
Module 1: Planning and provisioning Office 365

Lab: Provisioning Office 365

Exercise 1: Configuring an Office 365 tenant

► Task 1: Create the tenant account

1. On LON-CL1, logged on as **Adatum\Holly**, on the taskbar, click **Microsoft Edge**.
2. In the Address bar, type **https://products.office.com/en-us/business/office-365-enterprise-e3-business-software** and press Enter.
3. Click **Free trial**.
4. For Step 1, in the **Welcome, let's get to know you** page, complete the following fields. Regardless of your location, use the following information:
 - Country: **United Kingdom**
 - First name: **Holly**
 - Last name: **Dickson**
 - Business email address: **(use your new Microsoft account that you created for this course)**
 - Business phone number: **Your mobile phone number, including international code for your current country**
 - Company name: **A. Datum**
 - Organization size: **50-249 people**
5. Click **Just one more step**.
6. For Step 2, on the **Create your user ID** page, you have to create a unique domain for the Company name to use in the course. Use the **AdatumAVXXXX** name provided in the lab interface. For the rest of the fields, use the following information:
 - User name: **Holly**
 - Company name: **AdatumAVXXXX** (where **AVXXXX** is your unique Adatum number)
 - Password: **Pa\$\$w0rd**
 - Confirm password: **Pa\$\$w0rd**
7. Click **Create my account**.
8. For Step 3, you have to confirm your identity using your mobile phone. Under **Text me** from the drop-down box, select the code for the country that you are now in.
9. In the **Phone number** box, enter your correct mobile phone number.
10. Ensure that the **Text me** option is selected, and then click **Text me**.
11. When you receive the confirmation text on your mobile phone, enter the code provided in the **Enter your verification code** box.
12. Click **Next**.
13. Wait until the Office 365 tenant is provisioned, and then click **You're ready to go....**

14. Click the **Admin** tile to go to the Office 365 admin center. If a confirm your current password page appears, click **re-enter my password**, and type **Pa\$\$w0rd**.
15. On the **don't lose access to your account!** page, beside **Authentication Phone is set to**, verify that your phone number is listed, and then click **Verify**.
16. Select your country, verify that your phone number is listed, and then click **text me**.
17. After receiving the text, enter the verification string, and click **verify**. If verify is not available, press Enter.
18. On the **don't lose access to your account!** page, beside **Authentication Email is not configured**, click **Set it up now**.
19. Enter the Microsoft account email address that you configured for this course, and click **email me**.
20. Access your Microsoft account email to retrieve the verification code.
21. Enter the verification code, and then click **verify**. If verify is not available, press Enter, and then click **finish**.
22. If a **Manage Office 365 on the go** page appears, close the page.



Note: If you are connected to the previous Office 365 admin center when you connect to Office 365, click the **banner** at the top of the page to connect to the new admin center.

► Task 2: Verify Office 365 service health

1. Click **Health** on the left-hand menu, then click **Service health** to display the Service health dashboard.
2. In the left pane, view the status of the Office 365 services. If any services are showing a status other than health, click the service.
3. Review any service interruption records or additional information in the status page.



Note: During Microsoft testing, on rare occasions Office 365 did not create the trial tenant properly; as a result, the tenant did not have all the services available to it. If this happens to you, you should create a new trial tenant using a different business email (Microsoft account).

4. Close Microsoft Edge.
5. If prompted, click **Close all tabs**.

Results: After completing this exercise, you should have successfully provisioned the Office 365 tenant account for A. Datum Corporation.

Exercise 2: Configuring a custom domain

► Task 1: Add the custom domain

1. In LON-CL1, start Microsoft Edge and then browse to **login.microsoftonline.com**.
2. Sign in as **Holly@AdatumAVXXXX.onmicrosoft.com** with the password **Pa\$\$w0rd**.
3. Click **Admin**.

4. In the left-hand menu, point to **Settings** and then click **Domains**.
 5. Click **Add domain**.
 6. In the New Domain window, in the text box, enter your domain name in the form of **AVXXXXa.xtremelabs.us**.
 7. Click **Next**.
 8. On the **Verify domain** page, click **TXT record**.
 9. Write down the **TXT** record shown in the **TXT value** column. This entry will be similar to **MS=msXXXXXXXX**. Record this value below:
 10. MS=_____
 11. Switch to LON-DC1.
 12. On the toolbar, click **Server Manager**.
 13. Click **Tools**, and then click **DNS**.
 14. Expand LON-DC1, and click **Forward Lookup Zones**.
 15. Right-click **Forward Lookup Zones** and click **New Zone**.
 16. On the **New Zone Wizard** page, click **Next**.
 17. On the **Zone Type** page, verify that **Primary zone** is selected. Clear the **Store the zone in Active Directory** check box, and click **Next**.
 18. On the **Zone Name** page, type **AVXXXXa.xtremelabs.us**, and then click **Next**.
 19. On the **Zone File** page, click **Next**.
 20. On the **Dynamic Update** page, click **Next**, and then click **Finish**.
 21. Expand **Forward Lookup Zones**, click and then right-click **AVXXXXa.xtremelabs.us**, and then click **Other New Records**.
 22. Under **Select a resource record type**, scroll down to **Text (TXT)**, and then click **Create Record**.
 23. In the **New Resource Record** box, leave the **Record name** field blank.
 24. In the **Text** field, enter **MS=msXXXXXXXX** that you recorded in step 9.
 25. Click **OK** to create the record.
 26. In the **Resource Record type** dialog box, click **Done**.
 27. Switch back to LON-CL1 and in the Office 365 Admin center, click **Verify**.
- **Task 2: Complete the custom domain setup**
1. On the **Set up your online services** page, click to check **Skip this step – I have custom DNS records, so I'll add the records I need later**, and then click **Skip**.
 2. On the **Update DNS settings** page, click **Finish**. The domain shows a warning icon because you did not verify the DNS records. You can ignore this warning for now.

Results: After completing this exercise, you should have:

- Added a custom domain.
- Verified domain ownership.

Exercise 3: Exploring the Office 365 administrator interfaces

► Task 1: Explore the Office 365 admin center

1. On LON-CL1, in the Admin center, click **Home**.
2. On the left navigation menu, scroll down to explore all available items. Expand items such as **Users**, **Groups**, **Settings**, and so on.
3. On the left navigation menu, expand **Users**, and then click **Active users**.
4. Review the users list.
5. On the left navigation menu, expand **Health**, and then click **Message center**, and then in the right pane, review the messages.
6. Do not close the browser window.

► Task 2: Explore the Exchange admin center

1. On the left navigation menu, expand **Admin centers**, and then click **Exchange**.
2. A new tab will open displaying **Exchange admin center**.
3. On the left navigation menu, click each of the items, and review the results displayed on the right pane.

► Task 3: Explore the Skype for Business admin center

1. Click the **portal.office.com** tab.
2. On the left navigation menu, under **Admin centers**, click **Skype for Business**.
3. A new tab will open displaying **Skype for Business admin center**.
4. On the left navigation menu, click each of the items, and review the results displayed on the right pane.

► Task 4: Explore the SharePoint admin center

1. Click the **portal.office.com** tab.
2. On the left navigation menu, click **Admin centers**, and then click **SharePoint**.
3. A new tab will open displaying **SharePoint admin center**.
4. On the left navigation menu, click each of the items, and review the results displayed on the right pane.
5. Close Microsoft Edge.

Results: After completing this exercise, you should have provided a high-level overview of administrative portals of Office 365.

► To prepare for the next module

Keep the virtual machines running for the lab in the next module.

Module 2: Managing Office 365 users and groups

Lab A: Managing Office 365 users and passwords

Exercise 1: Managing Office 365 users and licenses by using the Office 365 admin center

► Task 1: Create Office 365 users

1. On LON-CL1, verify that you signed in as **Adatum\Holly**.
2. Open Microsoft Edge, and then browse to **https://portal.office.com/**.
3. Sign in as **Holly@AdatumAVXXXX.onmicrosoft.com**, where **AVXXXX** is your unique Adatum number, with the password **Pa\$\$w0rd**.
4. On the Microsoft Office 365 portal, click **Admin**.
5. On the menu on the left side, expand **Users**, and then click **Active Users**.
6. Click the **Add a user** icon.
7. On the **New User** page, in the **First name** text box, type **Lindsey**.
8. In the **Last name** text box, type **Gates**.
9. In the **Display name** text box, type the user's first and last names if the default name does not appear; in this case, in the **First name** text box, type **Lindsey**, and then in the **Last name** text box, type **Gates**.
10. In the **User name** text box, type **Lindsey**.
11. Verify that **AVXXXXa.xtremelabs.us** is listed in the text box after the at sign (@), where **AVXXXXa** is your unique Adatum number, and then click **Save**.
12. On the **User was added** page, note the temporary password here: _____
13. Click **Close**.
14. Repeat steps 6 to 13 to create the following users (for the **User name**, use the **First name**):
 - **Christie Thomas**
 - **Amy Santiago**
 - **Sallie McIntosh**
 - **Francisco Chaves**
15. Note their temporary passwords here:
 - Christie Thomas _____
 - Amy Santiago _____
 - Sallie McIntosh _____
 - Francisco Chaves _____

► Task 2: Edit Office 365 users

1. In the Office 365 admin center, in the **Active Users** list, click the **Francisco Chaves** user object.
2. On the right side, beside **Display name**, click **Edit**.
3. On the **Edit contact information** page, expand **Contact information**, and in the **Department** text box, type **Accounts**, click **Save**, and then click **Close**.
4. On the right side menu, in the **Sign in status** section, click **Edit**. Select **Blocked**, click **Save**, and then click **Close**. Close the page.
5. In the **Active Users** list, under **Display name**, click **Francisco Chaves**.
6. On the right side, beside **Display name**, click **Edit**.
7. Verify that the **Department** box displays **Accounts**, and then close the page.
8. Verify that **Sign-in status** is set to **Blocked**, and then close the page.
9. In the **Active Users** list, click the **Lindsey Gates** user object.
10. On the right side menu, click **Delete user**.
11. In the **Delete user** dialog box, click **Delete**, and then click **Close**.
12. In the left navigation pane, under **Users**, click **Deleted Users**.
13. Verify that Lindsey Gates is in this list.
14. In the **Deleted Users** list, select the **Lindsey Gates** check box.
15. On the toolbar, click **Restore**, and then on the **Restore** page, click **Restore**.
16. Note the new temporary password, and then click **Close**.
17. On the left navigation pane, under **Users**, click **Active Users**.
18. Verify that Lindsey Gates is in this list.
19. Close Microsoft Edge.

► Task 3: Verify user settings

1. On LON-CL1, open Microsoft Edge, and then browse to <https://login.microsoftonline.com/>.
2. Sign in as **Lindsey@AVXXXXa.xtremelabs.us** with the temporary password that you noted in the previous task.
3. If you are prompted to change your password, on the **Update your password** page, in the **Old password** text box, type Lindsey's **temporary password**.
4. In the **New password** and **Confirm new password** text boxes, type **Pa\$\$w0rd**, and then click **Update password and sign in**.
5. If prompted, enter your new password again, and then click **Sign in**.
6. Verify that you can access the Office 365 portal home page.
7. If you did not get prompted to change your password when you signed in, click the **Settings** icon in the top-right corner, and click **Office 365 Settings**.
8. On the **Settings** page, click **Change my password**.
9. In the **Old password** text box, type Lindsey's **temporary password**.
10. In the **New password** and **Confirm new password** text boxes, type **Pa\$\$w0rd**, and then click **Submit**.

11. Close Microsoft Edge.
12. Open Microsoft Edge, and then browse to **https://login.microsoftonline.com/**.
13. Sign in as **Francisco@AVXXXA.xtremelabs.us** with the temporary password that you noted in the previous task.
14. On the **Update password** page, in the **Old password** text box, type the **temporary password**.
15. In the **New password** and **Confirm new password** text boxes, type **Pa\$\$w0rd**, and then click **Update password and sign in**.
16. Verify that you cannot sign in.
17. Close Microsoft Edge.
18. Open Microsoft Edge, and then browse to **https://login.microsoftonline.com/**.
19. Sign in as **holly@AdatumAVXXX.onmicrosoft.com** with the password **Pa\$\$w0rd**.
20. On the Office 365 portal, click **Admin**.
21. On the left menu, expand **Users**, and then click **Active Users**.
22. In the **Active Users** list, click **Francisco Chaves**.
23. On the right side, in the **Sign-in status** section, click **Edit**.
24. On the **Sign in status** page, select **Allowed**, click **Save**, and then click **Close**.
25. Close Microsoft Edge.
26. Open Microsoft Edge, and then browse to **https://login.microsoftonline.com/**.
27. Sign in as **Francisco@AVXXXA.xtremelabs.us** with the temporary password that you noted in the previous task.
28. On the **Update password** page, in the **Old password** text box, type the **temporary password**.
29. In the **New password** and **Confirm new password** text boxes, type **Pa\$\$w0rd**, and then click **Update password and sign in**.
30. On the **Sign in again** page, type **Pa\$\$w0rd** as the password and click **Sign in**.
31. Verify that you can access the Office 365 portal.
32. Close Microsoft Edge.

Results: After completing this exercise, you should have created and managed user accounts and licenses according to business needs.

Exercise 2: Managing Office 365 password policies

- Task 1: Configure the Office 365 password policy
1. Open Microsoft Edge, and then browse to **https://login.microsoftonline.com/**.
 2. Sign in as **Holly@AdatumAVXXX.onmicrosoft.com** with the password **Pa\$\$w0rd**.
 3. On the Office 365 portal, click **Admin**.
 4. On the left side menu, click **Settings**, and then click **Security**.

5. Click **Edit**. In the **Days before passwords expire** text box, type **14**.



Note: This setting does not correspond with a real-world scenario. Use it as a sample scenario to verify the policy applied in the next exercise task.

6. In the **Days before a user is notified about expiration** box, leave the default value of **14**, and then click **Save**.
7. Verify that the “Password policy has been updated” message appears at the top of the page and then click **Close**.

► **Task 2: Validate the password policy**

1. In the Office 365 admin center, on the top-right menu, click **Holly**, and then click **Sign out**.
2. On the Office 365 page, click **Use another account**.
3. Sign in as **Lindsey@AVXXXXa.xtremelabs.us**, where **AVXXXXa** is your unique Adatum number, with the password **Pa\$\$w0rd**.
4. On the upper-right side of the window, verify that the notification appears with the following information: “**Time to change your password. Your password will expire in 13 days.**”



Note: You have now verified that your password policy is applied. In a real-world scenario, after you verify that the password policy is applied, you would need to increase the number of days before the password expires, according to your organizational policy.

5. Close Microsoft Edge.

Results: After completing this exercise, you should have configured and validated an Office 365 password policy.

► **Task: To prepare for the next lab**

Keep the virtual machines running for the next lab in this module.

Lab B: Managing Office 365 groups and administration

Exercise 1: Managing Office 365 groups

► **Task 1: Create Office 365 security groups**

1. On LON-CL1, open Microsoft Edge, and then browse to <https://login.microsoftonline.com/>.
2. Sign in as **Holly@AdatumAVXXXX.onmicrosoft.com**, where **AVXXXX** is your unique Adatum number, with the password **Pa\$\$w0rd**.
3. In the Office 365 admin center, click **Admin**.
4. On the left side menu, expand **Groups**, click **Groups**, and then click the **Add a group** icon.

5. On the **New Group** page, in the **Type** drop-down box, click **Security group**, and in the **Name** text box, type **Sales**.
6. In the **Description** text box, type **Sales department users**, click **Add** and then click **Close**.
7. **In the Members section**, click **Edit**.
8. On the **Edit** members page, in the search box, type **Lindsey**, wait until Lindsey Gates's user object appears, and then click **Add**.
9. In the same search text box, type **Christie Thomas** and then click **Add**.
10. Click **Save**, and then click **Close**.
11. Click **Add a group**.
12. On the **New Group** page, in the **Type** drop-down box, click **Security group**, and in the **Name** text box, type **Accounts**.
13. In the **Description** text box, type **Accounts Department users**, click **Add**, and then click **Close**.
14. In the **Members** section, click **Edit**.
15. In the search box, type **Francisco Chaves**, and then click **Add**. In the search box, type **Sallie McIntosh**, and then click **Add**.
16. Click **Save**, and then click **Close** twice.

► **Task 2: Manage security groups**

1. In the Office 365 admin center, verify that you can see the following groups:
 - **Sales**
 - **Accounts**
2. In the **groups** list, click the **Sales** group.
3. In the **Members** section, click **Edit**.
4. In the search box, type **Amy Santiago**, click **Add**, click **Save**, and then click **Close**.
5. Ensure that Amy Santiago is now listed under the **Display name** list.
6. Click **Delete group**.
7. On the **Delete** page, click **Delete**, and then click **Close**.
8. On the left side menu, click **Users**, and then click **Active Users**.
9. Confirm that Amy Santiago's account still exists in the list of users.

Results: After completing this exercise, you should have created and managed security groups.

Exercise 2: Managing Office 365 users and groups by using Windows PowerShell

► **Task 1: Install Microsoft Azure Active Directory module for Windows PowerShell**

1. On LON-CL1, open Microsoft Edge, and browse to **http://aka.ms/t01i1o**.
2. Under **Microsoft Online Services Sign-In Assistant for IT Professionals RTW**, click **Download**.

3. Select the **en\msoidcl_64.msi** check box, and then click **Next**.
4. When the download finishes, click **Run**.
5. In the Microsoft Online Services Sign-in Assistant Setup Wizard, on the **License Terms** page, click **I accept the terms in the License Agreement and Privacy Statement**, and then click **Install**.
6. In the **User Account Control** dialog box, click **Yes**.
7. On the **Completed the Microsoft Online Services Sign-in Assistant Setup Wizard** page, click **Finish**.
8. In Microsoft Edge, browse to **http://aka.ms/siqtee**.
9. After **AdministrationConfig-en.msi** finishes downloading, click **Run**.
10. In the Microsoft Azure Active Directory Module for Windows PowerShell Setup Wizard, on the **Welcome** page, click **Next**.
11. On the **License Terms** page, click **I accept the terms in the License Terms**, and click **Next**.
12. On the **Install Location** page, click **Next**.
13. On the **Ready to Install** page, click **Install**.
14. In the **User Account Control** dialog box, click **Yes**.
15. On the **Completing the Microsoft Azure Active Directory Module for Windows PowerShell Setup** page, click **Finish**.

► **Task 2: Create new users and assign licenses by using Windows PowerShell**

1. On LON-CL1, on the desktop, right-click the **Windows Azure Active Directory Module for Windows PowerShell** shortcut, and then click **Run as administrator**.
2. If a **User Account Control** dialog box appears, click **Yes**.
3. At the command prompt, type the following command, and then press Enter:

```
Connect-mso1service
```

4. In the **Enter Credentials** dialog box, sign in as **Holly@AdatumAVXXXX.onmicrosoft.com**, where **AVXXXX** is your unique Adatum number, with the password **Pa\$\$w0rd**.
5. At the command prompt, type the following command, and then press Enter; **AVXXXXa** is your unique Adatum number:

```
New-Mso1User -UserPrincipalName Catherine@AVXXXXa.xtremelabs.us -DisplayName "Catherine Richard" -FirstName "Catherine" -LastName "Richard" -Password 'Pa$$w0rd' -ForceChangePassword $false -UsageLocation "CH"
```

6. At the command prompt, type the following command, and then press Enter; **AVXXXXa** is your unique Adatum number:

```
New-Mso1User -UserPrincipalName tameka@AVXXXXa.xtremelabs.us -DisplayName "Tameka Reed" -FirstName "Tameka" -LastName "Reed" -Password 'Pa$$w0rd' -ForceChangePassword $false -UsageLocation "CH"
```

7. To determine which users are unlicensed, at the command prompt, type the following command, and then press Enter:

```
Get-Mso1User -UnlicensedUsersOnly
```

- To license Catherine Richard, at the command prompt, type the following command, and then press Enter; replace **AdatumAVXXXX** in the **-AddLicenses** attribute with the onmicrosoft.com domain name provided by the hosting provider:

```
Set-MsolUserLicense -UserPrincipalName Catherine@AVXXXXa.xtremelabs.us -AddLicenses "AdatumAVXXXX:ENTERPRISEPACK"
```

- To license Tameka Reed, at the command prompt, type the following command, and then press Enter; replace **AdatumAVXXXX** in the **-AddLicenses** attribute with the onmicrosoft.com domain name provided by the hosting provider:

```
Set-MsolUserLicense -UserPrincipalName Tameka@AVXXXXa.xtremelabs.us -AddLicenses "AdatumAVXXXX:ENTERPRISEPACK"
```

- To prevent a user from signing in, at the command prompt, type the following command, and then press Enter; **AVXXXXa** is your unique Adatum number:

```
Set-MsolUser -UserPrincipalName Catherine@AVXXXXa.xtremelabs.us -blockcredential $true
```

- To delete a user, at the command prompt, type the following command, and then press Enter; **AVXXXXa** is your unique Adatum number:

```
Remove-MsolUser -UserPrincipalName Catherine@AVXXXXa.xtremelabs.us -Force
```

- To view the **Deleted Users** list, at the command prompt, type the following command, and then press Enter:

```
Get-MsolUser -ReturnDeletedUsers
```

- Verify that Catherine Richard is in the **Deleted Users** list. Note that it specifies that she is still licensed.

- To restore a deleted user, at the command prompt, type the following command, and then press Enter; **AVXXXXa** is your unique Adatum number:

```
Restore-MsolUser -UserPrincipalName Catherine@AVXXXXa.xtremelabs.us
```

- To view the **Deleted Users** list, at the command prompt, type the following command, and then press Enter:

```
Get-MsolUser -ReturnDeletedUsers
```

- Verify that Catherine Richard is no longer in the **Deleted Users** list.

- To view the **Active Users** list, at the command prompt, type the following command, and then press Enter:

```
Get-MsolUser
```

- Verify that Catherine Richard is in the **Active Users** list.

- To allow a user to sign in, at the command prompt, type the following command, and then press Enter; **AVXXXXa** is your unique Adatum number:

```
Set-MsolUser -UserPrincipalName Catherine@AVXXXXa.xtremelabs.us -blockcredential $false
```

► **Task 3: Modify existing users by using Windows PowerShell**

1. On LON-CL1, on the taskbar, click **File Explorer**.
2. Navigate to **C:\labfiles**, right-click **O365users.csv**, point to **Open with**, and then click **Notepad**.
3. In Notepad, click **Edit**, and then click **Replace**.
4. In the **Find what** text box, type **Adatumyyxxx.hostdomain.com**.
5. In the **Replace with** text box, type your unique **public domain name** value, click **Replace All**.
6. In the **Find what** text box, type **Adatumyyxxx:ENTERPRISEPACK**.
7. In the **Replace with** text box, type your unique **AdatumAVXXXX** value followed by **:ENTERPRISEPACK**, and then click **Replace All**.



Note: **AdatumAVXXXX** in this step must be the onmicrosoft.com domain name.

8. Close O365users.csv, and then in the **Notepad** message box, click **Save**.
9. To bulk import several users from a comma-separated value (CSV) file, copy and paste this code into the Administrator: Windows Azure Active Directory Module for Windows PowerShell window on LON-CL1, and then press Enter:

```
Import-Csv -Path C:\labfiles\O365Users.csv | ForEach-Object { New-MsolUser -
UserPrincipalName $_.UPN -AlternateEmailAddresses $_.AltEmail -FirstName
$_.FirstName -LastName $_.LastName -DisplayName $_.DisplayName -BlockCredential
$False -ForceChangePassword $False -LicenseAssignment $_.LicenseAssignment -
Password $_.Password -PasswordNeverExpires $True -Title $_.Title -Department
$_.Department -Office $_.Office -PhoneNumber $_.PhoneNumber -MobilePhone
$_.MobilePhone -Fax $_.Fax -StreetAddress $_.StreetAddress -City $_.City -
State $_.State -PostalCode $_.PostalCode -Country $_.Country -UsageLocation
$_.UsageLocation }
```

10. To view the **Active Users** list, at the command prompt, type the following command, and then press Enter:

```
Get-MsolUser
```

11. Switch back to Microsoft Edge, click **Admin**.
12. On the **Home** page, click **Users**.
13. Review the active users that you just imported.
14. On the Admin center menu, click **Exchange**.
15. Under recipients, click **mailboxes** and review the mailboxes and associated email addresses that were created.

► **Task 4: Configure groups and group membership by using Windows PowerShell**

1. To create a Marketing group, at the command prompt, type the following command, and then press Enter:

```
New-MsolGroup -DisplayName "Marketing" -Description "Marketing department users"
```

2. To configure a variable for the group, at the command prompt, type the following command, and then press Enter:

```
$MktGrp = Get-MsolGroup | Where-Object {$_.DisplayName -eq "Marketing"}
```

3. To configure a variable for the first user account, at the command prompt, type the following command, and then press Enter:

```
$Catherine = Get-MsolUser | Where-Object {$_.DisplayName -eq "Catherine Richard"}
```

4. To configure a variable for the second user account, at the command prompt, type the following command, and then press Enter:

```
$Tameka = Get-MsolUser | Where-Object {$_.DisplayName -eq "Tameka Reed"}
```

5. To add Catherine Richard to the Marketing group, at the command prompt, type the following command, and then press Enter:

```
Add-MsolGroupMember -GroupObjectId $MktGrp.ObjectId -GroupMemberType "User" -
GroupMemberObjectId $Catherine.ObjectId
```

6. To add Tameka Reed to the Marketing group, at the command prompt, type the following command, and then press Enter:

```
Add-MsolGroupMember -GroupObjectId $MktGrp.ObjectId -GroupMemberType "User" -
GroupMemberObjectId $Tameka.ObjectId
```

7. To verify the members of the Marketing group, at the command prompt, type the following command, and then press Enter:

```
Get-MsolGroupMember -GroupObjectId $MktGrp.ObjectId
```

► Task 5: Configure user passwords by using Windows PowerShell

1. At the command prompt, type the following command, and then press Enter; **AVXXXX** is your unique Adatum number:

```
Set-MsolPasswordPolicy -DomainName "AdatumAVXXXX.onmicrosoft.com" -ValidityPeriod
"90" -NotificationDays "14"
```

2. At the command prompt, type the following command, and then press Enter; **AVXXXXa** is your unique Adatum number:

```
Set-MsolUserPassword -UserPrincipalName "Tameka@AVXXXXa.xtremelabs.us" -NewPassword
'Pa$$w0rd123'
```

3. At the command prompt, type the following command, and then press Enter:

```
Get-MsolUser | Set-MsolUser -PasswordNeverExpires $false
```

Results: After completing this exercise, you should have created new users, assigned licenses, modified existing users, and configured groups and user passwords by using the Windows PowerShell command-line interface.

Exercise 3: Configuring delegated administrators

► Task 1: Assign delegated administrators in the Office 365 admin center

1. On LON-CL1, open Microsoft Edge, and then browse to <https://login.microsoftonline.com/>.
2. Sign in as **Holly@AdatumAVXXXX.onmicrosoft.com**, where **AVXXXX** is your unique Adatum number, with the password **Pa\$\$w0rd**.
3. In the Office 365 admin center, click **Admin**.
4. On the left-hand side, click **USERS**, click **Active Users**, and then double-click **Francisco Chaves**.
5. On the **Francisco Chaves** page, in the **Roles** section, click **Edit**.
6. Under **Edit user role**, click **Customized administrator**, select **Billing administrator** from the list, in the **Alternate email address** text box, type **user@alt.none**, click **Save**, and then click **Close**.
7. In the list view, double-click **Tameka Reed**.
8. On the **Tameka Reed** page, in the **Roles** section, click **Edit**.
9. Under **Edit user role**, click **Customized administrator**, and then select **Password administrator** from the list.
10. In the **Alternative email address** text box, type **user@alt.none**, click **Save**, and then click **Close**.
11. In the list view, double-click **Christie Thomas**.
12. On the **Christie Thomas** page, in the **Roles** section, click **Edit**.
13. Under **Assign role**, click **Customized administrator**, and then select **User management administrator** from the list.
14. In the **Alternative email address** text box, type **user@alt.none**, click **Save**, and then click **Close**.
15. Close Microsoft Edge.

► Task 2: Manage delegated administration with Windows PowerShell

1. In the Windows PowerShell window, at the command prompt, type the following command, and then press Enter:

```
Add-MsolRoleMember -RoleName "Service Support Administrator" -RoleMemberEmailAddress "Sallie@AVXXXXa.xtremelabs.us"
```

2. At the command prompt, type the following command, and then press Enter:

```
Add-MsolRoleMember -RoleName "Company Administrator" -RoleMemberEmailAddress "Nona@AVXXXXa.xtremelabs.us"
```

3. At the command prompt, type the following command, and then press Enter:

```
$role = Get-MsolRole -RoleName "Service Support Administrator"
```

4. At the command prompt, type the following command, and then press Enter:

```
Get-MsolRoleMember -RoleObjectId $role.ObjectId
```

5. Verify that Sallie McIntosh is in the list of users who have the Service Support Administrator role.

6. At the command prompt, type the following command, and then press Enter:

```
$role = Get-MsolRole -RoleName "Billing Administrator"
```

- At the command prompt, type the following command, and then press Enter:

```
Get-MsolRoleMember -RoleObjectId $role.ObjectId
```

- Verify that Francisco Chaves is in the list of users who have the billing administrator role.
- At the command prompt, type the following command, and then press Enter:

```
$role = Get-MsolRole -RoleName "Company Administrator"
```

- At the command prompt, type the following command, and then press Enter:

```
Get-MsolRoleMember -RoleObjectId $role.ObjectId
```

- Verify that Nona Snider is in the list of users who have the Company Administrator role. You should also see Holly Dickson in the list.
- At the command prompt, type the following command, and then press Enter:

```
Exit
```

► Task 3: Verify delegated administration

- On the **Office 365** page, sign out if needed and then sign in as **Tameka@AVXXXXa.xtremelabs.us**, where **AVXXXXa** is your unique Adatum number, with the password **Pa\$\$w0rd123**.
- On the **Update your password** page, in the **Old password** text box, type **Pa\$\$w0rd123**.
- In the **New password** and **Confirm new password** text boxes, type **Pa\$\$w0rd**, and then click **Update password and sign in**.
- In the Office 365 portal, click **Admin**.
- If prompted, sign in again as **Tameka@AVXXXXa.xtremelabs.us** using the password **Pa\$\$w0rd**.
- On the **don't lose access to your account!** page, click **cancel**.
- If you are connected to the previous admin center, click the **banner** at the top of the page to connect to the new admin center.
- On the Home page, click **Users**.
- Double-click **Jessica Jennings**. Note that you cannot perform any administrative tasks.
- Click **Reset passwords**.
- On the **Reset passwords** page, click **Reset**.
- Write down the temporary password here for future reference, and then click **Close**:

- On the user account menu in the upper-right corner, click **Tameka Reed**, then click **Sign out**.
- On the **Office 365** page, sign in as **Christie@AVXXXXa.xtremelabs.us**, where **AVXXXXa** is your unique Adatum number, with the temporary password that you recorded in Lab A, Exercise 1.
- Change Christie's password to **Pa\$\$w0rd**.
- In the Office 365 portal, click **Admin**.
- If prompted, sign in again as **Christie@AVXXXXa.xtremelabs.us** using the password **Pa\$\$w0rd**.
- On the **don't lose access to your account!** page, click **cancel**.

19. If you are connected to the previous admin center, click the **banner** at the top of the page to connect to the new admin center.
20. In the Office 365 admin center, on the **Home** page, click **Users**, and then double-click **Jessica Jennings**.
21. On the **Jessica Jennings** page, in the **Office phone** section, click **Edit**.
22. In the **Office Phone** text box, type **555-1234**, click **Save**, and then click **Close**.
23. In the **Sign-in status** section, click **Edit**, click **Blocked**, click **Save**, and then click **Close**.
24. In the Office 365 admin center, click **Add a user**.
25. In the **First name** text box, type **Chris**.
26. In the **Last name** text box, type **Breland**.
27. In the **User name** text box, type **Chris**, click **Save**, and then click **Close**.
28. In the **Active Users** list, click **Chris Breland**.
29. On the right side, click **Delete user**.
30. In the **Message** box, click **Yes**, and then click **Close**.
31. Close Microsoft Edge.

Results: After completing this exercise, you should have assigned delegated administrators in the Office 365 admin center, managed delegated administration with Windows PowerShell, and verified delegated administration.

Module 3: Configuring client connectivity to Microsoft Office 365

Lab: Configuring client connectivity to Office 365

Exercise 1: Configuring DNS records for Office 365 clients

► Task 1: Review the recommended DNS records in the Office 365 admin center

1. On LON-CL1, open Microsoft Edge.
2. Connect to <http://login.microsoftonline.com>, and then sign in as **holly@adatumAVXXXX.onmicrosoft.com**, replacing **AVXXXX** with your unique Adatum number, and with the password **Pa\$\$w0rd**.
3. In the Office 365 portal, click **Admin**.
4. In the Office 365 admin center, in the menu to the left, go to **Settings**, click **Domains**, and then review the domain names assigned to the **Adatum** tenant.
5. In the Domains window, click **AVXXXXa.xtremelabs.us**.
6. On the **DNS errors** page, review the records that need to be configured for your domain.
7. Leave the Microsoft Edge window open.

► Task 2: Configure the DNS records for external clients

Configure DNS for an authoritative answer

1. On LON-DC1, open Server Manager.
2. In Server Manager, click the **Tools** menu, and then click **DNS**.
3. In DNS Manager, expand **LON-DC1**, and then expand **Forward Lookup Zones**.
4. Right click **AVXXXXa.xtremelabs.us**, and then click **New Host (A or AAAA)...**
5. In the **Name** text box, type **NLS01**
6. In the **IP address** text box, type the IP address associated with your lab session (found in **your Lab Network Info**)
7. Click **Add Host**
8. Double click the **Name Server (NS)** record
9. Click **Edit**
10. Replace the **FQDN** with **NLS01.AVXXXXa.xtremelabs.us**
11. Click **Resolve**, click **OK**, then click **OK** again
12. Double click the **Start of Authority (SOA)** record
13. Replace the **Primary server** with **NLS01.AVXXXXa.xtremelabs.us**
14. Click **OK**

Configure DNS settings for Exchange Online

1. Right-click **AVXXXXa.xtremelabs.us**, and then click **New Alias (CNAME)**.

2. In the **Alias name** text box, type **autodiscover** as the alias name.
3. In the **Fully qualified domain name (FQDN) for target host** text box, type **autodiscover.outlook.com**.
4. Click **OK**.
5. Right-click **AVXXXXa.xtremelabs.us**, and then click **New Mail Exchanger (MX)**.
6. In the **Mail Exchanger (MX)** dialog box, in the **Fully qualified domain name (FQDN) of mail server** text box, type **AVXXXXa-xtremelabs-us.mail.protection.outlook.com**.
7. Click **OK**.

Configure DNS settings for Skype for Business Online

1. On LON-DC1, right-click the **AVXXXXa.xtremelabs.us** zone, and then select **Other New Records**.
2. In the **Resource Record Type** dialog box, scroll down the list, click **Service Location**, and then click **Create Record**.
3. On the **Service Location (SRV)** tab, enter the following information, and then click **OK**:
 - Service: **_sip**
 - Protocol: **_tls**
 - Priority: **100**
 - Weight: **1**
 - Port number: **443**
 - Host offering this service: **sipdir.online.lync.com**
 - Time to live: **1 hour (default)**
4. In the **Resource Record Type** dialog box, click **Create Record**.
5. On the **Service Location (SRV)** tab, enter the following information, and then click **OK**:
 - Service: **_sipfederationtls**
 - Protocol: **_tcp**
 - Priority: **100**
 - Weight: **1**
 - Port number: **5061**
 - Host offering this service: **sipfed.online.lync.com**
 - Time to live: **1 hour (default)**
6. In the **Resource Record Type** dialog box, scroll back up the list, click **Alias (CNAME)**, and then click **Create Record**.
7. On the **Alias (CNAME)** tab, enter the following information, and then click **OK**:
 - Alias name: **sip**
 - Fully qualified domain name: **sip.AVXXXXa.xtremelabs.us**
 - Fully qualified domain name (FQDN) for target host: **sipdir.online.lync.com**
 - Time to live: **1 hour (default)**
8. In the **Resource Record Type** dialog box, click **Create Record**.

9. On the **Alias (CNAME)** tab, enter the following information, and then click **OK**:
 - Alias name: **lyncdiscover**
 - Fully qualified domain name: **lyncdiscover.AVXXXXa.xtremelabs.us**
 - Fully qualified domain name (FQDN) for target host: **webdir.online.lync.com**
 - Time to live: **1 hour (default)**
10. In the **Resource Record Type** dialog box, click **Done**.
11. Switch back to LON-CL1, and then in the Office 365 admin console, click **Check DNS**.
12. You should now see that most records are not listed anymore (you should see msoid, enterpriseregistration, enterpriseenrollment and SPF records). Close the page.
13. In the top bar, click the **Office 365** apps icon.
14. Click **Mail**.
15. On the **Outlook** page, select your time zone and click **Save**.
16. On LON-CL2, verify that you are signed in as Francisco.
17. Open Microsoft Edge, and then connect to <https://login.microsoftonline.com>.
18. Sign in as **Francisco@AVXXXXa.xtremelabs.us** by using the password **Pa\$\$w0rd**.
19. In the Office 365 portal, click **Mail**.
20. On the **Outlook** page, select your time zone and click **Save**.
21. In the upper-left corner, click the **New** button.
22. In the **To** text box, type **Holly Dickson**.
23. When the name resolves, note her instant message (IM) status. It might take a couple of minutes for her status to update.
24. Click **Holly Dickson** in the **To** text box.
25. In the pop-up dialog box, click the **IM** icon on the right.
26. In the IM pop-up window, type a message, and then press Enter.
27. On LON-CL1, click the **IM** dialog box.
28. Reply to the IM. Note that you now can send IMs between the two users.
29. Close both the IM windows, and then close the Microsoft Edge windows on both virtual machines.

Results: After completing this exercise, you should have reviewed the recommended DNS records in the Office 365 admin center, configured the DNS records for external clients, and configured the DNS records for internal clients.

Exercise 2: Running the Office 365 connectivity analyzer tools

- ▶ **Task 1: Run the Microsoft Connectivity Analyzer tool**
 1. On LON-CL1, open Microsoft Edge.
 2. In the address bar, type <https://testconnectivity.microsoft.com/>.

3. On the **Microsoft Remote Connectivity Analyzer** page, click the **Office 365** tab.
4. On the **Office 365** tab, click **Office 365 Exchange Domain Name Server (DNS) Connectivity Test**, and then click **Next**.
5. Under **Domain Name**, type **AVXXXXa.xtremelabs.us**.
6. Under **Verification**, type the characters that you can see in the verification field, and then click **Verify**.



Note: The verification code is not case-sensitive.

7. Click **Perform Test**.



Note: If you receive a message about having performed too many tests in 60 seconds, wait for a minute and then repeat the test.

8. When you see **Connectivity Test Successful**, under **Test Details**, expand **Test Steps**, and then review the checks that were made against the Exchange Online domain.
9. Click **Start Over**.
10. On the **Office 365** tab, click **Office 365 Lync Domain Name Server (DNS) Connectivity Test**, and then click **Next**.
11. In the **Sign-in address** text box, type **Francisco@AVXXXXa.xtremelabs.us**, and then click **Perform Test**.



Note: If you receive a message about having performed too many tests in 60 seconds, wait for a minute and then repeat the test.

12. When you see **Connectivity Test Successful**, under **Test Details**, expand **Test Steps**, and then review the checks that were made against the Skype for Business Online domain.
13. Click **Start Over**.
14. Under **Microsoft Office Outlook Connectivity Tests**, click **Outlook Connectivity**, and then click **Next**.
15. On the **Outlook Connectivity** page, in the **Email Address** and **Microsoft Account** text boxes, type **Francisco@AVXXXXa.xtremelabs.us**.
16. In the **Password** and **Confirm password** text boxes, type **Pa\$\$w0rd**.
17. Select **Use Autodiscover to detect server settings**.
18. Select **I understand that I must use the credentials of a working account from my Exchange domain to be able to test connectivity to it remotely. I also acknowledge that I am responsible for the management and security of this account**.
19. Click **Perform Test**.
20. When you see **Connectivity Test Successful with Warnings**, under **Test Details**, expand **Test Steps**, and then review the checks that were made against **Outlook Anywhere**. Note in particular the message that contains information about the **Autodiscover** steps that fail.

21. Under **Run Test Again** at the top-right corner of the window, note that you can copy this test to the clipboard, or save it as an XML or HTML file. Click **Start over**.

► **Task 2: Run the Office 365 Client Performance Analyzer**

1. In the Microsoft Connectivity Analyzer window, on the **Client** tab, in the **Microsoft Office 365 Client Performance Analyzer** section, click **Microsoft Office 365 Client Performance Analyzer**.
2. In the Office 365 Client Performance Analyzer window, under **Download and install Office 365 Client Performance Analyzer**, click **here**.
3. Wait for the download to finish, and then click **Run**.
4. In the **User Account Control** dialog box, click **Yes**.
5. In the Microsoft Office 365 Client Performance Analyzer window, click **Accept**, and then click **Run Exchange Analyzer**.
6. In the pop-up window, type **Francisco@AVXXXXa.xtremelabs.us**, clear the **Allow OCPA to run in the background collecting diagnostics every few hours for you** check box, and then click **OK**.
7. Wait until Office 365 Client Performance Analyzer generates the results.
8. Review the results, and then click **Show Trace Route Details**.
9. Review the details, and then close the window.

Results: After completing this exercise, you should have:

- Run the Microsoft Connectivity Analyzer tool.
- Run the Office 365 Client Performance Analyzer tool.

Exercise 3: Connecting Office 2016 clients

► **Task 1: Verify that Outlook 2016 can connect to Office 365**

1. On LON-CL1, start Outlook 2016.
2. On the **Welcome to Outlook 2016** page, click **Next**.
3. On the **Add an Email Account** page, click **Next**.
4. On the **Auto Account Setup** page, type the following information, and then click **Next**:
 - Your Name: **Holly Dickson**
 - E-mail Address: **Holly@adatumAVXXXX.onmicrosoft.com**
 - Password: **Pa\$\$w0rd**
 - Retype Password: **Pa\$\$w0rd**
5. In the **Windows Security** dialog box, type **Pa\$\$w0rd** as the password, select **Remember my credentials**, and then click **OK**.
6. Verify that you are connected to Exchange Online, and then click **Finish**.
7. In the **First things first** dialog box, click **Ask me later**, and then click **Accept**.
8. On LON-CL2, repeat steps 1 through 7, the following information:
 - Your Name: **Francisco Chaves**

- E-mail Address: **Francisco@AVXXXXa.xtremelabs.us**
 - Password: **Pa\$\$w0rd**
 - Retype Password: **Pa\$\$w0rd**
- ▶ **Task 2: Verify that Skype for Business can connect to Office 365**
1. On LON-CL1, start Skype for Business.
 2. Close the **Welcome - Skype for Business** dialog box.
 3. On the **Skype for Business sign in** page, type **Holly@AVXXXX.onmicrosoft.com** as the **Sign-in address**, and then click **Sign in**.
 4. On the **second Sign in** page, type **Pa\$\$w0rd** as the password, select **Save my password**, and click **Sign In**.
 5. Click **Yes**. In the **Help Make Skype for Business Better!** dialog box, click **No**. Verify that you are connected to Skype for Business Online.
 6. On LON-CL2, repeat steps 1 through 5, the following information:
 - Sign-in address: **Francisco@AVXXXXa.xtremelabs.us**
 - Password: **Pa\$\$w0rd**
 7. Keep the virtual machines running for the next module.

Results: After completing this exercise, you should have verified that Outlook 2016 can connect to Office 365, verified that Skype for Business can connect to Office 365, and verified OneDrive for Business connectivity to Office 365.

Module 4: Planning and configuring directory synchronization

Lab: Configuring directory synchronization

Exercise 1: Preparing for directory synchronization

► Task 1: Configure UPN

1. Sign in to the LON-DC1 virtual machine as **ADATUM\Administrator** with a password of **Pa\$\$word**.
2. On the Start screen, click **Administrative Tools**, and then double-click **Active Directory Domains and Trusts**.
3. In the Active Directory Domains and Trusts window, right-click **Active Directory Domains and Trusts**, and then click **Properties**.
4. Select the **UPN Suffixes** tab, in the **Alternative UPN suffixes:** box, type **AVXXXXa.xtremelabs.us**, and then click **Add**.
5. Click **OK**.
6. On the Start screen, right-click **Windows PowerShell**, and then click **Run as administrator**.
7. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
Get-ADUser -Filter * -Properties SamAccountName | foreach { Set-ADUser $_ -
UserPrincipalName ($_.SamAccountName + "@AVXXXXa.xtremelabs.us" )}
```

► Task 2: Prepare problem user accounts

1. On the LON-DC1, in the Windows PowerShell prompt, type the following command, and then press Enter:

```
CD C:\labfiles\
```

2. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
Set-ExecutionPolicy Unrestricted
```

3. To confirm the execution policy change, press Enter.
4. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
.\CreateProblemUsers.ps1
```



Note: Wait until the script has completed before proceeding to the next step.

5. This Windows PowerShell script will make the following changes in AD DS:
 - Amr Zaki. Add the "@" character to the beginning of "adatum" for the **UserPrincipalName** attribute.
 - Brad Sutton. Replace the existing string with "brad@adatum.com" for the **emailAddress** attribute.
 - Don Funk. Replace the existing string with "brad@adatum.com" for the **emailAddress** attribute.

- Holly Dickson. Replace the existing string with "**holly@adatum.com**" for the **emailAddress** attribute.
- Kelly Rollins. Replace the existing string with " " for the **emailAddress** attribute.


► **Task 3: Run the IdFix tool and fix identified issues**

1. On LON-CL1, open Microsoft Edge and connect to **https://www.microsoft.com/en-us/download/details.aspx?id=36832**.
2. On the **IdFix DirSync Error Remediation Tool** page, click **Download**.
3. Wait for the download to complete, and then click **Open**.
4. In the File Explorer windows, browse to the **Downloads** folder, right-click **IdFix.zip**, and then click **Extract All...**
5. In the **Extract Compressed (Zipped) Folders** dialog box, in the destination box, type **C:\Deployment Tools\IdFix**, and then click **Extract**.
6. In File Explorer, in the **C:\Deployment Tools\IdFix** folder, right-click **IdFix**, and then click **Run as administrator**.
7. In the **User Account Control** dialog box, click **Yes**.
8. In the **IdFix Privacy Statement** message box, click **OK**.
9. Click **Query**. You should see a number of errors.
10. Click the **ERROR** column to sort the character errors to the top of the list.



Note: Ignore topleveldomain errors, which cannot be fixed by the IdFix tool.

11. In the Amr Zaki row, in the ACTION column, select **EDIT**.
12. In the Holly Dickson row, in the ACTION column, select **EDIT**.
13. In the Kelly Rollin row, in the ACTION column, select **EDIT**.
14. On the toolbar, click **Apply**.
15. In the **Apply Pending** dialog box, click **Yes**; note the **COMPLETE** status in the **ACTION** column indicating successful writes.
16. Switch to File Explorer, and in the **C:\Deployment Tools\IdFix** folder, double-click **Verbose <date> <time>.txt** to view the updated transactions in the transaction log.
17. Switch back to the IdFix tool.
18. On the toolbar, click **Query**.
19. Click in the **UPDATE** column to locate the Don Funk error, and replace the string with **don@adatum.com**, and then in the **ACTION** column, select **EDIT**.
20. Click in the **UPDATE** column to locate the Kelly Rollin error, and replace the string with **kelly@adatum.com**, and then in the **ACTION** column, select **EDIT**.
21. On the toolbar, click **Apply**.
22. In the **Apply Pending** box, click **Yes**.
23. On the toolbar, click **Query** and verify that no more errors are reported.

 **Note:** Where there are format and duplicate errors for distinguished names, the UPDATE column either contains the same string as the VALUE column, or the UPDATE column entry is blank; in either case, this means that IdFix cannot suggest a remediation for the error. You can either fix these errors outside IdFix, or manually remediate them within IdFix. You can also export the results and use Windows PowerShell to remediate a large number of errors.

► **Task 4: Configure the Office 365 tenant for directory synchronization**

1. On LON-CL1, on the desktop, double-click **Windows Azure Active Directory Module for Windows PowerShell**.
2. At the Windows PowerShell prompt, type the following command, and press Enter after each:

```
$msolcred = Get-Credential
```

3. In the **Windows PowerShell Credential** dialog box, enter **Holly@AdatumAVXXXX.onmicrosoft.com** in the **User name** box, enter **Pa\$\$w0rd** in the **Password** box, and then click **OK**.

4. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
Connect-MsolService -Credential $msolcred
```

5. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
Set-MsolDirSyncEnabled -EnableDirSync $true -Force
```


 **Note:** The **-Force** switch disables the confirmation dialog box.

Although you might have to wait up to 24 hours for activation to complete, you should be able to continue.

6. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
(Get-MsolCompanyInformation).DirectorySynchronizationEnabled
```

The output returns **True** if sync is enabled.

 **Note:** It might take a few minutes to return **True**. Rerun the command until you see **True** showing.

7. Switch to Microsoft Edge, and in the address box, type **https://login.microsoftonline.com**, and then press Enter.
8. On the **Sign-in** page, in the **Name** box, select **holly@AdatumAVXXXX.onmicrosoft.com**. In the **Password** box, type **Pa\$\$w0rd**, and then click **Sign in**.
9. Navigate to the **Office 365 admin center**.
10. In the Office 365 admin center, click **Switch back to the old admin center** go to previous Office365 admin center.
11. In the left navigation pane of previous Office365 admin center, click **USERS**, and then click **Active users**.

12. To the right of **Active Directory synchronization**, verify that there is a **Manage** link (if activation was not yet completed this link would say "Set up"). If there is no **Manage**, click **Set up**, and verify that, under **Activate Active Directory synchronization**, the **Active Directory Synchronization is activated** notice appears.
13. Click **Admin** on the toolbar, and then click the **banner** at the top of the windows to go back to the new admin center.

Results: After completing this exercise, you will have resolved issues in AD DS identified by the IdFix tool and you will have enabled Active Directory synchronization in Office 365.

Exercise 2: Configuring directory synchronization

► Task 1: Download and install Azure AD Connect

1. Sign in to LON-DS1 as **ADATUM\Administrator** with a password of **Pa\$\$word**. If the Networks pane appears, click **Yes**.
2. Click **Start**, and then click **Internet Explorer**.
3. If a **Windows Internet Explorer 10** dialog box appears, select **Use recommended security and compatibility settings**, and then click **OK**.
4. In the **Address** box, type **https://portal.microsoftonline.com**, and then press Enter.
5. On the **Sign in** page, in the **Name** box, type **holly@AdatumAVXXX.onmicrosoft.com**.
6. In the **Password** box, type **Pa\$\$w0rd**, and then click **Sign in**.
7. Navigate to the Office 365 admin center. If you are connected to the previous Admin center, click the **banner** at the top of the window to connect to the new Admin center.
8. In the left side menu, click **Users**, and then click **Active Users**.



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 to 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.

9. Click **Holly Dickson**.
10. On the **Holly Dickson** page, click **Edit** in the **Email addresses** section.
11. Next to **Email address**, select **AVXXXa.xtremelabs.us** from the drop-down list box, and then click **Save**.
12. Click **Close**.
13. Close Internet Explorer.
14. Open **Internet Explorer**.
15. If a **Windows Internet Explorer 10** dialog box appears, select **Use recommended security and compatibility settings**, and then click **OK**.
16. In the **Address** box, type **https://portal.microsoftonline.com**, and then press Enter.
17. Sign in as **holly@AVXXXa.xtremelabs.us**, using the password **Pa\$\$w0rd**.

18. Navigate to the **Office 365 admin center**, click **Switch back to the old admin center**.
19. In the previous Office365 admin center, in the left side menu, click **USERS**, and then click **Active Users**.
20. To the right of **Active Directory synchronization**, click **Manage** (or if Active Directory synchronization has not yet completed, click **Set up**).
21. Under the **Directory Sync client version**, click **Upgrade**.



Note: You will automatically be redirected to the Microsoft Azure Active Directory Connect download page.

22. Click the **Tools** icon in the top-right corner, and click **Internet Options**.
23. On the **Security** tab, click **Custom level**.
24. In the **Security Settings – Internet Zone** dialog box, under **File download**, click **Enable**, and then click **OK**.
25. Click **Yes**, and then click **OK**.
26. On the **Microsoft Azure Active Directory Connect** download page in Internet Explorer, click **Download**.
27. In the Internet Explorer notification bar, click **Save as**, browse to **C:\Labfiles**, and then click **Save**. If the **LabFiles** folder does not exist, create it.
28. When the download has completed, in the Internet Explorer notification bar, click **Open folder**.
29. In **File Explorer**, right-click **AzureADConnect.msi**, and then click **Install**.
30. In the **Microsoft Azure Active Directory Connect** wizard, on the **Welcome** page, click **I agree to the license terms and privacy notice**, and then click **Continue**.
31. On the **Express Settings** page, click **Customize**.
32. Leave the Microsoft Azure Active Directory Connect wizard open for the next task.

► **Task 2: Run the Azure AD Connect tool with custom settings**

1. On the **Install required components** page, leave all the check boxes cleared, and click **Install**.
2. On the **User Sign-in** page, click **Password Synchronization**, and click **Next**.
3. On the **Connect to Azure AD** page, enter the following credentials, and then click **Next**:
 - User name: **holly@AVXXXXa.xtremelabs.us**
 - Password: **Pa\$\$w0rd**
4. On the **Connect your directories** page, enter the following credentials, click **Add Directory**, and then click **Next**:
 - User name: **ADATUM\Administrator**
 - Password: **Pa\$\$w0rd**
5. On the **Domain and OU filtering** page, click **Sync selected domains and OUs**, expand **Adatum.com**, clear all check boxes for the child containers except for the **IT** check box, and then click **Next**.
6. On the **Uniquely identifying your users** page, click **Next**.

7. On the **Filter users and devices** page, verify that **Synchronize all users and devices** is selected, and then click **Next**.
8. On the **Optional Features** page, leave the default options, and then click **Next**.
9. On the **Ready to configure** page, review the features that will be installed. Ensure that **Start the synchronization process as soon as the initial configuration completes** is not selected, and then click **Install**.



Note: The installation process will take approximately 10 minutes to complete.

10. Once the installation completes, on the **Configuration complete** page, click **Exit**.
11. On the Start screen, sign out of LON-DS1, and then sign back in as **Adatum\Administrator** with the password **Pa\$\$w0rd**.



Note: Because Adatum\administrator was used to install Azure AD Connect, it will be automatically added to the ADSyncAdmins group, and you need to sign out for the Kerberos token to be updated. Otherwise, if you use a different user account to install Azure AD Connect, you will need to manually add the Azure AD Connect admin to the local ADSyncAdmins group on LON-DS1.

► Task 3: Configure synchronization service filtering for organizational units

1. On LON-DS1, click **Start**, open the all apps list (arrow icon), and then click **Synchronization Service**.
2. In Synchronization Service Manager, click the **Connectors** tab.
3. On the **Connectors** tab, double-click **Adatum.com**.
4. In the **Properties** dialog box, click **Configure Directory Partitions**.
5. Click **Containers**.
6. In the **Credentials** dialog box, enter the following credentials, and then click **OK**:
 - User name: **Administrator**
 - Password: **Pa\$\$w0rd**
 - Domain: **Adatum.com**



Note: Although this account is not the one used for directory synchronization, you use the account credentials temporarily to access AD DS for configuring filtering.

7. In the **Select Containers** dialog box, select the **Research** check box, verify that **IT** is selected, and then click **OK**.
8. Click **OK** to close the **Properties** dialog box.

- **Task 4: Configure synchronization service filtering for object attributes**
1. On LON-DS1, open the Start screen, and then click **Synchronization Rules Editor**.
 2. In **Synchronization Rules Editor**, in **Rule Types**, click **Inbound**, and then click **Add new rule**.
 3. In the **Create inbound synchronization rule** dialog box, in the **Name** box, type **In from AD – User DoNotSyncFilter**.
 4. For **Connected System**, select **Adatum.com**.
 5. For **Connected System Object Type**, select **user**.
 6. For **Metaverse Object Type**, select **person**.
 7. For **Link Type**, select **Join**.
 8. For **Precedence**, type **50**.
 9. Click **Next**.
 10. In the **Create inbound synchronization rule** dialog box, on the **Scoping filter** tab, click **Add Group**, and then click **Add Clause**.
 11. In **Add scoping filters**:
 - For **Attribute**, select **msDS-cloudExtensionAttribute15**.
 - For **Operator**, select **EQUAL**.
 - For **Value**, type **NoSync**.
 12. Click **Next**.
 13. On the **Add join rules**, click **Next**.
 14. On the **Add transformations** page, click **Add transformation**:
 - For **FlowType**, select **Constant**.
 - For **Target Attribute**, select **cloudFiltered**.
 15. In the **Source** text box, type **True**.
 16. To save the rule, click **Add**, and then close Synchronization Rules Editor window.
 17. Open Windows PowerShell from the taskbar. In Windows PowerShell, type the following command, and then press Enter. The initial synchronization can take several minutes to complete. Leave the Windows PowerShell window open.

```
Start-ADSyncSyncCycle -PolicyType Initial
```

- **Task 5: Verify that synchronization was successful**
1. Ensure that you are signed in to the LON-DS1 as **ADATUM\Administrator** with a password of **Pa\$\$word**.
 2. Open Internet Explorer, and browse to **http://aka.ms/siqtee**.
 3. After **AdministrationConfig-en.msi** finishes downloading, click **Run**.
 4. In the Microsoft Azure Active Directory Module for Windows PowerShell Setup Wizard, on the **Welcome** page, click **Next**.
 5. On the **License Terms** page, click **I accept the terms in the License Terms**, and click **Next**.
 6. On the **Install Location** page, click **Next**.

7. On the **Ready to Install** page, click **Install**.
8. On the **Completing the Microsoft Azure Active Directory Module for Windows PowerShell Setup** page, click **Finish**.
9. On the Start screen, click the **down arrow**, and click **Synchronization Service**.
10. In **Synchronization Service Manager on LON-DS1**, click **Operations**.
11. In the **Connector Operations** list, click the line at the top of the list, and then review the **Start Time**, **End Time**, and the **Status**.
12. Verify the connector has a **Start Time** and **End Time** that aligns with the last time synchronization was initiated in the previous task.
13. On the taskbar, right-click **Windows PowerShell**, and then select **Run as Administrator**.
14. At the Windows PowerShell prompt, type the following commands, and press Enter after each:

```
Import-Module MSOnline  
Connect-MsolService
```

15. In the **Enter Credentials** dialog box, enter the following credentials, and then click **OK**:
 - User name: **holly@AVXXXXa.xtremelabs.us**
 - Password: **Pa\$\$w0rd**
16. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
Get-MsolCompanyInformation | fl LastDirSyncTime
```
17. Verify the **LastDirSyncTime** aligns with the last time synchronization was initiated in the previous task.
18. On the Start screen, open **Internet Explorer**, and then type **https://portal.office.com/admin/default.aspx** in the address bar.
19. On the **Sign-in** page, sign in by using the following credentials:
 - User name: **holly@AVXXXXa.xtremelabs.us**
 - Password: **Pa\$\$w0rd**
20. In the **Office 365 admin center**, switch back to the old Office365 admin center by clicking **Switch back to the old admin center**.
21. In the previous admin center, in the left navigation pane, click **USERS**, and then click **Active Users**.
22. Verify that the **Last synced less than an hour ago** message appears.
23. In the **Active users** list, note that your on-premises accounts from the selected OUs now have a status of Synced with Active Directory.

Results: After completing this exercise, you will have installed Azure AD Connect with customized settings. Upon completion of the installation, you will start directory synchronization to Office 365 and have verified that synchronization was successful.

Exercise 3: Managing Active Directory users and groups

► Task 1: Create a new user and group account

1. On LON-DC1, in Server Manager, click **Tools**, and then click **Active Directory Users and Computers**.
2. In the console tree, expand **Adatum.com**, right-click **Research**, click **New**, and then click **User**.
3. In the **First name** box, type **Perry**.
4. In the **Last name** box, type **Brill**.
5. In the **User logon name** box, type **Perry**, select your lab domain **UPN** (not **Adatum.com**), and then click **Next**.
6. In the **Password** and **Confirm password** boxes, type **Pa\$\$w0rd**, clear the **User must change password at next logon** check box, select the **Password never expires** check box, click **Next**, and then click **Finish**.
7. In the **Research** OU user list, double-click the **Perry Brill** user.
8. In the **Properties** dialog box, in the **E-mail** box, type **Perry@AVXXXA.xtremelabs.us**, and then click **OK**.
9. In the console tree, right-click the **Research** OU, click **New**, and then click **Group**.
10. In the New Object – Group window, in the **Group name:** box, type **Project Team**, click **Universal**, click **Distribution**, and then click **OK**.
11. In the **Research** OU, double-click the **Project Team** group.
12. In the **Properties** dialog box, in the **E-mail** box, type **projectteam@AVXXXA.xtremelabs.us**.
13. On the **Members** tab, click **Add**.
14. In the **Select Users, Contacts, Computers, Service Accounts, or Groups** dialog box, in the **Enter the object names to select**, type the following names, and then click **Check Names**:
 - **Chris Sells**
 - **Lukas Keller**
 - **Sabine Royant**
15. Click **OK** twice.

► Task 2: Move a user out of the scope of synchronization

1. On LON-DS1, at the Windows PowerShell prompt, type the following command, and then press Enter:

```
Get-MsolUser -Search Josh
```

2. Verify that the user Josh Bailey is listed in Office 365.
3. On LON-DC1, in Active Directory Users and Computers, move Josh Bailey from the Research OU to the Sales OU, by right-clicking **Josh Bailey** in the **Research** OU user list, and then clicking **Move** and selecting **Sales** OU. Click **OK**.

► **Task 3: Move a user into the scope of synchronization**

1. On LON-DC1, ensure that **Active Directory Users and Computers** is open.
2. In the console tree, if needed, expand **Adatum.com**, and then click **Marketing**.
3. Right-click **David So**, and click **Move**.
4. In the **Move** dialog box, expand **Adatum.com**, click **Research**, and then click **OK**.

► **Task 4: Change group membership**

1. In the console tree of **Active Directory Users and Computers**, click **Research**.
2. In the right pane, double-click **Research**.
3. In the **Research Properties** dialog box, click the **Members** tab.
4. Select the following three users and click **Remove**. In the confirmation dialog box, click **Yes**.
 - Allie Bellew
 - Anil Elison
 - Aziz Hassouneh
5. Click **OK**.

► **Task 5: Force synchronization**

1. On LON-DS1, from the taskbar, right-click the **Windows PowerShell** shortcut, and then click **Run as administrator**.



Note: If a **User Account Control** dialog box appears, click **Yes**.

2. At the Windows PowerShell prompt, type the following, and then press Enter:

```
Start-ADSyncSyncCycle -PolicyType Delta
```




Note: The **Delta** switch is used here so that only the updates are synchronized.


3. Wait until synchronization has completed before proceeding to the next task.

► **Task 6: Validate the results of directory synchronization**


1. To verify the new user you created, on LON-CL1, open the Office 365 Admin Center in Microsoft Edge by typing **https://portal.office.com/admin/default.aspx** in the address bar.
2. Sign in using the following credentials:
 - User name: **holly@AVXXXXa.xtremelabs.us**
 - Password: **Pa\$\$w0rd**
3. If you are connected to the previous Office 365 admin center, click that **banner** at the top of the page to connect to the new Office 365 admin center.
4. In the **Office 365 Admin Center**, in the left navigation, click **Users**, and then click **Active Users**.
5. In the **Active Users** list, verify that **Perry Brill** has a status of **Synced with Active Directory**.

 **Note:** You might need to wait up to 10 minutes before the account appears. Refresh the list until you see Perry Brill's account.

6. In the **Active Users** list, click the **Perry Brill**.
7. Under the **Product licenses** section, click **Edit**.
8. On the **Product licenses** page, in the **Location** drop-down menu, select **United States**, and then click the icon next to **Office 365 Enterprise E3**.
9. Click **Assign**, and then click **Close**.
10. Repeat steps 5-8 to assign an Office365 license for user David So.
11. To verify the new group you created, in **Office 365 admin center**, in the left navigation, click **Groups** and then click **Groups**.
12. In the **Groups** list, verify that the **Project Team** appears.

 **Note:** You might need to wait up to 10 minutes before the group appears. Refresh the list until you see the object.

13. In the **Groups** list, select the **Project Team** group.

 **Note:** In the right pane, notice that **Edit Members** is unavailable. This is because group membership is maintained by Active Directory. To view the membership, you need to use Windows PowerShell.

14. On LON-DS1, in Windows PowerShell, type the following command, and then press Enter:

```
Get-MsolGroup
```

15. Verify that you see Research and Project Team groups. Copy the **ObjectID** value for these two groups.
16. To verify the group you updated membership in AD DS, type the following command at the Windows PowerShell prompt, and then press Enter:

```
Get-MsolGroupMember -GroupObjectId <ObjectID for Research group>
```

17. Verify the membership of the group does not contain the users removed in AD DS. The users who were removed from the group are:
 - **Allie Bellew**
 - **Anil Elison**
 - **Aziz Hassouneh**
18. To verify the user you moved out of the scope of synchronization, Josh Bailey, type the following command at the Windows PowerShell prompt, and then press Enter:

```
Get-MsolUser -Search Josh
```

19. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
Get-Mso1AccountSku
```



Note: The number of **ConsumedUnits** is now less than before.

20. Leave the virtual machines running for the next lab.

Results: After completing this exercise, you will have identified how managing user and group accounts has changed with directory synchronization.

Module 5: Planning and deploying Office 365 ProPlus

Lab: Managing Office 365 ProPlus installations

Exercise 1: Preparing an Office 365 ProPlus managed installation

► Task 1: Download the Office 365 deployment tool

1. On LON-CL1, on the taskbar, click **File Explorer**.
2. In File Explorer, click **Local Disk (C:)** in the left navigation pane.
3. In File Explorer, click the **Home** tab, and then click **New Folder**.
4. Type **Office16**, and then press Enter.
5. In File Explorer, right-click **Office16**, click **Share with**, and then click **Specific people**.
6. In the **File Sharing** dialog box, click the drop-down list box, select **Everyone** from the list, click **Add**, and then click **Share**.
7. In the **File Sharing** dialog box, click **Done**.
8. From the taskbar, open the Microsoft Edge browser.
9. In the address bar, type **https://portal.microsoftonline.com**, and then press Enter.
10. Sign in as **holly@AVXXXa.xtremelabs.us**, with the password **Pa\$\$w0rd**.
11. On the **Office 365** home page, click **Admin**. Click **Switch back to the old admin center** to switch to the previous Office365 admin center.
12. In the Office 365 admin center, in the left panel, click **SERVICE SETTINGS**, and then click **User software**.
13. Under the **Manually deploy user software** area, click **Learn how to download and deploy software**.
14. On the **How admins can download Office 365 user software to deploy to users** page, click **Manage user software in Office 365**.
15. In the **Manually download and install the Office apps by using the Office Deployment Tool** section, click the **Office Deployment Tool (Office 2016 version)** link to open the **Office Deployment Tool** download page.
16. On the download page, expand **Details**, **System Requirements**, and **Install Instructions**.
17. Read and familiarize yourself with each section. You can mark this page as a favorite to refer to later.
18. Click **Download** and notice the information bar at the bottom of the browser.
19. Once the download is completed, click **Run**.
20. In the **User Account Control** dialog box, click **Yes**.
21. Accept the license agreement and click **Continue**.
22. Browse to the **Office16** folder on This PC's **C: drive**.
23. Click **OK**. You should see that the files were extracted successfully. Click **OK**.

24. Navigate to the **Office16** folder with File Explorer. You should see two files in the newly created **Office Deployment Tool** folder named **configuration** and **setup**.

► **Task 2: Modify an Office 365 ProPlus installation**

1. In this step, you will back up the Office 16 **configuration.xml** file and then open it so that you can edit it in the next step. To do this, perform the following steps:
 - a. In File Explorer, double-click **C:\Office16**.
 - b. Right-click **configuration.xml**, and click **Copy**. Right-click again and click **Paste**.
 - c. Right-click the **configuration.xml** file, click **Open with**, and then click **Notepad**.
2. In Notepad, edit the first **Add** line after <Configuration> to read:

```
<Add SourcePath="\\LON-CL1\Office16\" OfficeClientEdition="32" Branch="Current">
```

3. In Notepad, remove all the remaining comment codes (lines that start with <!-- and end with -->).
4. Comment out Microsoft Visio with the <!-- --> code to make the download quicker, by replacing this code:

```
</Product>
<Product ID="VisioProRetail">
<Language ID="en-us" />
</Product>
```

with this code:

```
</Product>
<!--
<Product ID="VisioProRetail">
<Language ID="en-us" />
</Product>
-->
```

5. Save the file as **AdatumConfiguration.xml**.
6. Switch to File Explorer (you should still be in the **Office16** folder), press Shift, right-click any white space below the file list, and then click **Open command window here**.
7. At the command prompt, type the following command, and then press Enter:

```
Setup /?
```

8. Note the Office Deployment Tool command-line options.
9. At the command prompt, type the following command, and then press Enter:

```
setup.exe /download \\LON-CL1\Office16\AdatumConfiguration.xml
```

10. In the User Account Control window, click **Yes**.
11. The download will take several minutes to complete.
12. Switch to File Explorer, and verify that the download has started in the Office16 folder. You can continue with the next task and leave the download in the background.

Results: After completing this exercise, you will have downloaded a copy of Microsoft Office 365 ProPlus for managed deployment to a shared folder. You will also have downloaded and installed the Office Deployment Tool.

Exercise 2: Managing user-driven Office 365 ProPlus installations

► Task 1: Manage user rights to install Office 365 ProPlus

1. On LON-CL1, if required, sign in to Office365 admin center as **holly@AdatumAVXXXXa.xtremelabs.us** with the password of **Pa\$\$w0rd**.
2. Connect to the new Office 365 admin center.
3. On the **Office 365** home page, click **Admin**.
4. In the Office 365 admin center, click **Users**.
5. Select **Brad Sutton**, and then next to **Product licenses**, click **Edit**.
6. Under **Set user location**, select **United Kingdom**, and then enable **Office 365 Enterprise E3**.
7. Set the **Office 365 ProPlus** option to **Off**, click **Assign**, and then click **Close**.
8. In the Office 365 admin center, under **Active users**, click **Maira Wenzel**.
9. Beside **Product licenses**, click **Edit**.
10. Under **Location**, select **United Kingdom**, and then enable **Office 365 Enterprise E3**.
11. Verify that Maira has permission to use all features.
12. Click **Assign**, and then click **Close**.
13. Repeat steps 8 through 12 for **Roman Miler**.
14. In the Office 365 admin center, on the **Settings** menu, click **Service & add-ins**.
15. Click **Software download settings**.
16. In the **Software for PC** section, under **2016 version**, turn off all options.
17. In the **2013 version** section, turn off all options. Click **Save**, and then **Close**.
18. On the **Admin** page, click Holly Dickson's **profile photo** icon in the top-right of the screen, and then click **Sign Out**.
19. On the **Sign in** page, at **https://portal.microsoftonline.com**, sign in as **brad@AVXXXXa.xtremelabs.us**, using the password **Pa\$\$w0rd**.
20. On the **Default Landing** page, click the small **Gear** icon in the top-right corner, and then click the **Office 365 settings** option.
21. On the **Office 365 settings** page, click **Software**.



Note: Because this user is not licensed for Office 365 ProPlus, Office 2016 is not available for download.

22. Close and reopen Microsoft Edge and connect to **https://portal.office.com**.
23. On the **Sign in** page, in the **Name** box, type **roman@AVXXXXa.xtremelabs.us**.
24. In the **Password** box, type **Pa\$\$w0rd**, and then click **Sign in**.

25. On the default landing page, click the small **Gear** icon in the top-right corner, and then click **Office 365 settings**.

26. On the **Office 365 settings** page, click **Install software**.



Note: This user has a license, but Skype for Business and Office are not available for download.

27. Click **Phone & tablet**. Verify that **Phone and tablet** apps are available.

28. Close Microsoft Edge.

29. Open Microsoft Edge.

30. In the address bar, type **https://portal.office.com**, and then press Enter.

31. Sign in as **holly@AVXXXA.xtremelabs.us**.

32. Click **Admin** on the **Office 365** home page.

33. In the Office 365 admin center, on the **Settings** menu, click **Apps**.

34. Click **Software download settings**.

35. Next to the 2016 version, set the value to **On**. Verify that Office and Skype for Business are both set to on, and click **Save**.

36. Click **Close**.

37. In Microsoft Edge, on the **User Software** page, click Holly Dickson's **profile photo** icon, and then click **Sign out**.



Note: Instead of signing out your admin user every time, you can click the Microsoft Edge browser ellipse menu (...) at the top right of the browser and open a New InPrivate window. This will allow you to have two sessions at a time open.

38. Switch to LON-CL3. Verify that you are logged in as Roman.

39. Open Microsoft Edge.

40. In the address bar, type **https://portal.office.com**, and then press Enter.

41. On the **Sign in** page, in the **Name** box, type **roman@AVXXXA.xtremelabs.us**.

42. In the **Password** box, type **Pa\$\$w0rd**, and then click **Sign in**.

43. On the **Office 365** home page, click the small **Gear** icon in the top-right corner, and then click **Office 365 settings**.

44. On the **Settings** page, click **Software**.



Note: This user has a license, and Office 2016 is available for download.

45. Verify that Office and Skype for Business desktop software are available to install.

46. Do not install, but notice that this user can now install the 32-bit version of Office 365 ProPlus and select which language he wants to install. He must click **Advanced** to turn on the 64-bit version option.

47. Note also that **Phone and tablet** apps are available from the left menu.
48. Leave this page open and continue to the next lab to perform the user-driven installation.

► **Task 2: Install Office 365 ProPlus from the Office 365 portal**

1. On LON-CL3, open Microsoft Edge and sign into the Office 365 portal at portal.office.com, with the username **roman@AVXXXXa.xtremelabs.us**, click **Office365 Settings** in the upper-right corner, and then click **Software**.
2. In the **Language** section, select the language to install from the drop-down menu.
3. Leave **32-bit (recommended)** selected.
4. Click **Install**.
5. In the Microsoft Edge notification bar, click **Run**.
6. If the **User Account Control** dialog box appears, type **Adatum\Holly** in the user name box, type **Pa\$\$w0rd** in the **Password** box, and then click **Yes**.
7. On the taskbar, click the **Office** icon, and note the status of the download.



Note: It will take several minutes to complete, but applications are now available.

8. Click **Close** when the wizard finishes.
9. Go to the Start screen.
10. On the Start screen, click **Word 2016**. On the first things first window click **Accept**.
11. In the top-right corner, if no one is signed in, sign in as **Roman@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**, by clicking the link **Sign in to get the most out of office**.
12. Once signed in, your subscription license is activated. At the top right, under **Roman Miler**, click **Switch account**.
13. Click **SIGN OUT**, and then click **Sign out** next to Roman's name.
14. Click **Yes** in the **Remove Account** dialog box.
15. At the top right, click **Sign in to get the most out of Office**.
16. On the **Sign in** page, in the **E-mail address** box, type **holly@AVXXXXa.xtremelabs.us**, and then click **Next**.
17. On the **Sign in** page, in the **Password** box, type **Pa\$\$w0rd**, and then click **Sign in**.
18. Click **Blank document**.
19. Type some text.
20. Click **File**, then click **Save**.
21. Click **Sites – A. Datum** and click **A. Datum** in the right pane.
22. Double-click the **Documents** folder, and then save the file with the name **Meeting Agenda**.
23. Click **Save**. You might see a **streaming features** message.
24. Close Word.
25. Switch back to Roman Miler's Office 365 session in Microsoft Edge.
26. In the top-right corner, click the **Settings** icon, and then click **Office 365 settings**.

27. On the **Office 365 settings** page, click **Software**.

Note that you now have a new section at the top of the page where you can manage Office 365 installs.

28. Click **Tools & Add-ins**.

► **Task 3: Manage office licenses**

1. On LON-CL3, sign out of Roman's account on the **Office 365** page.
2. Sign back in as **Holly Dickson** with the username **holly@AVXXXXa.xtremelabs.us**.
3. In the **Password** box, type **Pa\$\$w0rd**, and then click **Sign in**.
4. On the **Office 365** home page, click **Admin**.
5. In the Office 365 admin center, click **Users**, and then click **Roman Miler**.
6. In the right pane, under **Product licenses**, click **Edit**.
7. Under **Office 365 Enterprise E3**, set the **Office 365 ProPlus** option to **Off** to remove the license from Roman's account, click **Assign**, and then click **Close**.
8. In Microsoft Edge, at the top right, click the **Profile photo** icon for Holly Dickson, and then click **Sign out**.
9. On the **Sign in** page, type **roman@AVXXXXa.xtremelabs.us**.
10. In the **Password** box, type **Pa\$\$w0rd**, and then click **Sign in**.
11. In the top-right corner, click the **Settings** icon, and then click **Office 365 settings**.
12. On the **Settings** page, click **Software**.

Note that the Office installation is no longer listed, as this user no longer has an active license (although software is available).



Note: The Office 365 ProPlus applications will still be available to Roman on any machine on which he already installed them, but within 30 days, they will drop into low-functionality mode. This means he will only be able to read and print documents.

► **Task 4: Reactivate Office 365 ProPlus**

1. Sign out of the Office 365 page, and sign back in as **holly@AVXXXXa.xtremelabs.us**.
2. In the **Password** box, type **Pa\$\$w0rd**, and then click **Sign in**.
3. On the **Office 365** home page, click the **Admin** tile.
4. In the Office 365 admin center, click **Users**, and then click **Roman Miler**.
5. In the right pane, under **Product licenses**, click **Edit**.
6. Under **Office 365 Enterprise E3**, set the **Office 365 ProPlus** option to **On**, click **Assign**, and then click **Close**.
7. Close Microsoft Edge.

Results: After completing this exercise, you should be able to activate Office 365 ProPlus for self-service installations and set licensing options correctly for end users so that deployment and installation is possible.

Exercise 3: Managing centralized Office 365 ProPlus installations

► Task 1: Configure a Group Policy Object (GPO) to distribute the custom installation

1. Switch to LON-DC1 and connect as **Adatum\administrator**, with the password **Pa\$\$w0rd**.
2. On LON-DC1, in Server Manager, click **Tools**, and then click **Active Directory Users and Computers**.
3. In the console tree, right-click **Adatum.com**, point to **New**, and then click **Organizational Unit**.
4. Type **Adatum_Computers**, and then click **OK**.
5. In the console tree, under **Adatum.com**, click **Computers**.
6. Right-click **LON-CL4**, click **Move**, click **Adatum_Computers**, and then click **OK**.
7. In Server Manager, click **Tools**, and then click **Group Policy Management**.
8. In the Group Policy Management window, expand **Forest: Adatum.com**, expand **Domains**, expand **Adatum.com**, and then click **Adatum_Computers**.
9. Right-click **Adatum_Computers**, and then click **Create a GPO in this domain, and Link it here**.
10. In the **New GPO** dialog box, in the **Name** box, type **DeployO365**, and then click **OK**.
11. In **Group Policy Management**, click **Adatum_Computers**, and in the right pane, right-click **DeployO365**, and then click **Edit**. If you see a Group Policy Management Console window, click **OK**.
12. In Group Policy Management Editor, expand **Computer Configuration**, **Policies**, **Windows Settings**, and then double-click **Scripts (Startup/Shutdown)**.
13. Double-click **Startup**, and then click **Show Files**.
14. In File Explorer, click **Home**, click **New item**, click **Text Document**, and then press Enter to accept the default name.
15. Double-click **New Text Document.txt**.
16. In Notepad, add the following line:

```
\\LON-CL1\Office16\setup.exe /configure \\LON-CL1\Office16\AdatumConfiguration.xml
```

17. Save the file as **DeployO365.cmd**. Ensure that in **Save as type**, you select **All Files** and that the file extension is **.CMD**.
18. Click **Save**.
19. Close Notepad.
20. Delete **New Text Document**.
21. Switch back to the **Group Policy Management Editor**, **Startup Properties** dialog box.
22. Click **Add**.
23. In the **Add a Script** dialog box, click **Browse**.
24. In the **Browse** dialog box, select **DeployO365.cmd**, and then click **Open**.
25. In the **Add a Script** dialog box, click **OK**.
26. In the **Startup Properties** dialog box, click **OK**.
27. Close Group Policy Management Editor.

Note that you could also deploy this script by using Microsoft Intune, Microsoft System Center Configuration Manager, or other electronic software distribution.

► **Task 2: Verify the installation**

1. Switch to LON-CL4, and if necessary, sign in as **Adatum\Maira**, with the password, **Pa\$\$w0rd**.
2. Right-click the **Start** button, and click **Command Prompt (Admin)**.
3. In the **User Account Control** dialog box, type **Adatum\Holly** as the user name and **Pa\$\$w0rd** as the password, and click **Yes**.
4. Type **gpupdate /force** and press Enter.
5. Wait for the Group Policy to update for both the computer and user and then close the command prompt.
6. Restart the computer.



Note: If any updates have downloaded, click **Update**, and then restart.

7. Wait five minutes after LON-CL4 has restarted before continuing. This is to allow the Group Policy settings to take effect on LON-CL4.
8. Sign in as **ADATUM\maira** with the password **Pa\$\$w0rd**. You may have to wait for Office to finish installing.
9. Navigate to the Start screen, and note that Office 2016 is installed. You might have to wait up to 15 minutes before you see any available Office applications.
10. Click **Word 2016**. If you do not see it on the Start screen, type **Word** to bring up the icon.
11. On the **Activate Office** page, in the **E-mail address** box, type **maira@AVXXXXa.xtremelabs.us**, and then click **Next**.
12. On the **Sign in** page, in the **Password** box, type **Pa\$\$w0rd**, and then click **Sign in**. Click **OK** on the notification window.
13. In the **First things first** dialog box, click **Accept**.
14. Close the **Welcome to your new Office** dialog box.
15. In the templates list, click **Blank document**.
16. Type some text.
17. Click **File**, and then click **Save**.
18. Click **Browse in This PC – Documents**.
19. In **File name**, enter **Meeting Report**, and then click **Save**.
20. Right-click the **taskbar**, and then click **Task Manager**.
21. In Task Manager, click **More details**.
22. On the **Processes** tab, under **Background processes**, notice that Microsoft Office Click-to-Run appears.
23. Click the **Details** tab, and notice **officeclicktorun.exe** in the task list.
24. Click the **Services** tab, and notice that the **ClickToRunSvc** service is running.



Note: Check Task Manager for your deployment. These items will all be present in a successful install.

25. Close Task Manager.

26. Close Word 2016.

Results: After completing this exercise, you will have enabled centralized managed deployment of Office 365 ProPlus and implemented a standardized Microsoft Office configuration by using one version of Office.

Module 6: Planning and managing Exchange Online recipients and permissions

Lab: Managing Exchange Online recipients and permissions

Exercise 1: Configuring Exchange Online recipients

► Task 1: Create user mailboxes

1. On LON-CL1, open Microsoft Edge.
2. In the address bar, type **https://login.microsoftonline.com/**, and then press Enter.
3. Sign in as **holly@AVXXXa.xtremelabs.us**, with the password **Pa\$\$w0rd**.
4. On the **Office 365** home page, click **Admin**.
5. In the Office 365 admin center, click **Users**.
6. Above the list of users, click **Add a user**.
7. On the **Create new user account** page, enter the following information, and then click **Save**:
 - First name: **Martina**
 - Last name: **Blair**
 - Display name: **Martina Blair**
 - User name: **Martina**
 - Select **Let me create the password**, and then type the following password in both fields: **Pa\$\$w0rd**
 - Make this user change their password when they first sign in: **Not selected**
 - Under **Product licenses** select licenses for this user: **Office 365 Enterprise E3**
8. Click **Close**, and then repeat step 7 to add the following additional users:
 - **Matt Villagomez** (because **Matt@AVXXXa.xtremelabs.us** is in use, assign the user name **MattV**)
 - **Olivia Emerson**
 - **Kendra Sexton**
9. In the Office 365 admin center, on the **Admin centers** menu, click **Exchange**.
10. In the Exchange admin center, click **recipients**.



Note: It might take a few minutes for the mailboxes to appear. Click the refresh icon periodically until they do.

► Task 2: Create groups and assign mailboxes

1. On the **recipients** tab, click **groups**.
2. Click the **+** icon, and then click **Distribution group**.
3. In the Distribution Group window, in the **Display name** box, type **IT**.

4. In the **Alias** box, type **IT**.
5. Under **Members**, click the **+** icon.
6. In the Select Members window, click **Olivia Emerson**, click **Add**, and then click **OK**.
7. In the Distribution Group window, click **Save**.
8. Repeat steps 2 through 7 to add the following additional groups and members:
 - Managers: **Martina Blair**
 - Development: **Matt Villagomez**
 - Sales: **Kendra Sexton**

► **Task 3: Connect to Exchange Online with Windows PowerShell**

1. On the desktop, right-click **Windows Azure Active Directory Module for Windows PowerShell**, and then click **Run as administrator**.
2. At the **User Account Control** prompt, click **Yes**.

 **Note:** If you copy the following commands from the courseware, you can paste them into the virtual machine. On the **Virtual Machine Connection** menu, click **Clipboard**, and then click **Type clipboard text**.

3. In the Windows PowerShell window, type the following command, and then press Enter:

```
$credential = Get-Credential
```

4. In the **Enter Credentials** dialog box, in the **User name** box, type **holly@AVXXXXa.xtremelabs.us**.
5. In the **Password** box, type **Pa\$\$word**, and then click **OK**.
6. In the Windows PowerShell window, type the following command, and then press Enter:

```
connect-msolservice -credential $credential
```

7. In the Windows PowerShell window, type the following command, and then press Enter:


```
$exchangeSession = New-PSSession -ConfigurationName Microsoft.Exchange -ConnectionUri  
"https://outlook.office365.com/powershell-liveid/" -Credential $credential -  
Authentication "Basic" -AllowRedirection
```

8. In the Windows PowerShell window, type the following command, and then press Enter:

```
Import-PSSession $exchangeSession -DisableNameChecking
```

9. In the Windows PowerShell window, type the following command, and then press Enter:

```
Get-AcceptedDomain
```

 **Note:** This command returns the list of accepted domains and verifies that you can connect to your Office 365 subscription.

► **Task 4: Create resource mailboxes**

1. In Microsoft Edge, in the Exchange Admin center, in **recipients**, click **resources**.

- In the Windows PowerShell window, type the following command, and then press Enter:

```
New-Mailbox -Name "Conference Room" -Room
```

- In the Windows PowerShell window, type the following command, and then press Enter:

```
Set-CalendarProcessing "Conference Room" -AutomateProcessing AutoAccept
```

- In the Windows PowerShell window, type the following command, and then press Enter:

```
New-Mailbox -Name "Demonstration Laptop" -Equipment
```

- In the Windows PowerShell window, type the following command, and then press Enter:

```
Set-CalendarProcessing "Demonstration Laptop" -AutomateProcessing AutoAccept
```



Note: If you receive an error running the **set-calendarprocessing** cmdlet for either of these objects, wait a few moments and repeat.

- Switch to Microsoft Edge, and in the Exchange Admin center, click **Refresh**. You should be able to see both resources.

- In the Windows PowerShell window, type the following command, and then press Enter:

```
Set-mailbox "Conference room" -resourcecapacity "25"
```

- Switch to Microsoft Edge, and in the Exchange Admin center, click **Refresh**. You should be able to see the changes you made in the details pane on the right.

► Task 5: Configure additional Exchange Online recipients

- On LON-CL1, browse to **C:\Labfiles**. Open **ExternalContacts.csv**. Review the file contents, and then close Excel.
- In Microsoft Edge, in the Exchange admin center, click **contacts**.
- Switch to Windows PowerShell.
- In the Windows PowerShell window, type the following command, and then press Enter:

```
CD C:\Labfiles
```



Note: If you copy the following commands from the courseware, you can paste them into the virtual machine. On the **Virtual Machine Connection** menu, click **Clipboard**, and then click **Type clipboard text**.

- In the Windows PowerShell window, type the following command, and then press Enter:

```
Import-Csv .\Externalcontacts.csv | %{New-MailContact -Name $_.Name -DisplayName $_.Name -ExternalEmailAddress $_.ExternalEmailAddress -FirstName $_.FirstName -LastName $_.LastName}
```

- In the Windows PowerShell window, type the following command, and then press Enter:

```
$Contacts = Import-CSV .\externalcontacts.csv
```

- In the Windows PowerShell window, type the following command, and then press Enter:

```
$contacts | ForEach {Set-Contact $_.Name -StreetAddress $_.StreetAddress -City
$_City -StateorProvince $_.StateorProvince -PostalCode $_.PostalCode -Phone $_.Phone
-MobilePhone $_.MobilePhone -Pager $_.Pager -HomePhone $_.HomePhone -Company
$_.Company -Title $_.Title -OtherTelephone $_.OtherTelephone -Department
$_.Department -Fax $_.Fax -Initials $_.Initials -Notes $_.Notes -Office $_.Office -
Manager $_.Manager}
```

- In Microsoft Edge, in the Exchange Admin center, in **contacts**, click **Refresh**. You can see the newly created objects.

Results: After completing this exercise, you will have created and configured Microsoft Exchange Online recipients.

Exercise 2: Configuring delegated administration

► Task 1: Assign users to built-in role groups

- In the Exchange admin center, click **permissions**.
- On the **admin roles** tab, click **Organization management**, and then click **Edit**.
- In the Role Group window, under **Members**, click the **+** icon.
- In the Select Members window, click **Olivia**, click **add**, and then click **OK**.
- In the Role Group window, click **Save**.

► Task 2: Create a new admin role and assign a user to it

- Switch to Windows PowerShell.



Note: If you copy the following commands from the courseware, you can paste them into the virtual machine. On the **Virtual Machine Connection** menu, click **Clipboard**, and then click **Type clipboard text**.

- In the Windows PowerShell window, type the following commands, pressing Enter after each command:

```
Enable-OrganizationCustomization

New-RoleGroup -Name BranchOfficeAdmins -roles "Mail Recipients", "Distribution
Groups", "Move Mailboxes", "Mail Recipient Creation"
```

- In the Windows PowerShell window, type the following command, and then press Enter:

```
Add-RoleGroupMember "BranchOfficeAdmins" -Member Martina
```

4. In the Windows PowerShell window, type the following command, and then press Enter:

```
Get-RoleGroupMember "BranchOfficeAdmins"
```

5. Switch to Internet Explorer, and then in the Exchange admin center, click **Refresh**. Ensure that you can see the new BranchOffice Admins role group.

► **Task 3: Create a new role assignment policy**

1. In Microsoft Edge, in the Exchange Admin center, click **user roles**.
2. Switch to Windows PowerShell.



Note: If you copy the following commands from the courseware, you can paste them into the virtual machine. On the **Virtual Machine Connection** menu, click **Clipboard**, and then click **Type clipboard text**.

3. In the Windows PowerShell window, type the following command, and then press Enter:

```
New-RoleAssignmentPolicy "Limited Mailbox Configuration" -Roles MyBaseOptions, MyAddressInformation, MyDisplayName
```

4. To change the default role assignment policy for new mailboxes, in the Windows PowerShell window, type the following command, and then press Enter:

```
Set-RoleAssignmentPolicy "Limited Mailbox Configuration" -IsDefault
```

5. When prompted, type **Y**, and then press Enter.
6. In the Exchange admin center, click **Refresh**. You can see the new role assignment policy.

► **Task 4: To prepare for the next module**

When you have finished the lab, leave all of the virtual machines running.

Results: After completing this exercise, you will have configured delegated administration of your Exchange Online organization.

Module 7: Planning and configuring Exchange Online services

Lab A: Configuring message transport in Exchange Online

Exercise 1: Configuring message-transport settings

► Task 1: Connect to Exchange Online in Windows PowerShell

1. On LON-CL1, on the desktop, double-click **Windows Azure Active Directory Module for Windows PowerShell**.



Note: You might have a Windows PowerShell connection to Office 365 open from a previous lab. If so, you can use the existing connection and skip this step.

2. In Windows PowerShell, type **\$cred=Get-Credential**, and then press Enter.
3. In the Windows PowerShell credential request window, in the **User name** box, type **Holly@AVXXXXa.xtremelabs.us**.
4. In the **Password** box, type **Pa\$\$w0rd**, and then click **OK**.
5. In Windows PowerShell, type the following command, and then press Enter:

```
$Session=New-PSSession -ConfigurationName Microsoft.Exchange -ConnectionUri  
https://outlook.office365.com/powershell-liveid/ -Credential $cred -Authentication  
Basic -AllowRedirection
```

6. Type the following command, and then press Enter:

```
Import-PSSession $Session
```

► Task 2: Create a custom send and receive connector to enforce TLS

1. On the taskbar, click **Microsoft Edge**.
2. In Microsoft Edge, in the **search** box, type **https://login.microsoftonline.com**, and press Enter.
3. At the login page, sign in as **Holly@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
4. In the menu bar, click the **Apps** button, and then click **Admin**.
5. In the Office 365 admin center, on the menu on the left, under **Admin centers**, click **Exchange**.
6. In the Exchange admin center, click **mail flow**, and then click **connectors**.
7. Click **New**.
8. On the **Select your mail flow scenario** page, in the **From** box, select **Office 365**.
9. In the **To** box, select **Partner organization**, and then click **Next**.
10. On the **New connector** page, in the **Name** box, type **Humongous Insurance Outgoing**, and then click **Next**.
11. Click **Only when email messages are sent to these domains**, and then click **Add**.
12. On the **add domain** page, type **humongousinsurance.com**, click **OK**, and then click **Next**.
13. Click **Use the MX record associated with the partner's domain**, and then click **Next**.

14. Select the **Always use Transport Layer Security (TLS) to secure the connection** check box, click **Issued by a trusted certificate authority (CA)**, and then click **Next**.
15. On the **confirmation** page, click **Next**.
16. On the **Validate this connector** page, click **Add**.
17. In the **Send the test email to the address** box, type **postmaster@humongousinsurance.com**, click **OK**, and then click **Validate**.
18. Wait while validation completes, and then click **Close**.
19. On the **Validation Result** page, click **Save**.
20. In the Warning window, click **Yes**.



Note: Validation of mail flow will fail because the connector is to a fictitious organization. This is expected behavior for this lab.

21. In the Exchange admin center, on the **connectors** tab, click **New**.
22. On the **Select your mail flow scenario** page, in the **From** box, select **Partner organization**.
23. In the **To** box, select **Office 365**, and then click **Next**.
24. On the **New connector** page, in the **Name** box, type **Humongous Insurance Incoming**, and then click **Next**.
25. Click **Use the sender's domain**, and then click **Next**.
26. Click **Add**, type **humongousinsurance.com**, click **OK**, and then click **Next**.
27. Select the **Reject email messages if they aren't sent over TLS** check box, and then click **Next**.
28. On the **confirmation** page, click **Save**.

► Task 3: Create transport rules

1. On LON-CL1, on the **Exchange admin center** page, click **rules**.
2. Click **New**, and then click **Apply disclaimers**.
3. In the new rule window, in the **Name box**, type **A. Datum Disclaimer**.
4. In the **Apply this rule if** box, select **The recipient is located**, click **Outside the organization**, and then click **OK**.
5. Click **Enter text**.
6. In the specify disclaimer text window, type **<HR> If you are not the intended recipient of this message, you must delete it**, and then click **OK**.
7. Click **Select one**.
8. In the specify fallback action window, select **Wrap**, and then click **OK**.
9. In the new rule window, click **Save**.
10. If the Warning window appears, click **Yes**.
11. In Exchange admin center, click **New**, and then click **Send messages to a moderator**.
12. In the new rule window, in the **Name** box, type **Moderate Managers**.
13. In the **Apply the rule if** box, select **The recipient is a member of**, in the Select Members window, click **Managers**, click **add**, and then click **OK**.

14. In the **Do the following** box, select **Forward the message for approval to**, click **Holly Dickson**, click **add**, and then click **OK**.
15. In the new rule window, click **Save**.
16. On LON-CL2, on the taskbar, click **Microsoft Edge**.
17. In Microsoft Edge, in the **search** box, type **https://login.microsoftonline.com**, and then press Enter.
18. Sign in as **Francisco@AVXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
19. In Office 365, click the **Apps** button, and then click **Mail**.
20. In the Mail window, click **New**.
21. In the **To** field, type **alias@outlook.com**, where **alias@outlook.com** is the Microsoft account that you configured at the beginning of this course.
22. In the **Subject** field, type **Disclaimer Test**.
23. In the message body, type **This message will have a disclaimer**, and then click **Send**.
24. Sign in to Outlook.com, and then verify that the message has the disclaimer **If you are not the intended recipient of this message, you must delete it** added at the end of the message body. If the message is not in the Inbox, check the **Junk** folder.
25. In the Mail window in which you are signed in as Francisco, click **New**.
26. In the **To** field, type **Martina**.
27. In the **Subject** field, type **Moderation Test**.
28. In the message body, type **This message requires approval by Holly**, and then click **Send**.
29. On LON-CL1, click **Start**, type **Outlook**, and then click **Outlook 2016**.
30. Type **Holly@AVXXXa.xtremelabs.us** and **Pa\$\$w0rd** in the **Windows Security** dialog box. If needed, complete the account setup wizard by clicking **Next** four times.
31. In Outlook, read the approval request, and then click **Approve**.
32. Close Outlook 2016.

► **Task 4: Create a journal rule for members of the research department**

1. On LON-CL1, in the Exchange admin center, click **compliance management**, click **journal rules**, and then click **Select address**.
2. In the non-delivery reports window, click **Browse**, click **Holly Dickson**, click **OK**, and then click **Save**.
3. In the Warning window, click **OK**.
4. Click **New**.
5. In the new journal rule window, in the **Send journal reports to** box, type **journal@humongousinsurance.com**.
6. In the **Name** box, type **Development Messages**.
7. In the **If the message is sent to or received from** box, select **A specific user or group**, click **Development**, click **add**, and then click **OK**.
8. In the **Journal the following messages** box, select **All messages**, and then click **Save**.

► Task 5: Track internal and external message delivery

1. On LON-CL1, in the Exchange admin center, click **mail flow**, and then click **message trace**.
2. Review the available search options, and then click **search**.
3. In the Message Trace results window, double-click the message sent to **alias@outlook.com**.
4. Review the information in the message, including the message events that show that the disclaimer was applied.
5. Click **Close**.
6. Double-click the message sent from Francisco to Martina.
7. Review the information in the message, including that the message was sent for moderation.
8. Click **Close**.
9. In the Message Trace Results window, click **Close**.

Results: After completing the exercise, you will have configured message-transport settings.

Lab B: Configuring email protection and client policies

Exercise 1: Configuring email protection

► Task 1: Configure the malware filter

1. On LON-CL1, in the Exchange admin center, click **protection**, and then click **malware filter**.
2. Click **Default**, and then click **Edit**.
3. In the Default window, click **settings**.
4. Under **Notifications**, select the **Notify internal senders** check box.
5. Select the **Notify administrator about undelivered messages from internal senders** check box.
6. In the **Administrator email address** box, type **Holly@AVXXXa.xtremelabs.us**.
7. Select the **Notify administrator about undelivered messages from external senders** check box.
8. In the **Administrator email address** box, type **Holly@AVXXXa.xtremelabs.us**, and then click **Save**.

► Task 2: Configure the connection filter

1. On LON-CL1, in the Exchange admin center, click **connection filter**.
2. Click **Default**, and then click **Edit**.
3. In the Default window, click **connection filtering**.
4. Under **IP Block list**, click **Add**.
5. In the add blocked IP address window, type **192.168.0.0/24**, and then click **OK**.
6. Select the **Enable safe list** check box, and then click **Save**.

► **Task 3: Configure the spam filter**

1. On LON-CL1, in the Exchange admin center, click **spam filter**.
2. Click **Default**, and then click **Edit**.
3. In the Default window, click **spam and bulk actions**.
4. In the **High confidence spam** box, select **Quarantine message**, and then click **Save**.
5. Click **Add**.
6. In the new spam filter policy window, in the **Name** box, type **Sales spam policy**.
7. In the **Spam** box, select **Prepend subject line with text**.
8. In the **High confidence spam** box, select **Move message to Junk Email folder**.
9. In the **Prepend subject line with this text** box, type **Junk:**.
10. Scroll to the bottom of the window, and under **Applied To**, in the **If** box, select **The recipient is a member of**, click **Sales**, click **add**, and then click **OK**.
11. Click **Save**.

► **Task 4: Test the spam-filter settings (optional)**

1. Sign in to your **alias@outlook.com** account.
2. Create a new message to send to **kendra@AVXXXXa.xtremelabs.us**.
3. In the body of the message, include the text **XJS*C4JDBQADN1.NSBN3*2IDNEN*GTUBE-STANDARD-ANTI-UBE-TEST-EMAIL*C.34X**, and then send the message.
4. Create a new message to send to **francisco@AVXXXXa.xtremelabs.us**.
5. In the body of the message, include the text **XJS*C4JDBQADN1.NSBN3*2IDNEN*GTUBE-STANDARD-ANTI-UBE-TEST-EMAIL*C.34X**, and then send the message.
6. On LON-CL1, in the Exchange admin center, click **protection**, and then click **quarantine**.
7. Verify that the message sent to Francisco is in quarantine, but the message sent to Kendra is not.
8. Click the message sent to Francisco, click **Release Message**, and then click **Release selected message(s) to All recipients**.
9. In the Warning window, click **Yes**.
10. When processing is complete, click **Close**.
11. On LON-CL2, in Outlook on the web, verify that the message was delivered.

Results: After completing this exercise, you should have configured anti-spam and antivirus settings.

Exercise 2: Configuring client access policies

► **Task 1: Configure an Outlook Web App policy**

1. On LON-CL1, in the Exchange admin center, click **permissions**, and then click **Outlook Web App policies**.
2. Click **New**.

3. In the new Outlook Web App mailbox policy window, in the **Policy name** box, type **Limited features**.
 4. Clear the following check boxes:
 - **Instant messaging**
 - **Text messaging**
 - **Unified messaging**
 - **LinkedIn contact sync**
 - **Journaling**
 5. Under **Private computer or OWA for devices**, clear the **Direct file access** check box, and then click **Save**.
 6. Click **recipients**, click **Kendra Sexton**, and then click **Edit**.
 7. In the Kendra Sexton window, click **mailbox features**.
 8. Under **Email Connectivity**, click **View Details**.
 9. In the Outlook Web App mailbox policy window, click **Browse**, click **Limited features**, click **OK**, and then click **Save**.
 10. In the Kendra Sexton window, click **Save**.
 11. On LON-CL1, click **Start**, type **Outlook** and then click **Outlook 2016**. If prompted, type **Holly@AVXXXXa.xtremelabs.us** and **Pa\$\$w0rd** in the **Windows Security** dialog box.
 12. Click **New Email**.
 13. In the new email window, in the **To** box, type **Kendra@AVXXXXa.xtremelabs.us**, and then click **Check Names**.
 14. In the **Subject** box, type **Attachment Test**.
 15. In the ribbon, click **Attach File**, and then click **Browse This PC**.
 16. In the Insert File window, browse to **C:\Windows\Logs\DISM**, click **dism**, and then click **Insert**.
 17. Click **Send**.
 18. On LON-CL2, in Outlook on the web, sign out, and then sign in again as **Kendra@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
 19. On the Outlook page, select your time zone and click **Save**.
 20. Read the new **Attachment Test** message.
 21. Click the message **attachment**.
 22. Click **OK** to close the message, indicating that you do not have permission to download files.
- **Task 2: Configure mobile-device access**
1. On LON-CL1, in the Exchange admin center, click **mobile**, and then click **mobile device access**.
 2. Click **edit**.
 3. In the Exchange ActiveSync access settings window, click **Quarantine – Let me decide to block or allow later**.
 4. Under **Quarantine Notification Email Messages**, click **Add**, click **Holly Dickson**, click **add**, and then click **OK**.

5. In the Exchange ActiveSync access settings window, click **Save**.

▶ **Task 3: Configure a mailbox policy for mobile devices**

1. On LON-CL1, in the Exchange admin center, on the **mobile** menu, click **mobile device mailbox policies**.
2. Click **Default (default)**, and then click **Edit**.
3. In the Default window, click **security**, and then select the **Require a password** check box.
4. Select the **Allow simple passwords** check box.
5. Select the **Minimum password length** check box, enter a value of **4**, and then click **Save**.

▶ **Task 4: Validate mobile-device management policies (optional)**

1. On your mobile device, add a new ActiveSync account for Francisco Chaves.
2. If Autodiscover does not detect the server name, enter **outlook.office365.com**.
3. Your device will be placed into quarantine, and you must approve the device before you can send and receive messages.
4. After you configure the Exchange ActiveSync account, the security settings from the mobile-device mailbox policy will apply, and you may be prompted to create a password on your device.
5. When you finish your testing, you can delete the account from your mobile device.
6. Leave the virtual machines running for the next lab.

Results: After completing this exercise, you should have configured client access policies.

Module 8: Planning and deploying Skype for Business Online

Lab: Configuring Skype for Business Online

Exercise 1: Configuring Skype for Business Online organization settings

► Task 1: Download and install the Skype for Business Online module for Windows PowerShell

1. On LON-CL1, open Microsoft Edge, and then connect to **<http://go.microsoft.com/fwlink/?LinkId=294688>**.
2. On the **Skype for Business Online, Windows PowerShell Module** page, click **Download**, and then click **Run**.
3. Select **I agree to the license terms and conditions**, and then click **Install**.
4. If a **User Account Control** dialog box appears, click **Yes**.
5. After the installation completes, click **Close**.
6. Close the Microsoft Edge window.

► Task 2: Enable Skype Meeting Broadcast for the organization

1. On LON-CL1, in the search box on the taskbar, type **PowerShell**.
2. In the search results, right-click **Windows PowerShell**, and then click **Run as administrator**.
3. In the **User Account Control** dialog box, click **Yes**.
4. At the command prompt, type the following command, and then press Enter:

```
$cred = Get-Credential
```

5. In the **credentials** dialog box, enter the user name **Holly@AVXXXXa.xtremelabs.us** and the password **Pa\$\$w0rd**, and then click **OK**.
6. Type the following command, and then press Enter:

```
$SfBSession = New-CSOnlineSession -Credential $cred
```

7. Type **Y** and press Enter.
8. Type the following command, and then press Enter:

```
Import-PSSession $SfBSession
```

9. Type the following command, and then press Enter:

```
Set-CsBroadcastMeetingConfiguration -EnableBroadcastMeeting $True
```

10. Type the following command, and then press Enter:

```
Get-CsBroadcastMeetingConfiguration
```

11. Verify that the *EnableBroadcastMeeting* parameter is set to **True**.

► **Task 3: Configure the organization settings for Skype for Business Online**

1. On LON-CL1, in the Windows PowerShell command-line interface window, type the following command to enable privacy mode, and then press Enter:

```
Set-CSPrivacyConfiguration -EnablePrivacyMode $True
```

Note the warning that you receive about enabling client version checking.

2. To disable push notifications for Apple devices, type the following command, and then press Enter:

```
Set-CSPushNotificationConfiguration -EnableApplePushNotification $False
```

3. To verify the privacy notification settings, type the following command, and then press Enter:

```
Get-CSPrivacyConfiguration
```

You should see the following output:

- Identity: **Global**
 - EnablePrivacyMode: **True**
 - AutoInitiateContacts: **True**
 - PublishLocationDataDefault: **True**
 - DisplayPublishedPhotoDefault: **True**
4. To verify the push notification settings, type the following command, and then press Enter:

```
Get-CSPushNotificationConfiguration
```

5. To allow users to communicate with public Skype users, type the following command, and then press Enter:

```
Set-CsTenantFederationConfiguration -AllowPublicUsers $True
```

6. To allow users to communicate with federated partners, type the following command, and then press Enter:

```
Set-CsTenantFederationConfiguration -AllowFederatedUsers $True
```

7. To enable communication with all federated partners except for litware.com, type the following commands, and then press Enter after each command:

```
$AllDomains = New-CsEdgeAllowAllKnownDomains

$BlockedDomain = New-CsEdgeDomainPattern -Domain "litware.com"

Set-CsTenantFederationConfiguration -AllowedDomains $AllDomains -BlockedDomains
$BlockedDomain

Get-CsTenantFederationConfiguration
```

8. Open Microsoft Edge, and then connect to **https://portal.office.com**.
9. If needed, sign in as **Holly@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
10. On the **Office 365** home page, click the **Admin** tile.
11. In the Microsoft Office 365 admin center, in the menu to the left, click **Admin centers**, and then click **Skype for Business**.

12. On the left-hand side, click **organization**.
13. On the **general** page, under presence privacy mode, verify that the setting is configured as **Display presence information only to a user's contacts**.
14. Under mobile phone notifications, verify that **Apple Push Notification Service** is not enabled, and then click **external communications**.
15. Under external access, verify that **On except for blocked domains** is selected.
16. Verify that under blocked or allowed domains, litware.com is listed.

► **Task 4: Configure the meeting invitation settings**

1. On LON-CL1, in the Skype for Business admin center, click **meeting invitation**.
2. In the **Help URL** text box, type **http://help.adatum.com**.
3. In the **Footer text** text box, type **Sample legal disclaimer**. Click **save**.
4. At the Windows PowerShell command prompt, type the following command, and then press Enter:

```
Get-CsMeetingConfiguration
```

5. Verify that the **Help URL** and **CustomFooterText** display the correct information.

► **Task 5: Validate the meeting invitation settings**

1. On LON-CL1, click **Start**, type **Skype**, and then open Skype for Business 2016.
2. In the Skype for Business window, type **Holly@AVXXXXa.xtremelabs.us**, and then click **Sign in**.
3. Type **Pa\$\$w0rd** for password, and then click **Sign in**. Click **Yes**.
4. Open Microsoft Outlook 2016.
5. On the ribbon, click **New Items**, click **Meeting**, and then click **Skype Meeting**.
6. In the **To** text box, type **Maira**.
7. Create a meeting request for some time tomorrow using a subject of **Test Meeting**.
8. Send the meeting request.
9. Open the calendar, and then double-click the **meeting** that you just created. Verify that the meeting contains the custom footer text and that the help link references **http://help.adatum.com**.

Results: After completing this exercise, you should have configured Skype for Business Online service settings.

Exercise 2: Configuring Skype for Business Online user settings

► **Task 1: Configure Skype for Business user settings**

1. On LON-CL1, navigate to the Office 365 admin center.
2. On the menu to the left, click **Users**, and then click **Active users**. Select **Christie Thomas**, and then click **Edit** in the **Product licenses** section.
3. Turn off **Skype for Business Online (Plan 2)**, click **Assign**, and then click **Close**.
4. On the menu to the left, select **Admin centers**, and then click **Skype for Business**.

5. On the menu to the left, click **Users**.
6. Verify that Christie Thomas is not listed as a Skype for Business user.
7. Select **Maira Wenzel**, and then click **Edit**.
8. On the **general** tab, under **Audio and video**, clear **Record conversations and meetings**.
9. On the menu to the left, click **external communications**, clear **External Skype users**, and then click **Save**.
10. Click the **back** icon, select **Francisco Chaves**, and then click **Edit**.
11. On the **general** tab, under **Audio and video**, select **Audio only** from the drop-down list box. Click **save**.
12. Close Microsoft Edge.

► **Task 2: Verify Skype for Business communications**

1. On LON-CL4, ensure that you are signed in as Maira. Open Outlook 2016.
2. On the **Welcome to Outlook 2016** page, click **Next**.
3. On the **Add an Email Account** page, click **Next**. If the Office installation wizard launches, wait for the installation to finish, and then continue.
4. On the **Auto Account Setup** page, fill in the following information, and then click **Next**:
 - Your Name: **Maira Wenzel**
 - E-mail address: **Maira@AVXXXXa.xtremelabs.us**
 - Password: **Pa\$\$w0rd**
 - Retype Password: **Pa\$\$w0rd**
5. In the **Microsoft Outlook** dialog box, type **Pa\$\$w0rd** as the password, select **Remember my credentials**, and click **OK**.
6. Click **Finish**.
7. Open Skype for Business 2016.
8. Click **Skip for now**.
9. Sign in as **Maira@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
10. Save the sign-in information. In the **Help Make Skype for Business Better!** dialog box, click **No**.
11. On LON-CL1, ensure that you are signed in as Holly, and verify that Outlook 2016 and Skype for Business 2016 are open.
12. In Outlook 2016, create a Skype meeting request for a meeting that will start within the next 15 minutes, and then send the request to Francisco Chaves and Maira Wenzel.
13. In Skype for Business, in the **Find someone** text box, type **Maira**.
14. Double-click **Maira Wenzel** to open an IM window.
15. Type a message, and then press Enter.
16. On LON-CL4, verify that the IM from Holly is received and respond to it.
17. In Outlook 2016, accept Holly's meeting request.
18. Open the meeting, and then click **Join Skype Meeting**.
19. Click **Don't join audio**, and then click **OK**.

20. Verify that Maira is connected to the meeting.
21. On LON-CL1, open the meeting request, click **Join Skype Meeting**, click **Don't join audio**, and then click **OK**.
22. Verify that Holly is connected to the meeting.
23. On LON-CL1, in the meeting window, click the **Present** icon, and then click **Present Desktop**.
24. In the Present Desktop window, click **Present**.
25. In the Skype for Business window, click **OK**.
26. On LON-CL4, verify that Holly's desktop is visible in the meeting window.
27. On LON-DC1, open Internet Explorer, and then connect to **https://portal.office.com**. Sign in as **Francisco@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
28. Click **Mail**.
29. Click the **meeting request** from Holly Dickson, click **Accept**, and then click **Send the response now**.
30. Click the **App launcher** at the top of the window, and then click **Calendar**.
31. Double-click Holly's **meeting request**.
32. In the meeting details window, click **Join Skype Meeting**.
33. In the Skype for Business Web App window, click **Sign in if you are an Office 365 user**.
34. Ensure that **Install the Skype for Business Web App plug-in** is selected, click **Join the Meeting**, and then click **Run**.
35. Verify that you can join the meeting and that Holly's desktop is visible. Ignore the warning that you need to set up an audio device.
36. Close the Internet Explorer window, and when prompted, click **Leave this page**.
37. On LON-CL4, disconnect from the meeting.
38. On LON-CL1, disconnect from the meeting.

Results: After completing this exercise, you should have configured Skype for Business Online user settings and validated Skype for Business Online functionality.

Exercise 3: Configuring a Skype Meeting Broadcast

► Task 1: Configure a Skype Meeting Broadcast

1. On LON-CL1, open a new tab in the Microsoft Edge browser.
2. Connect to **https://broadcast.skype.com**, and then, if needed, sign in as **holly@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
3. In the Skype Meeting Broadcast window, click **New Meeting**.
4. In the Meeting details window, fill in the following information:
 - Meeting title: **Test broadcast meeting**

- Meeting time: **Today's date**
 - Start time: **Within the next 15 minutes**
 - Duration: **1 hour**
 - Members: **Roman Miler**
 - Access: **Secure**
 - Attendees: **Maira Wenzel**
5. Scroll back to the top of the window, and then click **Create**.
 6. In the Skype Meeting Broadcast window, click **Create Outlook invitation**, and then click **Open**.
 7. In the Test broadcast meeting - Meeting window, click **Send Update**.
- ▶ **Task 2: Validate the Skype Meeting Broadcast configuration**
1. On LON-CL3, open Outlook 2016.
 2. On the **Welcome to Outlook 2016** page, click **Next**.
 3. On the **Add an Email Account** page, click **Next**.
 4. On the **Auto Account Setup** page, fill in the following information, and then click **Next**:
 - Your Name: **Roman Miler**
 - E-mail address: **Roman@AVXXXA.xtremelabs.us**
 - Password: **Pa\$\$w0rd**
 - Retype Password: **Pa\$\$w0rd**
 5. In the **Microsoft Outlook** dialog box, type **Pa\$\$w0rd** as the password, select **Remember my credentials**, and then click **OK**.
 6. Click **Finish**.
 7. Open Skype for Business 2016.
 8. Click **Skip for now**.
 9. Sign in as **Roman@AVXXXA.xtremelabs.us** with the password **Pa\$\$w0rd**.
 10. Save the sign-in information. In the **Help Make Skype for Business Better!** dialog box, click **No**.
 11. Open PowerPoint 2016. Select the option to create a blank presentation.
 12. Type a title for the presentation, and then save the presentation to the **Documents** folder using the name **Presentation.pptx**.
 13. Close PowerPoint 2016.
 14. In Outlook, click the **broadcast meeting request** from Holly Dickson, and then click **Accept**.
 15. In the Reminders pop-up window, double-click the **meeting request** from Holly.
 16. Click **Join the Meeting**.
 17. In the Skype for Business window, sign in as **Roman@AVXXXA.xtremelabs.us** with the password **Pa\$\$w0rd**, and then click **Join the event**.
 18. In the **Join Meeting Audio** dialog box, click **Don't join audio**, and then click **OK**.
 19. Ignore the warning about setting up an audio device.
 20. In the Meeting window, click **Present**, and then click **Present PowerPoint Files**.

21. Browse to the **Documents** folder, click **Presentation.pptx**, and then click **Open**.
22. In the right side of the meeting window, click **Content only**, and then click **Start Broadcast**.
23. Click **Start Broadcast** again. Wait for the broadcast to start.
24. On LON-CL4, signed in as Maira, in Outlook 2016, accept the meeting request from Holly.
25. Open the meeting request, and then click **Join the Meeting**.
26. In the Skype for Business window, sign in as **Maira@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**, and then click **Join the event**.
27. On LON-CL3, in the broadcast window, click **Stop Broadcast**, and then click **Stop Broadcast** again.
28. On both LON-CL3 and LON-CL4, disconnect from the meeting.
29. Keep the virtual machines running for the next lab.

Results: After completing this exercise, you should have configured a broadcast meeting and verified that users can join the meeting.

Module 9: Planning for and configuring SharePoint Online

Lab: Configuring SharePoint Online

Exercise 1: Configuring SharePoint Online settings

► Task 1: Configure settings

1. Ensure you are signed in to the 20347A-LON-CL1 virtual machine as **Holly** with the password of **Pa\$\$word**.
2. In LON-CL1, click the **desktop**, on the taskbar, click **Microsoft Edge**, and then browse to **https://portal.office.com**.
3. Sign in as **holly@AVXXXa.xtremelabs.us** (where **AVXXXa** is your unique Adatum.com number) with the password of **Pa\$\$w0rd**.
4. In the Office 365 admin center, click **Admin centers**, and then click **SharePoint**.
5. On the leftmost side, click **settings**.
6. Under **Site Collection Storage Management**, click **Automatic**.
7. Scroll down to **Enterprise Social Collaboration**.
8. Select **Use Yammer.com service**.
9. Scroll down to **external sharing**.
10. Click **Allow both external users who accept sharing invitations and anonymous guest links**, and then click **OK**.

► Task 2: Configure user profiles

1. On the leftmost side, click **user profiles**.
2. Under **people**, click **Manage User Profiles**.
3. In the **Find profiles** dialog box, type **Brad**, and then click **Find**.
4. In the result window, in the drop-down list, click **Brad**.
5. Click **edit my profile**, and in the **Manager** box, type **Holly**.
6. Click the **check names** field and verify that the field displays **Holly Dickson**.
7. In the right corner, click **Save and close**.
8. On the left side, click **user profiles**.
9. Under **My Site settings**, click **Setup My Sites**.
10. Scroll down to **My Site Cleanup**.
11. In the **secondary owner** list, type **Holly** and then click the **Check names** icon.
12. Scroll down, and click **OK**.

► Task 3: Configure apps

1. On the leftmost side, click **apps**, and then click **Configure Store Settings**.
2. In the Apps for Office from the Store window, click **No** to disable apps from starting when documents are opened in the browser.
3. Click **OK** and close the browser.

Results: After completing this exercise, you should have configured SharePoint Online service settings.

Exercise 2: Creating and configuring SharePoint Online site collections

► Task 1: Create a site collection using the SharePoint admin center

1. Open Microsoft Edge and sign in to <https://portal.office.com> with the user name **holly@AVXXXXa.xtremelabs.us**, and the password of **Pa\$\$w0rd**.
2. In the Office 365 admin center, on the left side menu, click **Admin centers**, and then click **SharePoint**.
3. In the leftmost side, click **Site collections**.
4. On the Site Collections ribbon, click **New**, and then click **Private Site Collection**.
5. In the **new site collection** dialog box, in the **Title** box, type **marketing**, in the empty text box, type **marketing**, and then in the **administrator** list, type **Holly**. Then click the **Check Names** icon. Leave the other settings as suggested. To confirm, click **OK**.



Note: SharePoint Online provisions the new marketing site. This process can take a few minutes.

6. After marketing is created, select the <https://adatumAVXXXX.sharepoint.com/sites/marketing> check box.



Note: It can take a few minutes until the **Sharing** menu on the ribbon is active. You can speed this up by pressing the F5 key to refresh the page.

7. When the **marketing** site is selected, on the ribbon, click **Sharing**.
8. In the **Sharing** dialog box, select **Allow sharing with all external users, and by using anonymous access links**, and then click **Save**.



Note: The site settings changes to allow external user sharing. This process is usually done within one minute. Now, external user sharing is enabled and you can use it for this marketing site.

► Task 2: Create a site collection using Windows PowerShell

1. To install the SharePoint Online Management Shell, you must first download it from the Microsoft Download Center. To do so, open a new Microsoft Edge tab and browse to <http://aka.ms/f04q5o>.

2. On the **SharePoint Online Management Shell download** page, in the **Select Language** drop-down list, select your appropriate language, and then click **Download**.
3. On the **Choose the download you want** page, select the check box for the 64-bit version and for the most current file. Click **Next**.
4. If a message about pop-ups appears, click **Allow once**.
5. In the Internet Explorer dialog box asking whether you want to run or save the file, click **Run**.
6. On the **SharePoint Online Management Shell Setup** page, select the **I accept the terms in the License Agreement** check box, and then click **Install**.
7. If a **User Account Control** dialog box appears, click **Yes**.
8. When the installation completes, click **Finish**.
9. Click **Start**, type **sharep**, and right-click **SharePoint Online Management Shell**, and then click **Run as administrator**.
10. In the **User Account Control** dialog box, click **Yes**.
11. At the command prompt, type the following command, and then press Enter (where **AVXXXX** is your unique Adatum domain name):

```
Connect-SPOService -Url https://AdatumAVXXXX-admin.sharepoint.com -credential
holly@AVXXXXa.xtremelabs.us
```

12. In the **Enter your credentials** dialog box, in the **Password** box, type **Pa\$\$w0rd**, and then click **OK**.
13. At the command prompt, type the following command, and then press Enter:

```
New-SPOSite -Url https://AdatumAVXXXX.sharepoint.com/sites/AcctsProj -Owner
holly@AVXXXXa.xtremelabs.us -StorageQuota 500 -NoWait -Template PROJECTSITE#0 -Title
"Accounts Project"
```

14. Close the Windows PowerShell window.

► Task 3: Configure permissions on the site collections

1. In LON-CL1, open Microsoft Edge, in the top-right corner, click the **ellipsis**, and then click **New InPrivate Window**.
2. Browse to **https://portal.office.com**.
3. Sign in as **holly@AVXXXXa.xtremelabs.us**, with the password of **Pa\$\$w0rd**.
4. In the Office 365 admin center, click **Admin**, and then click **SharePoint**.
5. On the leftmost side, click **Site collections**.
6. Select the **https://adatumAVXXXX.sharepoint.com/sites/marketing** check box.
7. On the ribbon, click **owners**, and then click **Manage Administrators**.
8. In the **Site Collection Administrators** text box, type **Brad**, click the **Check Names** icon, and then click **OK**.
9. Open another InPrivate window, browse to **https://adatumAVXXXX.sharepoint.com/sites/marketing**, and sign in as **brad@AVXXXXa.xtremelabs.us**, with the password of **Pa\$\$w0rd**.
10. In the upper-right corner, click the **Settings** icon (the wheel icon), and then navigate to **site settings**.

11. Under **Users and Permissions**, click **Site collection administrators** to open it.
12. Verify that **Brad Sutton** appears.
13. Close the Microsoft Edge window.

► **Task 4: Verify access to the site collections**

1. In LON-CL1, open Microsoft Edge.
2. Browse to **<https://adatumAVXXXX.sharepoint.com/sites/marketing>**.
3. Sign in as **maira@AVXXXXa.xtremelabs.us**, with the password of **Pa\$\$w0rd**.



Note: You need permission to access this site, and you need to send an access request for permission to view the site.

4. In the **You need permission to access this site** dialog box, type **Please enable Maira's access to this site**, and then click **Request Access**.
5. Close Microsoft Edge and then reopen it.
6. Browse to **<https://AdatumAVXXXX.sharepoint.com/sites/marketing>**.
7. Sign in as **holly@AVXXXXa.xtremelabs.us** with the password of **Pa\$\$w0rd**.
8. In the top-right corner, click the **Settings** icon (the wheel icon), and then click **Site settings**.
9. Under **User and Permissions**, click **Site permissions**.
10. Click **Show access requests and invitations**.
11. Verify that Maira's request is listed, and click **Approve**.
12. Click **Site Settings**, and click **Site permissions**.
13. Click **marketing Members**.
14. Verify that Maira's account is listed.
15. Click **New**, and click **Add Users**.
16. In the text box at the top, type **Perry**, and then click **Perry Brill**.
17. Click **Share**.
18. Close Microsoft Edge.
19. Open Microsoft Edge and connect to **<https://AdatumAVXXXX.sharepoint.com/sites/marketing>**.
20. Sign in as **maira@AVXXXXa.xtremelabs.us**, with the password of **Pa\$\$w0rd**.
21. Verify that you can access the site.
22. Close Microsoft Edge and reopen it.
23. Browse to **<https://AdatumAVXXXX.sharepoint.com/sites/marketing>**.
24. Sign in as **Perry@AVXXXXa.xtremelabs.us**, with the password of **Pa\$\$w0rd**.
25. Verify that you can access the site.

Results: After completing this exercise, you should have created and configured SharePoint Online site collections.

Exercise 3: Configuring and verifying external user sharing

► Task 1: Configure global settings for external user sharing

1. In LON-CL1, open Microsoft Edge.
2. Browse to **https://portal.office.com**.
3. Sign in as **holly@AVXXXA.xtremelabs.us**, with the password of **Pa\$\$w0rd**.
4. In the Office 365 admin center, click **Admin**, and then click **SharePoint**.
5. On the leftmost side, click **settings**, and then scroll down to **external sharing**.
6. Click **Allow both external users who accept sharing invitations and anonymous guest links**, and then click **OK**.


► Task 2: Configure a site collection for external user sharing

1. In Microsoft Edge, click **Site Collections**.
2. Select the **https://AdatumAVXXX.sharepoint.com/sites/AcctsProj** check box.
3. On the ribbon, in the **Manage** section, click **Sharing**.
4. In the **Sharing** dialog box, click **Allow sharing with all external users, and by using anonymous access links**.
5. Click **Save**.
6. Wait for the operation to complete, which might take about 5 minutes.
7. Close Microsoft Edge.
8. Open Microsoft Edge and browse to **https://AdatumAVXXX.sharepoint.com/sites/AcctsProj**.
9. Sign in as **holly@AVXXXA.xtremelabs.us** with the password of **Pa\$\$w0rd**.
10. In the top-right corner, click **SHARE**.
11. In the **Share 'Accounts Project'** dialog box, type in the email address of the Microsoft account you used to set up Office 365.
12. In the text box, type **You can now access this shared site on Adatum Publishing**.
13. Click **Share**.
14. Browse to **https://AdatumAVXXX.sharepoint.com/sites/marketing**.
15. In the left navigation pane, click **Documents**.
16. Click **New**, and then click **Word document**.
17. In the Word Online window, type some text, and then wait to check if **Saved** appears in the document title, and then click the **marketing** link.
18. In the document list, click the **ellipsis** button (...) next to the document you created, and then click **SHARE**.
19. Click **Get a link**, and then click **Edit link – no sign-in required**.
20. Select the link, right-click it, and then click **Copy**.
21. Click **Close**.


22. In the SharePoint Online window, click the **apps** icon, and then click **Mail**.
23. If prompted, select your language and time zone, and then click **Save**.
24. Click **New**.
25. In the **To** box, type the email address for your Microsoft account, and then in the **Subject** box, type **Shared Document**.
26. In the message box, right-click, and then click **Paste**.
27. Click **SEND**.
28. Close Microsoft Edge.

► **Task 3: Verify external user sharing**

1. Open Microsoft Edge and browse to **https://outlook.com**.
2. Sign in with your Microsoft account.

 **Note:** The Inbox should show two emails from Microsoft Online Services Team. If the messages are not in the Inbox, look in the Junk folder.

3. Open the message that has the subject Holly Dickson wants to share Accounts Projects.
4. Click the **Accounts Project** link in the email.
5. Click **Microsoft Account**. Verify that you can access the site.
6. Close the browser tab. In your Inbox, open the second invitation email message with the subject of **Holly Dickson wants to share the document**.
7. Click the **Document** link.

 **Note:** You are redirected directly to the Word Document. Word Online opens and shows the document.

8. Verify that you can access the Word document, and then click **Edit in Browser**.
9. Add some text in this document.
10. Close Microsoft Edge.
11. Leave the virtual machines running for the next lab.

Results: After completing this exercise, you should have configured a new site collection for external user sharing, and you should have shared a site and a document with external users.

Module 10: Planning and configuring an Office 365 collaboration solution

Lab: Planning and configuring an Office 365 collaboration solution

Exercise 1: Configuring Yammer Enterprise

► Task 1: Configure a Yammer organization setting

1. In LON-CL1, click **Desktop**, open **Microsoft Edge** from the taskbar, and then browse to **https://portal.office.com**.
2. Sign in as **holly@AVXXXXa.xtremelabs.us** (where **AVXXXXa** is your unique Adatum number), with the password **Pa\$\$w0rd**.
3. Click the Office 365 app launcher icon, and then click **Yammer**.
4. On the **WHO DO YOU WORK WITH?** page, click the **X** at the top-right corner to close the page.
5. In Yammer, in the left pane beside Holly Dickson, click the **Settings** icon.
6. Click **NETWORK ADMIN**.
7. In the Yammer admin center, in the left Navigation pane, click on **Usage Policy**.
8. In the Usage Policy window, select the **Require users to accept policy during sign up and after any changes are made to the policy** check box.
9. In the Usage Policy window, select the **Display policy reminder in sidebar** check box.
10. In the **Custom Policy Title** text box, type **Adatum Acceptable Use Policy**.
11. In the **Enter your policy in the textbox below** text box, copy and paste the following text:
Welcome to Yammer! Our goal is to provide a collaborative environment to connect with colleagues and bridge various departments and geographic locations to share meaningful information.
12. Click **Save**.
13. In the Adatum Acceptable Use Policy window, click **I Accept**.
14. If needed, in Yammer, in the left pane beside Holly Dickson, click the **Settings** icon, and then click **NETWORK ADMIN**.
15. In the left side menu of the Yammer console, click **Configuration**.
16. In the Email Settings section, click **A weekly digest of your group messages**.
17. On the Enabled Features page, clear the **3rd Party Applications** check box.
18. Click **Save**.
19. In the left side menu of the Yammer console, click **Data Retention**.
20. On the **Data Retention Policy** page, read the description of available options, click **Soft Delete**, and then click **Save**.
21. In the left side menu of the Yammer console, click **Monitor Keywords**.
22. On the Monitor Keywords page, type **holly@AVXXXXa.xtremelabs.us** in the Email Address field.

23. In the text box, type the following words, one in each line: **gambling, erotic, warez**.
24. Click **Save**.
25. In the left side menu of the Yammer console, click **Success**.
26. Click **Write a welcome message** in the middle pane.
27. In the middle pane, in the **What are you working on?** text box, type **Welcome to all Adatum users!**, and then click **Post**.

► **Task 2: Configure Yammer service settings, and enforce Office 365 identity**

1. In Yammer, in the left pane, click the **Settings** icon.
2. Click on **NETWORK ADMIN**.
3. In the Yammer admin center, in the left Navigation pane, in the **Content and Security** section, click **Security Settings**.
4. Scroll down to **Enforce Office 365 identity in Yammer**.
5. Select the **Enforce Office 365 identity in Yammer** check box.
6. In the pop-up window, click **Yes, I'm ready**.
7. Click **Save**.

► **Task 3: Configure the Yammer user experience**

1. In Yammer, in the left pane, click the **Settings** icon, and then click **SETTINGS**.
2. In the left navigation pane, click **Notifications**.
3. In the **Send me a digest of message activity** drop-down list, click **weekly**.
4. Select only the following options in the **Email me when...**section:
 - **I receive a message in my inbox**
 - **I log in from somewhere new**
 - **I post a message via email (This will send a confirmation email)**
5. Click **Save**.
6. Close Microsoft Edge.

► **Task 4: Use Yammer**

1. On LON-CL3, open Microsoft Edge, and connect to **https://portal.office.com**.
2. Sign in as **Roman@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
3. On the Office 365 portal, click **Yammer**.
4. On the **WHO DO YOU WORK WITH** prompt, type **Christie** in the first text box, and then click **DONE**. Click the **X** at the top-right corner.
5. Click **I Accept** in the Adatum Acceptable Use Policy prompt.
6. Find the post from Holly Dickson in the post list.
7. Click **Like**, and then click **SHARE**.
8. In the **Share This Conversation** section, select **Post in a Group**, type **All Company** in the drop-down box, and in the text box, type **Welcome from me too**.
9. Click **Share**.

10. In the **What are you working on** text box, type **free gambling here**, and click **Post**.
11. Close the Microsoft Edge browser.
12. Open the Microsoft Edge browser and browse to **https://portal.office.com**.
13. Sign in as **Holly@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
14. On the Office 365 portal, click **Mail**.
15. Verify that you received a message from Yammer with a report about monitored keyword appearance in the Roman post.
16. Close Microsoft Edge browser.

Results: After completing this exercise, you should have enabled Yammer Enterprise for A. Datum.

Exercise 2: Configuring OneDrive for Business

► Task 1: Enable OneDrive for Business synchronization

1. On LON-CL3, click **Start**, click **All apps**, and then click **Word 2016**.
2. In the Word window, in the top right corner, verify that Word is licensed to Roman Miler.
3. If Word is licensed to another account, click **Switch account**.
4. In the **Accounts** dialog box, click **SIGN OUT**, and then click **Sign out**. In the **Remove Account** notice, click **Yes**.
5. At the top right, click **Sign in to get the most out of Office**.
6. On the Sign in page, in the **E-mail address** box, type **Roman@AVXXXXa.xtremelabs.us**, and then click **Next**.
7. On the **Sign in** page, in the **Password** box, type **Pa\$\$w0rd**, and then click **Sign in**.
8. Verify that Word is now licensed to Roman. Close Word.
9. Open Microsoft Edge, and connect to **https://portal.office.com**.
10. Sign in as **Roman@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
11. On the Office 365 portal, click **OneDrive**.
12. On the **Welcome to OneDrive for Business** page, click **Next**.
13. In the OneDrive window, click **New**, and then click **Word document**.
14. In the Word Online window, type some text, and then click **Roman Miler** at the top of the Window beside Word Online.
15. In the OneDrive window, click **Sync**, and then click **Sync now**.
16. In the **Did you mean to switch apps?** dialog box, click **Yes**.
17. In the **Sync the library 'Documents' for Roman Miler?** dialog box, click **Sync Now**.
18. If prompted to sign in, type **Roman@AVXXXXa.xtremelabs.us**, and click **Next**.
19. Type **Pa\$\$w0rd** and click **Sign In**.

20. In the **Microsoft OneDrive for Business** dialog box, click **Show my files**.
 21. Note that File Explorer opens and displays the location where the synchronized files will be stored. Verify that the Word document has been synchronized to the local computer.
- **Task 2: Create files to synchronize with OneDrive for Business**
1. On LON-CL3, ensure that the **OneDrive for Business** folder is open in File Explorer.
 2. On the ribbon in File Explorer, click **Home**, click **New folder**, and then create a new folder named **Private**.
 3. On the ribbon, click **Home**, click **New folder**, and then create a second new folder named **Project A**.
 4. Double-click the folder **Private**. Right-click in this folder, and on the context menu, click **New**, and then click **Microsoft Word Document**. Name the document **Holidays.docx**.
 5. Double-click **Holidays.docx** to open it, and then type some text. Save the changes, and then close Microsoft Word.
 6. See how the document icon in the taskbar changes from two blue arrows to a small green checkmark icon after the synchronization process is complete. The document has been transferred to the cloud storage automatically.
 7. In the File Explorer window, navigate to **OneDrive for Business** in the navigation address line to move one level up.
 8. Double-click the folder **Project A**. Right-click in this folder, and on the context menu, click **New**, and then click **Microsoft Word Document**. Name the document **Project targets.docx**.
 9. Double-click **Project targets.docx** to open it, and then type some text. Save the changes, and then close Microsoft Word.
 10. Verify that the document synchronizes.
 11. To view the files online, switch to the Microsoft Edge window. Refresh the view.
 12. In the **Files** list, you should see your two folders, **Private** and **Project A**.
 13. Navigate to the **Private** folder. Click the synchronized document **Holidays.docx** to open it in Word Online.
 14. Click **Edit document**, and then click **Edit with Word Online**. Add some text. The document is saved automatically when **Saved** is displayed in the title bar.
 15. In the menu bar right beside Word Online, click **Roman Miler** to return to OneDrive for Business.
 16. The content of the **Private** folder changes, and you will see that you changed the document online. The changed column shows that the document changed some seconds (or minutes) ago.
 17. Switch back to File Explorer. Navigate to the folder **Private**, and then open **Holidays.docx**. You will see that the changes you made in Word Online are synchronized back automatically.
- **Task 3: Share files with other users**
1. In File Explorer, right-click the folder **Project A**, click **View Online**.
 2. Microsoft Edge opens. Open the **Project A** folder, right-click **Project Targets.docx**, and then click **Share**.
SharePoint Online automatically opens a dialog box named **Share Project targets**.
 3. The left navigation pane displays the link **Invite people**. In the text box, type **Holly Dickson**.

4. Ensure that the drop-down list on the right has **Can edit** selected, add a short message in the message text box, and then click **Share**.
5. Open a new InPrivate Microsoft Edge window, and connect to **https://portal.office.com**.
6. Sign in as **Holly@AVXXXXa.xtremelabs.us** using the password **Pa\$\$w0rd**.
7. In the Office 365 Portal, click **Mail**.
8. Click the **message** with the subject Roman Miler wants to share Project Targets.
9. In the message box, click **Project Targets**.
10. When the document opens, click **Edit Document**, and then select **Edit in Word Online**. Verify that you can open the document and edit it. All modifications are stored online in the OneDrive for Business cloud storage. By default, SharePoint Online creates a new version when the document changes. This can be viewed by the owner in the **version history**.
11. Close the InPrivate Microsoft Edge window.
12. In the Microsoft Edge window, right-click **Project Targets**, and then click **Share** on the menu bar.
13. Click **Shared with**, and then click **Stop sharing** to stop sharing this document. Click **Stop sharing** again, and then click **Close**.
14. Close the Microsoft Edge window.

Results: After completing this exercise, you should have configured OneDrive for A. Datum.

Exercise 3: Configuring Office 365 groups

► Task 1: Configure a private Office 365 group

1. On LON-CL1, sign in to **http://portal.office.com** as **Holly@AVXXXXa.xtremelabs.us** with the password **Pa\$\$word**.
2. Open the Office 365 admin center through the app launcher by clicking the **Admin** icon.
3. Select **Groups** in the left navigation pane, click **Groups**, and then click **Add a group**.
4. In the Add a group window, verify that **Office 365 group** is selected in the **Type** drop-down list.
5. In the Add a group window, configure the following settings:
 - Name: **AdatumMarketing**
 - E-Mail: **Adatummarketing@AVXXXXa.xtremelabs.us**
 - Description: **Adatum Marketing Group**
 - Under **Privacy**, select **Private – Only members can see group content**.
 - Set the language to **English (United Kingdom)**
 - Group owner: **Holly Dickson**
6. Click **Add**.
7. Click **Close**.
8. In the Details window, in the **Members** section, click **Edit**.

9. Type **Roman** in the search box, and then click **Roman Miler**.
10. Click **Save**, and then click **Close**.

► **Task 2: Configure a public Office 365 group with Windows PowerShell**

1. On LON-CL1, double-click **Windows Azure Active Directory Module for Windows PowerShell** on the desktop.
2. Type the following command, and then press Enter:

```
$cred = Get-Credential
```

3. In the Windows PowerShell credential request windows, sign in as **Holly@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
4. Type the following command, and then press Enter:

```
$session = New-PSSession -ConfigurationName Microsoft.Exchange -ConnectionUri  
https://outlook.office365.com/powershell-liveid/ -Credential $cred -Authentication  
Basic -AllowRedirection
```

5. Type the following command, and then press Enter:

```
Import-PSSession $Session -AllowClobber
```

6. To create a new public Office 365 group, type the following command, and then press Enter:

```
New-UnifiedGroup -DisplayName "Planning Group" -Alias "PlanningGroup" -EmailAddresses  
PlanningGroup@AVXXXXa.xtremelabs.us
```

7. To add a user to the owners group, type the following command, and then press Enter:

```
Add-UnifiedGroupLinks "Planning Group" -Links Holly@AVXXXXa.xtremelabs.us -LinkType  
Owner
```

8. To add a user to the members group, type the following command, and then press Enter:

```
Add-UnifiedGroupLinks "Planning Group" -Links Francisco@AVXXXXa.xtremelabs.us -  
LinkType Member
```

► **Task 3: Explore the Office 365 group components**

1. On LON-CL1, open Microsoft Edge, and sign in to **https://portal.office.com** as **Holly@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
2. Click the **app launcher** in the upper-left corner.
3. Click **Mail**.
4. In the left pane, click **Planning Group**, and then click **Start a group conversation**.
5. In the message window, type a subject and some content, and then click **Send**.
6. Click **Calendar** on the toolbar, and then view the group calendar.
7. Click **New**. In the Details pane, fill out the data for the meeting, type **Planning meeting** for the subject, schedule it for tomorrow, and then click **Save**.
8. Ensure that the calendar item synchronizes with Holly's personal calendar.
9. Click the **Office365 apps** icon, and then click **Mail**.
10. In the navigation pane, select **Planning Group**.

11. Click **Files** on the toolbar, and then wait for the files store to be created. When you see **Ready to go**, click **Take me to Planning Group files**.
12. Click **New**, and then click **Word document**.
13. Type some text, and when you see **Saved** in the title bar, close the Microsoft Edge tab.
14. In the Mail window, click **Files**, and verify that the document has been added to the group.
15. On LON-CL3, open Microsoft Edge, and then sign in to **https://portal.office.com** as **Roman@AVXXXXa.xtremelabs.us**, with the password **Pa\$\$w0rd**.
16. Click **Mail**. Verify that the **AdatumMarketing** group appears in your **Groups** list.
17. Under Groups, click **Browse** or **Discover**.
18. Click **Planning Group**, and then click **Join**. Because this is a public group, you can join the group.
19. In the left navigation pane, click **Planning Group**, and then click **Conversations**. Verify that you see the message that Holly sent to the group.
20. Click **Files**, and then verify that you see the document that Holly created.
21. Close the Microsoft Edge browser.
22. Keep the virtual machines running for the next lab.

Results: After completing this exercise, you should have configured Office 365 groups at A. Datum.

Module 11: Planning and configuring Rights Management and compliance

Lab: Configuring Rights Management and compliance

Exercise 1: Configuring Rights Management in Office 365

► Task 1: Configure Rights Management for Exchange Online

1. On LON-CL1, sign in to <http://portal.office.com> as **Holly**.
2. In the Office 365 admin center, in the left side menu, select **Settings**, click **Services & add-ins**, then click **Microsoft Azure Right Management**.
3. Click **Manage Microsoft Azure Rights Management settings**, then click **activate**.
4. Open the Windows Azure Active Directory Module for Windows PowerShell from the desktop.
5. Type the following commands, pressing Enter after each command, to connect to remote Exchange Online with remote PowerShell. Use Holly's credentials to connect.

```
$Cred = Get-Credential

$Session = New-PSSession -ConfigurationName Microsoft.Exchange -ConnectionUri
https://outlook.office365.com/powershell-liveid/ -Credential $Cred -Authentication
Basic -AllowRedirection

Import-PSSession $Session
```

6. Type the following command, and then press Enter to set the IRM sharing location to the region you are in.

```
Set-IRMConfiguration -RMSOnlineKeySharingLocation "https://sp-
rms.na.aadrm.com/TenantManagement/ServicePartner.svc"
```



Note: Depending on the location of your tenant, replace the link in the preceding command with one of the following:

- For Europe: <https://sp-rms.eu.aadrm.com/TenantManagement/ServicePartner.svc>
- For Asia: <https://sp-rms.ap.aadrm.com/TenantManagement/ServicePartner.svc>
- For South America: <https://sp-rms.sa.aadrm.com/TenantManagement/ServicePartner.svc>

7. Type the following command, and then press Enter to configure Azure RMS as a trusted publishing domain.

```
Import-RMSTrustedPublishingDomain -RMSOnline -name "RMS Online"
```

8. Type the following command, and then press Enter to set the IRM configuration for licensed users only.

```
Set-IRMConfiguration -InternalLicensingEnabled $true
```

9. Type the following command, and then press Enter to test the configuration.

```
Test-IRMConfiguration -Sender holly@AVXXXXa.xtremelabs.us
```

10. Type the following command, press Enter, and then close Windows PowerShell.

```
Remove-PSSession $Session
```

► **Task 2: Configure Rights Management for SharePoint Online**

1. In Microsoft Edge, access the Office 365 admin center by using App launcher icon.
2. In the left navigation pane, under **Admin centers**, click **SharePoint**.
3. In the SharePoint admin center, in the left pane, click **settings**.
4. On the **settings** page, in the **Information Rights Management (IRM)** section, click **Use the IRM service specified in your configuration**, and then click **Refresh IRM Settings**.

► **Task 3: Validate the Azure Rights Management functionality**

1. On LON-CL1, open Word 2016.
2. In the Word window, at the top-right corner, click **Switch account**.
3. In the **Accounts** dialog box, click **Add Account**.
4. In the **Sign in** dialog box, type **Holly@AVXXXXa.xtremelabs.us**, and then click **Next**.
5. Type **Pa\$\$wOrd**, and then click **Sign in**.
6. Close Word 2016.
7. On LON-CL1, open Microsoft Outlook 2016.
8. Create a new email with **Brad Sutton** as the recipient.
9. Type a subject, and then type some text in the message body.
10. On the **Options** tab, click **Permission**, and then click **Connect to the Rights Management Server and get templates**.
11. Click **Permission** again, and then click **Do Not Forward**.
12. Send the message.
13. In Microsoft Edge, connect to **https://adatumAVXXXX.sharepoint.com/sites/marketing**.
14. Click **Documents**, and then click the **Library** tab.
15. On the **Library** ribbon, click **Library Settings**.
16. On the **Settings** page, under **Permissions and Management**, click **Information Rights Management**.
17. On the **Information Rights Management Settings** page, select the **Restrict permissions on this library on download** check box.
18. In the **Create a permission policy title** box, type **Marketing Policy**.
19. In the **Add a permission policy description** box, type **Marketing policy for downloads**.
20. Click **SHOW OPTIONS**.
21. Under **Configure document access rights**, select the **Allow viewers to write on a copy of the downloaded document** check box.
22. Click **OK**.

23. Close Microsoft Edge.
24. Open Microsoft Edge, and then connect to **https://portal.office.com**. Sign in as **Brad@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
25. In the Office 365 portal, in the App launcher, click **Mail**.
26. On the Outlook page, select your time zone, and then click **Save**.
27. Verify that you received an email from Holly that is IRM protected. Click the **message**.
28. Click the **down arrow** beside **Reply all**, and then verify that you do not have the option to forward or print the message.
29. In Microsoft Edge, connect to **https://adatumAVXXXX.sharepoint.com/sites/marketing**.
30. Click **Documents**, and then click **document**.
31. After the document opens, try to edit it in Word Online. Verify that you get a message that the document is read-only.
32. Close Microsoft Edge.

Results: After completing this exercise, you will have configured Rights Management for Exchange Online and SharePoint Online.

Exercise 2: Configuring compliance features

► Task 1: Configure Protection Center permissions and audit logging

1. On LON-CL1, open Microsoft Edge, and then connect to **https://portal.office.com**.
2. Sign in to the Office 365 portal as **holly@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
3. In the app launcher, click the **Admin** icon.
4. In the Office 365 admin center, in the left side menu, select **Admin centers**, and then click **Compliance**. If you are connected to the Compliance Center, click **Check out your new Office 365 Protection Center**.
5. In the Protection Center, click **Permissions**.
6. Click **Compliance Administrator**, and then click **Edit**.
7. On the **Compliance Administrator** page, under **Members**, click **Add**.
8. In the Select Members window, click **Brad Sutton**, click **add**, and then click **OK**.
9. Click **Save**.
10. Click **To assign permissions for retention policies and archiving, go to the Exchange admin center**.
11. Click **Compliance Management**, and then click **Edit**.
12. On the **Compliance Administrator** page, under **Members**, click **Add**.
13. In the Select Members window, click **Brad Sutton**, click **add**, and then click **OK**.
14. Click **Save**.
15. Close the Exchange role groups window.

16. Click **eDiscovery Manager**, and then click **Edit**.
17. On the **eDiscovery Manager** page, under **Members**, click **Add**.
18. In the Select Members window, click **Christie Thomas**, click **add**, and then click **OK**.
19. Click **Save**.
20. Click **Reports**, and then click **View reports**.
21. Click **Office 365 audit log report**.
22. On the **Audit log search** page, click **Start recording user and admin activities**, and then click **Turn on**.
23. Close Microsoft Edge.

► **Task 2: Configure archive mailboxes**

1. On LON-CL1, open Microsoft Edge, and then connect to **https://protection.office.com**.
2. Sign in to the Office 365 portal as **Brad@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**. Brad is a member of the Compliance Administrator role, so he can connect to the protection website.
3. In the navigation pane, click **Data management**, and then click **Archive**.
4. In the Archive window, click **Christie Thomas**, and then Ctrl + click **Jessica Jennings**.
5. Under **Bulk Edit**, click **Enable**. In the warning message, click **Yes**, and then click **Close**.
6. Click **Refresh**, and then verify that Christie and Jessica have been enabled for an archive mailbox.

► **Task 3: Configure retention tags and policies**

1. In the left pane, under **Data management**, click **Retention**.
2. Under **Delete**, click **Manage retention tags for mailboxes**.
3. On the **Retention Tags** page, click **New tag**, and then select **applied automatically to entire mailbox (default)**.
4. Type **Research User 1 year move to archive** as the name.
5. Select **Move to Archive** as the **Retention action**.
6. Type **365** as the **Retention period**.
7. Click **Save**.
8. On the toolbar, click **New tag**, and then select **applied automatically to entire mailbox (default)**.
9. Type **Default 2 years move to Deleted Items** as the name.
10. Select **Delete and Allow Recovery** as the **Retention action**.
11. Type **730** as the **Retention period**.
12. Click **Save**.
13. On the toolbar, click **New tag**, and then select **applied automatically to a default folder**.
14. Type **Purge Deleted Items 30 days** as the name.
15. Under **Apply this tag to the following default folder**, select **Deleted Items**.
16. Select **Permanently Delete** as the **Retention action**.
17. Type **30** as the **Retention period**.
18. Click **Save**.

19. On the toolbar, click **New tag**, and then select **applied by users to items and folders (personal)**.
 20. Type **2 Year Delete** as the name.
 21. Select **Delete and Allow Recovery** as the **Retention action**.
 22. Type **730** as the **Retention period**.
 23. Click **Save**.
 24. On the toolbar, click **New tag**, which is the plus sign (+), and then select **applied by users to items and folders (personal)**.
 25. Type **Never archive** as the name.
 26. Select **Move to Archive** as the **Retention action**.
 27. Select **Never** as the **Retention period**.
 28. Click **Save**.
 29. Close the Retention Tags window.
 30. On the **Retention** page, click **Manage retention policies for mailboxes**.
 31. On the toolbar, click **New**.
 32. On the **new retention policy** page, type **Research MRM Policy** as the name.
 33. Click **Add** below **Retention tags**.
 34. In the select retention tags window, Ctrl+click the following retention tags:
 - **6 Month Delete**
 - **1 Year Delete**
 - **2 Year Delete**
 - **Never Delete**
 - **Research user 1 year move to archive**
 - **Default 2 year move to Deleted Items**
 - **Purge Deleted Items 30 days**
 - **Personal 1 year move to archive**
 - **Never archive**
 35. Click **add**, and then click **ok**. Click **Save**.
 36. Close the Retention Policies window.
 37. On the **Retention** page, click **Assign retention policies to mailboxes**.
 38. On the **Assign Retention Policies to Mailboxes** page, click **Christie Thomas**, and then click **Edit**.
 39. On the **Assign Retention Policy to Christie Thomas** page, click **Research MRM Policy**, and then click **Save**.
 40. In the warning dialog box, click **Yes**.
- **Task 4: Configure content deletion and preservation policies**
1. On the **Retention** page, click **Manage document deletion policies for SharePoint Online and OneDrive for Business**.

2. Verify that Brad does not have permission to configure Microsoft SharePoint Online deletion settings. Close Microsoft Edge.
3. Open Microsoft Edge, and then connect to **https://protection.office.com**.
4. Sign in as **holly@AVXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
5. Click **Data Management**, and then click **Retention**.
6. On the **Retention** page, click **Manage document deletion policies for SharePoint Online and OneDrive for Business**.
7. On the **Compliance Policy Center** page, click **Sample Document Policy**.
8. On the **Sample Document Policy** page, change the policy name to **Marketing Document Policy**.
9. Under **Rules for this policy**, click **New**.
10. In the **New deletion rule** dialog box, type **Delete Messages at 7 years** as the name, select **Permanently Delete** as the delete action, select **Created Date** as the date from when the document deletion date will be calculated, and then configure the time period after which the document will be deleted as **7 years**.
11. Select the **Set as default rule** check box, click **Save**, and then click **Ok**.
12. On the **Sample Document Policy** page, click **Save**.
13. On the **Compliance Policy Center** page, click **Policy Assignments for Site Collections**.
14. On the **Policy Assignments for Site Collections** page, click **new item**.
15. On the **New: Site Collection Assignment** page, click **First choose a site collection**.
16. In the **Choose a site collection** dialog box, type **Marketing** in the search box, and then click the **Search** icon.
17. Select the **Marketing** check box, and then click **Save**.
18. On the **New: Site Collection Assignment** page, click **Manage Assigned Policies**.
19. In the **Add and manage policies** dialog box, select the **Marketing Document Policy** check box, and then click **Save**.
20. Select the **Mark Policy as Mandatory** check box, and then click **Save**.
21. Close the **Policy Assignments for Site Collections** tab.
22. On the **Retention** page, under **Preserve**, click **New**.
23. On the **New preservation policy** page, type **Retain contract details** as the policy name, and then click **Next**.
24. On the **Where do you want us to look?** page, select both **Mailboxes** and **SharePoint Online and OneDrive for Business sites**, and then click **Next**.
25. On the **Which mailboxes do you want to include?** page, click **Add**, click **Francisco Chaves**, click **Add**, click **OK**, and then click **Next**.
26. On the **Which SharePoint Online or OneDrive for Business sites do you want to include?** page, click **Add**.
27. On the **Choose sites** page, type **https://adatumAVXXX.sharepoint.com/sites/AcctsProj/** as the site URL, and then click **OK**.
28. Click **Next**.

29. On the **What do you want to look for?** page, in the box, type **Contract**. Select the **Start date** checkbox, and then pick a date that is two days ago.
30. Leave the **End date** check box cleared, and then click **Next**.
31. On the **How long do you want to preserve the content?** page, click **7 years**, and then click **Next**.
32. On the **Do you want to turn on Preservation Lock?** page, click **Next**.
33. On the **Do you want to turn on this policy after it is created?** page, accept the default, and then click **Next**.
34. On the **Review your settings** page, click **Create**.
35. Close Microsoft Edge.

► **Task 5: Configure data loss protection policies in SharePoint Online**

1. Open Microsoft Edge, and then connect to **https://protection.office.com**.
2. Sign in to the Office 365 portal as **Brad@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
3. In the navigation pane, click **Security Policies**, and then click **Data loss prevention**.
4. Click **New DLP policy from template**.
5. On the **What information do you want to protect?** page, verify that **Custom** is selected, and then click **Next**.
6. On the **Which services do you want to protect?** page, accept the default, and then click **Next**.
7. On the **Customize rules** page, click **New DLP rule**.
8. In the New DLP Rule window, click **Add condition**.
9. Click **Choose a condition**, and then click **Content contains sensitive information**.
10. Click **Add**, and in the Sensitive information types window, click **IP address**, click **Add**, and click **OK**.
11. On the **New DLP Rule** page, click **Actions**.
12. Click **Add Actions**.
13. Click **Select an action**, and then click **Send a notification**.
14. Review the default actions, and then click **Incident reports**.
15. Select the **Send an incident report to these people when this rule is matched** check box, and then click **Add people**.
16. Click **Christie Thomas**, click **add**, and then click **OK**.
17. On the **New DLP Rule** page, click **General**.
18. Type **IP address check** as the rule name, and then click **OK**.
19. On the **Customize rules** page, click **Next**.
20. On the **New DLP policy** page, type **Test DLP policy** as the policy name. Select the **Send notifications and Policy Tips to end users** check box, and then click **Create**.

► **Task 6: Configure data loss protection policies for email**

1. Open Microsoft Edge, and then connect to **https://protection.office.com**.
2. Sign in as **holly@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
3. In the Protection Center, click **Security Policies**, and then click **Data Loss Prevention**.

4. On the **Data loss prevention** page, click **go to the Exchange admin center**.
5. On the **Policy Mode** page, click **New custom DLP policy**.
6. On the **new custom DLP policy** page, type **Test DLP policy for email** as the policy name. Click **Enforce**, and then click **Save**.
7. On the **Policy Mode** page, click **Edit**.
8. On the **Test DLP policy for email** page, click **rules**.
9. Click the **New** icon, and then click **Block messages with sensitive information unless the sender overrides**.
10. On the **new rule** page, click **Select sensitive information types**.
11. On the **Contains any of these sensitive information types** page, click **Add**, click **IP address**, click **Add**, and then click **OK** twice.
12. On the **new rule** page, click **Select one**, click **Christie Thomas**, and then click **OK**.
13. Click **add action**.
14. Click **Select one**, point to **Modify the message security**, and then click **Apply rights protection**.
15. In the **select RMS template** dialog box, click **OK**.
16. Select the **Activate this rule on the following date** check box, and then click **Save**.
17. In the warning dialog box, click **OK**, and then click **Save**.
18. Close Microsoft Edge.

► **Task 7: Create compliance check content**

1. Open Microsoft Edge, and then connect to **https://portal.office.com**.
2. Sign in to the Office 365 portal as **Brad@AVXXXXa.xtremelabs.us** with the password **Pa\$\$wOrd**.
3. On the Office 365 home page, click **Mail**.
4. Click **New**, type your Microsoft account name on the **To** line, type **Server IP address** as the **Subject**, type **127.0.0.1** as the message body, and then click **Send**.
5. Click the **message** that you receive from Outlook, and then review the message content.
6. At the top of the message, click **click here**.
7. In the Policy tip, click **Show details**.
8. Click **Override**, and then click **Send**.
9. Close Microsoft Edge.

► **Task 8: Validate the configuration**

1. Open Microsoft Edge, and then connect to **https://outlook.com**. Sign in with your Microsoft account.
2. Click the **message** from Brad Sutton with the subject **Server IP address**.
3. Verify that the message is protected with Microsoft Information Protection and that you cannot open the attachment in Microsoft Edge.
4. Close Microsoft Edge.
5. Open Microsoft Edge, and then connect to **https://portal.office.com**.

6. Sign in to the Office 365 portal as **Christie@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**. Christie is a member of the eDiscovery Manager role group.
7. Click **Mail**.
8. Select your time zone, and then click **Save**.
9. In the left pane of Christie's mailbox, under **Folders**, click **More**.
10. Verify that a folder named **In-Place Archive – Christie Thomas** has been created.
11. Click the **newest message** in the mailbox, and then verify that it is a report on the message sent with the **Server IP address** subject.

Results: After completing this exercise, you will have implemented the Office 365 compliance features.

Module 12: Monitoring and troubleshooting Microsoft Office 365

Lab: Monitoring and troubleshooting Office 365

Exercise 1: Monitoring Office 365

► Task 1: Send an email to a nonexistent domain

1. On LON-CL1, on the taskbar, click **Microsoft Edge**.
2. Browse to <https://portal.office.com/>, and then sign in as **holly@AVXXXXA.xtremelabs.us** by using the password **Pa\$\$w0rd**.
3. Click **Mail**, and then click **New**.
4. In the **To** text box, type **user@alt.none**.
5. Enter a subject and some body text, and then click **Send**.

► Task 2: Track mail delivery

1. Wait for the delivery failure message to appear.
2. Note the reason for the failure (“**The domain name in the email address is incorrect.**”).
3. Select the body text of the message, including the phrase “**Generating server**” down to “**X-OriginatorOrg: adatumAVXXXX.onmicrosoft.com**” and then right-click and click **copy**.
4. In Microsoft Edge, press Ctrl+T to create a new tab.
5. In the new tab, browse to testconnectivity.microsoft.com.
6. On the **Microsoft Remote Connectivity Analyzer** page, click the **Message Analyzer** tab.
7. Under **Message Header Analyzer**, paste the message, and then click **Analyze headers**.
8. Note the diagnostic information and the time taken for the message to be rejected.
9. Click **Clear** to reset the Message Header Analyzer.

► Task 3: Send an email to a nonexistent user

1. In Microsoft Edge, click Holly’s **Mail** tab.
2. Click **New**, and then in the **To** text box, type **difflop4890@outlook.com**.
3. Enter a subject and some body text, and then click **Send**.

► Task 4: Track mail delivery

1. Wait for the delivery failure message to appear.
2. Note the reason for the “**550 Requested action not taken: mailbox unavailable**” failure.
3. Select the body text of the message including the phrase “**Generating server**” down to “**X-OriginatorOrg: adatumAVXXXX.onmicrosoft.com**” and then right-click and click **copy**.
4. In Microsoft Edge, switch to the **Microsoft Remote Connectivity Analyzer** tab.
5. On the **Microsoft Remote Connectivity Analyzer** page, ensure that you are on the **Message Analyzer** tab.

6. Under **Message Header Analyzer**, paste the message, and then click **Analyze headers**.
7. Note the diagnostic information and the time taken for the message to be rejected.
8. Close the **Microsoft Remote Connectivity Analyzer** page.

► **Task 5: Analyze mail flow**

1. On Holly's **Mail** tab in the Microsoft Office 365 portal, click the **Apps** launcher in the top task bar, and click **Admin**.
2. Access the new Office 365 admin center, click **Admin centers**, click **Exchange**, and then click **mail flow**.
3. In mail flow, click **message trace**.
4. In **message trace**, next to **Sender**, click **add sender**.
5. In the **Select Members** dialog box, click **Holly**, click **add**, and then click **OK**.
6. Under **Date range**, select **Past 24 hours**.
7. Under **Delivery status**, select **Failed**, and then click **Search**. Note the two messages.
8. Double-click each **message** to view the sender, recipient, message size, ID, and IP address information.
9. Note the differences between the message processing events: Receive, Submit, Spam Diagnostics, and Fail for the nonexistent domain, and Submit, Receive, Spam Diagnostics, and Fail for the nonexistent user.
10. Close the Message Trace window.

Results: After completing this exercise, you should have used the Message Header Analyzer to identify why email failed to deliver.


Exercise 2: Monitoring service health and analyzing reports

► **Task 1: View Office 365 service health**


1. In the new Office 365 admin center, click **Home**.
2. On the **Home** page, in the left menu, select **Health**, and then click **Service Health**.
3. Select **Exchange Online** in the left column.
4. On the right side of the page, click **View history**.
5. Click any **entry** in the calendar that is colored yellow to see further details about incident. Details appear below the calendar.
6. Click the **Home** icon on the menu to the left.

► **Task 2: View reports in the Office 365 admin center**


1. In the Office 365 admin center, on the **Home** page, click **Switch back to the old admin center** to go to the previous Office 365 admin center.
2. In the Office 365 admin center, click **REPORTS**.

 **Note:** At the time of writing this course, reports were not available in the new Office 365 admin center.

3. On the **Reports** page, in the **Mail** section, click **Mailbox usage**.

 **Note:** There might be little or no data shown because there is not much mailbox usage in the lab environment.

4. Click the **back arrow**.
5. On the **Reports** page, in the **Protection** section, click **Sent and received mail**, and then click **View table**.
6. Close the table view.

 **Note:** There might be little or no data shown because there is not much mailbox usage in the lab environment.

7. Close the open window.
8. On the **Reports** page, in the **Protection** section, click **Malware detections**.
9. Close the open window.
10. On the **Reports** page, in the **Protection** section, click **Spam detections**.
11. Close the open window.
12. Keep the virtual machines running for the next lab.

Results: After completing this exercise, you should have monitored the health of Office 365 services and viewed reports in the Office 365 admin center.

Module 13: Planning and configuring identity federation

Lab: Planning and configuring identity federation

Exercise 1: Deploying Active Directory Federation Services (AD FS) and Web Application Proxy

► Task 1: Add DNS records required for AD FS

1. On LON-DS1, on the taskbar, click **Windows PowerShell**.
2. Type **IPConfig** and press Enter.
3. Record the IPv4 address assigned to the server.
4. On LON-DC1, open Server Manager, click **Tools**, and then click **DNS**.
5. Expand LON-DC1, expand **Forward Lookup Zones**, and click **AVXXXXa.xtremelabs.us**.
6. Right-click **AVXXXXa.xtremelabs.us**, and click **New Host (A or AAAA)**.
7. In the **New Host** dialog box, leave the Name box empty, and in the **IP address** box, type the External IP address provided by the hosting partner.
8. Click **Add Host**, and then click **OK**.
9. In the **New Host** dialog box, leave the Name box empty, and in the **IP address** box, type the LON-DS1 IP address that you recorded in step 3.
10. Click **Add Host**, click **OK**, and then click **Done**.

► Task 2: Install and configure the AD FS server role

1. Sign in to the **LON-DS1** virtual machine as **ADATUM\Administrator** with a password of **Pa\$\$w0rd**.
2. On the desktop taskbar, right-click **Windows PowerShell** and click **Run as administrator**.
3. At the command prompt, type the following command and press Enter. This command creates the Key Distribution Services root key to generate group Managed Service Account passwords for the account that will be used later in this lab. You should receive a Guid value as a response to this command.

```
Add-KdsRootKey -EffectiveTime ((get-date).addhours(-10))
```

4. On the Start screen, click **Server Manager**.
5. In Server Manager, click **Manage**, and then click **Add Roles and Features**. If you get a Server Manger message about collecting inventory data, click **OK**. Wait a minute and then try this step again.
6. In the Add Roles and Features Wizard, on the **Before you begin** page, click **Next**.
7. On the **Select installation type** page, click **Role-based or Feature-based installation**, and then click **Next**.
8. On the **Select destination server** page, click **Select a server from the server pool**, verify that the target computer is highlighted, and then click **Next**.
9. On the **Select server roles** page, click **Active Directory Federation Services**, and then click **Next**.
10. On the **Select features** page, click **Next**.

11. On the **Active Directory Federation Service (AD FS)** page, click **Next**.
 12. On the **Confirm installation selections** page, click **Install**.
 13. When installation completes, on the **Installation progress** page, click **Close**.
 14. Click the **exclamation mark** icon on the toolbar, and then click **Configure the federation service on this server**.
 15. In the Active Directory Federation Services Configuration Wizard, on the **Welcome** page, click **Create the first federation server in a federation server farm**, and then click **Next**.
 16. On the **Connect to AD DS** page, click **Next**.
 17. On the **Specify Service Properties** page, use the following settings, and then click **Next**:
 - For **SSL Certificate**, click the **wild card certificate** provided by the hosting partner.
 - For **Federation Service Name**, type **AVXXXXa.xtremelabs.us**, replacing **AVXXXXa** with your unique Adatum domain name.
 - For **Federation Service Display Name**, type **Adatum Corporation**.
 18. On the **Specify Service Account** page, select the option **Create a Group Managed Service Account**, for **Account Name** type **svc-ADFS**, and then click **Next**.
 19. On the **Specify Configuration Database** page, click **Create a database on this server using Windows Internal Database**, and then click **Next**.
 20. On the **Review Options** page, click **Next**.
 21. Once the prerequisites check is complete, on the **Pre-requisite Checks** page, click **Configure**.
 22. When the configuration completes, on the **Results** page, click **Close**.
- **Task 3: Install the Web Application Proxy server role service**
1. Sign in to the **LON-WAP1** virtual machine as **LON-WAP1\Administrator** with a password of **Pa\$\$w0rd**.
 2. On the Start screen, click **Server Manager**.
 3. In Server Manager, click **Manage**, and then click **Add Roles and Features**.
 4. In the Add Roles and Features Wizard, on the **Before you begin** page, click **Next**.
 5. On the **Select installation type** page, click **Role-based or Feature-based installation**, and then click **Next**.
 6. On the **Select destination server** page, click **Select a server from the server pool**, verify that the target computer is highlighted, and then click **Next**.
 7. On the **Select server roles** page, click **Remote Access**, and then click **Next**.
 8. On the **Select features** page, click **Next**.
 9. On the **Remote Access** page, click **Next**.
 10. On the **Select role services** page, click **Web Application Proxy**. In the pop-up window, click **Add Features**, and then click **Next**.
 11. On the **Confirm installation selections** page, click **Install**.
 12. When the installation is complete, on the **Installation progress** page, click **Close**.

► **Task 4: Configure the Web Application Proxy server**

1. On LON-WAP1, in Server Manager, click **Tools**, and then click **Remote Access Management**.
2. In the Remote Access Management Console, in the left navigation pane, click **Web Application Proxy**. In the middle navigation pane, click **Run the Web Application Proxy Configuration Wizard**.
3. In the Web Application Proxy Configuration Wizard, on the **Welcome** page, click **Next**.
4. On the **Federation Server** page, use the following settings, and then click **Next**:
 - Federation service name: **AVXXXXa.xtremelabs.us**, replacing **AVXXXXa** with your unique Adatum domain name.
 - User name: **Adatum\Administrator**
 - Password: **Pa\$\$w0rd**
5. On the **AD FS Proxy Certificate** page, select the ***.xtremelabs.us** certificate, and then click **Next**.
6. On the **Confirmation** page, click **Configure**.
7. When the configuration is complete, on the **Results** page, click **Close**.

► **Task 5: Verify that the AD FS server is working**

1. Switch to the LON-DS1 virtual machine.
2. In Server Manager, click **Tools**, and then click **Event Viewer**.
3. In Event Viewer, in the details pane, expand **Applications and Services Logs**, expand **AD FS**, and then click **Admin**.
4. In the **Event ID** column, verify that event ID 100 displays.



Note: If the federation server is configured properly, you should see a new event with event ID 100 in the Event Viewer Application log. This event verifies that the federation server was able to communicate successfully with the Federation Service.

5. On LON-DC1, open Internet Explorer and connect to **https://AVXXXXa.xtremelabs.us/adfs/fs/federationsservice.asmx**, replacing **AVXXXXa** with your unique Adatum domain name, and then press Enter.
6. If you get a message stating **There is a problem with this website's security certificate**, click **Continue to this website**.



Note: The expected output is a display of XML with the service description document. If this page displays, then Microsoft Internet Information Services (IIS) on the federation server is operational and serving pages successfully.

Results: After completing this exercise, you should have deployed the AD FS server in a federation server farm, and deployed the Web Application Proxy server to support AD FS.

Exercise 2: Configuring federation with Microsoft Office 365

► Task 1: Switch the Office 365 tenant to federated mode

1. Switch to the LON-DS1 virtual machine.
2. Open Internet Explorer and connect to **https://portal.office.com**.
3. Sign in as **holly@AVXXXXa.xtremelabs.us** with the password **Pa\$\$w0rd**.
4. If you are connected to the previous Office 365 admin center, click the **banner** at the top of the page to access the new Office 365 admin center.
5. Click **Users**.
6. Click **Holly Dickson**, and in the **Email addresses** section, click **Edit**.
7. Change the User name suffix to **AdatumAVXXXX.onmicrosoft.com**. In the Warning window, click **Save**, and then click **Close**.
8. Close Internet Explorer. Holly cannot change the **AdatumAVXXXXa.xtremelabs.us** to a federated domain if she is logged in using an account from this domain.
9. On the taskbar, click the **Windows PowerShell** icon.
10. At the Windows PowerShell prompt, type the following commands, pressing Enter at the end of each line:

```
Set-ExecutionPolicy Unrestricted -force  
Import-Module MSOnline
```

11. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
$msolcred = Get-Credential
```

12. In the **Windows PowerShell Credential** dialog box, enter the following credentials, and then click **OK**:
 - User name: **holly@AdatumAVXXXX.onmicrosoft.com**
 - Password: **Pa\$\$w0rd**

13. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
Connect-MsolService -Credential $msolcred
```

14. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
Get-MsolDomain
```

15. Verify that your lab domain, **AVXXXXa.xtremelabs.us**, is listed as **Verified and Managed**.

 **Note:** If you were running this from a computer other than the AD FS federation server, you would need to use the **Set-MsolAdfsContext** to reference the AD FS server.

16. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
Convert-MsolDomainToFederated -DomainName AVXXXXa.xtremelabs.us
```

17. Verify that you get a **Successfully updated AVXXXXa.xtremelabs.us domain** message.
18. At the Windows PowerShell prompt, type the following command, and then press Enter:

```
Get-Mso1FederationProperty -DomainName AVXXXXa.xtremelabs.us
```



Note: This command reports the status of the domain federation, and provides details of URLs and certificates.

Results: After completing this exercise, you should have enabled a federation trust between your on-premises Active Directory domain and Office 365 through your AD FS federation server, and you should have converted your domain for federated authentication in Office 365.