



Installation and Setup Guide for the Data Connector

(Revision 1.0 - Aug 2024)

Pegasus Software
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Guide iterations

A summary of changes per document iteration.

| Iteration | Date | Changes |
|-------------|----------|---|
| R1.0 | Aug 2024 | The baselined initial release of the Installation and Setup for the Data Connector. |
| | | |

1. Introduction

This guide highlights the necessary preparations engineers must undertake for a smoother and more successful installation. Opera 3 SQL SE installation experience, OS environment (Win 11, Win Svr 2019-2022, SQL Server 2022), and IIS configuration are expected.

Before installing Opera 3 SE and associated Opera 3 SQL SE Components (e.g., Pegasus Data Connector), prerequisites must be installed/updated and configured on a clean VM/new hardware environment or update the components where needed and configure on your current working laptop/PC. Confirm by following the checklist.

2. Pre-requisites and Considerations

In this section, you must check that the necessary prerequisites are installed and applied.

- Software Environment
- ASP.NET Core 8.0 Hosting Bundle: x64
- Dot Net Desktop Runtime: x64
- Opera 3 SQL SE v2.98.00 or higher
- Applications appropriately licensed
- SAM
- IIS (relevant components)

2.1. Software Environment

The following are recommended versions.

| Software | Description |
|----------------------|-------------------------------------|
| Windows Server 2019+ | The Windows Server environment. |
| Windows 11v23H2+ | The Windows 11 Desktop environment. |

2.2. ASP.NET Core 8.0 Hosting Bundle: x64

The ASP.NET Core 8.0 Hosting Bundle must be installed for the Data Connector to work. You can download a copy from <https://dotnet.microsoft.com/permalink/dotnetcore-current-windows-runtime-bundle-installer>.

2.3. Dot Net Desktop Runtime: x64

Dot Net Desktop Runtime must be installed for the Data Connector to work. You can download a copy from [Download .NET 8.0 Desktop Runtime \(v8.0.7\) - Windows x64 Installer \(microsoft.com\)](#).

2.4. Dot Net SDK 8.0 Runtime: x64

If you are not using the recommended versions listed in section 2.1, you must install the Dot Net SDK 8.0 Runtime for the Data Connector to work. You can download a copy from <https://dotnet.microsoft.com/en-us/download/dotnet/thank-you/sdk-8.0.303-windows-x64-installer>

2.5. Opera 3 SQL SE

The main requirement for Opera 3 SQL SE is that version 2.98.00 or higher is installed and properly activated.

2.6. Opera 3 SQL SE Client

No direct set-up or configuration is needed.

2.7. Configuring IIS components

There should be minimal requirements, including components for installing the Data Connector. The default components included with IIS are required when enabled, but a few more components are not switched on as default and need to be enabled – See Appendix for complete list.

| Windows Server 2019 Roles & Features | |
|---|---|
| ASP.NET 4.7 | <ul style="list-style-type: none">▪ .Net Framework 4.7 Features▪ Net Framework 4.7 |
| IIS - Web Server – Security | <ul style="list-style-type: none">▪ Windows Authentication |
| IIS - Management Tools | <ul style="list-style-type: none">▪ IIS Management Console |
| Windows 11 | |
| .NET Framework 4.8 Advanced Services | <ul style="list-style-type: none">▪ ASP.NET 4.8 |
| IIS – Web Management | <ul style="list-style-type: none">▪ <i>IIS Management Console</i> |
| IIS – World Wide Web Services – Application Development Features | <ul style="list-style-type: none">▪ .NET Extensibility 4.8▪ ASP.NET 4.8▪ ISAPI Extensions▪ ISAPI Filters |
| IIS – World Wide Web Services – Security | <ul style="list-style-type: none">▪ Windows Authentication |

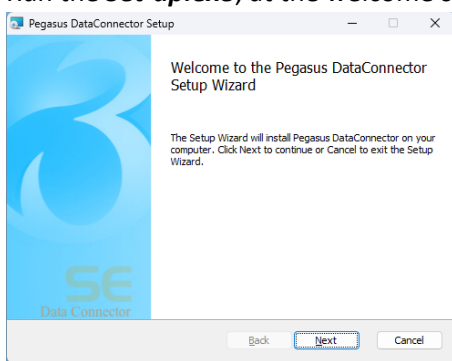
3. Installing the Data Connector

The installation of the Data Connector is available as part of the Opera 3 SQL SE build. Ensure you are on the correct version of Opera 3 SQL SE that is compatible before installing the Data Connector.

| Name | Date modified | Type | Size |
|-----------------------------|------------------|-------------|------|
| Client | 27/06/2024 12:38 | File folder | |
| Online Filing Manager | 27/06/2024 12:38 | File folder | |
| Pegasus O3 SE Dataconnector | 27/06/2024 12:38 | File folder | |
| Server | 27/06/2024 12:38 | File folder | |

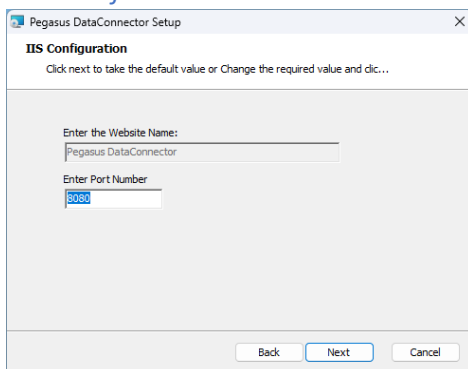
| Name | Date modified | Type | Size |
|--------------------------------------|------------------|-----------------------|-----------|
| Pegasus Opera 3 SE DataConnector.msi | 26/06/2024 13:26 | Windows Installer ... | 14,632 KB |
| pegrel.txt | 26/06/2024 13:30 | Text Document | 1 KB |
| Setup.exe | 26/06/2024 13:30 | Application | 247 KB |

1. Run the **Set-up.exe**; at the welcome screen, click **Next**.

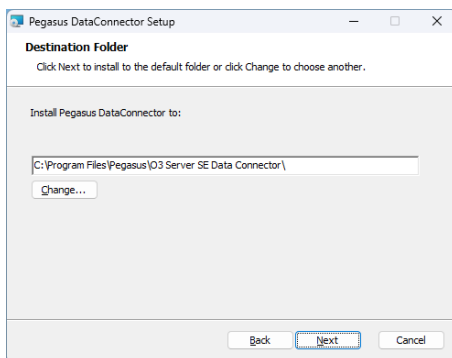


2. Confirm the default Port Number.

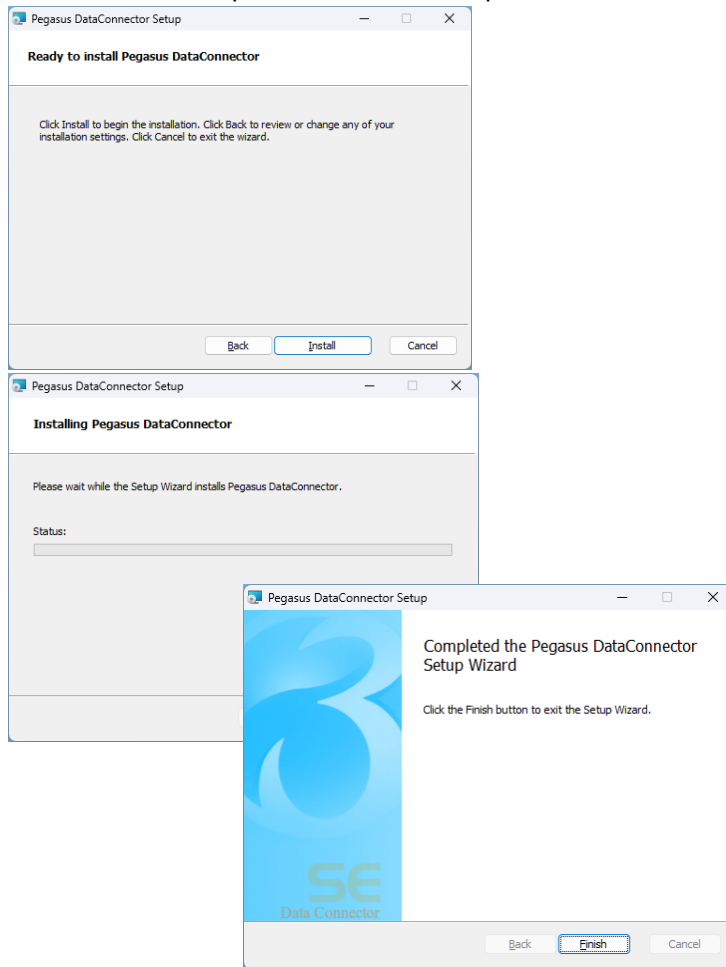
NB: This defaults to 8080 and can be changed. The default one will also offer a different number if it is in use.



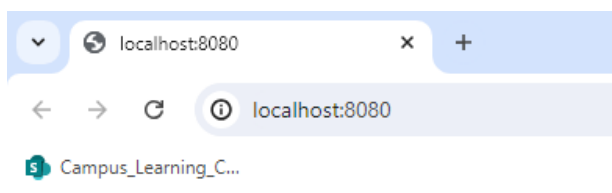
3. Select the location where the Data Connector will be installed. It is recommended that you use the default location.



4. Click Install to complete the installation process.



5. The base location of the default website will provide basic connection details (localhost:8080).



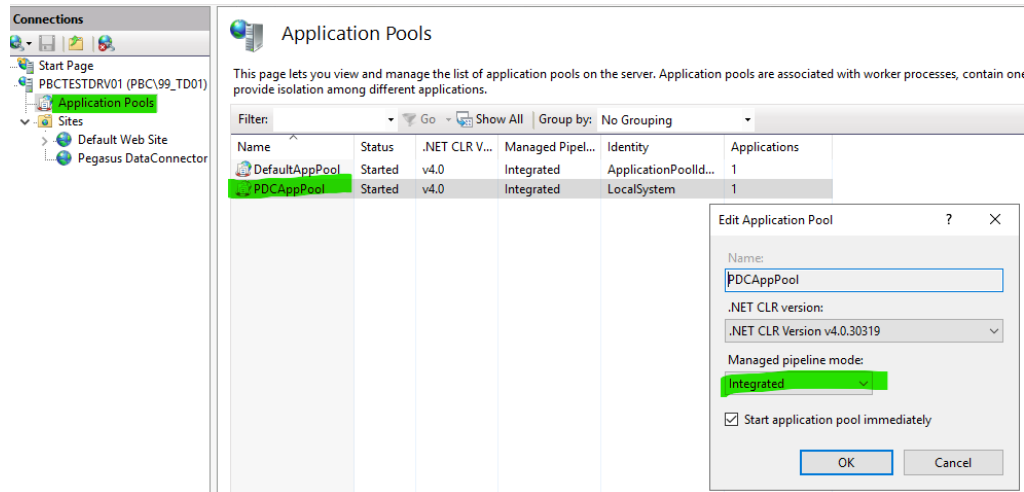
```
Initialising SE Server communications
Loading DataConnector components
Loading Components from SE Server (4305408 bytes)
Initialising UserSecurityHelpers
Initialising OperaServiceHelper
Building WebApplication
Enabled basic auth
Enabled Negotiate auth
Loaded 373 Company table names
Loaded 48 System table names
--- READY ---
```


4. IIS Post Installation checks

Once the Data Connector has been installed, it is recommended to check that the relevant IIS components have been installed, configured and applied.

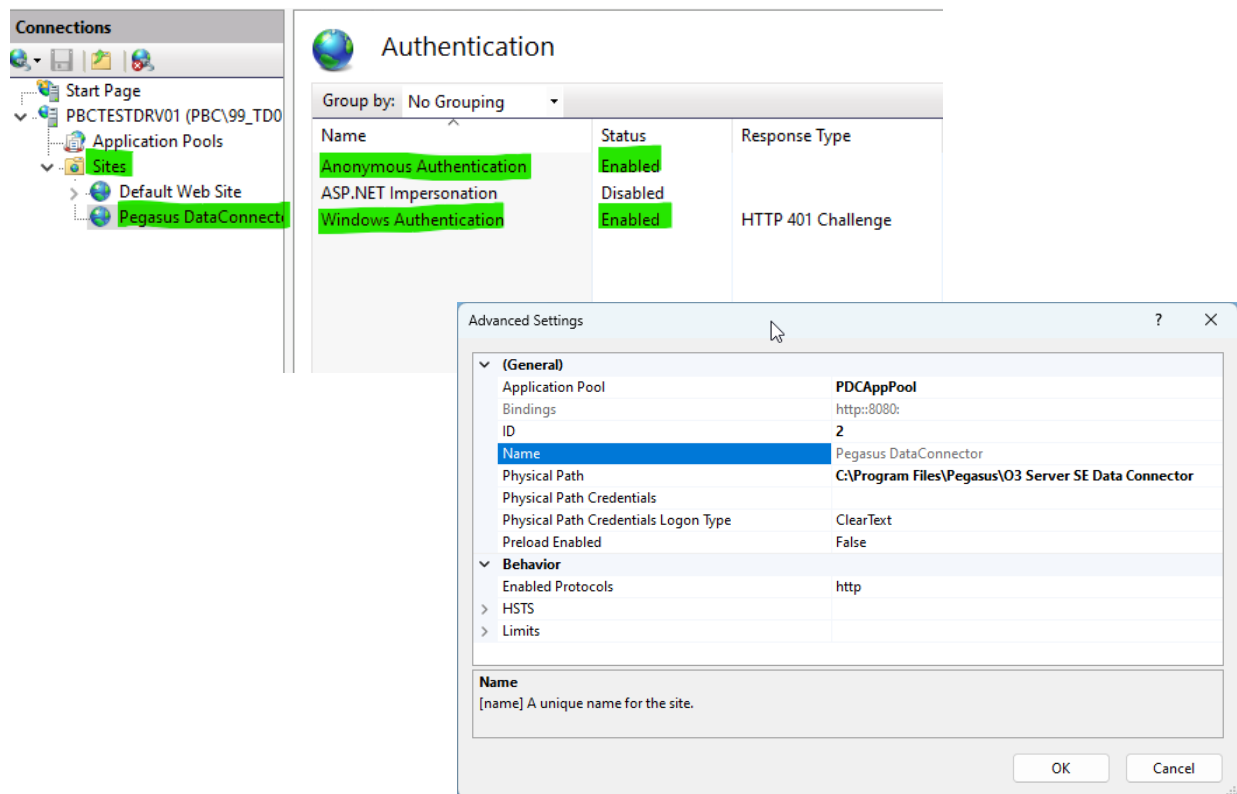
4.1. Application Pools

Ensure the PDCAppPool has been created and has the relevant properties as illustrated in the screenshot below.



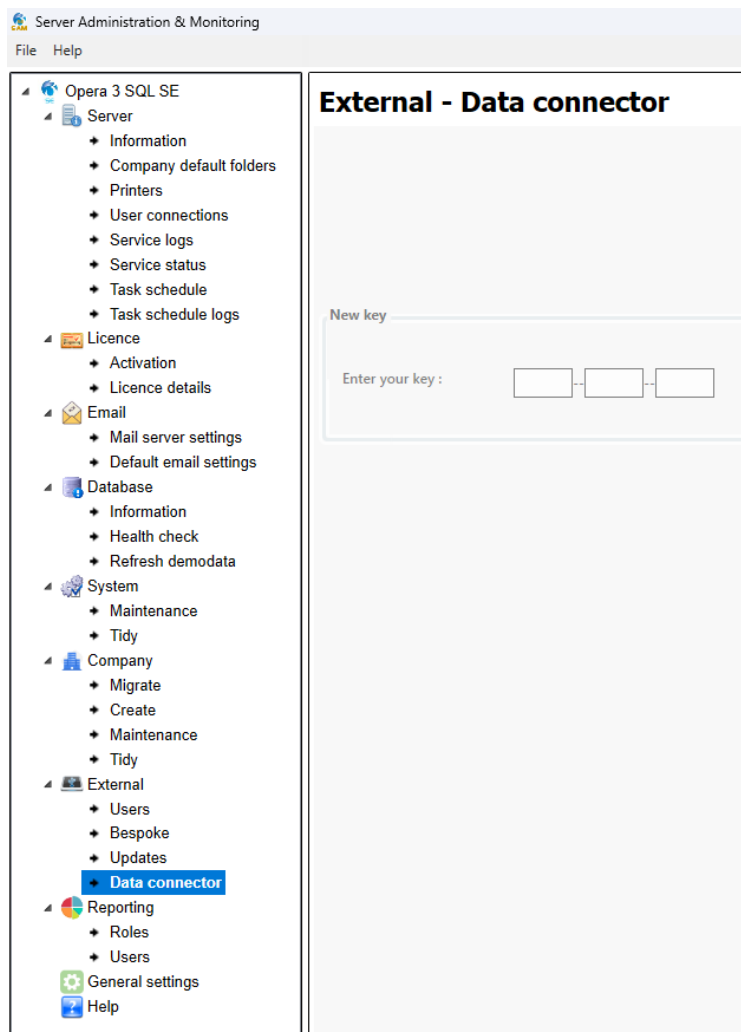
4.2. Sites

Ensure the Pegasus Data Connector site has been created and has the relevant properties applied for authentication and settings as illustrated in the screenshots below.



4.3. Activating the Data Connector

Once you have installed the Data Connector, you can activate this via the SAM. Go to External – Data Connector and enter a valid key. This follows the same concept as the SE Bespoke licence entry.



5. Configuring and Setting up Security and Permissions

Data Connector permissions are based on the Opera user calling the Data Connector. Security is divided into two parts:

- Authentication – validate and identify the user from their credentials. At this point the system has found out the relevant Opera user or rejected them.
- Authorisation – determine what permissions the user has after authentication. For the Data Connector this is what companies and tables they are allowed to see.

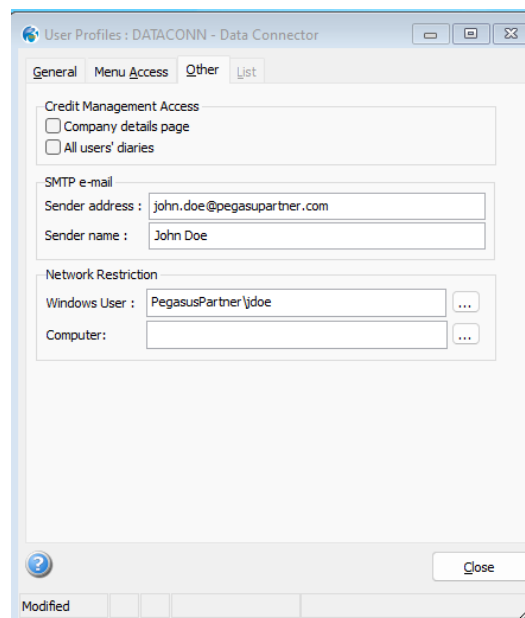
Once installed and activated, the system needs to be configured for the Data Connector to be used. There are two main elements that need to be set to complete the Data Connector configuration and respective permissions:

- Opera 3 SQL SE System – User Profiles / SAM External User (Windows Authentication)
- SAM – Reporting (Authorisation)

5.1. Authentication

There is no login form for the Data Connector API, so direct use of the Opera username and password is impossible. Instead, other credentials are used, which must be mapped to an Opera User (User Mapping).

NB: A separate Opera user must be created for the Data Connector testing and mapped to their Windows Domain Login in SE Client >> Admin Maintenance >> User Profiles (see below):



Supported credentials for Data Connector are:

- Trusted (i.e. domain) credentials (Standard User – Windows Authentication)
- SAM External users (TPD User – Basic Authentication)

Passing credentials from the user (using reporting or custom software) to Pegasus code, a standard web technologies and IIS feature, will host the primary Data Connector process.

Validate and identify the user based on their credentials. At this point, the system has found the relevant Opera user or rejected them.

NB: Windows authentication cannot generally be used if the application is running on a different network, calling the data connector from a service account (e.g., LOCAL SERVICE), or using a non-Windows OS. In these cases, only Basic Authentication can be used.

5.2. Trusted Credentials (Standard User – Windows Authentication)

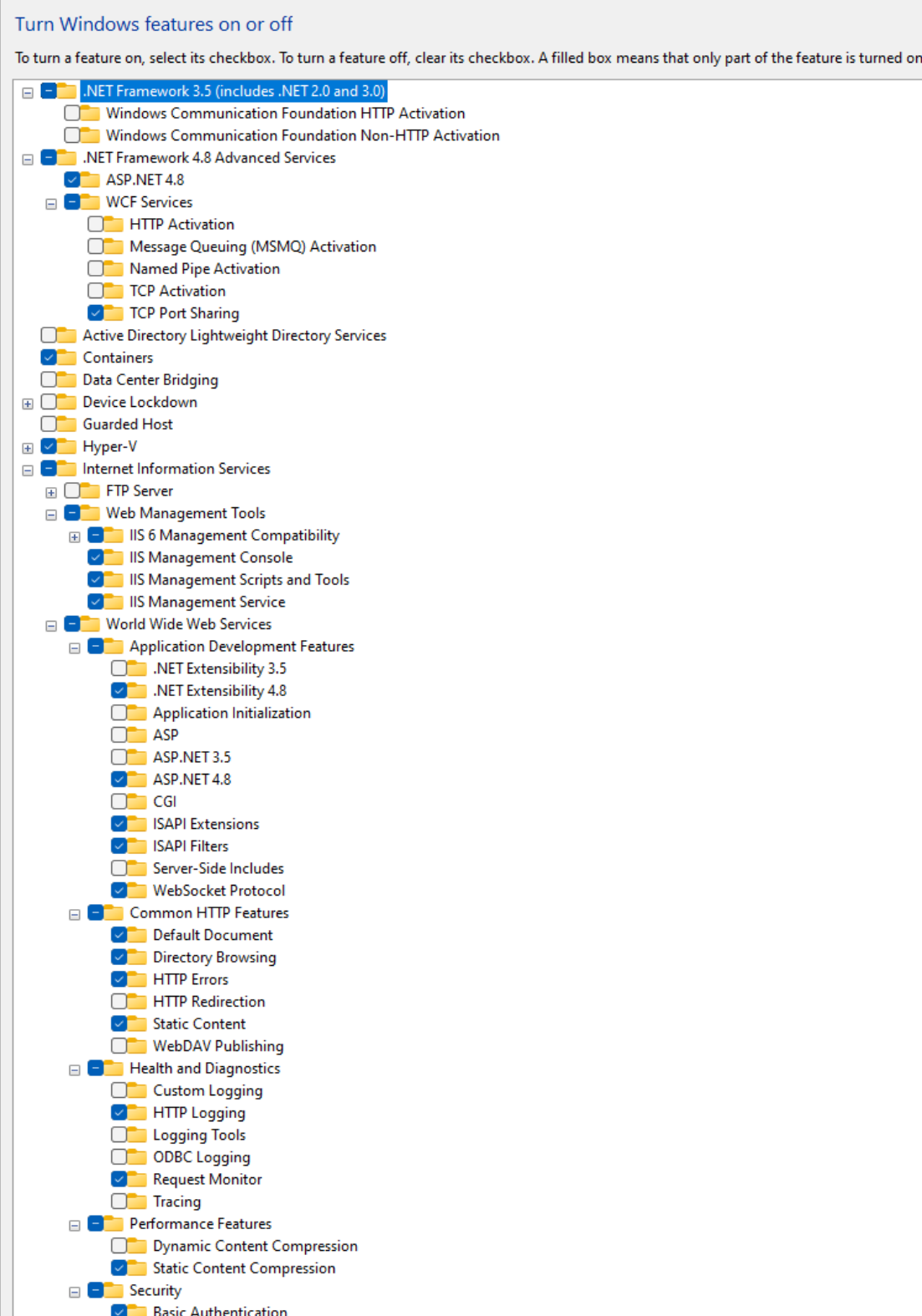
This section details the configuration for Trusted Credentials.

The first element to set-up is the Network Restriction setting within User Profiles. This is used to connect the Windows User with the Opera user therefore utilising a concept of single sign on. For the Data Connector it is the Windows user that is required for the permissions to be used with the Data Connector.

6. Appendix

Below are the minimum settings required for the Data Connector. If any other option is already selected, leave it selected as it may be required for other parts of your system.

Windows 11 Roles & Features:

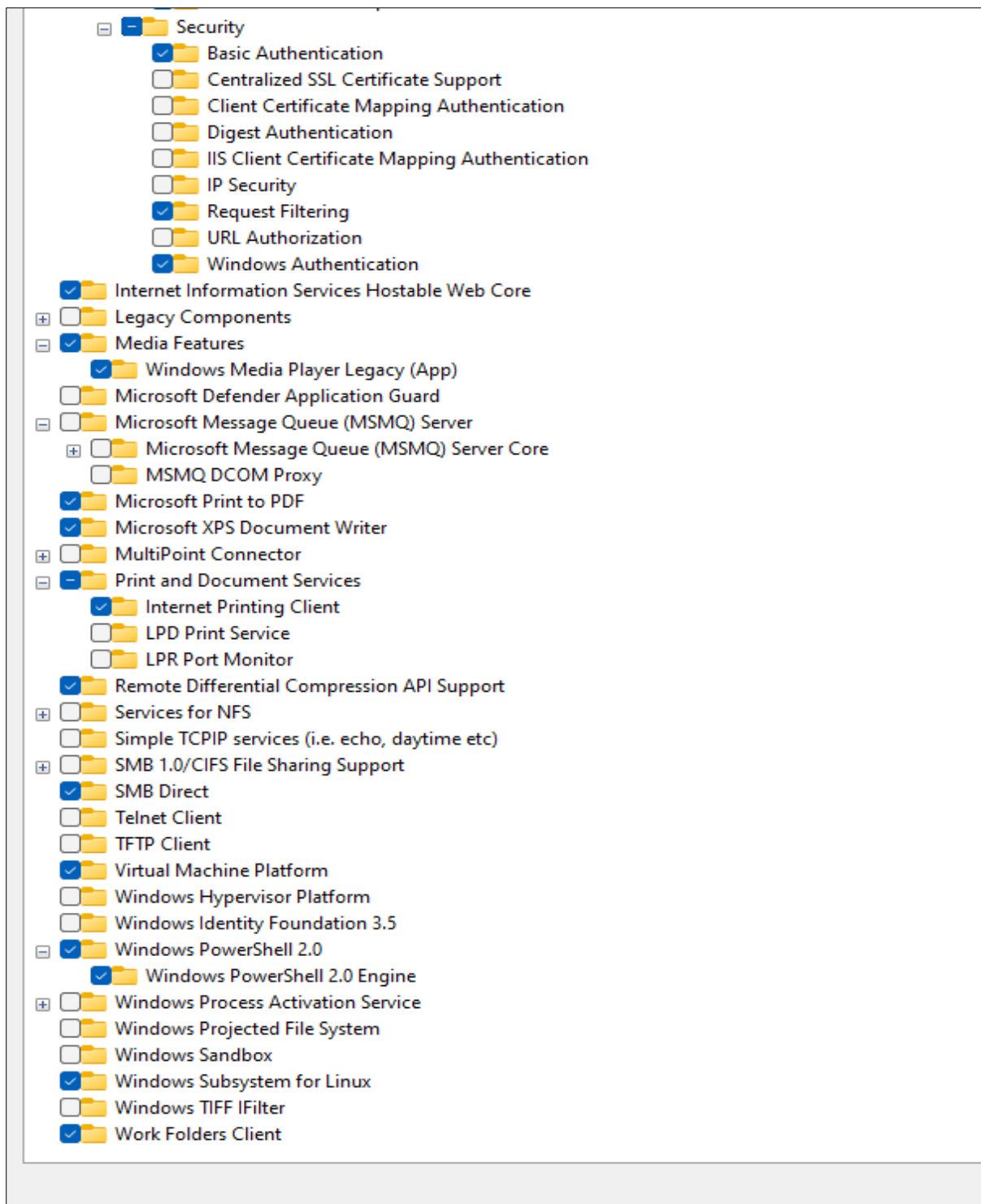


Turn Windows features on or off

To turn a feature on, select its checkbox. To turn a feature off, clear its checkbox. A filled box means that only part of the feature is turned on.

- .NET Framework 3.5 (includes .NET 2.0 and 3.0)
 - Windows Communication Foundation HTTP Activation
 - Windows Communication Foundation Non-HTTP Activation
- .NET Framework 4.8 Advanced Services
 - ASP.NET 4.8
 - WCF Services
 - HTTP Activation
 - Message Queuing (MSMQ) Activation
 - Named Pipe Activation
 - TCP Activation
 - TCP Port Sharing
 - Active Directory Lightweight Directory Services
 - Containers
 - Data Center Bridging
- Device Lockdown
- Guarded Host
- Hyper-V
- Internet Information Services
 - FTP Server
 - Web Management Tools
 - IIS 6 Management Compatibility
 - IIS Management Console
 - IIS Management Scripts and Tools
 - IIS Management Service
- World Wide Web Services
 - Application Development Features
 - .NET Extensibility 3.5
 - .NET Extensibility 4.8
 - Application Initialization
 - ASP
 - ASP.NET 3.5
 - ASP.NET 4.8
 - CGI
 - ISAPI Extensions
 - ISAPI Filters
 - Server-Side Includes
 - WebSocket Protocol
 - Common HTTP Features
 - Default Document
 - Directory Browsing
 - HTTP Errors
 - HTTP Redirection
 - Static Content
 - WebDAV Publishing
 - Health and Diagnostics
 - Custom Logging
 - HTTP Logging
 - Logging Tools
 - ODBC Logging
 - Request Monitor
 - Tracing
 - Performance Features
 - Dynamic Content Compression
 - Static Content Compression
 - Security
 - Basic Authentication

Windows 11 Roles & Features:



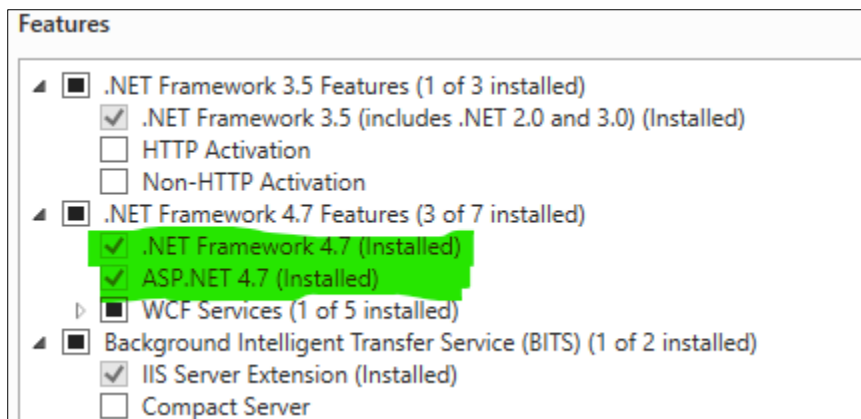
Windows Server 2019 Roles & Features:

Roles

- ▲ Web Server (16 of 34 installed)
 - ▲ Common HTTP Features (5 of 6 installed)
 - Default Document (Installed)
 - Directory Browsing (Installed)
 - HTTP Errors (Installed)
 - Static Content (Installed)
 - HTTP Redirection (Installed)
 - WebDAV Publishing
 - ▷ Health and Diagnostics (4 of 6 installed)
 - ▷ Performance (1 of 2 installed)
 - ▲ Security (2 of 9 installed)
 - Request Filtering (Installed)
 - Basic Authentication
 - Centralized SSL Certificate Support
 - Client Certificate Mapping Authentication
 - Digest Authentication
 - IIS Client Certificate Mapping Authentication
 - IP and Domain Restrictions
 - URL Authorization
 - Windows Authentication (Installed)
 - ▲ Application Development (4 of 11 installed)
 - .NET Extensibility 3.5 (Installed)
 - .NET Extensibility 4.7 (Installed)
 - Application Initialization
 - ASP
 - ASP.NET 3.5
 - ASP.NET 4.7
 - CGI
 - ISAPI Extensions (Installed)
 - ISAPI Filters (Installed)
 - Server Side Includes
 - WebSocket Protocol

- ▲ Management Tools (2 of 7 installed)
 - IIS Management Console (Installed)
 - ▲ IIS 6 Management Compatibility (1 of 4 installed)
 - IIS 6 Metabase Compatibility (Installed)
 - IIS 6 Management Console
 - IIS 6 Scripting Tools
 - IIS 6 WMI Compatibility
 - IIS Management Scripts and Tools
 - Management Service
- Windows Deployment Services
- Windows Server Update Services

For server 2019:



~End of Document ~