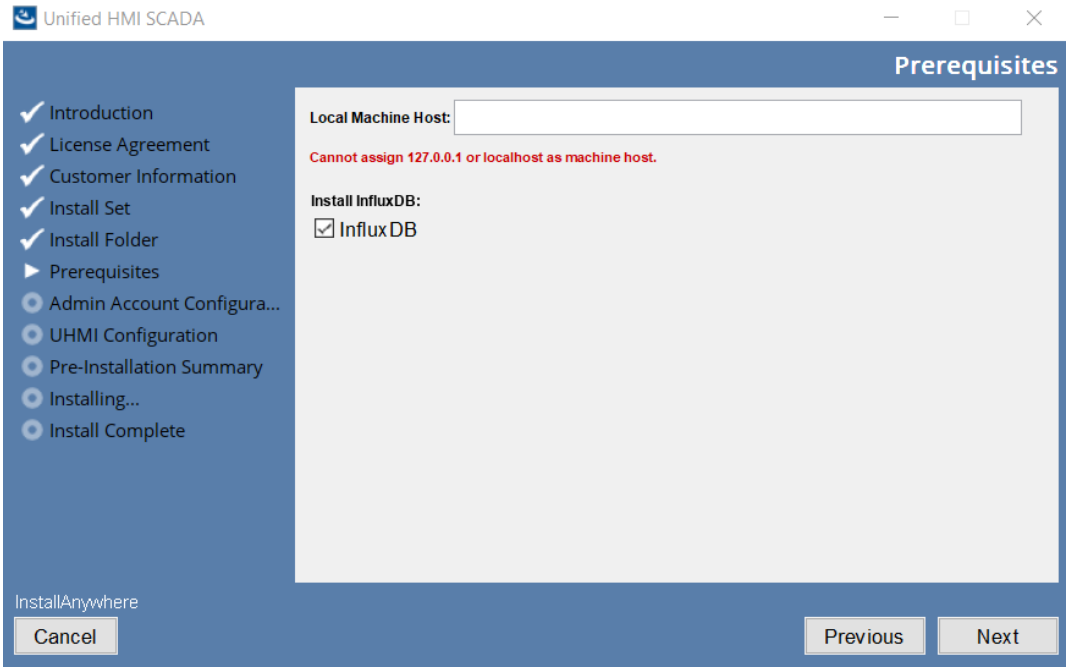


Figure 17: Prerequisites Configuration Dialog

8. Choose a user account to run the UHMI SCADA services or leave the fields empty to use the local system account. Click **Next** to continue. You can still configure the services logon from Windows Services after installation.

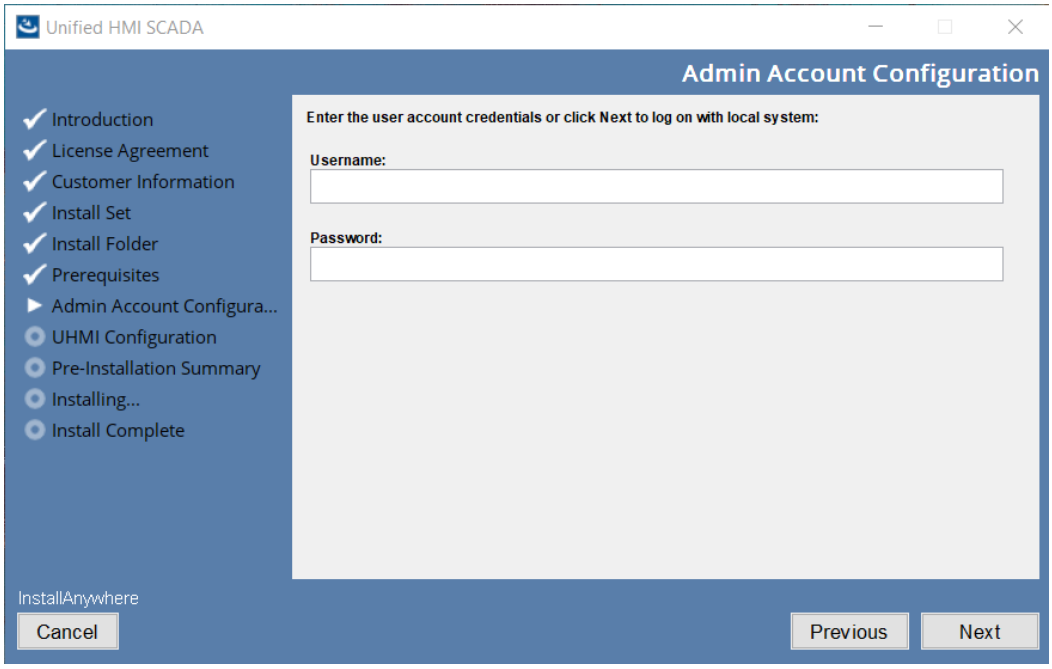


Figure 18: User Account Credentials

9. Click **Next** then UHMI SCADA database configuration dialog will be prompted, choose the Database type: **SQLite** or **SQL DB**.

   Proceed with the Default selected database (SQLite). In case of large project or recommended use of SQL, see Annex 1 for SQL server installation and configuration.

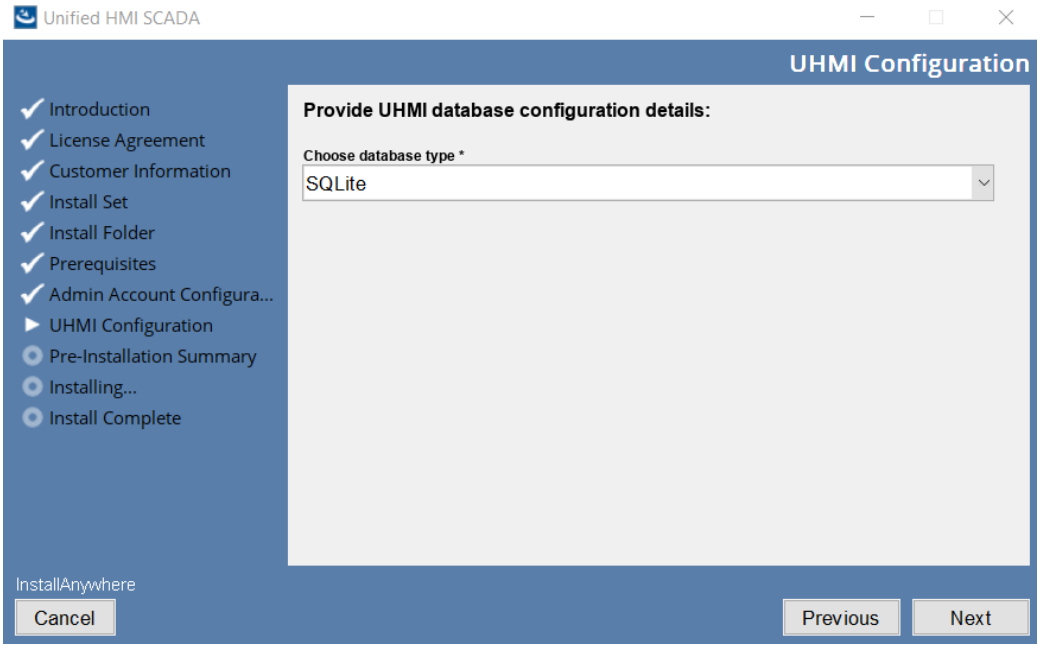


Figure 19: UHMI Default Database

10. Upon clicking **Next**, review your pre-installation summary, then click the **Install** button to start the installation.

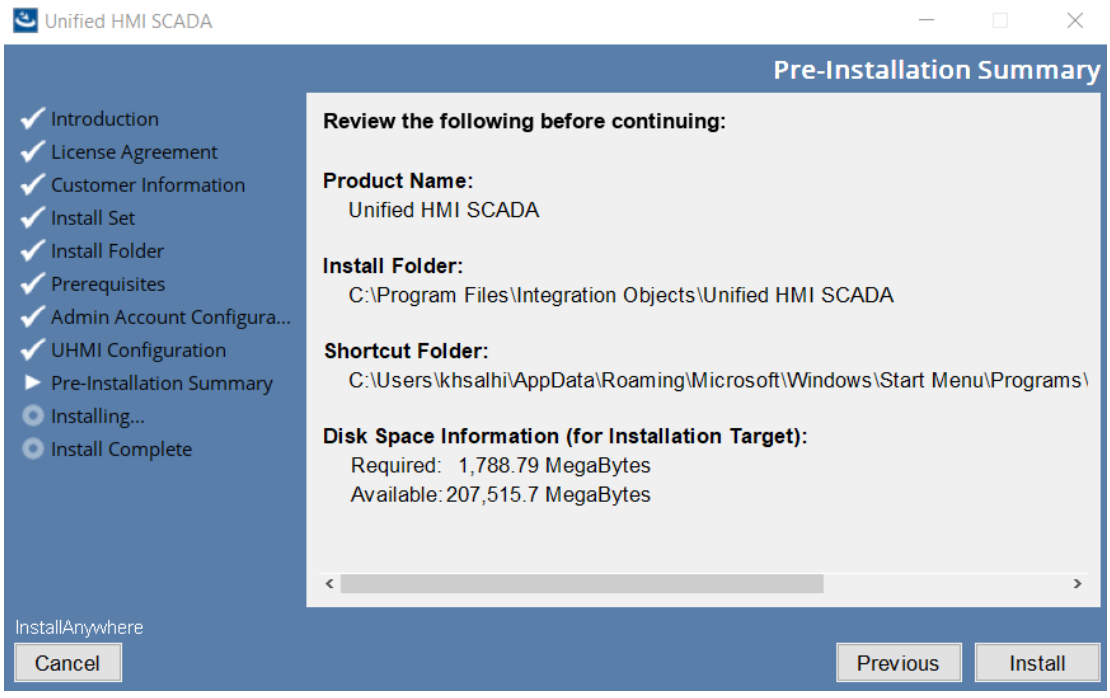


Figure 20: Pre-Installation Summary Dialog

The setup will copy the necessary files into the target folder, create the **UHMI SCADA** application pools and websites in IIS, create a shortcut icon to access the UHMI SCADA configuration portal, create the services for the installed features and make an uninstallation entry in the Add/Remove Programs in the Control Panel. This process may take a few minutes.

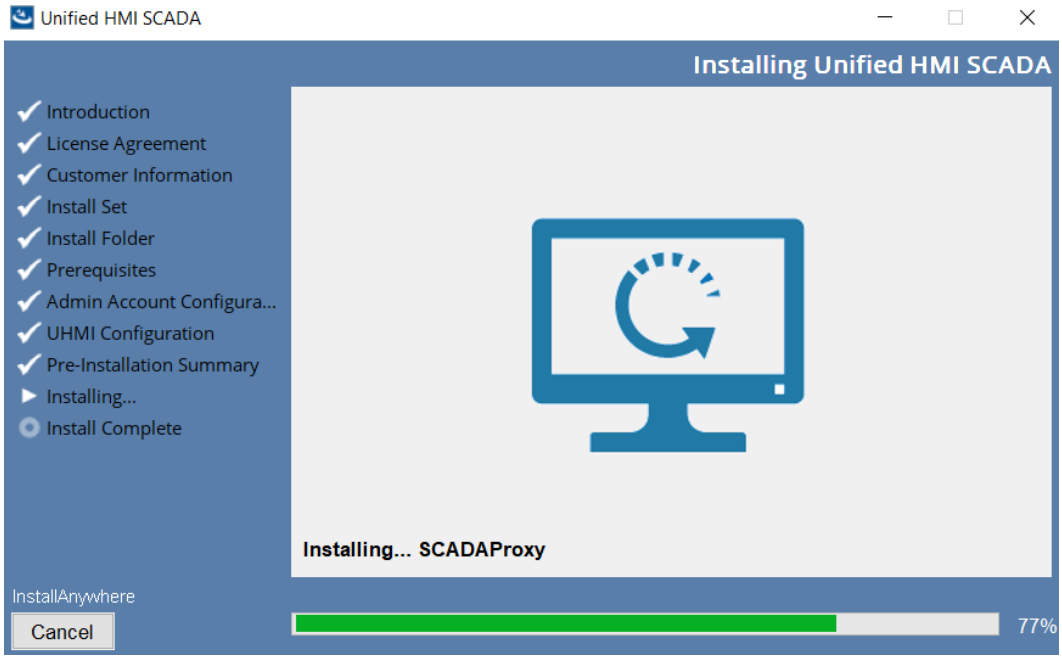


Figure 21: Installation Progress Dialog

Once the installation is complete, the following dialog will be displayed. Click **Done** to close the installer.

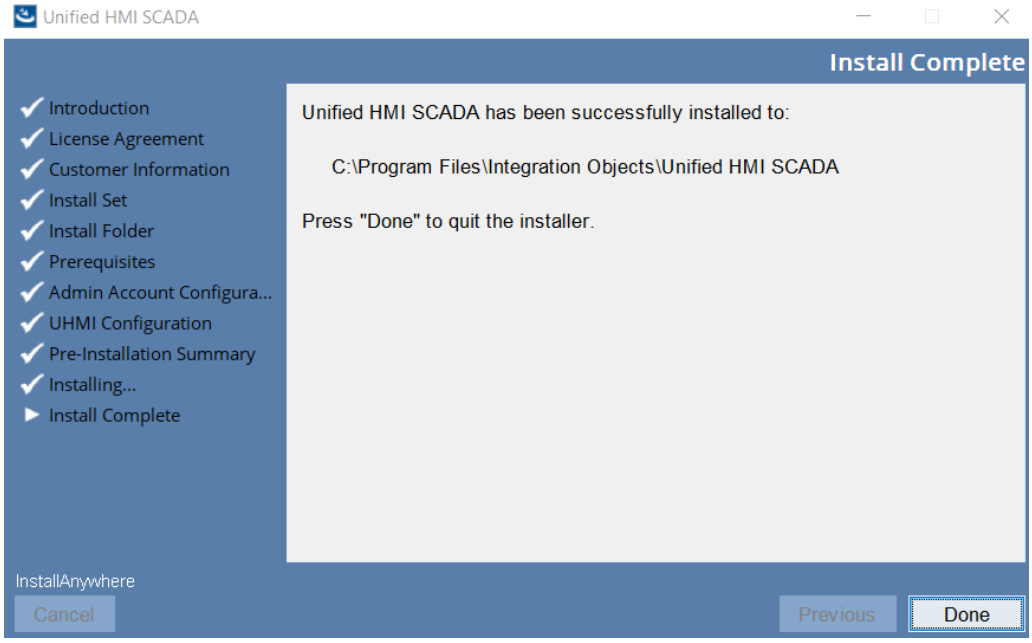
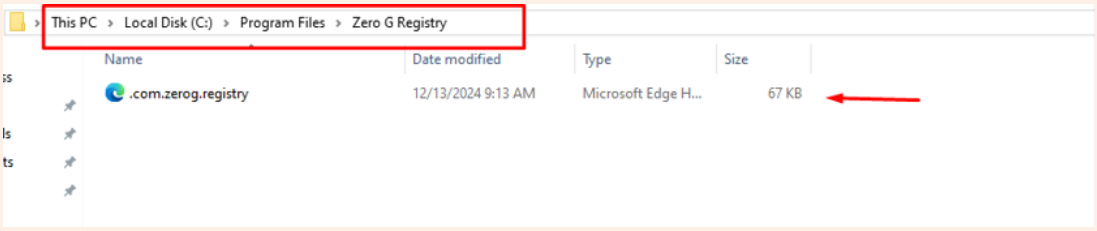


Figure 22: Installation Complete Dialog

(!) Note

In the event of an interruption during the installation phase, navigate to the following path: "C:\Program Files\Zero G Registry" and remove the ".com.zerog.registry" file, as shown below.



This interruption may happen if previous versions of SIOTH were installed on the same machine.

2. Post-Installation Verification

After installation, the License and Influx services will start automatically. The installed services are described below:

Figure 24: UHMI SCADA Services

The installed services are configured to start up automatically and are running with the Local System account by default.

The table below outlines the installed services:

Name	Description
Integration Objects' License Server	The License Server
Influx DB	Influx DB service.

Table 2: Services Description

The UHMI SCADA websites and APIs will also be created in IIS and run automatically using the Local System account.

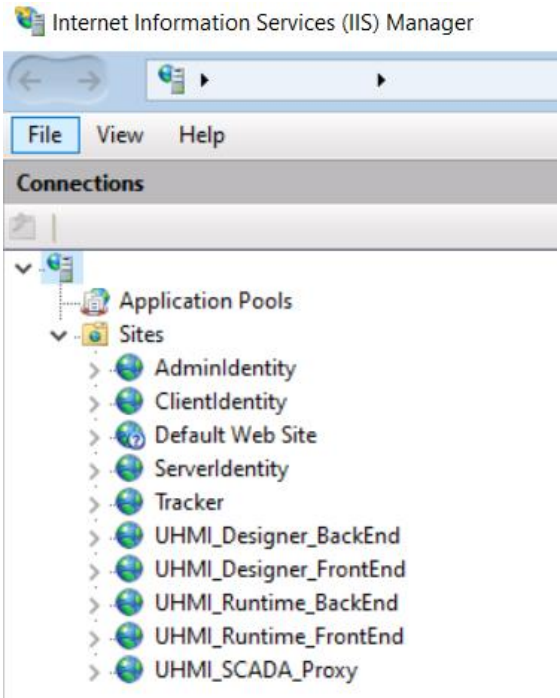


Figure 25: UHMI SCADA Web APIs

3. Uninstallation Process

Proceed as follows to uninstall UHMI SCADA from your machine:

1. Go to the **Control Panel** and select **Uninstall a Program** under the **Programs** section.
2. Right-click **Unified HMI SCADA** and choose **Uninstall**.

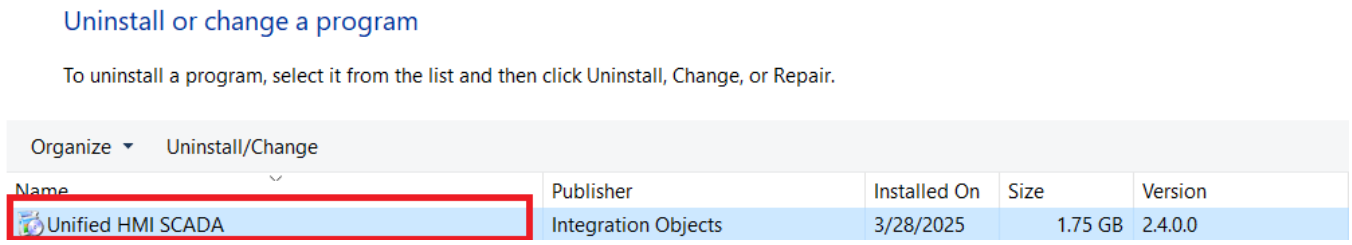


Figure 26: Uninstall UHMI SCADA

3. Select the **Uninstall Product** Option and then click **Next**

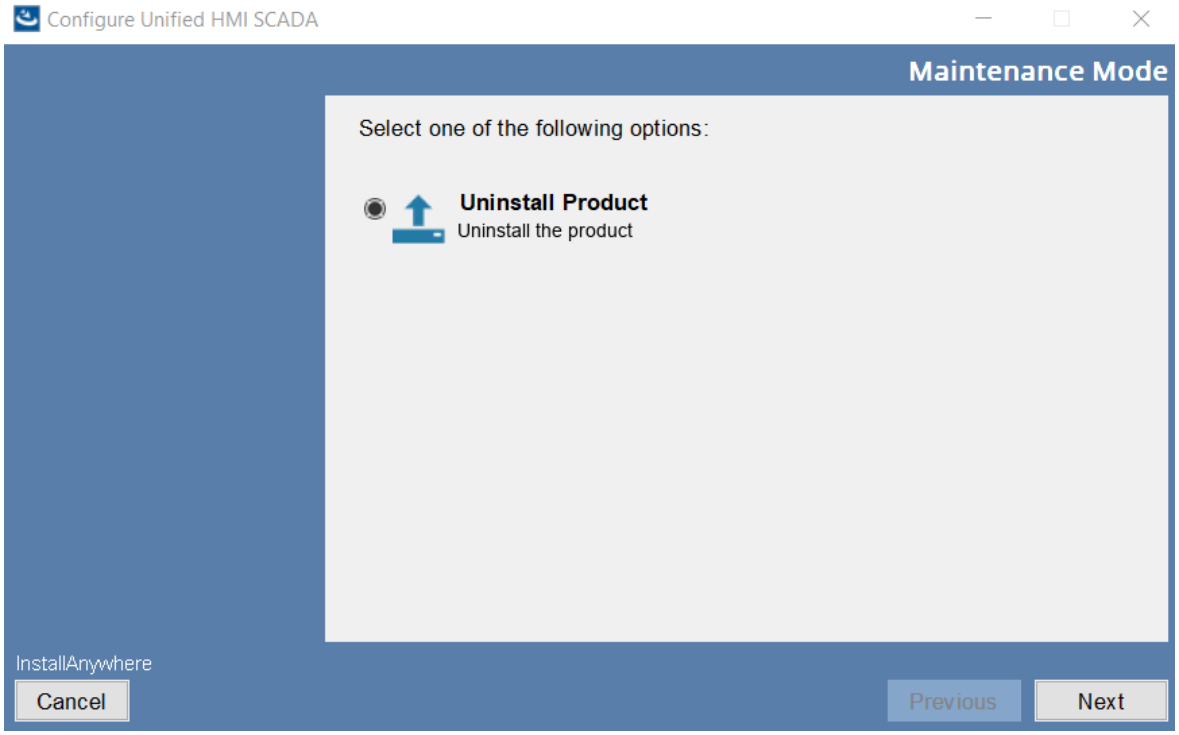


Figure 27: Uninstall Dialog

4. Confirm the uninstallation of all installed features by clicking **Next**.

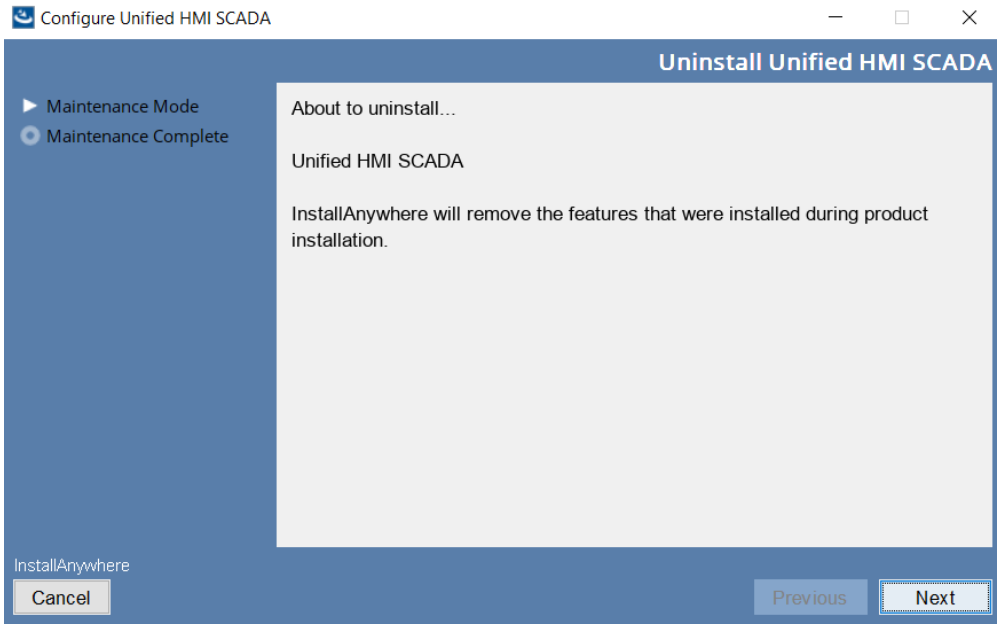


Figure 28: Uninstall Confirmation Message

5. Select whether to uninstall **Influx DB** or not and click **Uninstall** to continue.

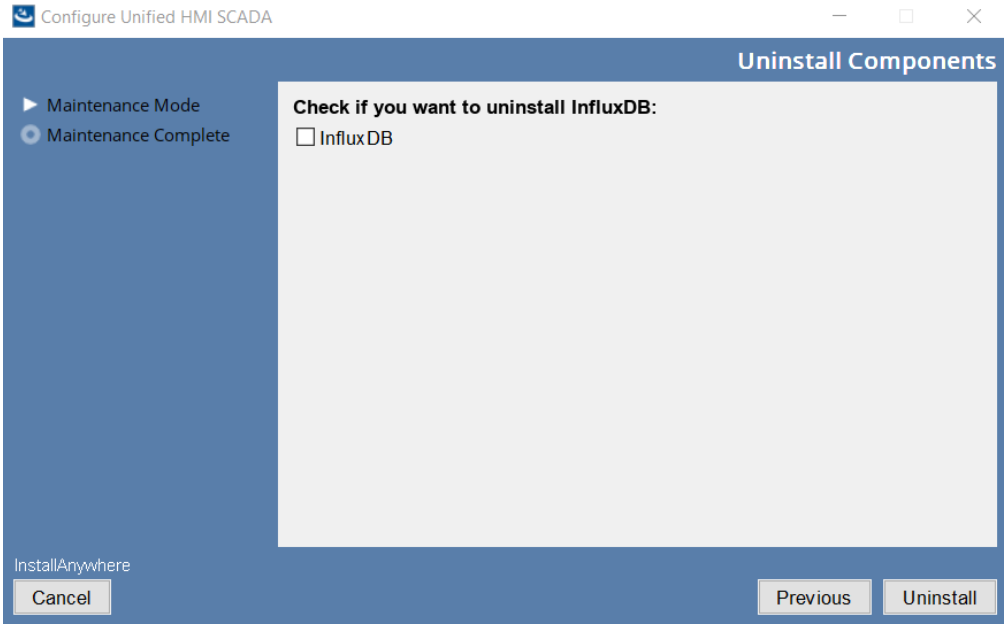


Figure 29: Uninstall Prerequisites Selection Dialog

6. You will be prompted to confirm if the **Influx DB** data should be deleted during the uninstallation. Click Yes to confirm the deletion of **Influx DB** data or No to keep it.

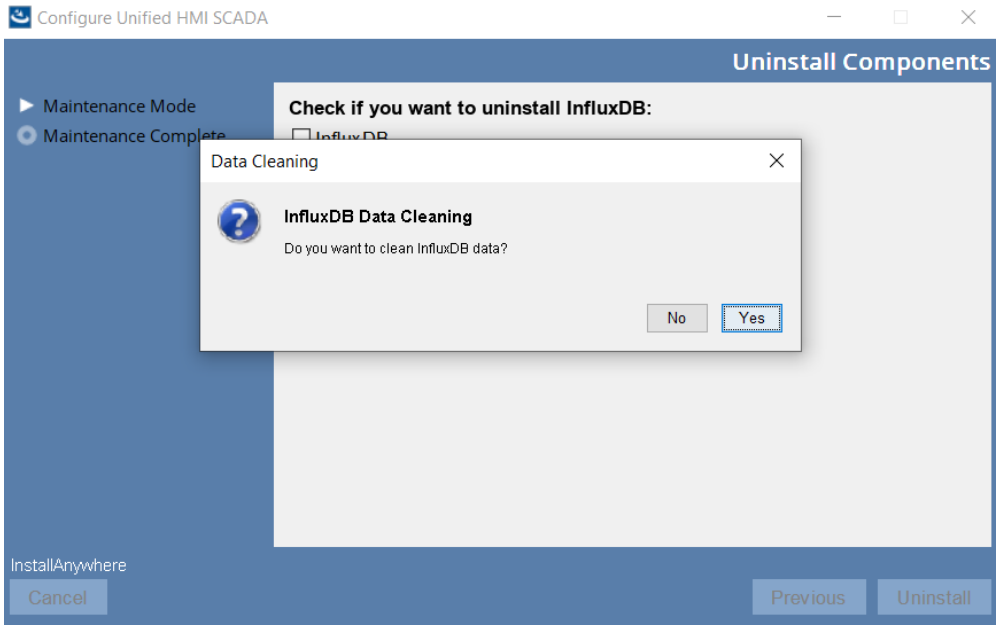


Figure 30: Influx DB Data Cleaning

The uninstall process will then begin and progress will be displayed:

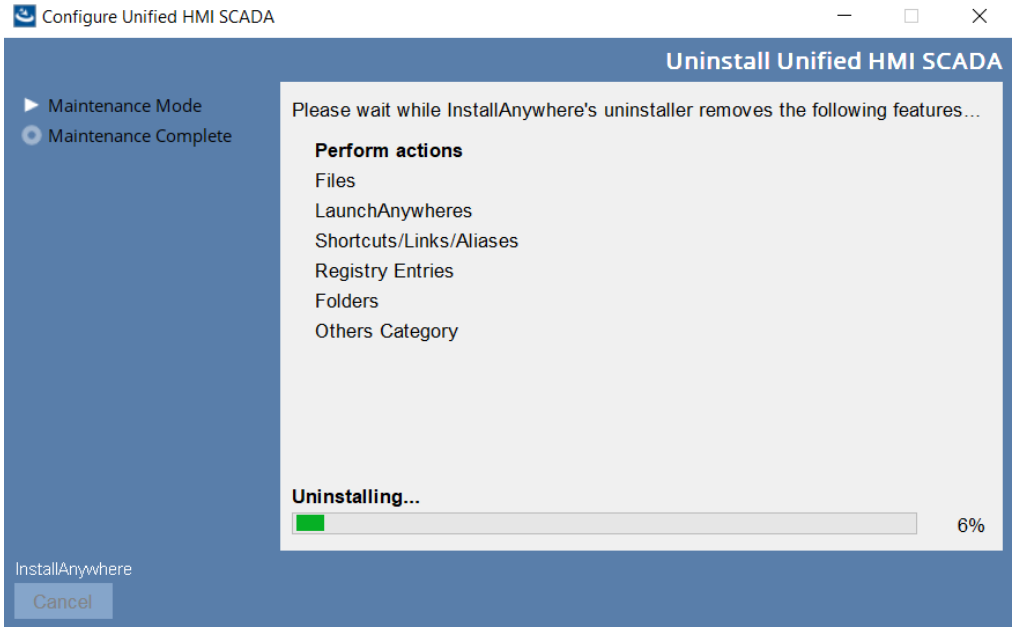


Figure 31: Uninstall Progress

Once the uninstallation is complete, a dialog will appear summarizing the uninstallation status. Choose **Yes, restart my system** and click **Done** to finish.

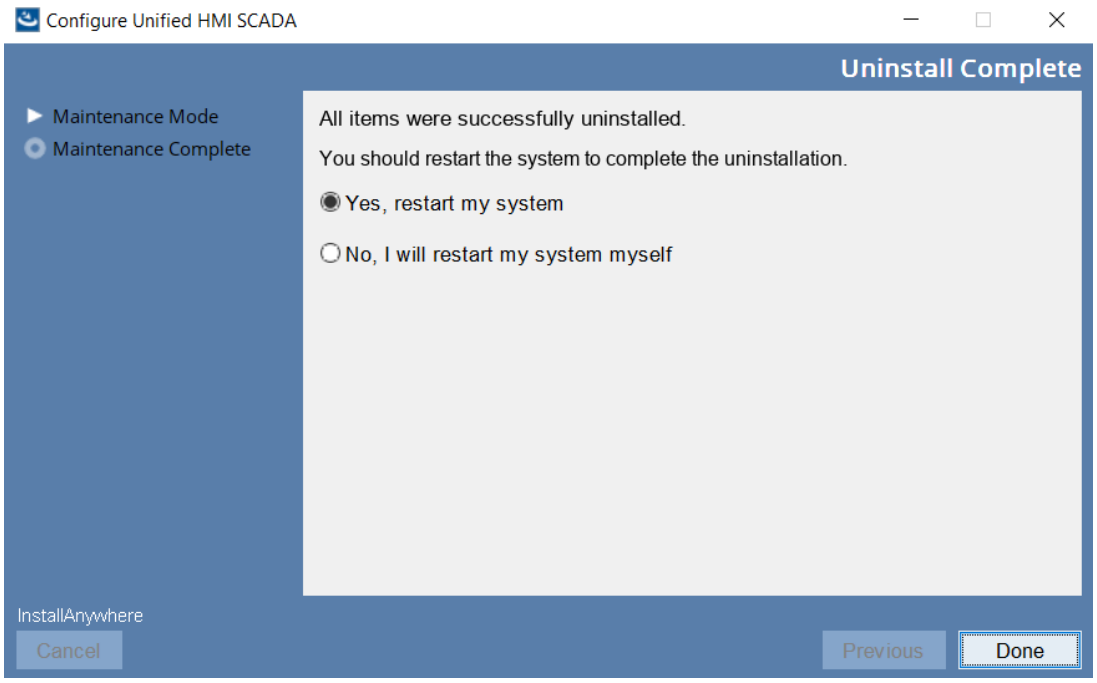


Figure 32: Completed Uninstallation

(!) Note

It is recommended to restart the system after SIOTH uninstallation for all files clean-up and Windows services deletion.

4. Repair Process

Proceed as follows to repair the UHMI SCADA installation on your machine:

1. Go to the folder where UHMI SCADA is installed and run the program "Change Integration Objects' Smart IoT Highway Installation" as an administrator, as illustrated below:

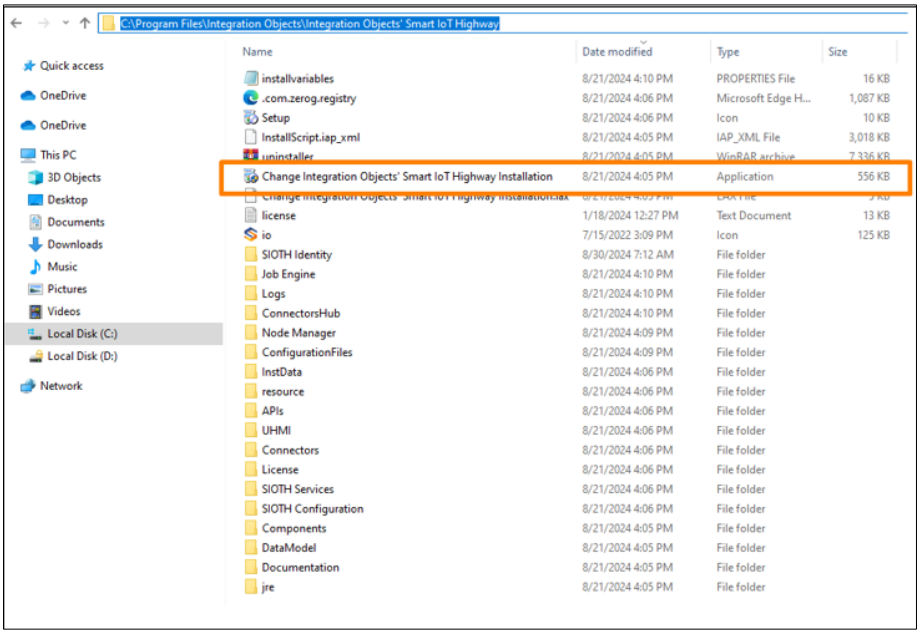


Figure 33: Installation Folder

2. A pop-up window will appear. Select "Repair Product" and click on the "Next" button.

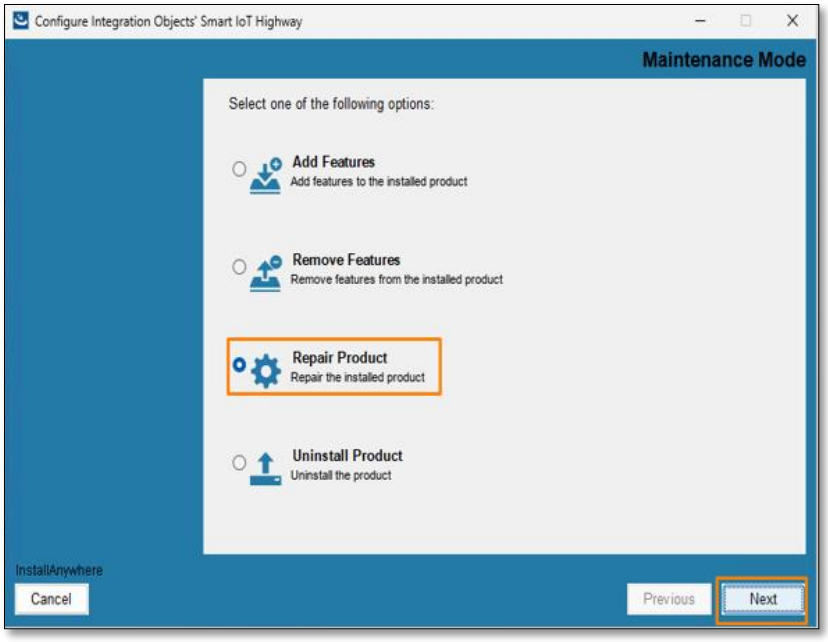


Figure 34: Repair Product

3. Click on the “Install” button

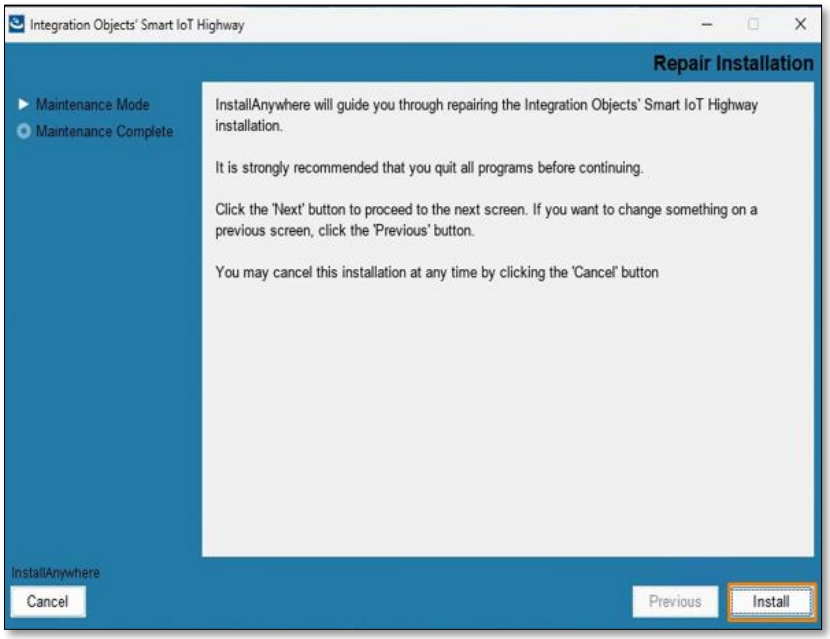


Figure 35: Repair Installation

This action may require the user to “repair”, “change” or “remove” the setup for MongoDB, RedisDB, and Influx DB.

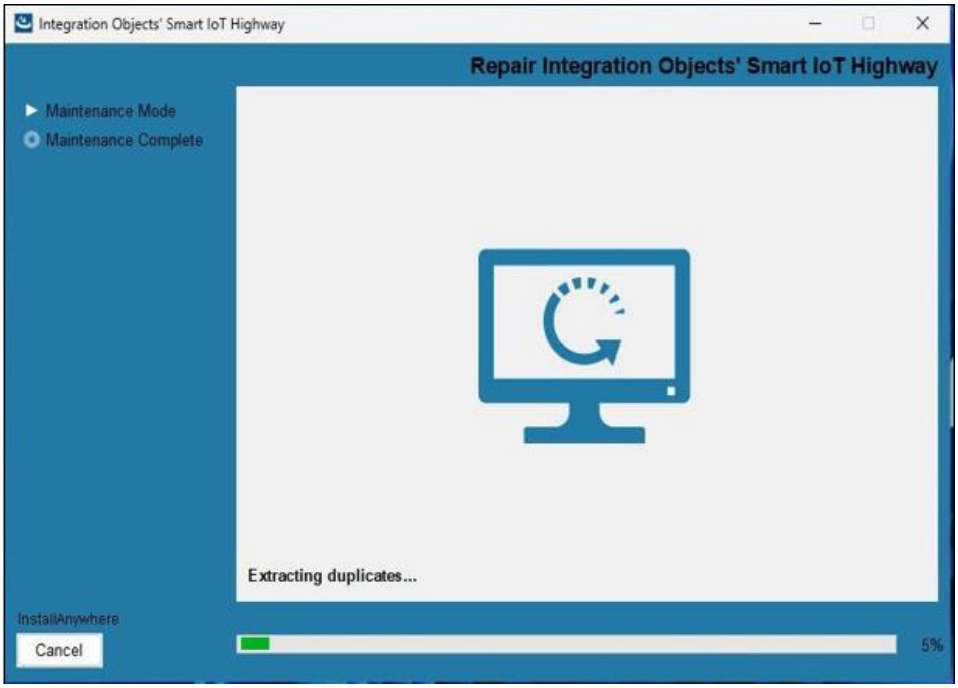


Figure 36: Repair In Progress

Once the repair process is complete, a confirmation dialog will appear. Click "Done" to close the installer.

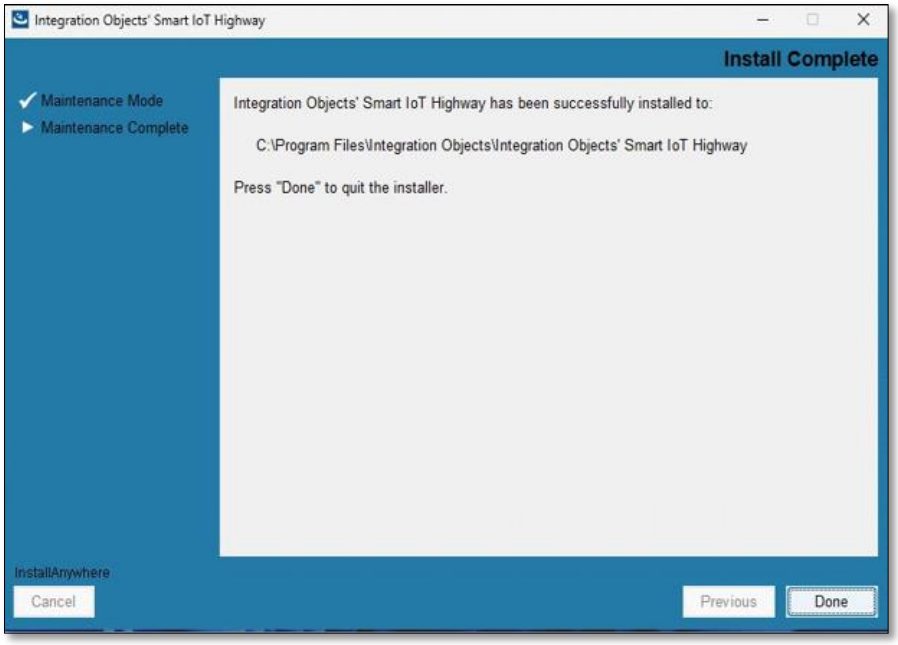


Figure 37: Repair Complete Dialog

5. Add Features Process

Proceed as follows to add a new feature into the UHMI SCADA installation:

1. Go to the folder where UHMI SCADA is installed and run the program "Change Integration Objects' Smart IoT Highway Installation" as an administrator, as illustrated below:

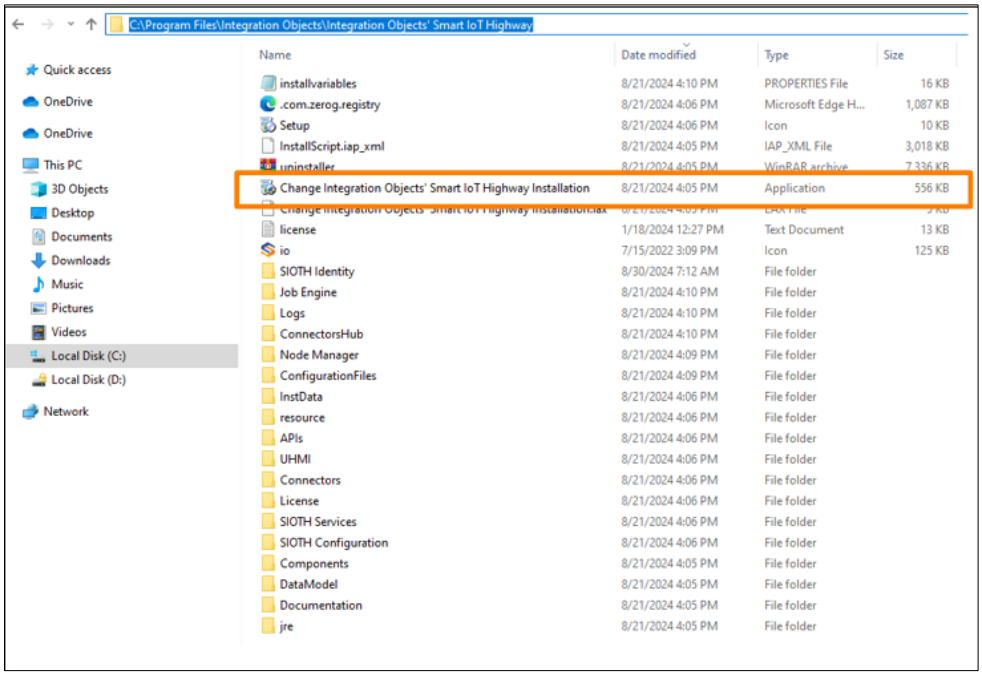


Figure 38: Installation Folder

2. To add a feature to the installed product, click **Add Features** as shown below:

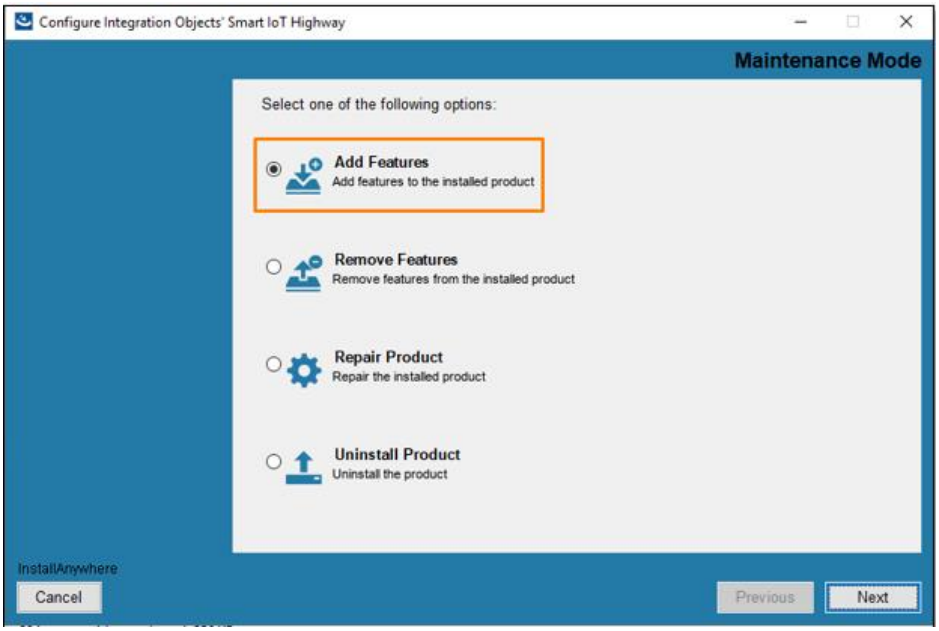


Figure 39: Add Feature 1

3. Click **Next**.

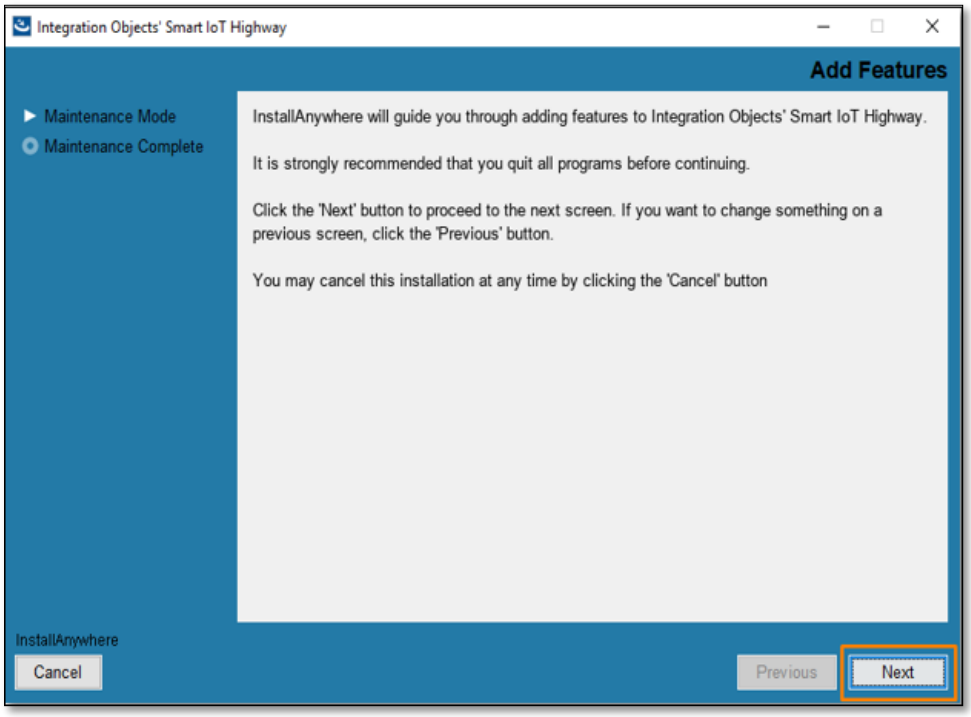


Figure 40: Add Feature 2

4. Select the desired features you want to install, then click the **Install** button.

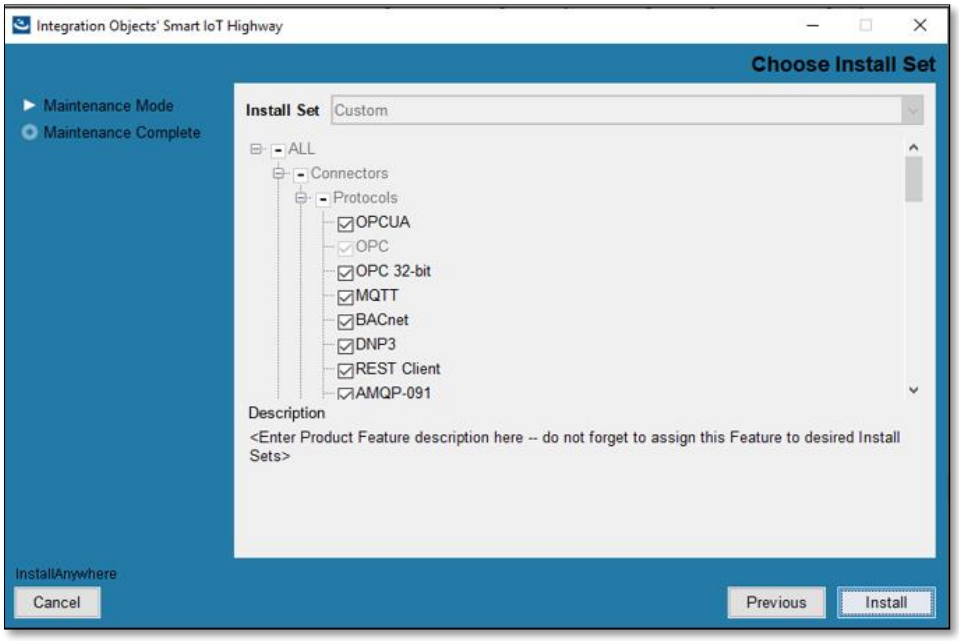


Figure 41: Features List

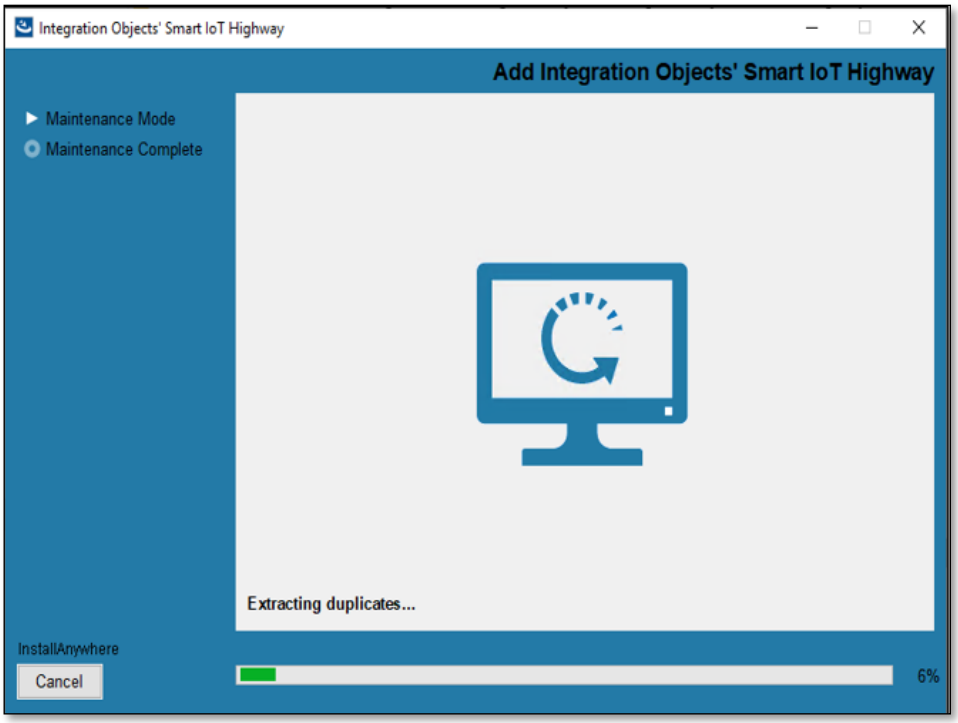


Figure 42: Features Installation in Progress

Once the installation is complete, the following dialog will be prompted to confirm that the added features process is done successfully.

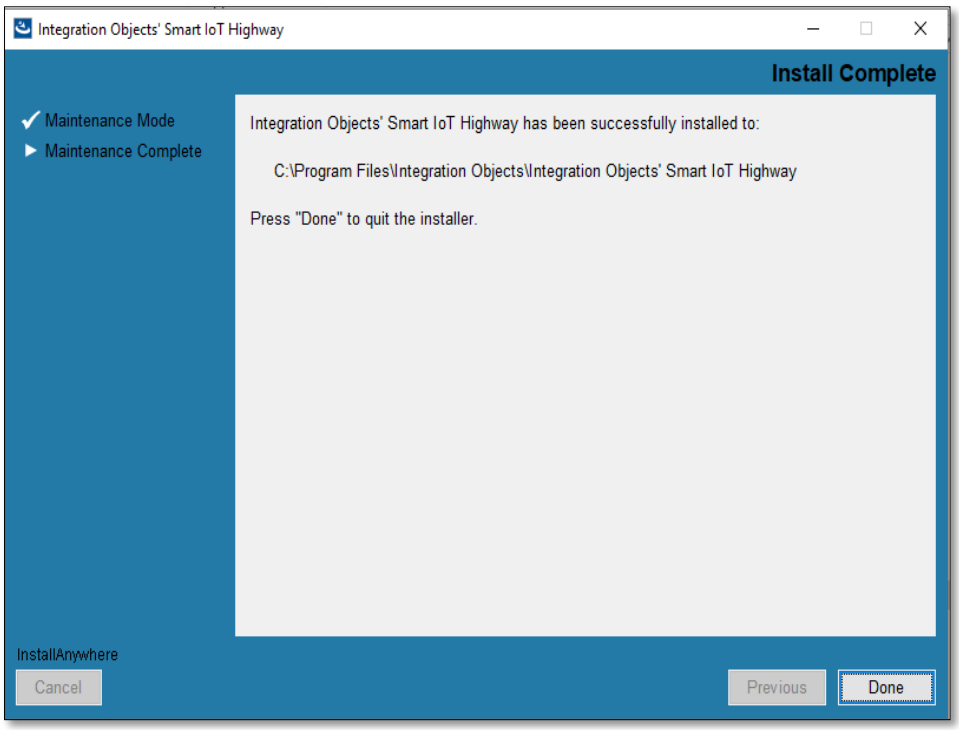


Figure 43: Features Installation Complete Dialog

6. Remove Features Process

Proceed as follows to remove an installed feature from the UHMI SCADA installation:

1. Go to the folder where UHMI SCADA is installed and run the program **Change Integration Objects' Smart IoT Highway Installation** as an administrator, as illustrated below:

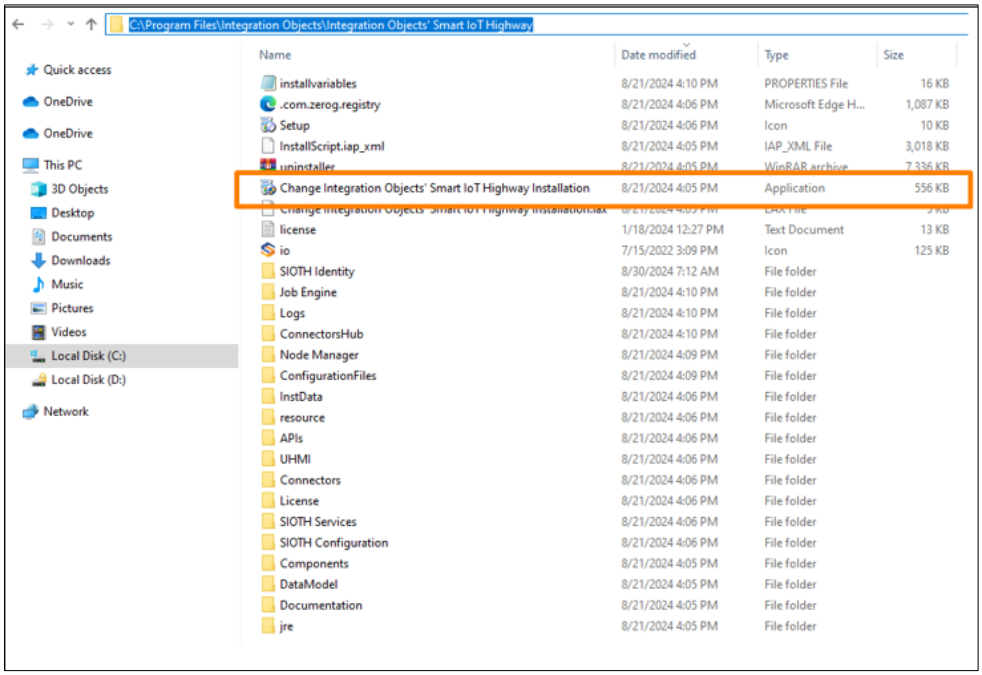


Figure 44: Installation Folder

2. 2. To remove a feature from the installed product, click on "Remove Features" as illustrated below:

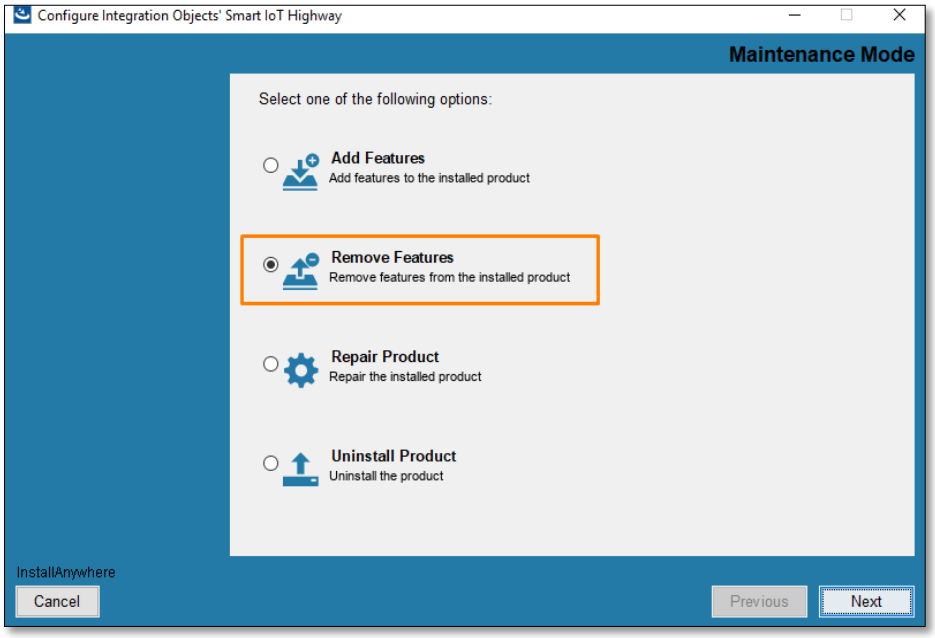


Figure 45: Remove Features 1

3. Click **Next**.

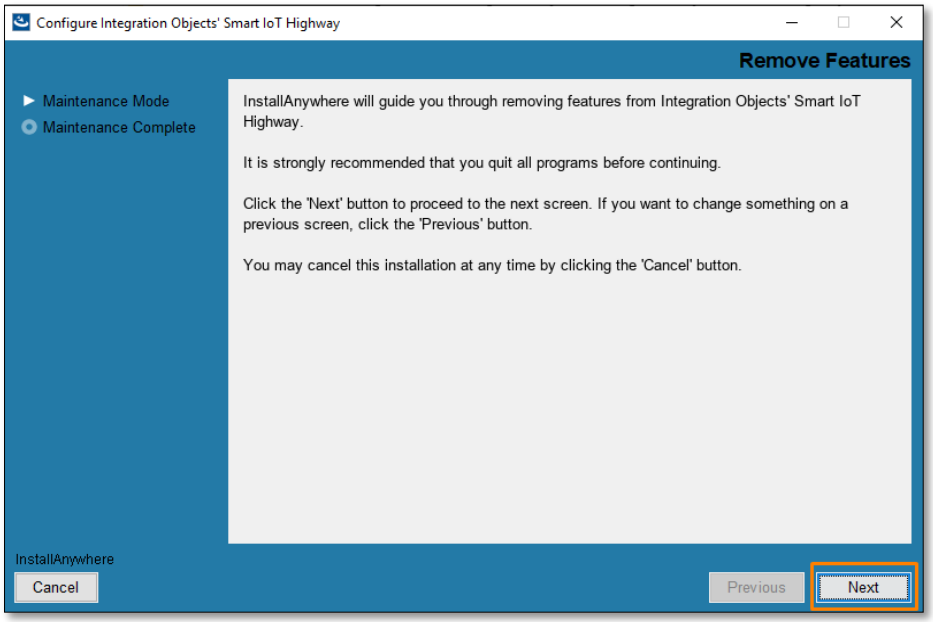


Figure 46: Remove Features 2

4. Select the features you want to remove from the installation.

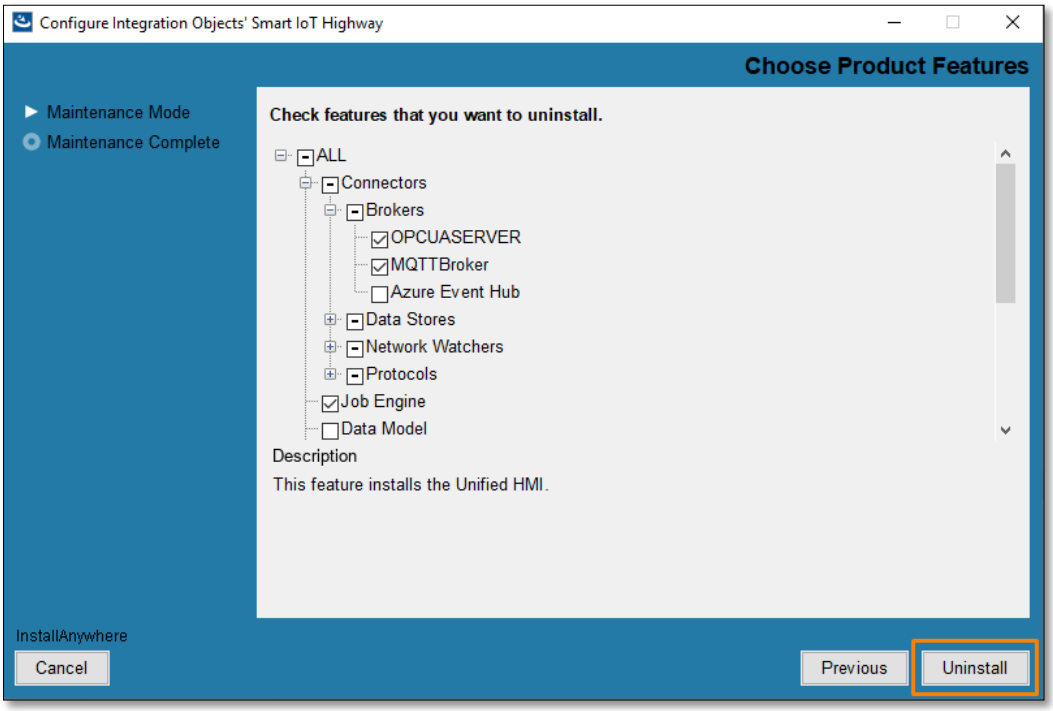


Figure 47: Features to be Removed

5. Click **Uninstall** to begin the uninstall process.

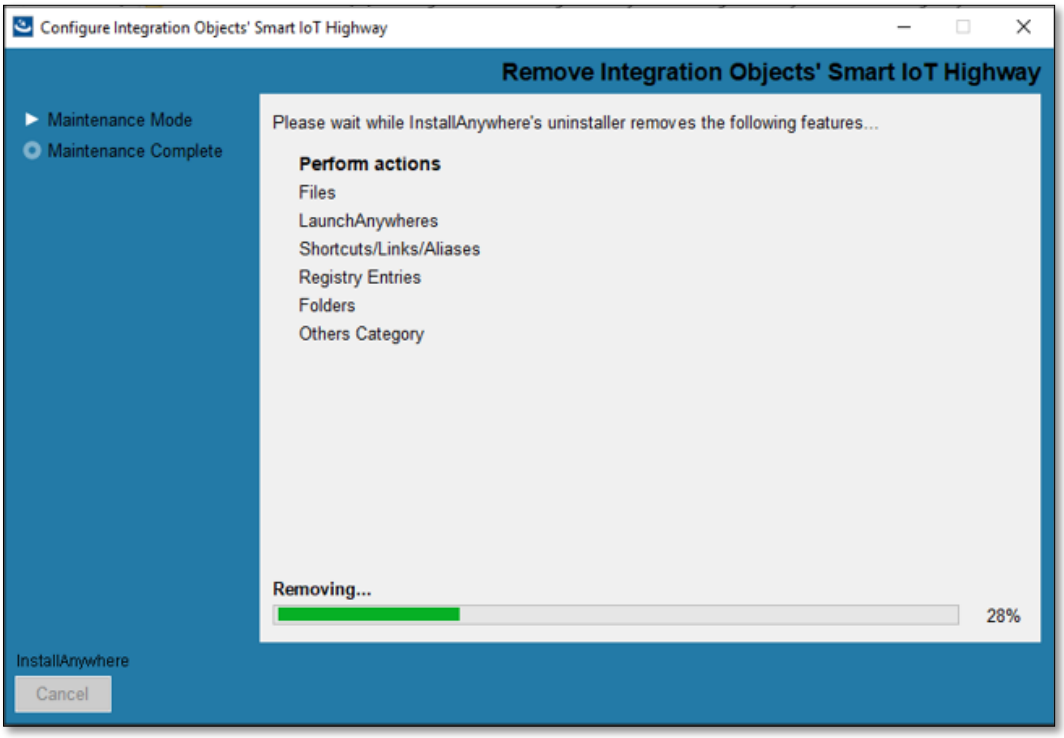


Figure 48: Uninstalling in Progress

6. The features uninstallation will be completed after the restart of the system.

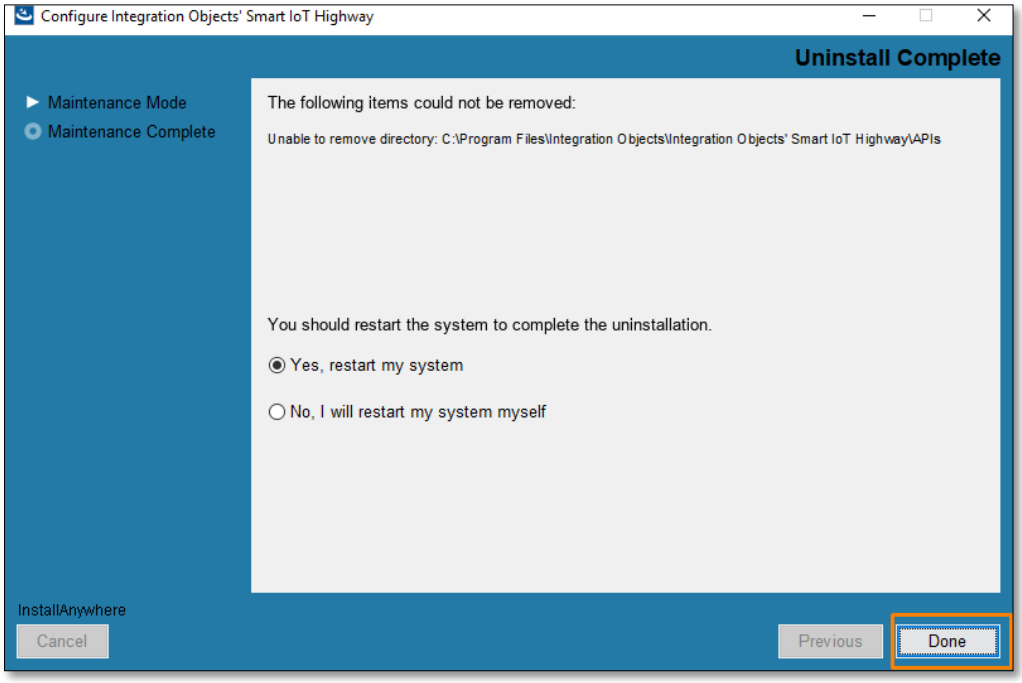


Figure 49: Restart System

(!) Note

It is recommended to restart the system after removing features from SIOTH installer.

APPENDIX 1: SQL SSERVER PREREQUISITES

1. SQL Server Configuration

Installation of **Microsoft SQL Server** is required if it is selected as a database during installation. Refer to the compatibility section for a list of supported SQL Server versions.

Ensure that the SQL Server network options are properly configured, and the user account has adequate privileges to connect to the SQL Server. The next sections explain the required privileges for **Windows Authentication** and **SQL Authentication**.

2. SQL User Privileges for Windows Authentication

For installations using the Windows Authentication for SQL Server, the following privileges need to be added to the "NT AUTHORITY\SYSTEM" service account before running the UHMI SCADA setup:

- dbcreator

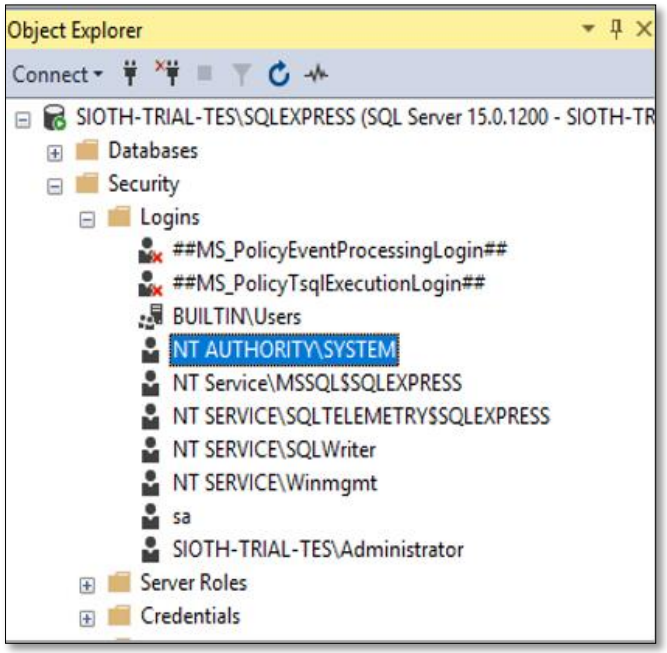


Figure 50: NT AUTHORITY\SYSTEM Account

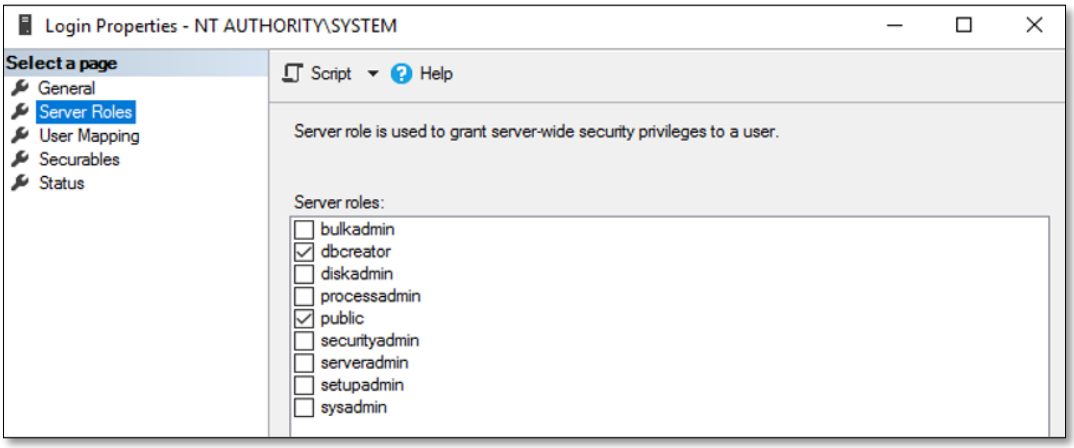


Figure 51: Server Roles Configuration for the NT AUTHORITY\SYSTEM Account

3. SQL User Privileges for Specific User Authentication

For UHMI SCADA installations using authentication for a specific user in SQL Server, the following privileges need to be configured for the related SQL user account after its creation and before running the UHMI SCADA setup:

- Dbcreator

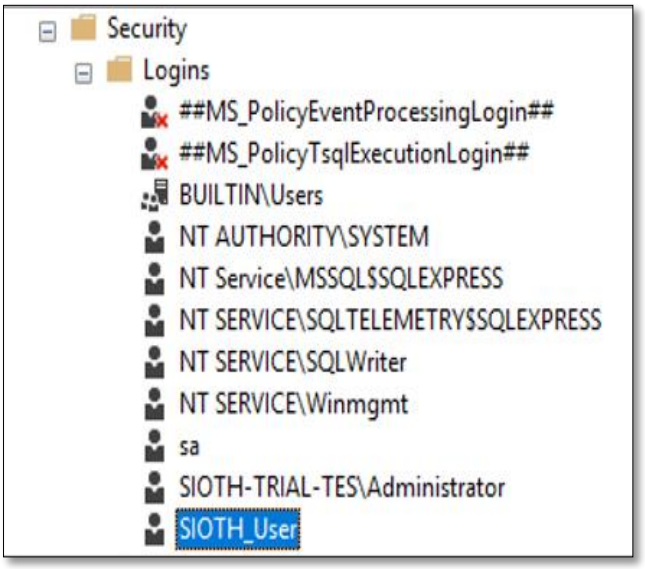


Figure 52: SQL Server Specific User

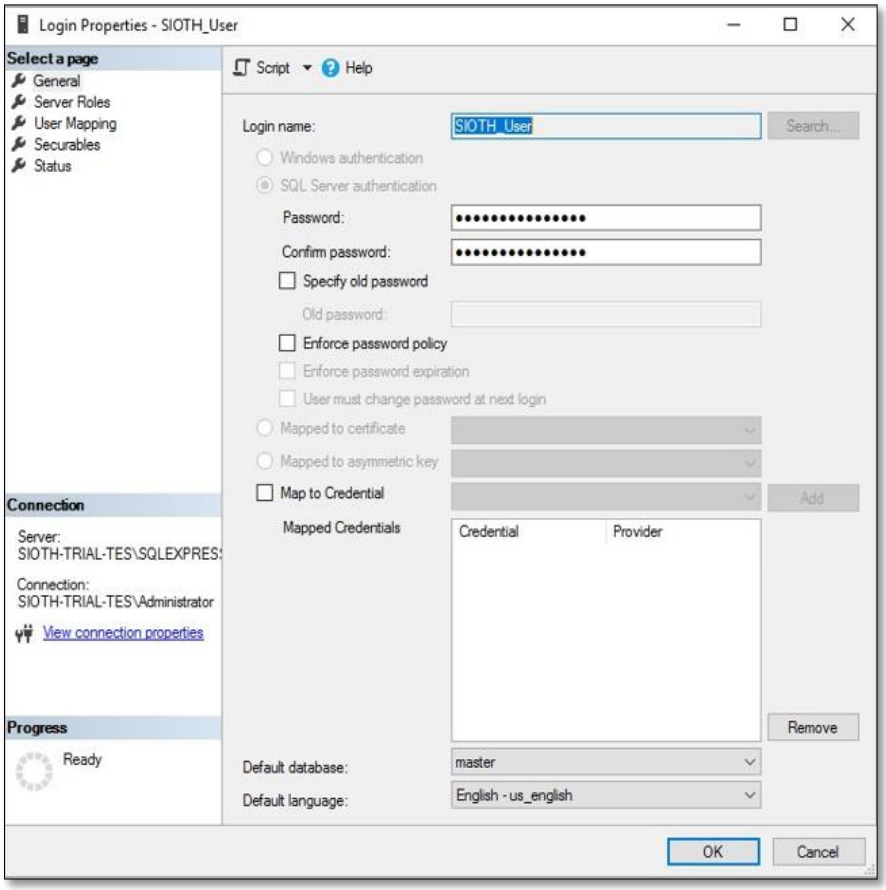


Figure 53: SQL Server Specific User Login Properties

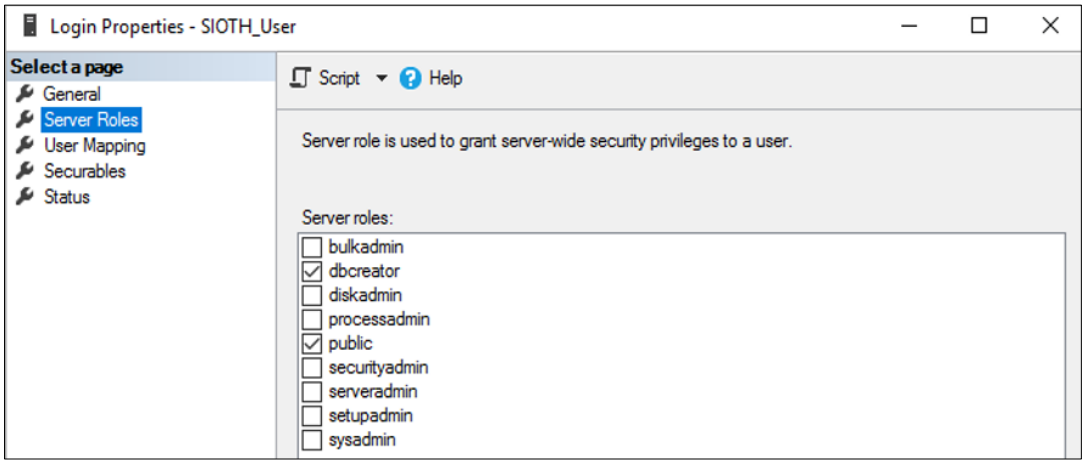


Figure 54: SQL Server Specific User Server Roles

4. SQL Server Network Configuration

To establish a connection between UHMI SCADA and the SQL Server database, configure the following parameters in the SQL Server Configuration Manager:

1. Enable all protocols under the SQL Server Network Configuration.

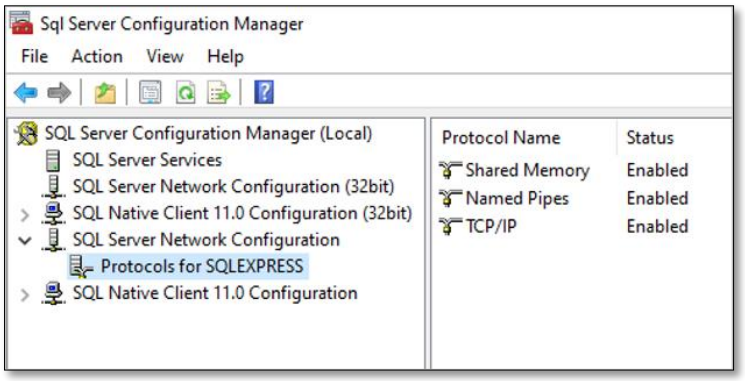


Figure 55: SQL Server Network Configuration

2. Set the correct TCP/IP port for connections. Open the TCP/IP protocol properties, navigate to IPAll under IP Addresses and set the TCP Port to 1433.

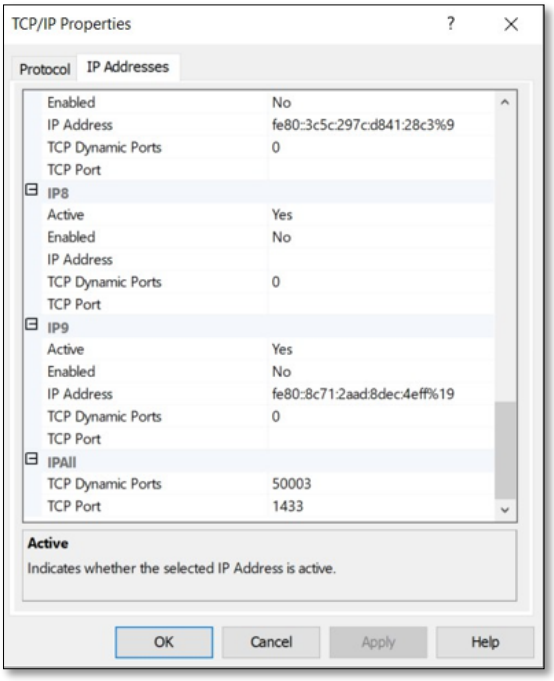


Figure 56. SQL Server TCP/IP Port Configuration

For additional information on this guide, questions, or problems to report, please contact:

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