Exchange Online - PowerShell Quick Reference (v 1.03)

Mailbox Management

List all mailboxes in Exchange environment:
Get-ExoMailbox -ResultSize Unlimited

Find mailboxes in One Exchange Online Database
Get-ExOMailbox -PropertySets All | Where Database -eq NAMPR22DG066-db432

Create New Shared Mailbox
New-Mailbox -Shared -Name "ActionCommittee" -DisplayName "ActionCommittee" -Alias ActionCommittee

Create archive mailbox for existing user:
Enable-Mailbox -Identity Damian -Archive

Disable mailbox (not delete) [archive or mailbox]
Disable-Mailbox -Identity Damian -Archive / Disable-Mailbox -Identity Damian

Remove mailbox (*deletes* Active Directory user object):
Remove-Mailbox -Identity Dom.Rigel -Confirm:$False

Other Mailbox Management Cmdlets

A variety of cmdlets and options exists to manage mailboxes. Some are listed below:

Set mailbox quotas
Set-Mailbox administrator -IssueWarningQuota 8GB -ProhibitSendQuota 10GB -ProhibitSendReceiveQuota 12GB

Set users Out of Office:
Set-MailboxAutoReplyConfiguration Administrator -AutoReplyState Enabled

Set user's Junk Mail configuration:
Set-MailboxJunkEmailConfiguration -Identity Gene.Ricks@Domain.Com -TrustedSendersAndDomains fabrikam.com
Get-MailboxJunkEmailConfiguration -Identity Gene.Ricks@Domain.Com

Configure mailbox regional settings:
Set-MailboxRegionalConfiguration -Identity "Hans de Vries" -Language nl-nl -DateFormat "dd-MM-yy" -LocalizeDefaultFolderName -TimeZone "W. Europe Standard Time"

Mailbox Sizes
Get-ExoMailbox | Get-MailboxStatistics | Ft Name,TotalItemSize

Add a retention policy to an existing mailbox
Set-Mailbox Damian -RetentionPolicy 'Corporate Retention Policy'

Manage Mailbox Folder Settings

List folder permissions (Calendar in this case):
Get-MailboxFolderPermission Damian:\Calendar

Add permissions to a folder
Add-MailboxFolderPermission 'Damian:\Contacts' -User John -AccessRights Editor

Remove an *existing* folder permission:
Add-MailboxFolderPermission 'Damian:\Calendar' -User Administrator

Modify existing Folder permissions:
Set-MailboxFolderPermission 'Damian:\Contacts' -User John -AccessRights FullAccess

Mailbox Operations

Get-MailboxAutoReplyConfiguration Ann.Ples
Set-MailboxAutoReplyConfiguration -Identity Ann.Ples -AutoReplyState Enabled -InternalMessage "I'm currently out of office."

ExO v3 PowerShell Module

Installation
Install-Module ExchangeOnlineManagement
Importing
Import-Module ExchangeOnlineManagement
Connecting
Connect-Exchange Online
Find Cmdlets
Get-Command | Where Source -Like tmp*
Get Help for One Cmdlet:
Get-Help <cmdlet> <operator>
(i.e.) Get-Help Get-ExOMailbox -Full

Connect with Certificate Based Authentication (CBA)

$Thumbprint = '4EA949DEB99BFDD75D9E881D8242075DFEAEF805'
$AppID = 0e339446-579e-4a49-b5e0-a9c155f206b5'
$Org = 'tenantdomain.onmicrosoft.com'
Connect-ExchangeOnline -CertificateThumbPrint $Thumbprint -AppID $AppID -Organization $Org

Archive Mailboxes

Archive Mailbox Management
Managing Archive mailboxes uses the same cmdlets as a regular mailbox, but requires the '-Archive' switch. Sample tasks for archive mailboxes:

Find all archive mailboxes:
Get-ExoMailbox -Archive -ResultSize Unlimited

Find archive mailboxes in a specific database:
Get-ExoMailbox -Database "<database name>" – Archive

Find archive mailboxes on a specific server:
Get-ExoMailbox -Server <Server> -Archive

Change Settings (Location)
Set-Mailbox -Archive

Add an archive:
Enable-Mailbox Administrator -Archive / Enable-Mailbox -Identity Administrator -Archive

Remove a user's archive:
Remove-Mailbox -Archive
Get-Mailbox <user> -Archive | Remove-Mailbox

Archive Quota Settings
Set-Mailbox <user> -ArchiveQuota 10GB -ArchiveWarningQuota 9GB

Archive mailbox sizes:
Get-Mailbox -Archive | Get-MailboxStatistics | Ft Name,TotalItemSize

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Distribution Groups

Distribution Groups in Exchange 2019 come in two different varieties – Dynamic and Static and can be used for groups of users or rooms.
** *(Examples separated by '/')* **

Distribution Groups

Get-DistributionGroup -ManagedBy Damian   /   Get-DistributionGroup Sales*   /   Get-DistributionGroup -OrganizationalUnit Users
New-DistributionGroup -Name 'Help Desk Operators'   /   New-DistributionGroup -Name 'Admins' -Type Security
Remove-DistributionGroup 'Help Desk Operators'   /   Get-DistribtionGroup Test* | Remove-DistributionGroup
Set-DistributionGroup 'HR Department' -MaxReceiveSize 10MB -MailTip 'HR is limited to 10MB emails'

Dynamic Distribution Groups

Get-DynamicDistributionGroup
New-DynamicDistributionGroup -Name 'Chicago Office' -RecipientFilter {(RecipientType -eq 'UserMailbox') -and (Office -eq 'Chicago')}
New-DynamicDistributionGroup -Name 'Executives' -RecipientFilter {(RecipientType -eq 'UserMailbox') -and (CustomAttribute1 -eq 'Exec')}
Remove-DynamicDistributionGroup 'Chicago Office'
Set-DynamicDistributionGroup 'Executives' -ManagedBy 'Bert'

Distribution Group Membership

Add-DistributionGroupMember -Identity 'Research Group' -Member FSJurgeon
$Members = Get-DistributionGroupMember -Identity $Group
Remove-DistributionGroupMember 'Help Desk' -Member Damian
Get-DistributionGroup Test* |Remove-DistributionGroupMember -Member Damian
Update-DistributionGroupMember -Identity 'IT Department' -Members Sam,Donna,Frank,Dave

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Room Lists

Room lists are special Distribution Groups in Exchange to organize groups of rooms for Outlook users when they search for rooms.

Create Room List based on Rooms with a particular name:
$Members = Get-Mailbox -Filter {Name -Like "Chicago*"} | Where {$_.RecipientTypeDetails -eq "RoomMailbox"}
New-DistributionGroup -Name "ChicagoMeetingRooms" -DisplayName "Chicago Meeting Rooms" -RoomList -Members $Members
Create Room List based on Rooms located in one physical location:
$Members = Get-Mailbox -Filter {Office -eq "Headquarters"} | Where {$_.RecipientTypeDetails -eq "RoomMailbox"}
New-DistributionGroup -Name "HeadquartersMeetingRooms" -DisplayName "Headquarters Meeting Rooms" -RoomList -Members $Members
Display all Room Lists:
Get-DistributionGroup -RecipientTypeDetails RoomList

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Helpful Tips

Use tab to autocomplete cmdlets
Tab through parameters to see all available
Check for latest module version
Read latest Microsoft Docs for Exchange
Read Exchange MVP blogs for more tips

More On PowerShell

Windows PowerShell Blog
devblogs.microsoft.com/powershell-community/
Script Center
technet.microsoft.com/scriptcenter
PowerShell Blog
www.powershellgeek.com
PowerShell Team – GitHub
github.com/powershell

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Non-User Mailboxes

Room Mailboxes
Get-Mailbox -RecipientTypeDetails 'RoomMailbox'
Get-Mailbox -Identity *Conference* -RecipientTypeDetails RoomMailbox
New-Mailbox 'Large Conference Room' -Room -ResourceCapacity 100
Remove-Mailbox 'Large conference Room'
Get-Mailbox -Identity *Chicago* -RecipientTypeDetails RoomMailbox | Remove-Mailbox
Set-Mailbox 'Medium Conference Room' -ResourceCapacity 55
Set-CalendarProcessing LargeConferenceRoom –AutomateProcessing AutoAccept

Equipment Mailboxes
Get-Mailbox -Filter {RecipientTypeDetails -eq "EquipmentMailbox"}
New-Mailbox Projector1 -Equipment
Set-Mailbox Projector1 -ModerationEnabled $True -ModeratedBy Damian

Shared Mailboxes
Shared mailboxes are special mailboxes where users have access to the mailbox, but the AD Account is disabled, preventing direct login/mailbox access.
Get-Mailbox -Filter {RecipientTypeDetails -eq "SharedMailbox"}).
New-Mailbox 'Suggestion Box' -Shared
Get-Mailbox 'Test*' -RecipientTypeDetails 'SharedMailbox' | Remove-Mailbox
Remove-Mailbox 'Suggestion Box'
Disable-Mailbox 'Suggestion Box'

Linked Mailboxes
A linked mailbox is a mailbox with a disabled user account in the Exchange environment (i.e. the resource forest).
$RemoteCred = Get-Credential accountforest\administrator
New-Mailbox -Name "Sjon Lont" -LinkedDomainController dc.accountforest.com -LinkedMasterAccount accountforest\Sjon.Lont -LinkedCredential $RemoteCred

Accepted Domains

Accepted Domains are domains for which Exchange will answer SMTP deliveries for. If a domain is not defined and an email delivery is attempted for that domain, it will be rejected. Defining these domains is important.

List all Accepted Domains:
Get-AcceptedDomain

Change settings on an existing Accepted Domain:
Set-AcceptedDomain PracticalPowerShell -DomainType InternalRelay

RFC 822 Check for Postmaster Address
Foreach ($Domain in (Get-AcceptedDomain).DomainName) {
$Postmaster = 'Postmaster@'+$Domain
$Check = Get-Recipient $Postmaster -ErrorAction SilentlyContinue
If (!$Check) {Write-Host $Postmaster" does not exist." -ForegroundColor Yellow}
If ($Check) {Write-Host $Postmaster" does exist" -ForegroundColor Cyan} }

Journaling

Enable this to copy email messages to a central location.
Create a New Journaling Rule
New-JournalRule -Name "FinancialPlanners" -JournalEmailAddress 'FP-Journal' -Scope Global -Recipient 'planners@domain.com' -Enabled $True
Remove an existing Journal Rule:
Remove-JournalRule -Identity "FinancialPlanners"
List any current Journal Rules:
Get-JournalRule
Disable an existing Journal Rule:
Disable-JournalRule -Identity "FinancialPlanners"
Enable an existing Journal Rule:
Enable-JournalRule -Identity 'FinancialPlanners'

Policy Tips

List any existing Policy Tips
Get-PolicyTipConfig
Create new Policy Tip
New-PolicyTipConfig -Name 'en\NotifyOnly' -Value 'The message has been blocked by Big Corp corporate qualifications.'
Remove any existing Policy Tips
Remove-PolicyTipConfig 'en\NotifyOnly'
Change settings on an existing Policy Tip
Set-PolicyTipConfig 'en\NotifyOnly' -Value 'The message has been blocked by Big Box Corporation'

Remote Domains

List all Remote Domains
Get-RemoteDomain
Create New Remote Domain
New-RemoteDomain -DomainName cnn.com -Name cnn.com
Remove Remote Domain
Remove-RemoteDomain cnn.com
Alter Settings on an existing Remote Domain
Set-RemoteDomain cnn.com -AutoReplyEnabled $False

Mail Transport

There are many PowerShell cmdlets for managing SMTP connectors and many types of connectors.

Inbound Connector(s)

Receive connectors receive emails from other Exchange servers, printers, applications or remote mail servers to route emails to local mailboxes or relay to external recipients.

List Inbound Connector(s) in Exchange Online
Get-InboundConnector
Get-InboundConnector | Where SenderIPAddresses -eq 50.87.226.16

Create new Inbound Connector:
New-InboundConnector 'Third Party' -SenderIPAddresses 50.187.100.0/24 -SenderDomains '*'

Remove existing Receive Connectors:
Remove-InboundConnector 'Third Party'

Change settings on an existing Receive Connector:
Set-InboundConnector BlueHost -Comment 'SMTP Relay for Marketing'

Outbound Connector(s)

By default, Exchange Online has no send connectors. Use these cmdlets to manage send connectors in Exchange Online

List Oubound Connectors
Get-OutboundConnector
Get-OutboundConnector 'Secure Bank'

Create New Send Connectors:
New-OutboundConnector 'Mimecast' -RecipientDomains '*' -SmartHost mail.mimecast.com -UseMXRecord $False
New-OutboundConnector -Name "Banking" -ConnectorSource Default -ConnectorType Partner -TlsSettings DomainValidation -TlsDomain *.bankinstitute.net -Enabled $True -SmartHost mail.bankinstitute.net -RecipientDomains $Domains -UseMxRecord $False

Remove existing Send Connectors:
Remove-OutboundConnector 'Research Test'

Change settings on an existing Send Connecto (add a domain):
Set-OutboundConnector 'Banking' -RecipientDomains bankdomain1.com,bankdomain2.com

Centralized Mail Transport

Turn on this feature
Set-OutboundConnector 'Hybrid Mail' -RouteAllMessagesViaOnPremises $True

Turn off this feature
Set-OutboundConnector 'Hybrid Mail' -RouteAllMessagesViaOnPremises $False

Compliance / DLP

Removed. See Security and Compliance Center cheatsheet.

Create Document Fingerprint (for HR) and use in a Transport Rule:
$HRDoc1 = Get-Content "C:\Documents\HR\EmployeePII.docx" -Encoding Byte
$HRDoc1_Fingerprint = New-Fingerprint -FileData $HRDoc1 -Description "Employee PII"
New-DataClassification -Name "HR Confidential Form 1" -Fingerprints $HRDoc1_Fingerprint -Description "Message contains confidential information."
Set-DataClassification -Name "HR Confidential Form 1" -Fingerprints $HRDoc1_Fingerprint
New-TransportRule -Name 'Notify: External Recipient BigBox confidential' -RejectMessageReasonText 'This file is restricted and may not be emailed outside the company.' -Mode Enforce -SentToScope NotInOrganization -MessageContainsDataClassification @{Name='HR Confidential Form 1'}

Protection Configuration

Below are some sample cmdlets for inbound message hygiene:
Add-IPAllowListEntry -IPAddress 157.166.168.213
Add-IPAllowListProvider -Name "Spamhaus" -LookupDomain swl.spamhaus.org -AnyMatch $True
Add-ContentFilterPhrase -Phrase "Project X" -Influence GoodWord
Remove-ContentFilterPhrase -Phrase "Free credit report"
Set-ContentFilterConfig –ByPassedSenders John@TechCenter.Com
Set-ContentFilterConfig –ByPassedSenderDomains PowerShellGeek.Com
Get-SenderIDConfig
Set-SenderFilterConfig –BlockedDomains BobsSpamService.Com – BlankSenderBlockingEnabled $True –Action StampStatus – RecipientBlockedSenderAction Delete
Get-RecipientFilterConfig
Set-RecipientFilterConfig –BlockedRecipients Administrator@tap.com – BlockListEnabled $True –RecipientValidationEnabled $True
Add-IPAllowListEntry -IPAddress 157.166.168.213
Add-IPAllowListProvider -Name "Spamhaus" -LookupDomain swl.spamhaus.org -AnyMatch $True
Add-ContentFilterPhrase -Phrase "Project X" -Influence GoodWord
Remove-ContentFilterPhrase -Phrase "Free credit report"
Set-ContentFilterConfig –ByPassedSenders John@TechCenter.Com
Set-ContentFilterConfig –ByPassedSenderDomains PowerShellGeek.Com
Get-SenderIDConfig
Set-SenderFilterConfig –BlockedDomains BobsSpamService.Com – BlankSenderBlockingEnabled $True –Action StampStatus – RecipientBlockedSenderAction Delete
Get-RecipientFilterConfig
Set-RecipientFilterConfig –BlockedRecipients Administrator@tap.com – BlockListEnabled $True –RecipientValidationEnabled $True

Email Messaging

Transport Rules

Transport Rule control mail flow and provide administrators control for certain mail types, mail flows or manipulate messages as needed for in or outbound processes.

List all Transport Rules:
Get-TransportRule

Create New Transport Rules [Example 1]:
New-TransportRule -Name "ZIP Block" -AttachmentNameMatchesPatterns zip -GenerateIncidentReport "Damian@Domain.Com" -IncidentReportOriginalMail IncludeOriginalMail -DeleteMessage $True -SetAuditSeverity Medium

Create New Transport Rules [Example 2]:
New-TransportRule -SentToScope 'NotInOrganization' -ApplyHtmlDisclaimerLocation 'Append' -ApplyHtmlDisclaimerText 'This email is for its intended recipient. If you are not the recipient, please delete this email immediately.' -ApplyHtmlDisclaimerFallbackAction 'Wrap' -Name 'Legal Required Disclaimer' -StopRuleProcessing:$false -Mode 'Enforce' -RuleErrorAction 'Ignore' -SenderAddressLocation 'Header' -ExceptIfSubjectOrBodyContainsWords 'This email is for its intended recipient'

Disable and existing Transport Rule:
Disable-TransportRule 'Test Keyword block rule'

Change settings on an existing Transport Rule:
Set-TransportRule 'Inbound HR eMail' -SetAuditSeverity Medium

Remove an existing Transport Rule:
Remove-TransportRule "ZIP Block"

Locate email sent in Exchange
Get-MessageTrace -Sender damian@powershellgeek.com -RecipientAddress dave@practicalpowershell.com -StartDate 10/1/24 -EndDate 10/7/24

Find a specific tracking report, which is then fed to the Get-MessageTrackingReport
$Messages = Search-MessageTrackingReport -Identity Jimmy -Sender damian@mmcug.com -BypassDelegateChecking

Get more detail on message deliveries (fed from Search-MessageTrackingReport)
Get-MessageTrackingReport -Identity $Messages.MessageTrackingReportID -ReportTemplate Summary -BypassDelegateChecking

Create messae in a users mailbox, Drafts folder
New-MailMessage -Body 'Important Announcement' -Subject 'Announcement'

Retrieve all existing message classifications
Get-MessageClassification

Create a new message classification [used in Transport Rules]
New-MessageClassification -Name 'Notifications' -DisplayName 'Notification Messages' -SenderDescription 'Notification email' -ClassificationID 6942d504-a158-4d09-b420-e796bcf2f6c8

Remove an existing Message Classification
Remove-MessageClassification 'Notifications'

Change settings in an existing notification
Set-MessageClassification 'Notifications' -SenderDescription 'IT Reporting emails.'

Full Exchange Server 2019 PowerShell Book – https://PracticalPowershell.com

DNS Health Check

Below is a simple way to health check each Accepted Domain in Exchange Online:

```
Import-Module DomainHealthChecker
Import-Module ExchangeOnlineManagement
Connect-ExchangeOnline
$AcceptedDomains = (Get-AcceptedDomain -ErrorAction STOP).Name
Foreach ($AcceptedDomain in $AcceptedDomains) {
        Get-SPFRecord $AcceptedDomain
        Get-DMARCRecord $AcceptedDomain
        Get-DKIMRecord $AcceptedDomain
        Get-DNSSec $AcceptedDomain
}
```

CAS Mailbox Cmdlets

List all mailboxes and available client access services
Get-CASMailbox /Get-CASMailbox | ft Name,*enabled

Filter for mailboxes that disabled 'SmtpClientAuthenticationDisabled'
Get-CASMailbox | Where SmtpClientAuthenticationDisable -eq $False

Change Services available to one mailbox
Set-CASMailbox Damian -OwaEnabled $False

Change Services available to all mailboxes
Get-CASMailbox | Set-CASMailbox -PopEnabled $False -ImapEnabled $False

List all CAS mailbox plans in Exchange Online
Get-CASMailboxPlan or Get-CASMailboxPlan | ft

Filter CAS Mailbox plans based on mailbox type
Get-CASMailboxPlan ExchangeOnlineEnterprise / Get-CASMailboxPlan ExchangeOnline

Make changes to an existing CAS Mailbox Plan [IMAP Disabled]
Set-CASMailboxPlan ExchangeOnlineEnterprise -ImapEnabled $False

Make changes to an existing CAS Mailbox Plan [POP Disabled]
Set-CASMailboxPlan ExchangeOnlineEnterprise -POPEnabled $False

Disable POP and IMAP on all CAS Mailbox Plans
Get-CasMailboxPlan | Set-CASMailboxPlan -ImapEnabled $False -POPEnabled $False

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Public Folders

Mail disable an existing mail enabled Public Folder
Disable-MailPublicFolder

Mail enable a Public Folder
Enable-MailPublicFolder \Sales\OutsideSales -HiddenFromAddressListsEnabled $True

List existing mail enabled Public Folders
Get-MailPublicFolder | Where Alias -eq 'Research'

Change setting on a mail enabled Public Folder
Set-MailPublicFolder \Marketing -RequireSenderAuthenticationEnabled $true

List any Public Folders [below lists all non-system Public Folders]
Get-PublicFolder '\' -Recurse

Create a new Public Folder in an existing Public Folder mailbox:
New-PublicFolder -Name OutsideSales -Mailbox PFMailbox03 -Path \Sales

Remove an existing Public Folder
Remove-PublicFolder \Sales\OutsideSales

Change settings on an existing Public Folder-MaxItemSize
Set-PublicFolder OutsideSales -ProhibitPostQuota 10GB -MaxItemSize 100MB

List the statistics from a Public Folder migration request
Get-PublicFolderMigrationRequestStatistics PFMigration1

Retrieve an existing Public Folder move requests
Get-PublicFolderMoveRequest

Create a new Public Folder migration request
$Folders = (Get-PublicFolder \IT -Recurse).Identity
New-PublicFolderMoveRequest -TargetMailbox PFMailbox03 -Folders $Folders

Remove an existing Public Folder move request
Remove-PublicFolderMoveRequest

Change settings on an existing Public Folder migration request
Set-PublicFolderMoveRequest -DomainController DC01 -SuspendWhenReadyToComplete $true

Suspend Public Folder move requests
Get-PublicFolderMoveRequest | Suspend-PublicFolderMoveRequest

Retrieve details on existing Public Folder move requests
Get-PublicFolderMoveRequestStatistics

Update Public Folder hierarchy
Get-Mailbox -PublicFolder | Update-PublicFolderMailbox -SuppressStatus

List any current Public Folder migration requests
Get-PublicFolderMigrationRequest

Move Public Folders from Exchange 2010 to 2013/6/9
New-PublicFolderMigrationRequest PFMigration1 -SourceDatabase (Get-PublicFolderDatabase -Server <Source server name>) -CSVData (Get-Content <Folder to mailbox map path> -Encoding Byte)

Remove an existing Public Folder migration request
Remove-PublicFolderMigrationRequest PFMigration1

Resume a suspended Public Folder migration request
Resume-PublicFolderMigrationRequest PFMigration1

Change settings on an existing Public Folder migration request
Set-PublicFolderMigrationRequest -Identity PFMigration1 -BadItemLimit 5 -PreventCompletion $True

Suspend and existing Public Folder migration request
Suspend-PublicFolderMigrationRequest PFMigration1 -SuspendComment 'Migration suspended due to space issues 2022/09/01.'

List migration statistics for Public Folder moves
Get-PublicFolderMailboxMigrationRequest | Get-PublicFolderMailboxMigrationRequest | ft TargetMailbox,Status*,*Transferred,PercentComplete -Auto

Retrieve Public Folder item level details
Get-PublicFolderItemStatistics -Identity "\Marketing\Reports" | Select Subject, LastModificationTime, ItemType, MessageSize

Retrieve Public Folder sizes
Get-PublicFolder \ -Recurse | Get-PublicFolderStatistics | ft Name,FolderPath,*size

Retrieve Public Folder mailbox diagnostic information
Get-PublicFolderMailboxDiagnostics -Identity PFMailBox01 -IncludeHierarchyInfo

Add a user permission to an existing Public Folder
Add-PublicFolderClientPermission -Identity "\IT\Projects" -User Jimmy -AccessRights PublishingEditor

Retrieve permissions on an existing Public Folder
Get-PublicFolderClientPermission -Identity \IT\Projects

Remove an existing permission assigned to a Public Folder
Remove-PublicFolderClientPermission -User Jimmy -Identity \IT\Projects