

LDAP Server Integration Guide

Yeostar P-Series Cloud Edition

Version: 84.18.0.102

Date: 2025-03-26



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LDAP Server Integration Guide

Yeastar P-Series Cloud Edition supports the integration with third-party LDAP server (e.g. MetaDirectory), which allows for automatically triggering contact lookup in your LDAP server when an inbound call reaches your PBX and displaying caller's name if a match is found. In addition, contact synchronization with phonebook(s) enables convenient outbound calling from Linkus UC Clients and intelligent inbound call routing based on phonebook(s) matches.

Requirements

Item	Requirement
Yeastar PBX	<ul style="list-style-type: none">• Plan: Enterprise Plan (EP) or Ultimate Plan (UP)• Firmware: Version 84.18.0.102 or later
Third-party LDAP Server	No requirement.

Integration flow

The integration between Yeastar P-Series Cloud Edition and LDAP server enables a variety of features, including caller ID name display, contact synchronization, and intelligent inbound call routing based on phonebook matches.

Depending on the features that you want to implement, you will need to perform different operations for the integration, as shown below:

Scenario: Caller ID name display

1. [Integrate Yeastar P-Series Cloud Edition with LDAP Server](#)

Scenario: Caller ID name display and contact synchronization

1. [Integrate Yeastar P-Series Cloud Edition with LDAP Server](#)
2. [Set up Contact Synchronization from LDAP Server](#)

Scenario: Caller ID name display, contact synchronization, and inbound call routing based on phonebook match

1. [Integrate Yeastar P-Series Cloud Edition with LDAP Server](#)
2. [Set up Contact Synchronization from LDAP Server](#)
3. [Set up inbound routes based on phonebook matches](#)

Integrate Yeastar P-Series Cloud Edition with LDAP Server

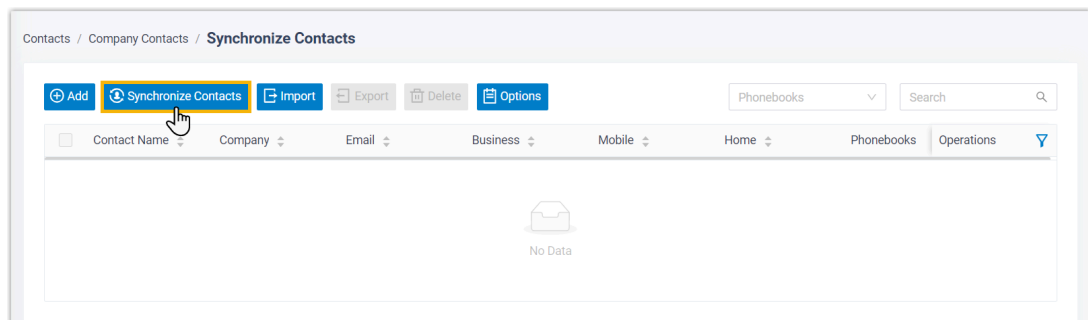
With the integration between Yeastar P-Series Cloud Edition and LDAP server, inbound calls to PBX will automatically trigger contact lookup in your LDAP server and display the caller's name if a match is found.

Requirements

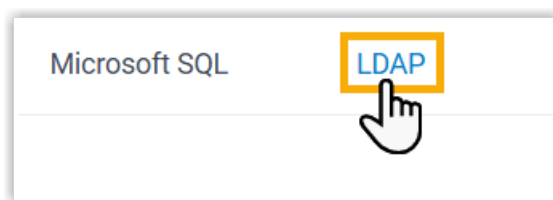
Item	Requirement
Yeastar PBX	<ul style="list-style-type: none">• Plan: Enterprise Plan (EP) or Ultimate Plan (UP)• Firmware: Version 84.18.0.102 or later
Third-party LDAP Server	No requirement.

Step 1. Enable LDAP integration

1. Access the LDAP configuration page.
 - a. Log in to PBX web portal, go to **Contacts > Company Contacts**.
 - b. At the top of the page, click **Synchronize Contacts**.



- c. Click **LDAP** tab.



2. Turn on the option **Enable LDAP Integration**, then complete the following settings.

Enable LDAP integration

Status

• **Disconnected**

• **Server Address**
112.48.21.123

• **Port**
399

• **Protocol**
LDAP

• **Base DN**
ou=support,dc=yeastar,dc=com

• **User**
cn=admin,dc=yeastar,dc=com

• **Password**

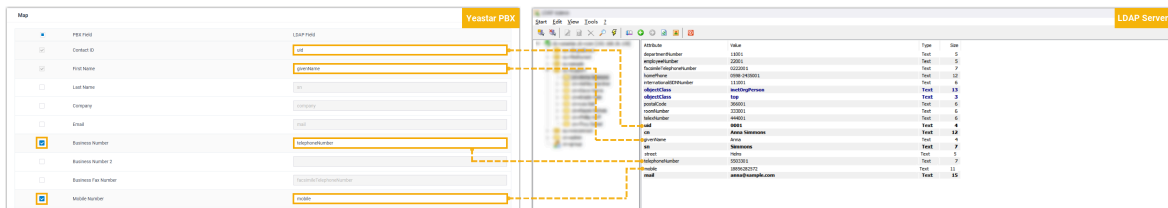
• **Auto-match Contact Filter**
((telephoneNumber=\${NUMBER})(mobile=\${NUMBER}))

Item	Description
Server Address	Enter the address of LDAP server.
Port	Enter the port on which LDAP server is running.
Protocol	<p>Select an LDAP protocol.</p> <ul style="list-style-type: none"> • LDAP: Transmit data in plain text. • LDAPS: Use SSL (Secure Sockets Layer) or TLS (Transport Layer Security) to encrypt and authenticate the data transmitted between the LDAP server and the LDAP client.
Base DN	<p>Specify the Distinguished Name (DN) as the base for contact searches in caller ID matching and contacts synchronization.</p> <p>The Base DN must include the Domain Component (DC) attribute to define the root node of an LDAP tree, formatted as <code>dc={domain_prefix},dc=domain_suffix</code>. One or more Relative Distinguished Name (RDN) can be configured to narrow the scope of search.</p> <ul style="list-style-type: none"> • Example 1: <code>dc=yeastar,dc=com</code> In this example, PBX will search contacts from <code>yeastar.com</code> (root entry of the LDAP tree). • Example 2: <code>ou=support,dc=yeastar,dc=com</code> In this example, PBX will search contacts from <code>support</code> (the Organizational Unit) within <code>yeastar.com</code> (root entry of the LDAP tree).
User	<p>Enter the username to connect to the LDAP server.</p> <div style="border-left: 3px solid #0070c0; padding-left: 10px; margin-top: 10px;"> <p> Note: This account must have permission to read the attribute types and object classes contained in the server schema.</p> </div>

Item	Description
Password	Enter the password associated with the username.
Auto-match Contact Filter	<p>Enter a filter statement for contact caller ID matching.</p> <p>This filter statement must contain the <code>\${NUMBER}</code> variable to represent the caller's number, and at least one number attribute for number lookup.</p> <p>Example: <code>((telephoneNumber=\${NUMBER})(mobile=\${NUMBER}))</code></p> <p>In this example, the PBX will search for entries in telephoneNumber or mobile attribute and compare them with <code>\${NUMBER}</code> (caller's number) when receiving an inbound call. If a match is found, the PBX retrieves the corresponding contact entry and displays the caller's name.</p>

Step 2. Map contact fields between Yeastar P-Series Cloud Edition and LDAP server

1. Scroll down to the **Map** section.
2. Map the fields that are required for displaying caller's name.



- a. For **Contact ID**, **First Name**, **Business Number**, and **Mobile Number**, enter the corresponding LDAP attribute name.



Note:

In this example, **Business Number** and **Mobile Number** are mapped because they are used as [number filters](#). You **MUST** map the number field based on your situation.

When an inbound call matches a contact in your LDAP server, the contact's first name will be displayed.

- b. **Optional:** To display contact's last name as well, select the checkbox of **Last Name**, then enter the corresponding LDAP attribute name.
3. If you want to synchronize LDAP contacts to PBX, enable and map the desired fields.

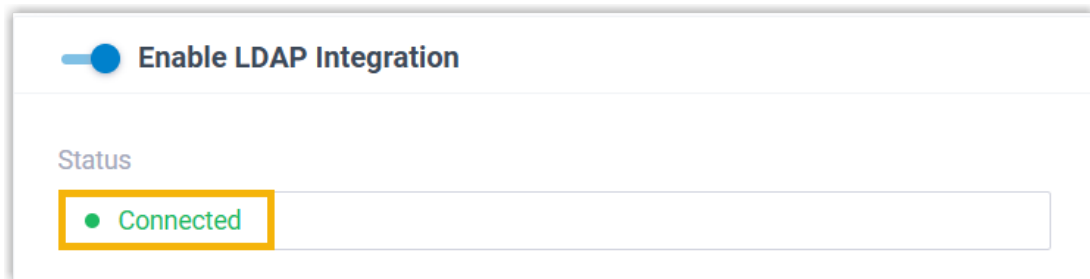
The screenshot shows a 'Map' configuration window with two columns: 'PBX Field' and 'LDAP Field'. The mapping is as follows:

PBX Field	LDAP Field
<input checked="" type="checkbox"/> Contact ID	uid
<input checked="" type="checkbox"/> First Name	givenName
<input checked="" type="checkbox"/> Last Name	sn
<input type="checkbox"/> Company	company
<input checked="" type="checkbox"/> Email	mail
<input checked="" type="checkbox"/> Business Number	telephoneNumber

4. Click **Save**.

Result

- Yeastar P-Series Cloud Edition is connected to your LDAP server.



- When an inbound call matches a contact in your LDAP server, the caller's name will be displayed.

What to do next

If you want to allow extension users to conveniently call LDAP contacts from Linkus UC Clients, you need to set up contact synchronization from LDAP server.

For more information, see [Set up Contact Synchronization from LDAP Server](#).

Set up Contact Synchronization from LDAP Server

By synchronizing LDAP contacts to Yeastar P-Series Cloud Edition, extension users can conveniently call these contacts from Linkus UC Clients. In addition, the system can automatically route inbound calls from LDAP contacts to the specified destinations based on phonebook matches.

Restrictions

Refer to the table below for the maximum number of company contacts and phonebooks supported by your system.

Maximum Number of Extensions (N)	$N \leq 50$	$50 < N \leq 200$	$N > 200$
Company contacts (total)	50,000	200,000	500,000
Company phonebooks	100	200	500

Prerequisites

[You have mapped the desired contact fields between Yeastar P-Series Cloud Edition and LDAP server.](#)

Procedure

1. On LDAP configuration page, scroll down to the **Contacts Synchronization** section.
2. Enable and set up contact synchronization from LDAP server.
 - a. Turn on the option **Contacts Synchronization**.
 - b. Complete the following settings.

Contacts Synchronization

When the contact synchronization feature is enabled, contacts from the database can be queried in real-time and synchronized to the PBX. If the contact synchronization feature is disabled, contacts from the database can still be queried in real-time, but they will not be synchronized to the PBX. ✕

Synchronize to Phonebook

Create New ▼

Phonebook Name

LDAP-Synchronization

Data Synchronization Frequency

Daily ▼

Feedback Email


demo@yeastar.com





Sync Contact Filter

(objectClass=*)

Sync Now

Remove existing contacts which are not received from the server

Item	Description
Synchronize to Phonebook	<p>Select where to store the contacts that will be synchronized from LDAP server.</p> <ul style="list-style-type: none"> • Create New: Create a new phonebook from scratch to store the synced contacts. <p>If you choose the option, enter the phonebook name in the Phonebook Name field.</p> <ul style="list-style-type: none"> • Read Specific Property Value and Create New: Create a new phonebook based on a specific LDAP attribute to store the synced contacts. <p>If you choose the option, enter an LDAP attribute name in the Property Name field.</p> <div style="border: 1px solid #0070c0; padding: 10px; margin-top: 10px;"> <p> Note: This is helpful when you want to route inbound calls from LDAP contacts to the specified destinations in PBX based on phonebook matches.</p> <p>For example, there is an LDAP attribute department, which designates the team responsible for serving the contacts - Sales and Support. By entering <code>department</code> in the field, the system will create two phonebooks - Sales and Support after you save the setting, and route inbound calls to the responsible team based on the phonebook matches after you configure proper inbound routes.</p> </div> <ul style="list-style-type: none"> • {existing_phonebook}: Select an existing empty phonebook to store the synced contacts.

Item	Description
	<p> Note: The existing empty phonebooks are synchronized from Contacts > Phonebooks.</p>
Data Synchronization Frequency	<p>Select the frequency to synchronize contacts, then configure time in the follow-up field.</p> <p> Note: Synchronizing a large number of contacts will affect system performance, we recommend that you schedule contact synchronization during off-peak hours.</p>
Feedback Email	<p>Optional. Enter an email address to get notified of the contact synchronization result.</p> <p> Note: A maximum of 5 email addresses are supported; Use a semicolon ; to separate multiple addresses.</p>
Sync Contact Filter	<p>Enter a filter statement for contact synchronization from LDAP server.</p> <p> Note: The filter condition is restricted to the Base DN, which means that PBX will start searching from the Base DN, and only synchronize entries that match the sync contact filter.</p> <p>Example: (objectClass=*)</p> <p>In this example, all the LDAP contacts will be synchronized to PBX.</p>
Remove existing contacts which are not received from the server	<p>If enabled, contacts that were successfully synchronized last time but do not exist in the current synchronization will be deleted.</p>

c. Click **Save**.

3. Click **Sync Now** to synchronize contacts to PBX immediately.

* Synchronize to Phonebook
Create New

* Data Synchronization Frequency
Daily

Feedback Email
demo@yeastar.com

* Sync Contact Filter
(objectClass=*)

Sync Now

Remove existing contacts which are not received from the server

* Phonebook Name
LDAP-Synchronization

*
00:30

Result

- A notification banner is appeared, displaying the number of contacts that have been successfully synchronized to PBX.

Contacts Synchronization

When the contact synchronization feature is enabled, contacts from the database can be queried in real-time and synchronized to the PBX. If the contact synchronization feature is disabled, contacts from the database can still be queried in real-time, but they will not be synchronized to the PBX.

368 contacts have been synced to the PBX.

* Synchronize to Phonebook
Create New

* Phonebook Name
LDAP-Synchronization

- You can check the synchronized contacts and the associated phonebook(s) in **Contacts > Company Contacts / Phonebooks**, which are tagged as **LDAP**.

Phonebook Name	Total Contacts	Operations
All Company Contacts_Phonebook	368	
LDAP-Synchronization LDAP	368	

Total: 2 | 1 | 20 / page

- Authorized extension users can view and call the contacts directly from Linkus UC Clients.



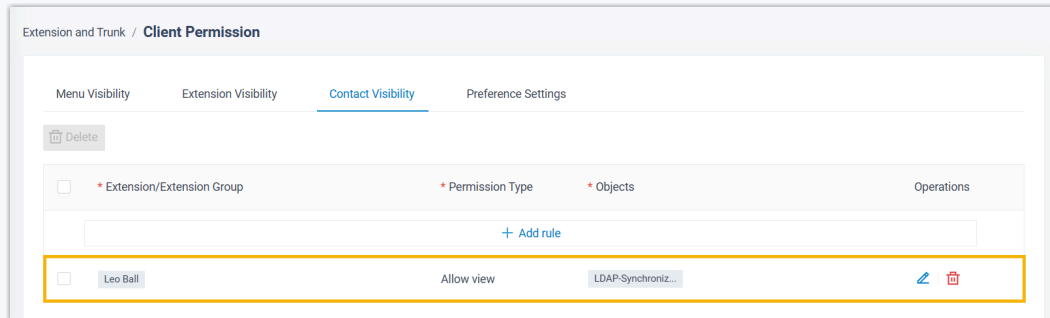
Note:

To achieve this, you need to grant the viewing permission of the associated phonebook to extension users (Path: **Extension and Trunk > Client Per-**



mission > Contact Visibility) and extension users need to upgrade Linkus UC Clients to the specified version, as shown below:

- Linkus iOS Client: Version 5.13.6 or later
- Linkus Android Client: Version 5.13.8 or later



What to do next

If you want to route inbound calls to specified destinations based on phonebook matches, you need to configure inbound routes to route calls by matching contacts in different phonebooks.

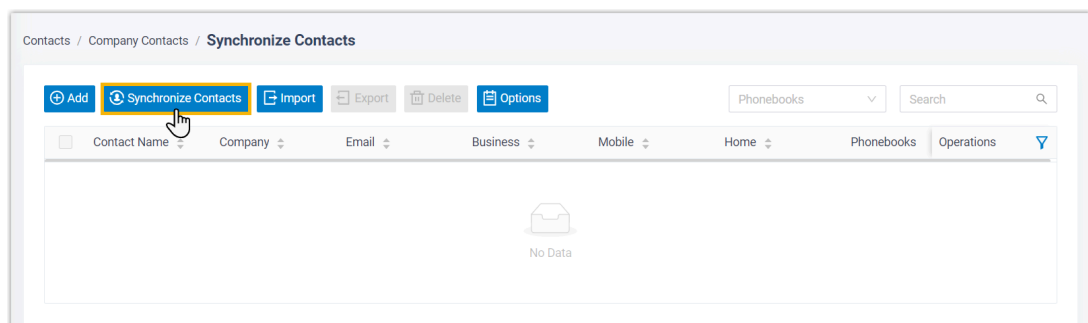
For more information, see [Route Inbound Calls by Matched Phonebook Contacts](#).

Disable LDAP Integration

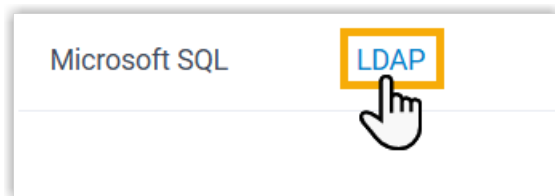
You can disable LDAP integration on Yeastar P-Series Cloud Edition at any time when you want to pause the integration.

Procedure

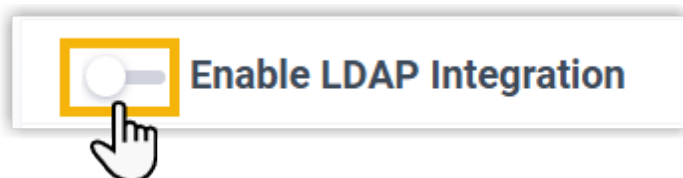
1. Access the LDAP configuration page.
 - a. Log in to PBX web portal, go to **Contacts > Company Contacts**.
 - b. At the top of the page, click **Synchronize Contacts**.



- c. Click **LDAP** tab.



2. Turn off the option **Enable LDAP Integration**.



3. Click **Save**.

Result

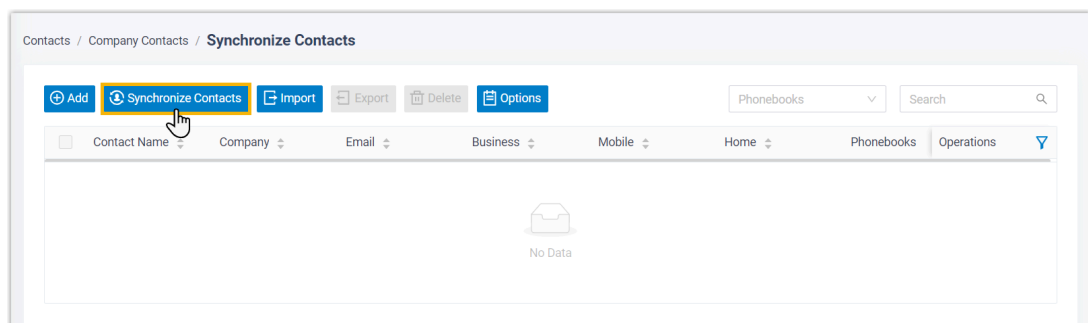
- The **Status** field displays **Disabled**.
- The LDAP configurations are retained, and can be used directly the next time the integration is enabled again.

Disconnect LDAP Integration

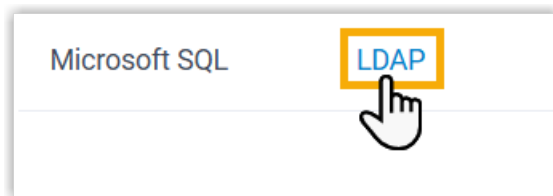
If you want to integrate with another database, you need to disconnect the current LDAP integration first.

Procedure

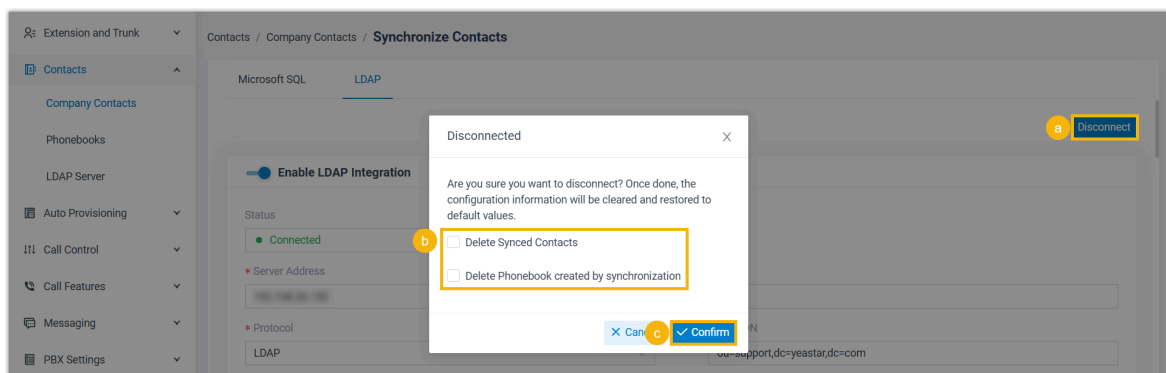
1. Access the LDAP configuration page.
 - a. Log in to PBX web portal, go to **Contacts > Company Contacts**.
 - b. At the top of the page, click **Synchronize Contacts**.



- c. Click **LDAP** tab.



2. Disconnect LDAP integration.



- a. At the top-right corner, click **Disconnect**.

- b. **Optional:** To delete the synced contacts or created phonebook, select the checkbox of **Delete Synced Contacts** and **Delete Phonebook created by synchronization**.
- c. Click **Confirm**.

Result

The LDAP integration is disconnected.