LDAP Server

Yeastar S-Series VoIP PBX

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Contents

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About this guide

In this guide, we introduce the configuration settings needed to set up Yeastar S-Series VoIP PBX as LDAP server and provide configuration examples of Zoiper Softphone and mainstream IP phones like Yealink, Fanvil, Snom, Htek, Cisco, and Grandstream.

Audience

This guide is intended for the administrators who are responsible for setting up LDAP server and have a basic knowledge of LDAP.

LDAP Overview

Yeastar S-Series VoIP PBX - LDAP Server App provides a centralized phonebook management. With the LDAP phonebook, you can quickly launch calls without wasting time finding a contact's number and subsequently entering it on your phone.

LDAP stands for Lightweight Directory Access Protocol which is a client-server protocol for accessing a directory service.

What kind of information can be stored in the LDAP directory?

The LDAP information model is based on *entries*.

An entry is a collection of attributes that has a globally-unique Distinguished Name (DN).

The DN is used to refer to the entry clearly. Each of the entry's attributes has a *type* and one or more *values*. The types are typically mnemonic strings, like "cn" for common name, or "mail" for email address.

The syntax of values depends on the attribute type. For example, a *cn* attribute might contain the value "Babs Jensen". A *mail* attribute might contain the value "babs@example.com".

Table 1: Common LDAP Attributes

| Yeastar LDAP Server Option	Attribute	Alias
Nickname	cn	commonName
First Name	gn	givenName
Last Name	sn	surname
Email	mail	rfc822Mailbox
Mobile Number	mobile	mobileTelephoneNumber
Office Number	telephoneNumber	telephoneNumber
Home Number	homePhone	homeTelephoneNumber
Department	departmentNumber	departmentNumber

How is the information arranged?

In LDAP, directory entries are arranged in a hierarchical tree-like structure. The following figure shows an example of Yeastar S-Series VoIP PBX LDAP directory tree.

Terminology

- dc: Domain Component.
- ou: Organization Unit, usually refers to a name of an organization unit.

- cn: Common Name, usually refers to a contact name.
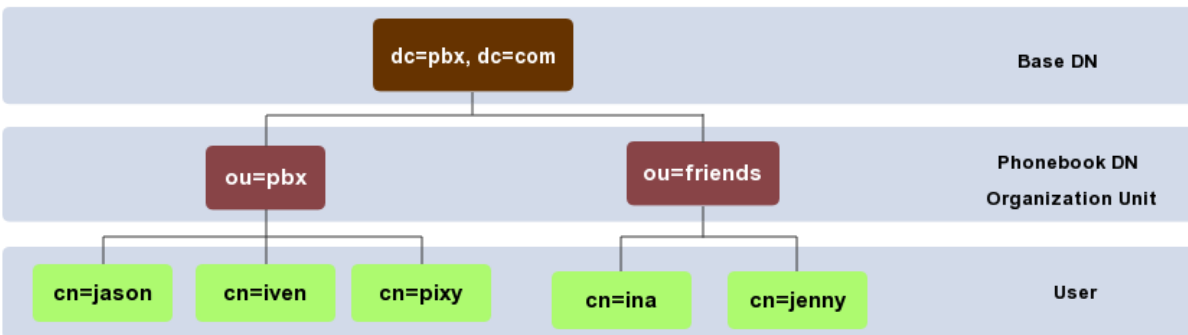
LDAP Server Configurations

Configure LDAP Server

Before you get started, you need to set up LDAP server on Yeastar S-Series VoIP PBX.

1. Log in the PBX web interface, go to **LDAP Server**.
2. Select the checkbox of **Enable LDAP Server**.
3. Retain the default LDAP server settings or change the settings according to your needs.

- **Base DN**: Base DN is a entry in the LDAP directory where the search is requested to begin by LDAP clients. The Base DN is often referred to as the search base. The default value is *dc=pbx,dc=com*.
- **PBX DN**: PBX DN is the default entry in the LDAP directory that contains attributes based on the PBX extension users. The default value is *ou=pbx,dc=pbx,dc=com*.
- **Username**: Specify the username to log in the LDAP server.

   📝 **Note:** Change `cn` value, `dc` value must be the same as **Base DN**.

- **Password**: Specify the password to log in the LDAP server.

4. Click **Save**.

LDAP Phonebook

Default LDAP Phonebook

The LDAP server has a default LDAP phonebook with **PBX DN** "ou=pbx,dc=pbx,dc=com", which is synchronized with the extensions on the Yeastar S-Series VoIP PBX.

You can click ✏ to view the default phonebook "pbx".

📝 **Note:**

You cannot add or delete the contacts in the default phonebook directly. Go to
Settings→PBX→Extensions to configure extensions, the phonebook will be automatically updated.

Add an LDAP Phonebook

You can add other phonebooks for external contacts.

1. Go to LDAP Server page, and click **Add**.
2. Enter the phonebook name.

    The Phonebook Node that contains the phonebook name and the Base DN will be generated automatically.

3. Click **Save**.

Manage an LDAP Phonebook

After you add an LDAP phonebook, you can edit or delete the phonebook.

Edit a Phonebook

You can add, edit, and delete contacts in the phonebook you've added.

Go to LDAP Server page, click ✎ beside the desired phonebook.

- **Add contacts to a phonebook**
  1. Click **Add**.
  2. In the right column, edit the contact attributes.
  3. Click **Save** to add contacts.

  > **Note:** Nickname, and at least one contact method are required.

- **Delete contacts from a phonebook**
  1. Select the checkbox of the desired contact.
  2. Click **Delete** or 🗑 to delete contacts.

- **Edit contacts in a phonebook**
  1. Select the checkbox of the desired contact.
  2. In the right column, edit the contact attributes.
  3. Click **Save**.

Delete Phonebooks

1. Go to LDAP Server page, and select the checkbox of the desired phonebooks.
2. Click **Delete** or 🗑 to delete the phonebooks.

Export/Import an LDAP Phonebook

You can export existing phonebooks from LDAP server to mass update LDAP entries and import the phonebooks to LDAP server again.

Export a Phonebook from LDAP Server

You can export phonebook from LDAP Server. The exported phonebook can be used as a record or a sample CSV file for you to edit contacts and be imported to LDAP Server again.

1. Go to LDAP Server page, and select the desired phonebook.
2. Click **Export**.

Import a Phonebook to LDAP Server

Before you start to import a phonebook, prepare a phonebook file, the phonebook should meet the following requirements:

- **File format**: CSV file with UTF-8 encoding.

  ℹ️ **Tip:** You can open the CSV file with **Notepad** and save it with UTF-8 encoding.

- **Import parameters**: The parameters in the CSV file should meet the requirements demonstrated in Import Parameters - LDAP Phonebook.

1. Go to LDAP Server page, and click **Import**.
2. In the **Import Phonebook** dialog box, click **Browse**.

3. Click **Import**.

Example LDAP Phonebook

With the phonebook file, you can do the following operations:

- **Centrally manage multiple phonebooks**

  Add multiple phonebook nodes in the phonebook file, and import the file to LDAP server.

  📝 **Note:** For phonebook node, only alphanumerics are valid.

	A	B	C	D	E	F	G	H	I	J
1	Phonebook Node	Extension	Nickname	First Name	Last Name	Email	Mobile Number	Office Number	Home Number	Department
2	pbx	1000	Mike					1000		
3	pbx	1001	Ann					1001		
4	friends	1002	Henry					1002		
5	colleagues	1003	Cindy					1003		
6	clients	1004	Tom					1004		

	Phonebook Node	Edit	Delete
☐	ou=pbx,dc=pbx,dc=com	✎	🗑
☐	ou=clients,dc=pbx,dc=com	✎	🗑
☐	ou=colleagues,dc=pbx,dc=com	✎	🗑
☐	ou=friends,dc=pbx,dc=com	✎	🗑

- **Add a new contact to an existing phonebook**

  Add a new contact "Angela" to an existing phonebook "colleagues", and import the file to LDAP server.

	A	B	C	D	E	F	G	H	I	J
1	Phonebook	Extension	Nickname	First Name	Last Name	Email	Mobile Number	Office Number	Home Number	Department
2	colleagues		Cindy					2000		
3	colleagues		Lily					2002		
4	colleagues		Tom					2003		
5	colleagues		Henry					2001		
6	colleagues		Angela					2004		

	Nickname	Edit	Delete
☐	Angela	✎	🗑
☐	Cindy	✎	🗑
☐	Henry	✎	🗑
☐	Lily	✎	🗑
☐	Tom	✎	🗑

- **Add a new phonebook with a new contact**

  Add a new phonebook "VIP" with a new contact "Jay".

	A	B	C	D	E	F	G	H	I	J
1	Phonebook Node	Extension	Nickname	First Name	Last Name	Email	Mobile Number	Office Number	Home Number	Department
2	friends		Rose					2008		
3	pbx	1000	Mike					1000		
4	pbx	1001	Ann					1001		
5	VIP		Jay					2009		

Phonebook Node	Edit	Delete
ou=pbx,dc=pbx,dc=com	✎	🗑
ou=VIP,dc=pbx,dc=com	✎	🗑
ou=friends,dc=pbx,dc=com	✎	🗑

- **Update information of existing contacts**

  Update the information of existing contact "Angela", and import the file to LDAP server. The following dialog will appear. Click **Yes** to check the replaced fields.

  ✕

  ❓ Part of contacts failed to be imported.
  Download the file and check for the replaced fields?

Yes	No

	A	B	C	D	E	F	G	H	I	J
1	Phonebook Node	Extension	Nickname	First Name	Last Name	Email	Mobile Number	Office Number	Home Number	Department
2	colleagues		Cindy					2000		
3	colleagues		Lily					2002		
4	colleagues		Tom					2003		
5	colleagues		Henry					2001		
6	colleagues		Angela			Angela@gmail.com		2004		Sales

Nickname:	Angela
First Name:	
Last Name:	
Email:	Angela@gmail.com
Mobile Number:	
Office Number:	2004
Home Number:	
Department:	Sales

LDAP Client Configuration Examples

LDAP Configurations on Yealink Phone

In this example,we demonstrate how to configure and use LDAP phonebook using a Yealink T41 (version 36.80.0.95).

Configuration Example

The example configurations are set according to default settings of Yeastar S-Series VoIP PBX LDAP server. You can use the following settings as a starting point and adjust the filter and display attributes according to your needs.

Log in the Yealink phone web interface, go to **Directory→LDAP** to configure LDAP.

| Setting	Description	Example
Enable LDAP	Enable or disable LDAP on IP phone.	Enabled
LDAP Label	Specify the name of phonebook.	Telephone Directory
LDAP Name Filter	Specify the name attributes for LDAP searching. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(cn=%)(sn=%))
LDAP Number Filter	Specify the number attributes for LDAP searching. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(telephoneNumber=%)(homePhone=%) (mobile=%))

Setting	Description	Example
LDAP TLS Mode	Specify the connection mode between the LDAP server and the IP phone. • LDAP • LDAP TLS Start • LDAPS 📝 **Note:** Yeastar S-Series VoIP PBX supports LDAP.	LDAP
Server Address	Enter the IP address of PBX.	192.168.6.216
Port	Enter the LDAP server port.	389
Base	Specify a starting point in the directory tree from which to search. • To search all contacts, enter the Base DN of LDAP server. • To search part of contacts, enter the desired phonebook node.	dc=pbx,dc=com
Username	Enter the user name to log in the LDAP server.	cn=admin,dc=pbx,dc=com
Password	Enter the password to log in the LDAP server.	password
Max Hits (1~1000)	Specify the maximum number of search results to be returned by the LDAP server.	50
LDAP Name Attributes	Specify the name attributes of each record to be returned by the LDAP server. The user can configure multiple name attributes separated by space.	cn sn displayName
LDAP Number Attributes	Specify the number attributes of each record to be returned by the LDAP server. The user can configure multiple number attributes separated by space.	telephoneNumber homePhone mobile mail departmentNumber
LDAP Display Name	Specify the display name of the contact record displayed on the LCD screen. This parameter value must start with % symbol.	%cn
Protocol	Yeastar S-Series VoIP PBX LDAP server uses Version 3.	3
LDAP Lookup for Incoming Call	Enable or disable IP phone to perform an LDAP search when receiving an incoming call.	Enabled

Setting	Description	Example
LDAP Lookup for Callout	Enable or disable IP phone to perform an LDAP search for on-going calls.	Enabled
LDAP Sorting Results	Enable or disable IP phone to sort out search results in alphabetical and numerical order.	Enabled

Search Contacts via Directory

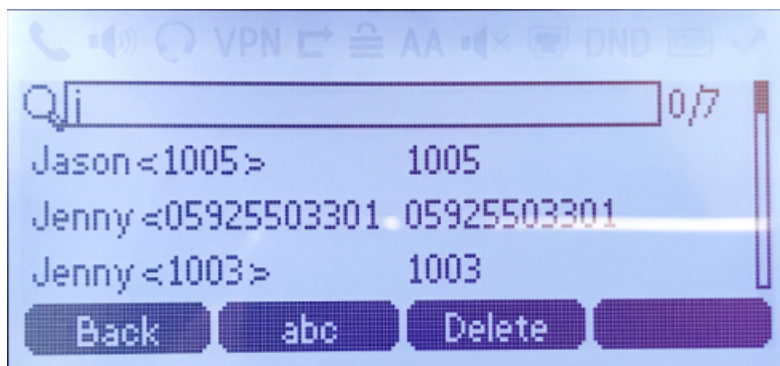- **Enable LDAP on Yealink Phone**

  1. Log in the Yealink phone web interface, go to **Directory**→**Setting** to enable LDAP.
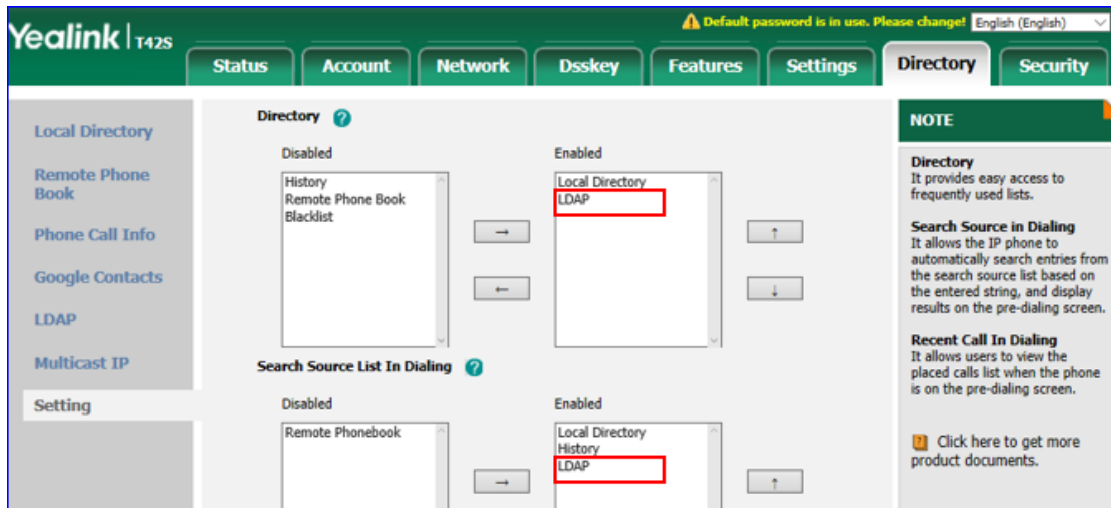
  2. Click **Confirm**.

- **Search LDAP Contacts**

  1. Press **Directory** to access LDAP phonebook.
  2. Search the contact name or number using the keypad. The contacts whose name or phone number match the characters entered will appear on the LCD screen.

  3. Press the navigation key to select the desired contact.
  4. Press **Send** to call the contact.

Search Contacts via LDAP Key

- **Set an LDAP Key on Yealink Phone**

Set an LDAP key on the phone to quickly access the LDAP phonebook.

1. Log in the Yealink phone web interface, go to **DSSKey→LineKey**.
2. Choose a DSS key, and select key type to **LDAP**.

3. Click **Confirm**.

*   **Search LDAP Contacts**

1. Press the LDAP key to access the LDAP phonebook.

2. Search the contact name or number using the keypad. The contacts whose name or phone number match the characters entered will appear on the LCD screen.
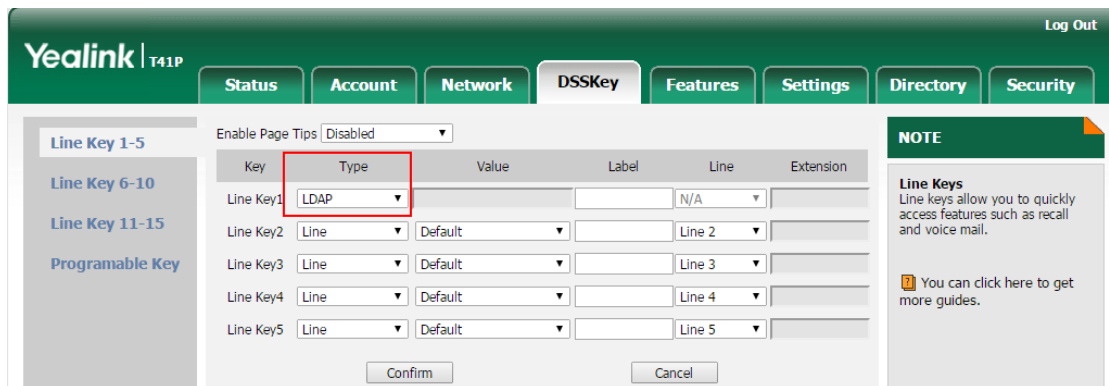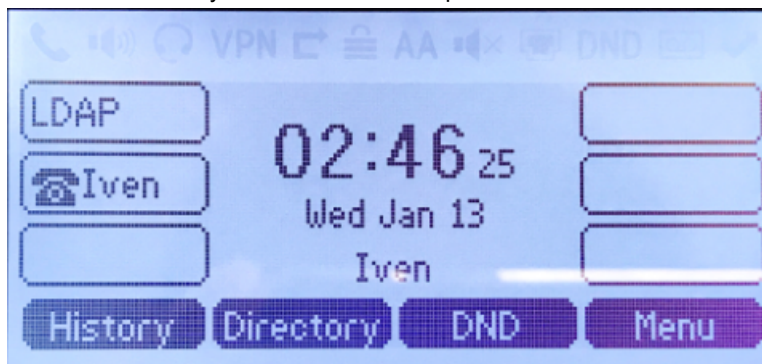3. Press the navigation key to select the desired contact.
4. Press **Send** to call the contact.

LDAP Configurations on Fanvil Phone

In this example, we demonstrate how to configure and use LDAP phonebook using a Fanvil X5S (version 1.12.1).

Configuration Example

The example configurations are set according to default settings of Yeastar S-Series VoIP PBX LDAP server. You can use the following settings as a starting point and adjust the filter and display attributes according to your needs.

Log in the Fanvil phone web interface, go to **Phonebook→Cloud phonebook→LDAP Settings** to configure LDAP client.

LDAP Settings

LDAP	LDAP 1 ⌄		
Display Title:	LDAP	Version:	Version 3 ⌄
Server Address:	192.168.6.36	Server Port:	389
LDAP TLS Mode:	LDAP ⌄	Calling Line:	AUTO ⌄
Authentication:	Simple ⌄	Search Line:	AUTO ⌄
Username:	cn=admin,dc=pbx,dc=com	Password:	••••••••
Search Base:	dc=pbx,dc=com	Max Hits:	50
Telephone:	telephoneNumber	Mobile:	mobile
Other:	other	Name Attr:	cn sn ou
Sort Attr:	cn	Display name:	cn
Name Filter:	(|(cn=%)(sn=%))	Number Filter:	(|(telephoneNumber=%)(mo
Enable In Call Search:	☑	Enable Out Call Search:	☑

Setting	Description	Example
LDAP	Choose one of the following phonebooks. • LDAP 1 • LDAP 2 • LDAP 3 • LDAP 4	LDAP 1
Display Title	Specify the name of phonebook.	LDAP
Version	Yeastar S-Series VoIP PBX LDAP server uses Version 3.	Version3
Server Address	Enter the IP address of PBX.	192.168.6.36
Server Port	Enter the LDAP server port.	389
LDAP TLS Mode	Specify the connection mode between the LDAP server and the IP phone. • LDAP • LDAP TLS Start • LDAPS 📝 **Note:** Yeastar S-Series VoIP PBX supports LDAP.	LDAP
Calling Line	Select a dialing line that LDAP uses. When a call is initiated from the specified line, contacts information is searched in the LDAP phonebook of the corresponding line. If no contacts information is found, contacts information is searched in LDAP phonebooks configured as **AUTO**.	AUTO

Setting	Description	Example
Authentication	Select authentication type to access to LDAP server. • None • DIGEST-MD5 • CRAM-MD5 • Simple (Default Configuration)	Simple
Search Line	Select an answering line that LDAP uses. When a call is received from the specified line, contacts information is searched in the LDAP phonebook of the corresponding line. If no contacts information is found, contacts information is searched in LDAP phonebooks configured as **AUTO**.	AUTO
Username	Enter the user name to log in the LDAP server.	cn=admin,dc=pbx,dc=com
Password	Enter the password to log in the LDAP server.	password
Search Base	Specify a starting point in the directory tree from which to search. • To search all contacts, enter the Base DN of LDAP server. • To search part of contacts, enter the desired phonebook node.	dc=pbx,dc=com
Max Hits	Specify the maximum number of search results to be returned by the LDAP server.	50
Telephone	Specify the telephoneNumber attributes of each record to be returned by the LDAP server.	telephoneNumber
Mobile	Specify the mobileNumber attributes of each record to be returned by the LDAP server.	mobile
Other	Specify the other attributes of each record to be returned by the LDAP server.	other
Name Attr	Specify the name attributes of each record to be returned by the LDAP server. You can configure multiple name attributes separated by space.	cn sn ou
Sort Attr	Specify the mode of sorting the query results.	cn
Display name	Specify the display name of the contact record displayed on the LCD screen.	cn

Setting	Description	Example
Name Filter	Specify the name attributes for LDAP searching. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(cn=%)(sn=%))
Number Filter	Specify the number attributes for LDAP searching. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(telephoneNumber=%)(mobile=%)(other=%))
Enable in Call Search	Enable or disable IP phone to perform LDAP search when receiving an incoming call.	Enabled
Enable Out Call Search	Enable or disable IP phone to perform LDAP search when placing an outgoing call.	Enabled

Set an LDAP Key

Set an LDAP key on Fanvil phone to quickly access the LDAP phonebook.

1. Log in the Fanvil phone web interface, go to **Function Key**.
2. Choose a DSS key, select key type to **Key Event** and subtype to **LDAP Group**.

3. Click **Apply**.

Search LDAP Contacts

You can press the LDAP key to access the LDAP phonebook. Enter the search criteria to search a contact from LDAP phonebook and call the contact.

1. Press the LDAP key to access the LDAP phonebook.
2. Press **Search** to search the contact name or number using the keypad. The contacts whose name or phone number match the characters entered will appear on the LCD screen.
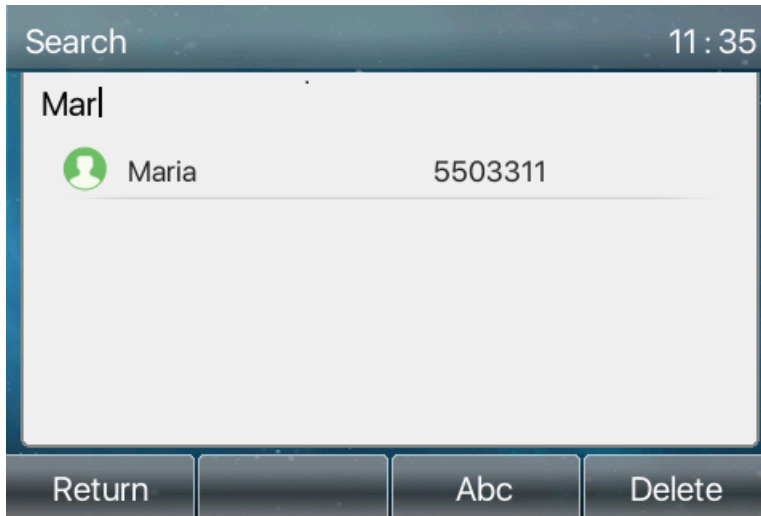
3. Press the navigation key to select the desired contact.
4. Press **Dial** to call the contact.

LDAP Configurations on Snom Phone

In this example, we demonstrate how to configure and use LDAP phonebook using a Snom D745 (version 66.84.0.10).

Configuration Example

The example configurations are set according to default settings of Yeastar S-Series VoIP PBX LDAP server. You can use the following settings as a starting point and adjust the filter and display attributes according to your needs.

Log in the Snom phone web interface, go to **Setup→Advanced→Network→LDAP** to configure LDAP client.

LDAP

LDAP Name Filter	(|(cn=%)(sn=%))
LDAP Number Filter	(|(telephoneNumber=%)(hor
LDAP Name Filter During Call	(|(cn=%)(sn=%))
LDAP Number Filter During Call	(|(telephoneNumber=%)(hor
Server Address	192.168.6.216
Port	389
Base	dc=pbx,dc=com
Username	cn=admin,dc=pbx,dc=com
Password	••••••••
LDAP Name Attributes	cn sn displayName
LDAP Number Attributes	telephoneNumber homePhon
LDAP Display Name	LDAP
Country Code	+49
Area code	030
LDAP over TLS	⦿on ◯off
Sort Results	⦿on ◯off
Initial Query	⦿on ◯off

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Setting	Description	Example
LDAP Name Filter	Specify the name attributes for LDAP searching. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(cn=%)(sn=%))
LDAP Number Filter	Specify the number attributes for LDAP searching. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(telephoneNumber=%)(homePhone=%)(mobile=%))
LDAP Name Filter During Call	Specify the name attributes for LDAP searching when dialing or for looking up an incoming call. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(cn=%)(sn=%))

Setting	Description	Example
LDAP Number Filter During Call	Specify the number attributes for LDAP searching when dialing or for looking up an incoming call. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(telephoneNumber=%)(homePhone=%)(mobile=%))
Server Address	Enter the IP address of PBX.	192.168.6.216
Port	Enter the LDAP server port.	389
Base	Specify a starting point in the directory tree from which to search. • To search all contacts, enter the Base DN of LDAP server. • To search part of contacts, enter the desired phonebook node.	dc=pbx,dc=com
Username	Enter the user name to log in the LDAP server.	cn=admin,dc=pbx,dc=com
Password	Enter the password to log in the LDAP server.	password
LDAP Name Attributes	Specify the name attributes of each record to be returned by the LDAP server. You can configure multiple name attributes separated by space.	cn sn displayName
LDAP Number Attributes	Specify the number attributes of each record to be returned by the LDAP server. You can configure multiple number attributes separated by space.	telephoneNumber homePhone mobile
LDAP Display Name	Specify the name of phonebook.	LDAP
Country Code	Specify standard country code which will be substituted in LDAP search requests.	+49
Area Code	Specify standard area code which will be substituted in LDAP search requests.	030
LDAP over TLS	Specify whether to use TCP or TLS as LDAP transport protocol.	On
Sort Results	Specify the mode of sorting the query results.	On

Setting	Description	Example
Initial Query	You can decide whether to query the server for an initial list of entries when entering the LDAP directory. 📝 **Note:** All placeholders (`%`) are replaced with `*`, and subsequent stars are formated to a single one. For example, `cn=*456%` would lead to `cn=*456*`, or `cn=456%*` would lead to `cn=456*`.	On

Set an LDAP Key

Set an LDAP key on the phone to quickly access the LDAP phonebook.

1. Log in the Snom phone web interface, go to **Setup→Function Keys→Line Keys**.
2. Choose a key, select key type to **Key Event**, select number to **LDAP Directory**, and set label name.

Line Keys

Page [Page 1 ▼]

	Context	Type	Number	Label	XML Label	
	Active ▼	Key Event ▼	LDAP Directory ▼	LDAP		P1
	Active ▼	None ▼				P2
	Active ▼	Key Event ▼	Conference ▼			P3
	Active ▼	Smart Transfer ▼				P4
	Active ▼	Line ▼				P5
	Active ▼	None ▼				P6
	Active ▼	Key Event ▼	Ringer Silent ▼			P7
	Active ▼	Key Event ▼	Redial ▼			P8

3. Click **Apply**.

Search LDAP Contacts

You can press the LDAP key to access the LDAP phonebook. Enter the search criteria to search a contact from LDAP phonebook and call the contact.

1. Press the LDAP key to access the LDAP phonebook.
2. Search the contact name or number using the keypad. The contacts whose name or phone number match the characters entered will appear on the LCD screen.
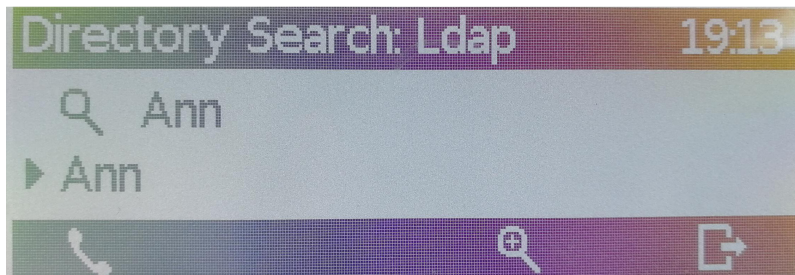
3. Press the navigation key to select the desired contact.

4. Press to call the contact.

LDAP Configurations on Htek Phone

In this example, we demonstrate how to configure and use LDAP phonebook using a Htek UC912 (version 2.0.4.4).

Configuration Example

The example configurations are set according to default settings of Yeastar S-Series VoIP PBX LDAP server. You can use the following settings as a starting point and adjust the filter and display attributes according to your needs.

Log in the Htek phone web interface, go to **Directory**→**LDAP** to configure LDAP client.

| Setting	Description	Example
LDAP Name Filter	Specify the name attributes for LDAP searching. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(cn=%)(sn=%))
LDAP Number Filter	Specify the number attributes for LDAP searching. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(telephoneNumber=%)(homePhone=%)(mobile=%))
Server Address	Enter the IP address of PBX.	192.168.6.216
Port	Enter the LDAP server port.	389

Setting	Description	Example
Base	Specify a starting point in the directory tree from which to search. • To search all contacts, enter the Base DN of LDAP server. • To search part of contacts, enter the desired phonebook node.	dc=pbx,dc=com
Username	Enter the user name to log in the LDAP server.	cn=admin,dc=pbx,dc=com
Password	Enter the password to log in the LDAP server.	password
Max.Hits(1~32000)	Specify the maximum number of search results to be returned by the LDAP server.	50
LDAP Name Attributes	Specify the name attributes of each record to be returned by the LDAP server. You can configure multiple name attributes separated by space.	cn sn displayName
LDAP Number Attributes	Specify the number attributes of each record to be returned by the LDAP server. You can configure multiple number attributes separated by space.	telephoneNumber homePhone mobile mail departmentNumber
LDAP Display Name	Specify the display name of the contact record displayed on the LCD screen. This parameter value must start with % symbol.	%cn
Search Delay(0~2000ms)	The time to display the search results after entering search information.	Leave it blank.
Protocol	Yeastar S-Series VoIP PBX LDAP server uses Version 3.	Version 3
LDAP Lookup For Call	Enable or disable IP phone to perform an LDAP search when receiving an incoming call.	On
LDAP Sorting Results	Enable or disable IP phone to sort out search results in alphabetical and numerical order.	On
LDAP Synchronize Time(0~9999mins)	The default value is 0, which means never synchronize.	Leave it blank.

Set an LDAP Key

Set an LDAP key on Htek phone to quickly access the LDAP phonebook.

1. Log in the Htek phone web interface, go to **Function Keys→LineKey**.
2. Choose a DSS key, and select key type to **LDAP**.
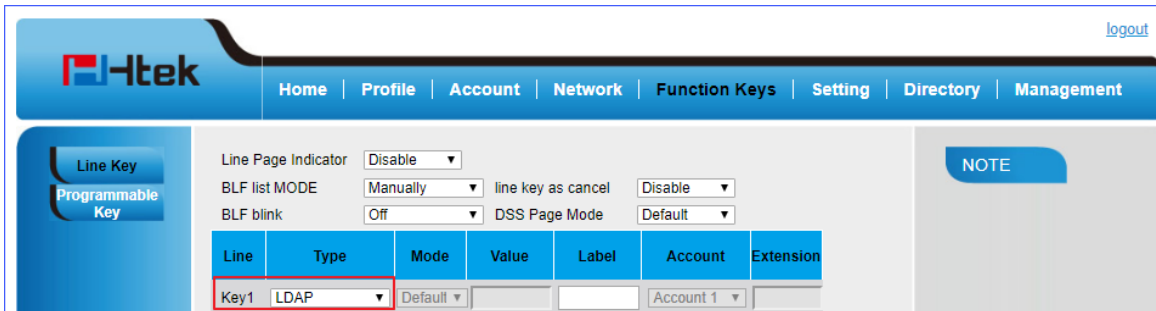
3. Click **SaveSet**.

Search LDAP Contacts

You can press the LDAP key to access the LDAP phonebook. Enter the search criteria to search a contact from LDAP phonebook and call the contact.

1. Press the LDAP key to access the LDAP phonebook.
2. Search the contact name or number using the keypad. The contacts whose name or phone number match the characters entered will appear on the LCD screen.

3. Press the navigation key to select the desired contact.
4. Press **Dial** to call the contact.

LDAP Configurations on Cisco SPA Phone

In this example, we demonstrate how to configure and use LDAP phonebook using a Cisco SPA-942 (version 6.1.5(a)).

Configuration Example

The example configurations are set according to default settings of Yeastar S-Series VoIP PBX LDAP server. You can use the following settings as a starting point and adjust the filter and display attributes according to your needs.

1. Log in the Cisco SPA phone web interface, click **Admin Login** and **advanced** to log in as an administrator.
2. Go to **Phone→LDAP Corporate Directory Search** to configure LDAP client.

Table 2:

Setting	Description	Example
LDAP Dir Enable	Whether to enable LDAP directory or not.	yes

Setting	Description	Example
LDAP Corp Dir Name	Specify the name of phonebook.	yeastar
LDAP Server	Enter the IP addresss of PBX.	192.168.6.216
LDAP Auth Method	Select the authentication method that the LDAP server requires. • None: No authentication is used between the client and the server. • Simple: The client sends its fully-qualified domain name and password to the LDAP server. But this may cause security issues. 📒 **Note:** If the version of your LDAP server is 1.4.12 or later, you should select **Simple**. • Digest-MD5: The LDAP server sends authentication options and a token to the client. The client returns an encrypted response that is decrypted and verified by the server.	Simple
LDAP Client DN	Enter the Username of LDAP server.	cn=admin,dc=pbx,dc=com
LDAP Username	Enter the user name to log in the LDAP server.	cn=admin,dc=pbx,dc=com
LDAP Password	Enter the password to log in the LDAP server.	password
LDAP Search Base	Specify a starting point in the directory tree from which to search. • To search all contacts, enter the Base DN of LDAP server. • To search part of contacts, enter the desired phonebook node.	dc=pbx,dc=com
LDAP Last Name Filter	This defines the search for surnames [sn], known as last name.	sn:(sn=*$VALUE*)
LDAP First Name Filter	This defines the search for the common name [cn].	cn:(cn=*$VALUE*)
LDAP Search Item3	Additional customized search item. Can be blank if not needed.	Leave it blank.
LDAP Item 3 Filter	Customized filter for the searched item. Can be blank if not needed.	Leave it blank.

| Setting	Description	Example
LDAP Search Item 4	Additional customized search item. Can be blank if not needed.	Leave it blank.
LDAP Item 4 Filter	Customized filter for the searched item. Can be blank if not needed.	Leave it blank.
LDAP Display Attr	Format of LDAP results displayed on phone.	a=sn;a=cn;a=telephoneNumber, n=Phone,t=p;
LDAP Number Mapping	Can be blank if not needed.	Leave it blank.

Cisco LDAP Display Attributes

Attribute	Value	Description
a	Attribute name	N/A
cn	Common name	N/A
sn	Surname (last name)	N/A
telephoneNumber	phone number	N/A
n	Display name	Example: n=Phone will cause "Phone:" to be displayed in front of the phone number of an LDAP query result when the detail soft button is pressed.
t	type	When t=p, that is, t is of type phone number, then the retrieved number can be dialed. Only one number can be made dialable. If two numbers are defined as dialable, only the first number is used. Example: a=ipPhone, t=p; a=mobile, t=p; Only the IP Phone number is dialable and the mobile number will be ignored.
p	phone number	When p is assigned to a type attribute, example t=p, then the retrieved number will be dialable by the phone.

Search LDAP Contacts

Enter the search criteria to search a contact from LDAP phonebook and call the contact.

1. Press the **Dir** soft key on the SPA phone.
2. Select the LDAP Corporate Directory from the list.
3. Enter the search parameters for Last Name and First Name, and press **submit**.
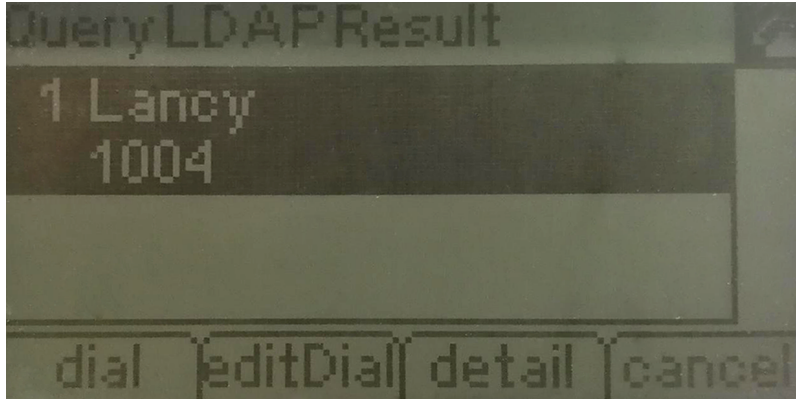
4. Press **Dial**, **EditDial**, **Detail**, or **Cancel** to use the LDAP results.

LDAP Configurations on Grandstream Phone

In this example, we demonstrate how to configure and use LDAP phonebook using Grandstream GXP1628 (version 1.0.4.100).

Configuration Example

The example configurations are set according to default settings of Yeastar S-Series VoIP PBX LDAP server. You can use the following settings as a starting point and adjust the filter and display attributes according to your needs.

Log in the Grandstream web interface, go to **Contacts**→**LDAP** to configure LDAP client.

Table 3:

| Setting	Description	Example
LDAP protocol	Specify the connection mode between the LDAP server and the IP phone. • LDAP • LDAPS 📝 **Note:** Yeastar S-Series VoIP PBX supports LDAP.	LDAP
Server Address	Enter the IP address of PBX.	192.168.6.36

Setting	Description	Example
Port	Enter the LDAP server port.	389
Base	Specify a starting point in the directory tree from which to search. • To search all contacts, enter the Base DN of LDAP server. • To search part of contacts, enter the desired phonebook node.	dc=pbx,dc=com
User Name	Enter the user name to log in the LDAP server.	cn=admin,dc=pbx,dc=com
Password	Enter the password to log in the LDAP server.	password
LDAP Number Filter	Specify the number attributes for LDAP searching. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(telephoneNumber=%)(homePhone=%)(mobile=%))
LDAP Name Filter	Specify the name attributes for LDAP searching. • The * symbol in the filter stands for any character. • The % symbol in the filter stands for the entering string used as the prefix of the filter condition.	(|(cn=%)(sn=%))
LDAP Version	Yeastar S-Series VoIP PBX LDAP server uses Version 3.	Version 3
LDAP Name Attributes	Specify the name attributes of each record to be returned by the LDAP server. You can configure multiple name attributes separated by space.	cn sn displayName
LDAP Number Attributes	Specify the number attributes of each record to be returned by the LDAP server. You can configure multiple number attributes separated by space.	telephoneNumber homePhone mobile mail departmentNumber
LDAP Display Name	Specify the display name of the contact record displayed on the LCD screen. This parameter value must start with % symbol.	%cn
Max. Hits	Specify the maximum number of search results to be returned by the LDAP server.	50

Setting	Description	Example
Search Timeout	Specify the interval for the LDAP server to process the request and the client waits for server to return. The valid range is 0 to 180.	30
Sort Results	Enable or disable IP phone to sort out search results .	Yes
LDAP Lookup	Enable or disable IP phone to perform an LDAP search when receiving an incoming call or placing an outgoing call.	Incoming Calls Outgoing Calls
Lookup Display Name	Specify the display name when the LDAP looks up the name for incoming call or outgoing call.	%cn

Search LDAP Contacts

Enter the search criteria to search a contact from LDAP phonebook and call the contact.

1. Press the **LDAP Search** soft key on the phone.
2. Search the contact name or number using the keypad and press **OK**. The contacts whose name or phone number match the characters entered will appear on the LCD screen.
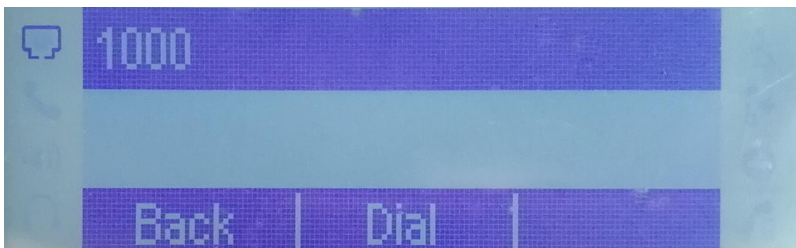
3. Press the navigation key to select the desired contact.
4. Press **Dial** to call the contact.

LDAP Configurations on Zoiper Softphone

In this example, we demonstrate how to configure and use LDAP phonebook using Zoiper Softphone.

Configuration Example

The example configurations are set according to default settings of Yeastar S-Series VoIP PBX LDAP server. You can use the following settings as a starting point and adjust the filter and display attributes according to your needs.

📝 **Note:** LDAP feature is only available for Zoiper Biz version.

1. Launch Zoiper Biz Softphone.
2. Go to **Settings→ Preferences→ Accounts→LDAP options**.
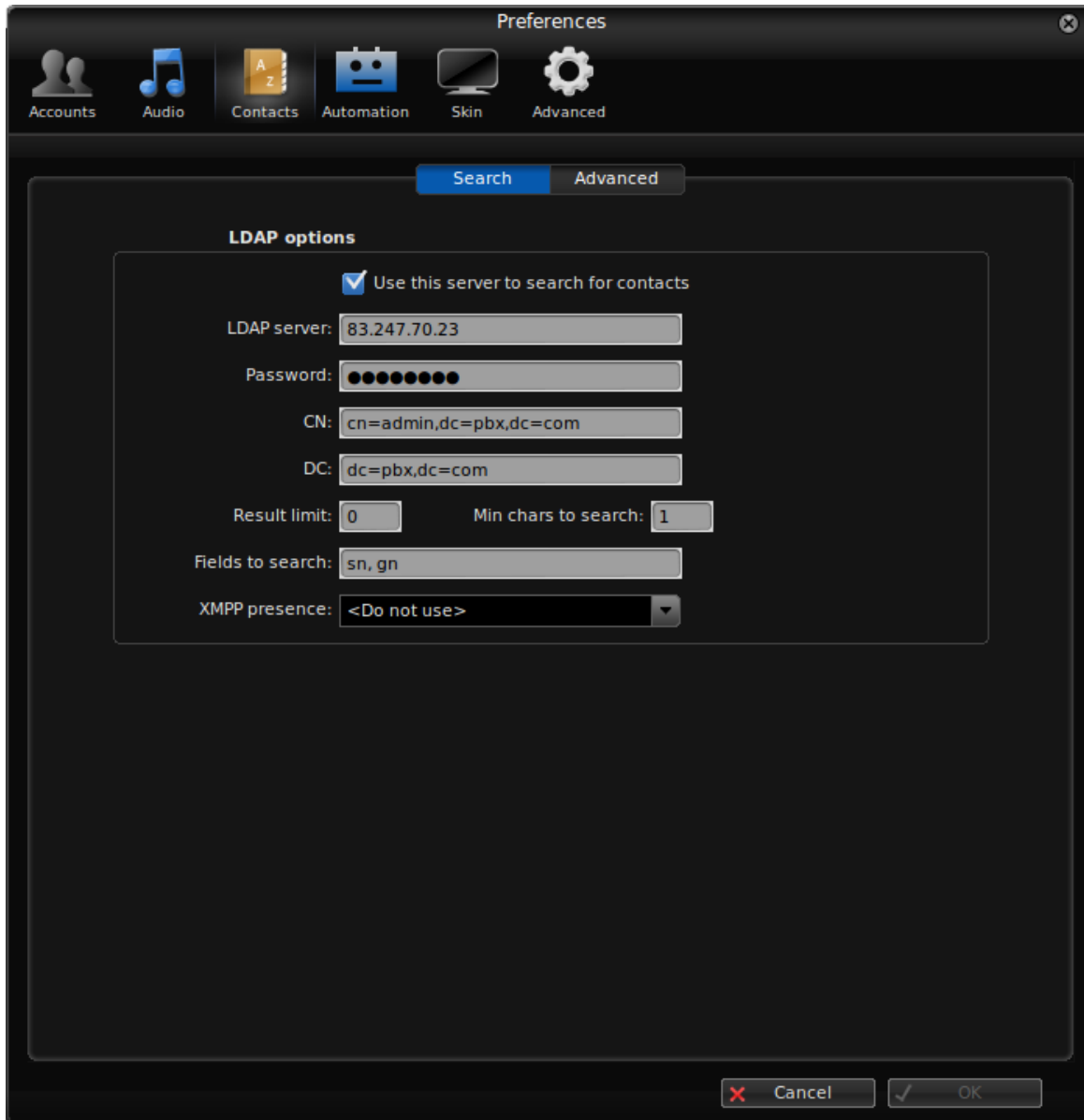3. Check **Use this server to search for contacts** and configure the LDAP client.

Table 4:

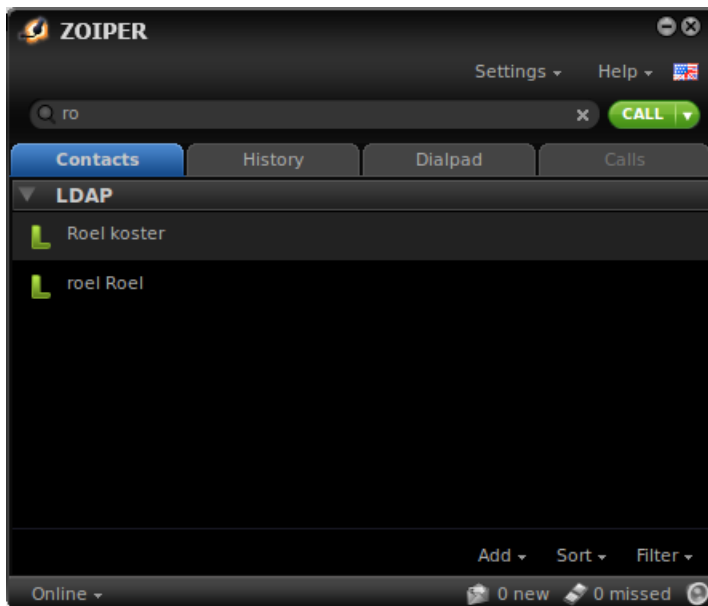| Setting	Description	Example
LDAP server	Enter the IP address of PBX.	83.247.7.70.23
Password	Enter the password to log in the LDAP server.	password
CN	Enter the user name to log in the LDAP server.	cn=admin,dc=pbx,dc=com
DN	Specify a starting point in the directory tree from which to search. Enter the Base DN of LDAP Server.	dc=pbx,dc=com

Setting	Description	Example
Result limit	Specify the maximum number of search results to be returned by the LDAP server.	0
Min chars to search	Specify the minimum number of characters to be entered before starting LDAP search.	1
Fields to search	Specify the name attributes for LDAP searching. The default value is "sn, givenname".	gn
XMPP presence	The name of the field in the LDAP points to the XMPP presence URI for the contact.	Do not use

Search LDAP Contacts

Enter the search criteria to search a contact from LDAP phonebook and call the contact.

1. Search the contact name or number. The contacts whose name or phone number match the characters entered will appear on the LCD screen.

2. Click **Dial** to call the contact.