

IBM Business Process Manager
Version 7.5.0

*IBM Business Process Manager for
Microsoft SharePoint Add-On
Installation Guide*



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Installing and configuring IBM Business Process Manager for Microsoft SharePoint Add-On

IBM Business Process Manager for Microsoft SharePoint Add-On is an integrated add-on for Microsoft SharePoint that provides access to the IBM BPM Process Portal inbox, and task execution and reporting capabilities through SharePoint web parts. Using IBM® Business Process Manager, you can add IBM BPM process-related information to corporate or personal SharePoint sites, and effectively maintain, manage, and analyze IBM BPM tasks and process instances from any Microsoft SharePoint portal. The installation and configuration guide helps you install, configure, and troubleshoot IBM BPM for Microsoft SharePoint.

Software and hardware requirements

This section describes the software and hardware requirements for installing IBM Business Process Manager for Microsoft SharePoint Add-On.

Software requirements

In addition to the following software and hardware requirements, IBM Business Process Manager for Microsoft SharePoint Add-On also requires IBM Business Process Manager.

SharePoint Server requirements

To run IBM BPM for Microsoft SharePoint on a server system, the server must have the required software installed and running. Client systems must have Microsoft Internet Explorer installed to access SharePoint sites.

Component type	Component name
Operating system	Microsoft Windows® Server 2008 R2 or with SP2
SharePoint 2010 prerequisites	See Hardware and software requirements (SharePoint Server 2010) for detailed requirements. <ul style="list-style-type: none">• Microsoft Internet Information Services (IIS)• Microsoft .NET Framework 3.5 SP1• ASP.NET 2.0 enabled in IIS
SharePoint Server 2010	Microsoft SharePoint Server 2010, 64-bit edition. The 64-bit edition requires a 64-bit edition of the operating system.

On Windows Server, Microsoft Internet Information Services (IIS) must be enabled using the Application Server (ASP) option. After the .NET Framework is installed, ASP.NET 2.0 can be enabled using the following steps.

1. In the Windows Server Control Panel, click **Administrative Tools**.
2. Click **Configure Your Server Wizard**.
3. Click **Next** twice.
4. In the **Configure Your Server Wizard - Server Role** window, select **Application server**.
5. Make sure that the **Application Server** role is enabled with IIS and ASP.NET, and that **Configured** is set to **Yes** for the Application server role.

Hardware requirements

The suggested hardware requirements are the minimum required to run IBM Business Process Manager for Microsoft SharePoint Add-On.

- Intel® Pentium® 4, 2.0 GHz processor
- 1-2 GB RAM
- About 50 MB of free disk space for the application

Please visit <http://technet.microsoft.com/en-us/library/cc262485.aspx> for detailed hardware requirements for Microsoft SharePoint Server.

IBM Professional Services can help you size your hardware based on more precise numbers of users, transactions, and data.

Upgrading from Teamworks for SharePoint

If you have previously installed a version of Teamworks for SharePoint or Lombardi for SharePoint 7.2, follow these instructions to upgrade to IBM Business Process Manager for Microsoft SharePoint Add-On.

There are two methods for upgrading. You can upgrade using the IBM BPM for Microsoft SharePoint installer program, or you can use the silent upgrade command.

Interactive upgrade using the installer program:

1. On the SharePoint server system, double-click the **IBM-BPM-for-Sharepoint-x64.exe** installer file.
2. In the installer Welcome window, click **Next** to continue the installation.
3. In the installer Maintenance window, select **Upgrade**, then click **Next**.
4. Complete the installation by following the steps in “Running the IBM BPM for Microsoft SharePoint installer” on page 3.

To upgrade silently, run one of these commands, depending on whether you want to use basic authentication or integrated authentication.

Silent upgrade command for basic authentication:

```
"/IBM-BPM-for-Sharepoint-x64.exe" /s /v"/qn SHAREPOINTURL=http://myserver ENABLESHAREPOINT=TRUE WLEAUTHMODE=Basic WLEPASSW
```

Silent upgrade command for integrated authentication:

```
"/IBM-BPM-for-Sharepoint-x64.exe" /s /v"/qn SHAREPOINTURL=http://myserver ENABLESHAREPOINT=TRUE INSTALL_MODE=Upgrade"
```

If the upgrade is successful, a new SharePoint sample site called **IBM Business Process Manager** is created. The new sample site does not overwrite or delete the existing sample site that was created by a previous version of the installer program. For more information about removing the older sample site, see “Removing the product” on page 7.

Installing IBM BPM for Microsoft SharePoint

After you have met all the software and hardware prerequisites, you are ready to install IBM Business Process Manager for Microsoft SharePoint Add-On using the installer program, or using the silent install procedure.

Before beginning the installation steps, search the release notes items on the IBM Support Portal for IBM Business Process Manager for important, late-breaking information.

Running the IBM BPM for Microsoft SharePoint installer

Install IBM Business Process Manager for Microsoft SharePoint Add-On using the installer program.

Before installing IBM BPM for Microsoft SharePoint, make sure that your system meets these requirements:

- Microsoft SharePoint Server 2010 is installed on the SharePoint Server system.
- All of the components listed in “Software requirements” on page 1 are installed.
- You must have local administrator privileges for the Microsoft SharePoint Server system and you must be a member of the Home Owners group within SharePoint 2010 to run the installer program. This permission level allows you to install the example portal page.
 1. On the SharePoint Server system, double-click the **IBM-BPM-for-Sharepoint-x64.exe** installer file.
 2. In the installer **Welcome** window, click **Next** to continue the installation.
 3. Click to select the terms of the license agreement.
 4. If your IIS installation is not on drive **C:** or if you are not using port **80**, you must change the default directory information. Click **Change** and then navigate to the directory where the **web.config** file is located.
 5. The next window verifies the security policy directory. Click **Change** to modify the security policy directory. In this window, you can also enable a security policy for the SharePoint server. The installer program modifies the existing IIS **web.config** file by adding the IBM BPM for Microsoft SharePoint application files to the list of allowed DLLs. Optionally, an example security policy file can also be added to the **web.config** file to help you configure IBM BPM for Microsoft SharePoint for your environment. If you want to add the security policy to the **web.config** file, select the **Enable this policy in SharePoint** option.

Note: Selecting the **Enable this policy in SharePoint** option changes the security policy for all of your SharePoint web pages, and might break other programs installed on the SharePoint server. If you have other programs installed, do not select the **Enable this policy in SharePoint** option. Instead, you must manually modify the SharePoint security policy to add support for IBM BPM for Microsoft SharePoint. See “Manually configuring the security policy” on page 5 for more information.

6. In the SharePoint Server URL window, enter the URL of the SharePoint Server using the syntax **http://servername**.
7. In the IBM Business Process Manager Information window, enter the URL and port number of the IBM Process Server using the syntax **http://servername:port**. The IBM Process Server information is used to configure SharePoint site templates to work in your environment. Select the **Authentication Mode**, either **Basic** or **Integrated**.
 - If you select basic authentication mode, you must also enter your user name and password.
 - If you select integrated authentication mode, the **Username** and **Password** fields are not available.

Note: IBM Business Process Manager supports both NTLM-based and Kerberos-based automatic login, also referred to as single sign-on (SSO). The SSO function reduces configuration effort and simplifies the authentication process by using your Windows credentials to authenticate with IBM Business Process Manager. The NTLM and Kerberos protocols allow you to automatically log on to IBM Process Portal Console, IBM Process Admin Console, IBM BPM for Microsoft Office, and IBM BPM for Microsoft SharePoint. IBM BPM for Microsoft SharePoint supports SSO with IBM Business Process Manager through the Kerberos protocol. NTLM is not supported for IBM BPM for Microsoft SharePoint. For more information, see “Configuring integrated authentication in IBM BPM for Microsoft SharePoint” on page 7.

8. The installer program is now ready to begin writing the IBM BPM for Microsoft SharePoint files. You can click **Back** to change the installation settings, or click **Install** to continue.
9. During the installation process, the status bar indicates progress towards completion, which typically takes several minutes.
10. When the installation is complete, click **Finish**. The installer program restarts IIS so that the IBM Business Process Manager services and web parts are available for immediate use.

Running the silent installer

You can install IBM Business Process Manager for Microsoft SharePoint Add-On silently using a command.

Before running the silent installer, make sure that your system meets these requirements:

- Remove any earlier versions of the product. Instructions are provided in “Removing the product” on page 7.
- Prerequisite client software is installed. For more information, see “Software and hardware requirements” on page 1.

Run the **IBM-BPM-for-Sharepoint-x64.exe** install command, using the following command arguments to perform the silent configuration:

- **WLESERVERURL** : Specifies the URL of the IBM Process Server. For example: **http://MyServer:PortNumber**.
- **PATHTOVIRTUALDIRECTORYWEBCONFIG**: Specifies the path to the virtual configuration directory.
- **PATHTOSECURITYPOLICYDIR**: Specifies the path to the security policy directory.
- **ENABLESHAREPOINT**: Enables the policy in SharePoint. Valid values are **TRUE** or **FALSE**. The default value is **FALSE**.
- **SHAREPOINTURL**: Specifies the SharePoint URL.
- **WLEAUTHMODE**: Sets the authentication mode of the IBM Process Server. Valid values are **Basic** and **Integrated**. The default value is **Integrated**.
- **WLEUSERNAME**: Indicates the username to authenticate to the IBM Process Server. This argument is required for basic authentication mode only.
- **WLEPASSWORD**: Indicates the password to authenticate to the IBM Process Server. This argument is required for basic authentication mode only.
- **INSTALL_MODE**: Specifies the installation mode. Valid values are **Install** or **Upgrade**. The default value is **Install**.

The following example shows the installation command for basic authentication:

```
"/IBM-BPM-for-Sharepoint-x64.exe" /s /v"/qn SHAREPOINTURL=http://myserver ENABLESHAREPOINT=TRUE WLEAUTHMODE=Basic WLEPASSW
```

The following example shows the installation command for integrated authentication:

```
"/IBM-BPM-for-Sharepoint-x64.exe" /s /v"/qn SHAREPOINTURL=http://myserver ENABLESHAREPOINT=TRUE"
```

To upgrade from an earlier version of the product, add the **INSTALL_MODE=Upgrade** argument to the command.

IBM BPM for Microsoft SharePoint directories and files installed on the server and the client

The IBM Business Process Manager for Microsoft SharePoint Add-On installer program creates several important directories and files on the Microsoft SharePoint server system and your local system.

These files and directories include web parts and services. The installer program adds files to the SharePoint Server system, and can also modify server configuration files.

By default, IBM BPM for Microsoft SharePoint application files are installed in the following directory:
C:\Inetpub\wwwroot\wss\VirtualDirectories\80\

The subdirectories in this directory contain the program DLLs. For example, the **bin\Lombardi.Server.WebParts.dll** file enables the Portal web parts function.

The installer program can modify the existing **web.config** file to add an example security policy. This optional modification can help you configure IBM BPM for Microsoft SharePoint for your environment. The **web.config** file is updated to point to the new policy file only if you select the **Enable this policy in SharePoint** option during installation. For more information, see “Running the IBM BPM for Microsoft SharePoint installer” on page 3.

The file name of the example security policy file added by the installer program is **wss_mediumtrust_lombardi.config**. By default, this file is installed in the following directory:
C:\Program Files\Common Files\Microsoft Shared\web server extensions\14\CONFIG

The installer program automatically adds references to **wss_mediumtrust_lombardi.config** inside the specified **web.config** file, as shown in this example:

```
<securityPolicy> <trustLevel name="WSS_Medium" policyFile="C:\Program Files\Common Files\Microsoft Shared\web server ext
```

This security policy becomes the current trust level in the **web.config** file if the **Enable this policy in SharePoint** option is selected during installation. The trust level entry in the **web.config** file is shown in the following example:

```
<trust level="WSS_Medium_Lombardi" originUrl="" />
```

Configuring IBM BPM for Microsoft SharePoint

After you have successfully installed IBM BPM for Microsoft SharePoint, you must configure Microsoft® SharePoint and the IBM BPM for Microsoft SharePoint environment.

Manually configuring the security policy

During installation of IBM Business Process Manager for Microsoft SharePoint Add-On, if you did not select the **Enable this policy in SharePoint** option in the security policy installer window, then you must perform the following steps to successfully run IBM BPM for Microsoft SharePoint.

The IBM BPM for Microsoft SharePoint services and web parts do not run until you manually enable the website to use a security policy that allows the installed files to run on the web server. You can enable the policy by setting the trust level in **web.config** to **full** (not recommended), or by creating a custom policy file. Creating a custom policy file is the best approach to optimize security while allowing IBM BPM for Microsoft SharePoint to run properly.

If the trust level is currently set to **WSS_Minimal**, which means that you are using the default contents of the **wss_minimaltrust.config** file, IBM BPM for Microsoft SharePoint will not run. To run properly, SharePoint web parts and web services require a higher level of permissions than the level provided by the default SharePoint permissions.

You can modify an existing custom security policy file to add the necessary policy information, or you can modify a default policy file. IBM BPM for Microsoft SharePoint provides a policy updater tool to help you modify the policy file and audit the results. Follow these steps to run the policy updater tool.

1. Start the policy updater by double-clicking the **TeamworksSharePointSecurityPolicyUpdater.exe** file. This file is located in the directory where the policy file was created during installation. By default, the policy file location is:
C:\Program Files\Common Files\Microsoft Shared\web server extensions\14\CONFIG
2. In the IBM BPM for Microsoft SharePoint Policy Updater window, click **Browse** and then navigate to an existing policy file that you want to modify. The existing policy file can be a custom file that is already in use, or the default **wss_mediumtrust.config** policy file.
The updater tool computes default names for the reformatted existing policy file and the new output file. By saving the original policy file, the tool allows you to compare the original file with the output file, in case the saved original is necessary for future troubleshooting. You can change the default file names, but you must make these changes before clicking **Generate**. If you enter a file name instead of clicking Browse, the tool computes default file names when you click Generate.
3. Click **Generate**. The original policy file is saved to the **Reformatted Original File For Comparison** file name. The new policy file is saved to the **New Security Policy File with strong names** file name. You can use a comparison program or utility to compare the original file with the new file. The policy updater tool does not add redundant IBM BPM for Microsoft SharePoint strong names to a policy file that already contains the strong names.
4. Close the policy updater window when you have finished using the updater tool.

After you have successfully generated the modified policy file, place the new file on the web server and reference the policy file from the **web.config** file. This step enables the new policy to become the global policy for the website.

Web parts overview

IBM Business Process Manager for Microsoft SharePoint Add-On provides web parts that enable you to view data from IBM Process Portal within a Microsoft SharePoint site.

Using IBM BPM for Microsoft SharePoint, you can perform many of the same tasks in SharePoint that you can do in the web-based IBM Process Portal, including:

- Launch processes from a list of favorites.
- View and perform assigned tasks.
- Manage in-flight processes, including starting and stopping process instances, viewing process diagrams, and reassigning tasks to balance workload.
- View real-time reports showing performance for individuals, teams and business processes.

The following table describes the function of the IBM Process Portal web parts.

Table 1. Web part function

Web part	Function
Saved Search	Displays active tasks from an IBM BPM saved search.
Process Start	Launches IBM BPM processes from a SharePoint site.
ScoreBoard Launcher	Displays commonly used links from IBM Process Portal.
Embedded Web Site	Displays a IBM BPM report or Coach within a SharePoint site. This web part can also display other types of web sites using any valid URL.

For more information about IBM Process Portal web parts, see Using IBM Process Portal with IBM BPM for Microsoft SharePoint .

Adding web parts to a SharePoint site

Add functions such as saved searches and processes to IBM Business Process Manager for Microsoft SharePoint Add-On by adding web parts to a Microsoft SharePoint site.

The IBM BPM for Microsoft SharePoint installer creates sample templates that use web parts. You can add and modify these templates instead of using the web parts directly, since the web parts rely on the structure of the SharePoint site.

To add web parts to a SharePoint site:

1. Click **Site Actions > Edit Page**.
2. Go to the web part zone and click **Add a Web part**.
3. In the **Add Web Parts** window, expand the tree until you see the **Miscellaneous** section.
4. Click to select the IBM BPM web parts that you want to add to your SharePoint site.
5. Click **Add**.

To configure the properties for each web part, click **Edit > Modify Shared Web Part**. For more information about configuring IBM BPM web parts in your SharePoint site, see Using IBM Process Portal with IBM BPM for Microsoft SharePoint.

Configuring integrated authentication in IBM BPM for Microsoft SharePoint

The integrated authentication between Microsoft® Windows® and IBM Business Process Manager for Microsoft SharePoint Add-On allows you to access the IBM BPM for Microsoft SharePoint client more efficiently.

IBM Business Process Manager supports both NTLM-based and Kerberos-based automatic logon. These authentication modes are also referred to as single sign-on (SSO). SSO reduces configuration effort and simplifies the authentication process by using the credentials of the current Windows user to authenticate with IBM Business Process Manager consoles. The NTLM and Kerberos protocols allow users to automatically log on to IBM Process Portal Console, IBM Process Center Console, IBM Process Admin Console, IBM BPM for Microsoft Office, and IBM BPM for Microsoft SharePoint.

Note: IBM BPM for Microsoft SharePoint supports SSO with IBM Business Process Manager through the Kerberos protocol. The NTLM protocol is not supported for IBM BPM for Microsoft SharePoint.

IBM BPM for Microsoft SharePoint supports integrated authentication by default. During installation, the authentication mode is configured for each site template and the sample IBM Business Process Manager site, using the authentication mode selected in the installer program. A web part can be manually configured to use either integrated or basic authentication. To change the authentication settings, click **Edit > Modify Shared Web Part** in a page. If you select basic authentication mode, you must specify the authentication credentials for the IBM Process Server, including user name and password. You can encrypt the password that is used for basic authentication. In the web part properties window, click **Encrypt Credentials**. For help with implementing single sign-on for IBM BPM for Microsoft SharePoint, contact IBM Support.

Removing the product

To remove IBM Business Process Manager for Microsoft SharePoint Add-On from your system, you can run the IBM BPM for Microsoft SharePoint uninstaller program using the Windows® Add and Remove Programs function, or use the uninstall command to uninstall silently.

To uninstall the product silently, use the following command:

```
"./IBM-BPM-for-Sharepoint-x64.exe" /s /v"/qn" /x
```

The uninstaller program does not remove some of the files that were previously installed. The small number of remaining files are necessary to avoid potential problems. For example, uninstalling IBM BPM for Microsoft SharePoint might cause the rest of a website to stop working, due to the removal of a critical file. The policy file and the associated **web.config** entry for it are not removed in case the website administrator is using them or has extended them with other applications.

Additionally, the IBM BPM for Microsoft SharePoint sample site created to demonstrate the Portal web parts is not removed, because the sample site might be customized. The IBM BPM for Microsoft SharePoint installer program creates a new SharePoint site instead of writing over the existing sample site. You can keep the older sample site, or remove it using the following steps:

1. Click **Site Actions > Site Settings**.
2. In the **Site Settings** window, under **Site Administration**, click **Delete this site**.
3. In the next window, click **Delete**. A message confirming the page deletion is displayed.

Troubleshooting

Review the troubleshooting issues to diagnose and fix common problems.

Because the configuration of your particular environment might differ from the standard, you might see some of the following common issues during an installation update. Ensure that you also search release notes items in the IBM Business Process Manager Support Portal for late-breaking information.

Configuring Kerberos for single sign-on (SSO)

IBM BPM for Microsoft SharePoint supports SSO with IBM Business Process Manager through the Kerberos protocol. NTLM is not supported with IBM BPM for Microsoft SharePoint.

IBM Business Process Manager sample site is not installed if account has insufficient permissions

The IBM BPM for Microsoft SharePoint installer program creates a Microsoft SharePoint site with a sample portal site called **IBM Business Process Manager**. If the account used to install IBM BPM for Microsoft SharePoint has insufficient permissions, the sample site is not created.

Workaround

Uninstall IBM BPM for Microsoft SharePoint and verify that you are using an account with appropriate permissions. Then run the installer program again.

For more information, see “Running the IBM BPM for Microsoft SharePoint installer” on page 3.

Configuring IBM BPM for Microsoft SharePoint permissions

Check the **web.config** file to ensure that IBM BPM for Microsoft SharePoint has the appropriate permissions to run. For more information, see “IBM BPM for Microsoft SharePoint directories and files installed on the server and the client” on page 4.

