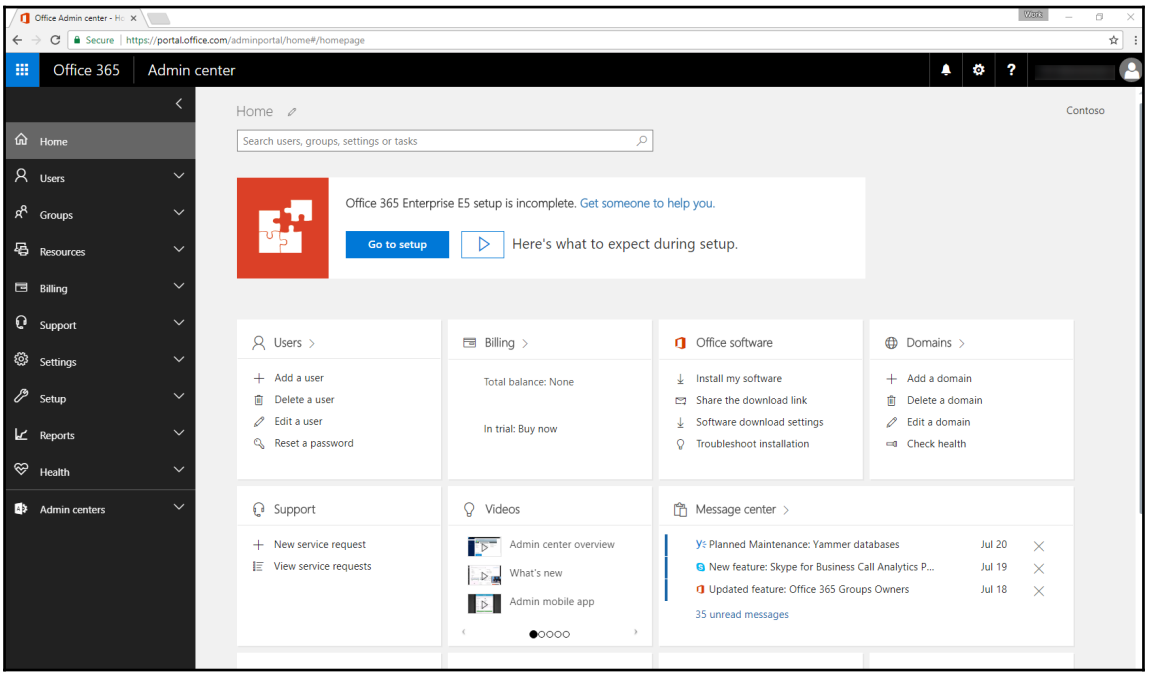
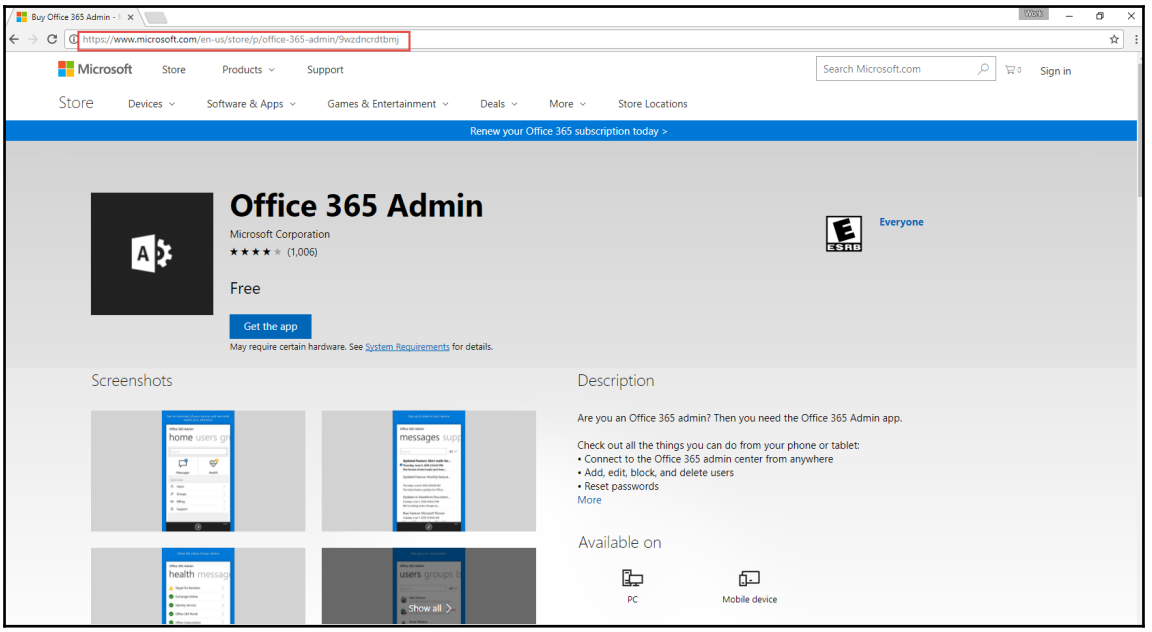
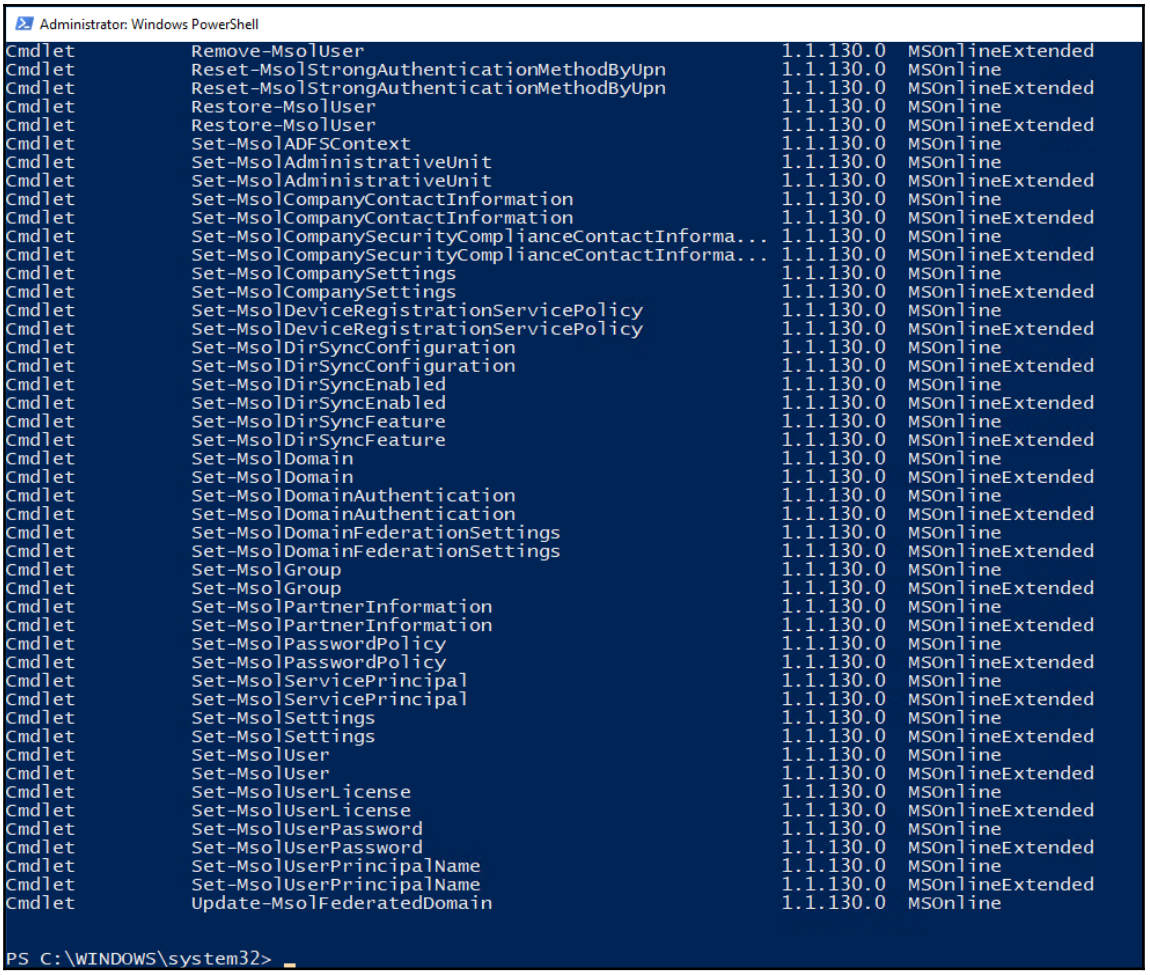
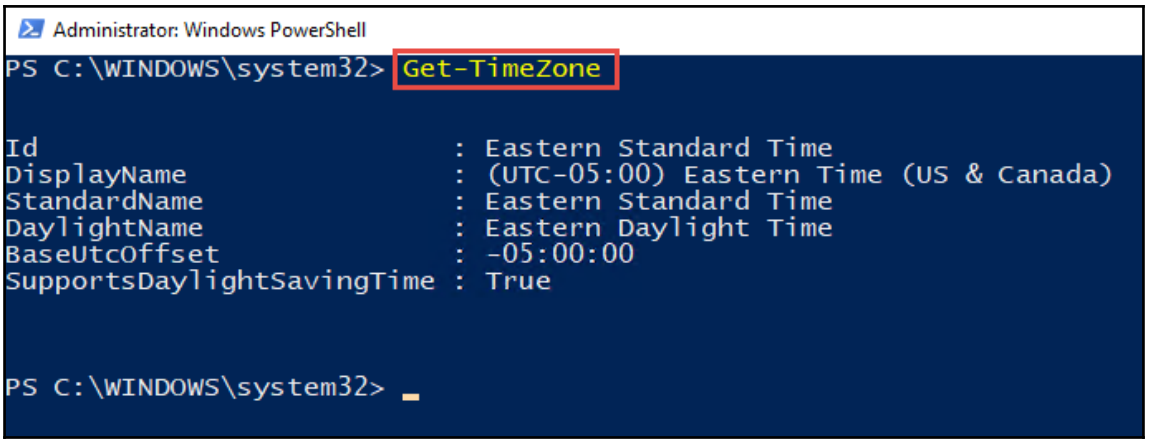
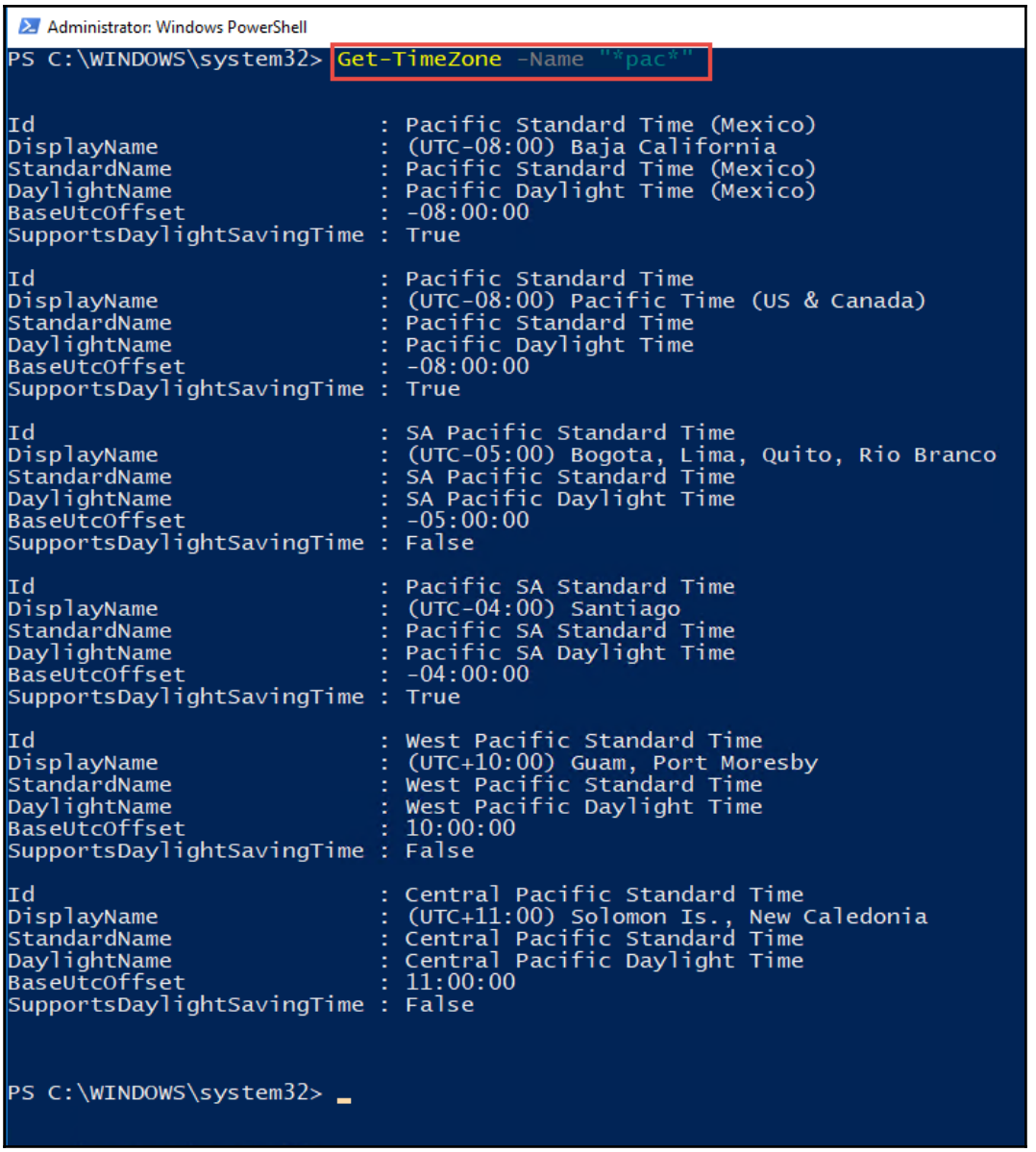
Chapter 1: PowerShell Fundamentals

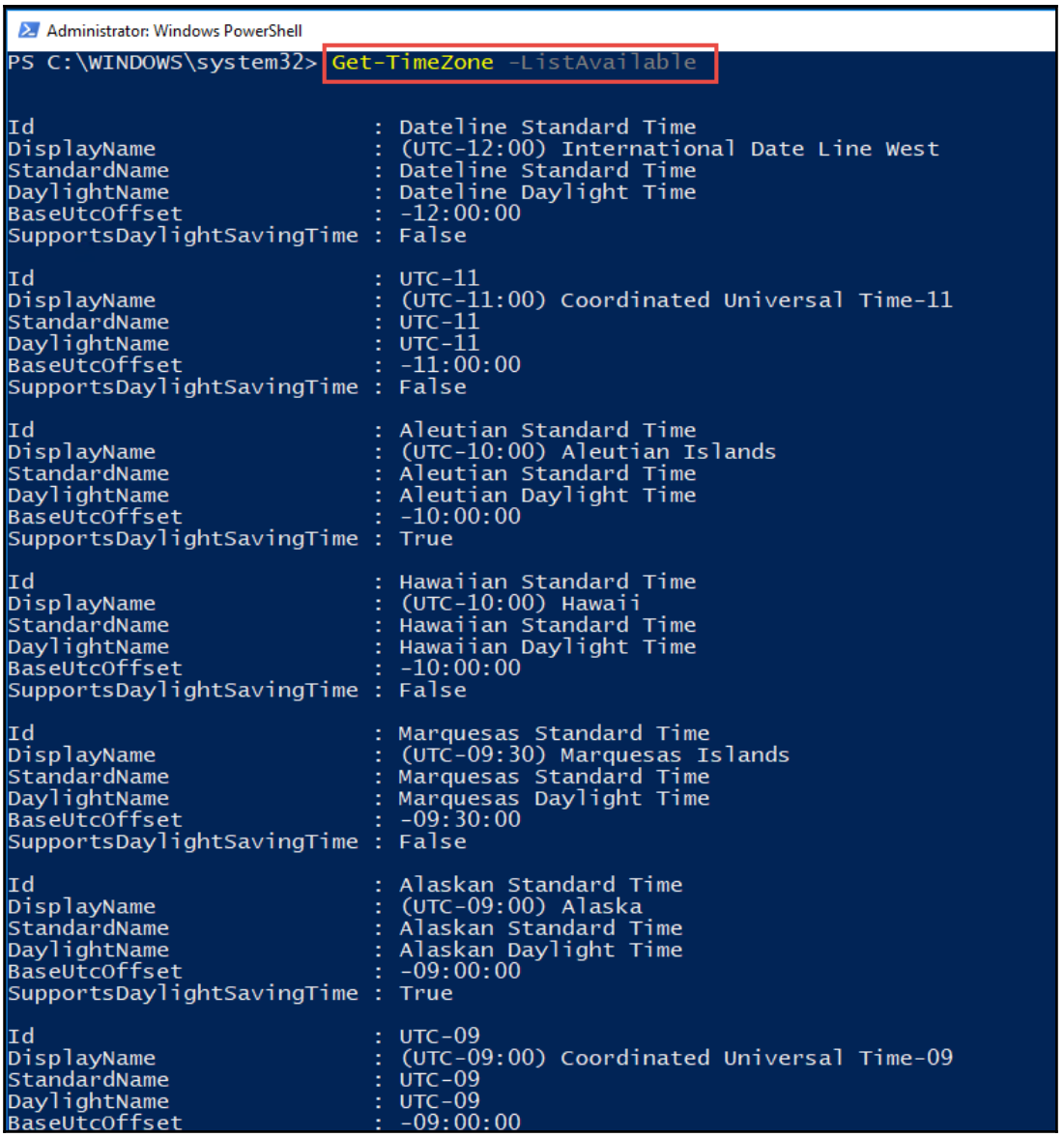


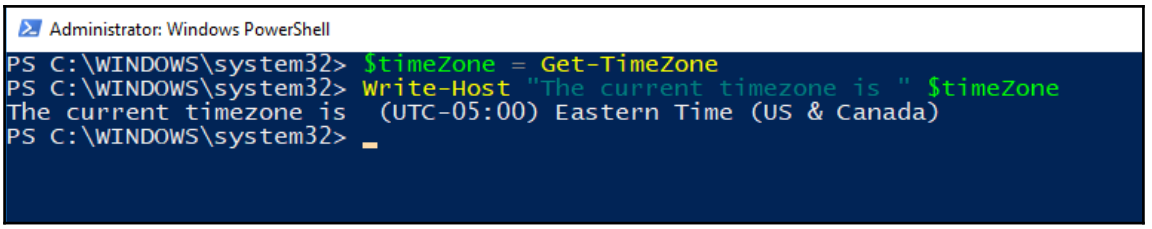


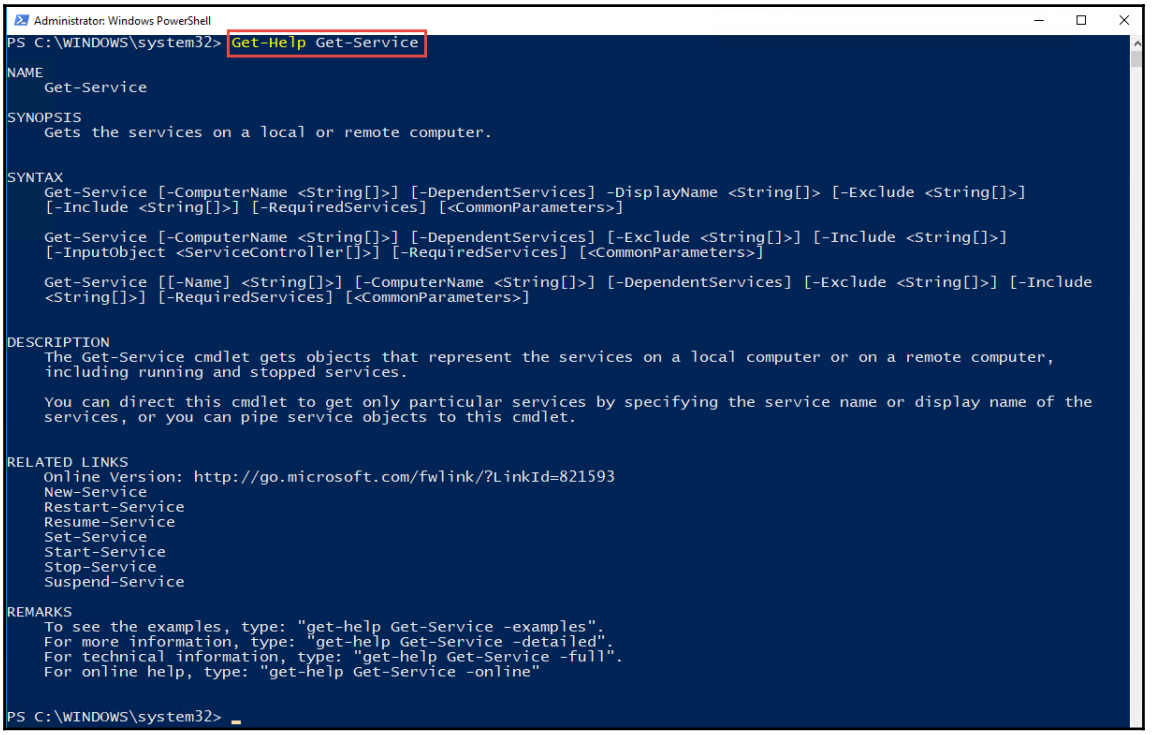

Administrator: Windows PowerShell
Cmdlet Remove-MsolUser 1.1.130.0 MSOnlineExtended
Cmdlet Reset-MsolStrongAuthenticationMethodByUpn 1.1.130.0 MSOnline
Cmdlet Reset-MsolStrongAuthenticationMethodByUpn 1.1.130.0 MSOnlineExtended
Cmdlet Restore-MsolUser 1.1.130.0 MSOnline
Cmdlet Restore-MsolUser 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolADFSContext 1.1.130.0 MSOnline
Cmdlet Set-MsolAdministrativeUnit 1.1.130.0 MSOnline
Cmdlet Set-MsolAdministrativeUnit 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolCompanyContactInformation 1.1.130.0 MSOnline
Cmdlet Set-MsolCompanyContactInformation 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolCompanySecurityComplianceContactInforma... 1.1.130.0 MSOnline
Cmdlet Set-MsolCompanySecurityComplianceContactInforma... 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolCompanySettings 1.1.130.0 MSOnline
Cmdlet Set-MsolCompanySettings 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolDeviceRegistrationServicePolicy 1.1.130.0 MSOnline
Cmdlet Set-MsolDeviceRegistrationServicePolicy 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolDirSyncConfiguration 1.1.130.0 MSOnline
Cmdlet Set-MsolDirSyncConfiguration 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolDirSyncEnabled 1.1.130.0 MSOnline
Cmdlet Set-MsolDirSyncEnabled 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolDirSyncFeature 1.1.130.0 MSOnline
Cmdlet Set-MsolDirSyncFeature 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolDomain 1.1.130.0 MSOnline
Cmdlet Set-MsolDomain 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolDomainAuthentication 1.1.130.0 MSOnline
Cmdlet Set-MsolDomainAuthentication 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolDomainFederationSettings 1.1.130.0 MSOnline
Cmdlet Set-MsolDomainFederationSettings 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolGroup 1.1.130.0 MSOnline
Cmdlet Set-MsolGroup 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolPartnerInformation 1.1.130.0 MSOnline
Cmdlet Set-MsolPartnerInformation 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolPasswordPolicy 1.1.130.0 MSOnline
Cmdlet Set-MsolPasswordPolicy 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolServicePrincipal 1.1.130.0 MSOnline
Cmdlet Set-MsolServicePrincipal 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolSettings 1.1.130.0 MSOnline
Cmdlet Set-MsolSettings 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolUser 1.1.130.0 MSOnline
Cmdlet Set-MsolUser 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolUserLicense 1.1.130.0 MSOnline
Cmdlet Set-MsolUserLicense 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolUserPassword 1.1.130.0 MSOnline
Cmdlet Set-MsolUserPassword 1.1.130.0 MSOnlineExtended
Cmdlet Set-MsolUserPrincipalName 1.1.130.0 MSOnline
Cmdlet Set-MsolUserPrincipalName 1.1.130.0 MSOnlineExtended
Cmdlet Update-MsolFederatedDomain 1.1.130.0 MSOnline
PS C:\WINDOWS\system32>

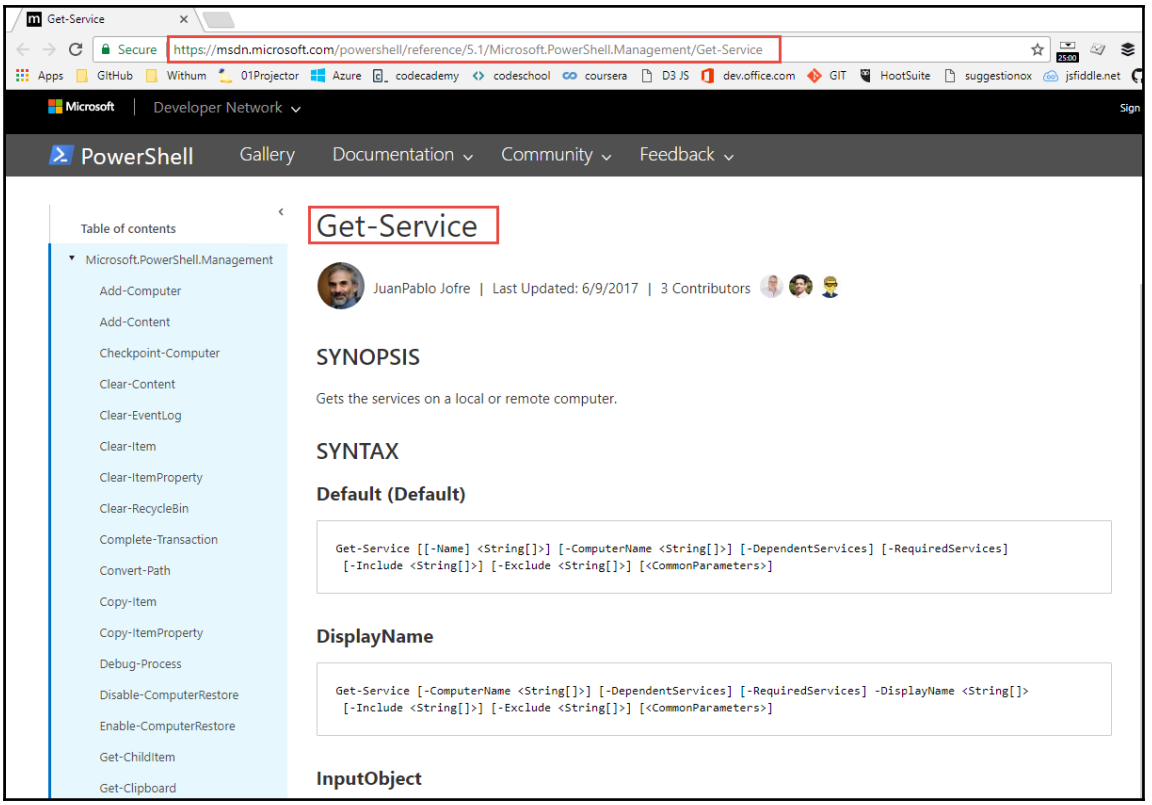

Administrator: Windows PowerShell
PS C:\WINDOWS\system32> Get-TimeZone
Id : Eastern Standard Time
DisplayName : (UTC-05:00) Eastern Time (US & Canada)
StandardName : Eastern Standard Time
DaylightName : Eastern Daylight Time
BaseUtcOffset : -05:00:00
SupportsDaylightSavingTime : True
PS C:\WINDOWS\system32>

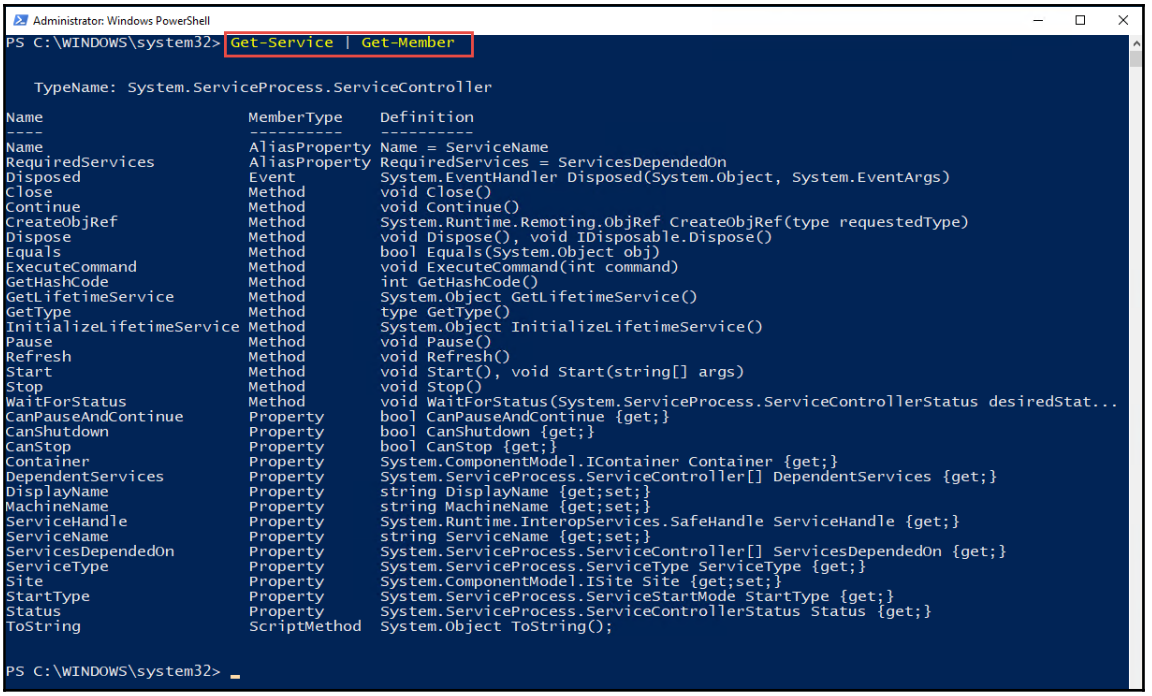

Administrator: Windows PowerShell
PS C:\WINDOWS\system32> Get-TimeZone -Name "*pac*"
Id : Pacific Standard Time (Mexico)
DisplayName : (UTC-08:00) Baja California
StandardName : Pacific Standard Time (Mexico)
DaylightName : Pacific Daylight Time (Mexico)
BaseUtcOffset : -08:00:00
SupportsDaylightSavingTime : True
Id : Pacific Standard Time
DisplayName : (UTC-08:00) Pacific Time (US & Canada)
StandardName : Pacific Standard Time
DaylightName : Pacific Daylight Time
BaseUtcOffset : -08:00:00
SupportsDaylightSavingTime : True
Id : SA Pacific Standard Time
DisplayName : (UTC-05:00) Bogota, Lima, Quito, Rio Branco
StandardName : SA Pacific Standard Time
DaylightName : SA Pacific Daylight Time
BaseUtcOffset : -05:00:00
SupportsDaylightSavingTime : False
Id : Pacific SA Standard Time
DisplayName : (UTC-04:00) Santiago
StandardName : Pacific SA Standard Time
DaylightName : Pacific SA Daylight Time
BaseUtcOffset : -04:00:00
SupportsDaylightSavingTime : True
Id : West Pacific Standard Time
DisplayName : (UTC+10:00) Guam, Port Moresby
StandardName : West Pacific Standard Time
DaylightName : West Pacific Daylight Time
BaseUtcOffset : 10:00:00
SupportsDaylightSavingTime : False
Id : Central Pacific Standard Time
DisplayName : (UTC+11:00) Solomon Is., New Caledonia
StandardName : Central Pacific Standard Time
DaylightName : Central Pacific Daylight Time
BaseUtcOffset : 11:00:00
SupportsDaylightSavingTime : False
PS C:\WINDOWS\system32>

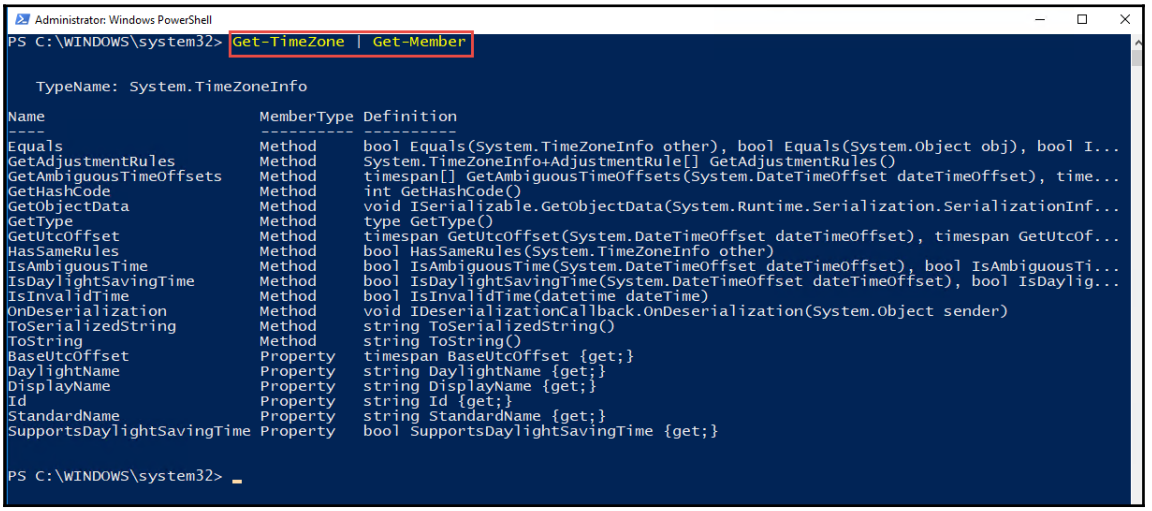

Administrator: Windows PowerShell
PS C:\WINDOWS\system32> Get-TimeZone -ListAvailable
Id : Dateline Standard Time
DisplayName : (UTC-12:00) International Date Line West
StandardName : Dateline Standard Time
DaylightName : Dateline Daylight Time
BaseUtcOffset : -12:00:00
SupportsDaylightSavingTime : False
Id : UTC-11
DisplayName : (UTC-11:00) Coordinated Universal Time-11
StandardName : UTC-11
DaylightName : UTC-11
BaseUtcOffset : -11:00:00
SupportsDaylightSavingTime : False
Id : Aleutian Standard Time
DisplayName : (UTC-10:00) Aleutian Islands
StandardName : Aleutian Standard Time
DaylightName : Aleutian Daylight Time
BaseUtcOffset : -10:00:00
SupportsDaylightSavingTime : True
Id : Hawaiian Standard Time
DisplayName : (UTC-10:00) Hawaii
StandardName : Hawaiian Standard Time
DaylightName : Hawaiian Daylight Time
BaseUtcOffset : -10:00:00
SupportsDaylightSavingTime : False
Id : Marquesas Standard Time
DisplayName : (UTC-09:30) Marquesas Islands
StandardName : Marquesas Standard Time
DaylightName : Marquesas Daylight Time
BaseUtcOffset : -09:30:00
SupportsDaylightSavingTime : False
Id : Alaskan Standard Time
DisplayName : (UTC-09:00) Alaska
StandardName : Alaskan Standard Time
DaylightName : Alaskan Daylight Time
BaseUtcOffset : -09:00:00
SupportsDaylightSavingTime : True
Id : UTC-09
DisplayName : (UTC-09:00) Coordinated Universal Time-09
StandardName : UTC-09
DaylightName : UTC-09
BaseUtcOffset : -09:00:00

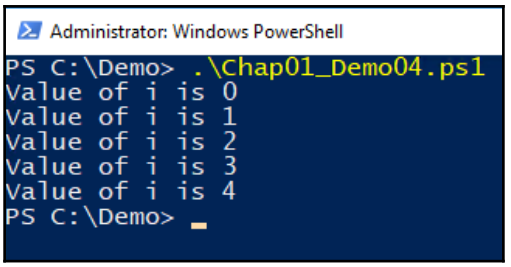

Administrator: Windows PowerShell
PS C:\WINDOWS\system32> $timeZone = Get-TimeZone
PS C:\WINDOWS\system32> Write-Host "The current timezone is " $timeZone
The current timezone is (UTC-05:00) Eastern Time (US & Canada)
PS C:\WINDOWS\system32> _

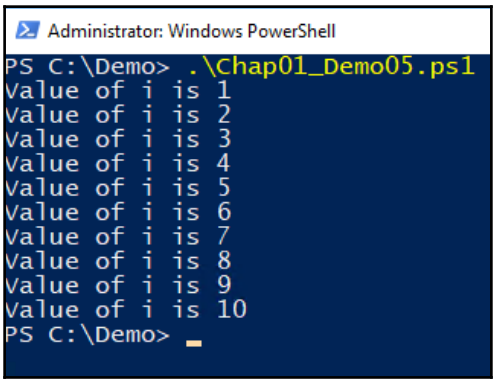

Administrator: Windows PowerShell
PS C:\WINDOWS\system32> Get-Help Get-Service
NAME
Get-Service
SYNOPSIS
Gets the services on a local or remote computer.
SYNTAX
Get-Service [-ComputerName <String[]>] [-DependentServices] -DisplayName <String[]> [-Exclude <String[]>]
[-Include <String[]>] [-RequiredServices] [<CommonParameters>]
Get-Service [-ComputerName <String[]>] [-DependentServices] [-Exclude <String[]>] [-Include <String[]>]
[-InputObject <ServiceController[]>] [-RequiredServices] [<CommonParameters>]
Get-Service [[-Name] <String[]>] [-ComputerName <String[]>] [-DependentServices] [-Exclude <String[]>] [-Include
<String[]>] [-RequiredServices] [<CommonParameters>]
DESCRIPTION
The Get-Service cmdlet gets objects that represent the services on a local computer or on a remote computer,
including running and stopped services.
You can direct this cmdlet to get only particular services by specifying the service name or display name of the
services, or you can pipe service objects to this cmdlet.
RELATED LINKS
Online Version: http://go.microsoft.com/fwlink/?LinkId=821593
New-Service
Restart-Service
Resume-Service
Set-Service
Start-Service
Stop-Service
Suspend-Service
REMARKS
To see the examples, type: "get-help Get-Service -examples".
For more information, type: "get-help Get-Service -detailed".
For technical information, type: "get-help Get-Service -full".
For online help, type: "get-help Get-Service -online"
PS C:\WINDOWS\system32> _

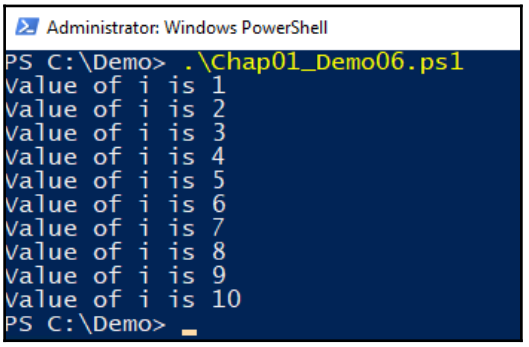

Get-Service
Secure
https://msdn.microsoft.com/powershell/reference/5.1/Microsoft.PowerShell.Management/Get-Service
Apps GitHub Withum 01Projector Azure codecademy codeschool coursera D3 JS dev.office.com GIT HootSuite suggestionox jsfiddle.net
Microsoft | Developer Network
Sign
PowerShell Gallery Documentation Community Feedback
Table of contents
Microsoft.PowerShell.Management
Add-Computer
Add-Content
Checkpoint-Computer
Clear-Content
Clear-EventLog
Clear-Item
Clear-ItemProperty
Clear-RecycleBin
Complete-Transaction
Convert-Path
Copy-Item
Copy-ItemProperty
Debug-Process
Disable-ComputerRestore
Enable-ComputerRestore
Get-ChildItem
Get-Clipboard
Get-Service
JuanPablo Jofre | Last Updated: 6/9/2017 | 3 Contributors
SYNOPSIS
Gets the services on a local or remote computer.
SYNTAX
Default (Default)
Get-Service [[-Name] <String[]>] [-ComputerName <String[]>] [-DependentServices] [-RequiredServices]
[-Include <String[]>] [-Exclude <String[]>] [<CommonParameters>]
DisplayName
Get-Service [-ComputerName <String[]>] [-DependentServices] [-RequiredServices] -DisplayName <String[]>
[-Include <String[]>] [-Exclude <String[]>] [<CommonParameters>]
InputObject

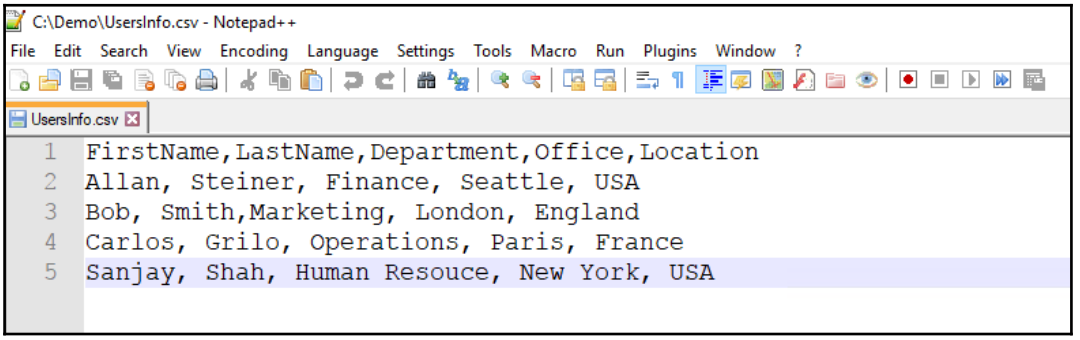

Administrator: Windows PowerShell
PS C:\WINDOWS\system32> Get-Service | Get-Member
TypeName: System.ServiceProcess.ServiceController
Name MemberType Definition
Name AliasProperty Name = ServiceName
RequiredServices AliasProperty RequiredServices = ServicesDependedOn
Disposed Event System.EventHandler Disposed(System.Object, System.EventArgs)
Close Method void Close()
Continue Method void Continue()
CreateObjRef Method System.Runtime.Remoting.ObjRef CreateObjRef(type requestedType)
Dispose Method void Dispose(), void IDisposable.Dispose()
Equals Method bool Equals(System.Object obj)
ExecuteCommand Method void ExecuteCommand(int command)
GetHashCode Method int GetHashCode()
GetLifetimeService Method System.Object GetLifetimeService()
GetType Method type GetType()
InitializeLifetimeService Method System.Object InitializeLifetimeService()
Pause Method void Pause()
Refresh Method void Refresh()
Start Method void Start(), void Start(string[] args)
Stop Method void Stop()
WaitForStatus Method void WaitForStatus(System.ServiceProcess.ServiceControllerStatus desiredStat...
CanPauseAndContinue Property bool CanPauseAndContinue {get;}
CanShutdown Property bool CanShutdown {get;}
CanStop Property bool CanStop {get;}
Container Property System.ComponentModel.IContainer Container {get;}
DependentServices Property System.ServiceProcess.ServiceController[] DependentServices {get;}
DisplayName Property string DisplayName {get;set;}
MachineName Property string MachineName {get;set;}
ServiceHandle Property System.Runtime.InteropServices.SafeHandle ServiceHandle {get;}
ServiceName Property string ServiceName {get;set;}
ServicesDependedOn Property System.ServiceProcess.ServiceController[] ServicesDependedOn {get;}
ServiceType Property System.ServiceProcess.ServiceType ServiceType {get;}
Site Property System.ComponentModel.ISite Site {get;set;}
StartType Property System.ServiceProcess.ServiceStartMode StartType {get;}
Status Property System.ServiceProcess.ServiceControllerStatus Status {get;}
ToString ScriptMethod System.Object ToString();
PS C:\WINDOWS\system32>

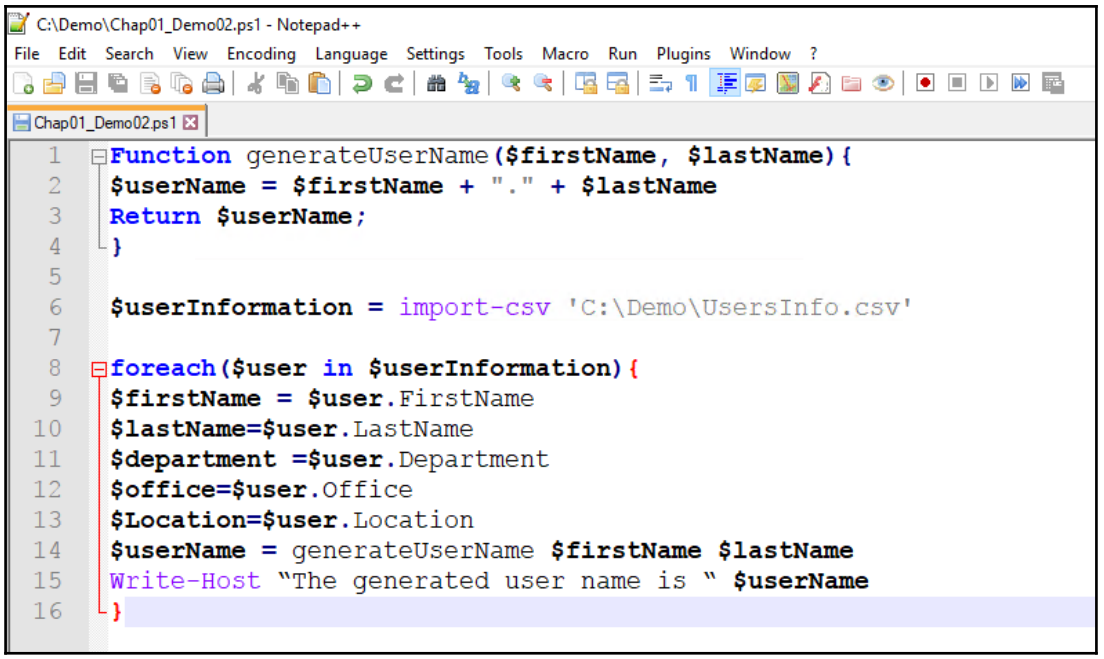

Administrator: Windows PowerShell
PS C:\WINDOWS\system32> Get-TimeZone | Get-Member
TypeName: System.TimeZoneInfo
Name MemberType Definition
Equals Method bool Equals(System.TimeZoneInfo other), bool Equals(System.Object obj), bool I...
GetAdjustmentRules Method System.TimeZoneInfo+AdjustmentRule[] GetAdjustmentRules()
GetAmbiguousTimeOffsets Method timespan[] GetAmbiguousTimeOffsets(System.DateTimeOffset dateTimeOffset), time...
GetHashCode Method int GetHashCode()
GetObjectData Method void ISerializable.GetObjectData(System.Runtime.Serialization.SerializationInf...
GetType Method type GetType()
GetUtcOffset Method timespan GetUtcOffset(System.DateTimeOffset dateTimeOffset), timespan GetUtcOf...
HasSameRules Method bool HasSameRules(System.TimeZoneInfo other)
IsAmbiguousTime Method bool IsAmbiguousTime(System.DateTimeOffset dateTimeOffset), bool IsAmbiguousTi...
IsDaylightSavingTime Method bool IsDaylightSavingTime(System.DateTimeOffset dateTimeOffset), bool IsDaylig...
IsInvalidTime Method bool IsInvalidTime(datetime dateTime)
OnDeserialization Method void IDeserializationCallback.OnDeserialization(System.Object sender)
ToSerializedString Method string ToSerializedString()
ToString Method string ToString()
BaseUtcOffset Property timespan BaseUtcOffset {get;}
DaylightName Property string DaylightName {get;}
DisplayName Property string DisplayName {get;}
Id Property string Id {get;}
StandardName Property string StandardName {get;}
SupportsDaylightSavingTime Property bool SupportsDaylightSavingTime {get;}
PS C:\WINDOWS\system32>

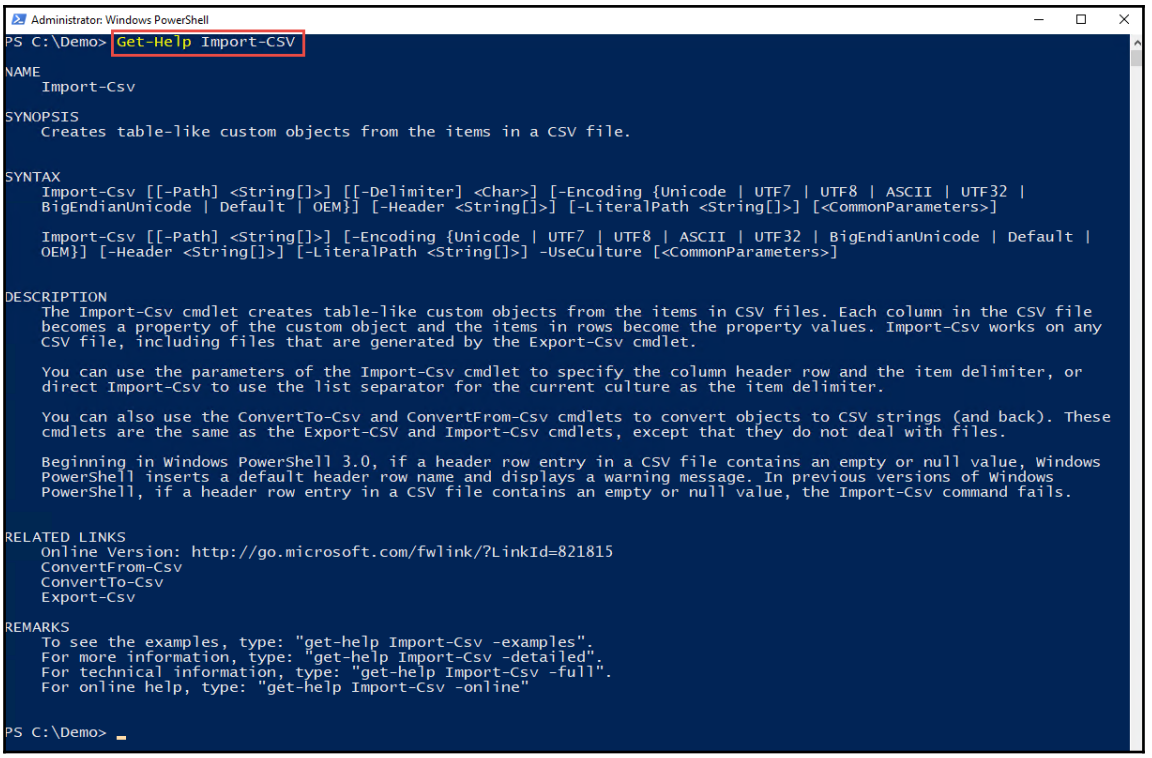

Administrator: Windows PowerShell
PS C:\Demo> .\Chap01_Demo04.ps1
Value of i is 0
Value of i is 1
Value of i is 2
Value of i is 3
Value of i is 4
PS C:\Demo>

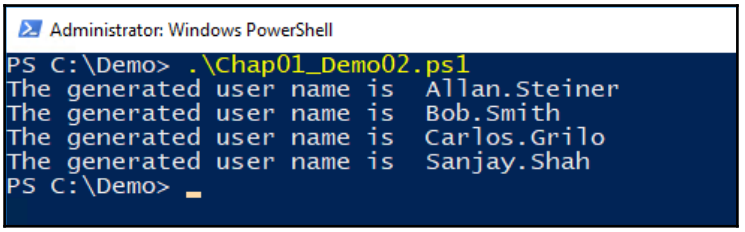

Administrator: Windows PowerShell
PS C:\Demo> .\Chap01_Demo05.ps1
Value of i is 1
Value of i is 2
Value of i is 3
Value of i is 4
Value of i is 5
Value of i is 6
Value of i is 7
Value of i is 8
Value of i is 9
Value of i is 10
PS C:\Demo>


Administrator: Windows PowerShell
PS C:\Demo> .\Chap01_Demo06.ps1
Value of i is 1
Value of i is 2
Value of i is 3
Value of i is 4
Value of i is 5
Value of i is 6
Value of i is 7
Value of i is 8
Value of i is 9
Value of i is 10
PS C:\Demo>

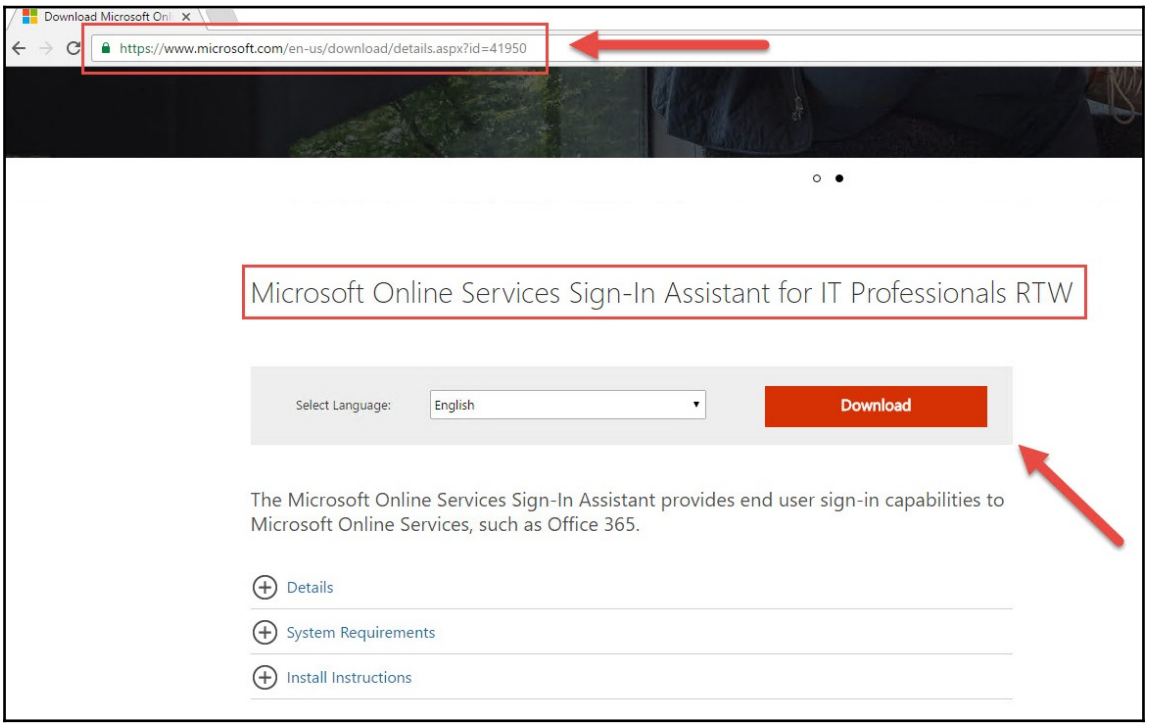

C:\Demo\UsersInfo.csv - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
UsersInfo.csv
1 FirstName,LastName,Department,Office,Location
2 Allan, Steiner, Finance, Seattle, USA
3 Bob, Smith,Marketing, London, England
4 Carlos, Grilo, Operations, Paris, France
5 Sanjay, Shah, Human Resouce, New York, USA

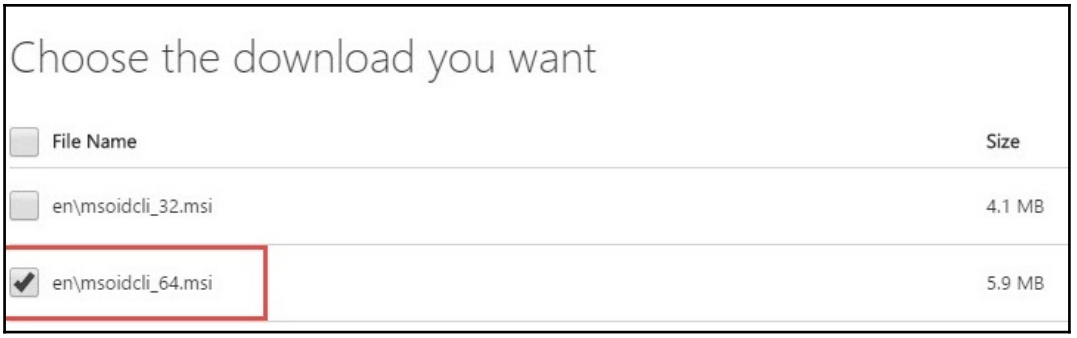

C:\Demo\Chap01_Demo02.ps1 - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
Chap01_Demo02.ps1
1 Function generateUserName($firstName, $lastName){
2 $userName = $firstName + "." + $lastName
3 Return $userName;
4 }
5
6 $userInformation = import-csv 'C:\Demo\UsersInfo.csv'
7
8 foreach($user in $userInformation){
9 $firstName = $user.FirstName
10 $lastName=$user.LastName
11 $department =$user.Department
12 $office=$user.Office
13 $Location=$user.Location
14 $userName = generateUserName $firstName $lastName
15 Write-Host "The generated user name is " $userName
16 }

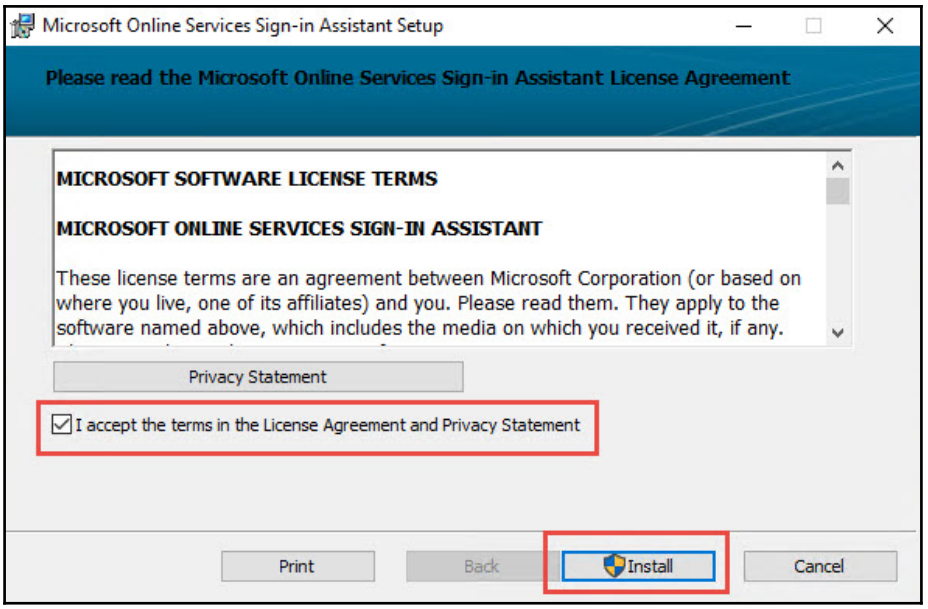

Administrator: Windows PowerShell
PS C:\Demo> Get-Help Import-CSV
NAME
Import-Csv
SYNOPSIS
Creates table-like custom objects from the items in a CSV file.
SYNTAX
Import-Csv [[-Path] <String[]>] [[-Delimiter] <Char>] [-Encoding {Unicode | UTF7 | UTF8 | ASCII | UTF32 | BigEndianUnicode | Default | OEM}] [-Header <String[]>] [-LiteralPath <String[]>] [<CommonParameters>]
Import-Csv [[-Path] <String[]>] [-Encoding {Unicode | UTF7 | UTF8 | ASCII | UTF32 | BigEndianUnicode | Default | OEM}] [-Header <String[]>] [-LiteralPath <String[]>] -UseCulture [<CommonParameters>]
DESCRIPTION
The Import-Csv cmdlet creates table-like custom objects from the items in CSV files. Each column in the CSV file becomes a property of the custom object and the items in rows become the property values. Import-Csv works on any CSV file, including files that are generated by the Export-Csv cmdlet.
You can use the parameters of the Import-Csv cmdlet to specify the column header row and the item delimiter, or direct Import-Csv to use the list separator for the current culture as the item delimiter.
You can also use the ConvertTo-Csv and ConvertFrom-Csv cmdlets to convert objects to CSV strings (and back). These cmdlets are the same as the Export-CSV and Import-Csv cmdlets, except that they do not deal with files.
Beginning in Windows PowerShell 3.0, if a header row entry in a CSV file contains an empty or null value, Windows PowerShell inserts a default header row name and displays a warning message. In previous versions of Windows PowerShell, if a header row entry in a CSV file contains an empty or null value, the Import-Csv command fails.
RELATED LINKS
Online Version: http://go.microsoft.com/fwlink/?LinkId=821815
ConvertFrom-Csv
ConvertTo-Csv
Export-Csv
REMARKS
To see the examples, type: "get-help Import-Csv -examples".
For more information, type: "get-help Import-Csv -detailed".
For technical information, type: "get-help Import-Csv -full".
For online help, type: "get-help Import-Csv -online"
PS C:\Demo>


Administrator: Windows PowerShell
PS C:\Demo> .\Chap01_Demo02.ps1
The generated user name is Allan.Steiner
The generated user name is Bob.Smith
The generated user name is Carlos.Grilo
The generated user name is Sanjay.Shah
PS C:\Demo>

Chapter 2: Managing Office 365 with PowerShell






Microsoft Online Services Sign-in Assistant Setup
Please read the Microsoft Online Services Sign-in Assistant License Agreement
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT ONLINE SERVICES SIGN-IN ASSISTANT
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Privacy Statement
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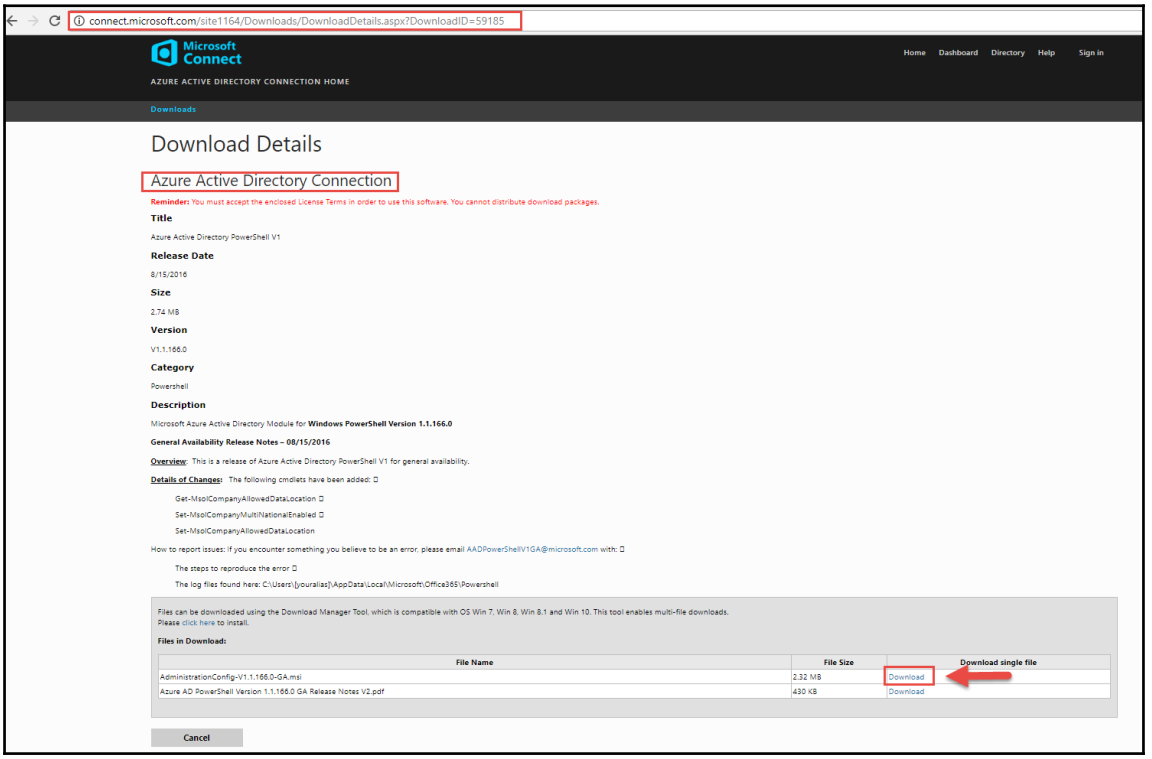
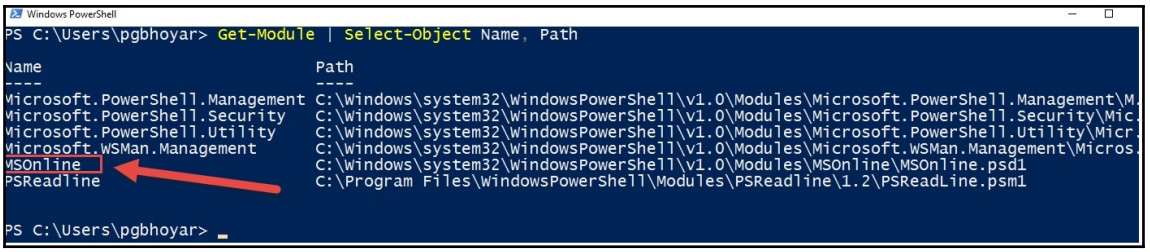
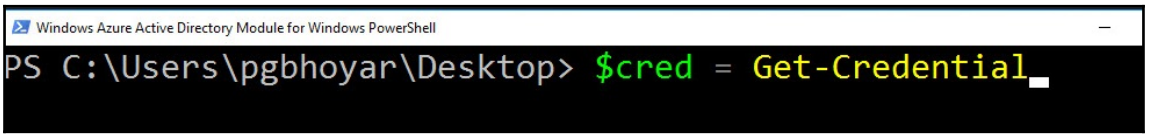
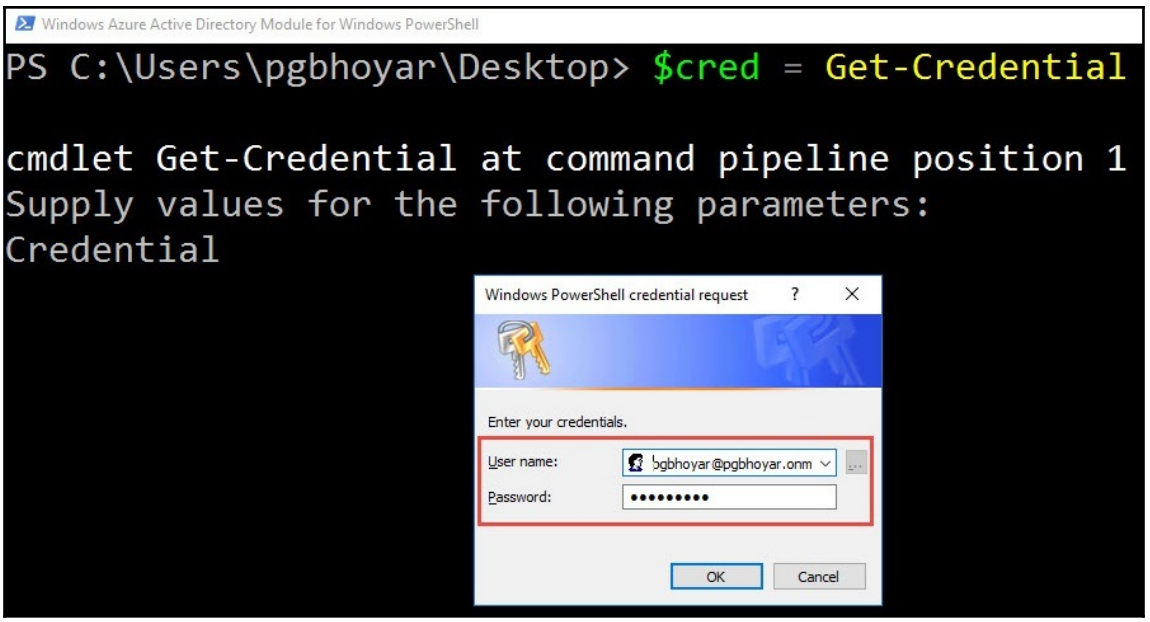
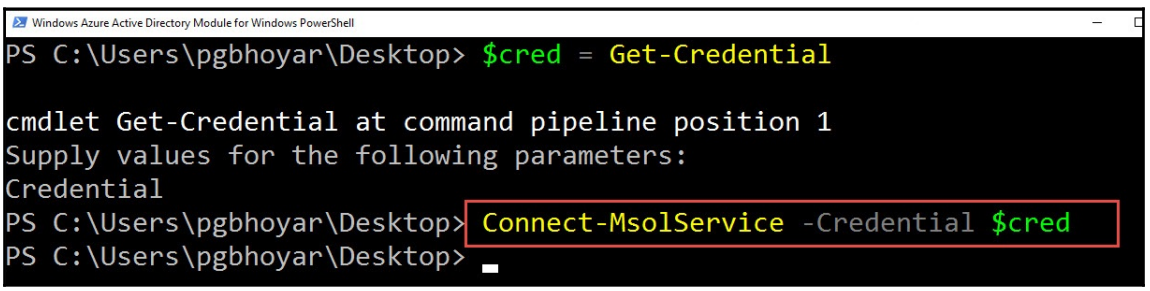
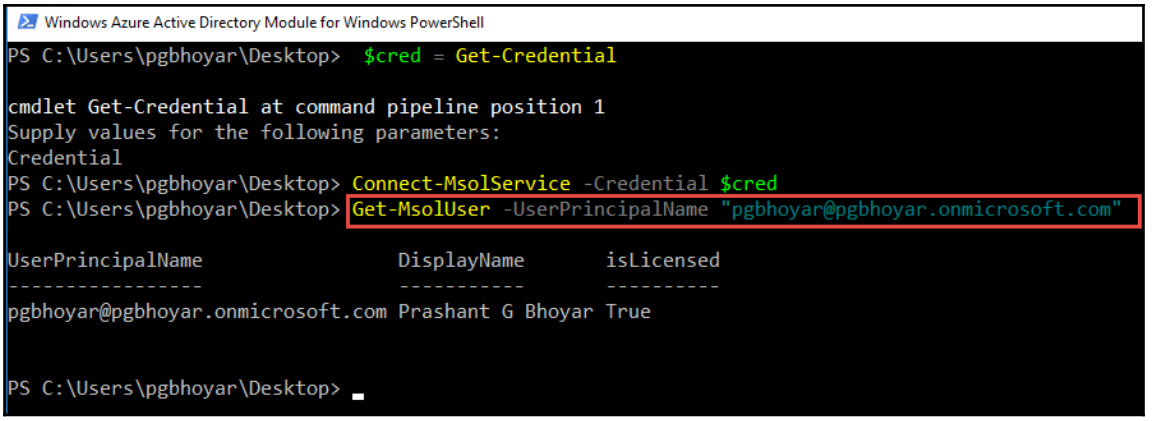

connect.microsoft.com/site1164/Downloads/DownloadDetails.aspx?DownloadID=59185
Microsoft Connect
AZURE ACTIVE DIRECTORY CONNECTION HOME
Home
Dashboard
Directory
Help
Sign in
Downloads
Download Details
Azure Active Directory Connection
Reminder: You must accept the enclosed License Terms in order to use this software. You cannot distribute download packages.
Title
Azure Active Directory PowerShell V1
Release Date
8/15/2016
Size
2.74 MB
Version
V1.1.166.0
Category
Powershell
Description
Microsoft Azure Active Directory Module for Windows PowerShell Version 1.1.166.0
General Availability Release Notes – 08/15/2016
Overview: This is a release of Azure Active Directory PowerShell V1 for general availability.
Details of Changes: The following cmdlets have been added:
Get-MsolCompanyAllowedDataLocation
Set-MsolCompanyMultiNationalEnabled
Set-MsolCompanyAllowedDataLocation
How to report issues: If you encounter something you believe to be an error, please email AADPowerShellV1GA@microsoft.com with:
The steps to reproduce the error
The log files found here: C:\Users\[youralias]\AppData\Local\Microsoft\Office365\Powershell
Files can be downloaded using the Download Manager Tool, which is compatible with OS Win 7, Win 8, Win 8.1 and Win 10. This tool enables multi-file downloads.
Please click here to install.
Files in Download:
File Name
File Size
Download single file
AdministrationConfig-V1.1.166.0-GA.msi
2.32 MB
Download
Azure AD PowerShell Version 1.1.166.0 GA Release Notes V2.pdf
430 KB
Download
Cancel

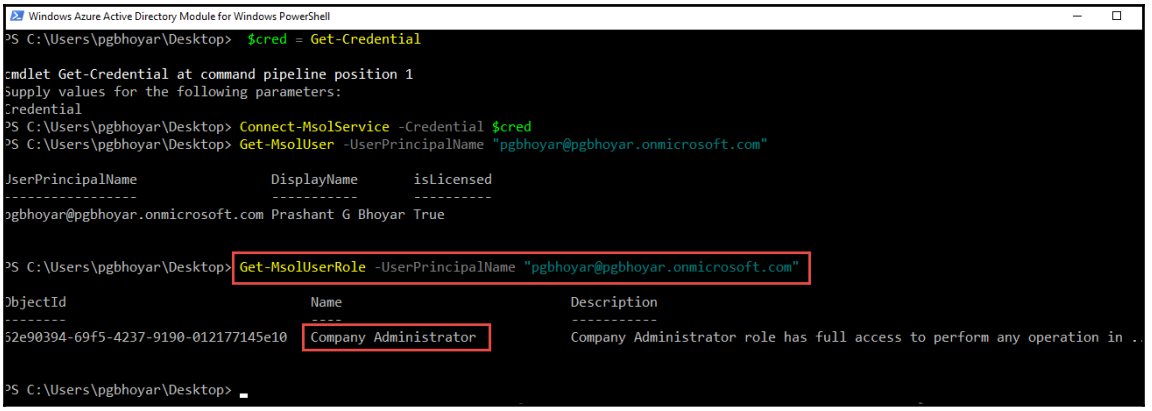

Windows PowerShell
PS C:\Users\pgbhoyar> Get-Module | Select-Object Name, Path
Name Path
Microsoft.PowerShell.Management C:\Windows\system32\WindowsPowerShell\v1.0\Modules\Microsoft.PowerShell.Management\M
Microsoft.PowerShell.Security C:\Windows\system32\WindowsPowerShell\v1.0\Modules\Microsoft.PowerShell.Security\Mic
Microsoft.PowerShell.Utility C:\Windows\system32\WindowsPowerShell\v1.0\Modules\Microsoft.PowerShell.Utility\Micr
Microsoft.WSMan.Management C:\Windows\system32\WindowsPowerShell\v1.0\Modules\Microsoft.WSMan.Management\Micros
MSOnline C:\Windows\system32\WindowsPowerShell\v1.0\Modules\MSOnline\MSOnline.psd1
PSReadline C:\Program Files\WindowsPowerShell\Modules\PSReadline\1.2\PSReadLine.psm1
PS C:\Users\pgbhoyar>

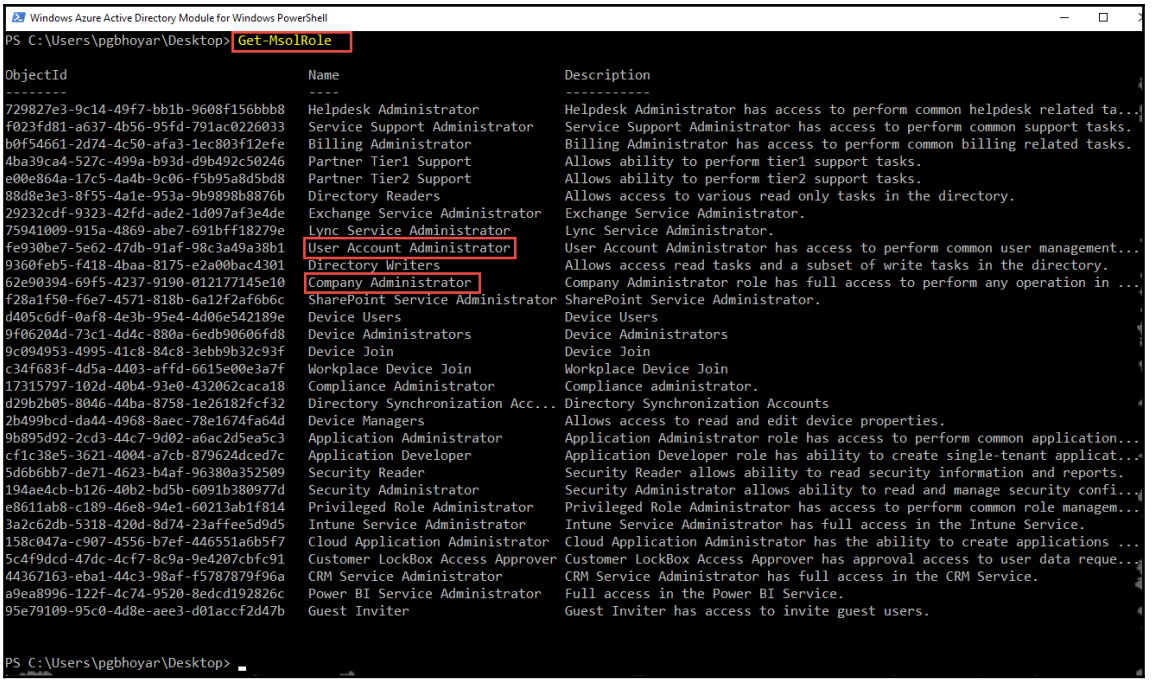

Windows Azure Active Directory Module for Windows PowerShell
PS C:\Users\pgbhoyar\Desktop> $cred = Get-Credential

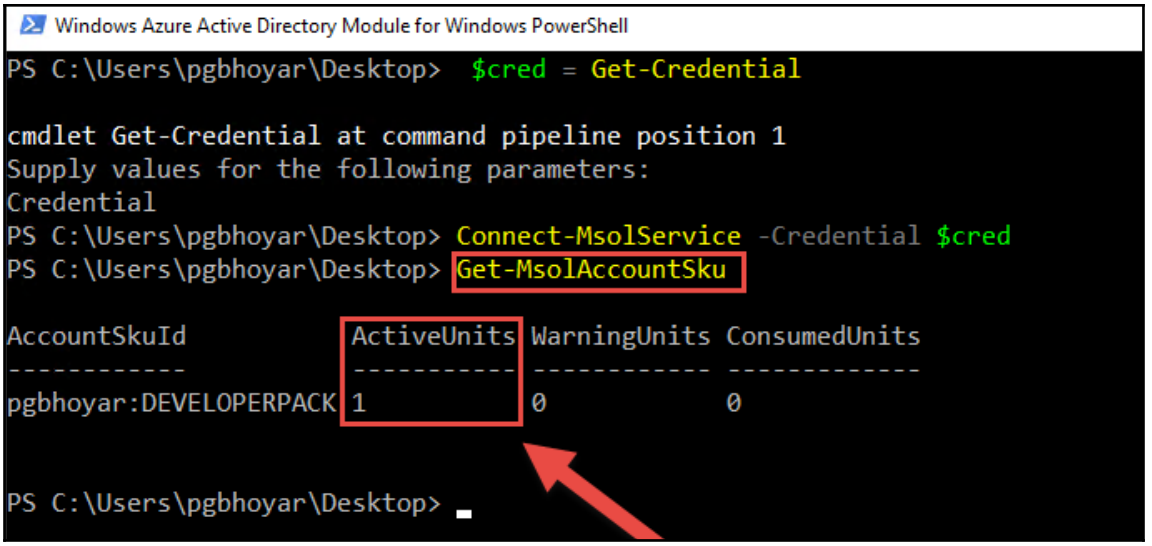

Windows Azure Active Directory Module for Windows PowerShell
PS C:\Users\pgbhoyar\Desktop> $cred = Get-Credential
cmdlet Get-Credential at command pipeline position 1
Supply values for the following parameters:
Credential
Windows PowerShell credential request
Enter your credentials.
User name:
bgbhoyar@pgbhoyar.onm
Password:
OK
Cancel

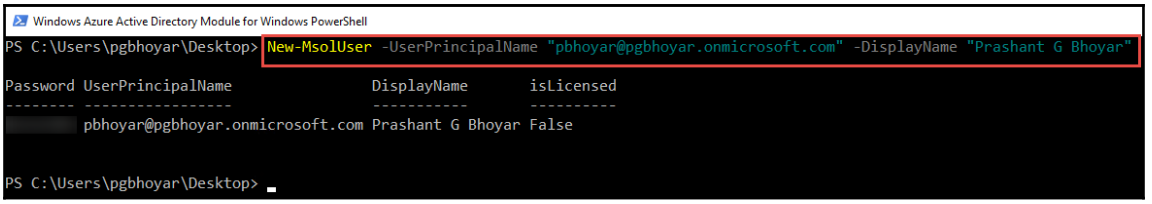

Windows Azure Active Directory Module for Windows PowerShell
PS C:\Users\pgbhoyar\Desktop> $cred = Get-Credential
cmdlet Get-Credential at command pipeline position 1
Supply values for the following parameters:
Credential
PS C:\Users\pgbhoyar\Desktop> Connect-MsolService -Credential $cred
PS C:\Users\pgbhoyar\Desktop>


Windows Azure Active Directory Module for Windows PowerShell
PS C:\Users\pgbhoyar\Desktop> $cred = Get-Credential
cmdlet Get-Credential at command pipeline position 1
Supply values for the following parameters:
Credential
PS C:\Users\pgbhoyar\Desktop> Connect-MsolService -Credential $cred
PS C:\Users\pgbhoyar\Desktop> Get-MsolUser -UserPrincipalName "pgbhoyar@pgbhoyar.onmicrosoft.com"
UserPrincipalName DisplayName isLicensed
pgbhoyar@pgbhoyar.onmicrosoft.com Prashant G Bhoyar True
PS C:\Users\pgbhoyar\Desktop>

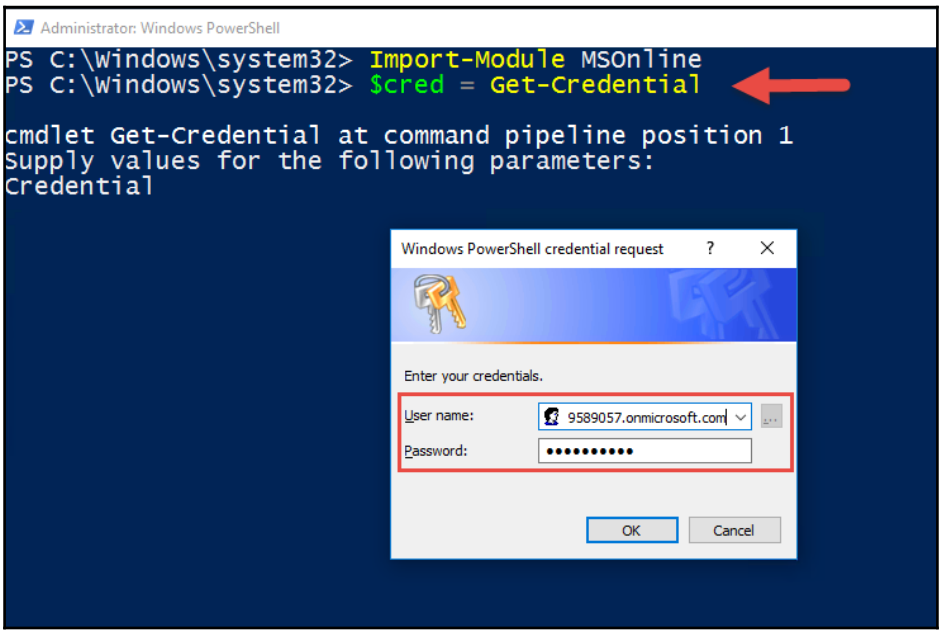

Windows Azure Active Directory Module for Windows PowerShell
Get-MsolUserRole -UserPrincipalName "pgbhoyar@pgbhoyar.onmicrosoft.com"
Company Administrator
Company Administrator role has full access to perform any operation in

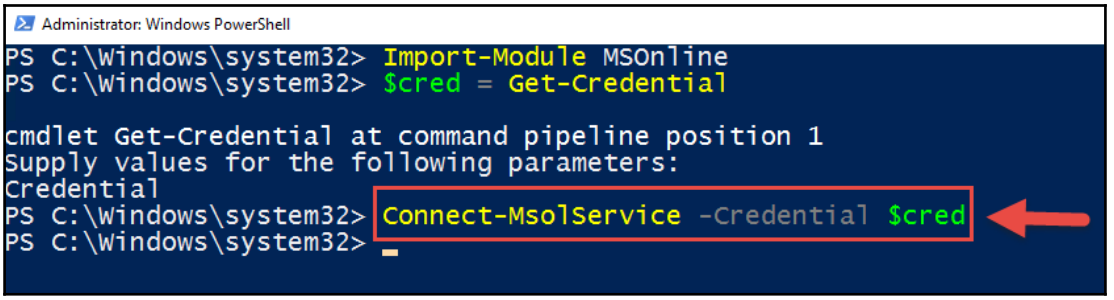

Windows Azure Active Directory Module for Windows PowerShell
PS C:\Users\pgbhoyar\Desktop> Get-MsolRole
ObjectId Name Description
729827e3-9c14-49f7-bb1b-9608f156bbb8 Helpdesk Administrator Helpdesk Administrator has access to perform common helpdesk related ta...
f023fd81-a637-4b56-95fd-791ac0226033 Service Support Administrator Service Support Administrator has access to perform common support tasks.
b0f54661-2d74-4c50-afa3-1ec803f12efe Billing Administrator Billing Administrator has access to perform common billing related tasks.
4ba39ca4-527c-499a-b93d-d9b492c50246 Partner Tier1 Support Allows ability to perform tier1 support tasks.
e00e864a-17c5-4a4b-9c06-f5b95a8d5bd8 Partner Tier2 Support Allows ability to perform tier2 support tasks.
88d8e3e3-8f55-4a1e-953a-9b9898b8876b Directory Readers Allows access to various read only tasks in the directory.
29232cdf-9323-42fd-ade2-1d097af3e4de Exchange Service Administrator Exchange Service Administrator.
75941009-915a-4869-abe7-691bff18279e Lync Service Administrator Lync Service Administrator.
fe930be7-5e62-47db-91af-98c3a49a38b1 User Account Administrator User Account Administrator has access to perform common user management...
9360feb5-f418-4baa-8175-e2a00bac4301 Directory Writers Allows access read tasks and a subset of write tasks in the directory.
62e90394-69f5-4237-9190-012177145e10 Company Administrator Company Administrator role has full access to perform any operation in ...
f28a1f50-f6e7-4571-818b-6a12f2af6b6c SharePoint Service Administrator SharePoint Service Administrator.
d405c6df-0af8-4e3b-95e4-4d06e542189e Device Users Device Users
9f06204d-73c1-4d4c-880a-6edb90606fd8 Device Administrators Device Administrators
9c094953-4995-41c8-84c8-3ebb9b32c93f Device Join Device Join
c34f683f-4d5a-4403-affd-6615e00e3a7f Workplace Device Join Workplace Device Join
17315797-102d-40b4-93e0-432062caca18 Compliance Administrator Compliance administrator.
d29b2b05-8046-44ba-8758-1e26182fcf32 Directory Synchronization Acc... Directory Synchronization Accounts
2b499bcd-da44-4968-8aec-78e1674fa64d Device Managers Allows access to read and edit device properties.
9b895d92-2cd3-44c7-9d02-a6ac2d5ea5c3 Application Administrator Application Administrator role has access to perform common application...
cf1c38e5-3621-4004-a7cb-879624dced7c Application Developer Application Developer role has ability to create single-tenant applicat...
5d6b6bb7-de71-4623-b4af-96380a352509 Security Reader Security Reader allows ability to read security information and reports.
194ae4cb-b126-40b2-bd5b-6091b380977d Security Administrator Security Administrator allows ability to read and manage security confi...
e8611ab8-c189-46e8-94e1-60213ab1f814 Privileged Role Administrator Privileged Role Administrator has access to perform common role managem...
3a2c62db-5318-420d-8d74-23affee5d9d5 Intune Service Administrator Intune Service Administrator has full access in the Intune Service.
158c047a-c907-4556-b7ef-446551a6b5f7 Cloud Application Administrator Cloud Application Administrator has the ability to create applications ...
5c4f9dcd-47dc-4cf7-8c9a-9e4207cbfc91 Customer LockBox Access Approver Customer LockBox Access Approver has approval access to user data reque...
44367163-eba1-44c3-98af-f5787879f96a CRM Service Administrator CRM Service Administrator has full access in the CRM Service.
a9ea8996-122f-4c74-9520-8edcd192826c Power BI Service Administrator Full access in the Power BI Service.
95e79109-95c0-4d8e-aee3-d01accf2d47b Guest Inviter Guest Inviter has access to invite guest users.
PS C:\Users\pgbhoyar\Desktop>

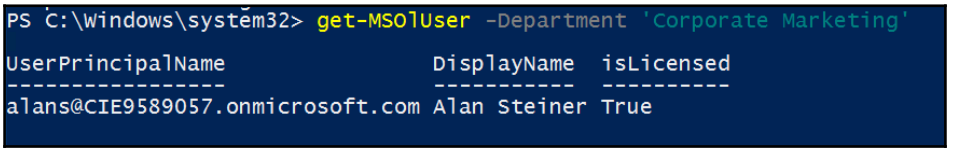

Windows Azure Active Directory Module for Windows PowerShell
PS C:\Users\pgbhoyar\Desktop> $cred = Get-Credential
cmdlet Get-Credential at command pipeline position 1
Supply values for the following parameters:
Credential
PS C:\Users\pgbhoyar\Desktop> Connect-MsolService -Credential $cred
PS C:\Users\pgbhoyar\Desktop> Get-MsolAccountSku
AccountSkuId ActiveUnits WarningUnits ConsumedUnits
pgbhoyar:DEVELOPERPACK 1 0 0
PS C:\Users\pgbhoyar\Desktop>


Windows Azure Active Directory Module for Windows PowerShell
PS C:\Users\pgbhoyar\Desktop> New-MsolUser -UserPrincipalName "pbhoyar@pgbhoyar.onmicrosoft.com" -DisplayName "Prashant G Bhoyar"
Password UserPrincipalName DisplayName isLicensed
pbhoyar@pgbhoyar.onmicrosoft.com Prashant G Bhoyar False
PS C:\Users\pgbhoyar\Desktop>

Chapter 3: Azure AD and Licensing Management







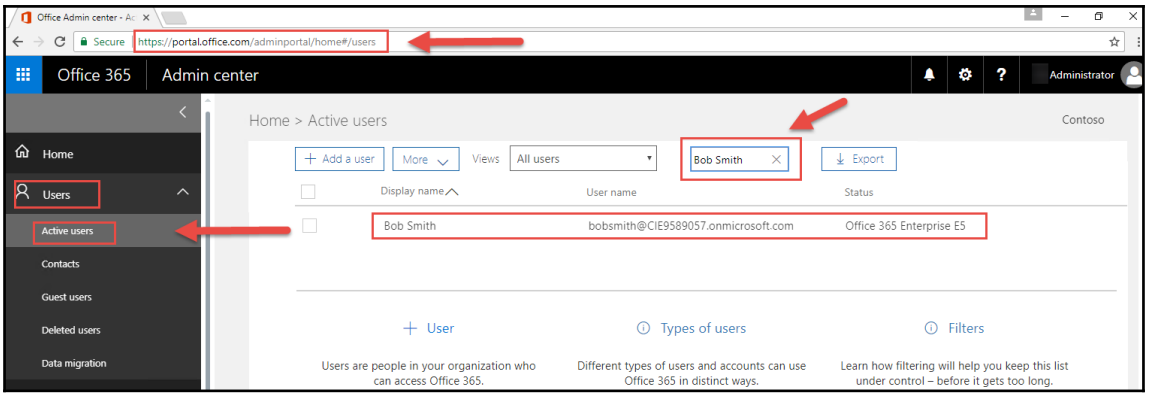
```
Administrator: Windows PowerShell
PS C:\Windows\system32> Get-MsolUser -Department "Corporate Marketing" > CorporateMarketingUsers.txt
PS C:\Windows\system32> Get-MsolUser -Department "Corporate Marketing" > CorporateMarketingUsers.csv
PS C:\Windows\system32> _
```

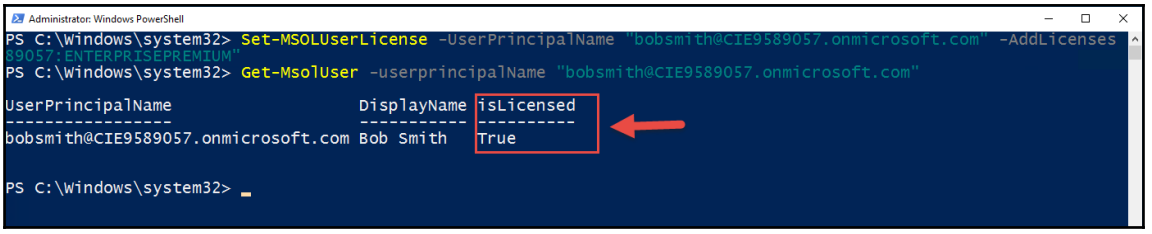
```
Administrator: Windows PowerShell
PS C:\Windows\system32> Get-MsolAccountSku

AccountSkuId                                 ActiveUnits WarningUnits ConsumedUnits
------------                                 ----------- ------------ -------------
CIE9589057:ENTERPRISEPREMIUM                 25          0            23
CIE9589057:PROJECTPREMIUM                    25          0            23
CIE9589057:EMS                               25          0            23
CIE9589057:PROJECT_MADEIRA_PREVIEW_IW_SKU    10000       0            23


PS C:\Windows\system32> _
```

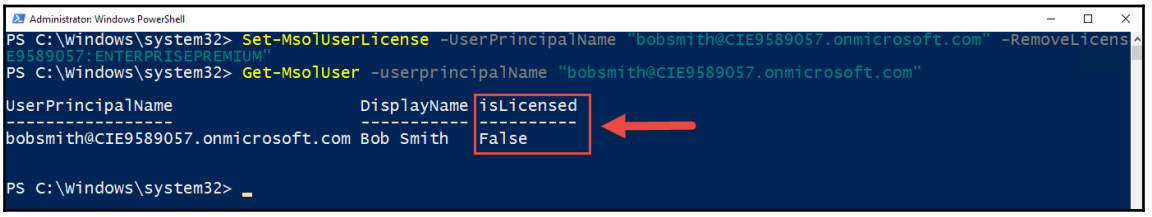
```
Administrator: Windows PowerShell
PS C:\Windows\system32> New-MsolUser -UserPrincipalName "bobsmith@CIE9589057.onmicrosoft.com" -DisplayName "Bo
FirstName "Bob" -LastName "Smith" -UsageLocation "US"

Password UserPrincipalName                  DisplayName isLicensed
-------- -----------------                  ----------- ----------
[redacted] bobsmith@CIE9589057.onmicrosoft.com Bob Smith   False


PS C:\Windows\system32> _
```

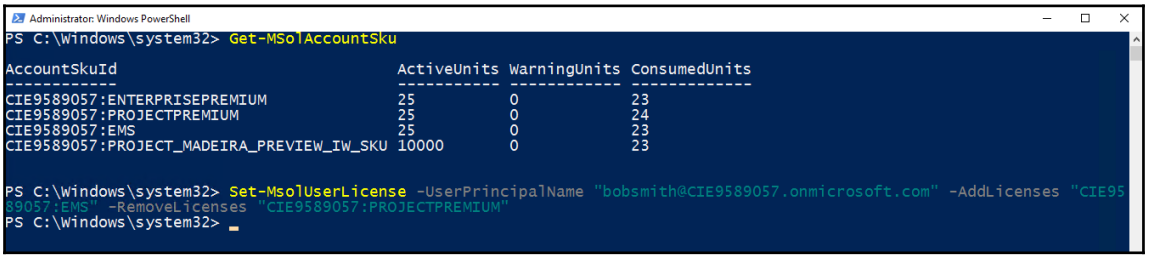
```
Administrator: Windows PowerShell
PS C:\Windows\system32> New-MsolUser -UserPrincipalName "bobsmith@CIE9589057.onmicrosoft.com" -DisplayName "Bob Sm
FirstName "Bob" -LastName "Smith" -UsageLocation "US" -LicenseAssignment "CIE9589057:ENTERPRISEPREMIUM"

Password UserPrincipalName                  DisplayName isLicensed
-------- -----------------                  ----------- ----------
[redacted] bobsmith@CIE9589057.onmicrosoft.com Bob Smith   True


PS C:\Windows\system32> _
```

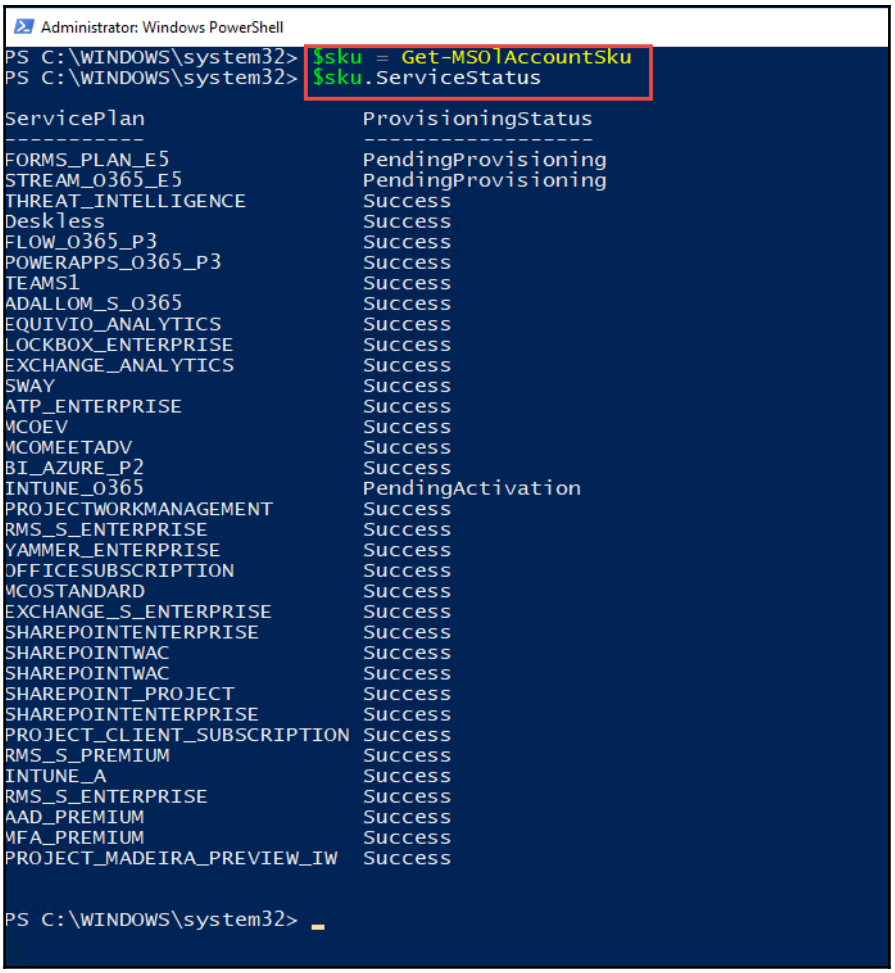
```
Administrator: Windows PowerShell
PS C:\Windows\system32> Get-MsolUser -userprincipalname bobsmith@CIE9589057.onmicrosoft.com

UserPrincipalName                  DisplayName isLicensed
-----------------                  ----------- ----------
bobsmith@CIE9589057.onmicrosoft.com Bob Smith   True


PS C:\Windows\system32> _
```

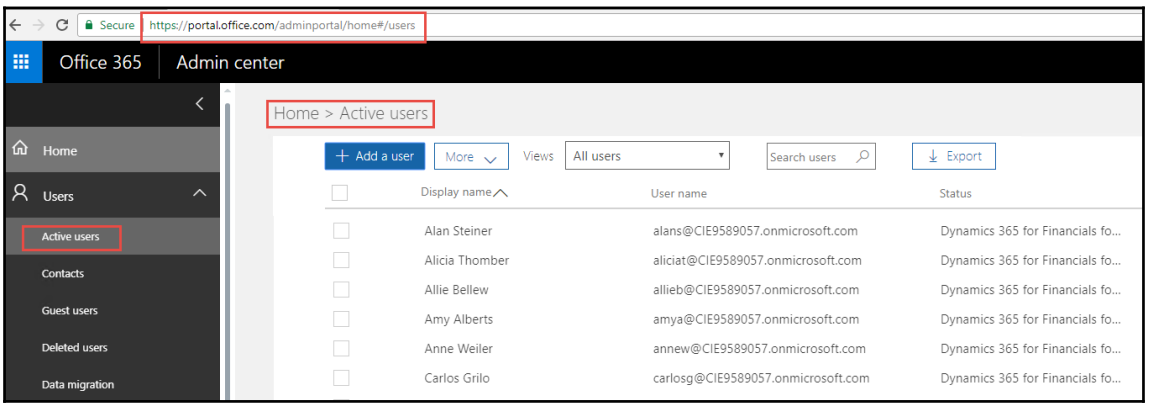

Office Admin center
https://portal.office.com/adminportal/home#/users
Office 365
Admin center
Administrator
Home > Active users
Contoso
Home
Users
Active users
Contacts
Guest users
Deleted users
Data migration
Add a user
More
Views
All users
Bob Smith
Export
Display name
User name
Status
Bob Smith
bobsmith@CIE9589057.onmicrosoft.com
Office 365 Enterprise E5
User
Types of users
Filters
Users are people in your organization who can access Office 365.
Different types of users and accounts can use Office 365 in distinct ways.
Learn how filtering will help you keep this list under control – before it gets too long.


Administrator: Windows PowerShell
PS C:\Windows\system32> Set-MSOLUserLicense -UserPrincipalName "bobsmith@CIE9589057.onmicrosoft.com" -AddLicenses
89057:ENTERPRISEPREMIUM"
PS C:\Windows\system32> Get-MsolUser -userprincipalName "bobsmith@CIE9589057.onmicrosoft.com"
UserPrincipalName DisplayName isLicensed
bobsmith@CIE9589057.onmicrosoft.com Bob Smith True
PS C:\Windows\system32> _

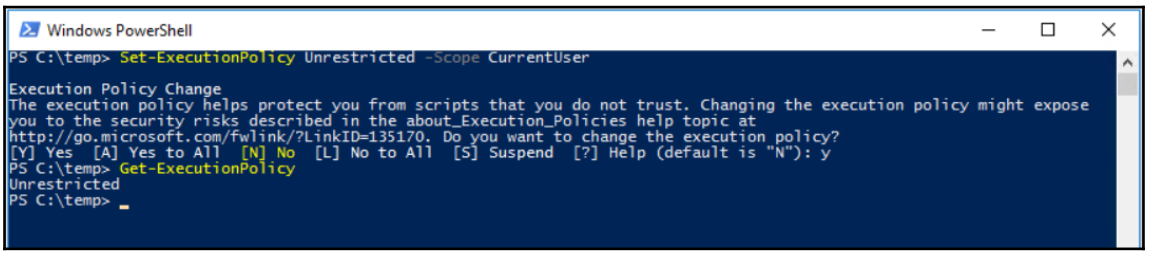

Administrator: Windows PowerShell
PS C:\Windows\system32> Set-MsolUserLicense -UserPrincipalName "bobsmith@CIE9589057.onmicrosoft.com" -RemoveLicens
E9589057:ENTERPRISEPREMIUM"
PS C:\Windows\system32> Get-MsolUser -userprincipalName "bobsmith@CIE9589057.onmicrosoft.com"
UserPrincipalName DisplayName isLicensed
bobsmith@CIE9589057.onmicrosoft.com Bob Smith False
PS C:\Windows\system32> _

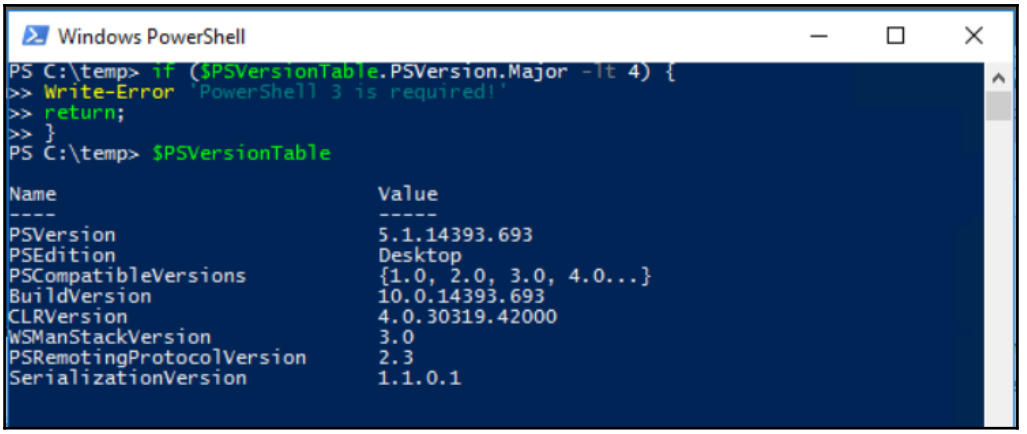

Administrator: Windows PowerShell
PS C:\Windows\system32> Get-MSolAccountSku
AccountSkuId ActiveUnits WarningUnits ConsumedUnits
CIE9589057:ENTERPRISEPREMIUM 25 0 23
CIE9589057:PROJECTPREMIUM 25 0 24
CIE9589057:EMS 25 0 23
CIE9589057:PROJECT_MADEIRA_PREVIEW_IW_SKU 10000 0 23
PS C:\Windows\system32> Set-MsolUserLicense -UserPrincipalName "bobsmith@CIE9589057.onmicrosoft.com" -AddLicenses "CIE95
89057:EMS" -RemoveLicenses "CIE9589057:PROJECTPREMIUM"
PS C:\Windows\system32> _

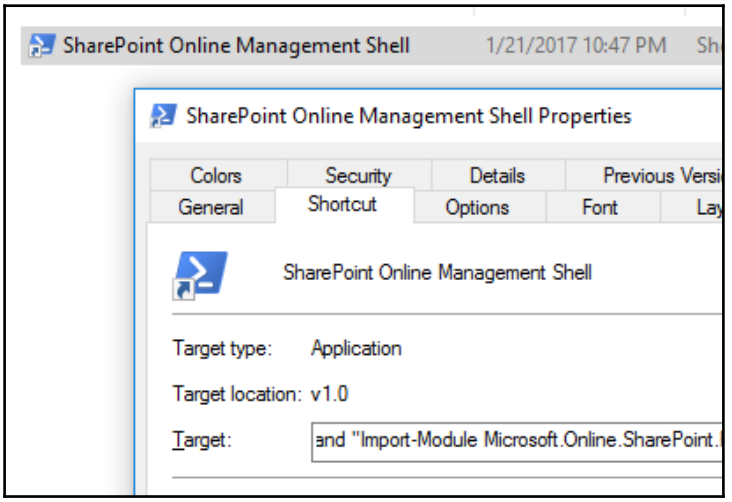

Administrator: Windows PowerShell
PS C:\WINDOWS\system32> $sku = Get-MSOlAccountSku
PS C:\WINDOWS\system32> $sku.ServiceStatus
ServicePlan ProvisioningStatus
FORMS_PLAN_E5 PendingProvisioning
STREAM_O365_E5 PendingProvisioning
THREAT_INTELLIGENCE Success
Deskless Success
FLOW_O365_P3 Success
POWERAPPS_O365_P3 Success
TEAMS1 Success
ADALLOM_S_O365 Success
EQUIVIO_ANALYTICS Success
LOCKBOX_ENTERPRISE Success
EXCHANGE_ANALYTICS Success
SWAY Success
ATP_ENTERPRISE Success
MCOEV Success
MCOMEETADV Success
BI_AZURE_P2 Success
INTUNE_O365 PendingActivation
PROJECTWORKMANAGEMENT Success
RMS_S_ENTERPRISE Success
YAMMER_ENTERPRISE Success
OFFICESUBSCRIPTION Success
MCOSTANDARD Success
EXCHANGE_S_ENTERPRISE Success
SHAREPOINTENTERPRISE Success
SHAREPOINTWAC Success
SHAREPOINTWAC Success
SHAREPOINT_PROJECT Success
SHAREPOINTENTERPRISE Success
PROJECT_CLIENT_SUBSCRIPTION Success
RMS_S_PREMIUM Success
INTUNE_A Success
RMS_S_ENTERPRISE Success
AAD_PREMIUM Success
MFA_PREMIUM Success
PROJECT_MADEIRA_PREVIEW_IW Success
PS C:\WINDOWS\system32>

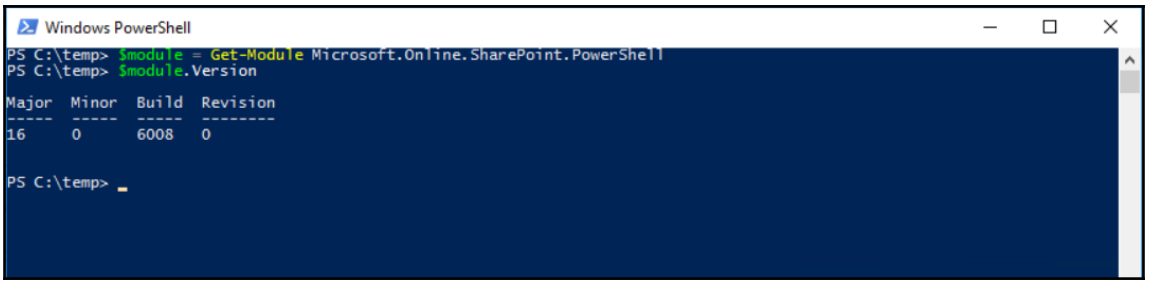

Secure
https://portal.office.com/adminportal/home#/users
Office 365
Admin center
Home
Users
Active users
Contacts
Guest users
Deleted users
Data migration
Home > Active users
Add a user
More
Views
All users
Search users
Export
Display name
User name
Status
Alan Steiner alans@CIE9589057.onmicrosoft.com Dynamics 365 for Financials fo...
Alicia Thomber aliciat@CIE9589057.onmicrosoft.com Dynamics 365 for Financials fo...
Allie Bellew allieb@CIE9589057.onmicrosoft.com Dynamics 365 for Financials fo...
Amy Alberts amya@CIE9589057.onmicrosoft.com Dynamics 365 for Financials fo...
Anne Weiler annew@CIE9589057.onmicrosoft.com Dynamics 365 for Financials fo...
Carlos Grilo carlosg@CIE9589057.onmicrosoft.com Dynamics 365 for Financials fo...

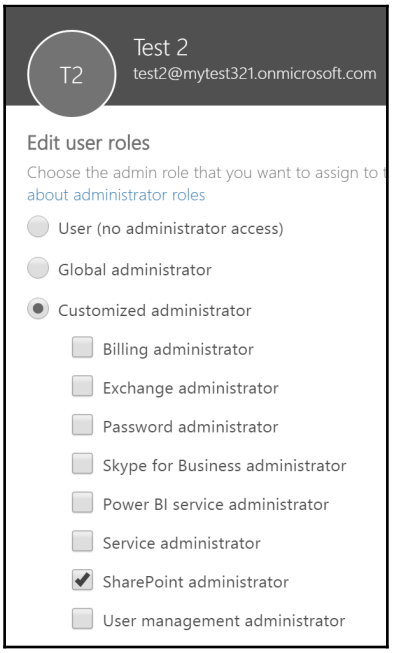
Chapter 4: Managing SharePoint Online Using PowerShell

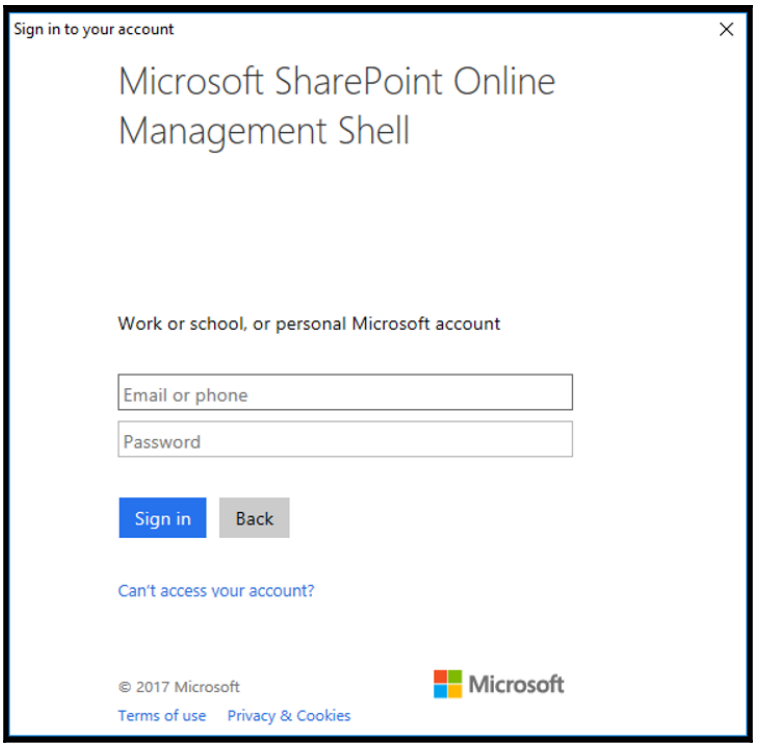


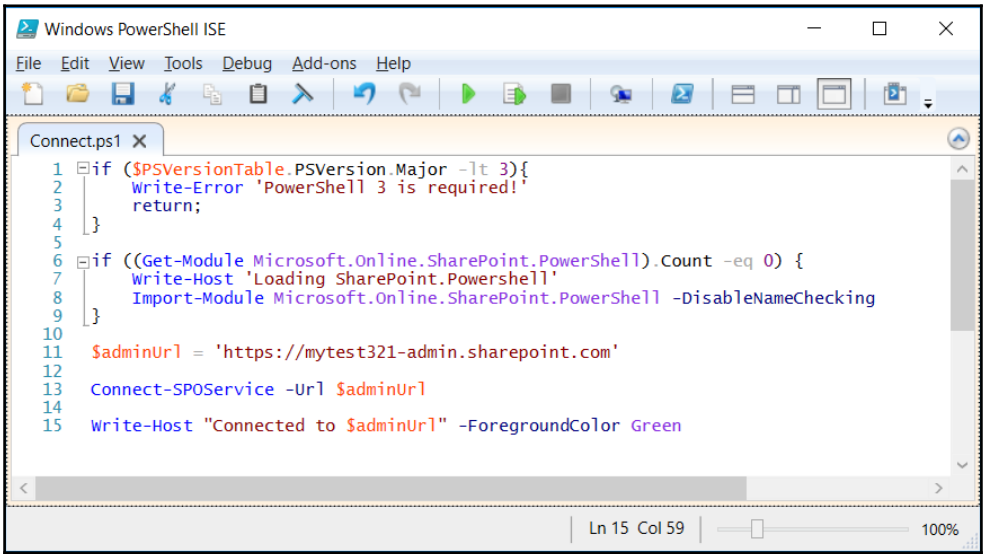


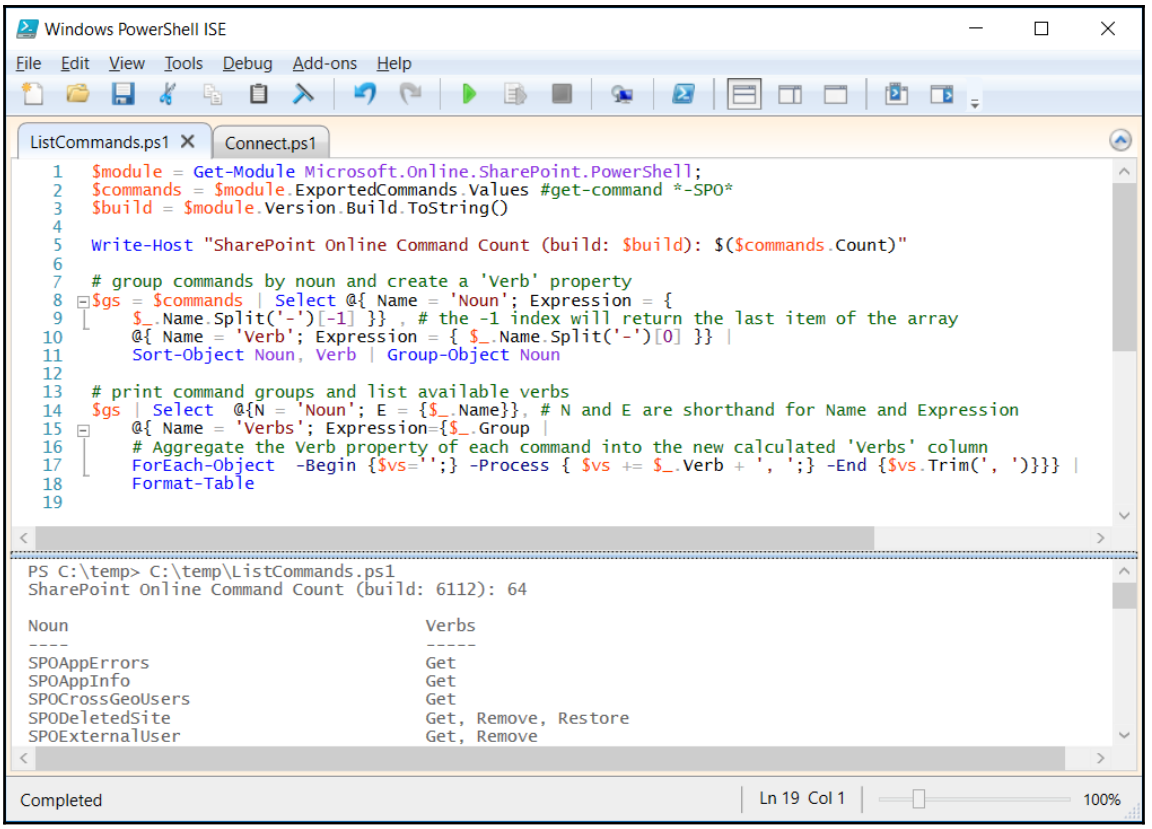


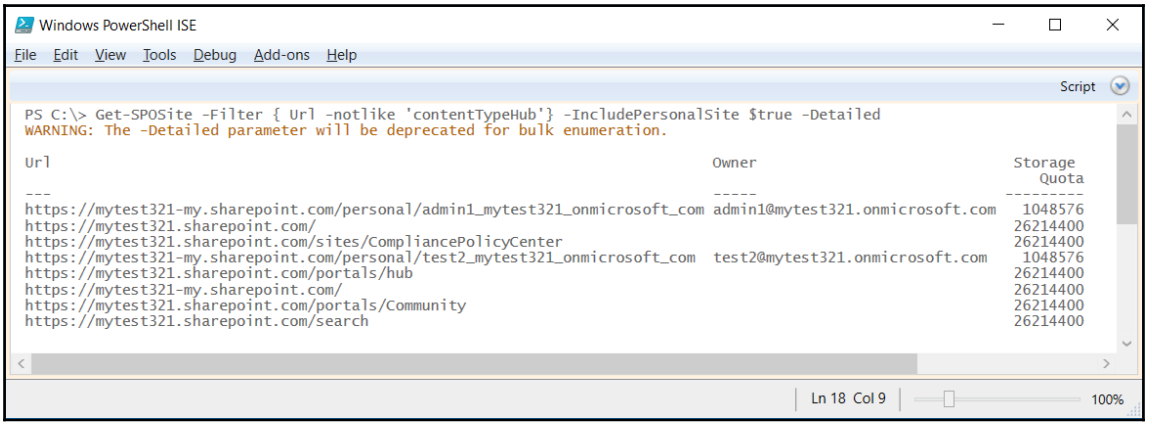

Windows PowerShell
PS C:\temp> $module = Get-Module Microsoft.Online.SharePoint.PowerShell
PS C:\temp> $module.Version
Major Minor Build Revision
16 0 6008 0
PS C:\temp>


T2
Test 2
test2@mytest321.onmicrosoft.com
Edit user roles
Choose the admin role that you want to assign to
about administrator roles
User (no administrator access)
Global administrator
Customized administrator
Billing administrator
Exchange administrator
Password administrator
Skype for Business administrator
Power BI service administrator
Service administrator
SharePoint administrator
User management administrator


Sign in to your account
Microsoft SharePoint Online Management Shell
Work or school, or personal Microsoft account
Email or phone
Password
Sign in
Back
Can't access your account?
© 2017 Microsoft
Microsoft
Terms of use
Privacy & Cookies


Windows PowerShell ISE
File Edit View Tools Debug Add-ons Help
Connect.ps1
1 if ($PSVersionTable.PSVersion.Major -lt 3){
2 Write-Error 'PowerShell 3 is required!'
3 return;
4 }
5
6 if ((Get-Module Microsoft.Online.SharePoint.PowerShell).Count -eq 0) {
7 Write-Host 'Loading SharePoint.Powershell'
8 Import-Module Microsoft.Online.SharePoint.PowerShell -DisableNameChecking
9 }
10
11 $adminUrl = 'https://mytest321-admin.sharepoint.com'
12
13 Connect-SPOService -Url $adminUrl
14
15 Write-Host "Connected to $adminUrl" -ForegroundColor Green
Ln 15 Col 59
100%


Windows PowerShell ISE
File Edit View Tools Debug Add-ons Help
ListCommands.ps1
Connect.ps1
$module = Get-Module Microsoft.Online.SharePoint.PowerShell;
$commands = $module.ExportedCommands.Values #get-command *-SPO*
$build = $module.Version.Build.ToString()
Write-Host "SharePoint Online Command Count (build: $build): $($commands.Count)"
# group commands by noun and create a 'Verb' property
$gs = $commands | Select @{ Name = 'Noun'; Expression = {
$_.Name.Split('-')[-1] }} , # the -1 index will return the last item of the array
@{ Name = 'Verb'; Expression = { $_.Name.Split('-')[0] }} |
Sort-Object Noun, Verb | Group-Object Noun
print command groups and list available verbs
$gs | Select @{N = 'Noun'; E = {$_.Name}}, # N and E are shorthand for Name and Expression
@{ Name = 'Verbs'; Expression={$_.Group |
Aggregate the Verb property of each command into the new calculated 'Verbs' column
ForEach-Object -Begin {$vs='';} -Process { $vs += $_.Verb + ', ';} -End {$vs.Trim(', ')}}} |
Format-Table
PS C:\temp> C:\temp\ListCommands.ps1
SharePoint Online Command Count (build: 6112): 64
Noun Verbs
SPOAppErrors Get
SPOAppInfo Get
SPOCrossGeoUsers Get
SPODeletedSite Get, Remove, Restore
SPOExternalUser Get, Remove
Completed
Ln 19 Col 1
100%


Windows PowerShell ISE
File Edit View Tools Debug Add-ons Help
Script
PS C:\> Get-SPOSite -Filter { Url -notlike 'contentTypeHub'} -IncludePersonalSite $true -Detailed
WARNING: The -Detailed parameter will be deprecated for bulk enumeration.
Url Owner Storage Quota
https://mytest321-my.sharepoint.com/personal/admin1_mytest321_onmicrosoft_com admin1@mytest321.onmicrosoft.com 1048576
https://mytest321.sharepoint.com/ 26214400
https://mytest321.sharepoint.com/sites/CompliancePolicyCenter 26214400
https://mytest321-my.sharepoint.com/personal/test2_mytest321_onmicrosoft_com test2@mytest321.onmicrosoft.com 1048576
https://mytest321.sharepoint.com/portals/hub 26214400
https://mytest321-my.sharepoint.com/ 26214400
https://mytest321.sharepoint.com/portals/Community 26214400
https://mytest321.sharepoint.com/search 26214400
Ln 18 Col 9
100%

Windows PowerShell ISE

File Edit View Tools Debug Add-ons Help

SiteInfo.ps1

```
1  # filter contentTypeHub as an example
2  $allSites = Get-SPOSite -Filter { Url -notlike 'contentTypeHub'} -IncludePersonalSite $true
3      # additional filters -Limit ALL -Template STS#0
4
5  # WebsCount & other properties are not loaded by default
6  # Detailed flag has to be called for each site collection
7  $allSites | foreach { $allSites[$allSites.IndexOf($_)] = Get-SPOSite $_ -Detailed };
8
9  $allSites | Select Url, WebsCount, StorageUsageCurrent #, ResourceUsageCurrent, ResourceUsageAverage
```

```
Url                                                                  WebsCount StorageUsageCurrent
---                                                                  --------- -------------------
https://mytest321-my.sharepoint.com/personal/admin1_mytest321_onmicrosoft_com         1                   1
https://mytest321.sharepoint.com/                                             1                1407
https://mytest321.sharepoint.com/sites/CompliancePolicyCenter                 1                   1
https://mytest321-my.sharepoint.com/personal/test2_mytest321_onmicrosoft_com  1                   1
https://mytest321.sharepoint.com/portals/hub                                  1                   1
https://mytest321-my.sharepoint.com/                                          1                   1
https://mytest321.sharepoint.com/portals/Community                            1                   1
https://mytest321.sharepoint.com/search                                       1                  27
```

Ln 16 Col 9 100%

Sharing outside your organization

Control how users share content with people outside your organization.

- Don't allow sharing outside your organization
- Allow sharing only with the external users that already exist in your organization's directory
- Allow users to invite and share with authenticated external users
- Allow sharing to authenticated external users and using anonymous access links

} Set-SPOTenant -SharingCapability <Disabled | ExternalUserSharingOnly | ExternalUserAndGuestSharing>

☑ Anonymous access links expire in this many days: 9 Set-SPOTenant -RequireAnonymousLinksExpireInDays <int>

Anonymous access links allow recipients to:

Files: view and edit Set-SPOTenant -FileAnonymousLinkType <None | View | Edit>

Folders: view, edit, and upload Set-SPOTenant -FolderAnonymousLinkType <None | View | Edit>

Default link type

Choose the type of link that is created by default when users get links. Learn more.

- Direct - only people who have permission
- Internal - people in the organization only
- Anonymous Access - anyone with the link

} Set-SPOTenant -DefaultSharingLinkType <None | Direct | Internal | AnonymousAccess>

Additional settings

☑ Limit external sharing using domains (applies to all future sharing invitations). Separate multiple domains with spaces. Learn more.

Allow sharing only with users from these domains

microsoft.com outlook.com

} Set-SPOTenant -SharingDomainRestrictionMode <AllowList | BlockList> -SharingAllowedDomainList 'outlook.com microsoft.com' -SharingBlockedDomainList '<string>'

☐ Prevent external users from sharing files, folders, and sites that they don't own Set-SPOTenant -PreventExternalUsersFromResharing <$true | $false>

☑ External users must accept sharing invitations using the same account that the invitations were sent to Set-SPOTenant -RequireAcceptingAccountMatchInvitedAccount <$true | $false>

When users share via anonymous access links, people who receive the link don't need to sign in to access the shared content. Therefore these additional settings don't apply to anonymous access links.

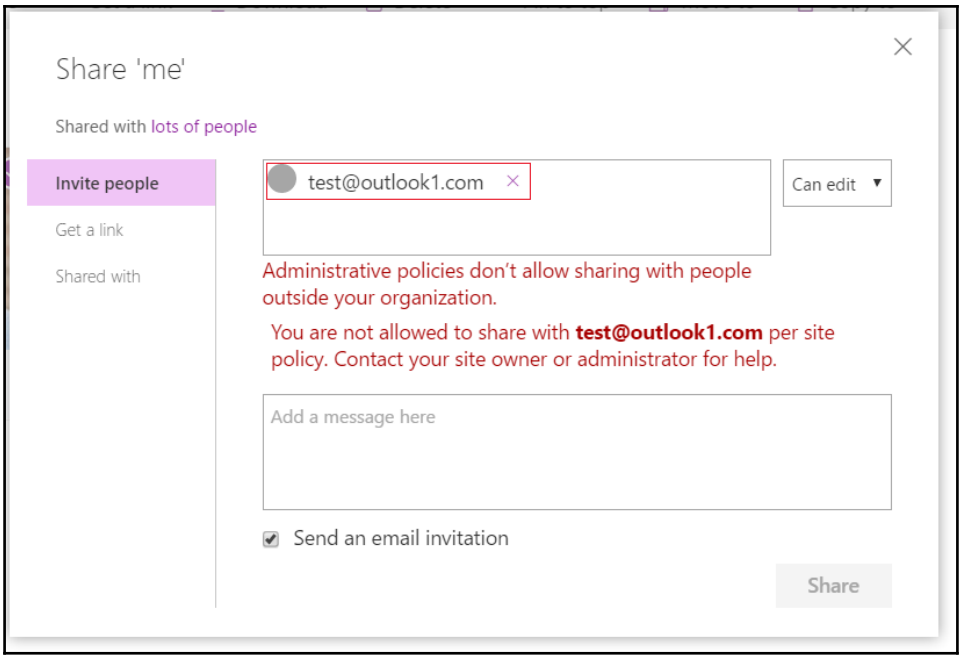
Notifications

E-mail OneDrive for Business owners when

☑ Other users invite additional external users to shared files Set-SPOTenant -NotifyOwnersWhenItemsReshared <$true | $false>

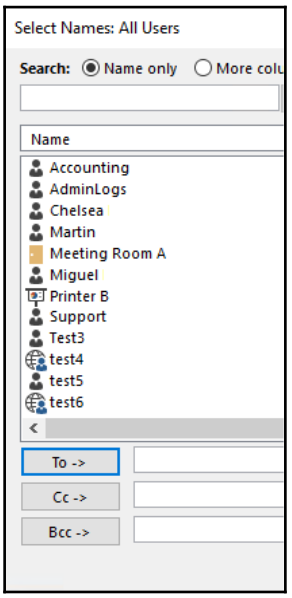
☑ External users accept invitations to access files Set-SPOTenant -NotifyOwnersWhenInvitationsAccepted <$true | $false>

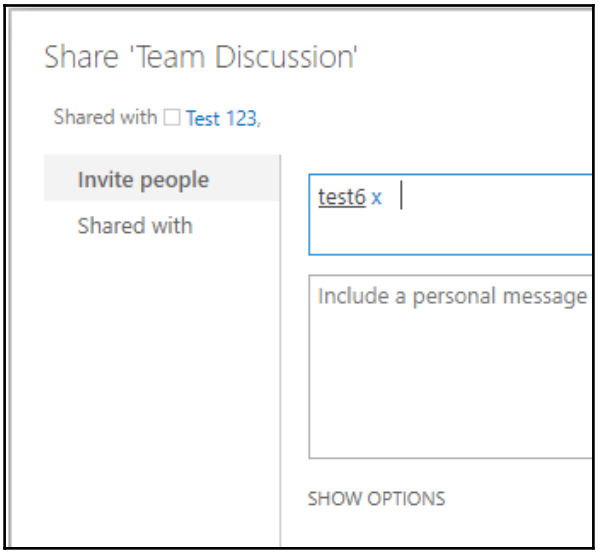
☑ An anonymous access link is created or changed

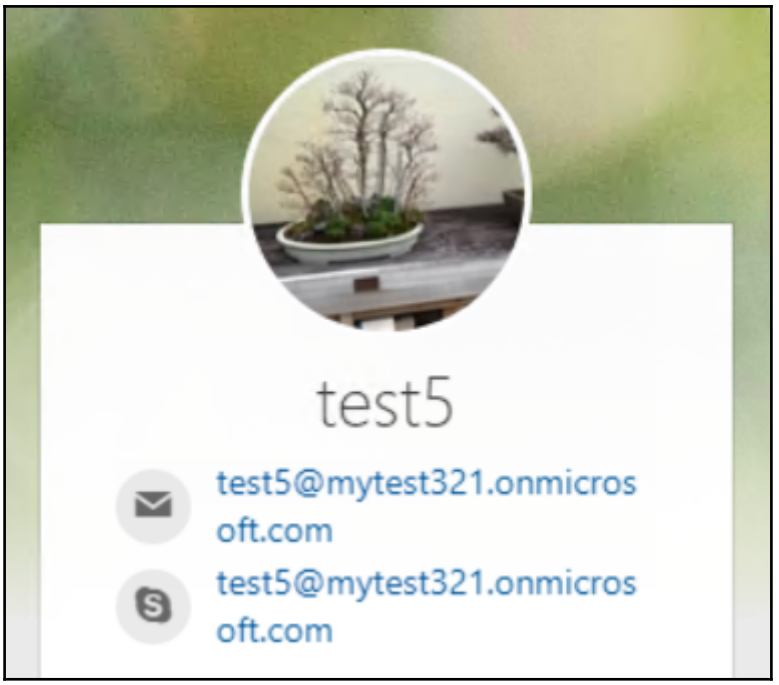

Share 'me'
Shared with lots of people
Invite people
Get a link
Shared with
test@outlook1.com
Can edit
Administrative policies don't allow sharing with people outside your organization.
You are not allowed to share with test@outlook1.com per site policy. Contact your site owner or administrator for help.
Add a message here
Send an email invitation
Share

Share 'me'
Shared with lots of people
Invite people
Get a link
Shared with
Edit link - no sign-in required
Restricted link - Only specific people can open this link (created)
View link - mytest321 account required
Edit link - mytest321 account required
View link - no sign-in required
Edit link - no sign-in required
Close

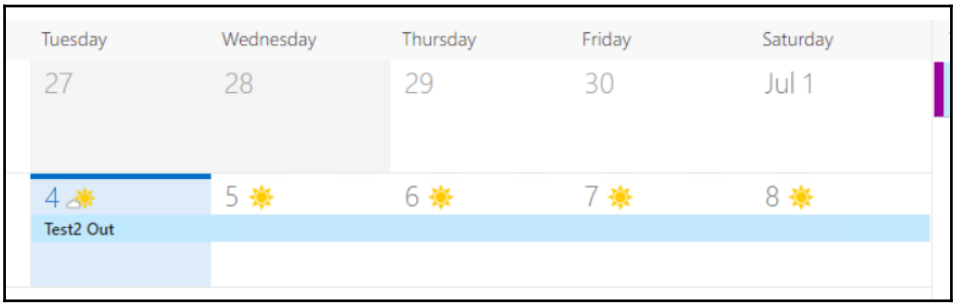
Chapter 5: Managing Exchange Online Using PowerShell

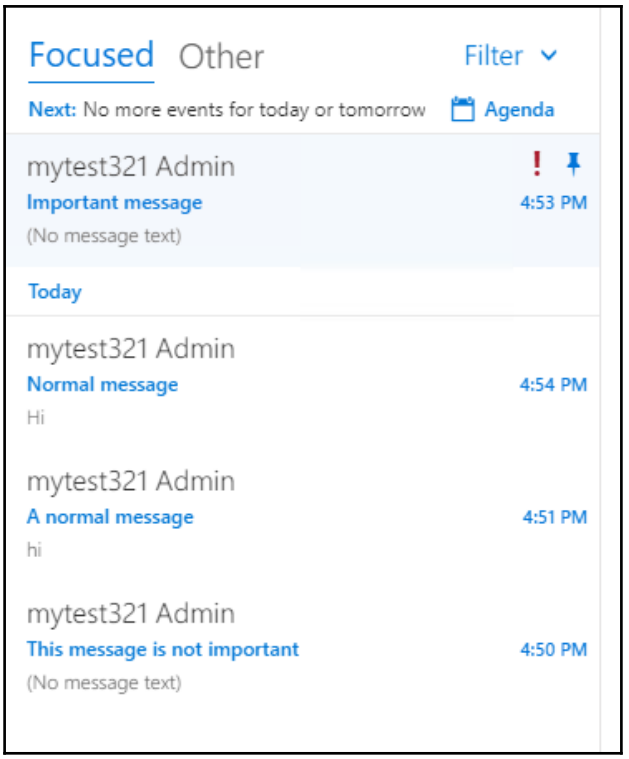






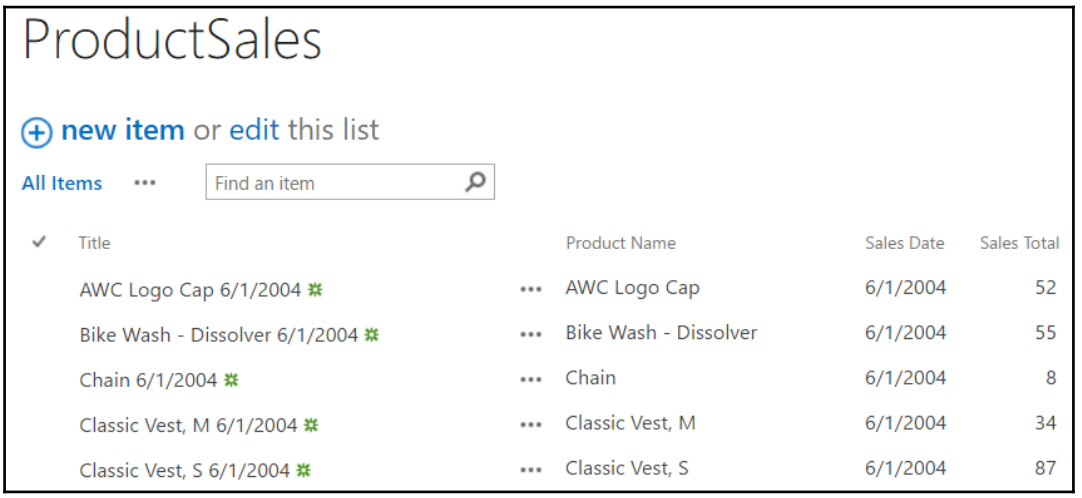
	A	B
1	Name	Photo
2	test5	c:\temp\b2.png
3	test123	c:\temp\b3.png
4		

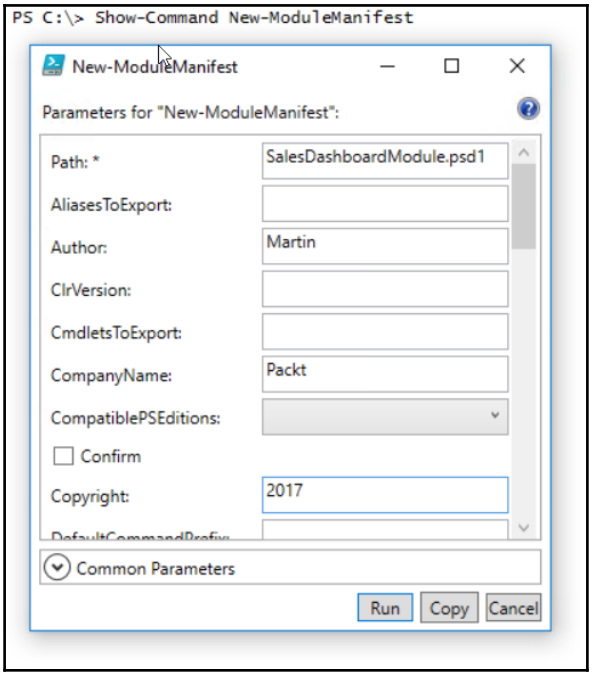


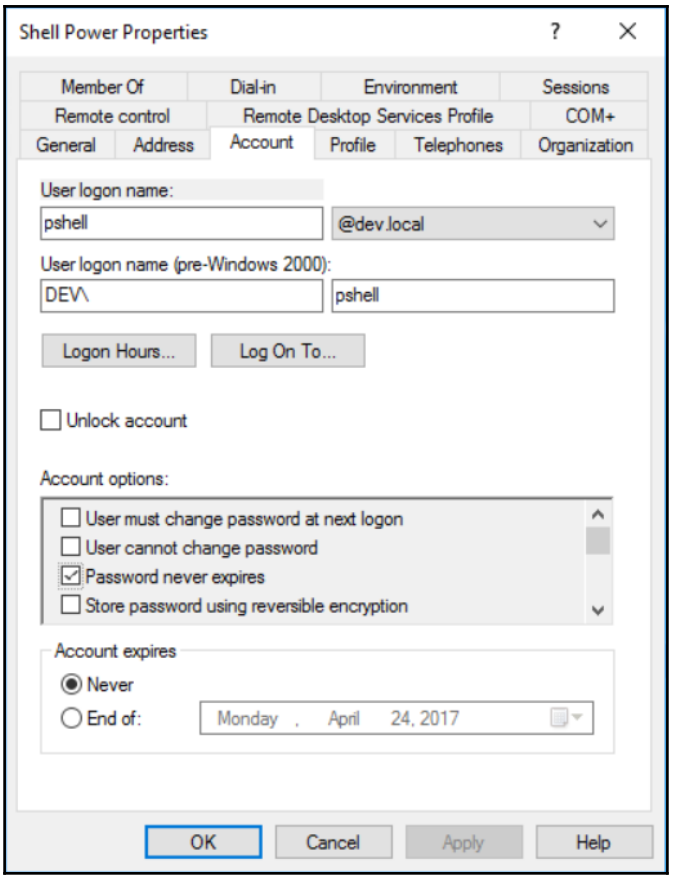


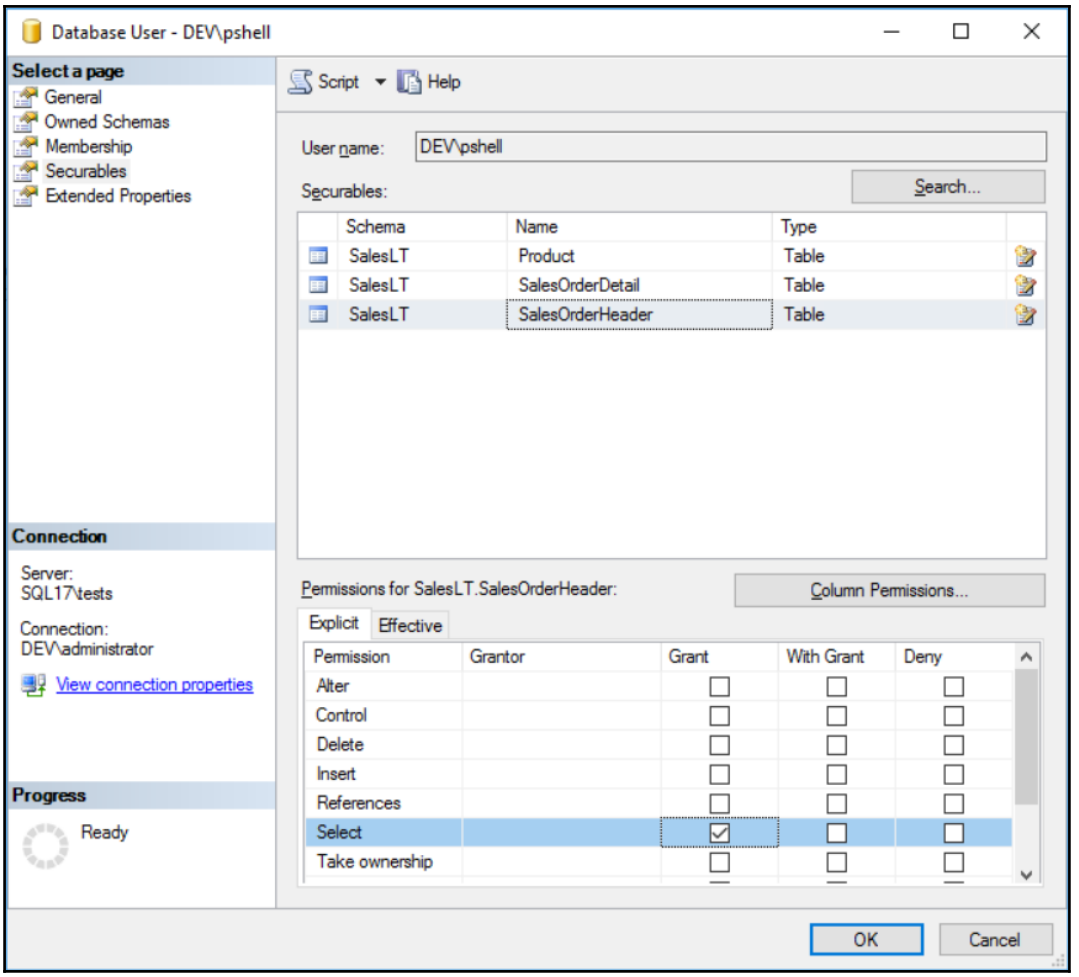
Management role	Recipient read scope	Recipient write scope	Configuration read scope	Configuration write scope
MyTextMessaging	Self	Self	Organization Config	Organization Config

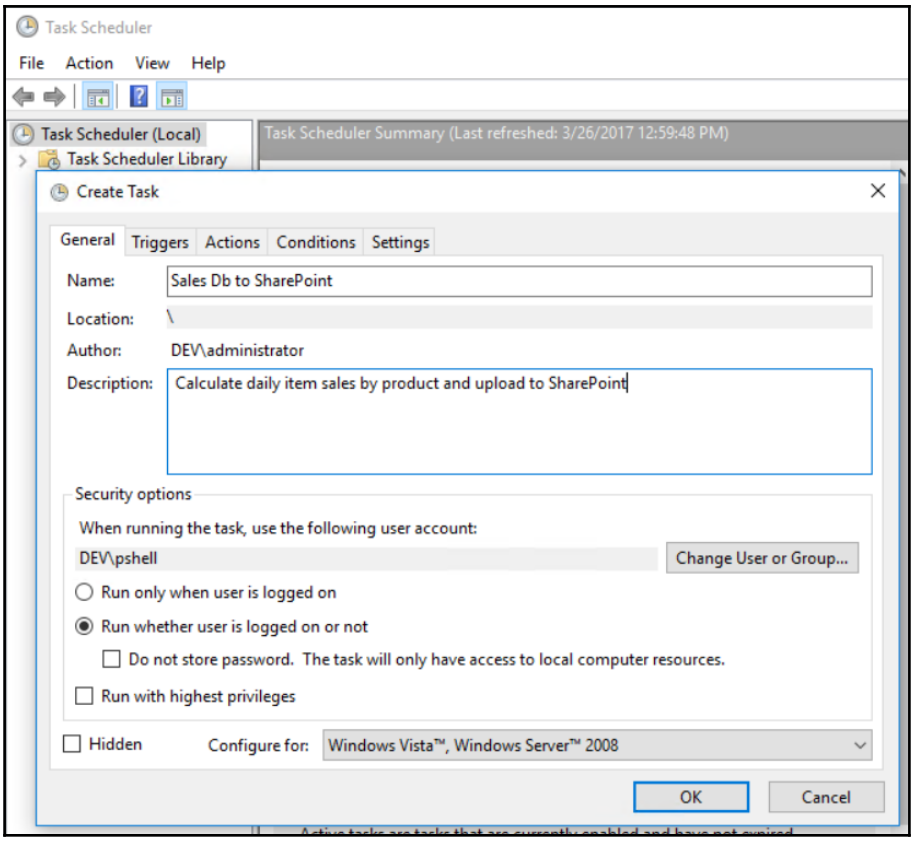
Chapter 6: Script Automation

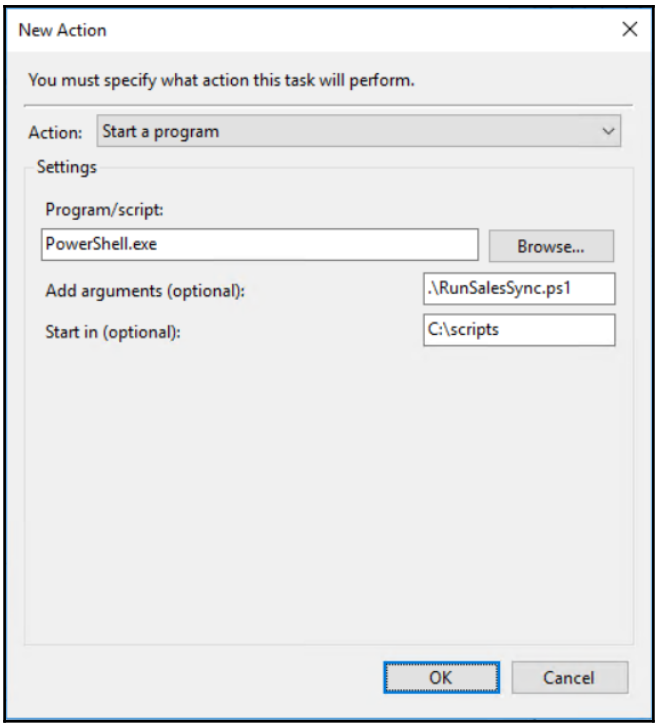


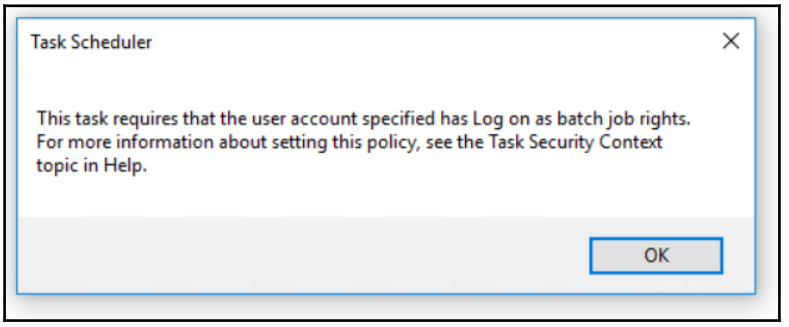


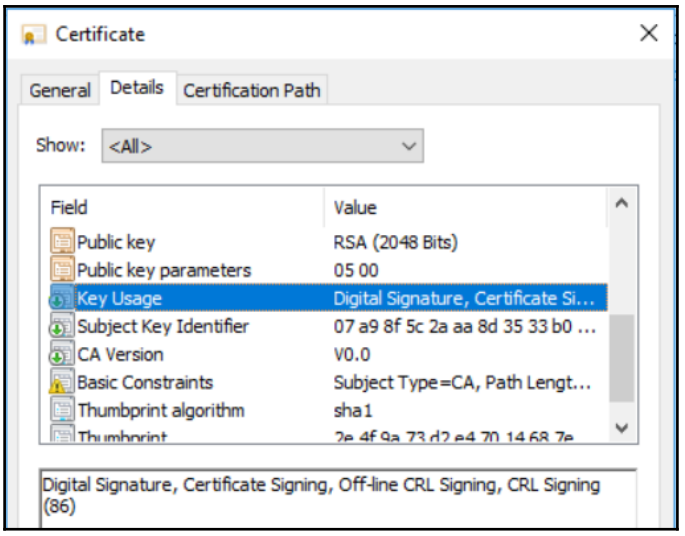

Shell Power Properties
Member Of
Dial-in
Environment
Sessions
Remote control
Remote Desktop Services Profile
COM+
General
Address
Account
Profile
Telephones
Organization
User logon name:
pshell
@dev.local
User logon name (pre-Windows 2000):
DEV\
pshell
Logon Hours...
Log On To...
Unlock account
Account options:
User must change password at next logon
User cannot change password
Password never expires
Store password using reversible encryption
Account expires
Never
End of:
Monday , April 24, 2017
OK
Cancel
Apply
Help

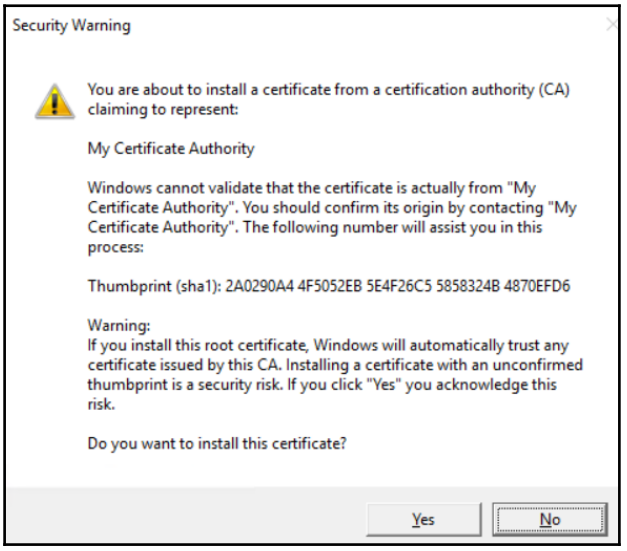

Database User - DEV\pshell
Select a page
General
Owned Schemas
Membership
Securables
Extended Properties
Script
Help
User name:
DEV\pshell
Securables:
Search...
Schema
Name
Type
SalesLT
Product
Table
SalesLT
SalesOrderDetail
Table
SalesLT
SalesOrderHeader
Table
Connection
Server:
SQL17\tests
Connection:
DEV\administrator
View connection properties
Permissions for SalesLT.SalesOrderHeader:
Column Permissions...
Explicit
Effective
Permission
Grantor
Grant
With Grant
Deny
Alter
Control
Delete
Insert
References
Select
Take ownership
Progress
Ready
OK
Cancel

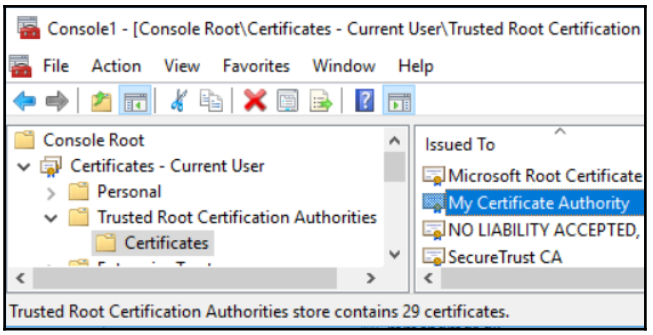

Task Scheduler
File Action View Help
Task Scheduler (Local)
Task Scheduler Library
Task Scheduler Summary (Last refreshed: 3/26/2017 12:59:48 PM)
Create Task
General Triggers Actions Conditions Settings
Name: Sales Db to SharePoint
Location: \
Author: DEV\administrator
Description: Calculate daily item sales by product and upload to SharePoint
Security options
When running the task, use the following user account:
DEV\pshell
Change User or Group...
Run only when user is logged on
Run whether user is logged on or not
Do not store password. The task will only have access to local computer resources.
Run with highest privileges
Hidden
Configure for: Windows Vista™, Windows Server™ 2008
OK
Cancel

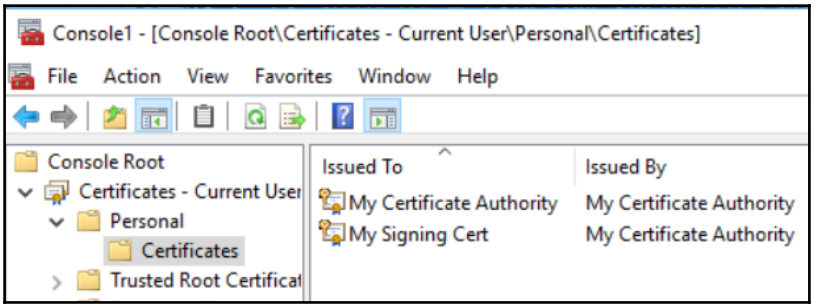

New Action
You must specify what action this task will perform.
Action:
Start a program
Settings
Program/script:
PowerShell.exe
Browse...
Add arguments (optional):
.\RunSalesSync.ps1
Start in (optional):
C:\scripts
OK
Cancel

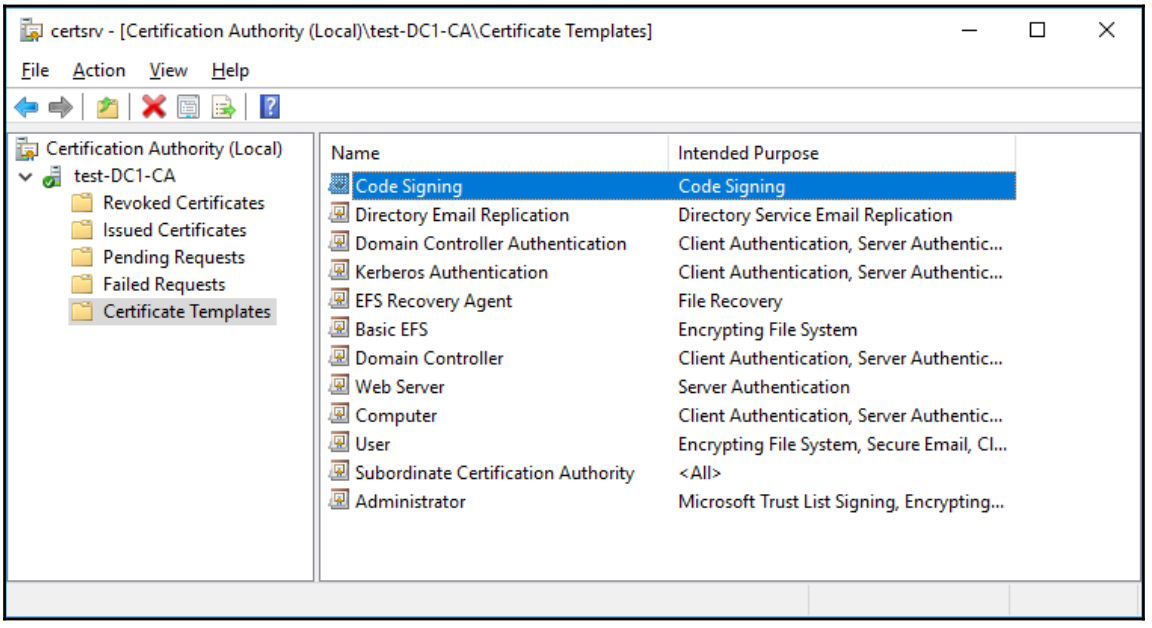

Task Scheduler
This task requires that the user account specified has Log on as batch job rights.
For more information about setting this policy, see the Task Security Context topic in Help.
OK

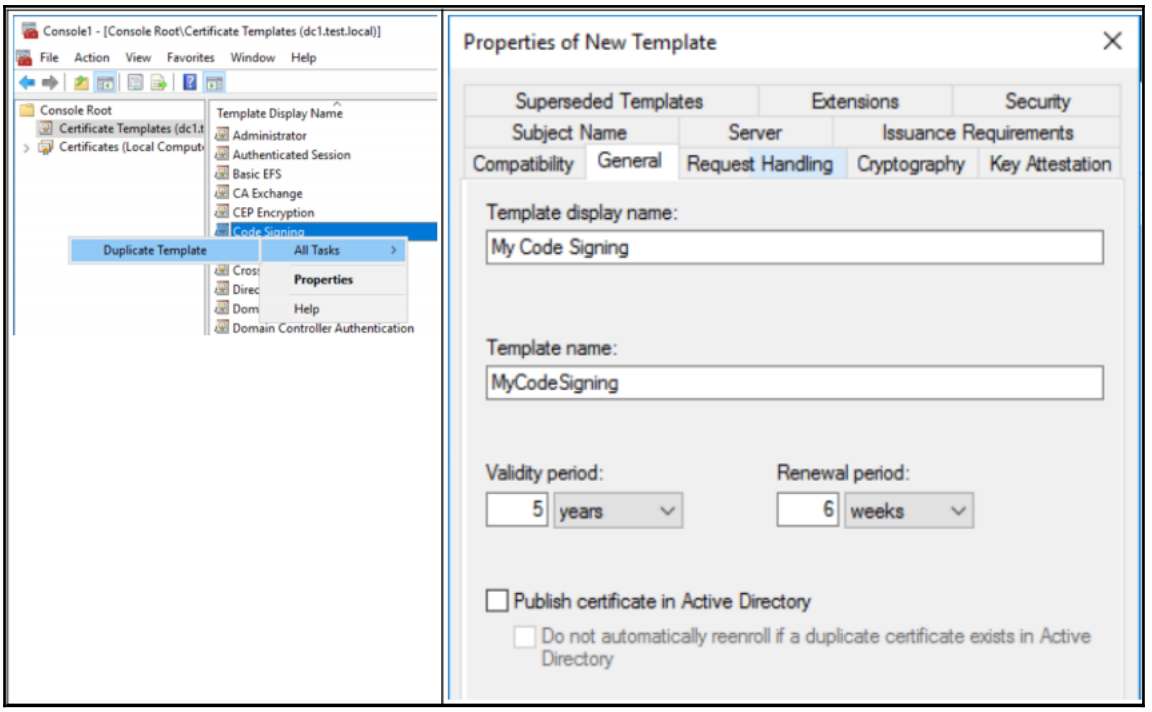

Certificate
General
Details
Certification Path
Show:
<All>
Field
Value
Public key
RSA (2048 Bits)
Public key parameters
05 00
Key Usage
Digital Signature, Certificate Si...
Subject Key Identifier
07 a9 8f 5c 2a aa 8d 35 33 b0 ...
CA Version
V0.0
Basic Constraints
Subject Type=CA, Path Lengt...
Thumbprint algorithm
sha1
Digital Signature, Certificate Signing, Off-line CRL Signing, CRL Signing (86)

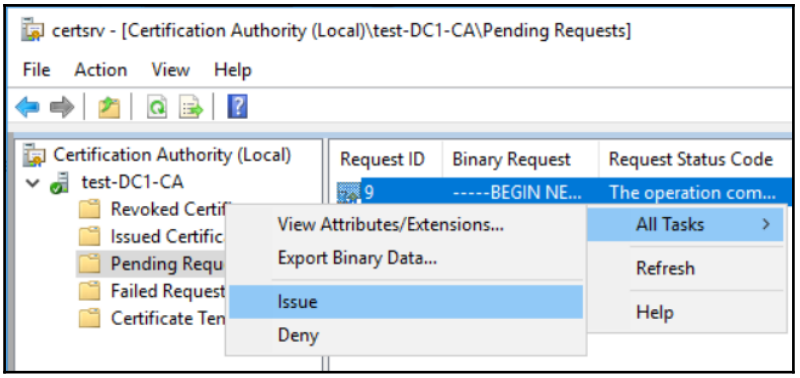

Security Warning
You are about to install a certificate from a certification authority (CA) claiming to represent:
My Certificate Authority
Windows cannot validate that the certificate is actually from "My Certificate Authority". You should confirm its origin by contacting "My Certificate Authority". The following number will assist you in this process:
Thumbprint (sha1): 2A0290A4 4F5052EB 5E4F26C5 5858324B 4870EFD6
Warning:
If you install this root certificate, Windows will automatically trust any certificate issued by this CA. Installing a certificate with an unconfirmed thumbprint is a security risk. If you click "Yes" you acknowledge this risk.
Do you want to install this certificate?
Yes
No

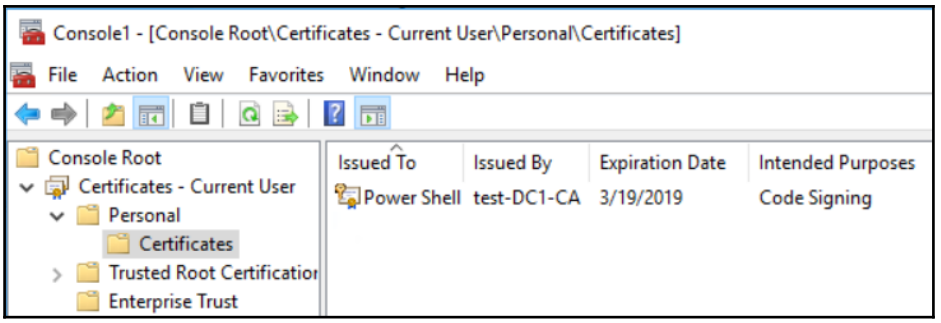

Console1 - [Console Root\Certificates - Current User\Trusted Root Certification
File Action View Favorites Window Help
Console Root
Certificates - Current User
Personal
Trusted Root Certification Authorities
Certificates
Issued To
Microsoft Root Certificate
My Certificate Authority
NO LIABILITY ACCEPTED,
SecureTrust CA
Trusted Root Certification Authorities store contains 29 certificates.

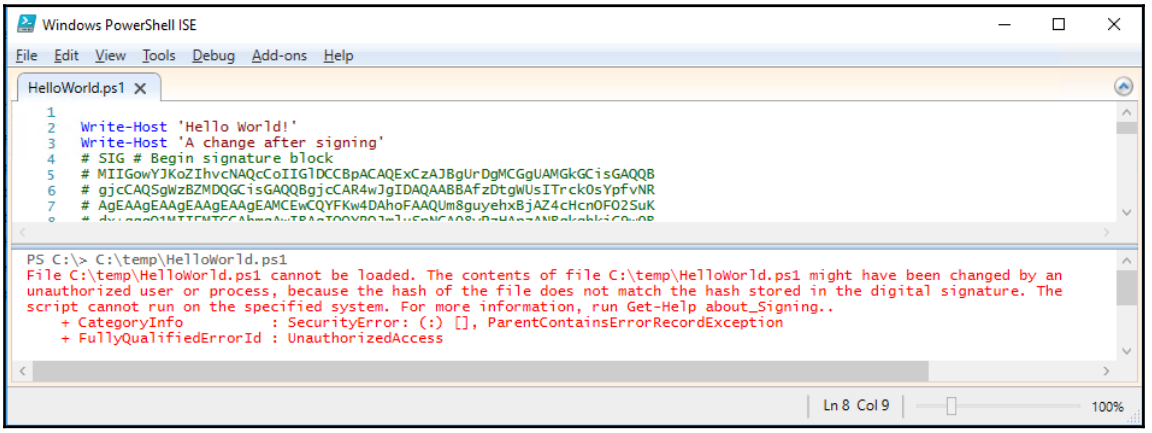

Console1 - [Console Root\Certificates - Current User\Personal\Certificates]
File Action View Favorites Window Help
Console Root
Certificates - Current User
Personal
Certificates
Trusted Root Certificat
Issued To
Issued By
My Certificate Authority
My Certificate Authority
My Signing Cert
My Certificate Authority


certsrv - [Certification Authority (Local)\test-DC1-CA\Certificate Templates]
File Action View Help
Certification Authority (Local)
test-DC1-CA
Revoked Certificates
Issued Certificates
Pending Requests
Failed Requests
Certificate Templates
Name
Intended Purpose
Code Signing
Code Signing
Directory Email Replication
Directory Service Email Replication
Domain Controller Authentication
Client Authentication, Server Authentic...
Kerberos Authentication
Client Authentication, Server Authentic...
EFS Recovery Agent
File Recovery
Basic EFS
Encrypting File System
Domain Controller
Client Authentication, Server Authentic...
Web Server
Server Authentication
Computer
Client Authentication, Server Authentic...
User
Encrypting File System, Secure Email, Cl...
Subordinate Certification Authority
<All>
Administrator
Microsoft Trust List Signing, Encrypting...

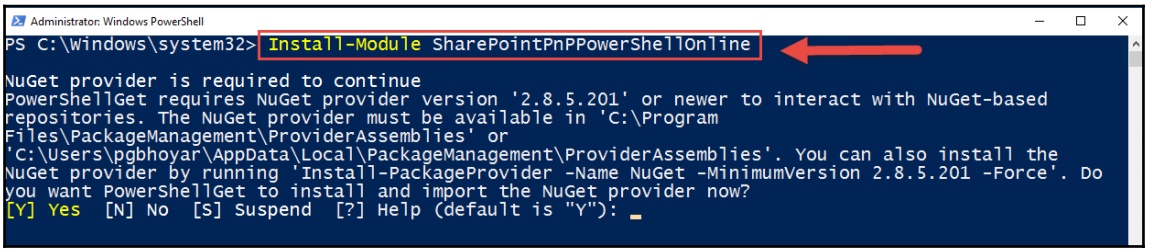

Console1 - [Console Root\Certificate Templates (dc1.test.local)]
File Action View Favorites Window Help
Console Root
Certificate Templates (dc1.t
Certificates (Local Comput
Template Display Name
Administrator
Authenticated Session
Basic EFS
CA Exchange
CEP Encryption
Code Signing
Duplicate Template
All Tasks
Properties
Help
Domain Controller Authentication
Properties of New Template
Superseded Templates
Extensions
Security
Subject Name
Server
Issuance Requirements
Compatibility
General
Request Handling
Cryptography
Key Attestation
Template display name:
My Code Signing
Template name:
MyCodeSigning
Validity period:
5
years
Renewal period:
6
weeks
Publish certificate in Active Directory
Do not automatically reenroll if a duplicate certificate exists in Active Directory

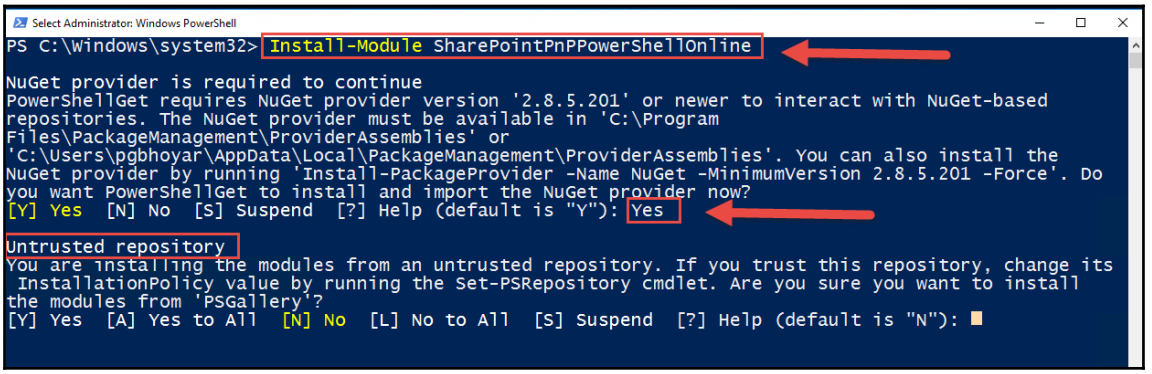

certsrv - [Certification Authority (Local)\test-DC1-CA\Pending Requests]
File Action View Help
Certification Authority (Local)
test-DC1-CA
Revoked Certif
Issued Certific
Pending Requ
Failed Request
Certificate Ten
Request ID
Binary Request
Request Status Code
9
-----BEGIN NE...
The operation com...
View Attributes/Extensions...
Export Binary Data...
Issue
Deny
All Tasks
Refresh
Help

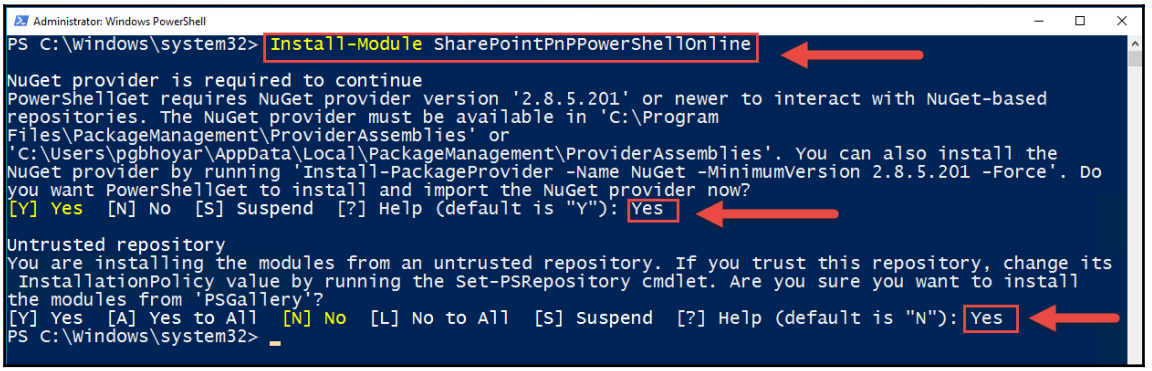

Console1 - [Console Root\Certificates - Current User\Personal\Certificates]
File Action View Favorites Window Help
Console Root
Certificates - Current User
Personal
Certificates
Trusted Root Certificatio
Enterprise Trust
Issued To
Issued By
Expiration Date
Intended Purposes
Power Shell
test-DC1-CA
3/19/2019
Code Signing

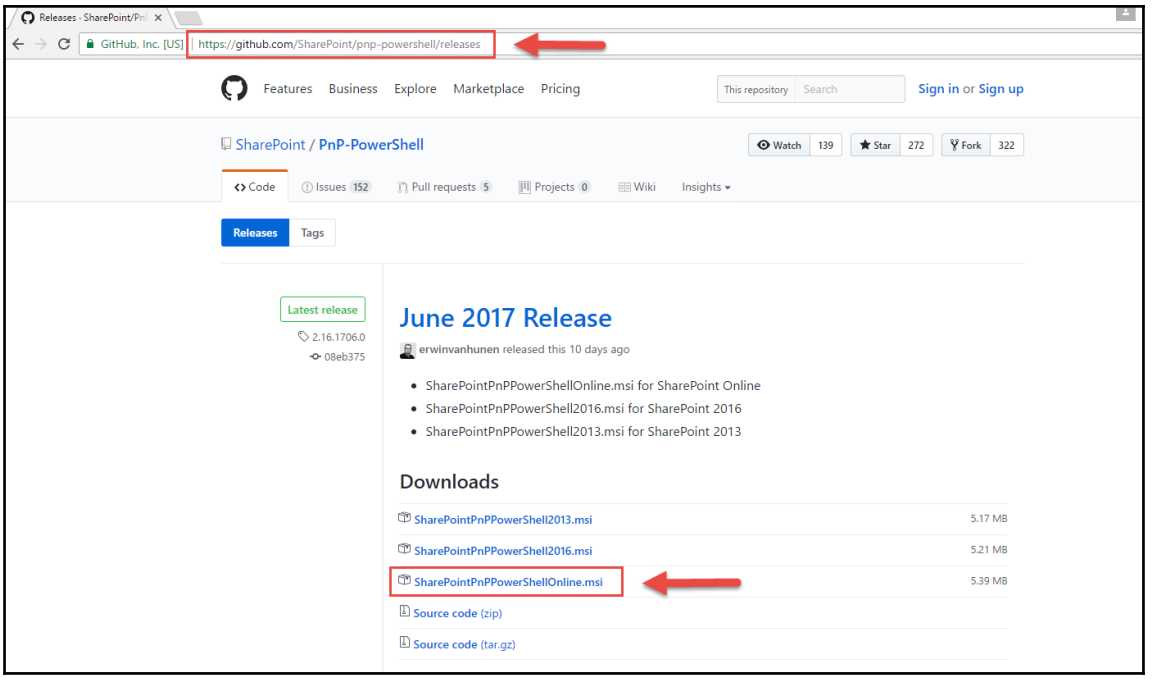

Windows PowerShell ISE
File Edit View Tools Debug Add-ons Help
HelloWorld.ps1
Write-Host 'Hello World!'
Write-Host 'A change after signing'
SIG # Begin signature block
MIIGowYJKoZIhvcNAQcCoIIGlDCCBpACAQExCzAJBgUrDgMCGgUAMGkGCisGAQQB
gjcCAQSgWzBZMDQGCisGAQQBgjcCAR4wJgIDAQAABBAfzDtgWUsITrck0sYpfvNR
AgEAAgEAAgEAAgEAAgEAMCEwCQYFKw4DAhoFAAQUm8guyehxBjAZ4cHcnOFO2SuK
PS C:\> C:\temp\HelloWorld.ps1
File C:\temp\HelloWorld.ps1 cannot be loaded. The contents of file C:\temp\HelloWorld.ps1 might have been changed by an unauthorized user or process, because the hash of the file does not match the hash stored in the digital signature. The script cannot run on the specified system. For more information, run Get-Help about_Signing..
+ CategoryInfo : SecurityError: (:) [], ParentContainsErrorRecordException
+ FullyQualifiedErrorId : UnauthorizedAccess
Ln 8 Col 9
100%

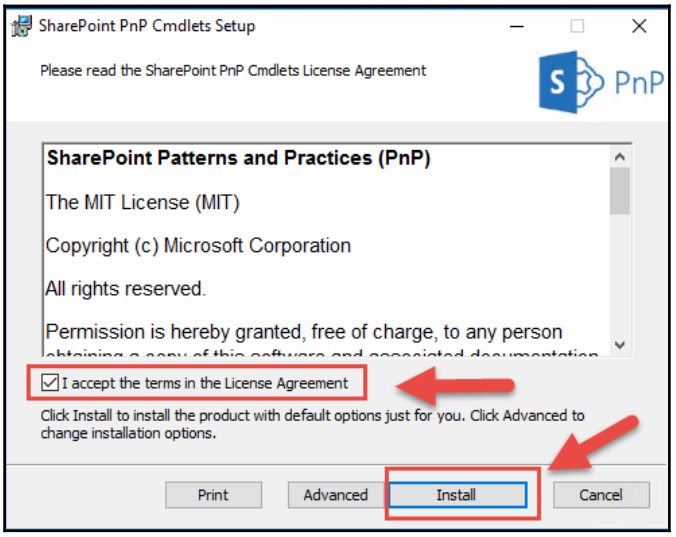
Chapter 7: Patterns and Practices PowerShell

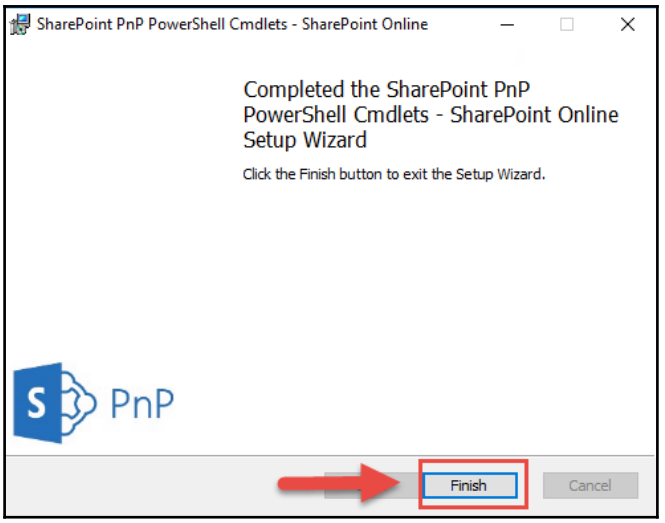


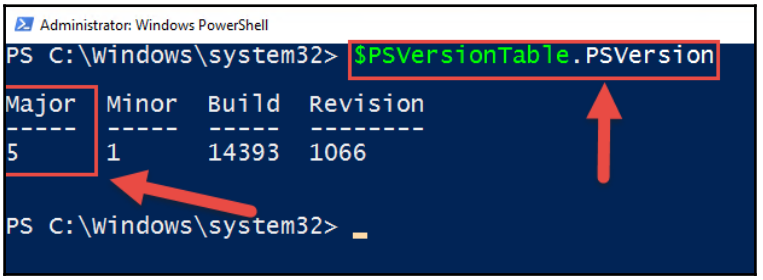


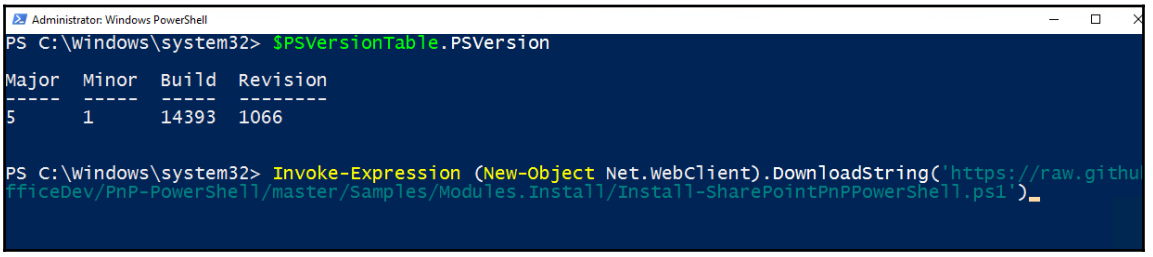


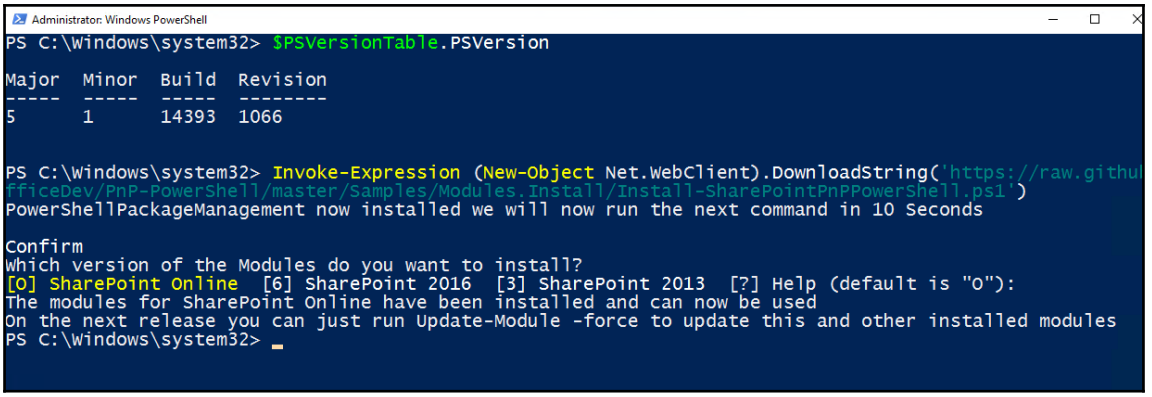

https://github.com/SharePoint/pnp-powershell/releases
Features
Business
Explore
Marketplace
Pricing
Sign in or Sign up
SharePoint / PnP-PowerShell
Watch 139
Star 272
Fork 322
Code
Issues 152
Pull requests 5
Projects 0
Wiki
Insights
Releases
Tags
Latest release
2.16.1706.0
08eb375
June 2017 Release
erwinvanhunen released this 10 days ago
SharePointPnPPowerShellOnline.msi for SharePoint Online
SharePointPnPPowerShell2016.msi for SharePoint 2016
SharePointPnPPowerShell2013.msi for SharePoint 2013
Downloads
SharePointPnPPowerShell2013.msi 5.17 MB
SharePointPnPPowerShell2016.msi 5.21 MB
SharePointPnPPowerShellOnline.msi 5.39 MB
Source code (zip)
Source code (tar.gz)

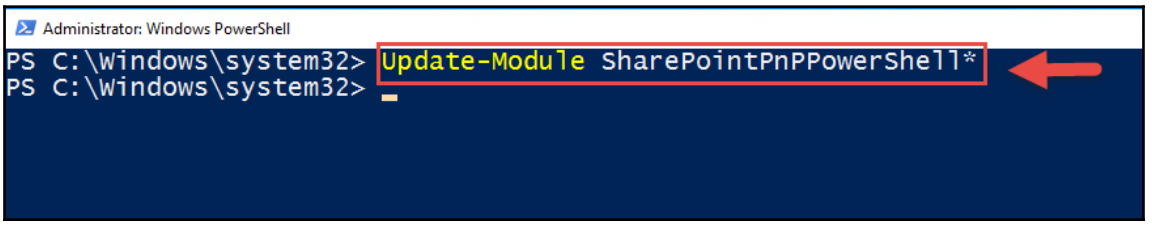

SharePoint PnP Cmdlets Setup
Please read the SharePoint PnP Cmdlets License Agreement
PnP
SharePoint Patterns and Practices (PnP)
The MIT License (MIT)
Copyright (c) Microsoft Corporation
All rights reserved.
Permission is hereby granted, free of charge, to any person
I accept the terms in the License Agreement
Click Install to install the product with default options just for you. Click Advanced to change installation options.
Print
Advanced
Install
Cancel

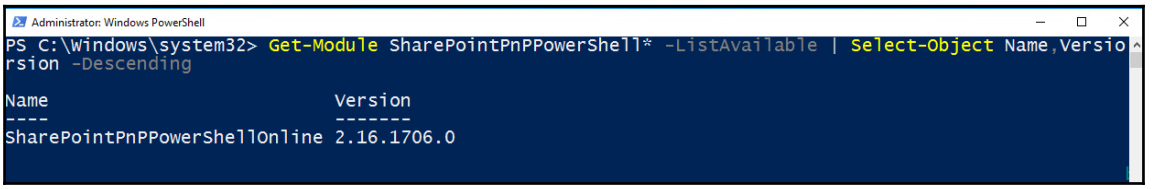

SharePoint PnP PowerShell Cmdlets - SharePoint Online
Completed the SharePoint PnP PowerShell Cmdlets - SharePoint Online Setup Wizard
Click the Finish button to exit the Setup Wizard.
PnP
Finish
Cancel

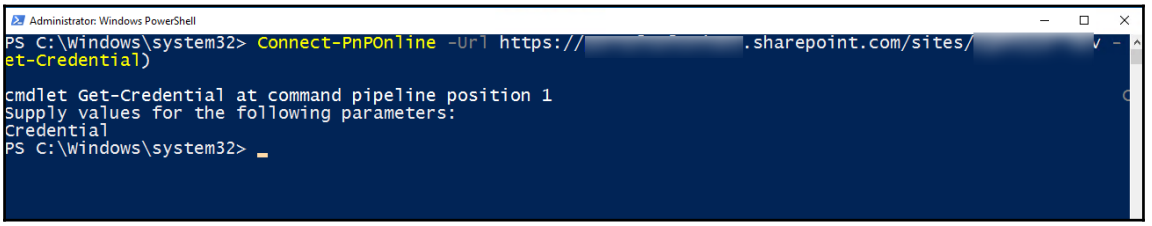

Administrator: Windows PowerShell
PS C:\Windows\system32> $PSVersionTable.PSVersion
Major Minor Build Revision
----- ----- ----- --------
5 1 14393 1066
PS C:\Windows\system32>

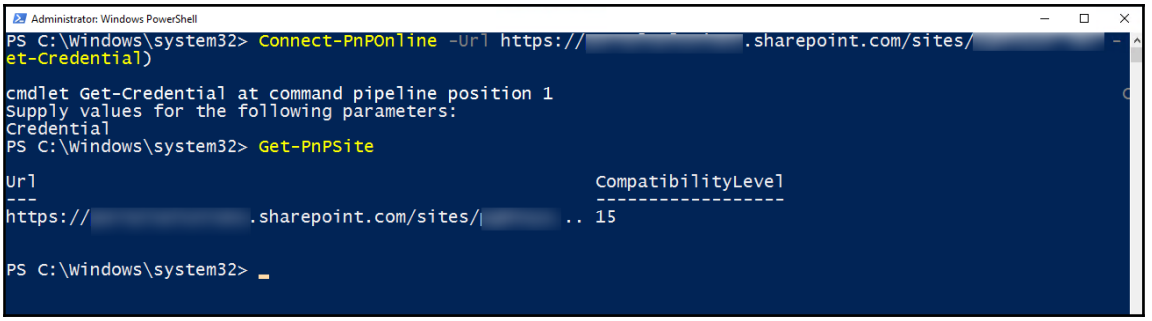

Administrator: Windows PowerShell
PS C:\Windows\system32> $PSVersionTable.PSVersion
Major Minor Build Revision
----- ----- ----- --------
5 1 14393 1066
PS C:\Windows\system32> Invoke-Expression (New-Object Net.WebClient).DownloadString('https://raw.githu
fficeDev/PnP-PowerShell/master/Samples/Modules.Install/Install-SharePointPnPPowerShell.ps1')

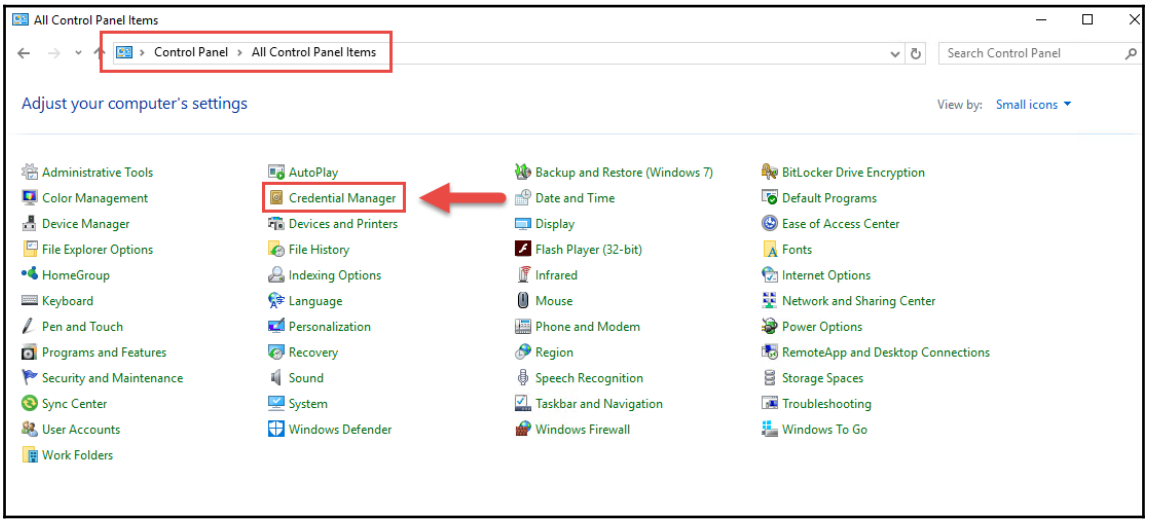

Administrator: Windows PowerShell
PS C:\Windows\system32> $PSVersionTable.PSVersion
Major Minor Build Revision
5 1 14393 1066
PS C:\Windows\system32> Invoke-Expression (New-Object Net.WebClient).DownloadString('https://raw.githu
fficeDev/PnP-PowerShell/master/Samples/Modules.Install/Install-SharePointPnPPowerShell.ps1')
PowerShellPackageManagement now installed we will now run the next command in 10 Seconds
Confirm
Which version of the Modules do you want to install?
[O] SharePoint Online [6] SharePoint 2016 [3] SharePoint 2013 [?] Help (default is "O"):
The modules for SharePoint Online have been installed and can now be used
On the next release you can just run Update-Module -force to update this and other installed modules
PS C:\Windows\system32>

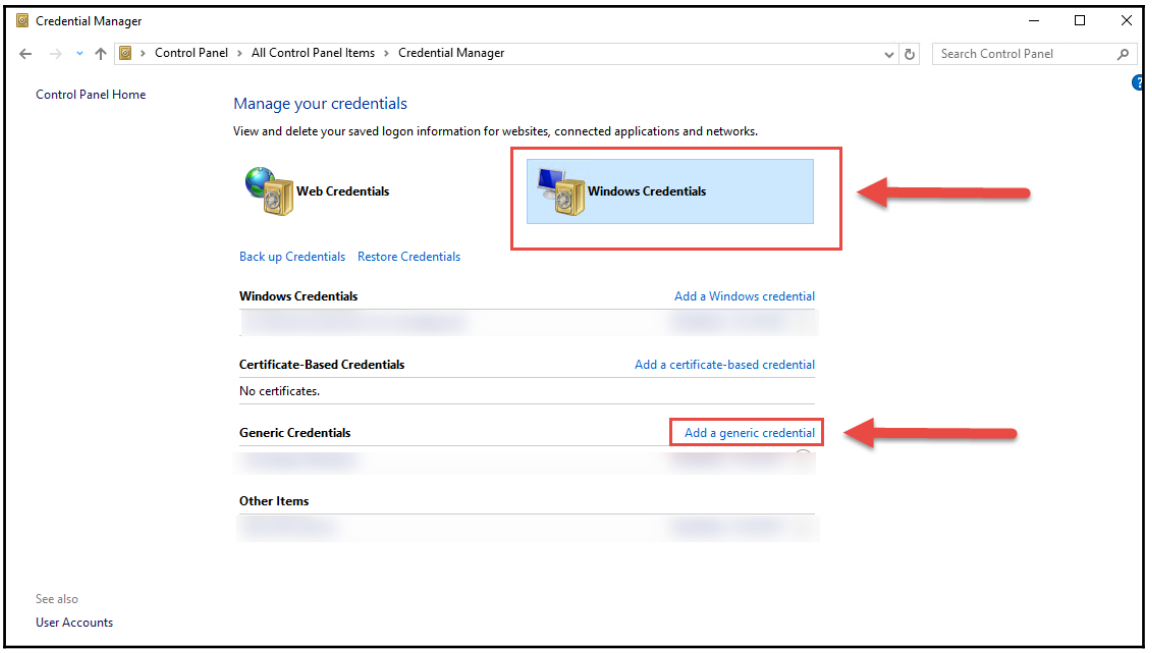

Administrator: Windows PowerShell
PS C:\Windows\system32> Update-Module SharePointPnPPowerShell*
PS C:\Windows\system32>

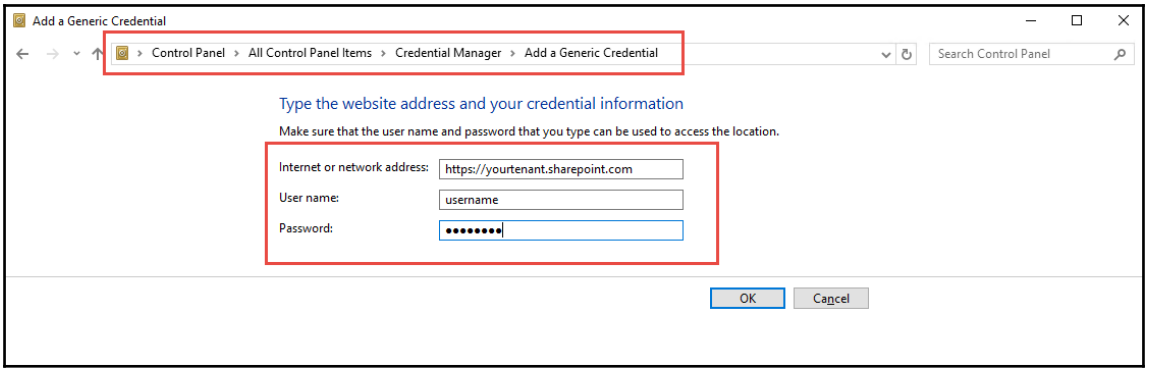

Administrator: Windows PowerShell
PS C:\Windows\system32> Get-Module SharePointPnPPowerShell* -ListAvailable | Select-Object Name,Versio
rsion -Descending
Name Version
SharePointPnPPowerShellOnline 2.16.1706.0

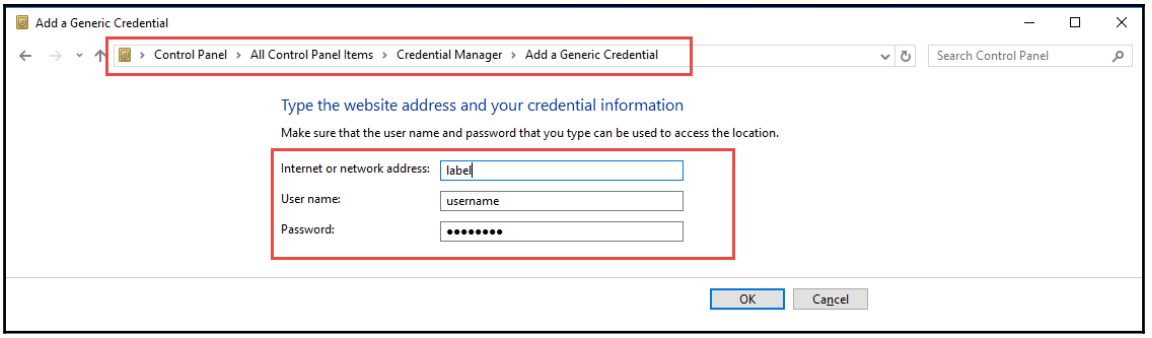

Administrator: Windows PowerShell
PS C:\Windows\system32> Connect-PnPOnline -Url https://
.sharepoint.com/sites/
et-Credential)
cmdlet Get-Credential at command pipeline position 1
Supply values for the following parameters:
Credential
PS C:\Windows\system32>


Administrator: Windows PowerShell
PS C:\Windows\system32> Connect-PnPOnline -Url https://[redacted].sharepoint.com/sites/[redacted] -
et-Credential)
cmdlet Get-Credential at command pipeline position 1
Supply values for the following parameters:
Credential
PS C:\Windows\system32> Get-PnPSite
Url CompatibilityLevel
--- -----------------
https://[redacted].sharepoint.com/sites/[redacted] .. 15
PS C:\Windows\system32> _

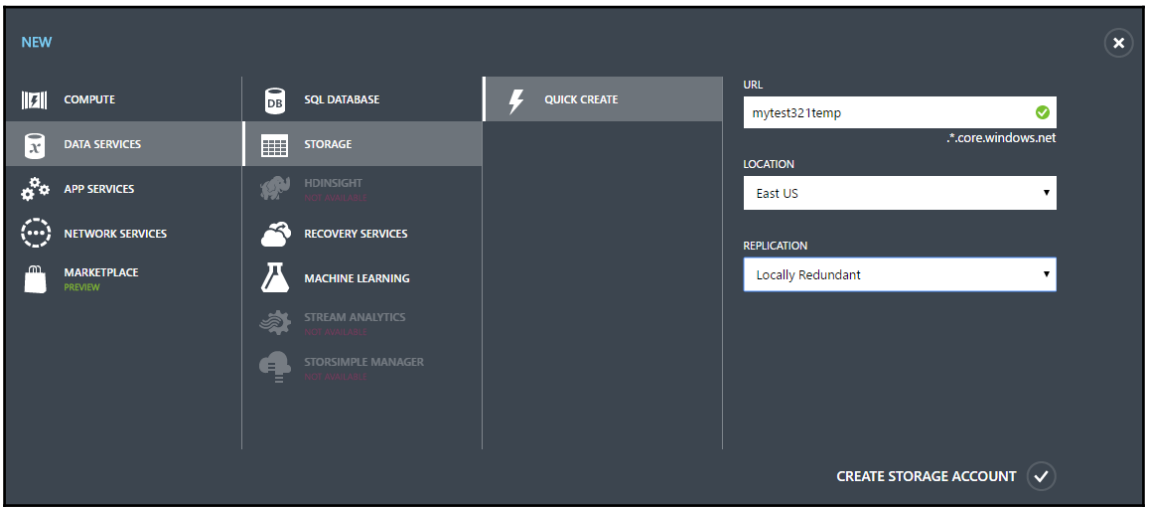

All Control Panel Items
Control Panel › All Control Panel Items
Search Control Panel
Adjust your computer's settings
View by: Small icons
Administrative Tools
AutoPlay
Backup and Restore (Windows 7)
BitLocker Drive Encryption
Color Management
Credential Manager
Date and Time
Default Programs
Device Manager
Devices and Printers
Display
Ease of Access Center
File Explorer Options
File History
Flash Player (32-bit)
Fonts
HomeGroup
Indexing Options
Infrared
Internet Options
Keyboard
Language
Mouse
Network and Sharing Center
Pen and Touch
Personalization
Phone and Modem
Power Options
Programs and Features
Recovery
Region
RemoteApp and Desktop Connections
Security and Maintenance
Sound
Speech Recognition
Storage Spaces
Sync Center
System
Taskbar and Navigation
Troubleshooting
User Accounts
Windows Defender
Windows Firewall
Windows To Go
Work Folders

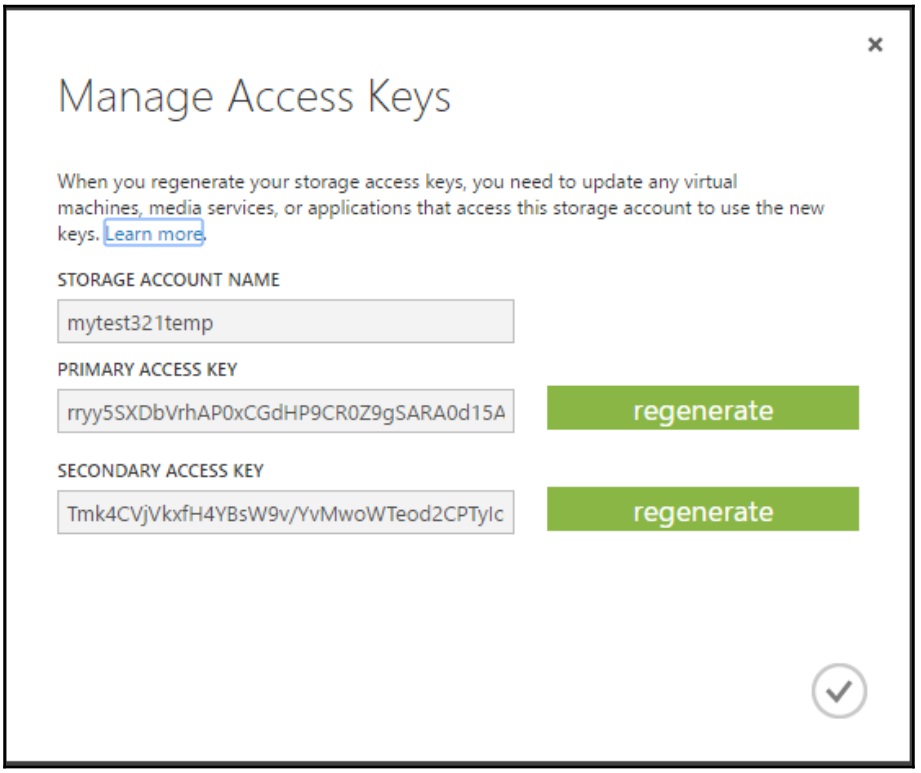

Credential Manager
Control Panel › All Control Panel Items › Credential Manager
Search Control Panel
Control Panel Home
Manage your credentials
View and delete your saved logon information for websites, connected applications and networks.
Web Credentials
Windows Credentials
Back up Credentials
Restore Credentials
Windows Credentials
Add a Windows credential
Certificate-Based Credentials
Add a certificate-based credential
No certificates.
Generic Credentials
Add a generic credential
Other Items
See also
User Accounts

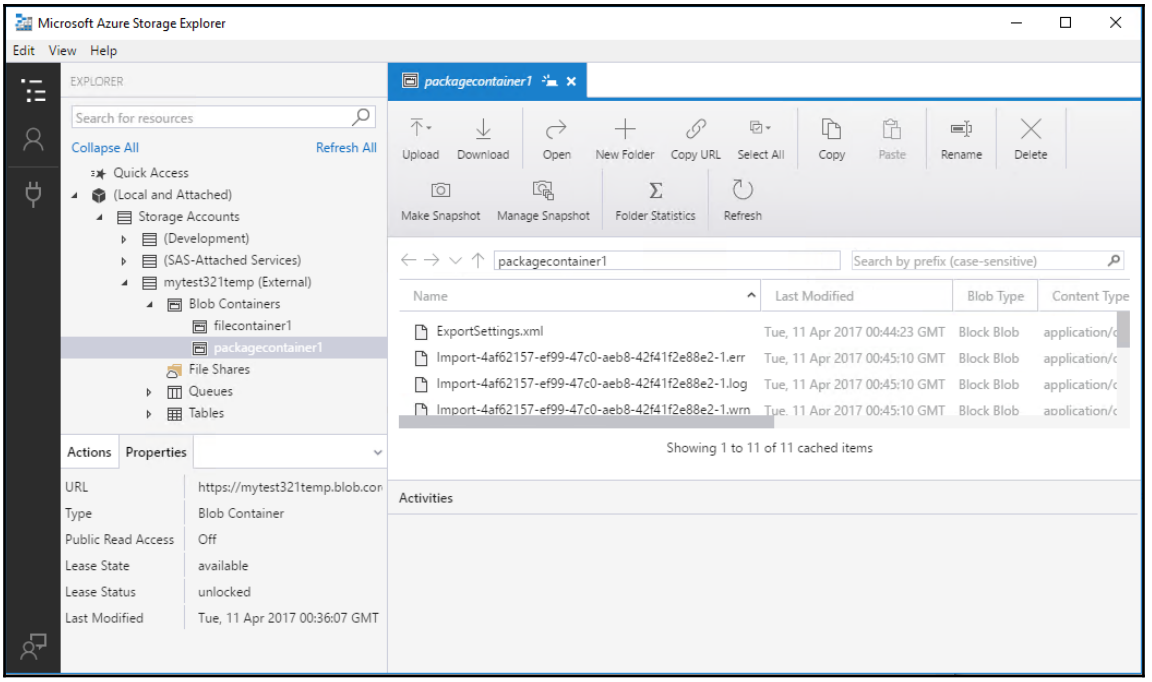

Add a Generic Credential
Control Panel › All Control Panel Items › Credential Manager › Add a Generic Credential
Search Control Panel
Type the website address and your credential information
Make sure that the user name and password that you type can be used to access the location.
Internet or network address:
https://yourtenant.sharepoint.com
User name:
username
Password:
OK
Cancel


Add a Generic Credential
Control Panel › All Control Panel Items › Credential Manager › Add a Generic Credential
Search Control Panel
Type the website address and your credential information
Make sure that the user name and password that you type can be used to access the location.
Internet or network address:
label
User name:
username
Password:
••••••••
OK
Cancel

Chapter 8: OneDrive for Business






Microsoft Azure Storage Explorer
Edit View Help
EXPLORER
Search for resources
Collapse All
Refresh All
Quick Access
(Local and Attached)
Storage Accounts
(Development)
(SAS-Attached Services)
mytest321temp (External)
Blob Containers
filecontainer1
packagecontainer1
File Shares
Queues
Tables
Actions
Properties
URL
https://mytest321temp.blob.cor
Type
Blob Container
Public Read Access
Off
Lease State
available
Lease Status
unlocked
Last Modified
Tue, 11 Apr 2017 00:36:07 GMT
packagecontainer1
Upload
Download
Open
New Folder
Copy URL
Select All
Copy
Paste
Rename
Delete
Make Snapshot
Manage Snapshot
Folder Statistics
Refresh
packagecontainer1
Search by prefix (case-sensitive)
Name
Last Modified
Blob Type
Content Type
ExportSettings.xml
Tue, 11 Apr 2017 00:44:23 GMT
Block Blob
Import-4af62157-ef99-47c0-aeb8-42f41f2e88e2-1.err
Tue, 11 Apr 2017 00:45:10 GMT
Block Blob
Import-4af62157-ef99-47c0-aeb8-42f41f2e88e2-1.log
Tue, 11 Apr 2017 00:45:10 GMT
Block Blob
Import-4af62157-ef99-47c0-aeb8-42f41f2e88e2-1.wrn
Tue, 11 Apr 2017 00:45:10 GMT
Block Blob
Showing 1 to 11 of 11 cached items
Activities

Chapter 9: PowerShell Core

No images in this chapter!