SharePoint Hybrid Implementation

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Abstract

SharePoint can be implemented in combination with SharePoint On-Prem & O365. The SharePoint On-Prem farm can be implemented in our own datacenters, in a private cloud, or in a public cloud as Azure or AWS.

Introduction

For many organizations, there is a need for SharePoint Hybrid implementations due to the following reasons:

- Organizations would like to align their information systems with Microsoft's vision of Cloud first, which means that all the latest features of SharePoint/O365 will be available in Cloud first. Furthermore, the latest features of Office365 like Microsoft teams, Microsoft Flow, PowerApps are available only on Cloud.
- The level of customizations and integration with other On-Prem systems, and due to the legal/compliance reasons where the data must remain in a certain geographical area such as a State or a Province.
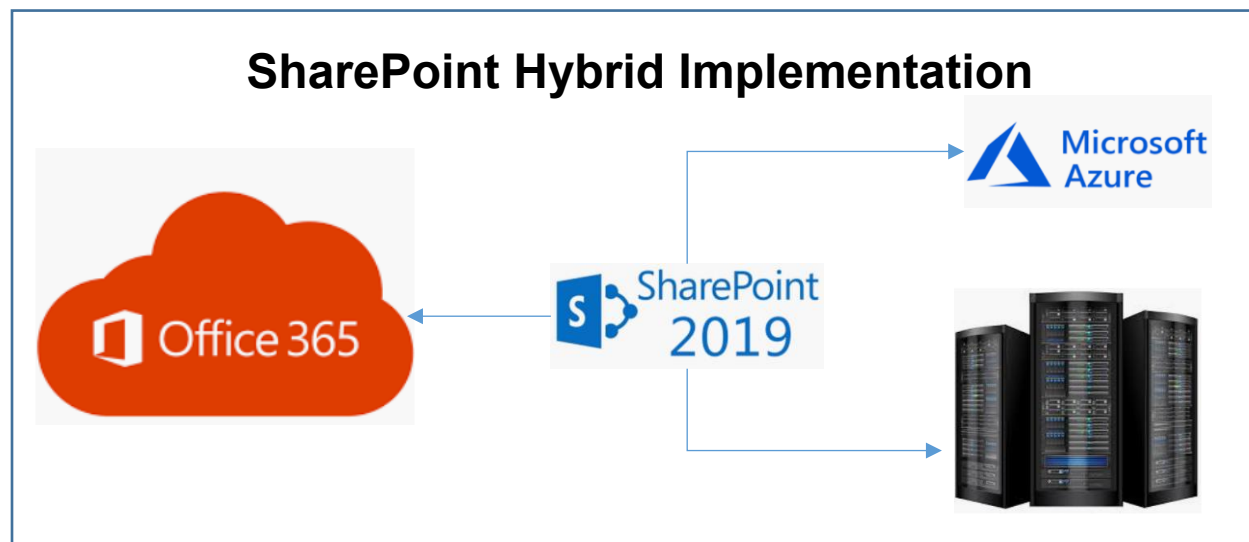
Configure Hybrid site feature:

The following steps need to be followed in order to configure a SharePoint Hybrid site:

Configure Office 365 for SharePoint hybrid	Configure Office 365 for enterprises tenant for a hybrid environment, including registering a domain, configuring UPN suffixes, and synchronizing user accounts.
Set up SharePoint services for hybrid environments	Configure the needed SharePoint services for hybrid search, including user profiles, MySites, and the application management service.
Run Hybrid Picker	Configure hybrid sites features by running the Hybrid Picker in Office 365.
Test the hybrid farm	Check to ensure hybrid sites features are working: Log in to a SharePoint Server as a regular user. *(Be sure you're a member of the correct audience if you used audiences.)* Click the follow link at the top of the page. You should see a small pop-up under **Follow** letting you know that you're following the site. Click this pop-up and notice that it navigates to your personal site, and the list of sites you're following in SharePoint Online.

Hybrid feature overview:

Hybrid App Launcher: The extensible hybrid app launcher is designed to help you get to your Office 365 apps and services from SharePoint Server. Once you enable this feature, you'll see the Office 365 Delve and Video apps, along with your custom Office 365 tiles, appear in your SharePoint Server app launcher.

OneDrive for Business Hybrid

In SharePoint Server, we can redirect users to OneDrive for Business in Office 365 when they choose OneDrive on the navigation menu (SharePoint Server 2010 and SharePoint Server 2013) or in the app launcher (SharePoint Server 2016). This is known as hybrid OneDrive for Business.

With this feature, users can continue to use their on-premises SharePoint farm while providing them with an easy way to store, share, and collaborate in the cloud with OneDrive for Business in Office 365.

This best-of-both-worlds approach lets users keep their key business information in their own environment, while allowing users the flexibility to access their documents from anywhere.

With hybrid OneDrive for Business, users can:

- Store personal files that they are working on in the cloud, and access these files even when they aren't signed in to the corporate network.
- Access these files multi devices (devices such as iPhones, Windows Phones, tablets).
- Share and collaborate on documents with others in the organization or with external users by using guest links.

Hybrid Self-service site creation

Hybrid self-service site creation redirects default self-service site creation page in SharePoint Server to SharePoint Online Group Creation page. This helps users to create their sites in SharePoint Online instead of SharePoint Server. Hybrid self-service site creation follows the configured hybrid audience settings.

Enable Hybrid Experience
- Open SharePoint 2019 Central Administration site.
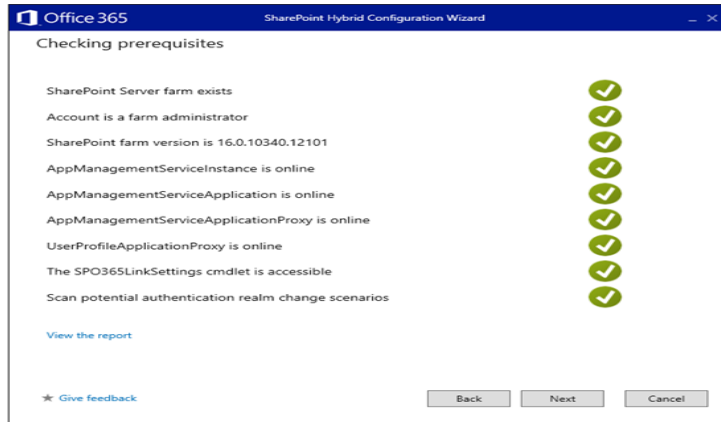- Click the link from green tool-tip "Click here to enable Hybrid experiences."
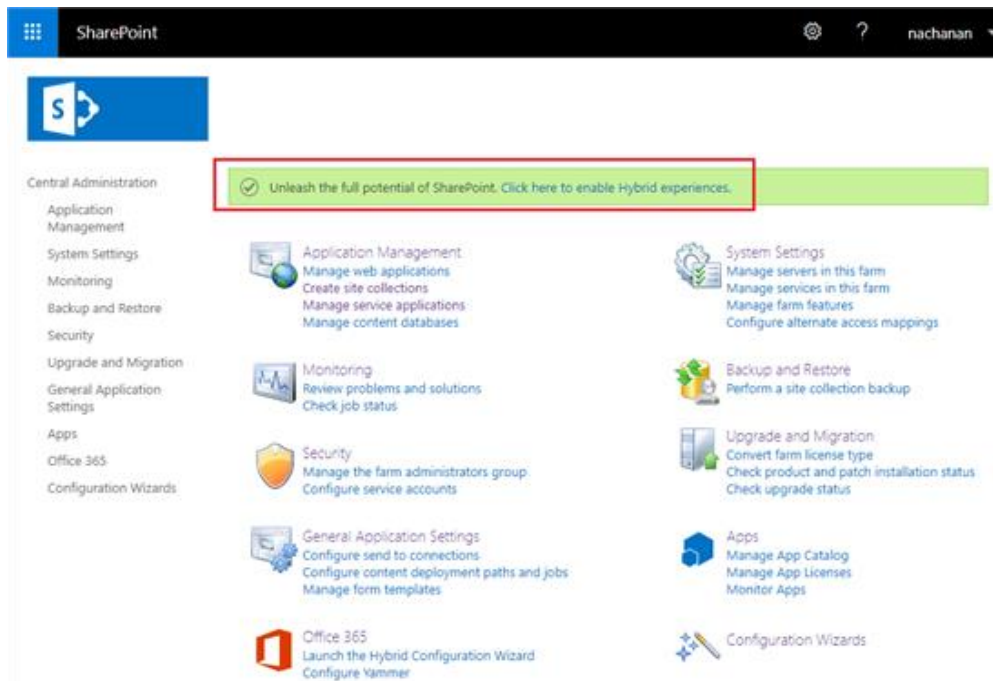
- An executable file "HybridSPSetup.exe" will be downloaded to the file system. Double click HybridSPSetup.exe to install.
- The wizard will open to connect your on-premises SharePoint Server farm with your Office 365 tenant. Click Next.
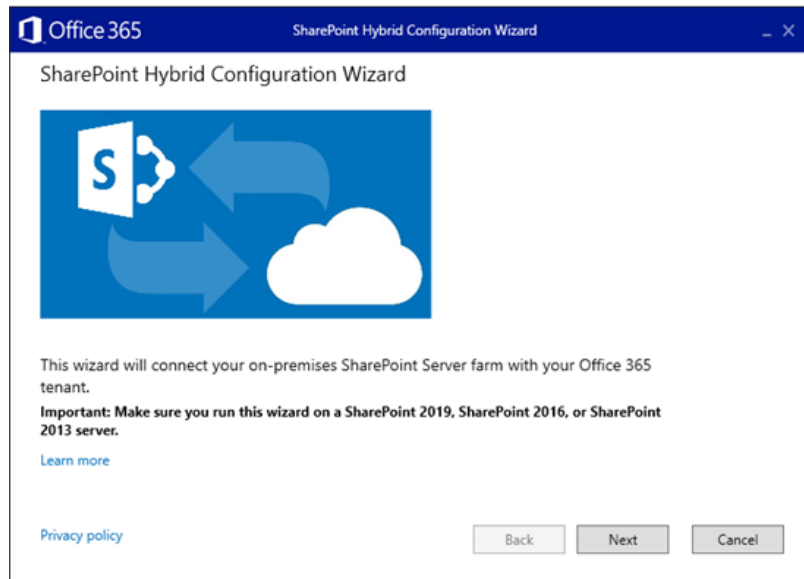
- In order to set up a hybrid environment for SharePoint or OneDrive for Business (OD4B), we need to provide administrator credentials for both SharePoint Server and Office 365. Click Next.

- Pre-requisites check report will be generated.

In case of any errors regarding SPO365LinkSettings cmdlet, please follow below steps and re-run SharePoint Hybrid Configuration Wizard.

- Open SharePoint 2019 Management Shell with administrator privileges.
- Run below command

```
Set-SPO365LinkSettings -MySiteHostUrl "http://mysites.contoso.com" -RedirectSites $true
```
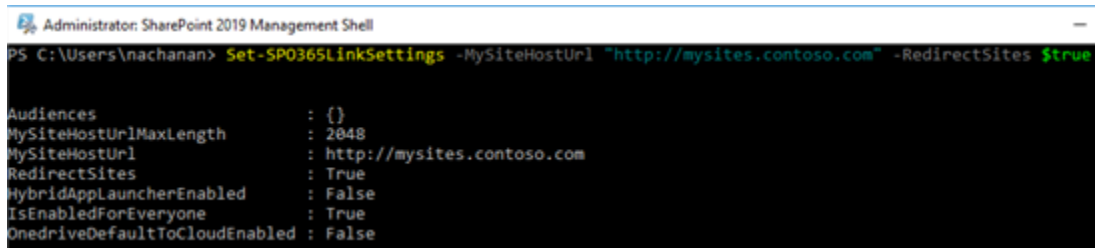

- Install the default features available in hybrid environment wizard. The configuration wizard will run.
- After the successful run of the hybrid configuration wizard, the SharePoint server environment will be connected to Office 365.
- Perform IISReset on SharePoint Server 2019.

Create Site Collection Page

The create site collection page in SharePoint 2019 provides an option to create a site collection in SharePoint Online.

1. Open SharePoint 2019 Central Administration site.
2. From the left menu, click Application Management.
3. Under Site Collections, click "Create site collections".
4. The page supports to create this Site Collection in SharePoint Online. Click the link "Click here".
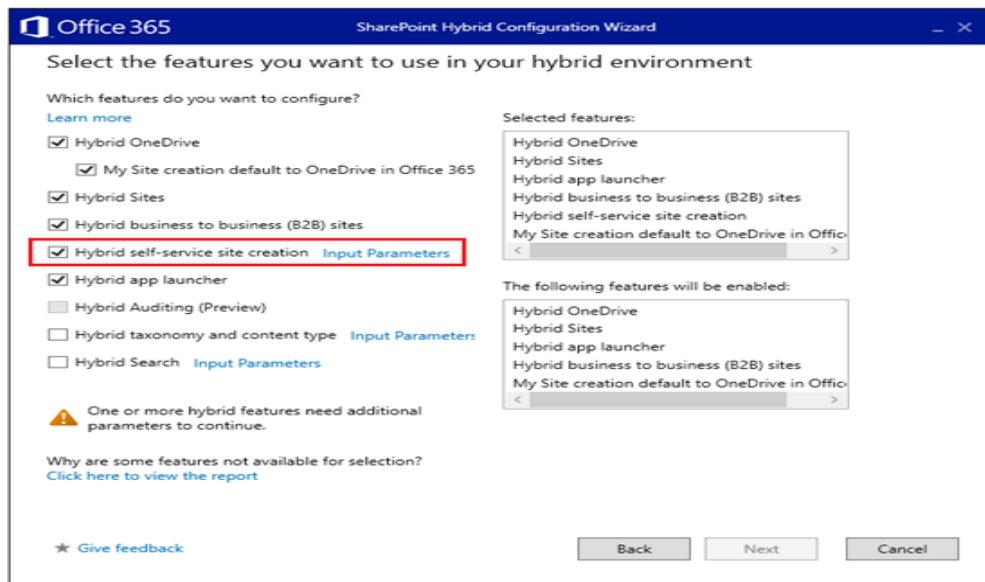
5. The login screen for SharePoint Online will appear. Enter the Office 365 administrator credentials.
6. The new site collection screen will appear.
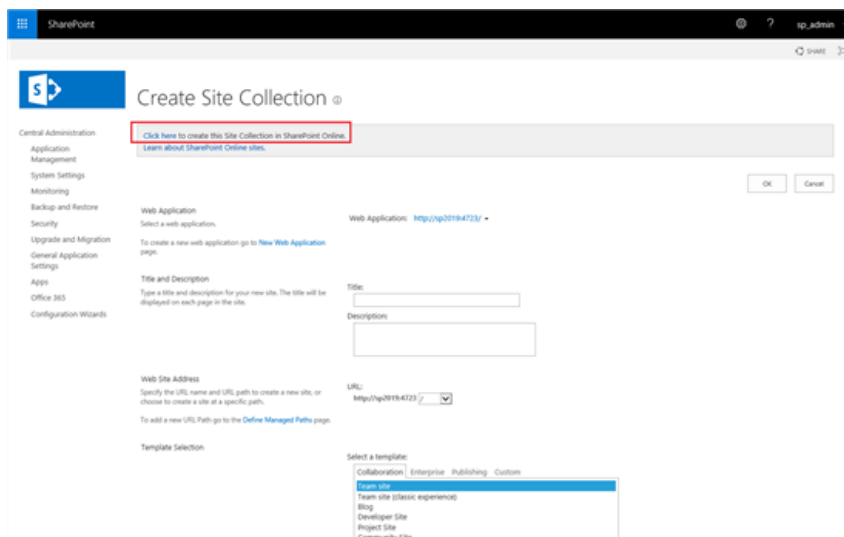
7. Enter the required information to create a new site collection in SharePoint online.

Hybrid Auditing:

Hybrid Auditing is a feature that allows SharePoint Administrators to push audit logs from On-Premises to the Office 365 Unified Audit Log, and therefore having a single location to view audit logs for both on-premises and online.

Hybrid Content Types and Taxonomy:

- The hybrid taxonomy and content types feature allow developers to have a shared taxonomy and set of Content Types between SharePoint Online tenant and SharePoint On-premises farm.
- After the initial term store migration is carried out by an admin using PowerShell, users will be able to create all their content types, as well as taxonomy in SharePoint Online.
- A timer job will automatically replicate the content type and taxonomy to SharePoint On-Premises on a schedule set by your administrator.
- Both Content Types and Managed Metadata terms will keep the same IDs, allowing developers to create custom solutions using the SharePoint Framework that would work both On-Premises and Online.

Hybrid Business Connectivity Services:

- Hybrid Business Connectivity Services allows developers to securely display data from an external system, such as SQL Server Database, as a SharePoint list in Office 365.
- Users can then view and edit the data from anywhere, with no need to be connected to their on-premises infrastructure.

Hybrid Search

SharePoint Server 2019 offers two options to integrate search between SharePoint On-Premises and SharePoint Online.

Federated Search: In a Federated Search setup, SharePoint Server 2019 can show results from SharePoint Online by making a Remote SharePoint query, and users can also search SharePoint On-Premises directly from SharePoint Online.

- In a Federated Search scenario, the index stays on the same system as the data. The SharePoint Server 2019 index remains On-Premises, while the SharePoint Online index remains in the cloud. From a user experience point of view, users will see results as two different systems on the search page.

Cloud Hybrid Search: In Cloud Hybrid Search, SharePoint Server 2019 pushes the index of On-Premises items and documents to Office 365, where it's merged with the SharePoint Online index.

- The index of both On-Premises and Cloud documents merged in the cloud, users will have access to Office 365–only features such as Delve and the Office Graph.

- Since there is only a single index, the search results will be shown and ranked in a single set for the users

Conclusion:

Some of the benefits of hybrid cloud benefits:

- **Security** – Since the hybrid cloud contains private cloud, this gives reassurance when it comes to security of sensitive operations, makes it easier to meet regulatory data handling and storage requirements.
- **Cost efficiency** – depending on usage, public cloud offers cost-effective solution than private cloud. Hybrid cloud can balance the need to be cost efficient, with the security of keeping most sensitive and critical workloads on private cloud.
- **Scalability** – Private cloud will be difficult to scale up,but public cloud can be scaled up easily with minimal configurations. By moving those workloads that most benefit from scalability to the public cloud, we also reduce the demands on your private cloud.
- **Flexibility** – hybrid cloud provides organizations to explore a variety of operational directions and find the optimum cloud solution that aptly suits them.
- **Preservation of investments** – a hybrid cloud strategy enables organizations to continue using existing IT investments, whether on premises or co located.

Reference Links

https://docs.microsoft.com/en-us/sharepoint/hybrid/plan-hybrid-onedrive-for-business

https://techcommunity.microsoft.com/t5/Microsoft-SharePoint-Blog/SharePoint-Server-2019-Hybrid-What-do-you-actually-get/ba-p/327320