Managing Your Ecosystem

AgilePoint BPMS for Azure

AgilePoint BPMS for Azure v5.0 SP3

Document Revision r5.0.13

June 2014

Contents

Preface

Disclaimer of Warranty

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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 **r*X.Y.Z***. The letters and numbers in this revision number can be interpreted as follows:

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

AgilePoint Documentation in PDF and HTML

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

Advantages of HTML Documentation

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

Advantages of PDF Documentation

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 in the Documentation Library.

Opening the Documentation Library

To open the AgilePoint Documentation Library, do the following.

Prerequisites

You must have a valid account on the AgilePoint Support Portal.

Instructions

1. Log on to the AgilePoint Support Portal.
2. Click **Documentation**.
3. On the **Documentation** page, click the documentation library for your AgilePoint release.
   - For AgilePoint BPMS v5.0 SP1 and higher, the web-based documentation library opens in a new tab or window in your web browser.

- For releases prior to v5.0 SP1, a download starts for a Zip file with the PDF documentation for your release.

Finding Information in the Documentation Library

The information in this topic will help you to locate information in the AgilePoint Documentation Library.

Using the Table of Contents

The table of contents in the AgilePoint Documentation Library is divided by content areas. For example, the Installation section includes all the information you need to install AgilePoint BPMS. The AgilePoint API section includes information about the AgilePoint APIs.

You can use the Table of Contents to explore the AgilePoint documentation content and find the information you want.

Searching

The web-based documentation includes a centralized search for all documentation content. To search for information:

1. In the AgilePoint Documentation Library, click the **Search** tab. In the Search box, enter **1 search team**, and click **Search**.

   The search results display in alphabetical order by topic title.

   It is important to understand that the third-party software AgilePoint uses to generate web-based documentation allows only 1 search term. More than 1 search term will cause the search to fail.

   AgilePoint recommends using a relatively unique search term to find the information you need. For example, entering a common term, such as "process," will return a high percentage of the total documentation topics in the search results.

2. Browse the list of topic titles to find the information you want.

Printing

The PDF documentation is provided mainly for the purpose of printing and archiving. To print a set of information:

1. Navigate to the main page of the Documentation Library from which you want to print.
2. In the list of documents, click the document name in the **PDF** column.
3. From your PDF reader software, print the portion of the document you want.

Downloading Files and Sharing Links from the Documentation Library

You can download and share files AgilePoint's documentation library as you would in any other web page. Note that if you send links to recipients, they must have a Support Portal login to view the file.

These procedures are common examples based on Internet Explorer with the Adobe Reader plug-in. Exact procedures may vary depending on your web browser, PDF viewer, and email client configuration.

Share a Link to an HTML Topic

1. Navigate to the topic you want to share.
2. Copy the URL in the Location box in your web browser.
3. Paste the URL in an email, IM client, etc.

Share a Link to a PDF Document

1. In Internet Explorer, navigate to the Documentation Library home page.
2. In the **PDF** column, right-click the name of the PDF file you want to share.
3. In the quick menu, click **Copy shortcut**.
4. Paste the URL in an email, IM client, etc.

Save a Copy of a PDF Document

1. In Internet Explorer, open the Documentation Library home page.
2. In the **PDF** column, click the name of the PDF file you want to share.
3. In the Adobe Reader plug-in, click **Save** button.

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

Contacting Customer Support

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

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

Managing Your Ecosystem for AgilePoint BPMS for Azure

This document provides instructions for growing and enhancing your AgilePoint BPMS for Azure solution.

Customizable Security

For AgilePoint BPMS for Azure production environments, you must use AgilePoint's highly customizable security framework, available from AgilePoint Developer. This framework enables AgilePoint BPMS to authenticate using your authentication mechanism.

This model has a client and server component:

- **Service proxy factory** - The client-side component.
- **Service binding factory** - The server-side component.

The customizable security framework supports WCF and REST services.

Service Proxy Factory

The Service Proxy Factory is an interface that supports connecting to AgilePoint services when a user has been authenticated using any authentication provider. The provider could be Windows authentication (the default), Windows Live ID, or a third party, such as Facebook or Google.

The Service Proxy Factory uses the user name as a surrogate for the credential for the impersonator user to determine the context for the user.

The Service Proxy Factory and Service Binding Factory are required for AgilePoint BPMS for Azure production environments.

Creating a Service Proxy Factory

To create a Service Proxy Factory, do the following.

Prerequisites

- AgilePoint BPMS for Azure.

Navigation

1. Open Microsoft Visual Studio.
2. In Visual Studio, click **New Project**.

Instructions

1. In the **New Project** window, click **AgilePoint Service Proxy Factory**.
2. Click **OK**.
3. On the **Service Proxy Factory Wizard**, complete the following fields as required, and click **OK**.

Field Name	Definition
Add Sample Custom Dialog	Specifies whether to create a configuration dialog for the Service Proxy Factory.

Field Name	Definition
Custom Dialog Type	Specifies the type of dialog to create: **Windows Form** or **Windows Presentation Foundation**.

4. Open the file **AgilePointServiceProxyFactory.cs** to set up your Service Proxy Factory. Comments are provided in the file.
5. When you generate the project, it is important to keep the default naming:
   - **Assembly name** - AgilePoint.Azure.ServiceProxyFactory.dll
   - **Class name** - AgilePointServiceProxyFactory

Note: If you want to use a custom name for Service Proxy Factory or Service Binding Factory, contact AgilePoint Professional Services.

Service Binding Factory

The binding factory is an interface that enables you to specify endpoints for your client application to connect to AgilePoint Server.

- BasicHttpBinding
- WebHttpBinding
- WsHttpBinding
- NetTcpBinding

The binding factory also defines the credentials for the impersonator user a client application uses to connect to AgilePoint Server.

Creating a Service Binding Factory

To create a Service Binding Factory, do the following.

Prerequisites

- AgilePoint BPMS for Azure.

Navigation

1. Open Microsoft Visual Studio.
2. In Visual Studio, click **New Project**.

Instructions

1. In the **New Project** window, click **AgilePoint Service Binding Factory**.
2. Click **OK**.
3. Open the file **BasicHttpBindingFactory.cs** to set up the following methods:
   - OpenBindings
   - OpenServiceHost

- GetSecurityContext

Instructions are provided in comments in the file.

Unlike the Service Proxy Factory, there is no naming restriction for Service Binding Factory.

Migrating To Your Custom Authorization

When you create an evaluation environment for AgilePoint BPMS for Azure, the evaluation account is set up with the default AgilePoint users and authorization mechanism. When you are ready to connect your own users to AgilePoint BPMS for Azure, you must migrate to your custom authorization system.

Prerequisites

- You have already created a custom Service Proxy Factory and Service Binding Factory.
- Your custom Service Proxy Factory uses the default assembly and class names.

> **Note:** If you want to use a custom name for Service Proxy Factory or Service Binding Factory, contact AgilePoint Professional Services.

Instructions

1. Deploy the Service Binding Factory to the following location:
   - **AgilePoint Server** - Azure Storage, in the folder **APSVC/bin**
   - **AgilePoint Developer machines** - GAC

     You must uninstall the existing Client Service Proxy factory before installing the new one.
2. Deploy the Service Proxy Factory to the following locations:
   - **AgilePoint Enterprise Manager** - Azure Storage, in the folder **bin**
   - **Custom ASP.NET applications** - Azure Storage, in the folder **bin**
   - **AgilePoint Envision machines** - GAC

     You must uninstall the existing Client Service Proxy factory before installing the new one.
   - **AgilePoint Developer machines** - GAC

     You must uninstall the existing Client Service Proxy factory before installing the new one.
   - **AgilePoint Service Bus machines** - GAC

     You must uninstall the existing Client Service Proxy factory before installing the new one.
   - **SharePoint machines** - GAC

     You must uninstall the existing Client Service Proxy factory before installing the new one.
3. Update the user credentials in the following locations:
   - **Service Bus machines** - Enter the AgilePoint Server credentials.

     For more information, see Configuring AgilePoint Service Bus
   - **SharePoint** - Update the SharePoint Impersonator to use your own SharePoint Impersonator account.

     For more information, see Set the AgilePoint Configuration List

Set the AgilePoint Configuration List

The AgilePoint Configuration List feature creates a new SharePoint list called AgilePoint Configuration List when this feature is activated. By default, this list is populated with sample data, it is required to modify the items before using the integration.

Prerequisites

- AgilePoint Integration for SharePoint is fully installed.
- The SharePoint Administrator should restrict access to the AgilePoint Configuration List.

Navigation

1. Open an AgilePoint-enabled SharePoint site collection.
2. Navigate to the list of SharePoint lists within the site (for example, **Site Actions > View All Site Content**).
3. In the list of SharePoint lists, click **AgilePoint Configuration**.

Instructions

Modify the following items in the list as appropriate to your environment.

Application	Title	Value	Evaluation Versions
AgilePoint	ServerUrl	The URL of AgilePoint Server • **On-Premises HTTP Format -** http://[AgilePoint Server machine name]:[WsHttp Port]/AgilePointServer For more information, see Finding Your AgilePoint Service URL On Premises. • **AgilePoint BPMS for Azure format -** http://[Server Url],[Assembly],[Class]. For more information, see Finding Your AgilePoint Service URL in Azure.	For on-premises AgilePoint evaluation, enter **http://localhost:1916/AgilePointServer**
AgilePoint	ImpersonatorDomain	The domain name for the SharePoint impersonator account. This account must have administrator	If you are using AgilePoint BPMS for Azure and you used automatic

Application	Title	Value	Evaluation Versions
		access to AgilePoint Server.	installation, you can leave the default value.
AgilePoint	ImpersonatorUser	The user name for the SharePoint impersonator account.	If you are using AgilePoint BPMS for Azure and you used automatic installation, you can leave the default value.
AgilePoint	ImpersonatorPass	The password for the SharePoint impersonator account. (Optionally, you can check the **Encrypted** check box in order to encrypt the value of this setting.)	If you are using AgilePoint BPMS for Azure and you used automatic installation, you can leave the default value.
AgilePoint	Log	Location of the log files (e.g. C:\NewSPLog). You can give the FTP location also (e.g. ftp://myserver/AgilePontSharePoint/Log). The Impersonator user should have write permission on FTP server.	
AgilePoint	LogSwitch	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). The Default value is: All.	
AgilePoint	HostingMechanism	Enter the type of AgilePoint installation you are using: • **IIS** – A standard, web-based installation. • **WCF** – A Windows service installation.	For on-premises AgilePoint evaluation, leave as **IIS**.

Application	Title	Value	Evaluation Versions
AgilePoint	AdminBindingUsed	Enter the type of binding that is used for Windows Service. This setting applies only if AgilePoint Server is running as a Windows Service. If AgilePoint Server is running in IIS mode, this setting is ignored. • WS HTTP - **WSHttpBinding_IWCFAdminService** • Basic HTTP (Windows Service Only) - **BasicHttpBinding_IWCFAdminService** • TCP (Windows Service Only) - **NetTcpBinding_IWCFAdminService**	For on-premises AgilePoint evaluation, this is not applicable.
AgilePoint	WorkflowBindingUsed	Enter the type of binding that is used for Windows Service. This setting applies only if AgilePoint Server is running as a Windows Service. If AgilePoint Server is running in IIS mode, this setting is ignored. • WS HTTP - **WSHttpBinding_IWCFWorkflowService** • Basic HTTP (Windows Service Only) - **BasicHttpBinding_IWCFWorkflowService** • TCP (Windows Service Only) - **NetTcpBinding_IWCFWorkflowService**	For on-premises AgilePoint evaluation, this is not applicable.
AgilePoint	CheckFileUpload	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	

Application	Title	Value	Evaluation Versions
		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. • **True** - (Default) SharePoint waits to confirm the metadata before starting the process. • **False** - SharePoint does not wait to confirm the metadata before starting the process.	
AgilePoint	ExcludeLibraryFromFileUploadCheck	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 documentation libraries that you do not want to wait to confirm metadata before starting the process.	
AgilePoint	TakeAssignment	This setting enables a participant in an InfoPath process to complete a task from an email without taking assignment first. The participant simply clicks the email link to complete the task, even though the task is assigned to an AgilePoint group. This has the	

Application	Title	Value	Evaluation Versions
		same effect as the Take Assignment and Complete action in the Task List Web Part. • **True** - An InfoPath process participant can complete the task from an email without taking assignment. • **False** - (Default) An InfoPath process participant must take assignment for a task before he can complete it.	
AgilePoint	ShowActivityNameInTaskList	Instead of displaying the default work item names for a task in the Task List drop-down, Status Page, Process Viewer, you can display the activity names. • **True** - Displays the activity name. • **False** - (Default) Displays the work item name.	
AgilePoint	CheckConcurrentAccess	In AgilePoint SharePoint Integration v2, if more than one person opens the same InfoPath form at the same time, SharePoint allows the first participant who submits the form to submit his or her changes. However, the second submitter receives the following error message: Your changes conflict with those made concurrently by another user. Your form would be reloaded. If you want your changes to be applied, resubmit your changes after filling the form.	

Application	Title	Value	Evaluation Versions
		• **True** - (Default) Checks for concurrency. • **False** - Does not check for concurrency.	
AgilePointASPAssociation	[Your web application name]	[Your web application URL] For more information, see Showing External AgilePoint Web Application Tasks	
AgilePoint	EnableXRM	Specifies whether AgileXRM features are enabled for the site collection. This setting is available for AgilePoint Universal Edition only. • **False** - (Default) AgileXRM features are not enabled for the site collection. • **True** - AgileXRM features are enabled for the site collection.	For on-premises AgilePoint evaluation, not applicable.
AgilePoint	OpenTasksInFullScreen	Definition: Specifies whether SharePoint List Form and InfoPath tasks that are opened from the Task List Web Part in a new window are opened in full screen mode, or in a smaller window. If OpenTasksInFullScreen is set to False, this setting has no effect. Allowed Values: • **True** - Tasks open in full screen mode.	For on-premises AgilePoint evaluation, not applicable.

Application	Title	Value	Evaluation Versions
		• **False** - Tasks open in a smaller window. Default Value: True	
AgilePoint	OpenTasksInNewWindow	Definition: Specifies whether SharePoint List Form and InfoPath tasks that are opened from the Task List Web Part are opened in a new window. By default, these tasks open in full screen mode. Allowed Values: • **True** - Tasks open in a new window. • **False** - Tasks open in the same window. Default Value: True	For on-premises AgilePoint evaluation, not applicable.
AgilePoint	OverwriteCheckInForDocLib	When a process is initiated from a file that is checked in to a SharePoint document library with version control enabled, the file must be associated with an AgilePoint process instance ID. The application pool identity account must modify the file to add this ID. Therefore, the AgilePoint application pool identity account displays as the user who checked in the file. However, it may still be desirable to have a record of the human user who initially checked in the file. This configuration list item provides the	For on-premises AgilePoint evaluation, not applicable.

Application	Title	Value	Evaluation Versions
		ability to enable this functionality. • **True** – (Default) When a file is initially checked in to initiate a process, the Modified by user is displayed as the application pool identity account only. The human user who checked in the file is not displayed in the version history. • **False** – When a file is checked in to initiate a process, the human user who checked in the file is recorded in the version history. Then the application pool identity account checks in the file again and does not overwrite the human user's name.	
AgilePoint	FilteredProcess	Definition: Limits the process models displayed on the WFAssociation page (where you associate a process with a workflow), so that only the specified process models appear. Allowed Values: A semicolon-delimited list of process model names. Default Value: None Example: MyProcess1;MyProcess2	

Finding the URL for your AgilePoint BPMS for Azure Service

To find your AgilePoint Service URL for AgilePoint BPMS for Azure, do the following.

Navigation

1. Open the Service Proxy Factory Window.

Instructions

1. On the Service Proxy Factory window, create a URL from the values in the fields, such as the following:

   [Server Url],[Assembly],[Class]

   Example:

   http://myapservice.cloudapp.net:13487/
   agilepointservice,AgilePoint.Azure.ServiceProxyFactory,AgilePointServiceProxyFactory

   In most cases, your AgilePoint Service will use the default values for Assembly and Class. The default values are used in this example.

Configuring AgilePoint Service Bus

To configure AgilePoint Service Bus to connect with AgilePoint BPMS for Azure, do the following.

Prerequisites

- AgilePoint BPMS Service Bus is installed.

Navigation

1. On the AgilePoint Service Bus machine, click **Start > AgilePoint > AgilePoint Service Bus Configuration**.

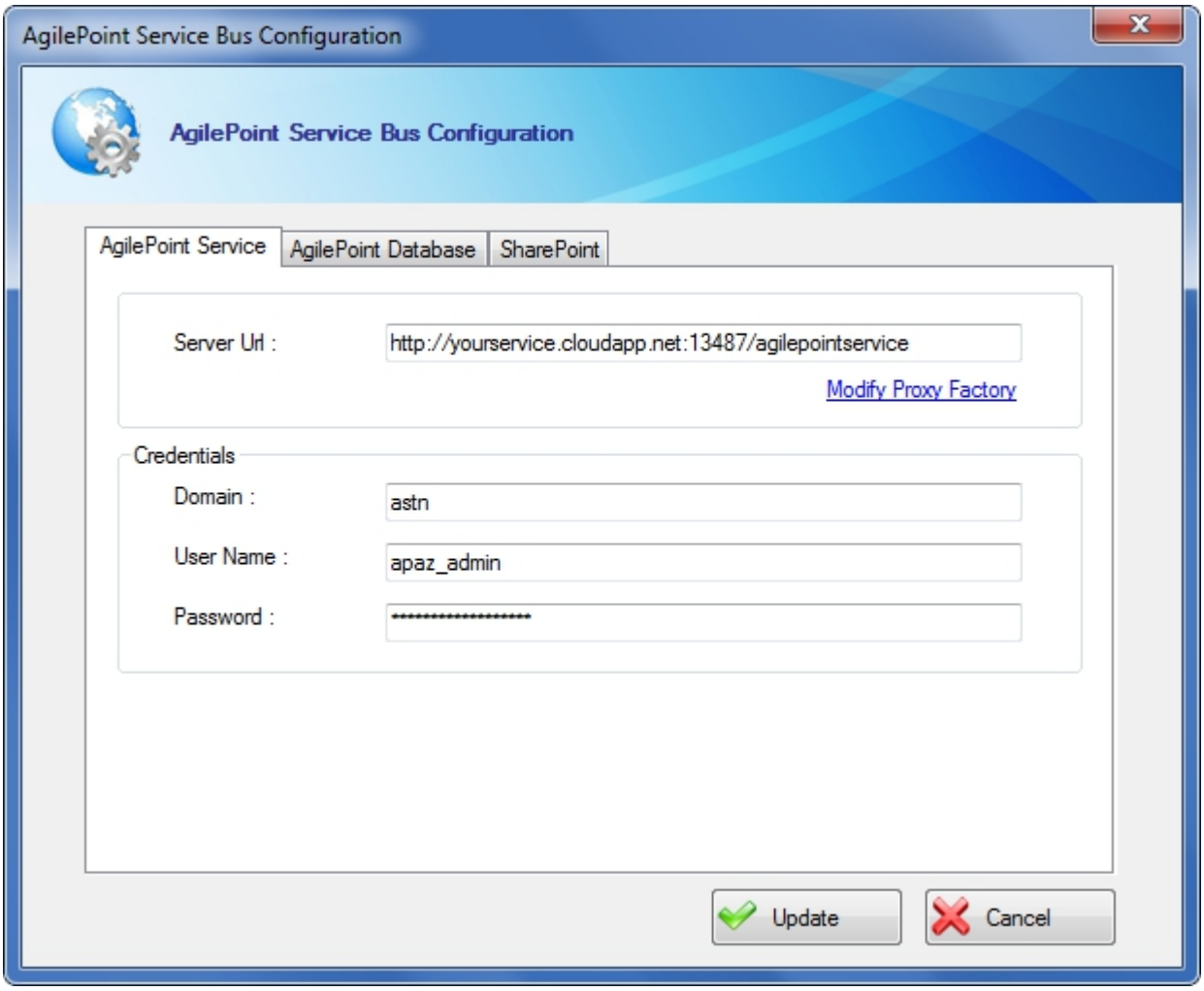
Instructions

1. On the **AgilePoint Service Bus Configuration** window, complete the fields on the following windows as required:
   - AgilePoint Service tab
   - AgilePoint Database tab
   - Adapter Extension tab

   If you are using a Service Bus Adapter, such as the out of the box SharePoint Adapter, in an NLB environment, there is one configuration option that is not included in the configuration windows

AgilePoint Service Bus Configuration - AgilePoint Service Tab

Specifies the connection information from the AgilePoint Service Bus to your AgilePoint Server on AgilePoint BPMS for Azure.



Navigation

1. On the AgilePoint Service Bus machine, click **Start > AgilePoint > AgilePoint Service Bus Configuration**.
2. Click the **AgilePoint Service** tab.

Field Definitions

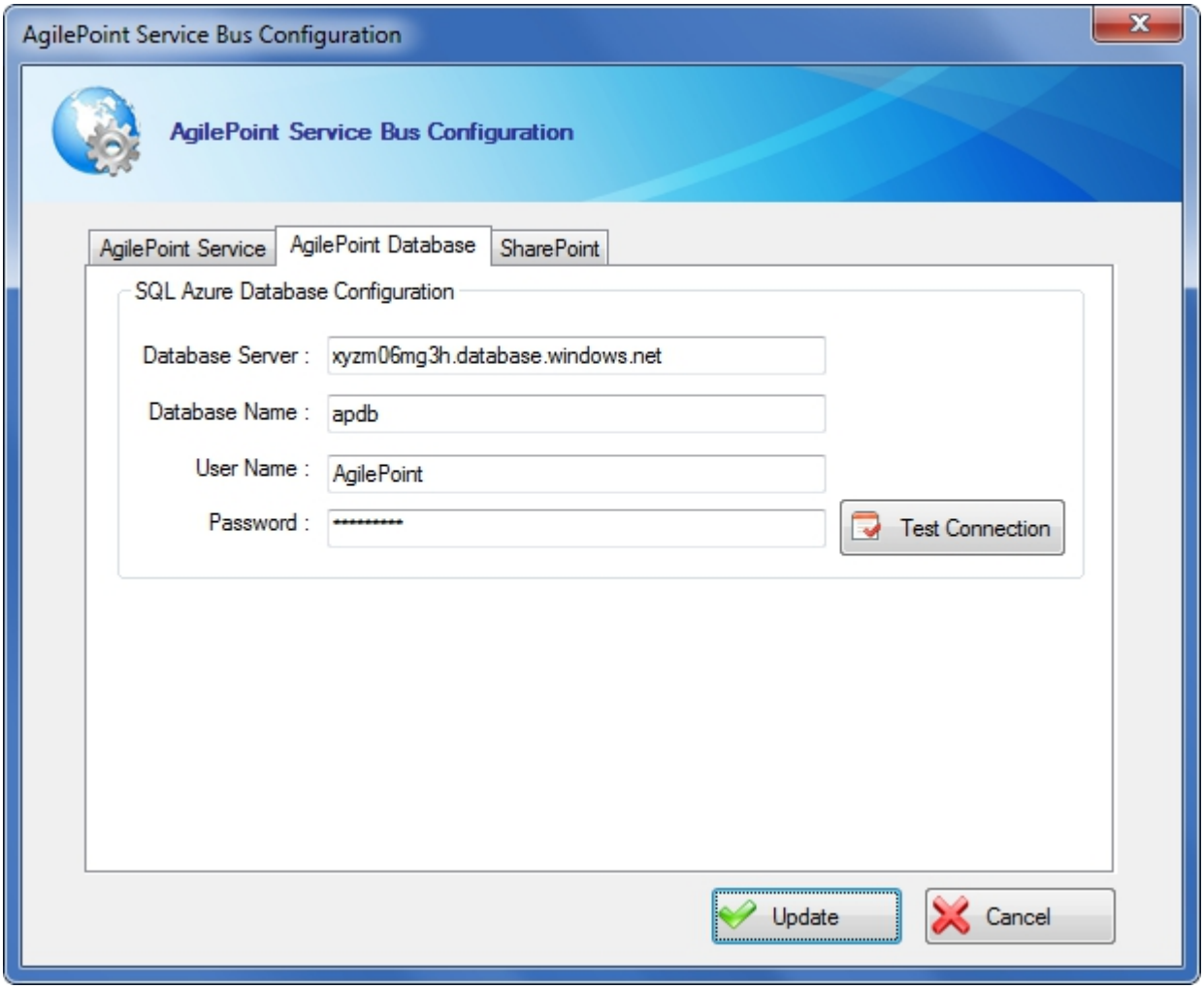
Field Name	Definition
AgilePoint Server URL	Definition: The URL of your AgilePoint Server. Allowed Values: A valid AgilePoint Server URL. Default Value:

Field Name	Definition
	In AgilePoint BPMS for Azure, the default value is the value of the default AgilePoint evaluation environment. Custom Attributes: No
Modify Proxy Factory	Opens the Following Window: Service Proxy Factory Window Purpose of this Window: Specifies the connection parameters for the Service Proxy Factory to connect to AgilePoint Server on Windows Azure.
Domain	Definition: The authentication domain for AgilePoint Server in Azure. This may not apply if you have a custom authentication provider. Allowed Values: A valid domain. Default Value: The domain for the AgilePoint BPMS for Azure evaluation user. For AgilePoint BPMS for Azure evaluation, you do not need to change the default value. You need to change it when you set up custom authentication. Custom Attributes: No
Username	Definition: The user ID of the AgilePoint Server authentication account. Allowed Values: A valid user name for an AgilePoint Server administrator account. Default Value: The user name for the AgilePoint BPMS for Azure evaluation user. For AgilePoint BPMS for Azure evaluation, you do not need to change the default value. You need to change it when you set up custom authentication.

Field Name	Definition
	Custom Attributes: No
Password	Definition: The password for the authentication account.

AgilePoint Service Bus Configuration - AgilePoint Database Tab

Specifies the connection information from the AgilePoint Service Bus to your AgilePoint database on SQL Azure.



Navigation

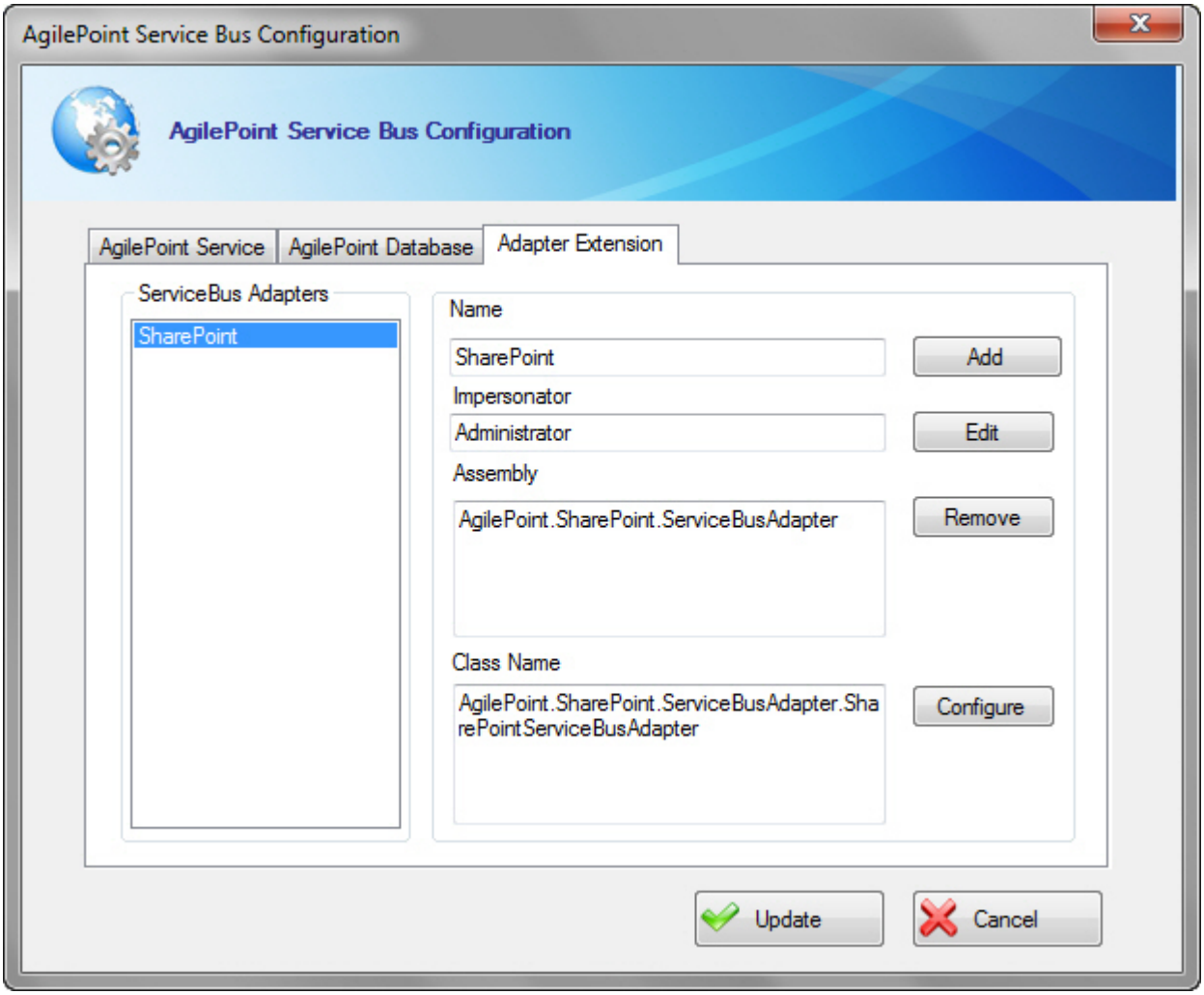
1. On the AgilePoint Service Bus machine, click **Start > AgilePoint > AgilePoint Service Bus Configuration**.
2. Click the **AgilePoint Database** tab.

Field Definitions

Field Name	Definition
Database Server	Definition: Specifies the server name and domain for the SQL Azure database. Allowed Values: A server name and domain in the format [database name].database.windows.net. Default Value: None Example: myazuredb.database.windows.net
Database Name	Definition: Specifies the name of your SQL Azure database. Allowed Values: A valid database name. Default Value: None
User Name	Definition: Specifies the user name for the SQL Azure database. Allowed Values: A valid user name. Default Value: None
Password	Definition: The password for the authentication account. Allowed Values: A valid password. Default Value: None

AgilePoint Service Bus Configuration - Adapter Extension Tab

Enables you to connect adapters from the AgilePoint Service Bus to your organization's internal data sources. A configurable SharePoint adapter is provided by default.



Navigation

1. On the AgilePoint Service Bus machine, click **Start > AgilePoint > AgilePoint Service Bus Configuration**.
2. Click the **Adapter Extension** tab.

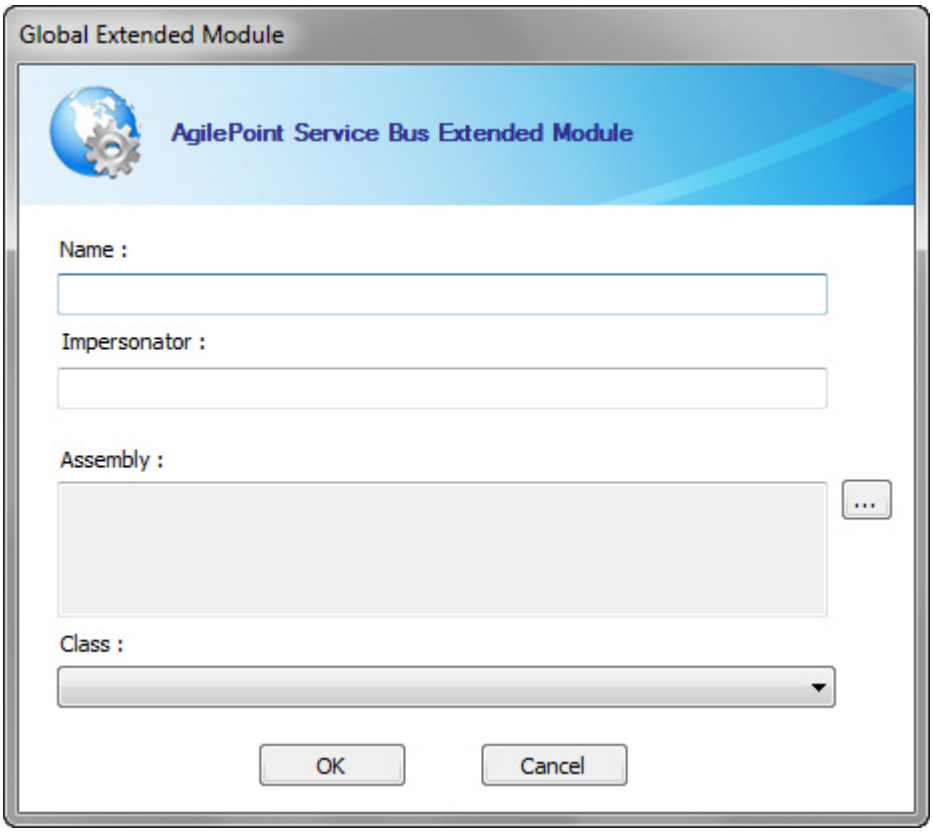
Field Definitions

Field Name	Definition
ServiceBus Adapters	Definition:

Field Name	Definition
	The list of configured adapters for the AgilePoint Service Bus. Allowed Values: Service Bus adapter name. Click a name to select an adapter.
Add	Opens the Following Window: AgilePonit Service Bus Configuration - Extended Module Window Purpose of this Window: Enables you to add or modify the information for a data source adapter.
Edit	Opens the Following Window: AgilePonit Service Bus Configuration - Extended Module Window Purpose of this Window: Enables you to add or modify the information for a data source adapter.
Remove	Function: Deletes the selected adapter.
Configure	Function: Opens the configuration window for the selected adapter, if a configuration window is defined. The default SharePoint adapter opens the AgilePoint Service Bus Adapter for SharePoint Window

AgilePonit Service Bus Configuration - Extended Module Window

Enables you to add or modify the information for a data source adapter.



Navigation

1. On the AgilePoint Service Bus machine, click **Start > AgilePoint > AgilePoint Service Bus Configuration**.
2. Click the **Adapter Extension** tab.
3. On the **Adapter Extension** tab, click one of the following buttons:
   - **Add** - Creates a new adapter connection.
   - **Edit** - Modifies the selected adapter connection.

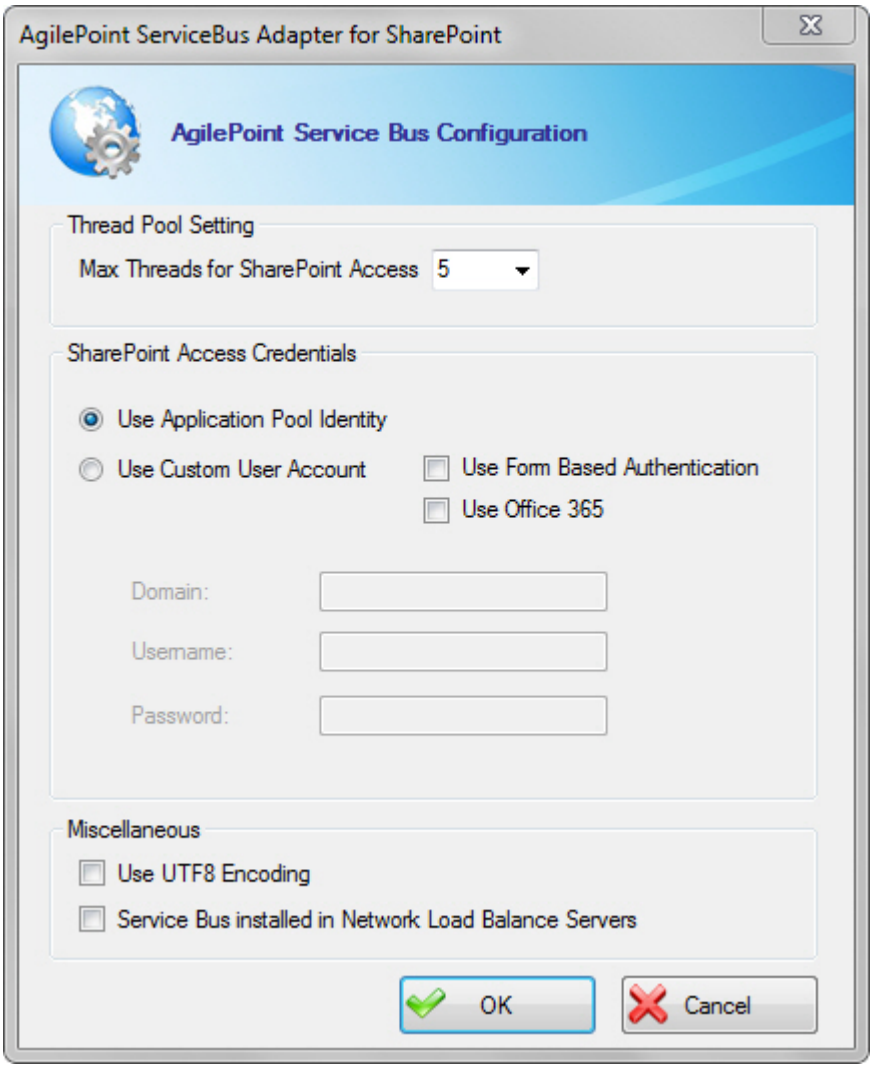
Field Definitions

Field Name	Definition
Name	Definition: The name of the adapter. Allowed Values: An alphanumeric string with no spaces. Default Value: None

Field Name	Definition
Impersonator	Definition: The user name for the impersonator user you want AgilePoint to use to authenticate to the system. Allowed Values: A valid user name. Default Value: None
Assembly	Definition: The assembly for your Service Bus adapter Allowed Values: A valid assembly name Default Value: None
Class Name	Definition: The class name for your Service Bus adapter. Click the ellipses button to select your assembly. Allowed Values: A valid class name Default Value: None

AgilePoint Service Bus Adapter for SharePoint Window

Specifies the connection information from the AgilePoint Service Bus to your SharePoint environment.



Navigation

1. On the AgilePoint Service Bus machine, click **Start > AgilePoint > AgilePoint Service Bus Configuration**.
2. In the **ServiceBus Adapters** list, click **SharePoint**.
3. Click **Configure**.

Field Definitions

Field Name	Definition
Max Threads	Definition: Specifies the maximum number of threads to use to connect to SharePoint. Allowed Values:

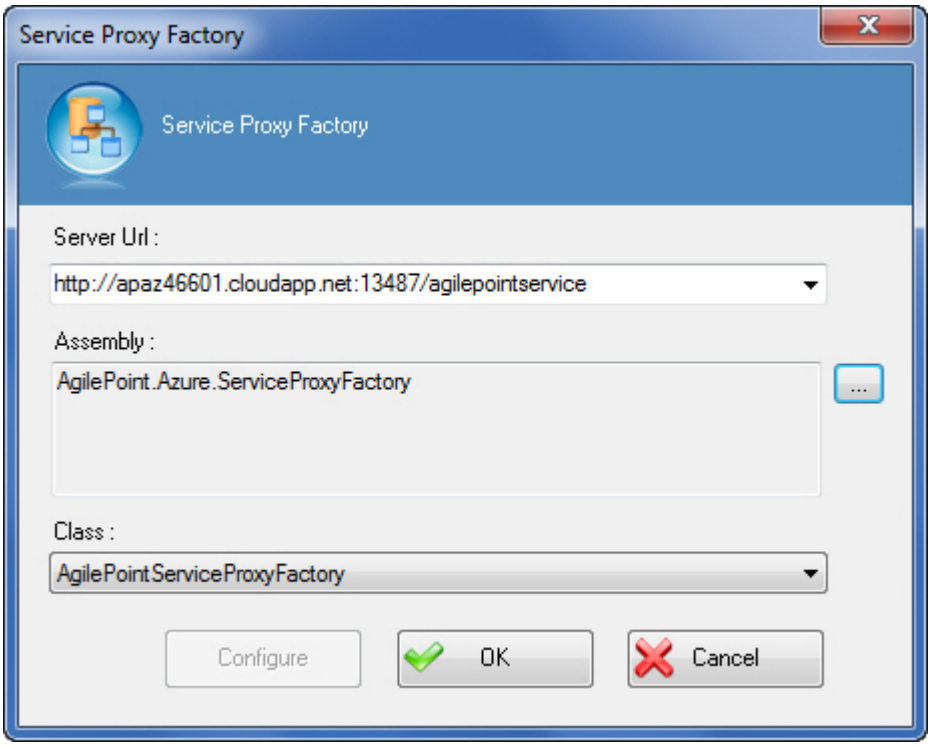
Field Name	Definition
	Any integer. Default Value: 10
SharePoint Access Credentials	Definition: Specifies whether to use the AgilePoint Windows service account or another authenticated account to connect to on-premises SharePoint. Allowed Values: • **Windows Service Account** - Specifies to use the AgilePoint Windows service account to connect to SharePoint. • **Use Custom Account** - Specifies to use account credentials you specify to connect to SharePoint. Default Value: Windows Service Account
Use Forms Based Authentication	Specifies the following: • **Selected** - The connection uses Forms-Based Authentication (SharePoint 2003, 2007) or Claims-Based Authentication (SharePoint 2010). • **Deselected** - The connection uses Windows authentication. You must deselect this option for the non-Forms Based Authentication environments.
Use Office 365	Specifies the following: • **Selected** - Claims authentication for Office 365 is enabled. • **Deselected** - Claims authentication for Office 365 is disabled.
Domain	Definition: The authentication domain for SharePoint in Azure. This may not apply if you have a custom authentication provider. Allowed Values: A valid domain. Default Value:

Field Name	Definition
	The domain for the AgilePoint BPMS for Azure evaluation user. For AgilePoint BPMS for Azure evaluation, you do not need to change the default value. You need to change it when you set up custom authentication. Custom Attributes: No
Username	The user ID of the SharePoint authentication account.
Password	The password for the authentication account.
Use UTF8 Encoding	Definition: Specifies whether to use UTF-8 encoding when communicating with the external system. Allowed Values: • **Selected** - Specifies to use UTF-8 encoding. • **Deselected** - Specifies not to use UTF-8 encoding. Default Value: Deselected
Service Bus Installed in Network Load Balanced Servers	Definition: Specifies whether AgilePoint Service Bus is installed on multiple servers in an NLB configuration. Allowed Values: • **Deselected** - AgilePoint Service Bus is installed on a single server. • **Selected** - AgilePoint Service Bus is installed on multiple servers in an NLB configuration. Default Value: Deselected

Service Proxy Factory Window

Specifies the connection parameters for the Service Proxy Factory to connect to AgilePoint Server on Windows Azure.

By default, you do not need to change this information. You need only change this if the assembly name or class name changes for your Service Proxy Factory custom authorization mechanism. This is not common.



Navigation

To access this window in Envision:

1. In AgilePoint Envision, open a process template.
2. Click **AgilePoint > Publish Process to Server**.
3. On the **Connecting to Server** window, select **Connecting to AgilePoint Server on Microsoft Azure?**
4. Click **Modify Default Setting**.

To access this window in AgilePoint Service Bus configuration:

1. On the AgilePoint Service Bus machine, click **Start > AgilePoint > AgilePoint Service Bus Configuration**.
2. Click the **AgilePoint Service** tab.
3. Click **Modify Default Setting**.

Field Definitions

Field Name	Definition
Server URL	The URL of your AgilePoint Server.
Assembly	Definition: The assembly for your service proxy factory. Allowed Values:

Field Name	Definition
	A valid assembly name Default Value: AgilePoint.Azure.ServiceProxyFactory Custom Attributes: No
Class	Definition: The class for your service proxy factory. Allowed Values: A valid class name Default Value: AgilePointServiceProxyFactory Custom Attributes: No

Advanced Configuration for Service Bus Adapters

If you are using a Service Bus Adapter, such as the out of the box SharePoint Adapter, in an NLB environment, there is one configuration option that is not included in the configuration windows. For more information about configuring this setting, contact AgilePoint Support.

Field Name	Definition
InvisibleTime	Definition: In an NLB environment, specifies the number of minutes after one server begins to process a task that other servers in the environment cannot access the task. This property prevents conflicts among servers in an NLB environment so that multiple servers do not attempt to process the same task. After a server takes the task, the task is invisible, or locked, to other servers in the environment for the specified number of minutes. After the specified time expires, the task is released to all servers in the environment. So, for example, if the server that takes assignment fails while processing a task, another server could pick up the task after the expiration time. Allowed Values: Any integer.

Field Name	Definition
	Default Value: 5

Web Application Project Template for AgilePoint BPMS for Azure

You can create ASP.NET web applications to serve as a user interface for your AgilePoint BPMS for Azure process-driven applications. Your ASP.NET applications can run on premises, in your data center, or on Windows Azure.

Creating an Azure-Enabled Web Application Project

To create an ASP.NET Web Application project for AgilePoint BPMS for Azure, do the following.

Prerequisites

- AgilePoint BPMS for Azure.

Navigation

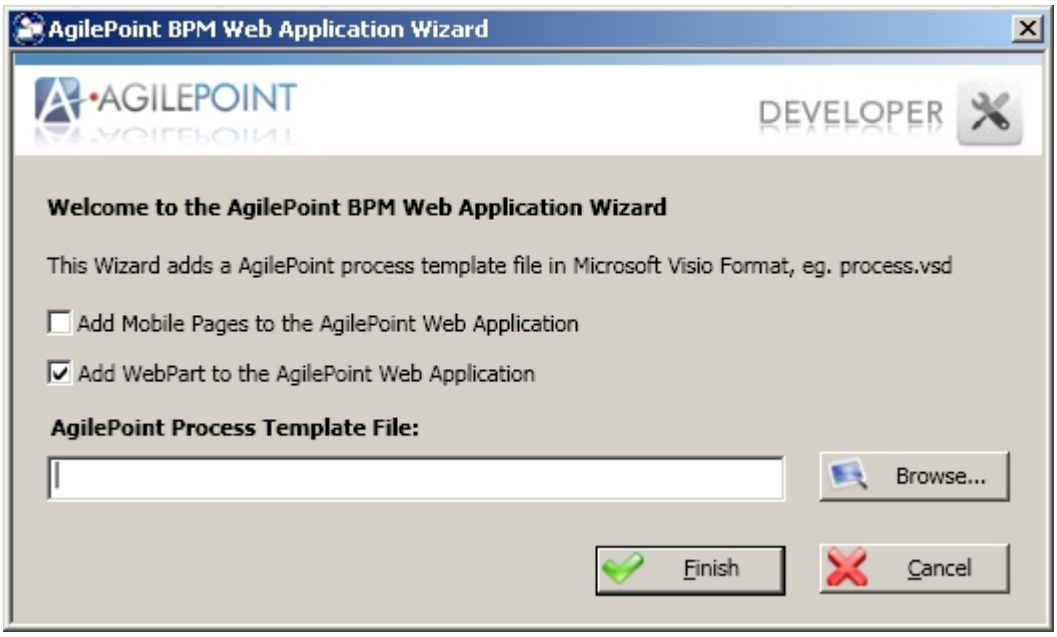
1. Open Microsoft Visual Studio.
2. In Visual Studio, click **New Project**.

Instructions

1. In the **New Project** window, click **AgilePoint Web Application for Azure**.
2. Click **OK**.
3. Complete the fields on the AgilePoint BPM Web Application Wizard.
4. Click **Finish**.

AgilePoint BPM Web Application Window

This window enables you to specify the options for a web application.



Field Definitions

Field Name	Definition
Add Mobile Pages to the AgilePoint Web Application	If selected, AgilePoint Developer creates mobile versions of all files for the web application. This simplifies development for mobile devices. AgilePoint Developer adds the following mobile files: • **Mobile_LognonForm** - A form page where the user can log on to the web application. • **Mobile_Default** - A default mobile template for an ASP.NET page. • **Mobile_TasksPage** - A mobile page that displays the user's Task List. There is also a detail page that displays details about a task when selected in the Task List. • A mobile page for the Work To Perform property of each activity that has the **EnableMobile** property set to **True**. The following images show the mobile Task List and Task Detail pages:

Field Name	Definition
	 
Add Web Part to the AgilePoint Web Application	If selected, AgilePoint Developer creates the following Web Parts for the web application: • Task List • Process Instance List
AgilePoint Process Template File	Specifies the process model you want to associate with the web application.

Field Name	Definition
	When you create the process template file, skeleton ASP.NET pages are created for each of the Work to Perform properties of the Manual Activities specified in the process model.

Events for Service Bus Adapter

This topic lists the events for the Service Bus Adapter, used in AgilePoint BPMS for Azure.

Event Handler

Event	Description
Start	The service bus is started.
Stop	The service bus is stopped.
Idle	The service bus is in the idle state.

Queue Based AgileParts

Queue Based AgileParts provide an event-driven extension to traditional AgileParts that allow a mechanism for connecting from Windows Azure to your internal, third-party systems (for example, SAP or Oracle), while minimizing security risks and maximizing performance.

AgilePoint can connect to many third-party systems that cannot currently run on Windows Azure due either to limitations of the Windows Azure platform, or current limitations of the software. So, they must for now continue to run on your internal network or data center.

Connecting from AgilePoint BPMS for Azure to these third-party systems is not ideal using the traditional AgilePart architecture because a) connecting directly to individual systems creates a security risk, and b) Internet communication tends to be slower and less reliable than internal networks. Queue Based AgileParts extend the traditional AgilePart Framework to an event-driven model, in which communication with third-party systems is extrapolated to the AgilePoint Service Bus component.

When to Use Queue Based AgileParts

This topic provides guidance for when to use Queue Based AgileParts, and when not to.

When to Use Queue Based AgileParts

Use Queue Based AgileParts when an AgilePart operation:

- Requires more than a few seconds to execute.
- When a call goes across service boundaries — for example from Windows Azure to your local intranet.

When Not to Use Queue Based AgileParts

Queue Based AgileParts are not recommended when an AgilePart operation:

- Requires only a few seconds or less to execute.
- Occurs within your local network.

Creating a Queue Based AgilePart

To create a Queue Based AgilePart, do the following.

Prerequisites

- AgilePoint Service Bus installed.

Navigation

1. Open Microsoft Visual Studio.
2. In Visual Studio, click **New Project**.

Instructions

1. In the **New Project** window, click **Queue Based AgilePart**.
2. Click **OK**.

Instructions are provided in comments within the project.

Queue Based AgilePart Properties

This topic describes the properties that are common to Queue Based AgileParts.

Field Definitions

Field Name	Definition
Retries	Definition: Specifies the number of times to retry an action for a Queue Based AgilePart if it fails. Allowed Values: Any integer. Default Value: 0 Custom Attributes: No Property Group: Status and Error Message (Queue Based AgileParts Only)
HandleException	Definition: Specifies the action to take when an exception occurs. Allowed Values: • **Ignore** - Writes an error to the error log, and moves the process forward. • **SuspendProcess** - Writes an error to the error log and suspends the process. • **UserDefined** - Uses a custom dll you provide to determine the appropriate action. Default Value: Ignore

Field Name	Definition
	Custom Attributes: No Property Group: Status and Error Message (Queue Based AgileParts Only)
Optimizing	Definition: Specifies the action to take when an exception occurs. Allowed Values: • **Performance** - A message from an AgilePart is sent directly to a third-party system without a message queue. When this is set, the Retries property is always treated as if the value were 0. • **Scalability** - A message from an AgilePart goes through the internal message queue within AgilePoint Server. • **Connectivity** - A message from an AgilePart goes through the Azure message queue in the cloud. This requires the AgilePoint Broker to be running in your internal environment. • **Configuration** - The value is set based on the value of the process attribute, QueuebaseAgilePartOptimizing. You can set the value of this attribute at the process model, application, or global level to one of the following values: • **Performance** • **Scalability** • **Connectivity** To determine the value the process attribute to use, AgilePoint checks QueuebaseAgilePartOptimizing in the following context: • **[Application].[process model Name].QueuebaseAgilePartOptimizing** - The process attribute within the context of a specific process model within a specific application. • **[Application].QueuebaseAgilePartOptimizing** - The process attribute within the context of a specific application.

Field Name	Definition
	• **Global.Setting.QueuebaseAgilePartOptimizing** - The global process attribute. Even if this process attribute is set, individual AgileParts can have a different property if desired. Default Value: Configuration, or Performance. If the process attribute QueuebaseAgilePartOptimizing has a value, that value is used, and Configuration is considered the default setting. If the value of QueuebaseAgilePartOptimizing is not defined, this property is treated as if Performance were the default value. Custom Attributes: No, but the Configuration option uses a process attribute to determine its behavior. Property Group: AgilePart (Queue Based AgileParts Only)

Communicating with AgilePoint Server

To communicate securely with your internal data sources, Queue Based AgileParts running in AgilePoint BPMS for Azure can use a message queue on Windows Azure, and an on premises component called the AgilePoint Service Bus. The message queue organizes data requests in a linear order. The AgilePoint Service Bus then uses an outbound only HTTP or HTTPS connection to send and receive data from the queue.

AgilePoint Service Bus

The AgilePoint Service Bus is a component that runs in your environment on-premises or in your data center to manage communication between the AgilePoint message queues and your internal data sources. In AgilePoint BPMS for Azure, the AgilePoint Service Bus provides a single point of communication between all your Queue Based AgileParts and your internal data sources.

Having one source for input and output between AgilePoint BPMS for Azure and your internal systems has several advantages:

- You do not need to open only any ports to your internal network.
- The cloud-based message queue is always on, meaning that even if your Internet connection goes down, your processes will simply pick up where they left off when it returns.

The AgilePoint Service Bus uses a flexible architecture, which enables it to:

- Run as a Windows service on any .NET enabled machine.
- Run on multiple machines to support failover.

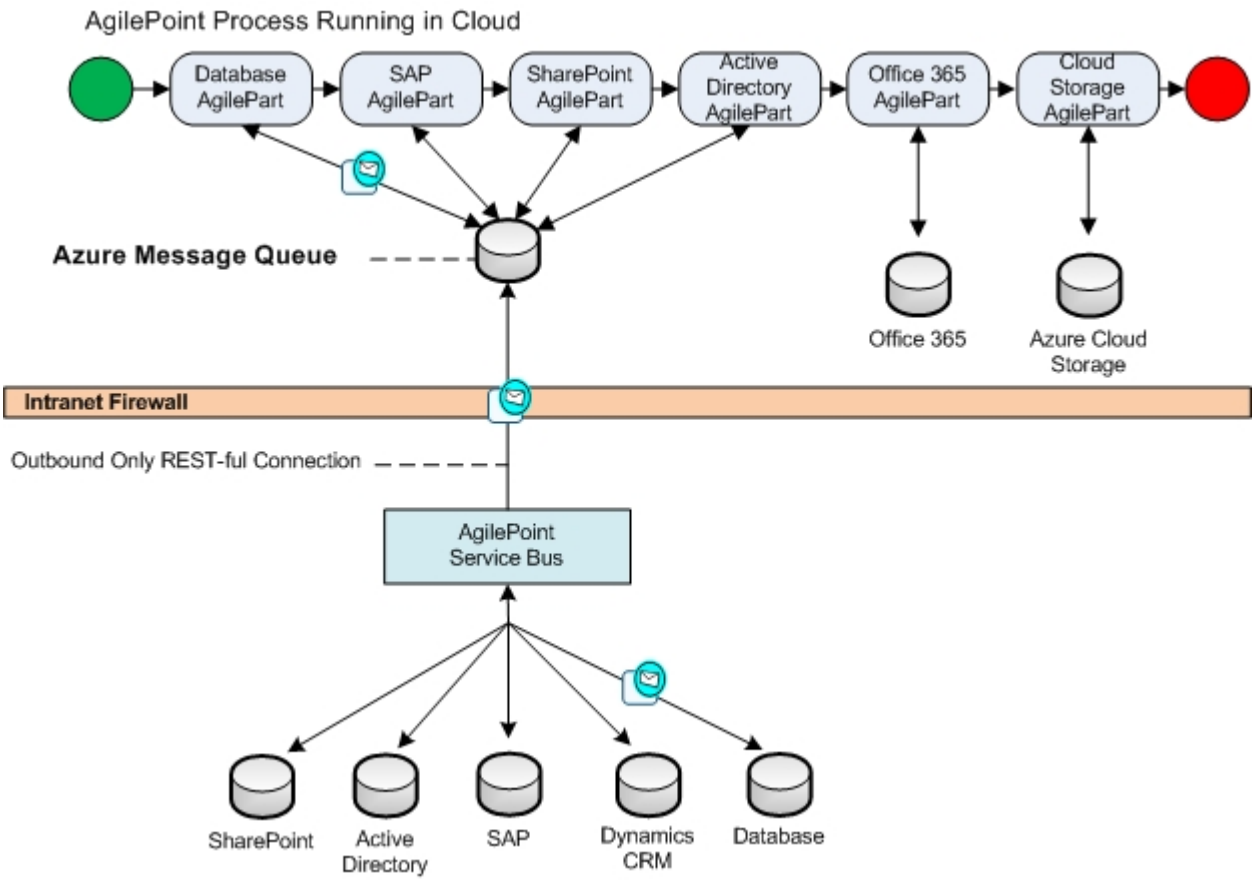
- Be configured to use multiple threads for scalability.

Message Queues

AgilePoint BPMS for Azure provides 2 message queues: the Internal Message Queue, and the Azure Message Queue. Queue Based AgileParts can be set to use either message queue, or no message queue.

Azure Message Queue

The Azure Message Queue uses a standard feature for Windows Azure that provides a common queue capability to connect a Windows Azure application to external systems.



The following are the main advantages of the Azure Message Queue:

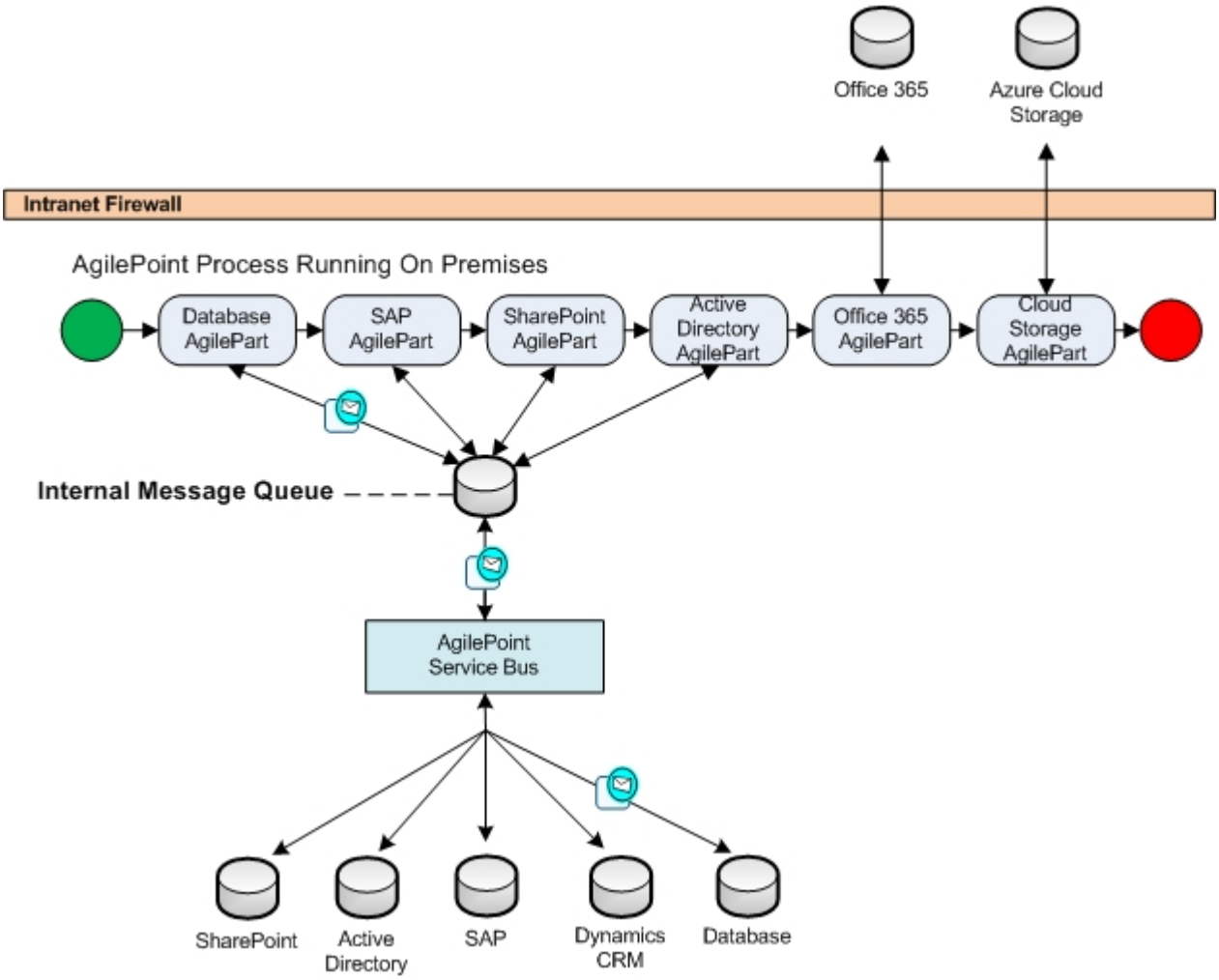
- The Azure Message Queue enables AgilePoint BPMS for Azure systems to connect to third-party systems within your intranet, thus improving the **connectivity** of a Queue Based AgilePart.
- An Internet connection is often slower and less stable than an organization's internal network connection. Decoupling AgilePoint applications in the cloud and your internal systems helps to improve the overall performance of the system.
- Messages between AgilePoint BPMS for Azure and your internal systems are fed through a single, secure port in your firewall, instead of sending individual messages directly to your internal data sources.

- Cloud messages are passed through REST-full, HTTP or SSL connection.
- The messages through cloud message queue are compressed to improve the performance.
- Messages in the cloud message queue can be encrypted using SSL.

For development machines that need access to the Azure Message Queue in a local environment, there is an Azure Message Queue emulator that runs on a local machine.

Internal Message Queue

The Internal Message Queue resides on the AgilePoint Server database. This queue can run in an on premises environment, or on AgilePoint for Azure.

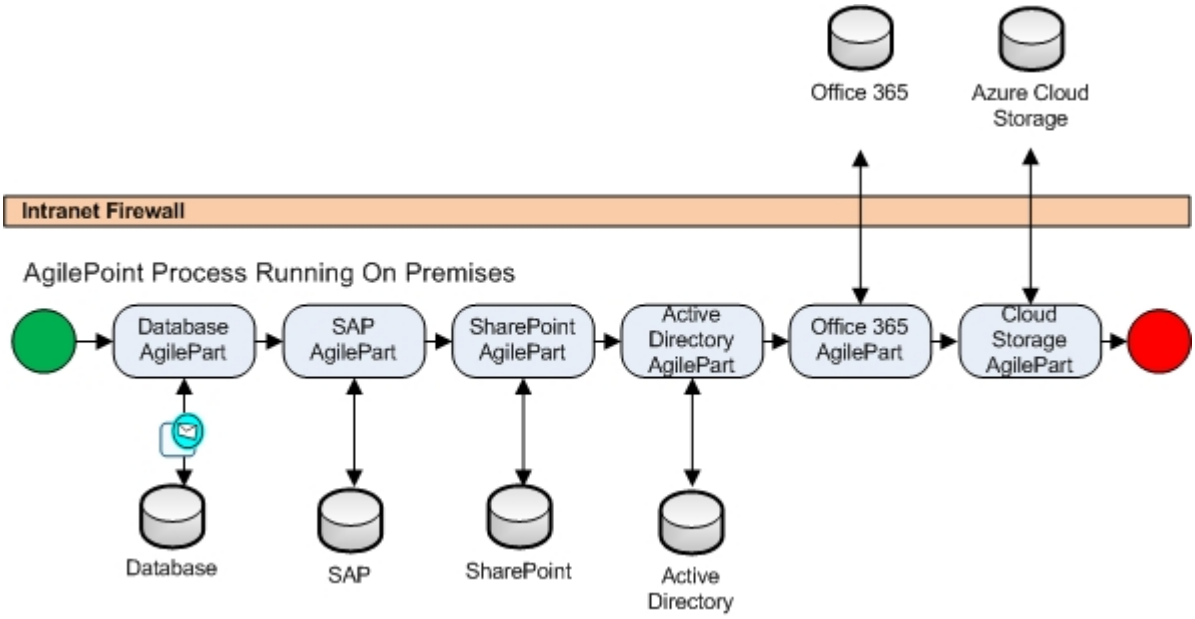


The benefit of the internal message queue is that it can move processes that take a long time out of the main processing thread, thus improving an application's **scalability**.

For example, it is common for a Facebook call to take several minutes or longer. Knowing this, you might want to use the Internal Message Queue for an AgilePart that makes a Facebook call, so that your process thread is not held up by the long processing time.

No Message Queue

Prior to the development of Queue Based AgileParts, AgileParts did not use a queue at all. Queue Based AgileParts can also be set to not use a queue. Not using a queue improves system performance because each AgilePart can connect to third-party systems independently, without an intermediary component.



Requirements

The following FAQ describes the minimal additional requirements for Queue-Based AgileParts.

What Additional Effort or Resources Are Required?

If you are using AgilePoint BPMS for Azure, you must install the AgilePoint Service Bus software component on your internal systems to manage the message queue between AgilePoint BPMS for Azure and your internal data sources.

What Other Special Considerations Are Required?

Queue-Based AgileParts do not need any further knowledge, intervention, or resources beyond those required for traditional AgileParts. In particular:

- No additional software to install in the cloud, aside from AgilePoint BPMS for Azure.
- No special network connection.
- No additional development work compared to traditional AgileParts.
- No cloud software development experience required.

Using Queue Based AgileParts with On-Premises AgilePoint

Queue Based AgileParts can be used either in AgilePoint BPMS for Azure or on premises AgilePoint. If AgilePoint Server is on premises, a built-in AgilePoint Service Bus simply runs within AgilePoint Server, and uses the Internal Message Queue.

Configuring the AgileConnector for Queue Based AgileParts

This Queue Based AgilePart AgileConnector tells AgilePoint Server whether to place the messages to and from Queue Based AgileParts in the message queue for AgilePoint for AgilePoint for Azure or On Premises AgilePoint.

Instructions

1. In a text editor, open the netflow.cfg for AgilePoint.
2. Add the following section:

```
<application name="QueuedWorkItemHandler"
        assemblyName="AgilePoint.AgileConnector.QueuedWorkItemHandler"
        className="AgilePoint.AgileConnector.QueuedWorkItemHandler.
        QueuedAutomaticWorkItemHandler">
   <ThreadPool>[number of threads]</ThreadPool>
   <TraceMode>[True or False]</TraceMode>
</application>
```

3. Restart AgilePoint Server.

Note: Only 1 AgilePoint Service Bus instance can be started on AgliePoint Server at a time.

Element Definitions

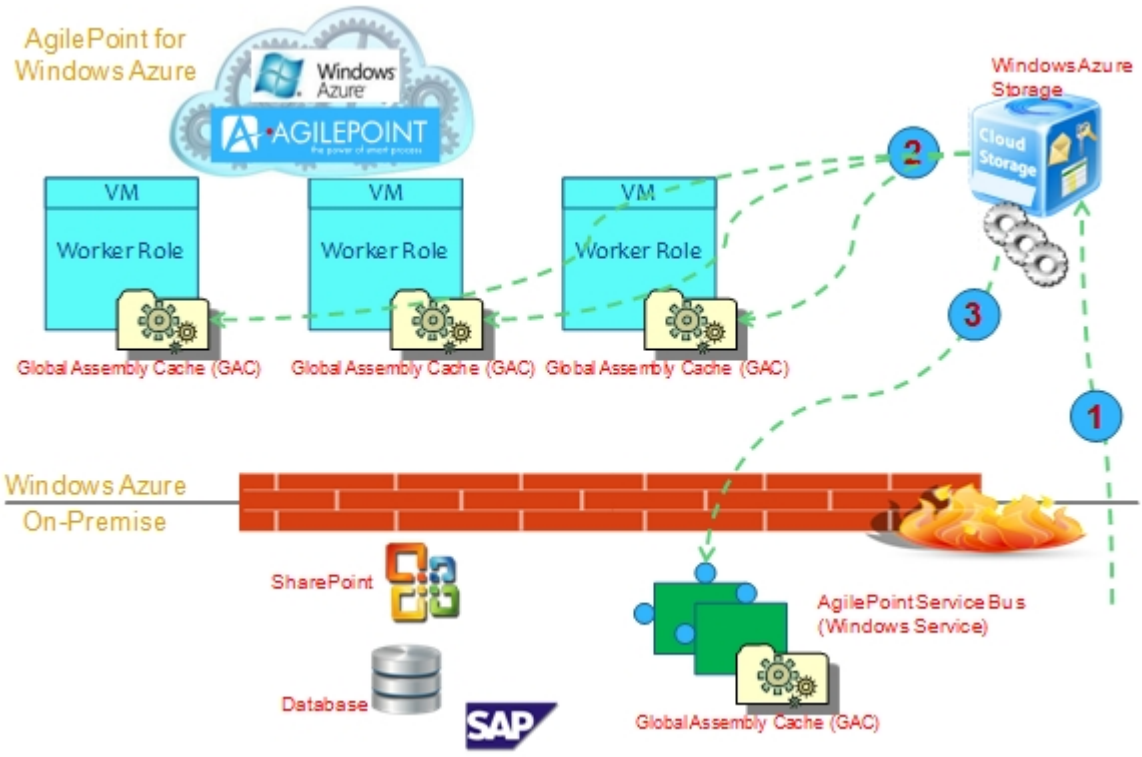
Field Name	Definition
MessageQueue	Definition: Specifies whether to use the message queue to use for Queue Based AgileParts. The value of this element is only important for AgilePoint Server running on premises. Allowed Values: • **Default** - Specifies to use the default message queue. • For AgilePoint BPMS for Azure, this means use the Azure queue.

Field Name	Definition

	• For on premises AgilePoint BPMS for Azure, this means use the build-in queue in the on premises database.
	• **Azure** - Specifies to use the message queue on Windows Azure message queue.
	  • For AgilePoint BPMS for Azure, this means use the Azure queue.
	  • Messages will go through local Windows Azure Storage Emulator. This requires the AgilePoint Service Bus running in the network to read and process the messages.
	
	Default Value:
	Default

Deployment for Queue Based AgileParts

Once you create a Queue Based AgilePart, you deploy it to Azure storage. It is then picked up by components in the AgilePoint BPMS for Azure system as it is needed.



1. A software developer or system administrator uploads a Queue Based AgilePart to a folder in your Azure storage account.

   For more information, seePublishing a Project to AgilePoint BPMS for Azure

2. The worker roles for AgilePoint BPMS for Azure download the Queue Based AgilePart from Azure storage and publish it to the Microsoft .NET GAC. The AgilePoint BPMS engine can then load the Queue Based AgilePart when a process needs it to run.
3. When the Queue Based AgilePart needs to access an on-premises data source, the AgilePart is automatically downloaded to the GAC for the AgilePoint Service Bus.

Managing Web and Worker Roles

This section provides instructions for managing your virtual machines (web roles and worker roles) for AgilePoint BPMS for Azure.

AgilePoint BPMS for Azure uses the following Web and Worker Roles:

- **APSVCWorkerRole** - AgilePoint Server.
- **APMGRWebRole** - Runs web applications.
- **APDMNWorkerRole** - Manages and synchronizes multiple instances of the APSVCWorkerRole, if applicable. This worker role is analogous to the Clustering Server Manager component in an AgilePoint BPMS on-premises installation.

Restarting Web and Worker Roles

To restart your virtual machines (web roles and worker roles) for AgilePoint BPMS for Azure, do the following.

Prerequisites

- AgilePoint BPMS for Azure

Navigation

1. Navigate to the Windows Azure home page at www.windowsazure.com.
2. On the Windows Azure home page, click **Manage**.
3. On the Windows Azure **Management Portal**, click **Hosted Services, Storage Accounts & CDN**.
4. Click **Hosted Services**.

Instructions

1. In the Hosted Services pane, expand your hosted service.
2. Do one of the following:
   - To restart all web and worker roles for your AgilePoint BPMS for Azure environment:
     1. Click the name of your hosted service in the row where the **Type** is **Deployment**.
     2. To stop all web and worker roles for your AgilePoint BPMS for Azure environment, click **Stop**.
     3. To restart all web and worker roles, click **Start**.
   - To restart an individual instance of a web and worker role:
     1. Expand the web or worker role.
     2. Right-click your role instance.
     3. On the quick menu, click **Reboot**.

Creating New Web and Worker Role Instances for Availability

To improve the availability of your AgilePoint BPMS for Azure solution, you can create multiple instances of your web and worker roles. The most common use is to create multiple instances of the AgilePoint Server role, APSVCWorkerRole.

To create new instances of your web or worker roles, do the following.

Prerequisites

- AgilePoint BPMS for Azure

Navigation

1. Navigate to the Windows Azure home page at www.windowsazure.com.
2. On the Windows Azure home page, click **Manage**.
3. On the Windows Azure **Management Portal**, click **Hosted Services, Storage Accounts & CDN**.
4. Click **Hosted Services**.

Instructions

1. In the Hosted Services pane, expand your hosted service.
2. Click the name of your hosted service in the row where the **Type** is **Deployment**.
3. Click **Configure**.
4. Click **Edit Current Configuration**.
5. In the node for the role you want, modify the value of the following node to reflect the number of instances you want:

```
<Instances count="1"/>
```

6. Click **OK**.
7. On the warning dialog, click **Yes**.

Changing the Size of Web or Worker Roles

To increase or decrease the capacity of your AgilePoint BPMS for Azure solution, you can change the size of your web or worker roles. To change the size of your web or worker roles, do the following.

Prerequisites

- AgilePoint BPMS for Azure

Instructions

1. Contact AgilePoint Support to request a larger web or worker role.
2. Follow the instructions from AgilePoint Support to deploy the roles to Windows Azure.