

INTEGRATING WITH LDAP DIRECTORIES

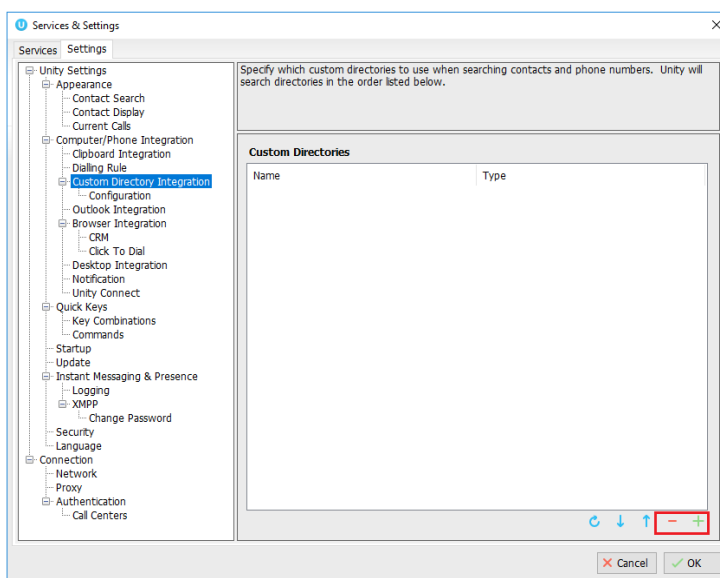
1 BACKGROUND

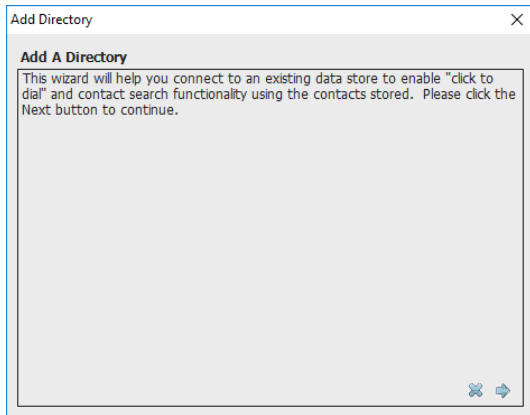
This document outlines the steps involved in integrating Unity Desktop with an LDAP-compliant directory (including Microsoft Active Directory) for click-to-dial and CLI popping functionality. Please note that this functionality is only available with a Unity Pro or Trial license. If you are currently using a Unity Lite license, speak to your service provider about upgrading. You can see your current license from the About window (Help > About.)

2 ADDING A CONNECTION TO THE LDAP DIRECTORY

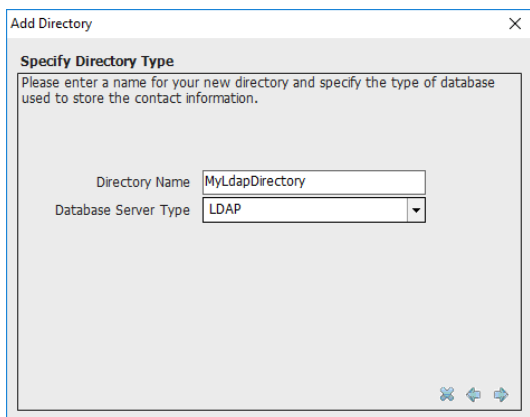
Setting up a connection to a third party data store is made easy through the use of a wizard.

This is accessed by clicking Settings > Settings tab > Custom Directory Integration. Click the green plus sign which will open the following window.



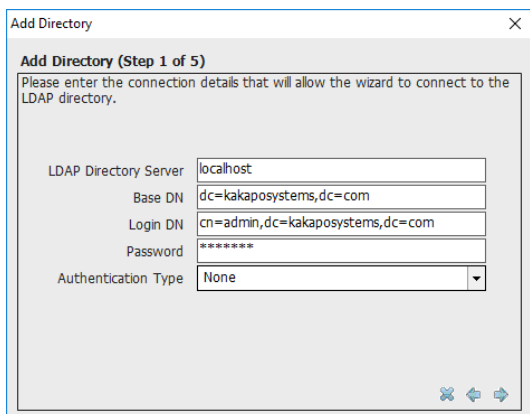


Click the arrow to progress to the next screen.



Enter a name for the custom directory and select LDAP Directory from the drop down list. Microsoft Active Directory is an LDAP-compliant directory so Unity connects to it the same way it connects to a Lotus Notes or Open LDAP directory.

Click the next button to progress to the next screen.

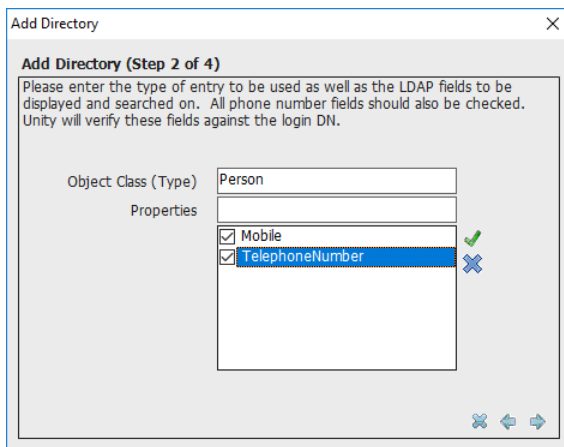


In this screen the connection and authentication details must be entered. The base Distinguished Name (DN) is used to specify where all searches start. All child nodes and sub-trees are included from this point by default.

The Login must include the full DN; otherwise the LDAP directory does not know where to find the account to authenticate.

Please note that by default Microsoft Active Directory uses the “Secure” authentication type, while Open LDAP doesn’t use an authentication type at all, so “None” should be selected. Please check with your LDAP or network administrator for the authentication type used.

Once all fields are completed, click the next button to progress to the next screen.



This step is used to enter the field information required by Unity to search the LDAP directory. Firstly, the object class must be entered, this is also known as the object type. There are many object types in any LDAP-compliant directory. For example, in Active Directory there are users, contacts, computers and domain controllers to name a few.

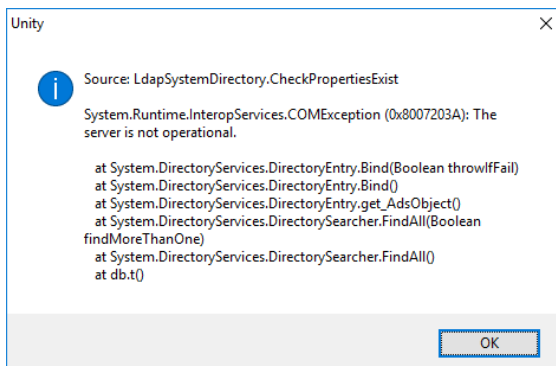
We are most interested in the user or contact object class as these classes represent a person in our organization. Therefore, in most cases the object class will be User when integrating with Active Directory. With Open LDAP directories, the object type most used is person as this class includes common name and number fields.

Enter all properties required to display and/or use to search. In the above screen-shot, the cn field is used to display as well as search on the contact name. For each contact, as well as the name we want to show

the telephone and mobile numbers. This also means that we will be able to perform a number-pop on these phone fields for incoming calls (if specified in a later step.) Remember, if you want to display or search on the field, then it must be included here. A list of relevant property names for Active Directory is provided in section 3.

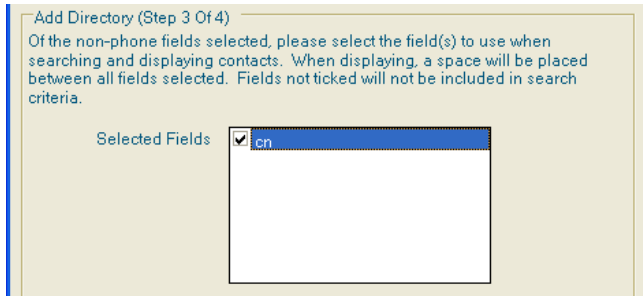
TIP: When integrating with Active Directory it is recommended that instead of using the Common Name (cn) property, the first name (givenName) and last name (sn) fields are used. This means that when searching on a contact, both the first and last name will be searched, instead of the common name as a whole. This provides increased search accuracy.

Once you click the next button, Unity attempts to connect the LDAP directory using the details provided, and performs a check to make sure all properties entered exist. The user is prompted of any problems such as not being able to connect to the LDAP server, incorrect authentication details or if a field does not exist (as shown below.)



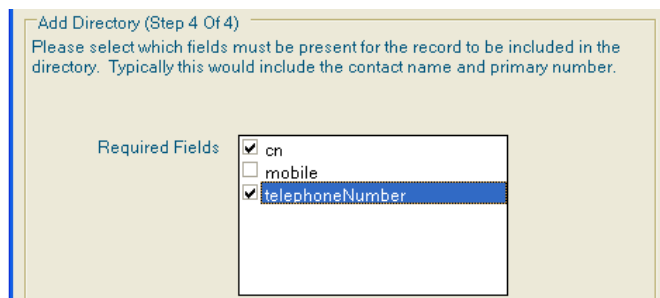
Once you see the following screen, you can be assured that the connection details provided are correct and that all properties exist in the LDAP directory. If Unity claims that a field does not exist but you are sure that it does, one possible reason may be that the field does not contain any details for any users.

Go to a record in the LDAP directory and enter a value for that field. If this issue is then resolved you can assume that this field is not populated, so it can be excluded from the property list.



This screen is used to select which non-phone fields are to be used when displaying information. If there are multiple non-phone fields added to the properties list in the previous screen, you can join them together, for example joining the givenName and sn fields with Active Directory to show the full name as one field. Unity will place a space between any fields added.

Now click the next button to progress to the next screen.



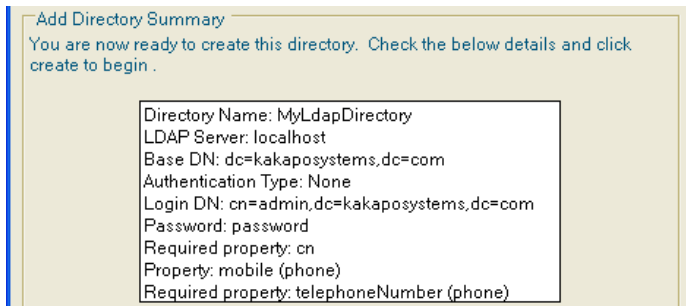
This screen is used to specify which fields must be present to include the contact when displaying the directory. For example in the above screenshot, the record will only be shown if there is a value in the cn (common name) and telephoneNumber fields. If there is a value in the mobile field this will be displayed otherwise the field will be empty, as shown below.

Search <input type="text" value="MyLdapDirectory"/>	
Name	Phone
Bill Bryson	0208288
Conference Bridge	1263
Derek Lynch	0797649
Jenna test	0120222
Joe Miccio Test	0120233
June	23644
Larry Brown	0797649
Markus Zusak	0120233
Mary Roach	0120256
Russell Stevens	0120265
Salem Kuczynska	0116526i
Sallina Watson	0203652
Sally White	0120255
Sasha Gorb	+44-7976
Steve Tutt	0208288
Steve Tutt mobile	0795634

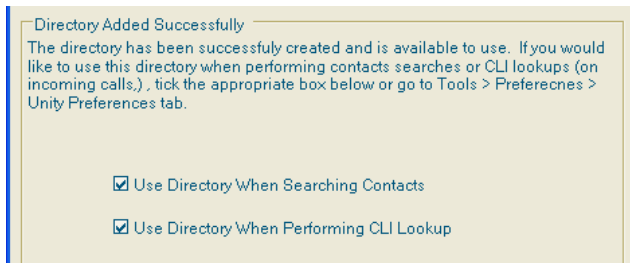
This LDAP directory actually contains more records than shown in the above screenshot, however only these records have values in the required fields so they are the only records displayed.

Please also note that Unity supports multiple dimension LDAP directories. In the above screenshot the user Ingrid Thompson has multiple entries in the list. This is because in the LDAP directory multiple values have been entered in the telephoneNumber field. When displaying the entire directory, Unity will duplicate entries in order to show all values for all fields. This is also how Unity displays all numbers for a user when searching.

Now click the next button to progress to the next screen.



Click the green tick to create the custom directory. You can then specify if this directory is to be used (in addition to built-in directories) to search contacts and perform number matching for calls.



3 RELEVANT ACTIVE DIRECTORY FIELDS

For a full list of Active Directory fields, go to www.winzero.ca/Active-Directory-users.html.

Display Name	Active Directory Field Name
International ISDN Number (Others)	internationalISDNNumber
Company	company
First Name	givenName
Full Name	cn
Home Phone	homePhone
Home Phone (Others)	otherHomePhone
Job Title	title
Mobile Number	mobile
Mobile Number (Others)	otherMobile
Pager Number	pager
Pager Number (Others)	otherPager
Phone (Others)	otherTelephone
Telephone Number	telephoneNumber
Surname	sn