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1 MS-050 : SharePoint Hybrid Deployment and Migration

- **Download Latest Student Handbook and AllFiles Content**
- **Are you a MCT?** - Have a look at our GitHub User Guide for MCTs
- **Need to manually build the lab instructions?** - Instructions are available in the MicrosoftLearning/Docker-Build repository

1.1 What are we doing?

- To support this course, we will need to make frequent updates to the course content to keep it current with the Microsoft 365 services used in the course. We are publishing the lab instructions and lab files on

GitHub to allow for open contributions between the course authors and MCTs to keep the content current with changes in the Microsoft 365 platform.

- We hope that this brings a sense of collaboration to the labs like we've never had before - when Microsoft 365 changes and you find it first during a live delivery, go ahead and make an enhancement right in the lab source. Help your fellow MCTs.

1.2 How should I use these files relative to the released MOC files?

- The instructor handbook and PowerPoints are still going to be your primary source for teaching the course content.
- These files on GitHub are designed to be used in conjunction with the student handbook, but are in GitHub as a central repository so MCTs and course authors can have a shared source for the latest lab files.
- It will be recommended that for every delivery, trainers check GitHub for any changes that may have been made to support the latest Microsoft 365 services, and get the latest files for their delivery.

1.3 What about changes to the student handbook?

- We will review the student handbook on a quarterly basis and update through the normal MOC release channels as needed.

1.4 How do I contribute?

- Any MCT can submit a pull request to the code or content in the GitHub repro, Microsoft and the course author will triage and include content and lab code changes as needed.
- You can submit bugs, changes, improvement and ideas. Find a new Microsoft 365 feature before we have? Submit a new demo!

1.5 Notes

1.5.1 Classroom Materials

1.6 It is strongly recommended that MCTs and Partners access these materials and in turn, provide them separately to students. Pointing students directly to GitHub to access Lab steps as part of an ongoing class will require them to access yet another UI as part of the course, contributing to a confusing experience for the student. An explanation to the student regarding why they are receiving separate Lab instructions can highlight the nature of an always-changing cloud-based interface and platform. Microsoft Learning support for accessing files on GitHub and support for navigation of the GitHub site is limited to MCTs teaching this course only

1.7 title: Online Hosted Instructions permalink: index.html layout: home

2 Content Directory

Hyperlinks to each of the lab exercises and demos are listed below.

2.1 Labs

{% assign labs = site.pages | where_exp:"page", "page.url contains '/Instructions/Labs'" %} | Module | Lab | | --- | --- | {% for activity in labs %}| {{ activity.lab.module }} | [{{ activity.lab.title }}{% if activity.lab.type %} - {{ activity.lab.type }}{% endif %}](/home/ll/Azure_clone/Azure_new/MS-050-SharePoint-Hybrid-Deployment-and-Migration/{{ site.github.url }}{{ activity.url }}) | {% endfor %}

2.2 Demos

2.3 {% assign demos = site.pages | where_exp:"page", "page.url contains '/Instructions/Demos'" %} | Module | Demo | | --- | --- | {% for activity in demos %}| {{ activity.demo.module }} | [{{ activity.demo.title }}](/home/ll/Azure_clone/Azure_new/MS-050-SharePoint-Hybrid-Deployment-and-Migration/{{ site.github.url }}{{ activity.url }}) | {% endfor %}

2.4 demo: title: 'Demo: Deploying an ARM Template' module: 'Module 1: Exploring Azure Resource Manager'

3 Demo: Deploying an ARM Template

3.1 Instructions

1. Quisque dictum convallis metus, vitae vestibulum turpis dapibus non.
    1. Suspendisse commodo tempor convallis.
    2. Nunc eget quam facilisis, imperdiet felis ut, blandit nibh.
    3. Phasellus pulvinar ornare sem, ut imperdiet justo volutpat et.
2. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos.
3. Vestibulum hendrerit orci urna, non aliquet eros eleifend vitae.
4. Curabitur nibh dui, vestibulum cursus neque commodo, aliquet accumsan risus.

   ```
   Sed at malesuada orci, eu volutpat ex
   ```
5. In ac odio vulputate, faucibus lorem at, sagittis felis.
6. Fusce tincidunt sapien nec dolor congue facilisis lacinia quis urna.

   Note: Ut feugiat est id ultrices gravida.
7. Phasellus urna lacus, luctus at suscipit vitae, maximus ac nisl.
    - Morbi in tortor finibus, tempus dolor a, cursus lorem.
    - Maecenas id risus pharetra, viverra elit quis, lacinia odio.
    - Etiam rutrum pretium enim.
8. Curabitur in pretium urna, nec ullamcorper diam.

4 Module 01-Lab 1: Configure and update SharePoint Farm

4.1 Microsoft 365 user interface

Given the dynamic nature of Microsoft cloud tools, you may experience user interface (UI) changes that were made following the development of this training content. This will manifest itself in UI changes that do not match up with the detailed instructions presented in this lab manual.

The Microsoft World-Wide Learning team will update this training course as soon as any such changes are brought to our attention. However, given the dynamic nature of cloud updates, you may run into UI changes before this training content is updated. **If this occurs, you will have to adapt to the changes and work through them in the lab exercises as needed.**

4.2 Lab Scenario

In the labs of this course you are the Administrator for Adatum Corporation, and you have two Windows servers and a SQL server deployed in a virtualized lab environment. Your server team has completed the following settings for you:

- Created service accounts for the farm, web apps and services in AD DS.
- Installation of SharePoint Server 2019 on LON-SP1 and LON-SP2.

- Installation of SQL Server on LON-SQL.

In this lab, you will configure a SharePoint 2019 farm across 2 SharePoint servers and 1 Database server.

- **Exercise 1: Configure SharePoint Server 2019 (30 minutes)**
  - Task 1: Run the SharePoint Products Configuration Wizard on LON-SP2
  - Task 2: Run the SharePoint Products Configuration Wizard on LON-SP1
  - Task 3: Check build version in SharePoint Central Administration
- **Exercise 2: Install update for SharePoint Server 2019 (40 minutes)**
  - Task 1: Download the latest updates
  - Task 2: Install the latest updates
  - Task 3: Finalize implementation of updates

4.3 Objectives

After you complete this lab, you will be able to:

- Configure SharePoint Server 2019 with a 2-server farm
- Update SharePoint Server 2019 to the latest patch level

4.4 Lab Setup

- **Estimated Time:** 60 minutes.

4.5 Instructions

4.6 Before you start

4.6.1 Review the lab virtual machines

The following are the virtual machines provided for this course. You will log in to the VM as a local administrator. The instructor will provide the sign-in information.

- LON-DC1: Domain controller
- LON-SP1: SharePoint Server with SharePoint 2019 installed.
- LON-SP2: SharePoint Server with SharePoint 2019 installed.
- LON-SQL: SQL Server with SQL Server management tools installed.

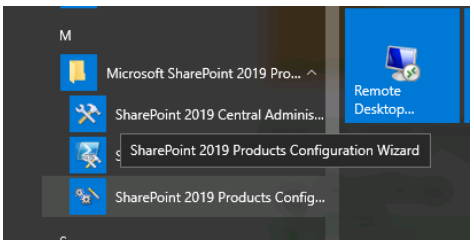
4.7 Exercise 1: Configure SharePoint Server 2019 Farm

In the first exercise you will walk through the configuration steps to create a SharePoint 2019 farm. We are starting with LON-SP2 as this will be the server hosting the application and search services. Also, the server which is used to create the farm will be the server which will host the Central Administration web site by default. Recommendations have this service hosted on servers which are not used by end users, such as web front end server roles.

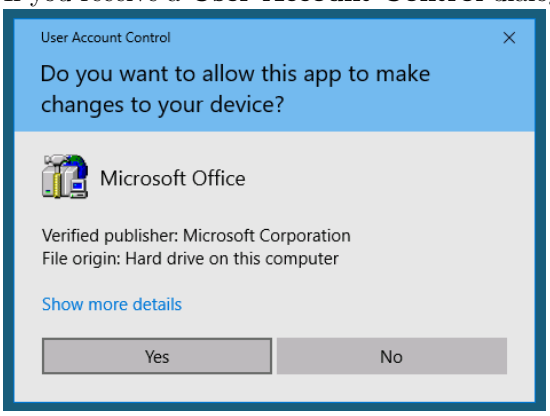
4.7.1 Task 1 – Run the SharePoint Products Configuration Wizard on LON-SP2

In this task you will use the SharePoint Products Configuration Wizard to setup a new farm on LON-SP2 server.

1. In your Lab Session, switch to **LON-SP2** virtual machine and login as the SharePoint Farm Administrator (**ADATUM\SPFarm**)
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, and select **SharePoint 2019 Products Configuration Wizard**.

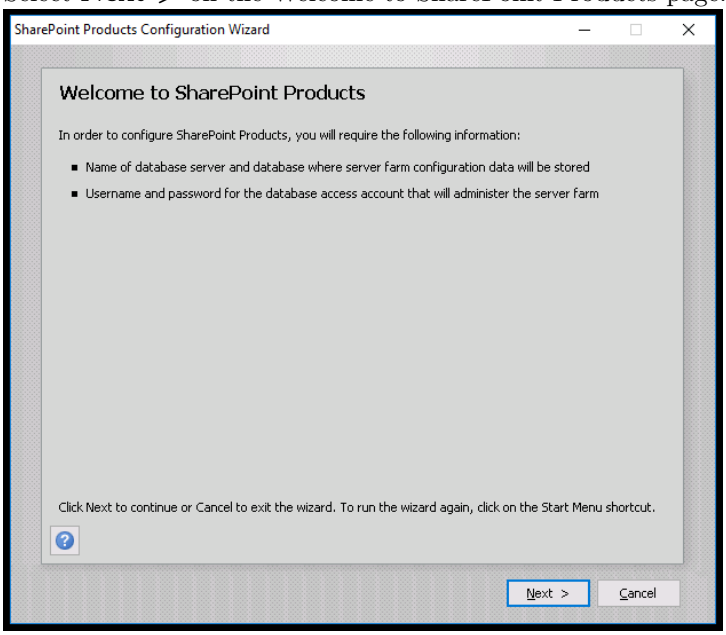


3. If you receive a **User Account Control** dialog, select **Yes** to allow changes to the server.

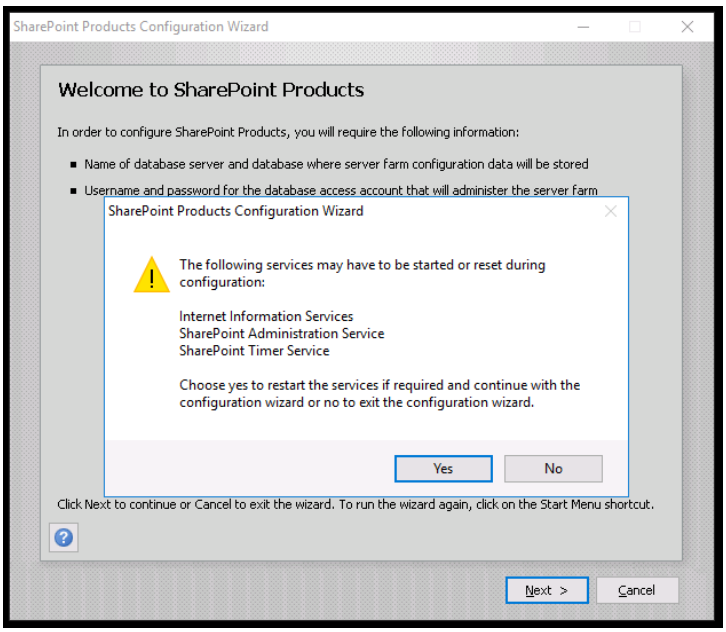


4. Follow the instructions on the **SharePoint 2019 Products Configuration Wizard** with the following information.

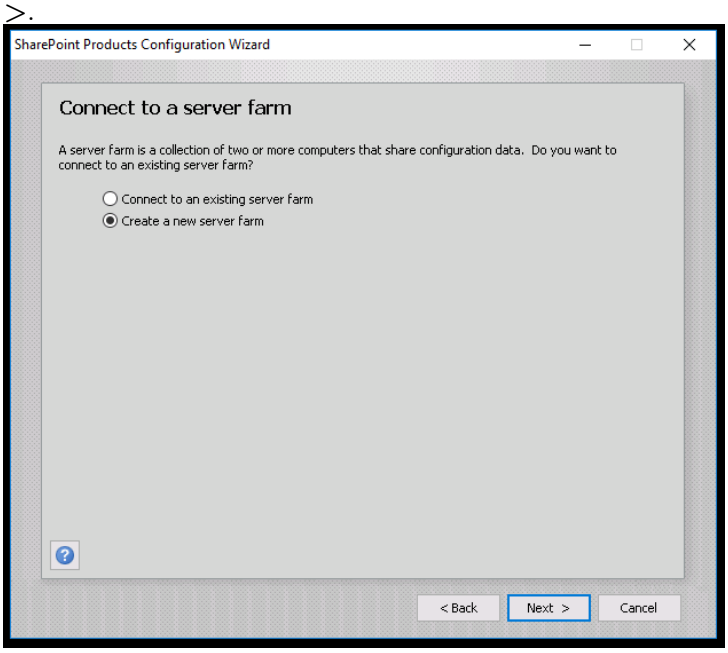
- Select **Next >** on the Welcome to SharePoint Products page.



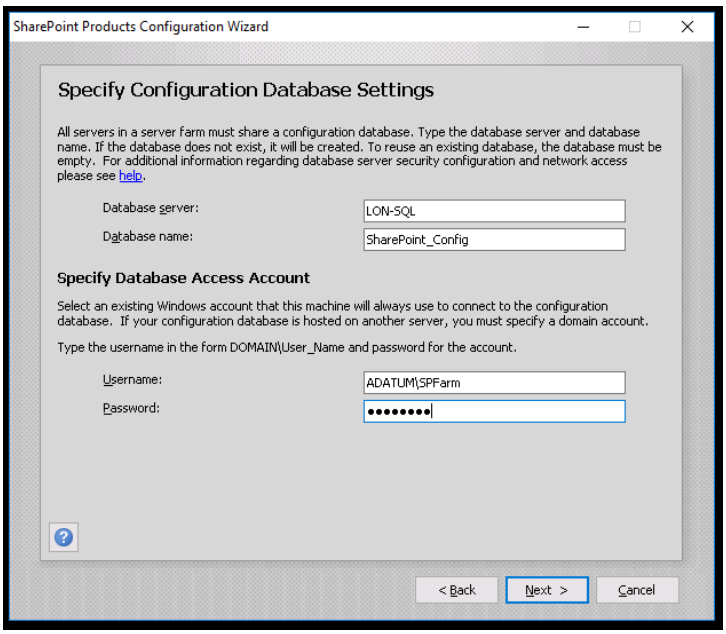
- Select **Yes** to continue in the warning pop-out.



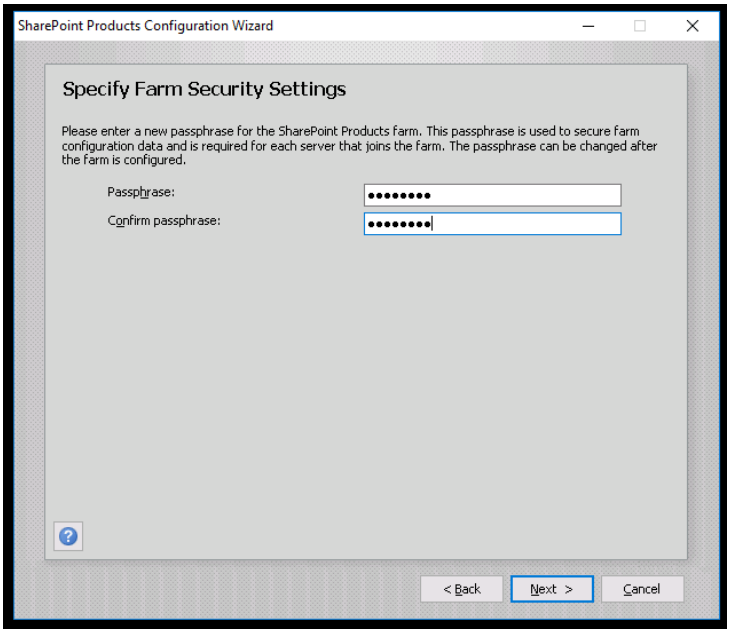
- In the **Connect to a server farm** page, select the option to **Create a new server farm**, select **Next >**.



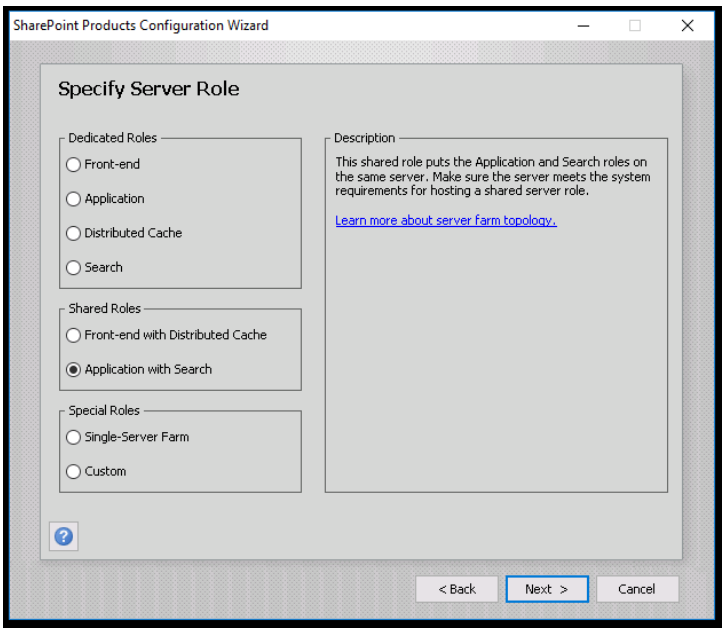
- In the **Specify Configuration Database Settings** page, use the following information to fill out the page, then select **Next >**.
  - Database Server: **LON-SQL**
  - Under the **Specify Database Access Account** section
    - Username: **ADATUM\SPFarm**
    - Password: **Pa55w.rd**



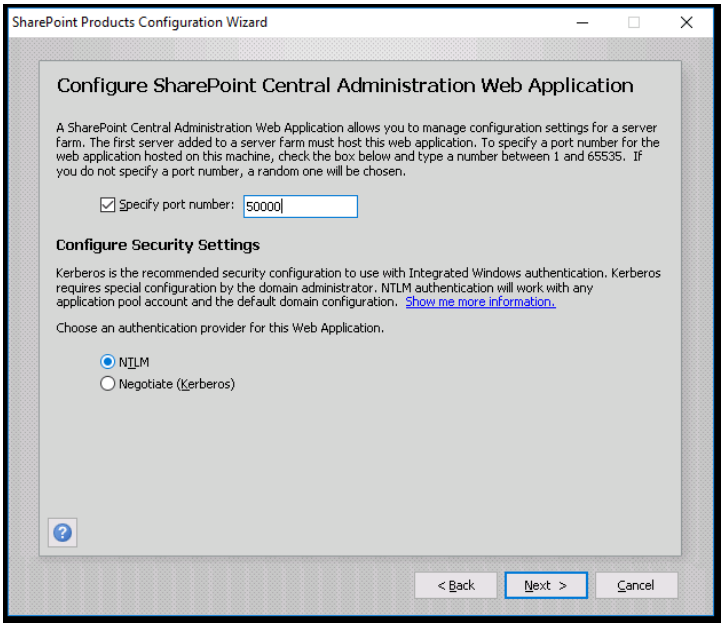
- In the **Specify Farm Security Settings** page, use the following information to fill out the page, then select **Next >**. Please keep this information as it will be used to join servers to the farm later in the process.
  - Passphrase: **Pa55w.rd**
  - Confirm passphrase: **Pa55w.rd**



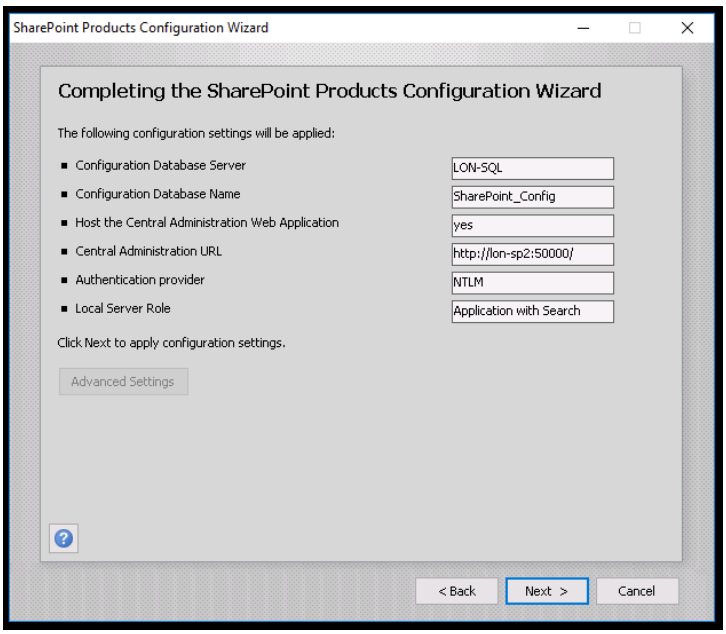
- In the **Specify Server Role** page, use the following information to configure the server's role in the farm.
  - Under **Shared Roles** section, select **Application with Search**
  - Select **Next >.**



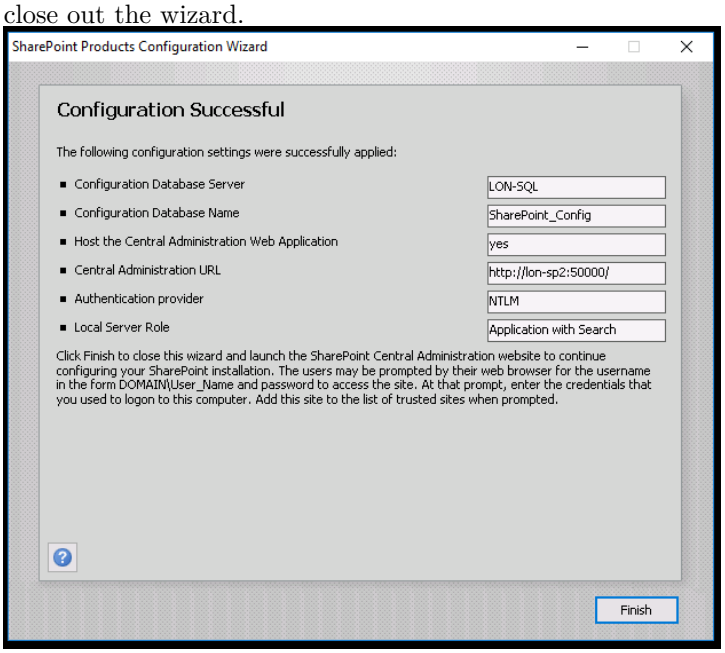
- In the **Configure SharePoint Central Administration Web Application** page, use the following information to configure the required settings.
  - Select the box to **Specify port number**, provide the value of **50000**
  - In the **Configure Security Settings** section, specify **NTLM** as the authentication provider of the central administration web application.
  - Select **Next >**.



- In the **Completing the SharePoint Products Configuration Wizard** page, review the provided information, select **Next >**.



- It will take some time for the wizard to complete. When the process is finished you will be presented with a **Configuration Successful** page, which shows all the details of what was configured. Select **Finish** to close out the wizard.



After closing out the wizard on LON-SP2, a browser will come up and load the central administration web site. Close the browser. We need to add the second server to the farm before continuing with central administration.

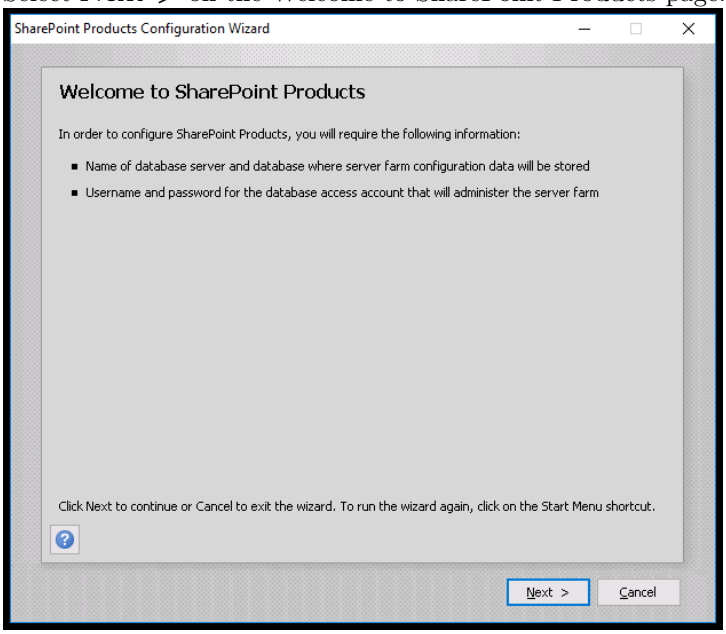
You have now successfully created a SharePoint 2019 farm. Proceed to the next task.

4.7.2 Task 2 - Run the SharePoint Products Configuration Wizard on LON-SP1

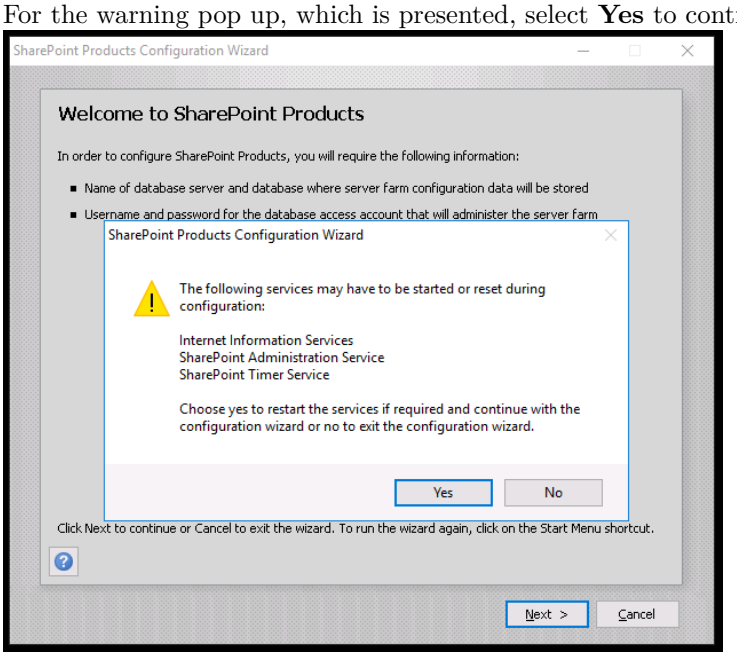
In this task you will use the SharePoint Products Configuration Wizard to join a server to an existing farm on LON-SP1 server.

1. In your Lab Session, switch to **LON-SP1** virtual machine and login as SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Products Configuration Wizard**.
3. If you receive a **User Account Control** dialog, select **Yes** to allow changes to the server.
4. Follow the instructions on the **SharePoint 2019 Products Configuration Wizard** with the following information.

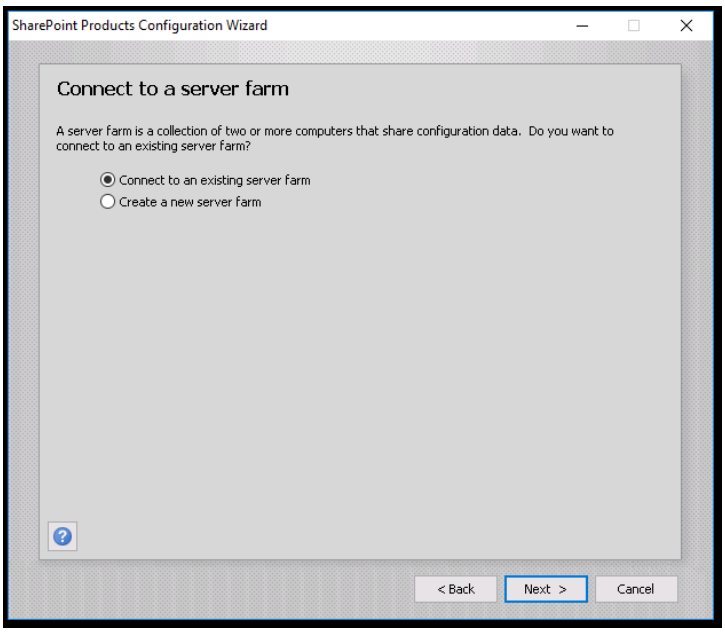
- Select **Next >** on the Welcome to SharePoint Products page.



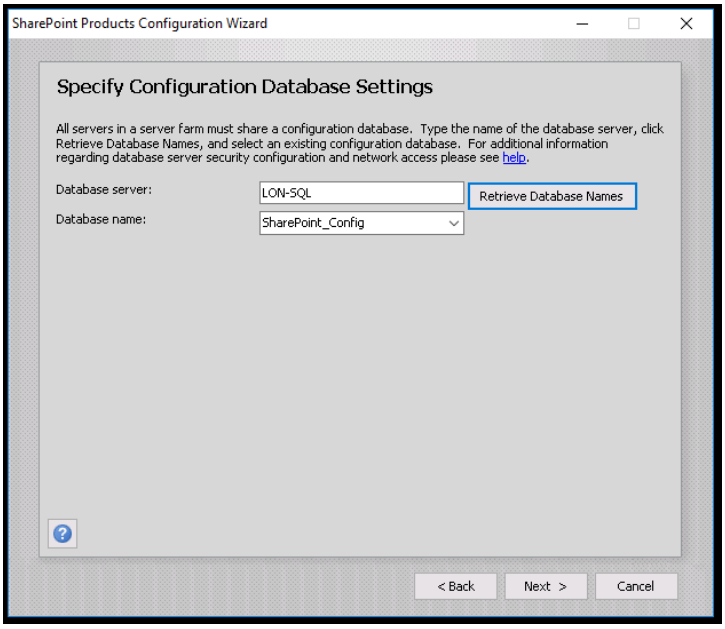
- For the warning pop up, which is presented, select **Yes** to continue.



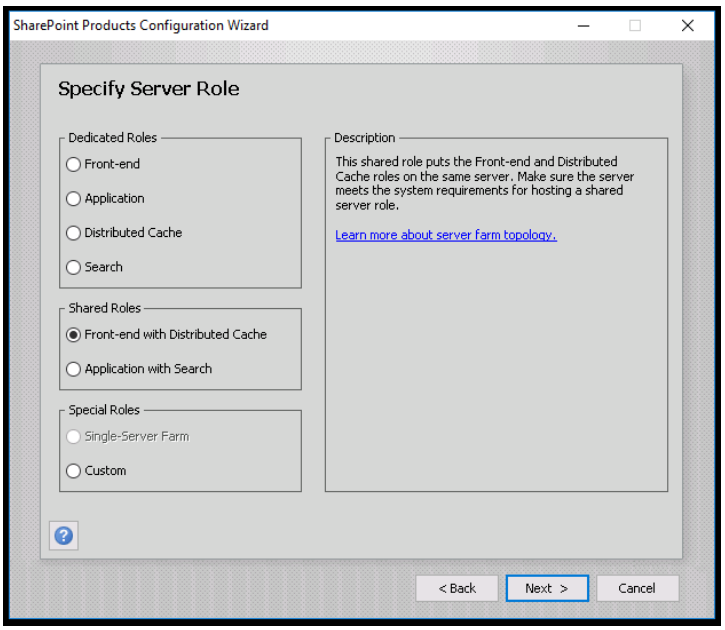
- In the **Connect to a server farm** page, select the option to **Connect to an existing server farm**, select **Next >**.



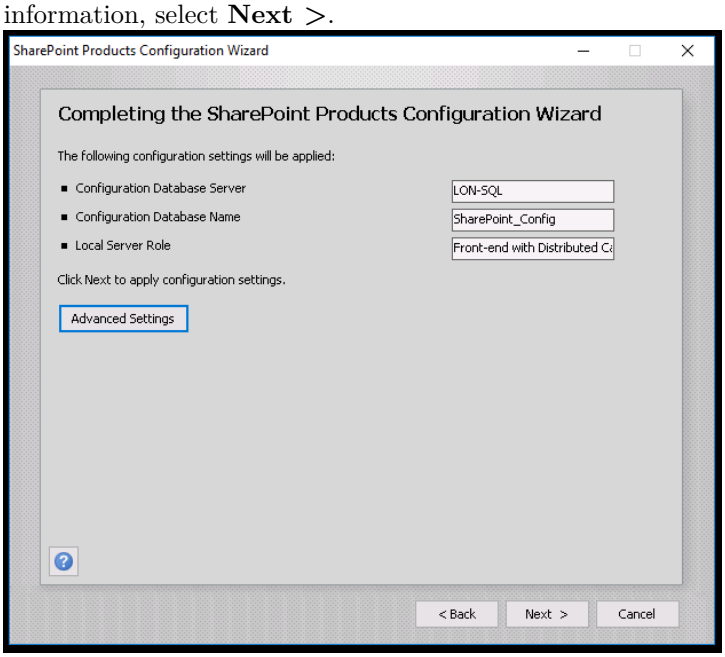
- In the **Specify Configuration Database Settings** page, use the following information to fill out the page, then select **Next >**.
  - Database Server: **LON-SQL**
  - Select **Retrieve Database Names** button
  - Database Name: **SharePoint_Config** (Should default as this is the only config DB)
  - Select **Next >**.



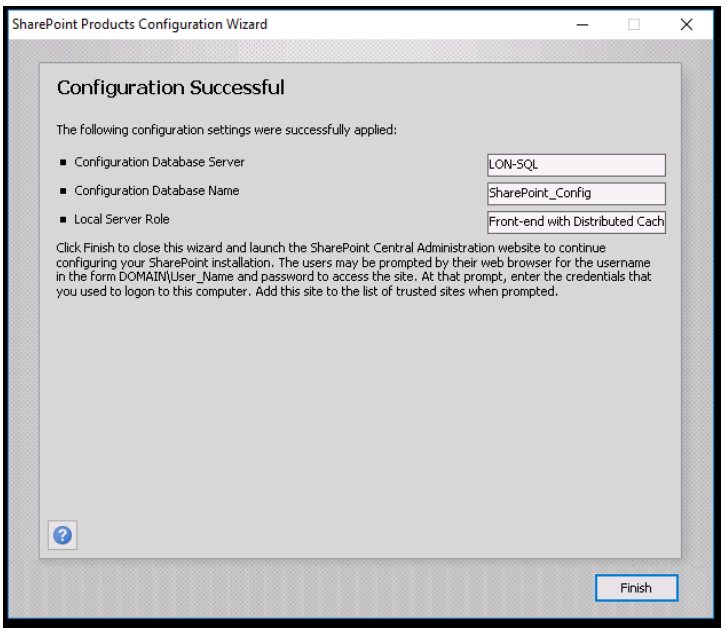
- In the **Specify Farm Security Settings** page, use the passphrase (**Pa55w.rd**) to fill out the page, then select **Next >**. This is the passphrase entered when creating the farm that all other servers need to use to join the farm.
- In the **Specify Server Role** page, use the following information to configure the server's role in the farm.
  - Under **Shared Roles** section, select **Front-end with Distributed Cache**
  - Select **Next >.**



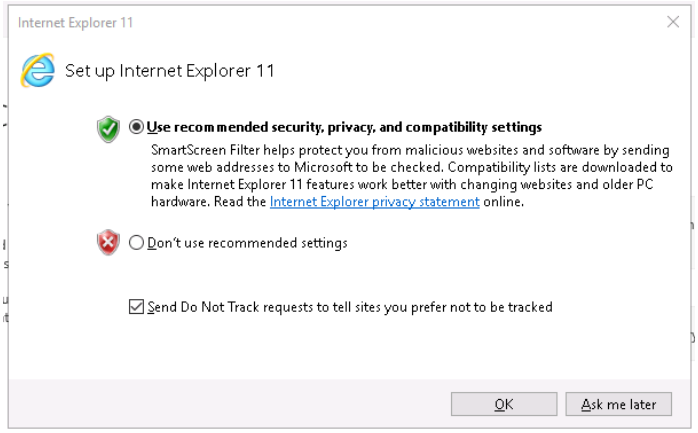
- In the **Completing the SharePoint Products Configuration Wizard** page, review the provided information, select **Next >**.



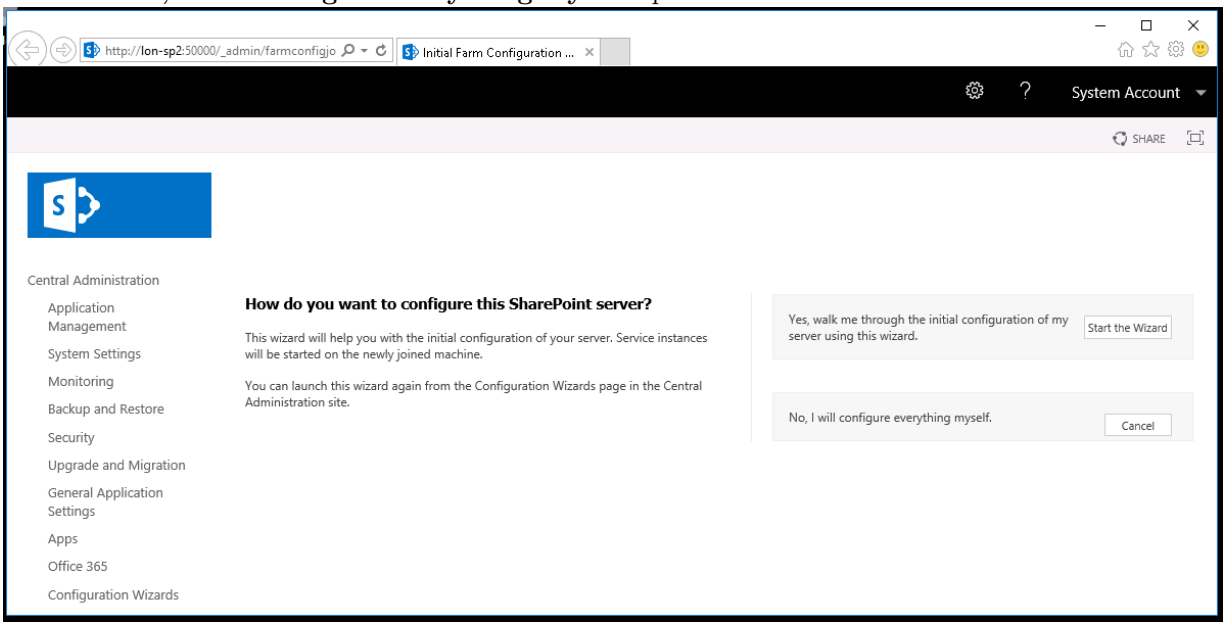
- When the process is finished you will be presented with a **Configuration Successful** page, which sows all the details of what was configured. Select **Finish** to close out the wizard.



5. Upon finishing the SharePoint Products Configuration Wizard, Internet Explorer will load and navigate to the farm central administrations web site. If this is the first time Internet Explorer is loaded, it will present a **Set up Internet Explorer 11** dialog. Make sure the option for **Use recommended security, privacy and compatibility settings** is selected and select **Ok**.



6. In Central Admin there is an option on **How do you want to configure this SharePoint Server**, select the **No, I will configure everything myself** option.

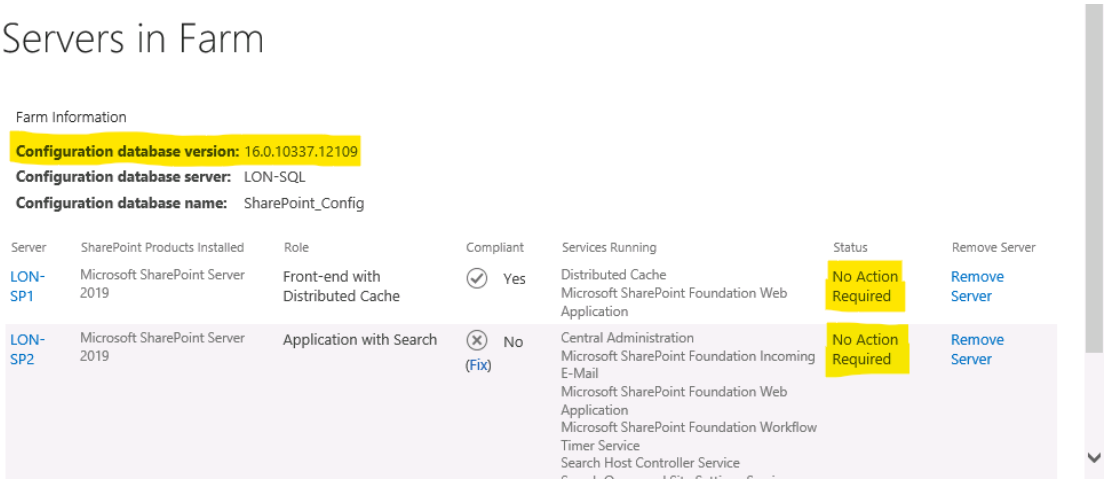


You have now successfully joined a server to a SharePoint 2019 farm. Proceed to the next task.

4.7.3 Task 3 – Check the build version in SharePoint Central Administration

For this task we need to determine what the current build of SharePoint 2019 is by looking in Central Administration. This will determine if we need to update the SharePoint farm.

1. In your Lab Session, switch to **LON-SP2** virtual machine and login as SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** screen, type **SharePoint 2019 Central Administration**, and **press Enter**.
3. In Central Administration page, select on **Manage Servers in this farm**. You can see the **version** of the SharePoint Farm, and the status for each of the servers should show **No Action Required**.



You have successfully completed this task. You have finished the first exercise and you can continue to the next one.

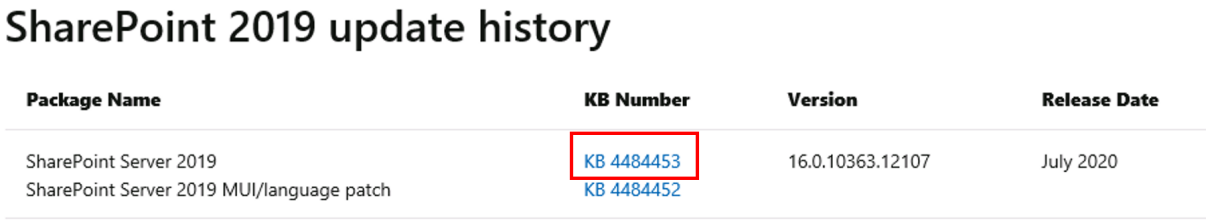
4.8 Exercise 2: Install SharePoint Server 2019 updates

In this exercise you will download, install and apply updates to the SharePoint Server 2019 farm.

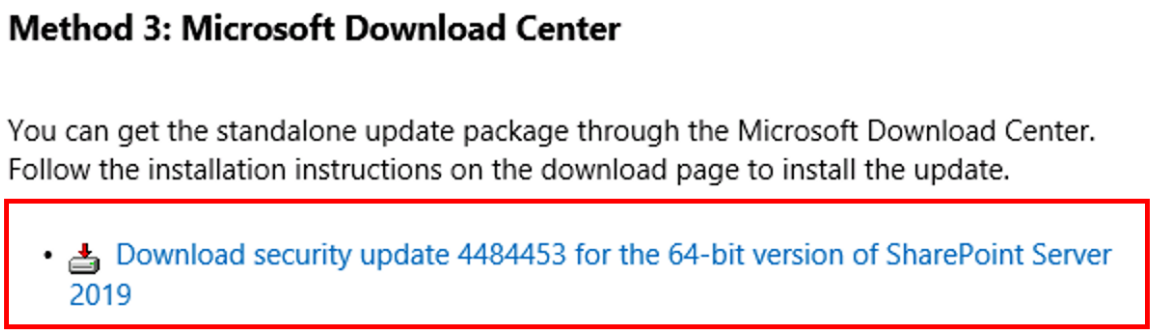
4.8.1 Task 1 – Download the latest updates

Before you can install updates, we must first download the updates. Use the following steps to download the updates to each of the SharePoint servers in the farm.

1. In your Lab Session, switch to **LON-SP1** virtual machine and login as SharePoint Farm Administrator(Adatum\SPFarm).
2. Open **Internet Explorer**, and browse to the following URL
   - https://docs.microsoft.com/en-us/OfficeUpdates/sharepoint-updates
   - You can also go to **Central Admin** > **Upgrade and Migration** > **Check Product and patch installation status** > and select on **Click here for the latest information on available updates for SharePoint Products.** Which will lead you to the same location as the link above.
3. Select on the latest **KB Number** under **SharePoint 2019 update history** section



4. The description of the update will load. Scroll down and select the link under **Microsoft Download Center** to be redirected to the download page for the update.



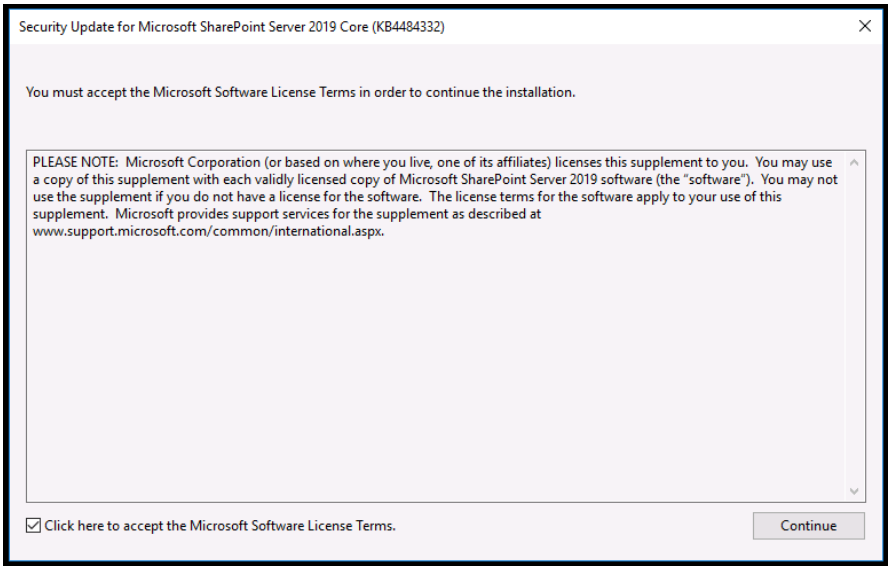
5. Download the update from the Microsoft Download Center. Select **English**, Select **Download**. Save the file to the **Downloads** folder on the local server.
6. Repeat the steps above for LON-SP2.

Once you have downloaded the update file on both SharePoint servers, you have successfully completed this task and can continue with the next task.

4.8.2 Task 2 – Install the latest updates

Updates can be installed in parallel on each of the servers. Use the following steps to install the updates to each of the SharePoint servers in the farm.

1. In your Lab Session, switch to **LON-SP1** virtual machine and login as SharePoint Farm Administrator(Adatum\SPFarm).
2. Navigate to the **Downloads** folder in the **File Explorer**
3. Double-select the KB update file to start the execution of the update on the server. You may see a User Account Control Dialog pop up, if so, select **Yes**.
4. The Security Update will present a dialog to **accept the Microsoft Software License Terms**. Check the box in the bottom left of the dialog to accept these terms and select **Continue**.



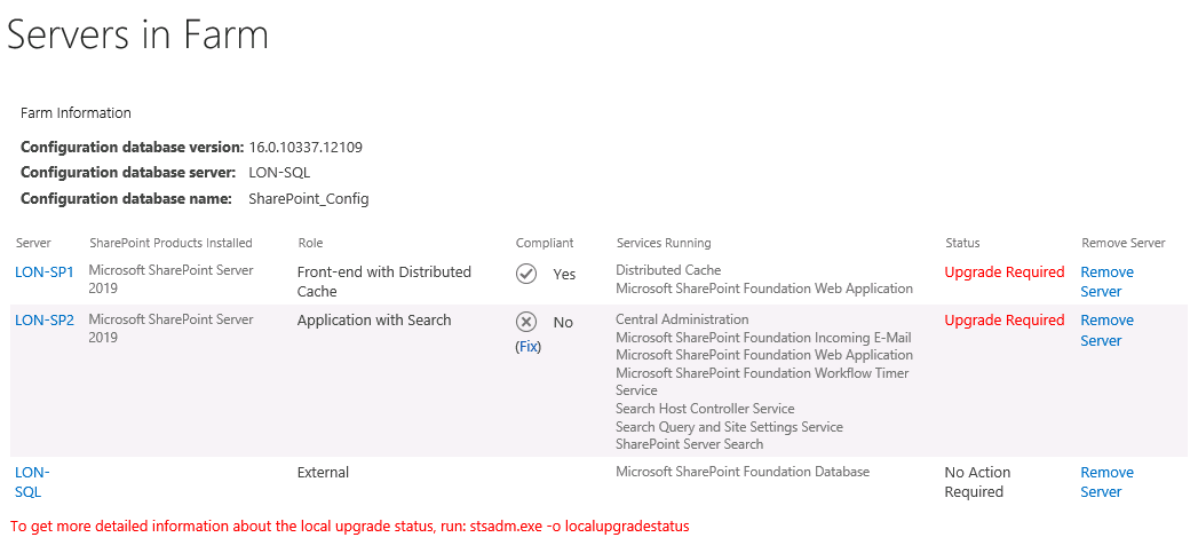
5. While the installation process is happening on LON-SP1, Repeat the steps above for LON-SP2
6. When both servers show the installation completed dialog box, the installation of the update is complete. It can take about 15 min to install the update.

When the installation of the update is complete on both servers, this task is completed, and you can move to the next task.

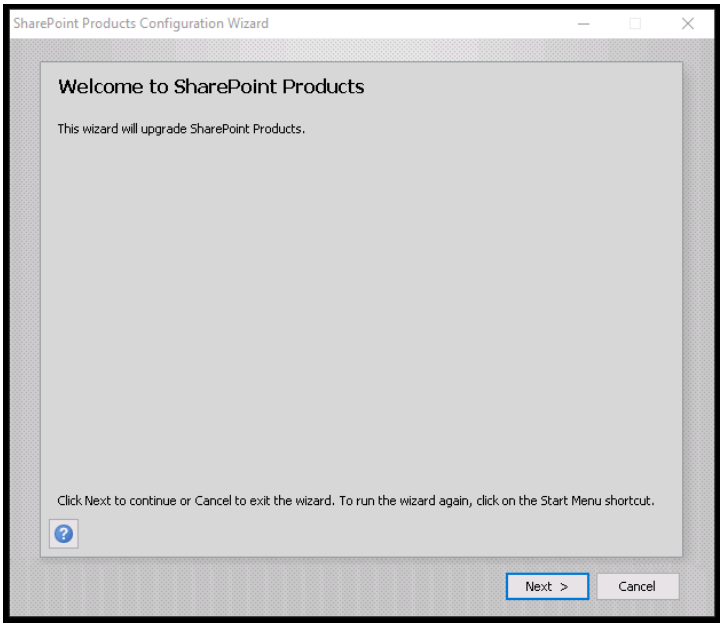
4.8.3 Task 3 – Finalize implementation of updates

After the update has been downloaded and installed, on each server, it must be applied to each server as well. Typical process with a multi-server farm is to first finalize the installation on all servers which do not host central administration, in this case LON-SP1. Then, last, do the server hosting central administration, in this case LON-SP2. Follow the steps below to apply the updates.

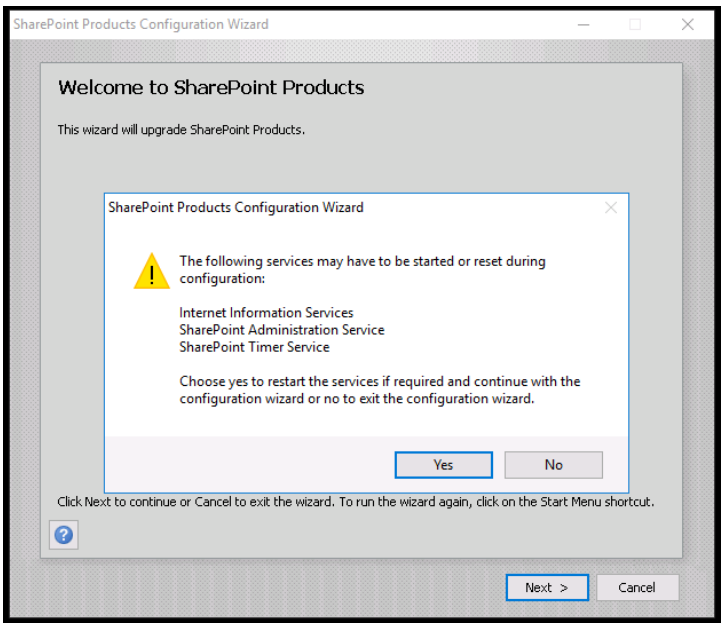
1. In your Lab Session, switch to **LON-SP1** virtual machine and login as SharePoint Farm Administrator(Adatum\SPFarm).
2. On the **Start** screen, type **SharePoint 2019 Central Administration**, and **press Enter**.
3. In Central Administration page, select on **Manage Servers in this farm**. You can see the **version** of the SharePoint Farm is still the old version, and the status for each of the servers should now show **Upgrade Required**.



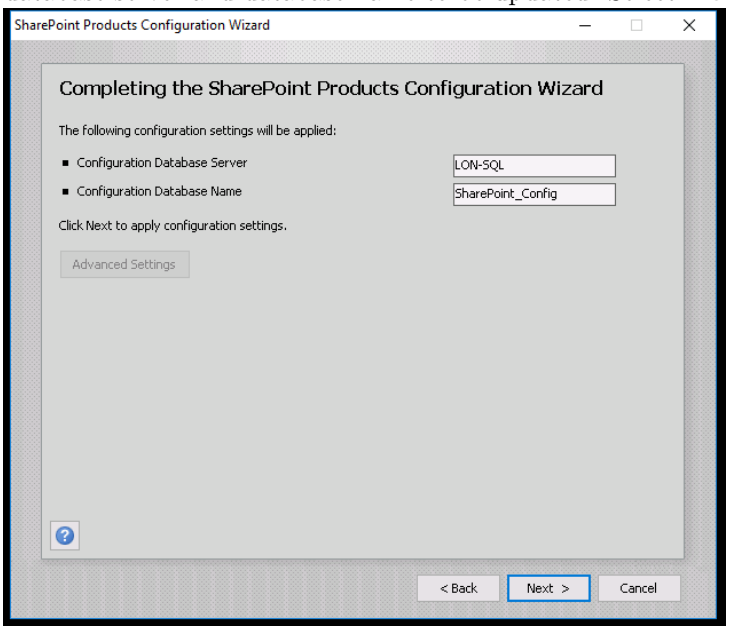
4. On the **Start** screen, type **SharePoint 2019 Products and Configuration Wizard**, and **press Enter**.
5. On the **Welcome to SharePoint Products** page of the **SharePoint Products Configuration Wizard**, press **Next >**.



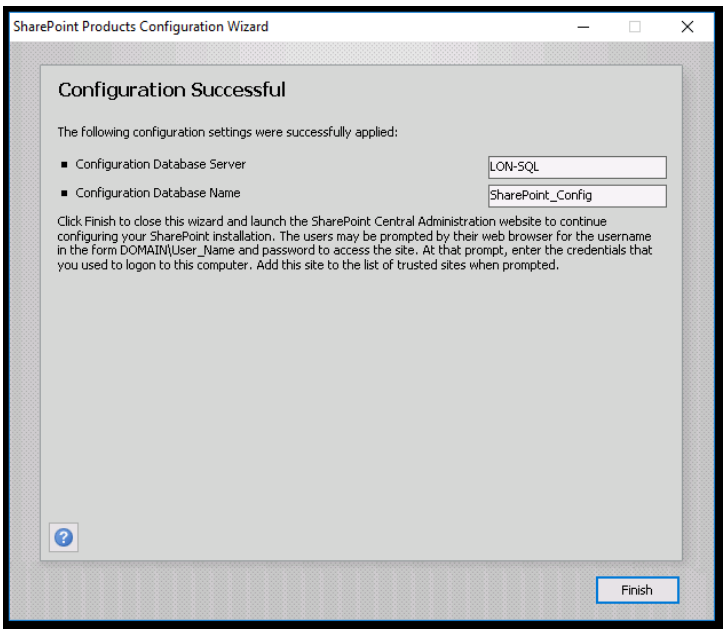
6. For the warning pop up, which is presented, select **Yes** to continue.



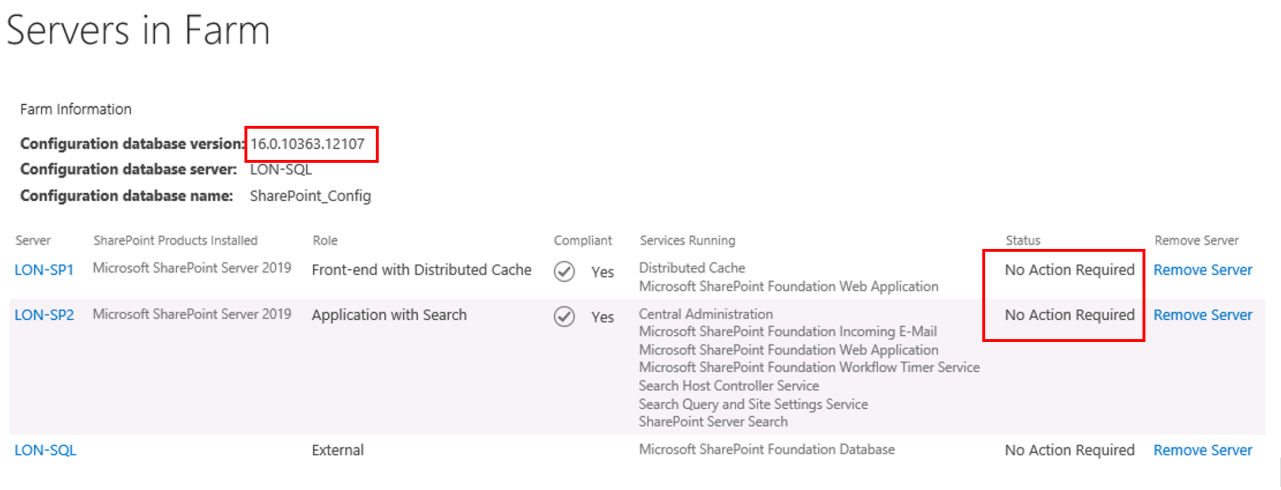
7. On the **Completing the SharePoint Products Configuration Wizard**, review the settings for your database server and database name to be updated. Select **Next >**.



8. When the process is complete, the **Configuration Successful** screen will display a message that it is complete. Select **Finish**.



9. Repeat steps 4 thru 8 on LON-SP2.
10. When the process completes on LON-SP2, Open **Central Administration** and select **Manager servers in the farm**. This page is now updated with the most recent version and the servers no longer have an action required.



Once the version is updated and the servers require no further action, this task is complete.

END OF LAB

5 Module 03-Lab 1: Create and Configure web applications

5.1 Microsoft 365 user interface

Given the dynamic nature of Microsoft cloud tools, you may experience user interface (UI) changes that were made following the development of this training content. This will manifest itself in UI changes that do not match up with the detailed instructions presented in this lab manual.

The Microsoft World-Wide Learning team will update this training course as soon as any such changes are brought to our attention. However, given the dynamic nature of cloud updates, you may run into UI changes before this training content is updated. **If this occurs, you will have to adapt to the changes and work through them in the lab exercises as needed.**

5.2 Lab Scenario

In the labs of this course you are the Administrator for Adatum Corporation, and you have two Windows servers and a SQL server deployed in a virtualized lab environment. In the previous module you completed the following:

- Created a 2 server SharePoint Server 2019 Farm
- Updated a SharePoint 2019 Farm to the latest updates

In this lab, you will create and configure a SharePoint 2019 web application.

- **Exercise 1: Create a web applications (20 minutes)**
  - Task 1: Configure DNS for the new web application
  - Task 2: Register Service Accounts as SharePoint Managed Accounts
  - Task 3: Create the web applications
  - Task 4: Disable loopback checking for the required domains
- **Exercise 2: Create site collections (15 minutes)**
  - Task 1: Use Central Administration to create a top-level site collection
  - Task 2: Use Windows PowerShell to create new content databases
  - Task 3: Use Windows PowerShell to create new site collections

5.3 Objectives

After you complete this lab, you will be able to:

- Create and configure a SharePoint Server 2019 web application
- Create a site collection via the Central Administration GUI as well as using PowerShell

5.4 Lab Setup

- **Estimated Time:** 35 minutes.

5.5 Instructions

5.6 Before you start

5.6.1 Review the lab virtual machines

The following are the virtual machines provided in this course. You will log in to the VM as a local administrator. The instructor will provide the sign-in information.

- LON-DC1: Domain controller
- LON-SP1: SharePoint Server with SharePoint 2019 installed.
- LON-SP2: SharePoint Server with SharePoint 2019 installed.
- LON-SQL: SQL Server with SQL Server management tools installed.

5.7 Exercise 1: Create a web application

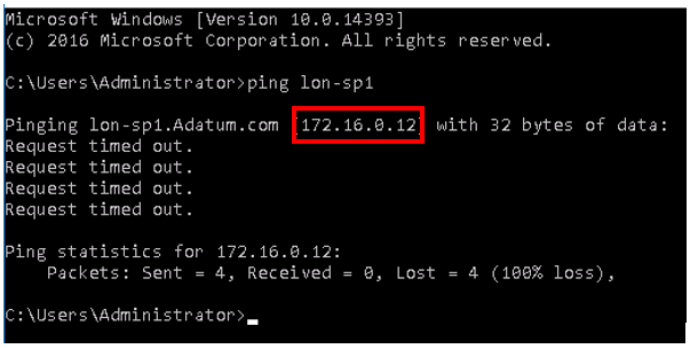
In the first exercise you will walk through the steps to create a new web application in your multi-server SharePoint Server 2019 farm.

5.7.1 Task 1 – Configure DNS for the new web application

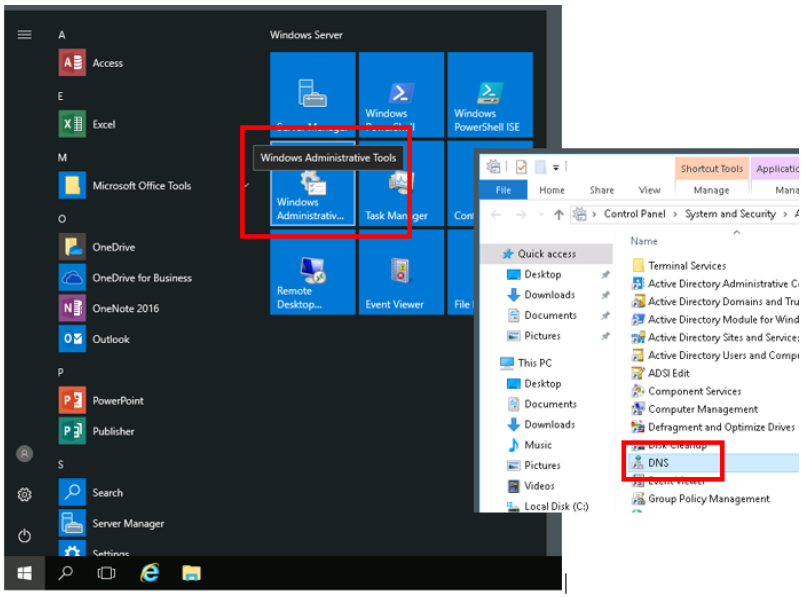
In this task you will configure a friendly URL in DNS to access your web application over the network.

1. In your Lab Session, switch to LON-DC1 virtual machine as Administrator (Adatum\administrator).
2. Validate the IP Address of **LON-SP1**.
   - Open the **Start** menu and type **CMD**, select to open the **Command Prompt**.

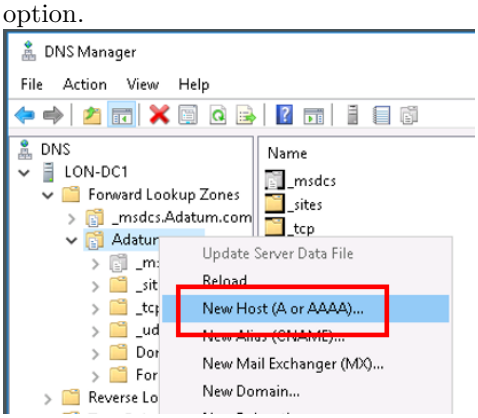
- In the command prompt type in **ping lon-sp1**, press **enter**.
- Copy the **IP Address** returned.



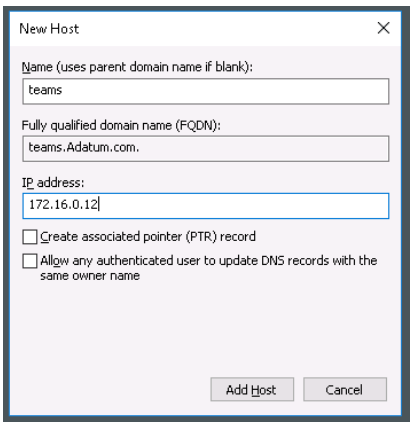
3. On the **Start** menu, select **Windows Administrative Tools**, select **DNS**.



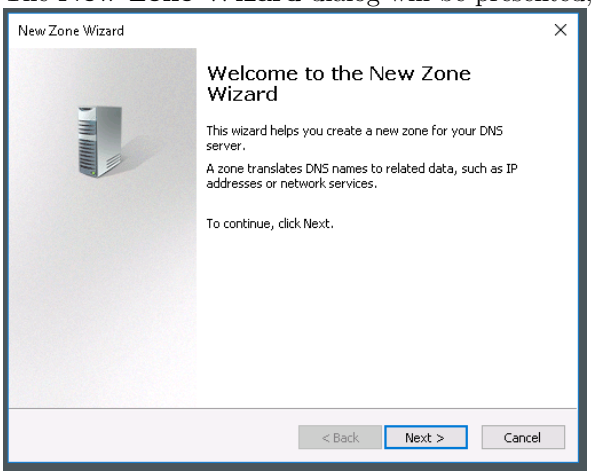
4. In the left pane, select and expand **LON-DC1**, expand **Forward Lookup Zones**, expand **adatum.com** domain.
   - Right-select on **adatum.com** domain in the left pane, then select **New Host (A or AAAA)** option.



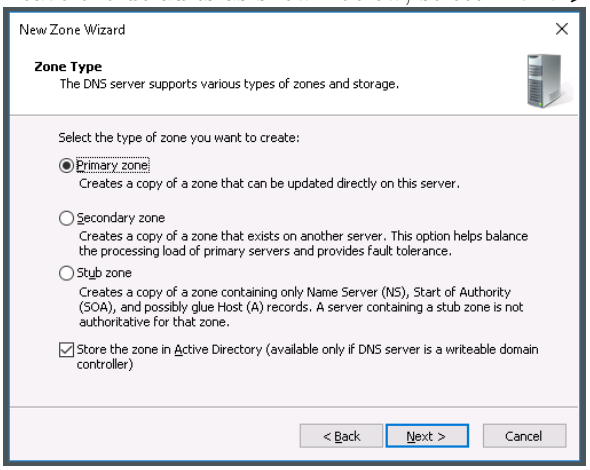
5. Use the following information to fill out the New Host dialog.
   - Name: **teams**
   - IP Address: **(use the IP Address from the command prompt output)**



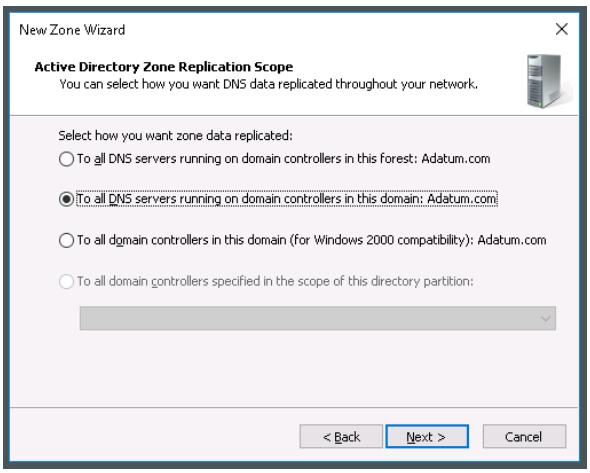
6. Select **Add Host**. A confirmation box will pop up, select **OK**. When complete, select **Done** to close the New Host dialog.
7. While still in **DNS Manager**, right-select **Forward Lookup Zones**, then select **New Zone**.
8. The **New Zone Wizard** dialog will be presented, click **Next >**.



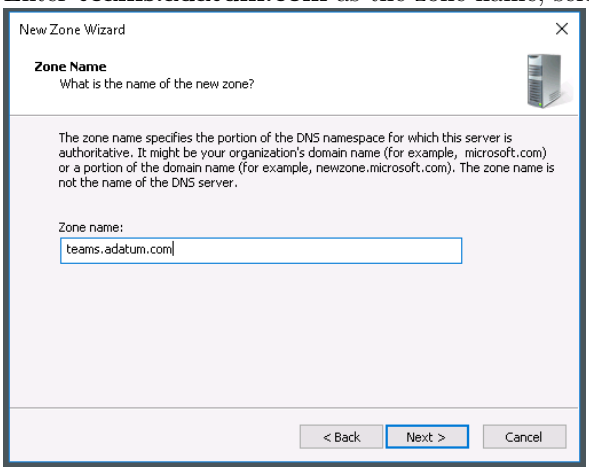
9. Leave the defaults as shown below, select **Next >**.



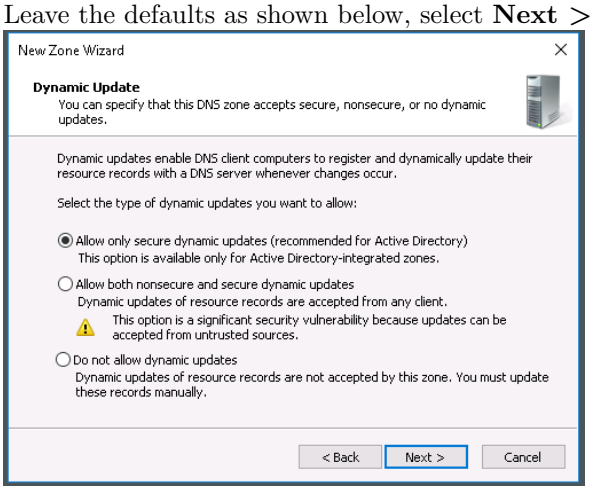
10. Leave the defaults as shown below, select **Next >**.



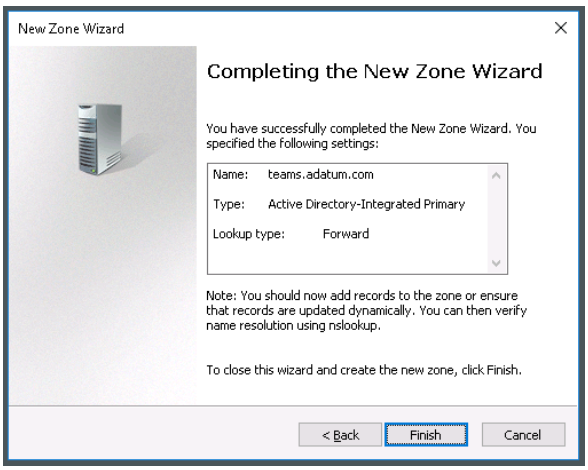
11. Enter **teams.adatum.com** as the zone name, select **Next >**.



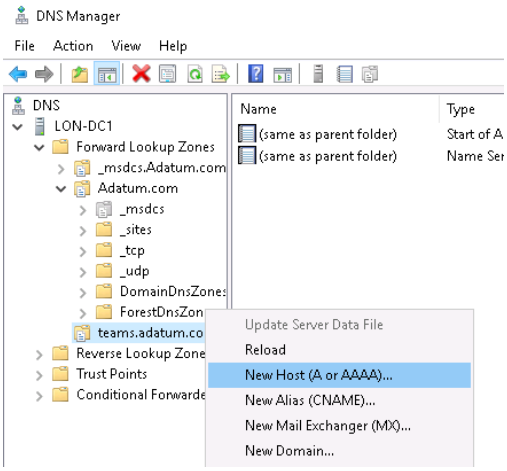
12. Leave the defaults as shown below, select **Next >**.



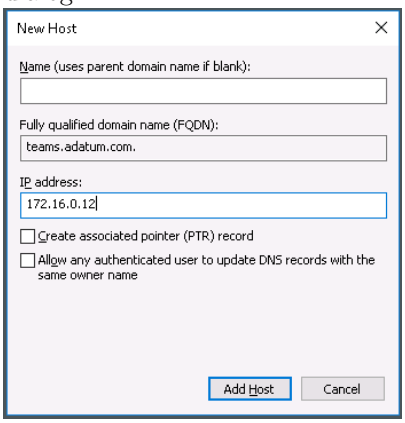
13. The final page is a summary of the request, select **Finish**.



14. While still in **DNS Manager**, expand **LON-DC1**, expand **Forward Lookup Zones**, right-select **teams.adatum.com** and select **New Host (A or AAAA)**.



15. Enter in the **IP Address** previously copied from the command prompt earlier in this task, select **Add Host**. A confirmation box will pop up, select **OK**. When complete, select **Done** to close the New Host dialog.



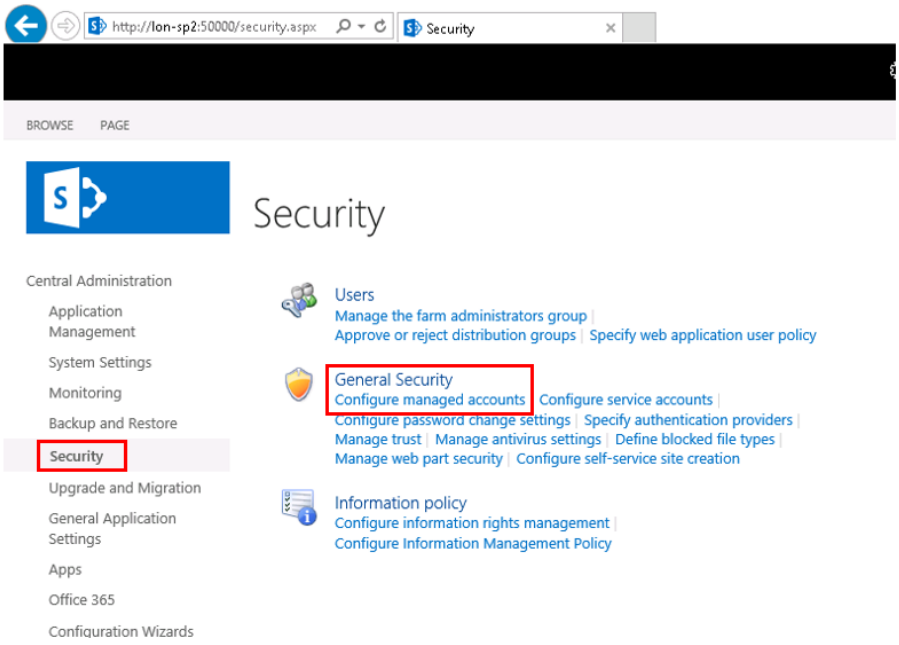
You have now successfully created the DNS entry for the new web application. Proceed to the next task.

5.7.2 Task 2 – Register Service Accounts as SharePoint Managed Accounts

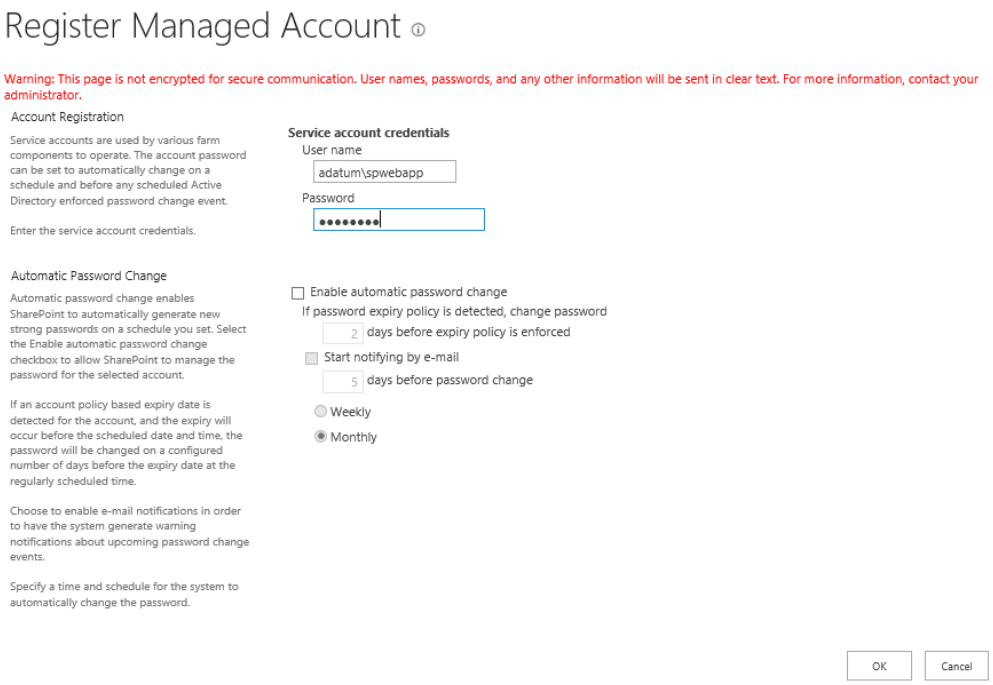
In this task you will configure managed accounts in SharePoint to be used with web applications.

1. In your Lab Session, log on to **LON-SP2** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Security**, then on the Security page, under **General Security**, select

Configure Managed Accounts.



4. On the **Managed Accounts** page, select **Register Managed Account**.
5. Create a new managed account by entering the following information into the form, then click **OK**.
   - Service Account Credentials -> Username: **adatum\spwebapp**
   - Service Account Credentials -> Password: **Pa55w.rd**



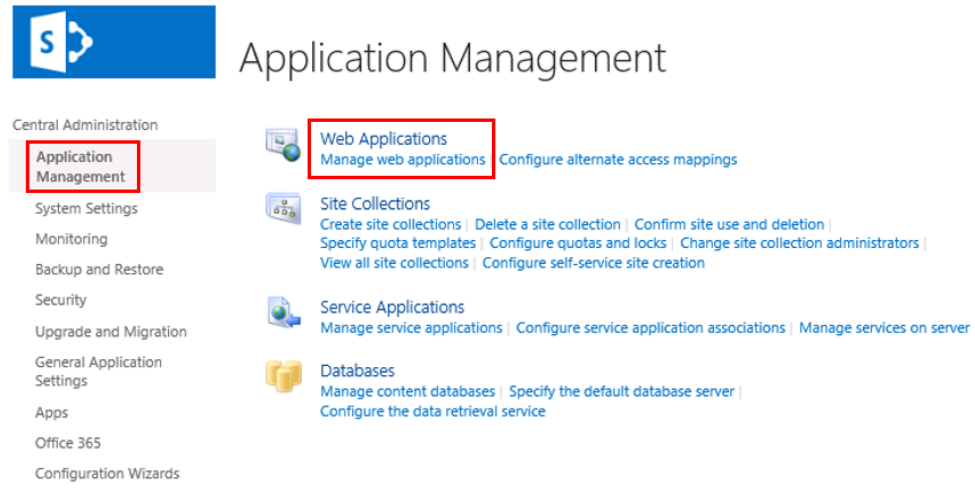
You have successfully completed this task. Please continue to the next task.

5.7.3 Task 3 – Create the web application

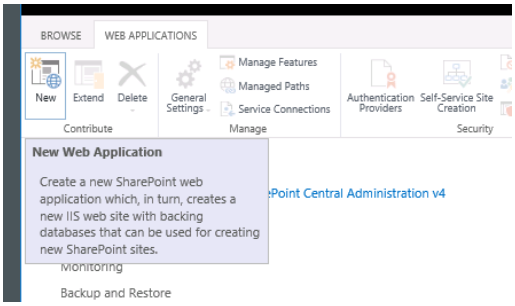
In this task you will create a web application which used the managed account and DNS created in the previous tasks.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.

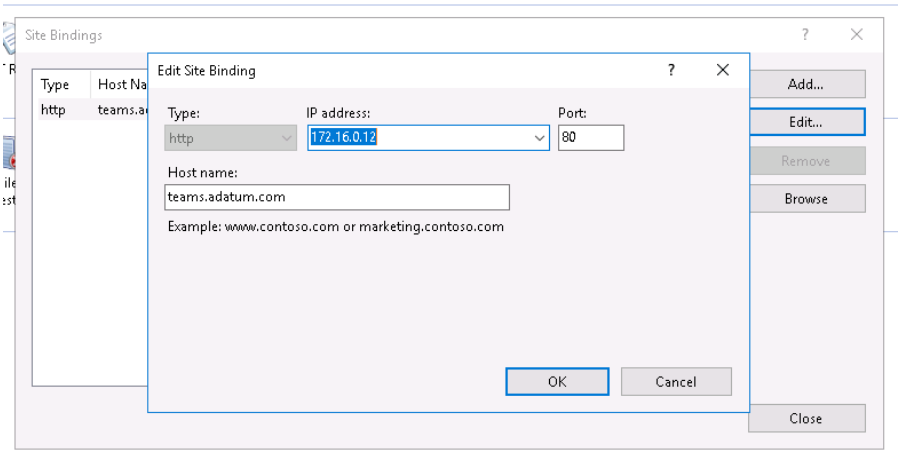
3. In Central Administration, select **Application Management**, then select **Manage Web Applications**.



4. To create a new web application, select **New** from the ribbon at the top of the page.



5. There is a fair amount to fill out on the new web application form, use the following information to populate the form.
   - IIS Web Site: Select **Create a new IIS Web Site**
   - IIS Web Site Name: **SharePoint – teams.adatum.com**
   - Port: **80**
   - Host Header: **teams.adatum.com**
   - Path: **C:\inetpub\wwwroot\wss\VirtualDirectories\teams80**
   - Application Pool: **Create new application pool**
   - Application Pool Name: **SharePoint – teams.adatum.com**
   - Select a security account for this application pool: **ADATUM\SPWebApp**
   - Select **OK**.
   - Select **OK** after the creation is finished.
6. On the **Start** screen, select **Windows Administrative Tools**, then select **Internet Information Services (IIS) Manager**.
7. In IIS Manager left pane, expand **LON-SP1**, then expand **Sites** and select **SharePoint – teams.adatum.com**.
8. In the **Actions** pane (on the right side), select **Bindings**.
9. In the **Site Bindings** dialog, there should be an entry already for teams.adatum.com. Highlight that entry and select **Edit**. Use the drop down for **IP Address** to select the IP address provided.



10. Select **OK**, then select **Close**

You have successfully completed this task. Please continue to the next task.

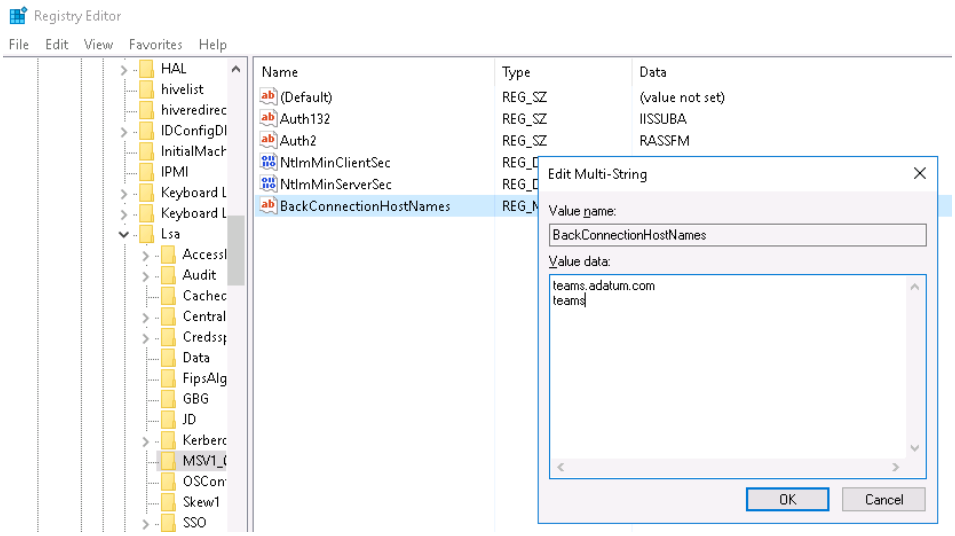
5.7.4 Task 4 – Disable loopback checking for the required domains

In this task you will disable loopback checking as this often interferes with accessing a local endpoint using DNS address.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, type **regedit**, then **press enter**.
3. In the Registry Editor, navigate to the following registry location :

   HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa\MSV1_0
4. Right-select **MSV1_0**, select **New**, then select **Multi-String Value**.
5. Enter **BackConnectionHostNames**, and **press Enter**.
6. Right-select **BackConnectionHostNames**, select **Modify**.
7. In the **Edit Multi-String** dialog, enter the following values into the **Value data** text box and select **OK**.

   - **teams.adatum.com**
   - **teams**



8. If a warning dialog appears, select **OK**, then close the **Registry Editor**.
9. On the **Start** screen, type **Command Prompt**, and **press Enter**.
10. At the command prompt, type **iisreset /noforce**, then **press Enter**.

11. When it is complete, you can close all the windows

You have now completed this task and the exercise. You can proceed to the next Exercise.

5.8 Exercise 2: Create Site Collections

In this exercise you will create content for the SharePoint Server 2019 web application created in exercise 1.

5.8.1 Task 1 – Use Central Administration to create a top-level site collection

In this task you will create a top-level site collection for the web application created in exercise 1.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then select **Create Site Collections**.
4. Using the following information, create a top-level site collection
   - Web Application: **http://teams.adatum.com**
   - Title: **Teams Search**
   - URL: **/**
   - Template: **Enterprise Search Center** *(under the Enterprise tab)*
   - Primary Site Collection Administrator: **adatum\administrator**
   - Select **OK**.
5. Test accessing the new site collection by selecting the link provided once the site collection has been created.
6. While in the Search Center (http://teams.adatum.com/ **),** select the gear icon at up-right corner and select **Site settings,** then select **Site permissions**.
7. Select **Teams Search Visitors.** Select **New** and add **everyone** to the group.

You have completed this task and may proceed onto the next task.

5.8.2 Task 2 – Use Windows PowerShell to create new content databases

In this task you will create a new content database using windows PowerShell for the web application created in exercise 1.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, and right-select **SharePoint 2019 Management Shell** to run as Administrator.
3. At the command prompt, type the following command and **press Enter**.

   ```
   New-SPContentDatabase -Name WSS\_Content\_Teams -WebApplication <http://teams.adatum.com>
   ```

You have completed this task and may proceed onto the next task.

5.8.3 Task 3 – Use Windows PowerShell to create new site collections

In this task you will create new site collections for the web application created in exercise 1.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Management Shell**.
3. At the command prompt, type the following command and **press Enter**.

   ```
   New-SPSite -Url "http://teams.adatum.com/sites/teamsite1" -ContentDatabase WSS_Content_Teams -Name
   ```

4. Once it is finished, ppen **Internet Explorer** and navigate to **http://teams.adatum.com/sites/teamsite1**.

5. If you open **Central Administration**, and navigate to the **Application Management** page, select **View all site collections**.
6. Validate the web application, **http://teams.adatum.com** is selected and select the site collection **/sites/teamsite1**, is in the newly created **WSS_Content_Teams** content database.

END OF LAB

6 Module 03- Lab2: Manage Site Collections and Permissions

6.1 Microsoft 365 user interface

Given the dynamic nature of Microsoft cloud tools, you may experience user interface (UI) changes that were made following the development of this training content. This will manifest itself in UI changes that do not match up with the detailed instructions presented in this lab manual.

The Microsoft World-Wide Learning team will update this training course as soon as any such changes are brought to our attention. However, given the dynamic nature of cloud updates, you may run into UI changes before this training content is updated. **If this occurs, you will have to adapt to the changes and work through them in the lab exercises as needed.**

6.2 Lab Scenario

In the labs of this course you are the Administrator for Adatum Corporation, and you have to setup some governance limits to control the growth of your content capacity before it gets out of control.

- Manage Site Collections quotas and locks
- Use the site collection recycle bin
- Create and Manage Permission Sets and Groups

In this lab, you will create and configure a SharePoint 2019 web application.

- **Exercise 1: Manage and configure site collection capacity governance (20 minutes)**
  - Task 1: Configure Site Collection Quotas
  - Task 2: Manage Site Collection Owners
  - Task 3: Manage Site Collection Locks
  - Task 4: Manage Site Collection Recycle Bin
- **Exercise 2: Manage site collection permissions (15 minutes)**
  - Task 1: Create and Manage Permission Sets
  - Task 2: Create and Manage SharePoint Groups

6.3 Objectives

After you complete this lab, you will be able to:

- Manage site collection capacity
- Manage site collection permissions

6.4 Lab Setup

- **Estimated Time:** 35 minutes.

6.5 Instructions

6.6 Before you start

6.6.1 Review the lab virtual machines

The following are the virtual machines provided in this course. You will log in to the VM as a local administrator. The instructor will provide the sign-in information.

- LON-DC1: Domain controller
- LON-SP1: SharePoint Server with SharePoint 2019 installed.
- LON-SP2: SharePoint Server with SharePoint 2019 installed.
- LON-SQL: SQL Server with SQL Server management tools installed.

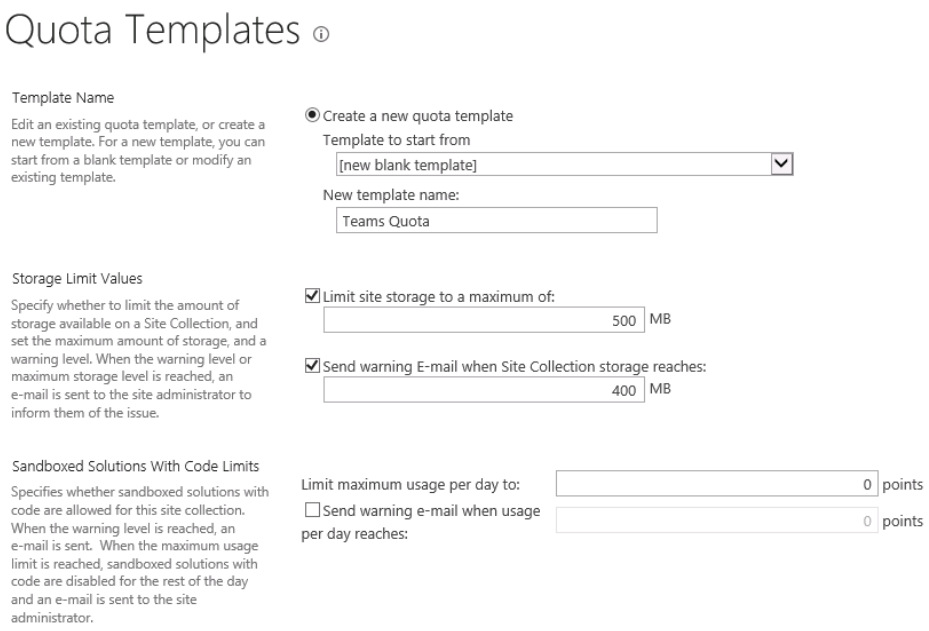
6.7 Exercise 1: Manage and Configure Site Collection Capacity Governance

In the first exercise you will walk through the steps to manage capacity governance within the environment.

6.7.1 Task 1 – Configure Site Collection Quotas

In this task you will create and configure site collection quotas.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then on the Application Management page, under the **Site Collections** section, select **Specify quota templates**.
4. Select **Create a new quota template** and enter in the following information
   - New Template Name: **Team Quota**
   - Storage Limit Values: Select the option for **Limit site storage to a maximum value of** and set the value to **500** MB
   - Storage Limit Values: Select the option for **Send warning E-mail when Site Collection storage reaches** and set the value to **400** MB
   - Select **OK**.



5. Select **Configure quotas and locks**.
6. Select the site collection created in the previous exercise with the URL of **http://teams.adatum.com/sites/teamsite**
7. In the **Site Quota Information** section, use the drop down to select the **Teams Quota** template.
8. Select **OK.**

You have now successfully created and applied a site quota template to a site collection. Proceed to the next task.

6.7.2 Task 2 – Manage Site Collection Owners

In this task you will manage site collection owners.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then on the Application Management page, under the **Site Collections** section, select **Change site collection administrators**.
4. Select the site collection created in the previous exercise with the URL of **http://teams.adatum.com/sites/teamsite**
5. Enter **adatum\UserA** for the **Secondary Administrator**, select people picker icon to resolve the user.
6. Select **OK**.

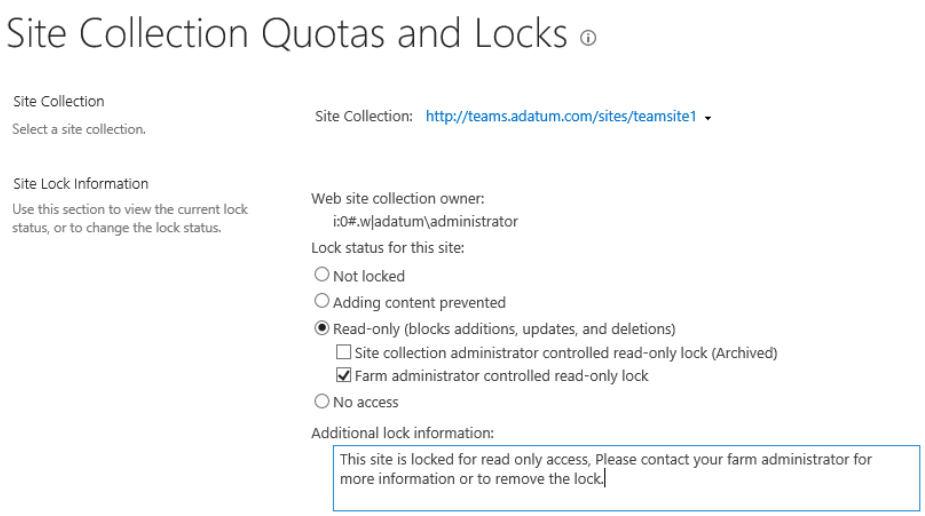
You have successfully completed this task. Please continue to the next task.

6.7.3 Task 3 – Manage Site Collection Locks

In this task you will create a web application which used the managed account and DNS created in the previous tasks.

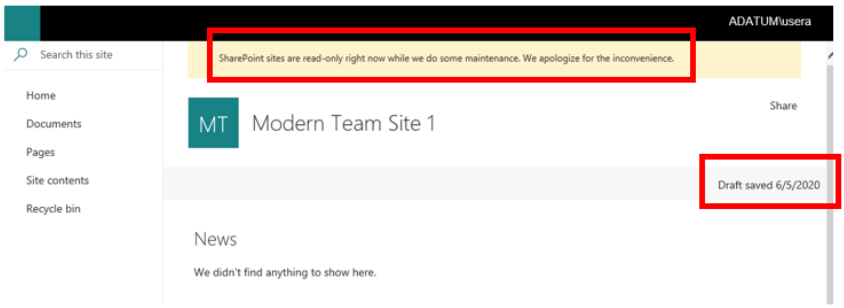
1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then on the Application Management page, under the **Site Collections** section, select **Configure Quotas and Locks**.
4. Select the site collection created in the previous exercise with the URL of **http://teams.adatum.com/sites/teamsite**
5. In the **Site Lock Information** section, select **Read-Only (blocks additions, updates, and deletions)** and check the box for **Farm administrator controlled read-only lock**.
6. When selecting this option an option for **Additional lock information** is provided. **Enter a message** in this area for a user who may try to add, update, or delete content. The sample message:

   This site is locked for read only access. Please contact your farm administrator for more information or to remove the lock.



7. Select **OK**.
8. Right-select on IE and select the InPrivate browsing mode.
9. Navigate to **http://teams.adatum.com/sites/teamsite1**, and login with **adatum\UserA** credentials.

10. Notice UserA is a secondary site collection administrator and should have full control permissions throughout the site collection. However, the site is locked at the farm level even for site collection administrators. Notice the message at the top as well as of the lack of an edit button for the page.



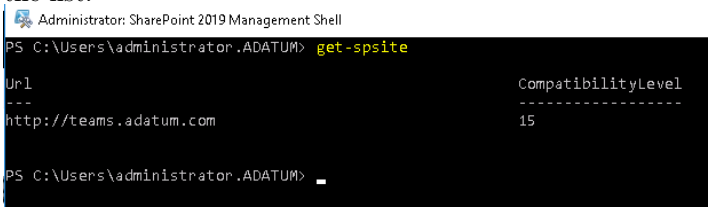
11. Navigate back to **Central Administration**, select **Application Management**, then on the Application Management page, under the **Site Collections** section, select **Configure Quotas and Locks**.
12. Select the site collection created in the previous exercise with the URL of **http://teams.adatum.com/sites/teamsite**
13. In the **Site Lock Information** section, select **Not Locked**.
14. Select **OK**.

You have successfully completed this task. At this point your site collection at /sites/teamsite1 should not have a read-only lock placed on the site. Please continue to the next task.

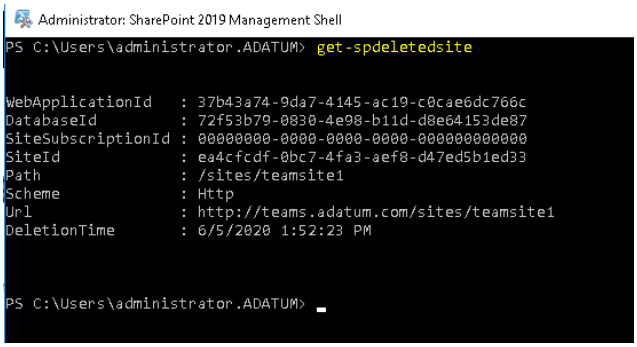
6.7.4 Task 4 – Manage Site Collection Recycle Bin

In this task you will delete a site collection and restore the site collection back using the site collection recycle bin.

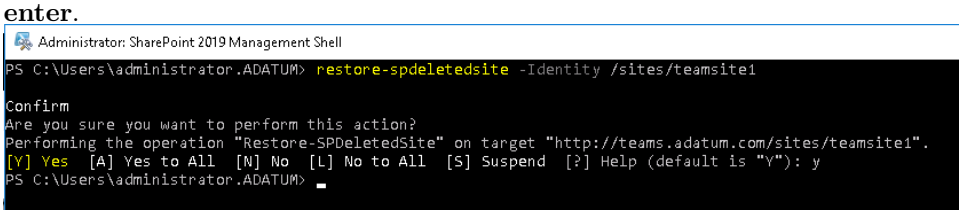
1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then under the **Site Collections** section, select **Delete a site collection**.
4. Select the site collection created in the previous exercise with the URL of **http://teams.adatum.com/sites/teamsite**
5. Select **Delete**.
6. A message will be presented asking if you are sure you want to permanently delete this web site and all its content, select **OK**.
7. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Management Shell**.
8. Type `Get-SPSite` in the management shell window. You can see the site we deleted does not show up in the list.



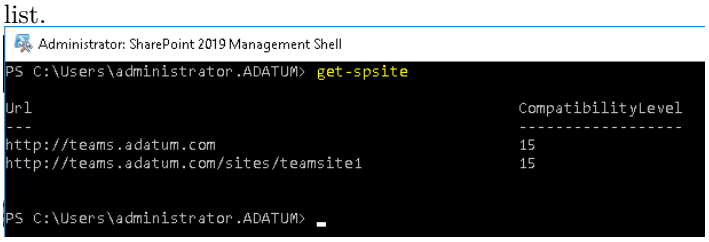
9. Type `Get-SPDeletedSite` in the management shell window. You can see the site, which was just deleted, in the list of deleted sites.



10. To restore this site, type `Restore-SPDeletedSite -identity /sites/teamsite1`, enter `Y` and **press enter**.



11. Type `Get-SPSite` in the PowerShell window. The site collection has been restored and is visible in the list.



You have now completed this task and the exercise. You can proceed to the next Exercise.

6.8 Exercise 2: Manage Site Collection Permissions

In this exercise you will create and manage permissions within the site collection.

6.8.1 Task 1 – Create and Manage Permission Sets

In this task you will create a top-level site collection for the web application created in exercise 1.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. Open **Internet Explorer** and navigate to the site collection at the address of **http://teams.adatum.com/sites/tear**
3. Once the site is loaded, select **Site Contents** from the left menu pane, then select **Site Settings** from the top right of the site contents details.
4. In the top left section called **Users and Permissions**, select **Site Permissions**
5. In the **Ribbon**, select **Permission Levels**.
6. Select **Contribute** permission level.
7. You can see the detailed individual permissions selected to make up the Contribute permission level. Scroll down to the bottom of the page, then select **Copy Permission Level**.
8. Provide the following details in the new permission level page.
   - Name: **Contribute – No Delete**
   - Description: **Can view, add, update but NOT delete list items, documents, or versions.**
   - Uncheck: **Delete Items**
   - Uncheck: **Delete Versions**
   - Select **Create**

You have completed this task and may proceed onto the next task.

6.8.2 Task 2 – Create and Manage SharePoint Groups

In this task you will create a SharePoint group and assign the permission level we created above to the group.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. Open **Internet Explorer** and navigate to the site collection at the address of **http://teams.adatum.com/sites/tear**
3. Once the site is loaded, select **Site Contents** from the left menu pane, then select **Site Settings** from the top right of the site contents details.
4. In the top left section called **Users and Permissions**, select **Site Permissions**.
5. In the **Ribbon**, select **Create Group**.
6. Use the following information to create the group, and select **Create.**
   - Name: **Modern Team Site 1 Contributors**
   - Group Owner: **ADATUM\Administrator**
   - Who can view the membership of the group?: **Group Members**
   - Who can edit the membership of the group?: **Group Owner**
   - Allow requests to join/leave group?: **No**
   - Choose Permission Level: **Contribute – No Delete**.
7. Go back to the **Site Settings** page and select on **Site Permissions**.
8. Select **Modern Team Site 1 Contributors**, expand **New** and select **Add Users**.
9. Enter the name of a user to add to the group, such as **ADATUM\UserB**.
10. Select **Share**.
11. In your Lab Session, switch to **LON-CL1** virtual machine as ADATUM\UserB.
12. Open **Internet Explorer** and navigate to the site collection at the address of **http://teams.adatum.com/sites/tear**
13. On the home page, select **New** then select **Page**. When the page comes up give it a title (i.e. New Page) and select **Publish** on the right.
14. In the left pane, select **Site Contents**.
15. Select the **Site Pages** library
16. Select the box on the left of the page you just created.

Notice that as UserB you were able to create the page and publish it, but you have no option to delete the page from the site pages library.

You have completed this task and may proceed onto the next task.

END OF LAB

7 Module 04- Lab1: Create and Configure Service Applications

7.1 Microsoft 365 user interface

Given the dynamic nature of Microsoft cloud tools, you may experience user interface (UI) changes that were made following the development of this training content. This will manifest itself in UI changes that do not match up with the detailed instructions presented in this lab manual.

The Microsoft World-Wide Learning team will update this training course as soon as any such changes are brought to our attention. However, given the dynamic nature of cloud updates, you may run into UI changes before this training content is updated. **If this occurs, you will have to adapt to the changes and work through them in the lab exercises as needed.**

7.2 Lab Scenario

In the labs of this course you are the Administrator for Adatum Corporation, and you have to setup services

- Create BCS (Business Connectivity Services) Service Application
- Create Secure Store Service Application
- Create MMS (Managed Metadata Services) Service Application
- Create App Management Service Application

In this lab, you will create and configure the following service applications in SharePoint 2019.

- **Exercise 1: Create a Business Connectivity Service Application (5 minutes)**
  - Task 1: Create an application pool account
  - Task 2: Register a service accounts as SharePoint managed account
  - Task 3: Create a BCS Service Application
- **Exercise 2: Create a Secure Store Service Application (5 minutes)**
  - Task 1: Create a Secure Store Service Application
- **Exercise 3: Create a Managed Metadata Service Application (5 minutes)**
  - Task 1: Register a service account as SharePoint managed account
  - Task 2: Create a Managed Metadata Service Application
- **Exercise 4: Create an App Management Service Application (5 minutes)**
  - Task 1: Create an App Management Service Application

7.3 Objectives

After you complete this lab, you will be able to:

- Create a Business Connectivity Service Application
- Create a Secure Store Service Application
- Create a Managed Metadata Service Application
- Create an App Management Service Application

7.4 Lab Setup

- **Estimated Time:** 20 minutes.

7.5 Instructions

7.6 Before you start

7.6.1 Review the lab virtual machines

The following are the virtual machines provided in this course. You will log in to the VM as a local administrator. The instructor will provide the sign-in information.

- LON-DC1: Domain controller
- LON-SP1: SharePoint Server with SharePoint 2019 installed.
- LON-SP2: SharePoint Server with SharePoint 2019 installed.
- LON-SQL: SQL Server with SQL Server management tools installed.

7.7 Exercise 1: Create and Configure Business Connectivity Service Application

In the first exercise you will walk through the steps to create and configure the BCS service application.

7.7.1 Task 1 – Create an application pool account

1. Sign in to **LON-DC1** virtual machine as the Administrator (Adatum\administrator).
2. Go to **Start** > **Windows Administrative Tools** > **Active Directory Administrative Center.**
3. In Active Directory Administrative Center, select **Adatum(local)**.
4. In the **Adatum**(local) pane, right select on the **IT** OU, select **New>User**.
5. In the **Create User** dialog box, fill out the properties, and hit **OK.**
   - Full name: Application Pool
   - User UPN logon: SPAppPool
   - Password: Pa55w.rd
   - Confirm password: Pa55w.rd
   - Click Other password options, select Password never expires, select User cannot change password.
6. Select **OK**.

7.7.2 Task 2 – Register Service Accounts as SharePoint Managed Accounts

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Security**, then on the Security page, under **General Security**, select **Configure Managed Accounts**.
4. On the **Managed Accounts** page, select **Register Managed Account**.
5. Create a new managed account by entering the following information under **Service Account Credentials**, then select **OK**.
   - Username: **adatum\SPAppPool**
   - Password: **Pa55w.rd**

7.7.3 Task 3 – Create BCS Service Application

In this task you will create the BCS service application.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then on the Application Management page, under the **Service Applications** section, select **Manage Service Applications**.
4. On the **Manage Service Applications** page, select **New** from the ribbon and select **Business Data Connectivity Service**.
5. Use the following information to create the BCS Service Application
   - Service Application Name: **BCS**
   - Database Name: **BCS_Service_DB**
   - Create new application pool – Application Pool Name: **SPServicesAppPool**
   - Create new application pool – Security Account: **ADATUM\SPAppPool**
   - Select **OK**.
6. Select **OK** on the creation summary page.

You have now completed this task and the exercise. You can proceed to the next Exercise.

7.8 Exercise 2: Create and Configure Secure Store Service Application

In this exercise you will create and configure the secure store service application.

7.8.1 Task 1 – Create Secure Store Service Application

In this task you will create the Secure Store service application.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then on the Application Management page, under the **Service Applications** section, select **Manage Service Applications**.
4. On the **Manage Service Applications** page, select **New** from the ribbon and select **Secure Store Service**.
5. Use the following information to create the Managed Metadata Service Application
   - Name: **Secure Store**
   - Database Name: **Secure_Store_Service_DB**
   - Use Existing Application Pool: **SPServicesAppPool**
   - Select **OK**.

7.9 Exercise 3: Create and Configure Managed Metadata Service Application

In this exercise you will create and configure the managed metadata service application.

7.9.1 Task 1 – Register Service Accounts as SharePoint Managed Accounts

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Security**, then on the Security page, under **General Security**, select **Configure Managed Accounts**.
4. On the **Managed Accounts** page, click on **Register Managed Account**.
5. Create a new managed account by entering the following information under **Service Account Credentials**, then click **OK**.
   - Username: **adatum\spMMS**
   - Password: **Pa55w.rd**

7.9.2 Task 2 – Create Managed Metadata Service Application

In this task you will create the Managed Metadata service application.

1. In Central Administration, select **Application Management**, go to the Application Management page, under the **Service Applications** section, and select **Manage Service Applications**.
2. On the **Manage Service Applications** page, select **New** from the ribbon and select **Managed Metadata Service**.
3. Use the following information to create the Managed Metadata Service Application
   - Name: **MMS**
   - Database Name: **MMS_Service_DB**
   - Create new application pool
   - Application pool name: **MMS**
   - Security account for the application pool: Adatum\SPMMS

- Select **OK** (it might take a while for the screen to change).

4. Once created you can select **MMS** to view the Term Store Administrator interface.

You have now completed this task and the exercise

7.10 Exercise 4: Create and Configure App Management Service Application

In this exercise you will create and configure the App Management service application.

7.10.1 Task 1 – Create App Management Service Application

In this task you will create the App Management service application.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then on the Application Management page, under the **Service Applications** section, select **Manage Service Applications**.
4. On the **Manage Service Applications** page, select **New** from the ribbon and select **App Management Service**.
5. Use the following information to create the Managed Metadata Service Application
   - Name: **App Management**
   - Database Name: **App_Management_Service_DB**
   - Use Existing Application Pool: **SPServicesAppPool**
   - Select **OK**.

You have now completed this task and the exercise.

END OF LAB

8 Module 04- Lab2: Create and Configure User Profile Service

8.1 Microsoft 365 user interface

Given the dynamic nature of Microsoft cloud tools, you may experience user interface (UI) changes that were made following the development of this training content. This will manifest itself in UI changes that do not match up with the detailed instructions presented in this lab manual.

The Microsoft World-Wide Learning team will update this training course as soon as any such changes are brought to our attention. However, given the dynamic nature of cloud updates, you may run into UI changes before this training content is updated. **If this occurs, you will have to adapt to the changes and work through them in the lab exercises as needed.**

8.2 Lab Scenario

In the labs of this course you are the Administrator for Adatum Corporation, and you have to setup services

- Create and Configure User Profile Service Application

In this lab, you will create and configure a SharePoint 2019 User Profile Service.

- **Exercise 1: Create User Profile Service Application (15 minutes)**
  - Task 1: Create a new User Profile Service Application
  - Task 2: Give SharePoint Farm Account rights to Active Directory
  - Task 3: Configure Directory Import
- **Exercise 2: Configure MySites (20 minutes)**
  - Task 1: Configure DNS for the new MySites Web Application

- Task 2: Configure MySites web application
- Task 3: Configure IIS Bindings
- Task 4: Create MySite Host Site Collection
- Task 5: Configure User Profile Service for MySites

8.3 Objectives

After you complete this lab, you will be able to:

- Create and configure a SharePoint Server 2019 User Profile Service Application

8.4 Lab Setup

- **Estimated Time:** 35 minutes.

8.5 Instructions

8.6 Before you start

8.6.1 Review the lab virtual machines

The following are the virtual machines provided in this course. You will log in to the VM as a local administrator. The instructor will provide the sign-in information.

- LON-DC1: Domain controller
- LON-SP1: SharePoint Server with SharePoint 2019 installed.
- LON-SP2: SharePoint Server with SharePoint 2019 installed.
- LON-SQL: SQL Server with SQL Server management tools installed.

8.7 Exercise 1: Create User Profile Service Application

In the first exercise you will walk through the steps to create and configure the User Profile service application.

8.7.1 Task 1 – Create a new User Profile Service Application

In this task you will create a new user profile service application.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then on the Application Management page, under the **Service Applications** section, select **Manage Service Applications**.
4. On the **Manage Service Applications** page, from the ribbon, select **New**, then select **User Profile Service Application**.
5. Fill out the following information when presented
   - Name: **UPA**
   - Select **Create new application** pool, and provide the name: **UPAAppPool.**
   - Select **Register new managed account** link to create a new managed account for **ADATUM\SPProfile** with the password **Pa55w.rd.**
   - After the new managed account is created, select **ADATUM\SPProfile** as the account to use for the application pool.

     (You may have to refill the Name and Application Pool Name again after creating the managed account)
   - Profile Database – Database Name: **UPA_ProfileDB**
   - Social Tagging Database – Database Name: **UPA_SocialDB**

- Select **Create**
- Once the service application is created, select **OK**

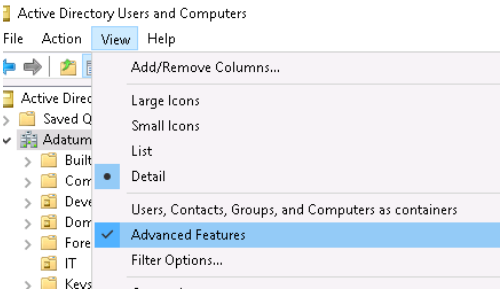
6. Navigate to **System Settings** page and select **Manage services on server**. Make sure to select the **LON-SP2** server and scroll down.
7. Notice the **User Profile Service** instance is started automatically due to MinRole configuration.

You have now completed this task and may proceed to the next Task.

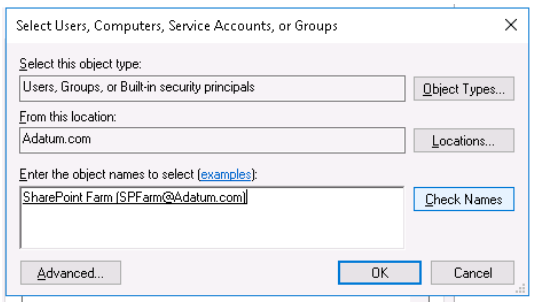
8.7.2 Task 2 – Give SharePoint Farm Account rights to Active Directory

In this task you will configure the SharePoint Farm Account the necessary permissions on Active Directory to execute the user profile synchronization.

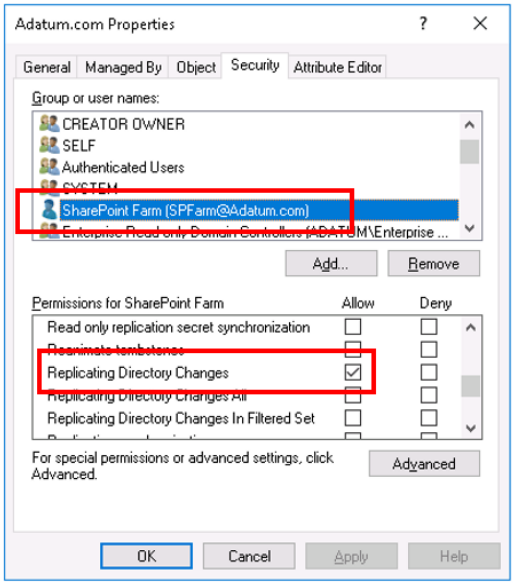
1. **In your Lab Session, switch to LON-DC1 virtual machine as Administrator.**
2. On the **Start** menu, select **Windows Administrative Tools**.
3. Select **Active Directory Users and Computers**.
4. When the application loads, select **View** from the toolbar and select **Advanced Features.**



5. Right-select the domain name **Adatum.com** and select **Properties.**
6. Select the **Security** tab
7. Select the **Add** button and enter **adatum\spfarm** into the box, then select **Check Names**.



8. With **SharePoint Farm (SPFarm@Adatum.com)** user selected in the top box, scroll down, and check the box to **Allow** for **Replicating Directory Changes**.



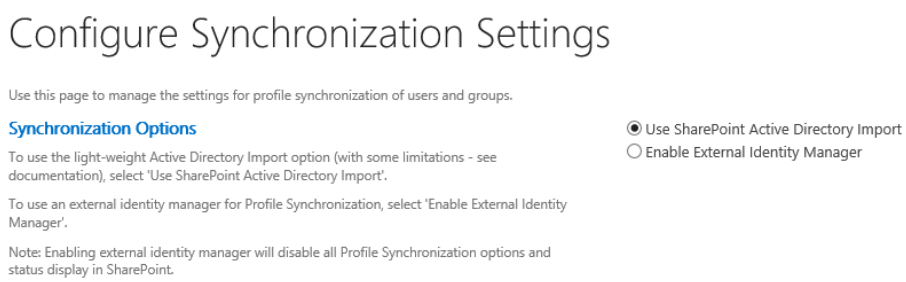
9. Select **OK**.

You have completed this necessary task for the import to be successful. Please proceed to the next task.

8.7.3 Task 3 – Configure Directory Import

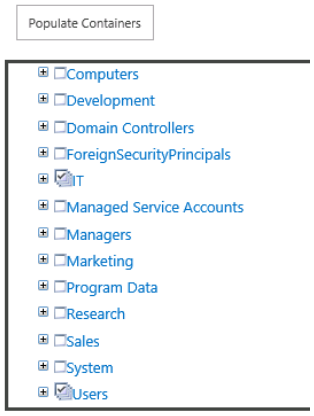
In this task you will configure the directory import to populate the user profiles into the service.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then on the Application Management page, under the **Service Application** section, select **Manage Service Applications**.
4. Select the recently created User Profile Application, **UPA**.
5. Under the **Synchronization** section, select **Configure Synchronization Settings**.
6. Validate **Use SharePoint Active Directory Import** is selected.

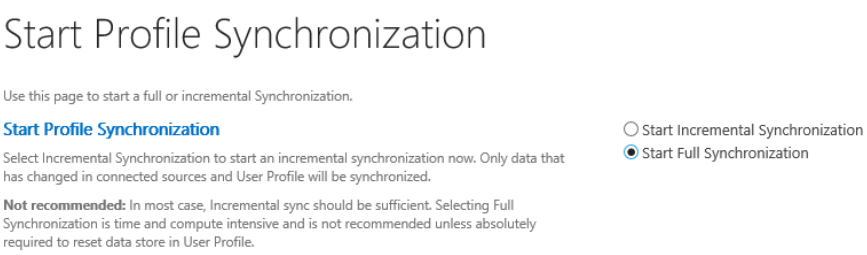


7. Select **OK**.
8. Under the **Synchronization** section, select **Configure Synchronization Connections**.
9. Select **Create New Connection**.
10. Add a new sync connection with the following information
    - Connection Name: **ADATUM**
    - Domain Name: **adatum.com**
    - Account Name: **ADATUM\SPFarm**
    - Password: **Pa55w.rd**
    - Confirm Password: **Pa55w.rd**

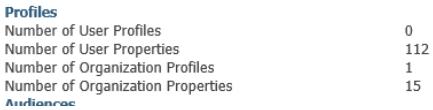
- Select **Populate Containers**, this will populate the select box with information from the provided domain.
- Select **IT** and **Users in the containers list and select OK**



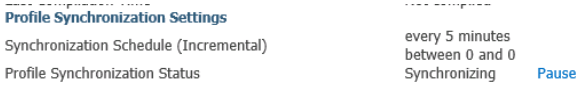
11. Navigate back to **Application Management**, then on the Application Management page, under the **Service Application** section, select **Manage Service Applications**.
12. Select the recently created User Profile Application, **UPA**.
13. Select **Start Profile Synchronization**
14. Pick **Start Full Synchronization**



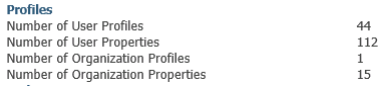
15. Select **OK**.
    - You should be starting out with 0 profiles.



    - Synchronization will take a few minutes, **Refresh** the page to see the status of the **Profile Synchronization**. It will start with **Synchronizing**.



    - Once it is back to **Idle**, the profile count should now be approx. 40 profiles.



16. Once the profiles are imported, select **Manage User Profiles** from the **People** section.
17. In the **Find Profiles** text box, enter **adatum\user** and select **Find**.

    UserA through UserE should be displayed.

You have now completed this task and the exercise. You can proceed to the next Exercise.

8.7.4 Exercise 2: Configure My Sites

In this exercise you will configure User Profile Service application.

8.7.5 Task 1 – Configure DNS for the new MySites Web Application

In this task you will configure a DNS host for the MySites web application.

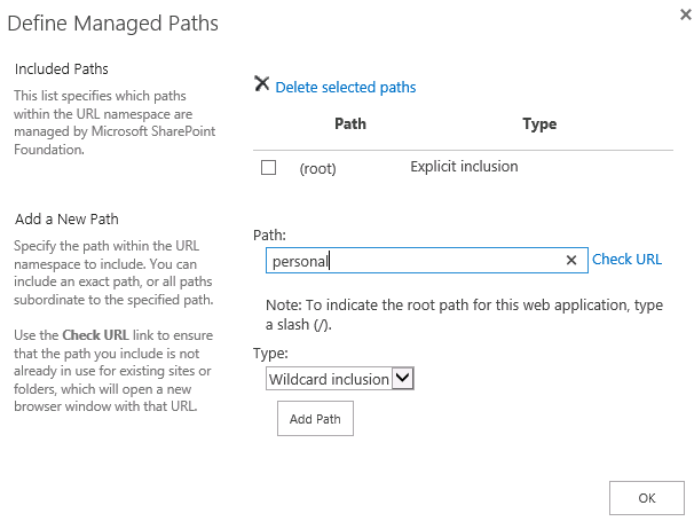
1. In your Lab Session, switch to **LON-DC1** virtual machine as Administrator.
2. On the Start menu, select **Windows Administrative Tools**, and select **DNS.**
3. In DNS Manager, expand **LON-DC1**, expand Forward Lookup Zones and expand **adatum.com.**
4. Right-select **adatum.com** and select **New Host (A or AAAA).**
5. Create a **New Host** with the following information
   - Name: **mysites**
   - IP Address: **172.16.0.12 (The IP of LON-SP1)**
   - Select **Add Host**
   - Select **OK** then **Done**.

You have now successfully created the User Profile service application. Proceed to the next task.

8.7.6 Task 2 – Configure MySites Web Application

In this task you will configure the MySites web application.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. Select **Application Management**, on the Application Management page, select **Manage Web Applications**.
4. Select **New** from the ribbon.
5. Scroll down to Application Pool section and select **Register new managed account**
   - User Name: **ADATUM\SPMySitesWebApp**
   - Password: **Pa55w.rd**
6. Use the following information to create the new web application
   - Name: **SharePoint - mysites.adatum.com**
   - Port: **80**
   - Host Header: **mysites.adatum.com**
   - Application Pool Name: **SharePoint - mysites.adatum.com80**
   - Application Pool Identity: **ADATUM\SPMySitesWebApp**.
   - Database Name: **MySite_Content_01**
7. Select **OK**.
8. After it is created, select **OK** to close the summary dialog.
9. Select the row (not the link) of the new **SharePoint – mysites.adatum.com** web application in the list to highlight the row.
10. Select **Managed Paths** from the ribbon.
11. In the **Define Managed Paths** dialog box, select the box for **Sites** and select **Delete selected paths**.
12. In the **Define Managed Paths** dialog box, under **Add a New Path**, enter **personal** into the **Path** text box and select **Wildcard inclusion** for the **Type**, then select **Add Path**.

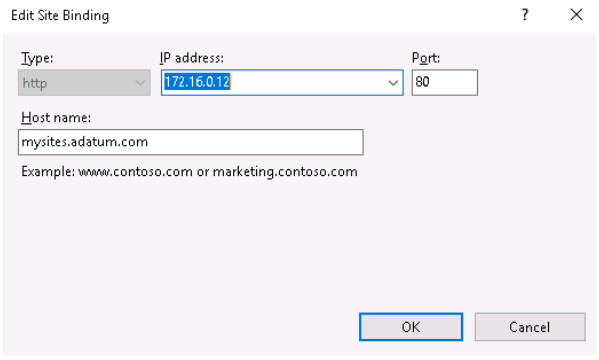


13. Select **OK**.

8.7.7 Task 3 – Configure IIS Bindings

In this task you will configure the IIS Bindings for the mysites web application.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, select **Windows Administrative Tools** then select **Internet Information Services (IIS) Manager**.
3. In IIS Manager, expand **LON-SP1 (Adatum\Administrator)**, expand **Sites** and click on **SharePoint – mysites.adatum.com**.
4. In the **Actions** pane on the right, select **Bindings**.
5. In the **Site Bindings** dialog box, highlight the mysites.adatum.com binding and select **Edit**.
6. In the **IP address** selector, select **172.16.0.12**.



7. Click **OK** then select **Close**.

This task is now complete, please continue to the next task.

8.7.8 Task 4 – Create MySite Host Site Collection

In this task you will configure the mysite web application to have a mysite host at the root of the web application.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then on the Application Management page, under the **Site Collections** section, select **Create site collections**.
4. Create a site collection, with the following information
   - Web Application: **http://mysites.adatum.com**

- Title: **My Site Host**
- Description: **Site is used for the user profiles and pictures**
- URL: **/**
- Template Selection: **My Site Host** *(in the Enterprise Tab)*
- Primary Site Collection Administrator: **adatum\administrator**

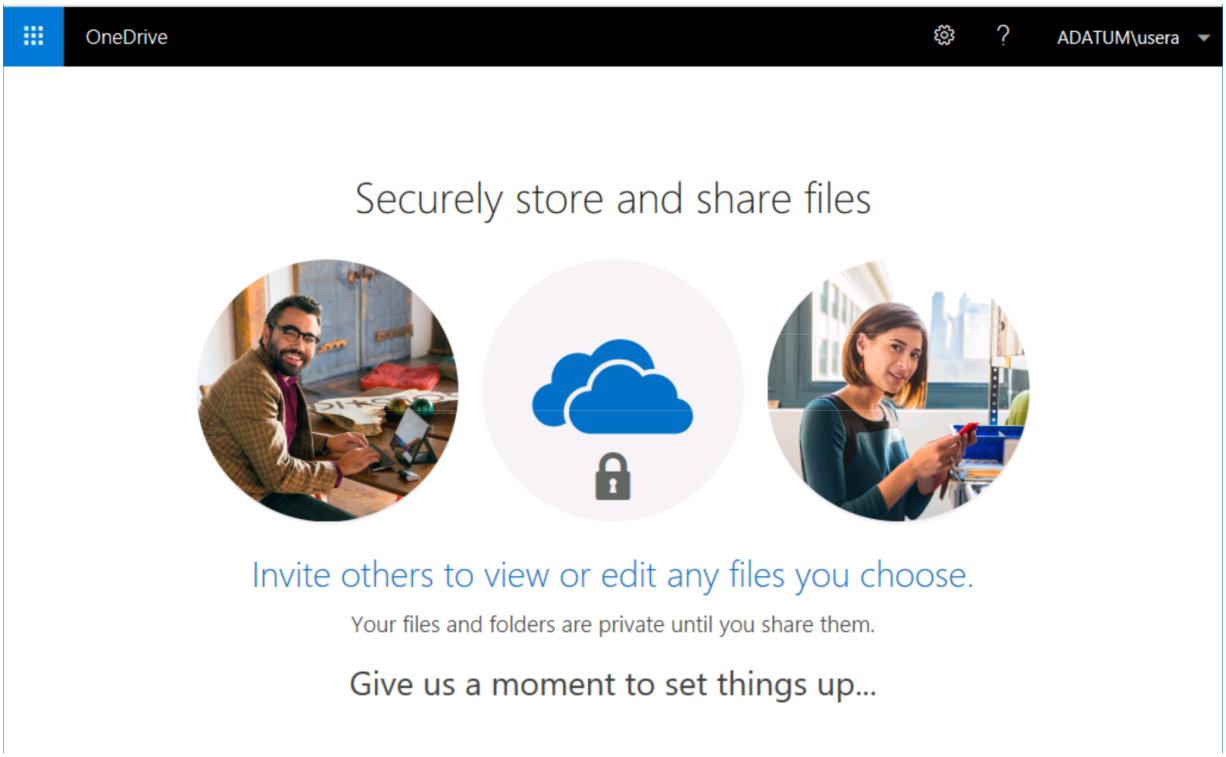
5. Select **OK**.
6. After it successfully creates go to **Application Management > Manage web applications**
7. Select the row (not the link) **SharePoint – mysites.adatum.com**
8. Select **Self-Service Site Creation** from the ribbon.
9. In the **Self-Service Site Creation Management** dialog box, under **Site Collections**, select **On** and then select **OK**.

You have now completed this task, please continue to the next task.

8.7.9 Task 5 – Configure User Profile Service for MySites

In this task you will configure the user profile service to use the new my sites web application.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. Select **Application Management**, then in the Application Management page, select **Managed Service Applications** from the **Service Applications** section.
4. Click the **UPA link**
5. On the **Manage Profile Service: UPA** page, under **My Site Settings** section, select **Setup My Sites**.
6. On the **My Site Settings** page, in the **My Site Host Location** text box, type **http://mysites.adatum.com**, uncheck the box for **Make My Sites Public**, and then select **OK**.
7. To test mysites is working in you Lab Session, switch to **LON-CL1** virtual machine.
8. Log on to **LON-SP1** virtual machine as **Adatum\UserA**
9. Open **Internet Explorer** from the taskbar and navigate to **http://mysites.adatum.com**.
10. OneDrive will then start being provisioned and you will see the following screen.



11. In few minutes you can refresh the page and the OneDrive will be ready for UserA to interact with.

    Screenshot with the message Your OneDrive is ready

You have now completed this task and the exercise. You have completed this lab.

END OF LAB

9 Module 06-Lab 1: Create and Configure Search Service

9.1 Microsoft 365 user interface

Given the dynamic nature of Microsoft cloud tools, you may experience user interface (UI) changes that were made following the development of this training content. This will manifest itself in UI changes that do not match up with the detailed instructions presented in this lab manual.

The Microsoft World-Wide Learning team will update this training course as soon as any such changes are brought to our attention. However, given the dynamic nature of cloud updates, you may run into UI changes before this training content is updated. **If this occurs, you will have to adapt to the changes and work through them in the lab exercises as needed.**

9.2 Lab Scenario

In the labs of this course you are the Administrator for Adatum Corporation, and you have to setup services

- Create and Configure Search Service Application

In this lab, you will create and configure a SharePoint 2019 Business Connectivity Service.

- **Exercise 1: Create Search Service Application (15 minutes)**
  - Task 1: Create a new Search Service Application
  - Task 2: Crawl Content

9.3 Objectives

After you complete this lab, you will be able to:

- Create and Configure a SharePoint Server 2019 Search Service Application

9.4 Lab Setup

- **Estimated Time:** 20 minutes.

9.5 Instructions

9.6 Before you start

9.6.1 Review the lab virtual machines

The following are the virtual machines provided in this course. You will log in to the VM as a local administrator. The instructor will provide the sign-in information.

- LON-DC1: Domain controller
- LON-SP1: SharePoint Server with SharePoint 2019 installed.
- LON-SP2: SharePoint Server with SharePoint 2019 installed.
- LON-SQL: SQL Server with SQL Server management tools installed.

9.7 Exercise 1: Create Search Service Application

In the first exercise you will walk through the steps to create and configure the search service application.

9.7.1 Task 1 – Create a new Search Service Application

In this task you will create the Search Service application.

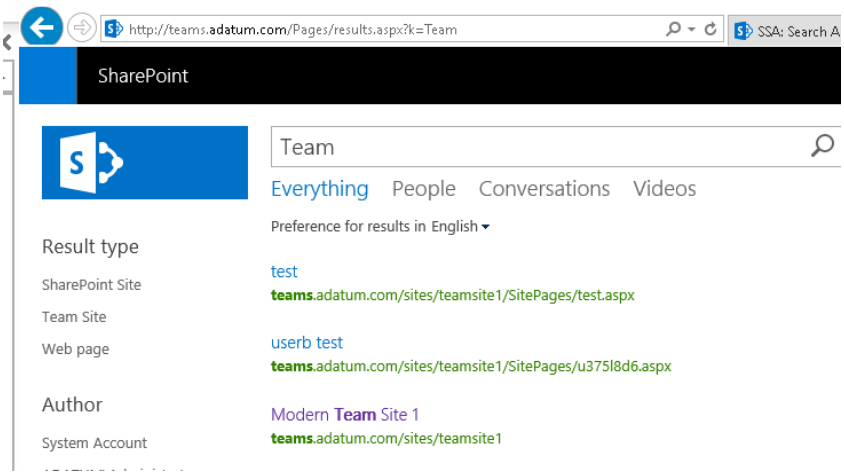
1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then on the Application Management page, under the **Service Applications** section, select **Manage Service Applications**.
4. On the **Manage Service Applications** page, on the ribbon, select **New** then select **Search Service Application**.
5. Use the following information to populate the request for a new search service application.
   - Select **Register new managed account** link to create **ADATUM\SPSearch** as a managed account.
   - Service Application Name: **SSA**
   - Search Service Account: **ADATUM\SPSearch**
   - For **Application Pool for Search Admin Web Service**, use the following information:
     - Name: **SPSearchAdminAppPool**
     - Security Account for this application pool: **ADATUM\SPSearch**
   - For **Application Pool for Search Query and Site Settings Web Service**, use the following information:
     - Name: **SPSearchSQSSAAppPool**
     - Security Account for this application pool: **ADATUM\SPSearch**
   - Select **OK**.
6. Once it is created (may take a few min), select **OK** on the creation summary dialog.

You have now successfully created the Search service application. Proceed to the next task.

9.7.2 Task 2 – Crawl Content

In this task you will configure the search service application to crawl the content.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. On the **Start** menu, expand **Microsoft SharePoint 2019 Products**, select **SharePoint 2019 Central Administration**.
3. In Central Administration, select **Application Management**, then on the Application Management page, under the **Service Applications** section, select **Manage Service Applications**.
4. Select the **SSA** link.
5. On the **SSA: Search Administration** page, on the menu on the left side, select **Content Sources** under the **Crawling** section.
6. On the **SSA: Content Sources** page, select the content source **Local SharePoint Sites, and verify if the following URLs are in the starting addresses:**
   - http://mysites.adatum.com
   - http://teams.adatum.com
   - sps3://mysites.adatum.com
7. **Select the dropdown menu for Local SharePoint Sites, and select Start Full Crawl, then select OK on the alert pop up.**
8. **Go back to the SSA: Search Administration** page, on the menu on the left side, select **Crawl Log** under the **Diagnostics** section, then select **Crawl History**.
9. Refresh the page until the **Full Crawl** (*Type* F) has completed. (May take a few minutes).
10. Once complete, navigate to **http://teams.adatum.com** share the site with **adatum\UserA**
11. Search for **Team**



You have now completed this task and the exercise. You have completed this lab.

END OF LAB

10 Module 09-Lab 1: Configuring SharePoint Hybrid'

10.1 Microsoft 365 user interface

Given the dynamic nature of Microsoft cloud tools, you may experience user interface (UI) changes that were made following the development of this training content. This will manifest itself in UI changes that do not match up with the detailed instructions presented in this lab manual.

The Microsoft World-Wide Learning team will update this training course as soon as any such changes are brought to our attention. However, given the dynamic nature of cloud updates, you may run into UI changes before this training content is updated. **If this occurs, you will have to adapt to the changes and work through them in the lab exercises as needed.**

10.2 Lab Scenario

In the labs of this course you are the SharePoint Administrator for Adatum Corporation, and you have a SharePoint 2019 farm deployed in a virtualized lab environment. In this lab, you will configure SharePoint Hybrid Scenarios.

- **Exercise 1: Set up your M365 lab environment (5 minutes)**
  - Task 1: Obtain your Microsoft 365 credentials
  - Task 2: Sign in to Microsoft 365
- **Exercise 2: Sync OnPrem users to AAD (25 minutes)**
  - Task 1: Configure UPN Suffix
  - Task 2: Enable Directory Synchronization
  - Task 3: Run Azure AD Connect
  - Task 4: Assign users with Microsoft 365 licenses
- **Exercise 3: Configuring SharePoint Hybrid (30 minutes)**
  - Task 1: Turn on the Microsoft SharePoint Foundation Subscription Settings Service
  - Task 2: Install and run SharePoint Hybrid Configuration Wizard
  - Task 3: Configure search result

10.3 Objectives

After you complete this lab, you will be able to:

- Configure and deploy SharePoint Hybrid scenarios.

10.4 Lab Setup

- **Estimated Time:** 60 minutes.

10.5 Instructions

10.6 Before you start

10.6.1 1. Review the lab virtual machines

The following are the virtual machines provided in this course. You will log in to the VM as a local administrator. The instructor will provide the sign-in information.

- LON-DC1: Domain controller
- LON-SP1: SharePoint Server with SharePoint 2019 installed.
- LON-SP2: SharePoint Server with SharePoint 2019 installed.
- LON-SQL: SQL Server with SQL Server management tools installed.

10.6.2 2. Review Microsoft 365 tenant

Once you launch the VM, a free trial tenant will be made available to you. The following are the details about the Microsoft 365 tenant:

- Microsoft 365 E5.
- 15 licenses with ten pre-assigned (5 available of 15).
- One Global Administrator (MOD Administrator) and nine normal users have been pre-created.
- Global Administrator (MOD Administrator) is **admin@YourTenant.onmicrosoft.com**.

Note: YourTenant.onmicrosoft.com is the domain associated with the Microsoft 365 tenant provided by the lab hosting provider. **YourTenant** is the unique tenant ID and different to each student.

10.7 Exercise 1: Set up your lab environment

In the first exercise you will walk through the steps to setup your lab environment.

10.7.1 Task 1: Obtain your Microsoft 365 Credentials

1. The **M365 Credentials** will be provided by the instructor.

10.7.2 Task 2: Sign in to Microsoft 365

In this task you will open Edge browser and navigate to Microsoft 365 Portal to sign in with the credentials obtained in the previous task.

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. Open **Edge** or **IE** and enter **https://portal.office.com** into the address bar and press **Enter**.
3. You should be presented a sign in dialog box, if you are directed to the page instead, select **Sign In** from the upper right of the page. If you are presented the sign in dialog box, **copy and paste the M365 Credential Username** into the box presented, select **Next**.
4. In the next screen, **copy and paste the M365 Credential Password** into the box presented, select **Sign In**.
5. When it asks if you would like to **Stay signed in?** then select **Yes** to stay signed in.

You have now completed this task and the exercise.

10.8 Exercise 2: Setting up your organization for identity synchronization

You are the security administrator for Adatum Corporation, and you have Microsoft 365 deployed in a virtualized lab environment. In this lab, you will implement identity synchronization between your Microsoft 365 tenant accounts and your local active directory accounts.

10.8.1 Task 1: Configure your UPN suffix

1. On **LON-DC1**, log on as **adatum\Administrator** and use password assigned to your lab.
2. Run **Windows PowerShell ISE** as administrator, update the UPN suffix for the domain and on the UPN on every user in AD DS with "@**YourTenant**.onmicrosoft.com" (where **YourTenant** is your unique UPN name) for the domain name. To do this, run the following command (remember to change **YourTenant** to your unique UPN name):

```
Import-Module ActiveDirectory
$upn = "YourTenant.onmicrosoft.com"
Set-ADForest -Identity Adatum.COM -UPNSuffixes @{Add=$upn}

$ou = "CN=Users,DC=Adatum,DC=com"
$oldSuffix = "Adatum.com"
$password = "Pa55w.rd"

Get-ADUser -SearchBase $ou -filter {Name -like "user*"} | ForEach-Object {
    $_ | Set-ADAccountPassword -reset -newpassword (ConvertTo-SecureString -AsPlainText $password
    $_.UserPrincipalName
    $newUpn = $_.UserPrincipalName.Replace($oldSuffix, $upn)
    $_ | Set-AdUser -UserPrincipalName $newUpn -EmailAddress  $newUpn -ChangePasswordAtLogon $fals
}

$serviceUpn = "spfarm@" + $upn
Set-ADUser -Identity spfarm -UserPrincipalName $serviceUpn -EmailAddress $serviceUpn
```

3. To confirm the change, open **Active Directory Administrative** Center, and navigate to the **UserA** under **Users** OU. You should see the value of Users UPN logon been changed to for Yes to **YourTenant**.onmicrosoft.com.

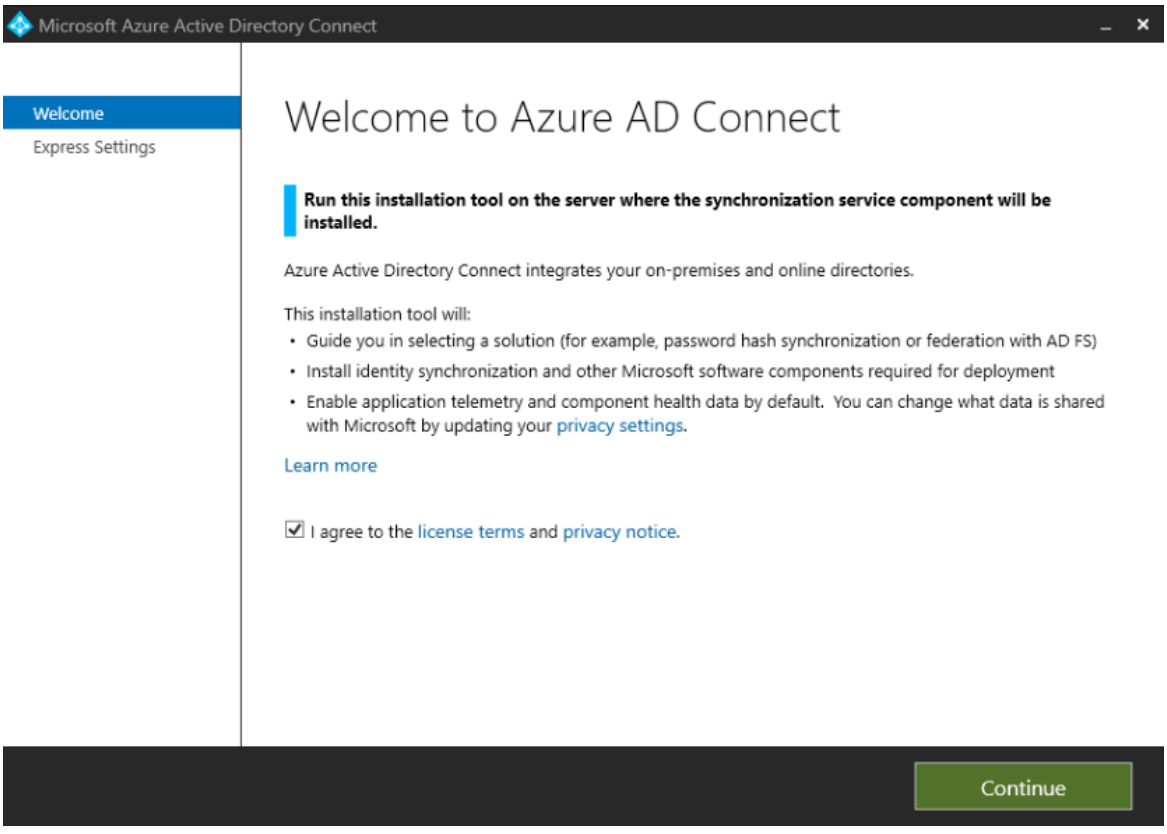
10.8.2 Task 2: Enable Directory Synchronization

1. On **LON-DC1**, log on as **adatum\Administrator** and use password assigned to your lab.
2. Open your browser and go to https://portal.office.com/

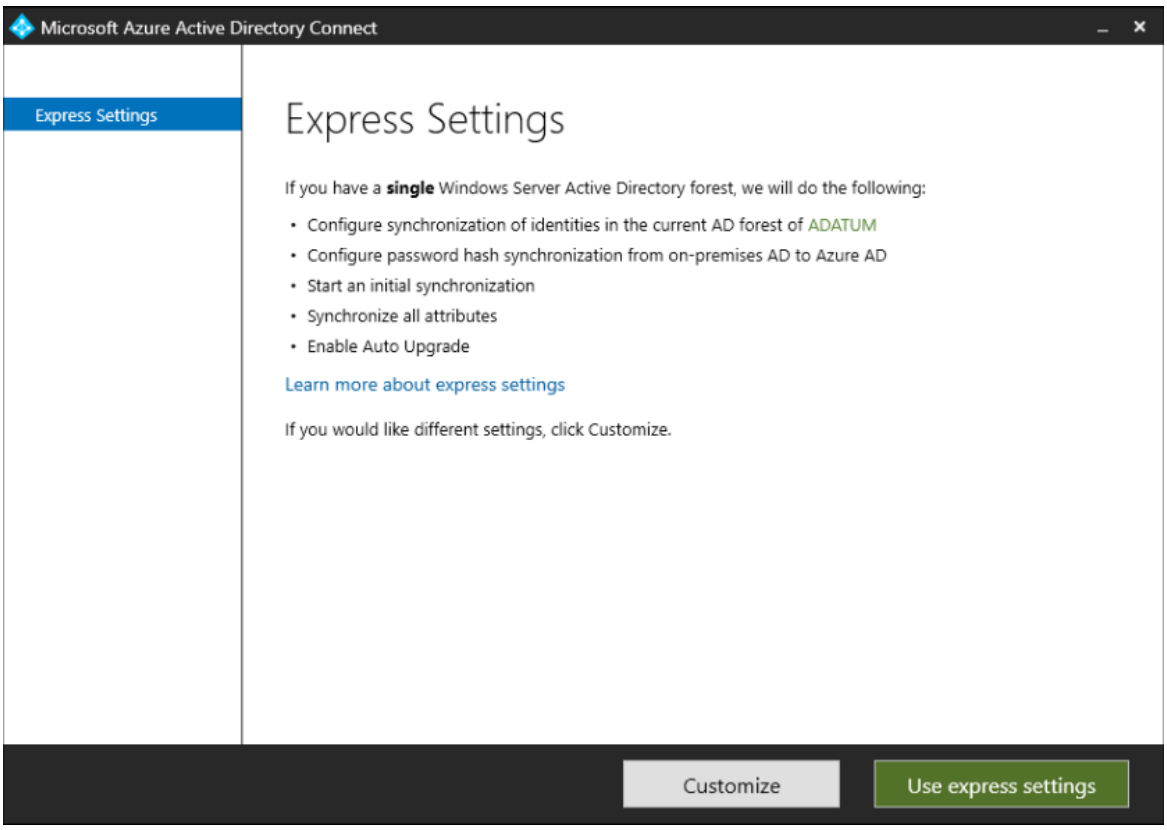
3. Sign in as **admin@YourTenant.onmicrosoft.com** with the password for M365 Credentials.
4. Select **Admin** to go to the Microsoft 365 admin center.
   - If asked about **update your admin contact information** select the Cancel button to skip this request.
   - **Note:** If you see the Active Directory synchronization is being activated warning, you can ignore it at this time, but you will not be able t2o run directory synchronization later in this exercise. You must wait until directory synchronization is activated. However, you can complete the following steps, even if you do see the warning message.
5. In the left navigation, select **Setup** icon and under **Sign-in and security** select **View** under **Sync users from your org's directory**.
   1. Select **Get Started**
   2. Select **Next** – we are not running IdFix for this lab**.**
   3. Select **Download Azure AD Connect** – it will open new window.
   4. Select **Save** to download AzureADConnect.msi.
   5. Select **Open folder.**

10.8.3 Task 3: Run Azure AD Connect

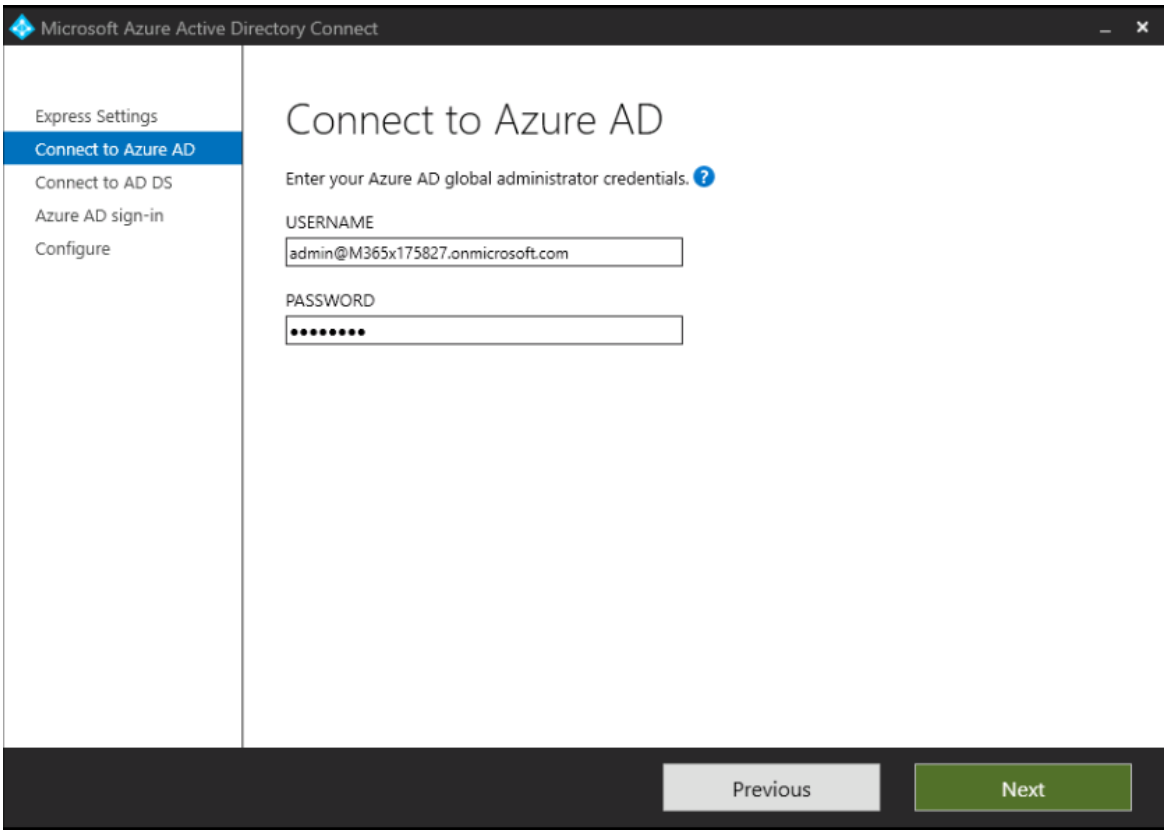
1. On **LON-DC1**, log on as **adatum\Administrator** and use password assigned to your lab.
2. Go to downloads folder, double-select **Azure AD Connect,** and select **Run.**
3. Run **Azure AD Connect**.
   1. On the Welcome screen, select the box agreeing to the licensing terms and select **Continue**.



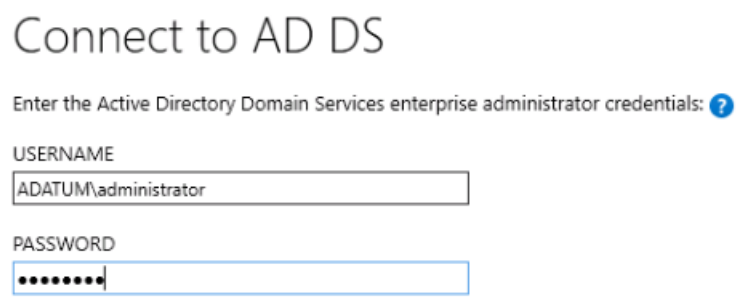
   2. On the **Express settings** screen, select **Use express settings**.



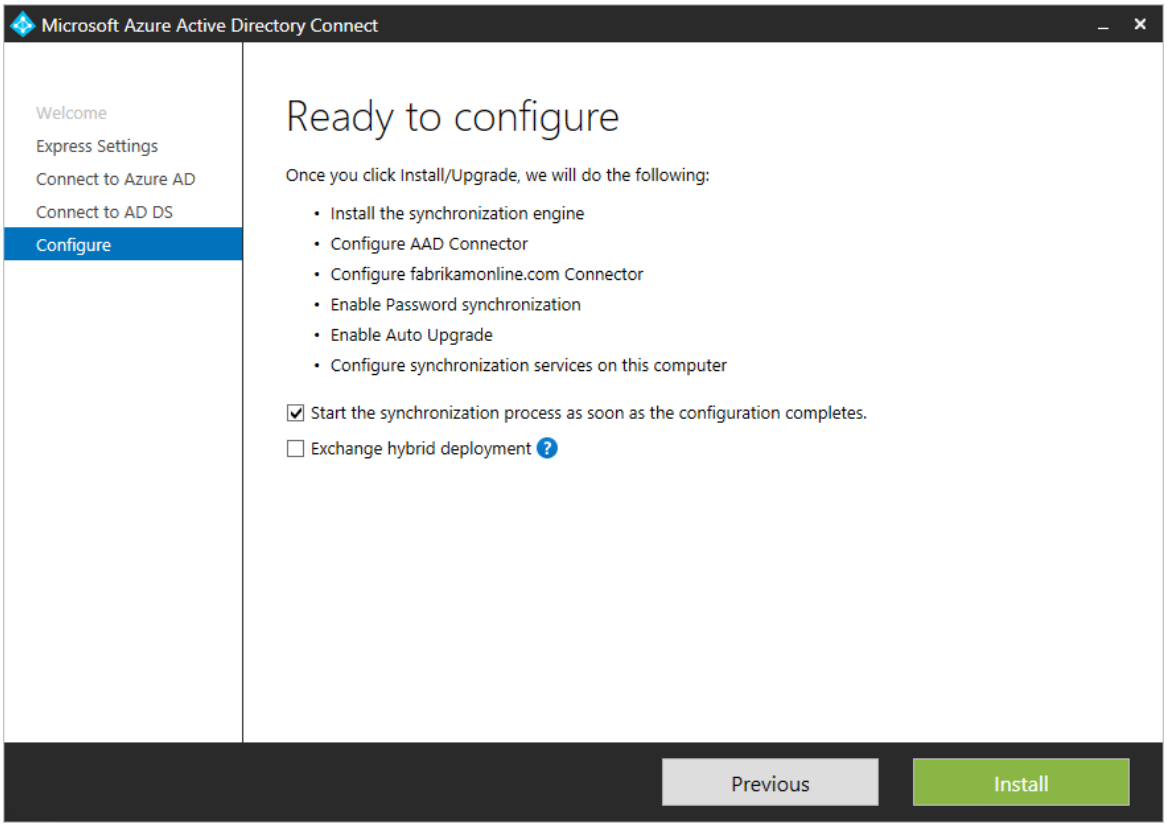
3. On the **Connect to Azure AD** screen, enter the Microsoft 365 admin credential (admin@YourTenant.onmicrosoft.com), and hit **Next**.



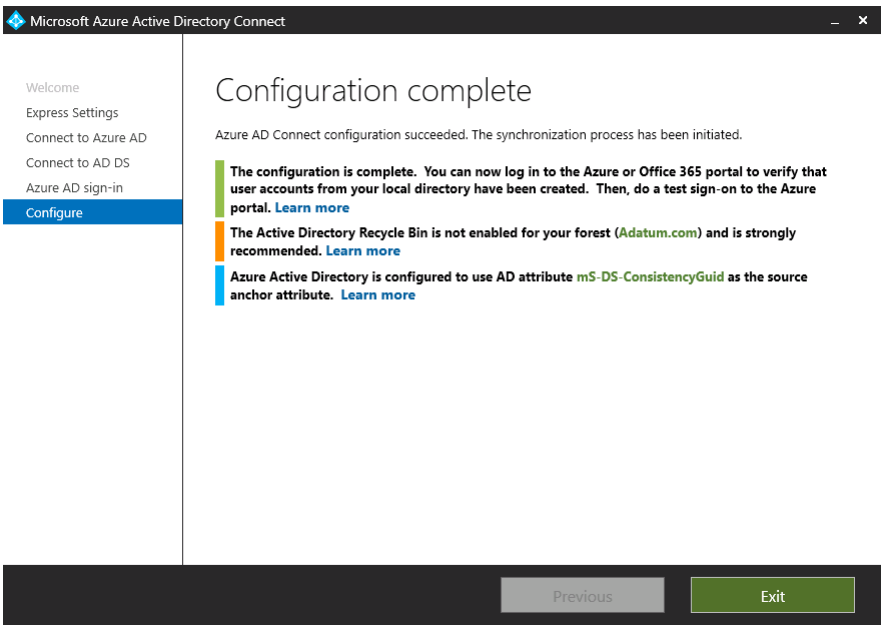
4. On the Connect to AD DS screen, enter "Adatum\administrator" account and password (Pa55w.rd) and click **Next**.



5. On the Azure AD sign-in configuration page choose "**Continue without matching all UPN suffixes to verified domains**" and select **NEXT** to continue.
6. On the Ready to configure screen, select the "**Start the synchronization process when configuration completes**" checkbox, then select **Install**.

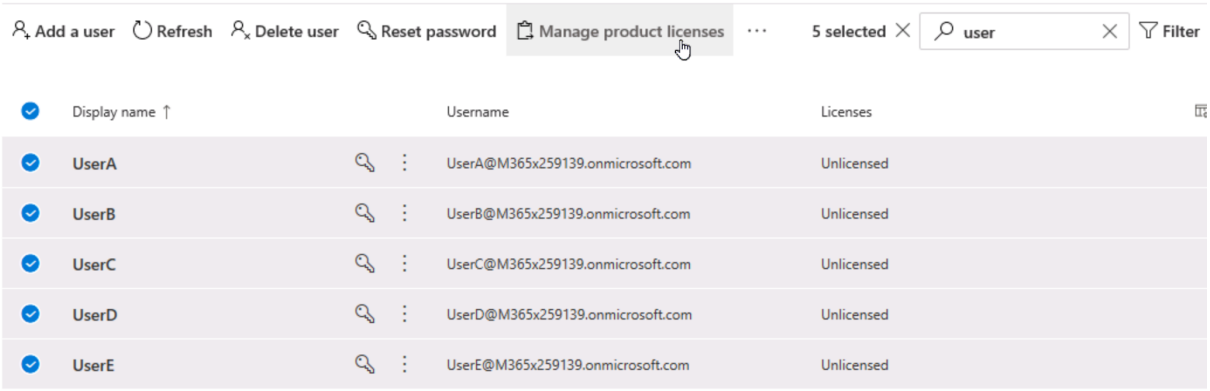


7. When the installation completes, select **Exit**. This process can take about 5 to 10 minutes to complete.



10.8.4 Task 4: Assign users the Microsoft 365 licenses

1. On **LON-DC1**, log on as **adatum\Administrator** and use password assigned to your lab.
2. Open your browser and go to https://portal.office.com/.
3. Sign in as **admin@YourTenant.onmicrosoft.com** with the password for M365 Credentials.
4. Browse to **Microsoft 365 Admin Center.**
5. In the left pane, select **Active users** under Users.
6. Find and select **UserA - UserE.** (You can search with keyword "user")
7. Select all users and select **Manage product licenses** on the top.



8. Then select **Add to existing products license assignments** and choose **Next**.
9. Select the slider beside **Microsoft/Office 365 E5** to active the licenses.
10. Select **Add** then **Close**.
11. Go to https://YourTenant.SharePoint.com , select **Share** at up-right corner, and share the site with **UserA**.

You have successfully synced local ADATUM users into Microsoft 365 and assigned licenses. You have now completed this exercise you may proceed to next one.

10.9 Exercise 3: Configuring SharePoint Hybrid

10.9.1 Task 1: Turn on the Microsoft SharePoint Foundation Subscription Settings Service

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).

2. Go to SharePoint 2019 Central Administration.
3. Select **System Settings** > **Manage Services in Farm**, and **Enable Auto Provision** for **Microsoft SharePoint Foundation Subscription Settings Service.**
4. Select **System Settings** > **Manage services on server**, and start **Microsoft SharePoint Foundation Subscription Settings Service.**

10.9.2 Task 2: Install and run SharePoint Hybrid Configuration Wizard

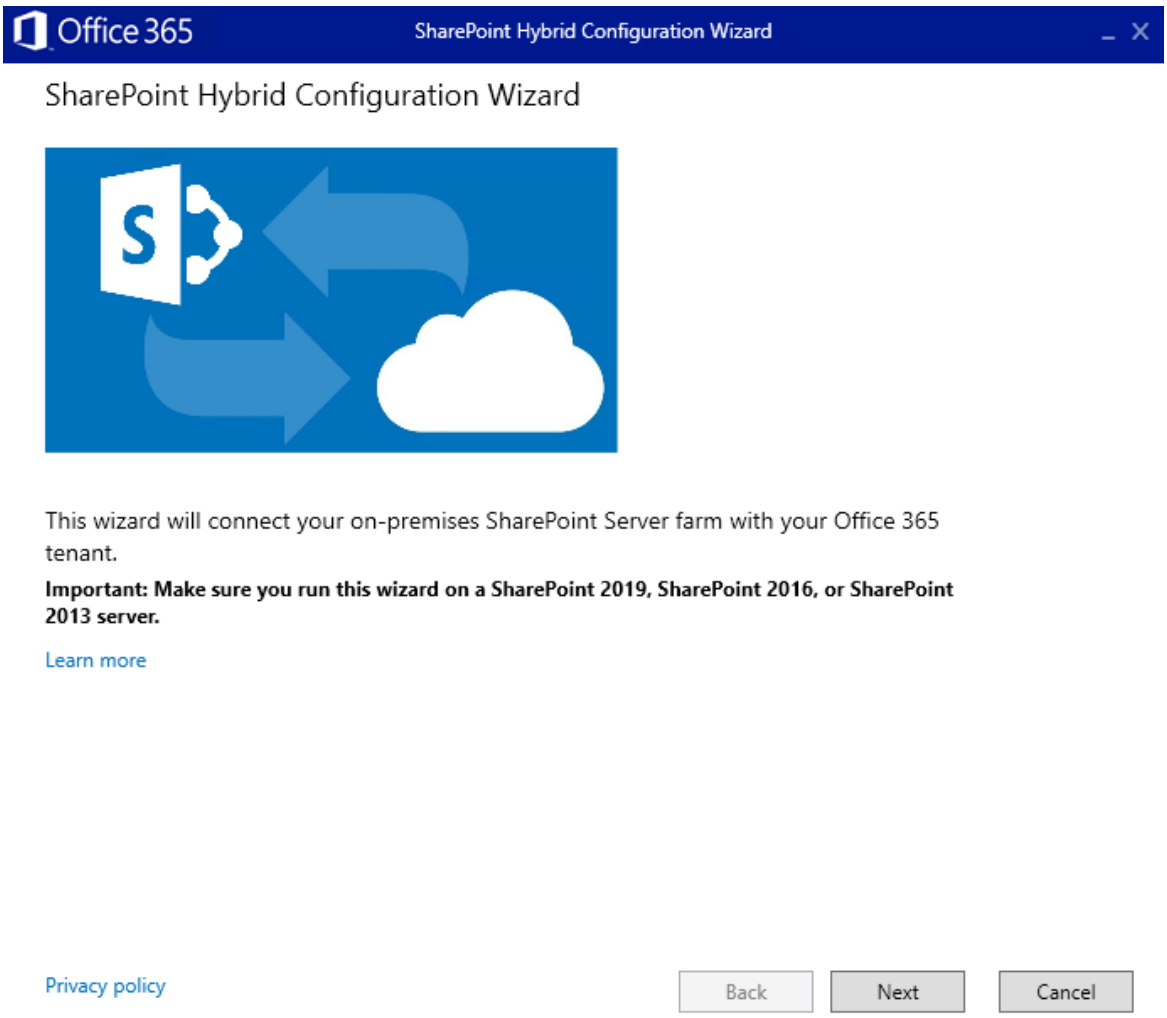
1. Log on to **LON-SP2** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. Install **prerequisites** for Hybrid Search configuration.
    1. **Microsoft Online Services Sign-In Assistant:**

       Download and install **msoidcli_64.msi** via link (https://www.microsoft.com/en-us/download/details.aspx?id=28

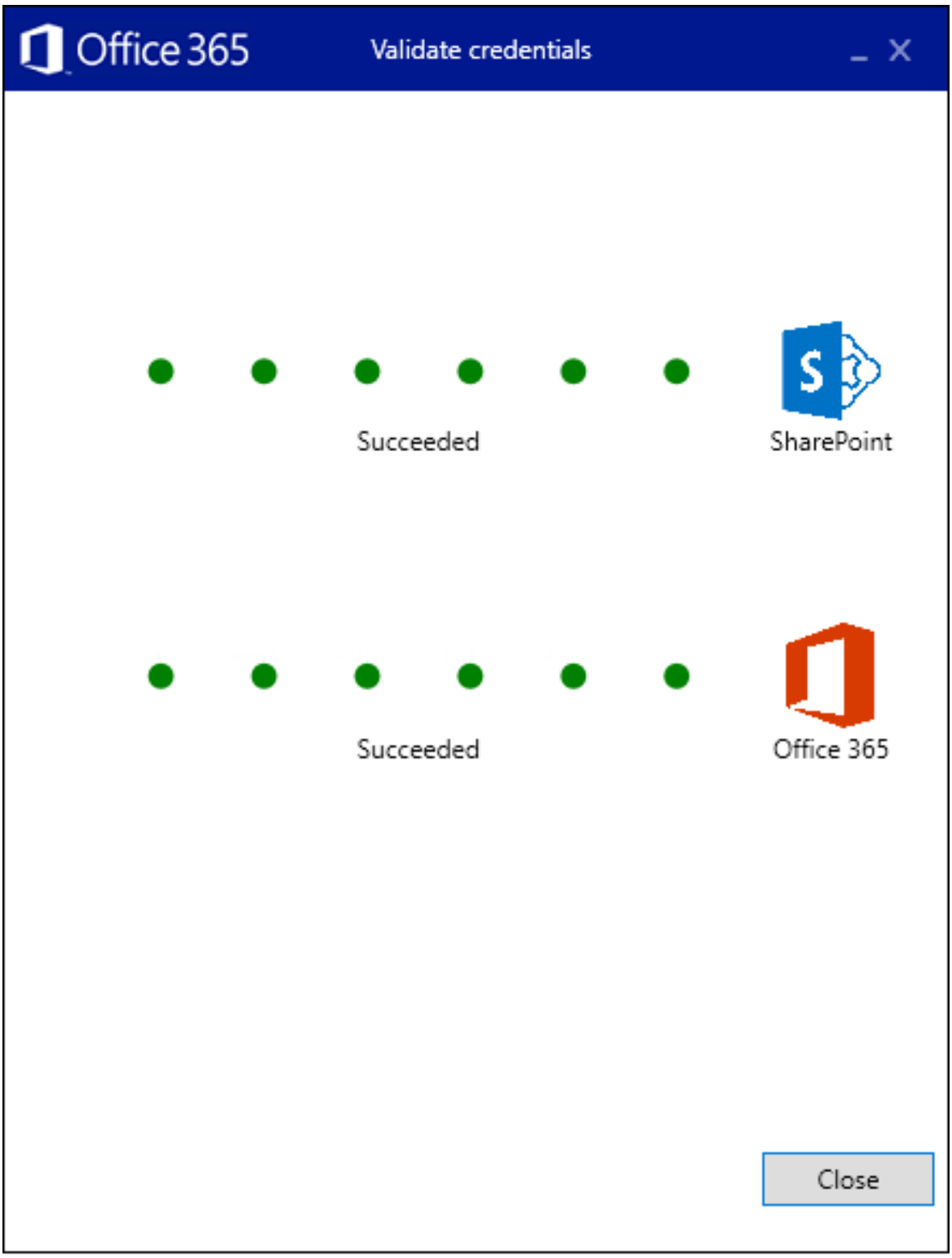
       (You might need to restart the machine to finish the installation.)
    2. **MSOnline AAD PowerShell module:**
        - Open Windows PowerShell and run as administrator.
        - Run following command and Yes to prompt questions.

       ```
       Install-Module -name MSonline -SkipPublisherCheck -Force
       ```

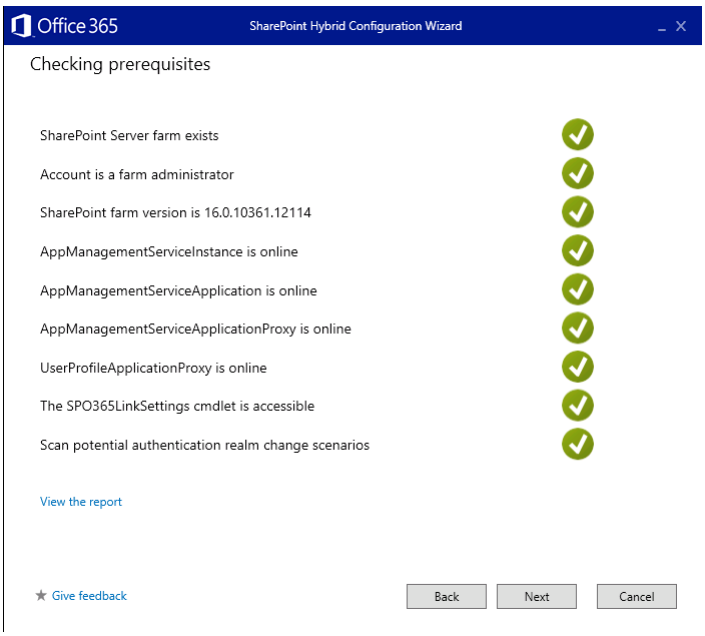
        - Note: We are forcing the install and ignoring the publish check to make sure we override the module with newest available
3. Go to **SharePoint 2019 Central Administration** (http://lon-sp2:50000) > **Office 365** > Select **Launch the Hybrid Configuration Wizard** > Select **Run** to install and launch the wizard.
4. Run the **Hybrid Configuration Wizard**
    1. This will launch the **SharePoint Hybrid Picker Wizard** Configuration Wizard. Select **Next**.



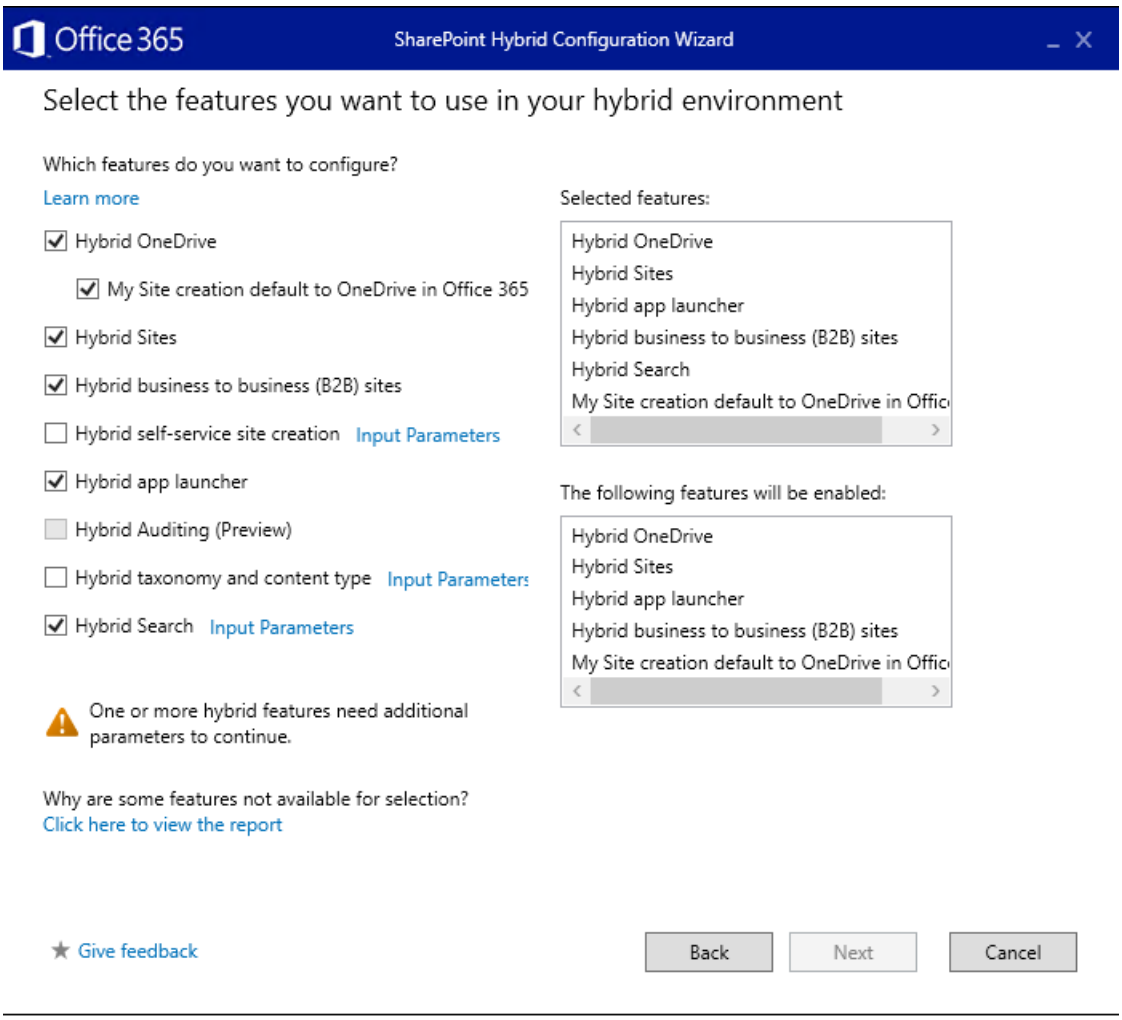
5. On the Credentials page enter:
   - **Farm Admin** (Adatum**SPFarm) or check use my current credentials.**
   - **Global Administrator** (admin@YourTenant.onmicrosoft.com) credential.
   - Select **Validate Credentials** to continue.



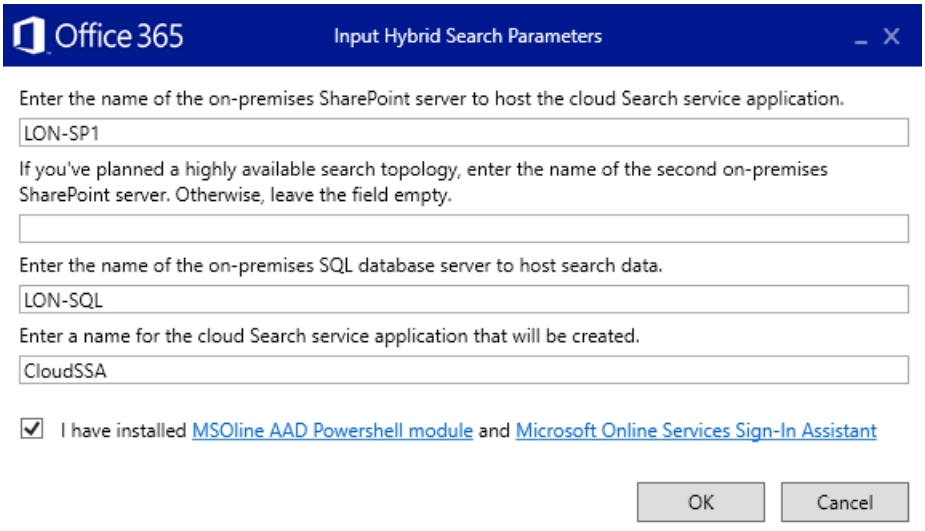
6. Once the **Validation** finishes, select **Close then Next**.
7. After all prerequisites succeed, select **Next**.



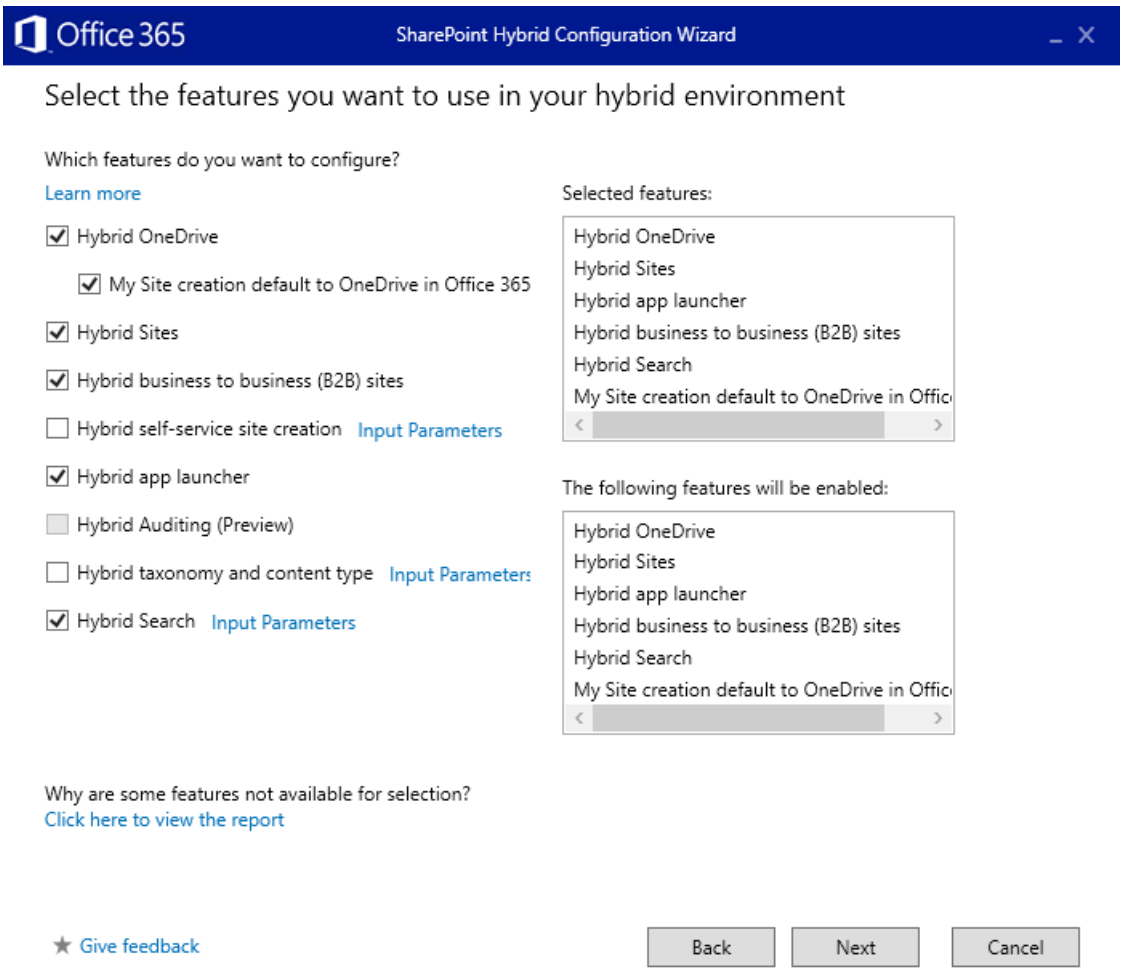
8. Keep all the default features to include and check the box for **Hybrid Search.** Verify following hybrid features are checked.
    1. Hybrid OneDrive
    2. My Site creation default to OneDrive in Microsoft 365
    3. Hybrid Sites
    4. Hybrid business to business (B2B) sites
    5. Hybrid app launcher
    6. Hybrid Search

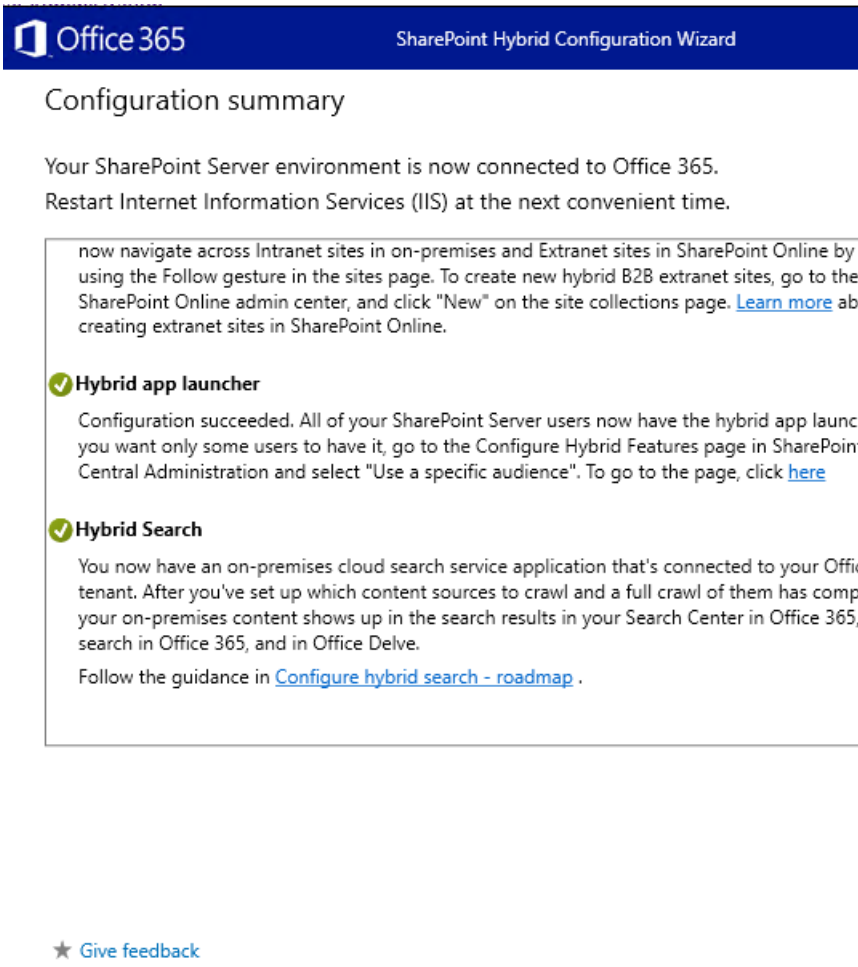


9. Select **Input Parameters** next to **Hybrid Search.** Enter following information in the popup window and click **OK.**
    1. On-premises SharePoint server: **LON-SP2**
    2. On-premises SQL database server: **LON-SQL**
    3. Name for the cloud Search service application: **CloudSSA**
    4. **Check the box** to validate installed MSOnline AAD PowerShell module and Microsoft Online Services Sign-In Assistant



10. Select **Next** to start the configuration. (It might take more than 10 minutes to finish the wizard.)


Office 365
SharePoint Hybrid Configuration Wizard
Select the features you want to use in your hybrid environment
Which features do you want to configure?
Learn more
Hybrid OneDrive
My Site creation default to OneDrive in Office 365
Hybrid Sites
Hybrid business to business (B2B) sites
Hybrid self-service site creation
Input Parameters
Hybrid app launcher
Hybrid Auditing (Preview)
Hybrid taxonomy and content type
Input Parameters
Hybrid Search
Input Parameters
Selected features:
Hybrid OneDrive
Hybrid Sites
Hybrid app launcher
Hybrid business to business (B2B) sites
Hybrid Search
My Site creation default to OneDrive in Offic
The following features will be enabled:
Hybrid OneDrive
Hybrid Sites
Hybrid app launcher
Hybrid business to business (B2B) sites
Hybrid Search
My Site creation default to OneDrive in Offic
Why are some features not available for selection?
Click here to view the report
Give feedback
Back
Next
Cancel



11. Select **Close** when Configuration completes.

10.9.3 Task 2: Configure search result

1. Log on to **LON-SP1** virtual machine as the SharePoint Farm Administrator (Adatum\SPFarm).
2. **Crawl on-premises content**
    1. Open Edge or IE
    2. Go to **SharePoint 2019 Central Administration** (http://lon-sp2:50000) > Manage service applications > CloudSSA.
    3. Select content source in left pane.
    4. Select the default content source named **Local SharePoint Sites**, and verify if the URL (http://teams.adatum.com) is in the start addresses. If not, add it to the text box, and select **OK.**
    5. Back to content source page, select the dropdown menu next to the content source, and start the full crawl.
3. **Create remote result source**
    1. Go to **SharePoint 2019 Central Administration** (http://lon-sp2:50000) > Manage service applications > CloudSSA.
    2. Select **Result Sources**, and then select **New Result Source**.
    3. On the **Search Result Sources** page, do the following:
        - In the **Name** text box, type a name for the new result source (for example, Hybrid RS).
        - For **Protocol**, select **Remote SharePoint**.
        - For the **Remote Service URL**, type the address of the root site collection of the SharePoint in Microsoft 365 (https://YourTenant.sharepoint.com/)

- For the **Type**, select **SharePoint Search Results**.
- Leave **Query Transform** as **default** which is {searchTerms}.
- Leave **Credentials Information** as **default** which is Default Authentication.
- Select **Save** to save the new result source.

4. You will be redirected back to the **Result Sources** page.
5. Select the dropdown menu of the **Result Source** you just created and set it as default.
6. **Change Service Connections**.
    1. Go to **SharePoint 2019 Central Administration (**http://lon-sp2:50000 **) > Application Management > Configure Service Application Associations.**
    2. Select the **default** proxy group.
    3. On the Associations popup, check the box beside the **CloudSSA** Proxy you created, and then select **set as default**. (Uncheck SSA proxy if it is checked.)
    4. Select **OK**
7. **Validate Search Results**
    1. Sign in to **LON-CL1** virtual machine as Adatum\UserA.

       Note: If you cannot login to the LON-CL1 with the userA, verify as administrator that the userA is added to local group on LON-CL1 for remote access users.
    2. Launch **Internet Explorer** and browse to enterprise search center http://teams.adatum.com.
    3. Within the **search** text box, try to search following query string.
        - IsExternalContent:0
        - IsExternalContent:1
    4. Go to https://YourTenanat.sharepoint.com log in as userA@Yourtenant.onmicrosoft.com with password: Pa55w.rd
    5. In the Search box (middle-top) type:
        - IsExternalContent:0
        - IsExternalContent:1
    6. In both search centers you can alidate that the Search results are coming for the Online (IsExternalContent:0) & On-Premises content (IsExternalContent:1).

You have reached the end of the task and the exercise. You have completed the Lab.

END OF LAB

11 Module 11-Lab 1: Migrate to SharePoint in Microsoft 365

11.1 Microsoft 365 user interface

Given the dynamic nature of Microsoft cloud tools, you may experience user interface (UI) changes that were made following the development of this training content. This will manifest itself in UI changes that do not match up with the detailed instructions presented in this lab manual.

The Microsoft World-Wide Learning team will update this training course as soon as any such changes are brought to our attention. However, given the dynamic nature of cloud updates, you may run into UI changes before this training content is updated. **If this occurs, you will have to adapt to the changes and work through them in the lab exercises as needed.**

11.2 Lab Scenario

In the labs of this course you are the Administrator for Adatum Corporation, and you must Migrate content to SharePoint online

- Migrate to SharePoint Online

In this lab, you will migrate files to SharePoint in Microsoft 365.

- **Exercise 1: Set up your lab environment (5 minutes)**
  - Task 1: Obtain Microsoft 365 credentials
  - Task 2: Sign in to Microsoft 365
- **Exercise 2: Migrate files to SharePoint in Microsoft 365 (15 minutes)**
  - Task 1: Download and install SharePoint Migration Tool
  - Task 2: Migrate content to SharePoint Online with SPMT

11.3 Objectives

After you complete this lab, you will be able to:

- Setup and migrate files to SharePoint in Microsoft 365 with use of SPMT

11.4 Lab Setup

- **Estimated Time:** 20 minutes.

11.5 Instructions

11.6 Before you start

11.6.0.1 1. Review the lab virtual machines

The following are the virtual machines provided in this course. You will log in to the VM as a local administrator. The instructor will provide the sign-in information.

- LON-DC1: Domain controller
- LON-SP1: SharePoint Server with SharePoint 2019 installed.
- LON-SP2: SharePoint Server with SharePoint 2019 installed.
- LON-SQL: SQL Server with SQL Server management tools installed.

11.6.1 2. Review Microsoft 365 tenant

Once you launch the VM, a free trial tenant will be made available to you. The following are the details about the Microsoft 365 tenant:

- Microsoft 365 E5.
- 15 licenses with ten pre-assigned (5 available of 15).
- One Global Administrator (MOD Administrator) and nine normal users have been pre-created.
- Global Administrator (MOD Administrator) is **admin@YourTenant.onmicrosoft.com**.

Note: YourTenant.onmicrosoft.com is the domain associated with the Microsoft 365 tenant provided by the lab hosting provider. **YourTenant** is the unique tenant ID and different to each student.

11.7 Exercise 1: Set up your lab environment

In the first exercise you will walk through the steps to setup your lab environment.

11.7.1 Task 1 – Obtain your Microsoft 365 Credentials

The **M365 Credentials** will be provided by the instructor.

In this task you will get the credentials needed to connect to Microsoft 365. When you launch the labs in this course, a free trial tenant will be automatically created for you to access Microsoft 365 in the virtual lab environment. This tenant will automatically assign a unique username and password. You must retrieve this username and password so you can sign into Microsoft 365 within the lab environment.

11.7.2 Task 2 – Sign in to Microsoft 365

In this task you will open Edge browser and navigate to Microsoft 365 Portal to sign in with the credentials obtained in the previous task.

1. In your Lab Session, switch to **LON-CL1** virtual machine (up-right corner) as Administrator.
2. Open **Edge** and enter **https://portal.office.com** into the address bar and press **Enter**.
3. You should be presented a sign in dialog box, if you are directed to the page instead, select **Sign In** from the upper right of the page. If you are presented the sign in dialog box, copy and paste the **M365 Credential Username** into the box presented, select **Next**.
4. In the next screen, copy and paste the **M365 Credential Password** into the box presented, select **Sign In**.
5. When it asks if you would like to **Stay signed in?** then select **Yes** to stay signed in.

You have now completed this task and the exercise.

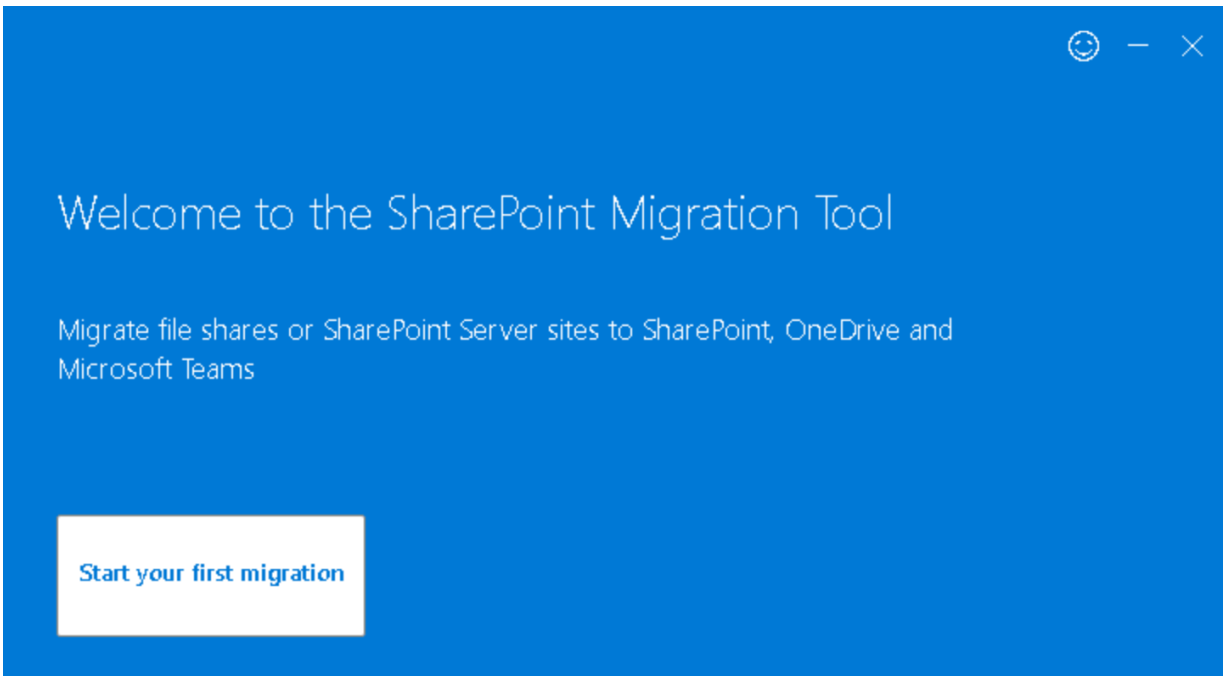
11.8 Exercise 2: Migrate files to SharePoint Online

In this exercise we will use the SharePoint Migration Tool to migrate content into SharePoint Online.

11.8.1 Task 1 – Download and install SharePoint Migration Tool

In this task you will download and install the SharePoint migration tool.

1. In your Lab Session, switch to **LON-CL1** virtual machine as Administrator.
2. Open **Edge** and got to SharePoint Admin Center (https://YourTenant-admin.SharePoint.com)
3. Select **Migration** > Desktop tool (SPMT) > Download Tool
4. You will have to present the M365 Credentials during the installation process.
5. Once SPMT is installed, you can see the welcome page of SPMT



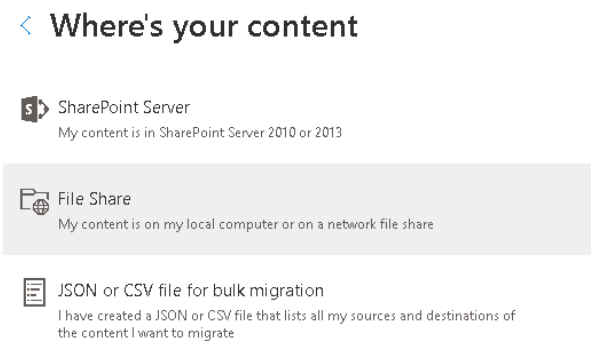
You have completed this task, please continue to the next task.

11.8.2 Task 2 – Migrate content to SharePoint Online with SPMT

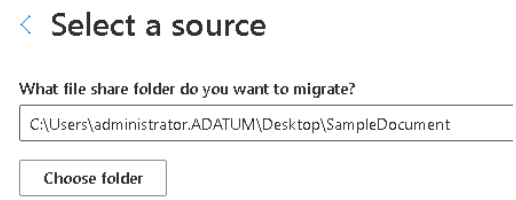
In this task you will migrate content into SharePoint Online with SPMT.

1. In your Lab Session, switch to **LON-CL1** virtual machine as Administrator.
2. From the welcome menu, select **Start your first migration**.

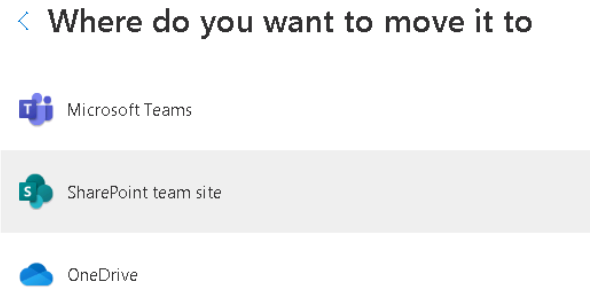
3. Select **File Share**.



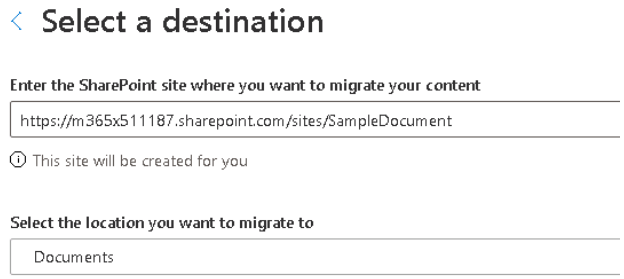
4. Select **Choose folder**, then select the folder **SampleDocument** on the **Desktop**. Then select **Next**.



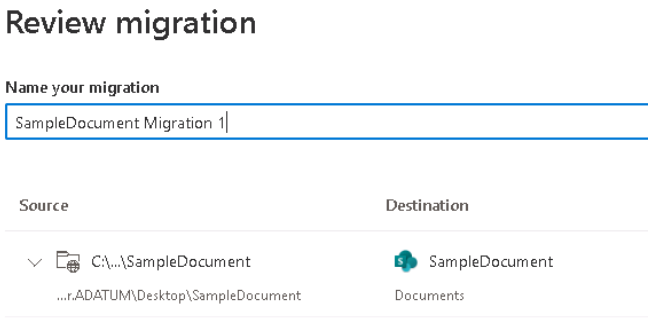
5. In the **Where do you want to move it to?** Screen, select **SharePoint Team Site**.



6. In the **Select a destination** screen, it will auto populate the site collection destination based on the SampleDocument folder we selected. You can leave the defaults selected. It will check if the site exists and in about 20 seconds refresh itself and show a selection box for what library to upload the content into. Select **Next** to continue.

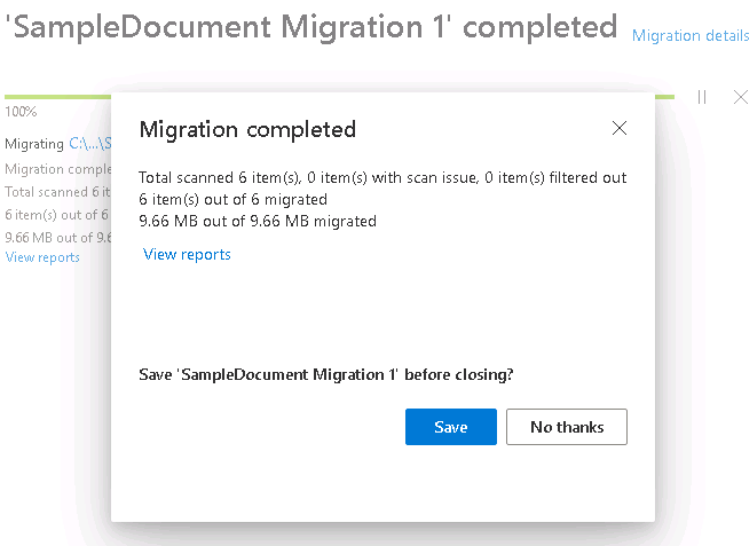


7. The final screen will be a review of what is selected. Here you can name your migration and review what is planned to be migrated. You could also add additional sources to this migration plan. If everything looks good, select **Next**.

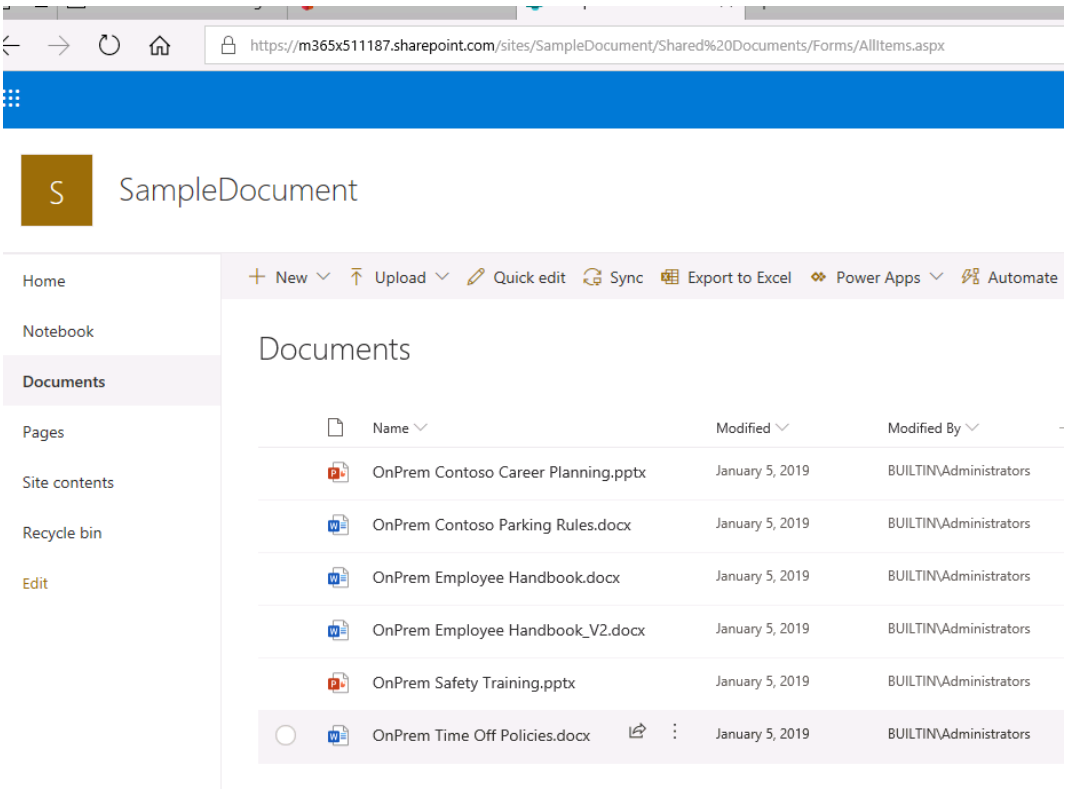


8. In the **Choose your settings** screen, leave the default settings. Select **View All Settings** to see all the available settings. Hover over the information icon next to each setting to learn more. Select **Migrate**.
9. A screen will come up so you can watch the progress of the migration

10. When the migration is done you will be presented with a summary and an option to save the migration plan details. Select **No Thanks** to continue. Then select the **X** in the top right to close the migration progress window.



11. Navigate to the destination to validate the documents were migrated successfully. The URL is https://YourTenant.sharepoint.com/sites/sampledocument. Please replace the [YourTenant] with your tenant name.



You have reached the end of the task and the exercise. You have completed the Lab.

END OF LAB