

On Demand Migration Directory Sync For Multi-Geo Tenants

Quick Start Guide



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Legend

 **CAUTION:** A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

 **IMPORTANT, NOTE, TIP, MOBILE, or VIDEO:** An information icon indicates supporting information.

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Introduction

Microsoft 365 Multi-Geo addresses data residency requirements set by local laws and policies by allowing organizations to control where their data is stored. Administrators can provision and store data at rest in either the central location or satellite locations, including end user's Exchange Online Mailboxes, OneDrive for Business, Team and SharePoint Online data.

The goal of this guide is to provide a step-by-step walk through of how-to setup Synchronization between your Multi-Geo Microsoft 365 tenants. To set up On Demand Migration Directory Synchronization between your tenants, source objects must be either matched to existing objects or created as new objects in the target environment.

Topics

This guide covers the following topics:

- What are the On Demand Migration Directory Sync requirements
- How to Configure On Demand Migration Directory Sync
- How to Perform Synchronization for Multi-Geo enabled objects
- How to Validate Synchronization results
- Frequently Asked Questions

Requirements

General

- Client is licensed for On Demand Migration Directory Sync

Accounts

Microsoft Entra ID Application Account

- An account with Global Administrator Role is required to grant permissions and establish connection when adding a Cloud Environment.

Microsoft Entra ID PowerShell Accounts

- Two (2) PowerShell accounts are automatically created to read and update objects in the cloud. To do this an OAuth token is used from the account used to add the Cloud Environment.
- These PowerShell accounts do not require any Microsoft 365 licenses.
- Exchange Administrator, Teams Administrator and User Administrator roles will be added for these PowerShell accounts.

This topic describes how to set up the On Demand Migration Directory Sync, setup the sync template and configure the Directory Sync workflow.

On Demand Migration Directory Sync

This section explains how to add a Microsoft 365 tenant and configure a Migration project using On Demand Migration. During project setup, an Office 365 Global Administrator account is initially required to add each tenant to the project.

How to add a Microsoft 365 tenant

Follow these steps to add each Microsoft 365 tenant for On Demand Migration. If there is an existing tenant from another project, it can be reused.

1. Log in to [On Demand](#).
2. Navigate to *Tenants*.
3. Click the *Add Tenant* button.
4. On Demand supports both Commercial and GCC High tenants. For the purpose of this guide, choose *Add Commercial or GCC Tenant* and choose *OK*.
5. Log in to Microsoft 365 with a Global Administrator account for the source tenant.
6. Accept the requested Application Permissions.
7. Click *Finish*.
8. Repeat steps 2 – 8 for the target tenant.

Setting up the Directory Sync Environments

Follow these steps to setup the Directory Sync Environments.

1. Log in to [On Demand](#).
2. Navigate to *Migration*.
3. Create a new migration project by click *Create Project*.
4. Provide a migration project name and select the source and target tenant in the project wizard and click *Save and Continue*.

New Project

1 — 2 — 3
 Select Source and Target Provide Admin Consent Project Created

Please provide Source and Target tenants for your new migration project.

Project Name

Project Description (Optional)

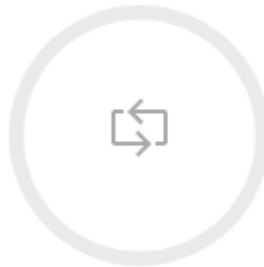
Source tenant (commercial tenants only)

Target tenant

Tenants for source and for target should be different

5. Click *Save and Continue* again and click *Finish and Close*.
6. Click on *Directory Sync* from the Project Dashboard.

Directory Sync



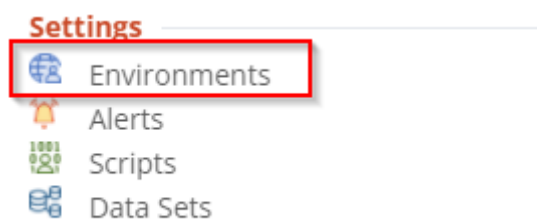
7. Once the On Demand Migration Active Directory module is loaded, click on the *Directory Sync* icon in the main dash view.



Directory Sync

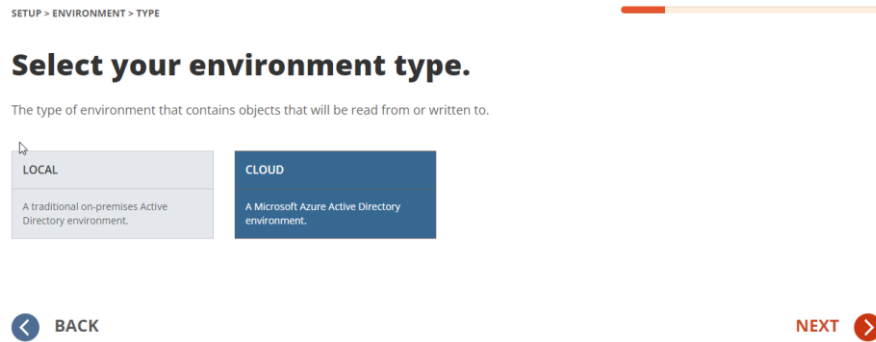
Directory synchronization services for Microsoft Active Directory and Azure Active Directory.

8. Click *Environments* in the left navigation menu to display the environment page.



9. Click *New* to open the environment wizard.

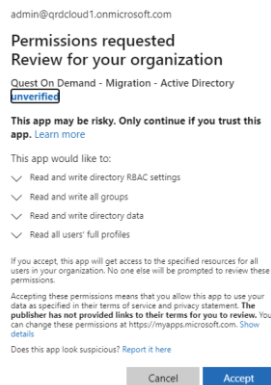
10. Select *Cloud* and click *Next*.



11. Type the name of the cloud environment and click *Next*.
12. Click on *Add Commercial or GCC tenant*.



13. Enter the tenant Admin Credential and accept the consents.

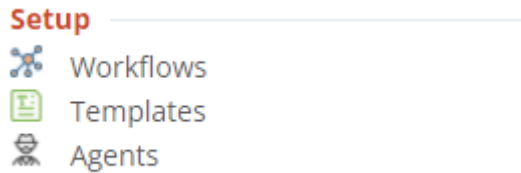


14. Click *Next*.
15. Configure the cloud environment filter group and click *Next*.
16. Select the "Include Objects Synchronized with a Local Active Directory via Microsoft Entra Connect" option if you wish to include Hybrid Objects. For the purpose of this guide, we will leave this option unchecked and click *Next*.
17. Review the environment summary and click *Finish*.
18. Repeat Steps 7-15 for the target tenant.

Configure Directory Sync Template

This section provides a step-by-step guide on how to configure the Directory Sync Template.

1. Log in to *On Demand*.
2. Navigate to *Migration*, select the project, and click on *Directory Sync*.
3. Click the *Directory Sync* icon.
4. Click the *Templates* link via the hamburger menu.



5. Click *New* and bring up the Template Wizard.
6. Enter the name and description for the template and click *Next*.
7. Select Cloud for source environment type and click *Next*.
8. Select Cloud for target environment type and click *Next*.
9. Configure the Users Synchronization options and click *Next*. For the purpose of this guide, use the default options.
10. Configure the Groups Synchronization options and click *Next*. For the purpose of this guide, use the default options.
11. Configure the Office 365 Groups and Teams Synchronization options, click *Next*. For the purpose of this guide, use the default options.
12. Configure the Contacts Synchronization options and click *Next*. For the purpose of this guide, use the default options.
13. Specify the default user password and click *Next*.
14. Click *New* on the mapping template to include the PreferredDataLocation(PDL) attribute to synchronize Multi-Geo enabled User objects. Include the MailboxRegion attribute to synchronize Multi-Geo enabled Unified Groups.
 - a. PreferredDataLocation – User Objects

 A screenshot of a 'MAPPING' configuration dialog box. At the top right is a close button (X). The title is 'MAPPING' and there is a link for more information. Below are two tabs: 'BASIC' (selected) and 'ADVANCED'. There are two dropdown menus: 'TARGET ATTRIBUTE' and 'SOURCE ATTRIBUTE', both set to 'PreferredDataLocation'. Under 'TARGET OBJECT TYPE', there is a list of checkboxes: 'ALL' (checked), 'USER', 'CONTACT', 'SECURITY GROUP', 'DISTRIBUTION GROUP', 'OFFICE 365 GROUP', 'RESOURCE MAILBOX', 'ORGANIZATIONAL UNIT', and 'TEAM'. At the bottom are three buttons: 'DEFAULT', 'SAVE', and 'CANCEL'.

- b. MailboxRegion – Unified Groups



MAPPING

For more information on mapping click here.

MODE

BASIC

ADVANCED

TARGET ATTRIBUTE

MailboxRegion

SOURCE ATTRIBUTE

MailboxRegion

TARGET OBJECT TYPE

ALL

USER

CONTACT

SECURITY GROUP

DISTRIBUTION GROUP

OFFICE 365 GROUP

RESOURCE MAILBOX

ORGANIZATIONAL UNIT

TEAM

DEFAULT

SAVE

CANCEL

15. Review the template summary and click *Finish*.

Configure Directory Sync Workflow

This section provides a step-by-step guide on how to deploy and configure the Directory Sync Workflow.

1. Log in to [On Demand](#).
2. Navigate to *Migration*, select the project, and click on *Directory Sync*.
3. Click on the *Directory Sync* icon.
4. Click on *New* under Workflow and bring up the workflow wizard.
5. Enter the workflow name and click *Next*.
6. Select the environments and click *Next*.
7. Select One Way Sync and click *Next*.
8. The workflow wizard will have four(4) workflow tasks pre-selected, they are Read, Match, Stage and Write. We will need to configure all 4 tasks.
 - a. Read – Select the environments from which you wish to read the objects.
 - b. Match – This is the step where you will decide how to match existing objects across your Microsoft Entra directories. Matching is conducted by pairing sets of attributes to find corresponding objects. Your two (2) environments may already have some attributes that can be used to find similar objects between the different directories, or you may need to populate some to ensure accurate matching. For a successful Directory Synchronization, it is most important that existing objects are correctly matched.

For the purpose of this guide, DisplayName and Name will be used for matching.

2. Match Objects

Configure your matching criteria by selecting up to five attributes below.

- c. Stage – Configure how objects are synced using the sync template.
 - i. Select the Sync Template, click *Next*.
 - ii. Select the source environment, click *Next*.
 - iii. Select the target environment, click *Next*.
 - iv. Choose the target domain name, click *Next*.
 - v. Configure any Stage Data filters. It is highly recommended to setup a filter to limit the scope when performing a test on the first sync as part of the validation. click *Next*.
 - vi. Review the stage data summary and click *Finish*.
 - d. Write – Specify the environment you want the changes to be applied to and click *Next*.
9. Configure the Sync Interval. For the purpose of this guide, select Manually and click *Next*.
 10. Configure the Sync Alert. For the purpose of this guide we do not want to setup any alerts. Click *Skip*.
 11. Review the workflow summary and click *Finish*.

Synchronize the Objects

This section explains how to configure multi-geo enabled test objects, perform the synchronization, and validate the results.

Prepare The Objects

This section provides a step-by-step guide on how to configure multi-geo enabled objects.

1. Setup a multi-geo test user in the source tenant, we will configure the object in Japan Azure Region.
2. Create a user in the source tenant and set the PreferredDataLocation(PDL) value to “JPN”.
`Get-MsolUser -searchString ODMADMEU1 | set-MsolUser - PreferredDataLocation JPN`
3. Verify the Microsoft Entra ID User's PDL is set to “JPN”

```
PS C:\WINDOWS\system32> Get-MsolUser -SearchString ODMADMEU1 | fl DisplayName,PreferredDataLocation

DisplayName           : ODMADMEU1
PreferredDataLocation : JPN
```

4. Verify the user mailbox region is set to "JPN".

```
PS C:\WINDOWS\system32> get-mailbox ODMADMEU1 | Format-List DisplayName,Database,MailboxRegion*
Creating a new Remote PowerShell session using Modern Authentication for implicit remoting of "Get-Mailbox" command ...

DisplayName           : ODMADMEU1
Database              : JPNP286DG140-db190
MailboxRegion         : JPN
MailboxRegionLastUpdateTime : 1/4/2022 9:00:23 PM
MailboxRegionSuffix   : None
```

5. Setup a multi-geo test Team in the source tenant, we will configure the object in Europe Azure Region.
6. Set the Team's Unified Group PreferredDataLocation(PDL) to "EUR".
`Set-UnifiedGroup -Identity ODMADGEOGrp -MailboxRegion EUR`
7. Verify the unified group mailbox region is set to "EUR".

```
PS C:\WINDOWS\system32> Get-UnifiedGroup -Identity ODMADGEOGrp | fl DisplayName,MailboxRegion

DisplayName : ODMADGEOGrp
MailboxRegion : EUR
```



Important Tip: To find out more on how to enable Multi-Geo capabilities in your Microsoft 365 Tenant, please refer to this Microsoft [Link](#) for more detail.

Sync The Objects

This section provides a step-by-step guide on how to perform the workflow synchronization.

1. Log in to [On Demand](#).
2. Navigate to *Migration*, select the project, and click on *Directory Sync*.
3. Select the *Directory Sync* icon.
4. Select the workflow configured and click *Run*.
5. Allow the workflow execution to complete.

Validate the objects

This section provides a step-by-step guide on how to verify synchronization of multi-geo enabled objects.

1. Verify the target tenant user's PreferredDataLocation(PDL) is set to "JPN".

```
PS C:\WINDOWS\system32> Get-MsolUser -SearchString ODMADMEU1 | fl DisplayName,PreferredDataLocation

DisplayName           : ODMADMEU1
PreferredDataLocation : JPN
```

2. Verify the target unified group mailbox region is set to "EUR".

```
PS C:\WINDOWS\system32> Get-UnifiedGroup -Identity ODMADGEOGrp | fl DisplayName,MailboxRegion

DisplayName : ODMADGEOGrp
MailboxRegion : EUR
```



Important Tip: User Mailbox and OneDrive data will be provisioned based on Microsoft Entra ID User's PDL value once the object is licensed. Teams data residency can be found in this Microsoft [Link](#).

Frequently Asked Questions

Where is Teams Private Chat data stored and how can I ensure my Teams data residency?

Teams data is stored in multiple locations. Individual user private chats are stored based on user's PreferredDataLocation attribute. Channel messages are stored based on the PreferredDataLocation set on the Unified Group associated with the Team. For more details on Teams data residency, please refer to this [Microsoft Link](#).

Can I provision my users in a specific region if my source users are not in a multi-geo tenant?

Yes, if your source tenant does not have Multi-Geo enabled and you would like to migrate into a Multi-Geo tenant, you can specify the Geo Location of the users via Directory Sync's mapping template. For example, if you would like to synchronize users into the Europe region, you can modify the mapping template based on the below sample.

MAPPING

For more information on mapping click here. [🔗](#)

MODE: BASIC | **ADVANCED**

TARGET ATTRIBUTE: PreferredDataLocation

VALUE: "EUR"

CONDITION:

The Value will be set on the target object when the above Condition is true

Can I provision my users in a specific region based on my source object's attribute, for example, Office location?

Yes, with the advance mapping template feature in On Demand Migration Directory Sync, you can control attribute values using mapping formulas. For example, Contoso has two geo-locations, "GBR" and "EUR". The sample mapping formula will set the PreferredDataLocation to "EUR" if the source object's Country attribute is Germany. Otherwise, the PreferredDataLocation value will be set to "GBR"



MAPPING

For more information on mapping click here.

MODE

BASIC

ADVANCED

TARGET ATTRIBUTE

PreferredDataLocation

VALUE

if(contain(s.Country,"Germany"), "EUR","GBR")

CONDITION

The Value will be set on the target object when the above Condition is true

For more details on Directory Sync advance mapping, please refer to this [Quick Start Guide](#).

Can I use On Demand Migration Directory Sync if my tenant is a hybrid?

PreferredDataLocation can be set for hybrid objects via Microsoft Entra Connect. Per Microsoft guidance, PreferredDataLocation synchronization is disabled by default and must be enabled. On Demand Migration Directory Sync will update the on-premises object with the PDL value and it will then be synchronized to the cloud object via Microsoft Entra Connect. For more detail on how to enable this in Microsoft Entra Connect, please refer to this [Microsoft Link](#).

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