# Introduction

This document outlines how to automate the migration of distribution groups from on-premises to Office 365. These scripts should be considered sample code, it should be edited and tested extensively before running it in production and use at your own risk.

DISCLAIMER:

THIS CODE IS SAMPLE CODE. THESE SAMPLES ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND.

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# High Level Steps:

## Prep

1. Exchange On-Premise: export all information for distribution groups
2. Exchange Online: create “NEW” distribution groups, hide from GAL, and add members

## Cutover

1. Exchange On-Premise: delete distribution groups
2. Exchange Online: rename distribution groups (remove “NEW”), set hidden from address list value based on on-prem setting, and add SMTP/x500 aliases

## Backout

1. Run the backout scripts which reverse the process

***Note:*** *All scripts will have to be edited to specify a valid path in your environment.*

# Preparation

## Step 1: Export all information for distribution groups that exist on premise.

Start by running 1-ExportData\_v5.ps1 in Exchange management shell (EMS) on-premise

This will create 3 csv files for use later:

* distributiongroups.csv
* distributiongroups-SMTPproxy.csv
* distributiongroups-and-members.csv

*Note: It is critical to make a backup of these 3 CSV files as these will be used for rollback if necessary.*

## Step 2 – Exchange Online: create “NEW” distribution groups, hide from GAL, and add members

### Exchange Online: Create Groups

To create the new distribution groups (and security groups if included), temporarily hiding them from the GAL in Exchange Online the distributiongroups.csv file will be used. Modify the distributiongroups.csv file to ensure that the ManagedBy property is correctly set for each distribution group as well as any other clean-up necessary.

***Notes:***

1. *Groups that do not have an owner (ManagedBy) will be inherited by the account that creates the distribution group in PowerShell.*
2. *The distributiongroups.csv, distributiongroups-SMTPproxy.csv & distributiongroups-and-members.csv files can be split up allowing batches of migrations to be performed instead of moving all at once.*

Once ready run the 2-CreateNewGroups\_v5.ps1 script which will use the data in distributiongroups.csv file to create the groups in Office 365.

### Exchange Online: Add Members to Groups

Once the distribution groups have been created in Office 365, members can be added. The distributiongroups-and-members.csv file will be used to complete this task.

Run the 3-AddMembers\_v5.ps1 script to add the members to the groups that were just created in Office 365.

*Note: The objects in the spreadsheet must exist in Office 365 or there will be errors. Things like dynamic distribution groups may not have a contact created in O365 since they don’t replicate.*

# **Cutover**

**During these steps there will be a period when distribution groups are unavailable.**

## Step 3 – Exchange On-Premise: delete distribution groups, and force sync

Although precautions have been taken to minimize the impacts, it is best to do the remaining steps during off-peak hours, during an outage window. Run the following script on an on-premises Exchange server via EMS. It will use the distributiongroups.csv file to complete this task.

Run the 4-DeleteOnPremDG\_v5.ps1 script to **delete** all the groups in the distributiongroups.csv file from on-premises. Once this step is complete the groups will be gone and must be recreated if needed, the rollback scripts can automate this.

Once the delete has been completed an AD Connect sync will need to be initiated and **must complete** before proceeding to step 4.

## Step 4 – Exchange Online: rename distribution groups (remove “NEW”), unhide, and add SMTP aliases

### Exchange Online: Rename distribution groups and unhide

Once you have validated that the old distribution groups are no longer visible in Exchange Online, you can now unhide the new ones that have been created and remove the “NEW” prefix from the names. Note that if the group was set to Hide from Address Lists on-prem, it will remain hidden after this step. The distributiongroups.csv file will be used to complete this task.

Run the 5-RenameO365Groups\_v5.ps1 script to complete this step.

### Exchange Online: Remove NEWPrimarySmtpAddress from -EmailAddresses for all Groups

In the previous step the “NEWPrimarySmtpAddress” is moved into an alternate smtp alias, next it needs to be removed. The distributiongroups.csv file will be used to complete this task.

Run the 6-RemoveNewPrimarySMTPAddress\_v5.ps1 script to complete this step.

### Exchange Online: Add Aliases and LegacyExchangeDN

Next add the SMTP, X500, and LegacyExchangeDN aliases to the distribution groups in Exchange Online. The distributiongroups-SMTPproxy.csv and distributiongroups.csv files will be used to complete this task.

Run the 7-AddAliasAndLegDN\_v5.ps1 script to complete this step.

Finally, it may be necessary to create contacts for the distribution groups on-prem. If there are mailboxes or applications that might send mail to distribution groups, mail contacts will be necessary. Ensure that contacts are created in an OU that is **not** synchronized to Office 365 otherwise there will be collisions due to duplicate email addresses. The distributiongroups.csv file will be used to complete this task.

Run the 8-CreateOnPremContacts\_v5.ps1 script to complete this step.

Some groups may have multiple email addresses. The contacts on-premises should also have these email addresses so on-premises users and applications can send mail to those addresses successfully.

Run the 9-AddEmailToOnPremContacts.ps1 script to add the email addresses to the newly created on prem contacts. The distributiongroups-SMTPproxy.csv file will be used to complete this task which should have a line for every email address in the original group.

# **Roll back**

If there are problems and you need to return to the starting states, follow these steps. The BO prefixed scripts will be used to rollback the changes and you will need these two input files:

* distributiongroups.csv
* distributiongroups-and-members.csv.

These scripts assume the distribution group email address format is <DG>@<domain>.onmicrosoft.com and that users addresses have format <user>@<domain>.onmicrosoft.com. If not, you may have to make some edits in the .csv file. **Be sure to keep the originals in a safe place.**

1. Create groups on-premises by running: 1-BOcreategroups\_v5.ps1
2. Add members to the on-premises groups by running: 2-BOaddmembers\_v5.ps1
3. Configure required sender authentication on-premises by running: 3-BOrsae\_v5.ps1
4. Delete the on-premises contacts (if they exist) by running:

4-BOdeleteonpremcontacts\_v5.ps1

**Cutover begins. This will cause the groups to be unavailable until finished and replicated.**

1. Delete the groups in Office 365 by running: 5-BOdeleteO365groups\_v5.ps1
2. Rename and unhide the on-premises groups by running. Note the groups will remain hidden if the hide from address lists attribute was set to “True” originally:

6-BOrenameandunhideGroups\_v5.ps1

1. Remove the new prefixed smtp address on-premises by running:

7-BOremovenewSMTPAddress\_v5.ps1

1. Add the alias and legacyexchangedn to the groups on-premises by running:

8-BOAddAliasAndLegDN\_v5.ps1

1. Create contacts in Office 365 for the on-premises groups by running:

9-BOcreateO365contacts\_v5.ps1

1. Some groups may have multiple email addresses in use. The contacts in Office 365 should also have these email addresses so Office 365 users can send mail to those addresses successfully.  
     
   Run the 10-BOaddemailtoo365contacts\_v5.ps1 script to add the email addresses to the newly created Office 365 contacts.  
     
   Edit the path to the distributiongroups-SMTPproxy.csv spreadsheet for input.  It uses the TYPE column in the distributiongroups-SMTPproxy.csv which should have a line for every email address in the original group.