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| Set up User Profile Sync in a new SharePoint Server 2016 farm using Microsoft Identity Manager |
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**Summary:** How to configure SharePoint Server Profile Synchronization with Microsoft Identity Manager (MIM) from scratch – for brand new SharePoint Synchronization deployments.

**Applies to:** SharePoint Server 2016 | SharePoint Server 2015

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* [Download the solutions files that you need](file:///C:/Users/tracyp.REDMOND/Downloads/html/b4c2dace-97fc-43c7-8991-44279a4fe05d#BKMK_Download)
* [Gather the configuration details you need](file:///C:/Users/tracyp.REDMOND/Downloads/html/b4c2dace-97fc-43c7-8991-44279a4fe05d#BKMK_Gather)
* [The PowerShell to install the SharePoint Server Synchronization Configuration file](file:///C:/Users/tracyp.REDMOND/Downloads/html/b4c2dace-97fc-43c7-8991-44279a4fe05d#BKMK_InstallConfigfile)
* The PowerShell to start the SharePoint Synchronization Configuration

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| **Important:** |
| If you need to convert the XML files from an existing SharePoint Farm's Federated Identity Management (FIM) system to configuration files that can be used in a Microsoft Identity Management server, the steps are a companion article, [Convert Forefront Identity Manager (FIM) XML files to Microsoft Identity Management (MIM) service config files for User Profile Sync](file:///C:/Users/tracyp.REDMOND/Downloads/html/04d1607a-21a9-4b77-929a-d9d7ffad51f8). |

**Note**:

The solutions files referenced in this article are available for download [here](https://github.com/PnP/tree/master/Solutions/UserProfile.MIMSync.). See the section ‘Download the solutions files that you need’ for more details.

# New SharePoint Synchronization Deployment

The article outlines a solution that will help you to install and synchronize accounts to SharePoint Server using Microsoft Identity Management, or MIM. MIM 2016 is the successor to a profile synchronization technology leveraged by previous versions of SharePoint Server that was known as Forefront Identity Manager, or FIM. FIM is no longer included as part of the product as of SharePoint Server 2016. However, MIM is not the only synchronization solution that SharePoint Server 2016 offers. If you would prefer to use the Active Directory Direct Import that is built-in with SharePoint Server 2016, please see the configuration article [here](https://technet.microsoft.com/en-us/library/jj219646.aspx). Otherwise, follow the steps in this article to configure a new installation of FIM for your User Profile Synchronization.

# Download the solutions files that you need

Download the files used by this solution into a folder on a SharePoint Server from this location.

<https://github.com/PnP/tree/master/Solutions/UserProfile.MIMSync>

Make certain you're logged in as a Farm Administrator and have a local administrator rights on this server.

1. **SharePointSync.psm1** - PowerShell module for deploying and starting the synchronization solution.
2. **MA-AD.xml** - This is the MIM management agent for Active Directory.
3. **MA-SP.xml** - This is the MIM management agent for SharePoint Server.
4. **MV.xml** - This XML file contains additional User Profile Synchronization configuration.
5. **SharePointSync.dll** - The scripted synchronization rules for the MIM 2016 configuration.

# Gather the configuration details you need

To run the PowerShell commands involved in this solution, you'll need to catalog some information from your Active Directory and your SharePoint Server configuration as well. You should include this information in any build-documentation you keep on the User Profile Synchronization process.

**Active Directory**

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| **Item** | **Description** |
| ForestDnsName | This is the DNS name of the Active Directory forest to be synchronized. |
| ForestCredential | This is the username and password of the account that will be used to read objects from Active Directory. This account must have Replicate-Directory-Changes permissions in the Active Directory that is to be synchronized. |
| OrganizationalUnit | This is the distinguished name of the Active Directory container to be synchronized. You can add more containers after the configuration is loaded. To add more containers, use the Synchronization Service Manager GUI interface to modify the ‘AD’ management agent. |

**SharePoint Connection Details**

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| **Item** | **Description** |
| SharePointUrl | This is the URL of the SharePoint Server running the User Profile Service application, for example, http://SharePoint01:8080. |
| SharePointCredential | The username and password of the account used to read and write objects into the SharePoint User Profile. |

# The PowerShell to install the SharePoint Server Synchronization Configuration file

Once you've downloaded the solution files and cataloged the configuration details you can begin running the PowerShell command for installing the SharePoint Synchronization Configuration.

The configuration is installed by loading SharePointSync.psm1 and calling Install-SharePointSyncConfiguration as shown in the following code.

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| ### Load the SharePoint Sync Module  Import-Module C:\SharePointSync\SharePointSync.psm1 -Force  ### Install the SharePoint Sync Configuration  Install-SharePointSyncConfiguration `  -Path C:\SharePointSync `  -ForestDnsName litware.ca `  -ForestCredential (Get-Credential LITWARE\adSyncAccount) `  -OrganizationalUnit 'ou=Litwarians,dc=Litware,dc=ca' `  -SharePointUrl http://SharePointServer:5555 `  -SharePointCredential (Get-Credential LITWARE\spUserProfileAdmin) `  -Verbose | |

## Preview the impact of your SharePoint Synchronization

Once the synchronization configuration is installed, it's ready to be started. Before you make further changes, you can examine the impact your synchronization will have by running the Start-SharePointSync cmdlet with '-WhatIf'.

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| ### Run the Synchronization Service management agents  Start-SharePointSync –WhatIf -Verbose | |

# The PowerShell to start the SharePoint Synchronization Configuration

To start the SharePoint Server synchronization service on-demand, run the Start-SharePointSync cmdlet.

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| ### Run the Synchronization Service management agents  Start-SharePointSync -Verbose | |

# How to add more Active Directory Domains

Now that you've loaded the initial configuration, you can add more domains for synchronization. Follow these steps in the Synchronization Service manager.

## 1. Add another domain or domains

1. Open the Synchronization Service Manager.
2. In the Management Agents tab, select the ADMA management agent > Properties > Actions.
3. In the Properties dialog box > Configure Directory Partitions.
4. In the list of directory partitions, select any domain you want to synchronize (and remember that credentials for these domains may be required).
5. Click OK to save the management agent properties.

Each run profile for the ADMA management agent must be updated for each domain that was added. To update your run profiles do the following:

## 2. Update your run profile

1. In the Management Agents tab > select ADMA Management agent > select Configure Run Profiles.
2. Select FullImport run profile > New Step.
3. Choose a step type of Full Import (Stage Only) > Next.
4. Choose the partition that matches the domain you just added and click Finish. The run profile should now have two steps.
5. Select the FullSync run profile next > New Step.
6. Choose a step type of Full Synchronization > Next.
7. Choose the partition that matches the domain you just added > Finish. The Run profile will now have two steps.
8. Click DeltaImport in the run profiles next > New Step.
9. Choose a step of type Delta Import (Stage Only) > Next.
10. Choose the partition that matches the domain that was just added > Finish. The run profile should now have two steps.
11. Select the DeltaSync run profile > New Step.
12. Choose a step of type Delta Synchronization > Next.
13. Choose the partition that matches the domain that was just added > Finish. The run profile should now have two steps.
14. Click Apply to save all the run profile changes > OK.

# Additional resources

For more information, see the following resources:

* Need an overview of SharePoint Server 2016's switch of FIM to MIM (including all prerequisites)? See [User Profiles in SharePoint Server 2016](file:///C:/Users/tracyp.REDMOND/Downloads/84972766-6527-4791-ae68-02d3a50b67f0).
* Do you need to convert your farm's existing Forefront Identity Manager (FIM) files to MIM files for use with User Profile Synchronization? See [Convert existing Forefront Identity Manager (FIM) XML files to Microsoft Identity Management (MIM) service config](file:///C:/Users/tracyp.REDMOND/Downloads/04d1607a-21a9-4b77-929a-d9d7ffad51f8).