

Smart-Vue Pro Server Installation

User Guide

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IMPORTANT Read this instruction manual. Failure to follow the instructions in this manual can result in damage to the unit, injury to operating personnel, and poor equipment performance.

CAUTION All internal adjustments and maintenance must be performed by qualified service personnel.

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Notices and Safety

Disclaimer and Limitation of Liability

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Safety Instructions

IMPORTANT NOTE: Do not use this product for protection or as part of an automated emergency system or as for any other application that involves protecting people and/or property. Customers and users of the products are responsible for ensuring that the product is fit for the intended use.

Introduction

Smart-Vue Pro Server Solution

This user guide describes procedure to install the entire Smart-Vue Pro web application and related services on a local server without any external connections to the internet or cloud.

About this Manual

This user guide only describes the process for installing Smart-Vue Pro software on the server that will run Smart-Vue Pro. Ensure you have read and understood the installation prerequisites (refer **Installation Prerequisites**).

Here, it is assumed that certain system components are already installed in the target system. However, details on related hardware or components are beyond the scope of this guide. Refer to the relevant documentation for more information, if necessary.



CAUTION: Some links to external web resources are provided in this manual for your convenience. Those links were accurate at the time of this writing though they are subject to change without notice.

Smart-Vue Pro Server Solution Architecture

The following diagram shows an overview of the Smart-Vue Pro Server solution. Information flow is bidirectional:

- Users interact with sensors remotely via the system.
- Data logger with sensors push their data to the system for storage and access.

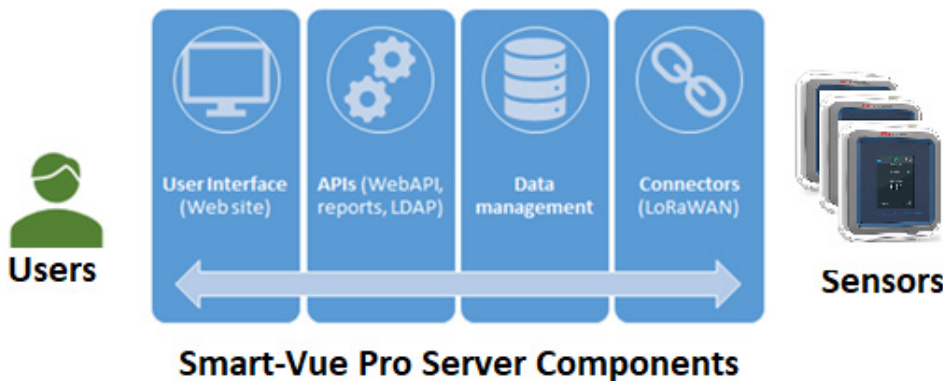


Figure 1. Smart-Vue Pro Server Solution Architecture

Smart-Vue Pro Server installation therefore involves setting up the following main components:

User Interface

The web application that people use to interface with the system.

APIs

Various software services providing specific application features such as reports and external authentication.

Data Management

Database services for managing system and sensor data.

Connectors

Services that manage the wireless network devices that collect sensor data.

Installation Prerequisites

Before you begin, please make sure to have the Smart Vue requirements checklist on-hand. This will ensure that all required elements are completed and documented prior to installation. Please contact Support for a copy if necessary.

This section summarizes the prerequisites for Smart-Vue Pro Server solution.

Related Thermo Scientific Products/Services

Required

- Smart-Vue Pro Multitech LoRaWAN gateway, installed on the same network as the server.
- Smart-Vue Pro Quatro LoRaWAN-enabled data loggers (firmware 2.4.1 or higher).
- Smart-Vue Pro subscription license key (provided by Thermo Scientific).
- Smart-Vue Pro Customer key (provided by Thermo Scientific), a customer-specific 8-digit code to ensure solution uniqueness and security.

Optional

- Smart-Vue Alert (to receive alert notifications via voice call and/or SMS/text).
- Remote access for Thermo Scientific technical support.

Server System, Hard Drive, and MS SQL Server Requirements

Server Requirements

- Microsoft Windows Server 2012 R2 (x64) or higher.
- RAM: minimum 8 GB / recommended 16 GB.
- Intel quad-core processor (i5 or higher, or Xeon series X5xx).
- Fixed IP address or fixed domain name.

Note: The domain name must be registered in your DNS server to access to the web application if you choose not to use the IP address directly.

Hard Drive and Microsoft SQL Server Requirements

- The Smart-Vue Pro web application and its components require about 650 MB hard drive space.
- Data storage requirements depend on the number of sensors used for data logging, the sensor read frequency and the audit trail. Here are some guidelines:

For up to 60 measurement points:

- Microsoft SQL Server 2016 Express or higher.

Note: The database size limit with Express is about 10 GB

- Enterprise quality hard drive (7200 rpm minimum).

For 60 to 2,000 measurement points:

- Microsoft SQL Server Standard 2016 or Enterprise is required.
- An enterprise SSD (or equivalent providing fast access).

Approximate space calculations

- 60 measurement points = 1 GB/yr.
- 1,000 measurement points = 10 GB/yr.
- 2,000 measurement points = 20 GB/yr.



CAUTION: The maximum database size for a single Smart-View Pro Server solution instance is 2 TB. This corresponds to 2,000 measurement points with a reading interval of 1 minute for 10 years.

Specific Requirements for LDAP

- 1 LDAP Server available
- 1 group containing all users with “User” role
- 1 group containing all users with “Application Manager” role
- Optional (if the server is already in the domain, this is not absolutely necessary):
 - 1 “guest” user without any privileges, but with access to the Active Directory (no password expiration)

Note regarding proxy servers and alert services

If your network uses a proxy server to grant users access to external sites, then you must also grant access to the solution’s Windows service “Smart View pro Alerting System”, the service that interfaces with the solution’s Smart View pro Alert notification platform.

Proxy server considerations are discussed in **“Using alert services with a proxy server”**.

Required Server Components

The following components must already be installed on your system. They are not part of the Smart-View Pro Server installation procedure.

Microsoft SQL Server 2016 or Higher

Smart-View Pro requires access to Microsoft SQL Server.

If you plan to install multiple instances of Smart-View Pro, there are two possible options:

- If the Smart-View Pro versions are different, you must also deploy multiple instances of SQL Server.

- If the Smart-Vue Pro versions are the same, you may create numerous companies with a single instance of SQL Server.



CAUTION: Some links to external web resources are provided in this manual for your convenience. Those links were accurate at the time of this writing though they are subject to change without notice.

The instructions here apply to the installation of one SQL Server instance.

1. Launch the SQL Server installation from the provided media.
2. Choose Custom in the following window.

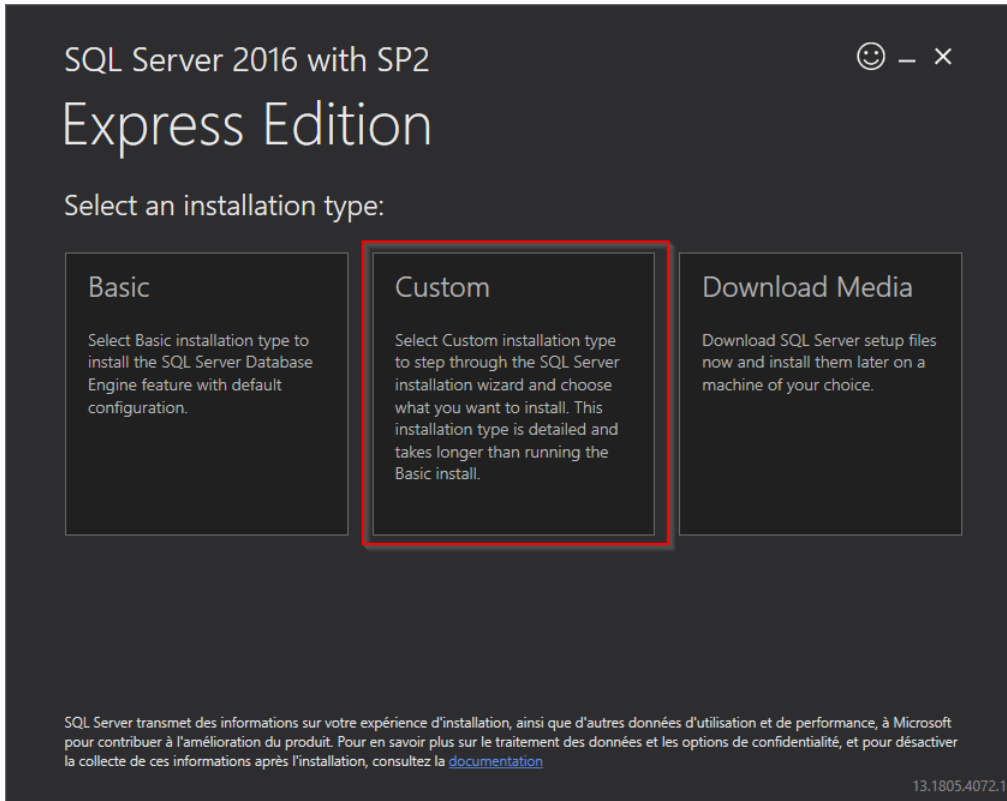


Figure 2. SQL Server Installation

3. Select the first option (1): New SQL Server stand-alone installation.

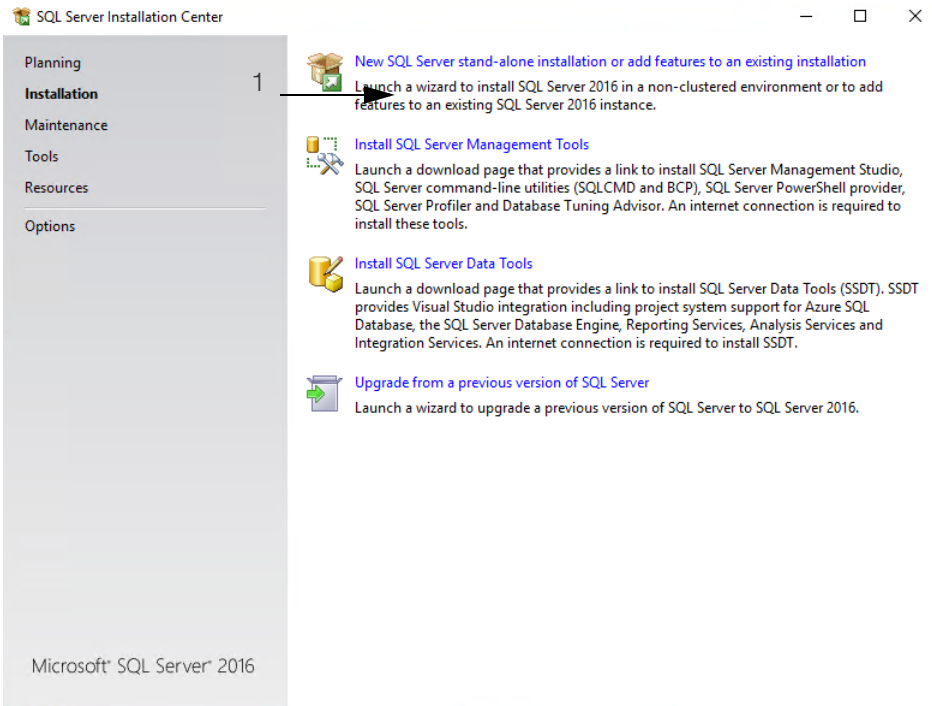


Figure 3. New SQL Server stand-alone installation

4. Follow installation and configuration instructions provided by Microsoft for this component.

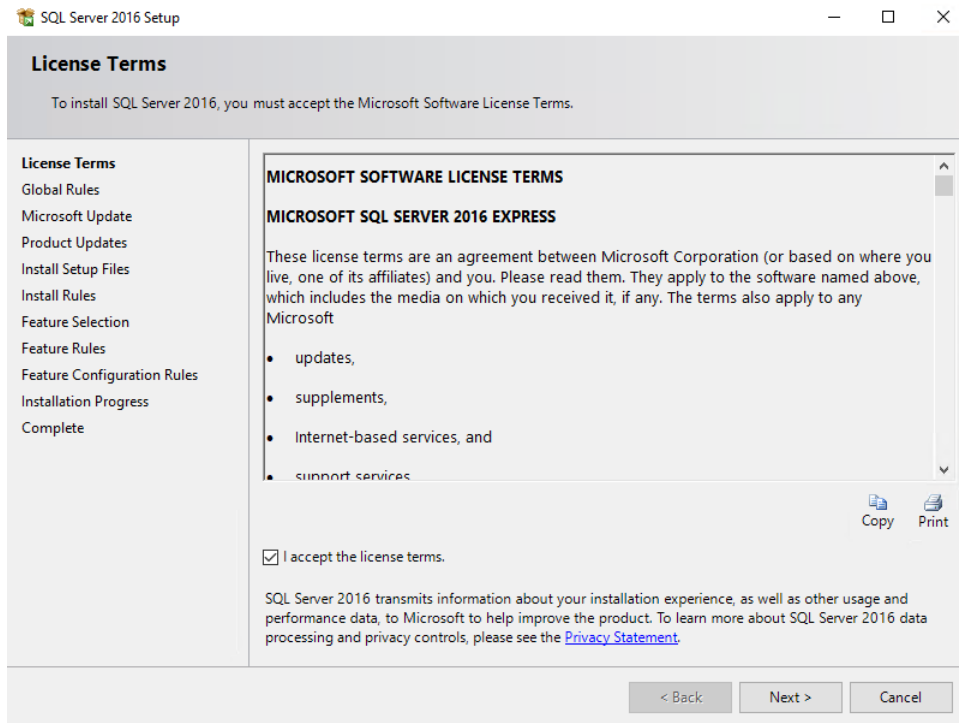


Figure 4. License Terms

5. Select the features shown below (2):

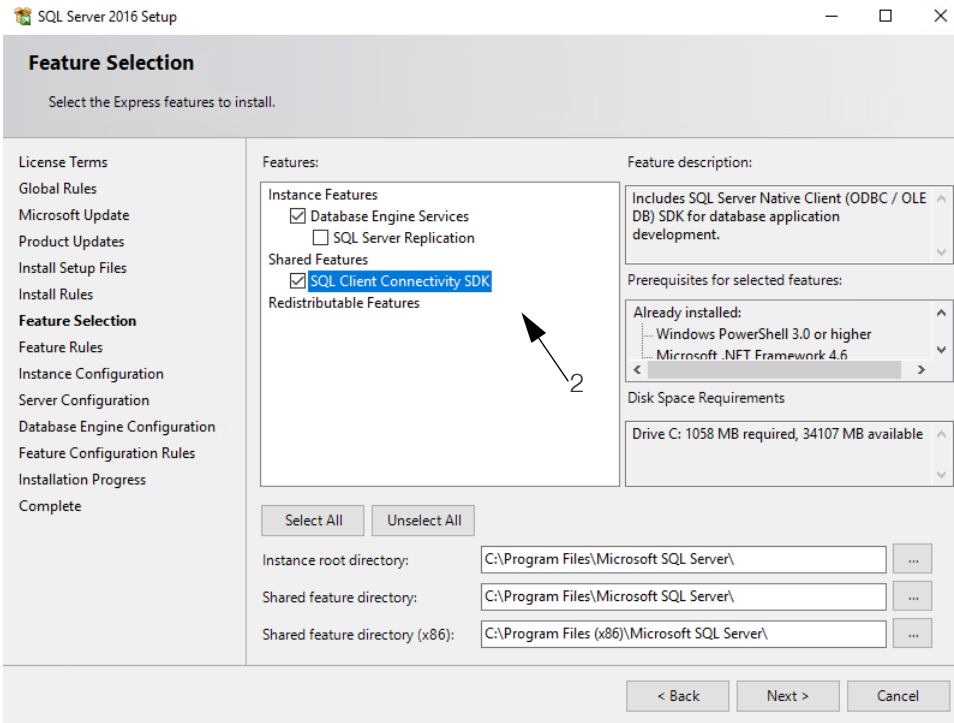


Figure 5. Feature Selection



CAUTION: Some links to external web resources are provided in this manual for your convenience. Those links were accurate at the time of this writing though they are subject to change without notice. You may change the target of your installation directory and define another disk if necessary.

6. Configure the instance name of your SQL Server (Default instance):

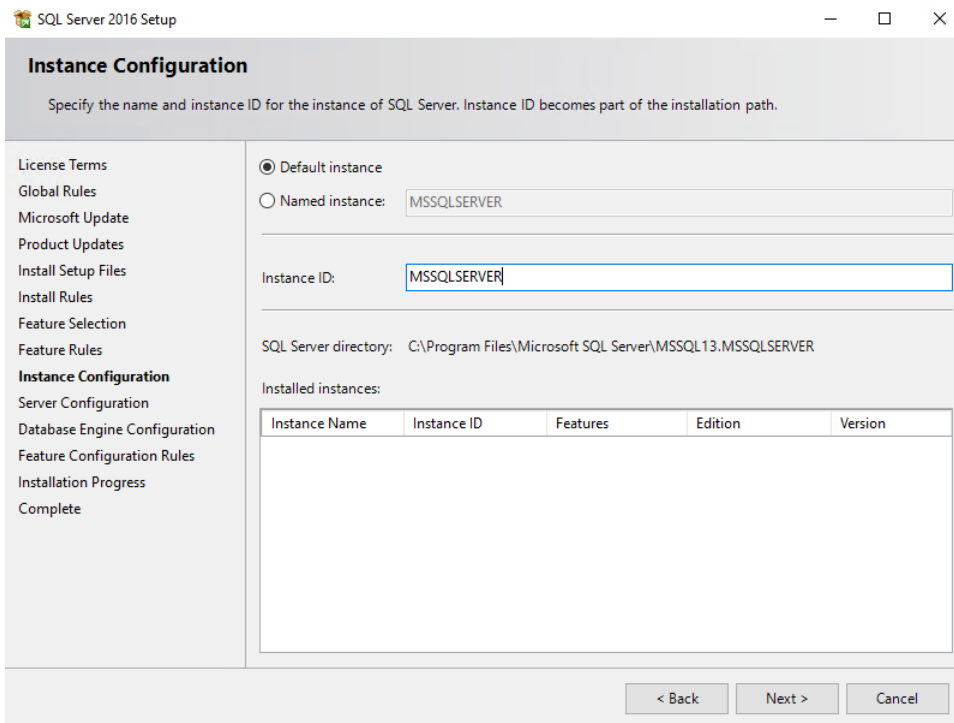


Figure 6. Instance Configuration

7. Check your server collation: SQL_Latin1_General_CP1_CI_AS:

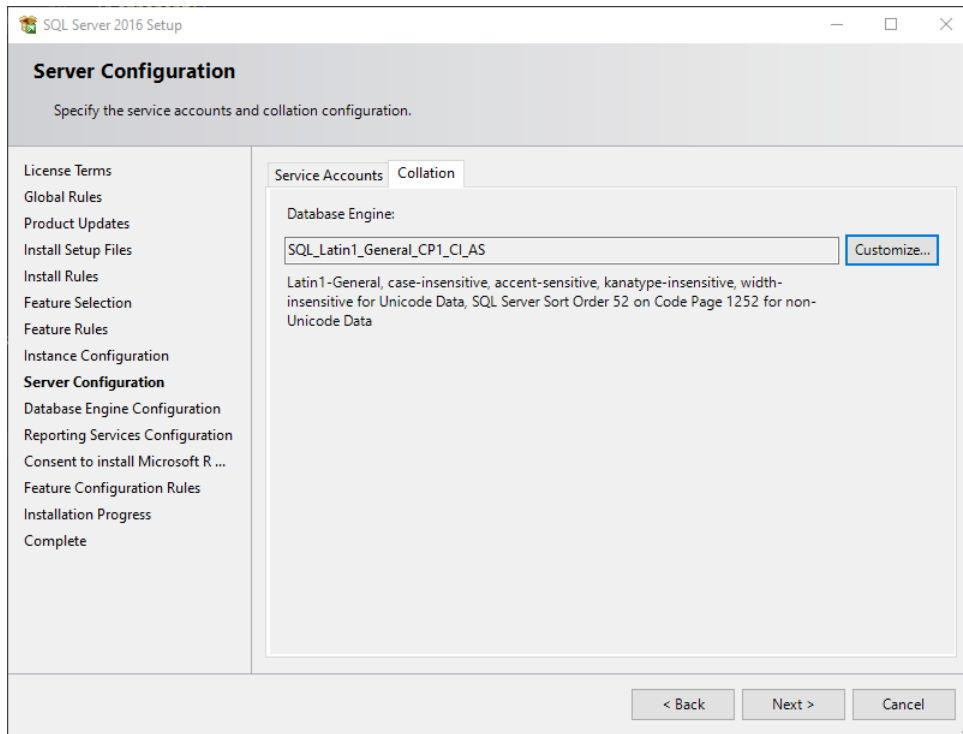


Figure 7. Server Configuration

This setting specifies how the database engine handles character data. It should be left at the default Microsoft SQL Server setting (notably with characters being “case-insensitive” and “accent-sensitive”).

8. Modify the Database Engine Configuration:

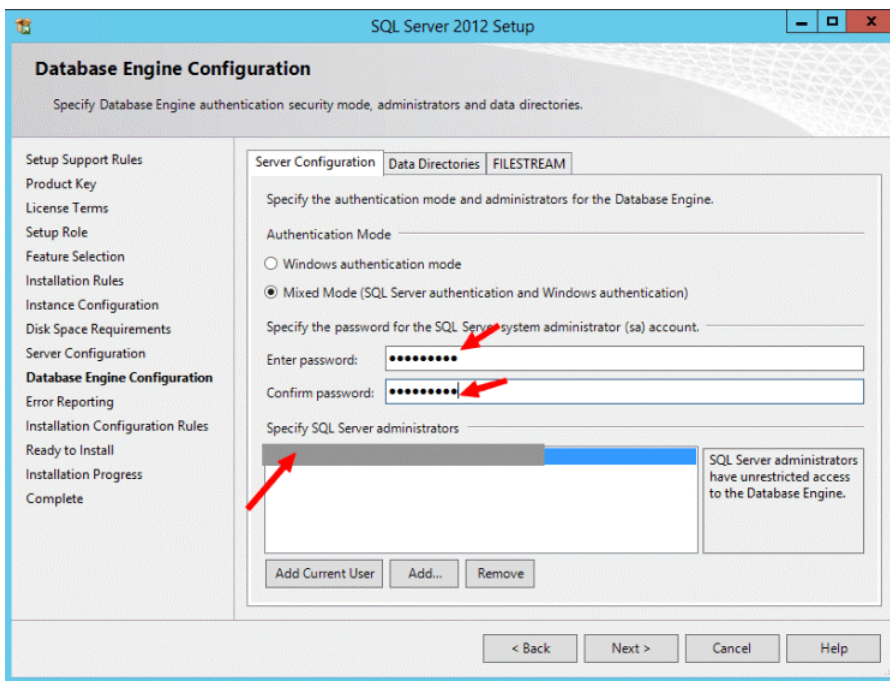


Figure 8. Database Engine Configuration

Under Authentication mode, choose “Mixed Mode”.

- Mixed mode enables both Windows Authentication and SQL Server Authentication.
- The Smart-Vue Pro application uses only SQL authentication.

Enter an SQL Server account login/password.

- This SQL account must be able to create, modify, and delete databases (dbcreator role). You may configure applications with an “sa” account.

9. You may change the “Data directories” to store the data to another disk, depending on your needs.

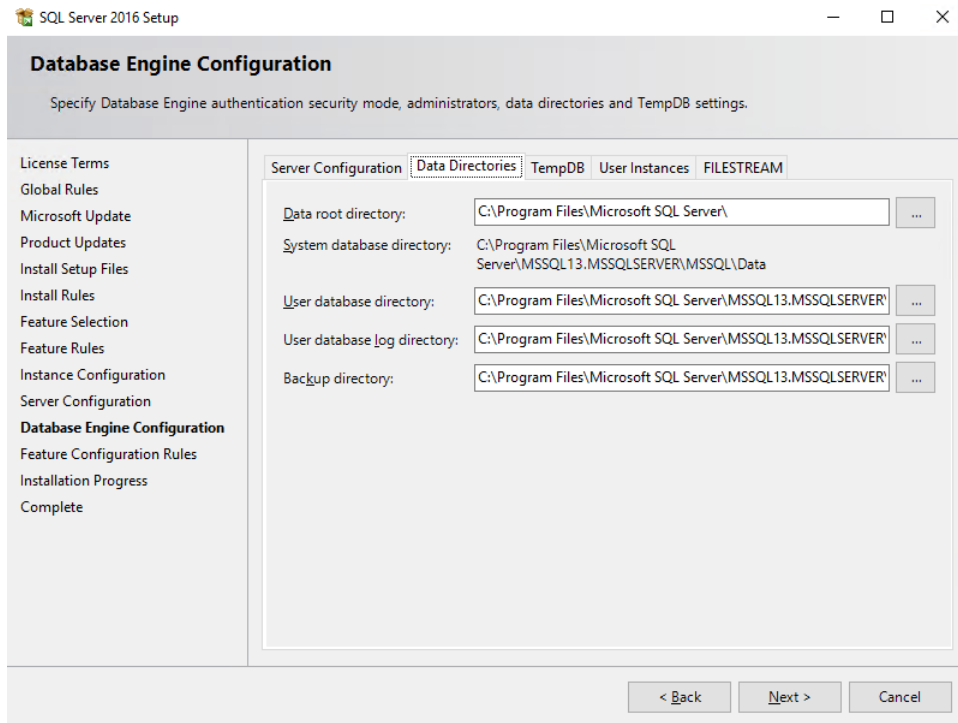


Figure 9. Database Engine Configuration

10. Complete the installation procedure.

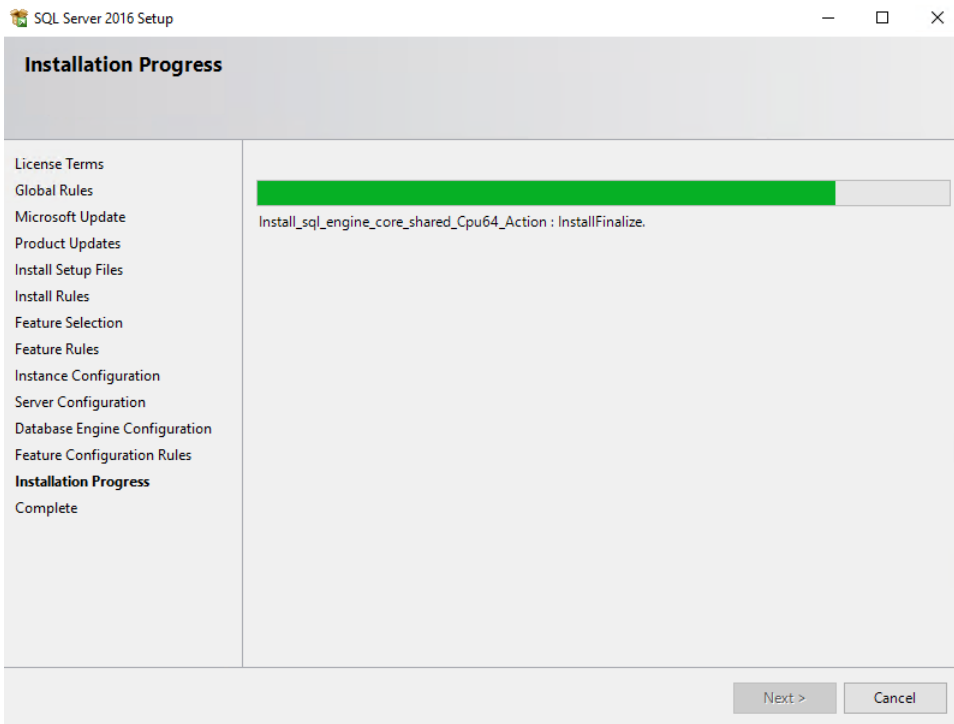


Figure 10. Installation Progress



CAUTION: Thermo Scientific recommends that you install SQL Server Management Studio to manage databases.

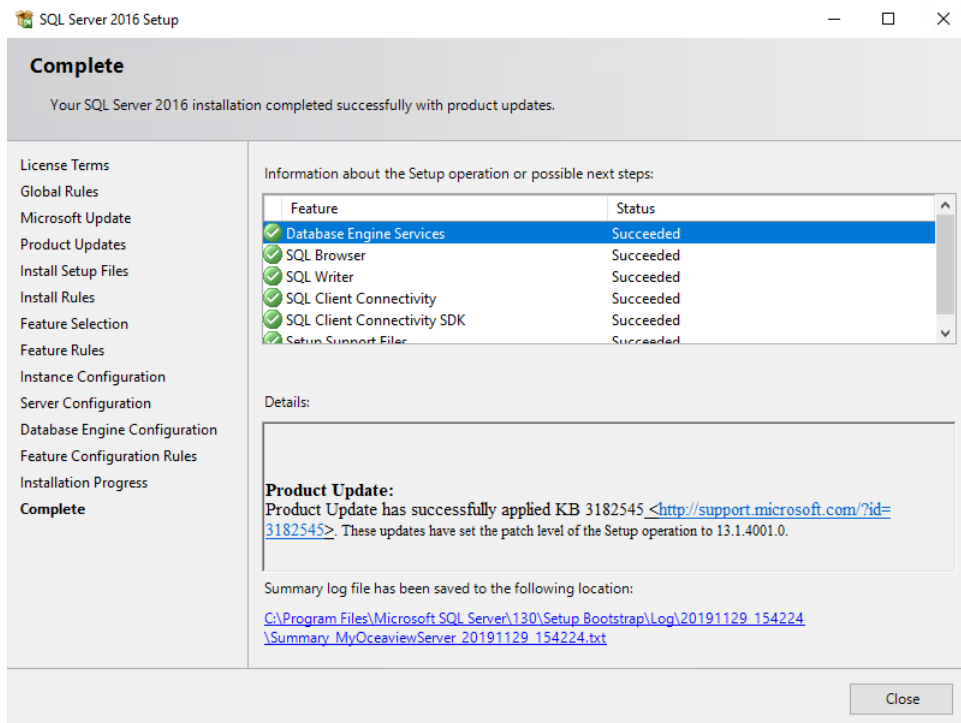


Figure 11. Completion Page

.NET Framework

Smart-Vue Pro has been validated to work with .NET Framework 4.8, which you may download from the Microsoft website:

<https://dotnet.microsoft.com/download/dotnet-framework/net48>

Follow installation and configuration instructions provided by Microsoft for this component.

VcredistC++ (14.1)

LoRaWAN protocol component requires VcredistC++ package (14.1). to work, you may download from the Microsoft website:

https://aka.ms/vs/16/release/vc_redist.x64.exe

Follow installation and configuration instructions provided by Microsoft for this component.

SMTP Server

Smart-Vue Pro sends messages via an e-mail server at the client site. This includes messages to the solution administrator as well as to various users for alert notifications. A login and password may be required to send mail. The SMTP server is generally not on the same physical server as the Smart-Vue Pro solution.

SMTP set up requires the following information:

Default Port	25 / 587 / or other specific port
SSL	True / False (depending on your system)
Server Name	smtp.yourdomain.com
Login / Password	SMTP servers generally require a login name and password
Default Sender Email	svp_onpremise@thermofisher.com (for Example) Note: Make sure you do not use thermofisher.com or smartvuepro.com for the default sender email.



CAUTION: If you choose to use Gmail as your SMTP server, remember to configure your Google Account Settings to allow other applications to send e-mail.


Microsoft IIS Web Server

Smart-Vue Pro uses Microsoft IIS (Internet Information Services) 10 or higher.



CAUTION: The web site must be deployed before you start SmartVuePro Windows services. It is highly recommended that you use a fixed IP address rather than a domain name for the application server.

You must add the Web Server (IIS) role in the Windows Server Manager, as described below. Do not change the default settings:

1. Select Start -> **Server Manager** ( + R -> **appwiz.cpl**).
2. Select Manage -> Add Roles and Features.
3. In the Add Roles and Features wizard, click Next until the Server Roles page appears.

4. Select the role "Web Server (IIS), then click Next.

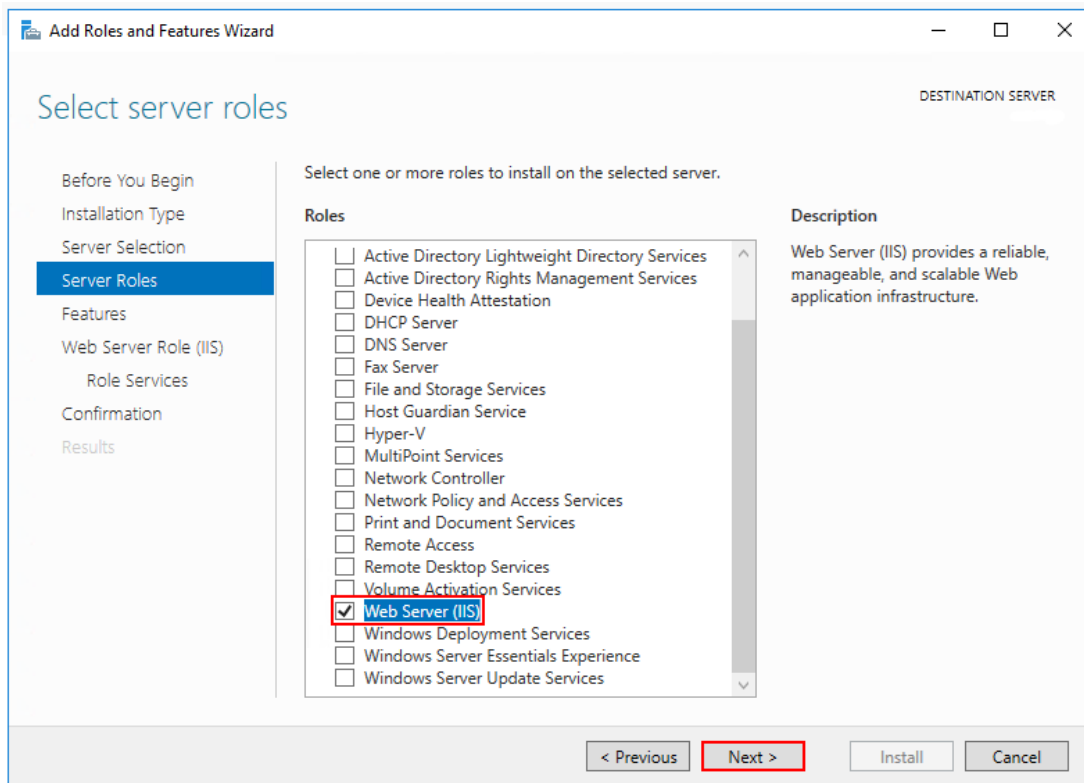


Figure 12. Server Roles

5. Click on Next -> Finish.

URL Rewrite Module 2.1 for IIS (x64)

Microsoft URL Rewrite Module 2.1 provides a rule-based rewriting mechanism for changing requested URLs before they are processed by the web server and for modifying response content before it gets served to HTTP clients. This plug-in must be installed for Smart-Vue Pro web app.

Download link: <https://www.iis.net/downloads/microsoft/url-rewrite>

CORS Module for IIS (x64)

The Microsoft IIS CORS Module is an extension that enables web sites to support the CORS (Cross-Origin Resource Sharing) protocol.

Download link: <https://go.microsoft.com/fwlink/?linkid=862444>

Application Request Routing for IIS (x64)

IIS Application Request Routing (ARR) 3 enables Web server administrators, hosting providers, and Content Delivery Networks (CDNs) to increase Web application scalability and reliability through rule-based routing, client and host name affinity, load balancing of HTTP server requests, and distributed disk caching.

Download link: <https://go.microsoft.com/fwlink/?LinkID=615136>

"ARR depends on **URL Rewrite Module 2.1 for IIS (x64)**. Ensure URL Rewrite is installed prior to installing ARR".

SSL Certificate

An SSL certificate enables your site to function with the secure HTTPS protocol. Smart-Vue Pro requires the certificate to be installed on the solution server (in PFX format, with password). The certificate is provided for a given domain name.

The name of the PFX file should be the same as the domain name.



CAUTION: The following web references provide detailed instructions for converting certificates and setting up an SSL certificate in IIS 10.

<https://www.digicert.com/kb/csr-creation-ssl-installation-iis-10.htm>



IMPORTANT:

1. Before proceeding with installation, you must create a folder: C:\[Program_files_folder]\Smart-Vue Pro\ssl
2. Copy *.pfx into this folder
3. In “SSL certificate file path” you must enter: ..\ssl\<MYCERTIFICATE>.pfx

1. Install the PFX by double-clicking on the PFX file and selecting installation on the local Machine. This launches the Certificate Import Wizard:

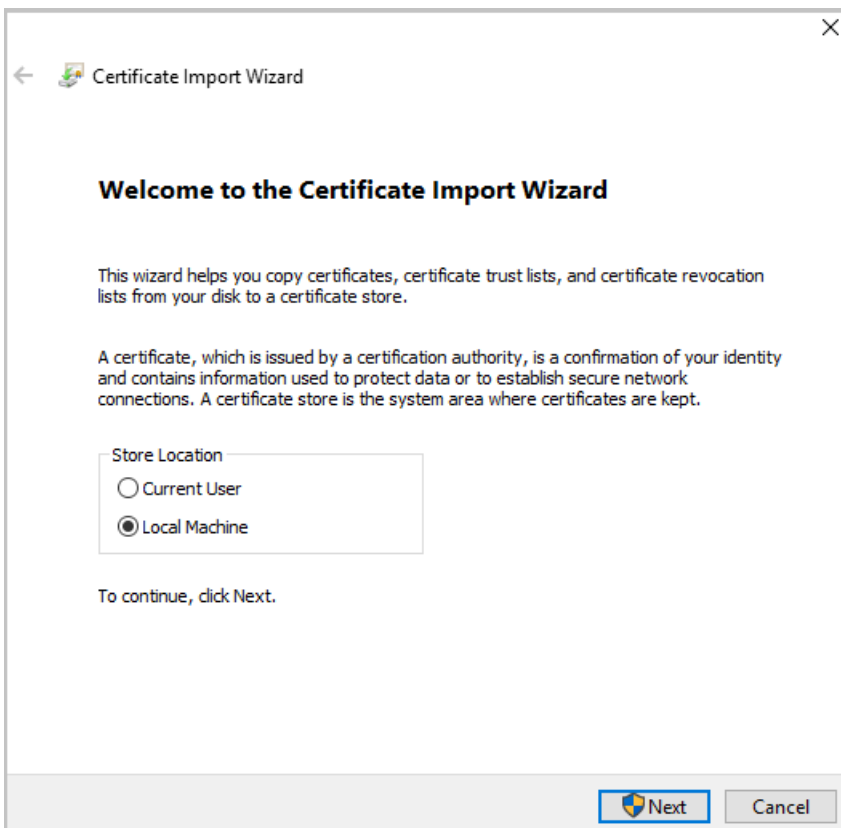


Figure 13. SSL certificate import on Local Machine

2. Click on **Next**.
3. Enter or confirm the complete path and file name.

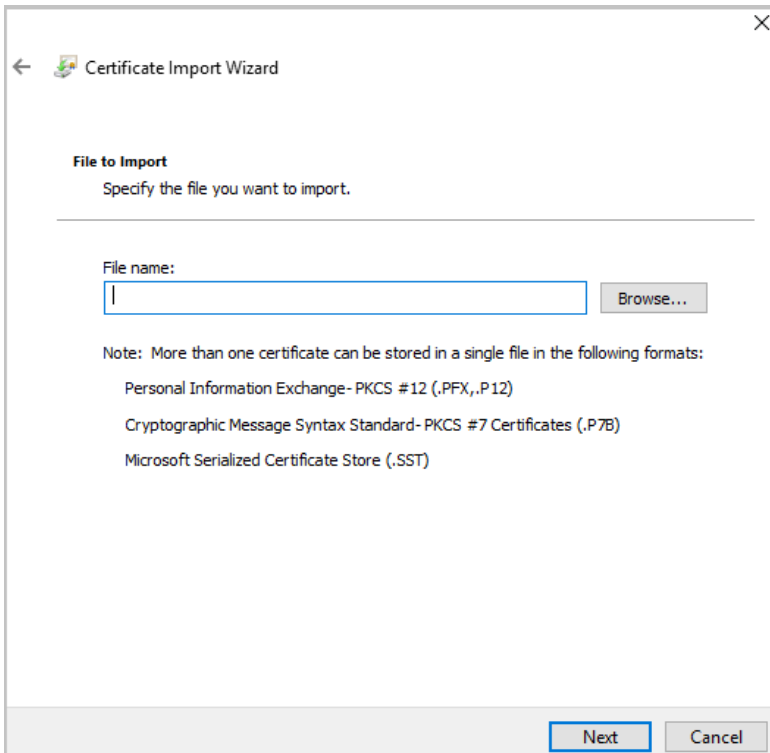


Figure 14. Select File Path of SSL Certificate

4. Click on **Next** and enter the password.

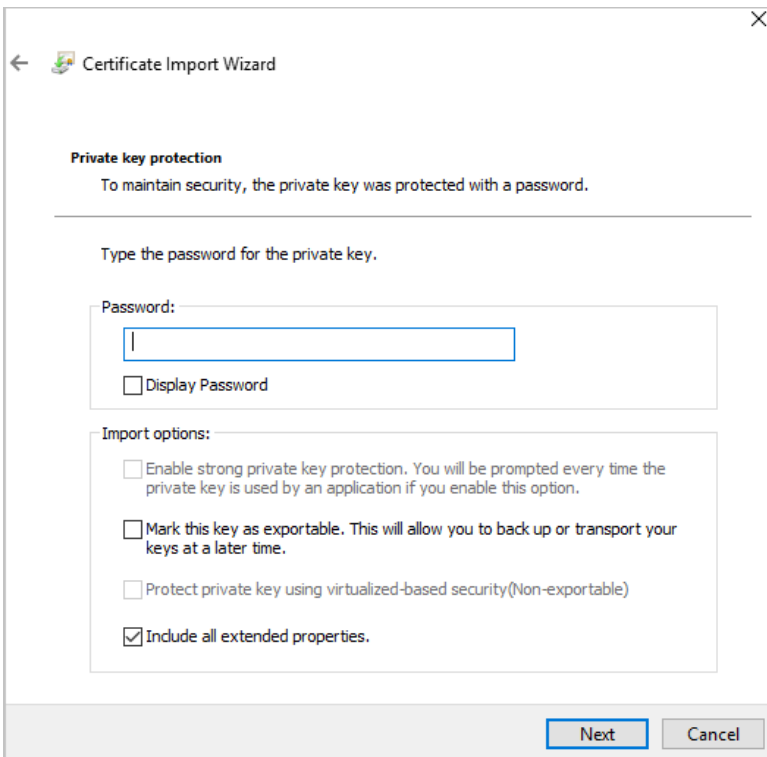


Figure 15. Providing SSL Password

Thermo Scientific Options

Smart-Vue Alert (External Alert Platform)

Smart-Vue Alert is an internet-based alert platform that is used to notify people in the event of alarms, such as a temperature value going outside the programmed range. Notifications are sent to users via Smart-Vue Alert by voice call and/or SMS-text message (e-mail notifications are integrated into Smart-Vue Pro by default and sent directly via the network's SMTP server).

Smart-Vue Alert service access URL: <https://alert.smartvueconnect.com>

Smart-Vue Pro Domain Agent (LDAP)

This Microsoft Windows service provided by Thermo Scientific enables the Smart-Vue Pro authentication mechanism to interface with an external domain controller, namely LDAP.

For this, the LDAP server must be set up with two Active Directory groups:

- One group containing all future application users with a “User” profile in Smart-Vue Pro.
- Another group containing all future “Application Manager” users in Smart-Vue Pro.



Note: Refer **Access to Various Ports** regarding terms to use during installation.

All the components related to the Smart-Vue Pro Server i.e., Application server, LDAP Server Domain, users/groups configured for LDAP mode have to be hosted in the same domain and same domain's LDAP server has to be defined in appsettings.json.

To configure any external Authentication Mode (like LDAP) in the Smart-Vue Pro Server solution, it is mandatory that, there should be at least an existing user as App Manager with internal authentication mode.

Reference Terms to Use During Installation

For reference purposes, we will use the following terms to describe certain details during installation.



CAUTION: The examples in the right-hand column below must be changed to correspond to your system.

General

Table 1. General Information

Description	Example (adapt for your system)
Domain name server	mydomain.com
Your website / Application server name	www.<Hostname>.<domain name>.com
SSL certificate associated with the domain	mycertificate.pfx
SSL certificate password	mycertificate_pwd
SQL Server instance name	SRV-DB
SQL account for that SQL Server instance	Login:yourname Password:your_password
Customer key	12345678
SMTP server	smtp.server.com
SMTP server account	User name:smtp_user Password:smtp_password
Admin email/ Support email	Any valid email address, that is compatible with the SMTP server

When using Smart-Vue Pro Domain Agent (for LDAP)

Table 2. Smart-Vue Pro Domain Agent (for LDAP)

Description	Example (adapt for your system)
Active Directory server	My_LDAP_domain
Optional: an account for accessing the domain	LDAP login:myLDAP_login Password:myLDAP_password
Group containing “Users”	LDAP_Users
Group containing “Application Managers”	LDAP_AppManagers

Access to Various Ports

The ports below are used by various components in the Smart-Vue Pro Server solution.

Table 3. Access to the ports

Item	Requirements
Client	Access to web application via browser with HTTP(s): open ports 80 and 443
Server and Gateway	LoRaWAN gateway connection on UDP port 1700 with ping less than 200 ms
Server and Gateway	DNS Server available if the gateway needs access to a URL instead of an IP address
SMTP Server	Server name and port (default 25)
SQL Server	TCP port 1433 and UDP port 1434 must be opened if SQL Server is installed on another server computer
Server	If Smart-Vue Alert is used, access is needed to https://alert.smartvueconnect.com/ (port 443)

Installing the Smart-Vue Pro Server Solution

The Smart-Vue Pro Server installation procedure involves installing several separate software packages. Each package is simple and straightforward to install, but you must be careful to enter the correct information in the setup wizards as described in this chapter. You will see that much of the same information simply needs to be entered into the different installation wizards.



CAUTION: Microsoft Windows considers these components just like any other application in the system. You may therefore remove and reinstall them easily if necessary.

Here is a summary of the components for Smart-Vue Pro Server solution:

Table 4. Components for Smart-Vue Pro Server Solution

Name	Description
Required	
Authentication API	Integrated authentication mechanism
Central API	Manage module lifecycle and company account
Web API	API used by the web application
Report API	Report generating tools
Web application	The user interface for Smart-Vue Pro
LoRaWAN connector	Handles the interface between the LoRaWAN network and Smart-Vue Pro
Alert service	Smart-Vue Alert external alert service enabling the system to notify users by voice call and/or SMS-text messages.
Optional	
Smart-Vue Pro Domain Agent	Authentication component for integrating your corporate LDAP authentication into Smart-Vue Pro.

For your convenience, you may wish to copy the installation files provided to you by Thermo Scientific into a folder on the server's hard drive. You could create a folder for this, such as: C:\[InstallFolderName]

We will use this as a reference in the following sections, but you must use the real folder name for your installation.

IMPORTANT: You can use the default folder path for installation or before proceeding with installation for every installer, create a folder with installer name: C:[Program-Files_folder]\Smart-Vue Pro \[Installer name]



CAUTION: In the following sections, some field values contain your own specific information, and others must be entered as shown. To avoid confusion, any field values that must be entered as shown are indicated in bold and with quotation marks, like this: "true".

Central API

Then proceed as follows:

1. Locate and launch the package “Smart-Vue Pro-CentralServer.msi”.
2. Accept the Terms and Conditions for using the application.
3. Choose an installation folder.
4. Fill in the various application keys.

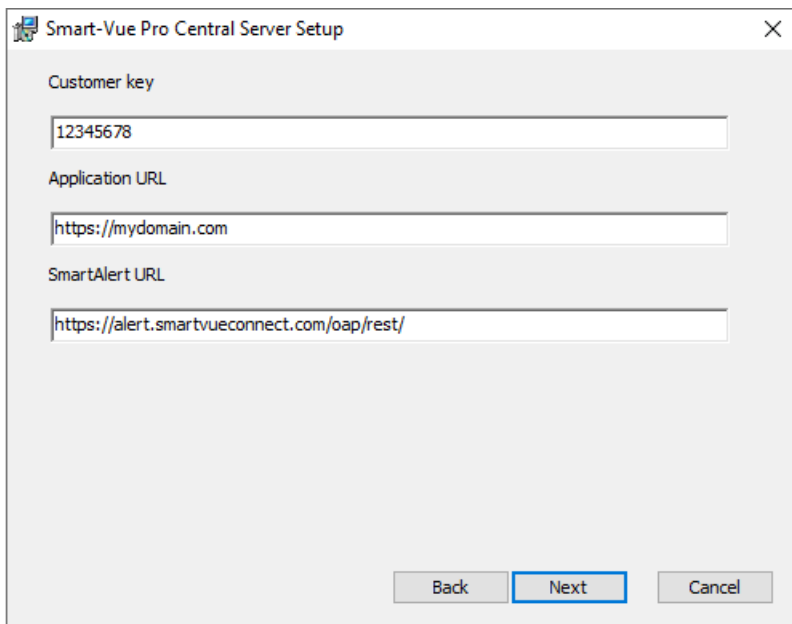


Figure 16. Smart-Vue Pro Central Server Setup installation: Fill application Keys

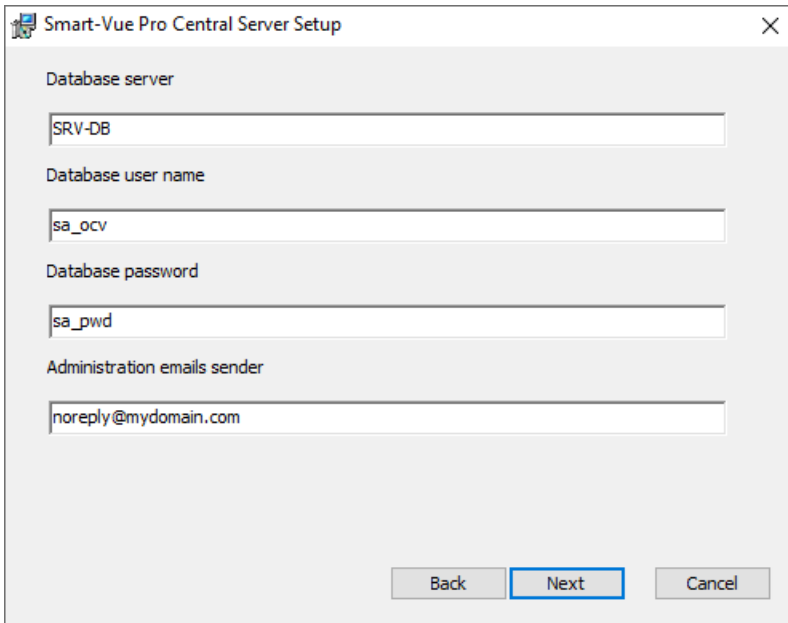
Customer key Enter your 8-digit customer key (provided by Thermo Scientific).

Application URL Enter the URL of the server where the APIs are installed (notably, replace “mydomain.com” with your own domain).

If you have an SSL certificate, enter the complete domain name, which should be the same as your certificate file name.

SmartAlert URL Leave “https://alert.smartvueconnect.com/oap/rest/”.

5. Click on Next to continue.



The image shows a Windows-style dialog box titled "Smart-Vue Pro Central Server Setup". It contains four text input fields with the following labels and values: "Database server" with "SRV-DB", "Database user name" with "sa_ocv", "Database password" with "sa_pwd", and "Administration emails sender" with "noreply@mydomain.com". At the bottom, there are three buttons: "Back", "Next" (which is highlighted with a blue border), and "Cancel".

Figure 17. Database Server Details

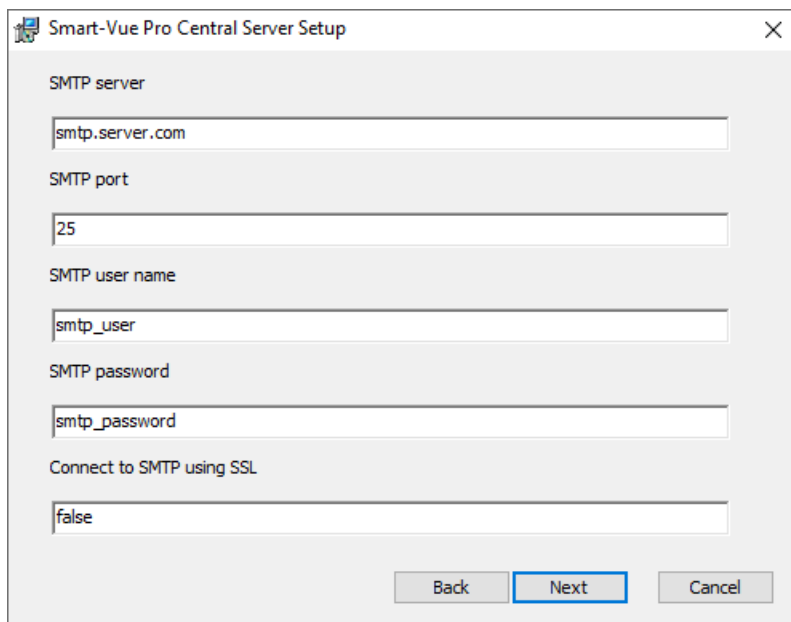
Database server Enter the name of your database.

Database user name Enter the name of the database user with the rights to create, modify, and delete databases.

Database password Enter the password for that database user account.

Admin e-mails sender Enter the e-mail address of the main Smart-Vue Pro administrator (mails will be sent using this address).

6. Click on Next to continue.



The image shows a Windows-style dialog box titled "Smart-Vue Pro Central Server Setup". It contains five text input fields with the following labels and values: "SMTP server" with "smtp.server.com", "SMTP port" with "25", "SMTP user name" with "smtp_user", "SMTP password" with "smtp_password", and "Connect to SMTP using SSL" with "false". At the bottom, there are three buttons: "Back", "Next" (which is highlighted with a blue border), and "Cancel".

Figure 18. SMTP Details

SMTP server Enter the name of your SMTP server.

SMTP port The default SMTP server port is usually 25.

SMTP user name Enter the user name for an account to be used by the system to send mail.

SMTP password Enter the password associated with that user account.

Connect using SSL Enter “true” if the system must connect to the SMTP server using SSL; otherwise enter “false”.

7. Click on Next to complete the wizard.

8. Open the Windows services management console:

Right click on Start -> Run (Windows + R) and type “services.msc”.

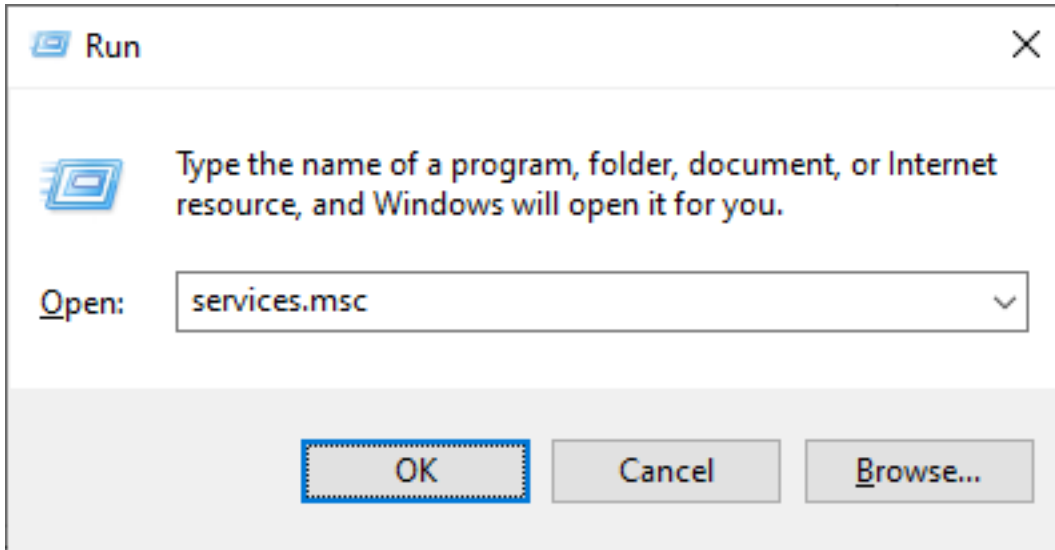


Figure 19. Windows Run

9. Start the service “Smart-Vue Pro Central Server”.

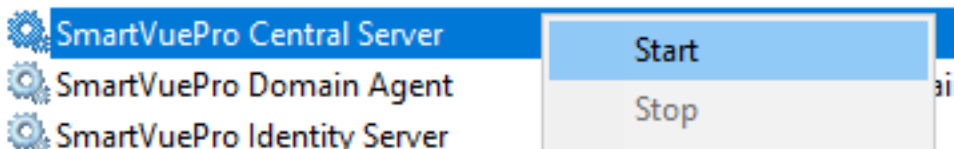


Figure 20. Central Server Service

Authentication API

1. Locate and launch the package “Smart-Vue Pro-IdentityServer.msi”
2. Accept the Terms and Conditions for using the application.
3. Choose an installation folder.
4. Fill in the various application keys.

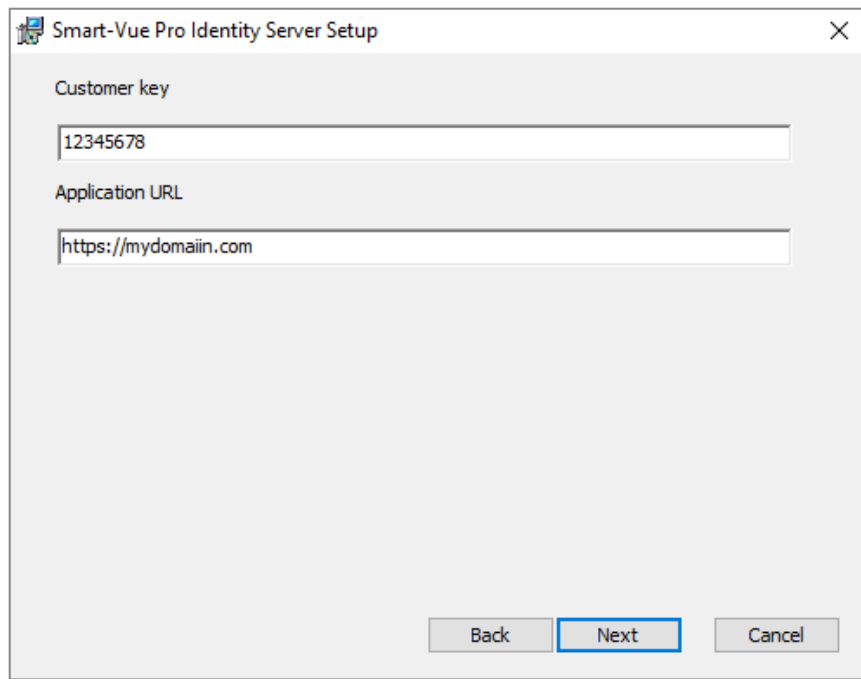


Figure 21. Identity Server’s Application Keys

Customer key Enter your 8-digit customer key (provided by Thermo Scientific)

Application URL Enter the URL of the server where the APIs are installed (notably, replace “mydomain.com” with your own domain).

5. Click on Next to continue.

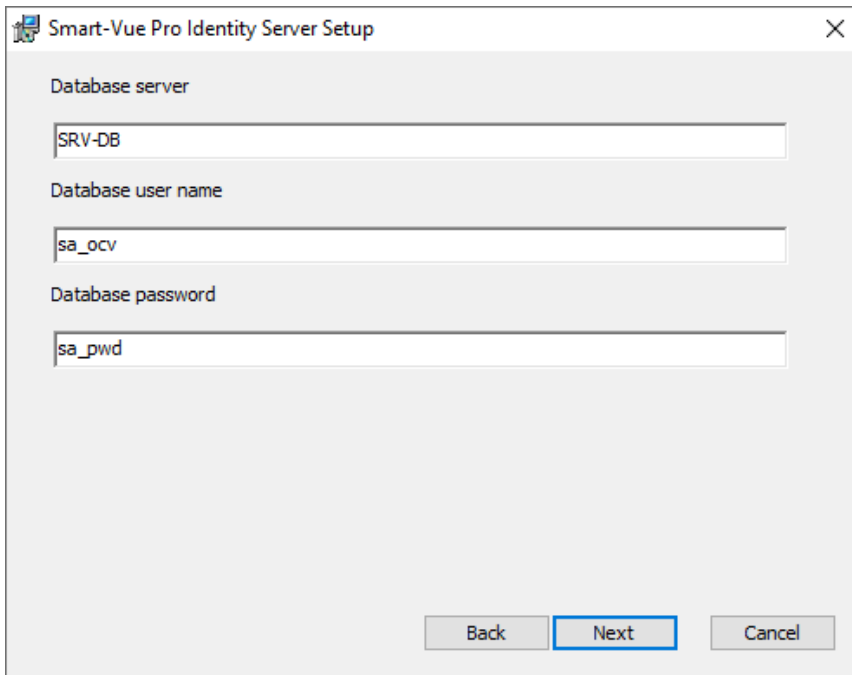


Figure 22. Database Server Details

Database server Enter the URL for the identity server (notably, replace “mydomain.com” with your own domain).

Database user name Enter the user name that the system will use to connect to the database.

Database password Enter the password for that user account.

6. Click on Next to complete the wizard.
7. Open the Windows services management console:

Right click on Start -> Run (Windows + R) and type “services.msc”.

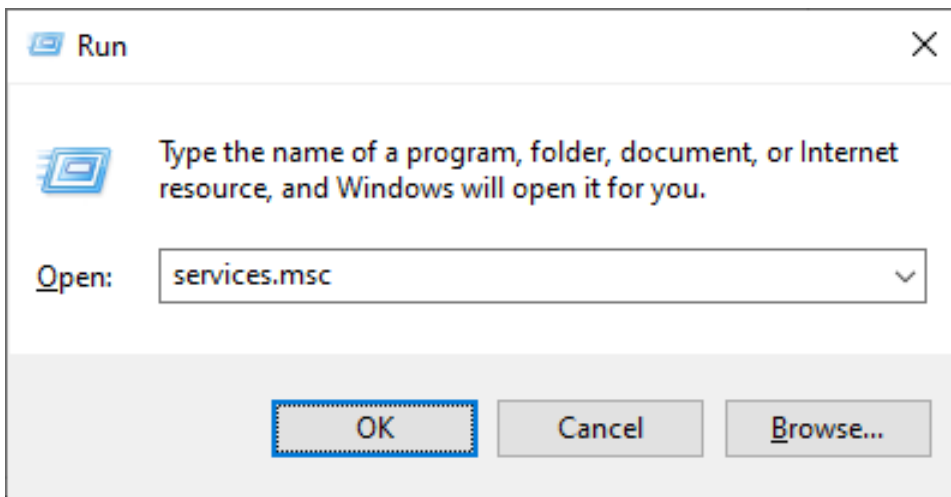


Figure 23. Windows Run

8. Start the service “Smart-Vue Pro Identity Server”.

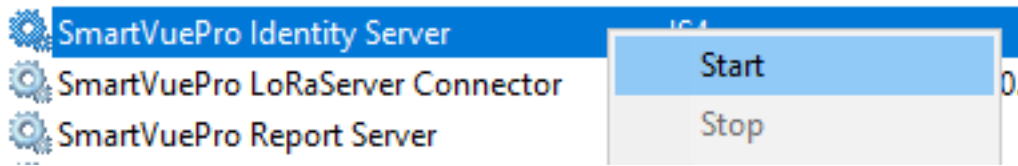


Figure 24. Identity Server Service

Web API

1. Locate and launch the package “Smart-Vue Pro-WebApi.msi”
2. Accept the Terms and Conditions for using the application.
3. Choose an installation folder.
4. Fill in the various application keys.

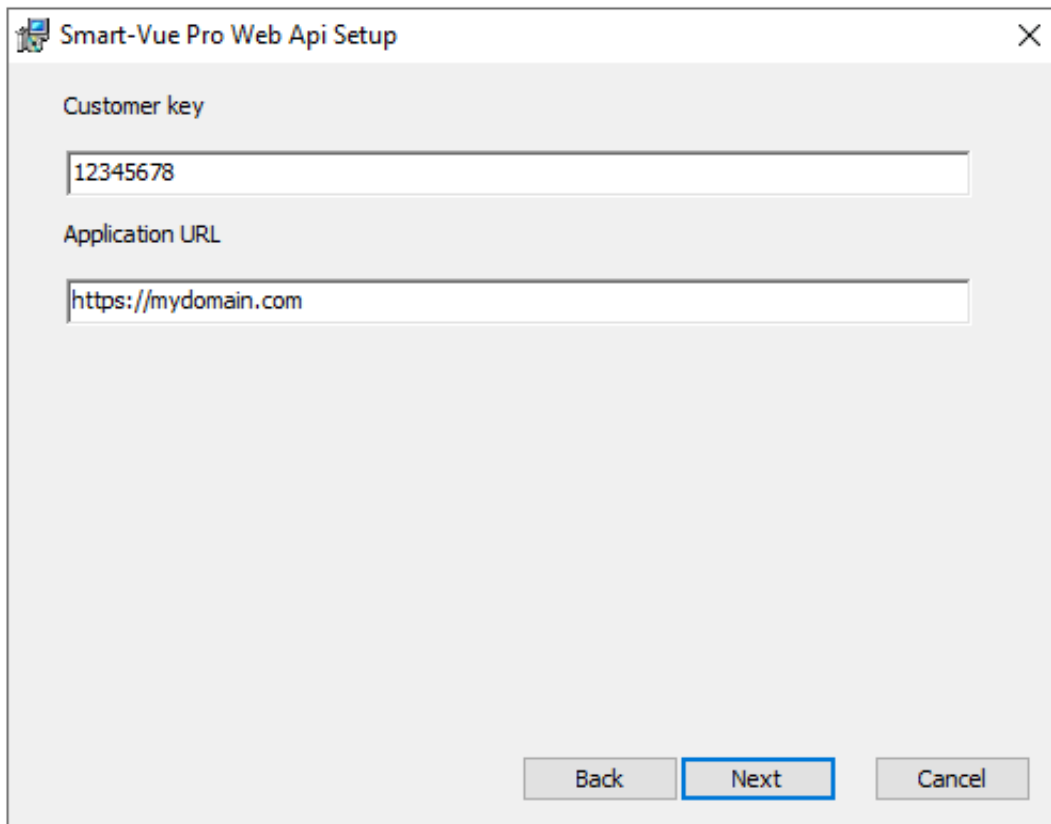


Figure 25. Web API’s Application Keys

Customer key Enter your 8-digit customer key (provided by Thermo Scientific)

Application URL Enter the URL of the server where the APIs are installed (notably, replace “mydomain.com” with your own domain).

5. Click on Next to continue.

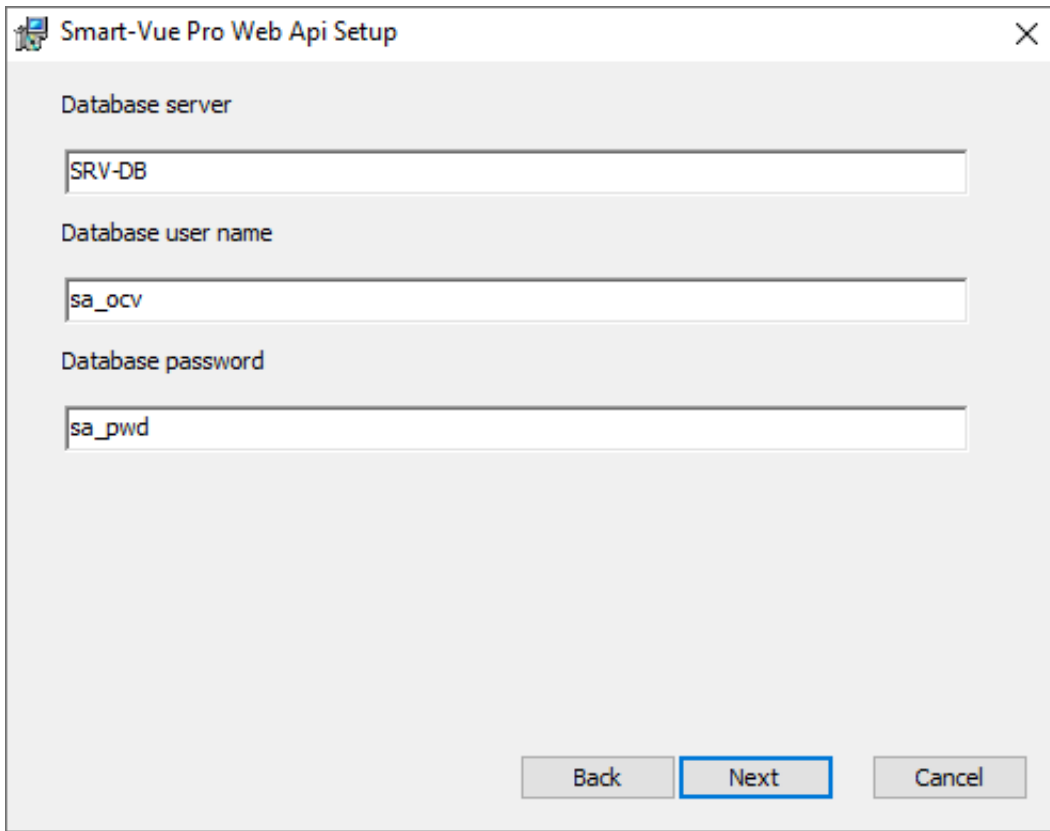


Figure 26. Database Server Details

Database server Enter the URL for the identity server (notably, replace “mydomain.com” with your own domain).

Database user name Enter the user name that the system will use to connect to the database.

Database password Enter the password for that user account.

6. Click on Next to complete the Wizard.

7. Open the Windows services management console:

Right click on Start -> Run (Windows + R) and type “services.msc”.

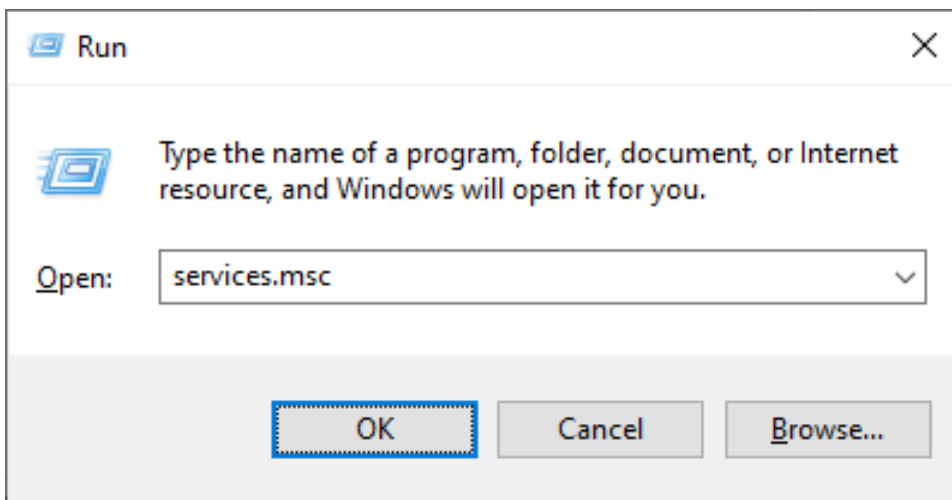


Figure 27. Windows Run

8. Start the service “Smart-Vue Pro Web API”.

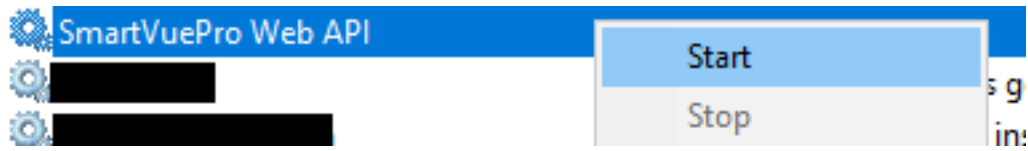


Figure 28. Web API Service

Report API

1. Locate and launch the package “Smart-Vue Pro-ReportServer.msi”
2. Accept the Terms and Conditions for using the application.
3. Choose an installation folder.
4. Fill in the various application keys.

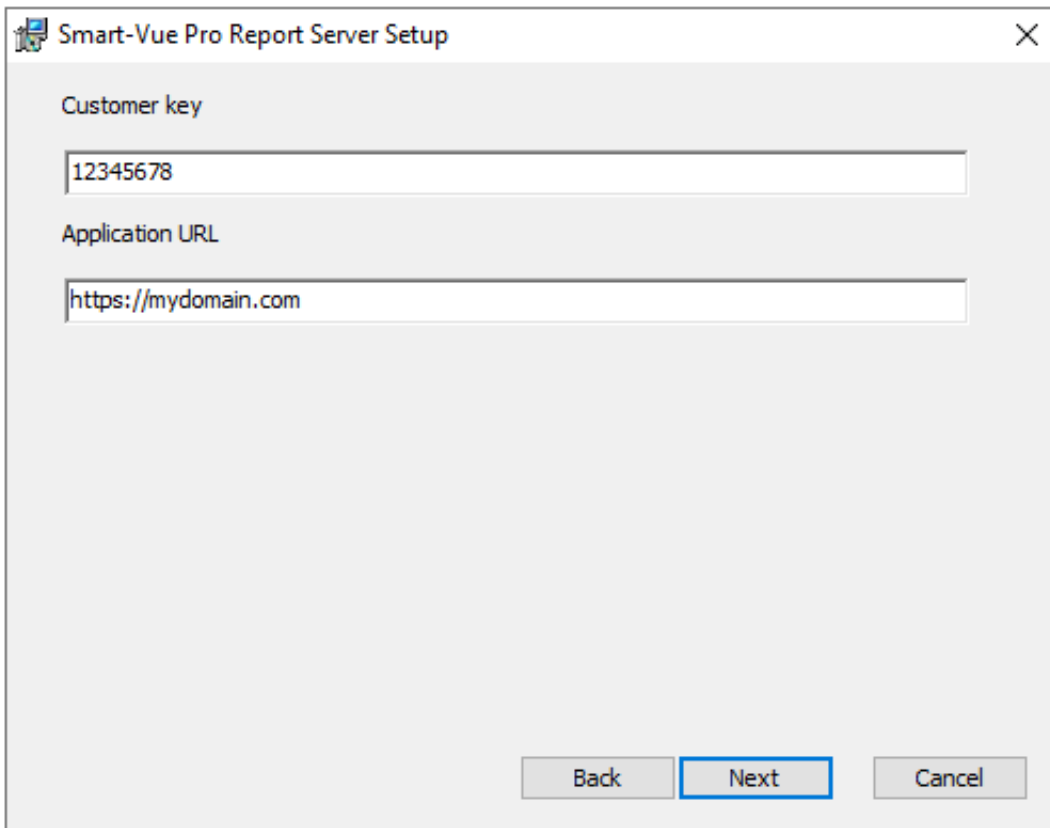


Figure 29. Report Server’s Application Keys

Customer key Enter your 8-digit customer key (provided by Thermo Scientific)

Application URL Enter the URL of the server where the APIs are installed (notably, replace “mydomain.com” with your own domain).

5. Click on Next to continue.

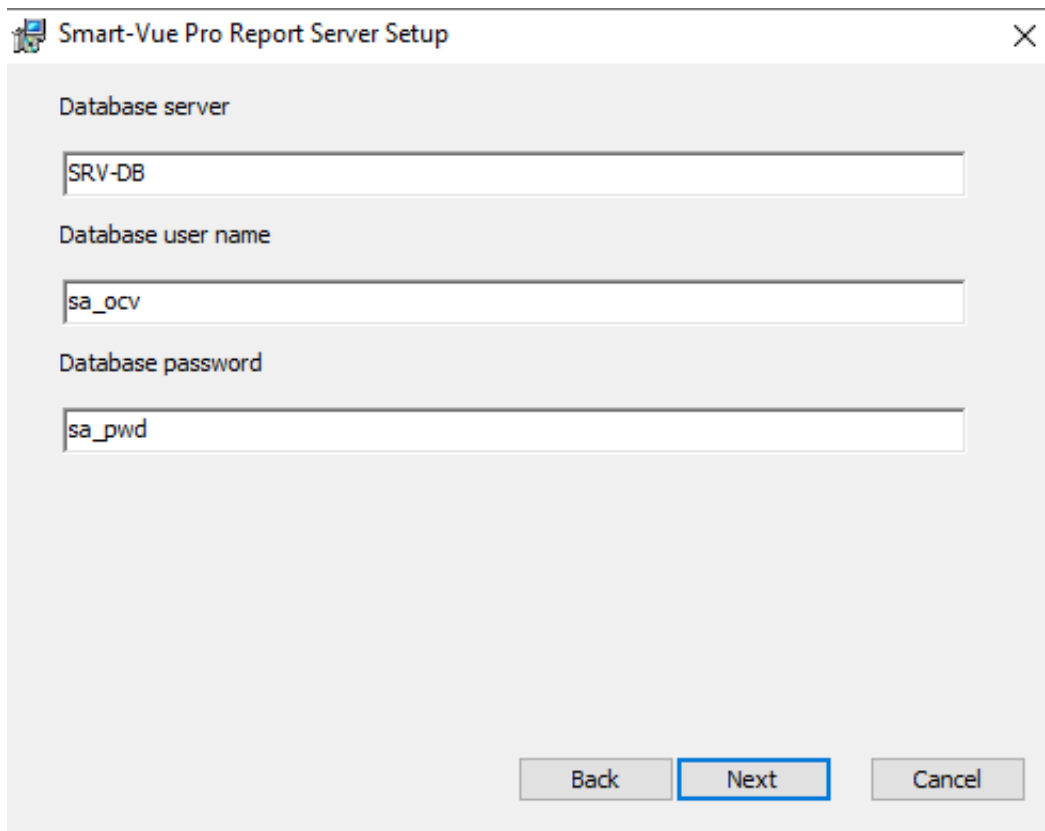


Figure 30. Database Server Details

Database server Enter the URL for the identity server (notably, replace “mydomain.com” with your own domain).

Database user name Enter the user name that the system will use to connect to the database.

Database password Enter the password for that user account.

6. Click on Next to complete the Wizard.
7. Open the Windows services management console:

Right click on Start -> Run (Windows + R) and type “services.msc”.

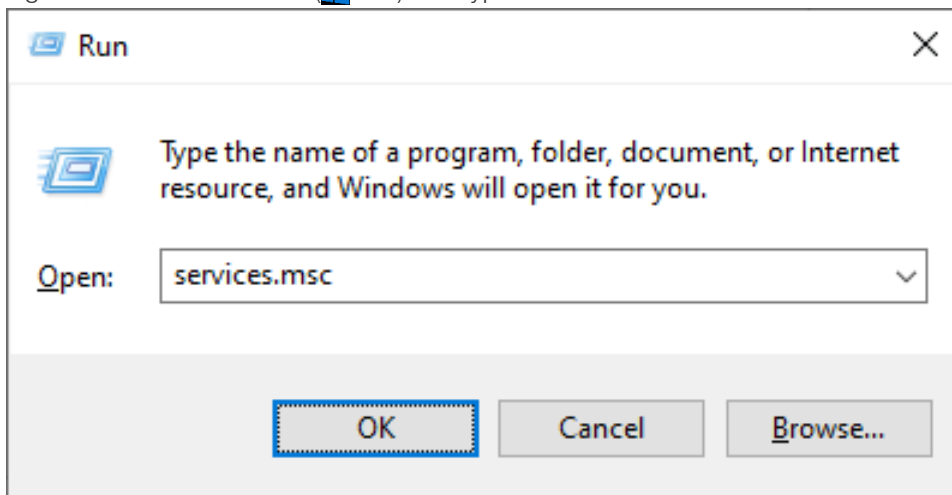


Figure 31. Windows Run

8. Start the service “Smart-Vue Pro Report Server”.

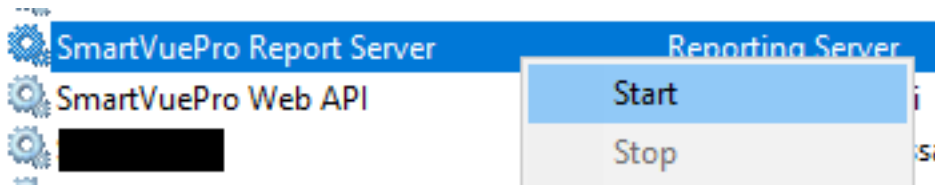


Figure 32. Report Server Service

Alert Service

1. Locate and launch the package “Smart-Vue Pro-AlertingSystem.msi”.
2. Accept the Terms and Conditions for using the application.
3. Choose an installation folder.
4. Fill in the various application keys.

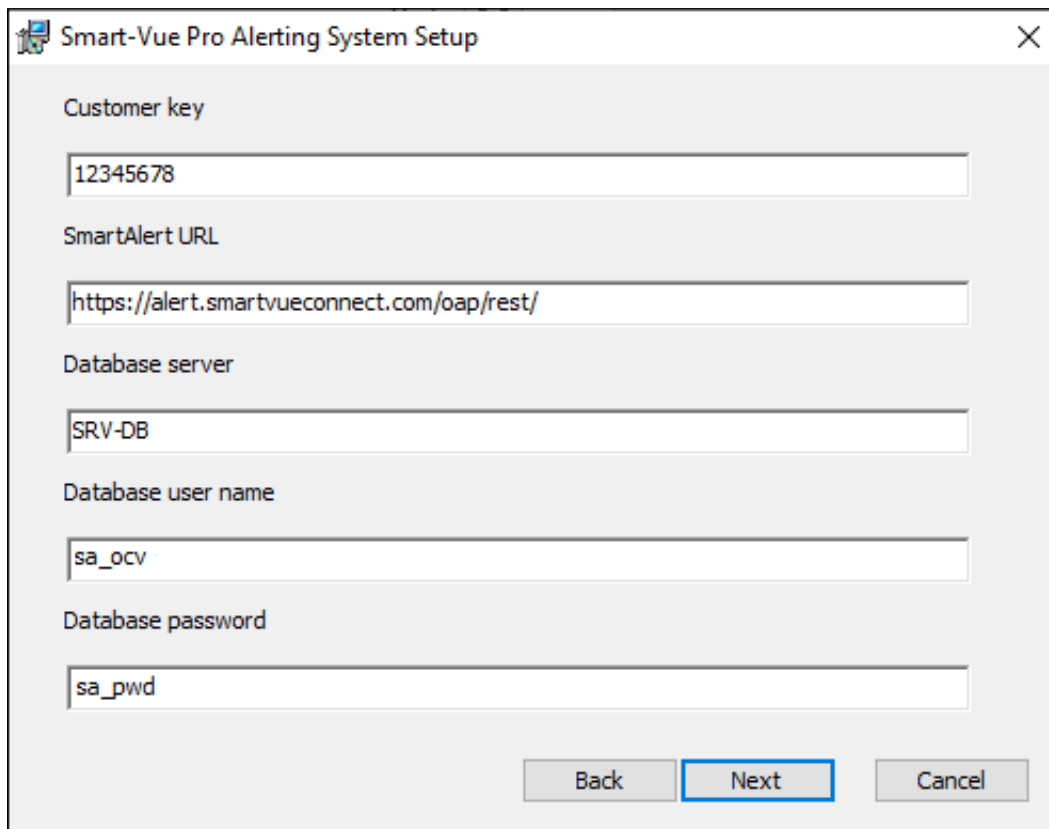


Figure 33. Alerting System's Details

Customer key Enter your 8-digit customer key (provided by Thermo Scientific).

Database server Enter the URL for the identity server (notably, replace “mydomain.com” with your own domain).

Database user name Enter the user name that the system will use to connect to the database.

Database password Enter the password for that user account.

Smart Alert URL Leave “https://alert.smartvueconnect.com/oap/rest/”.

5. Click on Next to complete the wizard.

6. Open the Windows services management console:

Right click on Start -> Run (Windows + R) and type “services.msc”.

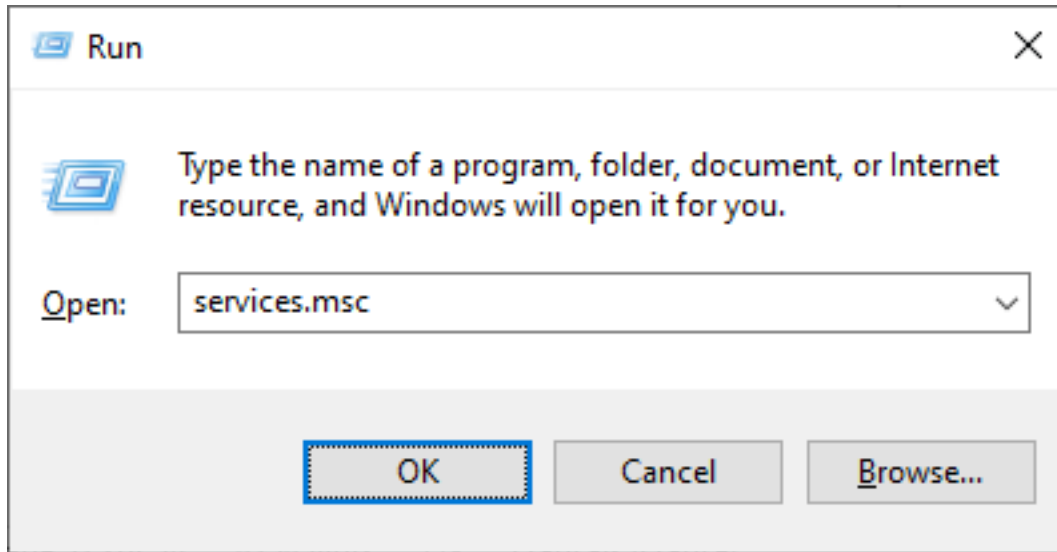


Figure 34. Windows Run

7. Start the service “Smart-Vue Pro Alerting System”.

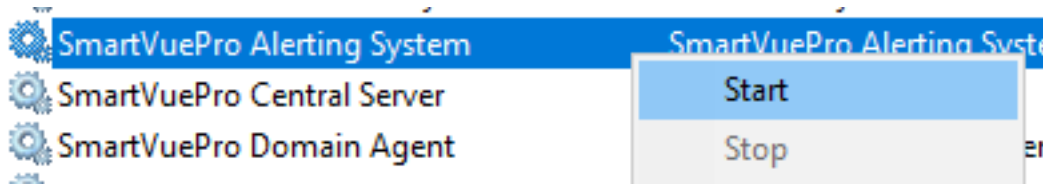


Figure 35. Alerting System Service

Using alert services with a proxy server

As mentioned in the “**Installation Prerequisites**” section of this guide, if your network uses a proxy server to grant users access to external sites, then you must also grant access to the Windows service “SmartVuePro Alerting System”, the service that interfaces with the solution’s SmartVueProAlert notification platform to send alerts via voice call or SMS/text messages.

The service must be authorized to access the URL: <https://alert.smartvueconnect.com/oap/rest/>. Proxy servers grant outgoing access based on user accounts. However, this alert service runs as a system service, not as a particular user. There are therefore two possible ways to grant access:

1. You may allow all network users to access <https://alert.smartvueconnect.com/oap/rest/>. This all-inclusive option will function, though it may not match your organization’s security policy.
2. The other option is to configure the service to run via a user account and then allow access on the proxy server specifically for that account:
 - Right click on **Start > Run** (Windows + R) and type “services.msc”
 - Locate **SmartVuePro Alerting System** > right-click on the name > **Properties**

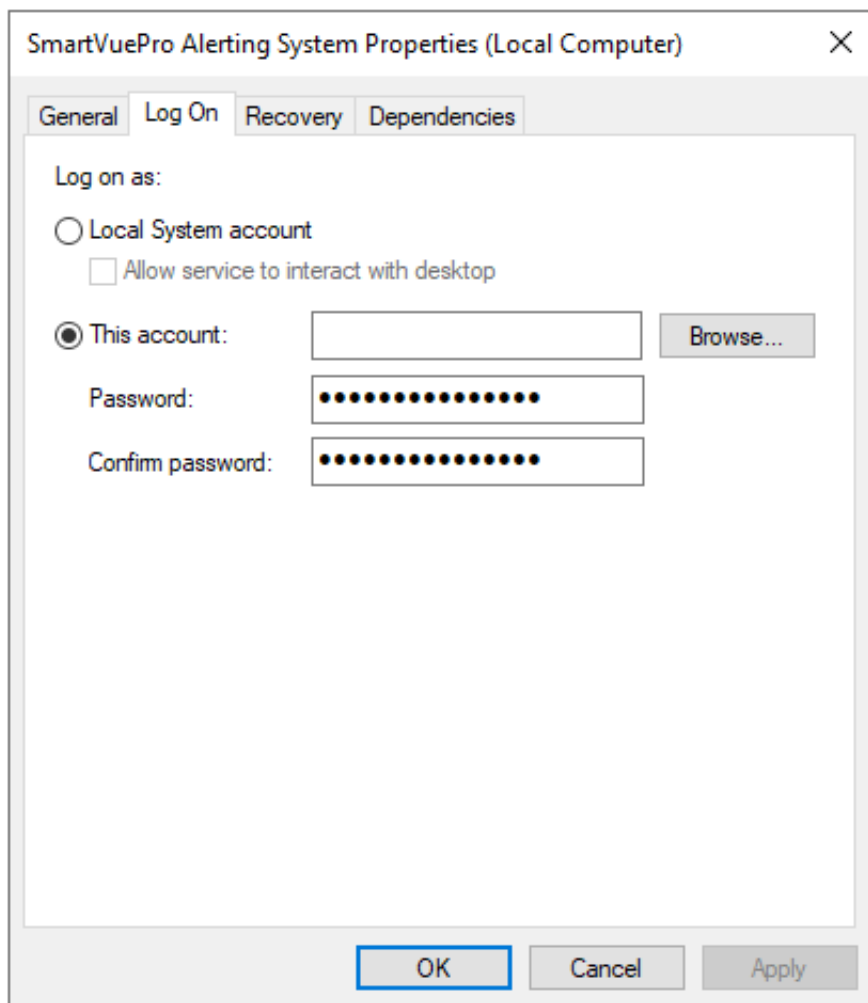


Figure 36. SmartVuePro Alerting System Properties

- Click on **Browse** > Add and confirm the user account name
- Enter and confirm the password in **Figure 36**.
- Click on **OK** to keep your changes.

3. Ensure that the necessary authorization is granted on your proxy server

This configuration will now be permanently assigned to the service and will remain in effect if the computer and/or the services are restarted.



CAUTION : If the password for this account is changed, or if the account expires, you must update the information as necessary for the service, otherwise SmartVueProAlert notification will not function for your solution if access is blocked by the proxy.

Web Application

1. Locate and launch the package “Smart-Vue Pro-Web-OnPremises.msi”.
2. Accept the Terms and Conditions for using the application.
3. Choose an installation folder.
4. Fill in the various application keys.

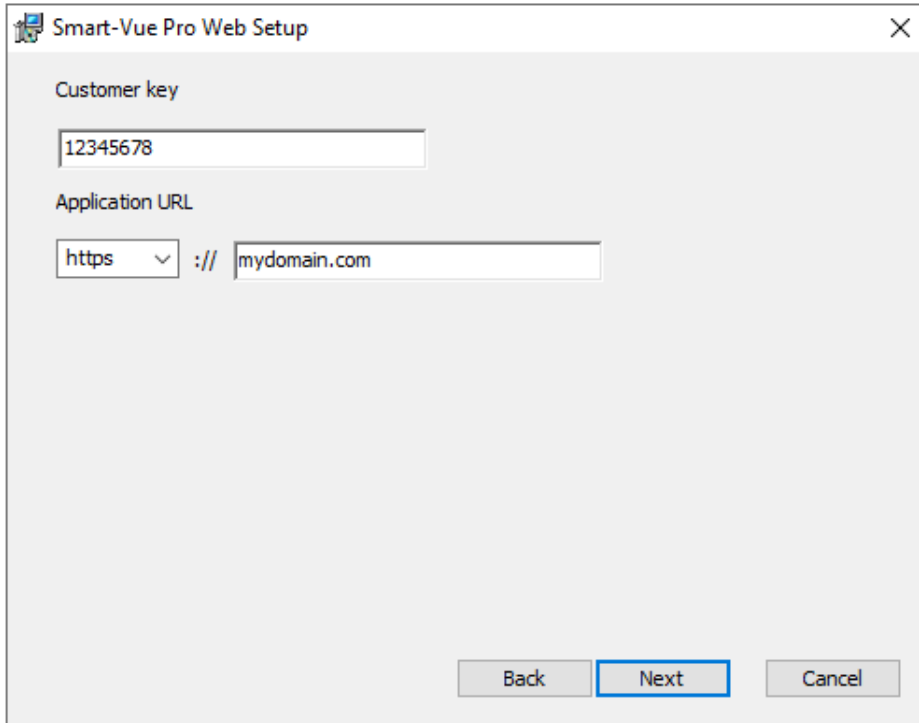


Figure 37. Web-On Premises Application Keys

Customer key Enter your 8-digit customer key (provided by Thermo Scientific).

Application URL Enter the URL of the server where the APIs are installed (notably, replace “mydomain.com” with your own domain).

5. Click to complete the wizard.
6. Locate and launch the package “Smart-Vue Pro-OnPremises-Documents.msi”
7. Accept the Terms and Conditions for using the application.
8. Choose an installation folder and click to complete the Wizard.

9. If you want to perform an https installation, you must add the https binding to IIS as follows:

- **Start IIS Manager** (Windows key + R and type `inetmgr`)
- Go to **Smart Vue Pro Web Website > Bindings > Add**

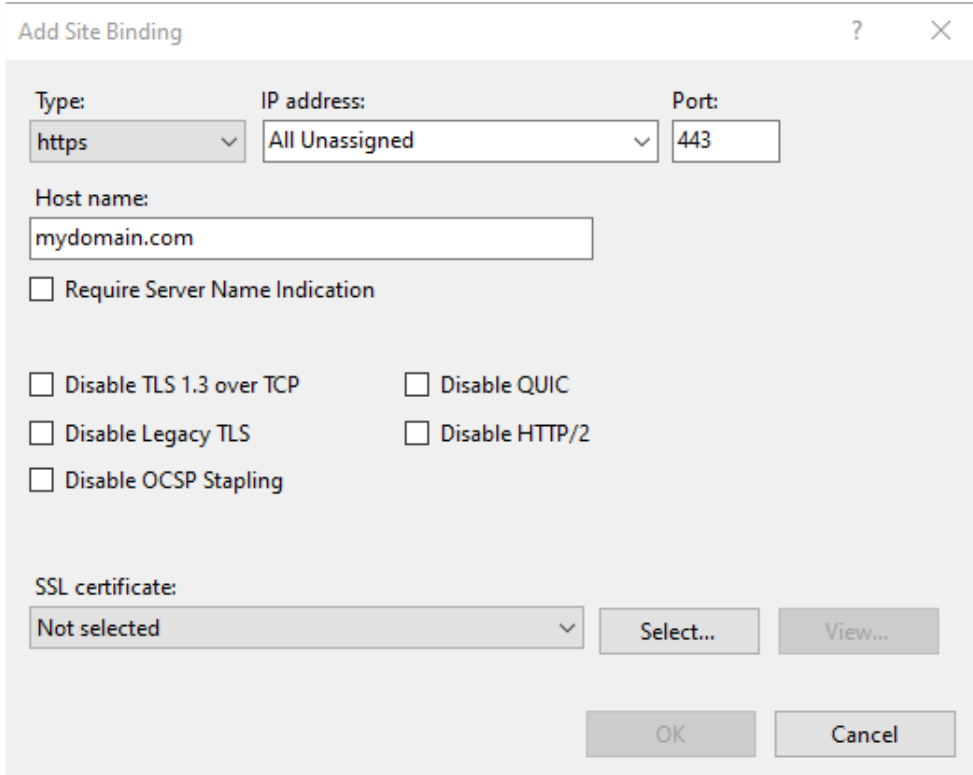


Figure 38. Select SSL certificate from Bindings

Table 5. Information for Bindings screen

Description	Example (adapt for your system)
Type	https
Host Name	Enter the complete domain name, e.g.: mydomain.com
SSL Certificate	Select your deployed SSL certificate, e.g.: *.mydomain.com

10. At this point, you may open your web browser to access the Smart-Vue Pro Server solution using the URL you specified during installation.



CAUTION: If you cannot access the application, perform the checks presented below.

1. Open the IIS console:

Right click on Start -> Run (Windows key + R) and type "inetmgr.exe".

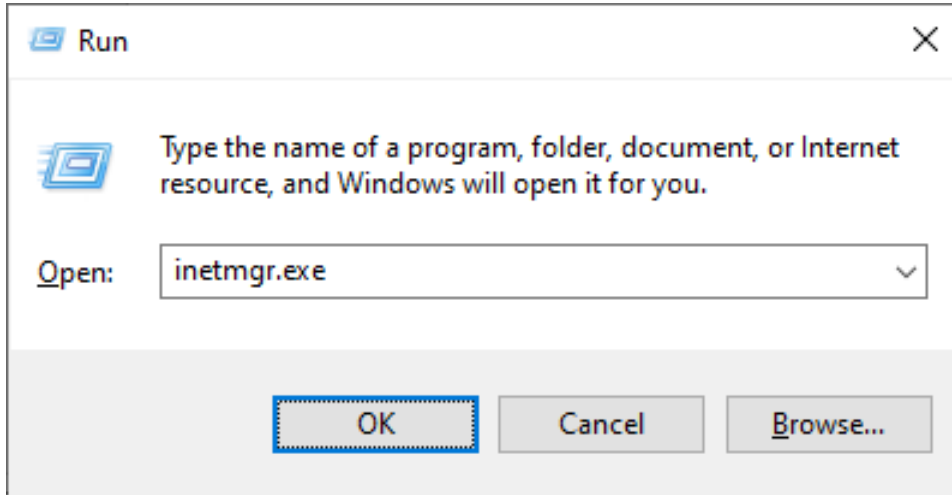


Figure 39. Windows Run

2. Check that the website "Smart-Vue Pro Web Website" is running (no stop "?" icon).

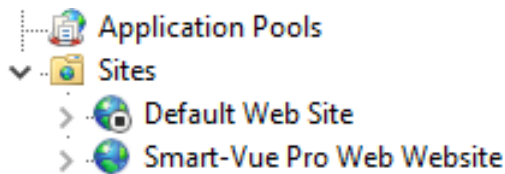


Figure 40. IIS Console

3. If the website is stopped, check whether another website is running. If there is another website using port 80 or 443, you must stop it.

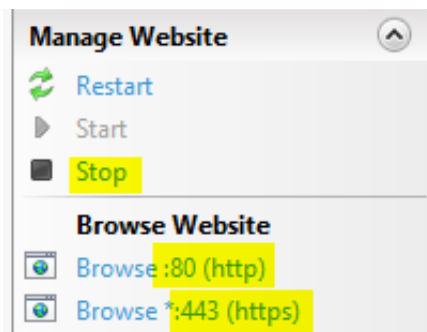


Figure 41. Manage Website

4. Start the website “Smart-Vue Pro Web Website”.

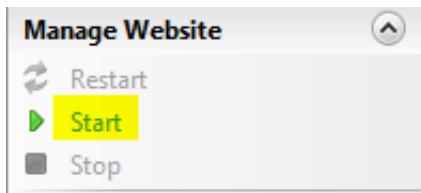


Figure 42. Smart-Vue Pro Web Website



CAUTION: If you cannot access the application in Firefox browser, perform the actions presented below:

1. Open Firefox browser and enter “about:config” in the address bar and continue to the list of preferences.
2. Set the preference "security.enterprise_roots.enabled" to true.
3. Restart Firefox.

Note: Run the web app first prior to the launch of the LoRa connector service.

LoRaWAN Connector

1. Locate and launch the package “Smart-Vue Pro-LoraConnector.msi”.
2. Accept the Terms and Conditions for using the application.
3. Choose an installation folder.
4. Fill in the various application keys.

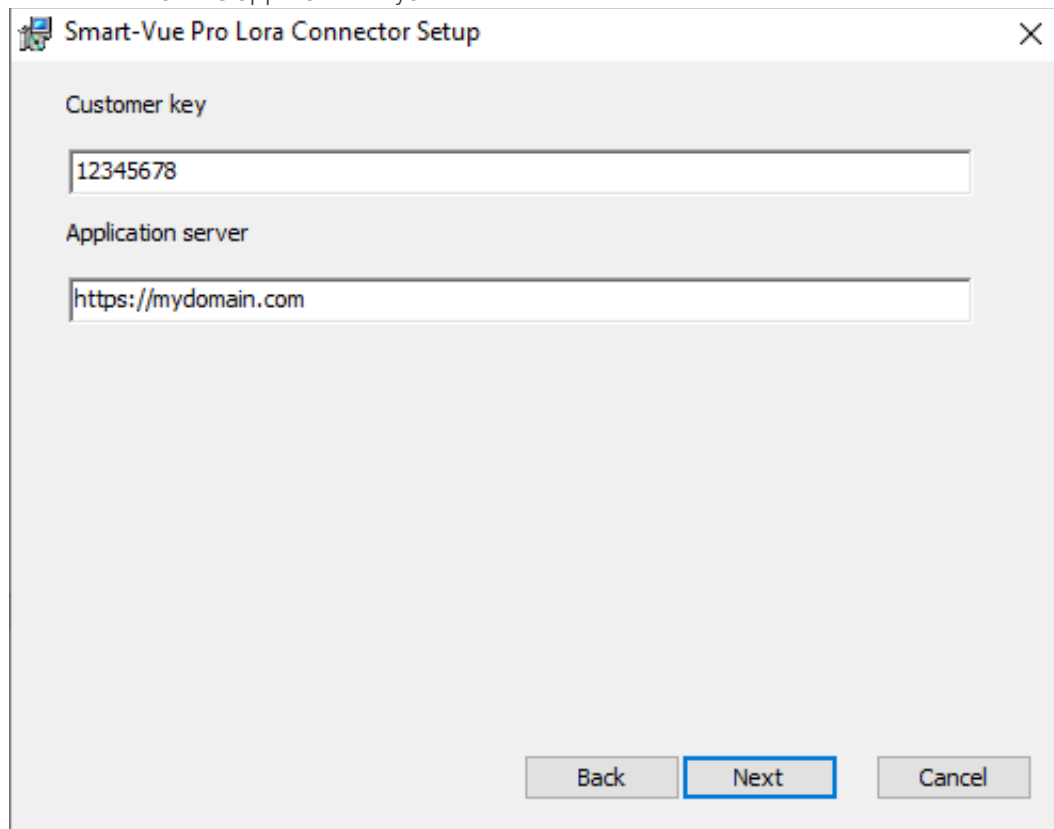


Figure 43. Lora Connector’s Application Keys

Customer Key Enter your 8-digit customer key (provided by Thermo Scientific).

Application server Enter the URL of the server where the APIs are installed (notably, replace “mydomain.com” with your own domain).

5. Click to complete the wizard.

6. Open the Windows services management console:

Right click on Start -> Run (Windows + R) and type "services.msc".

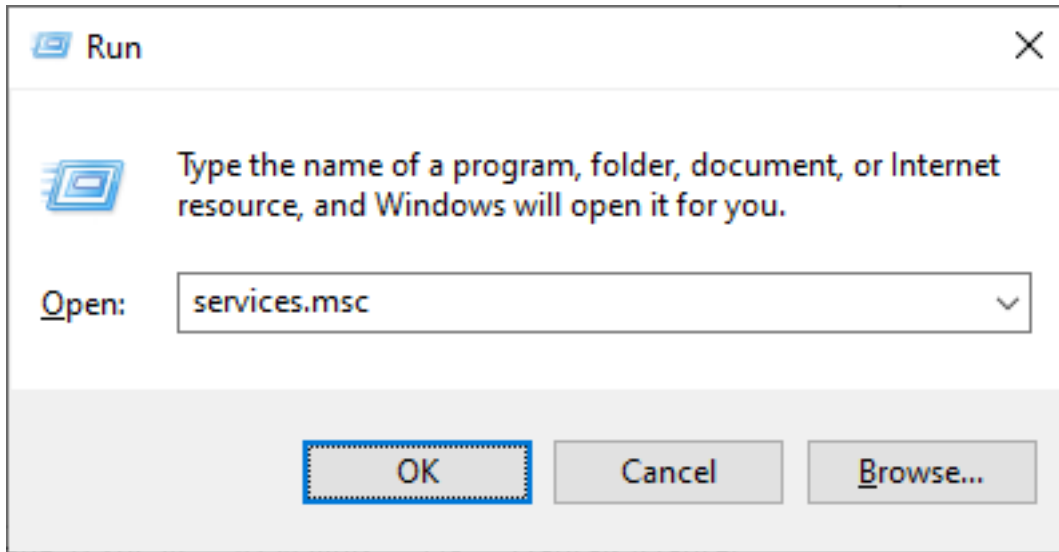


Figure 44. Windows Run

7. Start the service "Smart-Vue Pro LoRaServer Connector".

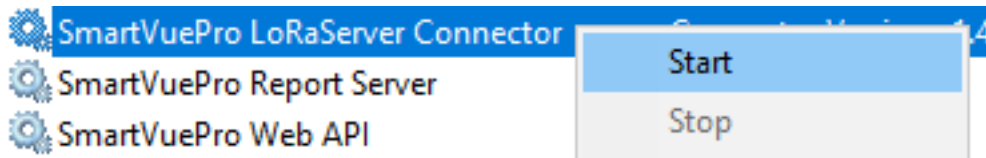


Figure 45. LoRaServer Connector Service

Note: Run the web app first prior to the launch of the LoRa connector service.

Smart-Vue Pro Domain Agent (Optional)

1. Locate and launch the package “Smart-Vue Pro-DomainAgent.msi”.
2. Accept the Terms and Conditions for using the application.
3. Choose an installation folder.
4. Fill in the various application keys.

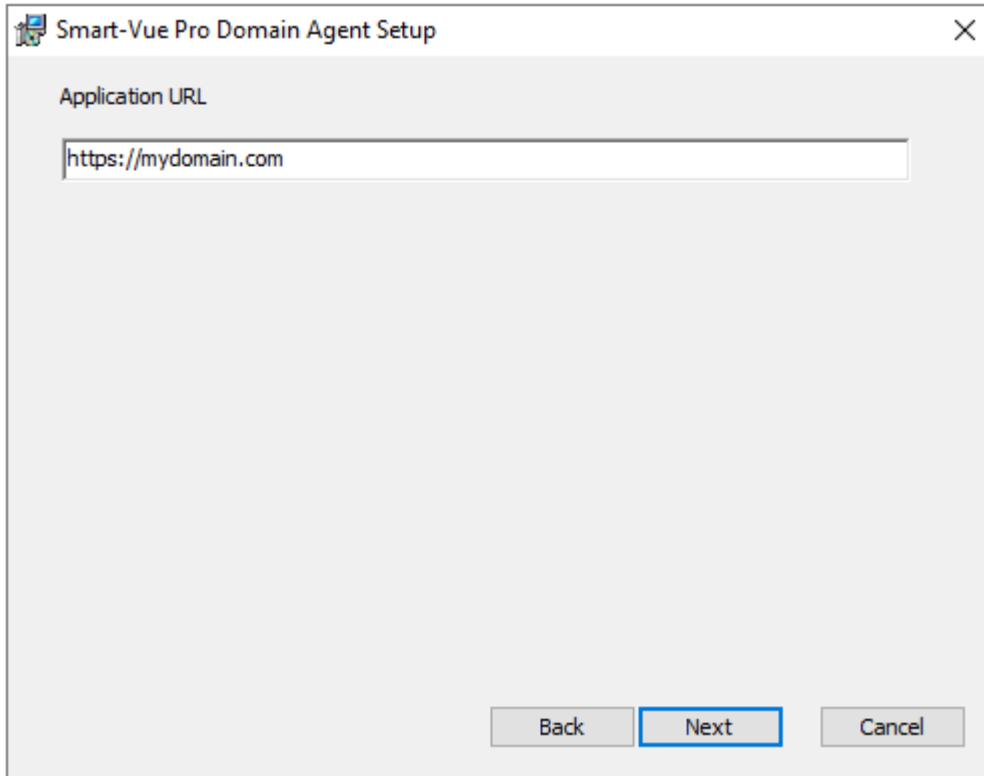
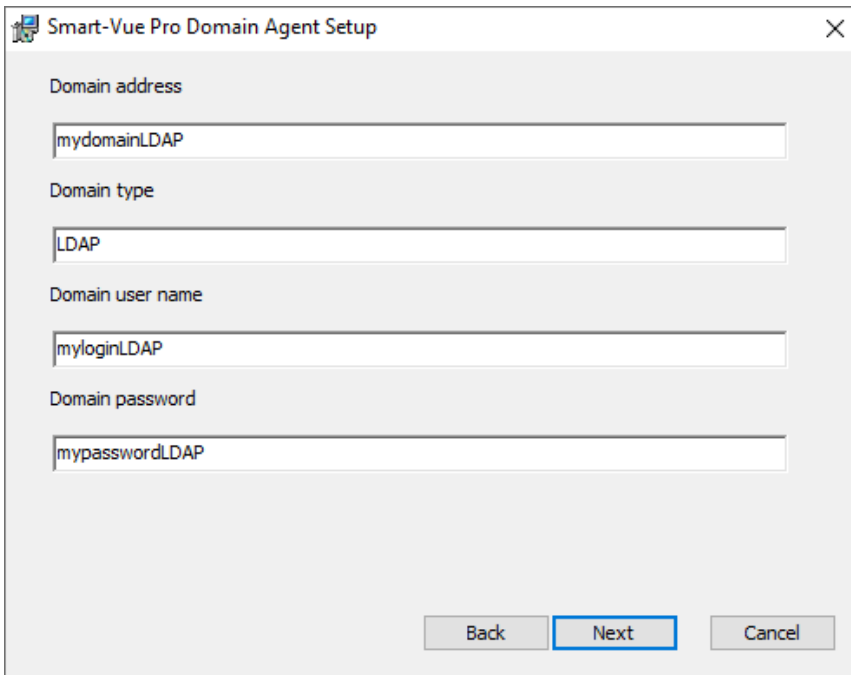


Figure 46. Domain Agent’s Application Keys

Application URL Enter the URL of the server where the APIs are installed (notably, replace “mydomain.com” with your own domain).

5. Click on Next to continue.



The image shows a dialog box titled "Smart-Vue Pro Domain Agent Setup". It contains four text input fields: "Domain address" with "mydomainLDAP", "Domain type" with "LDAP", "Domain user name" with "myloginLDAP", and "Domain password" with "mypasswordLDAP". At the bottom, there are three buttons: "Back", "Next" (highlighted with a blue border), and "Cancel".

Figure 47. External Domain Controller Details

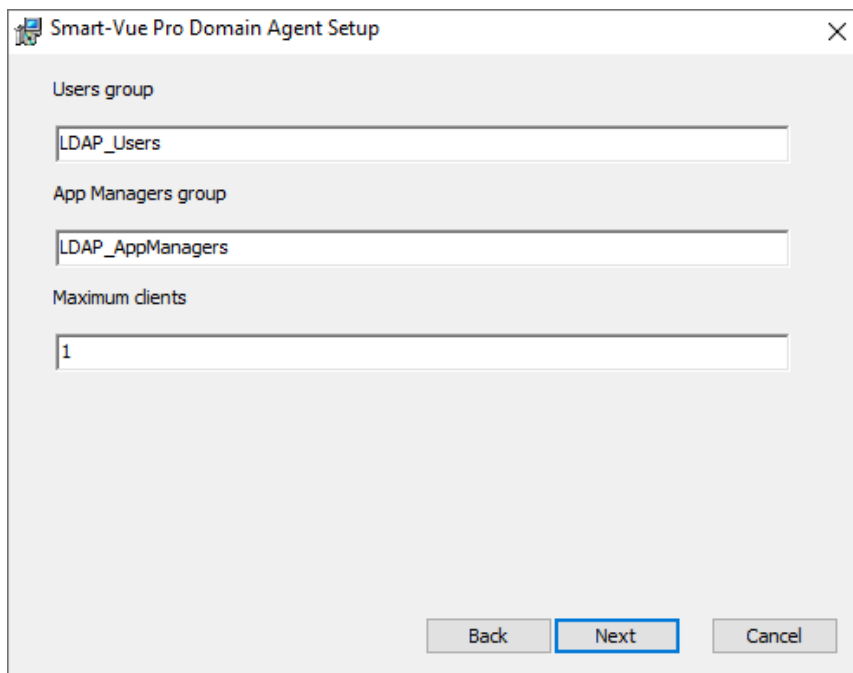
Domain address Enter the domain address for your LDAP server.

Domain type Enter "LDAP".

Domain user name Enter the user name that system will use to connect to the LDAP server.

Domain password Enter the password for that user.

6. Click on Next to continue.



The image shows a dialog box titled "Smart-Vue Pro Domain Agent Setup". It contains three text input fields: "Users group" with "LDAP_Users", "App Managers group" with "LDAP_AppManagers", and "Maximum clients" with "1". At the bottom, there are three buttons: "Back", "Next" (highlighted with a blue border), and "Cancel".

Figure 48. User Group Details

Users group Enter "LDAP_Users" – the name is configured by your IT Manager in your Active Directory.

App Managers group Enter “LDAP_AppManagers” – the name is configured by your IT Manager in your Active Directory.

7. Click to complete the Wizard.

8. Open the Windows services management console:

Right click on Start -> Run (Windows + R) and type “services.msc”.

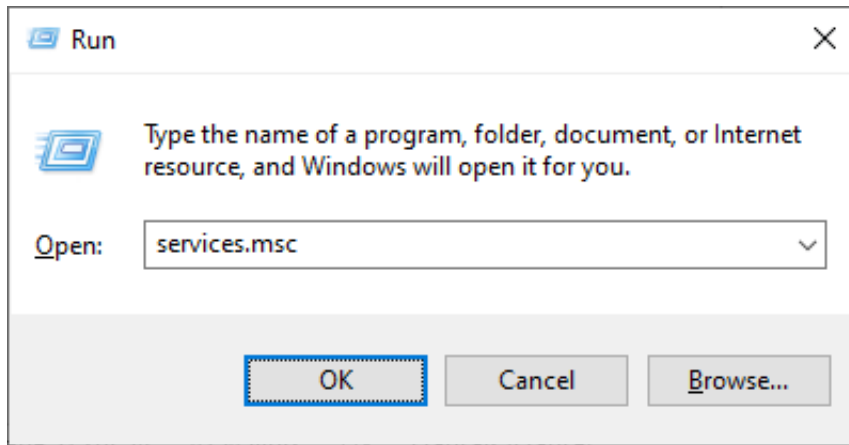


Figure 49. Windows Run

9. Start the service “Smart-Vue Pro Domain Agent”.

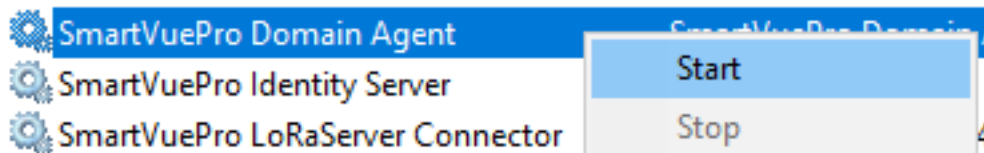


Figure 50. Domain Agent Service

Checking prerequisites or confirming your installation

Once installation is complete, run the EnvironmentQualify application located in the On- Premise Installation Zip file. This application lets you test each component including connection to the SQL Server, SMTP Server, LoRaWAN connection, and LDAP. Simply change the URLs based on your application URLs used during the install and click on the various **Test** buttons.

The screenshot displays the 'Access' section of the EnvironmentQualify application. It is organized into several panels for testing different services:

- URL:** A list of input fields for 'Front', 'URL base', 'API IS', 'API WEB', 'API Central', 'API RS', 'OceaAgent', and 'OceaAlert', each with a corresponding 'Test' button.
- SQL Server:** Fields for 'Instance *', 'Login' (pre-filled with 'SA'), and 'Password', with radio buttons for 'SQL Credentials' (selected) and 'SSPI', and a 'Test' button.
- LoRa:** Fields for 'Server *' and 'Port' (set to 1700), with a 'Test' button.
- SMTP Server:** Fields for 'From *', 'To *', 'Server *', 'Login', and 'Password', a 'Port' dropdown (set to 25), an 'Enable SSL' checkbox, and a 'Send' button.
- LDAP:** Fields for 'Server *', 'Login', and 'Password', a 'List all users' checkbox, and a 'Test' button.

At the bottom, there is an 'Output' section with a large text area and 'Copy' and 'Clear' links.

Figure 51. Server tests on Environmental Qualifying App

Upgrade Specifics

General Case

1. Open the Windows services management console:

Right click on Start -> Run (Windows + R) and type "services.msc".

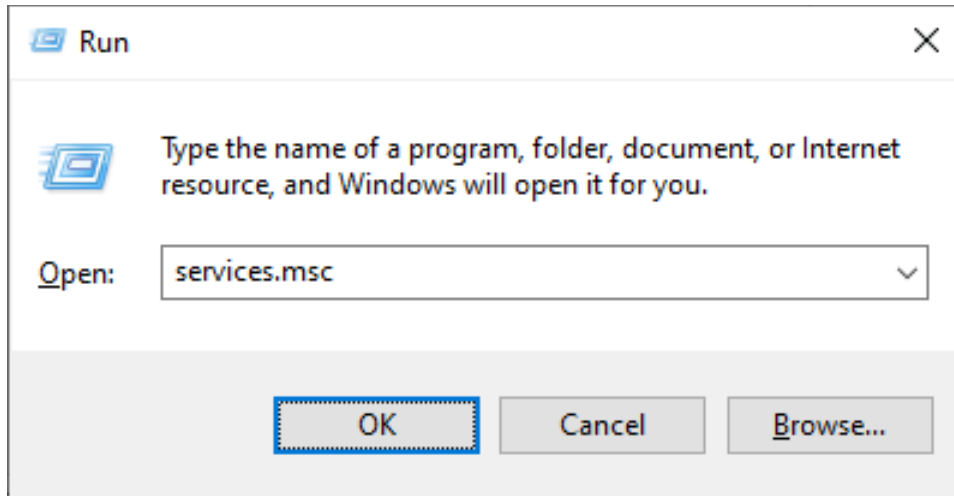


Figure 52. Windows Run

2. Stop all Smart-Vue Pro services.

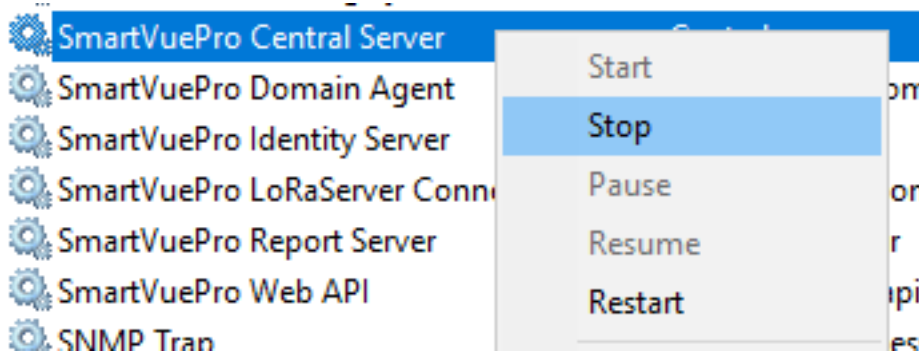


Figure 53. Smart-Vue Pro services

3. You must Uninstall the previous version of installers before installing the new one.
4. Proceed with the installation of new components by following the steps described in **Installing the Smart-Vue Pro Server Solution**.
5. Once the upgrade is complete and all services are running, the browser cache must be cleared on all workstations used to access the solution. For most web browsers, go to the Smart-Vue Pro login screen and use the keyboard shortcut "Ctrl + F5" (you may need to check the specific procedure for your browser).

Special Cases

Upgrading the LoRaWAN Connector for version 1.7.x

For this upgrade, you must install a new version of VcredistC++ package (14.1).

Upgrading from a version prior to 1.7.x

If your installation uses the Smart-Vue Domain Agent (LDAP) service, you must modify the authentication mode URL.

For example: for a previous Smart-Vue Domain Agent URL of `https://mydomain.com:5004`, the new URL would be `https://mydomain.com/DA1`.

Changing Smart-Vue Pro Domain Agent Installation Directory

If the Smart-Vue Pro Domain Agent installation directory is modified during the upgrade, you must move one file manually to the new directory.

1. After stopping the Windows services, go to Smart-Vue Pro Domain Agent installation directory (by default, “C:\Program Files\Smart-Vue Pro\Smart-Vue Pro Domain Agent”).
2. Copy the file “client-keys.json” to a temporary folder (such as the Windows desktop or a new folder).
3. Install the new version following the steps as described in **Smart-Vue Pro Domain Agent (Optional)**, but do not start the Windows service “Smart-Vue Pro Domain Agent”.
4. Copy the file “client-keys.json” to the new installation directory (“C:\Program Files\ Smart-Vue Pro\Smart-Vue Pro Domain Agent” by default).
5. Start the Windows service “Smart-Vue Pro Domain Agent”.

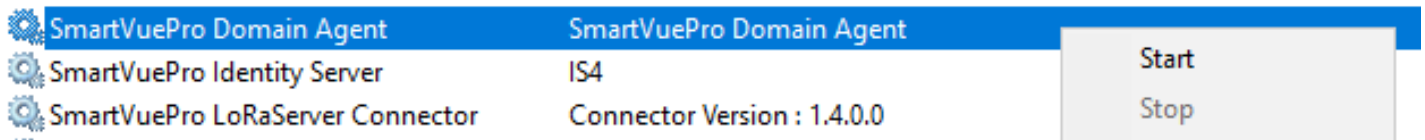


Figure 54. Domain Agent Service

Moving or Updating your SSL Certificate

You may need to renew your SSL certificate at some point in time (for example, if it expires) or you may want to move it.

Install the new certificate and change it in IIS site binding as described in **Web Application** of this guide.



CAUTION: If you change from an installation without an SSL certificate to one with an SSL certificate, you must uninstall the various applications and reinstall them in order to specify a URL using “https”.

FAQ

1. I just restarted the server machine. Why I am not able to access the Smart-Vue Pro Server solution?
 - All the Smart-Vue Pro server services needs to be run to access the server solution.
2. How to get the correct SQL Server instance name?
 - Windows -> Microsoft SQL Server xxxx -> SQL Server xxxx Configuration Manager -> SQL Server Services -> Right click on the SQL Server -> Service -> "Host Name" is the SQL Server instance name.
3. I have obtained SSL certificate in a format other than .pfx format. How to get the SSL certificate installed in .pfx format?
 - In the Windows Start menu, type Internet Information Services (IIS) Manager and open it. Select Server Certificates -> Double click ->Complete Certificate request ->Upload the certificate ->Give details ->OK ->Right click on the certificate ->Export ->Enter Password ->Select location -> Next -> Next ->Finish.
4. How can we remove/disable the LDAP users? How can we remove the internal users (not disable)?
 - To disable an LDAP user, the particular user should be disabled in the LDAP domain.
 - No user can be removed from the application (LDAP or Internal)
5. Why I am unable to change the user details of any LDAP/external user in the users page?
 - All the changes regarding LDAP user details should be done in the LDAP domain, then, the same would be reflected in the web application. User details of external users cannot be done from web application.
6. I deleted an existing Authentication mode, When I am trying to create it again in the Authentication Modes screen, I am getting an error. Why I am unable to re-create the Authentication Mode, once it is deleted?
 - To re-create deleted Authentication mode, user has to delete Client-keys.json file from Domain Agent Installation folder. When an Agent is deployed, user defines the number of "instance" user wants to associate this agent. (Default value is 1). So, when the Agent is deleted, user has to remove client-keys.json or user has to allow more max clients during installation.



7. If I want to change configuration of any installer, can I uninstall the particular installer, make the changes and install again? OR should I re-install all other installers also?
 - Yes, at any time, we can stop the services, un-install and re-install the required installer. After the installation is done, start all the services again.
8. Is there anything specific that needs to be done when installing on Windows Server 2012?
 - New versions of Chrome and Firefox must include a SAN attribute to be trusted, since generating a certificate with the Server 2012 SAN is not enabled by default.

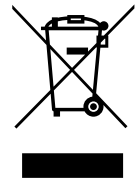
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intentionally
left blank.

WEEE Compliance

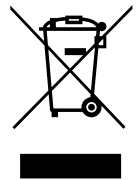
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