



Pre-Installation Guide

AgilePoint BPMS v5.0 SP2

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Preface

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Virus-free software policy

AgilePoint recognizes that viruses are a significant security consideration for our customers. To date, we have had no report of AgilePoint BPMS carries any virus. AgilePoint takes the following measures to ensure our software is free of viruses upon delivery:

- AgilePoint is built on top of Microsoft .NET framework. The pre-compiled executable is a .NET Common Language Runtime (CLR) application, not a native machine binary. As far as is known at this time, there are no viruses that infect .NET CLR executables.
- The virtual environment for the product packaging process is fully isolated and protected, and anti-virus software is installed and running during packaging.
- The deliverable package is scanned by anti-virus software before upload to our customer download site.

Document Revision Numbers

AgilePoint documentation uses the revision number format **rX.Y.Z**. The letters and numbers in this revision number can be interpreted as follows:

- **r** - Indicates "revision." This helps to differentiate the document *version* numbers, which start with **v**.
- **X** - The major version number for AgilePoint BPMS to which this document refers. For example, AgilePoint releases 5.0, 5.0 SP1, and 5.5 would all have an **X** value of **5**.
- **Y** - The major document revision number. This number typically changes only when either there is a new AgilePoint release, or there are major changes to the document.
- **Z** - The minor document revision number. This number is incremented each time the document is republished.

AgilePoint Documentation in PDF and HTML

AgilePoint documentation is provided in both print-friendly (PDF) and web-based (HTML) formats.

Advantages of HTML Documentation

- HTML is the **primary delivery format** for AgilePoint documentation.
- Unified, global **search** across all documentation. PDF documents allow you to search only within the context of a given PDF file.
- **All hyperlinks supported**. Links in PDFs are only supported in certain contexts.
- "One-stop shopping" for all information related to AgilePoint BPMS.
- The HTML documentation is updated more frequently than the PDF documentation. Web-based documentation is updated periodically between AgilePoint releases to address errors and omissions, but the PDF documentation is updated only at the time of a software release.

Advantages of PDF Documentation

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Contacting Customer Support

To contact AgilePoint Support, please submit a ticket on the AgilePoint Support Portal: <http://support.agilepoint.com/SupportPortal/>

If you do not have a Support Portal account, you can send an email to request one: support@agilepoint.com

Pre-Installation Guide

Welcome to the AgilePoint Pre-Installation Guide. This document provides instructions on how to prepare your environment for the software installation of the AgilePoint BPMS Suite.

AgilePoint requires that you complete **all** of the instructions in this document that apply to your environment before attempting to install any components of the AgilePoint BPMS Suite. If a procedure does not apply in some environments, these are noted in the **Prerequisites** section within the topic.

You will need to track some information gathered as you complete the instructions in this document. For more information, see [Pre-Installation Record](#) on the [AgilePoint Support Portal](#).

Pre-Installation Record

As you complete the procedures in this document, record the required information in this table. You will need this information during AgilePoint installation.

Setting	Value	Comments
AgilePoint Server License Keys		
AgilePoint Envision License Keys		
AgilePoint Developer License Keys		If applicable
AgileReports License Keys		If applicable
AgilePoint Server aliases		
AgilePoint Service User Account		
AgilePoint System User Account		Usually the same as the AgilePoint Service Account
SharePoint Impersonator Account		Usually the same as the AgilePoint Service Account If applicable
SMTP user account		If applicable
Workflow database name and port number		
AgilePoint Data Services database name and port number		If applicable
AgilePoint Clustering Server Manager port number		If applicable
AgilePoint Web Site		If applicable
AgilePoint Application Pool		If applicable
SharePoint Site		If applicable

Verifying System Requirements

Before installing any of the AgilePoint components, please ensure each computer meets the hardware and software requirements for your version of AgilePoint.

For more information, see one of the following documents on the [AgilePoint Support Portal](#):

- [System Requirements for .NET 3.5](#)
- [System Requirements for .NET 4.0](#)

Prerequisites

- These instructions apply to all installation scenarios.

Obtaining AgilePoint License Keys

AgilePoint BPMS requires license keys for installation and activation.

Prerequisites

- These instructions apply to the following licensed components of the AgilePoint BPMS Suite:
 - AgilePoint Server
 - AgilePoint Envision
 - AgilePoint Developer
 - AgileReports
- Allow at least one full business day for license keys to be provided following your request.

Instructions

To obtain new license keys, [contact AgilePoint Customer Support](#).

When requesting new license keys, please provide the following information:

- Your name.
- The name of your company or organization.
- The version numbers and the names) of the AgilePoint products that you are planning to install.
- The type (e.g. Evaluation, Development, Production, or Clustered) of license keys and the quantity for each of the AgilePoint products that you are planning to install.
- If you are requesting a license key as a replacement for a previously issued license key, please provide the original license key as well.

Each license key can only be used on one machine.

Creating Aliases for the AgilePoint Servers

In order to abstract the AgilePoint Server installation to allow load distribution, failover and high availability, aliases should be used instead of the server name or IP address for the physical hardware. Even if the initial topology is a single server deployment, using aliases makes it easy to reconfigure the deployment to support a more robust configuration in the future. All of the configuration references the alias and makes changes to the physical infrastructure transparent to the user, applications and services communicating with the AgilePoint Server.

Prerequisites

- These instructions apply to all installation scenarios.

Instructions

1. Create aliases for the AgilePoint Servers

The physical hardware is normally abstracted using DNS or FQDN entries registered on the network.

2. To verify that the proper entries have been created and are available on the network, ping the DNS Name or FQDN and make sure that the correct IP address is returned.

Creating AgilePoint User Accounts

Two user accounts are required on AgilePoint Server to support each AgilePoint BPMS deployment. These user accounts should be Domain accounts with minimal privileges on the network and elevated privileges on the servers running the AgilePoint components.

Prerequisites

- These instructions apply to all installation scenarios.

Instructions

1. Create the **AgilePoint Service User Account**.

This user account is the Application Pool Identity and Service Identity for the AgilePoint Server (e.g. APServerServiceAccount). The AgilePoint Service User Account is used to facilitate the following actions:

- The AgilePoint Service Account is used to create the database schema during AgilePoint Server installation. Therefore, the AgilePoint Service User Account must have db_owner privileges in the AgilePoint Database.
- If you are installing AgilePoint Server on a Domain Controller, this cannot be a local administrator account.

2. Create the **AgilePoint System User Account**.

An unrestricted administrator of the AgilePoint system (e.g. APServerSystemAccount). The AgilePoint System User Account is used to facilitate the following actions:

- You will enter this information during the AgilePoint Server installation when configuring AgilePoint Server.
- The AgilePoint System User Account is used to connect to the database during AgilePoint Server configuration. Therefore, the AgilePoint System User Account must have db_owner privileges in the AgilePoint Database.
- This user account will also be used to initially login to AgilePoint Enterprise Manager.

3. Log into a computer with each account to verify that the account is active, and the password is correct.

Obtaining SMTP Server Information

AgilePoint Server uses SMTP to send email alerts and notifications. AgilePoint uses anonymous SMTP by default.

The AgilePoint Server netflow.cfg file will need to be edited after installation to provide the user name and password to use with SMTP for user authentication.

Prerequisites

- These instructions apply to all installation scenarios.

Verifying NLB Configuration and Functionality

The AgilePoint BPMS Suite can be installed in an NLB environment. If you are planning an NLB environment installation, verify that the NLB environment is configured properly.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - Single server (non-NLB) environment
 - AgilePoint Express

Instructions

1. Ensure your NLB is configured properly.

If AgilePoint Server needs to be installed on a Web site other than the default Port 80 site, make sure all the Web sites are mirror images of each other including the Port numbers.

For more information, see:

- [Enabling and configuring Network Load Balancing for Windows Server 2003](#)
- [Network Load Balancing Deployment Guide for Windows Server 2008](#)

2. On AgilePoint Servers in an NLB environment, double loopback check must be disabled for the AgilePoint Server machines.

For more information, see [401 Error when Connecting to SharePoint](#) on the [AgilePoint Support Portal](#).

Setting Service Principle Name (SetSPN)

A Security Principle is required to authorize Kerberos communication. This is not required for NTLM only.

To use Kerberos, you must grant Service Principal Name (SPN) privileges for your AgilePoint user accounts:

- AgilePoint Service Account.
- The AgilePoint System User Account.

Granting Database Access for Kerberos

To grant the remote database access privileges to a Domain account using the SetSPN utility, do the following.

Prerequisites

- These instructions apply only if you are using Kerberos authentication.
- Ensure SetSPN is installed for Windows 2003.

The SetSPN command line tool is not available on a Windows 2003 Server by default. It is part of Windows Support Tools utility. Windows Support Tools can be installed from the Windows Server 2003 installation CD. For convenience, it is available for download from the following Knowledge Base article from Microsoft: <http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=7911>.

SetSPN is built into Windows Server 2008. It is available if you have the Active Directory Domain Services (AD DS) server role installed. To use setspn, you must run the setspn command from an elevated command prompt.

- Log on to Windows using a Domain Administrator account.

Navigation

- For Windows Server 2003 - Run **Start > Programs > Support Tools > Command Prompt** to open a command prompt.
- For Windows Server 2008 - Click **Start**, right-click **Command Prompt**, and then click **Run as administrator**.

Instructions

1. Set a fully qualified domain name, friendly name, and DNS name on the AgilePoint Server machine so that any client can access it:
 - a. To set the fully qualified domain name, execute the SetSPN command using the following syntax:

```
setspn -a http/machinename.domain.com domain\username
```

Be sure to include the Domain Name in the command prompt: machinename.domain.com. The machinename refers to the AgilePoint Server machine name.

- b. To set the friendly name, execute the setspn command using the following syntax:

```
setspn -a http/machinename domain\username
```

If you are unable to access the AgilePoint Server Web service pages from a machine other than the machine where AgilePoint Server is installed (e.g. Client or SharePoint machine). You should follow step a.

- c. To set the DNS Name or Alias used to abstract the physical hardware execute the setspn command using the following syntax:

```
setspn -a http/dns domain\username
```

- d. Verify whether this has been properly set by running the following command:

```
setspn -l domain\username
```

The result should list **http/machinename.domain.com**.

Creating the Workflow Database for AgilePoint Server

A database administrator must create a new database that will be used as the workflow database for AgilePoint Server before installing. (The AgilePoint workflow database tables will be created during the actual AgilePoint installation.)

The instructions in this topic are for creating and preparing a MS SQL Server workflow database. The concepts are similar if you are using Oracle.

Prerequisites

- These instructions apply to all installation scenarios.
- Determine the answers to the following questions:
 - What database technology will be used to host the AgilePoint BPMS database?
AgilePoint supports MS SQL Server and Oracle as your workflow database technology options. We recommend you to use MS SQL Server as your workflow database due to the added integration functionality with SQL Reporting Services and AgilePoint Enterprise Manager for reporting.
 - What privilege level will be granted to the connection user?
AgilePoint requires read/write access to run, but the MSI installer requires db_owner rights to create the initial database tables and constraints.
- For Oracle database installations, on the AgilePoint Server machine, download and install Oracle Database 11g Client that is appropriate for the system on which you are installing (32 bit or 64 bit). You will also need to install the Oracle Data Provider for ADO.NET 2.111.6.0.

Navigation

1. Make sure your SQL Server is up and running.
2. Open the SQL Server Management Studio via **Start > Programs > Microsoft SQL Server [Version] > SQL Server Management Studio**.

Instructions

1. In SQL Server Management Studio, Right-click on **Databases** and select **New Database**. The **New Database** window appears.
2. Enter a database name (for example, AP200 or APDB), and click **OK**.

Setting Up Database Authentication

Determine the database authentication method that will be used for the installation and gather the following information before installing AgilePoint Server.

Set Up SQL Authentication (SQL Server)

If you want to use SQL Authentication, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - Oracle database

Instructions

1. Obtain the username and password of a database account that has the **db_owner** access privilege for the database. This information will be used during the AgilePoint Server configuration to connect to the database.

Set Up Windows Authentication (SQL Server)

If Windows Authentication is going to be used, do the following to configure a Windows Account as a **db_owner** of a SQL Server database.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - Oracle database
- AgilePoint Server Service Account and the AgilePoint System User Account must have the **db_owner** access privilege for the database.

Navigation

1. On the database server, click **Start > All Programs > Microsoft SQL Server [Version] > SQL Server Management Studio**.
2. Navigate to the node of the SQL Server instance containing the workflow database.

Instructions

1. On the workflow database node, right-click on **Security** and select **New User**.
2. Enter the User name and Login name of the user account that you wish to grant privileges to.
3. Under the **Database role membership** group box, grant **db_owner** access.
4. Click **OK**.

Set Up Oracle Database Authentication

If you are using an Oracle database, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - Microsoft SQL Server

Instructions

1. Obtain the user name and password of the Oracle database user.
2. Obtain the Service Name of the Oracle database.

Using the Oracle Net Configuration Assistant utility, reconfigure the Oracle Local Service if necessary.

If the Local Service Name has changed, you will need to also update the AgilePoint Server Configuration utility Database tab during the AgilePoint installation with the new Oracle Local Service Name. The steps are provided in the installation guide as a reminder.

Set Up Remote Database Authentication

When using a remote database, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - Local database

Instructions

1. Ensure the AgilePoint and database servers are connected through the network.
2. Ensure the AgilePoint and database servers are part of the same network domain.
3. Ensure that you login to Windows using a domain user account login before performing the AgilePoint Server installation.
4. Obtain the username and password of the Windows user login that will be used as AgilePoint Server Service Account.

Validate Authentication

Once you have set up authentication, test that the authentication works, depending on the type of database tool you are using.

Prerequisites

- These instructions apply to all installation scenarios.

Setting Up a Database for AgilePoint Data Services

To set up the database for AgilePoint Data Services, do the following.

Prerequisites

- These instructions apply only if you plan to install the AgilePoint Data Services, an optional component.

Instructions

1. In Microsoft SQL Server Management Studio, create a database for the AgilePoint Data Tracking.
2. (Optional) The AgilePoint Data Population feature provides a basic and an advanced method when setting up the Data Population configuration. For the advanced Data Population configuration, create a table that is named based on the application, and create the table columns based on the fields from the form. The Primary Key should be the Process Instance ID (type varchar). If you will be using the basic Data Population Configuration, this table is created automatically for you during the configuration.

Setting Up the Clustering Server Manager Machine

Please ensure the following items are configured properly in an NLB environment.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - Single server (non-NLB) environment
 - AgilePoint Express

Instructions

1. Designate a port number for AgilePoint Clustering Server Manager.
AgilePoint Clustering Server Manager requires an open Port for .NET Remoting. The default Port number is 13481. You will need this port number during installation.
2. Make sure the Port is open bi-directionally.

Turning off User Account Control (UAC)

Prerequisites

- These instructions apply to all installation scenarios.

Instructions

1. Turn off User Account Control (UAC).
2. Restart the machine.

Setting Up the AgilePoint Server Machine on Windows Server 2003

For the AgilePoint Server machine, ensure the following items are installed and configured properly on Windows Server 2003.

If you are using Windows 2008, see [Setting Up the AgilePoint Server Machine on Windows Server 2008](#) on the [AgilePoint Support Portal](#).

Verifying .NET Framework Installation

Use Add/Remove programs to verify the appropriate version of .NET Framework is installed for your AgilePoint installation. To determine your .NET Framework version, see one of the following documents on the [AgilePoint Support Portal](#):

- [System Requirements for .NET 3.5](#)
- [System Requirements for .NET 4.0](#)

Prerequisites

- These instructions apply to all installation scenarios.

Verifying IIS Installation

To ensure IIS is installed, do the following.

IIS must be installed prior to the .NET Framework installation. For more information, see [http://msdn2.microsoft.com/en-us/library/k6h9cz8h\(VS.80\).aspx](http://msdn2.microsoft.com/en-us/library/k6h9cz8h(VS.80).aspx)

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode

Instructions

1. Via **Add/Remove Programs**, click **Add/Remove Windows Components**.
2. Check the **Application Server** check box and click **Details**. IIS will display as a checked item in the list.

Verifying IIS Configuration

To ensure IIS is configured, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode

Navigation

1. Open **IIS Manager**.
2. Click **Web Server Extensions**.

Instructions

1. On the Web Server Extensions, verify the ASP.NET version is **Allowed**.
2. In the **Extensions** list, verify the **.asmx**, **.aspx**, and **.asax** extensions appear. If these file extensions are not in the list, IIS is not configured properly for .NET. Contact your System Administrator for assistance.
3. Next, verify the **Executable Path** for the .asmx, aspx, and asax points to the correct DLL. To do so, click on the extension in the list and click **Edit**. Verify that the Executable path points to the isapi DLL for the correct .NET version for your installation.

Setting Up Local Account Groups

Do the following to add the AgilePoint Service User Account to the local machine's Administrators, IIS_WPG, and Performance Monitor Users groups.

Once you have completed this procedure, the AgilePoint Service User Account is added to the Administrators group so that AgilePoint Server is able to write log files and access the registry. If adding this user to the Administrators group is not desirable, the Windows account must have at least the following configuration:

- Read and write privilege to the AgilePointServer folder (for log files, cache, etc.).
- Read and write privilege to license file [drive]:\Program Files\Common Files\AgilePoint.
- Read and write privilege to [drive]:\Documents and Settings\Administrator\Local Settings\Temp. This is for XML Serialization.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2008

Navigation

1. Right-click on **My Computer**, and click **Manage**.
2. Expand **Local Users and Groups**.
3. Select **Groups**.

Instructions

1. Right-click on the **IIS_WPG** group and click **Add to Group**.

2. Click **Add** and type the AgilePoint Service User Account name (e.g. APServerServiceAccount).
3. Click **OK**.

If the AgilePoint Service User Account for AgilePoint Server Application Pool is not added to the IIS_WPG group, you will not be able to browse the Web service pages and work with ASP.NET.

4. Repeat the above steps for the **Administrators** and **Performance Monitor Users** groups.

(Windows Server 2003) Creating a New IIS Application Pool for AgilePoint Server

Use the procedures in this section to create a new IIS Application Pool for AgilePoint Server in Windows Server 2003.

Creating a New IIS Application Pool

To create a new IIS Application Pool, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2008

Instructions

1. In IIS Manager, expand the local computer, and expand Application Pools.
2. Right-click the Application Pools folder and click **New > Application Pool**.
3. Specify an Application Pool ID and select the Use default settings for new application pool option.
4. Click **OK**.

Configuring the Identity of AgilePoint Server's IIS Application Pool

You will need to configure the Identity of the Application Pool used by the AgilePoint Server application to ensure that the application has sufficient runtime security privileges.

To configure the identity of AgilePoint Server's IIS Application Pool, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2008

Instructions

1. In IIS Manager, expand the local computer, and expand **Application Pools**.
2. Right-click the application pool you want to configure and then click Properties.
3. Click the **Identity** tab, and click either **Predefined** or **Configurable**.

See the chart below for additional guidance.

Instructions from Microsoft for configuring the application pool identity can also be found here: <http://www.microsoft.com/technet/prodtechnol/WindowsServer2003/Library/IIS/60e38cf5-5ba9-4b30-a4d4-0da5976b83f3.mspx>

You should configure the Identity of the Application Pool as shown below:

	If using SQL Authentication	If using Windows Authentication
If using a Local Database	Use the predefined Local System account (recommended) or a Local account	Use a Local account that is also a db_owner of the database
If using a Remote Database	Use a Local account	Use a Domain account that is also a db_owner of the database.

4. When finished configuring, click **OK**.
 - Select **Predefined - Local System** if you want to use a built-in account and if the workflow database will be on the same machine or different machine as AgilePoint Server.
 - Select **Configurable** if you want to use a specific AgilePoint Service User Account for the identity of AgilePoint Server and in the User name and Password boxes, type the user name and password of the AgilePoint Service User Account. The Service Account could be a Domain account or a Local Administrator account. Domain accounts are typically used in remote database scenarios or for Windows Authentication. A Local Administrator account is used in local database scenarios or for SQL Authentication.

Setting the Recycle Worker Process Settings

By default, the Windows process that runs an ASP.NET Web application will be shut down every 29 hours (1740 minutes). This can cause performance problems because the recycle time will sometimes occur during peak hours.

To set the Recycle Worker Process Settings for AgilePoint Server's IIS Application Pool, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2008

-

Instructions

1. On the Recycle tab, uncheck **Recycle Worker Processes (in minutes)**.
2. If desired, select **Recycle worker processes at the following times**, and then add the times you want.
3. In IIS, right-click the AgilePoint Application Pool.
4. On the **Properties** dialog box, click the **Recycle** tab.
5. Uncheck **Recycle Worker Processes (in minutes)**.
6. If desired, select **Recycle worker processes at the following times**, and then add the times you want.

Optionally, you can create a more customized schedule using the Windows Task Scheduler.

Configuring AgilePoint Server to use a Specific Application Pool

To configure AgilePoint Server's virtual directory (only) to use a specific IIS Application Pool, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2008

Instructions

1. In **IIS Manager**, expand the local computer, and expand Web Sites.
2. Right-click the Web site that contains AgilePoint Server's virtual directory, then click **Properties**.
3. Click the **Home Directory** tab.
4. Select the desired application pool from the **Application pool** drop-down list.

The application pool you select must not be configured as a Web garden (e.g. the number of worker processes assigned to the application pool should not be greater than 1). To ensure this is configured properly:

- a. In IIS Manager expand the local computer, and expand Application Pools.
- b. Right-click the Application Pool you want to configure, and then click Properties.
- c. Click the **Performance** tab and make sure the Web garden field is set to **1**.

Configuring Performance Settings

To configure the performance settings for the Application Pool, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode

- Windows Server 2008

Instructions

1. In IIS Manager, expand the local computer, and expand **Application Pools**.
2. Right-click the Application Pool you want to configure, and then click **Properties**.
3. Click the **Performance** tab.
4. Ensure the following settings:
 - **Shutdown worker processes after being idle for (time in minutes)** - Deselected.
 - **Web garden** - 1

(Windows Server 2003) Creating a New IIS Web Site for use by AgilePoint Server

If SharePoint is installed locally, then you will need to create a separate "site" under Microsoft IIS. This is necessary because SharePoint does not allow port sharing with other Web applications.

Instructions from Microsoft on how to create a new site in IIS can also be found here: <http://www.microsoft.com/technet/prodtechnol/WindowsServer2003/Library/IIS/b6aadfeb-f09a-4f01-bde1-04b89925fd8a.mspx>

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2008

Instructions

To set up a new IIS Web site:

1. Create a physical folder on your local drive (E.g. c:\AgilePointServer).

The folder you create should not be located underneath or inside of the folder your SharePoint Web site is installed in. (The default location of the SharePoint site is usually c:\inetpub\wwwroot\, so you should pick a different location for your new site's folder).
2. Go to the IIS Manager and create a new Web site.
3. Type a description (name) of the Web site (E.g. AgilePointServer) and click **Next**.
4. Select **[All Unassigned]** to use an unassigned IP addresses.
5. Specify a unique port number (this must be different than the port number used by SharePoint, which defaults to 80. It must also be different from any other port numbers used for Web sites in IIS). It is recommended to use a port number that consists of 4 digits.
6. If necessary, specify a Host Header name and click **Next**.
7. Select the folder path you created above as the path for this Web site.
8. Ensure the **Allow anonymous access to this Web site check box** is not checked.

9. Ensure **Windows Authentication** is checked, and click **Next**.
10. Specify the Web site access permissions for your users. To ensure proper Web site access permissions for AgilePoint Server, select Read, Run Scripts, and Execute. For more information see the following articles:
 - <http://support.microsoft.com/kb/313075>
 - <http://www.microsoft.com/technet/prodtechnol/sppt/sharepnt/proddocs/admindoc/owsf04.msp?mfr=true>
11. Click **Next**.
12. Click **Finish**.

Setting Up the authentication mode for the AgilePoint Server Web site

By default, network authentication is not set when creating a new Web site. You can choose either NTLM or Kerberos authentication. To setup the network authentication protocol, do one of the following.

Setting Up NTLM

To use NTLM protocol for network authentication, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode

Instructions

1. In a command prompt, locate the directory that contains the Adsutil.vbs file. By default, this directory is C:\inetpub\Adminscripts.
2. Use the following command to enable the Negotiate process:

```
cscript adsutil.vbs set  
w3svc/[Website]/root/NTAuthenticationProviders "NTLM"
```

In the above command, **WebSite** refers to the Web site ID number.

3. To verify whether the command enabled NTLM authentication, run the following command to retrieve the current values for the NTAuthenticationProviders metabase property:

```
cscript adsutil.vbs get  
w3svc/WebSite/root/NTAuthenticationProviders
```

If the NTLM authentication is enabled, the command returns the following:

```
NTAuthenticationProviders : (STRING) "NTLM"
```

Setting Up Kerberos

To use Kerberos protocol for network authentication, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode

Instructions

1. In a command prompt, locate the directory that contains the Adsutil.vbs file. By default, this directory is C:\inetpub\Adminscripts.
2. Use the following command to enable the Negotiate process:

```
cscript adsutil.vbs set
w3svc/[Website]/root/NTAuthenticationProviders
"Negotiate,NTLM"
```

In the above command, **WebSite** refers to the Web site ID number.

3. To verify whether the command enabled Kerberos authentication, run the following command to retrieve the current values for the NTAuthenticationProviders metabase property:

```
cscript adsutil.vbs get
w3svc/WebSite/root/NTAuthenticationProviders
```

If the Kerberos authentication is enabled, the command returns the following:

```
NTAuthenticationProviders : (STRING) "Negotiate,NTLM"
```

Ensuring AgilePoint Server is Running under the Correct Version of ASP .NET

To ensure AgilePoint Server to running under the correct version of ASP .NET, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2008

Instructions

1. In **IIS**, expand **Web Sites**, then right-click the Web site that contains the AgilePoint Server virtual directory and click **Properties**.
2. Click the **ASP.NET** tab.
3. In the **ASP.NET** field, make sure it is set to either **3.5** or **4.0**, depending on whether you are using AgilePoint for .NET 3.5 or 4.0.
4. Click **OK**.

Resetting IIS

Prerequisites

- These instructions apply to all installation scenarios.

Instructions

1. Reset IIS.

Turning off User Account Control (UAC)

Prerequisites

- These instructions apply to all installation scenarios.

Instructions

1. Turn off User Account Control (UAC).
2. Restart the machine.

Setting Up the AgilePoint Server Machine on Windows Server 2008

For the AgilePoint Server machine, ensure the following items are installed and configured properly on Windows Server 2008.

If you are using Windows 2003, see [Setting Up the AgilePoint Server Machine on Windows Server 2003](#) on the [AgilePoint Support Portal](#).

Verifying .NET Framework Installation

Use Add/Remove programs to verify the appropriate version of .NET Framework is installed for your AgilePoint installation. To determine your .NET Framework version, see one of the following documents on the [AgilePoint Support Portal](#):

- [System Requirements for .NET 3.5](#)
- [System Requirements for .NET 4.0](#)

Prerequisites

- These instructions apply to all installation scenarios.

Verifying IIS Installation

To ensure IIS is installed and configured appropriately, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2003

Instructions

1. To ensure IIS is installed, click **Start > Administrative Tools > Server Manager**.
2. In the **Role Summary** section, the **Application Server** and **Web Server (IIS)** roles are required.
3. In the **Application Server** role, ensure the **Application Server Foundation** and **Web Server (IIS)** Role Services are installed.
4. In the **Web Server (IIS)** role, ensure the following Role Services are installed:
 - a. ASP.NET
 - b. .NET Extensibility
 - c. Basic Authentication
 - d. Windows Authentication

- e. Management Tools
- f. IIS Management Console
- g. IIS Management Scripts and Tools
- h. Management Service
- i. IIS 6 Management Compatibility
- j. IIS 6 Metabase Compatibility
- k. IIS 6 WMI Compatibility
- l. IIS 6 Scripting Tools
- m. IIS 6 Management Console

Verify the IIS 6 Management Compatibility Role Service

To Verify the IIS 6 Management Compatibility Role Service, do the following.

This is required for all web applications, but needs to be completed only once per machine where the web applications are running.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - IIS versions other than 6.0
 - Windows Server 2003

Navigation

1. On the AgilePoint Server, open **Windows Server Manager**.

Instructions

1. In **Windows Server Manager**, click **Roles > Add Roles**, and select the roles Application Server and Web Server (IIS).
2. Click **Roles > Web Server (IIS) > Add Role Services**, and ensure the Role Service for **IIS 6 Management Compatibility** (and its children) is added.

Setting Up Local Account Groups

Do the following to add the AgilePoint Service User Account to the local machine's Administrators, IIS_IUSRS, Administrators, and Performance Monitor Users groups.

Once you have completed this procedure, the AgilePoint Service User Account is added to the Administrators group so that AgilePoint Server is able to write log files and access the registry. If adding this user to the Administrators group is not desirable, the Windows account must have at least the following configuration:

- Read and write privilege to the AgilePointServer folder (for log files, cache, etc.).
- Read and write privilege to license file [drive]:\Program Files\Common Files\AgilePoint.
- Read and write privilege to [drive]:\Documents and Settings\Administrator\Local Settings\Temp. This is for XML Serialization.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2003

Navigation

1. In the Server Manager, click **Configuration > Local Users and Groups > Groups**.

Instructions

1. Right-click on the **IIS_IUSRS** group and click **Add to Group**.
2. Click **Add** and type the Service Account name (e.g. APServiceAccount).
3. Click **OK**.

If the AgilePoint Service Account is not added to the IIS_IUSRS_ group, you will not be able to browse the Web service pages and work with ASP.NET.

4. Repeat the above steps for the **Administrators** and **Performance Monitor Users** groups.

(Windows Server 2008) Creating a New IIS Web Site for use by AgilePoint Server

If SharePoint is installed locally, then you will need to create a separate "site" under Microsoft IIS. This is necessary because SharePoint does not allow port sharing with other Web applications.

Instructions from Microsoft on how to create a new site in IIS can also be found here:

<http://technet.microsoft.com/en-us/library/cc772350.aspx>

Creating a Web Site in IIS

To set up a new IIS Web site, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2003

Instructions

1. Create a physical folder on your local drive - for example, **c:\AgilePointServer**.

The folder you create should not be located underneath or inside of the folder your SharePoint Web site is installed in. (The default location of the SharePoint site is usually c:\inetpub\wwwroot\, so you should pick a different location for your new site's folder).

2. Go to the **IIS Manager** and create a new Web site.
3. Type a **Site name** of the Web site - for example, **AgilePointServer**. A new Application Pool is created along with the web site.
4. In the **Physical Path** field, browse and select the path to the AgilePoint Server physical folder.
5. In the **Port** field, specify a unique port number (this must be different than the port number used by SharePoint, which defaults to 80. It must also be different from any other port numbers used for Web sites in IIS). It is recommended to use a port number that consists of a 4 digits.
6. If necessary, specify a **Host Header** name.
7. Ensure the **Start Web site immediately** check box is checked and click **OK**.
The next step will be to configure the AgilePointServer IIS Application Pool.
8. In **IIS Manager**, click the **Application Pool** node.
9. Right-click on the **AgilePointServer** Application Pool and click **Advanced Settings**.
10. On the **Advanced Settings** window, ensure the following settings:
 - **Idle Time-out (minutes)** - 0.
 - **Maximum Worker Processes** - 1.
The application pool you select must not be configured as a Web garden. In other words, the number of worker processes assigned to the application pool should not be greater than 1.
 - **Identity** - AgilePoint Server account credentials.
11. You can test the settings by right-clicking on the **Web site > Basic Settings > Test Settings**. This step verifies that the AgilePoint Server Service Account can access the physical folder.
12. Click the AgilePoint web site, and click **Authentication**.
13. Click **Anonymous Authentication** and click **Disable**.

Configuring the Application Pool

To configure the Application Pool, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2003

Instructions

1. In **IIS Manager**, click the **Application Pool** node.
2. Right-click on the **AgilePointServer** Application Pool and click **Advanced Settings**.
3. On the **Advanced Settings** window, ensure the following settings:

- **Idle Time-out (minutes)** - 0.
- **Maximum Worker Processes** - 1.

The application pool you select must not be configured as a Web garden. In other words, the number of worker processes assigned to the application pool should not be greater than 1.

- **Recycle Worker Processes** - 0.

By default, the Windows process that runs an ASP.NET Web application will be shut down every 29 hours (1740 minutes). This can cause performance problems because the recycle time will sometimes occur during peak hours.

You can set a **Specific Time** for the recycle in IIS, or create a more customized schedule using Windows Task Scheduler.

- **Identity** - AgilePoint Server account credentials.
4. Test the settings by right-clicking on the **Web site > Basic Settings > Test Settings**. This step verifies that the AgilePoint Server Service Account can access the physical folder.

Disabling Anonymous Authentication

To disable anonymous authentication, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2003

Instructions

1. In IIS, click the AgilePoint web site, and click **Authentication**.
2. Click **Anonymous Authentication** and click **Disable**.
3. Click **Windows Authentication**, and click **Enable**.

Setting Up the Authentication Provider for the AgilePoint Server Web Site

To setup the network authentication provider for the AgilePoint Server web site, do the following.

Prerequisites

- These instructions do **not** apply to the following installation scenarios:
 - AgilePoint running in Windows Service mode
 - Windows Server 2003

Navigation

1. Open IIS Manger.

2. Expand the AgilePoint web site.
3. Select the AgilePointServer site.
4. Double-click Authentication.
5. Right-click Windows Authentication, and click Providers.

Instructions

1. On the Providers dialog box, ensure that your authentication provider is listed in the Enabled Providers list.
2. If your provider is not listed, select it in the Available Providers list.
3. If other providers are listed in the Enabled Providers list, select each one, and click Remove until your provider is the only one in the list.
4. Click OK.

Resetting IIS

Prerequisites

- These instructions apply to all installation scenarios.

Instructions

1. Reset IIS.

Turning off User Account Control (UAC)

Prerequisites

- These instructions apply to all installation scenarios.

Instructions

1. Turn off User Account Control (UAC).
2. Restart the machine.

Setting Up the SharePoint Machine

Please ensure the following items are installed and configured properly on the SharePoint machine.

Creating a SharePoint Impersonator User Account

To create the domain-qualified user account that SharePoint will use to interact with AgilePoint Server at runtime, do the following.

Prerequisites

- These instructions apply only if you plan to install SharePoint Integration. This is an optional component that is not available for all versions of AgilePoint BPMS.
-

Instructions

1. Create a domain-qualified SharePoint Impersonator User Account in SharePoint.
2. Assign the SharePoint Impersonator User Account the following minimal privileges:
 - The SharePoint Impersonator account as configured in the SharePoint Configuration List must at least have **Contribute** rights on each SharePoint site where Lists, Document Libraries or Form Libraries are associated to an AgilePoint Process. Usually, it's enough to add that SharePoint Impersonator account to the **[Site Collection Name] Members** SharePoint Group, but you must:
 - Make sure that group has **Contribute** rights on SharePoint.
 - Make sure inheritance is not broken on sub-sites as that might prevent that Impersonator account to access those sub-sites – it would have to be added to the **Members** role of each of those sub-sites that break inheritance with their parent site.

To alleviate these two issues, adding the SharePoint Impersonator account to the Site Collection Administrators group is another option (but does not follow the least-privileged account best practice).

Creating a SharePoint Web Application

Determine which SharePoint Web Application will be used for the AgilePoint Integration. If a SharePoint Web Application to be used for the AgilePoint Integration is not already created, you will need to create one.

To create a new SharePoint Web Application, do the following.

Prerequisites

- These instructions apply only if you plan to install SharePoint Integration. This is an optional component that is not available for all versions of AgilePoint BPMS.

Navigation

1. From the **SharePoint Central Administration** page, click the **Application Management** tab.

Instructions

1. In the **SharePoint Web Application Management** section, click the **Create or extend Web application** link.
2. Click the **Create a new Web application** link. The **Create New Web Application** page appears.
3. In the **IIS Web Site** section, it is recommended to select the **Create a new IIS web site** option and use the default **Port** number and **Path**. If necessary, specify a **Host Header** name.
4. In the **Security Configuration** section, select either **NTLM** or **Kerberos** depending on your preferred network authentication mode.
5. In the **Load Balanced URL** section, accept the default values.
6. In the **Application Pool** section, it is recommended to create a new unique application pool for this Web site. When entering a security account, use a different local administrator account (not the AgilePoint System User account).
7. In the **Reset Internet Information Services** section, accept the default value.
8. In the **Database Name and Authentication** section, accept the default values.
9. Click **OK**. The **Application Created** page appears.
10. Click the **Create Site Collection** link.
11. Complete the fields as desired. For the Site Collection Administrator, it is recommended to not use the same name that was used as the Identity account for the application pool.
12. After the Top-Level site is created, click **OK**.

Disabling Double Loopback Check

If user-friendly URLs are used on the SharePoint site, then double loopback check needs to be disabled for the SharePoint server machine.

For more information, see [401 Error when Connecting to SharePoint](#) on the [AgilePoint Support Portal](#).

Prerequisites

- These instructions apply only if you plan to install SharePoint Integration. This is an optional component that is not available for all versions of AgilePoint BPMS.
- User-friendly URLs are used on the SharePoint site.

Verifying the SharePoint configuration

To verify the SharePoint is installed and configured appropriately, do the following.

Prerequisites

- These instructions apply only if you plan to install SharePoint Integration. This is an optional component that is not available for all versions of AgilePoint BPMS.

Instructions

1. Browse a SharePoint page from the following locations:
 - The SharePoint machine.
 - The AgilePoint Server machine.
 - Client machines.

Setting Up the AgilePoint Client Machines

Ensure the following items are configured properly on each machine where an AgilePoint client software component will be installed (for example, Envision or Developer).

Turning off User Account Control (UAC)

Prerequisites

- These instructions apply to all installation scenarios.

Instructions

1. Turn off User Account Control (UAC).
2. Restart the machine.