

# Microsoft Entra ID Integration Guide

Yeastar P-Series Cloud Edition

Version: 1.0

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# Microsoft Entra ID (Azure Active Directory) Integration Guide

Microsoft Entra ID (formerly Azure Active Directory or Azure AD) is a cloud-based identity and access management service. By integrating Yeastar P-Series Cloud Edition with Microsoft Entra ID, you can synchronize the users and groups from Microsoft Entra ID to PBX, and allow the synced users to securely log in to Linkus UC Clients with Single Sign-on (SSO) by their Microsoft accounts.

## Requirements

- **Microsoft Entra ID Edition:** Free, Office 365 apps, Premium P1, or Premium P2
- **PBX Server:** Version 84.8.0.25 or later



### **Important:**

**Outlook contacts synchronization** and **Teams user presence synchronization** are only available for version 84.10.0.30 or later.

## Key features

The integration of Yeastar P-Series Cloud Edition and Microsoft Entra ID provides the following key features:

### **User and group synchronization**

The integration provides one-way synchronization, mapping the users and groups from Microsoft Entra ID to PBX's directory. Changes made on the synced users and groups within the Microsoft Entra ID will be automatically updated to PBX, thus implementing automated administration.

### **Auto extension assignment for users synced from Microsoft Entra ID**

PBX automatically creates and assigns extensions for the synced users, via which the users can utilize the unified communications features of the PBX.

### **Single Sign-on (SSO)**

PBX supports a secure Single Sign-on (SSO) feature, allowing the synced users to securely log in to Linkus UC Clients by their Microsoft accounts.

## **Outlook contacts synchronization**

One-way Synchronization of Outlook contacts to PBX and Linkus UC Clients, including personal Outlook contacts and shared contacts from Outlook shared mailboxes.

## **Teams user presence synchronization**

Automatically synchronize the Teams user presence of the synced users' to their PBX extension presence.

## **Objectives**

This integration guide provides detailed instructions on how to configure and manage Microsoft Entra ID integration.

### **Set up Microsoft Entra ID integration**

- [Integrate Yeastar P-Series Cloud Edition with Microsoft Entra ID](#)
- [Synchronize Users from Microsoft Entra ID to Yeastar P-Series Cloud Edition](#)
- [Synchronize Groups from Microsoft Entra ID to Yeastar P-Series Cloud Edition](#)
- [Synchronize Microsoft Outlook Contacts to Yeastar P-Series Cloud Edition](#)
- [Enable Microsoft Teams User Presence Synchronization](#)
- [Allow Users to Log in to Linkus UC Clients with SSO](#)

### **Manage Microsoft Entra ID integration**

- [Schedule Automatic Directory Synchronization](#)
- [Manually Perform a Directory Synchronization](#)
- [Update Client Secret for Microsoft Entra ID Integration](#)
- [Pause Microsoft Entra ID Synchronization](#)
- [Disable Microsoft Entra ID Integration](#)
- [Disconnect Microsoft Entra ID Integration](#)

# Set up Microsoft Entra ID Integration

## Integrate Yeastar P-Series Cloud Edition with Microsoft Entra ID

This topic describes how to integrate Yeastar P-Series Cloud Edition with Microsoft Entra ID (Azure Active Directory) .

### Requirements

- **Microsoft Entra ID Edition:** Free, Office 365 apps, Premium P1, or Premium P2
- **PBX Server:** Version 84.8.0.25 or later

### Prerequisites

Before you begin, make sure the followings are ready:

- Your organization already has an Microsoft Entra tenant.
- Use a Microsoft account with **Global Administrator** privilege to implement the integration.

### Procedure

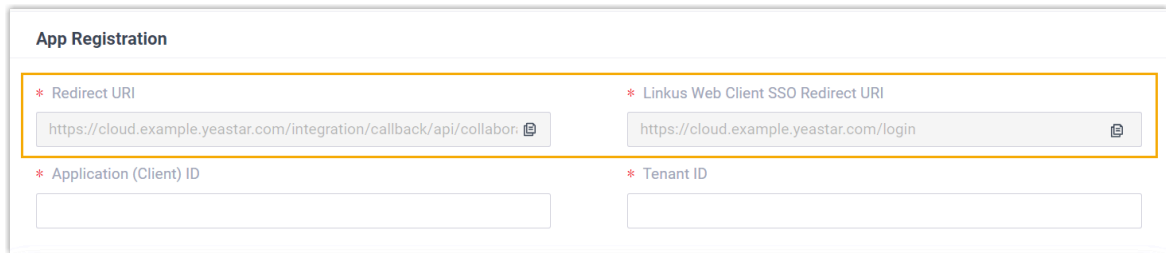
- [Step1. Obtain redirect URIs from PBX](#)
- [Step2. Register an application in Microsoft Entra tenant](#)
- [Step3. \(Optional\) Add SSO redirect URI to the Microsoft Entra application](#)
- [Step4. Grant permissions to the Microsoft Entra application](#)
- [Step5. Generate a client secret for the Microsoft Entra application](#)
- [Step6. Connect PBX and Microsoft Entra ID](#)

### Step1. Obtain redirect URIs from PBX

Obtain redirect URIs from Yeastar P-Series Cloud Edition, you will need the information when configuring a Microsoft Entra application for the integration.

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. Click **Integrate** beside the **Microsoft 365**.

3. In the **App Registration** section, take note of the following redirect URIs.



**App Registration**

\* Redirect URI:

\* Linkus Web Client SSO Redirect URI:

\* Application (Client) ID:

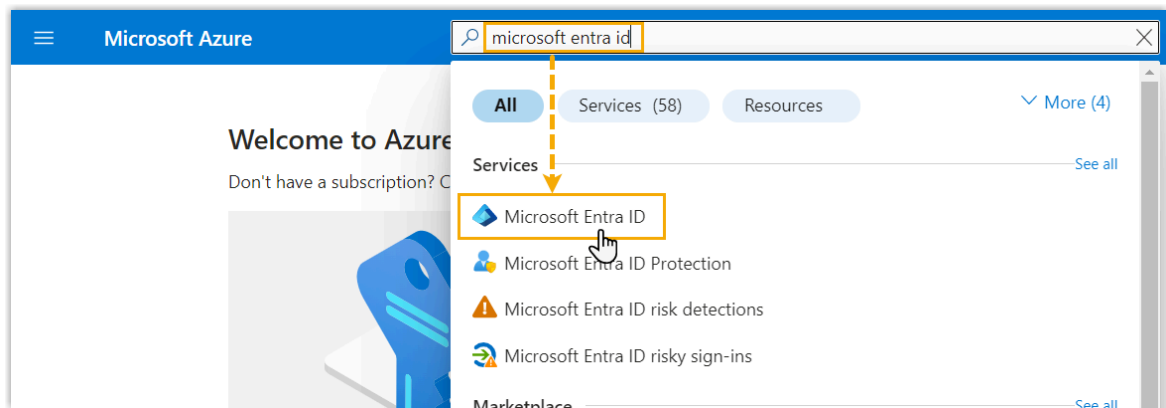
\* Tenant ID:

- **Redirect URI:** Used to specify the location to which you are redirected after the integration authentication is completed.
- **Linkus Web Client SSO Redirect URI:** Used to set up the Single Sign-on (SSO) feature of Linkus Web Client.

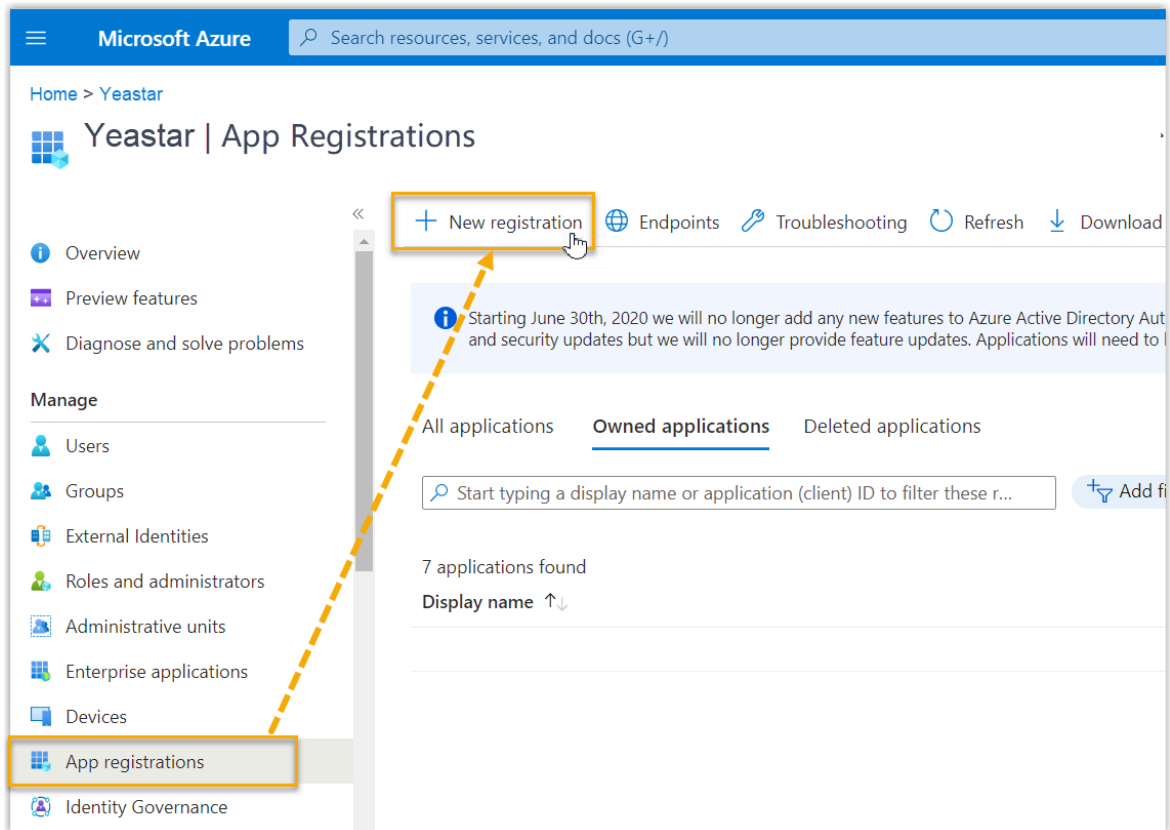
## Step2. Register an application in Microsoft Entra tenant

Register a Microsoft Entra application that will be used to connect Yeastar P-Series Cloud Edition and Microsoft Entra ID.

1. Log in to [Microsoft Azure Portal](#) with the **Microsoft Global Administrator account**.
2. In the search bar, search and select **Microsoft Entra ID** service to enter your organization's directory.



3. On the left navigation bar of organization's directory, go to **App registrations**, then click **New registration**.



4. In the **Register an application** page, do as follows:

Microsoft Azure

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

Home > Yeastar | App registrations

## Register an application

**\* Name**

The user-facing display name for this application (this can be changed later).

Yeastar\_P\_series\_PBX ✓

**Supported account types**

Who can use this application or access this API?

☒ Accounts in this organizational directory only (Yeastar - Single tenant)

☐ Accounts in any organizational directory (Any Azure AD directory - Multitenant)

☐ Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)

☐ Personal Microsoft accounts only

[Help me choose...](#)

**Redirect URI (optional)**

We'll return the authentication response to this URI after successfully authenticating the user. Providing this now is optional and it can be changed later, but a value is required for most authentication scenarios.

Select a platform ▼ https://cloud.example.yeastar.com/integration/callback/api/collabora...

Public client/native (mobile & desktop)

Web

Single-page application (SPA)

[Platform Policies](#)

**Register**

- a. Enter the registration information of the application.
  - **Name:** Specify a name to help you identify the application.
  - **Supported account types:** Select **Accounts in this organizational directory only**.
  - **Redirect URI:** In the **Select a platform** drop-down list, select **Web**, then paste the [Redirect URI](#) obtained from the PBX.
- b. Click **Register**.

A Microsoft Entra application is registered successfully.

The **Application (client) ID** and **Directory (tenant) ID** of the application is displayed on the **Overview** page. Note them down as you will need to fill them into the PBX later.

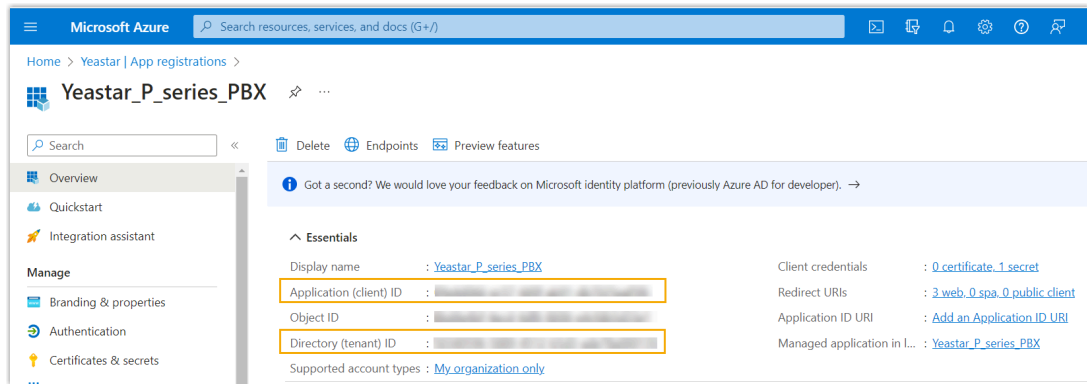


**Note:**





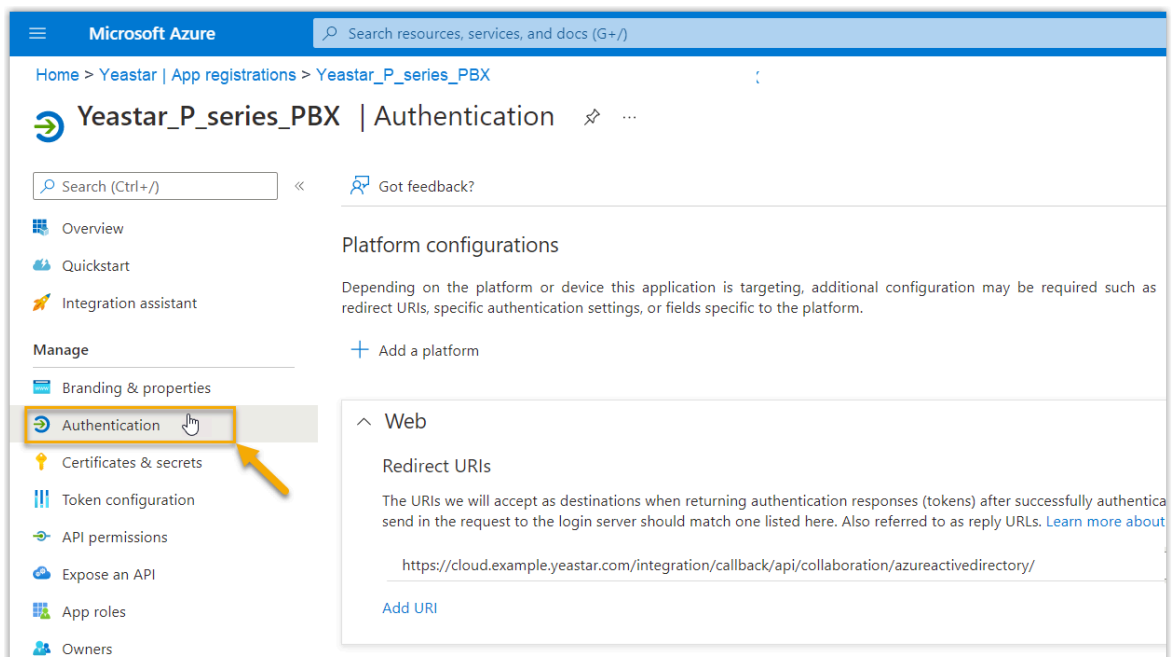
The **Directory (tenant) ID** is required if your PBX server is 84.10.0.30 or later.



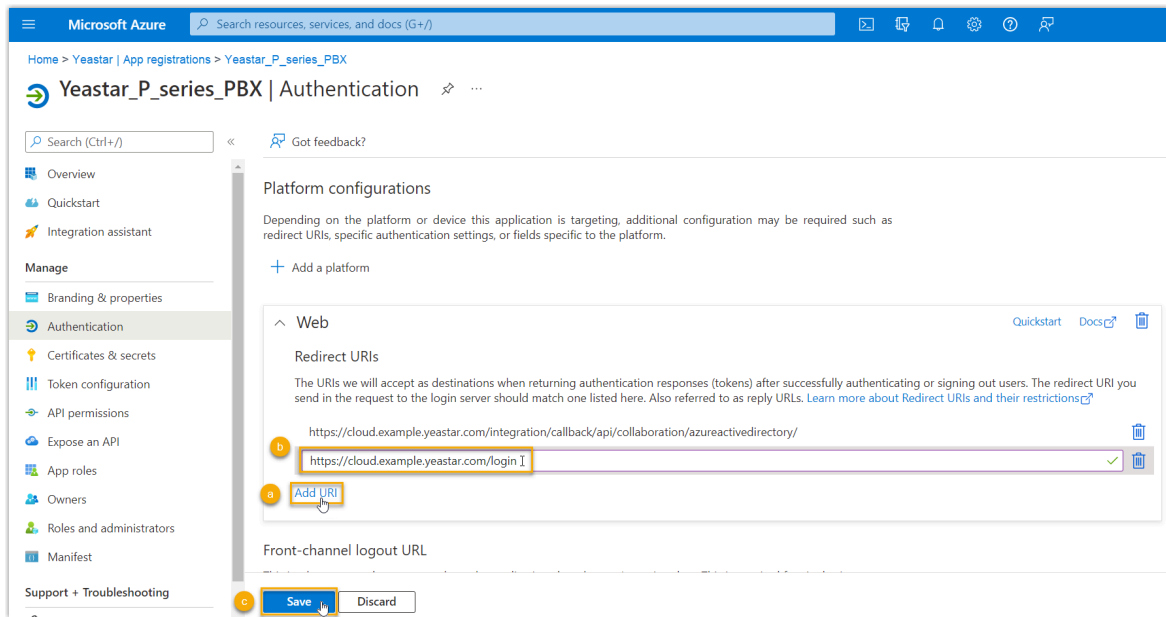
### Step3. (Optional) Add SSO redirect URI to the Microsoft Entra application

If you want to implement Single Sign-on (SSO) to allow the users synced from Microsoft Entra ID to log in to Linkus Web Client by their Microsoft accounts, you need to add the Linkus Web Client SSO Redirect URI to the Microsoft Entra application.

1. On the left navigation bar of the Microsoft Entra application, go to **Authentication**.



2. Add the SSO Redirect URI of Linkus Web Client.



- a. On the **Authentication** page, click **Add URI** in the **Web** section.
- b. Paste the [Linkus Web Client SSO Redirect URI](#) obtained from the PBX.
- c. Click **Save**.

## Step4. Grant permissions to the Microsoft Entra application

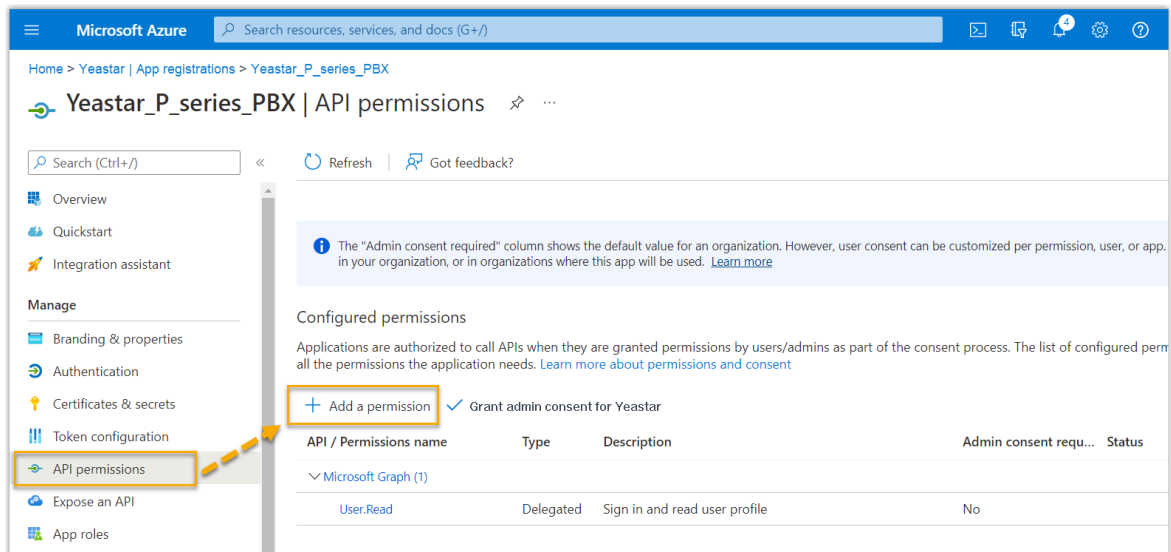


### Important:

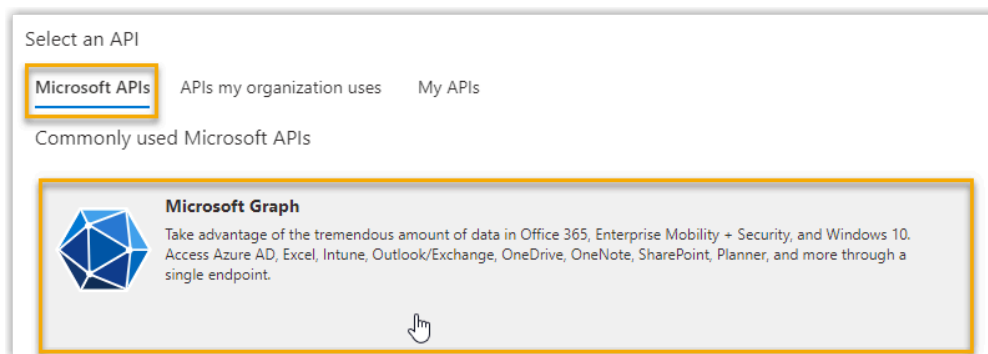
You DO NOT need to perform this step if your PBX server is 84.10.0.30 or later.

Grant the required API application permissions to the Microsoft Entra application, allowing the application to access specified data within Microsoft Entra ID.

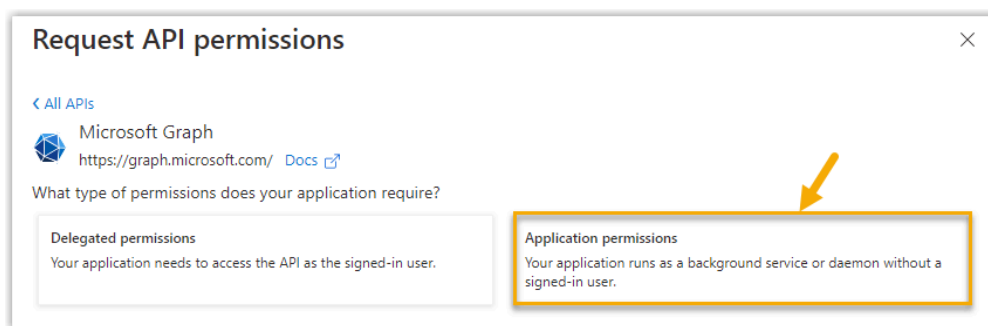
1. On the left navigation bar of the Microsoft Entra application, go to **API permissions**, then click **Add a permission**.



2. In the **Select an API** page, go to **Microsoft APIs > Microsoft Graph**.



3. Click **Application permissions**.



4. Add the required application permissions:

- a. In the search bar, enter the keyword to search and select the following required permissions.

Select permissions expand all

Search:

Permission	Admin consent required
<input checked="" type="checkbox"/> <b>Directory (1)</b> <input checked="" type="checkbox"/> <b>Directory.Read.All</b> ⓘ Read directory data	Yes
<input type="checkbox"/> <b>Directory.ReadWrite.All</b> ⓘ Read and write directory data	Yes
<input type="checkbox"/> <b>Directory.Write.Restricted</b> ⓘ Manage restricted resources in the directory	Yes
> DirectoryRecommendations	
> RoleManagement	

Permission	Description
<b>Directory &gt; Directory.Read.All</b>	Allow the application to read data in your organization's directory, such as users and groups.
<b>User &gt; User.Read.All</b>	Allow the application to read the profile properties of users in your organization.
<b>Group &gt; Group.Read.All</b>	Allow the application to read group properties and memberships.

b. Click **Add permissions**.

The selected permissions are added into the permissions list.

c. Click **Grant admin consent for...** to grant the permissions to the application.

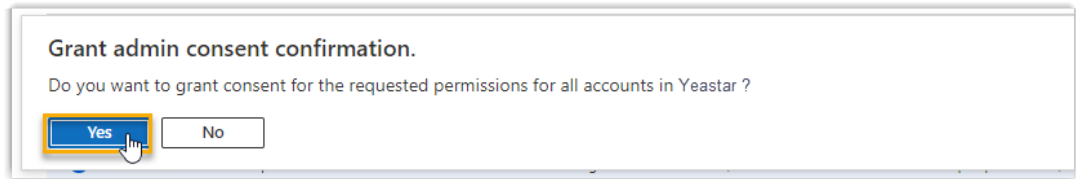
Configured permissions


Applications are authorized to call APIs when they are granted permissions by users/admins as part of the consent process. The list of configured permissions should include all the permissions the application needs. [Learn more about permissions and consent](#)

+ Add a permission ☒ Grant admin consent for Yeastar

API / Permissions name	Type	Description	Admin consent requ...	Status
▼ Microsoft Graph (4)				
Directory.Read.All	Application	Read directory data	Yes	⚠ Not granted for
Group.Read.All	Application	Read all groups	Yes	⚠ Not granted for
User.Read	Delegated	Sign in and read user profile	No	
User.Read.All	Application	Read all users' full profiles	Yes	⚠ Not granted for

d. In the pop-up dialog box, click **Yes** to proceed.

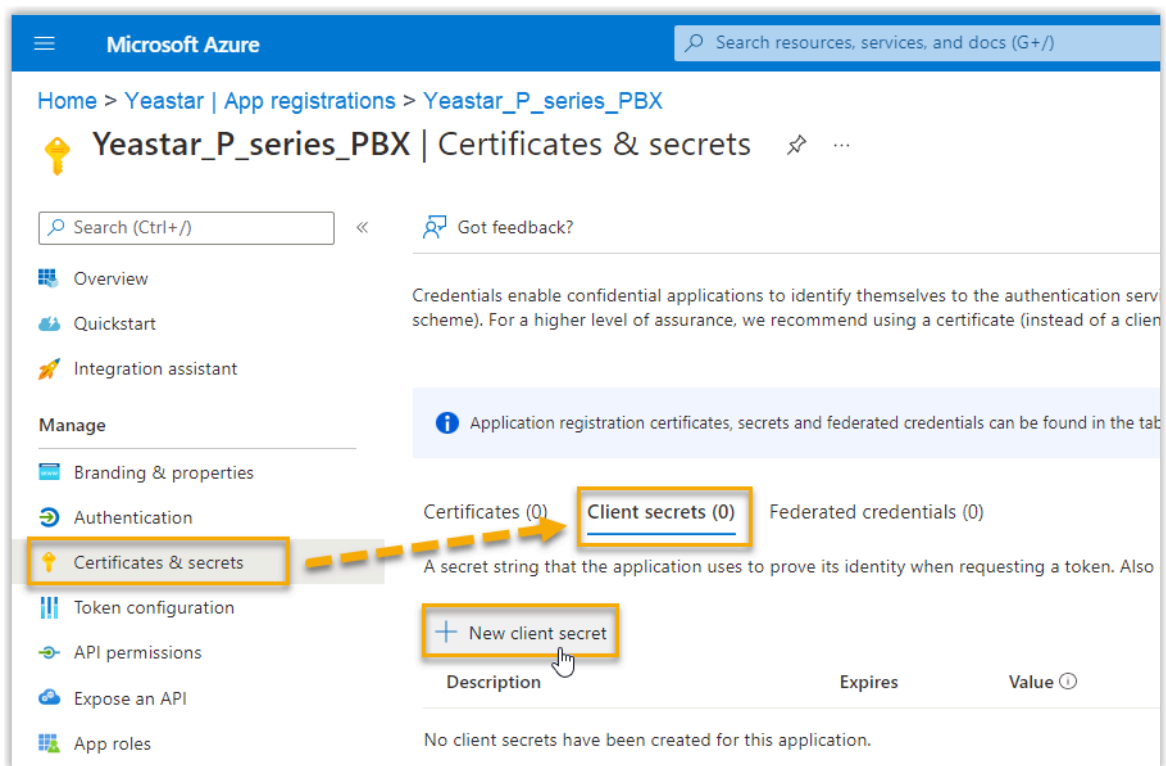


The **Status** of the permissions changes to , indicating that the API permissions have been granted to the application successfully.

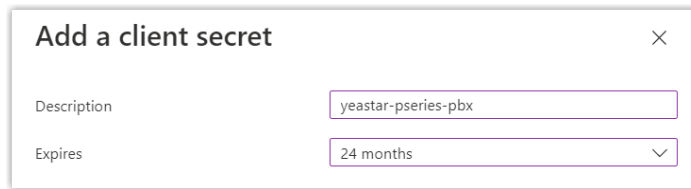
## Step5. Generate a client secret for the Microsoft Entra application

Generate a client secret for the Microsoft Entra application to authenticate the application in the integration.

1. On the left navigation bar of the Microsoft Entra application, go to **Certificates & secrets > Client secrets**, then click **New client secret**.



2. In the **Add a client secret** page, do as follows:
  - a. Add a description and set an expiration date for the client secret.



**Add a client secret** [X]

Description:

Expires:  [v]

b. On the bottom of the page, click **Add**.

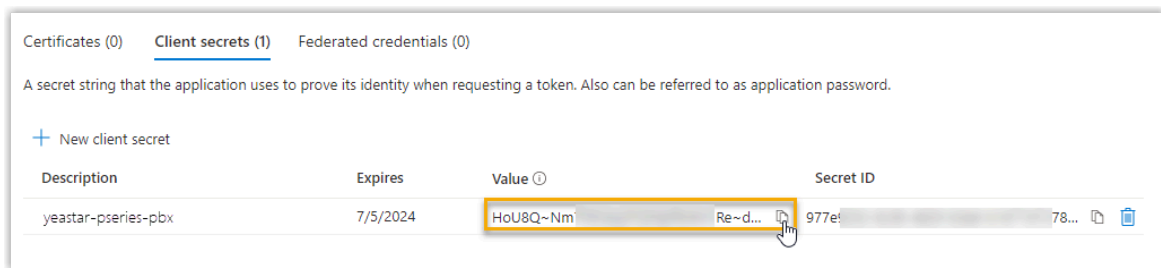
A client secret is created and displayed in the **Client secrets** list.

3. Note down the client secret's **Value** as you will need to fill it into the PBX later.



**Important:**

Record the client secret's value before leaving the page, as the key is only shown once. Otherwise, you will have to create a new secret.



Certificates (0) Client secrets (1) Federated credentials (0)

A secret string that the application uses to prove its identity when requesting a token. Also can be referred to as application password.

+ New client secret

Description	Expires	Value ⓘ	Secret ID
yeastar-pseries-pbx	7/5/2024	HoU8Q~Nm Re~d... [copy icon]	977e... 78... [copy icon]

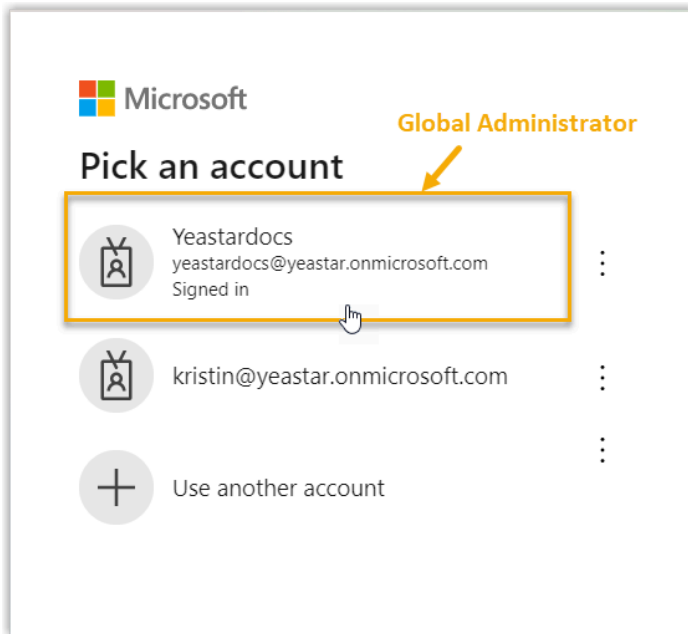
## Step6. Connect PBX and Microsoft Entra ID

Fill the application ID and client secret gathered from the Microsoft Entra application into PBX to implement the integration between Yeastar P-Series Cloud Edition and Microsoft Entra ID.

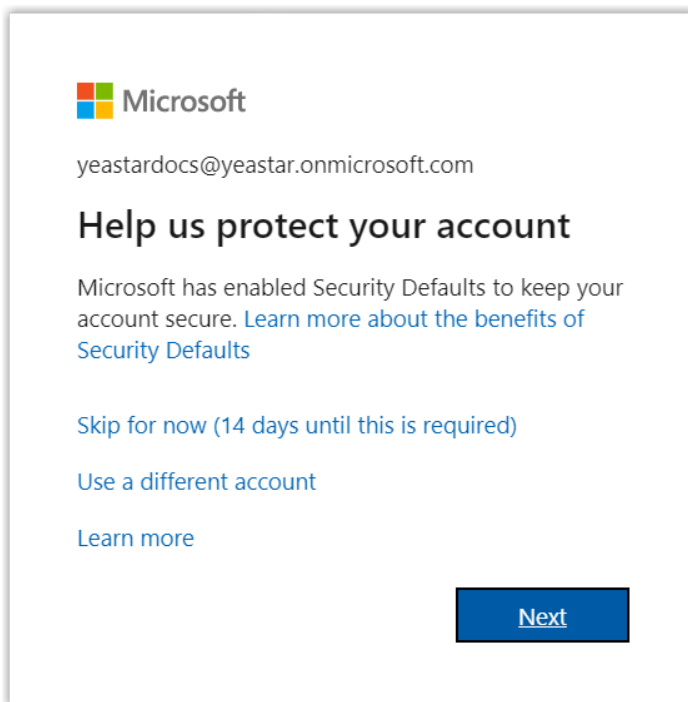
1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. Click **Integrate** beside the **Microsoft 365** service.
3. In the **App Registration** section, enter the following information:
  - **Application (Client) ID:** Paste the [application ID](#).
  - **Tenant ID:** Paste the [tenant ID](#).
4. In the **Certificates & Secrets** section, paste the [client secret](#) in the **Client Secret** field.
5. Click **Save**.

You are redirect to the Microsoft Sign-in page.

6. Sign in with the Microsoft account that has **Global Administrator** privilege.



7. You might be asked to provide an additional security confirmation. Click **Next** to complete it or skip for now.




8. In the pop-up window, check the permissions and click **Accept** to confirm.



**Note:**



If your PBX server is 84.10.0.30 or later, you can grant consent on behalf of your organization in this page as needed.

 **Microsoft**

yeastardocs@yeastar.onmicrosoft.com

**Permissions requested**

Yeastar\_P\_series\_PBX  
[App info](#)

**This application is not published by Microsoft.**

This app would like to:

- ✓ Maintain access to data you have given it access to
- ✓ Have full access to user contacts
- ✓ Read and write user and shared contacts
- ✓ Read all users' full profiles
- ✓ Read all groups
- ✓ Read directory data
- ✓ Read user's presence information
- ✓ Read presence information of all users in your organization

☒ Consent on behalf of your organization

If you accept, this app will get access to the specified resources for all users in your organization. No one else will be prompted to review these permissions.

Accepting these permissions means that you allow this app to use your data as specified in their terms of service and privacy statement. You can change these permissions at <https://myapps.microsoft.com>. [Show details](#)

Does this app look suspicious? [Report it here](#)

Cancel

Accept

9. On the PBX configuration page, click **Yes** to close the dialog box.

Collaboration ×

✓

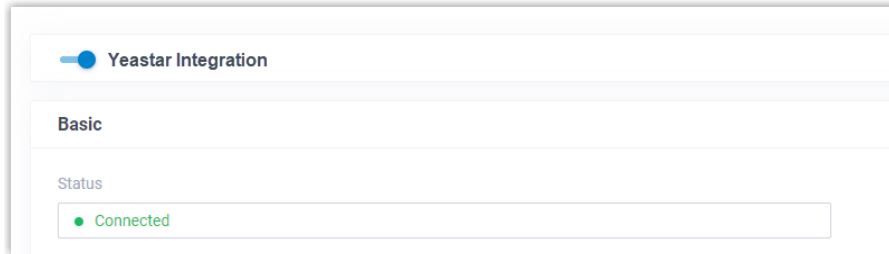
Data initialization succeeded. You can configure synchronization rules and enjoy advanced features now.

✓ OK



## Result

The status of the integration displays **Connected**, indicating that the PBX is successfully connected to your organization's Microsoft Entra ID.



## What to do next

Set up synchronization rules to synchronize the desired users and groups from Microsoft Entra ID to PBX. For more information, see the following topics:

- [Synchronize Users from Microsoft Entra ID to Yeastar P-Series Cloud Edition](#)
- [Synchronize Groups from Microsoft Entra ID to Yeastar P-Series Cloud Edition](#)

## Related information

[Disable Microsoft Entra ID Integration](#)

[Disconnect Microsoft Entra ID Integration](#)

# Synchronize Users from Microsoft Entra ID to Yeastar P-Series Cloud Edition

This topic describes how to customize synchronization rule based on users, so as to synchronize users from Microsoft Entra ID to Yeastar PBX system. PBX will create extensions for the specified users to be synced accordingly, and keep the extensions up-to-date with changes from the synced users.

## Limitation

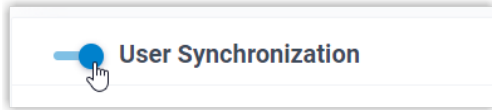
The number of users that can be synced from Microsoft Entra ID to PBX depends on the number of extensions that PBX system can create.

## Prerequisites

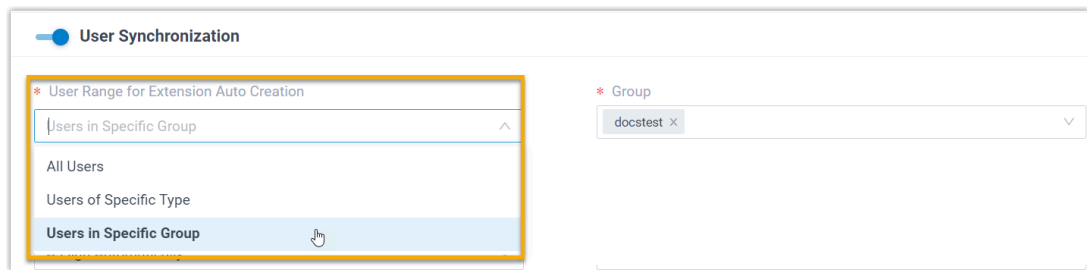
You have [integrated Yeastar P-Series Cloud Edition with Microsoft Entra ID](#).

## Procedure

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. In the **User Synchronization** section, turn on the switch.



3. Complete the following synchronization settings according to your need.
  - a. In the **User Range for Extension Auto Creation** drop-down list, specify the users that you want to synchronize to PBX and create extensions for them.



**Table 1.**

Option	Description
All Users	Synchronize all users from Microsoft Entra ID to PBX and create extensions for them.
Users of Specific Type	<p>Synchronize the specified type(s) of users from Microsoft Entra ID to PBX and create extensions for them.</p> <p>You need to select the desired user type(s) in the <b>User Type</b> drop-down list.</p> <ul style="list-style-type: none"> <li>• <b>Member:</b> All member users in your organization's directory.</li> <li>• <b>Guest:</b> All guest users in your organization's directory.</li> </ul>
Users in Specific Group	<p>Synchronize the users within the specified group(s) from Microsoft Entra ID to PBX and create extensions for them.</p> <p>You need to select the desired group(s) in the <b>Group</b> drop-down list.</p>



### Note:

In future use, if you change the range of users to be synced, you can decide how to deal with the extensions that are no longer synced from



the users in Microsoft Entra ID via the **Auto delete the Extensions no longer in sync** option.

\* Extension Range for Auto Creation

Users in Specific Group

☒ Auto delete the Extensions no longer in sync

- If selected, the extensions will be deleted during the next synchronization.
- If unselected, the extensions will be retained and fully managed by the PBX.

b. In the **User's Extension Number** drop-down list, configure the extension number assignment rule.

\* User's Extension Number

Assign Automatically


Assign Automatically

Read Specific Property Value

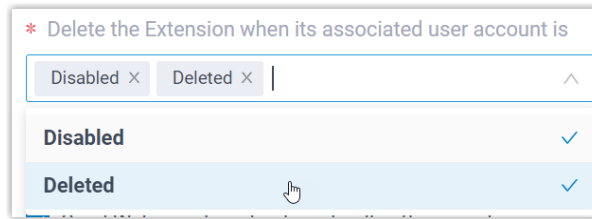
\* Start Extension Number from

1000

**Table 2.**

Option	Description
Assign Automatically	<p>Assign extension numbers from a specific starting number.</p> <p>You need to specify the starting number in the <b>Start Extension Number from</b> field.</p>
Read Specific Property Value	<p>Assign extension numbers based on users' property value. This can be used in the scenario that the users already have phone extensions assigned in Microsoft Entra ID, and you want to keep their extension numbers instead of assigning new ones.</p> <p>You need to specify the property where the users' extension numbers are stored (e.g. <code>businessPhones</code>) in the <b>Property Name</b> field.</p> <div>  <b>Tip:</b>  Refer to <a href="#">Microsoft User Properties</a> for the property name. </div>

- c. In the **Delete the Extension when its associated user account is** drop-down list, select the account status(es) at which PBX will stop syncing from the users, and delete the associated extensions.



**Table 3.**

Option	Description
Disabled	If an user account is disabled in Microsoft Entra ID, PBX will stop syncing from the user and delete the associated extension.
Deleted	If an user account is deleted in Microsoft Entra ID, PBX will stop syncing from the user and delete the associated extension.

- d. On the **Auto associate Extensions with the Users that share the same email address** option, decide whether to sync users from Microsoft Entra ID to PBX when the users have the same email addresses with existing extensions.
- If selected, the users with same mailboxes will be synced to PBX and associated with the existing extensions, the extensions' user information will then be overwritten by that of the users.
  - If unselected, the users with same mailboxes will not be synced to PBX as the PBX system does not allow duplicated email addresses.
- e. If you want to send Linkus Welcome Email to the synced users, select the checkbox of **Send Welcome Email automatically after an extension is created**.
4. Click **Save**.



**Note:**

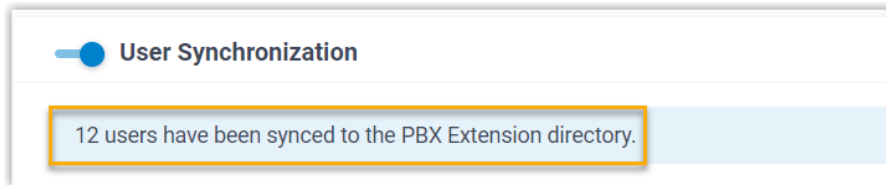
- If it is the FIRST time you save the synchronization-related settings, PBX will perform the initial synchronization immediately.
- Otherwise, you can [manually perform a directory synchronization](#) or wait for the [automatic directory synchronization](#).


## Result

You have created your custom synchronization rule for synchronizing users from Microsoft Entra ID to the PBX.

During a synchronization process, PBX system performs queries within the Microsoft Entra ID based on the rule, and synchronize the desired users as well as the updated information to PBX. After the synchronization, the followings can be implemented:

- You can check the synchronization result in the **User Synchronization** section.



- The PBX extensions that are associated with users in Microsoft Entra ID come with a label , and can not be manually deleted on PBX.
- You can NOT manually update the following information of the PBX extensions that are associated with users in Microsoft Entra ID on PBX.



**Note:**

The information can only be modified within the Microsoft Entra ID and updated to the PBX during a synchronization.

- Last name
- First name
- Email Address
- Mobile Number
- Job Title

## What to do next

If you want to allow the synced users to log in to Linkus UC Clients using their Microsoft accounts, you need to configure the Single Sign-on (SSO) feature. For more information, see [Allow Users to Log in to Linkus UC Clients with SSO](#).

## Related information

[Synchronize Groups from Microsoft Entra ID to Yeastar P-Series Cloud Edition](#)

[Synchronize Microsoft Outlook Contacts to Yeastar P-Series Cloud Edition](#)

[Enable Microsoft Teams User Presence Synchronization](#)

[Pause Microsoft Entra ID Synchronization](#)

# Synchronize Groups from Microsoft Entra ID to Yeastar P-Series Cloud Edition

This topic describes how to customize synchronization rule based on groups, so as to synchronize desired groups from Microsoft Entra ID to Yeastar PBX's extension groups.

## Limitation

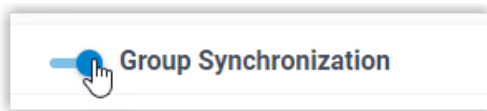
The number of groups that can be synced from Microsoft Entra ID to PBX depends on the extension groups that PBX system can create (up to 63 extension groups).

## Prerequisites

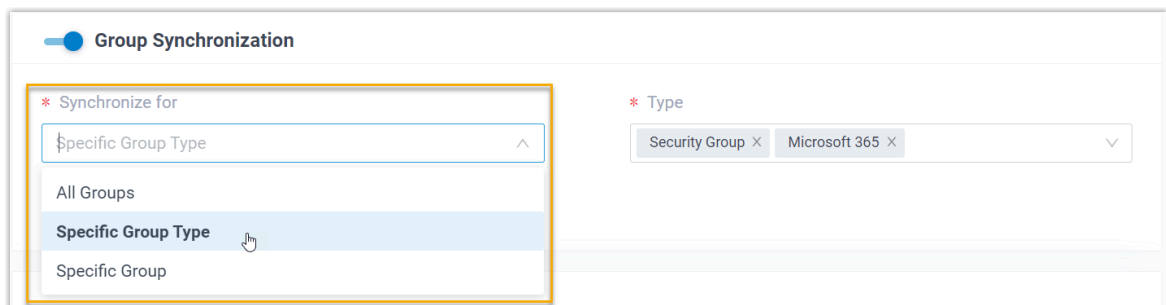
You have [integrated Yeastar P-Series Cloud Edition with Microsoft Entra ID](#).

## Procedure

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. Scroll down to the **Group Synchronization** section, turn on the switch.




3. In the **Synchronize for** drop-down list, specify the groups that you want to synchronize to PBX.



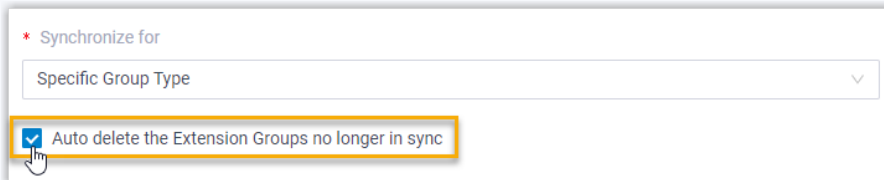
**Table 4.**

Option	Description
All Groups	Synchronize all groups from Microsoft Entra ID to PBX.
Specific Group Type	Synchronize the specified type(s) of groups from Microsoft Entra ID to PBX.

Option	Description
	<p>You need to select the desired group type(s) in the <b>Type</b> drop-down list.</p> <ul style="list-style-type: none"> <li>• <b>Security Group</b>: All security groups in your organization's directory.</li> <li>• <b>Microsoft 365</b>: All Microsoft 365 groups in your organization's directory.</li> </ul>
Specific Group	<p>Synchronize specific groups from Microsoft Entra ID to PBX. You need to directly search and select the desired groups in the <b>Group</b> drop-down list.</p> <div>  <b>Note:</b>  By default, the <b>Group</b> drop-down list displays 200 records of groups retrieved from Microsoft Entra ID. If you need the system to display more records, contact Yeastar. </div>

**Note:**

In future use, if you change the range of groups to be synced, you can decide how to deal with the extension groups that are no longer synced from the groups in Microsoft Entra ID via the **Auto delete the Extension Groups no longer in sync** option.



- If selected, the extension groups will be deleted during the next synchronization.
- If unselected, the extension groups will be retained and fully managed by the PBX.

4. Click **Save**.

**Note:**

- If it is the FIRST time you save the synchronization-related settings, PBX will perform the initial synchronization immediately.



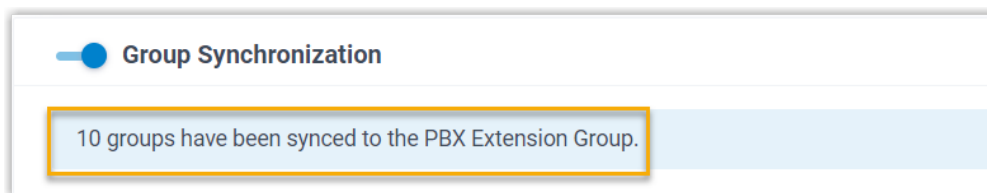
- Otherwise, you can [manually perform a directory synchronization](#) or wait for the [automatic directory synchronization](#).


## Result

You have created your custom synchronization rule for synchronizing groups from Microsoft Entra ID to the PBX.

During a synchronization process, PBX system performs queries within the Microsoft Entra ID based on the rule, and synchronize the desired groups as well as the updated information to PBX. After the synchronization, the followings can be implemented:

- You can check the synchronization result in the **Group Synchronization** section.



- The PBX extension groups that are associated with groups in Microsoft Entra ID come with a label , and can NOT be deleted.
- You can NOT manually update the name and group member of the PBX extension groups that are associated with Microsoft Entra ID on PBX.



### Note:

The information can only be modified within the Microsoft Entra ID and updated to the PBX during a synchronization.

## Related information

[Synchronize Users from Microsoft Entra ID to Yeastar P-Series Cloud Edition](#)  
[Pause Microsoft Entra ID Synchronization](#)

# Synchronize Microsoft Outlook Contacts to Yeastar P-Series Cloud Edition

Microsoft Entra ID (Azure Active Directory) integration provides one-way synchronization of Outlook contacts (personal Outlook contacts and contacts from Outlook shared mailboxes) to PBX and Linkus UC Clients. After synchronization, the users synced from Microsoft Entra



ID to Yeastar PBX can access and make calls to their Outlook contacts through Linkus UC Clients.

## Requirement

**PBX server:** Version 84.10.0.30 or later.

## Prerequisites

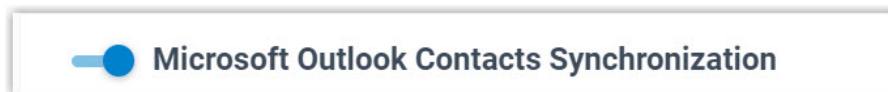
- You have [integrated Yeastar PBX with Microsoft Entra ID](#).
- You have [synchronized users from Microsoft Entra ID to Yeastar PBX](#).

## Synchronize personal Outlook contacts to Linkus Contacts directory

To synchronize the users' personal Outlook contacts, you need to select the user range for syncing personal contacts on PBX, and the selected users need to share their personal contacts folder with the authorization account ([the account that is used to authorize the Microsoft Entra ID integration with the PBX](#)), so that PBX can access the contacts.

### Step 1. Select user range for syncing personal contacts on PBX

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. Scroll down to the **Microsoft Outlook Contacts Synchronization** section, and turn on the switch.



3. Select the checkbox of **Contacts Synchronization**.
4. In the **User Range for Contacts Synchronization** drop-down list, select the range.



#### Important:

Ensure that the user range you select here is covered by the [user range you selected when syncing users from Microsoft Entra ID to PBX](#), as this feature is only available for synced users.


Option	Description
All Users	Synchronize all the users' personal contacts to their Linkus Contacts directory.

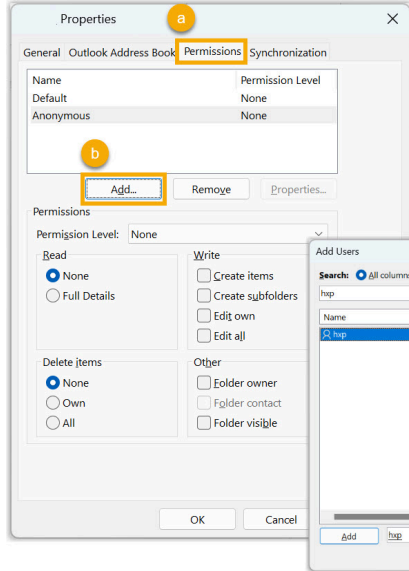
Option	Description
Users in Specific Group	Synchronize personal contacts of the users within specified group(s) to their Linkus Contacts directory.  You need to select the desired groups in the <b>Group</b> drop-down list.

5. Click **Save**.

## Step 2. Share personal Outlook contacts folder on Outlook Desktop Client

We provide an example on how an individual user in Microsoft Entra ID can share his or her personal Outlook contacts folder on Outlook Desktop Client.

1. Log in to Outlook Desktop Client, go to  (**People**).
2. In **My Contacts** section, right click the personal contacts folder, then select **Properties....**
3. In the pop-up window, search for and add the authorization account (the account that is used to authorize the Microsoft Entra ID integration with PBX).

Screenshot	Instruction
	<ol style="list-style-type: none"> <li>a. Click the <b>Permissions</b> tab.</li> <li>b. Click <b>Add</b> and search for the authorization account.</li> <li>c. Double click the authorization account, then click <b>OK</b>.</li> </ol>

4. Grant the authorization account access to contacts in the folder.


Screenshot	Instruction
<p>The screenshot shows the 'Properties' dialog box with the 'Permissions' tab selected. In the 'Name' list, 'hxp' is selected, and its 'Permission Level' is 'Reviewer'. In the 'Read' section, 'Full Details' is selected. In the 'Other' section, 'Folder contact' and 'Folder visible' are checked. The 'OK' button is highlighted.</p>	<p>a. In the upper user section, select the authorization account.</p> <p>b. In the <b>Read</b> section, select <b>Full Details</b>.</p> <p>c. In the <b>Other</b> section, select <b>Folder contact</b>.</p> <p>d. Click <b>OK</b>.</p>

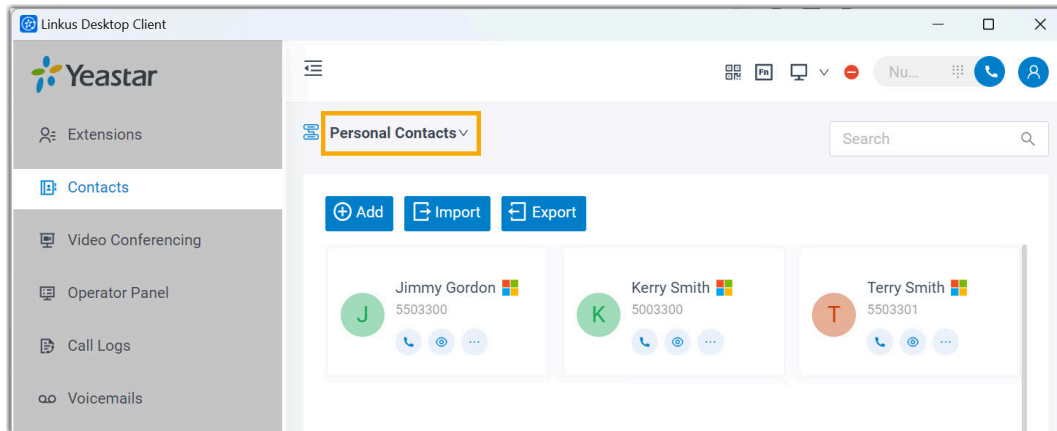


### Note:

The system will perform the synchronization at the preset time for [automatic directory synchronization](#), you can also [manually perform a directory synchronization](#) to sync Outlook contacts.

## Result

After the synchronization, the specified users' personal Outlook contacts are synced to their Linkus Contacts directory with a label . And the synced contacts can NOT be edited or deleted on Linkus UC Clients.



### Troubleshooting:

#### Unable to synchronize specific Outlook contacts?

Incomplete information of Outlook contacts can lead to synchronization failure. Make sure the following fields are filled in for Outlook contacts, then perform the directory synchronization again:

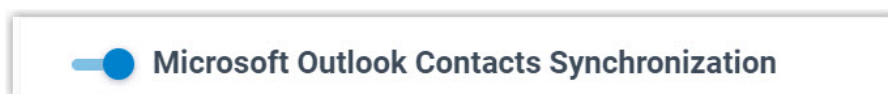
- **First name** or **Last name**: At least one field is required.
- **Mobile phone number**, **Home phone**, or **Business phone**: At least one field is required.

## Synchronize contacts from Outlook shared mailboxes to PBX phone-books

To synchronize contacts from shared mailboxes, you need to set up shared contacts synchronization on PBX, and add the authorization account ([the account that is used to authorize the Microsoft Entra ID integration with the PBX](#)) as a member of the desired shared mailboxes on Microsoft 365 admin center, so that PBX can access the contacts within the shared mailboxes.

### Step 1. Set up shared contacts synchronization on PBX

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. Scroll down to **Microsoft Outlook Contacts Synchronization** section, turn on the switch.



3. Select the checkbox of **Shared Mailbox Contacts Synchronization**.
4. In the **Shared Mailbox Contacts Synchronization** drop-down list, select the range.

Option	Description
Contacts in All Shared Mailboxes	Synchronize contacts from all the Outlook shared mailboxes to PBX phonebooks.
Contacts in Specific Shared Mailboxes	<p>Synchronize contacts from specific Outlook shared mailbox(es) to PBX phonebooks.</p> <p>You can select the desired shared mailbox(es) in the <b>Shared Mailboxes</b> drop-down list.</p>

5. Define the phonebook name for the shared contacts to be synced.

Shared Mailboxes \* Synchronize to Phonebook of Company Contacts

Yeastar Docs-yeastardocs@ursaconn.onmicrosoft.com

Yeastar Docs\_Synchronization

The Outlook shared mailbox where the shared contacts are located.

The PBX phonebook where the shared contacts will be stored after synchronization.

6. Click **Save**.

## Step 2. Add the authorization account to the shared mailboxes on Microsoft 365 admin center

1. Log in to [Microsoft 365 admin center](#).
2. On the left navigation bar, click **Teams & groups** and select **Shared mailboxes**.
3. Click the desired shared mailbox and configure the following settings.
  - a. In the **Members** section, click **Edit**.
  - b. Click **Add members** and search for the authorization account (the account that is used to authorize the Microsoft Entra ID integration with PBX).
  - c. Select the authorization account and click **Add**.
4. Repeat **step 3** for all the shared mailboxes that needs to be synced.




**Note:**

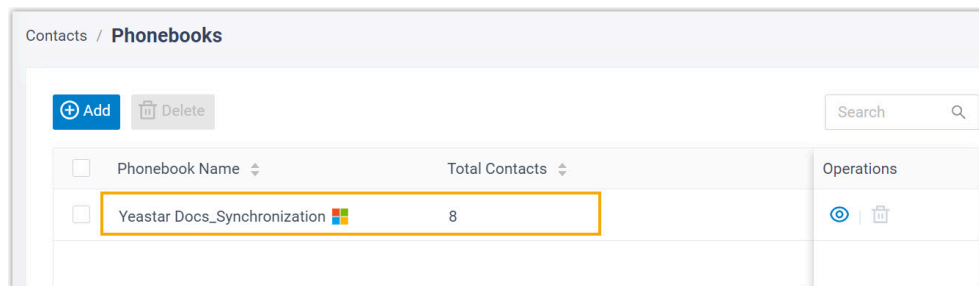


The system will perform the synchronization at the preset time for [automatic directory synchronization](#), you can also [manually perform a directory synchronization](#) to sync Outlook contacts.

## Result

After the synchronization, the followings can be implemented:

- The shared mailboxes and their contacts are synchronized to PBX phonebook, which comes with a label  and can NOT be edited or deleted on PBX.



### Troubleshooting:

#### Unable to synchronize specific Outlook contacts?

Incomplete information of Outlook contacts can lead to synchronization failure. Make sure the following fields are filled in for Outlook contacts, then perform the directory synchronization again:

- **First name** or **Last name**: At least one field is required.
- **Mobile phone number**, **Home phone**, or **Business phone**: At least one field is required.

- By default, the synced phonebook is NOT visible to users. To allow users to view the phonebook and its contacts, go to **Extension and Trunk > Client Permission > Contact Visibility Permission**.



### Note:

Users with permission can log in to Linkus clients, go to **Contacts** and select the phonebook to view its contacts.

# Enable Microsoft Teams User Presence Synchronization

Microsoft Entra ID (Azure Active Directory) integration provides one-way synchronization of Teams user presence to PBX extensions. To achieve the Teams user presence synchronization, you need to enable this feature on PBX, and Microsoft Entra ID users need to set up presence synchronization on their Linkus clients. After the setup, Microsoft Entra ID users' extension presence can follow their Teams user presence.

## Requirement

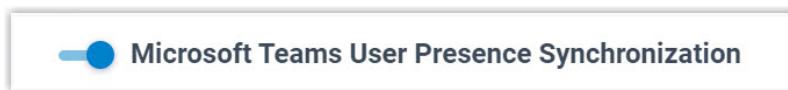
**PBX server:** Version 84.10.0.30 or later.

## Prerequisites

- You have [integrated Yeastar PBX with Microsoft Entra ID](#).
- You have [synchronized users from Microsoft Entra ID to Yeastar PBX](#).

## Procedure

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. Scroll down to the bottom, and turn on the switch of **Microsoft Teams User Presence Synchronization**.





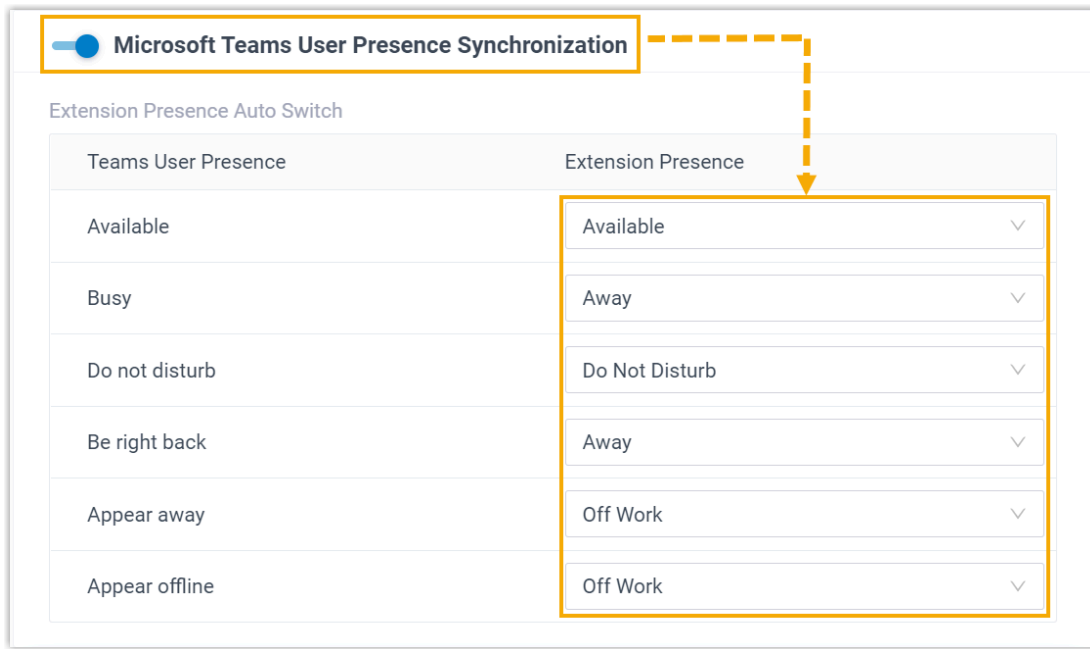
3. Click **Save**.

## Result

- Teams user presence synchronization is enabled.
- The synced users need to log in to **Linkus Web Client** or **Linkus Desktop Client** to enable this feature and set the corresponding extension presence for each Teams user presence (Path: **Preferences > Features > Microsoft Teams User Presence Synchronization**).

 **Tip:**

 You can also click  of a synced user's extension to enable and set up Teams presence synchronization for this user (Path: **Features > Microsoft Teams User Presence Synchronization**).



After the setup, when the users' Teams presence changes, their extension presence will be switched to the corresponding one automatically.



**Note:**

Since it's one-way synchronization, when users switch their extension presence, the result will NOT update to their Teams user presence.

## Allow Users to Log in to Linkus UC Clients with SSO

This topic describes how to configure the Single Sign-on (SSO) feature, so that users synced from Microsoft Entra ID can securely log in to Linkus UC Clients by their Microsoft accounts.

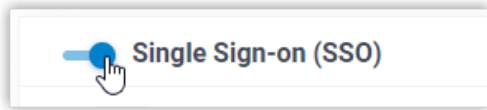
### Prerequisites

- You have [integrated Yeastar P-Series Cloud Edition with Microsoft Entra ID](#).
- You have [synchronized users from Microsoft Entra ID to Yeastar PBX](#).

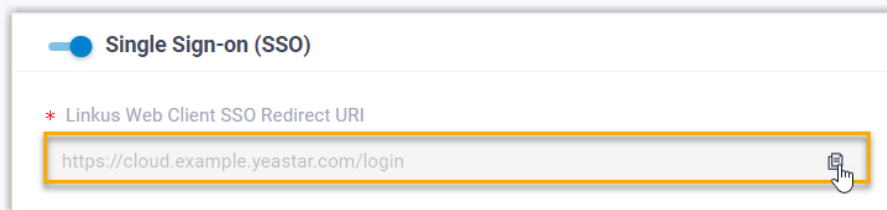


## Procedure

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. In the **Single Sign-on (SSO)** section, turn on the switch.

**Note:**

To implement SSO on Linkus Web Client, make sure you have [added the Linkus Web Client SSO Redirect URI to the Microsoft Entra application](#).



3. Click **Save**.

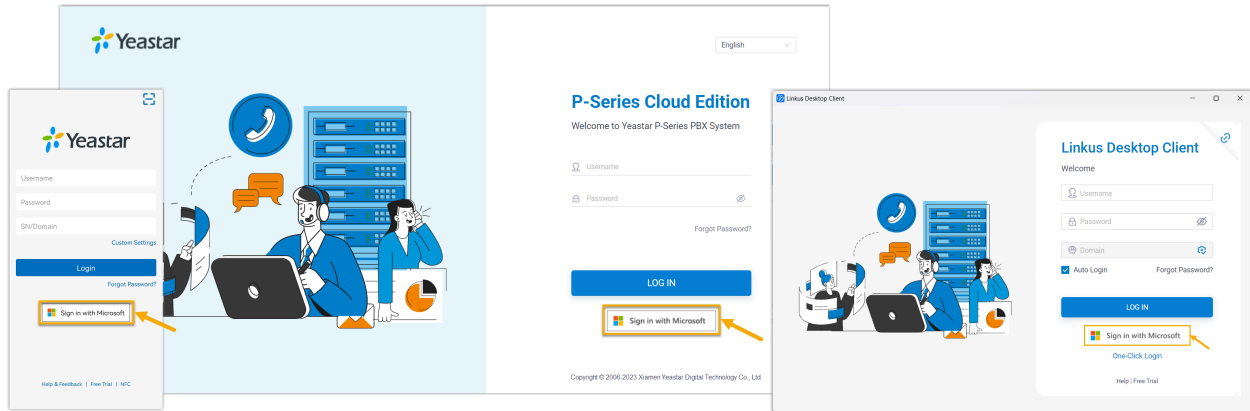
## Result

The synced users can directly log in to Linkus UC Clients by their Microsoft accounts.

**Note:**

To use the SSO feature on Linkus Mobile / Desktop Client, the App version should be updated.

- Linkus Android Client: 4.9.6 or later
- Linkus iOS Client: 4.9.5 or later
- Linkus Windows Desktop: 1.4.9 or later
- Linkus Mac Desktop: 1.4.9 or later



## Related information

[Synchronize Users from Microsoft Entra ID to Yeastar P-Series Cloud Edition](#)

# Manage Microsoft Entra ID Integration

## Schedule Automatic Directory Synchronization

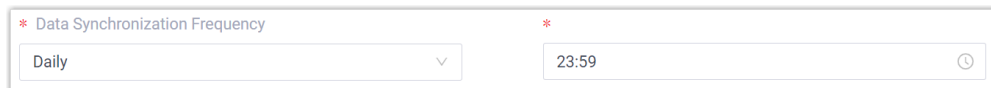
By default, PBX system automatically performs a directory synchronization at 00:30 every-day. You can also customize the automatic synchronization schedule to synchronize data from Microsoft Entra ID to Yeastar P-Series Cloud Edition at a specified time.

### Procedure

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. In the **Basic** section, select the data synchronization frequency and set a specific time (non-office hours or weekends is recommended).

- **Daily:** The system synchronizes data daily at a preset local time.

For example, set up to synchronize data at 23:59 everyday.

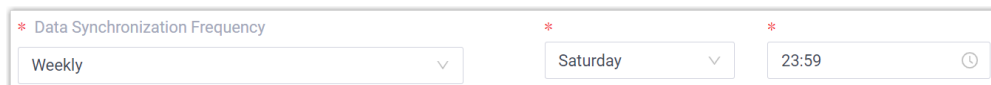


\* Data Synchronization Frequency

Daily 23:59

- **Weekly:** The system synchronizes data on the selected days at a preset local time.

For example, set up to synchronize data at 23:59 on every Saturday.



\* Data Synchronization Frequency

Weekly Saturday 23:59

3. Click **Save**.

### Result

The PBX system performs periodic synchronizations automatically based on the schedule.



#### Note:

In addition to the scheduled automatic synchronization, the integration also implements another automatic synchronization, which will be triggered when either of the following conditions is met:



- If there are data changes (synced users have been modified or removed, name or group member of synced groups have been changed) occur in Microsoft Entra ID, PBX will perform an automatic directory sync in 10 minutes.
- If there are data changes (synced users have been modified or removed, member of synced groups have been changed) occur in Microsoft Entra ID, and the number of change events reaches 10, PBX will immediately perform an automatic directory sync.

### Related information

[Manually Perform a Directory Synchronization](#)

## Manually Perform a Directory Synchronization

In case you want to immediately apply a new synchronization rule, or update the data changes from the Microsoft Entra ID to PBX, you can manually start a synchronization.

### Procedure

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. In the **Basic** section, click **Update Now**.

### Result

The PBX system performs directory synchronization once.

### Related information

[Schedule Automatic Directory Synchronization](#)

## Update Client Secret for Microsoft Entra ID Integration

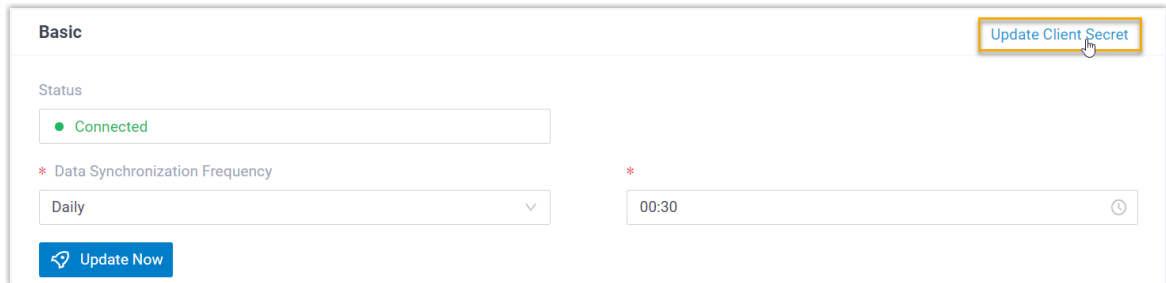
The client secret of the Microsoft Entra application has an expiration date, which is set when you creating one. You will need to update the client secret for the integration prior to the expiration date to avoid the directory synchronization interruption.

### Prerequisites

You have [generated a new client secret for the Microsoft Entra application](#).

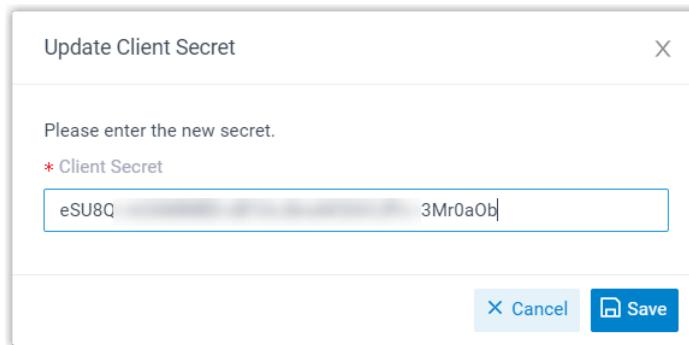
## Procedure

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. At the top-right of the **Basic** section, click **Update Client Secret**.



The screenshot shows the 'Basic' configuration page. At the top right, there is a button labeled 'Update Client Secret' which is highlighted with a yellow box. Below this, the 'Status' is shown as 'Connected'. The 'Data Synchronization Frequency' is set to 'Daily'. There is a clock icon next to a time field showing '00:30'. An 'Update Now' button is located at the bottom left of the configuration area.

3. In the pop-up window, do as follows:



The screenshot shows a modal window titled 'Update Client Secret'. It contains the text 'Please enter the new secret.' followed by a label '\* Client Secret'. Below the label is a text input field containing the characters 'eSU8Q' and '3Mr0a0b'. At the bottom right of the modal, there are two buttons: 'Cancel' and 'Save'.

- a. In the **Client Secret** field, paste the new client secret.
- b. Click **Save**.

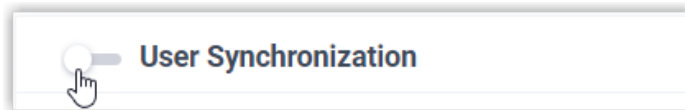
## Pause Microsoft Entra ID Synchronization

If you want to prevent the synced data from being overwritten by the updates from Microsoft Entra ID, you can temporarily put the sync on hold. This topic describes how to pause the synchronization of users and groups from Microsoft Entra ID.

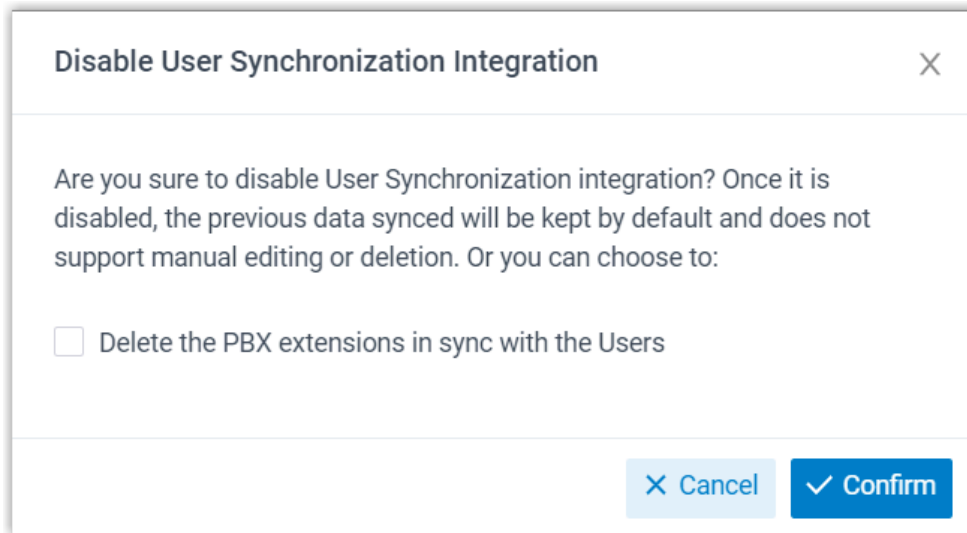
### Pause synchronization of users

#### Procedure

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. In the **User Synchronization** section, turn off the switch.



3. Click **Save**.
4. In the pop-up window, do as follows:



- a. If you want to delete the PBX extensions associated with the synced users, select the checkbox of **Delete the PBX extensions in sync with the Users**.
- b. Click **Confirm** to proceed.

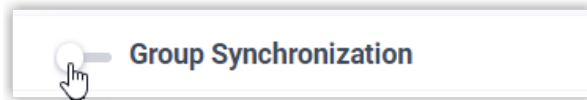
## Result

- The user synchronization is paused.
- The settings of **User Synchronization** remain and can not be edited.
- If you choose to retain the associated PBX extensions, you can NOT update the user information of the extensions, or delete the extensions.

## Pause synchronization of groups

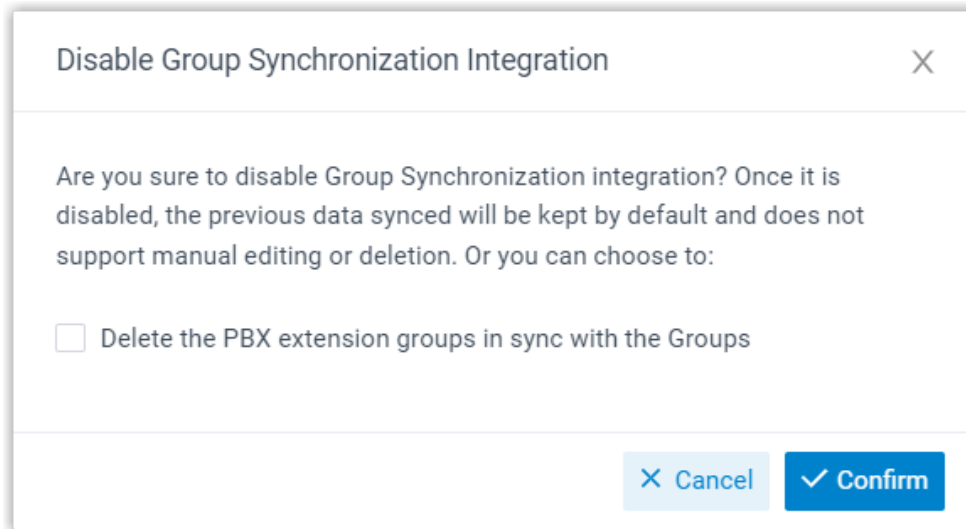
### Procedure

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. In the **Group Synchronization** section, turn off the switch.



3. Click **Save**.

4. In the pop-up window, do as follows:



- a. If you want to delete the PBX extension groups associated with the synced groups, select the checkbox of **Delete the PBX extension groups in sync with the Groups**.
- b. Click **Confirm** to proceed.

## Result

- The group synchronization is paused.
- The settings of **Group Synchronization** remain and can not be edited.
- If you choose to retain the associated extension groups, you can NOT update the name and group member of the extension groups, or delete the extension groups.

## Related information

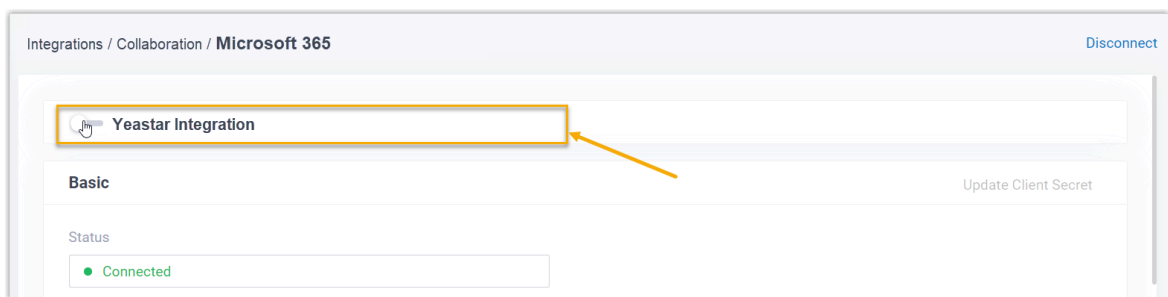
[Disable Microsoft Entra ID Integration](#)

# Disable Microsoft Entra ID Integration

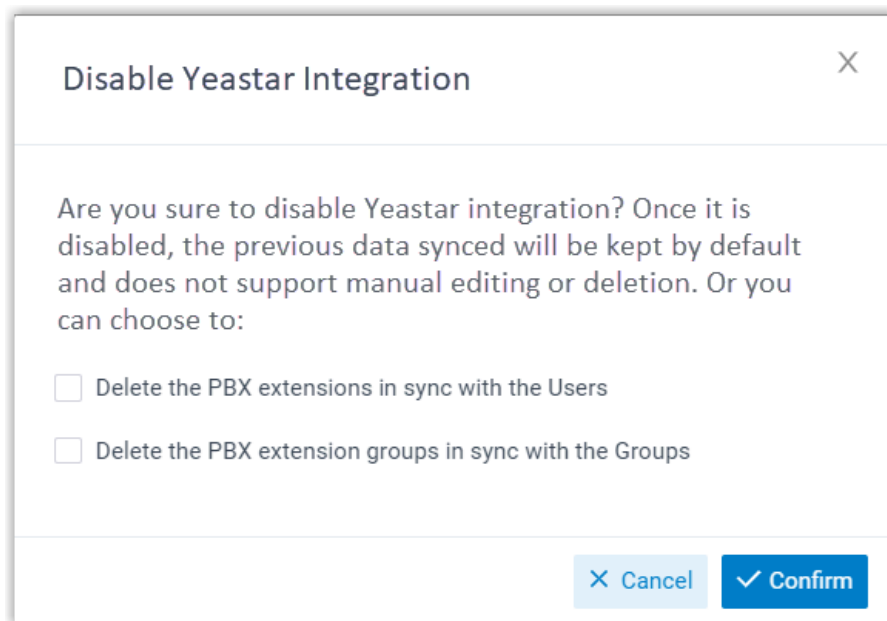
If there is a fix ongoing, and you might need to turn off the integration for troubleshooting, you can suspend the Microsoft Entra ID (Azure Active Directory) integration instead of disconnecting it. This topic describes how to disable the Microsoft Entra ID integration temporarily without losing the existing configurations.

## Procedure

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. On the top of the integration page, turn off the switch.



3. Click **Save**.
4. In the pop-up window, do as follows:



- a. Decide whether to clean up the PBX data that are associated with the synced users and groups.



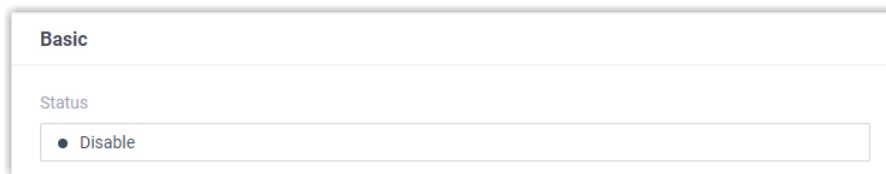
**Table 5.**

Option	Description
Delete the PBX extensions in sync with the Users	<ul style="list-style-type: none"> <li>• If selected, the extensions will be deleted.</li> <li>• If unselected, the extensions will be retained, and you can NOT update the user information of the extensions, or delete the extensions.</li> </ul>
Delete the PBX extension groups in sync with the Groups	<ul style="list-style-type: none"> <li>• If selected, the extension groups will be deleted.</li> <li>• If unselected, the extension groups will be retained, and you can NOT update the name and group member of the extension groups, or delete the extension groups.</li> </ul>

b. Click **Confirm** to proceed.

## Result

- The **Status** displays "Disable", indicating that the entire integration is suspended.



- The integration configurations remain and can not be edited.
- The synced users can NOT log in to Linkus UC Clients by their Microsoft accounts now.

## Related information

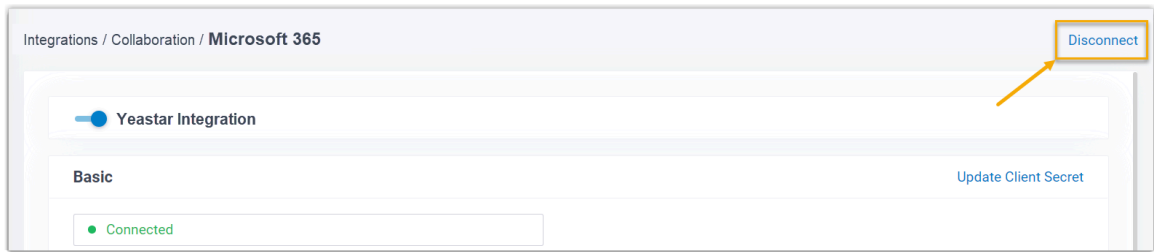
[Disconnect Microsoft Entra ID Integration](#)

# Disconnect Microsoft Entra ID Integration

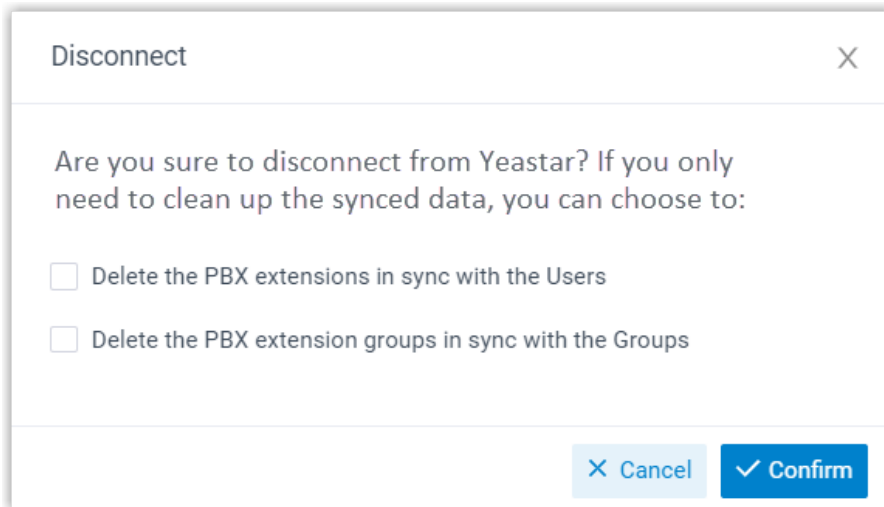
If you want to integrate with another directory, you need to remove the current integration first. This topic describes how to disconnect the integration between Yeastar P-Series Cloud Edition and Microsoft Entra ID (Azure Active Directory).

## Procedure

1. Log in to PBX web portal, go to **Integrations > Collaboration**.
2. At the top-right of the integration page, click **Disconnect**.



3. In the pop-up window, do as follows:



- a. Decide whether to clean up the PBX data that are associated with the synced users and groups.

**Table 6.**

Option	Description
Delete the PBX extensions in sync with the Users	<ul style="list-style-type: none"> <li>• If selected, the extensions will be deleted.</li> <li>• If unselected, the extensions will be retained and fully managed by the PBX.</li> </ul>
Delete the PBX extension groups in sync with the Groups	<ul style="list-style-type: none"> <li>• If selected, the extension groups will be deleted.</li> <li>• If unselected, the extension groups will be retained and fully managed by the PBX.</li> </ul>

- b. Click **Confirm**.

## Result

The Microsoft Entra ID integration is disconnected.