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Overview

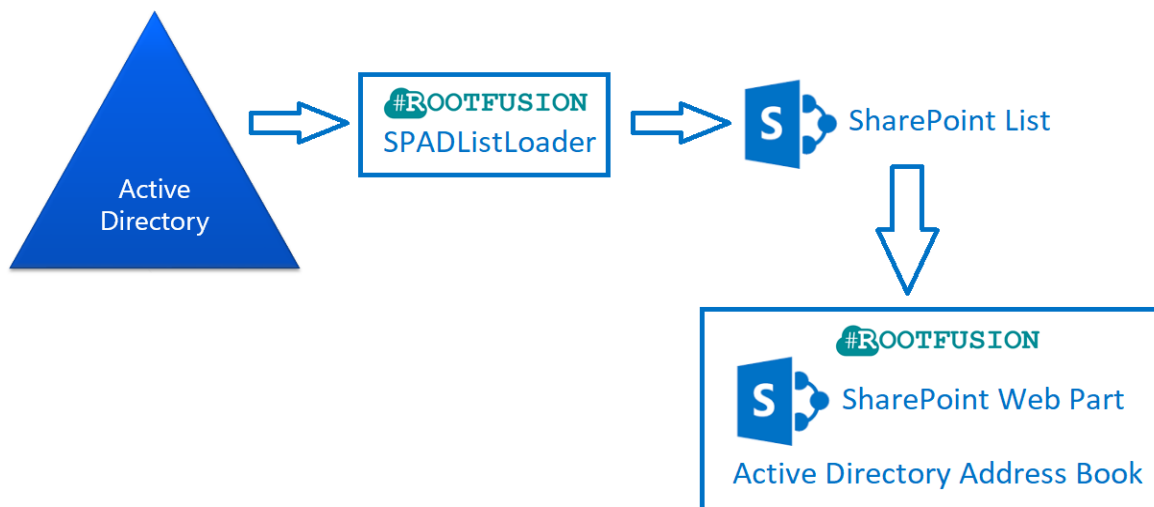
SPADListLoader stands for 'SharePoint Active Directory List Loader'.

This tool synchronizes your Active Directory users information (some specific fields, such phone numbers, title, department, etc.) in a SharePoint list. This is a one-way synchronization tool (read from your Active Directory and write to SharePoint). It is the complementary tool of the SharePoint Web Part/App "ROOTFUSION Active Directory Address Book" available for free on the Microsoft store, publishing nicely your user contact information into an Address Book web part on SharePoint.

It allows to easily create the SharePoint list structure, query and synchronize (download) Active Directory users with the SharePoint list.

You may configure the Web Part/App "ROOTFUSION Active Directory Address Book" to read data from the SharePoint list (which is synchronized by this tool, likely through a scheduled task running on your server).

This application works either in Console mode (with command-line arguments), or in a user-friendly Graphical mode (WinForms). You may run it in command line as a Windows Scheduled Task, allowing to 'refresh' your SharePoint list every day.



Licensing

To import users without limitations a license key must be provided. The key must be activated via the user interface in the Graphical mode (see Graphical mode in this user guide).

The application works without license but has some limitations:

- Only 10 AD users can be imported with the free version.

Note that the licensing information entered is saved by this tool on your target SharePoint site as site properties:

- ADL_CompanyName
- ADL_Key

Therefore, you'll need to be SharePoint site Administrator to be allowed to save your licensing information.

To acquire a license key, contact us through <http://www.rootfusion.com>

Compatibility & Software Requirements

Compatible with Microsoft Windows 7, 8.1, 10 – Windows Server 2008, 2012, 2016.

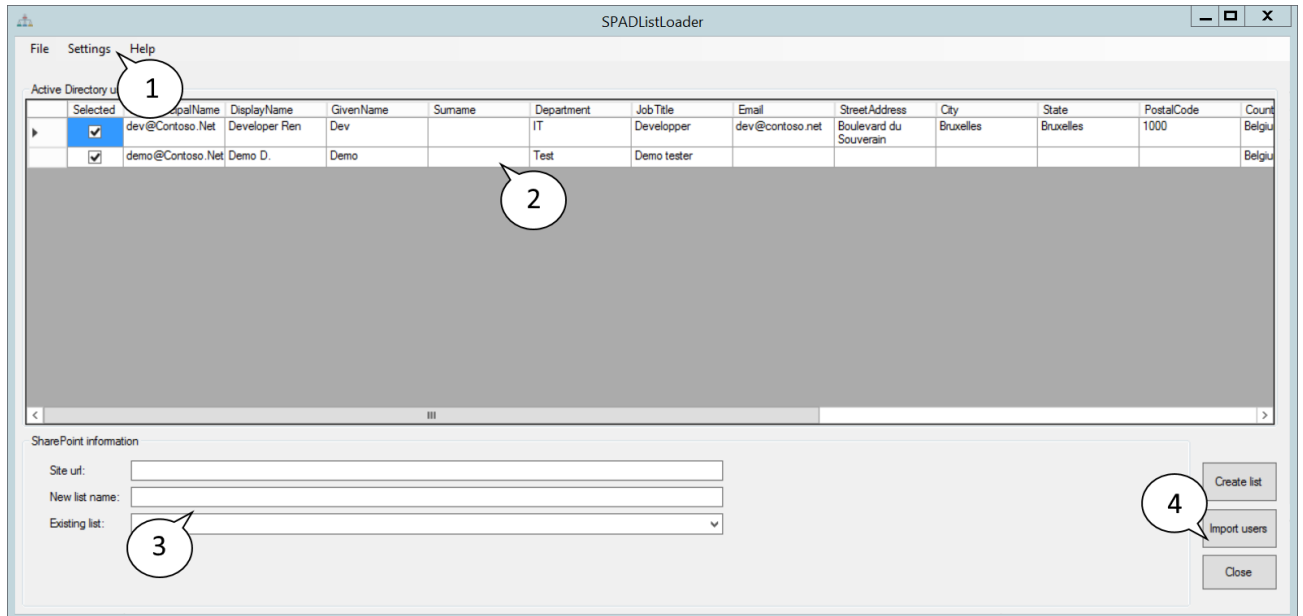
Requires:

- Microsoft .Net Framework 4.0 or greater.
- to be executed from a machine member of the Active Directory, with read permissions.
- SharePoint credentials with permissions to create a list on the target SharePoint site.

Note that Windows Defender Smartscreen may prompt the user for permissions to execute this application.

Graphical mode guide

Main screen



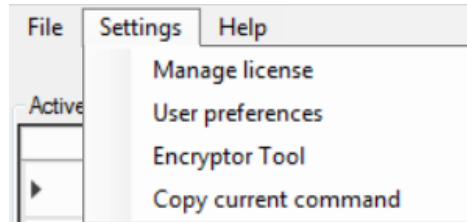
- 1) Toolbar menu
- 2) Active Directory users grid
- 3) SharePoint parameters
 - a. Site URL: SharePoint URL (mandatory).
 - b. New list name: If filled, the application will create a new list (mandatory if no list is selected in the next parameter)
 - c. Existing list: Drop down list to choose an existing list in SharePoint (mandatory if no new list name is entered in the previous parameter)
- 4) Actions buttons

Toolbar menu

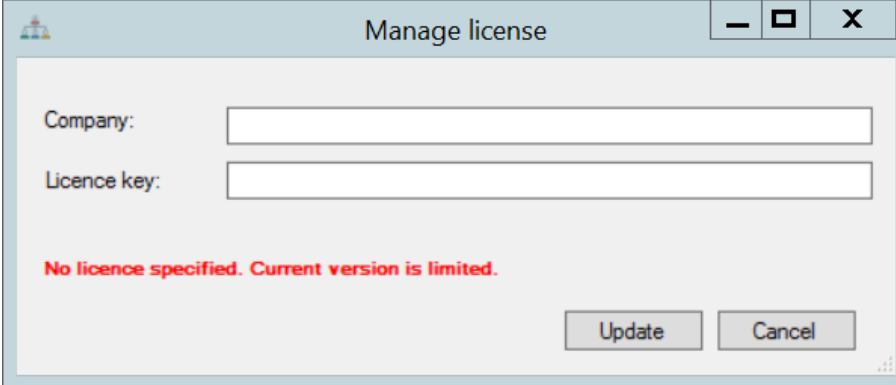
- File
 - o Exit
- Settings
 - o Manage license
 - o User preferences
 - o Encryptor Tool
 - o Copy current command
- Help
 - o About
 - o Documentation

Settings

In the settings menu, you can find options to manage your license or the user preferences and other tools like Encryptor.



1) Manage License



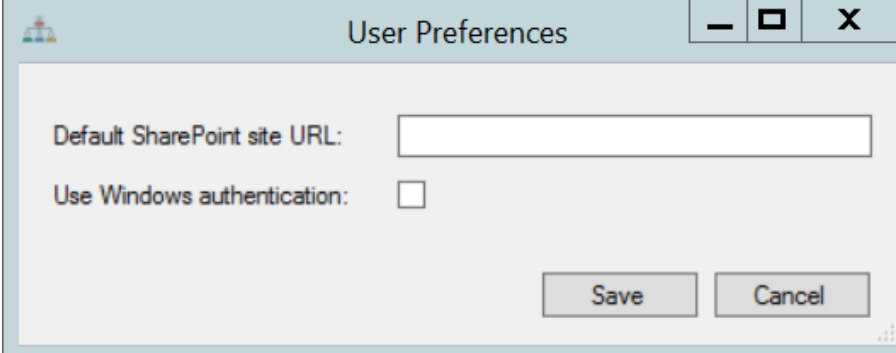
In this window, you can enter licensing information:

- Company: the company name registering the license
- Licence key: the key value sent by ROOTFUSION to the company after license purchase

A status will indicate the validity of the license.

When clicking the "Update" button, the licensing information entered is saved on your target SharePoint site as site properties (overwriting pre-existing licensing information, if any). See licensing section of this document.

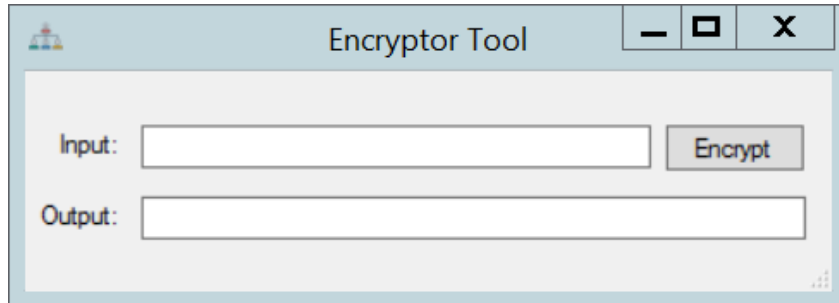
2) User Preferences



This screen allows the user to define the default URL of the SharePoint site to use within the application. The user can also decide to use the Windows Authentication or not. If the checkbox "Use Windows authentication" is checked, the application will use the current user

credentials to authenticate with SharePoint. If the check box is not checked, the application will prompt the user for SharePoint credentials when required.

3) Encryptor Tool



The Encryptor Tool allows you to encrypt the SharePoint credentials (user and password) when using the application in the console mode. This way, you may run a scheduled batch file on your server without disclosing the SharePoint credentials to non-authorized persons (e.g. other technicians accessing the server).

4) Copy current command

Copy the command-line in your clipboard (command line based on the current settings and filters of the Graphical mode: SharePoint site URL, SharePoint list name, credentials, AD grid filters).

You can then easily create your command-line argument to use in Console mode.

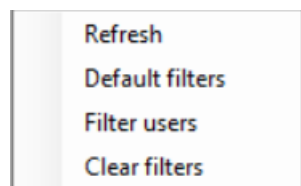
AD User grid

By default, the AD user grid displays the "active" users (not marked as disabled) and having a phone number. If a user does not have a phone number, he will not appear in the AD user grid.

The "Selected" column allows you to include or exclude users from the import. All users are selected by default.



A context menu allows you to "Refresh", "Set default filter", "Filter" or "Clear filters".

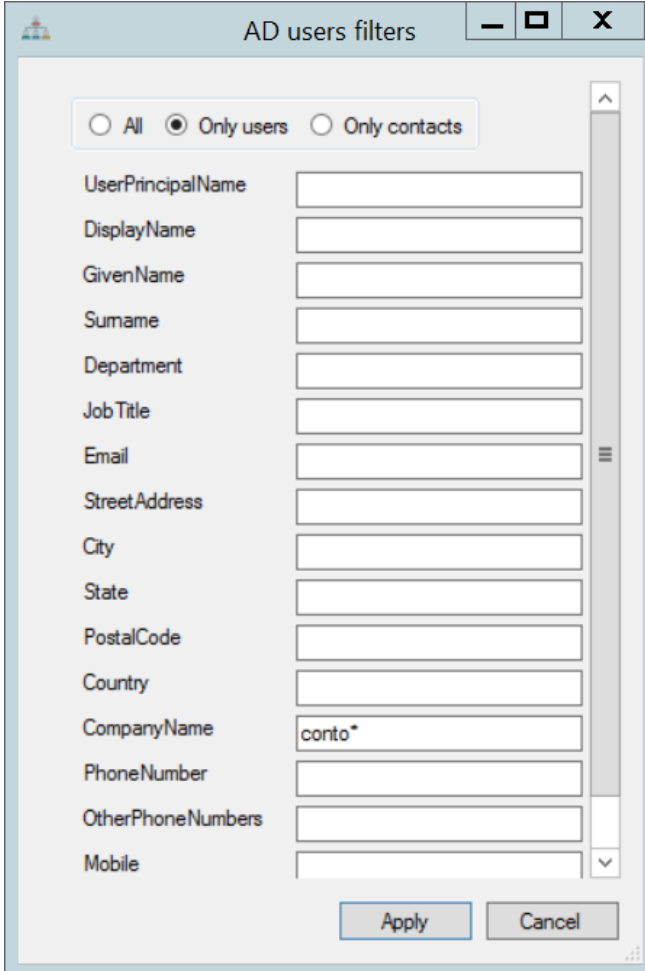


- Refresh: execute the query to reload the grid with values from the Active Directory. Applied filters remains.
- Default filters: Reset the filters to default values.

- Filter users: Open a dialog where you can set filter value for each column. (Wildcard symbol (*) is allowed here).

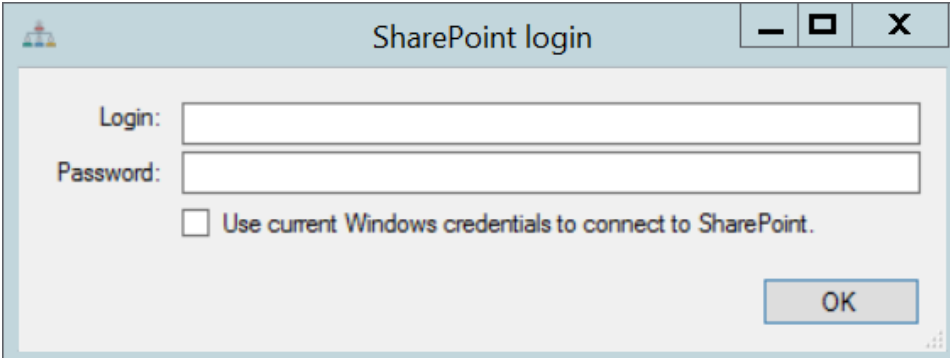
You can also choose to select only users, only contacts or both.

Note: in Graphical mode, you can only query non-disabled users from your Active Directory (this condition is predefined in the Lightweight Directory Access Protocol (LDAP) query)



- Clear filters: Delete all filters and refresh with the default query.

Login



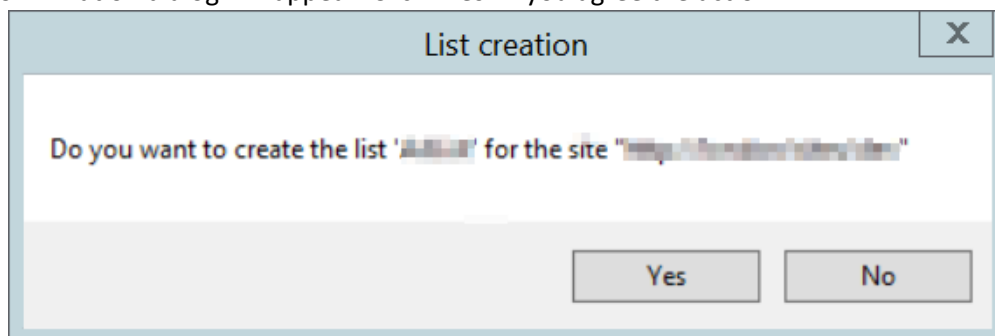
For some actions (manage license, choose an existing list, create a new list or import users) you will have to enter your SharePoint credentials (only once as long as the application is opened).

You must either enter your user and password or check the box to use your current Windows credentials (in this case no need to enter your user and password).

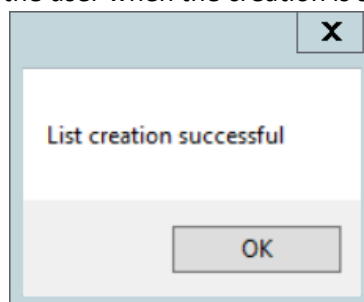
Graphical mode Step by Step Instructions

To only create the new empty SharePoint list:

- In the main screen, enter the destination SharePoint information (site URL, new list name)
- Click the button "Create list"
- A confirmation dialog will appear. Click "Yes" if you agree the action.



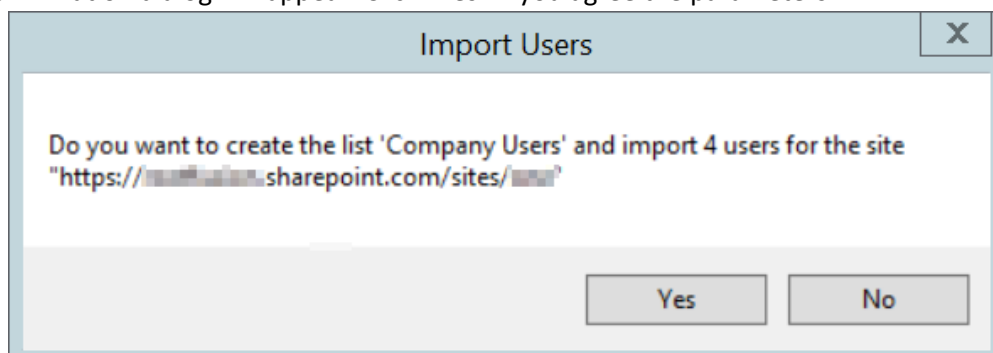
- The application will inform the user when the creation is successfully completed.



- In case of error (URL not valid, invalid credentials) a prompt will inform you about the cause.

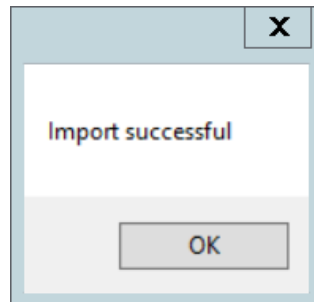
To import AD users in a SharePoint list:

- In the main screen, enter the destination SharePoint information (site URL, list name)
- In the AD users grid, you can filter and deselect unwanted users if needed with the "selected" checkbox
- Click the button "Import users"
- A confirmation dialog will appear. Click "Yes" if you agree the parameters.



- The application will inform the user when the import is successfully completed.

In case of error (URL not valid, invalid credentials, invalid selected list) a prompt will inform you about the cause.



Note: If you receive the generic error message "An error occurred during the users import", check your SharePoint information (Site url, credentials), if the current user have administration access to this SharePoint site.

Command-Line console mode guide

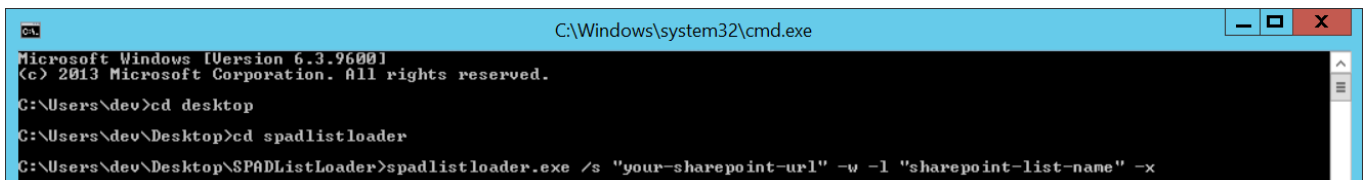
Console mode Step by Step Instructions

When the application is launched with command-line arguments it runs in console mode.

You could do that in the console prompt or in a batch file.

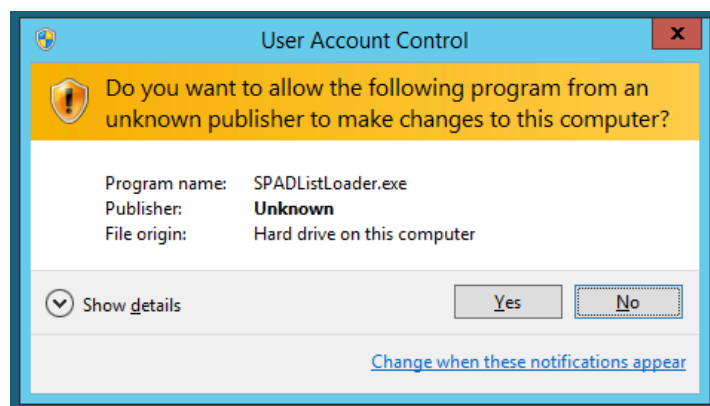
- Open the Windows Command Prompt (windows + R and type "cmd")
- Navigate to the directory where this application is installed.
- Type SPADListLoader.Exe + arguments (see table below about available arguments and their utility) and press "Enter".

Note : In the Graphical mode, you have the possibility to easily configure and extract the command-line (see documentation about Graphical mode).

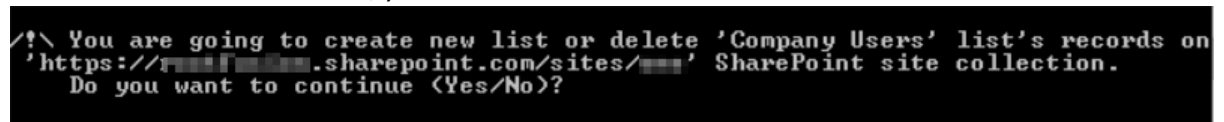


```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.
C:\Users\dev>cd desktop
C:\Users\dev\Desktop>cd spadlistloader
C:\Users\dev\Desktop\SPADListLoader>spadlistloader.exe /s "your-sharepoint-url" -u -l "sharepoint-list-name" -x
```

- SPADListLoader must runs in "Administrator mode" , from a machine member of your Active Directory, so you'll have a prompt asking you the permission to run this application => Click "Yes"



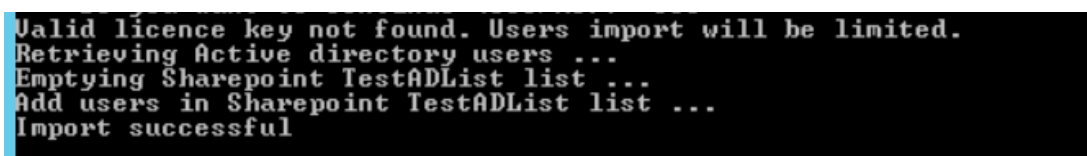
- If the silent mode is not active, you will have to confirm the action.



```
/?\ You are going to create new list or delete 'Company Users' list's records on
'https://[redacted].sharepoint.com/sites/[redacted]' SharePoint site collection.
Do you want to continue (Yes/No)?
```

Note: Be careful that if silent mode is active, application will delete users if SharePoint List exists.

- Then you will see information about import process steps (error if any, license validation, list's items delete, import and status)



```
Valid licence key not found. Users import will be limited.
Retrieving Active directory users ...
Emptying Sharepoint TestADList list ...
Add users in Sharepoint TestADList list ...
Import successful
```

Arguments

Name	Short alias	Required	Default	Definition
/site	/s	Yes		URL of the SharePoint site collection.
/list	/l	Yes		SharePoint list name used to store imported users. If the list does not exist it will be created automatically.
/user	/u	Only if not windows authentication		Encrypted SharePoint user login. (You must encrypt your user with the encryptor tool available in Graphical mode)
/password	/p	Only if not windows authentication		Encrypted Password for the specified user. (You must encrypt your password with the encryptor tool available in Graphical mode)
/win	/w	No	0	Use windows credentials to connect into SharePoint
/query	/q	No		LDAP syntax filter to querying Active Directory users. If not provided, the system will return by default all active AD users for whom a phone number is specified. (Some reserved/built-in windows users are always removed: Administrator, Guest and krbtgt)
/wait	/x	No	0	When specified, it forces the application to wait a key press before leaving.
/silent		No	0	When set to true, the application will not wait for confirmation from the user and application will not wait a key press before leaving.

Example:

- 1) With Windows credentials
SPADListLoader.exe /s "https://contoso.sharepoint.com" /w /l "ADusers"
- 2) With encrypted user and password
SPADListLoader.exe /s "https://contoso.sharepoint.com" /u "9SnERFxG+ =" /p "Mf5OR+xAncI2h66WjsA=" /l "ADusers"

Note: Encrypted username and password can have a very long length.

LDAP query guide

In the console command-line parameters (/q or /query) you have the possibility to override the default query to retrieve AD users. Here are some LDAP attributes (used in this application) you can use to build your own queries to customize the filters:

samAccountName	Logon name
userPrincipalName	Logon name with domain
displayName	The name used by LDAP clients
givenName	FirstName
sn	LastName
Company	Company Name
department	
title	Job title. For example, Manager.
mail	
streetAddress	
l	Location/City
st	State/Province
postalCode	
co	Country. For example, Belgium.
telephoneNumber	The primary telephone number
mobile	The primary mobile phone number
otherTelephone	A list of alternate office phone numbers
otherMobile	A list of alternate mobile phone numbers

Basic LDAP Syntax (source: [https://technet.microsoft.com/fr-fr/library/aa996205\(v=exchg.65\).aspx](https://technet.microsoft.com/fr-fr/library/aa996205(v=exchg.65).aspx))

- **= (EQUAL TO)**

This LDAP argument means a certain attribute must be equal to a certain value to be true. For example, if you want to find all objects that have the first name of John, you would use:

```
(givenName=John)
```

This would return all objects that have the first name of John. Parentheses are included to emphasize the beginning and end of the LDAP statement.

- **& (logical AND)**

You use this syntax when you have more than one condition, and you want all conditions in the series to be true. For example, if you want to find all the people that have the first name of John and live in Dallas, you would use: Copier

```
(&(givenName=John)(l=Dallas))
```

Notice that each argument is in its own set of parentheses. The entire LDAP statement must be encompassed in a main set of parentheses. The & operator means that each argument must be true for this filter to apply to your object in question.

- **! (logical NOT)**

This operator is used to exclude objects that have a certain attribute. Suppose you need to find all objects except those that have the first name of John. You would use the following statement:

```
(!givenName=John)
```

This statement would find all objects that do not have the first name of John. Notice that the ! operator goes directly in front of the argument and inside the argument's set of parentheses. Because there is only one argument in this statement, it is surrounded with parentheses for illustration.

- *** (wildcard)**

You use the wildcard operator to represent a value that could be equal to anything. One such situation might be if you wanted to find all objects that have a value for title. You would then use:

```
(title=*)
```

This would return all objects that have the title attribute populated with a value. Another example might be if you know an object's first name starts with Jo. Then, you could use the following to find those:

```
(givenName=Jo*)
```

This would apply to all objects whose first name starts with Jo.

- The following are more advanced examples of LDAP syntax:
 - You need a filter to find all objects that are in Dallas or Austin, and that have the first name of John. This would be:

```
(&(givenName=John)(|(l=Dallas)(l=Austin)))
```

Remark :

The ! operator in conjunction with the wildcard operator will look for objects where that attribute is not set to anything.

Example

```
(&(objectCategory=person)(objectClass=user)(!userAccountControl:1.2.840.113556.1.4.803:=2))
```

This query retrieves all active user (meaning all non-disabled accounts)

```
(&(objectCategory=person)(objectClass=user)(!userAccountControl:1.2.840.113556.1.4.803:=2)(Department=*))
```

This query retrieves all active users with a department filled.

Application Logs

Log4Net is used for the global logging mechanism.

By default, a log file SPADListLoader.log is created/appended (in the application folder) each time the import process is executed, and will contain any error encountered.

Log4Net is configurable via the application configuration file SPADListLoader.exe.config. E.g. you could force the log file path:

```
<log4net debug="false">
  <appender name="DefaultLogFileAppender" type="log4net.Appender.FileAppender">
    <file type="log4net.Util.PatternString" value="SPADListLoader.log" />
    <appendToFile value="true" />
    <lockingModel type="log4net.Appender.FileAppender+MinimalLock"/>
    <layout type="log4net.Layout.PatternLayout">
      <header type="log4net.Util.PatternString" value="[Log Starts]%newline" />
      <footer type="log4net.Util.PatternString" value="[Log Ends]%newline%newline" />
      <conversionPattern value="%date [%username] - %message%newline" />
    </layout>
  </appender>
```