P2 Server 4.0

Installation Guide

P2 Server

Installation Guide

First Edition (September 2014)

This edition applies to Version 4.0 of P2 Server and to all subsequent releases and modifications until otherwise indicated in new editions.

Description: C:\Users\trish.haynes\Desktop\Cover pages\Cover art\Logos\ISS Group RGB.wmfDescription: C:\Users\trish.haynes\Desktop\Cover pages\Cover art\Logos\ISS Group RGB.wmf

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40 Hasler Road, Osborne Park, WA, 6017, Australia

PO Box 1313, Osborne Park BC, Osborne Park, WA, 6916, Australia

Phone +61 8 9241 0300 • Fax +61 8 9242 8121

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# Preface

P2 Server gets your data from any source and shows its relationships, all with impressive speed, in a way that applications can easily consume it.

This document outlines how to install and configure the P2 Server components.

## What’s New

* P2 Server 4.0 provides a simplified installation and configuration process.

## Who Should Read This Guide

This guide is intended for anyone who is installing P2 Server into an existing enterprise system. It assumes working knowledge of:

Microsoft® Internet Explorer®

Microsoft® Windows® operating system

## Related Documentation

Documents in the P2 Server documentation suite are:

|  |  |
| --- | --- |
| Title | Description |
| P2 Server Release Notes | Release notes for the latest version of P2 Server. |
| P2 ServerInstallation Guide | How to install P2 Server. |

You may also find the following documents useful:

P2 Security Installation Guide

P2 License Manager User’s Guide

ISS Log Viewer User’s Guide

These documents are available from P2 Customer Support.

## Help and Support

P2 Customer Support provides a central point of contact for software assistance and the resolution of software issues. As part of this, P2 offers a variety of professional services, online resources, and access to experienced product specialists who are able to assist with your service requests. For support and information regarding our products, the following resources are provided:

Free Documentation Resources

PDF documentation supplied in the installation directory.

Online help provided with the product (if supplied).

Online Support Portal

The P2 Customer Support Portal (<http://p2energysolutions.com/support>) provides access to online support, where you can raise service requests for P2 software, track defects, get product information, and communicate with P2 Customer Support.

Customer Communities

P2’s customer communities offer a networking environment for you and other P2 users. Our boards and user groups offer an informal setting to exchange information and discuss issues relevant to today's oil and gas companies. P2 is confident that together, we can create an interactive venue that will provide value by allowing our customers to communicate, collaborate and connect at multiple levels. For details, see [www.p2energysolutions.com/services/customer-communities](http://www.p2energysolutions.com/services/customer-communities).

Training

P2 offers a variety of standard and customised training courses (ranging from introductory courses through to administrator courses) to help you learn how to use P2 products.

Performance Tuning

P2 offers a series of system checks to make sure your P2 systems are running as efficiently as possible.

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Contact Details

You can contact P2 Customer Support via phone or email for technical support on any aspect of P2’s products. Please also contact P2 Customer Support for further information on the Customer Communities, access to the online support portal, Performance Tuning services, and information on available training courses. Feedback on our products or user guides can also be sent to P2 Customer Support.

|  |  |
| --- | --- |
| **Phone:** | 1300 739 969 (Australia only)  +61 8 9241 0314 (outside Australia) |
| **Email:** | [support@issgroup.com.au](mailto:support@issgroup.com.au) or [iss.support@p2energysolutions.com](mailto:iss.support@p2energysolutions.com) |

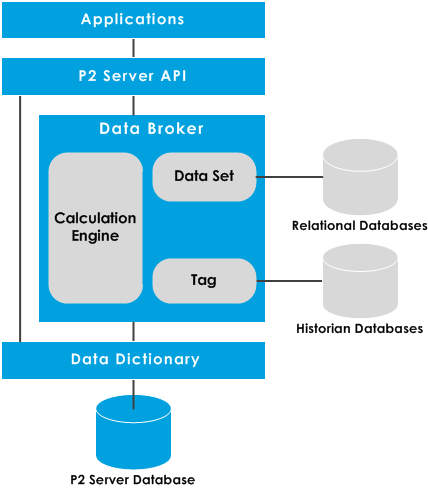
# About P2 Server

P2 Server maps data from multiple systems onto time-aware models to present a complete representation of an asset (e.g. field, well, jet pump, compressor, stacker).

It models the relationships between these real world assets and how they change over time. For example, a well belongs to a field from the time it went online to decommissioning; a jet pump may be deployed in a well for a period of time.

## Component Overview

P2 Server consists of several components.

Applications

Applications use the P2 Server API to get data from P2 Server, and to write data back to the P2 Server database.

P2 Server API

The P2 Server API is the public API for P2 Server. It provides a REST style interface that serves up the structure and data provided by the Data Broker and Data Dictionary. It also provides a way to model the relationships between objects from different P2 systems at a higher level than the Data Dictionary.

Data Broker

The Data Broker aggregates data from multiple systems through a common interface. The data can be fetched either in a time series format or in a tabular format, back into a consuming application. The consuming application is abstracted from the source of the data, making it possible to represent data from several systems into a single coherent picture. The Data Broker also allows users to configure freeform calculations over the aggregated data in order to transform it.

Data Dictionary

The Data Dictionary is a conceptual component that exists in the database schema, and acts as a layer between the Data Broker and the API to pass data to and from the P2 Server Database. It allows users to configure a model of what each real-world object (such as a pump) should represent, as well as attributes that are common to that object.

P2 Server Database

The P2 Server database stores data such as entity metadata, attribute definitions, data sources, hierarchies, and templates, which are required for consumption by other P2 applications.

# Quick Start Cheat Sheet

Here is a rundown of the installation process for those who wish to view a summary of the main instructions.

Note: If you encounter any issues during installation, refer to the complete linked instructions.

* **Collect your** [**database connection information**](#_Database_Information_1)**.**
* **Collect** [**URLs**](#_URLs) **for P2 Security.**
* **Ensure** [**IIS**](#_Appendix_B._How_2) **is correctly configured.**
* **Deploy and bind the** [**SSL Certificate**](#_Appendix_E._Adding)**.**
* [**Review**](#_Step_1._Review) **and** [**install**](#O_19502) **the prerequisites.**
* **Run P2 License Manager and** [**obtain a license file**](#_Licensing) **from P2 Customer Support.**
* [**Install P2 Server**](#_Step_4._Install)**.**
* [**Configure P2 Server**](#_Step_5._Configure)**.**
* [**Configure P2 Security**](#_Step_6._Configure_1)**.**
* **Collect information for** [**connecting other applications**](#_Connecting_to_P2) **to P2 Server.**

# Planning the Installation

This section describes the requirements for installing and configuring P2 Server. Before you start the installation, make sure your system will support P2 Server.

## Licensing

Before installing P2 Server, make sure you have a valid License File.

To obtain a valid license file, run P2 License Manager and email the generated host information file, along with the product name and version, to [iss.support@p2energysolutions.com](mailto:iss.support@p2energysolutions.com). P2 Customer Support will email you back with a License File as soon as they can. Please allow 24 hours during business hours (UTC+8) for the license file to arrive. For further information on P2 License Manager, refer to the P2 License Manager User's Guide.

If you require a license file out of Perth’s office hours and the request is urgent, please contact P2 Customer Support on 1300 739 969 or +61 8 9241 0314.

Instructions for applying the license file are included in the installation steps below.

## Required Information

You need the following information to correctly install and configure P2 Server.

### URLs

|  |  |  |
| --- | --- | --- |
| URL Required | Description | Used In |
| **P2 Security** | The URL used to open the P2 Security web interface. E.g.  <https://[servername]/P2.Security.Connect>  You will also need the password to connect to P2 Security. | Security Tab (Step [4.3](#_4.3_Security_Tab)) |

### Database Information

This information is required to configure the P2 Server database in the Configuration Utility.

|  |  |  |
| --- | --- | --- |
| Information | Description | Example |
| Server | Database server name that hosts SQL Server | Perdev01 |
| Catalog | Database catalog that will store P2 Server data | P2.SERVER |
| Username | Local DBA user account to access the database | sa |
| Password | Password for the local DBA user |  |

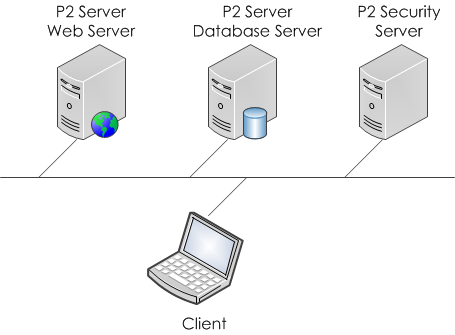
## Hardware Requirements

This section identifies the recommended hardware requirements for each machine. All server class machines have the following recommended requirements.

|  |  |
| --- | --- |
| Component | Recommended |
| **CPU** | 2 x Intel® Xeon® class E or L5000/7000 series or better |
| **RAM** | 16 GB+ |
| **Disk** | 4x 146GB 15000 rpm SAS, configured in RAID 5,10 |
| **NIC** | 1000 MBit/sec + |

## Network and Hardware Setup

The following diagram illustrates the recommended server configuration.



The servers as shown in the diagram are:

Database Server

This is the machine on which the P2 Server database is configured. This machine must have access to other servers configured in the corporate server. SQL Server must be installed on this machine prior to installing P2 Server.

Web Server

This is the machine on which P2 Server is installed. This may be located on the same machine as the P2 Server Database Server or on another machine, depending on the site configuration.

P2 Security Server

This is the machine on which P2 Security is installed. This may be located on the same machine as P2 Server or on another machine, depending on the site configuration.

Explorer Clients

The P2 Server clients are workstations or servers which have a browser that can access the P2 Server web site.

## Supported Technologies

The following list displays the technologies currently supported in P2 Server. We recommend that all customers keep their databases and operating systems current with patches and security fixes for the supported versions.

KEY:

 P2 does not warrant or support these platforms, this usually includes the very new and the very old.

 P2 does formal testing on these platforms and warrants and fully supports these installations.

 P2 generally supports these platforms/technologies outside of product maintenance; however no exhaustive testing is performed by P2 and if any major issues arise then it is recommended that only supported technologies are used.

clients

|  |  |  |
| --- | --- | --- |
| Technology / Version | 2.6 | 4.0 |
| Windows 7 |  |  |
| Windows 8 |  |  |
| Internet Explorer 8.0 (32-bit) |  |  |
| Internet Explorer 9.0 (32-bit) |  |  |
| Internet Explorer 10.0 (32-bit) |  |  |
| Internet Explorer 11.0 (32-bit) |  |  |
| Google Chrome 36 and later |  |  |

servers

|  |  |  |
| --- | --- | --- |
| Technology / Version | 2.6 | 4.0 |
| Windows 2008 Server R2 |  |  |
| Windows Server 2012 R2 |  |  |
| SQL Server 2008 R2 |  |  |
| SQL Server 2012 |  |  |
| Oracle 10 |  |  |
| Oracle 11 R2 |  |  |
| IIS 7.0 |  |  |
| IIS 7.5 |  |  |
| IIS 8.5 |  |  |

## Software Prerequisites

Software prerequisites are as follows:

Web Server Machine

* Microsoft Windows Server 2012 R2
* IIS 8.5  
  \*See [Appendix B](#_Appendix_B._How_2) for roles and features that need to be installed.
* Microsoft .Net Framework version 4.5
* ISS Log Viewer 2.0.26
* P2 Security 4.0
* Oracle® Data Access Components for Oracle Client 11.2.0.3.20 (64-bit)
* SSL Certificate for your domain

Database Server Machine

* Microsoft SQL Server 2012  
  (Space required for schema: 500MB)

Client Machines

* Microsoft Internet Explorer 11 or  
  Google Chrome 36 or later

Note: We recommend that the latest version updates of any software is installed where possible to take advantage of improved functionality. Check the software’s release notes for any compatibility issues.

## Supplied Software

With this installation, the following items are present on the installation package. No other software is required from third party vendors.

Documents

* P2 Server Installation Guide

Binaries

* P2 Server installer (P2 Server Setup.msi)

# Installation

This section describes the procedure for installing and configuring the P2 Server components, including the database.

## Fresh Installation

Installing P2 Server consists of the following steps:

1. Review the installation requirements.
2. Install the prerequisites.
3. Install P2 Server.
4. Configure P2 Server.
5. Configure P2 Security.

These steps are described in the following sections.

### Step 1. Review Installation Requirements

1. Gather the required [Database Information](#_Database_Information) and [URLs](#_URLs).
2. Review the [software prerequisites](#_Software_Prerequisites).

Pay particular attention to the **IIS** settings on the web server and ensure the **Net.Tcp Port Sharing Service** is set to automatically start. For instructions, see [Appendix B](#_Appendix_B._How_2).

You should also ensure you have deployed and bound the SSL certificate to the correct port. For instructions, see [Appendix E](#_Appendix_E._Adding).

### Step 2. Install Prerequisites

The following software is included in the P2 Server installation package and must be installed on the web server before installing P2 Server.

Install the following software:

1. Oracle® Data Access Components for Oracle Client 11.2.0.3.20 (64-bit)
2. P2 License Manager 1.8 (P2LicenseManager.msi)

Note: Refer to the P2 License Manager User's Guide for further information.

1. ISS Log Viewer 2.0.26 (ISSLogViewerSetup.msi)

Note: Refer to the ISS Logger User's Guide for further information.

1. P2 Security 4.0

Note: You will only need to install this if it is not already installed on the network or you cannot access it. If already installed and you do have access, you will need to know the connection URL so you can correctly configure security in [Step 6](#_Step_6._Configure_2).

Refer to the P2 Security User's Guide for further information.

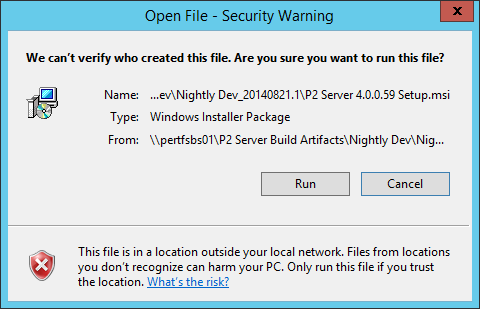
### Step 3. Install P2 Server

The P2 Server installer installs the P2 Server software and database.

Note: You can install multiple instances of P2 Server on the one machine using the same installer.

To run the installer:

1. Double-click P2 Server Setup.msi.
2. At the Security Warning, click **Run**.

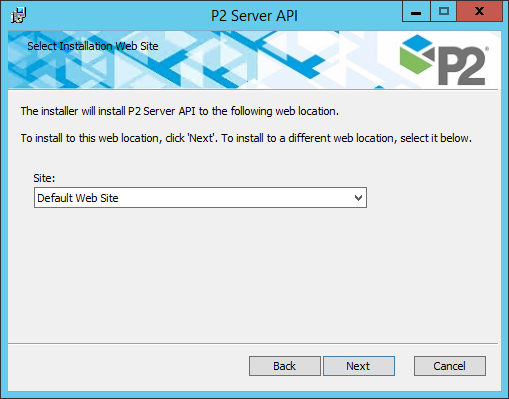


The **Installation** page appears.



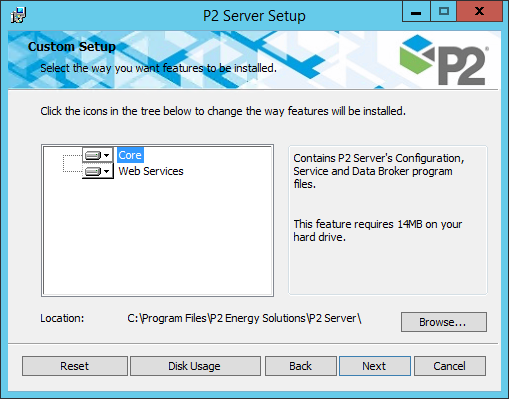
1. Click **Next**.
2. In the **Select Installation Web Site** screen, select the website where the P2 Server API will be installed.

This must be installed into an existing Site with an SSL certificate bound to the desired port.



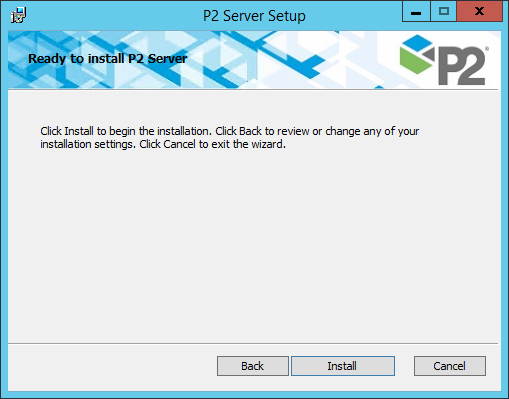
1. Click **Next**.

The **Custom Setup** screen appears.



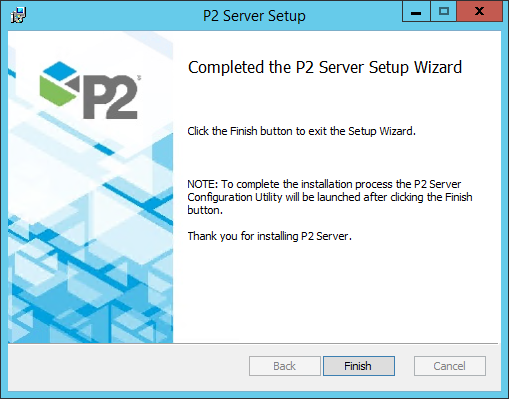
By default, P2 Server installs to C:\Program Files\P2 Energy Solutions\P2 Server.

1. Click **Browse** to select a different destination folder, if required.
2. Click **Next**.



1. Click **Install**.

P2 Server installs. The installation will usually only take a few seconds.



1. When the installer has finished, click **Finish**.

The P2 Server Configuration Utility is launched, ready for you to configure P2 Server.

File Directory Structure

When you install P2 Server, the following default file directory structure is created on your computer:

..P2 Energy Solutions

| P2 Server

| Configuration

| Data Broker

| Service

| Web

### Step 4. Configure P2 Server

The P2 Server Configuration Utility allows you to access basic configuration settings for P2 Server in order to complete your installation, and to administer and maintain your system in production.

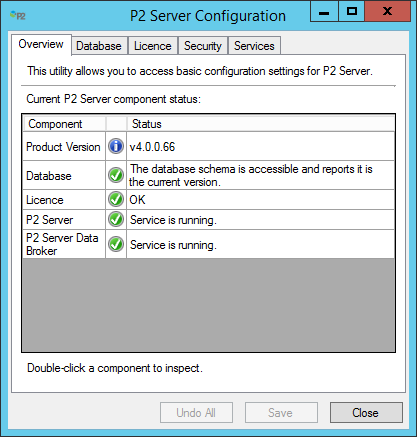
* To open the Configuration Utility, press the Windows key and type **P2 Server** into the search box.

The **Overview** tab shows you the status of the P2 Server components.

Double-clicking a component opens the relevant tab for you to make any required changes.

You will need to complete the following steps to ensure all components have a working status.

When properly configured, the overview page should look something like this:



#### 4.1 Database Tab

The Database tab allows you to define the configuration database settings used by P2 Server.

1. Complete the SQL Server connection details:

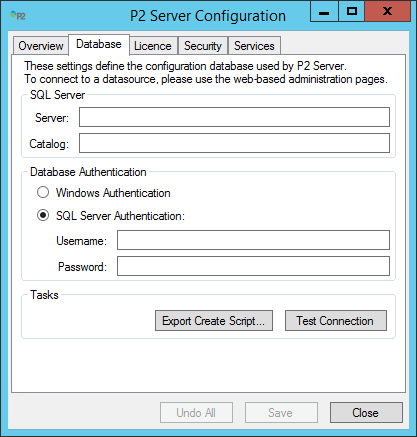
**Server**: The name of the database server where the P2 Server database will be created.

**Catalog**: The name of the P2 Server database catalog, where data will be stored.

1. Complete the Database Authentication details:

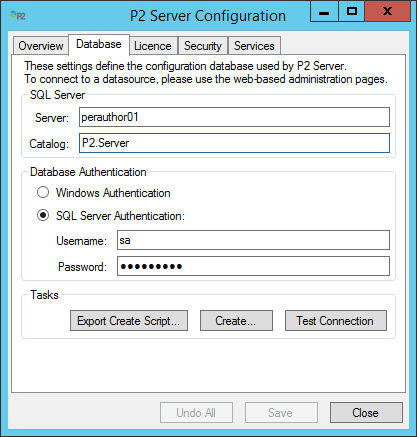
**Windows Authentication**; or

**SQL Server authentication**. If this is selected, provide the DBA user name and password.



1. Click **Save**.

The Create button is added to the Tasks group.



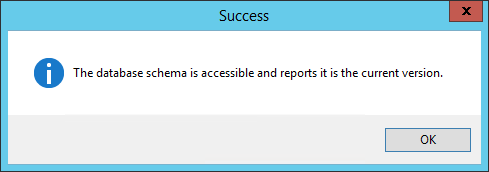
1. Click **Create** to create the P2 Server database.

Note: If you do not have permission to create the database, click **Export Create Script** to export the scripts for another DBA user to run. See [Appendix C](#_Appendix_C._Running).

1. At the confirmation prompt, click **Yes**.

The P2 Server database is created.

1. Click **Test Connection** to make sure the database connection is OK.
2. If the connection is successful, click **OK**. Otherwise, fix the database settings and try again.

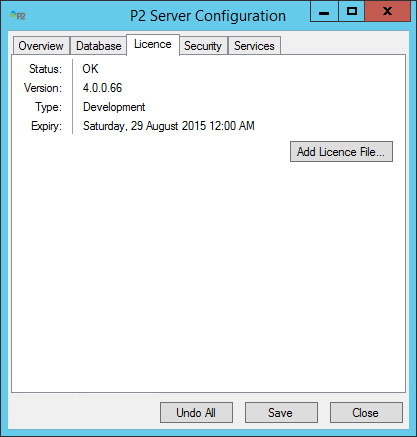


#### 4.2 Licence Tab

The Licence tab displays the licensing information for the software and allows you to apply a licence for your software.

The [software licence](#_Licensing) file is available from P2 Customer Support, and is usually called something like 20150829\_P2 Server\_4.0.0\_ISS Perth\_PERAUTHOR01.lic.

After receiving your licence file, you should place this in a file location on the web server, such as the desktop.

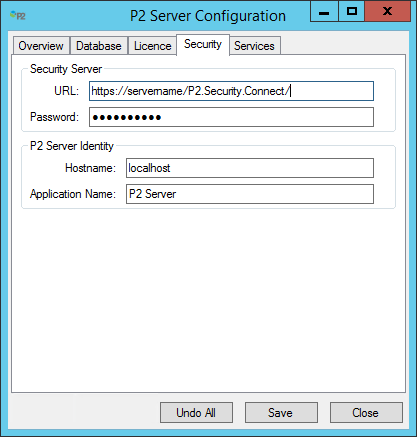


* Click **Add Licence File**, navigate to and select your licence file, and then click **Open**.

The licence is applied to the software.

#### 4.3 Security Tab

The Security tab allows you to define the settings used to connect to P2 Security.



1. Specify the Security Server settings (refer to [URLs](#_URLs)). These settings allow this instance of P2 Server to connect with P2 Security:

**URL**: The URL used to open the P2 Security web interface.

**Password**: The password required to connect to P2 Security.

1. Specify the P2 Server application settings. These settings allow P2 Security to recognize this instance of P2 Server:

**Hostname**: The name of the server on which P2 Server is hosted. Note that this may need to be the fully qualified machine name in order for the SSL certificate to validate correctly in a browser.

**Application** **Name**: The name by which P2 Security will refer to this instance of P2 Server. We recommend that this be in the format of P2 Server – Name since P2 Security will group multiple instances together when it detects that pattern.

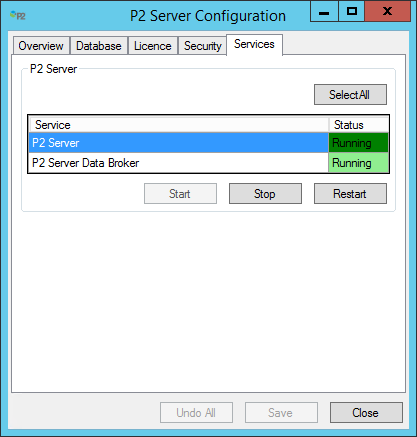
#### 4.4 Run the Services

In the Services tab of the P2 Server Configuration Utility:

1. Click **P2 Server**, and then click **Start**.

Wait until the Status is **Running**.

1. Click **P2 Server Data Broker**, and then click **Start**.



1. Click **Close** to close the Configuration Utility.

### Step 5. Configure P2 Security

You will need to configure the appropriate security settings for objects in P2 Server. This is done using **P2 Security**. You can find detailed information on how to use P2 Security in the P2 Security User’s Guide.

1. Open P2 Security.

The URL will look something like this:

https://[servername]/P2.Security.Connect

1. Configure P2 Server to use P2 Security.
   1. Add the application to P2 Security (see [Appendix A](#_Appendix_A._Connecting) for the required URL).

For instructions, refer to “Adding an Application” in the P2 Security User’s Guide.

* 1. Configure and map the required global roles.

This allows groups and users with those global roles to have the access privileges associated with the application roles.

For instructions, refer to “Managing Global Roles” in the P2 Security User’s Guide.

* 1. Configure object security for the application.

For instructions, refer to “Editing Object Privileges” in the P2 Security User’s Guide.

1. Configure user access.
   1. If required, add user to P2 Security.

For instructions, refer to “Adding, Editing, and Deleting a User” in the P2 Security User’s Guide.

* 1. Assign users to groups.

This allows the user to inherit the privileges assigned to the group.

For instructions, refer to “Assigning Users to Groups” in the P2 Security User’s Guide.

* 1. Assign users to global roles or assign groups to global roles.

This grants the user the privileges associated with the application (through the mapping of the global role to the application role). If the user has been assigned to a group, and the group has been assigned to a global role, you do not need to assign the user to a global role.

For instructions, refer to “Assigning Users to Global Roles” or “Assigning Groups to Global Roles” in the P2 Security User’s Guide.

P2 Server should now be correctly configured with appropriate security settings.

## Upgrading

This section applies to pre-release versions of the software.

Before upgrading, make sure you first back up your existing databases, web directories, and other customisations.

### Upgrade Procedure

Upgrading P2 Server consists of the following steps:

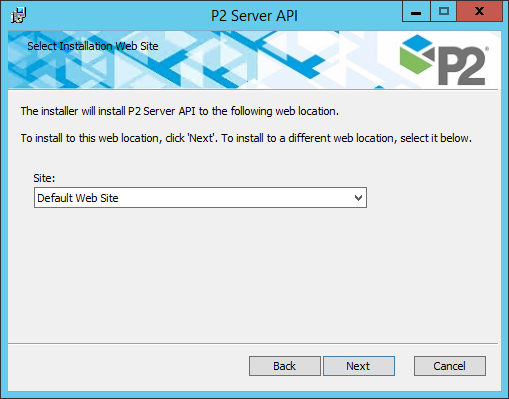
1. Back up the database and any modified configuration files found in the installation directory (C:\Program Files\P2 Energy Solutions\P2 Server\Configuration). Although the configuration files are not removed when uninstalling the software, it’s still a good idea to back them up.
2. [Uninstall P2 Server](#_Uninstall).
3. Obtain a new [licence key](#_Licensing).
4. Double-click P2 Server Setup.msi.
5. At the Security Warning, click **Run**.

The **Installation** page appears.



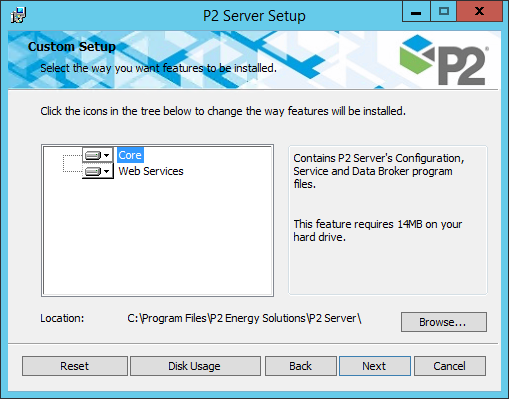
1. Click **Next**.
2. In the **Select Installation Web Site** screen, select the website where the P2 Server API will be installed.

This must be installed into an existing Site with an SSL certificate bound to the desired port.



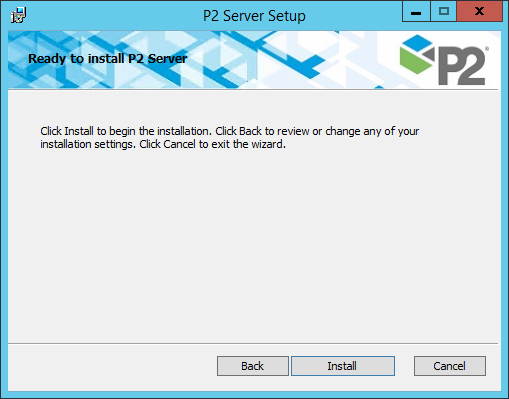
1. Click **Next**.

The **Custom Setup** screen appears.



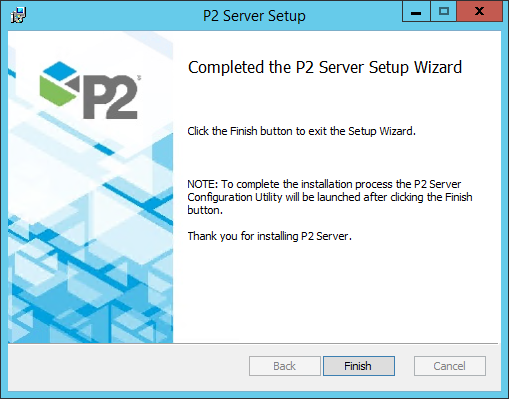
By default, P2 Server installs to C:\Program Files\P2 Energy Solutions\P2 Server.

1. Click **Browse** to select a different destination folder, if required.
2. Click **Next**.



1. Click **Install**.

P2 Server installs. The installation will usually only take a few seconds.



1. When the installer has finished, click **Finish**.

The P2 Server Configuration Utility is launched, ready for you to configure P2 Server.

1. Add the new **Licence** file.
2. Check the **Database** tab and **Security** tab are displaying the correct settings.
3. Review the settings in the configuration file, located at:

C:\Program Files\P2 Energy Solutions\P2 Server\Configuration\ServerConfig.xml

Refer to [Step 4.3](#_4.3_Security_Tab) and [Appendix D](#_Appendix_D._Default_1).

1. In the **Services** tab of the Configuration Utility, click **P2 Server**, and then click **Start**.

Wait until the Status is **Running**.

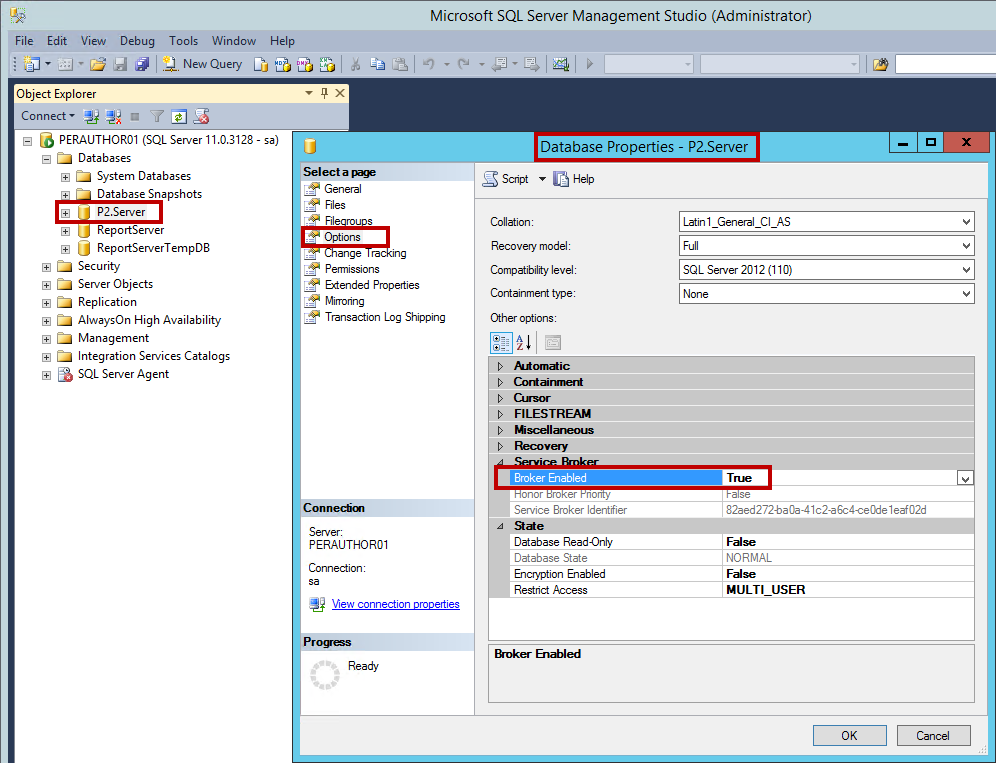
1. Click **P2 Server Data Broker**, and then click **Start**.
2. Click **Close** to close the Configuration Utility.
3. Check your settings for [P2 Security](#_Step_6._Configure).

You should not need to change anything, but be aware of any new objects that may appear.

### Rollback Procedure

1. [Uninstall P2 Server](#_Uninstall).
2. [Install the previous version of P2 Server](#_Upgrade_Procedure).
3. Restore the database from backup.

Note: When restoring a backed up database, ensure the database property **BrokerEnabled** is set to **true**.

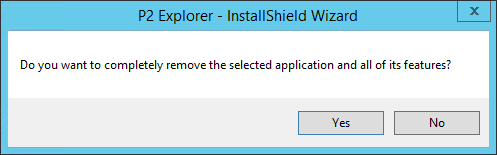


1. Restore the configuration files from backup.

## Uninstall

To remove P2 Server from your system:

1. Open the Control Panel > Programs and Features.
2. Double-click **P2 Server** in the list of installed programs to completely remove the application.



1. At the confirmation prompt, click **Yes**.

P2 Server is uninstalled. All files are removed except for C:\Program Files\P2 Energy Solutions\P2 Server\Configuration\ServerConfig.xml.

Note: The installer will not remove the P2 Server database. If you want to remove the database, you must do this manually using the appropriate database tool.

# Appendix A. Connecting to P2 Server

Typically, other P2 products (such as P2 Explorer) will need to connect to P2 Server in order to consume and display the data served by P2 Server.

Those products will require the following information in order to connect.

* In the following URLs, replace the [servername] placeholder with the name of the machine on which P2 Server is installed.

|  |  |  |
| --- | --- | --- |
| URL Required | Description | Value |
| **Web API Server** | The URL used to connect to P2 Server. | https://[servername]/P2.Server.API/api |
| **Connection Hub** | The URL used to connect to the P2 Server Data Broker. | https://[servername]:8080/databrokerasync |

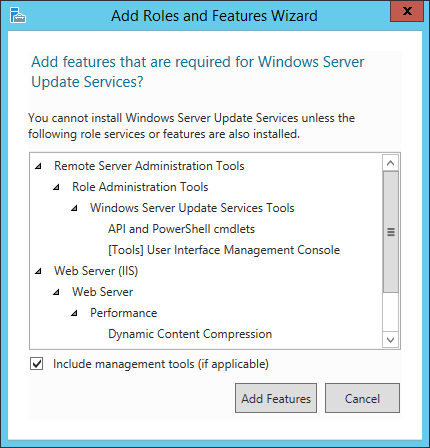
# Appendix B. How to Select Features in IIS 8.5

In Windows Server 2012, the default IIS settings have changed. When installing P2 Server onto a newly installed server, ensure the following IIS roles and features are **turned on**.

To turn the IIS roles and features on:

1. In the Server Manager, click **Add roles and features** in the Dashboard.
2. In the **Add Roles and Features Wizard**:
   1. On the Before You Begin Page (if displayed), click **Next**.
   2. On the Installation Type page, select **Role-based or feature-based installation**, and then click **Next**.
   3. On the Server Selection page, select the server you are installing onto, and then click **Next**.
   4. On the **Server Roles** page, select **Web Server (IIS)**.

Note: As you select some roles, an additional dialog box may appear, prompting for installation of additional features. In each case, click **Add Features** to accept. The dialog box will look something like this example below (note this example is not a required feature).



* 1. Select the following roles:
     + **Web Server (IIS) > Web Server > Common HTTP Features**:   
       select all options except WebDAV
     + **Web Server (IIS) > Web Server > Security**:

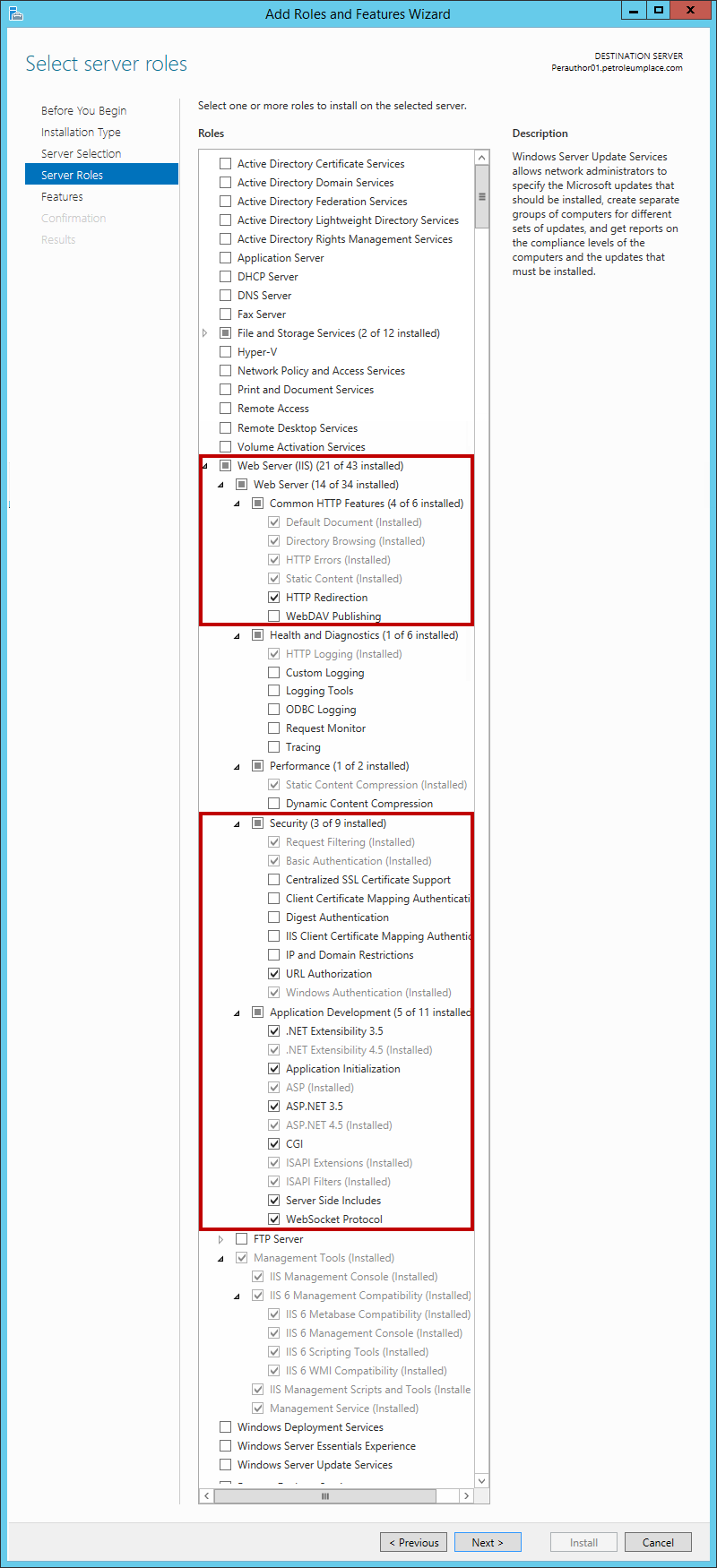
Request Filtering

Basic Authentication

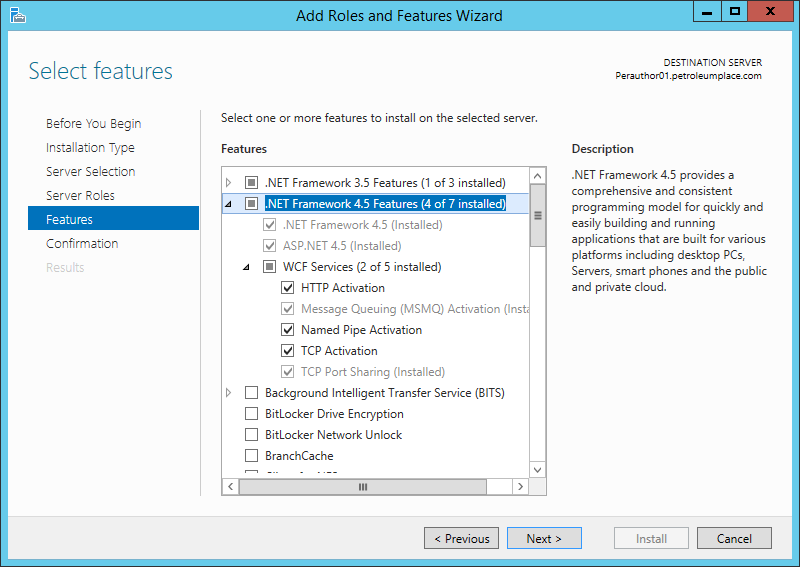
URL Authorization

Windows Authentication

* + - **Application Development:** select all options
    - **Management Tools:** select all options



* 1. Click **Next**.
  2. In the **Features** screen, select ALL of the **.NET Framework 4.5 Features**, and then click **Next**.



* 1. In the **Confirmation** screen, check that you have selected all the required features, and then click **Install**.

The installation may take a few minutes.

* 1. Click **Close** when the installation has finished.

1. In the Server Manager toolbar, click Tools > Services.
2. Change the **Startup Type** of the **Net.Tcp Port Sharing Service** to Automatic.

# Appendix C. Running the Create Database Scripts

If you did not create a database during initial installation, you will need a DBA user to run two scripts required to create the database.

P2 Server - 01 - Create database

Retrieves where the database .MDF file was created and adds a new file in the same directory for storing indexes. If a different, known path is to be used, the remaining statements may be replaced with one of the form:

ALTER DATABASE [P2.Server] ADD FILE (NAME = 'P2.Server\_idx', FILENAME = '<index\_file\_path>.ndf', SIZE = 128MB, MAXSIZE = UNLIMITED, FILEGROWTH = 128MB) TO FILEGROUP IDX

P2 Server - 02 - Create schema

Creates the database schema.

To create the database:

1. Open the **P2 Server - 01 - Create database** script using Microsoft SQL Server Management Studio.
2. Review the contents, make any modifications as required, and then save it.
3. Execute the **P2 Server - 01 - Create database** script.

After the database has been created, you need to create the schema.

1. Execute the **P2 Server - 02 - Create schema** script against the P2 Server database created in the previous step. (If you have altered the name of the database, run the script against the altered name).

# 

# Appendix D. Default Configuration Settings

These are the default settings in the configuration file: C:\Program Files\P2 Energy Solutions\P2 Server\Configuration\ServerConfig.xml

Global group

Locate these settings under the <ConfigGroup Name="Global"> node. These settings apply to all of the P2 Server components.

Debug

When set to **True**, the service will throw any error that occurred in the service back to the UI, instead of displaying the standard error message “The server was unable to process the request due to an internal error”. Default: **false.**

ServerHost

The hostname of the P2 Server machine. Note that this may need to be the fully qualified machine name in order for the SSL certificate to validate correctly in a browser. Default: **localhost**.

ServicePort

Defines the port that the backend services are exposed on. This must be different to the port that the SSL Web Site is bound to and must also have a SSL certificate bound to it. If there is no SSL Certificate bound, the services will fail to start correctly. Default: **8080.**

ServiceRootAlias

The path on the P2 Server machine that specifies where to host the services. Default: **Server**.

ServerApiAlias

The path on the P2 Server machine that specifies where to host the P2 Server API. Default: **P2.Server.Api**.

DefaultAccessBehavior

Controls the security of an object that has a NULL ACL. Values are: Allow, Deny. Default: **Allow**.

Database group

Locate these settings under the <ConfigGroup Name="Database"> node. These settings apply to the P2 Server database.

ConnectionString

The connection string that P2 Server uses to connect to the database. This value is initially defined in the Configuration Utility during the installation process.

Do not change this setting. The password is captured from the Configuration Utility and is encrypted. To change the password, use the P2 Server Configuration Utility.

DataBroker group

Locate these settings under the <ConfigGroup Name="DataBroker"> node. These settings apply to the Data Broker component.

EnableDefaultPageSize

When set to **true**, requesting a dataset that supports paging will result in the default paging being applied, if the paging parameters are not provided on the request. Default: **true.**

DefaultPageSize

The number of rows to display on a single page when using pagination. Default: **100**

AdaptorInactivityTimeout

The timeout, in seconds, for the Adaptor in the adaptor pool. Specifies the period of inactivity after which P2 Server will unload the Adaptor. Default: **1800**

InitFailureLockTimeout

After an Adaptor initialisation failure, this specifies the amount of time (in seconds) for P2 Server to deny further initialisation requests to the Adaptor. Default: **5**

CORS group

Locate these settings under the <ConfigGroup Name="CORS"> node. These settings are for cross-origin resource sharing, which is a specification that allows cross-domain scripting.

AllowedOrigins

A comma-separated list of URLs designating the origins allowed for cross-domain scripting. To allow all origins, specify **\***

Default: **\***

AllowedMethods

A comma-separated list of methods that are allowed for cross-domain scripting. Default: **GET,POST,PUT,DELETE,OPTIONS**

Security group

Locate these settings under the <ConfigGroup Name="Security"> node. These settings apply to the P2 Security application.

SecurityServerUrl

The URL used to connect to P2 Security. Default: **https://servername/P2.Security.Connect**

SecurityServicePassword

The password used to connect to P2 Security.

Do not change this setting. The password is captured from the Configuration Utility and is encrypted. To change the password, use the P2 Server Configuration Utility.

SecurityApplicationName

The name of this application, which is used by P2 Security to connect to this instance of P2 Server. Default: **P2 Server**

# Appendix E. Adding the SSL Certificate

This section describes how to deploy the SSL certificate (which you should receive from your IT department) and bind it to the correct ports.

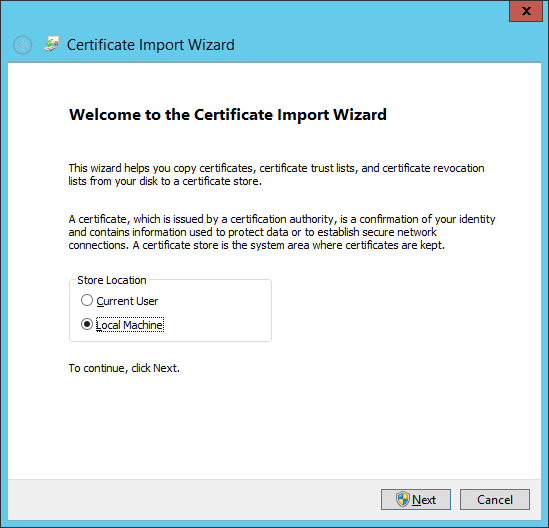
When you receive your certificate, you should copy it to the machine on which you are installing P2 Server.

## Step 1. Deploy the Certificate

1. Double-click the certificate (e.g. star.petroleumplace.com.pfx).

The Certificate Import Wizard appears.

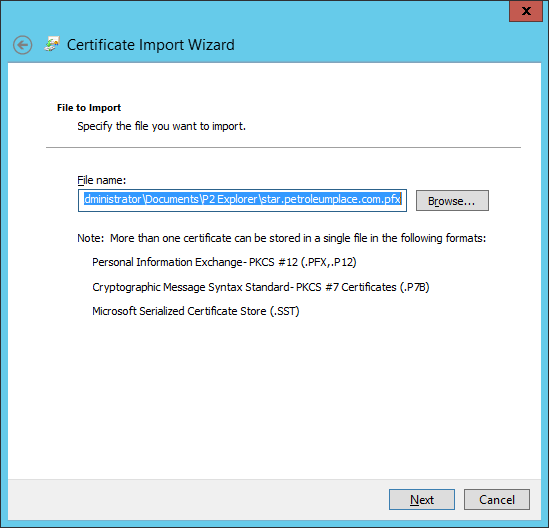
1. In the wizard, select **Local Machine**, and then click **Next**.



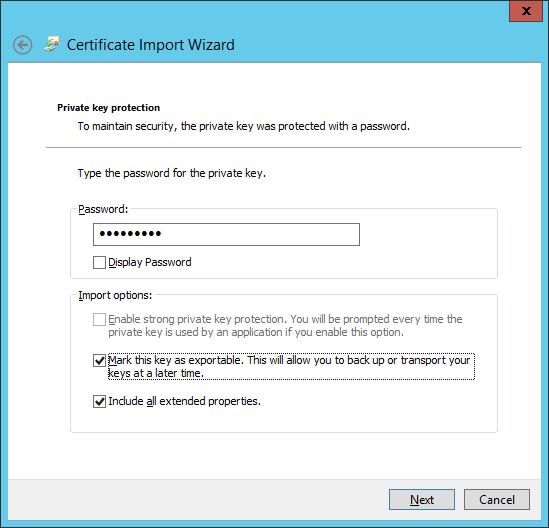
1. Specify the file you want to import (e.g star.petroleumplace.com.pfx).

The **File name** field defaults to the same location where you double-clicked the .pfx file.

If required, click **Browse** to locate the certificate.



1. Click **Next**.

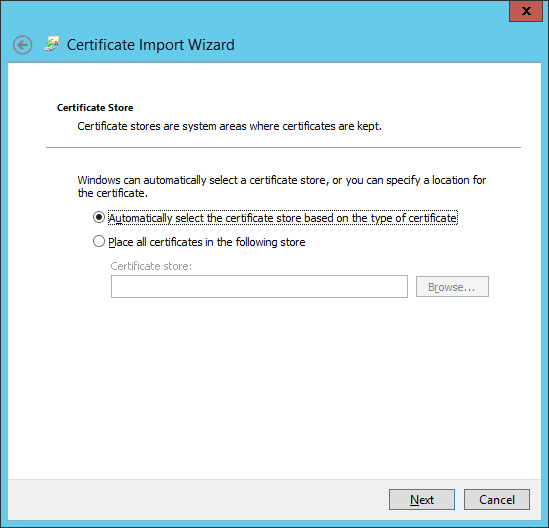


1. Type the **password** for the private key, and make sure that the following import options are selected:

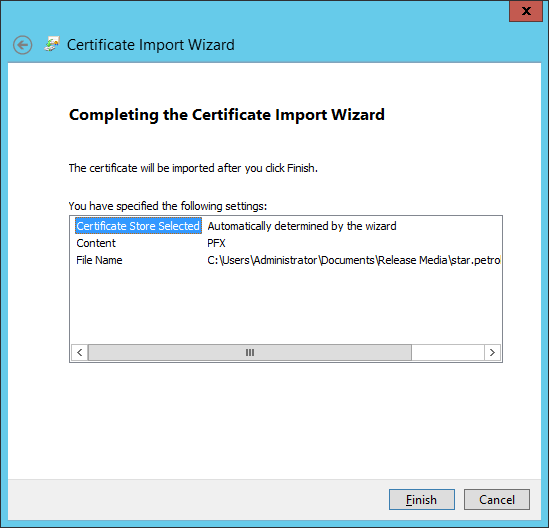
Mark this key as exportable.

Include all extended properties.

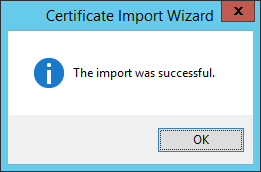
1. Click **Next**.



1. Select **Automatically select the certificate store based on the type of certificate**, and then click **Next**.



1. Check your settings, and then click **Finish**.



1. Click **OK**.

## Step 2. Bind the Certificate

For P2 Server to work correctly, the SSL certificate for your domain needs to be bound to two ports:

* One to the website in IIS (usually 443).
* One for the ServicePort specified in the configuration file (defaults to 8080).

When setting up the website in IIS, the certificate will automatically be bound by IIS to the port configured for that website. However, there is no user interface to bind the certificate to the ServicePort, so this has to be done through the command line. The following command shows the current SSL bindings:

netsh http show sslcert

The command to bind a certificate to the port is:

netsh http add sslcert ipport=0.0.0.0:8080 certhash=f0fdac6d8dd1ea9dcec72bd33ed7cc1ccdc06008 appid={daf2e53d-2c3b-4fce-9d74-a5b618c52562}

Where:

**ipport** specifies the IP address and port to bind to

**appip** is a GUID that can be used to identify the owning application

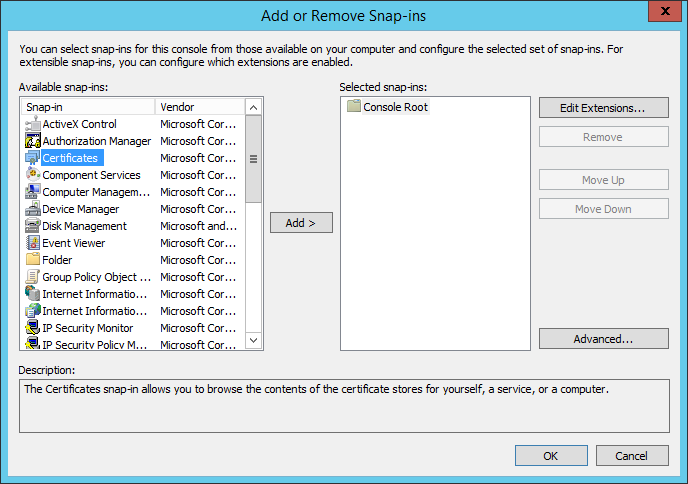
**certhash** specifies the thumbprint of the certificate

1. Open a command prompt.
2. Bind the SSL certificate to the ServicePort by typing the following command:

netsh http add sslcert ipport=0.0.0.0:8080 certhash=f0fdac6d8dd1ea9dcec72bd33ed7cc1ccdc06008 appid={daf2e53d-2c3b-4fce-9d74-a5b618c52562}

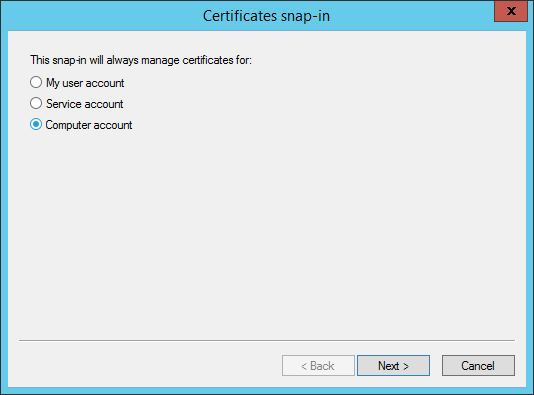
Ensure the correct **ipport** number is specified, and copy the **appid** from the example above. However, you will need to obtain the correct thumbprint (**certhash**) of the certificate, as follows:

* 1. Open the Microsoft Management Console (Start > mmc.exe).
  2. In the Console Root, select **Add/Remove Snap-in** from the **File** menu (File > Add/Remove Snap-in).

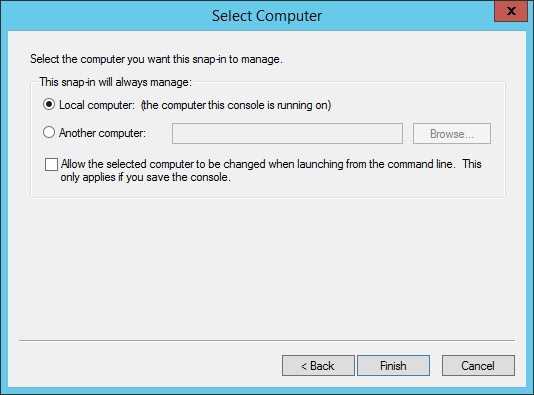


* 1. In the **Add or Remove Snap-ins** dialog box, click **Certificates** and then click **Add**, to move it to the **Selected snap-ins** box.

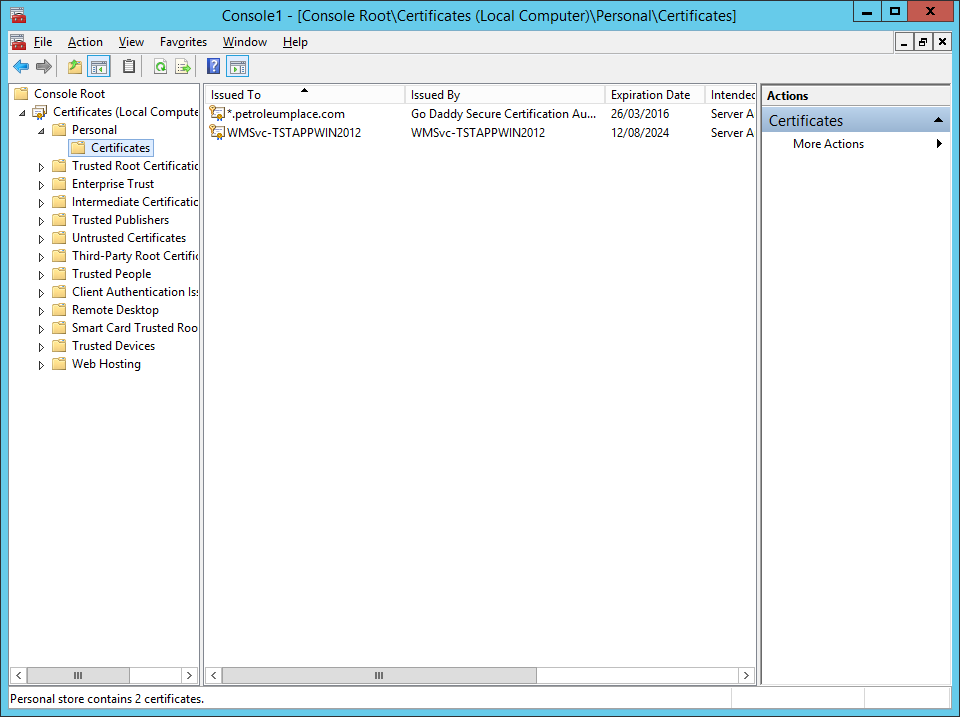
A message appears, asking which account to manage the snap-in for.



* 1. Select **Computer account**, and then click **Next**.
  2. Select the **Local computer**, and then click **Finish**.



* 1. Click **OK**.
  2. In the Console Root, expand the **Certificates** node, then expand the **Personal** node and click **Certificates**.



* 1. Right-click on the SSL certificate issued to your domain (e.g. **\*.petroleumplace.com**), and select **Properties**.
  2. Click the **Details** tab, and copy the **Thumbprint** value to the clipboard.
  3. Use this for the **certhash** value in the certificate binding command above.

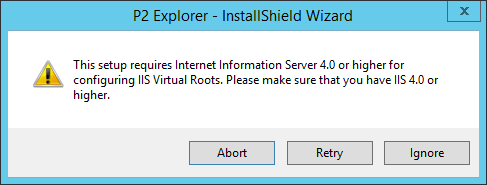
For more details on configuring a port with an SSL certificate, go to <http://msdn.microsoft.com/en-us/library/ms733791(v=vs.110).aspx>.

# Appendix F. Troubleshooting

This section describes some problems that may occur during installation, and how to resolve them.

Problem: P2 Server fails to install

**Description**: After clicking Install on the last page pf the installer, the installation process is interrupted with a warning stating that IIS 4.0 or higher is required.



**Cause**: IIS has not been properly configured.

**Resolution**: To resolve this, refer to [Appendix B](#_Appendix_B._How_1).

Problem: A database clash occurs following an upgrade

**Description**: A database clash occurs if you backup and restore a Server database onto the same SQL Server instance under another name.

**Cause**: The P2 Server database will keep the original GUID used to identify the Data Broker and clash with the original source database.

**Resolution**: To resolve this, run the following command on the database following the upgrade:

ALTER DATABASE cadrondemo01\_Server40 SET NEW\_BROKER