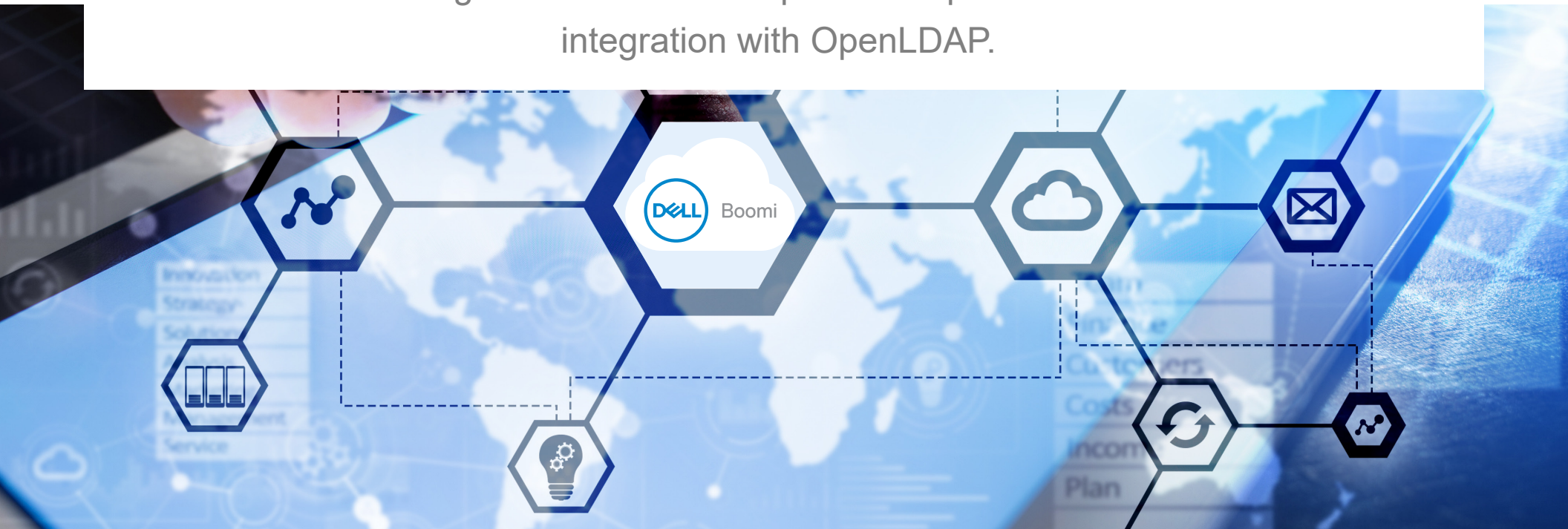
A Knowledge Article on Dell Boomi Integration with OpenLDAP

(A Step-By-Step Guide)

This knowledge article aims to help users to perform the Dell Boomi integration with OpenLDAP.



Overview

- Overview
- What is OpenLDAP?
- Installation Procedure for OpenLDAP
  - Complete Setup Wizard
- LDAP Configuration with the GUI
  - Process flow
  - LDAP Connection Configuration
  - LDAP Operation Configuration
  - LDAP Connector Parameters

This knowledge article aims to help users to perform the Dell Boomi integration with OpenLDAP. It defines a step-by-step process to provide with a comprehensive guide for users to get all the help they would need from understanding the outcomes to getting the installation and configuration done.

What is OpenLDAP?

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First things first, for those who are not familiar with the OpenLDAP, let's start by explaining this protocol before we start with the installation steps. But if you're already aware of this protocol, we recommend you to skip this section and scroll down for the installation procedure right away. For IT professionals, time is always on the other side. So no point of reading what you already know.

In Windows Server, LDAP is a protocol which is used to access Active Directory object, user authentication and authorization. Additionally LDAP is also used to store your credentials in a network security system and can be retrieved with a password and the decrypted key allowing access to the services in a secure manner.

It's important to know that the LDAP directory servers are often used as an authentication repository. Security is arguably the most important aspect of most directory servers. The directory servers are often used to store sensitive information like passwords and other account details. So there is absolutely no reason you shouldn't be concerned about their security. In addition to its exciting benefits, the OpenLDAP is an absolutely secure protocol.

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What are the basic ingredients of this recipe? To complete the installation of OpenLDAP, a user needs following two software, namely:

1. OpenLDAP s/w (Windows or Linux)
2. OpenLDAP Explorer tool

A step-by-step guide for OpenLDAP Installation

Complete Setup Wizard

As soon as you run **openldapforWindows.exe,** you will be prompted for the following,

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After you confirm, you will be able to see the Welcome Screen for you to begin with the installation assistant as shown below.

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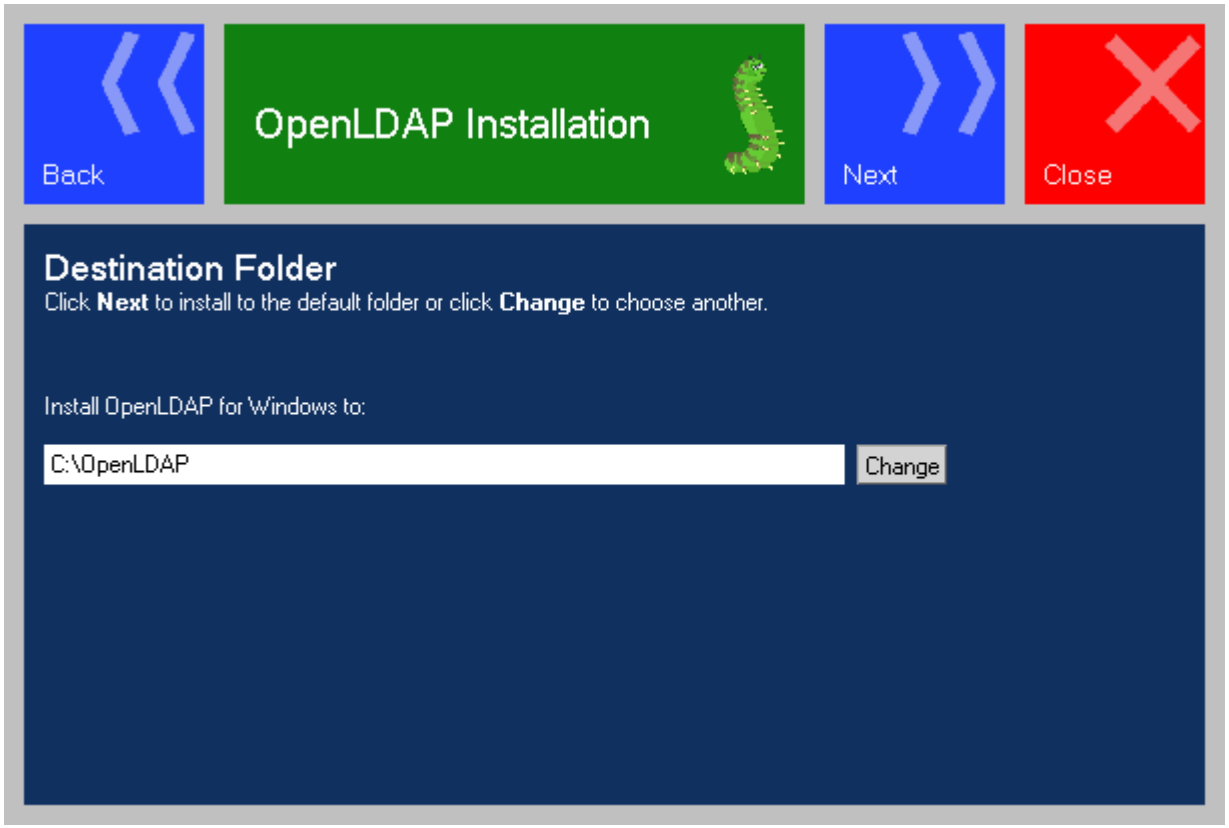
Just like every software installation, after a couple of agreement slides, you will land a Destination Folder screen so you can select the location where the software will be installed.



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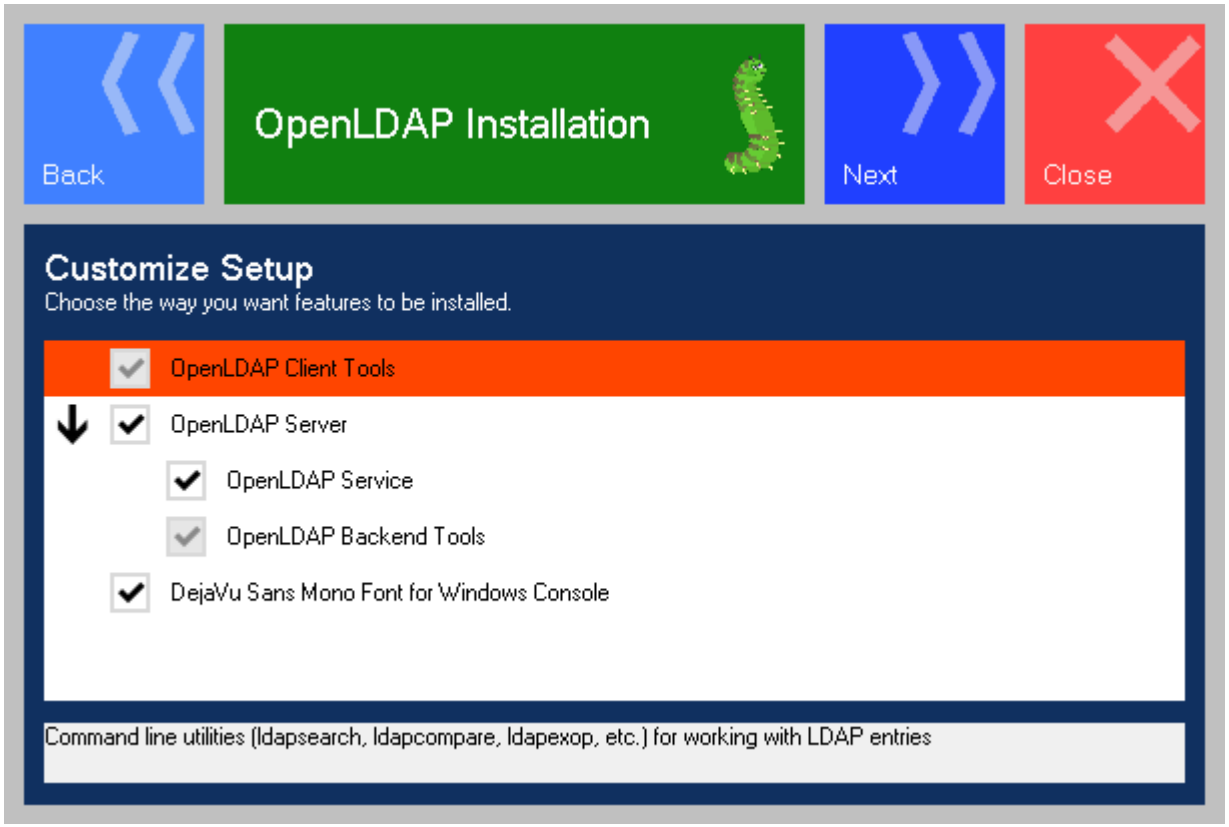
On the next screen, you will see Custom Setup options for you to exclude some of the features/tools of OpenLDAP for Windows if you do not need them.



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To help you with choosing the appropriate utilities, we've pasted the following reference table for your assistance:

Feature/Prerequisite	Whether Optional	Description
OpenLDAP Client Tools	**No**	Command line utilities (ldapsearch, ldapcompare, ldapexop, etc.) for working with LDAP entries
OpenLDAP Server	**Yes**	OpenLDAP server components with different backend modules like LDIF, BDB, SQL DATABASE, etc.
BDB Backend Tools	**No**	Berkley Database tools
OpenLDAP Service	**Yes**	Configures and starts the OpenLDAP daemon
DejaVu Sans Mono Font for Windows Console	**Yes**	Installs a DejaVu Sans Mono font and adds it to the list of fonts available in the console. The font provides a wide range of Unicode characters./td>

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The **Additional Settings** screen can be helpful if you need to change the default settings: your server name, IP address and SSL ports of the OpenLDAP server. You can also turn on or off the option to activate the statistics for the OpenLDAP instance. You can manage the server properties remotely without restarting the service by checking the dynamic configuration backend option.

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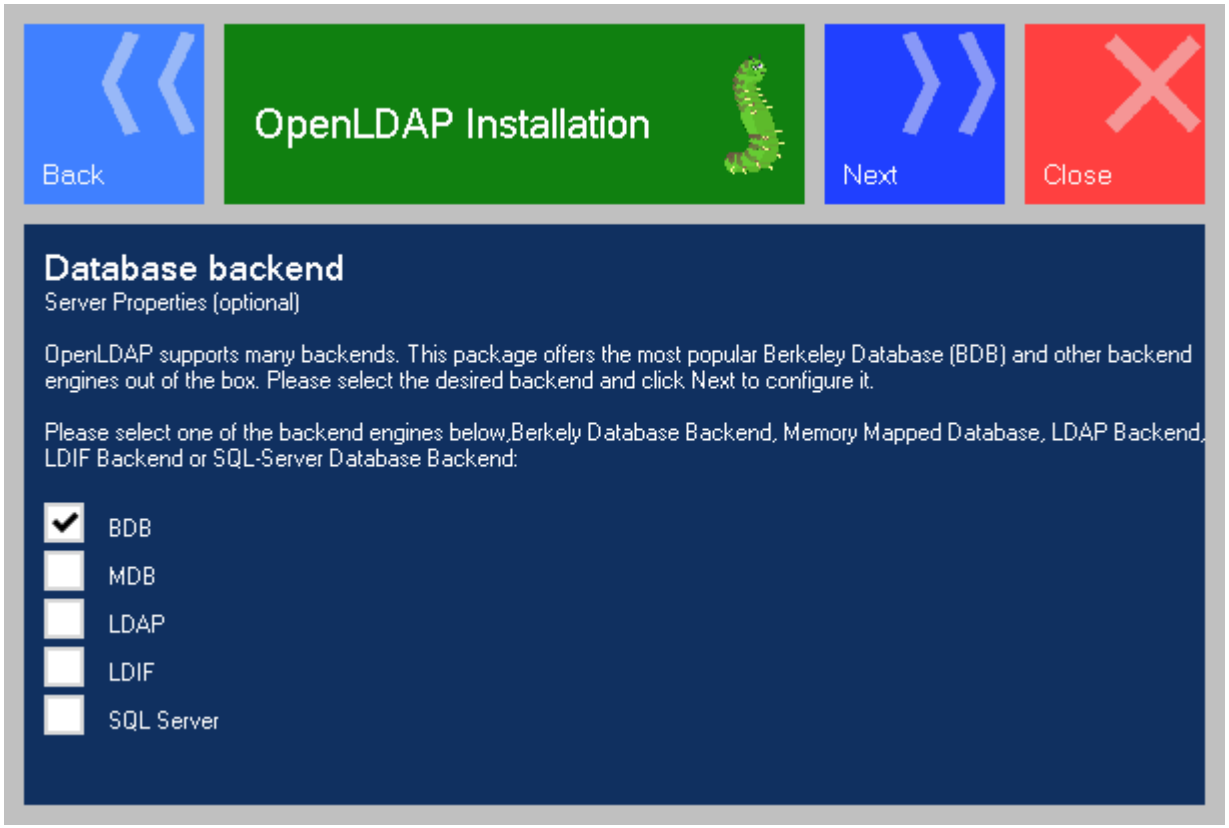
During the installation process the firewall settings will be changed accordingly to the port configuration.

Also as shown in the following screenshot, the **Backend Configuration** offers up to five different backend engines for to select from, the descriptions are also provided in the following table.



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Module	Description
BDB	Berkeley Database Backend
MDB	Memory Mapped Database
LDAP	Proxy-Server in front of the real LDAP Server
LDIF	This module saves the results in LDIF files
SQL Server	Microsoft SQL Server 2005/2008

The page **BDB Backend Settings** configures the password for the root-user. If you like, you can also enable the statistics by simply ticking a box.

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The final step in this setup wizard is to simply click on the install button. If you're not sure about your selections, you can also review them by going back and repeating the same steps as explained in the above.

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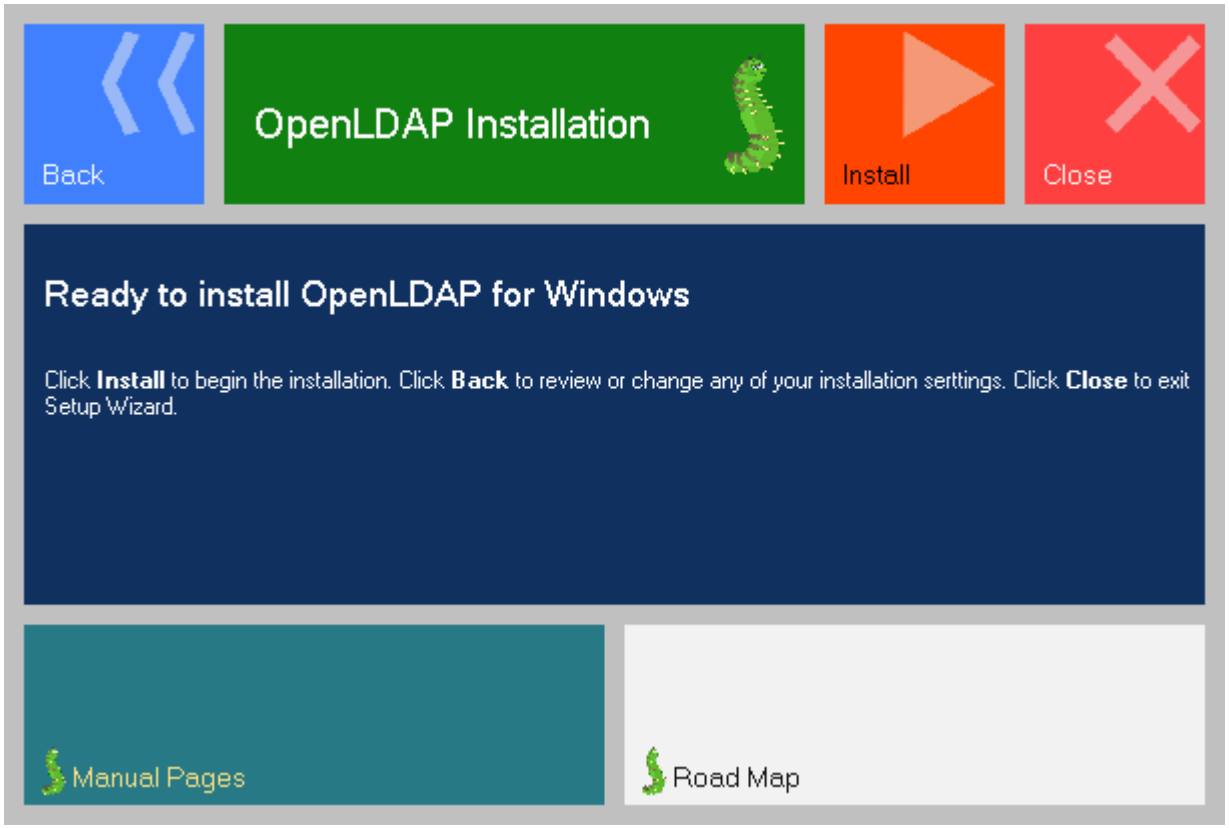

After the successful installation you will be prompted to close the screen.

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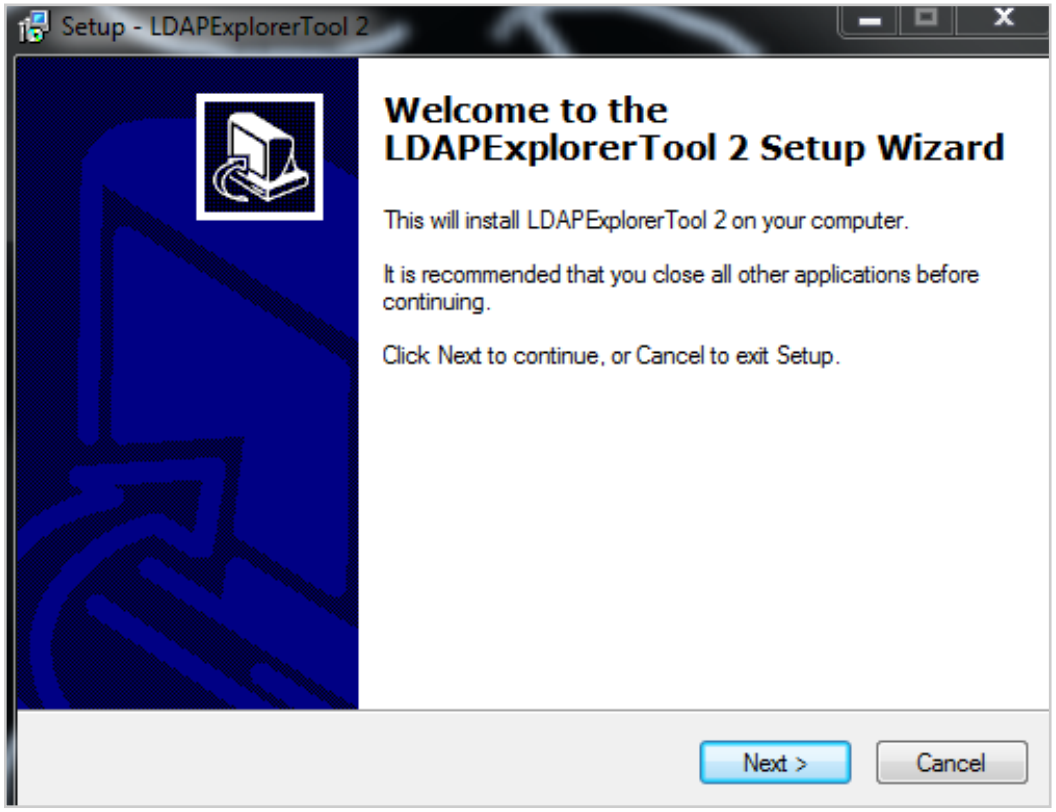
In order to configure your LDAP with the GUI, you will need an explorer tool called “LDAP Explorer Tool” which can be downloaded from the following link.

Link: https://sourceforge.net/projects/ldaptool/files/latest/download



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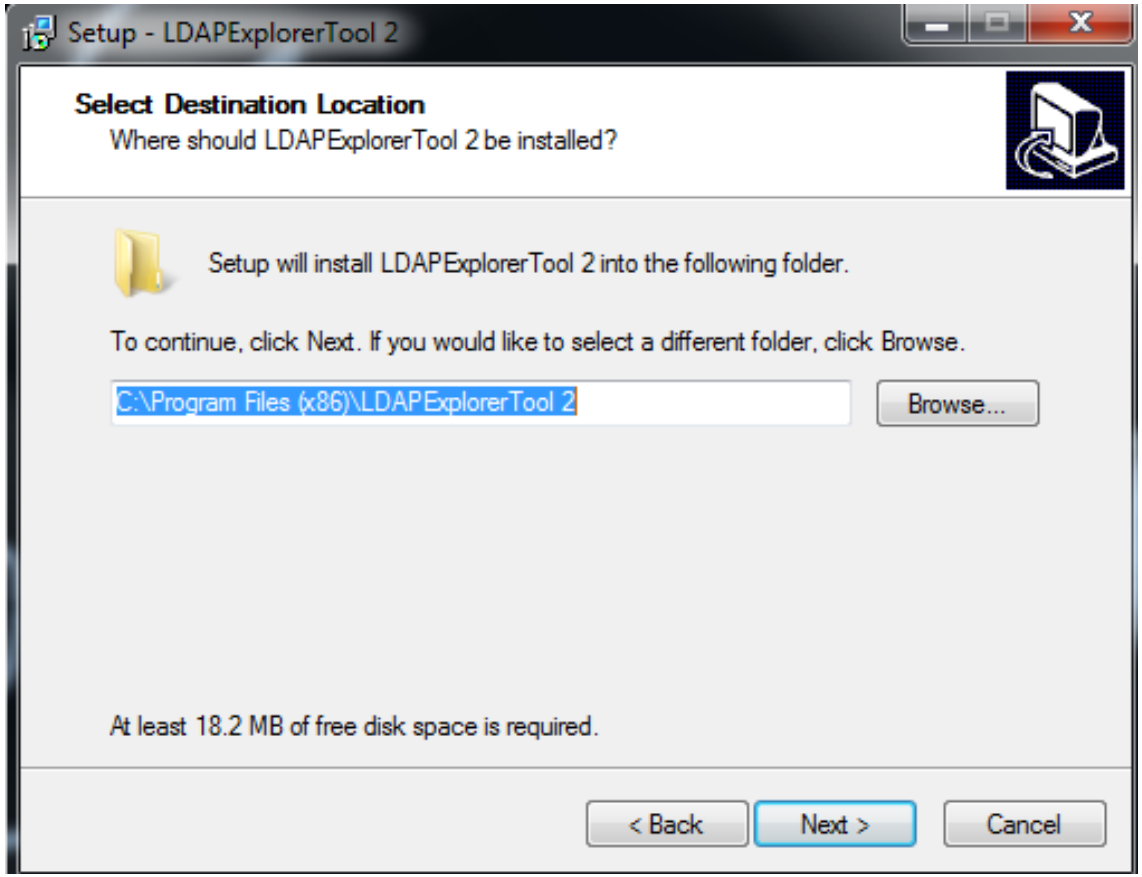
Please choose an appropriate installation path for the explorer tool as shown in the following screenshot.



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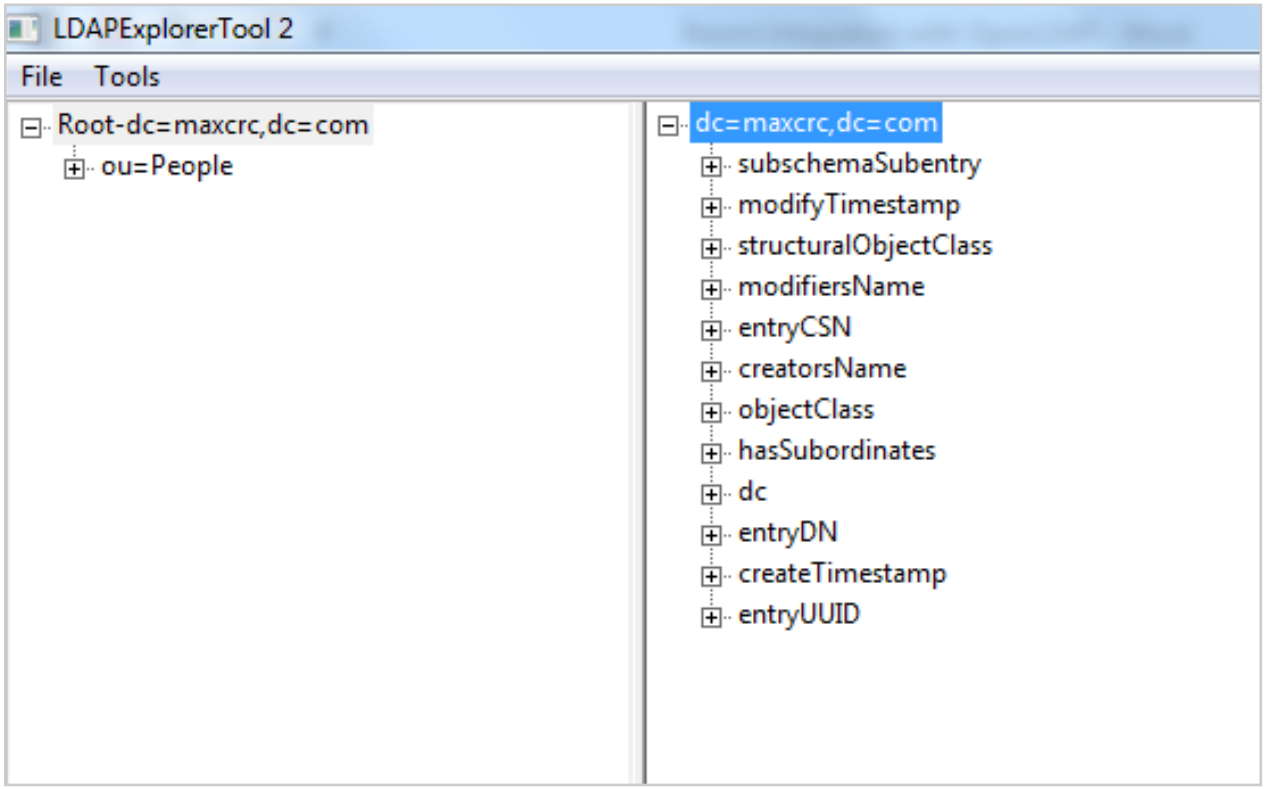
After successfully installing the explorer tool, upon clicking the desktop icon, the following page will appear on your computer screen.



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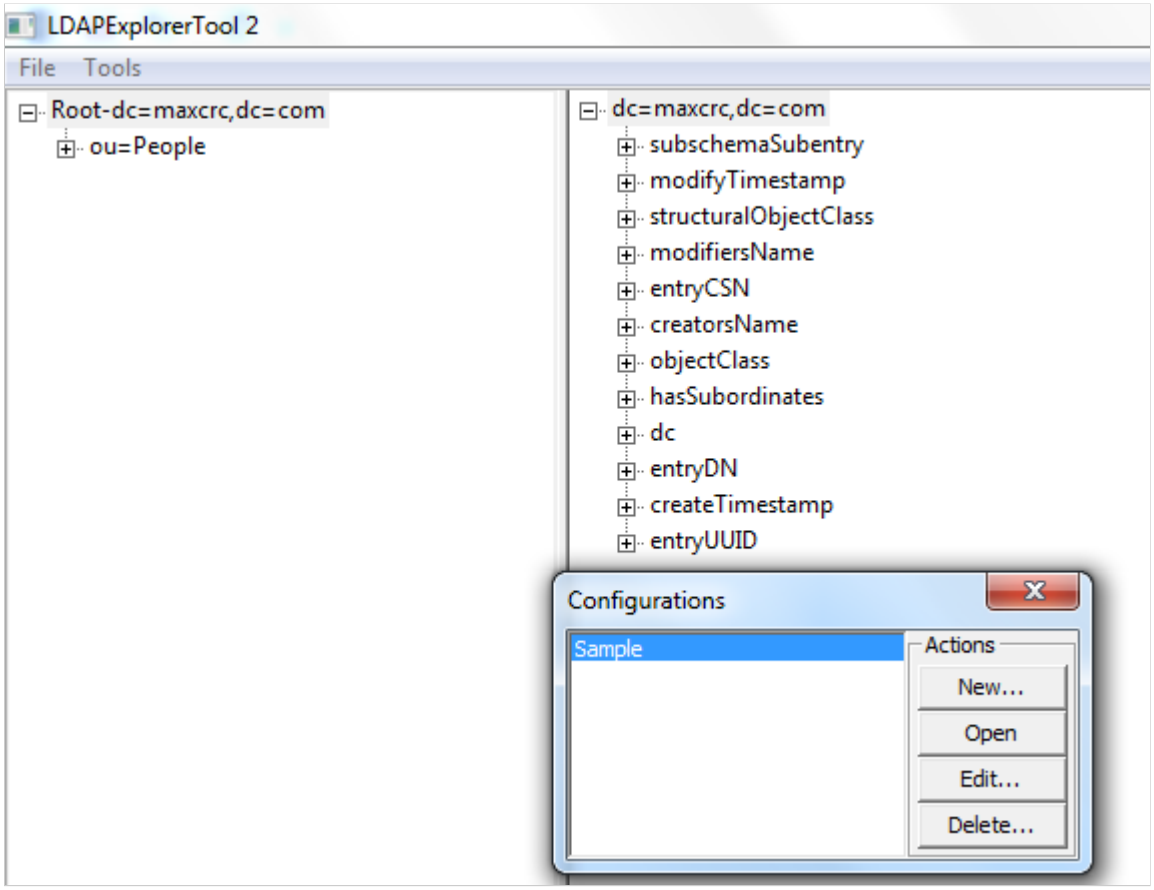
Click on File->Configurations and you will be prompted to the below screen to enter the details to create a new configuration value.



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As provided below, all the fields must be filled with correct configuration values to confirm the connectivity. Following are the correct configuration values:

- Server Name or IP : According to your Computer Name or IP
- LDAP Port : **389 ; check** the use default checkbox
- LDAP SSL Port : **636 ; check** the use default checkbox
- Version : **3** (LDAP ver. 3)
- User DN **cn=Manager,dc=maxcrc,dc=com ; Uncheck** the anonymous login.
- Password : **secret**
- Base DN (Just **click** the **Guess Value** button)
- For everything else, just accept the default value
- Click the **Test Connection** button. After saving it, just click **Open**.

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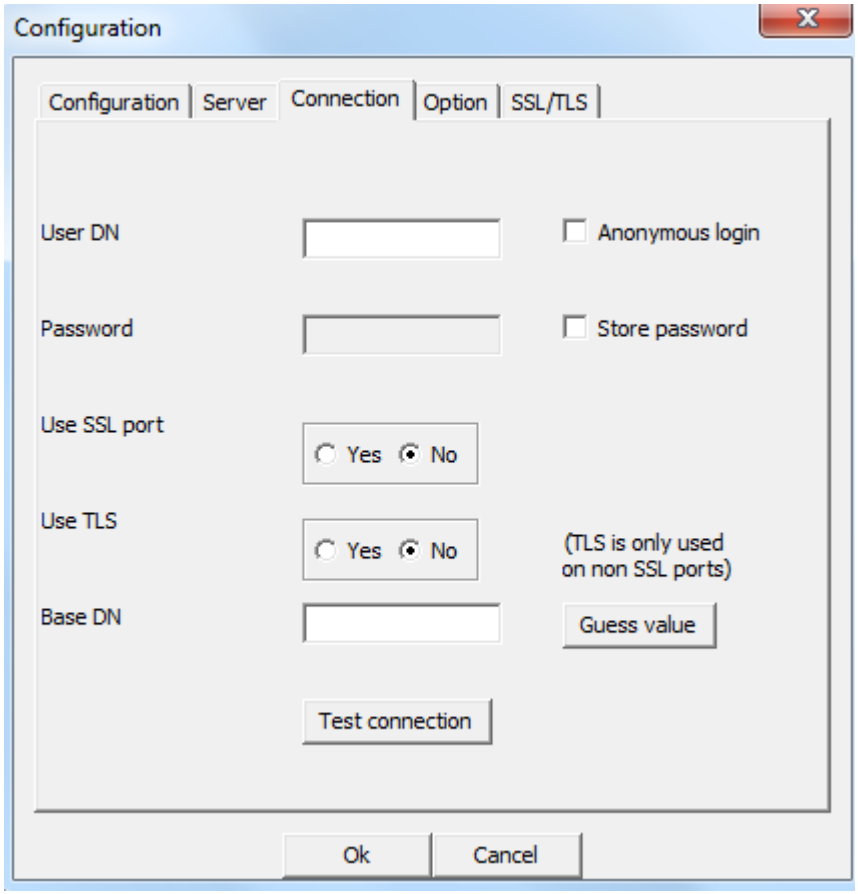

After the setup is finished, create an LDIF file in the directory 'D:\OpenLDAP\ldifdata' and name it 'step1.ldif'. The contents are as follows:

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After the setup is finished, create an LDIF file in the directory 'D:\OpenLDAP\ldifdata' and name it 'step1.ldif'. The contents are as follows:

```
## SECOND Level hierarchy
## ADD a single entry under FIRST (people) level
# this is an ENTRY sequence and is preceded by a BLANK line
# the ou: Human Resources is the department name

dn: cn=Sadhish,ou=people,dc=maxcrc,dc=com
objectclass: inetOrgPerson
cn: Sadhish
sn: Chinnappan
uid: Sadhish.Chinnappan
userpassword: Cyber3333
carlicense: HISCAR 4433
homephone: 555-111-2222
mail: Sadhish.Chinnappan1@royalcyber.com
description: Certified Integration Architect
ou: Cloud Integration
```

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- Save the file and open a command line and run the following commands:
  - cd D:\OpenLDAP\ClientTools
  - ldapmodify.exe -a -x -h localhost -p 389 -D "cn=manager,dc=maxcrc,dc=com" -f D:\OpenLDAP\ldifdata\step1.ldif -w secret
- From your LDAP Explorer Tool menu, select File -> Open last configuration, and you will find the LDAP Directory is no longer empty and values are as below.

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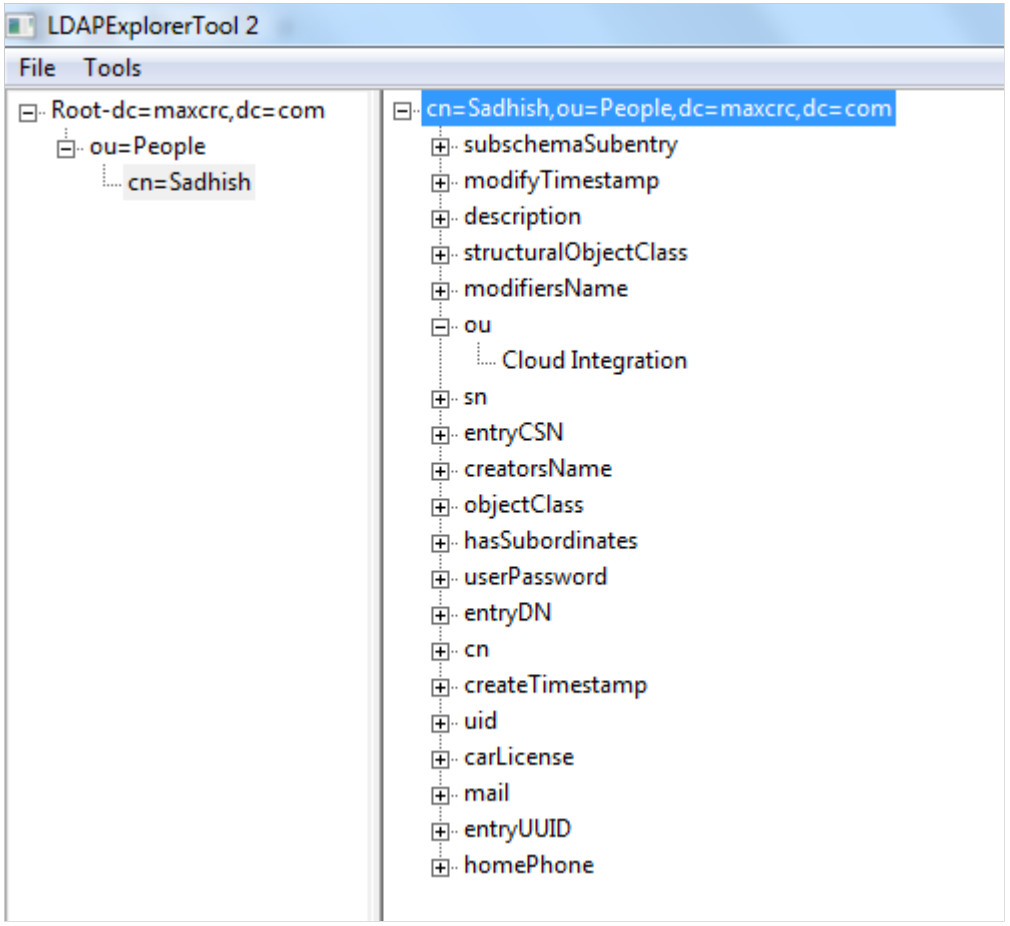

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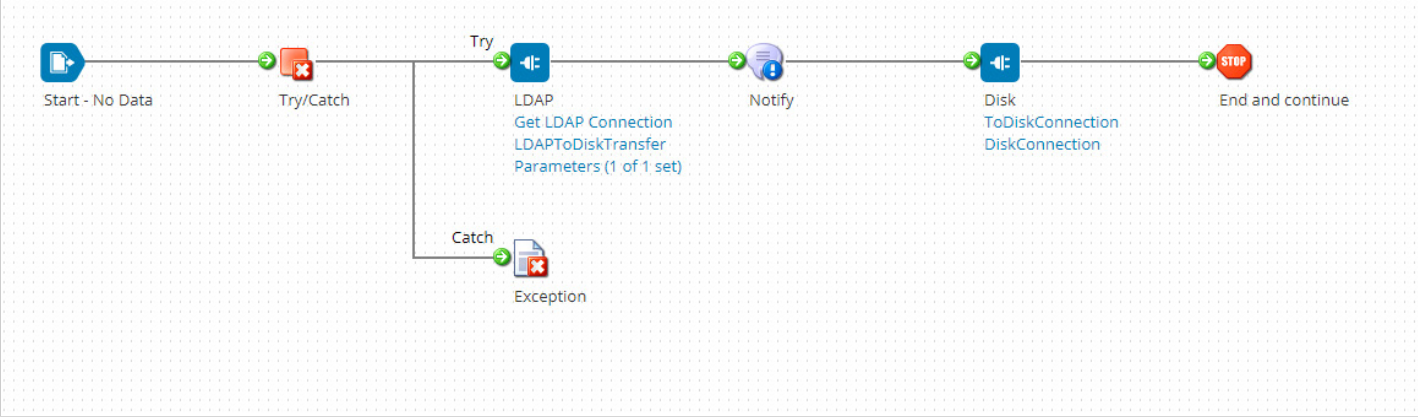
Now the LDAP setup is ready with the values and our sample Boomi process looks like below for the integration with LDAP.

Process flow:



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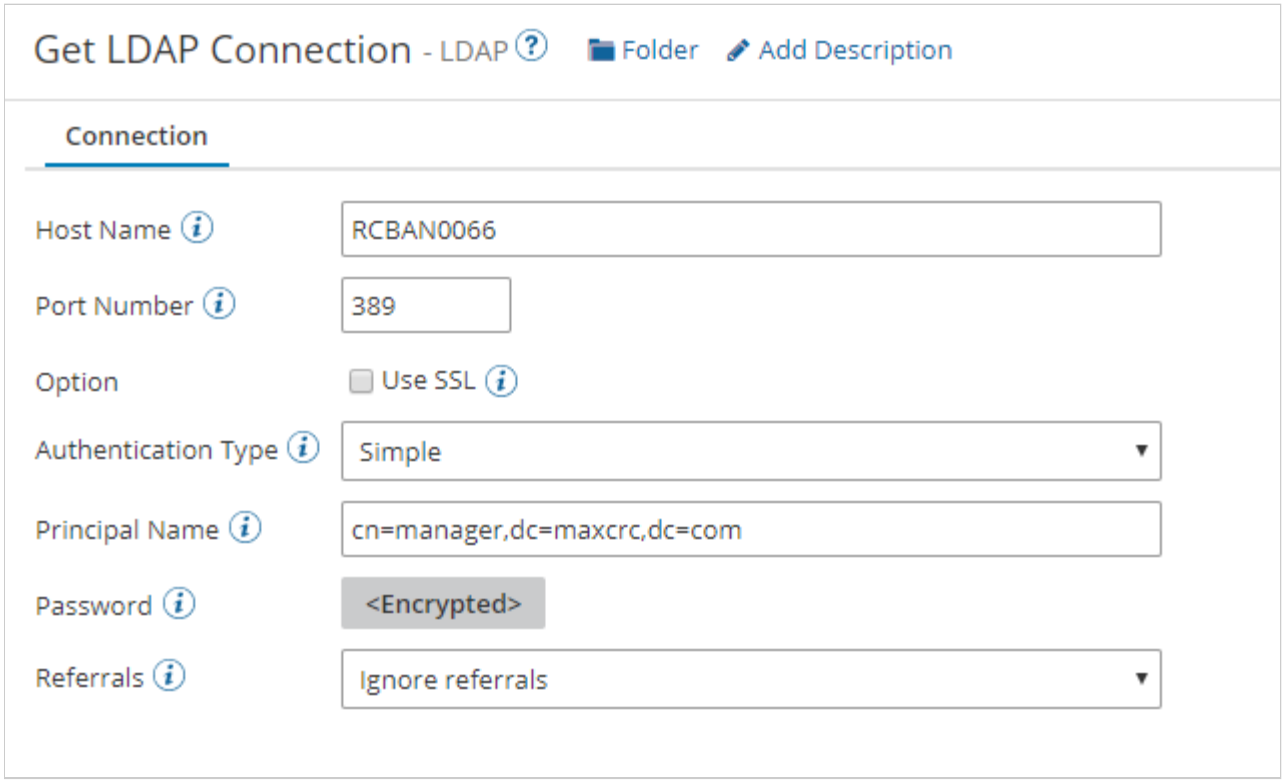
LDAP Connection Configuration:



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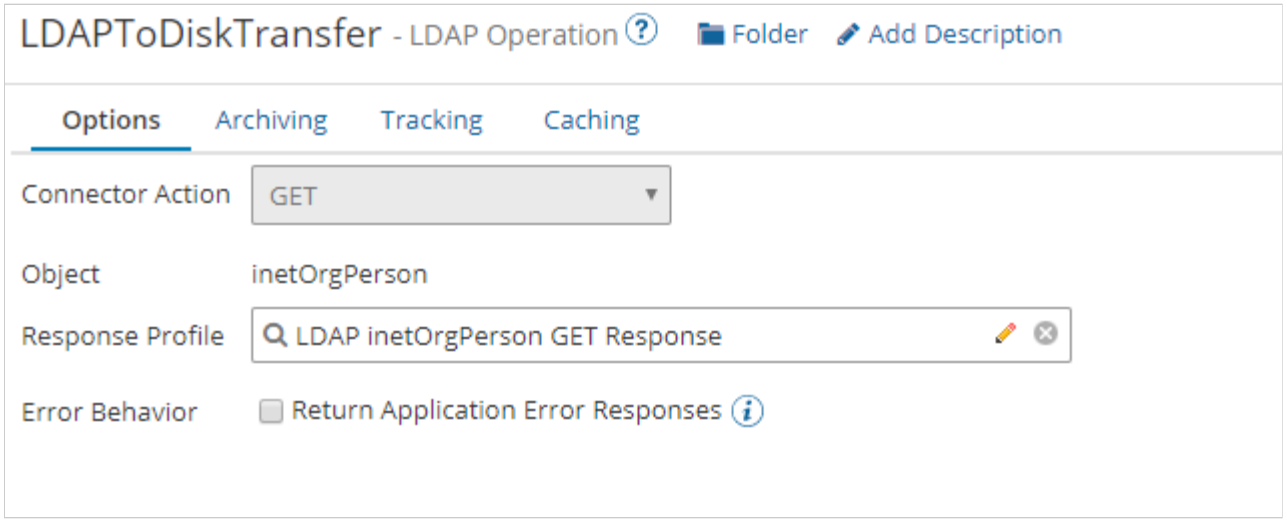
LDAP Operation Configuration:



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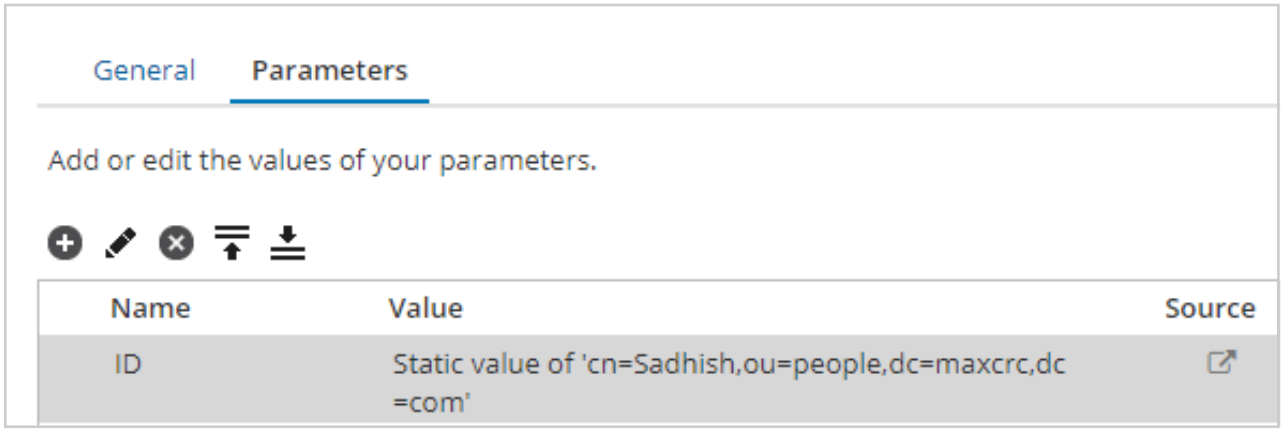
LDAP Connector Parameters:



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After completing the above setup, upon executing the process the files will get generated in the corresponding disk directory in JSON format (see below).


```
{
  "uid": [
    "Sadhish.Chinnappan"
  ],
  "mail": [
    "Sadhish.Chinnappan@royalcyber.com"
  ],
  "ou": [
    "Cloud Integration"
  ],
  "homePhone": [
    "555-111-2222"
  ],
  "objectClass": [
    "inetOrgPerson"
  ],
  "description": [
    "Cerrified Integration Architect"
  ],
  "sn": [
    "Chinnappan"
  ],
  "cn": [
    "Sadhish"
  ],
  "carLicense": [
    "HISCAR 4433"
  ]
}
```

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We demonstrated a get operation only for the blog but you can also try out for single object or get/put operations for a list.

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