

# ***AD SYNC v.1.9.1.0***



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## **Introduction**

The purpose of this document is to describe the operational features related to the Boolebox AD Sync application.

The function of the application consists in the synchronization of AD (Active Directory) users with the Boolebox platform. In other words, the application takes care of creating and keeping Boolebox users synchronized starting from existing AD users. This activity is carried out in a one-way mode, namely:

- the creation/modification of users on AD involves the creation/modification of the same on the Boolebox platform;
- the cancellation of an AD user – if this is present in at least one synchronized group – involves the suspension of the corresponding Boolebox user;
- the creation/modification of a Boolebox user does NOT involve the creation/modification of the same on AD;
- the cancellation of a Boolebox user does NOT entail the suspension of the corresponding AD user;

The application can be divided into two distinct components:

- **SERVICE:** component dedicated to synchronizing AD users with Boolebox. This component is activated at the start of the operating system and synchronizes users based on the time interval indicated during configuration;
- **WINDOWS APPLICATION:** component that provides the interface to configure the Boolebox ADSYNC application, regularizing the synchronization of AD users with Boolebox;

At the first start of the WINDOWS APPLICATION, the GENERAL CONFIGURATION screen is shown: within this the user configures the settings related to the interface between the Boolebox AD Sync application and the Boolebox server. At each boot after the first one, the MAIN SCREEN will be displayed directly.

The data is saved in partially encrypted mode on the Windows registry and partially in a local database.

## **Usage prerequisites**

In order to proceed correctly with the use and configuration of the Boolebox AD Sync application, it is necessary to ensure that the following usage prerequisites are met:

- the two components of the Boolebox AD Sync application (WINDOWS SERVICE and APPLICATION) must be able to communicate with the Boolebox web application via the HTTPS protocol: then verify that the server indicated in the configuration phase is reachable via TCP / IP through the correct port (tcp 443);
- The user who performs the installation and configuration of the Boolebox AD Sync application must have administrative permissions related to the machine on which it is installed;
- The machine on which the Boolebox AD Sync application is installed must be able to communicate with the Active Directory server via TCP/IP via the correct port (tcp 389);

***Note: Configuring Boolebox AD Sync allows you to configure multiple Active Directory servers for AD user synchronization. Each group can be associated with a specifically configured server. The above check is then to be performed for each configured AD server.***

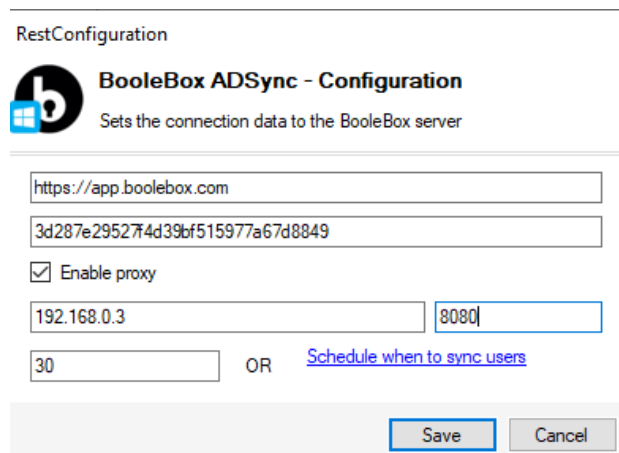
## **REST CONFIGURATION screen**

The REST CONFIGURATION screen allows you to set the connection parameters that allow communication between the machine where the AD Sync application was installed and the Boolebox server. Specifically, the following fields must be configured within the screen:

- **SERVER ADDRESS** - boolebox server address;
- **API KEY** - the API KEY of the company for which you are configuring the synchronization between users (available within the general data of the specific company in the Boolebox DASHBOARD);
- **PROXY IP ADDRESS** - by enabling the ENABLE PROXY flag, you can enter the IP address of the proxy server;
- **PROXY SERVER PORT** - by enabling the ENABLE PROXY flag, you can enter the connection port for the proxy server;
- **TIMER** - the time interval between AD Sync - Boolebox synchronizations. This time interval can:
  - be expressed in minutes by entering the corresponding time interval within the field;
  - be scheduled more precisely by clicking on ***Schedule when to sync users*** and selecting one or more days of the week, months of the year, hours and minutes;

Once you have entered all the necessary information in the appropriate fields, click on **Save**.

The application then performs a connection test with the server using the parameters entered. If the connection test is successful, the main screen is displayed; otherwise, an error message appears indicating the need to correct the required parameters.



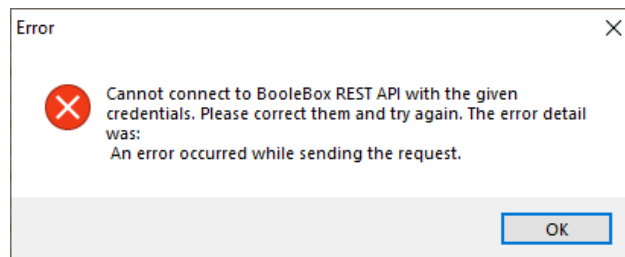
The screenshot shows the 'RestConfiguration' window for 'BooleBox ADSync - Configuration'. The window title is 'RestConfiguration'. Below the title is the BooleBox logo and the text 'BooleBox ADSync - Configuration' and 'Sets the connection data to the BooleBox server'. The form contains the following fields and controls:

- A text input field containing 'https://app.boolebox.com'.
- A text input field containing '3d287e29527f4d39bf515977a67d8849'.
- A checked checkbox labeled 'Enable proxy'.
- A text input field containing '192.168.0.3'.
- A text input field containing '8080'.
- A text input field containing '30'.
- The text 'OR' followed by a blue link labeled 'Schedule when to sync users'.
- At the bottom right, there are two buttons: 'Save' and 'Cancel'.

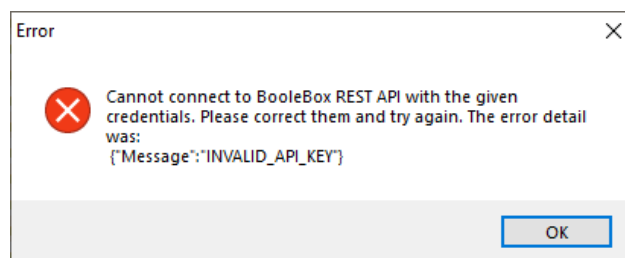
CronExpressionSelector

Minutes	Hours	Months	Weekdays
<input checked="" type="checkbox"/> Every minute	<input checked="" type="checkbox"/> Every hour	<input checked="" type="checkbox"/> Every month	<input checked="" type="checkbox"/> Every weekday
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	gennaio febbraio marzo aprile maggio giugno luglio agosto settembre ottobre novembre dicembre	domenica lunedì martedì mercoledì giovedì venerdì sabato

Save Cancel



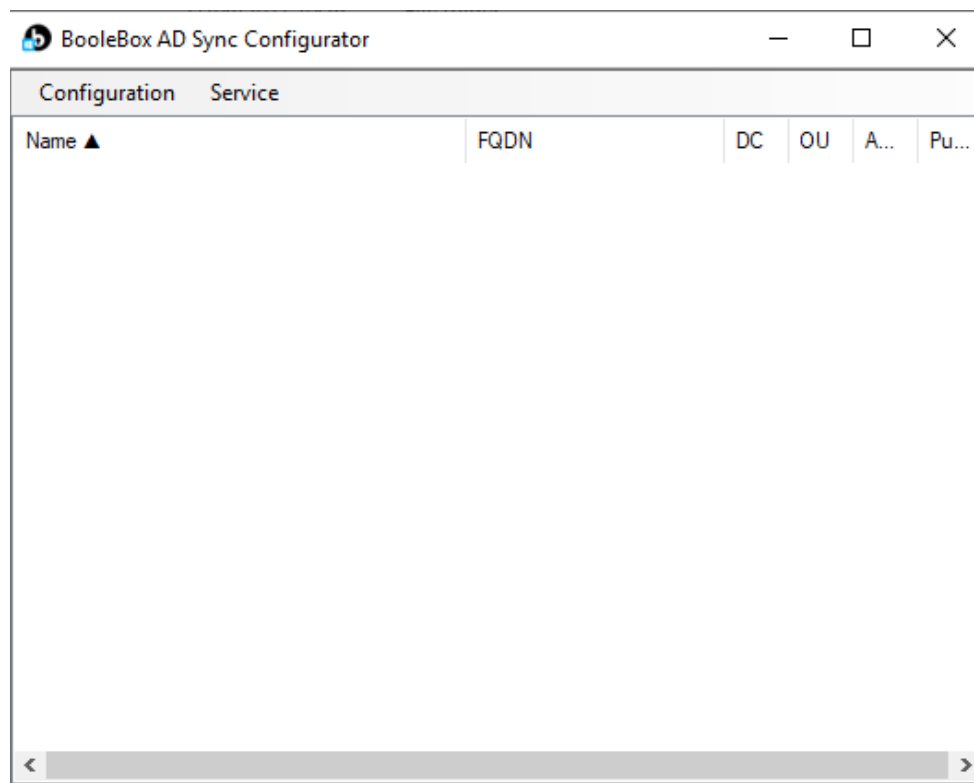
Example of server unreachability



Example of incorrect API KEY

## *The main screen*

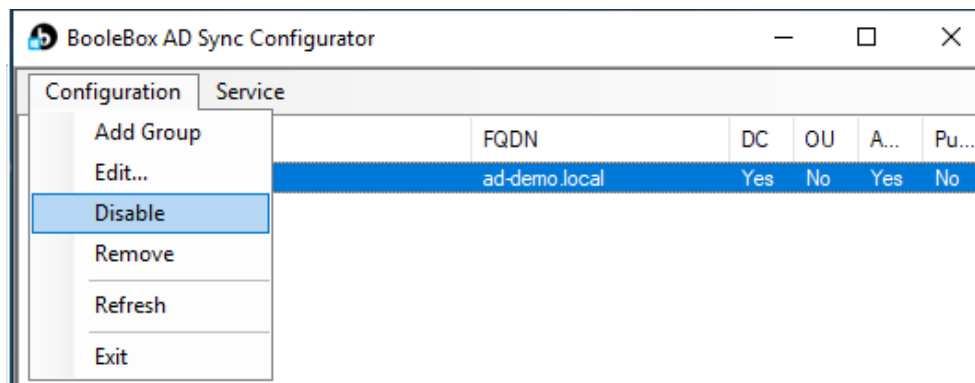
The main screen of boolebox AD Sync allows you to view the AD groups that the BOOLEBOX AD Sync application synchronizes with the boolebox platform. At the first opening, the application does not contain any groups.



From the main screen of the application, through the menu bar at the top, you can perform the main operations of the synchronized groups.

## Menu

The menu of the Boolebox AD Sync application consists of two items: **Configuration** and **Service**.



Within the **Configuration** menu you can choose from the following options:

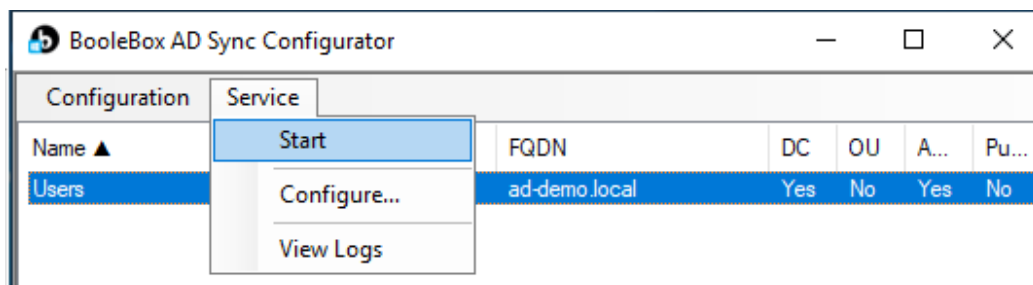
- **Add Group** – adding a new group to synchronize;
- **Edit** – editing an already existing group;
- **Enable/Disable** – enabling or disabling synchronization of selected items;
- **Remove** – remove the group/OU (Ou) from the list of groups to be synchronized. Alternatively you can press the **Delete** key.  
*Note: when a group is removed from the list of groups to be synchronized, the latter is not deleted from the groups on the Boolebox platform and remains composed of the users present at the last synchronization made.*
- **Refresh** - forces the refresh of the list of groups/organizational units for child objects that are automatically imported but not yet displayed. Alternatively, you can press the **F5** function key.
- **Exit**

Normally the list of groups is updated every time you open the Boolebox AD Sync application or after a change, the discrepancy between the display and the groups in the synchronization configuration is due only to the child objects automatically imported in the background by the service. That's why a useful manual refresh was introduced in the initial stages of configuration.



Within the **Service** menu you can choose the following options:

- **Start/Stop** – enabling or disabling the synchronization service;
- **Configure** – opening the GENERAL CONFIGURATION screen;
- **View Logs** – opening log file of the day, which keeps track of the operations carried out by the application along the course of the current day;



## **Groups/ou list**

Once you add a group to sync, it is displayed on the main screen along with the other synced groups. The list of groups/OUs synchronized by the Boolebox AD Sync application contains the following information for each entry:

- **NAME** - Group/OU name;
- **FQDN**: name of the AD domain;
- **DC (Domain Controller)** – value that indicates whether the group has been added by specifying a Domain Controller;
- **OU (Organizational Unit)** – a value that indicates whether the group synchronized from Active Directory is an Organization Unit (YES) or a group (NO);
- **AD AUTH** – value that indicates whether the users of the configured group use the AD password to access the Boolebox platform (YES) or the one set during configuration (NO);
- **PUBLIC** – a value that indicates whether the group created on the Boolebox is of type PUBLIC (YES) or PRIVATE (NO);

## Main operations

Through the MAIN SCREEN it is possible to perform the main operations concerning the management of groups synchronized with Boolebox AD Sync, listed in the MAIN SCREEN paragraph and better detailed in the following paragraphs.

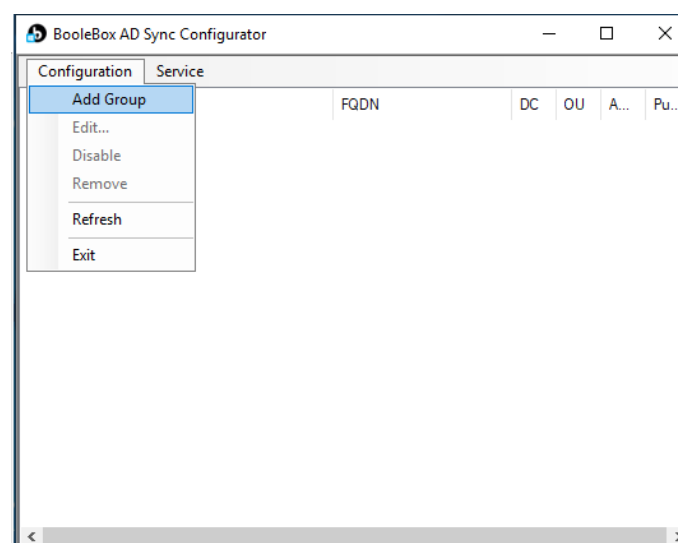
Boolebox AD Sync to better adapt to the multiple needs of its customers allows the insertion of individual groups of the customer AD rather than root Organizational Units allowing the import of all child objects automatically. While the first case could be more suitable for reality with few groups to manage, the second option should be the most suitable for large realities where there are multiple groups / OU and the automatic synchronization between AD and Boolebox becomes vital.

**Note: when removing a group from the list of groups to be synchronized, the latter is not deleted from the groups on the Boolebox platform but will remain composed of the users present at the last synchronization made.**

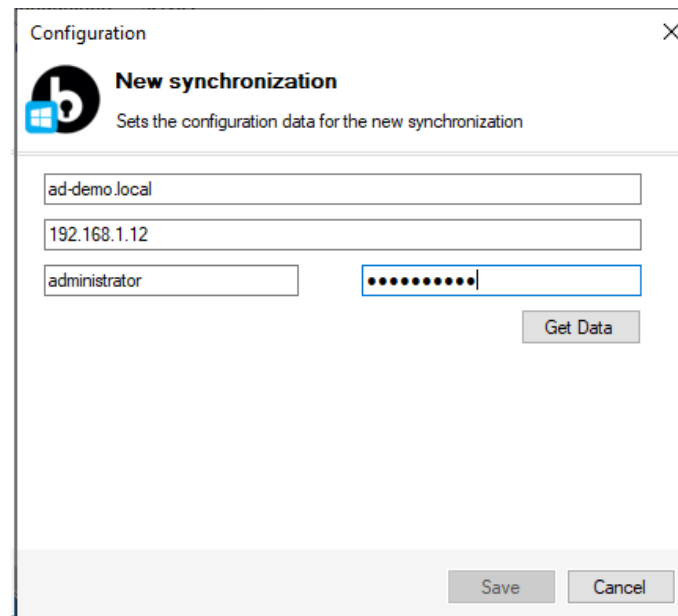
## Synchronizing a new group

By selecting the Add Group item, you create a new group on the Boolebox platform that is populated with users on Active Directory. To add a group to synchronize:

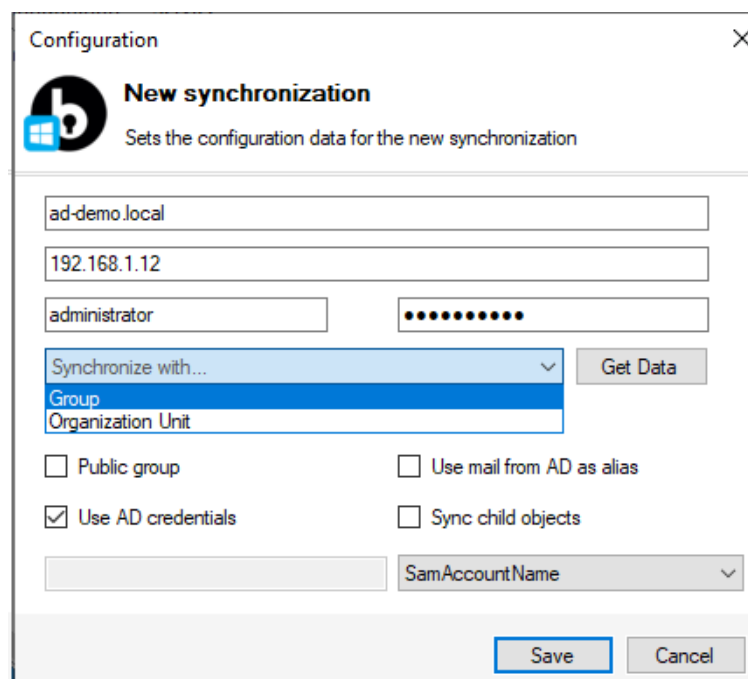
- Click **configuration**;
- Select the **Add Group** item;

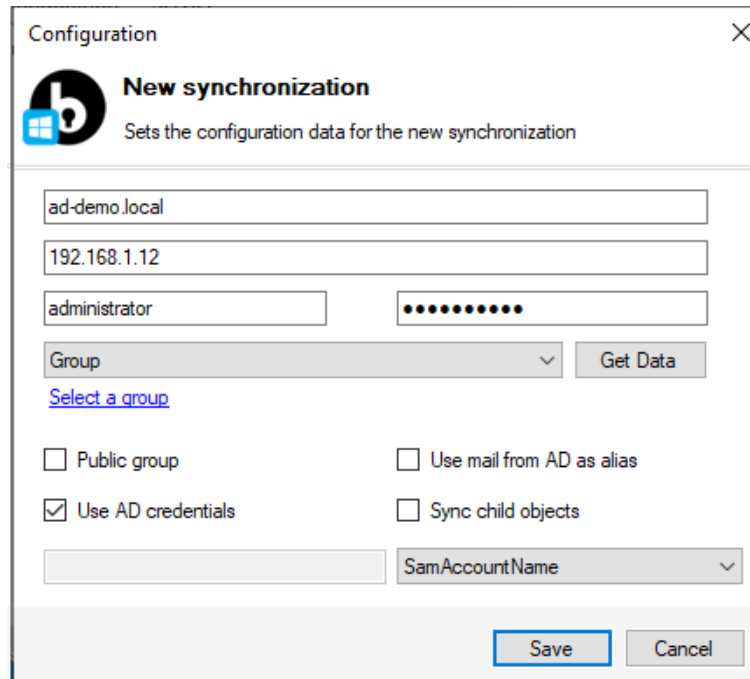


- In the screen that appears on your screen, enter:
  - the FQDN of the AD server;
  - the IP address of the AD server;
  - the name of the user authorized to perform AD queries;
  - the password of the user authorized to perform AD queries;



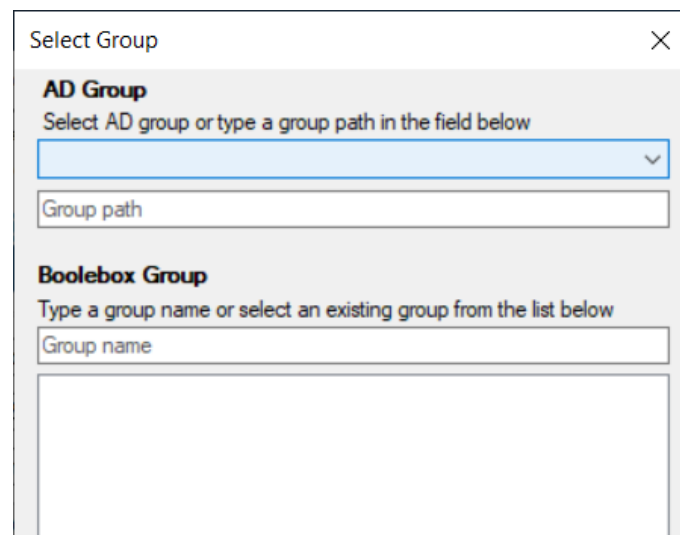
- Click **Get Data**;
- If the connection parameters entered are correct, the other fields to be set appear;
- Select from the drop-down menu located in the center of the screen the AD object to be synchronized as a Boolebox group: **Group** or Organization **Unit**;

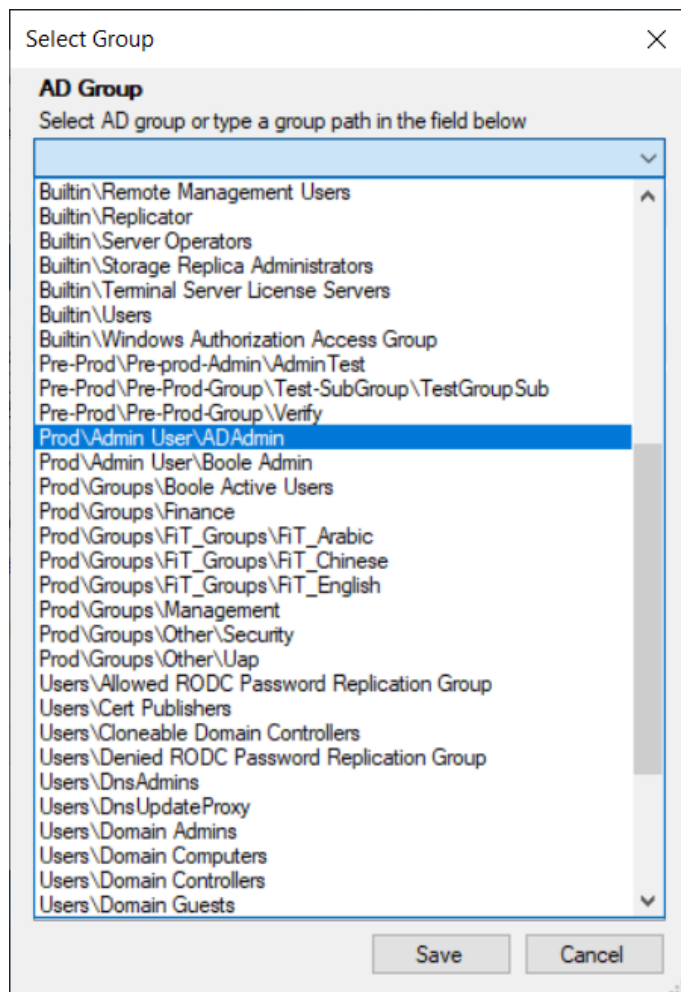




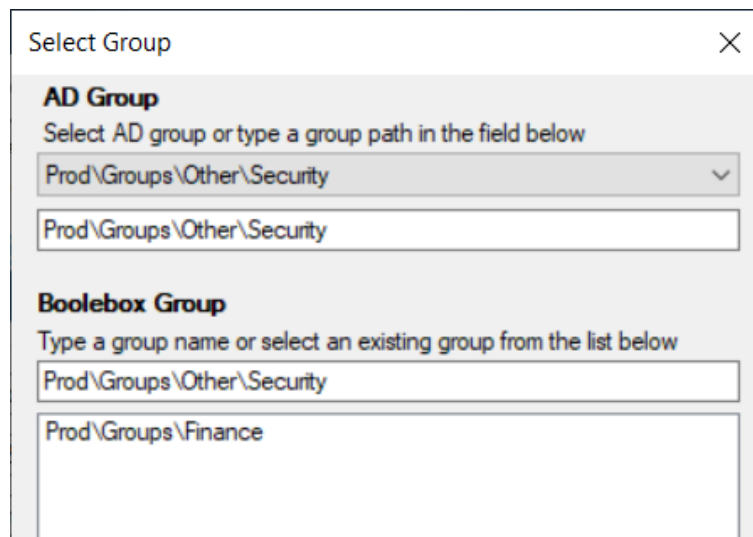
A) If you selected "Group":

- Cliccare su **Select a group**;
- The screen that appears on the screen is divided into two zones:
  - the upper area allows the selection of the AD group to be imported by choosing it through a drop-down list or by entering it by hand through the **Group path field**;





- the lower area allows you to choose the Boolebox group to be associated with the group selected above, usually you leave the group having the same name as the one chosen in AD which is proposed automatically. In case of need you can select as a destination a group already existing in Boolebox simply by selecting it with a click or by typing a customized name in the appropriate field;



Select Group

**AD Group**  
Select AD group or type a group path in the field below

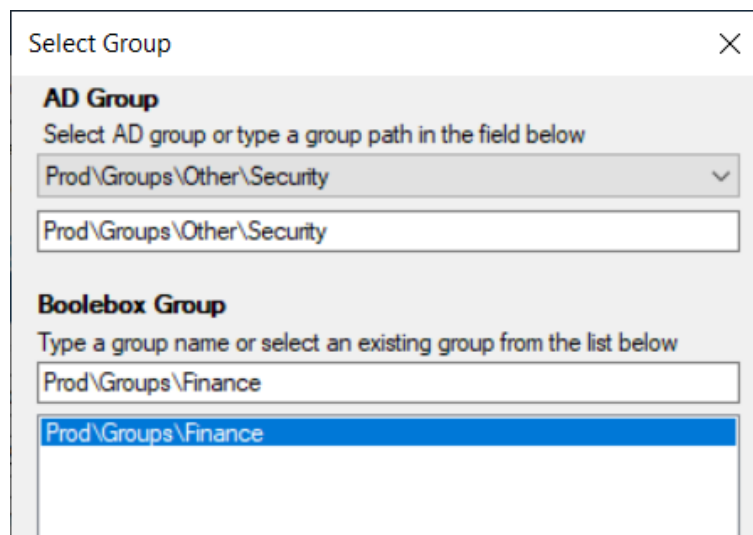
Prod\Groups\Other\Security

Prod\Groups\Other\Security

**Boolebox Group**  
Type a group name or select an existing group from the list below

Prod\Groups\Other\Security

Prod\Groups\Finance



Select Group

**AD Group**  
Select AD group or type a group path in the field below

Prod\Groups\Other\Security

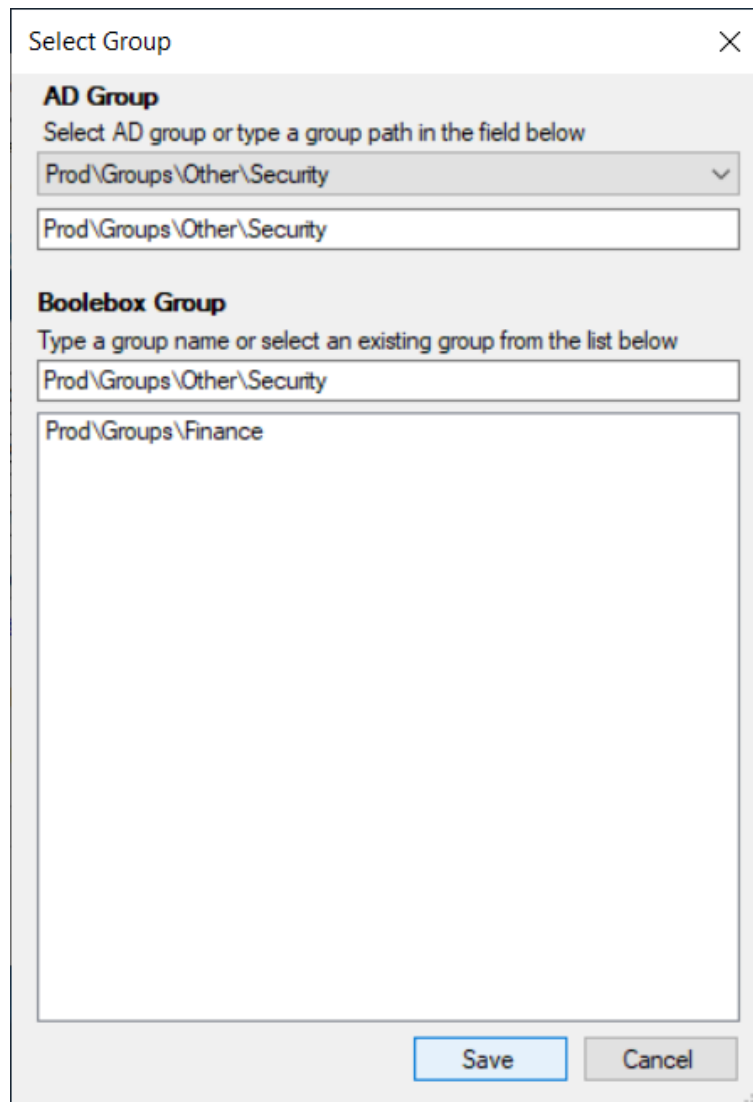
Prod\Groups\Other\Security

**Boolebox Group**  
Type a group name or select an existing group from the list below

Prod\Groups\Finance

Prod\Groups\Finance

- Click **Save**

A screenshot of a 'Select Group' dialog box. The dialog has a title bar with 'Select Group' and a close button. It is divided into two sections: 'AD Group' and 'Boolebox Group'. The 'AD Group' section has a dropdown menu and a text input field, both containing 'Prod\Groups\Other\Security'. The 'Boolebox Group' section has a text input field with 'Prod\Groups\Other\Security' and a list box with 'Prod\Groups\Finance'. At the bottom are 'Save' and 'Cancel' buttons.

Select Group

**AD Group**  
Select AD group or type a group path in the field below

Prod\Groups\Other\Security

Prod\Groups\Other\Security

**Boolebox Group**  
Type a group name or select an existing group from the list below

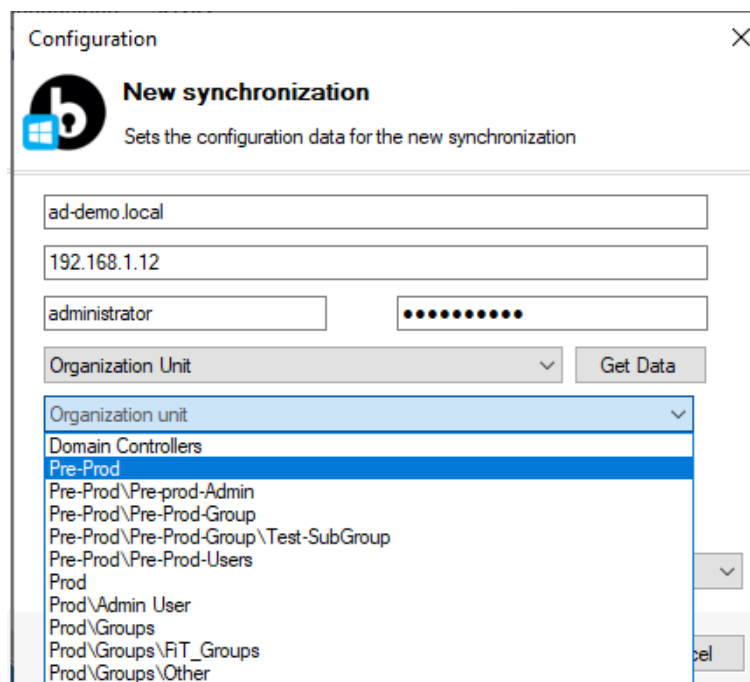
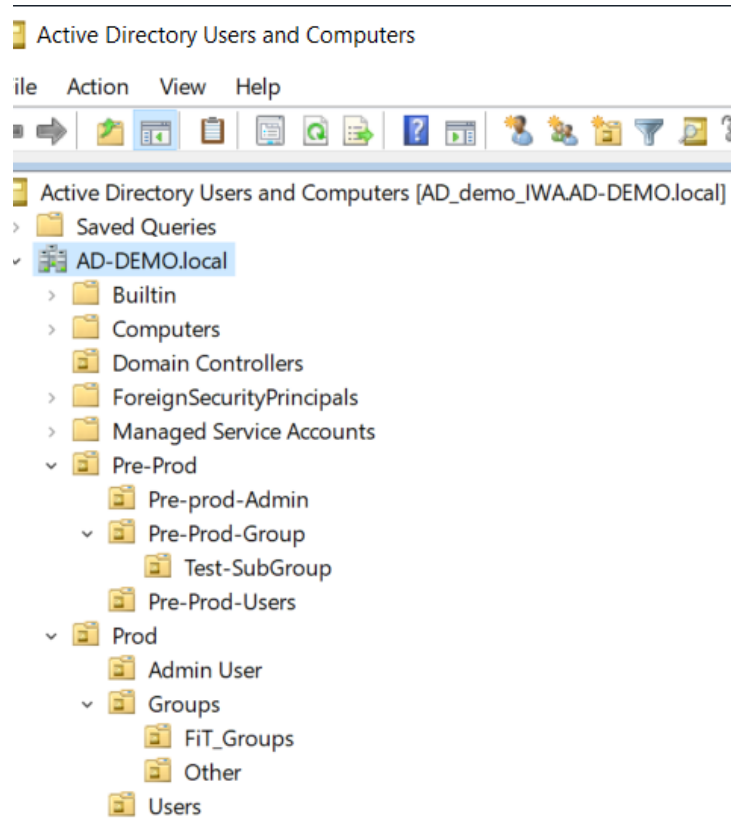
Prod\Groups\Other\Security

Prod\Groups\Finance

Save Cancel

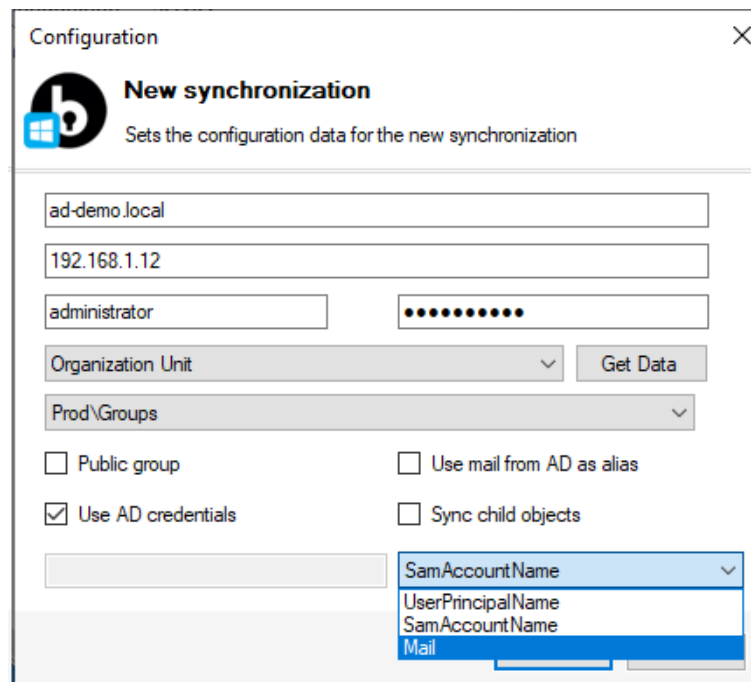
B) If you selected "Organization Unit":

- Select from the drop-down menu one of the OUs present on the AD server indicated during the configuration phase;





Whatever choice has been made previously there are common settings that can be enabled/disabled to further customize the synchronization that we are now going to explain in detail:



- **Public group** – option that makes the group created on Boolebox public;

**Note: By default, the group created when synchronizing with AD will be private.**

- **Use mail from AD as alias** – option that allows you to import the Active Directory email address as a user alias;
- **Use AD credentials** – option that allows you to use the imported credentials of AD users as boolebox login credentials;

**Note: if this operation is not selected, the field below will be activated, in which to indicate a default access password: this password will be set for all users belonging to the imported group and the change of the same will be forced at the first access of the user to the platform.**

- **Sync child objects** – option that also synchronizes the subgroups of the group or OU in question and its users;

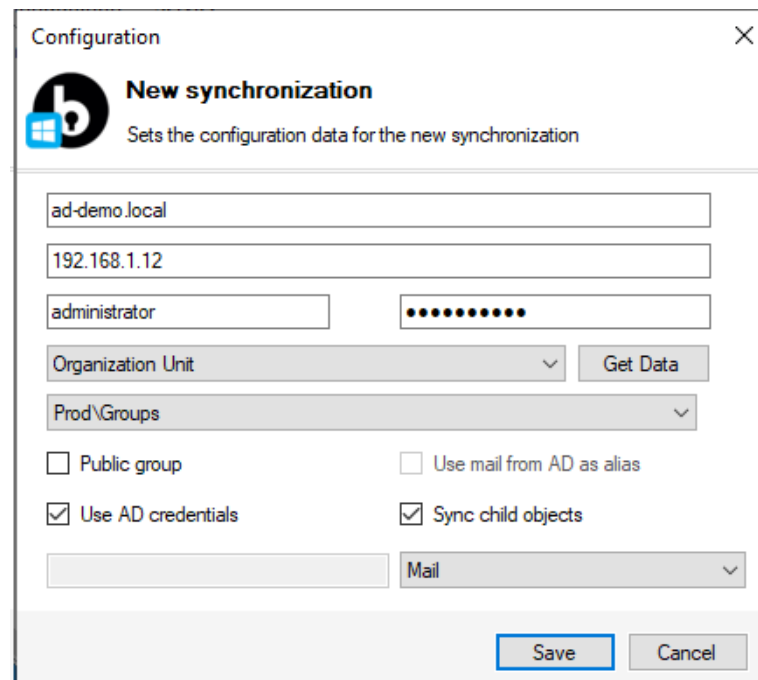
- from the drop-down menu at the bottom right select the Active Directory property to use as the user name for Boolebox and it will be the address used for sending and receiving notifications:
  - **UserPrincipalName:** The user name is created in the format *UserPrincipalName*;
  - **SamAccountName:** The user name is created in the format *SamAccountName@FQDN* (FQDN specified in the groupcreation);
  - **Mail:** the user name is created in the E-mail field format associated with the imported user;

**Note:** Given the various email communications available in Boolebox if the *UserPrincipalName* corresponds to a working email it is recommended to choose it as a login user and set as an alias any additional email address configured in the user profiles. Otherwise it is recommended not to tick Use mail from AD as alias and select *mail login user*.

The login on Boolebox, depending on the chosen field, will take place in the following ways:

- **UserPrincipalName:** You use the *UserPrincipalName*
- **SamAccountName:** You use *NetBiosDomain\SamAccountName* or *SamAccountName@FQDN*
- **Mail:** You Use *NetBiosDomain\SamAccountName*

- Click **Save**;



Configuration

**New synchronization**  
Sets the configuration data for the new synchronization

ad-demo.local

192.168.1.12

administrator

Organization Unit

Prod\Groups

Public group

Use mail from AD as alias

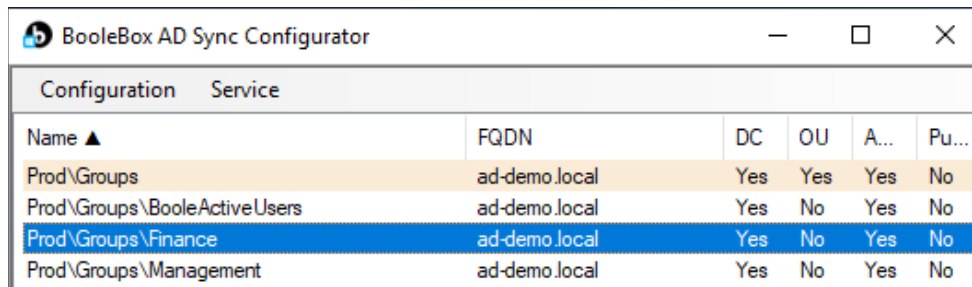
Use AD credentials

Sync child objects

Mail

Save Cancel

The indicated group is now present in the list of groups to be synchronized and will be synchronized based on the interval set during the configuration phase, automatically all the subgroups present will also be imported;



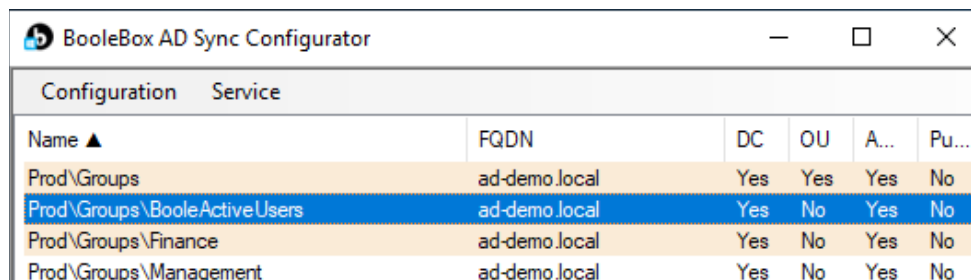
Name ▲	FQDN	DC	OU	A...	Pu...
Prod\Groups	ad-demo.local	Yes	Yes	Yes	No
Prod\Groups\BooleActiveUsers	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Finance	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Management	ad-demo.local	Yes	No	Yes	No

**Note:** once you press the SAVE button, among the groups of the indicated Boolebox company, an empty group is immediately created: the users with whom to populate it will be synchronized by AD at a later time based on the timer indicated in the configuration phase.

## Changing the parameters of a synchronized group

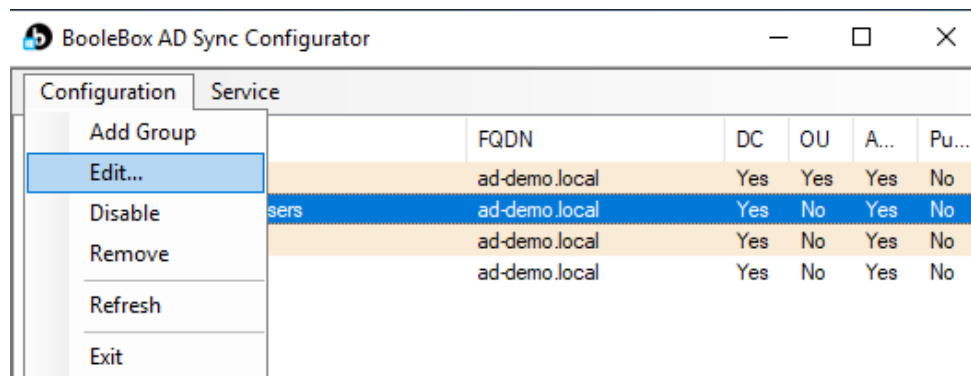
By changing the parameters of a group synchronized through the Boolebox AD Sync application, you can change the synchronization details of users between the Boolebox platform and the AD domain indicated. To change the synchronization parameters of a group managed by the Boolebox AD Sync application:

- Select the group for which you want to change the synchronization parameters;



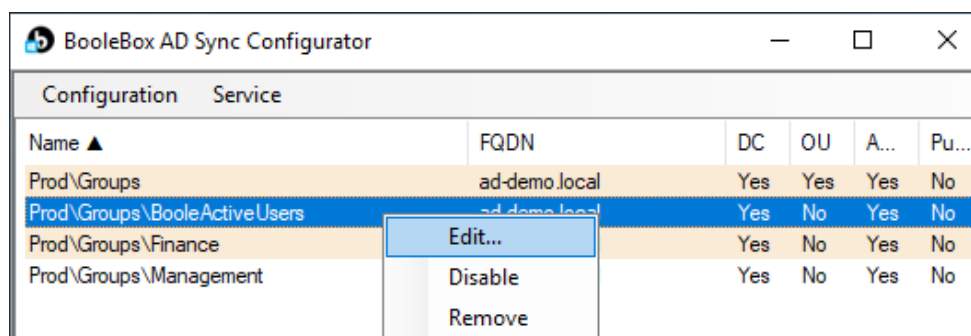
Name ▲	FQDN	DC	OU	A...	Pu...
Prod\Groups	ad-demo.local	Yes	Yes	Yes	No
Prod\Groups\BooleActiveUsers	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Finance	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Management	ad-demo.local	Yes	No	Yes	No

- Click **Configuration** and select **Edit**



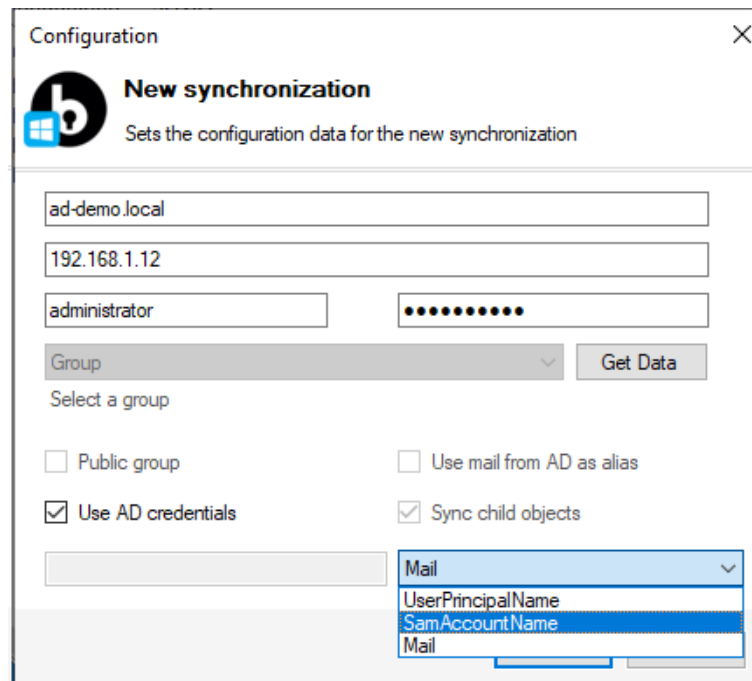
Name ▲	FQDN	DC	OU	A...	Pu...
Prod\Groups	ad-demo.local	Yes	Yes	Yes	No
Prod\Groups\BooleActiveUsers	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Finance	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Management	ad-demo.local	Yes	No	Yes	No

or right-click on the group and select **Edit**;

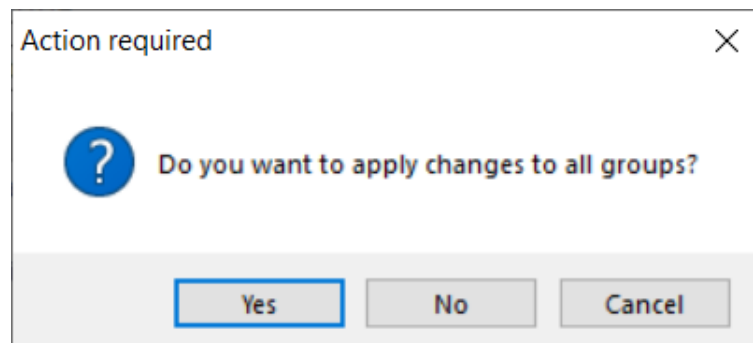


Name ▲	FQDN	DC	OU	A...	Pu...
Prod\Groups	ad-demo.local	Yes	Yes	Yes	No
Prod\Groups\BooleActiveUsers	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Finance	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Management	ad-demo.local	Yes	No	Yes	No

- In the group configuration screen, change the Active Directory property to be used for creating the user name in Boolebox, so the login mode will also be changed as described above;



- click on Save and confirm whether or not to apply the changes made to this group also to ALL the other groups in the list;



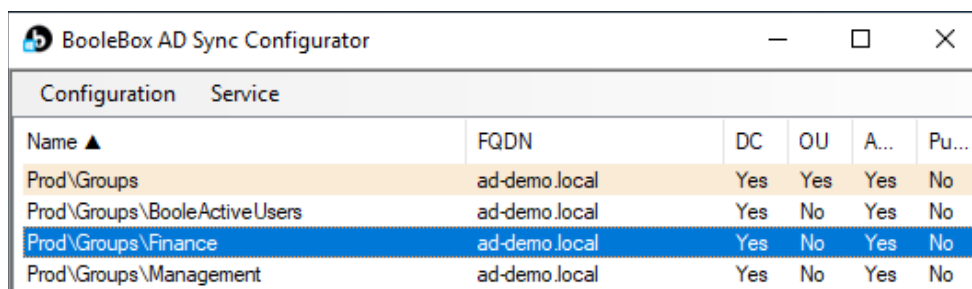
**Note: the change, if confirmed on all other groups present, will also be applied to all those groups belonging to different configurations of FQDN and AD Domain Controller.**

## Stopping the synchronization of a group

To stop synchronizing users of an AD group/OU with the Boolebox platform, you must remove a group from the list of groups to be synchronized.

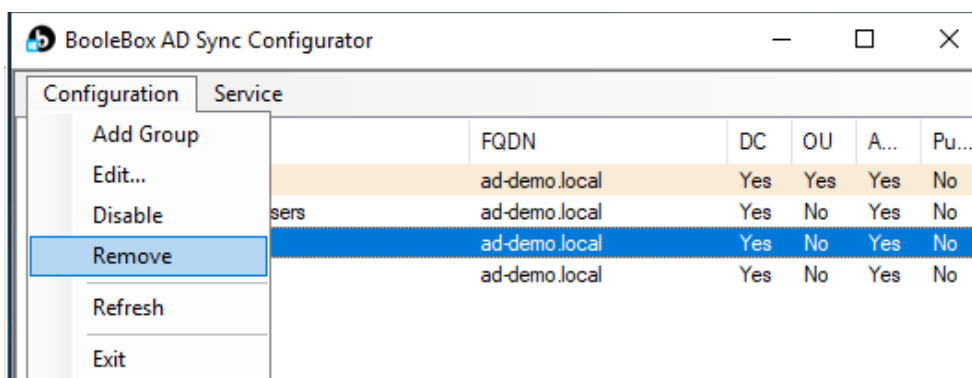
To stop synchronizing a group from Active Directory to Boolebox:

- Select the group for which to stop synchronization from the list of groups synchronized by the Boolebox AD Sync application;



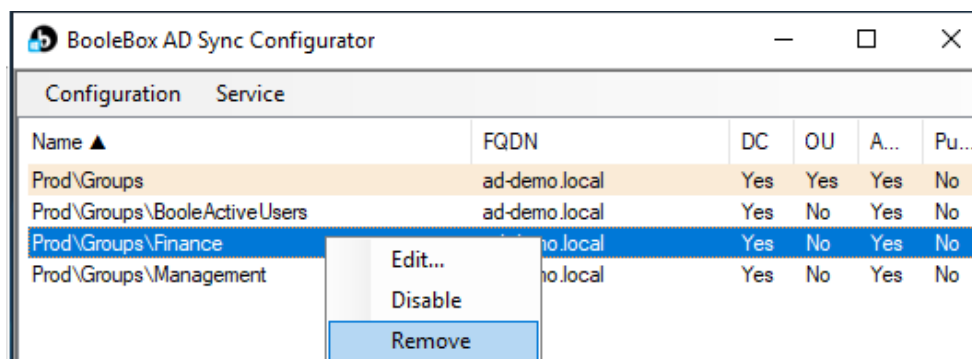
Name ▲	FQDN	DC	OU	A...	Pu...
Prod\Groups	ad-demo.local	Yes	Yes	Yes	No
Prod\Groups\BooleActiveUsers	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Finance	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Management	ad-demo.local	Yes	No	Yes	No

- Click on the **Configuration** menu, select **Remove** item.



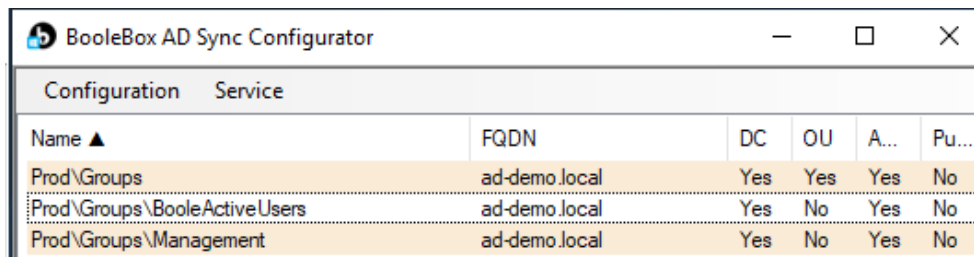
Name ▲	FQDN	DC	OU	A...	Pu...
Prod\Groups	ad-demo.local	Yes	Yes	Yes	No
Prod\Groups\BooleActiveUsers	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Finance	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Management	ad-demo.local	Yes	No	Yes	No

or right-click on the group and select **Remove**;



Name ▲	FQDN	DC	OU	A...	Pu...
Prod\Groups	ad-demo.local	Yes	Yes	Yes	No
Prod\Groups\BooleActiveUsers	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Finance	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Management	ad-demo.local	Yes	No	Yes	No

- Once confirmed, the removed group is no longer synchronized: therefore, changes made to users in Active Directory are not reflected in the corresponding Boolebox groups;



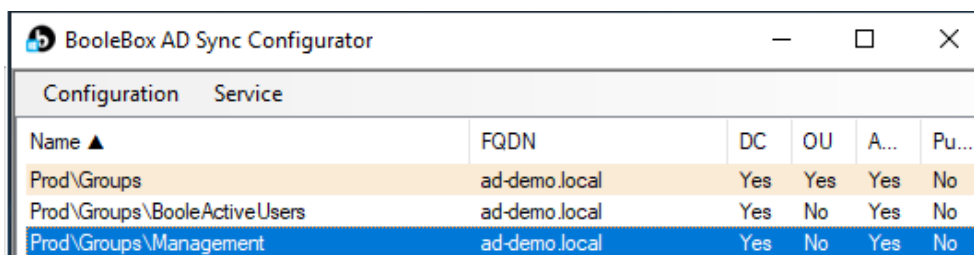
Name ▲	FQDN	DC	OU	A...	Pu...
Prod\Groups	ad-demo.local	Yes	Yes	Yes	No
Prod\Groups\BooleActiveUsers	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Management	ad-demo.local	Yes	No	Yes	No

**Note:** upon removal of a group from the list above, the latter will not be deleted from the groups on the Boolebox platform, but will remain composed of the users present at the last synchronization made.

## Suspending the synchronization of a group

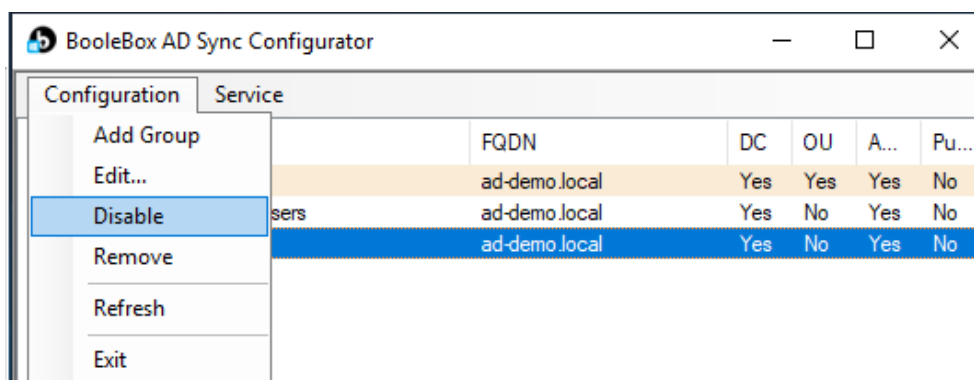
By suspending the synchronization of a group, you can temporarily stop synchronizing AD users with the Boolebox platform. To pause synchronization of a group:

- Select the group for which you want to pause synchronization;



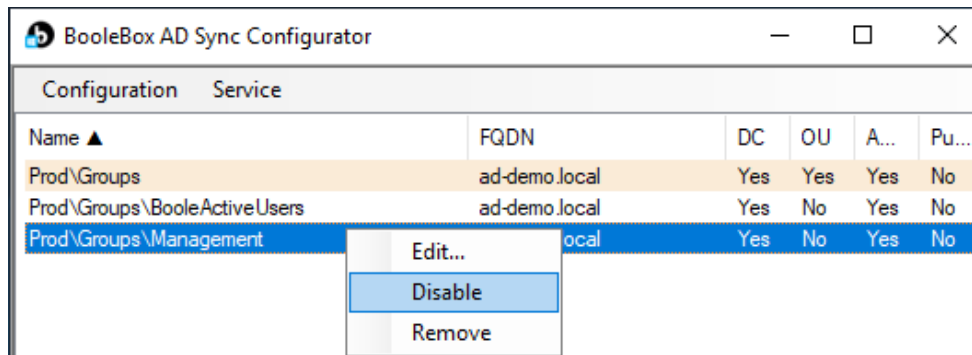
Name ▲	FQDN	DC	OU	A...	Pu...
Prod\Groups	ad-demo.local	Yes	Yes	Yes	No
Prod\Groups\BooleActiveUsers	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Management	ad-demo.local	Yes	No	Yes	No

- Click **Configuration** and select **Disable**

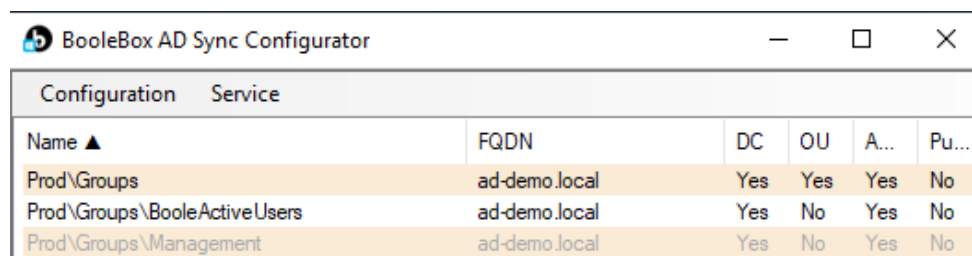


Name ▲	FQDN	DC	OU	A...	Pu...
Prod\Groups	ad-demo.local	Yes	Yes	Yes	No
Prod\Groups\BooleActiveUsers	ad-demo.local	Yes	No	Yes	No
Prod\Groups\Management	ad-demo.local	Yes	No	Yes	No

or right-click on the group and select **Disable**;



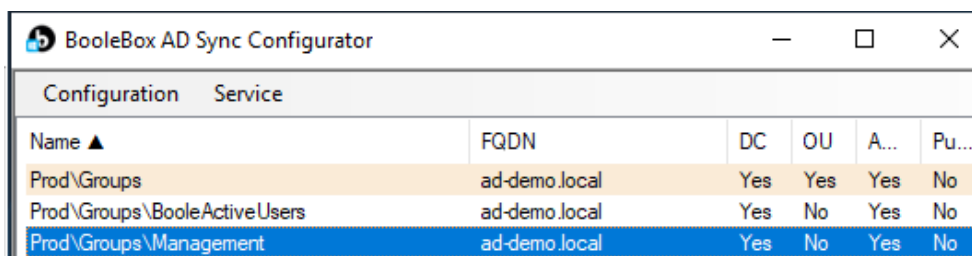
- The previously selected group turns gray and synchronization of the same between Active Directory and the Boolebox platform is suspended until the group is enabled again;



### **Reactivating the synchronization of a group**

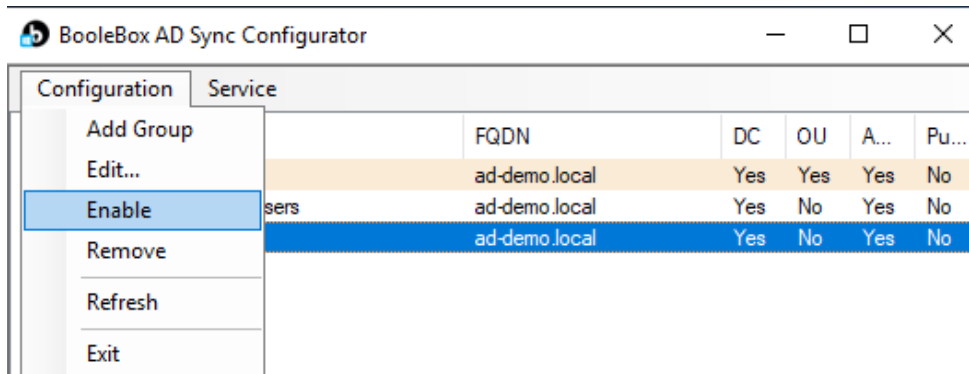
If you have temporarily suspended the synchronization of a group between Active Directory and the Boolebox platform, any changes made to AD users are not reported on Boolebox users. By re-enabling group synchronization, you can return to data synchronization between AD users and Boolebox users. To re-enable group synchronization:

- Select the group for which you want to re-enable synchronization;

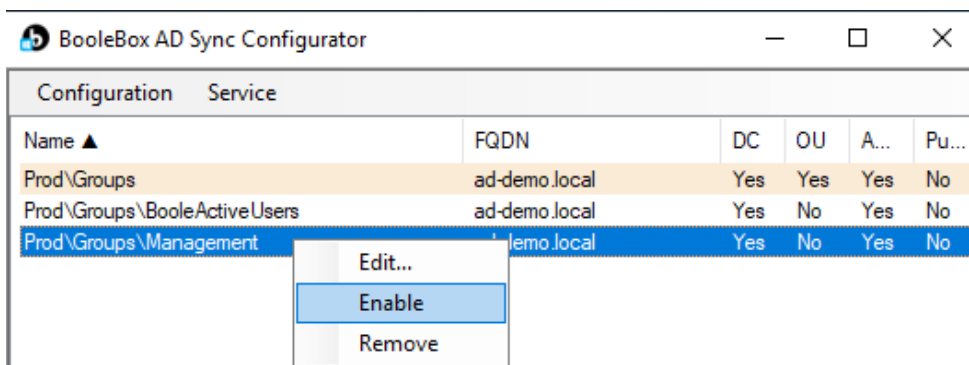




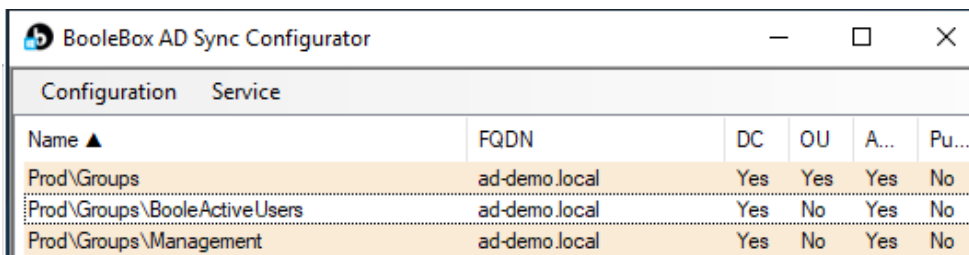
- Click on **Configuration** and select **Enable**;



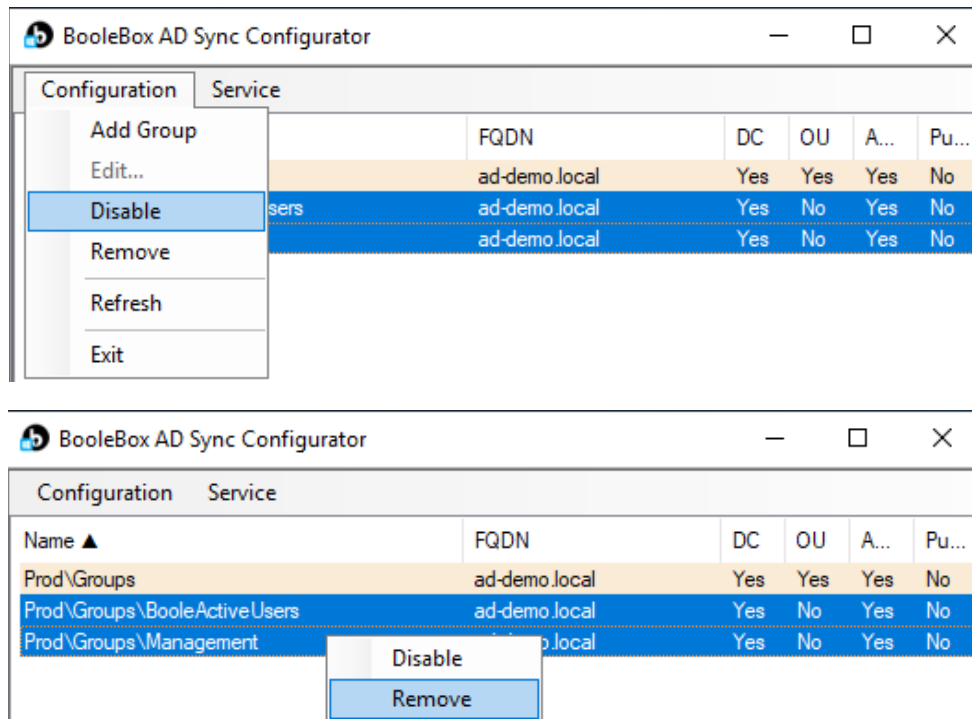
- or right-click on the group and select **Enable**;



- Group synchronization is now re-enabled: Active Directory user groups are resynchronized with the Boolebox platform;



It is also possible to disable/ remove multiple groups, simply by selecting multiple rows, and clicking on **Configuration** or with a right click on any line of the selection



## **Closing Windows application**

To close the Windows application:

- Click on the **Configuration** menu and select **Exit**;

