



# **AgilePoint Server Administrator's Guide**

**AgilePoint BPMS v5.0 SP2**

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# Preface

## Disclaimer of Warranty

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## Virus-free software policy

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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

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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

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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

PDFs can be more easily **printed**, **archived**, and **transferred** (such as by FTP or email) than HTML documentation.

For more information, see [Downloading Files and Sharing Links from the Documentation Library](#) on the [AgilePoint Support Portal](#).

## Contacting AgilePoint Sales

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AgilePoint is a leading Business Process Management System (BPMS) provider created by a team of driven people who strive to incorporate the principles of relentless innovation for the benefit of our customers. Our mission is to help companies of any size attain and sustain operational success through process excellence.

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**International:** For AgilePoint EMEA and AgilePoint Asia Pacific, please call the AgilePoint Corporate Office for contact information.

## Contacting Customer Support

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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](mailto:support@agilepoint.com)

# AgilePoint Server

AgilePoint Server is the server-side software engine that runs your AgilePoint-based processes. AgilePoint Server interprets the XML schema associated with a process and programmatically executes the appropriate actions. AgilePoint Server's SOA-based software model is what enables you to create and run processes without writing software code.

This document is a user's guide and reference to the features, functionality, usage, configuration, and administration of the AgilePoint Server component of the AgilePoint BPMS Suite.

## Deploying an AgilePart to AgilePoint Server

To deploy an AgilePart to AgilePoint Server, use the AgilePoint Deployment Wizard utility. For more information, see [AgilePart Deployment Wizard Utility](#) on the [AgilePoint Support Portal](#).



## Checking the AgilePoint Server log files

AgilePoint Server creates and maintains log files to store certain informational, warning, and/or error messages about the server and the workflow engine. These log files are created automatically, and named based on the date and time each file was created.

To enable AgilePoint Server debug mode, you must modify the "netflow.cfg" file located in the AgilePoint Server directory (e.g. "C:\AgilePoint\AgilePointServer\" or "C:\inetpub\wwwroot\AgilePointServer").

Add the debug attribute to the server element in the "netflow.cfg" file (as shown below):

```
<server
  eventCap=" 50 "
  workingCap=" 50 "
  maxLoop=" 50 "
  swapoutTime=" 60 "
  debug="true"
  archiveTime="180"
  assemblyPath="C:\inetpub\AgilePointSite\TuscaSampleApplication\bin">
```

To access the logs, simply view the relevant file(s) using a text editor. The files are located within your AgilePoint Server folder at:

```
...\AgilePointServer\log\*.*
```

## Safely Stopping AgilePoint Server

To stop (or shut down) AgilePoint Server safely (i.e. without risking any data loss for requests currently being processed), please use the following instructions.

Whenever you are performing maintenance on a resource required to run AgilePoint Server (e.g. taking the workflow DB offline, upgrading AgilePoint Server, etc.), it is recommended that you first stop AgilePoint Server. This will prevent possible problems, such as: data loss; email notification errors; etc.

1. (Optional) If you are using the AgilePoint Server Monitor windows service, it is recommended that you stop the service while AgilePoint Server is unavailable.
2. Open the IIS management console.
3. Under your server's Application Pools node, select the application pool associated with your AgilePoint Server application.
4. Stop the application pool (e.g. by right-clicking and choosing **Stop**).

You can also choose Recycle if you want the AgilePoint Server application to be available again immediately.

5. When you are ready, start the application pool to make the AgilePoint Server application available again.

## Configuration Settings

This section describes additional AgilePoint Server Configuration Settings that can be implemented via AgilePoint Server's configuration file (i.e. netflow.cfg). This file is located in the AgilePoint Server directory (e.g. C:\AgilePoint\AgilePointServer). These additional configuration options are done manually, as currently there is not a user interface to support them.

### Configure SMTP Servers to Require Authentication (Optional)

To configure your SMTP server to require authentication, you must modify the netflow.cfg file as below.

To modify the netflow.cfg file:

1. Open the **netflow.cfg** file in a text editor such as NotePad.
2. Locate the **Notification** section and modify it to look something like this:

```
<notification
  mode="true"
  format="text "
  smtpService="BuiltIn:username@sbcglobal.net,password1"
  mailServer="smtp.sbcglobal.yahoo.com"
  sender="NETSVR2@agilepoint.com"
  sysadm="adminuser@agilepoint.com"
```

Where **username@sbcglobal.net** is the user name provided to you by your ISP and **password1** is the password provided to you by your ISP.

### Implementing a Custom Email Notification Delivery Module

By default, AgilePoint uses System.Web.Mail for the Email Delivery Module. However, System.Web.Mail sometimes may not work as well with some SMTP servers. AgilePoint provides the flexibility to allow you to plug-in your own email delivery module or use a third-party component for the email delivery.

To plug-in your own mail delivery module:

1. First, implement the interface IWFSMTPService:

```
public interface IWFSMTPService
{
  void Authenticate(String smtpServer, String authenticateString);
  void Send(
    String mailDeliverableID,
    System.Text.Encoding encoding,
    Constants.MailFormat format,
    Constants.MailPriority priority,
```

```
String sender,  
String to,  
String cc,  
String subject,  
String body,  
String attachments);  
}
```

2. Add your assembly and class information into the AgilePoint Server configuration file (netflow.cfg). For example:

```
<configuration>  
  .. ..  
  <notification mode="true"  
    smtpService="EasyMailForSMTP:CustomSMTP.EasyMailForSMTPService:"  
  .. ..
```

Where **EasyMailForSMTP** is the assembly name and **CustomSMTP.EasyMailForSMTPService** is the class name.

## Configuring the AgilePoint Server Thread Pool Size

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The **System** tab of the AgilePoint Server Configuration utility provides the user interface to configure the maximum number of threads that AgilePoint will be able to use at runtime while handling workflow requests. When the thread pool is configured via this utility it sets both the Event Capacity (for processing AgileWorks) as well as the Working Capacity (for processing AgileParts). In most cases, the same thread pool size as configured via the utility is sufficient for both the Working Capacity as well as the Event Capacity.

For thread pool sizing, anything between 10-100 should be fine. In most cases, a thread pool size of 10 provides a good balance between concurrent processing and server resource optimization.

The screenshot displays the AgilePoint Server Configuration utility with the following settings:

- System Tab:**
  - Domain:   Active Directory
  - System User:
  - Password:
  - Thread Pool Size:  ( $\geq 10$ )
- Notification Tab:**
  - SMTP Server:
  - Email Sender:
  - System User Email:
  - Email Format:

Buttons for OK and Cancel are visible at the bottom right.

In some cases, additional tweaking of thread pool sizing may improve performance when heavy CPU usage is apparent for processing AgileParts versus AgileWorks. This finite control over thread pool sizing can be accomplished via the AgilePoint Server Configuration file (i.e., `netflow.cfg`).

As stated above, when using the AgilePoint Server Configuration utility to set the Thread Pool Size, the value entered, sets both the Event Capacity (for processing AgileWorks) as well as the Working Capacity (for processing AgileParts). However, manual customization can be done via the `netflow.cfg` to adjust the Working Capacity for a thread pool without changing the Event Capacity or vice versa. For example, if your CPU is processing a large number of AgileParts rather than AgileWorks, you may want to increase the Working Capacity thread pool size, and leave the Event Capacity as is. Improving AgilePart performance is the key to improving capacity because AgilePart processing can cause a bottleneck.

To modify the `netflow.cfg` file for thread pool optimization, follow these steps.

1. Open the **`netflow.cfg`** file and locate the server **`eventCap`** and **`workingCap`** attributes.
2. Increase the **`eventCap`** number to increase the available threads for processing AgileWorks or increase the **`workingCap`** to increase the number of threads for processing AgileParts. The results are viewed via Enterprise Manager on the Performance page.

## Thread Pool Sizing Guidelines

When configuring thread pool size, bigger is not always better! More concurrently running threads requires more server resources (e.g. RAM and CPU), so increasing the thread pool size past a certain point could start to decrease performance rather than improve it. In most cases, a thread pool size of 10 provides a good balance between concurrent processing and server resource optimization.

Anything between 10-100 should typically be fine for the Thread Pool. Also, it is often just as (if not more) important to configure the IIS App Pool Queue Length Limit appropriately as to fine tune the Thread Pool size.

If all of your process' activities are "short-duration" ones, then you may not need many threads, because the only way that "short-duration" activities alone would typically cause AgilePoint to (simultaneously) utilize the maximum number of threads in the Thread Pool is if a large number of such activities were entered/activated nearly simultaneously. However, if you have a mixture of "long-running" activities and "short-duration" activities, then increasing thread pool sizes may help considerably because "short" activities that start in the "middle" of a long running activity will not have to wait for it to end before being processed. In general, if you analyze a given time period, then increasing either the quantity or the average duration of activities that are active within that time period will increase the likelihood that some of those activities will require concurrent processing (and therefore require a larger Thread Pool size). However, in certain environments, usage patterns may also have a significant affect, and may render some of the above guidelines less (or more) accurate.

In the above context, a "long-running" activity is defined as one that will require server resources for a length of time long enough that it may overlap with other/subsequent activities or processing. Examples of long running activities could include: synchronous AgileParts that require several minutes (or even hours) of processing to complete; Web Service activities with a large timeout value; AgileShapes that interact with (and may have to wait for data from) other servers or systems; etc.

Conversely, a "short-duration" activity is one that will only consume server resources for a brief period. Examples of such activities include: AgileParts that perform minimal processing; Manual activities (or AgileWorks that perform minimal server-side processing); Single- or Multiple-Condition AgileShapes; etc. Note that Manual activities are normally considered to be "short-duration" activities regardless of the activities' time span or due date, because the AgilePoint server's resources are not being used during most of the activities' duration.

Another way to consider the issue is to determine how frequently new processes will be initiated/launched, how long each process takes to complete, and how much of that time is spent on "automatic" activities that are performed by the server. If you have many long-running processes running simultaneously, and each one contains automatic activities that require minutes (rather than seconds or microseconds) to complete, then you are much more likely to have simultaneous workflow processing occurring, which would require more threads for optimal performance.

See below for a list of guidelines that should be helpful in determining a good Thread Pool size for most environments.

## Increasing Thread Pool Size

---

It may help to increase the Thread Pool size if:

- The average server-side processing duration for activities increases.
- The number of activities entered/activated per day increases.
- The number of new process instances per day increases (because this will typically increase the number of activities entered/activated per day).
- The average number of activities per running process instance increases (i.e. if you start deploying much more complicated process models than you were, it increases the likelihood of concurrent processing).

- The average duration (from Start to Complete) of your process instances increases (because this may increase the number of activities entered/activated per day). This is especially true for processes whose duration is determined by the number of times the process instance "loops" back and re-enters an activity earlier in the process model. It may not be relevant for processes whose duration is primarily determined by the durations of the Manual activities in the process.
- Any of your commonly-used processes contain activities that require minutes (or longer) of server-side processing (as described above), as this significantly increases the likelihood of concurrent processing.
- Your environment is prone to intermittent periods of much-higher-than-average load during certain times of day (or week, month, etc.). For example, if your process instances are often started nearly simultaneously (e.g. at the start of the work day or shift, or because of certain events like the upload of a large batch of files), or you have many activities that "time out" simultaneously (e.g. at the end of the month), then it may make sense to increase the Thread Pool size to take the higher-load periods into account.
- Your server, network, or database is prone to intermittent "slowdowns" (i.e. periods of slower-than-normal processing). E.g. This could be due to scheduled services running in the background at specified times of the day, or could be caused by periods of high server load caused by non-AgilePoint sites or applications (on a non-dedicated server).
- Your server has plenty of memory (i.e. RAM), but not a lot of processing speed (i.e. CPU speed). In other words, activities will take longer to process on a slow machine.

## Decreasing Thread Pool Size

---

It may help to decrease the Thread Pool size if:

- Your server has limited memory (i.e. RAM). Regardless of CPU speed, a server with limited RAM should limit the amount of concurrent processing performed (i.e. threads used) in order to limit memory usage.
- All (or almost all) of your processes use only short-duration activities. In such a scenario, it may be faster for the server to process all activities sequentially (more or less) using a small number of threads, than to concurrently process the same activities. In such a scenario, the server resources required in order to split the server's CPU cycles between multiple threads may actually be (slightly) slower than simply waiting for any activities currently being processed to be completed.
- The opposite of any of the items in the previous list is true. However, note that decreasing the Thread Pool size will rarely result in dramatic performance improvements, so you typically don't need to fine-tune the Thread Pool size below 50.

## Configuring the Max Loop

---

The Max Loop is the number of times a process instance can loop back to the previous step. The maximum number of sessions for an activity is set to **50** by default. Once a process instances loops back the 51st time, the process instance will become suspended.

## Instructions

In some cases, you may have a special need to have more than 50 sessions, in this case, open the **netflow.cfg** file in Notepad, and change the value for **maxLoop** to a higher value, and then save the file.

Reset IIS upon making changes to the netflow.cfg file.

You can also set the Maxloop at the process model level to avoid an infinite loop scenario. The process level MaxLoop setting overwrites the global/server level setting in the netflow.cfg file.

There is a Process Template property in AgilePoint Envision called 'Maximum Session Allowed' that allows for the configuration of MaxLoop that will overwrite the global/server level setting in the netflow.cfg file.

## Configuring the Swap Out Time

The Swap Out Time configuration option refers to the maximum amount of time (in seconds) a process instance remains in idle before it is swapped out of memory. The maximum swap out time is set to 60 seconds by default. Increasing the swap out time lets the process stay in memory longer, avoiding the CPU intensive swapping, but keep in mind this may eventually affect capacity. Because swapping consumes a lot of CPU time, it may be beneficial to reduce this number if the CPU is low on memory to improve performance. To change this setting, open the netflow.cfg file (C:\AgilePoint\AgilePointServer) in Notepad, change the value for swapoutTime to a higher/lower value depending on the needs, then save the file.

Adjusting the swap out time should only be a temporary workaround solution. If performance is an issue, investing in another CPU, more memory, or a faster hard drive, is a better solution.

## Configure Session State Handling

After installing AgilePoint Server and Enterprise Manager, you must configure session state handling. There may be several valid options, depending upon your environment and your organization's requirements.

Value	Description
InProc	This is the default value for ASP.NET. This value is suitable for single-machine AgilePoint Server environments; you cannot use this setting for NLB.
StateServer	This setting can be used in a single-machine or NLB environment to manage the session state using the ASP.NET State Service Windows Service. To use the StateServer setting, the ASP.NET State Service must be running on a separate machine from AgilePoint Server.



Value	Description
SQLServer	In NLB environments, this setting allows the AgilePoint Servers to store their session data on a separate machine in a SQL Server database. If an AgilePoint Server fails, another server in the cluster can take over and serve requests without session data loss.
Off	This setting enables you to turn off the session state for AgilePoint Server. This setting can help to improve performance of AgilePoint Server in NLB environments. You cannot use this session for Enterprise Manager.
Custom	This setting requires custom coding. For more information, contact AgilePoint Support.

If you use Session State handling in an NLB environment, note the following:

- The session must be persisted outside of the current server.
- This session persistence is managed by the .NET Framework, not by AgilePoint. The framework uses the connection string declared in the web.config for AgilePoint Server and AgilePoint Enterprise Manager. See [http://msdn2.microsoft.com/en-us/library/87069683\(vs.71\).aspx](http://msdn2.microsoft.com/en-us/library/87069683(vs.71).aspx) to communicate to the database where the session is persisted.

To set up session state handling:

1. Run **InstallSqlState.sql** (installed by default in [system root]\Microsoft.NET\Framework\version) on the computer running SQL Server that will store the session state (i.e. the db server). This creates a database called ASPState with new stored procedures and ASPStateTempApplications and ASPStateTempSessions tables in the TempDB database.
2. Open the **AgilePoint Server** and **AgilePoint Enterprise Manager web.config** files. In the <sessionState> node, set the values as required for your environment.

For example, if you are using the **SQLServer** setting, the SQL connection string must point to the session state SQL Server database on the DB server machine that stores the session data:

```
<sessionState mode="SQLServer"
sqlConnectionString="[your sessionState database connection string]"
cookieless="false"
timeout="20000"
/>
```

If you are using the **Off** setting, no further information is required:

```
<sessionState mode="Off" />
```

## AgilePoint Server Configuration Utility

The AgilePoint Server Configuration utility can be accessed via: **Start > All Programs > AgilePoint > AgilePoint Server Configuration**.

This utility is a user-friendly editor for AgilePoint Server's **netflow.cfg** configuration file. This file can be found in the root folder where you have installed AgilePoint Server (e.g. c:\inetpub\wwwroot\AgilePointServer\netflow.cfg). The location of AgilePoint Server can be determined from the registry.

Although most of the AgilePoint Server configuration settings can be managed via the AgilePoint Configuration Utility, there are some additional configuration settings that can be modified manually via the netflow.cfg file.

For more information, see [Configuration Settings](#) on the [AgilePoint Support Portal](#).

The screenshot shows the AgilePoint Server Configuration Utility dialog box with the 'System' tab selected. The dialog has four tabs: System, Database, Extension, and Work Calendar. The 'System' tab contains the following fields and controls:

- Domain:   Active Directory
- System User:
- Password:
- Thread Pool Size:  ( >= 10)

The 'Notification' tab contains the following fields and controls:

- SMTP Server:
- Email Sender:
- System User Email:
- Email Format:

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

### System Window

This window allows you to configure the AgilePoint system user, thread pool sizing, and default email notification settings.

## System Settings

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The System area allows you to specify the identity and authentication information for the AgilePoint system user, and the maximum number of threads that AgilePoint will be able to use at run time while handling workflow requests.

The **System User** and **Password** fields should contain the same values that you would use when logging into Windows. However, if you are installing AgilePoint Server on a Windows Server that is a Domain Controller, you cannot use a local administrator account as the AgilePoint Server System User, because the domain controller will not recognize local accounts. To successfully configure AgilePoint Server on a Windows Server domain controller, check the Active Directory check box, and specify the domain name and administrator account that belongs to the domain controlled by the domain controller.

For thread pool sizing, anything between 10-100 should be fine. In most cases, a thread pool size of 10 provides a good balance between concurrent processing and server resource optimization.

## Email Notification Settings

---

The Notification area allows you to specify the default values for the email notification settings.

AgilePoint Server's notification mechanism uses an extensible framework that allows for the creation of custom notification modules. AgilePoint server provides a built-in notification module as default. However, it is possible to replace AgilePoint's default module with a custom notification module so that all AgilePoint notifications are processed and sent using the custom module. This allows you to implement virtually any kind of custom notification scenario, including IM, email "batch sending", sending via custom APIs, etc.

For more information, see [Implementing a Custom Email Notification Delivery Module](#) on the [AgilePoint Support Portal](#).

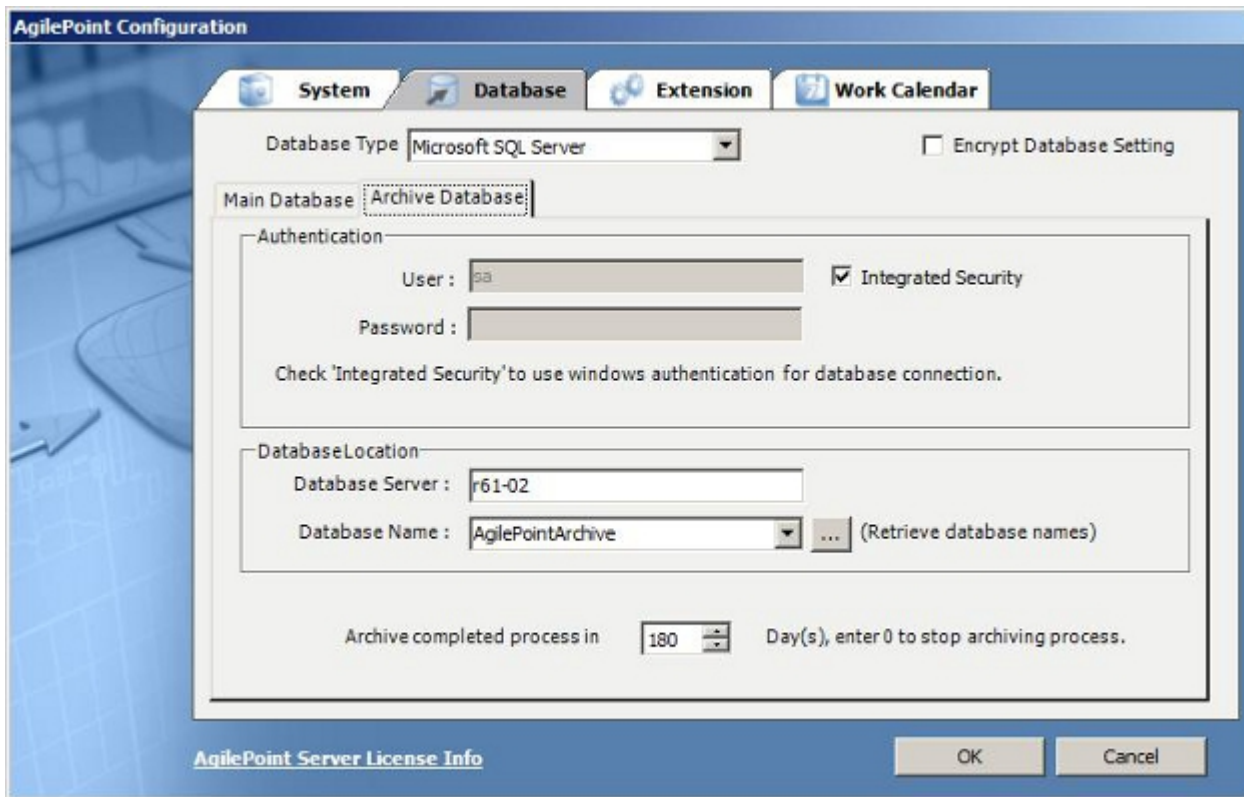
## Database Window

---

This window allows you to configure the workflow database that AgilePoint Server will use to store data. AgilePoint supports the following database types:

- **Microsoft SQL Server** (Recommended because of additional reporting integration features.)
- **Oracle**

It is recommended to use a connection pool size that is  $\geq 100$  or  $2 * \text{the thread pool size}$ .



## Configuring Process Archiving

Process archiving moves a process instance and all its related data to an archive database when the Completed or Canceled date for the process instance exceeds a specified number of days. This helps save storage space on the main AgilePoint database and improve performance.

You can also archive process data manually. For more information, see [APADM Archive Database Command](#) on the [AgilePoint Support Portal](#).

### Prerequisites

- Create a database to use as the archive database.

### Navigation

1. Log on to Windows using a user account with the access rights "Archive Process Instance" in AgilePoint.
2. Open the AgilePoint Server Configuration Utility: **Start > All Programs > AgilePoint > AgilePoint Server Configuration**.
3. Click the **Database** tab.

### Instructions

1. In the AgilePoint Server Configuration Utility On the **Database** tab, click the **Archive Database** tab.
2. In the **Authentication** section, configure authentication for the archive database.

3. In the **Database Server** field, enter the server name for the archive database.
4. In the **Database Name** field, click the ellipses button to populate the database names on the database server.
5. In the **Database Name** field, select the name of the archive database.
6. In the **Archive completed process in** field, set the number of days to save Completed or Canceled processes before archiving.

The process for archiving AgilePoint processes runs once per day between 1:00 a.m. and 3:00 a.m.

To suspend a database archive schedule without deleting the settings, set **Archive completed process in** to **0**.

## Extension Window

AgilePoint provides a powerful integration framework; Global Server Control Extended Module, to allow you to easily extend AgilePoint with additional server control modules. These server control modules extend AgilePoint's functionalities and provide a higher level of customizability. The Extension window allows you to register and configure certain optional server extensions through the Global Server Control Extended Module that can be used to modify the workflow engine's run time behavior. See the sections below for details on the supported extensions.

The screenshot shows the 'Extension' window in the AgilePoint Server Configuration Utility. The window has four tabs: 'System', 'Database', 'Extension' (which is selected), and 'Work Calendar'. On the left side, there is a list of extensions, with 'SPSIntegration' highlighted. To the right of this list, there are several input fields and buttons. The 'Name' field contains 'SPSIntegration'. Below it, the 'Impersonator' field is labeled '(AgilePoint registered user name)' and contains 'ASTN\vikash.marodia'. The 'Assembly' field is empty. Below that, the 'Class Name' field is also empty. To the right of these fields are buttons for 'Add', 'Edit', 'Remove', and 'Configure'. At the bottom of the window are 'OK' and 'Cancel' buttons.

The Add and Edit buttons allow you to register a new server extension. (See below for details.)

The Remove button allows you to un-register the highlighted server extension.

The Configure button allows you to modify the settings and configuration of the highlighted server extension. It is only enabled for server extensions that support additional configuration options.

## ADSyncModule Extension

---

For most enterprises, Active Directories are changing continuously with users added or removed frequently. For enterprises with large numbers of groups and users, a mechanism to automate the synchronization of the member association in Active Directory plays an important role for any Active Directory integration.

In addition to the built-in Active Directory integration with products such as: Envision and Enterprise Manager, AgilePoint also provides an out-of-the-box Active Directory synchronization module which can be plugged into AgilePoint through the Global Server Control Module framework. This synchronization module provides the synchronization capability between Active Directory groups and AgilePoint groups automatically.

This synchronization module can be added to the AgilePoint system through the AgilePoint Global Server Control Extended Module. This server extension allows you to enable and configure automated synchronization of the AgilePoint authentication data with Active Directory. It will automate the member synchronization between Active Directory users and groups and AgilePoint users and groups.

## Requirements

- The AgilePoint System User (as defined in the AgilePoint Server Configuration utility) should belong to the Active Directory domain.
- AgilePoint Server's Application Pool's Identity user account (as configured in IIS) needs to have read permissions to the Active Directory server and data.

## Enabling the Extension

To enable the AgilePoint Server extension:

1. Open the AgilePoint Server Configuration utility and go to the **Extension** window.
2. Click the Ellipses button next to the Assembly field and add the following assembly:  
`...\AgilePointServer\bin\ADSyncModule.dll`
3. In the **Impersonator** field, enter the Impersonator credential which will be the credential to run the synchronization module as shown in the figure above. This credential must be a domain account with access privileges to the Active Directory.
4. Click **OK**. Now you will need to configure the module to schedule the synchronization.
5. Click the **Configure** button, and specify the desired configuration settings. In the following configuration interface, you can specify the synchronization with the frequency of every day, week, or month and at a particular time of day starting with the day you set the schedule. The synchronization module also provides the option of registering the users automatically or sending an alert email to AgilePoint system user if there are members in the Active Directory groups that have yet to be registered in AgilePoint.
6. Click **OK**.

## Group Member Synchronization Rules

- Only groups that have already been added into AgilePoint will be synchronized with Active Directory. New Active Directory groups will not be added automatically to AgilePoint. The new Active Directory groups can be added manually through the Enterprise Manager interface.
- The changes of user members (adding or removing) in the Active Directory groups will be synchronized to AgilePoint but the changes in AgilePoint groups will NOT be synchronized back to the Active Directory.
- The synchronization only applies to member association (Add or Remove) within the groups. Group properties such as names and descriptions are NOT synchronized.
  - When a new member is added to Active Directory, this member will also be added to the corresponding AgilePoint group. If the actual user entity is not registered in AgilePoint yet, the user entity will be registered to AgilePoint automatically.
  - When a member is removed from Active Directory, this member in the corresponding AgilePoint group will also be removed. The actual user entity will NOT be removed from AgilePoint as the same user entity can also be associated with other groups in the system.
  - If the Active Directory contains sub-groups (Nested groups), the members in the sub-groups will also be synchronized and the members will be added to or removed from the top level group.

## User Synchronization Rules

- Changes to the following Active Directory User properties will be synchronized to AgilePoint. Other properties will NOT be synchronized.
  - Full Name
  - Email Address
  - Department
  - Title
  - Manager
- Removal of an Active Directory User will result in the following AgilePoint synchronization actions:
  - The user will be removed from any AgilePoint Groups.
  - Any tasks assigned to this user will still exist, it may be required to cancel or reassign these tasks to a valid AgilePoint user.

## Scheduling

The schedule of the synchronization is set through the module's configuration interface. The synchronization can be performed at a particular time of day with the frequency of every day, every week, or every month.

For example, if you schedule the synchronization to be performed at 2am on Jan. 1 and you also select **Every day** as the frequency, the synchronization will be started automatically at 2am on Jan 1, Jan 2, Jan 3, etc.

The following table summarizes the different ways that the schedule can be set for the synchronization.

Frequency	Time	1st Sync	2nd Sync	3rd Sync	4th Sync	5th Sync
Every Day	2am	Jan. 1	Jan. 2	Jan. 3	Jan. 4	Jan. 5
Every Week	2am	Jan. 1	Jan. 8	Jan. 15	Jan. 22	Jan. 29
Every Month	2am	Jan. 1	Feb. 1	March. 1	April. 1	May. 1

The synchronizations typically happen within five minutes of the scheduled time. For example, if the scheduled time is 2am, the actual synchronization could happen between 1:55am to 2:05am.

## Exception Handling

This module also provides exception handling for the scheduling. In the event that your server is down during the scheduled synchronization, as soon as your server is back online, the synchronization will be automatically kicked off. After that, the next synchronization will resume the original schedule.

## Log Files

The Active Directory Synchronization module provides two type of logging mechanisms. For each synchronization occurrence, the time and status will be logged in the netflow.log file. The netflow.cfg file can be found under AgilePointServer\log folder.

The following is an example of a log message in the netflow.log file:

```
3/2/2005 9:23:39 AM >>> Active Directory group
synchronizer started.
3/2/2005 9:23:39 AM >>> Configuration: every Day at 19 O'clock,
register user automatically=True
```

Besides the netflow.log file, the Active Directory synchronization module also writes log messages to the ActiveDirectorySynchronizer.log file. The ActiveDirectorySynchronizer.log file can also be found under AgilePointServer\log folder. This log file contains detail information about each synchronization such as the status of each group, or what users were unable to be registered to AgilePoint.

The following is an example of the log message in the ActiveDirectorySynchronizer.log file:

```
3/1/2005 5:51:49 PM>> Synchronization has started to
perform on 3/1/2005 5:51:47 PM
Synchronizing Group 'kTest2', Active Directory Path=
LDAP://CN=kTest2,OU=Test,DC=ASTN,DC=com
Registering user 'ASTN\Test1' to AgilePoint. User full name:
Test1, department:

***** EXCEPTION MESSAGE *****
Please check Active Directory access right, Failed to register
```



the user because both the username and the email address cannot be empty.

## Notifications

In addition to log files that keep track of the synchronization statuses, the synchronization module also provides email notification capability. Email notification is sent out to the AgilePoint System User with information about the synchronization. This will allow the system user to determine if there is a need to manually synchronize the groups or users in the event of failed synchronization.

## DBSyncModule Extension

---

The DBSyncModule AgileConnector extension allows you to synchronize custom user and group database tables with AgilePoint groups automatically.

## Requirements

The following are requirements for the DBSyncModule AgileConnector:

- The AgilePoint System User (as defined in the AgilePoint Server Configuration utility) should be a Database user.
- AgilePoint Server's Application Pool's Identity user account (as configured in IIS) needs to have read permissions for the appropriate database.

## Enabling the Extension

To enable the AgilePoint Server extension:

1. Open the AgilePoint Server Configuration utility and go to the **Extension** window.
2. Click the Ellipses button next to the Assembly field and add the following assembly:

```
...\AgilePointServer\bin\DBSyncModule.dll
```

3. Leave the **Impersonator** field blank.
4. Click **OK**. Now you will need to configure the module to schedule the synchronization.
5. Click the **Configure** button, and specify the desired configuration settings.

In the configuration interface, specify the following information:

- **Connection** - Provide a valid database connection string.
- **Query** - Provide the SQL query to fetch records from a table. The query must fetch the following fields, which are mandatory:
  - TITLE
  - USER\_NAME
  - FULL\_NAME
  - DEPARTMENT

- EMAIL\_ADDRESS
- MANAGER
- GROUP\_NAME

To check that the query was set up correctly, click **Verify Query**.

- **Schedule** - Specify the synchronization with the frequency of every day, week, or month and at a particular time of day starting with the day you set the schedule.
- **Option** - This section provides an option to select what action needs to be taken when a database member is not an AgilePoint user. Either one can select to register user to AgilePoint automatically or send a notification to AgilePoint System user.

## Group Member Synchronization Rules

- Only groups that have already been added into AgilePoint will be synchronized with the database. New groups will be added automatically to AgilePoint when the group name starts with a Group prefix value. The new groups will automatically be assigned to the default "Users" Role. If a group prefix value is empty, then new groups can be added manually through the Enterprise Manager interface.
- The changes of user members (adding or removing) in the database will be synchronized to AgilePoint but the changes in AgilePoint groups will NOT be synchronized back to the database.
- The synchronization only applies to member association (Add or Remove) within the groups.
- When a new member is added to the database, this member will also be added to the corresponding AgilePoint group. If the actual user entity is not registered in AgilePoint yet, the user entity will be registered to AgilePoint automatically.
- When a member is removed from the database, this member in the corresponding AgilePoint group will also be removed. The actual user entity will NOT be removed from AgilePoint as the same user entity can also be associated with other groups in the system.

## User Synchronization Rules

Changes to the following database field properties will be synchronized to AgilePoint. Other properties will NOT be synchronized.

- Full Name
- Email Address
- Department
- Title
- Manager

## Scheduling

The schedule of the synchronization is set through the module's configuration interface. The synchronization can be performed at a particular time of day with the frequency of every day, every week, or every month.

For example, if you schedule the synchronization to be performed at 2am on Jan. 1 and you also select **Every day** as the frequency, the synchronization will be started automatically at 2am on Jan 1, Jan 2, Jan 3, etc.

The following table summarizes the different ways that the schedule can be set for the synchronization.

Frequency	Time	1st Sync	2nd Sync	3rd Sync	4th Sync	5th Sync
Every Day	2am	Jan. 1	Jan. 2	Jan. 3	Jan. 4	Jan. 5
Every Week	2am	Jan. 1	Jan. 8	Jan. 15	Jan. 22	Jan. 29
Every Month	2am	Jan. 1	Feb. 1	March. 1	April. 1	May. 1

The synchronizations typically happen within five minutes of the scheduled time. For example, if the scheduled time is 2am, the actual synchronization could happen between 1:55am to 2:05am.

## Exception Handling

This module also provides exception handling for the scheduling. In the event that your server is down during the scheduled synchronization, as soon as your server is back online, the synchronization will be automatically kicked off. After that, the next synchronization will resume the original schedule.

## Log Files

The following is an example of the log message in the ActiveDirectorySynchronizer.log file:

```
3/1/2005 5:51:49 PM>> Synchronization has started
to perform on 3/1/2005 5:51:47 PM
Synchronizing Users Registering user 'ASTN\Test1' to
AgilePoint. User full name: Test1, department: Testing
```

## Notifications

In addition to log files that keep track of the synchronization statuses, the synchronization module also provides email notification capability. Email notification is sent out to the AgilePoint System User with information about the synchronization. This will allow the system user to determine if there is a need to manually synchronize the groups or users in the event of failed synchronization.

## Email Approval Extension

---

Using email approval, process participants can approve documents or requests through email, without accessing their task lists. The MailApproval AgileConnector supports the following functionality:

- Approve or reject tasks using a simple email reply
- Multiple AgileConnector configurations
- Network load balancing

## Requirements

One of the following:

- A POP3 mailbox configured with a valid account in the AgilePoint Server Configuration
- An IMAP4 mailbox configured with a valid account in the AgilePoint Server Configuration
- An Exchange Server mailbox with a valid account

## Configuring the Email Approval AgileConnector

To configure the Email Approval AgileConnector, do the following.

1. To open the AgilePoint Server Configuration Utility, click **Start > All Programs > AgilePoint > AgilePoint Server Configuration**.
2. On the **AgilePoint Configuration** window, click the **Extension** tab.
3. In the list on the left, click **MailApproval**, and then click **Configure**.
4. On the Mail Approve Processor dialog box, complete the following information, depending upon whether you are configuring Email approvals for POP3, IMAP, or Exchange:
  - **E-mail Service** – The type of email connection service you want to use.
  - **MS Exchange Server URL** - (Exchange Only) https://[ExchangeServerMachineName]:[Port]/
  - **POP3 Server** - (POP3 Only) Name or IP address of the POP3 server.
  - **POP3 Port** - (POP3 Only) POP 3 Port. The default is 110.
  - **IMAP4 Server** - (IMAP Only) Name or IP address of the POP3 server.
  - **IMAP4 Port** - (IMAP Only) POP 3 Port. The default is 110.
  - **SSL Connection** - (POP3 or IMAP Only) Specifies that you require an SSL connection to the POP3 server.
  - **Login** - The username for the mailbox containing the email-based approvals.
  - **Password** - The password for the mailbox.
  - **Sleep Timer** - Time between each P3 access in minutes.

- **Delete incorrect approval emails** - (Exchange Only) Specifies that invalid or ill-formatted emails will be deleted from the mailbox. Mails that are processed correctly are automatically deleted from the server.
- **Information Level** - Saves information about the details of the processing in the AgilePoint Server log file.
- **Debug Level** - Saves debugging information about the processing of the emails in the AgilePoint Server log file.

5. When you have finished, click **Save**.

## Logging

The MailApproval module writes log messages to the AgilePoint Server log file which can be found at AgilePointServer\Log. The following is an example of a log message in the file:

```
8/12/2008 8:04:05 >>> AgileConnector MailApproval Started.  
Pop3 server, Server=110, Port=in.telenet.be, userName=xxxxxxx 8/12/2008  
8:05:08 >>> TaskId: 65B82D87B3F34765B2DDE64791786961 8/12/2008  
8:05:08 >>> {Approval [X] = {/pd:myFields/pd:Approved}=True}  
8/12/2008 8:05:08 >>> {Remarks [This is a test] =  
{/pd:myFields/pd:Remark}} 8/12/2008 8:05:08 >>> Number of  
email based workitems received: 11
```

## POP3 Limitations

The following limitations apply when using Email Approval on a POP3 server:

- There is no response while testing a connection if you deselect **SSL-Connect** when the POP3 Server requires SSL.
- The incorrect emails will not be deleted from the mailbox even if the option **Delete incorrect approval emails** is selected.

## Creating an Email Template to Support Approvals

For information about creating an email template for direct approvals, see the Envision Online Help.

## ContentListener AgileConnector

---

The Content Listener AgileConnector extension enables you to initiate processes on items in a SharePoint list or library based on conditions you specify. The Content Listener AgileConnector runs a CAML query based on a schedule you specify to evaluate the items in the SharePoint list and initiate the appropriate processes.

For example, you could initiate an escalation processes for all items in a SharePoint list that are designated high priority or past due.

## Enabling the ContentListener AgileConnector

To enable the AgilePoint Server extension:

1. Open the AgilePoint Server Configuration utility and go to the **Extension** window.
2. Click the **Add** button.
3. Click the **Ellipses** button on the Extension window and add the following assembly:

```
...\AgilePointServer\bin\Ascentn.AgileConnector.ContentListener.dll
```

## Configuring the ContentListener AgileConnector

Once you have added the ContentListener AgileConnector

### Prerequisites

1. Enable the ContentListener AgileConnector.

For more information, see [Enabling the ContentListener AgileConnector](#) on the [AgilePoint Support Portal](#).

### Navigation

1. On the **AgilePoint Server Configuration Utility**, click the **Extension** Tab.

### Instructions

1. On the **Extension** tab, select **ContentListener**.
2. Click **Configure**.
3. On the **SharePoint Content Listener Connector Configuration** window, complete the fields as described in this topic.

### Field Definitions

Field Name	Definition
Add Task	Creates a new task.
Delete Task	Removes an existing task.
SharePoint Access Credentials	<p>The credentials you want to use to authenticate to SharePoint.</p> <ul style="list-style-type: none"> <li>• <b>AgilePoint System Account</b> - The standard AgilePoint system account</li> <li>• <b>Custom Account</b> - Credentials for an account you specify in the <b>Domain</b>, <b>User</b>, and <b>Password</b> fields.</li> </ul>
Schedule Name	A freetext name for the schedule.

Field Name	Definition
Site	The URL of the SharePoint site associated with the process.
List	The SharePoint list associated with the process.
Process	The process model to use for the initiated process.
CAML Query	<p>Specifies the CAML query used to initiate the process.</p> <p>You can type or paste a CAML query in the box, or click the Ellipses button to open the CAML Query Configuration window.</p> <p>For more information, see <a href="#">CAML Query Configuration</a> on the <a href="#">AgilePoint Support Portal</a></p>
Recurrence	<p>Specifies the schedule to run the CAML query. Options are:</p> <ul style="list-style-type: none"> <li>● <b>One Time</b> - The schedule occurs only one time.</li> <li>● <b>By Minute</b> - The schedule occurs once every specified number of minutes.</li> <li>● <b>By Day</b> - Recurs at the specified time on the specified interval of days.</li> <li>● <b>By Week</b> - Recurs at the specified time on the specified days.</li> <li>● <b>By Month</b> - Recurs at the specified time on the specified days of the specified months.</li> </ul>

## DataService AgileConnector

This AgilePoint Server extension (AgileConnector) allows you to enable application data services to collect and track application data. The Data Services includes two core components:

- Data Population
- Data Tracking

Data Population allows you to write to a database the desired application data values. The data can then be used for reporting purposes. The configuration is done via AgilePoint Envision. For more information, see [Data Services](#) on the [AgilePoint Support Portal](#).

Data Tracking provides the functionality to set up fields in AgilePoint Envision to be monitored for changes to application data, for example you can see for a specific field on a form, the "Old Value" and if the data changes, the "New Value". This viewpoint is provided via the AgilePoint Enterprise Manager Data Tracking tab.

## Enabling the DataService AgileConnector

To enable the AgilePoint Server extension:

1. Open the AgilePoint Server Configuration utility and go to the **Extension** window.
2. Click the **Add** button.
3. Click the **Ellipses** button on the **Extension** window and add the following assembly:  
`...\AgilePointServer\bin\Ascentn.AgileConnector.DataService.dll`
4. Give the AgileConnector a unique name based on the Application for which it will be associated.
5. Click **OK**.
6. Click the **Configure** button and configure the Data Service with the following parameters:
  - **Application Filter** - For InfoPath applications, enter **SPSIntegration**. For ASP.NET applications, enter the value of the **Application** property in your process model.
  - **Connection String** - A connection string that points to a valid database that contains the Temporary tracking table for the Data Services. Example:  
`Server=;Database=AgilePointTracking;Trusted_Connection=Yes`
7. Click **OK**.

## EventService AgileConnector

---

This AgilePoint Server extension (AgileConnector) allows you to initiate processes automatically via scheduling, email, database, or file dropping.

## Enabling the EventService AgileConnector

To enable the AgilePoint Server extension:

1. Open the AgilePoint Server Configuration utility and go to the **Extension** window.
2. Click the **Add** button.
3. Click the **Ellipses** button on the Extension window and add the following assembly:

```
...\AgilePointServer\bin\Ascentn.AgileConnector.EventService.dll
```

After registering the EventService AgileConnector, you can check the AgilePoint Server log file for verification. If you see the two lines as shown below in the log file, this means that the EventService AgileConnector configuration is correct.

```
2/23/2009 2:23:14 PM >>>
    EventServiceManager EventService Started.
2/23/2009 2:23:14 PM >>> EventServiceManager,
    Event count: [number of event]
```

## MSMQ AgileConnector

---

This AgilePoint Server extension (AgileConnector) allows you to run Microsoft Message Queuing.



## Enabling the MSMQ AgileConnector

To enable the AgilePoint Server extension:

1. Open the AgilePoint Server Configuration utility and go to the **Extension** window.
2. Click the **Add** button.
3. Click the **Ellipses** button on the Extension window and add the following assembly:  
`...\AgilePointServer\bin\Ascentn.AgileConnector.MSMQ.dll`
4. Click **OK**.
5. Click the **Configure** button and specify the desired configuration settings.

## MSWFRuntime AgileConnector

---

This AgilePoint Server extension (AgileConnector) allows you to enable AgilePoint Server to host and execute Microsoft Windows Workflow Foundation activities at run time. AgilePoint provides the Sequential Workflow AgilePart that can be initiated from an AgilePoint process as a sub-process to facilitate the data-exchange between AgilePoint and Windows Workflow Foundation. The Sequential Workflow AgilePart can be customized by leveraging this AgileConnector for Windows Workflow Foundation.

This AgileConnector is implemented as a class named **Ascentn.AgileConnector.MSWFRuntime** in the **Ascentn.AgileConnector.MSWFRuntime** assembly. The assembly is located by default in the **...\AgilePointServer\bin\** folder under your AgilePoint Server installation location.

Once you have enabled and configured the AgileConnector from the AgilePoint Server Configuration utility's Extensions window (as shown below), then you can create AgilePoint workflow applications that execute Windows Workflow Foundation activities and workflow applications.

## Enabling the MSWFRuntime AgileConnector

To enable the AgilePoint Server extension:

1. Open the AgilePoint Server Configuration utility and go to the **Extension** window.
2. Click the Add button.
3. Ensure the database is configured properly.
4. Click the Ellipses button on the Extension window and add the following assembly:  
`...\AgilePointServer\bin\Ascentn.AgileConnector.MSWFRuntime.dll`
5. Click **OK**.
6. Click the **Configure** button and specify the desired configuration settings. It prompts the following window for the Windows Workflow Foundation persistence and tracking database configuration.

This step requires DBA privileges for creating tables and stored procedures. Also, the following SQL files are used:

- **SqlPersistenceService\_Logic.sql**

- **SqlPersistenceService\_Schema.sql**
- **Tracking\_Logic.sql**
- **Tracking\_Schema.sql**

These files can be found in the AgilePoint Server folder at **...\AgilePoint Server\Components Workflow Foundation**.

The Database Server needs to be same as AgilePoint Server, but the Database can be different.

7. Once finished with the configuration, click **OK**.

## RemotingService AgileConnector

---

This AgilePoint Server extension (AgileConnector) allows you to enable and configure AgilePoint Server to use Remoting to interact with AgilePoint Server. This extension opens up a port that can be used to connect (via Remoting) to the AgilePoint Server Process Engine and API. This AgileConnector is implemented as a class named **Ascentn.Workflow.Extension.RemotingService** in the **Ascentn.AgileConnector.RemotingService.dll** assembly. The assembly is located by default in the **...\AgilePointServer\bin\** folder under your AgilePoint Server installation location.

Once you have enabled and configured the AgileConnector from the AgilePoint Server Configuration utility's Extensions window (as shown below), then you can create client applications that use Remoting to interact with AgilePoint Server.

## Enabling the RemotingService AgileConnector

To enable the AgilePoint Server extension:

1. Open the AgilePoint Server Configuration utility and go to the **Extension** window.
2. Click the **Add** button.
3. Click the **Ellipses** button on the Extension window and add the following assembly:  
`...\AgilePointServer\bin\Ascentn.AgileConnector.RemotingService.dll`
4. Click **OK**.
5. Click the **Configure** button and specify the desired configuration settings.
6. Click **OK**.

## SAP Integration AgileConnector

---

This AgilePoint Server extension (AgileConnector) enables you to run the SAP Integration component of the AgilePoint BPMS Suite.

## Enabling the SAP AgileConnector

To configure the SAP AgileConnector, do the following.

## Navigation

Navigate to the Extensions Tab:

1. Click **Start > All Programs > AgilePoint > AgilePoint Configuration**.
2. On the **AgilePoint Server Configuration Tool** window, click the **Extensions** tab.

## Instructions

1. On the **Extensions** tab, click **Add**.
2. Browse to the assembly **[AgilePoint Server Installation]\bin \Ascentn.AgileConnector.SAPIntegration.dll**, and then click **OK** to add this extension to AgilePoint Server.

## Configuring the SAP AgileConnector

To throttle the number of concurrent connections that are made to SAP, do the following.

### Navigation

Navigate to the Extensions Tab:

1. Click **Start > All Programs > AgilePoint > AgilePoint Configuration**.
2. On the **AgilePoint Server Configuration Tool** window, click the **Extensions** tab.

### Instructions

1. On the **Extensions** tab, select the **SAPIntegration** AgileConnector.
2. Click the **Configure** button.
3. In the configuration window for the SAP Integration AgileConnector, change the number of concurrent threads as required.

## SharePoint AgileConnector

---

This AgilePoint Server extension (AgileConnector) allows for the communication between AgilePoint Server and SharePoint. This extension is only applicable for the AgilePoint SharePoint Integration v2.

## Enabling the SharePoint AgileConnector

To enable the AgilePoint Server extension:

1. Open the AgilePoint Server Configuration utility and go to the Extension window.
2. Click the **Add** button.
3. Click the **Ellipses** button on the Extension window and add the following assembly:  
`...\AgilePointServer\bin\Ascentn.SharePoint.AgileConnector.dll`
4. Change the name from AgileConnector to SPSIntegration, provide the Impersonator (e.g. Administrator).

5. Optionally, you can click **Configure** to set the maximum thread for SharePoint access and to set the credential for SharePoint access. By default it will use the AgilePoint System User Account credential.

## SPSIntegration Extension

---

This server extension allows you to configure the authentication behavior between AgilePoint Server and AgilePoint SharePoint Integration.

The impersonator you specify below must be a valid registered AgilePoint user. This is done to grant the AgilePoint SharePoint Integration process sufficient security privileges on the workflow server. It is recommended to use the same user account that is used as the Identity of the Application Pool used by the AgilePoint Server and/or SharePoint Web sites. However, the impersonator you must choose must meet the following criteria at a minimum:

- The impersonator must be the same user account that was specified in the **SPS Sample Installation** dialog during the AgilePoint SharePoint Integration installation.
- The impersonator must be a registered user in AgilePoint Server. (This can be done using AgilePoint Enterprise Manager, if necessary).
- The impersonator must be a valid user who can access SharePoint.

## Enabling the Extension

To enable the AgilePoint Server extension:

1. Open the AgilePoint Server Configuration utility and go to the Extension window.
2. Click the **Add** button on the Extension window.
3. Enter **SPSIntegration** as the name, and the domain-qualified username of the AgilePoint user account that SharePoint should use to interact with AgilePoint Server at run time.  
Leave the Assembly and Class Name fields blank.
4. Click **OK**.

## Configuring SharePoint Authentication

To configure SharePoint authentication for the SPSIntegration extension:

### Prerequisites

Before setting up Forms-Based Authentication, you must set up Forms Authentication in your SharePoint environment using the instructions from Microsoft: <http://msdn.microsoft.com/en-us/library/bb975136%28v=office.12%29.aspx>

### Instructions

1. In the AgilePoint Server Configuration Utility on the **Extension Window**, select **SPSIntegration**.
2. Click **Configure**.

3. On the AgileConnector for SharePoint dialog box, select the user account you want to use to connect to SharePoint:
  - **Use AgilePoint System Account** - Authenticates using the AgilePoint system account.
  - **Logon as the following user** - Authenticates using the credentials you specify.
4. If you want to use Forms-Based Authentication (SharePoint 2003, 2007) or Claims-Based Authentication (SharePoint 2010), select **Use Forms Based Authentication**.
5. If you are **not** using Forms-Based Authentication, enter a domain in the **Domain** field.
6. Enter the **Username** and **Password**.
7. Click **OK**.

## SPSyncModule Extension

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This AgilePoint Server extension (AgileConnector) allows you to synchronize SharePoint site collection groups with AgilePoint groups automatically.

### Requirements

The following are requirements for the SPSyncModule AgileConnector:

- The AgilePoint System User (as defined in the AgilePoint Server Configuration utility) should be a SharePoint user.
- AgilePoint Server's Application Pool's Identity user account (as configured in IIS) needs to have read permissions to the SharePoint data.

### Enabling the Extension

To enable the AgilePoint Server extension:

1. Open the AgilePoint Server Configuration utility and go to the **Extension** window.
2. Click the Ellipses button next to the Assembly field and add the following assembly: ...  
**\\AgilePointServer\bin\SPSyncModule.dll**
3. Leave the **Impersonator** field blank.
4. Click **OK**. Now you will need to configure the module to schedule the synchronization.
5. Click the **Configure** button, and specify the desired configuration settings. In the configuration interface, you can specify the SharePoint site for which you want to synchronize the groups; you can also optionally provide the site prefix and group prefix. You can also specify the synchronization with the frequency of every day, week, or month and at a particular time of day starting with the day you set the schedule. The synchronization module also provides the option of registering the users automatically or sending an alert email to AgilePoint system user if there are members in the SharePoint groups that have yet to be registered in AgilePoint.
6. Provide a valid SharePoint Site URL, for example `http://[hostname]:[port]/sites/MySite`.
7. The **Site Prefix** field is optional. In a case where two site collections are configured, then groups with a common name can be distinguished using this property. For example Site "A" has a

group called "Employees" and Site "B" also has a group called "Employees". In AgilePoint, you can create two groups "SiteA\_Employees" corresponding to Employees group in site A and "SiteB\_Employees" corresponding to siteB's Employees. So while configuring Site A mention "SiteA\_" in site prefix so that it will sync with "SiteA\_Employees" during the synchronization process and for site B mention "SiteB\_" in site prefix so that it sync's with "SiteB\_Employees".

8. The "Group Prefix" field is optional. This property is used in case a new group is created in SharePoint and you want that group to be created in AgilePoint. If a group prefix is not empty, then all the groups created in SharePoint starting with a Group prefix value will be created in AgilePoint during the Synchronization process. For example, the group prefix value is set as "GR\_" then all the new groups in SharePoint starting with GR\_ will be created and synced during the synchronization process.
9. The **Schedule** section is used to schedule the frequency of synchronization. You can configure Synchronization frequency to sync daily (Every Day) at a particular time, or Weekly (Every Week), or Monthly (Every Month).
10. The **Option** section provides an option to select what action needs to be taken when a SharePoint group member is not an AgilePoint user. Either one can select to register user to AgilePoint automatically or send a notification to AgilePoint System user.

## Group Member Synchronization Rules

- Only groups that have already been added into AgilePoint will be synchronized with SharePoint. New SharePoint groups will be added automatically to AgilePoint only if the group prefix value is not empty and the new SharePoint group name starts with a Group prefix value. The new groups will automatically be assigned to the default "Users" Role. If a group prefix value is empty, then new groups can be added manually through the Enterprise Manager interface.
- The changes of user members (adding or removing) in the SharePoint groups will be synchronized to AgilePoint but the changes in AgilePoint groups will NOT be synchronized back to the SharePoint groups.
- The synchronization only applies to member association (Add or Remove) within the groups. Group properties such as names and descriptions are NOT synchronized.
- When a new member is added to SharePoint group, this member will also be added to the corresponding AgilePoint group. If the actual user entity is not registered in AgilePoint yet, the user entity will be registered to AgilePoint automatically.
- When a member is removed from SharePoint group, this member in the corresponding AgilePoint group will also be removed. The actual user entity will NOT be removed from AgilePoint as the same user entity can also be associated with other groups in the system.

## User Synchronization Rules

Changes to the following SharePoint User properties will be synchronized to AgilePoint. Other properties will NOT be synchronized.

- Full Name
- Email Address
- Department

- Title
- Manager

## Scheduling

The schedule of the synchronization is set through the module's configuration interface. The synchronization can be performed at a particular time of day with the frequency of every day, every week, or every month.

For example, if you schedule the synchronization to be performed at 2am on Jan. 1 and you also select **Every day** as the frequency, the synchronization will be started automatically at 2am on Jan 1, Jan 2, Jan 3, etc.

The following table summarizes the different ways that the schedule can be set for the synchronization.

Frequency	Time	1st Sync	2nd Sync	3rd Sync	4th Sync	5th Sync
Every Day	2am	Jan. 1	Jan. 2	Jan. 3	Jan. 4	Jan. 5
Every Week	2am	Jan. 1	Jan. 8	Jan. 15	Jan. 22	Jan. 29
Every Month	2am	Jan. 1	Feb. 1	March. 1	April. 1	May. 1

The synchronizations typically happen within five minutes of the scheduled time. For example, if the scheduled time is 2am, the actual synchronization could happen between 1:55am to 2:05am.

## Exception Handling

This module also provides exception handling for the scheduling. In the event that your server is down during the scheduled synchronization, as soon as your server is back online, the synchronization will be automatically kicked off. After that, the next synchronization will resume the original schedule.

## Log Files

The following is an example of the log message in the ActiveDirectorySynchronizer.log file:

```
3/1/2005 5:51:49 PM>> Synchronization has started
to perform on 3/1/2005 5:51:47 PM
Synchronizing Group 'Employees', SharePoint site URL =
http://r61i-01:8000 Registering user 'ASTN\Test1' to
AgilePoint. User full name: Test1
```

## Notifications

In addition to log files that keep track of the synchronization statuses, the synchronization module also provides email notification capability. Email notification is sent out to the AgilePoint System User with information about the synchronization. This will allow the system user to determine if there is a need to manually synchronize the groups or users in the event of failed synchronization.

## Configuration Interface

### SharePoint Section

- **SiteURL** - Provide a valid SharePoint site URL, for example `http://[hostname]:[port]/sites/MySite`
- **Site Prefix** - This property is optional. In case two site collections are configured then groups with common name can be distinguished using this property. For example Site "A" has group called "Employees" and Site "B" also has a group called "Employees". In AgilePoint you can create two groups "SiteA\_Employees" corresponding to Employees group in site A and "SiteB\_Employees" corresponding to siteB's Employees. So while configuring Site A mention "SiteA\_" in site prefix so that it will sync with "SiteA\_Employees" during synchronization process and for site B mention "SiteB\_" in site prefix so that it sync's with "SiteB\_Employees"
- **Group Prefix** - This property is optional. This property is used in case a new group is created in SharePoint and you want that group to be created in AgilePoint. If a group prefix is not empty then all the groups created in SharePoint starting with Group prefix value will be created in AgilePoint during Synchronization process. For example, the group prefix value is set as "GR\_" then all the new groups in SharePoint starting with GR\_ will be created and synced during synchronization process.

### Option Section

This section provides an option to select what action needs to be taken when a SharePoint group member is not an AgilePoint user. Either one can select to register user to AgilePoint automatically or send a notification to AgilePoint System user.

### Schedule Section

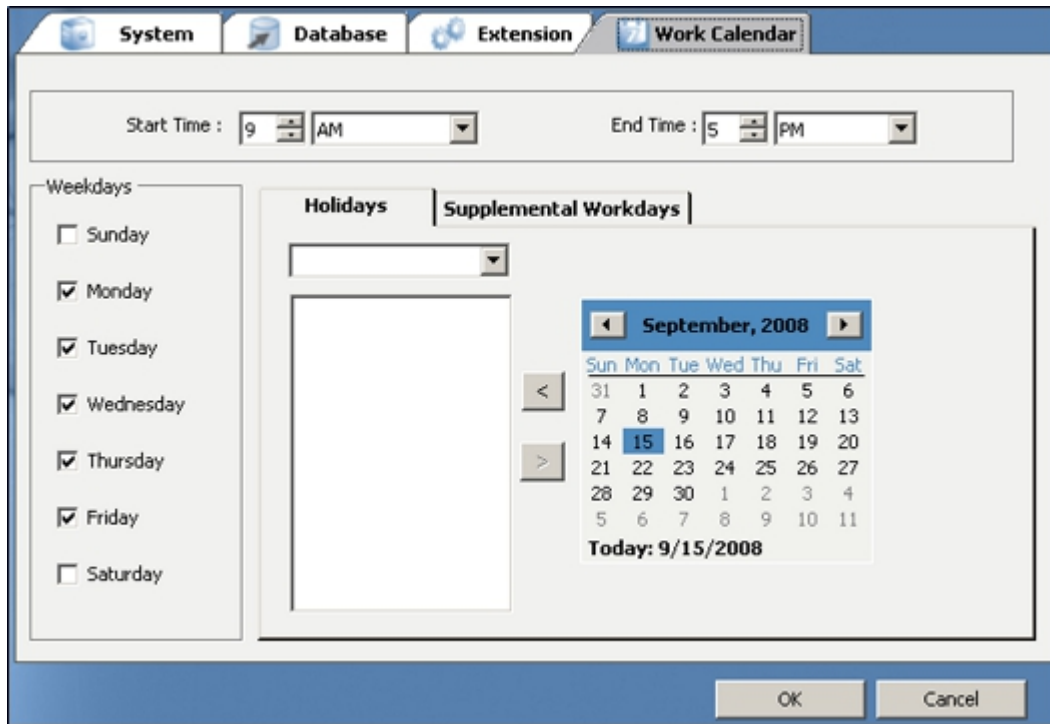
This section is used to Schedule the frequency of Synchronization. One can configure Synchronization frequency to sync daily (Every Day) at particular time, or Weekly (Every Week) or Monthly (Every Month).

## Work Calendar Window

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This window allows you to configure the "business hours" that are used by certain AgilePoint technologies that use "business time". E.g. When a Manual or Delay AgileShape is configured to use "business time", the settings on this window determine how the specified interval of "business time" corresponds to real (absolute) time.





# AgilePoint Deployment Services

The AgilePoint Deployment Utility is used to package and migrate AgilePoint Process Models and associated AgilePart/AgileWork assemblies amongst the different AgilePoint Server environments (e.g. Development, Testing, Staging, and Production). This tool can also be used to backup and restore Process Models and associated AgilePart/AgileWork assemblies.

Installing the AgilePoint Deployment Services is optional. For a fresh installation and upgrade, the AgilePoint Deployment Services is installed as a separate component via the **AgilePoint Utilities and Other Support Files** section of the installer.

The AgilePoint Deployment Services consists of the following components:

- AgilePoint Deployment Service
- AgilePoint Deployment Utility

## AgilePoint Deployment Service

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The AgilePoint Deployment Service is the Windows Service that runs on the AgilePoint Server machine, and provides a WCF communication channel between the server and the client.

## AgilePoint Deployment Utility

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The AgilePoint Deployment Utility is used to package and migrate AgilePoint Process Models and associated AgilePart/AgileWork assemblies amongst the different AgilePoint Server environments (e.g. Development, Testing, Staging, Production). This tool can also be used to backup and restore Process Models and associated AgilePart/AgileWork assemblies.

## Opening the AgilePoint Deployment Utility

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To open the AgilePoint Deployment Utility:

1. Click **Start > All Programs > AgilePoint > AgilePoint Deployment Utility**. The AgilePoint Deployment Utility appears.

## Adding an AgilePoint Server

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To expose process templates and associated dependencies that are deployed to an AgilePoint Server, first add the AgilePoint Server to the server collection. Two things are accomplished at this stage; the first is to test the connection to the AgilePoint Server, the second is to create a connection to the AgilePoint Server. After the information about the AgilePoint Server is gathered, the AgilePoint Deployment Service will validate the connection, and the certification of the user.

To add an AgilePoint Server:

1. From the AgilePoint Explorer tab, click the **Add** button.

2. In the **Display Name** field, type a Display Name that specifies the name of the AgilePoint Server that will be displayed in the AgilePoint Server Collection list.
3. In the **Server** field, select either **Host Name** or **IP Address** and enter the information about the AgilePoint Server as necessary.
4. In the **Port** field, type the Port number for the WCF Service (the default is 8917). The port number can be found and changed via the **apds.exe.config** file located at C:\Program Files\AgilePoint\AgilePoint Deployment Service.
5. In the **Domain** field, type the Domain Name for the AgilePoint Server.
6. In the **Username** field, type the AgilePoint Server System username.
7. In the **Password** field, type the password for the AgilePoint Server System user.
8. Click **Test Connection** to test the connection to the AgilePoint Server. If the test connection is successful, click **OK**.
9. The AgilePoint Deployment Utility appears with the AgilePoint Server added.
10. Repeat the process to add the desired AgilePoint Servers to the AgilePoint Deployment Utility.

## Removing an AgilePoint Server

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For one reason or another, an AgilePoint Server may need to be removed from the collection if it is no longer used.

To remove an AgilePoint Server:

1. From the AgilePoint Explorer tab, select the AgilePoint Server for which you would like to remove and click the **Remove** button on the toolbar. The AgilePoint Server is removed from the list.

## Backing up a Process Model and Associated Dependencies

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The Backup function allows for Process Models and associated dependencies on an AgilePoint Server to be backed up into a package file. The process definition will be saved as an XML file, and the associated dependencies will be copied from GAC. After all items are gathered, a package file (.odp) will be created and saved to the location specified. The package file can then be restored in a recovery scenario.

To backup a process model and associated dependencies:

1. From the **AgilePoint Explorer** tab, select the AgilePoint Server for which you would like to backup a Process Model and associated dependencies from and click the **Backup** button on the toolbar. The Backup Process Definition Wizard appears.
2. Click **Next**.
3. Select the Application(s) type(s) for which to backup and click **Next**.
4. Select the Process Model(s) and click **Next**.
5. Select the AgileParts and AgileWorks for which to backup and click **Next**.
6. Type the file path of browse and select the folder location for which to save the package file and click **Next**.

7. Once the backup has been completed successfully, click **Finish**. The package file is saved to the folder specified as an .odp package file that can then be later restored as needed.

## Restoring a Process Model and Associated Dependencies

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The Restore function allows for the package file (i.e. Process Model and associated dependencies) to be restored on an AgilePoint Server.

To restore a process model and associated dependencies:

1. From the AgilePoint Explorer tab, select the AgilePoint Server for which you would like to backup a Process Model and associated dependencies from and click the **Backup** button on the toolbar. The Restore Process Definition Wizard appears.
2. Add the desired package file(s) (.odp) and click **Next**.
3. Once the restore has been completed successfully, click **Finish**.

## Migrating a Process Model and Associated Dependencies

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The following provides instructions for migrating a Process Model and associated dependencies from one AgilePoint Server to another.

To migrate a Process Model and the associated dependencies:

In this example, the Document Approval Process Model and associated dependencies will be migrated from the AgilePoint Server on the Dimension4700-01 machine to the AgilePoint Server on the ibmt61-005 machine.

1. Right-click on the AgilePoint Server host machine name that contains the Process Model and dependencies for which you would like to export.
2. Click the **Import Export** button. The **Export & Import Process Definition Wizard** appears.
3. Click **Next**.
4. Select the application type(s) (ASP.NET or SPSIntegration).
5. Select the Process Template(s).
6. Click **Next**. The system automatically selects all the dependencies for the Process Templates.
7. Click **Next**. The list of Process Templates appears.
8. Click **Next**.
9. Select the target machine where AgilePoint Server is installed.
10. Click **Next**. The system moves the Process Template and associated dependencies to the target AgilePoint Server.
11. Click **Finish**.

## Rolling back a Process Model and Associated Dependencies

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The rollback function can be used if a Process Model and associated dependencies fail to be deployed to a target AgilePoint server, a new project fails to be deployed, or a package file fails to be restored. The AgilePoint Deployment Service records the information in a XML file and provides a way to rollback the migration.

To rollback a Process Model and the associated dependencies:

1. From the **AgilePoint Explorer** tab, select the AgilePoint Server that contains the Process Model and associated dependencies that failed to be migrated to a target AgilePoint server, the project failed to be deployed, or a package file failed to be restored and click the **Rollback** button on the toolbar. The **Rollback Process Definition Wizard** appears.
2. Click **Next**.
3. Select the item(s) (i.e. Process Model and dependencies, project, or package files) and click **Next**.
4. Once the rollback has been completed successfully, click **Finish**.

## Creating a Project

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If a new edition of a process definition is to be deployed to an AgilePoint Server, a new project can be created. The project includes the Process Model that will be saved in the folder location you have specified. The Process Model should be an XML file.

To create a new project

1. Click the **Local Projects** tab and click **Create**.
2. In the **Name** field, type a name for the project.
3. In the **Location** field, type a file path or browse and select the folder for which to store the project collection.
4. In the **Description** field, type a description for the process.
5. In the **Process** field type a file path to the XML file for a Process Model to add to the project or browse and select it.
6. Click **OK**.

## Project Functions

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### Add Project

Once a project is created, you can add a project to the project collection from another place by right-clicking on the project collection name and selecting **Add Project**.

### Remove Project

Once a project is created, you can remove a project from the project collection by right-clicking on the project name and selecting **Remove Project**.

### Add a Process

Once a project is created, you can add a process to the project by right-clicking on the project and selecting **Add Process**.

### **Remove a Process**

Remove a process from a project by right-clicking on the project and selecting **Remove Process**.

### **Analyze AgilePart**

Once a project is created, you can analyze AgileParts for a Process Model by right-clicking on a project and selecting **Analyze AgilePart**. If an AgilePart has been unintentionally removed, this function will allow you to get all AgileParts associated with the Process Model.

### **Add AgilePart Assembly**

Once a project is created, you can add an AgilePart assembly for a Process Model by right-clicking on an assembly and selecting **Add AgilePart Assembly**.

### **Exclude AgilePart Assembly**

Once a project is created, you can remove an AgilePart assembly for a Process Model by right-clicking on an assembly and selecting **Exclude AgilePart Assembly**.

### **Analyze AgileWork**

Once a project is created, you can analyze AgileWorks for a Process Model by right-clicking on a project and selecting **Analyze AgileWork**. If an AgileWork has been unintentionally removed, this function will allow you to get all AgileWorks associated with the Process Model.

### **Add AgileWork Assembly**

Once a project is created, you can add an AgileWork assembly for a Process Model by right-clicking on an assembly and selecting **Add AgileWork Assembly**.

### **Exclude AgileWork Assembly**

Once a project is created, you can remove an AgileWork assembly for a Process Model by right-clicking on an assembly and selecting **Exclude AgileWork Assembly**.

### **Analyze Dependency**

Once a project is created, you can analyze dependencies for an assembly by right-clicking on an assembly and selecting **Analyze Dependency**. If a dependency has been unintentionally removed, this function will allow you to get all dependencies associated with the assembly.

### **Add Dependency Assembly**

Once a project is created, you can add a dependency assembly for an assembly by right-clicking on an assembly and selecting **Add Dependency Assembly**.

### **Exclude Dependency Assembly**

Once a project is created, you can remove a dependency assembly for an assembly by right-clicking on an assembly and selecting **Exclude Dependency Assembly**.

## **Opening a Project**

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This function allows you to add an existing project to the project collection for editing.

To open a project:

1. Click the **Local Projects** tab and click **Open**.
2. Select the project to add or click **More** and browse to select it.

## Saving a Project

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After a project collection has been created or edited, it must be saved. All items of a project collection including the Process Model XML file and associated dependencies will be saved. When saving a project collection, you have the option to change the name as desired.

## Packaging a Project

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This function allows you to package an entire project collection and save it to the client machine for archive purposes.

## Deleting a Project or Project Collection

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This function allows you to delete a project or project collection from the Deployment Services Utility.

## Closing Projects

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This function allows you to close a project or project collection.

## Deploying a Project

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This function allows you to deploy a project to a target AgilePoint Server machine.

To deploy a project:

1. Click the **Local Projects** tab and click **Deploy**. The **Deploy Project Wizard** appears.
2. Click **Next**.
3. Select the project(s) to add and click **Next**.
4. Select the target AgilePoint Server and click **Next**.
5. Once the deployment has been completed successfully, click **Finish**.

## Viewing Deployment History

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This function allows you to view deployment history interaction (e.g. what operations occurred and the result) on an AgilePoint Server machine.

To view deployment history:

1. Click the **Deployment History** tab.
2. Expand the AgilePoint Server for which you would like to view deployment history.
3. Click the date icon to view the deployment history.

To delete deployment history, right-click on a date icon and select **Delete History**.



## AgilePart Deployment Wizard Utility

The AgilePart Deployment Wizard is a utility application that allows you to register custom AgilePart assemblies with AgilePoint Server so that those assemblies can be downloaded from AgilePoint Envision and used by AgilePoint Server's workflow engine at run time.

The AgilePart Deployment Wizard utility can be accessed from the Start menu at **Start > Programs > AgilePoint > AgilePart Deployment Wizard**

To use the utility to deploy an AgilePart to the server:

1. Run the AgilePoint Deployment Wizard utility. E.g. **Run: Start > Programs > AgilePoint > AgilePart Deployment**
2. Click **Add** to bring up the Deploy AgilePart dialog.
3. Click ... (next to the Assembly box) to browse and select the assembly containing the AgilePart.
4. (Optional) Click ... (next to the Visio Stencil box) to browse and select a Visio Stencil file that you want to associate with this AgilePart.
5. Click **OK**.

## Performance Tracing Utility

The Performance Tracing utility allows you to report on performance of custom components such as custom AgileParts, AgileWorks, AgileConnectors, AgileStubs, or Web Services. The performance criteria is based on milliseconds, for example you can write a query to return the most time consuming AgileParts. To use this utility, you will need a database that includes a table called WF\_PERF\_TRACES (it is not recommended to add this table to the AgilePoint database). You will also need to add a PerfTrace.config XML file to the root level folder where AgilePoint Server is installed (e.g. c:\inetpub\wwwroot\AgilePointServer\). The location of AgilePoint Server can be determined from the registry.

To use the utility to perform performance tracing:

1. Create a new table called **WF\_PERF\_TRACES** in a database as below. It is not recommended to use the AgilePoint database for this table.

```
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
SET ANSI_PADDING ON
GO
CREATE TABLE [WF_PERF_TRACES](
  [SOURCE] [varchar](1024) NULL,
  [CATEGORY] [int] NULL,
  [OBJECT_ID] [varchar](256) NULL,
  [TIME_STARTED] [datetime] NULL,
  [TIME_SPAN] [int] NULL
) ON [PRIMARY]
GO
SET ANSI_PADDING OFF
```

A sample query may return results as shown below:

	SOURCE	CATEGORY	OBJECT_ID	TIME_STARTED	TIME_SPAN
1	#AgilePart:Ascentn.AgileP...	0	b81fad11691e4ce7a6a92...	2007-08-03 15:56:47.350	171736
2	#AgilePart:Ascentn.AgileP...	0	77fb50b240dc422ebf6e9e...	2007-08-03 16:08:01.440	83109
3	#AgilePart:Ascentn.AgileP...	0	0e5a6fc77c6349f3a86564...	2007-08-03 19:22:50.990	54468
4	#AgilePart:Ascentn.AgileP...	0	5342b4a43d764c4a8b3ca...	2007-08-01 17:25:30.700	54338
5	#AgilePart:Ascentn.AgileP...	0	e3f8d99521bd481d8e6c3...	2007-08-01 19:26:36.017	47184
6	#AgilePart:LabOneAgilePar...	0	3621C4E80B004EBA97E0...	2007-07-20 03:38:29.173	35541
7	#AgilePart:LabOneAgilePar...	0	C19819A8BC6A4FAEA0A...	2007-07-20 03:38:29.253	35460
8	GetEvent	3	T42Z\Administrator	2007-08-05 21:22:11.120	31124
9	#AgilePart:Ascentn.AgileP...	0	e0e9a3590dd94b1984be3...	2007-08-03 17:16:47.443	20229
10	#AgilePart:Ascentn.AgileP...	0	b81fad11691e4ce7a6a92...	2007-08-03 16:00:28.307	16473

2. In a text editor, create a new file with the following content:, and save it with the name **PerfTrace.config**.

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<PerformanceTraceSetting xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Database>
    <Vendor>MSSQLDatabase</Vendor>
    <Connstr>server=localhost;database=lock;trusted_Connection=yes</
Connstr>
  </Database>
  <Filter>
    <Category>TrackingEvent</Category>
    <Category>WebService</Category>
    <Category>ProcessEventHandler</Category>
    <Category>AgilePart</Category>
  </Filter>
  <MinimumTimeSpan>10</MinimumTimeSpan>
</PerformanceTraceSetting>
```

3. Save the file to the following path and file name:

```
[AgilePoint Server installation root]\PerfTrace.config
```

4. Configure **PerfTrace.config** as follows:

- a. Within the **Database** section, enter the database vendor and connection string for your performance tracking database.
- b. The **Filter** section allows you to add the categories for which you want to report on. The categories that are available include:
  - **AgilePart** – Reports on all AgilePart data.
  - **ProcessEventHandler** – Reports on AgileWork and AgileStub data.
  - **TrackingEvent** – Reports on AgileConnector data.
  - **WebService** – Reports on Web Service data.

When doing the reporting, a few of the filtering options that are available include:

- **Exclude Categories** - To exclude one or more of the categories, remove the category from the PerfTrace.config file. For example, remove the <Category>WebService</Category> to tell AgilePoint Server to exclude Web Service tracing data from being recorded to the database.
- When writing your SQL, each category has been assigned a numerical identifier for filtering. This allows you to report only on a certain category. Each category is identified as follows:
  - **AgilePart** – 0.
  - **ProcessEventHandler** – 1.
  - **TrackingEvent** – 2.
  - **WebService** – 3.

A couple of sample query statements are shown below:

```
select * from WF_PERF_TRACES where source like
'%Sample%' order by time_span desc
```

```
select * from WF_PERF_TRACES
where category = 0 and source like '%Move%'
order by time_span desc
```

A sample query may return results similar to below:

	SOURCE	CATEGORY	OBJECT_ID	TIME_STARTED	TIME_SPAN
1	#AgilePart:Ascentn.AgileP...	0	b81fad11691e4ce7a6a92...	2007-08-03 15:56:47.350	171736
2	#AgilePart:Ascentn.AgileP...	0	77fb50b240dc422ebf6e9e...	2007-08-03 16:08:01.440	83109
3	#AgilePart:Ascentn.AgileP...	0	0e5a6fc77c6349f3a86564...	2007-08-03 19:22:50.990	54468
4	#AgilePart:Ascentn.AgileP...	0	5342b4a43d764c4a8b3ca...	2007-08-01 17:25:30.700	54338
5	#AgilePart:Ascentn.AgileP...	0	e3f8d99521bd481d8e6c3...	2007-08-01 19:26:36.017	47184
6	#AgilePart:LabOneAgilePar...	0	3621C4E80B004EBA97E0...	2007-07-20 03:38:29.173	35541
7	#AgilePart:LabOneAgilePar...	0	C19819A8BC6A4FAEA0A...	2007-07-20 03:38:29.253	35460
8	GetEvent	3	T42Z\Administrator	2007-08-05 21:22:11.120	31124
9	#AgilePart:Ascentn.AgileP...	0	e0e9a3590dd94b1984be3...	2007-08-03 17:16:47.443	20229
10	#AgilePart:Ascentn.AgileP...	0	b81fad11691e4ce7a6a92...	2007-08-03 16:00:28.307	16473

# APADM Command Line Utility

The APADM application is a command line utility that can be used to perform several different administrative tasks from the command line.

The APADM command line utility is located in your AgilePoint Server folder at ...\\AgilePointServer\\Tools\\apadm.exe

## APADM Archive Database Command

The APADM utility can be used to manually initiate archiving of AgilePoint Server data to the archive database. Archiving the workflow data will move the data for old processes from the main workflow database to an archive database. Old processes are those that have been Canceled or Completed for at least a specified minimum number of days.

### Prerequisites

- Configure a connection to an archive database using the AgilePoint Server Configuration utility.
- Log on to Windows using a user account with the access rights "Archive Process Instance" in AgilePoint.

### Navigation

1. Open the APADM Command Line Utility:

```
[AgilePoint Server installation]\\Tools\\apadm.exe
```

### Instructions

1. Run the archive database command:

```
apadm -archive [days] [AgilePointServer URL]
```

The following is an example of using the utility to archive all processes that were completed or canceled at least 170 days ago:

```
D:\>apadm -archive 170 http://[hostname]/AgilePointServer
Connecting AgilePoint Server...You currently logon as 'ASTN\admin'
Query AgilePoint database...12 process(es) can be archived.
Please enter <Y> to continue, otherwise stop...y
Archiving process '/sites/AgilePointFinancialSite/
ExpenseReport_InfoPath/ER-2005-0032.xml#1'...Done ( 0.334(s))
```

## APADM Synchronize Active Directory Command

The apadm.exe utility can be used to manually initiate a synchronization of AgilePoint Server's users and groups with Active Directory. (This is a manual alternative to the ADSyncModule server extension.)

## APADM Bulk Migration Command

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The apadm.exe utility can be used to do a bulk migration of process instances. For more information, see [Migrating a Process Model and Associated Dependencies](#) on the [AgilePoint Support Portal](#).

## AgilePoint Server Monitor Service

The AgilePoint Server Monitor is a Windows service application that can be used to monitor the AgilePoint Server application, and to automatically restart the application if IIS should stop and/or recycle the application's process. This service can be useful if you want to prevent your end users from experiencing the occasional delay that may occur during the first use of the application after IIS has recycled the application's worker process.

When running, the service makes a simple request to the AgilePoint Server application once per minute in order to ensure that the application is still initialized and running. If the application isn't running, the request will cause IIS to start it.

The executable is located in your AgilePoint Server folder at:

...\AgilePointServer\Tools\apsvrmon.exe

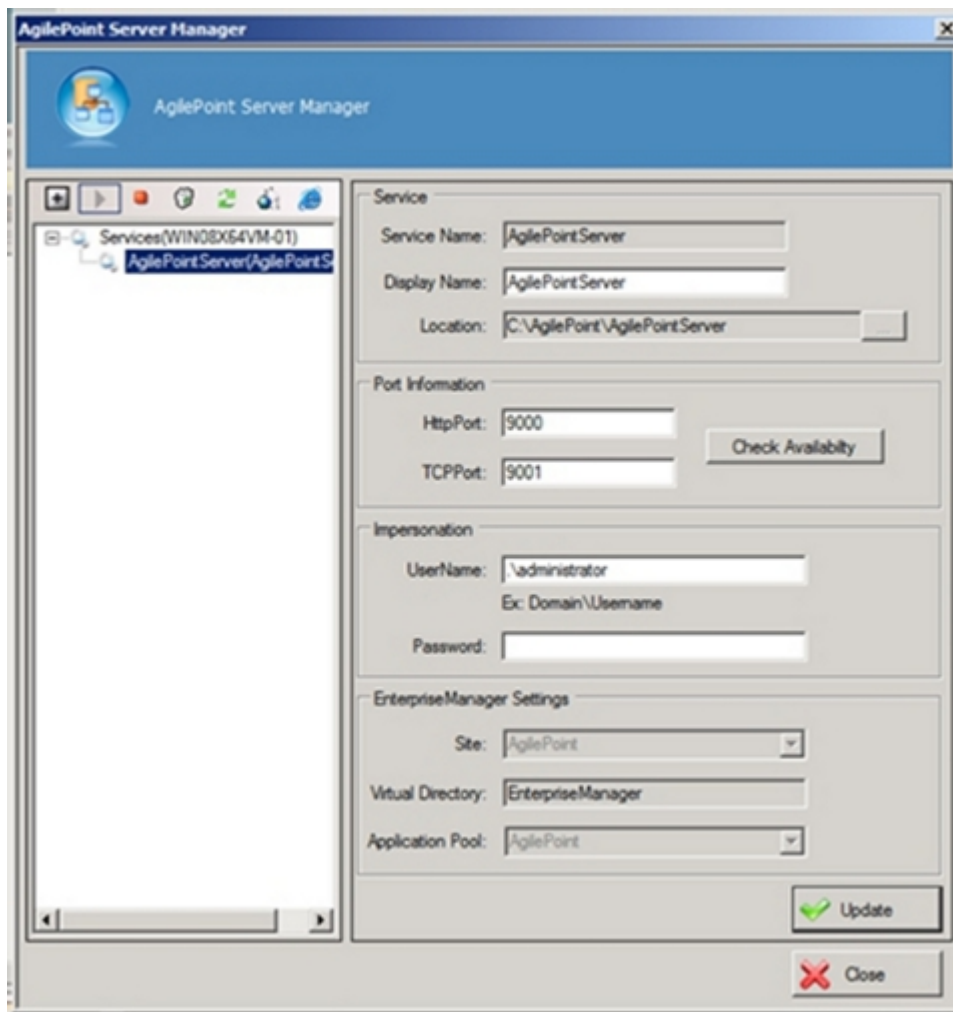
E.g. You could run the following command from the command prompt in the folder where the exe is located:

```
InstallUtil.exe apsvrmon.exe
```

## AgilePoint Server Manager (Windows Service Environments)

The AgilePoint Server Manager is a server management application that enables you to start, stop, add, delete, configure, and manage AgilePoint Server instances in a Windows Service environment.

To open AgilePoint Server Manager, click **Start > All Programs > AgilePoint > AgilePoint Server Manager**. The AgilePoint Server Manager window appears.



### Adding a Server Instance

To add a server instance, in AgilePoint Server Manager, click the **Add** button.



## Deleting a Server Instance

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To delete a server instance, in AgilePoint Server Manager, click the **Delete** button.

## Starting a Server Instance

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To start a server instance, in AgilePoint Server Manager, click the **Start** button.

## Stopping a Server Instance

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To stop a server instance, in AgilePoint Server Manager, click the **Stop** button.

## Configuring a Server Instance

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To configure a server instance, in AgilePoint Server Manager, click the **Configure** button. The AgilePoint Configuration window opens. Follow the instructions for the AgilePoint Server Configuration utility in this document.

## Managing a Server Instance

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To manage a server instance, in AgilePoint Server Manager, click the **Internet Explorer** icon. Enterprise Manager opens in Internet Explorer. Follow the instructions for Enterprise Manager in this document and the Enterprise Manager online help.