ESI eSIP and eCloud

ESI Phone LDAP Contacts with Active Directory

This document is intended to be followed as a general guideline to set up access to a simple Active Directory (AD) from an ESI Phone using Lightweight Directory Access Protocol (LDAP).

Contents

Introduction ____ ***2***

The Active Directory ____ ***2***

Setting up Active Directory via the phone's GUI ____ ***5***

Getting the phone IP address ____ **5**
Getting the IP address for ePhone8 ____ 5
Getting the IP address for ePhone3/4x v2, ePhoneX/X-1 ____ 6
Getting the IP address for ePhone3/4x v1 ____ 7

Logging in to the phone's GUI ____ **8**

Setting up the phonebooks ____ **8**
ePhone8, ePhone3/4x v2, ePhoneX/X-1 ____ 8
ePhone3/4x v1 ____ 11

Viewing phonebook on the ePhone8 ____ **12**
Viewing ePhone8 individually created Phonebooks ____ 12
Configure Phonebook icon to access Active Directory directly ____ 14

Viewing phonebook on ePhone3/4x v2, ePhoneX/X-1 ____ **16**
Configure a Contacts Softkey to access Active Directory ____ 16

Viewing phonebook on ePhone3/4x v1 ____ **19**
Configure a Contacts Softkey to access Active Directory ____ 19

Introduction

This document describes the procedure used to access a simple Active Directory (AD) using Lightweight Directory Access Protocol (LDAP). This document should not be interpreted as a universal “how to get access to any Active Directory”, but rather a guideline describing how ESI’s product Management setup one phone to retrieve information from a very simple Active Directory.

Please notice that the structures of Active Directories will be different in each company and therefore the administrator of the Active Directory needs to be involved in providing the appropriate information to enter into the phone via the GUI interface.

For the creation of this guideline document, a very simple Active Directory was created with fake values with the purpose of illustrating the relationship between the data in the Active Directory and the information required in the phone’s GUI to be able to retrieve names and phone numbers for users and contacts.

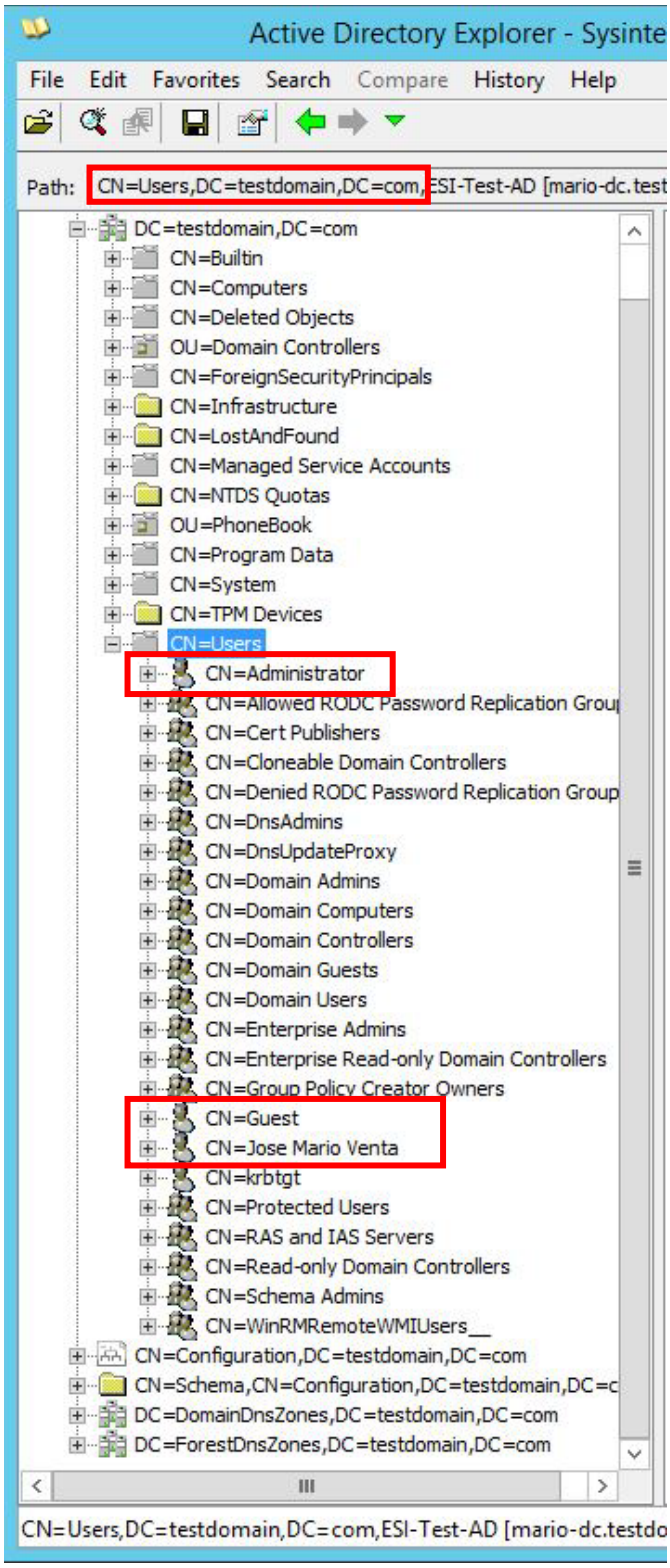
The Active Directory

Each company will have a different structure for the Active Directory being used. The administrator of the Active Directory should provide assistance in identifying what data should be entered. The network administrator should also provide guidelines as to what user should be used to gain access to the Active Directory. For this procedure, the credentials of one of the users were used, but that doesn’t have to be the case always.

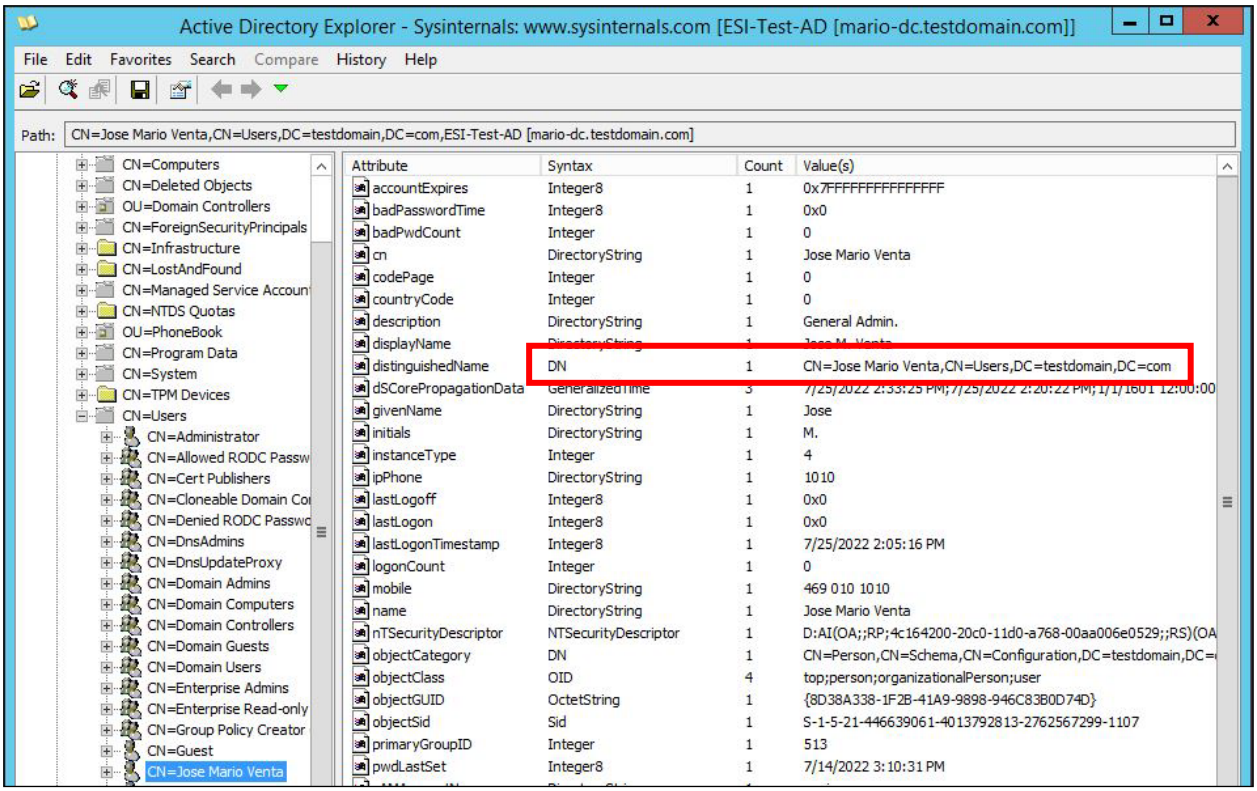
Access to the company’s Active Directory is always protected and therefore the network administrator should also provide assistance in giving the phones secure access to the network where the Active Directory resides. That may be setting up a VPN connection or something similar. Setting up the secured access to the network where the Active Directory resides is not covered in this document as it will be specific for each customer.

For this exercise, a very simple Active Directory was created on a virtual machine in a personal computer. Access to that virtual machine was therefore very easy and no VPN connection had to be set. The IP address of the virtual machine happened to be **10.0.0.5**, but in actual implementations the IP address to be used should be the address of the server hosting the Active Directory.

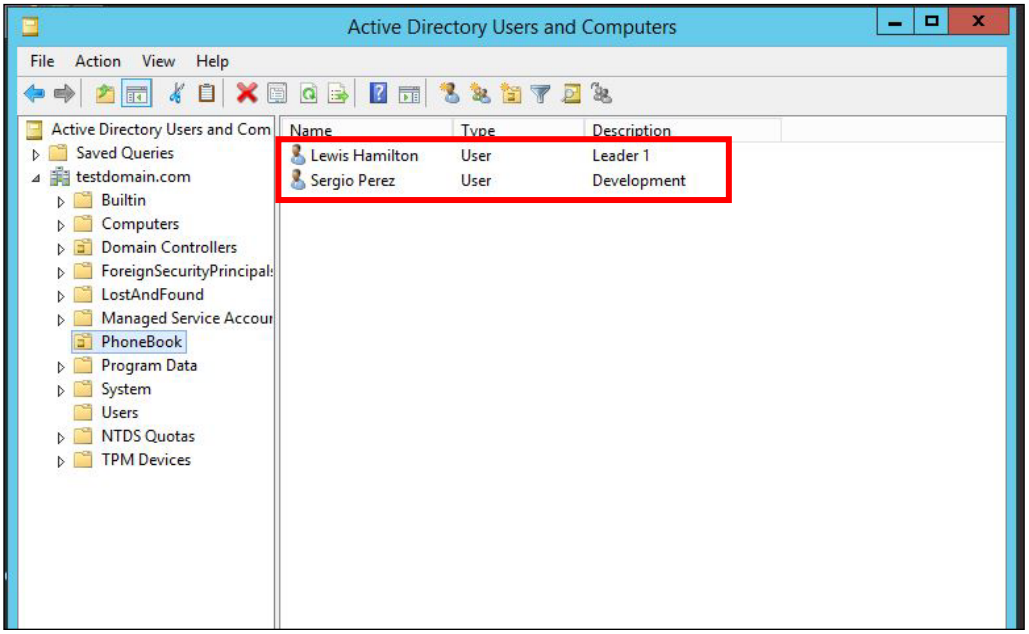
The following figure shows three users defined in the Active Directory under the Users folder and at the top, the path where those users are located.



In this exercise, user Jose Mario Venta will use his credentials to access the Active Directory. The figure below shows the **DN** for this user which is one of the elements that need to be known.



The following figure shows the two external contacts defined in the Active Directory under the Phonebook folder.

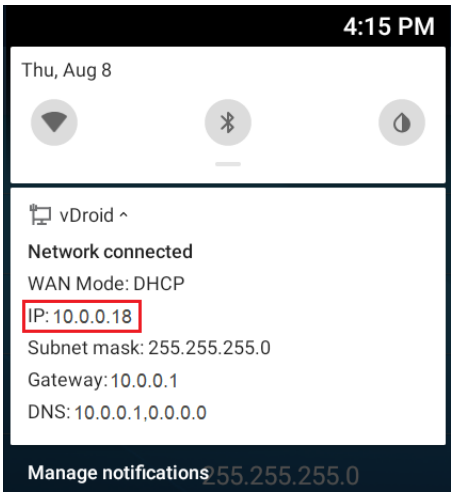


Setting up Active Directory via the phone's GUI

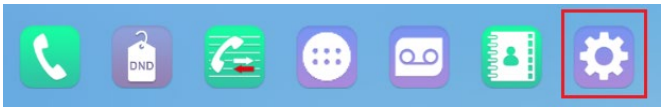
Getting the phone IP address

Getting the IP address for ePhone8

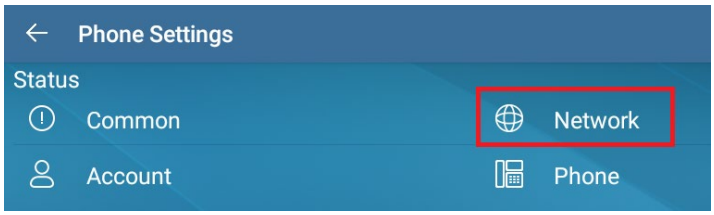
Obtain the IP address of the phone you want to setup to access the Active Directory. In an ePhone8 you can do that by sliding your finger from the top of the screen down, which will open a small window where the IP address can be seen.



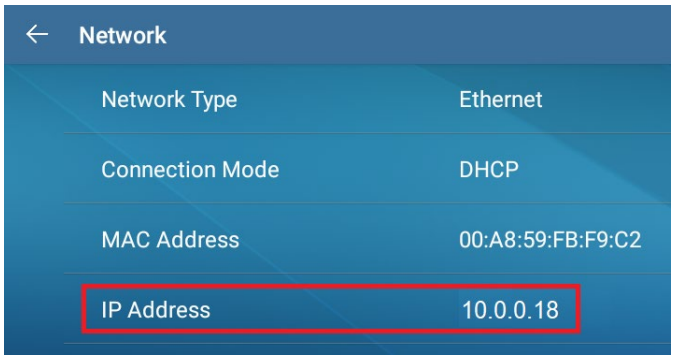
Alternatively, you can also find the IP address by selecting Settings (gear icon) on the main screen,



and then select Network.

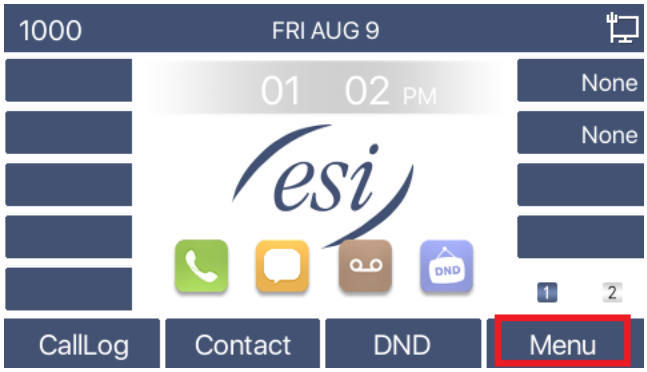


Here you will find the IP address.

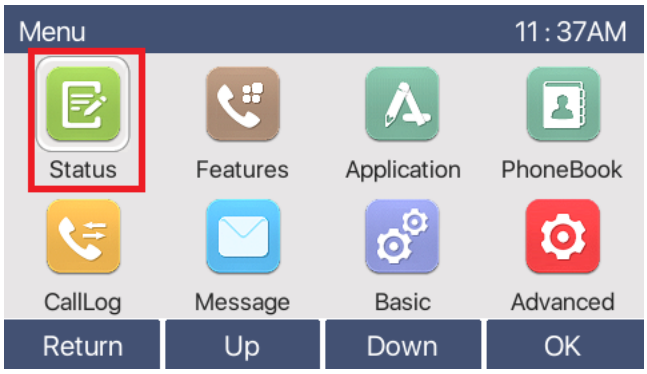


Getting the IP address for ePhone3/4x v2, ePhoneX/X-1

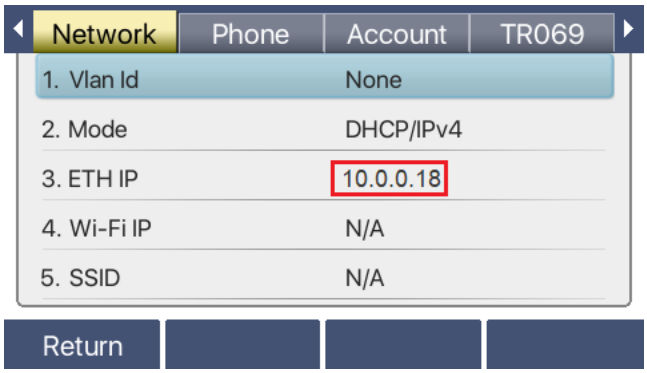
Press the **Menu** key on the phone.



Then select **Status** and press **OK**.

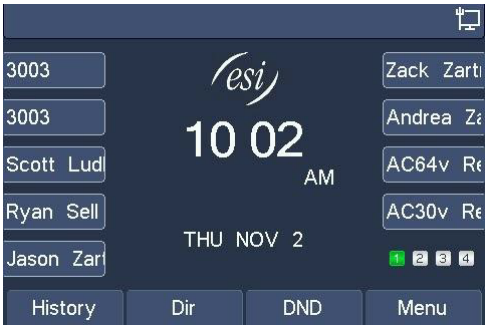


You will find the IP address under the Network tab as shown below.

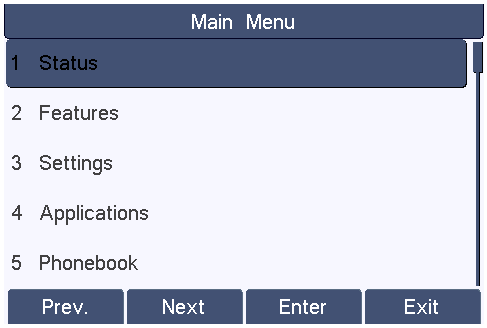


Getting the IP address for ePhone3/4x v1

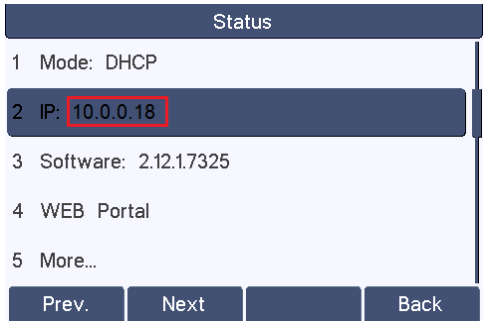
Press the **Menu** key on the phone.



Select **Status** and press Enter.



Under **Status** you will find the phone IP address.



Logging in to the phone's GUI

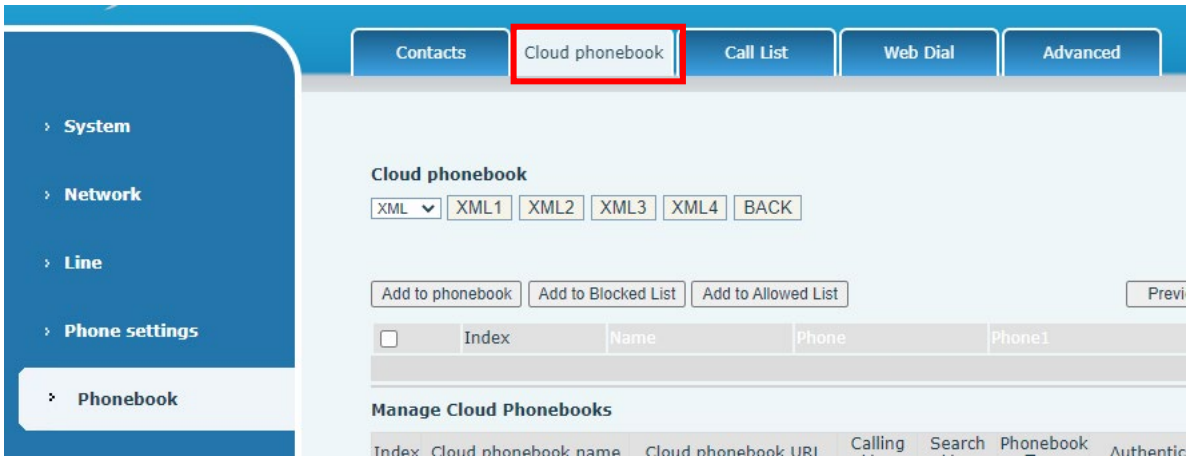
Open a web browser, enter the phone's IP address in the URL field and press Enter.

Then enter the User and Password into the login window and click Login.

Setting up the phonebooks

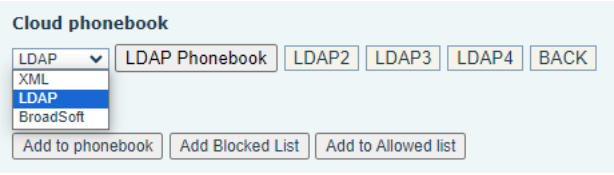
ePhone8, ePhone3/4x v2, ePhoneX/X-1

Now you are in the phone's GUI. Go to **Phonebook** > **Cloud Phonebook**.

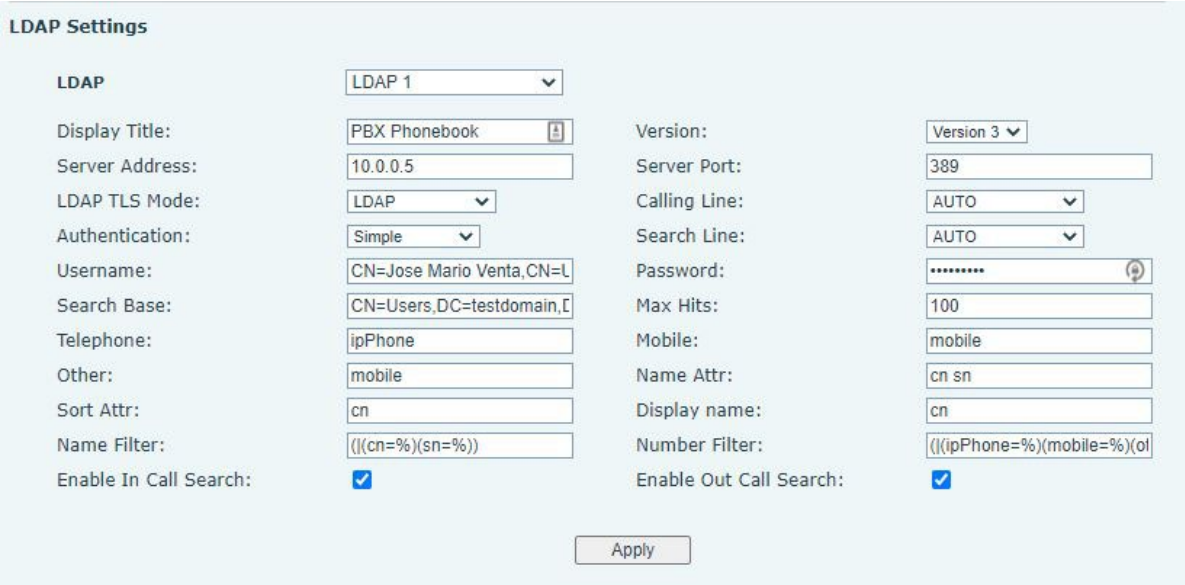


We will create two Active Directory Cloud Phonebooks, one for the PBX users and one for the external contacts. You can have up to 4 Active Directory Phonebooks.

Select **LDAP** from the dropdown menu, then click **LDAP Phonebook**.



To create the first phonebook, select LDAP1 from the dropdown menu under LDAP settings, enter the necessary information as shown in the example below and click Apply.



Display Title: Give this phonebook a name, in this case “PBX Phonebook”

Server Address: Enter the IP address of the server hosting the AD.

LDAP TLS Mode: Use LDAP

Authentication: Select “Simple” from the dropdown menu

Username: Enter the complete DN (as shown in the AD) for the user that will give access to the AD.

Search Base: Enter the path in the AD where the search should begin, in this example, the users are listed under testdomain.com/Users so, this is CN=Users, DC=testdomain, DC=com

Telephone: Enter the field in the AD where the extension number is specified, in this example, ipPhone

Other: If there are other fields populated in the AD you can enter one of them here

Sort Attr and **Name Filter** are automatically populated but if they are not just copy what’s shown in the figure above.

Version: select Version 3 from the dropdown menu

Server Port: 389

Calling Line and **Search Line**: Enter the phone’s line for which you want this Phonebook to show, in this case there is only one line so you can use “AUTO”

Password: Enter the AD password for the specified Username

Name Attr: cn sn

Display name: cn

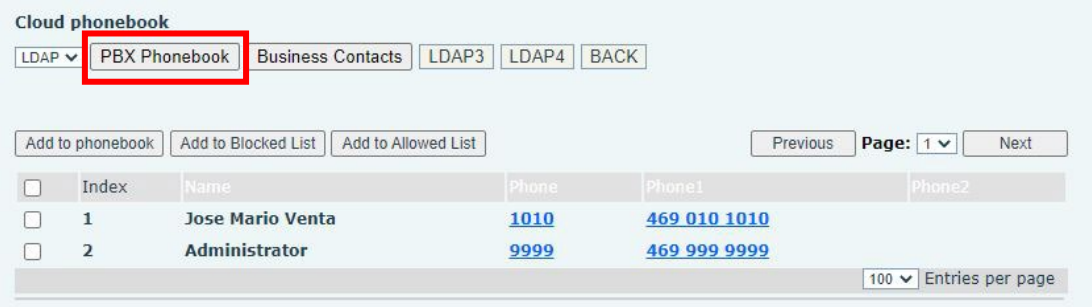
Number filter: should be automatically populated but if it is not, enter (|(ipPhone=%)(mobile=%)(other=%))
Please notice that the first field name (ipPhone) should be the same you have entered in the Telephone field above.

Checkmark the “**Enable In Call Search**” and “**Enable Out Call Search**”

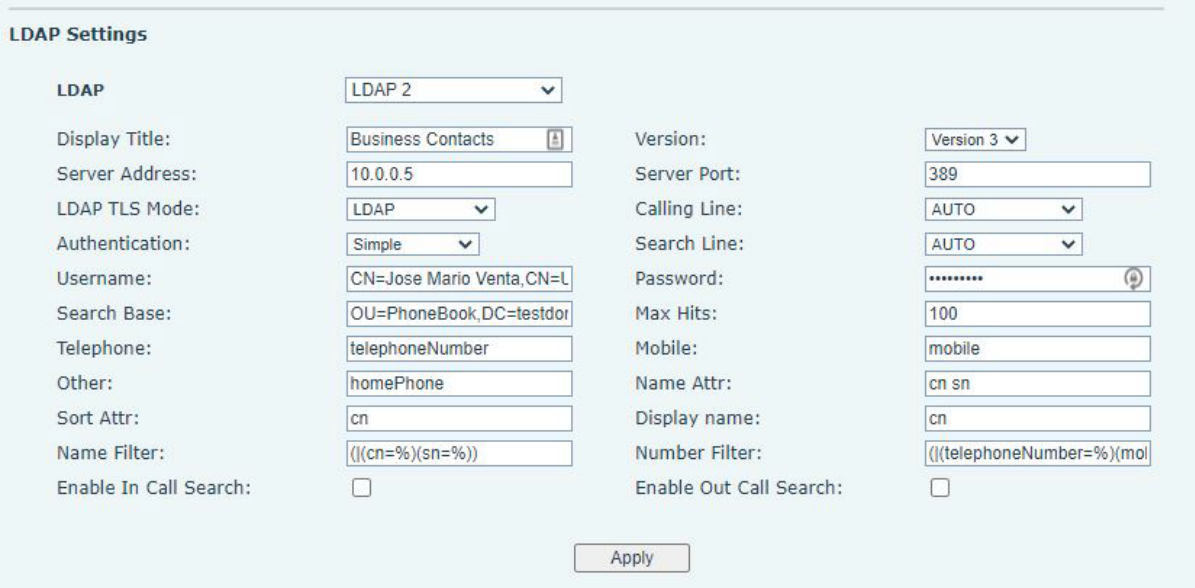
Click on the **Apply** button.

NOTICE: fields **Telephone**, **Mobile** and **Other**, can be populated with whatever values of the AD you want to retrieve (where phone numbers may have been stored).

The users retrieved from the Active Directory should now be listed in the Cloud phonebook section, and you will see a new button that reads **PBX Phonebook** as shown below.



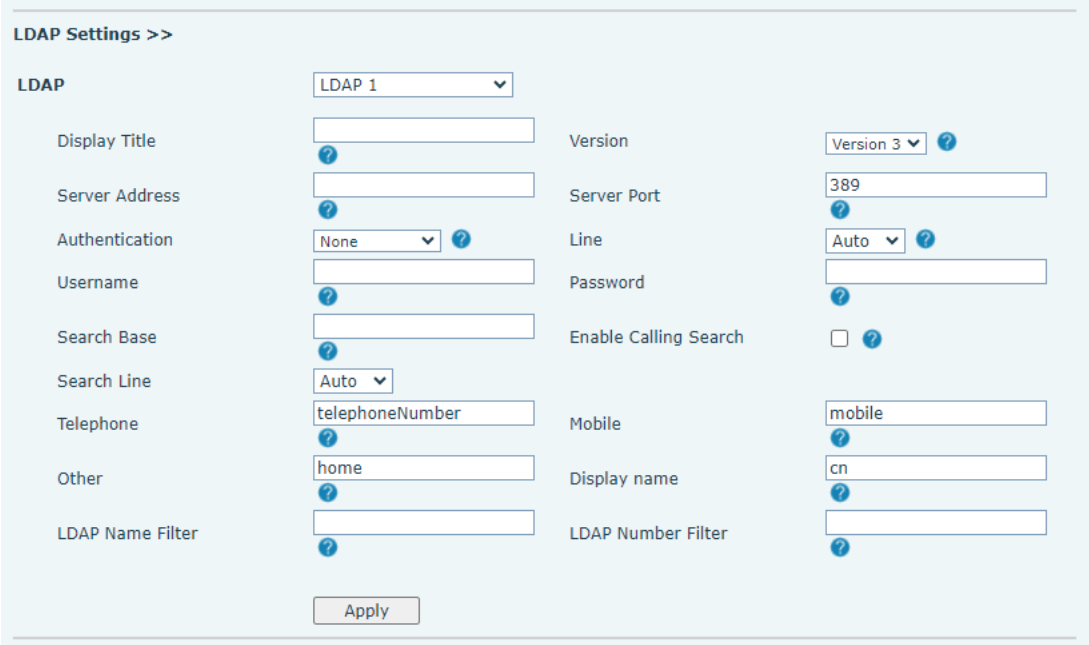
To create the second phonebook named Business Contacts, select LDAP2 from the dropdown menu under LDAP settings, enter the necessary information as shown in the example below and click Apply.



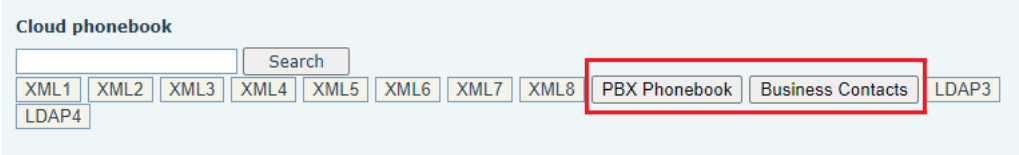
The users retrieved from the Active Directory should now be listed in the Cloud phonebook section, and you will see a new button labeled **Business Contacts** as shown below.

ePhone3/4x v1

LDAP settings for ePhone3 v1 and ePhone4x v1 are similar to the above, with a few minor differences in how a few of the settings are named. You can click the question mark for a description of the setting.



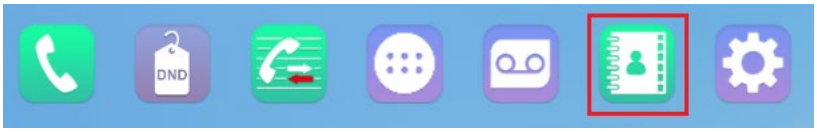
Once configured, the phonebook will appear in the Cloud phonebook list.



Viewing phonebook on the ePhone8

Viewing ePhone8 individually created Phonebooks

On your ePhone8, tap on the Phonebook icon on the main screen.

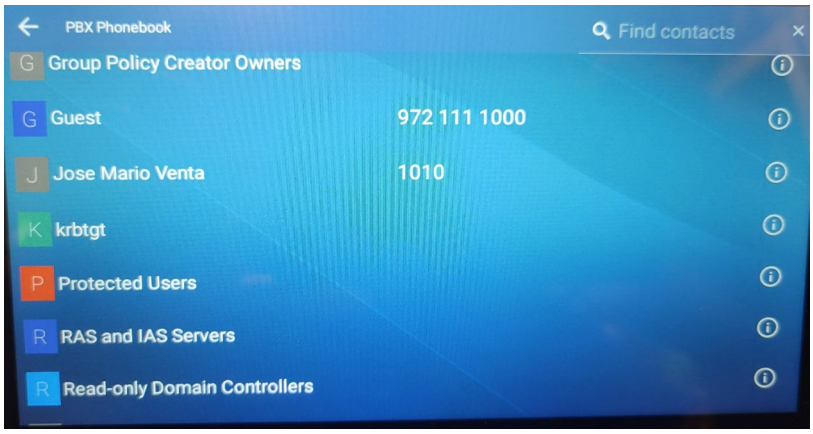


Now tap on the web phonebook on the menu to the right of the screen.

Both Cloud Phonebooks should be listed on your screen, identified with the names you gave them before. You will see the IP address of the server hosting the Active Directory underneath each name.

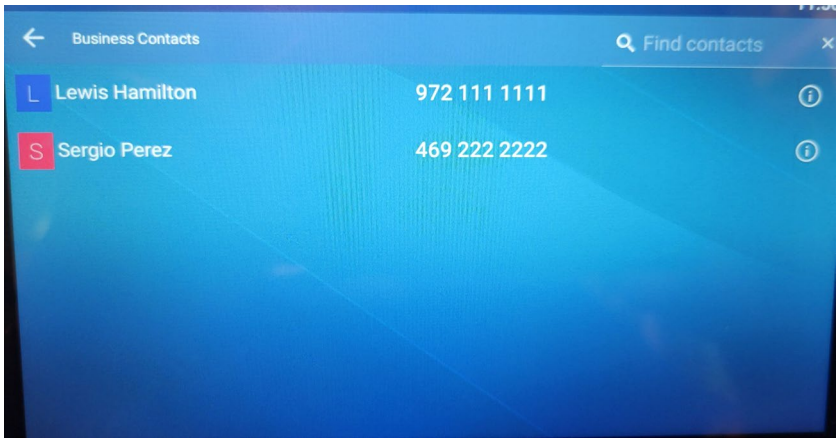
Tap on the **PBX Phonebook**.

You will see the contents retrieved from the **PBX Phonebook** Active Directory as shown below. In this example is the contents of the folder that contains the Users. Other Active Directories may be structured differently, with Organization Units and such, in this example you can see a “Guest” user with a phone number and a user for extension 1010.



Go back to the previous screen and tap on the **Business Contacts**.

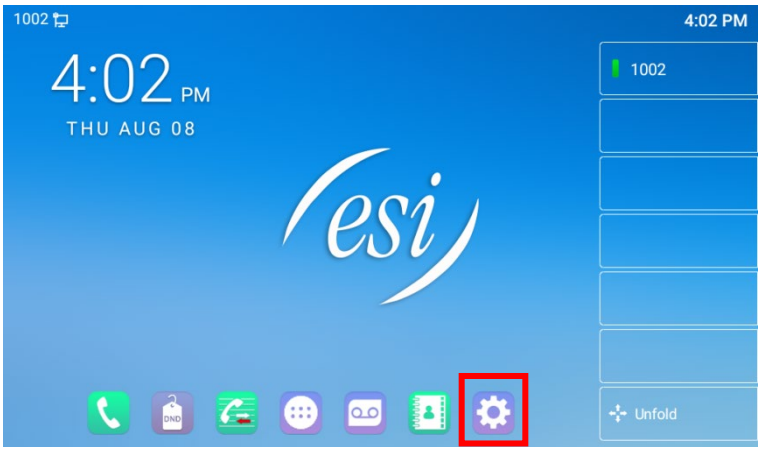
Now you will see the external contacts and their phone numbers defined in the **Business Contacts** Active Directory.



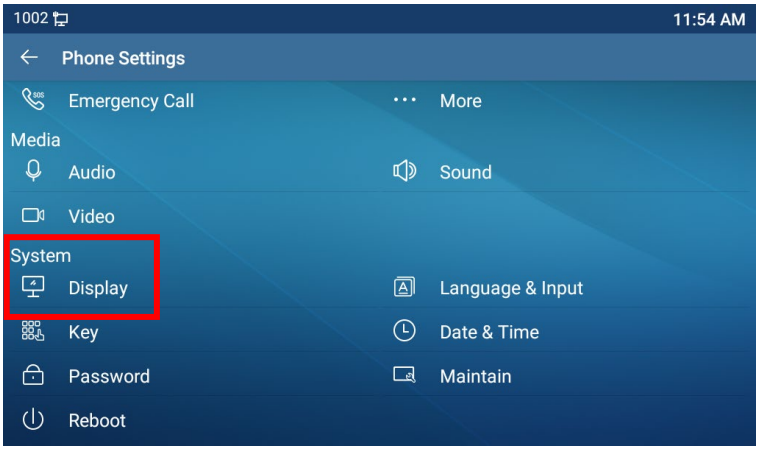
Configure Phonebook icon to access Active Directory directly

You can set up the ePhone8 Phonebook icon to access the Active Directory directly.

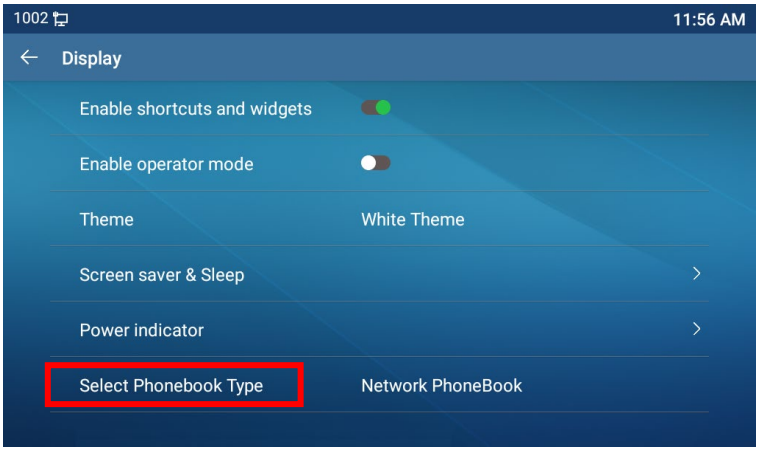
1. Select Settings Gear Icon that is located on the ePhone8 home screen.



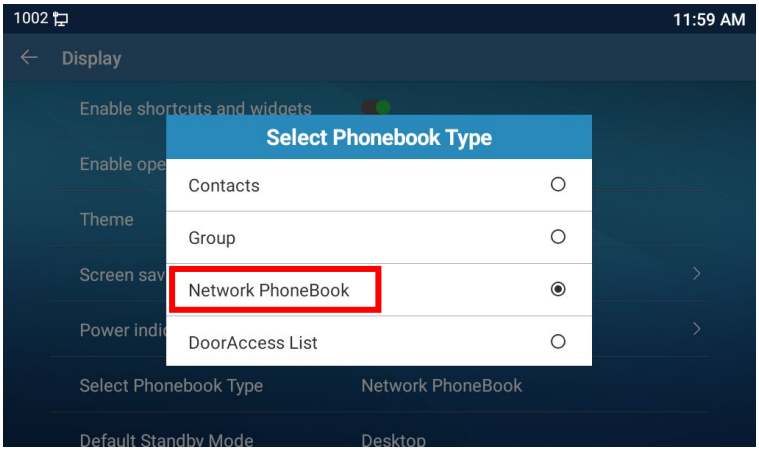
2. Scroll down to System, and then select Display.



3. Scroll down, and then select Select Phonebook Type.

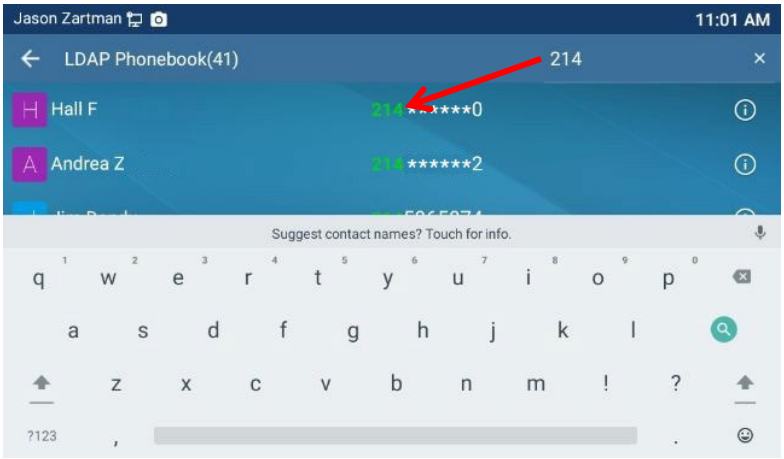


4. Select Network Phonebook.

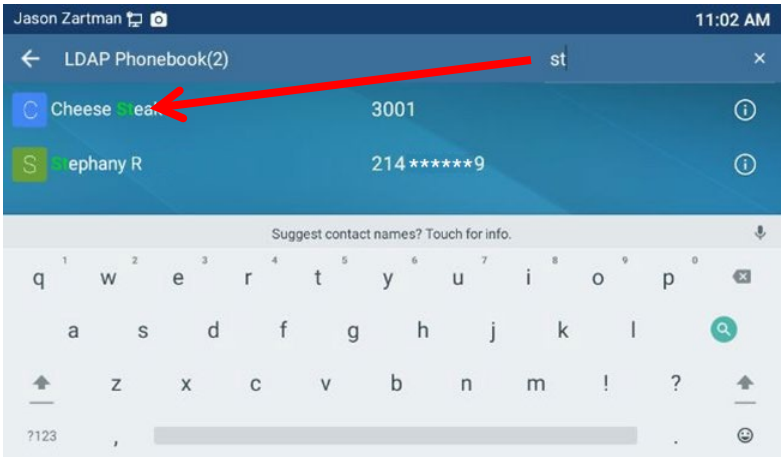


Press the Phonebook icon on the home screen and the Active Directory contacts will be displayed where user can scroll through the directory list or search by either Name or Number.

Search by number:



Search by name:

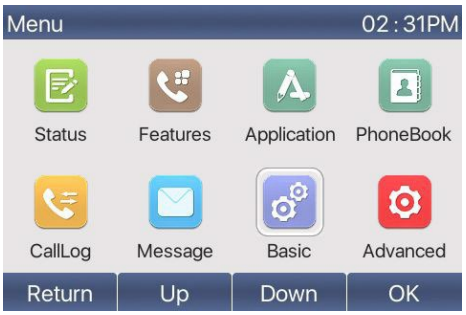


Configure a Contacts Softkey to access Active Directory

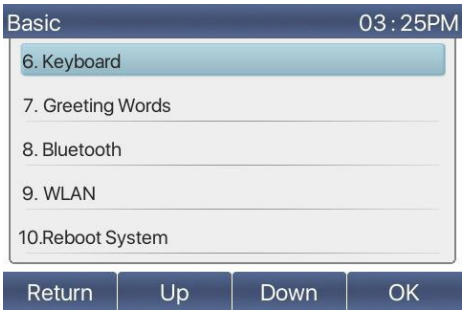
Set the contacts Softkey to access the Active Directory as default:

1. Select **Menu**.

2. Use the arrow keys to scroll to **Basic** and press **OK**



3. Select **6. Keyboard** and press **OK**

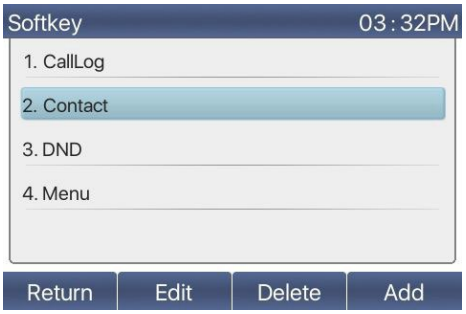


4. Select **2 Soft DSS Key Settings** and press **OK**

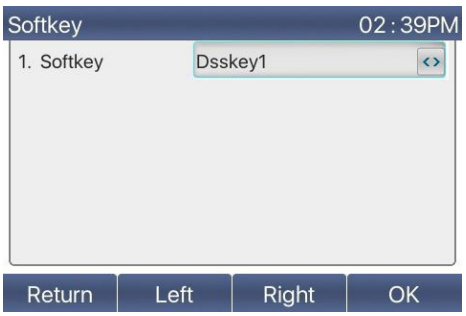
5. Configure the Soft DSS Key Settings as follows:
    a. Softkey: 1-1
    b. Type: Key Event
    c. Key: LDAP Group
    d. Line: LDAP Group1
    e. Name: Contacts (or configure your own key name)
    f. Press OK

6. From the Keyboard menu select **3. Softkey** and press **OK**

7. Select **2. Contact** and press **OK**



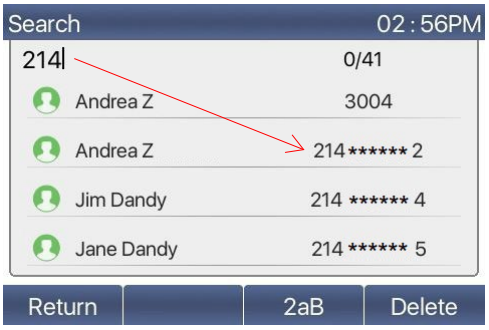
8. Using the left/right arrow keys select the soft DSS Key previously configured in step 5 and press **OK** (Dsskey1 = Softkey 1-1, Dsskey2 = Softkey 1-2, etc)



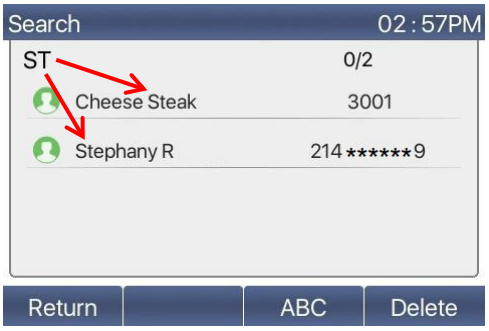
9. Return to the idle screen

Press the Contacts softkey Contacts and the full Active Directory is displayed where user can scroll through the directory list or search by either Name or Number.

Search by number:

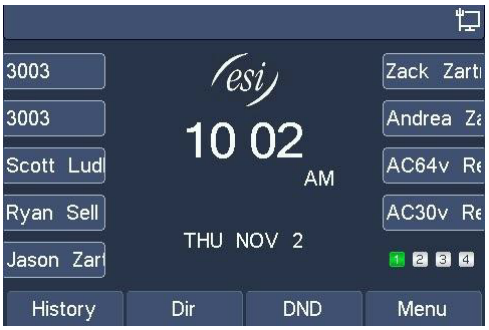


Search by name:



Configure a Contacts Softkey to access Active Directory

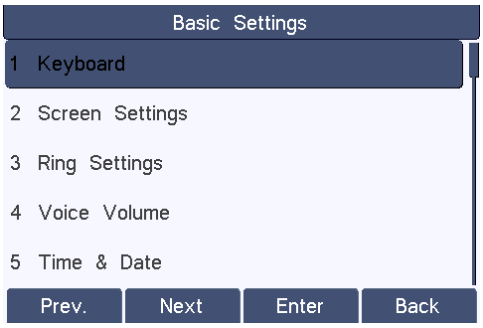
1. Select **Menu**.



2. Select **Settings**

3. Select **Basic Settings**

4. Select **Keyboard**

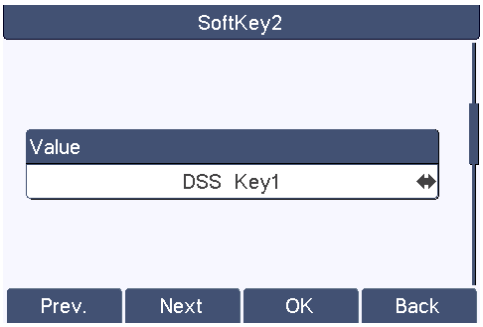


5. Select **2. Soft DSS Key Settings** and configure a key as follows:

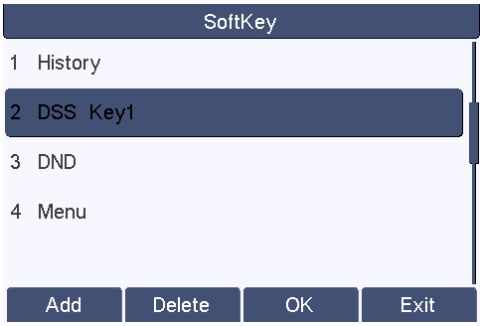
   a. DSS Key1 (or select your desired DSS Softkey).
   b. Type: Key Event
   c. Key: LDAP
   d. Line: LDAP1
   e. Select Save or OK
6. Go back to **Keyboard**.
7. Select **5. Softkey**

8. Select 2. **Dir**

9. Use the left/right arrow keys to select value to DSS Key1 (or select your desired DSS soft key).

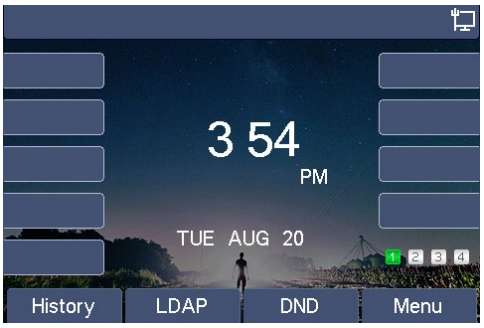


Notice that the menu name changed from **Dir** to **DSS Key1**.



10. Press **OK**.
11. Return to the idle screen.

Notice that the name of the Dir key at the bottom of the screen changed to LDAP.



1. Press the LDAP key to access the Active Directory. The full directory is displayed. The user can scroll through the directory list or search by either name or number.

Search by number:

Search by name: