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POWERSHELL SCRIPTS

Basic Operations on SharePoint 2013 Online using CSOM

Vijai Anand

Powershell Scripts

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About the Author:

Vijai Anand has been working in the IT industry for over 5 years. He holds a Bachelor's degree in Electronics and Communication Engineering. He works as a SharePoint Developer in Cognizant Technology Solutions, New Jersey. Vijai has worked on Microsoft Office SharePoint® Server 2007, Microsoft SharePoint® 2010 and Microsoft SharePoint® 2013.

Vijai is a frequent contributor to C# Corner (www.c-sharpcorner.com). He has authored around 500 articles and 400 blogs on www.c-sharpcorner.com for SharePoint 2013, SharePoint 2010, SharePoint Workspace, SharePoint Designer 2010, Powershell, C # and Silverlight. He currently holds ***Microsoft Most Valuable Professional and Mindcracker Most Valuable Professional award*** for SharePoint Server.

He has authored the following ***eBooks:***

- SharePoint 2013 .Net Client Side Object Model Cookbook that was published in CSHARPCORNER.com
- Getting Started with Managed Metadata Service in SharePoint 2010 that was published in CSHARPCORNER.com
- Business Data Connectivity Services - Step by Step tutorial that was published in ITFUNDA.com

He has accomplished the following ***Microsoft Certifications***:

- Microsoft SharePoint® 2013, Developing Microsoft SharePoint Server 2013 Core Solutions
- Microsoft SharePoint® 2010, Application Development
- Microsoft SharePoint® 2010, Designing and Developing Microsoft SharePoint 2010 Applications.
- Microsoft Office SharePoint® Server 2007, Application Development
- Microsoft Office SharePoint® Server 2007, Configuration

Who can read this book

SharePoint Developers with basic knowledge of the SharePoint 2013 .Net Client Side Object Model and Powershell scripting will find this book helpful for understanding and working with Powershell scripts using the .Net Client Side Object Model. This book is mainly focused for beginners and contains the Powershell scripts to perform basic operations using the .Net Client Side Object Model. For advanced developers, section 14 will be more useful; it explains the operations that can be performed by the new assemblies added to the SharePoint 2013 Client Side Object Model. With respect to the Powershell scripts in this book, you should be familiar with SharePoint Client Side Object Model, Powershell and Out-of-the-box features.

Acknowledgments

I am really thankful to each and every one that has motivated me to write articles and to publish my fourth eBook.

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I would like to express my thanks to all my colleagues and Architects who supported me in writing this book. Thanks to all my friends who helped me to publish this eBook.

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1 SharePoint 2013 Online Management Shell: an Overview

Windows Powershell is a command-line scripting tool introduced in SharePoint 2010 to perform both simple and complex administrative tasks. The Stsadm command-line tool has been deprecated and Windows PowerShell was used to perform command-line administrative tasks. Windows Powershell was used to manipulate web applications, site collections, sites, lists and much more with the help of cmdlets available and by scripting custom cmdlets to perform complex opertaions. Similarly for SharePoint 2013 Online, SharePoint Online Management Shell can be used to efficiently manage SharePoint Online users, sites, site collections, and organizations. The Windows PowerShell Command Builder tool helps you to build commands for SharePoint Online by simple drag and drop.

SharePoint Online Management Shell includes a set of cmdlets. Nearly 30 cmdlets are provided to manage users, sites, and organizations instead of using the SharePoint Online Administration Center. But this covers only the basic operations whereas for SharePoint 2013 On-Premise there are nearly 780 cmdlets that can be extensively used to perform most of the SharePoint tasks. To know more about the cmdlets available for SharePoint Online refer to http://technet.microsoft.com/en-us/library/fp161364(v=office.15).aspx. To overcome this we could use Powershell using the Client Side Object Model (CSOM) that enables running scripts against SharePoint Online remotely and it can be used in the same way that we are accustomed to (on-premises SharePoint). The scripts created using the Client Side Object Model can be reused for SharePoint 2013 On-Premise also.

2 Prerequisites

In this section you will see the prerequisites required to create the Powershell script using Client Side Object Model to run against SharePoint Online remotely.

The following are the prerequisites required:

1. Make sure that you have installed Windows PowerShell 3.0. If you do not have PowerShell 3.0, you will need to download the Windows Management Framework 3.0.
2. You will need to install the SharePoint Online Management Shell, that can be downloaded from the Microsoft Download Center.
3. Make sure SharePoint Client Runtime assemblies are available and this can be downloaded here.
4. **Authentication:** You can connect to SharePoint Online using the new SharePointOnlineCredentials class.

Note: I am using the cloudshare environment (development environments) where all the above prerequisites are available to execute the Powershell scipt using Client Side Object Model against SharePoint 2013 Online.

Thus in this section you have seen the prerequisites required to create the Powershell script using the Client Side Object Model.

3 Perform SharePoint list tasks using CSOM in Powershell script

In this section you will see how to perform list related tasks using the SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

3.1 How to get all the lists from the website

In this example you will see how to get all the lists from the website using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in **C:\Vijai** folder (a folder named **Vijai** is created in C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters
```

```
$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetAllLists()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web=$clientContext.Web;

    # Get all the lists
    $listColl=$web.Lists;
    $clientContext.Load($listColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the lists
    foreach($list in $listColl)
    {
        # Display the list name and ID
        write-host -ForegroundColor Green "List Name: " $list.Title " ID: " $list.Id
    }
}

### Calling the function

GetAllLists
```

Result

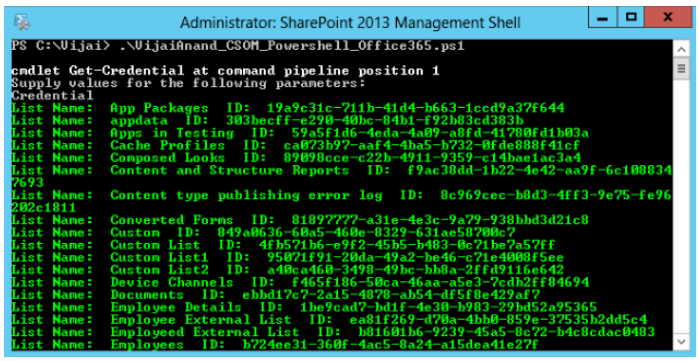


Figure3.1.1: *Get all the lists from the web*

3.2 How to create a new list in the website

In this example you will see how to create a new list in the website using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"
```

```
### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function CreateList()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Specifies the properties of the new custom list
    $creationInfo= New-Object Microsoft.SharePoint.Client.ListCreationInformation;
    $creationInfo.Title="CSOM List";
    $creationInfo.Description="CSOM custom list created using Powershell";
$creationInfo.TemplateType=[int][Microsoft.SharePoint.Client.ListTemplateType]::Gener
icList

    # Create a new custom list
    $newList=$clientContext.Web.Lists.Add($creationInfo);
    $clientContext.Load($newList);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the newly created list and ID
    write-host -ForegroundColor Green "List Name: " $newList.Title " ID: "
$newList.Id

}

### Calling the function

CreateList
```

Result

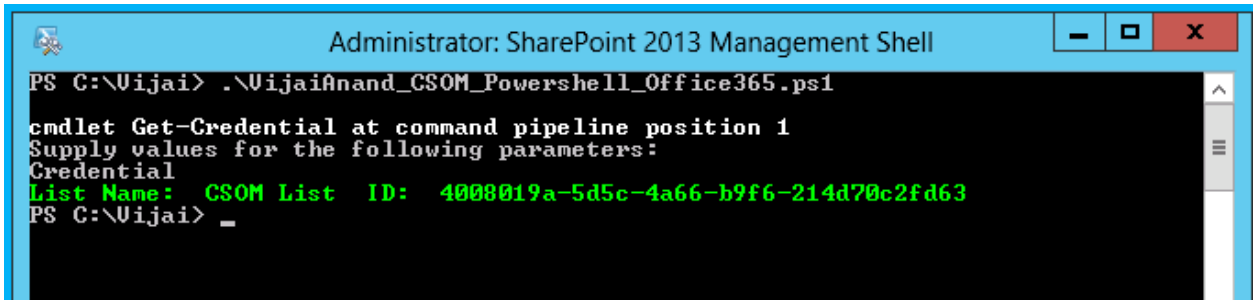


Figure3.2.1: *Create a new list*

3.3 How to delete a list from the website

In this example you will see how to delete a list from the website using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force
```

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DeleteList()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list by Title
    $list=$clientContext.Web.Lists.GetByTitle("CSOM List");

    # Delete the list
    $list.DeleteObject();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteList
```

Result

Custom list is deleted successfully.

3.4 How to update a list in the website

In this example you will see how to update a list in the website using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function UpdateList()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
```

```
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list by Title
    $list=$clientContext.Web.Lists.GetByTitle("Employee Details");

    # Update the list description
    $list.Description="Employee Details list updated using Powershell";
    $list.Update();
    $clientContext.Load($list);


    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the output
    Write-Host -ForegroundColor Green "List Name: " $list.Title " Description: "
$list.Description
}

### Calling the function

UpdateList
```

Result

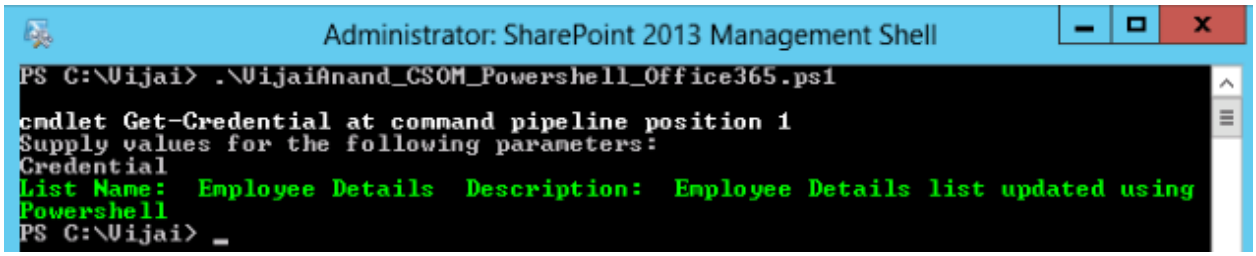


Figure3.4.1: *Update the list*

3.5 How to enable folder creation for the list in the website

In this example you will see how to enable folder creation for the list in the website using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function EnableFolderCreation()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials
```

```
    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Employee Details");

    # Enable the folder creation for the list
    $list.EnableFolderCreation=$true;

    # Update the list
    $list.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

EnableFolderCreation
```

Result

Navigate to the SharePoint site. Click on the **Employee Details** link in the quick launch bar. Click on the **List Settings** button in the ribbon interface. Click on the **Advance Settings** link available in the **General Settings** section. You will see that the folder creation for the list is enabled successfully.

Figure3.5.1: *Enable folder creation for the list*

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.list.enablefoldercreation.aspx

3.6 How to disable attachments to list items in the list

In this example you will see how to disable attachments to list items in the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Source Code

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DisableAttachments()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list by title
```

```
    $list=$clientContext.Web.Lists.GetByTitle("Employee Details");

    # Disable the attachments for the list
    $list.EnableAttachments=$false;

    # Update the list
    $list.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DisableAttachments
```

Result

Navigate to the SharePoint site. Click on the **Employee Details** link in the quick launch bar. Click on the **List Settings** button in the ribbon interface. Click on the **Advance Settings** link available in the **General Settings** section. You will see the attachments to the list items disabled successfully.

Figure3.6.1: *Disable attachments to list items*

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.list.enableattachments.aspx

3.7 How to display the list in the quick launch bar

In this example you will see how to display the list in the quick launch bar using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function OnQuickLaunch()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list by title
```

```
    $list=$clientContext.Web.Lists.GetByTitle("Employee Details");

    # Display the list on the quick launch
    $list.OnQuickLaunch=$true;

    # Update the list
    $list.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

OnQuickLaunch
```

Result

Navigate to the SharePoint site. Click on the **Employee Details** link in the quick launch bar. Click on the **List Settings** button in the ribbon interface. Click on the **List name, description and navigation** link available under the **General Settings** section. You will see the option to display the list in the quick launch is enabled successfully.

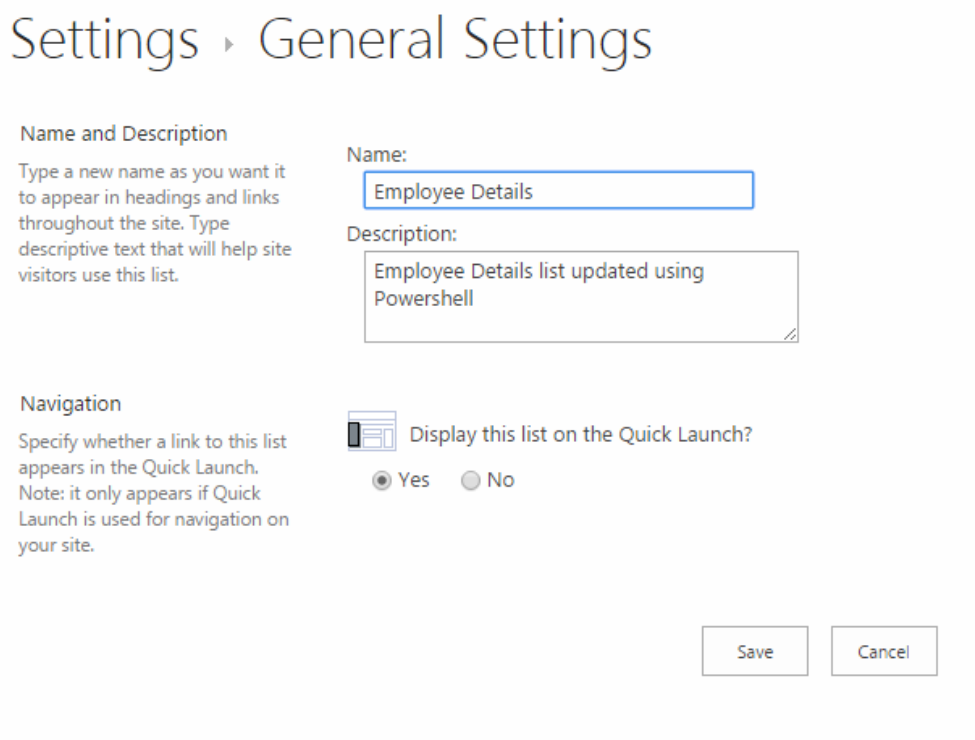


Figure3.7.1: *Display the list on the quick launch*

Reference

http://msdn.microsoft.com/en-us/library/microsoft.sharepoint.client.list.onquicklaunch.aspx

3.8 How to enable versioning for the list

In this example you will see how to enable versioning for the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
```

```
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function EnableVersioning()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Employee Details");

    # Enable versioning for the list
    $list.EnableVersioning=$true;

    # Update the list
    $list.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

EnableVersioning
```

Result

Navigate to the SharePoint site. Click on the **Employee Details** link in the quick launch bar. Click on the **List Settings** button in the ribbon interface. Click on the **Version Settings** link available under the **Settings** section. You will see versioning settings for the list is enabled successfully.

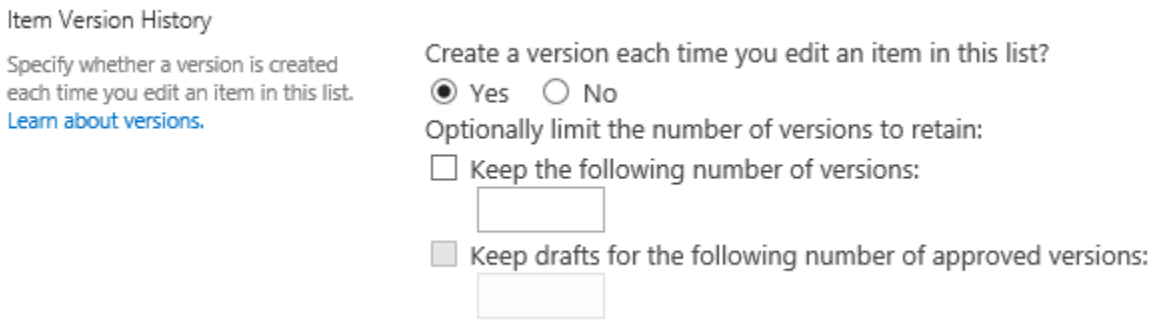


Figure3.8.1: *Enable versioning for the list*

Reference

http://msdn.microsoft.com/en-us/library/microsoft.sharepoint.client.list.enableversioning.aspx

3.9 How to enable minor versions for the document library

In this example you will see how to enable minor versions for the document library using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force
```

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function EnableMinorVersions()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the document library by title
    $dl=$clientContext.Web.Lists.GetByTitle("Documents");

    # Enable minor versions for the document library
    $dl.EnableMinorVersions=$true;

    # Update the document library
    $dl.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

EnableMinorVersions
```

Result

Navigate to the SharePoint site. Click on the **Documents** link in the quick launch bar. Click on the **Library Settings** button in the ribbon interface. Click on the **Versioning Settings** link available under the **Settings** section. You will see minor versions for the document library is enabled successfully.

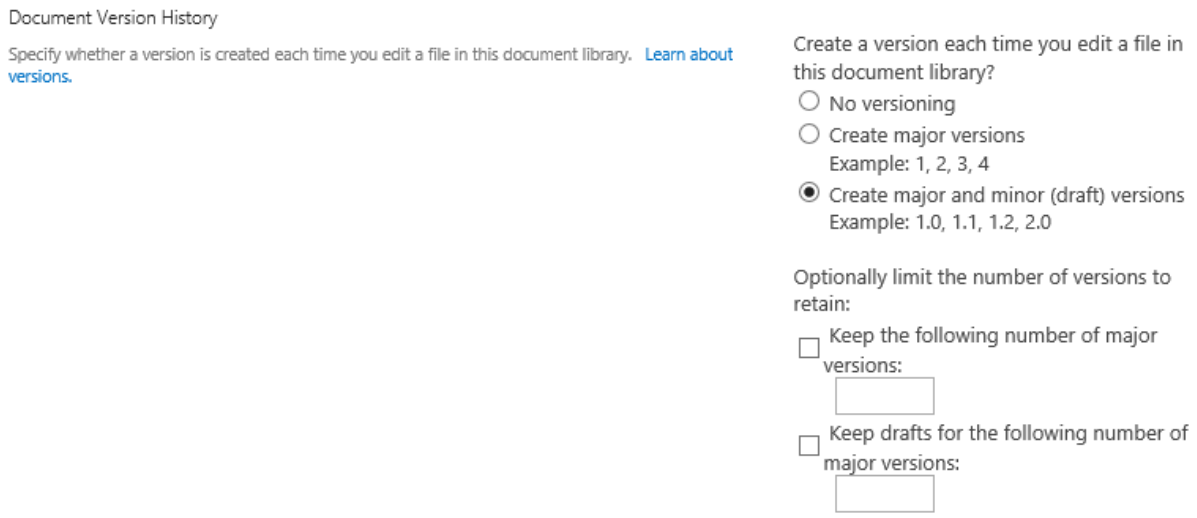


Figure3.9.1: *Enable minor versions for the list*

Reference

http://msdn.microsoft.com/en-us/library/microsoft.sharepoint.client.list.enableminorversions.aspx

3.10 How to enable Require Check Out for the document library

In this example you will see how to enable Require Check Out for the document library using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function ForceCheckOut()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the document library by title
    $dl=$clientContext.Web.Lists.GetByTitle("Documents");

    # Enable force check out for the document library
    $dl.ForceCheckOut=$true;

    # Update the document library
    $dl.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
```

```
}

### Calling the function

ForceCheckOut
```

Result

Navigate to the SharePoint site. Click on the **Documents** link in the quick launch bar. Click on the **Library Settings** button in the ribbon interface. Click on the **Versioning Settings** link available under the **Settings** section. You will see Require Check Out for the document library is enabled successfully.

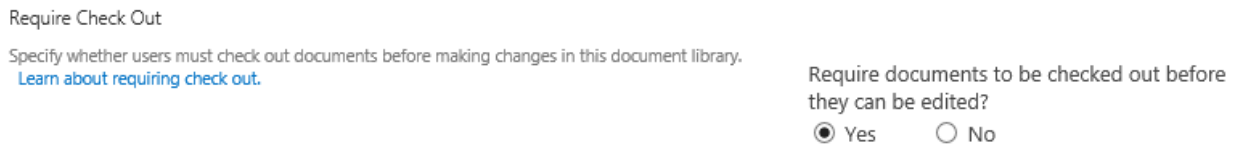


Figure3.10.1: *Enable Require Check Out for the list*

Reference

http://msdn.microsoft.com/en-us/library/microsoft.sharepoint.client.list.forcecheckout%28v=office.14%29.aspx

3.11 How to enable content approval for the list

In this example you will see how to enable content approval for the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function EnableModeration()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the document library by title
    $dl=$clientContext.Web.Lists.GetByTitle("Documents");

    # Enable the content approval for the document library
    $dl.EnableModeration=$true;

    # Update the document library
    $dl.Update();
```

```
    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

EnableModeration
```

Result

Navigate to the SharePoint site. Click on the **Documents** link in the quick launch bar. Click on the **Library Settings** button in the ribbon interface. Click on the **Versioning Settings** link available under the **General Settings** section.

Figure3.11.1: *Enable content approval for the list*

Reference

http://msdn.microsoft.com/en-us/library/microsoft.sharepoint.client.list.draftversionvisibility.aspx

3.12 How to specify the permission required to view minor versions and drafts within the list

In this example you will see how to specify the permission required viewing minor versions and drafts within the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.

f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DraftVersionVisibility()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the document library by title
    $dl=$clientContext.Web.Lists.GetByTitle("Documents");

    # Specify the permissions required to view minor versions and drafts within the
document library
$dl.DraftVersionVisibility=[Microsoft.SharePoint.Client.DraftVisibilityType]::Approve
r;
    # Update the document library
```

```
    $dl.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DraftVersionVisibility
```

Result

Navigate to the SharePoint site. Click on the **Documents** link in the quick launch bar. Click on the **Library Settings** button in the ribbon interface. Click on the **Versioning Settings** link available under the **General Settings** section.

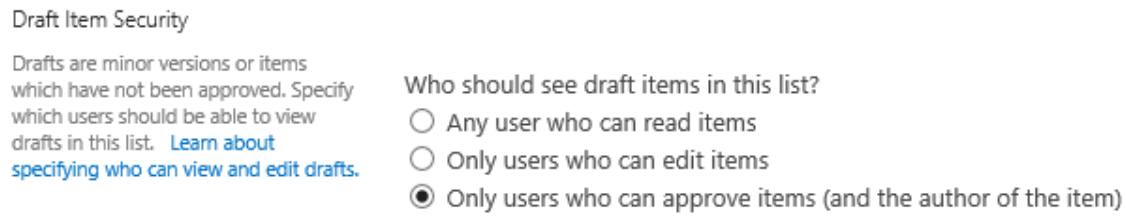


Figure3.13.1: *Specify which users should be able to view drafts in this list*

Reference

http://msdn.microsoft.com/en-us/library/microsoft.sharepoint.client.list.draftversionvisibility.aspx

3.13 How to get all the list templates available for creating lists

In this example you will see how to get all the list templates available for creating lists using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.

e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.

f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetListTemplates()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list templates
    $tempColl=$clientContext.Web.ListTemplates;
    $clientContext.Load($tempColl);

    # Execute the query
    $clientContext.ExecuteQuery();
```

```
    # Loop through the list templates
    foreach($template in $tempColl)
    {
        Write-Host -ForegroundColor Green "Template Name: " $template.Name
    }
}

### Calling the function

GetListTemplates
```

Result

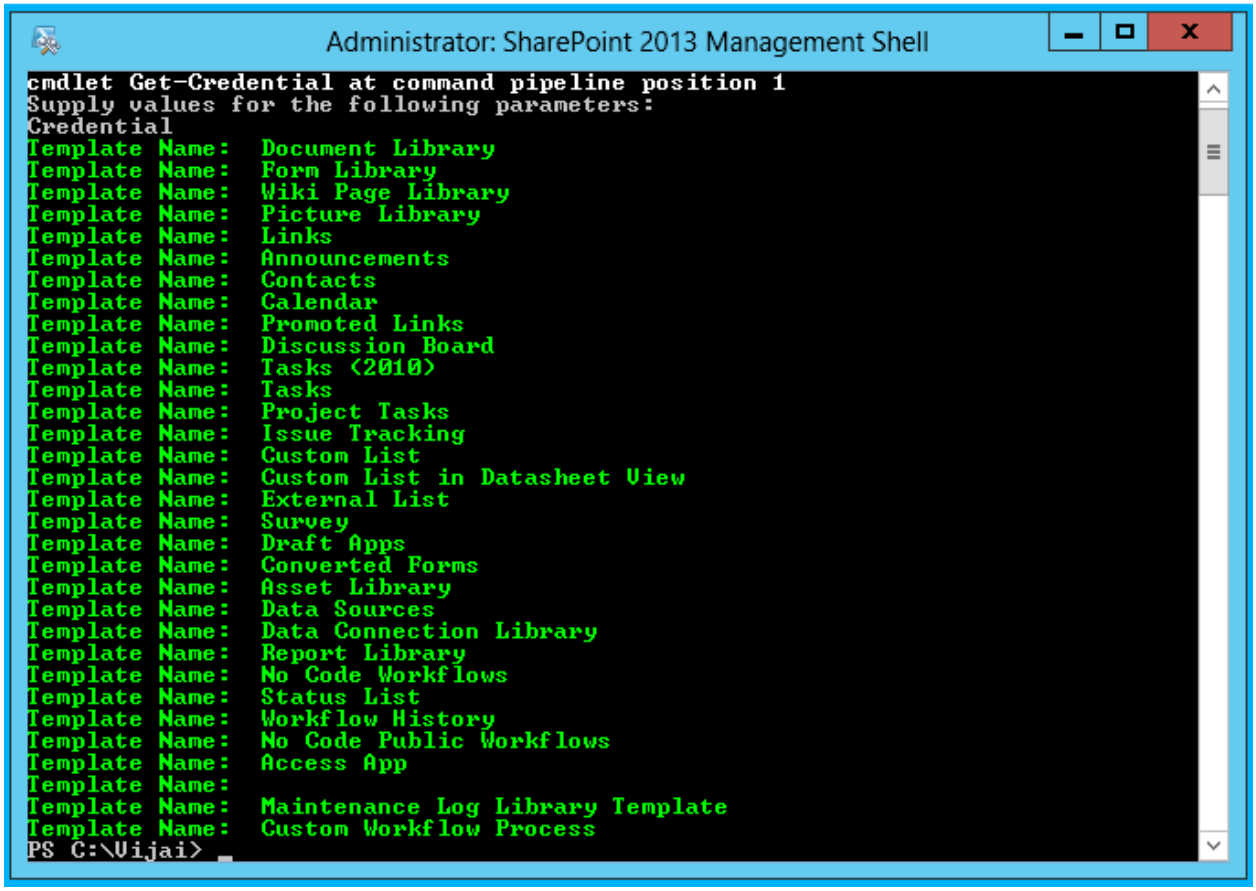


Figure3.13.1: *Get all the available list templates*

4 Perform SharePoint website tasks using CSOM in Powershell script

In this section you will see how to perform website related tasks using the SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

4.1 How to get the properties of a website

In this example you will see how to retrieve the website properties using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

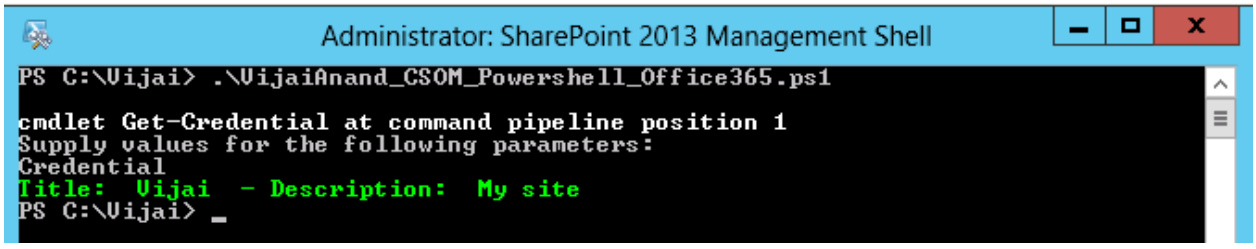
a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
```

```
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetWebProperties()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;
    $clientContext.Load($web);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the web properties
    Write-Host -ForegroundColor Green "Title: " $web.Title " - Description: "
$web.Description

}

### Calling the function

GetWebProperties
```

Result



Figur4.1.1: *Properties of the website*

4.2 How to update the properties of a website

In this example you will see how to update the website properties using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function UpdateWeb()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
```

```
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;
    # Update the web title and description
    $web.Title="CSOM Online";
    $web.Description="Updated using Powershell";
    $clientContext.Load($web);
    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the web properties
    Write-Host -ForegroundColor Green "Title: " $web.Title " - Description: "
$web.Description

}

### Calling the function

UpdateWeb
```

Result

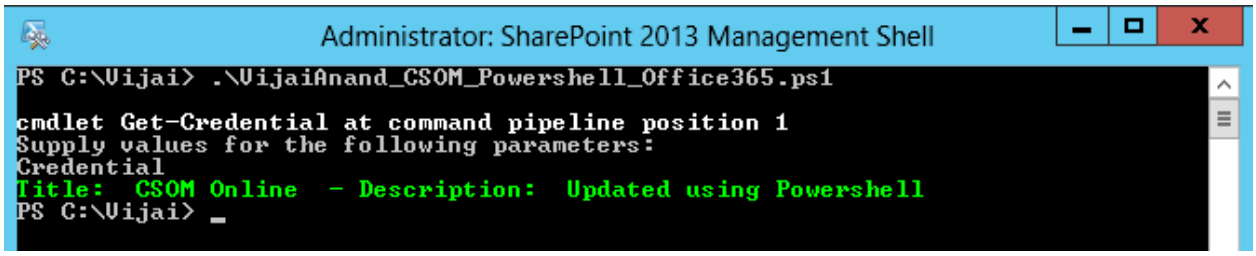


Figure4.2.1: *Update the properties of the website*

4.3 How to get only specific properties of a website

In this example you will see how to get specific website properties using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.

b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"


### Function

function GetSpecificProperties()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    $referencedAssemblies = (
```

```
        "Microsoft.SharePoint.Client, Version=15.0.0.0, Culture=neutral,
PublicKeyToken=71e9bce111e9429c",
        "Microsoft.SharePoint.Client.Runtime, Version=15.0.0.0, Culture=neutral,
PublicKeyToken=71e9bce111e9429c",
        "System.Core, Version=3.5.0.0, Culture=neutral,
PublicKeyToken=b77a5c561934e089")

    $sourceCode = @"
        using Microsoft.SharePoint.Client;
        using System.Collections.Generic;
        using System.Linq;

        public static class QueryHelper
        {
            public static void LoadListWithLimtedFields(ClientContext ctx, Web web)
            {
                ctx.Load(
                        web,
                        w => w.Title);
            }
        }
"@

    Add-Type -ReferencedAssemblies $referencedAssemblies -TypeDefinition $sourceCode
-Language CSharp;


    # Get the SharePoint web
    $web=$ctx.Web;
    [QueryHelper]::LoadListWithLimtedFields($ctx, $web)

    # Execute the query
    $ctx.ExecuteQuery()

    # Display the web title
    Write-Host -ForegroundColor Green "Web Title: " $web.Title
}

### Calling the function

GetSpecificProperties
```

Result

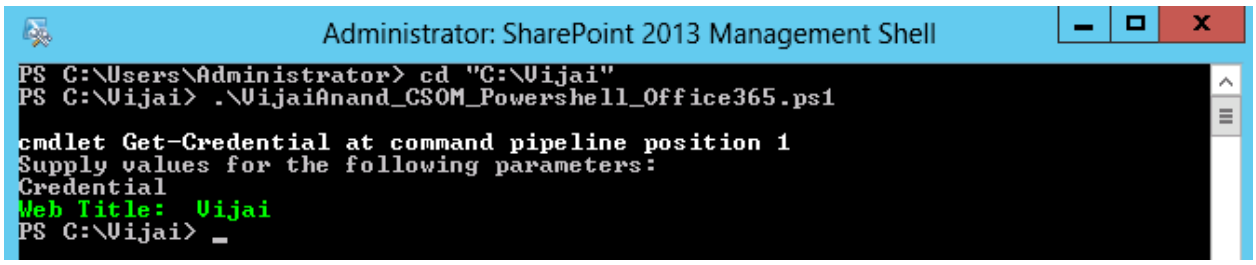


Figure4.3.1: *Get the specific property of the website*

4.4 How to get all the active features from website

In this example you will see how to get all the active web features using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com"

### References
```

```
# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetActiveFeatures()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get all the active features
    $featureColl=$web.Features;
    $clientContext.Load($featureColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the features
    foreach($feature in $featureColl)
    {
        # Display the feature ID
        Write-Host -ForegroundColor Green "Feature ID: " $feature.DefinitionId
    }
}

### Calling the function

GetActiveFeatures
```

Result

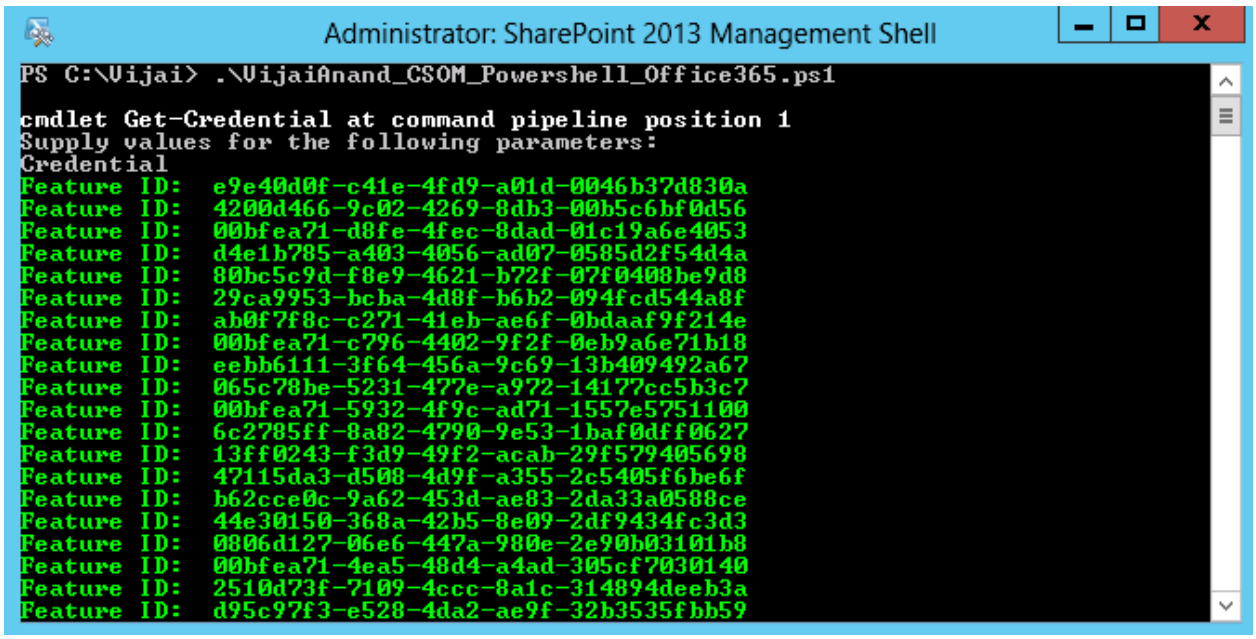


Figure4.4.1: *Get all the active features*

5 Perform SharePoint list item tasks using CSOM in Powershell script

In this section you will see how to perform list item related tasks using the SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

5.1 How to get all the items from the list

In this example you will see how to get all the items from the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.

f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetListItems()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list items
    $list=$clientContext.Web.Lists.GetByTitle("Employee Details")
    $camlQuery= [Microsoft.SharePoint.Client.CamlQuery]::CreateAllItemsQuery()
    $itemColl=$list.GetItems($camlQuery)
    $clientContext.Load($itemColl)

    # Execute the query
    $clientContext.ExecuteQuery();
```

```
    # Loop through all the items and display the title field
    foreach($item in $itemColl)
    {
        Write-Host -ForegroundColor Green $item["Title"]
    }
}

### Calling the function

GetListItems
```

Result

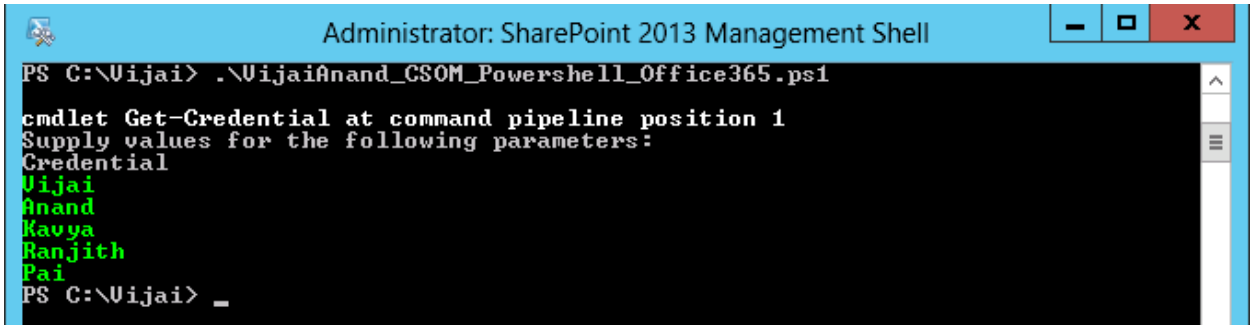


Figure 5.1.1: *Get all the list items*

5.2 How to create a new item in the list

In this example you will see how to create a new item in the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function AddNewitem()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Employee Details")

    # Add new item to the list
    $creationInfo= New-Object Microsoft.SharePoint.Client.ListItemCreationInformation
    $newItem=$list.AddItem($creationInfo)

    # Set the title value for the new item
    $newItem["Title"]="Rakesh";
```

```
    # Update the item
    $newItem.Update();
    $clientContext.Load($newItem)

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the new item field value
    Write-Host -ForegroundColor Green  $newItem["Title"]
}

### Calling the function

AddNewitem
```

Result

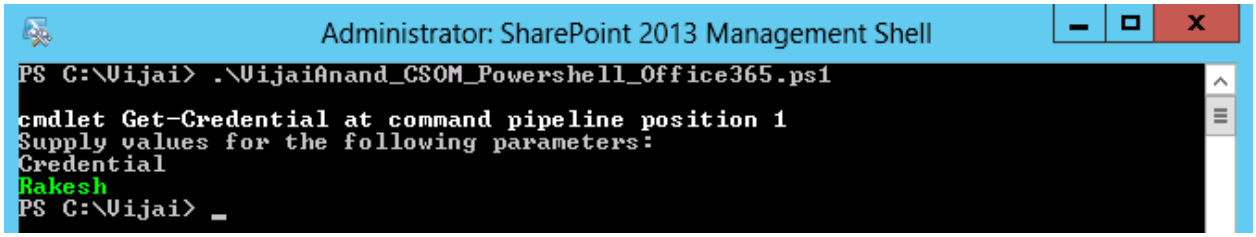


Figure5.2.1: *Create a new list item*

5.3 How to update an item in the list

In this example you will see how to update an item in the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function UpdateItem()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Employee Details")
    # Get the item by ID
    $item=$list.GetItemById(9);

    # Set the title value for the new item
    $item["Title"]="Kavya M";

    # Update the item
    $item.Update();
    $clientContext.Load($item)
```

```
    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the update item Title field value
    Write-Host -ForegroundColor Green  $item["Title"]
}

### Calling the function

UpdateItem
```

Result

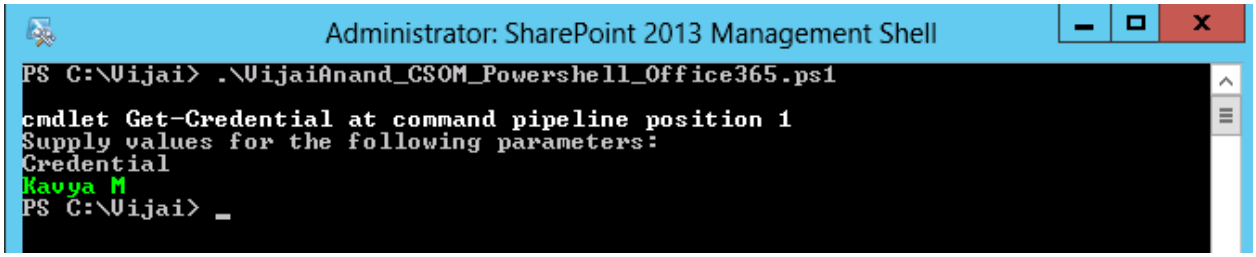


Figure5.3.1: *Update an item*

5.4 How to delete an item in the list

In this example you will see how to delete an item in the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DeleteItem()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Employee Details")

    # Get the item by ID
    $item=$list.GetItemById(9);

    # Set the title value for the new item
    $item["Title"]="Kavya M";

    # Delete the Item
    $item.DeleteObject();

    # Execute the query
```

```
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteItem
```

Result

The list item is deleted successfully.

5.5 How to get the items from a list folder

In this example you will see how to get the items from the specified server relative URL of a list folder using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References
```

```
# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetListItemsFromFolder()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list items
    $list=$clientContext.Web.Lists.GetByTitle("Custom List")

    # CamlQuery to retrieve the items from the list
    $camlQuery= New-Object Microsoft.SharePoint.Client.CamlQuery

    # Specify the server relative URL of a list folder
    $camlQuery.FolderServerRelativeUrl="/Lists/Custom List/FolderA";

    $itemColl=$list.GetItems($camlQuery)
    $clientContext.Load($itemColl)

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the items and display the title field
    foreach($item in $itemColl)
    {
        Write-Host -ForegroundColor Green $item["Title"]
    }
}

### Calling the function

GetListItemsFromFolder
```

Result

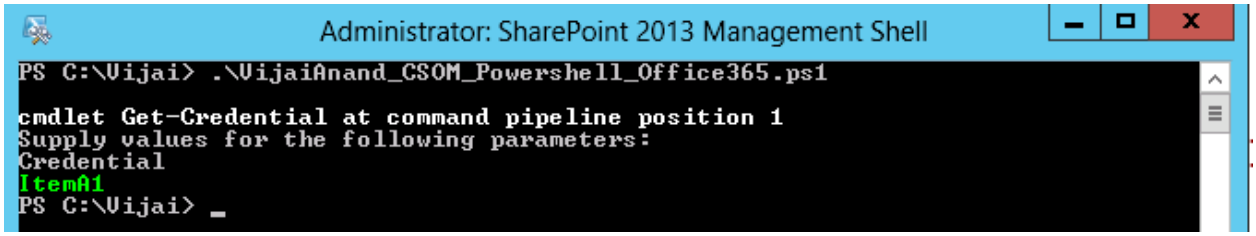


Figure 5.5.1: *Get items from the list folder*

5.6 How to get all the attachments for the list item

In this example you will see how to get all the attachments for the list item using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force
```

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetAttachments()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Custom List")

    # Get the item by ID
    $item=$list.GetItemById(1);

    # Get all the attachments for the list item
    $attachColl=$item.AttachmentFiles;
    $clientContext.Load($attachColl)

    # Execute the query
    $clientContext.ExecuteQuery();

    #Loop through all the attachment for the list item
    foreach($attachment in $attachColl)
    {
        write-host -ForegroundColor Green $attachment.FileName
    }

}
```

```
### Calling the function

GetAttachments
```

Result

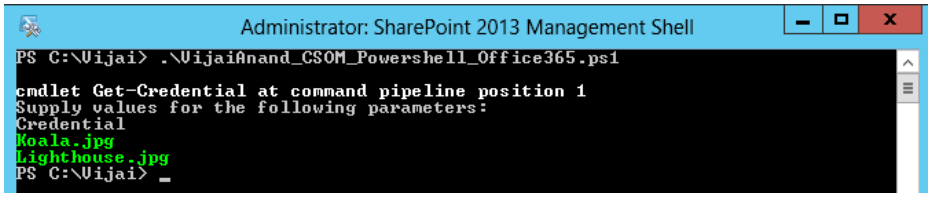


Figure 5.6.1: *Get all the attachments*

5.7 How to delete an attachment for the list item

In this example you will see how to delete an attachment for the list item using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters
```

```
$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DeleteAttachment()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Custom List")

    # Get the item by ID
    $item=$list.GetItemById(1);

    # Get the attachment by file name
    $attach=$item.AttachmentFiles.GetByFileName("Lighthouse.jpg");

    # Delete the attachment
    $attach.DeleteObject();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteAttachment
```

Result

The attachment is deleted successfully for the list item.

6 Perform SharePoint content type tasks using CSOM in Powershell script

In this section you will see how to perform content type related tasks using SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

6.1 How to get all the content types from the website

In this example you will see how to get all the content types from the website using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
```

```
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetSiteContentTypes()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the site content types
    $ctColl=$web.ContentTypes
    $clientContext.Load($ctColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display all the site content types
    foreach($ct in $ctColl)
    {
        write-host -ForegroundColor Green $ct.Name
    }

}

### Calling the function

GetSiteContentTypes
```

Result

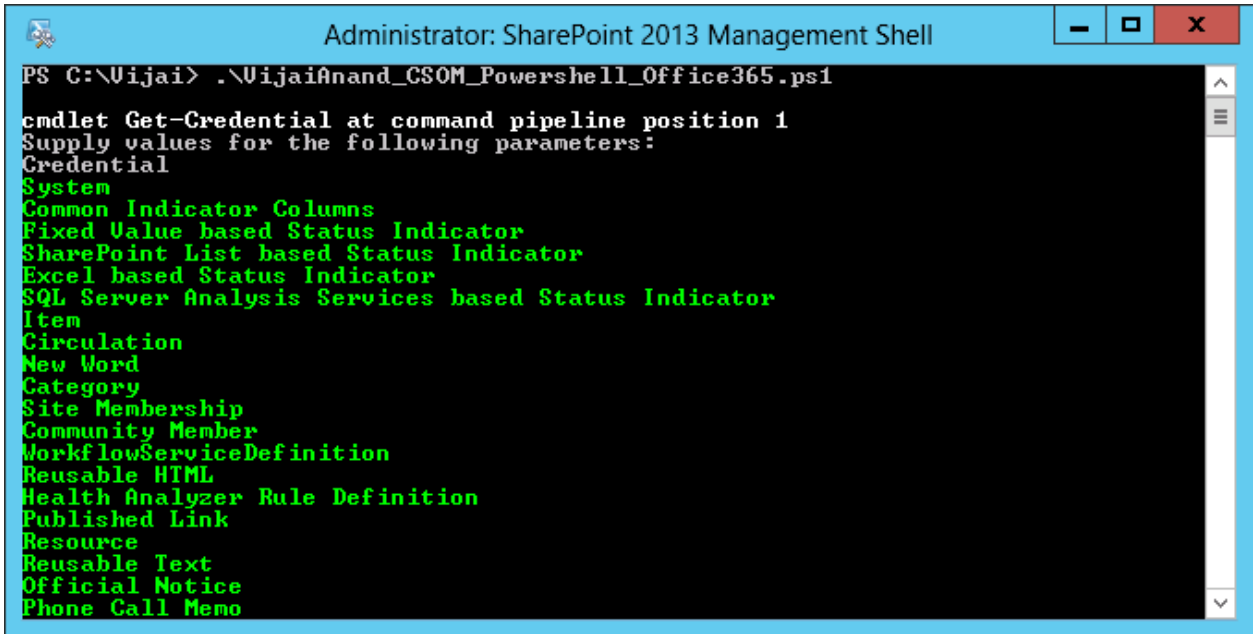


Figure6.1.1: *Get all the content types from the website*

6.2 How to create a site content type

In this example you will see how to create a new site content type using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function CreateContentType()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get all the content types from the website
    $ctColl=$web.ContentTypes;

    # Get the parent content type - Item (0x01)
    $parentCT=$web.ContentTypes.GetById("0x01");

    # Specify the properties that are used as parameters to initialize a new content
type
    $ctCreationInfo=New-Object
Microsoft.SharePoint.Client.ContentTypeCreationInformation;
    $ctCreationInfo.Name="Vijai Content Types";
```

```
    $ctCreationInfo.Description="My custom content types created using Powershell";
    $ctCreationInfo.Group="Vijai Content Types";
    $ctCreationInfo.ParentContentType=$parentCT;

    # Add the new content type to the collection
    $ct=$ctColl.Add($ctCreationInfo);

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

CreateContentType
```

Result

Navigate to the SharePoint site. Click on **Settings**. Click on **Site Settings**. Click on **Content Types** available under the **Galleries** section. You will see a newly created content type under the **Vijai Content Types** group as shown in Figure 6.2.1.

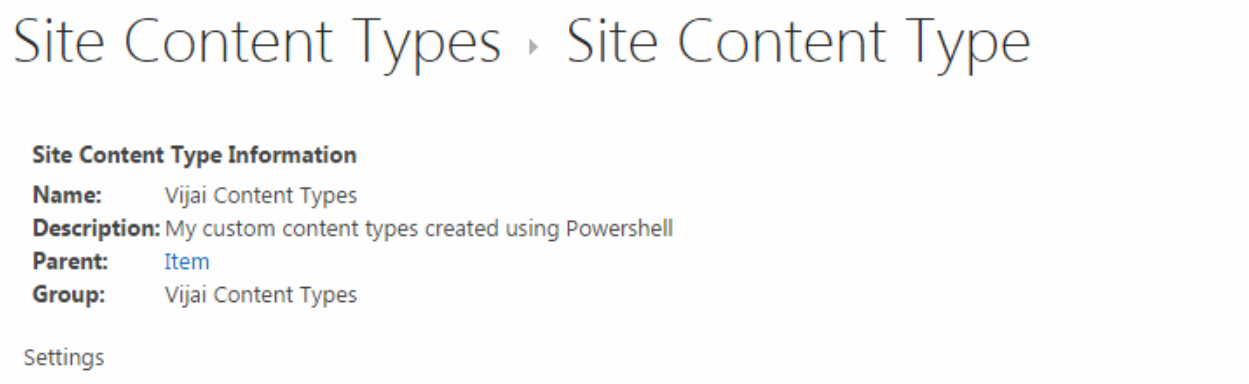


Figure 6.2.1: *Newly created site content type*

6.3 How to delete the site content type

In this example you will see how to delete the content type using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.

b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DeleteContentType()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials
```

```
    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get all the content types from the website
    $ctColl=$web.ContentTypes;

    # Get the content type by Id that has to be deleted
    $ct=$web.ContentTypes.GetById("0x01001A2242ED35BAF34382F7653DEDDA1B13");

    # Delete the content type
    $ct.DeleteObject();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteContentType
```

Result

The site content type is deleted successfully.

6.4 How to set the site content type read only

In this example you will see how to set the site content type read only using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function UpdateContentType()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get all the content types from the website
    $ctColl=$web.ContentTypes;

    # Get the content type by Id that has to be updated
    $ct=$web.ContentTypes.GetById("0x0100EF709A405E1CD549B22C8B2A4D5D9748");

    # Make the content type as read only
    $ct.ReadOnly=$true;
    $ct.Update($true);
```

```
    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

UpdateContentType
```

Result

Navigate to the SharePoint site. Click on **Settings**. Click on **Site Settings**. Click on **Content Types** available under the **Galleries** section. Click on **Vijai Content Type** available under the **Vijai Content Types** group. You will see the content type is set as read only as shown in Figure 6.4.1.

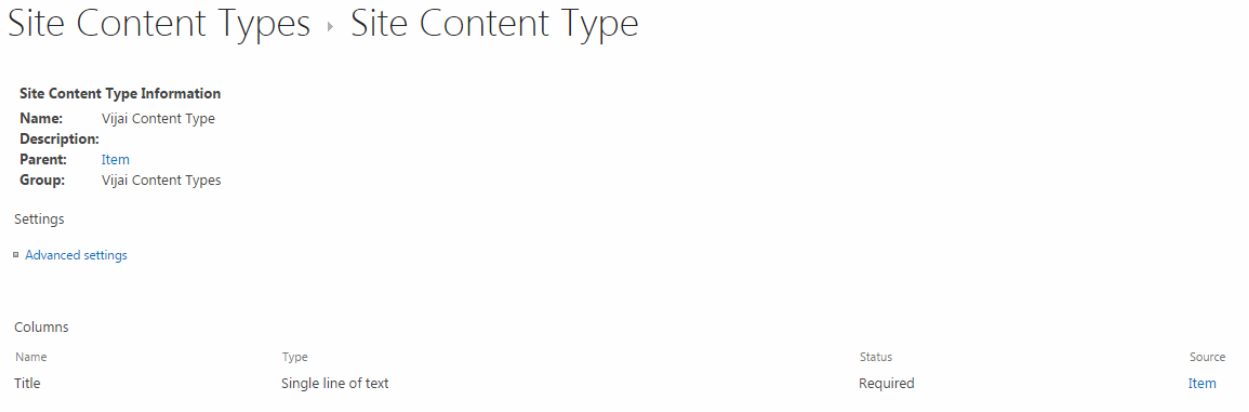


Figure 6.4.1: *Read only content type*

Reference

http://msdn.microsoft.com/en-us/library/microsoft.sharepoint.client.contenttype.readonly.aspx

6.5 How to get all the content types from the list

In this example you will see how to get all the content types from the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetListContentTypes()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
```

```
    $web=$clientContext.Web;

    # Get the custom list by title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get all the content types from the custom list
    $ctColl=$list.ContentTypes;
    $clientContext.Load($ctColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display all the list content types
    foreach($ct in $ctColl)
    {
        write-host -ForegroundColor Green $ct.Name
    }
}

### Calling the function

GetListContentTypes
```

Result

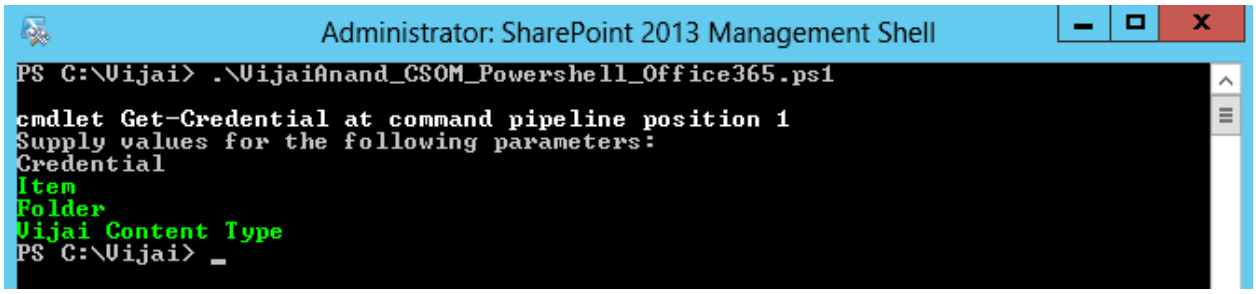


Figure 6.5.1: *Get all the content types from the list*

6.6 How to delete the content type from the list

In this example you will see how to delete the content type from the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DeleteListContentType()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
```

```
    $web=$clientContext.Web;

    # Get the custom list by title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get all the content types from the custom list
    $ctColl=$list.ContentTypes;
    $clientContext.Load($ctColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the content types
    foreach($ct in $ctColl)
    {
        # Delete the content type from the list
        if($ct.Name -eq "Vijai Content Type")
        {
            $ct.DeleteObject();
            break;
        }
    }

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteListContentType
```

Result

Content type is deleted successfully from the list.

6.7 How to add existing content type to the list

In this example you will see how to add existing content type to the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.

b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function AddExistingCT()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web=$clientContext.Web;
```

```
    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Custom List")

    # Get the content type by ID
    $ct=$web.ContentTypes.GetById("0x0100EF709A405E1CD549B22C8B2A4D5D9748");

    # Add the existing content type to the list
    $addedCt=$list.ContentTypes.AddExistingContentType($ct);

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

AddExistingCT
```

Result

Content type is added successfully to the list.

7 Perform SharePoint field tasks using CSOM in Powershell script

In this section you will see how to perform field related tasks using SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

7.1 How to get all the fields from the list

In this example you will see how to get all the fields from the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.

f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetListFields()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get all the list fields
    $fieldColl=$list.Fields
```

```
    $clientContext.Load($fieldColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the fields
    foreach($field in $fieldColl)
    {
        # Display the field title and ID
        Write-Host -ForegroundColor Green "Field Name: " $field.Title " ID: "
$field.ID
    }
}

### Calling the function

GetListFields
```

Result

All the fields available for the list will be displayed.

7.2 How to update a specific field available in the list

In this example you will see how to update a specific field available in the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function UpdateListField()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get a specific field by title
    $field=$list.Fields.GetByTitle("Department");

    # Update the description
    $field.Description= "Department description updated.";
    $field.Update();
    $clientContext.Load($field);
```

```
    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the field name and description
    Write-Host -ForegroundColor Green "Field Name: " $field.Title " Description: "
$field.Description
}

### Calling the function

UpdateListField
```

Result

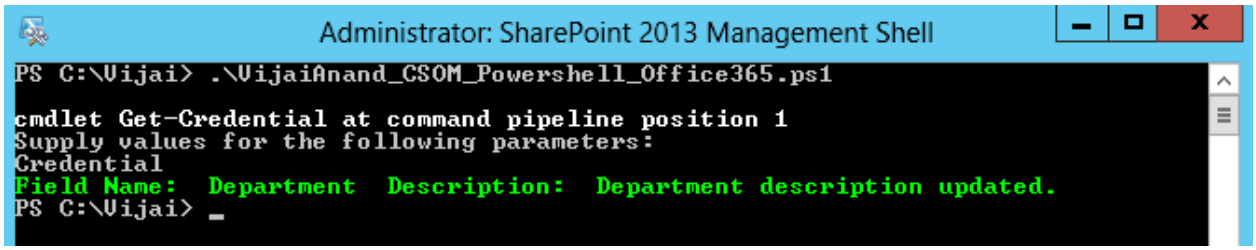


Figure7.2.1: *Update a specific field*

7.3 How to add a field in the list

In this example you will see how to add a field to a list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function AddField()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # String variable to store the field schema XML
    $schemaXML="<Field DisplayName='CustomField' Type='Text' />";

    # Add a field to the list
    $list.Fields.AddFieldAsXml($schemaXML,
$true,[Microsoft.SharePoint.Client.AddFieldOptions]::DefaultValue);
```

```
    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

AddField
```

Result

Navigate to the SharePoint site. Click on the **Employee Details** link available in the quick launch bar. Click on **List Settings** in the ribbon interface. You will see a new field added to the list available under the **Columns** section.

7.4 How to add an existing field to the list

In this example you will see how to add an existing field to the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters
```

```
$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function AddExistingField()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get a specific field bt title from site columns
    $field=$web.Fields.GetByTitle("MultiChoice");

    # Add the existing field to the list
    $list.Fields.Add($field);

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

AddExistingField
```

Result

Navigate to the SharePoint site. Click on the **Employee Details** link available in the quick launch bar. Click on **List Settings** in the ribbon interface. You will see a new field added to the list available under the **Columns** section.

7.5 How to delete a field from the list

In this example you will see how to delete a field from the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
```

```
### Function

function DeleteListField()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get a specific field bt title
    $field=$list.Fields.GetByTitle("MultiChoice");

    # Delete the field from the list
    $field.DeleteObject();;

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteListField
```

Result

Navigate to the SharePoint site. Click on the **Employee Details** link available in the quick launch bar. Click on **List Settings** in the ribbon interface. You will see a field is deleted from the list available under the **Columns** section.

7.6 How to set the default value for the list field

In this example you will see how to set the default value for the list field using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function SetDefaultValue()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials
```

```
    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get a specific field bt title
    $field=$list.Fields.GetByTitle("CustomField");

    # Set the default value for the field
    $field.DefaultValue="Default";

    # Update the field
    $field.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

SetDefaultValue
```

Result

Navigate to the SharePoint site. Click on the **Employee Details** link available in the quick launch bar. Click on **List Settings** in the ribbon interface. Click on the **CustomField** available under the **Columns** section. You will see a default value is set for the field.

7.7 How to get the calculated field formula

In this example you will see how to get the calculated field formula using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.

d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetCalculatedFieldFormula()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");
```

```
    # Get a specific field bt title
    $field=$list.Fields.GetByTitle("Calculated");

    # Cast the field
    $calculatedField=New-Object
Microsoft.SharePoint.Client.FieldCalculated($clientContext,$field.Path);
    $clientContext.Load($calculatedField);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the calculated field formula
    Write-Host -ForegroundColor Green $calculatedField.Formula
}

### Calling the function

GetCalculatedFieldFormula
```

Result

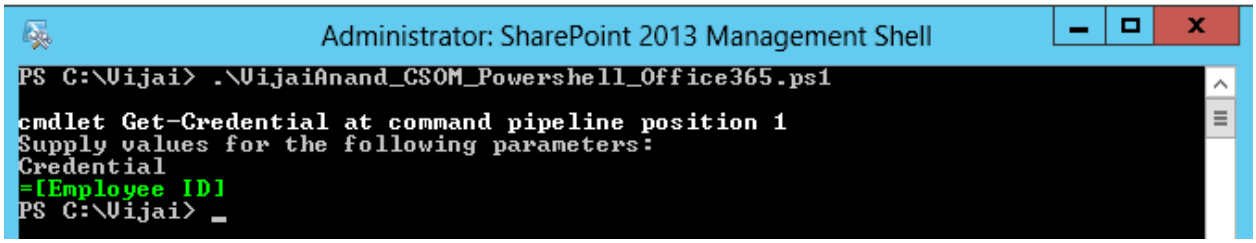


Figure7.7.1: *Calculated field formula*

7.8 How to set the formula for the calculated field

In this example you will see how to set the formula for the calculated field using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).

c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function SetCalculatedFieldFormula()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
```

```
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get a specific field bt title
    $field=$list.Fields.GetByTitle("Calculated");

    # Cast the field
    $calculatedField=New-Object
Microsoft.SharePoint.Client.FieldCalculated($clientContext,$field.Path);

    # Set the formula for the calculated value
    $calculatedField.Formula="=[Employee ID]";

    # Update the field
    $calculatedField.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

SetCalculatedFieldFormula
```

Result

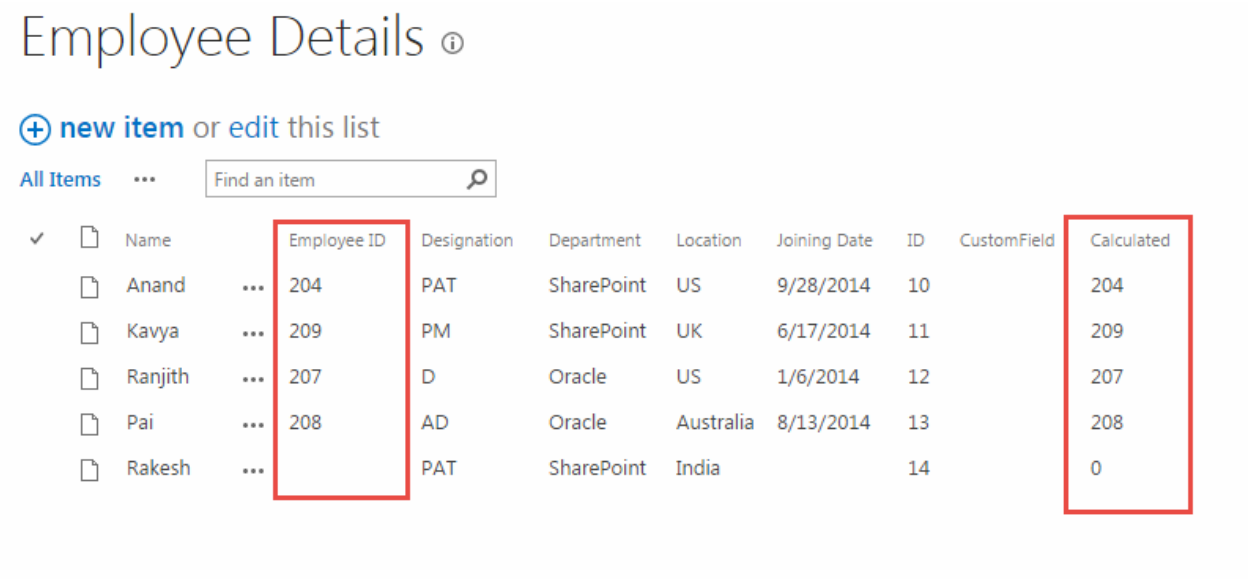


Figure7.8.1: *Values are updated based on the formula*

Perform SharePoint list view tasks using CSOM in Powershell script

In this section you will see how to perform list view related tasks using the SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

7.9 How to get all the views for the list

In this example you will see how to get all the views for the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
```

```
### Function

function GetListViews()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get all the views for the custom list
    $viewColl=$list.Views;
    $clientContext.Load($viewColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the views
    foreach($view in $viewColl)
    {
        # Display the view name
        write-host -ForegroundColor Green $view.Title
    }
}

### Calling the function

GetListViews
```

Result

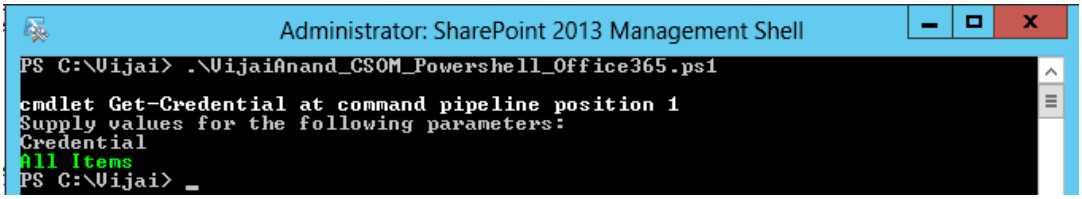


Figure8.1.1: *Get all the list views*

7.10 How to get all the fields available in the list view

In this example you will see how to get all the fields available in the list view using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
```

```
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetViewFields()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get a specific list view by title
    $view=$list.Views.getByTitle("Vijai View");

    # Get all the fields available in the list view
    $viewFieldColl=$view.ViewFields;
    $clientContext.Load($viewFieldColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the fields
    foreach($viewField in $viewFieldColl)
    {
        # Display the field
        Write-Host -ForegroundColor Green $viewField
    }
}

### Calling the function

GetViewFields
```

Result

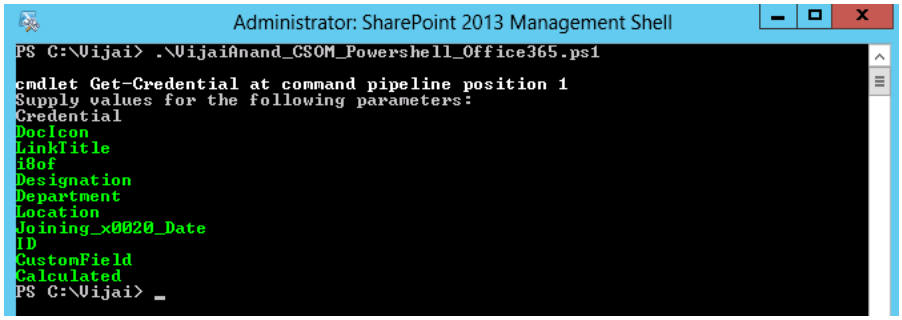


Figure 8.2.1: *Get all the fields*

7.11 How to set the default view in the list

In this example you will see how to set the default value in the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force
```

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function SetDefaultView()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get a specific list view by title
    $view=$list.Views.getByTitle("Vijai View");

    # Set the view as default view
    $view.DefaultView=$true;

    # Update the view
    $view.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function
```

```
SetDefaultView
```

Result

"Vijai View" view is set as the default view for the **Employee Details** list.

7.12 How to add a field to the list view

In this example you will see how to add a field to the list view using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
```

```
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function AddViewField()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get a specific list view by title
    $view=$list.Views.getByTitle("Vijai View");

    # Add the field to the list view
    $view.ViewFields.Add("Department");

    # Update the view
    $view.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

AddViewField
```

Result

Department field is added successfully to the **"Vijai View"** list view.

7.13 How to delete a field from the list view

In this example you will see how to delete a field from the list view using the Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function RemoveViewField()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
```

```
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get a specific list view by title
    $view=$list.Views.getByTitle("Vijai View");

    # Remove the field from the list view
    $view.ViewFields.Remove("Department");

    # Update the view
    $view.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

RemoveViewField
```

Result

Department field is removed successfully from the **"Vijai View"** list view.

7.14 How to delete a list view

In this example you will see how to delete a list view using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.

e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.

f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DeleteView()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the custom list by Title
    $list=$web.Lists.GetByTitle("Employee Details");

    # Get a specific list view by title
```

```
    $view=$list.Views.getByTitle("Vijai View");

    # Delete the list view
    $view.DeleteObject();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteView
```

Result

"Vijai View" list view is deleted successfully from the custom list.

8 Perform SharePoint folder tasks using CSOM in Powershell script

In this section you will see how to do folder related tasks using SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

8.1 How to get all the top level folders from the website

In this example you will see how to get all the top level folders from the website using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetFoldersFromWeb()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get all the top level folder collection from the website
    $folderColl=$web.Folders;
    $clientContext.Load($folderColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the folders
    foreach($folder in $folderColl)
    {
```

```
        # Display the folder name
        Write-Host -ForegroundColor Green $folder.Name
    }
}

### Calling the function

GetFoldersFromWeb
```

Result

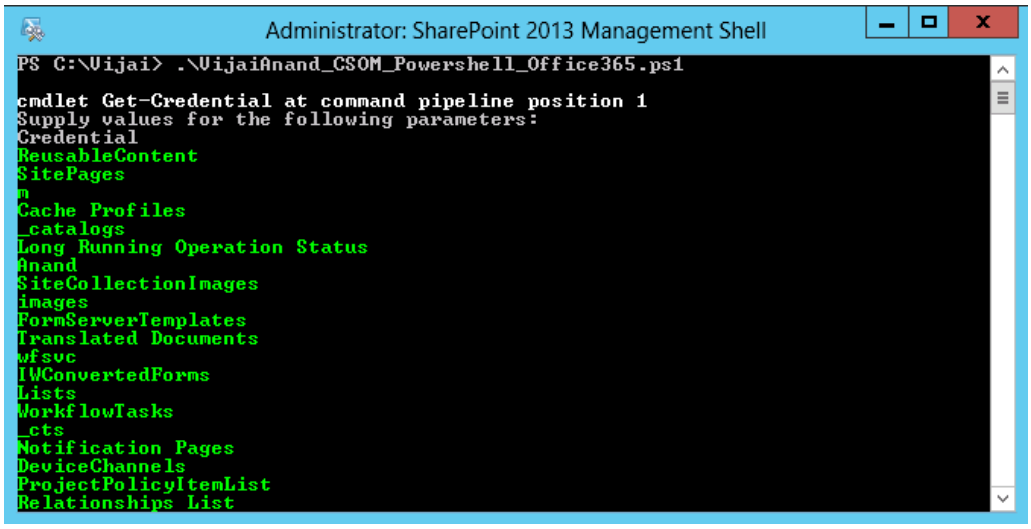


Figure 9.1.1: *Get all the top level folders*

8.2 How to get all the top level folders from the list

In this example you will see how to get all the top level folders from the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.

f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetFoldersFromList()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by Title
    $list=$web.Lists.GetByTitle("Documents");

    # Get all the top level folder collection from the list
    $folderColl=$list.RootFolder.Folders;
```

```
    $clientContext.Load($folderColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the folders
    foreach($folder in $folderColl)
    {
        # Display the folder name
        Write-Host -ForegroundColor Green $folder.Name
    }
}

### Calling the function

GetFoldersFromList
```

Result

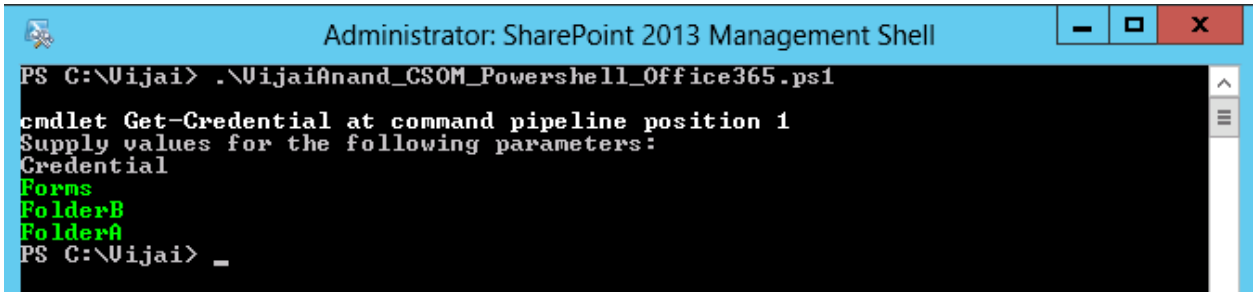


Figure9.2.1: *Get all the top level folders from the list*

8.3 How to get the subfolders from the list

In this example you will see how to get the subfolders from the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.

e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.

f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetSubfoldersFromList()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Returns the folder object located at the specified server relative URL
    $folderColl=$web.GetFolderByServerRelativeUrl("Shared
Documents/FolderA").Folders;
    $clientContext.Load($folderColl);
```

```
    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the folders
    foreach($folder in $folderColl)
    {
        # Display the folder name
        Write-Host -ForegroundColor Green $folder.Name
    }
}

### Calling the function

GetSubfoldersFromList
```

Result

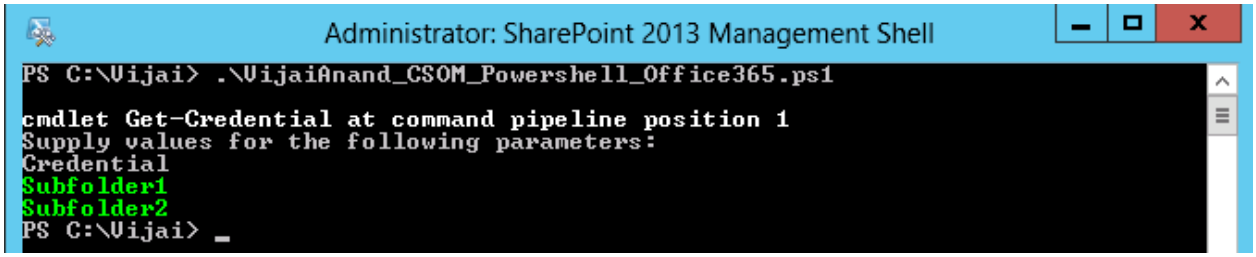


Figure9.3.1: *Get all the subfolders*

8.4 How to delete a folder from the list

In this example you will see how to delete a folder from the list using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.

f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DeleteFolder()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Returns the folder object located at the specified server relative URL
    $folder=$web.GetFolderByServerRelativeUrl("Shared Documents/FolderA/Subfolder1");

    # Delete the folder
```

```
    $folder.DeleteObject();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteFolder
```

Result

Folder at the specified server relative URL is deleted successfully.

8.5 How to create a new folder in the document library

In this example you will see how to create a new folder in the document library using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters
```

```
$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function CreateFolder()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Adds the folder that is located at the specified URL to the collection
    # Create a new folder in SharePoint Documents
    $folder=$web.Folders.Add("Shared Documents/FolderC");
    $clientContext.Load($folder);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the folder name and URL
    Write-Host -ForegroundColor Green "Folder Name: " $folder.Name " URL: "
$folder.ServerRelativeUrl;
}

### Calling the function

CreateFolder
```

Result

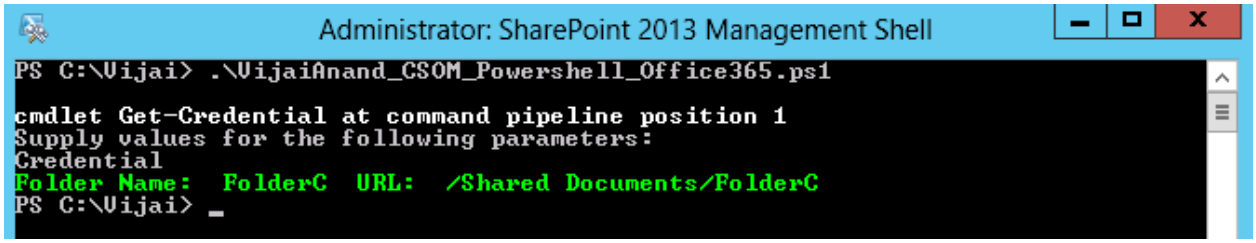


Figure9.5.1: *Create a new folder*

8.6 How to get the number of items inside the folder

In this example you will see how to get the number of items inside the folder using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References
```

```
# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetItemCountinFolder()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Returns the folder object located at the specified server relative URL
    $folder=$web.GetFolderByServerRelativeUrl("Shared Documents/FolderA");
    $clientContext.Load($folder);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the number of items inside the folder
    Write-Host -ForegroundColor Green "Number of items inside the folder: "
$folder.ItemCount
}

### Calling the function

GetItemCountinFolder
```

Result

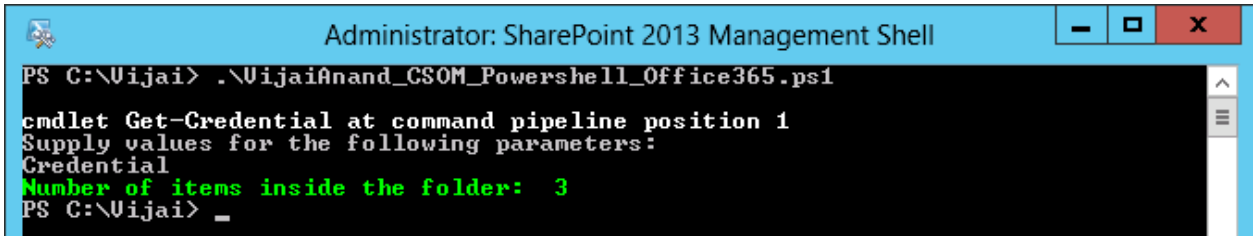


Figure9.6.1: *Get the count of items*

9 Perform SharePoint file tasks using CSOM in Powershell script

In this section you will see how to perform file related tasks using SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

9.1 How to get the major version of the file

In this example you will see how to get the major version of the file using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References
```

```
# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetMajorVersion()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$web.Lists.GetByTitle("Documents");

    # Get an item by ID
    $item=$list.GetItemById(19);

    # Get the file that is represented by the item from a document library
    $file=$item.File;
    $clientContext.Load($file);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the major version of the file
    Write-Host -ForegroundColor Green "Major Version of the file: "
$file.MajorVersion
}

### Calling the function

GetMajorVersion
```

Result

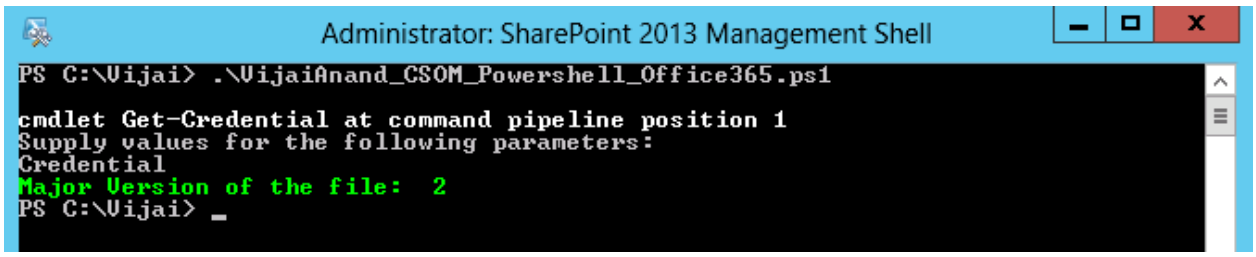


Figure10.1.1: *Get the major version of the file*

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.file.majorversion.aspx

9.2 How to get the minor version of the file

In this example you will see how to get the minor version of the file using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force
```

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetMinorVersion()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$web.Lists.GetByTitle("Documents");

    # Get an item by ID
    $item=$list.GetItemById(19);

    # Get the file that is represented by the item from a document library
    $file=$item.File;
    $clientContext.Load($file);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the minor version of the file
    Write-Host -ForegroundColor Green "Minor Version of the file: "
$file.MinorVersion
}
```

```
### Calling the function

GetMinorVersion
```

Result

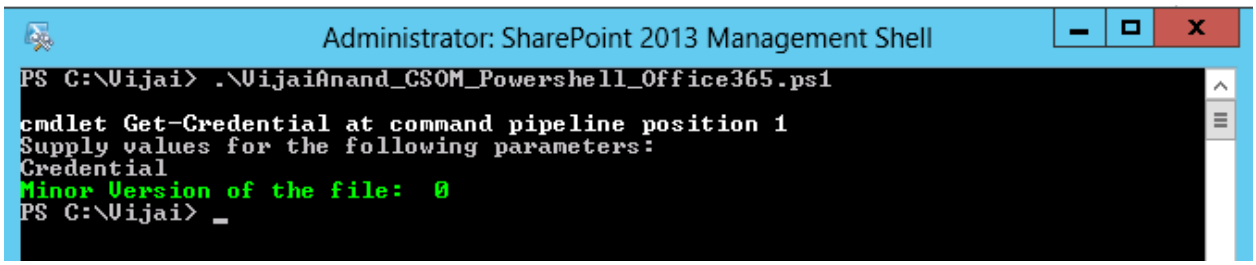


Figure10.2.1: *Get the minor version of the file*

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.file.minorversion.aspx

9.3 How to check out the file in the document library

In this example you will see how to check out the file in the document library using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials
```

```
$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function FileCheckOut()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$web.Lists.GetByTitle("Documents");

    # Get an item by ID
    $item=$list.GetItemById(19);

    # Get the file that is represented by the item from a document library
    $file=$item.File;

    # Check out the file
    $file.CheckOut()
```

```
    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

FileCheckOut
```

Result

The specified file is checked out successfully.

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.file.checkout.aspx

9.4 How to get the user login name that has checked out the file

In this example you will see how to get the user login name that has checked out the file using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References
```

```
# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetCheckedOutByUser()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$web.Lists.GetByTitle("Documents");

    # Get an item by ID
    $item=$list.GetItemById(19);

    # Get the file that is represented by the item from a document library
    $file=$item.File;

    # Get the checked out by user object
    $user=$file.CheckedOutByUser;
    $clientContext.Load($user);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the file checked out by user
    Write-Host -ForegroundColor Green "File Checked out: " $user.LoginName
}

### Calling the function

GetCheckedOutByUser
```

Result

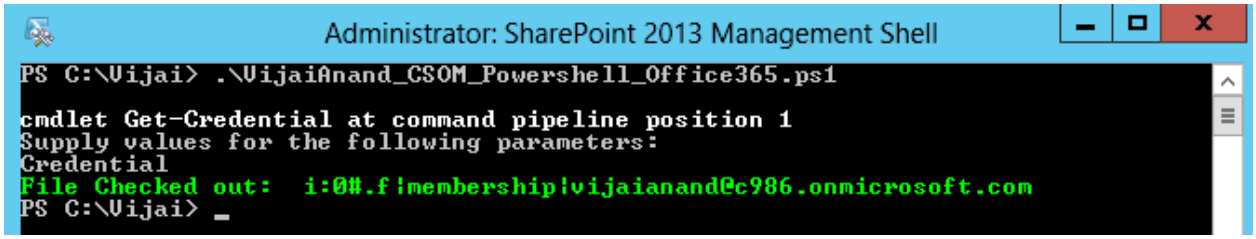


Figure10.4.1: *Get the login name of the user*

Reference

http://msdn.microsoft.com/en-us/library/microsoft.sharepoint.client.file.checkedoutbyuser.aspx

9.5 How to get the user login name who added the file

In this example you will see how to get the user login name that added the file using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force
```

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetFileAuthor()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$web.Lists.GetByTitle("Documents");

    # Get an item by ID
    $item=$list.GetItemById(19);

    # Get the file that is represented by the item from a document library
    $file=$item.File;

    # Get the user who added the file
    $user=$file.Author;
    $clientContext.Load($user);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the user login name who added the file
```

```
    Write-Host -ForegroundColor Green "Author: " $user.LoginName
}

### Calling the function

GetFileAuthor
```

Result

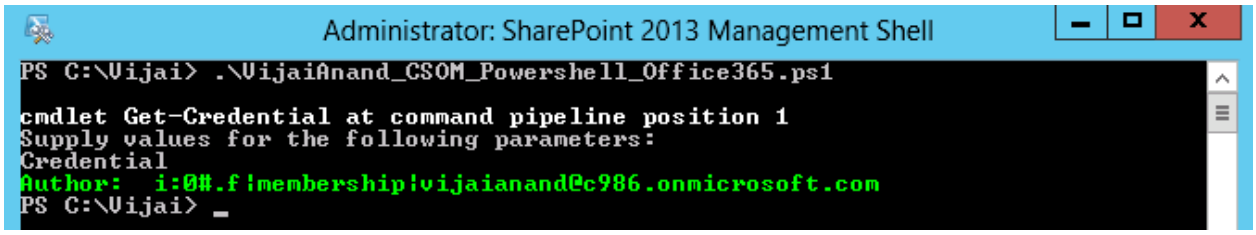


Figure10.5.1: *Get the login name of the user*

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.file.author.aspx

9.6 How to get the check out type associated with the file

In this example you will see how to get the check out type associated with the file using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetCheckOutType()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$web.Lists.GetByTitle("Documents");

    # Get an item by ID
    $item=$list.GetItemById(19);

    # Get the file that is represented by the item from a document library
    $file=$item.File;
    $clientContext.Load($file);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the Check out type associated with the file
    Write-Host -ForegroundColor Green "CheckOutType: " $file.CheckoutType
}
```

```
### Calling the function

GetCheckOutType
```

Result

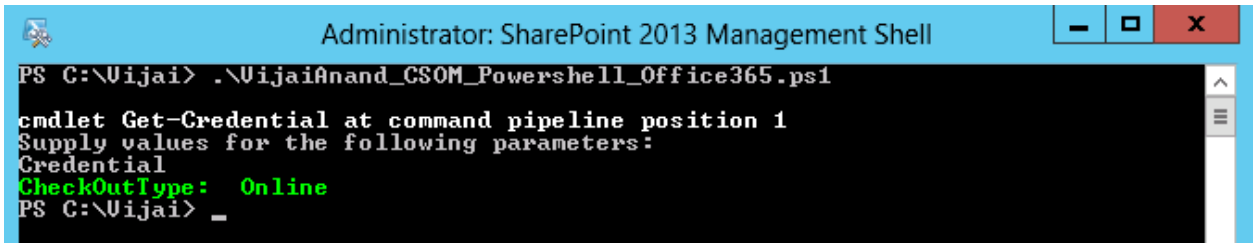


Figure10.6.1: *Get the check out type*

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.file.checkouttype.aspx

9.7 How to check in the file

In this example you will see how to check in the file using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Input Parameters

$url = "https://c986.sharepoint.com/"
```

```
### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function FileCheckIn()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$web.Lists.GetByTitle("Documents");

    # Get an item by ID
    $item=$list.GetItemById(19);

    # Get the file that is represented by the item from a document library
    $file=$item.File;

    # Check in the file
    $file.CheckIn("Checked in using powershell",
[Microsoft.SharePoint.Client.CheckInType]::MajorCheckIn);

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

FileCheckIn
```

Result

The file is checked in as major version successfully.

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.file.checkin.aspx

9.8 How to get the check in comment of the file

In this example you will see how to get the latest check in comment of the file using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetCheckInComment()
```

```
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$web.Lists.GetByTitle("Documents");

    # Get an item by ID
    $item=$list.GetItemById(19);

    # Get the file that is represented by the item from a document library
    $file=$item.File;
    $clientContext.Load($file);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the file check in comment
    Write-Host -ForegroundColor Green "File Check In Comment: " $file.CheckInComment
}

### Calling the function

GetCheckInComment
```

Result

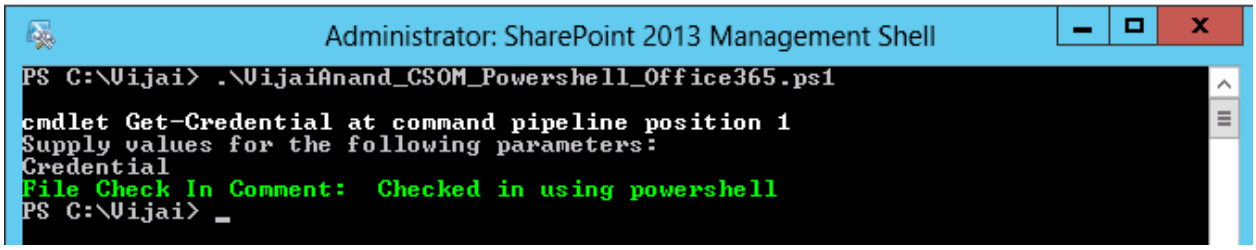


Figure10.8.1: *Check in comment*

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.file.checkincomment.aspx

9.9 How to unpublish the major version of the file

In this example you will see how to unpublish the major version of the file using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
```

```
### Function

function UnPublishFile()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$web.Lists.GetByTitle("Documents");

    # Get an item by ID
    $item=$list.GetItemById(19);

    # Get the file that is represented by the item from a document library
    $file=$item.File;

    $file.UnPublish(" Unpublishing the major version using powershell");

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

UnPublishFile
```

Result

The major version of the file is unpublished successfully.

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.file.unpublish.aspx

9.10 How to discard check out of the file

In this example you will see how to discard the check out of the file using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DiscardCheckOut()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
```

```
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$web.Lists.GetByTitle("Documents");

    # Get an item by ID
    $item=$list.GetItemById(19);

    # Get the file that is represented by the item from a document library
    $file=$item.File;

    # Discard check out
    $file.UndoCheckOut();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DiscardCheckOut
```

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.file.undocheckout.aspx

9.11 How to delete the file from the document library

In this example you will see how to delete the file from the document library using the Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.

d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DeleteFile()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$web.Lists.GetByTitle("Documents");
```

```
    # Get an item by ID
    $item=$list.GetItemById(19);

    # Get the file that is represented by the item from a document library
    $file=$item.File;

    # Delete the file
    $file.DeleteObject();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteFile
```

Result

The file is deleted successfully from the document library.

Reference

http://msdn.microsoft.com/en-IN/library/microsoft.sharepoint.client.file.deleteobject.aspx

10 Perform SharePoint file version tasks using CSOM in Powershell script

In this section you will see how to do file version related tasks using the SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

10.1 How to get all the versions for the file

In this example you will see how to get all the versions for the file using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.

b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetFileVersions()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web=$clientContext.Web;
```

```
    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Documents")

    # Get an item by ID
    $item=$list.GetItemById(23)

    # Get aall the versions for an item
    $versionColl=$item.File.Versions;
    $clientContext.Load($versionColl)

    # Execute the query
    $clientContext.ExecuteQuery();

    Write-Host -ForegroundColor Green "File Vesrions: "
    #Loop through all the versions
    foreach($version in $versionColl)
    {
        # Display the version Label and CheckInComment
        write-host -ForegroundColor Yellow "Label: " $version.VersionLabel "
CheckInComment: " $version.CheckInComment
    }
}

### Calling the function

GetFileVersions
```

Result

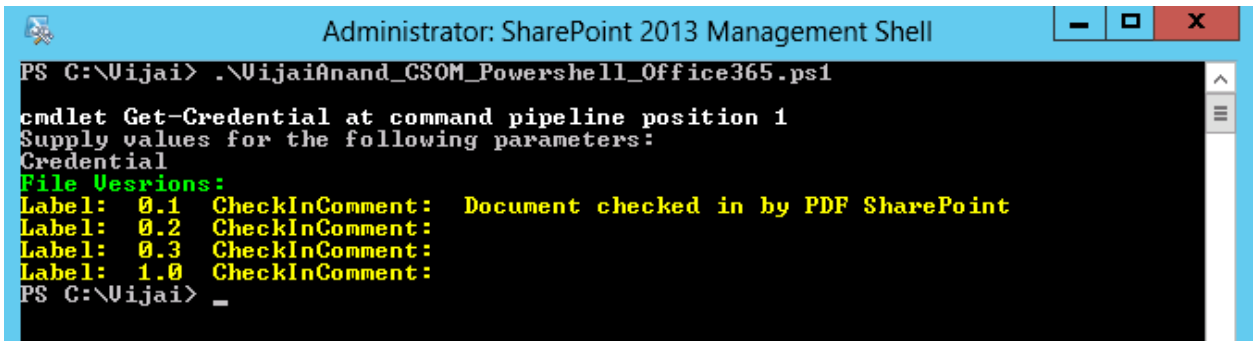


Figure11.1.1: *Get all the versions for the file*

10.2 How to get the file version for the document by version Id

In this example you will see how to get the file version for the document by version Id using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetFileVersion()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
```

```
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Documents")

    # Get an item by ID
    $item=$list.GetItemById(23)

    # Get the version for the document using VersionId
    $version=$item.File.Versions.GetById(1);
    $clientContext.Load($version)

    # Execute the query
    $clientContext.ExecuteQuery();


    # Display the version Label and CheckInComment
    write-host -ForegroundColor Yellow "Label: " $version.VersionLabel "
CheckInComment: " $version.CheckInComment

}

### Calling the function

GetFileVersion
```

Result

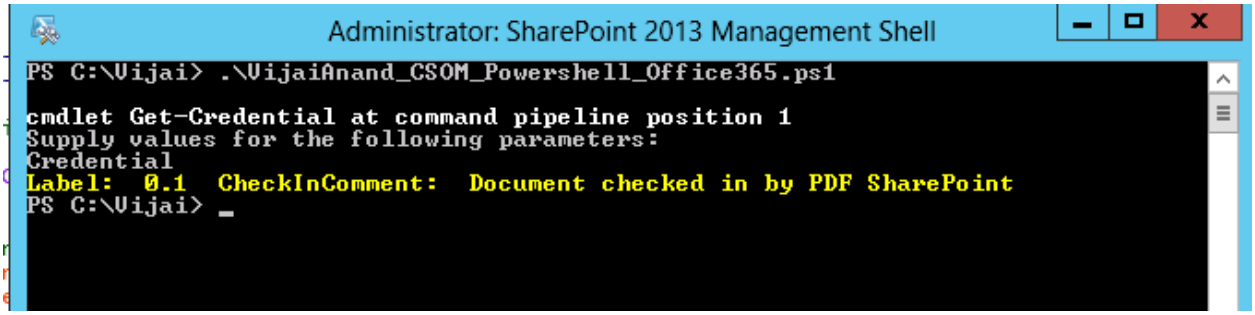


Figure11.2.1: *Get the file version by version ID*

10.3 How to delete a file version by version ID for the document

In this example you will see how to delete a file version for the document using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DeleteFileVersion()
{
```

```
    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Documents")

    # Get an item by ID
    $item=$list.GetItemById(23)

    # Get the version for the document using VersionId
    $version=$item.File.Versions.GetById(1);

    # Delete the version
    $version.DeleteObject();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteFileVersion
```

Result

Specified version of the file is deleted successfully.

10.4 How to delete a file version by version label for the document

In this example you will see how to delete a file version by version label for the document using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.

b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DeleteFileVersion()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web=$clientContext.Web;
```

```
    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Documents")

    # Get an item by ID
    $item=$list.GetItemById(23)

    # Delete the file version object with the specified version Label
    $version=$item.File.Versions.DeleteByLabel("0.2")

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteFileVersion
```

Result

Specified version of the file is deleted successfully.

10.5 How to restore a specific file version for the document

In this example you will see how to restore a specific file version for the document using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials
```

```
$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function RestoreFileVersion()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Documents")

    # Get an item by ID
    $item=$list.GetItemById(23)

    # Restore the file version
    $version=$item.File.Versions.RestoreByLabel("1.0")

    # Execute the query
    $clientContext.ExecuteQuery();
}
```

```
### Calling the function

RestoreFileVersion
```

Result

Specified version of the file is restored successfully.

10.6 How to check if the file version is a current version for the document

In this example you will see how to determine if the file version is a current version for the document using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
```

```
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function IsCurrentVersion()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Documents")

    # Get an item by ID
    $item=$list.GetItemById(23)

    # Get aall the versions for an item
    $versionColl=$item.File.Versions;
    $clientContext.Load($versionColl)

    # Execute the query
    $clientContext.ExecuteQuery();

    #Loop through all the versions
    foreach($version in $versionColl)
    {
        if($version.IsCurrentVersion)
        {
            # Display the version Label and CheckInComment
            write-host -ForegroundColor Yellow "Current Version of the file: "
$version.VersionLabel
            $cbreak;
        }
    }
}
```

```
### Calling the function

IsCurrentVersion
```

Result

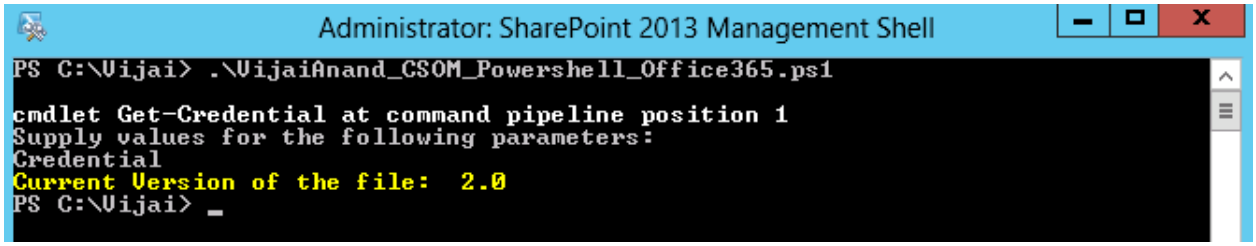


Figure11.6.1: *Check if the version is current version*

10.7 How to delete all the file versions for the document

In this example you will see how to delete all the file versions for the document using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force
```

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function DeleteAllVersions()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web=$clientContext.Web;

    # Get the list by title
    $list=$clientContext.Web.Lists.GetByTitle("Documents")

    # Get an item by ID
    $item=$list.GetItemById(23)

    # Delete all the versions
    $item.File.Versions.DeleteAll();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

DeleteAllVersions
```

Result

All the file versions for the document are deleted successfully.

Perform SharePoint group tasks using CSOM in Powershell script

In this section you will see how to do group related tasks using the SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

10.8 How to get all the site groups

In this example you will see how to get all the site groups using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References
```

```
# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetSiteGroups()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get all the site groups
    $groupColl=$web.SiteGroups;
    $clientContext.Load($groupColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the site groups
    foreach($group in $groupColl)
    {
        # Display the group name
        Write-Host -ForegroundColor Green $group.Title
    }
}

### Calling the function

GetSiteGroups
```

Result

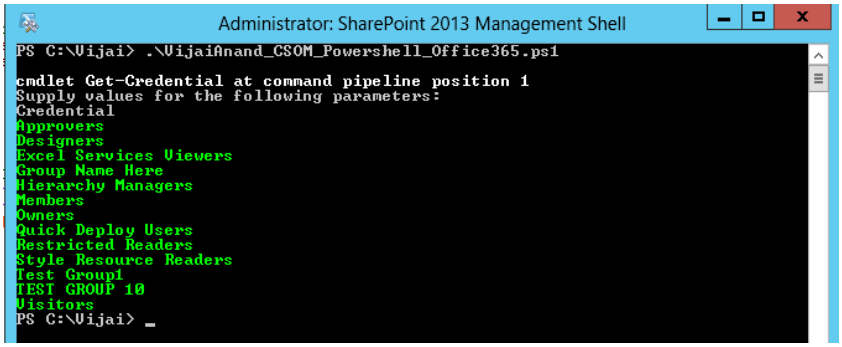


Figure12.1.1: *Get all the site groups*

10.9 How to create a new site group

In this example you will see how to create a new site group using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"
```

```
### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function CreateGroup()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get all the site groups
    $groupColl=$web.SiteGroups;

    # Create a new site group
    $groupCreationInfo=New-Object
Microsoft.SharePoint.Client.groupCreationInformation;
    $groupCreationInfo.Title="Vijai Custom Group";
    $groupCreationInfo.Description= " Custom group created using Powershell";
    $newGroup=$groupColl.Add($groupCreationInfo);
    $clientContext.Load($newGroup);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Display the new group name
    Write-Host -ForegroundColor Green "New group created successfully: "
$newGroup.Title
}

### Calling the function

CreateGroup
```

Result

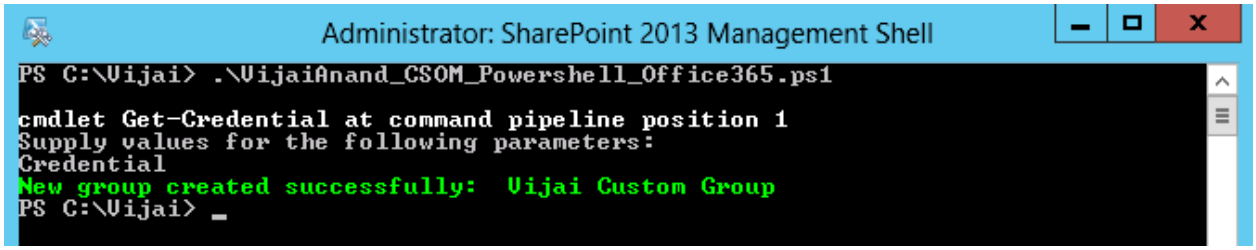


Figure12.2.1: *Create a new site group*

10.10 How to set the user as owner for the site group

In this example you will see how to set the user as owner for the site group using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters
```

```
$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function SetGroupOwner()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;
    $ownerUser=$web.EnsureUser("i:0#.f|membership|vijaianand@c986.onmicrosoft.com");

    # Set the user as owner for the site group
    $group=$web.SiteGroups.GetByName("Owners");
    $group.Owner=$ownerUser;

    # Update the group
    $group.Update();
    $clientContext.Load($group);

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

SetGroupOwner
```

Result

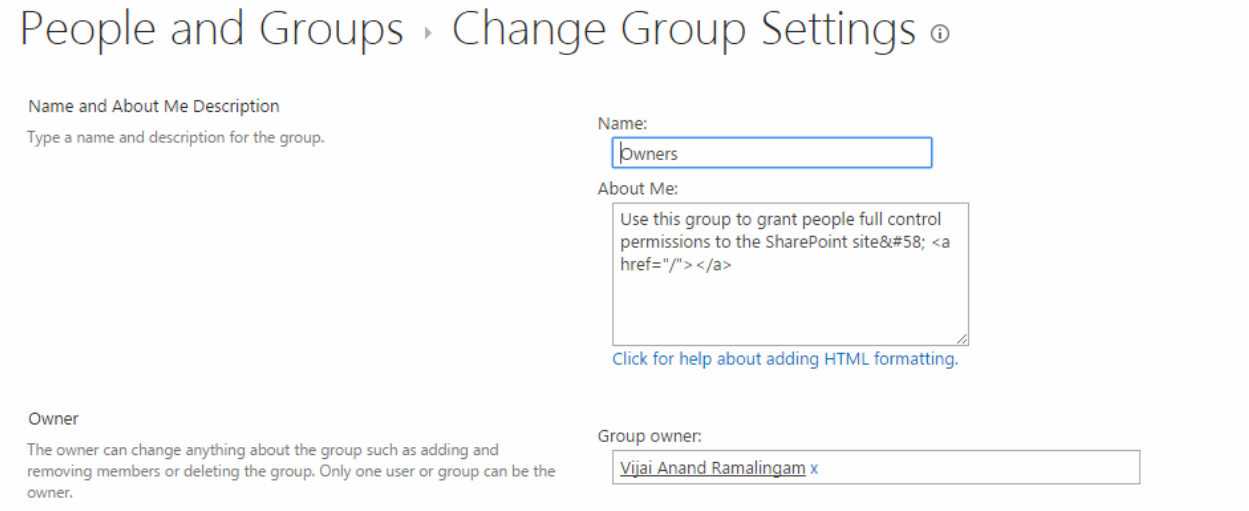


Figure12.3.1: *Set the user as owner for the site group*

10.11 How to set the group as owner for the site group

In this example you will see how to set the group as owner for the site group using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Input Parameters

$url = "https://c986.sharepoint.com/"
```

```
### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function SetGroupOwner()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the specific site group by name
    $ownerGroup=$web.SiteGroups.GetByName("Owners");

    # Set the group as owner for the site group
    $group=$web.SiteGroups.GetByName("Vijai Custom Group");
    $group.Owner=$ownerGroup;

    # Update the group
    $group.Update();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

SetGroupOwner
```

Result

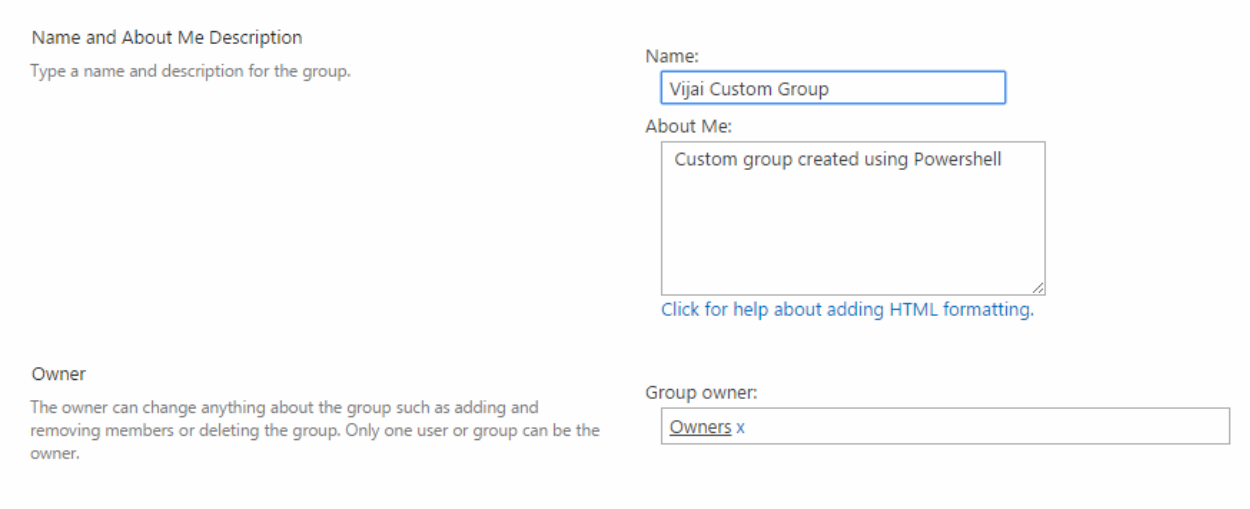


Figure12.4.1: *Set the group as owner for the site group*

10.12 How to get all the users from the site group

In this example you will see how to get all the users from the site group using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force
```

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function GetUsersFromGroup()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the specific site group by name
    $group=$web.SiteGroups.GetByName("Vijai Custom Group");

    # Get all the users who belong to this specific group
    $userColl=$group.Users
    $clientContext.Load($userColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the users
    foreach($user in $userColl)
    {
        # Display the user loginname
        Write-Host -ForegroundColor Green $user.LoginName
    }
}
```

```
### Calling the function

GetUsersFromGroup
```

Result

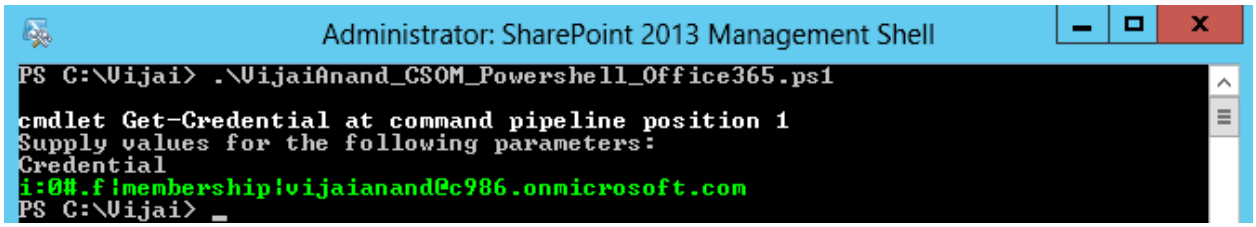


Figure12.5.1: *Get all the users from the site group*

10.13 How to add a user to the site group

In this example you will see how to add a user to the site group using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force
```

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function AddUserToGroup()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;
    $user=$web.EnsureUser("i:0#.f|membership|vijaianand@c986.onmicrosoft.com");

    # Get the specific site group by name
    $group=$web.SiteGroups.GetByName("Vijai Custom Group");

    # Add a user to the specific group
    $result=$group.Users.AddUser($user);
    $clientContext.Load($result);

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

AddUserToGroup
```

Result

Figure12.6.1: *Add user to the group*

10.14 How to remove a user from the site group

In this example you will see how to remove a user from the site group using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters
```

```
$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function RemoveUserFromGroup()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;
    $user=$web.EnsureUser("i:0#.f|membership|vijaianand@c986.onmicrosoft.com");

    $clientContext.Load($user);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Get the specific site group by name
    $group=$web.SiteGroups.GetByName("Vijai Custom Group");

    # Remove a user the specific group
    $group.Users.RemoveByLoginName($user.LoginName);

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

RemoveUserFromGroup
```

Result

The user is removed successfully from the **Vijai Custom Group**.

10.15 How to delete a site group

In this example you will see how to delete a site group using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
```

```
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"

### Function

function RemoveGroupFromWeb()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint web
    $web=$clientContext.Web;

    # Get the specific site group by name
    $group=$web.SiteGroups.GetByName("Vijai Custom Group");

    # Remove a group from the web
    $web.SiteGroups.Remove($group);

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

RemoveGroupFromWeb
```

Result

The specified site group is deleted successfully.

11 Perform SharePoint role tasks using CSOM in Powershell script

In this section you will see how to do role related tasks using the SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

11.1 How to get all the permission levels from the website

In this example you will see how to get all the roles or permission levels from the website using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"


### Function

function GetPermissionLevels()
```

```
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web= $clientContext.Web;

    # Get all the permission levels
    $roleDefColl=$web.RoleDefinitions;
    $clientContext.Load($roleDefColl);

    # Execute the query
    $clientContext.ExecuteQuery();

    # Loop through all the role definitions
   foreach($roleDef in $roleDefColl)
   {
     Write-Host -ForegroundColor Green $roleDef.Name
   }
}

### Calling the function

GetPermissionLevels
```

Result

Navigate to the SharePoint site. Click on **Settings** and then click on **Site Settings**. Click on **Site Permissions** available under the **Users and Permissions** section. Click on **Permission Levels** available in the ribbon interface. You will see all the permission levels available in the website.

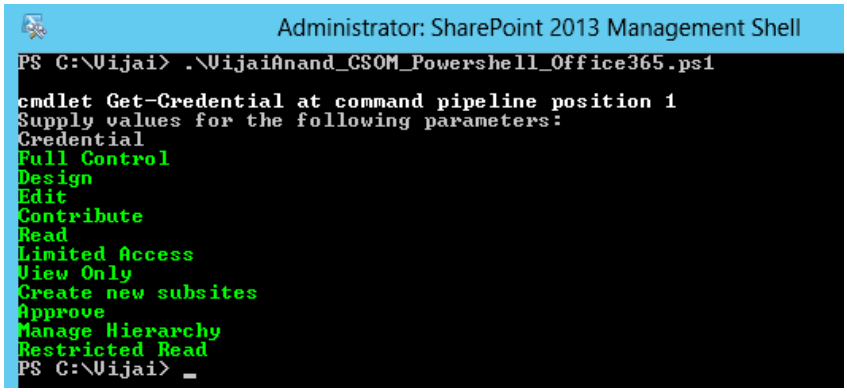


Figure13.1.1: *Get all the roles*

11.2 How to create a permission level in the website

In this example you will see how to create a new role or permission level in the website using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters
```

```
$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"


### Function

function CreatePermissionLevel()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web= $clientContext.Web;

    # Base Permissions that has to be added to the role definition
    $permissions = New-Object Microsoft.SharePoint.Client.BasePermissions;
    $permissions.Set([Microsoft.SharePoint.Client.PermissionKind]::ViewListItems);
    $permissions.Set([Microsoft.SharePoint.Client.PermissionKind]::ViewVersions);

    # Initialize the role definition
    $creationInfo = New-Object
Microsoft.SharePoint.Client.RoleDefinitionCreationInformation;
    $creationInfo.Name = "My role";
    $creationInfo.Description = "My role created using powershell";
    $creationInfo.BasePermissions = $permissions;

    # Add the role definitin to the site
    $web.RoleDefinitions.Add($creationInfo);

    # Execute the query
    $clientContext.ExecuteQuery();
}
```

```
### Calling the function

CreatePermissionLevel
```

Result

Navigate to the SharePoint site. Click on **Settings** and then click on **Site Settings**. Click on **Site Permissions** available under the **Users and Permissions** section. Click on **Permission Levels** available in the ribbon interface. You will see a new role or permission level is created successfully.

11.3 How to update the permission level in the website

In this example you will see how to update the permission level in the website using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References
```

```
# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"


### Function

function UpdatePermissionLevel()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web= $clientContext.Web;

    # Get the role definition by name
    $roleDef=$web.RoleDefinitions.GetByName("My Role");

    # Update the description
    $roleDef.Description = " Description updated";

    # Add the permissions
    $permissions = New-Object Microsoft.SharePoint.Client.BasePermissions;
    $permissions.Set([Microsoft.SharePoint.Client.PermissionKind]::ApproveItems);
    $permissions.Set([Microsoft.SharePoint.Client.PermissionKind]::CreateAlerts);
    $roleDef.BasePermissions = $permissions;

    # Update the permission level
    $roleDef.Update();
    $clientContext.Load($roleDef);

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

UpdatePermissionLevel
```

Result

Navigate to the SharePoint site. Click on **Settings** and then click on **Site Settings**. Click on **Site Permissions** available under the **Users and Permissions** section. Click on **Permission Levels** available in the ribbon interface. Click on **My role** permission level. You will see the specified role or permission level is updated successfully as shown in Figure 13.3.1.

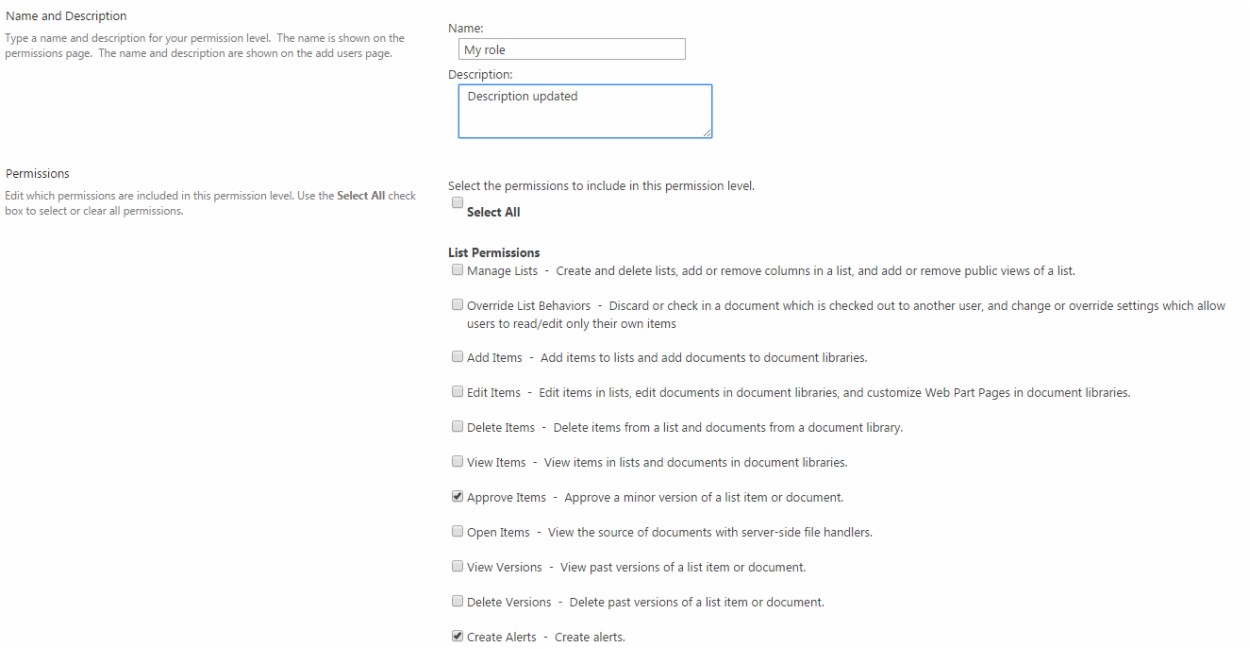


Figure13.3.1: *Update the role*

11.4 How to remove the permissions from the permission level

In this example you will see how to remove the permissions from the permission level using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.

f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"


### Function

function RemovePermission()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web= $clientContext.Web;

    # Get the role definition by name
    $roleDef=$web.RoleDefinitions.GetByName("My Role");

    # remove the permissions
```

```
    $permissions = New-Object Microsoft.SharePoint.Client.BasePermissions;
    $permissions.Clear([Microsoft.SharePoint.Client.PermissionKind]::ApproveItems);
    $roleDef.BasePermissions = $permissions;

    # Update the permission level
    $roleDef.Update();
    $clientContext.Load($roleDef);

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function

RemovePermission
```

Result

Navigate to the SharePoint site. Click on **Settings** and then click on **Site Settings**. Click on **Site Permissions** available under the **Users and Permissions** section. Click on **Permission Levels** available in the ribbon interface. Click on **My role** permission level. You will see the permissions are removed successfully from the role.

11.5 How to delete the permission level from the website

In this example you will see how to delete the role or permission level from the website using the .Net Client Side object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials
```

```
$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"


### Function

function DeletePermissionLevel()
{

    # Connect to SharePoint Online and get ClientContext object.
    $clientContext = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $clientContext.Credentials = $credentials

    # Get the SharePoint Web
    $web= $clientContext.Web;

    # Get the role definition by name
    $roleDef=$web.RoleDefinitions.GetByName("My Role");

    # Delete the role definition
    $roleDef.DeleteObject();

    # Execute the query
    $clientContext.ExecuteQuery();
}

### Calling the function
```

```
DeletePermissionLevel
```

Result

Navigate to the SharePoint site. Click on **Settings** and then click on **Site Settings**. Click on **Site Permissions** available under the **Users and Permissions** section. Click on **Permission Levels** available in the ribbon interface. You will see the specified role or permission level is successfully deleted from the website.

12 Perform SharePoint Taxonomy related tasks using CSOM in Powershell Script

In this section you will see how to perform taxonomy related tasks using the SharePoint 2013 .Net Client Side Object Model in Powershell scripts.

12.1 How to get all the Term Stores for the provided site

In this example you will see how to get all the termstores using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force
```

```
### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function

function GetTaxonomyStores()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    $referencedAssemblies = (
        "Microsoft.SharePoint.Client, Version=15.0.0.0, Culture=neutral,
PublicKeyToken=71e9bce111e9429c",
        "Microsoft.SharePoint.Client.Runtime, Version=15.0.0.0, Culture=neutral,
PublicKeyToken=71e9bce111e9429c",
        "Microsoft.SharePoint.Client.Taxonomy, Version=15.0.0.0, Culture=neutral,
PublicKeyToken=71e9bce111e9429c",
        "System.Core, Version=3.5.0.0, Culture=neutral,
PublicKeyToken=b77a5c561934e089")

    $sourceCode = @"
        using Microsoft.SharePoint.Client;
        using Microsoft.SharePoint.Client.Taxonomy;
        using System.Collections.Generic;
        using System.Linq;

        public static class QueryHelper
```

```
        {
            public static void LoadListWithLimtedFields(ClientContext ctx,
TaxonomySession taxonomySession)
            {
                ctx.Load(
                        taxonomySession.TermStores,
                        termStores => termStores.Include
                            (termStore => termStore.Name)
                            );

            }
        }
"@

    Add-Type -ReferencedAssemblies $referencedAssemblies -TypeDefinition $sourceCode
-Language CSharp;


    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);
    [QueryHelper]::LoadListWithLimtedFields($ctx, $taxonomySession)

    # Execute the query
    $ctx.ExecuteQuery()
    if($taxonomySession -ne $null)
    {
        Write-Host -ForegroundColor Green "Termstores available for the taxonomy
session"
        foreach($termStore in $taxonomySession.TermStores)
        {
            # Display the termstore name
            $termStore.Name
        }
    }
}

### Calling the function

GetTaxonomyStores
```

Result

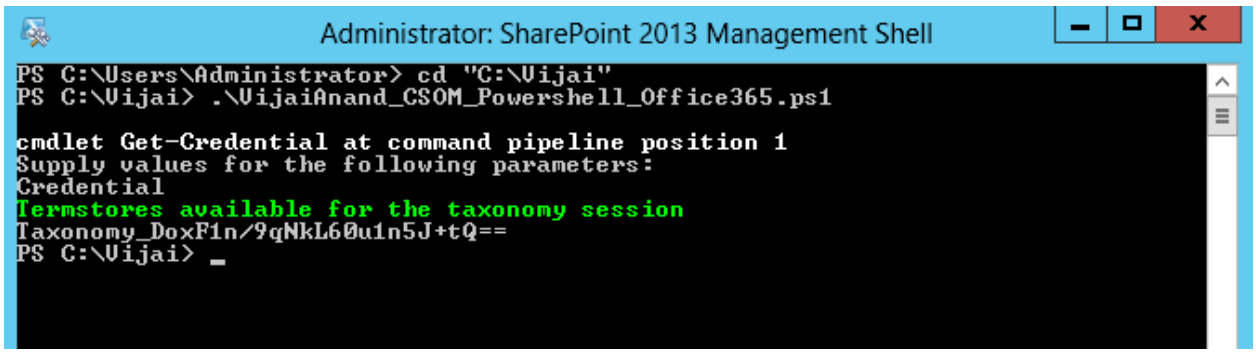


Figure14.1.1: *Get all the termstores*

12.2 How to get all the groups for the termstore

In this example you will see how to get all the groups for the specific termstore using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"
```

```
### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function

function GetTermStoreGroups()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    $referencedAssemblies = (
        "Microsoft.SharePoint.Client, Version=15.0.0.0, Culture=neutral,
PublicKeyToken=71e9bce111e9429c",
        "Microsoft.SharePoint.Client.Runtime, Version=15.0.0.0, Culture=neutral,
PublicKeyToken=71e9bce111e9429c",
        "Microsoft.SharePoint.Client.Taxonomy, Version=15.0.0.0, Culture=neutral,
PublicKeyToken=71e9bce111e9429c",
        "System.Core, Version=3.5.0.0, Culture=neutral,
PublicKeyToken=b77a5c561934e089")

    $sourceCode = @"
        using Microsoft.SharePoint.Client;
        using Microsoft.SharePoint.Client.Taxonomy;
        using System.Collections.Generic;
        using System.Linq;

        public static class QueryHelper
        {
            public static void LoadListWithLimtedFields(ClientContext ctx, TermStore
termstore)
            {
```

```
                ctx.Load(
                        termstore.Groups,
                        termGroups => termGroups.Include
                            (termGroup => termGroup.Name)
                            );

            }
        }
"@

    Add-Type -ReferencedAssemblies $referencedAssemblies -TypeDefinition $sourceCode
-Language CSharp;


    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;
    [QueryHelper]::LoadListWithLimtedFields($ctx, $termstore)

    # Execute the query
    $ctx.ExecuteQuery()

    Write-Host -ForegroundColor Green "Termstore Groups:"
    # Loop through all the term groups for the termstore
    foreach($group in $termstore.Groups)
    {
        # Display the group name
        $group.Name
    }
}

### Calling the function

GetTermStoreGroups
```

Result

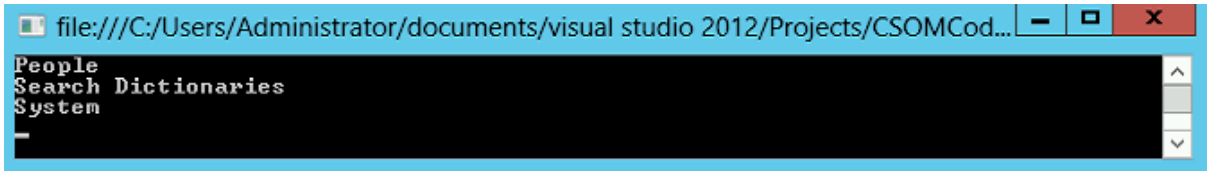


Figure14.4.1: *Get all the taxonomy groups*

12.3 How to create a new group for the term store

In this example you will see how to create a new taxonomy group for the termstore using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
```

```
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function

function CreateTermGroup()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Create a new guid for group
    $guid=[System.Guid]::NewGuid()

    # Create a new group
    $termGroup=$termStore.CreateGroup("NewGroup",$guid)

    # Commit all the changes
    $termStore.CommitAll();

    # Execute the query
    $ctx.ExecuteQuery()
}

### Calling the function
```

```
CreateTermGroup
```

Result

A new taxonomy group is created successfully as shown in Figure 14.3.1.

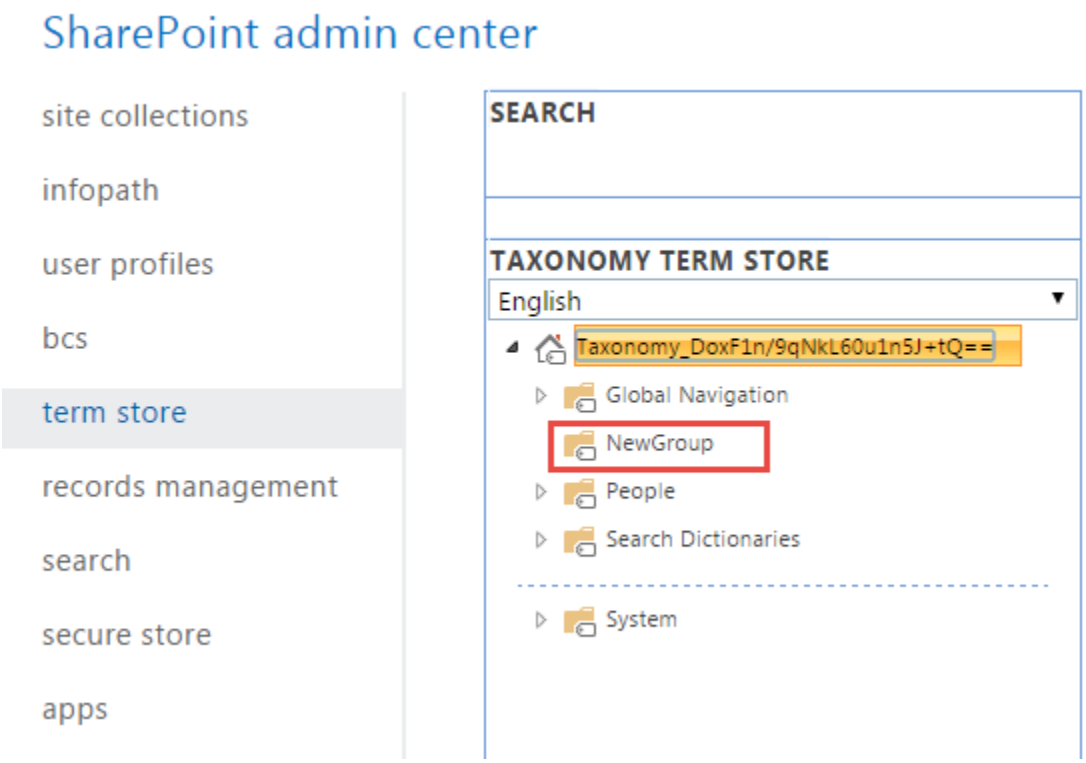


Figure14.3.1: *Create a new taxonomy group*

12.4 How to delete the group from the term store

In this example you will see how to delete a specific taxonomy group from the termstore using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.

d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function

function DeleteTermGroup()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    # Get the taxonomy session
```

```
$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Group Guid
    $guid=New-Object System.Guid("4b6caff1-6f6b-4c62-87e1-2d077eb62558")

    # Get the term group by Guid
    $termGroup=$termStore.GetGroup($guid)

    # Delete the term group
    $termGroup.DeleteObject();

    # Execute the query
    $ctx.ExecuteQuery()
}

### Calling the function

DeleteTermGroup
```

Result

The specified taxonomy group is deleted successfully from the termstore.

12.5 How to get all the termsets for the taxonomy group

In this example you will see how to get all the termsets for the taxonomy group using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.

e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.

f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function

function GetTermSets()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);
```

```
    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Group Guid
    $guid=New-Object System.Guid("da52b879-4c2c-4697-a574-ef5be1255d62")

    # Get the term group by Guid
    $termGroup=$termStore.GetGroup($guid)

    # Get all the termsets
    $termSetColl=$termGroup.TermSets;
    $ctx.Load($termSetColl);

    # Execute the query
    $ctx.ExecuteQuery()

    Write-Host -ForegroundColor Green "TermSets:"
    # Loop through all the term sets
    foreach($termSet in $termSetColl)
    {
        # Display the term set name
        $termSet.Name
    }
}

### Calling the function

GetTermSets
```

Result

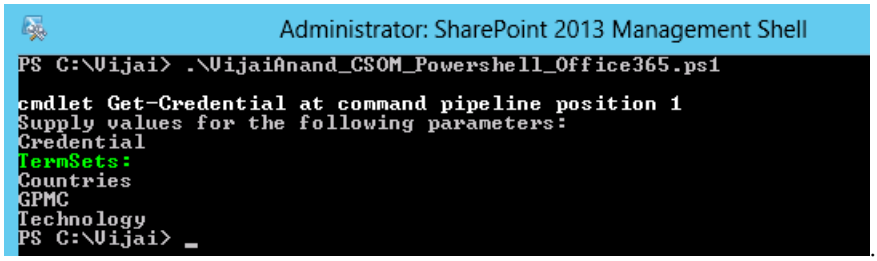


Figure14.5.1: *Get all the termsets*

12.6 How to create a term set for the specified group

In this example you will see how to create a new termset for the specified group using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function
```

```
function CreateTermSet()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Group Guid
    $guid=New-Object System.Guid("da52b879-4c2c-4697-a574-ef5be1255d62")

    # Get the term group by Guid
    $termGroup=$termStore.GetGroup($guid)

    # New termset name
    $termSetName = "New TermSet";

    # New Term Set GUID
    $guid=[System.Guid]::NewGuid()

    # New Term Set LCID
    $LCID=1033;

    # Create a new term set
    $termSetColl=$termGroup.CreateTermSet($termSetName,$guid, $LCID);

    # Execute the query
    $ctx.ExecuteQuery()
}

### Calling the function
```

```
CreateTermSet
```

Result

A new termset is created successfully for the specified taxonomy group.

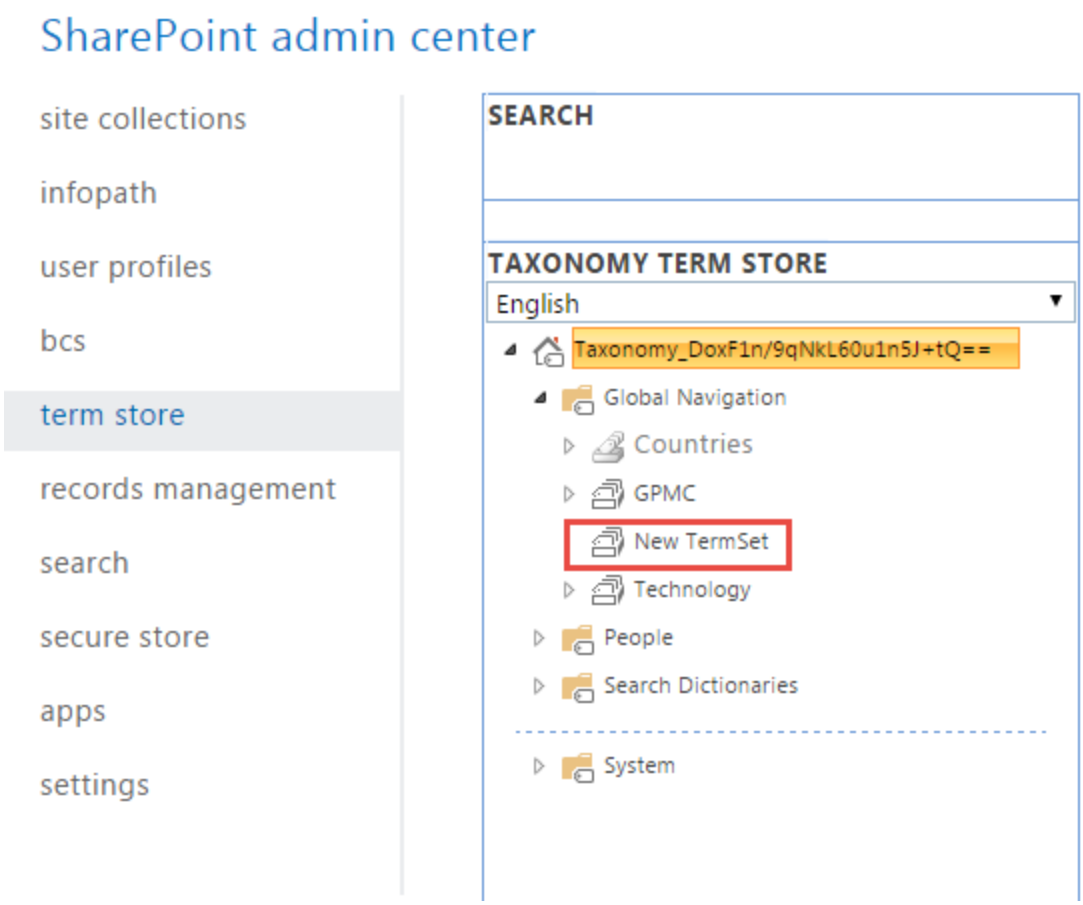


Figure14.6.1: *Create a new term set*

12.7 How to delete the term set from the specified group

In this example you will see how to delete the termset from the specified group using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.

b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function

function DeleteTermSet()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials
```

```
    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Get the term group by name
    $termGroup=$termStore.Groups.GetByName("Global Navigation");

    # Get the term set by name
    $termSet = $termGroup.TermSets.GetByName("New TermSet");

    # Delete the term set
    $termSet.DeleteObject();

    # Execute the query
    $ctx.ExecuteQuery();
}

### Calling the function

DeleteTermSet
```

Result

The termset is deleted successfully from the specified taxonomy group.

12.8 How to get all the terms for the termset

In this example you will see how to get all the terms for the termset using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.

b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function

function GetTerms()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials
```

```
    # Get the taxonomy session
$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name
$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Get the term group by name
    $termGroup=$termStore.Groups.GetByName("Global Navigation");

    # Get the term set by name
    $termSet = $termGroup.TermSets.GetByName("Technology");

    # Get all the terms
    $termColl=$termSet.Terms;
    $ctx.Load($termColl);

    # Execute the query
    $ctx.ExecuteQuery();

    Write-Host -ForegroundColor Green "Terms:"
    # Loop through all the terms
    foreach($term in $termColl)
    {
        # Display the term name
        $term.Name
    }
}

### Calling the function

GetTerms
```

Result

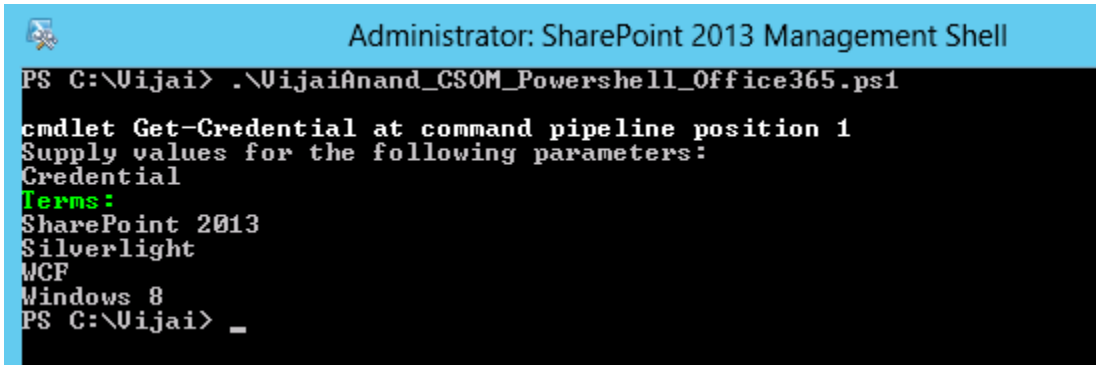


Figure14.8.1: *Get all the terms*

12.9 How to create a new term for the termset

In this example you will see how to create a new term for the termset using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"
```

```
### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function

function CreateTerm()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Get the term group by name
    $termGroup=$termStore.Groups.GetByName("Global Navigation");

    # Get the term set by name
    $termSet = $termGroup.TermSets.GetByName("Technology");

    # String Variable - New term name
    $termName = "New Term";

    # Guid - New Term  GUID
    $guid=[System.Guid]::NewGuid()
```

```
    # Int Variable - New Term LCID
    $LCID=1033;

    # Create a new term
    $newTerm=$termSet.CreateTerm($termName,$LCID, $guid);

    # Execute the query
    $ctx.ExecuteQuery();
}

### Calling the function

CreateTerm
```

Result

A new term is created successfully for the specified termset.

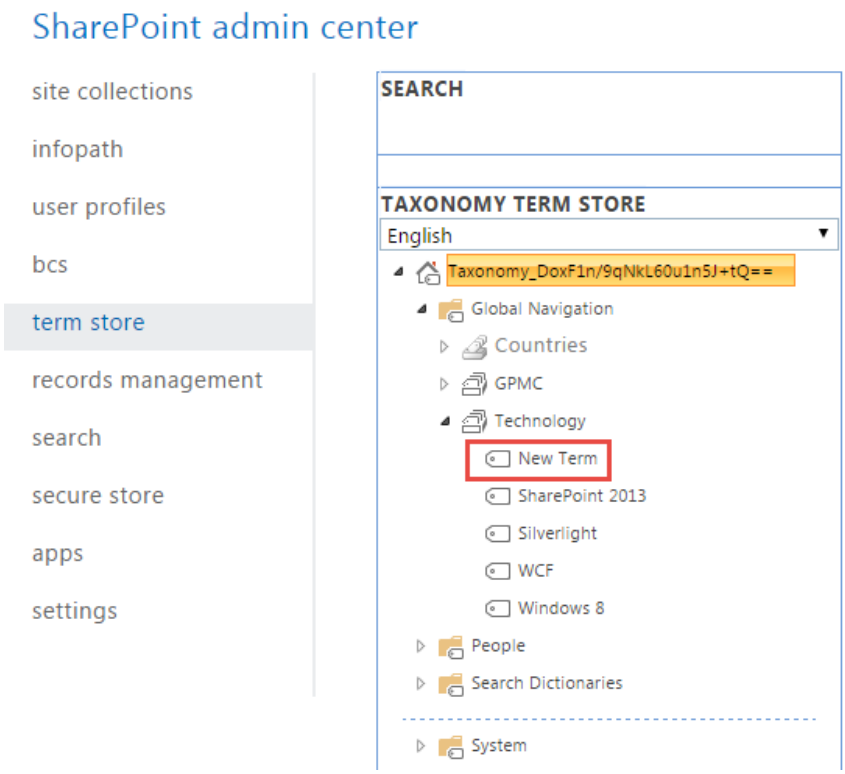


Figure14.9.1: *Create a new term*

12.10 How to delete the term from the term set

In this example you will see how to delete the term from the termset using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function
```

```
function DeleteTerm()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Get the term group by name
    $termGroup=$termStore.Groups.GetByName("Global Navigation");

    # Get the term set by name
    $termSet = $termGroup.TermSets.GetByName("Technology");

    # Get the term  by name
    $term = $termSet.Terms.GetByName("New Term");

    # Delete the term
    $term.DeleteObject();

    # Execute the query
    $ctx.ExecuteQuery();
}

### Calling the function

DeleteTerm
```

Result

The specified term is deleted successfully from the termset.

12.11 How to create a copy of the term within the termset

In this example you will see how to create a copy of the term within the termset using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function
```

```
function CopyTerm()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Get the term group by name
    $termGroup=$termStore.Groups.GetByName("Global Navigation");

    # Get the term set by name
    $termSet = $termGroup.TermSets.GetByName("Technology");

    # Get the term  by name
    $term = $termSet.Terms.GetByName("Silverlight");

    # Make a copy of the term within the termset
    # Need to pass a bool parameter - whether to copy the child terms or not
    $copyTerm=$term.Copy($false);

    # Execute the query
    $ctx.ExecuteQuery();
}

### Calling the function

CopyTerm
```

Result

The specified term is copied to the same termset as shown in Figure 14.11.1.

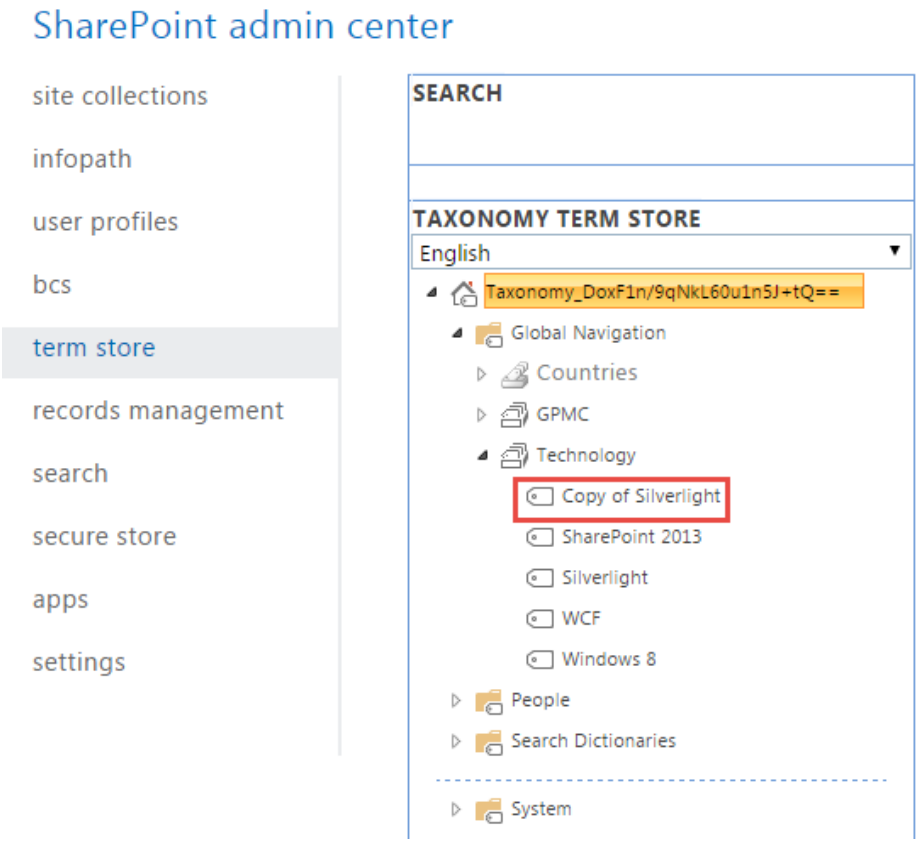


Figure14.11.1: *Create a copy of the term*

12.12 How to deprecate the specified term

In this example you will see how to deprecate the specified term using the .Net Client Side Object Model in Powersehell script.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.

e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.

f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function

function DeprecateTerm()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);
```

```
    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Get the term group by name
    $termGroup=$termStore.Groups.GetByName("Global Navigation");

    # Get the term set by name
    $termSet = $termGroup.TermSets.GetByName("Technology");

    # Get the term  by name which has to be deprecated
    $term = $termSet.Terms.GetByName("Silverlight");

    # Deprecate the term
    $term.Deprecate($true);

    # Execute the query
    $ctx.ExecuteQuery();
}

### Calling the function

DeprecateTerm
```

Result

The specified term is deprecated as shown in Figure 14.12.1.

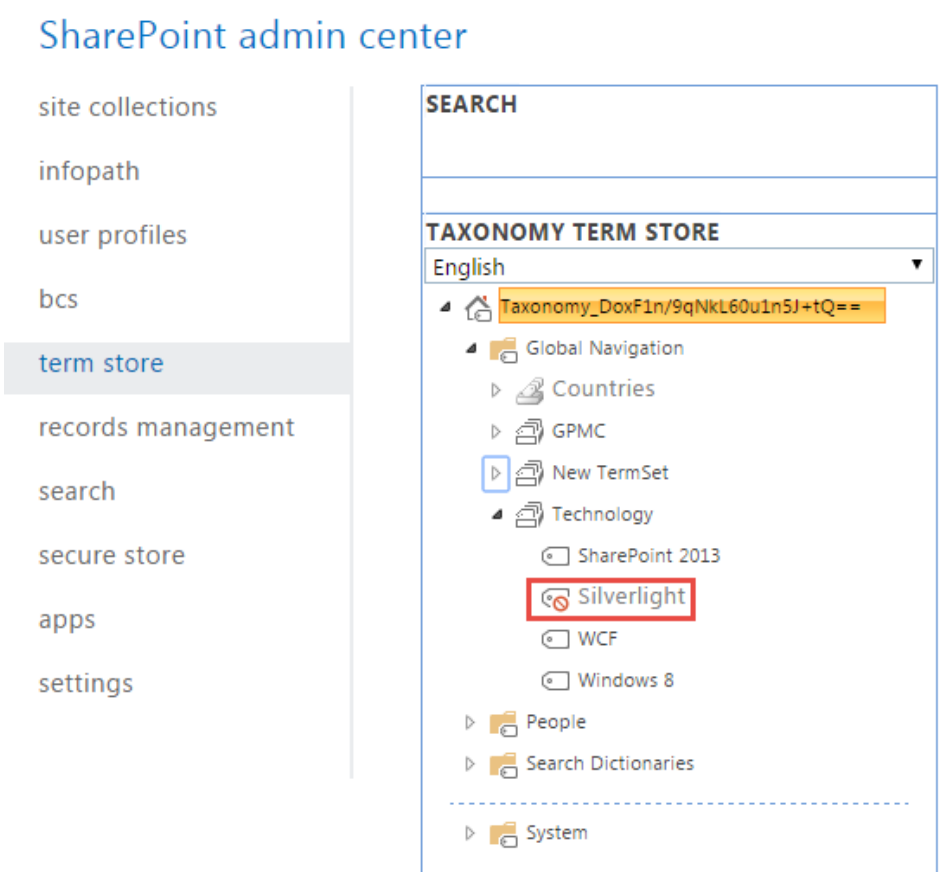


Figure14.12.1: *Deprecate the specified term*

12.13 How to get all the labels for specified term

In this example you will see how to get all the labels for a specified term using the .Net Client Side Object Model in Powersehll script.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function

function GetLabels()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name
```

```
$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Get the term group by name
    $termGroup=$termStore.Groups.GetByName("Global Navigation");

    # Get the term set by name
    $termSet = $termGroup.TermSets.GetByName("Technology");

    # Get the term  by name
    $term = $termSet.Terms.GetByName("SharePoint 2013");

    # Get all the labels for the term
    $labelColl=$term.Labels;
    $ctx.Load($labelColl);

    # Execute the query
    $ctx.ExecuteQuery();

    Write-Host -ForegroundColor Green "Labels:"
    # Loop through all the label
    foreach($label in $labelColl)
    {
        # Display the label name
        $label.Value
    }
}

### Calling the function

GetLabels
```

Result

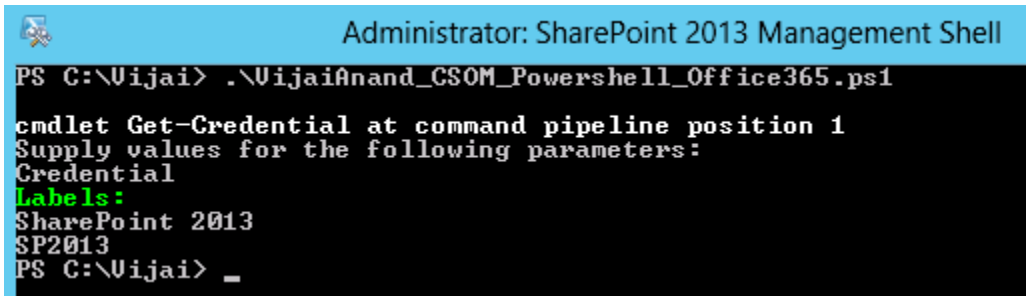


Figure14.13.1: *Get all the labels*

12.14 How to create a new label for specified term

In this example you will see how to create a new label for a specified term using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.
d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"
```

```
### Function

function CreateLabel()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    # Get the taxonomy session

$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Get the term group by name
    $termGroup=$termStore.Groups.GetByName("Global Navigation");

    # Get the term set by name
    $termSet = $termGroup.TermSets.GetByName("Technology");

    # Get the term  by name
    $term = $termSet.Terms.GetByName("SharePoint 2013");

    # String Variable - New label name
    $labelName = "Office 365";

    # Bool variable - IsDefault
    $isDefault=$false

    # Int Variable - New label LCID
    $LCID=1033;

    # Create a new label for the term
    $newLabel=$term.CreateLabel($labelName, $LCID, $isDefault);

    # Execute the query
```

```
    $ctx.ExecuteQuery();
}

### Calling the function

CreateLabel
```

Result

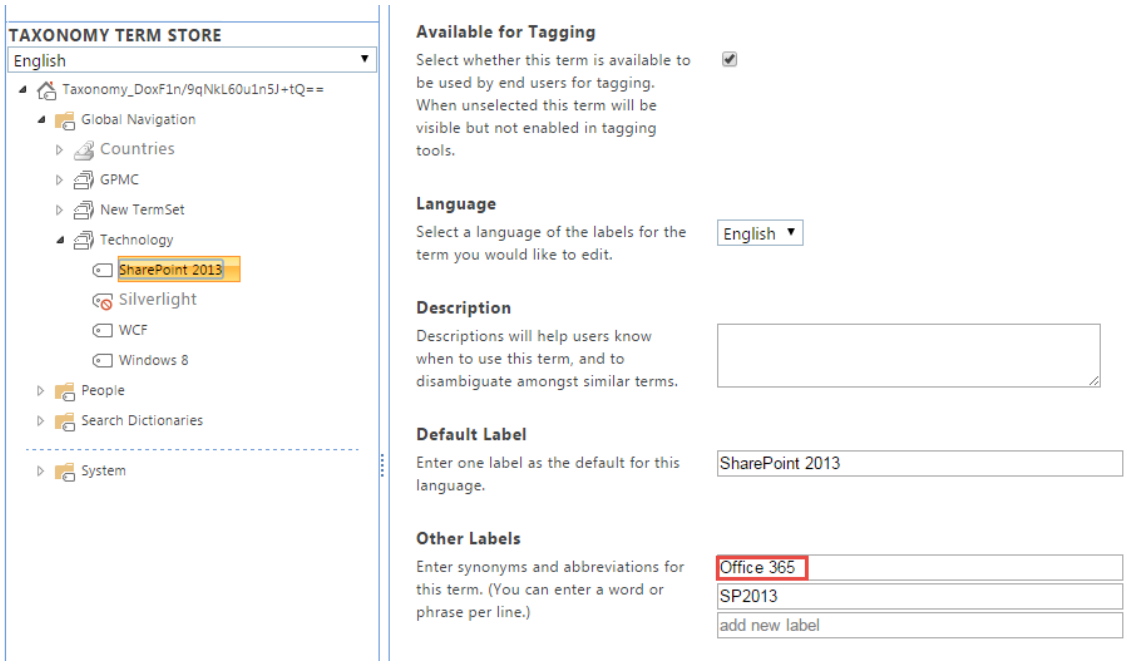


Figure14.14.1: *Create a new label*

12.15 How to delete the label for specified term

In this example you will see how to delete the label for a specified term using the .Net Client Side Object Model in Powershell scripts.

Create the ps1 file

a) Open a new text file and paste in the following script.
b) Save the file as **VijaiAnand_CSOM_Powershell_Office365.ps1** in the **C:\Vijai** folder (a folder named **Vijai** is created in the C drive).
c) Open **SharePoint 2013 Management Shell** as an administrator.

d) Type *cd "c:\Vijai"* in the management shell and then click on **Enter**.
e) Type *.\VijaiAnand_CSOM_Powershell_Office365.ps1* in the management shell and then click on **Enter**.
f) Enter the Office 365 username (vijaianand@c986.onmicrosoft.com) and password (*********) in the **Credentials** pop up. Click on **Ok.**

Script

```
### Get the user credentials

$credential=Get-Credential
$username=$credential.UserName
$password=$credential.GetNetworkCredential().Password
$securePassword = ConvertTo-SecureString $password -AsPlainText -Force

### Input Parameters

$url = "https://c986.sharepoint.com/"

### References

# Specify the path where the dll's are located.
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Runtime.dll"
Add-Type -Path "c:\Program Files\Common Files\microsoft shared\Web Server
Extensions\15\ISAPI\Microsoft.SharePoint.Client.Taxonomy.dll"


### Function

function DeleteLabel()
{

    # Connect to SharePoint Online and get ClientContext object.
    $ctx = New-Object Microsoft.SharePoint.Client.ClientContext($url)
    $credentials = New-Object
Microsoft.SharePoint.Client.SharePointOnlineCredentials($username, $securePassword)
    $ctx.Credentials = $credentials

    # Get the taxonomy session
```

```
$taxonomySession=[Microsoft.SharePoint.Client.Taxonomy.TaxonomySession]::GetTaxonomyS
ession($ctx);

    # Get the term store by name

$termstore=$taxonomySession.TermStores.GetByName("Taxonomy_DoxF1n/9qNkL6Ou1n5J+tQ==")
;

    # Get the term group by name
    $termGroup=$termStore.Groups.GetByName("Global Navigation");

    # Get the term set by name
    $termSet = $termGroup.TermSets.GetByName("Technology");

    # Get the term  by name
    $term = $termSet.Terms.GetByName("SharePoint 2013");

    # Get the label for the term
    $label = $term.Labels.GetByValue("Office 365");

    # Delete the label
    $label.DeleteObject();

    # Execute the query
    $ctx.ExecuteQuery();
}

### Calling the function

DeleteLabel
```

Result

The specified label is deleted successfully for the term.

Summary:

In this book we covered nearly all the basic operations that can be performed with Powershell scripts using the SharePoint 2013 .Net Client Side Object Model. This book is only the beginning, there are many things that can be done and now you are ready to develop advanced solutions with Powershells script using the .Net Client Side Object Model.

Thanks for Reading!!!!!!!