Overview

This document describes how you can import hosts and users from OpenLDAP.

There are some steps you'll need to follow in order to be able to import users :

- Enable the OpenLDAP source,
- Configure the OpenLDAP module,
- Configure the connection to OpenLDAP,
- Configure the import rules.
- Configure the mapping rules (optional),

On this page

- Overview
- What is already available in the Shinken Installation
- Setup the pre-installed source
  - Source definitions:
    - Enable the openldap-import Source
    - Configure the OpenLDAP Module
  - Connection configuration
  - Mapping rules configuration
  - Import rules configuration
- Import the objects
- HOW TO
  - Import users of multiple groups
  - Creation of your own sources
    - Create a module
    - Create a source
    - Configure the source data
    - Configure the Synchronizer Daemon
  - Apply contact templates to specific contact groups

What is already available in the Shinken Installation

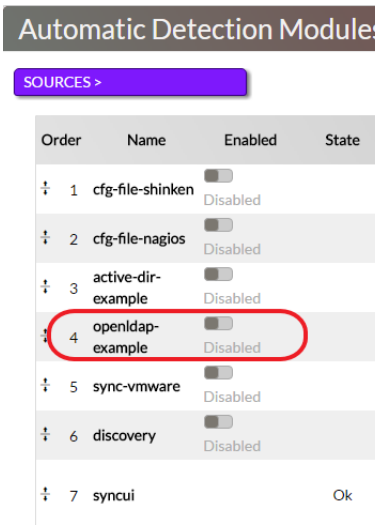
To make your life a bit easier, a few configuration tasks have already been done for you:

1. Installation of the OpenLDAP import module,
2. Availability of an example of pre-configured OpenLDAP source ready to be customized for your first try.

Setup the pre-installed source

Installation and update script of Shinken will set up a default OpenLDAP source already configured:

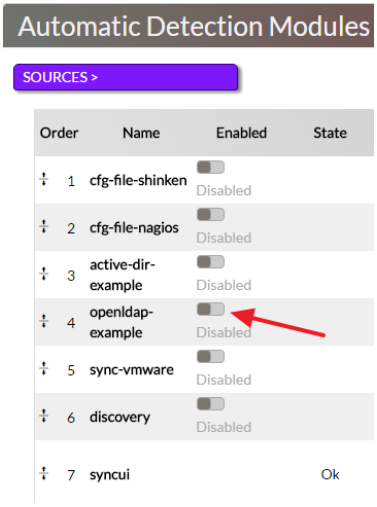
- You can see it in the source table of the UI Configuration home page.
- This source uses 2 kinds of configuration files
  - **Source definition files**
  - **Configuration files** to customize the data mining.
    - the example is available in folder (/etc/shinken-user/source-data/source-data-openldap-sample/_configuration).



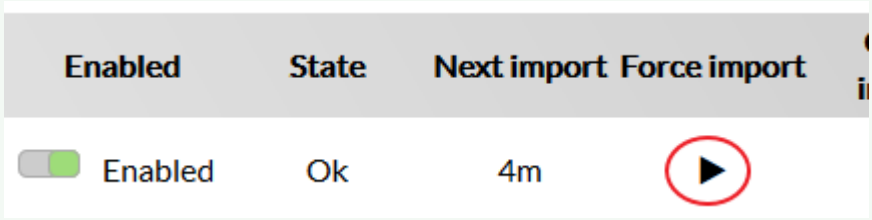
> **Advice**
>
> The first time, we advise you to only update Configuration files.
>
> Then, you will have to decide if you want to have 1 or more OpenLDAP sources (if you have a big directory, it might be interesting to have many sources pointing of specific entries for performance gain).

Source definitions:

Enable the openldap-import Source

In the **Automatic Detection Modules** panel, click on the button to enable the module.	

You can find the following parameters in the source file **/etc/shinken/sources/openldap.cfg** :

Property	Example	Description
source_name	openldap-example	Name of the source displayed in the **UI configuration** home page. **Must be unique**.
order	2	Order in the merge algorithm of this source data. Look in the Synchronizer page for more information about merging order.
import_interval	5	The source will be run automatically every *import_inverval* minutes. • if set to 0, the source will never be run automatically. **Advice** For your initial test, we advise you to set it to 0. Clicking on the **Force import** button in the home page will allow you to start the source whenever you want. 
modules	openldap-example	Module definition used by Shinken to parse OpenLDAP data.
enabled	0	Activate or Disable the source. This property is also edited automaticaly when you use the **Enabled** button.
description	This source is about loading hosts and contacts from OpenLDAP	

Configure the OpenLDAP Module

Modify if necessary, the file **/etc/shinken/modules/*openldap-import*.cfg**

Property	Value	Description
module_name	openldap-example	Module's name. **Must be unique**.
module_type	ldap-import	Type of module. Don't change it as it refers to the shinken component.
connection_configuration_file	/etc/shinken-user/source-data/source-data-openldap-sample/_configuration/openldap-connection.json	Connection information.
mapping_configuration_file	/etc/shinken-user/source-data/source-data-openldap-sample/_configuration/openldap-mapping.json	***Mapping rules*** Mapping of attributes can be different between 2 Openlapd installation. You can specify in this file for example what will be the attribute's name of the user phone number.
rules_configuration_file	/etc/shinken-user/source-data/source-data-openldap-sample/_configuration/openldap-rules.json	***Rules configuration*** You can choose what kind of elements (host and contact) will be retrieved and define criteria to set automatically template attachment on them.

Connection configuration

This file is used to make the connection to your OpenLDAP server.

Edit the file **/etc/shinken-user/source-data/source-data-openldap-sample/_configuration/openldap-connection.json**

Property	Default	Description
url	ldap://YOUR-DC-FQDN/	URL of your OpenLDAP server.
ldap_protocol	3	Version of LDAP protocol (by default set to 3 if not set)
base	dc=YOUR,dc=DOMAIN,dc=com	Base OU for your objects discovery.
hosts_base	OU=DataCenter Servers,dc=YOUR,dc=DOMAIN,dc=com	Base OU for the hosts discovery.
hostgroups_base	OU=computers,dc=shinkendom,dc=local	Base OU for host groups discovery
contacts_base	dc=YOUR,dc=DOMAIN,dc=com	Base OU for the contacts discovery.
username	uid=user1,ou=peoples,dc=YOUR,dc=DOMAIN,dc=com	Username used to connect to the server.
password	PASSWORD	Password used to connect to the server.

Example

/etc/shinken-user/source-data/source-data-openldap-sample/_configuration/openldap-connection.json

```
{
  "url": "ldap://vm-w2k8r2.shinkendom.local/",
  "ldap_protocol":3,
  "base": "dc=shinkendom,dc=local",
  "hosts_base": "OU=serveurs,dc=shinkendom,dc=local",
  "hostgroups_base": "OU=serveurs,dc=shinkendom,dc=local",
  "contacts_base": " OU=utilisateurs,DC=shinkendom,DC=local",
  "username": "uid=user1,ou=peoples,dc=shinkendom,dc=local",
  "password": "P@ssword1"
}
```

Tip

The account used to request LDAP only need read-only access. You should create a user account with read-only access dedicated to the OpenLDAP import module.

Mapping rules configuration

This file allows you to do the mapping between OpenLDAP attributes and Shinken properties.

Unless you know what you're doing here, you should keep this file unmodified.

You can find some customization in the **HOW TO** section.

File **/etc/shinken-user/source-data/source-data-openldap-sample/_configuration/openldap-mapping.json**

/etc/shinken-user/source-data/source-data-openldap-sample/_configuration/openldap-mapping.json

```
# IMPORTANT: Do not edit this file.
# To have your own mapping, copy it under the /etc/shinken-users/source-data/YOU_SOURCE_FOLDER
/_configuration/ directory and edit your copy instead.
# Note: comments should be with a # starting the line, NOT after a value
{
# first hosts propertyes (computer cat         object in openldap)
   "host.name": "name",
   "host.dNSHostName": "dNSHostName",
   "host.operatingSystem": "operatingSystem",
   "host.operatingSystemServicePack":"operatingSystemServicePack",
   "host.distinguishedName": "distinguishedName",
   "host.filter": "(objectClass=computer)",

# Now contact properties
    "contact.ClassFilter":"inetOrgPerson",
    "contact.categoryFilter": "",
    "contact.mail": "mail",
    "contact.name": "uid",
    "contact.member":"uniqueMember",
    "contact.telephoneNumber":"telephoneNumber",
    "contact.mobile":"mobile",
# Co: for country
    "contact.co":"co",
# l: for city
    "contact.l":"l",
    "contact;company":"company",
    "contact.filter":"(objectClass=inetOrgPerson)",
# By default hostgroup are not requested. Setup a filter to enabled it
    "hostgroup.filter":""
}
```

Import rules configuration

This file is used to apply **host template**, **contact template** and tags to the hosts and contacts while the import.

Edit the file **/etc/shinken-user/source-data/source-data-openldap-sample/_configuration/openldap-rules.json**

The mandatory properties to modify are in green.

Property	Default	Description
hosts_tag	your-host-template	The host template "your-host-template" will be applied to any host discovered in LDAP during the import.
contacts_tag	generic-contact	The contact template "generic-contact" will be applied to any contact discovered in LDAP during the import.
contacts_group_filter	CN=Domain Admins,CN=Users,DC=YOUR, dc=DOMAIN,dc=com | CN=OTHERGROUPS, OU=Groups,OU=Users Groups,DC=YOUR, dc=DOMAIN,dc=com	Organizational Unit or User group to import You can define many group by separing filter by |
hosts_tag_citrix	OU=Terminal Servers,OU=DataCenter Servers, DC=YOUR,dc=DOMAIN,dc=com	host template citrix applied

hosts_tag_database	OU=Database Servers,OU=DataCenter Servers, DC=YOUR,dc=DOMAIN,dc=com	host template database applied
hosts_tag_exchange	OU=Email Collaboration Servers, OU=DataCenter Servers,DC=YOUR, dc=DOMAIN,dc=com	host template exchange applied
hosts_tag_fileprint	OU=Files Print Servers,OU=DataCenter Servers, DC=YOUR,dc=DOMAIN,dc=com	Host template fileprint applied
hosts_match_operatingSystem_windows	windows	Host template windows will be applied for hosts matching "windows" in the property operatingSystem (Ldap data).
hosts_match_operatingSystem_windows2008	windows*.*2008(?!.*.(?:r2))	Host template windows2008 applied for hosts matching "windows*.*2008(?!.*.(?:r2))" in the property operatingSystem (Ldap data).
hosts_match_operatingSystem_windows2008r2	windows*.*2008*.*r2	Host template windows 2008r2
hosts_match_operatingSystem_windows2003	windows*.*2003	Host template windows2003
hosts_match_operatingSystem_windows2012	windows*.*2012(?!.*.(?:r2))	Host template windows2012
hosts_match_operatingSystem_windows2012r2	windows*.*2012*.*r2	Host template windows2012r2
hosts_match_operatingSystem_windows2000	windows*.*2000	Host template windows 2000
hosts_match_operatingSystem_windowsxp	windows*.*xp	Host template windows xp
hosts_match_operatingSystem_enterprise	Enterprise	Host template Enterprise
hosts_match_operatingSystemServicePack_sp1	Service Pack 1	Host template Service Pack 1
hosts_match_operatingSystemServicePack_sp2	Service Pack 2	Host template Service Pack 2
hosts_match_operatingSystemServicePack_sp3	Service Pack 3	Host template Service Pack 3
AddFirst_template_(domain-admins)_to_contact_matching_[memberOf]	CN=Domain Admins,CN=Users,DC=YOUR, dc=DOMAIN,dc=com	Add the "**domain-admins**" contact template to every contacts matching the value "CN=Domain Admins,CN=Users,DC=YOUR, dc=DOMAIN,dc=com" in its attribute "**memberOf**" first in list (before the contacts_tag template).
AddLast_template_(users)_to_contact_matching_[memberOf]	CN=Users,DC=YOUR,dc=DOMAIN,dc=com	Add the "**users**" contact template to every contacts matching the value "CN=Users,DC=YOUR,dc=DOMAIN,dc=com" in its attribute "**member Of**" last in list (after the contacts_tag template).
Force_template_(specific)_to_contact_matching_[memberOf]	CN=SpecificUsers,DC=YOUR,dc=DOMAIN, dc=com	Add the "**specific**" contact template to every contacts matching the value "CN=SpecificUsers,DC=YOUR,dc=DOMAIN,dc=com" in its atribute "**memberOf**" all alone (the contacts_tag template will not be applied).

Tip

See below about the tag functionality.

Example :

/etc/shinken-user/source-data/source-data-openldap-sample/_configuration/openldap-rules.json

```
{
  "hosts_tag": "you-host-template",
  "contacts_tag": "generic-contact",
  "contacts_group_filter": "CN=paris_shinken_users,OU=utilisateurs,DC=shinkendom,DC=local |
CN=bordeaux_shinken_users,OU=utilisateurs,DC=shinkendom,DC=local",
  "hosts_match_operatingSystem_windows": "windows",
  "hosts_match_operatingSystem_windows2008": "windows*.*2008(?!.*.(?:r2))",
  "hosts_match_operatingSystem_windows2008r2": "windows*.*2008*.*r2",
  "hosts_match_operatingSystem_windows2003": "windows*.*2003",
  "hosts_match_operatingSystem_windows2012": "windows*.*2012(?!.*.(?:r2))",
  "hosts_match_operatingSystem_windows2012r2": "windows*.*2012*.*r2",
  "hosts_match_operatingSystem_windows2000": "windows*.*2000",
  "hosts_match_operatingSystem_windowsxp": "windows*.*xp",
  "hosts_match_operatingSystem_enterprise": "Enterprise",
  "hosts_match_operatingSystemServicePack_sp1": "Service Pack 1",
  "hosts_match_operatingSystemServicePack_sp2": "Service Pack 2",
  "hosts_match_operatingSystemServicePack_sp3": "Service Pack 3",
  "AddFirst_template_(domain-admins)_to_contact_matching_[memberOf]": "CN=Domain Admins,CN=Users,DC=YOUR,
dc=DOMAIN,dc=com",
  "AddLast_template_(users)_to_contact_matching_[memberOf]": "CN=Users,DC=YOUR,dc=DOMAIN,dc=com",
  "Force_template_(specific)_to_contact_matching_[memberOf]": "CN=SpecificUsers,DC=YOUR,dc=DOMAIN,dc=com"
}
```

If you want to import all objects of an OU instead of groups, set no **contacts_group_filter**.

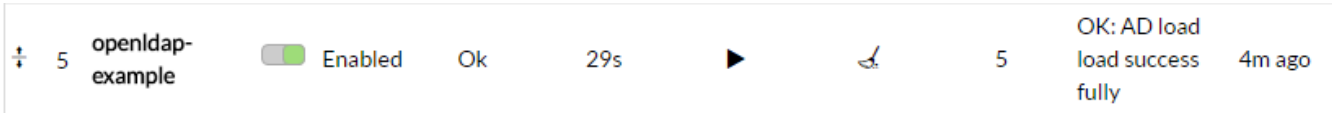
All objects inside **contacts_base** (file *openldap-connection.json*) filtered via **contact.filter** (file *openldap-mapping.json*) will be imported.

Import the objects

Go to the **UI Configuration home page**, if your configuration is ok you should have an ouput "**OK: Import clean**."

Now do a "**Force import**" in clicking on

In the "**Elements >**" panel you will see new elements appearing.



The next step will be to import those new objects.

HOW TO

Import users of multiple groups

With the OpenLDAP source, it's possible to import users that are in different groups.

Edit the file **/etc/shinken-user/source-data/source-data-openldap-sample/_configuration/openldap-rules.json**

In **contacts_group_filter,** add the Distinguished Name (DN) to the different contact groups separated by a pipe.

/etc/shinken-user/source-data/source-data-openldap-sample/_configuration/openldap-rules.json

```
  "contacts_group_filter": "CN=shinken_admins,OU=utilisateurs,DC=shinkendom,DC=local | CN=shinken_users,
OU=utilisateurs,DC=shinkendom,DC=local",
```

Creation of your own sources

Having multiple sources can help you if you have a huge directory and want to have the control on what to import at any time. As an example, you have an OU containing *Paris users* and another OU containing *Bordeaux users*. At a given time, you want to import only *Bordeaux users*. If you create two sources, you can activate just the Bordeaux source and import its objects.

Every time you have to customize Shinken Sources, you have to do it in the **/etc/shinken-user** folder.

You will have to do the following to create your own source :

- Create a module
- Create a source
- Configure the source-data
- Configure the Synchronizer daemon to take the new module in consideration

Create a module

```
cd /etc/shinken/modules/
cp openldap-import.cfg openldap-import-Bordeaux.cfg
```

Edit the file openldap-import-Bordeaux.cfg

Delete the 4 lines beginning from

 # Shinken Enterprise

to

 # End of Shinken Enterprise part

Modify

```
    module_name           openldap-example
```

With

```
    module_name           openldap-Bordeaux
```

Modify the following lines to point to the new source data (see below for the source data configuration)

```
connection_configuration_file
rules_configuration_file
mapping_configuration_file
```

Example :

```
    # Configuration file for your OpenLDAP connection (server, user, password, ...)
    connection_configuration_file   /etc/shinken-user/source-data/source-data-openldap-Bordeaux
/_configuration/openldap-connection.json

    # Configuration file for your import rules (like OU=>template rules)
    rules_configuration_file       /etc/shinken-user/source-data/source-data-openldap-Bordeaux/_configuration
/openldap-rules.json

        # Configuration file for your ldap fields mapping (like for openldap users)
    mapping_configuration_file     /etc/shinken-user/source-data/source-data-openldap-Bordeaux/_configuration
/openldap-mapping.json
```

Create a source

```
cd /etc/shinken/sources/
cp openldap.cfg openldap-Bordeaux.cfg
```

Edit the file openldap-Bordeaux.cfg

Delete the 4 lines beginning from

 # Shinken Enterprise

to

 # End of Shinken Enterprise part

Modify

```
    source_name           openldap-example
        modules                                 openldap-example
```

With

```
    source_name                          openldap-Bordeaux
    modules                             openldap-Bordeaux
```

Configure the source data

To create your own import source, do the following :

```
cd /etc/shinken-user/source-data
cp -r source-data-openldap-sample source-data-openldap-Bordeaux
```

In our example :

```
cp -r source-data-openldap-sample source-data-openldap-Bordeaux
```

Tip

Let's consider that the folder in which you will have your new OpenLDAP source is : /etc/shinken-user/source-data/source-data-openldap-Bordeaux/
inside it, the folder _configuration contain all configuration file to customize the source behavior.

See above on how to configure the source data

Configure the Synchronizer Daemon

Edit the file **/etc/shinken/synchronizers/synchronizer-master.cfg**

At the end of the "sources" line, add you new source.

Example :

```
    sources              syncui,cfg-file-shinken,active-dir-example,sync-vmware,cfg-file-nagios,discovery,
openldap-example,openldap-Bordeaux
```

you can see your new source :

↕	5	openldap-example	Enabled	Ok	2m	▶		5	OK: AD load load success fully	2m ago
↕	6	openldap-Bordeaux	Enabled	Ok	3m	▶		5	OK: AD load load success fully	1m ago

Apply contact templates to specific contact groups

During the import process a contact template is applied on every contacts thanks to the "**contacts_tag**" property found in the *openldap-rules.json*.

However, you have the possibility to apply contact templates to specific contact groups with the following properties (file *openldap-rules.json*):

Property	Value	Description

AddFirst_template_(domain-admins)_to_contact_matching_[memberOf]	CN=Domain Admins,CN=Users,DC=YOUR,dc=DOMAIN,dc=com	Add the "**domain-admins**" contact template to every contacts matching the value "CN=Domain Admins,CN=Users,DC=YOUR,dc=DOMAIN,dc=com" in its attribute "**memberOf**" first in list (before the contacts_tag template).
AddLast_template_(users)_to_contact_matching_[memberOf]	CN=Users,DC=YOUR,dc=DOMAIN,dc=com	Add the "**users**" contact template to every contacts matching the value "CN=Users,DC=YOUR,dc=DOMAIN,dc=com" in its attribute "**memberOf**" last in list (after the contacts_tag template).
Force_template_(specific)_to_contact_matching_[memberOf]	CN=SpecificUsers,DC=YOUR,dc=DOMAIN,dc=com	Add the "**specific**" contact template to every contacts matching the value "CN=SpecificUsers,DC=YOUR,dc=DOMAIN,dc=com" in its atribute "**memberOf**" all alone (the contacts_tag template will not be applied).

If you want to customize your OpenLDAP directory by adding a new property, for example called countryCode and to apply a template to it, you can do it like :

```
"AddFirst_template_(domain-admins)_to_contact_matching_[countryCode]" : "33"
```

By default, there is no "memberOf" attribute in OpenLDAP and therefor it's a virtual attribute.

Tip

Keep in mind that the group in which you want to apply specific contact templates must be part of the "**contacts_group_filter**" filter.

For example, let's consider you want to apply the contact templates to the groups listed in the table above.

You have to set "**contacts_group_filter**" like this :

"contacts_tag" : "CN=Domain Admins,CN=Users,DC=YOUR,dc=DOMAIN,dc=com|CN=User,DC=YOUR,dc=DOMAIN,dc=com|CN=SpecificUsers,DC=YOUR,dc=DOMAIN,dc=com"