



A MITEL
PRODUCT
GUIDE

MiCollab Solution Document — CloudLink Authentication and Synchronization

Release 9.8 SP2

October 2024

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CloudLink-based Authentication

1

This chapter contains the following sections:

- [Prerequisites and Supported Platforms](#)
- [Microsoft Azure Active Directory to CloudLink](#)
- [Setting up a CloudLink Account for Integration](#)
- [Adding a user on Azure in Mitel Connect](#)
- [Setting up MiCollab for CloudLink-based authentication](#)

With MiCollab Release 9.3, MiCollab has introduced CloudLink (CL)-based Authentication (known as CL Auth) for its end-users (i.e. for the MiCollab Clients).

Customers are provided with a MiCollab Client authentication choice between using MiCollab (i.e. local) or from CloudLink (i.e. CloudLink Authentication). CloudLink can be integrated with an Identity Provider such as Azure Active Directory (AD) at the CloudLink backend. An Identity Provider such as Azure AD provides Single Sign-on capabilities (where users use enterprise credentials to login to Mitel Applications) and safeguards access to data and applications while maintaining simplicity for users.

At the same time, the credentials for CloudLink/Azure AD Authentication on MiCollab Clients can be used to cross-launch CloudLink applications such as MiTeam Meetings, thus providing a seamless single sign-on experience across Mitel Applications. This is not valid for mobile clients.

Note:

While the intent is to allow Identity Providers to provide Single Sign-on capabilities, CloudLink with no integrations to an Identity Provider can also provide CloudLink Authentication. However, the user will be provided with an Email with links to CloudLink to complete the CloudLink authentication process (i.e. setting password). The benefit of having CloudLink Authentication (even without an Identity Provider) is that Single-Sign on Credentials are still provided for CloudLink applications such as MiTeam Meetings.

Note:

Enabling CloudLink Authentication is a time-consuming activity, and it depends on the number of users for whom the authentication is enabled. This activity should be performed during off-hours. For example, onboarding 500 users, the system will take approximately 60 minutes or so.

Note:

Creating users with CloudLink Authentication being enabled takes a little longer than creating users with CloudLink Authentication being disabled. For example, to onboard 100 users with CloudLink Authentication using UCC Standard Role, the system will take approximately 60 minutes or so.

Note:

AWV doesn't support CloudLink Authenticated users. But to make the AWV desktop client work for CloudLink Authentication enabled user, perform the following:

- Remove any preconfigured user credentials.
- Log in with the name-only option in the client.
- Provide access code to join or use join link provided to join the conference

The CloudLink authenticated users will only be able to join the conference as participants, using the participant access code or participant link provided by the conference owner.

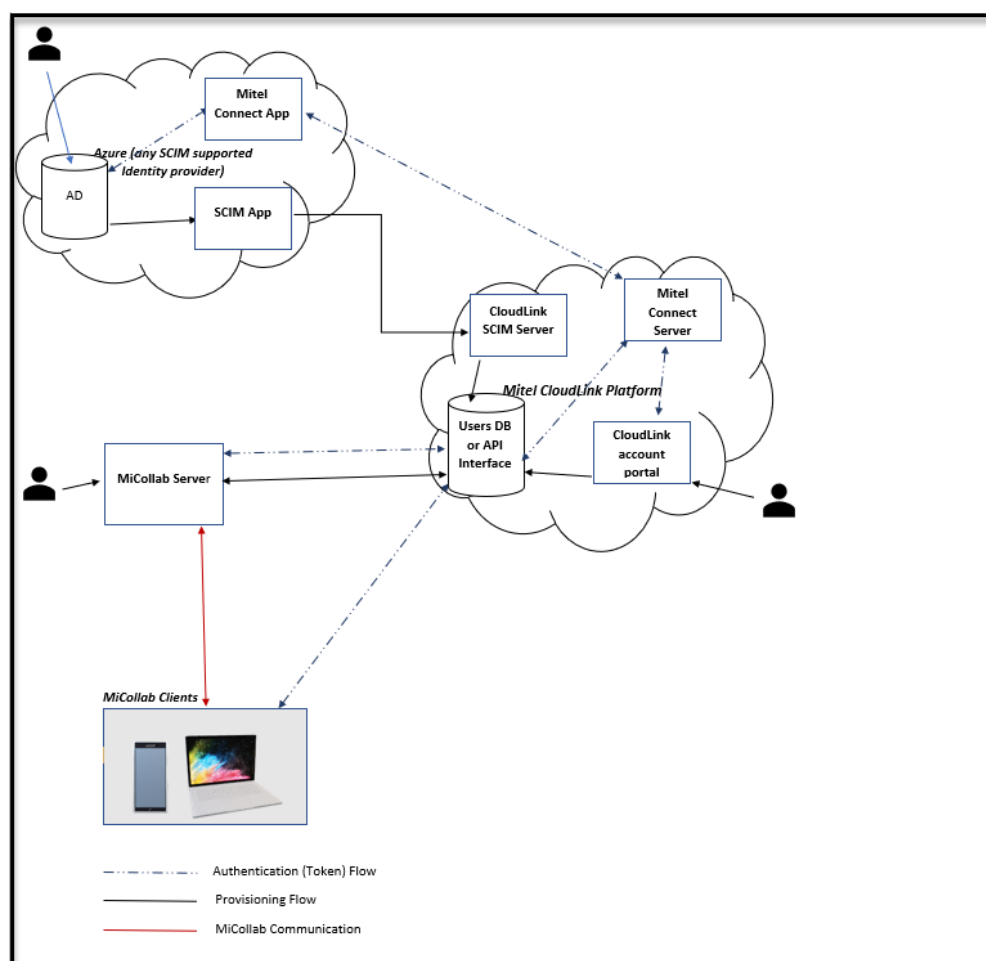


Figure 1: Data Flow Diagram between MiCollab, CloudLink and Azure

1.1 Prerequisites and Supported Platforms

- CloudLink/Azure AD based Authentication is supported on MiCollab Web, PC, Android, iOS, and MAC clients; however, it is not supported on End-user portal, AWV - Outlook portal/desktop client/Web Client, MiCollab for Microsoft and MiCollab Legacy desktop Clients.
- Users who have enabled CloudLink-based Authentication will not be able to use AWV (with leader capabilities) and create AWV conferences through End-User Portal, Outlook plugin, and Ad-hoc AWV meeting, that is, users with CloudLink-based authentication cannot be AWV users. However, these users can still join the AWV meetings as participants.
- Users who have enabled CloudLink-based Authentication can use the Meeting Centre but only to join meetings from other participants or their old meetings (created before they moved to CloudLink-based authentication).
- The CloudLink-based Authentication feature should only be turned on once the CloudLink Integration is done, and the MiCollab Clients are upgraded to Release 9.3 and above loads.
- Administrators have a choice to enable and disable CloudLink/Azure AD based Authentication for a specific set of users.
- MiCollab can only be configured with a single source of authentication - CloudLink or OnPrem-Active Directory. Before moving to CloudLink-based Authentication, they must disable the On-Prem AD authentication if configured already.

- The CloudLink-based Authentication feature is supported with MiVoice Business (on Enterprise and Flex deployments), MiVoice MX-ONE, MiVoice 5000, MiVoice Office 400 platforms.
- MiCollab Web Clients opened on Internet Explorer does not support CloudLink Authentication.
- For CloudLink-based authentication to work, the User Principal Name on Azure AD should be the same as MiCollab user's Primary Email Address.

CL Auth SSO Client authentication using SSO and multi-factor authentication is supported by the following configurations:

- User provisioning via non AD MiCollab integrations
- User provisioning via IDS - AD on-premise MiCollab integrations
- User provisioning via Azure AD CloudLink Sync MiCollab integrations

The following subsections describe the MiCollab Client behaviors and CloudLink/Azure AD/MiCollab server configurations to enable the CloudLink/Azure AD based authentication.

1.2 Microsoft Azure Active Directory to CloudLink



Note:

The information contained within this section on CloudLink or Azure do not follow MiCollab release cadences and content. The purpose of this section is to provide information on the basics of integrating CloudLink with Microsoft Azure AD.

Configuring the CloudLink Platform with Microsoft Azure AD allows users for your customer account to access CloudLink applications such as MiTeam Meetings using their enterprise credentials (i.e. Azure credentials: Email and password).

To proceed with this section, you must have the following:

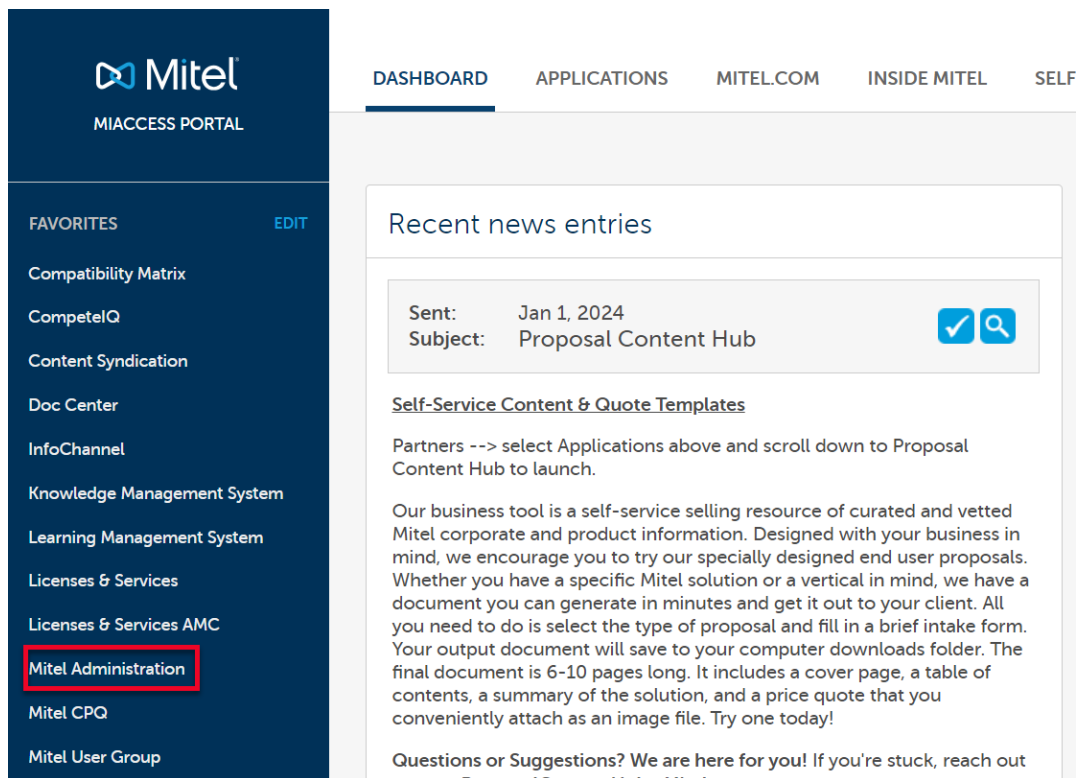
- An Azure AD subscription
- A Mitel CloudLink account

1.3 Setting up a CloudLink Account for Integration

Some of these steps are consistent with steps to enable CloudLink based Chat or MiTeam Meetings. However, for completeness, all steps will be included.

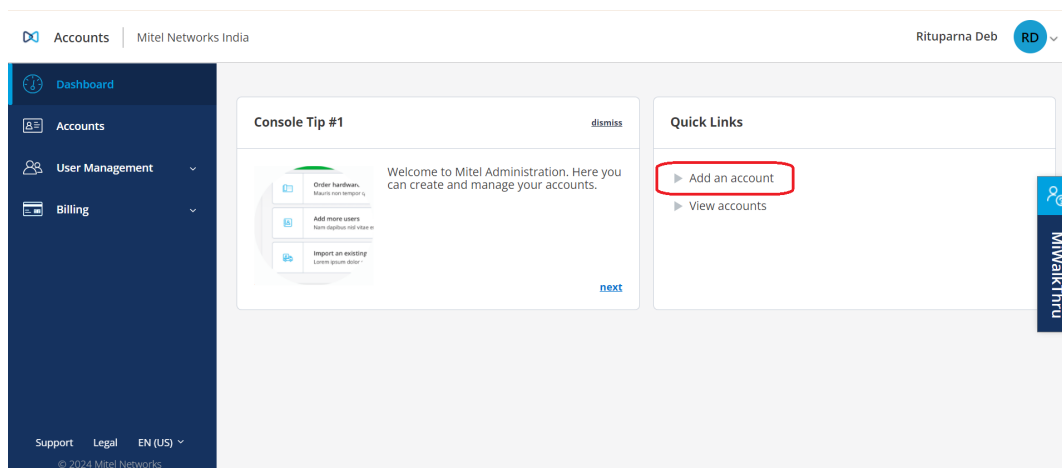
1. Log in to the MiAccess portal using your MiAccess credentials.

- On the left tab, select **Mitel Administration**.



- Partner can log in to the CloudLink account portal and select the **Add an account** link (i.e. customer account).

If the customer account already exists, you can skip this step, search for the customer account under Accounts and proceed to step 4.



4. Fill in the required details under Account Information.

- Customer Name
- Country
- Province/State
- Address
- City
- Postal/Zip Code
- Default Language
- Business Type
- Support Contact

The screenshot shows the 'Account Information' form in the application. The form is titled 'Account Information' and has a 'Delete' and 'Deactivate' button in the top right corner. The form contains the following fields:

- Customer Name * (Text input: CLDesignIntegration)
- Country * (Text input: Canada)
- Province / State * (Text input: Ontario)
- Address * (Text input: 628 Viverra Place)
- Address 2 (Text input:)
- City / Town * (Text input: Ottawa)
- Postal / Zip Code * (Text input: K2S 2M9)
- Account ID (Text input: 158974492)
- Default Language (Text input: English)
- Business Type (Text input: Other)
- SAP Customer Number (Text input: Not Available)
- Cloud location (Text input: Europe (Frankfurt))

The 'Add new' button is highlighted with a red box.

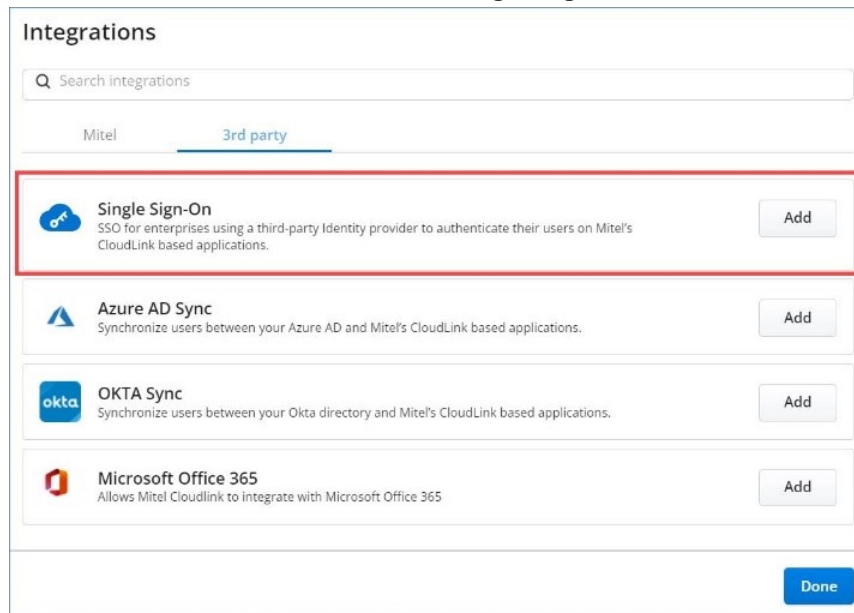
5. In the Integrations section, click **+ Add new**.

A pop-up screen displays the Integrations panel.

The screenshot shows the 'Integrations' panel. The panel has a title 'Integrations' and a '+ Add new' button. The '+ Add new' button is highlighted with a red box.

6. Integrations will include **Mitel** and **3rd Party**. Click the **3rd party** tab.

- Mitel Integrations include (not discussed here): MiCollab, MiTeam Meetings, and MiCC.
- 3rd Party Integrations will include **Single Sign-On** as shown below:
- Click the **Add** button associated with **Single Sign-On**, and click **Done**.



The **Single Sign-On** is enabled for the customer account and is added to the **Integrations** section of the **Account Information** page.

- At this point, the Single Sign-On procedure is not complete. Click the **Complete Setup** button.



- An [integration guide](#) link is provided that will outline the rest of the setup for Single Sign-on and integration with Azure.

Single Sign-On

Enable Single Sign-On (SSO) to allow your users to sign into Mitel applications using their enterprise username and password. Visit our [integration guide](#) for detailed instructions on how to configure single sign-on with your specific provider.

Step 1
Fill in the name of your Identity provider (IDP).

Identity Provider (IDP) *

To ensure that SSO with your IDP is successful, please validate and test in your own IT sandbox prior to deploying.

Step 2
Copy and paste these values where needed in your Identity provider

Mitel Identifier (Entity ID) https://authentication.us.dev.mitel.io/2017-09-01/sa...	Copy
Reply URL (Assertion Consumer Service URL) https://authentication.us.dev.mitel.io/2017-09-01/sa...	Copy

Step 3
Fill in these values from your Identity provider integration.

Sign-in URL *

IDP Identifier (Entity ID) *

Signing Certificate(s)
Your provider's public key in PEM format. If you need to include multiple, paste them one after the other. *

Optional Mitel credentials

☐ Enable Mitel Credentials (Optional)
Note that this will show the option to all users on login. You will also need to manually send a 'Welcome email' to all users who you would like to give a Mitel Application account to.

[Remove](#) [Cancel](#) [Save](#)

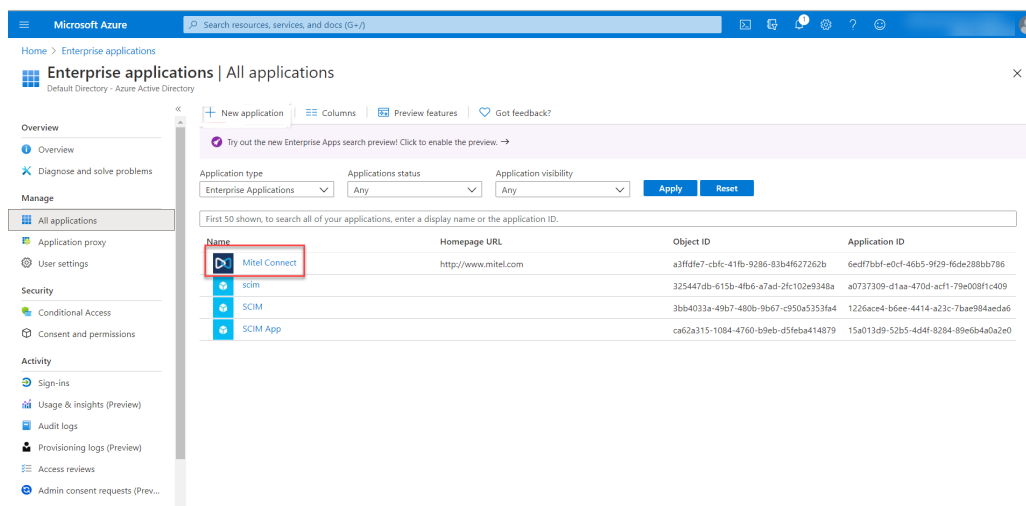
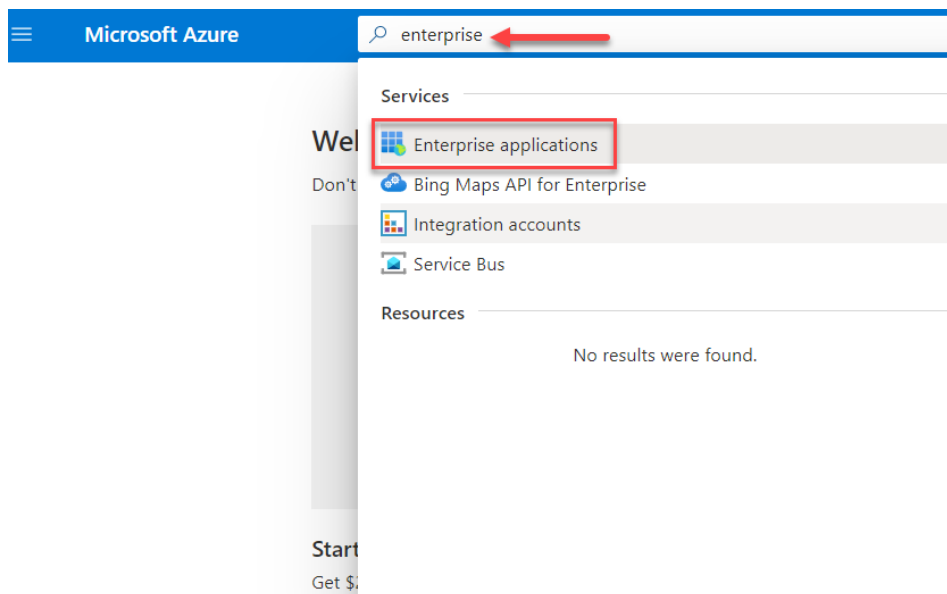
This completes the steps necessary to integrate the CloudLink Account with the customer Azure AD.

For new customer sites, the CloudLink Account must now be integrated with MiCollab. The steps required are identical to setting up the CloudLink based chat on MiCollab. See the [MiCollab Solution Document-CloudLink](#) for steps to Enable CloudLink Integration.

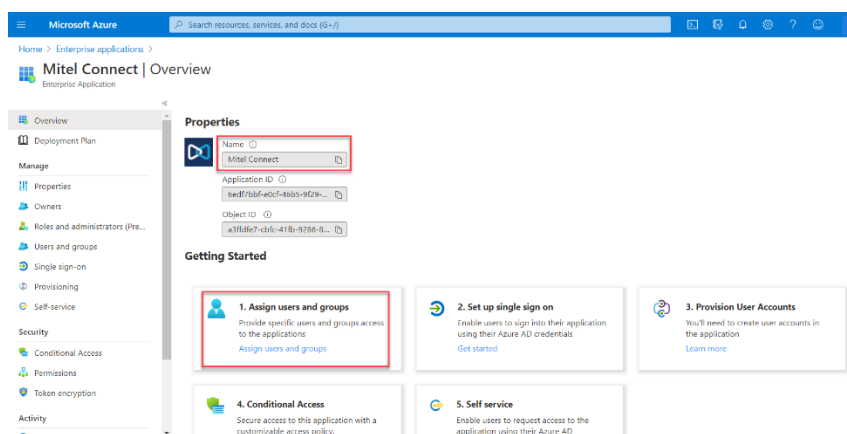
1.4 Adding a user on Azure in Mitel Connect

There are multiple ways to add users in Azure AD through UI, CSV import, PowerShell, etc. The user creation in Azure AD is not considered and described in this document. Please refer <https://portal.azure.com/> for details. This section only describes adding a user in the Azure Mitel Connect app once the user is created in Azure AD.

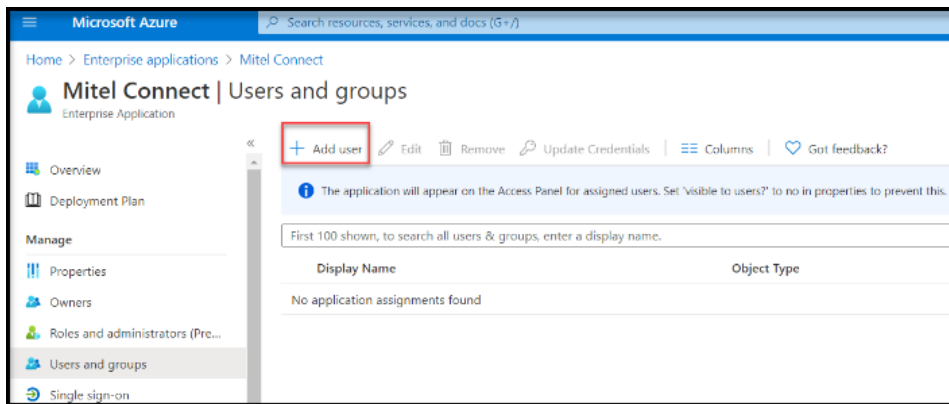
1. Search for Enterprise Applications on Azure AD and select **Mitel Connect** application.



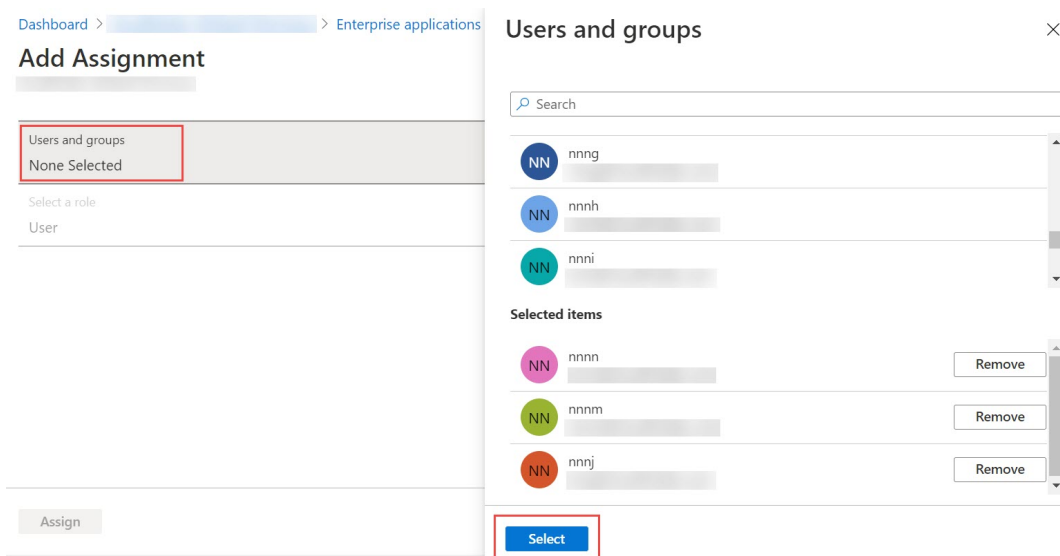
2. After clicking Mitel Connect, click **Assign user and group**.



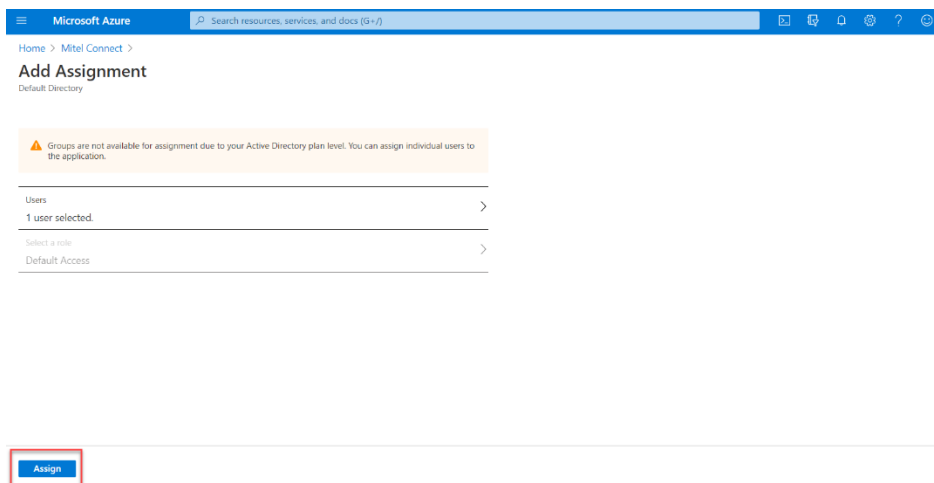
3. Click **Add user**.



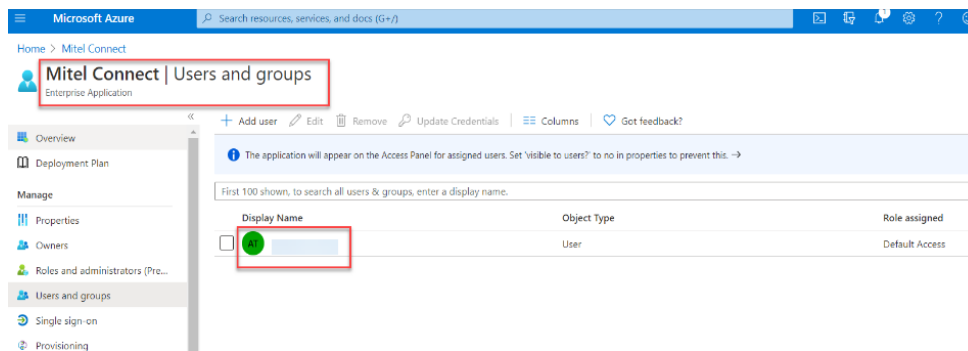
4. Search for the user and click to **Select** the user.



5. Once the user is selected, click on **Assign**.



- The user should list under the **Enterprise Application – Mitel Connect**.



- All users listed under the Enterprise Application - Mitel Connect should appear on CloudLink account portal. Before troubleshooting MiCollab, ensure that users from Azure AD within the Enterprise Application – Mitel Connect are shown on CloudLink for the customer Account.

Note:

For CloudLink-based Authentication to work, the User Principal Name on Azure AD should be the same as the MiCollab user's Primary Email Address.

1.5 Setting up MiCollab for CloudLink-based authentication

1.5.1 Enable CloudLink-based Authentication on MiCollab server

Note:

If you have an On-Prem AD connection currently being used for user authentication, you must disable the authentication first as only one source of authentication is allowed. If On-Prem AD connection is used only for user authentication and not for synchronization, you may proceed for deletion. Refer below steps for deletion.

1.5.2 To delete or disable on-prem AD authentication

- In the MiCollab Server, under **Configuration**, click **Integrated Directory Service**.
- In the Actions column for the desired domain, click **Remove**.

3. Click **Remove**.
4. If Authentication was enabled, you will be prompted to enter a temporary end-user login password. Enter a temporary password, confirm the password, and then click **Save**. The system automatically sends the users a Service (Welcome) Email with the temporary password and deployment Email with the QR code.

Note:

To prevent the system from sending a Welcome Email with a temporary password and a deployment Email, the administrator must disable the welcome Email before Step 1 and should enable it after Step 4 is completed.

1.5.3 To add CloudLink Platform/Azure AD authentication for IDS

Limitations:

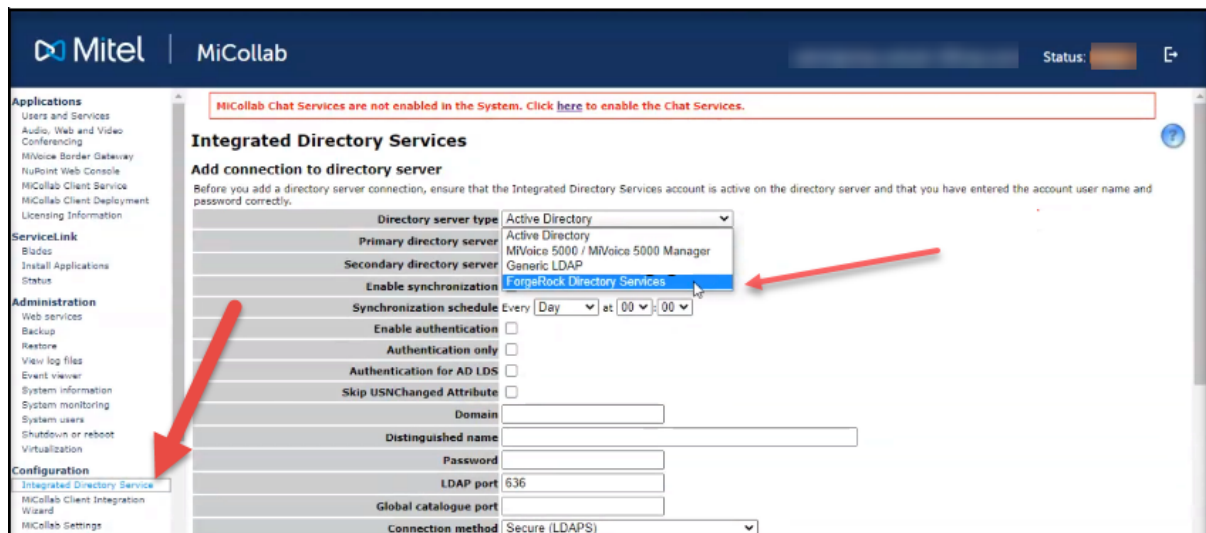
The following features are not supported with CloudLink IDS:

- External Search
- External Reverse Lookup
- Search Context, i.e. OU based search
- Query String

Prior to the enabling of CloudLink-based Integration on MiCollab you will notice that there are only four Directory Server types under Integrated Directory Services:

- Active Directory
- MiVoice 5000 / MiVoice 5000 Manager
- Generic LDAP

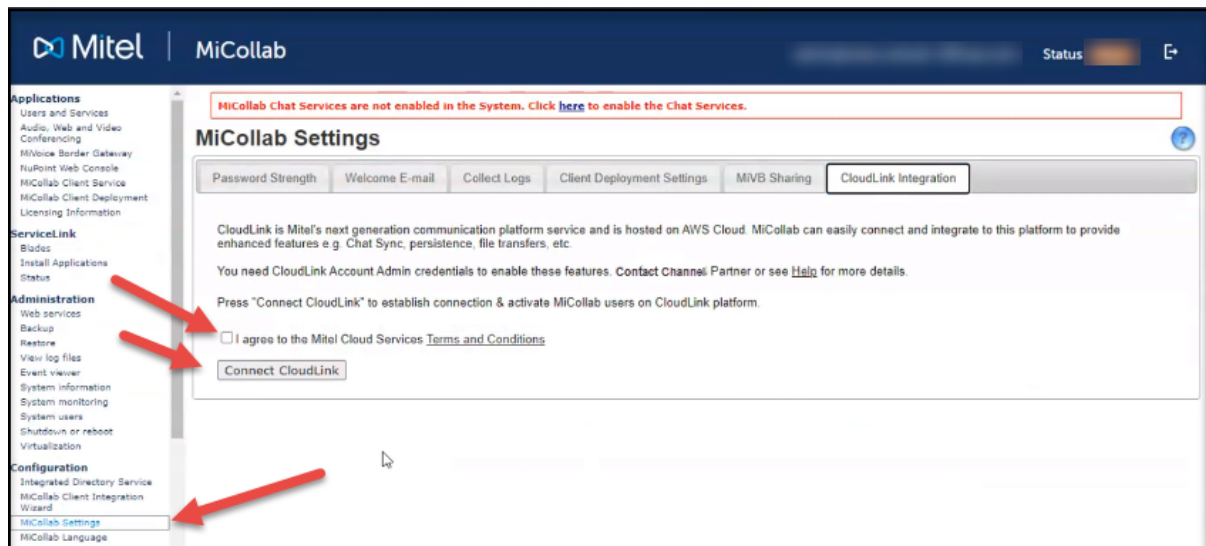
- ForgeRock Directory Services



If CloudLink Integration is enabled, CloudLink Platform will be shown under available Directory Server Types. Refer from step 6 onwards for further configuration.

If CloudLink Integration is not enabled, then the following steps will be required to enable CloudLink on MiCollab.

1. From **Configuration > MiCollab Settings** proceed to the **CloudLink Integration** tab.
2. Check the box **I agree to the Mitel Cloud Services Terms and Conditions** and then click the **Connect CloudLink** button.



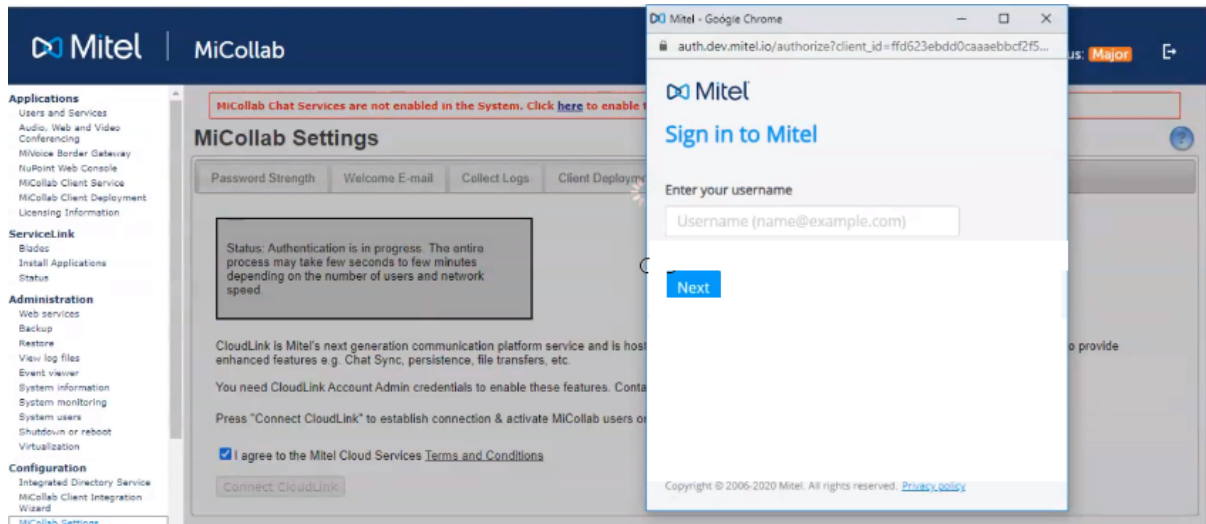
3. MiCollab will indicate: **You are being directed to Mitel Auth Portal for additional authentication. Make sure your web browser pop-up blocker is disabled. Do you want to proceed?**

Click **OK** to proceed.

4. As a Mitel Administration user administrator you will be asked by CloudLink to:

Note:

It is assumed that CloudLink has already been setup to include a user (administrator) and an account (customer).



- Enter your Username (Email address)
- Enter your Password

Any users that exist on MiCollab will be sent to CloudLink. This can be confirmed by looking at the users on CloudLink and comparing them with MiCollab.

Note:

At this point, CloudLink-based Authentication has not been enabled.

5. Return to **Configuration > Integrated Directory Services** and click **Add Connection**.

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Applications

- Users and Services
- Audio, Web and Video Conferencing
- MiVoice Border Gateway
- NuPoint Web Console
- MiCollab Client Service
- MiCollab Client Deployment
- Licensing Information

ServiceLink

- Blades
- Install Applications
- Status

Administration

- Web services
- Backup
- Restore
- View log files
- Event viewer
- System information
- System monitoring
- System users
- Shutdown or reboot
- Virtualization

Configuration

- Integrated Directory Service**
- MiCollab Client Integration Wizard
- MiCollab Settings
- MiCollab Language

Integrated Directory Services

Add, edit, remove, and synchronize connections between MiCollab and directory domain controllers.

Add connection **Manage detained entries (0)**

Domain	Enable synchronization	Summary	Status	Synchronization	Authentication	Actions
Default Attribute Mappings						
The following table maps the default directory services user data fields to the MiCollab user data fields. Each connection may use the default set or create its own set of attribute mappings within the connection itself.						
City	company	Country	co	DID Number	Department	department
Distinguished Name	distinguishedName	Email	mail	Fax	facsimileTelephoneNumber	
First Name	givenName	Home Element	ipPhone			

6. When the new connection page is provided, select the **Director Server Type** dropdown field. You will notice that CloudLink Platform will now appear. Select CloudLink Platform.

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Integrated Directory Services

Add connection to directory server

Before you add a directory server connection, ensure that the Integrated Directory Services account is active on the directory server and that you have entered the account user name and password correctly.

Directory server type **Active Directory**

- Active Directory
- MiVoice 5000 / MiVoice 5000 Manager
- Generic LDAP
- ForgeRock Directory Services
- CloudLink Platform**

Primary directory server

Secondary directory server

Enable synchronization

Synchronization schedule Every 1 Day

Enable authentication

Authentication only

Authentication for AD LDS

Skip USNChanged Attribute

Domain

Distinguished name

7. Once **CloudLink Platform** is selected, the following **Integrated Directory Services** page will open to further define the connection type. Click on the **Enable authentication** checkbox and **Save**.

Once the CloudLink/Azure AD based authentication is enabled, all existing users and new users created will be provided with CloudLink Unified Login as detailed in the subsequent sections.

At this point, once MiCollab is integrated with CloudLink for CloudLink authentication, MiCollab Client Users (Web, PC, Android, iOS, and MAC Client) login in will be authenticated by Azure AD (in this example) via CloudLink instead of MiCollab.

If the user synchronization is enabled from On-Prem AD and authentication is enabled from CloudLink, the Admin must change the IDS mapping for the login id to the “**userPrincipalName**” field.

Home > Enterprise applications > scim > Provisioning >

Attribute Mapping

Save Discard

Attribute mappings

Attribute mappings define how attributes are synchronized between Azure Active Directory and customappsso

Azure Active Directory Attribute	customappsso Attribute	Matching precedence	Remove
userPrincipalName	userName	1	Delete
Switch([IsSoftDeleted], , "False", "True", "True", "False")	active		Delete
displayName	displayName		Delete
mail	emails[type eq "work"].value		Delete
preferredLanguage	preferredLanguage		Delete
givenName	name.givenName		Delete
surname	name.familyName		Delete
Join(" ", [givenName], [surname])	name.formatted		Delete

Note:

From R9.5 onwards, for performing the CloudLink Authentication procedure, the migrated user's login ID becomes the same as their Email ID. This behavior is valid for all the first-time users performing CloudLink Authentication. In case of manually or locally enabling and disabling CloudLink Auth from Bulk User Provisioning (BUP)page, no changes would be seen.

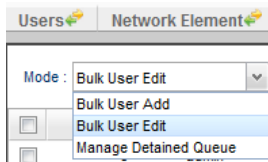
1.5.4 To disable CloudLink-based authentication

MiCollab administrator can disable/enable CloudLink-based Authentication for a set of users (one or multiple) through Bulk User Provisioning (BUP). This might be required for cases where the administrator

wishes to manage authentication locally through MiCollab for few users, for e.g. temporary users which do not have accounts in AD.

To disable CloudLink-based authentication for specific set of users/user, please follow the below steps.

1. Under **Applications**, click **Users and Services**.
2. Click the **Bulk User Provisioning** tab.
3. In the **Mode** drop-down window, select the **Bulk User Edit** option.



4. Click on **Load Users**.
5. Select the users for whom the CloudLink-based Authentication needs to be disabled.
6. Click on the **Disable CL Auth** button.

A **Password** pop-up will be opened.

7. Enter the default password of those selected users in the **Default Password** and **Confirm Password** fields and click **Submit**.
8. Click on **Yes** to confirm. The CloudLink-based Authentication of the selected users will be disabled.

In case of any error, the error message would be displayed. Refer the Troubleshooting Errors, Alarms and Reports for details.

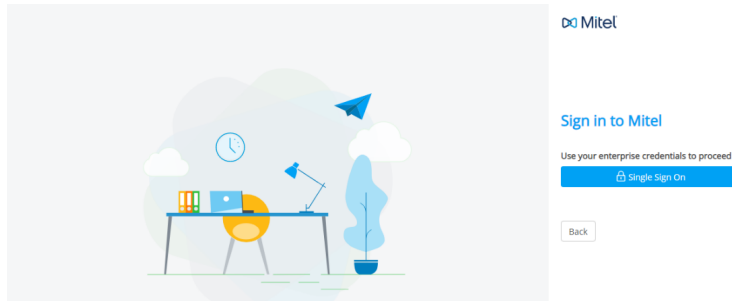
1.5.5 Using CloudLink-based Authentication on the MiCollab Clients

1. Open the MiCollab client in the web browser.
2. Enter the Email ID or login ID (received in MiCollab Welcome Email) and click **Next**.



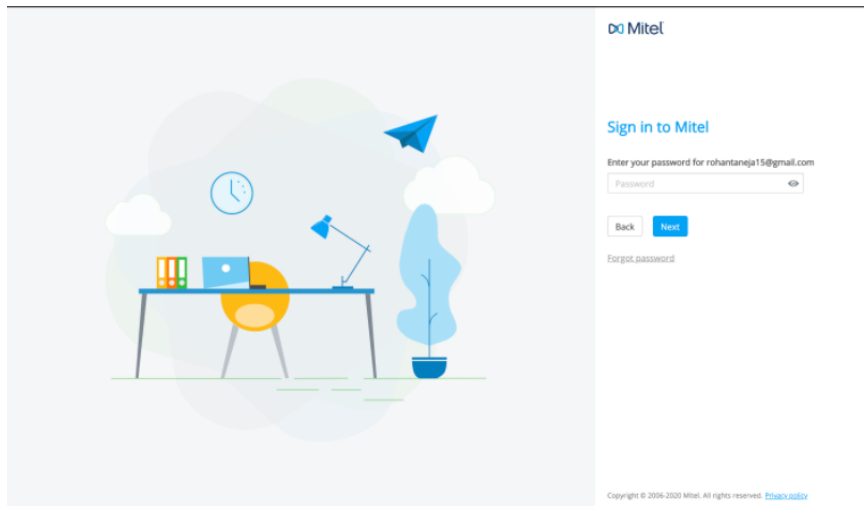
3. If CloudLink-based Authentication is enabled for the user, the MiCollab client will proceed for subsequent login through the CloudLink Unified login page.

- Azure AD is integrated: In the CloudLink Authorization page, use your enterprise credentials to login.
- Azure AD is not integrated: In the CloudLink Authorization page, use your CloudLink password. This password must be setup with the help of CloudLink welcome Email. Check Emails from no-reply@mitel.io to setup your password if not done already.

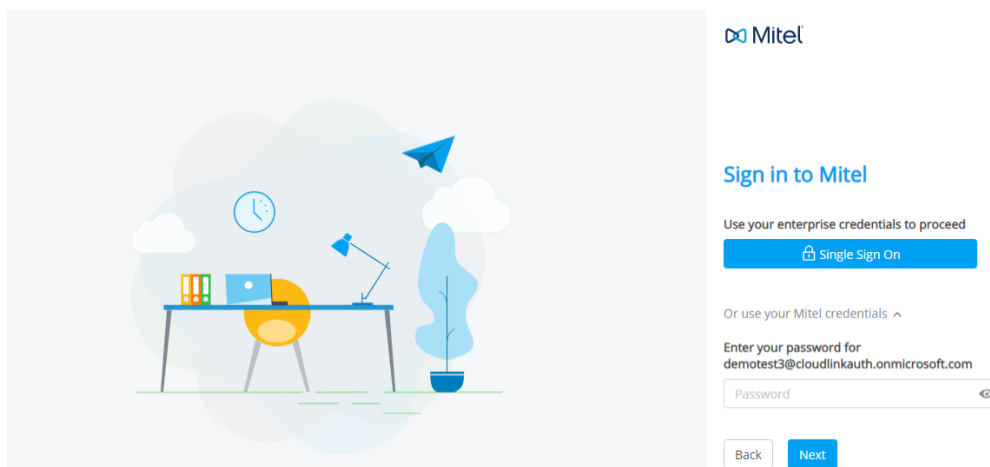


Note:

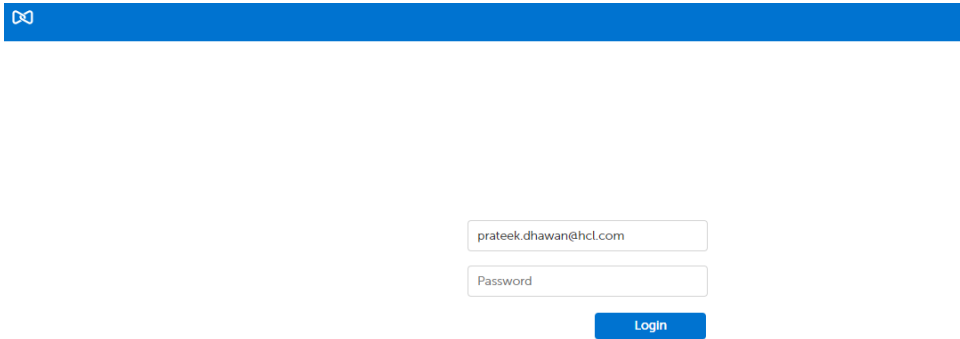
The Email ID is auto-populated on the CloudLink Sign-in page.



- Azure AD is integrated along with the field Enable Mitel Credentials (optional) over CloudLink Portal: In the CloudLink authorization page, you can use the credentials which were used to verify the account over CloudLink Portal (check Emails from no-reply@mitel.io to setup your password).

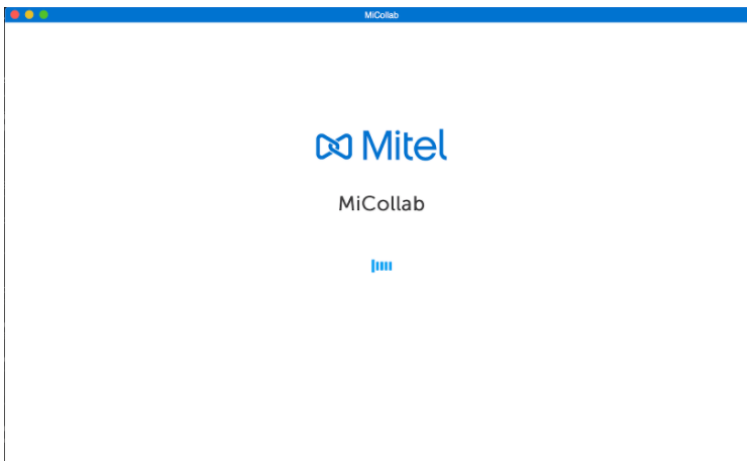


4. If CloudLink-based Authentication is not enabled, then the user proceeds for MiCollab Authentication and on providing the Email/Login ID on the same page, next the password field opens.

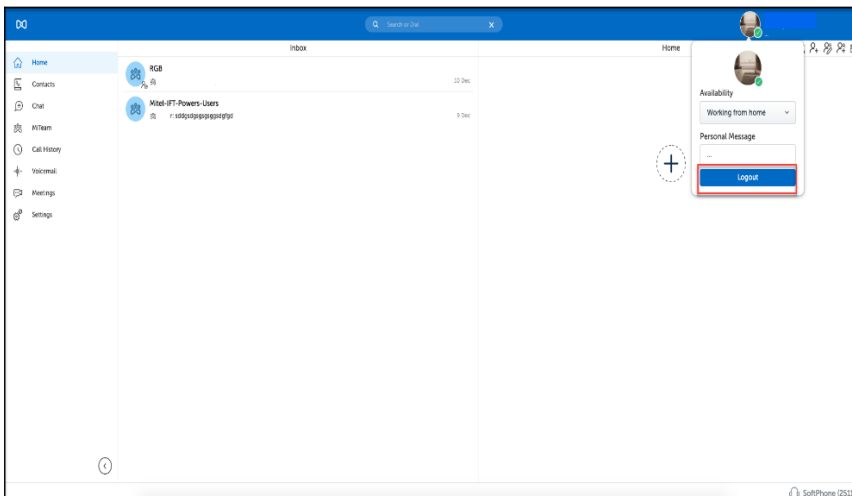


5. On successful password authentication, the user might be prompted to enter a second-factor authentication code, for example, OTP (based on Multifactor Authentication configuration done on Azure AD behind CL platform).
6. After the successful multifactor authentication, the client is presented with the progressing screen followed by MiCollab Home Screen.

With this the CloudLink-based authentication is complete and user can use the MiCollab Client features.



7. For CL authenticated users they can use the Logout functionality to logout of the Web client.



1.5.6 Manual login for native clients

CloudLink Authentication also supports manual login in native clients (iOS, Android, PC, and MAC OS).

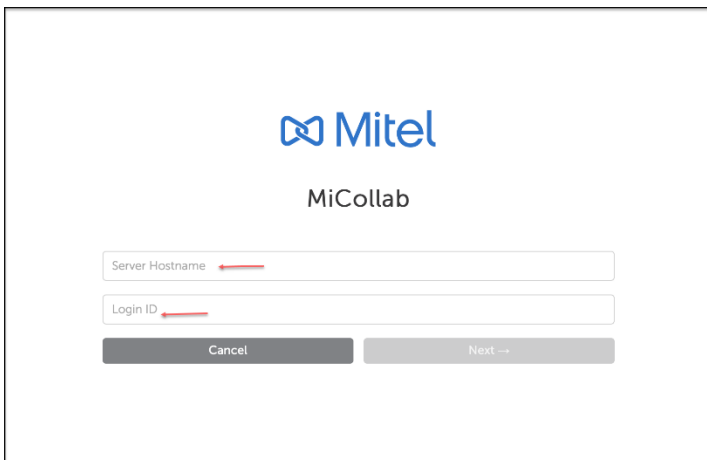
Perform the following steps for manual login for the native clients:

1. Tap on the Mitel logo three times to open the Manual Login screen.



The screenshot shows the Mitel MiCollab Manual Login screen. At the top is the Mitel logo. Below it is the text 'MiCollab'. Underneath is a text input field with the placeholder text 'Enter Authentication Key'. At the bottom is a 'Login' button.

2. In the Manual login screen, enter the **Server Hostname** and **Login ID/Email ID**.



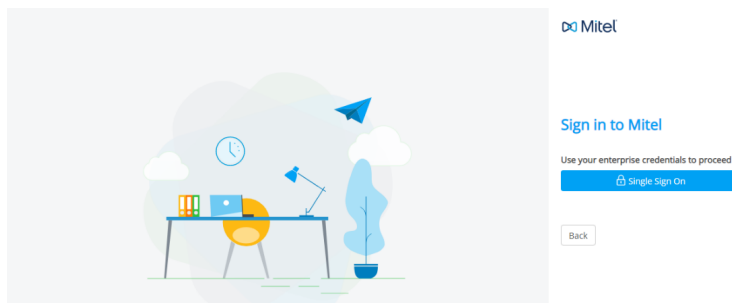
The screenshot shows the Mitel MiCollab Manual Login screen. At the top is the Mitel logo. Below it is the text 'MiCollab'. Underneath are two text input fields: 'Server Hostname' and 'Login ID'. At the bottom are 'Cancel' and 'Next -->' buttons.

3. Click **Next**.



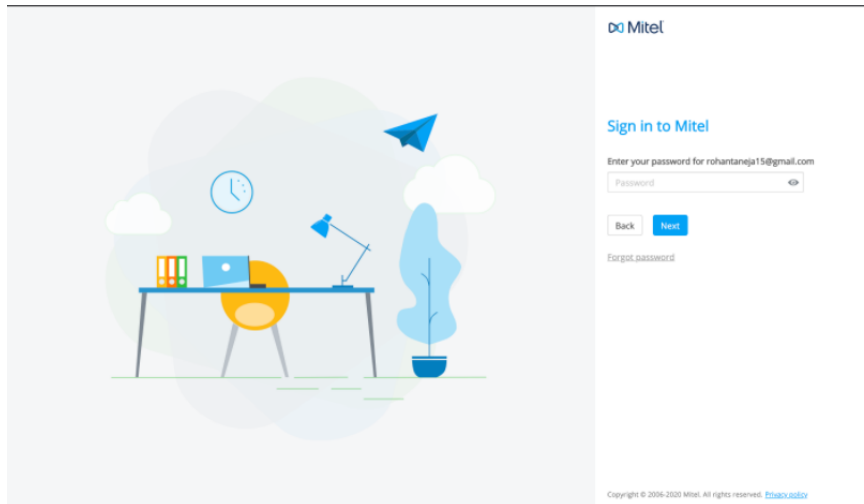
4. If CloudLink-based Authentication is enabled for the user, the MiCollab client will proceed for subsequent login through the CloudLink Unified login page.

- Azure AD is integrated: In the CloudLink Authorization page, use your enterprise credentials to login.
- Azure AD is not integrated: In the CloudLink Authorization page, use your CloudLink password. This password must be set up with the help of CloudLink Welcome Email. Check Emails from no-reply@mitel.io to setup your password if not done already.

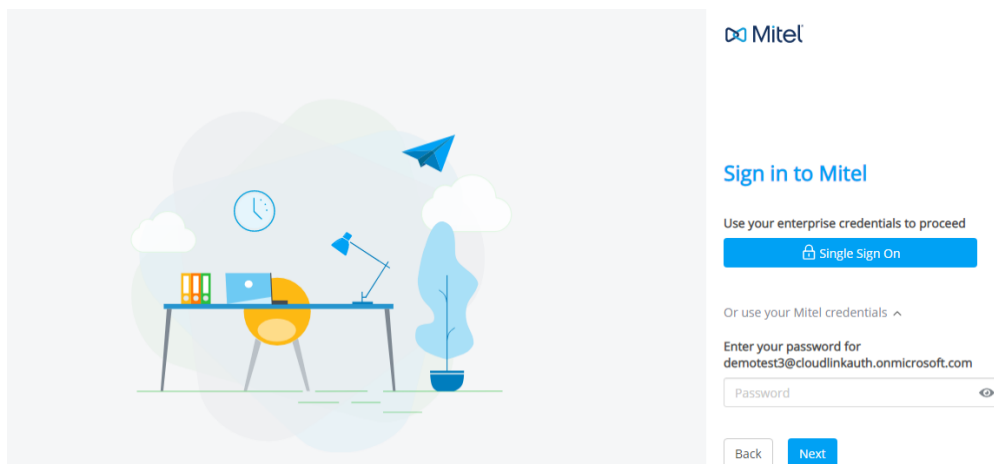


Note:

The Email ID is auto-populated on the CloudLink Sign-in page.



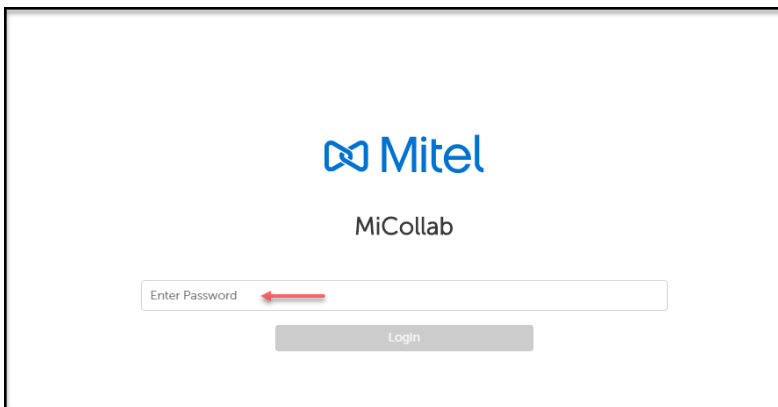
- Azure AD is integrated along with the field Enable Mitel Credentials (optional) over CloudLink Portal: In the CloudLink authorization page, you can use the credentials which were used to verify the account over CloudLink Portal (check Emails from no-reply@mitel.io to setup your password).



5. If CloudLink-based Authentication is not enabled, then the user proceeds for MiCollab Authentication, and on providing the Email/Login ID on the same page, next the password page opens.



The screenshot shows the Mitel MiCollab login interface. At the top is the Mitel logo, followed by the text "MiCollab". Below this are two input fields: "Server Hostname" and "Login ID". A red arrow points to the "Login ID" field. At the bottom are two buttons: "Cancel" and "Next -->".



The screenshot shows the Mitel MiCollab login interface. At the top is the Mitel logo, followed by the text "MiCollab". Below this is a single input field labeled "Enter Password". A red arrow points to this field. At the bottom is a "Login" button.

This chapter contains the following sections:

- [Prerequisites and Supported Platforms](#)
- [Limitations](#)
- [Setting up CloudLink Account for SCIM integration](#)
- [Setting up the Provisioning Server \(Azure AD\)](#)
- [Setting up Mitel SCIM Enterprise Application](#)
- [Setting up MiCollab for CloudLink-based Synchronization](#)
- [Adding a user in Azure Mitel SCIM enterprise application](#)
- [Deleting a user that was provisioned by Azure AD](#)

CloudLink (CL)-based synchronization provides single point of user provisioning and management of MiCollab users from the CloudLink Accounts Portal. CloudLink can further be integrated with a provisioning service such as Azure AD with the help of SCIM interface to extend the user provisioning and management directly from the Azure AD service portal. This feature can be turned on/off with Cloudlink-based authentication.

2.1 Prerequisites and Supported Platforms

- Cloudlink-based synchronization is supported in Integrated mode and only with MiVB platforms (On-premise and Flex deployments).
- Once Cloudlink-based synchronization is enabled, the administrator will not be able to add new users from MiCollab USP but from CloudLink (or 3rd party provisioning server) portal only. At the same time attributes updates for existing users will only be allowed for limited fields.
- Users can be created by Bulk User Provisioning and MiVB platform as well.
- Cloudlink-based Synchronization can only be turned on one IDS connection.

Note:

CloudLink Synchronization does not support importing contacts into MiCollab, as it can be done with on-premise AD synchronization. You can create contacts as Basic users from the Bulk User Provisioning tab on MiCollab.

Note:

it is not necessary to enable CloudLink-based Synchronization in order to take advantage of CloudLink-based Authentication.

Note:

For Cloudlink synchronization to work, the mobile number which is entered in Azure must be in **e.164** format. For example, +16135922122 and +441291436000.

The following subsections describe the MiCollab Client behaviors and CloudLink/ Provisioning server (Azure AD)/MiCollab server configurations to enable the Cloudlink-based synchronization.

2.2 Limitations

The following fields are not supported on Azure/CloudLink Synchronization, but they can be modified or changed as per the below-mentioned methods:

1. Fields that can be modified from MiCollab USP

- Department
- Language
- Location

2. MiCollab user fields that cannot be populated from Azure AD

- Info
- Info 2
- Position
- Title
- Home Element
- Secondary Phone directory Number
- Mobile Phone Number 2
- Fax
- Distinguished Name

3. Not supported on SCIM Interface; Administrator can update their photo on Azure and the user can update their photo in MiCollab Client.

- Photograph

Note:

On migration from AD Sync to CloudLink Sync, the above-mentioned field values would be maintained and not cleared. After the migration, these values can be updated or modified using the methods specified against the field values.

Note:

Due to a limitation of the Microsoft Azure SCIM solution, a user details field in Azure AD that has been mapped to an attribute will not be provisioned if the field is left blank and hence it cannot be pushed to CloudLink. Therefore, an update of the blank field is neither received by CloudLink nor by MiCollab. That means any field that is provisioned with a non-blank value cannot subsequently be blanked out from the Azure AD side. As an alternate solution, the administrator can set a particular character like "-" or a string "<blank>" instead of null fields on Azure. Updates using these characters or strings will be pushed to MiCollab via Cloudlink.

For removing the services like DID, External Number, etc. the administrator needs to update it to a random unique number. After the user is created with a service along with the provided random unique number, delete the service from MiCollab.

2.3 Setting up CloudLink Account for SCIM integration

Prerequisite : Provide a heads-up to the Customer IT administrator that SCIM Field Attribute mapping needs to be planned. The actual mappings will be set up in [Step 14](#) below, but they need to be aware of this requirement.

Follow steps mentioned in Setting up a CloudLink Account for Integration ([Step 1](#) and [Step 2](#)) in Chapter 1, for setting up CloudLink Account. Once the Integration is done, at the bottom of the page you will find the option **Integrations**. Integrations will include Mitel and 3rd Party.

- Mitel Integrations include (not discussed here): MiCollab, MiTeam Meetings, and MiCC.

- 3rd Party Integrations will include Azure AD Sync as shown below:
- Select the **Add** button beside Azure AD Sync.
- Select **Done**.

Integrations

Search integrations

Mitel 3rd party


Azure AD Single Sign-On
 SSO for enterprises using Azure AD with Mitel's CloudLink based applications.
 Add


Azure AD Sync
 Synchronize users between your Azure AD and Mitel's CloudLink based applications.
 Add


Microsoft Office 365
 Allows Mitel Cloudlink to integrate with Microsoft Office 365
 ✓ Added

Done

At this point the Azure AD Sync setup has not been completed. Click on the **Settings** icon.

Integrations + Add new

MiCollab	
MiTeam Meetings 	
Azure AD Single Sign-On 	
Azure AD Sync 	

Click on **Complete setup**.

Integrations + Add new

Azure AD Sync	Complete setup 
---------------	---

Click on **Generate keys**.

Azure AD Sync

Before starting ensure you have an Azure AD subscription/ account, and have added an application object. For more information see online help.

It might be easier to have this portal and the Azure AD portal side-by-side as you will be copying and pasting information from this portal to the Azure AD portal.

Press the Generate keys button to create keys to copy to Azure AD SCIM provisioning. Only generate keys as needed.

 Generate keys

 Remove

Done

Click on **Copy** against the **Tenant URL** text field and **Secret Token** text field and save the values, as these values would be required to be entered on Azure portal SCIM app configuration.

The keys generated will be used by the customer site IT personal for the Azure AD part of this configuration. Copy the Tenant URL and Secret Token and send this information to the Customer IT person via Email.

Click **Done** to complete the configuration on CloudLink.

Note:

Click on **Generate Keys** button to create the keys and copy them to the Azure AD SCIM app.

Azure AD Sync

Before starting ensure you have an Azure AD subscription/ account, and have added an application object. For more information see online help.

It might be easier to have this portal and the Azure AD portal side-by-side as you will be copying and pasting information from this portal to the Azure AD portal.

Press the Generate keys button to create keys to copy to Azure AD SCIM provisioning. Only generate keys as needed.

 Generate keys

Copy and paste these values where needed in Azure AD SCIM provisioning

Tenant URL https://admin.eu.dev.api.mitel.io/2017-09-01/accounts/7...	Copied
Secret Token \$p%PVqD7hQ9aBdrf^yKScxs+AGEwHvC@	Copy

 Remove

Done

Admin Credentials

Admin Credentials

Azure AD needs the following information to connect to Mitel CloudLink's API and synchronize user data.

Tenant URL *

Secret Token

Azure AD Sync

Before starting ensure you have an Azure AD subscription/ account, and have added an application object. For more information see online help.

It might be easier to have this portal and the Azure AD portal side-by-side as you will be copying and pasting information from this portal to the Azure AD portal.

Press the Generate keys button to create keys to copy to Azure AD SCIM provisioning. Only generate keys as needed.

Copy and paste these values where needed in Azure AD SCIM provisioning

Tenant URL https://admin.eu.dev.api.mitel.io/2017-09-01/accounts/1...	Copy
Secret Token hEv@%B67RzX^M8dfkZKDwu+VHIC&#xyF	Copy

2.4 Setting up the Provisioning Server (Azure AD)

The information contained within this section on CloudLink or Azure does not follow MiCollab release cadences and content. The purpose of this section is to provide information on the basics of integrating CloudLink with Microsoft Azure AD for the provisioning and management of MiCollab users.

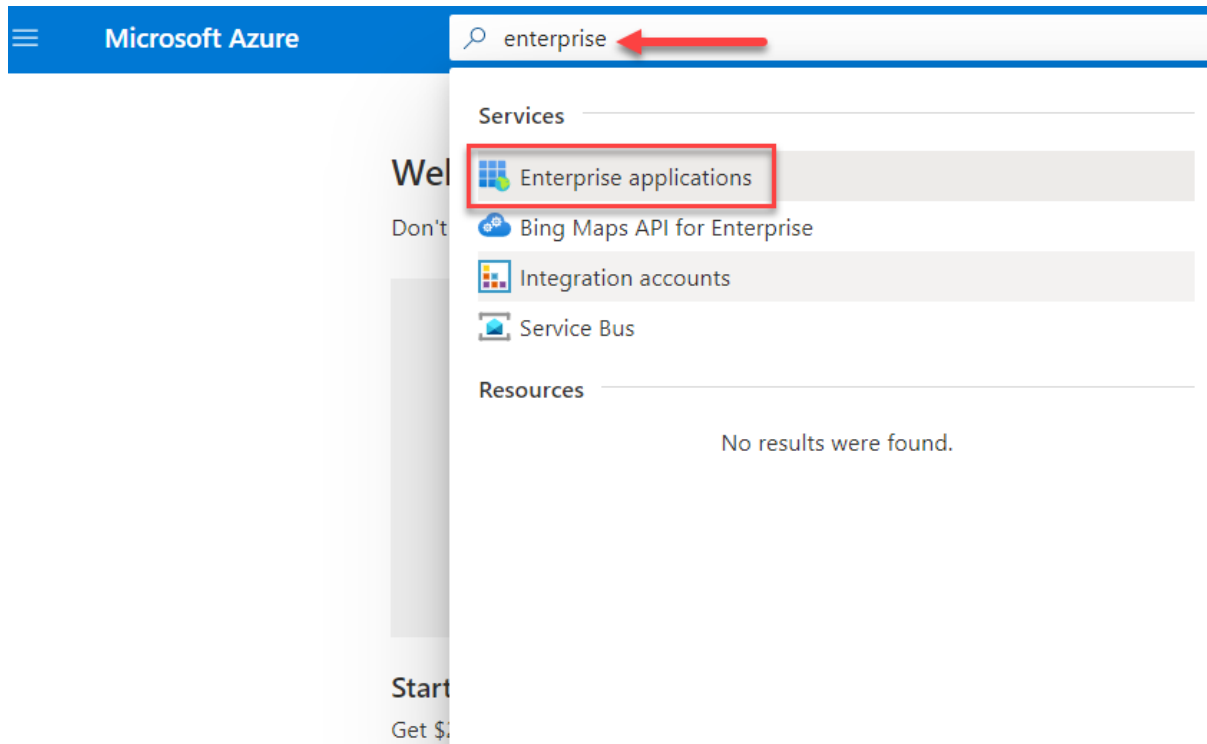
Note:

Role change and Directory Number change are not allowed when done through Azure AD; similarly, they are not allowed in the case of AD synchronization.

2.5 Setting up Mitel SCIM Enterprise Application

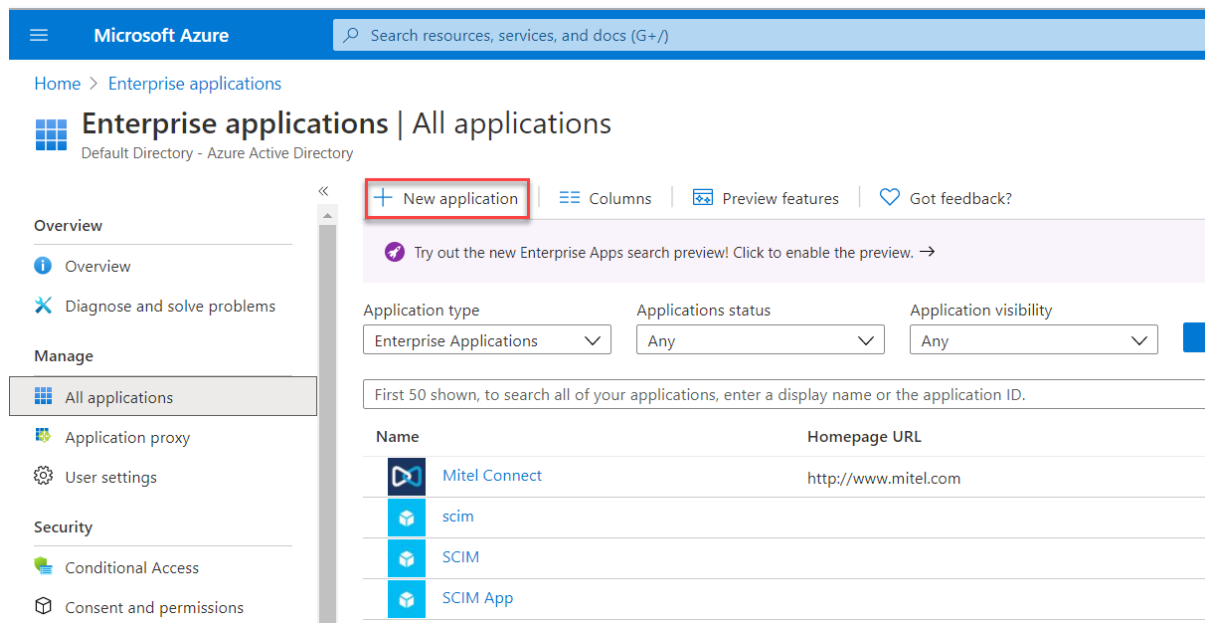
To set up the Mitel SCIM Enterprise app, the administrator should have access to the Azure Portal.

1. In the Azure portal, search for **Enterprise applications**.

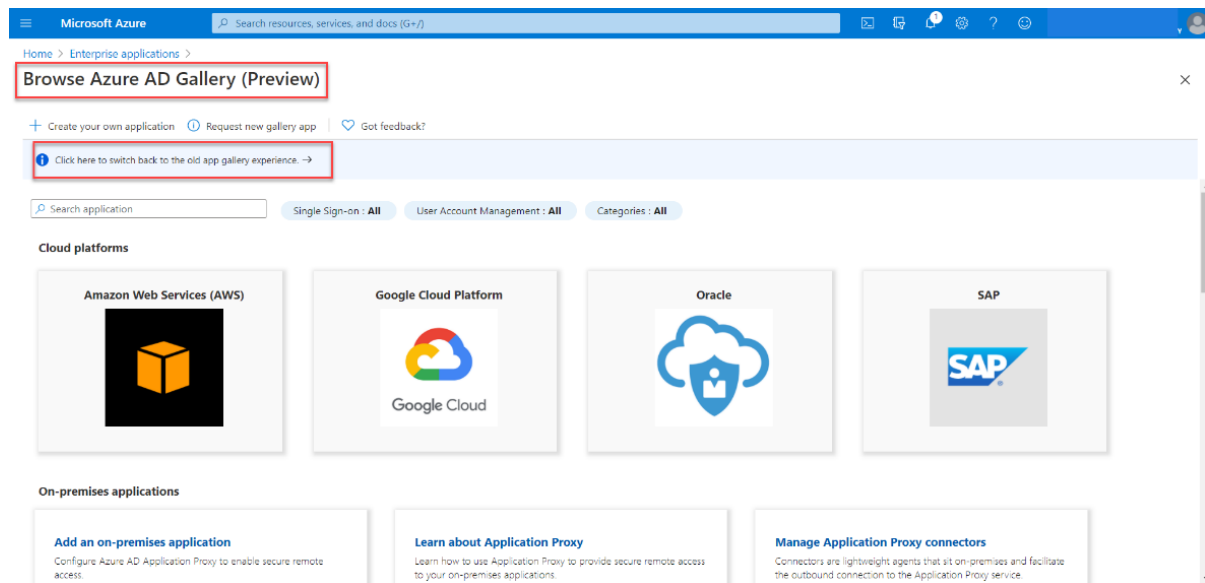


2. Once the Enterprise application opens, click on the **New application** option.

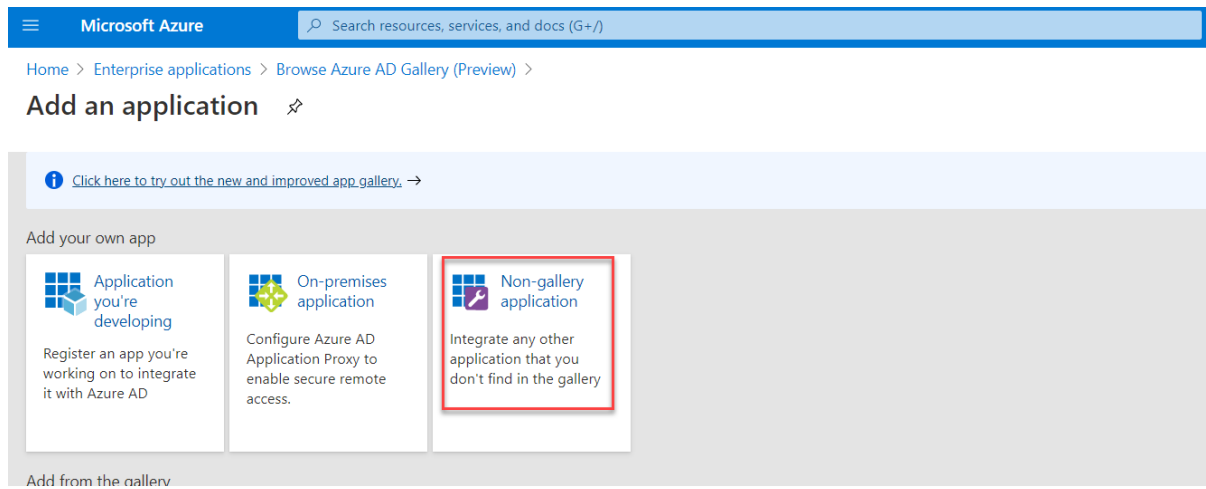
The **Browse Azure AD Gallery** opens.



3. In the **Browse Azure AD Gallery (Preview)**, switch to the old app gallery experience.



4. Select the **Non-gallery application**.



5. Under the **Add your own application** field, add the application with a name of your preference like Mitel SCIM and click on **Add**.

You can click on **Learn more** under **Automatic User Provisioning with SCIM** to learn more on SCIM.

Microsoft Azure

Search resources, services, and docs (G+/I)

Home > Enterprise applications > Browse Azure AD Gallery (Preview) > Add an application >

Add your own application

Name * ⓘ

SCIM-Test ✓

Once you decide on a name for your new application, click the "Add" button below and we'll walk you through some simple configuration steps to get the application working.

Supports: ⓘ

- SAML-based single sign-on
[Learn more](#)
- Automatic User Provisioning with SCIM**
[Learn more](#)
- Password-based single sign-on
[Learn more](#)

Add

6. Click on the configured SCIM application to set it up with CloudLink.

The screenshot shows the Microsoft Azure portal's 'Enterprise applications' page. The left-hand navigation pane is expanded to the 'Manage' section, where 'All applications' is selected. The main content area shows a list of applications. The 'SCIM-Test' application is highlighted with a red rectangular box. Above the list, there are filters for 'Application type' (set to 'Enterprise Applications'), 'Applications status' (set to 'Any'), and 'Application visibility' (set to 'Any'). A search bar is also present with the text 'First 50 shown, to search all of your applications, enter a display name or the application ID.'

7. Click on **Provisioning**, followed by **Get started**.

The screenshot shows the 'SCIM-Test | Provisioning' page in the Microsoft Azure portal. The left-hand navigation pane is expanded to the 'Provisioning' option, which is highlighted with a red rectangular box. The main content area features a large illustration of a laptop and a cloud. Below the illustration, the text reads: 'Automate identity lifecycle management with Azure Active Directory. Automatically create, update, and delete accounts when users join, leave, and move within your organization. [Learn more.](#)' A blue 'Get started' button is highlighted with a red rectangular box. At the bottom of the page, there are three links: 'What is provisioning?', 'Plan an application deployment.', and 'Configure automatic provisioning.'

8. Select the **Provisioning Mode** as Automatic from the drop-down list. Fill in the fields for **Tenant URL** and **Secret Token** from CloudLink. (Refer to previous section for details. These values were copied and

saved by the user). Refer to the [Tenant URL](#) details mentioned in the previous section. These values were copied and saved by the user.

Microsoft Azure

Home > Enterprise applications > SCIMDoc >

Provisioning

Save Discard

Provisioning Mode

Automatic

Use Azure AD to manage the creation and synchronization of user accounts in SCIMDoc based on user and group assignment.

Admin Credentials

Admin Credentials

Azure AD needs the following information to connect to SCIMDoc's API and synchronize user data.

Tenant URL *

https://admin.eu.dev.api.mitel.io/2017-09-01/accounts/7854f5e3-b99f-4c0f-a0dc-74e78771c7fa/v2/scim

Secret Token

Test Connection

Mappings

9. Click on **Test Connection**. Test connection should be successful.

Microsoft Azure

Home > Enterprise applications > SCIMDoc >

Provisioning

Save Discard

Provisioning Mode

Automatic

Use Azure AD to manage the creation and synchronization of user accounts in SCIMDoc based on user and group assignment.

Admin Credentials

Admin Credentials

Azure AD needs the following information to connect to SCIMDoc's API and synchronize user data.

Tenant URL *

https://admin.eu.dev.api.mitel.io/2017-09-01/accounts/7854f5e3-b99f-4c0f-a0dc-74e78771c7fa/v2/scim

Secret Token

Test Connection

Mappings

Settings

Testing connection to SCIMDoc: The supplied credentials are authorized to enable provisioning.

10. Under Mappings click on **Save your credentials to create mappings**.

Microsoft Azure Search resources, services, and docs (G+)

Home > Enterprise applications > scim >

Provisioning

Save ✕ Discard

Provisioning Mode: Automatic

Use Azure AD to manage the creation and synchronization of user accounts in scim based on user and group assignment.

Admin Credentials

Admin Credentials

Azure AD needs the following information to connect to scim's API and synchronize user data.

Tenant URL * ✓

Secret Token

Test Connection

Mappings

Mappings

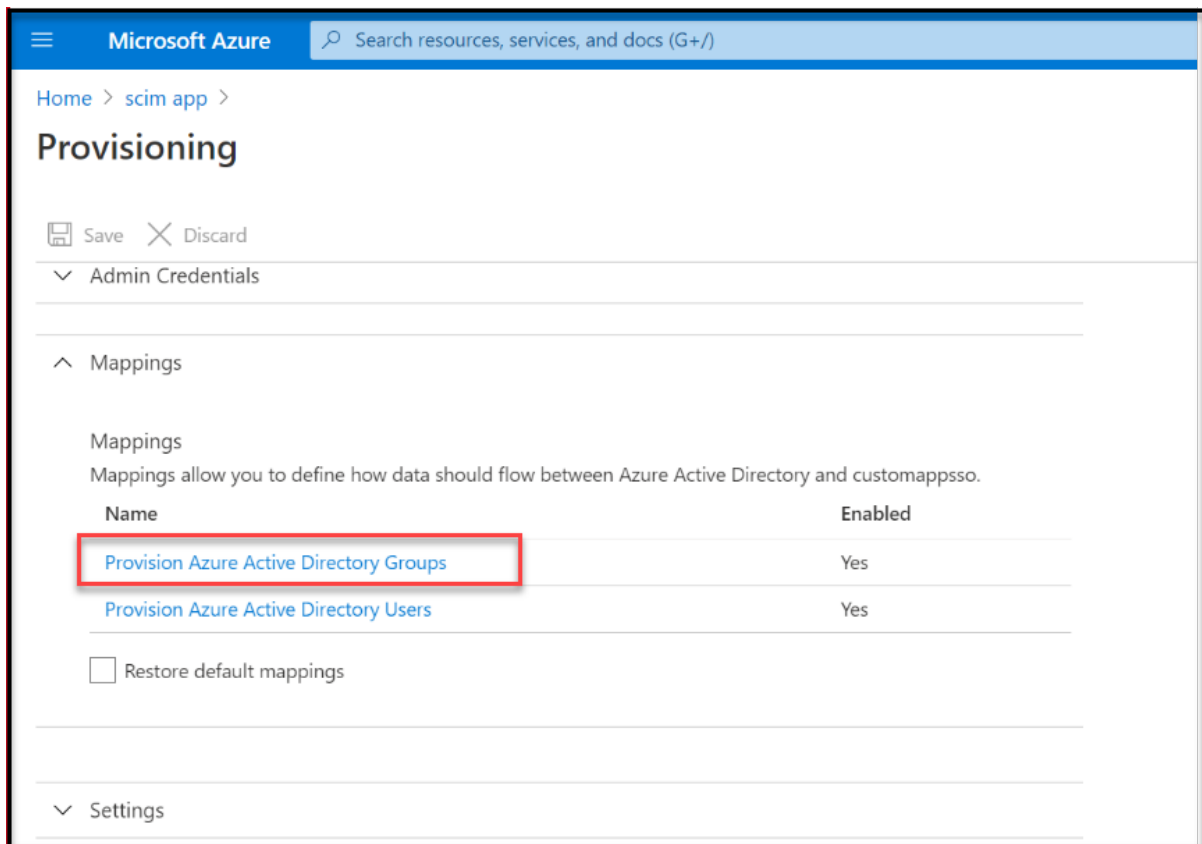
Mappings allow you to define how data should flow between applications.

Name	Enabled
Save your credentials to create mappings	

☐ Restore default mappings

Settings

Notification Email

11. Click on Provision Azure Active Directory Groups.

Microsoft Azure Search resources, services, and docs (G+)

Home > scim app >

Provisioning

Save Discard

Admin Credentials

Mappings

Mappings

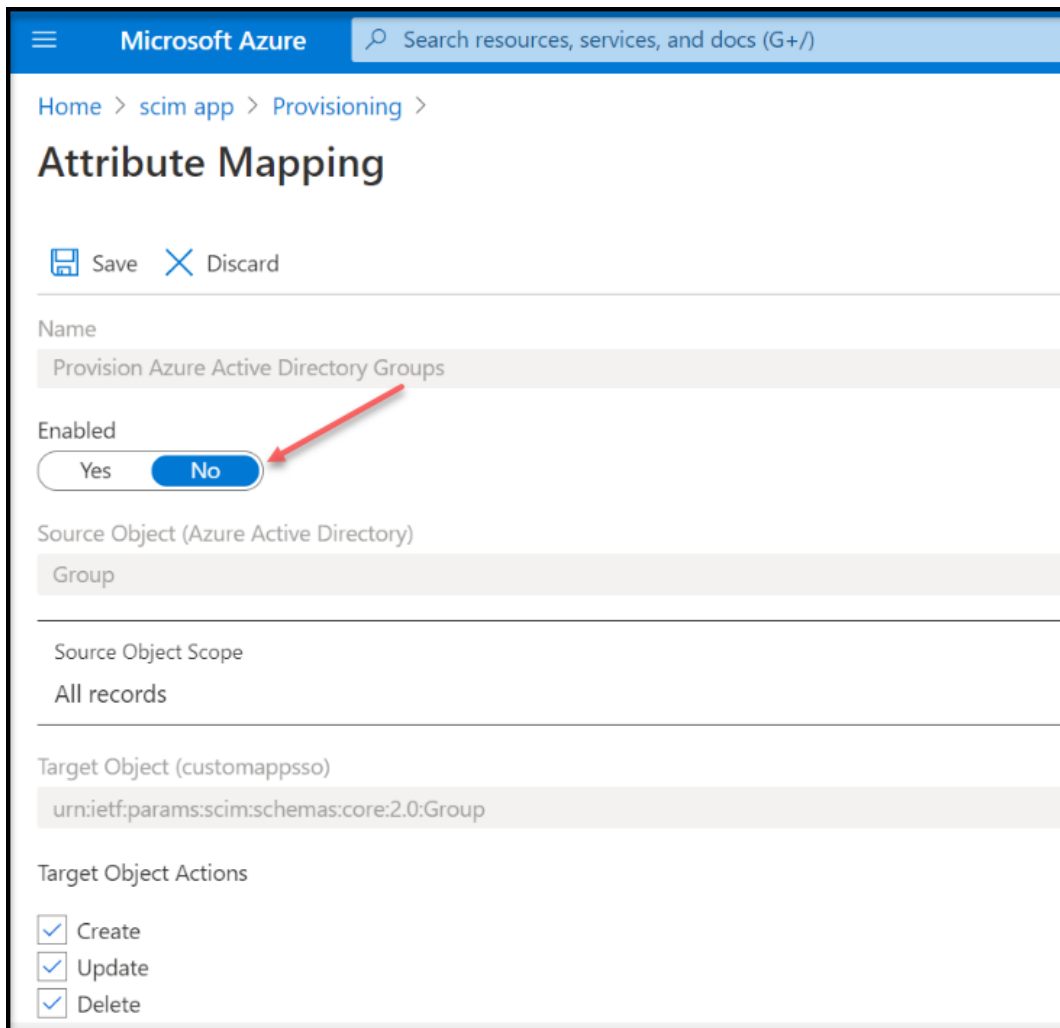
Mappings allow you to define how data should flow between Azure Active Directory and customappsso.

Name	Enabled
Provision Azure Active Directory Groups	Yes
Provision Azure Active Directory Users	Yes

☐ Restore default mappings

Settings

12. Under Attribute Mapping, turn off the **Enabled** and click **Save**.



Microsoft Azure Search resources, services, and docs (G+)

Home > scim app > Provisioning >

Attribute Mapping

 Save  Discard

Name
Provision Azure Active Directory Groups

Enabled
☐ Yes ☒ No

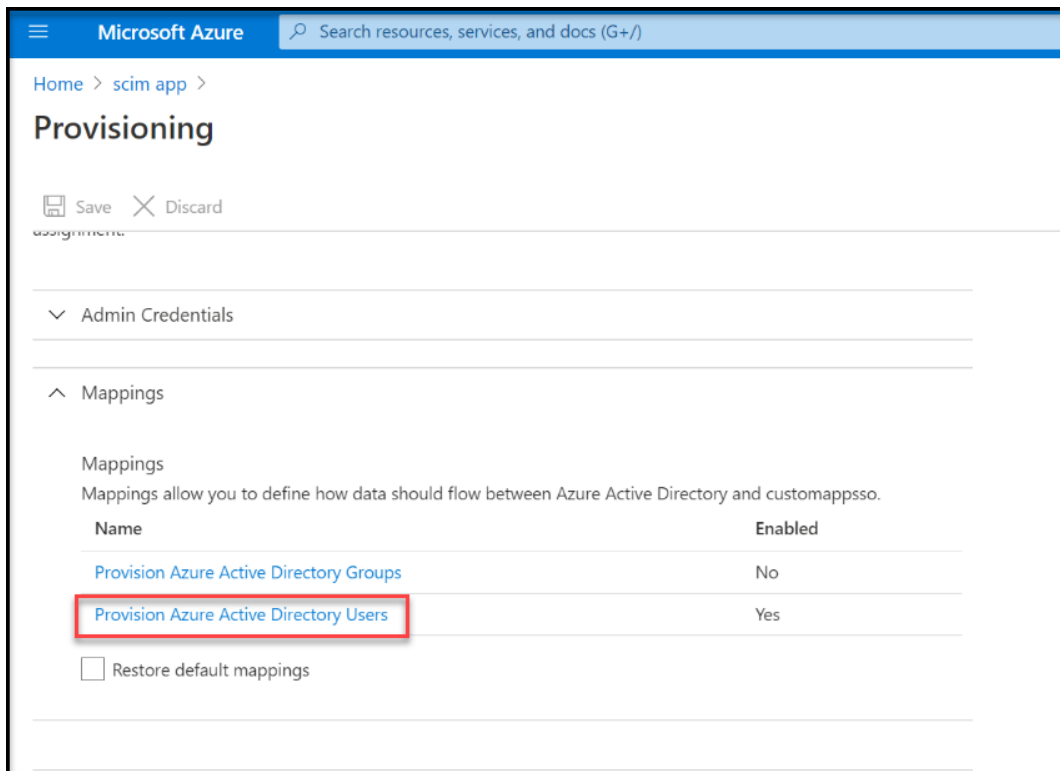
Source Object (Azure Active Directory)
Group

Source Object Scope
All records

Target Object (customappsso)
urn:ietf:params:scim:schemas:core:2.0:Group

Target Object Actions

- ☒ Create
- ☒ Update
- ☒ Delete

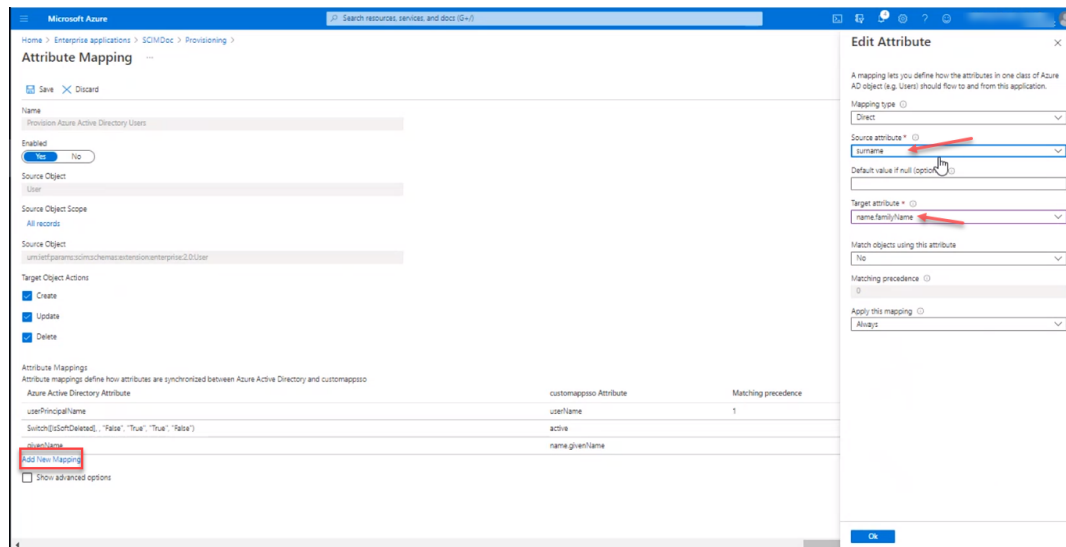
13. Click on Provision Azure Active Directory Users.**14. Add/Edit Attribute mappings**

Add/Edit source to target attribute mappings. All the target attributes will be auto-populated in Azure.

Note:

Edit attribute mapping can be done for AAD users and not for AAD groups.

Mappings determine the user attributes that flow between Azure AD and the MiCollab application (via CloudLink SCIM) when user accounts are provisioned or updated.

**Note:**

The following SCIM attributes are supported for programming from the provisioning server (in this case Azure AD). All the mandatory fields mentioned below in the table should be programmed from Azure. In absence of mandatory fields, the updates will first land in the detained queue and require Manual Intervention to save on MiCollab.

Table 1: Attribute Mapping for 'only' CloudLink Attributes

These attributes are mandatory and only needed by Cloudlink, and therefore they should not be deleted nor any changes should be made.

Azure AD Attributes	SCIM/Target Attributes	MiCollab Attributes
Switch([IsSoftDeleted], , "False", "True", "True", "False")	active	

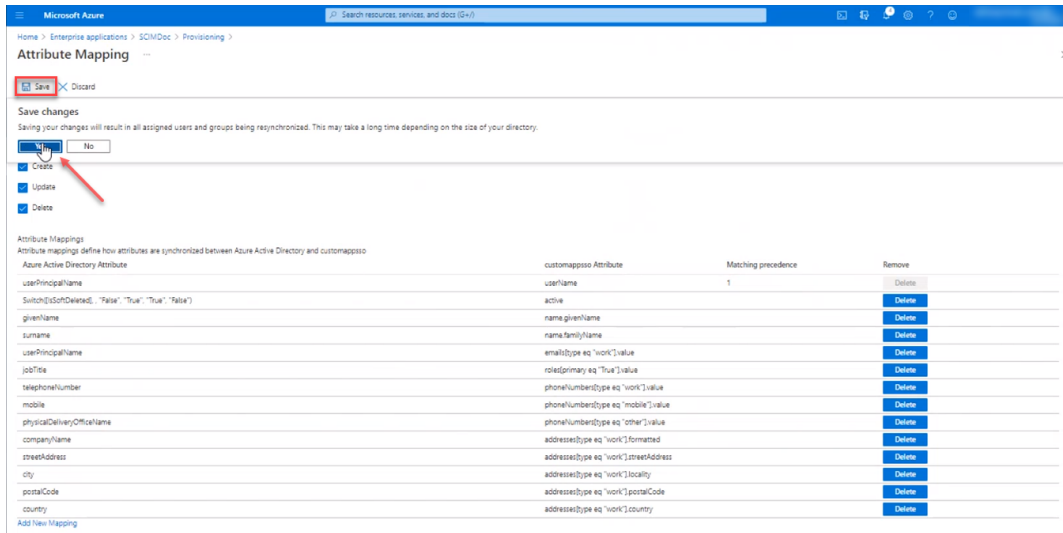
Azure AD Attributes	SCIM/Target Attributes	MiCollab Attributes
userPrincipalName	userName	
telephoneNumber	phoneNumbers[type eq "work"].value	Primary Phone Directory Number (DN

Table 2: Attribute Mappings

Azure AD Attributes	SCIM/Target Attributes	MiCollab Attributes
givenName	name.givenName	First Name
surName	name.familyName	Last Name
userPrincipalName	emails[type eq "work"].value	Email address
Extension attribute or any available UI attribute	roles[primary eq "True"].value	Role
mobile	phoneNumbers[type eq "mobile"].value	Mobile
Extension attribute or any available UI attribute	phoneNumbers[type eq "other"].value	DID
physicalDeliveryOfficeName	address[type eq "work"].formatted	Company name
Extension attribute or any available UI attribute	address[type eq "work"].streetAddress	Street Address
Extension attribute or any available UI attribute	address[type eq "work"].locality	City
Extension attribute or any available UI attribute	address[type eq "work"].postalCode	Postal Code

Azure AD Attributes	SCIM/Target Attributes	MiCollab Attributes
Extension attribute or any available UI attribute	address[type eq "work"].country	Country

15. Click on Save mapping.



16. Turn on the **Provisioning Status** and **Save** configuration to complete.

Microsoft Azure

Home > Enterprise applications > scim >

Provisioning

Save **Discard**

Mappings

Mappings allow you to define how data should flow between Azure Active Directory and customappsso.

Name	Enabled
Provision Azure Active Directory Groups	Yes
Provision Azure Active Directory Users	Yes

☐ Restore default mappings

Settings

Notification Email

☐ Send an email notification when a failure occurs

Status

Start and stop provisioning to scim, and view provisioning status.

Provisioning Status ☒ On ☐ Off

Current Status

Statistics to date

2.6 Setting up MiCollab for CloudLink-based Synchronization

1. If you have an On-Prem AD connection or any other IDS connection which is currently being used for user synchronization, you must disable the synchronization first, as only one source of synchronization is allowed. If On-Prem AD connection is only used for user synchronization and not for authentication, you may proceed for deletion.
2. Refer To add CloudLink Platform/Azure AD authentication for IDS step 1 to 6 for setting up CloudLink Integration and CloudLink Platform IDS.

- Click on the **Enable synchronization** checkbox and **Save**.

The screenshot shows the 'Integrated Directory Services' configuration window in MiCollab. The 'Directory server type' is set to 'CloudLink Platform'. The 'Enable synchronization' checkbox is unchecked, 'Enable authentication' is checked, 'Re-initialize on next cycle' is unchecked, and 'Defer all operations' is unchecked. The 'Save' button is highlighted.

- Once the Cloudlink-based synchronization is enabled, all existing users and new users created from the provisioning server (Azure AD) will be synced to MiCollab.
- Select **Defer all operations** to preview the synchronization updates in the detained updates queue. From the queue, you can view, apply, modify, or cancel (delete) the updates as required.
- Select **Re-initialize on next cycle** to re-initialize the user sync from CloudLink.

This option effectively forces a full synchronization on the next scheduled sync event. A full synchronization queries the directory server for the entire set of users. This option can be used to recover the MiCollab database from the directory server. It will most likely result in a large number of detained user updates.

- Once the IDS connection is made, a sync button is also provided to check for any database changes on the provisioning server and applies the updates to the MiCollab database. This might be required when changes are done on CloudLink (or provisioning server) when MiCollab is offline.

Note:

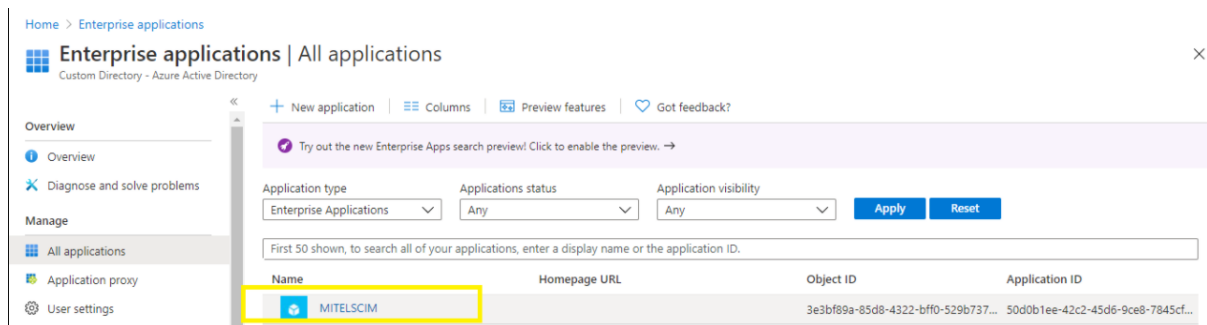
- Once the synchronization is enabled, the administrator will not be allowed to add a new user(s) from **Add**, and **Quick Add** options. Any new user addition and updates must be done from the provisioning server portal only. Refer to Table 1 Attribute Mappings for details on MiCollab attributes.
- Updates made from the provisioning server (Azure portal in this case) to MiCollab are synced at periodic intervals (few mins to few hours depending on the Azure AD configuration). To push the updates immediately, use the 'Provision on demand' feature from Azure portal.

2.7 Adding a user in Azure Mitel SCIM enterprise application

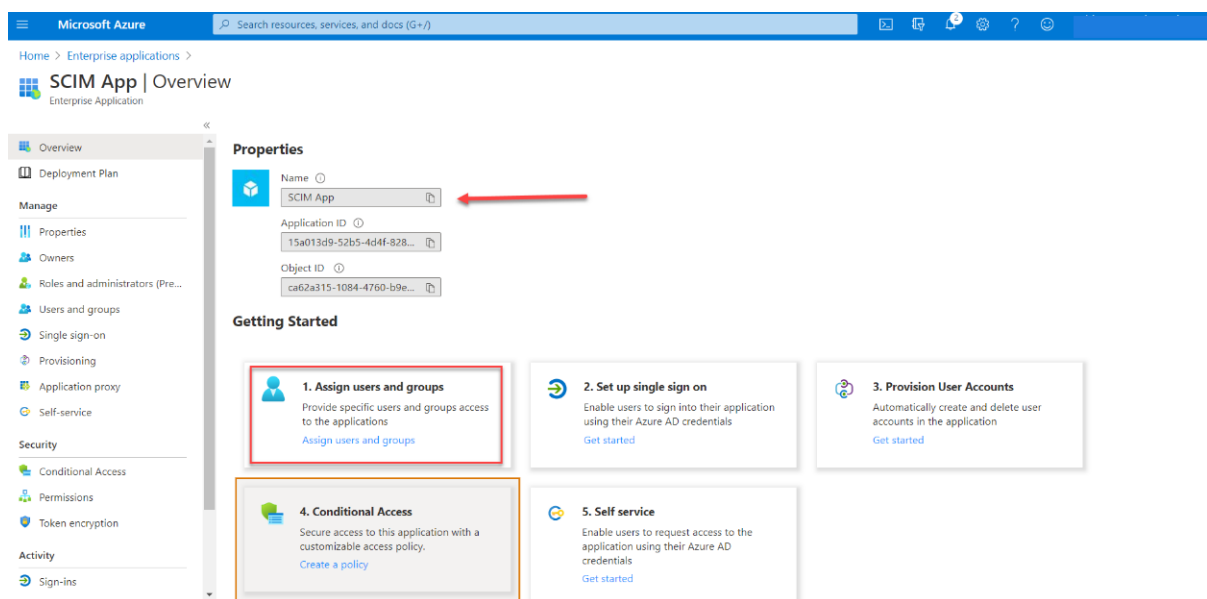
Prerequisites: The administrator needs to have an account in the azure portal (<https://portal.azure.com/>).

There are multiple ways to add users in Azure AD through UI, CSV import, PowerShell, etc. The user creation in Azure AD is not considered and described in this document. Please refer <https://portal.azure.com/> for details. This section only describes adding a user in Azure Mitel SCIM app once the user is created in Azure AD.

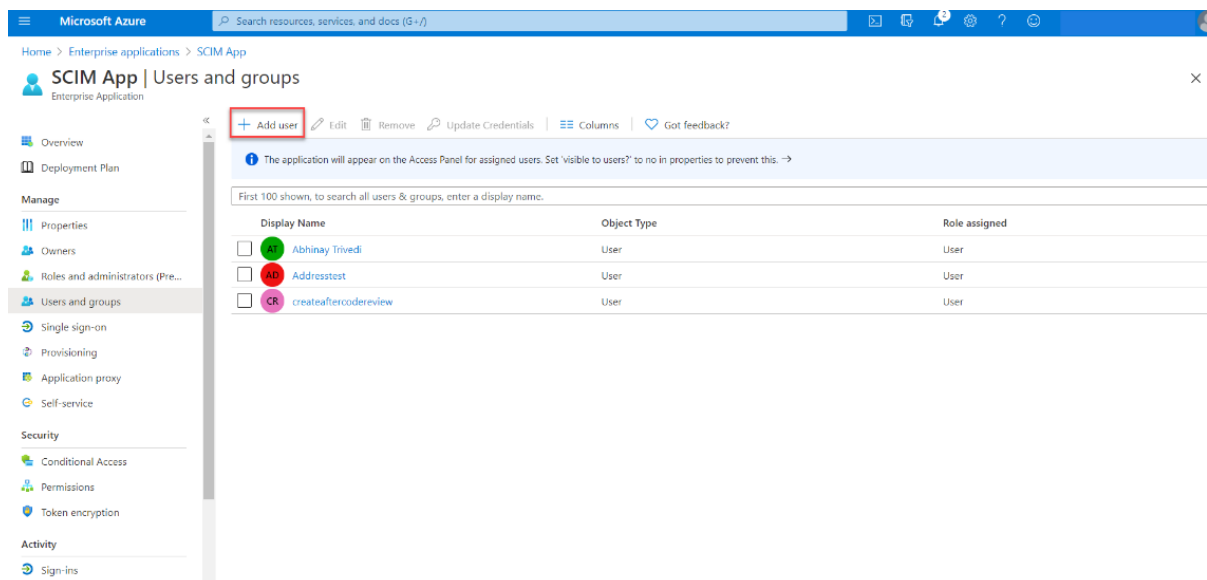
1. Under Enterprise Applications on Azure AD, select **Mitel SCIM**. To create a Mitel SCIM Application, refer to the section **Setting up Mitel SCIM Enterprise Application**.



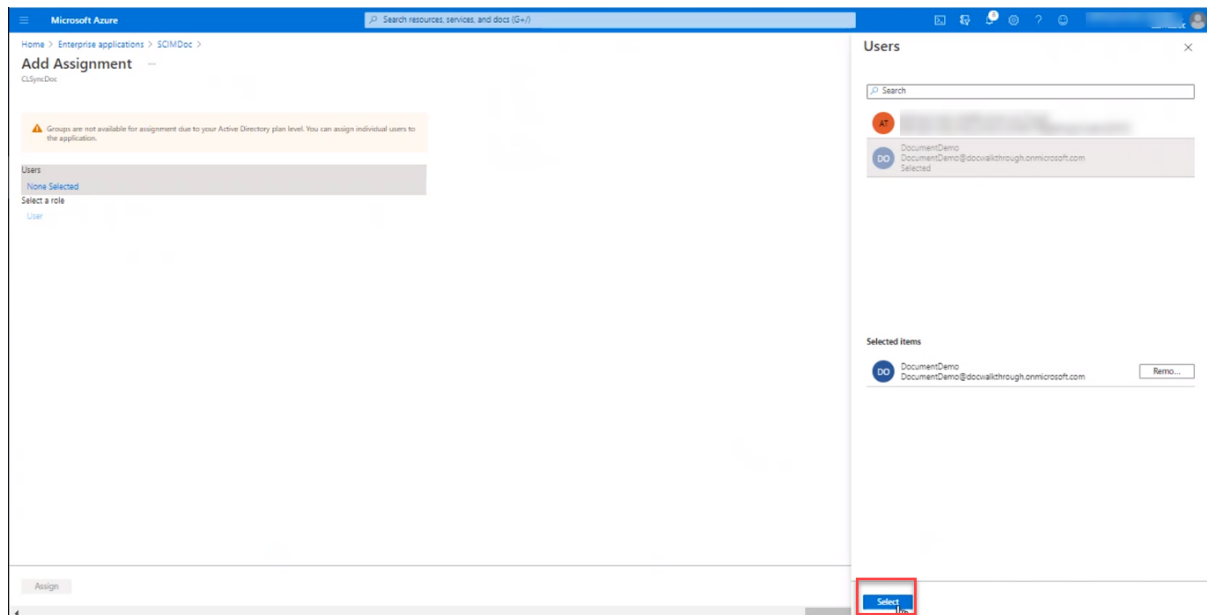
2. On the Mitel SCIM page, click on the **Assign users and groups** option.



3. Click **Add user**.



4. Search for the applicable users and **Select** the user.



5. Click **Assign**.

Home > Enterprise applications > scim app >

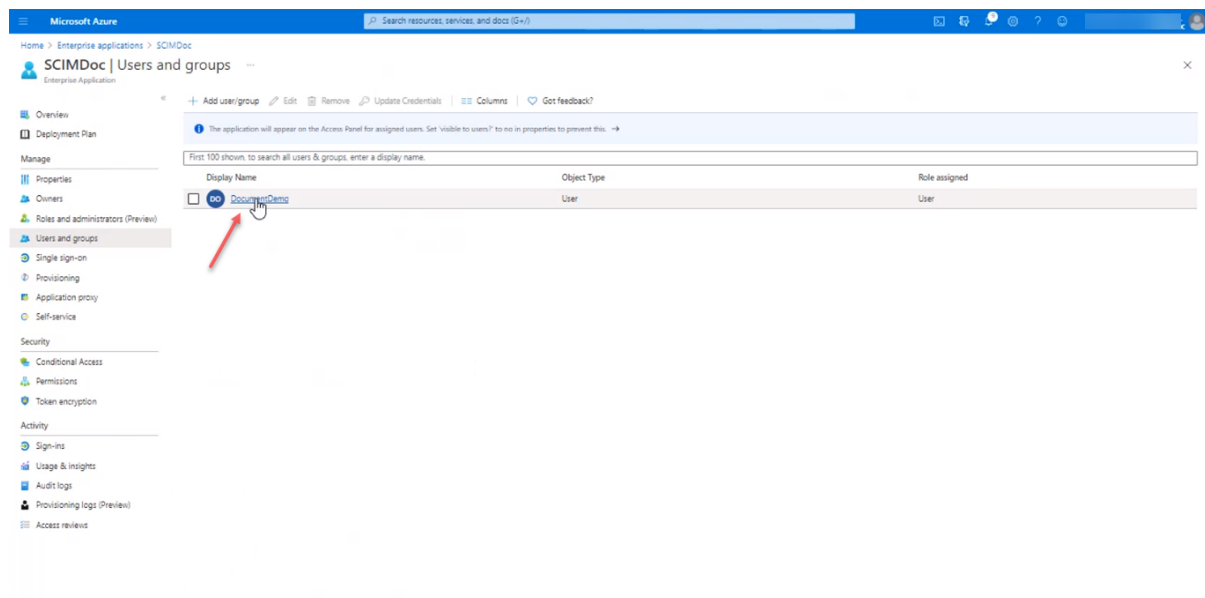
Add Assignment

HCL

Users and groups	>
1 user selected.	
Select a role	>
User	



6. User should List under Enterprise Application – **Mitel SCIM** as shown below.



Note:

- The last name of a user is not mandatory in Azure while it is mandatory in MiCollab. So, if the last name of the user is missing, in this scenario the user creation fails in MiCollab.
- If more than 64 characters are present in the Email ID (characters before @ and should not include @ and the domain part), the login ID will be truncated to 64 characters which will result in user creation failure.
- If Defer All Operations is selected under IDS, all users will be listed in detained queue list. In case the option is not selected, then only the failed users are listed.

2.8 Deleting a user that was provisioned by Azure AD

This section describes the procedure required to delete a user in MiCollab and CloudLink that was provisioned by Azure AD.

If the following procedure is not followed, the user will not be removed from CloudLink users which means in turn it will not send the delete command to MiCollab.

1. In Azure, under **Enterprise Applications**, click on the application that you have created.

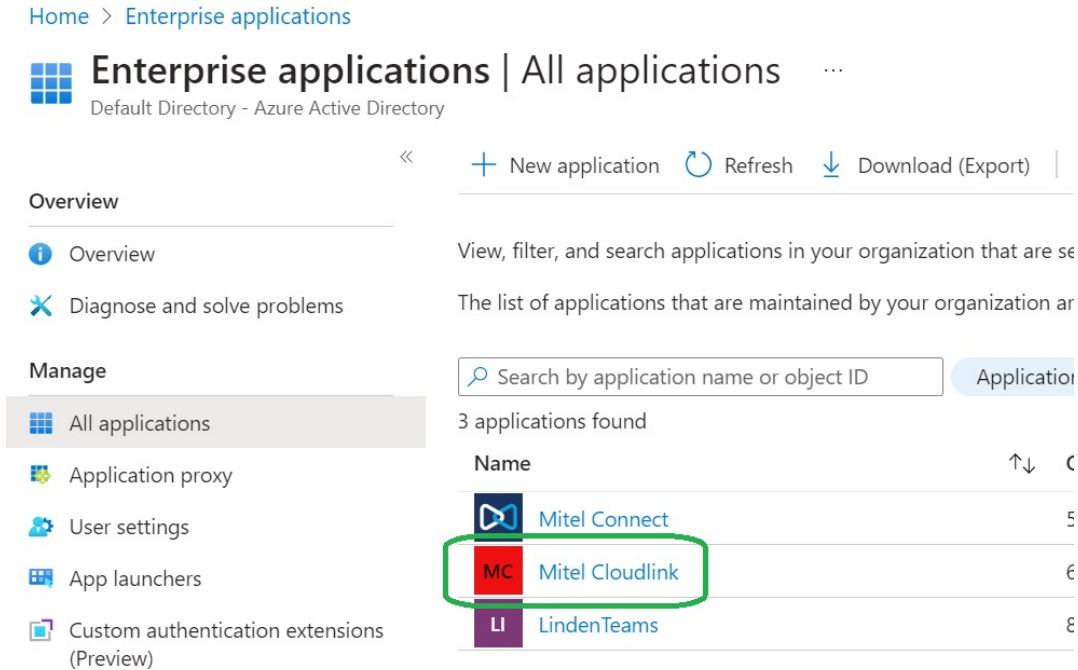


Figure 1: Enterprise Applications

2. On the selected application, click **Users and groups** from the left pane.

The **Users and groups** displays the list of users or groups that are provisioned in the application group.

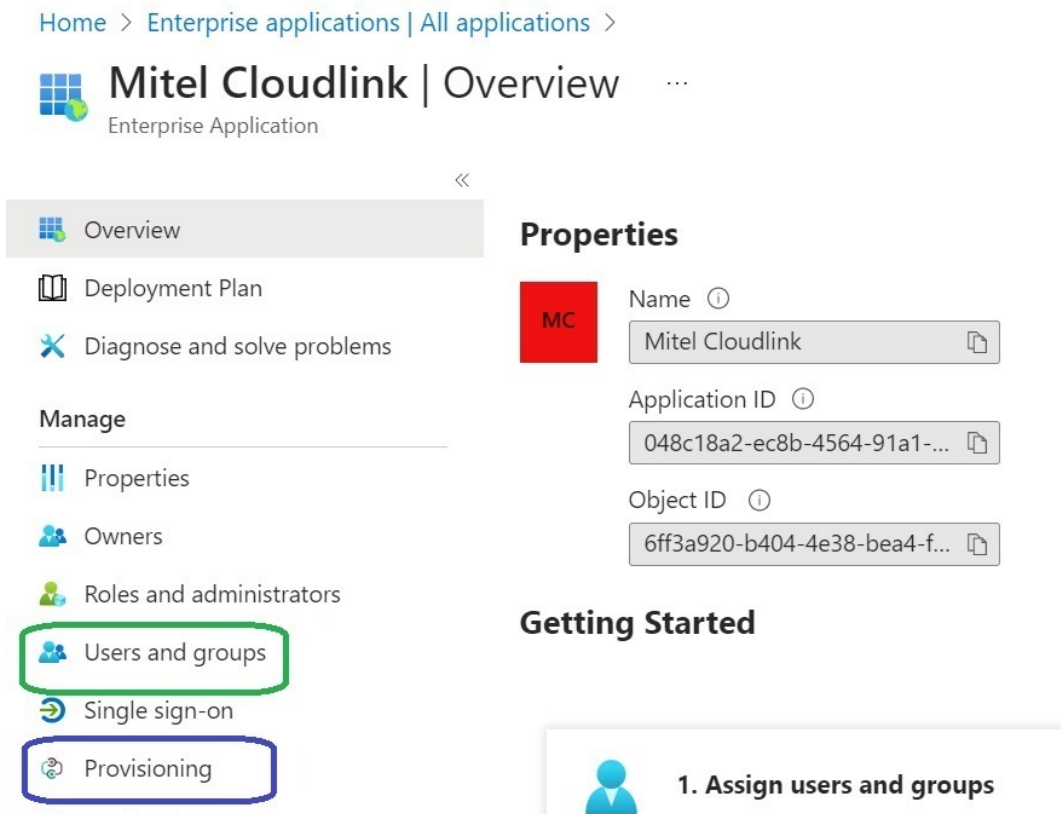


Figure 2: Mitel CloudLink - Overview

3. Search and select the users or groups that need to be removed, and then click **Remove**.

4. On the selected application, click **Provisioning** from the left pane.
5. Search and select the users or groups, and then click **Provision**.

The **Perform action** screen displays with the user details.

Perform action

Modified attributes (successful) Data flow

User 'Usain.Bolt@lindencoxoutlook.onmicrosoft.com' was updated in customappsso

Target attribute name	Source attribute value	Expression	Original target attribute val...	Modified target attribute v...
active	Switch("False", , "False", "True", ,...	Switch([IsSoftDeleted], , "False...		False
name.formatted	Join(" ", "Usain", "Bolt")	Join(" ", [givenName], [surnam...		Usain Bolt

Figure 3: Perform action

6. In the **Source attribute value**, the value should be **False**.
The user is removed from the CloudLink account.
7. In **MiCollab**, navigate to the **Integrated Directory Service** option.
8. Select the **mitel.io** option and click **Sync**.
A delete request is passed to MiCollab to action.
9. From the **Detained Queue**, select the deleted user checkbox and click **Save**.

The user has now been deleted from Azure AD, CloudLink, and MiCollab.

CloudLink and CloudLink Daemon updates for MiCollab

3

All the information pertaining to CloudLink Daemon, onboarding procedure, integration details, are available in the [CloudLink Daemon Solution Guide](#).

With the option to integrate CloudLink under CloudLink Integration in the MiCollab Settings panel and the CloudLink connection under CloudLink Daemon settings in the CloudLink panel, MiCollab administrators should take note of the following:

- **Integration Requirements** - The server must be connected to the CloudLink platform using the CloudLink Daemon settings in the Server Manager panel for the following.
 - **System Inventory and SWA Status** - When the server is connected to CloudLink platform using the controls in the CloudLink panel, the CloudLink Daemon will send system inventory to the CloudLink panel which can be accessed in the Mitel Administration portal.
 - **Remote management interfaces** - When the tunnels for MSL Server Manager, MiCollab administration web interface, and MBG administration web interface are started, the administrator can access these applications remotely in the Mitel Administration portal.

Once enabled, the launch buttons within the Mitel Administration console will open the remote management interfaces.

Note:

The procedure to connect the server to CloudLink platform in the CloudLink Daemon dashboard (in the CloudLink panel) is almost identical to the procedure to connect the MiCollab applications to CloudLink platform (in the MiCollab settings panel). The procedure for CloudLink Daemon integration is done in the new CloudLink panel under Configurations, in the Server Manager. See the *CloudLink Daemon Solution Guide* for detailed information.

- **Activation Process** - The procedure to connect to the CloudLink platform is identical, and in both cases the account administrator will log into the CloudLink in order to create the connection.
- **Separate Integrations**: Although similar, these are two distinct integrations. Both must be completed separately; connecting just one will not enable full functionality..
- **CloudLink Account**: Ensure that the same CloudLink account is used for connecting both integrations.
- **Single Server Onboarding**: Only one MiCollab server should be connected to a CloudLink account. Connecting multiple servers may result in the features not functioning properly.

Troubleshooting Errors, Alarms and Reports

4

This chapter contains the following sections:

- [Alarms](#)
- [Errors](#)
- [User Summary Reports](#)

4.1 Alarms

Table 3: List of Alarms and its Resolution

Scenario	Alarm Text	Severity	Resolution
When CL Adapter is down	ERROR – AUTHSERVICE_DOWN	High	Restart the CL Adapter service using command: service cladapter restart
When CL platform could not be connected from CL Adapter	ERROR – CL_CONNECT_FAILURE	High	Check the network connection between MiCollab and CL Platform
SAS rest service is down	ERROR – REST_CONNECT_FAILURE	High	Restart the SAS Rest service using command: service restserver restart
CL Adapter connection with CL platform breaks momentarily	ERROR – CL_CONNECT_FAILURE	Medium	Check the network connection between MiCollab and CloudLink Platform

4.2 Errors

Table 4: List of Errors and its Resolution

Scenario	Error String	Resolution
When Administrator tries to enable CL Auth from BUP	Failed to enable CloudLink Authentication.	Check the connection to CL platform. Restart mom-server using command service mom-server restart Contact Mitel Support with issue and log details
When Administrator tries to disable CL Auth from BUP	Failed to disable CloudLink Authentication.	
When Administrator tries to re-send CL Account setup Email	Failed to send CloudLink Account setup Email.	

4.3 User Summary Reports

This report lists the following information for the MiCollab users:

- User's First Name
- User's Last Name
- Email Address
- UCC Bundle
- Department
- Location

Table 5: External references

Serial number	Description	External Link
1	This is an attribute mapping link for Azure AD Admin programming. The AD attribute can be configured via the Azure AD portal.	https://docs.microsoft.com/en-us/powershell/azure/active-directory/using-extension-attributes-sample?view=azureadps-2.0
2	CloudLink documentation for setting up Azure AD Sync	https://www.mitel.com/en-ca/document-center/technology/cloudlink/all-releases/en/cloudlink-accounts-html
3	MiCollab Solution Document - CloudLink	https://www.mitel.com/document-center/applications/collaboration/micollab/micollab-server/913/en/micollab-cloudlink-solution-document
4	Azure portal	https://portal.azure.com/#home

