SharePoint Integration Guide

AgilePoint BPMS v5.0 SP2

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Virus-free software policy

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

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

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

- \texttt{r} - Indicates "revision." This helps to differentiate the document \textit{version} numbers, which start with \texttt{v}.
- \texttt{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 \texttt{X} value of 5.
- \texttt{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.
- \texttt{Z} - The minor document revision number. This number is incremented each time the document is republished.

AgilePoint Documentation in PDF and HTML

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

**Advantages of HTML Documentation**

- HTML is the \textbf{primary delivery format} for AgilePoint documentation.
- Unified, global \textbf{search} across all documentation. PDF documents allow you to search only within the context of a given PDF file.
- \textbf{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 \textbf{printed, archived}, and \textbf{transferred} (such as by FTP or email) than HTML documentation.

For more information, see \textit{Downloading Files and Sharing Links from the Documentation Library} on the AgilePoint Support Portal.

Contacting AgilePoint Sales

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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Contacting Customer Support


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

This document describes the SharePoint Integration component of the AgilePoint BPMS Suite.
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](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.
Localization

If the AgilePoint database locale is different from the SharePoint Machine locale it is required to add a new string value (APDBCulture) in the SharePoint machine Registry under the path HKEY_LOCAL_MACHINE/SOFTWARE/Ascentn/SharePoint.

The value of the APDBCulture is the localization code for the locale used in the AgilePoint database (e.g. en-US, ar-SA).
Web Parts

This section is a user's guide and reference to the features, functionality, usage, configuration, and administration of the Web Parts that are included with the AgilePoint SharePoint Integration component of the AgilePoint BPMS Suite.

Modifying Web Parts

This section describes options for modifying AgilePoint Web Parts. These features mainly use standard SharePoint functionality that is also supported by the AgilePoint Web Parts.

Modifying Web Part Display Properties

1. On the Web Part, click the drop-down arrow and select Modify My (Shared) Web Part. The page displays in edit mode.
2. Modify the Web Part as desired and click Apply.

Personalizing Web Parts

Personalization is a standard SharePoint functionality which permits each user of a site to personalize the pages and the elements in them that he/she has access to. These Web Parts are designed to permit personalization. This permits a user to configure the Web Parts including Filters, Sort By and Group By settings and these settings will persist for the user. To personalize an element, it first needs to have the corresponding AllowPersonalization property for that element set to true (If not present, you need to add it). For example the Welcome page (Default.aspx) of a top level site in a Publishing site collection has this property set to false for all Web Part Zones, meaning that, in order to enable Personalization, it is first necessary to set it to true using SharePoint Designer.

Once this is done, it is possible to personalize a page similar to any SharePoint page. See the SharePoint documentation from Microsoft for detailed instructions.

Web Part Connections

The Web Parts can be connected with other Web Parts using standard SharePoint connections. In addition, the Process Template Web Part can act as a provider for the Process Instance Web Part.

You can also use the Standard SharePoint Filter Web Parts. For example, you can use the Text Filter Web Part to filter the Task List Web Part by Task Name. For details, see the SharePoint documentation from Microsoft.
Extending the Web Parts

You can extend the AgilePoint Task List Web Part and AgilePoint Process Instance List Web Part to include custom actions. This is supported at the item level, as well as at the global level.

Custom Actions

This document provides instructions for adding Custom Actions in the AgilePoint Task List and AgilePoint Process Instance List Web Parts. This is supported at the item level as well as at the global level. Many times there is a requirement where apart from the built in task actions you need additional actions depending on some situation, in that case, Custom Actions can be added. These Custom Actions can be easily added as a plug-in and when configured, these custom actions will be available in the Web Parts along with other built in actions.

Custom Task Actions in the AgilePoint Task List Web Part

The following are the steps to design and configure Custom Actions:

1. Code the Custom Actions.

The user defined custom class needs to be derived from ICustomTaskListActions and needs to implement the AddCustomActions method.

Sample:

```csharp
public class CustomTaskListActions : ICustomTaskListActions
{
    public StringBuilder AddCustomActions(StringBuilder sb, WFManualWorkItem wi, string currentUser)
    {
        string formRenderUrl = "FormRender.aspx";
        try
        {
            formRenderUrl = ConfigurationSettings.AppSettings["FormRenderURL"].ToString();
        }
        catch
        {
        }
        if (wi.UserID.ToLower() == currentUser && (wi.Status == WFManualWorkItem.ASSIGNED || wi.Status == WFManualWorkItem.OVERDUE) && wi.Name == "FormRender")
        {
            sb.Append(AddMenuItem("Fill in", "window.open('" + formRenderUrl + "?WID=" + wi.WorkItemID + "')", "_layouts/images/edit.gif"));
        }
        return sb;
    }

    private string AddMenuItem(string text, string actionUrl, string imageUrl)
    {
        if (imageUrl == null || imageUrl == string.Empty)
        {
```

The AddCustomActions method takes three input parameters:

- StringBuilder
- WFManualWorkItem
- Current_user

WFManualWorkItem is the WorkItem for which the task needs to perform the action.

2. The custom Assembly should have a strong name.

3. Drop the custom Assembly in the GAC as well as the bin directory of the SharePoint Web application.

Configuring the Custom Action within the Task List Web Part

There are two different ways for which you can bind your custom Assembly to the AgilePoint Task List:

- Registering the custom Assembly in the GAC:
  
  Add a new setting in the appSettings node where the key is “CustomAgilePointTaskActions” and the value is “Class name, Assembly name” Sample:

  ```xml
  <add key="CustomAgilePointTaskActions"
       value="SPCustomAction.CustomTaskListActions,SPCustomAction" /> 
  ```

- Registering the custom Assembly in the AgilePoint Configuration List:
  
  Add a new entry in the AgilePoint Configuration List with the name as CustomAgilePointTaskActions, where the value is class name, assembly name

  Once the custom Assembly is properly registered, it will be available in your task list as shown below:
Global Actions in the AgilePoint Task List Web Part

Global Actions are similar to Custom Task Actions, except for the following differences:
2. During the configuration, you need to use the key “CustomAgilePointGlobalTaskActions” instead of “CustomAgilePointTaskActions” in the web.config and AgilePoint Configuration List.

Change Priority

This section provides information for a Global Action called Change Priority in the AgilePoint Task List Web Part. It allows the user to adjust the priority setting of tasks in the AgilePoint Task List Web Part.

Download the attached project files.

Extract the files, and drop the dll in GAC and bin directory of the SharePoint Web application. Also copy the ChangePriority.aspx file in C:\Program Files\Common Files\microsoft shared\web server extensions\12\TEMPLATE\LAYOUTS\AP.

Add an entry in the web.config or AgilePoint Configuration List as shown below: web.config:

```xml
<appSettings>
</appSettings>
```

-Or-

AgilePoint Configuration List:
- **Application** - CustomAgilePointGlobalTaskActions
- **AP Setting Key** - CustomAgilePointGlobalTaskActions
Custom Actions in the AgilePoint Process Instance List Web Part

This section provides the steps to design and configure Custom Actions in the AgilePoint Process Instance List Web Part:

1. Code the Custom Actions.

   The user defined custom class needs to be derived from ICustomProcessInstanceAction and needs to implement the AddCustomActions method.

   Sample:

   ```csharp
   public class CustomTaskListActions : ICustomProcessInstanceAction
   {
       public StringBuilder AddCustomActions(StringBuilder sb, string piid, string currentUser)
       {
           int count = 0;
           string formRenderUrl = "FormRender.aspx";
           formRenderUrl = formRenderUrl + "?PIID=" + piid;
           sb.Append(AddMenuItem(count.ToString(), "window.open('" + formRenderUrl + ")",  "_layouts/images/edit.gif")));
           return sb;
       }
   }
   
   private string AddMenuItem(string text, string actionUrl, string imageUrl)
   {
       if (imageUrl == null || imageUrl == string.Empty)
       {
           imageUrl = "/_layouts/AP/Image/warn16.gif";
       }
       string menuHtml = "<ie:menuitem id=" + Guid.NewGuid().ToString() + " type="option" iconSrc="" + imageUrl + "" onMenuClick="" + actionUrl + ");" text="" + text + "" title="" + text + "" menuGroupId="2147483647"></ie:menuitem>";
       return menuHtml;
   }
   }
   
2. Build and drop the assembly in the GAC and the bin directory of the SharePoint Web application.

3. Configure the Custom Action in the AgilePoint Process Instance List Web Part:

   This can be done in two ways:
   
   - Registering the custom assembly in the GAC. Add a new setting in the appSettings node with the key as “CustomProcessInstanceAction” and the value as “Class name, Assembly name”.

     For example:

     ```xml
     <add key="CustomAgilePointTaskActions" value="SPCustomAction.CustomTaskListActions,SPCustomAction" />
     
     - Registering the Custom Assembly in the AgilePoint Configuration List.
Add a new item in the AgilePoint Configuration List where the Application name is CustomProcessInstanceAction and the AP Setting Value is class name, assembly name

Custom Global Actions in the AgilePoint Process Instance List Web Part

Global Actions are similar to Custom Actions in the AgilePoint Process Instance List except for the following differences:

1. You need to derive your custom Global Actions class from:
   ICustomProcessInstanceGlobalAction, the AddCustomActions method accepts string[] PIIDs instead of string PIID.


Customizing the Process Name

This customization enables control over the Process Name to show something useful.

Customizing the Process Name for InfoPath Client processes:

It is first necessary to add/modify the code shown below in red in the script.js in

C:\Program Files\AgilePoint\AgilePoint Envision\InfoPath

```javascript
// Submit new form using InfoPath WebDAV Adapter
function CreateInfoPathFormByWebDAV(webdavAdapterName, fileName)
{
    var obj = new ActiveXObject("AgilePointInfoPath.Integration");
    var saveLocation = obj.GetDefaultSaveLocation();

    var dav = XDocument.DataAdapters(webdavAdapterName);
    dav_FOLDERURL = saveLocation;

    if(dav.FileName.toLowerCase() == "form.xml")
    {
        dav.FileName = fileName;
    }

    dav.Submit();

    XDocument.UI.Alert( "InfoPath form has been submitted successfully.\n\nDocument Name : " + dav.FileName);
}
```

Configuring the Data Connection:

In the form itself, change the Submit Data Connection as shown below. Anything between the _!_ (Underscore Exclamation Underscore) delimiters becomes the Process Name in the Web Parts. Note the now() function concatenated outside the delimiters to make sure the filenames are unique.

Use the format shown below to include any InfoPath data to be shown in the Process Name:
Custom Data Sources for Web Parts

AgilePoint SharePoint Integration supports displaying data from a custom data source on the Task List or Process Instance List SharePoint Web Parts.

Out of the box, AgilePoint provides custom data source configurations for SharePoint lists and custom attributes available on AgilePoint Server. However, you can also custom code your own custom data source configuration using the integration tools AgilePoint provides.

Deploy the Custom Data Source

To publish a custom data source for use with AgilePoint:

1. Create an assembly with a class that implements the IWebPartDataSource interface. This class should contain your custom logic to get data from external Data Source. The assembly should be strongly named.

The following specifications describe the interface:

- **Pi ids** parameter - Contains all process instance IDs the Web Part will render. This is useful if you want to filter your queries to external data source based on process instance ID. In fact, AgilePoint strongly recommends you use this parameter to optimize the performance, based on this diagram:
• **Fields** parameter: - An array of NameValues. Contains the fields that are configured for rendering on Web Part results. The name property of NameValue is the internal name of the field, and the value is the display name of the field.

• **Filters** parameter - An array of NameValues. Contains the filters for the data source. The Name property of NameValue is the internal name of the field, and the value is the value of the filter.

• **ConfigData** parameter - Is an array of NameValues. It contains configuration data for the data source.

• **Return type** - You must return a DataTable with your custom data. This DataTable should contain a column named ProcessInstanceID. This column is essential to merge with the main data source.

• **GetRequiredParameters** method - This method enables you to specify what parameters are needed to configure the data source. On configuration-time, those parameters will be rendered on Data Source Parameters configuration grid.

2. Deploy the assembly to the GAC.

**Configure the Custom Data Source**

You can use custom data sources in the SharePoint Task List and Process Instance List Web Parts. To configure the custom data sources in one of these Web Parts, do the following:

1. On your SharePoint site, to access the AgilePoint Configuration list, click **View All Site Content > AgilePoint Configuration**.
2. On the AgilePoint Configuration list, click **New > AgilePoint Config Setting Item**.
3. On the **AgilePoint Configuration: New Item** page, complete the fields as required:
   - **Application** – Enter CustomDataSources.
   - **AP Setting Key** - The exact name of the custom data source. For the data sources provided by AgilePoint, the names must be precisely as follows:
     - **SharePoint List** - SharePoint List DataSource
     - **Custom Attribute** - Custom Attr
   - **AP Setting Value** – The assembly information for your custom data source. The following are examples of the information required for the data sources provided by AgilePoint:
     - **SharePoint List** - AgilePoint.SharePoint.CustomDataSources.SharePointListDataSource, AgilePoint.SharePoint.CustomDataSources, Version=1.0.0.0, Culture=neutral, PublicKeyToken=b7c6f89c2c983acd
     - **Custom Attribute** - AgilePoint.SharePoint.CustomDataSourcesCustomAttributesDataSource,
Setting up the Custom Data Source for a SharePoint Web Part

To set up a custom data source for retrieval in a SharePoint Web Part:

1. Navigate to the page with the SharePoint list where you want to set up the custom data sources.
2. For the SharePoint list, navigate to Modify Shared Web Part.
3. In the configuration properties for the Web Part, click Custom Data Sources.
4. Use the Custom Data Sources Configuration dialog box to set up the custom data sources.

Adding a Data Source

To add a data source to the Web Part, select the name in the Available Sources list, and click Add.

Removing a Data Source

To remove a data source from the Web Part, select the name in the Configured Data Sources list, and click Remove.

Adding a Column to the Web Part List

To add a column to the Web Part:

1. On the Custom Data Sources Configuration dialog box, select the data source in the Configured Data Sources list.
2. Click the Add button ( ).
3. In the Internal field name box, enter the identifier for the data you want to display from the data source.
4. In the Display field name box, enter the name you want to appear in the SharePoint list.
5. Click the Update ( ) icon.
Editing a Column in the Web Part List

To edit a column in the Web Part list:
1. On the Custom Data Sources Configuration dialog box, click the Edit icon ( ),
2. Change the information you want in the fields.
3. Click the Update ( ) icon.

Removing a Column from the Web Part List

To remove a column in the Web Part list, on the Custom Data Sources Configuration dialog box, click the Delete icon ( ).

Modifying the URL for a SharePoint List Custom Data Source

If you are using a SharePoint list as a custom data source, you must provide the URL for the list:
1. On the Custom Data Sources Configuration dialog box, click the Edit icon ( ) for the List Url field.
2. In the Value field, enter the URL of the SharePoint list that you want to use as your custom data source.
3. Click the Update ( )
Task List Web Part
The AgilePoint Task List Web Part provides a Task List that displays any workflow tasks that are currently assigned to the user viewing the SharePoint site. Filtering, sorting and grouping are supported. This task list provides the following functionality:

- The names of the tasks.
- Links that allow the user to complete the assigned tasks.
- The current state of the workflow process associated with a task.
- The ability to reassign tasks, create linked work items, and go to the a document's source. (These capabilities are dependent upon the user's AgilePoint security privileges.)

The following options could appear in the Task column:

- View Process
- Open (View name)
- Complete Task (if in Envision, the Task has property *Wait Work Performed* is set to False)
- Take Assignment (if it is a task assigned to a pool of users)
- Take Assignment and Complete
- Return to Pool
- Cancel Task
- Cancel Process
- Reassign
- Task Rework: Permits doing a partial rework of any task that has already been completed.
- Create Linked Work Item: Permits creating tasks for others in ad-hoc manner.
- View Description: Shows content of Description parameter of the Activity as defined in Envision.
- Goto Source: Opens the source library where the item is stored.

Global Actions
You can use Global Actions to perform operations over all selected tasks # for example, complete or cancel a group of selected tasks.

Adding the AgilePoint Task List Web Part
The AgilePoint Task List Web Part for SharePoint can be placed in various locations in SharePoint. The AgilePoint Task List Web Part interacts with one or more servers (e.g. AgilePoint, SharePoint,
and/or database servers) whenever they are viewed or refreshed. This interaction is necessary and unavoidable in most cases, and is part of the AgilePoint system's expected usage patterns.

In some environments, the location for which the AgilePoint Task List Web Part is placed could have unintended effects on the system's performance. For example, in an environment where there are many thousands of SharePoint users, but only a fraction of those users interact with AgilePoint, placing the AgilePoint Task List control on an entry or Top Level site page that is frequently accessed by the entire group of SharePoint users may place additional unnecessary load on the AgilePoint system when the page is accessed by users that don't need access to the Web Part. In such a scenario, it may be better to place the Web Part on a sub site location that is only accessed by a more appropriate group of AgilePoint users and/or that is only accessed when necessary. You will notice errors being written to the AgilePoint Event Logs in the Event Viewer when a SharePoint site is being accessed (that includes the AgilePoint Task List Web Part) by a non-registered AgilePoint user.

**Configuration Options**

The AgilePoint Task List Web Part provides the following configuration options.

**Configuration Options**

**Show Tasks from other Virtual Servers (MOSS Web Applications)**

The AgilePoint Task List Web Part supports the ability to show tasks from multiple Virtual Servers (MOSS Web Applications). A SharePoint registry configuration is required to enable this feature.

**Showing tasks from multiple Virtual Servers (MOSS Applications) in the AgilePoint Task List Web Part**

1. Access the registry for the SharePoint machine.
2. For the ShowCrossVSTask registry entry, set the Value data field to 1. This allows tasks from multiple Virtual Servers (MOSS Applications) to show in the AgilePoint Task List.

**Showing External AgilePoint Web Application Tasks**

AgilePoint provides a powerful feature that allows users to include external AgilePoint Web application tasks in the AgilePoint Task List Web Part for SharePoint. Each process model in AgilePoint Envision has an associated "Application" name (as shown below). This name is configurable from AgilePoint Envision when the process model is open and no shapes or lines are selected. It will appear in the Property List in the Advanced.

You can use either the Manual or WebForm AgileWork to implement the Web application tasks.

To include external Web application tasks in the AgilePoint Task List Web Part for SharePoint:

1. Choose the Generic process model type, and change the Application name to something like MyASPNETApplication. Where MyASPNETApplication is the name of your Web application.

   The following process model template types can be used to implement the Web application tasks (i.e. Generic, Microsoft SPDoc, Microsoft SPList).
2. Add a new SharePoint List Item in the AgilePoint Configuration List. Open the AgilePoint Configuration List for the Site Collection and click New > AgilePoint Config Setting Item. The New Item page appears.

3. In the Application field, type AgilePointASPAssociation. This is a constant.

4. In the AP Setting Key field, type the name of your Web application.

5. In the AP Setting Value field, type the URL to the Web application.

6. In the Description field, enter a description about the Web application.

7. Click the Encrypted check box if you would like to encrypt the AP Setting Value.

8. Click OK. The Web application pages will now be served to the user based on your Manual activity Work to Perform property (e.g. Review).

Process Instance List Web Part

The AgilePoint Process Instance List displays all running process instances. Filtering, sorting, and grouping are supported.

Using the Process Instance List Web Part

By clicking on process name, the Web Part will show a menu with actions that the user can perform (e.g. if the user has privileges to cancel a process, this action will be available).

The Show Data action will be available if a process instance is an InfoPath-based process template, SharePoint Form Library is Web Browser enabled and associated InfoPath has a view named ROView (Read Only View). There is also a Go to Source action that opens the Form/Document library. You can perform some global actions over one or more process instances by checking the check boxes on the left and clicking on Global Actions.

Configuration Options

The Process Instance List Web Part provides the following configuration options.

Configuration Options

Process Model List Web Part

The AgilePoint Process Template List displays all process templates deployed on the AgilePoint Server.

By clicking on a process template name, the Web Part will show dynamically the actions that can be performed on the selected process template. If you have a process template bound to more than one SharePoint Library, or if you have more than one content type associated with the SharePoint Library, you can choose the correct option for each library or content type from the action menu.
Using the Process Model List Web Part

By clicking on a process template name, the Web Part will show dynamically the actions that can be performed on the selected process template. If you have a process template bound to more than one SharePoint Library, or if you have more than one content type associated with the SharePoint Library, you can choose the correct option for each library or content type from the action menu.

Configuration Options

The Process Template List Web Part provides the following configuration options.

Configuration Options
Additional Web Pages

This section is a user’s guide and reference to the features, functionality, usage, configuration, and administration of the various additional Web pages that are included with the AgilePoint SharePoint Integration component of the AgilePoint BPMS Suite.

AgilePoint Process Viewer for SharePoint

This page displays the current status of a process instance using a visual display. The following functionality is available in the Process Viewer:

- The ability to complete a task.
- A green border identifies an active task, a red border identifies an overdue task.

AgilePoint Manual Task Sample Pages

Several Web pages are provided that implement generic user interfaces for several typical Manual activities. These Web pages correspond to the special Manual AgileShapes built-in to AgilePoint Envision in the Microsoft SPS stencil (e.g. Approve, Complete, Publish, and Submit).
The AgilePoint Configuration List feature provides the administrative information and creates a new list called AgilePoint Configuration List when the feature is activated. By default, this list is populated with sample data, it is required to modify the items before using the integration. Go to View All Site Content on your SharePoint site and click AgilePoint Configuration List under the Lists section. Modify the following six items in the list as appropriate to your environment.

<table>
<thead>
<tr>
<th>Application</th>
<th>Title</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AgilePoint</td>
<td>ServerUrl</td>
<td>The URL of AgilePoint Server (e.g. <a href="http://127.0.0.1:9000/AgilePointServer">http://127.0.0.1:9000/AgilePointServer</a>)</td>
</tr>
<tr>
<td>AgilePoint</td>
<td>ImpersonatorDomain</td>
<td>The Domain Name</td>
</tr>
<tr>
<td>AgilePoint</td>
<td>ImpersonatorUser</td>
<td>The User Name</td>
</tr>
<tr>
<td>AgilePoint</td>
<td>ImpersonatorPass</td>
<td>The Password (Optionally, you can check the Encrypted check box in order to encrypt the value of this setting)</td>
</tr>
<tr>
<td>AgilePoint</td>
<td>Log</td>
<td>Location of the log files (e.g. C:\NewSPLog). You can give the FTP location also (e.g. ftp://netsvr1/AgilePointSharePoint/Log). If using an FTP server, the Impersonator user should have write permission on the FTP server.</td>
</tr>
<tr>
<td>AgilePoint</td>
<td>LogSwitch</td>
<td>You can provide switches for logging. The following are the available switches.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• All</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Info</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Debug</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Error</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>You can give multiple switches separating by a comma(,) (e.g. Debug, error, Info).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Default value is: All.</td>
</tr>
<tr>
<td>Application</td>
<td>Title</td>
<td>Value</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td>AgilePoint</td>
<td>OpenTasksInNewWindow</td>
<td>Determines whether tasks open in the current window or a new window.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• True – (Default) Tasks open in a new window</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• False – Tasks open in the current window.</td>
</tr>
<tr>
<td>AgilePoint</td>
<td>CheckFileUpload</td>
<td>This setting helps to deal with a SharePoint issue: If a SharePoint document library is set up to automatically start an AgilePoint process when a document is uploaded, it is possible to receive an error similar to the following: “The file xxx has been modified by SHAREPOINT\system on xxx.” This error is caused by a race condition where the process attempts to start before the document upload is complete. This setting determines whether SharePoint waits to confirm that SharePoint metadata has been added to the file before starting the process.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• True - (Default) SharePoint waits to confirm the metadata before starting the process.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• False - SharePoint does not wait to confirm the metadata before starting the process.</td>
</tr>
<tr>
<td>AgilePoint</td>
<td>ExcludeLibraryFromFileUploadCheck</td>
<td>Enables you to specify exceptions to CheckFileUpload=True. In other words, it enables you to effectively set CheckFileUpload=False only on a specified list of document libraries. Enter a semicolon (;) delimited list of URLs for the</td>
</tr>
<tr>
<td>Application</td>
<td>Title</td>
<td>Value</td>
</tr>
<tr>
<td>-------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>document libraries that you do not want to wait to confirm metadata before starting the process.</td>
</tr>
</tbody>
</table>

(Optional) It is recommended to keep separate AgilePoint Configuration Lists for each SharePoint Site Collection since this allows you the capability of connecting to different AgilePoint Servers for different SharePoint Site Collections in future. Also, things like different log folders for different SharePoint Site Collections for better tracking would be available. In a case where you have many SharePoint Site Collections within the same SharePoint Web application and you do not want to maintain the configuration list separately, and all site collections are going to connect to same AgilePoint Server, you can define one common AgilePoint Configuration List in the SharePoint Web Application web.config file as shown in the sample below:

```xml
<appSettings>
  <add key="APSettingsListName" value="AgilePoint Configuration" />
  <add key="APSettingsSiteUrl" value="http://demo3:8081" />
  <add key="APSettingsWebName" value="" />
</appSettings>
```

Where:

- **APSettingsListName** = The name of the AgilePoint Settings List.
- **APSettingsSiteURL** = The SharePoint SiteURL that contains the common AgilePoint Configuration List. The rest of the site collections will refer to this location and list as long as the individual AgilePoint Configuration list (which is auto-created in the site collection when this feature is activated) is deactivated or removed.
- **APSettingsWebName** = If this field is left blank, this means that the AgilePoint Configuration List is located at the top-level site. A value would indicate the Sub site name.
A SharePoint Library, List, or Content Type can be associated to an AgilePoint Process Model using the standard SharePoint approach. The AgilePoint Process Launcher allows you to easily workflow-enable regular SharePoint Libraries, Lists, and Content Types. It allows you to specify which process template will be invoked when a process is initiated within a specific SharePoint Form Library, List, or Content Type.

The following procedure explains how to workflow-enable a Form Library in SharePoint. Note that the procedure is similar for Document Libraries and Content Types. For Content Types, access the content type you want (Site Settings > Site Content Type Gallery), and modify the workflow settings as you would for a Form Library or List.

To workflow-enable a SharePoint Form Library:
1. Within the SharePoint Form Library, click Settings > Form Library Settings.
2. Click Workflow settings.
3. Select AgilePoint Process Launcher, and check the Start this workflow when a new item is created check box.
4. Select a process from the AgilePoint Process Model list and select the desired version from the Select Process Model Version list box.
5. After selecting the version of the AgilePoint Process Model, it will show the Process Model image. Click on Submit to complete the SharePoint entity, AgilePoint process association.
6. Upload a new document to the library. If you have checked the check box Start this workflow when a new item is created in Step 3, it will trigger the associated AgilePoint process when an item is created or uploaded to the library. Refresh the page and you will see the In Progress link below the process name column.
7. If Start this workflow when a new item is created was not checked at the time of creating the workflow association, you can start the workflow manually. Click on the drop down button next to the list item.
8. Click Workflows.
9. Click the AgilePoint Process that you want to trigger for this item.
10. When clicking on the In Progress link of the item, it will show the AgilePoint workflow status page.
11. The assigned user can take an action by clicking on the task name in the AgilePoint Task List.
12. Once the process completes, it shows as Completed status.
The SharePoint Configuration Manager utility allows you to configure the AgilePoint SharePoint configuration settings.

**Impersonation**

The Impersonation tab allows you to enter the domain-qualified username and password of the AgilePoint user account that SharePoint should use to interact with AgilePoint Server at run time.

**System Setting**

The Log group box on the System Setting tab allows you to turn on/off different types of logging.

Once data is available, AgilePoint will create the necessary folders to store the data. Error logging is fixed to always log, and is the most important type of logging for troubleshooting and is generally what is requested by Ascentn Support if issues surface. It is optional to turn on/off Information and Debug logging. The Information log provides sequential session descriptions. The Debug log provides information about the flow and status of activities. Be sure to purge these directories periodically to avoid using unnecessary disc space.

Below is an example of what the log files record.

**Debug:**

```
01/21/2008 11:10:20 <<< ConfigSetting deserializing successfully.(id=0).
01/21/2008 11:10:23 <<< ConfigSetting deserializing started....
01/21/2008 11:10:23 <<< Total 0 AgileLookProfiles, 0 are restored successfully.
Total 0 DocLibBindings, 0 are restored successfully.
Total 0 GenericListBinding, 0 are restored successfully.
Total 0 Sections, 0 are restored successfully.
01/21/2008 11:10:23 <<< ConfigSetting deserializing successfully.(id=0).
01/21/2008 11:10:26 <<< ConfigSetting deserializing started....
```

**Informational:**

```
07/25/2007 18:14:57 <<< Ascentn.SharePoint.Common has been initialized successfully. (Assembly version = Ascentn.SharePoint.Common, Version=4.0.0.1, Culture=neutral, PublicKeyToken=2f06ef94bac0a40f)
07/25/2007 18:14:57 <<< Ascentn.SharePoint.Common has been initialized successfully. (Assembly version = Ascentn.SharePoint.Common, Version=4.0.0.1, Culture=neutral, PublicKeyToken=2f06ef94bac0a40f)
07/25/2007 18:14:57 <<< Ascentn.SharePoint.Common has been initialized successfully. (Assembly version = Ascentn.SharePoint.Common, Version=4.0.0.1, Culture=neutral, PublicKeyToken=2f06ef94bac0a40f)
07/25/2007 18:34:56 <<< Ascentn.SharePoint.Common has been initialized successfully. (Assembly version = Ascentn.SharePoint.Common, Version=4.0.0.1, Culture=neutral, PublicKeyToken=2f06ef94bac0a40f)
```
07/25/2007 18:34:56 <<< Ascentn.SharePoint.Common has been initialized successfully. (Assembly version = Ascentn.SharePoint.Common, Version=4.0.0.1, Culture=neutral, PublicKeyToken=2f06ef94bac0a40f)

07/25/2007 18:34:56 <<< Ascentn.SharePoint.Common has been initialized successfully. (Assembly version =

Error:
01/21/2008 10:57:09 <<< FillCache()
Exception (Type=ThreadAbortException)
Error = Thread was being aborted.
CallStack =
  at System.Array.Copy(Array sourceArray, Int32 sourceIndex, Array destinationArray, Int32 destinationIndex, Int32 length, Boolean reliable)
  at System.Array.CopyTo(Array array, Int32 index)
  at System.Collections.ArrayList.InsertRange(Int32 index, ICollection c)
  at System.Collections.ArrayList.AddRange(ICollection c)
  at System.DirectoryServices.PropertyValueCollection..ctor(DirectoryEntry entry, String propertyName)
  at System.DirectoryServices.PropertyValueCollection.get_Item(String propertyName)
  at Microsoft.SharePoint.Administration.SPIisWebSite.get_ServerComment()
  at Microsoft.SharePoint.Administration.SPVirtualServer.InitializeIisComponents(SPIisWebSite iisInstance)
  at Microsoft.SharePoint.Administration.SPVirtualServer..ctor(SPIisWebSite iisInstance)
  at Microsoft.SharePoint.Administration.SPVirtualServerCollection.Undirty()
  at Microsoft.SharePoint.Administration.SPVirtualServerCollection..ctor()
  at Microsoft.SharePoint.Administration.SPGlobalAdmin.get_VirtualServers()
  at Ascentn.SharePoint.Common.SPSVirtualServerCache.FindSPVirtualServerByID(Guid virtualServerId)
  at 1..ctor(DboSPVirtualServer A_0)
  at Ascentn.SharePoint.Common.SPSVirtualServerCache.a()

The "Default Event Handler" group box on the System Setting tab displays the class that is invoked for the SharePoint Event Handling. This information is exposed to provide the option to implement customized event handling.

Database

This window allows you to select the AgilePoint SharePoint Integration database and specify the authentication information.
SharePoint Web Applications

This window allows you to select from a list of SharePoint Web Applications and enable/disable each of the SharePoint Web Applications as desired. Detailed information about each SharePoint Web Application is displayed when the SharePoint Web Application is highlighted in the list.

This window also allows you to view and edit the SharePoint Configuration Settings XML. To view/edit the SharePoint Configuration Settings XML, click the Edit button. This window provides the functionality to export the SharePoint Configuration Settings XML to the XML editor of your choice by clicking the Export button. When done editing the XML, click the Import button and import the changes.

Clicking the Show all Virtual Servers button allows you to view a list of all Virtual Servers on the physical machine.
Enable (or disable) Debug Mode

AgilePoint SharePoint Integration supports an optional Debug mode. When enabled, this feature will cause additional information to be logged to the AgilePoint SharePoint Integration log files. This mode can cause a large amount of data to be written to the logs, so it is not recommended to enable this all the time. However, when troubleshooting possible problems, it is very useful to enable this feature because the additional information in the logs makes analyzing the system's behavior much easier. AgilePoint provides a user interface to enable/disable the logging settings via the SharePoint Configuration Manager.
AgilePoint SharePoint Integration 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.

To access the logs, simply view the relevant file(s) using a text editor. The location of the log files comes from the AgilePoint Configuration List in SharePoint (e.g. C:\NewSPLog). You can give the FTP location also (e.g. ftp://netsvr1/AgilePontSharePoint/Log). The Impersonator user should have write permission on FTP server.

Some of the log files are only created when additional Debug mode logging is enabled. See below for details.

You can provide switches for logging. The following are the available switches.

- All
- Info
- Debug
- Error
- None

You can give multiple switches separating by a comma(,) (e.g. Debug, error, Info).
In SPDoc based process templates, you can access the values of custom SharePoint Document Library's metadata columns entered by the user when a document is uploaded. This data can then be used in your process (e.g. to determine the workflow in your process, or to display information in an email notification).

To allow for this metadata binding, follow these steps:

1. Click **Settings > Create Column** in the document library in SharePoint.
2. Enter the name of the new column and select the data type.
3. To bind this data with the process, in Envision add the Multiple Condition activity to the drawing area and click on the **Ellipses** button. The Select SharePoint Document Library Column window appears.
4. Click the **Show All** check box. The columns available for data binding appear.

Now, when you upload a document in the document library, this field will be shown and you can enter a value in the text field provided, as shown below:

A new process will be initiated and the process will retrieve the value of the metadata from the **Department** column (in the example above) and route the process as designed based on the **Department** entered by the user.
In SharePoint, document locking can be done through the CheckOut and CheckIn functionality. Similar to the Rename AgilePart, you could implement a CheckIn/CheckOut AgilePart that handles the document locking and releasing mechanism.

The following are some code snippets of using the SharePoint SDK to implement the CheckOut and CheckIn operation:

```csharp
public void CheckOut()
{
    SPWeb web = new SPSite("http://virtual:101/sites/s1/s1/a37").OpenWeb();
    file.CheckOut();
    Console.WriteLine("Checked Out");
}

public void CheckIn()
{
    SPWeb web = new SPSite("http://virtual:101/sites/s1/s1/a37").OpenWeb();
    file.CheckIn("This is the check in comment by console app.");
    Console.WriteLine("Checked In");
}
(v1 Only) Creating a workflow-enabled SharePoint Site

With the AgilePoint SharePoint Integration, you can deploy your process templates to AgilePoint Server and then create your own sites and libraries to associate with these process templates. After you install the AgilePoint SharePoint Integration, your SharePoint has the features needed to create AgilePoint enhanced sites and libraries.